



# PRODUCT SELECTION GUIDE

2023

[www.sg-micro.de](http://www.sg-micro.de)

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## SGMICRO OVERVIEW

SG Micro Corp (SGMICRO) specializes in designing, marketing, and supporting high-performance and high-quality analog ICs, offering innovative solutions for a broad range of applications in wireless communication, consumer electronics, medical devices, automotive, and industrial markets.

SGMICRO's expertise in analog IC technology and close collaboration with customers are the driving forces behind its continuous improvements and innovations. Heavy investments in R&D and advanced technologies have allowed the company to introduce over 4,300 analog IC products with excellent reliability and consistency, including precision signal conditioning products such as amplifiers and comparators, buffers, current sensors, temperature sensors, ADC/DAC, analog and RF switches and interface products, as well as many energy-efficient power management ICs.

Innovative analog IC solutions across an extensive portfolio of leading-edge products enable our customers to target and lead diverse and fast-growing markets such as smart devices, mobile electronics, and green energy technologies, resulting in improved performance, including longer battery life, fewer peripheral components, smaller PCB space, and lower overall product costs.

At SGMICRO, quality and reliability are always at the top of the priority list. The company's goal is to become one of the world's leading analog IC solution providers by offering customers the best quality products and services. It is the company's policy to continually improve our technologies and systems in an ongoing and never-ending effort to exceed customer expectations. Through its strict QA system, SGMICRO ensures that the company's products meet or exceed the highest levels of quality and reliability standards.

The company strives to achieve a leading position in the analog IC industry through advanced design, superior performance, and excellent quality products that promote its customers' success. The company is committed to improving people's lives and the environment through advancements in technology and technical innovations.





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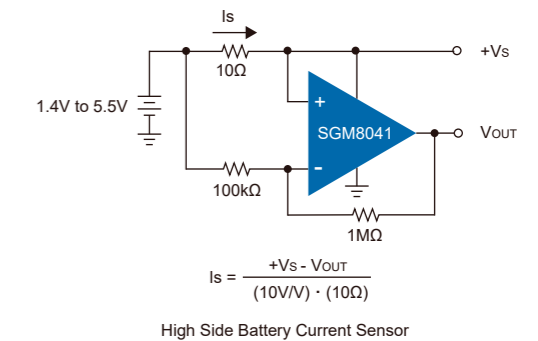
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# Nano Power Operational Amplifiers

The Nano Power Operational Amplifier family is designed to support rail-to-rail input and output operation and has as low as 350nA quiescent current. These specifications make these operational amplifiers extremely appropriate for low frequency low power applications, such as battery current monitoring and sensor conditioning.



Amplifiers per Package		1*														Package	Features
Part Number	I <sub>Q</sub> /Amp Typ (μA)	Shut-down	V <sub>CC</sub> (V)	GBP Typ (kHz)	Slew Rate Typ (V/ms)	E <sub>NOISE</sub> 0.1Hz ~ 10Hz (μV <sub>PP</sub> )	E <sub>NOISE</sub> Typ @1kHz (nV/√Hz)	V <sub>OS</sub> Max @25°C (mV)	TC of V <sub>OS</sub> Typ (μV/°C)	I <sub>B</sub> Typ (pA)	A <sub>VO</sub> Typ (dB)	CMRR Typ (dB)	Rail-to-Rail Input	Rail-to-Rail Output			
2	SGM8142	0.35	No	1.4 ~ 5.5	5	1.6	4	130	2.5	2	1	93	83	Yes	Yes	SOIC-8,MSOP-8	Ultra Low Quiescent Current, Rail-to-Rail Input and Output
1	SGM8141	0.38	No	1.4 ~ 5.5	5	1.5	4.9	125	2.5	2	1	90	80	Yes	Yes	SOT-23-5,SOIC-8,MSOP-8	Ultra Low Quiescent Current, Rail-to-Rail Input and Output
1	SGM8040-1	0.55	No	1.4 ~ 5.5	11	4	5	180	0.23	1	10	120	92	Yes	Yes	SOT-23-5,SC70-5,SOIC-8	Very Low Quiescent Current, Rail-to-Rail Input and Output
2	SGM8040-2	0.55	No	1.4 ~ 5.5	11	4	5	180	0.23	1	10	120	92	Yes	Yes	TDFN-2x2-8L,SOIC-8	Very Low Quiescent Current, Rail-to-Rail Input and Output
2	SGM8042	0.67	No	1.4 ~ 5.5	14.5	4.2	3.2	180	2.5	2.5	1	93	84	Yes	Yes	SOIC-8,MSOP-8	Very Low Quiescent Current, Rail-to-Rail Input and Output
4	SGM8044	0.67	No	1.4 ~ 5.5	15	3.4	3.2	190	2.5	2.5	1	93	83	Yes	Yes	SOIC-14,TSSOP-14, TQFN-3x3-16L	Very Low Quiescent Current, Rail-to-Rail Input and Output
2	SGM8046	0.67	No	1.4 ~ 5.5	100	14.5	3	190	2.5	2.5	1	92	82	Yes	Yes	SOIC-8,MSOP-8	Stable for Gain of 10, 100kHz, Very Low I <sub>Q</sub> , RRIO
4	SGM8048	0.69	No	1.4 ~ 5.5	100	14.5	3.5	205	2.5	2.5	1	92	83	Yes	Yes	SOIC-14,TSSOP-14	Stable for Gain of 10, 100kHz, Very Low I <sub>Q</sub> , RRIO
1	SGM8041	0.71	No	1.4 ~ 5.5	14.5	3.3	3.4	135	2.5	2.5	1	93	84	Yes	Yes	SOT-23-5,SOIC-8,MSOP-8	Very Low Quiescent Current, Rail-to-Rail Input and Output
1	SGM8045	0.71	No	1.4 ~ 5.5	100	16	3.2	160	2.5	2.5	1	93	84	Yes	Yes	SOT-23-5,SOIC-8,MSOP-8	Stable for Gain of 10, 100kHz, Very Low I <sub>Q</sub> , RRIO
2	SGM8039-2	1.5	No	1.4 ~ 5.5	12	4	5	190	0.08†		5	120	96	Yes	Yes	MSOP-10	Very Low Quiescent Current, Integrated Special Switch, RRIO

Note: † Typical Values @ 25°C

# Micro Power Operational Amplifiers

The Micro Power Operational Amplifier family is designed to support rail-to-rail input and output operation and has as low as 2.5μA quiescent current. These specifications make these operational amplifiers extremely appropriate for low frequency low power applications, such as battery current monitoring and sensor conditioning.

Amplifiers per Package		1*														Package	Features
Part Number	I <sub>Q</sub> /Amp Typ (μA)	Shut-down	V <sub>CC</sub> (V)	GBP Typ (MHz)	Slew Rate Typ (V/ms)	E <sub>NOISE</sub> 0.1Hz ~ 10Hz (μV <sub>PP</sub> )	E <sub>NOISE</sub> Typ @1kHz (nV/√Hz)	V <sub>OS</sub> Max @25°C (mV)	TC of V <sub>OS</sub> Typ (μV/°C)	I <sub>B</sub> Typ (pA)	A <sub>VO</sub> Typ (dB)	CMRR Typ (dB)	Rail-to-Rail Input	Rail-to-Rail Output			
1	SGM8049-1	2.5	No	1.8 ~ 5.5	0.12	80	3.5	75	0.85	0.6	1	118	100	Yes	Yes	SOT-23-5,SC70-5,TDFN-2x2-6L	Pico Amp Input Current, Micro Power, Rail-to-Rail Input and Output
2	SGM8049-2	2.5	No	1.8 ~ 5.5	0.12	80	3.5	75	0.85	0.6	1	118	100	Yes	Yes	SOT-23-8,SOIC-8	Pico Amp Input Current, Micro Power, Rail-to-Rail Input and Output
4	SGM8049-4	2.5	No	1.8 ~ 5.5	0.12	80	3.5	75	0.85	0.6	1	118	100	Yes	Yes	TSSOP-14	Pico Amp Input Current, Micro Power, Rail-to-Rail Input and Output
1	SGM8240-1	2.8	No	2.7 ~ 24	0.1	50	3	100	1	3	5	120	110	Yes	Yes	SC70-5,SOT-23-5	High Voltage, Micro Power, Precision
2	SGM8240-2	2.8	No	2.7 ~ 24	0.1	50	3	100	1	3	5	120	110	Yes	Yes	TDFN-2x3-8L,SOIC-8,MSOP-8	High Voltage, Micro Power, Precision
4	SGM8240-4	2.8	No	2.7 ~ 24	0.1	50	3	100	1	3	5	120	110	Yes	Yes	SOIC-14	High Voltage, Micro Power, Precision
1	SGM8521	5.5	No	2.1 ~ 5.5	0.15	50		85	3.5	2	3	110	87	Yes	Yes	SOT-23-5,SOIC-8	Low Bias Current, Micro Power, Rail-to-Rail Input and Output
2	SGM8522	5.5	No	2.1 ~ 5.5	0.15	50		85	3.5	2	3	110	87	Yes	Yes	SOIC-8,MSOP-8	Low Bias Current, Micro Power, Rail-to-Rail Input and Output
4	SGM8524	5.5	No	2.1 ~ 5.5	0.15	50		85	3.5	2	3	110	87	Yes	Yes	SOIC-14,TSSOP-14	Low Bias Current, Micro Power, Rail-to-Rail Input and Output

# Micro Power Operational Amplifiers

Amplifiers per Package	Part Number	I <sub>Q</sub> /Amp Typ (μA)	Shut-down	V <sub>CC</sub> (V)	GBP Typ (MHz)	Slew Rate Typ (V/ms)	E <sub>NOISE</sub> 0.1Hz ~ 10Hz (μV <sub>PP</sub> )	E <sub>NOISE</sub> Typ @1kHz (nV/√Hz)	V <sub>OS</sub> Max @25°C (mV)	TC of V <sub>OS</sub> Typ (μV/°C)	I <sub>B</sub> Typ (pA)	A <sub>VO</sub> Typ (dB)	CMRR Typ (dB)	Rail-to-Rail Input	Rail-to-Rail Output	Package	Features
1	SGM8038-1	6	No	1.4 ~ 5.5	0.145	130	6	110	0.8	3	2	125	94	Yes	Yes	SOT-23-5,SC70-5,SOIC-8	High Precision, Rail-to-Rail Input and Output
2	SGM8038-2	6	No	1.4 ~ 5.5	0.145	130	6	110	0.8	3	2	125	94	Yes	Yes	SOT-23-8,SOIC-8,TDFN-2×2-8L	High Precision, Rail-to-Rail Input and Output
1	SGM8954-1	9	No	1.8 ~ 5.5	0.14	40	1	65	0.035	0.055	60	125	108	Yes	Yes	SOT-23-5,SOIC-8,UTDFN-1.6×1.6-6L	Micro Power, CMOS, Zero-Drift, Rail-to-Rail Input and Output
2	SGM8954-2	9	No	1.8 ~ 5.5	0.14	40	1	65	0.035	0.055	60	125	108	Yes	Yes	SOIC-8,MSOP-8,TDFN-2×2-8L	Micro Power, CMOS, Zero-Drift, Rail-to-Rail Input and Output
1	SGM8953-1	17	No	1.8 ~ 5.5	0.14	50	1	50	0.05	0.06	80	118	106	Yes	Yes	SOT-23-5,SOIC-8,UTDFN-1.6×1.6-6L	Micro Power, CMOS, Zero-Drift, Rail-to-Rail Input and Output
2	SGM8953-2	17	No	1.8 ~ 5.5	0.14	50	1	50	0.05	0.06	80	118	106	Yes	Yes	SOIC-8,MSOP-8,TDFN-2×2-8L	Micro Power, CMOS, Zero-Drift, Rail-to-Rail Input and Output
1	SGM8531	18	No	2.1 ~ 5.5	0.5	200		33	3.5	1.7	0.5	104	75	Yes	Yes	SOT-23-5,SOIC-8	Low Bias Current, Micro Power, Rail-to-Rail Input and Output
2	SGM8532	18	No	2.1 ~ 5.5	0.5	200		33	3.5	1.7	0.5	104	75	Yes	Yes	SOIC-8,MSOP-8	Low Bias Current, Micro Power, Rail-to-Rail Input and Output
4	SGM8534	18	No	2.1 ~ 5.5	0.5	200		33	3.5	1.7	0.5	104	75	Yes	Yes	SOIC-14,TSSOP-14	Low Bias Current, Micro Power, Rail-to-Rail Input and Output
1	SGM8541	46	No	2.1 ~ 5.5	1.1	520		27	3.5	2.7	0.5	105	80	Yes	Yes	SOT-23-5,SOIC-8,SC70-5	Pico Amp Input Current, Micro Power, Rail-to-Rail Input and Output
2	SGM8542	46	No	2.1 ~ 5.5	1.1	520		27	3.5	2.7	0.5	105	80	Yes	Yes	SOIC-8,MSOP-8,TSSOP-8	Pico Amp Input Current, Micro Power, Rail-to-Rail Input and Output
4	SGM8544	46	No	2.1 ~ 5.5	1.1	520		27	3.5	2.7	0.5	105	80	Yes	Yes	SOIC-14,TSSOP-14	Pico Amp Input Current, Micro Power, Rail-to-Rail Input and Output
1	SGM8543	48	Yes	2.1 ~ 5.5	1.1	520		27	3.5	2.7	0.5	105	76	Yes	Yes	SOT-23-6,SOIC-8	Pico Amp Input Current, Micro Power, Rail-to-Rail Input and Output
1	SGM8545	48	No	2.1 ~ 5.5	1.1	520		27	3.5	2.7	0.5	105	76	Yes	Yes	SOT-23-5	Pico Amp Input Current, Micro Power, Rail-to-Rail Input and Output
1	SGM8210-1	50	No	3.3 ~ 24	1	300	3	25	1	1	5	120	115	Yes	Yes	SOT-23-5,SC70-5	High Voltage, Micro Power, Precision
2	SGM8210-2	50	No	3.3 ~ 24	1	300	3	25	1	1	5	120	115	Yes	Yes	SOIC-8,MSOP-8,TDFN-2×3-8L	High Voltage, Micro Power, Precision
4	SGM8210-4	50	No	3.3 ~ 24	1	300	3	25	1	1	5	120	115	Yes	Yes	SOIC-14	High Voltage, Micro Power, Precision
1	SGM8535	80	No	1.8 ~ 5.5	1.5	800		30	3.4	1.5	3	103	85	No	Yes	SOT-23-5,SC70-5,SOIC-8,MSOP-8	1.5MHz, 1.8V, Unity-Gain Stable, Rail-to-Rail Output
2	SGM8536	80	No	1.8 ~ 5.5	1.5	800		30	3.4	1.5	3	103	85	No	Yes	SOIC-8,MSOP-8	1.5MHz, 1.8V, Unity-Gain Stable, Rail-to-Rail Output
1	SGM8537	80	Yes	1.8 ~ 5.5	1.5	800		30	3.4	1.5	3	103	85	No	Yes	SOT-23-6,SOIC-8,MSOP-8	1.5MHz, 1.8V, Unity-Gain Stable, Rail-to-Rail Output
4	SGM8538	80	No	1.8 ~ 5.5	1.5	800		30	3.4	1.5	3	103	85	No	Yes	SOIC-14,TSSOP-14	1.5MHz, 1.8V, Unity-Gain Stable, Rail-to-Rail Output
1	SGM8271	150	No	4.5 ~ 36	1.4	7000		43	3	3	20	100	95	No	Yes	SOT-23-5,SOIC-8,MSOP-8	1.4MHz, 7V/μs, Low Power, Rail-to-Rail Output
2	SGM8272	150	No	4.5 ~ 36	1.4	7000		43	3	3	20	100	95	No	Yes	SOIC-8,MSOP-8	1.4MHz, 7V/μs, Low Power, Rail-to-Rail Output
4	SGM8274	150	No	4.5 ~ 36	1.4	7000		43	3	3	20	100	95	No	Yes	SOIC-14,TSSOP-14	1.4MHz, 7V/μs, Low Power, Rail-to-Rail Output
2	LM2904	220	No	3 ~ 32	1.1	350	8.7	36	5.8		10	111	118	No	Yes	SOIC-8,MSOP-8,TSSOP-8	High Voltage, Precision
2	SGM8270-2	500	No	3.3 ~ 36	0.14	8000	3	15	2.8	0.8	10	120	85	Yes	Yes	SOIC-8,MSOP-8	High Voltage, Precision, Rail-to-Rail Input and Output
4	SGM8270-4	500	No	3.3 ~ 36	0.14	8000	3.5	15	1.2	0.8	5	120	88	Yes	Yes	SOIC-14,TSSOP-14	High Voltage, Precision, Rail-to-Rail Input and Output
1	SGM8273-1	600	No	3.3 ~ 36	0.14	6000	1.5	9	1	2	10	90	86	Yes	Yes	SOT-23-5,SOIC-8,MSOP-8	High Voltage, Precision, Rail-to-Rail Input and Output
2	SGM8273-2	600	No	3.3 ~ 36	0.14	6000	1.5	9	1	2	10	90	86	Yes	Yes	SOIC-8	High Voltage, Precision, Rail-to-Rail Input and Output
4	SGM8273-4	600	No	3.3 ~ 36	0.14	6000	1.5	9	1	2	10	90	86	Yes	Yes	SOIC-14	High Voltage, Precision, Rail-to-Rail Input and Output
2	SGM8278-2	1200	No	3 ~ 36	3.3	2000	2	15	2	2	10	120	100	Yes	Yes	SOIC-8,MSOP-8,TDFN-2×2-8AL,TDFN-3×3-8BL,WLCSP-1.57×1.57-8B	High Voltage, Low Noise, Rail-to-Rail Input and Output
1	SGM8276-1	1400	No	3.3 ~ 36	0.14	8000	3	10	1.5	1	50	120	80	Yes	Yes	SOT-23-5	High Voltage, Low Noise, Precision, Rail-to-Rail Input and Output
2	SGM8276-2	1400	No	3.3 ~ 36	0.14	8000	3	10	1.5	1	50	120	80	Yes	Yes	SOIC-8	High Voltage, Low Noise, Precision, Rail-to-Rail Input and Output
4	SGM8276-4	1400	No	3.3 ~ 36	0.14	8000	3	10	1.5	1	50	120	80	Yes	Yes	SOIC-14	High Voltage, Low Noise, Precision, Rail-to-Rail Input and Output



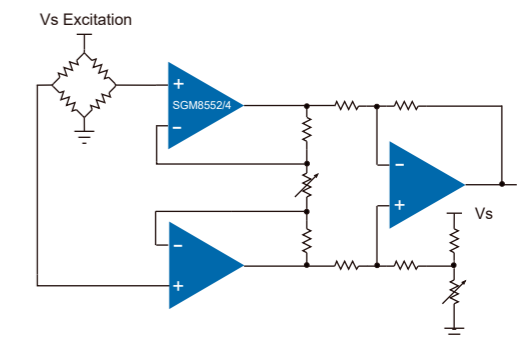
# High Speed Operational Amplifiers

Amplifiers per Package	Part Number	1* GBP Typ (MHz)	Bandwidth @-3dB (MHz)	Shut-down	V <sub>CC</sub> (V)	Slew Rate Typ (V/μs)	E <sub>NOISE</sub> Typ @1MHz (nV/√Hz)	V <sub>OS</sub> Max @25°C (mV)	TC of V <sub>OS</sub> Typ (μV/°C)	I <sub>B</sub> Typ (pA)	I <sub>O/Amp</sub> Typ (mA)	A <sub>VO</sub> Typ (dB)	CMRR Typ (dB)	Rail-to-Rail Input	Rail-to-Rail Output	Package	Features
1	SGM8968-1	10		No	1.8 ~ 5.5	20	8 <sup>††</sup>	0.24	1	6	1.6	128	95	Yes	Yes	SOT-23-5,SOIC-8	10MHz High Precision Rail-to-Rail Input and Output Amp
2	SGM8968-2	10		No	1.8 ~ 5.5	20	8 <sup>††</sup>	0.24	1	6	1.6	128	95	Yes	Yes	MSOP-8,SOIC-8	10MHz High Precision Rail-to-Rail Input and Output Amp
4	SGM8968-4	10		No	1.8 ~ 5.5	20	8 <sup>††</sup>	0.24	1	6	1.6	128	95	Yes	Yes	SOIC-14,TSSOP-14	10MHz High Precision Rail-to-Rail Input and Output Amp
1	SGM8967-1	27		No	2.1 ~ 5.5	30	8 <sup>††</sup>	0.24	1.5	3	2.7	128	105	Yes	Yes	SOT-23-5,SOIC-8	27MHz High Precision Rail-to-Rail Input and Output Amp
2	SGM8967-2	27		No	2.1 ~ 5.5	30	8 <sup>††</sup>	0.24	1.5	3	2.7	128	105	Yes	Yes	MSOP-8,SOIC-8	27MHz High Precision Rail-to-Rail Input and Output Amp
1	SGM8967-3	27		Yes	2.1 ~ 5.5	30	8 <sup>††</sup>	0.24	1.5	3	2.7	128	105	Yes	Yes	SOT-23-6	27MHz High Precision Rail-to-Rail Input and Output Amp
4	SGM8967-4	27		No	2.1 ~ 5.5	30	8 <sup>††</sup>	0.24	1.5	3	2.7	128	105	Yes	Yes	SOIC-14,TSSOP-14	27MHz High Precision Rail-to-Rail Input and Output Amp
1	SGM8965A-1	50		No	2.2 ~ 5.5	30	5.5 <sup>†</sup>	0.28	1.4	1	5	118	94	Yes	Yes	SOT-23-5,SOIC-8	50MHz High Precision Amp
1	SGM8969-1	50		No	1.8 ~ 5.5	20	8 <sup>††</sup>	0.24	1	6	1.1	127	102	Yes	Yes	SOT-23-5	50MHz High Precision Rail-to-Rail Input and Output Amp
2	SGM8969-2	50		No	1.8 ~ 5.5	20	8 <sup>††</sup>	0.24	1	6	1.1	127	102	Yes	Yes	SOIC-8,TDFN-3x3-8L	50MHz High Precision Rail-to-Rail Input and Output Amp
2	SGM8965A-2	50		No	2.2 ~ 5.5	30	5.5 <sup>†</sup>	0.28	1.4	1	5	118	94	Yes	Yes	MSOP-8,SOIC-8	50MHz High Precision Amp
1	SGM8301	57	110	No	4.5 ~ 12	140	65 <sup>††</sup>	18	12		7.5	105	75	No	Yes	SOT-23-5,SOIC-8,MSOP-8	110MHz High Voltage Rail-to-Rail Output Amp
2	SGM8302	57	110	No	4.5 ~ 12	140	65 <sup>††</sup>	18	12		7.5	105	75	No	Yes	SOIC-8,MSOP-8	110MHz High Voltage Rail-to-Rail Output Amp
4	SGM8304	57	110	No	4.5 ~ 12	140	65 <sup>††</sup>	18	12		7.5	105	75	No	Yes	SOIC-14,TSSOP-14	110MHz High Voltage Rail-to-Rail Output Amp
1	SGM80581	100	220	No	2.5 ~ 5.5	160	7	3	6.5	2	4.5	109	71	Yes	Yes	SOT-23-5,SOIC-8	220MHz Rail-to-Rail Input and Output Amp
2	SGM80582	100	220	No	2.5 ~ 5.5	160	7	3	6.5	2	4.5	109	71	Yes	Yes	SOIC-8,MSOP-8	220MHz Rail-to-Rail Input and Output Amp
4	SGM80584	100	220	No	2.5 ~ 5.5	160	7	3	6.5	2	4.5	109	71	Yes	Yes	SOIC-14	220MHz Rail-to-Rail Input and Output Amp

Notes: † Typical Values @ 100kHz  
 †† Typical Values @ 10kHz

# High Precision Operational Amplifiers

The High Precision Operational Amplifier family provides high precision, low noise, low drift, rail-to-rail input and output, and single/dual/quad channel operational amplifiers. The internal auto-zero circuit cancels the input offset voltage and drift over time and temperature, and eliminates the 1/f noise as well. The combination of these characteristics makes them good choices for temperature, position and pressure sensors, medical equipment, strain gauge amplifiers, or any other industrial applications requiring high precision, low noise and long term stability.



Amplifiers per Package	Part Number	1* V <sub>OS</sub> Max @25°C (mV)	2* TC of V <sub>OS</sub> Typ (μV/°C)	I <sub>B</sub> Typ (pA)	Shut-down	V <sub>CC</sub> (V)	GBP Typ (MHz)	Slew Rate Typ (V/μs)	E <sub>NOISE</sub> 0.1Hz ~ 10Hz (μV <sub>PP</sub> )	E <sub>NOISE</sub> Typ @1kHz (nV/√Hz)	I <sub>O/Amp</sub> Typ (μA)	A <sub>VO</sub> Typ (dB)	CMRR Typ (dB)	Rail-to-Rail Input	Rail-to-Rail Output	Package	Features
1	SGM8557-1	0.005	0.027	240	No	2.7 ~ 5.5	15	7	0.5	30	1150	144	120	Yes	Yes	SOT-23-5,SOIC-8,MSOP-8	High Precision, Low Noise, Zero-Drift
2	SGM8557-2	0.005	0.027	240	No	2.7 ~ 5.5	15	7	0.5	30	1150	144	120	Yes	Yes	SOIC-8,MSOP-8	High Precision, Low Noise, Zero-Drift
1	SGM8557-3	0.005	0.027	240	Yes	2.7 ~ 5.5	15	7	0.5	30	1150	144	120	Yes	Yes	SOT-23-6,SOIC-8	High Precision, Low Noise, Zero-Drift, Single Amp with Shutdown
2	SGM8557-5	0.005	0.027	240	Yes	2.7 ~ 5.5	15	7	0.5	30	1150	144	120	Yes	Yes	MSOP-10	High Precision, Low Noise, Zero-Drift, Dual Amps with Shutdown

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Amplifiers per Package	Part Number	1* V <sub>OS</sub> Max @25°C (mV)	2* TC of V <sub>OS</sub> Typ (μV/°C)	I <sub>B</sub> Typ (pA)	Shut-down	V <sub>CC</sub> (V)	GBP Typ (MHz)	Slew Rate Typ (V/μs)	E <sub>NOISE</sub> 0.1Hz ~ 10Hz (μV <sub>PP</sub> )	E <sub>NOISE</sub> Typ @1kHz (nV/√Hz)	I <sub>O/Amp</sub> Typ (μA)	A <sub>VO</sub> Typ (dB)	CMRR Typ (dB)	Rail-to-Rail -Rail Input	Rail-to-Rail -Rail Output	Package	Features
1	SGM8263-1	0.0085	0.01	60000	No	4 ~ 36	10	10	0.1	4.5	2500	145	135	No	Yes	SOT-23-5,SOIC-8	10MHz, Ultra Low Noise, Ultra Low Offset
2	SGM8263-2	0.0085	0.01	60000	No	4 ~ 36	10	10	0.1	4.5	2500	145	135	No	Yes	SOIC-8	10MHz, Ultra Low Noise, Ultra Low Offset
1	SGM8249-1	0.01	0.012	100	No	4.5 ~ 36	8	6	0.2	10	850	150	140	No	Yes	SOT-23-5,SOIC-8	High Voltage, High Precision, Low Noise, Rail-to-Rail Output
2	SGM8249-2	0.01	0.012	100	No	4.5 ~ 36	8	6	0.2	10	850	150	140	No	Yes	SOIC-8	High Voltage, High Precision, Low Noise, Rail-to-Rail Output
1	SGM8958-1	0.01	0.03	500	No	1.8 ~ 5.5	1.8	0.7	0.3	12	165	136	125	Yes	Yes	SOT-23-5,SC70-5,SOIC-8	High Precision, Low Noise, Zero-Drift
2	SGM8958-2	0.01	0.03	500	No	1.8 ~ 5.5	1.8	0.7	0.3	12	165	136	125	Yes	Yes	SOIC-8,TDFN-3x3-8L	High Precision, Low Noise, Zero-Drift
1	SGM8959-1	0.01	0.032	350	No	1.8 ~ 5.5	4	1		8	380	127	123	Yes	Yes	SOT-23-5,SC70-5,SOIC-8	High Precision, Low Noise, Zero-Drift
2	SGM8959-2	0.01	0.032	350	No	1.8 ~ 5.5	4	1		8	380	127	123	Yes	Yes	SOIC-8,TDFN-3x3-8L	High Precision, Low Noise, Zero-Drift
4	SGM8249-4	0.012	0.014	100	No	4.5 ~ 36	8	5	0.2	12	800	150	140	No	Yes	SOIC-14,TSSOP-14	High Voltage, High Precision, Low Noise, Rail-to-Rail Output
1	SGM8558-1	0.015	0.013	600	No	2.8 ~ 5.5	15	8	0.2	8	860	139	126	No	Yes	SOT-23-5,SOIC-8	High Precision, Low Noise, Zero-Drift
2	SGM8558-2	0.015	0.013	600	No	2.8 ~ 5.5	15	8	0.2	8	860	139	126	No	Yes	TDFN-3x3-8L,SOIC-8,WLCSP-1.45x1.45-8B	High Precision, Low Noise, Zero-Drift
1	SGM8558-3	0.015	0.013	600	Yes	2.8 ~ 5.5	15	8	0.2	8	860	139	126	No	Yes	SOT-23-6	High Precision, Low Noise, Zero-Drift, Single Amp with Shutdown
4	SGM8558-4	0.015	0.013	600	No	2.8 ~ 5.5	15	8	0.2	8	860	139	126	No	Yes	SOIC-14	High Precision, Low Noise, Zero-Drift
1	SGM8251	0.018	0.02	100	No	4.5 ~ 36	2.8	1.3	0.4	20	450	150	135	No	Yes	SOT-23-5,SOIC-8,MSOP-8	High Voltage, High Precision, Low Noise
2	SGM8252A	0.018	0.02	100	No	4.5 ~ 36	2.8	1.3	0.4	20	450	150	135	No	Yes	SOIC-8,MSOP-8	High Voltage, High Precision, Low Noise
1	SGM8551	0.02	0.02	10	No	2.5 ~ 5.5	1.53	0.9	0.8	47.5	930	145	105	Yes	Yes	SOT-23-5,SOIC-8,MSOP-8	High Precision, Low Noise, Zero-Drift
2	SGM8552	0.02	0.02	10	No	2.5 ~ 5.5	1.53	0.9	0.8	47.5	465	145	105	Yes	Yes	SOIC-8,MSOP-8	High Precision, Low Noise, Zero-Drift
1	SGM8255A-1	0.025	0.018	100	No	4.5 ~ 36	8.5	5	0.2	12	850	150	135	No	Yes	SOT-23-5,SOIC-8,MSOP-8	High Voltage, High Precision, Low Noise
2	SGM8255A-2	0.025	0.018	100	No	4.5 ~ 36	8.5	5	0.2	12	850	150	135	No	Yes	SOIC-8,MSOP-8	High Voltage, High Precision, Low Noise
4	SGM8554	0.025	0.07	10	No	2.5 ~ 5.5	1.5	1	1.6	63	465	145	105	Yes	Yes	SOIC-14,TSSOP-14	High Precision, Low Noise, Zero-Drift
1	SGM8957-1	0.025	0.08	130	No	1.8 ~ 5.5	0.35	0.18	2		20	121	100	Yes	Yes	SOT-23-5,SC70-5,SOIC-8	High Precision, Low Noise, Micro Power, RRIO
2	SGM8957-2	0.025	0.08	130	No	1.8 ~ 5.5	0.35	0.18	2		20	121	100	Yes	Yes	SOIC-8,TDFN-3x3-8L,MSOP-8	High Precision, Low Noise, Micro Power, RRIO
1	SGM8954-1	0.035	0.055	60	No	1.8 ~ 5.5	0.11	0.04	1	65	9	125	108	Yes	Yes	SOT-23-5,SOIC-8,UTDFN-1.6x1.6-6L	Ultra Low Power, CMOS, Zero-Drift, RRIO
2	SGM8954-2	0.035	0.055	60	No	1.8 ~ 5.5	0.11	0.04	1	65	9	125	108	Yes	Yes	SOIC-8,MSOP-8,TDFN-2x2-8L	Ultra Low Power, CMOS, Zero-Drift, RRIO
1	SGM8953-1	0.05	0.06	80	No	1.8 ~ 5.5	0.2	0.05	1	50	17	118	106	Yes	Yes	SOT-23-5,SOIC-8,UTDFN-1.6x1.6-6L	Ultra Low Power, CMOS, Zero-Drift, RRIO
2	SGM8953-2	0.05	0.06	80	No	1.8 ~ 5.5	0.2	0.05	1	50	17	118	106	Yes	Yes	SOIC-8,MSOP-8,TDFN-2x2-8L	Ultra Low Power, CMOS, Zero-Drift, RRIO
1	SGM8955	0.05	0.08	130	No	1.8 ~ 5.5	0.35	0.18	2		20	121	100	Yes	Yes	SOT-23-5,SC70-5,SOIC-8	High Precision, Low Noise, Micro Power, RRIO
2	SGM8956	0.05	0.08	130	No	1.8 ~ 5.5	0.35	0.18	2		20	121	100	Yes	Yes	SOIC-8,MSOP-8,TDFN-3x3-8L	High Precision, Low Noise, Micro Power, RRIO
1	SGM8250-1	0.05	0.11	80	No	3 ~ 24	0.35	0.09	0.85	40	50	145	130	Yes	Yes	SOT-23-5,SC70-5,SOIC-8	High Voltage, Micro Power, Zero-Drift
2	SGM8250-2	0.05	0.11	80	No	3 ~ 24	0.35	0.09	0.85	40	50	145	130	Yes	Yes	SOIC-8,TDFN-3x3-8L	High Voltage, Micro Power, Zero-Drift
1	SGM8555	0.09	0.05	30	No	2.5 ~ 5.5	3.5	3	0.6	21	950	133	98	Yes	Yes	SOT-23-5,SOIC-8,MSOP-8	3.5MHz, 3V/μs, High Precision, Low Noise, RRIO
2	SGM8556	0.09	0.05	30	No	2.5 ~ 5.5	3.5	3	0.6	21	950	133	98	Yes	Yes	SOIC-8,MSOP-8	3.5MHz, 3V/μs, High Precision, Low Noise, RRIO
1	SGM8581	0.1	0.1	15	No	2.5 ~ 5.5	1.45	0.75	0.85	47.5	445	145	90	Yes	Yes	SOT-23-5,SOIC-8,MSOP-8	High Precision, Low Noise, Zero-Drift
2	SGM8582	0.1	0.1	15	No	2.5 ~ 5.5	1.5	0.9	0.8	49	430	145	95	Yes	Yes	SOIC-8,MSOP-8	High Precision, Low Noise, Zero-Drift
4	SGM8584	0.1	0.15	60	No	2.5 ~ 5.5	1.5	0.9	1.4	78	430	135	92	Yes	Yes	SOIC-14,TSSOP-14	High Precision, Low Noise, Zero-Drift
1	SGMOP17C	0.12	0.02	100	No	4.5 ~ 36	2.8	1.3	0.4	20	450	150	135	No	Yes	SOT-23-5	High Voltage, High Precision, Low Noise



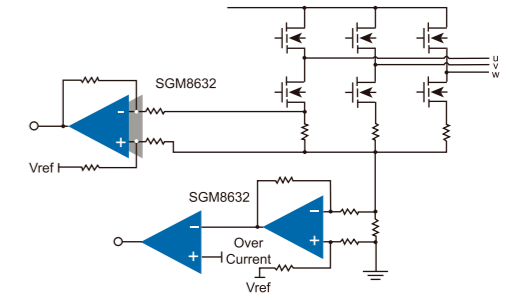
# High Precision Operational Amplifiers

Amplifiers per Package	Part Number	1* V <sub>OS</sub> Max @25°C (mV)	2* TC of V <sub>OS</sub> Typ ( $\mu$ V/°C)	I <sub>B</sub> Typ (pA)	Shut-down	V <sub>CC</sub> (V)	GBP Typ (MHz)	Slew Rate Typ (V/ $\mu$ s)	E <sub>NOISE</sub> 0.1Hz ~ 10Hz Typ ( $\mu$ V <sub>PP</sub> )	E <sub>NOISE</sub> Typ @1kHz (nV/ $\sqrt$ Hz)	I <sub>Q</sub> /Amp Typ ( $\mu$ A)	A <sub>VO</sub> Typ (dB)	CMRR Typ (dB)	Rail-to-Rail -Rail Input	Rail-to-Rail -Rail Output	Package	Features
2	SGMOP17C-2	0.12	0.02	100	No	4.5 ~ 36	2.8	1.3	0.4	20	450	150	135	No	Yes	SOIC-8	High Voltage, High Precision, Low Noise
1	SGM8275-1	0.15	0.3	1000	No	3.6 ~ 36	0.6	3	0.3	8.5	750	130	140	No	Yes	SOT-23-5	High Voltage, Precision, Low Noise
2	SGM8275-2	0.15	0.3	1000	No	3.6 ~ 36	0.6	3	0.3	8.5	750	130	140	No	Yes	SOIC-8	High Voltage, Precision, Low Noise
1	SGMOP07E	0.15	0.3	1000	No	3.6 ~ 36	0.6	3	0.3	8.5	750	130	140	No	Yes	SOIC-8	High Voltage, High Precision, Low Noise
1	SGM8040-1	0.23	1	10	No	1.4 ~ 5.5	0.011	0.004	5	180	0.55	120	92	Yes	Yes	SOT-23-5,SC70-5,SOIC-8	High Precision, Unity-Gain Stable, RRIO
2	SGM8040-2	0.23	1	10	No	1.4 ~ 5.5	0.011	0.004	5	180	0.55	120	92	Yes	Yes	SOIC-8,TDFN-2x2-8L	High Precision, Unity-Gain Stable, RRIO
1	SGM8968-1	0.24	1	6	No	1.8 ~ 5.5	10	20		18	1600	128	95	Yes	Yes	SOT-23-5,SOIC-8	10MHz High Precision Rail-to-Rail Input and Output Amp
2	SGM8968-2	0.24	1	6	No	1.8 ~ 5.5	10	20		18	1600	128	95	Yes	Yes	SOIC-8,MSOP-8	10MHz High Precision Rail-to-Rail Input and Output Amp
1	SGM8967-1	0.24	1.5	3	No	2.1 ~ 5.5	27	30		18	2700	128	105	Yes	Yes	SOT-23-5,SOIC-8	27MHz High Precision Rail-to-Rail Input and Output Amp
2	SGM8967-2	0.24	1.5	3	No	2.1 ~ 5.5	27	30		18	2700	128	105	Yes	Yes	SOIC-8,MSOP-8	27MHz High Precision Rail-to-Rail Input and Output Amp
1	SGM8295-1	0.25	0.4	1000	No	3.6 ~ 36	9	8	0.28	4.5	1500	130	140	No	Yes	SOIC-8,SOT-23-5	High Voltage, High Precision, Low Noise
2	SGM8295-2	0.25	0.4	1000	No	3.6 ~ 36	9	8	0.28	4.5	1500	130	140	No	Yes	SOIC-8,MSOP-8	High Voltage, High Precision, Low Noise
4	SGM8295-4	0.25	0.4	1000	No	3.6 ~ 36	9	8	0.28	4.5	1500	130	140	No	Yes	SOIC-14	High Voltage, High Precision, Low Noise
1	SGM8965-1	0.25	1.2	0.5	No	2.2 ~ 5.5	50	30	5	4.5 <sup>†</sup>	5300	115	100	Yes	Yes	SOT-23-5,SOIC-8	50MHz, High Precision Amp
2	SGM8965-2	0.25	1.2	0.5	No	2.2 ~ 5.5	50	30	5	4.5 <sup>†</sup>	5300	115	100	Yes	Yes	SOIC-8,MSOP-8	50MHz, High Precision Amp
2	SGM8261-2	0.35	1	40000	No	3.6 ~ 36	16	16	0.1	1.6	3800	140	135	No	Yes	TDFN-3x3-8BL,SOIC-8,MSOP-8	High Voltage, High Precision, Ultra Low Noise, HiFi Audio Amp
2	SGM8262-2	0.5	0.5	40000	No	4.5 ~ 36	50	33		3.5 <sup>†</sup>	9000	110	125	No	Yes	SOIC-8,TDFN-3x3-8BL	50MHz, Ultra Low Noise, HiFi High Output Current Audio Amp
1	SGM8925	0.6	2.5	1	No	1.6 ~ 5.5	0.11	0.04		105	6.4	93	85	No	Yes	SOT-23-5,SC70-5,SOIC-8,MSOP-8	High Precision, Very Low Quiescent Current, Low-side Current Sense
1	SGM8927	0.6	2.5	1	Yes	1.6 ~ 5.5	0.11	0.04		105	6.4	93	85	No	Yes	SOT-23-6,SOIC-8,MSOP-8	High Precision, Very Low Quiescent Current, Low-side Current Sense
1	SGM8951	0.8			No	1.8 ~ 5.5	0.11	0.045	3.5	115	26	92	92	Yes	Yes	SOT-23-5,SOIC-8	High Precision, Low Noise, Micro Power, RRIO
2	SGM8952	0.8			No	1.8 ~ 5.5	0.11	0.045	3.5	115	17	92	92	Yes	Yes	SOIC-8,MSOP-8	High Precision, Low Noise, Micro Power, RRIO
1	SGM8931	0.9	1.5	3	No	1.8 ~ 5.5	1.5	0.8		30	80	100	86	No	Yes	SOT-23-5,SC70-5,SOIC-8,MSOP-8	High Precision, Low Power, Low Noise, Rail-to-Rail Output
2	SGM8932	0.9	1.5	3	No	1.8 ~ 5.5	1.5	0.8		30	80	100	86	No	Yes	SOIC-8,MSOP-8	High Precision, Low Power, Low Noise, Rail-to-Rail Output
1	SGM8933	0.9	1.5	3	Yes	1.8 ~ 5.5	1.5	0.8		30	80	100	86	No	Yes	SOT-23-6,SOIC-8,MSOP-8	High Precision, Low Power, Low Noise, Rail-to-Rail Output
4	SGM8934	0.9	1.5	3	No	1.8 ~ 5.5	1.5	0.8		30	80	100	86	No	Yes	SOIC-14,TSSOP-14	High Precision, Low Power, Low Noise, Rail-to-Rail Output
2	SGM8922A	0.9	1.6		No	3.0 ~ 5.5	12.7	6.8		6	3000	104	108	No	Yes	SOIC-8,MSOP-8,TSSOP-8	High Precision, 300mA Output Short Circuit Current, Rail-to-Rail Output
2	SGM8926	0.9	2.5	1	No	1.6 ~ 5.5	0.11	0.04		105	6.4	93	85	No	Yes	SOIC-8,MSOP-8	High Precision, Very Low Quiescent Current, Low-side Current Sense
2	SGM8924A	1	1.5		No	3.0 ~ 5.5	8.9	5.1		6	5500	105	102	No	Yes	MSOP-10	High Precision, 300mA Output Short Circuit Current, Rail-to-Rail Output
1	SGM8273-1	1	2	10	No	3.3 ~ 36	4	6	1.5	9	600	90	86	Yes	Yes	SOT-23-5,SOIC-8,MSOP-8	Low Noise, High Precision, High Voltage RRIO
2	SGM8273-2	1	2	10	No	3.3 ~ 36	4	6	1.5	9	600	90	86	Yes	Yes	SOIC-8	Low Noise, High Precision, High Voltage RRIO
4	SGM8273-4	1	2	10	No	3.3 ~ 36	4	6	1.5	9	600	90	86	Yes	Yes	SOIC-14	Low Noise, High Precision, High Voltage RRIO
1	SGM8240-1	1	3	5	No	2.7 ~ 24	0.1	0.05	3	100	2.8	120	110	Yes	Yes	SOT-23-5,SC70-5	High Voltage, Precision, Micro Power, Low Noise
2	SGM8240-2	1	3	5	No	2.7 ~ 24	0.1	0.05	3	100	2.8	120	110	Yes	Yes	SOIC-8,MSOP-8,TDFN-2x3-8L	High Voltage, Precision, Micro Power, Low Noise

Note: † Typical Values @ 100kHz

# Low Noise Operational Amplifiers

The Low Noise Operational Amplifier family provides rail-to-rail input and output with an excellent speed/power consumption ratio. They are designed to provide optimal performance in low noise systems, providing rail-to-rail output swing into heavy loads. The combination of these characteristics makes them extremely suitable for sensor interfaces, high speed current sensing and active filtering.



2* Amplifiers per Package	Part Number	1* E <sub>NOISE</sub> Typ @1kHz (nV/√Hz)	I <sub>NOISE</sub> Typ @1kHz (pA/√Hz)	GBP Typ (MHz)	Slew Rate Typ (V/μs)	I <sub>OUT</sub> Min @25°C (mA)	V <sub>OS</sub> Max @25°C (mV)	TC of V <sub>OS</sub> Typ (μV/°C)	I <sub>B</sub> Typ (pA)	V <sub>CC</sub> (V)	I <sub>Q</sub> /Amp Typ (mA)	A <sub>VO</sub> Typ (dB)	CMRR Typ (dB)	Rail-to- -Rail I/O	Package	Features
1	SGM8261-1	1.6	6	16	16	65 <sup>†</sup>	0.35	1	40000	3.6 ~ 36	3.8	140	135	Output	SOIC-8	16MHz, Ultra Low Noise, HiFi Audio Amp
2	SGM8261-2	1.6	6	16	16	65 <sup>†</sup>	0.35	1	40000	3.6 ~ 36	3.8	140	135	Output	TDFN-3×3-8BL,SOIC-8,MSOP-8	16MHz, Ultra Low Noise, HiFi Audio Amp
2	SGM8261-5	1.6	6	16	16	110 <sup>†</sup>	0.35	1	40000	3.6 ~ 36	4.1	150	136	Output	TDFN-3×3-10L,MSOP-10	16MHz, Ultra Low Noise, HiFi Audio Amp
2	SGM8264-2	1.6	6	16	16	110 <sup>†</sup>	0.35	1	40000	3.6 ~ 36	4.1	140	120	Output	SOIC-8	16MHz, Ultra Low Noise, HiFi Audio Amp
2	SGM8262-2	3.5 <sup>†††</sup>	4 <sup>†††</sup>	50	33	200 <sup>†</sup>	0.5	0.5	40000	4.5 ~ 36	9	110	125	Output	SOIC-8,TDFN-3×3-8BL	50MHz, Ultra Low Noise, HiFi High Output Current Audio Amp
1	SGM8263-1	4.5	5	10	10	36	0.0085	0.01	60000	4 ~ 36	2.5	145	135	Output	SOT-23-5,SOIC-8	10MHz, Ultra Low Noise, Ultra Low Offset
1	SGM8295-1	4.5	2	9	8	28	0.25	0.4	1000	3.6 ~ 36	1.5	130	140	Output	SOIC-8,SOT-23-5	9MHz, Low Noise, High Voltage Amp
1	SGM8965-1	4.5 <sup>†††</sup>	0.125 <sup>††††</sup>	50	30	70 <sup>†</sup>	0.25	1.2	0.5	2.2 ~ 5.5	5.3	115	100	Yes	SOT-23-5,SOIC-8	50MHz, High Precision Amp
2	SGM8263-2	4.5	5	10	10	36	0.0085	0.01	60000	4 ~ 36	2.5	145	135	Output	SOIC-8	10MHz, Ultra Low Noise, Ultra Low Offset
2	SGM8295-2	4.5	2	9	8	28	0.25	0.4	1000	3.6 ~ 36	1.5	130	140	Output	SOIC-8,MSOP-8	9MHz, Low Noise, High Voltage Amp
2	SGM8965-2	4.5 <sup>†††</sup>	0.125 <sup>††††</sup>	50	30	70 <sup>†</sup>	0.25	1.2	0.5	2.2 ~ 5.5	5.3	115	100	Yes	SOIC-8,MSOP-8	50MHz, High Precision Amp
4	SGM8295-4	4.5	2	9	8	28	0.25	0.4	1000	3.6 ~ 36	1.5	130	140	Output	SOIC-14	9MHz, Low Noise, High Voltage Amp
2	SGM5532	5	1	20	18	27	0.5	0.6	550000	5 ~ 36	4.25	140	140	Output	SOIC-8	High Voltage, Low Noise
1	SGM8959-1	8		4	1	25	0.01	0.032	350	1.8 ~ 5.5	380	127	123	Yes	SOT-23-5,SC70-5,SOIC-8	High Precision, Low Noise, Zero-Drift
2	SGM8959-2	8		4	1	25	0.01	0.032	350	1.8 ~ 5.5	380	127	123	Yes	SOIC-8,TDFN-3×3-8L	High Precision, Low Noise, Zero-Drift
1	SGM8275-1	8.5	1.5	0.6	3	21	0.15	0.3	1000	3.6 ~ 36	0.75	130	140	Output	SOT-23-5	600kHz, Low Noise, High Voltage Amp
1	SGMOP07E	8.5	1.5	0.6	3	21	0.15	0.3	1000	3.6 ~ 36	0.75	130	140	Output	SOIC-8	High Voltage, High Precision, Low Noise, Rail-to-Rail Output
2	SGM8275-2	8.5	1.5	0.6	3	21	0.15	0.3	1000	3.6 ~ 36	0.75	130	140	Output	SOIC-8	600kHz, Low Noise, High Voltage Amp
1	SGM8651	8.7 <sup>††</sup>		50	66	100	8	4.5	6	2.5 ~ 5.5	2.3	80	80	Output	SOT-23-5,SOIC-8	50MHz, 66V/μs, Low Noise, Rail-to-Rail Output
1	SGM8653	8.7 <sup>††</sup>		50	66	100	8	4.5	6	2.5 ~ 5.5	2.3	80	80	Output	SOT-23-6,SOIC-8	50MHz, 66V/μs, Low Noise, Single Amp with Shutdown, Rail-to-Rail Output
2	SGM8652	8.7 <sup>††</sup>		50	66	100	8	4.5	6	2.5 ~ 5.5	2.3	80	80	Output	SOIC-8,MSOP-8	50MHz, 66V/μs, Low Noise, Rail-to-Rail Output
2	SGM8655	8.7 <sup>††</sup>		50	66	100	8	4.5	6	2.5 ~ 5.5	2.3	80	80	Output	MSOP-10	50MHz, 66V/μs, Low Noise, Dual Amps with Shutdown, Rail-to-Rail Output
4	SGM8654	8.7 <sup>††</sup>		50	66	100	8	4.5	6	2.5 ~ 5.5	2.3	80	80	Output	SOIC-14,TSSOP-14	50MHz, 66V/μs, Low Noise, Rail-to-Rail Output
1	SGM8273-1	9	0.7	4	6	18	1	2	10	3.3 ~ 36	0.6	90	86	Yes	SOT-23-5,SOIC-8,MSOP-8	High Voltage, Precision, RRIO
2	SGM8273-2	9	0.7	4	6	18	1	2	10	3.3 ~ 36	0.6	90	86	Yes	SOIC-8	High Voltage, Precision, RRIO
4	SGM8273-4	9	0.7	4	6	18	1	2	10	3.3 ~ 36	0.6	90	86	Yes	SOIC-14	High Voltage, Precision, RRIO
1	SGM8276-1	10	0.5	10	8	40	1.5	1	50	3.3 ~ 36	1.4	120	80	Yes	SOT-23-5	Low Noise, High Precision, High Voltage, RRIO
2	SGM8276-2	10	0.5	10	8	40	1.5	1	50	3.3 ~ 36	1.4	120	80	Yes	SOIC-8	Low Noise, High Precision, High Voltage, RRIO
4	SGM8276-4	10	0.5	10	8	40	1.5	1	50	3.3 ~ 36	1.4	120	80	Yes	SOIC-14	Low Noise, High Precision, High Voltage, RRIO
1	SGM8958-1	12		1.8	0.7	17	0.01	0.03	500	1.8 ~ 5.5	165	136	125	Yes	SOT-23-5,SC70-5,SOIC-8	High Precision, Low Noise, Zero-Drift

Notes : † Typical Values @ 25°C  
 †† Typical Values @ 1MHz  
 ††† Typical Values @ 100kHz  
 †††† Typical Values @ 10kHz

# Low Noise Operational Amplifiers

2* Amplifiers per Package	Part Number	1* E <sub>NOISE</sub> Typ @1kHz (nV/√Hz)	I <sub>NOISE</sub> Typ @1kHz (pA/√Hz)	GBP Typ (MHz)	Slew Rate Typ (V/μs)	I <sub>OUT</sub> Min @25°C (mA)	V <sub>OS</sub> Max @25°C (mV)	TC of V <sub>OS</sub> Typ (μV/°C)	I <sub>B</sub> Typ (pA)	V <sub>CC</sub> (V)	I <sub>Q</sub> /Amp Typ (mA)	A <sub>VO</sub> Typ (dB)	CMRR Typ (dB)	Rail-to -Rail I/O	Package	Features
2	SGM8958-2	12		1.8	0.7	17	0.01	0.03	500	1.8 ~ 5.5	165	136	125	Yes	SOIC-8,TDFN-3x3-8L	High Precision, Low Noise, Zero-Drift
4	SGM8634	12	0.003	6	3.7	49	3.5	2.4	1	2.5 ~ 5.5	0.47	97	83	Yes	SOIC-14,TSSOP-14	6MHz, 3.7V/μs, Low Noise, RRIO
1	SGM721	12.5		11	8.5	52	4	2.1	1	2.1 ~ 5.5	1.2	89	75	Yes	SOT-23-5,SOIC-8,SC70-5	11MHz, 8.5V/μs, Low Noise, RRIO
1	SGM723	12.5		11	8.5	52	4	2.1	1	2.1 ~ 5.5	1.2	89	75	Yes	SOT-23-6,SOIC-8	11MHz, 8.5V/μs, Low Noise, Single Amp with Shutdown, RRIO
2	SGM722	12.5		11	8.5	52	4	2.1	1	2.1 ~ 5.5	1.1	89	75	Yes	SOIC-8,MSOP-8,TSSOP-8	11MHz, 8.5V/μs, Low Noise, RRIO
4	SGM724	12.5		11	8.5	52	4	2.1	1	2.1 ~ 5.5	1.1	89	75	Yes	SOIC-14,TSSOP-14	11MHz, 8.5V/μs, Low Noise, RRIO
1	SGM8631	13		6	3.7	40	3.5	2.4	1	2 ~ 5.5	0.57	86	76	Yes	SOT-23-5,SOIC-8,SC70-5	6MHz, 3.7V/μs, Low Noise, RRIO
1	SGM8633	13		6	3.7	40	3.5	2.4	1	2 ~ 5.5	0.57	86	76	Yes	SOT-23-6,SOIC-8	6MHz, 3.7V/μs, Low Noise, Single Amp with Shutdown, RRIO
2	SGM8632	13		6	3.7	40	3.5	2.4	1	2 ~ 5.5	0.48	86	76	Yes	MSOP-8,SOIC-8	6MHz, 3.7V/μs, Low Noise, RRIO
1	SGM8212-1	15	0.3	2.5	1.5	16	1.8	1.1	5	2.7 ~ 36	0.475	140	98	Yes	SOT-553-5,SOT-23-5,SOIC-8	Low Noise, High Voltage, RRIO
2	SGM8212-2	15	0.3	2.5	1.5	16	1.8	1.1	5	2.7 ~ 36	0.475	140	98	Yes	SOIC-8,TDFN-3x3-8L,MSOP-8	Low Noise, High Voltage, RRIO
2	SGM8270-2	15	0.3	2.5	8	28	2.8	0.8	10	3.3 ~ 36	0.5	120	85	Yes	SOIC-8,MSOP-8	Precision, High Voltage, RRIO
2	SGM8278-2	15	0.3	3.3	2	55	2	2	10	3 ~ 36	1.2	120	100	Yes	SOIC-8,MSOP-8,TDFN-2x2-8AL, TDFN-3x3-8BL,WLCSP-1.57x1.57-8B	Low Noise, High Voltage, RRIO
4	SGM8270-4	15	0.3	2.2	8	28	1.2	0.8	5	3.3 ~ 36	0.5	120	88	Yes	SOIC-14,TSSOP-14	Precision, High Voltage, RRIO
1	SGM8621	17.5		3	1.7	38	3	2.7	1	2 ~ 5.5	0.27	90	71	Yes	SOT-23-5,SOIC-8,SC70-5	3MHz, 1.7V/μs, Low Noise, RRIO
1	SGM8623	17.5		3	1.7	38	3	2.7	1	2 ~ 5.5	0.27	90	71	Yes	SOT-23-6,SOIC-8	3MHz, 1.7V/μs, Low Noise, Single Amp with Shutdown, RRIO
2	SGM8622	17.5		3	1.7	38	3	2.7	1	2 ~ 5.5	0.21	90	71	Yes	SOIC-8,MSOP-8	3MHz, 1.7V/μs, Low Noise, RRIO
4	SGM8624	17.5		3	1.7	38	3	2.7	1	2 ~ 5.5	0.21	90	71	Yes	SOIC-14,TSSOP-14	3MHz, 1.7V/μs, Low Noise, RRIO
1	SGM8967-1	18		27	30	48	0.24	1.5	3	2.1 ~ 5.5	2.7	128	105	Yes	SOT-23-5,SOIC-8	27MHz, High Precision, RRIO
1	SGM8967-3	18		27	30	48	0.24	1.5	3	2.1 ~ 5.5	2.7	128	105	Yes	SOT-23-6	27MHz, High Precision, RRIO
1	SGM8968-1	18		10	20	31	0.24	1	6	1.8 ~ 5.5	1.6	128	95	Yes	SOT-23-5,SOIC-8	10MHz, High Precision, RRIO
1	SGM8970-3	18		27	30	75	0.24	1	3	2.1 ~ 5.5	1.8	128	103	Output	SOT-23-6	27MHz, High Precision, Low Noise, Single Amp with Shutdown
2	SGM8967-2	18		27	30	48	0.24	1.5	3	2.1 ~ 5.5	2.7	128	105	Yes	SOIC-8,MSOP-8	27MHz, High Precision, RRIO
2	SGM8968-2	18		10	20	31	0.24	1	6	1.8 ~ 5.5	1.6	128	95	Yes	SOIC-8,MSOP-8	10MHz, High Precision, RRIO
4	SGM8967-4	18		27	30	48	0.24	1.5	3	2.1 ~ 5.5	2.7	128	105	Yes	SOIC-14,TSSOP-14	27MHz, High Precision, RRIO
4	SGM8968-4	18		10	20	31	0.24	1	6	1.8 ~ 5.5	1.6	128	95	Yes	SOIC-14,TSSOP-14	10MHz, High Precision, RRIO
1	SGM8969-1	20		50	20	30	0.24	1	6	1.8 ~ 5.5	1.1	127	102	Yes	SOT-23-5	50MHz, High Precision, RRIO
2	SGM8969-2	20		50	20	30	0.24	1	6	1.8 ~ 5.5	1.1	127	102	Yes	SOIC-8,TDFN-3x3-8L	50MHz, High Precision, RRIO
2	SGM8608-2	30	0.031	11	6.6	50	1.7	0.9	10	2.1 ~ 5.5	1.1	120	82	Yes	SOIC-8,MSOP-8,TSSOP-8,UTDFN-2x2-8BL	11MHz, RRIO



# Special Function Operational Amplifiers

Amplifiers per Package	Part Number	Settling Time to 0.1%		Slew Rate Typ (V/ $\mu$ s)	$I_{OUT}$ Typ (mA)	$V_{OS}$ Max @25°C (mV)	TC of $V_{OS}$ Typ ( $\mu$ V/°C)	$I_B$ Typ ( $\mu$ A)	$V_{CC}$ (V)	$I_Q$ /Amp Typ ( $\mu$ A)	$A_{VO}$ Typ (dB)	CMRR Typ (dB)	Rail-to-Rail I/O	Package	Features
		$\mu$ s	GBP Typ (MHz)												
1	SGM620	0.14 @-3dB <sup>††</sup>	1.2	24	0.15	0.2	15000	4.6 ~ 36	1300	105	Output	SOIC-8	High Voltage, Low Noise, Rail-to-Rail Output Instrumentation Amplifier		
1	SGM621	0.14 @-3dB <sup>††</sup>	1.2	24	0.15	0.2	15000	4.6 ~ 36	1300	105	Output	SOIC-8,MSOP-8	High Voltage, Low Noise, Rail-to-Rail Output Instrumentation Amplifier		
1	SGM621A	0.14 @-3dB <sup>††</sup>	1.2	24	0.08	0.2	15000	4.6 ~ 36	1300	120	Output	SOIC-8,MSOP-8,TDFN-3x3-8L	High Voltage, Low Noise, Rail-to-Rail Output Instrumentation Amplifier		
1	SGM8139	0.011	0.0058	50	1.6			1.4 ~ 5.5	6.5	92	78		SOIC-16,TQFN-2.5x2.5-16L	Low Power, Low Voltage PIR and Vibration Sensor AFE	
2	SGM8140	0.005	0.0016	24	2.5	2	1	1.4 ~ 5.5	1.1	93	83	Yes	TQFN-4x4-16L	Low Power, Vibration Sensor and PIR Sensor Analog Front End (AFE)	
1	SGM8193A0	0.28@-3dB			0.06			1.6 ~ 28			124		SOT-23-5,WLCSP-1x1-4B	Tiny Packages, Nano Power,Precision Current-Sense Amplifier	
1	SGM8193A1	0.22 @-3dB			0.06			1.6 ~ 28			124		SOT-23-5,WLCSP-1x1-5B	Tiny Packages, Nano Power,Precision Current-Sense Amplifier	
1	SGM8193A2	0.16 @-3dB			0.06			1.6 ~ 28			124		SOT-23-5,WLCSP-1x1-6B	Tiny Packages, Nano Power,Precision Current-Sense Amplifier	
1	SGM8193A3	0.125 @-3dB			0.06			1.6 ~ 28			124		SOT-23-5,WLCSP-1x1-7B	Tiny Packages, Nano Power,Precision Current-Sense Amplifier	
1	SGM8196	0.68 @-3dB	1				$1.8 \times 10^7$	2.7 ~ 5.5	320		140		SOIC-8,TSSOP-8	High Voltage, High-side Current-Sense Amplifier	
1	SGM8197A0	2 @-3dB	1.7		4		250	2.7 ~ 28	650		102	No	SOIC-8,MSOP-8	High-side Current-Sense Amplifier with Open-Drain Comparator and Reference	
1	SGM8197A1	1.2 @-3dB	1.7		4		250	2.7 ~ 28	650		102	No	SOIC-8,MSOP-8	High-side Current-Sense Amplifier with Open-Drain Comparator and Reference	
1	SGM8197A2	0.8 @-3dB	1.7		4		250	2.7 ~ 28	650		102	No	SOIC-8,MSOP-8	High-side Current-Sense Amplifier with Open-Drain Comparator and Reference	
1	SGM8197A3	0.5 @-3dB	1.7		4		250	2.7 ~ 28	650		102	No	SOIC-8,MSOP-8	High-side Current-Sense Amplifier with Open-Drain Comparator and Reference	
1	SGM8198	15	0.48 @-3dB <sup>††</sup>		0.55	1	$1.6 \times 10^7$	2.7 ~ 36	65		140	No	SOT-23-5	High Voltage, High-side Measurement Current Shunt Monitor	
1	SGM8199A0	0.074 @-3dB	0.42		0.6	1	$3 \times 10^7$	2.7 ~ 26	85		97	No	SC70-6	Voltage Output, High- or Low-side Measurement, Bi-Directional Current Shunt Monitor	
1	SGM8199A1	0.08 @-3dB	0.35		0.35	1	$1.6 \times 10^7$	2.7 ~ 26	85		104	No	SC70-6	Voltage Output, High- or Low-side Measurement, Bi-Directional Current Shunt Monitor	
1	SGM8199A2	0.068 @-3dB	0.3		0.25	1	$1.6 \times 10^7$	2.7 ~ 26	85		108	No	SC70-6	Voltage Output, High- or Low-side Measurement, Bi-Directional Current Shunt Monitor	
1	SGM835	0.16 @-3dB			0.1/0.125	0.27 <sup>†††</sup>		2.7 ~ 5.5			140	No	MSOP-8	Dual, High Precision, High Voltage, Current-Sense Amplifier	
1	SGM8477-1B	0.15 @-3dB	0.4	50	0.01	0.02		1.8 ~ 5.5	380		108	Yes	SC70-6,UTQFN-1.8x1.4-10L	1.8V to 5.5V, Low Noise, Zero-Drift Operational Amplifier	
1	SGM8477-1G	0.032 @-3dB	0.15	50	0.01	0.02		1.8 ~ 5.5	380		108	Yes	SC70-6,UTQFN-1.8x1.4-10L	1.8V to 5.5V, Low Noise, Zero-Drift Operational Amplifier	
1	SGM8478-1C	0.23 @-3dB	2.1	64	0.016	0.14		4.5 ~ 36	1550		106	Output	SOIC-8,TDFN-3x3-8L	High Voltage, High Precision, Low Noise, Over the Rail Difference Amplifier	
1	SGM8478-1H	0.04 @-3dB	1	40	0.01 <sup>†</sup>		$8 \times 10^6$	4.5 ~ 36	5000		102	Output	SOIC-8,TDFN-3x3-8L	High Voltage, High Precision, Low Noise, Over the Rail Difference Amplifier	
2	SGM8480-2	0.7	7.5	6	85	0.025	0.2	500	4.5 ~ 18	2100	145	140	Output	TSSOP-14	15V Single-Supply, Dual Operation Amplifier with $\pm 10V$ Output Range
1	SGM8941	2	1.5	0.8	35	0.9	3	3	1.8 ~ 5.5	120	90	90	Yes	SOT-23-5,SOIC-8	Crossover Distortion Free, 0.9mV $V_{OS}$ , Low Bias Current
2	SGM8942	2	1.5	0.8	35	0.9	3	3	1.8 ~ 5.5	120	90	90	Yes	SOIC-8,MSOP-8	Crossover Distortion Free, 0.9mV $V_{OS}$ , Low Bias Current

Notes : † Typical Values @ 25°C  
 †† Typical Values @ G = 100  
 ††† Maximum Values @ 25°C

# High Output Current Operational Amplifiers

Amplifiers per Package	Part Number	1 <sup>+</sup>		GBP Typ (MHz)	Slew Rate Typ (V/ $\mu$ s)	I <sub>OUT</sub> Typ (mA)	V <sub>OS</sub> Max @25°C (mV)	TC of V <sub>OS</sub> Typ ( $\mu$ V/°C)	I <sub>B</sub> Typ (pA)	V <sub>CC</sub> (V)	I <sub>Q</sub> /Amp Typ ( $\mu$ A)	A <sub>VO</sub> Typ (dB)	CMRR Typ (dB)	Rail-to-Rail I/O	Package	Features
		Transient Output Peak Current (mA)	Settling Time to 0.1% ( $\mu$ s)													
1	SGM8557-1	240		15	7	240	0.005	0.027	240	2.7 ~ 5.5	1150	144	120	Yes	SOT-23-5,SOIC-8,MSOP-8	High Precision, Low Noise, Zero-Drift
2	SGM8557-2	240		15	7	240	0.005	0.027	240	2.7 ~ 5.5	1150	144	120	Yes	SOIC-8	High Precision, Low Noise, Zero-Drift
1	SGM8557-3	240		15	7	240	0.005	0.027	240	2.7 ~ 5.5	1150	144	120	Yes	SOT-23-6,SOIC-8	High Precision, Low Noise, Zero-Drift, Single Amp with Shutdown
2	SGM8557-5	240		15	7	240	0.005	0.027	240	2.7 ~ 5.5	1150	144	120	Yes	MSOP-10	High Precision, Low Noise, Zero-Drift
1	SGM8425	336	0.34	9	14	80	6.5	4.9		4.5 ~ 30	1600	92	71	Yes	SOT-23-5,SOIC-8,MSOP-8	336mA Peak Output Current, 14V/ $\mu$ s, 30V <sub>CC</sub> , Single V <sub>COM</sub> Buffer
2	SGM8426	336	0.34	9	14	80	6.5	4.9		4.5 ~ 30	1600	92	71	Yes	SOIC-8,MSOP-8	336mA Peak Output Current, 14V/ $\mu$ s, 30V <sub>CC</sub> , Dual V <sub>COM</sub> Buffer
4	SGM8428	336	0.34	9	14	80	6.5	4.9		4.5 ~ 30	1600	92	71	Yes	SOIC-14,TSSOP-14	336mA Peak Output Current, 14V/ $\mu$ s, 30V <sub>CC</sub> , Quad V <sub>COM</sub> Buffer
1	SGM8416-1	800	0.16	25	65	300	10	3.6	1000	4.5 ~ 26.5	2600	120	72	Yes	TDFN-3x3-8L	0.8A Peak Output Current, 65V/ $\mu$ s, 26.5V <sub>CC</sub> , Single V <sub>COM</sub> Buffer
2	SGM8416-2	800	0.16	25	65	300	10	3.6	1000	4.5 ~ 26.5	2600	120	72	Yes	MSOP-8 (Exposed Pad)	0.8A Peak Output Current, 65V/ $\mu$ s, 26.5V <sub>CC</sub> , Dual V <sub>COM</sub> Buffer
4	SGM8416-4	800	0.16	25	65	300	10	3.6	1000	4.5 ~ 26.5	2600	120	72	Yes	TSSOP-14 (Exposed Pad)	0.8A Peak Output Current, 65V/ $\mu$ s, 26.5V <sub>CC</sub> , Quad V <sub>COM</sub> Buffer
1	SGM8417-1	1500	0.14	28	65	400	10	3.6	1000	4.5 ~ 26.5	3300	120	72	Yes	TDFN-3x3-8L	1.5A Peak Output Current, 65V/ $\mu$ s, 26.5V <sub>CC</sub> , Single V <sub>COM</sub> Buffer
2	SGM8417-2	1500	0.14	28	65	400	10	3.6	1000	4.5 ~ 26.5	3300	120	72	Yes	MSOP-8 (Exposed Pad)	1.5A Peak Output Current, 65V/ $\mu$ s, 26.5V <sub>CC</sub> , Dual V <sub>COM</sub> Buffer
4	SGM8417-4	1500	0.14	28	65	400	10	3.6	1000	4.5 ~ 26.5	3300	120	72	Yes	TSSOP-14 (Exposed Pad)	1.5A Peak Output Current, 65V/ $\mu$ s, 26.5V <sub>CC</sub> , Quad V <sub>COM</sub> Buffer
2	SGM8423-2A	2000		63	104/63	210	10/3.5		100/160	5 ~ 24	145/20500	106/86	104/106	No	TQFN-4x4-20L	High Speed, Low Noise, 2A PLC Driver
1	SGM8418-1	3000	0.14	28	65	400	10	3.6	1000	4.5 ~ 26.5	4800	120	72	Yes	TDFN-3x3-8L	3A Peak Output Current, 65V/ $\mu$ s, 26.5V <sub>CC</sub> , Single V <sub>COM</sub> Buffer
2	SGM8418-2	3000	0.14	28	65	400	10	3.6	1000	4.5 ~ 26.5	4800	120	72	Yes	MSOP-8 (Exposed Pad)	3A Peak Output Current, 65V/ $\mu$ s, 26.5V <sub>CC</sub> , Dual V <sub>COM</sub> Buffer
4	SGM8418-4	3000	0.14	28	65	400	10	3.6	1000	4.5 ~ 26.5	4800	120	72	Yes	TSSOP-14 (Exposed Pad)	3A Peak Output Current, 65V/ $\mu$ s, 26.5V <sub>CC</sub> , Quad V <sub>COM</sub> Buffer
1	SGM8421-1	3000	0.14	28	65	400	10	3.5	1000	4.5 ~ 26.5	4800	120	72	Yes	TO-263-A	High Speed, Low Noise, 400mA Continuous Output Current Resolver Driver
2	SGM8422			2.4	2	80	6		10	4.5 ~ 30	720	115	81	Yes	SOIC-8,MSOP-8	Low Power, 30V <sub>CC</sub> , Dual V <sub>COM</sub> Buffer for Small Panel
4	SGM8424			2.4	2	80	6		10	4.5 ~ 30	720	115	81	Yes	SOIC-14,TSSOP-14	Low Power, 30V <sub>CC</sub> , Quad V <sub>COM</sub> Buffer for Small Panel

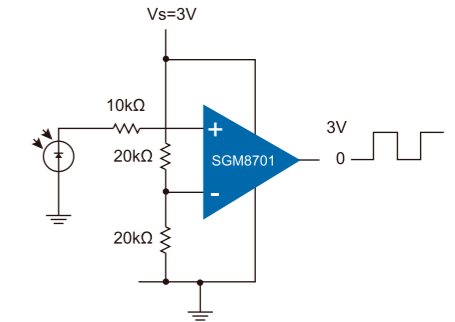
# Tiny Package Operational Amplifiers

2* Amplifiers per Package	1* Part Number	Estimated Package Size (W×L) (mm <sup>2</sup> )	V <sub>OS</sub> Max @25°C (mV)	TC of V <sub>OS</sub> Typ (μV/°C)	GBP Typ (MHz)	A <sub>VO</sub> Typ (dB)	I <sub>B</sub> Typ (pA)	V <sub>CC</sub> (V)	I <sub>Q</sub> /Amp Typ (μA)	Settling Time to 0.1% (μs)	Slew Rate Typ (V/μs)	I <sub>OUT</sub> Typ (mA)	CMRR Typ (dB)	Rail-to -Rail I/O	Package	Features
1	SGM8604-1	1.45	0.01	0.017	15	145	200	2.7 ~ 5.5	1200		7	232	120	No	UTDFN-1.45×1-6L	15MHz, 7V/μs, High-Output-Drive, High Precision, Low Noise, Single Amp
1	SGM8604-3	1.45	0.01	0.017	15	145	200	2.7 ~ 5.5	1200		7	232	120	No	UTDFN-1.45×1-6L	15MHz, 7V/μs, High-Output-Drive, High Precision, Low Noise, Single Amp with Shutdown
1	SGM8605-1	1.45	4.5		12.5	88	2	2.1 ~ 5.5	1200	0.21	8.5	78	79	Yes	UTDFN-1.45×1-6L	Ultra Tiny Package, Low Noise
2	SGM8558-2	2.1	0.015	0.013	15	139	600	2.8 ~ 5.5	860		8	230	126	Yes	TDFN-3×3-8L,SOIC-8,WLCSP-1.45×1.45-8B	High Precision, Low Noise, Zero-Drift
2	SGM8278-2	2.46	2	2	3.3	120	10	3 ~ 36	1200		2	95	100	Yes	SOIC-8,MSOP-8,TDFN-2×2-8AL, TDFN-3×3-8BL,WLCSP-1.57×1.57-8B	Low Noise, High Voltage, RRIO
1	SGM8212-1	2.56	1.8	1.1	2.5	140	5	2.7 ~ 36	475	15	1.5	30	98	Yes	SOT-553-5,SOT-23-5,SOIC-8	Low Noise, High Voltage, RRIO
1	SGM8954-1	2.56	0.035	0.055	0.11	125	60	1.8 ~ 5.5	9		0.04	8	108	Yes	SOT-23-5,SOIC-8,UTDFN-1.6×1.6-6L	Ultra Low Power, CMOS, Zero-Drift, RRIO
1	SGM8049-1	4	0.85	0.6	0.12	118	1	1.8 ~ 5.5	2.5		0.08	20	100	Yes	SC70-5,SOT-23-5,TDFN-2×2-6L	Pico Amp Input Current, Micro Power, RRIO
1	SGM8601	4	4	8.7	11	92	1	2.1 ~ 5.5	1100	0.21	8.5	63	82	Yes	TDFN-2×2-8L	Tiny Package, Low Noise
1	SGM8603	4	4.9	2.7	11	91	1	2.1 ~ 5.5	1100	0.21	8.5	64	83	Yes	TDFN-2×2-6L	Tiny Package, Low Noise
2	SGM4832	4	3.5	2.7	1.1	105	0.5	2.1 ~ 5.5	46	5.3	0.52	75	80	Yes	TDFN-2×2-8L	1.1MHz, 46μA, CMOS, RRIO
2	SGM8040-2	4	0.23	1	0.011	120	10	1.4 ~ 5.5	0.55		0.004	18	92	Yes	SOIC-8,TDFN-2×2-8L	High Precision, Unity-Gain Stable, RRIO
2	SGM8600	4	4	8.7	11	92	1	2.1 ~ 5.5	1100	0.21	8.5	63	82	Yes	TDFN-2×2-8L,SOIC-8	Tiny Package, Positive Offset, Low Noise
2	SGM8954-2	4	0.035	0.055	0.11	125	60	1.8 ~ 5.5	9		0.04	8	108	Yes	SOIC-8,MSOP-8,TDFN-2×2-8L	Ultra Low Power, CMOS, Zero-Drift, RRIO
2	SGM8956	4	0.05	0.08	0.35	121	130	1.8 ~ 5.5	20		0.18	60	100	Yes	SOIC-8,MSOP-8,TDFN-3×3-8L,TDFN-2×2-8L	High Precision, Low Noise, Micro Power, RRIO
2	SGM8210-2	6	1	1	1	120	5	3.3 ~ 24	50		0.3		115	Yes	TDFN-2×3-8L,SOIC-8,MSOP-8	High Voltage, Micro Power, Precision
2	SGM8240-2	6	1	3	0.1	120	5	2.7 ~ 24	2.8		0.05	20	110	Yes	TDFN-2×3-8L,SOIC-8,MSOP-8	High Voltage, Micro Power, Precision
2	SGM8602	6	5.1	4.7	12	92	1	2.1 ~ 5.5	1100	0.2	9	65	75	Yes	SOT-23-8,TDFN-2×3-8L	Tiny Package, Low Noise
2	SGM8604-2	6	0.01	0.017	15	145	200	2.7 ~ 5.5	1200		7	232	120	No	TDFN-2×3-8AL	15MHz, 7V/μs, High-Output-Drive, High Precision, Low Noise, Dual Amps
1	SGM8606	9	0.05	0.08	0.35	121	130	1.8 ~ 5.5	20		0.18	18	100	Yes	TDFN-3×3-10L	Current Sensing AFE
2	SGM4834	9	2.6	1.7	10	109		3 ~ 5.5	5500		5.4	212	103	No	TDFN-3×3-10L	Motor/Headset Driver with Shutdown
2	SGM4835	9	5.3	2.7	1.5	84	10	2.1 ~ 5.5	60	3.6	0.63	21	70	Yes	TDFN-3×3-8L	Stereo Headphone Driver
2	SGM8261-2	9	0.35	1	16	140	40000	3.6 ~ 36	3800		16	65	135	No	SOIC-8,MSOP-8,TDFN-3×3-8BL	16MHz, Ultra Low Noise, HiFi Audio Amp
2	SGM8261-5	9	0.35	1	16	150	40000	3.6 ~ 36	4100		16	110	136	No	MSOP-10,TDFN-3×3-10L	16MHz, Ultra Low Noise, HiFi Audio Amp
2	SGM8604-5	9	0.01	0.017	15	145	200	2.7 ~ 5.5	1200		7	232	120	No	TDFN-3×3-10L	15MHz, 7V/μs, High-Output-Drive, High Precision, Low Noise, Dual Amps with Shutdown
2	SGM8957-2	9	0.025	0.08	0.35	121	130	1.8 ~ 5.5	20		0.18	60	100	Yes	SOIC-8,MSOP-8,TDFN-3×3-8L	High Precision, Low Noise, Micro Power, RRIO
2	SGM8958-2	9	0.01	0.03	1.8	136	500	1.8 ~ 5.5	165		0.7	34	125	Yes	SOIC-8,TDFN-3×3-8L	High Precision, Low Noise, Zero-Drift
2	SGM8959-2	9	0.01	0.032	4	127	350	1.8 ~ 5.5	380		1	42	123	Yes	SOIC-8,TDFN-3×3-8L	High Precision, Low Noise, Zero-Drift
4	SGM3130	9	5	2.7	1	84	10	2.1 ~ 5.5	60	5.3	0.52	75	68	Yes	TQFN-3×3-16L	1MHz, 60μA, CMOS, RRIO
4	SGM8044	9	2.5	2.5	0.015	93	1	1.4 ~ 5.5	0.67		0.0034	23	83	Yes	SOIC-14,TSSOP-14,TQFN-3×3-16L	Very Low Quiescent Current, RRIO
4	SGM8424	9	6		2.4	115	10	4.5 ~ 30	720		2	80	81	Yes	SOIC-14,TSSOP-14,TQFN-3×3-16L	Low Power, 30V <sub>CC</sub> , Quad V <sub>COM</sub> Buffer for Small Panel
2	SGM8140	16	2.5	2	0.005	93	1	1.4 ~ 5.5	1.1		0.0016	24	83	Yes	TQFN-4×4-16L	PIR Sensor AFE Integrate Dual Amps and Single Comp



# Nano Power Comparators

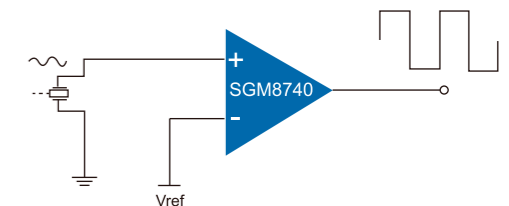
The Nano Power Comparator family provides a typical power supply current as low as 300nA. They have the best-in-class power supply current versus propagation delay performance. The propagation delay is as low as 3μs with 100mV overdrive at 5V supply. The Nano Power Comparator family also provides different options featuring push-pull output stage, PFET/NFET open-drain output stage, latch enable, reference output and ultra small DFN packages.



Comparators per Package	Part Number	<sup>1</sup> I <sub>Q</sub> /Comp Typ (nA)	Latch Enable	V <sub>CC</sub> (V)	V <sub>OS</sub> Max @25°C (mV)	t <sub>PD</sub> , H to L @V <sub>CC</sub> = 5V (μs)	t <sub>PD</sub> , L to H @V <sub>CC</sub> = 5V (μs)	Logic Output	Reference Output (V)	Rise Time @V <sub>CC</sub> = 5V (ns)	Fall Time @V <sub>CC</sub> = 5V (ns)	Package	Features
1	SGM8713A-1	300	No	1.6 ~ 5.5	10			Push-Pull		7	15	XTDFN-0.8×0.8-4L	Small Size, Nano Power, Push-Pull
1	SGM8713B-1	300	No	1.6 ~ 5.5	10	3	5	Open-Drain (NFET)			15	XTDFN-0.8×0.8-4L	Small Size, Nano Power, Open-Drain
1	SGM8714A-1	300	No	1.6 ~ 5.5	10			Push-Pull		6	6	XTDFN-1×1-6L	Small Size, Nano Power, Push-Pull
1	SGM8714B-1	300	No	1.6 ~ 5.5	10	4	6	Open-Drain (NFET)			6	XTDFN-1×1-6L	Small Size, Nano Power, Open-Drain
1	SGM8701	350	No	1.4 ~ 5.5	3	6	33	Push-Pull	NA	85	60	SOT-23-5,SC70-5	Ultra Low Power, Push-Pull, Small Package
1	SGM8702	350	No	1.4 ~ 5.5	3	6	33	Open-Drain (PFET)	NA	85	NA	SOT-23-5,SC70-5	Ultra Low Power, PFET Open-Drain, Small Package
1	SGM8703	350	Yes	1.4 ~ 5.5	3	6	33	Push-Pull	NA	85	60	SOT-23-6	Latch Enable, Ultra Low Power, Push-Pull, Small Package
1	SGM8704	350	Yes	1.4 ~ 5.5	3	6	33	Push-Pull & Invert	NA	85	60	SOIC-8,MSOP-8	Latch Enable, Ultra Low Power, Push-Pull and Inverter
2	SGM8705	350	No	1.4 ~ 5.5	3	6	33	Push-Pull	NA	85	60	SOIC-8,MSOP-8	Ultra Low Power, Push-Pull
1	SGM8707	350	No	1.4 ~ 5.5	3	6	33	Push-Pull	NA	85	60	SOT-23-5,SC70-5	Ultra Low Power, Push-Pull, Small Package
1	SGM8709	350	No	1.4 ~ 5.5	3	5		Open-Drain (NFET)	NA	NA	36	SOT-23-5,SC70-5	Ultra Low Power, NFET Open-Drain, Small Package
2	SGM8712	350	No	1.4 ~ 5.5	3	6	33	Push-Pull	NA	85	60	MSOP-8	Ultra Low Power, Push-Pull
1	SGM8706	2300	Yes	1.8 ~ 5.5	3	5.6	30	Push-Pull	1.2	40	30	SOIC-8,SOT-23-8,SOT-23-6	Internal Reference, Latch Enable, Ultra Low Power, Push-Pull
1	SGM8708	2300	Yes	1.8 ~ 5.5	3	5.6	30	Push-Pull & Invert	1.2	40	30	SOT-23-8,SOIC-8	Internal Reference, Latch Enable, Ultra Low Power, Push-Pull and Inverter
1	SGM8710	2300	Yes	1.8 ~ 5.5	3	5.6		Open-Drain (NFET)	1.2	NA	30	SOT-23-8,SOT-23-6	Internal Reference, Latch Enable, Ultra Low Power, NFET Open-Drain
1	SGM8711	2300	No	1.8 ~ 5.5	3	5.6	30	Push-Pull	1.2	40	30	UTDFN-1.6×1.6-6L	Tiny Package, Internal Reference, Ultra Low Power, Push-Pull

# High Speed Comparators

The High Speed Comparator family provides the smallest propagation delay as low as 6ns, while input common mode range of each device extends beyond both power supply rails. The output pulls to within 0.1V of either supply rail without external pull-up circuitry, making the devices ideal for interface with both CMOS and TTL logics. All input and output pins can tolerate a continuous short-circuit fault condition to either rail. Internal hysteresis ensures a clean output switching, even with slow-moving input signals.



Comparators per Package	Part Number	<sup>1</sup> t <sub>PD</sub> , H to L @V <sub>CC</sub> = 5V (ns)	t <sub>PD</sub> , L to H @V <sub>CC</sub> = 5V (ns)	Rise Time @V <sub>CC</sub> = 5V (ns)	Fall Time @V <sub>CC</sub> = 5V (ns)	V <sub>OS</sub> Max @25°C (mV)	V <sub>CC</sub> (V)	Input Common Mode Voltage Range (V)	I <sub>Q</sub> /Comp Typ (μA)	Logic Output	Rail-to-Rail Output	Package	Features
1	SGM8743	6 <sup>†</sup>	6 <sup>†</sup>	8 <sup>†</sup>	6 <sup>†</sup>	4.9	2.7 ~ 5.5	-0.1 ~ V <sub>s</sub> +0.1	1300	Push-Pull	Yes	SOT-23-5,SC70-5	Ultra High Speed, Small Package, Single, Rail-to-Rail Input
1	SGM8744	6 <sup>†</sup>	6 <sup>†</sup>	8 <sup>†</sup>	6 <sup>†</sup>	4.9	2.7 ~ 5.5	-0.1 ~ V <sub>s</sub> +0.1	1300	Push-Pull	Yes	SOT-23-5,SC70-5	Ultra High Speed, Small Package, Single, Rail-to-Rail Input
2	SGM8745	6 <sup>†</sup>	6 <sup>†</sup>	8 <sup>†</sup>	6 <sup>†</sup>	4.9	2.7 ~ 5.5	-0.1 ~ V <sub>s</sub> +0.1	1300	Push-Pull	Yes	SOIC-8,MSOP-8	Ultra High Speed, Small Package, Dual, Rail-to-Rail Input

Note : † Typical Values @ V<sub>CC</sub> = 3V

# High Speed Comparators

Comparators per Package	Part Number	1*		Rise Time @V <sub>CC</sub> = 5V (ns)	Fall Time @V <sub>CC</sub> = 5V (ns)	V <sub>OS</sub> Max @25°C (mV)	V <sub>CC</sub> (V)	Input Common Mode Voltage Range (V)	I <sub>O</sub> /Comp Typ (μA)	Logic Output	Rail-to-Rail Output	Package	Features
		t <sub>PD</sub> , H to L @V <sub>CC</sub> = 5V (ns)	t <sub>PD</sub> , L to H @V <sub>CC</sub> = 5V (ns)										
1	SGM8740	20†	25†	8†	5†	5	2.7 ~ 5.5	-0.1 ~ V <sub>S</sub> +0.1	155	Push-Pull	Yes	SOT-23-5,SC70-5	High Speed, Small Package, Single, Rail-to-Rail Input
1	SGM8741	20†	25†	8†	5†	5	2.7 ~ 5.5	-0.1 ~ V <sub>S</sub> +0.1	155	Push-Pull	Yes	SOT-23-5,SC70-5	High Speed, Small Package, Single, Rail-to-Rail Input
2	SGM8742	20†	25†	8†	5†	5	2.7 ~ 5.5	-0.1 ~ V <sub>S</sub> +0.1	155	Push-Pull	Yes	SOIC-8,MSOP-8	High Speed, Small Package, Dual, Rail-to-Rail Input
1	SGM8751	30†	22†	11†	8†	5	2.7 ~ 5.5	-0.1 ~ V <sub>S</sub> -1.2	150	Push-Pull	Yes	SOT-23-5	Low Power, Small Package, Single, Rail-to-Rail Output
2	SGM8770	45	NA	NA	15	2.4	2.8 ~ 36	-V <sub>S</sub> ~ V <sub>S</sub> -1.5	155	Open-Drain	No	SOIC-8,TDFN-3×3-8L	High Voltage, High Precision, Dual, Open-Drain Output
1	SGM8771	50	NA	NA	12	2.4	2.8 ~ 36	-V <sub>S</sub> ~ V <sub>S</sub> -1.5	180	Open-Drain	No	SOIC-8,TDFN-3×3-8L	High Voltage, High Precision, Single, Open-Drain Output
2	SGM8772	50	60	12	12	4	2.8 ~ 36	-V <sub>S</sub> ~ V <sub>S</sub> -1.5	210	Push-Pull	Yes	MSOP-10	High Voltage, High Precision, Dual, Push-Pull Output
1	SGM8774	50	NA	NA	20	2.8	2.8 ~ 36	-V <sub>S</sub> ~ V <sub>S</sub> -1.5	240	Open-Drain	No	SOT-23-5	High Voltage, High Precision, Single, Open-Drain Output
2	SGM8773	60	60	20	20	2.4	2.8 ~ 36	-V <sub>S</sub> ~ V <sub>S</sub> -1.5	165	Push-Pull	Yes	SOIC-8,TDFN-3×3-8L	High Voltage, High Precision, Dual, Push-Pull Output
1	SGM8746	95†	120†	8†	6†	4.9	2.7 ~ 5.5	-0.1 ~ V <sub>S</sub> +0.1	22	Push-Pull	Yes	SOT-23-5,SC70-5	Low Power, Small Package, Single, Rail-to-Rail Input
1	SGM8747	95†	120†	8†	6†	4.9	2.7 ~ 5.5	-0.1 ~ V <sub>S</sub> +0.1	22	Push-Pull	Yes	SOT-23-5,SC70-5	Low Power, Small Package, Single, Rail-to-Rail Input
2	SGM8748	95†	120†	8†	6†	4.9	2.7 ~ 5.5	-0.1 ~ V <sub>S</sub> +0.1	22	Push-Pull	Yes	SOIC-8,MSOP-8	Low Power, Small Package, Dual, Rail-to-Rail Input
1	SGM8749	97†	NA	NA	6	5	2.7 ~ 5.5	-0.1 ~ V <sub>S</sub> +0.1	22	Open-Drain	No	SOT-23-5,SC70-5	Low Power, Small Package, Single, Open-Drain Output
2	SGM8750	110	NA	NA	8	5.5	2.7 ~ 5.5	-0.1 ~ V <sub>S</sub> +0.1	25	Open-Drain	No	SOIC-8,MSOP-8	Low Power, Small Package, Dual, Open-Drain Output
1	SGM8752-1		6.5	1.2	0.9	6.5	2.7 ~ 5.5	-V <sub>S</sub> -0.2 ~ V <sub>S</sub> +0.2	1800	Push-Pull	Yes	SOT-23-5	High Speed, Single, Push-Pull Output
2	SGM8752-2		6.5	1.2	0.9	6.5	2.7 ~ 5.5	-V <sub>S</sub> -0.2 ~ V <sub>S</sub> +0.2	1800	Push-Pull	Yes	SOT-23-8,SOIC-8	High Speed, Dual, Push-Pull Output
1	SGM8752-3		6.5	1.2	0.9	6.5	2.7 ~ 5.5	-V <sub>S</sub> -0.2 ~ V <sub>S</sub> +0.2	1800	Push-Pull	Yes	SOT-23-6	High Speed, Single Comparator with Shutdown, Push-Pull Output

Note: † Typical Values @ V<sub>CC</sub> = 3V

# High Voltage Comparators

Comparators per Package	Part Number	1*		Rise Time @V <sub>CC</sub> = 5V (ns)	Fall Time @V <sub>CC</sub> = 5V (ns)	V <sub>OS</sub> Max @25°C (mV)	V <sub>CC</sub> (V)	Input Common Mode Voltage Range (V)	I <sub>O</sub> /Comp Typ (μA)	Logic Output	Rail-to-Rail Output	Package	Features
		t <sub>PD</sub> , H to L @V <sub>CC</sub> = 5V (ns)	t <sub>PD</sub> , L to H @V <sub>CC</sub> = 5V (ns)										
2	SGM8770	45			15	2.4	2.8 ~ 36	-V <sub>S</sub> ~ V <sub>S</sub> -1.5	155	Open-Drain	No	SOIC-8,TDFN-3×3-8L	High Voltage, High Precision, Dual, Open-Drain Output
1	SGM8771	50			12	2.4	2.8 ~ 36	-V <sub>S</sub> ~ V <sub>S</sub> -1.5	180	Open-Drain	No	SOIC-8,TDFN-3×3-8L	High Voltage, High Precision, Single, Open-Drain Output
2	SGM8772	50	60	12	12	4	2.8 ~ 36	-V <sub>S</sub> ~ V <sub>S</sub> -1.5	210	Push-Pull	Yes	MSOP-10	High Voltage, High Precision, Dual, Push-Pull Output
1	SGM8774	50			20	2.8	2.8 ~ 36	-V <sub>S</sub> ~ V <sub>S</sub> -1.5	240	Open-Drain	No	SOT-23-5	High Voltage, High Precision, Single, Open-Drain Output
2	SGM8773	60	60	20	20	2.4	2.8 ~ 36	-V <sub>S</sub> ~ V <sub>S</sub> -1.5	165	Push-Pull	Yes	SOIC-8,TDFN-3×3-8L	High Voltage, High Precision, Dual, Push-Pull Output

# Digital-to-Analog Converters

This SGM534X DAC family is designed for general purpose multi-channel high precision voltage output application, such as system bias generation, gain and offset control, positioning and control, etc.

1\*

Part Number	Resolution (Bits)	Update Rate (SPS)	Output Channels	Output Voltage		V <sub>DD</sub> (V)	INL (LSB)	DNL (LSB)	Offset Error (mV)	Gain Error (% of FSR)	Gain Drift (ppm/°C)	Output Settling Time (μs)	Operating I <sub>Q</sub> (μA)	Power-Down I <sub>Q</sub> (μA)	Operating Temperature Range (°C)	Package	Features
				Range (V)	Reference												
SGM5347-8	8	90k	8	0 ~ V <sub>REF</sub>	External	2.8 ~ 5.5	0.2	0.02	3	0.1	2	7	500	0.6	-40 to +125	SOIC-16,TSSOP-16	8 Channels, 8-Bit DAC with Output Operational Amplifier
SGM5347-10	10	83k	8	0 ~ V <sub>REF</sub>	External	2.8 ~ 5.5	0.8	0.08	3	0.1	2	7	500	0.6	-40 to +125	SOIC-16,TSSOP-16	8 Channels, 10-Bit DAC with Output Operational Amplifier
SGM5347-12	12	77k	8	0 ~ V <sub>REF</sub>	External	2.8 ~ 5.5	3	0.3	3	0.1	2	7	500	0.6	-40 to +125	SOIC-16,TSSOP-16	8 Channels, 12-Bit DAC with Output Operational Amplifier
SGM5348-8	8	200k	8	0 ~ V <sub>REF</sub>	External	2.8 ~ 5.5	0.2	0.02	3	0.1	2	7	500	0.6	-40 to +125	TSSOP-16	8 Channels, 8-Bit DAC with Output Operational Amplifier
SGM5348-10	10	200k	8	0 ~ V <sub>REF</sub>	External	2.8 ~ 5.5	0.8	0.08	3	0.1	2	7	500	0.6	-40 to +125	TSSOP-16	8 Channels, 10-Bit DAC with Output Operational Amplifier
SGM5348-12	12	140k	8	0 ~ V <sub>REF</sub>	External	2.8 ~ 5.5	3	0.3	3	0.1	2	7	500	0.6	-40 to +125	TSSOP-16,TQFN-3×3-16L	8 Channels, 12-Bit DAC with Output Operational Amplifier
SGM5349-16	16	140k	8	0 ~ V <sub>REF</sub>	External	2.7 ~ 5.5	8	0.4	1.5	0.1	2	6	800	1	-40 to +125	TSSOP-16,TQFN-4×4-16L	8 Channels, 16-Bit, SPI Interface, Voltage-Output DAC
SGM5351-16	16	140k	1	0 ~ V <sub>REF</sub>	External	2.7 ~ 5.5	8	0.4	1.5	0.1	2	6	140	0.5	-40 to +125	MSOP-8	16-Bit, Ultra-Low Glitch, Voltage-Output DAC
SGM5352-16	16	140k	4	0 ~ V <sub>REFH</sub>	External	2.7 ~ 5.5	6	0.5	1.5	0.01	2	6	450	0.45	-40 to +125	WLCSP-1.64×1.62-16B,TSSOP-16	16-Bit, 4 Channels, Voltage-Output DAC
SGM5353-16	16	700k	1	0 ~ V <sub>REF</sub> - 1LSB	External	2.7 ~ 5.5	0.2	0.3	0.015	0.0012	0.04	1.5	78		-40 to +125	SOIC-8	16-Bit, Serial Input, Voltage-Output DAC
SGM5355-16	16	140k	1	0 ~ V <sub>REF</sub>	External	2.7 ~ 5.5	6	0.5	1.5	0.05	2	6	108	0.45	-40 to +125	WLCSP-0.82×1.22-6B,MSOP-8	16-Bit, I <sup>2</sup> C Interface, Voltage-Output DAC
SGM71612R81Z	16	140k	8	0 ~ V <sub>REF</sub>	Internal/External	2.7 ~ 5.5	3	0.3	0.1	0.01	2	6	800	0.35	-40 to +125	TSSOP-16,TQFN-4×4-16BL, FOCSP-2.6×2.6-16B	8 Channels, 16-Bit, SPI Interface, Voltage-Output DAC with 10ppm/°C On-Chip Reference
SGM71612R82M	16	140k	8	0 ~ V <sub>REF</sub>	Internal/External	2.7 ~ 5.5	3	0.3	0.1	0.01	2	6	800	0.35	-40 to +125	TSSOP-16,TQFN-4×4-16BL	8 Channels, 16-Bit, SPI Interface, Voltage-Output DAC with 10ppm/°C On-Chip Reference
SGM71612R82Z	16	140k	8	0 ~ V <sub>REF</sub>	Internal/External	2.7 ~ 5.5	3	0.3	0.1	0.01	2	6	800	0.35	-40 to +125	TSSOP-16,TQFN-4×4-16BL, FOCSP-2.6×2.6-16B	8 Channels, 16-Bit, SPI Interface, Voltage-Output DAC with 10ppm/°C On-Chip Reference
SGM71622R8	16	200k	8	0 ~ V <sub>REF</sub>	Internal/External	2.7 ~ 5.5	±0.5	±0.5	±0.75	±0.05	2	5	4000	0.6	-40 to +125	TQFN-3.5×3.5-16AL,TQFN-3×3-16DL, WLCSP-2.45×2.45-16B	8 Channels, 16-Bit, SPI Interface, Voltage-Output DAC with Internal Reference

# Oversampling Analog-to-Digital Converters

This SGM58XXX sigma-delta ADC family is designed for high precision and low power consumption application, such as industrial temperature and pressure sensor conditioning, battery powered instruments and industrial field transducer.

1\*

Part Number	Resolution (Bits)	Data Rate (SPS)	Input Channels	Input Voltage		V <sub>DD</sub> (V)	INL (ppmFS)	Offset Error (μV)	Gain Error (% of FSR)	Gain Drift (ppm/°C)	Programmable Gain	ENOB (Bits)	Operating I <sub>Q</sub> (μA)	Power-Down I <sub>Q</sub> (μA)	Operating Temperature Range (°C)	Package	Features
				Range (V)	Reference												
SGM58031	16	6.25 ~ 960	4	0 ~ V <sub>DD</sub>	Internal/External	3 ~ 5.5	16	31	0.03	30	2/3 ~ 16	16	255	0.8	-40 to +125	MSOP-10,TDFN-3×3-10L	Ultra Small, Low-Power, 16-Bit, ADC with Internal Reference
SGM58200	24	6.25 ~ 960	4	0 ~ V <sub>DD</sub>	Internal/External	3 ~ 5.5	16	50	0.08	1	2/3 ~ 16	20.8	255	0.8	-40 to +125	MSOP-10,UTQFN-2×1.5-10L	Ultra Small, Low-Power, 24-Bit, ADC with Internal Reference
SGM58600	24	2.5 ~ 60000	2	0 ~ AVDD	External	4.75 ~ 5.25	12	8	0.003	±1.5	1 ~ 128	24.8	2700	0.46	-40 to +125	SSOP-20,TQFN-3.5×3.5-20L	Ultra Low-Noise, 24-Bit ADC
SGM58601	24	2.5 ~ 60000	8	0 ~ AVDD	External	4.75 ~ 5.25	12	8	0.003	±1.5	1 ~ 128	24.8	2700	0.46	-40 to +125	SSOP-28,TQFN-5×5-28L	Ultra Low-Noise, 24-Bit ADC
SGM58602	24	2.5 ~ 60000	4	0 ~ AVDD	External	4.75 ~ 5.25	12	8	0.003	±1.5	1 ~ 128	24.8	2700	0.46	-40 to +125	TQFN-5×5-20L	Ultra Low-Noise, 24-Bit ADC



# SAR Analog-to-Digital Converters

1\*

Part Number	Resolution (Bits)	Sample Rate (SPS)	Input Channels	Input Voltage		V <sub>DD</sub> (V)	INL (LSB)	DNL (LSB)	THD (dB)	SNR (dB)	SINAD (dB)	SFDR (dB)	Offset Error (LSB)	Gain Error (LSB)	Programmable Gain	Operating I <sub>Q</sub> (μA)	Power-Down I <sub>Q</sub> (μA)	Operating Temperature Range (°C)	Package	Features
				Range (V)	Reference															
SGM51613D	16	800k	1	±10.24/±5.12/±2.56/ 0 ~ 10.24/0 ~ 5.12	Internal/External	4.75 ~ 5.25	±1.2	-0.65/+0.85	-98	90.6	90.4	104		No	7300	7.5	-40 to +125	TSSOP-16,TQFN-4x4-16L	16-Bit, High-Speed, True Differential Input, SAR ADC	
SGM51613H	16	800k	1	±10.24/±5.12/±2.56/ 0 ~ 10.24/0 ~ 5.12	Internal/External	4.75 ~ 5.25	±1.5/±2	-0.6/+0.75 & -0.7/+1.4	-100	90.5	90.3	104	±1 @ ±10.24V Range	±0.6 @ ±10.24V Range	Yes	7300	7.5	-40 to +125	TSSOP-16,TQFN-4x4-16L	16-Bit, High-Speed, Programmable Bipolar Input Ranges, SAR ADC
SGM51622D	16	250k	1	±10.24/±5.12/±2.56/ 0 ~ 10.24/0 ~ 5.12	Internal/External	4.75 ~ 5.25	±1	-0.55/+0.75	-100	91.4	91	106		No	4800	7.5	-40 to +125	TSSOP-16,TQFN-4x4-16L	16-Bit, High-Speed, True Differential Input, SAR ADC	
SGM51622H	16	250k	1	±10.24/±5.12/±2.56/ 0 ~ 10.24/0 ~ 5.12	Internal/External	4.75 ~ 5.25	±1/±1.5	-0.55/+0.75 & -0.7/+1.2	-104	91	90.7	108	±1 @ ±10.24V Range	±0.6 @ ±10.24V Range	Yes	4800	7.5	-40 to +125	TSSOP-16,TQFN-4x4-16L	16-Bit, High-Speed, Programmable Bipolar Input Ranges, SAR ADC
SGM51652D	16	500k	1	±10.24/±5.12/±2.56/ 0 ~ 10.24/0 ~ 5.12	Internal/External	4.75 ~ 5.25	±1	-0.55/+0.75	-100	91.4	91	106		No	6300	7.5	-40 to +125	TSSOP-16,TQFN-4x4-16L	16-Bit, High-Speed, True Differential Input, SAR ADC	
SGM51652H	16	500k	1	±10.24/±5.12/±2.56/ 0 ~ 10.24/0 ~ 5.12	Internal/External	4.75 ~ 5.25	±1/±1.5	-0.55/+0.75 & -0.7/+1.2	-104	91	90.7	108	±1 @ ±10.24V Range	±0.6 @ ±10.24V Range	Yes	6300	7.5	-40 to +125	TSSOP-16,TQFN-4x4-16L	16-Bit, High-Speed, Programmable Bipolar Input Ranges, SAR ADC
SGM51652H4	16	500k	4	±10.24/±5.12/±2.56/ 0 ~ 10.24/0 ~ 5.12	Internal/External	4.75 ~ 5.25	±1.3	-0.6/+0.9	-99	89.5	89.1	101		Yes	11000	4	-40 to +125	TSSOP-38	16-Bit, 500kSPS, 4-Channel, Bipolar Input Ranges, SAR ADC	
SGM51652H8	16	500k	8	±10.24/±5.12/±2.56/ 0 ~ 10.24/0 ~ 5.12	Internal/External	4.75 ~ 5.25	±1.3	-0.6/+0.9	-99	89.5	89.1	101		Yes	14500	4	-40 to +125	TSSOP-38	16-Bit, 500kSPS, 8-Channel, Bipolar Input Ranges, SAR ADC	
SGM5200	12	1M	16	0 ~ V <sub>REF</sub> /0 ~ 2V <sub>REF</sub>	External	2.7 ~ 5.25	±0.8	±0.5	-79	71.4	70.7	81	±1.2	±0.8	No	1100	1.4	-40 to +125	TSSOP-38,TQFN-5x5-32L	12-Bit, 1MSPS, 16-Channel, Single-Ended, Serial Interface ADC
SGM5208-14	14	500k	8	0 ~ V <sub>REF</sub>	External	2.7 ~ 5.5	±1.2	±0.6	-83	80	79	87		No	5200	42	-40 to +125	TSSOP-24,TQFN-4x4-24L	Low-Power, 14-Bit, 500kSPS, 8 Channels Unipolar Inputs ADC	
SGM5209-14	14	500k	4	0 ~ V <sub>REF</sub>	External	2.7 ~ 5.5	±1.2	±0.6	-83	80	79	87		No	5200	42	-40 to +125	TSSOP-24,TQFN-4x4-24L	Low-Power, 14-Bit, 500kSPS, 4 Channels Unipolar Inputs ADC	

# Voltage References

The Voltage References (VREFs) are designed for use in precision signal chain and AC/DC applications. The high accuracy shunt VREFs provide precision in demanding system requirement for applications using high resolution data converters.

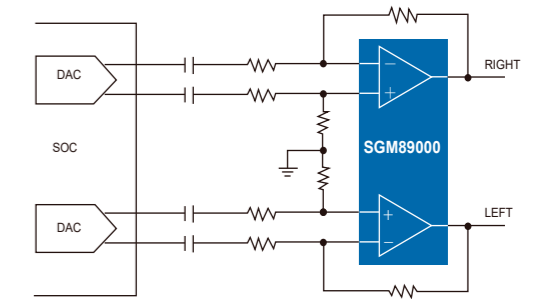
1\*

Part Number	V <sub>O</sub> (V)	Reference Voltage	Initial Accuracy Max (%)	V <sub>O</sub> Adj Min (V)	V <sub>O</sub> Adj Max (V)	I <sub>Z</sub> for Regulation Min (μA)	Temperature Coefficient Max (ppm/°C)	Operating Temperature Range (°C)	I <sub>OUT</sub> /I <sub>KA</sub> Max (mA)	Package	Features
SGM431	2.5	Adj	0.5,1	2.5	36	400	60	-40 to +125	100	SOIC-8,SOT-23,SOT-89-3,SOT-23-5,SC70-6	Adjustable Precision Shunt Regulator
SGM431VB	1.24	Adj	0.5	1.24	18	65		-40 to +125	70	SOT-23	Adjustable Precision Shunt Regulator
SGM432	2.5	Adj	0.5,1	2.5	36	400	60	-40 to +125	100	SOT-89-3,SOT-23,SOT-23-5	Adjustable Precision Shunt Regulator
SGM4025	1.25,2.048,2.5,3.0,3.3,4.096	Fixed	0.1			230 <sup>†</sup>	30	-40 to +125	10	UTQFN-1.5×1.5-8L	30ppm/°C, 230μA, CMOS Voltage Reference
SGM4027	2.048,2.5,3.0,3.3,4.096	Fixed	0.1			245 <sup>†</sup>	35	-40 to +125	10	SOT-23	35ppm/°C, 245μA, CMOS Voltage Reference
SGM4029	2.5,3.0,4.096	Fixed	0.1			1450 <sup>†</sup>	10	-40 to +125	10	SOIC-8	Low Noise, Low Drift, Precision Voltage Reference
SGM4040B	2.5	Fixed	0.2			48	20 <sup>†</sup>	-40 to +125	15 <sup>†</sup>	SOT-23	Micro-Power, Precision Shunt Voltage Reference
SGM4051C	1.2,Adj	Fixed, Adj	0.5	1.206	10	45	20 <sup>†</sup>	-40 to +125	12 <sup>†</sup>	SC70-5,SOT-23	Micro-Power, Precision Shunt Voltage Reference

Note: † Typical Values @ 25°C

# High Performance Audio Line Drivers

The Audio Line Driver family provides click-pop free stereo line drivers designed to allow the removal of the output DC-blocking capacitors for reduced component count and cost. The products are ideal for single supply electronics where size and cost are critical design parameters. The use of external gain resistors also allows the implementation of a 2<sup>nd</sup> order low pass filter to complement DAC's and SoC converters.



Part Number	Output Voltage		Stereo or Mono	V <sub>CC</sub> (V)	Differential Input	Shutdown Logic	Shutdown Current Typ (μA)	Click-Pop Suppression	Package	Features
	R <sub>L</sub> = 2.5kΩ THD = 1%, V <sub>CC</sub> = 5.0V	R <sub>L</sub> = 2.5kΩ THD = 1%, V <sub>CC</sub> = 3.3V								
SGM8903	3.05Vrms	2.05Vrms	Stereo	3.0 ~ 5.5	Yes	Active Low	130	Yes	TSSOP-14	600Ω Audio Line Driver with UVP Function
SGM8904	3.05Vrms	2.05Vrms	Stereo	3.0 ~ 5.5	No	Active Low	130	Yes	MSOP-10	600Ω Audio Line Driver with UVP Function
SGM8905	3.05Vrms	2.05Vrms	Stereo	3.0 ~ 5.5	No	Active Low	130	Yes	MSOP-10 (Exposed Pad)	600Ω Audio Line Driver with UVP Function
SGM89000		2.05Vrms	Stereo	3.0 ~ 3.6	Yes	Active Low	130	Yes	TSSOP-14	600Ω Audio Line Driver with UVP Function

# Headphone Drivers

Part Number	Output Power R <sub>L</sub> = 32Ω THD ≤ 0.1%, V <sub>CC</sub> = 5.0V	Stereo or Mono	V <sub>CC</sub> (V)	Differential Input	Shutdown Logic	Shutdown Current Typ (μA)	Click-Pop Suppression	Package	Features
SGM4917	80mW/CH	Stereo	2.7 ~ 5.5	Yes	Active Low	0.01	Yes	TQFN-3×3-16L	OCL Headphone Driver with Differential Input
SGM4918	80mW/CH	Stereo	2.7 ~ 5.1	No	Active Low	0.01	Yes	TDFN-3×3-10L	OCL Headphone Driver
SGM8910	55mW/CH	Stereo	2.8 ~ 12	Yes	Active Low	470	Yes	TSSOP-20, TQFN-4×4-20L	Audio Line Driver and Headphone Driver with Click-Pop Noise Cancellation

# High Performance Video Buffers

Part Number	Standard Definition Channels	High Definition Channels	1080p Support	Shut-down	V <sub>CC</sub> (V)	Internal Gain (dB)	-3dB Bandwidth		-0.1dB Bandwidth Typ (MHz)	Rail-to-Rail Output	Internal Filter	Quiescent Current (mA)	Slew Rate Typ (V/μs)	Group Delay (ns)	Package	Features
							Typ (MHz)	Typ (MHz)								
SGM9111	1			No	3.0 ~ 5.5	6	8	6	Yes	Yes	6	35	28	SOIC-8, SC70-5	Single Channel, Standard Definition, Small Package	
SGM9113	1			No	3.0 ~ 5.5	6	8	6	Yes	Yes	6	35	28	SOIC-8, SC70-5	Single Channel, Standard Definition, Small Package	
SGM9114	1			Yes	3.0 ~ 5.5	6	8	6	Yes	Yes	6	35	28	SOT-23-6	Single Channel, Standard Definition, Small Package with Shutdown	
SGM9115	3			No	3.3 ~ 5.5	6	9	5.5	Yes	Yes	21	44	31	SOIC-8	Triple Channels, Standard Definition	
SGM9116		3		No	3.3 ~ 5.5	6	38.5	30.5	Yes	Yes	30	165	3	SOIC-8	Triple Channels, High Definition, 1080i Supported	
SGM9117		3	Yes	No	2.5 ~ 5.5	6	200	92	Yes	No	27.5	300	3	SOIC-8	Triple Channels, High Definition, 1080p Supported	
SGM9119	3			No	3.3 ~ 5.5	6	8	5.56	Yes	Yes	21	31.5	31.2	SOIC-8, MSOP-8	Triple Channels, Standard Definition	

# High Performance Video Buffers

Part Number	Standard Definition Channels	High Definition Channels	1080p Support	Shut-down	V <sub>CC</sub> (V)	Internal Gain (dB)	-3dB Bandwidth Typ (MHz)	-0.1dB Bandwidth Typ (MHz)	Rail-to-Rail Output	Internal Filter	Quiescent Current (mA)	Slew Rate Typ (V/μs)	Group Delay (ns)	Package	Features
SGM9121	1			Yes	3.0 ~ 5.5	6	8	6	Yes	Yes	6	35	28	SC70-6	Single Channel, Standard Definition, Small Package with Shutdown
SGM9122	2			No	3.0 ~ 5.5	6	15	8.9	Yes	Yes	5.8			WSOP-8,TSSOP-8	Dual Channels, Standard Definition
SGM9124	4			No	3.3 ~ 5.5	6	8	5.9	Yes	Yes	30	35	28	MSOP-10	Quad Channels, Standard Definition
SGM9125	5			No	3.3 ~ 5.5	6	8	5.8	Yes	Yes	44	35	30.4	TSSOP-14	Five Channels, Standard Definition
SGM9126	6			No	3.3 ~ 5.5	6	8	5.7	Yes	Yes	44	35	30.5	TSSOP-14	Six Channels, Standard Definition
SGM9127	4			No	3.3 ~ 5.5	6	8	5.9	Yes	Yes	30	35	28	TSSOP-14	Quad Channels, Standard Definition
SGM9128YP	1	3		No	3.1 ~ 5.5	6	8.5/46	6.4/32	Yes	Yes	65	34/190	30/2.5	MSOP-10 (Exposed Pad)	Single SD Channel, Triple HD Channels, 1080i Supported, Exposed Pad
SGM9131		3		No	3.1 ~ 5.5	6	46	32	Yes	Yes	55	190	3.5	SOIC-8	Triple Channels, High Definition, 1080i Supported
SGM9132		3	Yes	No	3.1 ~ 5.5	6	98	78	Yes	Yes	75	340	5.3	SOIC-8 (Exposed Pad)	Triple Channels, High Definition, 1080p Supported
SGM9133	1	3	Yes	Yes	3.1 ~ 5.5	6	8.5/46/98	6.4/32/78	Yes	Yes	75	34/190/340	35/3.5/7	TSSOP-14	Single SD Channel, Triple HD Channels, 1080i/1080p Supported with Shutdown
SGM9134	1	3		No	3.1 ~ 5.5	6	8.5/46	6.4/32	Yes	Yes	58	34/190	35/3.5	TSSOP-14	Single SD Channel, Triple HD Channels, 1080i Supported
SGM9135	1	3	Yes	No	3.1 ~ 5.5	6	8.5/98	6.4/78	Yes	Yes	88	34/340	35/5.3	MSOP-10 (Exposed Pad)	Single SD Channel, Triple HD Channels, 1080p Supported
SGM9144	1			Yes	2.5 ~ 4.0	6/12	14/14		Yes	Yes	11.8	60		MSOP-8,TDFN-2x2-8L	Single SD Channel, Capless Output Coupling
SGM9152		1	Yes	Yes	3.1 ~ 5.5	6	79	64	Yes	Yes	15	300	3.5	MSOP-8	Single HD Channel, 1080p Supported
SGM9153		1	Yes	Yes	2.5 ~ 4.0	6	82	62	Yes	Yes	36	305	6.2	MSOP-10,TDFN-3x3-10L	Single HD Channel, 1080p Supported, Capless Output Coupling
SGM9155		1		Yes	3.1 ~ 5.5	6	40		Yes	Yes	12.5	175	3.8	SOT-23-6,SC70-5	Single HD Channel, 720p Supported
SGM9203	3	3	Yes	Yes	3.3 ~ 5.5	6/0	8/18/38/75	5.4/12/30/40	Yes	Yes	40	40/78/155/31122/13.5/9.5/NA		TSSOP-14	Triple Channels, Selectable SD/PS/HD(1080i)/HD(1080p) with Shutdown
SGM9346	3	3		No	3.3 ~ 5.5	6	8/35	5.36/28.2	Yes	Yes	64.5	39.5/140	10.5/4.9	TSSOP-20	Triple SD Channels, Triple HD Channels



# Analog Switches

The Analog Switch family provides industry's broadest analog switches covering the requirements of low on-resistance (as low as 75mΩ), high speed (up to 10000MHz), multi-channel selection and high voltage operation (up to 40V).

2* Channels per Package	1* Part Number	Type of Switch	V <sub>CC</sub> (V)	Quiescent Current (μA)	R <sub>ON</sub> (Ω)	Charge Injection (pC)	3* Bandwidth @-3dB (MHz)	Digital I/O V <sub>INH</sub> Min (V)	Digital I/O V <sub>INL</sub> Max (V)	t <sub>ON</sub> (ns)	t <sub>OFF</sub> (ns)	Package	Features
1	SGM3003	1:2	1.8 ~ 5.5	<1	0.5	5	30	2.4	0.8	21	9	MSOP-8	Small Package, 30MHz, Ultra Low R <sub>ON</sub> , Single SPDT
1	SGM4157YC	1:2	1.8 ~ 5.5	0.1	0.8		90	1.6	0.4	56	32	SC70-6	Low R <sub>ON</sub> , Small Package, Single SPDT
1	SGM3798	1:2	2.6 ~ 5.0	2	0.075		100	1.4	0.4	205	210	WLCSP-1.2×1.2-9B,TDFN-3×3-8L	Audio Headset Analog Switch with Reduced GND Switch R <sub>ON</sub> and FM Capability
1	SGM3001	1:2	1.8 ~ 5.5	<1	2.5	3	120	2.4	0.8	11	30	SC70-6	Small Package, 120MHz, Low R <sub>ON</sub> , Single SPDT
1	SGM3157	1:2	1.8 ~ 5.5	<5	6		300	1.8	0.4	20	15	SC70-6	300MHz, Small Package, Single SPDT
1	SGM3719	1:2	2.5 ~ 5.0	<8	4	16	400	1.65	0.6	15	11	SOT-23-6	400MHz, Negative Signal Passing, Single SPDT
1	SGM3167	1:2	1.8 ~ 5.5	<5	9		600	1.5	0.6	20	15	SC70-6	600MHz, Small Package, Single SPDT
2	SGM4684	1:2	1.8 ~ 5.5	<1	0.4	3	13	2.4	0.8	25	28	WLCSP-2.0×1.5-10B	Ultra Low R <sub>ON</sub> , Tiny Package, Dual SPDT
2	SGM3005	1:2	1.8 ~ 5.5	<1	0.5	20	15	2.4	0.8	50	15	TDFN-3×3-10L,MSOP-10	Tiny Package, 15MHz, Ultra Low R <sub>ON</sub> , Dual SPDT
2	SGM2267	1:2	1.8 ~ 4.2	<1	0.45	4	40	1.6	0.4	96	16	TQFN-2.1×1.6-10L	Ultra Low R <sub>ON</sub> , Tiny Package, Dual SPDT
2	SGM2268	1:2	1.8 ~ 4.2	<1	0.4	4	40	1.6	0.5	88	16	TQFN-1.8×1.4-10L	Ultra Low R <sub>ON</sub> , Tiny Package, Dual SPDT
2	SGM5223	1:2	1.8 ~ 4.2	<1	0.5	13	55	1.6	0.5	17	27.5	TQFN-1.8×1.4-10L	Ultra Low R <sub>ON</sub> , Dual, SPDT
2	SGM3718	1:2	2.5 ~ 5.0	<3.5	0.6	85	80	1.5	0.6	17	24	UTQFN-1.8×1.4-10L	80MHz, Negative Signal Passing, Tiny Package, Dual SPDT
2	SGM3712	1:2	2.7 ~ 12	600	0.9	500	100	1.5	0.5	400	100	WLCSP-1.27×2.13-15B,SOIC-14	Excellent THD, Low R <sub>FLAT(ON)</sub> , Rail-to-Rail Negative Signal Passing
2	SGM3715	1:2	2.7 ~ 12	520	0.8	1000	100	1.5	0.5	880	190	WLCSP-1.27×2.13-15B	Excellent THD, Low R <sub>FLAT(ON)</sub> , Click-Pop Noise Suppressor, Rail-to-Rail Negative Signal Passing
2	SGM4517	1:2	2.7 ~ 24	350	0.9	500	100	1.5	0.5	400	100	WLCSP-1.27×2.13-15B,SOIC-14	Low R <sub>FLAT(ON)</sub> , High Off-Isolation, Very Low Crosstalk, Rail-to-Rail Signal Passing
2	SGM3002	1:2	1.8 ~ 5.5	<1	2.5	3	120	2.4	0.8	11	8	MSOP-10	Small Package, 120MHz, Low R <sub>ON</sub> , Dual SPDT
2	SGM3710	1:2	2.7 ~ 12	300	1/11	600	160/130	1.4	0.4	200	100	TQFN-2.6×1.8-16L,SOIC-16	1Ω/11Ω, High Voltage, Rail-to-Rail Negative Signal Passing
2	SGM4515	1:2	2.7 ~ 24	70	1/11	600	160/130	1.4	0.4	200	60	SOIC-16,TQFN-2.6×1.8-16L	Low R <sub>FLAT(ON)</sub> , High Off-Isolation, Very Low Crosstalk, Rail-to-Rail Signal Passing
2	SGM3158	1:2	1.8 ~ 5.5	<5	4.5		270	1.5	0.6	20	15	TDFN-3×1-12L	270MHz, Tiny Package, Dual SPDT
2	SGM2258	1:2	1.8 ~ 5.5	<1	4.5	6	300	1.6	0.5	70	20	TQFN-2.1×1.6-10L	USB2.0 Full Speed Analog Switch
2	SGM2260	1:2	1.8 ~ 4.3	<1	6	10	300	1.6	0.5	20	20	UTQFN-1.8×1.4-10L	6Ω, 300MHz, Low-Power Full-Speed USB (12Mbps) Switch
2	SGM3711	1:2	2.7 ~ 12	300	11	80	300	1.4	0.4	200	60	SOIC-16,TQFN-2.6×1.8-16L	Excellent THD, High Off-Isolation, Very Low Crosstalk, Rail-to-Rail Negative Signal Passing
2	SGM4516	1:2	2.7 ~ 24	70	11	80	300	1.4	0.4	200	60	SOIC-16,TQFN-2.6×1.8-16L	Low R <sub>FLAT(ON)</sub> , High Off-Isolation, Very Low Crosstalk, Rail-to-Rail Signal Passing
2	SGM4717	1:2	1.8 ~ 5.5	<5	4.5		300	1.5	0.6	26	20	WLCSP-2.0×1.5-10B,MSOP-10,TDFN-3×3-10L,TQFN-1.8×1.4-10L	300MHz, WLCSP, Tiny Package, Dual SPDT
2	SGM3717	1:2	2.5 ~ 5.0	<6	4	16	400	1.5	0.6	15	11	UTQFN-1.8×1.4-10L,MSOP-10	400MHz, Negative Signal Passing, Tiny Package, Dual SPDT
3	SGM4583	1:2	3.6 ~ 11	<20	36	10	140	2.4	0.8	60	70	SSOP-16,TSSOP-16,SOIC-16,TQFN-3×3-16L	High Voltage, Triple 1:2 Mux
3	SGM48753	1:2	2.5 ~ 5.5	<6	48	3	180	1.7	0.5	60	70	SSOP-16,TSSOP-16,SOIC-16,TQFN-3×3-16L	Low R <sub>ON</sub> , Low Charge Injection, Triple 1:2 Mux
4	SGM3699	1:2	1.8 ~ 4.35	<1	0.5	30	70	1.6	0.5	52	25	TQFN-3×3-16L	70MHz, Low Voltage, Low I <sub>Q</sub> , Ultra Low R <sub>ON</sub> , Quad SPDT
4	SGM44603	1:2	1.8 ~ 5.5	<1	4.5	20	300	1.6	0.5	40	30	TQFN-2.6×1.8-16L	300MHz, Tiny Package, Quad SPDT
4	SGM5018	1:2	1.8 ~ 5.5	<1	4.5	20	300	1.6	0.5	40	30	TSSOP-16	300MHz, Quad SPDT
4	SGM330A	1:2	2.7 ~ 5.5	<20	12		500	2	0.6	25	13	SOIC-16,TSSOP-16,SSOP-16	Quad, SPDT Video Analog Switch
4	SGM331A	1:2	5	<20	12		500	2	0.6	25	13	SOIC-16,TSSOP-16,SSOP-16	Quad, SPDT Video Analog Switch with 1.2V Self Bias
1	SGM48780	1:4	1.8 ~ 4.2	<1	4	10	150	1.4	0.3	35	9	TDFN-3×3-10L,MSOP-10	Single SPQT

# Analog Switches

2* Channels per Package	1* Part Number	1* Type of Switch	V <sub>CC</sub> (V)	Quiescent Current ( $\mu$ A)	R <sub>ON</sub> ( $\Omega$ )	Charge Injection (pC)	3* Bandwidth @-3dB (MHz)	Digital I/O V <sub>INH</sub> Min (V)	Digital I/O V <sub>INL</sub> Max (V)	t <sub>ON</sub> (ns)	t <sub>OFF</sub> (ns)	Package	Features
1	SGM48755	1:4	2.5 ~ 5.5	<6	24	3	180	1.7	0.5	50	85	MSOP-10	Low R <sub>ON</sub> , Low Charge Injection, Single 1:4 Mux
2	SGM4782	1:4	1.8 ~ 4.2	<1	0.5	-18	30	1.6	0.5	20	20	TQFN-3x3-16L,TSSOP-16	Ultra Low R <sub>ON</sub> , Dual, SPQT
2	SGM4582	1:4	3.6 ~ 11	<20	36	15	120	2.4	0.8	60	60	SSOP-16,TSSOP-16,SOIC-16,TQFN-3x3-16L	High Voltage, Dual 1:4 Mux
2	SGM84782	1:4	1.8 ~ 4.2	<1	4	-18	150	1.6	0.5	17	9	TQFN-3x3-16L,TSSOP-16	Dual SPQT
2	SGM48752	1:4	2.5 ~ 5.5	<6	48	3	180	1.7	0.5	60	70	SSOP-16,TSSOP-16,SOIC-16,TQFN-3x3-16L	Low R <sub>ON</sub> , Low Charge Injection, Dual 1:4 Mux
2	SGM48752X	1:4	2.5 ~ 5.5	0.1	55	3	180	1.7	0.5	60	70	SSOP-16,TSSOP-16,SOIC-16,TQFN-3x3-16L	Low R <sub>ON</sub> , Low Charge Injection, Dual 1:4 Mux
2	SGM4589	1:4	4.5 ~ 40		23	18	300	1.6	0.5	50	180	TSSOP-16,SOIC-16	40V, 300MHz, Dual 1:4 Mux in One Package, GPIO Control
1	SGM4581	1:8	3.6 ~ 11	<20	36	15	90	2.4	0.8	60	60	SSOP-16,TSSOP-16,SOIC-16,TQFN-3x3-16L	High Voltage, Single 1:8 Mux
1	SGM4588	1:8	4.5 ~ 40		23	18	160	1.6	0.5	50	180	TSSOP-16,SOIC-16	40V, 160MHz, Single 1:8 Mux in One Package, GPIO Control
1	SGM48751	1:8	2.5 ~ 5.5	<6	48	6	180	1.7	0.5	60	70	SSOP-16,TSSOP-16,SOIC-16,TQFN-3x3-16L	Low R <sub>ON</sub> , Low Charge Injection, Single 1:8 Mux
1	SGM48751X	1:8	2.5 ~ 5.5	0.1	55	6	180	1.7	0.5	60	70	SSOP-16,TSSOP-16,SOIC-16,TQFN-3x3-16L	Low R <sub>ON</sub> , Low Charge Injection, Single 1:8 Mux
2	SGM7300A/B	2:1	3.0 ~ 3.6		5		10000	1.35	0.45	200	80	TLGA-2.5x4.5-20L	3.3V, Differential 2-Channel, 2:1 Multiplexer/Demultiplexer Switches
2	SGM7223	DPDT	1.8 ~ 4.3	<1	4.5	9.8	500	1.6	0.5	11	20	TQFN-2.1x1.6-10L	USB 2.0 High Speed, Dual SPDT
2	SGM7227	DPDT	1.8 ~ 4.3	<1	5	1.5	500	1.6	0.3	20	18	MSOP-10,UTQFN-1.8x1.4-10L	550MHz, USB 2.0 Certified, Tiny Package, Dual SPDT
2	SGM7222	DPDT	1.8 ~ 4.3	<1	4.5	11	550	1.6	0.5	10	22	TQFN-1.8x1.4-10L,MSOP-10,UTQFN-1.8x1.4-10L	USB 2.0 High Speed, Dual SPDT
2	SGM7226	DPDT	1.8 ~ 5.5	<30	5	10	550	1.5	0.35	15	20	TQFN-2.6x1.8-16L	5.5V, USB 2.0 High Speed, Dual SPDT
2	SGM7228	DPDT	1.8 ~ 4.3	<1	6	11	550	1.6	0.5	10	22	TQFN-1.8x1.4-10L	Low Cost, High Speed USB 2.0 (480Mbps) DPDT
2	SGM7224	DPDT	1.8 ~ 5.5	<0.5	6	2	850	1.5	0.4	28	18	UTQFN-1.8x1.4-10L,MSOP-10	High-Speed USB 2.0 (480Mbps) DPDT
2	SGM7229	DPDT	1.8 ~ 5.5	<0.5	5.5	2	850	1.5	0.4	40	15	UTQFN-1.8x1.4-10L,MSOP-10	High-Speed USB 2.0 (480Mbps) DPDT
2	SGM7237B	DPDT	2.7 ~ 5.5	26	1.2/4.5			1.7	0.5	0.01ms	300	UTQFN-1.8x1.4-10L,MSOP-10	USB 2.0 + Audio Switch, DPDT
4	SGM3799	DPDT	1.8 ~ 4.35	<1	0.5	30	70	1.6	0.5	52	25	TQFN-2.6x1.8-16L	70MHz, Low Voltage, Low I <sub>Q</sub> , Ultra Low R <sub>ON</sub> , Quad SPDT
4	SGM44599	DPDT	1.8 ~ 5.5	<1	4	3.5	300	1.6	0.5	31.5	30	TQFN-3x3-16L,TQFN-2.5x2.5-16L	300MHz, Small Package, Quad SPDT
4	SGM44600	DPDT	1.8 ~ 5.5	<1	4	4.8	300	1.6	0.5	29.5	29.5	TQFN-3x3-16L	300MHz, Small Package, Quad SPDT
4	SGM44601	DPDT	1.8 ~ 5.5	<1	4	3.5	300	1.6	0.5	36	30	TQFN-2.6x1.8-16L	300MHz, Tiny Package, Quad SPDT
4	SGM44602	DPDT	1.8 ~ 5.5	<1	4	4.8	300	1.6	0.5	32	26	TQFN-2.6x1.8-16L	300MHz, Tiny Package, Quad SPDT
4	SGM3700	DPDT	2.5 ~ 5.5	<15	4	21	380	1.5	0.5	15	9	TQFN-3x3-16L	380MHz, Negative Signal Passing, Quad SPDT, Tiny Package
1	SGM48756	SPDT	1.8 ~ 5.5	$\pm$ 0.1	3.5		250	1.8	0.4	26	20	SC70-6,XTDFN-1x1-6L,UTDFN-1.45x1-6AL	3.5 $\Omega$ , Low Voltage SPDT Analog Switch in Ultra-Thin Package
8	SGM7301	SPDT	3.0 ~ 3.6		4		8000	2	0.4	150	50	ULGA-3.5x9-42L	4-Channel High-Performance Differential Switch
1	SGM48760	SPST	1.65 ~ 5.5	0.1	4.5 @5V		335 @5V	3.5 @5V	1.5 @5V	2.7 @5V	3 @5V	SC70-5,SOT-23-5	Single SPST Analog Switch
2	SGM3713	SPST	2.7 ~ 9	375	0.18	320	220	1.6	0.4	175	520	TQFN-3x3-16L,WLCSP-1.62x1.23-12B	Excellent THD, Low R <sub>FLAT(ON)</sub> , Rail-to-Rail Negative Signal Passing
2	SGM3714	SPST	2.7 ~ 9	375	0.18	320	220	1.6	0.4	210ms	720ms	TQFN-3x3-16L,WLCSP-1.62x1.23-12B	Excellent THD, Low R <sub>FLAT(ON)</sub> , Click-Pop Noise Suppressor, Rail-to-Rail Negative Signal Passing
2	SGM48759	SPST	1.65 ~ 5.5	0.1	4.5 @5V		335 @5V	3.5 @5V	1.5 @5V	2.7 @5V	3 @5V	VSSOP-8,MSOP-8	Dual Bilateral Analog Switch
4	SGM48754	SPST	2.5 ~ 5.5	<6	24	7	180	1.7	0.5	40	100	TSSOP-14,SOIC-14	Low R <sub>ON</sub> , Low Charge Injection, Quad SPST
4	SGM4511	SPST	4.5 ~ 40		23	18	300	1.6	0.5	40	120	TSSOP-16,SOIC-16	40V, 300MHz, Quad SPST, Fast Turn-On Time
4	SGM4512	SPST	4.5 ~ 40		23	18	300	1.6	0.5	40	120	TSSOP-16,SOIC-16	40V, 300MHz, Quad SPST, Fast Turn-On Time

# Application-Specific Switches

Part Number	Type	V <sub>CC</sub> (V)	1* Bandwidth @-3dB (MHz)	Control Interface	R <sub>ON</sub> (Ω)	R <sub>ON</sub> Flatness (Ω)	C <sub>ON</sub> (pF)	C <sub>OFF</sub> C <sub>S</sub> /C <sub>D</sub> (pF)	Crosstalk Typ (dB)	Charge Injection Typ (pC)	Package	Features
SGM6516	16×8	4.5 ~ 13.2	45	I/O	40		65	25	-47		LQFP-10×10-44L	16×8, Passive
SGM6512	1:16	3.3 ~ 13.2	80	I/O	24	12	75	8/70	-70	25	TQFN-5×5-32L,TSSOP-28	1:16, Multiplexer
SGM6515	1:8	3.3 ~ 13.2	80	I/O	24	12	75	8/70	-70	25	TSSOP-16	1:8, Multiplexer
SGM6501	12×9	3.1 ~ 5.5	84	I <sup>2</sup> C					-74		SSOP-28,TSSOP-28	12×9, Buffered
SGM6502	8×6	3.1 ~ 5.5	88	I <sup>2</sup> C					-77		TSSOP-24	8×6, Buffered
SGM65232	(1:2)×32	3.3 ~ 5	100	I/O	11		26	13	-60		LQFP-14×14-100L	High Speed, 32-Bit 2:1 Bus Multiplexer
SGM6510	16×4	2.7 ~ 5.5	120	I <sup>2</sup> C	30	8	40		-110	7	TSSOP-28,TQFN-4×4-28L	16×4, Passive
SGM6511	16×8	2.7 ~ 5.5	120	I <sup>2</sup> C	30	8	50		-110	7	TQFN-5×5-32L,LQFP-7×7-32L	16×8, Passive
SGM6513	(1:8)×2	3.3 ~ 13.2	135	I/O	24	12	50	8/36	-70	25	TQFN-5×5-32L,TSSOP-28	Dual 1:8, Multiplexer
SGM6514	16×8	2.7 ~ 5.5	250	I <sup>2</sup> C	30	8	50		-110	7	LQFP-7×7-32L	High Speed, 16×8, Passive, I <sup>2</sup> C Interface
SGM6518	16×8	2.7 ~ 5.5	250	SPI	28	7	50	25	-55	6	LQFP-7×7-32L	High Speed, 16×8, Passive, Serial Digital Interface
SGM6533	(1:3)×3	2.5 ~ 5.5	350	I/O	7				-60		TQFN-3×3-20L,TSSOP-20	High Speed, 3-1:3 Multiplexer
SGM7232	(1:3)×2	2.7 ~ 4.3	380/400	I/O	4/9		18	7	-90		UTQFN-2.2×1.4-12L	High Speed, 2-1:3 Multiplexer
SGM6503		1.8 ~ 5.5	400	I/O		3.5/0.45	12/185		-80	3/80	TQFN-3×3-20L	SIM I/F Swap
SGM6504	(2:2)×4	1.8 ~ 5.5	400	I/O	12	3.5	12		-80	2.5	TQFN-3×3-20L	4-2:2, Passive Swap
SGM6505	(1:2)×6	2 ~ 5	450	I/O	8.5	4.5	15	4/9	-55	1.2	TSSOP-24,TQFN-4×4-24L	Six Channels 1:2 Multiplexer
SGM65231	SPST×8	2.3 ~ 3.6	500	I/O	4.5		17.2	13.5			TQFN-4.5×3.5-20L,TSSOP-20	8-Bit SPST, Low Voltage, High Bandwidth Bus Switch
SGM7300A/B	2:1	3.0 ~ 3.6	10000	I/O	5		1.5				TLGA-2.5×4.5-20L	3.3V, Differential 2-Channel, 2:1 Multiplexer/Demultiplexer Switches
SGM7220	Type C	2.7 ~ 5		I <sup>2</sup> C,I/O							UTQFN-1.6×1.6-12L	USB Type-C Configuration, Channel Logic and Port Control

# Level Translators

1* Translators per Package	Part Number	Data Rate (Mbps)	V <sub>CC</sub> (V)	V <sub>L</sub> Range (V)	V <sub>CCA</sub> Range (V)	V <sub>CCB</sub> Range (V)	Bidirectional	V <sub>CC</sub> Shutdown I/O State	Shutdown I <sub>CC</sub> Max (μA)	Logic Output	Package	Features
1	74LVC1T45	420			1.65 ~ 5.5	1.65 ~ 5.5	Yes	Hi-Z		Push-Pull	SC70-6,SOT-23-6	Single-Bit Dual-Supply Bus Transceiver
1	SGM4535		2.7 ~ 5.5	1.6 ~ 5.5			Yes	Low			TQFN-5×5-32L	Smart Card Interface
1	SGM4552	24/2			1.65 ~ 5.5	2.3 ~ 5.5	Yes	Hi-Z	5.5	Open-Drain/Push-Pull	UTDFN-1.45×1-6L,SOT-23-6,SC70-6	GPIO Level Shifter
1	SGM4554	100			1.2 ~ 5.0	1.65 ~ 5.5	Yes	Hi-Z	10	Push-Pull	SC70-6,UTDFN-1.45×1-6L	GPIO Level Shifter
1	SGM4555		2.7 ~ 5.5	1.4 ~ 5.5			Yes	Low			TQFN-2×2-12L,TQFN-3×3-16L	Card Interface
1	SGM4560		3.3 ~ 5.5	1.6 ~ 5.5			Yes	Low	8		TSSOP-14	CA Card Interface
1	SGM4561		5.0 ~ 5.5	1.6 ~ 5.5			Yes	Low			MSOP-10	HDMI Interface
2	74AVCH2T45	500			0.8 ~ 3.6	0.8 ~ 3.6	Yes	Hi-Z		Push-Pull	VSSOP-8	2-Bit Dual-Supply Translating Transceiver
2	74LVC2T45	420			1.65 ~ 5.5	1.65 ~ 5.5	Yes	Hi-Z		Push-Pull	MSOP-8,XTDFN-1.35×1-8L	2-Bit Dual-Supply Bus Transceiver
2	SGM4542				0.9 ~ 3.6	0.9 ~ 3.6	Yes	Hi-Z		Open-Drain/Push-Pull	XTDFN-1.35×1-8L	GPIO Level Shifter
2	SGM4551				1.2 ~ 3.3	1.8 ~ 5.5	Yes	Hi-Z	8	Open-Drain	SOT-23-8,XTDFN-1.4×1-8L	I <sup>2</sup> C Level Shifter
2	SGM4553	24/2			1.65 ~ 5.5	2.3 ~ 5.5	Yes	Hi-Z	5.5	Open-Drain/Push-Pull	SOT-23-8,XTDFN-1.4×1-8L	GPIO Level Shifter
2	SGM4556	100			1.2 ~ 5.0	1.65 ~ 5.5	Yes	Hi-Z	10	Push-Pull	SOT-23-8,XTDFN-1.4×1-8L	GPIO Level Shifter
2	SGM4558		2.7 ~ 5.5	1.4 ~ 5.5			Yes	Low	2		TQFN-3×3-20L	SIM/Smart Card Interface
4	74AVC4T245	380			0.8 ~ 3.6	0.8 ~ 3.6	Yes	Hi-Z		Push-Pull	TSSOP-16	4-Bit Dual-Supply Translating Transceiver
4	SGM4563	100			1.2 ~ 5.5	1.65 ~ 5.5	No	Hi-Z	5	Push-Pull	SOIC-14,UTQFN-1.8×1.8-12L	SPI Bus or UART Interface
4	SGM4564	100			1.2 ~ 5.5	1.65 ~ 5.5	Yes	Hi-Z	12/9	Push-Pull	SOIC-14,UTQFN-1.8×1.8-12L,TQFN-2×2-12L	GPIO Level Shifter
4	SGM4573	24			1.65 ~ 3.6	2.3 ~ 5.5	Yes	Hi-Z		Open-Drain/Push-Pull	TSSOP-14	Open-Drain, Dual-Supply Translating Transceiver
4	SGM4574	24/2			1.65 ~ 5.5	2.3 ~ 5.5	Yes	Hi-Z		Open-Drain/Push-Pull	SOIC-14,UTQFN-1.8×1.8-12L,TQFN-2×2-12L	GPIO Level Shifter
4	SGM4T245				1.2 ~ 5.0	1.2 ~ 5.0	Yes	Hi-Z		Push-Pull	TSSOP-16,TQFN-2.6×1.8-16L	4-Bit Non-Inverting Bus Transceiver
6	SGM4566	100			1.2 ~ 5.5	1.65 ~ 5.5	Yes	Hi-Z	12/9	Push-Pull	TSSOP-16,TQFN-2.6×1.8-16L	GPIO Level Shifter
6	SGM4576	24/2			1.65 ~ 5.5	2.3 ~ 5.5	Yes	Hi-Z		Open-Drain/Push-Pull	TQFN-2.6×1.8-16L	GPIO Level Shifter
8	74AVC8T245	380			0.8 ~ 3.6	0.8 ~ 3.6	Yes	Hi-Z		Push-Pull	TQFN-5.5×3.5-24L	8-Bit Dual-Supply Translating Transceiver
8	SGM7SZ245		1.8 ~ 5.0				Yes	Hi-Z		Push-Pull	TSSOP-20,TQFN-5.5×3.5-24L,TQFN-3×3-20L	Octal Bus Transceivers with 3-State Outputs
8	SGM4568	100			1.2 ~ 5.5	1.65 ~ 5.5	Yes	Hi-Z	12/9	Push-Pull	TSSOP-20,TQFN-3×3-20L	GPIO Level Shifter
8	SGM4578	24/2			1.65 ~ 5.5	2.3 ~ 5.5	Yes	Hi-Z		Open-Drain/Push-Pull	TSSOP-20,TQFN-3×3-20L	GPIO Level Shifter
8	SGM8T245				1.2 ~ 5.0	1.2 ~ 5.0	Yes	Hi-Z		Push-Pull	TSSOP-24,TQFN-5.5×3.5-24L	8-Bit Non-Inverting Bus Transceiver
16	74ALVC164245				1.5 ~ 3.6	1.5 ~ 5.5	Yes	Hi-Z		Push-Pull	TSSOP-48	16-Bit Dual-Supply Translating Transceiver
16	74AVC16T245	380			0.8 ~ 3.6	0.8 ~ 3.6	Yes	Hi-Z		Push-Pull	TSSOP-48	16-Bit Dual-Supply Translating Transceiver



# Level Shifters and Drivers

Channels per Package	Part Number	V <sub>CC</sub> Range (V)	Logic Low Input Voltage (V)	Logic High Input Voltage (V)	Output Peak Current (A)	Rise Time (ns)	Fall Time (ns)	I <sub>CC Typ</sub> (mA)	Package	Features
2	SGM48000	4.5 ~ 26.5	0.7	1.6	2	12	13	1.14	SOIC-8,TDFN-2×2-8L	2A Peak Current, 26.5V, Dual Non-Inverting
2	SGM48001	4.5 ~ 26.5	0.7	1.6	2	12	13	1.29	SOIC-8,TDFN-2×2-8L	2A Peak Current, 26.5V, Dual Inverting
2	SGM48002	4.5 ~ 26.5	0.7	1.6	2	12	13	1.19	SOIC-8,TDFN-2×2-8L	2A Peak Current, 26.5V, Inverting and Non-Inverting

# Small Logic Series

Part Number	Package	Features
SGM7SZ00	SOT-23-5,SC70-5	Single 2-Input NAND Gate
SGM7SZ04	SOT-23-5,SC70-5,UTDFN-1.45×1-6L	Single Inverter
SGM7SZ08	XTDFN-1×1-6L,SOT-23-5,SC70-5,UTDFN-1.45×1-6L	Single 2-Input AND Gate
SGM7SZ125	SOT-23-5,SC70-5	Single Active-Low 3-State Logic Buffer
SGM7SZ126	SOT-23-5,SC70-5	Single Active-High 3-State Logic Buffer
SGM7SZ14	SOT-23-5,SC70-5	Single Inverter with Schmitt Trigger Input
SGM7SZ19	SC70-6	Single 1-of-2 Decoder/Demultiplexer
SGM7SZ32	SOT-23-5,SC70-5	Single 2-Input OR Gate
SGM7SZ86	SOT-23-5,SC70-5	Single 2-Input Exclusive-OR Gate
SGM7SZ244	TSSOP-20	Octal Buffers and Line Drivers with 3-State Outputs
SGM7SZ245	TSSOP-20,TQFN-5.5×3.5-24L,TQFN-3×3-20L	Octal Bus Transceivers with 3-State Outputs
SGM4T245	TSSOP-16,TQFN-2.6×1.8-16L	4-Bit Non-Inverting Bus Transceiver
SGM8T245	TSSOP-24,TQFN-5.5×3.5-24L	8-Bit Non-Inverting Bus Transceiver
74AHC123	SOIC-16,TSSOP-16	Dual Retriggerable Monostable Multivibrator with Reset
74AHC14	SOIC-14,TSSOP-14	Hex Inverter with Schmitt Trigger Inputs
74AHC1G08Q	SC70-5	Single 2-Input AND Gate
74AHC595	SOIC-16,TSSOP-16	8-Bit Serial-In/Serial-Out or Parallel-Out Shift Register with Output Latches
74AHCT244	SOIC-20	Octal Buffer/Line Driver with 3-State Outputs
74AHCT86	SOIC-14	Quad 2-Input Exclusive-OR Gate
74ALVC164245	TSSOP-48	16-Bit Dual-Supply Translating Transceiver with 3-State Outputs
74AVC16T245	TSSOP-48	16-Bit Dual-Supply Translating Transceiver with 3-State Outputs
74AVC8T245	TSSOP-24,TQFN-5.5×3.5-24L	8-Bit Dual-Supply Translating Transceiver with 3-State Outputs
74LV1T08	SOT-23-5,SC70-5	Single 2-Input Translating AND Gate
74LVC04	SOIC-14,TSSOP-14	Hex Inverter

Part Number	Package	Features
74LVC08	SOIC-14,TSSOP-14	Quad 2-Input AND Gate
74LVC138	SOIC-16,TSSOP-16,TQFN-2.5×3.5-16L	3-Line to 8-Line Inverting Decoder/Demultiplexer
74LVC157	SOIC-16,TSSOP-16,TQFN-2.5×3.5-16L	Quad 2-Input Multiplexer
74LVC1G00	SC70-5	Single 2-Input NAND Gate
74LVC1G125	SOT-23-5,SC70-5	Bus Buffers and Line Drivers with 3-State Output
74LVC1G32	SOT-23-5,SC70-5	Single 2-Input OR Gate
74LVC1G32Q	SC70-5	Single 2-Input OR Gate
74LVC1T45	SC70-6,SOT-23-6	Single-Bit Dual-Supply Bus Transceiver with Configurable Voltage Translation
74LVC2T45	MSOP-8,XTDFN-1.35×1-8L	2-Bit Dual-Supply Bus Transceiver with Configurable Voltage Translation
74LVC2G04	SOT-23-6,SC70-6	Dual Inverter
74LVC2G08	VSSOP-8	Dual 2-Input AND Gate
74LVC2G14	SC70-6	Dual Inverter with 5V Tolerant Schmitt Trigger Inputs
74LVC32	SOIC-14,TSSOP-14	Quad 2-Input OR Gate
74LVC74	TSSOP-14	Dual D-Type Positive Edge-Triggered Flip-Flop with Set and Reset
74LVCM16373	TSSOP-48	16-Bit D-Type Transparent Latch with 3-State Outputs
74LVCM244	SOIC-20,TSSOP-20,SSOP-20	Octal Buffers and Line Drivers with 3-State Outputs
74LVTH125	SOIC-14	3.3V, Quad Buffers and Line Drivers with 3-State Outputs
74LVTH16244	TSSOP-48	3.3V, 16-Bit Buffers and Line Drivers with 3-State Outputs
74LVTH16373	TSSOP-48	3.3V, 16-Bit D-Type Transparent Latch with 3-State Outputs
74LVTH245	TQFN-4.5×2.5-20L,SSOP-20,TSSOP-20	3.3V, Octal Transceiver with Direction Pin and 3-State Outputs
74LVTH16244	TSSOP-48	3.3V, 16-Bit Buffers and Line Drivers with 3-State Outputs
74LVTH16245	TSSOP-48	3.3V, 16-Bit Transceiver with Direction Pin and 3-State Outputs
74LVTH16374	TSSOP-48	3.3V, 16-Bit D-Type Edge-Triggered Flip-Flops with 3-State Outputs

# Temperature Sensors

1\*

Device Type	Part Number	Interface	V <sub>CC</sub> (V)	Temp Resolution Max (Bits)	Local Sensor Accuracy Max (±°C)	Shutdown Current (μA)	Addresses	Quiescent Current (μA)	Operating Temperature Range (°C)	Remote Channels (#)	Package	Features
Local and Remote	SGM446	Analog Output	4 ~ 35		-55°C to +150°C: -5 ~ 2			298.2	-55 to +150	0	UTDFN-2x2-2L,UTDFN-2x2-4L	2-Terminal, High-Precision, Current Output Temperature Sensor
Local	SGM447	Analog Output	1.5 ~ 5.5		-20°C to +85°C: 2.5 -55°C to +150°C: 3.5			3	-55 to +150	0	WLCSF-0.8x0.8-4B-A	Dual-Gain Analog Temperature Sensor with Class-AB Output
Local and Remote	SGM448	Analog Output	2.7 ~ 10		+25°C: 1 -55°C to +125°C: 2			26	-55 to +150	0	SOT-23	Low Power, High Accuracy Analog Output Temperature Sensor
Local and Remote	SGM449	Analog Output	2.7 ~ 10		+25°C: 1 -55°C to +125°C: 2			26	-55 to +150	0	SOT-23	Low Power, High Accuracy Analog Output Temperature Sensor
Local	SGM450	Analog Output	2.3 ~ 5.5		-40°C to +150°C: 2			7.5	-40 to +150	0	SC70-5,SOT-23	Low Power, High Accuracy Analog Output Temperature Sensor
Local and Remote	SGM451	I <sup>2</sup> C and SMBus	3.0 ~ 5.5	12	-40°C to +85°C: 0.8 -40°C to +125°C: 1.2	<10	8	122	-40 to +125	1	TDFN-2x2-8BL	±1°C Local and Remote Temperature Sensor with η-Factor and Offset Correction, Series-Resistance Cancellation, and Programmable Digital Filter
Local	SGM452	I <sup>2</sup> C	2.7 ~ 5.5	12	-55°C to +125°C: 1.2	<3	8	49	-55 to +125	0	SOIC-8,MSOP-8	Digital Temperature Sensor and Thermal Watchdog with I <sup>2</sup> C Interface
Local	SGM457	Two-Wire, I <sup>2</sup> C and SMBus Interface	1.6 ~ 5.5	12	-40°C to +125°C: 1.5	0.5	8	17	-40 to +125	0	SOT-563-6	Low Power, Low Supply Voltage Digital Temperature Sensor
Local	SGM458	I <sup>2</sup> C and SMBus	1.6 ~ 5.5	12	-55°C to +125°C: 1	<2.5	8	2.9	-55 to +125	0	WLCSF-0.85x0.85-4B	Low Power, Low Supply Voltage Digital Temperature Sensor

## Reset ICs

1\*

Part Number	Supply Current (μA)	Manual Reset	V <sub>CC</sub> (V)	Reset Threshold (V)	V <sub>CC</sub> to Reset Delay (μs)	Reset Active Timeout Period (ms)	Reset Output	Package	Features
SGM708	20	Yes	1.0 ~ 5.5	4.65,4.4,4.0,3.08,2.93,2.63		200	Active Low/High (Push-Pull)	SOIC-8	6 Selectable Thresholds, Debounced Manual-Reset Input, Dual Reset Outputs
SGM800	3	No	1.0 ~ 5.5	2.93,2.63,2.32,1.63	80	Programmable	Active Low (Open-Drain)	SOT-23-5	Programmable Reset Timeout, Low Quiescent Current
SGM802	3	No	1.0 ~ 5.5	2.93,2.63,2.32,1.63	80	Programmable	Active High (Push-Pull)	SC70-4 (R),SOT-143	Programmable Reset Timeout, Low Quiescent Current, Small Package
SGM803B	0.3	No	1.0 ~ 5.5	4.38,4.00,3.08,2.93,2.63	110	240	Active Low (Open-Drain)	SOT-23-3,SOT-23	5 Selectable Thresholds, Low Power
SGM804	3	No	1.0 ~ 5.5	2.93,2.63,2.32,1.63	80	Programmable	Active Low (Push-Pull)	SOT-23-5	Programmable Reset Timeout, Low Quiescent Current
SGM809B	0.3	No	1.0 ~ 5.5	4.38,4.00,3.08,2.93,2.63	110	240	Active Low (Push-Pull)	SOT-23-3,SOT-23	5 Selectable Thresholds, Low Power
SGM810B	0.3	No	1.0 ~ 5.5	4.38,4.00,3.08,2.93,2.63	110	240	Active High (Push-Pull)	SOT-23-3,SOT-23	5 Selectable Thresholds, Low Power
SGM811B	0.5	Yes	1.0 ~ 5.5	3.08,2.93,2.63	84	200	Active Low (Push-Pull)	SOT-143	3 Selectable Thresholds, Manual-Reset Input, Low Power
SGM812B	0.5	Yes	1.0 ~ 5.5	3.08,2.93,2.63	84	200	Active High (Push-Pull)	SOT-143	3 Selectable Thresholds, Manual-Reset Input, Low Power
SGM814	1.6	Yes	1.0 ~ 5.0	1.2,1.5,2.0,3.3	50	140	Active Low (Open-Drain)	SOT-23-6	4 Selectable Thresholds, Watchdog, Manual-Reset Input, Low Power
SGM815	1.6	Yes	1.0 ~ 5.0	1.6,3.3	50	140	Active Low (Open-Drain)	SOT-23-6	2 Selectable Thresholds, Watchdog, Manual-Reset Input, Low Power
SGM825	0.5	Yes	1.0 ~ 5.5	4.63,3.08,2.93,2.63	84	200	Active Low/High (Push-Pull)	SOT-23-5	4 Selectable Thresholds, Manual-Reset Input
SGM829	0.6	Yes	1.65 ~ 6.5	1.8 ~ 5.0	85	Programmable	Active Low (Open-Drain)	SOT-23-5	Adjustable Delay Time, Manual-Reset Input, Low Quiescent Current
SGM836	0.6	Yes	1.7 ~ 6.5	0.9 ~ 5.0/Adj (down to 0.4)	28	Programmable	Active Low (Open-Drain)	SOT-23-6,TDFN-2x2-6AL	Adjustable Delay Time, Manual-Reset Input, Low Quiescent Current

## Watchdogs and Timers

1\*

Part Number	Supply Current (μA)	Manual Reset	V <sub>CC</sub> (V)	Reset Threshold (V)	Watchdog Timer	V <sub>CC</sub> to Reset Delay (μs)	Reset Active Timeout Period (ms)	Reset Output	Package	Features
SGM706B	0.6	Yes	1.0 ~ 5.5	4.63,4.38,4.0,3.08,2.93,2.63	1.6s		200	Active Low (Push-Pull)	UTDFN-1.5x1.5-8L,SOIC-8,MSOP-8	6 Selectable Thresholds, Watchdog, Debounced Manual-Reset Input
SGM816	1.6	Yes	1.0 ~ 5.0	1.2,1.5,3.3	1.2s	50	140	Active Low (Push-Pull)	SOT-23-6	3 Selectable Thresholds, Watchdog, Manual-Reset Input, Low Power
SGM820	1.2	Yes	1.6 ~ 6.5	4.8,4.65,3.168,3.069,2.88,2.79,2.4,2.325,1.728,1.674	Programmable	90	200	Active Low (Open-Drain)	TDFN-3x3-8L,TDFN-2x2-8L	10 Selectable Thresholds, Watchdog, Manual-Reset Input
SGM821	0.035	Yes	1.8 ~ 5.5		Programmable			Active Low (Open-Drain)	SOT-23-6,TDFN-2x2-6AL	Programmable Watchdog Intervals, Watchdog, Manual-Reset Input
SGM823	0.5	Yes	1.0 ~ 5.5	4.63,3.08,2.93,2.63	1.6s	84	200	Active Low (Push-Pull)	SOT-23-5	4 Selectable Thresholds, Watchdog, Manual-Reset Input
SGM823A	0.64	Yes	1.0 ~ 5.5	2.19,1.67,1.58	1.6s	90	200	Active Low (Push-Pull)	SOT-23-5	3 Selectable Thresholds, Watchdog, Manual-Reset Input
SGM824	0.5	No	1.0 ~ 5.5	4.63,3.08,2.93,2.63	1.6s	84	200	Active Low/High (Push-Pull)	SOT-23-5	4 Selectable Thresholds, Watchdog

## Voltage Detectors

1\*

Part Number	Supply Current (μA)	Manual Reset	V <sub>CC</sub> (V)	Reset Threshold (V)	V <sub>CC</sub> to Reset Delay (μs)	Reset Active Timeout Period (ms)	Reset Output	Package	Features
SGM808B	1	No	0.95 ~ 10	1.5 ~ 6.0 (0.1V Increments)			Active Low (Open-Drain)	SC70-4 (R),SOT-23-5,SOT-89-3	1.5V to 6.0V Selectable Thresholds, Low Power
SGM813B	0.6	No	1.0 ~ 6.0	1.4		22	Active Low (Open-Drain)	TDFN-2x2-6L	1.4V Fixed Threshold, Low Quiescent Current
SGM826B	1	No	0.95 ~ 10	2.2 ~ 6.0 (0.1V Increments)			Active Low (Open-Drain)	SC70-4 (R),SOT-23-5	2.2V to 6.0V Selectable Thresholds, Low Power
SGM827B	1	No	0.95 ~ 10	2.2 ~ 6.0 (0.1V Increments)			Active Low (Open-Drain)	SC70-4 (R),SOT-23-5	2.2V to 6.0V Selectable Thresholds, Low Power
SGM828B	1	No	0.95 ~ 10	2.2 ~ 6.0 (0.1V Increments)			Active Low (Open-Drain)	SC70-4 (R),SOT-23-5	2.2V to 6.0V Selectable Thresholds, Low Power
SGM890B	0.3	No	1.0 ~ 6.0	0.8 ~ 5.0 (0.1V Increments)		Programmable	Active Low (Open-Drain)	SOT-23-5	Programmable Reset Timeout, Low Quiescent Current
SGM891B	0.3	No	1.0 ~ 6.0	0.8 ~ 5.0 (0.1V Increments)			Active Low (Open-Drain)	SOT-23-5	0.8V to 5.0V Selectable Thresholds, Low Quiescent Current
SGM892B	0.4	No	1.0 ~ 6.0	1.0 ~ 5.0 (0.1V Increments)	50	0.11	Active Low (Open-Drain)	SOT-23-5,SOT-23-3,UTDFN-1x1-4L	1.0V to 5.0V Selectable Thresholds, Low Power
SGM893B	0.4	Yes	1.0 ~ 6.0	1.0 ~ 5.0 (0.1V Increments)	50	210	Active Low (Open-Drain)	SOT-23-5,UTDFN-1x1-4L	1.0V to 5.0V Selectable Thresholds, Low Power
SGM895	2.1	No	1.6 ~ 5.5	Adj (0.5 Default)	50	Programmable	Active High (Push-Pull)	UTDFN-1.45x1-6AL,TSOT-23-6	Adjustable Input Delay Time, Enable Delay Time, Low Power
SGM896	2.1	No	1.6 ~ 5.5	Adj (0.5 Default)	50	Programmable	Active Low (Push-Pull)	UTDFN-1.45x1-6AL,TSOT-23-6	Adjustable Input Delay Time, Enable Delay Time, Low Power
SGM897	2.1	No	1.6 ~ 5.5	Adj (0.5 Default)	50	Programmable	Active High (Open-Drain)	UTDFN-1.45x1-6AL,TSOT-23-6	Adjustable Input Delay Time, Enable Delay Time, Low Power
SGM898	2.1	No	1.6 ~ 5.5	Adj (0.5 Default)	50	Programmable	Active Low (Open-Drain)	UTDFN-1.45x1-6AL,TSOT-23-6	Adjustable Input Delay Time, Enable Delay Time, Low Power
SGM899	2.1	No	1.6 ~ 5.5	Adj (0.5 Default)	50	Programmable	Active High (Push-Pull)	UTDFN-1.45x1-6AL,TSOT-23-6	Adjustable Input Delay Time, Enable Delay Time, Low Power

## Power Sequencer

1\*

Part Number	Supply Current (μA)	Manual Reset	V <sub>CC</sub> (V)	Reset Output	Package	Features
SGM822	36	No	2.7 ~ 5.5	Active Low/High (Open-Drain)	MSOP-8	The Easiest Method to Sequence Rails, Power-Up and Power-Down Control



# High Accuracy, Low Noise, Low Power LDOs

Part Number	V <sub>OUT</sub> (V)	V <sub>IN</sub> (V)	Output Current (mA)	Dropout Voltage (mV)	Ground Current (No Load) (μA)	Output Voltage Noise (μV <sub>RMS</sub> )	PSRR @1kHz (dB)	Package	Features
SGM2033	1.2,1.8,2.5,2.8,2.85,2.9,2.95,3.0,3.3,4.2,5.0,Adj	1.8 ~ 5.5	250	62	13.5	20	94	SOT-23-5,UTDFN-1×1-4AL	Ultra Low Noise, High PSRR
SGM2034	1.2,1.8,2.5,2.8,3.0,3.3,3.6,3.8,4.0,4.5,5.0	1.7 ~ 7.5	250	75 @100mA	1		27	SOT-23-3,SOT-89-3	Ultra Low Current Consumption, Low Dropout
SGM2036S	0.75,0.8,0.9,1.0,1.05,1.1,1.2,1.3,1.35,1.5,1.8,1.85,2.1,2.5,2.8,2.9,3.0,...Adj	1.6 ~ 5.5	300	190	30	13	86	XTDFN-1×1-4L,SOT-23-5,SC70-5	300mA, Low Power and Low Dropout RF Linear Regulator
SGM2037	0.8,0.9,1.0,1.05,1.1,1.15,1.2,1.25,1.3,1.5,1.8,2.5,2.8,3.0,3.3,3.6,Adj	0.8 ~ 5.5	500	120	37	25	71	SOT-23-5,SOT-23-6,UTDFN-1.2×1.2-6L	Low Noise, Very Low Dropout
SGM2038	0.8,0.9,1.0,1.05,1.1,1.15,1.2,1.25,1.3,1.5,1.8,2.5,2.8,3.0,3.3,3.6	0.8 ~ 5.5	500	120	37	25	71	UTDFN-1.2×1.2-4L	Low Noise, Very Low Dropout
SGM2039	0.8,0.9,1.0,1.05,1.1,1.2,1.8,2.5,2.8,3.0,3.3,4.2,Adj	1.8 ~ 5.5	1000	88	55	11	88	XTDFN-1.6×1.2-8L	Fast Transient Response, 1A, Low Noise, Low Voltage, Low Dropout Linear Regulator
SGM2040	1.2,1.5,1.8,2.5,2.8,3.0,3.3,3.6,4.0,4.2,5.0	1.7 ~ 7.5	250	60 @100mA	1		27	SOT-23-5,UTDFN-1×1-4AL	Ultra Low Current Consumption, Low Dropout
SGM2041	0.75,0.8,1.0,1.1,1.2,1.5,1.8,2.5,2.8,3.0,3.3,3.6,4.2,4.35	1.6 ~ 5.5	300	50	11	9.5	92	WLCSP-0.64×0.64-4B-A	Ultra Low Noise, Ultra Thin Package, Low Dropout
SGM2045	0.6,0.75,0.8,0.85,1.0,1.05,1.1,1.2,1.5,1.75,1.8,1.825,2.2,2.5,2.8,2.9,3.0,3.3,4.2	1.1 ~ 5.5	300	80	15	9.5	92	XTDFN-1×1-4L,WLCSP-0.64×0.64-4B-A	300mA, Low V <sub>IN</sub> , Ultra Low Noise and High PSRR LDO
SGM2046	0.75,0.8,0.85,1.0,1.05,1.1,1.15,1.2,1.8,2.8,3.0,3.3,Adj	0.5 ~ 5.5	1200	60	35	29	68	WLCSP-0.8×1.2-6B-B	1.2A, Low Noise, Ultra-Low Dropout Bias Rail CMOS Voltage Regulator
SGM2047	0.6,0.7,0.8,0.9,1.0,1.1,1.2,1.5,1.8,2.5,2.8,3.0,3.3,3.6	1.7 ~ 5.5	200	200	0.6	90	42	XTDFN-1×1-4L,SOT-23-5	200mA, Ultra-Low Quiescent Current CMOS Low Dropout Regulators
SGM2048	1.2,1.8,2.8,3.0,3.3,5.0,Adj	2.2 ~ 7	1000	150	80	30	75	TDFN-3×3-8CL	1A, Low Noise, Wide Bandwidth, High PSRR, Low Dropout Linear Regulator
SGM2049	Adj	1.1 ~ 7	2000	75	1.4	5	47 @10kHz	TQFN-3.5×3.5-20L,TQFN-5×5-20L	2A, High Accuracy, Low Noise, Low Dropout Linear Regulator
SGM2050	Adj	1.1 ~ 7	3000	99	1.4	5	48 @10kHz	TQFN-3.5×3.5-20L	3A, High Accuracy, Low Noise, Low Dropout Linear Regulator
SGM2051	0.75,0.8,0.85,1.0,1.05,1.1,1.15,1.2,1.8,2.8,3.0,3.3,Adj	0.5 ~ 5.5	1200	60	96	29	70	WLCSP-0.8×1.2-6B-A	1.2A, Ultra High PSRR, Fast Load Transient, Bias Rail CMOS Voltage Regulator
SGM2052	0.75,0.8,0.85,1.0,1.05,1.1,1.15,1.2,1.8,2.8,3.0,3.3,Adj	0.5 ~ 5.5	1500	75	96	29	70	WLCSP-0.8×1.2-6B-A	1.5A, Ultra High PSRR, Fast Load Transient, Bias Rail CMOS Voltage Regulator
SGM2053	1.0,1.05,1.1,1.8,2.8,3.0,3.3,Adj	1.5 ~ 5.5	500	95	17	20	93	SOT-23-6	500mA, Ultra Low Dropout, Low Power, RF Linear Regulator
SGM2054		1.1 ~ 3.5	3000					TDFN-3×3-10L	Sink and Source DDR Termination Regulator
SGM2056	Adj	1.1 ~ 7	1200	85	2600	6.5	72	TDFN-3×3-8DL	1.2A, 7V, High PSRR, Ultra-Low Noise, Ultra-Low Dropout Linear Regulator
SGM2058	Adj	2.3 ~ 5.5	265	58 (MAX) @I <sub>OUT2</sub> =60mA	170		30 @50kHz	TQFN-1.8×1.4-10L	Negative Charge Pump and Adjustable Regulator
SGM2059	1.2,1.5,1.8,2.5,2.8,2.9,3.0,3.3,4.2,Adj	1.1 ~ 5.5	300	72	13	9.5	92	SOT-23-5,SC70-5	300mA, Low V <sub>IN</sub> , Ultra Low Noise and High PSRR Linear Regulator
SGM2065	Adj	0.8 ~ 5.5	1000	220	37	25	71	XTDFN-1.2×1.2-6L	1A, Low Noise, Ultra-Low Dropout, Bias Rail CMOS Voltage Regulator
SGM2066	Adj	2.7 ~ 5.5	250	34 @100mA	590	28	37 @50kHz	TDFN-2×2-8AL	Low-Noise Regulated, Switched-Capacitor Voltage Inverter

# High Reliability LDOs

Part Number	V <sub>IN</sub> Min (V)	V <sub>IN</sub> Max (V)	Output Current (mA)	Dropout Voltage (mV)	Ground Current (No Load) (μA)	PSRR @1kHz (dB)	V <sub>OUT</sub> (V)	Package	Features
SGM2225	3.6	36	800	450	80	75	1.8,2.5,3.3,5.0,12,Adj	TDFN-3×3-8L,SOIC-8,SOT-89-3,SOT-223-3,TO-263-5B	High Voltage, Low Noise
SGM2217	2.8	30	1500	1300	2000	70	1.8,2.5,2.8,3.0,3.3,5.0,12,Adj	TO-263-3A,TDFN-4×4-8L	1.5A, Low Dropout Positive Regulator
SGM2208	0	24	3000	155		55	Adj	TDFN-3×3-12L,TO-263-5B,TSSOP-16 (Exposed Pad)	High Voltage, Low Noise, Current Source Reference
SGM2205	2.5	20	800	450	80	75	1.8,2.5,3.0,3.3,3.6,4.2,5.0,12,Adj	TDFN-3×3-8L,SOIC-8,SOT-89-3,SOT-223-3,TO-263-5B	High Voltage, Low Noise
SGM2207	2.5	20	800	400	80	75	Adj	TDFN-2×3-8BL	High Voltage, Low Noise

# High Reliability LDOs

Part Number	V <sub>IN</sub> Min (V)	1* V <sub>IN</sub> Max (V)	2* Output Current (mA)	Dropout Voltage (mV)	Ground Current (No Load) (μA)	PSRR @1kHz (dB)	V <sub>OUT</sub> (V)	Package	Features
SGM2212	2.7	20	800	280	80	75	1.8,2.5,2.8,3.3,5.0,Adj	TDFN-3×3-8L,SOT-223-3,TO-263-3,TO-252-2	High Voltage, Low Noise
SGM2211	2.7	20	500	360	39	100	1.2,1.5,1.8,2.5,2.8,3.0,3.3,3.8,4.2,5.0,Adj	TDFN-2×2-6AL,SOT-23-5	High Voltage, Low Noise
SGM2210	2.5	20	300	240	36	100	1.2,1.8,2.5,3.3,3.6,5.0,Adj	SOT-23-5	High Voltage, Low Noise
SGM2214	2.7	16	300	235	40	85	1.5,1.8,2.5,2.7,2.8,3.0,3.3,5.0,Adj	SOIC-8	High Voltage, Low I <sub>Q</sub> , Low Dropout
SGM2220	2.2	13	300	330	1	52	0.8,1.8,2.8,3.0,3.3,3.9,4.0,4.1,4.2,5.0	SOT-23-5,SOT-89-3	1μA Low Quiescent Current, Low Dropout, 300mA, High Voltage Regulator
SGM2221	2.2	13	300	330	1	52	1.8,2.8,3.0,3.3,3.6,3.9,4.0,4.1,4.2,5.0,Adj	SOT-23-5,TDFN-2×2-6AL	1μA Low Quiescent Current, Low Dropout, 300mA, High Voltage Regulator
SGM2209	-2.7	-24	-500	-260	-42	-75	1.2,1.5,1.8,2.5,2.8,3.0,3.3,5.0,Adj	TDFN-2×2-6AL,TDFN-3×3-8L,SOT-23-5	High Voltage, Low Noise, High PSRR

# Protection Switches

Part Number	Input Over-Voltage Protection Threshold (V)	1*	Battery Over-Voltage Protection Threshold (V)	Maximum Start-Up Output Current (mA)	Shutdown Current (μA)	Soft-Start	Soft-Stop	LDO Mode Output Voltage (V)	Package	Features
		Input Voltage Max (V)								
SGM40654	Adj (Default 6.8)	28	NA	4500	<1	Yes	NA	NA	WLCSP-1.30×1.83-12B,TDFN-3×3-12L	120V Surge/Inrush Immunity Function, Adj OVP, 4.5A, Soft Start-Up, 28V Input with Shutdown
SGM40655	Adj (Default 5.81)	28	NA	4500	<1	Yes	NA	NA	WLCSP-1.30×1.83-12B,TDFN-3×3-12L	120V Surge/Inrush Immunity Function, Adj OVP, 4.5A, Soft Start-Up, 28V Input with Shutdown
SGM40659	Adj (Default 15.61)	28	NA	4000	NA	Yes	NA	NA	WLCSP-1.30×0.94-6B	Adj OVP, 4A, 28V Input
SGM40660	Adj (Default 6.8)	28	NA	4000	NA	Yes	NA	NA	WLCSP-1.30×0.94-6B	Adj OVP, 4A, 28V Input
SGM40661	Adj (Default 5.94)	28	NA	4000	NA	Yes	NA	NA	WLCSP-1.30×0.94-6B	Adj OVP, 4A, 28V Input
SGM40663	Adj (Default 22.2)	28	NA	4500		Yes	NA	NA	WLCSP-1.17×1.63-12B	110V/-400V Surge/Inrush Immunity Function, Adj OVP, 4.5A, 28mΩ R <sub>DS(ON)</sub> , Soft Start-Up, 28V Input with Shutdown
SGM40664	Adj (Default 15.3)	28	NA	4500		Yes	NA	NA	WLCSP-1.17×1.63-12B	110V/-400V Surge/Inrush Immunity Function, Adj OVP, 4.5A, 28mΩ R <sub>DS(ON)</sub> , Soft Start-Up, 28V Input with Shutdown
SGM40665	Adj (Default 10.5)	28	NA	4500		Yes	NA	NA	WLCSP-1.17×1.63-12B	110V/-400V Surge/Inrush Immunity Function, Adj OVP, 4.5A, 28mΩ R <sub>DS(ON)</sub> , Soft Start-Up, 28V Input with Shutdown
SGM40666AS	6.79	28	NA	4500		Yes	NA	NA	WLCSP-1.65×1.24-12B	High-Current Over-Voltage Protector
SGM40666BS	6.69	28	NA	4500		Yes	NA	NA	WLCSP-1.65×1.24-12B	High-Current Over-Voltage Protector
SGM40668	Adj (Default 5.95)	28	NA	4500		Yes	NA	NA	WLCSP-1.17×1.63-12B	110V/-400V Surge/Inrush Immunity Function, Adj OVP, 4.5A, 28mΩ R <sub>DS(ON)</sub> , Soft Start-Up, 28V Input with Shutdown
SGM40669	Adj (Default 6.35)	28	NA	4500		Yes	NA	NA	WLCSP-1.17×1.63-12B	110V/-400V Surge/Inrush Immunity Function, Adj OVP, 4.5A, 28mΩ R <sub>DS(ON)</sub> , Soft Start-Up, 28V Input with Shutdown
SGM4062	6.8	18	4.35	1500	<2	Yes	Yes	5.1	TDFN-2×2-8L,MSOP-8 (Exposed Pad)	1.5A Fixed Start-Up Current, Soft-Start, Soft-Stop, 18V Input
SGM4064	6.8	18	4.35	Adj (Max 1500)	<2	Yes	Yes	5.1	TDFN-2×2-8L	Adjustable Start-Up Current, Soft-Start, Soft-Stop, 18V Input
SGM40642	7.6	6.5	NA	2500	1	Yes	NA	5.4	TDFN-2×2-6AL	5V eFuse with Precision Adjustable Current Limit and Over-Voltage Clamp

# Load Switches

Switches per Package	Part Number	1*	Quiescent Current (μA)	V <sub>IN</sub> Min (V)	V <sub>IN</sub> Max (V)	Enable Logic	Shutdown Current (μA)	Current Limit (mA)	Soft-Start	Fault Flag	Package	Features
		Continuous Output Current Max (mA)										
1	SGM2571	1000	0.22	1	5.5	Active High	<0.44		Yes	No	WLCSP-0.8×0.8-4B	1A, Ultra Low Quiescent Current, WLCSP Package
1	SGM2574	1000	0.22	1	5.5	Active High	<0.44		Yes	No	WLCSP-0.8×0.8-4B	1A, Ultra Low Quiescent Current, WLCSP Package
1	SGM2578	1000	5	1	5	Active High	<1.5	1600	Yes	No	WLCSP-0.9×0.9-4B	1A, Ultra Low Quiescent Current, WLCSP Package
1	SGM2588A	1000	23	2.5	5.5	Active High	<1	1100	Yes	Yes	SOT-23-5	1A Output Current, 1.1A Fixed Current Limit, Low Power, Auto Discharge
1	SGM2588G	1000	23	2.5	5.5	Active High	<1	1100	Yes	Yes	SOT-23-5	1A Output Current, 1.1A Fixed Current Limit, Low Power, Default Disable /EN
1	SGM2523C	1200	150	2.6	22	Active High	<2	Programmable (100~1200)	Yes	Yes	SOT-23-6	Programmable Current Limit Switch
1	SGM2523D	1200	150	2.6	22	Active High	<2	Programmable (100~1200)	Yes	Yes	SOT-23-6	Programmable Current Limit Switch
1	SGM2523A	1600	150	2.6	22	Active High	<2	Programmable (100~1600)	Yes	Yes	SOT-23-6	22V, 1.6A, Auto-Recovery Programmable Current Limit Switch
1	SGM2523B	1600	150	2.6	22	Active High	<2	Programmable (100~1600)	Yes	Yes	SOT-23-6	22V, 1.6A, Latched-Off Programmable Current Limit Switch
1	SGM2521	2000	170	4.5	24	Active High	<1.4	Programmable (260~2000)	Yes	Yes	SOIC-8,TDFN-2×3-8BL	24V, 2A, Auto-Recovery Programmable Current Limit Switch
1	SGM2522	2000	170	4.5	24	Active High	<1.4	Programmable (260~2000)	Yes	Yes	SOIC-8,TDFN-2×3-8BL	24V, 2A, Latched-Off Programmable Current Limit Switch
1	SGM2572	2000	0.22	1	5.5	Active High	<0.44		Yes	No	WLCSP-0.8×0.8-4B	2A, Ultra Low Quiescent Current, WLCSP Package
1	SGM2575	2000	0.22	1	5.5	Active High	<0.44		Yes	No	WLCSP-0.8×0.8-4B	2A, Ultra Low Quiescent Current, WLCSP Package

# Load Switches

1*	2*	3*	4*	5*	6*	7*	8*	9*	10*	11*	12*	13*	14*
Switches per Package	Part Number	Continuous Output Current Max (mA)	Quiescent Current (μA)	V <sub>IN</sub> Min (V)	V <sub>IN</sub> Max (V)	Enable Logic	Shutdown Current (μA)	Current Limit (mA)	Soft-Start	Fault Flag	Package	Features	
1	SGM2578A	2000	0.22	1	5.5	Active High	< 0.65		Yes	No	WLCSP-0.9×0.9-4B-A	2A, Ultra Low Quiescent Current, WLCSP Package	
1	SGM2588C	2000	23	2.5	5.5	Active High	<1	2100	Yes	Yes	SOT-23-5	2A Output Current, 2.1A Fixed Current Limit, Low Power, Auto Discharge	
1	SGM2588I	2000	23	2.5	5.5	Active High	<1	2100	Yes	Yes	SOT-23-5	2A Output Current, 2.1A Fixed Current Limit, Low Power, Default Disable /EN	
1	SGM2576/B	2100	23	2.5	5.5	Active High	<1	Programmable (100~2500)	Yes	No	SOT-23-5	Adjustable Current Limit, Soft-Start, Low Power	
1	SGM2588E	2500	23	2.5	5.5	Active High	<1	2600	Yes	Yes	SOT-23-5	2.5A Output Current, 2.6A Fixed Current Limit, Low Power, Auto Discharge	
1	SGM2588K	2500	23	2.5	5.5	Active High	<1	2600	Yes	Yes	SOT-23-5	2.5A Output Current, 2.6A Fixed Current Limit, Low Power, Default Disable /EN	
1	SGM40642	2500	190	2.5	6.5	Active High	1	Programmable (709~2959)	Yes	Yes	TDFN-2×2-6AL	5V eFuse with Precision Adjustable Current Limit and Over-Voltage Clamp	
1	SGM2564	4000	0.44	1	5.5	Active High	<0.55		Yes	No	WLCSP-1.45×0.95-6B	4A, Ultra Low Quiescent Current, WLCSP Package	
1	SGM2567A	4000	0.84	2.2	5.5	Active High	<1.5	5600	Yes	No	WLCSP-1.45×0.95-6B	5.5V, 4A, 15mΩ R <sub>ON</sub> , Load Switch with Reverse Current Protection and Controlled Turn-On	
1	SGM2525	5000	170	4.5	18	Active High	<1.2	Programmable (1000~5000)	Yes	Yes	TDFN-3×3-10L	Programmable Current Limit Switch with Output Voltage Protection	
1	SGM2526	5000	170	4.5	22	Active High	<1.2	Programmable (1000~5000)	Yes	Yes	TDFN-3×3-10L	Programmable Current Limit Switch with Output Voltage Protection	
1	SGM2527	5000	170	4.5	18	Active High	<1.2	Programmable (1000~5000)	Yes	Yes	TDFN-3×3-10L	Programmable Current Limit Switch	
1	SGM2528	5000	110	9	18	Active High	48	Programmable (1500~5000)	Yes	Yes	TDFN-3×3-10L	5A, 12V Electronic Fuse (eFuse) with Thermal Shutdown	
1	SGM2529	5000	102			Active High	47	Programmable (1500~5000)	Yes	Yes	TDFN-3×3-10L	5A, 5V Electronic Fuse (eFuse) with Thermal Shutdown	
1	SGM2539	5000	75	2.5	20	Active Low	<2		Yes	No	WLCSP-2.56×1.54-15B	High Voltage, USB PD Power Switch	
1	SGM2566A	6000	16	0.8	5.3	Active High	<1.4		Yes	Yes	TDFN-2×2-8L	6A, 17mΩ On-Resistance Load Switch	
1	SGM2566B	6000	16	0.8	5.3	Active High	<1.4		Yes	Yes	TDFN-2×2-8L	6A, 17mΩ On-Resistance Load Switch	
1	SGM4073	6000	1	1.5	5.5	None	<1.5		Yes	No	WLCSP-1.31×1.62-12B	6A, Ultra Low Quiescent Current, Programmable Reset Timer, WLCSP Package	
1	SGM4075-2	6000	1	1.5	5.5	None	<1.5		Yes	No	WLCSP-1.31×1.62-12B	6A, Reset Timer with Integrated Load Switch, WLCSP Package	
1	SGM4075-1	6000/4500	1	1.5	5.5	None	<1.5		Yes	No	WLCSP-1.31×1.62-12B,TDFN-3×3-8L	6A/4.5A, Reset Timer with Integrated Load Switch, WLCSP/TDFN Packages	
1	SGM4076	6000/4500	1	1.6	5.5	None	<1.5		Yes	No	WLCSP-1.31×1.62-12B,TDFN-3×3-8L	6A/4.5A, Reset Timer with Integrated Load Switch, WLCSP/TDFN Packages	
1	SGM25711B		320	2.5	18	Active High	4	25mV/R <sub>SENSE</sub>	Yes	Yes	MSOP-10	2.5V to 18V High-Efficiency Power-Limiting Hot Swap Controller	
2	SGM2596	6000/CH	22	0.6	5.7	Active High	<0.5		Yes	No	TDFN-3×2-14AL	5.7V, 6A, 16mΩ On-Resistance, Dual-Channel Load Switch	
2	SGM2596D	6000/CH	22	0.6	5.7	Active High	<0.5		Yes	No	TDFN-3×2-14AL	5.7V, 6A, 16mΩ On-Resistance, Dual-Channel Load Switch	

# MOSFETs

1*	2*	3*	4*	5*	6*	7*	8*	9*	10*	11*	12*	13*	14*	15*	16*	17*	18*	19*	20*
Configuration	Part Number	V <sub>DS</sub> (V)	V <sub>GS</sub> (±V)	R <sub>DS(ON)</sub> Typ @10V (mΩ)	R <sub>DS(ON)</sub> Typ @4.5V (mΩ)	R <sub>DS(ON)</sub> Typ @2.5V (mΩ)	I <sub>D</sub> T <sub>A</sub> @25°C (A)	I <sub>D</sub> T <sub>C</sub> @25°C (A)	V <sub>GS(TH)</sub> Max (V)	Q <sub>G</sub> Typ @10V (nC)	Q <sub>G</sub> Typ @4.5V (nC)	Q <sub>GS</sub> Typ (nC)	Q <sub>GD</sub> Typ (nC)	C <sub>ISS</sub> (pF)	C <sub>OSS</sub> (pF)	C <sub>RSS</sub> (pF)	Package	Features	
Single	SGMNM05330	30	20	4.3	6.1		20		2	34.2		4.6	7.2	1557	189	178	TDFN-2×2-6BL,TDFN-2×2-6CL	30V, Power, Single N-Channel, TDFN Package, MOSFET	
Single	SGMNM45412	12	8		3	4	18		1		33.7	5.6	9.3	2630	757	708	PDFN-3.3×3.3-8AL	12V, Power, Single N-Channel, PDFN Package, MOSFET	
Single	SGMNMQ07430	30	20	0.6	0.8			300	2.2	130.7	60.6	29	19.9	7865	3679	86	PDFN-5×6-8CL	30V, Power, Single N-Channel, PDFN Package, MOSFET	
Single	SGMNMQ28430	30	20	2.1	3.3			78	2.2	27.4	12.5	7.3	4.1	1631	744	52	PDFN-5×6-8AL	30V, Power, Single N-Channel, PDFN Package, MOSFET	
Single	SGMNMQ34430	30	20	2.5	4			69	2.2	23.1	10.4	6.7	3.1	1417	632	39	PDFN-5×6-8AL	30V, Power, Single N-Channel, PDFN Package, MOSFET	
Single	SGMNMQ40430	30	20	2.9	4.5			63	2.2	19.1	8.6	5.6	2.5	1156	481	36	PDFN-5×6-8AL	30V, Power, Single N-Channel, PDFN Package, MOSFET	

## Battery Protection ICs

1*										
Part Number	Number of Series Cells	Input Over-Voltage Protection Threshold (V)	V <sub>IN</sub> Min (V)	V <sub>IN</sub> Max (V)	Shutdown Current From V <sub>IN</sub> (μA)	Status Indication	Package	Features		
SGM41002	2 to 4	4.35,4.45,4.5	3.6	24	<3	No	UTDFN-2×2.5-8L	Battery Protection IC for 2-Serial to 4-Serial-Cell Pack (Secondary Protection)		
SGM41100	1	4.2,4.25,4.3,4.35,4.4,4.45,4.5,4.55	0	6	<0.1	No	UTDFN-1.5×2-6L	Single Battery Protection IC		
SGM41100A	1	4.2,4.25,4.3,4.35,4.4,4.45,4.5,4.55	0	6	<0.1	No	UTDFN-1.5×2-6L	Single Battery Protection IC		
SGM41100V	1	4.2,4.225,4.25,4.275,4.3,4.325,4.35,4.375,4.4,4.425,4.45,4.475,4.5,4.525,4.55,4.575	0	6	<0.1	No	UTDFN-1.5×2-6L	Single Battery Protection IC		
SGM41100W	1	4.2,4.225,4.25,4.275,4.3,4.325,4.35,4.375,4.4,4.425,4.45,4.475,4.5,4.525,4.55,4.575	0	6	<0.1	No	UTDFN-1.5×2-6L	Single Battery Protection IC		
SGM41101	1	4.2,4.25,4.3,4.35,4.4,4.45,4.5,4.55	0	6	<0.1	No	TDFN-2×2-6L	Single Battery Protection IC		
SGM41102	1	4.2,4.225,4.25,4.275,4.3,4.325,4.35,4.375,4.4,4.425,4.45,4.475,4.5,4.525,4.55,4.575	0	6	<0.1	No	UTDFN-1.5×2-6L	Single Battery Protection IC		
SGM41103	1	4.225,4.25,4.275,4.3,4.325,4.35,4.375,4.4,4.425,4.45,4.475,4.5,4.525,4.55,4.575,4.6	0	6	<0.1	No	XTDFN-1×1-4L	Capacitor-Less Primary Battery Protector and Switch with Temperature Sensing for Tiny Li+/Poly Cells		
SGM41104	1	4.225,4.25,4.275,4.3,4.325,4.35,4.375,4.4,4.425,4.45,4.475,4.5,4.525,4.55,4.575,4.6	0	6	<0.1	No	XTDFN-1×1-4L	Primary Battery Protector and Switch for Tiny Li+/Poly Cells		
SGM41105	1	4.225,4.25,4.275,4.3,4.325,4.35,4.375,4.4,4.425,4.45,4.475,4.5,4.525,4.55,4.575,4.6	0	6	<0.1	No	XTDFN-1×1-4L	Primary Battery Protector and Switch for Tiny Li+/Poly Cells		

## Linear Regulation Chargers

1*											
Part Number	Number of Series Cells	Input Over-Voltage Protection Threshold (V)	Charge Voltage (V)	V <sub>IN</sub> Min (V)	V <sub>IN</sub> Max (V)	Programmable Current (mA)	Shutdown Current From V <sub>IN</sub> (μA)	Status Indication	Foldback Current From Battery (μA)	Package	Features
SGM4056	1	6.8,10.5	4.2	4.55	26.5	100 ~ 900	200	Yes	<1	TDFN-3×3-8L,TDFN-2×3-8L,TDFN-2×2-8L,SOIC-8 (Exposed Pad)	100mA ~ 900mA, 6.8V/10.5V Over-Voltage Protection, Input Voltage up to 26.5V
SGM40560	1		3.65,4.05,4.2,4.3,4.4	2.7	7.5	5 ~ 700	7.5	Yes	<1	TDFN-2×2-6AL,SOIC-8 (Exposed Pad)	Small Capacity Compact Battery Charger for Loosely Coupled Wireless Charging or Solar Charging
SGM40561	1	10.5	4.2,4.3,4.35	4.55	26.5	5 ~ 200	180	Yes	<1	TDFN-2×2-8L	5mA ~ 200mA, 10.5V Over-Voltage Protection, Input Voltage up to 26.5V
SGM40565	1		4.2,4.35	4.55	26.5	5 ~ 400	175	Yes	<1	XTDFN-2×2-8L,TDFN-2×2-8L,WLCSP-1.3×0.7-6B	Ultra Thin Package, 5mA ~ 400mA, 4.2V/4.35V Output Voltage for Long Battery Life Application
SGM40567	1		3.65,4.05,4.2,4.3,4.4	2.7	7.5	5 ~ 700	7.5	Yes	<1	WLCSP-0.92×1.16-6B	Small Capacity Compact Battery Charger for Loosely Coupled Wireless Charging or Solar Charging
SGM41007	1	4.35		2.7	5.5			Yes		TSOT-23-6	High Power Heating Resistance Wire Driver with Battery Protection, Firepower Control and Status Indication
SGM41008	1	4.35	4.25	2.7	5.5	560		Yes		TSOT-23-6	High Power Heating Resistance Wire Driver with Battery Protection, Firepower Control and Status Indication
SGM41562	1	6	3.6 ~ 4.545	4.35	5.5	8 ~ 456		Yes	<1	WLCSP-1.47×1.47-9B	500mA Single-Cell Li-Ion Battery Charger with Power Path Management
SGM41562B	1	6	4.2,4.38,4.545	4.35	5.5	8 ~ 456	80	Yes	<1	WLCSP-1.52×1.52-9B	500mA Single-Cell Li-Ion Battery Charger with Power Path Management
SGM41566	1	21	3.5 ~ 4.8	2.9	19.5	50 ~ 750	66	No		TDFN-2×2-8AL	Linear Regulation Battery Charger



## Switching Chargers

1*											
Part Number	Number of Series Cells	Input Over-Voltage Protection Threshold (V)	Charge Voltage (V)	V <sub>IN</sub> Min (V)	V <sub>IN</sub> Max (V)	Programmable Current (mA)	Shutdown Current From V <sub>IN</sub> (μA)	Status Indication	Foldback Current From Battery (μA)	Package	Features
SGM41510	1	Adj (Default 15.1)	3.84 ~ 4.608	3.9	14	0 ~ 5120	50	Yes	20	TQFN-4x4-24L	I <sup>2</sup> C Controlled 5A Single-Cell Battery Charger with Power Path Management
SGM41511	1	6.5,10.5,14	3.856 ~ 4.624	3.9	13.5	0 ~ 3000	45	Yes	20	TQFN-4x4-24L	I <sup>2</sup> C Controlled 3A Single-Cell Battery Charger with Power Path Management
SGM41512	1	6.5,10.5,14	3.848 ~ 4.616	3.9	13.5	0 ~ 3000	45	Yes	20	TQFN-4x4-24L	I <sup>2</sup> C Controlled 3A Single-Cell Battery Charger with Power Path Management
SGM41512A	1	6.5,10.5,14	3.848 ~ 4.616	3.9	13.5	0 ~ 3000	45	Yes	20	TQFN-4x4-24L	I <sup>2</sup> C Controlled 3A Single-Cell Battery Charger with Power Path Management
SGM41513/A/D	1	6.5,10.5,14	3.856 ~ 4.624	3.9	13.5	0 ~ 3000	38	Yes	8.5	TQFN-4x4-24L	3A Single-Cell Battery Charger with Power Path Management
SGM41516D	1	6.5,10.5,14	3.856 ~ 4.624	3.9	13.5	0 ~ 3780	55	Yes	15	WLCSP-2.0x2.4-30B	3.78A Single-Cell Battery Charger with Power Path Management
SGM41518	1	6.5,10.5,14	3.856 ~ 4.624	3.9	13.5	0 ~ 1260	40	Yes	15	WLCSP-2.0x2.4-30B	1.26A Single-Cell Battery Charger with Power Path Management
SGM41519	1	6.5,10.5,14	3.856 ~ 4.624	3.9	13.5	0 ~ 3000	38	Yes	8.5	TQFN-4x4-24L	3A Single-Cell Battery Charger with Power Path Management
SGM41521B	1	6.5,10.5,14	3.856 ~ 4.624	3.9	13.5	0 ~ 3000	45	Yes	20	TQFN-4x4-24L	I <sup>2</sup> C Controlled 3A Single-Cell Battery Charger with Power Path Management
SGM41522	1	13.5	4.1 ~ 4.45	4.2	13.2	0 ~ 2500		Yes	4.5	TDFN-2x3-8BL	Compact Switch, 2.5A Standalone Single-Cell Battery Charger with Safe and Reliable Charging
SGM41523	1	13.5	4.1 ~ 4.45	4.2	13.2	0 ~ 2500		Yes	4.5	TDFN-3x3-12L	Compact Switch, 2.5A Standalone Single-Cell Battery Charger with Safe and Reliable Charging
SGM41524	1	5.67	4.2 ~ 4.5	3.5	5.5	300 ~ 2300	15	Yes	<1.4	TDFN-2x3-8BL	Compact Switch Li+/Poly Battery Charger Safe and Reliable Charging
SGM41526	2 to 4	Adj	8.4,12.6,16.8	4.5	22	0 ~ 4000	1300	Yes	18	TQFN-5.5x3.5-24L	2-4 Cells Stand-Alone Battery Charger with Integrated MOSFETs and Power Path Selector
SGM41527	1 to 4	Adj	Adj	4.5	22	0 ~ 4000	1300	Yes	18	TQFN-5.5x3.5-24L	1-4 Cells Stand-Alone Battery Charger with Integrated MOSFETs and Power Path Selector
SGM41528	2	6.4	6.8 ~ 9.2	3.9	6.2	0 ~ 2200	14.5	Yes	14	WLCSP-2.1x2.1-25B	I <sup>2</sup> C Controlled 2A, 2-Cell Battery Charger with Boost Mode for USB Input
SGM41536	1	22.4	3.4 ~ 18	4.1	22	0 ~ 3000	3 @ 9V	Yes	<1	TQFN-3x3-16L	Standalone 22V, 3A 1-4 Cell Buck Battery Charger
SGM41542	1	6.5,10.5,14	3.856 ~ 4.624	3.9	13.5	0 ~ 3780	55	Yes	15	TQFN-4x4-24L	3.78A Single-Cell Battery Charger with Power Path Management
SGM41543	1	6.5,10.5,14	3.856 ~ 4.624	3.9	13.5	0 ~ 3780	50	Yes	15	TQFN-4x4-24L	3.78A Single-Cell Battery Charger with Power Path Management
SGM41570	1 to 4	26	1.024 ~ 19.2	3.58	24	0 ~ 8128 (for 10mΩ Sense Resistor)		Yes		TQFN-4x4-32AL	SMBus Narrow VDC Buck-Boost Battery Charge Controller
SGM41573	1 to 4	26	1.024 ~ 19.2	3.58	24	0 ~ 8128 (for 10mΩ Sense Resistor)		Yes		TQFN-4x4-32AL	I <sup>2</sup> C Narrow VDC Buck-Boost Battery Charge Controller

## Switched Cap Chargers

1*											
Part Number	Number of Series Cells	Input Over-Voltage Protection Threshold (V)	Charge Voltage (V)	V <sub>IN</sub> Min (V)	V <sub>IN</sub> Max (V)	Programmable Current (mA)	Shutdown Current From V <sub>IN</sub> (μA)	Status Indication	Package	Features	
SGM41600	1	Adj (Default 12)	3 ~ 5.5	3.3	11.5	0 ~ 6000		No	WLCSP-2.6x2.6-36B	I <sup>2</sup> C Controlled 6A Single-Cell Switched-Capacitor Fast Charger with Bypass Mode and ADC	
SGM41600A	1	Adj (Default 12)		3.3	11.5	0 ~ 8000		Yes	WLCSP-2.8x2.8-36B	I <sup>2</sup> C Controlled 8A Single-Cell Switched-Capacitor Charger with Bypass Mode	
SGM41603	2	Adj (Default 9.5)/Adj (Default 5.3)	2.4 ~ 5.5	2.8	11	0 ~ 10000	6.7	Yes	WLCSP-2.85x2.59-42B	I <sup>2</sup> C Controlled 10A Bidirectional Switched-Capacitor Converter	

## LED Backlight Drivers

The White LED Driver family offers various solutions for LCD backlighting in portable device applications. The devices operate from 2.5V to 24V input supply range and deliver an output voltage up to 38V with up to 8 channels in parallel and up to 10 LEDs in series.

1* Channels per Package	Part Number	V <sub>IN</sub> Min (V)	V <sub>IN</sub> Max (V)	LEDs per String	Shutdown Current (μA)	Switching Frequency (MHz)	LED Connection Type	Quiescent Current (mA)	Dimming Method	Package	Features
1	SGM3110	2.7	5	1	<1	0.75	Common Anode	0.06	PWM	SOT-23-6	1P Charge Pump LED Driver
1	SGM3752	2.7	5.5	10	<1	1.2	Common Anode	0.2	PWM	TSOT-23-6	1:250 High Performance, 10 LEDs per String
1	SGM3756	2.7	5.5	10	<1	1.2	Common Anode	0.2	PWM	TDFN-2×2-6L	1:250 High Performance, 10 LEDs per String
1	SGM3758	2.7	5.5	7	<1	1.2	Common Anode	0.2	PWM	TDFN-2×2-6L	1:500 High Performance, Screen Flash Mode Support
1	SGM3759	2.7	5.5	7	<1	1.2	Common Anode	0.2	PWM	TSOT-23-6	1:500 High Performance, Screen Flash Mode Support
1	SGM3766	2.7	5.5	10	<1	1.2	Common Anode	0.2	PWM	TSOT-23-5	1:500 High Performance, 10 LEDs per String
2	SGM3743	3	18	10	<1	1.2	Common Anode	1.2	PWM & One-Wire	WLCSP-1.32×1.32-9B	2 Feedback Channels, 18V Input, Serial LED Driver
2	SGM3760	2.7	5.5	10	<1	1.15	Common Anode	1.7	PWM	WLCSP-1.32×1.32-9B	2 Feedback Channels, Serial LED Driver
3	SGM31323	2.5	5.5	1	<1		Common Anode	0.041	I <sup>2</sup> C	UTDFN-1.5×1.5-8L	I <sup>2</sup> C Programmable RGB LED Driver
3	SGM31324	2.5	5.5	1	<1		Common Anode	0.041	I <sup>2</sup> C	UTDFN-1.5×1.5-8L	I <sup>2</sup> C Programmable RGB LED Driver with Auto Blink Mode
3	SGM3741	3	18	10	<1	0.6	Common Anode	0.24	PWM & PWM	TQFN-3×3-16L	3 Feedback Channels, 18V Input, Serial LED Driver
3	SGM37603	3	24	8	<1.5	1.2	Common Anode	0.66	PWM & I <sup>2</sup> C	WLCSP-1.78×1.36-12B,TDFN-3×3-12L	11-Bit, 3 Feedback Channels, 24V Input, Serial LED Driver
3	SGM37603A	3	24	8	<1.5	1.2	Common Anode	0.66	PWM & I <sup>2</sup> C	WLCSP-1.78×1.36-12B,TDFN-3×3-12L	12-Bit, 3 Feedback Channels, 24V Input, Serial LED Driver
4	SGM3132	2.5	5	1	<5		Common Anode	0.55	One-Wire	TQFN-3×3-16L,TDFN-2×2-8L,MSOP-8	4P Ultra Low Dropout LED Driver
4	SGM3741B	3	18	10	<1	0.6	Common Anode	0.24	PWM & PWM	TQFN-3×3-16L	4 Feedback Channels, 18V Input, Serial LED Driver
4	SGM37604A	3	24	8	<1.5	1.2	Common Anode	0.66	PWM & I <sup>2</sup> C	WLCSP-1.78×1.36-12B,TDFN-3×3-12L	12-Bit, 4 Feedback Channels, 24V Input, Serial LED Driver
6	SGM3138	2.7	5.5	1	<1	1	Common Anode	0.21	One-Wire	TQFN-3×3-16L	6P Charge Pump LED Driver
8	SGM3145	2.7	5.5	1	<2.5 @ V <sub>IN</sub> = 4.2V	0.93	Common Anode	0.155	PWM	TQFN-3×3-20L	8P Charge Pump LED Driver

## Pattern Lighting Drivers

1* Channels per Package	Part Number	V <sub>IN</sub> Min (V)	V <sub>IN</sub> Max (V)	LEDs per String	Shutdown Current (μA)	LED Connection Type	Quiescent Current (mA)	Dimming Method	Package	Features
3	SGM31323	2.5	5.5	1	<1	Common Anode	0.041	I <sup>2</sup> C	UTDFN-1.5×1.5-8L	I <sup>2</sup> C Programmable RGB LED Driver
3	SGM31324	2.5	5.5	1	<1	Common Anode	0.041	I <sup>2</sup> C	UTDFN-1.5×1.5-8L	I <sup>2</sup> C Programmable RGB LED Driver with Auto Blink Mode

## LCD Bias Supplies

DC/DC Topology	Part Number	2* Output Current Max (mA)	V <sub>IN</sub> Min (V)	1* V <sub>IN</sub> Max (V)	Output Voltage (V)	Switching Frequency (MHz)	Quiescent Current (μA)	Shutdown Current (μA)	Enable Logic	Efficiency Max	Package	Features
LCM Bias Power Supply	SGM3804	100	2.7	5.5	Adj (2.4 ~ 6.4)	1.6	400	<1	Active High	0.84	WLCSP-1.7×1.51-12B	P/N Voltage Output, 100mA Output Current Synchronous Boost
LCM Bias Power Supply	SGM3803	200	2.7	5.5	Adj (up to 5.2)	1.2/0.95	30	<1	Active High	0.9	TDFN-3×3-12L	P/N Voltage Output, 200mA Output Current Synchronous Boost

## AMOLED Display Supplies

1* Part Number	3* EL Output Current Max (mA)	V <sub>IN</sub> Min (V)	2* V <sub>IN</sub> Max (V)	Output Channel Number (V)	Control Interface	Outputs	Package	Features
SGM38045	70	2.7	4.8	3	1-Wire	AVDD/ELVDD/ELVSS	WLCSP-1.2×2.4-17B	Inductor-Less, Triple-Output, for Wearable Devices
SGM38046	100	2.7	5.5	3	1-Wire	AVDD/ELVDD/ELVSS	WLCSP-2×2-16B	Triple-Output, for Wearable Devices
SGM3833B	400	2.9	4.5	3	1-Wire	AVDD/ELVDD/ELVSS	TQFN-3×3-16L	Triple-Output, for Smart Phones
SGM3837	600	2.9	5.0	3	1-Wire	AVDD/ELVDD/ELVSS	WLCSP-2.0×2.0-25B	Triple-Output, for Smart Phones
SGM3838	700	2.5	4.8	3	1-Wire	AVDD/ELVDD/ELVSS	WLCSP-2.5×2.5-36B	Triple-Output, for Smart Phones
SGM3839	1200	2.5	4.8	3	1-Wire	AVDD/ELVDD/ELVSS	WLCSP-2.90×2.96-49B	Triple-Output, for Smart Phones & PADs
SGM3842	1000	2.9	4.8	4	1-Wire	AVDD/ELVDD/ELVSS/DVDD	WLCSP-2.5×2.9-42B	Triple-Output, for Smart Phones & PADs
SGM3843	1200	2.9	5.0	6	I <sup>2</sup> C	AVDD/ELVDD/ELVSS/DVDD/VGL/VGL_LDO	WLCSP-3.3×3.3-64B	Four-Output, for Tandem AMOLED Display Smart Phones & PADs
SGM3843A	1200	2.9	5.0	6	1-Wire	AVDD/ELVDD/ELVSS/DVDD/VGL/VGL_LDO	WLCSP-3.3×3.3-64B	Six-Output, for Smart Phones & PADs
SGM3851A	400	2.9	4.5	3	1-Wire	AVDD/ELVDD/ELVSS	TQFN-3×3-16L	Six-Output, for Smart Phones & PADs

# Buck Converters

1*	3*	2*										
DC/DC Topology	Part Number	Output Current Max (mA)	V <sub>IN</sub> Min (V)	V <sub>IN</sub> Max (V)	Output Voltage (V)	Switching Frequency (MHz)	Quiescent Current (μA)	Shutdown Current (μA)	Enable Logic	Efficiency Max	Package	Features
Non-Sync Buck	SGM6061	1500	3.8	55	Adj (0.8 ~ 24)	2	131	18	Active High	0.95	TDFN-3×3-10L	1.5A, 2MHz, 55V, Buck Converter
Non-Sync Buck	SGM6060	2000	3.8	55	Adj	2	129	12.9	Active High	0.95	TDFN-3×3-10L,SOIC-8 (Exposed Pad)	2A, 2MHz, 55V, Buck Converter
Non-Sync Buck	SGM61234	2000	6.5	28	5	0.05 to 1.1	105			0.95	SOIC-8 (Exposed Pad)	28V, 2A, 5V Fixed Output, Non-Synchronous Buck
Non-Sync Buck	SGM61432	3500	4	40	Adj (0.8 ~ 28)	0.2 to 2.5	40	<3	Active High	0.92	SOIC-8 (Exposed Pad)	40V/3.5A, 2.2MHz, Non-Synchronous Buck
Non-Sync Buck	SGM61433	3500	4.5	42	Adj (0.8 ~ 36)	0.1 to 2.5	148	2.6	Active High		SOIC-8 (Exposed Pad)	4.5V to 42V Input, 3.5A Non-Synchronous Buck
Non-Sync Buck	SGM61450	5000	4.5	42	Adj (0.8 ~ 36)	0.1 to 2.5	148	2.75	Active High		SOIC-8 (Exposed Pad)	4.5V to 42V Input, 5A Non-Synchronous Buck
Sync Buck	SGM6021	200	1.8	5.5	Adj	1.4	0.4	<1	Active High	0.9	UTDFN-1.5×2-6L	1.4MHz, 200mA Synchronous Buck
Sync Buck	SGM6031	200	1.8	5.5	1.0/1.2/1.5/1.8/2.5/2.8/3.0/3.3/Adj (1.0 ~ 3.3)	1.4	0.4	<1	Active High	0.9	UTDFN-1.5×2-6L,WLCSP-0.90×0.88-5B	1.4MHz, 200mA Synchronous Buck
Sync Buck	SGM6022	600	2.5	5.5	Adj	6	22	<1	Active High	0.9	TDFN-2×2-6L	6MHz, 600mA Synchronous Buck
Sync Buck	SGM6027	600	2.5	5.5	Adj (0.7 ~ 3.3)	1.2	0.58	0.01	Active High	0.92	WLCSP-0.8×1.6-8B	Ultra-Low Quiescent Current, Synchronous Buck
Sync Buck	SGM6027A/B	600	2.5	5.5	Adj (0.7 ~ 3.3)	1.2	0.58	0.01	Active High	0.92	WLCSP-0.8×1.6-8B	Ultra-Low Quiescent Current, Synchronous Buck
Sync Buck	SGM6032	600	2.5	5.5	0.6/0.8/1.0/1.1/1.15/1.2/1.5/1.6/1.8/2.5/2.8/3.0/3.3	6	22	<1	Active High	0.9	TDFN-2×2-6L,WLCSP-1.21×0.81-6B	6MHz, 600mA Synchronous Buck
Sync Buck	SGM6036	600	1.8	5.5	1.0/1.2/3.3/Adj (1.0 ~ 3.3)	1.4	0.45		Active High	0.9	UTDFN-1.5×2-6L	Ultra Low Power Buck Converters with up to 600mA Output Current
Sync Buck	SGM6029	1000	2	5.5	0.4 ~ 0.775/0.8 ~ 1.55/1.8 ~ 3.3	4.0/1.5	2.3	0.12	Active High	0.96	WLCSP-0.74×1.09-6B	Ultra-Low Quiescent Current, Synchronous Buck
Sync Buck	SGM6033	1000	2.5	5.5	Adj	4.6	26	<1	Active High	0.9	TDFN-2×2-6L,WLCSP-1.21×0.81-6B	4.6MHz, 1A, Synchronous Buck
Sync Buck	SGM61020	2000	2.5	5.5	Adj (0.6 ~ V <sub>IN</sub> )	1.5	42	0.03	Active High	0.95	SOT-23-5,SOT-563-6	2A, High Efficiency, Synchronous Buck
Sync Buck	SGM61031	3000	2.7	5.5	Adj	2	24	0.01	Active High	0.95	TDFN-2×2-8AL	3A, High Efficiency, Synchronous Buck
Sync Buck	SGM61032A/B	3000	2.5	5.5	Adj (0.6 ~ V <sub>IN</sub> )	1.5	45	0.02	Active High	0.95	SOT-563-6	Low Voltage, 3A High Efficiency Synchronous Buck
Sync Buck	SGM61040A/B	4000	2.5	5.5	Adj (0.6 ~ V <sub>IN</sub> )	2.5/2	42/420	0.06	Active High	0.95	TDFN-2×2-7L	4A, High Efficiency, Synchronous Buck
Sync Buck	SGM61160	6000	4.5	18	Adj (0.765 ~ 5.5)	0.7	400	15	Active High	0.96	SOIC-8 (Exposed Pad)	4.5V to 18V Input, 6A, Synchronous, Buck Converter with Power-Save Mode
Sync Buck	SGM61161	6000	4.5	18	Adj (0.765 ~ 5.5)	0.7	400	<22	Active High	0.96	SOIC-8 (Exposed Pad)	4.5V to 18V Input, 6A, Synchronous, Buck Converter with Power-Save Mode
Sync Buck	SGM61163	6000	4.5	18	Adj	0.2 to 2	1100	3.3	Active High	0.95	TQFN-3.5×3.5-14L	4.5V to 18V Input, 6A, Synchronous Buck
Sync Buck	SGM61164	6000	4.5	18	Adj	0.2 to 2	1100	3.3	Active High	0.95	TQFN-3.5×3.5-14L	4.5V to 18V Input, 6A, Synchronous Buck
Sync Buck	SGM61220	2000	4.5	28	Adj	0.41	25	2	Active High	0.95	TSOT-23-6	4.5V to 28V Input, 2A Output, Synchronous Buck
Sync Buck	SGM61230	3000	4.5	28	Adj	0.41	25	2	Active High	0.95	TSOT-23-6	4.5V to 28V Input, 3A Output, Synchronous Buck
Sync Buck	SGM61430	3000	4.5	36	Adj (0.8 ~ 24)	0.2 to 2.2	64	<1.8	Active High	0.95	SOIC-8 (Exposed Pad)	36V, 3A, Synchronous Buck
Sync Buck	SGM61410	600	5	42	Adj (0.8 ~ 24)	1.2	14	<1.2	Active High	0.95	SOT-23-6	1.2MHz, 600mA, 42V, Synchronous Buck
Sync Buck	SGM61013	1000	2.3	5.5	1.2/1.8/3.3	10, 6.5/8	20	0.1	Active High	0.95	WLCSP-0.9×1.2-6B	10MHz 1A Micro-Point-of-Load Buck
Sync Buck	SGM61012	1200	2.3	5.5	Adj (0.5 ~ 4)	2	25	0.01	Active High	0.95	TDFN-2×2-8AL	1.2A High-Efficiency Buck with AHP-COT Mode
Sync Buck	SGM61022	2000	2.3	5.5	Adj (0.5 ~ 4)	2	25	0.01	Active High	0.95	TDFN-2×2-8AL	2A High-Efficiency Buck with AHP-COT Mode
Sync Buck	SGM61030A/B	3000	2.5	5.5	Adj (0.6 ~ V <sub>IN</sub> )	2.5/2	42/410	0.05	Active High	0.95	TDFN-2×2-7L	High Efficiency, 3A, Synchronous Buck
Sync Buck	SGM61135A/B	3000	4.5	17	Adj (0.76 ~ 7)	0.7	220	<15	Active High	0.93	TSOT-23-6,SOT-563-6	3A, 4.5V to 17V Input, Synchronous Buck
Sync Buck	SGM61136A/B	3000	4.5	17	Adj (0.6 ~ 7)	0.4	220	<15	Active High	0.93	TSOT-23-6,SOT-563-6	3A, 4.5V to 17V Input, Synchronous Buck
Sync Buck	SGM61130	4000	4.5	18	Adj (0.8 ~ 5)	0.2 to 2	1100	3.4	Active High	0.95	TQFN-3.5×3.5-14L	4.5V to 18V Input, 4A, Synchronous Buck
Sync Buck	SGM61411	600	5	42	Adj (0.8 ~ 20)	0.15		0.6	Active High	0.95	SOT-23-6	150kHz, 600mA, 42V, Synchronous Buck

## Buck Converters

1*	3*	2*										
DC/DC Topology	Part Number	Output Current Max (mA)	V <sub>IN</sub> Min (V)	V <sub>IN</sub> Max (V)	Output Voltage (V)	Switching Frequency (MHz)	Quiescent Current (μA)	Shutdown Current (μA)	Enable Logic	Efficiency Max	Package	Features
Sync Buck	SGM61413	600	5	42	Adj (0.8 ~ 20)	0.56	14	0.6	Active High	0.95	SOT-23-6	570kHz, 600mA, 42V, Synchronous Buck
Sync Buck	SGM61412A	1200	4.5	42	Adj (0.83 ~ 20)	1.2	55	1.2	Active High	0.96	TSOT-23-6	1.2MHz, 1.2A, 42V, Synchronous Buck
Sync Buck	SGM61720	2500	6	60	Adj (up to 24)	0.3	90	<4	Active High	0.96	SOIC-8 (Exposed Pad)	High Efficiency, 2.5A, 60V Input, Synchronous Buck

## Boost Converters

1*	2*											
DC/DC Topology	Part Number	Switch Current Limit Typ (A)	V <sub>IN</sub> Min (V)	V <sub>IN</sub> Max (V)	Output Voltage (V)	Switching Frequency (MHz)	Quiescent Current (μA)	Shutdown Current (μA)	Enable Logic	Efficiency Max	Package	Features
Non-Sync Boost	SGM6601	0.4	1.8	5.5	Adj (up to 38)	Up to 1	20	<1	Active High	0.85	TSOT-23-5, TDFN-2×2-6L	400mA Switch, Internal MOSFET, High Voltage Non-Synchronous Boost
Non-Sync Boost	SGM6623	4.4	0.8	12	Adj (3.3 ~ 13)	0.6	47	<1	Active High	0.9	SOT-23-6	4.4A, Miniature Boost Converter
Non-Sync Boost	SGM6607A	1.2	3	20	Adj (up to 38)	1.2	400	<1	Active High	0.93	TDFN-2×2-6L, TSOT-23-6	1.2A Switch, Internal MOSFET, High Voltage Non-Synchronous Boost
Sync Boost	SGM66099B	1.3	1.15	5.2	5.0/Adj (2.5 ~ 5.2)	1.2	1.75	<1	Active High	0.93	WLCSP-1.22×0.83-6B, TDFN-2×2-6AL	Synchronous Boost Converter with Ultra Low Quiescent Current
Sync Boost	SGM6602	0.9	1.8	5.5	Adj (4.5 ~ 20)	1.1	41	<1	Active High	0.85	WLCSP-0.8×1.2-6B, TDFN-2×2-6L	20V Output, Synchronous Boost
Sync Boost	SGM6603	1.1	0.9	5.5	3.3/5.0/Adj (up to 5.5)	1.2	30	<1	Active High	0.9	SOT-23-6	0.9V Input, Synchronous Boost
Sync Boost	SGM6610	10	2.7	12	Adj (4.5 ~ 12.6)	0.5	80	<1.2	Active High	0.91	TQFN-4.5×3.5-20L	10A, Fully-Integrated, Synchronous Boost
Sync Boost	SGM6611C	7	2.7	12	Adj (4.5 ~ 12.6)	1.1	90	<1.1	Active High	0.9	TQFN-2×2.5-11L	7A, Fully-Integrated, Synchronous Boost
Sync Boost	SGM6612A	10	2.7	16	Adj (4.5 ~ 20)	2.2	125	<3	Active High	0.95	TQFN-3×3.5-13L	10A, Fully-Integrated, Synchronous Boost
Sync Boost	SGM6613A	7	4.5	22	Adj ((V <sub>IN</sub> + 5) ~ 28.5)	0.7	150	<3	Active High	0.9	TQFN-3×3.5-13L	28.5V, 7A Fully-Integrated, Synchronous Boost
Sync Boost	SGM66099C	1.16	1.5	5.2	Adj (2.5 ~ 5.5)	1.2	1.7	0.1	Active High	0.93	WLCSP-1.3×0.83-6B, TDFN-2×2-6AL	Synchronous Boost with Ultra-Low Quiescent Current
Sync Boost	SGM6614	15	2.17	18	Adj (4.5 ~ 18)	0.5	85	<1.5	Active High	0.94	TQFN-3×2.5-11L	18V Output, 15A, Fully Integrated, Synchronous Boost

## Buck-Boost Converters

2*	1*												
DC/DC Topology	Part Number	Output Current Max (A)	Switch Current Limit Typ (A)	V <sub>IN</sub> Min (V)	V <sub>IN</sub> Max (V)	Output Voltage (V)	Switching Frequency (MHz)	Quiescent Current (μA)	Shutdown Current (μA)	Enable Logic	Efficiency Max	Package	Features
Sync Buck-Boost	SGM62116	0.4	1	1.8	5.5	Adj (1.2 ~ 5.5)	2.4	50	0.1	Active High	0.95	WLCSP-1.11×1.84-8B	High-Efficiency Buck-Boost Converter
Sync Buck-Boost	SGM62115	0.5	1	1.8	5.5	3.3/Adj (2.5 ~ 5.5)	2.4	43	0.1	Active High	0.95	WLCSP-1.22×1.62-12B, TQFN-2.5×2.5-12L	Single Inductor Buck-Boost Converter with 1A Switch and Adjustable Soft-Start
Sync Buck-Boost	SGM62112	0.8	1.8	1.8	5.5	3.3/Adj (1.2 ~ 5.5)	1.4	40	0.1	Active High	0.96	TDFN-3×3-10L	Current Single Inductor Buck-Boost Converter with 1.8A Switch
Sync Buck-Boost	SGM62117	2	5	2.2	5.5	Adj (1.8 ~ 5.2)	3	18	0.05	Active High	0.95	TDFN-3×2-10L	High-Efficiency Buck-Boost Converter



## Buck-Boost Converters

DC/DC Topology	Part Number	2 <sup>+</sup> Output Current		Switch Current Limit Typ (A)	1 <sup>+</sup> V <sub>IN</sub>		Output Voltage (V)	Switching Frequency (MHz)	Quiescent Current (μA)	Shutdown Current (μA)	Enable Logic	Efficiency Max	Package	Features
		Max (A)	Min (V)		Max (V)									
Sync Buck-Boost	SGM62118	2		5	2.2	5.5	Adj (1.8 ~ 5.2)	3	18	0.1	Active High	0.95	WLCSP-2.21×1.4-15B	High-Efficiency Buck-Boost Converter
Sync Buck-Boost	SGM62110	2.5		5.4	2.2	5.5	Adj (1.8 ~ 5.2)	3	18	0.1	Active High	0.95	WLCSP-2.21×1.40-15B	2.5A Buck-Boost Converter with I <sup>2</sup> C Interface
Sync Buck-Boost	SGM62111	2.5		5.4	2.2	5.5	Adj (1.8 ~ 5.2)	3	18	0.1	Active High	0.95	WLCSP-2.21×1.40-15B	2.5A Buck-Boost Converter with I <sup>2</sup> C Interface

## Inverting Converters

Part Number	2 <sup>+</sup> Output Current		1 <sup>+</sup> V <sub>IN</sub>		Output Voltage (V)	Switching Frequency (MHz)	Quiescent Current (μA)	Shutdown Current (μA)	Enable Logic	Efficiency Max	Package	Features
	Max (mA)	Min (V)	Max (V)	Min (V)								
SGM3206	60	1.4	5.5		-V <sub>IN</sub>	0.047	115		None	0.85	SOT-23-5	Unregulated 60mA Charge Pump Voltage Inverter
SGM3207	60	1.4	5.5		-V <sub>IN</sub>	0.019	72		None	0.85	SOT-23-5	Unregulated 60mA Charge Pump Voltage Inverter
SGM3204	200	1.4	5.5		-V <sub>IN</sub>	0.95	1500	<1	Active High	0.8	SOT-23-6	Unregulated 200mA Charge Pump Voltage Inverter
SGM660		2.8	5.5		Adj (-0.8 ~ -5.2)	1.8/1.6 (Default)/1.4	270	<1	Active High	0.8	WLCSP-0.9×1.3-6B	Buck-Boost Converter for Negative Output Voltage
SGM3209	100	3	18		-V <sub>IN</sub>	0.12 ~ 1.25	900	<1.2	Active High	0.9	SOIC-8, TDFN-2×2-8L	Unregulated Inverter, Programmable Frequency, 100mA

## Charge Pumps

Converters per Package	Part Number	1 <sup>+</sup> Output Current		V <sub>IN</sub> Min (V)	V <sub>IN</sub> Max (V)	Output Voltage (V)	Switching Frequency (kHz)	Quiescent Current (μA)	Shutdown Current (μA)	Output Type	Package	Features
		Max (mA)	Shutdown									
2	SGM3200	500	Yes	2.7	5	5	1700	70	<2	Regulated	TDFN-3×3-8L	Low Noise, Doubler/White LED Driver
1	SGM3204	200	Yes	1.4	5.5	-V <sub>IN</sub>	950	1500	<1	Unregulated	SOT-23-6	Unregulated Inverter, 950kHz, 200mA
1	SGM3112	200	Yes	2.7	5.5	5	2200	66	<0.1	Regulated	TDFN-2×2-8AL	Low Noise, Load Disconnect, 2200kHz, 200mA
1	SGM3110	100	Yes	2.7	5	5	750	60	<1	Regulated	SOT-23-6	Low Noise, Doubler/White LED Driver
1	SGM3209	100	Yes	3	18	-V <sub>IN</sub>	120 ~ 1250	900	<1.2	Unregulated	SOIC-8, TDFN-2×2-8L	Unregulated Inverter, Programmable Frequency, 100mA
1	SGM3206	60	No	1.4	5.5	-V <sub>IN</sub>	47	115	NA	Unregulated	SOT-23-5	Unregulated Inverter, 47kHz, 60mA

## Switch Mode Power Controllers

DC/DC Topology	Part Number	1 <sup>+</sup> V <sub>IN</sub>		Output Voltage (V)	Switching Frequency (MHz)	Quiescent Current (μA)	Shutdown Current (μA)	Enable Logic	Efficiency Max	Package	Features
		Min (V)	Max (V)								
Sync Buck	SGM64200	3	20	Adj (0.6 ~ 5.4)	Adj (0.1 ~ 1)	5200	170	Active High	0.9	TQFN-5×5-32AL	Enable, Frequency Synchronization, Multiple Outputs, Phase Interleaving, Power Good, Remote Sense
Sync Buck	SGM63600	4.3	60	Adj (≤32)	Adj (0.1 ~ 1)	1035	1.5	Active High	0.95	TQFN-3×4-20L, TSSOP-20 (Exposed Pad)	Adjustable Frequency, External Frequency Sync, Hiccup Current Limit

## TEC Drivers

DC/DC Topology	Part Number	2 <sup>+</sup> Output Current		1 <sup>+</sup> V <sub>IN</sub>		Output Voltage (V)	Switching Frequency (MHz)	Quiescent Current (μA)	Shutdown Current (μA)	Enable Logic	Efficiency Max	Package	Features
		Max (mA)	Min (V)	Max (V)	Min (V)								
TEC Driver	SGM41280	3000	2.2	4.9	3.35/3.45/3.63/3.85/4.25	2.5	10	<1	Active High	0.95	WLCSP-1.27×1.67-12B, TQFN-3×3-16L	Low Voltage, Wide Input Range, Front-End DC/DC	
TEC Driver	SGM41285	10	2.8	5.5	Adj (up to 70)	0.85	190	<1	Active High	0.69	TQFN-3×3-16L	70V, 300mW Boost Converter and Current Monitor for APD Bias Applications	
TEC Driver	SGM41286	500 <sup>†</sup>	7	14	14/19	0.022/1.41	60	<5.5	Active High	0.9	TDFN-3×3-8L, SOIC-8 (Exposed Pad)	LNB Supply with Tone Repeater/Synthesizer and Programmable Cable Drop Compensation	

Note: † Input Voltage = 5V, Output Voltage = 12V

## EML Bias ICs

Part Number	2 <sup>+</sup> Output Current Max (mA)	V <sub>IN</sub> Min (V)	1 <sup>+</sup> V <sub>IN</sub> Max (V)	Output Voltage (V)	Switching Frequency (MHz)	Quiescent Current (μA)	Package	Features
SGM41291	0 ~ 239.5	2.9	5.5	Adj (-0.2 ~ -4.08)	1	44	WLCSP-1.25×1.65-12B	Low Voltage, Wide Input Range, Front-End DC/DC
SGM41295	0 ~ 239.5	2.9	5.5	Adj (-0.2 ~ -3.2)	1.75	100	TQFN-3×3-16L	DC Bias Controller for EML

## Combined Supplies

Part Number	2 <sup>+</sup> Output Current		1 <sup>+</sup> V <sub>IN</sub>		Output Voltage (V)	RBFET Current Limit (A)	Buck Mode Peak Current (A)	Boost Mode Peak Current (mA)	Switching Frequency (MHz)	Quiescent Current (μA)	Shutdown Current (μA)	Enable Logic	Efficiency Max	Package	Features
	Max (mA)	Min (V)	Max (V)	Min (V)											
SGM38045	70	2.7	4.8	3.3V/Adj (-2.8 ~ -3.5)/Adj (2.8 ~ 3.5)					1	190	<1	Active High	0.88	WLCSP-1.2×2.4-17B	Inductor-Less, Triple-Output, for Wearable Devices
SGM41280	3000	2.2	4.9	Adj		6.5	6.5		2.5	10	<1	Active High	0.9	WLCSP-1.27×1.67-12B, TQFN-3×3-16L	Low Voltage, Wide Input Range, Front-End DC/DC
SGM38042	40	2.7	5.5	1.8 or 2.8/Adj (-2.4 ~ -6.4)/Adj (2.4 ~ 6.4)					1.6	500	<1	Active High	0.87	WLCSP-1.51×2.10-15B	SIMO, Triple-Output, for Wearable Devices
SGM38046	90	2.7	5.5	3.3V/Adj (-4 ~ -0.6)/Adj (2.8 ~ 4.6)					1.2	270	<1	Active High	0.8	WLCSP-2×2-16B	Triple-Output, for Wearable Devices
SGM41664		2.8	16	Adj		6.2	8.4	250	0.25 ~ 1.5	267	<2	Active High	0.9	TQFN-4×4-25L	I <sup>2</sup> C Power Backup Manager with High Current Bidirectional DC/DC Converter and Capacitor Measurement Capability

## Isolation Transformer Driver

Drivers per Package	Part Number	Output Power (W)	1 <sup>+</sup> V <sub>CC</sub> Range (V)	External Resistance (kΩ)	Input Frequency (kHz)	Logic Low Input Voltage (V)	Logic High Input Voltage (V)	I <sub>CC</sub> Typ (mA)	Package	Features
1	SGM46000	3	2.5 ~ 5.5	5 ~ 390	200 ~ 2000	0.3	2	0.6	SOIC-8 (Exposed Pad), TDFN-2×3-8BL	3W Output Power, Programmable Oscillator Frequency Isolated Power Supply

## Motor Drivers

Full Bridges per Package	2*	1*	V <sub>CC</sub> Min (V)	V <sub>CC</sub> Max (V)	RMS Output Current (A)	Peak Output Current (A)	Control Interface	R <sub>DS(ON)</sub> (HS+LS) per Channel (mΩ)	Operating Temperature Range (°C)	Package	Features
	Part Number	Motor Type									
1	SGM42507	Brushed DC Motor	1.9	7.5		1.5	PH/EN	555	-40 to +125	SC70-6, TSOT-23-6	1.5A, 7.5V H-Bridge Driver for Motor/Coil
1	SGM42609	Brushed DC Motor	2.7	24	1.5	2	PWM	480	-40 to +125	MSOP-10, TDFN-3×3-10L	Single H-Bridge Motor Driver
2	SGM42600	Brushed DC/Stepper Motor	2.7	24	1.5	2	PWM	410	-40 to +125	TSSOP-16 (Exposed Pad), TQFN-4×4-16L	Dual H-Bridge Motor Driver
2	SGM42633	Brushed DC/Stepper Motor	2.5	12	0.6	1	PWM	1610	-40 to +125	TSSOP-16 (Exposed Pad), TQFN-3×3-16L	Dual H-Bridge Motor Driver
2	SGM42622	Stepper Motor	1.8	10	1.3	2	STP/DIR	500	-40 to +85	TQFN-3×3-16L	Stepper Motor Driver with 1/256 Microstepping
2	SGM42630	Stepper Motor	8	35	1.8	2.6	STP/DIR	290	-40 to +85	TSSOP-28 (Exposed Pad)	Stepper Motor Driver with 1/8 Microstepping and Auto Decay Mode

## Gate Drivers

Drivers per Package	1*	Output Peak Current (A)	V <sub>CC</sub> (V)	Rise Time (ns)	Fall Time (ns)	Logic Low Input Voltage (V)	Logic High Input Voltage (V)	Input Hysteresis (V)	I <sub>CC</sub> Typ (mA)	Package	Features
	Part Number										
1	SGM48005	9/12	3 ~ 15	2.9	3.6	1.2	2.4	0.12	1	TSSOP-14	Zero Overshoot, Large Swing SiC & IGBT Driver with Precision Dual Power Rail Generation Circuit
1	SGM48010	8/12	4.5 ~ 20	10	10	0.9	2.5	0.45	0.13	TDFN-2×2-6L	Single-Channel High Speed Low-side Gate Driver
1	SGM48013	8	4.5 ~ 20	7	8	0.7	2.5	0.45	0.09	SOT-23-5	Single-Channel High Speed Low-side Gate Driver
1	SGM48013C	8/13	4.5 ~ 20	7	8	0.7	2.5	0.45	0.09	SOT-23-5	Single-Channel High Speed Low-side Gate Driver
1	SGM48017	8	4.5 ~ 20	7	8	0.7	2.5	0.45	0.09	SOT-23-5	Single-Channel High Speed Low-side Gate Driver
1	SGM48017C	8/13	4.5 ~ 20	7	8	0.7	2.5	0.45	0.09	SOT-23-5	Single-Channel High Speed Low-side Gate Driver
1	SGM48018C	8/13	4.5 ~ 20	7	8	0.7	2.5	0.45	0.09	SOT-23-5	Single-Channel High Speed Low-side Gate Driver
1	SGM48019	8/13	4.5 ~ 20	7	8	0.7	2.5		0.09	SOT-23-5	Single-Channel High Speed Low-side Gate Driver
1	SGM48019C	8/13	4.5 ~ 20	7	8	0.7	2.5	0.45	0.09	SOT-23-5	Single-Channel High Speed Low-side Gate Driver
2	SGM48523C	5	8.5 ~ 18	7	7	1.2 <sup>†</sup>	2.1 <sup>†</sup>	0.9	0.075	SOIC-8, MSOP-8 (Exposed Pad), TDFN-3×3-8L	Dual-Channel High Speed Low-side Gate Driver
2	SGM48524A	5	4.5 ~ 18	8	8	1.2 <sup>†</sup>	2 <sup>†</sup>	0.8	0.038	SOIC-8, MSOP-8 (Exposed Pad), TDFN-3×3-8L	Dual-Channel High Speed Low-side Gate Driver
2	SGM48524C	5	8.5 ~ 18	7	7	1.2 <sup>†</sup>	2.1 <sup>†</sup>	0.9	0.074	SOIC-8, MSOP-8 (Exposed Pad), TDFN-3×3-8L	Dual-Channel High Speed Low-side Gate Driver
2	SGM48524D	5	4.5 ~ 18	7	7	1.2 <sup>†</sup>	2.1 <sup>†</sup>	0.9	0.075	SOIC-8, MSOP-8 (Exposed Pad), TDFN-3×3-8L	Dual-Channel High Speed Low-side Gate Driver
2	SGM48526	5	4.5 ~ 18	8	8	1.2 <sup>†</sup>	2 <sup>†</sup>	0.8	0.038	TDFN-3×3-8L	Dual-Channel High Speed Low-side Gate Driver

Note: † Typical Values @ 25°C

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