



FSA8108

Audio Jack Detection and Configuration Switch, Supports Volume Up/Down & Send/End Keys

Features

Detection	Audio Plug Connection Volume Up/Down Key Press Send/End Key Press
V _{DD}	2.7 to 4.5V
V _{IO}	1.6V to V _{DD}
THD (MIC)	0.01% Typical
LDO Output for MIC Bias Voltage	2.4V
ESD (IEC 61000-4-2)	15kV
Operating Temperature	-40°C to 85°C
Package	12-Ball WLCSP
Top Mark	G6
Ordering Information	FSA8108BUCX

Description

The FSA8108 is an audio jack detection switch for 3- or 4-pole accessories that detects the audio plug connection. The detection circuit monitors the microphone bias voltage to detect a volume up/down or send/end key press. For system flexibility, the FSA8108 features an I²C port with registers to allow programmability of AC timing specifications.

- Detects 3- or 4-Pole Audio Accessories
- Removes Audio Jack Pop-and-Click Caused by MIC Bias
- Detects Key Press: Volume Up/Down, Send/End
- Stuck Send/End Key Recovery
- LDO Output for MIC Bias Voltage

Related Resources

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

Applications

- Cellular Phones, Smart Phones
- MP3 and PMP (Portable Media Player)

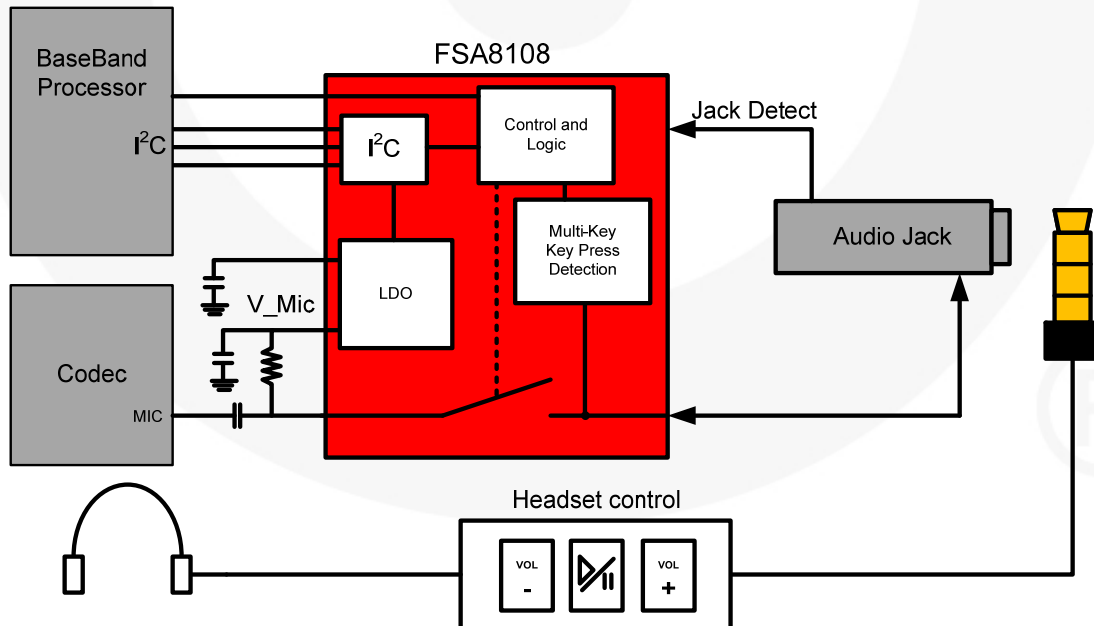
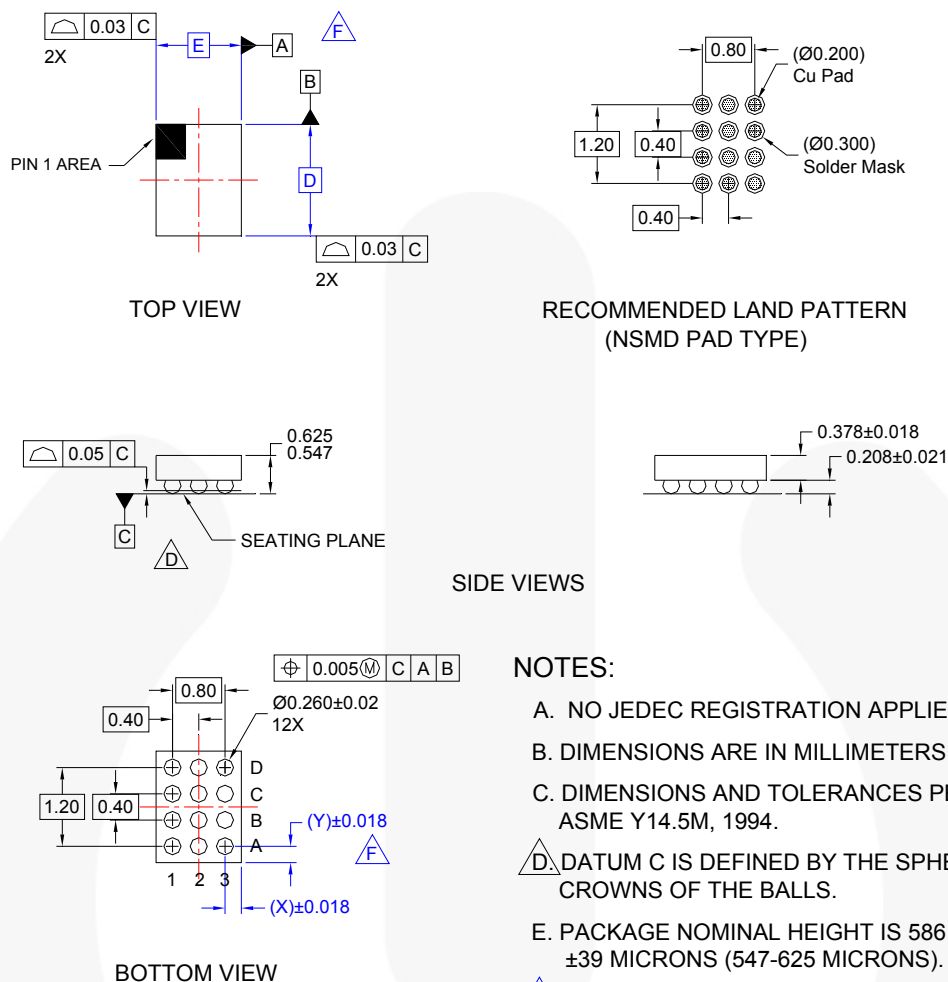


Figure 1. Typical Application Diagram

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 14. 12-Ball, 3x4 Array, 0.4mm Pitch, 250µm Ball, Wafer-Level Chip-Scale Package (WLCSP)

Nominal Values

Bump Pitch	Overall Package Height	Silicon Thickness	Solder Bump Height	Solder Bump Diameter
0.4mm	0.586mm	0.378mm	0.208mm	0.260mm

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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Ordering Information

Part Number	Operating Temperature Range	Top Mark	Package	D	E	X	Y
FSA8108BUCX	-40 to +85°C	G6	12-Ball, 3x4 Array, 0.4mm Pitch, 250µm Ball, Wafer-Level Chip-Scale Package	1.56mm	1.16mm	0.18mm	0.18mm

WLCSP Packing - Embossed Tape FSA8108BUCX

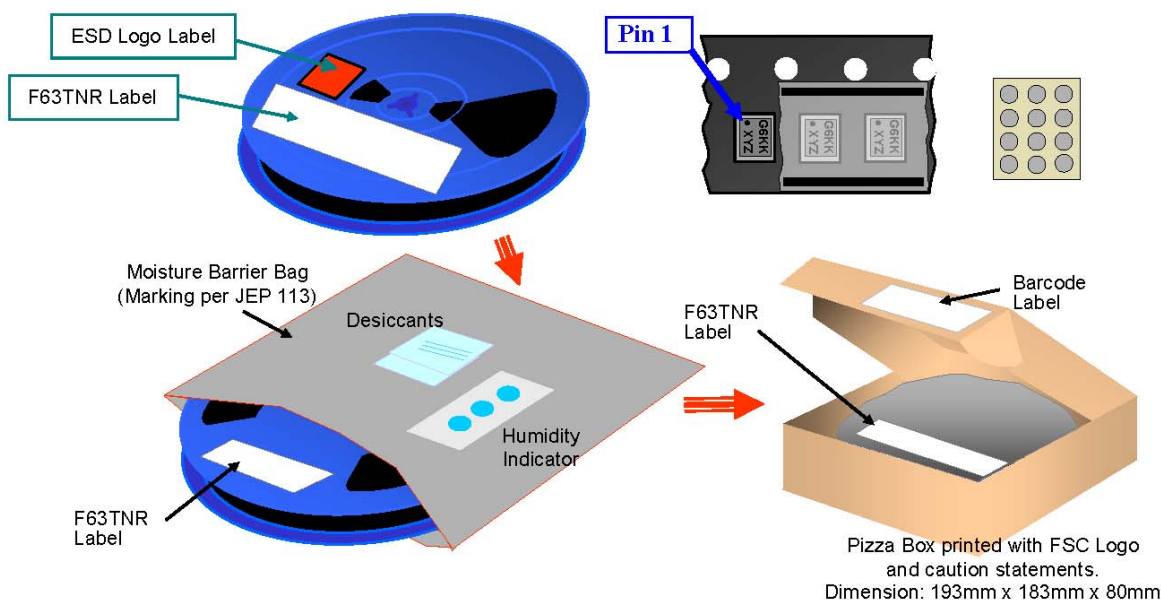


Packing Description:

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.



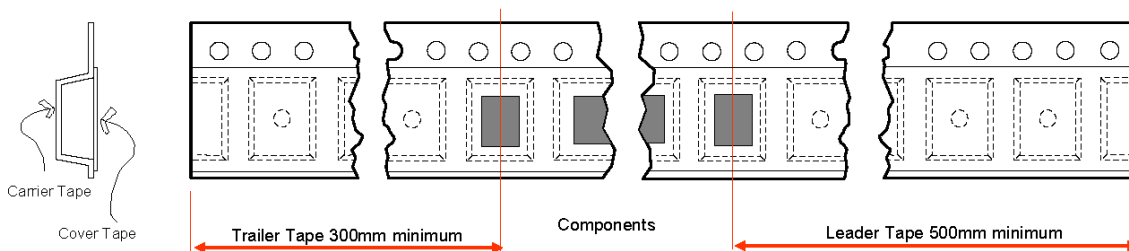
ESD Logo Label sample



F63TNR Label sample

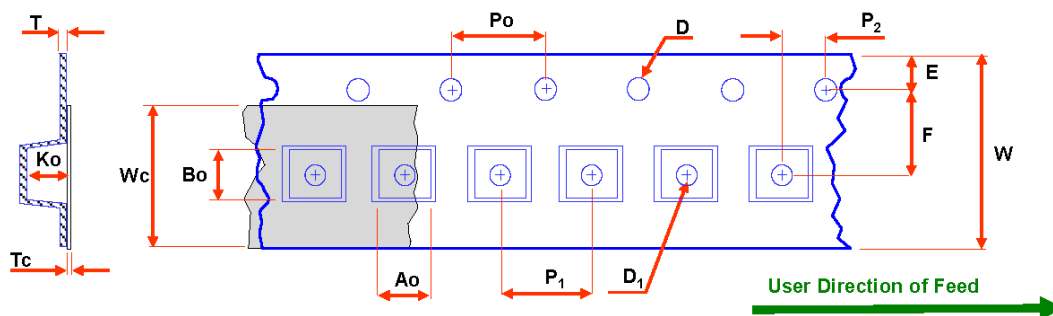
LOT: PMH010088888	QTY: 3000
FSID: FSA8108BUCX	SPEC:
D/C1: P1103AA QTY1:	SPEC REV: 2 nd Level Interconnect
D/C2: QTY2:	1. Category G1
Green Component	2. Maximum safe temperature 260 deg C
RoHS COMPLIANT	3. MSL 1
	FAIRCHILD SEMICONDUCTOR (F63TNR)6.0

Tape Leader and Trailer Configuration



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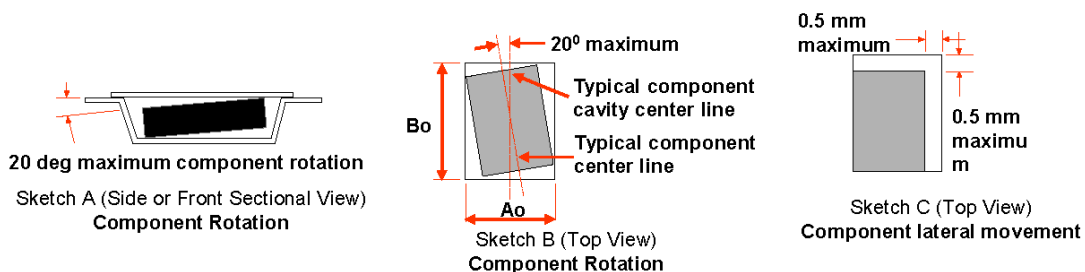
WLCSP Embossed Tape Dimension



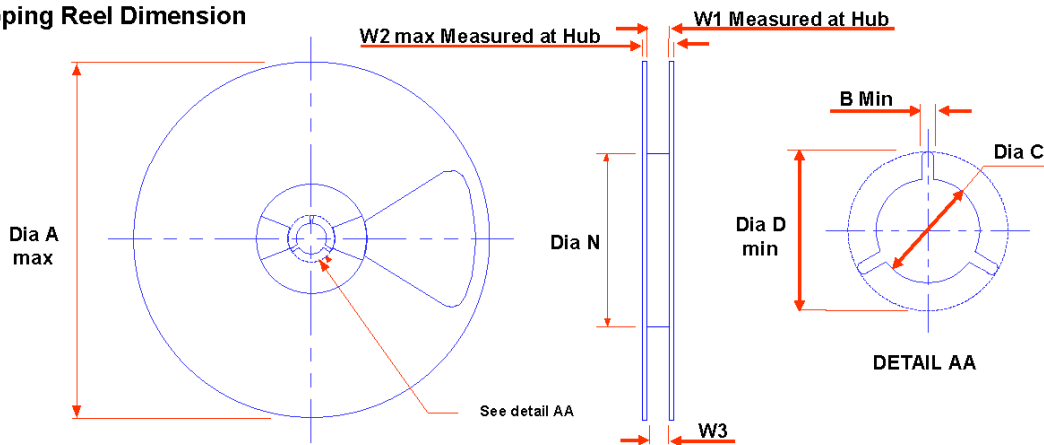
Dimensions are in millimeters

Package	A _o +/-0.05	B _o +/-0.05	D +0.10	D ₁ min.	E +/-0.1	F +/-0.1	K _o +/-0.05	P ₁ TYP	P _o TYP	P ₂ +/-0.05	T TYP	T _c +/-0.005	W +/-0.3	W _c TYP
FSA8108BU CX	1.24	1.70	1.50	0.6	1.75	3.5	0.76	4	4	2.0	0.25	0.06	8	5.3

Notes: A_o, B_o, and K_o 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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