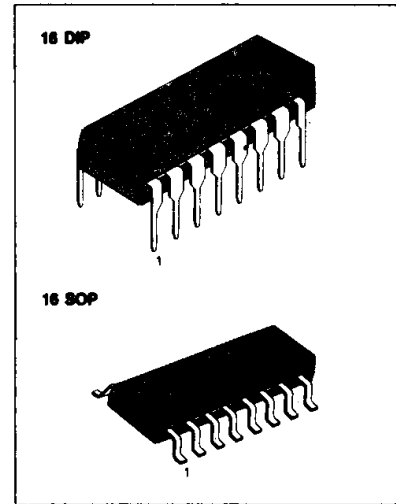


**DUAL PREAMPLIFIER FOR 3V USING**

The KA2225 is a monolithic integrated circuit consisting of a dual equalizer amplifier, and it is suitable for 3V stereo radio cassettes.

**FEATURES**

- High open loop gain: 85dB (Typ) ( $V_{cc}=3V$ ,  $f=1kHz$ ).
- Not necessary the input coupling capacitors.
- Operating supply voltage range:  $V_{cc}=1.6V \sim 5V$ .
- Good channel separation: 60dB (Typ).



**ORDERING INFORMATION**

Device	Package	Operating Temperature
KA2225	16 DIP	- 20°C ~ + 70°C
KA2225D	16 SOP	

**BLOCK DIAGRAM**

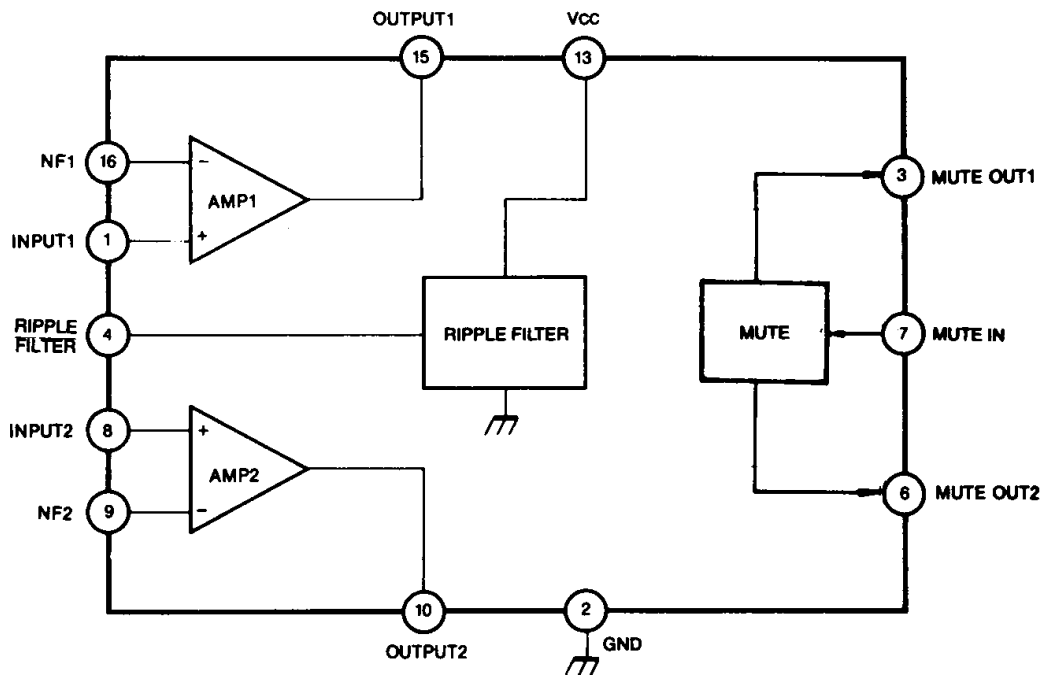


Fig. 1

**ABSOLUTE MAXIMUM RATINGS (Ta = 25°C)**

Characteristic	Symbol	Value	Unit
Supply Voltage	V <sub>CC</sub>	7	V
Power Dissipation	KA2225	750	mW
	KA2225D	350	
Operating Temperature	T <sub>OPR</sub>	- 20 ~ + 70	°C
Storage Temperature	T <sub>STG</sub>	- 40 ~ + 125	°C

3

**ELECTRICAL CHARACTERISTICS**

(Ta = 25°C, V<sub>CC</sub> = 3V, f = 1KHz, unless otherwise specified)

Characteristic	Symbol	Test Conditions	Min	Typ	Max	Unit
Quiescent Circuit Current	I <sub>CCQ</sub>	V <sub>I</sub> = 0		2	3.4	mA
Voltage Gain	Open Loop	G <sub>VO</sub>	70	85		dB
	Closed Loop	G <sub>VC</sub>		40		dB
Output Voltage	V <sub>O</sub>	THD = 1%	0.5	0.8		V
Total Harmonic Distortion	THD	V <sub>O</sub> = 0.1V,		0.07	0.5	%
Output Noise Voltage	V <sub>NO</sub>	R <sub>G</sub> = 2.2KΩ, G <sub>V</sub> = 40dB BW(- 3dB) = 50Hz ~ 20KHz		0.14	0.22	mV
Cross Talk	CT	R <sub>G</sub> = 600Ω, V <sub>O</sub> = - 10dBv		60		dB
Muting Attenuation	ATT <sub>MUTE</sub>	V <sub>MUTE</sub> = 1V		43		dB
Input Resistance	R <sub>I</sub>		20	30		KΩ

**TEST CIRCUIT**

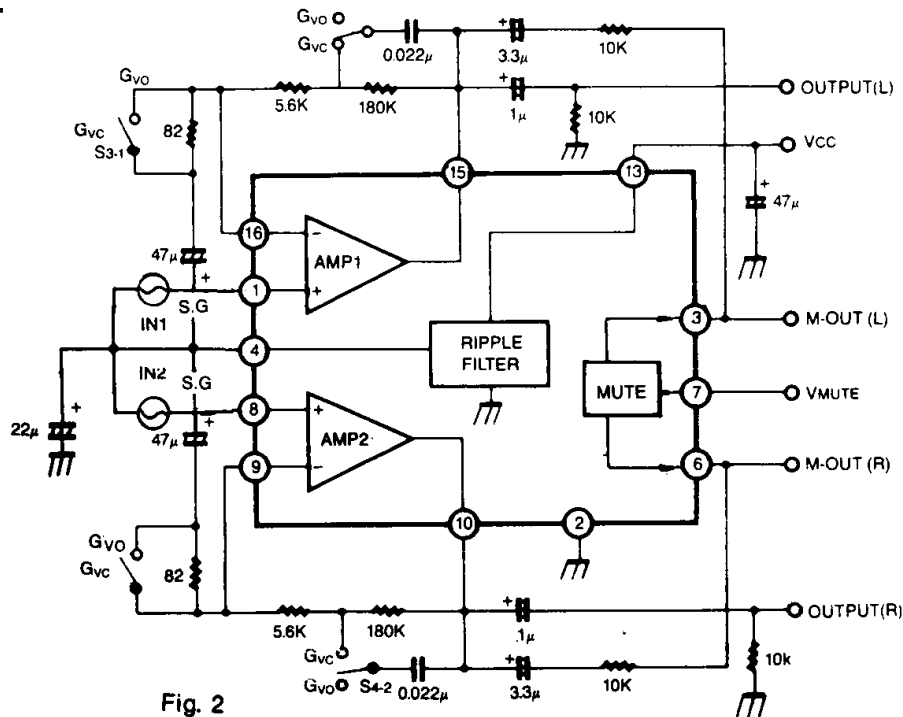


Fig. 2

## APPLICATION CIRCUIT

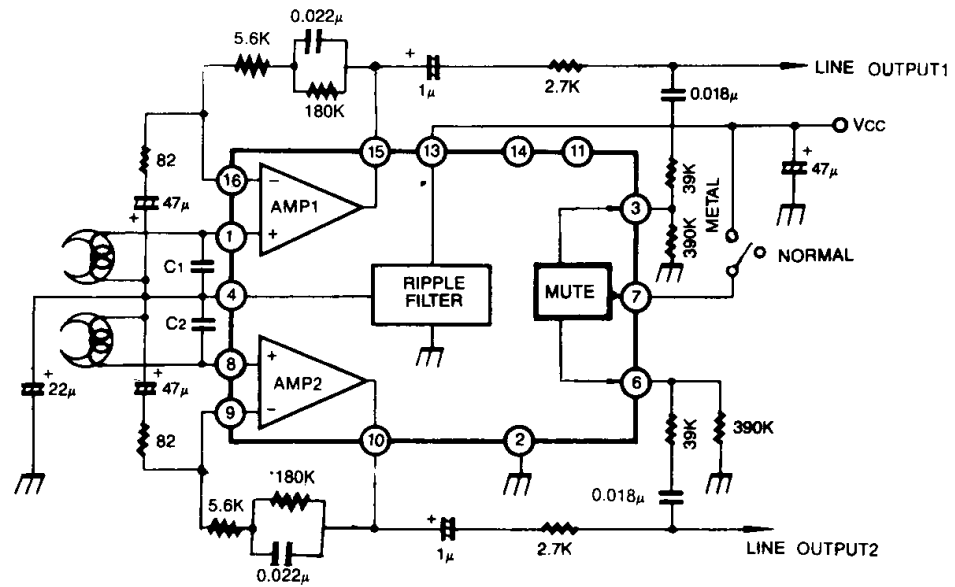


Fig. 3

- Capacitor  $C_1$  and  $C_2$  may be required to prevent instability caused by the pattern layout or interference of external high frequency signals.