

5.8W DUAL POWER AMPLIFIER

The KA2211 is a dual audio power amplifier for consumer application. It is designed for high power, low dissipation and low noise.

It also contains various kinds of protector. It is suitable for high performance car-audio power amplifiers.

FEATURES

- Operating supply voltage range: $V_{CC} = 9V \sim 18V$
- High power (Dual)
 $P_o = 5.8W$ (Typ) at $V_{CC} = 13.2V$, $R_L = 4\Omega$, $THD = 10\%$
- Low distortion (Dual)
 $THD = 0.06\%$ (Typ) at $V_{CC} = 13.2V$, $R_L = 4\Omega$, $P_o = 1W$, $A_v = 52dB$
- Low noise (Dual)
 $V_{NO} = 0.7mV$ (Typ) at $V_{CC} = 13.2V$, $R_L = 4\Omega$, $R_g = 10K\Omega$,
 $A_v = 52dB$, $BW(-3dB) = 20Hz \sim 20KHz$
- Protector, thermal shut down
 Over voltage protection
 DC short protection
- Connect H/S to GND

BLOCK DIAGRAM

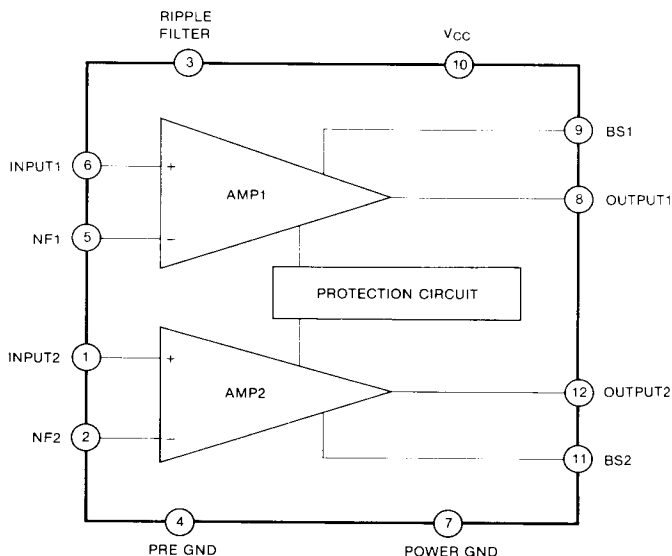
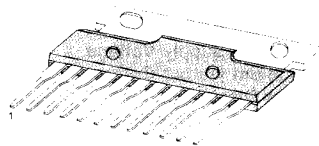


Fig. 1

12 SIP H/S



ORDERING INFORMATION

Device	Package	Operating Temperature
KA2211	12 SIP H/S	$-20 \sim +70^{\circ}C$

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

Characteristic	Symbol	Condition	Value	Unit
Surge Voltage	V_{CC} (surge)	$t = 0.2$ sec	45	V
Maximum Supply Voltage	V_{CC} (max 1)	$V_i = 0$	25	V
Maximum Supply Voltage	V_{CC} (max 2)	with signal	18	V
Maximum Output Current	I_o (peak)		3.5	A
Power Dissipation	P_d		15	W
Operating Temperature	T_{opr}		- 20 ~ + 70	$^\circ\text{C}$
Storage Temperature	T_{stg}		- 40 ~ + 150	$^\circ\text{C}$

ELECTRICAL CHARACTERISTICS

($T_a = 25^\circ\text{C}$, $V_{CC} = 13.2\text{V}$, $R_L = 4\Omega$, $R_g = 600\Omega$, $f = 1\text{KHz}$, unless otherwise specified)

Characteristic	Symbol	Test Conditions	Min	Typ	Max	Unit
Quiescent Circuit Current	I_{CC}	$V_i = 0$		80	145	mA
Output Power	P_o	THD = 10%	5	5.8		W
Total Harmonic Distortion	THD	$P_o = 1\text{W}$		0.06	0.3	%
Voltage Gain	A_v	$V_o = 0\text{dBm}$	50	52	54	dB
Channel Balance	CB	$V_o = 0\text{dBm}$	- 1	0	1	dB
Output Noise Voltage	V_{NO}	$R_g = 10\text{K}\Omega$, BW(- 3dB) = 20Hz ~ 20KHz		0.7	1.5	mV
Ripple Rejection Ratio	RR	$f = 120\text{Hz}$, $V_i = 0\text{dBm}$	40	52		dB
Cross Talk	CT	$V_o = 0\text{dBm}$		57		dB
Input Resistance	R_i	$f = 1\text{KHz}$		33		$\text{K}\Omega$

TEST AND APPLICATION CIRCUIT

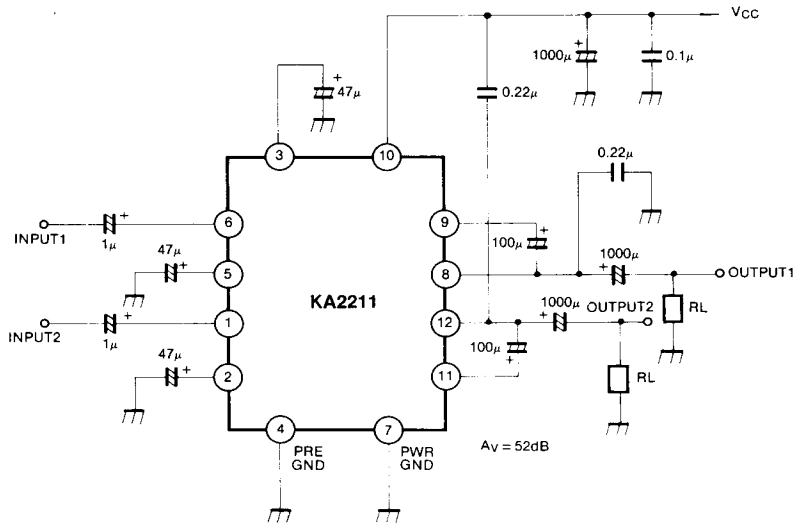
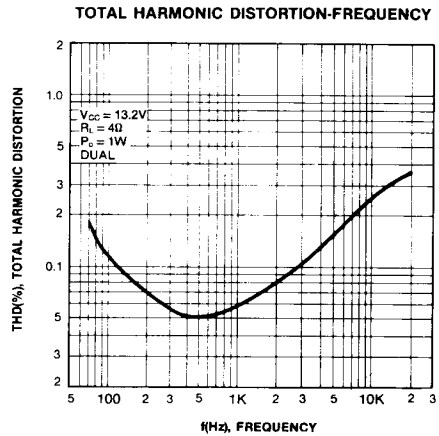
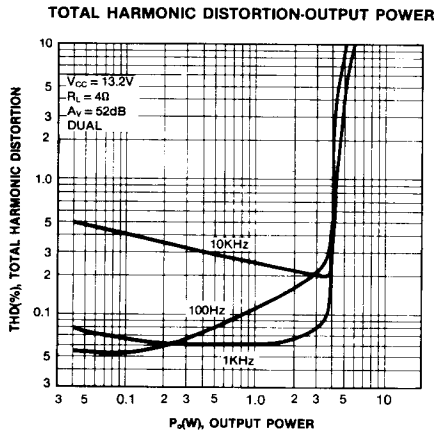
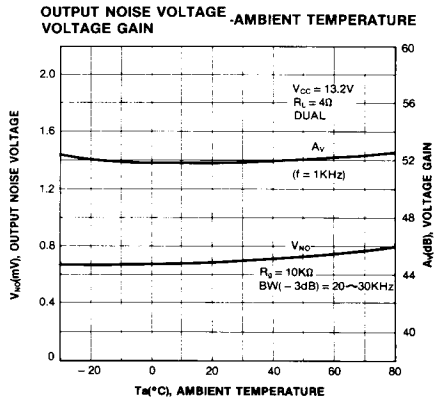
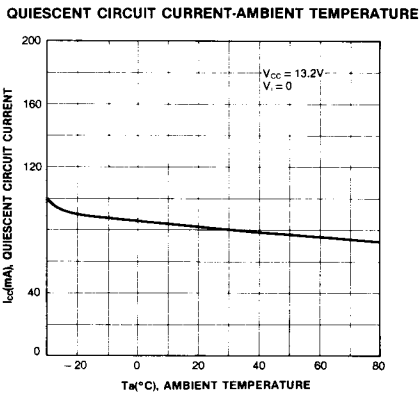
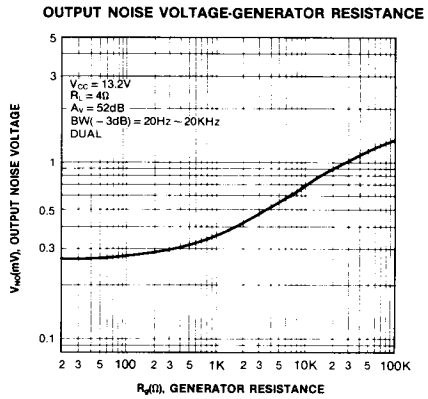
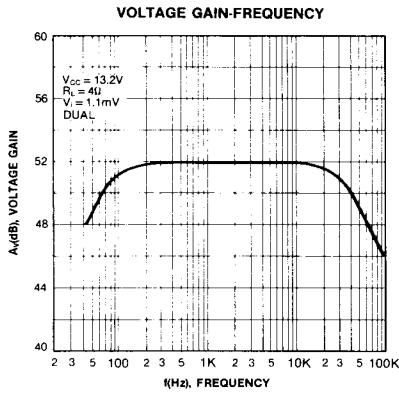
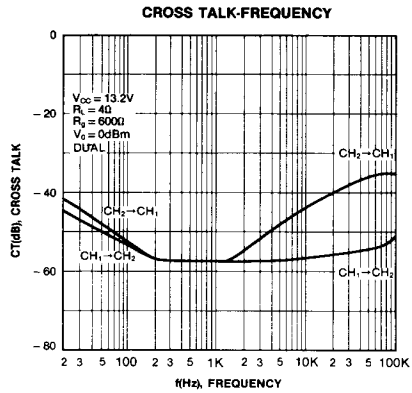
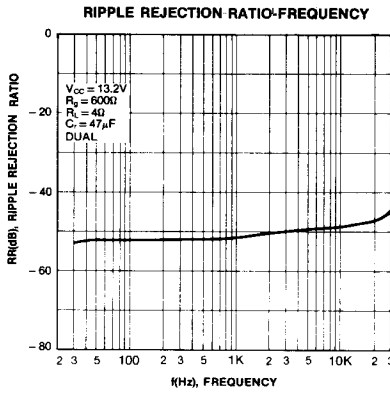
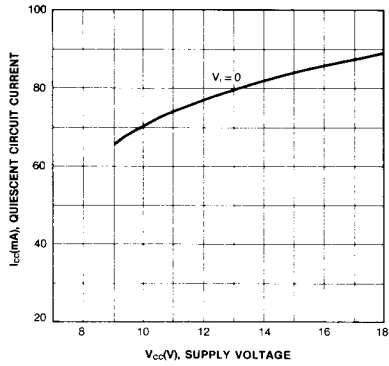


Fig. 2

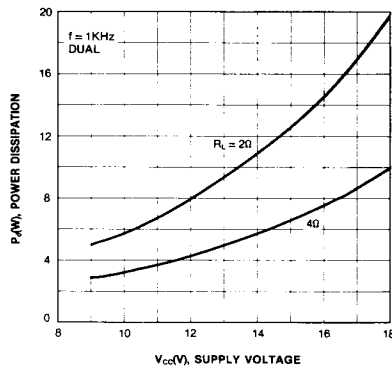




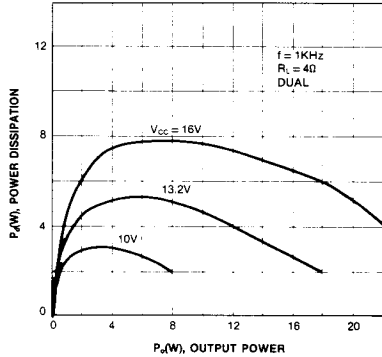
QUIESCENT CIRCUIT CURRENT-SUPPLY VOLTAGE



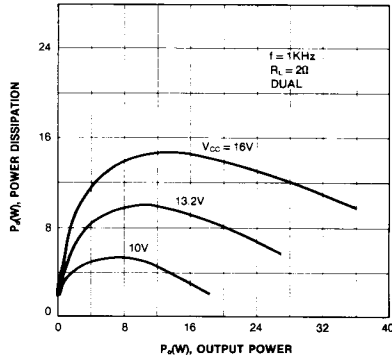
POWER DISSIPATION-SUPPLY VOLTAGE



POWER DISSIPATION-OUTPUT POWER



POWER DISSIPATION-OUTPUT POWER



OUTPUT POWER-SUPPLY VOLTAGE

