

2.4W STEREO AUDIO POWER AMP——YD2025A

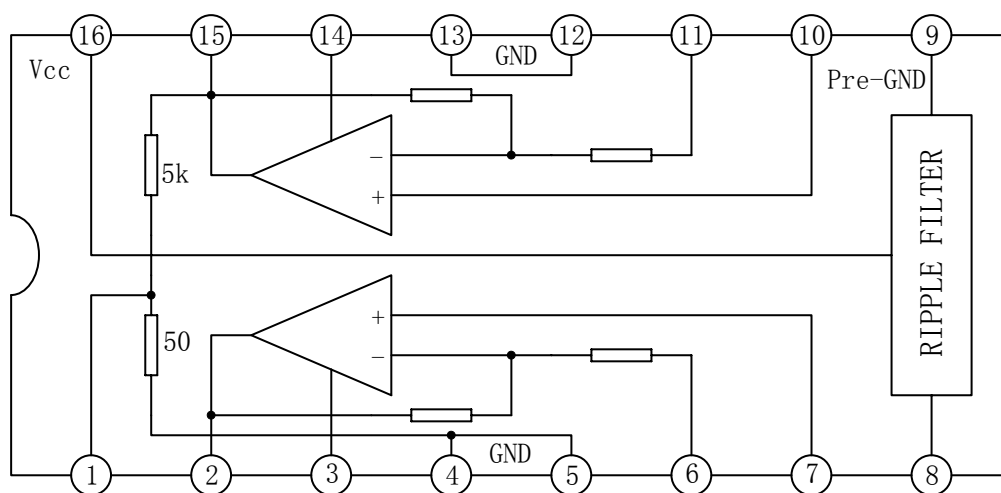
DESCRIPTION

The YD2025A is a monolithic integrated circuit consisting of a 2-channel power amplifier. It is suitable for stereo and bridge amplifier application of radio cassette tape recorder.

FEATURES

- *High output power
 - Stereo: $P_o=2.4W$ (Typ) at $V_{cc}=9V, R_L=4\Omega, THD=10\%$
 - Bridge: $P_o=4.7W$ (Typ) at $V_{cc}=9V, R_L=8\Omega, THD=10\%$
- *Small shock noise at the time of power on/off due to a built-in muting circuit
- *Good ripple rejection due to a built-in ripple filter
- *Good channel separation
- *Soft tone at the time of output saturation
- *Closed loop voltage gain fixed 45dB (Bridge: 51dB) but availability with external resistor added
- *Minimum number of external parts required

BLOCK DIAGRAM



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ABSOLUTE MAXIMUM RATINGS (Tamb=25°C)

PARAMETER		SYMBOL	VALUE	UNIT
Supply Voltage	Vi=0	Vcc	20	V
	Vi>0		15	
Output Peak Current		Iop	2.0	A
Power Dissipation	80*60*1.2mm ³ PCB	PD1	3.5	W
	No Heat Sink	PD2	1.6	W
Operating Temperature		Topr	-20~+75	°C
Storage Temperature		Tstg	-55~+150	°C

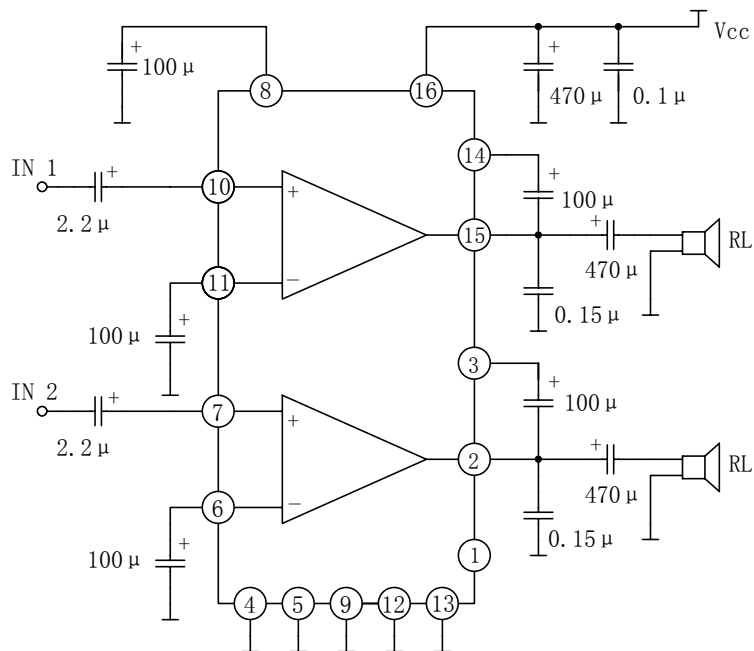
ELECTRICAL CHARACTERISTICS

(Tamb=25°C, Vcc=9V, f=1kHz, Rg=600Ω, Unless otherwise specified)

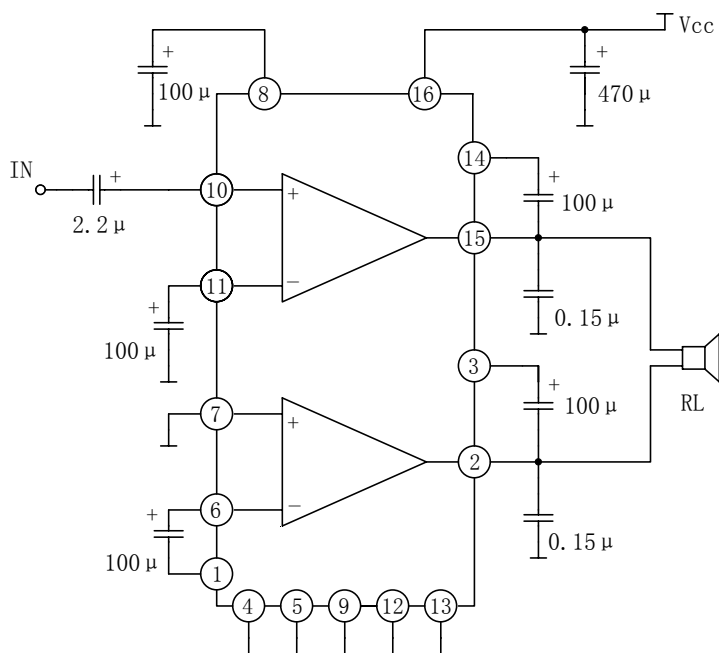
PARAMETER	SYMBOL	TEST CONDITIONS	MIN	TYP	MAX	UNIT
Operating Supply Voltage	Vcc	Vi>0	6	9	15	V
Quiescent Circuit Current	ICcq	Vi=0		26	40	mA
Output Power	PO	THD=10%, RL=4Ω	2.0	2.4		W/CH
		THD=10%, RL=3Ω		3.0		
Total Harmonic Distortion	THD	PO=0.4W/CH		0.2	1.0	%
Closed Loop Voltage Gain	Gv	Stereo	43	45	47	dB
		Bridge	49	51	53	
Input Resistance	Zi	f=1kHz		30		kΩ
Output Noise Voltage	VNO	Rg=10kΩ, BPF=22Hz~22kHz		0.3	1.0	mV
Ripple Rejection Ratio	RR	F=100Hz, Rg=600Ω		46		dB
Cross-Talk	CT	VO=0dBm	46	55		dB

APPLICATION CIRCUIT

(1) YD2025A TYPE APPLICATION



(2) YD2025A BTL APPLICATION



OUTLINE DRAWING

DIP-16

unit:mm

