



FPF1048B

IntelliMAX™ 3A-Capable, Slew-Rate-Controlled Load Switch with True Reverse Current Blocking

Features

- Input Voltage Operating Range: 1.5V to 5.5V
- Typical $R_{DS(ON)}$:
 - 21mΩ at $V_{IN}=5.5V$
 - 23mΩ at $V_{IN}=4.5V$
 - 41mΩ at $V_{IN}=1.8V$
 - 90mΩ at $V_{IN}=1.5V$
- Slew Rate/Inrush Control with t_R : 2.7ms (Typ.)
- 3A Maximum Continuous Current Capability
- Low Off Switch Current: <1μA
- True Reverse Current Blocking (TRCB)
- Logic CMOS IO Meets JESD76 Standard for GPIO Interface and Related Power Supply Requirements
- ESD Protected:
 - Human Body Model: >8kV
 - Charged Device Model: >1.5kV
 - IEC 61000-4-2 Air Discharge: >15kV
 - IEC 61000-4-2 Contact Discharge: >8kV

Applications

- Smart Phones, Tablet PCs
- Storage, DSLR, and Portable Devices

Description

The FPF1048B advanced load management switch targets applications requiring a highly integrated solution. It disconnects loads powered from the DC power rail (<6V) with stringent off-state current targets and high load capacitances (up to 100μF). The FPF1048B consists of slew-rate controlled low-impedance MOSFET switch (23mΩ typical) and integrated analog features. The slew-rate controlled turn-on characteristic prevents inrush current and the resulting excessive voltage droop on power rails.

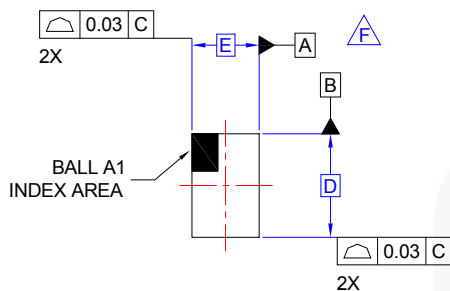
The FPF1048B has a True Reverse Current Blocking (TRCB) function that obstructs unwanted reverse current from V_{OUT} to V_{IN} during both ON and OFF states. The exceptionally low off-state current drain (<1μA maximum) facilitates compliance with standby power requirements. The input voltage range operates from 1.5V to 5.5V_{DC} to support a wide range of applications in consumer, optical, medical, storage, portable, and industrial-device power management. Switch control is managed by a logic input (active HIGH) capable of interfacing directly with low-voltage control signal / General-Purpose Input / Output (GPIO) without an external pull-down resistor.

The device is packaged in advanced, fully “green” compliant, 1.0mm x 1.5mm, Wafer-Level Chip-Scale Package (WLCSPP) with backside lamination.

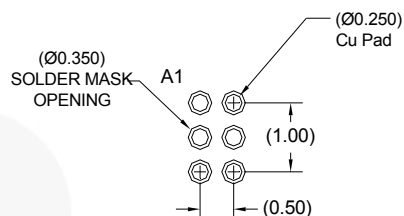
Ordering Information

Part Number	Top Mark	Switch R_{ON} (Typical) at 4.5V _{IN}	Input Buffer	Output Discharge	ON Pin Activity	t_R	Package
FPF1048BUCX	RA	23mΩ	CMOS	NA	Active HIGH	2.7ms	6-Ball WLCSPP, 2x3 Array, 0.5mm Pitch, 300μm Ball

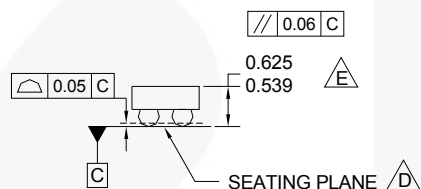
Physical Dimensions



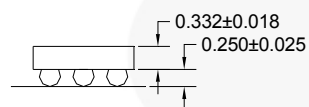
TOP VIEW



RECOMMENDED LAND PATTERN
(NSMD PAD TYPE)

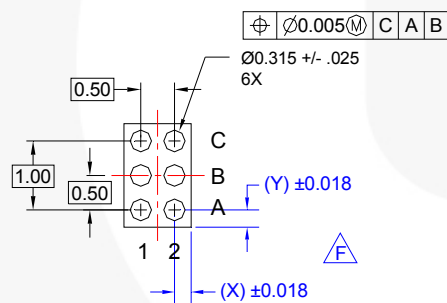


SIDE VIEWS



NOTES:

- A. NO JEDEC REGISTRATION APPLIES.
- B. DIMENSIONS ARE IN MILLIMETERS.
- C. DIMENSIONS AND TOLERANCE PER ASMEY14.5M, 1994.
-  D. DATUM C IS DEFINED BY THE SPHERICAL CROWNS OF THE BALLS.
-  E. PACKAGE NOMINAL HEIGHT IS 582 MICRONS ± 43 MICRONS (539-625 MICRONS).
-  F. FOR DIMENSIONS D, E, X, AND Y SEE PRODUCT DATASHEET.
- G. DRAWING FILNAME: MKT-UC006AFrev2.



BOTTOM VIEW

Figure 29. 6-Ball WLCSP, 2x3 Array, 0.5mm Pitch, 300µm Ball

Product-Specific Dimensions

Product	D	E	X	Y
FPF1048BUCX	1460µm ±30µm	960µm ±30µm	230µm	230µm

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