

LED Driver 12 Segment 50uA Supply Current Automotive 20-Pin TSSOP T/R

Manufacturer:	Texas Instruments, Inc	<input type="text" value="TLC6C5912GQPWRQ1 Image"/>
Package/Case:	TSSOP20	Images are for reference only
Product Type:	Optoelectronics	<input type="button" value="Inquiry"/>
RoHS:	RoHS Compliant/Lead free 	
Lifecycle:	Active	

General Description

The TLC6C5912-Q1 is a monolithic, medium-voltage, low-current power 12-bit shift register designed for use in systems that require relatively moderate load power, such as LEDs.

This device contains a 12-bit serial-in, parallel-out shift register that feeds a 12-bit D-type storage register. Data transfers through both the shift and storage registers on the rising edge of the shift-register clock (SRCK) and the register clock (RCK), respectively. The storage register transfers data to the output buffer when shift register clear (CLR) is high. A low on CLR clears all registers in the device. Holding the output enable (G) high holds all data in the output buffers low, and all drain outputs are off. Holding G low makes data from the storage register transparent to the output buffers.

When data in the output buffers is low, the DMOS transistor outputs are off. When data is high, the DMOS transistor outputs have sink-current capability. The serial output (SER OUT) clocks out of the device on the falling edge of SRCK to provide additional hold time for cascaded applications. This provides improved performance for applications where clock signals may be skewed, devices are not located near one another, or the system must tolerate electromagnetic interference. The device contains a built-in thermal shutdown protection.

Outputs are low-side, open-drain DMOS transistors with output ratings of 40 V and 50-mA continuous sink-current capabilities when $V_{CC} = 5$ V. The current limit decreases as the junction temperature increases for additional device protection. The device also provides up to 2000 V of ESD protection when tested using the human-body model and 200 V when tested using the machine model.

The TLC6C5912-Q1 characterization is for operation over the operating ambient temperature range of 40°C to 125°C.

Key Features

Qualified for Automotive Applications

Wide V_{CC} Range from 3 V to 5.5 V

Output Maximum Rating of 40 V

Twelve Power DMOS Transistor Outputs of 50-mA Continuous Current With $V_{CC} = 5$ V

Thermal Shutdown Protection

Enhanced Cascading for Multiple Stages

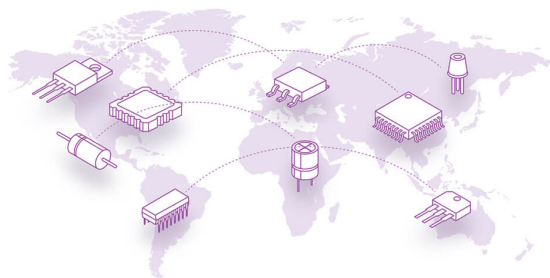
All Registers Cleared With Single Input

Low Power Consumption

Slow Switching Time (t_r and t_f), Which Helps Significantly With Reducing EMI

20-Pin TSSOP-PW Package

20-Pin DW Package



Recommended For You

TLC5955DCAR

Texas Instruments, Inc

HTSSOP56

TLC5917IN

Texas Instruments, Inc

PDIP-16

TLC5916QDRQ1

Texas Instruments, Inc

SOP-16

TLC59116ITPWRQ1

Texas Instruments, Inc
TSSOP28

TLC6C5712QPWRQ1

Texas Instruments, Inc
HTSSOP-28

TLC6C5748QDCARQ1

Texas Instruments, Inc
HTSSOP-56

TL4242IDRJRQ1

Texas Instruments, Inc
SON8

TLC5916IPW

Texas Instruments, Inc
TSSOP16

TLC5916IDR

Texas Instruments, Inc
SOIC16

TLC5916IPWR

Texas Instruments, Inc
TSSOP16

TLC6C598QPWRQ1

Texas Instruments, Inc
TSSOP16

TLC6C598CQDRQ1

Texas Instruments, Inc
SOP16

TLC5945PWP

Texas Instruments, Inc
HTSSOP

TLC5943PWR

Texas Instruments, Inc
HTSSOP28

TLC5917IPWR

Texas Instruments, Inc
TSSOP16