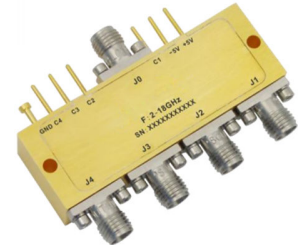




# Absorptive Coaxial SP4T Switch 2-18GHz

## Features

- Ultra Wide Band Operation 2-18GHz
- 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

Parameters	Min.	Typ.	Max	Min.	Typ.	Max.	Min.	Typ.	Max.	Units
Frequency Range	2~6			6~12			12~18			GHz
Insertion Loss		1.8	2.0		2.7	3.0		3	3.5	dB
Insertion Loss Temperature Coefficient		0.003			0.003			0.003		dB/ °C
Isolation	70	75		70	75		60	65		dB
Input VSWR		1.5	2.0		1.5	2.0		1.6	2.0	: 1
Output VSWR		1.5	2.0		1.5	2.0		1.5	2.0	: 1
RF Input power			30			30			30	dBm
DC Power Dissipation		0.5			0.5			0.5		W
0.1dB Compression Point (P0.1dB)		30			30			30		dBm
IIP3		55			55			55		dBm
Switching Speed	100 Max.									ns
Weight	1.25 Max.									Ounces
Impedance	50									Ω
Bias Current (+5V / -5V)	160/50 Max.									mA
Input / Output Connectors	SMA-Female									
Finish	Gold Plated									
Material	Aluminum									
Sealing	Hermetically Sealed (Optional)									



### Absolute Maximum Ratings

Biasing	+5V ± 10%/-5V ± 10%
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### Ordering Information

Part No.	Description
DBSA0402001800C	SP4T 2-18GHz PIN Diode Switch

### Environmental Specifications

Operational Temperature	-40°C ~ +85°C (Case Temperature)
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

### Outline Drawing:

All Dimensions in mm (inches)

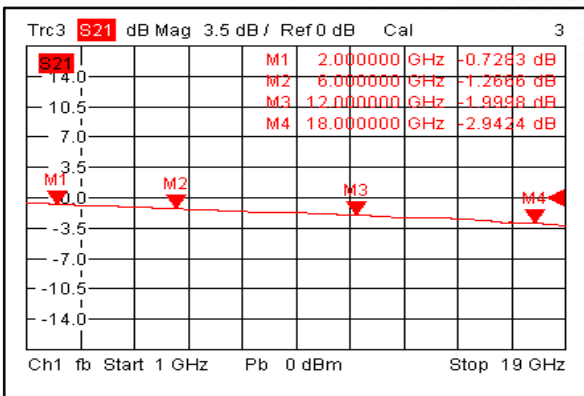
The drawing shows a top view and a side view of the component. The top view includes dimensions for pin spacing (4 [0.16]), pin diameter (2.5 [0.10]), and overall width (52 [2.05]). The side view shows a height of 12.5 [0.49] and a diameter of 2 [0.08]. The component is labeled with 'RFECHO', 'F:2-18GHz', and 'SN:XXXXXXXXXX'. Pin configurations include GND, C4, C3, C2, J0, C1, -5V, +5V, J4, J3, J2, and J1. A note indicates '2-∅2.8[0.11] THRU'.

TTL Control Voltage THRESHOLD				Low(0)=0~0.8V
Control Input TTL				High(1)=2.8~5V
C4	C3	C2	C1	Signal Path State
0	0	0	0	Not Used
1	1	1	0	J0-J1
1	1	0	1	J0-J2
1	0	1	1	J0-J3
0	1	1	1	J0-J4
1	1	1	1	OFF

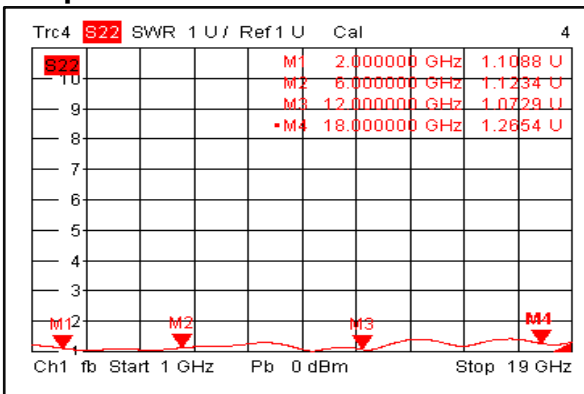
Control Pin Customization available upon request



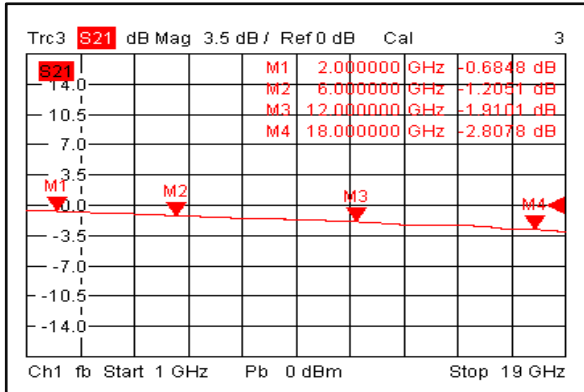
### Insertion Loss @+25



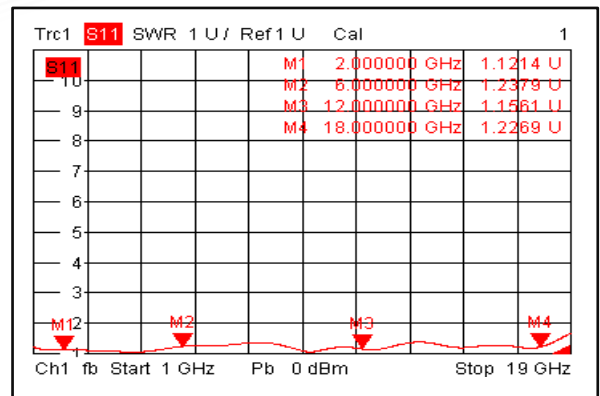
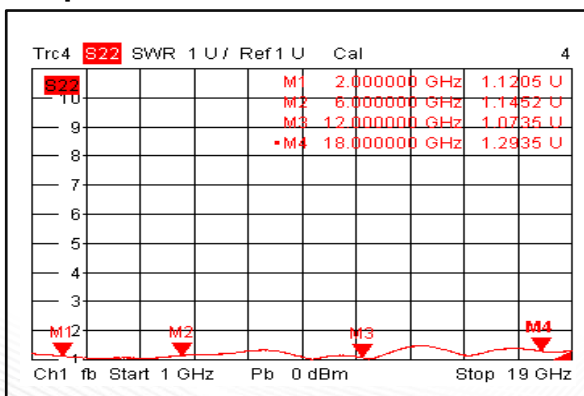
### Output VSWR @+25°C



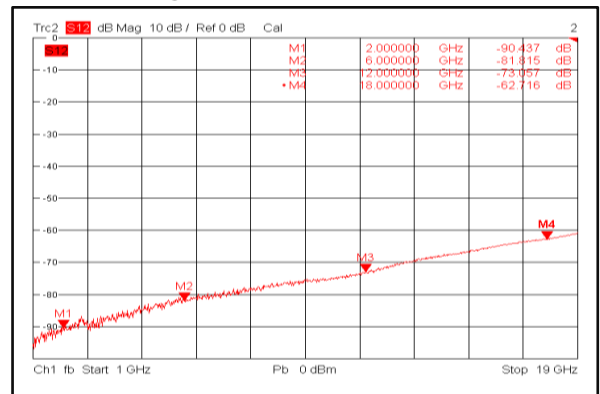
### Insertion Loss @-40°C



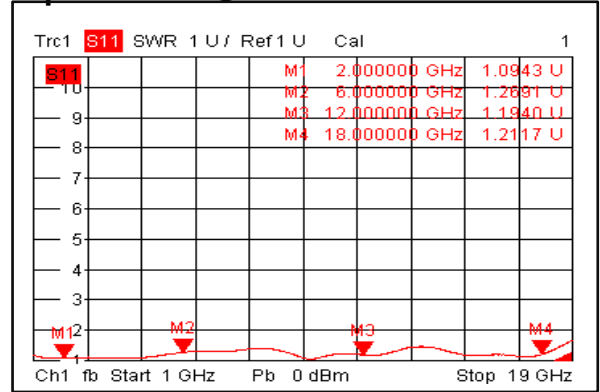
### Output VSWR @-40°C



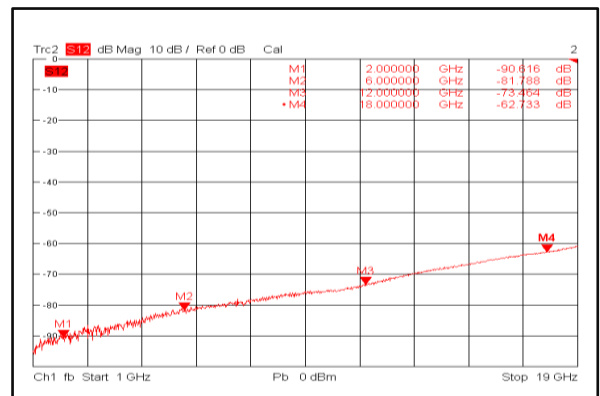
### Isolation @+25°C



### Input VSWR @-40°C

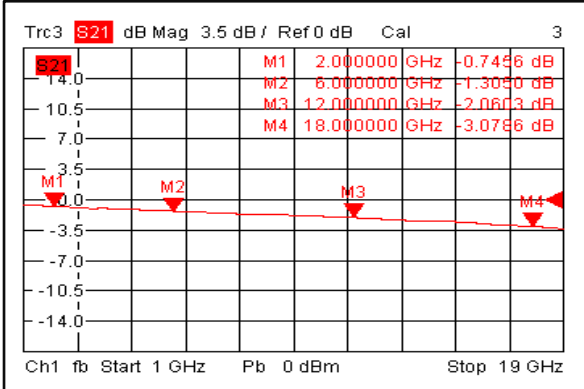


### Isolation @-40°C

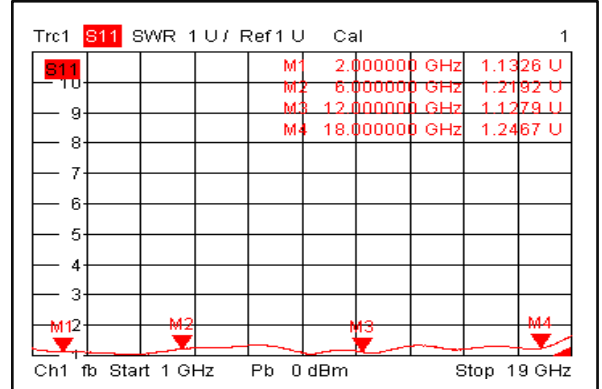




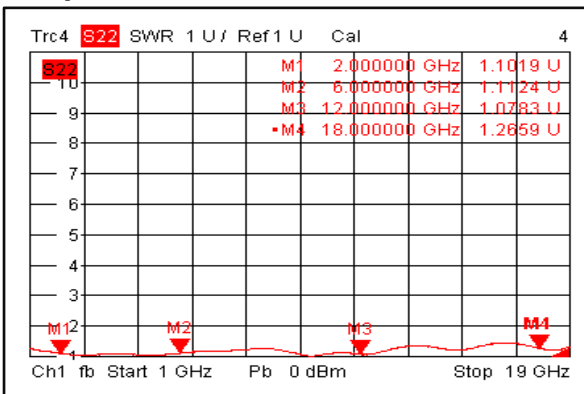
### Insertion Loss @+85°C



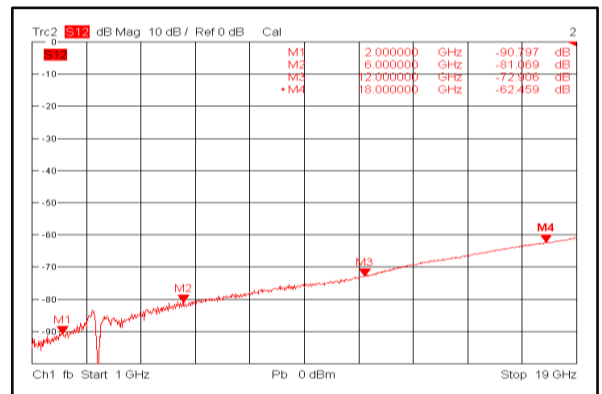
### Input VSWR @+85°C



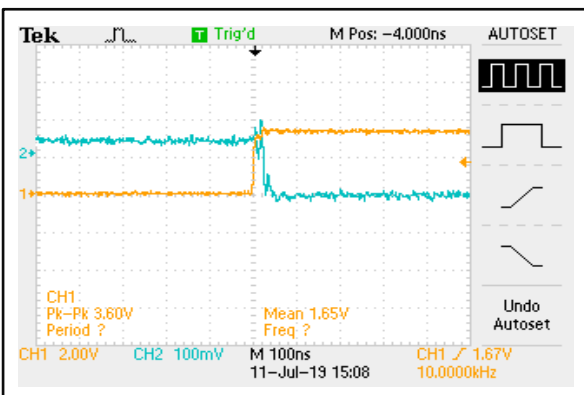
### Output VSWR @+85°C



### Isolation @+85°C



### Switching Speed



### Switching Speed

