



## DUAL OPERATIONAL AMPLIFIER

### GENERAL DESCRIPTION

The NJM14558 is dual operational amplifier, which can operate from  $\pm 2V$  supply. The features are low offset voltage, low bias current and low current consumption.

The package lineup is DIP, DMP and others compact, which is SON (Small Package on Leadless), so that the NJM14558 is suitable for portable audio and any kind of signal amplifier.

### PACKAGE OUTLINE



NJM14558D



NJM14558M



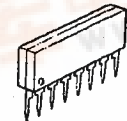
NJM14558E



NJM14558V



NJM14558R

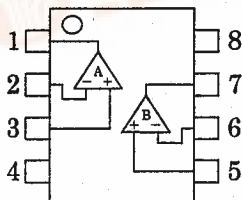


NJM14558L

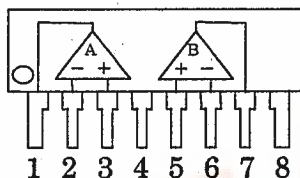
### FEATURES

- Operating Voltage ( $\pm 2.0V \sim \pm 7.0V$ )
  - Input Offset Voltage (3mV max.)
  - Slew Rate ( $2.5V/\mu s$  typ.)
  - Bipolar Technology
  - Package Outline
- DIP8, DMP8, EMP8, SSOP8, VSP8, SIP8, SON8(PRELIMINARY)

### PIN CONFIGURATION



NJM14558/14558M/14558E  
NJM14558V/14558R  
NJM14558x(PRELIMINARY)

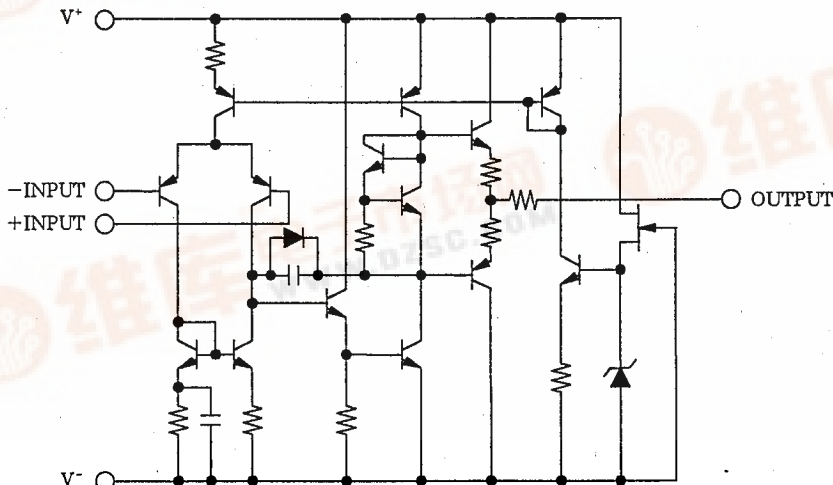


NJM14558L

### PIN FUNCTION

1. A OUTPUT
2. A-INPUT
3. A+INPUT
4. V-
5. B+INPUT
6. B-INPUT
7. B OUTPUT
8. V+

### EQUIVALENT CIRCUIT(1/2 Shown)



**■ ABSOLUTE MAXIMUM RATINGS (Ta=25°C)**

PARAMETER	SYMBOL	RATINGS	UNIT
Supply Voltage	$V^+/V^-$	$\pm 7.5$	V
Differential Input Voltage	$V_{ID}$	$\pm 14$	V
Input Voltage	$V_{IC}$	$\pm 7$ (note)	V
Power Dissipation	$P_D$	(DIP8) 500 (DMP8) 300 (EMP8) 300 (SSOP8) 250 (VSP8) 320 (SIP8) 800 (SON8) U.D	mW
Operating Temperature Range	$T_{opr}$	-40~+85	°C
Storage Temperature Range	$T_{stg}$	-40~+125	°C

(note) For supply voltage less

**■ ELECTRICAL CHARACTERISTICS ( $V^+/V^- = \pm 5V$ , Ta=25°C)**

PARAMETER	SYMBOL	TEST CONDITION	MIN.	TYP.	MAX.	UNIT
Operating Voltage	$V_{opr}$		$\pm 2$	—	$\pm 7$	V
Input Offset Voltage	$V_{IO}$	$R_S \leq 10k\Omega$	—	0.5	3	mV
Input Offset Current	$I_{IO}$		—	5	50	nA
Input Bias Current	$I_B$		—	70	250	nA
Input Resistance	$R_{IN}$		0.3	5	—	M $\Omega$
Large Signal Voltage Gain	$A_V$	$R_L \geq 2k\Omega, V_O = \pm 3V$	86	100	—	dB
Maximum Output Voltage Swing (+)	$V_{OM}^+$	$R_L \geq 2k\Omega$	3.5	4.0	—	V
Maximum Output Voltage Swing (-)	$V_{OM}^-$	$R_L \geq 2k\Omega$	—	-3.5	-3.0	V
Input Common Mode Voltage Range	$V_{ICM}$		$\pm 3.0$	$\pm 4.0$	—	V
Common Mode Rejection Ratio	CMR	$R_S \leq 10k\Omega$	70	90	—	dB
Supply Voltage Rejection Ratio	SVR	$R_S \leq 10k\Omega$	76.5	90	—	dB
Operating Current	$I_{CC}$		—	2.7	4.5	mA
Slew Rate	SR		—	2.5	—	V/ $\mu s$
Equivalent Input Noise Voltage	$V_{NI}$	RIAA, $R_S = 2.2k\Omega$ , 30kHz:LPF	—	1.4	—	$\mu V_{rms}$
Gain Bandwidth Product	GB		—	5	—	MHz

# NJM14558

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## MEMO

**[CAUTION]**

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