

## Evaluation Board for 5-Lead SC70 Devices in the **Switches and Multiplexers Portfolio**

### FEATURES

- 5-lead SC70 evaluation board
- Clamp allows the main device to be easily changed
- Gold pin connectors 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-5SC70EBZ evaluation board

### DOCUMENTS NEEDED

- Data sheet of the device being evaluated
- EVAL-5SC70EBZ user guide

### EQUIPMENT NEEDED

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

### GENERAL DESCRIPTION

The EVAL-5SC70EBZ evaluation board evaluates 5-lead SC70 devices in the **Switches and Multiplexers Portfolio** that are purchased separately. A clamp is supplied with the EVAL-5SC70EBZ to secure a 5-lead SC70 device to the evaluation board without the need for soldering, making the evaluation board reusable for multiple devices.

Figure 1 shows the EVAL-5SC70EBZ evaluation board. A 5-lead SC70 device can be clamped or soldered to the center of the evaluation board. Each pin of the device has a corresponding link from K1 to K5 that can be set to either VDD or GND. A wire screw terminal supplies VDD and GND. SubMiniature Version B (SMB) connectors on the evaluation board allow additional external signals to be supplied to the device. In addition, there is space available at the top of the evaluation board for prototyping.

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

### EVAL-5SC70EBZ EVALUATION BOARD PHOTOGRAPH

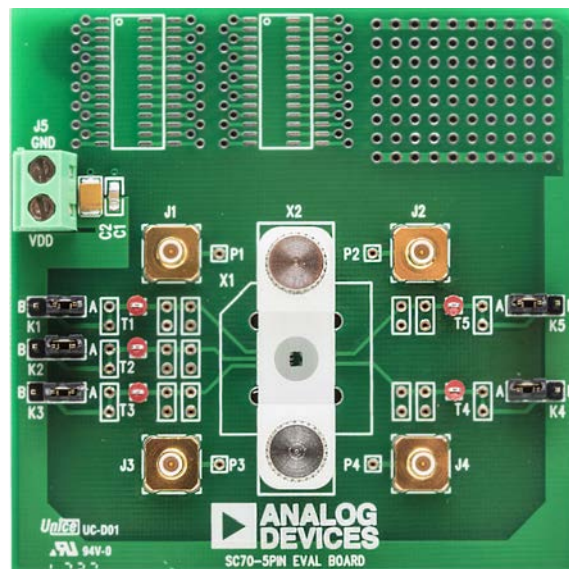


Figure 1.

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**REVISION HISTORY**

11/2017—Revision 0: Initial Version

## EVALUATION BOARD HARDWARE

### POWER SUPPLY

Connector J5 supplies the VDD supply and GND supply to the board. Set the link headings to either VDD or GND to select the supplies for each pin of the device. When a VSS supply is needed, apply the voltage directly to the VSS or GND pin of the device by removing the corresponding link.

### LINK HEADERS

The link headers supply the DUT with either VDD or GND. The headers are designated K1 to K5 with the number corresponding to the pin number of the device. Table 1 lists the link headers and how they function on the EVAL-5SC70EBZ evaluation board.

**Table 1. Link Header Descriptions**

Label	Position	Description
K1 to K5	H <sup>1</sup>	VDD
	L <sup>2</sup>	GND

<sup>1</sup> H stands for high.

<sup>2</sup> L stands for low.

### SMB CONNECTORS

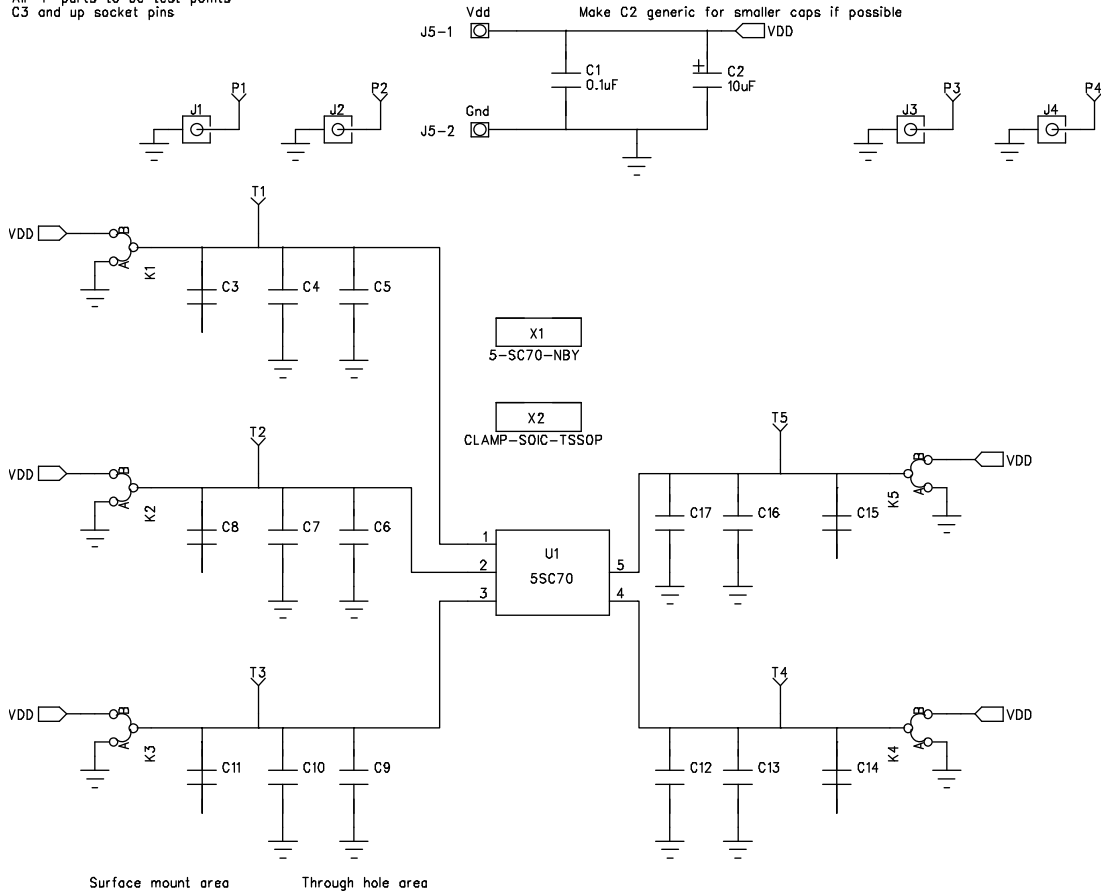
There are four SMB connectors on evaluation board (J1 to J4). When an SMB cable is connected to one of these connectors, the input signal becomes available on the corresponding P1 to P4 port. Apply this signal to the relevant pin of the device by forming a connection from P1 to P4 to a gold pin connector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

### INPUT SIGNAL TRACES

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

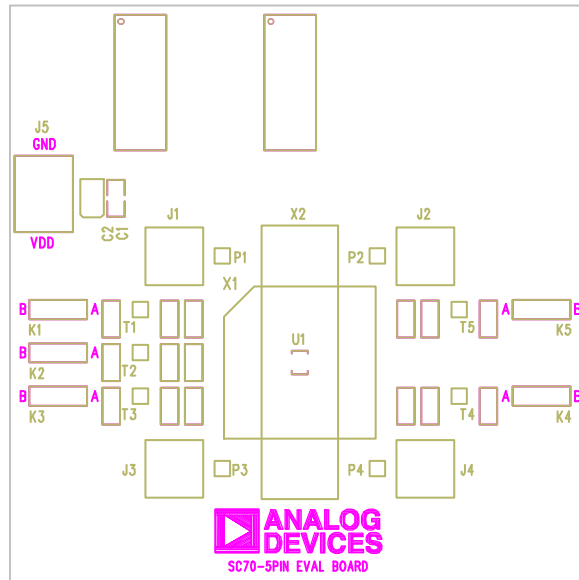
# EVALUATION BOARD SCHEMATIC AND ARTWORK

All 'P' parts to be socket pins  
 All 'T' parts to be test points  
 C3 and up socket pins



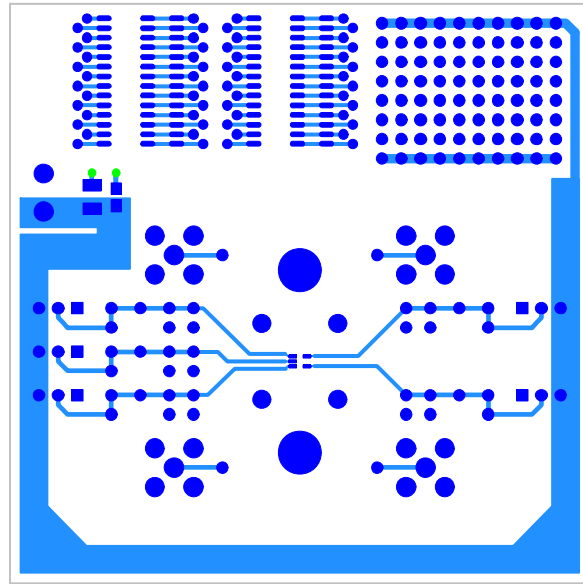
16350-002

Figure 2. EVAL-5SC70EBZ Evaluation Board Schematic



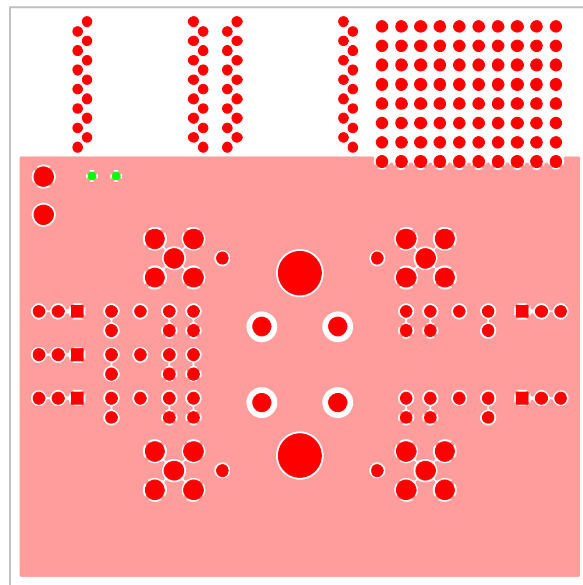
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Figure 3. EVAL-5SC70EBZ Evaluation Board Silkscreen



16350-004

Figure 4. EVAL-5SC70EBZ Evaluation Board Top Layer



16350-005

Figure 5. EVAL-5SC70EBZ Evaluation Board Bottom Layer

## ORDERING INFORMATION

### BILL OF MATERIALS

Table 2.

Reference Designator	Description	Part Number	Stock Code
C1	0.1 $\mu$ F, 50 V, X7R, ceramic capacitor	GRM21BR71H104KA01L	FEC 2408531
C2	10 $\mu$ F, 10 V tantalum capacitor	TAJB106K016RNJ	FEC 498-737
C3 to C17	Harwin subminiature sockets (2)	H3153-01	FEC 2120079
J1 to J4	SMB connectors	1206013	FEC 310-682
J5	2-pin terminal block (5 mm pitch)	KRM 02	FEC 151-785
K1 to K5	Jumper blocks using 3-pin session initiation protocol (SIP) headers	M20-9990345 and M7566-05	FEC 512-047 and 150-411
P1 to P4	Harwin subminiature sockets	H3153-01	FEC 2120079
T1 to T5	Test points	20-313137	FEC 240-345



#### 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.

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