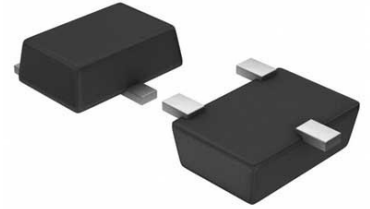


## Op Amp Single Low Noise Amplifier R-R I/O $\pm 20V/40V$ 6-Pin SOT-23 T/R



Images are for reference only

[Inquiry](#)

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

**Package/Case:** SOT23-6

**Product Type:** Amplifier ICs

**RoHS:** RoHS Compliant/Lead free 

**Lifecycle:** Active

### General Description

The CD4066B-Q1 is a quad bilateral switch intended for the transmission or multiplexing of analog or digital signals. It is pin-for-pin compatible with the CD4016B, but exhibits a much lower on-state resistance. In addition, the on-state resistance is relatively constant over the full signal-input range.

The CD4066B-Q1 consists of four bilateral switches, each with independent controls. Both the p and the n devices in a given switch are biased on or off simultaneously by the control signal. As shown in , the well of the n-channel device on each switch is tied to either the input (when the switch is on) or to VSS (when the switch is off). This configuration eliminates the variation of the switch-transistor threshold voltage with input signal and, thus, keeps the on-state resistance low over the full operating-signal range.

The advantages over single-channel switches include peak input-signal voltage swings equal to the full supply voltage and more constant on-state impedance over the input-signal range. However, for sample-and-hold applications, the CD4016B is recommended.

### Key Features

Qualified for Automotive Applications

15-V Digital or  $\pm 7.5$ -V Peak-to-Peak Switching

125- $\Omega$  Typical On-State Resistance for 15-V Operation

Switch On-State Resistance Matched to Within 5  $\Omega$  Over 15-V Signal-Input Range

On-State Resistance Flat Over Full Peak-to-Peak Signal Range

High On/Off Output-Voltage Ratio: 80 dB Typical at f

is

L

High Degree of Linearity:  $<0.5\%$  Distortion Typical at f

is

is

V

DD

SS

L

Extremely Low Off-State Switch Leakage, Resulting in Very Low Offset Current  
and High Effective Off-State Resistance: 10 pA Typical at V

DD

SS

T

A

Extremely High Control Input Impedance (Control Circuit Isolated From Signal Circuit):

10

12

Low Crosstalk Between Switches: -50 dB Typical at f

is

L

Matched Control-Input to Signal-Output Capacitance: Reduces Output Signal Transients

Frequency Response, Switch On = 40 MHz Typical

100% Tested for Quiescent Current at 20 V

5-V, 10-V, and 15-V Parametric Ratings

Latch-Up Exceeds 100mA per JESD78 - Class I

Meets All Requirements of JEDEC Tentative Standard No. 13-B,

Standard Specifications for Description of "B" Series CMOS Devices

#### APPLICATIONS

Analog Signal Switching/Multiplexing: Signal Gating, Modulator, Squelch Control,

Demodulator, Chopper, Commutating Switch

Digital Signal Switching/Multiplexing

Transmission-Gate Logic Implementation

Analog-to-Digital and Digital-to-Analog Conversion

Digital Control of Frequency, Impedance, Phase, and Analog-Signal Gain

#### Recommended For You

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**OPA445BM**

Texas Instruments, Inc  
CAN

**OPA1611AIDR**

Texas Instruments, Inc  
SOP8

**OPA388QDBVRQ1**

Texas Instruments, Inc  
SOT23-5

**OPA2365AQDRQ1**

Texas Instruments, Inc  
SOP8

**OPA334AIDBVR**

Texas Instruments, Inc  
SOT23-6

**OPA2835IDCSR**

Texas Instruments, Inc  
MSOP10

**OPA656U**

Texas Instruments, Inc  
SOP8

**OPA360AIDCKR**

Texas Instruments, Inc  
SC70-6

**LMI11H/NOPB**

Texas Instruments, Inc  
CAN8

**OPA353UA**

Texas Instruments, Inc  
SOP8

**LMI3700MX/NOPB**

Texas Instruments, Inc  
SOP16

**OPA633KP**

Texas Instruments, Inc  
DIP8

**OPA453FAKTWT**

Texas Instruments, Inc  
TO263-7

**OPA4251UA**

Texas Instruments, Inc  
SOP14

**LMV321M5X/NOPB**

Texas Instruments, Inc  
SOT23-5