

TOSHIBA BIPOLAR LINEAR INTEGRATED CIRCUIT SILICON MONOLITHIC

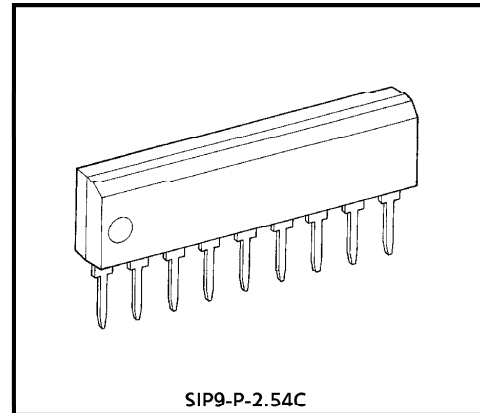
# TA8193S

## DUAL LINE OUTPUT AMPLIFIER

The TA8193S is dual Line Output Amplifier designed for audio use.

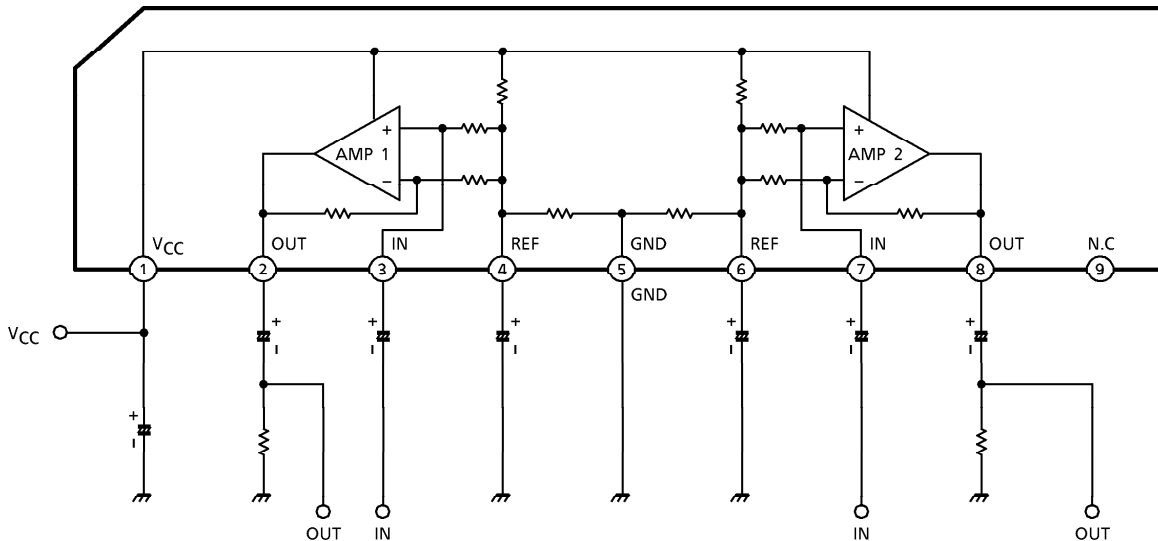
### FEATURES

- Suitable for Line Output Amplifier
- Built-in Feedback Resistor
- Few External Parts
- Fixed Voltage Gain :  $G_V = 20\text{dB (Typ.)}$
- Low Noise :  $V_{NO} = 30\mu\text{V}_{\text{rms (Typ.)}}$   
( $R_g = 10\text{k}\Omega$ , DIN AUDIO)
- Small Package : Slim SIP 9pin
- Operating Supply Voltage Range :  $V_{CC(\text{opr.})} = 5\sim 16\text{V (Ta} = 25^\circ\text{C)}$



Weight : 0.65g (Typ.)

### BLOCK DIAGRAM



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**MAXIMUM RATINGS** (Ta = 25°C)

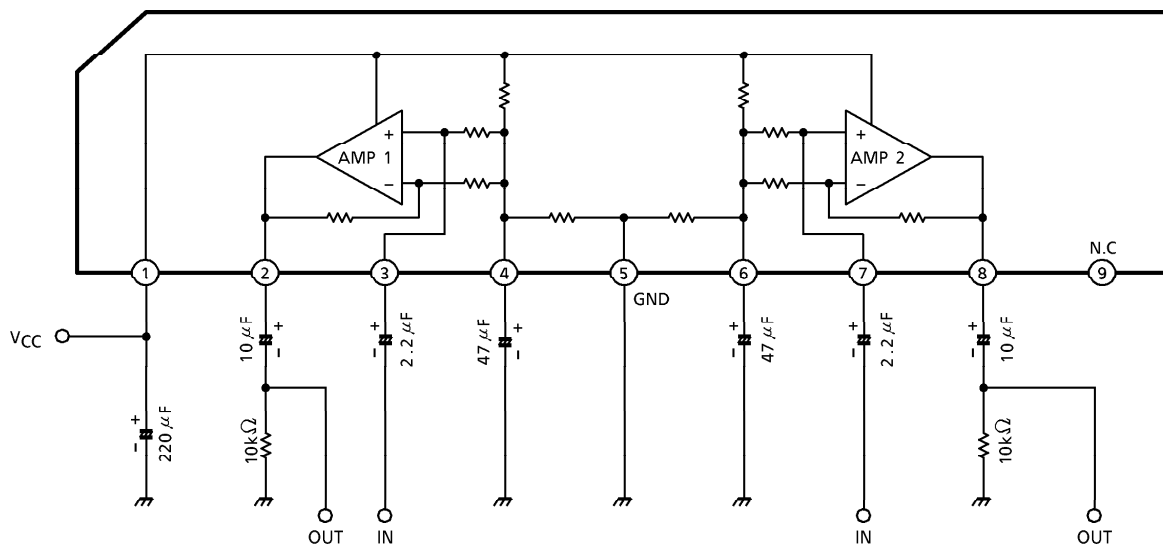
CHARACTERISTIC	SYMBOL	RATING	UNIT
Supply Voltage	V <sub>CC</sub>	18	V
Power Dissipation	P <sub>D</sub> (Note)	500	mW
Operating Temperature	T <sub>opr</sub>	- 30~85	°C
Storage Temperature	T <sub>stg</sub>	- 55~150	°C

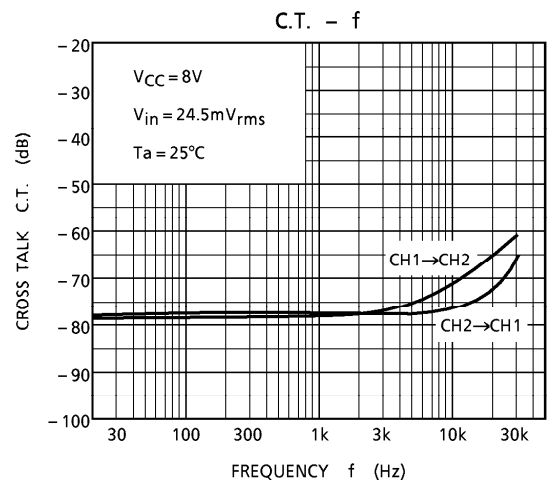
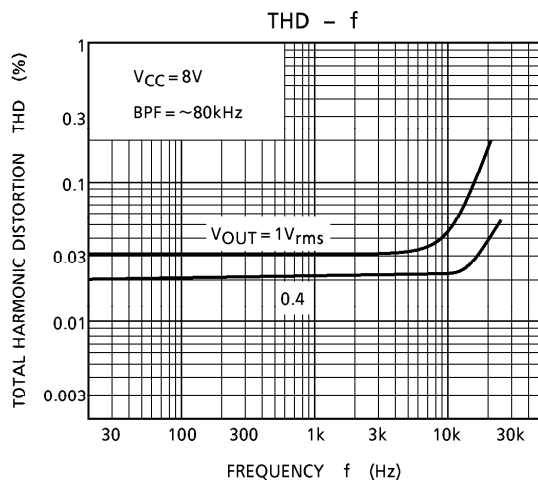
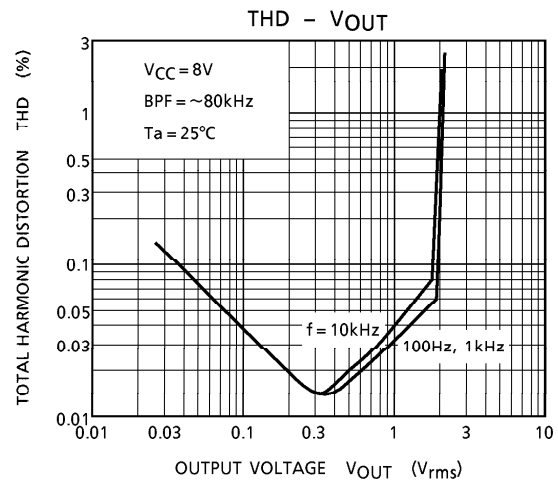
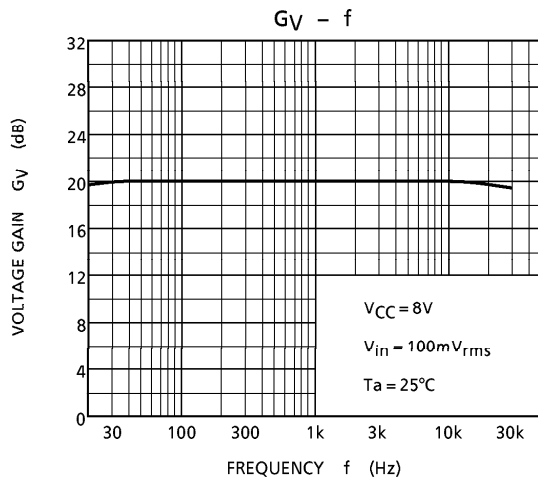
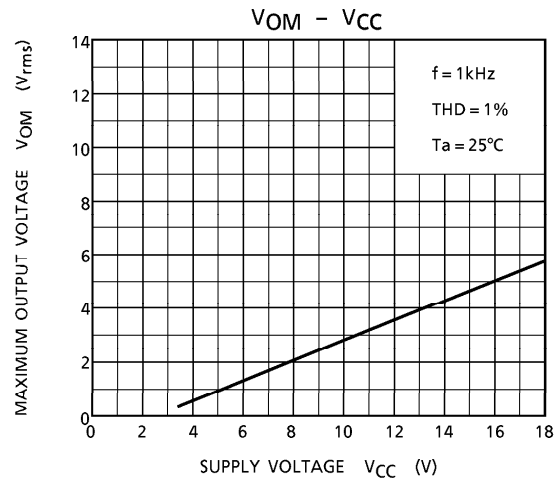
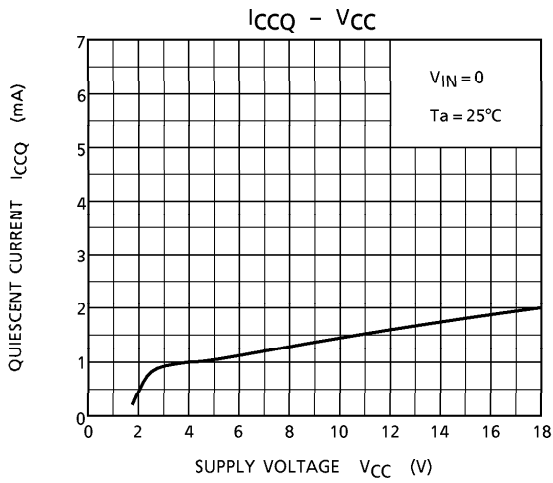
(Note) Derated above Ta = 25°C in the proportion of 4mW/°C.

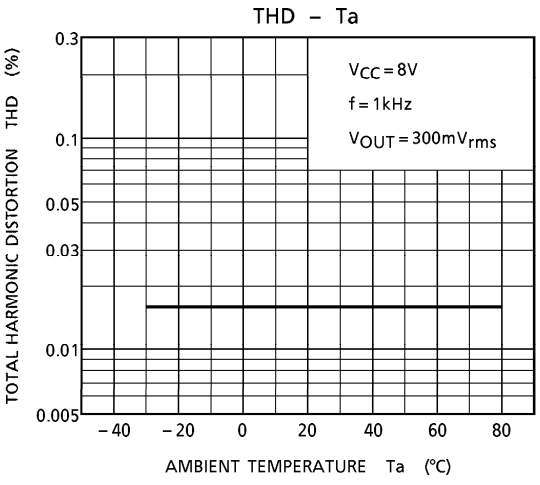
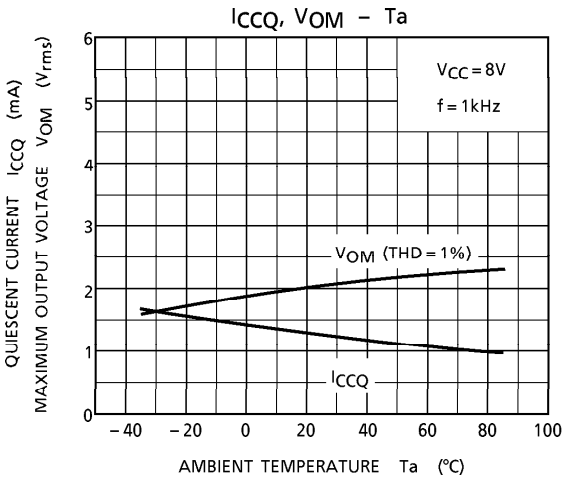
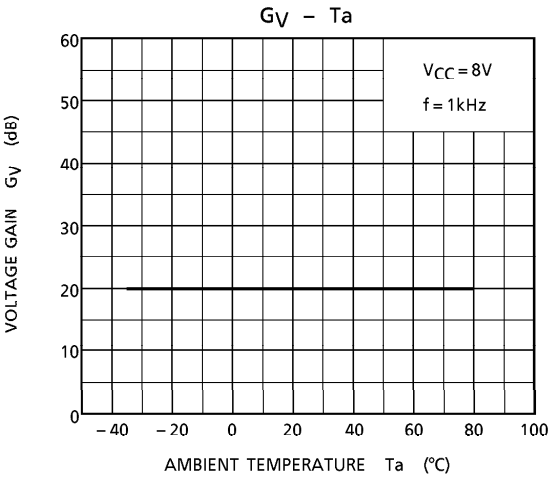
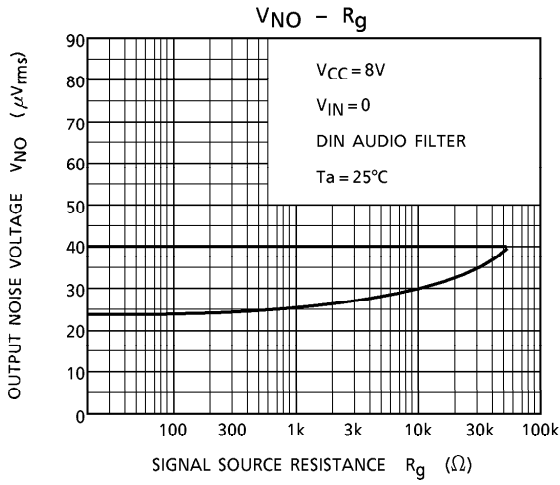
**ELECTRICAL CHARACTERISTICS** (Unless otherwise specified, V<sub>CC</sub> = 8V, f = 1kHz, R<sub>L</sub> = 10kΩ, Ta = 25°C)

CHARACTERISTIC	SYMBOL	TEST CIRCUIT	TEST CONDITION	MIN.	TYP.	MAX.	UNIT
Quiescent Current	I <sub>CCQ</sub>	—	V <sub>IN</sub> = 0	—	1.5	2.5	mA
Maximum Output Voltage	V <sub>OM</sub>	—	THD = 1%	1.4	2.0	—	V <sub>rms</sub>
Closed Loop Voltage Gain	G <sub>V</sub>	—	—	18.5	20	21.5	dB
Total Harmonic Distortion	THD	—	V <sub>OUT</sub> = 300mV <sub>rms</sub>	—	0.02	0.3	%
Output Noise Voltage	V <sub>NO</sub>	—	R <sub>g</sub> = 10kΩ, BPF = 20~20kHz	—	30	60	μV <sub>rms</sub>
Cross Talk	C.T	—	R <sub>g</sub> = 10kΩ	—	- 75	—	dB

**TEST CIRCUIT**

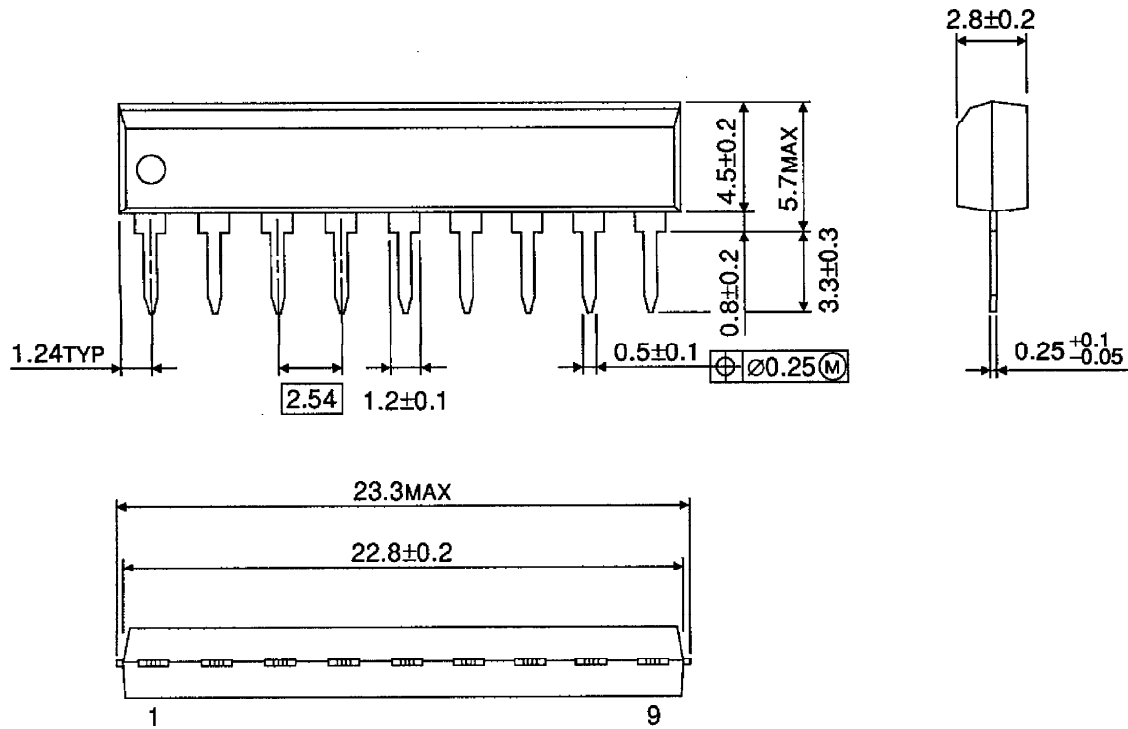






OUTLINE DRAWING  
SIP9-P-2.54C

Unit : mm



Weight : 0.65g (Typ.)