# e-Fuse Power Switch with DevSleep SATA Interface

(ACTIVE) TIDA-00429

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## Description

TPS25940A provides a dedicated DevSleep interface terminal (DEVSLP) to force the device in low power mode. The DEVSLP pin is compatible with standard hardware signals asserted from the host controller. When pulled high, it puts the device in low power DevSleep mode. In this mode, the quiescent current consumption of the TPS25940A is limited 95 µA typical. The key challenge that DevSleep feature of TPS25940A overcome, is to keep the device active, even when the device is forced in DeVSleep mode, the output voltage remains active and overload current limit is set to I(DEVSLP(LIM). Also, all other protections are still active and ensuring the safety of the system even in DevSleep mode.

TIDA-00429 Board

## Features

- A dedicated DevSleep interface terminal (DEVSLP) to force the device in low power mode
- 95uA quiescent current consumption During DevSleep Mode
- Output voltage and other protection features remains active even when device is in DevSleep Mode
- No external controller and circuitry required

Fully assembled board (shown above) developed for testing and performance validation only, not available for sale.

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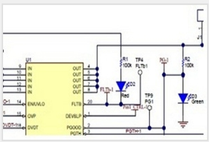
### Schematic/Block Diagram

Quickly understand overall system functionality.



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### Test Data

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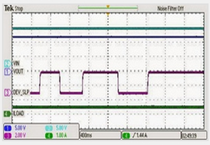

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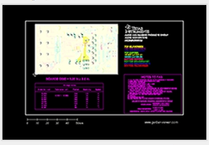
### Design Files

Download ready-to-use system files to speed your design process. Get Viewer.



Download Design Files

## Bill of Materials (BOM)

Find the complete list of components in this reference design.

Download BOM

## Parametrics

| | TIDA-00429 |
|---|---|
| Vin (Min) (V) | 2.7 |
| Vin (Max) (V) | 18 |
| Vout (V) | 12 |
| Iout (Max) (A) | 500 |
| Isolated/Non-Isolated | Non-Isolated |
| Input Type | DC |
| Topology | Hot Swap |

## TI Devices (1)

Order samples, get tools and find more information on the TI products in this reference design.

| Part Number | Name | Product Family | Sample & Buy | Design Kits & Evaluation Modules |
|---|---|---|---|---|
| TPS25940 | 18V, 5A, 42mΩ eFuse with Integrated Reverse Current Protection and DevSleep Support | Protection, Monitoring and Hot Swap | Sample & Buy | View Design Kits & Evaluation Modules |

## Technical Documents

### User guides (1)

| Title | Abstract | Type | Size (KB) | Date | Views |
|---|---|---|---|---|---|
| TIDA-00429 Test Results | | PDF | 238 | 20 Feb 2015 | 126 |

### Design files (3)

| Title | Abstract | Type | Size (KB) | Date | Views |
|---|---|---|---|---|---|
| TIDA-00429 Assembly Drawing | | PDF | 220 | 20 Feb 2015 | 14 |
| TIDA-00429 BOM | | PDF | 62 | 20 Feb 2015 | 91 |
| TIDA-00429 Schematic | | PDF | 40 | 20 Feb 2015 | 152 |

## Related Tools & Software

### Software (1)

TIDA-00429 Gerber
(ZIP, 206 KB) 45 views, 20 Feb 2015

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