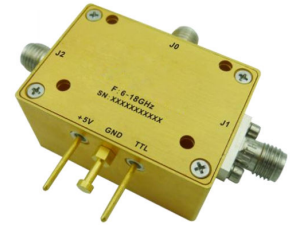




# Absorptive Coaxial SP2T Switch 6 - 18GHz

## Features

- Wide Band Operation 6-18GHz
- TTL compatible driver included
- Fast Switching Speed
- Low Insertion Loss and High Isolation
- High Power Cold Switching



## Typical Applications

- Wireless Infrastructure
- 5G communication
- Test and measurement Instrument

RF Microwave & VSAT  
Fiber Optics

| Parameters                             | Min.                           | Typ.  | Max.  | Min. | Typ.  | Max. | Units   |
|--|--------------------------------|-------|-------|------|-------|------|---------|
| Frequency Range                        | 6-15                           |       | 15-18 |      |       |      | GHz     |
| Insertion Loss                         |                                | 2.0   | 3.0   |      | 3.2   | 3.5  | dB      |
| Insertion Loss Temperature Coefficient |                                | 0.003 |       |      | 0.003 |      | dB/ ° C |
| Isolation                              | 60                             | 75    |       | 60   | 65    |      | dB      |
| Input VSWR                             |                                | 1.9   | 2.0   |      |       | 2.0  | : 1     |
| Output VSWR (ON State)                 |                                | 1.9   | 2.0   |      |       | 2.0  | : 1     |
| Output VSWR (OFF State)                |                                | 2.0   |       |      | 2.0   |      | : 1     |
| RF Input Power                         |                                |       | 40    |      |       | 40   | dBm     |
| DC Power Dissipation                   |                                | 0.6   |       |      | 0.6   |      | W       |
| 0.1dB Compression Point( P0.1dB )      |                                | 40    |       |      | 40    |      | dBm     |
| IIP3                                   |                                | 55    |       |      | 55    |      | dBm     |
| Switching Speed                        |                                | 250   | 350   |      | 250   | 350  | ns      |
| Weight                                 | 1.41                           |       |       |      |       |      | Ounces  |
| Impedance                              | 50                             |       |       |      |       |      | Ω       |
| Bias Current (+5V)                     | 200                            |       |       |      |       |      | mA      |
| Input / Output Connectors              | SMA-Female                     |       |       |      |       |      |         |
| Finish                                 | Gold Plated                    |       |       |      |       |      |         |
| Material                               | Aluminum                       |       |       |      |       |      |         |
| Sealing                                | Hermetically Sealed (Optional) |       |       |      |       |      |         |



### Absolute Maximum Ratings

|          |           |
|----------|-----------|
| Biassing | +5V ± 10% |
|----------|-----------|

### Ordering Information

| Part No         | Description                   |
|-----------------|-------------------------------|
| DBSA0215001800A | SP2T 6-18GHz PIN Diode Switch |

### Environmental Specifications

|                         |   |
|-------------------------|---|
| Operational Temperature | -40°C~+85°C   |
| Storage Temperature     | -50°C~+105°C  |
| Altitude                | 30,000 ft. (Epoxy Sealed Controlled environment)                                |
|                         | 60,000 ft. 1.0psi min (Hermetically Sealed Uncontrolled environment) (Optional) |
| Vibration               | 25g RMS (15 degrees 2KHz) endurance, 1 hour per axis                            |
| Humidity                | 100% RH at 35°C, 95%RH at 40°C  |
| Shock                   | 20G for 11msec half sine wave, 3 axis both directions                           |

### Outline Drawing:

All Dimensions in mm (inches)

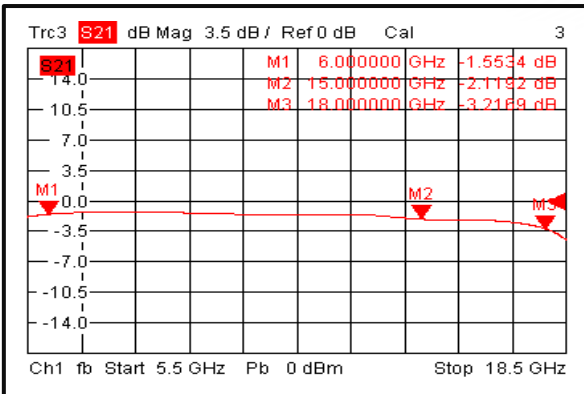
The drawing shows two views of the component. The top view shows a rectangular package with dimensions 14.2 [0.56] mm height and 18 [0.71] mm width. It features two SMA connectors (J2 and J1) and a control input (J0) with three pins. Dimensions for the top view include 5 [0.20] mm for the control pins, 12 [0.47] mm for the SMA connector spacing, and 10 [0.39] mm for the SMA connector height. The bottom view shows the component with dimensions 23.5 [0.93] mm height and 13.5 [0.53] mm width. It features two SMA connectors (J2 and J1) and a control input (J0) with three pins. Dimensions for the bottom view include 34 [1.34] mm for the SMA connector spacing, 22 [0.87] mm for the SMA connector height, and 17 [0.67] mm for the SMA connector width. The component is labeled with 'RFECHO', 'F:6-18GHz', 'SN:XXXXXXXXXX', and '+5V GND TTL' pins. A note indicates '4-Ø2.2[0.09] THRU' holes.

| TTL Control Voltage | Signal Path State |
|---------------------|-------------------|
| Low(0)=0~0.8V       | J0-J1             |
| High(1)=2.8~5V      | J0-J2             |

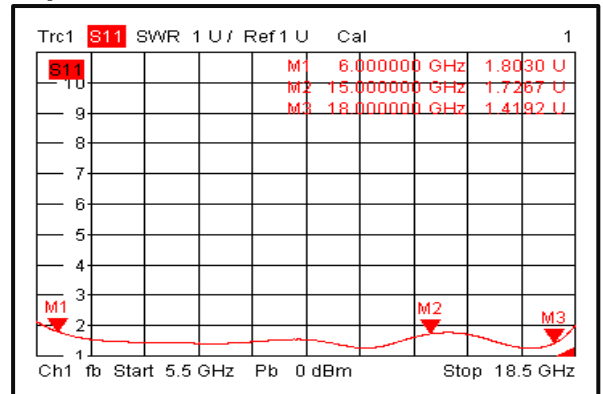
Control Pin Customization available upon request



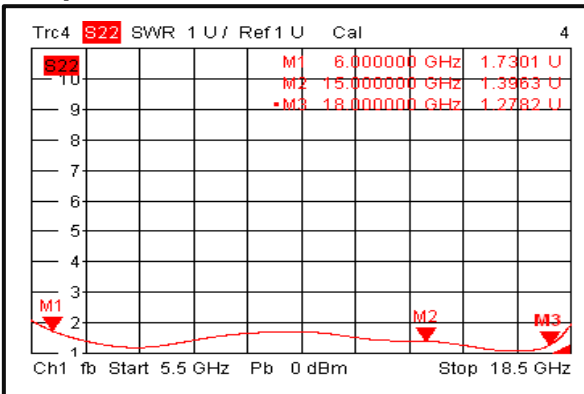
### Insertion Loss @+25°C



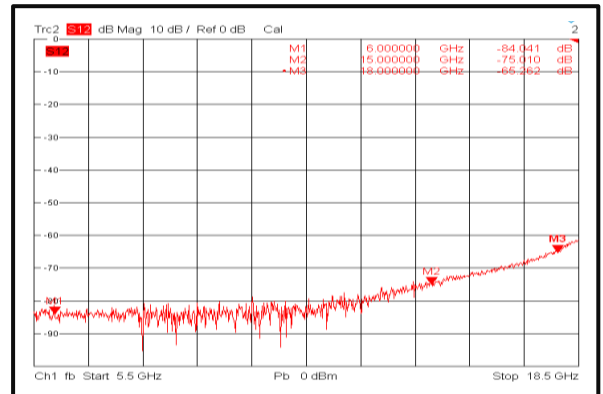
### Input VSWR @+25°C



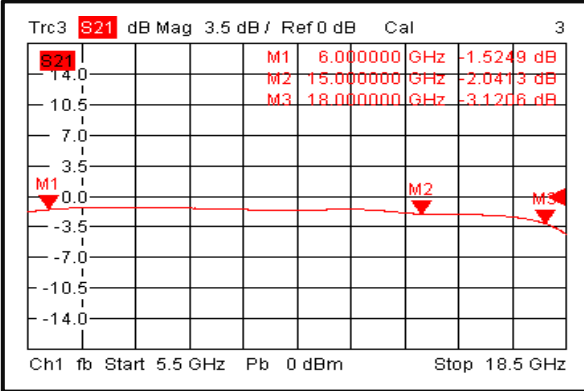
### Output VSWR @+25°C



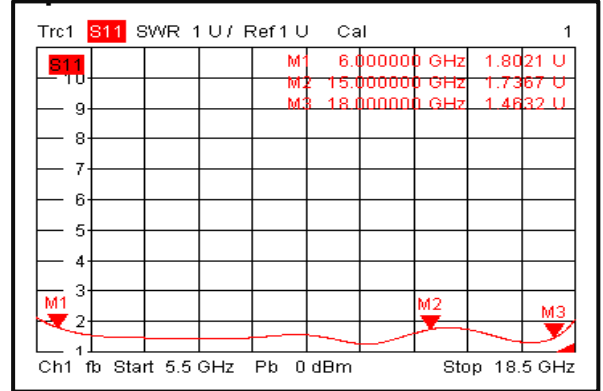
### Isolation @+25°C



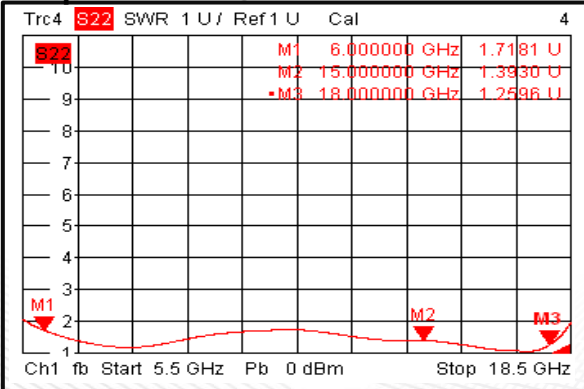
### Insertion Loss @-40°C



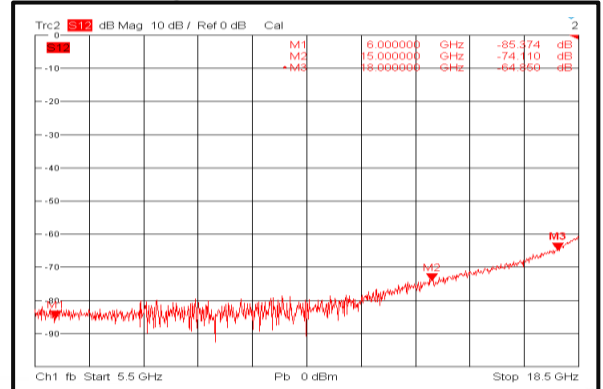
### Input VSWR @-40°C



### Output VSWR @-40°C

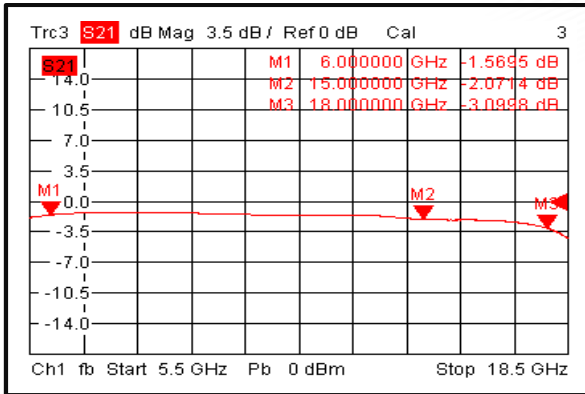


### Isolation @-40°C

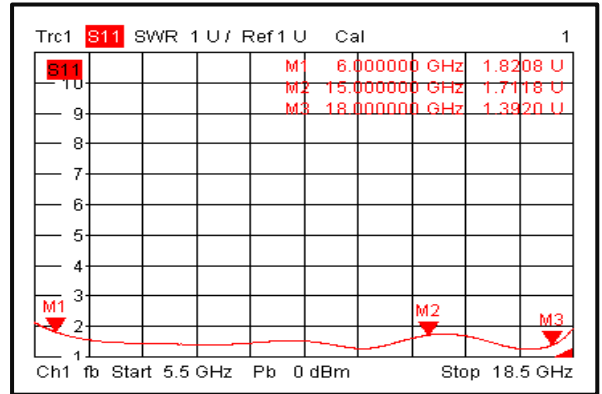




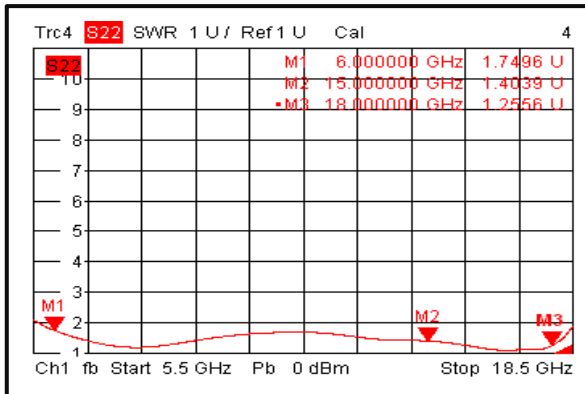
### Insertion Loss @+85°C



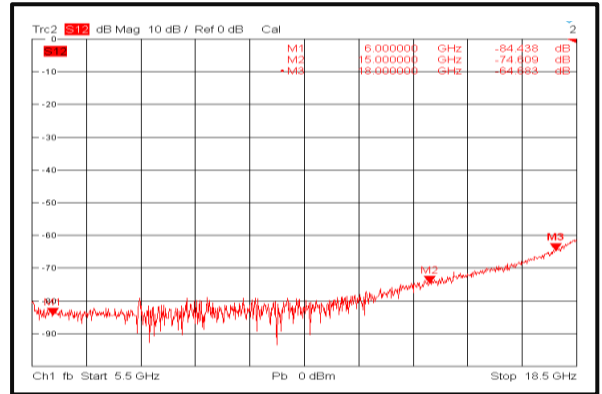
### Input VSWR @+85°C



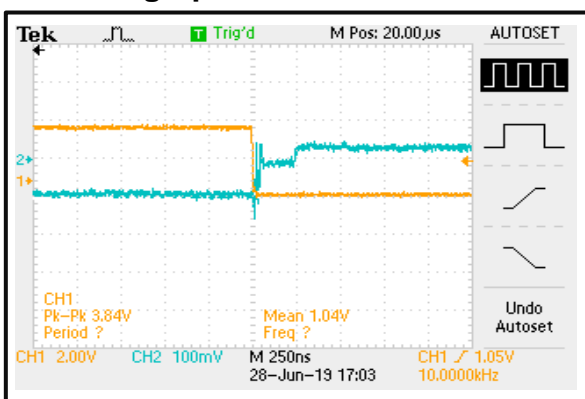
### Output VSWR @+85°C



### Isolation @+85°C



### Switching Speed



### Switching Speed

