

# TA8213K

## Audio Power Amplifier

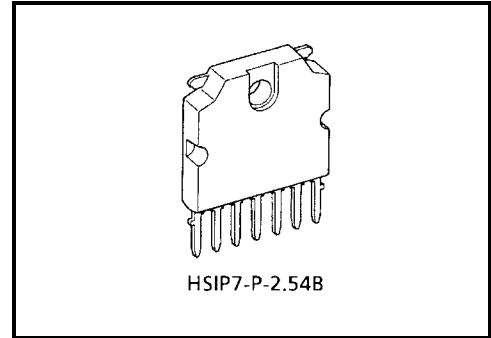
The TA8213K is audio power amplifier for consumer applications.

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

It is suitable for power amplifier of TV.

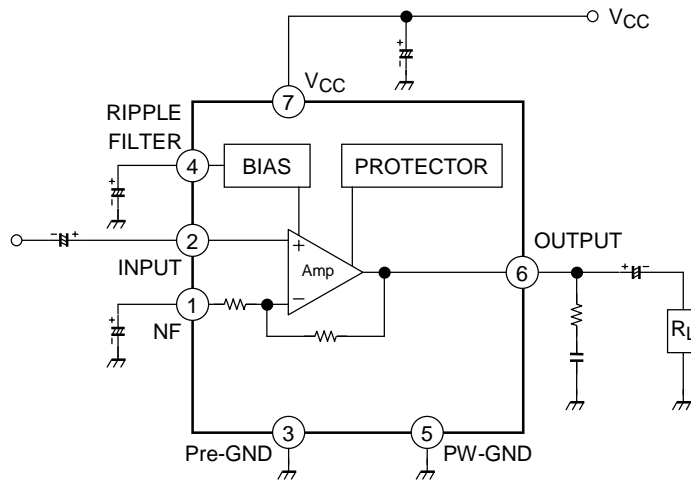
### Features

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



Weight: 2.19 g (typ.)

### Block Diagram



## Maximum Ratings (Ta = 25°C)

Characteristics	Symbol	Rating	Unit
Supply voltage	V <sub>CC</sub>	30	V
Output current (Peak/ch)	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

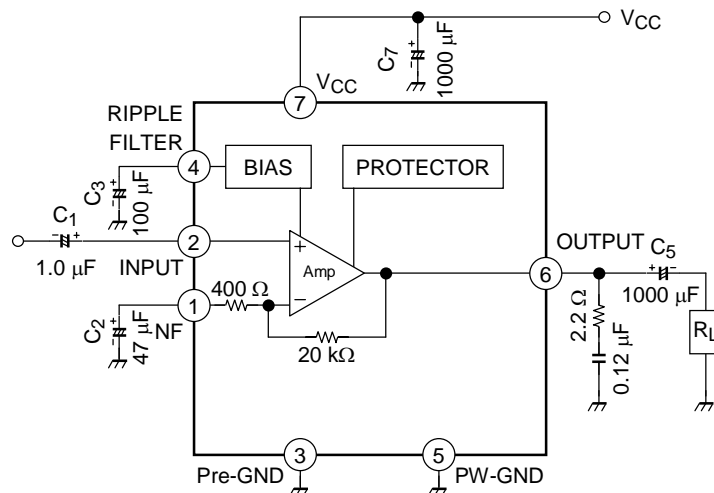
Note: Derated above Ta = 25°C in the proportion of 200 mW/°C.

## Electrical Characteristics

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

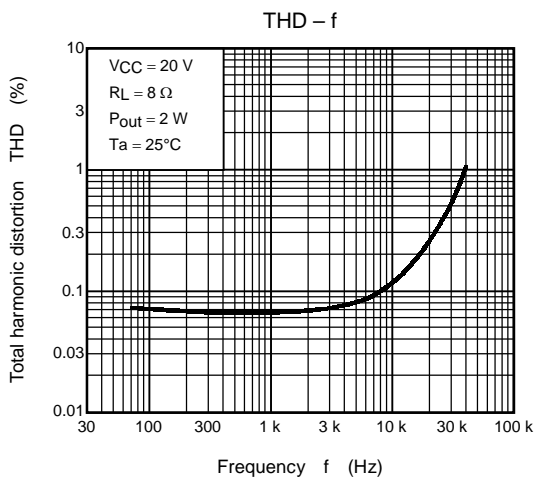
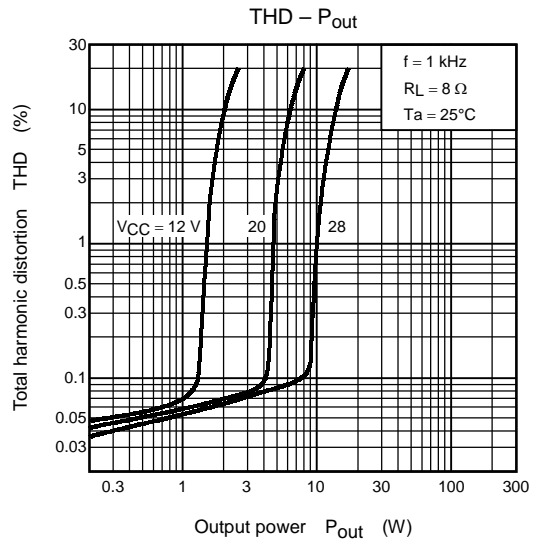
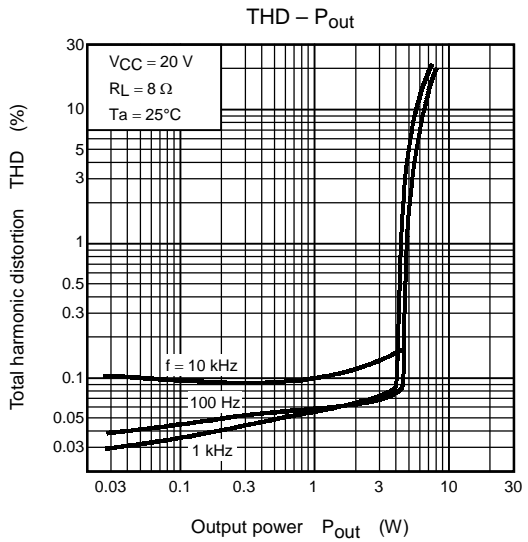
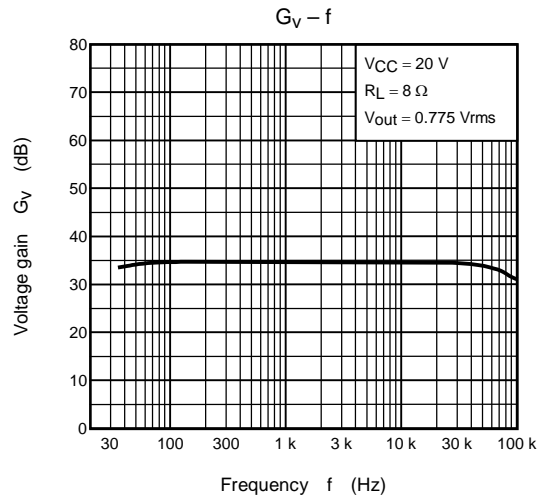
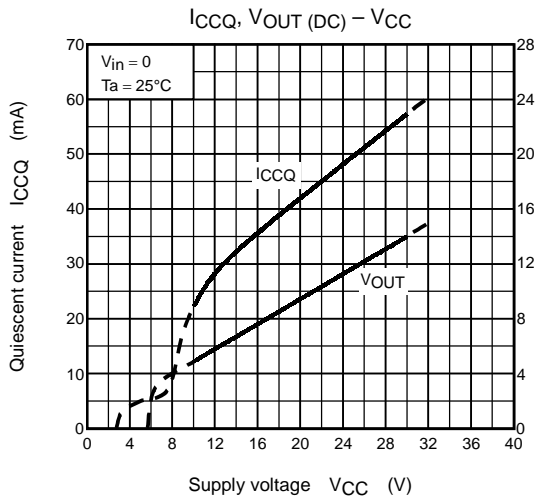
Characteristics	Symbol	Test Circuit	Test Condition	Min	Typ.	Max	Unit
Quiescent current	I <sub>CCQ</sub>	—	V <sub>in</sub> = 0	—	45	65	mA
Output power	P <sub>out</sub> (1)	—	THD = 10%	5.0	6.0	—	W
	P <sub>out</sub> (2)	—	THD = 1%	—	4.5	—	
Total harmonic distortion	THD	—	P <sub>out</sub> = 2 W	—	0.1	0.7	%
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>	—	—	—	30	—	kΩ
Ripple rejection ratio	R.R.	—	R <sub>g</sub> = 0, f <sub>ripple</sub> = 100 Hz, V <sub>ripple</sub> = 0.775 V <sub>rms</sub>	-45	-57	—	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>

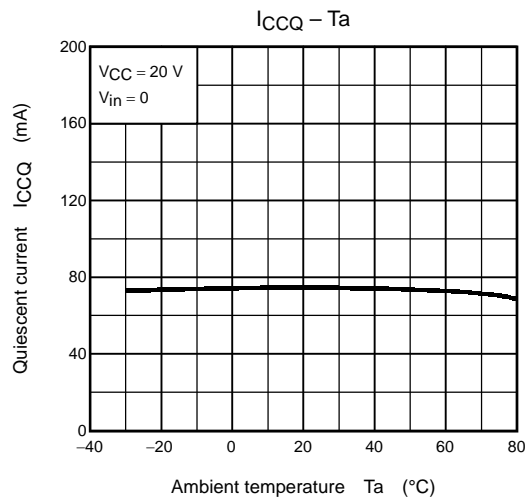
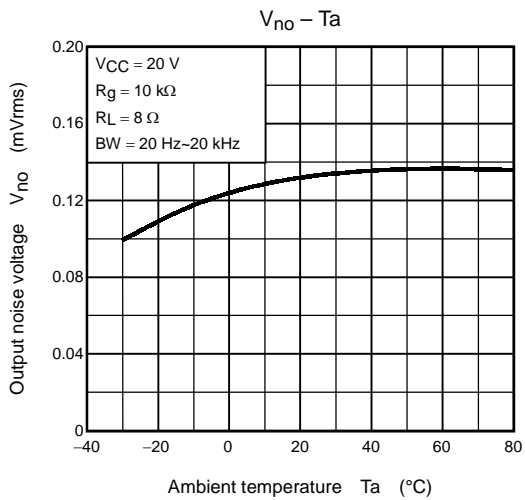
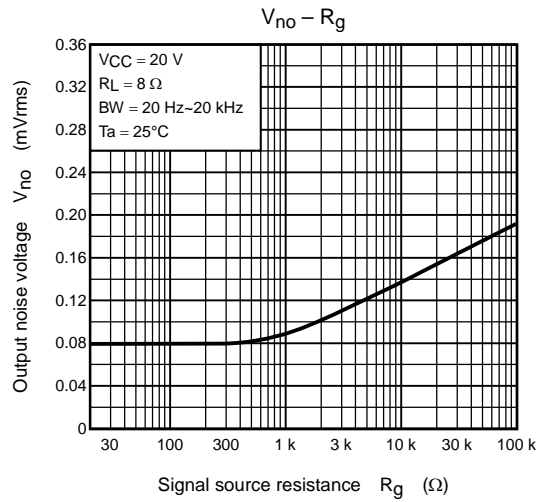
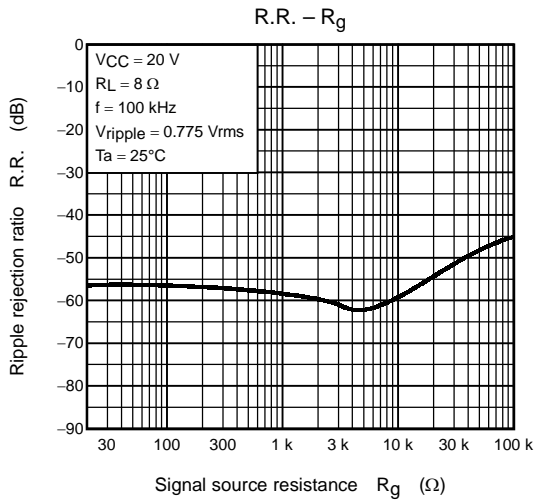
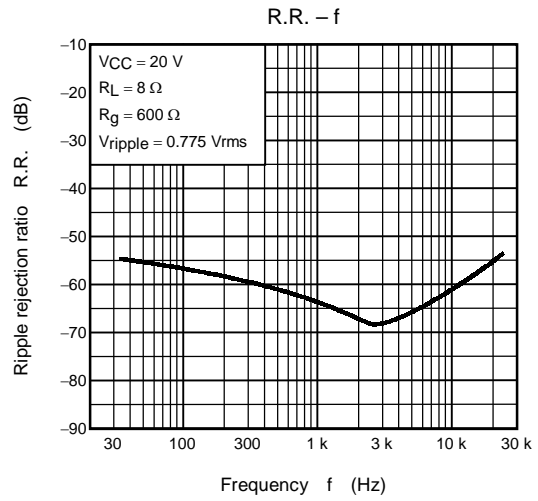
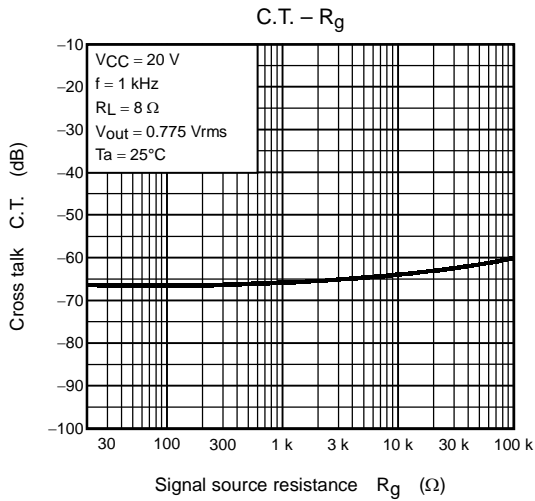
## Test Circuit

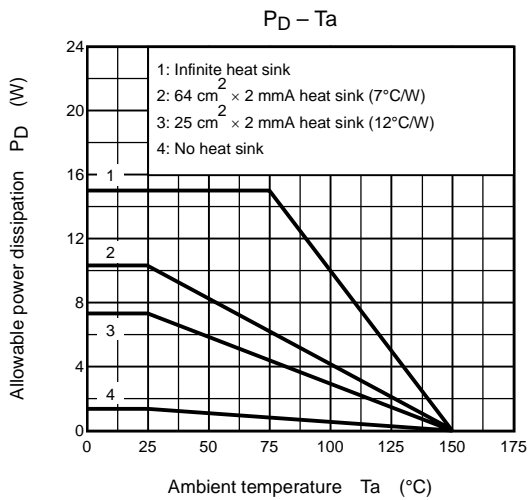
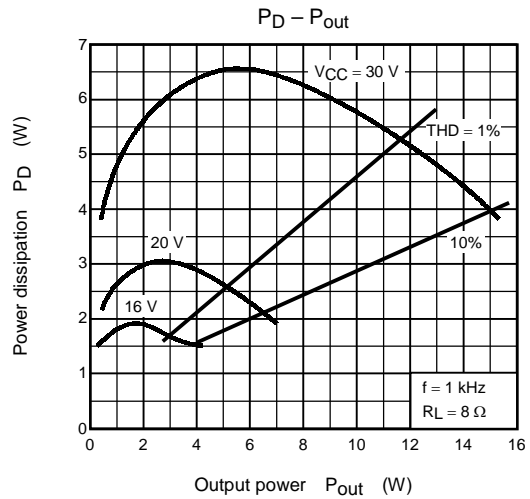
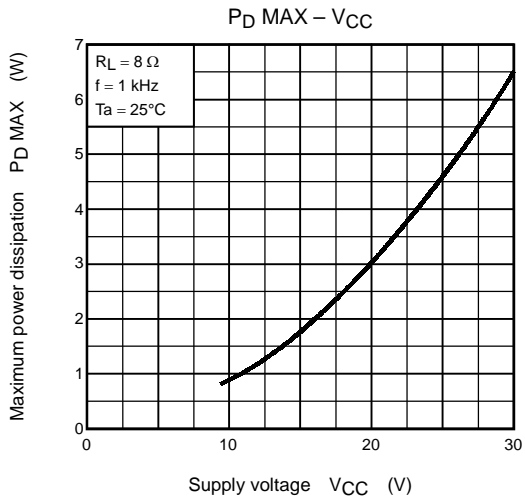
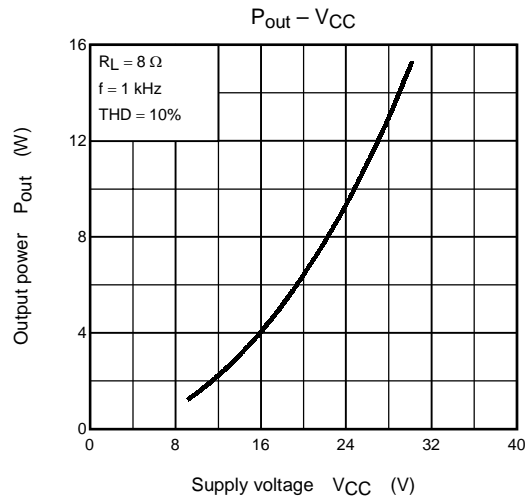
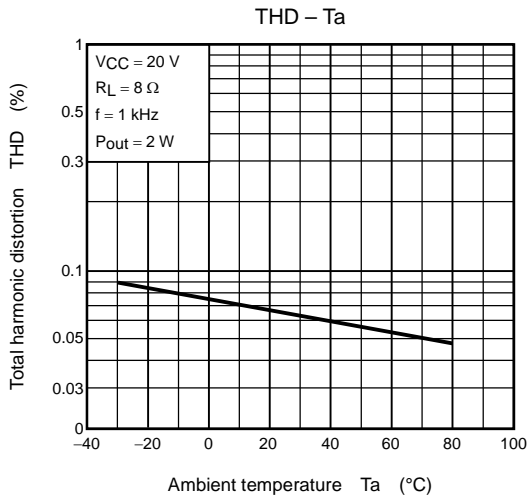


## Cautions

This IC is not proof enough against a strong E-M field by CRT which may cause malfunction such as leak. Please set the IC keeping the distance from CRT.



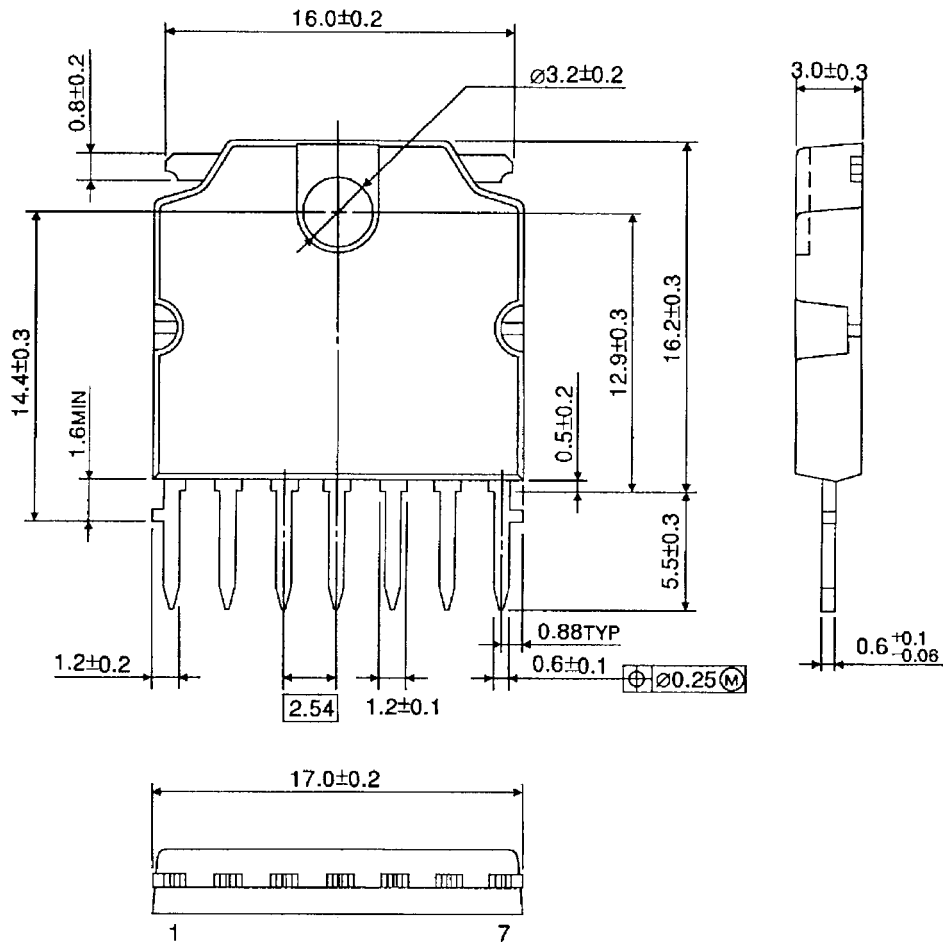




## Package Dimensions

HSIP7-P-2.54B

Unit : mm



Weight: 2.19 g (typ.)

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