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## Headphone Driver

## PT2308L

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### DESCRIPTION

PT2308L is a Class AB stereo headphone driver chip utilizing CMOS Technology specially designed for portable digital audio applications. It is housed in an 8-pin DIP or SO package and is functionally compatible with TDA1308. Pin assignments and application circuit are optimized for lower cost effectiveness and easy PCB Layout

### FEATURES

- CMOS Technology
- Low Power Consumption
- Wide Temperature Range
- Excellent Power Supply Ripple Rejection
- High Signal-to-Noise Ratio, S/N=110dB
- Low Harmonic Distortion, THD= 0.001%
- Large Output Voltage Swing
- Low Supply Voltage Available (VDD=2V)

### APPLICATIONS

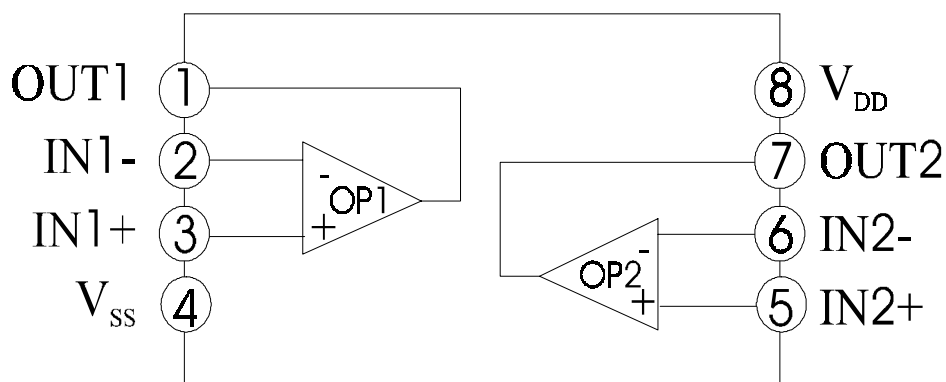
- Portable Digital Audio
- Hi-fi Audio System
- Walkman
- CD-ROM



Headphone Driver

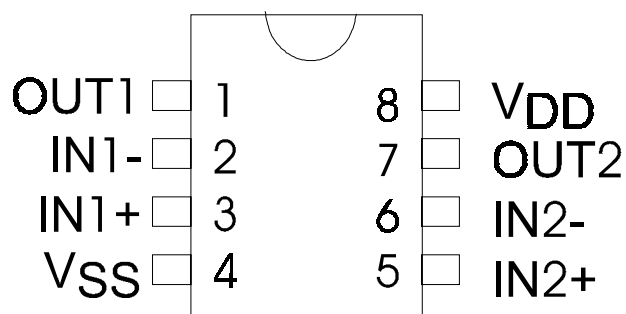
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## BLOCK DIAGRAM



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## PIN CONFIGURATION



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## PIN DESCRIPTION

Symbol	I/O	Description	Pin No.
OUT1	O	Output Pin 1	1
IN1-	I	Inverting Input Pin 1	2
IN1+	I	Non-Inverting Input Pin 1	3
V <sub>SS</sub>	-	Negative Power Supply	4
IN2+	I	Non-Inverting Input Pin 2	5
IN2-	I	Inverting Input Pin 2	6
OUT2	O	Output Pin 2	7
V <sub>DD</sub>	-	Positive Power Supply	8



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### ELECTRICAL PARAMETERS

(Unless otherwise stated, VDD=3V, Vss=0V, Tamb=25°C, fin=1 KHz, RL=32 Ohms)

Symbol	Parameter	Condition	Min.	Typ.	Max.	Unit
VDD	Single Power Supply		2	3	4	V
	Dual Power Supply		+1.0	+1.5	+2.0	
VSS	Single Power Supply		0	0	0	V
	Dual Power Supply		-1.0	-1.5	-2.0	
IDD	Supply Current	No Load, VDD=3V		7		mA
Ptot	Total Power Dissipation	No Load, VDD=3V		21		mW
Po	Maximum Output Power (RL=32 Ohms)	THD=0.15%	VDD=1.8V	-	5.8	mW
			VDD=3V	-	23	
		THD=3%	VDD=1.8V	-	8.2	
			VDD=3V	-	27	
THD	Total Harmonic Distortion	Vo (p-p)=2V		0.03	0.06	%
		Vo (p-p)=2V RL=5K Ohms		0.001		
S/N	Signal-to-Noise Ratio	A-weighted	100	110		dB
$\alpha_{cs}$	Channel Separation	RL=32 Ohms		105		dB
		RL=5K Ohms		100		
PSRR	Power Supply Ripple Rejection	fin=100Hz Vripple(p-p)=100mV		90		dB
Ro	Output Impedance	Gain=0dB		1		Ohm
SR	Slew Rate	Gain=0dB inverting		3.5		V/ $\mu$ s



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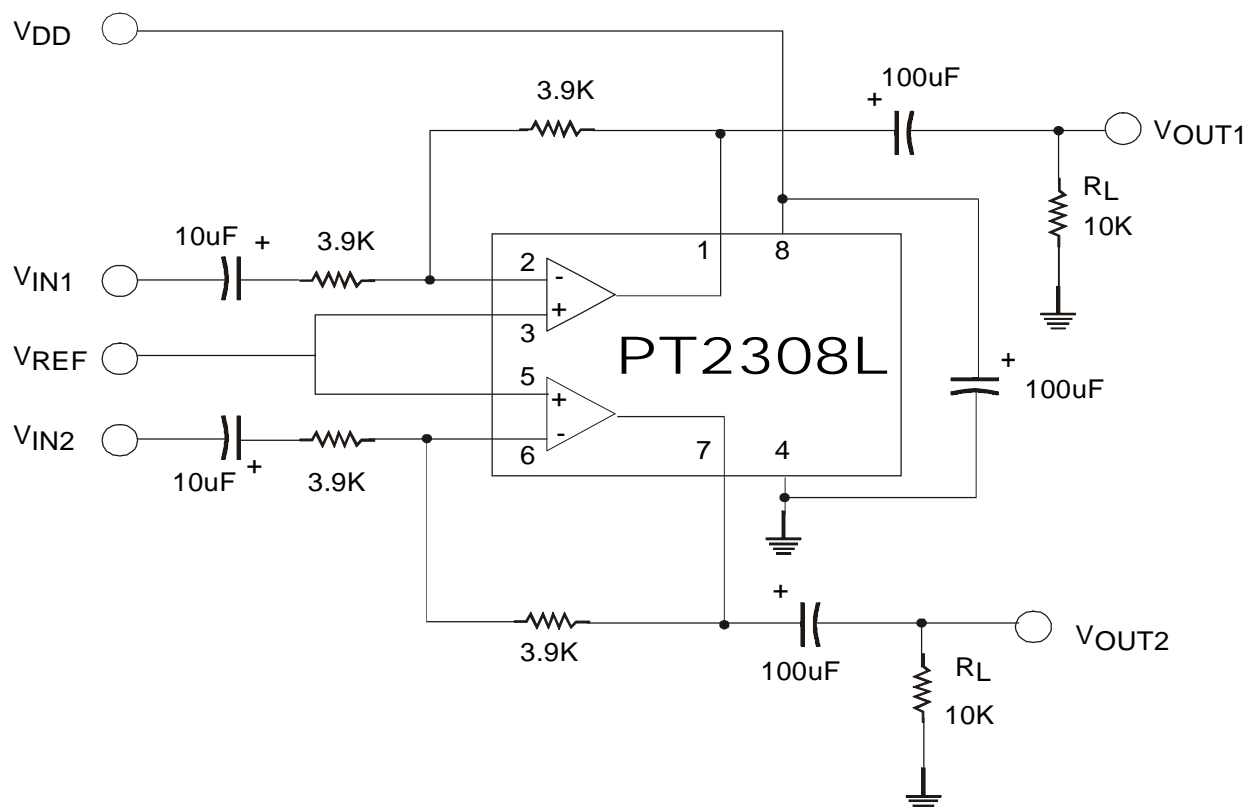
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## ABSOLUTE MAXIMUM RATING

Symbol	Parameter	Rating	Unit
V <sub>DD</sub>	Supply Voltage	8	V
T <sub>amb</sub>	Operating Ambient Temperature	-40 to +85	°C
T <sub>stg</sub>	Storage Temperature	-65 to +150	°C

## APPLICATION CIRCUITS

### PT2308L Application Circuit (Single Power Supply)





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**PT2308L Application Circuit (Dual Power Supply)**

