

One Technology Way • P.O. Box 9106 • Norwood, MA 02062-9106, U.S.A. • Tel: 781.329.4700 • Fax: 781.461.3113 • www.analog.com

## Evaluation Board for 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 to be evaluated EVAL-8MSOPEBZ user guide

#### **EQUIPMENT NEEDED**

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

#### **GENERAL DESCRIPTION**

The EVAL-8MSOPEBZ is the evaluation board for the 8 lead MSOP devices in the switch/mux portfolio which are to be purchased separately. A clamp is supplied with the board so that the device can be secured to the board without the need for soldering. This 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 broke out to a link that can be set to either  $V_{DD}$  or GND and a wire screw terminal is provided to supply  $V_{DD}$  and GND. SMB connectors are on the board allow for additional external signals to be supplied to the device. In addition, there is space at the top of the board available for prototyping.

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



## **EVALUATION BOARD**

Figure 1. EVAL-8MSOPEBZ Evaluation Board

# TABLE OF CONTENTS

Features	. 1
Evaluation Kit Contents	. 1
Online Resources	. 1
Equipment Needed	. 1
General Description	. 1
Evaluation Board	. 1
Revision History	. 2
Evaluation Board Hardware	. 3

# Preliminary Technical Data

Power Supply	3
Link headers	3
SMB Connectors	3
Input Signal Traces	3
Evaluation Board Schematics and Artwork	4
Ordering Information	6
Bill of Materials	6

## **REVISION HISTORY**

8/15—Revision 0: Initial Version

# **EVALUATION BOARD HARDWARE**

The operation of a 8 lead MSOP devices in the switch/mux portfolio can be evaluated using the EVAL-8MSOPEBZ. Figure 1 shows the evaluation board.

## **POWER SUPPLY**

Connector J5 provides the ability to supply VDD and GND supplies to the board. These can them be selected for each pin of the device by setting the link headers to either VDD or GND. If a V<sub>SS</sub> supply is needed then the voltage can applied directly to the pin of the device. An example of how this can be 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 are used to supply the device under test with either  $V_{DD}$  or GND. Each header is designated K1 to K8, with the number corresponding to the pin number of the device. Table 1 shows a summary of the link headers and how they function on the evaluation board.

#### Table 1. Link Header Descriptions

Label	Position	Description
K1to K8	Н	V <sub>DD</sub>
	L	GND

#### **SMB CONNECTORS**

They are four SMB connectors on evaluation board labelled J1 to J4. When an SMB cable is one of these connectors, the signal becomes available on either P1 to P4. This signal can then be applied to the pin of the device by forming a connection from either 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 be used to 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 be used to create a simple resistorcapacitor (RC) filter.

## **EVALUATION BOARD SCHEMATICS AND ARTWORK**



Figure 2. ADG5208F Evaluation Board Schematic



Figure 3. EVAL-ADG5208FEBZ Silkscreen



Figure 4. EVAL-ADG5208FEBZ Top Layer



Figure 5. EVAL-ADG5208FEBZ Bottom Layer

# ORDERING INFORMATION

**BILL OF MATERIALS** 

Table 2.

## NOTES

#### ESD Caution

ESD (electrostatic discharge) sensitive device. Charged devices and circuit boards can discharge without detection. Although this product features patented or proprietary protection circuitry, damage may occur on devices subjected to high energy ESD. Therefore, proper ESD precautions should be taken to avoid performance degradation or loss of functionality.

#### Legal Terms and Conditions

By using the evaluation board discussed herein (together with any tools, components documentation or support materials, the "Evaluation Board"), you are agreeing to be bound by the terms and conditions set forth below ("Agreement") unless you have purchased the Evaluation Board, in which case the Analog Devices Standard Terms and Conditions of Sale shall govern. Do not use the Evaluation Board until you have read and agreed to the Agreement. Your use of the Evaluation Board shall signify your acceptance of the Agreement. This Agreement is made by and between you ("Customer") and Analog Devices, Inc. ("ADI"), with its principal place of business at One Technology Way, Norwood, MA 02062, USA. Subject to the terms and conditions of the Agreement, ADI hereby grants to Customer a free, limited, personal, temporary, non-exclusive, non-sublicensable, non-transferable license to use the Evaluation Board FOR EVALUATION PURPOSES ONLY. Customer understands and agrees that the Evaluation Board is provided for the sole and exclusive purpose referenced above, and agrees not to use the Evaluation Board for any other purpose. Furthermore, the license granted is expressly made subject to the following additional limitations: Customer shall not (i) rent, lease, display, sell, transfer, assign, sublicense, or distribute the Evaluation Board; and (ii) permit any Third Party to access the Evaluation Board. As used herein, the term "Third Party" includes any entity other than ADI, Customer, their employees, affiliates and in-house consultants. The Evaluation Board is NOT sold to Customer; all rights not expressly granted herein, including ownership of the Evaluation Board, are reserved by ADI. CONFIDENTIALITY. This Agreement and the Evaluation Board shall all be considered the confidential and proprietary information of ADI. Customer may not disclose or transfer any portion of the Evaluation Board to any other party for any reason. Upon discontinuation of use of the Evaluation Board or termination of this Agreement, Customer agrees to promptly return the Evaluation Board to ADI. ADDITIONAL RESTRICTIONS. Customer may not disassemble, decompile or reverse engineer chips on the Evaluation Board. Customer shall inform ADI of any occurred damages or any modifications or alterations it makes to the Evaluation Board, including but not limited to soldering or any other activity that affects the material content of the Evaluation Board. Modifications to the Evaluation Board must comply with applicable law, including but not limited to the RoHS Directive. TERMINATION. ADI may terminate this Agreement at any time upon giving written notice to Customer. Customer agrees to return to ADI the Evaluation Board at that time. LIMITATION OF LIABILITY. THE EVALUATION BOARD PROVIDED HEREUNDER IS PROVIDED "AS IS" AND ADI MAKES NO WARRANTIES OR REPRESENTATIONS OF ANY KIND WITH RESPECT TO IT. ADI SPECIFICALLY DISCLAIMS ANY REPRESENTATIONS, ENDORSEMENTS, GUARANTEES, OR WARRANTIES, EXPRESS OR IMPLIED, Related to the evaluation board including, but not limited to, the implied Warranty of Merchantability, title, fitness for a particular purpose or noninfringement of INTELLECTUAL PROPERTY RIGHTS. IN NO EVENT WILL ADI AND ITS LICENSORS BE LIABLE FOR ANY INCIDENTAL, SPECIAL, INDIRECT, OR CONSEQUENTIAL DAMAGES RESULTING FROM CUSTOMER'S POSSESSION OR USE OF THE EVALUATION BOARD, INCLUDING BUT NOT LIMITED TO LOST PROFITS, DELAY COSTS, LABOR COSTS OR LOSS OF GOODWILL. ADI'S TOTAL LIABILITY FROM ANY AND ALL CAUSES SHALL BE LIMITED TO THE AMOUNT OF ONE HUNDRED US DOLLARS (\$100.00). EXPORT. Customer agrees that it will not directly or indirectly export the Evaluation Board to another country, and that it will comply with all applicable United States federal laws and regulations relating to exports. GOVERNING LAW. This Agreement shall be governed by and construed in accordance with the substantive laws of the Commonwealth of Massachusetts (excluding conflict of law rules). Any legal action regarding this Agreement will be heard in the state or federal courts having jurisdiction in Suffolk County, Massachusetts, and Customer hereby submits to the personal jurisdiction and venue of such courts. The United Nations Convention on Contracts for the International Sale of Goods shall not apply to this Agreement and is expressly disclaimed.

©2015 Analog Devices, Inc. All rights reserved. Trademarks and registered trademarks are the property of their respective owners. UG13456-0-8/15(0)



www.analog.com

Rev. PrA | Page 7 of 7