

TOSHIBA BIPOLAR LINEAR INTEGRATED CIRCUIT SILICON MONOLITHIC

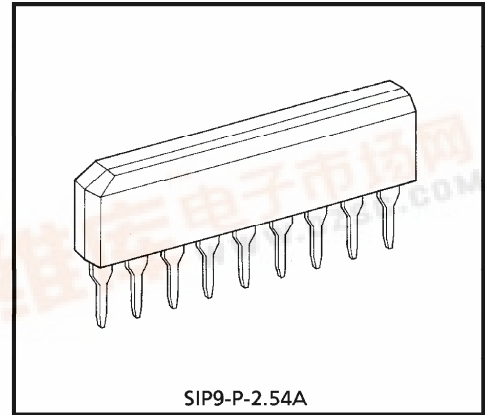
TA8125S

DUAL PRE-AMPLIFIER

The TA8125S is dual output preamplifier designed for car or home use.

FEATURES

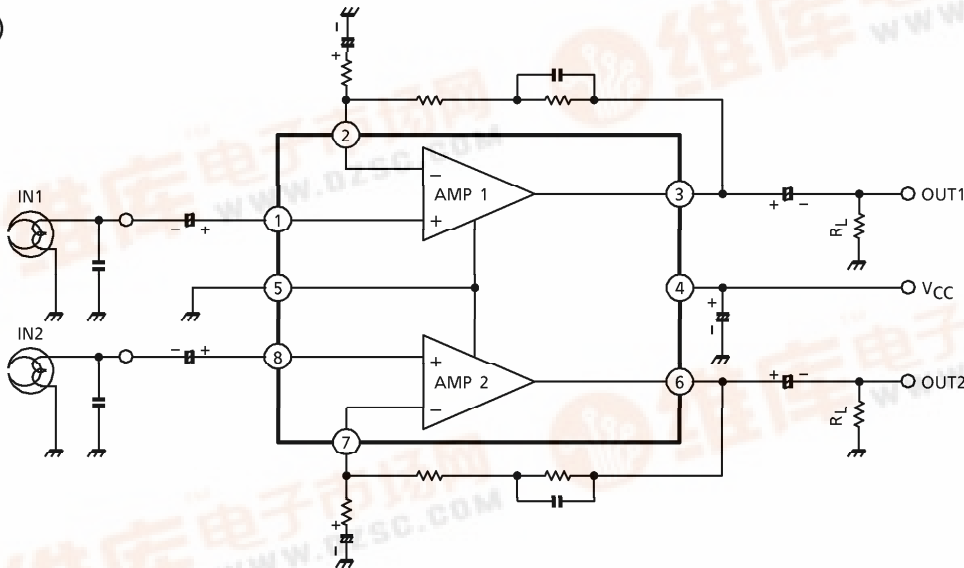
- High Open Loop Voltage Gain
: $G_{VO} = 100\text{dB}$ (Typ.) at $f = 1\text{kHz}$
- Excellent Channel Separation and High Ripple Rejection
: $CH_{sep} = 65\text{dB}$ (Typ.)
($f = 10\text{kHz}$, $R_G = 2.2\text{k}\Omega$, $V_{OUT} = 0.775V_{rms}$ (0dBm))
: R.R. = 50dB (Typ.)
($f_{ripple} = 100\text{Hz}$, $R_G = 2.2\text{k}\Omega$, $V_{OUT} = 0.775V_{rms}$ (0dBm))
- Low Noise
: $V_{NI} = 1.0\mu V_{rms}$ (Typ.) at $R_G = 2.2\text{k}\Omega$, $BW = 20\text{Hz} \sim 20\text{kHz}$, NAB EQ
- Wide Operating Supply Voltage Range : $V_{CC}(\text{opr.}) = 6 \sim 16\text{V}$ ($T_a = 25^\circ\text{C}$)



Weight : 0.92g (Typ.)

BLOCK DIAGRAM

(NAB EQ)



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MAXIMUM RATINGS (Ta = 25°C)

CHARACTERISTIC	SYMBOL	RATING	UNIT
Supply Voltage	V _{CC}	16	V
Power Dissipation (Note)	P _D	700	mW
Operating Temperature	T _{opr}	- 30~80	°C
Storage Temperature	T _{stg}	- 55~150	°C

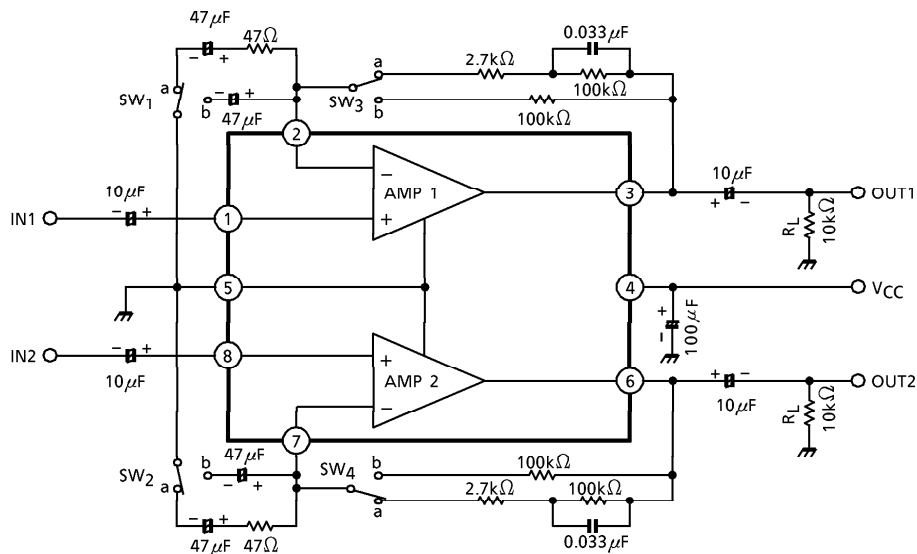
(Note) Derated above Ta = 25°C in the proportion of 5.6mW / °C.

ELECTRICAL CHARACTERISTICS

(Unless otherwise specified, V_{CC} = 6V, f = 1kHz, R_G = 600Ω, R_L = 10kΩ, Ta = 25°C)

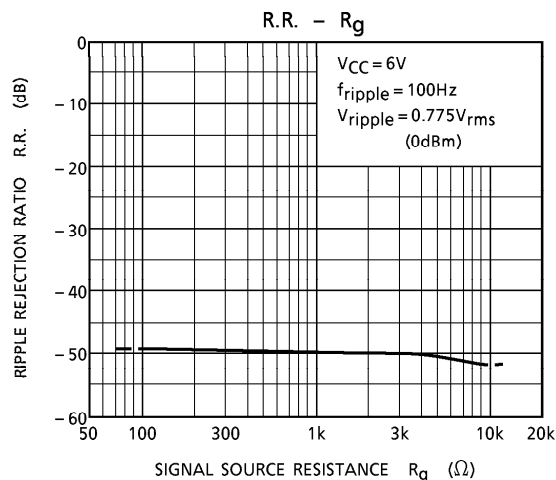
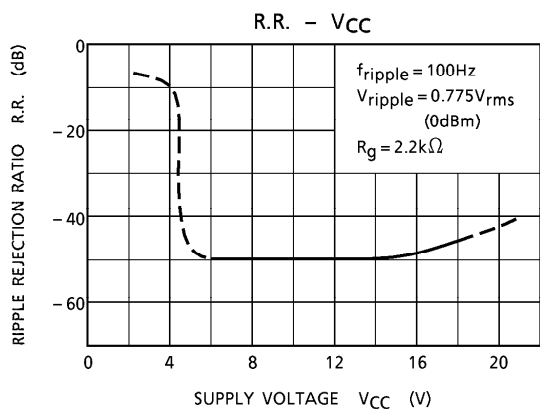
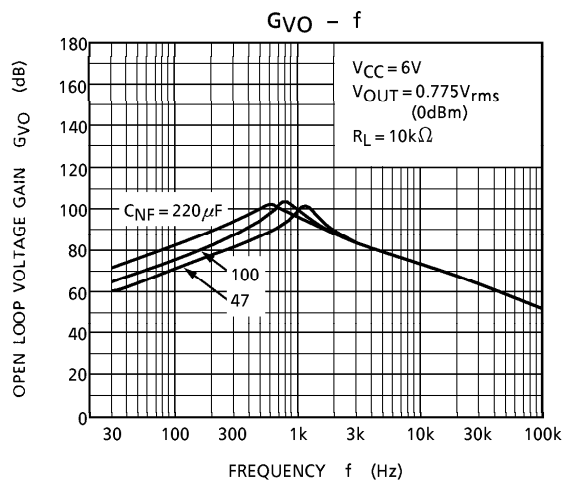
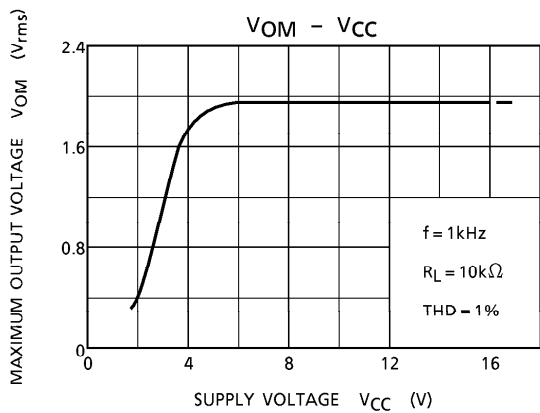
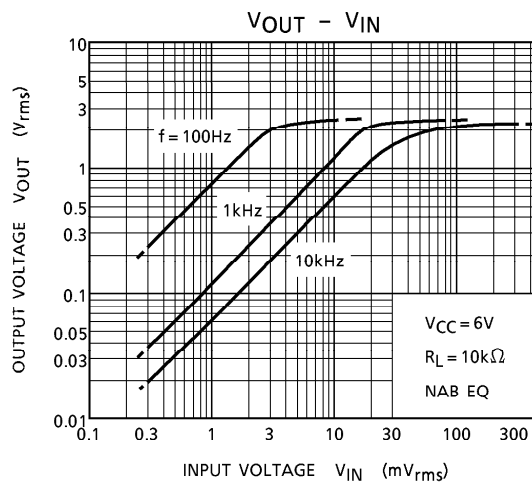
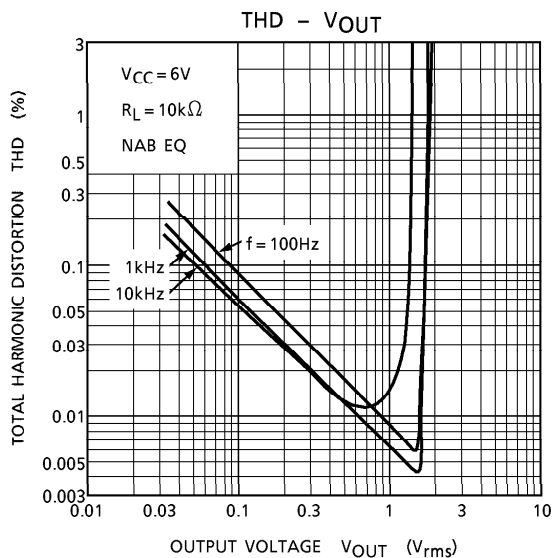
CHARACTERISTIC	SYMBOL	TEST CIRCUIT	TEST CONDITION	MIN.	TYP.	MAX.	UNIT
Quiescent Current	I _{CCQ}	—	V _{IN} = 0	—	3	6	mA
Voltage Gain	G _{VO}	—	V _{OUT} = 7.75μV _{rms} (- 100dBm)	75	100	—	dB
	G _V	—	V _{OUT} = 0.775V _{rms} (0dBm)	38.5	41.5	44.5	
Maximum Output Voltage	V _{OM}	—	THD = 1%	1.0	1.8	—	V
Equivalent Input Noise Voltage	V _{NI}	—	R _G = 2.2kΩ, B.W = 20Hz~20kHz	—	1.0	1.7	μV _{rms}
Input Resistance	R _{IN}	—	—	50	150	—	kΩ
Total Harmonic Distortion	THD	—	V _{OUT} = 0.775V _{rms} (0dBm)	—	0.04	0.25	%
Channel Separation	CH _{sep}	—	f = 10kHz, V _{OUT} = 0.775V _{rms} (0dBm)	—	65	—	dB
Ripple Rejection Ratio	R.R.	—	f = 100Hz, R _G = 2.2kΩ	—	50	—	dB

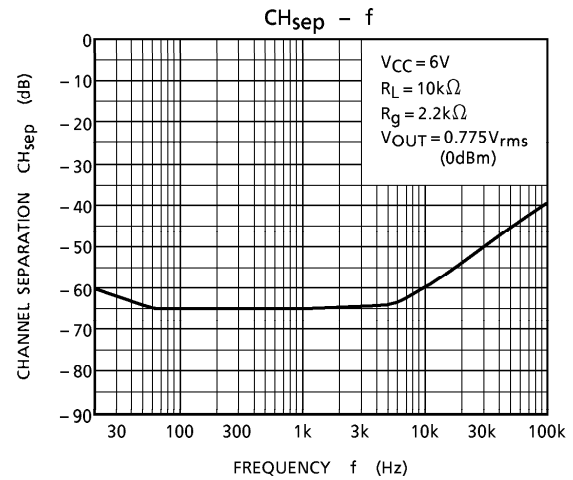
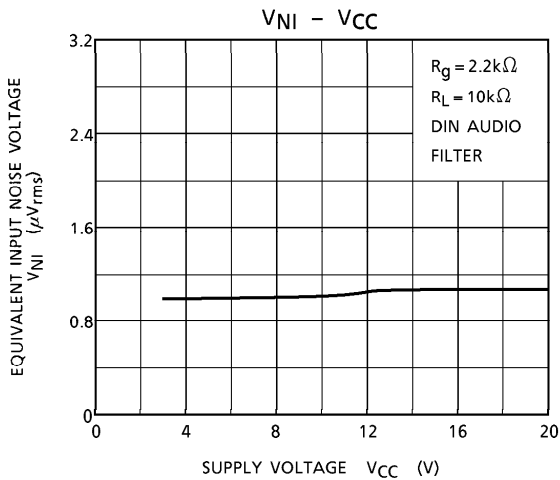
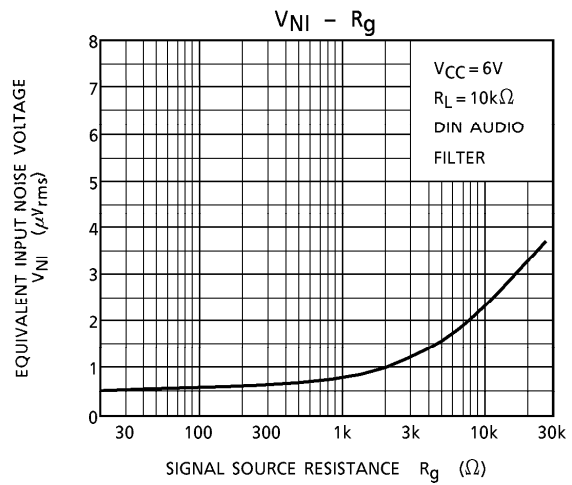
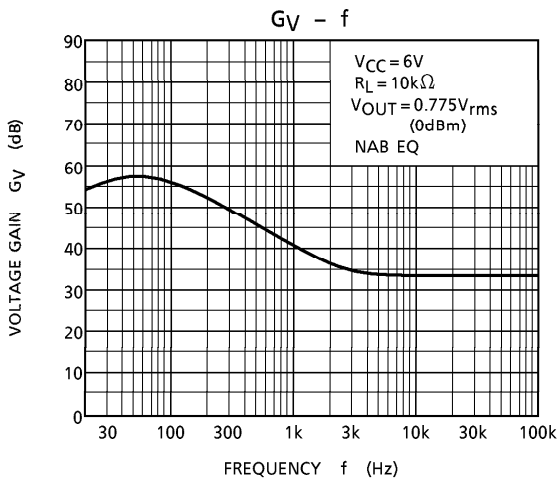
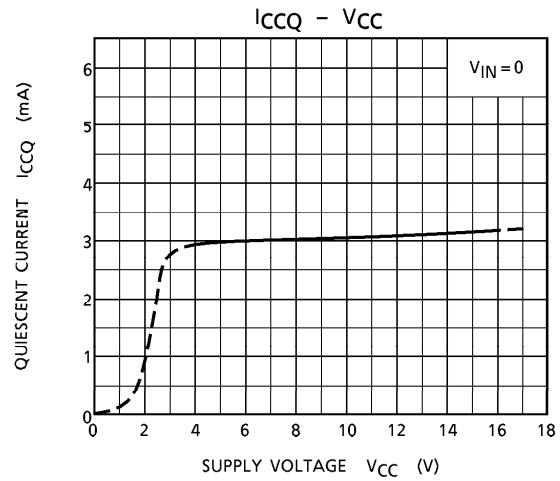
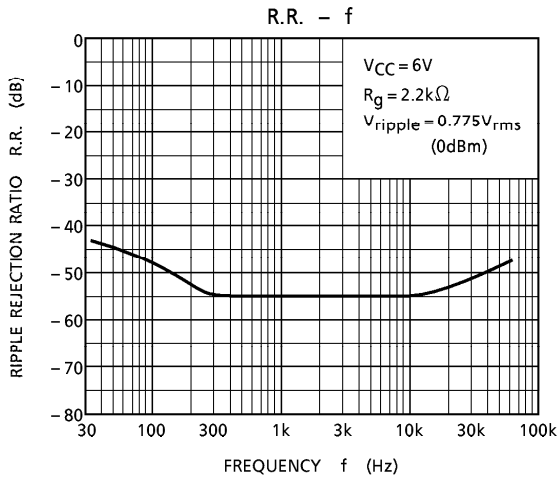
TEST CIRCUIT (Ⓢ pin open or GND)

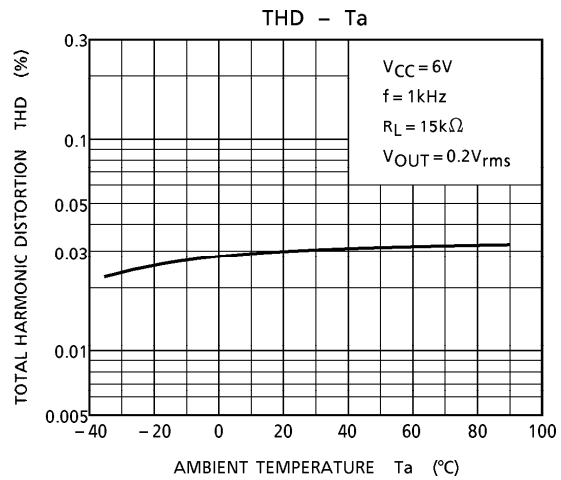
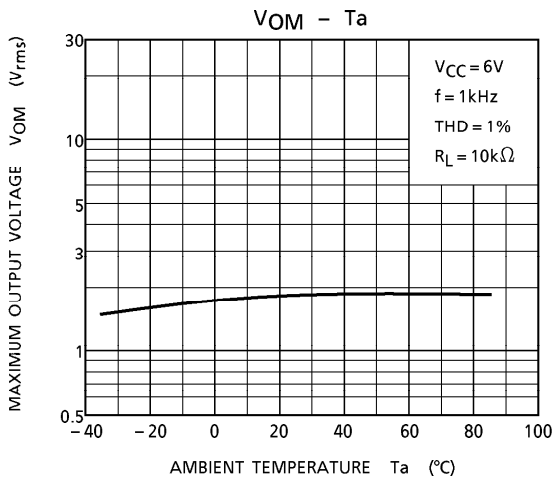
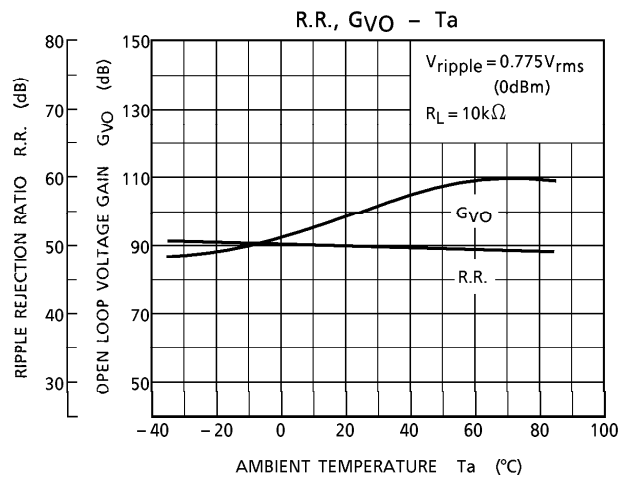
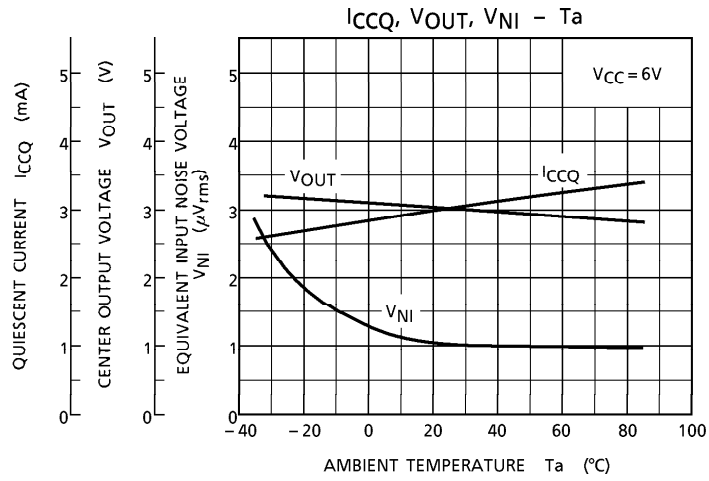


PINⓈ : NC

(*) G_{VO} : SW₁~SW₄→b SIDE

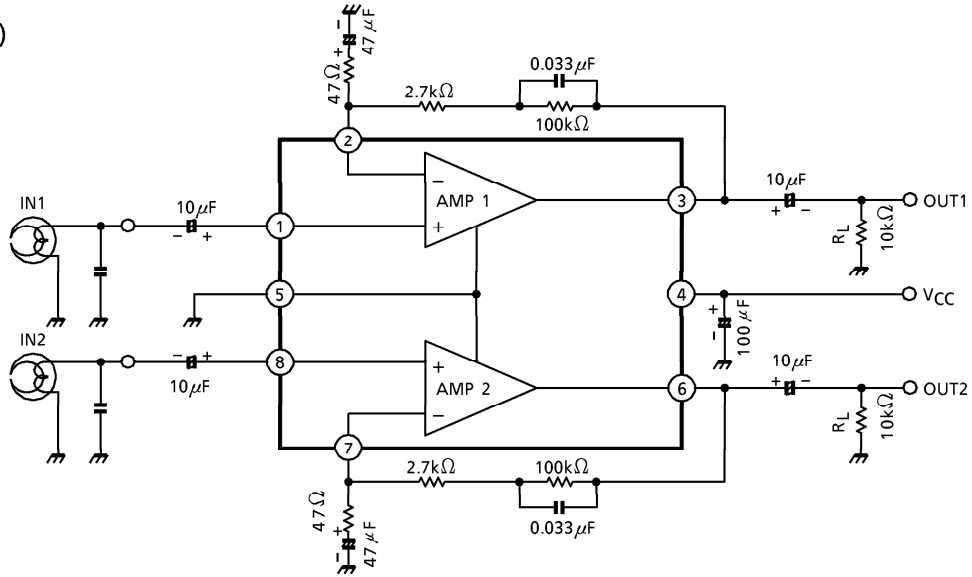






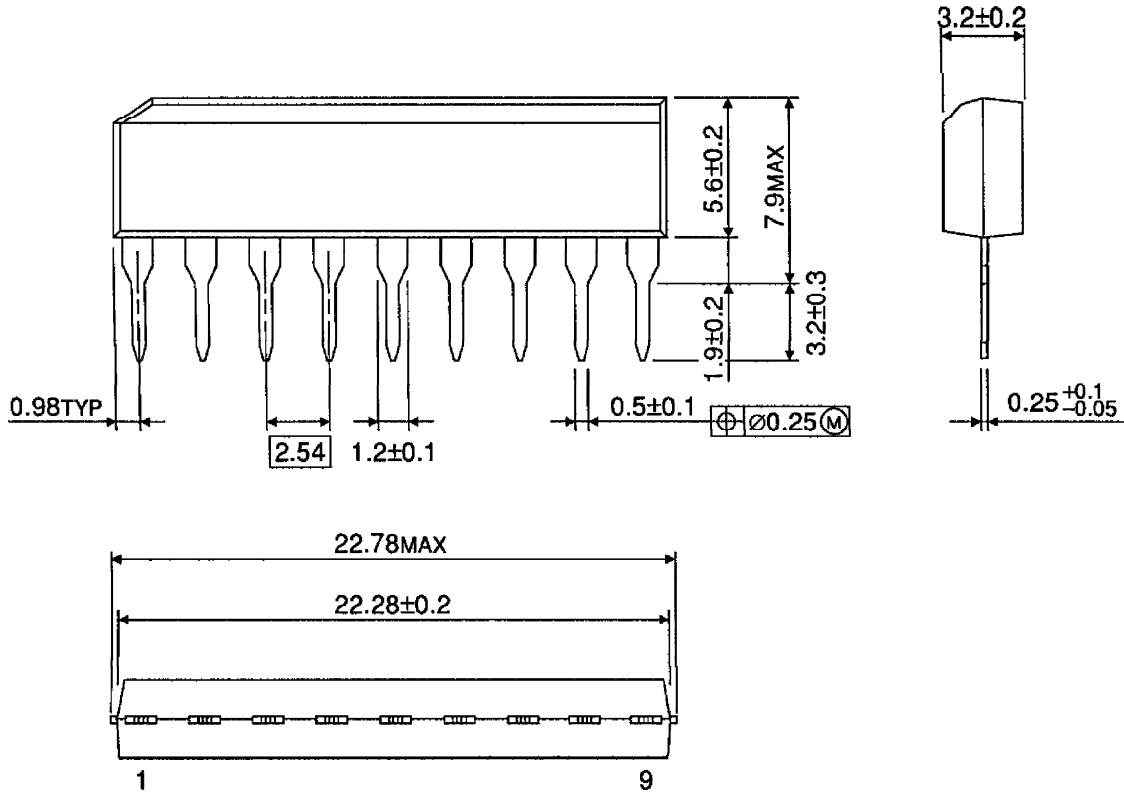
APPLICATION CIRCUIT

(NAB EQ)



OUTLINE DRAWING
SIP9-P-2.54A

Unit : mm



Weight : 0.92g (Typ.)