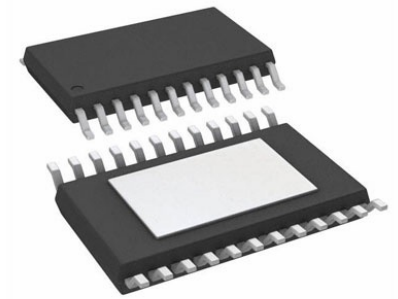


## LCD Driver 2.5V/3.3V/5V Automotive 24-Pin HTSSOP EP T/R



Images are for reference only

[Inquiry](#)

**Manufacturer:** [Texas Instruments, Inc](#)

**Package/Case:** HTSSOP-24

**Product Type:** Optoelectronics

**RoHS:** RoHS Compliant/Lead free 

**Lifecycle:** Active

### General Description

The TPS65150 device offers a very compact and small power supply solution that provides all three voltages required by thin film transistor (TFT) LCD displays. With an input voltage range of 1.8 V to 6 V the device is ideal for notebooks powered by a 2.5-V or 3.3-V input rail or monitor applications with a 5-V input voltage rail. Additionally the TPS65150 device provides an integrated high current buffer to provide the VCOM voltage for the TFT backplane.

Two regulated adjustable charge pump drivers provide the positive V(VGH) and negative V(VGL) bias voltages for the TFT. The device incorporates adjustable power-on sequencing for V(VGL) as well as for V(VGH). This avoids any additional external components to implement application specific sequencing. The device has an integrated high-voltage switch to isolate V(VGH).

The same internal circuit can also be used to provide a gate shaping signal of V(VGH) for the LCD panel controlled by the signal applied to the CTRL input. For highest safety, the TPS65150 device has an integrated adjustable shutdown latch feature, which allows application-specific flexibility. 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, the device enters shutdown latch, after its adjustable delay time has passed by.

## Key Features

1.8-V to 6-V Input Voltage Range

Integrated VCOM Buffer

High-voltage Switch to Isolate V(VGH)

Gate-Voltage Shaping of V(VGH)

2-A Internal MOSFET switch

Main Output V(VS) up to 15 V With <1% Output Voltage Accuracy

Virtual-Synchronous Converter Technology

Regulated Negative Charge Pump Driver V(VGL)

Regulated Positive Charge Pump Driver V(CPI)

Adjustable Power-On Sequencing

Adjustable Fault Detection Timing

Gate Drive Signal for External Isolation MOSFET

Out-of-Regulation Protection

Overshoot Protection

Thermal Shutdown

Available in HTSSOP-24 Package

Available in VQFN-24 Package

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## Recommended For You

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### TPS61196PWRQ1

Texas Instruments, Inc

HTSSOP28

### TPS92391RHBR

Texas Instruments, Inc

VQFN32

### TLC59116ITPWRQ1

Texas Instruments, Inc

TSSOP28

**TPS92692QPWPTQ1**

Texas Instruments, Inc  
HTSSOP20

**TPS92691PWP**

Texas Instruments, Inc  
HTSSOP-16

**TPS92691PWPR**

Texas Instruments, Inc  
HTSSOP16

**TPS92633QPWPRQ1**

Texas Instruments, Inc  
HTSSOP20

**TPS61161QDRVRQ1**

Texas Instruments, Inc  
WSON-6

**TPS61194PWPRQ1**

Texas Instruments, Inc  
HTSSOP20

**TPS92520QDADRQ1**

Texas Instruments, Inc  
HTSSOP32

**TPS92630QPWPRQ1**

Texas Instruments, Inc  
HTSSOP16

**TPS92691QPWPRQ1**

Texas Instruments, Inc  
HTSSOP-16

**TPS92692QPWPRQ1**

Texas Instruments, Inc  
HTSSOP-20

**TPS65132SYFFR**

Texas Instruments, Inc  
DSBGA-15

**TPS65132B2YFFR**

Texas Instruments, Inc  
DSBGA15