

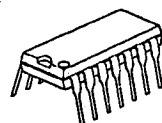
SINGLE SUPPLY QUAD COMPARATOR

■ GENERAL DESCRIPTION

The NJM12901 is single-supply quad voltage comparator, which can operate from 2V supply. The features are input offset voltage, input bias current and low current consumption. The NJM12901 compare the input signal to 0V(ground) due to the Darlington PNP input stage.

The package lineup is DIP, DMP and others compact, which is SON, so that the NJM12901 is suitable for any kind of signal comparator.

■ PACKAGE OUTLINE



NJM12901D1



NJM12901M



NJM12901E



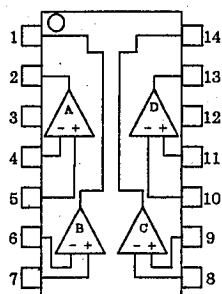
NJM12901V

■ FEATURES

- Operating Voltage (+2V~+14V)
- Open Collector Output
- Bipolar Technology
- Package Outline

DIP14,DMP14,EMP14,SSOP14,SON14(PRELIMINARY)

■ PIN CONFIGURATION



NJM12901D1/12901M

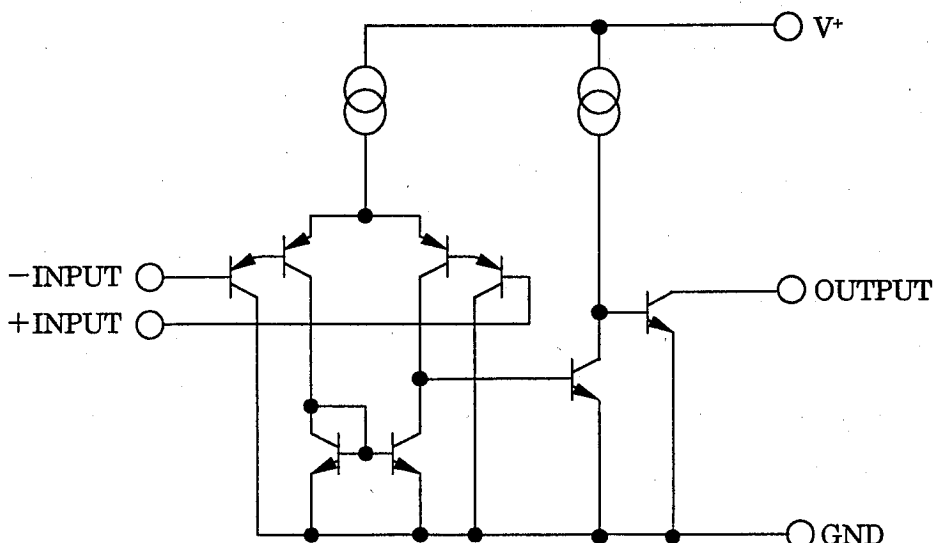
NJM12901E/12901V

NJM12901x(PRELIMINARY)

PIN FUNCTION

- | | |
|-------------------|--------------|
| 1. B OUTPUT | 8. C-INPUT |
| 2. A OUTPUT | 9. C +INPUT |
| 3. V ⁺ | 10. D-INPUT |
| 4. A-INPUT | 11. D +INPUT |
| 5. A +INPUT | 12. GND |
| 6. B-INPUT | 13. D OUTPUT |
| 7. B +INPUT | 14. C OUTPUT |

■ EQUIVALENT CIRCUIT (1/4Shown)



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■ ABSOLUTE MAXIMUM RATING

(Ta=25°C)

PARAMETER	SYMBOL	RATINGS	UNIT
Supply Voltage	V^+	15	V
Differential Input Voltage	V_{ID}	14	V
Input Voltage	V_{IC}	-0.3~+14	V
Power Dissipation	P_D	(DIP14) 700 (DMP14) 300 (EMP14) 300 (SSOP14) 300 (SON14) U.D.	mW
Operating Temperature Range	T_{opr}	-40~+85	°C
Storage Temperature Range	T_{stg}	-50~+125	°C

■ ELECTRICAL CHARACTERISTICS (V⁺=5V, Ta=25°C)

PARAMETER	SYMBOL	TEST CONDITION	MIN.	TYP.	MAX.	UNIT.
Operating Voltage	V_{opr}		2	—	14	V
Input Offset Voltage	V_{IO}	$R_S=0\Omega, V_O \approx 1.4V$	—	1	4	mV
Input Offset Voltage	I_{IO}		—	5	50	nA
Input Bias Current	I_B		—	30	200	nA
Input Common Mode Voltage Range	V_{ICM}		0~3.5	—	—	V
Large Signal Voltage Range	A_V	$R_L=15k\Omega$	—	106	—	dB
Response Time	t_R	$R_L=5.1k\Omega$	—	0.5	—	μs
Output Sink Current	I_{SINK}	$V_{IN}^+=0V, V_{IN}^-=1V, V_O=1.5V$	6	10	—	mA
Output Saturation Voltage	V_{SAT}	$V_{IN}^+=0V, V_{IN}^-=1V, I_{SINK}=3mA$	—	80	300	mV
Leakage Current	I_{LEAK}	$V_{IN}^+=1V, V_{IN}^-=0V, V_O=5V$	—	0.1	1.0	μA
Operating Current	I_{CC}	$R_L=\infty$	—	0.8	1.8	mA

MEMO

[CAUTION]

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