
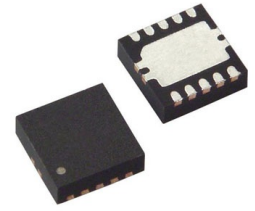


Conv DC-DC 2.75V to 6V Synchronous Step Down Single-Out 0.6V to 5.5V 4A Automotive 9-Pin VQFN-HR T/R

Manufacturer:	Texas Instruments, Inc
Package/Case:	VQFN-9
Product Type:	Power Management ICs
RoHS:	RoHS Compliant/Lead free 
Lifecycle:	Active



Images are for reference only

[Inquiry](#)

General Description

The TPS6281x-Q1 is family of pin-to-pin 1-A, 2-A, 3-A, and 4-A synchronous step-down DC/DC converters. All devices offer high efficiency and ease of use. The TPS6281x-Q1 family is based on a peak current mode control topology. The TPS6281x-Q1 is designed for automotive applications such as infotainment and advanced driver assistance systems. Low resistive switches allow up to 4-A continuous output current at high ambient temperature. The switching frequency is externally adjustable from 1.8 MHz to 4 MHz and can also be synchronized to an external clock in the same frequency range. In PWM/PFM mode, the TPS6281x-Q1 automatically enter Power Save Mode at light loads to maintain high efficiency across the whole load range. The TPS6281x-Q1 provide 1% output voltage accuracy in PWM mode which helps design a power supply with high output voltage accuracy. The SS/TR pin allows setting the start-up time or forming tracking of the output voltage to an external source. This allows external sequencing of different supply rails and limiting the inrush current during start-up.

The TPS6281x-Q1 is available in a 3-mm × 2-mm VQFN package with wettable flanks.

Key Features

AEC-Q100 qualified for automotive applications
Device temperature grade 1: -40°C to $+125^{\circ}\text{C}$ T_A

Functional Safety-Capable
Documentation available to aid functional safety system design

Input voltage range: 2.75 V to 6 V

Family of 1 A, 2 A, 3 A and 4 A

Quiescent current 15- μA typical

Output voltage from 0.6 V to 5.5 V

Output voltage accuracy $\pm 1\%$ (PWM operation)

Adjustable soft start

Forced PWM or PWM and PFM operation

Adjustable switching frequency of 1.8 MHz to 4 MHz

Precise ENABLE input allows
User-defined undervoltage lockout

Exact sequencing

100% duty cycle mode

Active output discharge

Spread spectrum clocking - optional

Power good output with window comparator

Package with wettable flanks

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