



# NJM2901C / NJM2901CA

## ■ ABSOLUTE MAXIMUM RATINGS

(Ta=25°C)

PARAMETER	SYMBOL	RATINGS	UNIT
Supply Voltage	$V^+-V$	+36	V
Differential Input Voltage (Note1)	$V_{ID}$	±36	V
Input Voltage (Note2)	$V_{IN}$	V -0.3 to V +36	V
Output Terminal Input Voltage (Note3)	$V_O$	V -0.3 to V +36	V
Power Dissipation	$P_D$	SOP : 880 (Note4) 1200 (Note5) SSOP : 510 (Note4) 640 (Note5)	mW
Operating Temperature Range	$T_{opr}$	-40 to +125	°C
Storage Temperature Range	$T_{stg}$	-65 to +150	°C

(Note1) It can be applied to the input terminals regardless of the supply voltage and must be less than the rating voltage.

(Note2) Input voltage is the voltage should be allowed to apply to the input terminal independent of the magnitude of  $V^+$

(Note3) Output voltage is the voltage should be allowed to apply to the output terminal independent of the magnitude of  $V^+$ .

(Note4) EIA/JEDEC STANDARD Test board (76.2 x 114.3 x 1.6mm, 2layers, FR-4) mounting

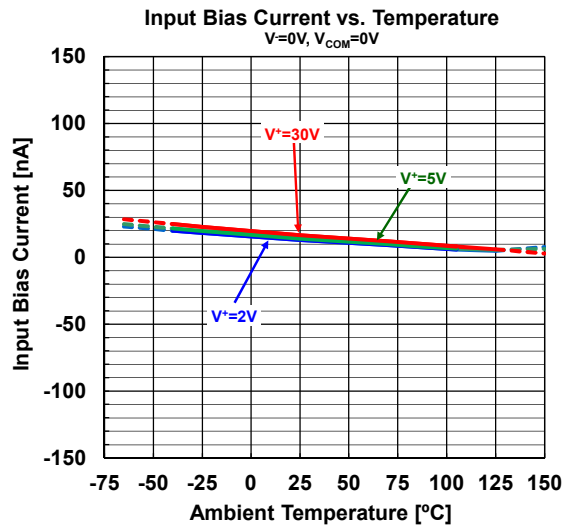
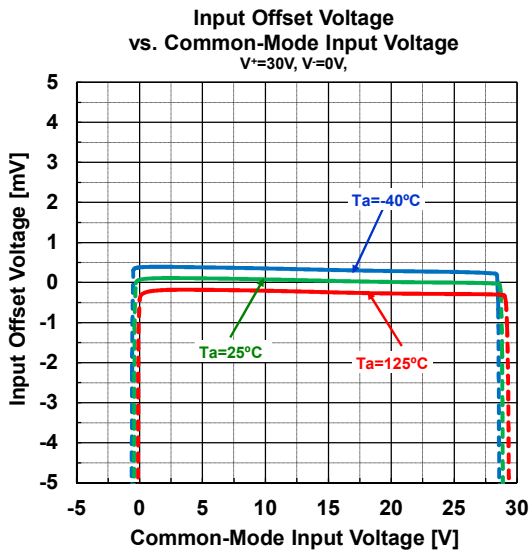
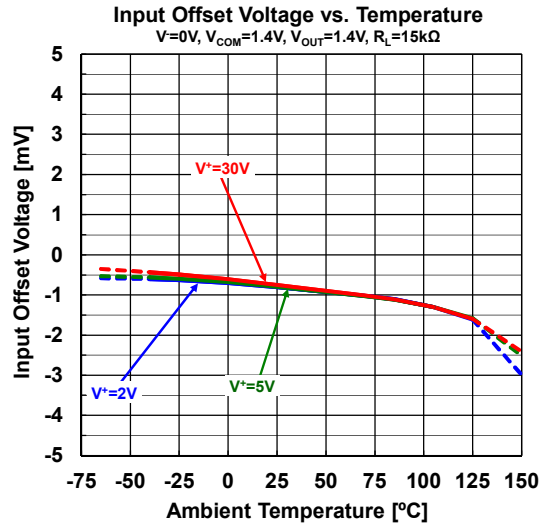
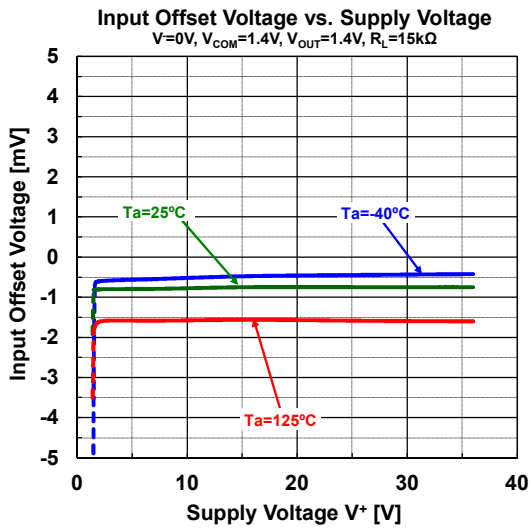
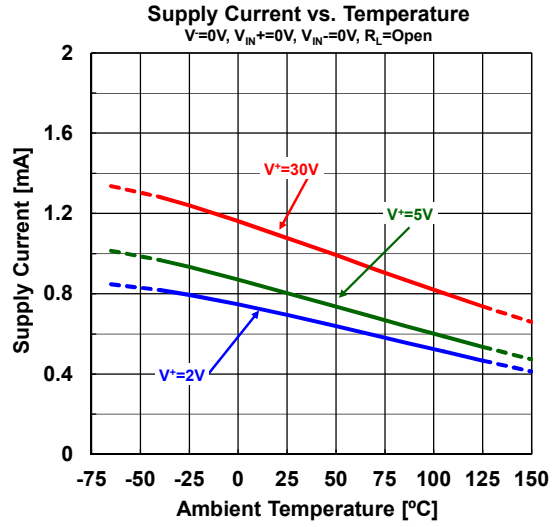
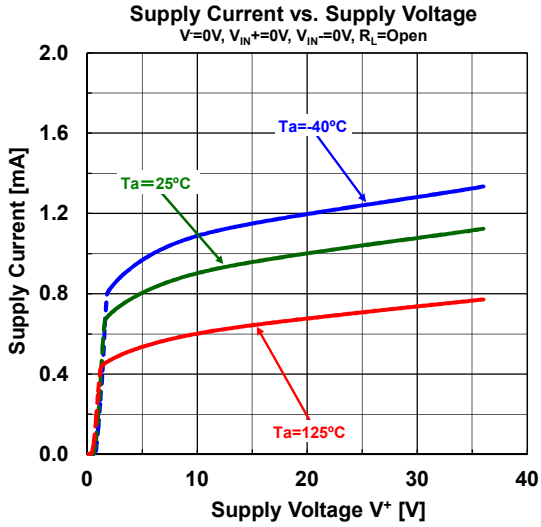
(Note5) EIA/JEDEC STANDARD Test board (76.2 x 114.3 x 1.6mm, 4layers, FR-4) mounting

## ■ ELECTRICAL CHARACTERISTICS

( $V^+=5V, V^- = 0V, Ta=25^\circ C$  unless otherwise noted.)

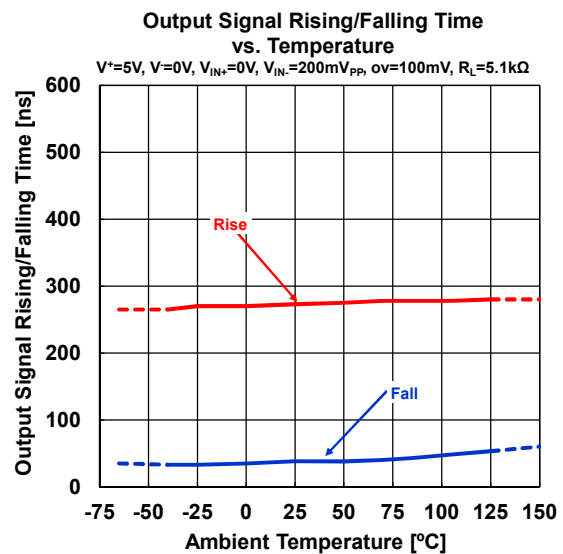
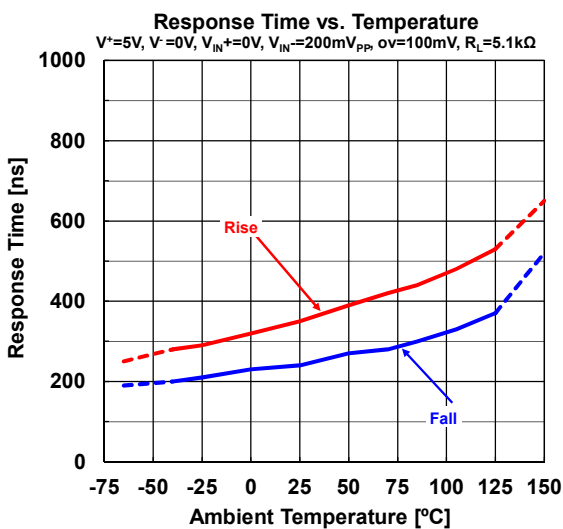
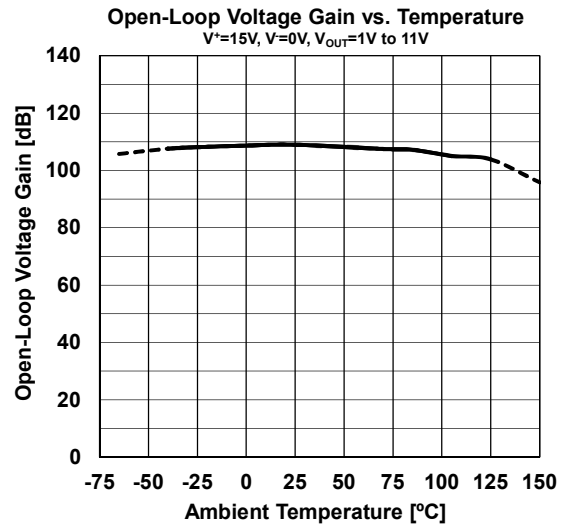
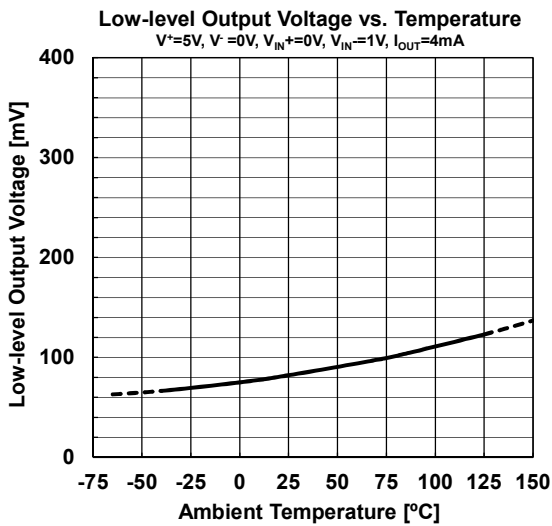
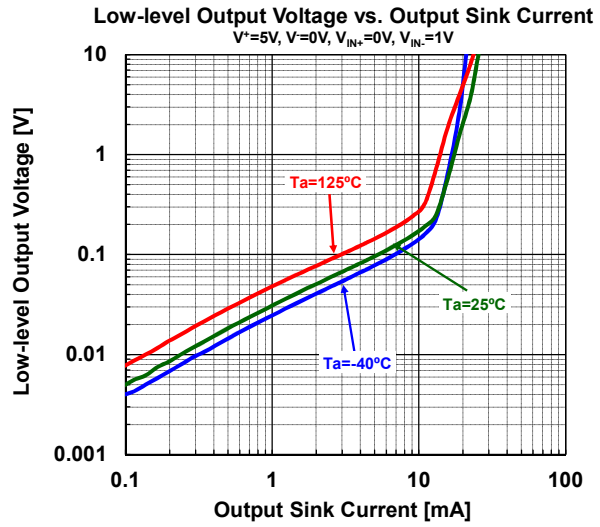
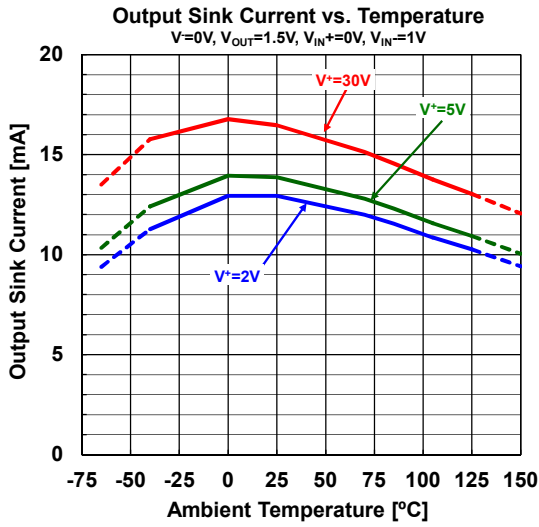
PARAMETER	SYMBOL	TEST CONDITION	MIN.	TYP.	MAX.	UNIT
Input Offset Voltage	$V_{IO}$	$R_S=0\Omega, V_O=1.4V$	-	0.5	5	mV
		$R_S=0\Omega, V_O=1.4V, NJM2901CA$	-	0.5	2.5	
Input Offset Current	$I_{IO}$		-	0.5	50	nA
Input Bias Current	$I_B$		-	20	250	nA
Open-Loop Voltage Gain	$A_V$	$V^+=15V, R_L=15k\Omega, V_O=1V$ to 11V	94	106	-	dB
Common Mode Input Voltage Range	$V_{ICM}$		0	-	3.5	V
Supply Current (all comparators)	$I_{SUPPLY}$	no load	-	0.8	2	mA
		$V^+=+30V$ , no load	-	1.1	2.5	
Low-level Output Voltage	$V_{OL}$	$V_{IN^+}=0V, V_{IN^-}=1V, I_{SINK}=4mA$	-	160	400	mV
Output Leakage Current	$I_{LEAK}$	$V^+=V_O=30V, V_{IN^+}=1V, V_{IN^-}=0V$	-	-	1	uA
Output Sink Current	$I_{SINK}$	$V_{IN^+}=0V, V_{IN^-}=1V, V_O=1.5V$	6	16	-	mA
Response Time	$t_{re}$	$R_L=5.1k\Omega$ to $V^+$	-	1.3	-	μs
Large Signal Response Time	$t_{rel}$	$R_L=5.1k\Omega$ to $V^+$ , $V_{ref}=+1.4V$ , TTL input	-	250	-	ns

## ■ TYPICAL CHARACTERISTICS

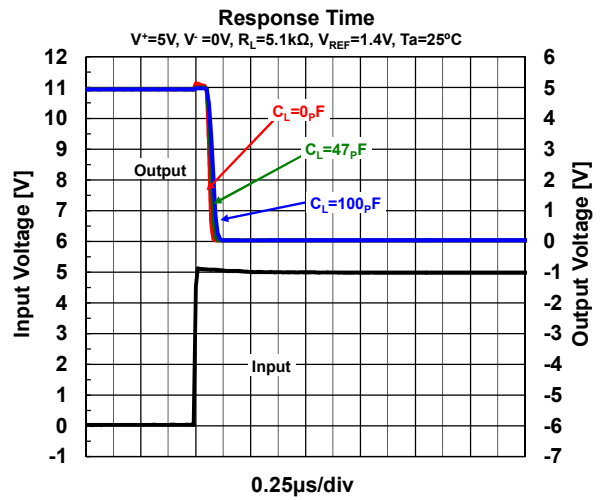
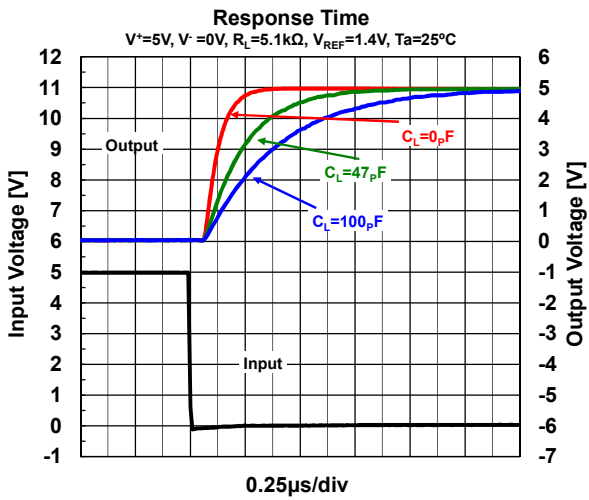
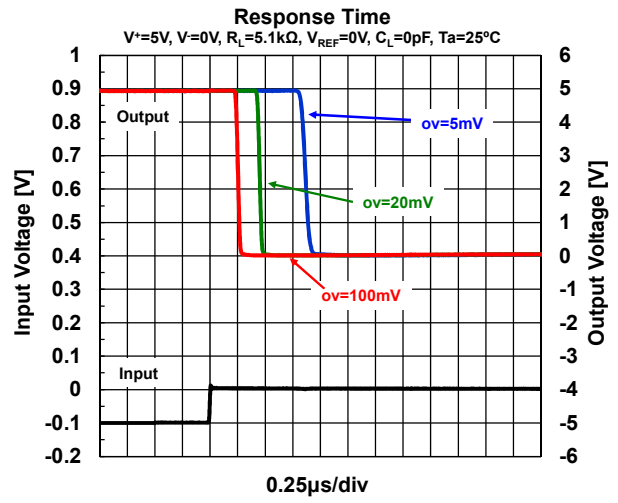
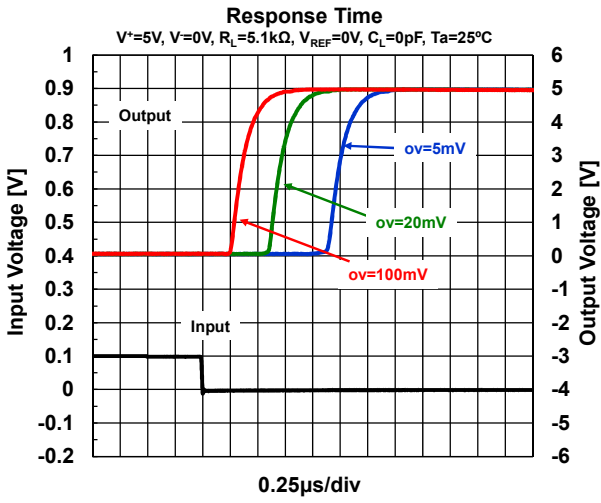


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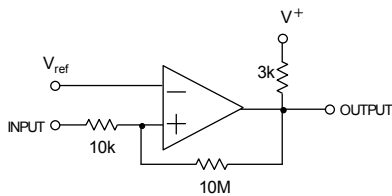


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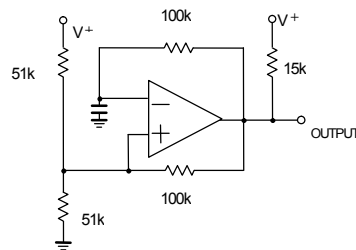


## ■ TYPICAL APPLICATIONS

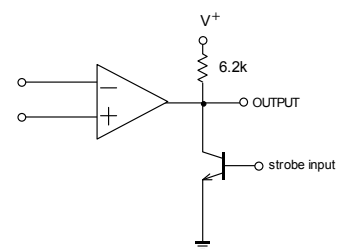
**Comparator With Hysteresis**



**Pulse Generator**



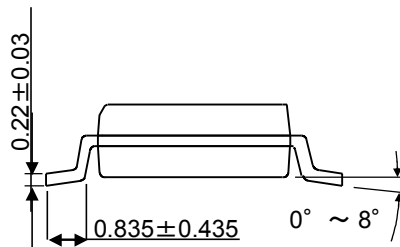
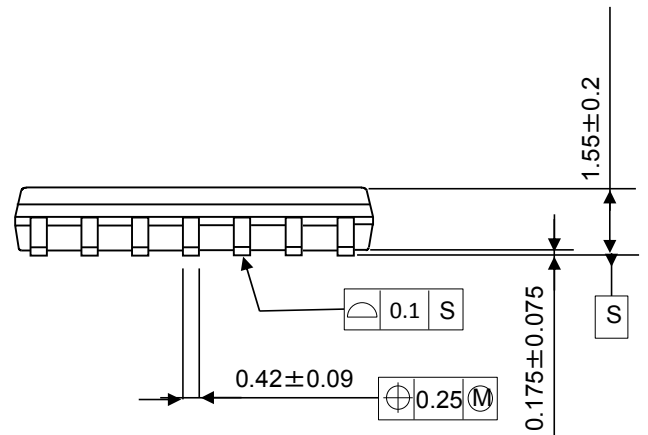
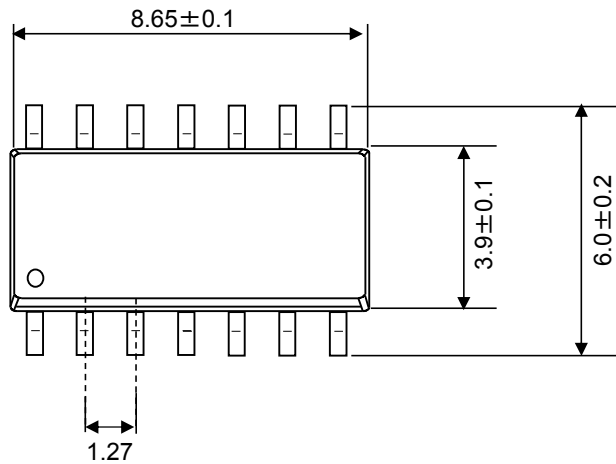
**Output Strobing Circuit**



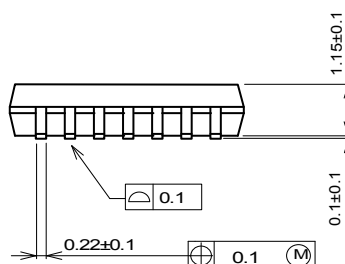
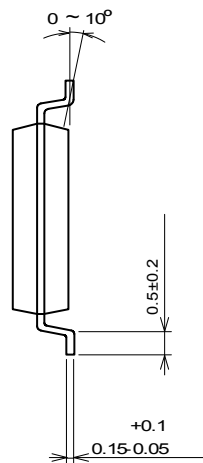
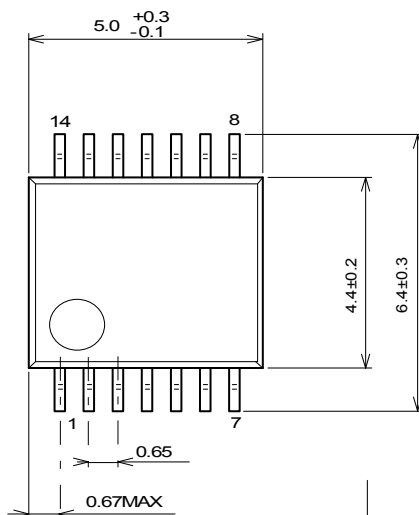
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## ■PACKAGE OUTLINE UNIT : mm

### SOP14



### SSOP14



#### [CAUTION]

The specifications on this databook are only given for information, without any guarantee as regards either mistakes or omissions.

The application circuits in this databook are described only to show representative usages of the product and not intended for the