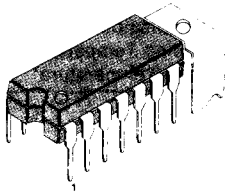
1.2W DUAL POWER AMPLIFIER

The KA2214 is a monolithic integrated dual audio power amplifier in a 14-pin plastic dual in line package. It is designed for portable audio sets.

14 DIP H/S



FEATURES

- **Wide operating supply voltage range: V_{CC} = 3V ~ 13V**
- **Output power: P_O = 1.2W at 9V/8Ω/THD = 10%**
  P_O = 1.6W at 9V/4Ω/THD = 10%
  P_O = 2W at 12V/8Ω/THD = 10%
- **Good ripple rejection ratio: 50dB (Typ)**
- **Low quiescent circuit current: 10mA (V_{CC} = 9V)**
- **Minimum number of external parts required**

ORDERING INFORMATION

Device	Package	Operating Temperature
KA2214	14 DIP H/S	−20°C ~ +70°C

BLOCK DIAGRAM

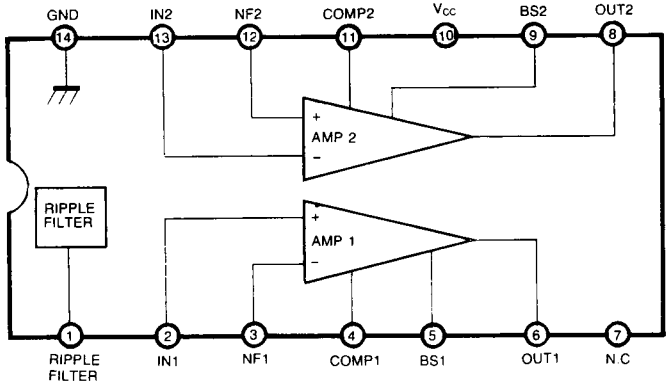


Fig. 1.

ABSOLUTE MAXIMUM RATINGS (Ta = 25°C)

Characteristic	Symbol	Value	Unit
Supply Voltage (No Signal)	V_{CC}	18	V
Supply Voltage (Operating)	V_{CC}	16	V
Power Dissipation ·	P_D	2.4	W
Operating Temperature	T_{OPR}	− 20 ~ + 70	°C
Storage Temperature	T_{STG}	− 40 ~ + 150	°C

ELECTRICAL CHARACTERISTICS

(Ta = 25°C, V_{CC} = 9V, R_F = 33Ω, f = 1KHz, R_L = 8Ω, R_G = 600Ω, unless otherwise specified)

Characteristic	Symbol	Test Conditions	Min	Typ	Max	Unit
Quiescent Circuit Current	I_{CCQ}	V_I = 0		10		mA
Voltage Gain	G_{V1}	P_O = 0.25W, R_F = 33Ω		44		dB
	G_{V2}	P_O = 0.25W, R_F = 120Ω		34		dB
Output Power	P_{o1}	V_{CC} = 12V, R_L = 8Ω, THD = 10%		2		W
	P_{o2}	V_{CC} = 9V, R_L = 4Ω, THD = 10%		1.6		W
	P_{o3}	V_{CC} = 9V, R_L = 8Ω, THD = 10%	0.9	1.2		W
	P_{o4}	V_{CC} = 6V, R_L = 4Ω, THD = 10%		0.7		W
	P_{o5}	V_{CC} = 6V, R_L = 8Ω, THD = 10%		0.5		W
	P_{o6}	V_{CC} = 4.5V, R_L = 32Ω, THD = 10%		50		mW
Total Harmonic Distortion	THD_1	P_O = 0.5W, R_F = 33Ω		0.8		%
	THD_2	P_O = 0.5W, R_F = 120Ω		0.4		%
Output Noise Voltage	V_{NO}	R_G = 10KΩ, BW (− 3dB) = 20Hz ~ 20KHz		0.6		mV
Ripple Rejection Ratio	RR	R_G = 0, f = 120Hz, V_R = 0.3V		50		dB
Cross Talk	CT	R_G = 0, P_O = 0.25W		55		dB
Channel Balance	CB	P_o = 0.25W	− 2	0	2	dB
Input Resistance	R_I			5		MΩ

APPLICATION CIRCUIT

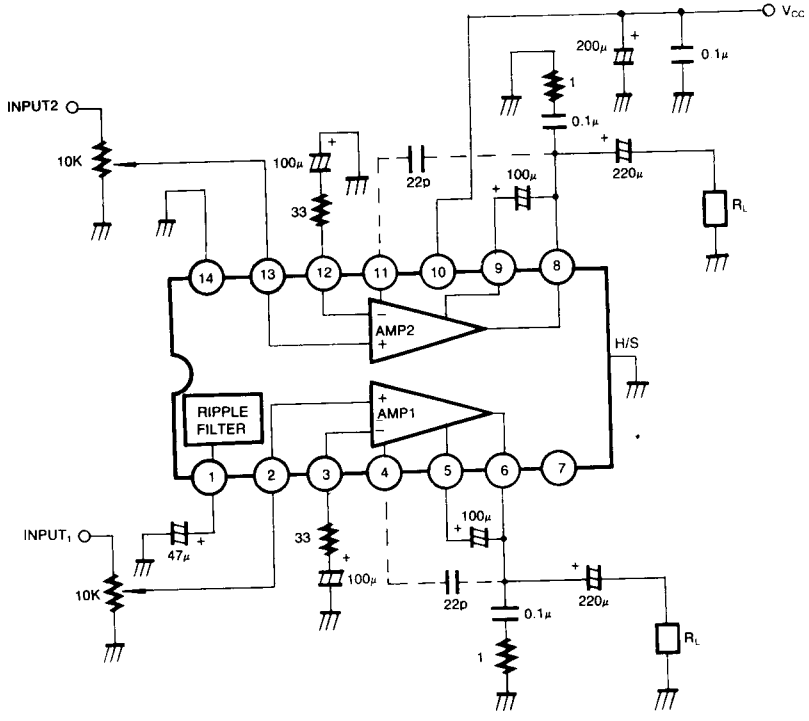


Fig. 2