

MAXIM

MAX9721 Evaluation Kit

Evaluates: MAX9721A/B/C

General Description

The MAX9721 evaluation kit (EV kit) is a fully assembled and tested circuit board that uses the MAX9721, a DirectDrive stereo headphone amplifier with -2V/V fixed gain for single 1.0V applications. The EV kit can be used to evaluate the MAX9721B (-1.5V/V fixed gain) and MAX9721C (-1V/V fixed gain).

Features

- ◆ Single Power Supply: 0.9V to 1.8V
- ◆ 20mW per Channel into 32 Ω
- ◆ 25mW per Channel into 16 Ω
- ◆ Low 0.006% THD+N
- ◆ 1 μ A (typ) IC Shutdown Current
- ◆ Fixed -2V/V Gain (MAX9721A)
- ◆ Surface-Mount Construction
- ◆ Fully Assembled and Tested

Component List

DESIGNATION	QTY	DESCRIPTION
C1, C2, C3	3	1 μ F \pm 10%, 10V X5R ceramic capacitors (0603) TDK C1608X5R1A105K
C4	1	4.7 μ F \pm 10%, 6.3V X5R ceramic capacitor (0603) TDK C1608X5R0J475K
C5, C6	2	0.47 μ F \pm 20%, 10V tantalum capacitors (0402) AVX TACK474M010
JU1	1	3-pin header
OUT	1	3.5mm SMT stereo headphone jack
OUTL, OUTR	2	Not installed, test points
U1	1	MAX9721AETC (4mm x 4mm 12-pin TQFN)
U2	0	Not installed, MAX9721AEBCT (4 x 3 UCSP™)
None	1	Shunt
None	1	MAX9721 PC board

Ordering Information

PART	TEMP RANGE	IC PACKAGE
MAX9721EVKIT	0°C to +70°C	12 TQFN (4mm x 4mm)

Note: To evaluate the MAX9721B/C, request a MAX9721BETC/MAX9721CETC free sample with a MAX9721 EV kit.

Quick Start

The MAX9721 EV kit is fully assembled and tested. Follow these steps to verify board operation. **Do not turn on the power supply until all connections are completed.**

Recommended Equipment

- 1.5V, 150mA power supply
 - Stereo headphone with 3.5mm plug
 - Audio source (i.e., CD player, cassette player)
- 1) Verify that JU1 has a shunt across pins 1 and 2 (SHDN = VDD).
 - 2) Plug the stereo headphone into the OUT jack.
 - 3) Connect the 1.5V power supply to the VDD pad and the power-supply ground to the GND pad.
 - 4) Connect the audio source to VINL and VINR pads.
 - 5) Turn on the power supply, and then turn on the audio source.

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Component Suppliers

SUPPLIER	PHONE	FAX	WEBSITE
AVX	843-946-0238	843-626-3123	www.avxcorp.com
TDK	847-803-6100	847-390-4405	www.component.tdk.com

Note: Please indicate that you are using the MAX9721 when contacting these component suppliers.

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

MAX9721 Evaluation Kit

Detailed Description

The MAX9721 EV kit evaluates a class AB DirectDrive stereo headphone amplifier with a -2V/V fixed gain. The EV kit delivers up to 20mW per channel into a 32Ω load and achieves 0.006% THD+N.

Jumper Selection

Jumper JU1 controls the $\overline{\text{SHDN}}$ pin of the MAX9721 IC. See Table 1 for JU1 function.

Evaluating MAX9721B/C

To evaluate the MAX9721B/C with the MAX9721 EV kit, replace the MAX9721AETC with a MAX9721BETC or MAX9721CETC.

Table 1. JU1 Function

SHUNT LOCATION	$\overline{\text{SHDN}}$ PIN	EV KIT OUTPUT
Pins 1 and 2	Connected to VDD	Enabled
Pins 2 and 3	Connected to GND	Disabled

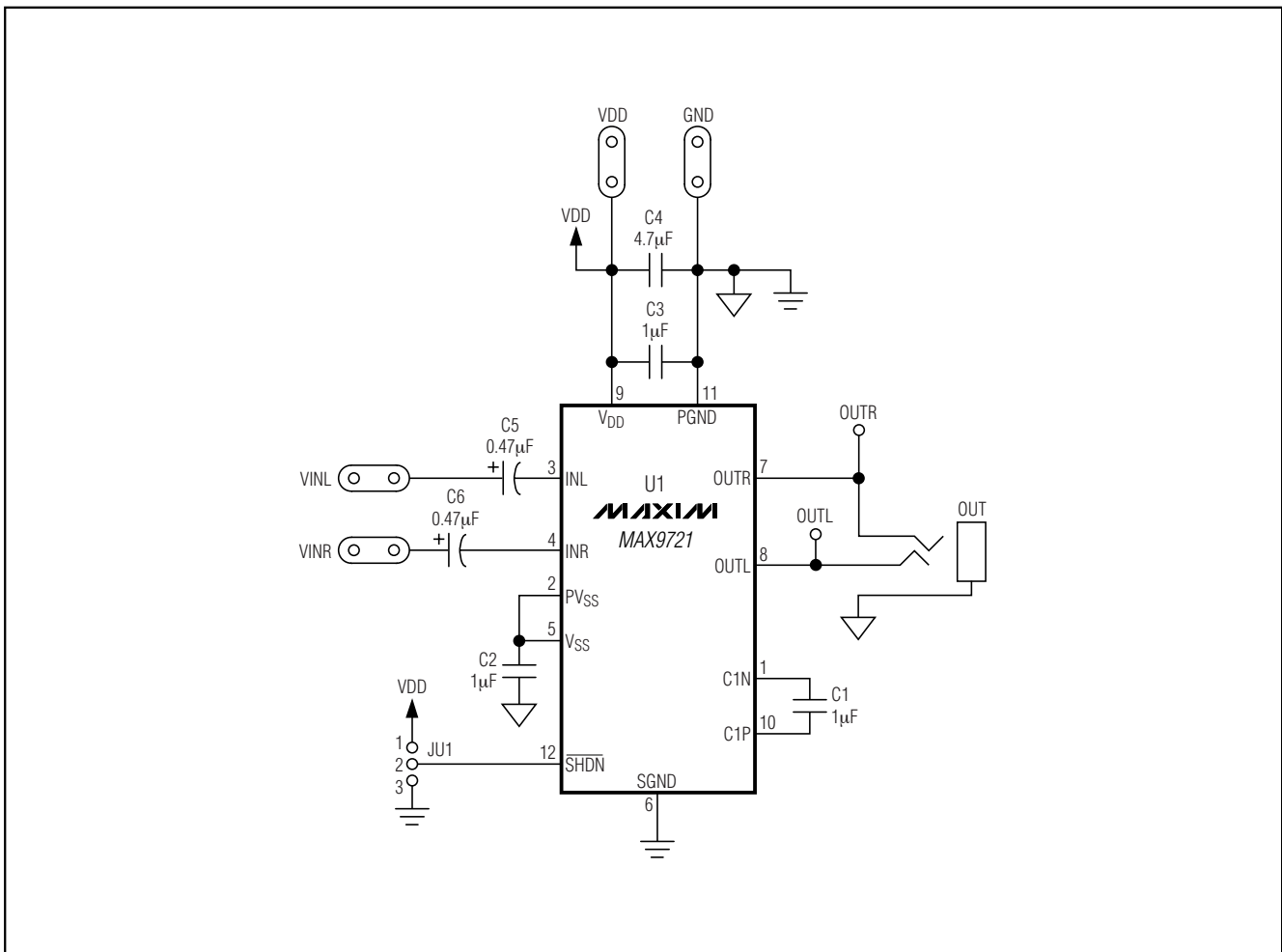


Figure 1. MAX9721 EV Kit Schematic

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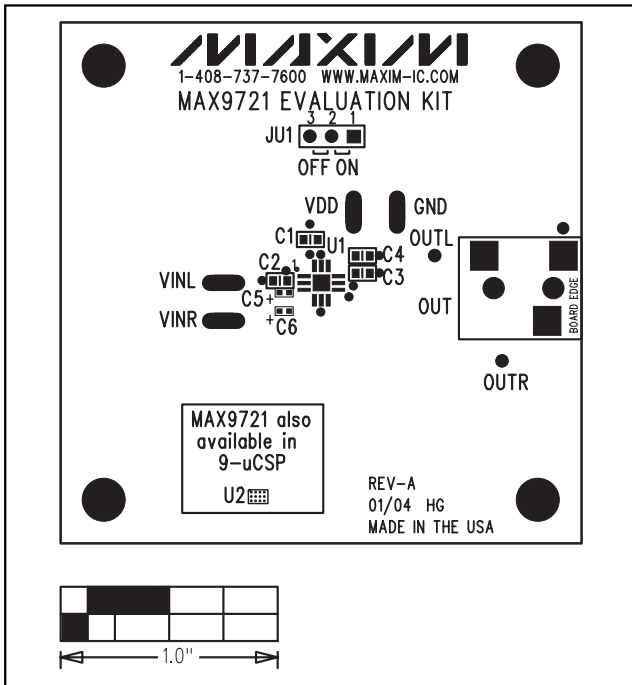


Figure 2. MAX9721 EV Kit Component Placement Guide—Component Side

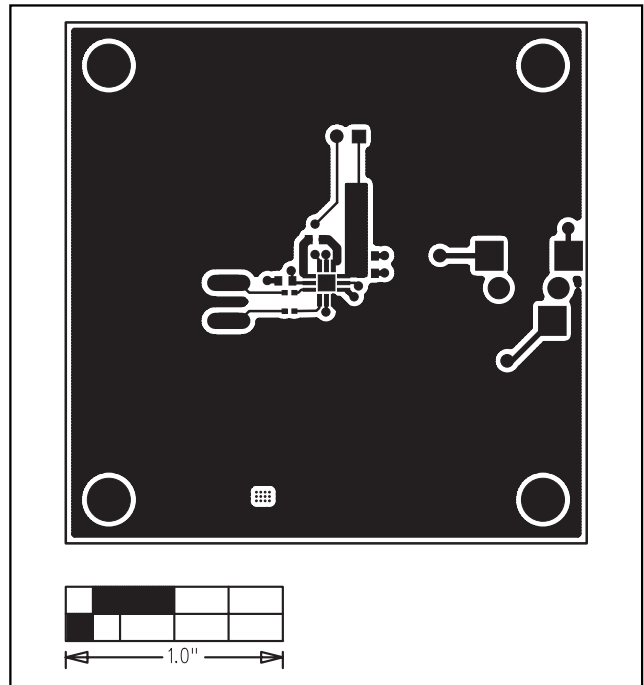


Figure 3. MAX9721 EV Kit PC Board Layout—Component Side

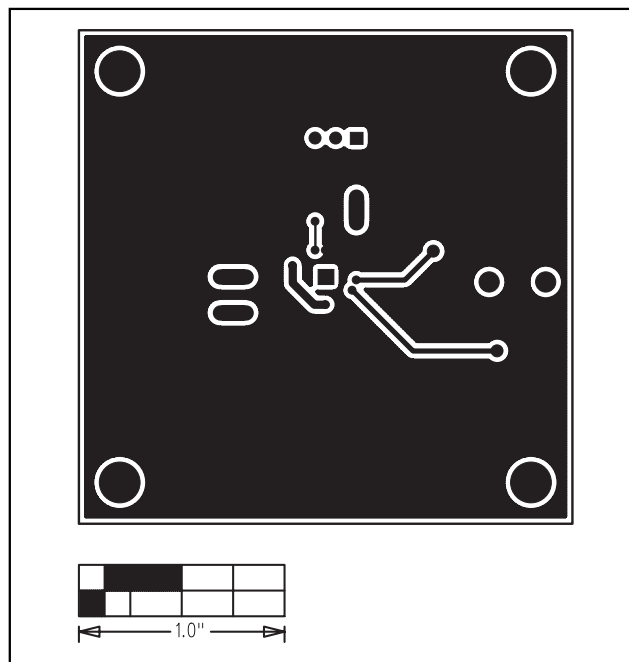


Figure 4. MAX9721 EV Kit PC Board Layout—Solder Side

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Maxim Integrated Products, 120 San Gabriel Drive, Sunnyvale, CA 94086 408-737-7600 _____ **3**