

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
VSWR RFx (max) (terminated)	1.40:1 @ 3-6 GHz 1.45:1 @ 0.01-0.7 GHz 1.35:1 @ 0.7-3 GHz
Insertion loss (max)	1.50:1 @ 3-6 GHz 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
Isolation (min) RFx-RFy	35 dB @ 3-6 GHz 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 IP3 (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