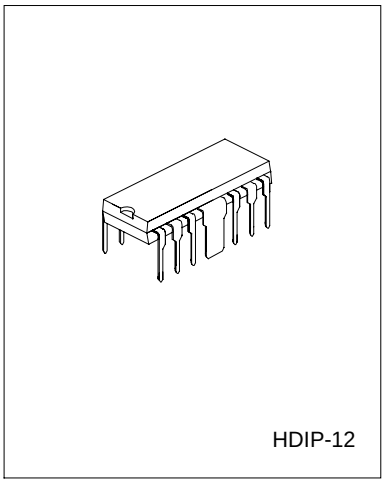
LOW FREQUENCY POWER AMPLIFIER



DESCRIPTION

The UTC8227 is the audio power amplifier with built-in two channel developed for portable radio cassette tape recorder with power ON/OFF switch.

FEATURES

*Wide operating supply voltage: Vcc=5~12V

*Low quiescent supply current

(Icc=21mA,typical,at Vcc=9V ,Vi=0)

*Output power

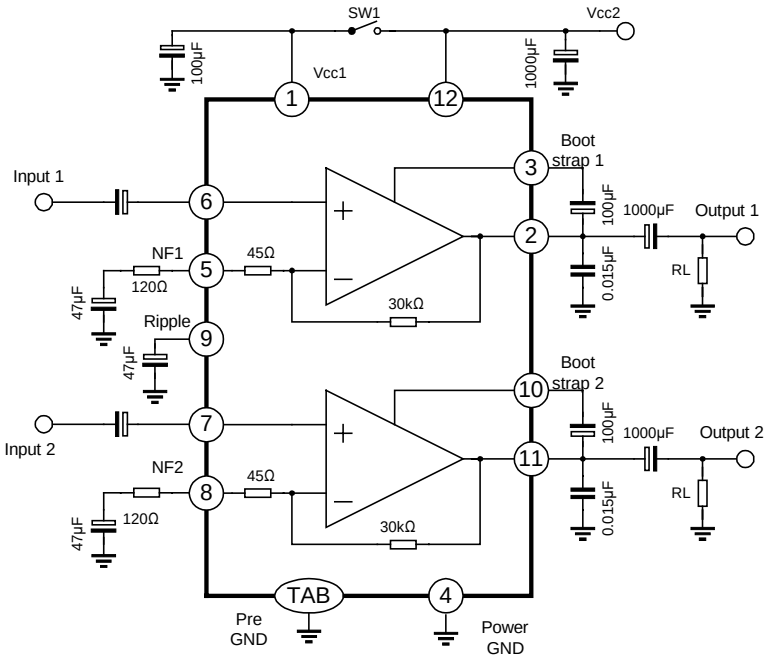
Po=2.50W/CH at Vcc=9V,R_L=4ohm ,f=1kHz,Thd=10%

*Soft Clip

*Built-in Thermal shut-down protection circuit

*Stand-by Switch

TEST CIRCUIT



ABSOLUTE MAXIMUM RATINGS(Ta=25°C)

Characteristic	Symbol	Value	Unit
Supply Voltage	Vcc	20	V
Output Current	Io	2.5	A
Power Dissipation(note)	Pd	4	W
Operating Temperature	Topr	-20 ~ +75	°C
Storage Temperature	Tstg	-55 ~ +150	°C

Note: Value for mounting on PC board

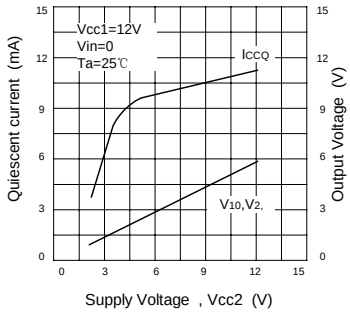
ELECTRICAL CHARACTERISTICS

(Ta=25°C,Vcc=9V,RL=4Ω,Rg=600Ω,f=1kHz,unless otherwise specified)

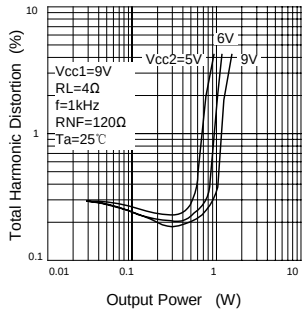
Characteristic	Symbol	Test Conditions	Min	Typ	Max	Units
Quiescent current	Icc	Vi=0		21	45	mA
Output Power	Po	THD=10%,RL=4Ω	2.0	2.5		W
		THD=10%,RL=3Ω		3.0		W
Total Harmonic Distortion	THD	Po=0.4W/CH		0.2	1.0	%
Voltage Gain	Gv1	Rf=120Ω,Vout=0.775Vrms	43	45	47	dB
	Gv2	Rf=0,Vout=0.775Vrms		56.5		
Input Impedance	Rin			30		Ω
Output Noise Voltage	Vno	Rg=10kΩ,BW=20Hz~20kHz		0.3	1.0	mVrms
Ripple Rejection Ratio	R.R	Rg=600Ω，fripple=100Hz		52		dB
Cross Talk	C.T	Rg=600Ω,Vout=0, f=1kHz		50		dB
Input Offset Voltage	V7,8			30	60	mV
Standby Current		Sw1:OFF		1		μA

TYPICAL PERFORMANCE CHARACTERISTICS

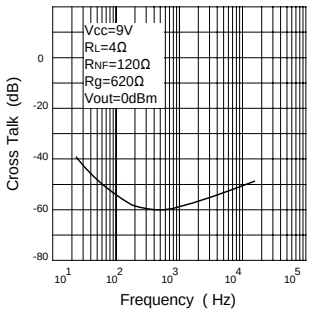
ICCQ, V2,V10 vs. VCC1



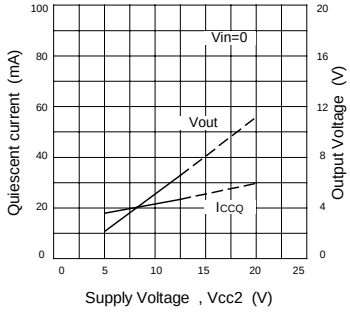
THD vs Output Power



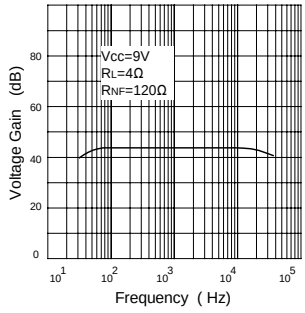
Cross Talk vs. Frequency



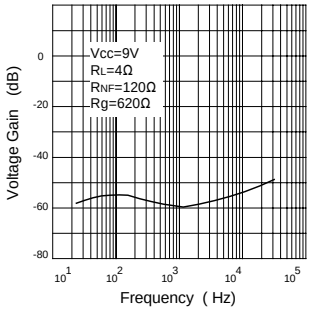
ICCQ, DC Vout vs. Supply Voltage



Voltage Gain vs. Frequency



Ripple Rejection vs. frequency



APPLICATION INFORMATION

1.Input Voltage

When the excessive signal is input, turning-up is produced in the clip waveform. The turning-up point is Vin=300mVrms(Typical) at Vcc=9V,RL=4Ω，f=1kHz. Enough care must be taken for this phenomenon.

2.Power ON/OFF

There is power ON/OFF switch at pin 1. However output power is changed by pin 1 supply voltage when pin1 supply voltage is not same pin 12 supply voltage, after referring to attached date, select pin 1 supply voltage.

3.Voltage Gain

The voltage gain can be changed by the external negative feedback resistor. When Rf=0, the Gain is equal to 56.5dB.When Rf=120Ω，the Gain is equal to 45dB.