

## MONAURAL MICROPHONE AMPLIFIER

### ■ GENERAL DESCRIPTION

The NJM2118 is a monaural microphone amplifier with current limit.

The low operating current and 3V or 5V operation are easy apply to portable items such as camcorder, microphone module and others.

The very small package of SSOP8 makes downsized PCB design.

### ■ PACKAGE OUTLINE



NJM2118M

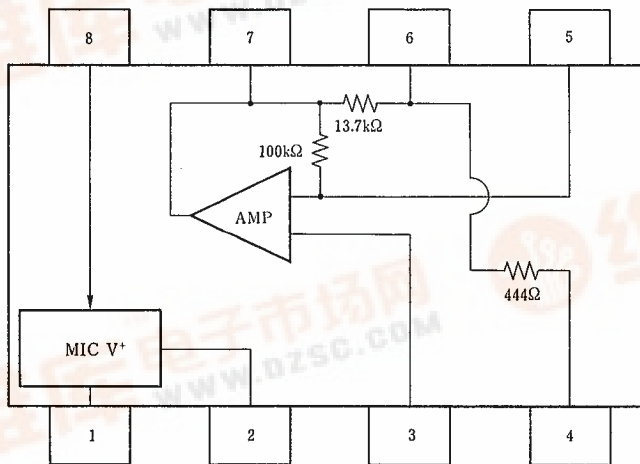


NJM2118V

### ■ FEATURES

- Operating Voltage (+2.7V ~ +5.3V)
- Low Operating Current (1.0mA typ.)
- Low Noise (30  $\mu$ Vrms typ.)
- Bipolar Technology
- Package Outline DMP8, SSOP8

### ■ PIN CONFIGURATION


 NJM2118M  
 NJM2118V

#### PIN FUNCTION

- 1 : MIC V<sup>+</sup>
- 2 : C-NOISE
- 3 : +V<sub>IN</sub>
- 4 : GND
- 5 : -V<sub>IN</sub>
- 6 : AMP NFB
- 7 : AMP OUT
- 8 : V<sup>+</sup>

# NJM2118

## ■ ABSOLUTE MAXIMUM RATINGS

( $T_a=25^\circ\text{C}$ )

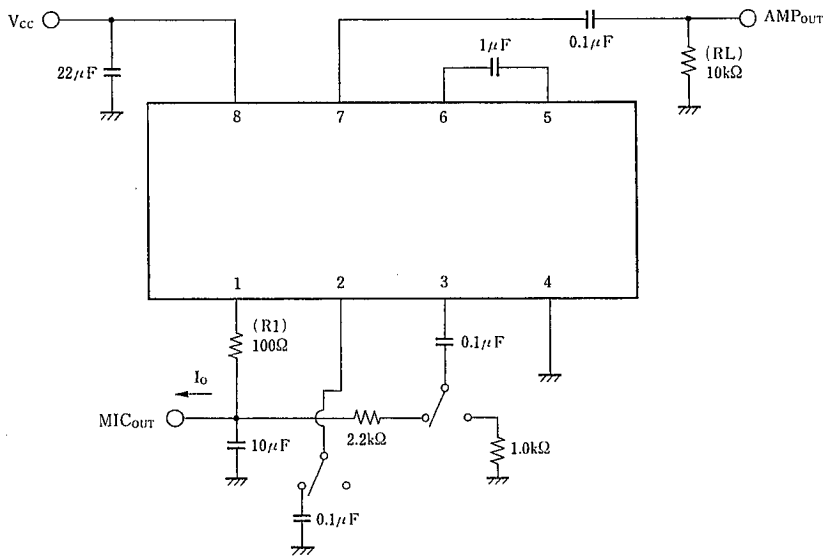
PARAMETER	SYMBOL	RATINGS	UNIT
Supply Voltage	$V^+$	+7	V
Power Dissipation	$P_D$	(SSOP8) 250 (DMP8) 300	mW
Operating Temperature Range	$T_{opr}$	-20~+75	$^\circ\text{C}$
Storage Temperature Range	$T_{stg}$	-40~+125	$^\circ\text{C}$

## ■ ELECTRICAL CHARACTERISTICS

( $V^+=5\text{V}$ ,  $T_a=25^\circ\text{C}$ )

PARAMETER	SYMBOL	TEST CONDITIONS	MIN.	TYP.	MAX.	UNIT
Operating Voltage	$V^+$		+2.7	-	+5.3	V
Operating Current	$I_{cc}$		-	1	2	mA
Voltage Gain	$G_v$	$f=1\text{kHz}$	27	28	29	dB
Total Harmonic Distortion	THD	$f=1\text{kHz}$ , $V_o=300\text{mV}_{rms}$ , $R_L=10\text{k}\Omega$	-	0.05	0.5	%
Maximum Output Voltage	$V_{om}$	$f=1\text{kHz}$ , THD=1%, $R_L=10\text{k}\Omega$	2.0	2.5	-	$V_{pp}$
Output Noise Voltage 1	$V_{n1}$	$R_L=100\Omega$ , $I_o=2.5\text{mA}$ , Weight JIS-A	-	30	35	$\mu\text{V}_{rms}$
Output Noise Voltage 2	$V_{n2}$	$R_g=1\text{k}\Omega$ , Weight JIS-A	-	20	42	$\mu\text{V}_{rms}$
Input Impedance	$R_{in}$	$f=1\text{kHz}$	-	110	-	$\text{k}\Omega$
Output Impedance	$R_o$	$f=1\text{kHz}$	-	18	-	$\Omega$
Mic Output Supply Voltage 1	MI Cout1	$I_o=0\text{mA}$	2.0	2.45	-	V
Mic Output Supply Voltage 2	MI Cout2	$I_o=2.5\text{mA}$ , $R_L=100\Omega$	2.0	2.15	-	V

## ■ TEST CIRCUIT



# NJM2118

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## MEMO

**[CAUTION]**

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