

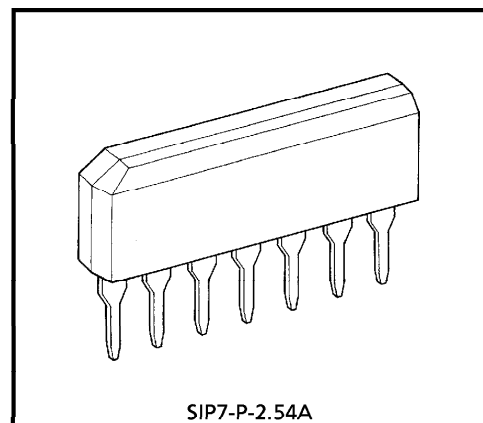
TA2011S

MIC AMP IC

TA2011S is suitable for audio mic amplifier of portable cassette tape recorder and karaoke.

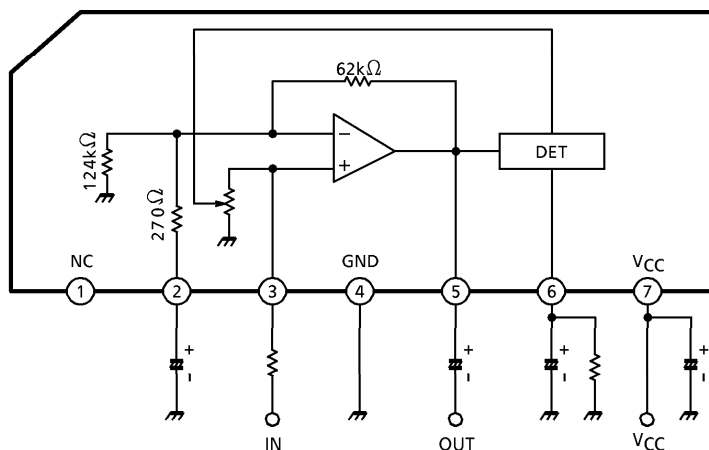
FEATURES

- Built in ALC DET Circuit.
- Built in NFB resistance. (Voltage gain is fixed)
 $G_V = 47\text{dB}$ (Typ.)
: $f = 1\text{kHz}$, ALC OFF
- ALC Level
: $V_{\text{out}}(\text{ALC}) = 0.6V_{\text{rms}}$ (Typ.)
- ALC Range
: $R_{\text{ALC}} = 58\text{dB}$ (Typ.)
- Operating Supply Voltage Range
: $V_{\text{CC}}(\text{opr}) = 4 \sim 14\text{V}$ ($T_a = 25^\circ\text{C}$)



Weight : 0.7g (Typ.)

BLOCK DIAGRAM



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

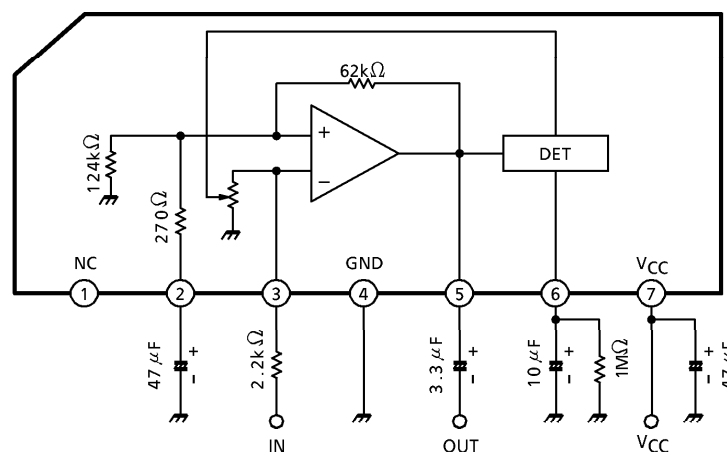
CHARACTERISTIC	SYMBOL	RATING	UNIT
DC Supply Voltage	V_{CC}	14	V
Power Dissipation	P_D (Note)	900	mW
Operating Temperature	T_{opr}	$-25 \sim 75$	$^\circ\text{C}$
Storage Temperature	T_{stg}	$-55 \sim 150$	$^\circ\text{C}$

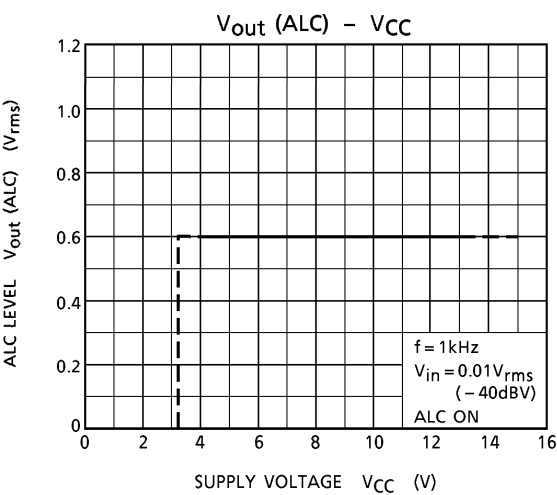
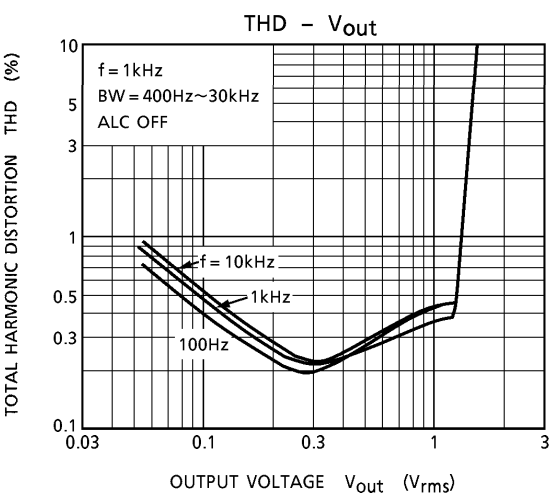
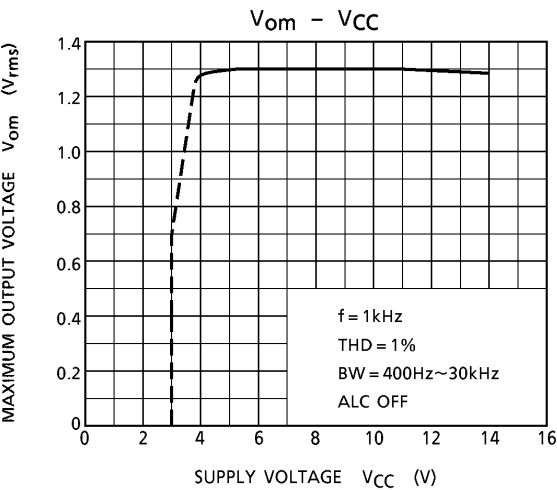
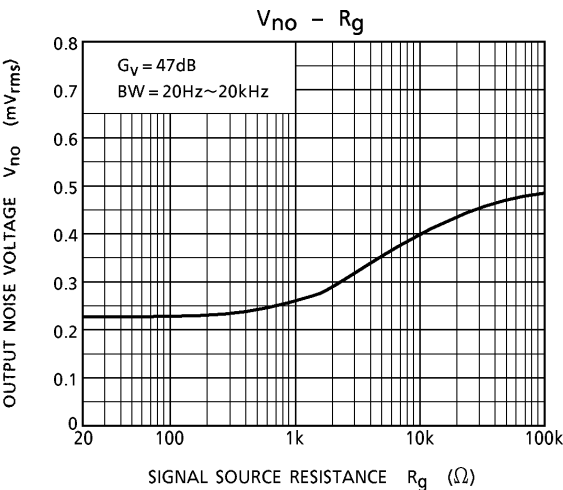
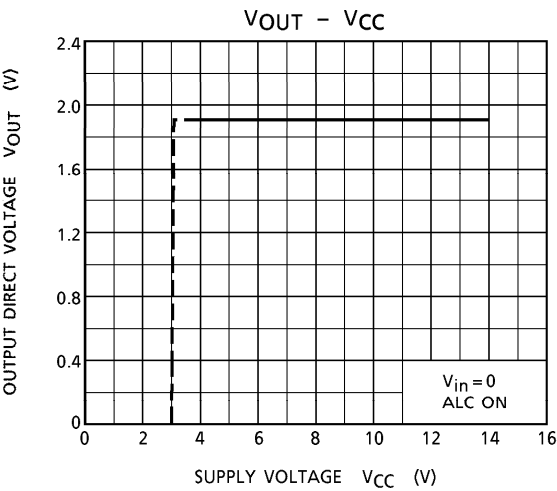
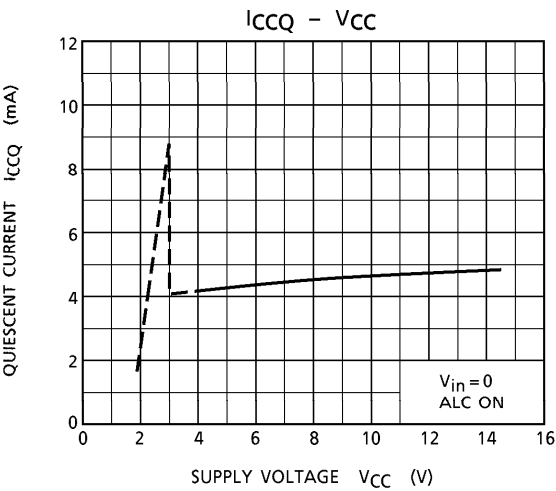
(Note) Derated above $T_a = 25^\circ\text{C}$ in the proportion of $7.2\text{mW}/^\circ\text{C}$.

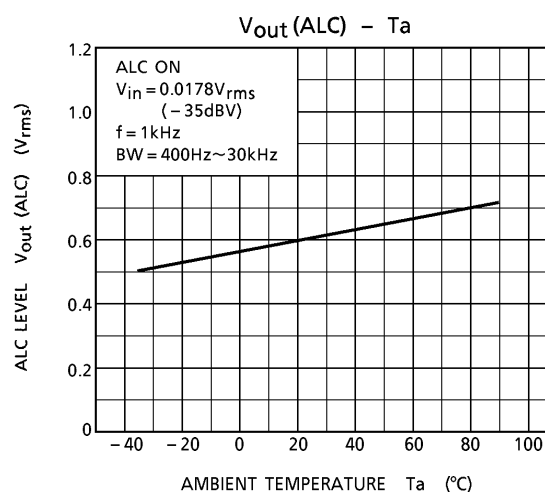
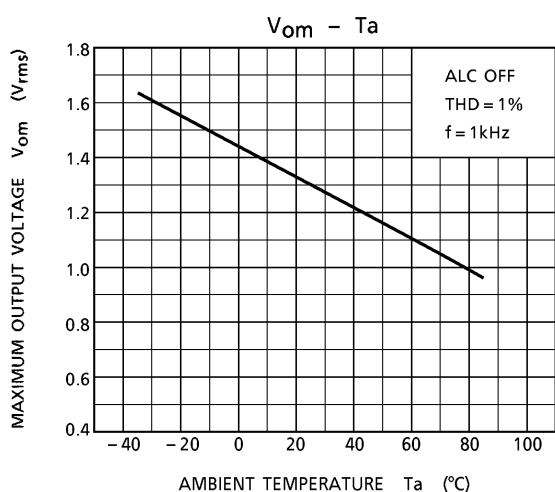
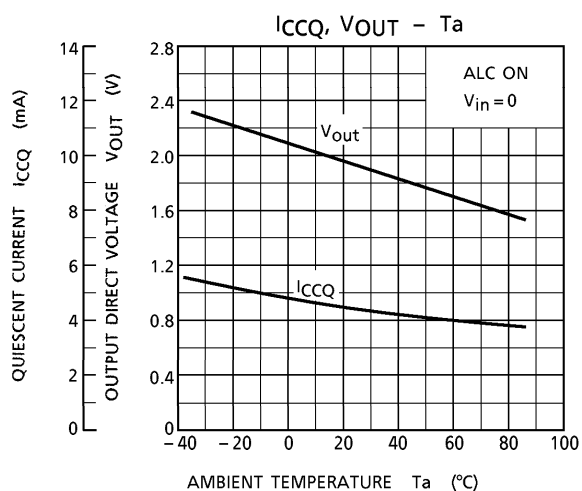
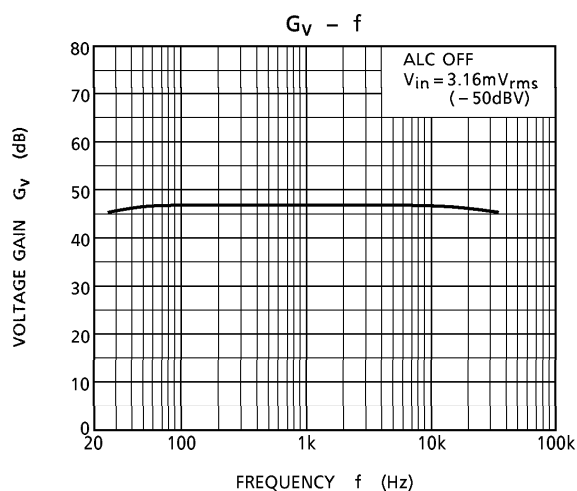
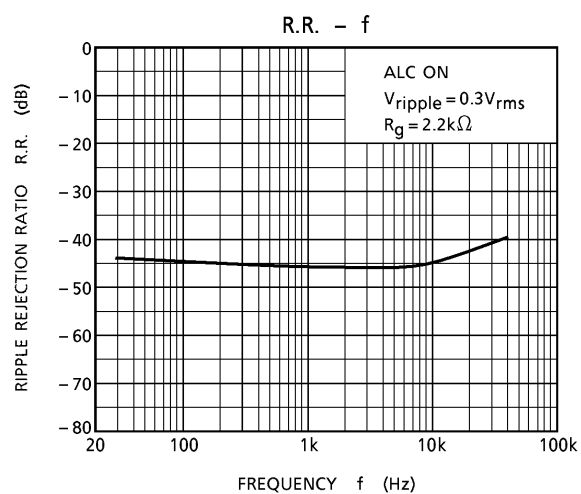
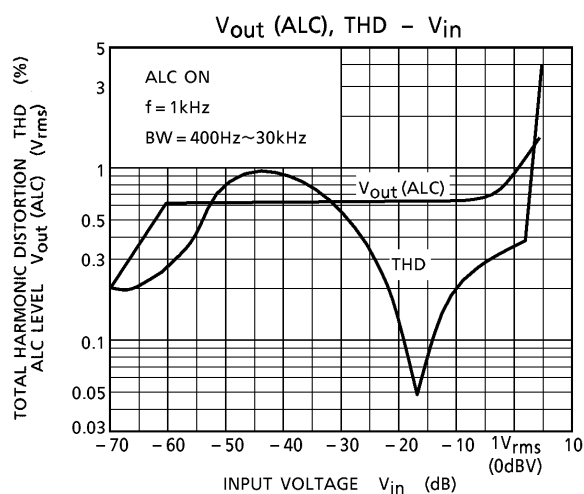
ELECTRICAL CHARACTERISTICS

(Unless otherwise specified, $V_{CC} = 7\text{V}$, $f = 1\text{kHz}$, $R_L = 10\text{k}\Omega$, ALC = OFF, $T_a = 25^\circ\text{C}$)

CHARACTERISTIC	SYMBOL	TEST CIRCUIT	TEST CONDITION	MIN.	TYP.	MAX.	UNIT
Quiescent Current	I_{CCQ}	—	$V_{in} = 0$, ALC ON	—	4.4	8.0	mA
Voltage Gain	G_V	—	—	45.5	47	48.5	dB
Maximum Output Voltage	V_{om}	—	THD = 1%	1.0	1.3	—	V_{rms}
Total Harmonic Distortion	THD	—	$V_{out} = 0.3V_{rms}$ $BW = 400\text{Hz} \sim 30\text{kHz}$	—	0.2	0.5	%
ALC Level	$V_{out}(\text{ALC})$	—	$V_{in} = 0.0178V_{rms}$ (−35dBV)	0.5	0.6	0.7	V_{rms}
ALC Range	R_{ALC}	—	3dB up	40	58	—	dB
Attack Time	T_{ATK}	—	$V_{in} = 1.41\text{mV}_{rms}$ (−57.0dBV) → $0.014V_{rms}$ (−37.0dBV)	—	0.05	—	s
Recovery Time	T_{RCV}	—	$V_{in} = 0.014V_{rms}$ (−37.0dBV) → 0.447mV_{rms} (−67.0dBV)	—	2	—	s
Ripple Rejection Ratio	R.R.	—	$f = 100\text{Hz}$, $V_{ripple} = 0.1V_{rms}$	−30	−46	—	dB
Input Resistance	R_{IN}	—	—	—	20	—	$\text{k}\Omega$
Equivalent Input Noise Voltage	V_{ni}	—	$BW = 20\text{Hz} \sim 20\text{kHz}$ $G_V = 47\text{dB}$, $R_g = 2.2\text{k}\Omega$	—	1.4	3.0	μV

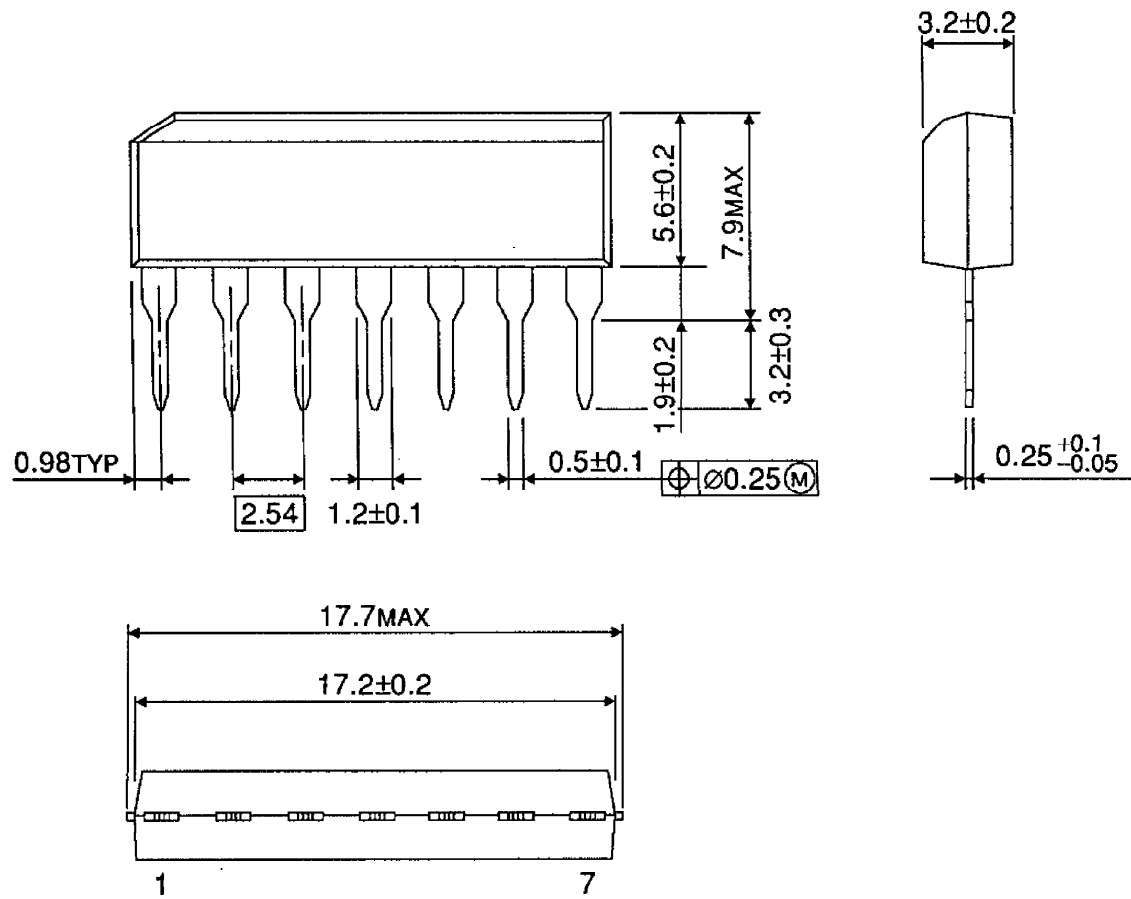
TEST CIRCUIT





PACKAGE DIMENSIONS
SIP7-P-2.54A

Unit : mm



Weight : 0.7g (Typ.)

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000707EBA

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