

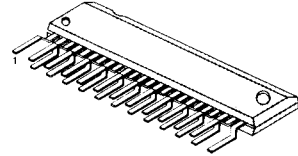
**5-BAND DUAL GRAPHIC EQUALIZER AMPLIFIER**

The KA22234 is a monolithic integrated circuit developed for the stereo 5 band graphic equalizer amplifier. It is consisting of an operational amplifier, four resonant circuits with an active filter, and it is suitable for radio cassettes, car stereos or music centers.

**FEATURES**

- Tone control with independent adjustment of each band through an external capacitor
- Gain control through an external variable resistor (Gain = ± 11dB)
- Excellent cross talk characteristic (CT = 70dB Typ, at  $R_c = 0$ )
- Wide operating supply voltage range:  $V_{CC} = 3.5V \sim 14V$

24 ZSIP



**ORDERING INFORMATION**

Device	Package	Operating Temperature
KA22234	24 ZSIP	-20°C ~ +70°C

**BLOCK DIAGRAM**

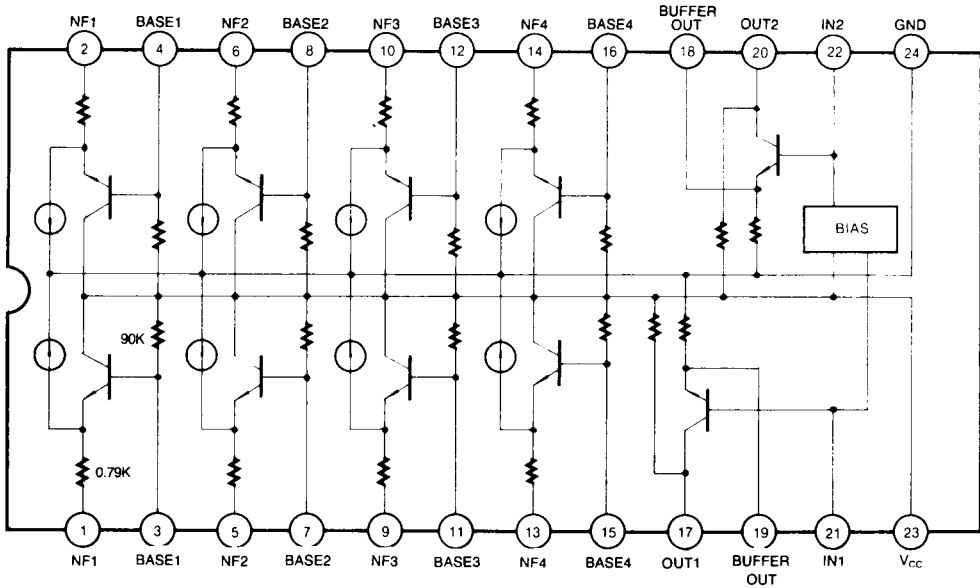


Fig. 1

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

Characteristic	Symbol	Value	Unit
Supply Voltage	$V_{CC}$	15	V
Power Dissipation	$P_D$	500	mW
Operating Temperature	$T_{OPR}$	$-20 \sim +70$	$^\circ\text{C}$
Storage Temperature	$T_{STG}$	$-40 \sim +125$	$^\circ\text{C}$

## ELECTRICAL CHARACTERISTICS

( $T_a = 25^\circ\text{C}$ ,  $V_{CC} = 8\text{V}$ ,  $R_L = 20\text{K}\Omega$ , Flat Mode, unless otherwise specified)

Characteristic	Symbol	Test Conditions		Min	Typ	Max	Unit	
		f(Hz)	Condition					
Quiescent Circuit Current	$I_{CCQ}$		$V_i = 0$	4.0	7.0	10.0	mA	
Output Voltage	$V_o$	1K	THD = 1%	500	600		mV	
Total Harmonic Distortion	THD	1K			0.1	0.3	%	
Channel Balance	CB	1K		-1.0	0	1.0	dB	
Cross Talk	CT	1K		50	70		dB	
Output Noise Voltage	$V_{NO}$	Flat, $R_G = 2.2\text{K}\Omega$ $BW(-3\text{dB}) = 10\text{Hz} \sim 30\text{KHz}$			10	20	$\mu\text{V}$	
Voltage Gain	Flat	$G_v$ (Flat)	1K	$V_i = 100\text{mV}$	-2.0	-1.5	1.0	dB
			100					
	Boost	$G_v$ (Boost)	300	$V_i = 100\text{mV}$	9.0	11.0	14.0	dB
			1K					
			3K					
			10K					
	Cut	$G_v$ (Cut)	100	$V_i = 100\text{mV}$	-14.0	-11.0	-9.0	dB
			300					
			1K					
			3K					
				10K				

TEST CIRCUIT

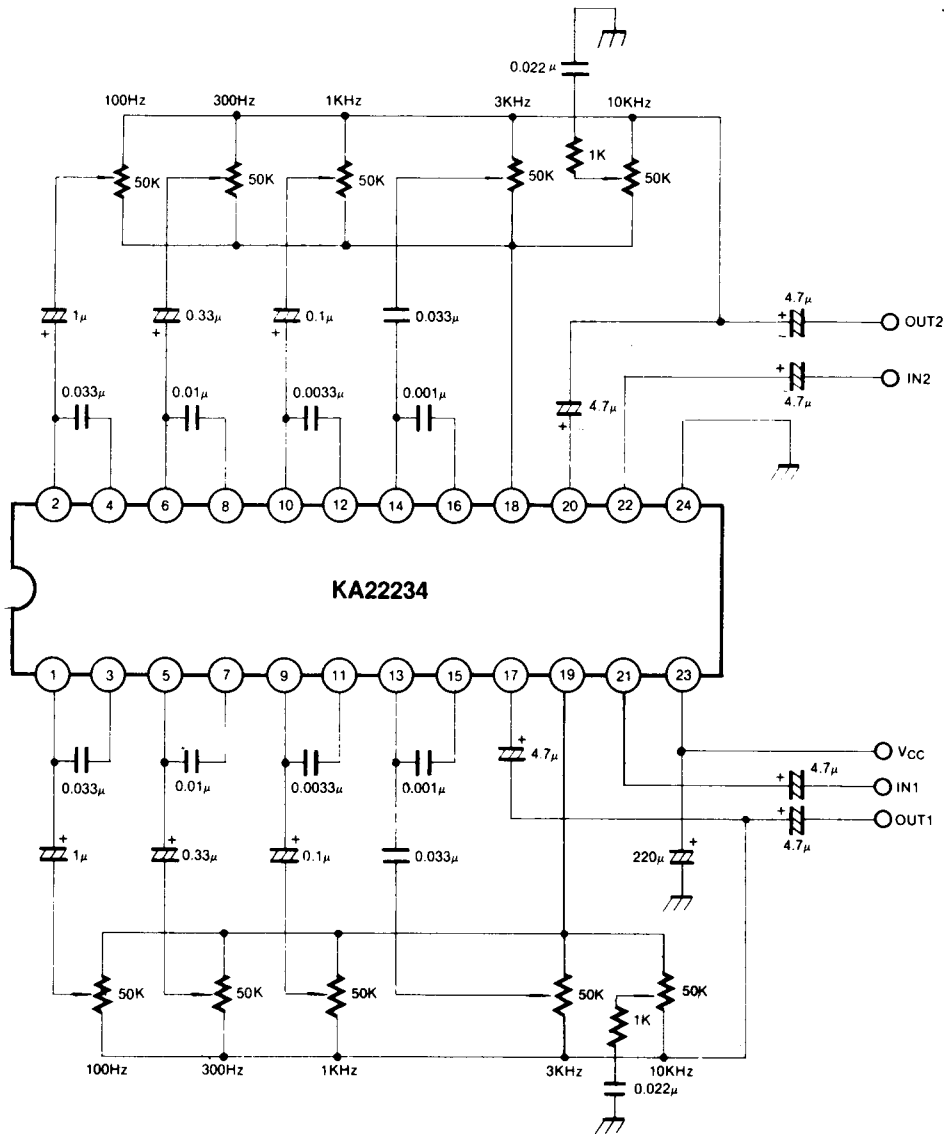
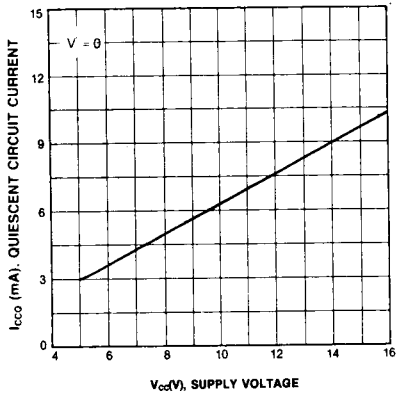
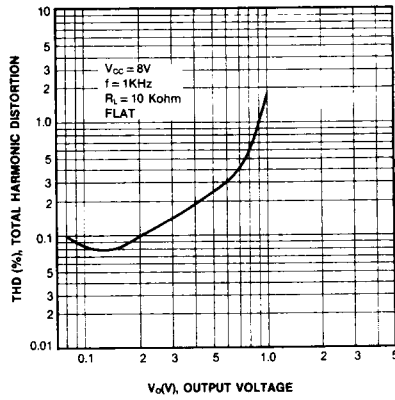


Fig. 2

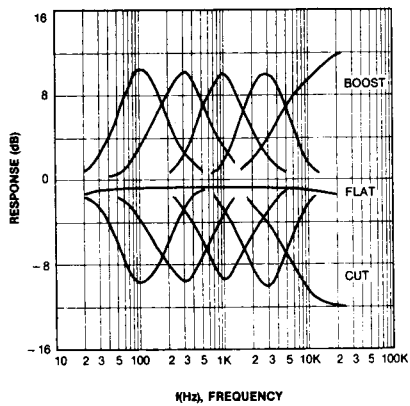
QUIESCENT CIRCUIT CURRENT-SUPPLY VOLTAGE



TOTAL HARMONIC DISTORTION-OUTPUT VOLTAGE



FREQUENCY RESPONSE



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