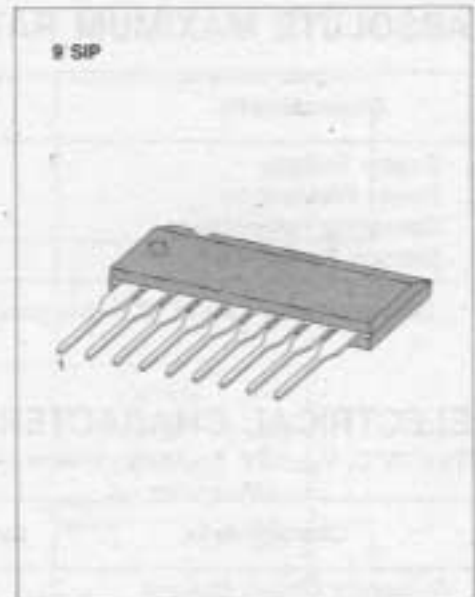


DUAL EQUALIZER AMPLIFIER WITH ALC

The KA22241 is a monolithic integrated circuit consisting of dual equalizer amplifier with ALC, and it is suitable for stereo radio cassette tape recorder.

FEATURES

- Dual equalizer amplifier with ALC circuit
- Low noise; $V_{ni} = 1.0\mu\text{V}$ (Typ)
- High open loop voltage gain; 80 dB (Typ)
- Wide operating supply voltage range; $V_{CC} = 4.5\text{V} \sim 14\text{V}$
- Good ALC response balance between channels
- Non necessary the input coupling capacitor
- Non necessary diode or transistor for ALC
- Built in power supply muting circuit
- Minimum number of external parts required



BLOCK DIAGRAM

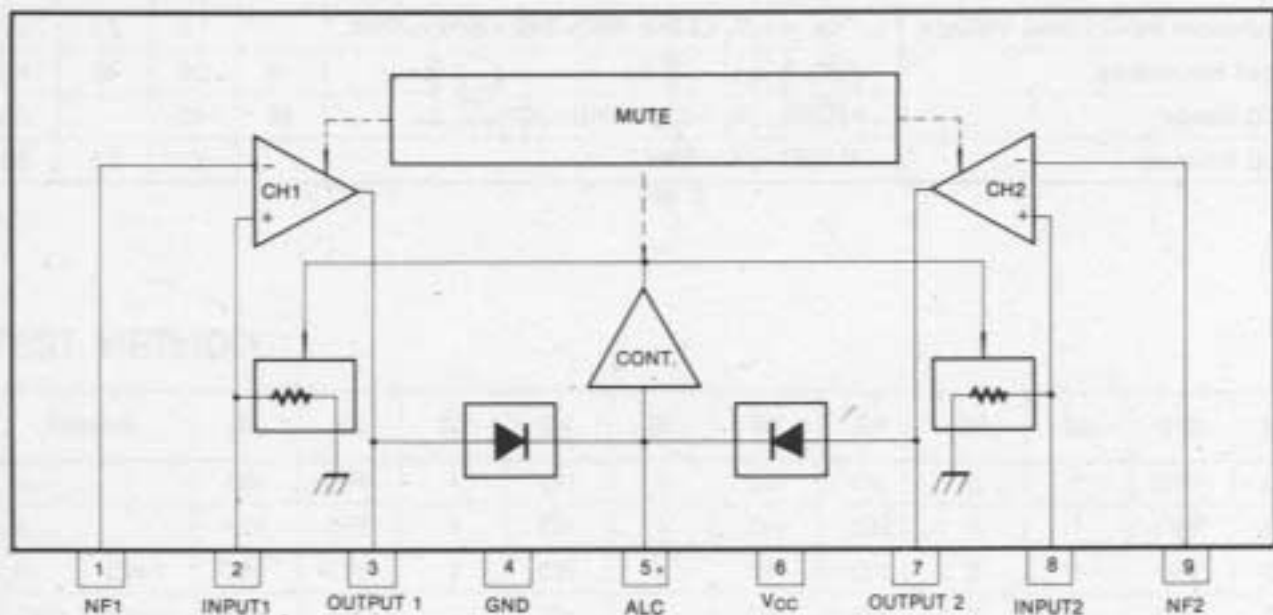


Fig. 1

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

Characteristic	Symbol	Value	Unit
Supply Voltage	V_{CC}	16	V
Power Dissipation	P_T	*550	mW
Operating Temperature	T_{opr}	-20 ~ +75	$^\circ\text{C}$
Storage Temperature	T_{stg}	-40 ~ +125	$^\circ\text{C}$

* : Derated above $T_a = 25^\circ\text{C}$ in the proportion of $5.5\text{mW}/^\circ\text{C}$

ELECTRICAL CHARACTERISTICS

($T_a = 25^\circ\text{C}$, $V_{CC} = 7\text{V}$, $f = 1\text{KHz}$, unless otherwise specified)

Characteristic	Symbol	Test Conditions	Min	Typ	Max	Unit
Quiescent Circuit Current	I_{CC}	$V_i = 0$	1.5	3.5	4.5	mA
Open Loop Voltage Gain	A_{VO}	$V_o = 0.3\text{V}$	70	80		dB
Closed Loop Voltage Gain	A_V	$V_o = 0.3\text{V}$	45	48	50	dB
Output Voltage	V_o	THD = 1%	0.6	1.2		V
Total Harmonic Distortion	THD	$V_o = 0.3\text{V}$		0.1	0.3	%
Equivalent Input Noise Voltage	V_{NI}	$R_s = 2.2\text{K}\Omega$, BW(-3dB) = 20Hz ~ 20KHz		1.0	2.0	μV
Input Resistance	R_i		15	25	45	$\text{K}\Omega$
ALC Range	ALC(R)	$R_g = 3.9\text{K}$, THD = 10%	40	45		dB
ALC Balance	ALC(B)	$V_i = 1\text{mV}$		0	2.5	dB