

UNISONIC TECHNOLOGIES CO., LTD

M2110

LINEAR INTEGRATED CIRCUIT

MONAURAL MIC AMP. FOR VIDEO CAMERA

DESCRIPTION

The UTC M2110 is a monaural microphone amplifier. It's used for video camera which can operate from 2.7V.

For the performance is small package and low operating current. So it is easy to design the downsizing and low consumption.

FEATURES

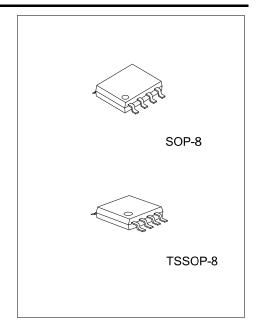
*Operating voltage: 2.7V~5.3V

*Low operating current: V+=5V, 3.5mA (Typ,)

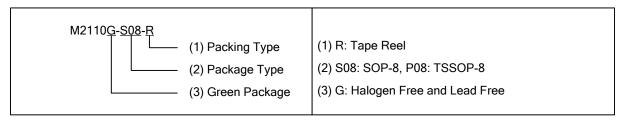
V+=3.3V, 1.1mA (Typ.)

*Short circuit protection for external MIC.

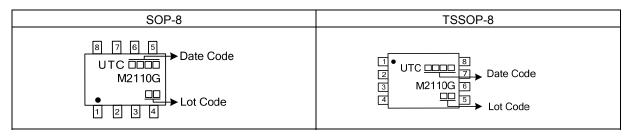
ORDERING INFORMATION



Ordering Number	Package	Packing
M2110G-S08-R	SOP-8	Tape Reel
M2110G-P08-R	TSSOP-8	Tape Reel

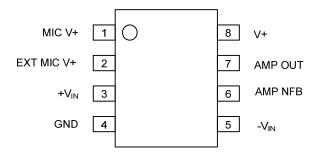


MARKING



www.unisonic.com.tw 1 of 2

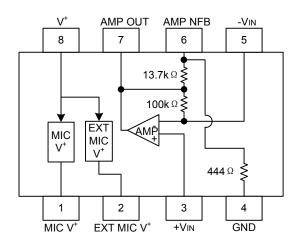
■ PIN CONFIGURATION



■ PIN DESCRIPTIONS

PIN NO.	PIN NAME	I/O	DESCRIPTION	
1	MIC V+			
2	EXT MIC V+	0	External microphone power supply	
3	+V _{IN}	I	Microphone amplifier non-inverting input	
4	GND		Ground	
5	-V _{IN}	I	Microphone amplifier inverting input	
6	AMP NFB			
7	AMP OUT	0	Amplifier output	
8	V+		Power supply	

■ BLOCK DIAGRAM



■ ABSOLUTE MAXIMUM RATINGS (T_A=25°C, unless otherwise specified)

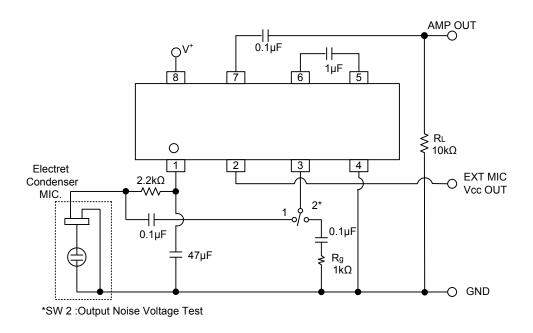
PARAMETER		SYMBOL	RATINGS	UNIT
Supply Voltage		V ⁺	7.0	V
Power Dissipation	TSSOP-8	Ь	250	mW
	SOP-8	P _D	300	mW
Operating Temperature		T _{OPR}	-20 ~+75	°C
Storage Temperature		T _{STG}	-40 ~+125	°C

Note: Absolute maximum ratings are those values beyond which the device could be permanently damaged. Absolute maximum ratings are stress ratings only and functional device operation is not implied.

■ ELECTRICAL CHARACTERISTICS (V+= 5V, T_A=25°C, unless otherwise specified))

PARAMETER	SYMBOL	TEST CONDITION	MIN	TYP	MAX	UNIT
Operating Current 1	Icc 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	Vo=300mVrms, R _L =10k Ω , f=1KHz		0.05	0.2	%
Maximum Output Voltage	V _{O(MAX)}	V^{\dagger} = 2.7V, R _L =10kΩ, f=1kHz,THD=1%	2.0	2.5		Vp-p
Output Noise Voltage	eN	Rg=1kΩ, C=0.1μF, A-Weight		30	42	μVrms
Input Resistance Gain	Z _{IN}	f=1kHz		110		kΩ
Output Resistance	Z _{OUT}	f=1kHz		10		Ω
MIC Output Supply Voltage 1	MICo 1		2.0	2.35	2.7	V
MIC Output Supply Voltage 2	MICo 2	V ⁺ = 2.7V	2.0	2.25	2.5	V
External Output Supply Voltage	EXT _{OUT}	lo=25mA	4.0			V
Output Short Circuit Current	I _{O(SC)}	EXT _{OUT} =0V			30	mA

■ TEST CIRCUIT



UTC assumes no responsibility for equipment failures that result from using products at values that exceed, even momentarily, rated values (such as maximum ratings, operating condition ranges, or other parameters) listed in products specifications of any and all UTC products described or contained herein. UTC products are not designed for use in life support appliances, devices or systems where malfunction of these products can be reasonably expected to result in personal injury. Reproduction in whole or in part is prohibited without the prior written consent of the copyright owner. The information presented in this document does not form part of any quotation or contract, is believed to be accurate and reliable and may be changed without notice.