UCC27712QDQ1

Driver 2.8A 2-OUT High and Low Side Half Brdg Non-Inv Automotive 8-Pin SOIC Tube

Images are for reference only

Inquiry

Manufacturer:	Texas Instruments, Inc
Package/Case:	SOIC-8
Product Type:	Drivers
RoHS:	RoHS Compliant/Lead free
Lifecycle:	Active

General Description

The UCC27712-Q1 is a 620-V high-side and low-side gate driver with 1.8-A source, 2.8-A sink current, targeted to drive power MOSFETs or IGBTs. The recommended VDD operating voltage is 10-V to 20-V for IGBT's and 10-V to 17-V for power MOSFETs.

The UCC27712-Q1 includes protection features where the outputs are held low when the inputs are left open or when the minimum input pulse width specification is not met. Interlock and deadtime functions prevent both outputs from being turned on simultaneously. In addition, the device accepts a wide range bias supply range from 10 V to 22 V, and offers UVLO protection for both the VDD and HB bias supply.

Developed with TI's state of the art high-voltage device technology, the device features robust drive with excellent noise and transient immunity including large negative voltage tolerance on its inputs, high dV/dt tolerance, wide negative transient safe operating area (NTSOA) on the switch node (HS), and interlock.

The device consists of one ground-referenced channel (LO) and one floating channel (HO) which is designed for operating with bootstrap or isolated power supplies. The device features fast propagation delays and excellent delay matching between both channels. On the UCC27712-Q1, each channel is controlled by its respective input pins, HI and LI.

Key Features

AEC-Q100 Qualified for Automotive Application
Device HBM Classification Level 1C

Device CDM Classification Level C4B

High-Side and Low-Side Configuration

Dual Inputs With Output Interlock and 150-ns Deadtime

Fully Operational up to 620-V, 700-V Absolute Maximum on HB Pin

10-V to 20-V VDD Recommended Range

Peak Output Current 2.8-A Sink, 1.8-A Source

dv/dt Immunity of 50 V/ns

Logic Operational up to –11 V on HS Pin

Negative Voltage Tolerance On Inputs of –5 V

Large Negative Transient Safe Operating Area

UVLO Protection for Both Channels

Small Propagation Delay (100-ns Typical)

Delay Matching (12-ns Typical)

Low Quiescent Current

TTL and CMOS Compatible Inputs

Industry Standard SOIC-8 Package

All Parameters Specified Over Temperature Range, –40 °C to +125 °C

Recommended For You

UCC28064ADR
Texas Instruments, Inc
SOP16

UC3637N
Texas Instruments, Inc
DIP-18

UCC27517DBVR
Texas Instruments, Inc
SOT23-5

UCC2946TPWRQ1
Texas Instruments, Inc
TSSOP8

UCC28730QDRQ1
Texas Instruments, Inc
SOP7

UCC21222QDRQ1
Texas Instruments, Inc
SOP16

UCD9090QRGZRQ1
Texas Instruments, Inc
VQFN-48

UCC27531QDBVRQ1
Texas Instruments, Inc
SOT23-6

UCC27511AQDBVRQ1
Texas Instruments, Inc
SOT23-6

UCC2803QDRQ1

Texas Instruments, Inc

SOP8

UCC28951QPWRQ1

Texas Instruments, Inc

TSSOP24

UCC21320QDWKRQ1

Texas Instruments, Inc

SOIC-14

UCC27322QDGNRQ1

Texas Instruments, Inc

HVSSOP-8

UCC28950QPWRQ1

Texas Instruments, Inc

TSSOP24

UCC2808AQDR-2Q1

Texas Instruments, Inc

SOP8