2.2W~3.0W BTL Output Class-AB Audio Power Amplifier

GENERAL DESCRIPTION

The FH8002 audio power amplifier is ideal for portable audio devices with internal speakers.
A bridge-tied load(BTL) architecture minimizes external component count, while providing high-quality audio reproduction. The device is available as adjustable gain amplifier, reducing component count.

A low-power shutdown mode disables the bias generator and amplifiers, reducing quiescent current consumption to less than 1.0uA.
This device feature ForDevices's industry-leading, comprehensive click-and-pop sup-pression that reduces audible clicks and pops during startup and shutdown.

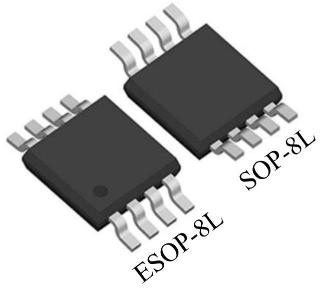
The FH8002 is available in 8-pin SOP/ESOP package. This device operates over the -40°C to +85°C extended temperature range.

FEATURES

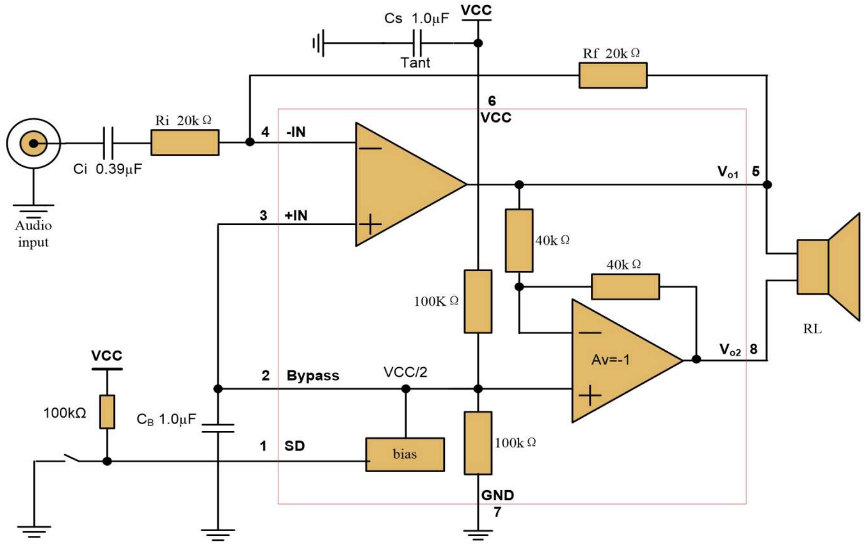
- 2.5V to 5.5V Single-Supply Operation
- PO at 10% THD+N, f=1KHz, V_{DD}=5V
  RL=8Ω 1.3W(Typ.)
  RL=4Ω 2.2W(Typ.)
- Less than 1uA Low-Power Shutdown Mode
- 64dB PSRR at 1kHz
- Temperature Range: -40°C to 85°C
- No Audible Clicks or Pops at Power-Up/Down
- Available in SOP-8L/ESOP-8L package

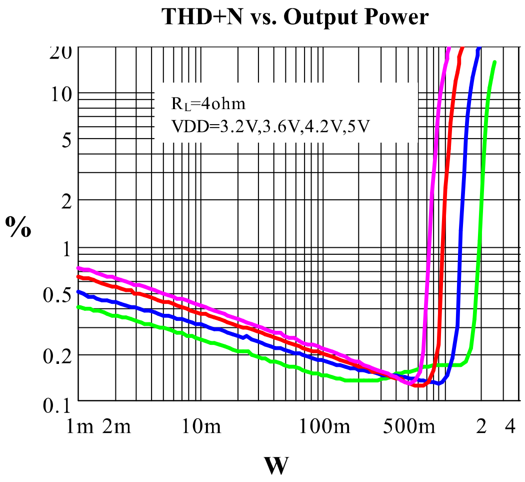
APPLICATIONS

- PDAs, Mobile Phones
- Portable Instrumentation



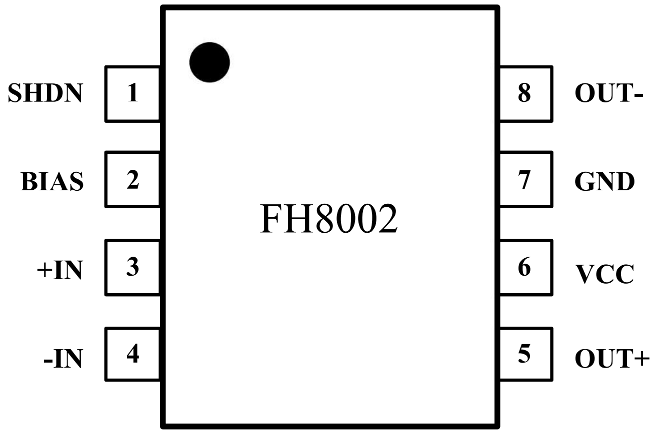
TYPICAL APPLICATION CIRCIUT





PIN CONFIGURATION

(TOP VIEW)



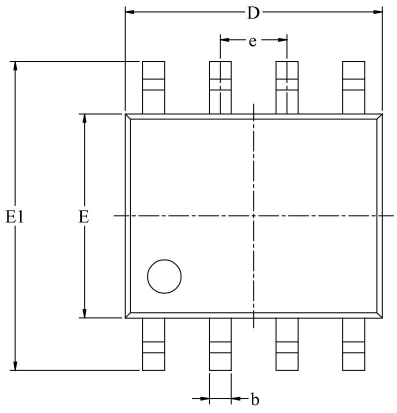
SOP/ESOP-8L (Exposed Pad)

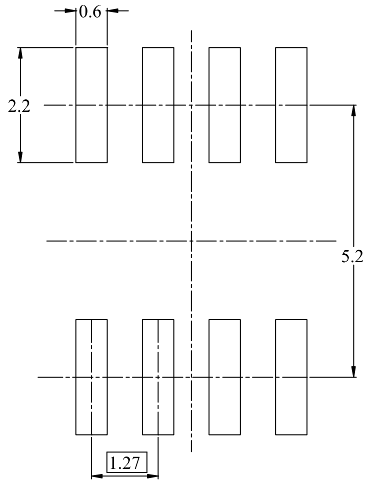
PIN DESCRIPTION

Pin	Name	Function
1	SHDN	Shutdown Input， Active-High
2	BIAS	DC Bias Bypass Capacitor Connection, Bypass BIAS to ground with a 1.0uF capacitor.
3	IN+	Noninverting Input
4	IN-	Inverting Input
5	OUT+	Bridge Amplifier Positive Output
6	VCC	Power Supply, Bypass Vcc with a 1uF capacitor to ground.
7	GND	Ground
8	OUT-	Bridge Amplifier Negative Output.

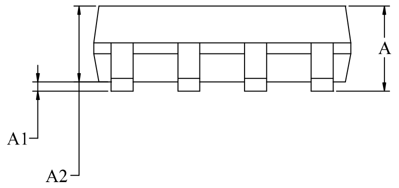
PACKAGE OUTLINE DIMENSIONS

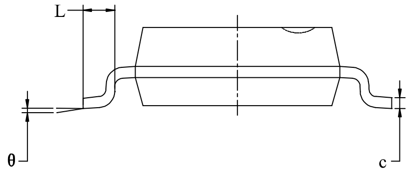
Type: SOP-8L





RECOMMENDED LAND PATTERN(Unit: mm)



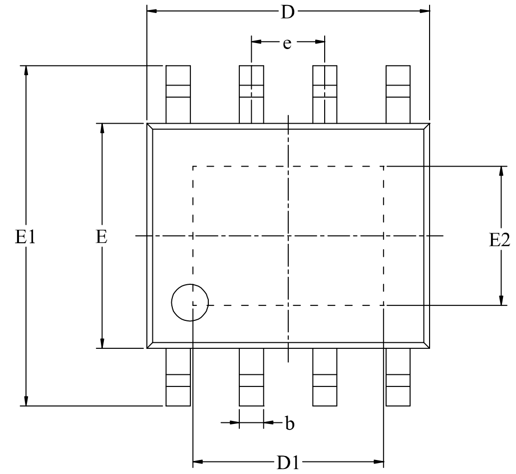


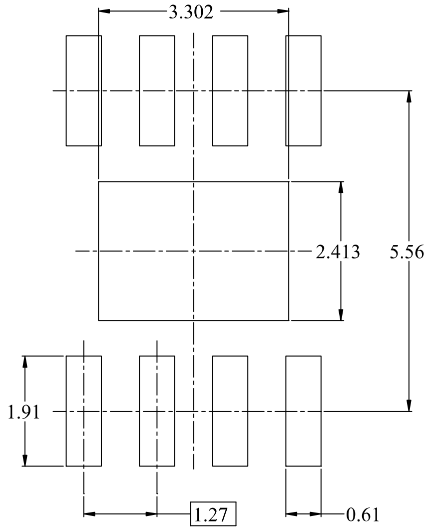
Symbol	Dimensions In Millimeters		Dimensions In Inches	
	MIN	**MAX**	**MIN**	**MAX**
A	1.350	1.750	0.053	0.069
A1	0.100	0.250	0.004	0.010
A2	1.350	1.550	0.053	0.061
b	0.330	0.510	0.013	0.020
c	0.170	0.250	0.006	0.010
D	4.700	5.100	0.185	0.200
E	3.800	4.000	0.150	0.157
E1	5.800	6.200	0.228	0.244
e	1.27 BSC		0.050 BSC	
L	0.400	1.270	0.016	0.050
θ	0°	8°	0°	8°

NOTES:
1. Body dimensions do not include mode flash or protrusion.
2. This drawing is subject to change without notice.

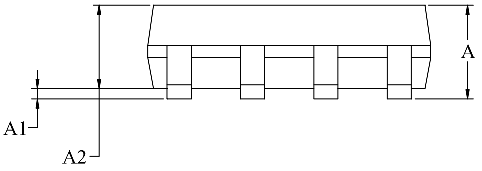
PACKAGE OUTLINE DIMENSIONS

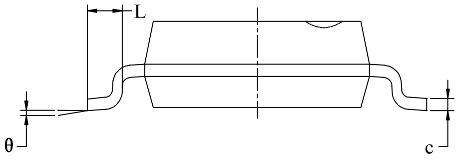
Type: ESOP-8L (Exposed Pad)





RECOMMENDED LAND PATTERN(Unit: mm)





Symbol	Dimensions In Millimeters		Dimensions In Inches	
	MIN	MAX	MIN	MAX
A		1.700		0.067
A1	0.000	0.100	0.000	0.004
A2	1.350	1.550	0.053	0.061
b	0.330	0.510	0.013	0.020
c	0.170	0.250	0.007	0.010
D	4.700	5.100	0.185	0.201
D1	3.202	3.402	0.126	0.134
E	3.800	4.000	0.150	0.157
E1	5.800	6.200	0.228	0.244
E2	2.313	2.513	0.091	0.099
e	1.27 BSC		0.050 BSC	
L	0.400	1.270	0.016	0.050
θ	0°	8°	0°	8°

NOTES:
1. Body dimensions do not include mode flash or protrusion.
2. This drawing is subject to change without notice.

ORDERING INFORMATION

Part Number	Voltage Range	Features	Operating Temperature	Package Type	Top Mark	SPQ
FH8002AS8	2.5V ~ 5.5V	● Class-AB Audio Amplifier ● BTL Output ● 64dB PSRR@1kHz ● Shutdown Current: 1.0uA(Typ.) ● Output Power: FH8002A: 3.0W FH8002B: 3.0W FH8002D: 2.4W FH8002E: 2.0W	-40°C to 85°C	SOP-8L	8002A YY MM LL	4000PCS/Reel
FH8002BS8	2.5V ~ 5.5V		-40°C to 85°C	SOP-8L	8002B YY MM LL	4000PCS/Reel
FH8002DS8	2.5V ~ 5.5V		-40°C to 85°C	SOP-8L	8002D YY MM LL	4000PCS/Reel
FH8002ES8	2.5V ~ 5.5V		-40°C to 85°C	ESOP-8L	8002E YY MM LL	4000PCS/Reel

Note:

- **FH8002A/FH8002B/FH8002D/FH8002E** devices are Pb-free and RoHs compliant.
- The surface prints of our semiconductor devices are subject to change during the production process and do not involve changes in electrical parameters, and we will not separately state the notice.
- If you have any other custom purchase needs, please contact our sales department.
- ForDevices reserves the right to amend and legally interpret the electrical parameters of this chip device. (http://www.fordevices.com)

ESD SENSITIVITY CAUTION

ESD damage can range from subtle performance degradation to complete device failure. Precision integrated circuits may be more susceptible to damage because very small parametric changes could cause the device not to meet its published specifications.

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Note:

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▲ Update by Oct.2018