



# RF-LAMBDA

LEADER OF RF BROADBAND SOLUTIONS

RFSP2TA0218GUSB

## USB Absorptive Coaxial SP2T Switch 2 - 18GHz



### Features

- Wide Band Operation 2-18GHz
- USB Controlled and Powered.
- Low Insertion Loss and High Isolation
- Customization available upon request
- Control SW included.

### Typical Applications

- Automated Test
- Aerospace and military applications

### Electrical Specifications, TA = +25° C, USB Powered

| Description                            | PN: RFSP2TA0218GUSB              |       |     |      |       |     |       |       |     |        |
|----------------------------------------|----------------------------------|-------|-----|------|-------|-----|-------|-------|-----|--------|
|                                        | SP2T Absorptive Switch           |       |     |      |       |     |       |       |     |        |
|                                        | Low Power Cold Switching         |       |     |      |       |     |       |       |     |        |
| Parameters                             | Min                              | Typ.  | Max | Min  | Typ.  | Max | Min   | Typ.  | Max | Units  |
| Frequency Range                        | 2-8                              |       |     | 8-12 |       |     | 12-18 |       |     | GHz    |
| Insertion Loss                         |                                  | 1.6   | 1.8 |      | 2.2   | 2.4 |       | 2.7   | 3   | dB     |
| Insertion Loss Temperature Coefficient |                                  | 0.003 |     |      | 0.003 |     |       | 0.003 |     | dB/ °C |
| Isolation                              | 65                               | 70    |     | 60   | 65    |     | 60    | 65    |     | dB     |
| Input VSWR                             |                                  | 1.6   | 2   |      | 1.6   | 2   |       | 1.6   | 2   | :1     |
| Output VSWR                            |                                  | 1.6   | 2   |      | 1.6   | 2   |       | 1.6   | 2   | :1     |
| RF Input power (CW)                    |                                  |       | 1   |      |       | 1   |       |       | 1   | W      |
| DC Power Dissipation                   |                                  | 0.55  |     |      | 0.55  |     |       | 0.55  |     | W      |
| 0.1dB Compression Point (P 0.1dB)      |                                  | 30    |     |      | 30    |     |       | 30    |     | dBm    |
| IIP3                                   |                                  | 55    |     |      | 55    |     |       | 55    |     | dBm    |
| Weight                                 | 1.5                              |       |     |      |       |     |       |       |     | ounces |
| Impedance                              | 50                               |       |     |      |       |     |       |       |     | Ω      |
| Bias Current                           | 110                              |       |     |      |       |     |       |       |     | mA     |
| Control Interface                      | USB 2.0 (Control Cable Included) |       |     |      |       |     |       |       |     |        |
| Switching Speed                        | 200~300 ms                       |       |     |      |       |     |       |       |     |        |
| Input / Output Connectors              | SMA-Female                       |       |     |      |       |     |       |       |     |        |
| Finishing                              | Nickel Plated                    |       |     |      |       |     |       |       |     |        |
| Material                               | Aluminum                         |       |     |      |       |     |       |       |     |        |

USB Absorptive Coaxial Single Pole Double Throw Switch 2 - 18GHz



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### Absolute Maximum Ratings

|                |        |
|----------------|--------|
| RF Input Power | +30dBm |
|----------------|--------|

### Ordering Information

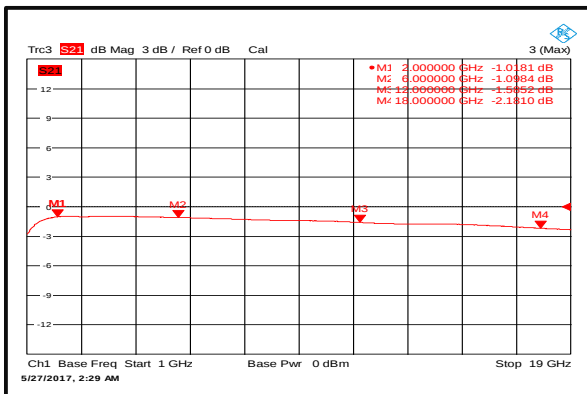
| Part No.        | ECCN  | Description                   |
|-----------------|-------|-------------------------------|
| RFSP2TA0218GUSB | EAR99 | SP2T 2-18GHz PIN Diode Switch |

### Environmental Specifications

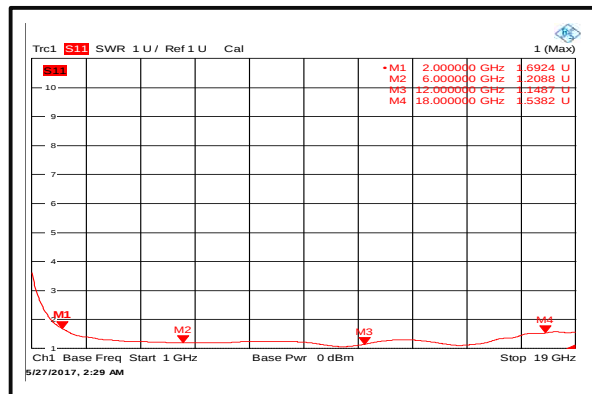
|                              |                                                       |
|------------------------------|-------------------------------------------------------|
| Operational Temperature (°C) | -20 ~ +75                                             |
| Storage Temperature (°C)     | -40 ~ +85                                             |
| Vibration                    | 25g RMS (15 degrees 2KHz) endurance, 1 hour per axis  |
| Shock                        | 20G for 11msec half sine wave, 3 axis both directions |

### Typical Performance Plots

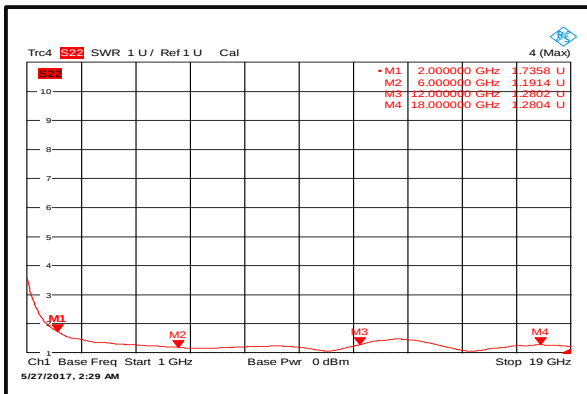
#### Insertion Loss @+25



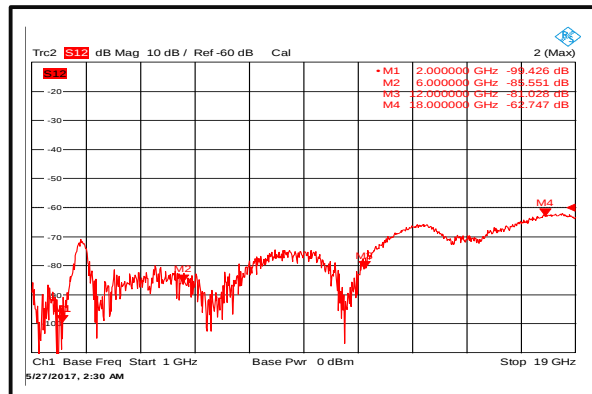
#### Input VSWR @+25



#### Output VSWR @+25



#### Isolation @+25



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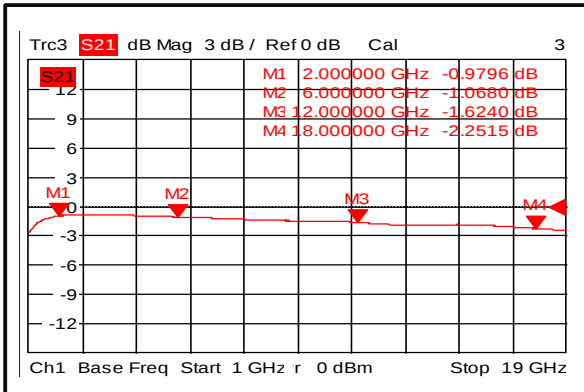
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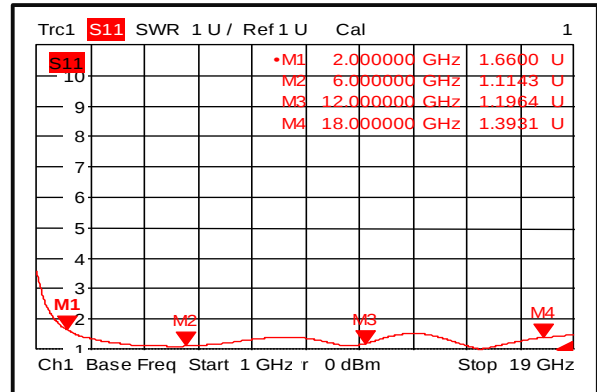
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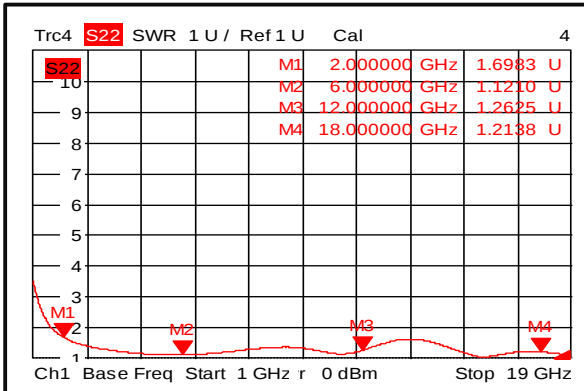
## Insertion Loss @-45



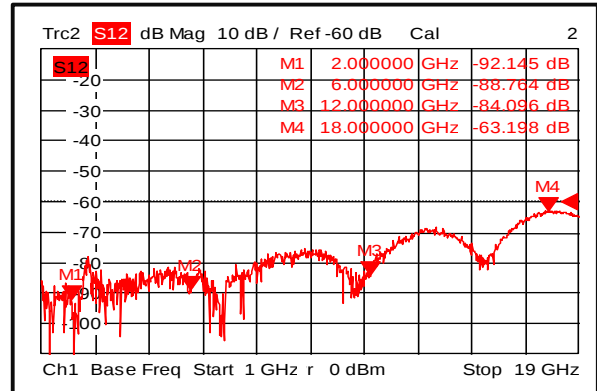
## Input VSWR @-45



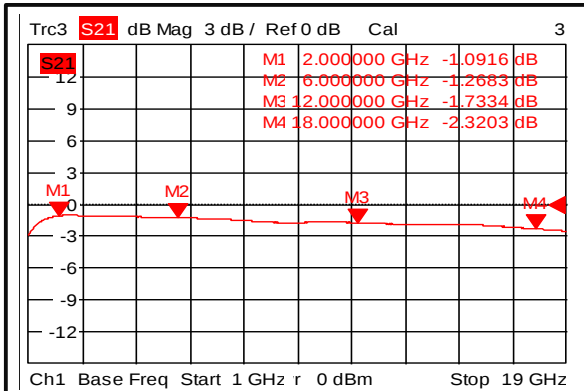
## Output VSWR @-45



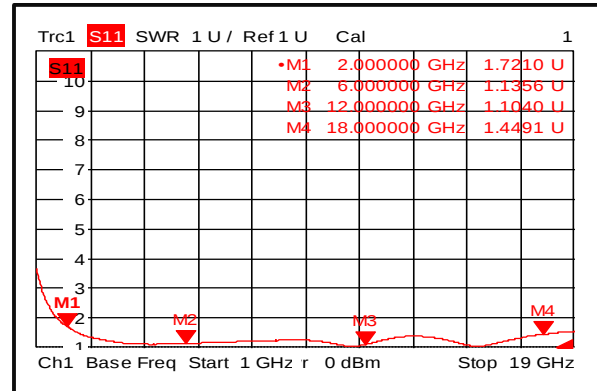
## Isolation @-45



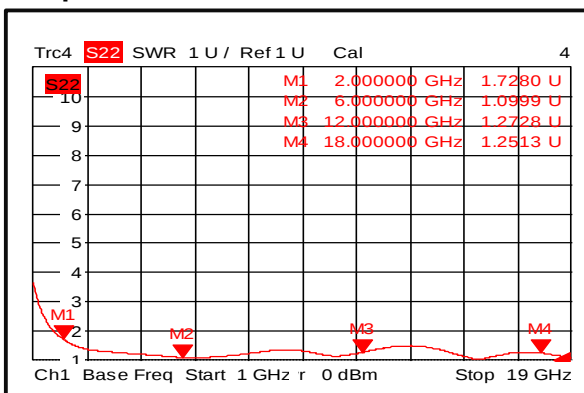
## Insertion Loss @+85



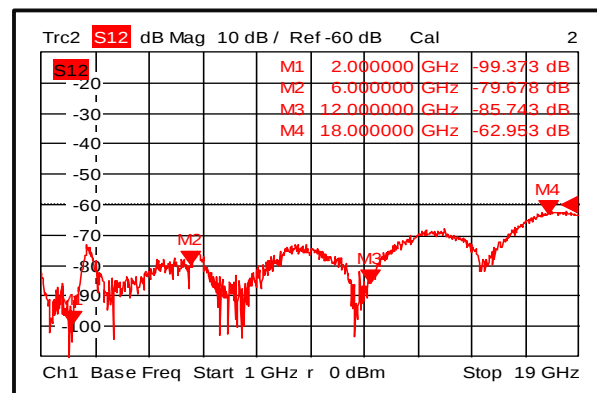
## Input VSWR @+85



## Output VSWR @+85



## Isolation @+85





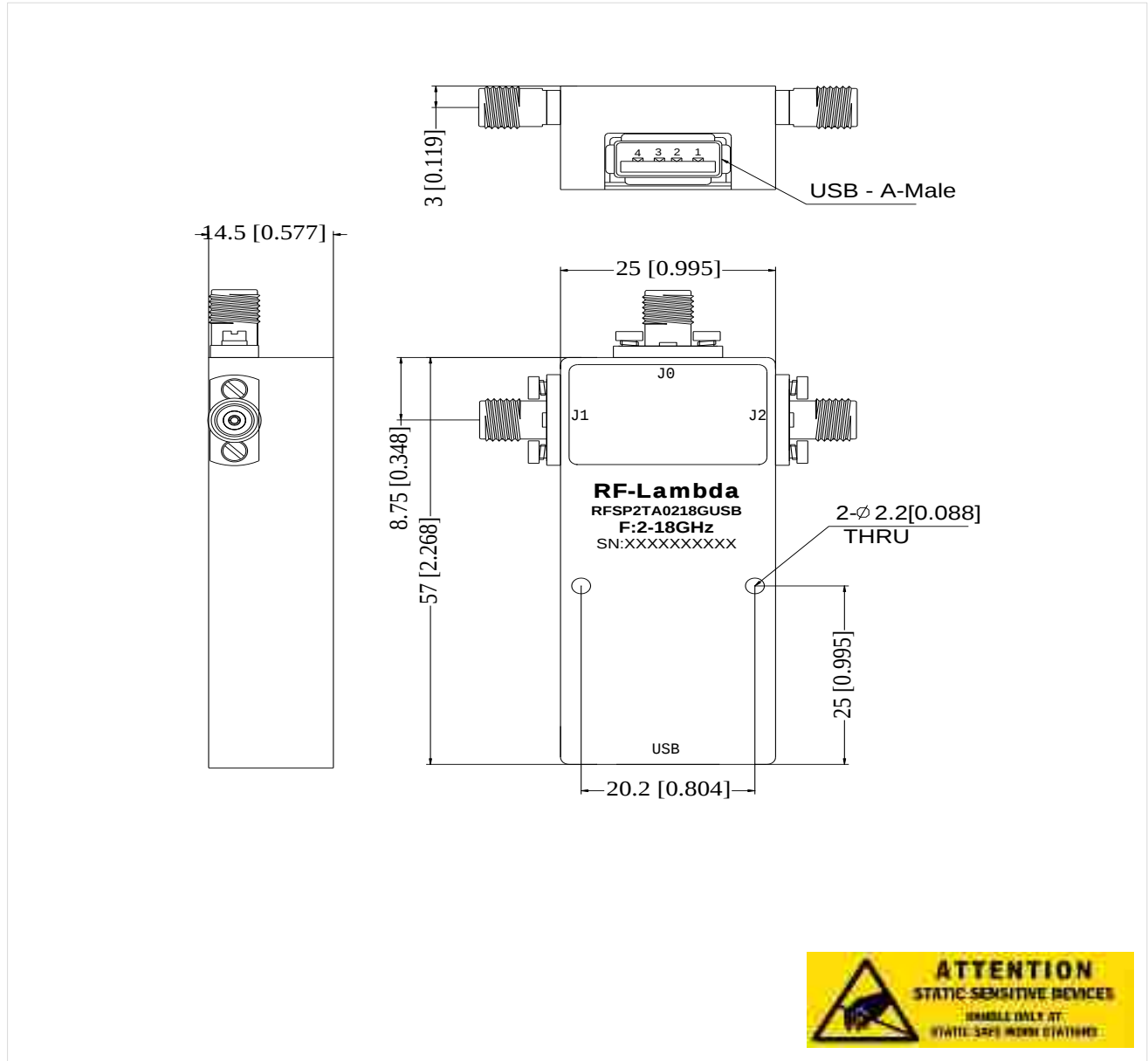
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### Outline Drawing:

All Dimensions in mm [inches]



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USB Absorptive Coaxial Single Pole Double Throw Switch 2 - 18GHz



Figure 1 (USB Control Panel)





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