



The industry's lowest current consumption in the world's smallest package

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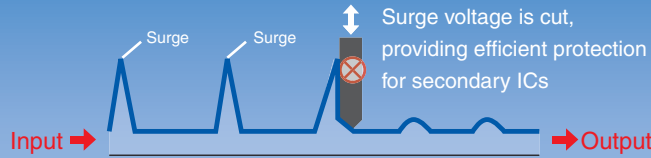
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# High Performance Charge Protection IC

## BD6040GUL



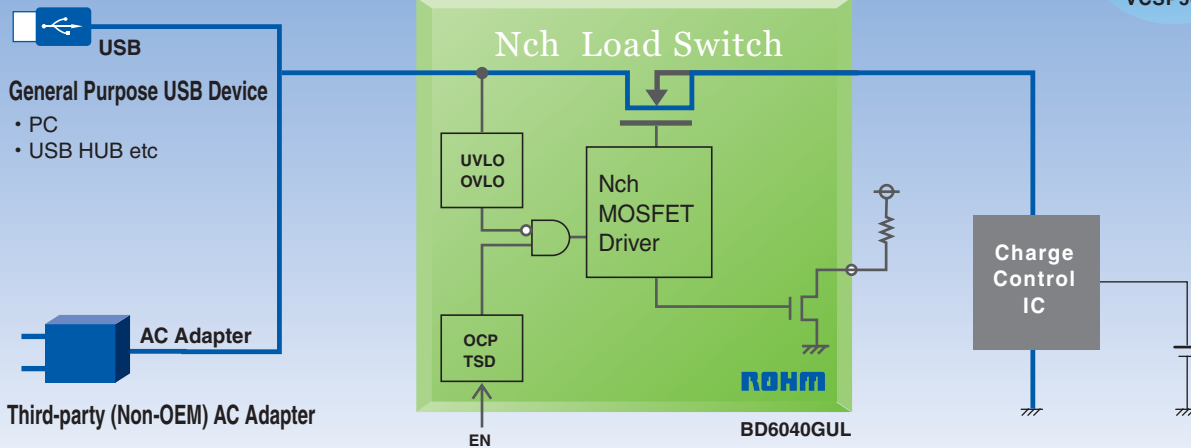
### Ensures worry-free operation against abnormal voltages



Ultra-compact CSP (Chip Sized Package)



VCSP50L1



### ROHM's charge protection IC for internal overvoltage control

## High Performance Charge Protection IC BD6040GUL



#### Overview

ROHM has developed the world's most compact high performance charge protection IC with the industry's lowest current consumption (45  $\mu$ A) for battery-powered portable devices that charge via AC adapter or USB cable. A full complement of protection circuits, including OVLO, OCP, UVLO, startup delay, and temperature protection, are integrated into an ultra-compact CSP (Chip Sized Package).

#### Features

- 28V overvoltage protection circuit built in
- Integrated low ON-resistance FET
- Built-in 6.4V OVLO (Over Voltage Lock Out) circuit
- Built-in 2.65V UVLO (Under Voltage Lock Out) circuit
- Equipped with 2msec startup delay circuit
- Overcurrent (1.2A) protection circuit included
- Available in an ultra-compact CSP (Chip Sized Package): 1.6x1.6x0.55mm Max.

### Integrated Protection Functions

#### OVLO (Over Voltage Locked-Out)

The output is shut off upon detection of abnormal input voltages greater than 6.4V

#### OCP (Over Current Protect)

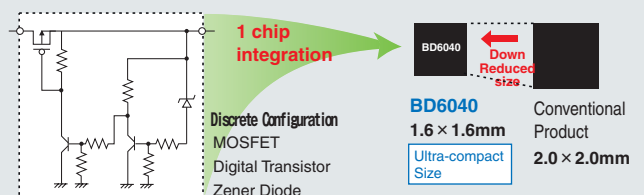
Shuts off the output once the current increases above 1.2A

#### UVLO (Under Voltage Locked-Out)

Turns off the output when the input voltage decreases below 2.65V

Startup Delay Circuit / Temperature Protection Circuit

#### Mounting Area Comparison



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\* September 2007 ROHM study

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