

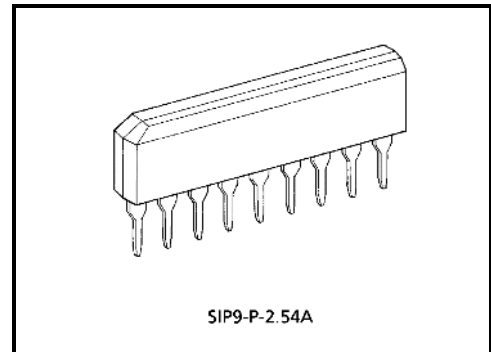
# TA8125S

## Dual Pre-Amplifier

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

### Features

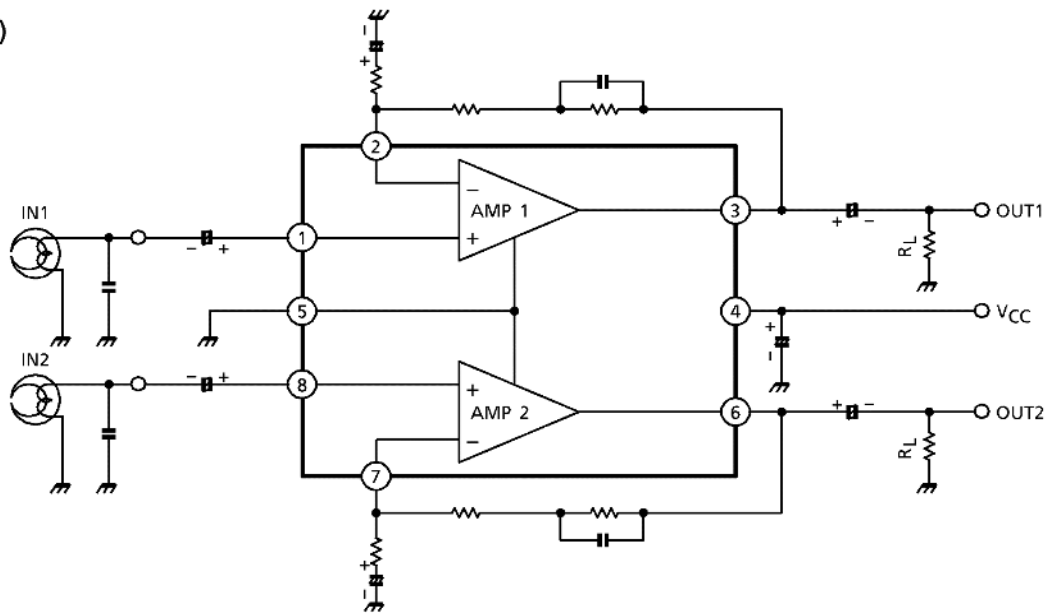
- High open loop voltage gain  
:  $G_{VO} = 100\text{dB}$  (typ.) at  $f = 1\text{kHz}$
- Excellent channel separation and high ripple rejection  
:  $CH_{sep} = 65\text{dB}$  (typ.)  
( $f = 10\text{kHz}$ ,  $R_g = 2.2\text{k}\Omega$ ,  $V_{OUT} = 0.775V_{rms}$  (0dBm))  
: R.R. = 50dB (typ.)  
( $f_{ripple} = 100\text{Hz}$ ,  $R_g = 2.2\text{k}\Omega$ ,  $V_{OUT} = 0.775V_{rms}$  (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:  $V_{CC} (opr.) = 6 \sim 16\text{V}$  ( $T_a = 25^\circ\text{C}$ )



Weight: 0.92g (typ.)

### Block Diagram

(NAB EQ)



## Maximum Ratings (Ta = 25°C)

Characteristic	Symbol	Rating	Unit
Supply voltage	V <sub>CC</sub>	16	V
Power dissipation (Note)	P <sub>D</sub>	700	mW
Operating temperature	T <sub>opr</sub>	-30~80	°C
Storage temperature	T <sub>stg</sub>	-55~150	°C

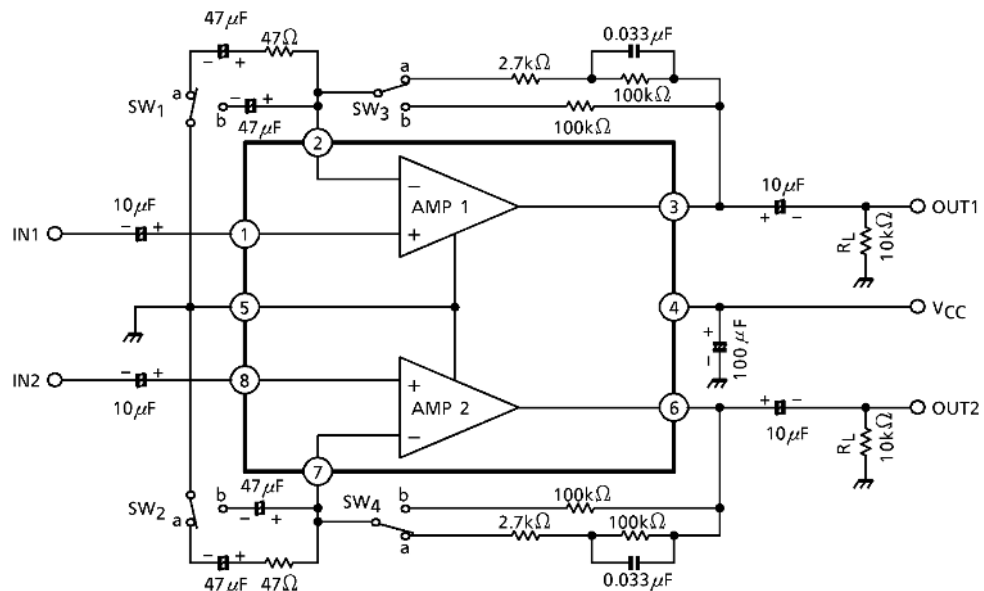
(Note) Derated above Ta = 25°C in the proportion of 5.6mW / °C.

## Electrical Characteristics

(unless otherwise specified, V<sub>CC</sub> = 6V, f = 1kHz, R<sub>g</sub> = 600Ω, R<sub>L</sub> = 10kΩ, Ta = 25°C)

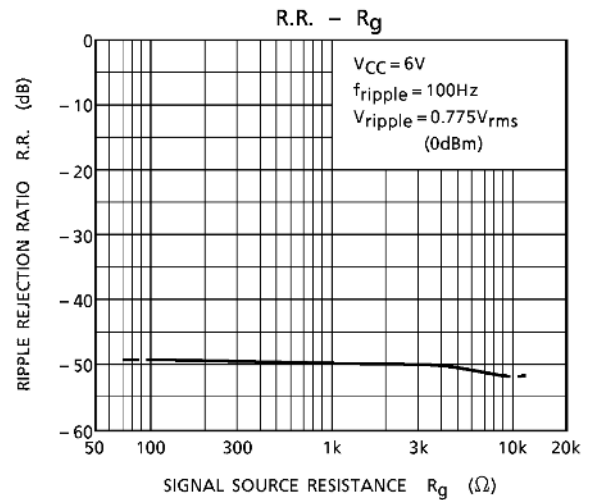
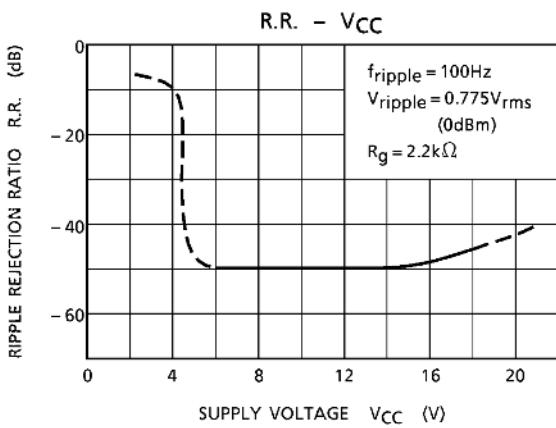
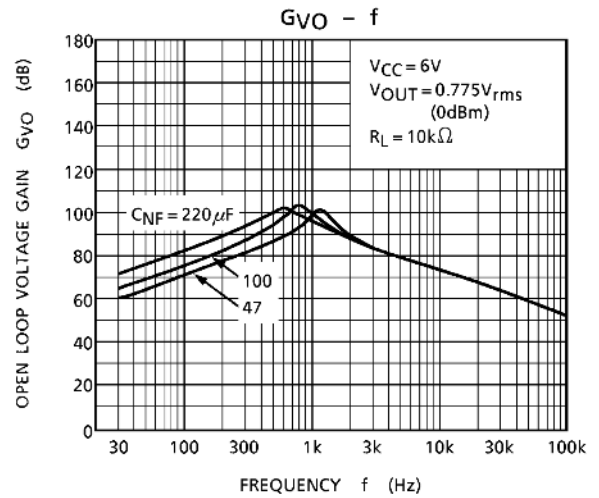
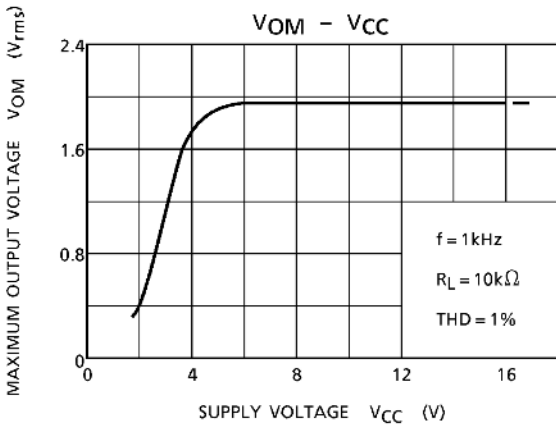
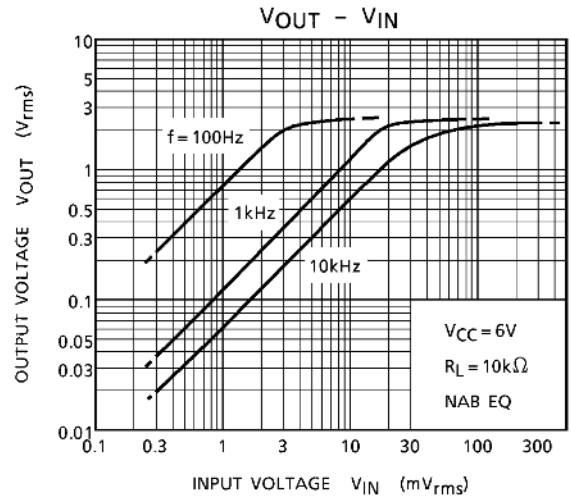
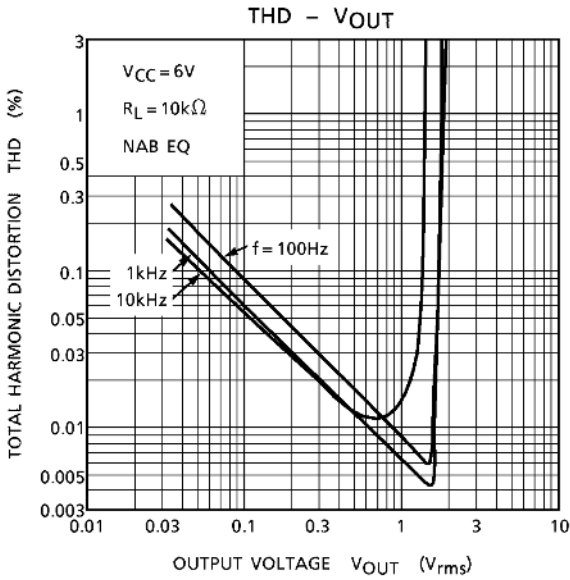
Characteristic	Symbol	Test Circuit	Test Condition	Min.	Typ.	Max.	Unit
Quiescent current	I <sub>CCQ</sub>	—	V <sub>IN</sub> = 0	—	3	6	mA
Voltage gain	G <sub>VO</sub>	—	V <sub>OUT</sub> = 7.75μV <sub>rms</sub> (-100dBm)	75	100	—	dB
	G <sub>V</sub>	—	V <sub>OUT</sub> = 0.775V <sub>rms</sub> (0dBm)	38.5	41.5	44.5	
Maximum output voltage	V <sub>OM</sub>	—	THD = 1%	1.0	1.8	—	V
Equivalent input noise voltage	V <sub>NI</sub>	—	R <sub>g</sub> = 2.2kΩ, B.W = 20Hz~20kHz	—	1.0	1.7	μV <sub>rms</sub>
Input resistance	R <sub>IN</sub>	—	—	50	150	—	kΩ
Total harmonic distortion	THD	—	V <sub>OUT</sub> = 0.775V <sub>rms</sub> (0dBm)	—	0.04	0.25	%
Channel separation	CH <sub>sep</sub>	—	f = 10kHz, V <sub>OUT</sub> = 0.775V <sub>rms</sub> (0dBm)	—	65	—	dB
Ripple rejection ratio	R.R.	—	f = 100Hz, R <sub>g</sub> = 2.2kΩ	—	50	—	dB

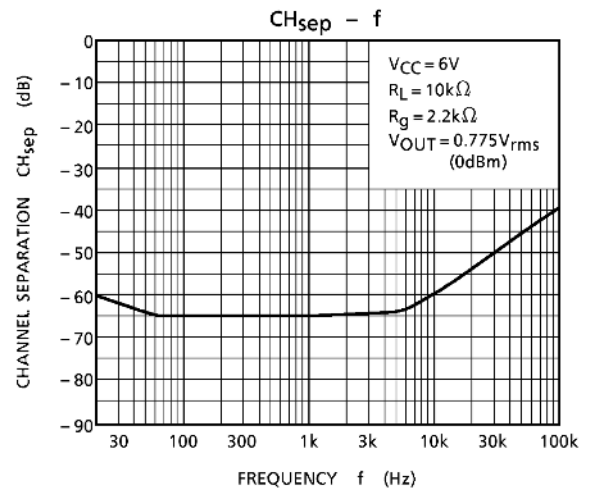
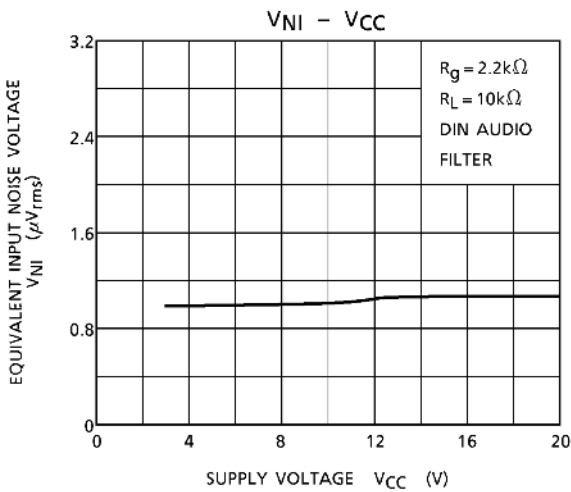
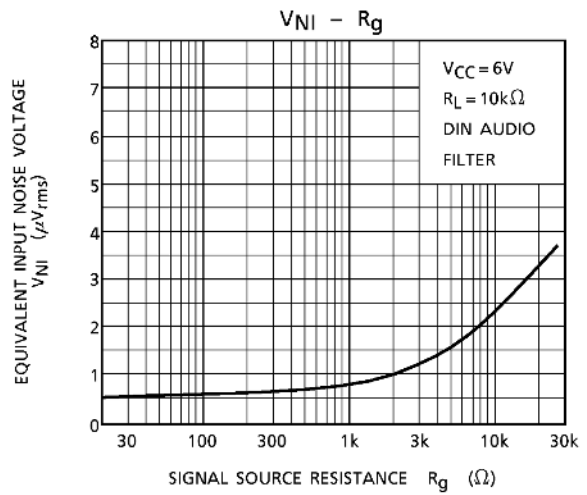
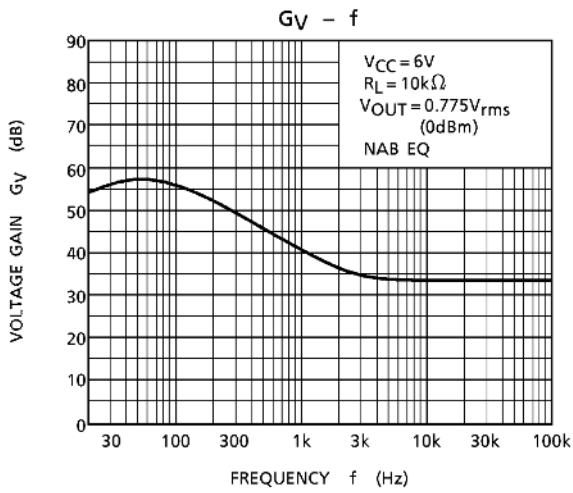
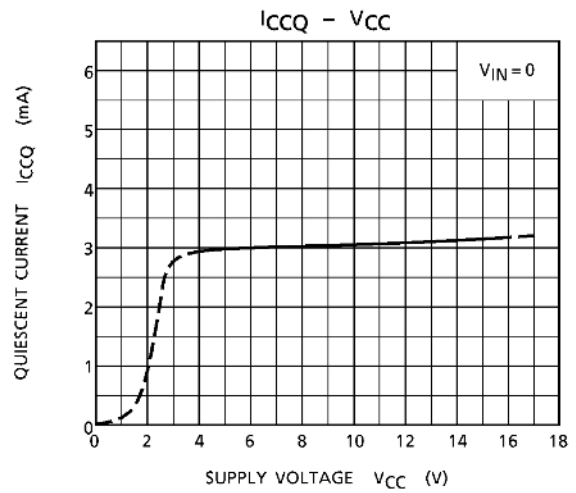
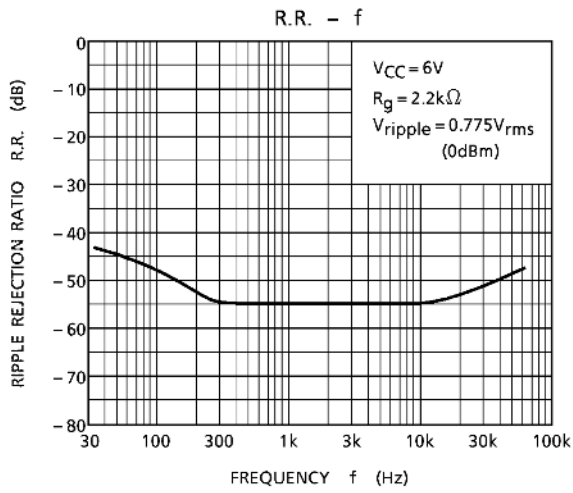
## Test Circuit ((9)pin open or GND)

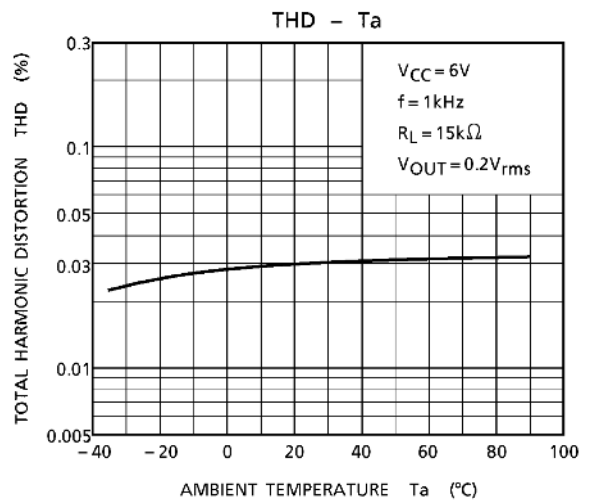
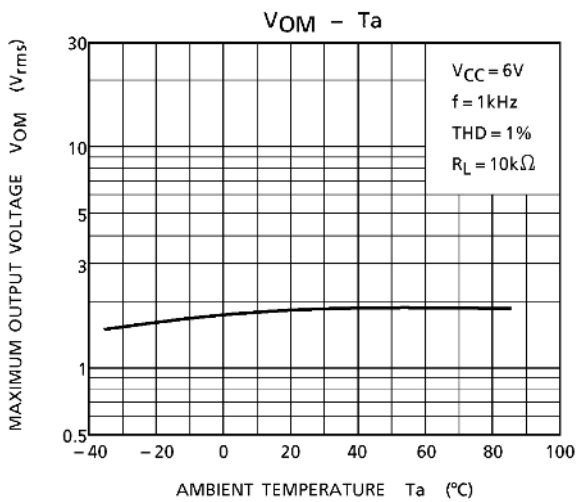
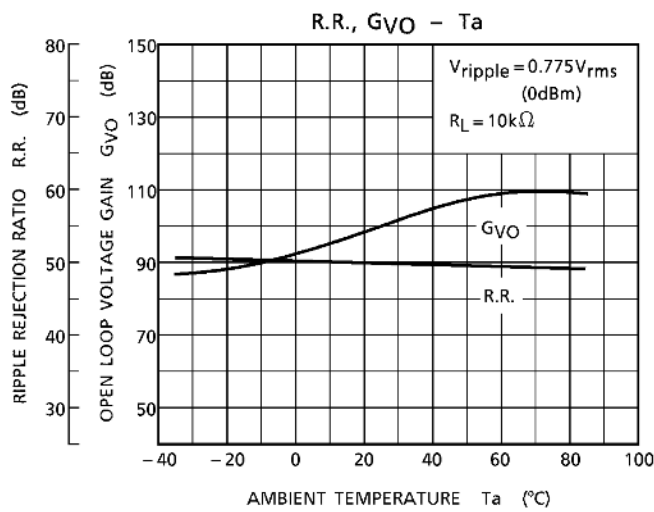
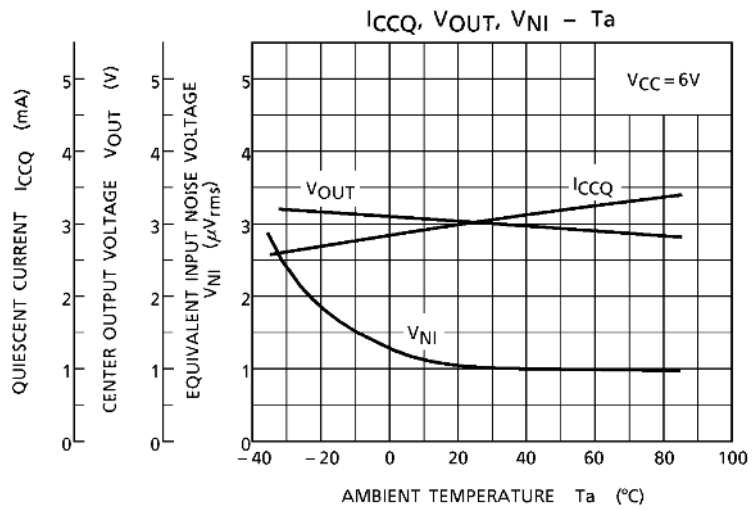


PIN⑨ : NC

(\*) G<sub>VO</sub> : SW<sub>1</sub>~SW<sub>4</sub>→b SIDE

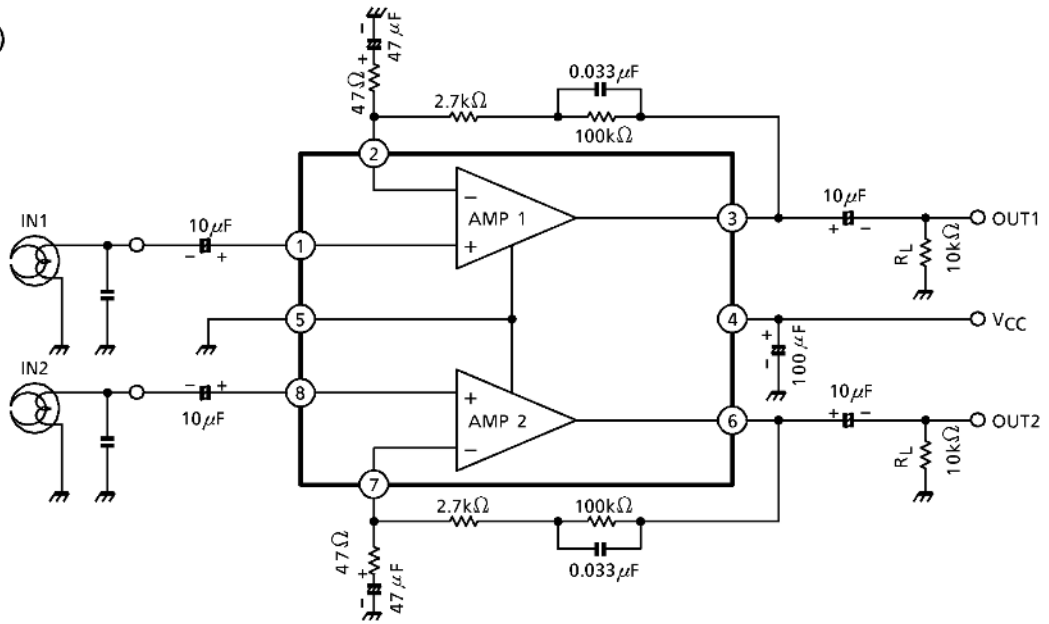






**Application Circuit**

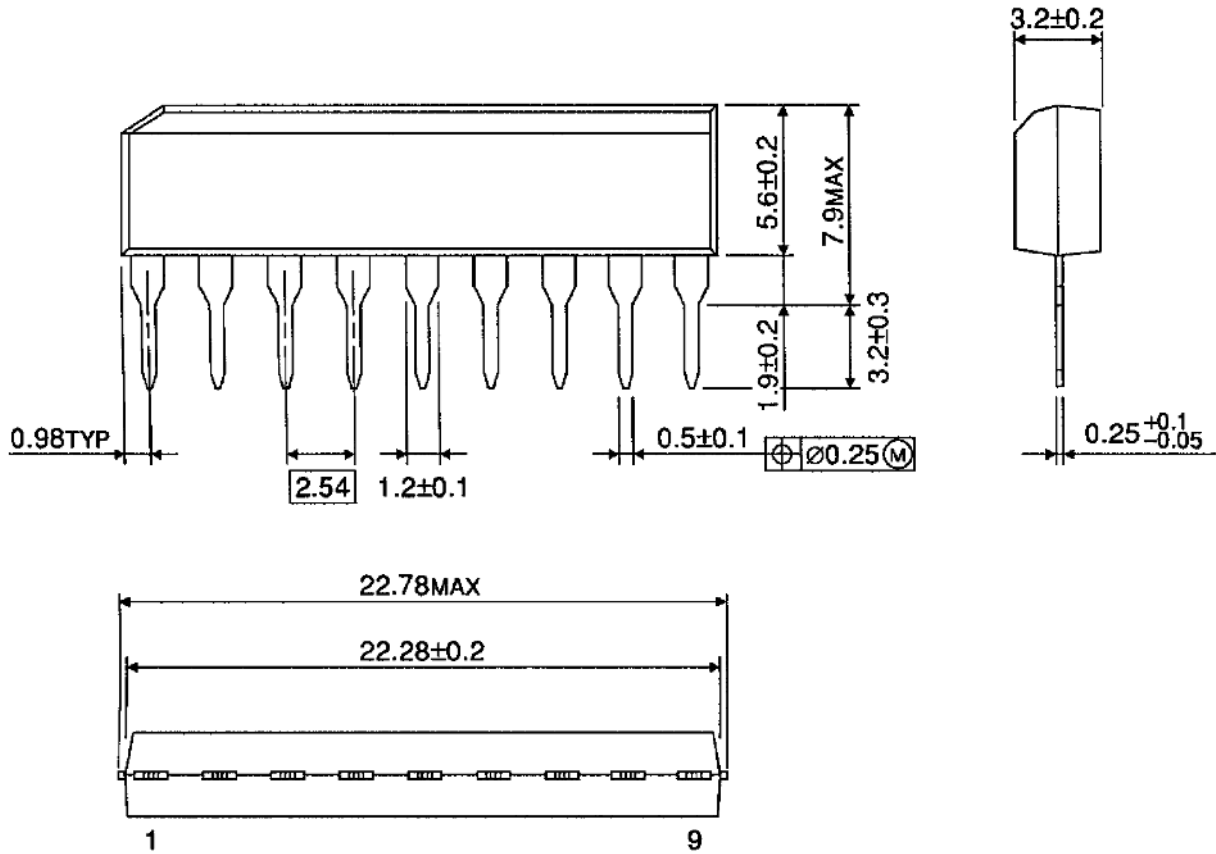
(NAB EQ)



**Package Dimensions**

SIP9-P-2.54A

Unit : mm



Weight: 0.92g (typ.)

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