19-1954; Rev 1; 5/02

MAXIM

MAX3800 Evaluation Kits

Evaluate: MAX3800

General Description

The MAX3800 evaluation kits (EV kits) simplify evaluation of the MAX3800 adaptive equalizer and cable driver. The EV kits enable testing of all the device's functions. SMA connectors with 50Ω controlled-impedance transmission lines to the MAX3800 are provided for all input and output ports.

Features

- ♦ **SMA Connectors for All High-Speed Inputs and Outputs**
- ♦ **Fully Assembled and Tested**
- ♦ **Includes Potentiometer for Adjusting Driver Output Amplitude**

Component List

DESIGNATION	QTY	DESCRIPTION
C1–C10, C13–C18, C21–25	21	0.1µF ±10% ceramic capacitors (0603) Murata GRM39X7R104K016A
C11, C12	2	10µF ±10% tantalum capacitors C case AVX TAJC106K010
J1–J8	8	SMA edge-mount connectors EFJohnson 142-0701-801 or Digi-Key J502-ND **Note:** Cut center pin to approximately 1/16in length.
J9, J10, J11	3	Test points Digi-Key 5000K-ND
JU1	1	2-pin header, 0.1in centers Digi-Key S1012-36-ND
JU1	1	Shunt Digi-Key S9000-ND
R1, R2, R3	3	100kΩ ±5% resistors (0603)
R4	1	20kΩ variable resistor Bourns, Digi-Key 3296W-203-ND
TP1–TP7	7	Test points Digi-Key 5000K-ND
U1*	1	MAX3800UHJ (32-pin TQFP-EP)
U1*	1	MAX3800UGJ (32-pin QFN)
None	1	MAX3800 evaluation kit, rev B circuit board
None	1	MAX3800 data sheet
None	1	MAX3800 EV kit data sheet

**The MAX3800UHJ is included with the MAX3800EVKIT. The MAX3800UGJ is included in the MAX3800UGJ-KIT.*

Ordering Information

PART	TEMP RANGE	IC PACKAGE
MAX3800EVKIT	0°C to +85°C	32 TQFP-EP
MAX3800UGJ-KIT	0°C to +85°C	32 QFN

Component Suppliers

SUPPLIER	PHONE	FAX
AVX	843-444-2863	843-626-3123
Digi-Key	218-681-6674	218-681-3380
EFJohnson	402-474-4800	402-474-4858
Murata	415-964-6321	415-964-8165

Note: *Please indicate that you are using the MAX3800 when contacting these component suppliers.*

Quick Start

1) Connect a +3.3V power supply to J9 (VCCE) and J11 (VCCD). Connect the power-supply ground to J10. (**Note:** Placing a shunt on JU1 connects VCCE and VCCD.)

Cable Driver

2) Connect a differential input signal (700mV differential voltage amplitude) to the cable driver input at SMA edge connectors J5 and J6.
3) Connect a 50Ω oscilloscope to SMA output connectors J7 and J8 to observe the output of the cable driver.
4) Potentiometer R4 (R_{MOD}) can be adjusted to change the cable driver output amplitude.

Adaptive Cable Equalizer

5) Connect a differential input signal (700mV differential voltage amplitude) to a cable. Connect the other end of the cable to the cable equalizer inputs at SMA edge connectors J1 and J2.

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.

MAX3800 Evaluation Kits

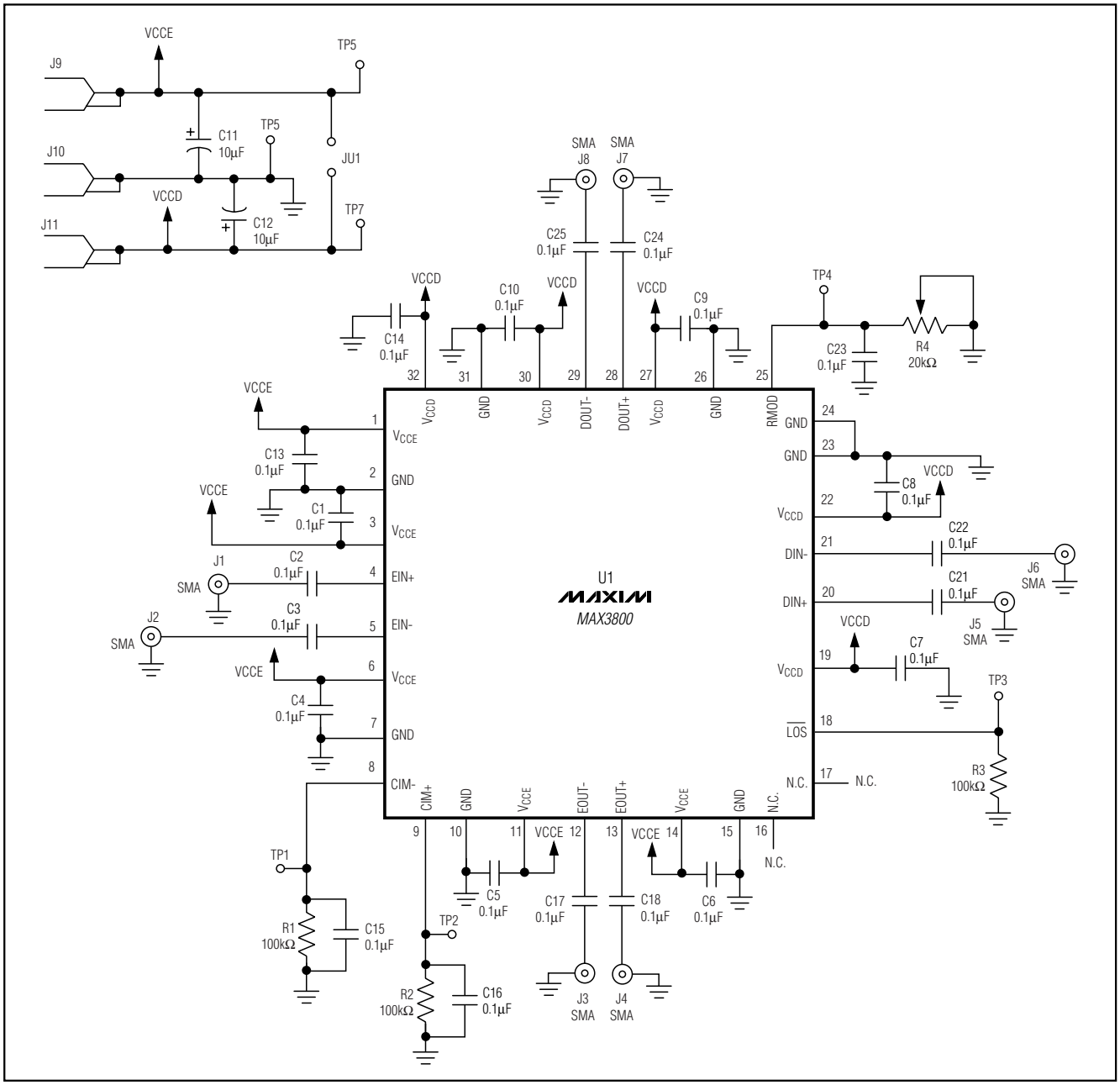

Figure 1. MAX3800 Schematic

6) Connect a 50Ω oscilloscope to SMA edge connectors J3 and J4 to observe the output of the cable equalizer.

7) The cable integrity monitor (CIM) outputs can be monitored at TP1 (CIM-) and TP2 (CIM+).

8) The loss-of-signal ($\overline{LOS}$) output can be monitored at TP3.

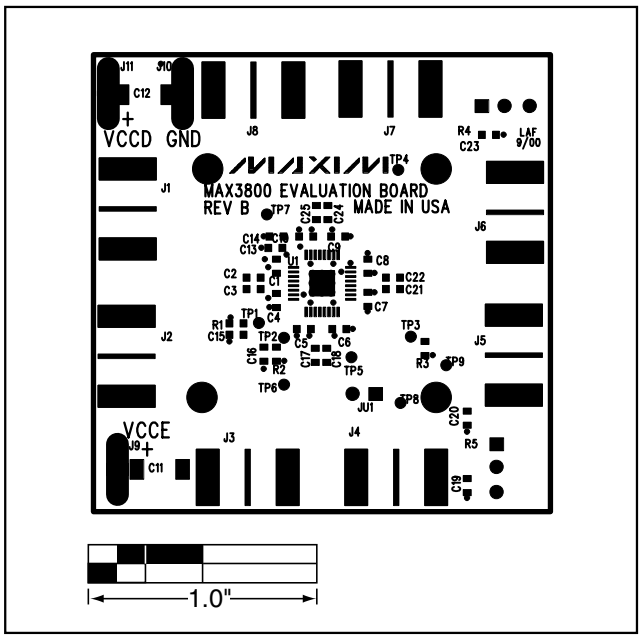

Figure 2. MAX3800 EV Kit Component Placement Guide

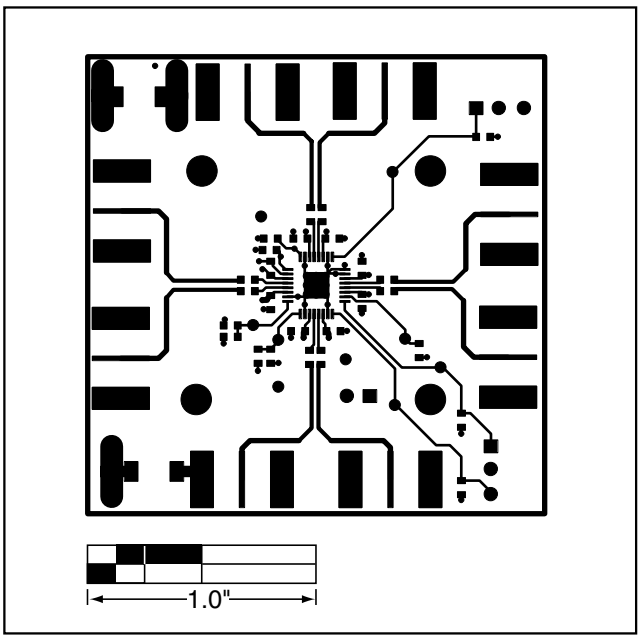

Figure 3. MAX3800 EV Kit PC Board Layout—Component Side

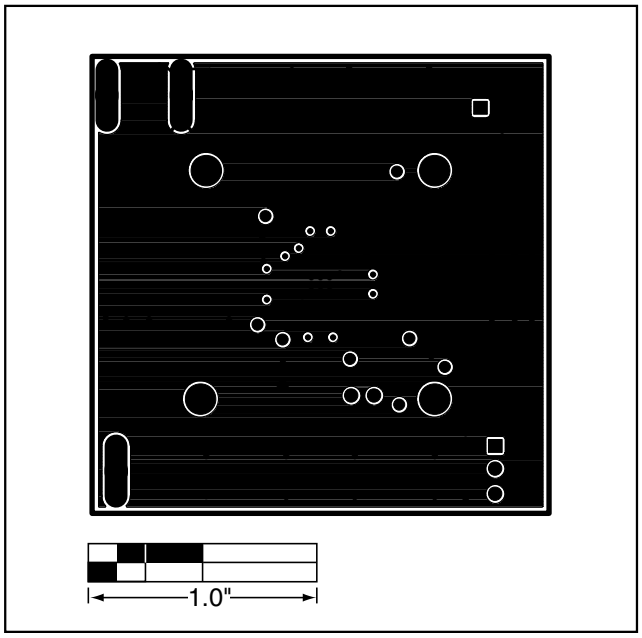

Figure 4. MAX3800 EV Kit PC Board Layout—Ground Plane

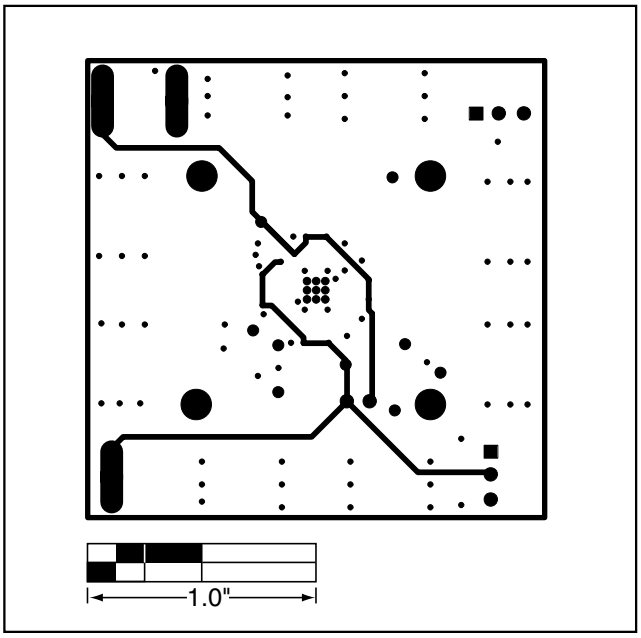

Figure 5. MAX3800 EV Kit PC Board Layout—Power Plane

MAX3800 Evaluation Kits

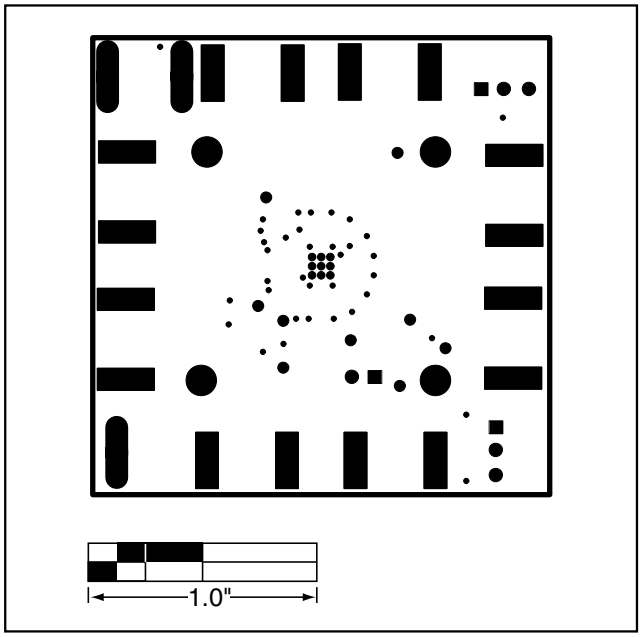

Figure 6. MAX3800 EV Kit PC Board Layout—Solder Side

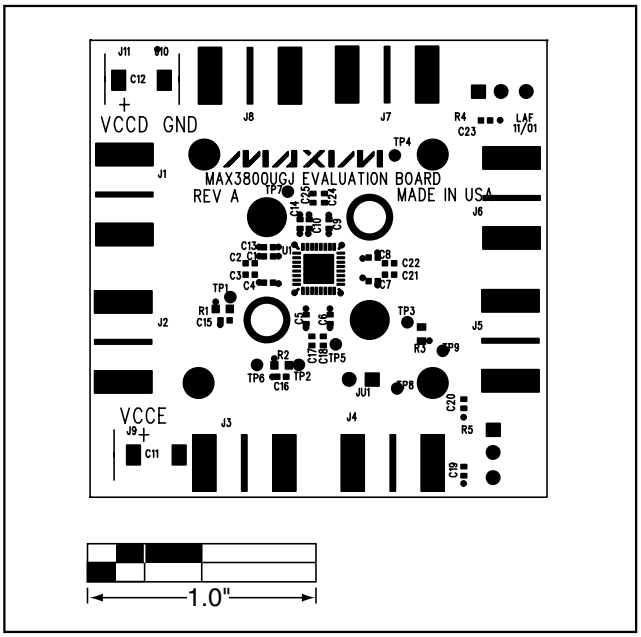

Figure 7. MAX3800UGJ EV Kit—Component Placement Guide

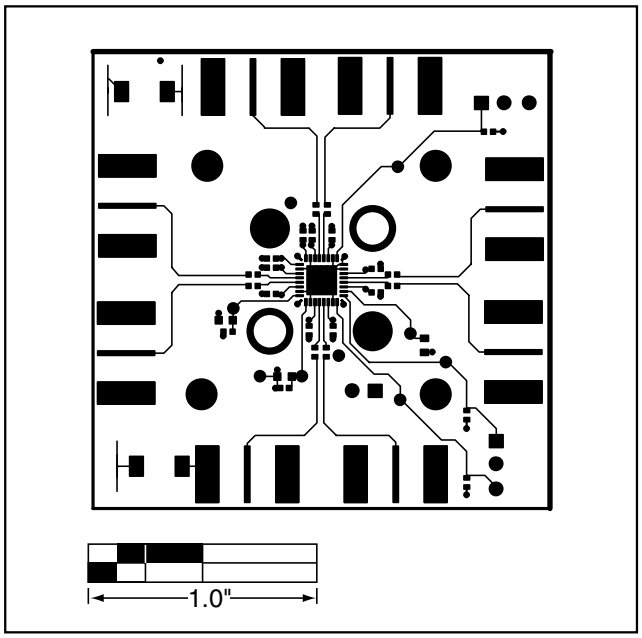

Figure 8. MAX3800UGJ EV Kit PC Board Layout—Component Side

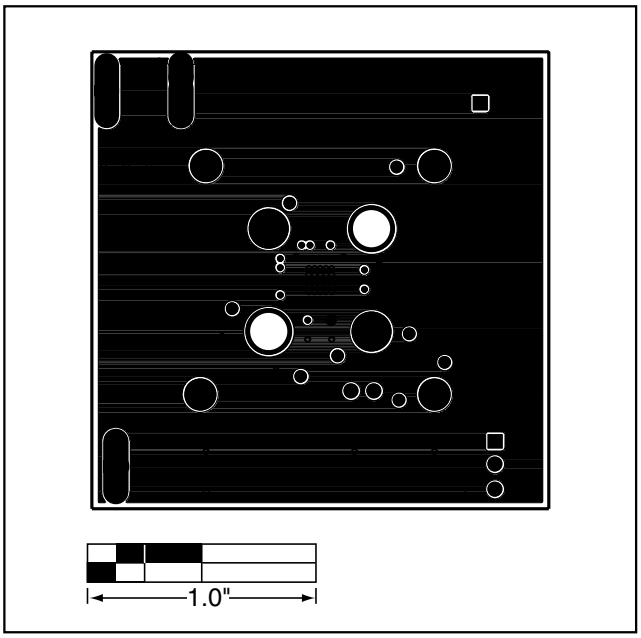

Figure 9. MAX3800UGJ EV Kit PC Board Layout—Ground Plane

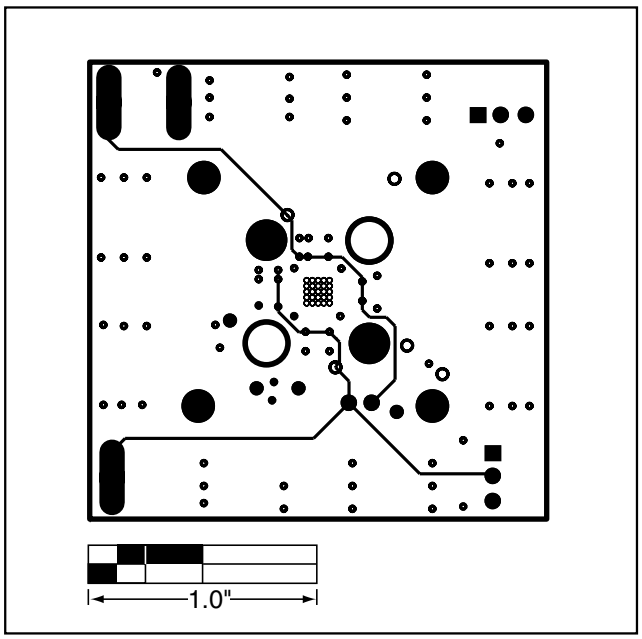

Figure 10. MAX3800UGJ EV Kit PC Board Layout—Power Plane

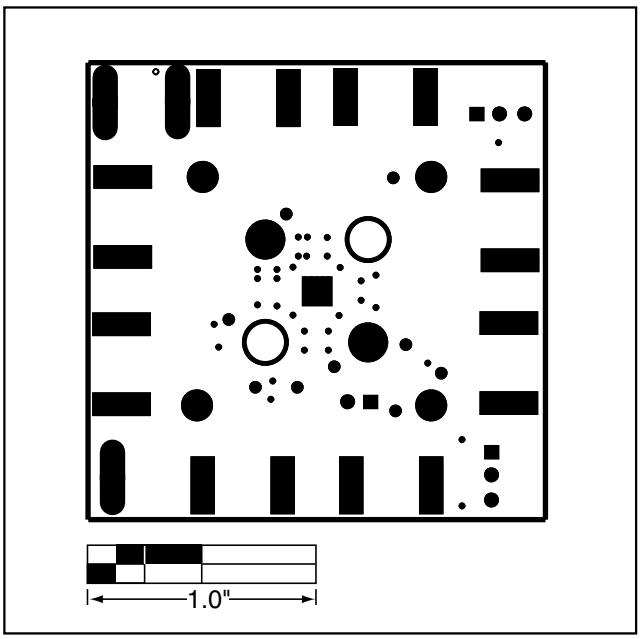

Figure 11. MAX3800UGJ EV Kit PC Board Layout—Solder Side

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