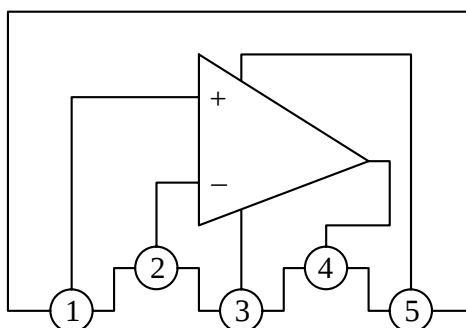


22W HI-FI AUDIO POWER AMPLIFIER——YD1008**DESCRIPTION**

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**WuXi YouDa Electronics Co., Ltd**

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ABSOLUTE MAXIMUM RATINGS ($T_{amb}=25^{\circ}\text{C}$)

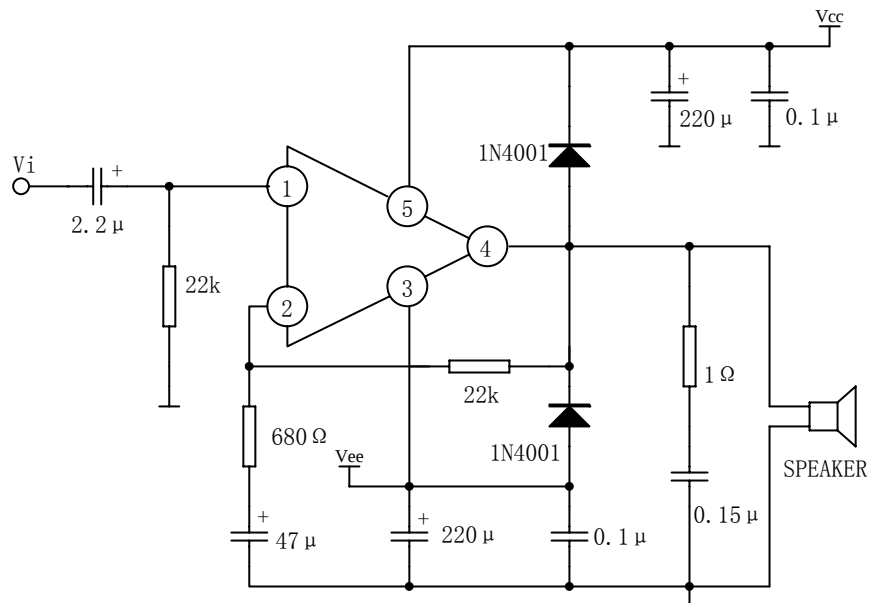
PARAMETER	SYMBOL	VALUE	UNIT
Supply Voltage	V_{CC}/V_{EE}	± 25	V
Output Peak Current (internally limited)	I_{op}	5	A
Power Dissipation at $T_{case}=75^{\circ}\text{C}$	P_D	25	W
Ambient operating temperature	T_{opr}	$-20\sim+75$	$^{\circ}\text{C}$
Storage And Junction Temperature	T_{stg}, T_j	$-40\sim+150$	$^{\circ}\text{C}$

ELECTRICAL CHARACTERISTICS($V_{CC}/V_{EE} = \pm 18\text{V}$, $T_{amb} = 25^{\circ}\text{C}$, $f = 1\text{ kHz}$, unless otherwise specified)

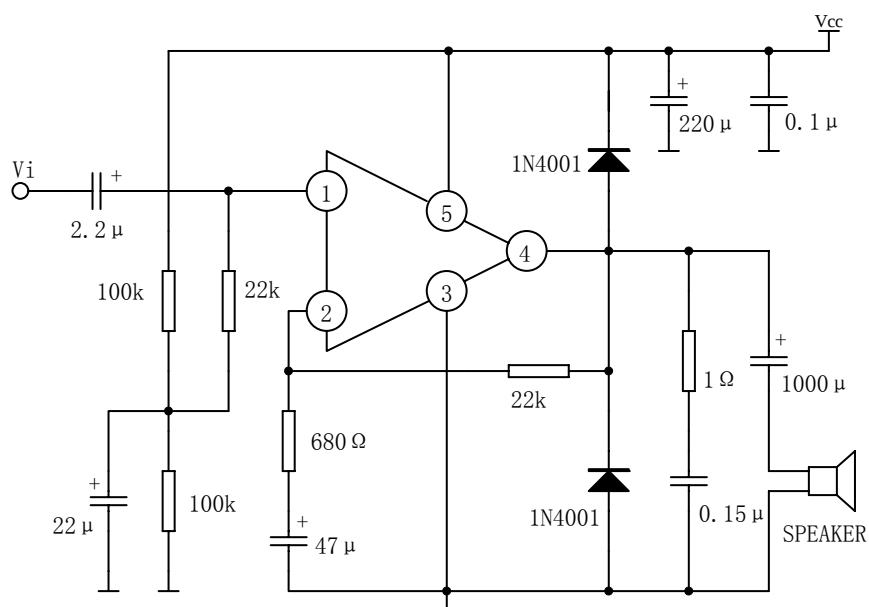
PARAMETER	SYMBOL	TEST CONDITIONS	MIN	TYP	MAX	UNIT
Supply Voltage	V_s		± 4.5		± 25	V
Quiescent Drain Current	I_d	$V_{CC}/V_{EE} = \pm 4.5\text{V}$		30	50	mA
		$V_{CC}/V_{EE} = \pm 25\text{V}$		55	90	mA
Input Bias Current	I_b	$V_{CC}/V_{EE} = \pm 22\text{V}$		0.1	0.5	μA
Input Offset Voltage	V_{is}				± 15	mV
Input Offset Current	I_{is}				± 200	nA
Output Power	P_o	THD = 1%, $R_L = 8\ \Omega$	16	18		W
		THD = 10%, $R_L = 8\ \Omega$	20	22		W
Total Harmonic Distortion	THD	$f = 40\text{Hz to } 15\text{kHz}$, $R_L = 8\ \Omega$ $P_o = 0.1\text{ to } 10\text{W}$		0.02	0.5	%
SR Slew Rate	SR		5	8		$\text{V}/\mu\text{s}$
Open Loop Voltage Gain	G_v			80		dB
Closed Loop Voltage Gain	G_v		30	30.5	31	dB
Power Bandwidth (-3dB)	BW	$R_L = 8\ \Omega$, $V_i = 200\text{mV}$	20 to 80,000			Hz
Total Input Noise	e_N	$B = 22\text{Hz to } 22\text{kHz}$		5	10	μV
Input Resistance (pin 1)	R_i		500	5000		$\text{k}\ \Omega$
Supply Voltage Rejection	SVR	$R_s = 22\text{k}\ \Omega$, $f = 100\text{Hz}$ $V_r = 0.5\text{V}$		45		dB
Efficiency	η	$P_o = 15\text{W}$, $R_L = 8\ \Omega$;		65		%
Thermal Shut-Down Junction Temperature	T_{sd-j}			150		$^{\circ}\text{C}$

APPLICATION CIRCUIT

(1) YD1008 DUAL SUPPLY POWER APPLICATION



(2) YD1008 SINGLE SUPPLY POWER APPLICATION



OUTLINE DRAWING

Unit: inch / mm

