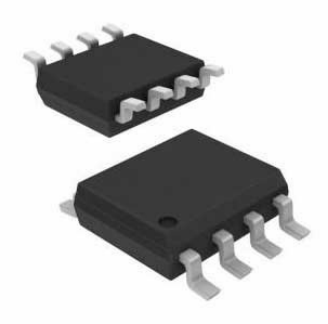
TPS2034DR

USB Power Switch Single 5.5V 3A 8-Pin SOIC T/R

Manufacturer:	Texas Instruments, Inc
Package/Case:	SOP8
Product Type:	Switches
RoHS:	RoHS Compliant/Lead free
Lifecycle:	Active



Images are for reference only

Inquiry

General Description

The TPS203x family of power distribution switches is intended for applications where heavy capacitive loads and short circuits are likely to be encountered. These devices are 50-m N-channel MOSFET high-side power switches. The switch is controlled by a logic enable compatible with 5-V logic and 3-V logic. Gate drive is provided by an internal charge pump designed to control the power-switch rise times and fall times to minimize current surges during switching. The charge pump requires no external components and allows operation from supplies as low as 2.7 V.

When the output load exceeds the current-limit threshold or a short is present, the TPS203x limits the output current to a safe level by switching into a constant-current mode, pulling the overcurrent (OC) logic output low. When continuous heavy overloads and short circuits increase the power dissipation in the switch, causing the junction temperature to rise, a thermal protection circuit shuts off the switch to prevent damage. Recovery from a thermal shutdown is automatic once the device has cooled sufficiently. Internal circuitry ensures the switch remains off until valid input voltage is present.

The TPS203x devices differ only in short-circuit current threshold. The TPS2030 limits at 0.3-A load, the TPS2031 at 0.9-A load, the TPS2032 at 1.5-A load, the TPS2033 at 2.2-A load, and the TPS2034 at 3-A load (see Available Options). The TPS203x is available in an 8-pin small-outline integrated-circuit (SOIC) package and in an 8-pin dual-in-line (DIP) package and operates over a junction temperature range of -40°C to 125°C.

Key Features

33-m (5-V Input) High-Side MOSFET Switch

Short-Circuit and Thermal Protection

Overcurrent Logic Output

Operating Range: 2.7 V to 5.5 V

Logic-Level Enable Input

Typical Rise Time: 6.1 ms

Undervoltage Lockout

Maximum Standby Supply Current: 10 µA

No Drain-Source Back-Gate Diode

Available in 8-pin SOIC and PDIPPackages

Ambient Temperature Range, -40°C to 85°C

2-kV Human-Body-Model, 200-VMachine-Model ESD Protection

UL Listed— File No. E169910

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Recommended For You

TPD3S014DBVR

Texas Instruments, Inc

SOT23-6

TPS2065CDBVR

Texas Instruments, Inc

SOT23-5

TPS2557DRBT

Texas Instruments, Inc

SON8

TPS2042BDR

Texas Instruments, Inc

SOP8

TPS2051BDR

Texas Instruments, Inc

SOP8

TPL7407LPWR

Texas Instruments, Inc

TSSOP16

TPS23753APWR

Texas Instruments, Inc

TSSOP14

TPS2116DRLR

Texas Instruments, Inc

SOT5X3-8

TPS259460ARPWR

Texas Instruments, Inc

VQFN-10

TPS23751PWPR

Texas Instruments, Inc

HTSSOP16

TPS65150QPWPRQ1

Texas Instruments, Inc

HTSSOP-24

TPS2410PWR

Texas Instruments, Inc

TSSOP-14

TPS22914BYFPR

Texas Instruments, Inc

DSBGA4

TPS2115ADRBR

Texas Instruments, Inc

VSON8

TPS2113ADRBR

Texas Instruments, Inc

SON8