

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



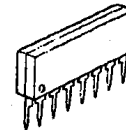
NJM14558E



NJM14558V



NJM14558R

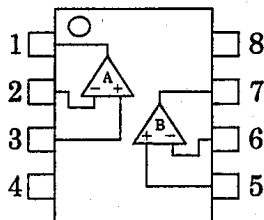


NJM14558L

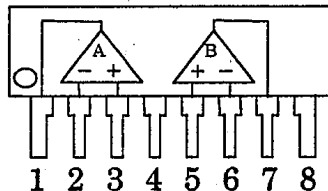
■ FEATURES

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

■ PIN CONFIGURATION



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

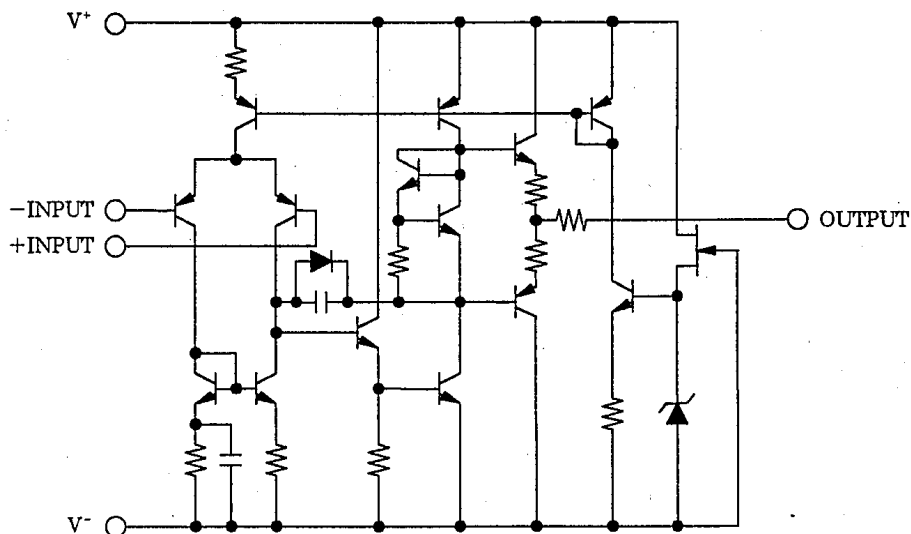


NJM14558L

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^-	± 7.5	V
Differential Input Voltage	V_{ID}	± 14	V
Input Voltage	V_{IC}	± 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}	$-40 \sim +85$	°C
Storage Temperature Range	T_{stg}	$-40 \sim +125$	°C

(note) For supply voltage less

■ ELECTRICAL CHARACTERISTICS ($V^+/V^- = \pm 5V$, $T_a = 25^\circ C$)

PARAMETER	SYMBOL	TEST CONDITION	MIN.	TYP.	MAX.	UNIT
Operating Voltage	V_{opr}		± 2	—	± 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	—	MΩ
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}		± 3.0	± 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/ μs
Equivalent Input Noise Voltage	V_{NI}	RIAA, $R_S = 2.2k\Omega$, 30kHz:LPF	—	1.4	—	μV_{rms}
Gain Bandwidth Product	GB		—	5	—	MHz

MEMO

[CAUTION]

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