

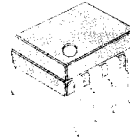
0.5W AUDIO POWER AMPLIFIER

The KA2201B is a monolithic integrated audio amplifier in a 8-pin plastic dual in line package, designed for audio frequency class B amplifiers.

8 DIP

FEATURES

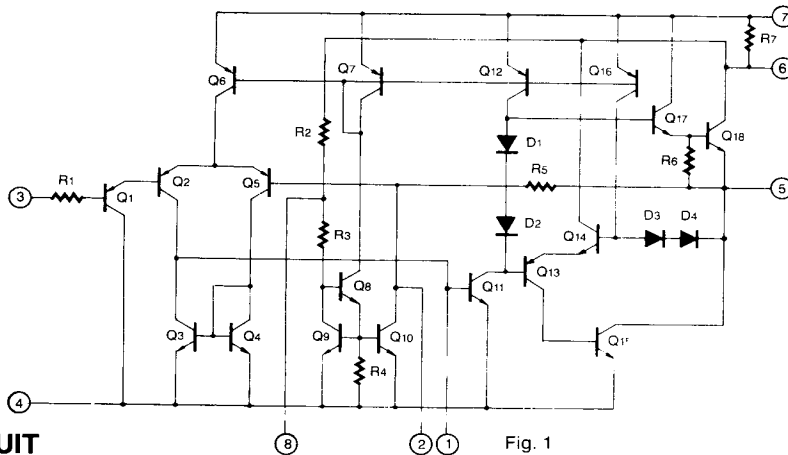
- Wide operating supply voltage (3V ~ 12V).
- Medium output power.  
 $P_o = 0.5W$  at  $V_{cc} = 6V$ ,  $R_L = 8\Omega$ , THD=10%.
- Low quiescent circuit current ( $I_{CC} = 3.5mA$ : Typ).
- Good ripple rejection.
- Minimum number of external parts required.
- Built-in bootstrap resistor  $R_7$  (External resistor  $R_3$  (56 $\Omega$ ) of the KA2201)



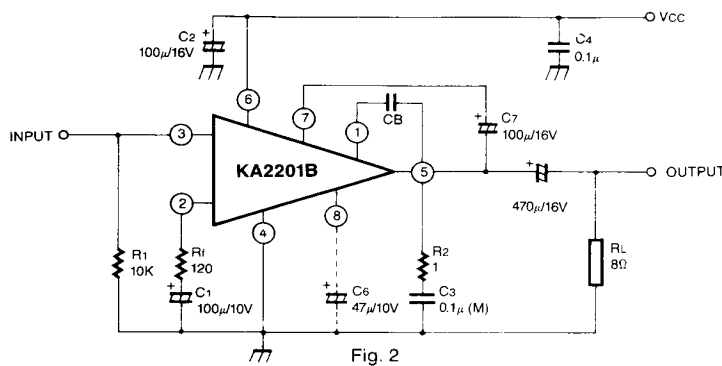
ORDERING INFORMATION

Device	Package	Operating Temperature
KA2201B	8 DIP	- 20 ~ + 70°C

SCHEMATIC DIAGRAM



TEST CIRCUIT



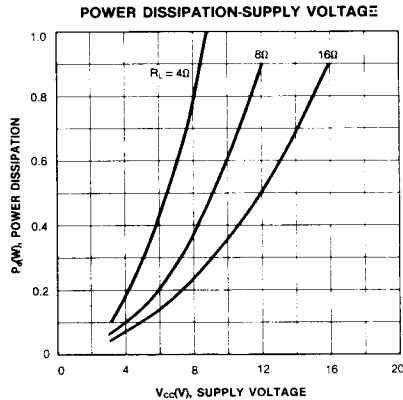
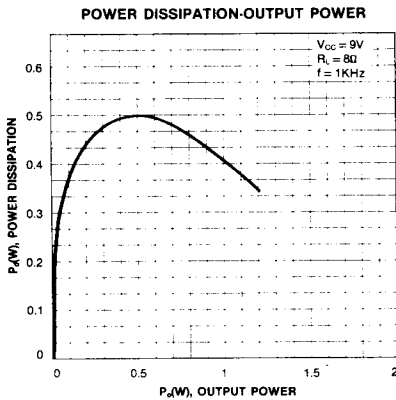
**ABSOLUTE MAXIMUM RATINGS (T<sub>a</sub> = 25°C)**

Characteristic	Symbol	Value	Unit
Supply Voltage	V <sub>CC</sub>	16	V
Output Peak Current	I <sub>o</sub>	1.5	A
Power Dissipation	P <sub>d</sub>	1.25	W
Operating Temperature	T <sub>opr</sub>	-20 ~ +70	°C
Storage Temperature	T <sub>stg</sub>	-40 ~ +150	°C

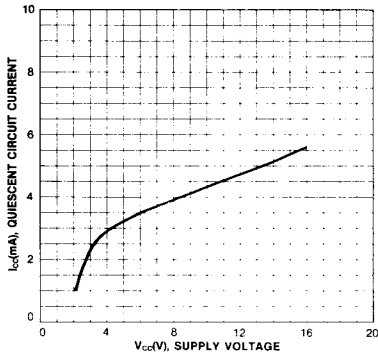
**ELECTRICAL CHARACTERISTICS**

(T<sub>a</sub> = 25°C, V<sub>CC</sub> = 6V, f = 1KHz, R<sub>g</sub> = 600Ω, R<sub>L</sub> = 8Ω unless otherwise specified)

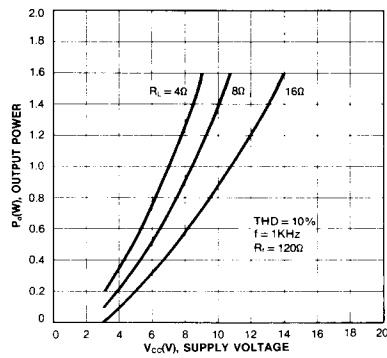
Characteristic	Symbol	Test Conditions	Min	Typ	Max	Unit
Quiescent Circuit Current	I <sub>CC</sub>	V <sub>i</sub> = 0		3.5	7.0	mA
Output Power	P <sub>o</sub>	V <sub>CC</sub> = 6V, R <sub>L</sub> = 8Ω, THD = 10% V <sub>CC</sub> = 6V, R <sub>L</sub> = 4Ω, THD = 10% V <sub>CC</sub> = 9V, R <sub>L</sub> = 8Ω, THD = 10% V <sub>CC</sub> = 9V, R <sub>L</sub> = 4Ω, THD = 10% V <sub>CC</sub> = 12V, R <sub>L</sub> = 8Ω, THD = 10%	0.4 0.9	0.5 0.75 1.2 1.6 2		W
Total Harmonic Distortion	THD	P <sub>o</sub> = 100mW		0.3	1.0	%
Voltage Gain (Open Loop)	A <sub>VO</sub>	R <sub>i</sub> = 0		75		dB
Voltage Gain (Closed Loop)	A <sub>V</sub>	R <sub>f</sub> = 120Ω	33	36	39	dB
Input Resistance	R <sub>i</sub>			5		MΩ
Output Noise Voltage	V <sub>NO</sub>	R <sub>g</sub> = 10KΩ BW (-3dB) = 50Hz ~ 20KHz		0.3	1.0	mV



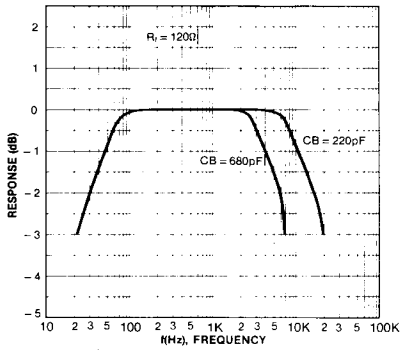
QUIESCENT CIRCUIT CURRENT-SUPPLY VOLTAGE



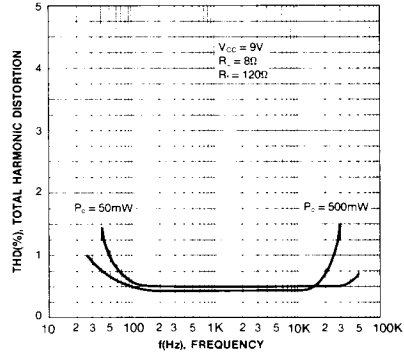
OUTPUT POWER-SUPPLY VOLTAGE



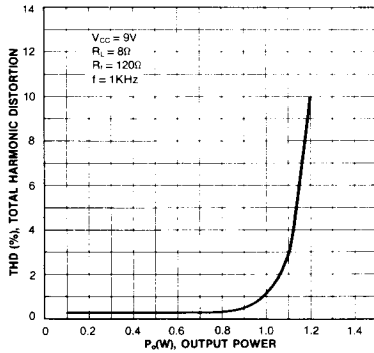
FREQUENCY RESPONSE



TOTAL HARMONIC DISTORTION-FREQUENCY



TOTAL HARMONIC DISTORTION-OUTPUT POWER



VOLTAGE GAIN-FEEDBACK RESISTANCE

