

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

Features

- Low input voltage 1.0V to 3.6V
- Ultra low R_{ON}
 - $R_{ON} = 78m\Omega$ at $V_{IN}=3.6V$
 - $R_{ON} = 93m\Omega$ at $V_{IN}=2.5V$
 - $R_{ON} = 109m\Omega$ at $V_{IN}=1.8V$
 - $R_{ON} = 146m\Omega$ at $V_{IN}=1.2V$
- 500mA maximum continuous operating current.
- Ultra low quiescent current : 82nA at $V_{IN}=1.8V$
- Ultra low sundown current : 44nA at $V_{IN}=1.8V$
- 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 R_{ON} resistance (R_{on}) 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 interfacing directly with low-voltage control signals. In G5178B and G5178C a 120 Ω 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	109m Ω	40 μ s	No	500mA	Active High	Soft start=40 μ s	WLCSP2X2-4
G5178BBE1U	5B x	109m Ω	40 μ s	Yes	500mA	Active High	Soft start=40 μ s & Load discharge	WLCSP2X2-4
G5178CBE1U	5C x	109m Ω	220 μ s	Yes	500mA	Active High	Soft start=220 μ s & Load discharge	WLCSP2X2-4

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

Pin Configuration

