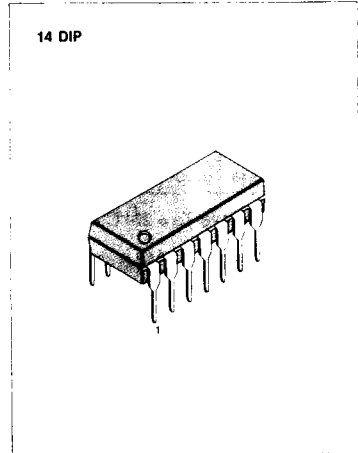


DUAL EQUALIZER AMPLIFIER WITH ALC

The KA7226 is a monolithic integrated circuit consisting of a dual equalize amplifier with ALC. It is suitable for use in the record/ playback amplifier of stereo radio cassettes.

FEATURES

- Dual equalizer amplifier with ALC circuit
- Built-in buffer amplifier
- Not necessary input coupling capacitor
- Quick stabilization after power on
- High output voltage: $V_o = 1.7V$ (Typ) at THD = 1%
- Wide operating supply voltage range: $V_{cc} = 3V \sim 16V$



3

BLOCK DIAGRAM

ORDERING INFORMATION

Device	Package	Operating Temperature
KA7226	14 DIP	-25°C ~ +75°C

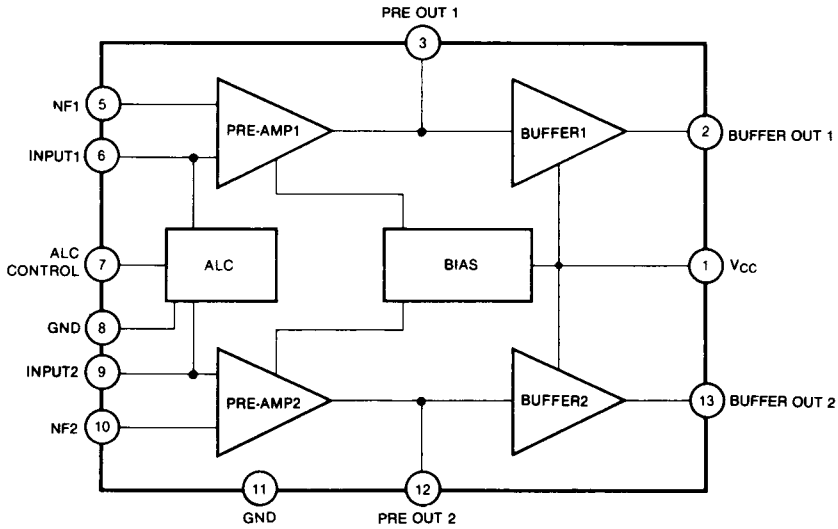


Fig. 1

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

Characteristic	Symbol	Value	Unit
Supply Voltage	V_{CC}	16	V
Power Dissipation	P_D	600	mW
Operating Temperature	T_{OPR}	-25 ~ +75	$^\circ\text{C}$
Storage Temperature	T_{STG}	-40 ~ +125	$^\circ\text{C}$

* : Derated above $T_a = 25^\circ\text{C}$ in the propotion of $5\text{mW}/^\circ\text{C}$.

ELECTRICAL CHARACTERISTICS

($T_a = 25^\circ\text{C}$, $V_{CC} = 5\text{V}$, $f = 1\text{KHz}$, unless otherwise specified)

Characteristic	Symbol	Test Conditions	Min	Typ	Max	Unit
Quiescent Circuit Current	I_{CCQ}	$V_I = 0$	6	10	15	mA
ALC Range	ΔV_{ALC}	$V_I = -60\text{dBm}$	35	40		dB
ALC Voltage	$V_{O(ALC)}$	$V_I = -20\text{dBm}$	-3	-1	1	dBm
ALC Distortion	THD_{ALC}	$V_I = -20\text{dBm}$		0.6	2.0	%
ALC Balance	CB_{ALC}	$V_I = -20\text{dBm}$		0	2	dB
Output Voltage	V_O	$\text{THD} = 1\%$	1.3	1.7		V
Cross Talk	CT	$R_G = 2.2\text{K}\Omega$ $V_O = 0\text{dBm}$	40	60		dB
Open Loop Voltage Gain	G_{VO}	$V_I = -80\text{dBm}$	67	75		dB
Equivalent Input Noise Voltage	V_{NI}	$R_G = 2.2\text{K}\Omega$,		1.3	2.7	μV

TEST CIRCUIT

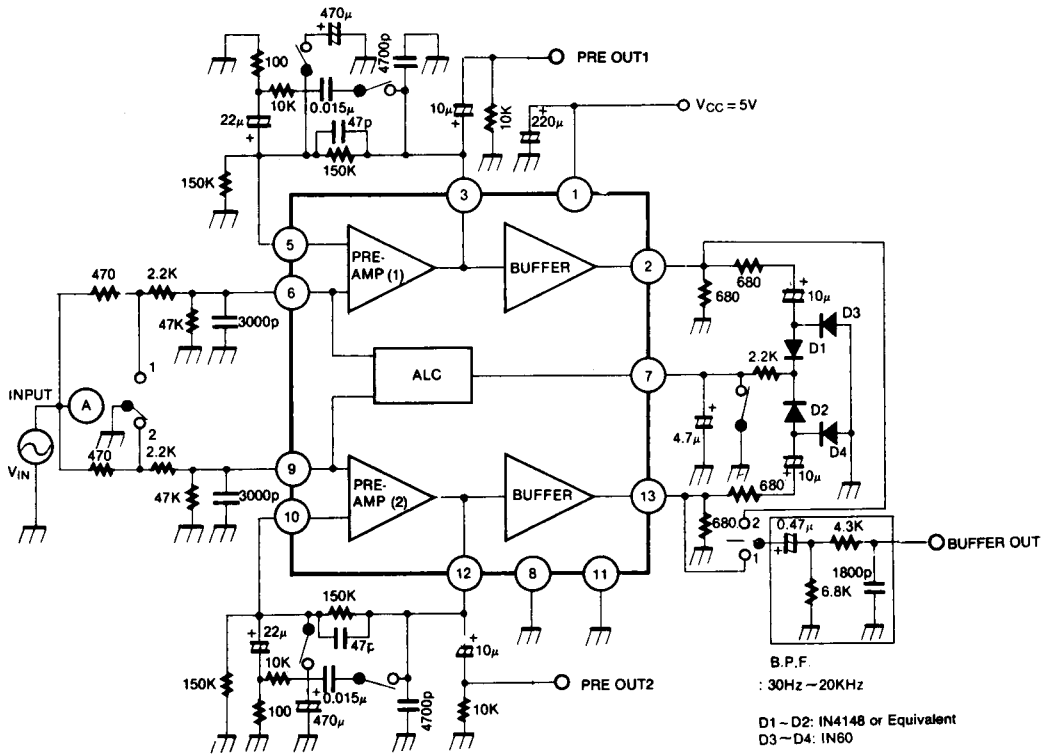
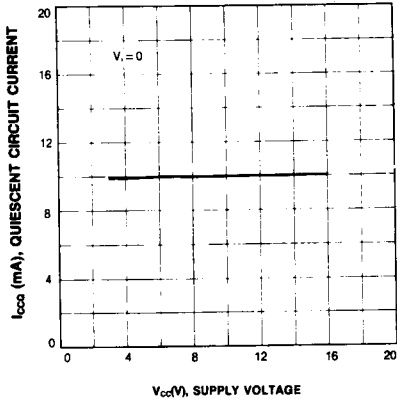
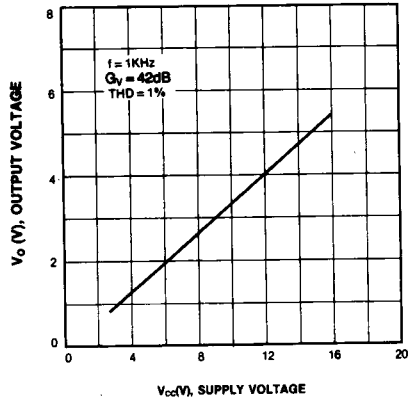


Fig. 2

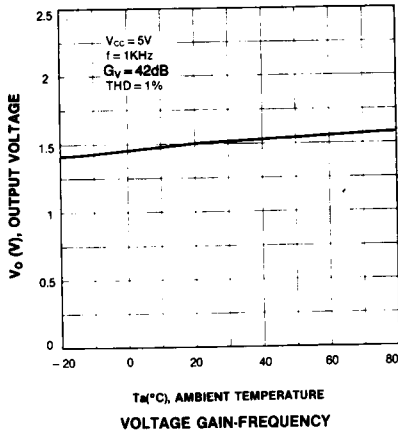
QUIESCENT CIRCUIT CURRENT-SUPPLY VOLTAGE



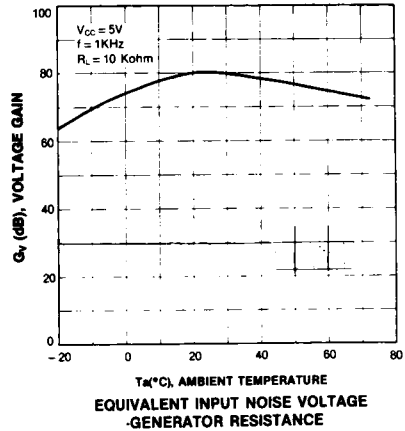
OUTPUT VOLTAGE-SUPPLY VOLTAGE



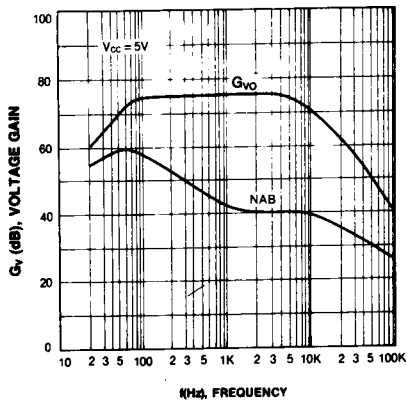
OUTPUT VOLTAGE-AMBIENT TEMPERATURE



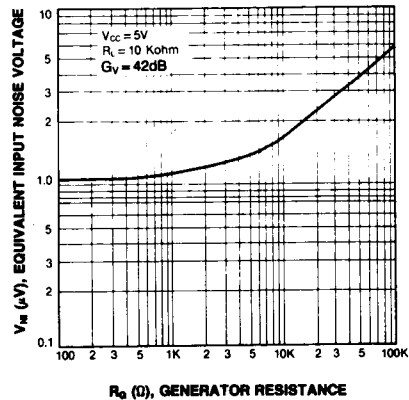
VOLTAGE GAIN-AMBIENT TEMPERATURE



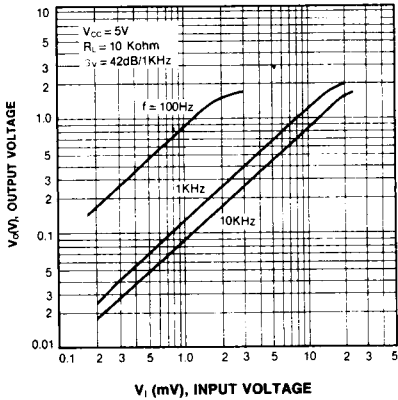
VOLTAGE GAIN-FREQUENCY



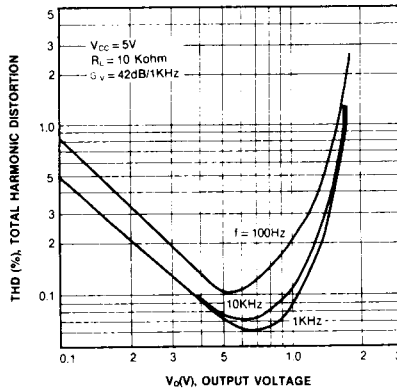
EQUIVALENT INPUT NOISE VOLTAGE-GENERATOR RESISTANCE



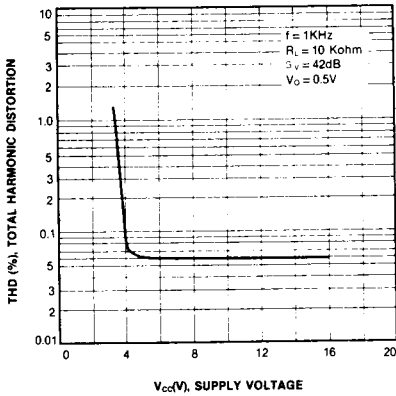
OUTPUT VOLTAGE-INPUT VOLTAGE



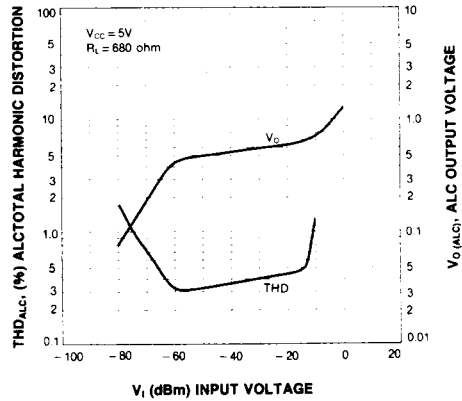
TOTAL HARMONIC DISTORTION-OUTPUT VOLTAGE



TOTAL HARMONIC DISTORTION-SUPPLY VOLTAGE



ALC OUTPUT VOLTAGE ALC TOTAL HARMONIC DISTORTION-INPUT VOLTAGE



APPLICATION CIRCUIT

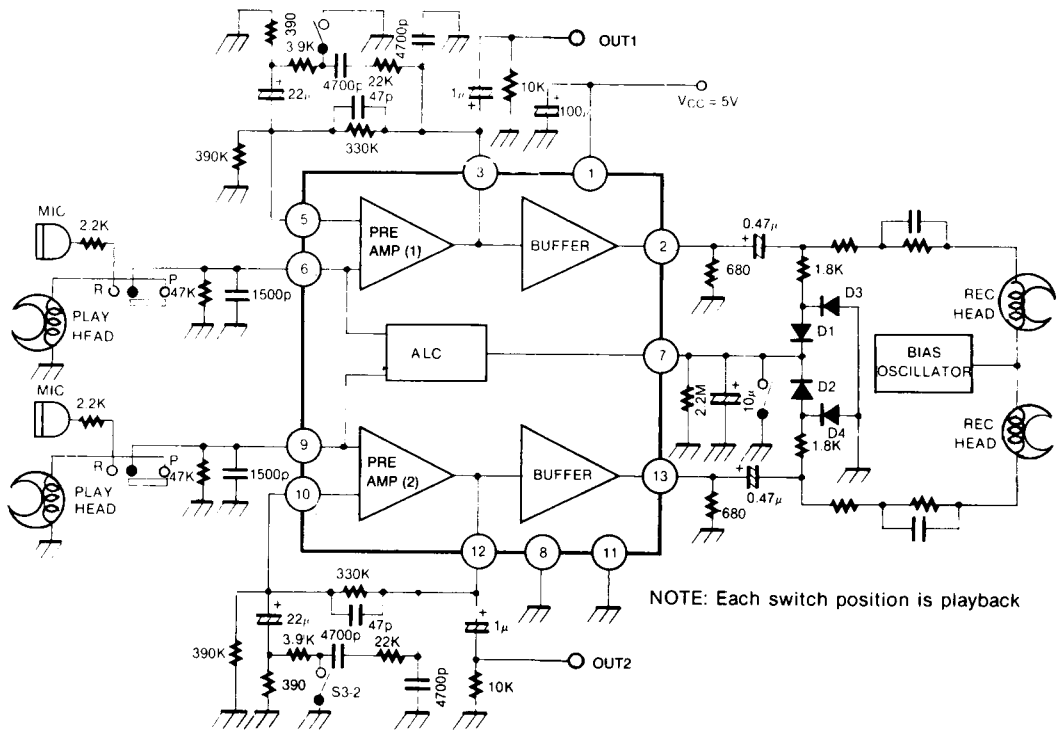


Fig. 3

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