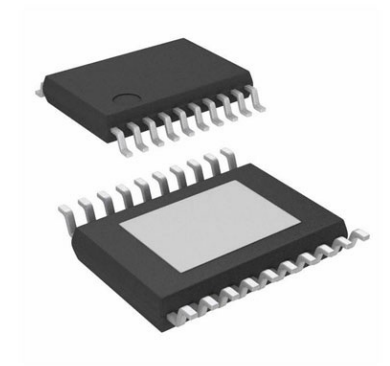


Power Over Ethernet PSE Controller 0V 57V 30W 20-Pin HTSSOP EP



Images are for reference only

[Inquiry](#)

Manufacturer: [Texas Instruments, Inc](#)

Package/Case: HTSSOP20

Product Type: Power Management ICs

RoHS: RoHS Compliant/Lead free 

Lifecycle: Active

General Description

The TPS23754 and TPS23756 devices have a combined power-over-ethernet(PoE), powered-device (PD) interface, and current-mode DC-DC controller optimized specifically for isolated converters. The PoE interface supports the IEEE 802.3at standard.

The TPS23754 and TPS23756 support a number of input voltage ORing options including highest voltage, external adapter preference, and PoE preference. These features allow the designer to determine which power source will carry the load under all conditions.

The PoE interface features the new extended hardware classification necessary for compatibility with high-power midspan power sourcing equipment (PSE) per IEEE 802.3at. The detection signature pin can also be used to force power from the PoE source off. Classification can be programmed to any of the defined types with a single resistor.

The DC-DC controller features two complementary gate drivers with programmable dead time. This simplifies the design of active-clamp forward converters or optimized gate drive for highly-efficient flyback topologies. The second gate driver may be disabled if desired for single MOSFET topologies. The controller also features internal soft start, bootstrap start-up source, current-mode compensation, and a 78% maximum duty cycle. A programmable and synchronizable oscillator allows design optimization for efficiency and eases use of the controller to upgrade existing power supply designs. Accurate programmable blanking, with a default period, simplifies the usual current-sense filter design trade-offs.

The TPS23754 device has a 15-V converter start-up while the TPS23756 device has a 9-V converter start-up. The TPS23754-1 replaces the PPD pin with a no-connect for increased pin spacing.

Key Features

Powers up to 30-W (Input) PDs

DC-DC Control Optimized for Isolated Converters

Supports High-Efficiency Topologies

Complete PoE Interface

Enhanced Classification per IEEE 802.3at With Status Flag

Adapter ORing Support

Programmable Frequency With Synchronization

Robust 100-V, 0.5- μ s Hotswap MOSFET

-40°C to 125°C Junction Temperature Range

Industry Standard PowerPAD[®] HTSSOP-20

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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

TPS65150QPWRQ1

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