

# G5178A/G5178B/G5178C

# Ultra Small, Low Input Voltage, Low R<sub>ON</sub>, Load Switch

#### **Features**

- Low input voltage 1.0V to 3.6V
- Ultra low R<sub>ON</sub>
- $R_{ON}$  =78m $\Omega$  at VIN=3.6V
- $R_{ON}$  =93m $\Omega$  at VIN=2.5V
- $R_{ON}$  =109m $\Omega$  at VIN=1.8V
- $R_{ON}$  =146m $\Omega$  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

### **Applications**

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

#### **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  $120\Omega$  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.

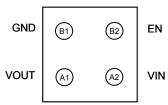
**Ordering Information** 

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