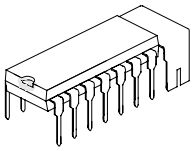
UTC PC1316 LINEAR INTEGRATED CIRCUIT

DUAL CHANNEL AUDIO POWER AMPLIFIER



DIP-14H

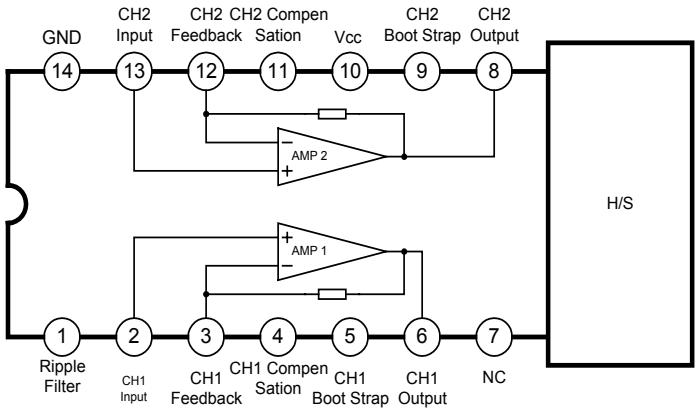
DESCRIPTION

The UTC PC1316 is a monolithic integrated circuit, designed for the audio amplifier part in tape recorders and radio.

FEATURES

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

BLOCK DIAGRAM



ABSOLUTE MAXIMUN RATINGS (Ta=25°C)

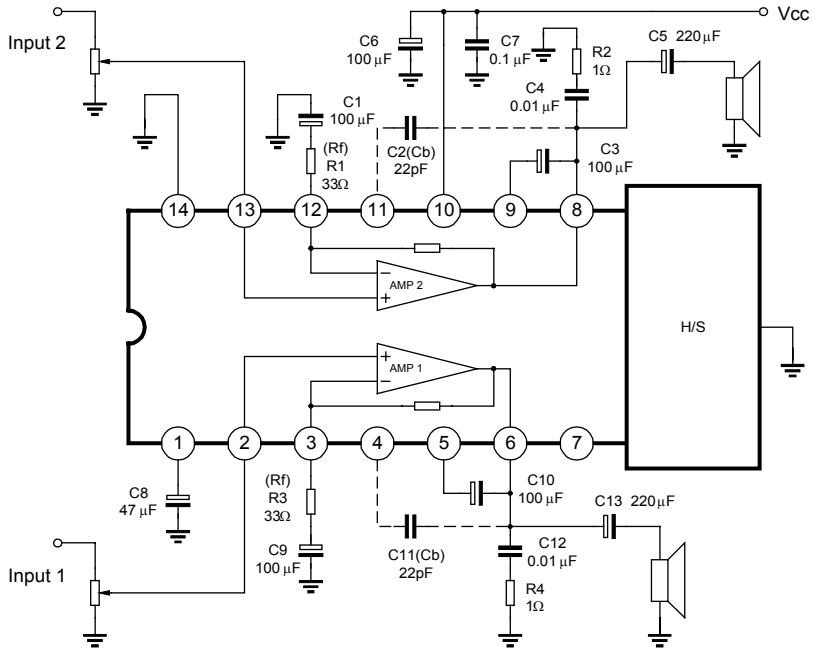
PARAMETER	SYMBOL	VALUE	UNIT
Supply Voltage(no signal)	Vcc	18	V
Supply Voltage(operating)	Vcc	16	V
Power Dissipation	PD	2	W
Operating Temperature	TOPR	-20 ~ 75	°C
Storage Temperature	TSTG	-40 ~ 150	°C

ELECTRONIC CHARACTERISTICS

(Ta=25°C,Vcc=9V,Rf=33Ω,f=1kHz,RL=8Ω,unless otherwise specified)

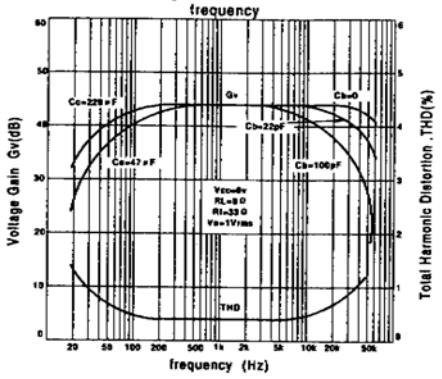
PARAMETER	TEST CONDITIONS	SYMBOL	MIN	TYP	MAX	UNIT
Quiescent Current	No Signal	ICCQ		10		mA
Voltage Gain	Po=0.25W, Rf=33Ω	Gv		44		dB
	Po=0.25W, Rf=120Ω	Gv		34		dB
	Vcc=12V, RL=8Ω, THD=10%	PO		2		W
	Vcc=9V, RL=4Ω, THD=10%	PO		1.6		W
Output Power	Vcc=9V, RL=8Ω, THD=10%	PO		1.2		W
	Vcc=6V, RL=4Ω, THD=10%	PO		0.7		W
	Vcc=6V, RL=8Ω, THD=10%	PO		0.5		W
Total Harmonic Distortion	Po=0.5W, Rf=33Ω	THD		0.8		%
	Po=0.5W, Rf=120Ω	THD		0.4		%
Noise Output Voltage	Rg=10kΩ	VNO		0.6		mV
Ripple Rejection Ratio	Rg=0,frip=100Hz,Vrip=0.3V	RR		50		dB
Channel Separation	Rg=0,Po=0.25W	CS		55		dB
Channel Balance	Po=0.25W	CB	-2	0	2	dB
Input Impedance		RI		5		MΩ

APPLICATION CIRCUIT

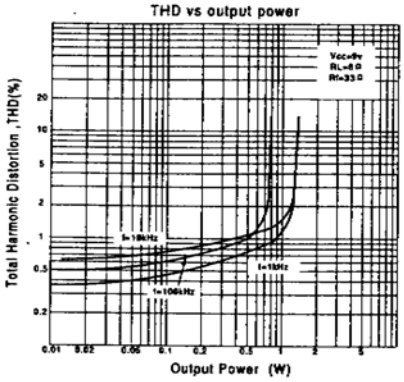


TYPICAL PERFORMANCE CHARACTERISTICS

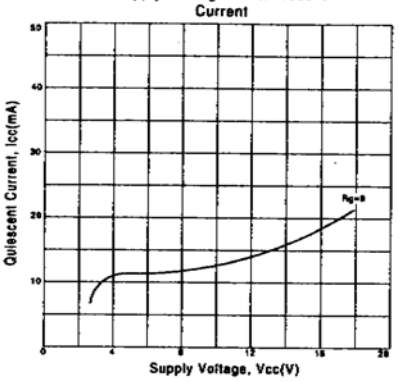
Voltage Gain and THD vs frequency



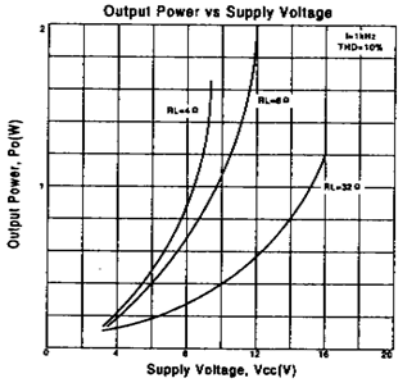
THD vs output power



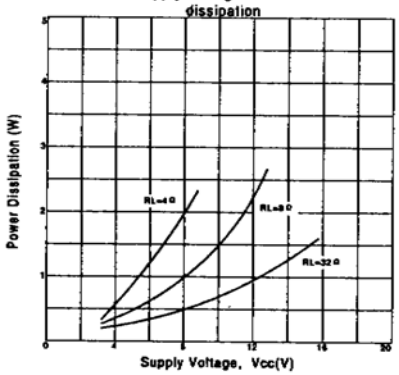
Supply Voltage vs. Quiescent Current



Output Power vs Supply Voltage



Supply Voltage vs Power dissipation



Voltage gain and THd vs. feed back resistance