



FSA8049

Audio Jack Detection and Configuration, MIC / GND Cross Point Switch

Features

| | |
|-------------------------------|--|
| Detection | Audio Plug GND & MIC Polarity |
| V _{DD} | 2.5 to 4.4V |
| THD (MIC) | 0.002% Typical |
| ESD (IEC 61000-4-2) (Air Gap) | 15kV |
| Operating Temperature | -40°C to 85°C |
| Package | 9-Ball WLCSP 3x3 Array, 0.4mm Terminal Pitch, 250µm Ball |
| Top Mark | M3 |
| Ordering Information | FSA8049UCX |

Description

The FSA8049 is an audio jack detection switch for 3- or 4-pole accessories. The FSA8049 detects the locations of ground (GND) and microphone (MIC) poles on the audio plug and automatically routes them to the appropriate connections. This allows the end user to plug accessories, such as headsets with different audio pole configurations, into the mobile device and have them operate correctly.

- Detects 3- or 4-pole audio accessories
- Detects polarity of GND and MIC on 4-pole plugs
- Automatically routes GND and MIC to audio jack terminals

Related Resources

- For evaluation boards and questions, please contact: Analog.Switch@fairchildsemi.com.

Applications

- Cellular Phones, Smart Phones
- MP3 and Portable Multimedia Player

Typical Application

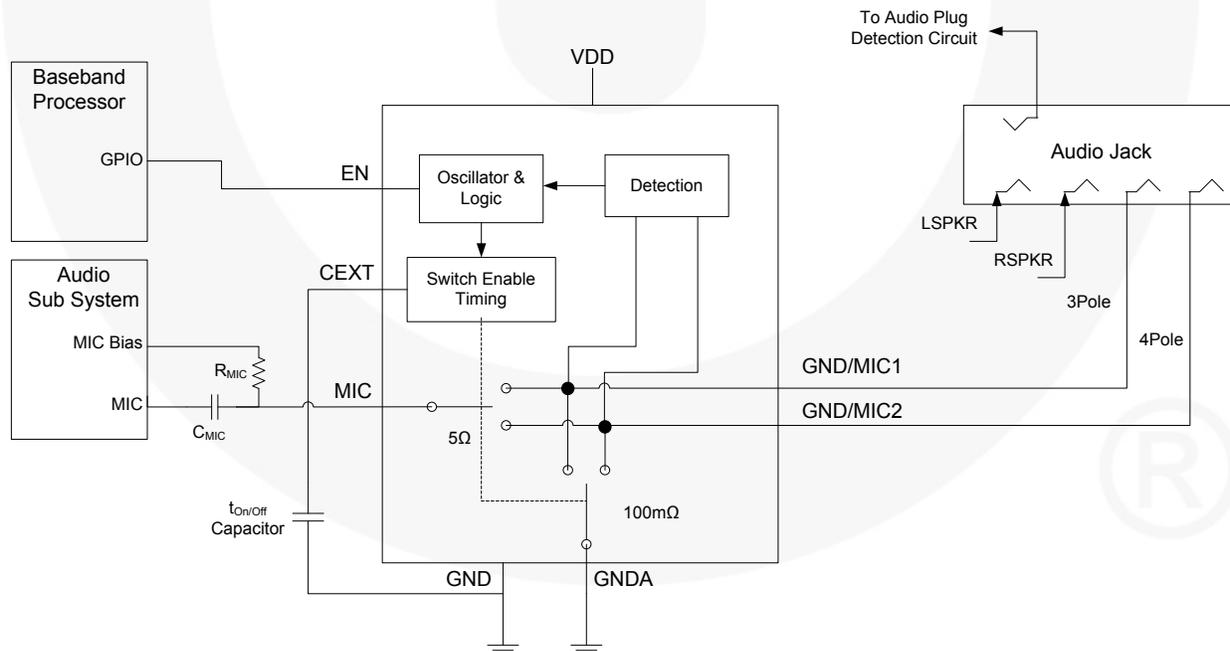


Figure 1. Mobile Phone Example

Physical Dimensions

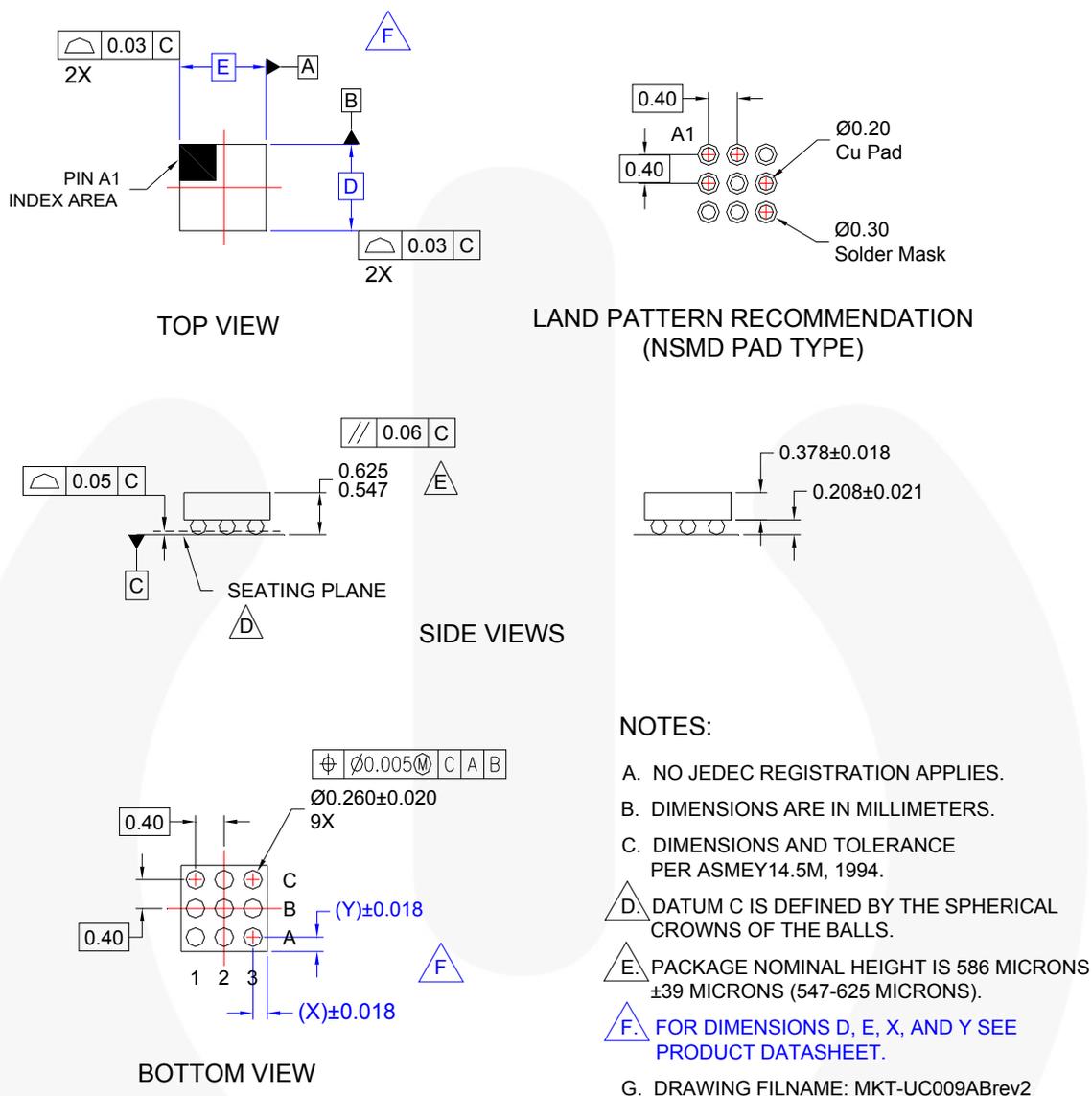


Figure 6. 9-Ball, Wafer-Level Chip-Scale Package (WLCSP), 3x3 Array, 0.4mm Pitch, 250µm Ball

Package drawings are provided as a service to customers considering Fairchild components. Drawings may change in any manner without notice. Please note the revision and/or date on the drawing and contact a Fairchild Semiconductor representative to verify or obtain the most recent revision. Package specifications do not expand the terms of Fairchild's worldwide terms and conditions, specifically the warranty therein, which covers Fairchild products.

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<http://www.fairchildsemi.com/packaging/>

Ordering Information

| Part Number | Operating Temperature Range | Top Mark | Package | D | E | X | Y |
|-------------|-----------------------------|----------|--|--------|--------|--------|--------|
| FSA8049UCX | -40 to +85°C | M3 | 9-Ball, Wafer-Level Chip-Scale Package (WLCSP), 3x3 Array, 0.4mm Pitch, 250µm Ball | 1.16mm | 1.16mm | 0.18mm | 0.18mm |

WLCSP Packing - Embossed Tape FSA8049UCX

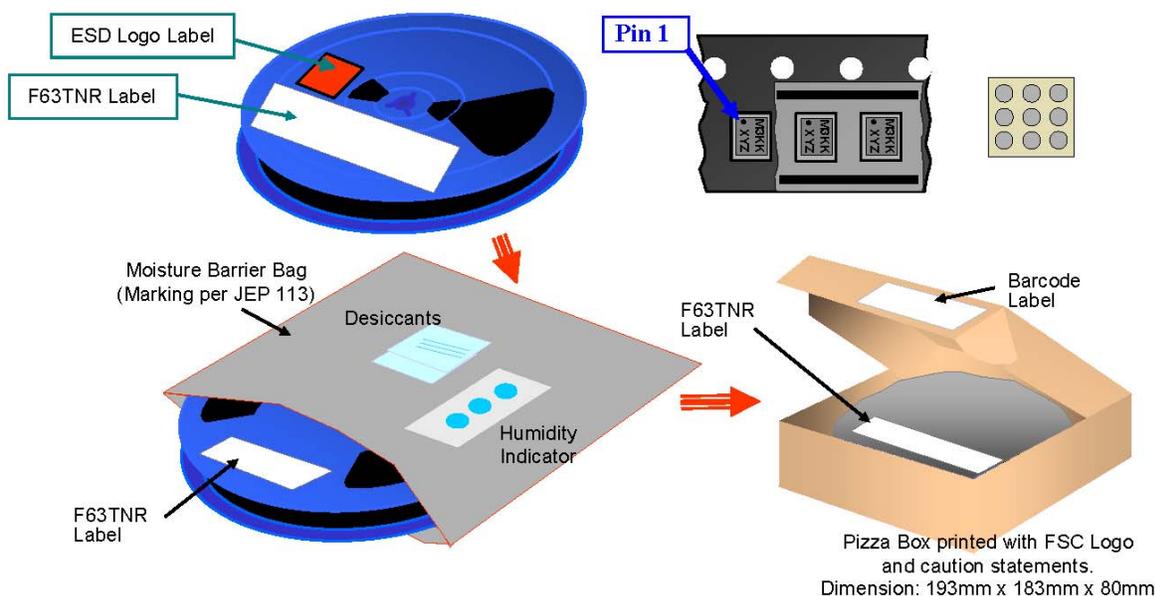


Packing Description:

WLCSP products are classified under Moisture Sensitive Level 1 and are packed in moisture barrier bag for added protection.

The carrier tape is made from dissipative polystyrene or polycarbonate resin. The cover tape is a multilayer film primarily composed of polyester film, adhesive layer, heat activated sealant, and anti-static sprayed agent. These reeled parts in standard option are shipped with 3000 units per 178 mm diameter reel. Up to three reels are packed in each intermediate box. The reels is made of polystyrene plastic (anti-static coated or intrinsic).

These full reels are individually barcode labeled and placed inside a pizza box made of recyclable corrugated brown paper with a Fairchild logo printing. The reel is packed single reel in the pizza box. And these pizza boxes are placed inside a barcode labeled shipping box which comes in different sizes depending on the number of parts shipped.



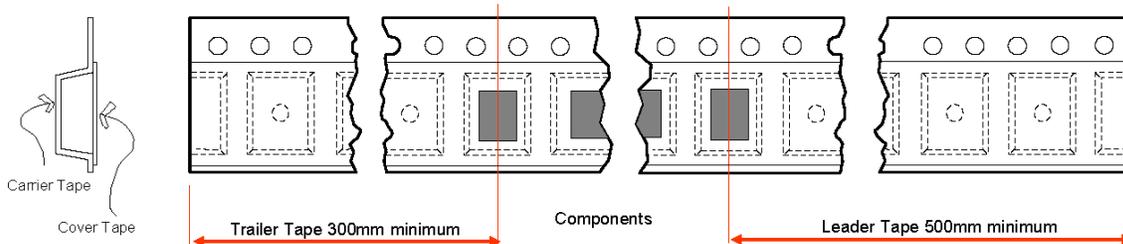
ESD Logo Label sample



F63TNR Label sample

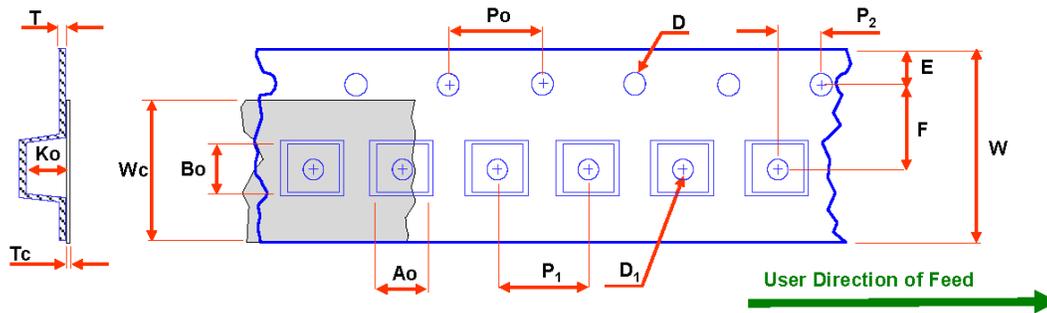
| | |
|---------------------|--|
| LOT: PMH010088888 | QTY: 3000 |
| FSID: FSA8049UCX | SPEC: |
| D/C1: P1103AA QTY1: | SPEC REV: 2 nd Level Interconnect |
| D/C2: QTY2: | Green Component |
| | 1. Category G1 |
| | 2. Maximum safe temperature 260 deg C |
| | 3. MSL 1 |
| | FAIRCHILD SEMICONDUCTOR (F63TNR)6.0 |

Tape Leader and Trailer Configuration



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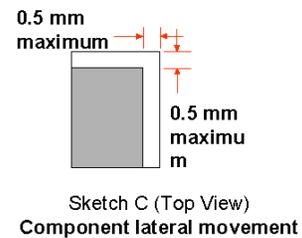
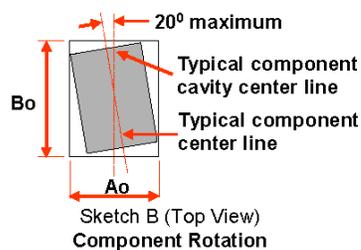
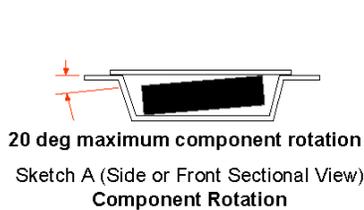
WLCSP Embossed Tape Dimension



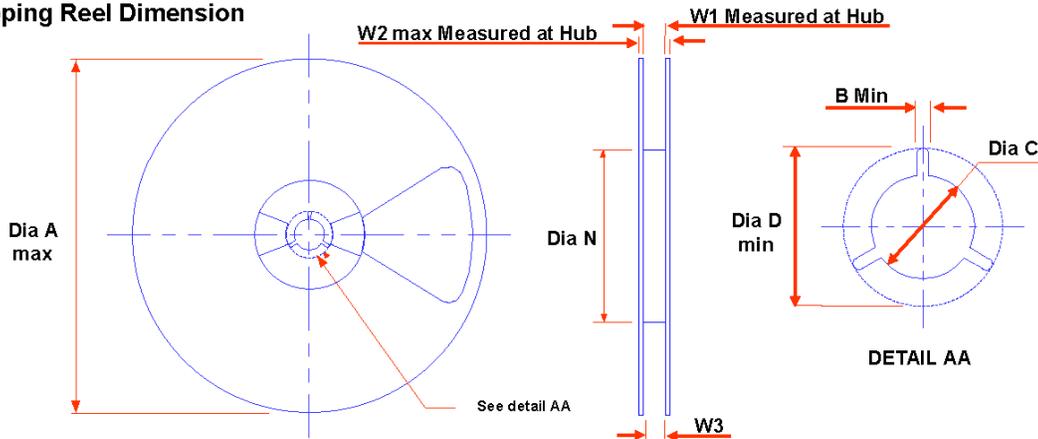
Dimensions are in millimeters

| Package | Ao | Bo | D | D ₁ | E | F | Ko | P ₁ | Po | P ₂ | T | Tc | W | Wc |
|------------|---------|---------|---------|----------------|--------|--------|---------|----------------|-----|----------------|-------|----------|--------|-----|
| | +/-0.05 | +/-0.05 | +/-0.05 | min. | +/-0.1 | +/-0.1 | +/-0.05 | TYP | TYP | +/-0.05 | TYP | +/-0.005 | +/-0.3 | TYP |
| FSA8049UCX | 1.35 | 1.35 | 1.55 | 0.6 | 1.75 | 3.5 | 0.76 | 4 | 4 | 2.0 | 0.254 | 0.06 | 8 | 5.3 |

Notes: Ao, Bo, and Ko dimensions are determined with respect to the EIA /JEDEC RS-481 rotational and lateral movement requirements (see sketches A, B, and C).



Shipping Reel Dimension



Dimensions are in millimeters

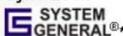
| Tape Width | Dia A max | Dim B min | Dia C +.5/- .2 | Dia D min | Dim N min | Dim W1 +2/-0 | Dim W2 max | Dim W3 (LSL - USL) |
|------------|-----------|-----------|----------------|-----------|-----------|--------------|------------|--------------------|
| 8 | 178 | 1.5 | 13 | 20.2 | 55 | 8.4 | 14.4 | 7.9~10.4 |

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