

## I<sup>2</sup>S Output MEMS Microphone Flex Evaluation Board

### GENERAL DESCRIPTION

This user guide applies to the following MEMS microphone evaluation boards:

- EV\_ICS-43434-FX

This is a simple board that allows quick evaluation of the performance of the ICS-43434 MEMS microphone. The small size and low profile of the flexible PCB enables direct placement of the microphone into a prototype or an existing design for an in situ evaluation. The board consists of an I<sup>2</sup>S-output microphone soldered to a flexible PCB. The only other component on the board is a 0.1 μF supply bypass capacitor.

The flex PCB design mates to a 6-position ZIF connector with 0.5 mm pin spacing, such as the Molex 0527450697 connector. The flex PCB mates to the connector by first pulling out the connector’s clamp, inserting the flex PCB, and then pushing the clamp closed. Wires can be soldered directly to this connector’s pins or it can be mounted directly on a rigid PCB for evaluation. We recommend to use 28 AWG or smaller wire for soldering to this connector’s pins. The PCB thickness at the pin edge is 0.3 mm.

### TABLE 1. PIN FUNCTION DESCRIPTIONS

Flex PCB pad (Top to Bottom, see Figure 2)	Mic Pin	Description
1	LR	Left/right channel select
2	WS	Word select for I <sup>2</sup> S interface
3	SD	Serial digital output signal for I <sup>2</sup> S interface
4	SCK	Serial clock for I <sup>2</sup> S interface
5	VDD	Power, 1.62 to 3.63 V
6	GND	Ground

### EVALUATION BOARD CIRCUIT

Figure 1 show the schematics of the evaluation board, and Figure 2 shows the board layout. See the microphone data sheets for complete descriptions and specifications.

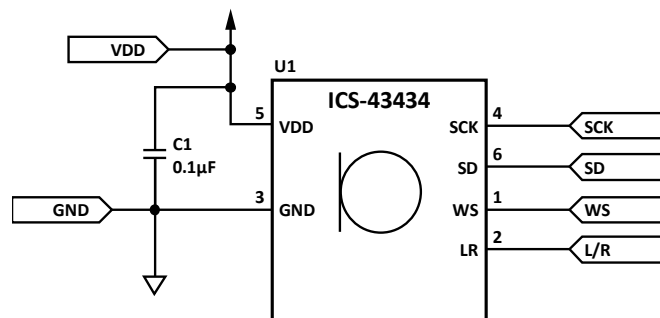


Figure 1. EV\_ICS-43434-FX Evaluation Board Schematic



Figure 2. EV\_ICS-43434-FX Evaluation Board Layout (Top View)

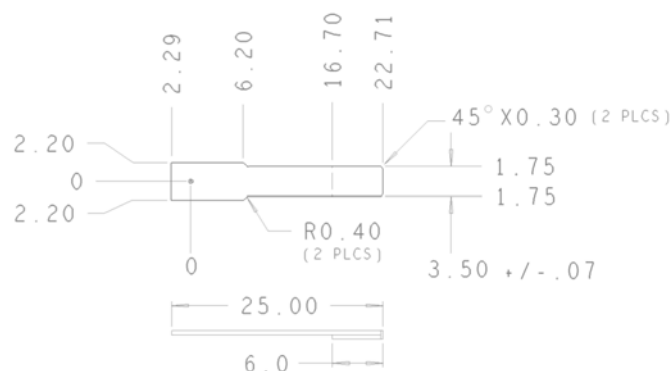


Figure 3. Evaluation Board Dimensions in Millimeters

**EVALUATION BOARD PHOTOGRAPHS**

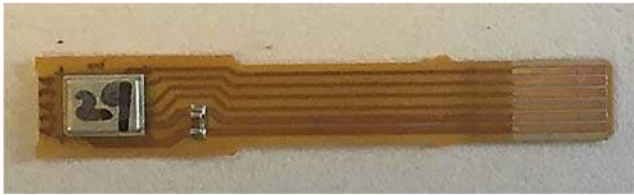


Figure 4. EV\_ICS-43434-FX Top View

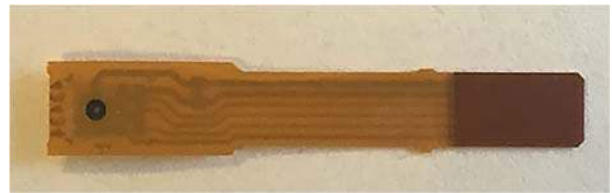


Figure 5. EV\_ICS-43434-FX Bottom View

**REVISION HISTORY**

Revision Date	Revision	Description
4/26/2016	1.0	Initial Release

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