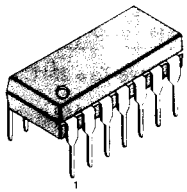
DUAL EQUALIZER AMPLIFIER WITH ALC

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.

14 DIP



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: $V_{CC} = 3V \sim 16V$**

ORDERING INFORMATION

Device	Package	Operating Temperature
KA7226	14 DIP	$-25°C \sim +75°C$

BLOCK DIAGRAM

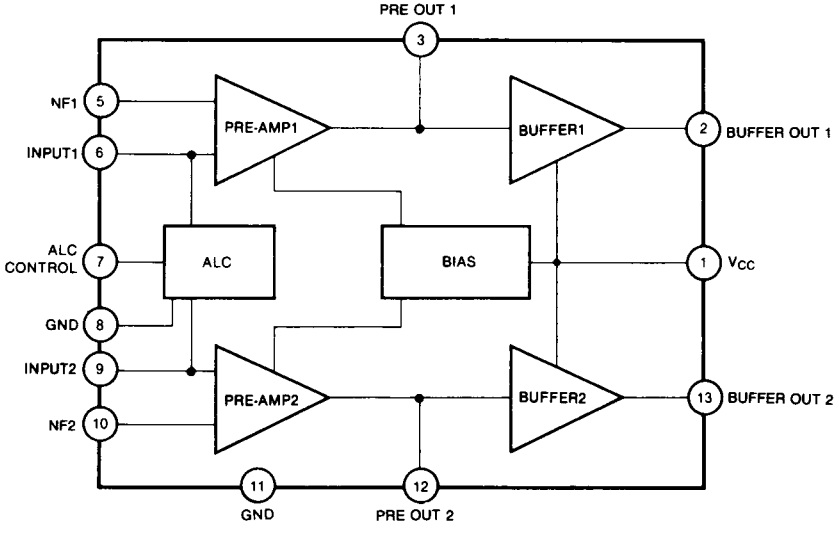


Fig. 1

ABSOLUTE MAXIMUM RATINGS (Ta = 25°C)

Characteristic	Symbol	Value	Unit
Supply Voltage	V_{CC}	16	V
Power Dissipation	P_D	600	mW
Operating Temperature	T_{OPR}	−25 ~ +75	°C
Storage Temperature	T_{STG}	−40 ~ +125	°C

* : Derated above Ta = 25°C in the propotion of 5mW/°C.

ELECTRICAL CHARACTERISTICS

(Ta = 25°C, V_{CC} = 5V, f = 1KHz, 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 = −60dBm	35	40		dB
ALC Voltage	$V_{O(ALC)}$	V_I = −20dBm	−3	−1	1	dBm
ALC Distortion	THD_{ALC}	V_I = −20dBm		0.6	2.0	%
ALC Balance	CB_{ALC}	V_I = −20dBm		0	2	dB
Output Voltage	V_O	THD = 1%	1.3	1.7		V
Cross Talk	CT	R_G = 2.2KΩ V_O − 0dBm	40	60		dB
Open Loop Voltage Gain	G_{VO}	V_I = −80dBm	67	75		dB
Equivalent Input Noise Voltage	V_{NI}	R_G = 2.2KΩ,		1.3	2.7	μV

TEST CIRCUIT

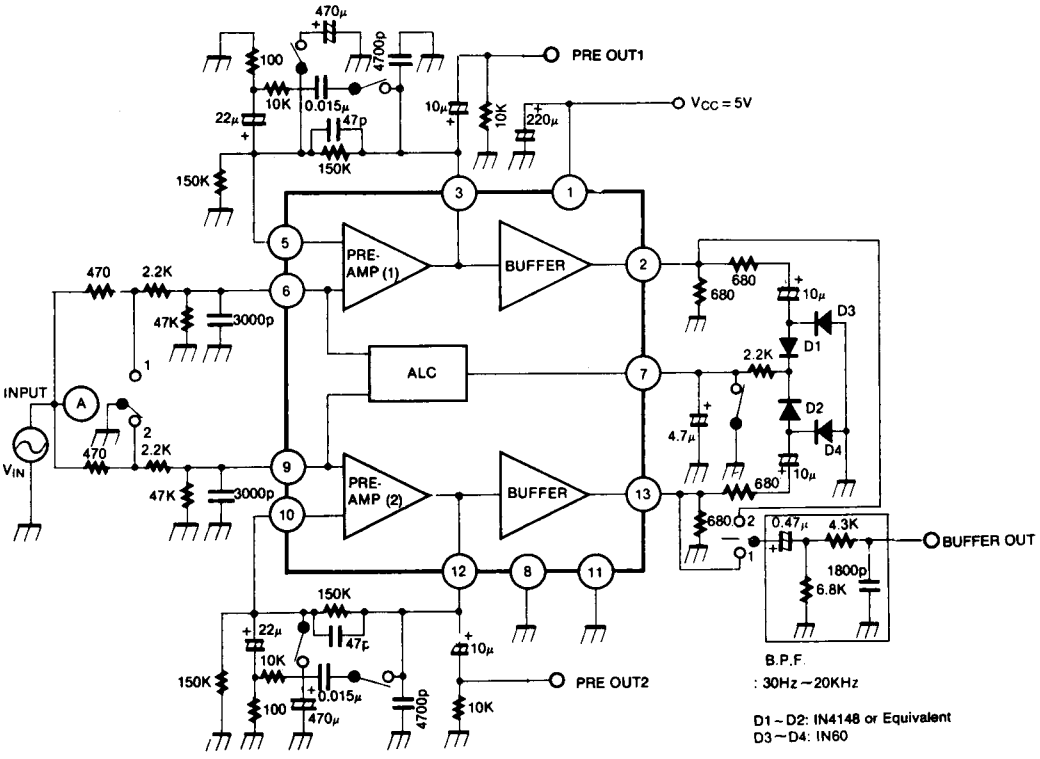
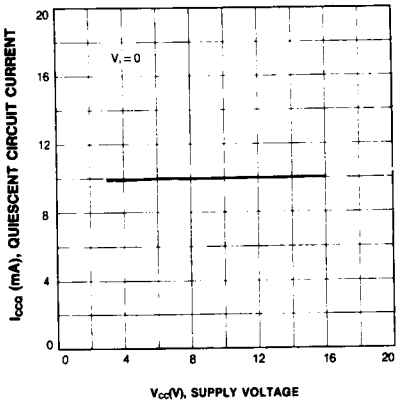
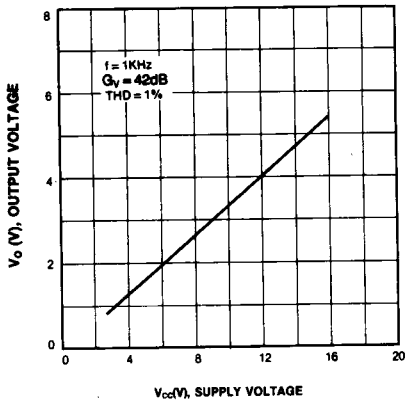


Fig. 2

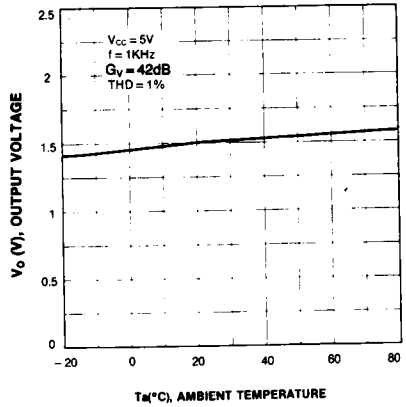
QUIESCENT CIRCUIT CURRENT-SUPPLY VOLTAGE



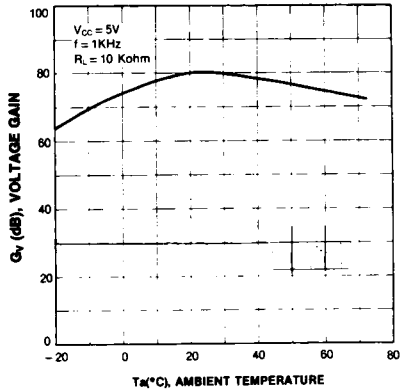
OUTPUT VOLTAGE-SUPPLY VOLTAGE



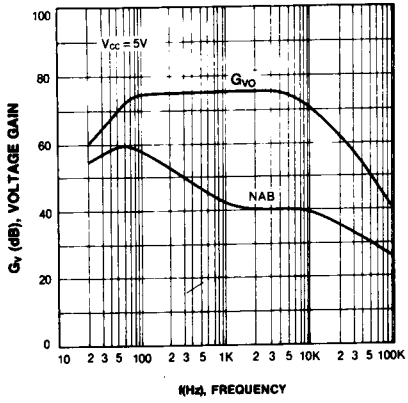
OUTPUT VOLTAGE-AMBIENT TEMPERATURE



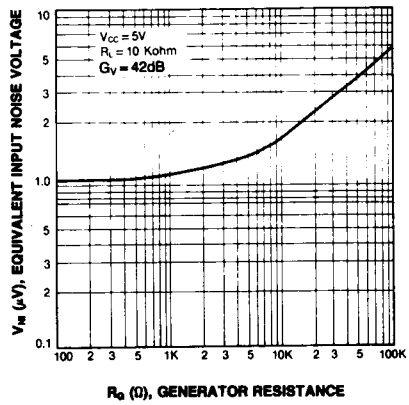
VOLTAGE GAIN-AMBIENT TEMPERATURE



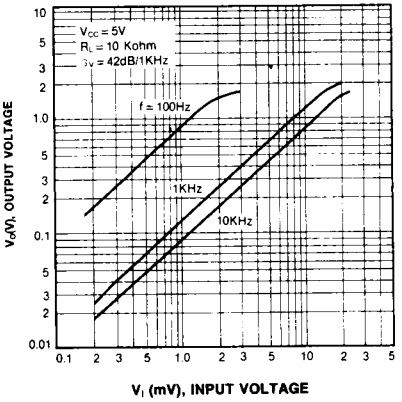
VOLTAGE GAIN-FREQUENCY



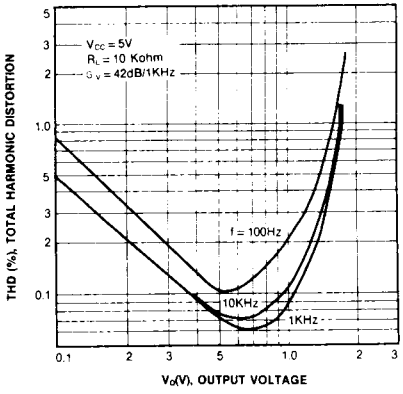
EQUIVALENT INPUT NOISE VOLTAGE -GENERATOR RESISTANCE



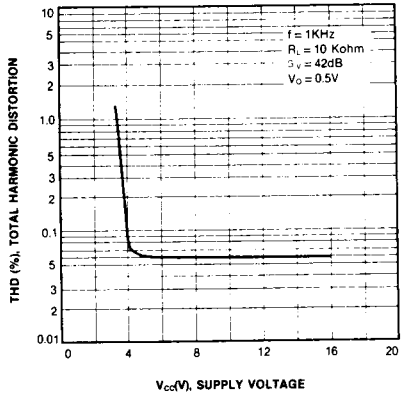
OUTPUT VOLTAGE-INPUT VOLTAGE



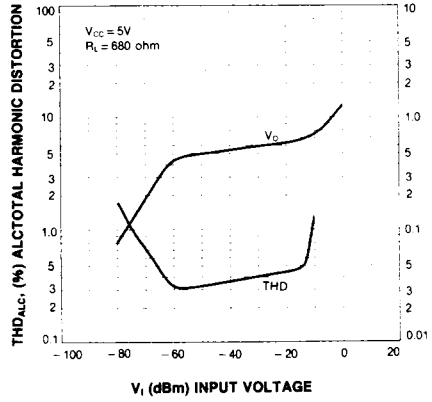
TOTAL HARMONIC DISTORTION-OUTPUT VOLTAGE



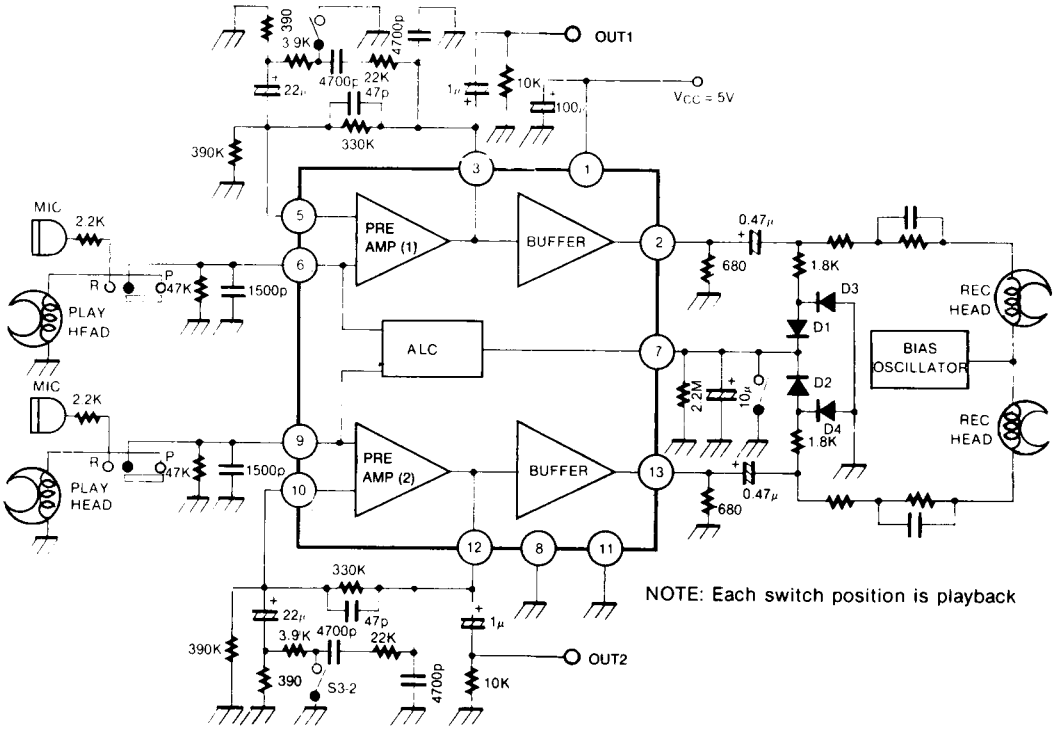
TOTAL HARMONIC DISTORTION-SUPPLY VOLTAGE



ALC OUTPUT VOLTAGE ALC TOTAL HARMONIC DISTORTION-INPUT VOLTAGE



APPLICATION CIRCUIT



NOTE: Each switch position is playback

Fig. 3