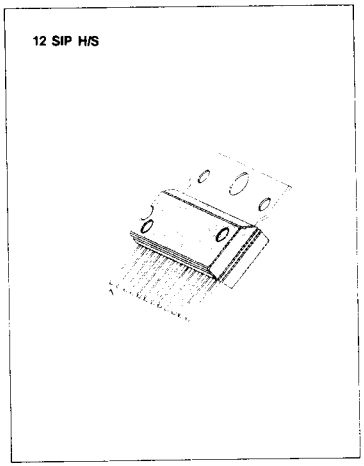
4.5W DUAL POWER AMP

The KA22063 is a monolithic integrated circuit consisting of a 2-channel power amplifier with a power on/off (stand-by switch) function. It is suitable for portable radio cassette recorders.



FEATURES

- 2-channel amplifier: 4.5W x 2 (typ.)
- **Low quiesent circuit current: I_{CC} = 16mA (typ.)**
- **High output**
- **Small pop noise at the power on**
- **Minimum external parts required**
- **Supply voltage: 6V to 15V**
- **Including the thermal protection circuit**
- Connect H/S to GND

ORDERING INFORMATION

Device	Package	Operating Temperature
KA22063S	12 SIP H/S	−20 ~ +70°C

BLOCK DIAGRAM

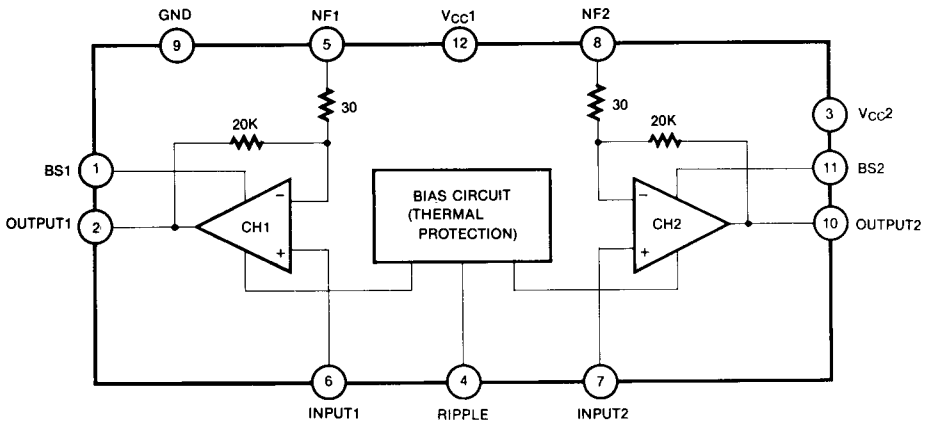


Fig. 1

ABSOLUTE MAXIMUM RATINGS (Ta = 25°C)

Characteristic	Symbol	Value	Unit
Supply Voltage	V_{CC}	16	V
Output Current (Channel)	I_O (peak)	2.5	A
Power Dissipation	P_d	12.5	W
Operating Temperature	T_{opr}	−20 ~ +70	°C
Storage Temperature	T_{stg}	−40 ~ +150	°C

ELECTRICAL CHARACTERISTICS

(Ta = 25°C, V_{CC} = 9V, R_L = 4Ω, f = 1KHz, R_g = 600Ω, unless otherwise specified)

Characteristic	Symbol	Test Conditions	Min	Typ	Max	Unit
Quiescent Circuit Current	I_{CC}	V_i = 0		16	28	mA
Output Power	P_O1	THD = 10%	2.0	2.5		W
	P_O2	THD = 10%, V_{CC} = 12V		4.5		W
Total Harmonic Distortion	THD	P_O = 1W/CH		0.2	1.0	%
Voltage Gain (Closed Loop)	AV_1	R_f = 82Ω, V_o = 0.775V	43	45	47	dB
	AV_2	R_f = 0Ω, V_o = 0.775V		56		dB
Input Resistance	R_i			30		KΩ
Output Noise Voltage	V_{NO}	R_g = 10KΩ, BW = 20Hz ~ 20KHz		0.3	1.0	mV
Ripple Rejection Ratio	RR	R_g = 600Ω, f = 120Hz		54		dB
Cross Talk	C.T	R_g = 10KΩ, V_O = 0dBm, f = 1KHz		45		dB
Input Offset Voltage	V_5, V_7			20	60	mV

APPLICATION CIRCUIT

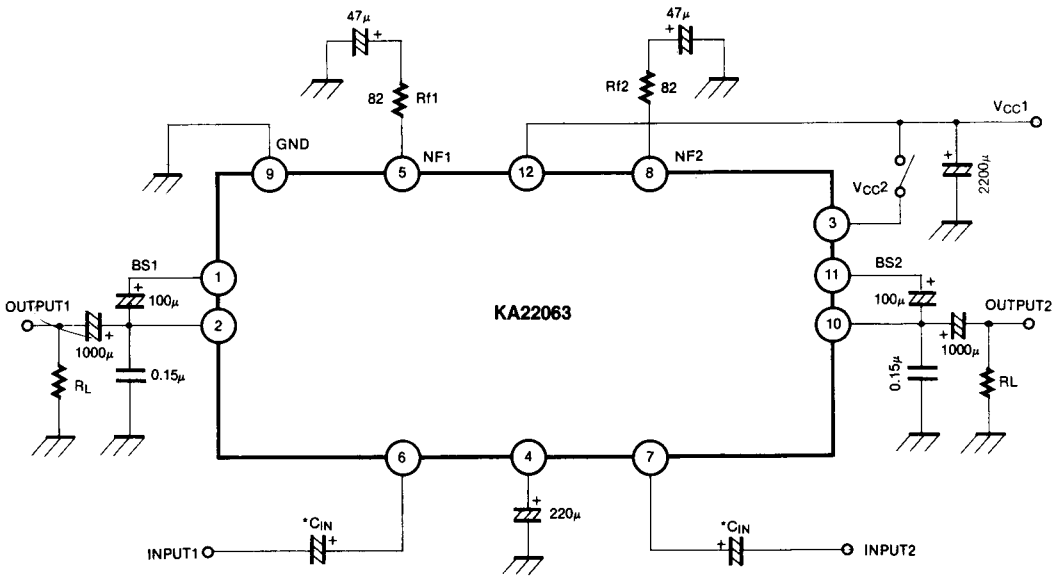
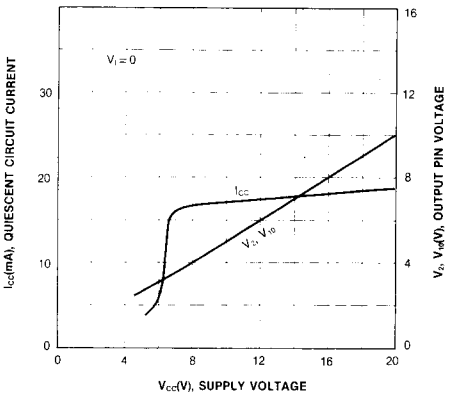
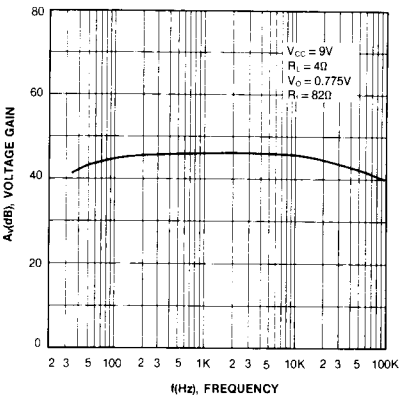


Fig. 2

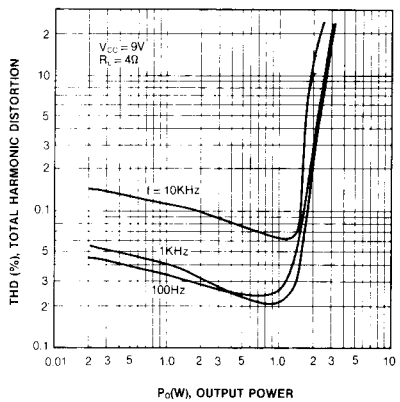
QUIESCENT CIRCUIT CURRENT
OUTPUT PIN VOLTAGE-SUPPLY VOLTAGE



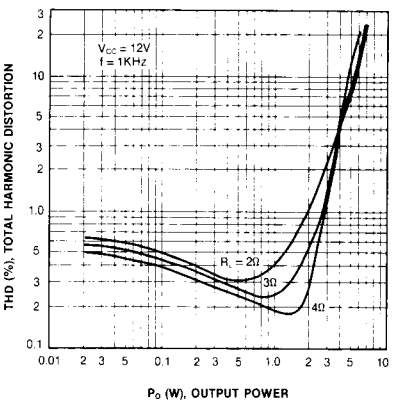
VOLTAGE GAIN-FREQUENCY



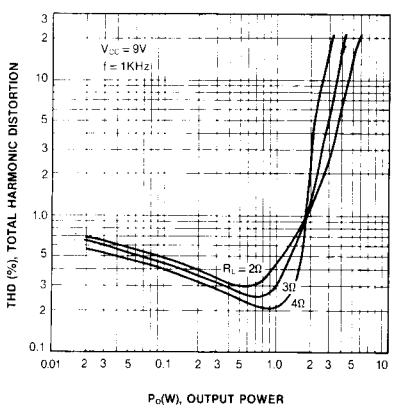
TOTAL HARMONIC DISTORTION-OUTPUT POWER



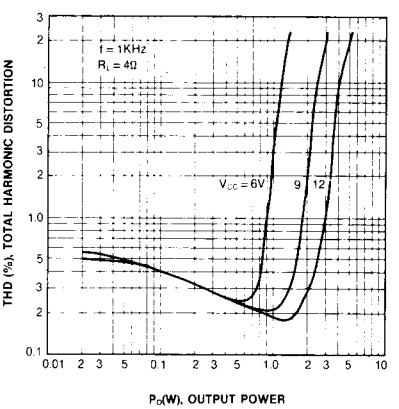
TOTAL HARMONIC DISTORTION-OUTPUT POWER



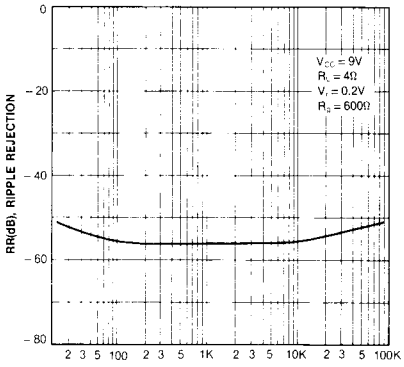
TOTAL HARMONIC DISTORTION-OUTPUT POWER



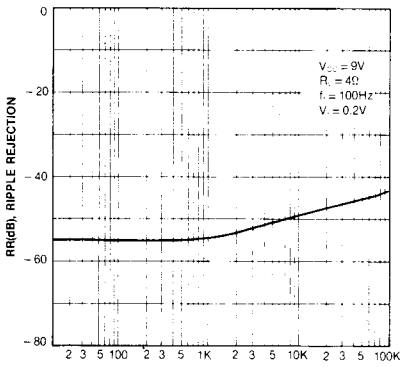
TOTAL HARMONIC DISTORTION-OUTPUT POWER



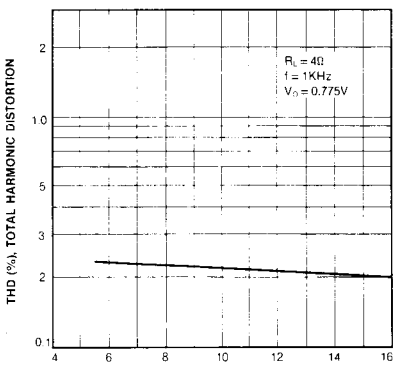
RIPPLE REJECTION-FREQUENCY



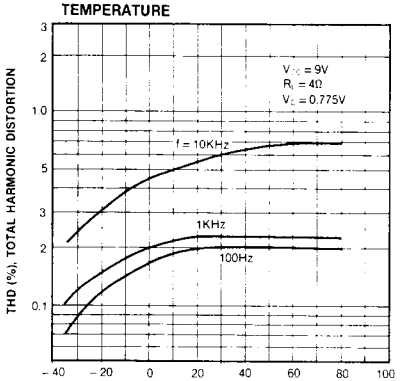
RIPPLE REJECTION-GENERATOR RESISTANCE



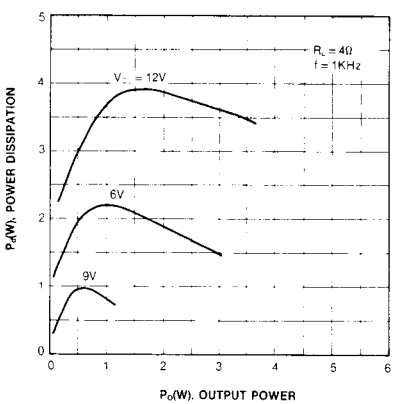
TOTAL HARMONIC DISTORTION-SUPPLY VOLTAGE



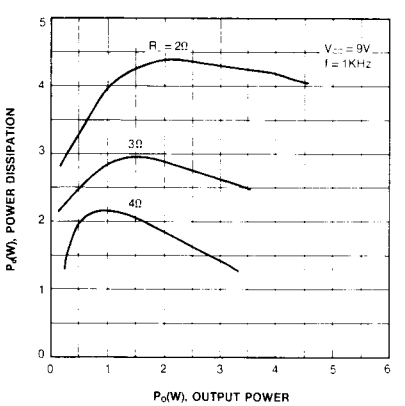
TOTAL HARMONIC DISTORTION-AMBIENT TEMPERATURE



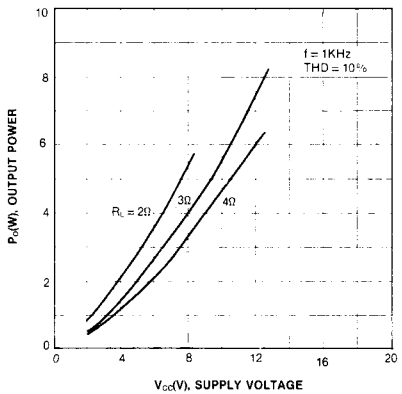
POWER DISSIPATION-OUTPUT POWER



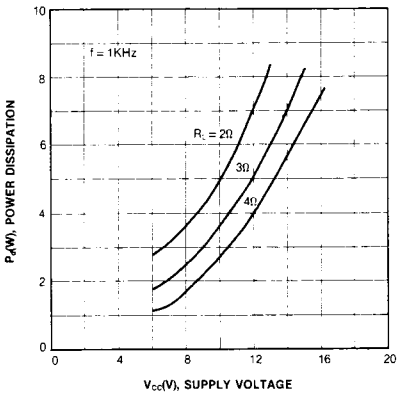
POWER DISSIPATION-OUTPUT POWER



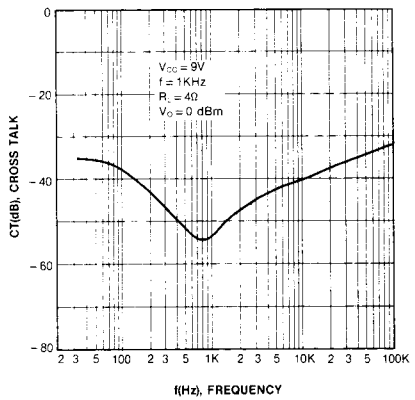
OUTPUT POWER-SUPPLY VOLTAGE



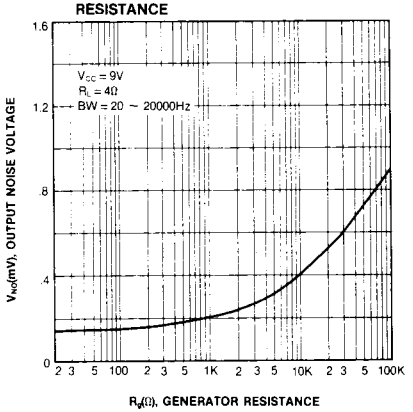
POWER DISSIPATION-SUPPLY VOLTAGE



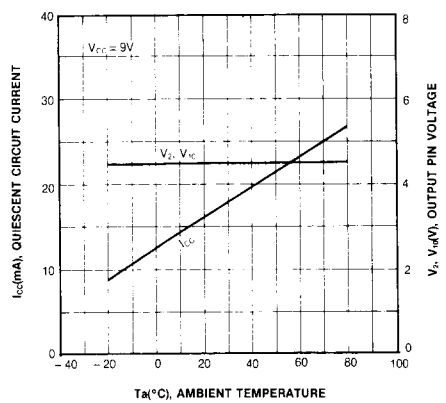
CROSS TALK-FREQUENCY



OUTPUT NOISE VOLTAGE-GENERATOR RESISTANCE



QUIESCENT CIRCUIT CURRENT
OUTPUT PIN VOLTAGE-AMBIENT TEMPERATURE



OUTPUT POWER-AMBIENT TEMPERATURE