Ultra Small, Low Input Voltage, Low R_{ON}, Load Switch

Features

- **Low input voltage 1.0V to 3.6V**
- **Ultra low R_{ON}**
  - **R_{ON} =78mΩ at VIN=3.6V**
  - **R_{ON} =93mΩ at VIN=2.5V**
  - **R_{ON} =109mΩ at VIN=1.8V**
  - **R_{ON} =146mΩ at VIN=1.2V**
- **500mA maximum continuous operating current.**
- **Ultra low quiescent current : 82nA at VIN=1.8V**
- **Ultra low sundown current : 44nA at VIN=1.8V**
- **Low Control Input Thresholds Enable Use of 1.2V/1.8V/2.5V/3.3V Logic**
- **Controlled Slew Rate to Avoid Inrush Currents**
  G5178A and G5178B: 40-us tr
  G5178C: 220-us tr
- **Micro-power shutdown current**
- **0.8mmX0.8mm 4-pin, pin pitch 0.4mm WLCSP Package**
- **RoHS Compliant**

General Description

The G5178A G5178B and G5178C are .ultra-small, low ON resistance (Ron) load switches with controlled turn on. The devices contain a P-channel MOSFET that operates over an input voltage range 1.2V to 3.6V. The switch is controlled by an on/off input (EN), which is capable of in interfacing directly with low-voltage control signals. In G5178B and G5178C a 120Ω on-chip load resistor is added for output quick discharge when the switch is turned off.

G5178A G5178B and G5178C are available in a space-saving 4-terminal WLCSP with 0.4mm pitch. The devices are characterized for operation over the free-air temperature range for -40°C to 85°C.

Applications

- **Cellular phones.**
- **Personal Digital Assistants (PDAs)**
- **GPS Devices**
- **MP3 Players**
- **Digital Cameras**
- **RF Modules**
- **Peripheral Ports**
- **Portable Instrumentation**

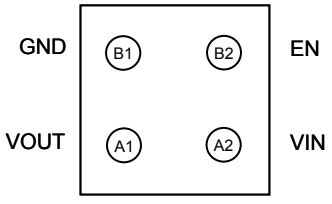
Ordering Information

ORDER NUMBER	MARKING	Ron at 1.8V	Slew rate	Discharge	Max output current	Enable	SPEC	PACKAGE (Green)
G5178ABE1U	5A x	109mΩ	40μs	No	500mA	Active High	Soft start=40μs	WLCSP2X2-4
G5178BBE1U	5B x	109mΩ	40μs	Yes	500mA	Active High	Soft start=40μs & Load discharge	WLCSP2X2-4
G5178CBE1U	5C x	109mΩ	220μs	Yes	500mA	Active High	Soft start=220μs & Load discharge	WLCSP2X2-4

Note: BE: WLCSP2X2-4
1: Bonding Code
U: Tape & Reel

Pin Configuration

4 Bump WLCSP



Bottom View
WLCSP2X2-4