

KA2201/N

LINEAR INTEGRATED CIRCUIT

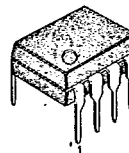
1.2W AUDIO POWER AMPLIFIER

The KA2201/N is a monolithic integrated audio amplifier in 8 pin plastic dual in line package designed for audio frequency class B amplifier.

FEATURES

- Wide operating supply voltage (3V ~ 14V)
- Medium output power.
 $P_o = 1.2W$ at $V_{CC} = 9V$, $R_L = 8\Omega$, THD = 10%.
- Low quiescent circuit current ($I_{CC} = 4mA$: Typ).
- Good ripple rejection.
- Minimum number of external parts required.

8 DIP



SCHEMATIC DIAGRAM

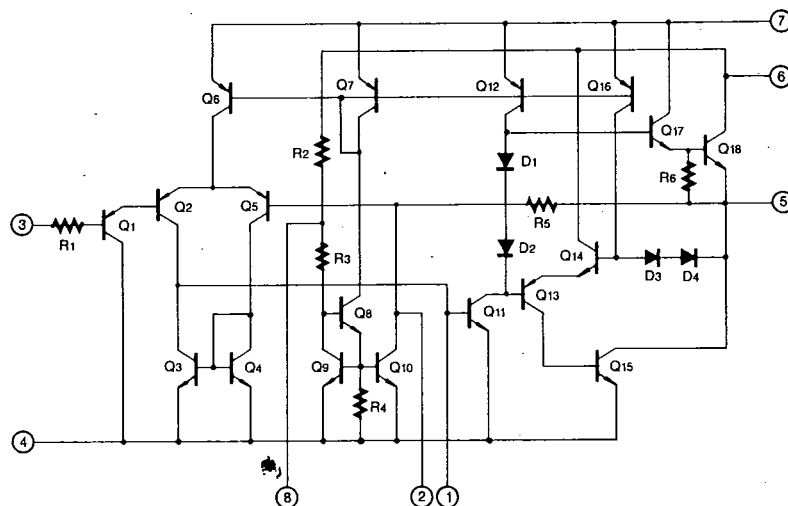


Fig. 1

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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} = 9V, f = 1KHz, R_o = 600Ω, R_f = 120Ω, R_L = 8Ω unless otherwise specified)

Characteristic	Symbol	Test Conditions	Min	Typ	Max	Unit
Quiescent Circuit Current	I _{cc}	V _i = 0		4	12	mA
Output Power	P _o	V _{cc} = 9V, R _L = 4Ω, THD = 10%	0.9	1.6		W
		V _{cc} = 9V, R _L = 8Ω, THD = 10%		1.2		
		V _{cc} = 6V, R _L = 4Ω, THD = 10%	0.4	0.75		
		V _{cc} = 6V, R _L = 8Ω, THD = 10%		0.5		
		V _{cc} = 12V, R _L = 8Ω, THD = 10%		2		
Total Harmonic Distortion	THD	P _o = 500mW		0.3	1.0	%
Voltage Gain (Open Loop)	A _{vo}	R _f = 0		75		dB
Voltage Gain (Closed Loop)	A _v	R _f = 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

TEST CIRCUIT

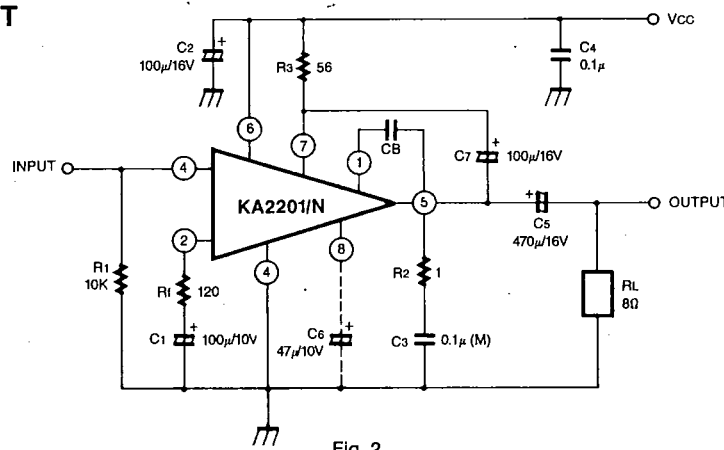
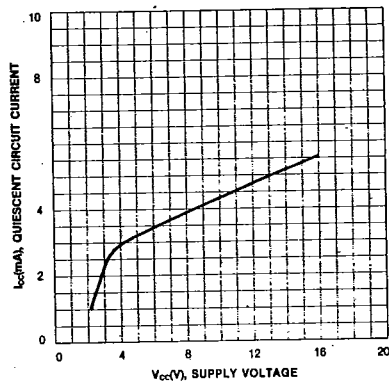


Fig. 2

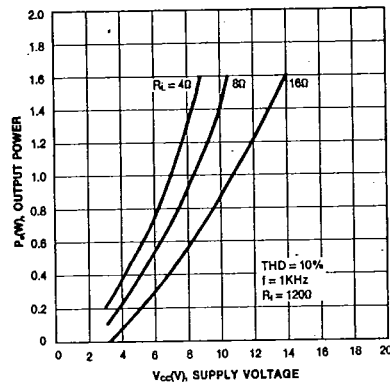
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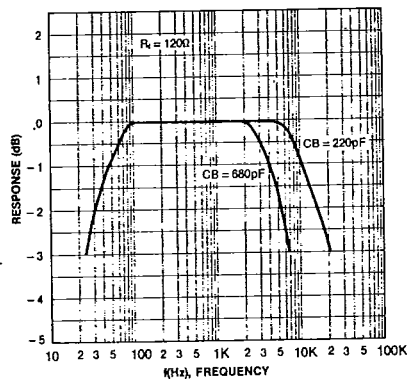
QUIESCENT CIRCUIT CURRENT—SUPPLY VOLTAGE



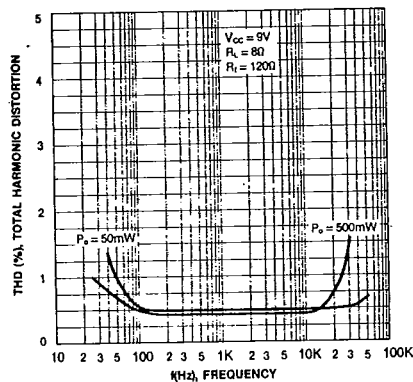
OUTPUT POWER—SUPPLY VOLTAGE



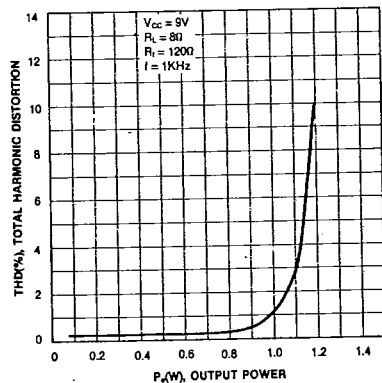
FREQUENCY RESPONSE



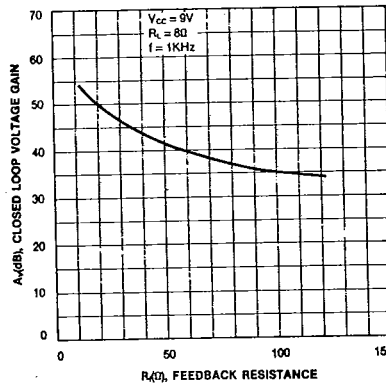
TOTAL HARMONIC DISTORTION—FREQUENCY



TOTAL HARMONIC DISTORTION—OUTPUT POWER



VOLTAGE GAIN—FEEDBACK RESISTANCE



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