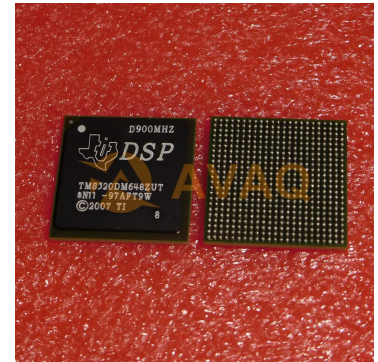


**DSP Fixed-Point 32bit 900MHz 7200MIPS Automotive 529-Pin
FCBGA Tray**

Manufacturer:	Texas Instruments, Inc
Package/Case:	BGA
Product Type:	Embedded Processors & Controllers
Lifecycle:	LTB



Images are for reference only

[Inquiry](#)

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 ($\overline{\text{CLR}}$) is high. A low on $\overline{\text{CLR}}$ clears all registers in the device. Holding the output enable ($\overline{\text{G}}$) high holds all data in the output buffers low, and all drain outputs are off. Holding $\overline{\text{G}}$ 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 $V_{\text{CC}} = 5 \text{ V}$. 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

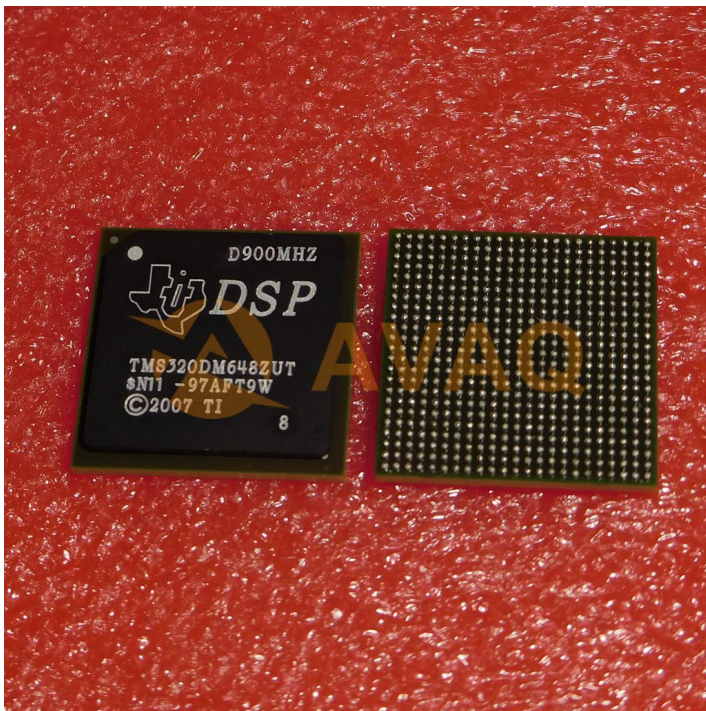
All Registers Cleared With Single Input

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

TMS320DM642AZNZ6

Texas Instruments, Inc

BGA

TMS320C31PQA40

Texas Instruments, Inc

QFP

TMS320C6726BRFP266

Texas Instruments, Inc

QFP144

TMS320C203PZ80

Texas Instruments, Inc
QFP

TMS320F28027PTT

Texas Instruments, Inc
LQFP48

TMS5703137DZWTQQ1

Texas Instruments, Inc
NFBGA-337

TMS34010FNL-40

Texas Instruments, Inc
PLCC

TMS320C6670ACYP2

Texas Instruments, Inc
FCBGA84

TMS320VC5402APGE16

Texas Instruments, Inc
LQFP-144

TMS320DM642AGDKA5

Texas Instruments, Inc
FCCSP(GDK)

TMS320C6424ZWT4

Texas Instruments, Inc
BGA

TMS320C6711DZDP250

Texas Instruments, Inc
BGA

TMS320DM642AZNZA6

Texas Instruments, Inc
BGA

TMS320DM642AZNZA6

Texas Instruments, Inc
BGA

TMS320C50PQ57

Texas Instruments, Inc
QFP132