

YOU DA INTEGRATED CIRCUIT

YD2025D

1.3W STEREO AUDIO AMPLIFIER——YD2025D

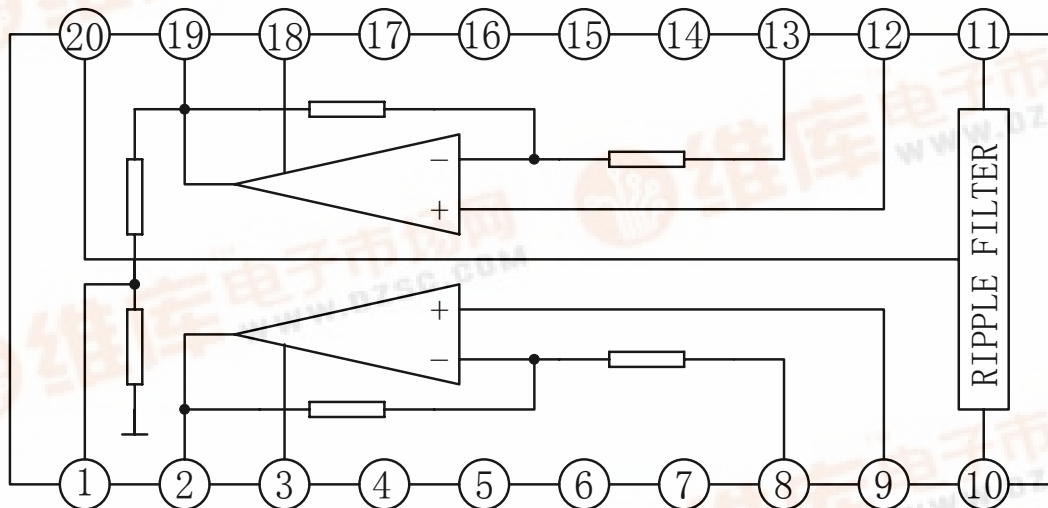
DESCRIPTION

The YD2025D is a monolithic integrated audio Amplifier in a SOP20. 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 (No Heat Sink)	P _D	1.0	W
Ambient operating temperature range	Topr	-20~+75	°C
Storage Temperature	Tstg	-40~+150	°C

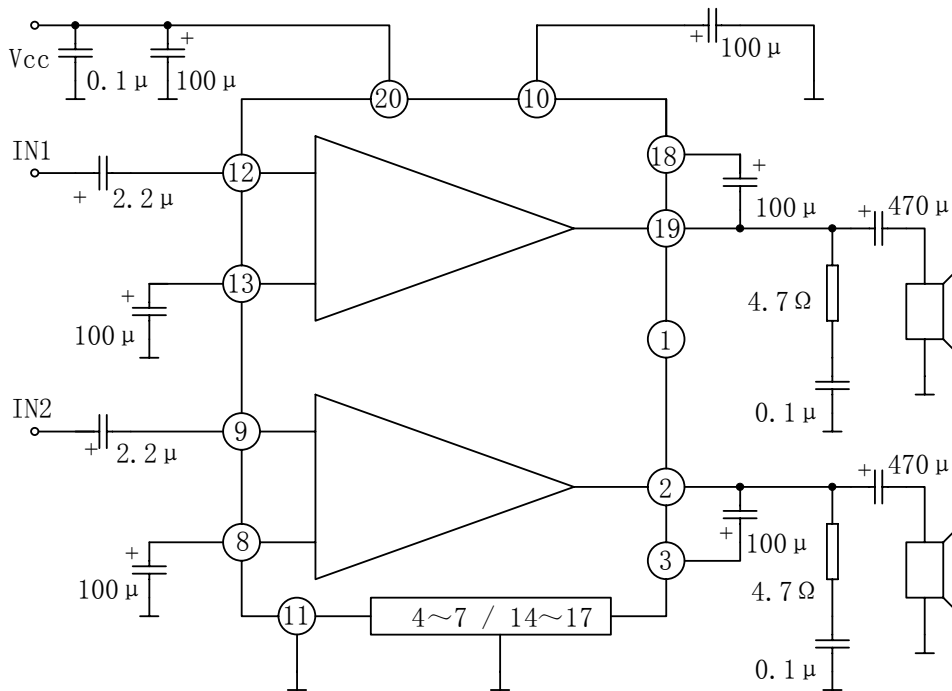
Electrical CHARACTERISTICS

(Tamb=20°C, Vcc=9V, f=1kHz, Stereo, Unless otherwise specified)

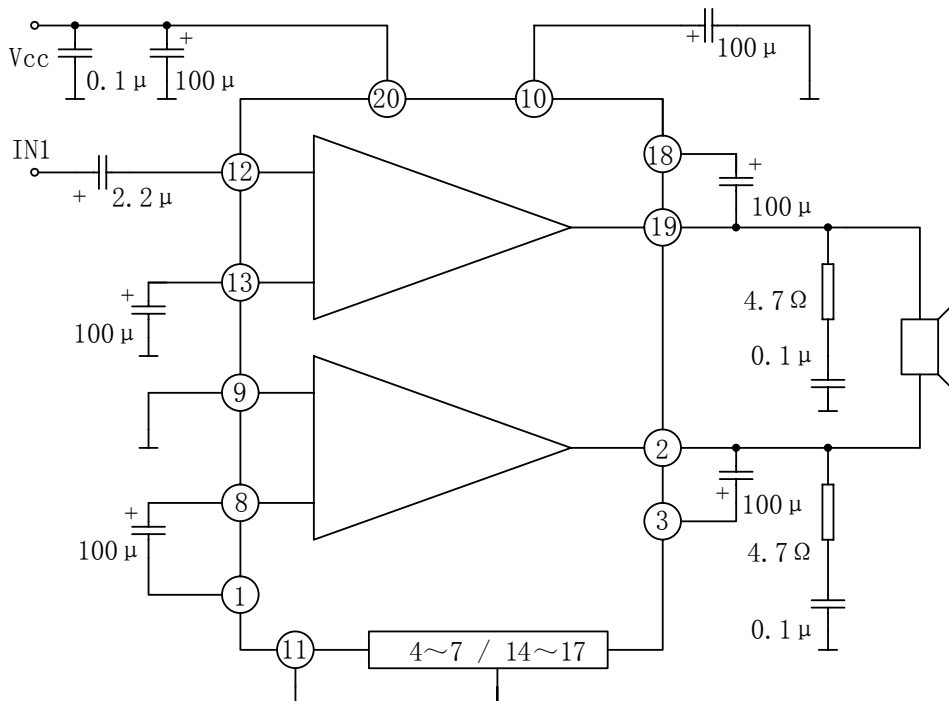
PARAMETER	SYMBOL	TEST CONDITIONS	NIN	TYP	MAX	UNIT
Supply Voltage	Vcc		3		9	V
Quiescent Current	Iccq			40	50	mA
Quiescent Output Voltage	Vo			4.5		V
Voltage Gain	Gv	Stereo	43	45	47	dB
		Bridge	49	51	53	
Voltage Gain Difference	Δ Gv				±1	dB
Input Impedance	Zi			30		kΩ
Output Power (STEREO)	Po (THD =10%)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

APPLICATION CIRCUIT

(1) YD2025D TYPE APPLICATION



(2) YD2025D BTL APPLICATION



OUTLINE DRAWING

SO20 PACKAGE MECHANICAL DATA

DIM.	mm			inch		
	MIN.	TYP.	MAX.	MIN.	TYP.	MAX.
A			2.65			0.104
a1	0.1		0.3	0.004		0.012
a2			2.45			0.096
b	0.35		0.49	0.014		0.019
b1	0.23		0.32	0.009		0.013
C		0.5			0.020	
c1	45 (typ.)					
D	12.6		13.0	0.496		0.512
E	10		10.65	0.394		0.419
e		1.27			0.050	
e3		11.43			0.450	
F	7.4		7.6	0.291		0.299
L	0.5		1.27	0.020		0.050
M			0.75			0.030
S	8 (max.)					

