

2W DUAL CHANNEL AUDIO POWER AMPLIFIER—YD1316

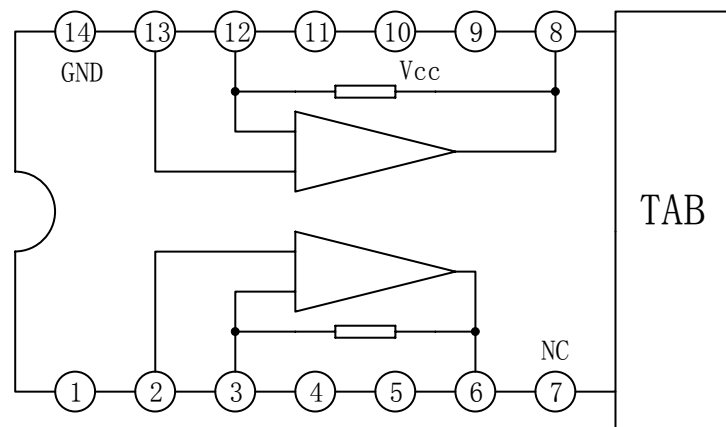
DESCRIPTION

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

FEATURES

- *Wide operating voltage ($V_{CC}=3V$ to $16V$);
- *Low quiescent current;
- *Low Harmonic distortion;
- *Large output power ($P_o=2W \times 2$, maximum, $V_{CC}=12V$, $R_L=8\Omega$, THD=10%);
- *Fine ripple rejection characteristic.

BLOCK DIAGRAM



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ABSOLUTE MAXIMUM RATINGS (Tamb=25°C)

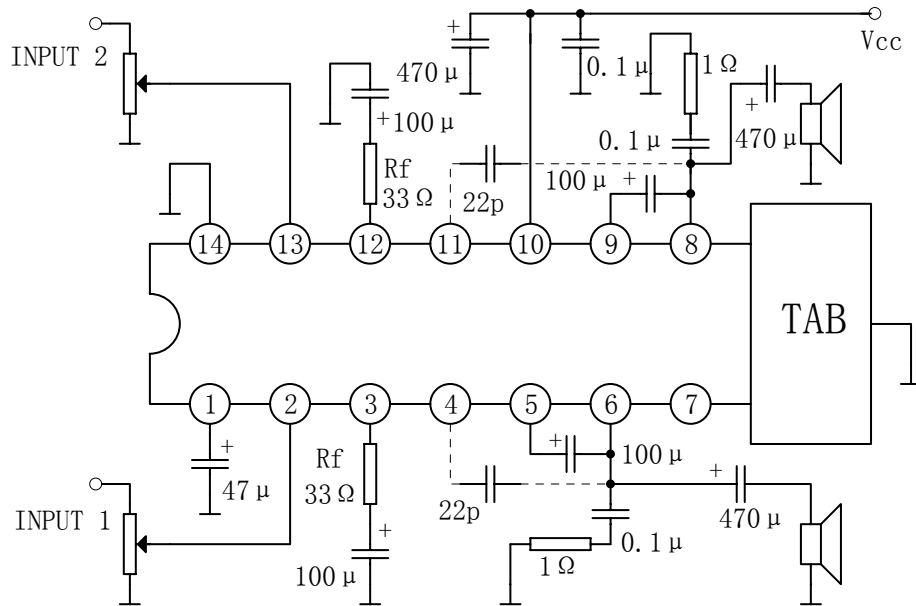
PARAMETER		SYMBOL	VALUE	UNIT
Supply Voltage (No signal)		V _{CC}	18	V
Supply Voltage (operating)		V _{CC}	16	V
Peak Output Current		I _{op}	1.25	A
Power Dissipation	80*60*1.2mm ³ PCB	P _{D1}	3.0	W
	No Heat Sink	P _{D2}	1.5	W
Operating Temperature		T _{opr}	-20 to +75	°C
Storage Temperature		T _{stg}	-55 to 150	°C

ELECTRICAL CHARACTERISTICS

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

PARAMETER	SYMBOL	TEST CONDITIONS	MIN	TYP	MAX	UNIT
Quiescent Circuit Current	I _{ccq}	No Signal		10		mA
Voltage Gain	G _v	P _o =0.25W, R _f =33Ω		44		dB
		P _o =0.25W, R _f =120Ω		34		
Output Power	P _o	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	P _o = 0.5W, R _f =33Ω		0.8	1.0	%
		P _o =0.5W, R _f =120Ω		0.4		
Noise Output Voltage	V _{NO}	R _g =10kΩ		0.6	4	mV
Ripple Rejection	RR	R _g =0, f _r =100Hz, V _r =0.3V		50		dB
Cross Talk	CT	R _g =0, P _o =0.25W		55		dB
Channel Balance	Δ G _v	Crip	-2	0	2	dB
Input Resistance	Z _i			5		MΩ

APPLICATION CIRCUIT



OUTLINE DRAWING

