

# RI 2481 SP8T Solid state switch DC-6 GHz

## High performance solid state switch module

### Features:

- Switch mode: SP8T failsafe, terminated
- DC - 6 GHz RF frequency range
- Insertion loss < 2.7 dB up to 3 GHz
- 63 dBm IP3
- +30 dBm maximum input power
- Flexible supply voltage: 4-30 VDC
- <10  $\mu$ s switching time
- High repeatability
- Ultra-long lifetime

### Overview

The Ranatec RI 2481 is a high performance 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 2481 offers very good linearity, power handling and speed.

### Control interface

RI 2481 IDC10	Function
PIN 1	VCC*
PIN 2	Port 1**
PIN 3	Port 2**
PIN 4	Port 3**
PIN 5	Port 4**
PIN 6	Port 5**
PIN 7	Port 6**
PIN 8	Port 7**
PIN 9	Port 8**
PIN 10	GND

\* 4-30 VDC

\*\* Active low

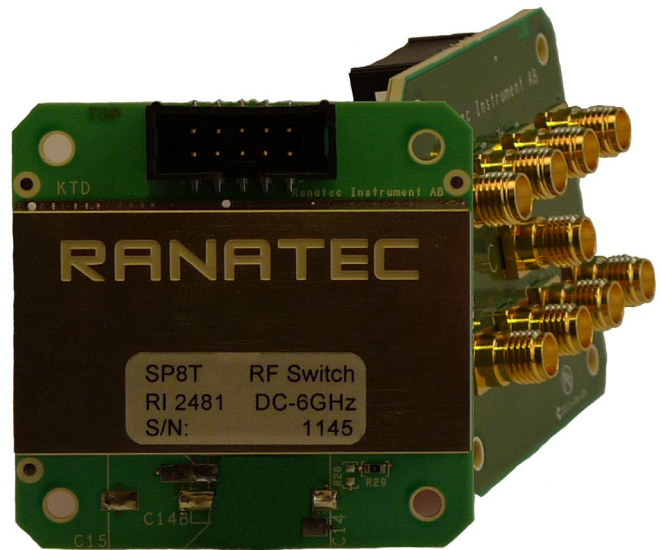
### Applications

The RI 2481 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: SP8T failsafe\*, terminated
- Switching time: < 10  $\mu$ s
- Supply voltage: 4 - 30 VDC
- Supply current: < 8 mA
- Actuating current: < 0.5 mA (active low, input pulled up to 3.3 VDC)



Ranatec RI 2481 is a high performance SP8T solid state switch module suitable for high volume switching applications.

- Operating frequency: DC - 6 GHz
- Impedance: 50 Ohm
- Max DC at RF inputs: 0 VDC
- VSWR (max):
  - 1.45:1 @ 0.01 - 0.698 GHz
  - 1.35:1 @ 0.698 - 3 GHz
  - 1.50:1 @ 3 - 6 GHz
- Insertion loss (max):
  - 2.2 dB @ 0.01 - 0.698 GHz
  - 2.7 dB @ 0.698 - 3 GHz
  - 3.3 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 8 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: 50x56x22 mm
- Weight: 44 g
- Connectors: SMA(F)

### Ordering

- |            |                                |
|------------|--------------------------------|
| RI 2481    | SP8T solid state switch module |
| RI 2481-02 | Optional 90° mounting bracket  |
| RI 2481-03 | Optional cable                 |
| RI 2481-04 | Protective cover               |