19-5156; Rev 0; 2/10

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	10µF ±20%, 6.3V X5R ceramic capacitor (0603) Murata GRM188R60J106M TDK C1608X5R0J106M
C2	1	0.1µF ±10%, 25V X7R ceramic capacitor (0603) Murata GRM188R71E104K TDK C1608X7R1E104K
C3–C7	5	1µF ±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	10kΩ ±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.

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	$\overline{\text{SHDN}}$ PIN	AMPLIFIER
Installed*	Connected to VIN	Enabled
Not installed	Connected to GND	Disabled

**Default position.*

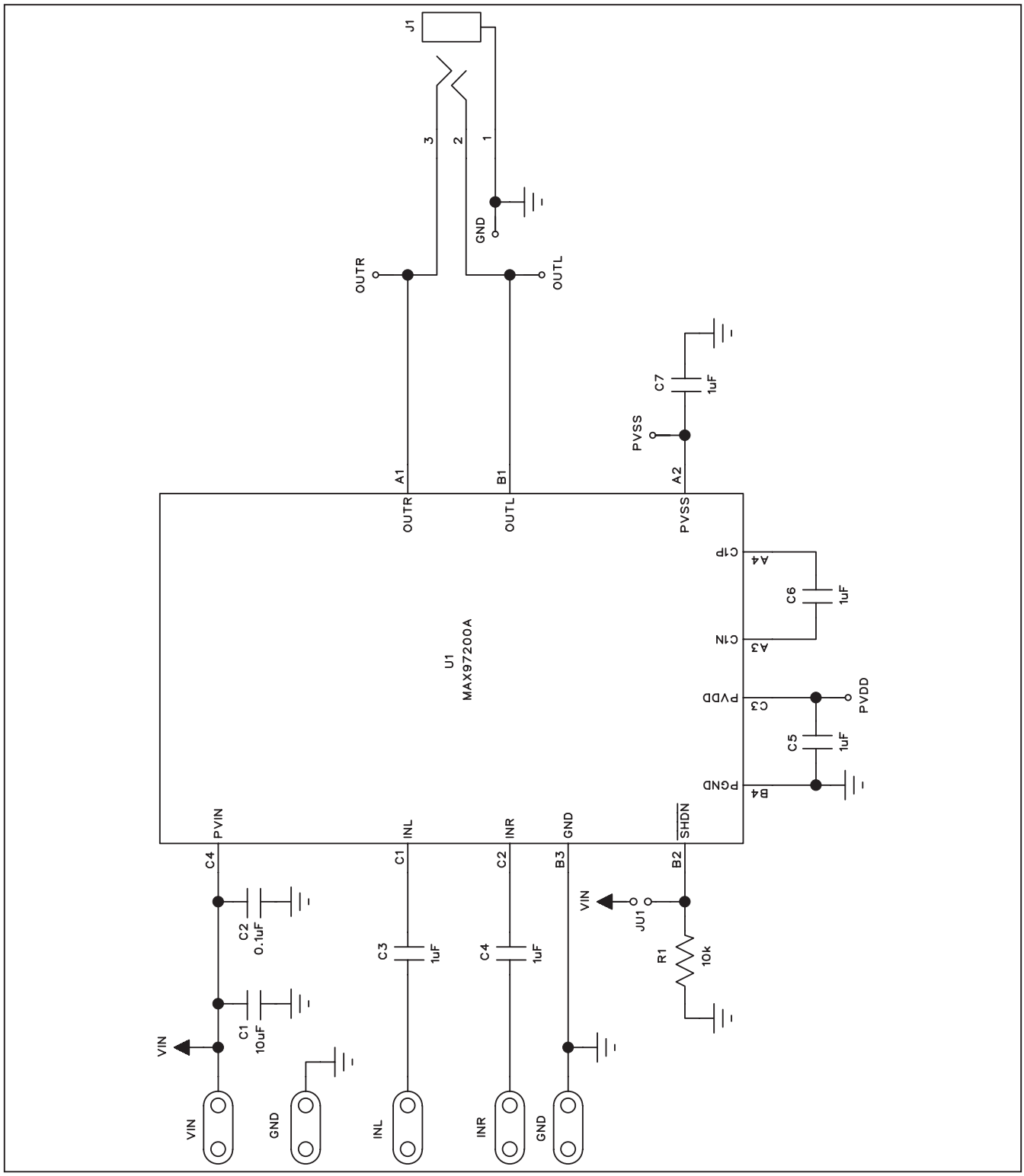


Figure 1. MAX97200A EV Kit Schematic

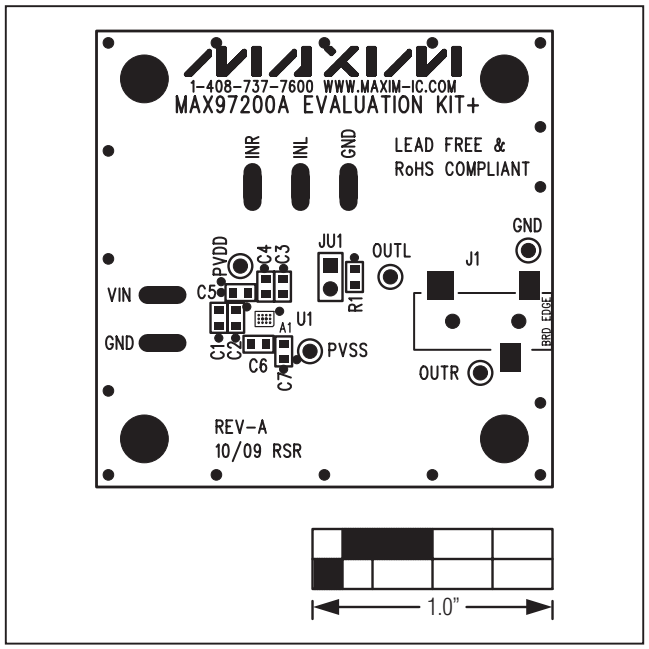


Figure 2. MAX97200A EV Kit Component Placement Guide—Component Side

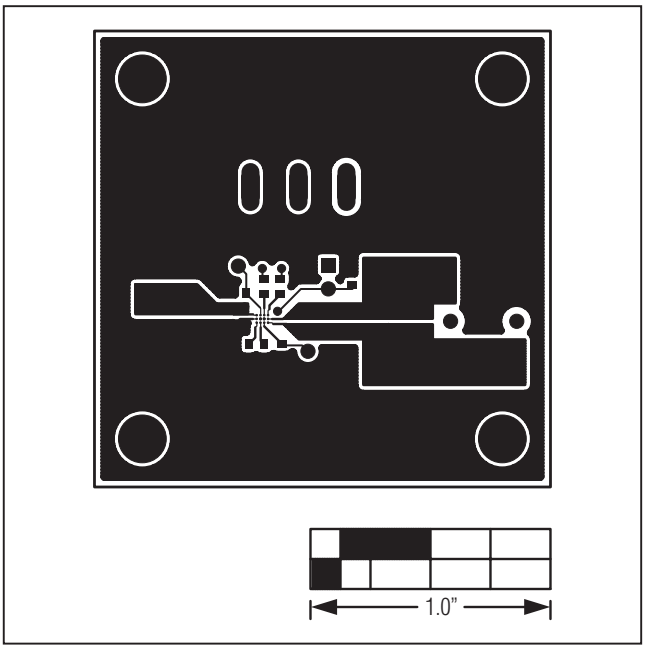


Figure 3. MAX97200A EV Kit PCB Layout—Component Side

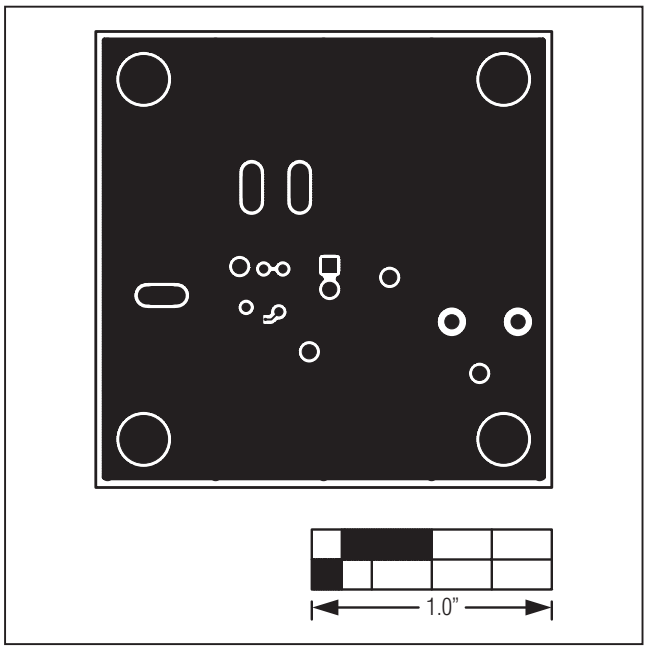


Figure 4. MAX97200A EV Kit PCB Layout—Layer 2

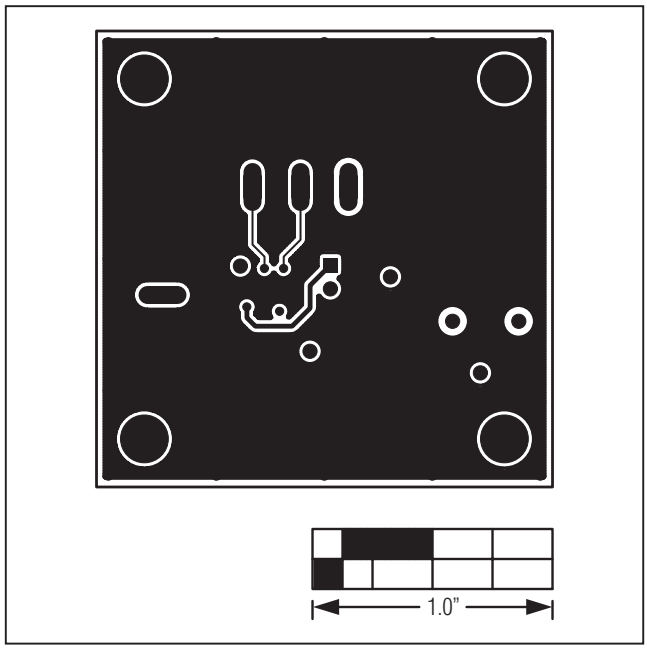


Figure 5. MAX97200A EV Kit PCB Layout—Layer 3

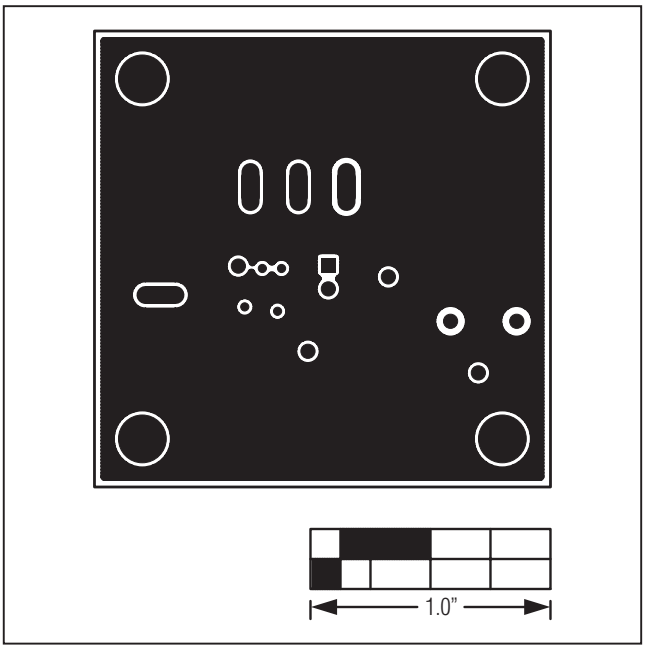


Figure 6. MAX97200A EV Kit PCB Layout—Solder Side

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