

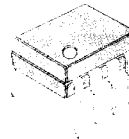
0.5W AUDIO POWER AMPLIFIER

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

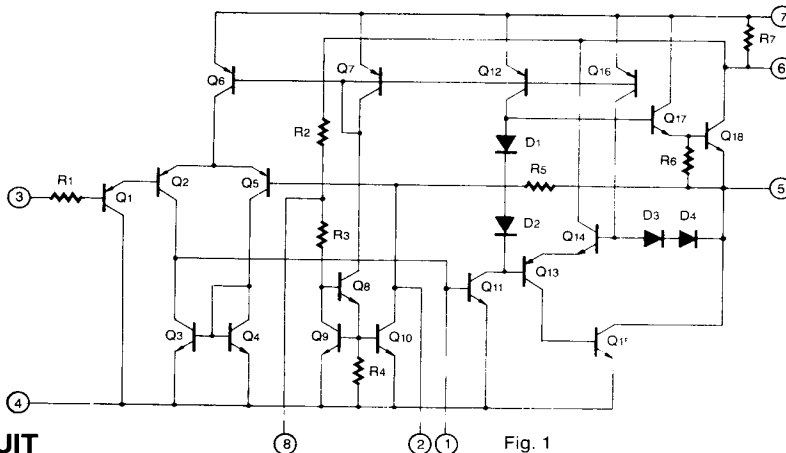
- Wide operating supply voltage (3V ~ 12V).
- Medium output power.
 $P_o = 0.5W$ at $V_{cc} = 6V$, $R_L = 8\Omega$, THD=10%.
- Low quiescent circuit current ($I_{CC} = 3.5mA$: Typ).
- Good ripple rejection.
- Minimum number of external parts required.
- Built-in bootstrap resistor R_7 (External resistor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



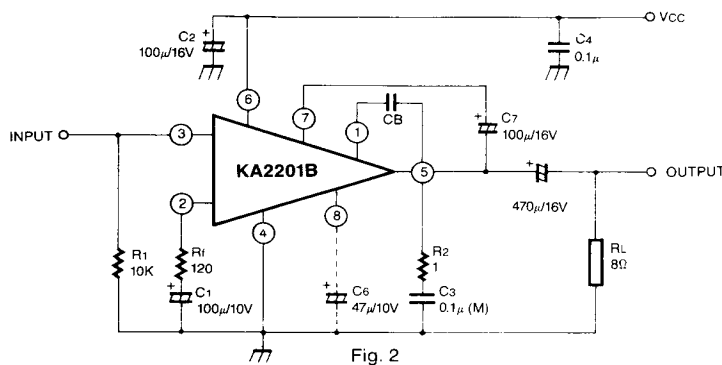
ORDERING INFORMATION

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

SCHEMATIC DIAGRAM



TEST CIRCUIT



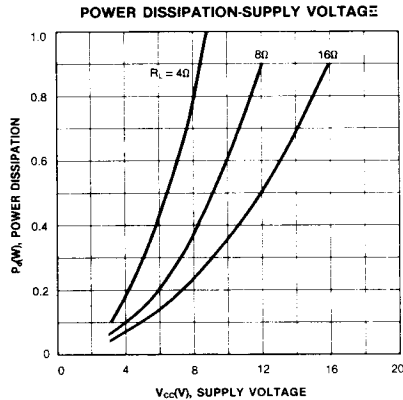
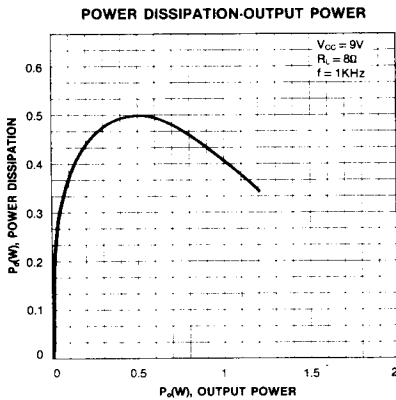
ABSOLUTE MAXIMUM RATINGS (T_a = 25°C)

Characteristic	Symbol	Value	Unit
Supply Voltage	V _{CC}	16	V
Output Peak Current	I _o	1.5	A
Power Dissipation	P _d	1.25	W
Operating Temperature	T _{opr}	-20 ~ +70	°C
Storage Temperature	T _{stg}	-40 ~ +150	°C

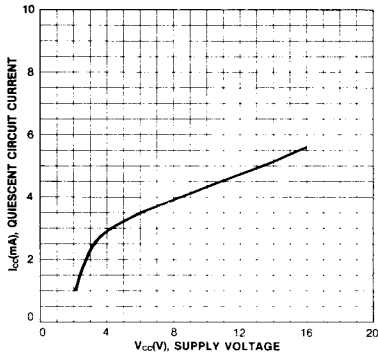
ELECTRICAL CHARACTERISTICS

(T_a = 25°C, V_{CC} = 6V, f = 1KHz, R_g = 600Ω, R_L = 8Ω unless otherwise specified)

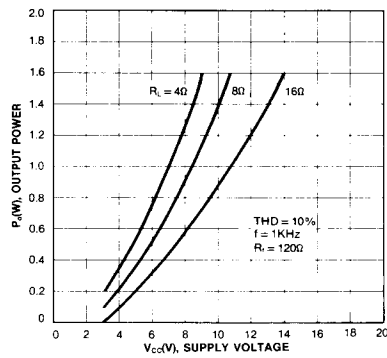
Characteristic	Symbol	Test Conditions	Min	Typ	Max	Unit
Quiescent Circuit Current	I _{CC}	V _i = 0		3.5	7.0	mA
Output Power	P _o	V _{CC} = 6V, R _L = 8Ω, THD = 10% V _{CC} = 6V, R _L = 4Ω, THD = 10% V _{CC} = 9V, R _L = 8Ω, THD = 10% V _{CC} = 9V, R _L = 4Ω, THD = 10% V _{CC} = 12V, R _L = 8Ω, THD = 10%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



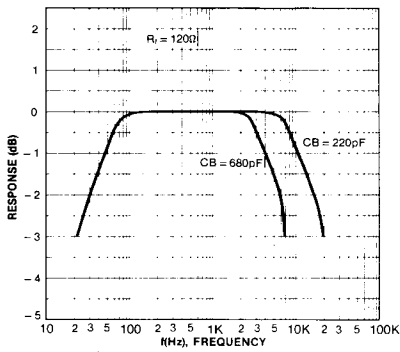
QUIESCENT CIRCUIT CURRENT-SUPPLY VOLTAGE



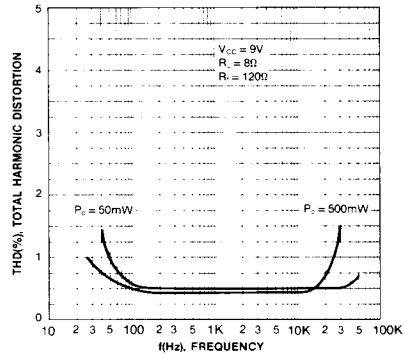
OUTPUT POWER-SUPPLY VOLTAGE



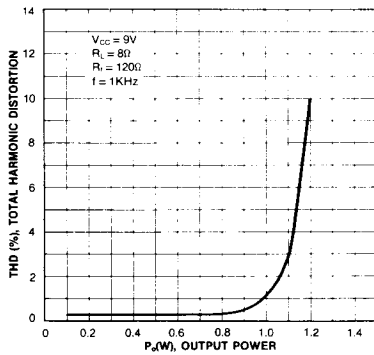
FREQUENCY RESPONSE



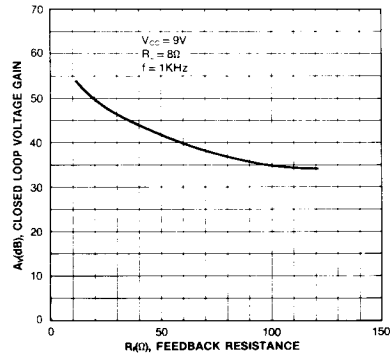
TOTAL HARMONIC DISTORTION-FREQUENCY



TOTAL HARMONIC DISTORTION-OUTPUT POWER



VOLTAGE GAIN-FEEDBACK RESISTANCE





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