2W DUAL CHANNEL
AUDIO POWER AMPLIFIER—YD1316

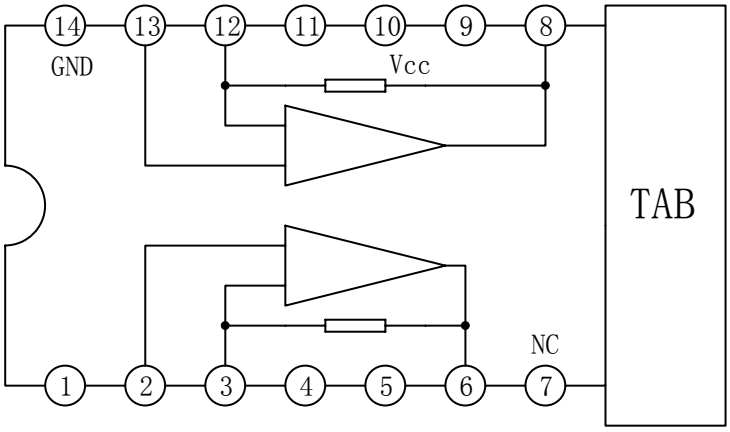
DESCRIPTION

The YD1316 is a monolithic integrated circuit designed for the audio amplifier in tape recorders and radio.

FEATURES

*Wide operating voltage (Vcc=3V to 16V);
*Low quiescent current;
*Low Harmonic distortion;
*Large output power (Po=2W×2, maximum, V_{CC}=12V, R_L=8Ω, THD=10%);
*Fine ripple rejection characteristic.

BLOCK DIAGRAM



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ABSOLUTE MAXIMUM RATINGS (Tamb=25℃)

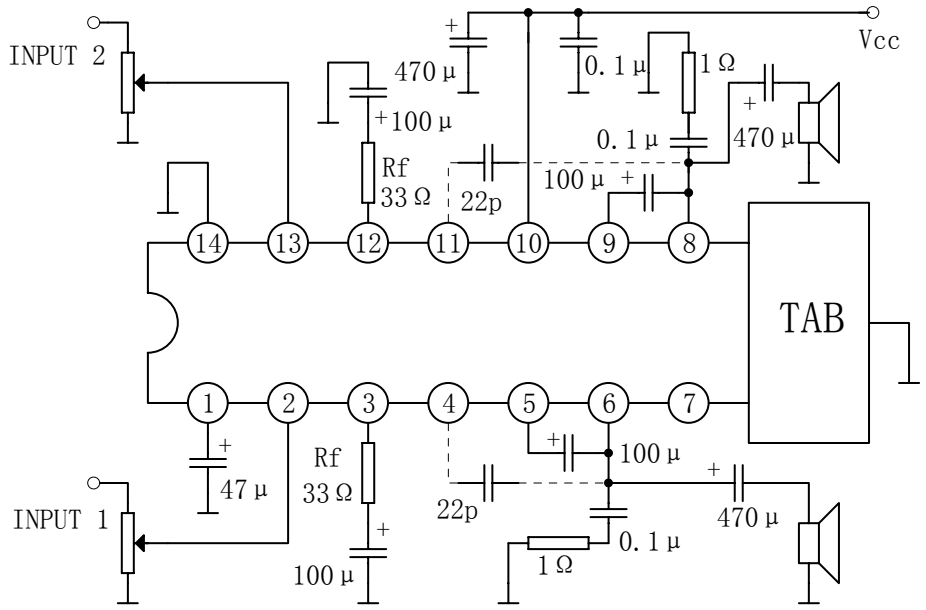
PARAMETER		SYMBOL	VALUE	UNIT
Supply Voltage (No signal)		V_{CC}	18	V
Supply Voltage (operating)		V_{CC}	16	V
Peak Output Current		Iop	1.25	A
Power Dissipation	80*60*1.2mm^3 PCB	P_D1	3.0	W
	No Heat Sink	P_D2	1.5	W
Operating Temperature		Topr	-20 to +75	℃
Storage Temperature		Tstg	-55 to 150	℃

ELECTRICAL CHARACTERISTICS

(Tamb=25℃, V_{CC}=9V, R_L=8Ω, Rf=120Ω, f=1kHz, Unless otherwise specified)

PARAMETER	SYMBOL	TEST CONDITIONS	MIN	TYP	MAX	UNIT
Quiescent Circuit Current	Iccq	No Signal		10		mA
Voltage Gain	G_V	Po=0.25W, Rf=33Ω		44		dB
		Po=0.25W, Rf=120Ω		34		
Output Power	Po	V_{CC}=12V, R_L=8Ω, THD=10%		2		W
		V_{CC}=9V, R_L=4Ω, THD=10%		1.6		
		V_{CC}=9V, R_L=8Ω, THD=10%		1.2		
		V_{CC}=6V, R_L=4Ω, THD=10%		0.7		
		V_{CC}=6V, R_L=8Ω, THD=10%		0.5		
Total Harmonic Distortion	THD	Po= 0.5W, Rf=33Ω		0.8	1.0	%
		Po=0.5W, Rf=120Ω		0.4		
Noise Output Voltage	V_{NO}	Rg=10kΩ		0.6	4	mV
Ripple Rejection	RR	Rg=0, fr=100Hz, Vr=0.3V		50		dB
Cross Talk	CT	Rg=0, Po=0.25W		55		dB
Channel Balance	ΔG_V	Crip	-2	0	2	dB
Input Resistance	Zi			5		MΩ

APPLICATION CIRCUIT



OUTLINE DRAWING