

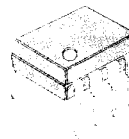
0.5W AUDIO POWER AMPLIFIER

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

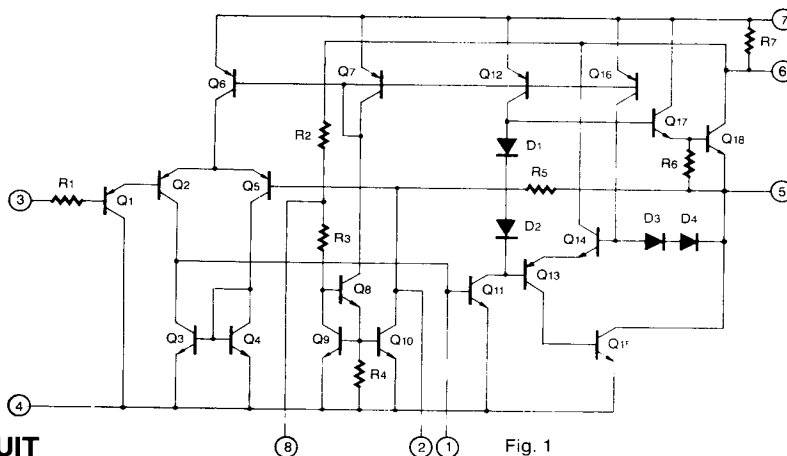
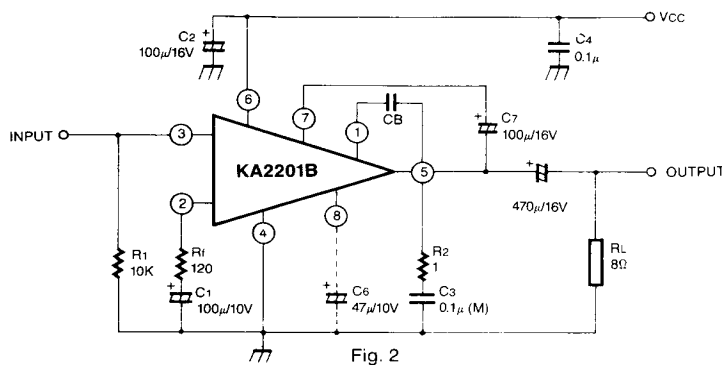
8 DIP

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**

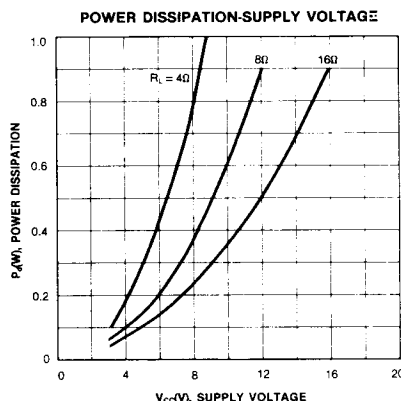
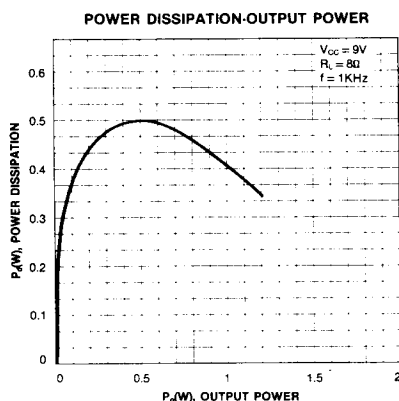
ABSOLUTE MAXIMUM RATINGS ($T_a = 25^\circ\text{C}$)

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}	$-20 \sim +70$	$^\circ\text{C}$
Storage Temperature	T_{stg}	$-40 \sim +150$	$^\circ\text{C}$

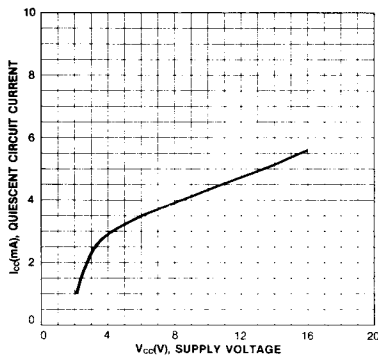
ELECTRICAL CHARACTERISTICS

($T_a = 25^\circ\text{C}$, $V_{CC} = 6\text{V}$, $f = 1\text{KHz}$, $R_g = 600\Omega$, $R_L = 8\Omega$ unless otherwise specified)

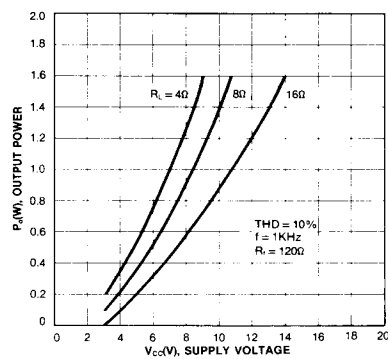
Characteristic	Symbol	Test Conditions	Min	Typ	Max	Unit
Quiescent Circuit Current	I_{CC}	$V_i = 0$		3.5	7.0	mA
Output Power	P_o	$V_{CC} = 6\text{V}$, $R_L = 8\Omega$, THD = 10% $V_{CC} = 6\text{V}$, $R_L = 4\Omega$, THD = 10% $V_{CC} = 9\text{V}$, $R_L = 8\Omega$, THD = 10% $V_{CC} = 9\text{V}$, $R_L = 4\Omega$, THD = 10% $V_{CC} = 12\text{V}$, $R_L = 8\Omega$, THD = 10%	0.4 0.9	0.5 1.2 1.6 2		W
Total Harmonic Distortion	THD	$P_o = 100\text{mW}$		0.3	1.0	%
Voltage Gain (Open Loop)	A_{VO}	$R_i = 0$		75		dB
Voltage Gain (Closed Loop)	A_V	$R_i = 120\Omega$	33	36	39	dB
Input Resistance	R_i			5		$M\Omega$
Output Noise Voltage	V_{NO}	$R_g = 10\text{K}\Omega$ $\text{BW } (-3\text{dB}) = 50\text{Hz} \sim 20\text{KHz}$		0.3	1.0	mV



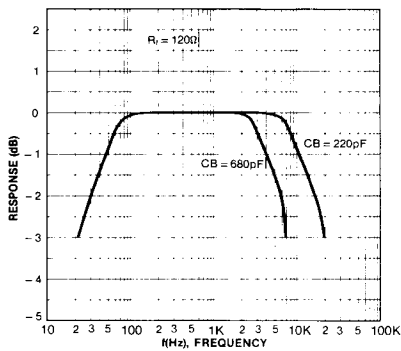
QUIESCENT CIRCUIT CURRENT-SUPPLY VOLTAGE



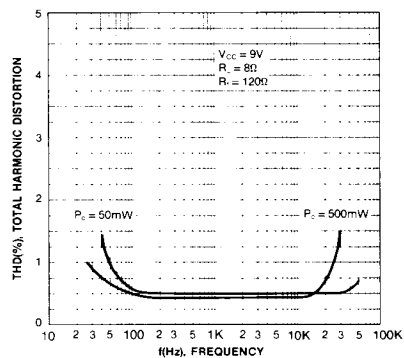
OUTPUT POWER-SUPPLY VOLTAGE



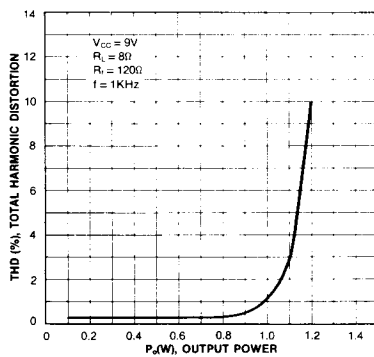
FREQUENCY RESPONSE



TOTAL HARMONIC DISTORTION-FREQUENCY



TOTAL HARMONIC DISTORTION-OUTPUT POWER



VOLTAGE GAIN-FEEDBACK RESISTANCE

