

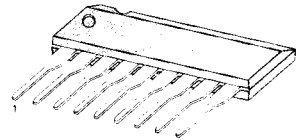
0.5W AUDIO POWER AMPLIFIER

The KA2212 is a monolithic integrated audio power amplifier in a 9-pin plastic single in line package, designed for audio frequency class B amplifiers.

FEATURES

- Suitable for portable radios, cassette tape recorders.
- **Medium output power.**
 $P_o = 0.5W$ (Typ) at $V_{CC} = 6V$, $R_L = 8\Omega$, THD = 10%.
- **Wide operating supply voltage range:** $V_{CC} = 3.5V \sim 12V$
- **Low quiescent circuit current.**
- **Excellent thermal stability.**

9 SIP



ORDERING INFORMATION

Device	Package	Operating Temperature
KA2212	9 SIP	$-20^{\circ}C \sim +70^{\circ}C$

BLOCK DIAGRAM

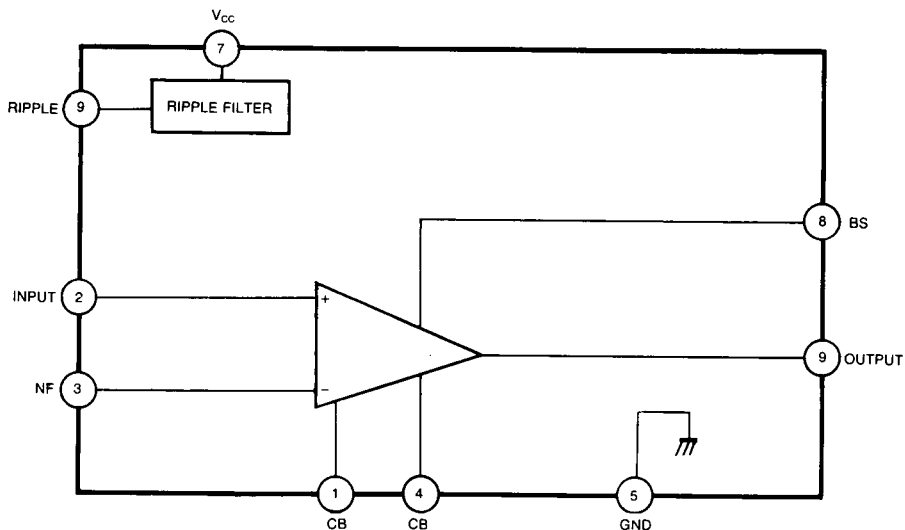


Fig. 1

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

Characteristic	Symbol	Value	Unit
Supply Voltage	V_{CC}	14	V
Power Dissipation	P_D	750	mW
Operating Temperature	T_{OPR}	$-20 \sim +70$	$^{\circ}\text{C}$
Storage Temperature	T_{STG}	$-40 \sim +150$	$^{\circ}\text{C}$

ELECTRICAL CHARACTERISTICS

($T_a = 25^{\circ}\text{C}$, $V_{CC} = 6\text{V}$, $R_L = 8\Omega$, $R_G = 600\Omega$, $R_F = 68\Omega$, $f = 1\text{KHz}$, unless otherwise specified)

Characteristic	Symbol	Test Conditions	Min	Typ	Max	Unit
Quiescent Circuit Current	I_{CCQ}	$V_i = 0$		14		mA
Open Loop Voltage Gain	G_{VO}	$R_F = 0\Omega$	60	75		dB
Closed Loop Voltage Gain	G_{VC}	$R_F = 68\Omega$	47	50	52	dB
Output Power	P_O	THD=10%	0.45	0.5		W
Total Harmonic Distortion	THD	$P_O = 100\text{mW}$		0.3	1.0	%
Input Resistance	R_i			15		$\text{K}\Omega$
Output Noise Voltage	V_{NO}	$R_G = 10\text{K}\Omega$ $\text{BW} (-3\text{dB}) = 50\text{Hz} \sim 20\text{KHz}$		0.4	1.0	mV

TEST CIRCUIT

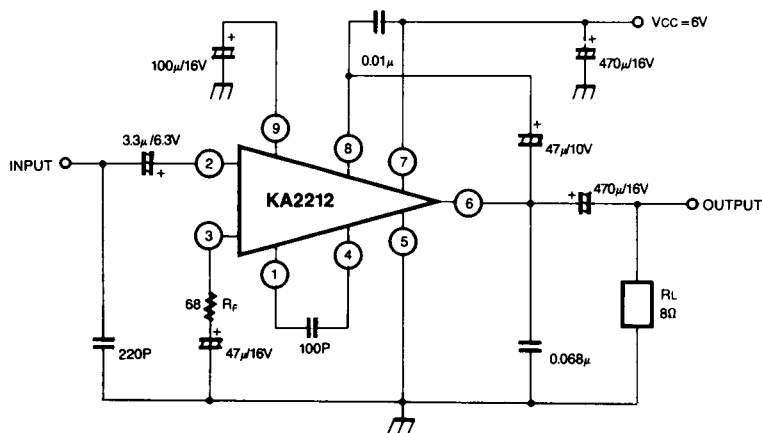
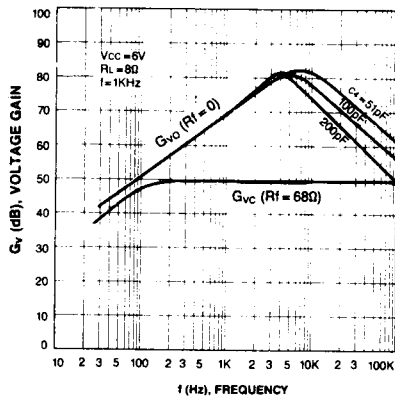
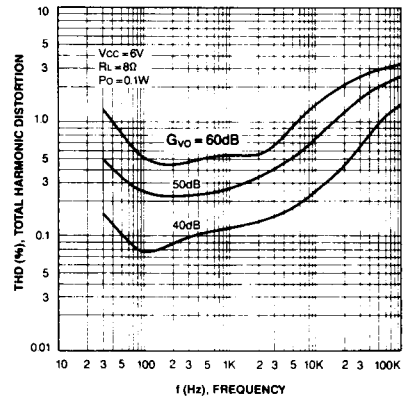


Fig. 2

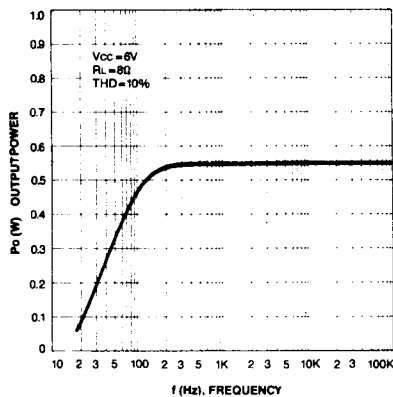
VOLTAGE GAIN-FREQUENCY



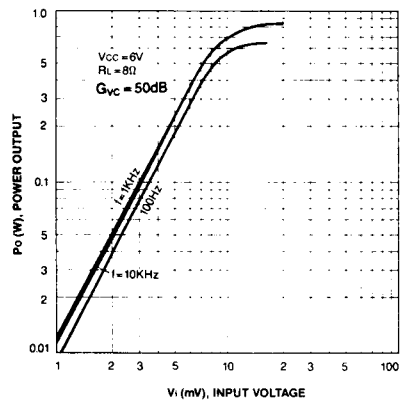
TOTAL HARMONIC DISTORTION-FREQUENCY



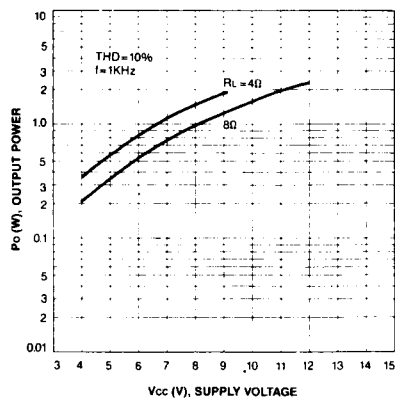
OUTPUT POWER-FREQUENCY



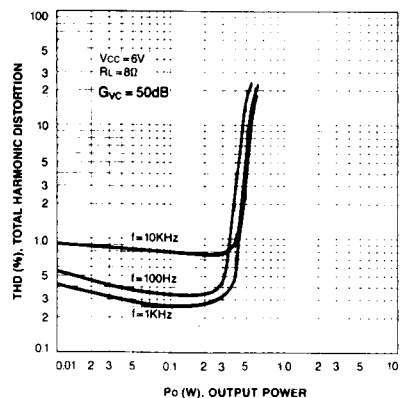
OUTPUT POWER-INPUT VOLTAGE



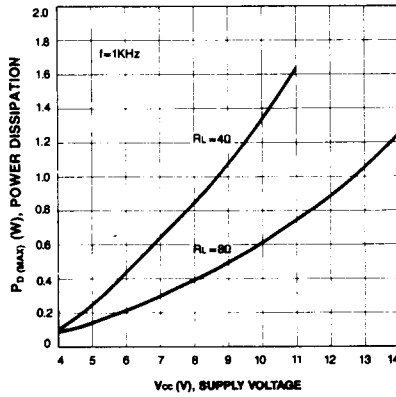
OUTPUT POWER-SUPPLY VOLTAGE



TOTAL HARMONIC DISTORTION-OUTPUT POWER



POWER DISSIPATION-SUPPLY VOLTAGE



QUIESCENT CIRCUIT CURRENT-SUPPLY VOLTAGE

