

LCD Driver 2.5V/3.3V/5V Automotive 24-Pin HTSSOP EP T/R

Manufacturer:	Texas Instruments, Inc	<input type="text" value="TPS65150QPWPRQ1 Image"/>
Package/Case:	HTSSOP-24	Images are for reference only
Product Type:	Optoelectronics	<input type="button" value="Inquiry"/>
RoHS:	RoHS Compliant/Lead free 	
Lifecycle:	Active	

General Description

The TPS65150-Q1 is an integrated power-supply for automotive LCD applications. The device integrates a boost converter for the source voltage and two regulated adjustable charge pump drivers for the gate voltages. For reduced external cost, improved picture quality and reduced image sticking, the device includes a VCOM buffer and a gate-voltage shaping function.

The device is designed to operate from a supply voltage of 1.8 V to 6 V making it ideal for automotive LCD applications using a fixed 3.3 V or 5 V input-voltage rail.

Adjustable power-on sequencing for VGL and VGH allow the device to be optimized for a variety of displays.

For protection from system malfunction, the TPS65150-Q1 integrates an adjustable shutdown latch feature. The device monitors the outputs ($V(VS)$,

$V(VGL)$, $V(VGH)$); and, as soon as one of the outputs falls below its power-good threshold for longer than the adjustable fault delay time, the device enters shutdown.

Key Features

AEC-Q100 Qualified:

Device Temperature Grade 1: -40°C to 125°C Junction Temperature

Device HBM ESD Classification According to AEC - Q100-002

Device CDM ESD Classification According to AEC - Q100-011

Input Voltage Range: 1.8 V to 6 V

$V_{(\text{VS})}$ Boost Converter

Up to 15 V Output Voltage

< 1% Output Voltage Accuracy

2-A Switch Current Limit

$V_{(\text{VGH})}$ Positive Regulated Charge Pump Driver

Up to 30 V Output Voltage

Gate Voltage Shaping

$V_{(\text{VGL})}$ Negative Regulated Charge Pump Driver

Down to -15 V Output Voltage

Integrated VCOM Buffer

Adjustable Power On Sequencing

Gate Drive Signal for External Isolation MOSFET for $V_{(\text{VS})}$

Protection Features

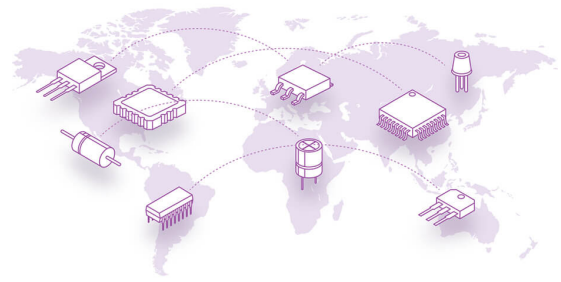
Out-of-Regulation Protection

Over-voltage Protection

Adjustable Fault Detection Timing

Thermal Shutdown

24-Pin TSSOP Package with Exposed Thermal Pad



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

TPS2410PWR

Texas Instruments, Inc

TSSOP-14

TPS22914BYFPR

Texas Instruments, Inc

DSBGA4

TPS2115ADRBR

Texas Instruments, Inc

VSON8

TPS2113ADRBR

Texas Instruments, Inc

SON8

TPS51716RUKR

Texas Instruments, Inc

WQFN20