

UTC PC1316 LINEAR INTEGRATED CIRCUIT

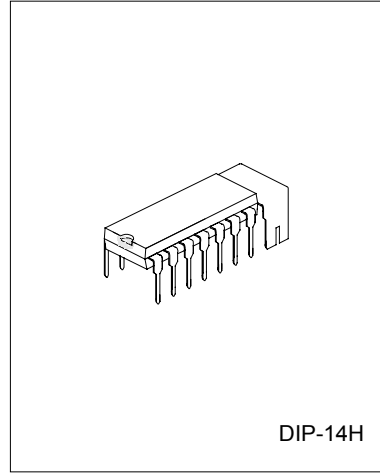
DUAL CHANNEL AUDIO POWER AMPLIFIER

DESCRIPTION

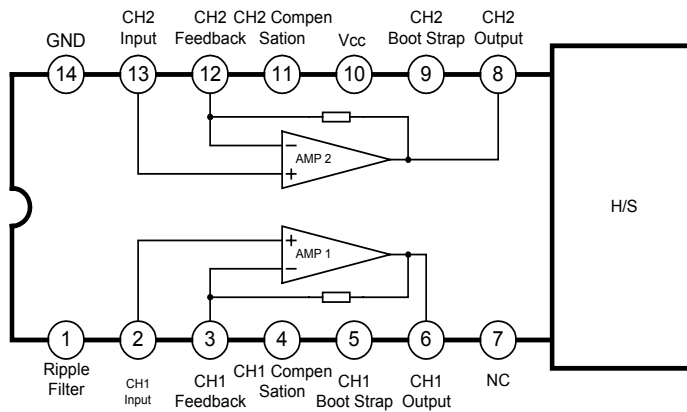
The UTC PC1316 is a monolithic integrated circuit, designed for the audio amplifier part in tape recorders and radio.

FEATURES

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



BLOCK DIAGRAM



ABSOLUTE MAXIMUM 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

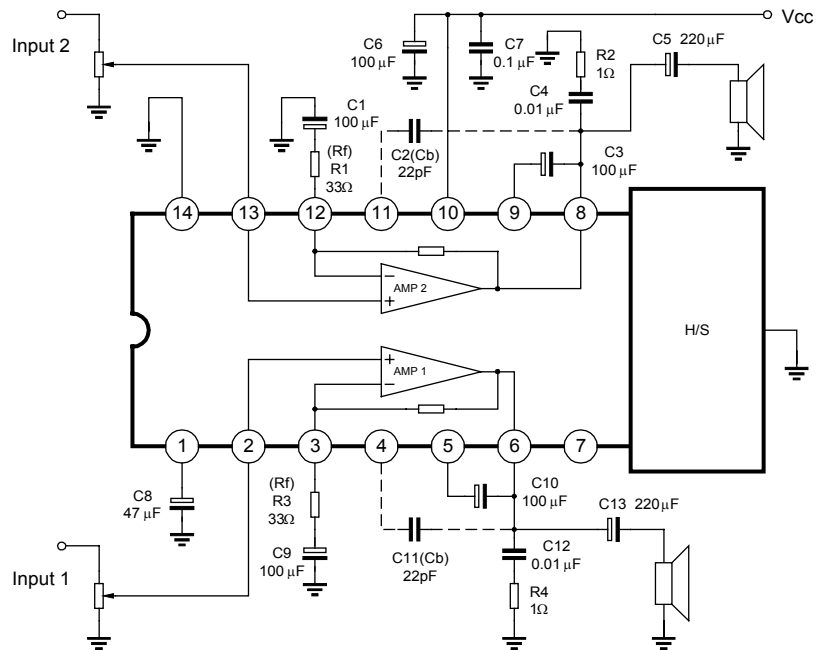
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ELECTRONIC CHARACTERISTICS

($T_a=25^\circ\text{C}$, $V_{cc}=9\text{V}$, $R_f=33\Omega$, $f=1\text{kHz}$, $R_L=8\Omega$, unless otherwise specified)

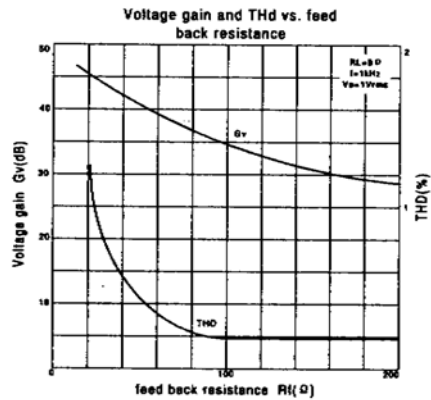
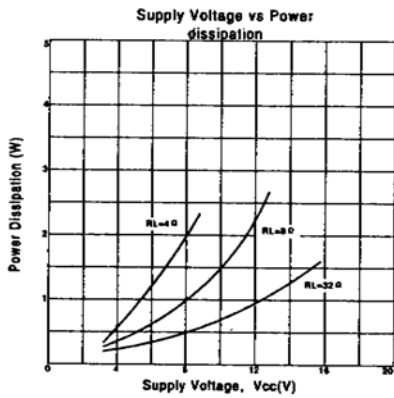
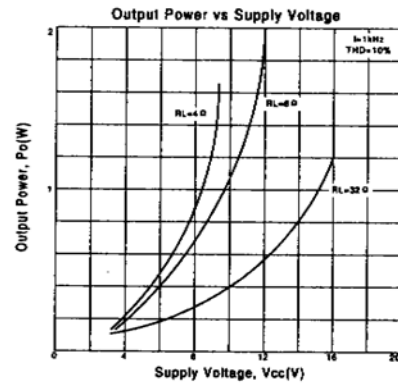
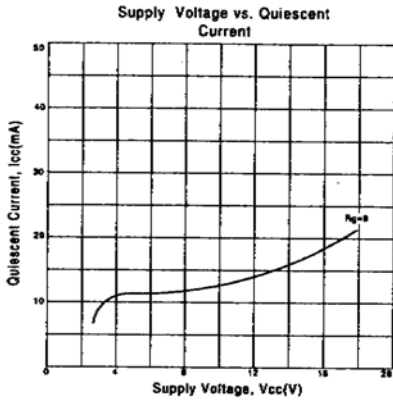
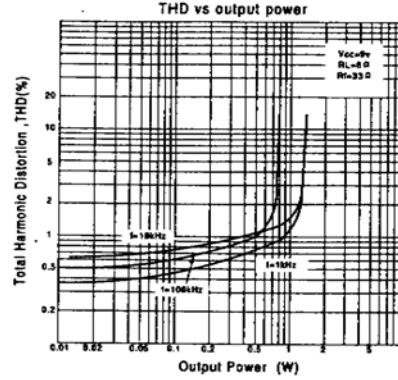
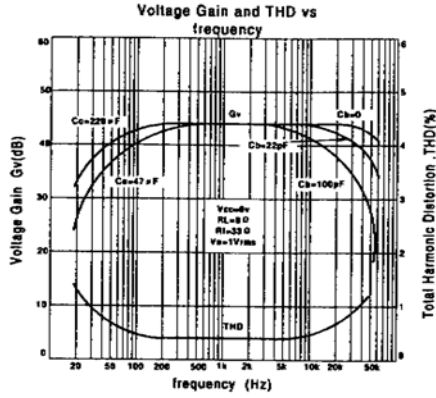
PARAMETER	TEST CONDITIONS	SYMBOL	MIN	TYP	MAX	UNIT
Quiescent Current	No Signal	ICCQ		10		mA
Voltage Gain	$P_o=0.25\text{W}$, $R_f=33\Omega$	G_v		44		dB
	$P_o=0.25\text{W}$, $R_f=120\Omega$	G_v		34		dB
Output Power	$V_{cc}=12\text{V}$, $R_L=8\Omega$, THD=10%	PO		2		W
	$V_{cc}=9\text{V}$, $R_L=4\Omega$, THD=10%	PO		1.6		W
Output Power	$V_{cc}=9\text{V}$, $R_L=8\Omega$, THD=10%	PO		1.2		W
	$V_{cc}=6\text{V}$, $R_L=4\Omega$, THD=10%	PO		0.7		W
	$V_{cc}=6\text{V}$, $R_L=8\Omega$, THD=10%	PO		0.5		W
Total Harmonic Distortion	$P_o=0.5\text{W}$, $R_f=33\Omega$	THD		0.8		%
	$P_o=0.5\text{W}$, $R_f=120\Omega$	THD		0.4		%
Noise Output Voltage	$R_g=10\text{k}\Omega$	VNO		0.6		mV
Ripple Rejection Ratio	$R_g=0$, $f_{rip}=100\text{Hz}$, $V_{rip}=0.3\text{V}$	RR		50		dB
Channel Separation	$R_g=0$, $P_o=0.25\text{W}$	CS		55		dB
Channel Balance	$P_o=0.25\text{W}$	CB	-2	0	2	dB
Input Impedance		RI		5		$M\Omega$

APPLICATION CIRCUIT



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TYPICAL PERFORMANCE CHARACTERISTICS



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