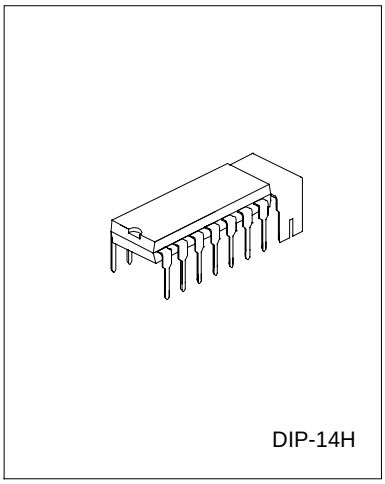
DUAL CHANNEL AUDIO POWER AMPLIFIER



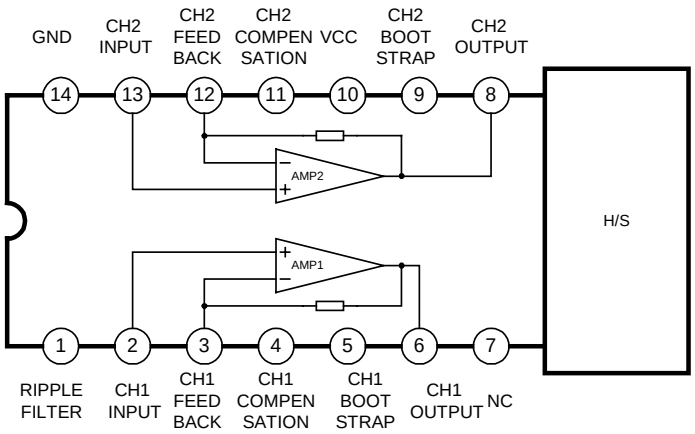
DESCRIPTION

The UTC1316 is a monolithic integrated circuit designed for the audio amplifier part in tap recorders and radio.

FEATURES

*Wide operating voltage (3V to 16V)
*Low quiescent current
*Low Harmonic distortion
*Large output power(2W,maximum)
*Fine ripple rejection characteristic

BLOCK DIRGARM



ABSOLUTE MAXIMUM RATINGS(Ta=25°C)

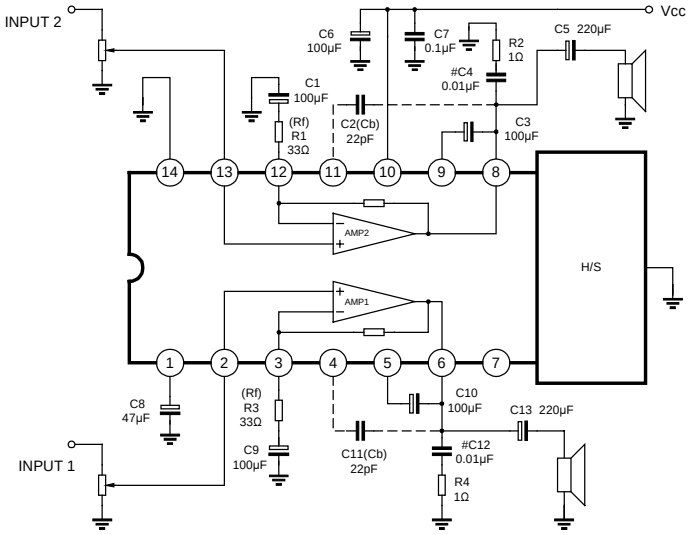
Characteristic	Symbol	Value	Unit
Supply Voltage(No signal)	Vcc	18	V
Supply Voltage(operating)	Vcc	16	V
Operating Temperature	Topr	-20 to +75	°C
Storage Temperature	Tstg	-40 to 150	°C
Power dissipation	P_D	2.0	W

ELECTRICAL CHARACTERISTICS

(Ta=25°C,Vcc=9V,R_B=33Ω,f=1KHz,R_L=8Ω,unless otherwise specified)

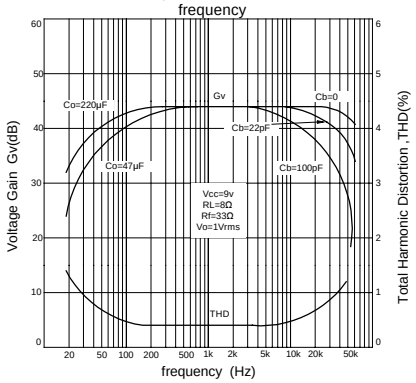
Characteristic	Symbol	Test Condition	Min	Typ.	Max	Unit
Quiescent Current	I_{CCQ}	No Signal		10		mA
Voltage Gain	Gv	Po=0.25W,Rf=33Ω		44		dB
		Po=0.25W,Rf=120Ω		34		dB
Output Power	Po	Vcc=12V,R_L=8Ω,THD=10%		2		W
		Vcc=9V,R_L=4Ω,THD=10%		1.6		
		Vcc=9V,R_L=8Ω,THD=10%		1.2		
		Vcc=6V,R_L=4Ω,THD=10%		0.7		
		Vcc=6V,R_L=8Ω,THD=10%		0.5		
Total Harmonic distortion	THD	Po=0.5W,Rf=33Ω		0.8		%
		Po=0.5W,Rf=120Ω		0.4		%
Noise output voltage	Vno	Rg=10kΩ		0.6		mV
Ripple Rejection Ratio	RR	Rg=0,frip=100Hz,Vrip=0.3V		50		dB
Channel Separation	CS	Rg=0,Po=0.25W		55		dB
Channel Balance	CB	Po=0.25W	-2	0	2	dB
Input impedance	Ri			5		MΩ

TYPICAL APPLICATION CIRCUIT

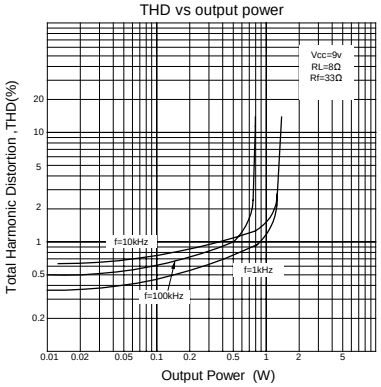


TYPICAL PERFORMANCE CHARACTERISTICS

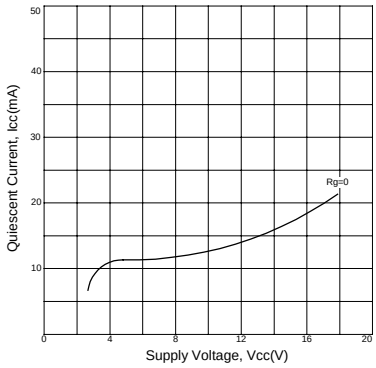
Voltage Gain and THD vs frequency



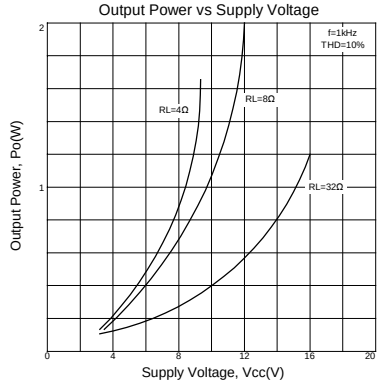
THD vs output power



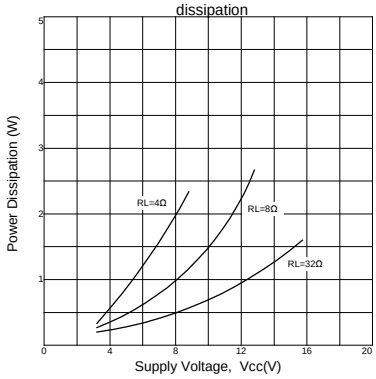
Supply Voltage vs. Quiescent Current



Output Power vs Supply Voltage



Supply Voltage vs Power dissipation



Voltage gain and THd vs. feed back resistance