

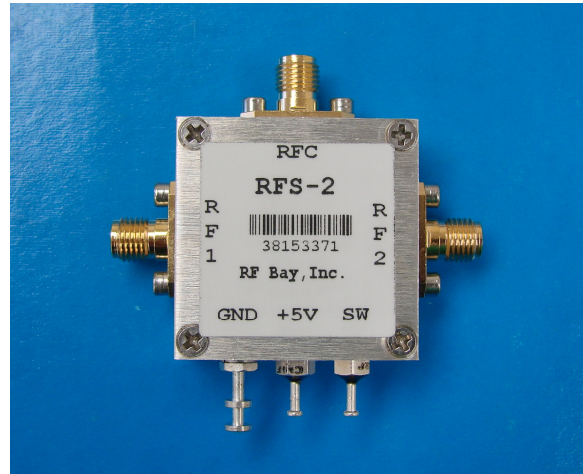
## RFS Series

## 50 – 1500MHz 4W SPDT RF Switch

### Features

- Frequency Range: 50 - 1500MHz
- Insertion Loss: 1dB
- Isolation: 50dB
- Maximum Input P<sub>in</sub>: +36dBm
- Switching Time: 1.5μs
- DC Power: 5V/<1mA
- SMA Connector

### Picture



### Description

RFS-2 is a 4W Single Pole Double Throw (SPDT) RF Switch operates in frequency range from 50MHz to 1500MHz.

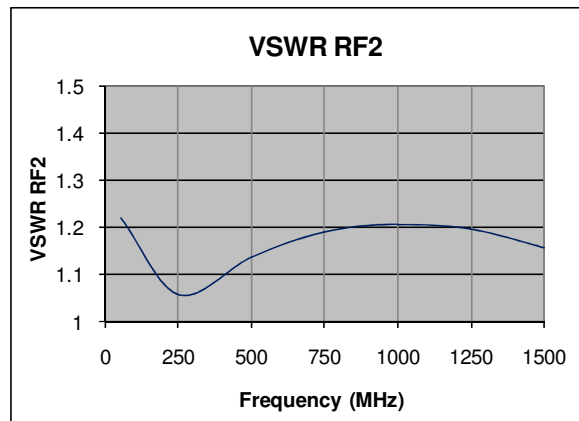
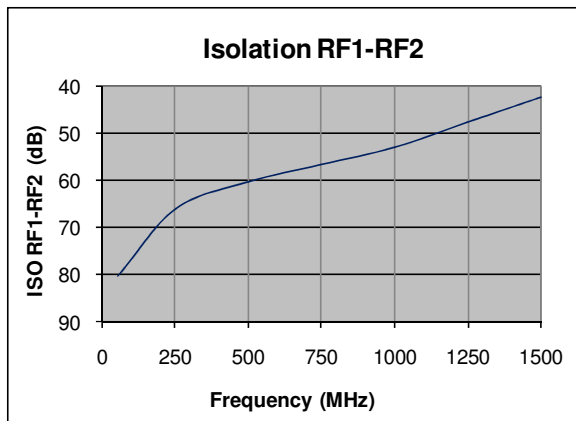
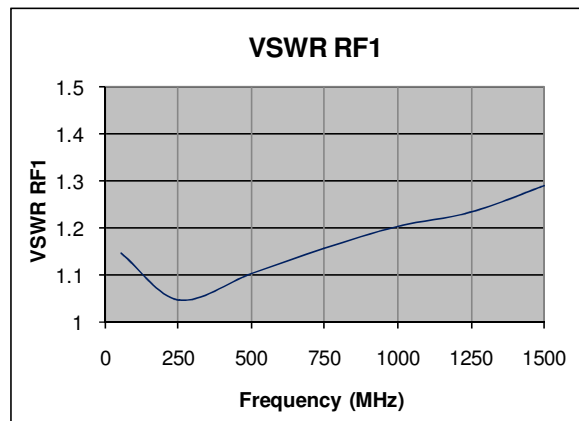
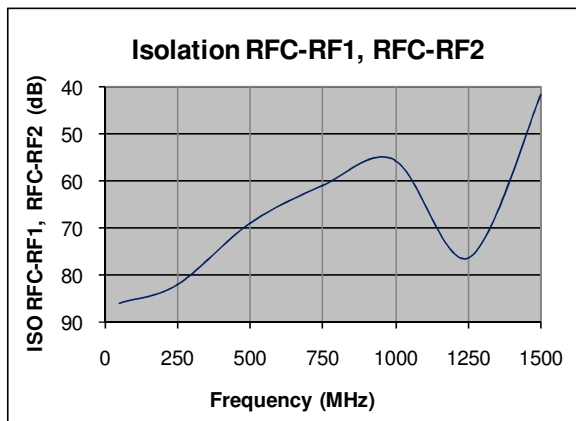
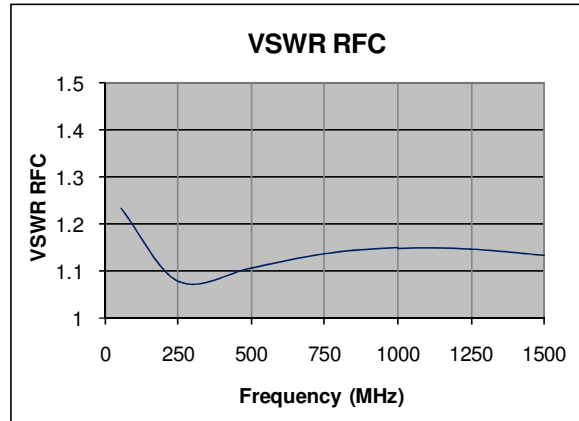
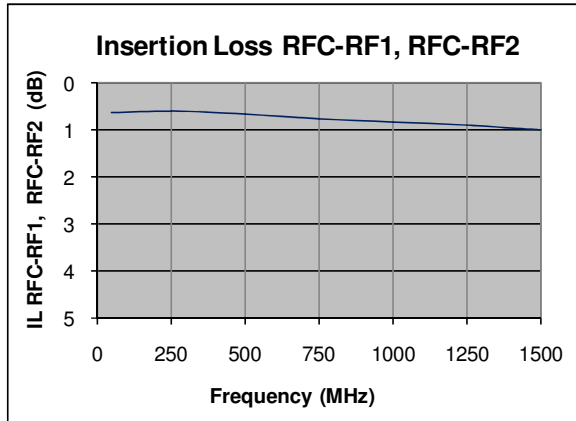
### Electrical Specifications @ +25 °C, 50 Ω System, V<sub>supply</sub>=+5V

| Parameter                               | Unit    | Minimum | Typical | Maximum |
|---|---------|---------|---------|---------|
| Frequency Range                         | MHz     | 50      |         | 1500    |
| Insertion Loss                          | 50MHz   |         | 0.7     | 0.9     |
|   | 750MHz  |         | 0.8     | 1.0     |
|   | 1500MHz |         | 1.0     | 1.2     |
| Isolation (RFC,1&2)                     | 50MHz   | 80      | 85      |         |
|   | 750MHz  | 58      | 61      |         |
|   | 1500MHz | 38      | 41      |         |
| Isolation (RF1&2)                       | 50MHz   | 75      | 80      |         |
|   | 750MHz  | 53      | 56      |         |
|   | 1500MHz | 38      | 42      |         |
| VSWR (50 – 1500MHz)                     |         |         | 1.2:1   | 1.5:1   |
| Maximum Input P <sub>in</sub>           | dBm     | +36     |         |         |
| Switching Time                          | μs      |         | 1.5     | 2       |
| Control Voltage V <sub>sw</sub> (HCMOS) | V       | 0       |         | 5       |
| DC Power Supply                         | V       | 4.5     | 5       | 5.5     |
| Supply Current                          | mA      |         | <1      |         |

**RFS Series**

**50 – 1500MHz 4W SPDT RF Switch**

**Typical Performance at 25°C**



**RFS Series**

**50 – 1500MHz 4W SPDT RF Switch**

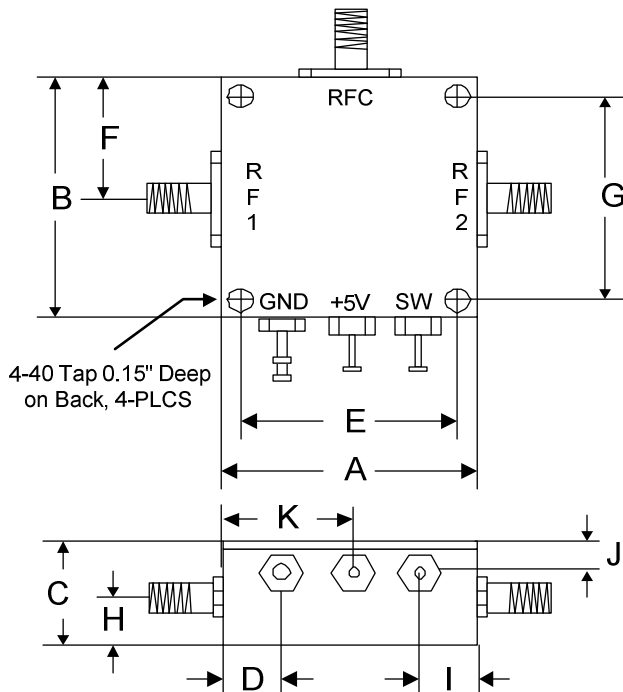
**Absolute Maximum Ratings**

| Parameter             | Absolute Maximum  |
|-----------------------|-------------------|
| Supply Voltage        | +6V               |
| RF Input Power        | +37dBm            |
| Operating Temperature | -40 °C to +85 °C  |
| Storage Temperature   | -55 °C to +125 °C |

**Truth table**

| Control Input $V_{sw}$ | Signal Path State |
|------------------------|-------------------|
| High (+5V)             | RFC to RF1        |
| Low (0V)               | RFC to RF2        |

**Outline**



|             | A     | B     | C     | D     | E     | F     | G     | H     | I     | J     | K     |
|-------------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|
| <b>Inch</b> | 1.250 | 1.250 | 0.563 | 0.450 | 1.000 | 0.625 | 1.000 | 0.250 | 0.500 | 0.187 | 0.625 |
| <b>mm</b>   | 31.75 | 31.75 | 14.29 | 11.43 | 25.40 | 15.88 | 25.40 | 6.35  | 12.70 | 4.76  | 15.88 |