

Electronic Devices Product Catalog

2023



Caution

1. We strive to produce reliable and high quality products. Our products are intended for specific applications and require proper maintenance and handling. To enhance the performance and service of our products, the devices, machinery or equipment into which they are integrated should undergo preventative maintenance and inspection at regularly scheduled intervals. Failure to properly maintain equipment and machinery incorporating these products can result in catastrophic system failures.
2. To ensure the highest levels of reliability, our products must always be properly handled. The introduction of external contaminants (e.g. dust, oil or cosmetics) can result in failures of products.
3. We offer a variety of products intended for particular applications. It is important that you select the proper component for your intended application. You may contact our Sales Office if you are uncertain about the products listed in this catalog.
4. Special care is required in designing devices, machinery or equipment which demand high levels of reliability. This is particularly important when designing critical components or systems whose failure can foreseeably result in situations that could adversely affect health or safety. In designing such critical devices, equipment or machinery, careful consideration should be given to, amongst other things, their safety design, fail-safe design, back-up and redundancy systems, and diffusion design.
5. The products listed in the catalog may not be appropriate for use in certain equipment where reliability is critical or where the products may be subjected to extreme conditions. You should consult our sales office before using the products in any of the following types of equipment.
 - Aerospace Equipment
 - Equipment Used in the Deep sea
 - Power Generator Control Equipment (Nuclear, Steam, Hydraulic)
 - Life Maintenance Medical Equipment
 - Fire Alarm/Intruder Detector
 - Vehicle Control Equipment (automobile, airplane, railroad, ship, etc.)
 - Various Safety Equipment
6. Our products have been designed and tested to function within controlled environmental conditions. Do not use products under conditions that deviate from methods or applications specified in this catalog. Failure to employ our products in the proper applications can lead to deterioration, destruction or failure of the products. We shall not be responsible for any bodily injury, fires or accident, property damage or any consequential damages resulting from misuse or misapplication of its products. Products are sold without warranty of any kind, either express or implied, including but not limited to any implied Warranty of merchantability or fitness for a particular purpose.
7. Warning about the handling and disposal of products.
The following products use which are specified as poisonous chemicals by law. For the prevention of a hazard, do not burn, destroy, or process chemically to make them as gas or powder. When the product is disposed, please follow the related regulation and do not mix this with general industrial waste or household waste.

-Products	Contained materials
-GaAs MMICs	Gallium(Ga) and Arsenic(As)
-Photo Reflectors	Gallium(Ga) and Arsenic(As)
-SAW Filters	Nickel (Ni), Cobalt (C)
8. The product specifications and descriptions listed in this catalog are subject to change at any time, without notice.

NISSHINBO
Nisshinbo Micro Devices Inc.



Official Site
<https://www.nisshinbo-microdevices.co.jp/en/>



Buy/Sample
<https://www.nisshinbo-microdevices.co.jp/en/buy/>

Inquiry and order ...

About Nisshinbo Micro Devices Inc.

Nisshinbo Micro Devices Inc. is the result of the integration of former New Japan Radio Co., Ltd. and former RICOH Electronic Devices Co., Ltd. Both companies, having contributed to expanding the Nisshinbo Group's microdevices business so far, will further grow as an "Analog Solution Provider" for growing markets by strengthening our structure and achieving synergies through business integration.

Nisshinbo Micro Devices will provide analog solutions through electronic devices and microwave products based on the strength of analog technology in accordance with the Nisshinbo Group's corporate philosophy of "Change and Challenge! For the creation of the future of Earth and People". We will contribute to developing connected society, and aim to be a company with value and presence that is expected by customers around the world.

Supporting the development of the automotive industry with reliable automotive ICs

The automotive industry is currently going through a period of extraordinary transformation thanks to the developing of electric vehicles, the demonstration of practical applications for autonomous driving, and the appearance of new mobility services. Nisshinbo Micro Devices provides fine services that satisfy customer's needs based on the experiences and results of two former companies which have contributed to the development of car electronics for long years.



Contributing to the evolution of industrial equipment with analog technology to satisfy needs

In industrial equipment, the introduction of centralized controls is accelerated with new technologies such as automation and IoT technology. Nisshinbo Micro Devices contributes to the evolution of industrial equipment through providing solution proposals taking full advantage of synergy through business integration, high reliability supporting long term operation, and our product longevity program.



Providing new technologies that corresponds to more diverse needs in consumer equipment.

Consumer devices are diversifying and most of them include sensors and communication functions. Nisshinbo Micro Devices contributes to the improvement of convenience for customers and end users by providing new technologies and/or products not only for conventional home appliances but also for healthcare and IoT devices.



About Nisshinbo Micro Devices Inc.

Nisshinbo Micro Devices Inc. is the result of an integration former New Japan Radio Co., Ltd. and former RICOH Electronic Devices Co., Ltd. New Japan Radio Co., Ltd. as famous as Op-amp supplier and RICOH Electronic Devices as known as Power management IC supplier integrated. We further grow as an "Analog solution provider".

At a Glance: Nisshinbo Micro Devices Inc.
<https://www.nisshinbo-microdevices.co.jp/en/about/hayawakari/>



We contribute to realizing a smart society through "Connect Everything" technology that connect Humans to Humans, Humans to Things and Things to Things.



Nisshinbo Micro Devices as an Analog solution provider.

Expand existing products portfolio and develop new products for new market

RICOH Electronic Devices
Power management ICs

New Japan Radio
Op-amps

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Product Longevity Program

For lifecycle-focused applications [PRODUCT LONGEVITY PROGRAM]

For long life applications, sudden production end of parts can have a critical impact on the continuity of equipment's production.

It also brings costly steps such as investigation/procurement of alternative parts and redesign of the board due to parts change.

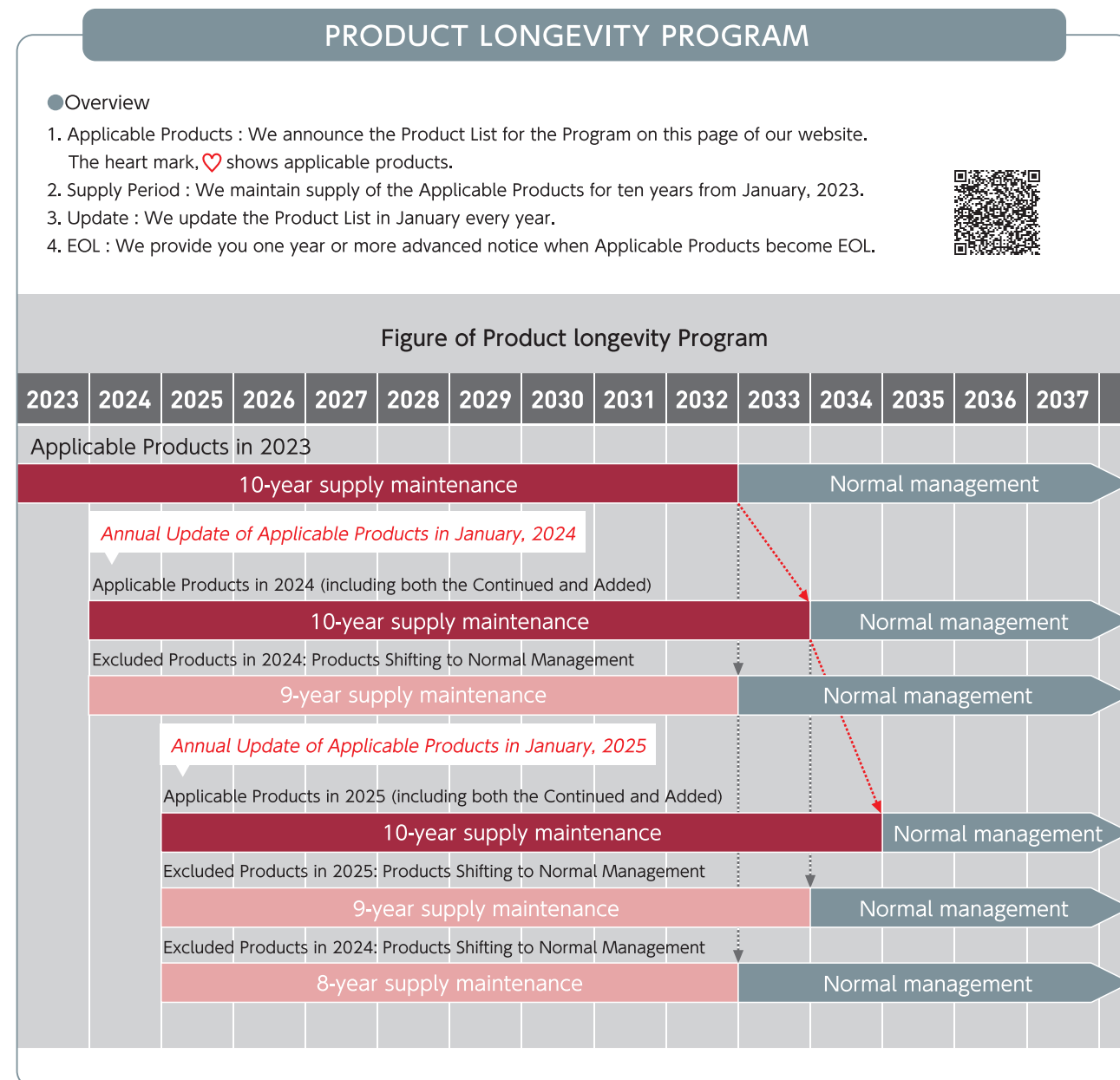
We are operating PLP (Product Longevity Program) to minimize the risk of customers.

PLP maintains the products supply for at least 10 years.

Customers receive one year advanced notice when PLP product finally becomes EOL after 10 years.

PLP product list is updated in January every year by checking each condition of related product line and material supply.

By using products under PLP, customers can make a long-term production plan.



Product Longevity Program

Part No.	Main Functions	Page
Operational Amplifiers & Comparators		
NJM2725	160MHz, 1.4nV/√Hz, Operational Amplifier	15
NJM2902B	High EMC Performance, Single Supply, Operational Amplifier	22,33,37
NJM2904B	High EMC Performance, Single Supply, Operational Amplifier	22,33,38
NJM8207	Single-Supply, High-Operating voltage, Precision, Dual Operational Amplifier	7,11,19,35
NJM8208	Single-Supply, High-Operating voltage, Precision, Dual Operational Amplifier	7,11,19,23,35
NJM8212	Single Supply, Rail-to-Rail Output, Dual Operational Amplifier	7,16,23
NJM8801	High Quality Audio, Dual Operational Amplifier	16,19,35,82
NJM8830	Ultralow Distortion, Ultralow Noise, Rail-to-Rail Output, Dual Audio Operational Amplifier	16,19,82
NJU77000A	1.5V, 0.23μA/ch, Ultra-Low Power, Excellent EMI Immunity, Rail-to-Rail Input/Output, CMOS Operational Amplifier	17
NJU77001A	1.5V, 0.23μA/ch, Ultra-Low Power, Excellent EMI Immunity, Rail-to-Rail Input/Output, CMOS Operational Amplifier	17
NJU77002A	1.5V, 0.23μA/ch, Ultra-Low Power, Excellent EMI Immunity, Rail-to-Rail Input/Output, CMOS Operational Amplifier	10,18
NJU77004A	1.5V, 0.23μA/ch, Ultra-Low Power, Excellent EMI Immunity, Rail-to-Rail Input/Output, CMOS Operational Amplifier	18
Power Management ICs		
NR1600	500mA LDO with Soft-Start Time Adjustment and Power-Good Function	47
NR1640	200mA Ultra-low Noise Voltage Regulator	45
NJW4109	45 V, I _o = 500 mA LDO with Power-Good	52
NB7140	1-cell Li-ion Battery Protection IC with Forced Standby and Built-In System Reset Function	78
NB7141	1-cell Li-ion Battery Protection IC with Forced Standby and Built-In Watchdog Timer	78
NB7200	2-cell Li-ion Battery Protection IC with High-accuracy Overcurrent Detection	79
R5660	1-Cell Li-ion Battery Protection IC with High-accuracy Overcharge Protection	79
R5619	One-cell Li-ion Battery Protection IC with High-accuracy Overcurrent Detection	79
RM516	0.3V Ultra-low Output Voltage 100mA Buck DC/DC Module	59
RM517	0.3V Ultra-low Output Voltage 300mA Buck DC/DC Module	60
NC2600	2A Low Quiescent Current PWM/PFM Step-down Switching Regulator	63
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Audio & video ICs		
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NJM8830	Ultralow Distortion, Ultralow Noise, Rail-to-Rail Output, Dual Audio Operational Amplifier	16,19,82
NJD3015	MEMS Transducer for Microphone	87
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NJU72089S	Pre-Amplifier for MEMS Microphone with sensitivity adjustment function	87
Communication ICs & RF Devices		
NJG1186PJL	GNSS L5/L2C Band Front-End Module	92
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What is myNISD?

myNISD <https://www.nisshinbo-microdevices.co.jp/en/mynisd/benefit.html>

"myNISD" provides electronic component users with a variety of information and services, including technical documents and exclusive tools. It is available free of charge with only account registration.



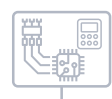
- Benefit 1** Download SPICE models (OrCAD PSpice®) to streamline your circuit design
- Benefit 2** Available for full version of Prime Designer, a DC/DC online simulation
- Benefit 3** Web tool to support complicated circuit design calculations
- Benefit 4** Download members-only contents
- Benefit 5** Personalization of parametric search results and favorite pages
- Benefit 6** Email alerts for new product information, webinars, etc.

Service



Provide SPICE Models for Effective Circuit Design

It covers OrCAD Capture®, the industry standard schematic entry tool, and OrCAD PSpice®, the world's most widely used circuit simulation.



Online Simulation of DC/DC Converters

Full-function simulation such as circuit design and analysis of electronic components, and the change of electrical characteristics by selecting external components can be performed on the web without installing any programs.



Essential Calculation Tools for Circuit Design on Web

This convenient tool makes it easy to perform complicated calculations such as generating frequency response graphs from low-pass filter values, calculating capacitor charge/discharge times and generating graphs, and calculating parameters for voltage dividers and parallel/series resistors.

Nisshinbo Micro Devices Website

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You will receive new product release, seminar/event information and technology tips from Nisshinbo Micro Devices Inc.



Website Featured Content

Nisshinbo Micro Devices provides a clue as to the technical solution for customer's needs.



Package List

Package Information incl. dimensions and recommended land pattern.



Application Manuals

Characteristics, glossary, application blocks by product category



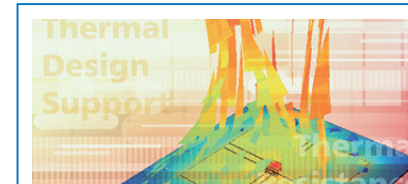
FAQ

Technical Information on our products



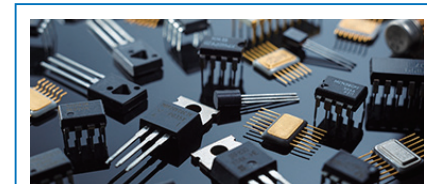
[Example] Trouble Shooting

The circuit itself seems to be OK, but something is wrong with it!



Thermal Design Support

You can analyze thermal characteristics at concept design stage



Discontinued/NRND Products

List of non-promotion products and Limited/discontinued products



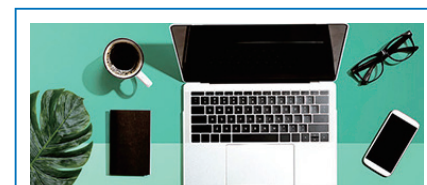
Quality & Reliability

Documents for Part Approvemet & Registration



Power Management IC Basics

What are PMICs? How to they work? An easy to understand basic course.



Blog+

"Blog+" provides useful information, such as basic knowledge and troubleshooting.



Operational Amplifiers & Comparators

U.D. : Under Development **NEW** : New product **♥** : Products available in PRODUCT LONGEVITY PROGRAM **xxxx** : Products available in PRODUCT LONGEVITY PROGRAM with time limit



Rail to Rail

Part No.	Auto-motive	No. of Circuit	Power Supply	Supply Voltage [V]		I _{cc} /ch. [mA]	V _{io} [mV]	I _b [nA]	I _o [nA]	SR [V/μsec]	GBW [MHz]	f _T [MHz]	Noise typ.		Operating Temperature [°C]		Package Outline	Notes	
				min.	max.								V _{NI} [μVrms]	e _n [nV/√Hz]	min.	max.			
U.D. NL6002	–	2	Single	1.6	5.5	0.015	0.2	0.001	0.001	0.04	0.12	–	–	65	–40	125	DFN8-W2(ESON8-W2), MSOP8(VSP8), SOP8 JEDEC150mil(EMP8)		
U.D. NL6010	–	1	Single	2.1	5.5	0.015	0.01	0.001	0.001	0.11	0.26	–	–	60	–40	125	SOT-23-5		
U.D. NL6011	–	1	Single	2.1	5.5	0.015	0.01	0.001	0.001	0.11	0.26	–	–	60	–40	125	SC-88A		
U.D. NL6012	–	2	Single	2.1	5.5	0.015	0.01	0.001	0.001	0.11	0.26	–	–	60	–40	125	MSOP8(VSP8)		
NJM2100	–	2	Dual	±1	±3.5	1.75	6	100	–	4	12	1.9	0.6	–	–40	85	DIP8, DMP8, SOP8 JEDEC 150mil(EMP8),SOP8		
NJM2115	–	2	Dual	±1	±7	1.75	6	100	–	4	12	4.4	0.5	–	–40	85	DIP8, DMP8, SSOP8, MSOP8(TVSP8)		
NJM2140	–	2	Dual	±1	±7	1.75	6	100	10	4	12	12	–	–	–40	85	MSOP8(TVSP8), MSOP8(VSP8)		
NJM2716	–	1	Single	2.7	12	4.2	10	1000	200	40	25	30	–	–	–40	85	SOT-23-5		
NJM2717	–	2	Single	2.7	12	4	11	2000	200	40	25	20	–	–	–40	85	DIP8, DMP8, SSOP8, MSOP8(TVSP8)		
NJM2719	–	2	Dual	±2.25	±5	7	9	2900	200	60	90	100	–	2.5	–40	85	SSOP8, MSOP8(TVSP8)		
NJM2730	✓	1	Single	1.8 to 5		0.32	5	50	5	0.4	1	1.5	–	10	–40	85	SOT-23-5		
NJM2732	✓	2	Single	1.8	6	0.29	5	50	5	0.4	1	1	–	10	–40	85	DIP8, DMP8, SOP8 JEDEC150mil(EMP8), SSOP8, MSOP8(TVSP8) PCSP20-CC		
NJM2734	–	4	Single	1.8	6	0.3	5	50	5	0.4	1	1	–	10	–40	85	DMP14, SSOP14, PCSP20-CC		
NJM2737	–	2	Single	1.8	6	0.6	5	200	5	0.7	3.1	2	–	5	–40	85	DIP8, DMP8, SSOP8, MSOP8(TVSP8)		
NJM2740	–	2	Dual	±1.1	±3.5	1.75	6	100	5	4	12		–	–	–40	125	DMP8, SSOP8, MSOP8(TVSP8)		
NJM2741	✓	1	Single	2.5	14	2.2	6	100	5	3.5	10	10	–	10	–40	85	SC-88A, SOT-23-5		
NJM2746	✓	2	Single	2.5	14	2	6	100	5	3.5	10	10	–	10	–40	85	DMP8,SOP8 JEDEC 150mil(EMP8), DFN8-U1(ESON8-U1), SSOP8, MSOP8(TVSP8)		
NJM2747	✓	4	Single	2.5	14	2	6	100	5	3.5	10	10	–	10	–40	85	DMP14, PCSP20-CC, SSOP14		
NJM8202	♥	✓	2	Single	2.5	14	2	6	100	5	3.5	10	10	–	10	–40	85	DMP8, SOP8 JEDEC 150mil(EMP8), SSOP8, MSOP8(TVSP8), MSOP8(VSP8)	PLP: DMP8
NJM8204	♥	✓	4	Single	2.5	14	2	6	100	5	3.5	10	–	–	–40	125	SSOP14		
NEW NJM8207	♥	✓	2	Single	4	35	0.7	1	120	5	0.15	0.3	–	–	–40	125	DMP8		
NEW NJM8208	♥	✓	2	Single	3	35	0.45	1	55	5	0.2	0.35	–	–	–40	125	DMP8,MSOP8(VSP8)	PLP: DMP8	
NEW NJM8212	♥	✓	2	Single	2.5	14	3	6	900	30	3.5	6	–	–	–40	125	DMP8		
NJM8524	–	4	Single	3	36	0.025	1.8	3	0.5	0.04	0.1	0.1	–	60	–40	85	SSOP14		
NJM8530	♥	✓	1	Single	1.8	14	0.32	4	50	5	0.4	1	1	–	10	–40	125	SOT-23-5	

Part No.	Auto-motive	No. of Circuit	Power Supply	Supply Voltage [V]		I _{cc} /ch. [mA]	V _{io} [mV]	I _b [nA]	I _o [nA]	SR [V/μsec]	GBW [MHz]	f _T [MHz]	Noise typ.		Operating Temperature [°C]		Package Outline	Notes		
				min.	max.								V _{NI} [μVrms]	e _n [nV/√Hz]	min.	max.				
NJM8532	♥	✓	2	Single	1.8	14	0.29	4	50	5	0.35	1	1	–	10	–40	125	MSOP8(TVSP8), DMP8, SSOP8	PLP: MSOP8 (TVSP8)	
NJM8534	–	4	Single	1.8	14	0.3	4	50	5	0.3	1	1	–	10	–40	125	SSOP14			
NJU7006	–	1	Single	1.8	3.6	0.003	2	0.001	0.001	0.04	–	0.095	–	–	–40	85	SOT-23-5			
NJU7007	–	1	Single	1	5.5	0.015	4	0.001	0.001	0.1	–	0.2	–	–	–40	85	SC-88A			
NJU7008	–	1	Single	1	5.5	0.2	4	0.001	0.001	2.4	–	1	–	–	–40	85	SC-88A			
NJU7009	–	1	Single	2.2	5.5	0.45	5	0.001	0.001	1	3.5	3	1.7	13	–40	85	SC-88A			
NJU7011	–	1	Single	1	5.5	0.015	10	0.001	0.001	0.1	0.2	0.2	–	–	–40	85	SOT-23-5			
NJU7012	–	1	Single	1	5.5	0.08	10	0.001	0.001	1	1	1	–	–	–40	85	SOT-23-5			
NJU7013	–	1	Single	1	5.5	0.2	10	0.001	0.001	2.4	1	1	–	–	–40	85	SOT-23-5			
NJU7014	–	2	Single	1	5.5	0.015	10	0.001	0.001	0.1	0.2	0.2	–	–	–40	85	DMP8, SSOP8, MSOP8(TVSP8), MSOP8(VSP8)			
NJU7015	–	2	Single	1	5.5	0.08	10	0.001	0.001	1	1	1	–	–	–40	85	DIP8, DMP8, SSOP8, MSOP8(TVSP8), MSOP8(VSP8)			
NJU7016	–	2	Single	1	5.5	0.2	10	0.001	0.001	2.4	1	1	–	–	–40	85	DIP8, DMP8, SSOP8, MSOP8(TVSP8), MSOP8(VSP8)			
NJU7017	–	1	Single	1	5.5	0.75	10	0.001	0.001	3.7	1	1	–	–	–40	85	SOT-23-5			
NJU7018	–	2	Single	1	5.5	0.75	10	0.001	0.001	3.7	1	1	–	–	–40	85	DIP8, DMP8, SSOP8, MSOP8(TVSP8), MSOP8(VSP8)			
NJU7019	–	2	Single	1	5.5	0.02	10	0.001	0.001	0.25	–	0.4	–	–	–40	85	MSOP8(VSP8)			
NJU7021	–	1	Single	3	16	0.15	10	0.001	0.001	0.4	0.35	0.4	–	27	–20	75	DMP8, SSOP8			
NJU7022	–	2	Single	3	16	0.15	10	0.001	0.001	0.4	0.35	0.4	–	27	–20	75	DIP8, DMP8			
NJU7024	–	4	Single	3	16	0.15	10	0.001	0.001	0.4	0.35	0.4	–	27	–20	75	DMP14, SSOP14			
NJU7026	♥	2031	–	1	Single	1.8	5.5	0.013	4	0.001	0.001	0.05	0.16	0.16	–	50	–40	125	SC-88A SOT-23-5	
NJU7027	♥	–	2	Single	1.8	5.5	0.013	4	0.001	0.001	0.05	0.16	0.16	–	50	–40	125	DFN8-U1(ESON8-U1), MSOP8(TVSP8)		
NJU7028	♥	–	4	Single	1.8	5.5	0.012	4	0.001	0.001	0.05	0.16	0.16	–	50	–40	125	SSOP14		
NJU7029	–	2	Single	2.2	5.5	0.425	5	0.001	0.001	1	3.5	3	1.7	13	–40	85	DFN8-U1(ESON8-U1), SSOP8, MSOP8(TVSP8)			
NJU7031	–	1	Single	3	16	1	10	0.001	0.001	3.5	2	1.5	–	20	–40	85	DIP8, DMP8, SSOP8			
NJU7032	–	2	Single	3	16	1	10	0.001	0.001	3.5	2	1.5	–	20	–40	85	DIP8, DMP8			
NJU7034	–	4	Single	3	16	1	10	0.001	0.001	3.5	2	1.5	–	20	–40	85	DMP14, SSOP14			
NJU7036	–	2	Single	2.7	5.5	1.75	10	0.001	0.001	0.7	0.4	0.4	–	60	–40	85	PCSP20-E3			

Operational Amplifiers & Comparators

U.D. : Under Development **NEW** : New product **♥** : Products available in PRODUCT LONGEVITY PROGRAM **xxxx** : Products available in PRODUCT LONGEVITY PROGRAM with time limit



Rail to Rail

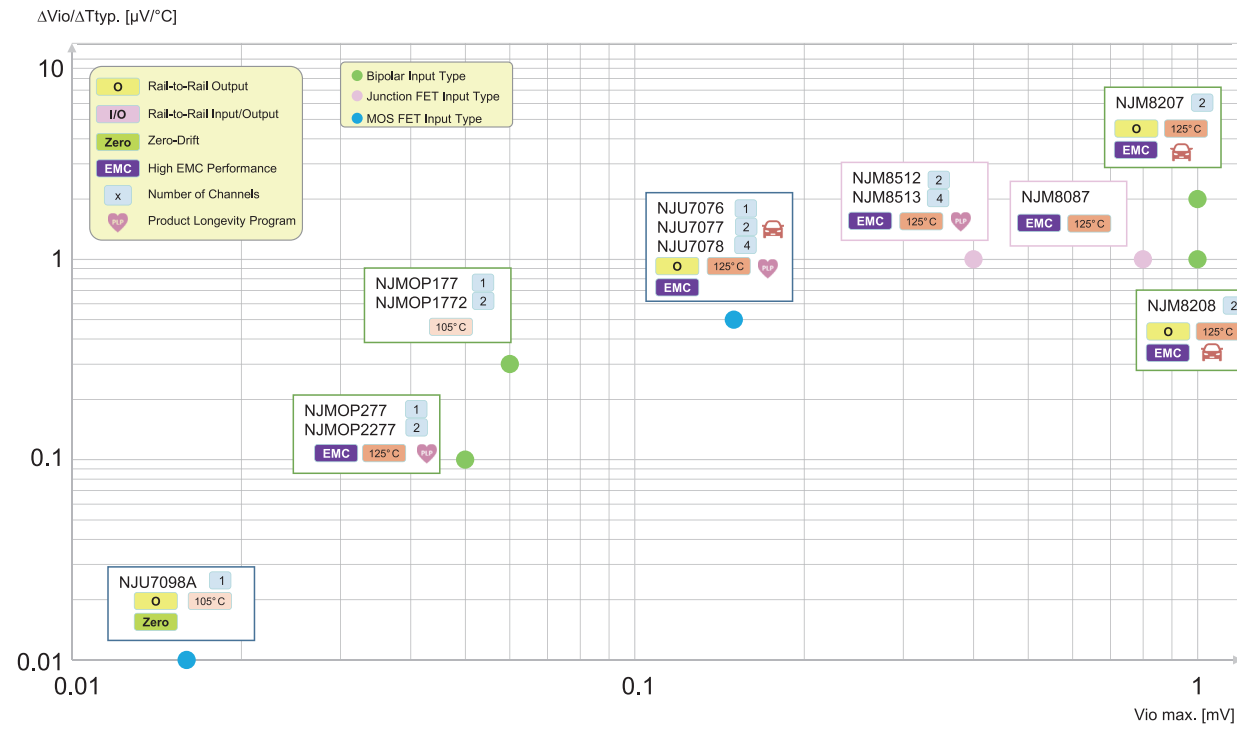
Part No.	Auto-motive	No. of Circuit	Power Supply	Supply Voltage [V]		I _{cc} /ch. [mA]	V _{io} [mV]	I _b [nA]	I _o [nA]	SR [V/μsec]	GBW [MHz]	f _T [MHz]	Noise typ.		Operating Temperature [°C]		Package Outline	Notes	
				min.	max.								V _{NI} [μVrms]	e _n [nV/√Hz]	min.	max.			
NJU7040	–	1	Single	2.2	5.5	0.45	10	0.001	0.001	0.85	0.8	0.8	–	40	–40	85	SOT-23-5		
NJU7042	–	1	Single	2.7	5.5	0.015	5	0.001	0.001	0.03	–	0.047	–	–	–40	85	SOT-23-5		
NJU7043	✓	2	Single	1.8	5.5	0.3	10	0.001	0.001	0.7	0.8	0.8	–	40	–40	85	DIP8, DMP8, SSOP8, JEDEC150mil(EMP8), SSOP8, MSOP8(TVSP8), MSOP8(VSP8) PCSP20-CC		
NJU7044	–	4	Single	2.2	5.5	0.45	10	0.001	0.001	0.8	0.8	0.8	–	40	–40	85	DMP14, SSOP14		
NJU7046	♥	✓	1	Single	2.7	5.5	1.4	5	0.001	0.001	9	5	4	–	20	–40	125	SOT-23-5, SC-88A	
NJU7047	♥	✓	2	Single	2.7	5.5	1.35	5	0.001	0.001	9	5	4	–	20	–40	125	SOP8 JEDEC150mil(EMP8), MSOP8(TVSP8), DFN8-U1(ESON8-U1)	PLP♥: MSOP8 (TVSP8)
NJU7048	♥	–	4	Single	2.7	5.5	1.325	5	0.001	0.001	9	5	4	–	20	–40	125	SOP14, SSOP14	PLP♥: SSOP14
NJU7051	–	1	Single	1	16	0.015	2	0.001	0.001	0.05	–	0.1	–	–	–40	85	DMP8		
NJU7052	–	2	Single	1	16	0.015	2	0.001	0.001	0.05	–	0.1	–	–	–40	85	DMP8		
NJU7056	♥	✓	1	Single	1.8	5.5	0.26	4	0.001	0.001	0.8	2.1	2	–	15	–40	125	SC-88A, SOT-23-5	
NJU7057	♥	✓	2	Single	1.8	5.5	0.26	4	0.001	0.001	0.8	2.1	2	–	15	–40	125	DFN8-U1(ESON8-U1), MSOP8(TVSP8)	PLP♥: MSOP8 (TVSP8)
NJU7058	♥	✓	4	Single	1.8	5.5	0.25	4	0.001	0.001	0.8	2.1	2	–	15	–40	125	SSOP14	
NJU7061	–	1	Single	3	16	0.15	2	0.001	0.001	0.4	0.35	0.4	–	27	–20	75	DIP8, DMP8, SSOP8		
NJU7062	–	2	Single	3	16	0.15	2	0.001	0.001	0.4	0.35	0.4	–	27	–20	75	DIP8, DMP8		
NJU7064	–	4	Single	3	16	0.15	2	0.001	0.001	0.4	0.35	0.4	–	27	–20	75	DMP14, SSOP14		
NJU7066	♥	–	2	Single	2.2	5.5	0.6	0.5	0.001	0.001	0.5	1.3	1.3	–	10	–40	125	MSOP8(VSP8)	
NJU7067	–	2	Single	4	16	0.014	4	0.001	0.001	0.04	0.06	–	–	45	–40	85	DMP8, SSOP8		
NJU7068	–	4	Single	4	16	0.014	4	0.001	0.001	0.04	0.06	–	–	45	–40	85	DMP14, SSOP14		
NJU7071	–	1	Single	5	16	0.6	2	0.001	0.001	1.1	–	1	–	–	–20	75	DIP8, DMP8, SSOP8		
NJU7072	–	2	Single	5	16	0.6	2	0.001	0.001	1.1	–	1	–	–	–20	75	DIP8, DMP8		
NJU7074	–	4	Single	5	16	0.6	2	0.001	0.001	1.1	–	1	–	–	–20	75	DMP14, SSOP14		
NJU7076	♥	–	1	Single	2.2	5.5	0.6	0.15	0.001	0.001	0.5	1.3	1.3	–	10	–40	125	SOT-23-5	
NJU7076B	–	1	Single	2.2	5.5	0.6	0.3	0.001	0.001	0.5	1.3	1.3	–	10	–40	125	SC-88A		
NJU7077	♥	✓	2	Single	2.2	5.5	0.6	0.15	0.001	0.001	0.5	1.3	1.3	–	10	–40	125	MSOP8(VSP8)	
NJU7078	♥	–	4	Single	2.2	5.5	0.6	0.15	0.001	0.001	0.5	1.3	1.3	–	10	–40	125	SSOP14	
NJU7091A	–	1	Single	1	5.5	0.015	2	0.001	0.001	0.1	0.19	0.2	–	–	–40	85	SOT-23-5		

Part No.	Auto-motive	No. of Circuit	Power Supply	Supply Voltage [V]		I _{cc} /ch. [mA]	V _{io} [mV]	I _b [nA]	I _o [nA]	SR [V/μsec]	GBW [MHz]	f _T [MHz]	Noise typ.		Operating Temperature [°C]		Package Outline	Notes	
				min.	max.								V _{NI} [μVrms]	e _n [nV/√Hz]	min.	max.			
NJU7092A	–	1	Single	1	5.5	0.08	2	0.001	0.001	1	1	1	–	–	–40	85	SOT-23-5		
NJU7093A	–	1	Single	1	5.5	0.2	2	0.001	0.001	2.4	1	1	–	–	–40	85	SOT-23-5		
NJU7094	–	2	Single	1	5.5	0.015	4	0.001	0.001	0.1	0.19	0.2	–	–	–40	85	DIP8, DMP8, SSOP8, MSOP8(TVSP8), MSOP8(VSP8)		
NJU7095	–	2	Single	1	5.5	0.08	4	0.001	0.001	1	1	1	–	–	–40	85	DIP8, DMP8, SSOP8, MSOP8(TVSP8), MSOP8(VSP8)		
NJU7096	–	2	Single	1	5.5	0.2	4	0.001	0.001	2.4	1	1	–	–	–40	85	DIP8, DMP8, SSOP8, MSOP8(TVSP8), MSOP8(VSP8)		
NJU7098A	–	1	Single	3	10	0.55	0.015	0.015	–	3	2	–	–	120	–40	105	SOT-23-6-1		
NJU7098AF1-C	–	1	Single	3	10	0.6	0.015	0.02	–	3	3	–	–	120	–40	105	SOT-23-6-1		
NJU77000	♥	–	1	Single	1.5	5.5	0.00029	1.8	0.001	0.001	0.0008	0.0011	0.0011	–	600	–40	105	SOT-23-5	Ultra-Low Operating Current
NJU77001	♥	–	1	Single	1.5	5.5	0.00029	1.8	0.001	0.001	0.0008	0.0011	0.0011	–	600	–40	105	SOT-23-5, SC-88A	Ultra-Low Operating Current
NJU77002	♥	–	2	Single	1.5	5.5	0.00023	2	0.001	0.001	0.0007	0.001	0.001	–	700	–40	105	SOP8 JEDEC150mil(EMP8), MSOP8(TVSP8), DFN8-U1(ESON8-U1)	PLP♥: MSOP8 (TVSP8), DFN8-U1 (ESON8-U1), Ultra-Low Operating Current
NEW NJU77002A	♥	✓	2	Single	1.5	5.5	0.00023	1.3	0.001	0.001	0.0007	0.001	0.001	–	700	–40	105	SOP8 JEDEC 150mil(EMP8), MSOP8(TVSP8), DFN8-U1(ESON8-U1)	PLP♥ (General only): MSOP8 (TVSP8), DFN8-U1 (ESON8-U1)
NJU77004	♥	–	4	Single	1.5	5.5	0.00023	2.2	0.001	0.001	0.0007	0.001	0.001	–	700	–40	105	SSOP14	Ultra-Low Operating Current
NJU77550	♥	–	1	Single	1.8	5.5	0.055	5	0.001	0.001	0.8	1.7	–	–	24	–55	125	SOT-23-5, SC-88A	PLP♥: SOT-23-5
NJU77551	♥	–	1	Single	1.8	5.5	0.055	5	0.001	0.001	0.8	1.7	–	–	24	–55	125	SOT-23-5, SC-88A	
NJU77552	♥	✓	2	Single	1.8	5.5	0.05	5	0.001	0.001	0.8	1.7	–	–	24	–55	125	SOP8, MSOP8(TVSP8), MSOP8(VSP8), DFN8-U1(ESON8-U1)	PLP♥: MSOP8 (TVSP8), MSOP8 (VSP8), DFN8-U1 (ESON8-U1)
NJU77554	♥	–	4	Single	1.8	5.5	0.05	5	0.001	0.001	0.8	1.7	–	–	24	–55	125	SSOP14	
NJU77572	♥	–	4	Single	2.7	5.5	1.1	4	0.001	0.001	5	10	–	–	8	–55	125	MSOP8(VSP8)	
U.D. NJU77580	–	4	Single	2.7	5.5	2.3	2.5	0.001	0.001	10	20	–	–	6	–55	125	SOT-23-5, SOP8, MSOP8(VSP8), DFN8-U1(ESON8-U1)	High Capacitive Load Drive	
NJU77582	♥	–	2	Single	2.7	5.5	2.3	2.5	0.001	0.001	10	20	–	–	6	–55	125	SOT-23-5, SOP8, MSOP8(VSP8), DFN8-U1(ESON8-U1)	High Capacitive Load Drive
NJU77701	♥	✓	1	Single	2.4	5.5	3.8	1.5	0.001	0.001	35	34	–	–	6	–40	125	SOT-23-5	
NJU77806	♥	–	1	Single	1.8	5.5	0.5	2	0.001	0.001	1.1	4.4	2.4	–	5.5	–40	105	SC-88A	
NJU77902	–	2	Single	6	18	3.5	10	0.001	0.001	9	–	3	–	80	–40	85	DFN8-W2(ESON8-W2)	Capacitive Load Stable, High EMI Immunity, Small Package	
NJU77903	♥	✓	1	Single	6.8	36	9.5	6	0.001	0.001	3.5	–	1.5	–	50	–40	125	TO-252-5-L3, DFN8-W2(ESON8-W2)	Capacitive Load Stable, High EMI Immunity



Precision

※Main Product Only



Precision

Part No.	Auto-motive	No. of Circuit	Power Supply	Supply Voltage [V]		I _{cc} /ch. [mA]	V _{io} [mV]	I _s [nA]	I _o [nA]	SR [V/μsec]	GBW [MHz]	f _T [MHz]	Noise typ.		Operating Temperature [°C]		Package Outline	Notes
				min.	max.								V _{n1} [μVrms]	e _n [nV/√Hz]	min.	max.		
U.D. NL6002	-	2	Single	1.6	5.5	0.015	0.2	0.001	0.001	0.04	0.12	-	-	65	-40	125	DFN8-W2(ESON8-W2), MSOP8(VSP8), SOP8 JEDEC150mil(EMP8)	
U.D. NL6010	-	1	Single	2.1	5.5	0.015	0.01	0.001	0.001	0.11	0.26	-	-	60	-40	125	SOT-23-5	
U.D. NL6011	-	1	Single	2.1	5.5	0.015	0.01	0.001	0.001	0.11	0.26	-	-	60	-40	125	SC-88A	
U.D. NL6012	-	2	Single	2.1	5.5	0.015	0.01	0.001	0.001	0.11	0.26	-	-	60	-40	125	MSOP8(VSP8)	
NJM2119	✓	2	Single	4 to	36	0.5	0.45	18	0.3	0.3	1	0.4	-	-	-30	85	DIP8, DMP8	
NJM2729	-	1	Dual	±3	±18	1.6	0.06	1.2	0.3	0.3	-	1.1	0.08	8	-40	85	SOP8 JEDEC 150mil(EMP8)	
NJM2739	-	2	Dual	±3	±18	1.3	0.06	1.2	0.3	0.3	-	1.1	0.08	8	-40	85	SOP8 JEDEC 150mil(EMP8)	
NJM2748	✓	1	Dual	±6	±16	2	2	0.05	0.025	13	2.2	2	2.5	20	-40	85	DIP8, DMP8	
NJM2748A	-	1	Dual	±6	±16	2	2	0.05	0.025	13	2.2	2	2.5	20	-40	85	DIP8, DMP8	
NJM2749	-	2	Dual	±6	±16	1.9	2.5	0.05	0.025	13	2.2	2	2.5	20	-40	85	DMP8, SOP8 JEDEC 150mil(EMP8)	
NJM2749A	-	2	Dual	±6	±16	1.9	2.5	0.05	0.025	13	2.2	2	2.5	20	-40	85	DIP8, DMP8, SOP8 JEDEC 150mil(EMP8)	
NJM8087	-	1	Dual	±4	±16	1.3	0.8	0.025	0.006	20	-	7	-	10	-40	125	SOP8 JEDEC 150mil(EMP8)	No Phase Reversal
NEW NJM8207 ♥	✓	2	Single	4	35	0.7	1	120	5	0.15	0.3	-	-	-	-40	125	DMP8	
NEW NJM8208 ♥	✓	2	Single	3	35	0.45	1	55	5	0.2	0.35	-	-	-	-40	125	DMP8, MSOP8(VSP8)	PLP ♥: DMP8

Part No.	Auto-motive	No. of Circuit	Power Supply	Supply Voltage [V]		I _{cc} /ch. [mA]	V _{io} [mV]	I _s [nA]	I _o [nA]	SR [V/μsec]	GBW [MHz]	f _T [MHz]	Noise typ.		Operating Temperature [°C]		Package Outline	Notes
				min.	max.								V _{n1} [μVrms]	e _n [nV/√Hz]	min.	max.		
NJM8502	-	2	Dual	±4.5	±16	1.3	0.4	0.025	0.006	20	7	7	0.18	10	-40	125	MSOP8(VSP8)	
NJM8512 ♥	-	2	Dual	±4.5	±16	1.3	0.4	0.025	0.006	20	7	7	-	10	-40	125	MSOP8(VSP8), SOP8 JEDEC 150mil(EMP8)	PLP ♥: MSOP8 (VSP8)
NJM8513 ♥	-	4	Dual	±4.5	±16	1.3	0.4	0.025	0.006	20	7	7	-	10	-40	125	SSOP14	
NJMOP177	-	1	Dual	±3	±18	1.6	0.06	1.2	0.3	0.3	1.1	1.1	0.08	8	-40	105	SOP8 JEDEC 150mil(EMP8)	
NJMOP1772	-	2	Dual	±3	±18	1.3	0.06	1.2	0.3	0.3	1.1	1.1	0.08	8	-40	105	SOP8 JEDEC 150mil(EMP8)	
NJMOP277 ♥	-	1	Dual	±2.25	±18	0.76	0.05	0.5	0.5	0.7	1	1	0.07	8	-40	125	SOP8 JEDEC 150mil(EMP8), MSOP8(VSP8)	PLP ♥: MSOP8 (VSP8), RF Immunity
NJMOP2277 ♥	-	2	Dual	±2.25	±18	0.76	0.05	0.5	0.5	0.7	1	1	0.07	8	-40	125	SOP8 JEDEC 150mil(EMP8), MSOP8(VSP8), DFN8-W2(ESON8-W2)	PLP ♥: MSOP8 (VSP8), DFN8-W2 (ESON8-W2), High EMI Immunity
NJU7051	-	1	Single	1	16	0.015	2	0.001	0.001	0.05	-	0.1	-	-	-40	85	DMP8	
NJU7052	-	2	Single	1	16	0.015	2	0.001	0.001	0.05	-	0.1	-	-	-40	85	DMP8	
NJU7061	-	1	Single	3	16	0.15	2	0.001	0.001	0.4	0.35	0.4	-	27	-20	75	DIP8, DMP8, SSOP8	
NJU7062	-	2	Single	3	16	0.15	2	0.001	0.001	0.4	0.35	0.4	-	27	-20	75	DIP8, DMP8	
NJU7064	-	4	Single	3	16	0.15	2	0.001	0.001	0.4	0.35	0.4	-	27	-20	75	DMP14, SSOP14	
NJU7066 ♥	-	2	Single	2.2	5.5	0.6	0.5	0.001	0.001	0.5	1.3	1.3	-	10	-40	125	MSOP8(VSP8)	
NJU7071	-	1	Single	5	16	0.6	2	0.001	0.001	1.1	-	1	-	-	-20	75	DIP8, DMP8, SSOP8	
NJU7072	-	2	Single	5	16	0.6	2	0.001	0.001	1.1	-	1	-	-	-20	75	DIP8, DMP8	
NJU7074	-	4	Single	5	16	0.6	2	0.001	0.001	1.1	-	1	-	-	-20	75	DMP14, SSOP14	
NJU7076 ♥	-	1	Single	2.2	5.5	0.6	0.15	0.001	0.001	0.5	1.3	1.3	-	10	-40	125	SOT-23-5	
NJU7076B	-	1	Single	2.2	5.5	0.6	0.3	0.001	0.001	0.5	1.3	1.3	-	10	-40	125	SC-88A	
NJU7077 ♥	✓	2	Single	2.2	5.5	0.6	0.15	0.001	0.001	0.5	1.3	1.3	-	10	-40	125	MSOP8(VSP8)	
NJU7078 ♥	-	4	Single	2.2	5.5	0.6	0.15	0.001	0.001	0.5	1.3	1.3	-	10	-40	125	SSOP14	
NJU7091A	-	1	Single	1	5.5	0.015	2	0.001	0.001	0.1	0.19	0.2	-	-	-40	85	SOT-23-5	
NJU7092A	-	1	Single	1	5.5	0.08	2	0.001	0.001	1	1	1	-	-	-40	85	SOT-23-5	
NJU7093A	-	1	Single	1	5.5	0.2	2	0.001	0.001	2.4	1	1	-	-	-40	85	SOT-23-5	
NJU7098A	-	1	Single	3	10	0.55	0.015	0.015	-	3	2	-	-	120	-40	105	SOT-23-6-1	
NJU7098AF1-C	-	1	Single	3	10	0.6	0.015	0.02	-	3	3	-	-	120	-40	105	SOT-23-6-1	

Operational Amplifiers & Comparators

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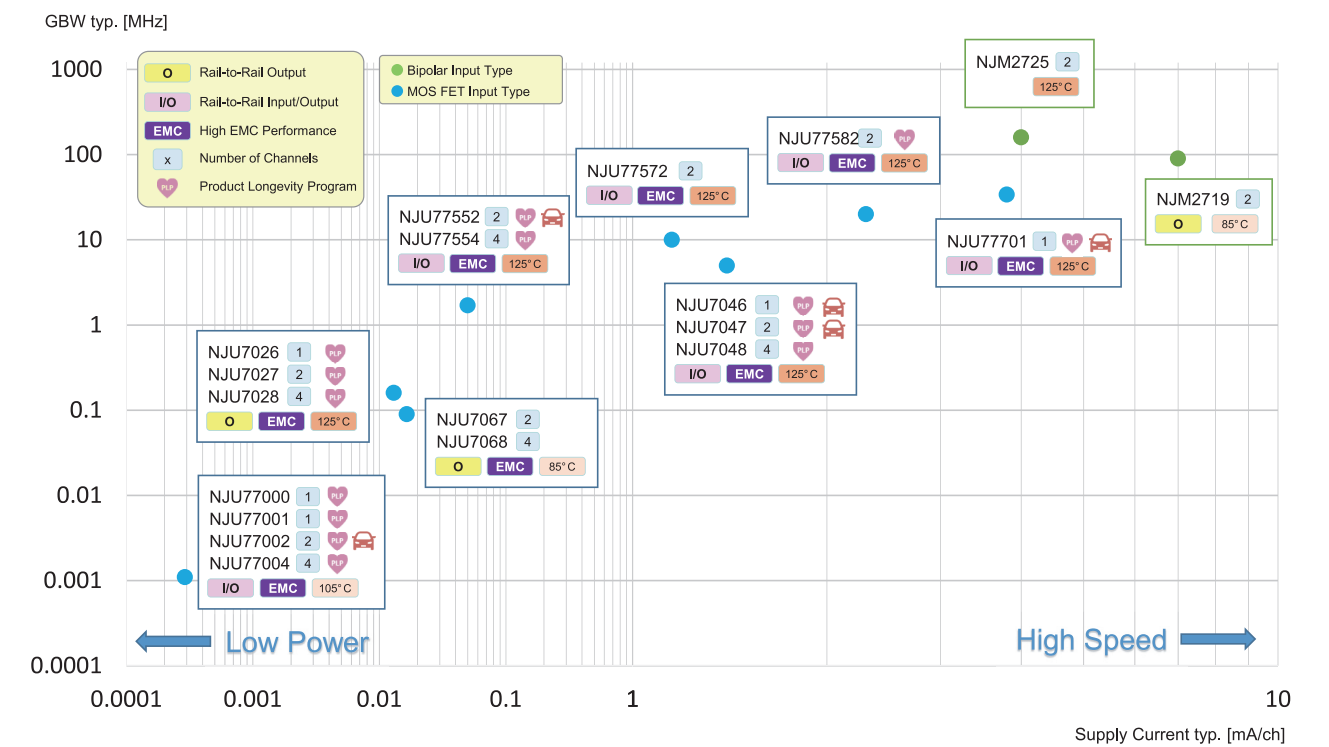
Audio Op-Amps

Part No.	Auto-motive	No. of Circuit	Power Supply	Supply Voltage [V]		I _{cc} /ch. [mA]	V _{IO} [mV]	I _b [nA]	I _{io} [nA]	SR [V/μsec]	GBW [MHz]	f _T [MHz]	Noise typ.		Operating Temperature [°C]		Package Outline	Notes	
				min.	max.								V _{Ni} [μVrms]	e _n [nV/√Hz]	min.	max.			
NJM2058	—	4	Dual	± 4	± 18	1.75	6	20	5	1	4	5	1.4	14	-40	85	DMP14, SSOP14		
NJM2059	—	4	Dual	± 4	± 18	1.75	6	20	5	2	6.8	8	1.4	14	-40	85	DMP14, SSOP14		
NJM2060	—	4	Dual	± 4	± 18	2.25	6	40	5	4	10	10	1.2	10	-20	75	DMP14, SSOP14		
NJM2068	—	2	Dual	± 4	± 18	2.5	3	150	5	6	24	5.5	0.44	4	-20	75	DIP8, DMP8, SSOP8		
NJM2122	—	2	Dual	± 2	± 7	3.5	6	3600	450	2.4	12	—	0.56	1.5	-20	75	DIP8, DMP8		
NJM2737	—	2	Single	1.8	6	0.6	5	200	5	0.7	3.1	2	—	5	-40	85	DIP8, DMP8, SSOP8, MSOP8(TVSP8)		
NJM2740	—	2	Dual	± 1.1	± 3.5	1.75	6	100	5	4	12	—	—	—	-40	125	DMP8, SSOP8, MSOP8(TVSP8)		
NJM2741	✓	1	Single	2.5	14	2.2	6	100	5	3.5	10	10	—	10	-40	85	SC-88A, SOT-23-5		
NJM2745	—	4	Dual	± 2	± 15.5	3.25	3	100	5	5	15	5	—	5	-40	85	DMP14, SSOP14		
NJM2746	✓	2	Single	2.5	14	2	6	100	5	3.5	10	10	—	10	-40	85	DMP8, SOP8 JEDEC 150mil(EMP8), DFN8-U1(ESON8-U1), SSOP8, MSOP8(TVSP8)		
NJM2747	✓	4	Single	2.5	14	2	6	100	5	3.5	10	10	—	10	-40	85	DMP14, PCSP20-CC, SSOP14		
NJM4556A	—	2	Dual	± 2	± 18	4.5	6	50	5	3	8	4	—	12	-40	85	DIP8, DMP8, SSOP8		
NJM4558	—	2	Dual	± 4	± 18	1.75	6	25	5	1	3	3	1.4	12.5	-40	85	DIP8, DMP8, SOP8 JEDEC 150mil(EMP8), SSOP8		
NJM4558C	—	2	Dual	± 4	± 18	1.75	6	25	5	1.5	3.5	3	1.4	12	-40	85	SOP8, SSOP8		
NJM4565	—	2	Dual	± 4	± 18	2.25	3	50	2	4	10	5	1.2	9	-40	85	DIP8, DMP8, SOP8 JEDEC 150mil(EMP8), SSOP8		
NJM4580	—	2	Dual	± 2	± 18	3	3	100	5	5	15	5	0.8	5	-40	85	DIP8, DMP8, SOP8 JEDEC 150mil(EMP8), SSOP8, MSOP8(VSP8)		
NJM4580C	—	2	Dual	± 2	± 18	3	3	100	5	5	15	5	0.8	5	-40	85	SOP8, SSOP8		
NJM4585	—	2	Dual	± 4	± 18	2.5	3	260	5	6.8	19	7.5	0.5	3.5	-40	125	DMP8		
NJM5532	—	2	Dual	± 3	± 22	4.5	4	200	10	8	10	8	0.5	5	-20	75	DIP8, DMP8		
NJM5532C	—	2	Dual	± 3	± 22	4.5	4	200	10	9	10	—	0.6	5	-40	85	SOP8		
NJM8068	—	2	Dual	± 4	± 18	2.5	3	260	5	6.8	19	7.5	0.5	3.5	-40	125	SOP8, MSOP8(TVSP8)	Wide Operating Temperature (-40°C to +125°C)	
NJM8080	—	2	Dual	± 2	± 18	3	3	100	5	5	15	5	—	5	-40	125	SOP8, MSOP8(TVSP8), SSOP8	Wide Operating Temperature (-40°C to +125°C)	
NJM8087	—	1	Dual	± 4	± 16	1.3	0.8	0.025	0.006	20	—	7	—	10	-40	125	SOP8 JEDEC 150mil(EMP8)	No Phase Reversal	
NJM8202	♥	✓	2	Single	2.5	14	2	6	100	5	3.5	10	10	—	10	-40	85	DMP8, SOP8 JEDEC 150mil(EMP8), SSOP8, MSOP8(TVSP8), MSOP8(VSP8)	PLP: MSOP8 (TVSP8)

Part No.	Auto-motive	No. of Circuit	Power Supply	Supply Voltage [V]		I _{cc} /ch. [mA]	V _{IO} [mV]	I _b [nA]	I _{io} [nA]	SR [V/μsec]	GBW [MHz]	f _T [MHz]	Noise typ.		Operating Temperature [°C]		Package Outline	Notes	
				min.	max.								V _{Ni} [μVrms]	e _n [nV/√Hz]	min.	max.			
NJM8204	♥	✓	4	Single	2.5	14	2	6	100	5	3.5	10	—	—	10	-40	125	SSOP14	
NJM8530	♥	✓	1	Single	1.8	14	0.32	4	50	5	0.4	1	1	—	10	-40	125	SOT-23-5	
NJM8532	♥	✓	2	Single	1.8	14	0.29	4	50	5	0.35	1	1	—	10	-40	125	MSOP8(TVSP8), DMP8, SSOP8	PLP: MSOP8 (TVSP8)
NJM8534	—	4	Single	1.8	14	0.3	4	50	5	0.3	1	1	—	10	-40	125	SSOP14		
NJU77806	♥	—	1	Single	1.8	5.5	0.5	2	0.001	0.001	1.1	4.4	2.4	—	5.5	-40	105	SC-88A	

Low power and High speed

※Main Product Only



High Speed/Wide Band

Part No.	Auto-motive	No. of Circuit	Power Supply	Supply Voltage [V]		I _{cc} /ch. [mA]	V _{IO} [mV]	I _b [nA]	I _{io} [nA]	SR [V/μsec]	GBW [MHz]	f _T [MHz]	Noise typ.		Operating Temperature [°C]		Package Outline	Notes
				min.	max.								V _{Ni} [μVrms]	e _n [nV/√Hz]	min.	max.		
NJM14558	—	2	Dual	± 2	± 7	1.35	3	70	5	2.5	5	4	1.4	10	-40	85	DIP8, DMP8, SOP8 JEDEC 150mil(EMP8), SSOP8, MSOP8(VSP8)	
NJM2059	—	4	Dual	± 4	± 18	1.75	6	20	5	2	6.8	8	1.4	14	-40	85	DMP14, SSOP14	
NJM2060	—	4	Dual	± 4	± 18	2.25	6	40	5	4	10	10	1.2	10	-20	75	DMP14, SSOP14	
NJM2068	—	2	Dual	± 4	± 18	2.5	3	150	5	6	24	5.5	0.44	4	-20	75	DIP8, DMP8, SSOP8	
NJM2100	—	2	Dual	± 1	± 3.5	1.75	6	100	—	4	12	1.9	0.6	—	-40	85	DIP8, DMP8, SOP8 JEDEC 150mil(EMP8), SOP8	

Operational Amplifiers & Comparators

U.D. : Under Development **NEW** : New product **♥** : Products available in PRODUCT LONGEVITY PROGRAM **xxxx** : Products available in PRODUCT LONGEVITY PROGRAM with time limit



High Speed/Wide Band

Part No.	Auto-motive	No. of Circuit	Power Supply	Supply Voltage [V]		I _{cc} /ch. [mA]	V _{io} [mV]	I _b [nA]	I _{io} [nA]	SR [V/μsec]	GBW [MHz]	f _r [MHz]	Noise typ.		Operating Temperature [°C]		Package Outline	Notes
				min.	max.								V _{ni} [μVrms]	e _n [nV/√Hz]	min.	max.		
NJM2115	-	2	Dual	±1	±7	1.75	6	100	-	4	12	4.4	0.5	-	-40	85	DIP8, DMP8, SSOP8, MSOP8(TVSP8)	
NJM2122	-	2	Dual	±2	±7	3.5	6	3600	450	2.4	12	-	0.56	1.5	-20	75	DIP8, DMP8	
NJM2136	-	1	Dual	±1.35	±6	0.63	5	500	20	45	200	40	-	-	-40	85	DMP8, SSOP8	
NJM2137	-	2	Dual	±1.35	±6	0.57	5	500	20	45	200	40	-	-	-40	85	DIP8, DMP8, SSOP8	
NJM2140	-	2	Dual	±1	±7	1.75	6	100	10	4	12	12	-	-	-40	85	MSOP8(TVSP8), MSOP8(VSP8)	
NJM2710	-	6	Dual	±2	±4.5	1.9	7	2000	350	260	1000	180	-	6.8	-40	85	DMP20, SSOP20	
NJM2711	-	1	Dual	±2	±4.5	1.9	7	2000	350	260	1000	180	-	6.8	-40	85	SOT-23-5	
NJM2712	-	2	Dual	±2	±4.5	1.9	7	2000	350	260	1000	180	-	6.8	-40	85	DMP8, MSOP8(TVSP8)	
NJM2716	-	1	Single	2.7	12	4.2	10	1000	200	40	25	30	-	-	-40	85	SOT-23-5	
NJM2717	-	2	Single	2.7	12	4	11	2000	200	40	25	20	-	-	-40	85	DIP8, DMP8, SSOP8, MSOP8(TVSP8)	
NJM2718	-	2	Single	3	36	1.85	4	1200	100	9	1.8	2	-	24	-40	85	SOP8 JEDEC 150mil(EMP8), SSOP8	
NJM2719	-	2	Dual	±2.25	±5	7	9	2900	200	60	90	100	-	2.5	-40	85	SSOP8, MSOP8(TVSP8)	
NJM2723	-	1	Dual	±3.5	±17.5	2.9	20	2000	-	2000	75	100	-	6	-40	85	DIP8, SOP8 JEDEC 150mil(EMP8)	Current Feedback Type
NEW NJM2725 ♥	-	2	Single	4	10	4	1	4600	500	15	160	-	-	1.4	-40	125	SOP8, MSOP8(VSP8)	PLP: MSOP8 (VSP8)
NJM2740	-	2	Dual	±1.1	±3.5	1.75	6	100	5	4	12	-	-	-40	125	DMP8, SSOP8, MSOP8(TVSP8)		
NJM2741	✓	1	Single	2.5	14	2.2	6	100	5	3.5	10	10	-	10	-40	85	SC-88A, SOT-23-5	
NJM2745	-	4	Dual	±2	±15.5	3.25	3	100	5	5	15	5	-	5	-40	85	DMP14, SSOP14	
NJM2746	✓	2	Single	2.5	14	2	6	100	5	3.5	10	10	-	10	-40	85	DMP8, SOP8 JEDEC 150mil(EMP8), DFN8-U1(ESON8-U1), SSOP8, MSOP8(TVSP8)	
NJM2747	✓	4	Single	2.5	14	2	6	100	5	3.5	10	10	-	10	-40	85	DMP14, PCSP20-CC, SSOP14	
NJM4556A	-	2	Dual	±2	±18	4.5	6	50	5	3	8	4	-	12	-40	85	DIP8, DMP8, SSOP8	
NJM4565	-	2	Dual	±4	±18	2.25	3	50	2	4	10	5	1.2	9	-40	85	DIP8, DMP8, SOP8 JEDEC 150mil(EMP8), SSOP8	
NJM4580	-	2	Dual	±2	±18	3	3	100	5	5	15	5	0.8	5	-40	85	DIP8, DMP8, SOP8 JEDEC 150mil(EMP8), SSOP8, MSOP8(VSP8)	
NJM4580C	-	2	Dual	±2	±18	3	3	100	5	5	15	5	0.8	5	-40	85	SOP8, SSOP8	






Part No.	Auto-motive	No. of Circuit	Power Supply	Supply Voltage [V]		I _{cc} /ch. [mA]	V _{io} [mV]	I _b [nA]	I _{io} [nA]	SR [V/μsec]	GBW [MHz]	f _r [MHz]	Noise typ.		Operating Temperature [°C]		Package Outline	Notes
				min.	max.								V _{ni} [μVrms]	e _n [nV/√Hz]	min.	max.		
NJM4585	-	2	Dual	±4	±18	2.5	3	260	5	6.8	19	7.5	0.5	3.5	-40	125	DMP8	
NJM5532	-	2	Dual	±3	±22	4.5	4	200	10	8	10	8	0.5	5	-20	75	DIP8, DMP8	
NJM5532C	-	2	Dual	±3	±22	4.5	4	200	10	9	10	-	0.6	5	-40	85	SOP8	
NJM8065	-	2	Dual	±4	±18	2.25	3	50	2	4	10	4	-	8	-40	125	SOP8, DMP8, MSOP8(TVSP8), SSOP8	Wide Operating Temperature (-40°C to +125°C)
NJM8068	-	2	Dual	±4	±18	2.5	3	260	5	6.8	19	7.5	0.5	3.5	-40	125	SOP8, MSOP8(TVSP8)	Wide Operating Temperature (-40°C to +125°C)
NJM8080	-	2	Dual	±2	±18	3	3	100	5	5	15	5	-	5	-40	125	SOP8, MSOP8(TVSP8), SSOP8	Wide Operating Temperature (-40°C to +125°C)
NJM8087	-	1	Dual	±4	±16	1.3	0.8	0.025	0.006	20	-	7	-	10	-40	125	SOP8 JEDEC 150mil(EMP8)	No Phase Reversal
NJM8202 ♥	✓	2	Single	2.5	14	2	6	100	5	3.5	10	10	-	10	-40	85	DMP8, SOP8 JEDEC 150mil(EMP8), SSOP8, MSOP8(TVSP8), MSOP8(VSP8)	PLP: DMP8
NJM8204 ♥	✓	4	Single	2.5	14	2	6	100	5	3.5	10	-	-	10	-40	125	SSOP14	
NEW NJM8212 ♥	✓	2	Single	2.5	14	3	6	900	30	3.5	6	-	-	18	-40	125	DMP8	
NJM8502 ♥	-	2	Dual	±4.5	±16	1.3	0.4	0.025	0.006	20	7	7	0.18	10	-40	125	MSOP8(VSP8)	
NJM8512 ♥	-	2	Dual	±4.5	±16	1.3	0.4	0.025	0.006	20	7	7	-	10	-40	125	MSOP8(VSP8), SOP8 JEDEC 150mil(EMP8)	PLP: MSOP8 (VSP8)
NJM8513 ♥	-	4	Dual	±4.5	±16	1.3	0.4	0.025	0.006	20	7	7	-	10	-40	125	SSOP14	
NEW NJM8801	-	2	Dual	±2	±18	3	3	100	5	5	15	-	0.8	4.5	-40	85	EMP8, SSOP8	
NEW NJM8830 ♥	-	2	Dual	±2	±5.25	3.25	2	150	10	30	90	60	0.34	2.5	-40	125	HSOP8-M1, DFN8-W1(ESON8-W1)	PLP: DFN8-W1 (ESON8-W1)
NJU7046 ♥	✓	1	Single	2.7	5.5	1.4	5	0.001	0.001	9	5	4	-	20	-40	125	SOT-23-5, SC-88A	
NJU7047 ♥	✓	2	Single	2.7	5.5	1.35	5	0.001	0.001	9	5	4	-	20	-40	125	SOP8 JEDEC 150mil(EMP8), MSOP8(TVSP8), DFN8-U1(ESON8-U1)	PLP: MSOP8 (TVSP8)
NJU7048 ♥	-	4	Single	2.7	5.5	1.325	5	0.001	0.001	9	5	4	-	20	-40	125	SOP14, SSOP14	PLP: SSOP14
NJU77572 ♥	-	4	Single	2.7	5.5	1.1	4	0.001	0.001	5	10	-	-	8	-55	125	MSOP8(VSP8)	
U.D. NJU77580	-	4	Single	2.7	5.5	2.3	2.5	0.001	0.001	10	20	-	-	6	-55	125	SOT-23-5, SOP8, MSOP8(VSP8), DFN8-U1(ESON8-U1)	High Capacitive Load Drive
NJU77582 ♥	-	2	Single	2.7	5.5	2.3	2.5	0.001	0.001	10	20	-	-	6	-55	125	SOT-23-5, SOP8, MSOP8(VSP8), DFN8-U1(ESON8-U1)	High Capacitive Load Drive
NJU77701 ♥	✓	1	Single	2.4	5.5	3.8	1.5	0.001	0.001	35	34	-	-	6	-40	125	SOT-23-5	










Operational Amplifiers & Comparators

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Low Operating Current

Part No.	Auto-motive	No. of Cir-cuit	Power Supply	Supply Voltage [V]		I _{cc} /ch. [mA]	V _{IO} [mV]	I _B [nA]	I _{IO} [nA]	SR [V/μsec]	GBW [MHz]	f _T [MHz]	Noise typ.		Operating Temperature [°C]		Package Outline	Notes
				min.	max.								V _{Ni} [μVrms]	e _n [nV/√Hz]	min.	max.		
U.D. NL6002	-	2	Single	1.6	5.5	0.015	0.2	0.001	0.001	0.04	0.12	-	-	65	-40	125	DFN8-W2(ESON8-W2), MSOP8(VSP8), SOP8 JEDEC150mil(EMP8)	
U.D. NL6010	-	1	Single	2.1	5.5	0.015	0.01	0.001	0.001	0.11	0.26	-	-	60	-40	125	SOT-23-5	
U.D. NL6011	-	1	Single	2.1	5.5	0.015	0.01	0.001	0.001	0.11	0.26	-	-	60	-40	125	SC-88A	
U.D. NL6012	-	2	Single	2.1	5.5	0.015	0.01	0.001	0.001	0.11	0.26	-	-	60	-40	125	MSOP8(VSP8)	
NJM8524	-	4	Single	3	36	0.025	1.8	3	0.5	0.04	0.1	0.1	-	60	-40	85	SSOP14	
NJU7001	-	1	Single	1	16	0.015	10	0.001	0.001	0.05	0.15	0.1	-	37.5	-20	75	DIP8, DMP8, SSOP8	
NJU7002	-	2	Single	1	16	0.015	10	0.001	0.001	0.05	0.15	0.1	-	37.5	-20	75	DIP8, DMP8	
NJU7004	-	4	Single	1	16	0.015	10	0.001	0.001	0.05	0.15	0.1	-	37.5	-20	75	DMP14, SSOP14	
NJU7006	-	1	Single	1.8	3.6	0.003	2	0.001	0.001	0.04	-	0.095	-	-	-40	85	SOT-23-5	
NJU7007	-	1	Single	1	5.5	0.015	4	0.001	0.001	0.1	-	0.2	-	-	-40	85	SC-88A	
NJU7011	-	3	Single	1	5.5	0.015	10	0.001	0.001	0.1	0.2	0.2	-	-	-40	85	SOT-23-5	
NJU7014	-	2	Single	1	5.5	0.015	10	0.001	0.001	0.1	0.2	0.2	-	-	-40	85	DMP8, SSOP8, MSOP8(TVSP8), MSOP8(VSP8)	
NJU7019	-	2	Single	1	5.5	0.02	10	0.001	0.001	0.25	-	0.4	-	-	-40	85	MSOP8(VSP8)	
NJU7026	 2031	-	Single	1.8	5.5	0.013	4	0.001	0.001	0.05	0.16	0.16	-	50	-40	125	SC-88A SOT-23-5	
NJU7027		-	Single	1.8	5.5	0.013	4	0.001	0.001	0.05	0.16	0.16	-	50	-40	125	DFN8-U1(ESON8-U1), MSOP8(TVSP8)	
NJU7028		-	Single	1.8	5.5	0.012	4	0.001	0.001	0.05	0.16	0.16	-	50	-40	125	SSOP14	
NJU7042	-	1	Single	2.7	5.5	0.015	5	0.001	0.001	0.03	-	0.047	-	-	-40	85	SOT-23-5	
NJU7051	-	1	Single	1	16	0.015	2	0.001	0.001	0.05	-	0.1	-	-	-40	85	DMP8	
NJU7052	-	2	Single	1	16	0.015	2	0.001	0.001	0.05	-	0.1	-	-	-40	85	DMP8	
NJU7067	-	2	Single	4	16	0.014	4	0.001	0.001	0.04	0.06	-	-	45	-40	85	DMP8, SSOP8	
NJU7068	-	4	Single	4	16	0.014	4	0.001	0.001	0.04	0.06	-	-	45	-40	85	DMP14, SSOP14	
NJU7091A	-	1	Single	1	5.5	0.015	2	0.001	0.001	0.1	0.19	0.2	-	-	-40	85	SOT-23-5	
NJU7094	-	2	Single	1	5.5	0.015	4	0.001	0.001	0.1	0.19	0.2	-	-	-40	85	DIP8, DMP8, SSOP8, MSOP8(TVSP8), MSOP8(VSP8)	
NJU77000		-	Single	1.5	5.5	0.00029	1.8	0.001	0.001	0.0008	0.0011	0.0011	-	600	-40	105	SOT-23-5	Ultra-Low Operating Current
NEW NJU77000A	-	1	Single	1.5	5.5	0.00029	1	0.001	0.001	0.0008	0.0011	0.0011	-	600	-40	105	SOT-23-5	
NJU77001		-	Single	1.5	5.5	0.00029	1.8	0.001	0.001	0.0008	0.0011	0.0011	-	600	-40	105	SOT-23-5, SC-88A	Ultra-Low Operating Current
NEW NJU77001A	-	1	Single	1.5	5.5	0.00029	1	0.001	0.001	0.0008	0.0011	0.0011	-	600	-40	105	SOT-23-5, SC-88A	

Part No.	Auto-motive	No. of Cir-cuit	Power Supply	Supply Voltage [V]		I _{cc} /ch. [mA]	V _{IO} [mV]	I _B [nA]	I _{IO} [nA]	SR [V/μsec]	GBW [MHz]	f _T [MHz]	Noise typ.		Operating Temperature [°C]		Package Outline	Notes	
				min.	max.								V _{Ni} [μVrms]	e _n [nV/√Hz]	min.	max.			
NJU77002		-	2	Single	1.5	5.5	0.00023	2	0.001	0.001	0.0007	0.001	0.001	-	700	-40	105	SOP8 JEDEC 150mil(EMP8), MSOP8(TVSP8), DFN8-U1(ESON8-U1)	PLP  : MSOP8 (TVSP8), DFN8-U1 (ESON8-U1), Ultra-Low Operating Current
NEW NJU77002A		✓	2	Single	1.5	5.5	0.00023	1.3	0.001	0.001	0.0007	0.001	0.001	-	700	-40	105	SOP8 JEDEC 150mil(EMP8), MSOP8(TVSP8), DFN8-U1(ESON8-U1)	PLP  (General only): MSOP8 (TVSP8), DFN8-U1 (ESON8-U1)
NJU77004		-	4	Single	1.5	5.5	0.00023	2.2	0.001	0.001	0.0007	0.001	0.001	-	700	-40	105	SSOP14	Ultra-Low Operating Current
NEW NJU77004A		-	4	Single	1.5	5.5	0.00023	1.5	0.001	0.001	0.0007	0.001	0.001	-	700	-40	105	SSOP14	
NJU77552		✓	2	Single	1.8	5.5	0.05	5	0.001	0.001	0.8	1.7	-	-	24	-55	125	SOP8, MSOP8(TVSP8), MSOP8(VSP8), DFN8-U1(ESON8-U1)	PLP  : MSOP8 (TVSP8), MSOP8 (VSP8), DFN8-U1 (ESON8-U1)
NJU77554		-	4	Single	1.8	5.5	0.05	5	0.001	0.001	0.8	1.7	-	-	24	-55	125	SSOP14	

Low Noise

Part No.	Auto-motive	No. of Circuit	Power Supply	Supply Voltage [V]		I _{cc} /ch. [mA]	V _{IO} [mV]	I _B [nA]	I _{IO} [nA]	SR [V/μsec]	GBW [MHz]	f _T [MHz]	Noise typ.		Operating Temperature [°C]		Package Outline	Notes
				min.	max.								V _{Ni} [μVrms]	e _n [nV/√Hz]	min.	max.		
U.D. NL8802	-	2	Dual	±3	±22	4	5	500	100	15	13	23	0.9	5.5	-40	85	SOP JEDEC150mil(EMP8), ESON8-W1	
NJM12902	-	4	Single	2	14	0.25	5	20	5	0.7	1.5	1	-	-	-40	85	DMP14, SSOP14, PCSP14-C3	
NJM12904	-	2	Single	2	14	0.35	5	20	5	0.7	1.5	1	-	-	-40	85	DIP8, DMP8, SOP8 JEDEC 150mil(EMP8), SSOP8, MSOP8(TVSP8), MSOP8(VSP8)	
NJM2068	-	2	Dual	±4	±18	2.5	3	150	5	6	24	5.5	0.44	4	-20	75	DIP8, DMP8, SSOP8	
NJM2100	-	2	Dual	±1	±3.5	1.75	6	100	-	4	12	1.9	0.6	-	-40	85	DIP8, DMP8, SOP8 JEDEC 150mil(EMP8), SSOP8	
NJM2115	-	2	Dual	±1	±7	1.75	6	100	-	4	12	4.4	0.5	-	-40	85	DIP8, DMP8, SSOP8, MSOP8(TVSP8)	
NJM2119	✓	2	Single	4	36	0.5	0.45	18	0.3	0.3	1	0.4	-	-	-30	85	DIP8, DMP8	
NJM2122	-	2	Dual	±2	±7	3.5	6	3600	450	2.4	12	-	0.56	1.5	-20	75	DIP8, DMP8	
NJM2125	-	1	Single	2.7	20	1	7	25	5	1.2	1	1.2	-	-	-40	85	SOT-23-5	
NJM2136	-	1	Dual	±1.35	±6	0.63	5	500	20	45	200	40	-	-	-40	85	DMP8, SSOP8	
NJM2137	-	2	Dual	±1.35	±6	0.57	5	500	20	45	200	40	-	-	-40	85	DIP8, DMP8, SSOP8	
NJM2140	-	2	Dual	±1	±7	1.75	6	100	10	4	12	12	-	-	-40	85	MSOP8(TVSP8), MSOP8(VSP8)	
NJM2143	-	2	Single	3	20	0.35	7	25	5	0.5	0.6	-	-	-	-40	85	MSOP8(TVSP8), MSOP8(VSP8)	
NJM2716	-	1	Single	2.7	12	4.2	10	1000	200	40	25	30	-	-	-40	85	SOT-23-5	

Operational Amplifiers & Comparators

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Low Noise

Part No.	Auto-motive	No. of Circuit	Power Supply	Supply Voltage [V]		I _{cc} /ch. [mA]	V _{io} [mV]	I _b [nA]	I _{io} [nA]	SR [V/μsec]	GBW [MHz]	f _T [MHz]	Noise typ.		Operating Temperature [°C]		Package Outline	Notes
				min.	max.								V _{ni} [μVrms]	e _n [nV/√Hz]	min.	max.		
NJM2717	-	2	Single	2.7	12	4	11	2000	200	40	25	20	-	-	-40	85	DIP8, DMP8, SSOP8, MSOP8(TVSP8)	
NJM2719	-	2	Dual	± 2.25	± 5	7	9	2900	200	60	90	100	-	2.5	-40	85	SSOP8, MSOP8(TVSP8)	
NJM2723	-	1	Dual	± 3.5	± 17.5	2.9	20	2000	-	2000	75	100	-	6	-40	85	DIP8, SOP8 JEDEC 150mil(EMP8)	Current Feedback Type
NJM2745	-	4	Dual	± 2	± 15.5	3.25	3	100	5	5	15	5	-	5	-40	85	DMP14, SSOP14	
NJM2902	✓	4	Single	3	32	0.25	10	20	5	0.5	0.5	-	-	-	-40	85	DMP14, SSOP14	
NJM2904	✓	2	Single	3	32	0.35	7	25	5	0.5	-	0.6	-	-	-40	85	DIP8, DMP8, SOP8 JEDEC 150mil(EMP8), SSOP8, MSOP8(TVSP8), MSOP8(VSP8)	
NJM3404A	-	2	Single	4	36	1	5	70	5	1.2	2	1.2	-	-	-40	85	DIP8, DMP8 SSOP8	
NJM4580	-	2	Dual	± 2	± 18	3	3	100	5	5	15	5	0.8	5	-40	85	DIP8, DMP8, SOP8 JEDEC 150mil(EMP8), SSOP8, MSOP8(VSP8)	
NJM4580C	-	2	Dual	± 2	± 18	3	3	100	5	5	15	5	0.8	5	-40	85	SOP8, SSOP8	
NJM4585	-	2	Dual	± 4	± 18	2.5	3	260	5	6.8	19	7.5	0.5	3.5	-40	125	DMP8	
NJM5532	-	2	Dual	± 3	± 22	4.5	4	200	10	8	10	8	0.5	5	-20	75	DIP8, DMP8	
NJM5532C	-	2	Dual	± 3	± 22	4.5	4	200	10	9	10	-	0.6	5	-40	85	SOP8	
NJM8065	-	2	Dual	± 4	± 18	2.25	3	50	2	4	10	4	-	8	-40	125	SOP8, DMP8 MSOP8(TVSP8), SSOP8	Wide Temperature Range (-40°C to +125°C)
NJM8068	-	2	Dual	± 4	± 18	2.5	3	260	5	6.8	19	7.5	0.5	3.5	-40	125	SOP8, MSOP8(TVSP8)	Wide Temperature Range (-40°C to +125°C)
NJM8080	-	2	Dual	± 2	± 18	3	3	100	5	5	15	5	-	5	-40	125	SOP8, MSOP8(TVSP8), SSOP8	Wide Temperature Range (-40°C to +125°C)
NJM8087	-	1	Dual	± 4	± 16	1.3	0.8	0.025	0.006	20	-	7	-	10	-40	125	SOP8 JEDEC 150mil(EMP8)	No Phase Reversal
NEW NJM8207	✓	2	Single	4	35	0.7	1	120	5	0.15	0.3	-	-	-	-40	125	DMP8	
NEW NJM8208 ♥	✓	2	Single	3	35	0.45	1	55	5	0.2	0.35	-	-	-	-40	125	DMP8, MSOP8(VSP8)	PLP♥: DMP8
NEW NJM8801	-	2	Dual	± 2	± 18	3	3	100	5	5	15	-	0.8	4.5	-40	85	EMP8, SSOP8	
NEW NJM8830 ♥	-	2	Dual	± 2	± 5.25	3.25	2	150	10	30	90	60	0.34	2.5	-40	125	HSOP-M1, DFN8-W1(ESON8-W1),	PLP♥: DFN8-W1(ESON8-W1)
NJU7001	-	1	Single	1	16	0.015	10	0.001	0.001	0.05	0.15	0.1	-	37.5	-20	75	DIP8, DMP8 SSOP8	
NJU7006	-	1	Single	1.8	3.6	0.003	2	0.001	0.001	0.04	-	0.095	-	-	-40	85	SOT-23-5	
NJU7007	-	1	Single	1	5.5	0.015	4	0.001	0.001	0.1	-	0.2	-	-	-40	85	SC-88A	
NJU7008	-	1	Single	1	5.5	0.2	4	0.001	0.001	2.4	-	1	-	-	-40	85	SC-88A	
NJU7011	-	1	Single	1	5.5	0.015	10	0.001	0.001	0.1	0.2	0.2	-	-	-40	85	SOT-23-5	
NJU7012	-	1	Single	1	5.5	0.08	10	0.001	0.001	1	1	1	-	-	-40	85	SOT-23-5	

Part No.	Auto-motive	No. of Circuit	Power Supply	Supply Voltage [V]		I _{cc} /ch. [mA]	V _{io} [mV]	I _b [nA]	I _{io} [nA]	SR [V/μsec]	GBW [MHz]	f _T [MHz]	Noise typ.		Operating Temperature [°C]		Package Outline	Notes
				min.	max.								V _{ni} [μVrms]	e _n [nV/√Hz]	min.	max.		
NJU7013	-	1	Single	1	5.5	0.2	10	0.001	0.001	2.4	1	1	-	-	-40	85	SOT-23-5	
NJU7014	-	2	Single	1	5.5	0.015	10	0.001	0.001	0.1	0.2	0.2	-	-	-40	85	DMP8, SSOP8, MSOP8(TVSP8), MSOP8(VSP8)	
NJU7015	-	2	Single	1	5.5	0.08	10	0.001	0.001	1	1	1	-	-	-40	85	DIP8, DMP8, SSOP8, MSOP8(TVSP8), MSOP8(VSP8)	
NJU7016	-	2	Single	1	5.5	0.2	10	0.001	0.001	2.4	1	1	-	-	-40	85	DIP8, DMP8, SSOP8, MSOP8(TVSP8), MSOP8(VSP8)	
NJU7017	-	1	Single	1	5.5	0.75	10	0.001	0.001	3.7	1	1	-	-	-40	85	SOT-23-5	
NJU7018	-	2	Single	1	5.5	0.75	10	0.001	0.001	3.7	1	1	-	-	-40	85	DIP8, DMP8, SSOP8, MSOP8(TVSP8), MSOP8(VSP8)	
NJU7019	-	2	Single	1	5.5	0.02	10	0.001	0.001	0.25	-	0.4	-	-	-40	85	MSOP8(VSP8)	
NJU7042	-	1	Single	2.7	5.5	0.015	5	0.001	0.001	0.03	-	0.047	-	-	-40	85	SOT-23-5	
NJU7051	-	1	Single	1	16	0.015	2	0.001	0.001	0.05	-	0.1	-	-	-40	85	DMP8	
NJU7052	-	2	Single	1	16	0.015	2	0.001	0.001	0.05	-	0.1	-	-	-40	85	DMP8	
NJU7061	-	1	Single	3	16	0.15	2	0.001	0.001	0.4	0.35	0.4	-	27	-20	75	DIP8, DMP8, SSOP8	
NJU7062	-	2	Single	3	16	0.15	2	0.001	0.001	0.4	0.35	0.4	-	27	-20	75	DIP8, DMP8	
NJU7064	-	4	Single	3	16	0.15	2	0.001	0.001	0.4	0.35	0.4	-	27	-20	75	DMP14, SSOP14	
NJU7071	-	1	Single	5	16	0.6	2	0.001	0.001	1.1	-	1	-	-	-20	75	DIP8, DMP8, SSOP8	
NJU7072	-	2	Single	5	16	0.6	2	0.001	0.001	1.1	-	1	-	-	-20	75	DIP8, DMP8	
NJU7074	-	4	Single	5	16	0.6	2	0.001	0.001	1.1	-	1	-	-	-20	75	DMP14, SSOP14	
NJU7091A	-	1	Single	1	5.5	0.015	2	0.001	0.001	0.1	0.19	0.2	-	-	-40	85	SOT-23-5	
NJU7092A	-	1	Single	1	5.5	0.08	2	0.001	0.001	1	1	1	-	-	-40	85	SOT-23-5	
NJU7093A	-	1	Single	1	5.5	0.2	2	0.001	0.001	2.4	1	1	-	-	-40	85	SOT-23-5	
NJU7094	-	2	Single	1	5.5	0.015	4	0.001	0.001	0.1	0.19	0.2	-	-	-40	85	DIP8, DMP8, SSOP8, MSOP8(TVSP8), MSOP8(VSP8)	
NJU7095	-	2	Single	1	5.5	0.08	4	0.001	0.001	1	1	1	-	-	-40	85	DIP8, DMP8, SSOP8, MSOP8(TVSP8), MSOP8(VSP8)	
NJU7096	-	2	Single	1	5.5	0.2	4	0.001	0.001	2.4	1	1	-	-	-40	85	DIP8, DMP8, SSOP8, MSOP8(TVSP8), MSOP8(VSP8)	
NJU77580	-	4	Single	2.7	5.5	2.3	2.5	0.001	0.001	10	20	-	-	6	-55	125	SOT-23-5, SOP8, MSOP8(VSP8), DFN8-U1(ESON8-U1)	High Capacitive Load Drive
NJU77582 ♥	-	2	Single	2.7	5.5	2.3	2.5	0.001	0.001	10	20	-	-	6	-55	125	SOT-23-5, SOP8, MSOP8(VSP8), DFN8-U1(ESON8-U1)	High Capacitive Load Drive PLP♥: MSOP8(VSP8), DFN8-U1(ESON8-U1)
NJU77701 ♥	✓	1	Single	2.4	5.5	3.8	1.5	0.001	0.001	35	34	-	-	6	-40	125	SOT-23-5	
NJU77806 ♥	-	1	Single	1.8	5.5	0.5	2	0.001	0.001	1.1	4.4	2.4	-	5.5	-40	105	SC-88A	

Operational Amplifiers & Comparators

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Low Operating Voltage

Part No.	Auto-motive	No. of Circuit	Power Supply	Supply Voltage [V]		I _{cc} /ch. [mA]	V _{io} [mV]	I _e [nA]	I _{io} [nA]	SR [V/μsec]	GBW [MHz]	f _T [MHz]	Noise typ.		Operating Temperature [°C]		Package Outline	Notes
				min.	max.								V _{ni} [μVrms]	e _n [nVA/√Hz]	min.	max.		
NJM12902	-	4	Single	2	14	0.25	5	20	5	0.7	1.5	1	-	-	-40	85	DMP14, SSOP14, PCSP14-C3	
NJM12904	-	2	Single	2	14	0.35	5	20	5	0.7	1.5	1	-	-	-40	85	DIP8, DMP8, SOP8 JEDEC150mil(EMP8), SSOP8, MSOP8(TVSP8), MSOP8(VSP8)	
NJM13403	✓	4	Single	2	14	0.75	4	25	5	1.2	2	2	-	25	-40	85	DMP14, SSOP14	
NJM13404	✓	2	Single	2	14	1	4	25	5	1.2	2	2	-	25	-40	85	DIP8, DMP, SOP8 JEDEC 150mil(EMP8), SSOP8, MSOP8(VSP8), MSOP8(TVSP8)	
NJM2100	-	2	Dual	±1	±3.5	1.75	6	100	-	4	12	1.9	0.6	-	-40	85	DIP8, DMP8, SOP8 JEDEC 150mil(EMP8), SOP8	
NJM2115	-	2	Dual	±1	±7	1.75	6	100	-	4	12	4.4	0.5	-	-40	85	DIP8, DMP8, SSOP8, MSOP8(TVSP8)	
NJM2125	-	1	Single	2.7	20	1	7	25	5	1.2	1	1.2	-	-	-40	85	SOT-23-5	
NJM2132	-	2	Single	2.7	32	0.22	4.5	20	5	2.1	1.8	1.5	-	32	-40	85	DIP8, DMP8, SSOP8	
NJM2136	-	1	Dual	±1.35	±6	0.63	5	500	20	45	200	40	-	-	-40	85	DMP8, SSOP8	
NJM2137	-	2	Dual	±1.35	±6	0.57	5	500	20	45	200	40	-	-	-40	85	DIP8, DMP8, SSOP8	
NJM2140	-	2	Dual	±1	±7	1.75	6	100	10	4	12	12	-	-	-40	85	MSOP8(TVSP8), MSOP8(VSP8)	
NJM2143	-	2	Single	3	20	0.35	7	25	5	0.5	0.6		-	-	-40	85	MSOP8(TVSP8), MSOP8(VSP8)	
NJM2716	-	1	Single	2.7	12	4.2	10	1000	200	40	25	30	-	-	-40	85	SOT-23-5	
NJM2717	-	2	Single	2.7	12	4	11	2000	200	40	25	20	-	-	-40	85	DIP8, DMP8, SSOP8, MSOP8(TVSP8)	
NJM2718	-	2	Single	3	36	1.85	4	1200	100	9	1.8	2	-	24	-40	85	SOP8 JEDEC 150mil(EMP8), SSOP8	Capacitive Load Stable
NJM2730	✓	1	Single	1.8	5	0.32	5	50	5	0.4	1	1.5	-	10	-40	85	SOT-23-5	
NJM2732	✓	2	Single	1.8	6	0.29	5	50	5	0.4	1	1	-	10	-40	85	DIP8, DMP8, SOP8 JEDEC 150mil(EMP8), SSOP8, MSOP8(TVSP8), PCSP20-CC	
NJM2734	-	4	Single	1.8	6	0.3	5	50	5	0.4	1	1	-	10	-40	85	DMP14, SSOP14, PCSP20-CC	
NJM2737	-	2	Single	1.8	6	0.6	5	200	5	0.7	3.1	2	-	5	-40	85	DIP8, DMP8, SSOP8, MSOP8(TVSP8)	
NJM2740	-	2	Dual	±1.1	±3.5	1.75	6	100	5	4	12	-	-	-	-40	125	DMP8, SSOP8, MSOP8(TVSP8)	
NJM2741	✓	1	Single	2.5	14	2.2	6	100	5	3.5	10	10	-	10	-40	85	SC-88A, SOT-23-5	
NJM2742	-	2	Single	3	32	2.15	12	80	5	10	2	2	-	40	-40	85	DIP8, DMP8, SSOP8, MSOP8(TVSP8)	
NJM2744	-	4	Single	3	32	1.875	12	80	5	10	2	2	-	40	-40	85	DMP14, SSOP14	
NJM2746	✓	2	Single	2.5	14	2	6	100	5	3.5	10	10	-	10	-40	85	DMP8, SOP8 JEDEC150mil(EMP8), DFN8-U1(ESON8-U1), SSOP8, MSOP8(TVSP8)	

Part No.	Auto-motive	No. of Circuit	Power Supply	Supply Voltage [V]		I _{cc} /ch. [mA]	V _{io} [mV]	I _e [nA]	I _{io} [nA]	SR [V/μsec]	GBW [MHz]	f _T [MHz]	Noise typ.		Operating Temperature [°C]		Package Outline	Notes	
				min.	max.								V _{ni} [μVrms]	e _n [nVA/√Hz]	min.	max.			
NJM2747	✓	4	Single	2.5	14	2	6	100	5	3.5	10	10	-	10	-40	85	DMP14, PCSP20-CC, SSOP14		
NJM2902	✓	4	Single	3	32	0.25	10	20	5	0.5	0.5	-	-	-	-40	85	DMP14, SSOP14		
NEW NJM2902B	✓	4	Single	3	36	0.30	2.5	10	1	0.4	0.9	-	-	30	-40	125	SSOP14-B4		
NJM2902C	-	4	Single	3	32	0.3	7	20	2	0.6	1.3	-	-	30	-40	125	SOP14, SSOP14	Wide Operating Temperature (-40°C to +125°C)	
NJM2902CA	-	4	Single	3	32	0.3	2.5	20	2	0.6	1.3	-	-	30	-40	125	SOP14, SSOP14	Wide Operating Temperature (-40°C to +125°C)	
NJM2904	✓	2	Single	3	32	0.35	7	25	5	0.5	-	0.6	-	-	-40	85	DIP8, DMP8, SOP8 JEDEC 150mil(EMP8), SSOP8, MSOP8(TVSP8), MSOP8(VSP8)		
NEW NJM2904B	✓	2	Single	3	36	0.35	2.5	10	1	0.4	0.9	-	-	30	-40	125	MSOP8(VSP8)		
NJM2904C	-	2	Single	3	32	0.35	7	20	2	0.6	1.1	-	-	30	-40	125	SOP8, DMP8, MSOP8(TVSP8), SSOP8, EQFN12-E2	Wide Operating Temperature (-40°C to +125°C)	
NJM2904CA	-	2	Single	3	32	0.35	2	20	2	0.6	1.1	-	-	30	-40	125	SOP8, DMP8, MSOP8(TVSP8), SSOP8	Wide Operating Temperature (-40°C to +125°C)	
NJM320A	♥	1	Single	3	32	0.45	2.5	20	2	0.6	1.1	-	-	30	-40	125	SOT-23-5, SC-88A	Dual Supply (±1.5 to ±16V)	
NJM321A	♥	1	Single	3	32	0.45	2.5	20	2	0.6	1.1	-	-	30	-40	125	SOT-23-5, SC-88A, DFN6-G1(ESON6-G1)	PLP♥: SOT-23-5, SC-88A, Dual Supply (±1.5 to ±16V)	
NJM324C	-	4	Single	3	30	0.3	7	20	2	0.6	1.3	1	-	30	-40	85	SOP14, SSOP14	Dual Supply (±1.5 to ±15V)	
NJM324CA	-	4	Single	3	30	0.3	2.5	20	2	0.6	1.3	1	-	30	-40	85	SOP14, SSOP14	Dual Supply (±1.5 to ±15V)	
NJM3414A	-	2	Single	3	15	2	5	100	5	1	1.3	9	-	18	-40	85	DIP8, DMP8, SSOP8		
NJM3472	♥	2	Single	3	36	2	5.5	80	5	10	3	3.6	-	48	-40	125	SOP8, SSOP8, MSOP8(VSP8)	PLP♥: MSOP8(VSP8)	
NJM3474	♥	4	Single	3	36	2	5.5	80	5	10	3	3.6	-	48	-40	125	SOP14, SSOP14	PLP♥: SSOP14	
NJM358C	-	2	Single	3	30	0.35	7	20	2	0.6	1.1	0.5	-	30	-40	85	SOP8, SSOP8	Dual Supply (±1.5 to ±15V)	
NJM358CA	-	2	Single	3	30	0.35	2	20	2	0.6	1.1	0.5	-	30	-40	85	SOP8, SSOP8	Dual Supply (±1.5 to ±15V)	
NJM8020	♥	1	Single	3	36	0.45	2	20	2	0.6	1.1	-	-	30	-40	125	SOT-23-5, SC-88A	PLP♥: SOT-23-5 Dual Supply (±1.5 to ±18V)	
NJM8021	♥	1	Single	3	36	0.45	2	20	2	0.6	1.1	-	-	30	-40	125	SOT-23-5, SC-88A, DFN6-G1(ESON6-G1)	Dual Supply (±1.5 to ±18V)	
NJM8202	♥	✓	2	Single	2.5	14	2	6	100	5	3.5	10	10	-	10	-40	85	DMP8, SOP8 JEDEC 150mil(EMP8), SSOP8, MSOP8(TVSP8), MSOP8(VSP8)	PLP♥: DMP8
NJM8204	♥	✓	4	Single	2.5	14	2	6	100	5	3.5	10	-	-	10	-40	125	SSOP14	

Operational Amplifiers & Comparators

U.D. : Under Development **NEW** : New product **♥** : Products available in PRODUCT LONGEVITY PROGRAM **xxxx** : Products available in PRODUCT LONGEVITY PROGRAM with time limit



Low Operating Voltage

Part No.	Auto-motive	No. of Circuit	Power Supply	Supply Voltage [V]		I _{cc} /ch. [mA]	V _{io} [mV]	I _e [nA]	I _{io} [nA]	SR [V/μsec]	GBW [MHz]	f _r [MHz]	Noise typ.		Operating Temperature [°C]		Package Outline	Notes	
				min.	max.								V _{ni} [μVrms]	e _n [nVA/√Hz]	min.	max.			
NEW NJM8208 ♥	✓	2	Single	3	35	0.45	1	55	5	0.2	0.35	—	—	—	—	-40	125	DMP8,MSOP8(VSP8)	PLP♥: DMP8
NEW NJM8212 ♥	✓	2	Single	2.5	14	3	6	900	30	3.5	6	—	—	18	—	-40	125	DMP8	
NJM842 ♥	✓	2	Single	3	36	2.15	3.5	120	6	8.5	3.5	3.5	—	32	—	-40	125	SOP8, SSOP8, MSOP8(VSP8)	PLP♥: MSOP8 (VSP8)
NJM844 ♥	—	4	Single	3	36	2.2	3.5	120	6	8.5	3.5	—	—	32	—	-40	125	SOP14, SSOP14	PLP♥: SSOP14
NJM8524	—	4	Single	3	36	0.025	1.8	3	0.5	0.04	0.1	0.1	—	60	—	-40	85	SSOP14	
NJM8530 ♥	✓	1	Single	1.8	14	0.32	4	50	5	0.4	1	1	—	10	—	-40	125	SOT-23-5	
NJM8532 ♥	✓	2	Single	1.8	14	0.29	4	50	5	0.35	1	1	—	10	—	-40	125	MSOP8(TVSP8), DMP8, SSOP8	PLP♥: MSOP8 (TVSP8)
NJM8534	—	4	Single	1.8	14	0.3	4	50	5	0.3	1	1	—	10	—	-40	125	SSOP14	
NJU7001	—	1	Single	1	16	0.015	10	0.001	0.001	0.05	0.15	0.1	—	37.5	—	-20	75	DIP8, DMP8, SSOP8	
NJU7002	—	2	Single	1	16	0.015	10	0.001	0.001	0.05	0.15	0.1	—	37.5	—	-20	75	DIP8, DMP8	
NJU7004	—	4	Single	1	16	0.015	10	0.001	0.001	0.05	0.15	0.1	—	37.5	—	-20	75	DMP14, SSOP14	
NJU7006	—	1	Single	1.8	3.6	0.003	2	0.001	0.001	0.04	—	0.095	—	—	—	-40	85	SOT-23-5	
NJU7007	—	1	Single	1	5.5	0.015	4	0.001	0.001	0.1	—	0.2	—	—	—	-40	85	SC-88A	
NJU7008	—	1	Single	1	5.5	0.2	4	0.001	0.001	2.4	—	1	—	—	—	-40	85	SC-88A	
NJU7009	—	1	Single	2.2	5.5	0.45	5	0.001	0.001	1	3.5	3	1.7	13	—	-40	85	SC-88A	
NJU7011	—	1	Single	1	5.5	0.015	10	0.001	0.001	0.1	0.2	0.2	—	—	—	-40	85	SOT-23-5	
NJU7012	—	1	Single	1	5.5	0.08	10	0.001	0.001	1	1	1	—	—	—	-40	85	SOT-23-5	
NJU7013	—	1	Single	1	5.5	0.2	10	0.001	0.001	2.4	1	1	—	—	—	-40	85	SOT-23-5	
NJU7014	—	2	Single	1	5.5	0.015	10	0.001	0.001	0.1	0.2	0.2	—	—	—	-40	85	DMP8, SSOP8, MSOP8(TVSP8), MSOP8(VSP8)	
NJU7015	—	2	Single	1	5.5	0.08	10	0.001	0.001	1	1	1	—	—	—	-40	85	DIP8, DMP8, SSOP8, MSOP8(TVSP8), MSOP8(VSP8)	
NJU7016	—	2	Single	1	5.5	0.2	10	0.001	0.001	2.4	1	1	—	—	—	-40	85	DIP8, DMP8, SSOP8, MSOP8(TVSP8), MSOP8(VSP8)	
NJU7017	—	1	Single	1	5.5	0.75	10	0.001	0.001	3.7	1	1	—	—	—	-40	85	SOT-23-5	
NJU7018	—	2	Single	1	5.5	0.75	10	0.001	0.001	3.7	1	1	—	—	—	-40	85	DIP8, DMP8, SSOP8, MSOP8(TVSP8), MSOP8(VSP8)	
NJU7019	—	2	Single	1	5.5	0.02	10	0.001	0.001	0.25	—	0.4	—	—	—	-40	85	MSOP8(VSP8)	
NJU7021	—	1	Single	3	16	0.15	10	0.001	0.001	0.4	0.35	0.4	—	27	—	-20	75	DMP8, SSOP8	
NJU7022	—	2	Single	3	16	0.15	10	0.001	0.001	0.4	0.35	0.4	—	27	—	-20	75	DIP8, DMP8	
NJU7024	—	4	Single	3	16	0.15	10	0.001	0.001	0.4	0.35	0.4	—	27	—	-20	75	DMP14, SSOP14	
NJU7026 ♥ 2031 ♥	—	1	Single	1.8	5.5	0.013	4	0.001	0.001	0.05	0.16	0.16	—	50	—	-40	125	SC-88A	
																		SOT-23-5	

Part No.	Auto-motive	No. of Circuit	Power Supply	Supply Voltage [V]		I _{cc} /ch. [mA]	V _{io} [mV]	I _e [nA]	I _{io} [nA]	SR [V/μsec]	GBW [MHz]	f _r [MHz]	Noise typ.		Operating Temperature [°C]		Package Outline	Notes	
				min.	max.								V _{ni} [μVrms]	e _n [nVA/√Hz]	min.	max.			
NJU7027 ♥	—	2	Single	1.8	5.5	0.013	4	0.001	0.001	0.05	0.16	0.16	—	50	—	-40	125	DFN8-U1(ESON8-U1), MSOP8(TVSP8)	
NJU7028 ♥	—	4	Single	1.8	5.5	0.012	4	0.001	0.001	0.05	0.16	0.16	—	50	—	-40	125	SSOP14	
NJU7029	—	2	Single	2.2	5.5	0.425	5	0.001	0.001	1	3.5	3	1.7	13	—	-40	85	DFN8-U1(ESON8-U1), SSOP8, MSOP8(TVSP8)	
NJU7031	—	1	Single	3	16	1	10	0.001	0.001	3.5	2	1.5	—	20	—	-40	85	DIP8, DMP8, SSOP8	
NJU7032	—	2	Single	3	16	1	10	0.001	0.001	3.5	2	1.5	—	20	—	-40	85	DIP8, DMP8	
NJU7034	—	4	Single	3	16	1	10	0.001	0.001	3.5	2	1.5	—	20	—	-40	85	DMP14, SSOP14	
NJU7036	—	2	Single	2.7	5.5	1.75	10	0.001	0.001	0.7	0.4	0.4	—	60	—	-40	85	PCSP20-E3	
NJU7040	—	1	Single	2.2	5.5	0.45	10	0.001	0.001	0.85	0.8	0.8	—	40	—	-40	85	SOT-23-5	
NJU7042	—	1	Single	2.7	5.5	0.015	5	0.001	0.001	0.03	—	0.047	—	—	—	-40	85	SOT-23-5	
NJU7043	✓	2	Single	1.8	5.5	0.3	10	0.001	0.001	0.7	0.8	0.8	—	40	—	-40	85	DIP8, DMP8, SOP8 JEDEC 150mil(EMP8), SSOP8, MSOP8(TVSP8), PCSP20-CC	
NJU7044	—	4	Single	2.2	5.5	0.45	10	0.001	0.001	0.8	0.8	0.8	—	40	—	-40	85	DMP14, SSOP14	
NJU7046 ♥	✓	1	Single	2.7	5.5	1.4	5	0.001	0.001	9	5	4	—	20	—	-40	125	SOT-23-5, SC-88A	
NJU7047 ♥	✓	2	Single	2.7	5.5	1.35	5	0.001	0.001	9	5	4	—	20	—	-40	125	SOP8 JEDEC 150mil(EMP8), MSOP8(TVSP8), DFN8-U1(ESON8-U1)	PLP♥: MSOP8 (TVSP8), DFN8-U1 (ESON8-U1)
NJU7048 ♥	—	4	Single	2.7	5.5	1.325	5	0.001	0.001	9	5	4	—	20	—	-40	125	SOP14, SSOP14	PLP♥: SSOP14
NJU7051	—	1	Single	1	16	0.015	2	0.001	0.001	0.05	—	0.1	—	—	—	-40	85	DMP8	
NJU7052	—	2	Single	1	16	0.015	2	0.001	0.001	0.05	—	0.1	—	—	—	-40	85	DMP8	
NJU7056 ♥	✓	1	Single	1.8	5.5	0.26	4	0.001	0.001	0.8	2.1	2	—	15	—	-40	125	SC-88A, SOT-23-5	
NJU7057 ♥	✓	2	Single	1.8	5.5	0.26	4	0.001	0.001	0.8	2.1	2	—	15	—	-40	125	DFN8-U1(ESON8-U1), MSOP8(TVSP8)	
NJU7058 ♥	✓	4	Single	1.8	5.5	0.25	4	0.001	0.001	0.8	2.1	2	—	15	—	-40	125	SSOP14	
NJU7061	—	1	Single	3	16	0.15	2	0.001	0.001	0.4	0.35	0.4	—	27	—	-20	75	DIP8, DMP8, SSOP8	
NJU7062	—	2	Single	3	16	0.15	2	0.001	0.001	0.4	0.35	0.4	—	27	—	-20	75	DIP8, DMP8	
NJU7064	—	4	Single	3	16	0.15	2	0.001	0.001	0.4	0.35	0.4	—	27	—	-20	75	DMP14, SSOP14	
NJU7066 ♥	—	2	Single	2.2	5.5	0.6	0.5	0.001	0.001	0.5	1.3	1.3	—	10	—	-40	125	MSOP8(VSP8)	
NJU7076 ♥	—	1	Single	2.2	5.5	0.6	0.15	0.001	0.001	0.5	1.3	1.3	—	10	—	-40	125	SOT-23-5	
NJU7076B	—	1	Single	2.2	5.5	0.6	0.3	0.001	0.001	0.5	1.3	1.3	—	10	—	-40	125	SC-88A	

Operational Amplifiers & Comparators

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Low Operating Voltage

Part No.	Auto-motive	No. of Circuit	Power Supply	Supply Voltage [V]		I _{cc} /ch. [mA]	V _{io} [mV]	I _b [nA]	I _o [nA]	SR [V/μsec]	GBW [MHz]	f _r [MHz]	Noise typ.		Operating Temperature [°C]		Package Outline	Notes	
				min.	max.								V _{NI} [μVrms]	e _n [nV/√Hz]	min.	max.			
NJU7077	♥	✓	2	Single	2.2	5.5	0.6	0.15	0.001	0.001	0.5	1.3	1.3	—	10	-40	125	MSOP8(VSP8)	
NJU7078	♥	—	4	Single	2.2	5.5	0.6	0.15	0.001	0.001	0.5	1.3	1.3	—	10	-40	125	SSOP14	
NJU7091A	—	—	1	Single	1	5.5	0.015	2	0.001	0.001	0.1	0.19	0.2	—	—	-40	85	SOT-23-5	
NJU7092A	—	—	1	Single	1	5.5	0.08	2	0.001	0.001	1	1	1	—	—	-40	85	SOT-23-5	
NJU7093A	—	—	1	Single	1	5.5	0.2	2	0.001	0.001	2.4	1	1	—	—	-40	85	SOT-23-5	
NJU7094	—	—	2	Single	1	5.5	0.015	4	0.001	0.001	0.1	0.19	0.2	—	—	-40	85	DIP8, DMP8, SSOP8, MSOP8(TVSP8), MSOP8(VSP8)	
NJU7095	—	—	2	Single	1	5.5	0.08	4	0.001	0.001	1	1	1	—	—	-40	85	DIP8, DMP8, SSOP8, MSOP8(TVSP8), MSOP8(VSP8)	
NJU7096	—	—	2	Single	1	5.5	0.2	4	0.001	0.001	2.4	1	1	—	—	-40	85	DIP8, DMP8, SSOP8, MSOP8(TVSP8), MSOP8(VSP8)	
NJU7098A	—	—	1	Single	3	10	0.55	0.015	0.015	—	3	2	—	—	120	-40	105	SOT-23-6-1	
NJU7098AF1-C	—	—	1	Single	3	10	0.6	0.015	0.02	—	3	3	—	—	120	-40	105	SOT-23-6-1	
NJU77000	♥	—	1	Single	1.5	5.5	0.00029	1.8	0.001	0.001	0.0008	0.0011	0.0011	—	600	-40	105	SOT-23-5	Ultra-Low Operating Current
NJU77001	♥	—	1	Single	1.5	5.5	0.00029	1.8	0.001	0.001	0.0008	0.0011	0.0011	—	600	-40	105	SOT-23-5, SC-88A	Ultra-Low Operating Current
NJU77002	♥	—	2	Single	1.5	5.5	0.00023	2	0.001	0.001	0.0007	0.001	0.001	—	700	-40	105	SOP8 JEDEC 150mil(EMP8), MSOP8(TVSP8), DFN8-U1(ESON8-U1), Ultra-Low Operating Current	PLP♥: MSOP8 (TVSP8), DFN8-U1 (ESON8-U1), Ultra-Low Operating Current
NJU77004	♥	—	4	Single	1.5	5.5	0.00023	2.2	0.001	0.001	0.0007	0.001	0.001	—	700	-40	105	SSOP14	Ultra-Low Operating Current
NJU77550	♥	—	1	Single	1.8	5.5	0.055	5	0.001	0.001	0.8	1.7	—	—	24	-55	125	SOT-23-5, SC-88A	PLP♥: SOT-23-5
NJU77551	♥	—	1	Single	1.8	5.5	0.055	5	0.001	0.001	0.8	1.7	—	—	24	-55	125	SOT-23-5, SC-88A	
NJU77552	♥	✓	2	Single	1.8	5.5	0.05	5	0.001	0.001	0.8	1.7	—	—	24	-55	125	SOP8, MSOP8(TVSP8), MSOP8(VSP8), DFN8-U1(ESON8-U1)	PLP♥: MSOP8 (TVSP8), MSOP8 (VSP8), DFN8-U1 (ESON8-U1)
NJU77554	♥	—	4	Single	1.8	5.5	0.05	5	0.001	0.001	0.8	1.7	—	—	24	-55	125	SSOP14	
NJU77572	♥	—	4	Single	2.7	5.5	1.1	4	0.001	0.001	5	10	—	—	8	-55	125	MSOP8(VSP8)	
NJU77580	—	—	4	Single	2.7	5.5	2.3	2.5	0.001	0.001	10	20	—	—	6	-55	125	SOT-23-5, SOP8, MSOP8(VSP8), DFN8-U1(ESON8-U1)	High Capacitive Load Drive
NJU77582	♥	—	2	Single	2.7	5.5	2.3	2.5	0.001	0.001	10	20	—	—	6	-55	125	SOT-23-5, SOP8, MSOP8(VSP8), DFN8-U1(ESON8-U1)	High Capacitive Load Drive, PLP♥: MSOP8 (VSP8), DFN8-U1 (ESON8-U1)
NJU77701	♥	✓	1	Single	2.4	5.5	3.8	1.5	0.001	0.001	35	34	—	—	6	-40	125	SOT-23-5	
NJU77806	♥	—	1	Single	1.8	5.5	0.5	2	0.001	0.001	1.1	4.4	2.4	—	5.5	-40	105	SC-88A	

Small Sized Package

Part No.	Auto-motive	No. of Circuit	Power Supply	Supply Voltage [V]		I _{cc} /ch. [mA]	V _{io} [mV]	I _b [nA]	I _o [nA]	SR [V/μsec]	GBW [MHz]	f _r [MHz]	Noise typ.		Operating Temperature [°C]		Package Outline	Notes	
				min.	max.								V _{NI} [μVrms]	e _n [nV/√Hz]	min.	max.			
NJM2125	—	—	1	Single	2.7	20	1	7	25	5	1.2	1	1.2	—	—	-40	85	SOT-23-5	
NJM2711	—	—	1	Dual	±2	±4.5	1.9	7	2000	350	260	1000	180	—	6.8	-40	85	SOT-23-5	
NJM2712	—	—	2	Dual	±2	±4.5	1.9	7	2000	350	260	1000	180	—	6.8	-40	85	DMP8, MSOP8(TVSP8)	
NJM2716	—	—	1	Single	2.7	12	4.2	10	1000	200	40	25	30	—	—	-40	85	SOT-23-5	
NJM2730	✓	—	1	Single	1.8	5	0.32	5	50	5	0.4	1	1.5	—	10	-40	85	SOT-23-5	
NJM2741	✓	—	1	Single	2.5	14	2.2	6	100	5	3.5	10	10	—	10	-40	85	SC-88A, SOT-23-5	
NJM2743	—	—	1	Single	3	15	2	5	100	5	0.85	0.8	0.4	—	18	-40	85	SOT-23-5	I _{out} =70mA
NJM320A	♥	—	1	Single	3	32	0.45	2.5	20	2	0.6	1.1	—	—	30	-40	125	SOT-23-5, SC-88A	Dual (±1.5 to ±16V)
NJM321A	♥	—	1	Single	3	32	0.45	2.5	20	2	0.6	1.1	—	—	30	-40	125	SOT-23-5, SC-88A, DFN6-G1(ESON6-G1)	PLP♥: SOT-23-5, SC-88A, Dual (±1.5 to ±16V)
NJM8020	♥	—	1	Single	3	36	0.45	2	20	2	0.6	1.1	—	—	30	-40	125	SOT-23-5, SC-88A	PLP♥: SOT-23-5, Dual (±1.5 to ±18V)
NJM8021	♥	—	1	Single	3	36	0.45	2	20	2	0.6	1.1	—	—	30	-40	125	SOT-23-5, SC-88A, DFN6-G1(ESON6-G1)	PLP♥: SOT-23-5, SC-88A, Dual (±1.5 to ±18V)
NJMOP2277	♥	—	2	Dual	±2.25	±18	0.76	0.05	0.5	0.5	0.7	1	1	0.07	8	-40	125	SOP8 JEDEC 150mil(EMP8), MSOP8(VSP8), DFN8-W2(ESON8-W2)	PLP♥: MSOP8 (VSP8), DFN8-W2 (ESON8-W2), High EMI Immunity
NJU7007	—	—	1	Single	1	5.5	0.015	4	0.001	0.001	0.1	—	0.2	—	—	-40	85	SC-88A	
NJU7008	—	—	1	Single	1	5.5	0.2	4	0.001	0.001	2.4	—	1	—	—	-40	85	SC-88A	
NJU7009	—	—	1	Single	2.2	5.5	0.45	5	0.001	0.001	1	3.5	3	1.7	13	-40	85	SC-88A	
NJU7011	—	—	1	Single	1	5.5	0.015	10	0.001	0.001	0.1	0.2	0.2	—	—	-40	85	SOT-23-5	
NJU7012	—	—	1	Single	1	5.5	0.08	10	0.001	0.001	1	1	1	—	—	-40	85	SOT-23-5	
NJU7013	—	—	1	Single	1	5.5	0.2	10	0.001	0.001	2.4	1	1	—	—	-40	85	SOT-23-5	
NJU7017	—	—	1	Single	1	5.5	0.75	10	0.001	0.001	3.7	1	1	—	—	-40	85	SOT-23-5	
NJU7026	♥ 2031	—	1	Single	1.8	5.5	0.013	4	0.001	0.001	0.05	0.16	0.16	—	50	-40	125	SC-88A	
NJU7027	♥	—	2	Single	1.8	5.5	0.013	4	0.001	0.001	0.05	0.16	0.16	—	50	-40	125	DFN8-U1(ESON8-U1), MSOP8(TVSP8)	
NJU7040	—	—	1	Single	2.2	5.5	0.45	10	0.001	0.001	0.85	0.8	0.8	—	40	-40	85	SOT-23-5	

Operational Amplifiers & Comparators

U.D. : Under Development NEW : New product ♥ : Products available in PRODUCT LONGEVITY PROGRAM ♥♥♥ : Products available in PRODUCT LONGEVITY PROGRAM with time limit



Small Sized Package

Part No.	Auto-motive	No. of Circuit	Power Supply	Supply Voltage [V]		I _{cc} /ch. [mA]	V _{IO} [mV]	I _b [nA]	I _o [nA]	SR [V/μsec]	GBW [MHz]	f _r [MHz]	Noise typ.		Operating Temperature [°C]		Package Outline	Notes	
				min.	max.								V _{NI} [μVrms]	e _n [nV/√Hz]	min.	max.			
NJU7042	-	1	Single	2.7	5.5	0.015	5	0.001	0.001	0.03	-	0.047	-	-	-40	85	SOT-23-5		
NJU7043	✓	2	Single	1.8	5.5	0.3	10	0.001	0.001	0.7	0.8	0.8	-	40	-40	85	DIP8, DMP8, SOP8 JEDEC 150mil(EMP8), SSOP8, MSOP8(TVSP8), PCSP20-CC		
NJU7046	♥	✓	1	Single	2.7	5.5	1.4	5	0.001	0.001	9	5	4	-	20	-40	125	SOT-23-5, SC-88A	
NJU7047	♥	✓	2	Single	2.7	5.5	1.35	5	0.001	0.001	9	5	4	-	20	-40	125	SOP8 JEDEC 150mil(EMP8), MSOP8(TVSP8), DFN8-U1(ESON8-U1)	PLP♥: MSOP8(TVSP8), DFN8-U1(ESON8-U1)
NJU7056	♥	✓	1	Single	1.8	5.5	0.26	4	0.001	0.001	0.8	2.1	2	-	15	-40	125	SC-88A, SOT-23-5	
NJU7057	♥	✓	2	Single	1.8	5.5	0.26	4	0.001	0.001	0.8	2.1	2	-	15	-40	125	DFN8-U1(ESON8-U1), MSOP8(TVSP8)	
NJU7076B	-	1	Single	2.2	5.5	0.6	0.3	0.001	0.001	0.5	1.3	1.3	-	10	-40	125	SC-88A		
NJU7091A	-	1	Single	1	5.5	0.015	2	0.001	0.001	0.1	0.19	0.2	-	-	-40	85	SOT-23-5		
NJU7092A	-	1	Single	1	5.5	0.08	2	0.001	0.001	1	1	1	-	-	-40	85	SOT-23-5		
NJU7093A	-	1	Single	1	5.5	0.2	2	0.001	0.001	2.4	1	1	-	-	-40	85	SOT-23-5		
NJU77000	♥	-	1	Single	1.5	5.5	0.00029	1.8	0.001	0.001	0.0008	0.0011	0.0011	-	600	-40	105	SOT-23-5	Ultra-Low Operating Current
NJU77001	♥	-	1	Single	1.5	5.5	0.00029	1.8	0.001	0.001	0.0008	0.0011	0.0011	-	600	-40	105	SOT-23-5, SC-88A	Ultra-Low Operating Current
NJU77002	♥	-	2	Single	1.5	5.5	0.00023	2	0.001	0.001	0.0007	0.001	0.001	-	700	-40	105	SOP8 JEDEC 150mil(EMP8), MSOP8(TVSP8), DFN8-U1(ESON8-U1)	PLP♥: MSOP8(TVSP8), DFN8-U1(ESON8-U1), Ultra-Low Operating Current
NJU77550	♥	-	1	Single	1.8	5.5	0.055	5	0.001	0.001	0.8	1.7	-	-	24	-55	125	SOT-23-5, SC-88A	PLP♥: SOT-23-5
NJU77551	♥	-	1	Single	1.8	5.5	0.055	5	0.001	0.001	0.8	1.7	-	-	24	-55	125	SOT-23-5, SC-88A	
NJU77552	♥	✓	2	Single	1.8	5.5	0.05	5	0.001	0.001	0.8	1.7	-	-	24	-55	125	SOP8, MSOP8(TVSP8), MSOP8(VSP8), DFN8-U1(ESON8-U1)	PLP♥: MSOP8(TVSP8), MSOP8(VSP8), DFN8-U1(ESON8-U1)
NJU77582	♥	-	2	Single	2.7	5.5	2.3	2.5	0.001	0.001	10	20	-	-	6	-55	125	SOT-23-5, SOP8, MSOP8(VSP8), DFN8-U1(ESON8-U1)	High Capacitive Load Drive, PLP♥: MSOP8(VSP8), DFN8-U1(ESON8-U1)
NJU77806	♥	-	1	Single	1.8	5.5	0.5	2	0.001	0.001	1.1	4.4	2.4	-	5.5	-40	105	SC-88A	
NJU77902	-	2	Single	6	18	3.5	10	0.001	0.001	9	-	3	-	80	-40	85	DFN8-W2(ESON8-W2)	Capacitive Load Stable, High EMI Immunity, Small Package	

Low Bias Current

Part No.	Auto-motive	No. of Circuit	Power Supply	Supply Voltage [V]		I _{cc} /ch. [mA]	V _{IO} [mV]	I _b [nA]	I _o [nA]	SR [V/μsec]	GBW [MHz]	f _r [MHz]	Noise typ.		Operating Temperature [°C]		Package Outline	Notes	
				min.	max.								V _{NI} [μVrms]	e _n [nV/√Hz]	min.	max.			
NJM062C	-	2	Dual	±2	±18	0.2	15	0.03	0.005	3.5	-	1	-	35	-40	125	SOP8, SSOP8		
NJM062CA	-	2	Dual	±2	±18	0.2	6	0.03	0.005	3.5	-	1	-	35	-40	125	SOP8, SSOP8		
NJM064C	♥	-	4	Dual	±2	±18	0.2	15	0.03	0.005	3.5	-	1	-	35	-40	125	SOP14, SSOP14	PLP♥: SSOP14
NJM064CA	-	4	Dual	±2	±18	0.2	6	0.03	0.005	3.5	-	1	-	35	-40	125	SOP14, SSOP14		
NJM072C	-	2	Dual	±4	±18	1.4	10	0.03	0.005	13	-	3	4	18	-40	125	SOP8, SSOP8		
NJM072CA	-	2	Dual	±4	±18	1.4	6	0.03	0.005	13	-	3	4	18	-40	125	SOP8, SSOP8		
NJM074C	♥	-	4	Dual	±4	±18	1.4	10	0.03	0.005	13	-	3	4	18	-40	125	SOP14, SSOP14	PLP♥: SSOP14
NJM074CA	-	4	Dual	±4	±18	1.4	6	0.03	0.005	13	-	3	4	18	-40	125	SOP14, SSOP14		
NJM082C	-	2	Dual	±4	±18	1.4	15	0.03	0.005	13	-	3	4	18	-40	125	SOP8, SSOP8		
NJM082CA	-	2	Dual	±4	±18	1.4	6	0.03	0.005	13	-	3	4	18	-40	125	SOP8, SSOP8		
NJM084C	-	4	Dual	±4	±18	1.4	15	0.03	0.005	13	-	3	4	18	-40	125	SOP14, SSOP14		
NJM084CA	-	4	Dual	±4	±18	1.4	6	0.03	0.005	13	-	3	4	18	-40	125	SOP14, SSOP14		
NJM2748	✓	1	Dual	±6	±16	2	2	0.05	0.025	13	2.2	2	2.5	20	-40	85	DIP8, DMP8		
NJM2748A	-	1	Dual	±6	±16	2	2	0.05	0.025	13	2.2	2	2.5	20	-40	85	DIP8, DMP8		
NJM2749	-	2	Dual	±6	±16	1.9	2.5	0.05	0.025	13	2.2	2	2.5	20	-40	85	DMP8, SOP8 JEDEC 150mil(EMP8)		
NJM2749A	-	2	Dual	±6	±16	1.9	2.5	0.05	0.025	13	2.2	2	2.5	20	-40	85	DIP8, DMP8, SOP8 JEDEC 150mil(EMP8)		
NJM8087	-	1	Dual	±4	±16	1.3	0.8	0.025	0.006	20	-	7	-	10	-40	125	SOP8 JEDEC 150mil(EMP8)	No Phase Reversal	
NJM8502	-	2	Dual	±4.5	±16	1.3	0.4	0.025	0.006	20	7	7	0.18	10	-40	125	MSOP8(VSP8)		
NJM8512	♥	-	2	Dual	±4.5	±16	1.3	0.4	0.025	0.006	20	7	7	-	10	-40	125	MSOP8(VSP8), SOP8 JEDEC 150mil(EMP8)	PLP♥: MSOP8(VSP8)
NJM8513	♥	-	4	Dual	±4.5	±16	1.3	0.4	0.025	0.006	20	7	7	-	10	-40	125	SSOP14	
NJMOP2277	♥	-	2	Dual	±2.25	±18	0.76	0.05	0.5	0.7	1	1	0.07	8	-40	125	SOP8 JEDEC 150mil(EMP8), MSOP8(VSP8), DFN8-W2(ESON8-W2)	PLP♥: MSOP8(VSP8), DFN8-W2(ESON8-W2), High EMI Immunity	
NJMOP277	♥	-	1	Dual	±2.25	±18	0.76	0.05	0.5	0.7	1	1	0.07	8	-40	125	SOP8 JEDEC 150mil(EMP8), MSOP8(VSP8)	PLP♥: MSOP8(VSP8), High EMI Immunity	
NJU7001	-	1	Single	1	16	0.015	10	0.001	0.001	0.05	0.15	0.1	-	37.5	-20	75	DIP8, DMP8, SSOP8		
NJU7002	-	2	Single	1	16	0.015	10	0.001	0.001	0.05	0.15	0.1	-	37.5	-20	75	DIP8, DMP8		

Operational Amplifiers & Comparators

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Low Bias Current

Part No.	Auto-motive	No. of Circuit	Power Supply	Supply Voltage [V]		I _{cc} /ch. [mA]	V _{io} [mV]	I _b [nA]	I _o [nA]	SR [V/μsec]	GBW [MHz]	f _r [MHz]	Noise typ.		Operating Temperature [°C]		Package Outline	Notes	
				min.	max.								V _{ni} [μVrms]	e _n [nV/√Hz]	min.	max.			
NJU7004	-	4	Single	1	16	0.015	10	0.001	0.001	0.05	0.15	0.1	-	37.5	-20	75	DMP14, SSOP14		
NJU7006	-	1	Single	1.8	3.6	0.003	2	0.001	0.001	0.04	-	0.095	-	-	-40	85	SOT-23-5		
NJU7007	-	1	Single	1	5.5	0.015	4	0.001	0.001	0.1	-	0.2	-	-	-40	85	SC-88A		
NJU7008	-	1	Single	1	5.5	0.2	4	0.001	0.001	2.4	-	1	-	-	-40	85	SC-88A		
NJU7009	-	1	Single	2.2	5.5	0.45	5	0.001	0.001	1	3.5	3	1.7	13	-40	85	SC-88A		
NJU7011	-	1	Single	1	5.5	0.015	10	0.001	0.001	0.1	0.2	0.2	-	-	-40	85	SOT-23-5		
NJU7012	-	1	Single	1	5.5	0.08	10	0.001	0.001	1	1	1	-	-	-40	85	SOT-23-5		
NJU7013	-	1	Single	1	5.5	0.2	10	0.001	0.001	2.4	1	1	-	-	-40	85	SOT-23-5		
NJU7014	-	2	Single	1	5.5	0.015	10	0.001	0.001	0.1	0.2	0.2	-	-	-40	85	DMP8, SSOP8, MSOP8(TVSP8), MSOP8(VSP8)		
NJU7015	-	2	Single	1	5.5	0.08	10	0.001	0.001	1	1	1	-	-	-40	85	DIP8, DMP8, SSOP8, MSOP8(TVSP8), MSOP8(VSP8)		
NJU7016	-	2	Single	1	5.5	0.2	10	0.001	0.001	2.4	1	1	-	-	-40	85	DIP8, DMP8, SSOP8, MSOP8(TVSP8), MSOP8(VSP8)		
NJU7017	-	1	Single	1	5.5	0.75	10	0.001	0.001	3.7	1	1	-	-	-40	85	SOT-23-5		
NJU7018	-	2	Single	1	5.5	0.75	10	0.001	0.001	3.7	1	1	-	-	-40	85	DIP8, DMP8, SSOP8, MSOP8(TVSP8), MSOP8(VSP8)		
NJU7019	-	2	Single	1	5.5	0.02	10	0.001	0.001	0.25	-	0.4	-	-	-40	85	MSOP8(VSP8)		
NJU7021	-	1	Single	3	16	0.15	10	0.001	0.001	0.4	0.35	0.4	-	27	-20	75	DMP8, SSOP8		
NJU7022	-	2	Single	3	16	0.15	10	0.001	0.001	0.4	0.35	0.4	-	27	-20	75	DIP8, DMP8		
NJU7024	-	4	Single	3	16	0.15	10	0.001	0.001	0.4	0.35	0.4	-	27	-20	75	DMP14, SSOP14		
NJU7026	♥ 2031	1	Single	1.8	5.5	0.013	4	0.001	0.001	0.05	0.16	0.16	-	50	-40	125	SC-88A		
																	SOT-23-5		
NJU7027	♥	-	2	Single	1.8	5.5	0.013	4	0.001	0.001	0.05	0.16	0.16	-	50	-40	125	DFN8-U1(ESON8-U1), MSOP8(TVSP8)	
NJU7028	♥	-	4	Single	1.8	5.5	0.012	4	0.001	0.001	0.05	0.16	0.16	-	50	-40	125	SSOP14	
NJU7029	-	2	Single	2.2	5.5	0.425	5	0.001	0.001	1	3.5	3	1.7	13	-40	85	DFN8-U1(ESON8-U1), SSOP8, MSOP8(TVSP8)		
NJU7031	-	1	Single	3	16	1	10	0.001	0.001	3.5	2	1.5	-	20	-40	85	DIP8, DMP8, SSOP8		
NJU7032	-	2	Single	3	16	1	10	0.001	0.001	3.5	2	1.5	-	20	-40	85	DIP8, DMP8		
NJU7034	-	4	Single	3	16	1	10	0.001	0.001	3.5	2	1.5	-	20	-40	85	DMP14, SSOP14		
NJU7036	-	2	Single	2.7	5.5	1.75	10	0.001	0.001	0.7	0.4	0.4	-	60	-40	85	PCSP20-E3		

Part No.	Auto-motive	No. of Circuit	Power Supply	Supply Voltage [V]		I _{cc} /ch. [mA]	V _{io} [mV]	I _b [nA]	I _o [nA]	SR [V/μsec]	GBW [MHz]	f _r [MHz]	Noise typ.		Operating Temperature [°C]		Package Outline	Notes	
				min.	max.								V _{ni} [μVrms]	e _n [nV/√Hz]	min.	max.			
NJU7040	-	1	Single	2.2	5.5	0.45	10	0.001	0.001	0.85	0.8	0.8	-	40	-40	85	SOT-23-5		
NJU7042	-	1	Single	2.7	5.5	0.015	5	0.001	0.001	0.03	-	0.047	-	-	-40	85	SOT-23-5		
NJU7043	✓	2	Single	1.8	5.5	0.3	10	0.001	0.001	0.7	0.8	0.8	-	40	-40	85	DIP8, DMP8, SOP8, JEDEC 150mil(EMP8), SSOP8, MSOP8(TVSP8), PCSP20-CC		
NJU7044	-	4	Single	2.2	5.5	0.45	10	0.001	0.001	0.8	0.8	0.8	-	40	-40	85	DMP14, SSOP14		
NJU7046	♥	✓	1	Single	2.7	5.5	1.4	5	0.001	0.001	9	5	4	-	20	-40	125	SOT-23-5, SC-88A	
NJU7047	♥	✓	2	Single	2.7	5.5	1.35	5	0.001	0.001	9	5	4	-	20	-40	125	SOP8 JEDEC 150mil(EMP8), MSOP8(TVSP8), DFN8-U1(ESON8-U1)	PLP♥: MSOP8(TVSP8), DFN8-U1(ESON8-U1)
NJU7048	♥	-	4	Single	2.7	5.5	1.325	5	0.001	0.001	9	5	4	-	20	-40	125	SOP14, SSOP14	PLP♥: SSOP14
NJU7051	-	1	Single	1	16	0.015	2	0.001	0.001	0.05	-	0.1	-	-	-40	85	DMP8		
NJU7052	-	2	Single	1	16	0.015	2	0.001	0.001	0.05	-	0.1	-	-	-40	85	DMP8		
NJU7056	♥	✓	1	Single	1.8	5.5	0.26	4	0.001	0.001	0.8	2.1	2	-	15	-40	125	SC-88A, SOT-23-5	
NJU7057	♥	✓	2	Single	1.8	5.5	0.26	4	0.001	0.001	0.8	2.1	2	-	15	-40	125	DFN8-U1(ESON8-U1), MSOP8(TVSP8)	
NJU7058	♥	✓	4	Single	1.8	5.5	0.25	4	0.001	0.001	0.8	2.1	2	-	15	-40	125	SSOP14	
NJU7061	-	1	Single	3	16	0.15	2	0.001	0.001	0.4	0.35	0.4	-	27	-20	75	DIP8, DMP8, SSOP8		
NJU7062	-	2	Single	3	16	0.15	2	0.001	0.001	0.4	0.35	0.4	-	27	-20	75	DIP8, DMP8		
NJU7064	-	4	Single	3	16	0.15	2	0.001	0.001	0.4	0.35	0.4	-	27	-20	75	DMP14, SSOP14		
NJU7066	♥	-	2	Single	2.2	5.5	0.6	0.5	0.001	0.001	0.5	1.3	1.3	-	10	-40	125	MSOP8(VSP8)	
NJU7067	-	2	Single	4	16	0.014	4	0.001	0.001	0.04	0.06	-	-	45	-40	85	DMP8, SSOP8		
NJU7068	-	4	Single	4	16	0.014	4	0.001	0.001	0.04	0.06	-	-	45	-40	85	DMP14, SSOP14		
NJU7071	-	1	Single	5	16	0.6	2	0.001	0.001	1.1	-	1	-	-	-20	75	DIP8, DMP8, SSOP8		
NJU7072	-	2	Single	5	16	0.6	2	0.001	0.001	1.1	-	1	-	-	-20	75	DIP8, DMP8		
NJU7074	-	4	Single	5	16	0.6	2	0.001	0.001	1.1	-	1	-	-	-20	75	DMP14, SSOP14		
NJU7076	♥	-	1	Single	2.2	5.5	0.6	0.15	0.001	0.001	0.5	1.3	1.3	-	10	-40	125	SOT-23-5	
NJU7076B	-	1	Single	2.2	5.5	0.6	0.3	0.001	0.001	0.5	1.3	1.3	-	10	-40	125	SC-88A		
NJU7077	♥	✓	2	Single	2.2	5.5	0.6	0.15	0.001	0.001	0.5	1.3	1.3	-	10	-40	125	MSOP8(VSP8)	

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Low Bias Current

Part No.	Auto-motive	No. of Circuit	Power Supply	Supply Voltage [V]		I _{cc} /ch. [mA]	V _{IO} [mV]	I _b [nA]	I _o [nA]	SR [V/μsec]	GBW [MHz]	f _T [MHz]	Noise typ.		Operating Temperature [°C]		Package Outline	Notes	
				min.	max.								V _{NI} [μVrms]	e _n [nV/√Hz]	min.	max.			
NJU7078	♥	—	4	Single	2.2	5.5	0.6	0.15	0.001	0.001	0.5	1.3	1.3	—	10	-40	125	SSOP14	
NJU7091A	—	—	1	Single	1	5.5	0.015	2	0.001	0.001	0.1	0.19	0.2	—	—	-40	85	SOT-23-5	
NJU7092A	—	—	1	Single	1	5.5	0.08	2	0.001	0.001	1	1	1	—	—	-40	85	SOT-23-5	
NJU7093A	—	—	1	Single	1	5.5	0.2	2	0.001	0.001	2.4	1	1	—	—	-40	85	SOT-23-5	
NJU7094	—	—	2	Single	1	5.5	0.015	4	0.001	0.001	0.1	0.19	0.2	—	—	-40	85	DIP8, DMP8, SSOP8, MSOP8(TVSP8), MSOP8(VSP8)	
NJU7095	—	—	2	Single	1	5.5	0.08	4	0.001	0.001	1	1	1	—	—	-40	85	DIP8, DMP8, SSOP8, MSOP8(TVSP8), MSOP8(VSP8)	
NJU7096	—	—	2	Single	1	5.5	0.2	4	0.001	0.001	2.4	1	1	—	—	-40	85	DIP8, DMP8, SSOP8, MSOP8(TVSP8), MSOP8(VSP8)	
NJU7098A	—	—	1	Single	3	10	0.55	0.015	0.015	—	3	2	—	—	120	-40	105	SOT-23-6-1	
NJU7098AF1-C	—	—	1	Single	3	10	0.6	0.015	0.02	—	3	3	—	—	120	-40	105	SOT-23-6-1	
NJU77000	♥	—	1	Single	1.5	5.5	0.00029	1.8	0.001	0.001	0.0008	0.0011	0.0011	—	600	-40	105	SOT-23-5	Ultra-Low Operating Current
NJU77001	♥	—	1	Single	1.5	5.5	0.00029	1.8	0.001	0.001	0.0008	0.0011	0.0011	—	600	-40	105	SOT-23-5, SC-88A	Ultra-Low Operating Current
NJU77002	♥	—	2	Single	1.5	5.5	0.00023	2	0.001	0.001	0.0007	0.001	0.001	—	700	-40	105	SOP8 JEDEC 150mil(EMP8), MSOP8(TVSP8), DFN8-U1(ESON8-U1), Ultra-Low Operating Current	PLP♥: MSOP8(TVSP8), DFN8-U1(ESON8-U1), Ultra-Low Operating Current
NJU77004	♥	—	4	Single	1.5	5.5	0.00023	2.2	0.001	0.001	0.0007	0.001	0.001	—	700	-40	105	SSOP14	Ultra-Low Operating Current
NJU77550	♥	—	1	Single	1.8	5.5	0.055	5	0.001	0.001	0.8	1.7	—	—	24	-55	125	SOT-23-5, SC-88A	PLP♥: SOT-23-5
NJU77551	♥	—	1	Single	1.8	5.5	0.055	5	0.001	0.001	0.8	1.7	—	—	24	-55	125	SOT-23-5, SC-88A	
NJU77552	♥	✓	2	Single	1.8	5.5	0.05	5	0.001	0.001	0.8	1.7	—	—	24	-55	125	SOP8, MSOP8(TVSP8), MSOP8(VSP8), DFN8-U1(ESON8-U1)	PLP♥: MSOP8(TVSP8), MSOP8(VSP8), DFN8-U1(ESON8-U1)
NJU77554	♥	—	4	Single	1.8	5.5	0.05	5	0.001	0.001	0.8	1.7	—	—	24	-55	125	SSOP14	
NJU77572	♥	—	4	Single	2.7	5.5	1.1	4	0.001	0.001	5	10	—	—	8	-55	125	MSOP8(VSP8)	
NJU77580	—	—	4	Single	2.7	5.5	2.3	2.5	0.001	0.001	10	20	—	—	6	-55	125	SOT-23-5, SOP8, MSOP8(VSP8), DFN8-U1(ESON8-U1)	High Capacitive Load Drive
NJU77582	♥	—	2	Single	2.7	5.5	2.3	2.5	0.001	0.001	10	20	—	—	6	-55	125	SOT-23-5, SOP8, MSOP8(VSP8), DFN8-U1(ESON8-U1)	High Capacitive Load Drive, PLP♥: MSOP8(VSP8), DFN8-U1(ESON8-U1)
NJU77701	♥	✓	1	Single	2.4	5.5	3.8	1.5	0.001	0.001	35	34	—	—	6	-40	125	SOT-23-5	
NJU77806	♥	—	1	Single	1.8	5.5	0.5	2	0.001	0.001	1.1	4.4	2.4	—	5.5	-40	105	SC-88A	
NJU77902	—	—	2	Single	6	18	3.5	10	0.001	0.001	9	—	3	—	80	-40	85	DFN8-W2(ESON8-W2)	Capacitive Load Stable, High EMI Immunity, Small Package
NJU77903	♥	✓	1	Single	6.8	36	9.5	6	0.001	0.001	3.5	—	1.5	—	50	-40	125	TO-252-5-L3, DFN8-W2(ESON8-W2)	Capacitive Load Stable, High EMI Immunity

High Output Current

Part No.	Auto-motive	No. of Circuit	Power Supply	Supply Voltage [V]		I _o [mA]	V _{IO} [mV]	I _b [nA]	I _o [nA]	SR [V/μsec]	GBW [MHz]	f _T [MHz]	Noise typ.		Operating Temperature [°C]		Package Outline	Notes
				min.	max.								V _{NI} [μVrms]	e _n [nV/√Hz]	min.	max.		
NJM2743	—	—	1	Single	3	15	70	5	100	5	0.85	0.8	0.4	18	-40	85	SOT-23-5	
NJM3414A	—	—	2	Single	3	15	70	5	100	5	1	1.3	9	18	-40	85	DIP8, DMP8, SSOP8	
NJM4556A	—	—	2	Dual	±2	±18	73	6	50	5	3	8	4	12	-40	85	DIP8, DMP8, SSOP8	
NJU7036	—	—	2	Single	2.7	5.5	250	10	0.001	0.001	0.7	0.4	0.4	60	-40	85	PCSP20-E3	
NJU77902	—	—	2	Single	6	18	1000	10	0.001	0.001	9	—	3	80	-40	85	DFN8-W2(ESON8-W2)	Capacitive Load Stable, High EMI Immunity, Small Package
NJU77903	♥	✓	1	Single	6.8	36	100	6	0.001	0.001	3.5	—	1.5	50	-40	125	TO-252-5-L3, DFN8-W2(ESON8-W2)	Capacitive Load Stable, High EMI Immunity

High Voltage

Part No.	Auto-motive	No. of Circuit	Power Supply	Supply Voltage [V]		I _{cc} /ch. [mA]	V _{IO} [mV]	I _b [nA]	I _o [nA]	SR [V/μsec]	GBW [MHz]	f _T [MHz]	Noise typ.		Operating Temperature [°C]		Package Outline	Notes	
				min.	max.								V _{NI} [μVrms]	e _n [nV/√Hz]	min.	max.			
NJM062C	—	—	2	Dual	±2	±18	0.2	15	0.03	0.005	3.5	—	1	—	35	-40	125	SOP8, SSOP8	
NJM062CA	—	—	2	Dual	±2	±18	0.2	6	0.03	0.005	3.5	—	1	—	35	-40	125	SOP8, SSOP8	
NJM064C	♥	—	4	Dual	±2	±18	0.2	15	0.03	0.005	3.5	—	1	—	35	-40	125	SOP14, SSOP14	PLP♥: SSOP14
NJM064CA	—	—	4	Dual	±2	±18	0.2	6	0.03	0.005	3.5	—	1	—	35	-40	125	SOP14, SSOP14	
NJM072C	—	—	2	Dual	±4	±18	1.4	10	0.03	0.005	13	—	3	4	18	-40	125	SOP8, SSOP8	
NJM072CA	—	—	2	Dual	±4	±18	1.4	6	0.03	0.005	13	—	3	4	18	-40	125	SOP8, SSOP8	
NJM074C	♥	—	4	Dual	±4	±18	1.4	10	0.03	0.005	13	—	3	4	18	-40	125	SOP14, SSOP14	PLP♥: SSOP14
NJM074CA	—	—	4	Dual	±4	±18	1.4	6	0.03	0.005	13	—	3	4	18	-40	125	SOP14, SSOP14	
NJM082C	—	—	2	Dual	±4	±18	1.4	15	0.03	0.005	13	—	3	4	18	-40	125	SOP8, SSOP8	
NJM082CA	—	—	2	Dual	±4	±18	1.4	6	0.03	0.005	13	—	3	4	18	-40	125	SOP8, SSOP8	
NJM084C	—	—	4	Dual	±4	±18	1.4	15	0.03	0.005	13	—	3	4	18	-40	125	SOP14, SSOP14	
NJM084CA	—	—	4	Dual	±4	±18	1.4	6	0.03	0.005	13	—	3	4	18	-40	125	SOP14, SSOP14	
NJM2058	—	—	4	Dual	±4	±18	1.75	6	20	5	1	4	5	1.4	14	-40	85	DMP14, SSOP14	
NJM2059	—	—	4	Dual	±4	±18	1.75	6	20	5	2	6.8	8	1.4	14	-40	85	DMP14, SSOP14	
NJM2060	—	—	4	Dual	±4	±18	2.25	6	40	5	4	10	10	1.2	10	-20	75	DMP14, SSOP14	
NJM2068	—	—	2	Dual	±4	±18	2.5	3	150	5	6	24	5.5	0.44	4	-20	75	DIP8, DMP8, SSOP8	
NJM2119	—	—	2	Single	4	36	0.5	0.45	18	0.3	0.3	1	0.4	—	—	-30	85	DIP8, DMP8	
NJM2122	—	—	2	Dual	±2	±7	3.5	6	3600	450	2.4	12	—	0.56	1.5	-20	75	DIP8, DMP8	

Operational Amplifiers & Comparators

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High Voltage

Part No.	Auto-motive	No. of Circuit	Power Supply	Supply Voltage [V]		I _{cc} /ch. [mA]	V _{IO} [mV]	I _b [nA]	I _{io} [nA]	SR [V/μsec]	GBW [MHz]	f _r [MHz]	Noise typ.		Operating Temperature [°C]		Package Outline	Notes	
				min.	max.								V _{NI} [μVrms]	e _n [nV/√Hz]	min.	max.			
NJM2125	—	1	Single	2.7	20	1	7	25	5	1.2	1	1.2	—	—	-40	85	SOT-23-5		
NJM2132	—	2	Single	2.7	32	0.22	4.5	20	5	2.1	1.8	1.5	—	32	-40	85	DIP8, DMP8, SSOP8		
NJM2143	—	2	Single	3	20	0.35	7	25	5	0.5	0.6	—	—	—	-40	85	MSOP8(TVSP8), MSOP8(VSP8)		
NJM2718	—	2	Single	3	36	1.85	4	1200	100	9	1.8	2	—	24	-40	85	SOP8 JEDEC 150mil(EMP8), SSOP8	Capacitive Load Stable	
NJM2723	—	1	Dual	± 3.5	±17.5	2.9	20	2000	—	2000	75	100	—	6	-40	85	DIP8, SOP8 JEDEC 150mil(EMP8)	Current Feedback Type	
NJM2729	—	1	Dual	± 3	± 18	1.6	0.06	1.2	0.3	0.3	—	1.1	0.08	8	-40	85	SOP8 JEDEC 150mil(EMP8)		
NJM2739	—	2	Dual	± 3	± 18	1.3	0.06	1.2	0.3	0.3	—	1.1	0.08	8	-40	85	SOP8 JEDEC 150mil(EMP8)		
NJM2742	—	2	Single	3	32	2.15	12	80	5	10	2	2	—	40	-40	85	DIP8, DMP8, SSOP8, MSOP8(TVSP8)		
NJM2744	—	4	Single	3	32	1.875	12	80	5	10	2	2	—	40	-40	85	DMP14, SSOP14		
NJM2745	—	4	Dual	± 2	±15.5	3.25	3	100	5	5	15	5	—	5	-40	85	DMP14, SSOP14		
NJM2748	✓	1	Dual	± 6	± 16	2	2	0.05	0.025	13	2.2	2	2.5	20	-40	85	DIP8, DMP8		
NJM2748A	—	1	Dual	± 6	± 16	2	2	0.05	0.025	13	2.2	2	2.5	20	-40	85	DIP8, DMP8		
NJM2749	—	2	Dual	± 6	± 16	1.9	2.5	0.05	0.025	13	2.2	2	2.5	20	-40	85	DMP8, SOP8 JEDEC 150mil(EMP8)		
NJM2749A	—	2	Dual	± 6	± 16	1.9	2.5	0.05	0.025	13	2.2	2	2.5	20	-40	85	DIP8, DMP8, SOP8 JEDEC 150mil(EMP8)		
NJM2902	✓	4	Single	3	32	0.25	10	20	5	0.5	0.5	—	—	—	-40	85	DMP14, SSOP14		
NEW NJM2902B	✓	4	Single	3	36	0.30	2.5	10	1	0.4	0.9	—	—	30	-40	125	SSOP14-B4		
NJM2902C	✓	4	Single	3	32	0.3	7.0	20	2	0.6	1.3	—	—	30	-40	125	SSOP14 SOP14		
NJM2902CA	✓	4	Single	3	32	0.3	2.5	20	2	0.6	1.3	—	—	30	-40	125	SSOP14 SOP14		
NJM2904	✓	2	Single	3	32	0.35	7	25	5	0.5	0.6	—	—	—	-40	85	DIP8, DMP8, SOP8 JEDEC 150mil(EMP8), SSOP8, MSOP8(TVSP8), MSOP8(VSP8)		
NEW NJM2904B	✓	2	Single	3	36	0.30	2.5	10	1	0.4	0.9	—	—	30	-40	125	MSOP8(VSP8)		
NJM2904C	✓	2	Single	3	32	0.35	7	20	2	0.6	1.1	—	—	30	-40	125	DMP8, SOP8, SSOP8, MSOP8(VSP8), EQFN12-E2		
NJM2904CA	✓	2	Single	3	32	0.35	2.5	20	2	0.6	1.1	—	—	30	-40	125	DMP8, SOP8, SSOP8, MSOP8(VSP8)		
NJM320A	♥	—	1	Single	3	32	0.45	2.5	20	2	0.6	1.1	—	—	30	-40	125	SOT-23-5, SC-88A	Dual Supply (±1.5 to ±16V)
NJM321A	♥	—	1	Single	3	32	0.45	2.5	20	2	0.6	1.1	—	—	30	-40	125	SOT-23-5, SC-88A, DFN6-G1(ESON6-G1)	PLP: SOT-23-5, SC-88A, Dual Supply (±1.5 to ±16V)

Part No.	Auto-motive	No. of Circuit	Power Supply	Supply Voltage [V]		I _{cc} /ch. [mA]	V _{IO} [mV]	I _b [nA]	I _{io} [nA]	SR [V/μsec]	GBW [MHz]	f _r [MHz]	Noise typ.		Operating Temperature [°C]		Package Outline	Notes	
				min.	max.								V _{NI} [μVrms]	e _n [nV/√Hz]	min.	max.			
NJM324C	—	4	Single	3	30	0.3	7	20	2	0.6	1.3	1	—	30	-40	85	SOP14, SSOP14	Dual Supply (±1.5 to ±15V)	
NJM324CA	—	4	Single	3	30	0.3	2.5	20	2	0.6	1.3	1	—	30	-40	85	SOP14, SSOP14	Dual Supply (±1.5 to ±15V)	
NJM3403A	✓	4	Single	4	36	0.75	5	70	5	1.2	1	1.2	—	25	-40	85	DMP14, SSOP14		
NJM3404A	—	2	Single	4	36	1	5	70	5	1.2	2	1.2	—	—	-40	85	DIP8, DMP8, SSOP8		
NJM3472	♥	—	2	Single	3	36	2	5.5	80	5	10	3	3.6	—	48	-40	125	SOP8, SSOP8, MSOP8(VSP8)	PLP: MSOP8 (VSP8)
NJM3474	♥	—	4	Single	3	36	2	5.5	80	5	10	3	3.6	—	48	-40	125	SOP14, SSOP14	PLP: SSOP14
NJM358C	—	2	Single	3	30	0.35	7	20	2	0.6	1.1	0.5	—	30	-40	85	SOP8, SSOP8	Dual Supply (±1.5 to ±15V)	
NJM358CA	—	2	Single	3	30	0.35	2	20	2	0.6	1.1	0.5	—	30	-40	85	SOP8, SSOP8	Dual Supply (±1.5 to ±15V)	
NJM4556A	—	2	Dual	± 2	± 18	4.5	6	50	5	3	8	4	—	12	-40	85	DIP8, DMP8, SSOP8		
NJM4558	—	2	Dual	± 4	± 18	1.75	6	25	5	1	3	3	1.4	12.5	-40	85	DIP8, DMP8, SOP8 JEDEC 150mil(EMP8), SSOP8		
NJM4558C	—	2	Dual	± 4	± 18	1.75	6	25	5	1.5	3.5	3	1.4	12	-40	85	SOP8, SSOP8		
NJM4565	—	2	Dual	± 4	± 18	2.25	3	50	2	4	10	5	1.2	9	-40	85	DIP8, DMP8, SOP8 JEDEC 150mil(EMP8), SSOP8		
NJM4580	—	2	Dual	± 2	± 18	3	3	100	5	5	15	5	0.8	5	-40	85	DIP8, DMP8, SOP8 JEDEC 150mil(EMP8), SSOP8, MSOP8(VSP8)		
NJM4580C	—	2	Dual	± 2	± 18	3	3	100	5	5	15	5	0.8	5	-40	85	SOP8, SSOP8		
NJM4585	—	2	Dual	± 4	± 18	2.5	3	260	5	6.8	19	7.5	0.5	3.5	-40	125	DMP8		
NJM5532	—	2	Dual	± 3	± 22	4.5	4	200	10	8	10	8	0.5	5	-20	75	DIP8, DMP8		
NJM5532C	—	2	Dual	± 3 to ± 22	± 3 to ± 22	4.5	4	200	10	9	10	—	0.6	5	-40	85	SOP8		
NJM8020	♥	—	1	Single	3	36	0.45	2	20	2	0.6	1.1	—	—	30	-40	125	SOT-23-5, SC-88A	PLP: SOT-23-5, Dual Supply (±1.5 to ±18V)
NJM8021	♥	—	1	Single	3	36	0.45	2	20	2	0.6	1.1	—	—	30	-40	125	SOT-23-5, SC-88A, DFN6-G1(ESON6-G1)	Dual Supply (±1.5 to ±18V)
NJM8065	—	2	Dual	± 4	± 18	2.25	3	50	2	4	10	4	—	8	-40	125	SOP8, DMP8, MSOP8(TVSP8), SSOP8	Wide Temperature Range (-40°C to +125°C)	
NJM8068	—	2	Dual	± 4	± 18	2.5	3	260	5	6.8	19	7.5	0.5	3.5	-40	125	SOP8, MSOP8(TVSP8)	Wide Temperature Range (-40°C to +125°C)	

Operational Amplifiers & Comparators

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High Voltage

Part No.	Auto-motive	No. of Circuit	Power Supply	Supply Voltage [V]		I _{cc} /ch. [mA]	V _{IO} [mV]	I _b [nA]	I _{io} [nA]	SR [V/μsec]	GBW [MHz]	f _r [MHz]	Noise typ.		Operating Temperature [°C]		Package Outline	Notes
				min.	max.								V _{NI} [μVrms]	e _n [nV/√Hz]	min.	max.		
NJM8080	–	2	Dual	± 2	± 18	3	3	100	5	5	15	5	–	5	–40	125	SOP8, MSOP8(TVSP8), SSOP8	Wide Temperature Range (-40°C to +125°C)
NJM8087	–	1	Dual	± 4	± 16	1.3	0.8	0.025	0.006	20	–	7	–	10	–40	125	SOP8 JEDEC 150mil(EMP8)	No Phase Reversal
NEW NJM8207 ♥	✓	2	Single	4	35	0.7	1	120	5	0.15	0.3	–	–	–	–40	125	DMP8	
NEW NJM8208 ♥	✓	2	Single	3	35	0.45	1	55	5	0.2	0.35	–	–	–	–40	125	DMP8,MSOP8(VSP8)	PLP: DMP8
NJM842 ♥	✓	2	Single	3	36	2.15	3.5	120	6	8.5	3.5	3.5	–	32	–40	125	SOP8, SSOP8, MSOP8(VSP8)	PLP: MSOP8 (VSP8)
NJM844 ♥	–	4	Single	3	36	2.2	3.5	120	6	8.5	3.5	3.5	–	32	–40	125	SOP14, SSOP14	PLP: SSOP14
NJM8502 ♥	–	2	Dual	± 4.5	± 16	1.3	0.4	0.025	0.006	20	7	7	0.18	10	–40	125	MSOP8(VSP8)	
NJM8512 ♥	–	2	Dual	± 4.5	± 16	1.3	0.4	0.025	0.006	20	7	7	–	10	–40	125	MSOP8(VSP8), SOP8 JEDEC 150mil(EMP8)	PLP: MSOP8 (VSP8)
NJM8513 ♥	–	4	Dual	± 4.5	± 16	1.3	0.4	0.025	0.006	20	7	7	–	10	–40	125	SSOP14	
NJM8524	–	4	Single	3	36	0.025	1.8	3	0.5	0.04	0.1	0.1	–	60	–40	85	SSOP14	
NEW NJM8801	–	2	Dual	± 2	± 18	3	3	100	5	5	15	–	0.8	4.5	–40	85	EMP8, SSOP8	
NJMOP177	–	1	Dual	± 3	± 18	1.6	0.06	1.2	0.3	0.3	1.1	1.1	0.08	8	–40	105	SOP8 JEDEC 150mil(EMP8)	
NJMOP1772	–	2	Dual	± 3	± 18	1.3	0.06	1.2	0.3	0.3	1.1	1.1	0.08	8	–40	105	SOP8 JEDEC 150mil(EMP8)	
NJMOP2277 ♥	–	2	Dual	±2.25	± 18	0.76	0.05	0.5	0.5	0.7	1	1	0.07	8	–40	125	SOP8 JEDEC 150mil(EMP8), MSOP8(VSP8), DFN8-W2(ESON8-W2), High EMI Immunity	PLP: MSOP8 (VSP8), DFN8-W2 (ESON8-W2), High EMI Immunity
NJMOP277 ♥	–	1	Dual	±2.25	± 18	0.76	0.05	0.5	0.5	0.7	1	1	0.07	8	–40	125	SOP8 JEDEC 150mil(EMP8), MSOP8(VSP8)	PLP: MSOP8 (VSP8), High EMI Immunity
NJU7001	–	1	Single	1	16	0.015	10	0.001	0.001	0.05	0.15	0.1	–	37.5	–20	75	DIP8, DMP8, SSOP8	
NJU7002	–	2	Single	1	16	0.015	10	0.001	0.001	0.05	0.15	0.1	–	37.5	–20	75	DIP8, DMP8	
NJU7004	–	4	Single	1	16	0.015	10	0.001	0.001	0.05	0.15	0.1	–	37.5	–20	75	DMP14, SSOP14	

Part No.	Auto-motive	No. of Circuit	Power Supply	Supply Voltage [V]		I _{cc} /ch. [mA]	V _{IO} [mV]	I _b [nA]	I _{io} [nA]	SR [V/μsec]	GBW [MHz]	f _r [MHz]	Noise typ.		Operating Temperature [°C]		Package Outline	Notes
				min.	max.								V _{NI} [μVrms]	e _n [nV/√Hz]	min.	max.		
NJU7021	–	1	Single	3	16	0.15	10	0.001	0.001	0.4	0.35	0.4	–	27	–20	75	DMP8, SSOP8	
NJU7022	–	2	Single	3	16	0.15	10	0.001	0.001	0.4	0.35	0.4	–	27	–20	75	DIP8, DMP8	
NJU7024	–	4	Single	3	16	0.15	10	0.001	0.001	0.4	0.35	0.4	–	27	–20	75	DMP14, SSOP14	
NJU7031	–	1	Single	3	16	1	10	0.001	0.001	3.5	2	1.5	–	20	–40	85	DIP8, DMP8, SSOP8	
NJU7032	–	2	Single	3	16	1	10	0.001	0.001	3.5	2	1.5	–	20	–40	85	DIP8, DMP8	
NJU7034	–	4	Single	3	16	1	10	0.001	0.001	3.5	2	1.5	–	20	–40	85	DMP14, SSOP14	
NJU7051	–	1	Single	1	16	0.015	2	0.001	0.001	0.05	–	0.1	–	–	–40	85	DMP8	
NJU7052	–	2	Single	1	16	0.015	2	0.001	0.001	0.05	–	0.1	–	–	–40	85	DMP8	
NJU7061	–	1	Single	3	16	0.15	2	0.001	0.001	0.4	0.35	0.4	–	27	–20	75	DIP8, DMP8, SSOP8	
NJU7062	–	2	Single	3	16	0.15	2	0.001	0.001	0.4	0.35	0.4	–	27	–20	75	DIP8, DMP8	
NJU7064	–	4	Single	3	16	0.15	2	0.001	0.001	0.4	0.35	0.4	–	27	–20	75	DMP14, SSOP14	
NJU7067	–	2	Single	4	16	0.014	4	0.001	0.001	0.04	0.06	–	–	45	–40	85	DMP8, SSOP8	
NJU7068	–	4	Single	4	16	0.014	4	0.001	0.001	0.04	0.06	–	–	45	–40	85	DMP14, SSOP14	
NJU7071	–	1	Single	5	16	0.6	2	0.001	0.001	1.1	–	1	–	–	–20	75	DIP8, DMP8, SSOP8	
NJU7072	–	2	Single	5	16	0.6	2	0.001	0.001	1.1	–	1	–	–	–20	75	DIP8, DMP8	
NJU7074	–	4	Single	5	16	0.6	2	0.001	0.001	1.1	–	1	–	–	–20	75	DMP14, SSOP14	
NJU77902	–	2	Single	6	18	3.5	10	0.001	0.001	9	–	3	–	80	–40	85	DFN8-W2(ESON8-W2)	Capacitive Load Stable, High EMI Immunity, Small Package
NJU77903 ♥	✓	1	Single	6.8	36	9.5	6	0.001	0.001	3.5	–	1.5	–	50	–40	125	TO-252-5-L3, DFN8-W2(ESON8-W2)	Capacitive Load Stable, High EMI Immunity

Operational Amplifiers & Comparators

U.D. : Under Development **NEW** : New product **♥** : Products available in PRODUCT LONGEVITY PROGRAM **xxxx** : Products available in PRODUCT LONGEVITY PROGRAM with time limit



General Purpose

Part No.	Auto-motive	No. of Circuit	Power Supply	Supply Voltage [V]		I _{cc} /ch. [mA]	V _{IO} [mV]	I _b [nA]	I _o [nA]	SR [V/μsec]	GBW [MHz]	f _r [MHz]	Noise typ.		Operating Temperature [°C]		Package Outline	Notes	
				min.	max.								V _{NI} [μVrms]	e _n [nV/√Hz]	min.	max.			
NJM062C	—	2	Dual	±2	±18	0.2	15	0.03	0.005	3.5	—	1	—	35	-40	125	SOP8, SSOP8		
NJM062CA	—	2	Dual	±2	±18	0.2	6	0.03	0.005	3.5	—	1	—	35	-40	125	SOP8, SSOP8		
NJM064C	♥	—	4	Dual	±2	±18	0.2	15	0.03	0.005	3.5	—	1	—	35	-40	125	SOP14, SSOP14	PLP♥: SSOP14
NJM064CA	—	4	Dual	±2	±18	0.2	6	0.03	0.005	3.5	—	1	—	35	-40	125	SOP14, SSOP14		
NJM072C	—	2	Dual	±4	±18	1.4	10	0.03	0.005	13	—	3	4	18	-40	125	SOP8, SSOP8		
NJM072CA	—	2	Dual	±4	±18	1.4	6	0.03	0.005	13	—	3	4	18	-40	125	SOP8, SSOP8		
NJM074C	♥	—	4	Dual	±4	±18	1.4	10	0.03	0.005	13	—	3	4	18	-40	125	SOP14, SSOP14	PLP♥: SSOP14
NJM074CA	—	4	Dual	±4	±18	1.4	6	0.03	0.005	13	—	3	4	18	-40	125	SOP14, SSOP14		
NJM082C	—	2	Dual	±4	±18	1.4	15	0.03	0.005	13	—	3	4	18	-40	125	SOP8, SSOP8		
NJM082CA	—	2	Dual	±4	±18	1.4	6	0.03	0.005	13	—	3	4	18	-40	125	SOP8, SSOP8		
NJM084C	—	4	Dual	±4	±18	1.4	15	0.03	0.005	13	—	3	4	18	-40	125	SOP14, SSOP14		
NJM084CA	—	4	Dual	±4	±18	1.4	6	0.03	0.005	13	—	3	4	18	-40	125	SOP14, SSOP14		
NJM12902	—	4	Single	2	14	0.25	5	20	5	0.7	1.5	1	—	—	-40	85	DMP14, SSOP14, PCSP14-C3		
NJM12904	—	2	Single	2	14	0.35	5	20	5	0.7	1.5	1	—	—	-40	85	DIP8, DMP8, SOP8 JEDEC 150mil(EMP8), SSOP8, MSOP8(TVSP8), MSOP8(VSP8)		
NJM13403	✓	4	Single	2	14	0.75	4	25	5	1.2	2	2	—	25	-40	85	DMP14, SSOP14		
NJM13404	✓	2	Single	2	14	1	4	25	5	1.2	2	2	—	25	-40	85	DIP8, DMP8, SIP8, SOP8 JEDEC 150mil(EMP8), SSOP8, MSOP8(VSP8), MSOP8(TVSP8)		
NJM14558	—	2	Dual	±2	±7	1.35	3	70	5	2.5	5	4	1.4	10	-40	85	DIP8, DMP8, SOP8 JEDEC 150mil(EMP8), SSOP8, MSOP8(VSP8)		
NJM2058	—	4	Dual	±4	±18	1.75	6	20	5	1	4	5	1.4	14	-40	85	DMP14, SSOP14		
NJM2059	—	4	Dual	±4	±18	1.75	6	20	5	2	6.8	8	1.4	14	-40	85	DMP14, SSOP14		
NJM2060	—	4	Dual	±4	±18	2.25	6	40	5	4	10	10	1.2	10	-20	75	DMP14, SSOP14		
NJM2902	✓	4	Single	3	32	0.25	10	20	5	0.5	0.5	—	—	—	-40	85	DMP14, SSOP14		
NEW NJM2902B	✓	4	Single	3	36	0.30	2.5	10	1	0.4	0.9	—	—	30	-40	125	SSOP14-B4		
NJM2902C	—	4	Single	3	32	0.3	7	20	2	0.6	1.3	—	—	30	-40	125	SOP14, SSOP14	Wide Temperature Range (-40°C to +125°C)	
NJM2902CA	—	4	Single	3	32	0.3	2.5	20	2	0.6	1.3	—	—	30	-40	125	SOP14, SSOP14	Wide Temperature Range (-40°C to +125°C)	
NJM2904	✓	2	Single	3	32	0.35	7	25	5	0.5	0.6	—	—	—	-40	85	DIP8, DMP8, SOP8 JEDEC 150mil(EMP8), SSOP8, MSOP8(TVSP8), MSOP8(VSP8)		

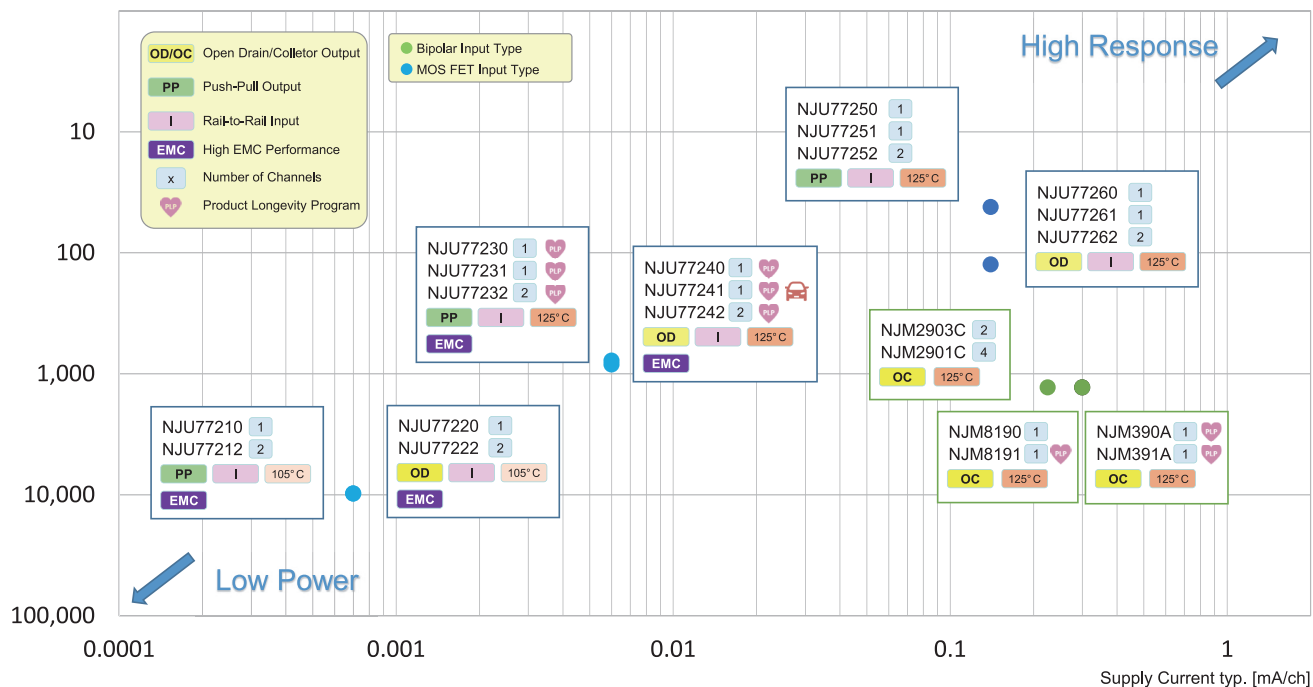
Part No.	Auto-motive	No. of Circuit	Power Supply	Supply Voltage [V]		I _{cc} /ch. [mA]	V _{IO} [mV]	I _b [nA]	I _o [nA]	SR [V/μsec]	GBW [MHz]	f _r [MHz]	Noise typ.		Operating Temperature [°C]		Package Outline	Notes	
				min.	max.								V _{NI} [μVrms]	e _n [nV/√Hz]	min.	max.			
NEW NJM2904B	✓	2	Single	3	36	0.30	2.5	10	1	0.4	0.9	—	—	30	-40	125	MSOP8(VSP8)		
NJM2904C	—	2	Single	3	32	0.35	7	20	2	0.6	1.1	—	—	30	-40	125	SOP8, DMP8, MSOP8(TVSP8), SSOP8, EQFN12-E2	Wide Temperature Range (-40°C to +125°C)	
NJM2904CA	—	2	Single	3	32	0.35	2	20	2	0.6	1.1	—	—	30	-40	125	SOP8, DMP8, MSOP8(TVSP8), SSOP8	Wide Temperature Range (-40°C to +125°C)	
NJM320A	♥	—	1	Single	3	32	0.45	2.5	20	2	0.6	1.1	—	—	30	-40	125	SOT-23-5, SC-88A	Dual Supply (±1.5 to ±16V)
NJM321A	♥	—	1	Single	3	32	0.45	2.5	20	2	0.6	1.1	—	—	30	-40	125	SOT-23-5, SC-88A, DFN6-G1(ESON6-G1)	PLP♥: SOT-23-5, SC-88A, Dual Supply (±1.5 to ±16V)
NJM324C	—	4	Single	3	30	0.3	7	20	2	0.6	1.3	1	—	30	-40	85	SOP14, SSOP14	Dual Supply (±1.5 to ±15V)	
NJM324CA	—	4	Single	3	30	0.3	2.5	20	2	0.6	1.3	1	—	30	-40	85	SOP14, SSOP14	Dual Supply (±1.5 to ±15V)	
NJM3403A	✓	4	Single	4	36	0.75	5	70	5	1.2	1	1.2	—	25	-40	85	DMP14, SSOP14		
NJM3404A	—	2	Single	4	36	1	5	70	5	1.2	2	1.2	—	—	-40	85	DIP8, DMP8, SSOP8		
NJM358C	—	2	Single	3	30	0.35	7	20	2	0.6	1.1	0.5	—	30	-40	85	SOP8, SSOP8	Dual Supply (±1.5 to ±15V)	
NJM358CA	—	2	Single	3	30	0.35	2	20	2	0.6	1.1	0.5	—	30	-40	85	SOP8, SSOP8	Dual Supply (±1.5 to ±15V)	
NJM4558	—	2	Dual	±4	±18	1.75	6	25	5	1	3	3	1.4	12.5	-40	85	DIP8, DMP8, SOP8 JEDEC 150mil(EMP8), SSOP8		
NJM4558C	—	2	Dual	±4	±18	1.75	6	25	5	1.5	3.5	3	1.4	12	-40	85	SOP8, SSOP8		
NJM4565	—	2	Dual	±4	±18	2.25	3	50	2	4	10	5	1.2	9	-40	85	DIP8, DMP8, SOP8 JEDEC 150mil(EMP8), SSOP8		
NJM4580	—	2	Dual	±2	±18	3	3	100	5	5	15	5	0.8	5	-40	85	DIP8, DMP8, SOP8 JEDEC 150mil(EMP8), SSOP8, MSOP8(VSP8)		
NJM4580C	—	2	Dual	±2	±18	3	3	100	5	5	15	5	0.8	5	-40	85	SOP8, SSOP8		
NJU7056	♥	✓	1	Single	1.8	5.5	0.26	4	0.001	0.001	0.8	2.1	2	—	15	-40	125	SC-88A, SOT-23-5	
NJU7057	♥	✓	2	Single	1.8	5.5	0.26	4	0.001	0.001	0.8	2.1	2	—	15	-40	125	DFN8-U1(ESON8-U1), MSOP8(TVSP8)	
NJU7058	♥	✓	4	Single	1.8	5.5	0.25	4	0.001	0.001	0.8	2.1	2	—	15	-40	125	SSOP14	
NJU77550	♥	—	1	Single	1.8	5.5	0.055	5	0.001	0.001	0.8	1.7	—	—	24	-55	125	SOT-23-5, SC-88A	PLP♥: SOT-23-5
NJU77551	♥	—	1	Single	1.8	5.5	0.055	5	0.001	0.001	0.8	1.7	—	—	24	-55	125	SOT-23-5, SC-88A	
NJU77552	♥	✓	2	Single	1.8	5.5	0.05	5	0.001	0.001	0.8	1.7	—	—	24	-55	125	SOP8, MSOP8(TVSP8), MSOP8(VSP8), DFN8-U1(ESON8-U1)	PLP♥: MSOP8(TVSP8), MSOP8(VSP8), DFN8-U1(ESON8-U1)
NJU77554	♥	—	4	Single	1.8	5.5	0.05	5	0.001	0.001	0.8	1.7	—	—	24	-55	125	SSOP14	



Comparator

※Main Product Only

Propagation Delay typ. [nsec]



Comparators

Part No.	Auto-motive	No. of Circuit	Output Type	Supply Voltage [V]		Icc/ch. [mA]	Vio [mV]	Response Time [ns]	Operating Temperature [°C]		Package Outline	Notes
				min.	max.				typ.	max.		
NJM12901	-	4	Open-Collector	2	14	0.2	4	500	-40	85	DMP14, SSOP14	
NJM12903	-	2	Open-Collector	2	14	0.2	4	500	-40	85	DIP8, DMP8, SOP8 JEDEC 150mil(EMP8), SSOP8, MSOP8(TVSP8), MSOP8(VSP8)	
NJM2407	✓	2	Open-Collector	2	20	0.2	7	800	-40	85	MSOP8(TVSP8), MSOP8(VSP8)	
NJM2901 ♥	✓	4	Open-Collector	2	36	0.2	7	1300	-40	85	DMP14, SSOP14	PLP♥: DMP14, SSOP14
NJM2901C	-	4	Open-Collector	2	36	0.2	5	1300	-40	125	SOP14, SSOP14	Wide Operating Temperature (-40°C to +125°C)
NJM2901CA	-	4	Open-Collector	2	36	0.2	2.5	1300	-40	125	SOP14, SSOP14	Wide Operating Temperature (-40°C to +125°C)
NJM2903 ♥	✓	2	Open-Collector	2	36	0.2	7	1500	-40	85	DIP8, DMP8, SOP8 JEDEC 150mil(EMP8), SSOP8, MSOP8(TVSP8), MSOP8(VSP8)	PLP♥: DMP8, SSOP8, MSOP8(VSP8)
NJM2903C	-	2	Open-Collector	2	36	0.225	5	1300	-40	125	SOP8, SSOP8, DMP8, MSOP8(TVSP8), EQFN14-D7	Wide Operating Temperature (-40°C to +125°C)
NJM2903CA	-	2	Open-Collector	2	36	0.225	2	1300	-40	125	SOP8, SSOP8, DMP8, MSOP8(TVSP8)	Wide Operating Temperature (-40°C to +125°C)
NJM339C	-	4	Open-Collector	2	36	0.2	5	1300	-40	85	SOP14, SSOP14	Dual Supply (±1 to ±18V)
NJM339CA	-	4	Open-Collector	2	36	0.2	2.5	1300	-40	85	SOP14, SSOP14	Dual Supply (±1 to ±18V)

Part No.	Auto-motive	No. of Circuit	Output Type	Supply Voltage [V]		Icc/ch. [mA]	Vio [mV]	Response Time [ns]	Operating Temperature [°C]		Package Outline	Notes
				min.	max.				typ.	max.		
NJM390A ♥	-	1	Open-Collector	2	36	0.3	3	1300	-40	125	SOT-23-5, SC-88A	Wide Operating Temperature (-40°C to +125°C)
NJM391A ♥	-	1	Open-Collector	2	36	0.3	3	1300	-40	125	SOT-23-5, SC-88A, DFN6-G1(ESON6-G1)	Wide Operating Temperature (-40°C to +125°C)
NJM393C	-	2	Open-Collector	2	36	0.225	5	1300	-40	85	SOP8, SSOP8	Dual Supply (±1 to ±18V)
NJM393CA	-	2	Open-Collector	2	36	0.225	2	1300	-40	85	SOP8, SSOP8	Dual Supply (±1 to ±18V)
NJM8190	-	1	Open-Collector	2	36	0.3	3	1300	-40	125	SOT-23-5, SC-88A	Dual Supply (±1 to ±18V)
NJM8191 ♥	✓	1	Open-Collector	2	36	0.3	3	1300	-40	125	SOT-23-5, SC-88A, DFN6-G1(ESON6-G1)	Dual Supply (±1 to ±18V)
NJU7108	-	1	Push-Pull	1	5.5	0.01	4	500	-40	85	SC-88A, TSON6	
NJU7109	-	1	Push-Pull	1.8	5.5	0.1	7	110	-40	85	SC-88A, SOT-23-5	
NJU7116	-	1	Push-Pull	1.8	3.6	0.001	2.5	3300	-40	105	SOT-23-5, DFN6-G1(ESON6-G1)	
NJU7118	-	1	Open-Drain	1	5.5	0.01	4	540	-40	85	SC-88A	
NJU7119	-	1	Open-Drain	1.8	5.5	0.1	7	160	-40	85	SC-88A	
NJU7141	-	1	Open-Drain	1	5.5	0.005	10	900	-40	85	SOT-23-5	
U.D. NJU77210	-	1	Push-Pull	1.7	5.5	0.0007	7	9800	-40	105	SOT-23-5, SC-88A, DFN6-G1(ESON6-G1)	Integrated EMI Filter
NJU77212 ♥	-	2	Push-Pull	1.7	5.5	0.0006	7	9800	-40	105	MSOP8(VSP8), DFN8-U1(ESON8-U1)	Integrated EMI Filter
U.D. NJU77220	-	1	Open-Drain	1.7	5.5	0.0007	7	9800	-40	105	SOT-23-5, SC-88A, DFN6-G1(ESON6-G1)	Integrated EMI Filter
U.D. NJU77222	-	2	Open-Drain	1.7	5.5	0.0006	7	9800	-40	105	MSOP8(VSP8), DFN8-U1(ESON8-U1)	Integrated EMI Filter
NJU77230 ♥	-	1	Push-Pull	1.8	5.5	0.006	6	780	-40	125	SOT-23-5, SC-88A	Wide Operating Temperature (-40°C to +125°C)
NJU77231 ♥	-	1	Push-Pull	1.8	5.5	0.006	6	780	-40	125	SOT-23-5, SC-88A, DFN6-G1(ESON6-G1)	Wide Operating Temperature (-40°C to +125°C)
NJU77232 ♥	-	2	Push-Pull	1.8	5.5	0.006	6	780	-40	125	MSOP8(TVSP8), DFN8-U1(ESON8-U1)	Wide Operating Temperature (-40°C to +125°C)
NJU77240 ♥	-	1	Open-Drain	1.8	5.5	0.006	6	840	-40	125	SOT-23-5, SC-88A	Wide Operating Temperature (-40°C to +125°C)

Operational Amplifiers & Comparators

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Comparators

Part No.	Auto-motive	No. of Circuit	Output Type	Supply Voltage [V]		Icc/ch. [mA]	Vio [mV]	Response Time [ns]	Operating Temperature [°C]		Package Outline	Notes
				min.	max.				typ.	max.		
NJU77241 ♥	-	1	Open-Drain	1.8	5.5	0.006	6	840	-40	125	SOT-23-5, SC-88A, DFN6-G1(ESON6-G1)	Wide Operating Temperature (-40°C to +125°C)
NJU77242 ♥	✓	2	Open-Drain	1.8	5.5	0.006	6	840	-40	125	MSOP8(TVSP8), DFN8-U1(ESON8-U1)	Wide Operating Temperature (-40°C to +125°C)
NJU77250 ♥	-	1	Push-Pull	2.7	5.5	0.14	7	42	-40	125	SOT-23-5, SC-88A	Wide Operating Temperature (-40°C to +125°C) PLP: SOT-23-5
NJU77251 ♥	-	1	Push-Pull	2.7	5.5	0.14	7	42	-40	125	SOT-23-5, SC-88A, DFN6-G1(ESON6-G1)	Wide Operating Temperature (-40°C to +125°C)
NJU77252 ♥	-	2	Push-Pull	2.7	5.5	0.14	7	42	-40	125	MSOP8(VSP8), DFN8-U1(ESON8-U1)	Wide Temperature Range (-40°C to +125°C)
NJU77260 ♥	-	1	Open-Drain	2.7	5.5	0.14	7	125	-40	125	SOT-23-5, SC-88A	Wide Operating Temperature (-40°C to +125°C)
NJU77261 ♥	-	1	Open-Drain	2.7	5.5	0.14	7	125	-40	125	SOT-23-5, SC-88A, DFN6-G1(ESON6-G1)	Wide Operating Temperature (-40°C to +125°C)
U.D. NJU77262	-	2	Open-Drain	2.7	5.5	0.14	7	125	-40	125	MSOP8(VSP8), DFN8-U1(ESON8-U1)	Wide Operating Temperature (-40°C to +125°C)



Special Functions Amplifiers

Part No.	Auto-motive	Functions	Supply Voltage [V]		Package Outline	Key Features
			min.	max.		
NJU77903-H ♥	✓	Resolver Excitation Amplifier for Automotive	6.8	36	TO-252-5-L3	High Output Current, Rail-to-Rail Input / Output, AEC-Q100 Grade 1 Qualified, High output current: ± 100mA typ. (200mApp typ.), Thermal shutdown, Current limit
NJU77903-Z2 ♥	✓	Resolver Excitation Amplifier for Automotive	6.8	36	TO-252-5-L3	High Output Current, Rail-to-Rail Input / Output, AEC-Q100 Grade 1 Qualified, High output current: ± 100mA typ. (200mApp typ.), Thermal shutdown, Current limit
NJU7870-Z2 ♥	✓	Resolver Excitation Amplifier for Automotive	2.4	5.5	SSOP16-B3	Differential Voltage Input/ Differential Current Output (Transconductance 13.5mAp/Vpp typ.)
NJU7890-Z ♥	✓	1000V High Voltage Monitor IC for Automotive	2.2	5.5	PMAP11-PM	AEC-Q100 Grade 1 Qualified, Common Mode Input Voltage Range : 1000V, High Precision Attenuation Rate : ± 1%, High Input Resistance : 30M ohm Min.

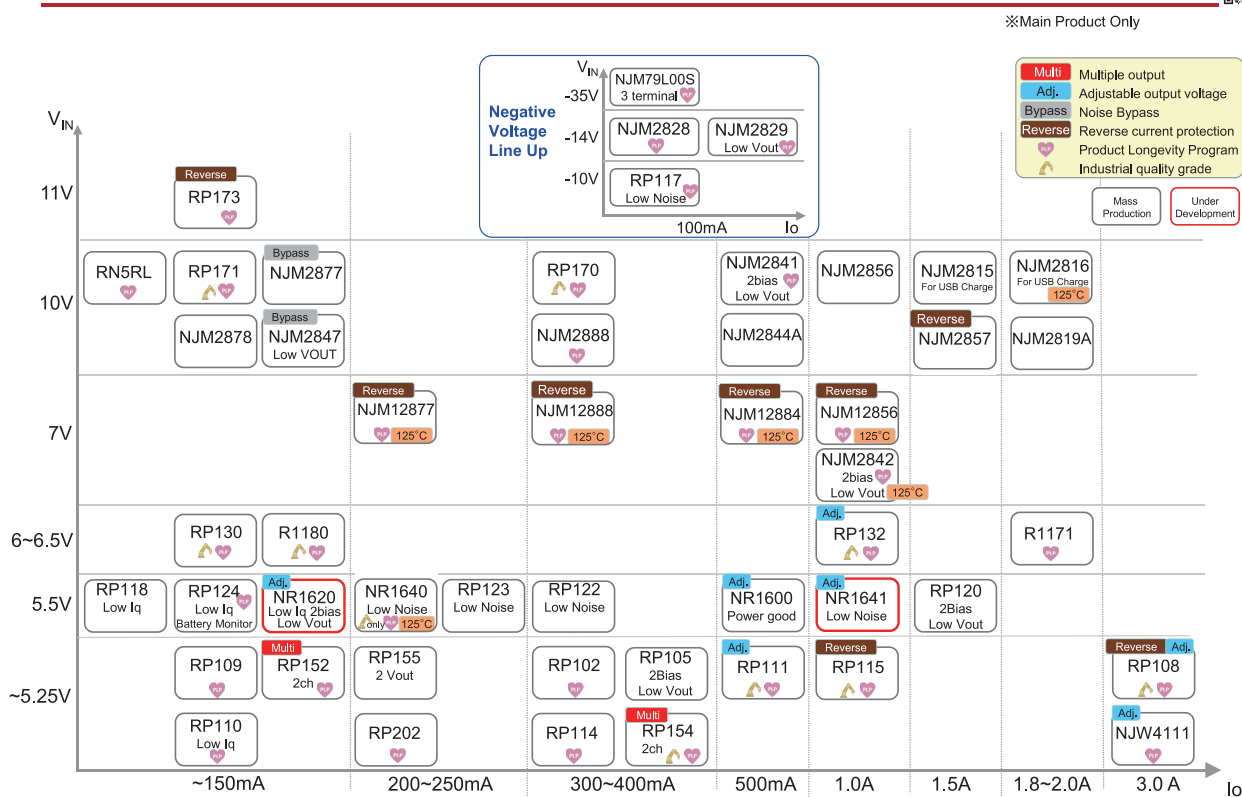
Sensor Measurement AFEs

U.D. : Under Development NEW : New product ♥ : Products available in PRODUCT LONGEVITY PROGRAM xxxx : Products available in PRODUCT LONGEVITY PROGRAM with time limit



Part No.	Auto-motive	Supply Voltage [V]		Supply Current		Resolution [bit]	Speed [sps]	Features	Number of Pin	Interface	Package Outline	Notes
		min.	max.	typ.	max.							
U.D. NA2100	-	3.0	5.25	0.95mA (UNBUF) 1.2mA (BUF)	TBD	-	-	V-F Converter	8	-	MSOP8(VSP8)	Low Power: 3mW(typ.) Low-Cost Analog to Digital Conversion and so on, Isolation of High Common-Mode Voltages.
U.D. NA2200 ♥	-	2.7	5.5	4.0mA	5.7mA	16	0.814k to 6.51k	5V Operation, High Gain	16	SPI	SSOP16-BD	Built-in Excitation current source Communication error detection
U.D. NA2201	-	4.0	5.5	TBD		14	-	Digital Earth Leakage Current Detection, Time Delay Function	16	-	SSOP16-BD	Over Voltage Detection, DC Current Detection
U.D. NA2202	-	2.7	5.5	3.2mA	4.0mA	16	3.125 to 9.6k	High Precision	24	SPI	QFN4040-24-NB	Built-in Excitation current source Communication error detection Disconnection Detection
U.D. NA2203	-	2.7	5.5	3.2mA	4.0mA	20	3.125 to 9.6k	High Precision	24	SPI	QFN4040-24-NB	Built-in Excitation current source Communication error detection Disconnection Detection
U.D. NA2204	-	2.7	5.5	3.2mA	4.0mA	24	3.125 to 9.6k	High Precision	24	SPI	QFN4040-24-NB	Built-in Excitation current source Communication error detection Disconnection Detection
NJU9101 ♥	-	2.4	3.6	4.0μA (Op-Amp) 150μA (ADC)	5.5μA (Op-Amp) 200μA (ADC)	16	32 to 2k	Low Power	24	I ² C	QFN4040-24-NB	High EMC noise tolerance, Programmable Cell Bias Voltage, System Calibration for offset & gain drift
NJU9102 ♥	-	4	5.5	300μA	380μA	14	-	Digital Earth Leakage Current Detection	8	-	DMP8	Immediate response, Set Earth Leakage Detector Condition, Type A / Type AC selectable
NJU9102A ♥	-	4	5.5	300μA	380μA	14	-	Digital Earth Leakage Current Detection	8	-	DMP8	Set Earth Leakage Detector Condition, Type A / Type AC selectable
NJU9103	-	2.7	3.6	4.0mA	5.0mA	16	0.814k to 6.51k	High Gain	8	SPI	DFN8-V1 (ESON8-V1), SSOP8	Built-in PGA can set a gain of up to 512, Built-in D-A converter (DAC) for calibrating offset voltage of sensor. Small-Sized packaging can reduce the area of PCB

LDO Regulators Maximum Input Voltage and Output Current Chart (Maximum input voltage ≤ 11V)



LDO Linear Regulators (Maximum input voltage ≤ 11V)

- ♥ : Products available in PRODUCT LONGEVITY PROGRAM
- ♥ : Products available in PRODUCT LONGEVITY PROGRAM with time limit
- U.D. : Under Development
- NEW : New product
- Ripple : Ripple Rejection, Frequency = 1kHz
- Automatic : Automatic Shift to ECO Mode
- Manual : Manual Shift to ECO Mode
- Manu/Auto : Manual/Automatic Shift to ECO Mode
- Seamless : Seamless Shift to ECO Mode
- Thermal : Thermal Shutdown Circuit
- Constant : Constant Slope Circuit
- Reverse : Reverse Current Protection Circuit
- Inrush : Inrush Current Limit Circuit
- TempCo : Output Voltage Temperature Coefficient
- Load Reg. : Load Regulation
- Tantalum : Tantalum
- Electrolytic : Electrolytic Capacitor
- High Immunity : Enhanced Noise Immunity
- UVLO : Undervoltage Lockout Circuit
- Soft-Start : Soft-start Circuit
- Discharge : Auto-Discharge

Part No.	Auto-motive	Output Current [mA]	Input Voltage [V]		Output Voltage*1 [V]		VOUT Deviation [%]	Dropout Voltage [V]	Ripple Rejection Ratio [dB]	Quiescent Current [μA]		ON/OFF Control	Operating Temperature [°C]		Key Features	Package Outline	Notes	
			min.	max.	min.	max.				typ.	max.		min.	max.				
NJU7211	-	20	2.5	-12	-5	-2	± 5.0	0.2	-	19	-	-	-25	75	Negative type Electrolytic	SOT-89-3		
RN5RL	♥	-	55	-	10	2	± 2.5	0.04	-	1	-	Yes	-40	85		SOT-23-5		
RH5RL	♥	-	65	-	8	2	± 2.0	0.3	-	4	-	Yes	-40	85		SOT-89		
RN5RT	-	65	-	8	2	6	± 2.0	0.3	-	4	-	Yes	-40	85		SOT-23-5		
RD5RW	-	80	-	8	1.5	6	± 2.0	0.04	-	1.5	-	Yes	-40	85		SON1612-6		
RQ5RW	-	80	-	8	1.5	6	± 2.0	0.04	-	1.5	-	Yes	-40	85		SC-82AB		
RH5RE	-	80	-	10	2	6	± 2.5	0.5	-	1.1	-	Yes	-40	85		SOT-89		
NJM2827	-	100	-12	-3.2	-10	-1.4	± 1.5	0.13	65	130	200	-	-40	85	Negative type Discharge Thermal Soft-Start	SC-88A		
NJM2828	♥	-	100	-12	-3.2	-10	-1.4	± 1.5	0.13	65	130	200	Yes	-40	85	Negative type Discharge Thermal Soft-Start	SC-88A	
NJM2829	♥	-	100	-12	-3.2	-1.3	-0.8	± 1.5	0.13	80	140	220	Yes	-40	85	Negative type Discharge Thermal Soft-Start	SC-88A	
RP117	♥	-	100	-10.0	-2.5	-5.5	-1	± 2.0	0.23	80	75	-	Yes	-40	85	Negative type Output noise: 16μVrms Thermal Discharge: Ver.D	DFN(PL)1212-6	
RP117	♥ 2031	-	100	-10.0	-2.5	-5.5	-1	± 2.0	0.23	80	75	-	Yes	-40	85	Negative type Output noise: 16μVrms Thermal Discharge: Ver.D	SC-88A	
RP118	♥ 2031	-	100	1.7	5.5	1.2	3.6	± 0.8	0.10	-	-	Yes	-40	85	Automatic Discharge: Ver.D	WL CSP-4-P8 DFN(PL)1010-4B SOT-23-5		

*1 Please refer to the product data sheet for the output voltage lineup.

Part No.	Auto-motive	Output Current [mA]	Input Voltage [V]		Output Voltage*1 [V]		VOUT Deviation [%]	Dropout Voltage [V]	Ripple Rejection Ratio [dB]	Quiescent Current [μA]		ON/OFF Control	Operating Temperature [°C]		Key Features	Package Outline	Notes	
			min.	max.	min.	max.				typ.	max.		min.	max.				
RP124	♥	-	100	1.7	5.5	1.2	3.6	± 0.8	0.1	-	0.2 BM:0.1	-	Yes	-40	85	+BM : with Battery Monitor Assist Function Automatic Discharge: Ver.D	DFN1212-6 SOT-23-5	
R1100	-	100	-	6	0.9	4	± 2.0	0.025	-	1.5	-	Yes	-40	85		SON1408-3		
NJU7757	-	100	2.3	6	1.5	5	± 1.0	0.15	65	20	40	Yes	-40	85		SC-82AB		
NJU7758	-	100	2.3	6	1.5	5	± 1.0	0.15	65	20	40	Yes	-40	85	Discharge	SC-82AB		
RN5RZ	-	100	-	8	2	6	± 2.0	0.2	55	20	-	Yes	-40	85	Tantalum	SOT-23-5		
RH5RZ	-	100	-	8	2	6	± 2.0	0.2	55	20	-	Yes	-40	85	Tantalum	SOT-89		
NJU7254	-	100	2.3	8	2.1	5	± 1.0	0.09	65	18 30 60	35	Yes	-40	85	2-Channel 1-Input, 2-Output	SOT-23-6-1		
NJU7741	-	100	-	9	1.8	6	± 1.0	0.17	-	1.5	3.5	Yes	-40	85		SOT-23-5		
NJU7747	-	100	-	9	1.5	5	± 1.0	0.17	-	1.5	3.5	Yes	-40	85		SC-82AB		
NJU7748	-	100	-	9	1.5	5	± 1.0	0.17	-	1.5	3.5	Yes	-40	85	Discharge	SC-82AB		
NJU7751	-	100	2.3	9	1.5	5	± 1.0	0.15	65	20	40	Yes	-40	85		SOT-23-5		
NJU7754	-	100	2.3	9	1.5	5	± 1.0	0.15	65	20	40	Yes	-40	85	Discharge	SOT-23-5		
NJU7272	-	100	-	9	1.5	5	± 1.0	0.17	-	3.5	8.2	Yes	-40	85	with Reset (Input Voltage Monitor Type) Delay Time (External Capacitor)	SOT-23-6-1		
NJU7744	-	100	-	9	1.5	6	± 1.0	0.17	-	1.5	3.5	Yes	-40	85	Discharge	SOT-23-5		
R1141	-	120	2.2	6	1.5	4	± 1.5	0.18	70	90	-	Yes	-40	85	Discharge: Ver.D	SC-82AB	Succeeding Products : RP109	
RP104	♥	-	150	1.7	5.25	1.2	3.3	± 0.8	0.24	-	1	-	Yes	-40	85	TempCo: Typ. ±40ppm/°C Discharge: Ver.D	DFN(PL)1010-4 SOT-23-5	PLP: DFN(PL)1010-4
RP110	♥	-	150	1.4	5.25	0.8	3.6	± 1.0	0.28	-	1	-	Yes	-40	85	Constant Discharge: Ver.D	DFN(PL)0808-4 DFN1010-4 SC-88A SOT-23-5	PLP: DFN1010-4, SOT-23-5
RP201	-	150	1.4	5.25	0.8	4	± 1.0	0.12	70	1.5	-	Yes	-40	85	Manu/Auto Discharge: Ver.D	DFN(PL)1212-6		
RP103	-	150	1.7	5.25	1.2	3.3	± 1.0	0.21	75	36	-	Yes	-40	85	Discharge: Ver.D	DFN(PL)1010-4 SC-82AB SOT-23-5	Succeeding Products : RP109	
RP109	♥	-	150	1.4	5.25	0.8	3.6	± 1.0	0.25	75	50	-	Yes	-40	85	TempCo: Typ. ±30ppm/°C Load Reg. TYP.5mV Discharge: Ver.D	DFN(PL)0808-4 DFN1010-4 SC-88A SOT-23-5	PLP: DFN1010-4, SOT-23-5
RP112	♥	-	150	2.0	5.25	1.2	4.8	± 1.0	0.20	80	75	-	Yes	-40	85	Output noise : 10μVrms TempCo: Typ. ±30ppm/°C Discharge: Ver.D	DFN(PL)1010-4 SC-88A SOT-23-5	PLP: SOT-23-5
RP152	♥	-	150	1.4	5.25	0.8	3.6	± 1.0	0.20	70	80	-	Yes	-40	85	2CH Start-up sequence controllable: xxx°C Discharge: Ver.B/C	DFN1212-6 SOT-23-6	PLP: DFN1212-6
R1180	♥	✓	150	1.7	6	1.2	3.6	± 2.0	0.25	-	1	-	Yes	-40	85		SC-82AB SOT-23-5 SON1612-6	PLP: SOT-23-5, Industrial (-50°C to +105°C)
R1163	♥ 2029	✓	150	2.0	6	1.5	5	± 1.5	0.25	70	6	-	Yes	-40	85	Reverse Manual Discharge: Ver.D	SOT-23-5 SON-6	PLP: SOT-23-5
R1116	-	150	1.8	6	1.5	4	± 1.5	0.29	70	10	-	Yes	-40	85	Seamless Discharge: Ver.D	SON1612-6 SOT-23-5		
R5326	♥	-	150	1.4	6	0.8	4.2	± 1.0	0.19	70	11	-	Yes	-40	85	2CH Automatic Discharge: Ver.B	DFN(PL)1820-6	
R1114	♥ 2029	✓	150	2.0	6	1.5	4	± 2.0	0.22	70	75	-	Yes	-40	85	Discharge: Ver.D	SON1612-6 SC-82AB SOT-23-5	PLP: SOT-23-5
R1122	-	150	2.0	6	1.5	5	± 2.0	0.19	80	100	-	Yes	-40	85	Replaceable with TK111/112/113 Succeeding Products : RP112x	SOT-23-5		

*1 Please refer to the product data sheet for the output voltage lineup.

LDO Linear Regulators (Maximum input voltage ≤ 11V)



Part No.	Auto-motive	Output Current [mA]	Input Voltage [V]		Output Voltage*1 [V]		VOU Deviation [%]	Dropout Voltage [V]	Ripple Rejection Ratio [dB]	Quiescent Current [μA]		ON/OFF Control	Operating Temperature [°C]		Key Features	Package Outline	Notes
			min.	max.	min.	max.				typ.	max.		min.	max.			
RP130	✓	150	1.7	6.5	1.2	5.3	± 1.0	0.32	80	38	—	Yes	-40	85	TempCo: ±20ppm/°C Discharge: Ver.D	DFN(PL)1010-4 DFN1212-4 SC-82AB SOT-23-5	PLP: DFN(PL) 1010-4, DFN1212-4, SOT-23-5, Industrial (-40°C to +105°C) DFN1212-4: Automotive
R1111	—	150	2.0	8	1.5	5	± 2.0	0.2	70	35	—	Yes	-40	85	Replaceable with LP2980/2985 Tantalum	SOT-23-5	
R1121	—	150	2.0	8	1.5	5	± 2.0	0.2	70	35	—	Yes	-40	85	Replaceable with TK111/112/113 Tantalum	SOT-23-5	
NJU7777	—	150	2.3	8	1.5	5	± 1.0	0.13	65	18	35	Yes	-40	85	Thermal	SC-82AB	
NJU7250	—	150	—	8	2.5	3.3	± 2.0	0.2	—	35	70	Yes	-40	85	Electrolytic	SOT-23-5	
NJU7771	—	150	2.3	9	1.5	5	± 1.0	0.15	65	18	35	Yes	-40	85	Thermal	SOT-23-5	
NJU7772	—	150	2.3	9	1.5	5	± 1.0	0.15	65	18	35	Yes	-40	85	Variation of Pin Configuration (NJU7771) Thermal	SOT-23-5	
NJU7773	—	150	2.3	9	1.5	5	± 1.0	0.15	65	18	35	Yes	-40	85	Variation of Pin Configuration (NJU7771) Thermal	SOT-23-5	
NJU7774	—	150	2.3	9	1.5	5	± 1.0	0.15	65	18	35	Yes	-40	85	Discharge Thermal	SOT-23-5	
NJU7775	—	150	2.3	9	1.5	5	± 1.0	0.15	65	18	35	Yes	-40	85	Variation of Pin Configuration (NJU7771) Thermal Discharge	SOT-23-5	
NJU7776	—	150	2.3	9	1.5	5	± 1.0	0.15	65	18	35	Yes	-40	85	Variation of Pin Configuration (NJU7771) Thermal Discharge	SOT-23-5	
NJM2877	—	150	2.3	9	1.5	5	± 1.0	0.1	75	120	180	Yes	-40	85	With Noise Bypass Pin Thermal	SC-88A, SOT-23-5	
NJM2847	—	150	2.3	9	0.8	1.4	± 1.0	85	140	200	Yes	-40	85	Low Output Voltage Type With Noise Bypass Pin Thermal	SC-88A		
NJM2878	—	150	2.3	9	1.5	5	± 1.0	0.1	75	140	195	Yes	-40	85	Thermal	DFN4-F1(ESON4-F1), SC-82AB SC-88A	
RP171	✓	150	2.6	10	1.2	6.5	± 1.0	0.40	70	23	—	Yes	-40	85	Thermal Constant Discharge: Ver.D	SC-88A SOT-23-5	PLP: SOT-23-5, Industrial (-40°C to +105°C)
RP173	✓	150	2.5	11	1.2	5.5	± 1.0	0.90	—	2	—	Yes	-40	85	Reverse Discharge: Ver.D	DFN(PL)1010-4 SOT-23-5	
U.D. NR1620	—	150	0.6	VBIAS	0.4	1.2	± 10mV	0.15	—	0.4	—	Yes	-40	85	very low dropout LDO Dual power supply (VIN: from 0.6 to VBIAS/ VBIAS: 2.4 to 5.5V) Discharge	DFN1212-6-GK SOT-23-5-DC	
RP202	✓	200	1.4	5.25	0.8	4	± 1.0	0.20	70	2.5	—	Yes	-40	85	Constant Automatic Discharge: Ver.D	DFN(PL)1010-4 SC-88A SOT-23-5	PLP: DFN(PL) 1010-4, SOT-23-5
RP107	—	200	1.4	5.25	1	4.2	± 1.0	0.27	60	9.5	—	Yes	-40	85	Output Capacitor-less Constant Discharge: Ver.D	WLCSP-4-P5 DFN(PL)1212-6 SC-88A	
RP100	—	200	1.7	5.25	1.2	3.3	± 0.6	0.13	75	18	—	Yes	-40	85	TempCo: Typ. ±30ppm/°C Discharge: Ver.D	DFN(PL)1612-4 SOT-23-5	
RP155	✓	200	1.9	5.25	1.6	3.6	± 1.0	0.085	75	80	—	Yes	-40	85	Dual Output voltage switchable. TempCo: Typ. ±30ppm/°C Thermal Inrush Discharge: Ver.B	WLCSP-5-P1	
NEW NR1640	✓	200	2.7	5.5	2.5	4.8	± 1.0	0.10	80	350	—	Yes	-40	125	Output noise : 6μVrms Thermal Discharge : Ver.D	SOT-23-5 - DC	Industrial (-40°C to +125°C)

*1 Please refer to the product data sheet for the output voltage lineup.

Part No.	Auto-motive	Output Current [mA]	Input Voltage [V]		Output Voltage*1 [V]		VOU Deviation [%]	Dropout Voltage [V]	Ripple Rejection Ratio [dB]	Quiescent Current [μA]		ON/OFF Control	Operating Temperature [°C]		Key Features	Package Outline	Notes
			min.	max.	min.	max.				typ.	max.		min.	max.			
R1160	—	200	1.4	6	0.8	3.3	± 2.0	0.14	70	5	—	Yes	-40	85	Manual Tantalum	SOT-23-5	
R5324	—	200	2.0	6	1.5	4	± 2.0	0.22	70	270	—	Yes	-40	85	3CH Discharge: Ver.B	DFN(PL)2527-10	
NJM2879-H	✓	200	2.3	6.5	1.5	5	± 2.0	0.12	66	150	180	Yes	-40	85	Discharge Thermal Reverse	SOT-23-5	
NJM12877	✓	200	2.3	6.5	1.5	5	± 1.0	0.12	64	160	210	Yes	-40	125	Discharge Thermal Soft-Start Reverse	DFN6-G1(ESON6-G1) SOT-23-5	
RP123	✓	250	1.9	5.5	1.2	4.8	± 0.8	Z: 0.090 K/N: 0.105	90	9.5	—	Yes	-40	85	Output noise : 8μVrms Seamless Thermal Inrush Discharge: Ver.D	WLCSP-4-P8 WLCSP-4-P12 DFN(PL)1010-4B SOT-23-5	PLP: WLCSP-4-P8, DFN(PL) 1010-4B, SOT-23-5
RP200	—	300	1.4	5.25	0.8	4	± 1.0	0.23	70	1.5	—	Yes	-40	85	Manu/Auto Discharge: Ver.D	DFN(PL)1212-6 SOT-23-5	
RP101	✓	300	1.7	5.25	1.2	3.3	± 0.6	0.13	75	18	—	Yes	-40	85	TempCo: Typ. ±30ppm/°C Discharge: Ver.D	DFN(PL)1612-4 DFN(PL)1612-4B SOT-23-5	PLP: DFN(PL) 1612-4
RP150	—	300	2.5	5.25	1.5	3.3	± 1.0	0.21	80	48	—	Yes	-40	85	Dual TempCo Typ. ±30ppm/°C Discharge: Ver.B	DFN(PL)2020-8	
RP102	✓	300	1.7	5.25	1.2	3.3	± 0.8	0.12	80	50	—	Yes	-40	85	TempCo: Typ. ±20ppm/°C Discharge: Ver.D	WLCSP-4-P2 DFN(PL)1820-6 SOT-23-5	PLP: DFN(PL) 1820-6
RP114	✓	300	1.4	5.25	0.8	3.6	± 1.0	0.25	75	50	—	Yes	-40	85	Discharge: Ver.D	DFN(PL)1010-4B SC-88A SOT-23-5	PLP: DFN(PL) 1010-4B, SOT-23-5
RP114	✓	300	1.4	5.25	0.8	3.6	± 1.0	0.25	75	50	—	Yes	-40	85	Discharge: Ver.D	DFN(PL)1010-4	
RP154	✓	300	1.4	5.25	0.8	3.7	± 1.0	0.25	75	100	—	Yes	-40	85	2CH Dual Input Type available: only DFN Discharge: Ver.B	DFN1216-8 DFN2020-8 SOT-23-6	PLP: DFN2020-8, SOT-23-6, Industrial (-40°C to +105°C)
R1161	—	300	1.4	6	0.8	3.3	± 2.0	0.23	65	4.5	—	Yes	-40	85	Succeeding Products : RP200 Manual Discharge: Ver.D	SOT-23-5	
R1131	—	300	1.4	6	0.8	3.3	± 2.0	0.23	65	60	—	Yes	-40	85	Succeeding Products : RP101 Discharge: Ver.D	SOT-23-5 SON-6	
NJM2881	—	300	2.3	6	1.5	5	± 1.0	0.1	75	120	180	Yes	-40	85	With Noise Bypass Pin Thermal	SOT-23-5	
NJM2882	—	300	2.3	6	1.5	5	± 1.0	0.1	75	120	180	Yes	-40	85	Variation of Pin Configuration (NJM2881) With Noise Bypass Pin Thermal	SOT-23-5	
NJM12888	✓	300	2.3	6.5	1.5	5	± 1.0	0.1	66	150	200	Yes	-40	125	Discharge Thermal Soft-Start Reverse	DFN6-G1(ESON6-G1) SOT-23-5	
R1130	✓	300	2.5	8	1.5 (Fix/Adj)	5 (Fix/Adj)	± 2 (Fix) ± 36mV (Adj)	0.25	60	50	—	Yes	-40	85	—	SOT-89-5	
NJU7780	—	300	2.3	9	1.5	5	± 1.0	0.15	65	20	40	Yes	-40	85	Thermal	SOT-89-5-1	
NJU7781	—	300	2.3	9	1.5	5	± 1.0	0.15	65	20	40	Yes	-40	85	Discharge Thermal	SOT-89-5-1	
NJM2888	✓	300	2.3	9	1.5	5	± 1.0	0.1	75	140	195	Yes	-40	85	Thermal	DFN4-F1(ESON4-F1) SOT-23-5	
RP170	✓	300	2.6	10	1.2	6.5	± 1.0	0.77	70	23	—	Yes	-40	85	Thermal Constant Discharge: Ver.D	SOT-23-5 SOT-89-5	Industrial (-50°C to +105°C)
RP106	—	400	1.0	3.6	0.7	1.8	± 0.8	0.22	60 f=10kHz	48	—	Yes	-40	85	Constant Discharge: Ver.D	WLCSP-4-P5 DFN(PL)1212-6 SC-88A	

*1 Please refer to the product data sheet for the output voltage lineup.

LDO Linear Regulators (Maximum input voltage ≤ 11V)



Part No.	Auto-motive	Output Current [mA]	Input Voltage [V]		Output Voltage*1 [V]		VOU Deviation [%]	Dropout Voltage [V]	Ripple Rejection Ratio [dB]	Quiescent Current [μA]		ON/OFF Control	Operating Temperature [°C]		Key Features	Package Outline	Notes
			min.	max.	min.	max.				typ.	max.		min.	max.			
RP116	-	400	1.0	3.6	0.7	1.8	± 0.8	0.22	60 f=10kHz	48	-	Yes	-40	85	Thinner than RP106Z (t=0.36mm) Constant Discharge: Ver.D	WLCSP-4-P7	
RP105	-	400	0.9	VBIAS	0.6	1.5	± 1.0	0.18	80	28	-	Yes	-40	85	Dual power supply (VIN: from 0.9 to VBIAS / VBIAS: 2.4 to 5.25V) Discharge: Ver.D/F	DFN1212-5 DFN(PL)1212-6 SOT-23-5	
RP122	2031	400	1.9	5.5	1.2	4.8	± 0.8	Z: 0.145 K/N: 0.170	90	9.5	-	Yes	-40	85	Output noise: 8μVrms Seamless Thermal Inrush Discharge: Ver.D	WLCSP-4-P8 WLCSP-4-P12 DFN(PL)1010-4B SOT-23-5	PLP: WLCSP-4-P8, DFN(PL)1010-4B, SOT-23-5
RP111	✓	500	1.4	5.25	0.7 (Fix/Adj)	3.6 (Fix) 3.6 (Adj)	± 0.8	0.23	75	80	-	Yes	-40	85	TempCo: Typ. ±30ppm/°C Load Reg: Typ. 1mV Load transient response accuracy: Typ. -75mV/+45mV Thermal Inrush Discharge: Ver.D	DFN1212-6 SOT-23-5 SOT-89-5 HSOP-6J	Industrial, HSOP-6J: Automotive
NEW NR1600	-	500	1.4	5.5	1.0 (Fix/Adj)	3.6 (Fix) 4.8 (Adj)	± 1.0	0.16	75	80	125	Yes	-40	85	Thermal Inrush Discharge Soft-Start Power-Good Function	DFN1212-6-GK SOT-23-6-DD HSOP-8-AC	
NJM12884	2031	500	2.3	6.5	1.5	5	± 1.0	0.18	68	200	280	Yes	-40	125	Discharge Thermal Soft-Start Reverse	SOT-89-5-2 TO-252-5-L3 DFN8-WA(ESON8-WA)	
NJU7790	-	500	2.3	8	1.5	5	± 1.0	0.12	65	30	60	Yes	-40	85	Thermal	SOT-89-5-1	
NJM2841	2031	500	-	9	0.8	2.5	± 1.0	0.1	86	180	300	Yes	-40	85	Low Output Voltage Type Dual Supply Voltage Type (sequence free) Thermal Load Reg: Max. 0.002%/mA	SOT-23-5 SOT-89-5-2	
NJM2884	2031	500	2.3	9	1.5	5	± 1.0	0.18	75	200	300	Yes	-40	85	Thermal	SOT-89-5-1 SOT-89-5-2	
NJM2884A	-	500	2.3	9	1.5	5	± 1.0	0.18	75	200	300	Yes	-40	85	Thermal	DFN6-H1(ESON6-H1) TO-252-5-L3	
RP115	2031	500	1.4	5.25	0.7	4.3	± 1.0	0.065	80	110	-	Yes	-40	85	TempCo: Typ. ±30ppm/°C Load Reg: Typ. 1mV Thermal Reverse Inrush Constant Discharge: Ver.D	DFN1216-8 DFN1216-8 DFN2020-8B SOT-89-5	Industrial (-40°C to +105°C), DFN2020-8B: Automotive
R1170	2029	800	6	1.5	5	± 2.0	0.12	50	80	-	Yes	-40	85	Thermal	SOT-89-5 HSOP-6 HSOP-6J	PLP: SOT-89-5	
U.D. NR1641	-	1000	1.7	5.5	1.0	5.0	TBD	0.150	90	17	-	Yes	-40	85	Constant Inrush Discharge Automatic	WLCSP-6-P12 DFN1616-6-GY HSOP-6	
R1172	2031	1000	1.4	6	0.8	5	± 2.0	0.05	70	60	-	Yes	-40	85	Thermal Inrush Discharge: Ver.D	SOT-23-5 SOT-89-5 HSOP-6J HSOP-6	PLP: SOT-23-5, SOT-89-5, HSOP-6J
R1173	2031	1000	1.4	6	0.8 (Fix) 1.0 (Adj)	5.0 (Fix) VIN (Adj)	± 2 (Fix) ± 30mV (Adj)	0.05	70	60	-	Yes	-40	85	Load Reg: Typ. -3mV Thermal Inrush Discharge: Ver.D	SOT-89-5 HSOP-6 HSOP-6J	PLP: HSOP-6J
RP131	-	1000	1.6	6.5	0.8	5.5	± 1.0	0.50	70	65	-	Yes	-40	85	Thermal Inrush Discharge: Ver.D	DFN(PL)1820-6 SOT-89-5 HSOP-6J TO-252-5-P2	

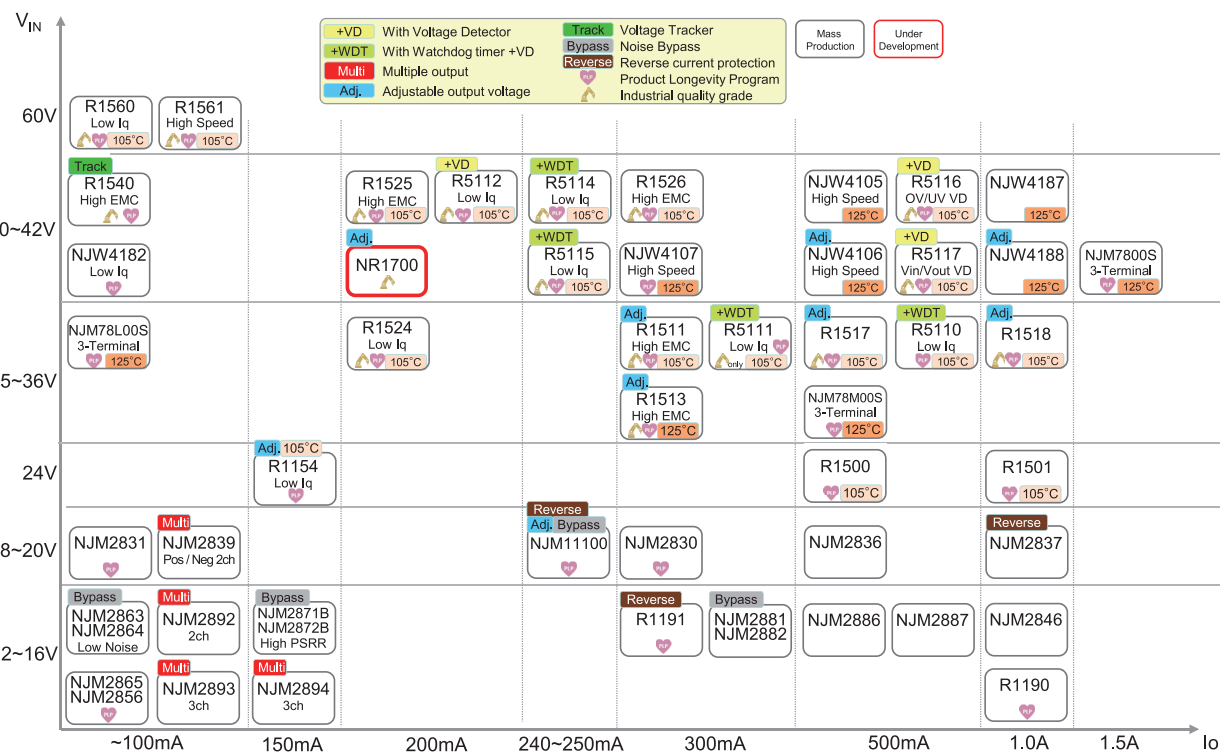
*1 Please refer to the product data sheet for the output voltage lineup.

Part No.	Auto-motive	Output Current [mA]	Input Voltage [V]		Output Voltage*1 [V]		VOU Deviation [%]	Dropout Voltage [V]	Ripple Rejection Ratio [dB]	Quiescent Current [μA]		ON/OFF Control	Operating Temperature [°C]		Key Features	Package Outline	Notes
			min.	max.	min.	max.				typ.	max.		min.	max.			
RP132	2031	1000	1.4	6.5	0.8 (Fix/Adj)	5.5 (Fix/Adj)	± 1 (Fix) ± 15mV (Adj)	0.52	70	65	-	Yes	-40	85	Inrush Ext.Adjustable Load Reg: Typ. 5mV Discharge: Ver.D/F Thermal	DFN(PL)1820-6 SOT-89-5 HSOP-6J TO-252-5-P2	Industrial (-40°C to +105°C)
NJM2842	2031	1000	-	5.5	0.8	1.8	± 1.0	0.1	91	300	500	Yes	-40	125	Low Output Voltage Type Dual Supply Voltage Type (sequence free) Load Reg: Max. 0.002%/mA Thermal	DFN6-H1(ESON6-H1) SOT-89-5-2 TO-252-5-L3	
NJM12856	2031	1000	2.5	6.5	1.5	5	± 1.0	0.2	77	400	600	Yes	-40	125	Discharge Thermal Soft-Start Reverse	SOT-89-5-2 TO-252-5-L3	
NJM2855	-	1000	2.5	8	1.5	5	± 1.0	0.2	75	400	600	-	-40	85	Thermal	TO-252-3-L1	
NJM2856	-	1000	2.5	8	1.5	5	± 1.0	0.2	75	400	600	Yes	-40	85	Thermal	HSOP8-M1 TO-252-5-L3	
NJM2391	-	1000	-	10	2.5	5	± 1.0	1.1	62	2300	4000	-	-40	85	Thermal Electrolytic	TO-252-3-L1	
RP120	2031	1500	0.768	VBIAS	0.6 (Fix/Adj)	2.0 (Fix) 3.6 (Adj)	± 0.7	0.102	95	35	-	Yes	-40	85	very low dropout LDO Dual power supply (VIN: from 0.768 to VBIAS / VBIAS: 2.4 to 5.5V) Thermal Soft-Start Discharge Inrush	WLCSP-6-P11	
R1171	2031	1500	2.1	6	1.5	5	± 2.0	0.09	50	130	-	Yes	-40	85	Thermal	HSOP-6J	
NJM2857	-	1500	2.6	8	1.5	5	± 1.0	0.2	80	500	750	Yes	-40	125	Thermal Reverse	TO-252-5-L3	
NJM2815	2031	1500	5.5	10	5.1	5.15	± 1.0	0.2	-	980	1350	Yes	-40	85	Voltage Correction Circuit Error Flag Output (FAULT) Thermal Soft-Start Reverse	HSOP8-M1	
NJM2816	2031	1800	5.5	8	5.1	5.15	± 1.0	0.25	-	1150	1600	Yes	-40	125	Voltage Correction Circuit Error Flag Output (FAULT) Thermal Soft-Start Reverse	HSOP8-M1	
NJM2819A	-	2000	2.3	9	1.8	7	± 1.0	0.1	65	500	800	Yes	-40	85	Thermal	TO-252-5-L3	
NJW4111	2031	3000	0.8	3.3	0.8	1.8	± 1.0	0.08	-	1400	2200	Yes	-40	85	Adjustable type Dual input voltage (VIN: 0.8 to 3.3V / VBIAS: 4.3 to 5.5V) Output low dropout adjustable type Short circuit protection (Timer latch type) Load Reg: Max. 10mV Discharge U.V.L.O. Thermal Soft-Start	HSOP8-M1	VFB= 0.65V ± 1.0%
RP108	2031	3000	1.6	5.25	0.8 (Fix/Adj)	4.2 (Fix/Adj)	± 1.0	0.51	65	350	-	Yes	-40	85	Load Reg: Typ. 3mV Discharge: Ver.D/F Thermal Reverse Constant	TO-252-5-P2	Industrial (-40°C to +105°C)
RN5RF	-	-	1.8	10	1.2	6	± 2.0	0.1	60	30	-	Yes	-40	85	External Tr. Tantalum	SOT-23-5	

*1 Please refer to the product data sheet for the output voltage lineup.

LDO Regulators and LDO Regulators (Tracking Regulators) Maximum Input Voltage and Output Current Chart (Maximum input voltage ≥ 12V)

※Main Product Only



LDO Linear Regulators (Maximum input voltage ≥ 12V)

- ♥ : Products available in PRODUCT LONGEVITY PROGRAM
- ♥xxx : Products available in PRODUCT LONGEVITY PROGRAM with time limit
- U.D. : Under Development
- NEW : New product
- Ripple : Ripple Rejection, Frequency = 1kHz
- Automatic : Automatic Shift to ECO Mode
- Manual : Manual Shift to ECO Mode
- Manu/Auto : Manual/Automatic Shift to ECO Mode
- Seamless : Seamless Shift to ECO Mode
- Thermal : Thermal Shutdown Circuit
- Constant : Constant Slope Circuit
- Reverse : Reverse Current Protection Circuit
- Inrush : Inrush Current Limit Circuit
- TempCo : Output Voltage Temperature Coefficient
- Load Reg. : Load Regulation
- Tantalum : Tantalum
- Electrolytic : Electrolytic Capacitor
- High Immunity : Enhanced Noise Immunity
- UVLO : Undervoltage Lockout Circuit
- Soft-Start : Soft-start Circuit
- Discharge : Auto-Discharge

Part No.	Auto-motive	Output Current [mA]	Input Voltage [V]		Output Voltage*1 [V]		VOU Deviation [%]	Dropout Voltage [V]	Ripple Rejection Ratio [dB]		Quiescent Current [μA]		ON/OFF Control	Operating Temperature [°C]		Key Features	Package Outline	Notes
			min.	max.	min.	max.			typ.	typ.	typ.	max.		min.	max.			
NJU7200	-	15	-	12	1	5.5	± 5.0	0.36	-	1.3	-	-	-25	75	Electrolytic	SOT-89-3		
NJU7201	-	15	2.0	12	1.2	5.5	± 5.0	0.2	-	19	-	-	-25	75	Electrolytic	SOT-89-3		
NJU7221	-	15	2.3	12	1.2	5.5	± 2.0	0.2	-	19	-	-	-25	75	Electrolytic	SOT-89-3		
NJU7231	-	15	2.3	15	1.2	5.2	± 2.0	0.2	-	10	20	-	-40	85	Electrolytic	SOT-23-5 SOT-89-3		
R1515	♥	✓	50	4.0	36	2	12	± 2.0	0.20	-	9	-	Yes	-40	105	Thermal	SOT-89-5 HSOP-6J	
R8151	♥	✓	50	4.0	36	2	12	± 2.0	0.32	-	9	-	Yes	-40	110	Thermal	SOT-89-5 HSOP-6J	Automotive only
NJU7241	-	60	-	14	1.8	6	± 2.0	0.2	55	20	40	Yes	-40	85	Electrolytic	SOT-23-5		
NJM2860	-	100	2.5	14	1.5	5	± 1.0	0.1	70	120	180	Yes	-40	85	With Noise Bypass Pin Thermal	SC-88A		
NJM2861	-	100	-	14	2.1	5	± 1.0	0.1	70	120	180	Yes	-40	85	With Noise Bypass Pin Thermal	SOT-23-5		
NJM2862	-	100	-	14	2.1	5	± 1.0	0.1	70	120	180	Yes	-40	85	Variation of Pin Configuration (NJM2861) With Noise Bypass Pin Thermal	SOT-23-5		
NJM2863	-	100	-	14	2.1	5	± 1.0	0.1	75	120	180	Yes	-40	85	With Noise Bypass Pin Ultra Low Noise: Typ. 12uVrms Thermal	SOT-23-5		

*1 Please refer to the product data sheet for the output voltage lineup.

Part No.	Auto-motive	Output Current [mA]	Input Voltage [V]		Output Voltage*1 [V]		VOU Deviation [%]	Dropout Voltage [V]	Ripple Rejection Ratio [dB]		Quiescent Current [μA]		ON/OFF Control	Operating Temperature [°C]		Key Features	Package Outline	Notes
			min.	max.	min.	max.			typ.	typ.	typ.	max.		min.	max.			
NJM2864	-	100	-	14	2.1	5	± 1.0	0.1	75	120	180	Yes	-40	85	Variation of Pin Configuration (NJM2863) With Noise Bypass Pin Ultra Low Noise: Typ. 12uVrms Thermal	SOT-23-5		
NJM2865	♥	-	100	2.3	14	1.5	5	± 1.0	0.1	75	120	180	Yes	-40	85	Thermal	SC-88A SOT-23-5	PLP SOT-23-5
NJM2866	-	100	2.3	14	1.5	5	± 1.0	0.1	75	120	180	Yes	-40	85	Variation of Pin Configuration (NJM2865) Thermal	SOT-23-5		
NJM2867	♥	-	100	-	14	2.1	5	± 1.0	0.1	75	120	180	Yes	-40	85	Thermal	SC-88A SOT-23-5	
NJM2868	-	100	-	14	2.1	5	± 1.0	0.1	75	120	180	Yes	-40	85	Variation of Pin Configuration (NJM2867) Thermal	SOT-23-5	PLP SOT-23-5	
NJM2892	-	100	2.3	14	1.5	5	± 1.0	0.1	75	150 270	220 400	Yes	-40	85	2-Channel, 1-In-put, 2-Out-put Thermal	SOT-23-6-1		
NJU7202	-	100	-	14	3	5	± 5.0	0.4	-	20	-	-	-25	75	Electrolytic	SOT-89-3		
NJU7222	-	100	-	14	3	5	± 2.0	0.4	-	20	-	-	-25	75	Electrolytic	SOT-89-3		
NJM2839	-	100	-12	18	-6 12	-7.5 15	± 1.5	0.1 0.13	75 65	120 130	180 200	Yes	-40	85	2-Channel Positive Channel and Negative Channel Thermal	MSOP8(VSP8)		
NJM2831	♥	-	100	-	18	2.1	15.5	± 1.0	0.1	75	120	180	Yes	-40	85	Thermal	DFN6-G1(ESON6-G1) SOT-23-5	
NJW4181	-	100	-	35	2.5	15	± 1.0	-	-	9	20	Yes	-40	85	ON/OFF function (Apply only A ver.) Thermal Reverse	DFN6-G1(ESON6-G1), SOT-89-3, SOT-89-5		
NJW4183	-	100	4.0	35	3.3	5	± 1.0	0.16	45 (VOUT 3.3V) 43 (VOUT 5V)	18 (A ver.) 15 (B ver.)	30 (A ver.) 27 (B ver.)	Yes	-40	85	ON/OFF function (Apply only A ver.) Thermal Reverse	SOT-89-3, SOT-89-5-2, TO-252-3-L1, TO-252-5-L3		
NJW4182	♥	✓	100	4.0	40	2.5	5	± 1.0	0.18	54	9	18	-	-40	85	Ultra-Low Operating Current Thermal	SOT-23-5, SOT-89-3, DFN6-H1(ESON6-H1)	
R1560	♥	✓	100	5.5	60	1.8	14	± 0.8	1.5	-	3	-	Yes	-40	105	Thermal	HSOP-6J TO-252-5-P2	Industrial (-50°C to +125°C)
R1561	♥	✓	100	5.5	60	1.8	14	± 0.8	1.3	-	20	-	Yes	-40	105	Thermal	HSOP-6J TO-252-5-P2	Industrial (-50°C to +125°C)
NJM2871	-	150	2.5	14	1.5	5	± 2.0	0.1	70	120	180	Yes	-40	85	With Noise Bypass Pin Thermal	SOT-23-5		
NJM2871A	♥	✓	150	2.5	14	1.5	5	± 1.0	0.1	70	120	180	Yes	-40	85	With Noise Bypass Pin Thermal	SOT-23-5	
NJM2871B	-	150	2.3	14	1.5	5	± 1.0	0.1	75	120	180	Yes	-40	85	With Noise Bypass Pin Thermal	SOT-23-5		
NJM2872	-	150	2.5	14	1.5	5	± 2.0	0.1	70	120	180	Yes	-40	85	Variation of Pin Configuration (NJM2871) With Noise Bypass Pin Thermal	SOT-23-5		
NJM2872A	♥	✓	150	2.5	14	1.5	5	± 1.0	0.1	70	120	180	Yes	-40	85	Variation of Pin Configuration (NJM2871A) With Noise Bypass Pin Thermal	SOT-23-5	
NJM2872B	-	150	2.3	14	1.5	5	± 1.0	0.1	75	120	180	Yes	-40	85	Variation of Pin Configuration (NJM2871B) With Noise Bypass Pin Thermal	SOT-23-5		
NJM2874	✓	150	-	14	2.1	5	± 1.0	0.1	75	120	180	Yes	-40	85	Variation of Pin Configuration (NJM2875/76) Thermal	SOT-23-5		
NJM2875	✓	150	-	14	2.1	5	± 1.0	0.1	75	120	180	Yes	-40	85	Variation of Pin Configuration (NJM2874/76) Thermal	SOT-23-5		
NJM2876	✓	150	-	14	2.1	5	± 1.0	0.1	75	120	180	Yes	-40	85	Variation of Pin Configuration (NJM2874/75) Thermal	SOT-23-5		

*1 Please refer to the product data sheet for the output voltage lineup.

LDO Linear Regulators (Maximum input voltage ≥ 12V)



Part No.	Auto-motive	Output Current [mA]	Input Voltage [V]		Output Voltage*1 [V]		VOU Deviation [%]	Dropout Voltage [V]	Ripple Rejection Ratio [dB]	Quiescent Current [μA]		ON/OFF Control	Operating Temperature [°C]		Key Features	Package Outline	Notes
			min.	max.	min.	max.				typ.	max.		min.	max.			
NJM2870	-	150	2.0	14	1.5	5	± 2.0	0.12	60	200	300	Yes	-40	85	4.7μF(Tantalum Capacitor) With Noise Bypass Pin Thermal	SOT-23-5	
NJM2801	-	150	-	14	3.3	5	± 1.0	0.1	60	250	350	-	-40	85	With Reset (Output Voltage Monitor Type) Thermal	SOT-23-5 SOT-89-5-1	
NJM2893	-	150	-	14	2.1	5	± 1.0	0.1	75	150 270 390	220 400 580	Yes	-40	85	3-Channel, 1-Input, 3-Output Thermal	MSOP8(TVSP8)	
NJM2894	-	150	-	14	2.1	5	± 1.0	0.1	75	150 270 390	220 400 580	Yes	-40	85	1-Channel(Io=150mA) 2/3-Channel(Io=80mA) 1-Input,3-Output Thermal	MSOP8(TVSP8)	
NJM2370	-	150	-	20	2	15.5	± 3.0	0.1	60	180	-	Yes	-40	85	With Noise Bypass Pin Thermal Electrolytic	SOT-89-5-1 MSOP8(TVSP8) MSOP8(VSP8)	
R1154	♥	-	150	24	2.5 (Fix/Adj)	12 (Fix) 24 (Adj)	± 2 (Fix) ± 50mV (Adj)	0.2	-	5	-	Yes	-40	105	Thermal	DFN1616-6 SOT-23-5 SOT-89-5	
R1150	♥	✓	150	24	2.1	14	± 2.0	0.3	-	7	-	Yes	-40	85	+VD Thermal	SOT-89-5	Detector Threshold Range Ver.A:2.3V to 15.0V. Ver.B,C,D:2.0V to 15.0V Detector Threshold Accuracy ± 2.5%
R1155	-	150	3.5	24	2.5 (Fix/Adj)	12 (Fix) 23 (Adj)	± 2 (Fix) ± 50mV (Adj)	0.55	60	7.5	-	Yes	-40	105	Automatic Thermal Reverse	SOT-23-5 SOT-89-5	
R1514	♥	✓	150	4.0	36	2	± 2.0	0.20	-	9	-	Yes	-40	105	Thermal	SOT-89-5 HSOP-6J	Industrial (-40°C to +105°C)
R8150	♥	✓	150	4.0	36	2	± 2.0	0.32	-	9	-	Yes	-40	125	Thermal	HSOP-6J	Automotive only
R1516	♥	✓	150	4.0	36	1.8	± 1.0	-	-	29	-	Yes	-40	105	Thermal	SOT-89-5 HSOP-6J	
R1524	♥	✓	200	3.5	36	1.8	± 0.6	0.6	-	2.2	-	Yes	-40	105	Thermal	DFN(PL)1820-6 SOT-23-5 SOT-89-5 HSOP-6J HSOP-8E	Industrial (-50°C to +125°C)
R8160	♥	✓	200	3.5	36	3.3	± 0.6	0.6	-	2.2	-	Yes	-40	125	Thermal	SOT-23-5 SOT-89-5 HSOP-6J	Automotive only
NJW4104	♥	✓	200	4.0	40	3.3	± 1.0	0.18	41	5.5(A ver.) 5(B ver.)	9.5(A ver.) 8.5(B ver.)	Yes	-40	125	Ultra-Low Operating Current UVLO Thermal	SOT-89-5-2 SOT-89-3 TO-252-3-L1	
R1525	♥	✓	200	3.5	42	1.8	± 0.6	0.6	-	2.2	-	Yes	-40	105	Thermal High Immunity	DFN(PL)1820-6 SOT-23-5 SOT-89-5 HSOP-6J HSOP-8E	Industrial (-50°C to +125°C), PLP SOT-23-5, SOT-89-5, HSOP-6J, HSOP-8E
R5112	♥	✓	200	3.5	42	1.8	± 0.6	0.6	-	3.8	-	Yes	-40	105	+VD Thermal	HSOP-8E	Industrial (-40°C to +125°C) Detector Threshold Range: Ver.B: 1.6V to 4.8V, Ver.D: 2.9V to 4.8V Detector Threshold Accuracy: ± 0.6%
U.D. NR1700	✓	200	3.5	42	1.2 (Adj)	24 (Adj)	± 0.8	TBD	TBD	12	-	Yes	-40	125	Foldback Protection Circuit Thermal	SOT-23-5-DC SOT-89-5-DM DFN(PL)1820-6	Industrial
NJM11100	♥	✓	240	2.1	18	1.3	± 1.0	0.2	75	200	320	Yes	-40	85	Adjustable type With Noise Bypass Pin Output low dropout adjustable type Thermal Reverse	SOT-23-6-1 DFN6-H1(ESON6-H1)	Vref=1.25V
NJM2880	-	300	2.3	14	1.5	5	± 1.0	0.1	70	120	180	Yes	-40	85	With Noise Bypass Pin Thermal	SOT-89-5-1	

*1 Please refer to the product data sheet for the output voltage lineup.

Part No.	Auto-motive	Output Current [mA]	Input Voltage [V]		Output Voltage*1 [V]		VOU Deviation [%]	Dropout Voltage [V]	Ripple Rejection Ratio [dB]	Quiescent Current [μA]		ON/OFF Control	Operating Temperature [°C]		Key Features	Package Outline	Notes	
			min.	max.	min.	max.				typ.	max.		min.	max.				
NJM2883	-	300	2.3	14	1.5	5	± 1.0	0.1	75	120	180	Yes	-40	85	With Noise Bypass Pin Thermal	SOP8 JEDEC 150mil(EMP8)		
NJM2804	-	300	2.3	14	1.5	3.3	± 1.0	0.1	75	250	350	-	-40	85	With Reset (Input Voltage Monitor Type) Thermal	SOT-89-5-1		
NJM2805	-	300	-	14	2.9	5	± 1.0	0.1	75	250	350	-	-40	85	With Reset (Input Voltage Monitor Type) Thermal	SOT-89-5-1		
R1191	♥	✓	300	3.5	16	2	± 1.5	0.55	70	6	-	Yes	-40	85	Manual Reverse Discharge Thermal Ver.D	DFN1616-6 SOT-23-5 SOT-89-5	PLP SOT-23-5, SOT-89-5	
NJM2830	♥	✓	300	2.3	18	2.1	± 1.0	0.1	75	130	180	Yes	-40	85	Thermal	SOT-89-5-1		
NJW4184	✓	300	4.0	35	2.5	15	± 1.0	0.1	42 (VOU 3.3V) 40 (VOU 5V)	12 (A ver.) 9 (B ver.)	22 (A ver.) 19 (B ver.)	Yes	-40	85	ON/OFF function (Apply only A ver.) Thermal	SOT-89-3 SOT-89-5-2 TO-252-3-L1 TO-252-5-L3		
R1510	♥	✓	300	3.5	36	2.5	± 1.6	1.0	-	12.5	-	Yes	-40	105	+VD Automatic Thermal	HSOP-8E	Detector Threshold Range Ver.A,B,C: 2.3V to 12.0V. Ver.D: 2.3V to 10.6V Detector Threshold Accuracy ± 1.7%	
R1513	♥	✓	300	3.5	36	1.2 (Fix/Adj)	5 (Fix) 18 (Adj)	± 0.8	0.32	70 f=100Hz	75	-	Yes	-40	125	Thermal Discharge Ver.D	HSOP-6J	Industrial (-40°C to +125°C)
R8156	♥	✓	300	3.5	36	1.2 (Fix/Adj)	5 (Fix) 18 (Adj)	± 0.8	0.32	70 f=100Hz	75	-	Yes	-40	125	Thermal Discharge Ver.D	HSOP-8E	Automotive only
R1511	♥	✓	300	3.5	36	3 (Fix/Adj)	9 (Fix) 12 (Adj)	± 1 (Fix) ± 30mV (Adj)	0.64	65	100	-	Yes	-40	105	Thermal	HSOP-6J TO-252-5-P2	Industrial (-40°C to +105°C)
R8153	♥	✓	300	3.5	36	3 (Fix/Adj)	9 (Fix) 12 (Adj)	± 1 (Fix) ± 30mV (Adj)	0.64	-	100	-	Yes	-40	125	Thermal	HSOP-6J TO-252-5-P2	Automotive only
R1526	♥	✓	300	3.5	42	1.8	± 0.6	0.4	-	32	-	Yes	-40	105	Thermal High Immunity	HSOP-8E	Industrial (-40°C to +125°C)	
NJW4107	♥	✓	300	4.0	40	3.3	± 1.0	0.12	56	75 (A ver.) 70 (B ver.)	125 (B ver.) 120 (B ver.)	Yes	-40	125	Fast Transient Response UVLO Thermal	SOT-89-5-2, SOT-89-3		
NJM2885	-	500	2.3	14	1.5	5	± 1.0	0.18	75	200	300	-	-40	85	Thermal	TO-252-3-L1		
NJM2886	✓	500	2.3	14	1.5	5	± 1.0	0.18	75	200	300	Yes	-40	85	Thermal	TO-252-5-L3		
NJM2887	♥	✓	500	2.3	14	1.5	± 1.0	0.18	70	200	300	Yes	-40	85	Adjustable type Thermal	TO-252-5-L3	Vref=1.29V	
NJM2806	-	500	-	14	2.5	3.3	± 1.0	0.18	75	330	430	-	-40	85	With Reset (Input Voltage Monitor Type)	TO-252-5-L3		
NJU7223	-	500	2.5	14	1.8	5	± 2.0	0.4	57	30	60	-	-40	85	Thermal Electrolytic	TO-220F-3, TO-252-3-L1		
NJM2835	-	500	-	18	2.1	15	± 1.0	0.18	75	200	300	-	-40	85	Thermal	TO-252-3-L1		
NJM2836	-	500	-	18	2.1	15	± 1.0	0.18	75	200	300	Yes	-40	85	Thermal	TO-252-5-L3		
R1500	♥	✓	500	4.0	24	3	± 2.0	0.115	60	70	-	Yes	-40	105	Thermal	SOT-89-5		
R1517	♥	✓	500	3.5	36	2.5 (Fix/Adj)	8.5 (Fix) 20 (Adj)	± 0.8 (Fix) ± 20mV (Adj)	0.35	-	18	-	Yes	-40	105	Constant Ext.Adjustable Discharge Thermal Ver.D	HSOP-6J TO-252-5-P2	Industrial (-40°C to +125°C)
R8154	♥	✓	500	3.5	36	2.5 (Fix/Adj)	9 (Fix) 12 (Adj)	± 0.8 (Fix) ± 20mV (Adj)	0.35	-	18	-	Yes	-40	125	Constant Ext.Adjustable Ver.E/F Thermal Discharge Ver.D/F	HSOP-6J TO-252-5-P2	Automotive only
U.D. NP4271	✓	500	4.0	40	3.3	5	± 2.0	TBD	68/71	120	-	Yes	-40	125	UVLO Thermal	HSOP8-AC	WDT Built-in Window VD	
NEW NJW4109	♥	-	500	4.0	40	8	± 1.0	0.4	50	90	130	Yes	-40	125	Fast Transient Response Power-Good Function Thermal	TO-252-5-L5		

*1 Please refer to the product data sheet for the output voltage lineup.

LDO Linear Regulators (Maximum input voltage ≥ 12V)



Part No.	Auto-motive	Output Current [mA]	Input Voltage [V]		Output Voltage*1 [V]		VOUT Deviation [%]	Dropout Voltage [V]	Ripple Rejection Ratio [dB]	Quiescent Current [μA]		ON/OFF Control	Operating Temperature [°C]		Key Features	Package Outline	Notes	
			min.	max.	min.	max.				typ.	max.		min.	max.				
NJW4113	✓	500	4.0	40	5	5	± 1.0	0.3	45	37	80	–	-40	125	Watchdog Timer Thermal	HSOP8-M1	Watchdog Timer Enable Function, WDT Reset Time and Output Delay Hold Time with external capacitor	
NJW4186	✓	500	4.0	40	2	16	± 1.0	0.27	60	55	90	Yes	-40	85	Adjustable type Thermal	TO-252-5-L3		
NJW4116	✓	500	4.0	40	3.3	5	± 1.0	0.27	55	55	90	–	-40	125	With Reset Thermal	TO-252-5-L3	Adjustable RESET Output Delay Hold Time	
NJW4105	♥	✓	500	4.0	40	3.3	8	± 1.0	0.4	56	65	105	Yes	-40	125	Fast Transient Response Thermal	TO-252-5-L5	
NJW4106	♥	✓	500	4.0	40	2.5	16	± 1.0	0.4	53	65	105	Yes	-40	125	Fast Transient Response Adjustable type Thermal	TO-252-5-L5	
NJW4185	✓	500	4.0	40	3.3	15	± 1.0	0.27	62	55 (A ver.) 48 (B ver.)	90 (A ver.) 83 (B ver.)	Yes	-40	125	ON/OFF Control (A ver.) Thermal	TO-252-5-L3, TO-252-3-L1		
R5116	♥	✓	500	3.5	42	3.3	5	± 0.5	0.9	65	25	–	Yes	-40	105	Built-in Window VD Released Hysteresis: 0.7% (Max.) Thermal	HSOP-8E HQFN0808-28	PLP:HSOP-8E Industrial (-50°C to +125°C) Detector Threshold Range OV: 3.3V to 5.5V UV: 2.5V to 5.0V Detector Threshold Accuracy ± 0.5%
R5117	♥	✓	500	3.5	42	3.3	5	± 0.5	0.9	65	35	–	Yes	-40	105	Built-in Dual VD SVD Released Hysteresis: 0.7% (Max.) BVD Released Hysteresis: 5.0% (Max.) Thermal	HSOP-8E HQFN0808-28	PLP:HSOP-8E Industrial (-50°C to +125°C) Detector Threshold Range SVD: 2.5V to 5.0V, BVD: 3.5V to 12.0V Detector Threshold Accuracy SVD: ± 0.5%, BVD: ± 0.8%
NJM2845	–	800	2.5	14	1.5	5	± 1.0	0.18	75	400	600	–	-40	85	Thermal	TO-252-3-L1		
NJM2846	–	800	2.5	14	1.5	5	± 1.0	0.18	75	400	600	Yes	-40	85	Thermal	TO-252-5-L3		
R1190	♥	✓	1000	3.5	16	2	± 1.5	1.10	60	150	–	Yes	-40	85	Inrush Discharge Thermal	SOT-89-5 HSOP-6J TO-252-5-P2	PLP:HSOP-6J, TO-252-5-P2	
NJM2837	–	1000	–	18	2.4	15	± 1.0	0.2	80	420	570	Yes	-40	85	Thermal Reverse	TO-252-5-L3		
R1501	♥	✓	1000	3.0	24	3	± 2.0	0.575	60	70	–	Yes	-40	105	Thermal	HSOP-6J TO-252-5-P2		
R8152	♥	✓	1000	3.0	24	3	± 2.0	0.575	–	70	–	Yes	-40	125	Thermal	HSOP-6J TO-252-5-P2	Automotive only	
NJM2386A	–	1000	–	30	3.3	12	± 2.0	0.2	67	–	5000	Yes	-40	85	Thermal Electrolytic	TO-252-5-L3		
NJM2387A	–	1000	3.8	30	1.5	20	± 2.0	0.2	65	–	5000	Yes	-40	85	Adjustable type Thermal Electrolytic	TO-252-5-L3	Vref=1.26V	
NJM2386	–	1000	–	35	3.3	12	± 2.0	0.2	67	–	5000	Yes	-40	85	Thermal Electrolytic	TO-252-5-L3		
NJM2387	–	1000	3.8	35	1.5	20	± 2.0	0.2	67	–	5000	Yes	-40	85	Adjustable type Thermal Electrolytic	TO-252-5-L3	Vref=1.26V	
NJM2388	–	1000	–	35	3.3	12	± 2.0	0.2	67	–	5000	Yes	-40	85	Thermal Electrolytic	TO-220F-4		
NJM2389	–	1000	3.8	35	1.5	20	± 2.0	0.2	65	–	5000	–	-40	85	Adjustable type Thermal Electrolytic	TO-220F-4	Vref=1.26V	
R8155	♥	✓	1000	3.5	36	2.5 (Fix/Adj) 9 (Fix) 12 (Adj)	± 0.8 (Fix) ±20mV (Adj)	0.7	–	18	–	Yes	-40	125	Constant Discharge Thermal	HSOP-6J TO-252-5-P2	Automotive only	
R1518	♥	✓	1000	3.5	36	2.5 (Fix/Adj) 9 (Fix) 20 (Adj)	± 0.8 (Fix) ±20mV (Adj)	0.70	–	18	–	Yes	-40	105	Constant Discharge Thermal	HSOP-6J TO-252-5-P2	Industrial (-40°C to +125°C)	
NJW4187	✓	1000	4.0	40	3.3	5	± 1.0	0.27	58 (VOUT 3.3V) 54 (VOUT 5V)	55	90	Yes	-40	125	Thermal	TO-252-5-L3, TO-252-3-L1		
NJW4188	✓	1000	4.0	40	2	15	± 1.0	0.27	58	55	90	Yes	-40	125	Adjustable type Thermal	TO-252-5-L3		

*1 Please refer to the product data sheet for the output voltage lineup.

LDO Linear Regulators (3-Terminal Voltage Regulators)

Thermal : Thermal Shutdown Circuit Reverse : Reverse Current Protection Circuit Electrolytic : Electrolytic Capacitor

Part No.	Auto-motive	Key Features	Operating Voltage [V]	Output Voltage [V]		Package Outline	Notes
				min.	max.		
NJM7800	–	Positive type Thermal Electrolytic	35/40	5	24	TO-220F-3, TO-252-3-L1	
NJM7800S	♥	– Positive type Thermal	35/40	5	24	TO-252-3-L1	Wide Temperature Range (-40°C to +125°C), Output Capacitor (Ceramics)
NJM78L00	–	Positive type Thermal Electrolytic	30/35/40	2.6	24	SOT-89-3, SOP8 JEDEC 150mil(EMP8)	
NJM78L00S	♥	– Positive type Thermal	30/35	3	15	SOT-89-3	Wide Temperature Range (-40°C to +125°C), Output Capacitor (Ceramics)
NJM78LR05	–	With Reset Function Thermal Electrolytic	20	–	5	DIP8, DMP8, SOT-89-5-1	
NJM78M00	–	Positive type Thermal Electrolytic	35/40	5	24	TO-220F-3, TO-252-3-L1	
NJM78M00S	♥	– Positive type Thermal	35	5	15	TO-252-3-L1	Wide Temperature Range (-40°C to +125°C), Output Capacitor (Ceramics)
NJM79L00S	♥	– Negative type Thermal Electrolytic	-40	-5	-15	SOT-89-3	Direct replacement from NJM79L00 series Wide Temperature Range (-40°C to +125°C)
NJW4181	–	Quiescent Current 9μA(typ.) Io=100mA ON/OFF Control (A ver.) Thermal Reverse	40	2.5	15	DFN6-G1(ESON6-G1), SOT-89-3	

LDO Linear Regulators (Tracking Regulators)

Thermal : Thermal Shutdown Circuit High Immunity : Enhanced Noise Immunity

Part No.	Auto-motive	Input Voltage [V]		Output Current [mA]	Output Voltage*1 [V]		VOUT Deviation [mV]	Dropout Voltage [V]	Ripple Rejection Ratio [dB]	Quiescent Current [μA]		ON/OFF Control	Operating Temperature [°C]		Key Features	Package Outline	Notes	
		min.	max.		min.	max.				typ.	max.		min.	max.				
R1540	♥	✓	3.5	42	70	2.2	14	± 15	1.3	80	60	–	Yes	-40	105	Foldback Protection Circuit Thermal High Immunity	SOT-23-5 HSOP-8E	Industrial (-40°C to +125°C)
U.D. NR4250	✓	4.0	40	50	2.5	36	± 5	0.1	80	40	80	Yes	-40	125	Overcurrent Protection Thermal	SOT-23-5-DC		
U.D. NR4254	✓	4.0	40	70	2.5	36	± 5	0.2	80	40	80	Yes	-40	125	Overcurrent Protection Thermal	SOT-89-5-DF		
U.D. NR4252	✓	4.0	40	250	1.5	36	± 5	0.28	80	45	80	Yes	-40	125	Overcurrent Protection Thermal	SOT-89-5-DF		

*1 Please refer to the product data sheet for the output voltage lineup.



Shunt Regulators

Part No.	Auto-motive	Reference Voltage [V]	Ref. tol.	Cathode Voltage [V]	Cathode Current [mA]	Minimum Cathode Current [μA]	Package Outline	Notes	
									typ.
NJM1431A	♥	✓	2.465	± 1	36	100	400	DFN4-F1(ESON4-F1), SOT-23-5, SOT-89-3	
NJM17431	♥	–	2.5 2.495	± 0.8	36	100	250	SOT-23-5, SOT-89-3	Wide Safety Operating Boundary Condition Replacement from HA17431 (Renesas)
NJM2373	–	–	1.25	± 2	13	30	80	SOT-23-5	
NJM2373A	–	–	1.25	± 1	13	30	80	SOT-23-5, SOT-89-3	
NJM2376	–	–	1.25	± 1	13	30	80	SOT-23-5, SOT-89-3	
NJM2820	✓	–	1.25	± 0.7	13	30	80	SOT-23-5	
NJM2821	–	–	1.25	± 0.7	13	30	80	SOT-23-5	
NJM2822	–	–	1.25	± 0.7	13	30	80	SOT-23-5	
NJM2823	♥	✓	1.136	± 0.4	13	12	20	SOT-23-5	
NJM2825	–	–	1.2	± 0.5	13	12	0.7	SOT-23-5	
NJM431	✓	–	2.495	± 2	36	100	400	DIP8, DMP8, SOT-89-3	
NJM431S	–	–	2.495	± 1.8	36	100	400	SOT-89-3, SOT-23-5	
NJM432S	–	–	2.495	± 1.8	36	100	400	SOT-89-3, SOT-23-5	Variation of Pin Configuration (NJM431S)

Voltage Detectors (VD) and Watchdog Timers (WDT) Supervisor Features

※Main Product Only

VIN / VSENSE (Monitoring Voltage)	Part No.	Output Type	Release Voltage Configuration	Over / Under Voltage Detection	Multiple Input / Output	Manual Reset	Product Longevity Program	Industrial quality grade
60V	R3160	CMOS	Vrel	OV/UV	Multi	MR	PLP	Industrial quality grade
36V	R3119-A	CMOS	Vrel	OV/UV	Multi	MR	PLP	Industrial quality grade
	R3150-A/B	CMOS	Vrel	OV/UV	Multi	MR	PLP	Industrial quality grade
	R3121-A/G	CMOS	Vrel	OV/UV	Multi	MR	PLP	Industrial quality grade
18V	NJU2103A 3ch	CMOS	Vrel	OV/UV	Multi	MR	PLP	Industrial quality grade
	NJU2102A	CMOS	Vrel	OV/UV	Multi	MR	PLP	Industrial quality grade
10V	NJU7700/1	CMOS	Vrel	OV/UV	Multi	MR	PLP	Industrial quality grade
	NJU7704/5	CMOS	Vrel	OV/UV	Multi	MR	PLP	Industrial quality grade
6V	R3111	CMOS	Vrel	OV/UV	Multi	MR	PLP	Industrial quality grade
	R3116	CMOS	Vrel	OV/UV	Multi	MR	PLP	Industrial quality grade
	R3112	CMOS	Vrel	OV/UV	Multi	MR	PLP	Industrial quality grade
5.5V	RP300	CMOS	Vrel	OV/UV	Multi	MR	PLP	Industrial quality grade
	NJU7295/6	CMOS	Vrel	OV/UV	Multi	MR	PLP	Industrial quality grade

Release Delay time	None	Ext. Cap	Counter	None	Ext. Cap	Counter	Ext. Cap
Monitoring terminal	VIN			VSENSE			VIN, VSENSE
Watchdog timer	X						O

Voltage Detectors (Reset ICs)

Part No.	Auto-motive	Key Features	Operating Voltage [V]	Manual Reset	Voltage Detection [V] min./max.	Voltage Detection (Deviation) [%]	Hysteresis Voltage [V] typ.	Quiescent Current [μA] typ.	Package Outline	Notes
NJU7700	✓	Nch. Open Darin Type	10	-	1.3 to 6(0.1step)	± 1.0	VDET x0.05	0.8	SC-82AB, SOT-23-5	
NJU7701	✓	C-MOS Output Type	10	-	1.3 to 6(0.1step)	± 1.0	VDET x0.05	0.8	SC-82AB, SOT-23-5	PLP SOT-23-5
NJU7702	-	Nch. Open Darin Type	10	-	1.3 to 6(0.1step)	± 1.0	VDET x0.05	0.8	SOT-23-5	
NJU7703	-	C-MOS Output Type	10	-	1.3 to 6(0.1step)	± 1.0	VDET x0.05	0.8	SOT-23-5	
NJU7704	✓	Nch. Open Drain Type, Adjustable Delay Time with External Capacitor	10	Yes	1.5 to 6(0.1step)	± 1.0	90m	0.9	SC-88A, SOT-23-5	
NJU7705	✓	C-MOS. Output Type, Adjustable Delay Time with External Capacitor	10	Yes	1.5 to 6(0.1step)	± 1.0	90m	0.9	SC-88A, SOT-23-5	PLP SOT-23-5
NJU7706	✓	Nch. Open Drain Type, Delay Time(Built-in Fixed Type) (50ms/100ms/200ms)	10	Yes	1.5 to 6(0.1step)	± 1.0	90m	1.3	SOT-23-5	
NJU7707	✓	C-MOS. Output Type, Delay Time(Built-in Fixed Type) (50ms/100ms/200ms)	10	Yes	1.5 to 6(0.1step)	± 1.0	90m	1.3	SOT-23-5	
NJU7708	-	Nch. Open Drain Type, Delay Time (Built-in Fixed Type) (0ms/50ms/100ms/200ms)	10	-	1.5 to 6(0.1step)	± 1.0	90m	1.3	SOT-23-5	
NJU7709	-	C-MOS. Output Type, Delay Time (Built-in Fixed Type) (0ms/50ms/100ms/200ms)	10	-	1.5 to 6(0.1step)	± 1.0	90m	1.3	SOT-23-5	
NJU7711	-	C-MOS Output Type	10	-	1.3 to 6(0.1step)	± 1.0	VDET x0.05	0.8	SC-88A, SOT-23-5	
NJU7712	-	Nch. Open Darin Type	10	-	1.3 to 6(0.1step)	± 1.0	VDET x0.05	0.8	SC-88A, SOT-23-5	
NJU7713	-	C-MOS Output Type	10	-	1.3 to 6(0.1step)	± 1.0	VDET x0.05	0.8	SC-88A, SOT-23-5	
NJU7719	-	Nch. Open Darin Type	10	-	1.3 to 6(0.1step)	± 1.0	VDET x0.05	0.8	SOT-89-3	

Voltage Detectors (Reset ICs)

Part No.	Auto-motive	Operating Voltage Range [V]	Detector Threshold Range [V]	Detector Threshold Accuracy [%]	Reset Signal	SENSE Pin	MR Pin ¹	Adjustable Release Output Delay Time	Output Delay Time Accuracy [%]	Supply Current ² [μA]	Hysteresis	Package Outline	Notes
R3111	✓	0.7 to 10.0	0.9 to 6.0	± 2.0	L/H *3	-	-	-	-	1	Yes	SON1612-6 SC-82AB SC-88A SOT-23-3 SOT-23-5 SOT-89	PLP SC-82AB, SOT-23-5, SOT-89
R3112	✓	0.7 to 6.0	0.9 to 5.0	± 2.0	L	-	-	Ext. Capacitor	Not specified	0.5	Yes	SON1612-6 SC-82AB SOT-23-5	PLP SC-82AB, SOT-23-5
R3114	✓	0.5 to 6.0	0.7 to 5.0	± 0.8	L	-	-	-	-	0.35	Yes	DFN(PL)1010-4 SC-82AB SOT-23-5	PLP DFN(PL) 1010-4
R3116	✓	0.5 to 6.0	0.7 to 5.0	± 0.8	L	-	-	Ext. Capacitor	± 15	0.35	Yes	DFN(PL)1010-4 SC-82AB SOT-23-5	Industrial (-50°C to +105°C)
R3117 ⁵	✓	1.0 to 6.0	0.7 to 5.0	± 1.0	L	Yes	-	-	-	0.29	Yes	DFN(PL)1010-4 SC-88A SOT-23-5	Industrial (-40°C to +105°C)
R3118	✓	1.0 to 6.0	0.6 to 5.0	± 1.5	L	Yes	-	Ext. Capacitor	± 30	0.4	Yes	DFN(PL)1212-6 SC-88A SOT-23-5	
R3119xxxxA ⁵	✓	1.2 to 36.0	2.3 to 12.0	± 1.5	L	-	-	Ext. Capacitor	-50, +80	3.3	Yes	DFN(PL)1820-6 SOT-23-5	Industrial (-50°C to +105°C)
R3119xxxxE ⁵	✓	2.1 to 6.0 * 4	2.3 to 12.0	± 1.5	L	Yes	-	-	-	3.3	Yes	SOT-23-5	Automotive only
R3120xxxxA ⁵	✓	1.2 to 36.0	2.3 to 12.0	± 1.5	L	-	-	Ext. Capacitor	-50, +80	3.3	Yes	SOT-23-5	Automotive only
R3120xxxxE ⁵	✓	2.1 to 6.0 * 4	2.3 to 12.0	± 1.5	L	Yes	-	-	-	3.3	Yes	SOT-23-5	Automotive only
R3130	-	1.0 to 6.0	1.6~4.8	± 1.5	L	-	-	Int. Counter	50ms ± 10 240ms ± 10	1.4	-	SOT-23-3	
R3132	-	0.75 to 6.0	1.0 to 5.0	± 2.0	L	-	Yes	Int. Counter	240ms ± 15	0.8	-	SON1612-6 SC-82AB	
R3133	-	0.8~6.0	1.0 to 5.0	± 2.0	H	-	Yes	Int. Counter	240ms ± 15	0.8	-	SON1612-6	
R3134	✓	0.75 to 6.0	1.0 to 5.0	± 1.8	L	-	Yes	Int. Counter	240ms ± 15	0.8	-	SOT-23-5	
RN5VD	✓	0.7 to 10.0	0.9 to 6.0	± 2.5	L	-	-	Ext. Capacitor	Not specified	1	Yes	SOT-23-5	
RP300	✓	0.72 to 5.50	1.1, 2.32, 2.63, 2.7, 2.8, 2.93, 3.08, 4.2, 4.38, 4.6	± 0.8	L	-	Yes	Int. Counter	50ms ± 5 200ms ± 5	0.95	-	DFN(PL)1010-4B SOT-23-5	
R3121xxxxA/G	✓	1.4 to 36.0	3.0 to 12.0	± 1.5	L	-	-	Ext. Capacitor	-35, +40	3.8	A/E: Yes G: No	SOT-23-6	Industrial (-40°C to +125°C)
R3121xxxxE	✓	2.4 to 6.0 * 4	3.0 to 12.0	± 1.5	L	Yes	-	Ext. Capacitor	-35, +40	3.5	A/E: Yes G: No	SOT-23-6	Automotive only
R8300xxxxA/G ⁶	✓	1.4 to 36.0	3.0 to 12.0	± 1.5	L	-	-	Ext. Capacitor	-35, +40	3.8	A/E: Yes G: No	SOT-23-6	Automotive only
R8300xxxxE ⁶	✓	2.4 to 6.0 * 4	3.0 to 12.0	± 1.5	L	Yes	-	Ext. Capacitor	-35, +40	3.5	A/E: Yes G: No	SOT-23-6	Automotive only
R3150xxxxA ⁵	✓	1.4 to 36.0	Detector Threshold Range: 5.0 to 10.0, Release Threshold Range: 5.3 to 11.0	Detector Threshold Accuracy: ± 1.5, Release Threshold Accuracy: ± 1.5	L	-	-	Ext. Capacitor, Detector Output Delay Time and Release Output Delay Time are also adjustable using external capacitors.	Output Delay Time Accuracy: -35, +40, Detector Output Delay Time Accuracy: -35, +40	3.8	Yes	SOT-23-6	Industrial (-40°C to +105°C)
R3150xxxxB	✓	1.4 to 36.0	Detector Threshold Range: 5.0 to 10.0, Release Threshold Range: 5.3 to 11.0	Detector Threshold Accuracy: ± 1.5, Release Threshold Accuracy: ± 1.5	H	-	-	Ext. Capacitor, Detector Output Delay Time and Release Output Delay Time are also adjustable using external capacitors.	Output Delay Time Accuracy: -35, +40, Detector Output Delay Time Accuracy: -35, +40	3.8	Yes	SOT-23-6	Automotive only
R3150xxxxE	✓	3.6 to 6.0 * 4	Detector Threshold Range: 5.0 to 10.0, Release Threshold Range: 5.3 to 11.0	Detector Threshold Accuracy: ± 1.5, Release Threshold Accuracy: ± 1.5	L	Yes	-	Ext. Capacitor, Detector Output Delay Time and Release Output Delay Time are also adjustable using external capacitors.	Output Delay Time Accuracy: -35, +40, Detector Output Delay Time Accuracy: -35, +40	3.5	Yes	SOT-23-6	Automotive only
R3150xxxxF	✓	3.6 to 6.0 * 4	Detector Threshold Range: 5.0 to 10.0, Release Threshold Range: 5.3 to 11.0	Detector Threshold Accuracy: ± 1.5, Release Threshold Accuracy: ± 1.5	H	Yes	-	Ext. Capacitor, Detector Output Delay Time and Release Output Delay Time are also adjustable using external capacitors.	Output Delay Time Accuracy: -35, +40, Detector Output Delay Time Accuracy: -35, +40	3.5	Yes	SOT-23-6	Automotive only
R3151xxxxA	✓	1.4 to 36.0	Detector Threshold Range: 5.0 to 10.0, Release Threshold Range: 5.3 to 11.0	Detector Threshold Accuracy: ± 1.5, Release Threshold Accuracy: ± 1.5	L	-	-	Ext. Capacitor, Detector Output Delay Time and Release Output Delay Time are also adjustable using external capacitors.	Output Delay Time Accuracy: -35, +40, Detector Output Delay Time Accuracy: -35, +40	3.8	Yes	SOT-23-6	Automotive only
R3151xxxxB	✓	1.4 to 36.0	Detector Threshold Range: 5.0 to 10.0, Release Threshold Range: 5.3 to 11.0	Detector Threshold Accuracy: ± 1.5, Release Threshold Accuracy: ± 1.5	H	-	-	Ext. Capacitor, Detector Output Delay Time and Release Output Delay Time are also adjustable using external capacitors.	Output Delay Time Accuracy: -35, +40, Detector Output Delay Time Accuracy: -35, +40	3.8	Yes	SOT-23-6	Automotive only
R3151xxxxE	✓	3.6 to 6.0 * 4	Detector Threshold Range: 5.0 to 10.0, Release Threshold Range: 5.3 to 11.0	Detector Threshold Accuracy: ± 1.5, Release Threshold Accuracy: ± 1.5	L	Yes	-	Ext. Capacitor, Detector Output Delay Time and Release Output Delay Time are also adjustable using external capacitors.	Output Delay Time Accuracy: -35, +40, Detector Output Delay Time Accuracy: -35, +40	3.5	Yes	SOT-23-6	Automotive only
R3151xxxxF	✓	3.6 to 6.0 * 4	Detector Threshold Range: 5.0 to 10.0, Release Threshold Range: 5.3 to 11.0	Detector Threshold Accuracy: ± 1.5, Release Threshold Accuracy: ± 1.5	H	Yes	-	Ext. Capacitor, Detector Output Delay Time and Release Output Delay Time are also adjustable using external capacitors.	Output Delay Time Accuracy: -35, +40, Detector Output Delay Time Accuracy: -35, +40	3.5	Yes	SOT-23-6	Automotive only
R8315xxxxA ⁶	✓	1.4 to 36.0	Detector Threshold Range: 5.0 to 10.0, Release Threshold Range: 5.3 to 11.0	Detector Threshold Accuracy: ± 1.5, Release Threshold Accuracy: ± 1.5	L	-	-	Ext. Capacitor, Detector Output Delay Time and Release Output Delay Time are also adjustable using external capacitors.	Output Delay Time Accuracy: -35, +40, Detector Output Delay Time Accuracy: -35, +40	3.8	Yes	SOT-23-6	Automotive only
R8315xxxxB ⁶	✓	1.4 to 36.0	Detector Threshold Range: 5.0 to 10.0, Release Threshold Range: 5.3 to 11.0	Detector Threshold Accuracy: ± 1.5, Release Threshold Accuracy: ± 1.5	H	-	-	Ext. Capacitor, Detector Output Delay Time and Release Output Delay Time are also adjustable using external capacitors.	Output Delay Time Accuracy: -35, +40, Detector Output Delay Time Accuracy: -35, +40	3.8	Yes	SOT-23-6	Automotive only
R8315xxxxE ⁶	✓	3.6 to 6.0 * 4	Detector Threshold Range: 5.0 to 10.0, Release Threshold Range: 5.3 to 11.0	Detector Threshold Accuracy: ± 1.5, Release Threshold Accuracy: ± 1.5	L	Yes	-	Ext. Capacitor, Detector Output Delay Time and Release Output Delay Time are also adjustable using external capacitors.	Output Delay Time Accuracy: -35, +40, Detector Output Delay Time Accuracy: -35, +40	3.5	Yes	SOT-23-6	Automotive only
R8315xxxxF ⁶	✓	3.6 to 6.0 * 4	Detector Threshold Range: 5.0 to 10.0, Release Threshold Range: 5.3 to 11.0	Detector Threshold Accuracy: ± 1.5, Release Threshold Accuracy: ± 1.5	H	Yes	-	Ext. Capacitor, Detector Output Delay Time and Release Output Delay Time are also adjustable using external capacitors.	Output Delay Time Accuracy: -35, +40, Detector Output Delay Time Accuracy: -35, +40	3.5	Yes	SOT-23-6	Automotive only
R3152 ⁵	✓	3.0 to 42.0	OV: 1.1 to 5.9 UV: 1.0 to 4.8	± 0.5	L	Yes	-	Ext. Capacitor	-37.5, +100	1.5	A: Yes B: No	SOT-23-6	Industrial (-50°C to +125°C)



Voltage Detectors (Reset ICs)

Part No.	Auto-motive	Operating Voltage Range [V]	Detector Threshold Range [V]	Detector Threshold Accuracy [%]	Re-set Signal	SENSE Pin	MR Pin ¹	Adjustable Release Output Delay Time	Output Delay Time Accuracy [%]	Supply Current ² [μA]	Hysteresis	Package Outline	Notes
R3154 ^{5,7}	✓	3.0 to 42.0	OV: 0.75 to 3.7 UV: 0.55 to 3.3	± 0.5	L	Yes	—	Ext. Capacitor	-37.5, +100	2.0	Yes	SOT-23-6	Industrial (-40°C to +125°C)
R3160 ⁵	✓	2.7 to 60.0	10.0 to 48.0	± 1.0	H/L	—	—	Ext. Capacitor	± 50	1.8	Yes	SOT-23-6	Industrial (-50°C to +125°C)
R3500 ^{5,7}	✓	3.0 to 42.0	OV: 1.0 to 5.9 UV: 0.9 to 5.0	± 0.5	L	Yes	Yes	Ext. Capacitor	-37.5, +100	10.0	Yes	HSOP-18	4 CH Industrial (-40°C to +125°C)
U.D. NV3600 ⁶	✓	2.4 to 6.0 * ⁸	3.3 to 19.8	± 0.5	—	Yes	—	—	—	3	A/C/E/ G:Yes B/D/F/ H:No	SOT-23-5-DC	Industrial -VDET & +VDET Individually set voltage
U.D. NV3601 ⁶	✓	2.4 to 6.0 * ⁸	UV:3.3 to 19.8 OV:4.5 to 22.2	± 0.5	—	Yes	—	—	—	3	—	SOT-23-5-DC	Industrial Window Voltage Detector

*1 Manual Reset Pin *2 Detector Threshold (-VDET) = 1.5 V, Detection released *3 SON1612-6, SC-82AB and SC-88A generates a high reset signal. *4 Input Voltage of SENSE Pin: 0V to 36.0V *5 Operating Temperature Rang = -40° C to 105° C *6 Operating Temperature Rang = -40° C to 125° C *7 Applicable to failure diagnosis *8 Input Voltage of SENSE Pin: 0V to 42.0V

System Reset ICs

Part No.	Auto-motive	Key Features	Operating Voltage [V] max.	Watch Dog Timer	Voltage Detection (Arbitrary)	Voltage Detection (Setting by Inside)[V]	Quiescent Current [μA]	Operating Voltage [V]min.	Package Outline	Notes
NJU2103A	✓	Suitable for replacement from MB3771 / NJM2103	18	—	Yes	4.2	280	2.5	DMP8, DIP8, MSOP8(TVSP8)	PLP↔DMP8, MSOP8(TVSP8)
NJU2103B	—	Suitable for replacement from MB3771 / NJM2103	18	—	Yes	4.2	280	2.5	SOP8 JEDEC 150mil(EMP8)	V _{SB} , V _{SC} , I _{PO} MB3771 compatible
NJU7291	✓	—	7	Yes	Yes	3	170	2.5	DIP8, MSOP8(TVSP8)	PLP↔MSOP8(TVSP8)
NJU7295	✓	With Delay Circuit (Rising / Falling independent setting)	5.5	—	Yes	1 (Adjustable)	1.7	1.5	SOT-23-6-1	
NJU7296	—	With Delay Circuit (Rising / Falling independent setting)	5.5	—	Yes	1 (Adjustable)	1.7	1.5	SOT-23-6-1	

Watchdog Timers (WDT)

Watchdog Timers + Voltage Detectors + Voltage Regulators

Part No.	Auto-motive	Operating Voltage Range [V]	Voltage Detector Section			Watchdog Timer Section			LDO Regulator Section			Supply Current [μA]	Package Outline	Notes
			Detector Threshold Range [V]	Detector Threshold Accuracy [%]	Output Delay Time ¹ [ms]	WDT Timeout Period ² [ms]	Inhibit Pin	Output Voltage Range [V]	Output Voltage Accuracy [%]	Output Current [mA]				
R5101	—	1.5 10	1.7 to 4.5	± 2.5	7 14 35	50 120 250	○	1.8 to 5.0	± 2.5	50	5	SSOP-8G		
R5104	✓	Max.36.0	2.8 to 4.0	± 2.0	—	200 300 510	○ xxxA	3.3 to 5.0	± 2.0	Depends on Ext. Tr.	60	SSOP-10	Automotive only	
R5110xxx1A ⁵	✓						×					HSOP-8E		
R5110xxx1B ^{3,5}	✓						○					HSOP-18		
R5110xxx2C ⁵	✓	3.5 36	1.6 to 5.5	± 1.8 * ⁴	194 242 290	14.4 18 21.6	○	1.8 to 5.0	± 1.5 * ⁴	500	25	HSOP-18		
R5110xxx2D ^{3,5}	✓						○					HQFN0808-28		
R5111xxx1A ⁵	✓						×					HSOP-8E		
R5111xxx1B ^{3,5}	✓						○					HSOP-18	Industrial	
R5111xxx2C ⁵	✓	3.5 36	1.6 to 5.5	± 1.8 * ⁴	194 242 290	14.4 18 21.6	○	1.8 to 5.0	± 1.5 * ⁴	300	25	HSOP-18		
R5111xxx2D ^{3,5}	✓						○					HQFN0808-28		
R5114xxx1 ⁵	✓						○					HSOP-8E	Industrial : -40°C to +125°C	
R5114xxx2 ⁵	✓	3.5 42	2.5 to 4.8	± 1.6 * ⁴	184 220 253	14.8 18 21.9	○	3.3 to 5.0	± 1.6 * ⁴	250	8.5	HSOP-18		
R5114xxx2 ⁵	✓						○					HQFN0808-28		
R5115xxx1 ^{3,5}	✓						○					HSOP-8E	Industrial : -40°C to +125°C	
R5115xxx2 ^{3,5}	✓	3.5 42	2.5 to 4.8	± 1.6 * ⁴	184 220 253	14.8 18 21.9	○	3.3 to 5.0	± 1.6 * ⁴	250	8.5	HSOP-18		
R5115xxx2 ^{3,5}	✓						○					HQFN0808-28		
R8360xxx1 ^{3,4,6}	✓	3.5 36	1.6 to 5.5	± 1.8 * ⁴	194 242 290	14.4 18 21.6	×	1.8 to 5.0	± 1.5 * ⁴	500	25	HSOP-8E	Automotive only	
R8360xxx2 ^{3,4,6}	✓						○					HSOP-18		

*1 R5101: CD = 0.001 μF, R5110/R5111/R5114/R5115: CD = 0.22 μF *2 R5101/R8360: CW = 0.01 μF, R5104: CTW = 0.1 μF, R5110/R5111/R5114/R5115: CTW = 0.01 μF *3 Window Watchdog Timer. Window watchdog timer monitors microprocessor activity and asserts a reset signal if the watchdog pulse does not occur within the defined time window (open window) or if the watchdog pulse occurs within the defined time window (close window). *4 Detector Threshold Accuracy in all temperature range. *5 Operating Temperature Rang = -40° C to 105° C *6 Operating Temperature Rang = -40° C to 125° C

Watchdog Timers (WDT) with Voltage Detectors (Reset ICs)

Part No.	Auto-motive	Operating Voltage Range [V]		Voltage Detector Section			Watchdog Timer Section		Supply Current [μA] Typ.	Package Outline	Key Features
		min.	max.	Detector Threshold Range [V]	Detector Threshold Accuracy [%]	Output Delay Time Accuracy [%]	WDT Timeout Period Accuracy [%]	Inhibit Pin			
R5105 ¹	✓									SOT-23-6	Automotive only
R5106 ¹	✓	0.9	6						11		Industrial(-40°C to +125°C) CD Pin and CTW Pin are combined.
R5107 ¹	✓			1.5 to 5.5	± 1.0	± 16	± 33	○		SSOP-8G	Industrial(-40°C to +125°C) MR Pin is included.
R5108 ¹	✓	1.5	6								Industrial(-40°C to +125°C) SENSE Pin is included.
R5109 ¹	✓	0.9	6						11.5		Industrial(-40°C to +125°C) 2 Clock Input Type
R8355 ²	✓									SOT-23-6	Automotive only
R8356 ²	✓	0.9	6						11		CD Pin and CTW Pin are combined. Automotive only
R8357 ²	✓			1.5 to 5.5	± 1.0	± 16	± 33	○		SSOP-8G	MR Pin is included. Automotive only
R8358 ²	✓	1.5	6								SENSE Pin is included. Automotive only
R8359 ²	✓	0.9	6						11.5		2 Clock Input Type Automotive only

*1 Operating Temperature Rang = -40°C to 105° C *2 Operating Temperature Rang = -40°C to 125° C

Part No.	Auto-motive	Key Features	Operating Voltage [V]	Watch Dog Timer	Voltage Detection (Arbitrary)	Voltage Detection (Setting by Inside) [V]	Quiescent Current [μA]	Operating Voltage [V] min.	Package Outline	Notes
NJU2102A	✓	Suitable for replacement from MB3773 / NJM2102	20	Yes	Yes	4.2	320	3.5	DMP8	

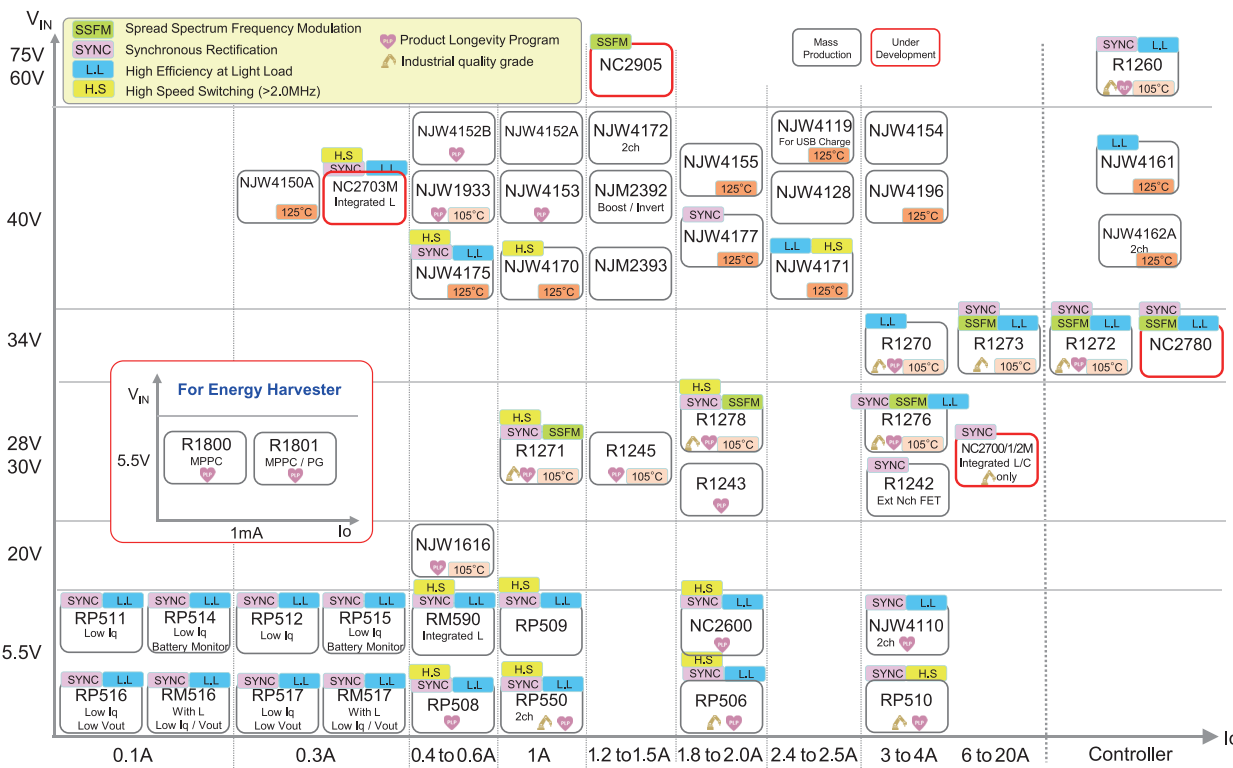
Reset Timer ICs

Part No.	Auto-motive	Operating Voltage Range [V]	Reset Input	Reset Output	Supply Current [μA]	Output Delay Time [s]	Output Release Time [s]	Package Outline	Notes
R3200x001x						7.5, 11.25	—	DFN(PL)2020-8B DFN1216-8	
R3200x002x						7.5	0.234		
R3200x052B	—	1.65 to 5.5	SR0, SR1	xxxA: RST xxxB: RST, RST2	0.28: at standby	10	0.313		
R3200x053B						10	0.078		
R3200x064A						3	0.188		
R3201x001						8		QFN014018-10	with shipping mode
R3201x002	—	2.2 to 5.5	RST0, RST1	SR0 nSR0 DCHGx	0.35: at standby, at shipping mode	10	0.4		
R3201x003						12			
R3201x004						16			

Battery Back-up ICs

Part No.	Auto-motive	Key Features	Operating Voltage [V]	Quiescent Current [μA]		Δ V I-O (Reg1.2.3) [V] typ.	Package Outline	Notes
				Normal Operation	Back-up Mode			
NJU7286	—	Low Dropout Voltage(2-channel) Voltage Detection(2-channel)	10	12	2.1	reg1/0.06(I _{RO} =3mA) reg2/0.3(I _O =23mA)	SSOP8, MSOP8(TVSP8)	
NJU7287	—	Low Dropout Voltage(3-channel) Voltage Detection(2-channel)	10	13	2.1	reg1/0.06(I _{RO} =3mA) reg2/0.3(I _O =23mA) reg3/0.06(I _{CH} =3mA)	MSOP8(TVSP8)	

DC/DC Switching Regulators (Buck) Maximum Input Voltage and Output Current Chart ※Main Product Only



DC/DC Switching Regulators

Buck

- ♥ : Products available in PRODUCT LONGEVITY PROGRAM
- ♥ : Products available in PRODUCT LONGEVITY PROGRAM with time limit
- U.D. : Under Development NEW : New product
- Seamless : Seamless Shift to ECO Mode
- Thermal : Thermal Shutdown Circuit
- Reverse : Reverse Current Protection Circuit
- Soft-Start : Soft-start Circuit

- Inrush : Inrush Current Limit Circuit
- OVLO : Overvoltage Lockout Circuit
- UVLO : Undervoltage Lockout Circuit
- OVP : Overvoltage Protection Circuit
- Shutdown : Shutdown Function
- Discharge : Auto-discharge Function
- Anti-Ringing : Anti-ringing Switch
- Phase : Phase Compensation
- Sequencing : Start-up Sequencing Control
- Maxduty : Maximum Duty Cycle
- LED Adjust : High-speed LED Adjustment
- Single-Wire : Single Wire Interface
- Diode : Diode Rectification
- Synchro : Synchronous Rectification
- SSCG : Spectrum Diffusion Type Oscillator

Part No.	Auto-motive	Application	Output Current [A]	Operating Voltage [V]		Output Voltage [V]		SW. Device	Number of Outputs	Oscillation Frequency Range [kHz]		Stand-by Function	Power Good	Operating Temperature [°C]		Package Outline	Notes
				min.	max.	min.	max.			min.	max.			min.	max.		
R1800	♥	Buck	0.001	2	5.5	2	4.5	Internal FET	1	Depends on conditions of Input/ Output Voltage and Output Current		Yes	-	-40	85	DFN(PL)2730-12	for Energy Harvest VFM Low Quiescent Current : 0.144µA Low Quiescent Current Maximum Power Voltage: 2.0V to 5.3V Starting Power: 0.72 µW Reverse Synchro
R1801	♥	Buck	0.001	2.3	5.5	2.3	4.5	Internal FET	1	Depends on conditions of Input/ Output Voltage and Output Current		Yes	Yes	-40	85	DFN(PL)2730-12	for Energy Harvest VFM Low Quiescent Current : 0.2µA Maximum Power Voltage: 2.7V to 5.3V Starting Power: 1µW Adjustable MPPC/VOUT Reverse Synchro
NEW RMS16		Buck	0.1	1.8	5.5	0.3	1.2	Internal FET	1	Max.1000 (Depends on conditions of Input/ Output Voltage and Output Current)		Yes	-	-40	85	QFN2430-8	Built-in Inductor VFM Ultra-Low Power Consumption : 0.3µA Soft-Start Synchro UVLO Discharge : xx1B

Part No.	Auto-motive	Application	Output Current [A]	Operating Voltage [V]		Output Voltage [V]		SW. Device	Number of Outputs	Oscillation Frequency Range [kHz]		Stand-by Function	Power Good	Operating Temperature [°C]		Package Outline	Notes
				min.	max.	min.	max.			min.	max.			min.	max.		
RP511	♥ 2031	Buck	0.1	2	5.5	1	4	Internal FET	1	Max.1000 (Depends on conditions of Input/ Output Voltage and Output Current)		Yes	-	-40	85	WLCSP-8-P1 DFN(PL)2527-10 SOT-89-5	VFM Ultra-Low Power Consumption: 0.3µA Synchro UVLO Soft-Start Discharge : xx1B
RP514	♥ 2031	Buck	0.1	1.8	5.5	1	4	Internal FET	1	Max.1000 (Depends on conditions of Input/ Output Voltage and Output Current)		Yes	-	-40	85	WLCSP-9-P2 DFN(PL)2527-10	VFM + BM : with Battery Monitor Assist Function Ultra-Low Power Consumption : 0.3µA (+BM:0.1µA) Synchro UVLO Soft-Start Discharge : xxxB
RP516	♥ 2031	Buck	0.1	1.8	5.5	0.3	1.2	Internal FET	1	Max.1000 (Depends on conditions of Input/ Output Voltage and Output Current)		Yes	-	-40	85	WLCSP-8-P1 DFN(PL)2527-10 SOT-89-5	VFM Ultra-Low Power Consumption: 0.3µA Synchro UVLO Soft-Start Discharge : xxxB
NEW RMS17		Buck	0.3	1.8	5.5	0.3	1.2	Internal FET	1	Max.1000 (Depends on conditions of Input/ Output Voltage and Output Current)		Yes	-	-40	85	QFN2430-8	Built-in Inductor VFM Ultra-Low Power Consumption : 0.3µA Soft-Start Synchro UVLO Discharge : xx1D
RP512	♥ 2031	Buck	0.3	2	5.5	1	4	Internal FET	1	Max.1000 (Depends on conditions of Input/ Output Voltage and Output Current)		Yes	-	-40	85	WLCSP-8-P1 DFN(PL)2527-10 SOT-89-5	VFM Ultra-Low Power Consumption: 0.3µA Synchro UVLO Soft-Start Discharge : xx1D
RP515	♥ 2031	Buck	0.3	1.8	5.5	1	4	Internal FET	1	Max.1000 (Depends on conditions of Input/ Output Voltage and Output Current)		Yes	-	-40	85	WLCSP-9-P2 DFN(PL)2527-10	VFM + BM : with Battery Monitor Assist Function Ultra-Low Power Consumption: 0.3µA (+BM:0.1µA) Synchro UVLO Soft-Start Discharge : xxxD
RP517	♥ 2031	Buck	0.3	1.8	5.5	0.3	1.2	Internal FET	1	Max.1000 (Depends on conditions of Input/ Output Voltage and Output Current)		Yes	-	-40	85	WLCSP-8-P1 DFN(PL)2527-10 SOT-89-5	VFM Ultra-Low Power Consumption: 0.3µA Synchro UVLO Soft-Start Discharge : xxxD
NJU7691		Buck	0.3	2.2	7	0.8 (Adj)	6.5 (Adj)	Internal FET	1	300	1000	Yes	-	-40	85	MSOP8 (TVSP8)	PWM Protection Circuit Type : Latch Thermal Soft-Start UVLO Synchro
NJW4150A		Buck	0.3	6.2	40	1 (Adj)	38 (Adj)	Internal FET	1	1000 (Fix)		Yes	-	-40	125	MSOP8 (TVSP8)	PWM Thermal Soft-Start
U.D. NC2703M		Buck	0.3	3.4	40	0.8 (Adj)	5.0 (Fix) 10 (Adj)	Internal FET	1	2100(Fix)		Yes	Yes	-40	125	EMCM13-LL6	Built-in Inductor PWM External Clock Synchronization Over Current Protection:Hiccup type Synchro UVLO Soft-Start Phase
R5220		Buck	0.4	2.8	5.5	1	3.3	Internal FET	1	1200 (Fix)		Yes	-	-40	85	DFN(PL)2514-6	+LDO PWM Protection Circuit Type : Latch Built-in DC/DC and LDO Alternative Circuit Synchro Soft-Start UVLO
RM590	♥ 2031	Buck	0.4	2.3	5.5	0.6 (Fix/Adj)	3.3 (Fix) 5.5 (Adj)	Internal FET	1	6000 (Fix)		Yes	-	-40	85	QFN2220-8	Forced PWM,PWM/VFM Built-in Inductor MODE Pin Synchro UVLO Soft-Start Thermal Discharge : xx2B/002D
NJW1616	♥	Buck	0.5	4.5	20	1.245 (Adj)	17.6 (Adj)	Internal FET	1	500 (Fix)		Yes	-	-40	105	SOT-23-6-1	Pin compatible with LT1616 and LT2736 PWM Pulse-by-pulse current limit circuit Soft-Start Ext.Adjustable Thermal UVLO Diode Phase

DC/DC Switching Regulators

Buck



Part No.	Auto-motive	Appli-cation	Out-put Cur-rent [A]	Operating Voltage [V]		Output Voltage [V]		SW-De-vice	Num-ber of Out-puts	Oscillation Fre-quency Range [kHz]		Stand-by Func-tion	Power Good	Operating Temperature [°C]		Package Outline	Notes
				min.	max.	min.	max.			min.	max.			min.	max.		
RP500	-	Buck	0.6	2.55	5.5	1.1	3.3	Internal FET	1	1200 (Fix)		Yes	-	-40	85	DFN(PL)1820-6 SOT-23-6W	PWM,PWM/VFM Protection Circuit Type : Latch Synchro UVLO Soft-Start Discharge : xx3A/xx4A
RP507	♥	Buck	0.6	2.3	5.5	0.7 (Adj)	5.5 (Adj)	Internal FET	1	2000 (Fix)		Yes	-	-40	85	DFN(PL) 1616-6D	PWM/VFM Synchro UVLO Soft-Start Thermal Discharge
RP503	-	Buck	0.6	2.5	5.5	0.8	2.5	Internal FET	1	2000 (Fix)		Yes	-	-40	85	DFN1616-6 SOT-23-5	PWM/VFM Protection Circuit Type : Latch Synchro UVLO Soft-Start Discharge : xx2A
RP504	-	Buck	0.6	2.3	5.5	0.8	3.3	Internal FET	1	2250 (Fix)		Yes	-	-40	85	DFN(PL)1216-6F DFN1616-6B SOT-23-5	Forced PWM,PWM/VFM Protection Circuit Type : Latch MODE Pin Synchro UVLO Soft-Start Discharge : xx1D
RP508	♥	Buck	0.6	2.3	5.5	0.8	3.3	Internal FET	1	6000 (Fix)		Yes	-	-40	85	DFN(PL)1212-6F	Forced PWM,PWM/VFM MODE Pin Synchro UVLO Soft-Start Thermal Discharge : xx1B
NJW1933	♥	Buck	0.6	4.5	40	1.245 (Adj)	35.2 (Adj)	Internal FET	1	500 (Fix)		Yes	-	-40	105	SOT-23-6-1	Pin compatible with LT1933 and LT2842 PWM Pulse-by-pulse current limit circuit Thermal Soft-Start : Ext.Adjustable UVLO Phase Diode
NJW4152B	♥	Buck	0.6	4.6	40	0.8 (Adj)	38 (Adj)	Internal FET	1	300	1000	Yes	-	-40	85	MSOP8(VSP8)	PWM Pulse-by-pulse current limit circuit Thermal Soft-Start UVLO Diode
NJW4175	✓	Buck	0.6	3.4	40	0.8 (Adj)	3.3,5.0 (Fix) 38 (Adj)	Internal FET	1	2100 (Fix)		Yes	Yes	-40	125	HSOP8-M1	PWM Light Load Mode External Clock Synchronization Protection Circuit Type : Hiccup type Thermal Soft-Start Synchro Phase UVLO
RP901	-	Buck	0.9	4.5	5.5	DC/ DC:1.2 LDO:2.5	DC/ DC:1.8 LDO:3.3	Internal FET	1	1200 (Fix)		Yes	-	-40	85	DFN(PL)2527-10	+LDO + VD : Detector Threshold Range 2.0V to 5.0V for DVD drive PWM,PWM/VFM Protection Circuit Type : Reset type Synchro Soft-Start UVLO Thermal Sequencing
RP519	-	Buck	1 or 0.5	2.3	5.5	0.6 (Fix) 0.6 (Adj)	3.3 (Fix) 5.5 (Adj)	Internal FET	1	6000 (Fix)		Yes	-	-40	85	WLCSP-6-P8	Forced PWM,PWM/VFM MODE Pin Synchro UVLO Soft-Start Thermal Discharge : xxxB/00xD
RP539	♥ 2031	Buck	1 or 0.5	2.3	5.5	0.6 (Fix) 0.6 (Adj)	3.3 (Fix) 5.5 (Adj)	Internal FET	1	6000 (Fix)		Yes	-	-40	105	WLCSP-6-P6	Forced PWM,PWM/VFM Operating Temp.,Tj : -40 to +105°C MODE Pin Synchro UVLO Soft-Start Thermal Discharge : xxxB/00xD
R1232	-	Buck	1	2.6	5.5	0.9 (Fix) 0.8 (Adj)	3.3 (Fix) VIN (Adj)	Internal FET	1	A/C:1000 (Fix) B/D:2250 (Fix)		Yes	-	-40	85	SON-8	PWM Protection Circuit Type : Latch Synchro UVLO Soft-Start
RP904	-	Buck	1	2.5	5.5	1.2 (VSET1) 1.0 (VSET2)	3.3 (VSET1) 1.5 (VSET2)	Internal FET	1	2000 (Fix)		Yes	-	-40	85	WLCSP-11-P2	PWM/VFM Built-in Bypass switch, Output Voltage selectable from VSET1 or VSET2 Protection Circuit Type : Latch Synchro Soft-Start UVLO

Part No.	Auto-motive	Appli-cation	Out-put Cur-rent [A]	Operating Voltage [V]		Output Voltage [V]		SW-De-vice	Num-ber of Out-puts	Oscillation Fre-quency Range [kHz]		Stand-by Func-tion	Power Good	Operating Temperature [°C]		Package Outline	Notes
				min.	max.	min.	max.			min.	max.			min.	max.		
RP501	-	Buck	1	2.5	5.5	1	3.3	Internal FET	1	2250 (Fix)		Yes	-	-40	85	DFN(PL)2527-10	PWM,PWM/VFM MODE Pin Protection Circuit Type : Latch Synchro UVLO Soft-Start Discharge : xx1B
RP505	♥	Buck	1	2.3	5.5	0.6 (Fix) 0.8 (Adj)	3.3 (Fix) 3.3 (Adj)	Internal FET	1	2250 (Fix)		Yes	-	-40	85	DFN(PL)2020-8	Forced PWM,PWM/VFM MODE Pin Protection Circuit Type : Latch Synchro UVLO Soft-Start Thermal Discharge : xx1B
RP550	♥	Buck	1 x 2ch.	2.3	5.5	0.6 (Adj)	3.3 (Adj)	Internal FET	2	2250 (Fix)		Yes	-	-40	85	DFN(PL)2730-12 DFN3030-12	Industrial (-40°C to +105°C) 2CH Forced PWM,PWM/VFM Protection Circuit Type : Latch Synchro UVLO Soft-Start Thermal
RP509	♥ 2031	Buck	1 or 0.5	2.3	5.5	0.6 (Fix) 0.6 (Adj)	3.3 (Fix) 5.5 (Adj)	Internal FET	1	6000 (Fix)		Yes	-	-40	85	WLCSP-6-P6 SOT-23-6	Forced PWM,PWM/VFM MODE Pin Synchro UVLO Soft-Start Thermal Discharge : xxxB/00xD
R1271	♥ 2030	Buck	1	3.6	30	3.3,5.0		Internal FET	1	2000 (Fix)		Yes	Yes	-40	105	DFN3030-12B HSOP-18	PLP:HSOP-18 Industrial (-40°C to +125°C) Forced PWM Protection Circuit Type : Latch or Hiccup Synchro Soft-Start : Ext.Adjustable UVLO OVLO Thermal SSCG : xx1C/D
NJW4152A	✓	Buck	1	4.6	40	0.8 (Adj)	38 (Adj)	Internal FET	1	300	1000	Yes	-	-40	85	HSOP8-M1	PWM Pulse-by-pulse current limit circuit Thermal Soft-Start UVLO Diode
NJW4152-AB	✓	Buck	1	3.6	40	0.8 (Adj)	38 (Adj)	Internal FET	1	300	1000	Yes	-	-40	85	HSOP8-M1	PWM Pulse-by-pulse current limit circuit Thermal Soft-Start UVLO Diode
NJW4153	♥	Buck/ Invert-ing	1	4.6	40	0.8 (Adj)	34 (Adj)	Internal FET	1	1000 (Fix)		Yes	-	-40	85	SOT-89-5-2, DFN8-V1 (ESON8-V1)	PWM Protection Circuit Type : Hiccup Thermal Soft-Start UVLO Phase Diode
NJW4170	-	Buck	1	4.5	40	0.8 (Adj)	31 (Adj)	Internal FET	1	2400 (Fix, A ver.) 2100 (Fix, B ver.)		Yes	-	-40	125	SOT-89-5-2, DFN8-V1 (ESON8-V1)	PWM External Clock Synchron-ization Protection Circuit Type : Hiccup Thermal Soft-Start UVLO Phase Diode
R1240	-	Buck	1.2	4.5	30	0.8 (Adj)	15.0 (Adj)	Internal FET	1	1250 (Fix)		Yes	-	-40	85	SOT-23-6W DFN(PL)2527-10	PWM Protection Circuit Type : Latch or Fold Back Diode UVLO Soft-Start Thermal
R1245	♥	Buck	1.2	4.5	30	0.8 (Adj)	27.6 (Adj)	Internal FET	1	A/B:330(Fix) C/D:500(Fix) E/F:1000(Fix) G/H:2400(Fix)		Yes	-	-40	105	DFN(PL)2020-8 DFN2020-8 SOT-23-6W HSOP-8E	PWM Protection Circuit Type : Latch or Fold Back Diode UVLO Soft-Start Thermal DFN2020-8 : Automotive
NJM2374A	♥	Buck/ Boost/ Invert-ing	1.5	2.5	40	1.25 (Adj)	38 (Adj)	Internal Tr.	1	0.1	100	-	-	-40	85	DIP8, DMP8 SOP8 JEDEC 150mil(EMP8), SSOP14	PLP:DMP8 PWM control version(NJM2360) Pulse-by-pulse current limit circuit Phase Diode
NJM2344	-	Buck/ Boost/ Invert-ing	1.5	3	40	1.25 (Adj)	38 (Adj)	Internal Tr.	1	1	150	Yes	-	-40	85	DIP8, DMP8	PWM, Standby function(N-JM2392) Pulse-by-pulse current limit circuit Phase Diode

DC/DC Switching Regulators

Buck



Part No.	Auto-motive	Appli-cation	Out-put Current [A]	Operating Voltage [V]		Output Voltage [V]		SW. Device	Num-ber of Out-puts	Oscillation Fre-quency Range [kHz]		Stand-by Function	Power Good	Operating Temperature [°C]		Package Outline	Notes	
				min.	max.	min.	max.			min.	max.			min.	max.			
NJM2345	-	Buck	1.5	3	40	1.25 (Adj)	38 (Adj)	Internal Tr.	1	1	150	Yes	-	-40	85	DIP8, DMP8	PWM, Buck (NJM2344) Pulse-by-pulse current limit circuit Phase Diode	
NJM2392	-	Buck/ Boost/ Invert-ing	1.5	3	40	1.25 (Adj)	38 (Adj)	Internal Tr.	1	1	150	-	-	-40	85	DIP8, DMP8	PWM control version(NJM2360) Pulse-by-pulse current limit circuit Phase Diode	
NJM2393	-	Buck	1.5	3	40	1.25 (Adj)	38 (Adj)	Internal Tr.	1	1	150	-	-	-40	85	DIP8, DMP8	PWM, Buck (NJM2392) Pulse-by-pulse current limit circuit Phase Diode	
U.D. NC2905	✓	Buck	1.5	4.0	75	TBD	TBD	Internal FET	1	100	2400	Yes	Yes	-40	125	HSOP8-8-AC	Industrial PWM External Clock Synchronization Over Current Protection:Hiccup type Diode UVLO SSCG Soft-Start Thermal Phase Ext.	
NJW4155	-	Buck/ Invert-ing	1.8	4.5	40	0.8 (Adj)	36.8 (Adj)	Internal FET	1	450 (Fix, A ver) 300 (Fix, B ver)		Yes	Yes	-40	125	HSOP8-M1, TO-252-5-L3	PWM, External Clock Synchron-ization Over Current Protection:Hiccup type Thermal Soft-Start UVLO Phase Diode	
NEW NC2600	-	Buck	2	2.3	5.5	0.6 (Fix) 0.6 (Adj)	3.3 (Fix) 5.5 (Adj)	Internal FET	1	4000 (Fix)		Yes	Yes	-40	85	WLCSP-8-P11 DFN2020-8-GT	Forced PWM,PWM/VFM MODE Pin Protection Circuit Type : Latch Synchro UVLO Soft-Start : Ext.Adjustable Thermal Discharge : Ver. A/C	
U.D. NC2600M	-	Buck	2	2.3	5.5	0.6 (Fix) 0.6 (Adj)	3.3 (Fix) 5.5 (Adj)	Internal FET	1	4000 (Fix)		Yes	Yes	-40	85	QFN2334-10	Built-in Inductor Forced PWM,PWM/PFM MODE Pin Protection Circuit Type : Latch Synchro UVLO Soft-Start : Ext.Adjustable Thermal Discharge : Ver. A/C	
NJW4122	-	Buck	2	2.7	5.5	0.6 (Adj)	5 (Adj)	Internal FET	1	100	2400	Yes	-	-40	125	DFN8-U1 (ESON8-U1)	PWM, External Clock Synchron-ization Over Current Protection : Hiccup type Thermal Soft-Start UVLO Phase Synchro	
RP506	♥	✓	Buck	2	2.5	5.5	0.6/0.8 (Fix) 0.6/0.8 (Adj)	3.3 (Fix) 4.0 (Adj)	Internal FET	1	D/E/F:1200 (Fix) A/B/C:2250 (Fix)		Yes	Yes	-40	85	DFN(PL)2527-10 DFN3030-12	Industrial (-40°C to +105°C) Forced PWM,PWM/VFM MODE Pin Protection Circuit Type : Latch Synchro UVLO Thermal Soft-Start :Ext.Adjustable Discharge : xx1B/E
R1243	♥	-	Buck	2	4.5	30	0.8 (Adj)	18.0 (Adj)	Internal FET	1	C/D:330 (Fix) A/B/E:1000 (Fix)		Yes	-	-40	85	DFN(PL)2527-10 HSOP8-8E	Forced PWM Protection Circuit Type : Latch or Fold Back FLG Pin Diode UVLO Thermal Soft-Start : Ext.Adjustable
R1278	♥ 2030	✓	Buck	2	3.6	30	3.3 (Adj)	5.0 (Adj)	Internal FET	1	2000 (Fix)		Yes	Yes	-40	105	HSOP8-18	Industrial (-40°C to +125°C) Forced PWM Ext.Synchronizable with PLL Circuit Tracking function Protection Circuit Type : Hiccup Synchro SSCG : Ver. 003x UVLO Thermal OVLO Soft-Start : Ext.Adjustable Phase : Ext.
NJW4177	-	Buck	2	3.6	40	0.8 (Adj)	38 (Adj)	Internal FET	1	450 (Fix, A ver.) 300 (Fix, B ver.)		Yes	Yes	-40	125	HSOP8-M1	PWM, External Clock Synchron-ization Over Current Protection:Hiccup type Thermal Soft-Start UVLO Discharge Phase Synchro	

Part No.	Auto-motive	Appli-cation	Out-put Current [A]	Operating Voltage [V]		Output Voltage [V]		SW. Device	Num-ber of Out-puts	Oscillation Fre-quency Range [kHz]		Stand-by Function	Power Good	Operating Temperature [°C]		Package Outline	Notes	
				min.	max.	min.	max.			min.	max.			min.	max.			
NJW4119	✓	Buck	2.4	6.5	40	5.1 (Fix)	5.185 (Fix)	Internal FET	1	300 (Fix)		Yes	Yes	-40	125	HTSSOP24-P1	USB Power Supply PWM, External Clock Synchron-ization Protection Circuit Type : Hiccup Thermal Soft-Start UVLO Diode	
NJW4171	✓	Buck	2.5	3.4	40	0.8 (Adj)	38 (Adj)	Internal FET	1	100	2400	Yes	Yes	-40	125	HSOP8-M1	Light Load Mode(A ver.) PWM, External Clock Synchron-ization Protection Circuit Type : Hiccup Thermal Soft-Start UVLO Diode	
NJW4128	✓	Buck/ Invert-ing	2.5	4.5	40	0.8 (Adj)	35.2 (Adj)	Internal FET	1	450 (Fix, A ver) 300 (Fix, B ver)		Yes	Yes	-40	85	HSOP8-M1	PWM, External Clock Synchron-ization Protection Circuit Type : Hiccup Thermal Soft-Start UVLO Phase Diode	
NJW4110	♥	✓	Buck	3	2.7	5.5	0.6 (Adj)	5 (Adj)	Internal FET	2	100	2400	Yes	Yes	-40	125	EQFN24-LE	PWM, External Clock Synchron-ization Protection Circuit Type : Hiccup Soft-Start : Ext.Adjustable Thermal UVLO Phase Synchro
R1276	♥ 2030	✓	Buck	3	3.6	30	0.7 (Adj)	6.5 (Adj)	Internal FET	1	250	1000	Yes	Yes	-40	105	HSOP8-18	Industrial (-40°C to +125°C) Forced PWM, PWM/VFM External Clock Synchronization Tracking function Protection Circuit Type : Hiccup Synchro SSCG : Ver. xxxC UVLO Thermal OVLO Soft-Start : Ext.Adjustable Phase : Ext.
R1242	-	Buck	3	5	30	0.8 (Adj)	15.0 (Adj)	Internal FET	1	C/D:330 (Fix) E/F:500 (Fix) G/H:1000 (Fix) A/B:300 to 1000		Yes	-	-40	85	HSOP8-8E	PWM,External Clock Synchron-ization Protection Circuit Type : Latch or Fold Back Synchro : with external low side transis-tor UVLO Soft-Start Thermal	
R1270	♥	✓	Buck	3	3.6	34	0.8 (Adj)	31.6 (Adj)	Internal FET	1	300	2400	Yes	-	-40	105	HSOP8-18	Industrial (-40°C to +125°C) PWM,PWM/VFM Ext.Synchronizable with PLL Circuit Protection Circuit Type : Latch or Fold Back FLG Pin Diode UVLO Thermal OVLO Soft-Start : Ext.Adjustable Phase : Ext.
NJW4154	✓	Buck	3	4.5	40	0.8 (Adj)	35.2 (Adj)	Internal FET	1	300 (Fix)		Yes	Yes	-40	85	HSOP8-M1, TO-252-5-L3	PWM, External Clock Synchron-ization Protection Circuit Type : Hiccup Thermal Soft-Start UVLO Phase Diode	
NJW4196	-	Buck	3.5	4.45	40	1 (Adj)	38 (Adj)	Internal FET	1	450 (Fix) 100	450 (Fix) 1000	Yes	Yes	-40	125	HSOP8-M1	PWM, External Clock Synchron-ization Protection Circuit Type : Hiccup Thermal Soft-Start UVLO Phase Diode	
RP510	♥	✓	Buck	4	2.5	5.5	0.8 (Fix) 0.8 (Adj)	3.3 (Fix) 3.3 (Adj)	Internal FET	1	2300 (Fix)		Yes	Yes	-40	85	DFN3030-12	Industrial (-50°C to +105°C) Forced PWM Protection Circuit Type : Latch or Fold Back Synchro UVLO Thermal Soft-Start : Ext.Adjustable Discharge : xxxH/N

DC/DC Switching Regulators

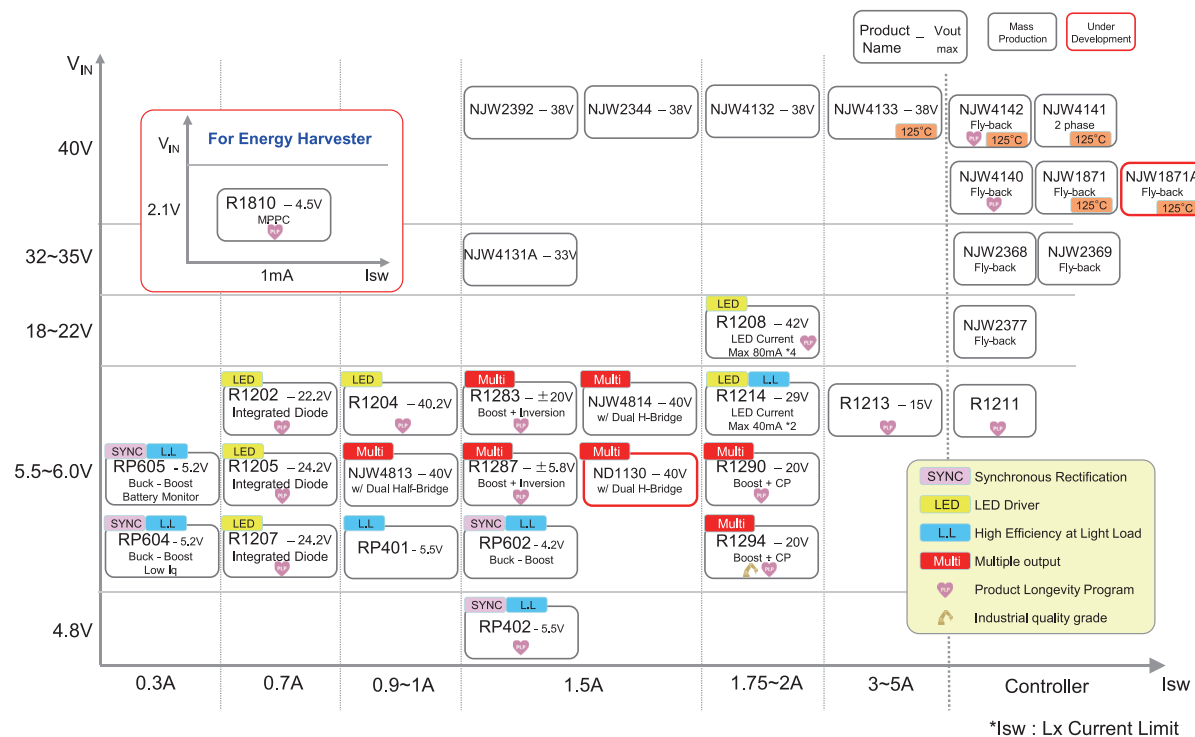
Buck



Part No.	Auto-motive	Appli-cation	Out-put Current [A]	Operating Voltage [V]		Output Voltage [V]		SW-Device	Number of Out-puts	Oscillation Fre-quency Range [kHz]		Stand-by Function	Power Good	Operating Temperature [°C]		Package Outline	Notes
				min.	max.	min.	max.			min.	max.			min.	max.		
U.D. NC2700M			20														Industrial only Built-in Inductor Forced PWM Protection Circuit Type : Latch or Hiccup Ext.Synchronizable with PLL Circuit Synchro UVLO Soft-Start : Ext.Adjustable Phase : Ext. Thermal
U.D. NC2701M	-	Buck	10	4	28	0.7 (Adj)	5.3 (Adj)	Internal FET	1	250	1000	Yes	Yes	-40	85	QFN0910-65-MA	
U.D. NC2702M			6														
R1273	✓	Buck	14	4	34	0.7 (Adj)	5.3 (Adj)	Internal FET	1	250	1000	Yes	Yes	-40	105	QFN0505-32B	Industrial (-40°C to +105°C) Forced PWM,PWM/VFM External Clock Synchronization Tracking function Protection Circuit Type : Latch or Hiccup Synchro SSCG : Ver. 03x/13x UVLO OVP Thermal Soft-Start : Ext.Adjustable Phase : Ext.
R1282	-	Boost/Buck	-	2.5	5.5	Adjustable		Control-ler	2	700 (Fix)		Yes	-	-40	85	SON-10	2CH for LCD/CCD/OLED PWM Protection Circuit Type : Latch UVLO Diode Soft-Start : Ext.Adjustable Phase : Ext.
NJU7680	-	Buck/Boost	-	2.3	7	1 (Adj)	-	Control-ler	2	300	1000	Yes	-	-40	85	PCSP24-ED, SSOP16	2CH Buck/Boost SEPIC Circuit
NJU7630	-	Buck	-	2.2	8	1 (Adj)	7.5 (Adj)	Control-ler	1	300	1000	-	-	-40	85	DMP8, MSOP8(TVSP8)	PWM Protection Circuit Type : Latch Soft-Start UVLO Maxduty Diode
NJU7631	-	Buck	-	2.2	8	1 (Adj)	7.5 (Adj)	Control-ler	1	300	1000	-	-	-40	85	MSOP8 (TVSP8)	PWM/PFM Protection Circuit Type : Latch Soft-Start UVLO Maxduty Diode
NJU7632	-	Buck	-	2.2	8	1 (Adj)	7.5 (Adj)	Control-ler	1	300	1000	Yes	-	-40	85	MSOP8 (TVSP8)	PWM Protection Circuit Type : Latch Soft-Start UVLO Maxduty Diode
NJU7640	-	Buck	-	2.2	8	1 (Adj)	7.5 (Adj)	Control-ler	1	300	1000	-	-	-40	85	MSOP8 (TVSP8)	PWM Pulse-by-pulse current limit circuit Soft-Start UVLO Maxduty Diode
NJU7650	-	Buck	-	2.2	8	1 (Adj)	7.5 (Adj)	Control-ler	1	300	1000	-	-	-40	85	MSOP8 (TVSP8)	Constant voltage/current control for output voltage PWM Soft-Start UVLO Maxduty Diode
NJU7690	-	Buck	-	2.2	8	1 (Adj)	7.5 (Adj)	Control-ler	1	300	1000	Yes	-	-40	85	MSOP10 (TVSP10)	PWM Protection Circuit Type : Latch Soft-Start UVLO Maxduty Synchro
R1223	-	Buck	-	2.3	13.2	1.5	5	Control-ler	1	A/C/E/G:300 (Fix) B/D/F/H:500 (Fix)		Yes	-	-40	85	SOT-23-5	PWM,PWM/VFM Protection Circuit Type : Latch or Hiccup Diode Soft-Start
R1224	-	Buck	-	2.3	18.5	1.2 (Fix) 1.0 (Adj)	6.0 (Fix) VIN (Adj)	Control-ler	1	L/M:180 (Fix) E/G:300 (Fix) F/H:500 (Fix)		Yes	-	-40	85	SOT-23-5	PWM,PWM/VFM Over Current Protection:Hiccup type Diode Soft-Start UVLO
R1225	-	Buck	-	2.3	18.5	1.2	6	Control-ler	1	J/K:180 (Fix) A/C:300 (Fix) B/D:500 (Fix)		Yes	-	-40	85	SOT-23-6W	PWM,PWM/VFM Protection Circuit Type : Latch Diode Soft-Start UVLO

Part No.	Auto-motive	Appli-cation	Out-put Current [A]	Operating Voltage [V]		Output Voltage [V]		SW-Device	Number of Out-puts	Oscillation Fre-quency Range [kHz]		Stand-by Function	Power Good	Operating Temperature [°C]		Package Outline	Notes	
				min.	max.	min.	max.			min.	max.			min.	max.			
NJM2309	-	Buck	-	3.6	32	0.52 (Adj)	30 (Adj)	Control-ler	1	5	500	-	-	-40	85	DMP8, SOP8 JEDEC 150mil(EMP8), SSOP8	PWM Protection Circuit Type : Latch Soft-Start : Ext.Adjustable UVLO Maxduty Diode	
NJM2383	-	Buck	-	3.6	32	0.52 (Adj)	30 (Adj)	Control-ler	1	5	350	Yes	-	-40	85	DMP14, SSOP10	PWM Current Sensing Amplifier Soft-Start : Ext.Adjustable UVLO Maxduty Diode	
NJM2384	-	Buck	-	3.6	32	0.52 (Adj)	30 (Adj)	Control-ler	1	5	500	-	-	-40	85	DMP14, SSOP10	PWM Current Sensing Amplifier Soft-Start : Ext.Adjustable UVLO Maxduty Diode	
NJM2340	-	Buck	-	3.6	32	1 (Adj)	30 (Adj)	Control-ler	1	20	500	-	-	-40	85	DMP8, MSOP8 (TVSP8)	Constant voltage/current control for output voltage PWM Diode	
R1272	♥	✓	Buck	-	4	34	0.7 (Adj)	5.3 (Adj)	Control-ler	1	250	1000	Yes	Yes	-40	105	HSOP-18	Industrial (-40°C to +105°C) Forced PWM,PWM/VFM External Clock Synchronization Tracking function Protection Circuit Type : Latch or Hiccup Synchro UVLO SSCG : Ver. 03x/13x Soft-Start : Ext.Adjustable Thermal OVP Phase : Ext.
U.D. NC2780	✓	Buck	-	4.0	34	0.7 (Adj)	5.3 (Adj)	Control-ler	1	250	1000	Yes	Yes	-40	125	HSOP-18-AK	Industrial(-40°C to +105°C) Forced PWM,PWM/VFM External Clock Synchronization Tracking function Protection Circuit Type : Latch or Hiccup Synchro UVLO SSCG : Ver. A/C Soft-Start : Ext.Adjustable Thermal OVP Phase : Ext.	
NJW4160	-	Buck	-	3	35	0.8 (Adj)	33 (Adj)	Control-ler	1	50	1000	Yes	-	-40	85	MSOP8(VSP8), DMP8	-	
NJW4161	-	Buck	-	3.1	40	0.8 (Adj)	38 (Adj)	Control-ler	1	50	1000	Yes	-	-40	125	MSOP8(VSP8), DIP8	PWM PWM/PFM Protection Circuit Type : Hiccup, Latch Thermal Soft-Start UVLO Diode	
NJW4162A	✓	Buck	-	4.3	40	0.8 (Adj)	38 (Adj)	Control-ler	2	100	1000	Yes	Yes	-40	125	SSOP20-C3	PWM External Clock Synchronization Protection Circuit Type : Hiccup Soft-Start : Ext.Adjustable Thermal UVLO Diode	
R1260	♥	✓	Buck	-	5	60	1 (Adj)	16 (Adj)	Control-ler	1	150	600	Yes	Yes	-40	105	HSOP-18	Industrial (-40°C to +105°C) Forced PWM,PWM/VFM External Clock Synchronization Tracking function Protection Circuit Type : Latch or Hiccup Synchro Soft-Start : Ext.Adjustable UVLO OVP Thermal SSCG : xxxB/D Phase : Ext.

DC/DC Switching Regulators (Boost, Buck-Boost) Maximum Input Voltage and Output Current Chart ※Main Product Only



DC/DC Switching Regulators
Boost / Fly-Back

Part No.	Auto-motive	Switching Current [A]	Ap-plication	Operating Voltage [V]		Output Voltage[V]		SW. Device	Oscillation Fre-quency Range [kHz]		Stand-by Function	Operating Temperature [°C]		Package Out-line	Notes
				min.	max.	min.	max.		min.	max.		min.	max.		
R1810	2031	0.001	Boost	0.35	2.1	2.3	4.5	Internal FET	Depends on conditions of Input/ Output Voltage and Output Current		Yes	-40	85	WLCSP-15-P1	for Energy Harvest VFM Low Quiescent Current : 0.6μA Maximum Power Voltage: 0.2V to 2.1V Starting Power: 9μW Power Good Function : Output/Input Reverse Synchro
									DFN2735-14						
R1202	Heart	0.35 0.7	Boost	1.8/2.3	5.5	Up to 22.2 (Adj)		Internal FET	1200(Fix)	Yes	-40	85	DFN1616-6B TSOT-23-6	for LED PWM UVLO Soft-Start Shutdown Diode Discharge Ver.A	
R1205	Heart	0.35 0.7	Boost	1.8	5.5	Up to 24.2 (Adj)		Internal FET	1200(Fix)	Yes	-40	85	DFN1616-6B TSOT-23-6	for LED PLP: DFN1616-6B Succeeding Products : R1205N → R1207N UVLO Soft-Start Diode Thermal LED Adjust	
R1207	Heart	0.35 0.7	Boost	1.8	5.5	Up to 24.2 (Adj)		Internal FET	1200(Fix)	Yes	-40	85	TSOT-23-6	for LED PWM UVLO Soft-Start Diode Thermal LED Adjust	
RP400		0.6	Boost	0.7	5.5	1.8 (Fix) 1.8 (Adj:DFN)	5.0 (Fix) 5.0 (Adj:DFN)	Internal FET	700(Fix)	Yes	-40	85	DFN(PL)1820-6 SOT-23-5	PWM/VFM Diode Soft-Start Anti-Ringing	
R1203		0.7	Boost	1.8	5.5	Up to 28.7 (Adj)		Internal FET	1200(Fix)	Yes	-40	85	SOT-23-6	for LED PWM Succeeding Products : R1203N → R1206N UVLO Soft-Start LED Adjust Diode	
R1206		0.7	Boost	1.8	5.5	Up to 28.7 (Adj)		Internal FET	1200(Fix)	Yes	-40	85	SOT-23-6	for LED UVLO Soft-Start LED Adjust Diode	

Part No.	Auto-motive	Switching Current [A]	Ap-plication	Operating Voltage [V]		Output Voltage[V]		SW. Device	Oscillation Fre-quency Range [kHz]		Stand-by Function	Operating Temperature [°C]		Package Out-line	Notes
				min.	max.	min.	max.		min.	max.		min.	max.		
R1218		0.7	Boost	1.8	5.5	Up to 30 (Adj)		Internal FET	1200(Fix)		Yes	-40	85	SOT-23-6	for LED PWM UVLO Soft-Start Diode
R1204	Heart	0.9	Boost	2.3	5.5	Up to 40.2 (Adj)		Internal FET	B/C:1000(Fix) E/F:750(Fix)		Yes	-40	85	DFN(PL)1820-6 TSOT-23-6	for LED PWM, PWM/VFM UVLO Soft-Start Thermal Diode
R1286		CH1:1.0 or 1.1 CH2:1.5 or 1.8	CH1: Boost/ CH2: Inverting	2.3	5.5	CH1 : 4.6 (Fix/Adj) CH2 :-2.0 (Fix/Adj)	CH1 : 5.8 (Fix/Adj) CH2 :-6.0 (Fix/Adj)	Internal FET	1750(Fix)		Yes	-40	85	DFN(PL)2730-12	2CH for LCD/CCD/OLED PWM Protection Circuit Type: Latch Synchro Soft-Start UVLO Sequencing Discharge Thermal S-Wire : xxxA/C-G Inverting output can be dynamically changed by S-wire control.
RP401		1	Boost	0.6	5.5	1.8 (Fix) 1.8 (Adj: DFN)	5.5 (Fix) 5.5 (Adj: DFN)	Internal FET	1200(Fix)		Yes	-40	85	DFN(PL)1820-6 SOT-23-5	PWM, PWM/VFM Protection Circuit Type: Latch Diode Soft-Start
NJW4131B		1	Boost	4	35	4 (Adj)	33 (Adj)	Internal FET	300	1000	Yes	-40	85	MSOP8 (VSP8)	PWM Pulse-by-pulse current limit circuit Thermal Soft-Start UVLO Diode
NJW4813		1	Boost	2.7	5.5	2.7	35 (Adj)	Internal FET	380	810	Yes	-40	85	PCSP20-E3	Internal 2-channel Half Bridge Driver PWM Pulse-by-pulse current limit circuit Thermal Soft-Start UVLO Diode
R1287	Heart	CH1:1.1 CH2:1.5	CH1: Boost/ CH2: Inverting	2.5	5.5	CH1 : 4.5 (Fix/Adj) CH2 :-4.5 (Fix/Adj)	CH1 : 5.8 (Fix/Adj) CH2 :-5.8 (Fix/Adj) -6.0 (Adj)	Internal FET	B/F:900 (Fix) C/G:300(Fix) D/H:1000(Fix) CH2 B/F:1100(Fix) C/G:300(Fix) D/H:1000(Fix)		Yes	-40	85	WLCSP-12-P1 DFN3030-12	PLP:DFN3030-12 2CH for LCD/CCD/OLED PWM, PWM/VFM Protection Circuit Type: Latch Synchro Soft-Start UVLO Sequencing Discharge Thermal
RP600		1.4	Boost	DC/DC : 0.8 LDO : 2.0	DC/DC : 5.5 LDO : 5.5	DC/DC : 2.3 (Fix/Adj) LDO:1.5 (Fix)	DC/DC : 5.5 (Fix/Adj) LDO:5.0 (Fix)	Internal FET	1200 (Fix)		Yes	-40	85	DFN(PL)2527-10	+LDO +VD: Operating Voltage Range 0.8V to 5.5, Detector Threshold Range 1.0V to 4.5V PWM, PWM/VFM Diode Soft-Start Sequencing Thermal : Except xxC
NJW4131A		1.4	Boost	4	35	4 (Adj)	33 (Adj)	Internal FET	300	1000	Yes	-40	85	HSOP8-M1	PWM Pulse-by-pulse current limit circuit Thermal Soft-Start UVLO Diode
RP402	Heart	1.5	Boost	0.6	4.8	1.8 (Fix) 1.8 (Adj)	5.5 (Fix) 5.5 (Adj)	Internal FET	1A/B/C/D/E/F/G/H:1200(Fix) 2A/B:1000(Fix)		Yes	-40	85	DFN(PL)2020-8 SOT-23-5	Forced PWM, PWM, PWM/VFM Regulation available at VIN>VOUT Reverse current protection at VIN=0V or open Input and output cut off completely at standby: xxxA/B/E/F Input and output bypass at standby: xxxC/D/G/H Protection Circuit Type: Latch Synchro Soft-Start OVP OVLO Anti-Ringing : xx1/001
R1283	Heart	1.5	CH1: Boost/ CH2: Inverting	2.5	5.5	CH1: Up to 20 (Adj) CH2: Up to VDD-20 (Adj)		Internal FET	A:300 (Fix) B:700 (Fix) C:1400 (Fix)		Yes	-40	85	DFN(PL)2730-12	2CH for LCD/CCD/OLED PWM Protection Circuit Type: Latch Soft-Start UVLO Discharge Inverting output only Sequencing Diode
NJM2374A	Heart	1.5	Buck/ Boost/ Inverting	2.5	40	1.25 (Adj)	38 (Adj)	Internal Tr.	0.1	100	-	-40	85	DIP8, DMP8 SOP8 JEDEC 150mil(EMP8), SSOP14	PWM control version(NJM2360) Pulse-by-pulse current limit circuit Phase Diode

DC/DC Switching Regulators

Boost / Fly-Back



Part No.	Auto-motive	Switching Current [A]	Ap-plication	Operating Voltage [V]		Output Voltage[V]		SW. Device	Oscillation Frequency Range [kHz]		Stand-by Function	Operating Temperature [°C]		Package Out-line	Notes
				min.	max.	min.	max.		min.	max.		min.	max.		
NJM2344	-	1.5	Buck/Boost/Inverting	3	40	1.25 (Adj)	38 (Adj)	Internal Tr.	1	150	Yes	-40	85	DIP8, DMP8	PWM, Standby function(NJM2392) Pulse-by-pulse current limit circuit Phase Diode
NJM2392	-	1.5	Buck/Boost/Inverting	3	40	1.25 (Adj)	38 (Adj)	Internal Tr.	1	150	-	-40	85	DIP8, DMP8	PWM control version(NJM2360) Pulse-by-pulse current limit circuit Phase Diode
NJW4814	-	1.5	Boost	2.7	5.5	2.7 (Adj)	35 (Adj)	Internal FET	380	1000	Yes	-40	85	EQFN24-LE	Internal 2-channel H Bridge Driver PWM Pulse-by-pulse current limit circuit Thermal Soft-Start UVLO OVP Diode
NJW4132	♥	✓	1.75	Boost	4.5	40	4.5 (Adj)	38 (Adj)	Internal FET	300(Fix) 700(Fix) 2000(Fix)	Yes	-40	85	SOT-89-5-2	PWM, External Clock Synchronization Over Current Protection (Hiccup type) Thermal Soft-Start UVLO Phase Diode
NJW4138	-	1.75	Boost	4.5	40	4.5 (Adj)	38 (Adj)	Internal FET	2000 (Fix)		Yes	-40	125	SOT-89-5-2	Capacitor Charge application PWM, External Clock Synchronization Pulse-by-pulse current limit circuit Thermal Soft-Start UVLO Phase Diode
R1214	♥	2031	-	1.9	Boost	2.7	5.5	Up to 29 (Adj)	Internal FET	221A/C:750(-Fix) 211A/B/C/ D:450(Fix)	Yes	-40	85	WLCSP-9-P1	for LED 2 strings PWM/VFM, PWM UVLO Soft-Start Diode Thermal LED Adjust
R1290	♥	✓	CH1:2	CH1: Boost/CH2: Charge-pump, Boost/CH3: Charge-pump, Inverting	2	5.5	CH1 : Up to 20 (Adj) CH2/3: Adjustable	Internal FET	180	1400	Yes	-40	85	QFN0404-24	for LCD/CCD/OLED PWM Protection Circuit Type: Latch The charge pump operates at 1/4th operating frequency. Soft-Start : Ext.Adjustable Sequencing UVLO Diode Phase : Ext. Maxduty : Ext.Adjustable
R1294	♥	✓	CH1:2	CH1: Boost/CH2: Charge-pump, Boost/CH3: Charge-pump, Inverting	2	5.5	CH1 : Up to 20 (Adj) CH2/3: Adjustable	Internal FET	210	1400	Yes	-40	85	QFN0404-24B	Industrial (-40°C to 105°C) for LCD/CCD/OLED PWM Protection Circuit Type: Latch-type The charge pump operates at 1/4th operating frequency. Soft-Start : Ext.Adjustable Sequencing UVLO Diode Phase : Ext. Maxduty : Ext.Adjustable
R1208	♥	-	2	Boost	2.7	22	Up to 42 (Adj)	Internal FET	A:750(Fix) B:450(Fix)	Yes	-40	85	DFN(PL)2730-12	for LED 4 strings PWM UVLO Soft-Start Diode Thermal LED Adjust	
R1293	-	3	Boost	DC/DC : 2.2 LDO : 2.2 Amplifier : 5.0 DC/DC : 5.5 LDO : 5.5 Amplifier : 16.0			DC/DC:Up to 16 (Adj) LDO:1.8 to 2.5 (Fix)	Internal FET	300	1000	Yes	-40	85	QFN(PL)0404-32	+LDO +AMP for LCD/CCD/OLED PWM Protection Circuit Type: Latch DC/DC output with noise reduction function, 1ch. VCOM amplifier. 6ch. GAMMA amplifiers Thermal UVLO Diode Soft-Start : Ext.Adjustable Phase : Ext. Maxduty : Ext.Adjustable
R1213	♥	-	3	Boost	2.3	5.5	3 (Adj) 15.0 (Adj)	Internal FET	1000 (Fix)	Yes	-40	85	DFN(PL)2730-12	PWM Protection Circuit Type: Latch Diode Phase : Ext. Shutdown : FLAG pin Soft-Start : Ext.Adjustable UVLO Thermal	

Part No.	Auto-motive	Switching Current [A]	Ap-plication	Operating Voltage [V]		Output Voltage[V]		SW. Device	Oscillation Frequency Range [kHz]		Stand-by Function	Operating Temperature [°C]		Package Out-line	Notes
				min.	max.	min.	max.		min.	max.		min.	max.		
NJW4133	✓	5	Boost	3	40	3 (Adj)	38 (Adj)	Internal FET	100	2400	Yes	-40	125	HSOP8-M1	PWM, External Clock Synchronization Over Current Protection (Hiccup type) Thermal Soft-Start UVLO Diode
R1280	-	-	Boost/Inverting	2.5	5.5	Adj		Control-ler	C:200 (Fix) A/B:700 (Fix)		Yes	-40	85	SON-10	2CH for LCD/CCD/OLED PWM Protection Circuit Type: Latch Soft-Start : Ext.Adjustable UVLO Diode Phase : Ext. xxxA/C Phase : Int., xxxB, with stand-by
R1212	-	-	Boost	2.2	5.5	Adj		Control-ler	C:300(Fix) A:700(Fix) B:1400(Fix)		Yes	-40	85	SON-8	for LCD/CCD/OLED PWM Protection Circuit Type: Latch Soft-Start : Ext.Adjustable UVLO Diode Phase : Ext. Maxduty : Ext.Adjustable
R1282	-	-	Boost/Buck	2.5	5.5	Adj		Control-ler	700 (Fix)		Yes	-40	85	SON-10	2CH for LCD/CCD/OLED PWM Protection Circuit Type: Latch UVLO Diode Soft-Start : Ext.Adjustable Phase : Ext.
R1215	-	-	Boost	1.8	5.5	Adj		Control-ler	A/E:700(Fix) B/F:1400(Fix)		Yes	-40	85	SON-8	for LCD/CCD/OLED PWM Protection Circuit Type: Latch Soft-Start : Ext.Adjustable UVLO Diode Phase : Ext. Maxduty : Ext.Adjustable
R1211	♥	✓	-	Boost	2.5	6	Adj	Control-ler	A/B:700 (Fix) C/D:300 (Fix)		Yes	-40	85	SON-6 SOT-23-6W	PLP:SOT-23-6W for LCD/CCD/OLED PWM Protection Circuit Type: Latch Soft-Start UVLO Diode Phase : Ext. xxxA/C Phase : Int., xxxB/D, with stand-by
NJU7677	-	-	Boost	1.8	7	1.8 (Adj)	-	Control-ler	300	1000	-	-40	85	MSOP8 (TVSP8)	PWM Protection Circuit Type: Latch Soft-Start UVLO Maxduty Diode
NJU7680	-	-	Buck/Boost	2.3	7	1 (Adj)	-	Control-ler	300	1000	Yes	-40	85	PCSP24-ED, SSOP16	PWM Protection Circuit Type: Latch Soft-Start UVLO Maxduty Diode
RN5RK	-	-	Boost	0.75	8	2	5.5	Internal FET Control-ler	Max.100 Depends on conditions of Input/ Output Voltage and Output Current		Yes	-40	85	SOT-23-5	VFM Diode
R1210	-	-	Boost	0.9	8	2.2	6.5	Internal FET Control-ler	A/C:100 (Fix) D:180 (Fix)		Yes	-40	85	SOT-23-5	PWM xx1A: with frequency change-over circuit Diode Soft-Start
NJU7600	-	-	Boost/Fly-Back	2.2 to 8	8	2.2 (Adj)	-	Control-ler	300	1000	-	-40	85	DMP8, MSOP10(TVSP10) MSOP8(TVSP8)	PWM Protection Circuit Type: Latch Soft-Start UVLO Maxduty Diode
NJU7601	-	-	Boost/Fly-Back	2.2	8	2.2 (Adj)	-	Control-ler	300	1000	-	-40	85	DMP8, MSOP8(TVSP8)	PWM/PFM Protection Circuit Type: Latch Soft-Start UVLO Maxduty Diode
NJU7602	-	-	Boost/Fly-Back	2.2	8	2.2 (Adj)	-	Control-ler	300	1000	Yes	-40	85	DMP8, MSOP8(TVSP8)	PWM Protection Circuit Type: Latch Soft-Start UVLO Maxduty Diode

DC/DC Switching Regulators

Boost / Fly-Back



Part No.	Auto-motive	Switching Current [A]	Ap-plication	Operating Voltage [V]		Output Voltage[V]		SW. Device	Oscillation Frequency Range [kHz]		Stand-by Function	Operating Temperature [°C]		Package Out-line	Notes
				min.	max.	min.	max.		min.	max.		min.	max.		
NJU7606	-	-	Boost/Fly-Back	2.2	8	2.2 (Adj)	-	Control-ler	300	1000	Yes	-40	85	MSOP10 (TVSP10)	With load SW. function PWM Protection Circuit Type: Latch Soft-Start UVLO Maxduty Diode
NJU7610	-	-	Boost/Fly-Back	2.2	8	2.2 (Adj)	-	Control-ler	300	1000	-	-40	85	DMP8, MSOP8(TVSP8)	PWM Pulse-by-pulse current limit circuit Soft-Start UVLO Maxduty Diode
NJU7620	-	-	Boost/Fly-Back	2.2	8	2.2 (Adj)	-	Control-ler	300	1000	-	-40	85	MSOP8 (TVSP8)	Constant voltage/current control for output voltage PWM Soft-Start UVLO Maxduty Diode
NJM2377	✓	-	Boost/Fly-Back	2.7	18	2.7 (Adj)	-	Control-ler	10	500	Yes	-40	85	DIP8 DMP8 SSOP8 MSOP8(VSP8)	PWM Protection Circuit Type: Latch Soft-Start : Ext.Adjustable UVLO Maxduty Diode
NJM2368	✓	-	Boost/Fly-Back	3.6	32	3.6 (Adj)	-	Control-ler	5	350	-	-40	85	DIP8, DMP8 SOP8 JEDEC 150mil(EMP8), SSOP8	PWM, Tr. Drive Protection Circuit Type: Latch Soft-Start : Ext.Adjustable UVLO Maxduty Diode
NJM2369	✓	-	Boost/Fly-Back	3.6	32	3.6 (Adj)	-	Control-ler	5	350	-	-40	85	DIP8, DMP8, SOP8 JEDEC 150mil(EMP8), SSOP8	PWM, MOSFET Drive Protection Circuit Type: Latch Soft-Start : Ext.Adjustable UVLO Maxduty Diode
NJM2379	-	-	Boost/Fly-Back	3.6	32	3.6 (Adj)	-	Control-ler	5	350	-	-40	85	DIP8, DMP8 SOP8 JEDEC 150mil(EMP8), SSOP8	PWM, MOSFET Drive Only External Clock Synchronization Protection Circuit Type : Latch Soft-Start : Ext.Adjustable UVLO Maxduty Diode
U.D. NJW1871A	✓	-	Boost/Fly-Back	4.5	40	4.5 (Adj)	-	Control-ler	1000	2000	Yes	-40	125	MSOP10 (VSP10)	5.2V Gate Drive PWM, RUN function, External Clock Synchronization Over Current Protection (Hiccup type) Thermal Soft-Start UVLO OVP Diode
NJW4148	✓	-	Boost/Fly-Back	7	40	7 (Adj)	-	Control-ler	40	1000	Yes	-40	125	MSOP8(VSP8)	5.3V Gate Drive Load Switch PWM Soft-Start UVLO OVP Diode
NJW4140	✓	-	Boost/Fly-Back	3	40	3 (Adj)	-	Control-ler	40	1000	Yes	-40	85	DMP8, MSOP8(VSP8)	PLP:MSOP8(VSP8) PWM Pulse-by-pulse current limit circuit Soft-Start UVLO Diode
NJW1871	✓	-	Boost/Fly-Back	2.5	40	2.5 (Adj)	-	Control-ler	50	1000	Yes	-40	125	MSOP10 (VSP10)	5.2V Gate Drive PWM, RUN function, External Clock Synchronization Over Current Protection (Hiccup type) Thermal Soft-Start UVLO OVP Diode
NJW4141	✓	-	Boost	3	40	3 (Adj)	-	Control-ler	50	500	Yes	-40	125	SSOP20-C3	2 Phase PWM Pulse-by-pulse current limit circuit Soft-Start : Ext.Adjustable UVLO Maxduty Diode
NJW4142	✓	-	Boost/Fly-Back	2.5	40	2.5 (Adj)	-	Control-ler	50	1000	Yes	-40	125	MSOP10 (VSP10)	10V Gate Drive PWM, RUN function, External Clock Synchronization Over Current Protection (Hiccup type) Thermal Soft-Start UVLO OVP Diode

Inverting

Part No.	Auto-motive	Ap-plication	Operating Voltage [V]		Switching Current [A]	Output Voltage[V]		SW. Device	Oscillation Frequency Range [kHz]		Stand-by Function	Operating Temperature [°C]		Package Out-line	Notes
			min.	max.		min.	max.		min.	max.		min.	max.		
NJW4153	✓	Buck Converter/Inverting	4.6	40	1	0.8 (Adj)	34 (Adj)	Internal FET	1000 (Fix)	-	Yes	-40	85	SOT-89-5-2 DFN8-V1(ESON8-V1)	PLP:SOT-89-5-2 PWM Over Current Protection (Hiccup type) Thermal Soft-Start UVLO Phase Diode
NJM2374A	✓	Buck/Boost/Inverting	2.5	40	1.5	1.25 (Adj)	38 (Adj)	Internal Tr.	0.1	100	-	-40	85	DIP8, DMP8 SOP8 JEDEC 150mil(EMP8), SSOP14	PWM control version(NJM2360) Pulse-by-pulse current limit circuit Phase Diode
NJM2344	-	Buck/Boost/Inverting	3	40	1.5	1.25 (Adj)	38 (Adj)	Internal Tr.	1	150	Yes	-40	85	DIP8, DMP8	PWM, Standby function(NJM2392) Pulse-by-pulse current limit circuit Phase Diode
NJM2392	-	Buck/Boost/Inverting	3	40	1.5	1.25 (Adj)	38 (Adj)	Internal Tr.	1	150	-	-40	85	DIP8, DMP8	PWM control version(NJM2360) Pulse-by-pulse current limit circuit Phase Diode
NJW4155	-	Buck Converter/Inverting	4.5	40	1.8	0.8 (Adj)	36.8 (Adj)	Internal FET	450 (Fix, A ver.) 300 (Fix, B ver.)	-	Yes	-40	125	HSOP8-M1 TO-252-5-L3	PWM, External Clock Synchronization Over Current Protection (Hiccup type) Thermal Soft-Start UVLO Phase Diode
NJW4128	✓	Buck Converter/Inverting	4.5	40	2.5	0.8 (Adj)	35.2 (Adj)	Internal FET	450 (Fix, A ver.) 300 (Fix, B ver.)	-	Yes	-40	85	HSOP8-M1	PWM, External Clock Synchronization Over Current Protection (Hiccup type) Thermal Soft-Start UVLO Phase Diode
R1286	-	CH1: Boost/CH2: Inverting	2.3	5.5	CH1:1.0 or 1.1 CH2:1.5 or 1.8	CH1 : 4.6 (Fix/Adj) CH2 : -2.0 (Fix/Adj)	CH1 : 5.8 (Fix/Adj) CH2 : -6.0 (Fix/Adj)	Internal FET	1750(Fix)	-	Yes	-40	85	DFN(PL) 2730-12	2CH for LCD/CCD/OLED PWM Protection Circuit Type: Latch Synchro Soft-Start UVLO Sequencing Discharge Thermal S-Wire : xxxA/C to G, Inverting output can be dynamically changed by S-wire control.
R1287	✓	CH1: Boost/CH2: Inverting	2.5	5.5	CH1:1.1 CH2:1.5	CH1 : 4.5 (Fix/Adj) CH2 : -4.5 (Fix/Adj)	CH1 : 5.8 (Fix/Adj) CH2 : -6.0 (Adj)	Internal FET	B/F:900 (Fix) C/G:300(Fix) D/H:1000(Fix) CH2 B/F:1100(Fix) C/G:300(Fix) D/H:1000(Fix)	-	Yes	-40	85	WLCSOP-12-P1 DFN3030-12	PLP:DFN3030-12 2CH for LCD/CCD/OLED PWM,PWM/VFM Protection Circuit Type: Latch Synchro Soft-Start UVLO Sequencing Discharge Thermal
R1283	✓	CH1: Boost/CH2: Inverting	2.5	5.5	1.5	CH1: Up to 20(Adj) CH2: Up to VDD-20(Adj)	-	Internal FET	A:300(Fix) B:700(Fix) C:1400(Fix)	-	Yes	-40	85	DFN(PL) 2730-12	2CH for LCD/CCD/OLED PWM Protection Circuit Type: Latch Soft-Start UVLO Discharge Inverting output only Sequencing Diode
R1280	-	Boost/Inverting	2.5	5.5	-	Adj.	-	Control-ler	C:200(Fix) A/B:700(Fix)	-	Yes	-40	85	SON-10	2CH for LCD/CCD/OLED PWM Protection Circuit Type: Latch Soft-Start : Ext.Adjustable UVLO Diode Phase : Ext., xxxA/C Phase : Int., xxxB, with stand-by

DC/DC Switching Regulators

Buck-Boost

Part No.	Auto-motive	Application	Operating Voltage [V]		Switching Current [A]	Output Voltage [V]		SW. Device	Oscillation Frequency Range [kHz]	Stand-by Function	Operating Temperature [°C]		Package Outline	Notes							
			min.	max.		min.	max.				min.	max.									
RP604	-	Buck-Boost	1.8	5.5	0.3	1.6	5.2	Internal FET	Depends on conditions of Input/ Output Voltage and Output Current	Yes	-40	85	WLCSP-20-P2 DFN(PL)2730-12	VFM Ultra-Low Power Consumption: 0.3μA Synchro UVLO OVP Thermal Soft-Start Discharge: xx1B							
														212A/B	23	DFN(PL) 2730-12	4strings PWM UVLO Soft-Start Thermal LED Adjust				
														312A/B				33	43.5		
RP605	-	Buck-Boost	1.8	5.5	0.3	1.6	5.2	Internal FET	Depends on conditions of Input/ Output Voltage and Output Current	Yes	-40	85	WLCSP-20-P3 DFN(PL)2730-12	'VFM + BM : Battery Monitor Assist Function Ultra-Low Power Consumption: 0.3μA (+BM:0.1μA) Synchro UVLO OVP Soft-Start Thermal Discharge: xxxB							
														221A/C	35	WLCSP-9-P1	2strings PWM/VFM, PWM UVLO Soft-Start Thermal LED Adjust				
														211B							
RP602	-	Buck-Boost	2.3	5.5	1.5	2.7	4.2	Internal FET	2600(Fix)	Yes	-40	85	WLCSP-20-P1 DFN(PL)2730-12	PLP:WLCSP-20-P1 Forced PWM,PWM/VFM Protection Circuit Type: Latch or Hiccup Synchro OVP UVLO Soft-Start Thermal Discharge: A/C/E/G							
														4xxA/B	17	DFN1616-6B TSOT-23-6	PWM UVLO Soft-Start Thermal Shutdown Discharge: Ver.A				
														5xxA/B				19	21		
R1202	-	Boost	-40	85	2.3	5.5	350	700	Up to 22.2 (Adj)	Internal	Boost	Internal FET	1.0V ± 15	1200 (Fix)	14	DFN1616-6B TSOT-23-6	PWM UVLO Soft-Start Thermal Shutdown Discharge: Ver.A				
																		6xxA/B	17	19	21
																		7xxA/B	19	21	23
R1205	-	Boost	-40	85	2.3	5.5	350	700	Up to 24.2 (Adj)	Internal	Boost	Internal FET	1.0V ± 15	1200 (Fix)	25	DFN1616-6B	PLP:DFN1616-6B Succeeding Products : R1205N → R1207N PWM UVLO Soft-Start Thermal				
																		8x1A	17	19	21
R1207	-	Boost	-40	85	2.3	5.5	350	700	Up to 24.2 (Adj)	Internal	Boost	Internal FET	1.0V ± 15	1200 (Fix)	25	TSOT-23-6 *3	PWM UVLO Soft-Start Thermal				
																		8x3A	17	19	21
R1200	-	Boost	-40	85	2.3	5.5	700	Up to 20 (Adj)	Internal	Boost	Internal FET	1.0V ± 15	1200 (Fix)	17	DFN1616-6 SOT-23-6	PWM UVLO Soft-Start Shutdown Discharge: Ver.A					
																	001x	19	21		
																	002x	19	21		
R1204	-	Boost	-40	85	2.3	5.5	900	Up to 40.2 (Adj)	External	Boost	Internal FET	1.0V ± 15	B/C:1000 (Fix) E/F:750 (Fix)	23	DFN(PL)1820-6 TSOT-23-6	PWM, PWM/VFM UVLO Soft-Start Thermal					
																	21xB/C/E/F	33	42		
																	31xB/C/E/F	33	42		

Boost DC/DC Switching Regulators for White LEDs/PMOLEDs/General Use

For White LEDs

Part No.	Version	Auto-motive	Operating Temperature [°C]		Operating Voltage [V]		Lx Current Limit *2 [mA]	Output Voltage *1 [V]	Diode	Application	SW. Device	VFB Voltage Accuracy [mV]	Oscillation Frequency Range [kHz]	OVP Voltage [Typ./V]	Package Outline	Notes			
			min.	max.	min.	max.													
R1202	3xD	-	-40	85	1.8	5.5	350	700	Up to 22.2 (Adj)	Internal	Boost	Internal FET	0.2V ± 10	1200 (Fix)	14	DFN1616-6B TSOT-23-6	PWM UVLO Soft-Start Thermal Shutdown LED Adjust		
																		7xD	23
R1205	8x1B	-	-40	85	1.8	5.5	350	700	Up to 24.2 (Adj)	Internal	Boost	Internal FET	0.2V ± 10	1200 (Fix)	25	DFN1616-6B	PLP:DFN1616-6B Succeeding Products : R1205N → R1207N PWM UVLO Soft-Start Thermal		
																		8x1C	25
																		8x3B	25
R1207	8x3B	-	-40	85	1.8	5.5	350	700	Up to 24.2 (Adj)	Internal	Boost	Internal FET	0.2V ± 10	1200 (Fix)	25	TSOT-23-6 *3	PWM UVLO Soft-Start Thermal LED Adjust		
																		8x3C	25
R1218	021A	-	-40	85	1.8	5.5	700	Up to 17 (Adj)	Internal	Boost	Internal FET	0.2V ± 10	1200 (Fix)	9.5	SOT-23-6	PWM UVLO Soft-Start			
																	031A	14	
																	041A	18.5	
R1203	071B	-	-40	85	1.8	5.5	700	Up to 28.7 (Adj)	Internal	Boost	Internal FET	0.2V ± 10	1200 (Fix)	29.5	SOT-23-6 *3	PWM Succeeding Products : R1203N → R1206N UVLO Soft-Start LED Adjust			
																	29.5		
R1206	071B	-	-40	85	1.8	5.5	700	Up to 28.7 (Adj)	Internal	Boost	Internal FET	0.2V ± 10	1200 (Fix)	29.5	SOT-23-6 *3	PWM UVLO Soft-Start LED Adjust			
																	29.5		
R1218	052A	-	-40	85	1.8	5.5	700	Up to 30 (Adj)	External	Boost	Internal FET	0.2V ± 10	1200 (Fix)	23	SOT-23-6	PWM UVLO Soft-Start			
																	062A	27.5	
																	072A	31.5	
R1204	11xA/D	-	-40	85	2.3	5.5	900	Up to 40.2 (Adj)	Internal	Boost	Internal FET	0.2V ± 10	A:1000 (Fix) D:750 (Fix)	23	DFN(PL)1820-6 TSOT-23-6	PWM UVLO Soft-Start Thermal LED Adjust			
																	21xA/D	33	
																	31xA/D	42	
																	11xG/H	23	
																	21xG/H	33	
																	31xG/H	42	

*1 Output voltage is different by version. *2 Lx current limit is different from output current. *3 The pin-layout of R1205N and that of R1207N are different by 180 degrees. Also, the pin-layout of R1203N and that of R1206N are different by 180 degrees.



For 2 or 4 Strings of White LEDs

Part No.	Version	Auto-motive	Operating Temperature [°C]		Operating Voltage [V]		Lx Current Limit *2 [A]	Output Voltage *1 [V]	Diode	Application	SW. Device	Max LED Current [mA]	LED Current Accuracy [%]	Oscillation Frequency Range [kHz]	OVP Voltage [Typ./V]	Package Outline	Notes	
			min.	max.	min.	max.												
R1208	112A/B	-	-40	85	2.7	22	2	Up to 42 (Adj)	Internal	Internal FET	80 × 4	± 3	A:750(Fix) B:450(Fix)	23	DFN(PL) 2730-12	4strings PWM UVLO Soft-Start Thermal LED Adjust		
																	212A/B	33
																	312A/B	43.5
R1214	211A/C	-	-40	85	2.7	5.5	1.9	Up to 29 (Adj)	External	Boost	Internal FET	40 × 2	A/B: ± 2 C/D: ± 1.5	221A/C: 750(Fix) 211A/B/C/D: 450(Fix)	35	WLCSP-9-P1	2strings PWM/VFM, PWM UVLO Soft-Start Thermal LED Adjust	
																		221A/C
																		211B
																		211D

*1 Output voltage is different by version. *2 Lx current limit is different from output current.

For PMOLEDs and General Use

Part No.	Version	Auto-motive	Operating Temperature [°C]		Operating Voltage [V]		Lx Current Limit *2 [mA]	Output Voltage *1 [V]	Diode	Application	SW. Device	VFB Voltage Accuracy [mV]	Switching Frequency [kHz]	OVP Voltage [Typ./V]	Package Outline	Notes			
			min.	max.	min.	max.													
R1202	3xxA/B	-	-40	85	2.3	5.5	350	700	Up to 22.2 (Adj)	Internal	Boost	Internal FET	1.0V ± 15	1200 (Fix)	14	DFN1616-6B TSOT-23-6	PWM UVLO Soft-Start Thermal Shutdown Discharge: Ver.A		
																		4xxA/B	17
																		5xxA/B	19
																		6xxA/B	21
																		7xxA/B	23
R1205	8x1A	-	-40	85	2.3	5.5	350	700	Up to 24.2 (Adj)	Internal	Boost	Internal FET	1.0V ± 15	1200 (Fix)	25	DFN1616-6B	PLP:DFN1616-6B Succeeding Products : R1205N → R1207N PWM UVLO Soft-Start Thermal		
																		8x3A	25
R1207	8x3A	-	-40	85	2.3	5.5	350	700	Up to 24.2 (Adj)	Internal	Boost	Internal FET	1.0V ± 15	1200 (Fix)	25	TSOT-23-6 *3	PWM UVLO Soft-Start Thermal		
																		25	
R1200	001x	-	-40	85	2.3	5.5	700	Up to 20 (Adj)	Internal	Boost	Internal FET	1.0V ± 15	1200 (Fix)	17	DFN1616-6 SOT-23-6	PWM UVLO Soft-Start Shutdown Discharge: Ver.A			
																	002x	19	
																	003x	21	
R1204	11xB/C/E/F	-	-40	85	2.3	5.5	900	Up to 40.2 (Adj)	External	Boost	Internal FET	1.0V ± 15	B/C:1000 (Fix) E/F:750 (Fix)	23	DFN(PL)1820-6 TSOT-23-6	PWM, PWM/VFM UVLO Soft-Start Thermal			
																	21xB/C/E/F	33	
																	31xB/C/E/F	42	

*1 Output voltage is different by version. *2 Lx current limit is different from output current. *3 The pin-layout of R1205N and that of R1207N are different by 180 degrees.



DDR Termination Regulator

Part No.	Automotive	Key Features	Operating Voltage [V]		Package Outline	Notes
			min.	max.		
NJW4118T1	✓	± 2.0A DDR Termination Regulator	2.7	5.5	EQFN16-JE	VREF Voltage Accuracy : VDDQ x 0.49 to 0.51V VTT Voltage Accuracy : VREF ± 40mV

Battery Charger ICs

Part No.	Auto-motive	Key Features	Operating Voltage[V]		Quiescent Current [mA]	Package Outline	Notes
			min.	max.			
NJM2146B	-	Constant Voltage, Constant Current Control	2.5	18	1	DIP8, MSOP8(VSP8)	VREF=1.5V ± 1% VIO=2mV
NJM2336	-	Constant Voltage, Constant Current Control	2.2	13	0.2	SOT-23-6-1	VREF(A)=A version=75mV B version=109mV C version=151mV VREF(B)=1.24V ± 1%
NJM2337	-	Constant Voltage, Constant Current Control	2.2	13	0.2	SOT-23-6-1	VREF(A)=A version=75mV B version=109mV C version=151mV VREF(B)=1.24V ± 1%
NJM2346	-	Constant Voltage, Constant Current Control	2.2	13	0.25	DMP8, MSOP8(TVSP8)	VREF=1.24V ± 1% VIO=0.5mV
NJW4100	-	Lithium-ion Battery Charger Controller with Timer, 1cell/2cell Charge protective function	2.4	14	2	DMP20, SSOP20	
NJW4108	-	Lithium-ion Battery Charger Controller with Timer, Adjustable Charge Voltage, Adjustable Pre-Charge and Full Charge Current	-	14	2	SSOP20	
NJW4120	-	Lithium-ion Battery Charger Controller with Timer, 1cell/2cell Charge protective function, Charge Control Feedback by Photocoupler	2.7	14	2	DMP20, SSOP20	

Switching Drivers

Gate Drivers

Part No.	Auto-motive	Channels	Operating Voltage [V]		UVLO	Operating Temperature [°C]	Output Peak Current [A]	Output Rise Time [nsec] typ.	Output Fall Time [nsec] typ.	Key Features	Package Outline
			min.	max.							
NJW4840	✓	1	8	20	Yes	-40 to 105	± 4	27.5	27.5	Built-in Thermal Shut Down, Under Voltage Lockout, Short Circuit Protection (power/ground fault)	MSOP8(VSP8)
NJW4841	✓	1	4	20	Yes	-40 to 85	± 2	25	20	Built-in Thermal Shut Down, Under Voltage Lockout	MSOP8(VSP8)
NJW4860	-	2	4	20	Yes	-40 to 125	± 1	15	15	Built-in Thermal Shut Down, Under Voltage Lockout, LDO	HSOP8-M1 DFN8-V1(ESON8-V1)

Half / Full Bridge Drivers

Part No.	Auto-motive	Channels	Operating Voltage[V]		UVLO	Operating Temperature [°C]	Output Peak Current[A]	Output Rise Time [nsec] typ.	Output Fall Time [nsec] typ.	Fault	Key Features	Package Outline
			min.	max.								
NJU7386	✓	2(Half)	1.8	5.5	Yes	-40 to 125	1.5A (VDD=5V)	115	25	-	Low voltage operation and low ON resistance	MSOP8(TVSP8)
NJU7386A	✓	2(Half)	1.8	5.5	Yes	-40 to 125	1.7A (VDD=5V)	115	25	-	Low voltage operation and low ON resistance, 1.8V IF regardless of V _{DD}	DFN8-V1 (ESON8-V1)
NJW4801	-	1(Half)	8	35	Yes	-40 to 85	± 0.45	5	5	Yes	35V/450mA Half Bridge Driver(P/N ch.)	MSOP8(VSP8)
NJW4810A	-	2(Half)	8	40	Yes	-40 to 85	± 1	3	5	Yes	Dual Half Bridge Driver	HSOP8-M1
NJW4813	-	2(Half)	2.7 (V _{DD_SW}) 8 (V _{DD_HB})	5.5 (V _{DD_SW}) 35 (V _{DD_HB})	Yes	-40 to 85	+0.28 /-0.25	400	400	Yes	Dual Half Bridge Driver with Boost Converter	PCSP20-E3
NJW4814	-	4(Half)	2.7 (V _{DD_SW}) 7 (V _{DD_HB})	5.5 (V _{DD_SW}) 35 (V _{DD_HB})	Yes	-40 to 85	± 0.3	400	340	Yes	Dual H Bridge Driver with Boost Converter	EQFN24-LE
U.D. ND1130	-	4(Half)	2.7 (V _{DD_SW}) 7 (V _{DD_HB})	5.5 (V _{DD_SW}) 35 (V _{DD_HB})	Yes	-40 to 125	± 0.3	400	340	Yes	Dual H Bridge Driver with Boost Converter	WLCSP-30-ZA1

Switch ICs

High-side Switches/ Low-side Switches/ Load Switches

♥ : Products available in PRODUCT LONGEVITY PROGRAM
♥xxxx : Products available in PRODUCT LONGEVITY PROGRAM with time limit
U.D. : Under Development NEW : New product
Thermal : Thermal Shutdown Circuit
OVLO : Overvoltage Lockout Circuit
Reverse : Reverse Current Protection Circuit
Discharge : Auto-discharge Function
Soft-Start : Soft-start Circuit
PG : Power Good Function

Part No.	Auto-motive	Channels	Drain-Source Voltage [V]	UVLO	Operating Temperature Range [V]		Input Current [μA]	Drain Current[A]	On-Resistance [ohm]	Operating Temperature [°C]		Function	Package Outline
					min.	max.				min.	max.		
NJW4820	♥	-	40	-	2.64	5.5	80	0.5	270	-40	85	Low-side Switch (Nch.) Active Clamp Circuit Thermal	SOT-23-5
NJW4822	♥	-	40	-	2.64	5.5	160	0.2	1100	-40	125	Low-side Switch (Nch.) Active Clamp Circuit Thermal	DFN6-H1(ESON6-H1)
NJW4830	♥	✓	40	-	2.64	5.5	150	0.5	350	-40	85	High-side Switch (Pch.) Active Clamp Circuit Thermal	SOT-89-5-2
NJW4832	♥	-	40	-	2.64	5.5	150	0.2	750	-40	125	High-side Switch (Pch.) Active Clamp Circuit Thermal	DFN6-H1(ESON6-H1)
R5528	♥ 2031	-	36	Yes	2.3	36	-	3.0	54	-40	85	External Power SW. / Load SW. IC Debounce Time Delay Circuit Internal FET: Nch. Thermal Soft-Start OVLO Reverse : OFF PG	WLCSP-9-P1
R5560	♥ 2031	-	28	-	2.5	28	-	4.5	38	-40	85	OVP SW. IC Surge Clamp Circuit: 80 V Debounce Time Delay Circuit Internal FET: Nch. Thermal Soft-Start OVLO :Threshold PG	WLCSP-12-P2
R5542	♥ 2031	-	5.5	Yes	2.3	5.5	-	6.0	9	-40	85	Load SW. IC / Battery Line SW. IC Built-in Voltage Detector (CMOS Output) Detector Threshold: 2.0 V to 5.0 V Detector Threshold Accuracy: ± 2.0% Internal FET: Nch. Soft-Start Reverse : OFF	WLCSP-12-P3
R5527	♥	-	5.5	-	1.8	5.5	-	3.0	45	-40	85	Load SW. IC / Battery Line SW. IC Internal FET: Nch. Reverse : ON/OFF=001x, OFF=002x Soft-Start Discharge : xxxC/D	DFN(PL)1612-4D
R5524	♥	✓	5.5	Yes	2.7	5.5	-	0.55	100	-40	85	PLP: SOT-23-5 Industrial (-40°C to 105°C) USB SW. IC / Load SW. IC FLG Internal FET: Nch. Thermal Soft-Start Reverse : OFF Discharge : xxxA	DFN(PL)1820-6 SOT-23-5
R5520	-	1	5.5	Yes	4	5.5	-	0.5	100	-40	85	USB SW. IC FLG Internal FET: Pch. Thermal Soft-Start	SOT-89-5
R5523	♥	✓	5.5	Yes	2.2	5.5	-	0.5	130	-40	85	USB SW. IC FLG Internal FET: Pch. Thermal Soft-Start	SOT-23-5
R5533	-	1	5.5	-	3	5.5	-	-	-	-40	85	PC Card Power SW. IC Internal FET: Nch.	SSOP-16
R5550	-	1	5.25	Yes	2.3	5.25	-	1.0	180	-40	85	Intelligent Power SW. IC Internal FET: Pch.	DFN(PL)1010-4F
R5590	-	1	5.25	-	0.9	5.25	-	-	400 or 500	-40	85	Rectifier SW. IC Internal FET: Nch.	SON1612-6 SOT-23-5
R5541	♥	-	4.8	Yes	2.5	5.5	-	3.0	18	-40	85	Load SW. IC Internal FET: Nch. Thermal Reverse : OFF Discharge : xxxD Soft-Start : Ext.Adjustable	DFN(PL)1216-6G

Switch ICs

High-side Switches/ Low-side Switches/ Load Switches

Part No.	Auto-motive	Channels	Drain-Source Voltage [V]	UVLO	Operating Temperature Range [V]		Input Current [μA]	Drain Current [A]	On-Resistance [ohm]	Operating Temperature [°C]		Function	Package Outline
					min.	max.				min.	max.		
R5543	♥	1	4.8	Yes	2.5	5.5	—	3.0	18	-40	105	Load SW. IC Operating Temp.,Tj: -40 to +105°C Internal FET: Nch. Thermal Reverse : OFF Discharge : xxxD Soft-Start : Ext.Adjustable	DFN(PL)1216-6G
R5540	♥	1	3.6	—	0.75	3.6	—	0.45	120	-40	85	Load SW. IC Internal FET: Nch. Discharge : xxxC/D Soft-Start Reverse : OFF	DFN(PL)1010-4F
R5538	—	1	3.6	—	1.35	3.6	—	—	40	-40	85	Express Card Power SW. IC Internal FET: Nch.	QFN0404-20
U.D. ND1160	—	1	60	Yes	—	—	—	0.2	—	-40	125	IO-Link Device Transceiver (COM3 compatible)	DFN3030-8-GG (ESON8-WA), WLCSP-12

Charge Pumps

Part No.	Auto-motive	Output Function	Operating Voltage[V]		Output Resistance [ohm]	Oscillation Frequency [kHz]	Quiescent Current [mA]	Package Outline	Notes
			min.	max.					
NJU7660A	♥	For Negative voltage converter For Twofold voltage converter	1.5(Negative) 3(Twofold)	10	100	5	0.13	DMP8, SSOP8	
NJU7665A	—	Inverting type	1.5	5.5	1000	7.5	0.1	SOT-23-5	
NJU7665B	—	Inverting type	1.5	5.5	100	75	0.65	SOT-23-5	
NJU7665C	—	Inverting type	1.5	5.5	75	150	1.4	SOT-23-5	
NJU7670	—	Duble Inverting Triple Inverting	1.5	10	14	2.5	0.12	DMP14, SSOP14	
NJW4190	✓	Doubler type	5	17	42	300	1.25	MSOP8(VSP8), DMP8	Maximum Output Voltage: 34V ON/OFF Function
NJW4191	—	Inverting type	4.7	17	34	300	1.22	MSOP8(VSP8), DMP8	Maximum Output Voltage: -17V ON/OFF Function

Spread Spectrum Modulation(SSFM) Oscillator ICs

Part No.	Auto-motive	Operating Voltage[V]		Frequency Spreading [%]	Clock Generation Method	Clock Frequency[kHz]		SSFM Modulation Frequency	Frequency Spreading [%]	Operating Temperature [°C]		Stand-by Function	Package Outline	Notes
		min.	max.			max.	min.			max.	min.			
NJW4201	—	2.7	5.5	± 5	External resistor sets the oscillating frequency	280	2400	A1 ver./ fOSC/512, fOSC/128 A2 ver./ fOSC/2048, fOSC/512	± 5	-40	125	Yes	DFN8-U1(ESON8-U1) SOT-23-6-1	Anti-phase operation for each output
NJW4203	—	2.7	5.5	± 4.4	External clock synchronization	120	2400	fCLK/2048, fCLK/512, fCLK/128	± 4.4	-40	125	Yes	MSOP8(VSP8)	Anti-phase operation for each output

PMICs (Power Management ICs)

Part No.	Auto-motive	Package Outline	Operating Temperature[°C]		Interface	Main Function									
			min.	max.		Buck DC/DC	LDO	VD	Charge	Battery-Gauge (Fuel-Gauge)	WDT	ADC	RTC	GPIO	
RN5T566A	♥	QFN0606-36	-40	85	PIN	2	5	2	—	—	—	—	—	—	—
RN5T567	♥	QFN0606-48-P14	-40	85	I ² C	4 DVS ¹	7	4	—	—	1	—	—	—	4
RN5T568	♥	QFN0707-48-P25	-40	85	I ² C	4 DVS ¹	7	4	—	—	1	—	—	—	4
RN5T569	✓	QFN0707-48-P27	-40	105	I ² C	4 DVS ¹	7	4	—	—	1	—	—	—	4
RN5T5610 ²	♥	QFN0707-48-P25	-40	105	I ² C	4 DVS ¹	7	4	—	—	1	—	—	—	4
NEW RN5T5611	✓	QFN0505-32-P7	-40	125	I ² C	2	1	4 Window VD	—	—	—	—	—	—	—
RN5T5612	♥	QFN0707-48-P25	-40	85	I ² C	4 DVS ¹	7	4	—	—	1	—	—	—	4
RN5T614	—	QFN0606-48-P14	-40	85	I ² C	3 DVS ¹	8	2	Wall USB	—	—	—	—	—	—
RN5T618	♥	QFN0606-48-P22	-40	85	I ² C	3 DVS ¹	7	4	Wall USB	1	1	1	—	—	4
RC5T619	—	CSP0606-85	-40	85	I ² C	5 DVS ¹	12	4	Wall USB	1	1	1	1	—	5
RC5T619x	—	CSP0608-80	-40	85	I ² C	5 DVS ¹	12	4	Wall USB	1	1	1	1	—	5

¹ DVS (Dynamic Voltage Scaling) allows the output voltages to be programmed through I²C.
² Industrial (-40°C to 105°C)

PMICs (Power Management ICs)

Part No.	Auto-motive	Number of Outputs	Configuration	Operating Voltage [V]		Output Current [A]	Oscillation Frequency [kHz] min./max.	Package Outline	Notes
				min.	max.				
NJW4750T1	♥	4	HV Buck LV Buck LV LDO	3.9 2.4 2.4 2.4	40 5.5 5.5 5.5	1.2 0.6 0.6 0.3	280 to 2400 280 to 2400 -	EQFN26-HH	Ch3: Selectable Reg
U.D. NJW4760	—	12	HV LDO HV LDO LV Buck LV Buck LV Buck LV LDO LV LDO LV LDO LV LDO LV LDO	4.5 4.5 2.4 2.4 2.4 2.4 2.4 2.4 2.4 2.4	40 40 5.5 5.5 5.5 5.5 5.5 5.5 5.5 5.5	0.05 0.05 3.0 3.0 3.0 2.0 0.1 0.1 0.1 0.1	400 to 2000	EQFN48-SN	OTP I ² C Sequence Interface SSFM Digital Watchdog Timer
U.D. NP8700	✓	4	HV Buck LV Buck/LV LDO LV LDO	3.9 2.4 2.4 2.4	20 5.5 5.5 5.5	1.2 1.0 1.0/0.3 0.3	2000 2000 2000/- -	QFN3426-26-NC	SSFM Sequence Interface Ch3: Selectable Reg

Li-ion Battery Protection ICs

1-Cells Li-ion Battery Protection ICs

Part No.	Sensing Type	Quiescent Current typ. [μA]	Standby Current Max. [μA]	Detection Threshold Range [V]					Release Method	OV Charge [V]	Package Outline	Notes
				Over Voltage (OVP)	Under Voltage (UVP)	Discharge Over Current (DOC)	Charge Over Current (COC)	Short-Circuit (SCP)				
NEW NB7140	RSENS	1.5	UVP Latch type: 0.04 UVP Auto Release type: 0.20	4.2 to 4.7, ± 15	2.1 to 3.2, ± 35	VD3-1: 0.005 to 0.050, ± 1.0 or ± 1.5 VD3-2: 0.011 to 0.100, ± 2.0 or ± 4.0%	-0.005 to -0.050, ± 1.0 or ± 1.5	0.030 to 0.200 ± 4.0 or ± 5.0	Latch or Auto Release	Acceptable or Inhibition 1.0 to 2.5 ± 4.0%	WLCSP-8-P10	Forced Standby Function Two Phase Discharge Over Current Detection High Accuracy Detection Forced Rest Function
NEW NB7141	RSENS	2.0	UVP Latch type: 0.04 UVP Auto Release type: 0.20	4.2 to 4.7, ± 15	2.1 to 3.2, ± 35	VD3-1: 0.005 to 0.050, ± 1.0 or ± 1.5 VD3-2: 0.011 to 0.100, ± 2.0 or ± 4.0%	-0.005 to -0.050, ± 1.0 or ± 1.5	0.030 to 0.200 ± 4.0 or ± 5.0	Latch or Auto Release	Acceptable or Inhibition 1.0 to 2.5 ± 4.0%	WLCSP-8-P10	Forced Standby Function Two Phase Discharge Over Current Detection High Accuracy Detection WDT Function
R5445	RSENS	5.0	0.04	4.2 to 4.6, ± 10	2.0 to 3.4, ± 35	0.015 to 0.150, ± 3, ± 10% or ± 5	-0.150 to -0.015, ± 4, ± 20% or ± 8	0.040 to 0.200	Latch	Inhibition 1.25 to 2.0, ± 0.05	WLCSP-8-P4	Shipping Mode Function RSENS in High-side Over Temp. Protection (External NTC, Over Temp. Protection for Charge/Discharge)
R5449	RSENS	5.0	0.04	4.2 to 4.6, ± 10	2.0 to 3.4, ± 35	0.012 to 0.150, ± 2, ± 5% or ± 3	-0.150 to -0.012, ± 2, ± 5% or ± 3	0.032 to 0.200	Latch	Inhibition 1.25 to 2.0 ± 0.05	WLCSP-8-P8	Shipping Mode Function RSENS in High-side Over Temp. Protection (External NTC, Over Temp. Protection for Charge/Discharge)
R5480	RSENS	4.0	0.1	4.1 to 4.5, ± 20 or ± 25	2.1 to 3.0, ± 35	0.020 to 0.050, ± 15% or ± 4.5	-0.057 to -0.020, ± 15%	0.140, 0.180, 0.250 or 0.500	Latch	Inhibition 0.7 ± 0.3	DFN(PL)1414-6	
R5486	RSENS	4.0	0.1	4.1 to 4.6, ± 20 or ± 25	2.1 to 3.0, ± 35	VD3-1: 0.015 to 0.046, ± 8% or ± 3.1 VD3-2: 0.025 to 0.080, ± 8% or ± 3.1	-0.060 to -0.015, ± 15% or ± 3	0.150 to 0.300	Latch	Inhibition 0.7, 1.5 ± 0.3	DFN(PL)1414-6	Two Phase Discharge Over Current Detection
R5494	RSENS	3.0	0.5	4.1 to 4.5, ± 20	2.1 to 3.0, ± 35	0.030 to 0.048, ± 15%	-0.035 to -0.020, ± 15%	VDET3=0.030V to 0.047V : VDET3 × 3 VDET3=0.048V : VDET3 × 3 -1mV	Auto Release	Acceptable or Inhibition 0.7 ± 0.3	DFN1814-6C	
R5610	RSENS	3.0	0.5	4.2 to 4.7, ± 20	2.1 to 3.0, ± 55	0.015 to 0.043, ± 3	-0.043 to -0.017, ± 3	0.050 to 0.200	Auto Release	Acceptable	DFN1816-6	Two Phase Discharge Over Current Detection Low Resistance RSENS High Accuracy Detection
R5611	RSENS	3.0	0.5	4.2 to 4.7, ± 20	2.1 to 3.0, ± 55	0.015 to 0.043, ± 3	-0.043 to -0.017, ± 3	0.050 to 0.200	Auto Release	Acceptable	DFN1616-8	Two Phase Discharge Over Current Detection Low Resistance RSENS High Accuracy Detection Built-in REST Function
R5612	RSENS	2.0 or 2.5	0.2 or 0.04	4.2 to 4.7, ± 20	2.1 to 3.2, ± 35	VD3-1: 0.007 to 0.030, ± 1 VD3-2: 0.011 to 0.060, ± 2	-0.030 to -0.007, ± 1	0.030 to 0.200	Latch or Auto Release	Acceptable or Inhibition 1.0, 1.2 ± 0.25	DFN1814-6C	Two Phase Discharge Over Current Detection Low Resistance RSENS High Accuracy Detection
R5613	RSENS	2.0 or 2.5	0.2 or 0.04	4.2 to 4.7, ± 20	2.1 to 3.2, ± 35	VD3-1: 0.007 to 0.030, ± 1 VD3-2: 0.011 to 0.060, ± 2	-0.030 to -0.007, ± 1	0.030 to 0.200	Latch or Auto Release	Acceptable or Inhibition 1.0, 1.2, 1.5 ± 0.25 2.2 +0.3/-0.2 2.35 +0.2/-0.3	DFN1616-8B	Two Phase Discharge Over Current Detection Low Resistance RSENS High Accuracy Detection Rest/Forced Standby Function
R5617	RSENS	2.0	UVP Latch type: 0.04 UVP Auto Release type: 0.20	4.2 to 4.7, ± 10	2.0 to 3.2, ± 35	VD3-1: 0.003 to 0.030, ± 0.75 VD3-2: 0.010 to 0.100, ± 2	-0.030 to -0.003, ± 0.75	0.020 to 0.150 ± 4.0	Latch or Auto Release	Acceptable or Inhibition 1.0 to 2.2 ± 0.1	WLCSP-6-P13 DFN1814-6B	Two Phase Discharge Over Current Detection Low Resistance RSENS High Accuracy Detection

Li-ion Battery Protection ICs

1-Cells Li-ion Battery Protection ICs

Part No.	Sensing Type	Quiescent Current typ. [μA]	Standby Current Max. [μA]	Detection Threshold Range [V] Detection Voltage Accuracy [mV]					Release Method	OV Charge [V]	Package Outline	Notes
				Over Voltage (OVP)	Under Voltage (UVP)	Discharge Over Current (DOCP)	Charge Over Current (COCP)	Short-Circuit (SCP)				
NEW R5619	RSENS	2.0	UVP Latch type: 0.04 UVP Auto Release type: 0.2	4.2 to 4.7, ± 10	2.0 to 3.2, ± 35	VD3-1: 0.0030 to 0.0300, ± 1 VD3-2: 0.010 to 0.100, ± 2	-0.0300 to -0.0030, ± 1	0.020 to 0.150, ± 4	Latch or Auto Release	Acceptable or Inhibition 1.000V to 2.200V	DFN1814-6B	
NEW R5660	RSENS	2.5	0.04	4.2 to 4.6, ± 10	2.0 to 3.4, ± 2%	0.015 to 0.150, ± 3, ± 10% or ± 5	-0.075 to -0.015, ± 4	0.040 to 0.300, ± 5	Latch	Acceptable	WL CSP-6-P7	
U.D. R5668	RSENS	3.0	0.04	4.2 to 4.6, ± 1	2.0 to 3.4, ± 3	0.010 to 0.080, ± 2, ± 5% or ± 3	-0.080 to -0.010, ± 2, ± 5% or ± 3	0.025 to 0.12	Latch	Acceptable or Inhibition 1.0V to 2.0V, ± 0.05mV	WL CSP-8-P14	
U.D. NB7142 NB7143	FET	1.5	UVP Latch type: 0.04 UVP Auto Release type: 0.5	4.2 to 4.8, ± 20	2.0 to 3.0, ± 50	0.015 to 0.150, ± 3, ± 5% or ± 5	-0.020 to -0.150, ± 3, ± 5% or ± 5	0.060 to 0.400 ± 5%	Latch or Auto Release	Acceptable or Inhibition 1.2 ± 0.3	NB7142: DFN1212-6-GK NB7143: DFN1814-6-GN	Ultra Low Consumption Current High Accuracy Detection
R5442	FET	3.0	0.1	4.1 to 4.6, ± 20	2.1 to 3.0, ± 1.5%	0.020 to 0.160, ± 5 or ± 10	-0.120 to -0.020, ± 5 or ± 10	0.120 to 0.500	Auto Release	Acceptable or Inhibition 0.7 ± 0.3	DFN1814-6B SOT-23-6	
R5487 R5497	FET	3.0	0.1 or 0.5	4.2 to 4.6, ± 20	2.0 to 3.0, ± 35	0.025 to 0.150, ± 10, ± 10% or ± 5	-0.150 to -0.020, ± 10% or ± 5	0.150 to 0.400	Latch or Auto Release	Acceptable or Inhibition 1.2 ± 0.4	R5487L: DFN1814-6B DFN1414-6B R5497L: DFN1414-6B	
R5492	FET	4.0	0.5	4.0 to 4.5, ± 20	2.0 to 3.0, ± 2.5%	0.050 to 0.200, ± 15	-0.200 to -0.050, ± 15	0.800	Auto Release	Acceptable	SOT-23-6	

2-Cells Li-ion Battery Protection ICs

Part No.	Sensing Type	Quiescent Current typ. [μA]	Standby Current Max. [μA]	Detection Threshold Range [V] Detection Voltage Accuracy [mV]					Release Method	OV Charge [V]	Package Outline	Notes
				Over Voltage (OVP)	Under Voltage (UVP)	Discharge Over Current (DOCP)	Charge Over Current (COCP)	Short-Circuit (SCP)				
NEW NB7200	RS-ENS	3.0	UVP Latch Type: 0.04 UVP Auto Release type: 0.30	4.2 to 4.8, ± 15	2.0 to 3.2, ± 35	VD3-1: 0.003 to 0.030, ± 1.0 VD3-2: 0.010 to 0.040, ± 2 0.040 to 0.050, ± 5% 0.050 to 0.090, ± 2.5	-0.003 to -0.030, ± 1.0	0.020 to 0.100 ± 4.0	Auto Release/Latch	Acceptable or Inhibition	DFN1616-8-GM	
R5460	FET	4.0	0.1 or 2.0 or 4.0	4.1 to 4.5, or 3.5 to 4.0, ± 25	2.0 to 3.0 or 3.2 ± 2.5%	0.05 to 0.20, ± 15	-0.1, -0.2, -0.4 ± 30, ± 30, ± 40	1.1 ± 0.4 or 0.3 to 0.5	Auto Release/Latch or Auto Release	Acceptable or Inhibition	DFN(PL)1820-6 SOT-23-6	
R5461	FET	4.0 or 5.0	0.1	3.6 to 4.35, +10 -15	2.0 to 3.0, ± 2.5%	0.05 to 0.24, ± 15	-0.22 to -0.1, ± 30	1	Auto Release/Latch	Acceptable or Inhibition	DFN(PL)2527-10	Built-in Alarm Notification Function
R5462	FET	4.0	0.1 or 2.0	3.65 to 4.32, ± 10	2.0 to 3.2, ± 1%	0.05 to 0.20, ± 10	-0.2 to -0.1, ± 20	1	Auto Release/Latch or Auto Release	Acceptable or Inhibition	DFN(PL)1820-6B	High Accuracy Detection
R5463	FET	4.0	0.1	3.65 to 4.32, ± 20	2.0 to 3.2, ± 1%	0.05 to 0.20, ± 10 0.20 to 0.40, ± 10%	-0.2 to -0.1, ± 20	1	Auto Release/Latch	Acceptable or Inhibition	DFN(PL)1820-6B	
R5464	FET	5.0 or 6.0	0.1	3.6 to 4.5, +10 -15	2.0 to 3.0, ± 2.5%	0.05 to 0.24, ± 15	-0.22 to -0.1, ± 20	1	Auto Release/Latch	Acceptable or Inhibition	DFN(PL)2527-10	Built-in Alarm Notification Function
R5466	FET	5.0	0.1	3.6 to 4.3, +20 -25	2.0 to 3.0, ± 2.5%	0.05 to 0.24, ± 15	-0.22 to -0.1, ± 20	1	Auto Release/Latch	Acceptable	DFN(PL)2527-10	Built-in Alarm Notification Function

Multi-Cell Li-ion Battery Protection ICs

Part No.	Sensing Type	Quiescent Current typ. [μA]	Standby Current Max. [μA]	Detection Threshold Range [V] Detection Voltage Accuracy [mV]					Release Method	OV Charge [V]	Package Outline	Notes
				Over Voltage (OVP)	Under Voltage (UVP)	Discharge Over Current (DOCP)	Charge Over Current (COCP)	Short-Circuit (SCP)				
R5432	3 to 5	12.0	—	3.6 to 4.5, ± 25	2.0 to 3.0, ± 2.5%	VD3-1 0.1 to 0.3, ± 20 VD3-2 BA: 0.45 or 0.60, ± 100 BB/BC: 0.25 to 0.40, ± 70 BD: 0.25 or 0.30, ± 55 (VD3-2 ≥ VD3-1 + 0.1V)	-0.05, -0.1, -0.2, -0.4 ± 30, ± 30, ± 30, ± 40	BA: 1.0 BB/BC: 0.75 BD: VD3-2 × 1.67	Auto Release	Acceptable or Inhibition	SSOP-24	Built-in Cascadable, Cell Balance Function, and Open Wire Detection
R5433	3 to 5	6.0	—	3.6 to 4.5, ± 25	2.0 to 3.0, ± 2.5%	—	—	—	Auto Release	Acceptable	SSOP-16	Over Charge/Discharge Control by Output Signal from COUT/DOUT Pin to MCU Built-in Open Wire Detection



Part No.	Sensing Type	Quiescent Current typ. [μA]	Standby Current Max. [μA]	Detection Threshold Range [V] Detection Voltage Accuracy [mV]					Release Method	OV Charge [V]	Package Outline	Notes
				Over Voltage (OVP)	Under Voltage (UVP)	Discharge Over Current (DOCP)	Charge Over Current (COCP)	Short-Circuit (SCP)				
R5436	3 to 5	12.0	6.0	3.6 to 4.5, ± 25	2.0 to 3.2, ± 2.5%	VD3-1: 0.05 to 0.25, ± 20 VD3-2: 3 × VD3-1, ± 50	-0.05, -0.1, -0.2 ± 30, ± 30, ± 30	0.25 to 1.0	Auto Release/Latch or Auto Release	Acceptable	TSSOP-28	Built-in Cascadable, Cell Balance Function, Open Wire Detection, and Over Temp. Protection (External NTC, Over Charge/Discharge Temp. Detection)
R5650	3 to 5	12.0	5.0	3.6 to 4.5, ± 25	2.0 to 3.2, ± 50	VD3-1: 0.03 to 0.05, ± 5, 0.05 to 0.1, ± 10% VD3-2: 2, 2.5 or 3 × VD3-1, 0.06 to 0.10, ± 12.5, 0.10 to 0.30, ± 12.5%	-0.015 to -0.025, ± 5, -0.030 to -0.050, ± 20%, or disable	0.1 to 0.6	Auto Release	Acceptable or Inhibition	TSSOP-20	Built-in Temp. Protection (External NTC, Over Temp. Protection for Charge/Discharge)
R5651	3 to 5	13.0	6.0	3.6 to 4.5, ± 25	2.0 to 3.2, ± 50	VD3-1: 0.01 to 0.03, ± 3, 0.35 to 0.15, ± 10% VD3-2: 0.03 to 0.08, ± 8, 0.09 to 0.45, ± 10%	-0.008 to -0.03, ± 3, -0.035 to -0.090, ± 10%	0.1 to 0.7	Auto Release	Inhibition	TSSOP-24	Built-in Open Wire Detection and Temp. Protection (External NTC, Over Temp. Detection for Charge/Discharge, Under Temp. Detection for Charging)

Li-ion Battery Second Protection ICs

Part No.	Number of Cells	Quiescent Current typ. [μA]	Standby Current max. [μA]	Detection Threshold Range[V] Detection Voltage Accuracy [mV]	COUT Output "H" Voltage [V]	Shutdown Detection Voltage [V]	Package Outline	Notes
R5434	2 to 5	3.0	-	3.6 to 4.6, ± 25	3.7	—	SON-8	
R5435	2 to 3	3.0	0.1	4.10 to 4.55, ± 20	4.7	3.5	DFN(PL)1616-6B TSOT-23-6	
R5437	1 to 3	0.85	0.1	4.10 to 4.7, ± 20	4.7	3.5	DFN1814-6C	
R5438	1 to 3	0.85	0.1	4.10 to 4.7, ± 20	4.7	3.5	DFN1814-6C	
R5439	2 to 4	4.0: VCELLn=4.15V (n=1, 2, 3, 4) 2.5: VCELLn=3.1V (n=1, 2, 3, 4)	0.2	4.20 to 4.65, ± 20	4.7	Shutdown1 detector threshold: 3.8 Shutdown2 detector threshold: 2.3 to 2.8	DFN(PL)2020-8	Built-in Regulator: 2.9V to 3.7V
R5458	1	1.5	0.5	4.00 to 4.70, ± 20	VDD	—	DFN1814-6C	
R5459	1	1.8	0.5	4.00 to 4.70, ± 20	VDD	—	DFN1814-6C	
R5641	2 to 4	2.8	0.2	4.10 to 4.60, ± 16	4.7	2.5 or 3.7	DFN2020-8C	Over Temp. Protection (External PTC)
R5640	2 to 5	2.5	0.2	2.90 to 4.60, ± 16	4.7	2.1, 2.5 or 3.7	MSOP-8	Built-in Cascadable
R5642	1 to 3	0.85	0.1	4.10 to 4.65, ± 15	4.7	3.5	DFN2020-6	

Battery Management AFEs

Part No.	Number of Cells	Supply Current typ. [μA]	Standby Current Max. [μA]	Voltage Monitor Accuracy [mV]	Current Monitor Accuracy	External Reference Voltage [V]	LDO Output Voltage [V]	LDO Output Current [mA]	Communication I/F	ADC	Package Outline	Notes
R5601	3 to 5	36.0	2	± 9	Gain Accuracy H AA: 40 ± 2.0% AC: 10 ± 1.0% Gain Accuracy L AA: 10 ± 1.0% AC: 5 ± 0.8%	3.0000 ± 0.0035	3.3 ± 1.5%	30	I ² C	—	TSSOP-16 QFN0303-20-P28	Wake-up Function Short-Circuit Current Detection Built-in Switch for Cell Balance
R5602	4 to 7	150.0	1	± 30	*RSNS=5m Ω Gain=20: ± 1.0A Gain=10: ± 1.4A Gain=2.5: ± 2.4A	—	3.4 ± 5%	10	I ² C/SPI with/without CRC8	12bit	QFN0505-32C	Monitoring Speed : Less than 1ms / 1monitor Die Temp./External 2NTC Monitoring Over Current Detection : Over Charge/Over Discharge/Short-Circuit High Side FET Control Built-in Open-Wire Detection Switch and Cell Balance Switch Sequence Free for Cell Connection



Thermal : Thermal Shutdown Circuit UVLO : Overvoltage Lockout Circuit OVP : Overvoltage Protection Circuit

White LED Drivers

Part No.	Auto-motive	Key Features	Operating Voltage [V]		LED Serial Connect	Number of channel [ch.]	LED Current [mA/ch.]	LED Pin Voltage [V]	Brightness control	Package Outline	Notes
			min.	max.				max.			
NJU6080	-	Linear Type Constant Current	2.5	5.5	1Series	1	100	5.5	PWM	SOT-23-6-1	
NJW4615A	♥	Linear Type Constant Current	2.5	35	10Series	1	100	35	PWM	SOT-23-6-1	
NJW4616	♥	Linear Type Constant Current	2.5	40	10Series	1	300	40	PWM	SOT-89-5-2	
NJW4617	♥	Linear Type Constant Current	2.5	40	10Series	1	500	40	PWM	TO-252-5-L3	

RGB LED Drivers

Part No.	Auto-motive	Operating Voltage [V]		Number of channel [ch.]	LED Current [mA/ch.]	Brightness control	PWM steps [steps/ch.]	Package Outline	Notes
		min.	max.						
NJU6061	-	1.7	5.5	3	30	PWM	128	SSOP14	
NJU6062	-	1.8	5.5	4	30	PWM	256	SSOP14	
NJU6063	-	1.8	5.5	3	30	PWM	128	SSOP14	

IO Port Expansion ICs(LED)

Part No.	Auto-motive	Operating Voltage [V]		Output Current [mA]	Output Port	Interface	Cascade	Package Outline	Notes
		min.	max.						
NJU3711A	-	2.4	5.5	25	8	Serial	-	SSOP14	
NJU3712A	-	2.4	5.5	25	8	Serial	Yes	SSOP16	
NJU3719A	-	2.4	5.5	25	24	Serial	-	SSOP32	
NJW4828-B	-	3	5.5	300	8	Parallel	-	HTSSOP24-P1	
NJW4829	-	3	5.5	300	8	Serial	Yes	HTSSOP24-P1	

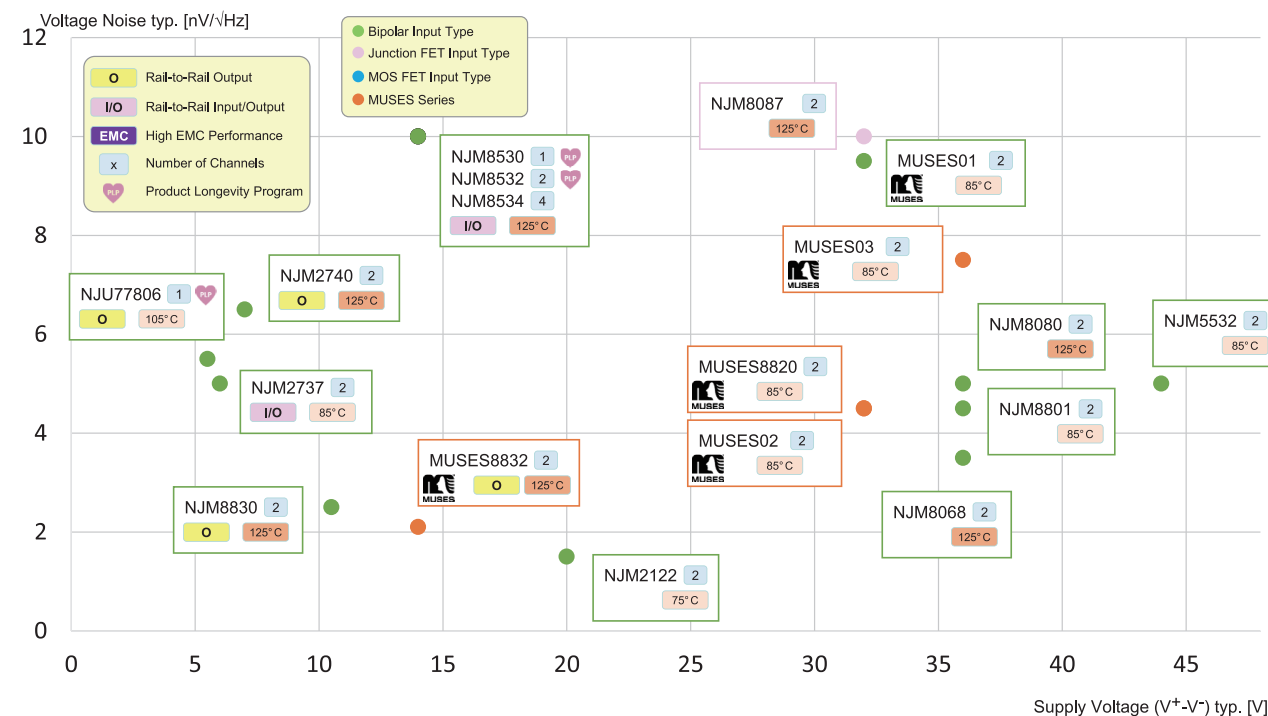
Constant Current LED Driver Controller

Part No.	Auto-motive	Operating Temperature Range [V]		Absolute Max. Ratings [V]	Max. SOURCE Pin Voltage Accuracy [mV]	Signal Input Circuit	Dimming Control [%]	Standby Current [μA]	Quiescent Current [μA]	Package Outline	Notes				
		min.	max.												
R1580	♥	3.6	34	36	400 ± 8	Comparator Input, H=1.3 V, L=1.1 V	1 to 100	140	320	SOT-23-6	Industrial Thermal UVLO OVP				
												800 ± 16	Comparator Input, H=1.3 V, L=1.1 V	0.5 to 100	140
												400 ± 8	Inverter Input, H=1.2 V, L=0.4 V	1 to 100	28

U.D. : Under Development NEW : New product ♥ : Products available in PRODUCT LONGEVITY PROGRAM xxx : Products available in PRODUCT LONGEVITY PROGRAM with time limit

Audio

※Main Product Only



Audio Amplifiers

High Quality Audio Amplifiers

Part No.	Auto-motive	Channels	Power Supply	Operating Voltage [V]		I _{cc} /ch. [mA]	V _{io} [mV]	I _b [nA]	I _{io} [nA]	SR [V/μsec]	GBW [MHz]	f _t [MHz]	Noise		Package Outline	Notes
				min.	max.								V _{ni} [μVrms]	e _n [nV/√Hz]		
MUSES01	-	2	Dual	± 9	± 16	4.25	5	0.2	0.1	12	3.3	3	1.2	9.5	DIP8	THD(typ.)=0.002% J-FET Input
MUSES02	-	2	Dual	± 3.5	± 16	4	3	100	5	5	11	5.8	0.8	4.5	DIP8	THD(typ.)=0.001% Bipolar Input
MUSES03	-	1	Dual	± 3.5	± 18	5.8	-	0.005	0.002	35	12	13	1.0	7.5	DIP8	THD(typ.)=0.00003% J-FET Input
NEW MUSES05	-	1	Dual	± 3.5	± 18	2.9	10	0.005	0.002	40	12	13	1.0	7.5	DFN12-CA8 (ESON12-CA8)	High Quality Audio, OFC lead-frame, Ultralow Distortion (0.00003% typ. at f=1kHz)
MUSES8820	-	1	Dual	± 3.5	± 16	4	3	100	5	5	11	5.8	0.8	4.5	DIP8, SOP8 JEDEC 150mil(EMP8)	THD(typ.)=0.001% Bipolar Input
MUSES8832	-	2	Dual	± 1.35	± 7	3.75	0.5	4000	100	1	10	-	0.3	2.1	SOP8 JEDEC, 150mil(EMP8), SSOP8-A3, DFN8-W1 (ESON8-W1)	THD(typ.)=0.0009% Bipolar Input, Rail to Rail Output
U.D. MUSES8920A	-	2	Dual	± 3.5	± 17	4.5	5	0.005	0.002	25	11	10	1.1	8.0	DIP8, SOP8 JEDEC-150mil(EMP8), DFN8-X7 (ESON8-X7)	High Quality Audio
NEW NJM8801	-	2	Dual	± 2	± 18	3	3	100	5	5	15	-	0.8	4.5	SOP8 JEDEC 150mil(EMP8), SSOP8-A3	THD(typ.)=0.0005% Bipolar Input
NEW NJM8830	♥	2	Dual	± 2.0	± 5.25	3.25	2	150	10	30	90	60	0.34	2.5	HSOP8-M1, DFN8-W1 (ESON8-W1)	Rail to Rail Output PLP ♥ DFN8-W1 (ESON8-W1)
U.D. NL8802	-	2	Dual	± 3.0	± 22	4	3	500	10	15	13	23	0.9	5.5	SOP8 JEDEC150mil(EMP8), DFN8-W1(ESON8-W1)	

Audio Amplifiers

Power Amplifier / Headphone Amplifiers



Part No.	Auto-motive	Operating Voltage[V]		Channel	Output Power			Stand-by Function	Mute	Key Features	Package Outline	Notes
		min.	max.		Po	V ⁺ [V]	R _L [Ω]					
NJM2113	-	2	16	BTL 1ch.	400mW min.	12	100	Yes	Yes	Low Voltage Operation	DIP8, DMP8 SOP8 JEDEC 150mil(EMP8), SSOP8, MSOP8(VSP8)	
NJM2135	-	2	16	BTL 1ch.	400mW min.	12	100	Yes	Yes	Low Voltage Operation	DIP8, DMP8, SSOP8, MSOP8(VSP8)	
NJM2149	-	2	6	BTL 1ch.	250mW min.	6	32	Yes	Yes	Low Voltage Operation	DIP8, DMP8, SSOP8 MSOP8(TVSP8), MSOP8(VSP8)	
NJM2151A	-	2.7	8.5	BTL 1ch.(SP) 2ch.(HP)	50mW typ.	5	8	Yes	Yes	BEEP Level Control Function, Electronic Volume	DMP20, SSOP20-F1, SSOP20	Power Amplifier/ Headphone Amplifier
NJM2166	-	2.7	8.5	BTL 1ch.	500mW typ.	5	8	Yes	Yes	Controlled by DC voltage, Electronic Volume	SSOP14, MSOP10(VSP10)	
NJM2768B	-	2.8	5.5	2ch.	100mW typ.	5	16	-	Yes	Fix Gain 0dB typ.	DMP8, MSOP8(TVSP8)	Headphone Amplifier
NJM2769B	-	2.8	5.5	2ch.	100mW typ.	5	16	-	Yes	Fix Gain 6dB typ.	DMP8, MSOP8(TVSP8)	Headphone Amplifier
NJM2770	-	2	4.5	BTL 1ch.	250mW typ.	3	8	Yes	Yes	Low Voltage Operation	MSOP8(TVSP8), MSOP8(VSP8)	
NJM2775A	-	1.8	6	BTL 1ch.(SP) 1ch.(Pre)	500mW typ.	4	8	-	-	Auto level control (ALC) function	DMP16	
NJM2776	-	1.8(V+1) 0.9(V+2)	4.5	2ch.	8.5mW typ.	2.3	16	Yes	Yes	Low Voltage Operation	MSOP10(TVSP10)	Headphone Amplifier
NJM2777	-	8	10	2ch.	100mW typ.	9	100	-	Yes	Controlled by DC voltage, Electronic Volume	DMP14, SSOP14	Headphone Amplifier
NJU7082B	-	2.4	5.5	2ch.	-	-	-	Yes	-	-	DMP8, SSOP8	
NJU7084	✓	2.8	5.5	BTL 1ch.	1W typ.	5	8	Yes	Yes	-	MSOP8(VSP8)	
NJU7085	-	2.8	5.5	BTL 2ch.	400mW typ.	3	4	Yes	Yes	Surround sound technology	PCSP32-F7, SSOP32	
NJU7086	-	2.8	5.5	BTL 2ch.	1W typ.	5	8	Yes	Yes	Three input selector, I ² C Bus Interface, Electronic volume	LQFP48-R3	
NJU7089 ♥	✓	1.8	5.5	BTL 1ch.	1.2W typ.	5	8	Yes	Yes	Low Operating Voltage, Single-end/Differential Input	DFN8-V1(ESON8-V1), SSOP20-C3, MSOP8(VSP8), HTSSOP24-P1	
NJU72040	-	2.7	3.6	2ch.	80mW typ.	3.3	32	-	Yes	Output Coupling Capacitor-less Single-end/Differential Input Gain(+6.4dB/+12.4dB (RL=32ohm), +7.1dB/+13.1dB (RL=10kohm), 2Vrms output(RL=10kohm)	SSOP14	Headphone Amplifier
NJU72060	✓	2.7	5.5	BTL 1ch.	500mW typ.	5	8	Yes	Yes	Single-end/Differential Input	MSOP8(VSP8), HSOP8-M1 DFN8-V1(ESON8-V1)	
NJU72065	-	2.7	5.5	BTL 1ch.	1.2W typ.	5	8	Yes	Yes	Electronic Volume, Single-end/Differential Input	MSOP10(TVSP10), SSOP20-C3	
NJW1109	-	7.5	10	2ch.	100mW typ.	9	100	-	Yes	Electronic Volume, I ² C Bus Interface	DMP14, SSOP14	Headphone Amplifier

Class D Amplifiers

Part No.	Auto-motive	Operating Voltage[V]		Channel	Input Signal	Output Power/Output Voltage					Output Filter-less	Stand-by Function	Function	Package Outline
		min.	max.			Po	Vout	V ⁺ [V]	R _L [Ω]	CL [nF]				
U.D. NA1150	✓	2.6	5.5	BTL 1ch.	PWM	1.2W min.	-	5	8	-	-	Yes	Load Diagnostics, Over Current, Over Temperature	DFN8-V1(ESON8-V1), MSOP8(VSP8)
NJU72501	-	2.3	5	BTL 1ch.	PWM/PDM	-	18Vpp typ.	3	-	15	-	Yes	Built-in Charge Pump Adjust Output Voltage	EQFN12-JE, EQFN16-G2, SSOP14
NJU8758	-	1.8	5.5	BTL 1ch.	Analog	1.5W typ.	-	5	8	-	OK	Yes	EQ for Active filter	SSOP14
NJU8759	-	1.8	5.5	BTL 1ch.	Analog	3W typ.	-	5	4	-	OK	Yes	Single-end input Differential input corresponds	WCSP9
NJU8759A	✓	1.8	5.5	BTL 1ch.	Analog	3W typ.	-	5	4	-	OK	Yes	Single-end input Differential input corresponds	HSOP8-M1
NJU8789	-	1.8	4.5	BTL 1ch.	PWM/PDM	500mW typ.	-	3.3	8	-	-	Yes	-	SSOP10
NJW1280	-	2	5.5	BTL 1ch.	PWM/PDM	-	30Vpp typ.	5	-	30	-	Yes	Built-in Charge Pump 30Vpp Differential Output	EQFN16-G2, MSOP10(TVSP10)

Line Amplifiers

Part No.	Auto-motive	Operating Voltage [V]		Channel	Voltage Gain	Output Voltage			Output Coupling Capacitor-less	Pop Noise Suppression Circuit	Mute	Key Features	Package Outline
		min.	max.			Vom	V ⁺ [V]	R _L [Ω]					
NJM2160B	-	6	12	2ch.	+8dB typ.	5.2Vrms typ.	9	10k	-	-	-	-	DMP16, SSOP16
NJM2792	-	6	11	4ch.	+8dB typ.	5.2Vrms typ.	9	10k	-	-	-	-	SSOP20
NJU72013	-	2.7	3.6	2ch.	+6.2dB typ.	2.3Vrms typ.	3.3	47k	Yes	Yes	Yes	Pop Noise Suppression Circuit, Output Coupling Capacitor-less	MSOP10(TVSP10)
NJU72014	-	2.7	3.6	2ch.	+10.5dB typ.	2.3Vrms typ.	3.3	47k	Yes	Yes	Yes	Pop Noise Suppression Circuit, Output Coupling Capacitor-less	MSOP10(TVSP10)
NJU72015	-	3	3.6	2ch.	Adjustable	2.3Vrms typ.	3.3	10k	Yes	Yes	Yes	Pop Noise Suppression Circuit Output Coupling Capacitor-less	SSOP14
NJU72040	-	2.7	3.6	2ch.	+7.1dB typ. +13.1dB typ.	2.2Vrms typ.	3.3	32	Yes	Yes	Yes	Output Coupling Capacitor-less, Single-end/Differential Input, Pop Noise Suppression Circuit, Gain(+6.4dB/+12.4dB (RL=32ohm), +7.1dB/+13.1dB (RL=10kohm), 2Vrms output(RL=10kohm))	SSOP14
NJW1240	-	6	10	6ch.	+6dB typ. +8.3dB typ.	5Vrms min.	8	47k	Yes	Yes	Yes	Pop Noise Suppression Circuit, Output Coupling Capacitor-less	SSOP32
NJW1241	-	6	10	BTL 3ch.	+12dB typ. +16dB typ.	10Vrms min.	8	47k	Yes	Yes	Yes	Pop Noise Suppression Circuit, Output Coupling Capacitor-less	SSOP32

Audio Amplifiers

Microphone Amplifiers



Part No.	Auto-motive	Operating Voltage [V]		Channel	Voltage Gain	Mute	Key Features	Package Outline
		min.	max.					
NJD2201	-	1	10	1ch.	-4dB typ.	-	For ECM, THD (0.1% typ.)	ESON4-E1
NJM2173A	-	2.7	4.5	2ch.	+13dB typ. +29dB typ.	Yes	Built-in Regulator for Microphone	SSOP14
NJM2781	-	2.7	4.5	1ch.	Adjustable type	-	Built-in Regulator for Microphone	SSOP8, MSOP8(TVSP8)
NJM2783	-	2.7	13	1ch.	+20 to +63dB	-	Auto level control (ALC) function	SSOP14
NJU72090	-	1.8	16	1ch.	+24 to +40dB	-	2-Wired, FET for impedance converter, Fine Tune Sensitivity	MSOP10(TVSP10)
NJU72097	-	2.7	16	1ch.	+24 to +40dB	-	2-Wired, Fine Tune Sensitivity, Built-in Regulator for microphone capsule, Wide Dynamic Range	MSOP10(TVSP10)
NJU7907A	-	4.5	16	1ch.	+24 to +40dB	-	2-Wired, Wide Dynamic Range	MSOP10(TVSP10)
NJU7907B	-	4.5	16	1ch.	+24 to +40dB	-	2-Wired, Wide Dynamic Range, Small Package	EPFFP10-C4

Isolation Amplifiers

Part No.	Automotive	Operating Voltage [V]		Channel	Voltage Gain	Key Features	Package Outline
		min.	max.				
NJM2794	-	4.3	13	2ch.	0dB typ.	CMRR=60dB typ.	SSOP14, MSOP10(TVSP10)
NJM2795	-	4.3	20	2ch.	+6 to +52dB	CMRR=80dB typ.	SSOP14

Audio Signal Processing ICs

Electronic Volume ICs



Part No.	Auto-motive	Operating Voltage [V]		Channel	Volume Range	Tone Control	Input Selector	Control	Function	Package Outline
		min.	max.							
MUSES72320	-	± 8.5 3	± 18 6	2	0 to -111.5dB (0.5dB step) +31.5 to 0dB (0.5dB step)	-	-	Three-wired Serial	Zero Cross Detection, Selectable external Op-Amp	SSOP32
MUSES72323	-	± 10 3	± 18 5.5	2	0 to -111.75dB (0.25dB step) +21 to 0dB (3dB step)	-	-	Three-wired Serial	Zero Cross Detection, Soft- Step, Selectable external Op-Amp	SSOP32
NJM2172	-	2.7	5.5	2	-3 to -95dB	-	-	DC Control	Include Op-Amp	SSOP14
NJU72315	-	± 3 1.6	± 5.5 3.6	2	0 to -62dB (2dB step)	-	-	I ² C BUS	Zero Cross Detection, Soft- Step, Selectable external Op-Amp	WCSP16
NJU72322	-	± 10 3	± 18 5.5	2	0 to -111.5dB (0.5dB step) +21 to 0dB (3dB step)	-	-	Three-wired Serial	Zero Cross Detection, Selectable external Op-Amp	SSOP32
NJU72341	-	4.5	14.5	2	0 to -95dB (1dB step)	-	-	I ² C BUS	Zero Cross Detection	SSOP14
NJU72342	-	4.5	14.5	4	0 to -95dB (1dB step)	-	-	I ² C BUS	Zero Cross Detection	SSOP14
NJU72343	-	± 4.5 9	± 7.5 15	8	+31.5 to -95dB (0.5dB step)	-	2-input (4 of 8-channels)	Two-wired Serial	Zero Cross Detection	SSOP32
NJU72344	-	± 4.5	± 7.5	2	0 to -95dB (1dB step) 0,+3,+6,+12,+18,+24	-	-	Two-wired Serial	Zero Cross Detection	SSOP14
NJU7391A	-	4.7	9.7	2	0 to -95dB (1dB step)	2-Band 0 to ± 14dB (2dB step)	Stereo 5-in- put/1-Output	Three-wired Serial	eala Surround	SSOP32

Part No.	Auto-motive	Operating Voltage [V]		Channel	Volume Range	Tone Control	Input Selector	Control	Function	Package Outline
		min.	max.							
NJU7392	-	2.7	5.5	2	0 to -68dB	-	2-input/1-output (Differential 1/ Single end 1)	Push Button	eala Stereo Expander Bass Boost	SSOP32
NJU7394	-	2.7	5.5	2	+6 to -62dB	-	-	Push Button	Standby	SSOP20-C3
NJW1119A	-	± 4.5	± 7.5	2	-	0 to ± 12dB (1dB step)	-	Three-wired Serial	-	SSOP32
NJW1159	-	± 4.5	± 7.5	2	0 to -95dB (1dB step)	-	-	Three-wired Serial	Selectable external Op-Amp	DMP16 SSOP16
NJW1184	-	7.5	13	4	0 to -100dB (0.5dB step)	-	-	I ² C BUS	VCA Volume	DMP20
NJW1190	-	8	13	2	0 to -44dB	3-Band 0 to ± 14dB (2dB step)	Stereo 5-input/1-Output	I ² C BUS	Surround, Bass Boost	SSOP44
NJW1192	-	7.5	13	4	+6 to -30dB (1dB step) -30 to -68dB (2dB step)	2-Band 0 to ± 14dB (2dB step)	Stereo 3-input (Mono 1-input/1-Output)	I ² C BUS	Surround, Bass Boost	SSOP32
NJW1194	-	± 4.5	± 7.5	2	+31.5 to -95dB (0.5dB step)	2-Band 0 to ± 10dB (1dB step)	Stereo 4-input/1-Output	Three-wired Serial	-	SSOP32
NJW1195A	-	± 3.5 15	± 7.5 15	4	+31.5 to -95dB (0.5dB step)	-	Stereo 4-input/2-Output (Stereo 4-input/1-Output) (Differential 2-input/1-Output)	Three-wired Serial	Zero Cross Detection Differential transmission select function	SSOP32
NJW1200	-	2.7	5.5	2	0 to -78dB (2dB step)	-	Differential 2-input/1-Output	I ² C BUS	eala Surround Bass Boost	SSOP32
NJW1201A	-	7.5	10	2	0 to -90dB	0 to ± 14dB (2dB step, Treble, Middle) 0 to ± 17.5dB (2.5dB step, Bass)	6-input/1-output (Differential 1/ Single end 5)	I ² C BUS	eala Surround Bass Boost	LQFP52-H2
NJW1298	-	± 4.5	± 7.5	8	+31.5 to -95dB (0.5dB step)	-	Stereo 13-input/4-output (8ch. 2-input/1-output)	Three-wired Serial	Multi-Channel Selector REC Out	QFP100-U1

Audio Processors

Part No.	Auto-motive	Function	Operating Voltage [V]		Input [ch.]	Output [ch.]	Original Surround			License			Aux		Package Outline
			min.	max.			eala	Base Boost	Simulated Surround	BBE	SRS 3D Stereo	SRS Tru-Surround	Input	Output	
NJW1142A	-	3channel Output (Lch, Rch, Line output)	8	10	4(x2)	3	Yes	-	Yes	-	-	-	-	-	SSOP32
NJW1143A	-	-	8	13	2	2	Yes	-	Yes	-	-	-	-	2	SSOP32
NJW1163	-	3channel Output (Lch, Rch, Subwoofer ch.)	7.5	13	2	3	Yes	Yes	Yes	-	-	-	-	2	SSOP32
NJW1173	-	-	8	13	2	2	Yes	-	Yes	-	-	-	2	2	SSOP20
NJW1185	-	Voice Enhancement, I ² C Bus Ineter Face	7.5	13	6	1	Yes	-	Yes	-	-	-	-	-	SSOP32

3D Surround & Sound Enhancement ICs

Part No.	Automotive	Function	Key Features	Operating Voltage [V]		Package Outline
				min.	max.	
NJM2702	-	eala Stereo	eala Stereo	4.7	13	DMP14, SSOP10
NJM2703	-	eala Headphone	eala Headphone	1.8	6	MSOP10(TVSP10)



Audio Switches

Part No.	Auto-motive	Function	Operating Voltage [V]		Input	Output	Package Outline	Notes
			min.	max.				
NJM2750	-	Stereo Audio Selector	4.7	13	4	1	DMP16	
NJM2752	-	Stereo Audio Selector	4.7	10	2	1	SSOP14, MSOP10(TVSP10)	
NJM2753	-	Stereo Audio Selector	4.7	10	3	1	SSOP14	
NJM2754	-	Stereo Audio Selector, with Ground Noise Isolation Amplifier	4.7	12	4	1	SSOP20	CMRR=60dB typ.
NJM2755	-	Stereo Audio Selector	4.7	10	4	1	SSOP16	
NJU72750A	-	Stereo Analog Switch, 2-wired Serial BUS Control	± 4.5 9	± 7.5 15	7	3	SSOP32	
NJU72751A	-	Stereo Analog Switch, 2-wired Serial BUS Control	± 4.5 9	± 7.5 15	4	4	SSOP32	
NJW1110	-	Stereo Audio Selector, I ² C Bus Interface, Gain Control	7.5	15	9	3	SSOP32	
NJW1111	-	Stereo Audio Selector, Three-wired Serial, Gain Control	± 4.5	± 7.5	9	3	SSOP32	
NJW1112	-	Stereo Audio Selector, Three-wired Serial, Output Switch	± 4.5	± 7.5	8	4	SSOP32	
NJW1156A	-	Stereo Audio Selector, I ² C Bus Interface, Gain Control	4.75	13	5	1	SSOP20	

MEMS Microphone Elements

MEMS Transducers



Part No.	Function	Operating Voltage [V]	Static Capacitance [pF]	Package Outline	Chip Size [mm]
NJD3004	MEMS Transducer for Microphone	12.5	0.86	Wafer	1.1 × 1.1
NJD3007	MEMS Transducer for Microphone	12.5	1.15	Wafer	1.3 × 1.3
NEW NJD3015	MEMS Transducer for Microphone	12.5	0.42	Wafer	0.7 × 0.7
U.D. NS1101	MEMS Transducer for Microphone	12.5	0.65	Wafer	0.8 × 0.8
U.D. NS1102	MEMS Transducer for Microphone	T.B.D.	T.B.D.	Wafer	1.1 × 1.1

MEMS Microphone Amplifiers

Part No.	Function	Operating Voltage [V]	Quiescent Current[μA]	SNR	Maximum Output Voltage	Package Outline	Notes
NEW NJU72087P	Pre-Amplifier for MEMS Microphone	+1.5 to +3.6	115	-	-6dBV@THD<5%	Wafer	High AOP, Tight Sensitivity Tolerance
U.D. NJU72089K	Pre-Amplifier for MEMS Microphone	+1.5 to +3.6	130	-	-6dBV@THD<10%	Wafer	High AOP, Sensitivity, Matching, Fast Start-up time
NEW NJU72089S	Pre-Amplifier for MEMS Microphone	+1.5 to +3.6	130	-	-6dBV@THD<10%	Wafer	High AOP
NJU9555	Digital Pre-Amplifier for MEMS Microphone	+1.64 to +3.6	600	62.5dBFS	-	Wafer	PDM Output, Tight Sensitivity, Low Power
U.D. NS2101	Pre-Amplifier for MEMS Microphone	+1.5 to +3.6	82	-	-6dBV@THD<5%	Wafer	Low Power, High AOP

Video Amplifiers

V: Composite Video Signal S: S-Video Signal(Y/C) C: Component Signal(Y/Pb/Pr)/RGB Signal



Part No.	Auto-motive	Operating Voltage [V]		Channel	Input			Output			Gain [dB]	LPF [th order]	75ohm Driver	Functions	Package Outline
		min.	max.		V	S	C	V	S	C					
NJM2274	-	2.8	5.5	1	-	1	-	1	-	-	12	-	Yes	Low Operating Voltage, Y/C MIX, Sag Correction	MSOP8(VSP8)
NJM2274A	-	2.8	5.5	1	-	1	-	1	-	-	6	-	Yes	Low Operating Voltage, Y/C MIX, Sag Correction	MSOP8(VSP8)
NJM2504	✓	4.5	9	1	1	-	-	2	-	-	6	-	Yes	Video Differential Transmission, Single-end Input, Differential Output	MSOP8(TVSP8)
NJM2505A	-	4.5	9	1	1	-	-	1	-	-	0	-	-	Isolation Amplifier	SOT-23-5
NJM2507	✓	4.5	9	1	2	-	-	1	-	-	6 (Reverse phase)	-	Yes	Video Differential Transmission, Differential Input, Single-end Output	MSOP8(TVSP8)
NJM2512	✓	3	6	1	1	-	-	1	-	-	6	6	Yes	Low Operating Voltage, 47uF AC-Coupling Capacitor	MSOP8(TVSP8)
NJM2512A	-	3	6	1	1	-	-	1	-	-	12	6	Yes	Low Operating Voltage, 47uF AC-Coupling Capacitor	MSOP8(TVSP8)
NJM2515	-	4.5	5.5	3	-	-	3	-	-	1	6	Bypass 13.5MHz	Yes	Wide frequency range, 3-input 1-output	SSOP32
NJM2516	-	4.5	9.5	3	-	-	1	-	-	1	6	4	Yes	47uF AC-Coupling Capacitor, Sag Correction, Wide Band	SSOP20-C3
NJM2538	-	4.5 2.7	5.3	3	-	1	-	1	1	-	6	4	Yes	Y/C MIX, Sag Correction	SSOP20
NJM2559	✓	4.5	5.5	1	1	-	-	1	-	-	12	6	Yes	Output Capacitor-less (0.5V DC Output), Power Supply Short-circuit Protection	MSOP8(TVSP8)
NJM2561	✓	2.8	5.5	1	1	-	-	1	-	-	6	6	Yes	Low Operating Voltage, Sag Correction	DFN6-G1 (ESON6-G1) SOT-23-6-1
NJM2561A	-	2.6	5.5	1	1	-	-	1	-	-	6	6	Yes	Low Operating Voltage, Sag Correction, DC Coupling Screening Type	DFN6-G1 (ESON6-G1)
NJM2561B	-	2.6	5.5	1	1	-	-	1	-	-	6	6	Yes	DC Coupling Screening Type	SOT-23-6-1
NJM2562	✓	2.8	5.5	1	1	-	-	1	-	-	12	6	Yes	Low Operating Voltage, Sag Correction	SOT-23-6-1
NJM2563	-	2.8	5.5	1	1	-	-	1	-	-	16	6	Yes	Low Operating Voltage, Sag Correction	SOT-23-6-1
NJM2564	-	2.8 4.5 -5.5	3.5 5.5 -2.8	6	-	1	1	1	1	1	6	4	Yes	Dual Supply Voltage, Y/C MIX, Wide Band	SSOP32
NJM2565	-	4.5	5.5	6	-	1	1	1	1	1	6	2	Yes	Sag Correction, Y/C MIX, Wide Band	SSOP32
NJM2566A	-	4.5	5.5	6	1	1	1	1	1	1	6	4	Yes	DC Interface for S2, RGB In Y/C MIX, Wide Band	SSOP32
NJM2567	-	2.8	5.5	3	-	1	-	1	1	-	6	6	Yes	Low Operating Voltage, Y/C MIX, Sag Correction	SSOP14
NJM2570A	-	4.5	5.5	3	-	1	-	1	1	-	12	6	Yes	Y/C MIX, Sag Correction, DC Output for Aspect Ratio	SSOP16
NJM2573	-	2.8	5.5	3	1	1	-	1	1	-	6	2	Yes	Low Operating Voltage, CLAMP/BIAS Switch, Sag Correction	SSOP14
NJM2574	-	2.8	5.5	1	1	-	-	1	-	-	12	3	Yes	Low Operating Voltage, CLAMP/BIAS Switch, LPF/Through Switch	MSOP8(TVSP8)
NJM2575	-	2.8	5.5	1	1	-	-	1	-	-	6	2	Yes	Low Operating Voltage, Sag Correction	SOT-23-6-1
NJM2580	-	4.5	5.5	3	-	-	1	-	-	1	6	-	Yes	High Definition, Sag Correction	DMP14 SSOP14
NJM2581	-	± 4.5	± 5.5	3	-	-	1	-	-	1	6	-	Yes	High Definition, Dual Voltage	DMP14



Video Amplifiers

V: Composite Video Signal S: S-Video Signal(Y/C) C: Component Signal(Y/Pb/Pr)/RGB Signal

Part No.	Auto-motive	Operating Voltage [V]		Channel	Input			Output			Gain [dB]	LPF [th order]	75ohm Driver	Functions	Package Outline
		min.	max.		V	S	C	V	S	C					
NJM2582	-	4.5 -5.5 10.5	5.5 -4.5 11.5	4	1	1	1	1	1	1	6	3	Yes	DC Output for SCART	SSOP32
NJM2583A	-	4.5	5.5	6	-	1	1	1	1	1	6	4	Yes	High Definition, Sag Correction, Y/C MIX	SSOP32
NJM2589	-	4.5	5.5	6	1	1	1	1	1	1	6	4	Yes	LPF for 480p, Sag Correction	SSOP32
NJM41001T	✓	3	7	1	1	-	-	1	-	-	6	-	Yes	Low Voltage, Wide Band	SOT-23-6-1
NJM41005T	✓	4.5	5.5	1	1	-	-	1	-	-	0	-	Yes	Isolation Amplifier with Video Driver	SOT-23-5
NJM41030	-	4.5	5.5	1	1	-	-	1	-	-	3	-	-	3dB Gain	SOT-23-6-1
NJM41031	-	4.5	5.5	1	1	-	-	1	-	-	6	6	Yes	Sag Correction	SOT-23-6-1
NJM41033	-	2.6	5.5	3	3	-	1	3	-	1	0	-	-	Low Operating Voltage, Isolation Amplifier	SSOP14
NJM41035	-	2.7	9.5	1	1	-	-	1	-	-	ADJ	6	-	Low Operating Voltage, Isolation Amplifier, Gain Adjust	MSOP8(TVSP8)
NJM41041	-	4.5	5.5	4	1	1	1	1	-	1	6	2(SD) 3(HD)	Yes	High Definition, Y/C MIX	SSOP20-C3
NJM41045	-	4.5 ±3	9.5 ±5	3	-	-	1	-	-	1	6	-	Yes	High Definition, Wide Band(to 400MHz)	SSOP20-C3
NJU71031	-	2.5	3.45	1	1	-	-	1	-	-	6	3	Yes	Low Operating Voltage, Output Capacitor-less (0V DC Output)	MSOP8(TVSP8), DFN8-U1(ESON8-U1)
NJU71032	-	2.5	3.45	1	1	-	-	1	-	-	12	3	Yes	Low Operating Voltage, Output Capacitor-less (0V DC Output)	MSOP8(TVSP8)
NJU71041	-	2.5	3.45	1	1	-	-	1	-	-	6	3	Yes	Output Capacitor-less(0V DC Output), Coaxial Receiver	MSOP10(TVSP10)
NJU71042	-	2.5	3.45	1	1	-	-	1	-	-	12	3	Yes	Output Capacitor-less(0V DC Output), Coaxial Receiver	MSOP10(TVSP10)
NJU71044	-	2.5	3.45	1	-	1	-	1	-	-	12	3	Yes	Output Capacitor-less(0V DC Output), Coaxial Receiver	MSOP10(TVSP10)
NJU71074	-	2.5	3.45	1	-	1	-	1	-	-	12	3	Yes	Y/C MIX, Output Capacitor-less(0V DC Output)	MSOP10(TVSP10)
NJU71091T1	✓	2.65	3.45	1	1	1	-	-	1	-	6	6	Yes	1ch. Video Driver with Short to Battery Protection	DFN8-U1(ESON8-U1)
NJU71094T1	✓	2.65	3.45	2	2	1	-	-	2	-	6	6	Yes	Differential Output Video Driver with Short to Battery Protection	DFN8-W2 (ESON8-W2)
NJW1230	-	2.8	3.6	1	1	-	-	1	-	-	6	6	Yes	Video: AC or DC Coupling Output, Audio: Ground Referenced Output	SSOP16
NJW1350	-	2.5	3.45	1	1	-	-	1	-	-	12	6	Yes	Low Operating Voltage, Output Capacitor-less (0V DC Output)	DFN10-K1(SON10-K1), MSOP8(TVSP8)
NJW1351	✓	2.5	3.45	1	1	-	-	1	-	-	6	6	Yes	Low Operating Voltage, Output Capacitor-less (0V DC Output)	DFN10-K1(SON10-K1), MSOP8(TVSP8), DFN8-U1(ESON8-U1)
NJW1352	-	2.5	3.45	1	1	-	-	1	-	-	9	6	Yes	Low Operating Voltage, Output Capacitor-less (0V DC Output)	DFN10-K1(SON10-K1), MSOP8(TVSP8)
NJW1353	-	2.5	3.45	1	1	-	-	1	-	-	16	6	Yes	Low Operating Voltage, Output Capacitor-less (0V DC Output)	DFN10-K1(SON10-K1), MSOP8(TVSP8)

Video Switches

V: Composite Video Signal S: S-Video Signal(Y/C) C: Component Signal(Y/Pb/Pr)/RGB Signal

Part No.	Auto-motive	Operating Voltage [V]		Input			Output			Clamp	Bias	6dB AMP	75ohm Driver	Functions	Package Outline
		min.	max.	V	S	C	V	S	C						
NJM2526	-	4.5	9	4	-	-	1	-	-	Yes	-	-	-	Isolation Amplifier for CVBS	SSOP16
NJM2533	-	4.75	13	2	-	-	1	-	-	-	Yes	-	-	-	DIP8, DMP8, SSOP8
NJM2534	-	4.5	13	3	-	-	1	-	-	-	Yes	-	-	-	DIP8, DMP8, SSOP8
NJM2535	-	4.5	13	3	-	-	1	-	-	Yes	-	-	-	-	DIP8, DMP8, SSOP8
NJM2584A	-	4.5	9	-	-	-	-	-	1	Yes	Yes	-	-	High Definition	DMP16
NJM2586A	-	± 4.5	± 5.5	-	-	-	-	-	1	-	Yes	Yes	Yes	High Definition	SDIP22, SSOP20-C3
NJM41010	-	4.5	9.5	2	-	-	1	-	-	Yes	-	Yes	Yes	-	SOT-23-6-1
NJM41050	✓	4.5	9.5	3	-	-	1	-	-	Yes	-	Yes	Yes	LPF, Mute, 47uF AC-Coupling Capacitor	SSOP14
NJW1327	-	3 -3	3.45 -5.5	9	-	6	5	-	4	-	Yes	Yes	Yes	Wide Band, I ² C BUS control function	QFP100-U1
NJW1328	-	4.5	5.5	7	-	3	3	-	2	Yes	Yes	Yes	Yes	Wide Band, Differential Input Signal Detector, I ² C BUS control function	LQFP52-H2
NJW1329	-	3 -3	3.45 -5.5	7	-	3	2	-	1	-	Yes	Yes	Yes	Wide Band, Signal Detector, I ² C BUS Control Function	LQFP52-H3
NJW1340	-	4.5	5.5	5	3 (x2)	-	1	1	-	Yes	Yes	-	-	I ² C BUS Control Function 6th order LPF	SSOP32
NJW1341	-	4.5	9.5	8	-	-	2	-	-	-	Yes	Yes	Yes	Isolation Amplifier, 47uF AC-Coupling Capacitor, I ² C BUS Control Function	SSOP20-C3



Audio & Video misc.

Part No.	Automotive	Operating Voltage [V]		Key Features	Package Outline
		min.	max.		
NJD2201	-	1	10	For ECM, THD (0.1% typ.)	DFN4-E1(ESON4-E1)
NJM2761	-	2.7	13	Audio Limiter (Speaker Protection), Limit Level: 0.2 to 1Vrms, Mixed L+Rch signal detection	SSOP14, MSOP10(TVSP10)
NJM2762	-	2.7	13	Speaker Protection, Limit Level:0.2 to 1Vrms, Independent L/Rch signal detection	SSOP14, MSOP10(TVSP10)
NJU3610	-	3	3.6	1bit Delta-Sigma stereo ADC, Single power supply: 3.0 to 3.6V(Built-in regulator using together), Two power supply: Analog(3.0 to 3.6V) /Digital (1.65 to 2.0V)	LQFP48-R3
NJU7181	-	0.9	5.5	Power Saving for battery operated devices, Muting Application, Memory saving for recording devices, Half-duplex transmission application	DFN8-U1(ESON8-U1), MSOP8(TVSP8)
NJW1124	-	2.9	4.5	Voice Switched Speakerphone circuit, Amplifiers(Microphone , Receive ,Line), Level detector, All external capacitors are ceramic capacitors.	SSOP32
NJW1128	-	3.9	5.5	Voice Switched Speakerphone circuit, Amplifiers(Microphone , Receive ,Line), Level detector, All external capacitors are ceramic capacitors.	LQFP48-R3

FM IF Demodulator ICs

Part No.	Auto-motive	Functions	Key Features	Operating Voltage [V]		Quiescent Current [mA] typ.	IF [Hz]	Mixer [MHz]	RSSI	Filter Amp	FSK Comp	Quick Charge	Other	Package Outline
				min.	max.									
NJM14570	-	Wide Band FM IF Demodulator	Up to 15MHz IF	1.8	9	2.9	10.7M	-	Yes	-	-	-	-	MSOP8 (TVSP8)
NJM2295A	-	FM IF for Remote Keyless Entry System	Suitable to 10.7MHz application	2.7	7	5	10.7M	Up to 450	Yes	Yes	Yes	Yes	Battery Save	SSOP20
NJM2537	-	FM IF for Pagers	Suitable for battery use	1.1	4	1.2	455k	Up to 50	Yes	Yes	Yes	-	Battery Save Battery Alarm	SSOP20
NJM2549	-	Wide Band FM IF Demodulator	Up to 15MHz IF	2.7	9	3	10.7M	-	Yes	-	-	-	-	MSOP10 (TVSP10)
NJM2550	-	10.7MHz Input FM IF Demodulator	IF 5MHz to 50MHz, Adjust RSSI's Thermal Characteristics	2	9	4.4	10.7M	-	Yes	Yes	Yes	Yes	-	SSOP16
NJM2552	-	100MHz Input Mixer and 450kHz FM/AM IF Demodulator	Up to 2MHz IF, Built-in AM Demodulator	2.2	9	2.5(FM) 5(AM)	450k	Up to 100	Yes	Yes	-	-	AM AGC AM SW	SSOP20
NJM2590	-	455kHz Input FM IF Demodulator	Low current/voltage	1.6	5.5	0.55	455k	-	Yes	Yes	Yes	Yes	RSSI Comparator	SSOP14
NJM2591	-	100MHz Input 450kHz FM IF Demodulator for Voice	Low current	1.8	9	2.5	450k	Up to 100	Yes	Yes	-	-	Noise Detector Noise Comparator	SSOP16
NJM2592	-	470MHz Input Mixer and 455kHz FM IF Demodulator	50 ohm Mixer Input Imp.	1.8	9	2.2	455k	Up to 470	Yes	Yes	Yes	Yes	RSSI Comparator	SSOP20
NJM2593	-	50MHz Input Mixer and 450kHz FM IF Demodulator	Low current/voltage	1.8	9	1.2	450k	Up to 50	Yes	Yes	Yes	Yes	RSSI Comparator	SSOP20
NJM2597	-	455kHz Input FM IF Demodulator	Low current/voltage	1.6	5.5	0.55	455k	-	Yes	Yes	Yes	Yes	RSSI Comparator	SSOP14
NJW2311	-	Phase Shifter-less Wide Band FM IF Demodulator IC for Voice	Phase Shifter-less, SNR:80dB, THD:0.015%	4.5	5.5	23	1.5M to 15M	-	-	-	-	-	Low Noise Amp. for Voice	SSOP14

Amplifier / PLL ICs

Part No.	Auto-motive	Functions	Key Features	Operating Voltage [V]		Quiescent Current [mA] typ.	Operating Frequency (Reference) [MHz]	Amp	Mixer	PLL	Package Outline
				min.	max.						
NJM2275	-	VHF/UHF Band RF Amplifier	Cascode Amplifier Built-in Bias Circuit Peak for External CL	1.8	6	0.8	Up to 800	Yes	-	-	SOT-23-6-1
NJM2278	-	20mW Power Amplifier	Down Converter Built-in Bias Circuit Peak for External CL	2	5.5	20	300 to 500	Yes	-	-	SOT-23-6-1
NJM2287	-	100MHz Input Mixer and 450kHz IF Gain Control IC	Dynamic range (Up to 80dB) Built-in RSSI	2.7	5.5	4.7	RF: to 100 IF: 0.45	Yes	Yes	-	SSOP14

Modulation / Demodulation / Mixer ICs

Part No.	Auto-motive	Functions	Key Features	Operating Voltage [V]		Quiescent Current [mA] typ.	Operating Frequency (Reference) [MHz]	Mixer	Modulation/Demodulation	Package Outline
				min.	max.					
NJM2288	-	300/400MHz Band Down Mixer with Amplifier	Low Current, Gain Flatness for Temp.	2	5.5	2.8	300MHz to 500MHz	Yes	-	SOT-23-6-1
NJM2299	-	Wave Shaping Circuit for FSK	Low data error rate, Short wake-up time	1.8	5.5	0.6	Up to 2kHz (Up to 4kbps)	-	Yes	MSOP10 (TVSP10)
NJM2519A	-	RF Modulator for VHF Band	-	4.5	5.5	15.3	-	-	Modulation	DMP8
NJM2536A	-	RF Modulator for VHF Band	Carrier-off switch External ANT switch drive output	4.5	5.5	16	-	-	Modulation	DMP14 SSOP14
NJM2542	-	VIF/SIF Demodulator	AFT: Adjustment Free, FM-PLL Demodulator: Adjustment Free	4.75	5.25	51	-	-	Demodulation	SSOP20
NJM2594	-	Double Balanced Modulation/Demodulation	Up to 200MHz Mod/ Demod/ Doublers	4.5	9	11	Up to 200MHz	Yes	Yes	DMP8, SSOP8
NJU7512	-	1200 bps MSK Modem for Data Communication	High Receiving Sensitivity, Noise Susceptibility	1.8	5.5	1.9	1200Hz/1800Hz (1200bps)	-	Modem	SSOP20
NJW2307	-	FM modulation/ Demodulation with PLL	Adjustment needlessness, Built-in VCO, PLL, AFC	3.8	5.5	Mod: 9 Dem: 9.5	2.3MHz 2.8MHz	-	Modem	SSOP20-C3

Power Line Communication IC

Part No.	Auto-motive	Key Features	Operating Voltage [V]		(Transmit)		(Receive)		Transmit Amplifier					Receive Amplifier				Package Outline
			min.	max.	Operating Current 1 [mA]	Operating Current 2 [mA]	Zo [Ω]	Vio [mV]	Ia [μA]	SR [V/us]	GBW [MHz]	Noise Figure [dB]	SR [V/us]	GBW [MHz]	THD [%]			
NJM45001	-	Higher transmit performance (High output current 3A typ.), Flexible receive gain control (-18dB / -6dB / 0dB / +12dB)	8	22	50	6	0.05	10	1	40	50	26	15	8.5	0.003	HSSOP24		

Power Amplifiers

Part No.	Auto-motive	Applications	Bands	Gain [dB]	Pout [dBm]	ACL_R_ UTRA [dBc]	PAE [%]	Operating Voltage [V]	Package Size [mm]	Package Outline
NJG1330LEC	-	LTE Ultra High Band PAM	Band 42,43,48	30	28	-40	32	3.4	2x2.5x0.7	EMCM10-EC

Front-End Modules

Part No.	Auto-motive	Applications	Gain [dB]	NF [dB]	P-1dB [dBm]	IIP3 [dBm]	Frequency Range [MHz]	Operating Voltage [V]	Supply Current [mA]	Package Size [mm]	Package Outline	Notes
NJG1156PCD	♥	GPS	18.5/17.5	1.55/1.60	-15/-17	-4/-6	1575	2.8/1.8	3.3/2.6	2.5x2.5x0.63	HFFP10-CD	
NJG1159PHH	♥	GNSS (GPS/ GLONASS/ BeiDou/ Galileo)	16.0/ 15.5 (GPS) 16.5/ 16.0 (GLONASS) 16.0/ 15.5 (BeiDou, Galileo)	1.50/1.55 1.65/1.70 1.70/1.75	-10/-13	-2/-5	1575 1597 to 1606 1559 to 1591	2.8/1.8	3.7/3.0	1.5x1.1x0.5 (max.)	HFFP10-HH	
NJG1159PHH-A	♥	GNSS (GPS/ GLONASS/ BeiDou/ Galileo)	16.0 (GPS) 16.5 (GLONASS) 16.0 (BeiDou, Galileo)	1.5 1.65 1.7	-10	-	1575 1597 to 1606 1559 to 1591	2.8	3.7	1.5x1.1x0.5 (max.)	HFFP10-HH	AEC-Q100 grade 2 qualified
NJG1161PCD	♥	GNSS (GPS/ GLONASS/ BeiDou/ Galileo)	18.5/17.5	1.60/1.65 1.70/1.75	-15/-17	-3/-6	1575 1597 to 1606	2.8/1.8	4.6/3.6	2.5x2.5x0.63	HFFP10-CD	
NJG1168PCD	-	GPS	18/17	1.65/1.70	-12/-15	+1/-4	1575	2.8/1.8	2.4/1.8	2.5x2.5x0.63	HFFP10-CD	
NEW NJG1186PJJ	♥	L5/E5/B2/G3 L2C	19.5/19.0 19.0/18.5	1.7/2.0 1.7/2.0	-12	-	1164 to 1214 1227.6	2.8/1.8	4.8/3.8	1.57x1.23x0.47	HFFP10-JL	
U.D. NJG1186PJJ-A	♥	L5/E5/B2/G3 L2C	19.5/19.0 19.0/18.5	1.7/2.0 1.7/2.0	-12	-	1164 to 1214 1227.6	2.8/1.8	4.8/3.8	1.57x1.23x0.47	HFFP10-JL	

Low Noise Amplifiers (LNAs)

GNSS

Part No.	Auto-motive	Applications	Gain [dB] typ.	NF [dB] typ.	P-1dB [dBm] typ.	IIP3 [dBm] typ.	Frequency Range [MHz]	Operating Voltage [V]	Quiescent Current [mA] typ.	Package Size [mm]	Package Outline	Notes
NJG1107HB3	-	GNSS	17	1.1	-	-4	1575	2.7	2.5	1.5 x 1.5 x 0.75	USB8-B3	
NJG1107KB2	-	GNSS	17 15 14	1.2 1.2 1.3	-	-4 -2 -1.5	1500 1900 2400	2.7	3 3 3	2.1 x 2.0 x 0.75	FLP6-B2	
NJG1108HA8	-	GNSS/ WLAN/ WIMAX	19	1	-15	0	1575	2.7	2	1.0 x 1.2 x 0.38	USB6-A8	Stand-by Function
NJG1117HA8	-	GNSS	19.5	0.7	-16.5	-2	1575	2.7	3	1.0 x 1.2 x 0.38	USB6-A8	
NJG1130KA1	♥	GNSS	29	0.65	+11(out)	+14(OIP3)	1575	2.85	5	1.6 x 1.6 x 0.6	FLP6-A1	
NJG1143UA2	-	GNSS	20/19	0.7/0.75	-16.5/-19.5	-2/-6	1575	2.85/1.8	4/3	1.0 x 1.0 x 0.37	EPFFP6-A2	Stand-by Function
NJG1144KA1	♥	GNSS	21/18	0.65/0.85	-16.5/-18.5	-2/-6	1575	2.85/1.8	3.5/1.8	1.6 x 1.6 x 0.55	FLP6-A1	
NJG1150UA2	-	GNSS	16/16	0.6/0.6	-7/-9	+1/-1	1575	2.8/1.8	4.9/4.2	1.0 x 1.0 x 0.37	EPFFP6-A2	Stand-by Function
NJG1155UX2	-	GNSS	19/18.5	0.75/0.75	-12.5/-16	-1.5/-5	1575	2.8/1.8	3.5/3.1	1.1 x 0.7 x 0.37	EPFFP6-X2	Stand-by Function
NJG1187KG1	♥	GNSS	34 37 36	0.6 0.65 0.65	+13(out) +12(out) +12(out)	+17(OIP3) +19/+20(OIP3) +20(OIP3)	1575 1176/1227 1278	3.3	8	1.6 x 1.6 x 0.397	DFN6-G1 (ESON6-G1)	
NEW NJG1187AKGC-A	♥	GNSS	34 37	0.6 0.65	-19 -23	-18 -18	1559 to 1610 1164 to 1300	3.3	8.0	1.6 x 1.6 x 0.78	ESON6-GC	
NEW NT1191GAE3S	♥	GNSS	17.5/16.0	0.75/0.85	-10/-16	0/-6	1164 to 1610	3.3/1.8	5.5/3.5	1.6 x 1.6 x 0.78	DFN1616-6-GE	Stand-by Function
NEW NT1192FAAE1S	-	GNSS	20.0/19.5	0.70/0.75	-13/-17	-2.0/-5.5	1164 to 1300	2.8/1.8	4.5/3.5	1.1 x 0.7 x 0.37	EPFFP6-FA	Stand-by Function

Low Noise Amplifiers (LNAs)

CATV / DTV / STB H: High gain mode L: Low gain mode



Part No.	Auto-motive	Applications	Gain [dB] typ.		NF [dB] typ.	P-1dB [dBm] typ.		IIP3 [dB] typ.		Frequency Range [MHz]	Operating Voltage [V]	Quiescent Current [mA] typ.		Package Size [mm]	Package Outline
			H	L		H	L	H	L			H	L		
NJG1140KA1	-	TV tuner/ STB	9	-	2.5	+7	-	+9	-	50 to 2150	3.3	10	-	1.6 × 1.6 × 0.55	FLP6-A1
NJG1142KA1	-	H: High gain mode L: Low gain mode	14	-1	1.5	0	+17	+2	+22	170 to 900	2.8/1.8	6	11uA	1.6 × 1.6 × 0.55	FLP6-A1
NJG1145UA2	-	TV tuner/ STB	15	-1	1.5	0	+15	+10	+30	90 to 2150	2.8	20	11uA	1.0 × 1.0 × 0.37	EPFFP6-A2
NJG1146KG1 ♥	-	TV tuner/ STB	12	-1	2.2	+6	+16	+22	+33	40 to 900	5	60	30uA	1.6 × 1.6 × 0.397	DFN6-G1 (ESON6-G1)
NJG1151MD7	-	TV tuner/ STB	6	-	2.5	+7	-	+20	-	40 to 1000	5	100	-	1.6 × 1.6 × 0.397	EQFN14-D7
NJG1152KA1 ♥	-	TV tuner/ STB	18	-1	0.9	-5	+15	+7	+30	40 to 900	3.3	20	17uA	1.6 × 1.6 × 0.55	FLP6-A1
NJG1162K64 ♥	-	TV tuner/ STB	13	-1	2.2	+4	+16	+20	+33	40 to 1000	3.3	50	20uA	1.5 × 1.5 × 0.375	DFN8-64
NJG1740MHH ♥	-	TV tuner/ STB	18	-1	0.9	-	-	-5	1	40 to 780	5	40	10	3.4 × 2.6 × 0.7	EQFN26-HH

5G / LTE / 3G / WiMAX

H: High gain mode L: Low gain mode

Part No.	Auto-motive	Applications	Gain [dB] typ.		NF [dB] typ.		P-1dB [dBm] typ.		IIP3 [dB] typ.		Frequency Range [MHz]	Operating Voltage [V]	Quiescent Current [mA] typ.		Package Size [mm]	Package Outline
			H	L	H	L	H	L	H	L			H	L		
NJG1126HB6	-	Cellular/WLAN/WiMAX	16.5	-7	1.4	7	-12	+11	0	+16	2140	2.7	2.2	1uA	1.5 × 1.5 × 0.55	USB8-B6
NJG1127HB6	-	Cellular	15	-2.5	1.4	2.5	+9	+8	+11	+19	800	2.8	10	1uA	1.5 × 1.5 × 0.55	USB8-B6
NJG1128HB6	-	Cellular	15	-3	1.4	3	+9	+8	+11	+21	410	2.8	10	1uA	1.5 × 1.5 × 0.55	USB8-B6
NJG1169UX2	-	3G/LTE	12.5	-2.5	0.8	-	+1.0	-	0	-	880	2.8	4.8	15uA	1.1 × 0.7 × 0.37	EPFFP6-X2
NJG1170UX2	-	Cellular	14.5 15	-3	0.8 0.7	-	-8 -8.5	+10	+3.5 +2	+18 +17	2500 2000	2.8	4.8	15uA	1.1 × 0.7 × 0.37	EPFFP6-X2
NJG1173UX2	-	Cellular	13.5	-3.5	1	-	-10	+10	+5	+18	3500	2.8	5	15uA	1.1 × 0.7 × 0.37	EPFFP6-X2
NJG1175KG1 ♥	-	LTE/WLAN	16	-5.5	0.95	-	-5	+9	+9	+14	5500	3.3	13	20uA	1.6 × 1.6 × 0.397	DFN6-G1 (ESON6-G1)
NJG1182UX2	-	LTE/WLAN	15	-3.5	1.1	-	-11	+7.5	+2	+18	5500	2.8	5	20uA	1.1 × 0.7 × 0.37	EPFFP6-X2
NEW NT1189GDAE3S	-	5G	26 21	-	0.48 0.63	-	+19	-	-6 -1	-	3300 to 4200 4400 to 5000	5.0	50	100uA (Standby)	1.6 × 1.6 × 0.397	DFN1616-6-GD

WLAN

H: High gain mode L: Low gain mode

Part No.	Auto-motive	Applications	Gain [dB] typ.		NF [dB] typ.	P-1dB [dBm] typ.		IIP3 [dB] typ.		Frequency Range [MHz]	Operating Voltage [V]	Quiescent Current [mA] typ.		Package Size [mm]	Package Outline	Notes
			H	L		H	L	H	L			H	L			
NJG1175KG1 ♥	-	Cellular/WLAN	16	-5.5	0.95	-5	+9	+9	+14	5500	3.3	13	20uA	1.6 × 1.6 × 0.397	DFN6-G1 (ESON6-G1)	
NJG1182UX2	-	Cellular/WLAN	15	-3.5	-	-11	+7.5	+2	+18	5500	2.8	5	20uA	1.1 × 0.7 × 0.37	EPFFP6-X2	
NJG1730MD7	-	WLAN	15	-6	1.6	-4	+9	+7	+13	2400 to 2500	3.6	10	4uA	1.6 × 1.6 × 0.397	EQFN14-D7	SP3T Switch + LNA
NJG1739K51	-	WLAN	12	-8.5	2.5	0	+15	+9	+14	4900 to 5900	3.6	8	4uA	2.0 × 2.0 × 0.375	QFN12-51	SPDT Switch + LNA

RF Switches

5G / LTE / 3G / WiMAX / GSM



Part No.	Auto-motive	Function	P-0.1dB [dB] typ.	Power Level	Insertion Loss [dB] typ.	Isolation [dB] typ.	Frequency Range [GHz]	Package Size [mm]	Package Outline
NJG1635AHB6	-	SPDT Switch	34	High Power	0.30@0.9GHz 0.35@1.9GHz 0.40@2.7GHz	35@0.9/1.9GHz 33@2.7GHz	0.05 to 3	1.5 × 1.5 × 0.55	USB8-B6
NJG1648HB6	-	DPDT Switch	23	Low Power	0.20@0.5GHz 0.25@1GHz 0.40@2GHz	26@0.5GHz 21@1GHz 15@2GHz	0.1 to 3	1.5 × 1.5 × 0.55	USB8-B6
NJG1649HB6	-	SPDT Switch	29	High Power	0.35@1.0GHz 0.40@2.0GHz 0.45@2.5GHz	27@1.0GHz 22@2.0GHz 20@2.5GHz	0.05 to 3	1.5 × 1.5 × 0.55	USB8-B6
NJG1655ME7	-	DP6T Switch(X-SP3T)	23	Low Power	0.4@1.0GHz 0.45@2.0GHz	18@2.0GHz 21@2.0GHz	0.05 to 3	2.0 × 2.0 × 0.397	EQFN18-E7
NJG1657MD7	-	DPDT Switch	35	High Power	0.3@0.9GHz 0.4@1.9GHz	32@0.9GHz 26@1.9GHz	0.05 to 3	1.6 × 1.6 × 0.397	EQFN14-D7
NJG1665MD7 ♥	-	SP5T Switch	29	Middle Power	0.4@1.0GHz 0.5@2.0GHz 0.6@2.5GHz	29@1.0GHz 23@2.0GHz 21@2.5GHz	0.05 to 3	1.6 × 1.6 × 0.397	EQFN14-D7
NJG1666MD7 ♥	-	SPDT Switch	25	Middle Power	0.40@0.25GHz 0.45@1.0GHz 0.50@2.2GHz	70@0.25GHz 60@1.0GHz 60@2.2GHz	0.05 to 3	1.6 × 1.6 × 0.397	EQFN14-D7
NJG1667MD7	-	SP5T Switch	29	Middle Power	0.4@1.0GHz 0.5@2.0GHz 0.6@2.5GHz	29@1.0GHz 23@2.0GHz 21@2.5GHz	0.05 to 3	1.6 × 1.6 × 0.397	EQFN14-D7
NJG1681MD7 ♥	-	SPDT Switch	36	High Power	0.18@0.9GHz 0.20@1.9GHz 0.23@2.7GHz 0.45@6.0GHz	45@0.9GHz 35@1.9GHz 30@2.7GHz 20@6.0GHz	0.2 to 6	1.6 × 1.6 × 0.397	EQFN14-D7
NJG1682MD7 ♥	-	SP3T Switch	36	High Power	0.22@0.9GHz 0.25@1.9GHz 0.30@2.7GHz	35@0.9GHz 30@1.9GHz 27@2.7GHz	0.2 to 3	1.6 × 1.6 × 0.397	EQFN14-D7
NJG1683ME7	-	X-SP3T Switch(DP6T) High Isolation	23	Low Power	0.35@1.0GHz 0.45@2.0GHz 0.60@2.7GHz	55@1.0GHz* 47@2.0GHz* 45@2.7GHz*	0.05 to 3	2.0 × 2.0 × 0.397	EQFN18-E7
NJG1684ME2	-	SP4T Switch	36	High Power	0.25@0.9GHz 0.30@1.9GHz 0.35@2.7GHz	37@0.9GHz 29@1.9GHz 25@2.7GHz	0.2 to 3	1.8 × 1.8 × 0.397	EQFN12-E2
NJG1686MHH	-	SP10T Switch	-	High Power	0.65@452 to 960MHz 0.30@452 to 960MHz 0.75@1710 to 2170MHz 0.45@1710 to 2170MHz 1.10@2300 to 2690MHz 0.45@2300 to 2690MHz 1.05@GSM850/900 1.20@GSM1800/1900	38@GSM850/900 34@GSM1800/1900 25@452 to 2690MHz 36@1805 to 1990MHz 33@452 to 2690MHz	0.2 to 3	2.6 × 3.4 × 0.7	EQFN26-HH
NJG1690MD7	-	DP4T Switch(X-SPDT) High Isolation	24	Low Power	0.3@1GHz 0.4@2GHz 0.45@2.7GHz	37@2.7GHz* 29@1GHz 24@2GHz 21@2.7GHz	0.05 to 3	1.6 × 1.6 × 0.397	EQFN14-D7
NJG1695ME7	-	X-SP4T Switch (DP8T) High Isolation	23	Low Power	0.45@1.0GHz 0.55@2.0GHz 0.80@2.7GHz	43@1.0GHz* 38@2.0GHz* 35@2.7GHz*	0.05 to 3	2.0 × 2.0 × 0.397	EQFN18-E7
NJG1697EM1	-	SPDT Switch High Isolation	21	Low Power	0.45@1GHz 0.50@2GHz 0.55@2.7GHz	50@1GHz 48@2GHz 43@2.7GHz	0.5 to 3	1.0 × 1.0 × 0.38	DFN6-M1
NJG1699MD7	-	SP4T Switch High Isolation	21	Low Power	0.55@1GHz 0.55@2GHz 0.60@2.7GHz	50@1GHz 48@2GHz 43@2.7GHz	0.5 to 3	1.6 × 1.6 × 0.397	EQFN14-D7
NJG1800NB2 ♥	-	DP4T Switch(X-SPDT)	21	Low Power	0.38@2GHz 0.36@2.7GHz	39@2GHz 37@2.7GHz	0.5 to 3	1.55 × 1.15 × 0.55	EPCSP10-B2
NJG1802K51 ♥	-	SPDT Switch	36	High Power	0.18@0.9GHz 0.20@1.9GHz 0.23@2.7GHz	50@0.9GHz 38@1.9GHz 33@2.7GHz	0.2 to 6	2.0 × 2.0 × 0.375	QFN12-51
NJG1808K94 ♥	-	SP3T Switch	24	Low Power	0.35@1.0GHz 0.4@2.0GHz 0.4@2.7GHz	29@1.0GHz 26@2.0GHz 24@2.7GHz	0.7 to 3	1.1 × 1.1 × 0.425	QFN9-94
NJG1809ME7 ♥	-	SP4T Switch	32	High Power	0.4@2.7GHz 0.4@3.5GHz 0.5@5.85GHz	27@2.7GHz 25@3.5GHz 30@5.85GHz	0.2 to 6	2.0 × 2.0 × 0.397	EQFN18-E7
NJG1812ME4 ♥	-	DPDT Switch	36	High Power	0.25@900MHz 0.35@1900MHz 0.45@2700MHz	25@900MHz 20@1900MHz 17@2700MHz	0.2 to 3	2.0 × 2.0 × 0.397	EQFN12-E4
NJG1814MD7 ♥	-	SPDT Switch	33	High Power	0.35@0.7GHz 0.38@2.0GHz 0.40@2.7GHz 0.45@5.85GHz	42@0.7GHz 35@2.0GHz 34@2.7GHz 33@5.85GHz	0.2 to 6	1.6 × 1.6 × 0.397	EQFN14-D7
NJG1817ME4 ♥	-	SPDT Switch	40	High Power	0.35@3.85GHz 0.4@4.7GHz 0.45@6.0GHz	27@3.85GHz 27@4.7GHz 25@6.0GHz	0.2 to 6	2.0 × 2.0 × 0.397	EQFN12-E4
NJU1206MER	-	SP6T Switch	34	High Power	0.30@0.9GHz 0.40@1.9GHz 0.50@2.7GHz	40@0.9GHz 30@1.9GHz 26@2.7GHz	0.2 to 3	2.0 × 2.0 × 0.397	EQFN14-ER

RF Switches

WLAN / Bluetooth



Part No.	Auto-motive	Function	P-0.1dB [dB] typ.	Power Level	Insertion Loss [dB] typ.	Isolation [dB] typ.	Frequency Range [GHz]	Package Size [mm]	Package Outline
NJG1608KB2	-	SPDT Switch	27	High Power	0.3@2.0GHz 0.5@2.5GHz 0.6@5.85GHz	29@2.0GHz 30@2.5GHz 18@2.5GHz	0.1 to 6	2.1 × 2.0 × 0.75	FLP6-B2
NJG1615HA8	-	SPDT Switch	27	High Power	0.55@5.85GHz	25@2.5GHz	0.1 to 6	1.0 × 1.2 × 0.38	USB6-A8
NJG1617K11	-	DPDT Switch	31	High Power	0.75@6GHz	25@6GHz	0.1 to 6	3.0 × 3.0 × 0.75	QFN12-11
NJG1650HB6	-	SP3T Switch	28	High Power	0.38@1.0GHz 0.42@2.0GHz 0.45@2.5GHz	29@1.0GHz 23@2.0GHz 21@2.5GHz	0.05 to 3	1.5 × 1.5 × 0.55	USB8-B6
NJG1660HA8	♥	SPDT Switch	32	High Power	0.35@2.5GHz 0.45@3.5GHz 0.50@6.0GHz	33@2.5GHz 30@3.5GHz 21@6.0GHz	0.05 to 8	1.0 × 1.2 × 0.38	USB6-A8
NJG1669MD7	♥	SPDT Switch	36	High Power	0.35@2.5GHz 0.40@3.5GHz 0.45@6.0GHz	28@2.5GHz 29@3.5GHz 25@6.0GHz	0.05 to 6	1.6 × 1.6 × 0.397	EQFN14-D7
NJG1801AKGC-A	♥	SPDT Switch	31	High Power	0.35@0.3 to 2.5GHz 0.45@4.9 to 5.9GHz 0.6@8.5GHz	28@0.3 to 2.5GHz 27@4.9 to 5.9GHz 18@8.5GHz	0.3 to 8.5	1.6 × 1.6 × 0.78	ESON6-GC
NJG1801BKGC-A	♥	SPDT Switch	31	High Power	0.35@0.3 to 2.5GHz 0.45@4.9 to 5.9GHz 0.6@8.5GHz	28@0.3 to 2.5GHz 27@4.9 to 5.9GHz 18@8.5GHz	0.3 to 8.5	1.6 × 1.6 × 0.78	ESON6-GC
NJG1801K75	♥	SPDT Switch	31@2.5GHz 31@5.9GHz 31@8.5GHz	High Power	0.35@2.4 to 2.5GHz 0.45@4.9 to 5.9GHz 0.60@8.5GHz	28@2.4 to 2.5GHz 30@4.9 to 5.9GHz 20@8.5GHz	0.05 to 8.5	1.0 × 1.0 × 0.375	DFN6-75
NJG1804K64	♥	SP3T Switch	29@2.5GHz 29@5.9GHz	High Power	0.50@2.4 to 2.5GHz 0.60@4.9 to 5.9GHz	30@2.4 to 2.5GHz 26@4.9 to 5.9GHz	0.05 to 6	1.5 × 1.5 × 0.375	DFN8-64
NJG1806K75	♥	SPDT Switch	31@0.7 to 5.9GHz	High Power	0.35@0.7GHz 0.35@1.9GHz 0.35@2.4 to 2.5GHz 0.4@4.9 to 5.9GHz	30@0.7GHz 25@1.9GHz 25@2.4 to 2.5GHz 25@4.9 to 5.9GHz	0.05 to 6	1.0 × 1.0 × 0.375	DFN6-75
NJG1809ME7	♥	SP4T Switch	32	High Power	0.4@2.7GHz 0.4@3.5GHz 0.5@5.85GHz	27@2.7GHz 25@3.5GHz 30@5.85GHz	0.2 to 6	2.0 × 2.0 × 0.397	EQFN18-E7
NJG1814MD7	♥	SPDT Switch	33	High Power	0.35@0.7GHz 0.38@2.0GHz 0.40@2.7GHz 0.45@5.85GHz	42@0.7GHz 35@2.0GHz 34@2.7GHz 33@5.85GHz	0.2 to 6	1.6 × 1.6 × 0.397	EQFN14-D7
NJG1815AK75-A	♥	SPDT Switch	31	High Power	0.45@2.4 to 2.5GHz 0.45@3.4 to 3.8GHz 0.4@4.9 to 6GHz	25@2.4 to 2.5GHz 25@3.4 to 3.8GHz 25@4.9 to 6GHz	2.4 to 6	1.0 × 1.0 × 0.375	DFN6-75
NJG1815K75	♥	SPDT Switch	31	High Power	0.45@2.4 to 2.5GHz 0.4@4.9 to 6GHz	25@2.4 to 2.5GHz 25@4.9 to 6GHz	1 to 6	1.0 × 1.0 × 0.375	DFN6-75
NJG1817ME4	♥	SPDT Switch	40	High Power	0.35@3.85GHz 0.4@4.7GHz 0.45@6.0GHz	27@3.85GHz 27@4.7GHz 25@6.0GHz	0.05 to 6	2.0 × 2.0 × 0.397	EQFN12-E4
NEW NJG1818K75	♥	SPDT Switch	31	Middle Power	0.50@2.4 to 2.5GHz 0.50@4.9 to 5.9GHz 0.55@5.9 to 7.125GHz	25@2.4 to 2.5GHz 25@4.9 to 5.9GHz 25@5.9 to 7.125GHz	1 to 7.125	1.0 × 1.0 × 0.375	DFN6-75

LPWA

Part No.	Auto-motive	Function	P-0.1dB [dB] typ.	Power Level	Insertion Loss [dB] typ.	Isolation [dB] typ.	Frequency Range [GHz]	Package Size [mm]	Package Outline
NJG1801K75	♥	SPDT Switch	31@2.5GHz 31@5.9GHz 31@8.5GHz	High Power	0.35@2.4 to 2.5GHz 0.45@4.9 to 5.9GHz 0.60@8.5GHz	28@2.4 to 2.5GHz 30@4.9 to 5.9GHz 20@8.5GHz	0.05 to 8.5	1.0 × 1.0 × 0.375	DFN6-75
NJG1804K64	♥	SP3T Switch	29@2.5GHz 29@5.9GHz	High Power	0.50@2.4 to 2.5GHz 0.60@4.9 to 5.9GHz	30@2.4 to 2.5GHz 26@4.9 to 5.9GHz	0.05 to 6	1.5 × 1.5 × 0.375	DFN8-64
NJG1806K75	♥	SPDT Switch	31@0.7 to 5.9GHz	High Power	0.35@0.7GHz 0.35@1.9GHz 0.35@2.4 to 2.5GHz 0.4@4.9 to 5.9GHz	30@0.7GHz 25@1.9GHz 25@2.4 to 2.5GHz 25@4.9 to 5.9GHz	0.05 to 6	1.0 × 1.0 × 0.375	DFN6-75
NJG1813KG1	♥	DPDT Switch	30	Middle Power	0.45@920MHz	30@920MHz	0.05 to 3	1.6 × 1.6 × 0.397	DFN6-G1
NJG1816K75	♥	SPDT Switch	30	High Power	0.45@920MHz	30@920MHz	0.05 to 3	1.0 × 1.0 × 0.375	DFN6-75

Small Cell / Customer Premises Equipment (CPE)

Part No.	Auto-motive	Function	P-0.1dB [dB] typ.	Power Level	Insertion Loss [dB] typ.	Isolation [dB] typ.	Frequency Range [GHz]	Package Size [mm]	Package Outline
NJG1608KB2	-	SPDT Switch	27	High Power	0.3@2.0GHz 0.5@2.5GHz 0.6@5.85GHz	29@2.0GHz 30@2.5GHz 18@2.5GHz	0.1 to 6	2.1 × 2.0 × 0.75	FLP6-B2
NJG1615HA8	-	SPDT Switch	27	High Power	0.55@5.85GHz	25@2.5GHz	0.1 to 6	1.0 × 1.2 × 0.38	USB6-A8
NJG1660HA8	♥	SPDT Switch	32	High Power	0.35@2.5GHz 0.45@3.5GHz 0.50@6.0GHz	33@2.5GHz 30@3.5GHz 21@6.0GHz	0.05 to 8	1.0 × 1.2 × 0.38	USB6-A8
NJG1669MD7	♥	SPDT Switch	36	High Power	0.35@2.5GHz 0.40@3.5GHz 0.45@6.0GHz	28@2.5GHz 29@3.5GHz 25@6.0GHz	0.05 to 6	1.6 × 1.6 × 0.397	EQFN14-D7

Part No.	Auto-motive	Function	P-0.1dB [dB] typ.	Power Level	Insertion Loss [dB] typ.	Isolation [dB] typ.	Frequency Range [GHz]	Package Size [mm]	Package Outline
NJG1699MD7	-	SP4T Switch High Isolation	21	Low Power	0.55@1GHz 0.55@2GHz 0.60@2.7GHz	50@1GHz 48@2GHz 43@2.7GHz	0.5 to 3	1.6 × 1.6 × 0.397	EQFN14-D7
NJG1801K75	♥	SPDT Switch	31@2.5GHz 31@5.9GHz 31@8.5GHz	High Power	0.35@2.4 to 2.5GHz 0.45@4.9 to 5.9GHz 0.60@8.5GHz	28@2.4 to 2.5GHz 30@4.9 to 5.9GHz 20@8.5GHz	0.05 to 8.5	1.0 × 1.0 × 0.375	DFN6-75
NJG1806K75	♥	SPDT Switch	31	Middle Power	0.35@0.7GHz 0.35@1.9GHz 0.35@2.4 to 2.5GHz 0.4@4.9 to 5.9GHz	30@0.7GHz 25@1.9GHz 25@2.4 to 2.5GHz 25@4.9 to 5.9GHz	0.05 to 6	1.0 × 1.0 × 0.375	DFN6-75
NJG1814MD7	♥	SPDT Switch	33	High Power	0.35@0.7GHz 0.38@2.0GHz 0.40@2.7GHz 0.45@5.85GHz	42@0.7GHz 35@2.0GHz 34@2.7GHz 33@5.85GHz	0.2 to 6	1.6 × 1.6 × 0.397	EQFN14-D7
NJG1815K75	♥	SPDT Switch	31	High Power	0.45@2.4 to 2.5GHz 0.4@4.9 to 6GHz	25@2.4 to 2.5GHz 25@4.9 to 6GHz	1 to 6	1.0 × 1.0 × 0.375	DFN6-75
NJG1817ME4	♥	SPDT Switch	40	High Power	0.35@3.85GHz 0.4@4.7GHz 0.45@6.0GHz	27@3.85GHz 27@4.7GHz 25@6.0GHz	0.2 to 6	0.05 to 6	EQFN12-E4

Mobile Communication Devices

Part No.	Auto-motive	Function	P-0.1dB [dB] typ.	Power Level	Insertion Loss [dB] typ.	Isolation [dB] typ.	Frequency Range [GHz]	Package Size [mm]	Package Outline
NJG1512HD3	-	SPDT Switch	20	Low Power	0.6@1.0GHz	44@1.0GHz	0.001 to 3	2.0 × 1.8 × 0.85	USB6-D3
NJG1608KB2	-	SPDT Switch	27	High Power	0.3@2.0GHz 0.5@2.5GHz 0.6@5.85GHz	29@2.0GHz 30@2.5GHz 18@2.5GHz	0.1 to 6	2.1 × 2.0 × 0.75	FLP6-B2
NJG1615HA8	-	SPDT Switch	27	High Power	0.55@5.85GHz	25@2.5GHz	0.1 to 6	1.0 × 1.2 × 0.38	USB6-A8
NJG1617K11	-	DPDT Switch	31	High Power	0.75@6GHz	25@6GHz	0.1 to 6	3.0 × 3.0 × 0.75	QFN12-11
NJG1635AHB6	-	SPDT Switch	34	High Power	0.30@0.9GHz 0.35@1.9GHz 0.40@2.7GHz	35@0.9/1.9GHz 33@2.7GHz	0.05 to 3	1.5 × 1.5 × 0.55	USB8-B6
NJG1648HB6	-	DPDT Switch	23	Low Power	0.20@0.5GHz 0.25@1GHz 0.40@2GHz	26@0.5GHz 21@1GHz 15@2GHz	0.1 to 3	1.5 × 1.5 × 0.55	USB8-B6
NJG1649HB6	-	SPDT Switch	29	High Power	0.35@1.0GHz 0.40@2.0GHz 0.45@2.5GHz	27@1.0GHz 22@2.0GHz 20@2.5GHz	0.05 to 3	1.5 × 1.5 × 0.55	USB8-B6
NJG1650HB6	-	SP3T Switch	28	High Power	0.38@1.0GHz 0.42@2.0GHz 0.45@2.5GHz	29@1.0GHz 23@2.0GHz 21@2.5GHz	0.05 to 3	1.5 × 1.5 × 0.55	USB8-B6
NJG1655ME7	-	DP6T Switch (X-SP3T)	23	Low Power	0.4@1.0GHz 0.45@2.0GHz	18@2.0GHz 21@2.0GHz	0.05 to 3	2.0 × 2.0 × 0.397	EQFN18-E7
NJG1657MD7	-	DPDT Switch	35	High Power	0.3@0.9GHz 0.4@1.9GHz	32@0.9GHz 26@1.9GHz	0.05 to 3	1.6 × 1.6 × 0.397	EQFN14-D7
NJG1660HA8	♥	SPDT Switch	32	High Power	0.35@2.5GHz 0.45@3.5GHz 0.50@6.0GHz	33@2.5GHz 30@3.5GHz 21@6.0GHz	0.05 to 8	1.0 × 1.2 × 0.38	USB6-A8
NJG1665MD7	♥	SP5T Switch	29	Middle Power	0.4@1.0GHz 0.5@2.0GHz 0.6@2.5GHz	29@1.0GHz 23@2.0GHz 21@2.5GHz	0.05 to 3	1.6 × 1.6 × 0.397	EQFN14-D7
NJG1666MD7	♥	SPDT Switch	25	Middle Power	0.40@0.25GHz 0.45@1.0GHz 0.50@2.2GHz	70@0.25GHz 60@1.0GHz 60@2.2GHz	0.05 to 3	1.6 × 1.6 × 0.397	EQFN14-D7
NJG1667MD7	-	SP5T Switch	29	Middle Power	0.4@1.0GHz 0.5@2.0GHz 0.6@2.5GHz	29@1.0GHz 23@2.0GHz 21@2.5GHz	0.05 to 3	1.6 × 1.6 × 0.397	EQFN14-D7
NJG1669MD7	♥	SPDT Switch	36	High Power	0.35@2.5GHz 0.40@3.5GHz 0.45@6.0GHz	28@2.5GHz 29@3.5GHz 25@6.0GHz	0.05 to 6	1.6 × 1.6 × 0.397	EQFN14-D7
NJG1681MD7	♥	SPDT Switch	36	High Power	0.18@0.9GHz 0.20@1.9GHz 0.23@2.7GHz 0.45@6.0GHz	45@0.9GHz 35@1.9GHz 30@2.7GHz 20@6.0GHz	0.2 to 6	1.6 × 1.6 × 0.397	EQFN14-D7
NJG1682MD7	♥	SP3T Switch	36	High Power	0.22@0.9GHz 0.25@1.9GHz 0.30@2.7GHz	35@0.9GHz 30@1.9GHz 27@2.7GHz	0.2 to 3	1.6 × 1.6 × 0.397	EQFN14-D7
NJG1683ME7	-	X-SP3T Switch(DP6T) High Isolation	23	Low Power	0.35@1.0GHz 0.45@2.0GHz 0.60@2.7GHz	55@1.0GHz* 47@2.0GHz* 45@2.7GHz*	0.05 to 3	2.0 × 2.0 × 0.397	EQFN18-E7

RF Switches

Mobile Communication Devices



Part No.	Auto-motive	Function	P-0.1dB [dB] typ.	Power Level	Insertion Loss [dB] typ.	Isolation [dB] typ.	Frequency Range [GHz]	Package Size [mm]	Package Outline
NJG1684ME2	-	SP4T Switch	36	High Power	0.25@0.9GHz 0.30@1.9GHz 0.35@2.7GHz	37@0.9GHz 29@1.9GHz 25@2.7GHz	0.2 to 3	1.8 × 1.8 × 0.397	EQFN12-E2
NJG1686MHH	-	SP10T Switch	-	High Power	0.65@452 to 960MHz 0.30@452 to 960MHz 0.75@1710 to 2170MHz 0.45@1710 to 2170MHz 1.10@2300 to 2690MHz 0.45@2300 to 2690MHz 1.05@GSM850/900 1.20@GSM1800/1900	38@GSM850/900 34@GSM1800/1900 25@452 to 2690MHz 36@1805 to 1990MHz 33@452 to 2690MHz	0.2 to 3	2.6 × 3.4 × 0.7	EQFN26-HH
NJG1690MD7	-	DP4T Switch (X-SPDT) High Isolation	24	Low Power	0.3@1GHz 0.4@2GHz 0.45@2.7GHz	37@2.7GHz* 29@1GHz 24@2GHz 21@2.7GHz	0.05 to 3	1.6 × 1.6 × 0.397	EQFN14-D7
NJG1695ME7	-	X-SP4T Switch (DP8T) High Isolation	23	Low Power	0.45@1.0GHz 0.55@2.0GHz 0.80@2.7GHz	43@1.0GHz* 38@2.0GHz* 35@2.7GHz*	0.05 to 3	2.0 × 2.0 × 0.397	EQFN18-E7
NJG1697EM1	-	SPDT Switch High Isolation	21	Low Power	0.45@1GHz 0.50@2GHz 0.55@2.7GHz	50@1GHz 48@2GHz 43@2.7GHz	0.5 to 3	1.0 × 1.0 × 0.38	DFN6-M1
NJG1699MD7	-	SP4T Switch High Isolation	21	Low Power	0.55@1GHz 0.55@2GHz 0.60@2.7GHz	50@1GHz 48@2GHz 43@2.7GHz	0.5 to 3	1.6 × 1.6 × 0.397	EQFN14-D7
NJG1800NB2	♥	DP4T Switch (X-SPDT)	21	Low Power	0.38@2GHz 0.36@2.7GHz	39@2GHz 37@2.7GHz	0.5 to 3	1.55 × 1.15 × 0.55	EPCSP10-B2
NJG1801K75	♥	SPDT Switch	31@2.5GHz 31@5.9GHz 31@8.5GHz	High Power	0.35@2.4 to 2.5GHz 0.45@4.9 to 5.9GHz 0.60@8.5GHz	28@2.4 to 2.5GHz 30@4.9 to 5.9GHz 20@8.5GHz	0.05 to 8.5	1.0 × 1.0 × 0.375	DFN6-75
NJG1802K51	♥	SPDT Switch	36	High Power	0.18@0.9GHz 0.20@1.9GHz 0.23@2.7GHz	50@0.9GHz 38@1.9GHz 33@2.7GHz	0.2 to 6	2.0 × 2.0 × 0.375	QFN12-51
NJG1804K64	♥	SP3T Switch	29@2.5GHz 29@5.9GHz	High Power	0.50@2.4 to 2.5GHz 0.60@4.9 to 5.9GHz	30@2.4 to 2.5GHz 26@4.9 to 5.9GHz	0.05 to 6	1.5 × 1.5 × 0.375	DFN8-64
NJG1806K75	♥	SPDT Switch	31@0.7 to 5.9GHz	High Power	0.35@0.7GHz 0.35@1.9GHz 0.35@2.4 to 2.5GHz 0.4@4.9 to 5.9GHz	30@0.7GHz 25@1.9GHz 25@2.4 to 2.5GHz 25@4.9 to 5.9GHz	0.05 to 6	1.0 × 1.0 × 0.375	DFN6-75
NJG1808K94	♥	SP3T Switch	24	Low Power	0.35@1.0GHz 0.4@2.0GHz 0.4@2.7GHz	29@1.0GHz 26@2.0GHz 24@2.7GHz	0.7 to 3	1.1 × 1.1 × 0.425	QFN9-94
NJG1809ME7	♥	SP4T Switch	32	High Power	0.4@2.7GHz 0.4@3.5GHz 0.5@5.85GHz	27@2.7GHz 25@3.5GHz 30@5.85GHz	0.2 to 6	2.0 × 2.0 × 0.397	EQFN18-E7
NJG1812ME4	♥	DPDT Switch	36	High Power	0.25@900MHz 0.35@1900MHz 0.45@2700MHz	25@900MHz 20@1900MHz 17@2700MHz	0.2 to 3	2.0 × 2.0 × 0.397	EQFN12-E4
NJG1813KG1	♥	DPDT Switch	30	High Power	0.45@920MHz	30@920MHz	0.05 to 3	1.6 × 1.6 × 0.397	EQFN6-G1
NJG1814MD7	♥	SPDT Switch	33	High Power	0.35@0.7GHz 0.38@2.0GHz 0.40@2.7GHz 0.45@5.85GHz	42@0.7GHz 35@2.0GHz 34@2.7GHz 33@5.85GHz	0.2 to 6	1.6 × 1.6 × 0.397	EQFN14-D7
NJG1815K75	♥	SPDT Switch	31	High Power	0.45@2.4 to 2.5GHz 0.4@4.9 to 6GHz	25@2.4 to 2.5GHz 25@4.9 to 6GHz	1 to 6	1.0 × 1.0 × 0.375	DFN6-75
NJG1816K75	♥	SPDT Switch	30	High Power	0.45@920MHz	30@920MHz	0.05 to 3	1.0 × 1.0 × 0.375	DFN6-75
NEW NJG1818K75	♥	SPDT Switch	31	High Power	0.50@2.4 to 2.5GHz 0.50@4.9 to 5.9GHz 0.55@5.9 to 7.125GHz	25@2.4 to 2.5GHz 25@4.9 to 5.9GHz 25@5.9 to 7.125GHz	1 to 7.125	1.0 × 1.0 × 0.375	DFN6-75
NJU1206MER	-	SP6T Switch	34	High Power	0.30@0.9GHz 0.40@1.9GHz 0.50@2.7GHz	40@0.9GHz 30@1.9GHz 26@2.7GHz	0.2 to 3	2.0 × 2.0 × 0.397	EQFN14-ER

Automotive

Part No.	Auto-motive	Function	P-0.1dB [dB] typ.	Power Level	Insertion Loss [dB] typ.	Isolation [dB] typ.	Frequency Range [GHz]	Package Size [mm]	Package Outline
NJG1801AKGC-A	♥	SPDT Switch	31	High Power	0.35@0.3 to 2.5GHz 0.45@4.9 to 5.9GHz 0.6@8.5GHz	28@0.3 to 2.5GHz 27@4.9 to 5.9GHz 18@8.5GHz	0.3 to 8.5	1.6 × 1.6 × 0.78	ESON6-GC
NJG1801BKGC-A	♥	SPDT Switch	31	High Power	0.35@0.3 to 2.5GHz 0.45@4.9 to 5.9GHz 0.6@8.5GHz	28@0.3 to 2.5GHz 27@4.9 to 5.9GHz 18@8.5GHz	0.3 to 8.5	1.6 × 1.6 × 0.78	ESON6-GC
NJG1812AMET-A	♥	DPDT Switch	36	High Power	0.25@900MHz 0.35@1900MHz 0.45@2700MHz	25@900MHz 20@1900MHz 17@2700MHz	0.7 to 2.7	2.0 × 2.0 × 0.78	EQFN12-ET
NJG1815AK75-A	♥	SPDT Switch	31	High Power	0.45@2.4 to 2.5GHz 0.45@3.4 to 3.8GHz 0.4@4.9 to 6GHz	25@2.4 to 2.5GHz 25@3.4 to 3.8GHz 25@4.9 to 6GHz	2.4 to 6	1.0 × 1.0 × 0.375	DFN6-75

SAW Filters

GPS



Part No.	Applications	Center Frequency f0 [MHz]	Passband Width [MHz]	Package Size [mm]	Notes
NSNJ9200A	GNSS GPS GLONASS Beidou	1582.471	4.092 2 8.34	2.0 × 1.6 × 0.65	High ATT Type
NSNJ9205	GPS-L2	1227.6	20	2.0 × 1.6 × 0.65	High ATT Type
NSNJ9208	GPS-L6	1278.75	10	2.0 × 1.6 × 0.65	Low Loss Type
NSVS1174	GPS-L1	1575.42	2	3.0 × 3.0 × 1.15	
NSVS9013A	GPS-L1	1575.42	2	2.0 × 1.6 × 0.65	High ATT Type
NSTS9110A	GPS-L1	1575.42	2	2.0 × 1.6 × 0.65	Low Loss Type
NSTS9116A	GPS+GLONASS	1589.5	32	2.0 × 1.6 × 0.65	Low Loss Type
NSTS9117A	GPS+GLONASS	1589.5	32	2.0 × 1.6 × 0.65	High ATT Type

Automotive

Part No.	Applications	Center Frequency f0 [MHz]	Passband Width [MHz]	Package Size [mm]	Notes
NSVS1154	Keyless Entry Systems	315	1	3.0 × 3.0 × 1.15	
NSVS1231	Keyless Entry Systems	868	4	3.0 × 3.0 × 1.15	
NSVS9012	Keyless Entry Systems	314.85	0.6	3.0 × 3.0 × 1.15	
NSVS9016	Keyless Entry Systems	315	0.6	3.0 × 3.0 × 1.15	
NSTS9118	Keyless Entry Systems	433.92	0.4	3.0 × 3.0 × 1.15	



Low Power Transceiver

Part No.	Applications	Center Frequency f0 [MHz]	Passband Width [MHz]	Package Size [mm]	Notes
NSNJ2014	ASIA AMR	922.5	5	2.0 × 1.6 × 0.65	CHK/HKG/THA
NSNJ2016	Australia AMR	921.5	13	2.0 × 1.6 × 0.65	
NSNJ2021	New Zealand AMR	924.5	5	2.0 × 1.6 × 0.65	
NSTS1431	Transceiver	426.42	1	3.0 × 3.0 × 1.15	
NSTS1444	JAP AMR	924	8	3.0 × 3.0 × 1.15	
NSTS1449	JAP AMR	924	8	3.0 × 3.0 × 1.15	
NSVS1093	Transceiver	429.42	1	3.0 × 3.0 × 1.15	
NSVS1126	Transceiver	429.42	1	3.0 × 3.0 × 1.15	
NSVS1145	Transceiver	426	1	3.0 × 3.0 × 1.15	
NSVS1231	EU AMR	868	4	3.0 × 3.0 × 1.15	

PHS

Part No.	Applications	Center Frequency f0 [MHz]	Passband Width [MHz]	Package Size [mm]	Notes
NSTS1437	PHS-RF base station	1902	35.2	3.0 × 3.0 × 1.15	

PATENT
JP2096558, JP2131273, JP2598110, JP2601543, JP2606708, JP2673993, JP2933171, JP3293671, JP3181158, JP3194849, US4878036, US4973875, US5175519, US5252882, US5471722, US5521453, US5523641

Actuator/Gate Drivers

DC Brush Motor / Actuator Drivers



Part No.	Automotive	Driver Formation *Half Bridge x2= H-Bridge		Output Current [A] max.	Motor Voltage [V]			Logic Voltage [V]	Package Outline
		Output Form	Number of channel		Absolute Maximum Rating	Operating Voltage			
						min.	max.		
NJU7325	-	BTL	2	0.6	7	2.4	5.5	-	MSOP8(VSP8), MSOP8(TVSP8), DFN8-V1(ESON8-V1)
NJU7381A	-	Dual H Bridge	4	0.4	7	1.8	5.5	-	SSOP16, EQFN16-JE
NJU7385	-	Dual H Bridge	4	0.7	9	3	8	2.5 to 5.5	SSOP20-C3
NJU7386 ♥	-	H-Bridge	2	1.5	7	1.8	5.5	-	MSOP8(TVSP8)
NJU7386A ♥	-	H-Bridge	2	1.7	7	1.8	5.5	-	DFN8-V1(ESON8-V1)
NJW4381	✓	Dual H Bridge	4	1.5	40	8	36	-	SSOP32
NJW4801	-	Half Bridge	1	0.45	40	8	35	-	MSOP8(VSP8)
NJW4810A	-	Dual Half Bridge	2	1	45	8	40	-	HSOP8-M1
NJW4813	-	Dual Half Bridge	2	0.2	40	8	35	2.7 to 5.5	PCSP20-E3
NJW4814	-	Dual H Bridge	4	0.02	40	8	35	2.7 to 5.5	EQFN24-LE
NJW4820	-	Sink	1	0.5	43	-	40	2.64 to 5.5	SOT-23-5
NJW4822 ♥	-	Sink	1	0.2	43	-	40	2.64 to 5.5	DFN6-H1(ESON6-H1)
NJW4830 ♥	✓	Source	1	0.5	45	4.6	40	2.64 to 5.5	SOT-89-5-2
NJW4832 ♥	-	Source	1	0.2	45	4.6	40	2.64 to 5.5	DFN6-H1(ESON6-H1)

FET Gate Drivers

Part No.	Automotive	Operating Temperature [°C]	External FET Type	Number of channel	Output Current [A] max.	Operating Voltage [V]			Package Outline
						Absolute Maximum Rating	Operating Voltage		
							min.	max.	
NJW4840	✓	-40 to +105	Low Side Nch.	1	4	24	8	20	MSOP8(VSP8)
NJW4841 ♥	✓	-40 to +85	Low Side Nch.	1	2	40	4	20	MSOP8(VSP8)
NJW4860	-	-40 to +125	Low Side Nch.	2	1	40	4	20	HSOP8-M1, DFN8-V1(ESON8-V1)

Stepper Motor ICs Drivers



Part No.	Automotive	Output Current [A] max.	Motor Voltage			Logic Voltage [V]	Number of Motors	Key Features				Package Outline	Notes
			Absolute Maximum Rating [V]	Operating Voltage [V]				Input Mode	Exitation Mode	Constant Current			
				min.	max.					VR Input	Current Select		
NJU7381A	-	0.4	7	1.8	5.5	-	1	2IN	2/1-2	-	-	SSOP16, EQFN16-JE	
NJU7382A	-	0.4	7	1.8	5.5	-	1	Phase +EN	2/1-2	-	-	EQFN16-JE	
NJU7384	-	0.7	9	4	8	3 to 5.5	1	CLK	2/1-2	-	-	SSOP32	
NJU7385	-	0.7	9	3	8	2.5 to 5.5	1	Phase +EN 2IN	2/1-2	-	-	SSOP20-C3	
NJW4372	-	0.8	40	9	36	2.7 to 5.5	1	CLK	2/1-2	Yes	2bit	SSOP32	
NJW4375	-	0.8(Bipolar) 1.5(Unipolar)	40	10	36	2.7 to 5.5	1	SPI	2/1-2	Yes	Data	SDIP22, SSOP32	
NJW4381	✓	1.5	40	8	36	-	1	Phase +EN 2IN	2/1-2	Yes	-	SSOP32	
NJW4382 ♥	-	1.5	40	8	36	-	1	Phase +Ix	2/1-2/ W1-2	Yes	2bit	HTSSOP24-P1	
NJW4351	-	1.5	55	-	50	2.7 to 5.5	1	CLK	2/1-2	-	-	SSOP20-C3	

Controller

Part No.	Automotive	Logic Voltage [V]	Number of Motors	Key Features			Package Outline
				Input Mode	Output Mode	Excitation Mode for Motor Driver	
NJU7380	-	4.75 to 5.25	1	CLK	Phase +EN	2/1-2	DMP14

Three-Phase BLDC Motor ICs

Pre-Drivers



Part No.	Auto-motive	Operating Temperature [°C]		Phase Input	Supply Voltage [V]			Output Drive Mode	Lead Angle	Package Outline	Notes
		min.	max.		Absolute Maximum Rating	Operating Voltage					
						min.	max.				
NJM2624A ♥	-	-25	85	2Inx3	20	4.5	18	120° Square Wave	-	DMP16, SSOP16	PLPSSOP16
NJM2626	-	-40	85	1Inx3	28	6	26	120° Square Wave	-	SSOP16, SSOP20-C3	
NJM2627	-	-40	85	2Inx3	15	4.5	14	120° Square Wave	-	DMP16, SSOP16	
NJW4303 ♥	-	-40	85	2Inx3	40	9	35	120° Square Wave	-	SSOP32	
NJW4305A	✓	-40	105	2Inx3	40	7.3	36	120° Square Wave	-	SSOP20-C3	
NJW4315T1	✓	-40	125	2Inx3	40	6.3	36	120° Square Wave	-	EQFN24-LE	

Controllers

Part No.	Auto-motive	Operating Temperature [°C]		Phase Input	Supply Voltage [V]			Output Drive Mode	Lead Angle	Package Outline	Notes
		min.	max.		Absolute Maximum Rating	Operating Voltage					
						min.	max.				
NJU7387	-	-40	105	2Inx3	7	4.5	5.5	150° Square Wave	Yes	SSOP20-C3	External FET: High-side Nch. + Low-side Nch. (Bootstrap Circuit)
NJU7388B ♥	-	-40	105	2Inx3	7	4.5	5.5	150° Square Wave	Yes	SSOP20-C3	External FET: High-side Pch. + Low-side Nch.

Single-Phase BLDC Motor Drivers



Part No.	Auto-motive	Operating Temperature [°C]		Output Current[A]		Motor Voltage [V]			Trapezoidal Output Form	Speed Control	Lock Protection	Start-up Assist	Package Outline
		min.	max.	typ.	max.	Absolute Maximum Rating	Operating Voltage						
							min.	max.					
NJM2660A	-	-40	85	Pre-Drive	-	36	4.5	30	Linear	Yes (D-PWM)	Yes (External Capacitor)	-	DMP16, SSOP16
NJU7325	-	-40	85	0.25	0.6	7	2.4	5.5	Linear	-	-	-	MSOP8(VSP8), MSOP8(TVSP8), DFN8-V1(ESON8-V1)
NJU7326	-	-40	85	0.25	0.6	7	2.4	5.5	Linear	-	-	-	MSOP8(VSP8), MSOP8(TVSP8)
NJU7329B	-	-40	85	0.35	0.6	7	2.4	5.5	Linear	-	Yes (External Capacitor)	-	MSOP10(TVSP10)
NJU7342	✓	-40	85	0.25	0.6	7	2.4	5.5	Linear	-	-	-	MSOP8(VSP8), MSOP8(TVSP8)
NJU7356	-	-40	85	0.4	1	7	2.2	5.5	Linear	-	Yes	-	MSOP8(TVSP8)
NJU7360	-	-40	85	0.25	0.6	7	2.2	5.5	Linear	-	-	-	MSOP8(TVSP8)
NJU7364	-	-40	85	0.25	0.6	7	2	5.5	Linear	-	-	-	MSOP8(TVSP8), DFN8-U1(ESON8-U1)
NJU7365	-	-40	85	0.35	1	7	2	5.5	Linear	Yes (D-PWM)	Yes	-	MSOP8(TVSP8)
NJU7366	-	-40	85	0.25	0.6	7	2	5.5	Linear	Yes (A-PWM)	-	Yes	MSOP8(TVSP8)
NJU7367	-	-40	85	0.35	0.7	7	2	5.5	Linear	Yes (D-PWM)	Yes	-	MSOP8(TVSP8)
NJU7367A	-	-40	85	0.35	0.7	7	2	5.5	Linear	Yes (D-PWM)	Yes	Yes	MSOP8(TVSP8)
NJU7367B ♥	✓	-40	105	0.35	0.7	7	2	5.5	Linear	Yes (D-PWM)	Yes	Yes	MSOP8(TVSP8)
NJW4320 ♥	-	-40	105	0.3	0.7	40	6	36	Switching	Yes (D-PWM)	Yes	Yes	SSOP16
NJW4321 ♥	-	-40	105	0.3	0.7	40	6	36	Switching	Yes (D-PWM/A-PWM)	Yes	Yes	SSOP16

Two-Phase Unipolar BLDC Motor Pre-Drivers

Part No.	Automotive	FET Pre-Drive	Supply Voltage [V]			Lock Protection	Lock Alarm	FG Output	Package Outline
			Absolute Maximum Rating	Operating Voltage					
				min.	max.				
NJM2641	-	-	15	4	14	Yes (External Capacitor)	Yes	-	MSOP8(TVSP8), DMP8
NJM2646	-	Yes	30	4	15	Yes (External Capacitor)	Yes	-	MSOP8(TVSP8), DMP8, SOP8 JEDEC 150mil(EMP8)



Touchless Sensor

Part No.	Recommended Operating Conditions			Operation Temperature [°C]		Detector Operating Current I _{cc} [mA] typ.	Output Signals	Detecting Distance [mm] max.	MSL (Moisture Sensitivity Levels)	Package Size [mm]	Package Outline
	Emitter Pulse Forward Current I _{FP} [mA]	Detector Supply Voltage V _{CC} [V]		min.	max.						
NEW NJL5830R	0 to 200	4.5	12.0	-30	70	3	Digital Output "H" by light input	50	MSL5a	5.8 × 3.6 × 1.2	ACOB06-CPZ-3 (COBP)

Bio-monitoring Sensors

Part No.	Key Features	Absolute Maximum Ratings				Dark Current [μA] max.	Output Current [μA]		Response Time (Rise/Fall) [μs]	MSL (Moisture Sensitivity Levels)	Package Size [mm]	Package Outline
		P _{tot} [mW]	I _F [mW]	V _{CEO} [V]	V _{ECO} [V]		min.	max.				
NJL5303R	built in Green LED	60	20	16	6	0.2	12	50	30	MSL5	1.9 × 2.6 × 0.8	COBP
NJL5313R	Two Green LEDs & Optical filtered PD	85	15	35(VR)	—	0.2	0.8	7	0.4/0.4	MSL5	3.15 × 6 × 0.65	COBP
NJL5510R	PD & Red & IR	85	50(RED) 50(IR)	35(VR)	—	0.1(RED) 0.1(IR)	2.5(RED) 0.6(IR)	8(RED) 1.8(IR)	0.25(RED) 0.4(IR)	MSL5	2.4 × 3.75 × 0.8	COBP
NJL5513R	Red & IR & Two Green LEDs	85	50(RED) 50(IR) 15(GREEN)	35(VR)	—	0.1(RED) 0.1(IR) 0.2(GREEN)	8(RED) 2(IR) 2(GREEN)	22(RED) 12(IR) 10(GREEN)	0.25(RED) 0.3(IR) 0.25(GREEN)	MSL5	3.2 × 5.0 × 0.65	COBP

Photo Reflectors

Part No.	Key Features	Absolute Maximum Ratings				Dark Current [μA] max.	Output Current [μA]		Response Time (Rise/Fall) [μs]	MSL (Moisture Sensitivity Levels)	Package Size [mm]	Package Outline
		P _{tot} [mW]	I _F [mW]	V _{CEO} [V]	V _{ECO} [V]		min.	max.				
NJL5901AR	Transistor Output	60	30	16	6	2	180	450	30	MSL5	1.6 × 2.4 × 0.8	COBP
NJL5901AR-1	Transistor Output	60	30	16	6	5	280	700	30	MSL5	1.3 × 1.6 × 0.6	COBP
NJL5901R-2	Transistor Output	60	20	16	6	5	165	412	20	MSL5	1.0 × 1.4 × 0.6	COBP
NJL5902R	Transistor Output	60	30	16	6	0.2	90	250	30	MSL5	1.9 × 2.6 × 0.8	COBP
NJL5902R-1	Transistor Output	60	30	16	6	0.5	160	400	30	MSL5	1.6 × 2.0 × 0.6	COBP
NJL5902R-2	Transistor Output	60	20	16	6	0.5	62	155	20	MSL5	1.2 × 1.7 × 0.6	COBP
NJL5908AR	Transistor Output	60	20	16	6	2	92	230	20	MSL5	1.06 × 1.46 × 0.5	COBP
NJL5909RL-4	with LENS (Focal length 4mm)	60	30	16	6	0.2	35	175	30	MSL5	1.9 × 2.6 × 1.6	COBP
NJL5911R	Ultra thin Photo Reflector	60	20	16	6	5	400	1000	20	MSL5	1.66 × 1.24 × 0.35	COBP
NJL5912R	High sensitive Photo Reflector	60	20	16	6	2	600	2200	20	MSL5	1.06 × 1.46 × 0.5	COBP

Photo Detectors

Part No.	Absolute Maximum Ratings VR [V]	Peak Wavelength [nm] typ.	Dark Current [nA] max.	Cut off Frequency [MHz] typ.	Response Time (Rise/Fall) [ns] typ.	Sensitivity [A/W] typ.	MSL (Moisture Sensitivity Levels)	Package Size [mm]	Package Outline
NJL6193R-3	35	850	2	—	10/10	0.48	MSL5	1.2 × 1.7 × 0.5	COBP
NJL6195R	35	890	10	—	25/42	0.55	MSL5	3.55 × 3.95 × 0.82	COBP
NJL6195R-W	35	890	10	—	25/42	0.55	MSL5	3.55 × 3.95 × 0.82	COBP
NJL6401R-3	35	780 650 405	2	250 300 350	2/2	0.47 0.42 0.28	MSL5	1.2 × 1.7 × 0.8	COBP
NJL6402R-2	35	780 650 405	2	200 220 250	2/2	0.47 0.42 0.28	MSL5	1.6 × 2.4 × 0.8	COBP
NJL6407R	35	800	2	—	9/9	0.47	MSL5	2.0 × 2.9 × 0.75	COBP
NJL6414R	35	900	5	—	16/22	0.47	MSL5	2.1 × 2.6 × 0.8	COBP

Ambient Light Sensors

Part No.	Absolute Maximum Ratings VR [V]	Peak Wavelength [nm] typ.	Dark Current [nA] max.	MSL (Moisture Sensitivity Levels)	Package Size [mm]	Package Outline
NJL6502R-1	6	580	0.5	MSL5	1.7 × 1.2 × 0.8	COBP
NJL7302L-F3	15	550	100	—	—	—
NJL7302L-F5	15	550	100	—	—	—
NJL7502L	70	560	100	—	—	—
NJL7502R	35	590	100	MSL5	1.6 × 1.3 × 0.65	COBP

Position Sensors

Part No.	Recommended Operating Conditions			Detector Operating Current I _{cc} [μA] typ.	Output Signals	Resolution [LPI]	MSL (Moisture Sensitivity Levels)	Package Size [mm]	Package Outline
	Emitter Forward Current I _F [mA]	Detector Supply Voltage V ₊ [V]							
NJL5820R	1 to 30	2.7	5.5	150	2 Phase Digital (0°, 90°)	50.8	MSL5	2.6 × 2.5 × 0.8	ACOB06-CHZ-3 (COBP)
NEW NJL5821R	4 to 30	2.7	5.5	150	2 Phase Digital (0°, 90°)	150	MSL5	2.6 × 2.5 × 0.8	ACOB06-CHZ-3 (COBP)
NEW NJL5822R	4 to 30	2.7	5.5	150	2 Phase Digital (0°, 90°)	180	MSL5	2.6 × 2.5 × 0.8	ACOB06-CHZ-3 (COBP)
NJL9101R	5	2	3.3	—	3 Phase Analog (0° / 90° / 180°)	100	MSL5	2.3 × 2.0 × 0.6	COBP

LD Driver ICs

LD Driver ICs

Part No.	LD	CH	Supply Voltage [V]	Maximum Operating Frequency [MHz]	LED Current Minimum Pulse Width [ns]	Drive Current Setting [mA]			Package Outline	Notes
						Threshold Current	LED Current	Operating Current		
RN5C713	Cathode	2CH	5	400	1.25	50	50	70	QFN0606-48-P14	Need no VR, Digital method
RN5C711	♥ Cathode	2CH	3.3 or 5.0	200	2.5	—	—	70	QFN0505-36-P6	Include APC (Automatic Power Control), LVDS (Low Voltage Differential Signal) format data
RN5C716	♥ anode	1CH	3.3 or 5.0	200	2.5	—	—	80	QFN0303-20-P25	



LD Driver ICs for Display

Part No.	Auto-motive	CH	Supply Voltage [V]	Maximum Output Rate Per 1 Channel [Modot/sec]	Rising/Falling Time [ns]	Maximum Operating Current [mA]		Protection Circuit	Package Outline
						LD1	LD2/3/4		
RN5C750	✓	4CH	1.8 & 3.3	200	1.0	800	400	LD Over Current Detection, LD Pin Short Circuit Detection, PDI Current Error Detection, Thermal Shutdown	QFN0808-56
RN5C752	—	4CH	1.8 & 3.3	200	1.0	800	400	LD Over Current Detection, LD Pin Short Circuit Detection, PDI Current Error Detection, Thermal Shutdown	QFN0808-56



Quartz Crystal Oscillator ICs

Fundamental Oscillator ICs

Part No.	Voltage Regulator	Oscillation Frequency [MHz]	Operating Voltage V _{DD} [V]	I _{DD} @V _{DD} =3.3V [mA]	Divider	Output	Package Outline	Chip Size [mm]	Notes
NJU6212 Series	Yes	to 60	1.62 to 3.63	5(typ.)	to f ₀ /8	C-MOS	Chip	0.7 × 0.75	
NJU6221 Series	Yes	to 60	1.62 to 3.63	2(typ.)	to f ₀ /64	C-MOS	Thin-Chip Wafer	0.73 × 0.63	
NJU6222 Series	—	20 to 50	1.62 to 3.63	5.5(typ.)	to f ₀ /2	C-MOS	Thin-Chip Wafer	0.58 × 0.5888	For Special High Quality Audio Sound
NJU6229 Series	Yes	32.768kHz	1.62 to 5.5	1.45uA(typ.)	—	C-MOS	Thin-Chip Wafer	0.53 × 0.53	
NJU6311 Series	—	to 50	2 to 5.5	8(max.)	to f ₀ /32	C-MOS	Thin-Chip MSOP10(VSP10)	0.7 × 0.95	
NJU6321 Series	—	to 50	3 to 6.0	10(max.) @5V	to f ₀ /8	C-MOS	Chip, SOP8 JEDEC 150mil(EMP8), MSOP8(VSP8)	1.21 × 0.8	
NJU6322 Series	—	to 50	3 to 6.0	10(max.) @5V	to f ₀ /8	TTL	Chip, SOP8 JEDEC 150mil(EMP8)	1.24 × 0.8	
NJU6323 Series	—	to 50	3 to 6.0	10(max.) @5V	to f ₀ /8	C-MOS	Chip, SOP8 JEDEC 150mil(EMP8)	1.28 × 0.8	
NJU6324 Series	—	to 50	3 to 6.0	10(max.) @5V	to f ₀ /8	C-MOS	Chip, SOP8 JEDEC 150mil(EMP8)	1.24 × 0.8	
NJU6360 Series	—	to 50	2.7 to 5.5	8(max.)	to f ₀ /32	C-MOS	Thin-Chip	0.7 × 0.75	
NJU6363 Series	—	to 40	1.5 to 3.6	2.5(max.)	to f ₀ /32	C-MOS	Thin-Chip	0.7 × 0.75	
NJU6364 Series	—	to 60	2 to 3.6	3.5(max.)	to f ₀ /32	C-MOS	Thin-Chip	0.7 × 0.75	
NJU6365 Series	—	to 32	1.8 to 3.6	1.5(max.)	to f ₀ /32	C-MOS	Thin-Chip	0.7 × 0.75	
NJU6366 Series	—	to 50	2 to 5.5	6(max.) @3V	to f ₀ /8	C-MOS	Thin-Chip, SOT-23-6-1	0.67 × 0.75	
NJU6367 Series	—	to 50	2 to 5.5	6(max.) @3V	to f ₀ /32	C-MOS	Thin-Chip	0.7 × 0.75	
NJU6368 Series	—	to 50	2.7 to 5.5	8(max.)	to f ₀ /8	C-MOS	Thin-Chip, SOT-23-6-1	0.67 × 0.75	
NJU6369 Series	—	to 50	1.5 to 3.6	5(max.)	to f ₀ /32	C-MOS	Thin-Chip	0.7 × 0.75	
NJU6385	—	20 to 50	1.62 to 3.63	5.5(typ.)	—	C-MOS	DFN6-G1(ESON6-G1)	—	For Special High Quality Audio Sound

Quartz Crystal Oscillator ICs

3rd. Over Tone Oscillator ICs

Part No.	Product Version (Oscillation Frequency) [MHz]	Operating Voltage V _{DD} [V]		I _{DD} @V _{DD} =3.3V	Output	Package Outline	Chip Size [mm] typ.	Notes
		min.	max.					
NJU6227 Series	x1 (40 to 50)	1.62	3.63	3.1(typ.)	C-MOS	Thin-Chip, Wafer	0.73 × 0.63	Built-in Voltage Regulator
	x2 (50 to 60)	1.62	3.63	3.6(typ.)				
	x3 (60 to 85)	2.25	3.63	7.0(typ.)				
	x4 (85 to 110)	2.25	3.63	7.8(typ.)				
	x5 (110 to 130)	2.25	3.63	8.2(typ.)				
	x6 (130 to 160)	2.25	3.63	9.2(typ.)				
NJU6376 Series	G (30 to 40)	2.2	5.5	8(max.) @3V	C-MOS	Chip, SOT-23-6-1	0.7 × 0.75	
	H (40 to 50)			10(max.) @3V				
	J (50 to 60)			11(max.) @3V				
	K (60 to 75)			12(max.) @3V				
NJU6377 Series	E (30 to 40)	2.2	5.5	8(max.) @3V	C-MOS	Thin-Chip	0.7 × 0.75	
	F (40 to 50)			10(max.) @3V				
	G (50 to 60)			11(max.) @3V				
	H (60 to 75)			12(max.) @3V				
	J (45 to 55)			11(max.) @3V				
	K (40 to 50)			11(max.) @3V				
NJU6394 Series	A (75 to 90)	1.6	3.6	6(typ.) @1.8V	C-MOS	Thin-Chip	0.7 × 0.75	
	B (90 to 105)			7(typ.) @1.8V				
	C (105 to 125)			8(typ.) @1.8V				
NJU6396	135 to 166	2.7	3.6	27(typ.) @3.3V	C-MOS	Thin-Chip	0.7 × 0.75	
NJU6397 Series	A (70 to 90)	2.3	3.6	13(typ.) @3.3V	C-MOS	Thin-Chip, Wafer	0.7 × 0.75	
	B (90 to 110)			13(typ.) @3.3V				
	C (110 to 135)			18(typ.) @3.3V				
NJU6397D	100 to 125	2.25	2.75	13(typ.) @2.5V	C-MOS	Thin-Chip, Wafer	0.7 × 0.75	

VCXO IC

Part No.	Oscillation Frequency [MHz]	Operating Voltage V _{DD} [V]		I _{DD} @V _{DD} =3.3V [mA]	Output	Package Outline	Chip Size [mm]	Notes
		min.	max.					
NJM2555	120(240) to 160(640)	3	3.6	50(typ.) @3.3V	LVPECL Equivalent	Chip, SSOP10	1.6 × 2.0	

Real Time Clock (RTC)

4-wire Serial Interface (SPI Bus)

Part No.	Package Outline	Time Keeping Current [μA] typ.	Time Keeping Voltage [V]	Alarm Function	Periodic Interrupt Function	32kHz Clock Output	Battery Checker [V]	Clock Adjust Function	OSC Halt Sensing	Back-up Battery Switch-over Circuit	VD with Delay Function	Notes
R2043	♥ QFN023023-16 TSSOP10G	0.45, at 3V	Typ. 0.66 to 5.50 Worst. 1.0 to 5.5	2 Sets, W/H/M, H/M	0.5s to 1Month	Nch Open Drain Output, Controllable by Command	1.6 or 1.3	Yes	Yes	No	No	PLP: TSSOP10G
R2045	♥ SOP14	0.48, at 3V	1.15 to 5.50	2 Sets, W/H/M, H/M	0.5s to 1Month	Nch Open Drain Output, Controllable by Command	2.1 or 1.3	Yes	Yes	No	No	Built-in Crystal Unit, Frequency Deviation: 0 ± 5ppm
RS5C348A	SSOP10	0.35, at 3V	1.45 to 5.50	2 Sets, W/H/M, H/M	0.5s to 1Month	Nch Open Drain Output, Controllable by Command	2.1 or 1.6	Yes	Yes	No	No	
RV5C348A	SSOP10G											
RV5C348B	SSOP10G											

3-wire Serial Interface

Part No.	Package Outline	Time Keeping Current [μA] typ.	Time Keeping Voltage [V]	Alarm Function	Periodic Interrupt Function	32kHz Clock Output	Battery Checker [V]	Clock Adjust Function	OSC Halt Sensing	Back-up Battery Switch-over Circuit	VD with Delay Function	Notes
R2033	♥ QFN023023-16 TSSOP10G	0.45, at 3V	Typ. 0.66 to 5.50 Worst. 1.0 to 5.5	2 Sets, W/H/M, H/M	0.5s to 1Month	CMOS Output with Control Pin	1.6 or 1.3	Yes	Yes	No	No	PLP: TSSOP10G
R2061	♥ QFN023023-16 SSOP16	0.4, at 3V	Typ. 0.75 to 5.50 Worst. 1.0 to 5.5	2 Sets, W/H/M, H/M	0.5s to 1Month	—	2.10 or 1.35	Yes	Yes	Yes	Yes	1.7V, 2.8V PLP: SSOP16 2.4V
R2062	QFN023023-16	0.4, at 3V	Typ. 0.75 to 5.50 Worst. 1.0 to 5.5	2 Sets, W/H/M, H/M	0.5s to 1Month	CMOS Output with Level Shifter	2.10 or 1.35	Yes	Yes	Yes *1	Yes	2.7V, 2.9V
R2262	QFN0202-18 TSSOP10G	0.3, at 3V	Typ. 0.6 to 5.5 Worst. 0.9 to 5.5	2 Sets, W/H/M, H/M	0.5s to 1Month	CMOS Output with Level Shifter	1.35	Yes	Yes	Yes *2	Yes	2.7V
RS5C338A	SSOP10	0.35, at 3V	1.45 to 5.50	2 Sets, W/H/M, H/M	0.5s to 1Month	CMOS Output with Level Shifter	2.1 or 1.6	Yes	Yes	No	No	
RV5C338A	SSOP10G											

*1 For secondary battery or capacitor *2 For secondary battery or capacitor, built-in VR for charger *3 Time keeping current can be reduced in ECO mode.



Real Time Clock (RTC)

2-wire Serial Interface (I²C Bus)



Part No.	Package Outline	Time Keeping Current [μA] typ.	Time Keeping Voltage [V]	Alarm Function	Periodic Interrupt Function	32kHz Clock Output	Battery Checker [V]	Clock Adjust Function	OSC Halt Sensing	Back-up Battery Switch-over Circuit	VD with Delay Function	Notes
R2025	SOP14 SON22	0.48, at 3V	1.15 to 5.50	2 Sets, W/H/M, H/M	0.5s to 1Month	CMOS output with control pin	2.1 or 1.3	Yes	Yes	No	No	PLP: SOP14 Built-in crystal unit. Frequency Deviation : 0 ± 5ppm
R2051	QFN023023-16	0.4, at 3V	1.0 to 5.5, Worst. TYP.0.75	2 Sets, W/H/M, H/M	0.5s to 1Month	CMOS output with level shifter	2.10 or 1.35	Yes	Yes	Yes	Yes	2.4V, 2.8V
	SSOP16											2.4V, 2.8V, 4.0V
	TSSOP10G			Register only, No INTR pin	Register only, No INTR pin	—	PLP: TSSOP10G 2.4V					
R2221	QFN018018-12	0.3*3 at 3V	0.9 to 5.5, Worst. TYP.0.6	2 Sets, W/H/M, H/M	0.5s to 1Month	CMOS output with control pin	1.35	Yes	Yes	No	No	PLP: TSSOP10G ECO mode is set by ECO Pin.
	TSSOP10G											
R2223	QFN018018-12	0.3*3 at 3V	0.9 to 5.5, Worst. TYP.0.6	2 Sets, W/H/M, H/M	0.5s to 1Month	CMOS output with control pin	1.35	Yes	Yes	No	No	PLP: TSSOP10G ECO Mode is set by a Register.
	TSSOP10G											
RS5C372A	SSOP8	0.5, at 3V	1.3 to 6.0 1.45 to 6.00	2 Sets, W/H/M × 2	0.5s to 1Month	Nch open drain output (Controllable by command)	—	Yes	Yes	No	No	32768Hz/ 32000Hz Crystal is Selectable
RS5C372B						CMOS output (Controllable by command)						
RV5C386A	SSOP10G	0.35, at 3V	1.45 to 5.50	2 Sets, W/H/M, H/M	0.5s to 1Month	CMOS output with control pin	2.1 or 1.6	Yes	Yes	No	No	
RV5C387A	SSOP10G	0.35, at 3V	1.45 to 5.50	2 Sets, W/H/M, H/M	0.5s to 1Month	Nch open drain output (Controllable by command)	2.1 or 1.6	Yes	Yes	No	No	

*1 For secondary battery or capacitor *2 For secondary battery or capacitor, built-in VR for charger *3 Time keeping current can be reduced in ECO mode.

Other Peripheral ICs



Part No.	Automotive	Key Features	Operating Voltage [V]		Package Outline	Notes
			min.	max.		
NJM2342	—	Quad Buffer for Reference Circuit	2	14	MSOP10(TVSP10)	Icc=1mA(typ.), Sink/Source Buffer
NJU6402B	—	—	4.5 4.5 -12	5.5 12 -4.5	DMP16	Receiver-3/ Driver-3

ATE ASSP



Part No.	Automotive	Key Features	Operating Voltage[V]		Package Outline	Notes
			min.	max.		
NJU6495	—	Quad Pin Electronics Driver	8	15	LQFP64-H2	Max. 50MHz Operation, Max. 15V Output Range
NJU6496	—	Quad PIN-Electronics Drivers / Comparators / Analog Switches	10	15	QFN84-D4	Comparator and Analog Switch for kelvin, Max. 45MHz Operation, Max. 15V Output Range

Data Converters



Part No.	Key Features	Operating Voltage [V]		A/D Conversion	Package Outline	Notes
		min.	max.			
NJM4151	Frequency Operation from 1Hz to 100kHz	8	22	—	DIP8, DMP8	8V < V+ < 15V (3.5mA typ.), 16V < V+ < 22V (4.5mA typ.)
NJU3610	Digital Filter High-Pass Filter, Stereo 4-1 Selectors	—	—	1bit Delta-Sigma stereo ADC	LQFP48-R3	Single power supply: 3.0 to 3.6V (Built-in regulator using together), Two power supply: Analog(3.0 to 3.6V) Digital(1.65 to 2.0V)
NJW5210	R-2R System, 8bit 3channel D/A Converters	2.7	5.5	—	MSOP8(TVSP8)	
NJW5211	R-2R System, 8bit 8channel D/A Converters	2.7	5.5	—	SSOP14	

Analog Switches



Part No.	Supply Voltage [V]	Current Consumption	On-state Resitance [ohm]	Package Outline	Notes
NJU201A	44	1.2mA typ.(V+/V- = ± 15V)	50	DMP16	Turn-on Time 480ns typ. Turn-off Time 370ns typ.
NJU211	40	1.15mA typ.(V+/V- = ± 15V)	115	DMP16	Turn-on Time 460ns typ. Turn-off Time 360ns typ.
NJU4051B	20	5uA max.(VDD=5V)	220	DMP16, SSOP16	—
NJU4052B	20	5uA max.(VDD=5V)	220	DMP16, SSOP16	—
NJU4053B	20	5uA max.(VDD=5V)	220	DMP16, SSOP16	—
NJU4066B	20	0.25uA max.(VDD=5V)	300	DMP14, SSOP14	—
NJU7301	44	1.2mA typ.(V+/V- = ± 15V)	115	DMP16	Turn-on Time 480ns typ. Turn-off Time 370ns typ.

USB Power Delivery (PD) Controller IC



Part No.	Standby Current [μA]	Power Role	Data Role	Protection Circuit	VBUS Input Voltage [V]	CC1/2 Pin Input Voltage [V]	VBUS Controls	Operating Temperature Range [°C]	Package Outline	Notes
RN5U700	2.8 (Deep-Sleep)	DRP/ Source/ Sink	DRD/ DFP/ UFP	VBUS OVP, OCP, CC Pin OVP, OTP	4.5 to 24	Up to 24	Nch.FET Pch.FET Switch IC	-20 to 70 -20 to 85	QFN0404-24-P12	Supports Dead Battery Operation, I ² C Interface: Up to 1MHz (FM+)

Package Information

Please refer to our website for additional details.



● CSP

Pin	Symbol	Package	Actual Size Photo	Dimensions (mm)				Quantity/Reel (pcs)
				Body	Mount Area	Thickness *1	Pitch	
80	C	CSP0608-80		8.0 × 6.0	8.0 × 6.0	1.2	0.65	2,000
85	C	CSP0606-85		6.0 × 6.0	6.0 × 6.0	1.07	0.5	2,000

*1 Maximum Value

● DFN

Pin	Symbol	Package	Actual Size Photo	Dimensions (mm)				Quantity/Reel (pcs)
				Body	Mount Area	Thickness *1	Pitch	
4	L	DFN1010-4		1.0 × 1.0	1.0 × 1.0	0.4	0.65	10,000
4	L	DFN1212-4		1.2 × 1.2	1.2 × 1.2	0.8	0.5	3,000
5	L	DFN1212-5		1.2 × 1.2	1.2 × 1.2	0.4	0.8	5,000
6	L	DFN1212-6		1.2 × 1.2	1.2 × 1.2	0.4	0.4	5,000
6	GK	DFN1212-6-GK		1.2 × 1.2	1.2 × 1.2	0.4	0.4	5,000
6	L	DFN1414-6B		1.4 × 1.4	1.4 × 1.4	0.6	0.5	5,000
6	L	DFN1616-6		1.6 × 1.6	1.6 × 1.6	0.4	0.5	5,000
6	L	DFN1616-6B		1.6 × 1.6	1.6 × 1.6	0.4	0.5	5,000
6	GY	DFN1616-6-GY		1.6 × 1.6	1.6 × 1.6	0.4	0.5	5,000
6	L	DFN1814-6		1.4 × 1.8	1.4 × 1.8	0.4	0.5	5,000
6	GN	DFN1814-6-GN		1.4 × 1.8	1.4 × 1.8	0.4	0.5	5,000
6	L	DFN1814-6B		1.4 × 1.8	1.4 × 1.8	0.4	0.5	5,000
6	L	DFN1814-6C		1.4 × 1.8	1.4 × 1.8	0.4	0.5	5,000
6	L	DFN1816-6		1.6 × 1.8	1.6 × 1.8	0.4	0.5	5,000
6	L	DFN2020-6		2.0 × 2.0	2.0 × 2.0	0.8	0.65	3,000
8	L	DFN1216-8		1.6 × 1.2	1.6 × 1.2	0.4	0.4	5,000
8	L	DFN1616-8		1.6 × 1.6	1.6 × 1.6	0.6	0.4	5,000
8	L	DFN1616-8B		1.6 × 1.6	1.6 × 1.6	0.4	0.4	5,000
8	GM	DFN1616-8-GM		1.6 × 1.6	1.6 × 1.6	0.4	0.4	5,000
8	L	DFN2020-8		2.0 × 2.0	2.0 × 2.0	0.8	0.5	3,000
8	GA	DFN2020-8-GA		2.0 × 2.0	2.0 × 2.0	0.8	0.5	3,000
8	L	DFN2020-8B		2.0 × 2.0	2.0 × 2.0	0.8	0.5	3,000
8	L	DFN2020-8C		2.0 × 2.0	2.0 × 2.0	0.6	0.5	3,000
8	L	DFN2020-8-GT		2.0 × 2.0	2.0 × 2.0	0.6	0.5	3,000
12	L	DFN3030-12		3.0 × 3.0	3.0 × 3.0	0.8	0.5	3,000
12	L	DFN3030-12B		3.0 × 3.0	3.0 × 3.0	0.8	0.5	3,000
14	L	DFN2735-14		3.5 × 2.7	3.5 × 2.7	0.6	0.5	5,000

*1 Maximum Value

● DFN (ESON)

Pin	Symbol	Package	Actual Size Photo	Dimensions (mm)				Quantity/Reel (pcs)
				Body	Mount Area	Thickness *1	Pitch	
4	KF1	DFN4-F1(ESON4-F1)		1.6 × 1.2	1.6 × 1.2	0.4	0.5	3,000
6	KG1	DFN6-G1(ESON6-G1)		1.6 × 1.6	1.6 × 1.6	0.4	0.5	3,000
6	KH1	DFN6-H1(ESON6-H1)		2.0 × 2.0	2.0 × 2.0	0.4	0.5	3,000
8	KU1	DFN8-U1(ESON8-U1)		2.0 × 2.0	2.0 × 2.0	0.4	0.5	3,000
8	KV1	DFN8-V1(ESON8-V1)		2.3 × 2.3	2.3 × 2.3	0.4	0.5	3,000
8	KW1	DFN8-W1(ESON8-W1)		3.0 × 3.0	3.0 × 3.0	0.705	0.5	1,500
8	KW2	DFN8-W2(ESON8-W2)		3.0 × 3.0	3.0 × 3.0	0.705	0.65	1,500
8	KX7	DFN8-X7(ESON8-X7)		3.5 × 4.0	3.5 × 4.0	0.705	0.65	1,500
12	KCA8	DFN12-CA8(ESON12-CA8)		4.5 × 5.0	4.5 × 5.0	0.78	0.725/0.65	100

*1 Maximum Value

● DFN (PL)

Pin	Symbol	Package	Actual Size Photo	Dimensions (mm)				Quantity/Reel (pcs)
				Body	Mount Area	Thickness *1	Pitch	
4	K	DFN(PL)0808-4		0.8 × 0.8	0.8 × 0.8	0.4	0.48	10,000
4	K	DFN(PL)1010-4		1.0 × 1.0	1.0 × 1.0	0.6	0.65	10,000
4	K	DFN(PL)1010-4B		1.0 × 1.0	1.0 × 1.0	0.6	0.65	10,000
4	K	DFN(PL)1010-4F		1.0 × 1.0	1.0 × 1.0	0.4	0.5	10,000
4	K	DFN(PL)1612-4		1.2 × 1.6	1.2 × 1.6	0.6	0.6	5,000
4	K	DFN(PL)1612-4B		1.2 × 1.6	1.2 × 1.6	0.4	0.6	5,000
4	K	DFN(PL)1612-4D		1.2 × 1.6	1.2 × 1.6	0.6	0.5	5,000
6	K	DFN(PL)1212-6		1.2 × 1.2	1.2 × 1.2	0.4	0.4	5,000
6	K	DFN(PL)1212-6F		1.2 × 1.2	1.2 × 1.2	0.4	0.4	5,000
6	K	DFN(PL)1216-6F		1.6 × 1.2	1.6 × 1.2	0.4	0.5	5,000
6	K	DFN(PL)1216-6G		1.6 × 1.2	1.6 × 1.2	0.4	0.6	5,000
6	K	DFN(PL)1414-6		1.4 × 1.4	1.4 × 1.4	0.4	0.5	5,000
6	K	DFN(PL)1616-6		1.6 × 1.6	1.6 × 1.6	0.6	0.5	5,000
6	K	DFN(PL)1616-6B		1.6 × 1.6	1.6 × 1.6	0.6	0.5	5,000
6	K	DFN(PL)1616-6D		1.6 × 1.6	1.6 × 1.6	0.6	0.5	5,000
6	K	DFN(PL)1820-6		1.8 × 2.0	1.8 × 2.0	0.6	0.5	5,000
6	K	DFN(PL)1820-6B		1.8 × 2.0	1.8 × 2.0	0.6	0.55	5,000
6	K	DFN(PL)2514-6		1.4 × 2.5	1.4 × 2.5	0.6	0.5	5,000

*1 Maximum Value

Package Information

Please refer to our website for additional details.



DFN (PL)

Pin	Symbol	Package	Actual Size Photo	Dimensions (mm)				Quantity/Reel (pcs)
				Body	Mount Area	Thickness *1	Pitch	
8	K	DFN(PL)2020-8		2.0 × 2.0	2.0 × 2.0	0.6	0.5	5,000
8	K	DFN(PL)2020-8B		2.0 × 2.0	2.0 × 2.0	0.6	0.5	5,000
10	K	DFN(PL)2527-10		2.7 × 2.5	2.7 × 2.5	0.6	0.5	5,000
12	K	DFN(PL) 2730-12		3.0 × 2.7	3.0 × 2.7	0.6	0.5	5,000

*1 Maximum Value

DFN (SON)

Pin	Symbol	Package	Actual Size Photo	Dimensions (mm)				Quantity/Reel (pcs)
				Body	Mount Area	Thickness *1	Pitch	
10	KK1	DFN10-K1(SON10-K1)		2.9 × 2.8	2.9 × 3.0	0.85	0.5	3,000

*1 Maximum Value

DIP

Pin	Symbol	Package	Actual Size Photo	Dimensions (mm)				Quantity/Reel (pcs)
				Body	Mount Area	Thickness	Pitch	
8	D	DIP8		8.8 × 6.4	—	3.4	2.54	50/Stick
22	—	DIP22-D2		27.81 × 9.02	—	4.94	2.54	20/Stick

DMP

Pin	Symbol	Package	Actual Size Photo	Dimensions (mm)				Quantity/Reel (pcs)
				Body	Mount Area	Thickness	Pitch	
8	M	DMP8		5.0 × 5.0	5.0 × 6.8	1.6	1.27	2,000
14	M	DMP14		10.0 × 5.0	10.0 × 6.8	1.6	1.27	2,000
16	M	DMP16		10.0 × 5.0	10.0 × 6.8	1.6	1.27	2,000
20	M	DMP20		10.0 × 5.0	10.0 × 6.8	1.6	0.95	2,000

EMCM

Pin	Symbol	Package	Actual Size Photo	Dimensions (mm)				Quantity/Reel (pcs)
				Body	Mount Area	Thickness *1	Pitch	
13		EMCM13-LL6		5.4 × 3.0	5.4 × 3.0	1.65 (TBD)	TBD	TBD

*1 Maximum Value

EPCSP

Pin	Symbol	Package	Actual Size Photo	Dimensions (mm)				Quantity/Reel (pcs)
				Body	Mount Area	Thickness *1	Pitch	
10	NB2	EPCSP10-B2		1.55 × 1.15	1.55 × 1.15	0.55	0.4	3,000

*1 Maximum Value

EPFFP

Pin	Symbol	Package	Actual Size Photo	Dimensions (mm)				Quantity/Reel (pcs)
				Body	Mount Area	Thickness *1	Pitch	
4	—	EPFFP4-X2		0.65 × 0.65	0.65 × 0.65	0.39	0.4	5,000
6	UA2	EPFFP6-A2		1.0 × 1.0	1.0 × 1.0	0.39	0.4	5,000
6	UX2	EPFFP6-X2		1.1 × 0.7	1.1 × 0.7	0.39	0.4	5,000
10	UC4	EPFFP10-C4		1.5 × 1.5	1.5 × 1.5	0.375	0.5	5,000

*1 Maximum Value

EQFN

Pin	Symbol	Package	Actual Size Photo	Dimensions (mm)				Quantity/Reel (pcs)
				Body	Mount Area	Thickness *1	Pitch	
12	ME2	EQFN12-E2		1.8 × 1.8	1.8 × 1.8	0.4	0.4	3,000
12	MJE	EQFN12-JE		3.0 × 3.0	3.0 × 3.0	0.75	0.5	1,500
14	MD7	EQFN14-D7		1.6 × 1.6	1.6 × 1.6	0.4	0.4	3,000
16	MG2	EQFN16-G2		2.3 × 2.3	2.3 × 2.3	0.4	0.4	3,000
16	MJE	EQFN16-JE		3.0 × 3.0	3.0 × 3.0	0.75	0.5	1,500
18	ME7	EQFN18-E7		2.0 × 2.0	2.0 × 2.0	0.4	0.4	3,000
24	MLE	EQFN24-LE		4.0 × 4.0	4.0 × 4.0	0.75	0.5	1,000
26	MHH	EQFN26-HH		3.4 × 2.6	3.4 × 2.6	0.75	0.4	1,500
48	MSN	EQFN48-SN		7.0 × 7.0	7.0 × 7.0	0.785	0.5	3,000

*1 Maximum Value

FLP

Pin	Symbol	Package	Actual Size Photo	Dimensions (mm)				Quantity/Reel (pcs)
				Body	Mount Area	Thickness *1	Pitch	
6	KA1	FLP6-A1		1.6 × 1.2	1.6 × 1.6	0.6	0.5	4,000
6	KB2	FLP6-B2		2.0 × 1.7	2.0 × 2.1	0.8	0.65	3,000

*1 Maximum Value

HSOP

Pin	Symbol	Package	Actual Size Photo	Dimensions (mm)				Quantity/Reel (pcs)
				Body	Mount Area	Thickness	Pitch	
6	S	HSOP-6J		5.02 × 3.9	5.02 × 6.0	1.5	3.81	1,000
6	S	HSOP-6-AL		5.02 × 3.9	5.02 × 6.0	1.5	3.81	1,000



● HSOP

Pin	Symbol	Package	Actual Size Photo	Dimensions (mm)				Quantity/Reel (pcs)
				Body	Mount Area	Thickness	Pitch	
8	S	HSOP-8E		5.2 × 4.4	5.2 × 6.2	1.45	1.27	1,000
18	S	HSOP-18		5.2 × 4.4	5.2 × 6.2	1.45	0.5	1,000
18	S	HSOP-18-AK		5.2 × 4.4	5.2 × 6.2	1.5	0.5	1,000
8	GM1	HSOP8-M1		5.2 × 4.4	5.2 × 6.2	1.5	1.27	3,000
8	AC	HSOP8-AC		5.2 × 4.4	5.2 × 6.2	1.5	1.27	3,000

● HTSSOP

Pin	Symbol	Package	Actual Size Photo	Dimensions (mm)				Quantity/Reel (pcs)
				Body	Mount Area	Thickness	Pitch	
24	VP1	HTSSOP24-P1		7.8 × 4.4	7.8 × 6.4	0.85	0.65	2,500

● LQFP

Pin	Symbol	Package	Actual Size Photo	Dimensions (mm)				Quantity/Reel (pcs)
				Body	Mount Area	Thickness	Pitch	
48	FR3	LQFP48-R3		7 × 7	9 × 9	1.4	0.5	—
52	FH2	LQFP52-H2		10 × 10	12 × 12	1.4	0.65	—
52	FH3	LQFP52-H3		10 × 10	12 × 12	1.4	0.65	—
64	FH2	LQFP64-H2		10 × 10	12 × 12	1.4	0.5	—
144	—	LQFP144-L1		20 × 20	22 × 22	1.65	0.5	—

● MSOP

Pin	Symbol	Package	Actual Size Photo	Dimensions (mm)				Quantity/Reel (pcs)
				Body	Mount Area	Thickness	Pitch	
8	G	MSOP-8		3.0 × 3.0	3.0 × 4.9	0.85	0.65	3,000

● MSOP (TVSP)

Pin	Symbol	Package	Actual Size Photo	Dimensions (mm)				Quantity/Reel (pcs)
				Body	Mount Area	Thickness	Pitch	
8	RB1	MSOP8(TVSP8)		2.9 × 2.8	2.9 × 4.0	0.9	0.65	2,000
10	RB2	MSOP10(TVSP10)		2.9 × 2.8	2.9 × 4.0	0.9	0.5	2,000

(注) MSOP(TVSP) : MEET JEDEC MO-187-DA THIN TYPE

● MSOP (VSP)

Pin	Symbol	Package	Actual Size Photo	Dimensions (mm)				Quantity/Reel (pcs)
				Body	Mount Area	Thickness	Pitch	
8	R	MSOP8(VSP8)		2.9 × 2.8	2.9 × 4.0	1.1	0.65	2,000
10	R	MSOP10(VSP10)		2.9 × 2.8	2.9 × 4.0	1.1	0.5	2,000

(注) MSOP(VSP) : MEET JEDEC MO-187-DA

● PCSP

Pin	Symbol	Package	Actual Size Photo	Dimensions (mm)				Quantity/Reel (pcs)
				Body	Mount Area	Thickness *1	Pitch	
14	SC3	PCSP14-C3		2.5 × 2.5	2.5 × 2.5	1.01	0.5	3,000
20	SCC	PCSP20-CC		2.7 × 2.7	2.7 × 2.7	0.9	0.45	3,000
20	SE3	PCSP20-E3		3.5 × 3.5	3.5 × 3.5	0.94	0.5	1,500
24	SED	PCSP24-ED		3.5 × 3.5	3.5 × 3.5	0.9	0.5	1,500
32	SF7	PCSP32-F7		4.0 × 4.0	4.0 × 4.0	0.96	0.5	1,000

*1 Maximum Value

● PLCC

Pin	Symbol	Package	Actual Size Photo	Dimensions (mm)				Quantity/Reel (pcs)
				Body	Mount Area	Thickness	Pitch	
28	—	PLCC28-M2		11.51 × 11.51	12.45 × 12.45	4.4	1.27	750

● PMAP11

Pin	Symbol	Package	Actual Size Photo	Dimensions (mm)				Quantity/Reel (pcs)
				Body	Mount Area	Thickness	Pitch	
11	YPM	PMAP11-PM		8.1 × 6.6	8.1 × 8.1	1.85	0.65	2,000

*1 Maximum Value

● QFL

Pin	Symbol	Package	Actual Size Photo	Dimensions (mm)				Quantity/Reel (pcs)
				Body	Mount Area	Thickness *1	Pitch	
36	—	QFL36-B2		5.4 × 5.4	6.0 × 6.0	0.95	0.5	250

*1 Maximum Value



● QFN

Pin	Symbol	Package	Actual Size Photo	Dimensions (mm)				Quantity/Reel (pcs)
				Body	Mount Area	Thickness *1	Pitch	
8	L	QFN2220-8		2.2 × 2.0	2.2 × 2.0	1.5	0.65	2,000
8	L	QFN2430-8		3.0 × 2.4	3.0 × 2.4	0.8	0.5	3,000
10	L	QFN014018-10		1.8 × 1.4	1.8 × 1.4	0.4	0.4	5,000
12	K11	QFN12-11		3.0 × 3.0	3.0 × 3.0	0.88	0.5	—
12	K51	QFN12-51		2.0 × 2.0	2.0 × 2.0	0.4	0.5	5,000
12	L	QFN018018-12		1.8 × 1.8	1.8 × 1.8	0.43	0.4	3,000
16	L	QFN023023-16		2.3 × 2.3	2.3 × 2.3	0.43	0.4	3,000
18	L	QFN0202-18		2.0 × 2.0	2.0 × 2.0	0.43	0.4	3,000
20	KM1	QFN20-M1		4.2 × 4.2	4.2 × 4.2	0.95	0.5	3,000
20	L	QFN0303-20-P25		3.0 × 3.0	3.0 × 3.0	0.6	0.4	—
20	L	QFN0303-20-P28		3.0 × 3.0	3.0 × 3.0	0.6	0.4	4,000
20	D	QFN0404-20		4.0 × 4.0	4.0 × 4.0	0.7	0.5	2,000
24	K	QFN0404-24		4.0 × 4.0	4.0 × 4.0	0.8	0.5	1,000
24	L	QFN0404-24B		4.0 × 4.0	4.0 × 4.0	0.75	0.5	1,000
24	U	QFN0404-24-P12		4.0 × 4.0	4.0 × 4.0	0.75	0.5	1,000
24	NB	QFN4040-24-NB		4.0 × 4.0	4.0 × 4.0	0.75	0.5	1,000
26	NC	QFN3426-26-NC		3.4 × 2.6	3.4 × 2.6	0.75	0.4	1,500
28	L	HQFN0808-28		8.0 × 8.0	8.8 × 8.8	0.95	0.8	2,000
32	K	QFN(PL)0404-32		4.0 × 4.0	4.0 × 4.0	0.6	0.4	2,000
32	L	QFN0505-32B		5.0 × 5.0	5.0 × 5.0	0.85	0.5	1,000
32	L	QFN0505-32C		5.0 × 5.0	5.0 × 5.0	0.8	0.5	5,000

Pin	Symbol	Package	Actual Size Photo	Dimensions (mm)				Quantity/Reel (pcs)
				Body	Mount Area	Thickness *1	Pitch	
32	L	QFN0505-32-P7		5.0 × 5.0	5.0 × 5.0	0.75	0.5	1,000
36	N	QFN0505-36-P6		5.0 × 5.0	5.0 × 5.0	0.9	0.4	—
36	N	QFN0606-36		6.0 × 6.0	6.0 × 6.0	0.9	0.5	5,000
48	—	QFN48-Q1		7.2 × 7.2	7.2 × 7.2	1	0.5	—
48	N	QFN0606-48-P14		6.0 × 6.0	6.0 × 6.0	0.9	0.4	2,000
48	N	QFN0606-48-P22		6.0 × 6.0	6.0 × 6.0	0.9	0.4	5,000
48	N	QFN0707-48-P25		7.0 × 7.0	7.0 × 7.0	0.9	0.5	2,000
48	N	QFN0707-48-P27		7.0 × 7.0	7.0 × 7.0	0.9	0.5	2,000
48	U	QFN0507-48		5.0 × 7.0	5.0 × 7.0	0.6	—	—
56	L	QFN0808-56		8.0 × 8.0	8.0 × 8.0	0.8	0.5	1040 (トレイ)
64	—	QFN64-S4		8.2 × 8.2	8.2 × 8.2	0.95	0.4	—
65	L	QFN0910-65-MA		10.0 × 9.0	10.0 × 9.0	4.7	0.5	250
84	KD4	QFN84-D4		10.2 × 10.2	10.2 × 10.2	0.95	0.4	—

*1 Maximum Value

● QFP

Pin	Symbol	Package	Actual Size Photo	Dimensions (mm)				Quantity/Reel (pcs)
				Body	Mount Area	Thickness	Pitch	
44	—	QFP44-A1		10.0 × 10.0	12.4 × 12.4	2	0.8	50
52	—	QFP52-A2		10.0 × 10.0	13.2 × 13.2	2	0.65	—
64	FH1	QFP64-H1		10.0 × 10.0	12.0 × 12.0	1.4	0.5	90
100	FU1	QFP100-U1		20.0 × 14.0	23.2 × 17.2	2	0.65	72

Package Information

Please refer to our website for additional details.



● SC

Pin	Symbol	Package	Actual Size Photo	Dimensions (mm)				Quantity/Reel (pcs)
				Body	Mount Area	Thickness	Pitch	
4	F4	SC-82AB		2.0 × 1.25	2.0 × 2.1	0.9	1.3	3,000
5	F3	SC-88A		2.0 × 1.25	2.0 × 2.1	0.9	0.65	3,000
4	Q	SC-82AB		2.0 × 1.25	2.0 × 2.1	0.9	1.3	3,000
5	Q	SC-88A		2.0 × 1.25	2.0 × 2.1	0.9	0.65	3,000

● SDIP

Pin	Symbol	Package	Actual Size Photo	Dimensions (mm)				Quantity/Reel (pcs)
				Body	Mount Area	Thickness	Pitch	
44	—	SDIP22		19.0 × 6.4	—	3.4	1.778	25/Stick
52	—	SDIP24		23.0 × 6.5	—	3.4	1.778	20/Stick

● SON

Pin	Symbol	Package	Actual Size Photo	Dimensions (mm)				Quantity/Reel (pcs)
				Body	Mount Area	Thickness	Pitch	
3	D	SON1408-3		1.4 × 0.8	1.4 × 1.2	0.45	0.45	9,000
6	D	HSO6-6		2.9 × 2.8	2.9 × 3.0	0.9	0.95	3,000
6	D	SON1612-6		1.6 × 1.2	1.6 × 1.6	0.6	0.5	4,000
6	D	SON-6		1.6 × 2.6	1.6 × 3.0	0.85	0.5	3,000
8	D	SON-8		2.9 × 2.8	2.9 × 3.0	0.9	0.65	3,000
10	D	SON-10		2.9 × 2.8	2.9 × 3.0	0.9	0.5	3,000
22	D	SON22		6.1 × 4.7	6.1 × 5.0	1.3	0.5	1,000

● SOP

Pin	Symbol	Package	Actual Size Photo	Dimensions (mm)				Quantity/Reel (pcs)
				Body	Mount Area	Thickness	Pitch	
8	G	SOP8		4.9 × 3.9	4.9 × 6.0	1.25	1.27	2,500
14	G	SOP14		8.65 × 3.9	8.65 × 6.0	1.25	1.27	2,500
14	S	SOP14		10.1 × 5.0	10.1 × 7.4	3.1	1.27	1,000
20	—	SOP20		12.7 × 5.4	12.7 × 7.8	1.8	1.27	—
40	—	SOP40		26.6 × 9.4	26.6 × 11.8	2.6	1.27	1,000

● SOP JEDEC (EMP)

Pin	Symbol	Package	Actual Size Photo	Dimensions (mm)				Quantity/Reel (pcs)
				Body	Mount Area	Thickness	Pitch	
8	E	SOP8 JEDEC 150mil(EMP8)		5.0 × 3.9	5.0 × 6.0	1.5	1.27	2,000

● SOT

Pin	Symbol	Package	Actual Size Photo	Dimensions (mm)				Quantity/Reel (pcs)
				Body	Mount Area	Thickness	Pitch	
3	N	SOT-23-3		2.9 × 1.6	2.9 × 2.8	1.1	0.95	3,000
5	F	SOT-23-5		2.9 × 1.6	2.9 × 2.8	1.1	0.95	3,000
5	N	SOT-23-5		2.9 × 1.6	2.9 × 2.8	1.1	0.95	3,000
5	DC	SOT-23-5-DC		2.9 × 1.6	2.9 × 2.8	1.1	0.95	3,000
6	N	SOT-23-6		2.9 × 1.6	2.9 × 2.8	1.1	0.95	3,000
6	F1	SOT-23-6-1		2.9 × 1.6	2.9 × 2.8	1.1	0.95	3,000
6	N	SOT-23-6W		2.9 × 1.8	2.9 × 2.8	1.1	0.95	3,000
6	DD	SOT-23-6-DD		2.9 × 1.6	2.9 × 2.8	1.1	0.95	3,000
6	N	TSOT-23-6		2.9 × 1.6	2.9 × 2.8	0.85	0.95	3,000
3	H	SOT-89		4.5 × 2.5	4.5 × 4.0	1.5	1.5	1,000
3	U3	SOT-89-3		4.5 × 2.5	4.5 × 4.25	1.5	1.5	1,000
5	H	SOT-89-5		4.5 × 2.5	4.5 × 4.35	1.5	1.5	1,000
5	U1	SOT-89-5-1		4.5 × 2.5	4.5 × 4.5	1.5	1.5	1,000
5	U2	SOT-89-5-2		4.5 × 2.5	4.5 × 4.5	1.5	1.5	1,000
5	DF	SOT-89-5-DF		4.5 × 2.5	4.5 × 4.35	1.5	1.5	1,000
5	DM	SOT-89-5-DM		4.5 × 2.5	4.5 × 4.35	1.5	1.5	1,000



● SSOP

Pin	Symbol	Package	Actual Size Photo	Dimensions (mm)				Quantity/Reel (pcs)
				Body	Mount Area	Thickness	Pitch	
8	G	SSOP-8G		2.9 × 2.8	2.9 × 4.0	1.1	0.65	3,000
8	V	SSOP8		3.5 × 4.4	3.5 × 6.4	1.15	0.65	2,000
8	S	SSOP8		3.5 × 4.4	3.5 × 6.4	1.15	0.65	2,000
10	S	SSOP10		3.5 × 4.4	3.5 × 6.4	1.15	0.5	2,000
10	V	SSOP10		3.5 × 4.4	3.5 × 6.4	1.15	0.5	2,000
10	V	SSOP-10		3.1 × 4.4	3.1 × 6.4	1.15	0.5	3,000
10	V	SSOP10G		2.9 × 2.8	2.9 × 4.0	1.1	0.5	2,000
14	V	SSOP14		5.0 × 4.4	5.0 × 6.4	1.15	0.65	2,000
16	S	SSOP16		5.0 × 4.4	5.0 × 6.4	1.15	0.65	2,000
16	V	SSOP16		5.0 × 4.4	5.0 × 6.4	1.15	0.65	2,000
16	V	SSOP-16		5.1 × 4.4	5.1 × 6.4	1.15	0.65	2,000
20	VC3	SSOP20-C3		6.5 × 4.4	6.5 × 6.4	1.15	0.65	2,000
20	VF1	SSOP20-F1		8.9 × 5.4	8.9 × 7.8	1.8	0.8	2,000
20	V	SSOP20		6.5 × 4.4	6.5 × 6.4	1.15	0.5	2,000
24	VC2	SSOP24-C2		6.5 × 4.4	6.5 × 6.4	1.15	0.5	2,000
24	-	SSOP24-E1		7.9 × 5.6	7.9 × 7.6	1.15	0.65	2,000
24	V	SSOP-24		7.9 × 5.6	7.9 × 7.6	1.15	0.65	3,000
32	V	SSOP32		11.0 × 5.6	11.0 × 7.6	1.15	0.65	2,000
44	V	SSOP44		11.0 × 5.6	11.0 × 7.6	1.15	0.5	2,000

● TO

Pin	Symbol	Package	Actual Size Photo	Dimensions (mm)				Quantity/Reel (pcs)
				Body	Mount Area	Thickness	Pitch	
3	F	TO-220F-3		10.0 × 16.0	10.0 × 28.5 (20.8 *2)	4.7	2.54	100/plastic bag
4	F	TO-220F-4		10.0 × 16.0	10.0 × 29.1 (18.4 *2)	4.5	2.54	50/Stick
4	-	TO-220F-4-L		10.0 × 16.0	10.0 × 27.8 (19.2 *2)	4.5	2.54	50/Stick
3	DL1	TO-252-3-L1		6.54 × 6.04	6.54 × 9.68	2.29	2.28	3,000/ リール
5	DL3	TO-252-5-L3		6.54 × 6.04	6.54 × 9.68	2.29	1.27	3,000/ リール
5	DL5	TO-252-5-L5		6.54 × 6.04	6.54 × 9.68	2.29	1.14	3,000/ リール
5	J	TO-252-5-P2		6.6 × 6.1	6.6 × 9.9	2.3	1.27	3,000

*2 Mounting Height

Package Information

Please refer to our website for additional details.



TSSOP

Pin	Symbol	Package	Actual Size Photo	Dimensions (mm)				Quantity/Reel (pcs)
				Body	Mount Area	Thickness	Pitch	
10	T	TSSOP10G		2.9 × 2.8	2.9 × 4.0	0.75	0.5	2,000
16	T	TSSOP-16		5.0 × 4.4	5.0 × 6.4	0.9	0.65	2,500
20	T	TSSOP-20		6.5 × 4.4	6.5 × 6.4	0.9	0.65	3,000
24	T	TSSOP-24		7.8 × 4.4	7.8 × 6.4	0.9	0.65	3,000
28	T	TSSOP-28		9.7 × 4.4	9.7 × 6.4	1.2	0.65	3,000

USB

Pin	Symbol	Package	Actual Size Photo	Dimensions (mm)				Quantity/Reel (pcs)
				Body	Mount Area	Thickness *1	Pitch	
6	HA8	USB6-A8		1.0 × 1.2	1.0 × 1.2	0.44	0.8	3,000
6	HD3	USB6-D3		1.8 × 2.0	1.8 × 2.0	0.85	0.5	3,000
8	HB3	USB8-B3		1.5 × 1.5	1.5 × 1.5	0.8	0.5	3,000
8	HB6	USB8-B6		1.5 × 1.5	1.5 × 1.5	0.6	0.5	3,000

*1 Maximum Value

WLCSP

Pin	Symbol	Package	Actual Size Photo	Dimensions (mm)				Ball Diameter (φ)	Quantity/Reel (pcs)
				Body	Mount Area	Thickness *1	Pitch		
4	Z	WLCSP-4-P2		0.79 × 0.79	0.79 × 0.79	0.53	0.5	0.16	5,000
4	Z	WLCSP-4-P5		0.69 × 0.69	0.69 × 0.69	0.53	0.4	0.16	5,000
4	Z	WLCSP-4-P7		0.69 × 0.69	0.69 × 0.69	0.4	0.4	0.16	5,000
4	Z	WLCSP-4-P8		0.64 × 0.64	0.64 × 0.64	0.4	0.35	0.2	5,000
4	Z	WLCSP-4-P12		0.64 × 0.64	0.64 × 0.64	0.3	0.35	0.2	10,000
5	Z	WLCSP-5-P1		1.346 × 0.98	1.346 × 0.98	0.62	X=0.433 Y=0.5	0.25	5,000
6	Z	WLCSP-6-P6		1.28 × 0.88	1.28 × 0.88	0.69	0.4	0.26	5,000
6	Z	WLCSP-6-P7		1.25 × 0.84	1.25 × 0.84	0.4	X=0.4 Y=0.5	0.16	5,000
6	Z	WLCSP-6-P8		1.28 × 0.88	1.28 × 0.88	0.4	0.4	0.23	5,000

Pin	Symbol	Package	Actual Size Photo	Dimensions (mm)				Ball Diameter (φ)	Quantity/Reel (pcs)
				Body	Mount Area	Thickness *1	Pitch		
6	Z	WLCSP-6-P11		1.20 × 0.80	1.20 × 0.80	0.33	0.4	0.26	5,000
6	ZA	WLCSP-6-P12		1.30 × 0.88	1.30 × 0.88	0.5	0.4	0.2	5,000
6	Z	WLCSP-6-P13		1.10 × 0.88	1.10 × 0.88	0.3	0.4	0.16	—
8	Z	WLCSP-8-P1		1.45 × 1.48	1.45 × 1.48	0.4	0.4	0.245	5,000
8	Z	WLCSP-8-P4		1.50 × 1.08	1.50 × 1.08	0.4	X=0.40 Y=0.79	0.16	5,000
8	Z	WLCSP-8-P8		1.50 × 1.08	1.50 × 1.08	0.38	X=0.4 Y=0.79	0.16	5,000
8	Z	WLCSP-8-P10		1.60 × 1.00	1.60 × 1.00	0.2	X=0.4 Y=0.6	0.16	5,000
8	Z	WLCSP-8-P11		1.62 × 0.98	1.62 × 0.98	0.4	0.4	0.245	—
8	Z	WLCSP-8-P14		1.55 × 0.92	1.55 × 0.92	0.4	X=0.4 Y=0.58	0.18	5,000
9	Z	WLCSP-9-P1		1.27 × 1.27	1.27 × 1.27	0.69	0.4	0.26	5,000
9	Z	WLCSP-9-P2		1.45 × 1.48	1.45 × 1.48	0.4	0.4	0.245	5,000
11	Z	WLCSP-11-P2		2.37 × 1.47	2.37 × 1.47	0.83	0.5	0.16	4,000
12	Z	WLCSP-12-P1		1.97 × 1.47	1.97 × 1.47	0.86	0.4	0.26	4,000
12	Z	WLCSP-12-P2		1.288 × 1.828	1.288 × 1.828	0.69	0.4	0.27	5,000
12	Z	WLCSP-12-P3		1.68 × 1.28	1.68 × 1.28	0.7	0.4	0.26	4,000
12	TBD	WLCSP-12	TBD	2.29 × 1.79 (TBD)	2.29 × 1.79 (TBD)	TBD	TBD	TBD	TBD
15	Z	WLCSP-15-P1		2.88 × 1.68	2.88 × 1.68	0.4	0.5	0.25	5,000
20	Z	WLCSP-20-P1		2.305 × 1.70	2.305 × 1.70	0.59	0.4	0.265	5,000
20	Z	WLCSP-20-P2		2.315 × 1.71	2.315 × 1.71	0.4	0.4	0.245	5,000
20	Z	WLCSP-20-P3		2.315 × 1.71	2.315 × 1.71	0.4	0.4	0.245	5,000
30	ZA	WLCSP-30-ZA1		2.40 × 2.35	2.40 × 2.35	0.6 (TBD)	X=0.4 Y=0.48	TBD	TBD

*1 Maximum Value of thickness including balls

Package Information

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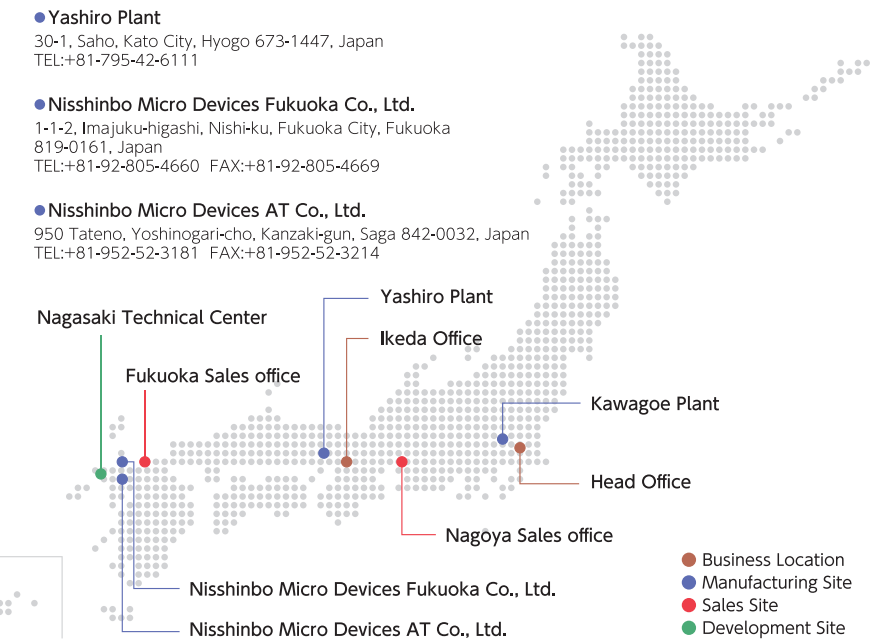
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