MONORAL MIC AMP. for VIDEO CAMERA

■ GENERAL DESCRIPTION

NJM2110 is a monaural microphone amplifier for video camera. It can operate from 2.7V.

The performance is low Operating current and small package, therefore it is easy to design the downsizing and low consumption.

■ PACKAGE OUTLINE

NJM2110M

NJM2110V

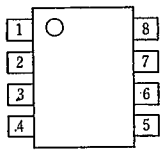
■ FEATURES

- Operating Voltage 2.7V～5.3V
- Low Operating Current (V^+=5V:3.5mA Typ.)
  (V^+=3.3V:1.1mA Typ.)
- Short Circuit Protection for External MIC.
- Package Outline DMP8, SSOP8
- Bipolar Technology

■ APPLICATION

- Video Camera

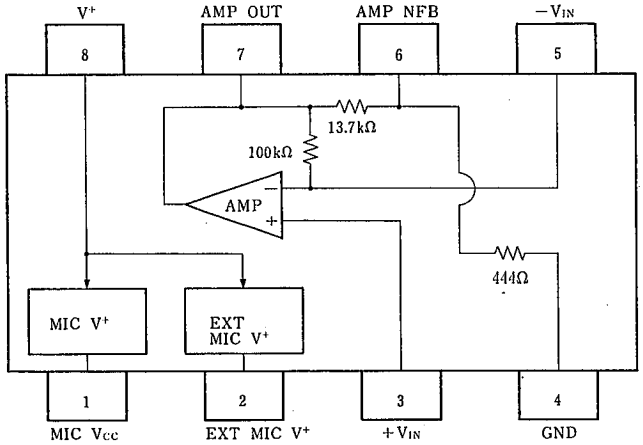
■ PIN CONFIGURATION



1. MIC V^+
2. EXT MIC V^+
3. $+V_{IN}$
4. GND
5. $-V_{IN}$
6. AMP NFB
7. AMP OUT
8. V^+

NJM2110M
NJM2110V

■ BLOCK DIAGRAM



■ ABSOLUTE MAXIMUM RATINGS

PARAMETER	SYMBOL	RATINGS	UNIT
Supply Voltage	V^+	7.0	V
Power Dissipation	P_D	(SSOP8) 250 (DMP8) 300	mW
Operating Temperature Range	T_{opr}	−20～+75	℃
Storage Temperature Range	T_{stg}	−40～+125	℃

■ ELECTRICAL CHARACTERISTICS

(V^+=5V, Ta=25℃)

PARAMETER	SYMBOL	TEST CONDITION	MIN.	TYP.	MAX.	UNIT
Operating Current 1	I_{CC} 1		—	3.5	4.5	mA
Operating Current 2	I_{CC} 2	V^+= 3.3V	—	1.1	2.0	mA
Transfer Gain	Gv	f=1kHz	27	28	29	dB
Total Harmonic Distortion	THD	f=1kHz, Vo=300mV$_{rms}$, R_L =10kΩ	—	0.05	0.2	%
Maximum Output Voltage	V_{om}	f=1kHz, V^+=2.7V, THD=1%, R_L =10kΩ	2.0	2.5	—	V_{P-P}
Output Noise Voltage	V_{no}	R_g =1kΩ, C=0.1μF, A−Weight	—	30	42	μVrms
Input Resistance Gain	Zin	f=1kHz	—	110	—	kΩ
Output Resistance	Zo	f=1kHz	—	10	—	Ω
MIC Output Supply Voltage 1	MIC_O 1		2.0	2.35	2.7	V
MIC Output Supply Voltage 2	MIC_O 2	V^+=2.7V	2.0	2.25	2.5	V
External Output Supply Voltage	EXT_{out}	Io=25mA	4.0	—	—	V
Output Short Circuit Current	Ios	EXTo=0V	—	—	30	mA

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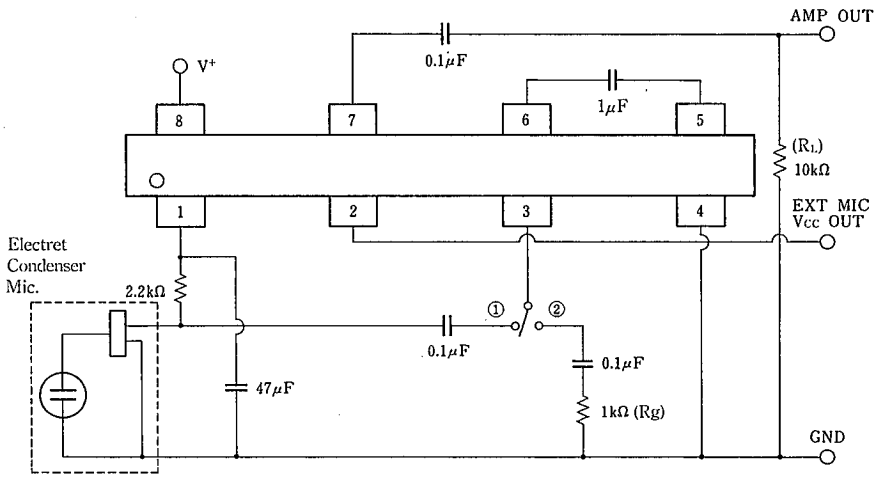
■ TEST CIRCUIT



※SW②:Output Noise Voltage TEST

MEMO