
22W HI-FI AUDIO POWER AMPLIFIER——YD1008

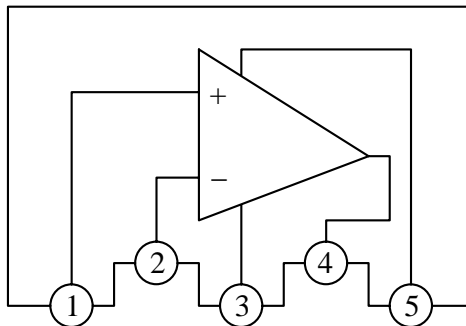
DESCRIPTION

The YD1008 is a monolithic audio power amplifier integrated circuit.

FEATURES

- *High output power
- *High operating supply voltage (50V)
- *Single or split supply operations
- *Very low distortion
- *Short circuit protection (out to end)
- *Thermal shutdown

BLOCK DIAGRAM



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ABSOLUTE MAXIMUM RATINGS (Tamb=25°C)

PARAMETER	SYMBOL	VALUE	UNIT
Supply Voltage	Vcc/Vee	±25	V
Output Peak Current (internally limited)	Iop	5	A
Power Dissipation at Tcase=75°C	PD	25	W
Ambient operating temperature	Topr	-20~+75	°C
Storage And Junction Temperature	Tstg, Tj	-40~+150	°C

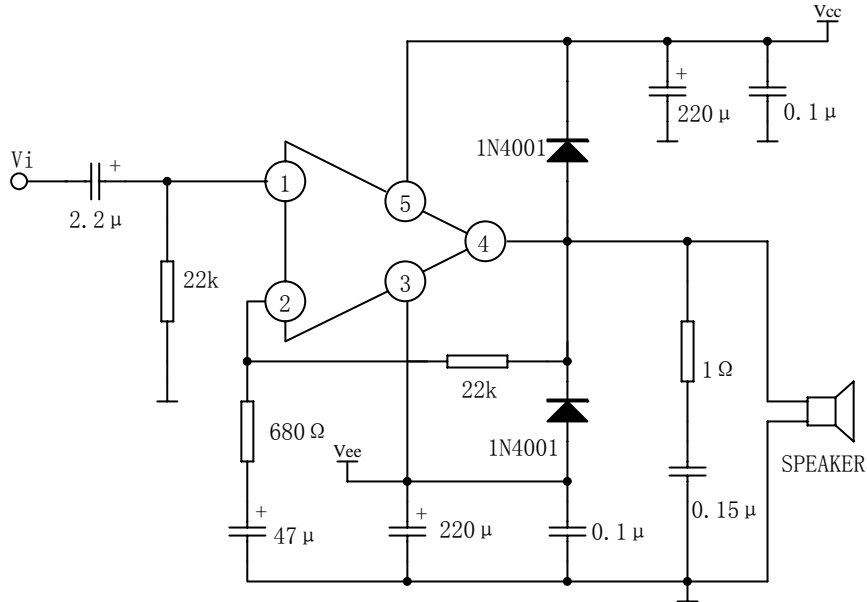
ELECTRICAL CHARACTERISTICS

(Vcc/Vee = ±18V, Tamb =25°C, f = 1 kHz, unless otherwise specified)

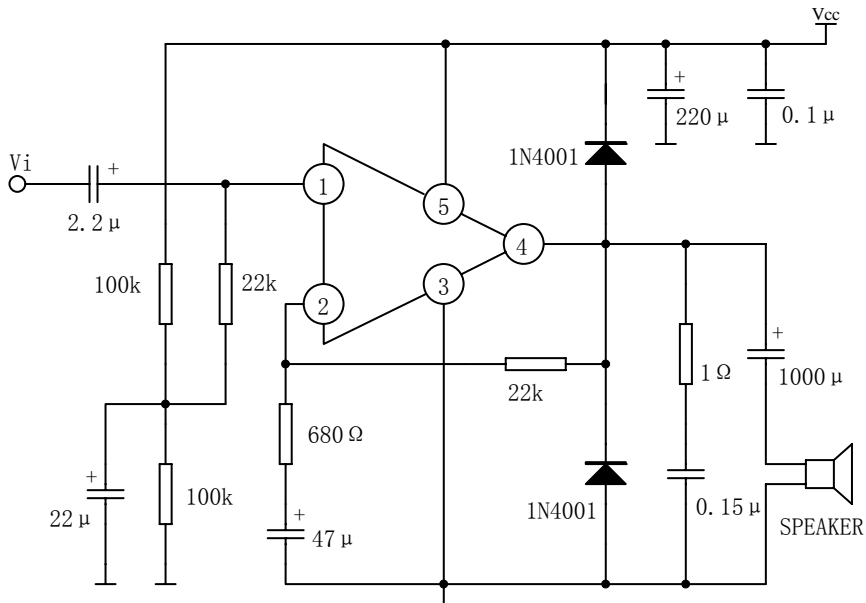
PARAMETER	SYMBOL	TEST CONDITIONS	MIN	TYP	MAX	UNIT
Supply Voltage	Vs		±4.5		±25	V
Quiescent Drain Current	Id	Vcc/Vee = ±4.5V		30	50	mA
		Vcc/Vee = ±25V		55	90	mA
Input Bias Current	Ib	Vcc/Vee = ±22V		0.1	0.5	μ A
Input Offset Voltage	Vis				±15	mV
Input Offset Current	Iis				±200	nA
Output Power	Po	THD = 1%, RL = 8 Ω	16	18		W
		THD = 10%, RL = 8 Ω	20	22		W
Total Harmonic Distortion	THD	f = 40Hz to 15kHz, RL = 8 Ω Po = 0.1 to 10W		0.02	0.5	%
SR Slew Rate	SR		5	8		V/μ s
Open Loop Voltage Gain	Gv			80		dB
Closed Loop Voltage Gain	Gv		30	30.5	31	dB
Power Bandwidth (-3dB)	BW	RL = 8 Ω, Vi = 200mV	20 to 80,000			Hz
Total Input Noise	eN	B = 22Hz to 22kHz		5	10	μ V
Input Resistance (pin 1)	Ri		500	5000		k Ω
Supply Voltage Rejection	SVR	Rs = 22k Ω, f = 100Hz Vr = 0.5V		45		dB
Efficiency	η	PO = 15W, RL = 8 Ω;		65		%
Thermal Shut-Down Junction Temperature	Tsd- j			150		°C

APPLICATION CIRCUIT

(1) YD1008 DUAL SUPPLY POWER APPLICATION

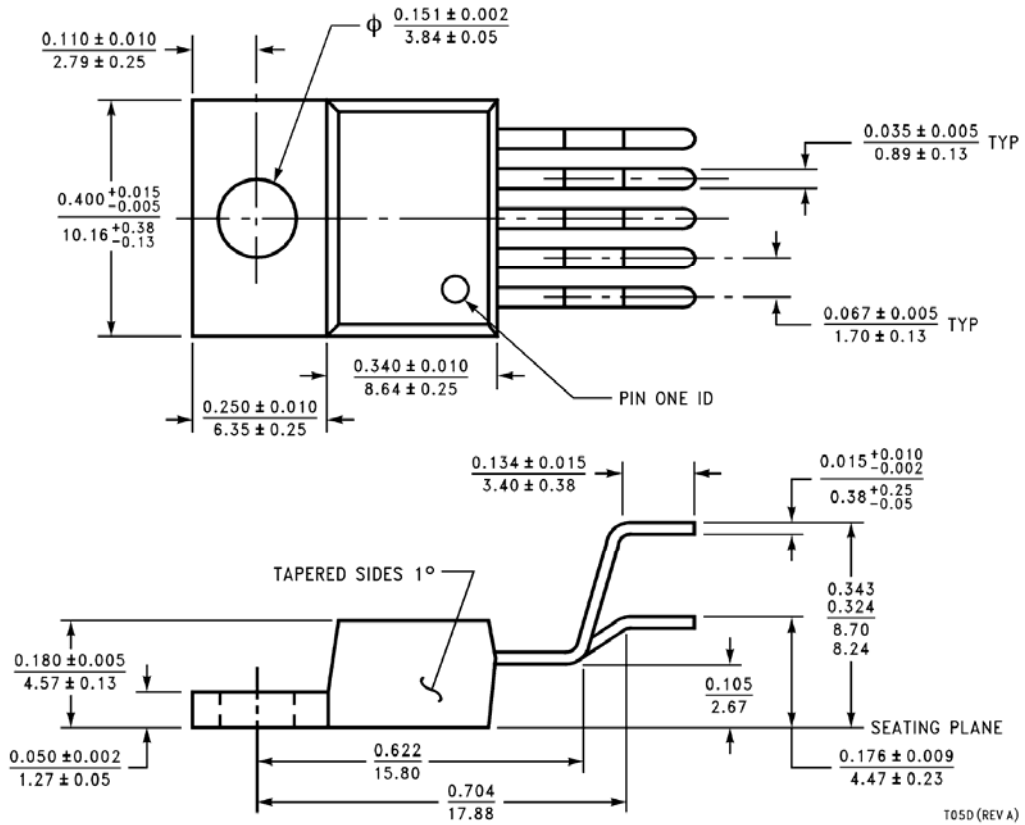


(2) YD1008 SINGLE SUPPLY POWER APPLICATION



OUTLINE DRAWING

Unit: inch / mm



T05D (REV A)