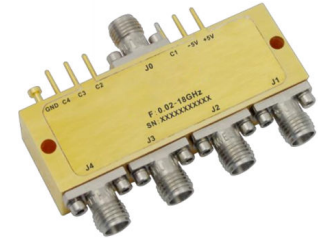




# Reflective 0.02-18GHz Coaxial SP4T Switch

## Features

- Ultra Wide Band Operation 0.02-18GHz
- TTL compatible driver include
- 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 | Min  | Typ.  | Max | Min   | Typ.  | Max | Units   |
|----------------------------------------|--------------------------------|-------|-----|------|-------|-----|-------|-------|-----|---------|
| Frequency Range                        | 0.02~6                         |       |     | 6~12 |       |     | 12~18 |       |     | GHz     |
| Insertion Loss                         |                                | 2.2   | 3.0 |      | 3.8   | 4.3 |       | 4.2   | 4.5 | dB      |
| Insertion Loss Temperature Coefficient |                                | 0.003 |     |      | 0.003 |     |       | 0.003 |     | dB/ ° C |
| Isolation                              | 60                             | 80    |     | 70   | 85    |     | 70    | 85    |     | dB      |
| Input VSWR                             |                                | 1.5   | 2   |      | 1.5   | 2   |       | 1.5   | 2   | : 1     |
| Output VSWR                            |                                | 1.5   | 2   |      | 1.5   | 2   |       | 1.5   | 2   | : 1     |
| RF Input power                         | 30                             |       |     |      | 30    |     | 30    |       |     | dBm     |
| Power Dissipation (CW)                 |                                | 0.3   |     |      | 0.4   |     |       | 0.5   |     | W       |
| 0.1dB Compression P0.1dB               |                                | 27    |     |      | 27    |     |       | 26    |     | dBm     |
| IM3                                    |                                | 40    |     |      | 40    |     |       | 40    |     | dBc     |
| IIP3                                   |                                | 50    |     |      | 50    |     |       | 50    |     | dBm     |
| Switching Speed                        | 100                            |       |     |      |       |     |       |       |     | ns      |
| Weight                                 | 1.7                            |       |     |      |       |     |       |       |     | ounces  |
| Impedance                              | 50                             |       |     |      |       |     |       |       |     | Ω       |
| Biasing(+5V/-5V)                       | 160/50                         |       |     |      |       |     |       |       |     | mA      |
| Input /Output Connectors               | SMA-Female/SMA-                |       |     |      |       |     |       |       |     |         |
| Finish                                 | Gold Plated                    |       |     |      |       |     |       |       |     |         |
| Material                               | Aluminum                       |       |     |      |       |     |       |       |     |         |
| Seal                                   | Hermetically Sealed (optional) |       |     |      |       |     |       |       |     |         |



### Absolute Maximum Ratings

|         |                  |
|---------|------------------|
| Biasing | $\pm 5V \pm 5\%$ |
|---------|------------------|

### Ordering Information

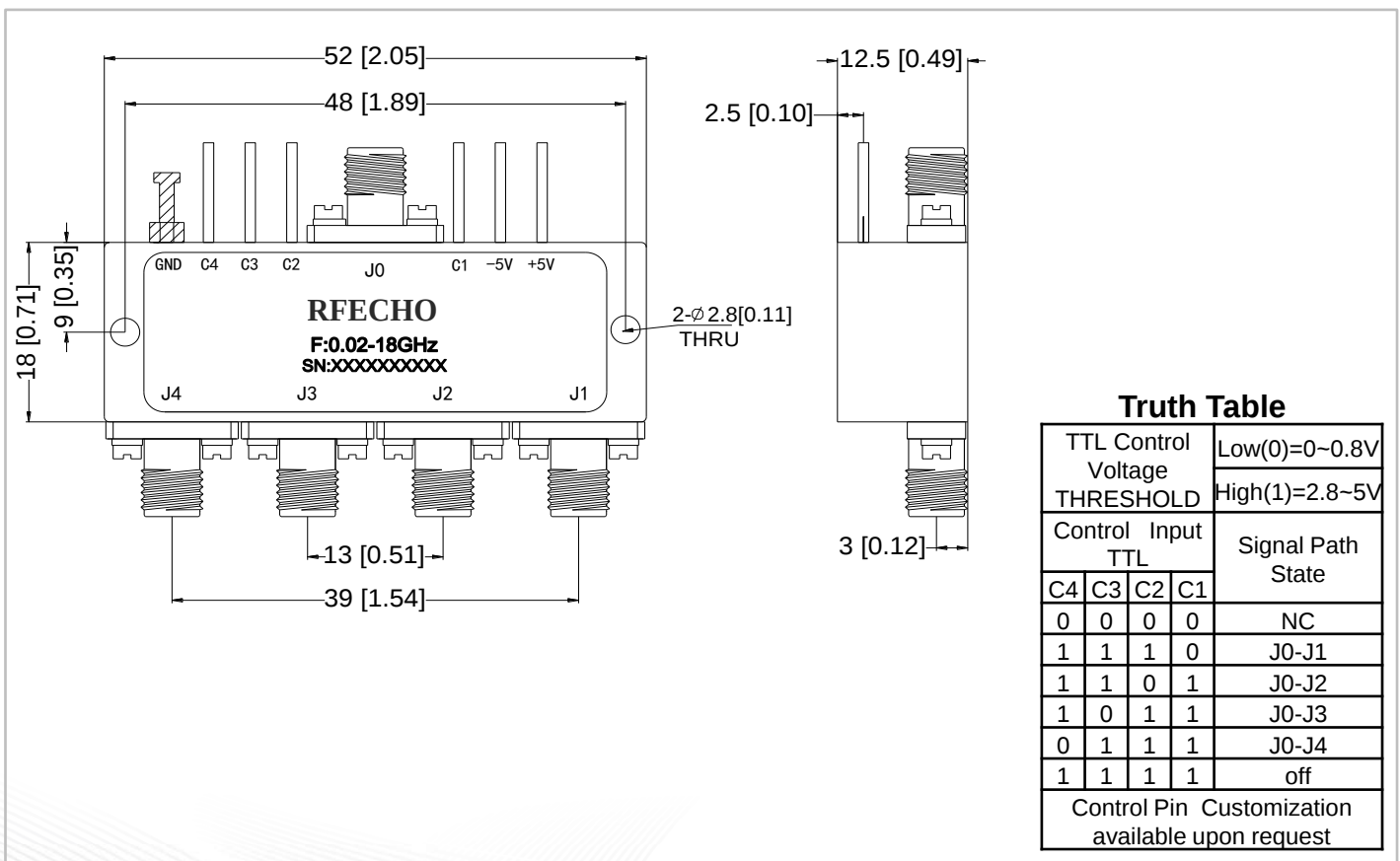
| Part No.        | Description                      |
|-----------------|----------------------------------|
| DBSR0400021800A | SP4T 0.02-18GHz PIN Diode Switch |

### 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 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                            |

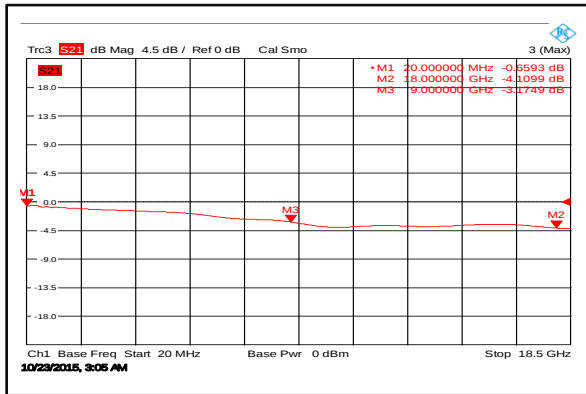
### Outline Drawing:

All Dimensions in mm (inches)

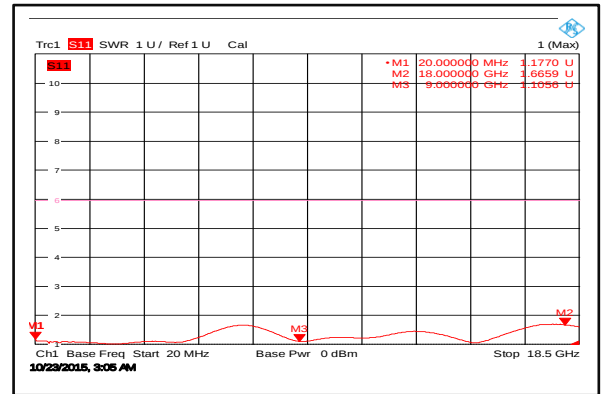




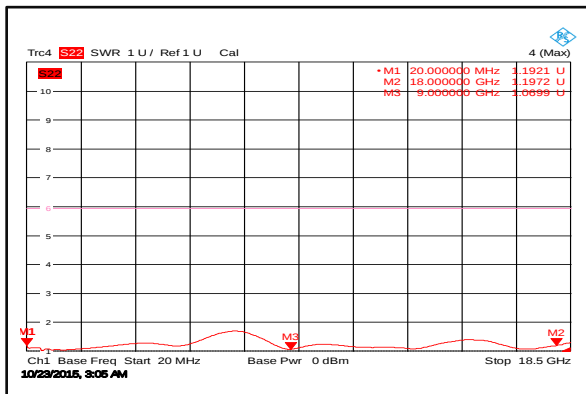
## Insertion Loss



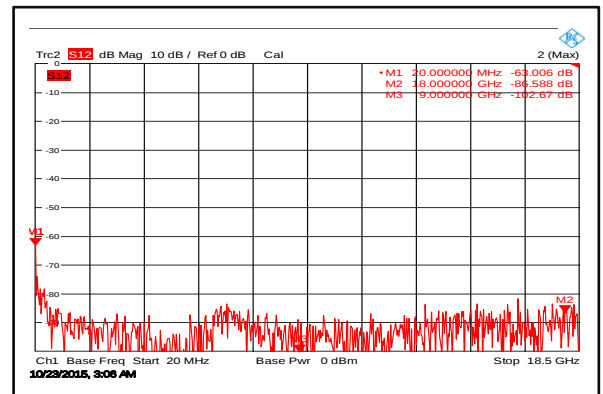
## Input VSWR



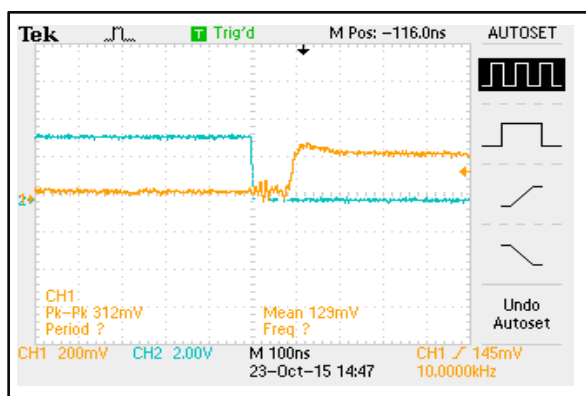
## Output VSWR



## Isolation



## Turn on Switching Speed



## Turn off Switching Speed

