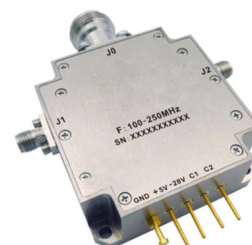




# Reflective 100-250MHz Coaxial SP2T Switch

## Features

- Wide Band Operation 100-250MHz
- TTL compatible driver included
- Fast Switching Speed
- Low Insertion Loss and High Isolation
- Customization available upon request
- High Power Cold Switching



## Typical Applications

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

RF Microwave & VSAT  
Fiber Optics

| Parameters                                           | Min.                                                      | Typ.  | Max. | Units   |
|------------------------------------------------------|-----------------------------------------------------------|-------|------|---------|
| Frequency Range                                      | 100-250                                                   |       |      | MHz     |
| Insertion Loss                                       |                                                           | 0.4   | 0.8  | dB      |
| Insertion Loss Temperature Coefficient               |                                                           | 0.003 |      | dB/ ° C |
| Isolation                                            | 55                                                        | 65    |      | dB      |
| Input VSWR                                           |                                                           | 1.25  | 1.5  | : 1     |
| Output VSWR                                          |                                                           | 1.25  | 1.5  | : 1     |
| RF Input Power<br>(5us Pulse width , 10% duty cycle) |                                                           |       | 300  | W       |
| DC Power Dissipation                                 |                                                           | 1     |      | W       |
| 0.1dB Compression Point (P 0.1dB)                    |                                                           | 51    |      | dBm     |
| IIP3                                                 |                                                           | 50    |      | dbm     |
| Switching Speed                                      |                                                           | 1.2   |      | us      |
| Weight                                               | 4.23                                                      |       |      | Ounces  |
| Impedance                                            | 50                                                        |       |      | Ω       |
| Bias Current (+5V/-28V)                              | 200/50                                                    |       |      | mA      |
| Input / Output Connectors                            | N-Female / SMA-Female                                     |       |      |         |
| Finish                                               | Nickel Plated                                             |       |      |         |
| Material                                             | Aluminum                                                  |       |      |         |
| Sealing                                              | Epoxy Sealed (Standard)<br>Hermetically Sealed (Optional) |       |      |         |



## Absolute Maximum Ratings

|         |              |
|---------|--------------|
| Biasing | +5V/-28V±10% |
|---------|--------------|

## Ordering Information

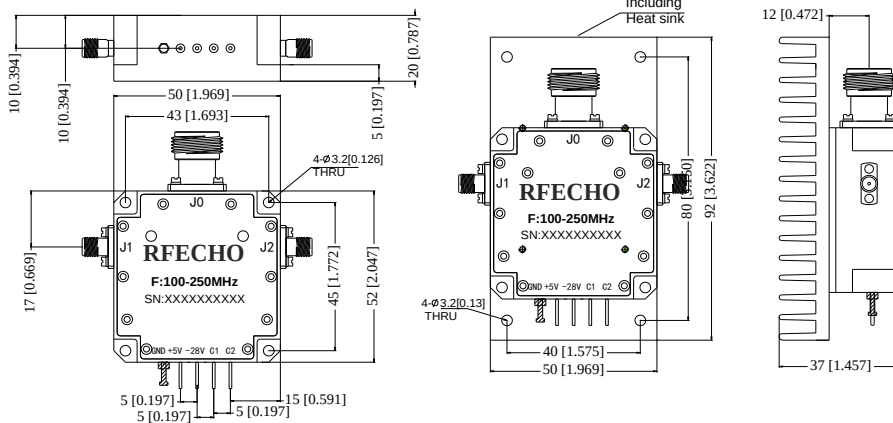
| Part No.        | Description                      |
|-----------------|----------------------------------|
| DBSR0200100025A | SP2T 100-250MHz PIN Diode Switch |

## 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)  
Housing Tolerances  $\pm 0.2$  [0.008]

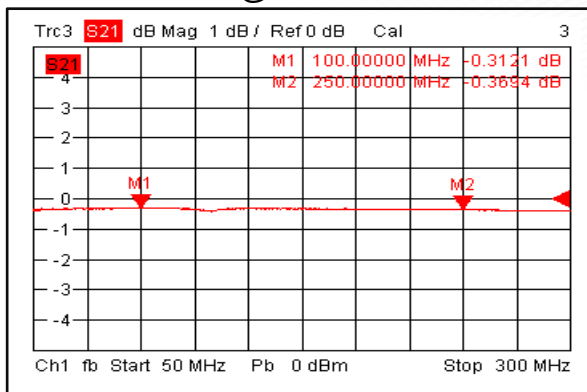


## Truth Table

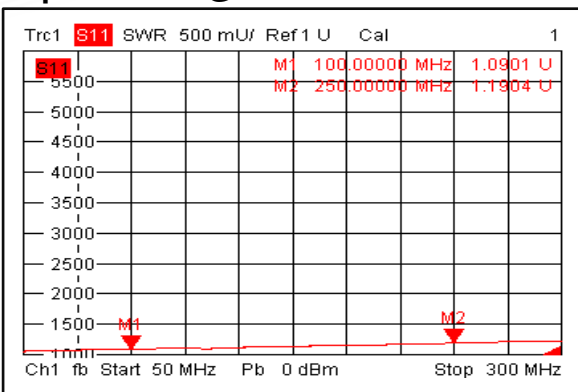
| TTL Control Voltage THRESHOLD                    |    | Low(0)=0~0.8V     |
|--------------------------------------------------|----|-------------------|
|                                                  |    | High(1)=2.8~5V    |
| Control Input TTL                                |    | Signal Path State |
| c2                                               | c1 |                   |
| 0                                                | 0  | OFF               |
| 0                                                | 1  | J0-J1             |
| 1                                                | 0  | J0-J2             |
| 1                                                | 1  | Not Used          |
| Control Pin Customization available upon request |    |                   |



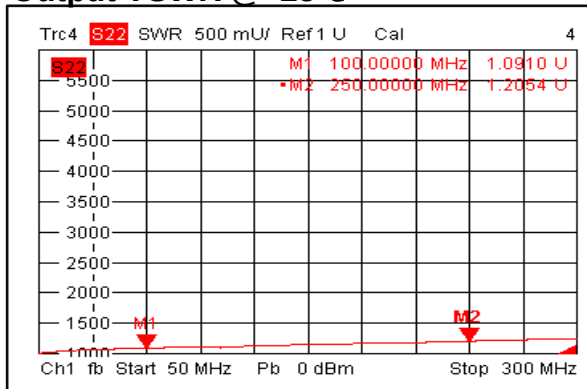
### Insertion Loss @+25°C



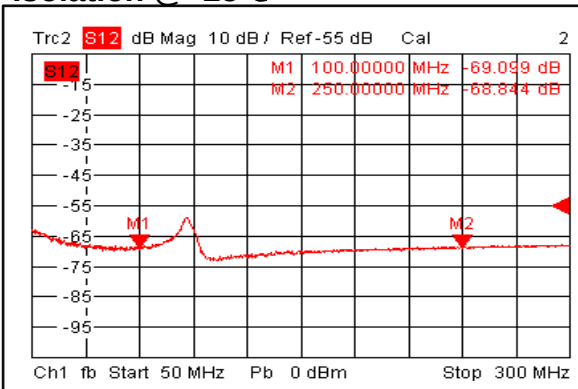
### Input VSWR @+25°C



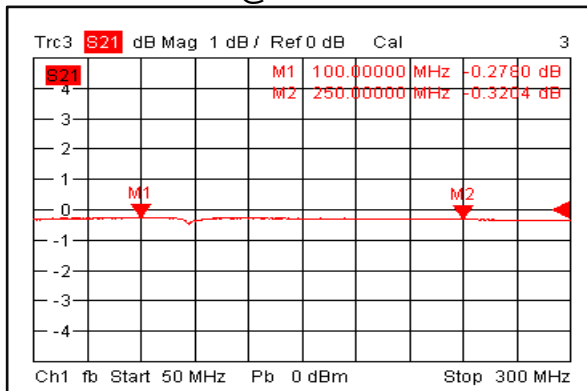
### Output VSWR @+25°C



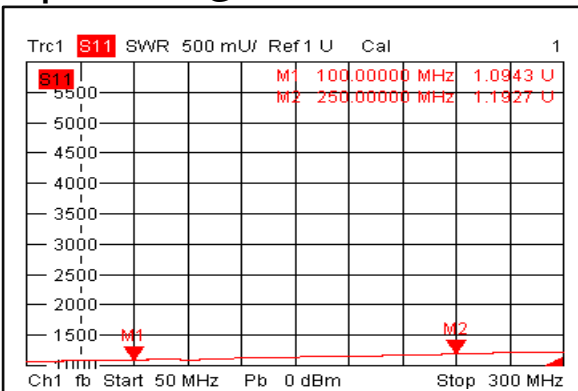
### Isolation @+25°C



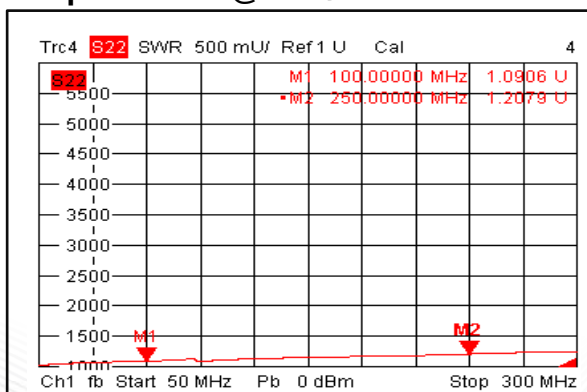
### Insertion Loss @-40°C



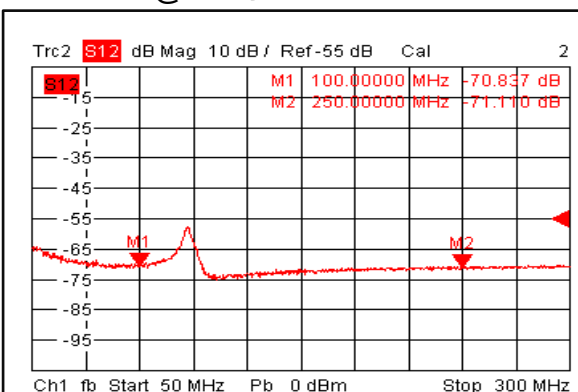
### Input VSWR @-40°C



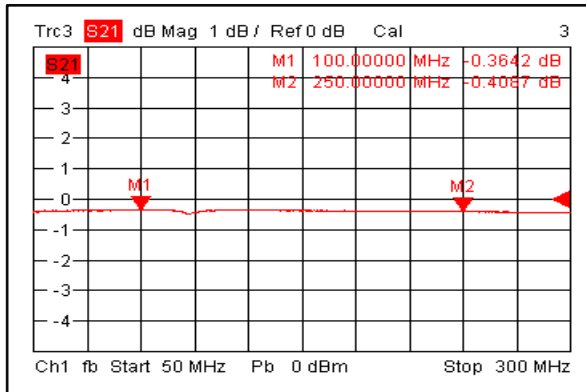
### Output VSWR @-40°C



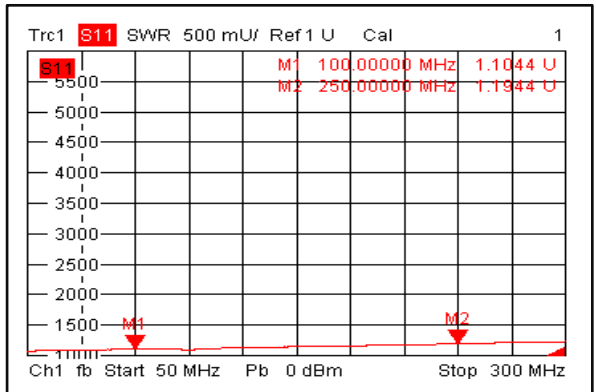
### Isolation @-40°C



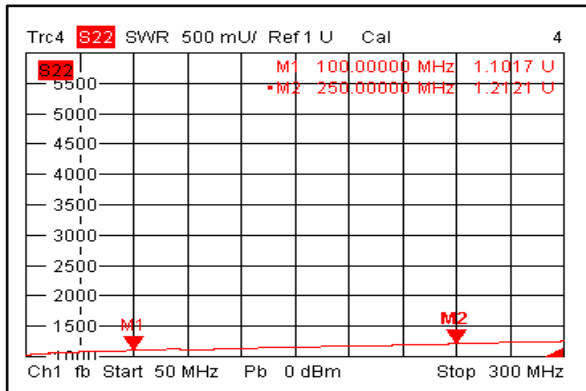
## Insertion Loss @+85°C



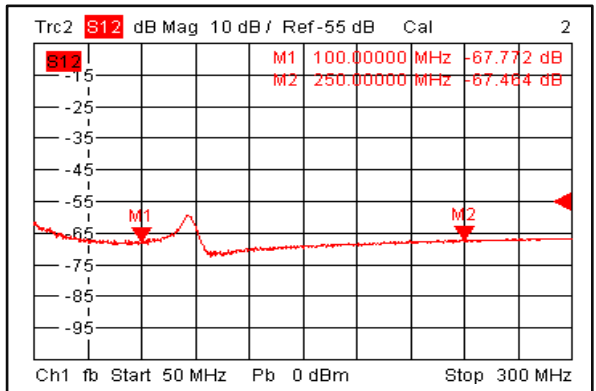
## Input VSWR @+85°C



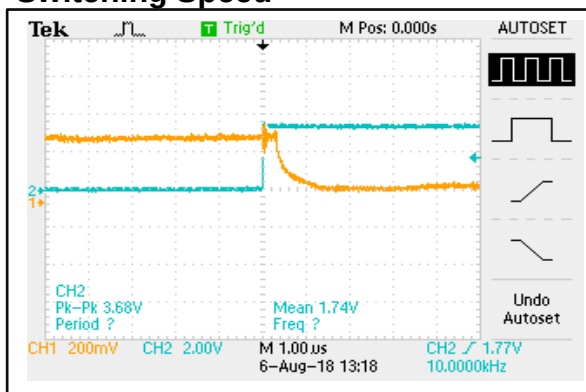
## Output VSWR @+85°C



## Isolation @+85°C



## Switching Speed



## Switching Speed

