# Absorptive Coaxial SP2T Switch 0.5 - 12GHz

## Features

- Ultra Wide Band Operation 0.5-12GHz
- 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

| Parameter | Min. | Typ. | Max. | Min. | Typ. | Max. | Units |
|---|---|---|---|---|---|---|---|
| Frequency Range | | 0.5-6 | | | 6-12 | | GHz |
| Insertion Loss | | 1.3 | 1.5 | | 2.0 | 2.5 | dB |
| Insertion Loss Temperature Coefficient | | 0.003 | | | 0.003 | | dB/ °C |
| Isolation | 80 | 90 | | 80 | 85 | | dB |
| Input VSWR | | 1.5 | 1.8 | | 1.5 | 1.8 | : 1 |
| Output VSWR | | 1.5 | 1.8 | | 1.5 | 1.8 | : 1 |
| RF Input Power (CW) | | | 30 | | | 30 | dBm |
| Power Dissipation | | 0.4 | | | 0.4 | | W |
| 0.1dB Compression Point (P0.1dB ) | | 30 | | | 30 | | dBm |
| IIP3 | | 55 | | | 55 | | dBm |
| Switching Speed | 100 | | | | | | ns |
| Weight | 0.71 | | | | | | ounces |
| Impedance | 50 | | | | | | Ω |
| Bias Current (+5V/-5V) | 80/50 | | | | | | mA |
| Input / Output Connectors | SMA-Female | | | | | | |
| Finish | Gold Plat | | | | | | |
| Material | Aluminum | | | | | | |
| Sealing | Hermetically Sealed ( optional ) | | | | | | |

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## Absolute Maximum Ratings

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

## Environmental Specifications

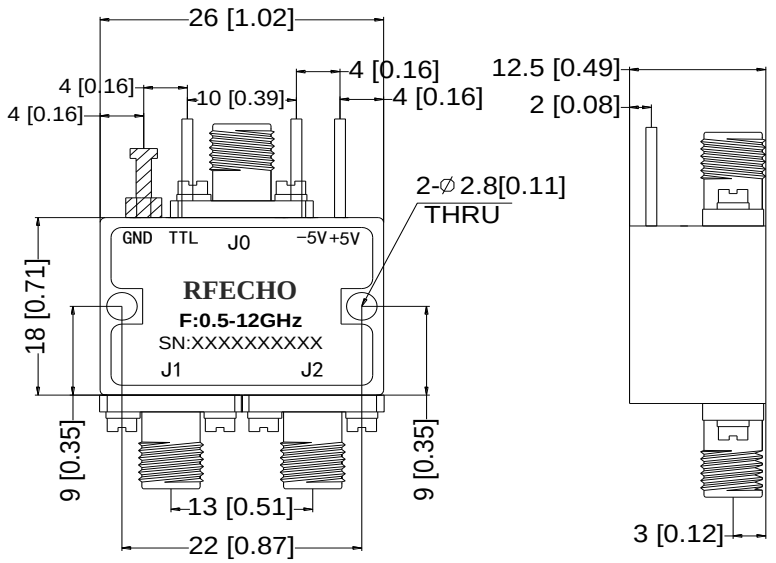
| | |
|---|---|
| Operational Temperature | -40ºC~+85ºC |
| Storage Temperature | -50ºC~+105ºC |
| Altitude | 30,000 ft. (Epoxy Sealed Controlled environment) |
| | 60,000 ft. 1.0psi min (Hermetically Sealed Un-controlled environment) (Optional) |
| Vibration | 25g RMS (15 degrees 2KHz) endurance, 1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

## Ordering Information

| Part No. | Description |
|---|---|
| DBSA0200501200A | SP2T 0.5-12GHz PIN Diode Switch |

## 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 |
| 1 | J0-J1 |
| 0 | J0-J2 |
| Control Pin Customization available upon request | |

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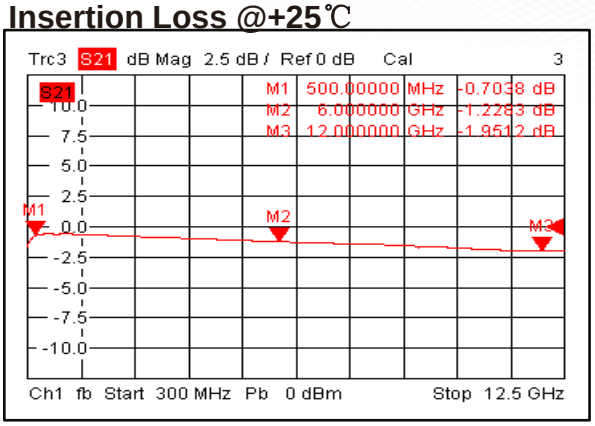
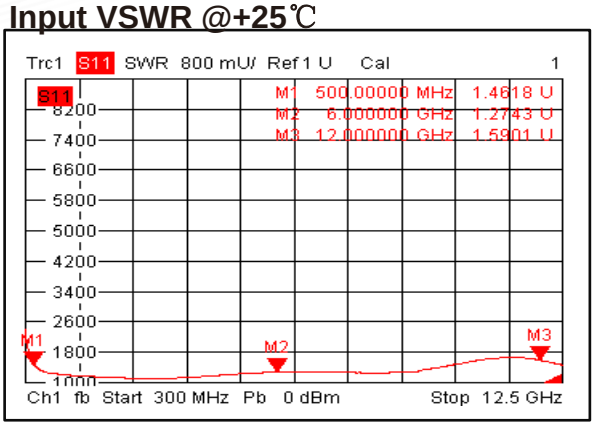
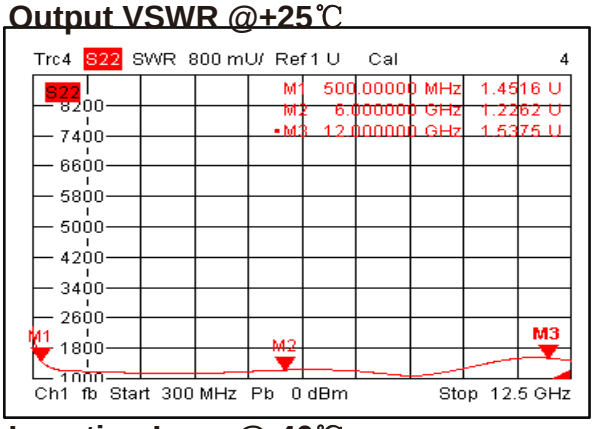
## Insertion Loss @+25℃



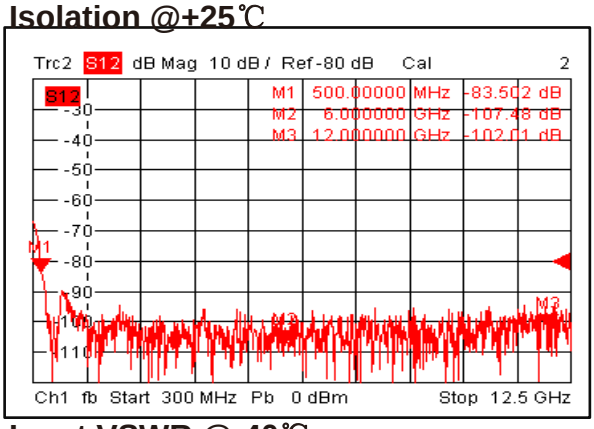

## Input VSWR @+25℃



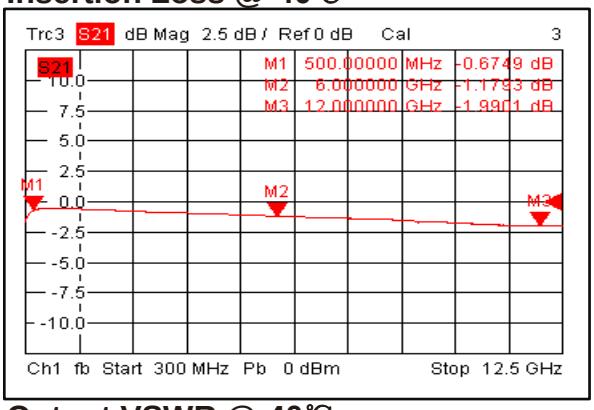

## Output VSWR @+25℃



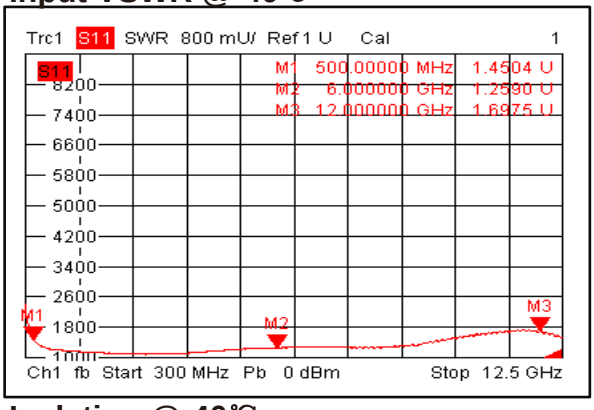

## Isolation @+25℃



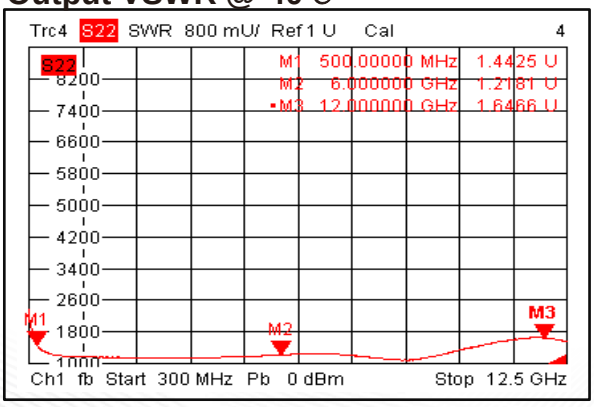

## Insertion Loss @-40℃



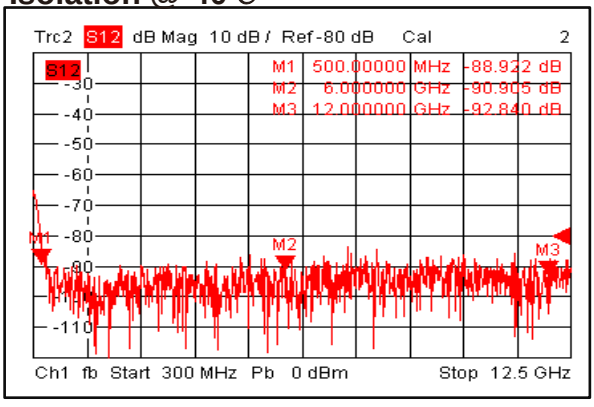

## Input VSWR @-40℃




## Output VSWR @-40℃




## Isolation @-40℃

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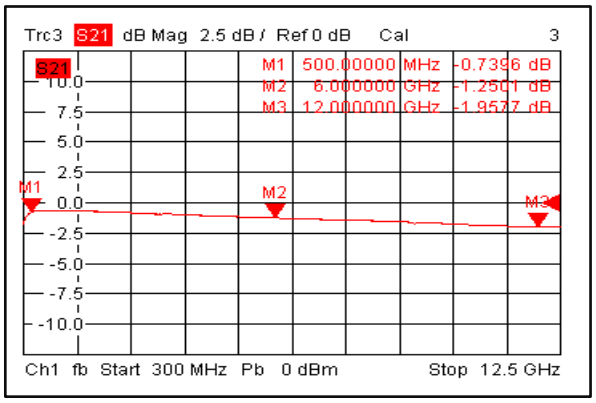
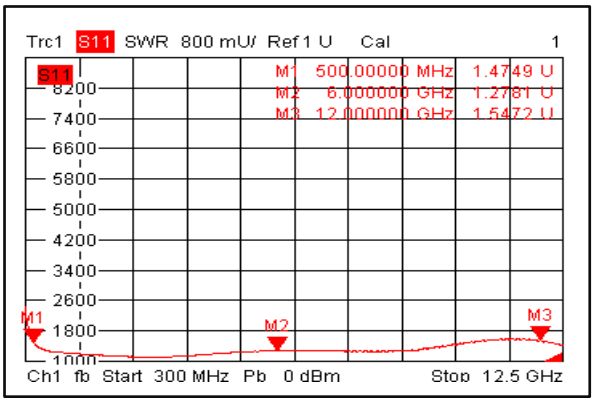
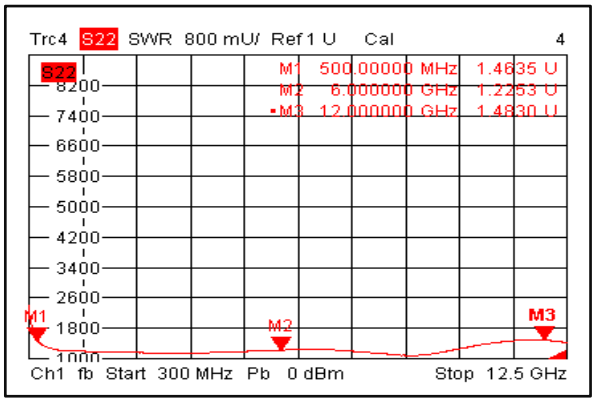
## Insertion Loss @+85℃



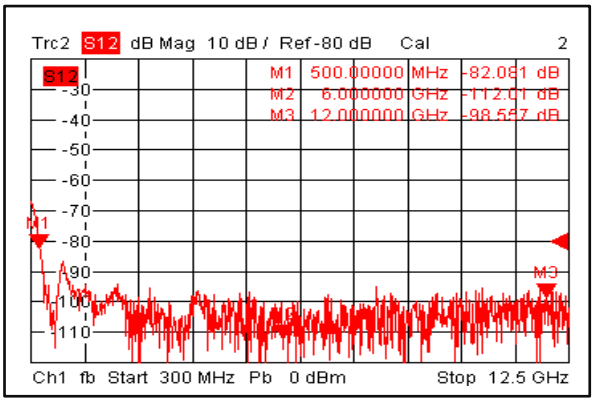

## Input VSWR @+85℃



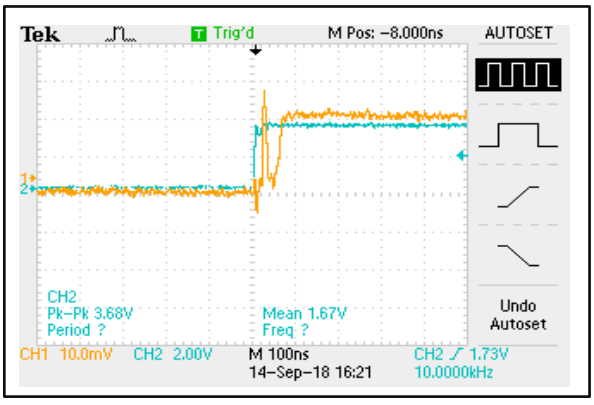

## Output VSWR @+85℃



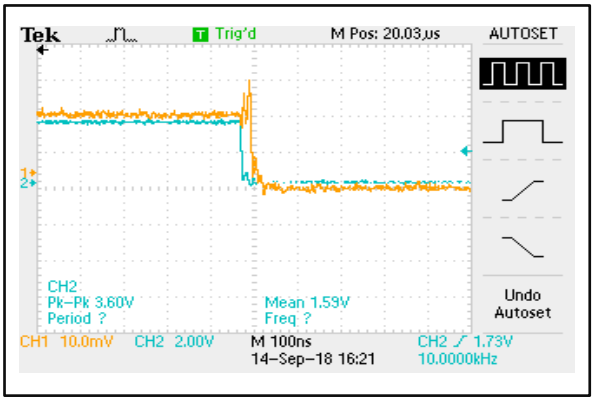

## Isolation @+85℃




## Switching Speed




## Switching Speed

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