

Reflective Coaxial SP2T Switch 6 – 13.5GHz

Features

- Wide Band Operation 6-13.5GHz
- TTL compatible driver included
- Fast Switching Speed
- Low Insertion Loss and High Isolation
- High Power Cold Switching
- Customization available upon request



Typical Applications

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

RF Microwave & VSAT
Fiber Optics

| Parameter | 1 | Min. | Typ. | Max. | Units |
|--|----|------|--------------------------------|------|---------|
| Frequency Range | | | 6-13.5 | | GHz |
| Insertion Loss | | | 1.2 | 1.8 | dB |
| Insertion Loss Temperature Coefficient | | | 0.003 | | dB/ ° C |
| Isolation | 50 | | 55 | | dB |
| Input VSWR | | | 1.5 | 2.0 | : 1 |
| Output VSWR | | | 1.5 | 2.0 | : 1 |
| RF Input Power (CW) | | | | 20 | W |
| RF Input Power (Pulsed, 10% Duty Cycle, 10us pulse width) | | | | 250 | W |
| DC Power Dissipation | | 1 | | | W |
| 0.1dB Compression Point (P 0.1dB) | | | 42 | | dBm |
| IIP3 | | 55 | | | dbm |
| Switching Speed | | 350 | 500 | | ns |
| Weight | | 1.41 | | | Ounces |
| Impedance | | 50 | | | Ω |
| Bias Current (+5V) | | 200 | | | mA |
| Input / Output Connectors | | | SMA-Female | | |
| Finish | | | Gold Plated | | |
| Material | | | Aluminum | | |
| Sealing | | | Epoxy Sealed (Standard) | | |
| | | | Hermetically Sealed (Optional) | | |

Absolute Maximum Ratings

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

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 |

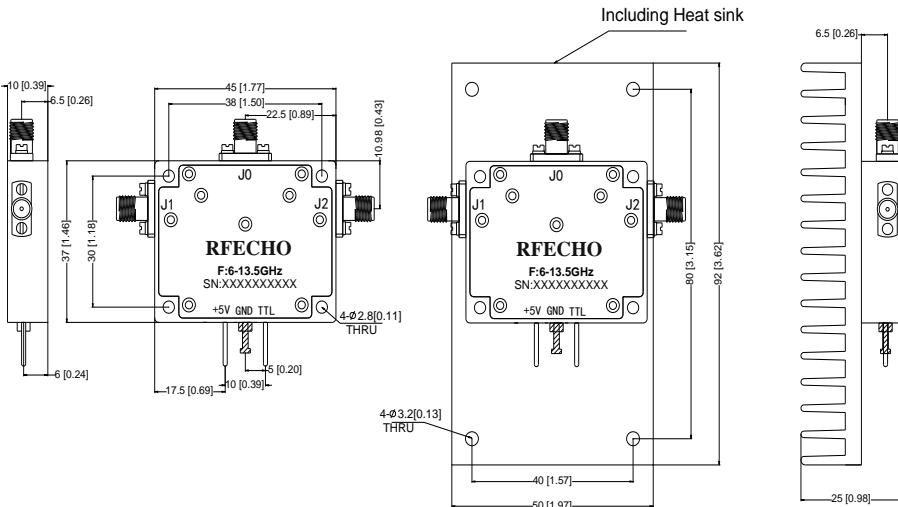
Ordering Information

| Part No. | Description |
|-----------------|---------------------------------|
| DBSR0206001350A | SP2T 6-13.5GHz PIN Diode Switch |

Outline Drawing:

All Dimensions in mm (inches)

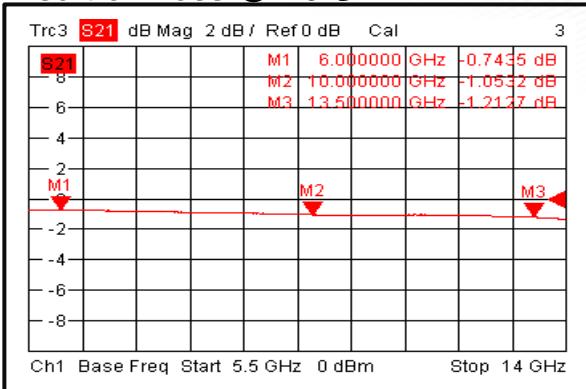
Housing Tolerances ± 0.1 (0.004)



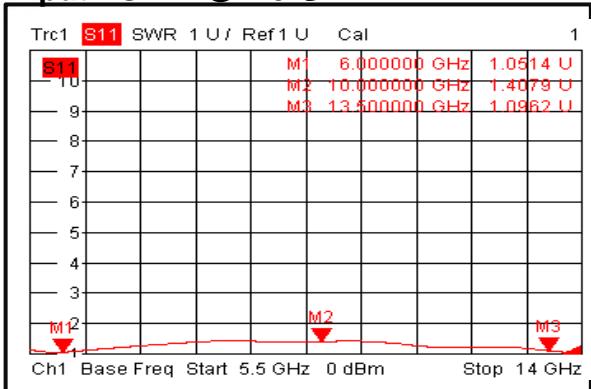
Truth Table

| | |
|--|-------------------|
| TTL Control Voltage THRESHOLD | Low(0)=0~0.8V |
| | High(1)=2.8~5V |
| Control Input TTL | Signal Path State |
| 0 | J0-J1 |
| 1 | J0-J2 |
| Control Pin Customization available upon request | |

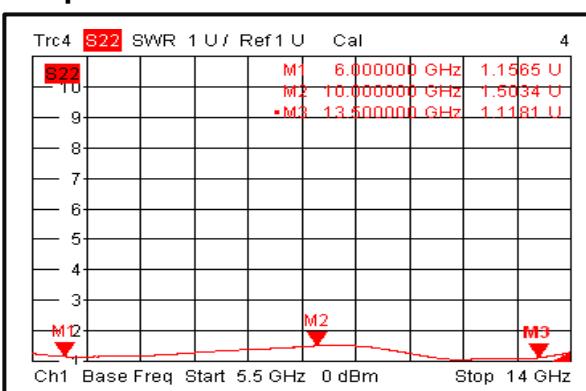
Insertion Loss @+25°C



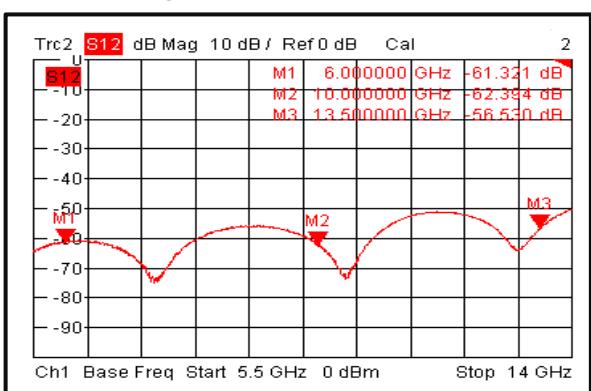
Input VSWR @+25°C



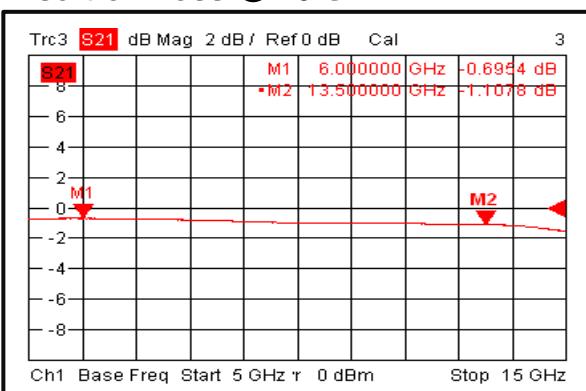
Output VSWR @+25°C



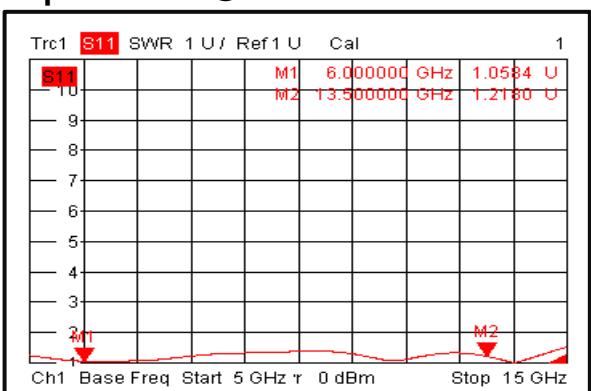
Isolation @+25°C



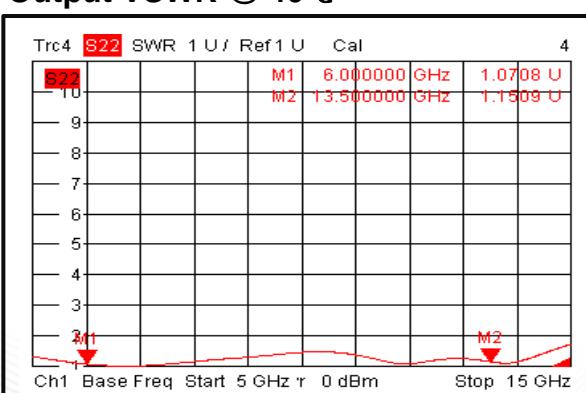
Insertion Loss @-40°C



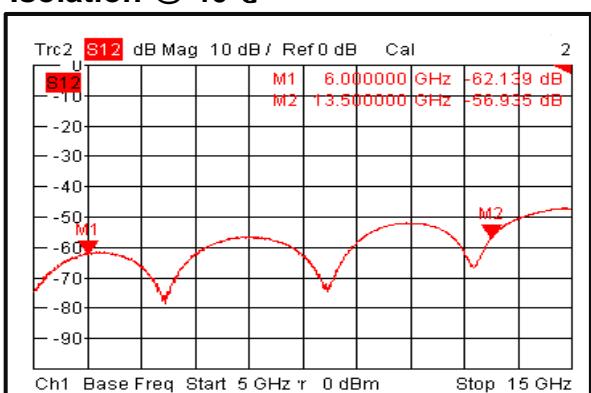
Input VSWR @-40°C



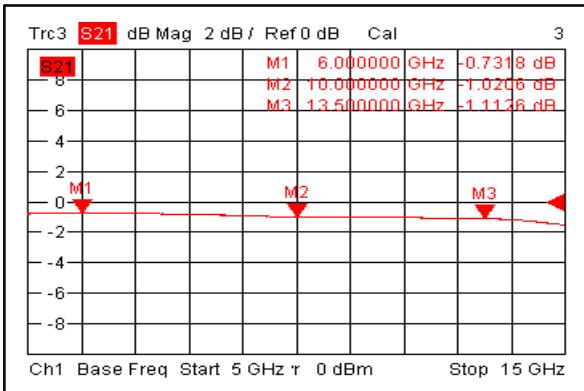
Output VSWR @-40°C



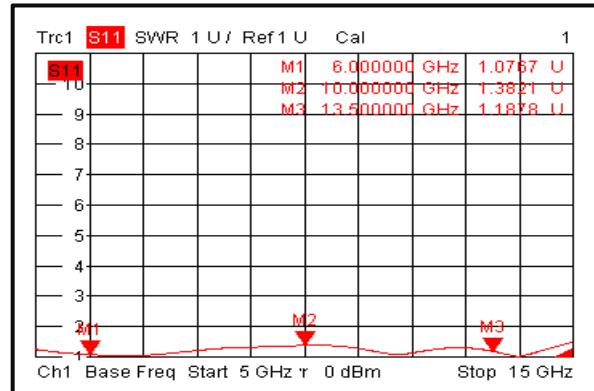
Isolation @-40°C



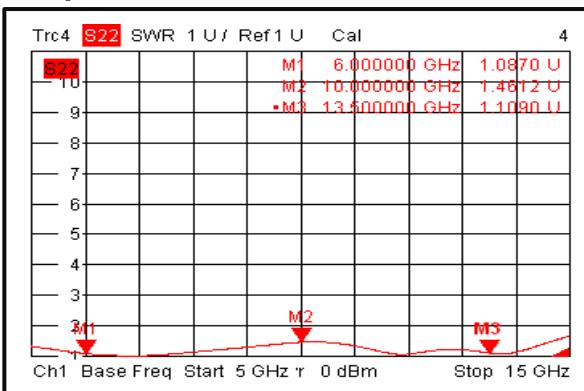
Insertion Loss @+85°C



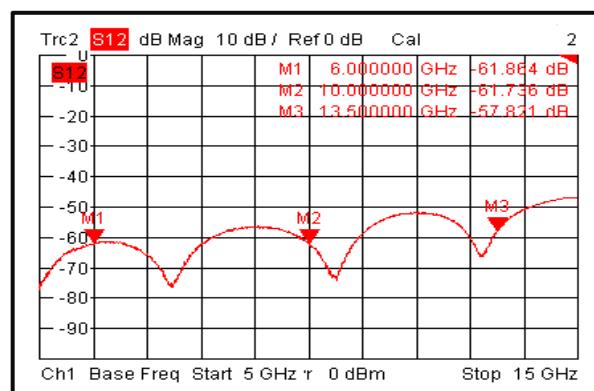
Input VSWR @+85°C



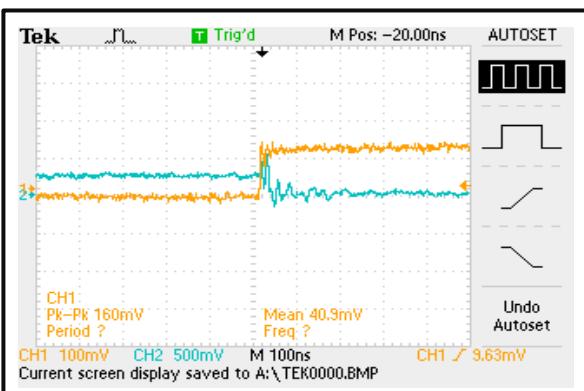
Output VSWR @+85°C



Isolation @+85°C



Switching Speed



Switching Speed

