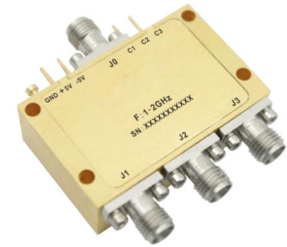




# Absorptive 1-2GHz Coaxial SP3T Switch

## Features

- Wide Band Operation 1-2GHz
- TTL compatible driver included
- Fast Switching Speed
- Low Insertion Loss and High Isolation
- Customization available upon request



## Typical Applications

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

RF Microwave & VSAT  
Fiber Optics

| Parameters                             | Min.                           | Typ.   | Max. | Units    |
|--|--------------------------------|--------|------|----------|
| Frequency Range                        |                                | 1~2    |      | GHz      |
| Insertion Loss                         |                                | 1      | 1.3  | dB       |
| Insertion Loss Temperature Coefficient |                                | 0.003  |      | dB/ °C   |
| Isolation                              | 80                             | 85     |      | dB       |
| Input VSWR                             |                                | 1.2    | 1.4  | : 1      |
| Output VSWR                            |                                | 1.2    | 1.4  | : 1      |
| RF Input power (CW)                    |                                |        | 30   | dBm      |
| DC Power Dissipation                   |                                | 0.85   |      | W        |
| 0.1dB Compression Point ( P0.1dB )     |                                | 30     |      | dBm      |
| IIP3                                   |                                | 55     |      | dBm      |
| Switching Speed                        |                                | 100    |      | ns       |
| Weight                                 |                                | 0.71   |      | ounces   |
| Impedance                              |                                | 50     |      | $\Omega$ |
| Bias Current (+5V/-5V)                 |                                | 120/50 |      | mA       |
| Input / Output Connectors              | SMA-Female                     |        |      |          |
| Finish                                 | Gold Plating                   |        |      |          |
| Material                               | Aluminum                       |        |      |          |
| Sealing                                | Hermetically Sealed (optional) |        |      |          |



### Absolute Maximum Ratings

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

### Ordering Information

| Part No.        | Description                  |
|-----------------|------------------------------|
| DBSA0301000200A | SP3T 1-2GHz 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 Un-controlled 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)

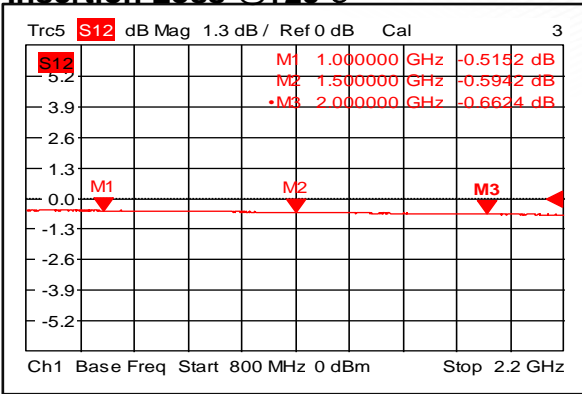
#### Truth Table

|                               |                |    |                   |
|-------------------------------|----------------|----|-------------------|
| TTL Control Voltage THRESHOLD | Low(0)=0~0.8V  |    |                   |
|                               | High(1)=2.8~5V |    |                   |
| Control Input TTL             |                |    | Signal Path State |
| C1                            | C2             | C3 |                   |
| 0                             | 0              | 0  | Not used          |
| 0                             | 1              | 1  | J0-J1             |
| 1                             | 0              | 1  | J0-J2             |
| 1                             | 1              | 0  | J0-J3             |
| 1                             | 1              | 1  | OFF               |

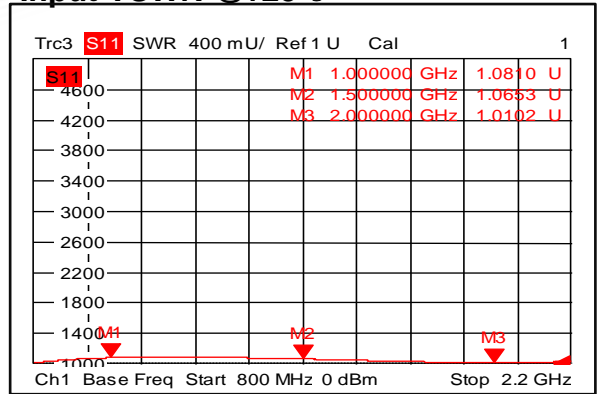
Control Pin Customization available upon request



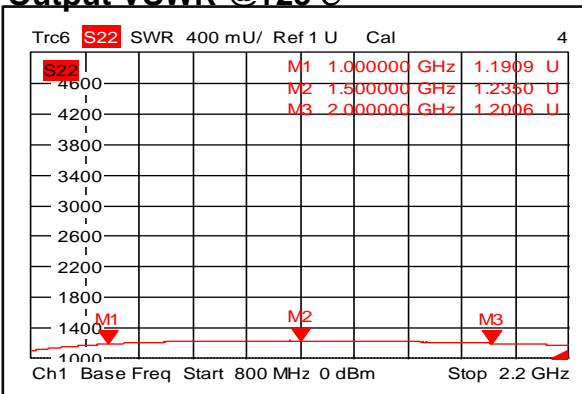
### Insertion Loss @+25°C



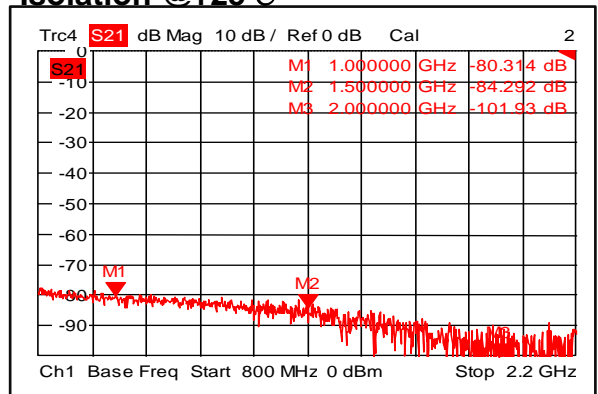
### Input VSWR @+25°C



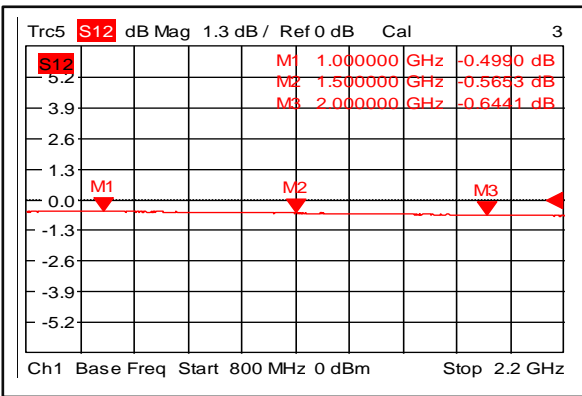
### Output VSWR @+25°C



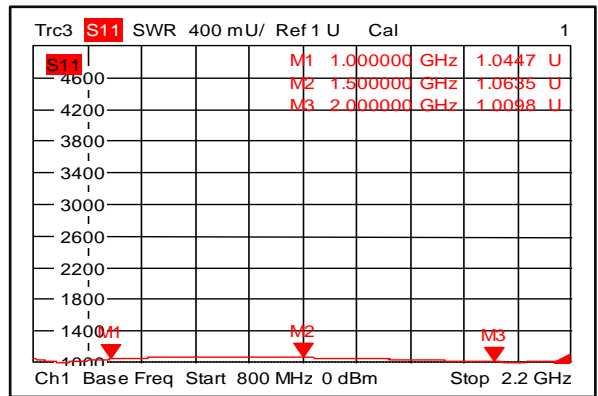
### Isolation @+25°C



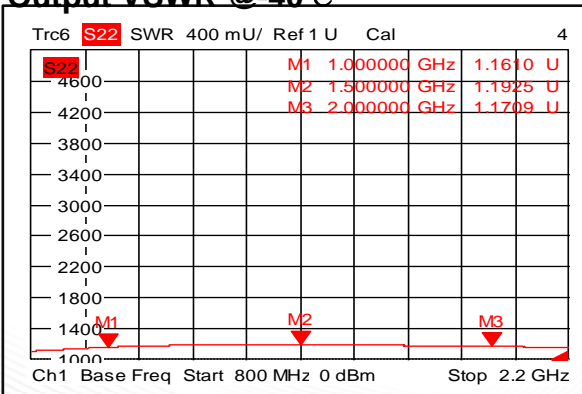
### Insertion Loss @-40°C



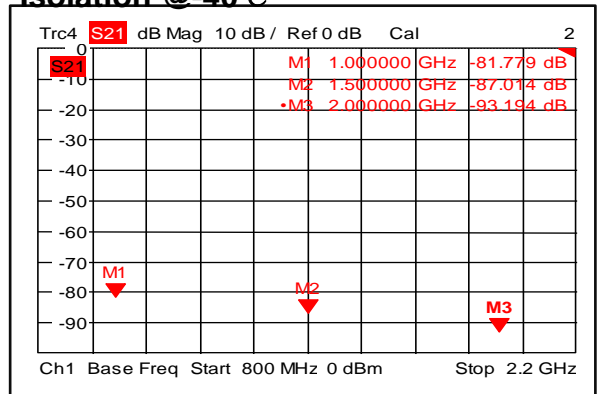
### Input VSWR @-40°C



### Output VSWR @-40°C

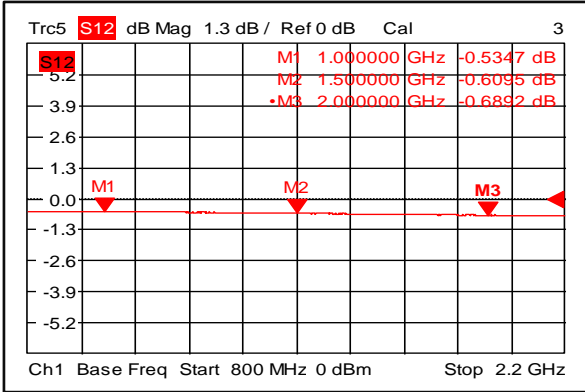


### Isolation @-40°C

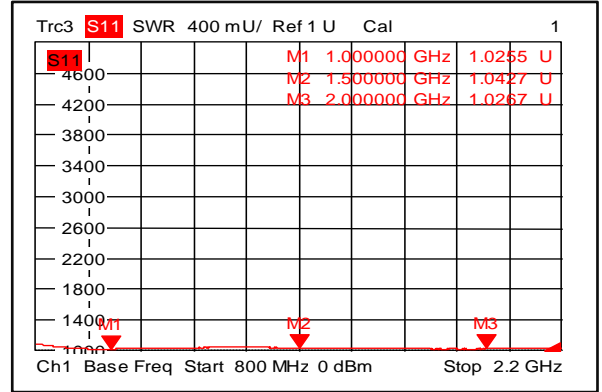




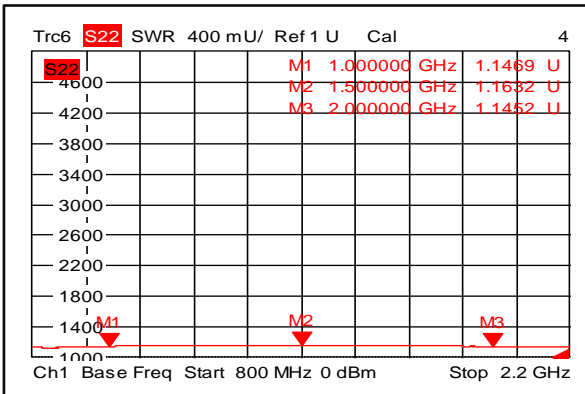
### Insertion Loss @+85°C



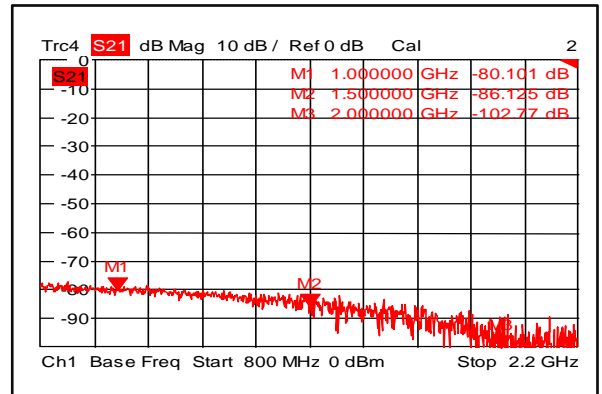
### Input VSWR @+85°C



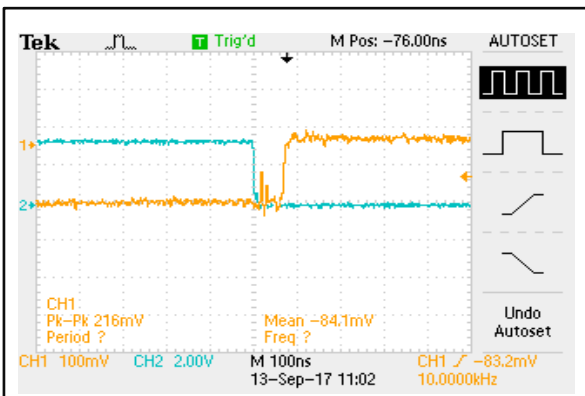
### Output VSWR @+85°C



### Isolation @+85°C



### Switching Speed



### Switching Speed

