

Low Voltage Dual SPDT Analog Switch 2:1 Mux/Demux Bus Switch

Features

- CMOS Technology for Bus and Analog Applications
- Low On-Resistance: 8Ω at 3.0V
- Wide V_{CC} Range: 1.65V to 5.5V
- Rail-to-Rail Signal Range
- Control Input Overvoltage Tolerance: 5.5V(Min)
- Fast Transition Speed: 2ns at 5.0V
- High Off Isolation: -63dB @ 10MHz
- Break-Before-Make Switching
- High Bandwidth: 350MHz
- Extended Industrial Temperature Range: -40°C to 85°C
- Packaging (Lead Free & Green): 12-pin TDFN

Description

The PI5A3158B is a dual high-bandwidth, fast single-pole double-throw(SPDT) CMOS switch. It can be used as an analog switch or as a low-delay bus switch. Specified over a wide operating power supply voltage range, 1.65V to 5.5V, the PI5A3158B has a maximum ON resistance of 12-ohms at 1.65V, 9-ohms at 2.3V & 6-ohms at 4.5V.

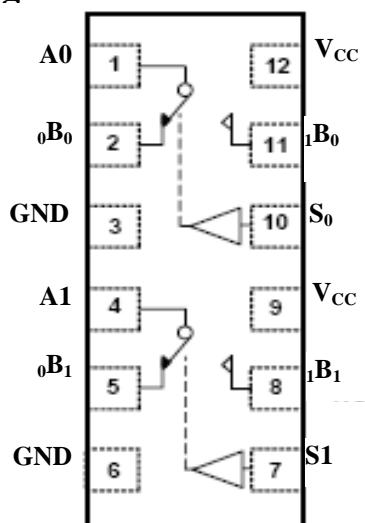
Break-before-make switching prevents both switches being enabled simultaneously. This eliminates signal disruption during switching.

The control input, S_x , is independent of supply voltage.

Applications

- Cell Phones
- PDAs
- MP3 Players
- Portable Instrumentation
- Battery powered Communications
- Computer Peripherals

Pin Assignment



TDFN-12

Pin Description

| Pin No | Name | Description |
|--------|-----------|-----------------------------|
| 8, 11 | ${}_1B_X$ | Data Port (Normally open) |
| 3, 6 | GND | Ground |
| 2, 5 | ${}_0B_X$ | Data Port (Normally closed) |
| 1, 4 | A_X | Common Output / Data Port |
| 9, 12 | V_{CC} | Positive Power Supply |
| 7, 10 | S_X | Logic Control |

Logic Function Table

| Logic Input (IN_X) | Function |
|------------------------|------------------------------|
| 0 | ${}_0B_X$ Connected to A_X |
| 1 | ${}_1B_X$ Connected to A_X |

Note: $x = 1$ or 2