

## 2.3W STEREO AUDIO AMPLIFIER——YD2025

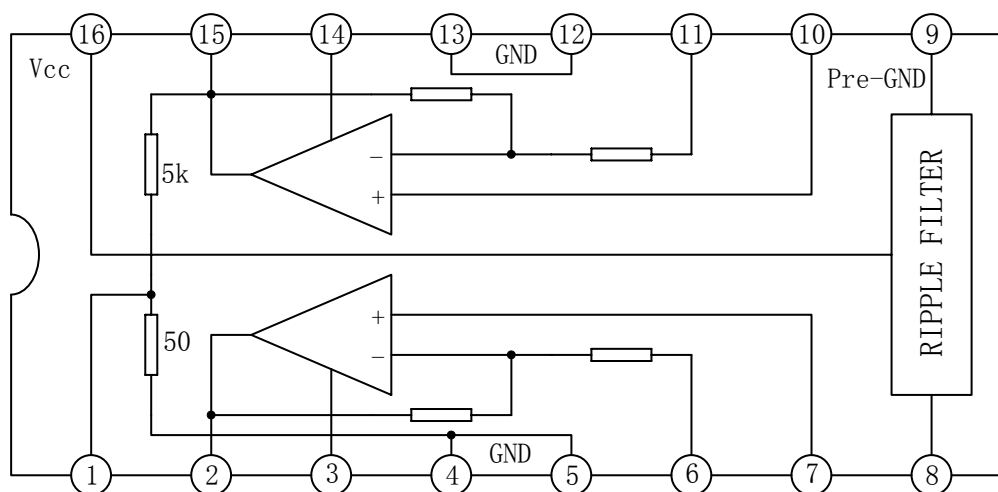
### DESCRIPTION

The YD2025 is a monolithic integrated audio Amplifier in a 16-pin plastic dual in line package. It is designed for portable cassette players and radios.

### FEATURES

- \*Working voltage down to 3V;
- \*Few external components;
- \*High channel isolation;
- \*Voltage gain up to 45dB (Adjustable with external resistor);
- \*Soft clipping;
- \*Internal thermal protection.

### BLOCK DIAGRAM



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**ABSOLUTE MAXIMUM RATINGS** (Tamb=25°C)

PARAMETER		SYMBOL	VALUE	UNIT
Supply Voltage		Vcc	15	V
Output Peak Current		Io	1.5	A
Power Dissipation	80*60*1.2mm <sup>3</sup> PCB	P <sub>D1</sub>	3.0	W
	No Heat Sink	P <sub>D2</sub>	1.5	W
Ambient operating temperature		Topr	-20~+75	°C
Storage Temperature		Tstg	-40~+150	°C

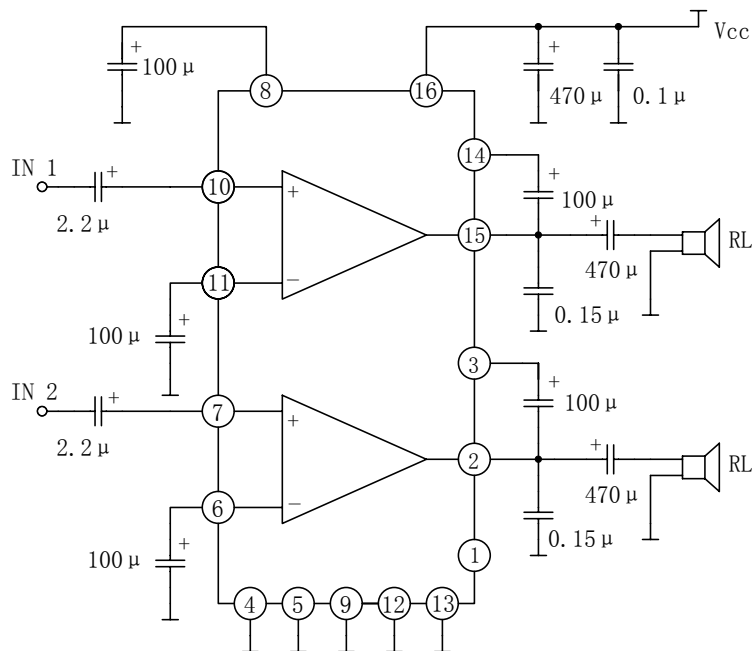
**Electrical CHARACTERISTICS**

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

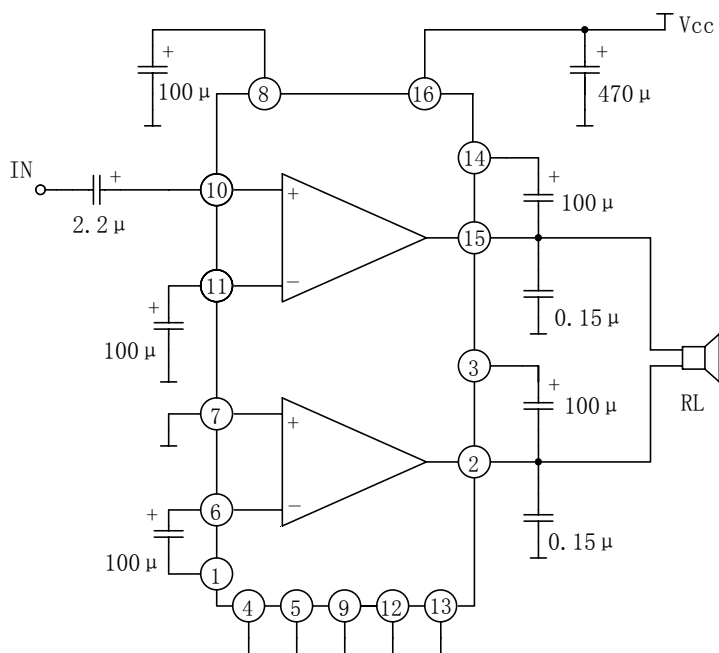
PARAMETER	SYMBOL	TEST CONDITIONS	NIN	TYP	MAX	UNIT
Supply Voltage	Vcc		3		12	V
Quiescent Current	Iccq			40	50	mA
Quiescent Output Voltage	Vo			4.5		V
Voltage Gain	Gv	Stereo	43	45	47	dB
		Bridge	49	51	53	
Voltage Gain Difference	Δ Gv				±1	dB
Input Impedance	Zi			30		kΩ
Output Power (STEREO)	Po (THD =10%)	Vcc=9V, R <sub>L</sub> =4Ω	1.7	2.3		W
		Vcc=9V, R <sub>L</sub> =8Ω		1.3		W
		Vcc=6V, R <sub>L</sub> =4Ω	0.7	1		W
		Vcc=6V, R <sub>L</sub> =8Ω		0.6		W
		Vcc=3V, R <sub>L</sub> =4Ω		0.1		W
Output Power (BTL)		Vcc=9V, R <sub>L</sub> =8Ω		4.7		W
		Vcc=6V, R <sub>L</sub> =4Ω		2.8		W
Distortion	THD	Stereo, R <sub>L</sub> =4Ω, Po=250mW		0.3	1.5	%
		BTL, R <sub>L</sub> =8Ω, Po=250mW		0.5		%
Supply Voltage Rejection	RR	Rg=0, Gv=45dB, Vr=150mV, f=100Hz	40	46		dB
Input Noise Voltage	V <sub>NI</sub>	Gv=45dB, BPF=20Hz ~20kHz	Rg=0	1.5	3	μ V
			Rg=10kΩ	3	6	μ V
Cross-Talk	CT	Rg=10kΩ, f=1kHz, R <sub>L</sub> =4Ω, Po=1W	40	55		dB

APPLICATION CIRCUIT

(1) YD2025 TYPE APPLICATION



(2) YD2025 BTL APPLICATION



OUTLINE DRAWING

DIP-16

unit:mm

