SINGLE SUPPLY DUAL COMPARATOR

■ GENERAL DESCRIPTION

The NJM12903 is single-supply dual voltage comparator, which can operate from 2V supply. The features are input offset voltage, input bias current and low current consumption.

The NJM12903 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 **NJM12903** is suitable for any kind of signal comparator.

■ PACKAGE OUTLINE

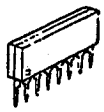

NJM12903D


NJM12903M


NJM12903E


NJM12903V

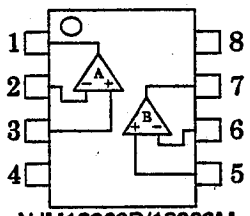

NJM12903R


NJM12903L

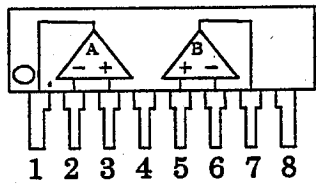
■ FEATURES

- Operating Voltage (+2V~+14V)
- Open Collector Output
- Bipolar Technology
- Package Outline DIP8,DMP8,EMP8,SSOP8, VSP8,SIP8,SON8(PRELIMINARY)

■ PIN CONFIGURATION



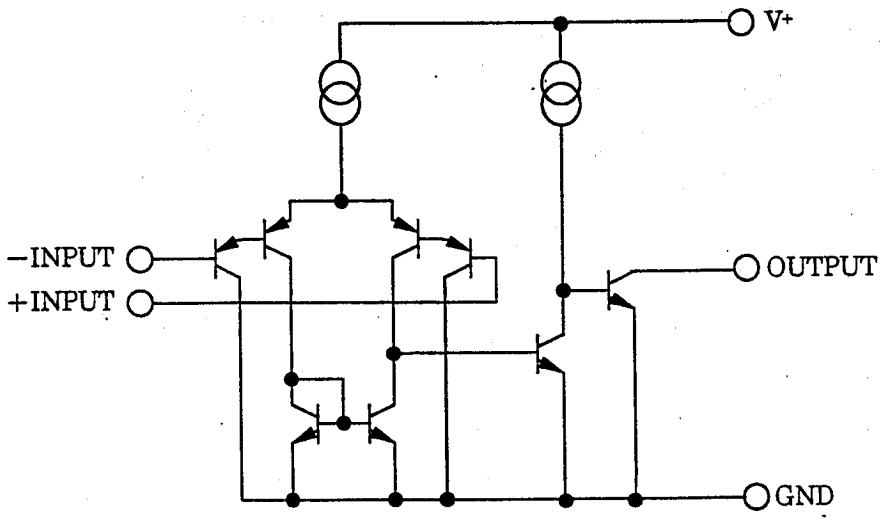
NJM12903D/12903M
NJM12903E/12903V/12903R
NJM12903x(PRELIMINARY)



NJM12903L

PIN FUNCTION
1. A OUTPUT
2. A−INPUT
3. A +INPUT
4. GND
5. B +INPUT
6. B−INPUT
7. B OUTPUT
8. V+

■ EQUIVALENT CIRCUIT (1/2Shown)



■ ABSOLUTE MAXIMUM RATINGS (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	(DIP8) 500 (DMP8) 300 (EMP8) 300 (SSOP8) 250 (VSP8) 320 (SIP8) 800 (SON8) U.D.	mW
Operating Temperature Range	Topr	−40～+85	°C
Storage Temperature Range	Tstg	−50～+125	°C

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

PARAMETER	SYMBOL	TEST CONDITION	MIN.	TYP.	MAX.	UNIT
Operating Voltage	Vopr		2	—	14	V
Input Offset Voltage	V_{IO}	R_S=0Ω, V_O≒1.4V	—	1	4	mV
Input Offset Current	I_{IO}		—	5	50	nA
Input Bias Current	I_B		—	30	200	nA
Large Signal Voltage Gain	A_V	R_L=15kΩ	—	106	—	dB
Input Common Mode Voltage Range	V_{ICM}		0～3.5	—	—	V
Response Time	t_R	R_L=5.1kΩ	—	0.5	—	μs
Output Sink Current	I_{SINK}	V_{IN}^+=0V, V_{IN}^-=1V, V_O=1.5V	6	10	—	mA
Output Saturation	V_{SAT}	V_{IN}^+=0V, V_{IN}^-=1V, I_{SINK}=3mA	—	80	300	mV
Output Leakage Current	I_{LEAK}	V_{IN}^+=0V, V_{IN}^-=1V, V_O=5V	—	0.1	1.0	μA
Operating Current	I_{CC}		—	0.4	1.0	mA

MEMO

[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 guarantee or permission of any right including the industrial rights.