

# TA8213K

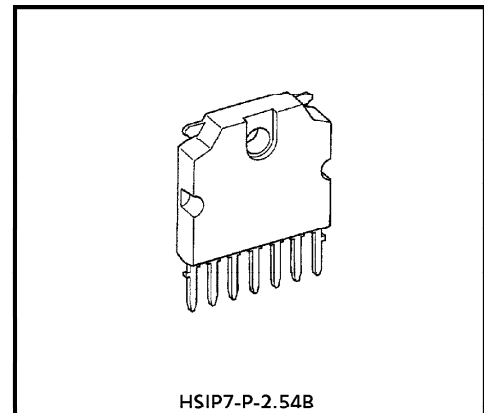
## AUDIO POWER AMPLIFIER

The TA8213K is audio power amplifier for consumer applications.

This IC provides an output power of 6W (at  $V_{CC} = 20V$ ,  $R_L = 8\Omega$ ,  $f = 1kHz$ , THD = 10%), it is suitable for power amplifier of TV.

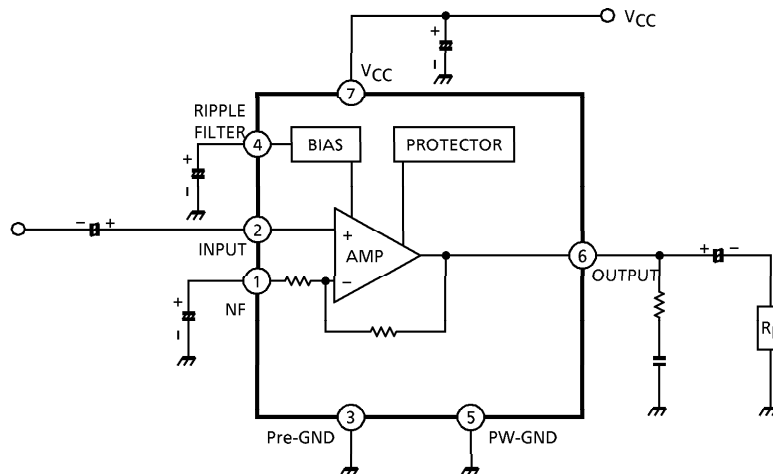
### FEATURES

- High output power :  $P_{out} = 6W$  (Typ.) ( $V_{CC} = 20V$ ,  $R_L = 8\Omega$ ,  $f = 1kHz$ , THD = 10%)
- Low Noise :  $V_{no} = 0.14mV_{rms}$  (Typ.) ( $V_{CC} = 20V$ ,  $R_L = 8\Omega$ ,  $G_V = 34dB$ ,  $R_g = 10k\Omega$ , BW = 20Hz~20kHz)
- Very few external parts
- Built in thermal shut down protector circuit
- Operation Supply Voltage Range :  $V_{CC(opr)} = 10\sim 30V$  ( $T_a = 25^\circ C$ )



Weight : 2.19g (Typ.)

### BLOCK DIAGRAM



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**MAXIMUM RATINGS** (Ta = 25°C)

CHARACTERISTIC	SYMBOL	RATING	UNIT
Supply Voltage	V <sub>CC</sub>	30	V
Output Current	I <sub>O</sub> (peak)	2	A
Power Dissipation	P <sub>D</sub> (Note)	15	W
Operating Temperature	T <sub>opr</sub>	- 20~75	°C
Storage Temperature	T <sub>stg</sub>	- 55~150	°C

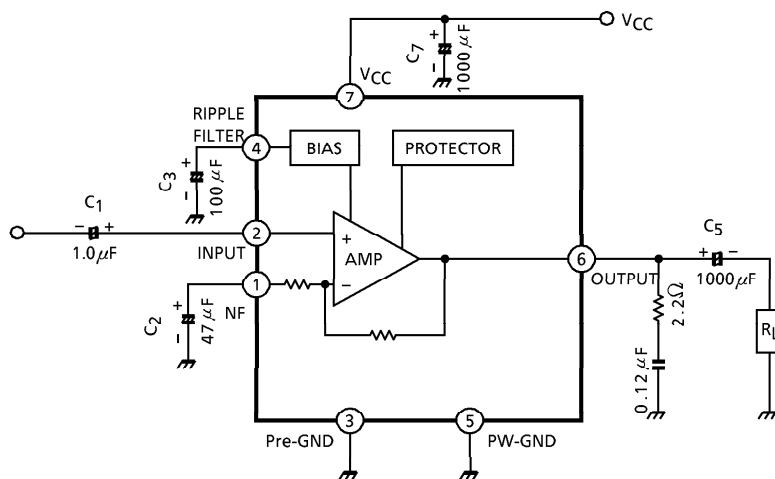
(Note) Derated above Ta = 25°C in the proportion of 120mW/°C.

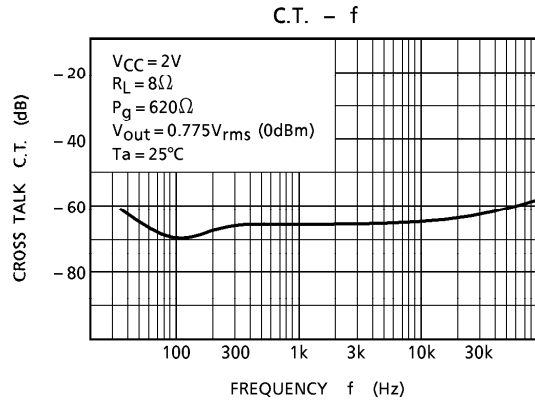
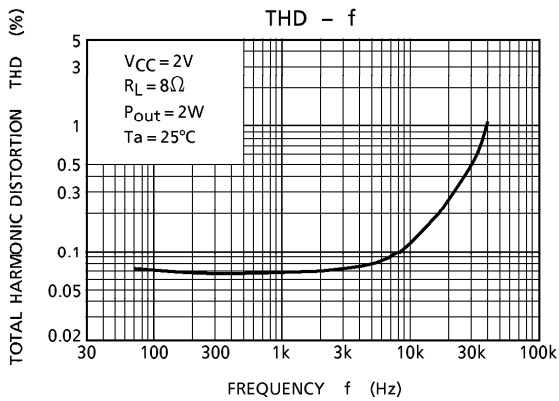
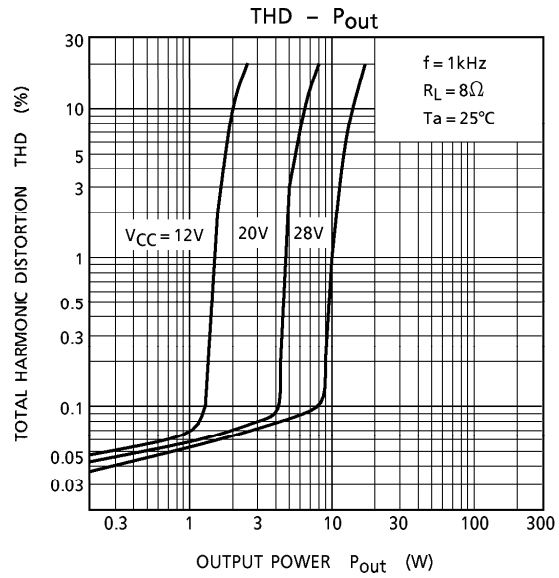
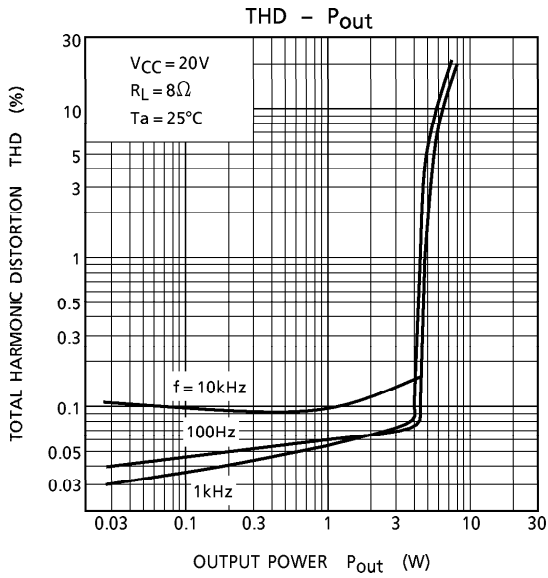
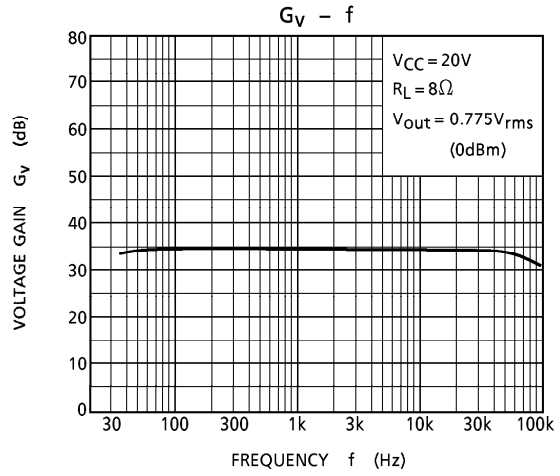
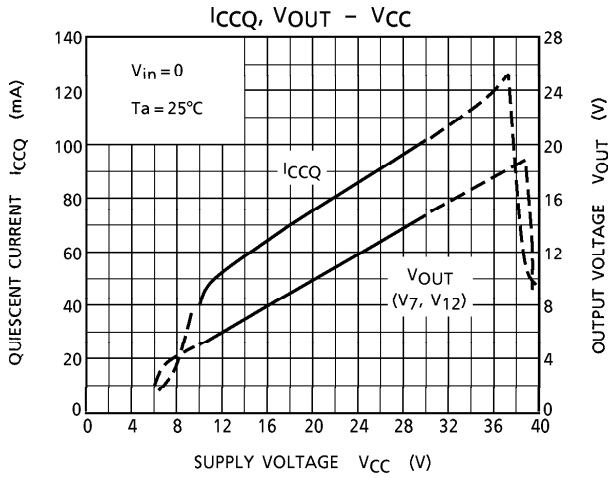
**ELECTRICAL CHARACTERISTICS**

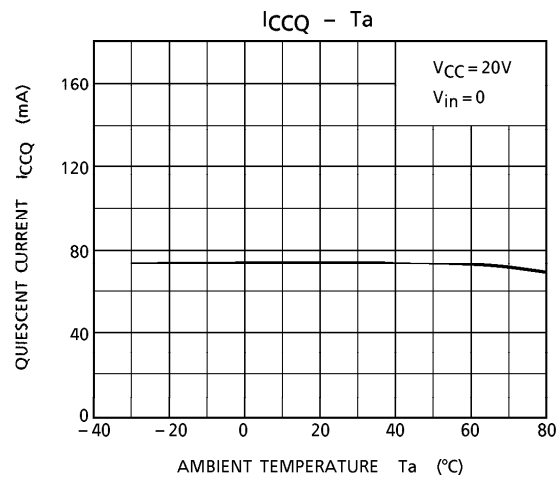
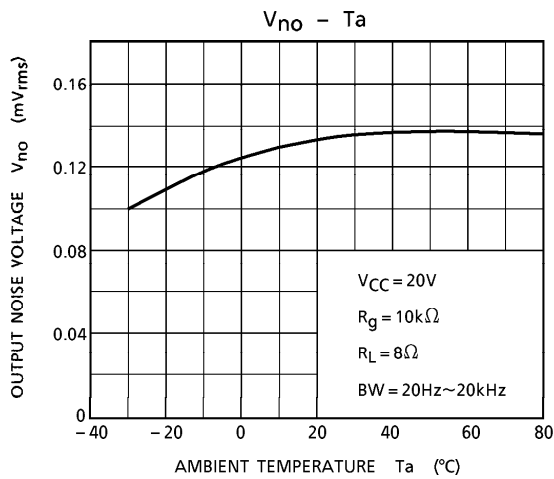
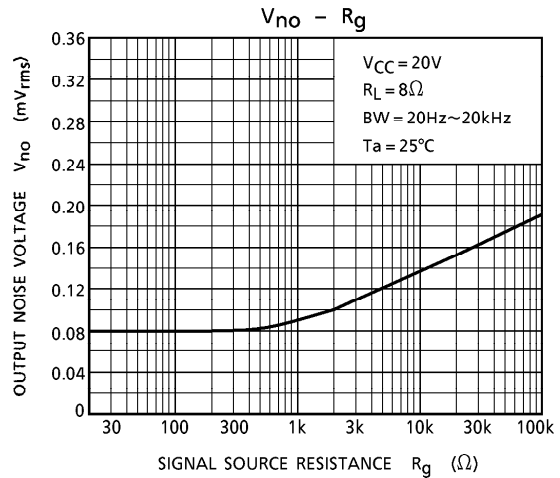
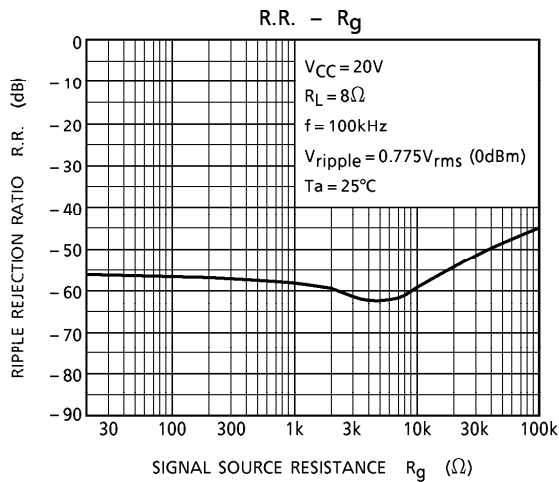
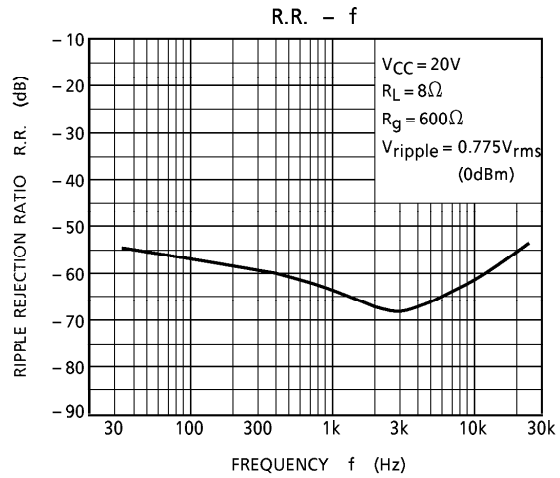
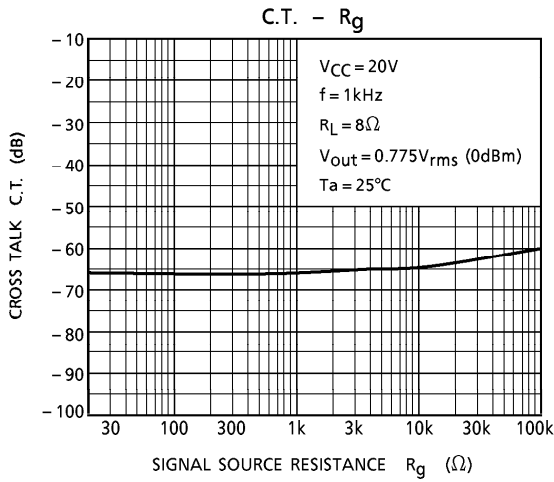
(Unless otherwise specified, V<sub>CC</sub> = 20V, R<sub>L</sub> = 8Ω, R<sub>G</sub> = 600Ω, f = 1kHz, Ta = 25°C)

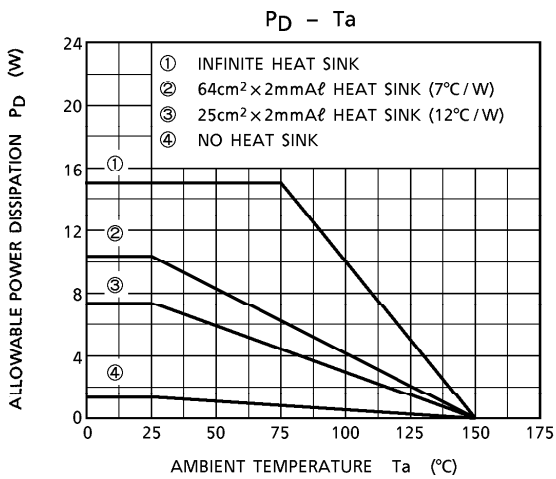
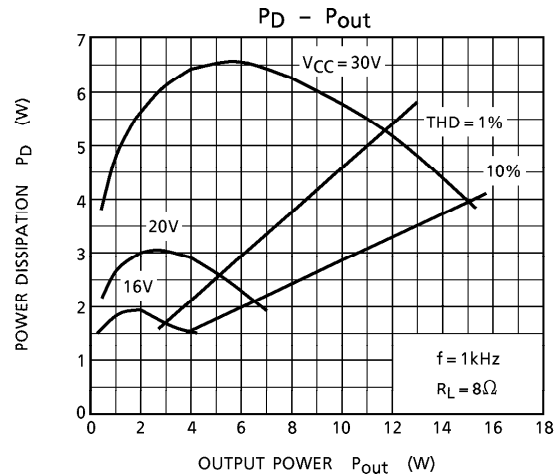
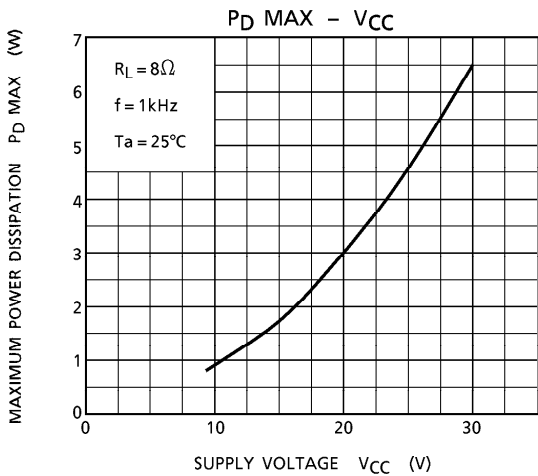
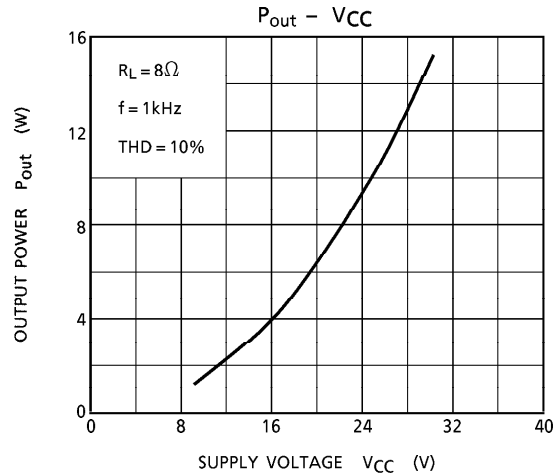
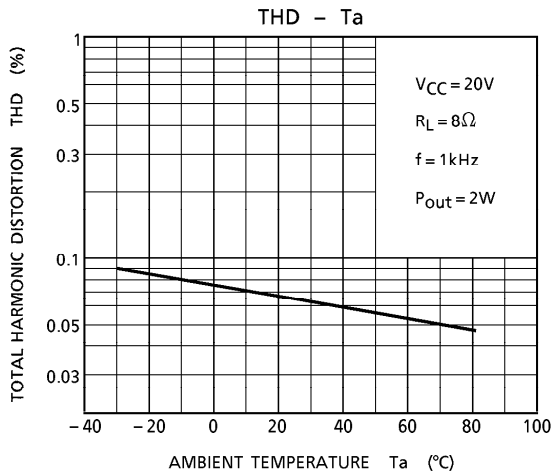
CHARACTERISTIC	SYMBOL	TEST CIRCUIT	TEST CONDITION	MIN.	TYP.	MAX.	UNIT
Quiescent Current	I <sub>CCQ</sub>	—	V <sub>in</sub> = 0	—	45	65	mA
Output Power	P <sub>out</sub> (1)	—	THD = 10%	5.0	6.0	—	W
	P <sub>out</sub> (2)	—	THD = 1%	—	4.5	—	
Total Harmonic Distortion	THD	—	P <sub>OUT</sub> = 2W	—	0.1	0.7	%
Voltage Gain	G <sub>V</sub>	—	V <sub>OUT</sub> = 0.775V <sub>rms</sub> (0dBm)	32.5	34.0	35.5	dB
Input Resistance	R <sub>IN</sub>	—		—	30	—	kΩ
Ripple Rejection Ratio	R.R.	—	R <sub>G</sub> = 0, f <sub>ripple</sub> = 100Hz V <sub>ripple</sub> = 0.775V <sub>rms</sub> (0dBm)	- 45	- 57	—	dB
Output Noise Voltage	V <sub>no</sub>	—	R <sub>G</sub> = 10kΩ BW = 20Hz~20kHz	—	0.14	0.3	mV <sub>rms</sub>

**TEST CIRCUIT**



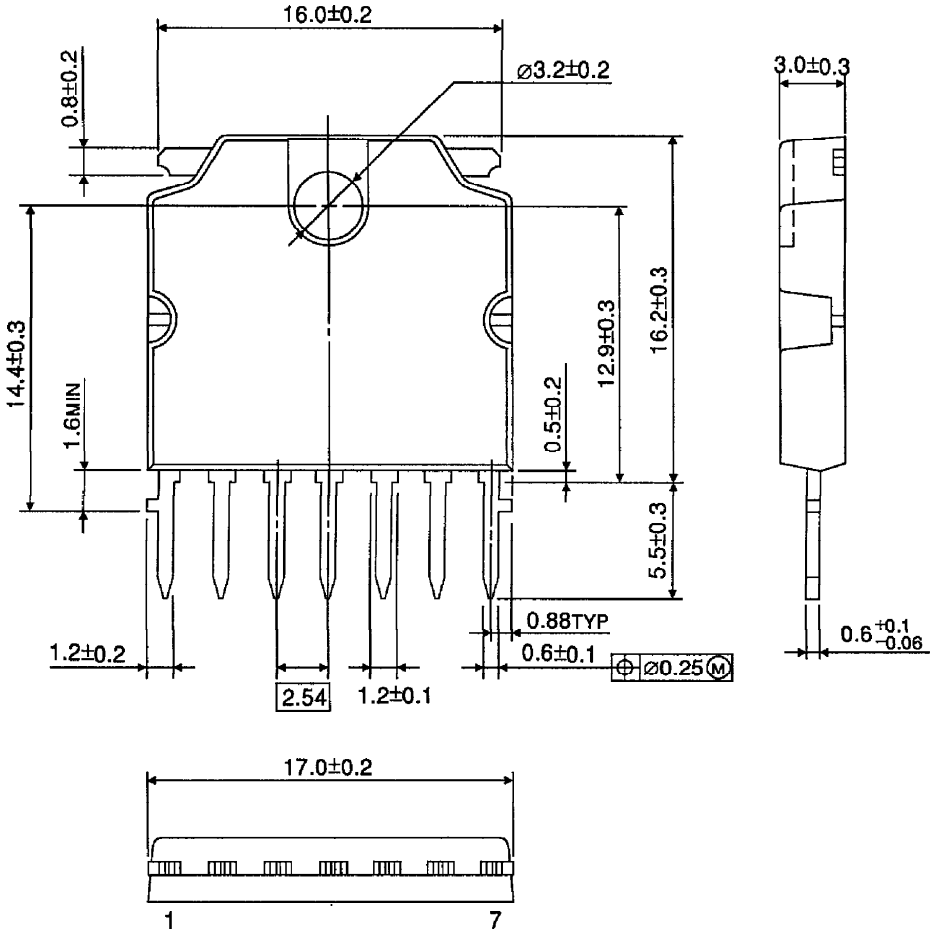






**OUTLINE DRAWING**  
HSIP7-P-2.54B

Unit : mm



Weight : 2.19g (Typ.)