

RI 2583

SOLID STATE SWITCH

SP8T Solid state switch module, terminated, I²C, DC - 6 GHz



OVERVIEW

RI 2583 is a solid-state switch module with 1 pole and 8 throws. It is very well suited for high volume testing where long lifetime is required without sacrificing RF performance. RI 2583 offers good linearity, power handling and speed.

FEATURES

- Switch mode: SP8T I²C controlled, terminated
 - 8 I²C-bus addresses selectable via DIP switch
 - 0-400 kHz I²C clock
 - DC - 6 GHz RF frequency range
 - 63 dBm IP₃
 - +30 dBm maximum input power
 - Insertion loss < 3.1 dB up to 3 GHz
 - 10 μs max switching time after data transfer¹⁾
 - Flexible supply voltage: 4-30 VDC
 - High repeatability and Ultra-long lifetime
- ¹⁾ 50 μs max switch setting time after data transfer

APPLICATIONS

RI 2583 Solid state switch module is designed for applications such as:

- Production testing of mobile handsets
- Production testing of mobile basestations
- Built-In-Test (BITE) applications
- MIMO applications

CONTROL INTERFACE

| RI 2583, Molex 502584-0570 | Function |
|----------------------------|----------|
| PIN 1 | GND |
| PIN 2 | SDA |
| PIN 3 | VCC* |
| PIN 4 | SCL |
| PIN 5 | GND |

* 4-30 VDC

SPECIFICATION

| | |
|--|---|
| Switch mode | SP8T I ² C ctrl, terminated |
| Supply voltage | 4-30 VDC |
| Supply current max | 8 mA |
| I ² C-bus LOW-level | 0.99 V |
| I ² C-bus HIGH-level | 2.31 V |
| I ² C-bus MAX-level | 5.5 V |
| Operating frequency | DC-6 GHz |
| Impedance | 50 Ohm |
| Max DC at RF inputs | 0 VDC |
| VSWR (max) RFC→RFx | 1.55:1 @ 0.1-0.7 GHz 1.45:1 @ 0.7-3 GHz 1.60:1 @ 3-6 GHz |
| VSWR (max) RFx→RFC | 1.50:1 @ 0.01-0.7 GHz 1.35:1 @ 0.7-3 GHz 1.40:1 @ 3-6 GHz |
| VSWR RFx (max) (terminated) | 1.45:1 @ 0.01-0.7 GHz 1.35:1 @ 0.7-3 GHz 1.50:1 @ 3-6 GHz |
| Insertion loss (max) | 2.5 dB @ 0.01-0.7 GHz 3.1 dB @ 0.7-3 GHz 4.3 dB @ 3-6 GHz |
| Isolation (min) RFC-RFx | 55 dB @ 0.01-0.7 GHz 40 dB @ 0.7-3 GHz 35 dB @ 3-6 GHz |
| Isolation (min) RFx-RFy | 55 dB @ 0.01-0.7 GHz 40 dB @ 0.7-3 GHz 30 dB @ 3-6 GHz |
| Input power (max) (thru path) | 30 dBm @ 0.01-6 GHz |
| Input power (max) (hot switching & into termination) | 20 dBm @ 0.01-6 GHz |
| Input IP ₃ (typ) | 63 dBm @ 0.01-6 GHz |
| Operating temp | 0°C to +50°C |
| Storage temp | -20°C to +70°C |
| Relative humidity | 95% at +40°C |
| Dimensions | 50 x 56 x 22 mm |
| Weight | 44 g |
| Connectors | SMA (f) |

ORDERING

| | |
|------------|-------------------------------|
| RI 2583 | SP8T solid state switch |
| RI 2583-02 | Optional 90° mounting bracket |
| RI 2583-03 | Optional cable |