



MAX97200A Evaluation Kit

General Description

The MAX97200A evaluation kit (EV kit) is a fully assembled and tested circuit board that evaluates the MAX97200A. The MAX97200A is a 20mW Class G headphone amplifier that employs Maxim's second-generation DirectDrive® technology.

The MAX97200A EV kit provides 3dB gain, is powered from a 1.8V single power supply, and includes a shutdown input. The MAX97200A EV kit also evaluates the MAX97200B. Request a free MAX97200B IC sample from the factory when ordering the MAX97200B EV kit.

Features

- ◆ 1.8V Single-Supply Operation
- ◆ 20mW Class G Headphone Amplifier
- ◆ 3dB Gain
- ◆ Low-Quiescent Current, 1.15mA at PVIN = 1.8V
- ◆ Low-Power Shutdown Input
- ◆ Evaluates the MAX97200B (with IC Replacement)
- ◆ Fully Assembled and Tested

Ordering Information

PART	TYPE
MAX97200AEVKIT+	EV Kit

+Denotes lead(Pb)-free and RoHS compliant.

Component List

DESIGNATION	QTY	DESCRIPTION
C1	1	10 μ F \pm 20%, 6.3V X5R ceramic capacitor (0603) Murata GRM188R60J106M TDK C1608X5R0J106M
C2	1	0.1 μ F \pm 10%, 25V X7R ceramic capacitor (0603) Murata GRM188R71E104K TDK C1608X7R1E104K
C3-C7	5	1 μ F \pm 10%, 10V X7R ceramic capacitors (0603) Murata GRM188R71C105K TDK C1608X7R1C105K

DESIGNATION	QTY	DESCRIPTION
GND, OUTL, OUTR, PVDD, PVSS	5	Test points
J1	1	3.5mm stereo headphone jack
JU1	1	2-pin header
R1	1	10k Ω \pm 5% resistor (0603)
U1	1	Class G headphone amplifier (12 WLP) Maxim MAX97200AEWC+T
—	1	Shunt
—	1	PCB MAX97200A EVALUATION KIT+

Component Suppliers

SUPPLIER	PHONE	WEBSITE
Murata Electronics North America, Inc.	770-436-1300	www.murata-northamerica.com
TDK Corp.	847-803-6100	www.component.tdk.com

Note: Indicate that you are using the MAX97200A when contacting these component suppliers.

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For pricing, delivery, and ordering information, please contact Maxim Direct at 1-888-629-4642, or visit Maxim's website at www.maxim-ic.com.

Evaluates: MAX97200A/MAX97200B

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Quick Start

Recommended Equipment

- 1.8V DC supply
- Stereo audio signal source
- Pair of stereo headphones

Procedure

The MAX97200A EV kit is fully assembled and tested. Follow the steps below to verify board operation.

Caution: Do not turn on the power supply until all connections are completed.

- 1) Verify that shunts are installed as follows:
 - JU1: Installed (device enabled)
- 2) Set the power-supply output to 1.8V.
- 3) Disable the power-supply output.
- 4) Connect the power-supply ground to the GND pad and the power-supply positive output to the VIN pad on the EV kit.
- 5) Connect the headphones to the stereo headphone jack (J1) provided on the EV kit.
- 6) Verify that the audio source output is disabled.
- 7) Connect the left channel of the stereo audio source to INL.
- 8) Connect the right channel of the stereo audio source to INR.
- 9) Connect the ground of the stereo audio source to GND.
- 10) Enable the stereo audio source.
- 11) Enable the power-supply output.
- 12) Verify that the headphones are playing the audio source signal.

Jumper Configuration

Headphone Amplifier Shutdown

Jumper JU1 enables or disables the headphone amplifier. See Table 1 for jumper JU1 configuration.

Table 1. Shutdown Input (JU1)

SHUNT POSITION	SHDN PIN	AMPLIFIER
Installed*	Connected to VIN	Enabled
Not installed	Connected to GND	Disabled

*Default position.

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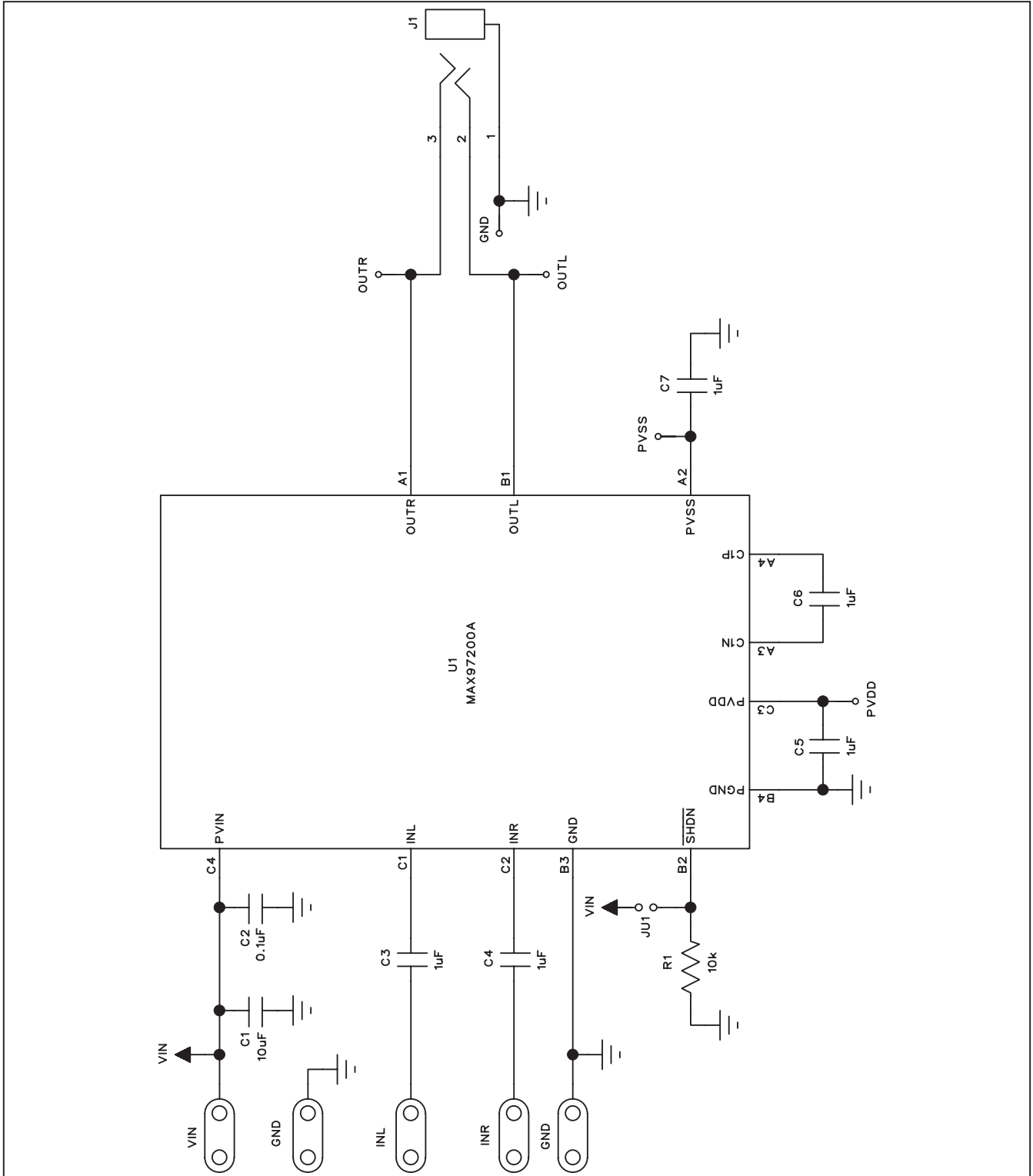


Figure 1. MAX97200A EV Kit Schematic

MAX97200A Evaluation Kit

Evaluates: MAX97200A/MAX97200B

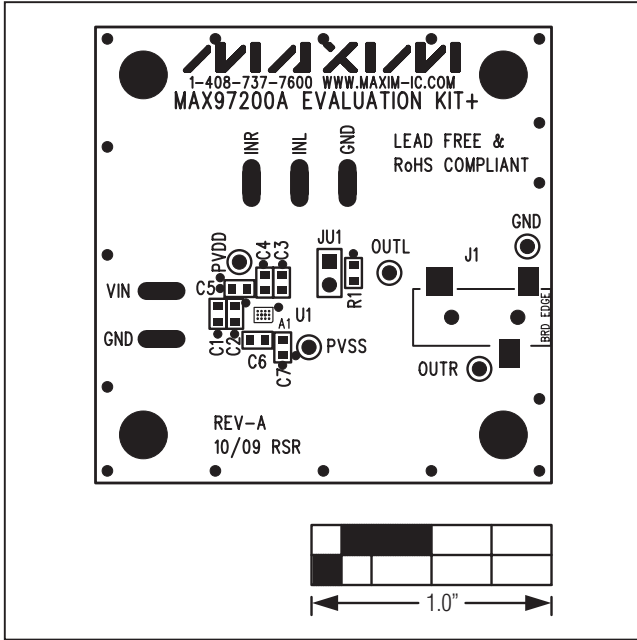


Figure 2. MAX97200A EV Kit Component Placement Guide—Component Side

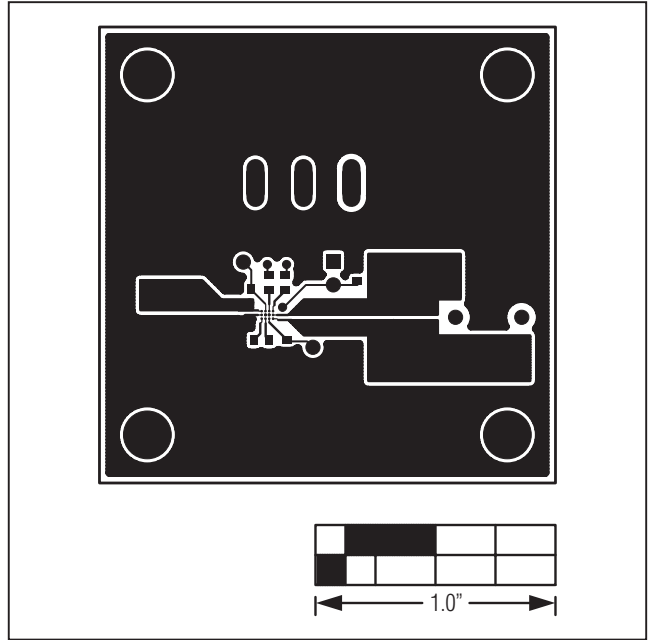


Figure 3. MAX97200A EV Kit PCB Layout—Component Side

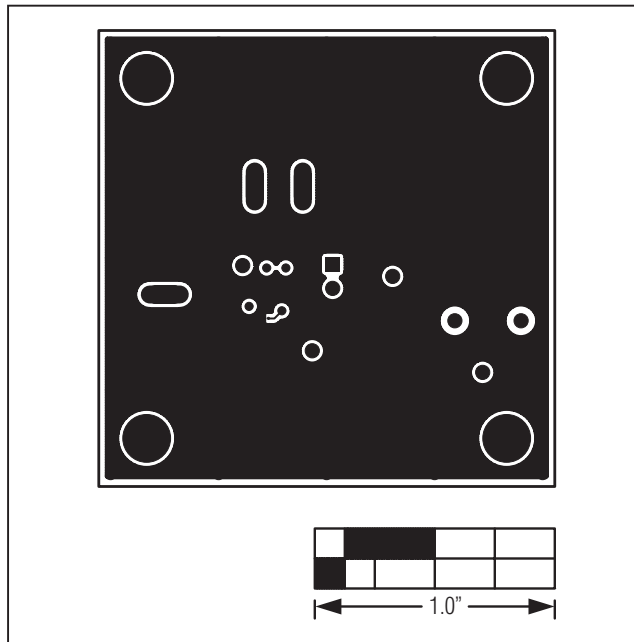


Figure 4. MAX97200A EV Kit PCB Layout—Layer 2

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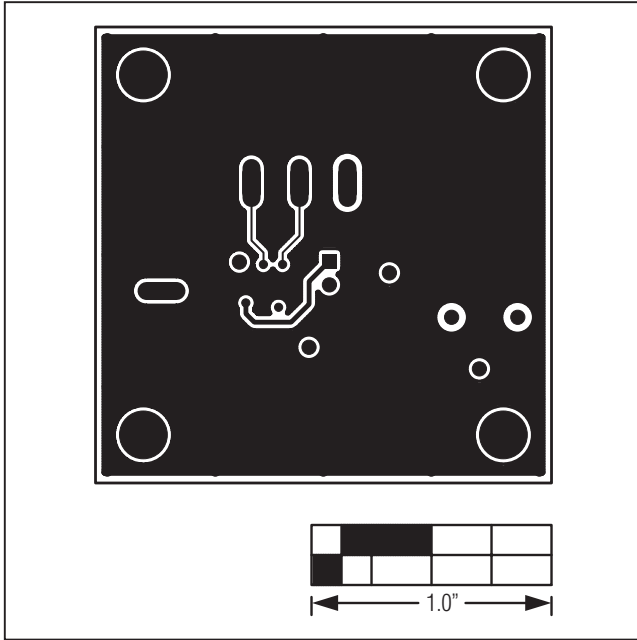


Figure 5. MAX97200A EV Kit PCB Layout—Layer 3

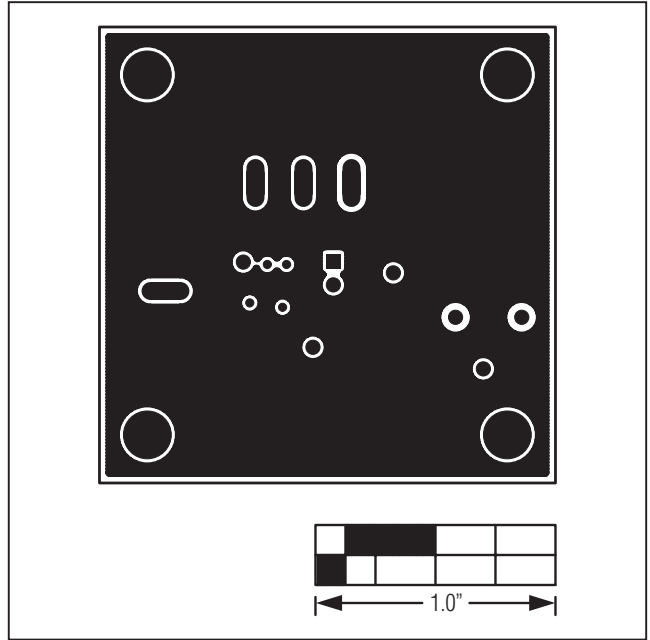


Figure 6. MAX97200A EV Kit PCB Layout—Solder Side

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