

TOSHIBA BIPOLAR LINEAR INTEGRATED CIRCUIT SILICON MONOLITHIC

# TA8246AH

## DUAL AUDIO POWER AMPLIFIER 6 W × 2 CH

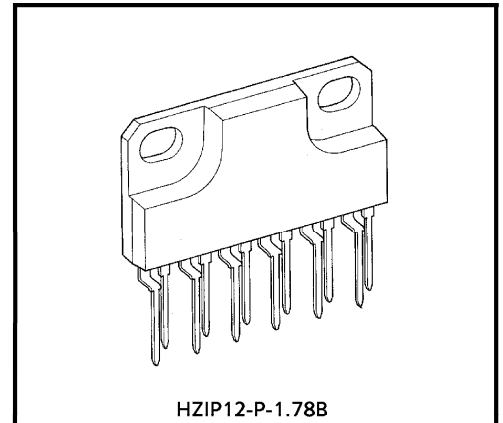
The TA8246AH is dual power amplifier for Consumer applications.

This IC provides an output power of 6 watts per channel (at  $V_{CC} = 20\text{ V}$ ,  $f = 1\text{ kHz}$ ,  $\text{THD} = 10\%$ ,  $R_L = 8\ \Omega$ )

It is suitable for power amplifier of TV and home Stereo.

### FEATURES

- High Output Power
  - :  $P_{out} = 6\text{ W}$  (Typ.)
  - ( $V_{CC} = 20\text{ V}$ ,  $R_L = 8\ \Omega$ ,  $f = 1\text{ kHz}$ ,  $\text{THD} = 10\%$ )
- Built-in Audio Muting Circuit.
- NF Terminal Capacitor Less : Fixed Gain ( $G_v = 34\text{ dB}$ ), Needless External capacitor.
- Protectors
  - Thermal shut down Protection circuit, Over Voltage Protection circuit
- Low Popping Noise
- High THD Ratio
- High input dynamic range
- Available for using same PCB layout with 3 channel IC : TA8256H.
- Operating Supply Voltage Range :  $V_{CC}(\text{opr}) = 10\sim 30\text{ V}$  ( $T_a = 25^\circ\text{C}$ )

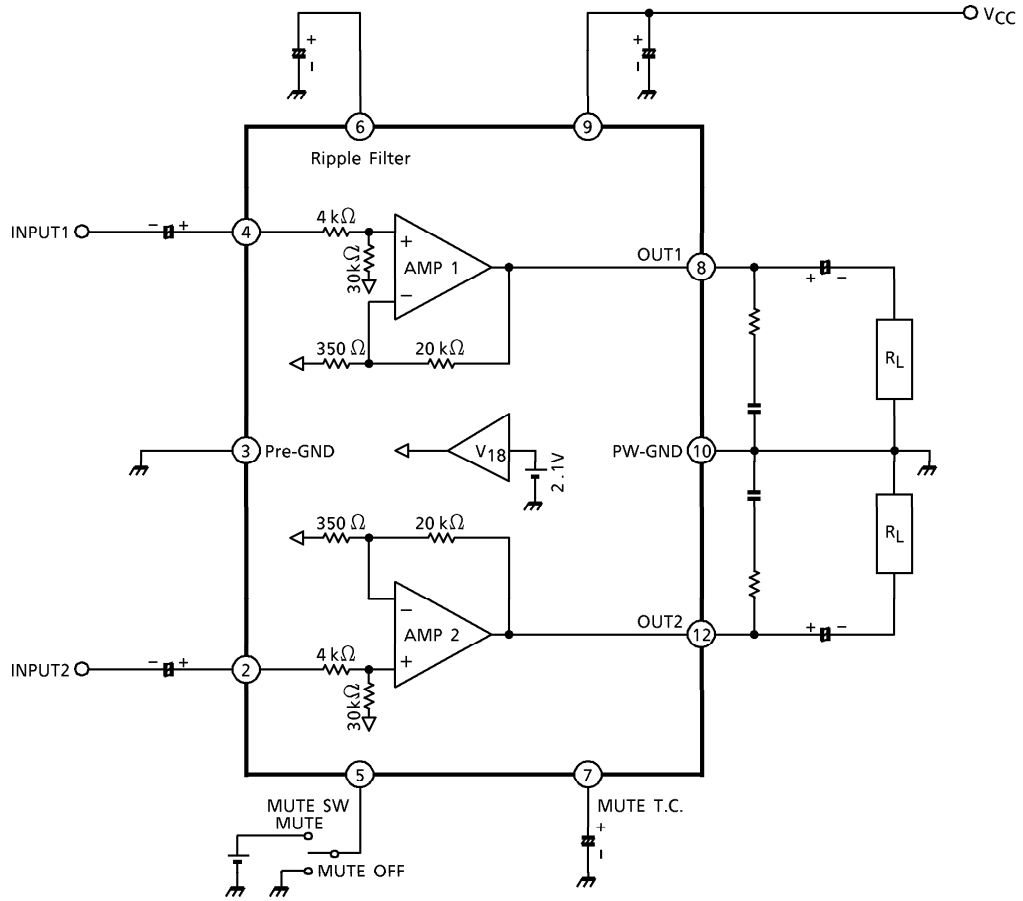


Weight : 4.04 g (Typ.)

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BLOCK DIAGRAM



**TERMINAL EXPLANATION**

TERMINAL No.	SYMBOL	FUNCTION	EQUIVALENT CIRCUIT
2	IN1	Input	
4	IN2		
3	Pre-GND	GND terminal	—
5	MUTE SW	MUTE control terminal	
7	MUTE T.C.		
6	R.F.	Ripple filter	
8	OUT1	Output	
12	OUT2		
9	V <sub>CC</sub>	Supply voltage terminal	—
10	PW-GND	GND terminal	—

①, ⑩ : N.C

## MAXIMUM RATINGS (Ta = 25°C)

CHARACTERISTIC	SYMBOL	RATING	UNIT
Supply Voltage	V <sub>CC</sub>	30	V
Output Current (Peak/Ch)	I <sub>O(peak)</sub>	2	A
Power Dissipation	P <sub>D</sub> (Note)	25	W
Operating Temperature	T <sub>opr</sub>	-20~75	°C
Storage Temperature	T <sub>stg</sub>	-55~150	°C

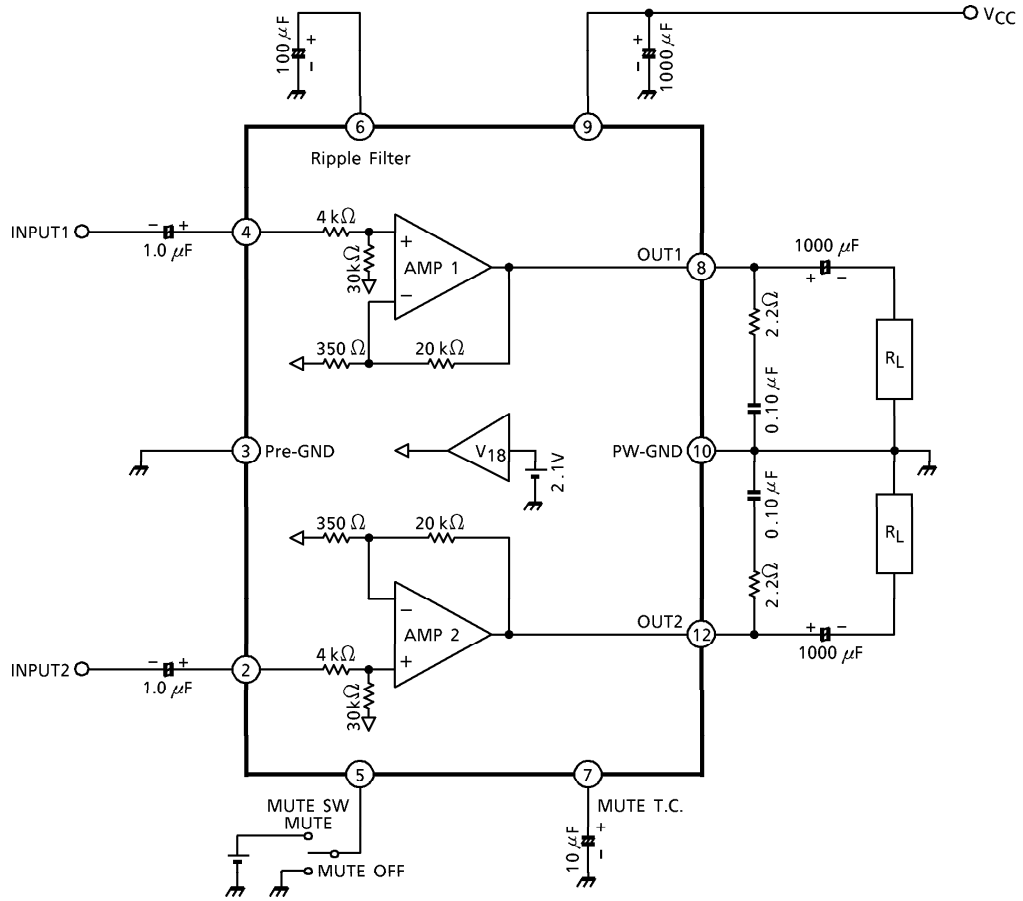
(Note) Derated above Ta = 25°C in the proportion of 200 mW/°C.

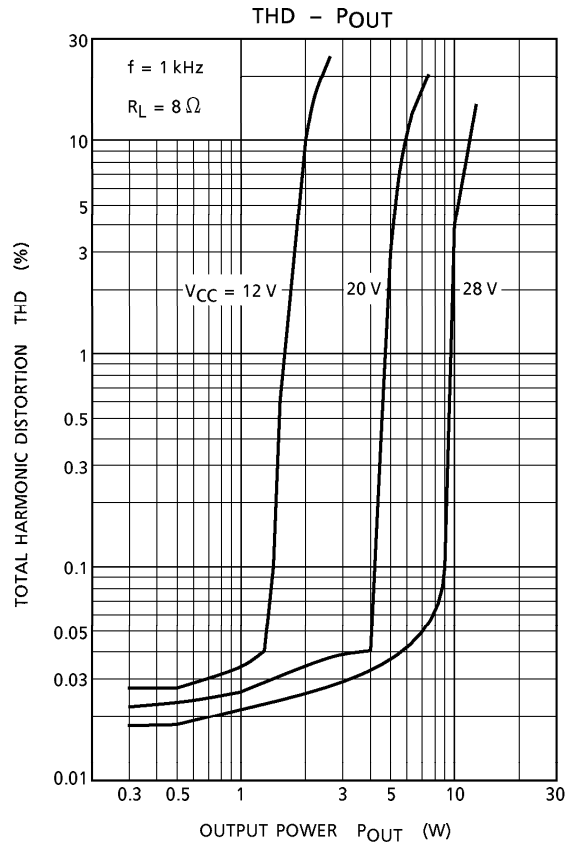
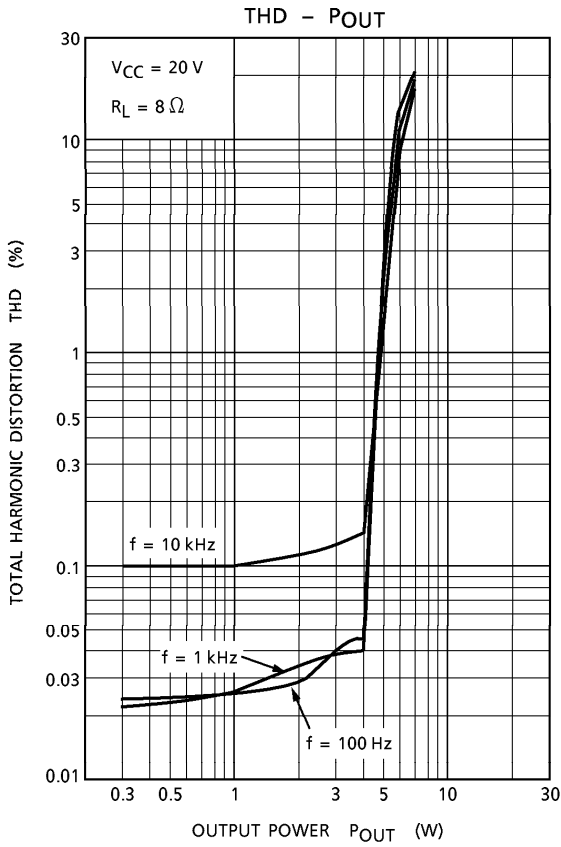
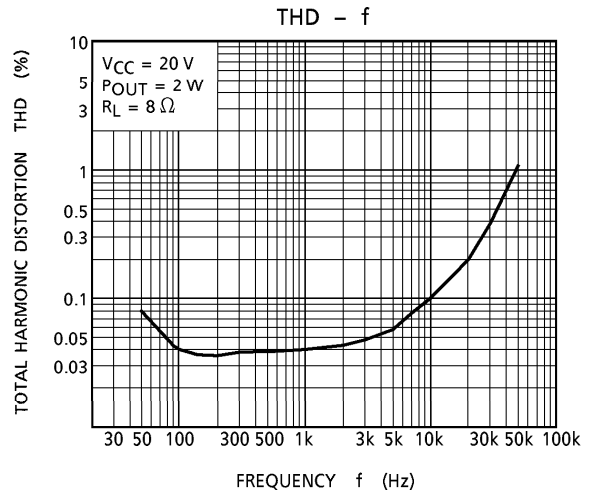
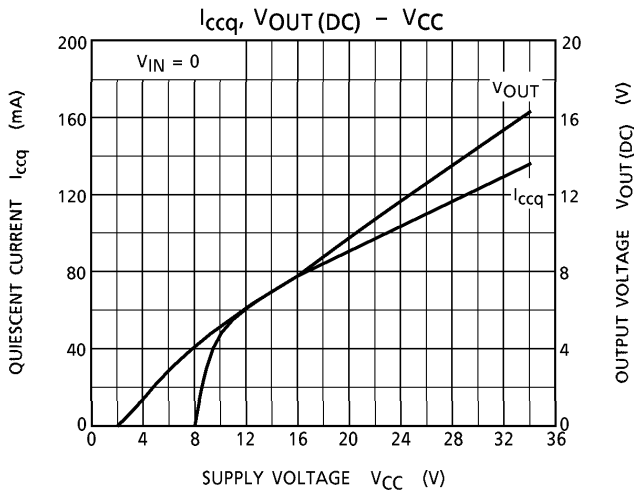
## ELECTRICAL CHARACTERISTICS

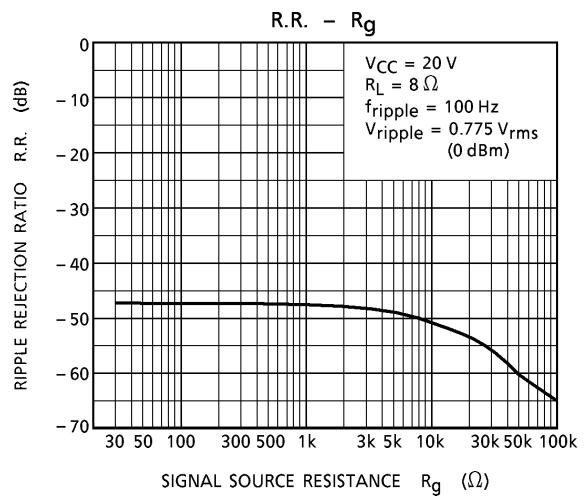
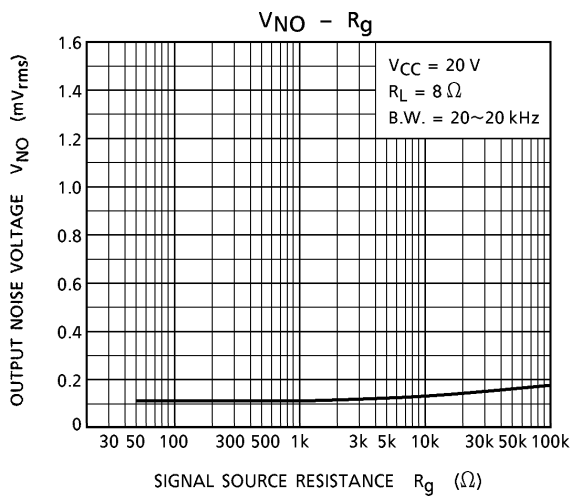
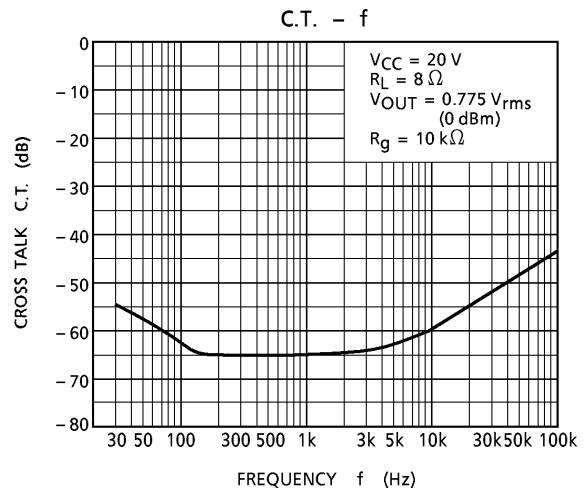
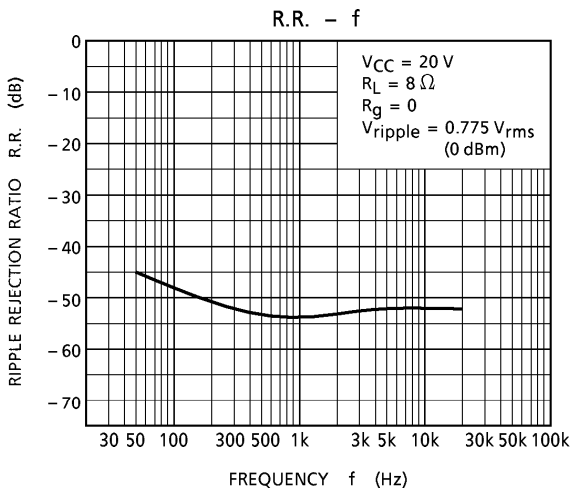
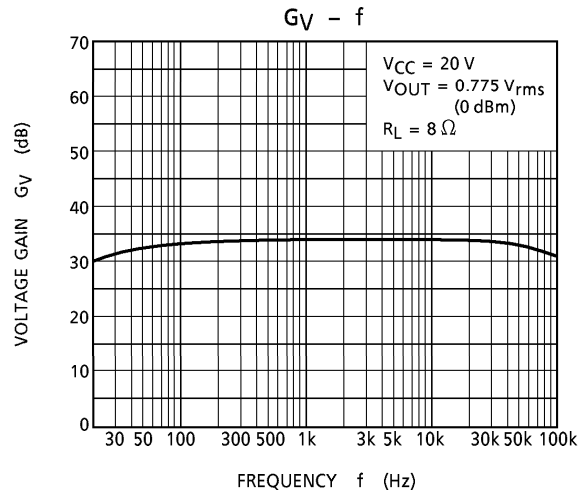
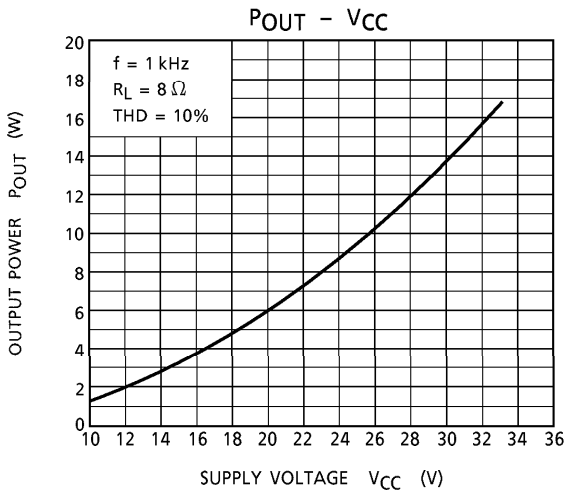
(Unless otherwise specified, V<sub>CC</sub> = 20 V, R<sub>L</sub> = 8 Ω, R<sub>g</sub> = 620 Ω, f = 1 kHz, Ta = 25°C)

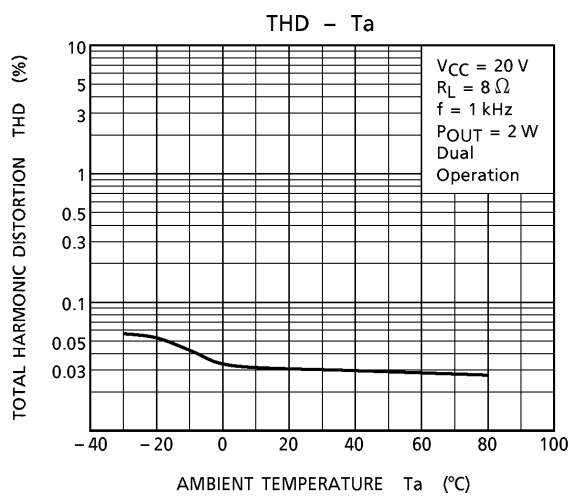
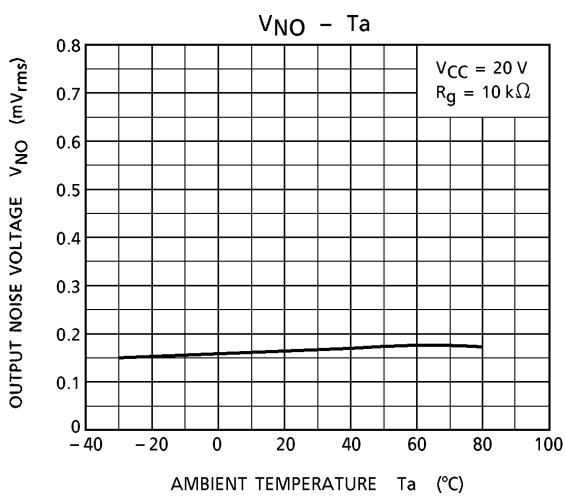
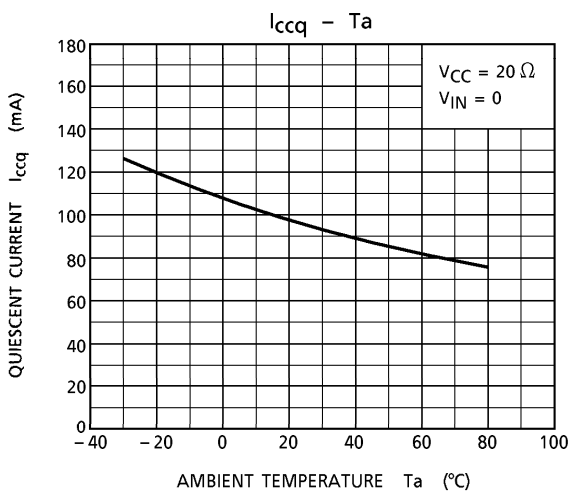
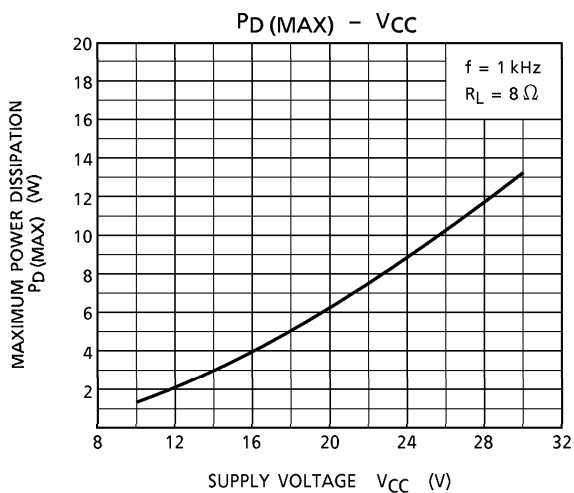
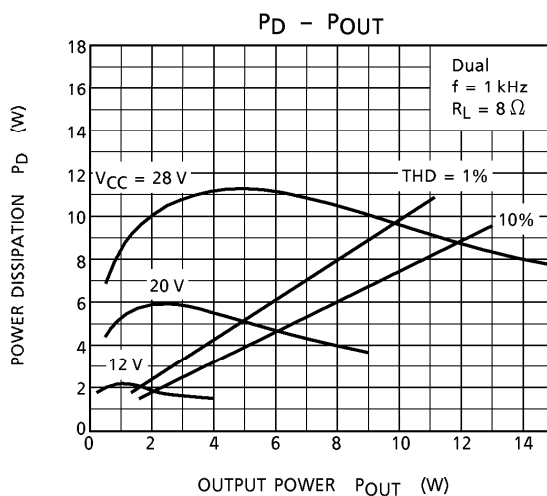
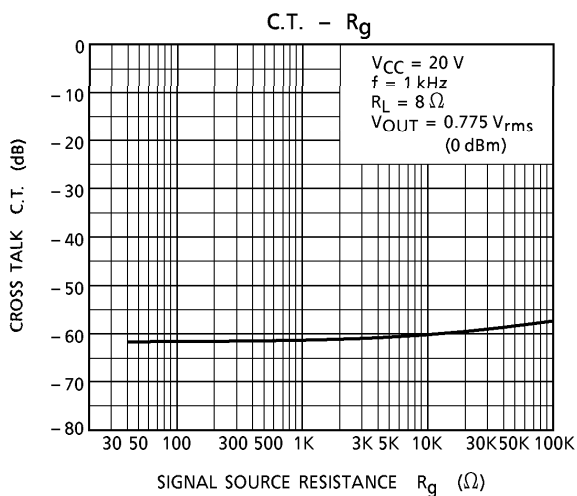
CHARACTERISTIC	SYMBOL	TEST CIRCUIT	TEST CONDITION	MIN.	TYP.	MAX.	UNIT
Quiescent Current	ICCQ	—	V <sub>in</sub> = 0	50	85	130	mA
Output Power	P <sub>out</sub> (1)	—	THD = 10%	5.0	6.0	—	W
	P <sub>out</sub> (2)	—	THD = 1%	—	4.5	—	
Total Harmonic Distortion	THD (1)	—	P <sub>out</sub> = 2 W	—	0.04	0.2	%
	THD (2)	—	P <sub>out</sub> = 2 W, f = 10 kHz	—	0.1	0.6	
Voltage Gain	G <sub>v</sub>	—	V <sub>out</sub> = 0.775 V <sub>rms</sub>	32.5	34.0	35.5	dB
Input Resistance	R <sub>in</sub>	—		—	34	—	kΩ
Ripple Rejection Ratio	R.R.	—	f = 100 Hz	-40	-47	—	dB
Output Noise Voltage	V <sub>no</sub>	—	R <sub>g</sub> = 10 kΩ, BW = 20 Hz~20 kHz	—	0.14	0.3	mV <sub>rms</sub>
Cross Talk	C.T.	—	R <sub>g</sub> = 10 kΩ, V <sub>out</sub> = 0.775 V <sub>rms</sub>	—	-60	—	dB
Mute Control Voltage	V <sub>th</sub> (ON)	—	MUTE ON	3.1	—	V <sub>CC</sub>	V
	V <sub>th</sub> (OFF)	—	MUTE OFF	0	—	2.5	
Mute Attenuation Level	ATT	—	V <sub>out</sub> = 0.775 V <sub>rms</sub> → MUTE	-52	-60	—	dB

TEST CIRCUIT

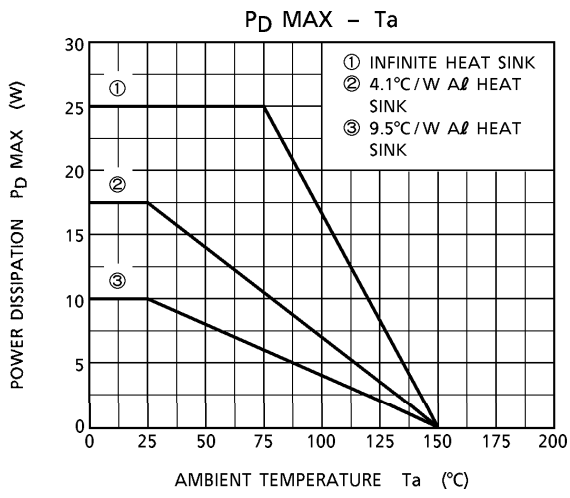






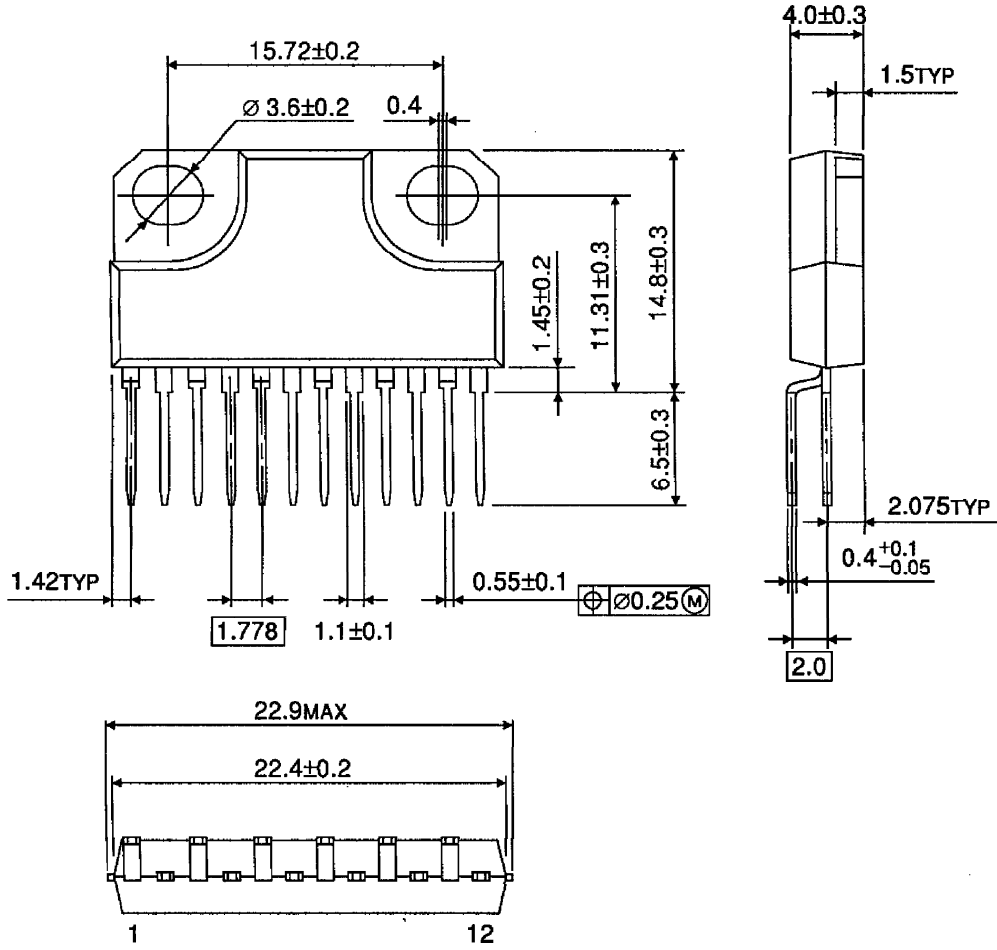






**OUTLINE DRAWING**  
HZIP12-P-1.78B

Unit : mm



Weight : 4.04 g (Typ.)