

Voltage Level Shifter 4-CH Unidirectional 16-Pin TSSOP Tube

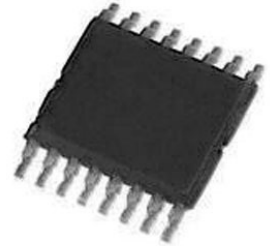
Manufacturer: [Texas Instruments, Inc](#)

Package/Case: TSSOP-16

Product Type: Logic ICs

RoHS: RoHS Compliant/Lead free 

Lifecycle: Active



Images are for reference only

[Inquiry](#)

General Description

CD40109B contains four low-to-high-voltage level-shifting circuits. Each circuit will shift a low-voltage digital-logic input signal (A, B, C, D) with logical 1 = VCC and logical 0 = VSS to a higher-voltage output signal (E, F, G, H) with logical 1 = VDD and logical 0 = VSS.

The CD40109, unlike other low-to-high level-shifting circuits, does not require the presence of the high-voltage supply (VDD) before the application of either the low-voltage supply (VCC) or the input signals. There are no restrictions on the sequence of application of VDD, VCC, or the input signals. In addition, with one exception there are no restrictions on the relative magnitudes of the supply voltages or input signals within the device maximum ratings, provided that the input signal swings between VSS and at least 0.7 VCC; VCC may exceed VDD, and input signals may exceed VCC and VDD. When operated in the mode VCC > VDD, the CD40109 will operate as a high-to-low level-shifter.

The CD40109 also features individual three-state output capability. A low level on any of the separately enabled three-state output controls produces a high-impedance state in the corresponding output.

The CD40109B-Series types are supplied in 16-lead ceramic dual-in-line packages (F3A suffix), 16-lead dual-in-line plastic packages (E suffix), 16-lead small-outline packages (NSR suffix), and 16-lead thin shrink small-outline packages (PW and PWR suffixes).

Key Features

Independence of power supply sequence considerations - VCC can exceed VDD, input signals can exceed both VCC and VDD

Up and down level-shifting capability

Three-state outputs with separate enable controls

Standardized, symmetrical output characteristics

100% tested for quiescent current at 20 V

Maximum input current of 1 μ A at 18 V over full package-temperature range; 100 nA at 18 V and 25°C

Noise margin (full package-temperature range): = 1 V at VCC = 5 V, VDD = 10 V = 2 V at VCC = 10 V, VDD = 15 V

5-V, 10-V, and 15-V parametric ratings

Meets all requirements of JEDEC Tentative Standard No. 13B, "Standard Specifications for Description of 'B' Series CMOS Devices"

Applications:

High-or-low level-shifting with three-state outputs for unidirectional or bidirectional bussing.

Isolation of logic subsystems using separate power supplies from supply sequencing, supply loss and supply regulation considerations

Data sheet acquired from Harris Semiconductor

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Recommended For You

CD4070BE

Texas Instruments, Inc

DIP14

CD74HCT138E

Texas Instruments, Inc

DIP16

CD4098BE

Texas Instruments, Inc

DIP

CD74HC08E

Texas Instruments, Inc

DIP

CD74HC4075E

Texas Instruments, Inc

DIP

CD74ACT174E

Texas Instruments, Inc

DIP-14

CD74HC75E

Texas Instruments, Inc

DIP

CD4504BE

Texas Instruments, Inc

DIP16

CD4068BE

Texas Instruments, Inc

DIP

CD4081BE

Texas Instruments, Inc

DIP14

CD4001BE

Texas Instruments, Inc

DIP14

CD4512BE

Texas Instruments, Inc

DIP16

CD4069UBE

Texas Instruments, Inc

DIP14

CD74HCT151E

Texas Instruments, Inc

DIP

CD74HC04M

Texas Instruments, Inc

SOP14