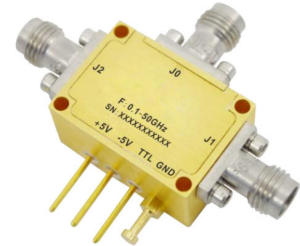




# Absorptive 0.1-50GHz Coaxial SP2T Switch

## Features

- Ultra Wide Band Operation 0.1-50GHz
- 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	0.1-18		18-43.5			43.5-50			GHz	
Insertion Loss		3.3	4		4.5	5		6.2	7.5	dB
Insertion Loss Temperature Coefficient		0.003			0.003			0.003		dB/ °C
Isolation	50	65		40	50		50	55		dB
Input VSWR		1.8	2.5		2.5	3		2	2.5	: 1
Output VSWR		1.8	2.5		2.5	3		2	2.5	: 1
RF Input Power			23			23			23	dBm
DC Power Dissipation		0.8			0.8			0.8		W
0.1dB Compression Point ( P0.1dB )		23			23			23		dBm
IIP3		55			50			45		dBm
Switching Speed	50									ns
Weight	0.35									Ounces
Impedance	50									Ω
Bias Current ( +5V / -5V )	100/50									mA
Input / Output Connectors	2.4mm-Female									
Finish	Gold Plated									
Material	Aluminum									
Sealing	Hermetically Sealed (Optional)									



### Absolute Maximum Ratings

Biassing	+5V ± 10%/-5V ± 10%
----------	---------------------

### 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

### Ordering Information

Part No.	Description
DBSA0200105000A	SP2T 0.1-50GHz PIN Diode Switch

### Outline Drawing:

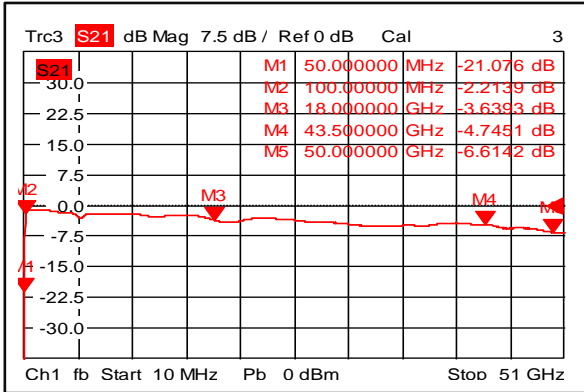
All Dimensions in mm (inches)

The drawing shows a rectangular component with four SMA connectors (J0, J1, J2, and a top connector) and four control pins (+5V, -5V, TTL, GND). Dimensions are provided in mm [inches]. Key dimensions include: 3 [0.12] mm for the top connector height, 12 [0.47] mm for the top connector width, 24 [0.94] mm for the main body width, 21 [0.83] mm for the main body length, 17 [0.67] mm for the bottom connector height, 14 [0.55] mm for the bottom connector width, 8.5 [0.33] mm for the bottom connector offset, and 4-Ø 2.2 [0.09] THRU holes. The component is labeled with 'RFECHO', 'F:0.1-50GHz', and 'SN:XXXXXXXXXX'.

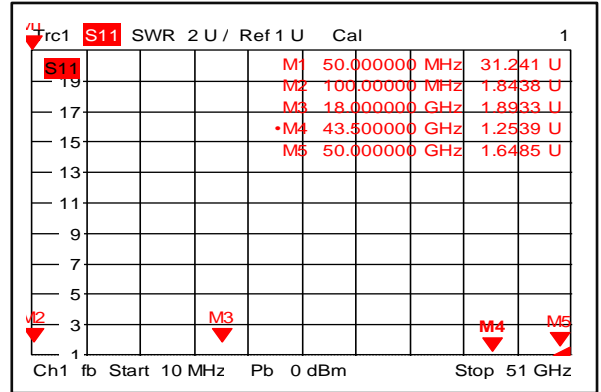
TTL Control Voltage THRESHOLD	Low(0)=0~0.8V
	High(1)=2.8~5V
Control Input TTL	Signal Path State
1	J0-J2
0	J0-J1
Control Pin Customization available upon request	



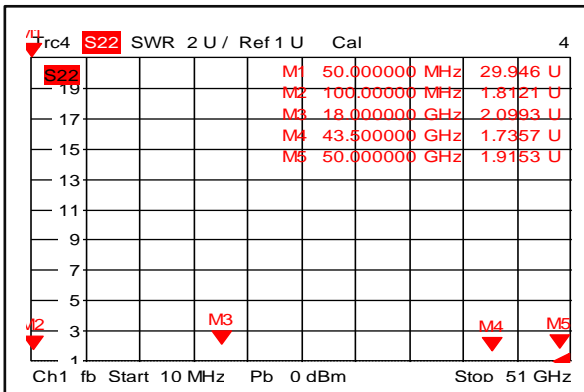
### Insertion Loss



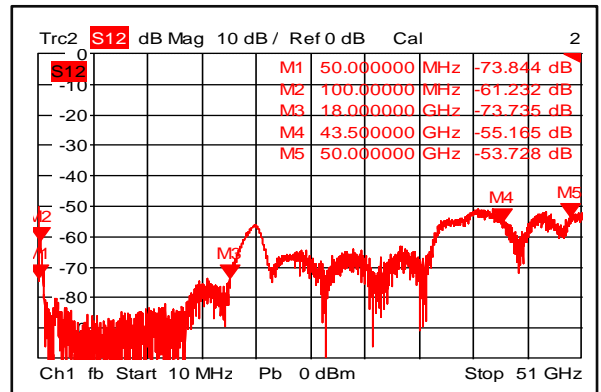
### Input VSWR



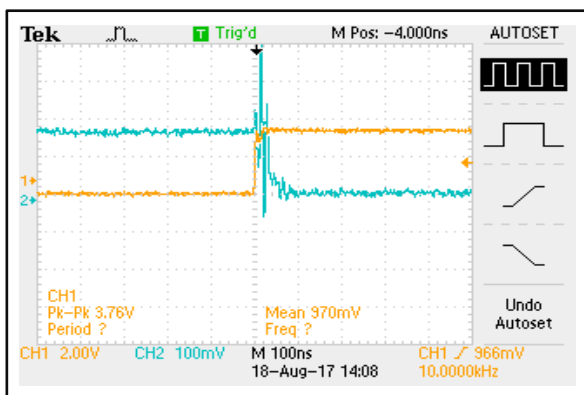
### Output VSWR



### Isolation



### Turn on Switching Speed



### Turn off Switching Speed

