Evaluation Board User Guide
UG-893

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Evaluating the 8-Lead MSOP Devices in the Switch/Mux Portfolio

FEATURES

8-lead MSOP evaluation board
Clamp to allow the main device to be changed easily
Gold pin connectors to allow the addition of passive components
SMB connectors for the input/output of signals
Additional space on board to allow for prototyping

EVALUATION KIT CONTENTS

EVAL-8MSOPEBZ evaluation board

ONLINE RESOURCES

Documents needed
Data sheet of the device being evaluated
EVAL-8MSOPEBZ user guide

EQUIPMENT NEEDED

Device being evaluated
DC voltage source
Analog signal source
Method to measure voltage, such as a digital multimeter (DMM)

GENERAL DESCRIPTION

The EVAL-8MSOPEBZ evaluation board is for 8-lead MSOP devices in the switch/mux portfolio that are purchased separately. A clamp is supplied with the EVAL-8MSOPEBZ evaluation board so that the device can be secured to the evaluation board without the need for soldering which makes the board reusable for multiple devices.

Figure 1 shows the EVAL-8MSOPEBZ evaluation board. The device can be clamped or soldered to the center of the evaluation board. Each pin of the device is broken out to a link that can be set to either VDD or GND. A wire screw terminal supplies VDD and GND. SMB connectors are on the board to allow additional external signals to be supplied to the device. In addition, there is space available at the top of the board for prototyping.

Full specifications of the device under test (DUT) are available in the product data sheet, which should be consulted in conjunction with this user guide when using the evaluation board.

EVALUATION BOARD PHOTOGRAPH

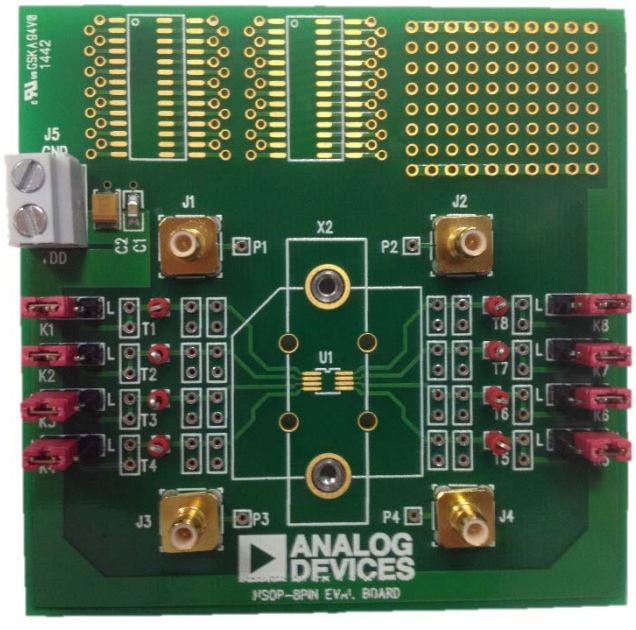

Figure 1.

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REVISION HISTORY

11/15—Revision 0: Initial Version

EVALUATION BOARD HARDWARE

Use the EVAL-8MSOPEBZ to evaluate the 8-lead MSOP devices in the switch/mux portfolio. Figure 1 shows the evaluation board.

POWER SUPPLY

Connector J5 provides the ability to supply VDD and GND supplies to the board. These supplies can then be selected for each pin of the device by setting the link headers to either VDD or GND. When a VSS supply is needed, apply the voltage directly to the pin of the device. An example of how this is done is by removing the link and then supplying the required voltage to the central pin of the header or to the gold pin connectors on the relevant trace.

LINK HEADERS

The link headers supply the DUT with either VDD or GND. Each header is designated K1 to K8, with the number corresponding to the pin number of the device. Table 1 summarizes the link headers and how they function on the evaluation board.

Table 1. Link Header Descriptions

Label	Position	Description
K1to K8	H	VDD
	L	GND

SMB CONNECTORS

There are four SMB connectors on evaluation board, J1 to J4. When an SMB cable is one of these connectors, the signal becomes available on P1 to P4. Apply this signal to the pin of the device by forming a connection from P1 to P4 to a gold pin connector found on the relevant trace.

INPUT SIGNAL TRACES

Each trace includes three sets of gold pin connectors, two of which can place a load on the signal path to ground and another that is in series with the signal path. The three sets of gold pin connectors can create a simple resistor capacitor (RC) filter.

EVALUATION BOARD SCHEMATIC AND ARTWORK

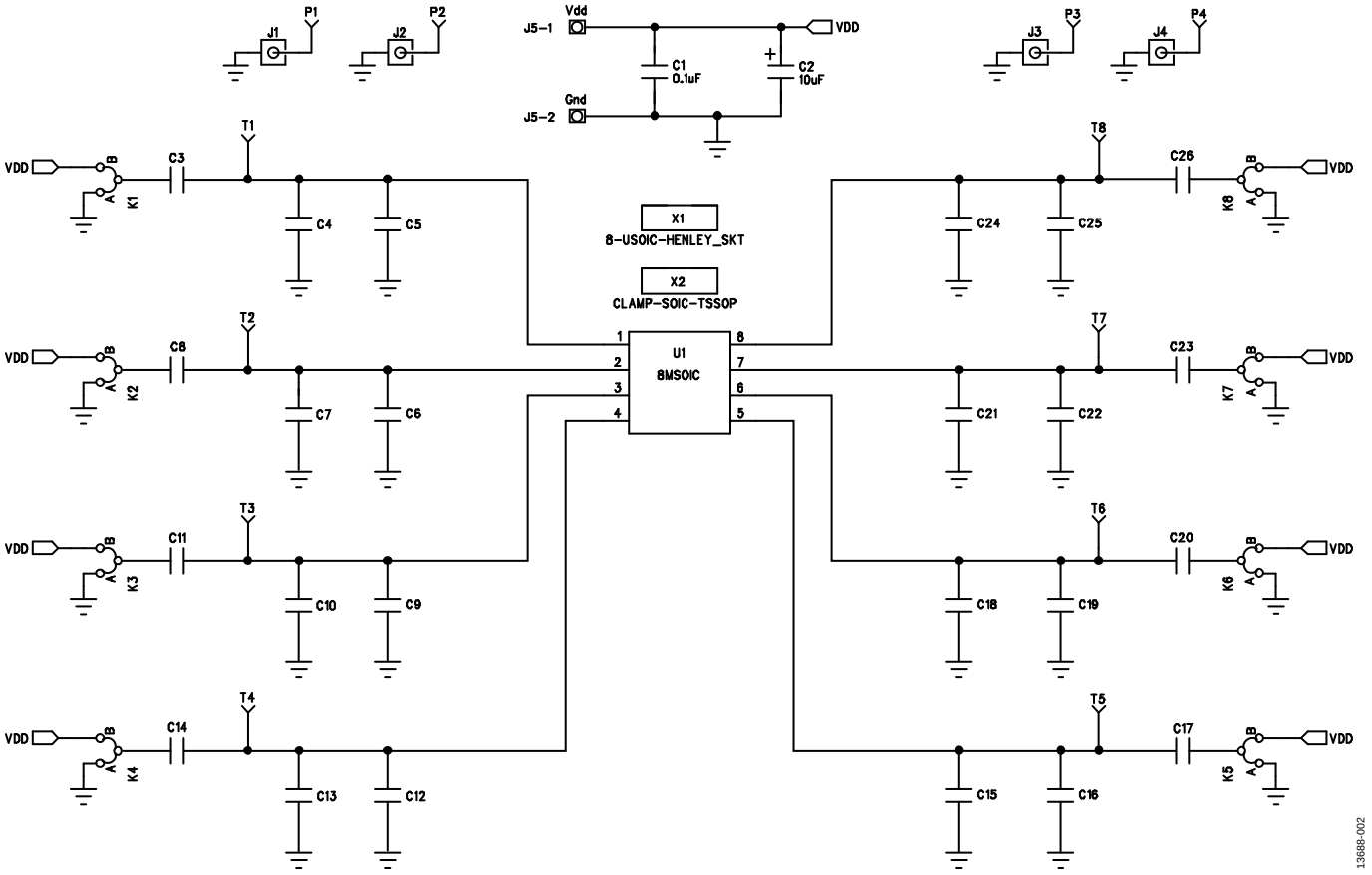

Figure 2. EVAL-8MSOPEBZ Evaluation Board Schematic

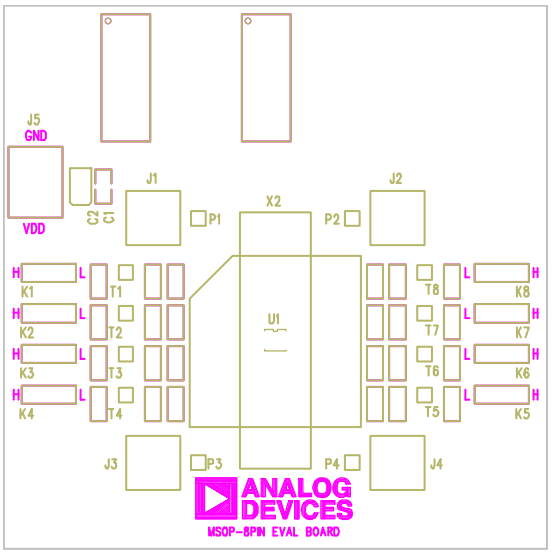

Figure 3. EVAL-8MSOPEBZ Silkscreen

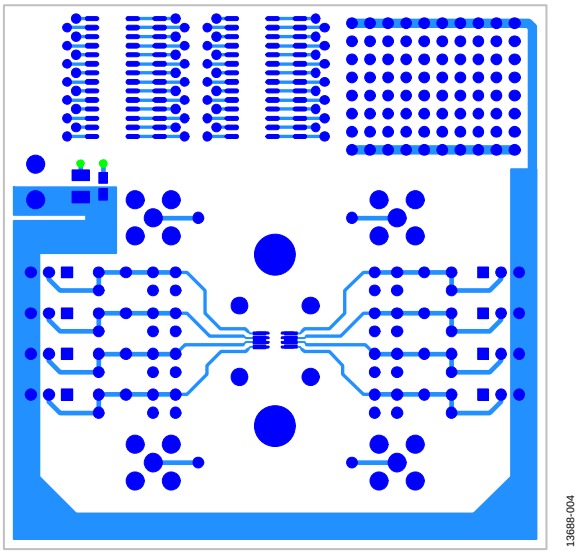

Figure 4. EVAL-8MSOPEBZ Top Layer

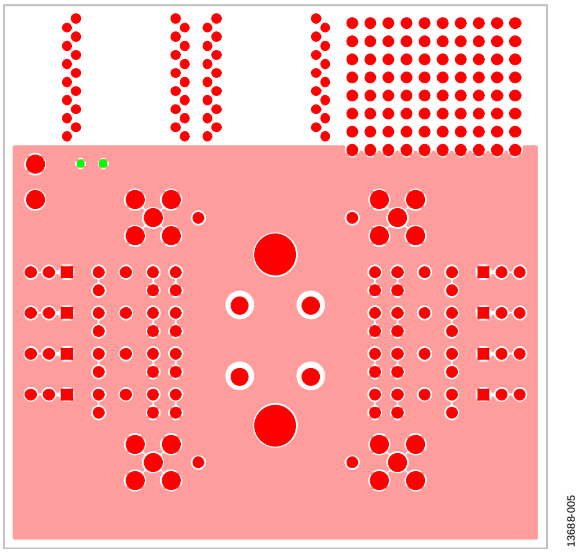

Figure 5. EVAL-8MSOPEBZ Bottom Layer

ORDERING INFORMATION

BILL OF MATERIALS

Table 2.

Reference Designator	Description	Manufacturer Part Number	Stock Code
C1	0.1 µF, 50 V, X7R, ceramic capacitor	GRM21BR71H104KA01L	FEC 2408531
C2	10 µF, 10 V tantalum capacitor	TAJB106K016RNJ	FEC 498-737
C3 to C26	Harwin subminiature sockets (2)	H3153-01	FEC 2120079
J1 to J4	SMB sockets	1206013	FEC 310-682
J5	2-pin terminal block (5 mm pitch)	KRM 02	FEC 151-785
K1 to K8	Jumper blocks using 3-pin SIP header	M20-9990345 and M7566-05	FEC 512-047 and 150-411
P1 to P4	Harwin subminiature sockets (2)	H3153-01	FEC 2120079
T1 to T8	Test points	20-313137	FEC 240-345