

RI 2442 SP4T Solid state switch DC-6 GHz

High performance solid state switch module

Features:

- Switch mode: SP4T failsafe, terminated
- DC - 6 GHz RF frequency range
- Insertion loss < 1.9 dB up to 3 GHz
- 63 dBm IP3
- +30 dBm maximum input power
- Flexible supply voltage: 5-45 VDC
- <100 μ s switching time
- High repeatability
- Ultra-long lifetime

Overview

The Ranatec RI 2442 is a high performance solid state switch module with 1 pole and 4 throws. It is very well suited for high volume testing where long lifetime is required without sacrificing RF performance. RI 2442 offers very good linearity, power handling and speed.

Control interface

RI 2442 IDC10	Function
PIN 1	VCC*
PIN 2	Port 1**
PIN 3	Port 2**
PIN 4	Port 3**
PIN 5	Port 4**
PIN 6	NC
PIN 7	NC
PIN 8	NC
PIN 9	NC
PIN 10	GND

* 5-45 VDC, ** Active low

Applications

The RI 2442 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

Electrical specifications:

- Switch mode: SP4T failsafe*, terminated
- Switching time: < 100 μ s
- Supply voltage: 5 - 45 VDC
- Supply current: < 1 mA
- Actuating current: < 50 μ A (active low, input pulled up to 3 VDC)
- Operating frequency: DC - 6 GHz



Ranatec RI 2442 is a high performance SP4T solid state switch module suitable for high volume switching applications.

- Impedance: 50 Ohm
- Max DC at RF inputs: 0 VDC
- VSWR (max): 1.4:1 @ 0.01 - 0.698 GHz
1.3:1 @ 0.698 - 3 GHz
1.4:1 @ 3 - 6 GHz
- Insertion loss (max): 1.6 dB @ 0.01 - 0.698 GHz
1.9 dB @ 0.698 - 3 GHz
2.2 dB @ 3 - 6 GHz
- Isolation RFC - RFx (min): 55 dB @ 0.01 - 0.698 GHz
40 dB @ 0.698 - 3 GHz
35 dB @ 3 - 6 GHz
- Isolation RFx - RFy (min): 55 dB @ 0.01 - 0.698 GHz
40 dB @ 0.698 - 3 GHz
30 dB @ 3 - 6 GHz
- Input power thru path (max): 30 dBm @ 0.01 - 6 GHz
- Input power hot switching & into termination (max): 20 dBm @ 0.01 - 6 GHz
- Input IP3 (typ): 63 dBm @ 0.01 - 6 GHz

* Returns to port 1 when control voltage is removed.

Environmental specification:

- Operating temp: 0°C to +50°C
- Storage temp: -20°C to +70°C
- Relative humidity: 95% at +40°C

Mechanical specifications:

- Dimensions: 50x50x30 mm
- Weight: 25 g
- Connectors: SMA(F)

Ordering

- | | |
|------------|--------------------------------|
| RI 2442 | SP4T solid state switch module |
| RI 2442-02 | Optional 90° mounting bracket |
| RI 2442-03 | Optional cable |
| RI 2442-04 | Protective cover |
| RI 2442-05 | 3.3 - 45 VDC Supply Voltage |