FAIRCHILD SEMICONDUCTOR®

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FSA850
Audio 3-Pole / 4-Pole MIC-GND Switch

Features

Switch Type	3-Pole/4-Pole MIC - GND
V_{CC}	2.3 to 4.5 V
THD (MIC)	0.001% Typical
ESD	
IEC 61000-4-2 (Air Gap)	15 kV
IEC 61000-4-2 (Contact)	8 kV
HBM (All Pins)	3 kV
GNDnA/GNDnB to GND	8 kV
Power to GND	10 kV
CDM	2 kV
Operating Temperature	-40°C to 85°C
R_{ON} Maximum (GND1n)	0.08 Ω
R_{ON} Maximum (SENSE)	1 Ω

Applications

- 3.5 mm and 2.5 mm Audio Jacks
- Cellular Phones, Smart Phones
- MP3 and PMP (Portable Media Player)

Description

The FSA850 is a 3-pole or 4-pole audio jack microphone GND switch for accessories with General-Purpose Input / Output (GPIO) control signals. The FSA850 also has the ability to perform 4-pole cross-point switching to support Open Mobile Terminal Platform (OMTP) 4-pole headset plugs. The architecture is designed to replace discrete MOSFET solutions and allow common third-party headphones to be used for listening to music or playing video from mobile handsets, personal media players, and portable peripheral devices.

- Supports 4-Pole OMTP Cross Point Switching for GND Connection
- Integrates a MIC switch for 3- or 4-Pole Configuration Headset Plugs
- Reduces “Pop and Click” Caused by Microphone Bias

Related Resources

- *For samples and questions, please contact: Analog.Switch@fairchildsemi.com.*

Typical Application

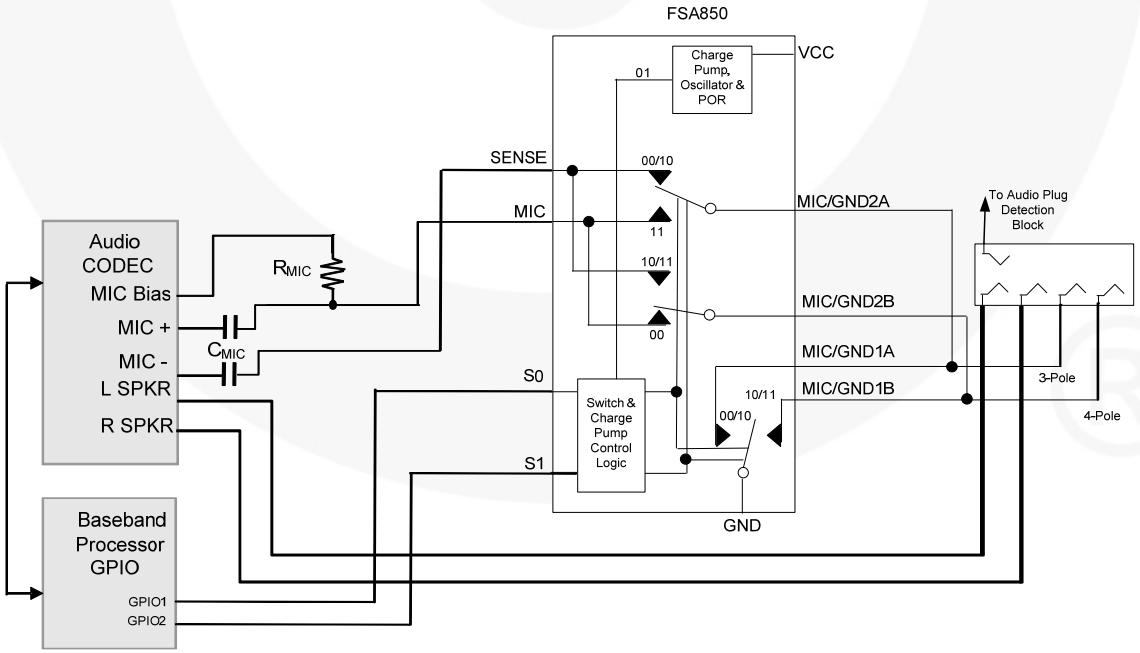

Figure 1. Typical Mobile Application

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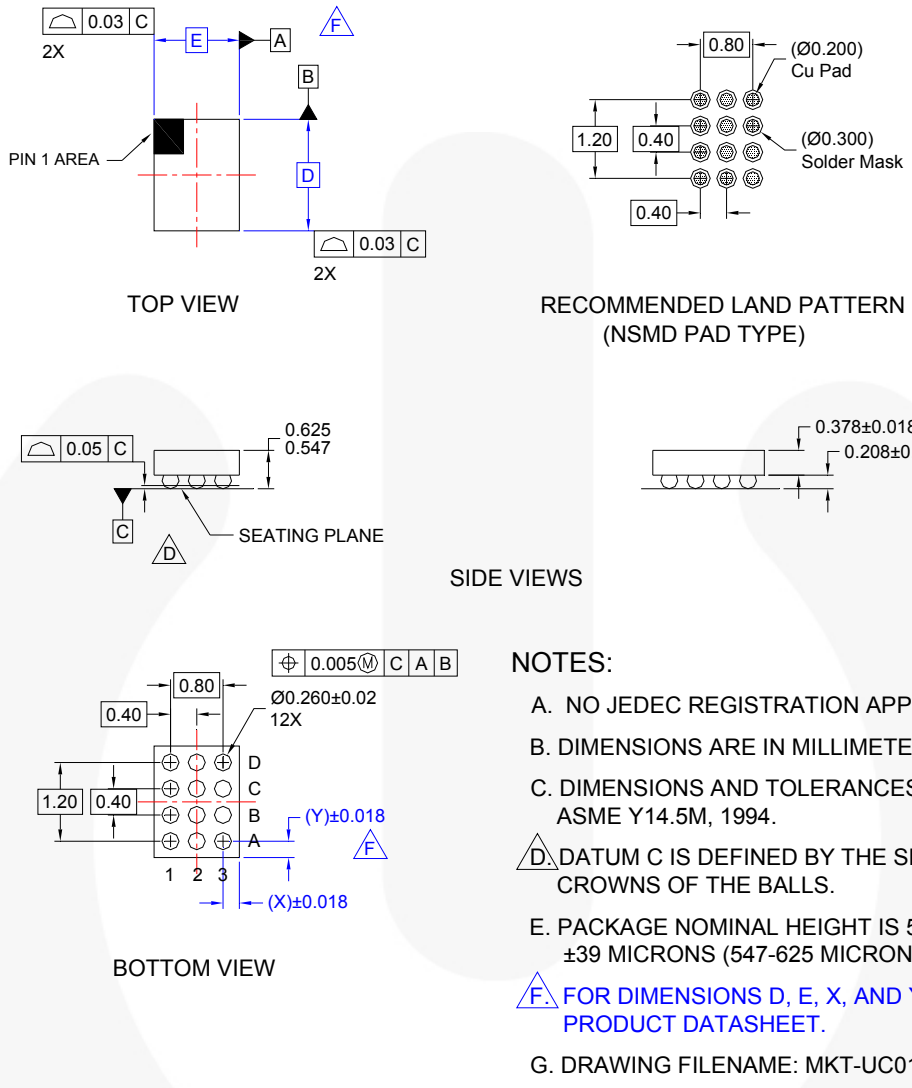
Physical Dimensions



NOTES:

A. NO JEDEC REGISTRATION APPLIES.

B. DIMENSIONS ARE IN MILLIMETERS.

C. DIMENSIONS AND TOLERANCES PER ASME Y14.5M, 1994.

D. DATUM C IS DEFINED BY THE SPHERICAL CROWNS OF THE BALLS.

E. PACKAGE NOMINAL HEIGHT IS 586 MICRONS ±39 MICRONS (547-625 MICRONS).

F. FOR DIMENSIONS D, E, X, AND Y SEE PRODUCT DATASHEET.

G. DRAWING FILENAME: MKT-UC012ACrev1.

Figure 4. 12-Bump, Wafer-Level Chip Scale Package (WLCSP), 1.2mmx1.6mm, 0.4mm Pitch

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Ordering Information

Part Number	Operating Temperature Range	Top Mark	Package	D	E	X	Y
FSA850UCX	-40 to +85°C	M5	12-Ball, Wafer-Level Chip-Scale Package (WLCSP), 3x4 Array, 0.4mm Pitch, 250 µm Ball	1.16 mm	1.56 mm	0.18 mm	0.18 mm

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