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Please note: As part of the Fairchild Semiconductor integration, some of the Fairchild orderable part numbers will need to change in order to meet ON Semiconductor's system requirements. Since the ON Semiconductor product management systems do not have the ability to manage part nomenclature that utilizes an underscore (_), the underscore (_) in the Fairchild part numbers will be changed to a dash (-). This document may contain device numbers with an underscore (_). Please check the ON Semiconductor website to verify the updated device numbers. The most current and up-to-date ordering information can be found at www.onsemi.com. Please email any questions regarding the system integration to Fairchild_questions@onsemi.com.

August 2015

FPF3488
SIDO Over-Voltage Protection Load Switch

Features

- Single Input Dual Output (SIDO) Switch
  - V_{BUS} to V_{OUT} Path
  - V_{BUS} to SYS Path
- Surge Protection under IEC 61000-4-5
  - V_{BUS}: ±100 V
- Input Voltage Range
  - V_{BUS}: 2.7 V ~ 13.5 V
- Max. Continuous Current Capability
  - V_{OUT} Path: 3.5 A
  - SYS Path: 6 A
- Ultra Low On-Resistance
  - V_{OUT} Path: Typ. 28 mΩ
  - SYS Path: Typ. 33 mΩ
- Over-Voltage Protection (OVP)
  - V_{OUT} Path: 13.9 V ±400 mV
  - SYS Path: 5.25 V ±250 mV
- Always ON LDO Output POK for V_{BUS} Detection and System Power Up without Battery
- Active LOW Control for V_{BUS} to V_{OUT} Path
- Active HIGH Control for V_{BUS} to SYS Path
- Active HIGH Control for Device Shutdown
- CMOS output FLAG for VBUS to SYS Path
- RCB for VBUS to SYS Path
- Over-Temperature Protection (OTP)

Description

The FPF3488 features a Single Input Dual Output (SIDO) power switch, which offers surge protection and Over-Voltage Protection (OVP), to protect downstream components and enhancing overall system robustness.

Channel one (V_{BUS} to V_{OUT}) is an active-low, 28 V/3.5 A rated, power MOSFET switch with an internal clamp supporting ±100 V surge protection, fixed OVP at 13.9 V (±400 mV). Channel two (V_{BUS} to SYS) is a active-high, 6 V/6 A rated, power MOSFET, fixed OVP at 5.25 V (±250 mV) and Reverse Current Blocking (RCB) during its OFF State.

POK is paired with always ON LDO to power downstream devices when VBUS is greater than 2.7 V, regardless of OVLO, EN1 and EN2 State. This provides system power supply without battery.

The FPF3488 is available in a 28-bump, 1.67 mm x 2.96 mm Wafer-Level Chip-Scale Package (WL-CSP) with 0.4 mm pitch.

Applications

- Mobile Handsets and Tablets
- Wearable Devices

Additional Information

For the full datasheet, please contact a Fairchild Sales Representative.

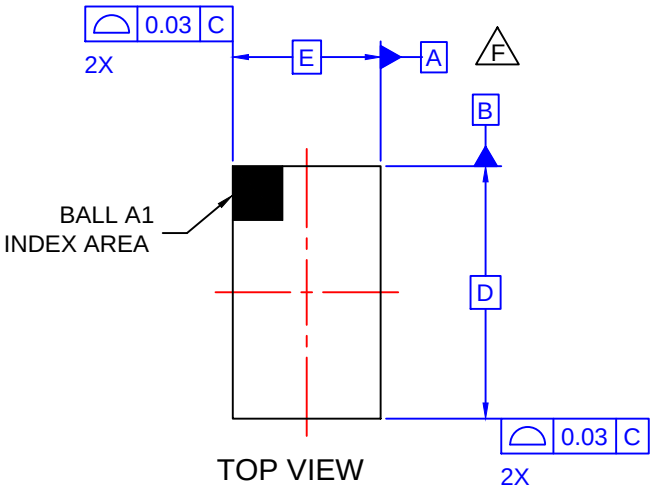
Ordering Information

Part Number	Operating Temperature Range	Top Mark	Package	Packing Method
FPF3488UCX	-40°C – +85°C	VE	28-Ball, 0.4 mm Pitch WLCSP	Tape & Reel

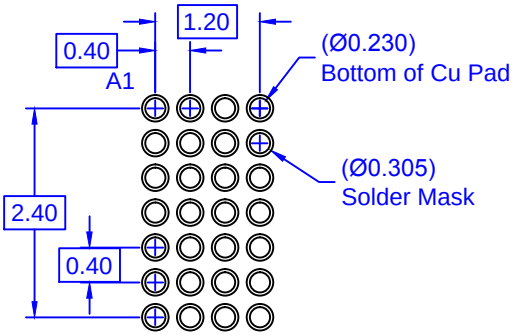
Product-Specific Dimensions

This table applies to the WLCSP package dimensions on the following page.

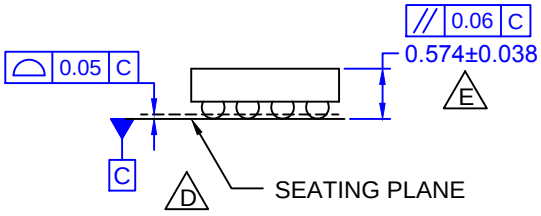
D	E	X	Y
2960 µm ±30 µm	1670 µm ±30 µm	235 µm ±18 µm	280 µm ±18 µm

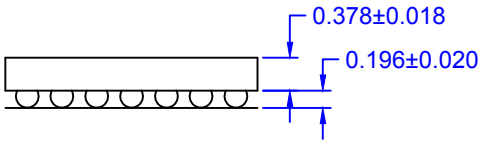


TOP VIEW

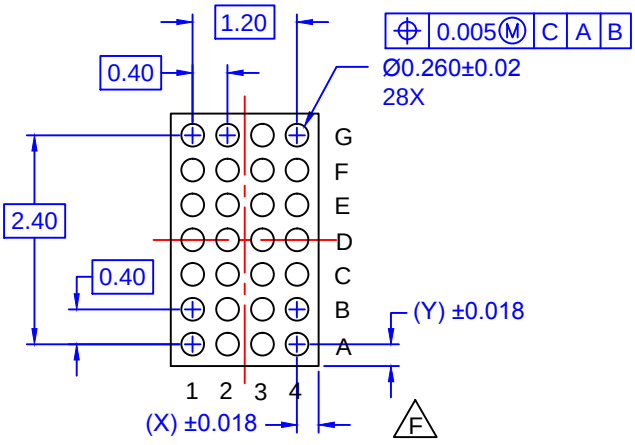


RECOMMENDED LAND PATTERN
(NSMD PAD TYPE)





SIDE VIEWS



BOTTOM VIEW

NOTES

A. NO JEDEC REGISTRATION APPLIES.
B. DIMENSIONS ARE IN MILLIMETERS.
C. DIMENSIONS AND TOLERANCE PER ASMEY14.5M, 2009.
D. DATUM C IS DEFINED BY THE SPHERICAL CROWNS OF THE BALLS.
E. PACKAGE NOMINAL HEIGHT IS 574 ± 38 MICRONS (536-612 MICRONS).
F. FOR DIMENSIONS D, E, X, AND Y SEE PRODUCT DATASHEET.
G. DRAWING FILENAME: MKT-UC028AB REV1.

FAIRCHILD

PUBLICATION ORDERING INFORMATION

LITERATURE FULFILLMENT:
Literature Distribution Center for ON Semiconductor
19521 E. 32nd Pkwy, Aurora, Colorado 80011 USA
Phone: 303−675−2175 or 800−344−3860 Toll Free USA/Canada
Fax: 303−675−2176 or 800−344−3867 Toll Free USA/Canada
Email: orderlit@onsemi.com

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Order Literature: http://www.onsemi.com/orderlit

For additional information, please contact your local Sales Representative