

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

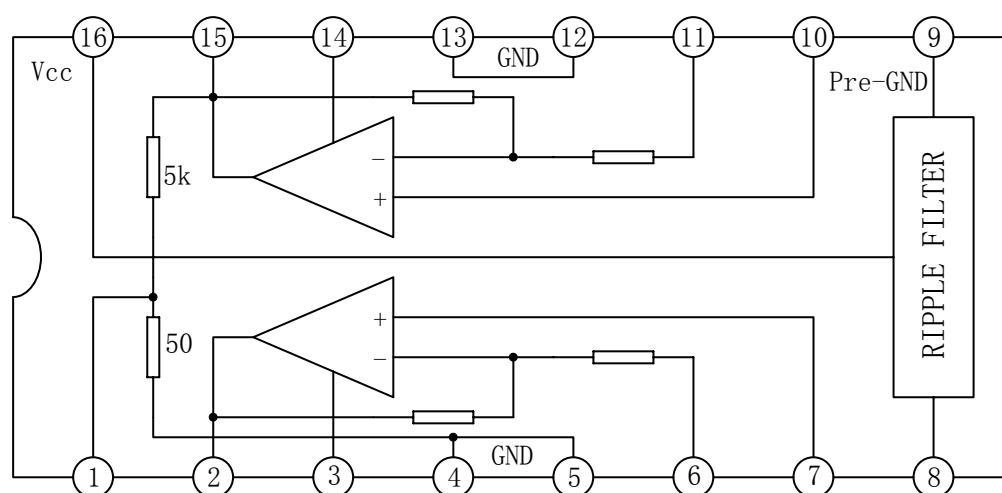
*Good channel separation

*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



WuXi YouDa Electronics Co., Ltd

Add: No.5 Xijin Road, National Hi-Tech Industrial Development Zone, Wuxi Jiangsu China

Tel: 86-510-85205117 86-510-85205106 Fax: 86-510-85205110 Website: www.e-youda.com

SHENZHEN OFFICE Tel: 86-755-83740369 Fax: 86-755-83741418

ABSOLUTE MAXIMUM RATINGS (Tamb=25℃)

PARAMETER		SYMBOL	VALUE	UNIT
Supply Voltage	Vi=0	V _{CC}	20	V
	Vi>0		15	
Output Peak Current		I _{op}	2.0	A
Power Dissipation	80*60*1.2mm ³ PCB	P _D 1	3.5	W
	No Heat Sink	P _D 2	1.6	W
Operating Temperature		T _{opr}	-20~+75	℃
Storage Temperature		T _{stg}	-55~+150	℃

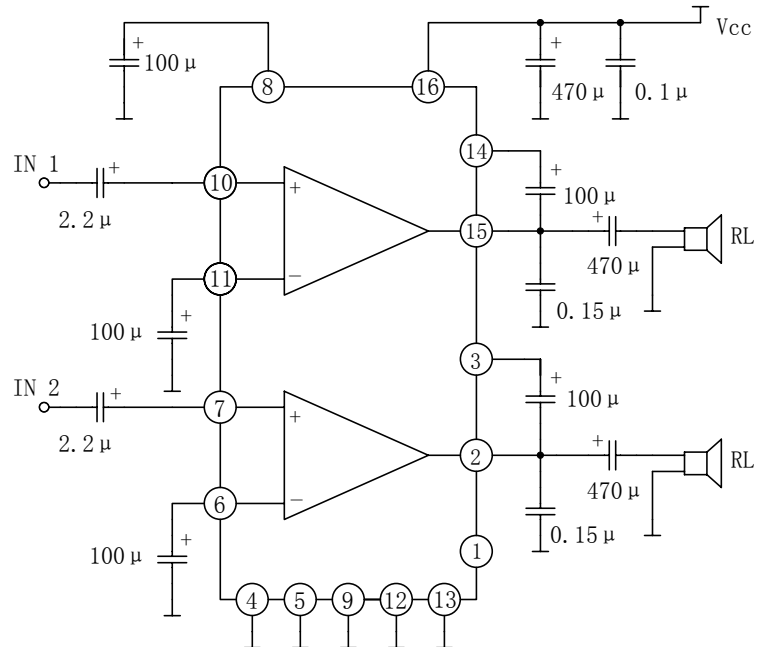
ELECTRICAL CHARACTERISTICS

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

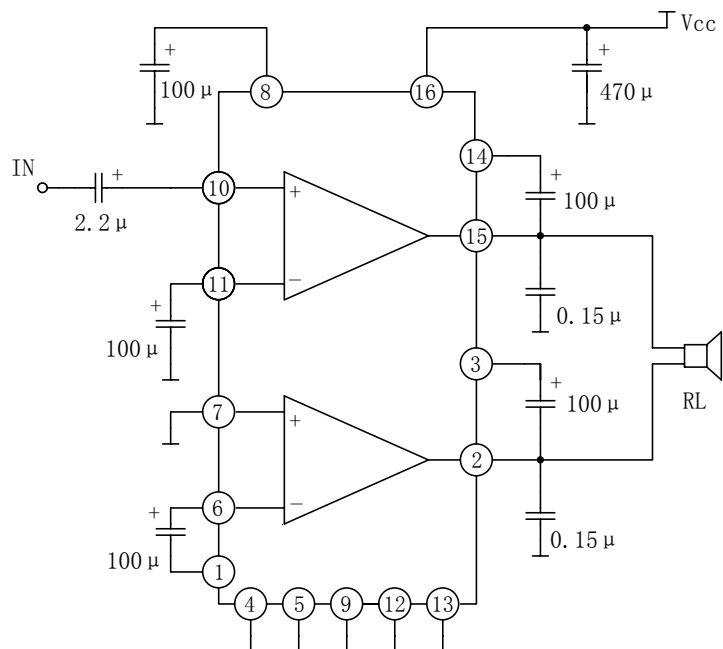
PARAMETER	SYMBOL	TEST CONDITIONS	MIN	TYP	MAX	UNIT
Operating Supply Voltage	V _{CC}	Vi>0	6	9	15	V
Quiescent Circuit Current	I _{CCQ}	Vi=0		26	40	mA
Output Power	P _O	THD=10%, R _L =4Ω	2.0	2.4		W/CH
		THD=10%, R _L =3Ω		3.0		
Total Harmonic Distortion	THD	P _O =0.4W/CH		0.2	1.0	%
Closed Loop Voltage Gain	G _v	Stereo	43	45	47	dB
		Bridge	49	51	53	
Input Resistance	Z _i	f=1kHz		30		kΩ
Output Noise Voltage	V _{NO}	Rg=10kΩ, BPF=22Hz~22kHz		0.3	1.0	mV
Ripple Rejection Ratio	RR	F=100Hz, Rg=600Ω		46		dB
Cross-Talk	CT	V _O =0dBm	46	55		dB

APPLICATION CIRCUIT

(1) YD2025A TYPE APPLICATION



(2) YD2025A BTL APPLICATION



OUTLINE DRAWING

DIP-16

unit:mm

