

**TOSHIBA**

**TA8256H**

TOSHIBA BIPOLAR LINEAR INTEGRATED CIRCUIT SILICON MONOLITHIC

# TA8256H

## AUDIO POWER AMPLIFIER 6W×3CH

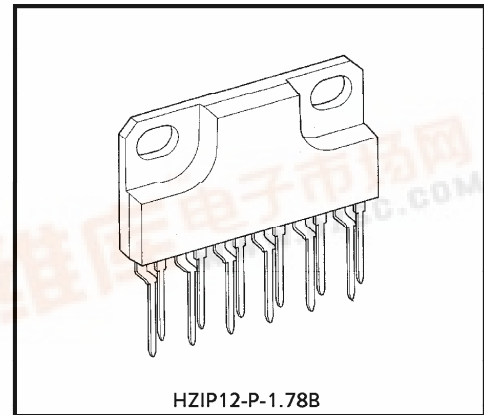
The TA8256H is 3 channel audio power amplifier for Consumer applications.

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

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

### FEATURES

- Built-in 3ch Amplifier
- High Output Power  
:  $P_{out} = 6W$  (Typ.)  
( $V_{CC} = 20V$ ,  $R_L = 8\Omega$ ,  $f = 1kHz$ ,  $THD = 10\%$ )
- Built-in Audio Muting Circuit.
- NF Terminal Capacitor Less  
: Fixed Gain ( $G_V = 34dB$ ), 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 2 channel IC : TA8246H.
- Operating Supply Voltage Range  
:  $V_{CC} (opr) = 10 \sim 30V$  ( $T_a = 25^\circ C$ )



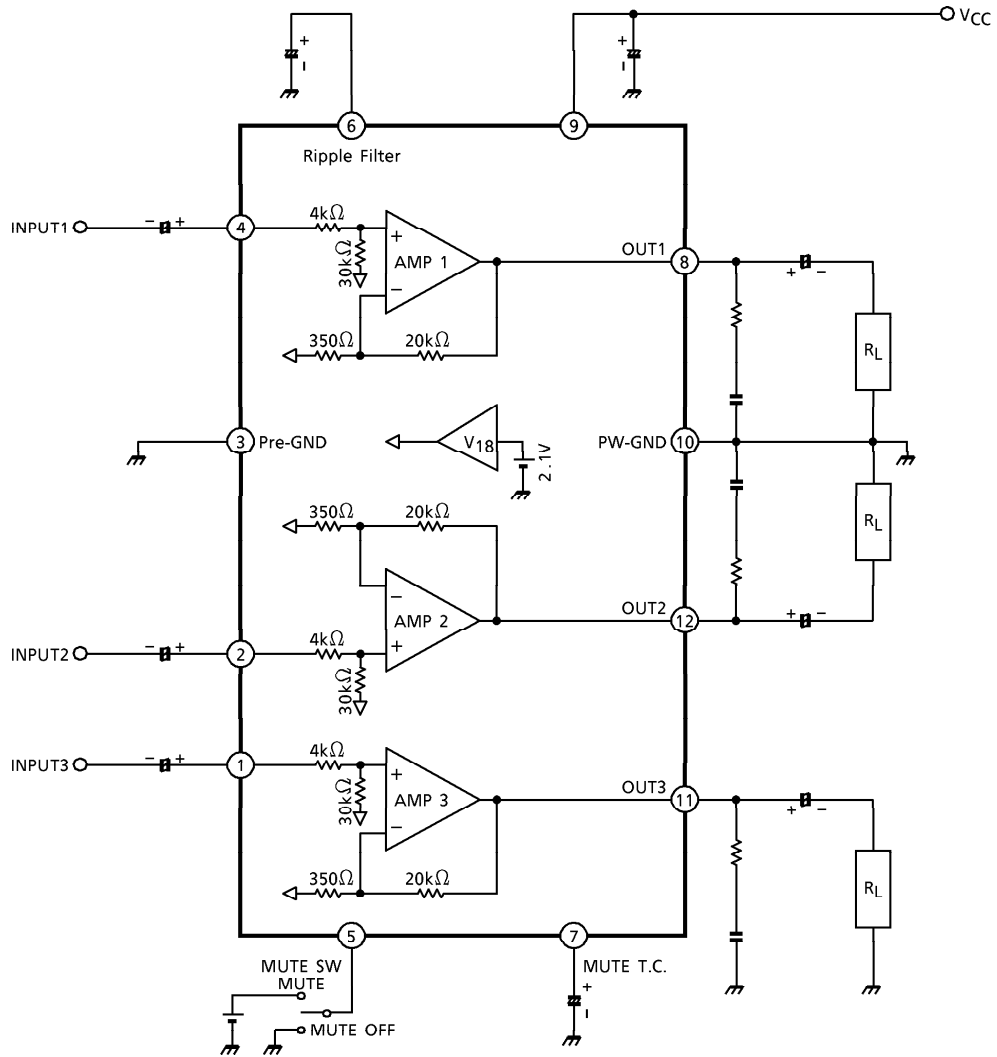
Weight : 4.04g (Typ.)

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BLOCK DIAGRAM



**TERMINAL EXPLANATION**

TERMINAL No.	SYMBOL	FUNCTION	EQUIVALENT CIRCUIT
1	IN3	Input	
2	IN2		
4	IN1		
3	Pre-GND	GND terminal	—
5	MUTE. SW	MUTE control terminal	
7	MUTE. T.C		
6	RF	Ripple filter	
8	OUT1	Output	
11	OUT3		
12	OUT2		
9	V <sub>CC</sub>	Supply voltage terminal	—
10	PW-GND	GND terminal	—

**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 (Note)</sub>	25	W
Operating Temperature	T <sub>opr</sub>	- 20~75	°C
Storage Temperature	T <sub>stg</sub>	- 55~150	°C

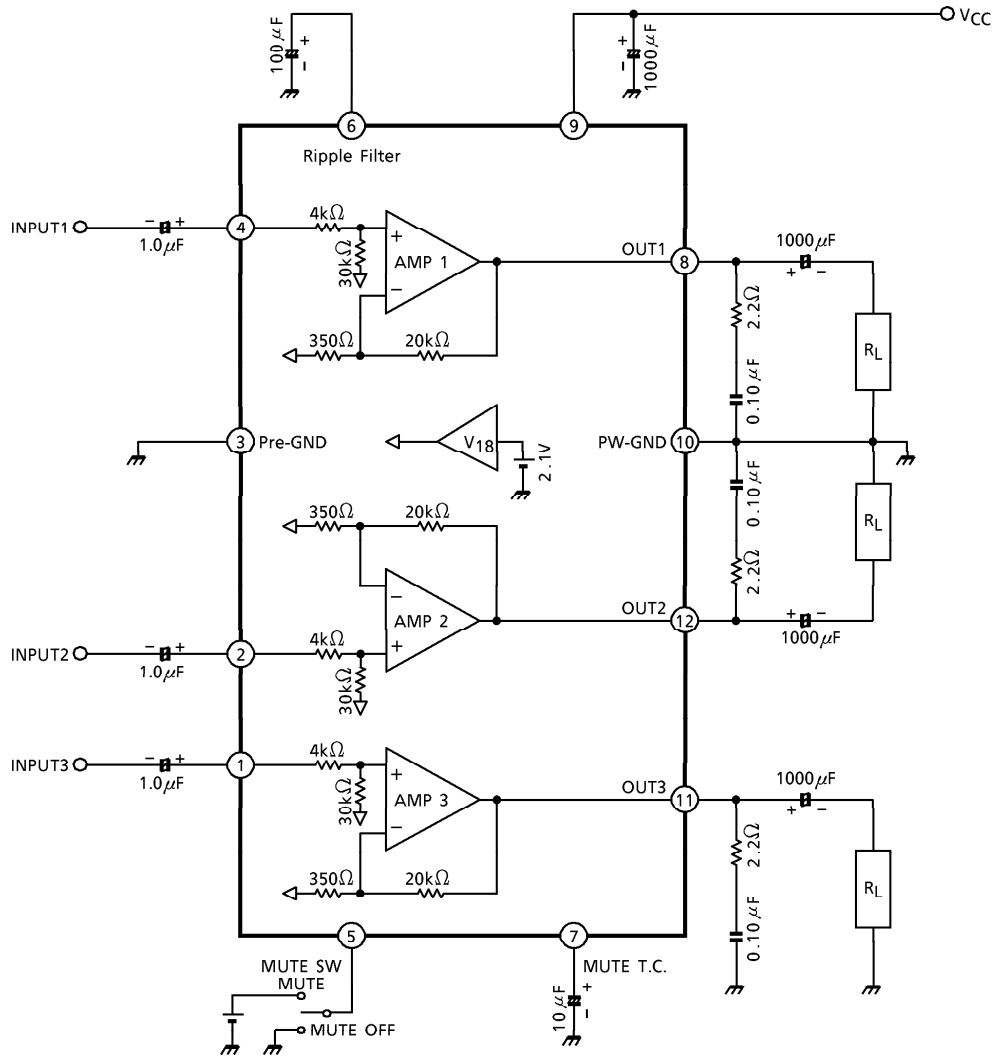
(Note) Derated above Ta = 25°C in the proportion of 200mW / °C.

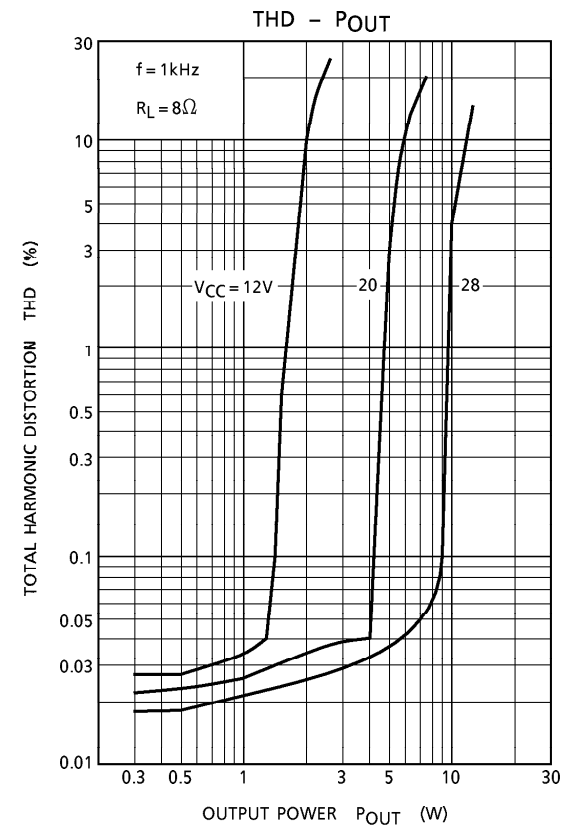
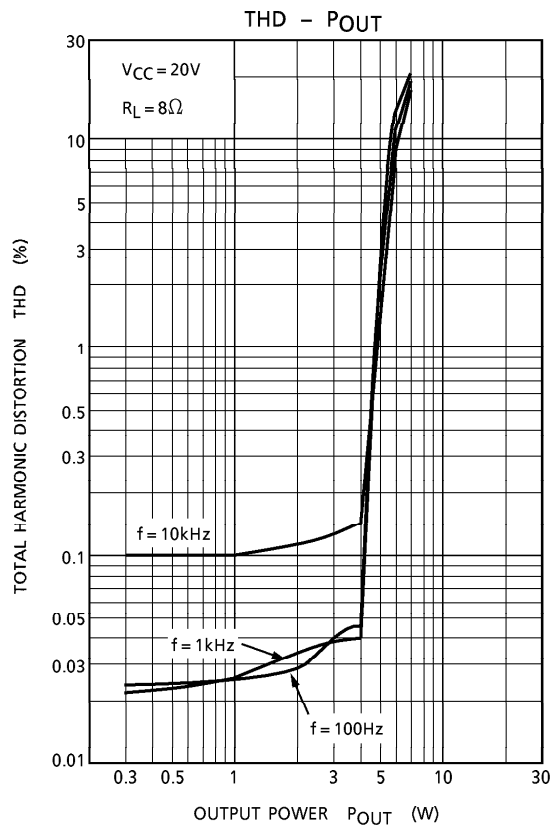
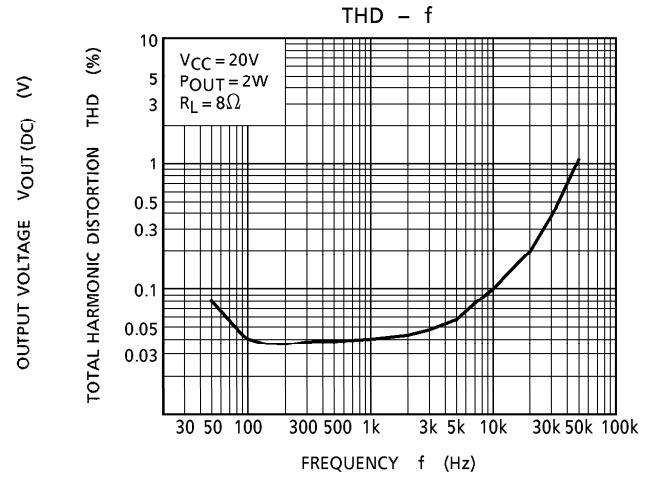
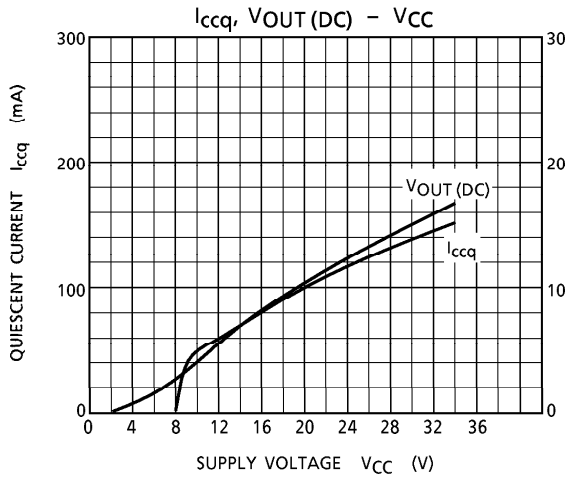
**ELECTRICAL CHARACTERISTICS**

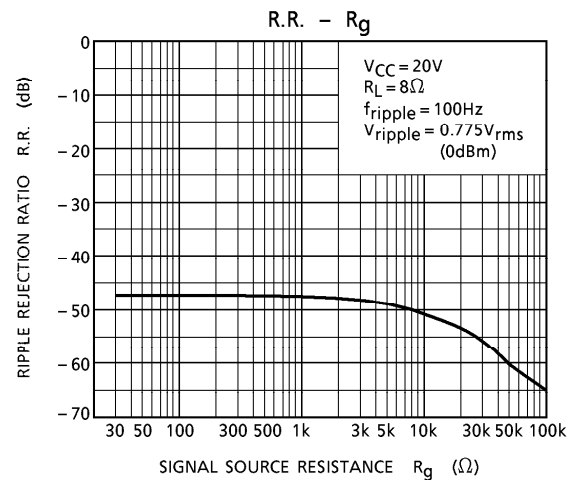
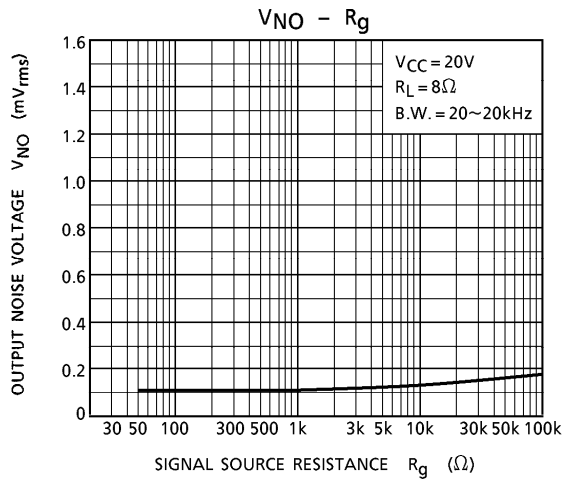
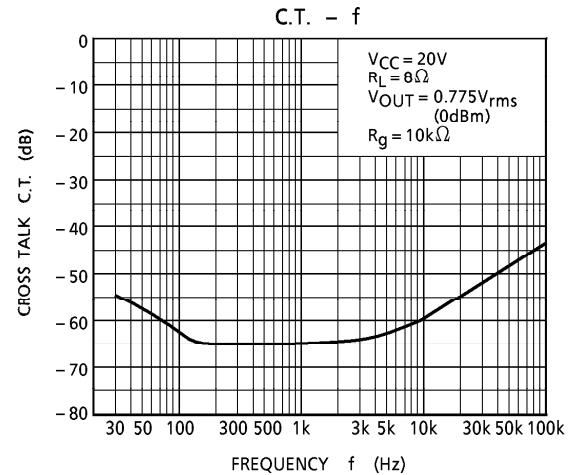
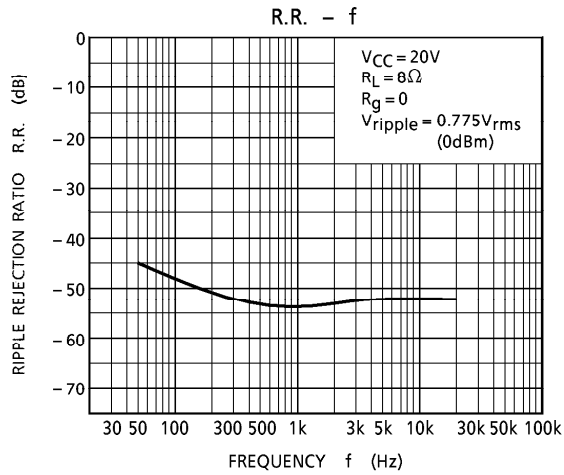
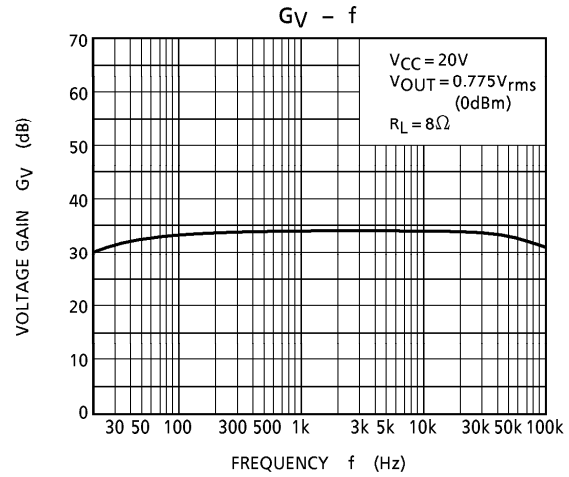
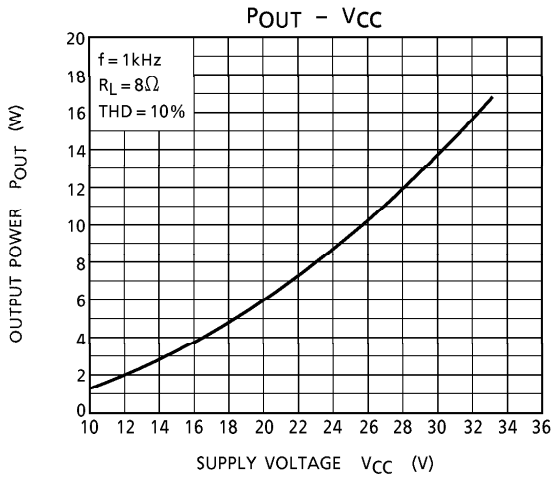
(Unless otherwise specified, V<sub>CC</sub> = 20V, R<sub>L</sub> = 8Ω, R<sub>g</sub> = 620Ω, f = 1kHz, Ta = 25°C)

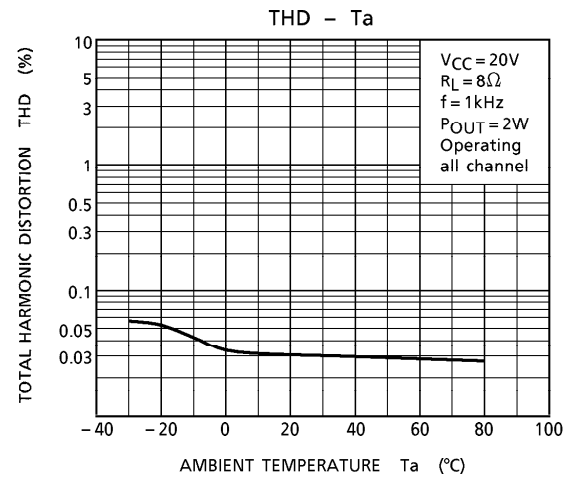
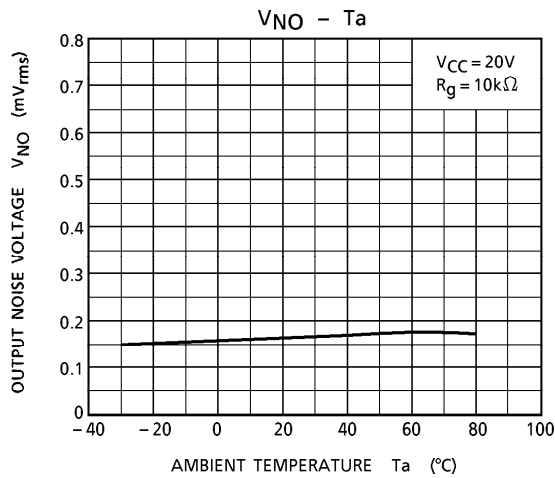
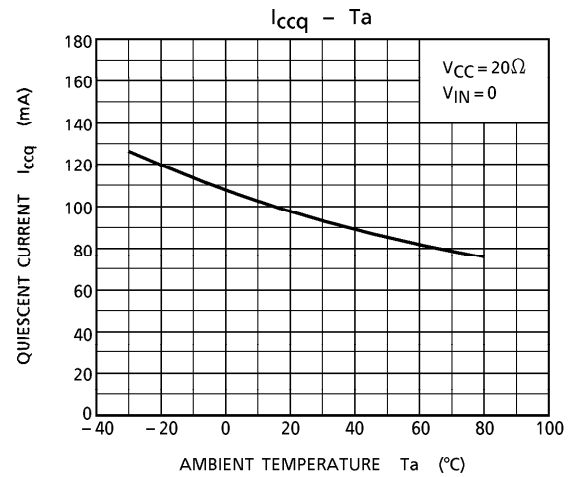
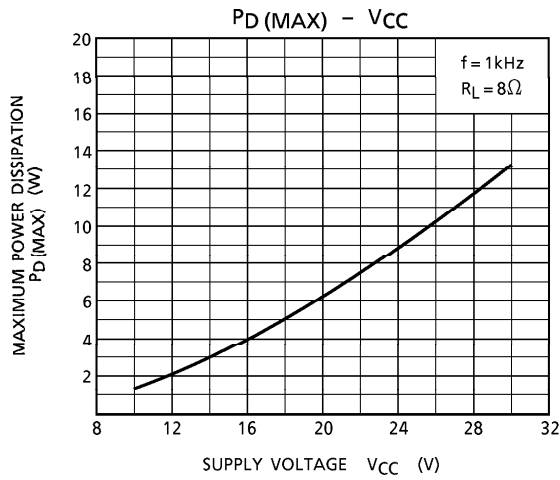
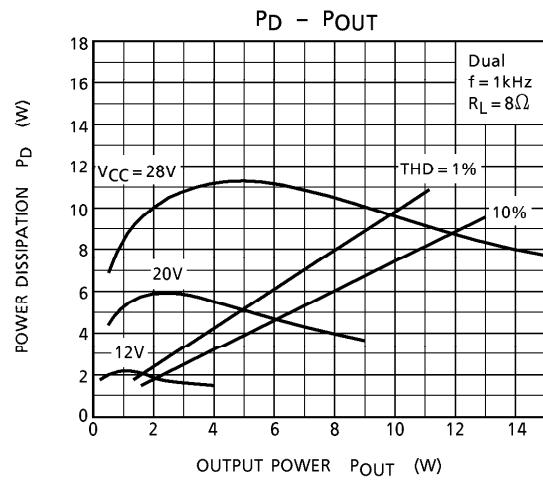
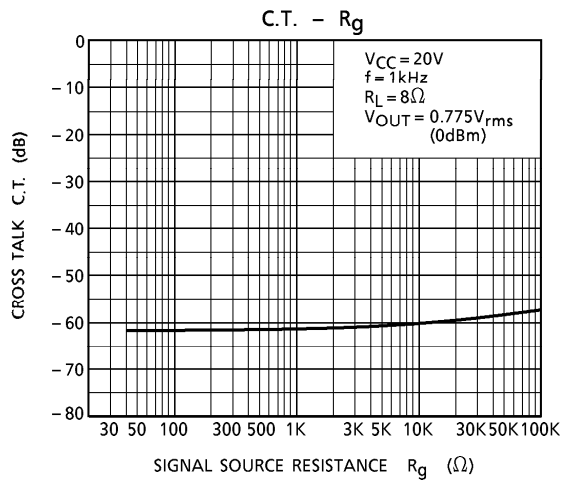
CHARACTERISTIC	SYMBOL	TEST CIRCUIT	TEST CONDITION	MIN.	TYP.	MAX.	UNIT
Quiescent Current	I <sub>ccq</sub>	—	V <sub>in</sub> = 0	65	100	180	mA
Output Power	P <sub>out (1)</sub>	—	THD = 10%	5	6	—	W
	P <sub>out (2)</sub>	—	THD = 1%	—	4.5	—	
Total Harmonic Distortion	THD (1)	—	P <sub>out</sub> = 2W	—	0.04	0.2	%
	THD (2)	—	P <sub>out</sub> = 2W, f = 10kHz	—	0.1	0.6	
Voltage Gain	G <sub>v</sub>	—	V <sub>out</sub> = 0.775V <sub>rms</sub>	32.5	34	35.5	dB
Input Resistance	R <sub>in</sub>	—	—	—	34	—	kΩ
Ripple Rejection Ratio	R.R.	—	f = 100Hz V <sub>ripple</sub> = 0.775V <sub>rms</sub>	- 40	- 47	—	dB
Output Noise Voltage	V <sub>no</sub>	—	R <sub>g</sub> = 10kΩ BW = 20Hz~20kHz	—	0.14	0.3	mV <sub>rms</sub>
Cross Talk	C.T.	—	V <sub>out</sub> = 0.775V <sub>rms</sub>	—	- 60	—	dB
Mute Control Voltage	V <sub>th (ON)</sub>	—	MUTE ON	3.1	—	V <sub>CC</sub>	V
	V <sub>th (OFF)</sub>	—	MUTE OFF	0	—	2.5	
Mute Attenuation Level	ATT	—	V <sub>out</sub> = 0.775V <sub>rms</sub> → MUTE	- 52	- 60	—	dB

TEST CIRCUIT

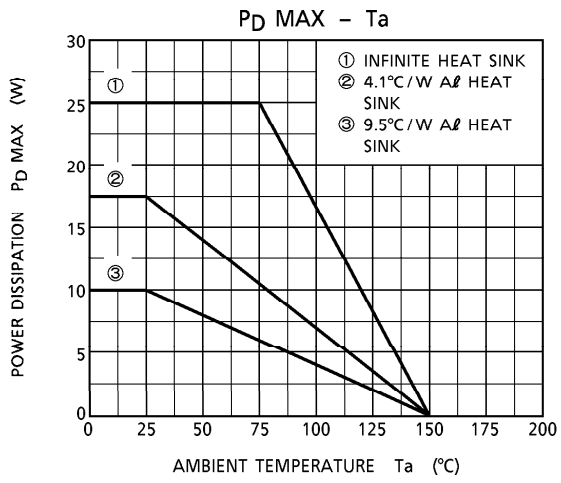






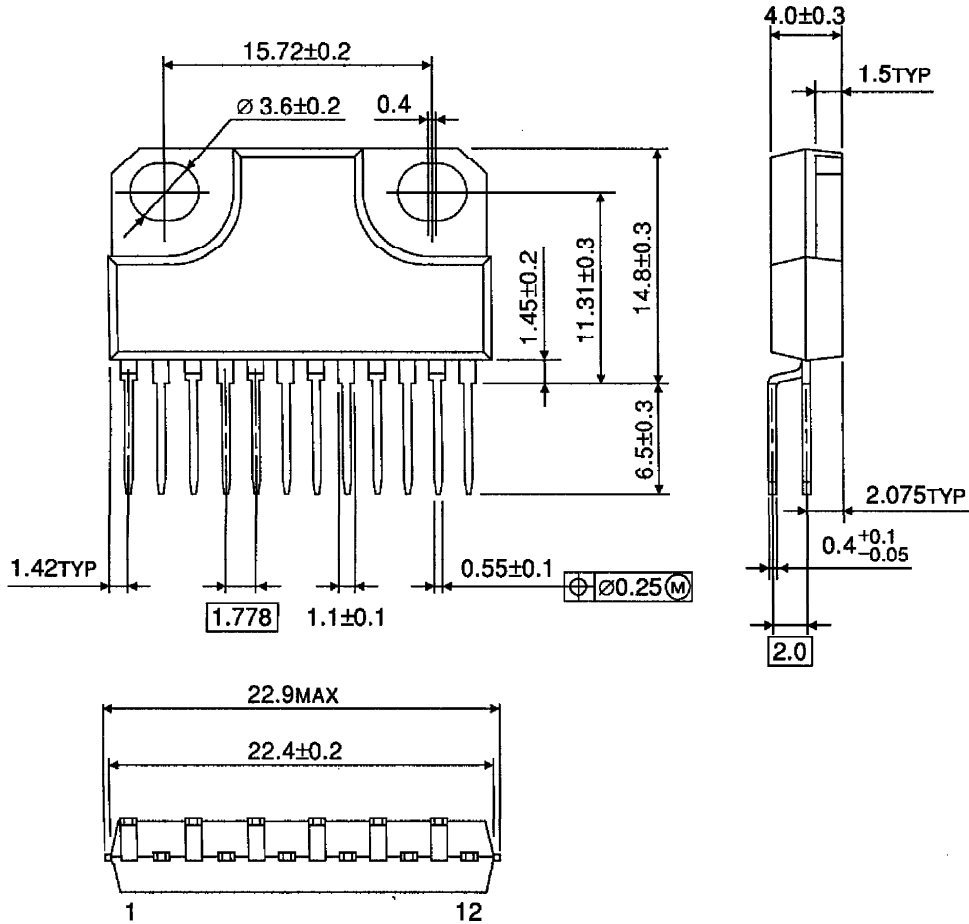






**OUTLINE DRAWING**  
HZIP12-P-1.78B

Unit : mm



Weight : 4.04g (Typ.)