



# Absorptive Coaxial SP2T Switch 12 - 18GHz

## Features

- Wide Band Operation 12-18GHz
- 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

Parameter	Min.	Typ.	Max.	Units
Frequency Range	12		18	GHz
Insertion Loss		2.5	3.0	dB
Insertion Loss Temperature Coefficient		0.003		dB/ °C
Isolation	60	65		dB
Input VSWR		1.5	1.8	: 1
Output VSWR		1.5	1.8	: 1
RF Input Power (CW)			30	dBm
Power Dissipation		0.4		W
0.1dB Compression Point (P0.1dB )		30		dBm
IIP3		55		dBm
Switching Speed		50	100	ns
Weight	0.71			ounces
Impedance	50			Ohms
Bias Current (+5V/-5V)	60/30			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
DBSA0212001800A	SP2T 12-18GHz 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 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)

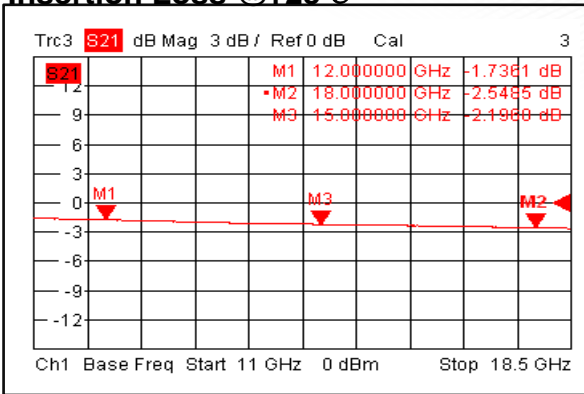
The drawing shows a top and side view of the component. Key dimensions include: overall width 26 [1.024], mounting hole diameter 4 [0.157], distance between mounting holes 22 [0.866], distance from mounting hole to center of J1 18 [0.709], distance from mounting hole to center of J2 13 [0.512], distance from mounting hole to center of J0 9 [0.354], distance from mounting hole to center of -5V pin 9.5 [0.374], distance from mounting hole to center of +5V pin 2 [0.079], and distance from mounting hole to center of J1/J2 3 [0.118]. The component is labeled with 'RFECHO', 'F:12-18GHz', 'SN:XXXXXXXXXX', and pin labels 'GND', 'TTL', 'J0', '-5V', '+5V', 'J1', and 'J2'. A note indicates '2-∅ 2.8 [0.11] THRU' for the mounting holes.

TTL Control Voltage	Signal Path State
Low(0)=0~0.8V	J0-J1
High(1)=2.8~5V	J0-J2

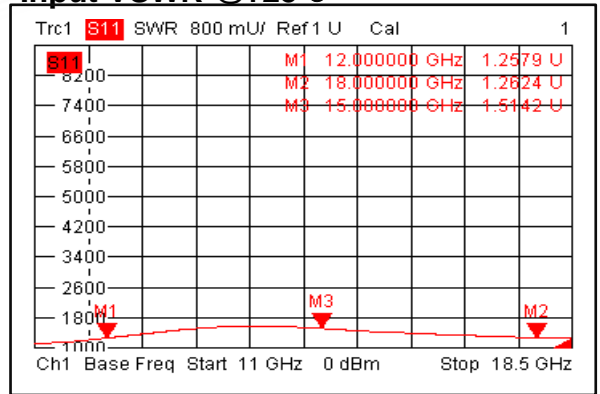
Control Pin Customization available upon request



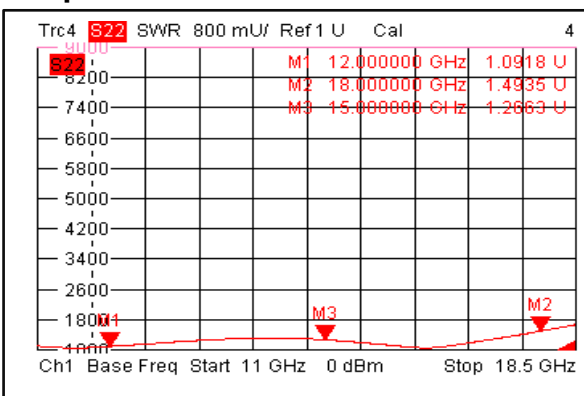
### Insertion Loss @+25°C



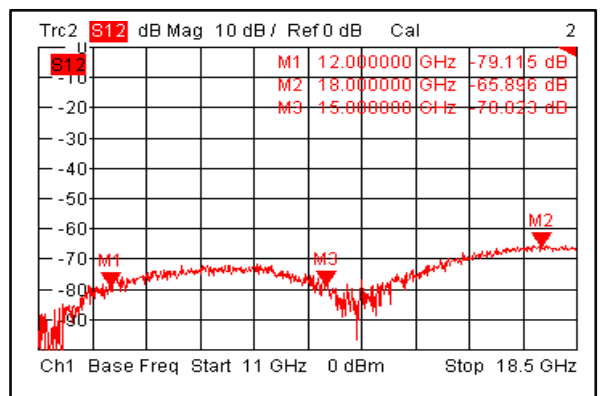
### Input VSWR @+25°C



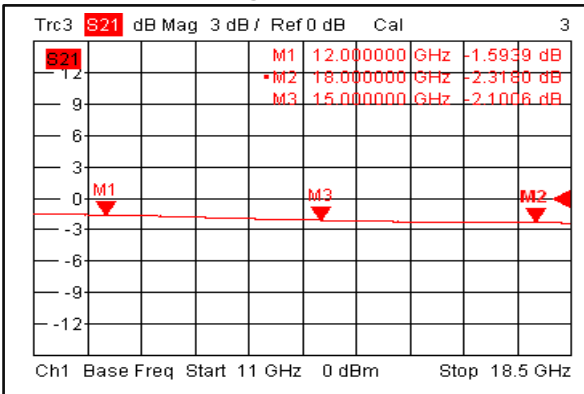
### Output VSWR @+25°C



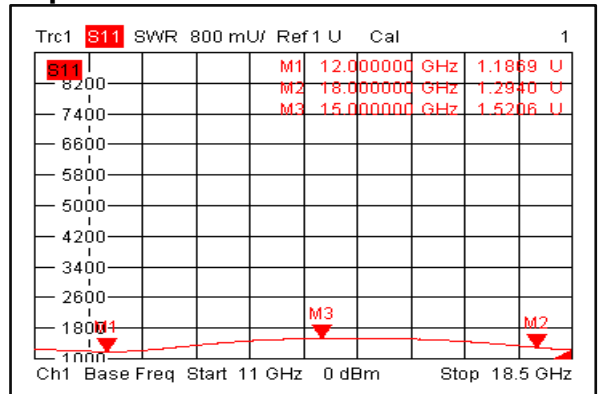
### Isolation @+25°C



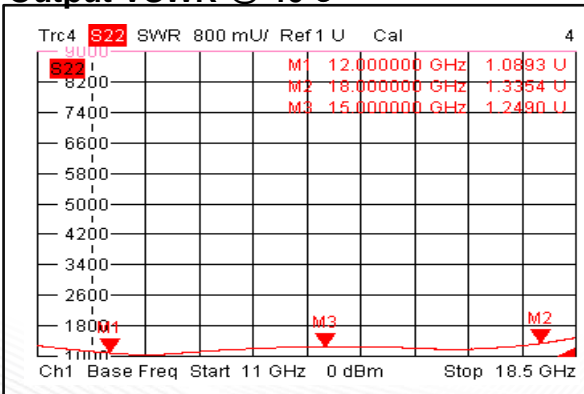
### Insertion Loss @-40°C



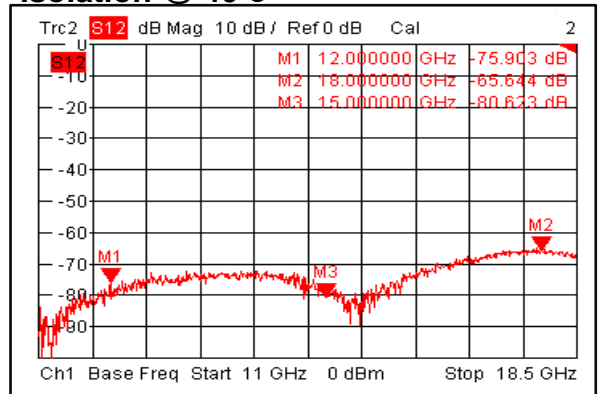
### Input VSWR @-40°C



### Output VSWR @-40°C

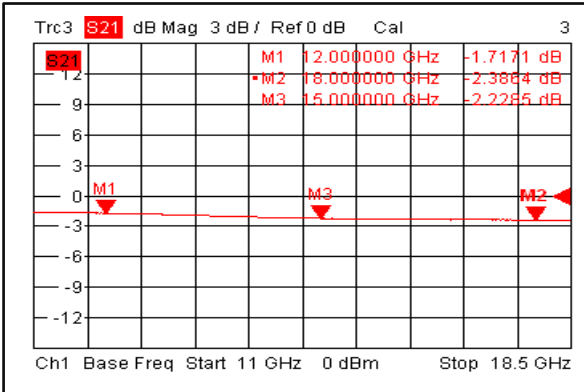


### Isolation @-40°C

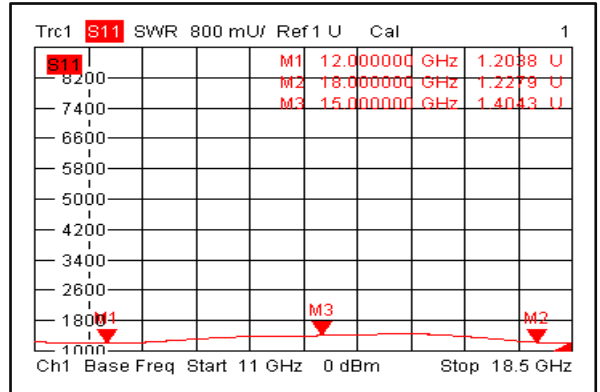




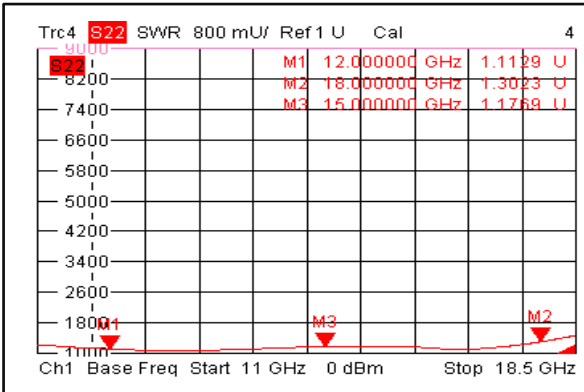
### Insertion Loss @+85°C



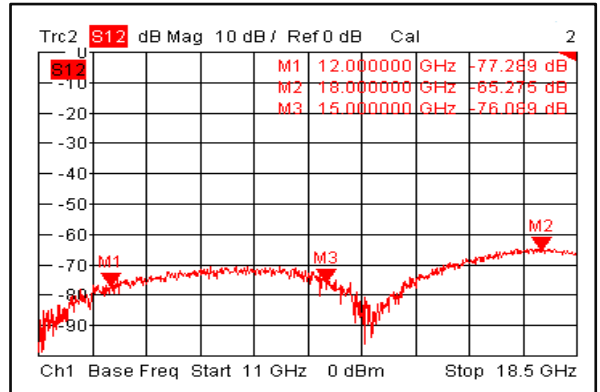
### Input VSWR @+85°C



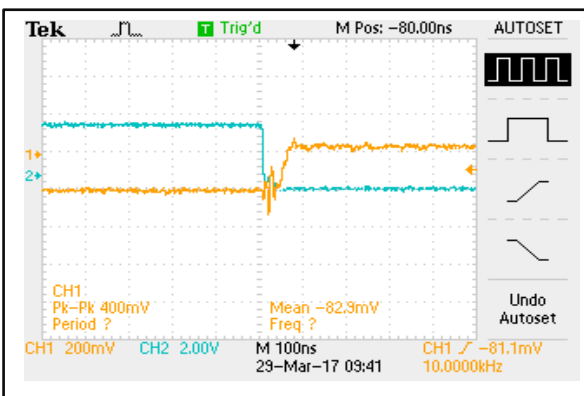
### Output VSWR @+85°C



### Isolation @+85°C



### Switching Speed



### Switching Speed

