

## 2W+2W AMPLIFIER

### WITH DC VOLUME CONTROL—YD7496L

#### DESCRIPTION

The YD7496L is a stereo 2W+2W class AB power amplifier assembled in the @ PowerDIP20 package, specially designed for high quality sound, TV and Monitor applications.

Features of the YD7496L include linear volume control, Stand-by and mute functions.

#### FEATURES

- \*2W+2W OUTPUT POWER  $R_L=8\Omega$  @ THD=10% , $V_{cc}=14V$ .
- \*ST-BY AND MUTE FUNCTION.
- \*LOW TURN-ON TURN-OFF POP NOISE.
- \*LINER VOLUME CONTROL DC COUPLED WITH POWER OP. AMP.
- \*NO BOUCHEROT CELL.
- \*NO ST-BY RC INPUT NETWORK.
- \*SINGLE SUPPLY RANGING UP TO 15V
- \*SHORT CIRCUIT PROTECTION.
- \*THERMAL OVERLOAD PROTECTION.
- \*INTERNALLY FIXED GAIN.
- \*SOFT CLIPPING.
- \*VARIABLE OUTPUT AFTER VOLUME CONTROL CIRCUIT.
- \*POWERDIP 20 PACKAGE.

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#### WuXi YouDa Electronics Co., Ltd

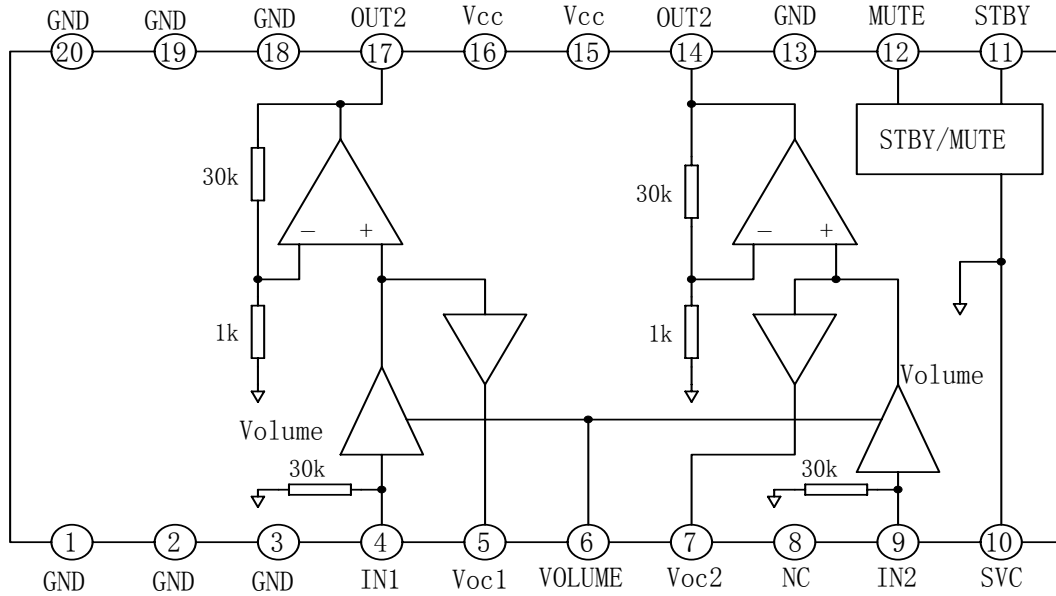
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**BLOCK DIAGRAM**



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

PARAMETER		SYMBOL	VALUE	UNIT
DC Supply Voltage		Vcc	26	V
Maximum Input Voltage		Vin	8	Vp-p
Volume CTRL DC Voltage		V6	7	V
Output Peak Current(internally limited)		Iop	1.0	A
Power Dissipation	No Heat Sink	PD	2	W
	Tc=60°C		6.0	
Operating Temperature		Topr	-20~+70	°C
Storage Temperature		Tstg	-40~+150	°C

**MUTE STAND-BY TRUTH TABLE**

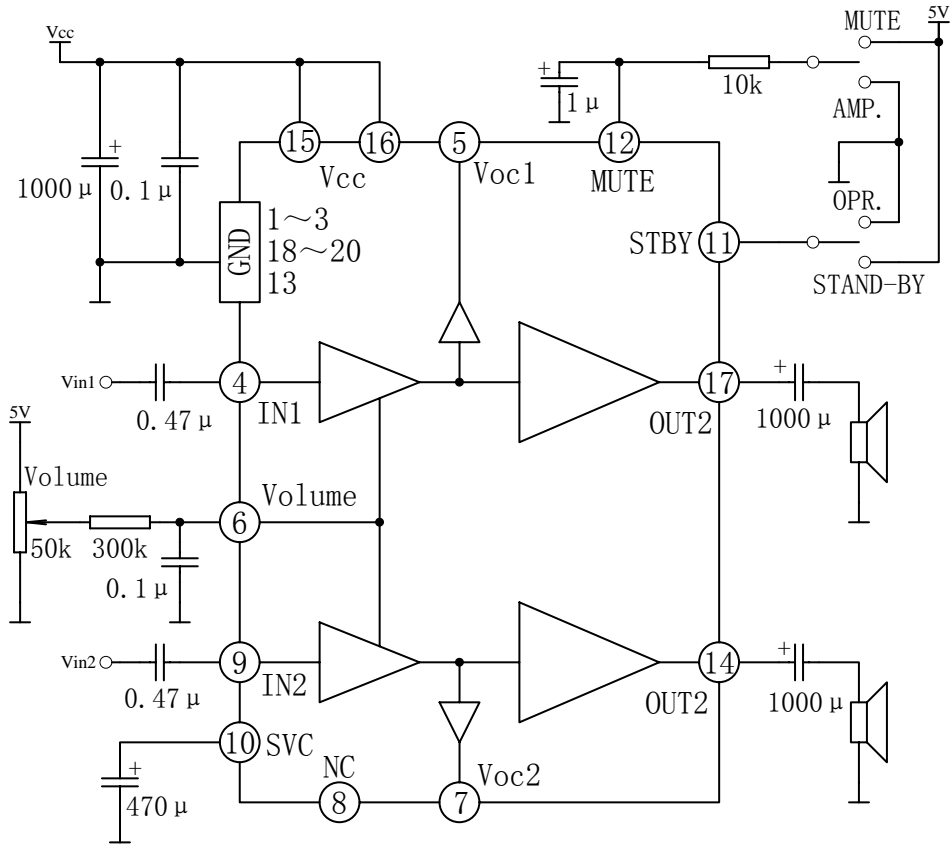
MUTE	ST-BY	OPERATING CONDITION
H	H	STANDBY
L	H	STANDBY
H	L	MUTE
L	L	PLAY

**ELECTRICAL CHARACTERISTICS**

(Vcc=14V,RL=8Ω, Rg=50Ω, Tamb=25°C, Unless otherwise specified.)

Parameter	Symbol	Test Condition	Min.	Typ.	Max.	Unit
Supply Range	Vcc		10		18	V
Quiescent Current	Iccq			25	50	mA
Input Offset Voltage	Vo			7		mV
Output Power	Po	THD=10%	1.6	2		W
		THD=1%		1.3		
Total Harmonic Distortion	THD	Po=1W			0.4	%
Closed Loop Gain	Gv	Vol Ctrl>4.5V	28.5	30	31.5	dB
Attenuation at Minimum Volume	Gmin	Vol Ctrl<0.5V	-80			dB
Monitor Out Gain	Gvc	Vol Ctrl>4.5V	-1.5	0	1.5	dB
Frequency Response	BW			0.6		MHz
Input Resistance	Rin		22.5	30		kΩ
Total Output Noise	EN	F=20Hz~22kHz, max volume		500	800	μV
		F=20Hz~22kHz, max attenuation		100	250	μV
		F=20Hz~22kHz, mute		60	150	μV
Supply Voltage Rejection	SVR	Max volume, Csvr=470μ, Vr=1V	35	39		dB
		Max attenuation, Csvr=470μ, Vr=1V	55	65		dB
Thermal Muting	TM			150		°C
Thermal Shut-down	Ts			160		°C
<b>MUTE STAND-BY &amp; INPUT SELECTION FUNCTIONS</b>						
Stand-by ON Threshold	VST ON		3.5			V
Stand-by OFF Threshold	VST OFF				1.5	V
Mute ON Threshold	VM ON		3.5			V
Mute OFF Threshold	VM OFF				1.5	V
Quiescent Current @ Stand-by	Iccqstby			0.6	1	mA
Mute Attenuation	Gmute		-50	-65		dB
Stand-by bias current	Istby	Stand by on VST-BY=5V VMUTE=5V		80		μA
		Play or Mute	-20	-5		
Mute bias current	Imute	Mute		1	5	μA
		Play		0.2	2	

APPLICATION CIRCUIT



OUTLINE DRAWING

DIM.	mm			inch		
	MIN.	TYP.	MAX.	MIN.	TYP.	MAX.
a1	0.51			0.020		
B	0.85		1.40	0.033		0.055
b		0.50			0.020	
b1	0.38		0.50	0.015		0.020
D			24.80			0.976
E		8.80			0.346	
e		2.54			0.100	
e3		22.86			0.900	
F			7.10			0.280
l			5.10			0.201
L		3.30			0.130	
Z			1.27			0.050

