

## AND-OR-Invert Gate 2-Element 2 Wide 2-IN CMOS 14-Pin PDIP Tube



Images are for reference only

[Inquiry](#)

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

**Package/Case:** DIP

**Product Type:** Logic ICs

**RoHS:** RoHS Compliant/Lead free 

**Lifecycle:** Active

### General Description

The LM284x-Q1 SIMPLE SWITCHER devices are PWM DC/DC buck (step-down) regulators. With an input range from 4.5 V to 42 V, they are suitable for a wide range of applications, such as power conditioning from unregulated sources. They feature a low  $R_{DS(on)}$  (0.9 typical) internal switch for maximum efficiency (85% typical). Operating frequency is fixed at 550 kHz (X option) and 1.25 MHz (Y option), allowing the use of small external components while still being able to have low output voltage ripple. Soft start can be implemented using the shutdown ( $\overline{SHDN}$ ) pin with an external RC circuit allowing the user to tailor the soft-start time to a specific application.

The LM2840-Q1 is optimized for up to 100 mA, the LM2841-Q1 for up to 300 mA, and the LM2842-Q1 for up to 600 mA load currents. They all have a 0.765-V nominal feedback voltage.

Additional features include: thermal shutdown,  $V_{IN}$  undervoltage lockout, and gate-drive undervoltage lockout. The LM284x-Q1 are available in a low-profile SOT-6L package.

### Key Features

AEC-Q100-qualified for automotive applications:  
Temperature grade 1:  $-40^{\circ}\text{C}$  to  $+125^{\circ}\text{C}$ ,  $T_A$

Input voltage 4.5 V to 42 V

Output current options of 100 mA, 300 mA, and 600 mA

Feedback pin voltage of 0.765 V

550-kHz (X) or 1.25-MHz (Y) switching frequency

Low shutdown  $I_Q$ : 16- $\mu\text{A}$  typical

Short-circuit protected

Internally compensated

Soft-start circuitry

Small overall solution size (SOT-6L package)

Create a custom design using the LM2840-Q1 (or LM2841-Q1/42-Q1) with the WEBENCH Power Designer

## Recommended For You

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### 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

### CD74ACT74E

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