

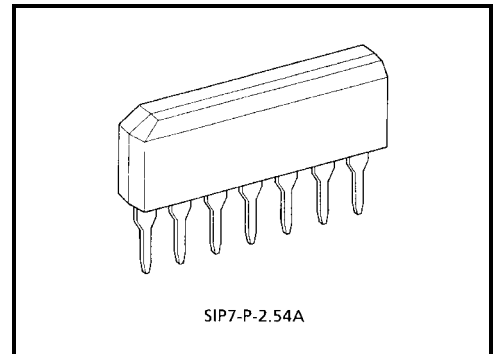
TA2011S

Mic Amp IC

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

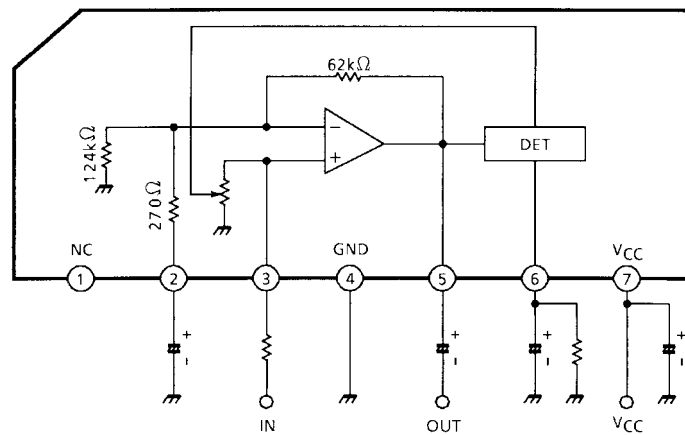
Features

- 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: $V_{\text{out (ALC)}} = 0.6 V_{\text{rms (typ.)}}$
- ALC Range: $R_{\text{ALC}} = 58\text{dB (typ.)}$
- Operating Supply Voltage Range:
 $V_{\text{CC (opr)}} = 4\sim 14\text{ V (Ta = 25}^\circ\text{C)}$
- When the ALC circuit is off, pin 6 must be connected directly to ground.



Weight: 0.7 g (typ.)

Block Diagram



Maximum Ratings (Ta = 25°C)

Characteristics	Symbol	Rating	Unit
DC supply voltage	V _{CC}	14	V
Power dissipation	P _D (Note)	900	mW
Operating temperature	T _{opr}	-25~75	°C
Storage temperature	T _{stg}	-55~150	°C

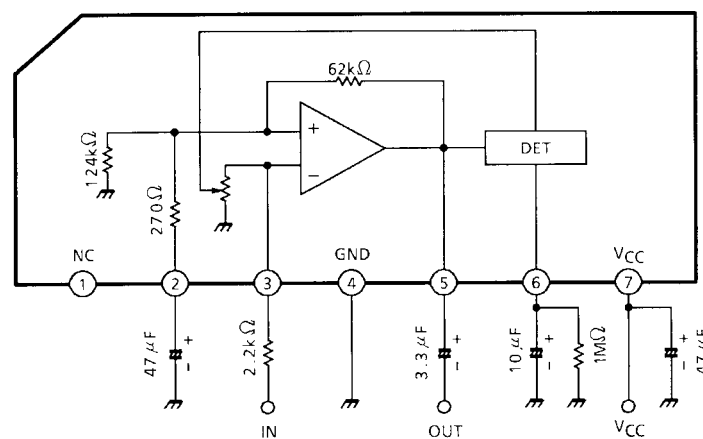
Note: Derated above Ta = 25°C in the proportion of 7.2 mW/°C.

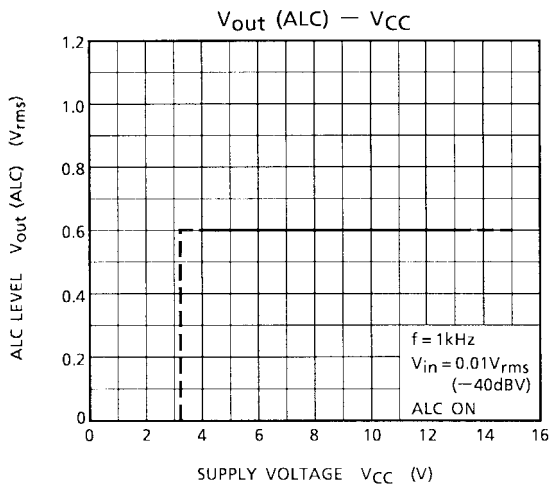
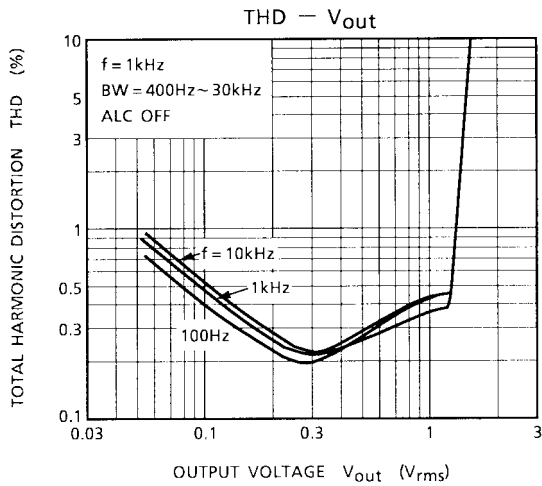
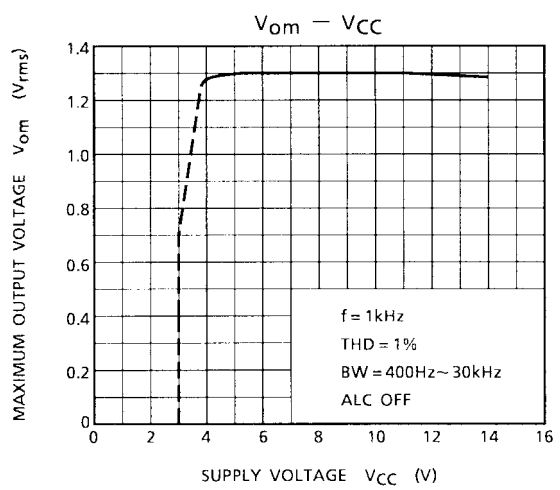
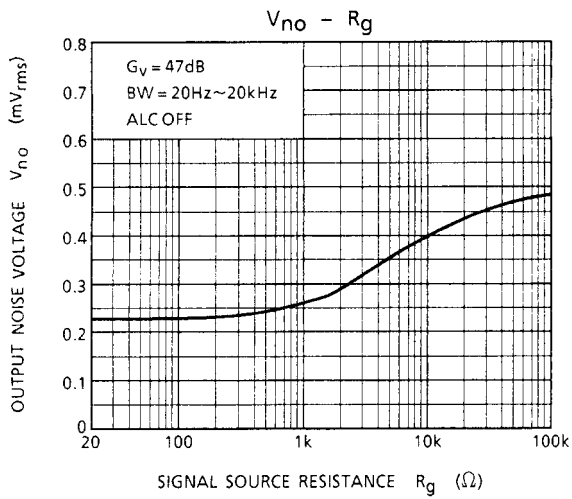
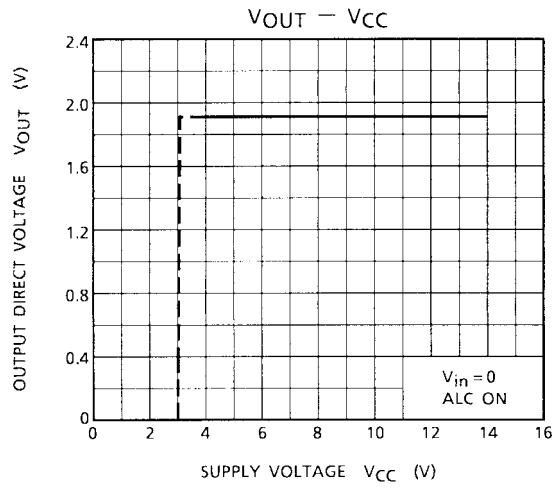
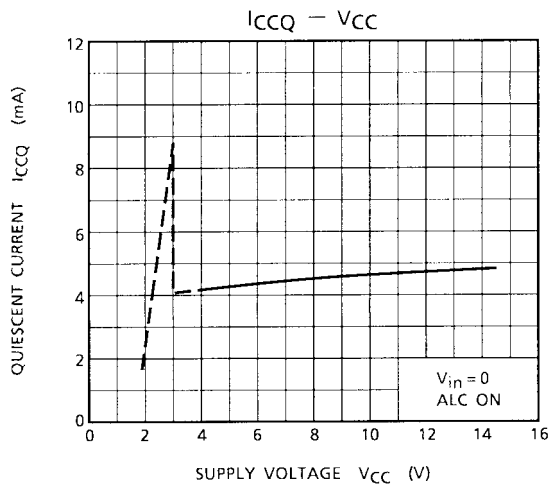
Electrical Characteristics

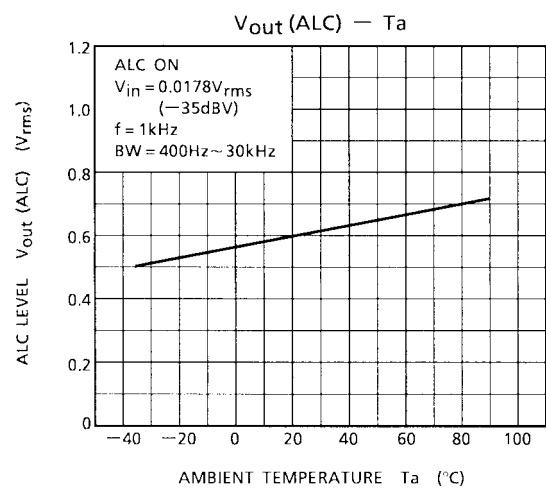
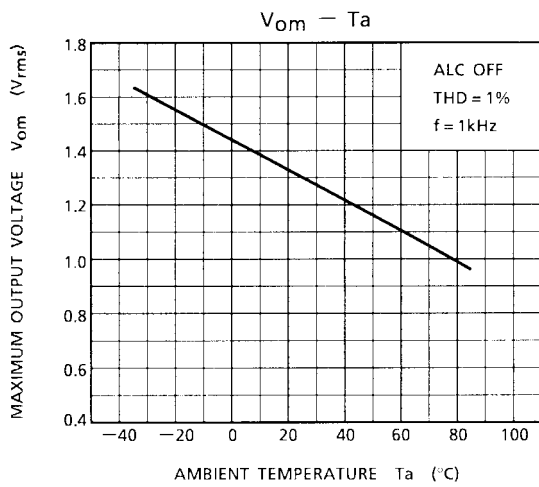
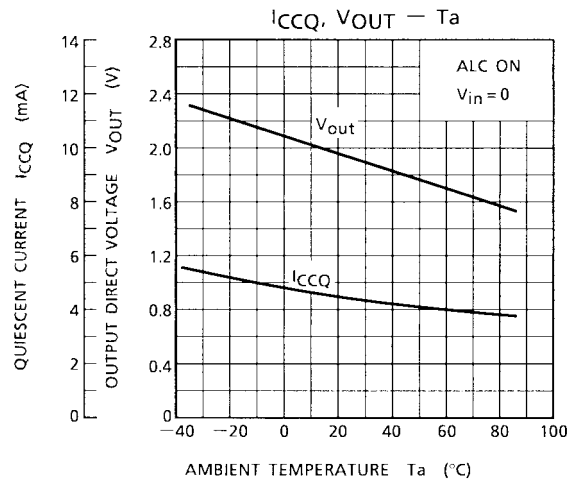
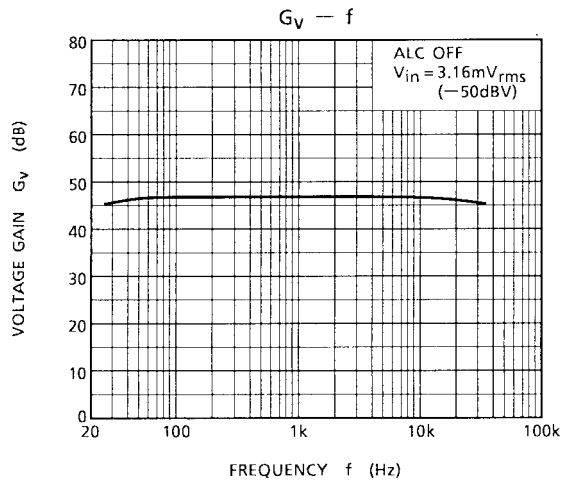
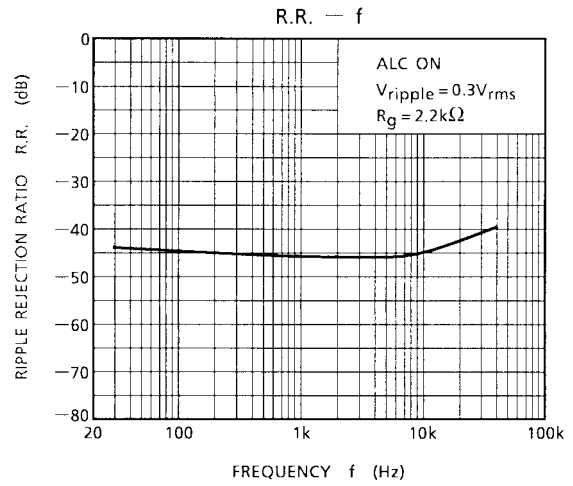
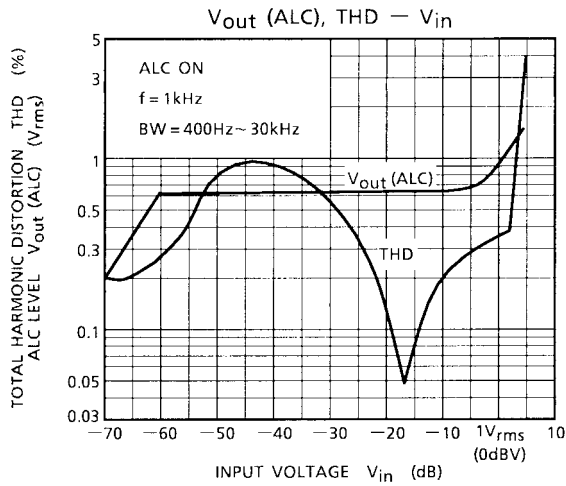
(unless otherwise specified, V_{CC} = 7 V, f = 1 kHz, R_L = 10 kΩ, ALC = OFF, Ta = 25°C)

Characteristics	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} = 0.3 V _{rms} BW = 400 Hz~30 kHz	—	0.2	0.5	%
ALC level	V _{out} (ALC)	—	V _{in} = 0.0178 V _{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 mV _{rms} (-57.0dBV) → 0.014 V _{rms} (-37.0dBV)	—	0.05	—	s
Recovery time	T _{RCV}	—	V _{in} = 0.014 V _{rms} (-37.0dBV) → 0.447 mV _{rms} (-67.0dBV)	—	2	—	s
Ripple rejection ratio	R.R.	—	f = 100 Hz, V _{ripple} = 0.1 V _{rms}	-30	-46	—	dB
Input resistance	R _{IN}	—	—	—	20	—	kΩ
Equivalent input noise voltage	V _{ni}	—	BW = 20 Hz~20 kHz G _V = 47dB, R _g = 2.2 kΩ	—	1.4	3.0	μV

Test Circuit



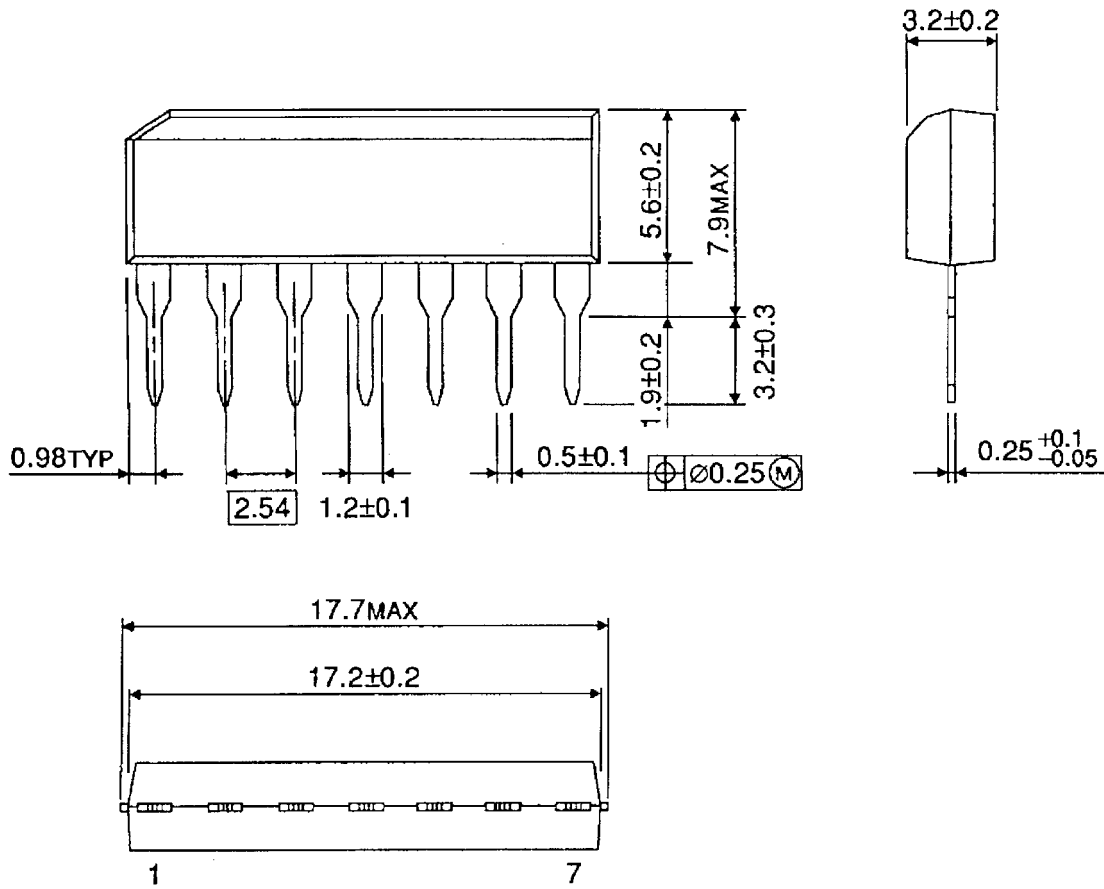




Package Dimensions

SIP7-P-2.54A

Unit : mm



Weight: 0.7 g (typ.)

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