



# Absorptive Coaxial SP5T Switch 0.5-43.5GHz

## Features

- Ultra Wide Band Operation 0.5-43.5GHz
- 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	0.5-18			18-30			30-43.5			GHz
Insertion Loss		3	3.5		3.9	4.5		5.5	6.0	dB
Insertion Loss Temperature Coefficient		0.003			0.003			0.003		dB/ °C
Isolation	60	75		50	55		50	55		dB
Input VSWR		2.0	2.5		2.2	3		2.5	3	: 1
Output VSWR		2.0	2.5		2.2	3		2.2	3	: 1
RF Input power			23			23			23	dBm
DC Power Dissipation		0.6			0.6			0.6		W
0.1dB Compression Point(P0.1dB)		23			23			23		dBm
IIP3		55			53			50		dBm
Switching Speed		50	100		50	100		50	100	ns
Weight	1.41									Ounces
Impedance	50									Ω
Biasing(+5V/-5V)	240/50									mA
Input /Output Connectors	2.92mm-Female									
Finish	Gold Plated									
Material	Aluminum									
Sealing	Hermetically Sealed (optional)									



### Absolute Maximum Ratings

Biasing	+5V ± 10%/-5V ± 10%
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### 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
DBSA0500504350A	SP5T 0.5-43.5GHz PIN Diode Switch

### Outline Drawing:

All Dimensions in mm (inches)

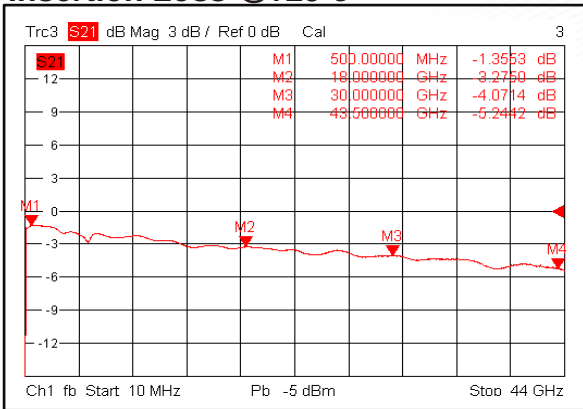
**Truth Table**

TTL Control Voltage THRESHOLD		Low(0)=0~0.8V		High(1)=2.8~5V	
Control Input TTL					Signal Path State
C5	C4	C3	C2	C1	
1	1	1	1	0	J0-J1
1	1	1	0	1	J0-J2
1	1	0	1	1	J0-J3
1	0	1	1	1	J0-J4
0	1	1	1	1	J0-J5

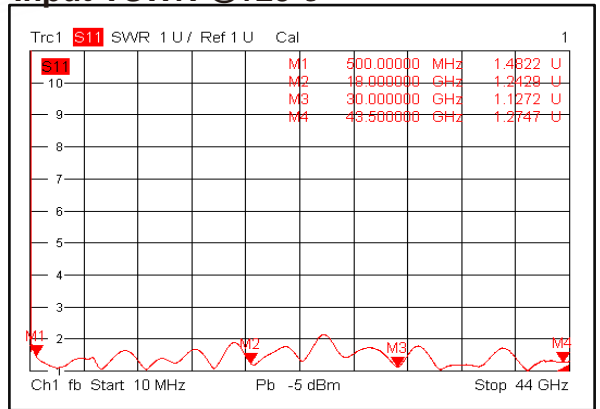
Control Pin Customization available upon request



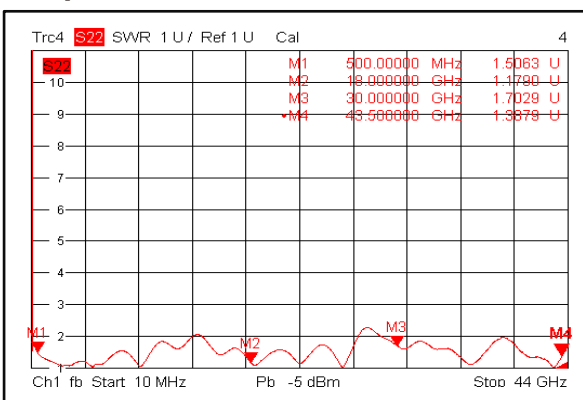
### Insertion Loss @+25°C



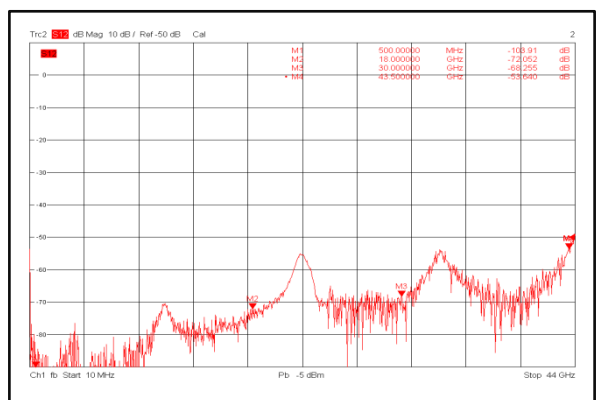
### Input VSWR @+25°C



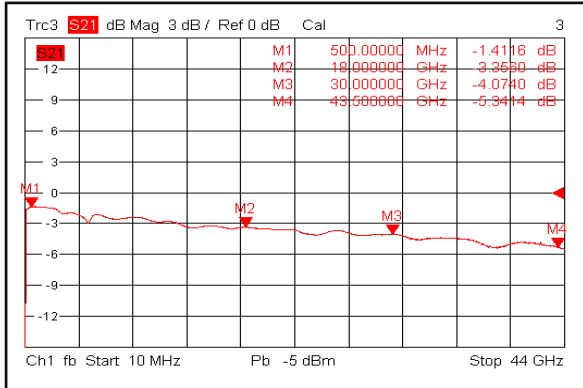
### Output VSWR @+25°C



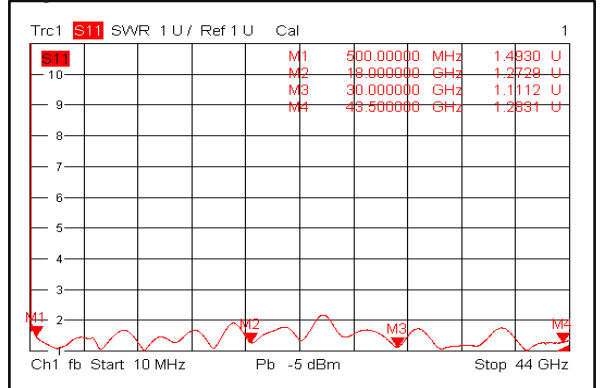
### Isolation @+25°C



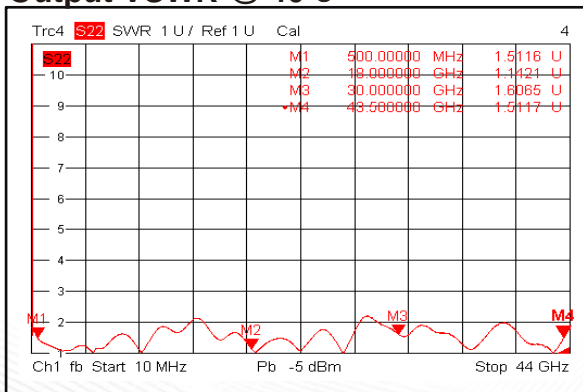
### Insertion Loss @-40°C



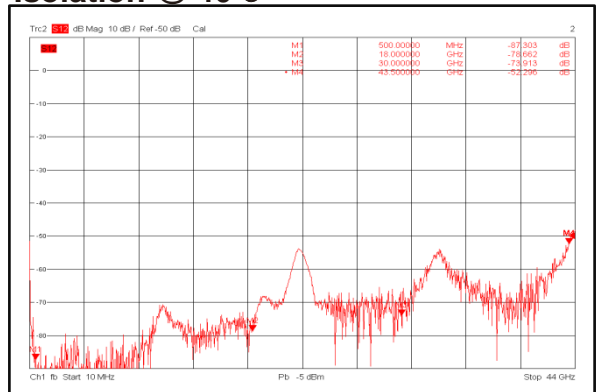
### Input VSWR @-40°C



### Output VSWR @-40°C

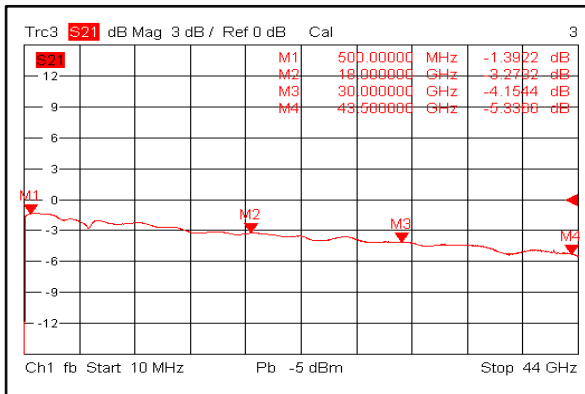


### Isolation @-40°C

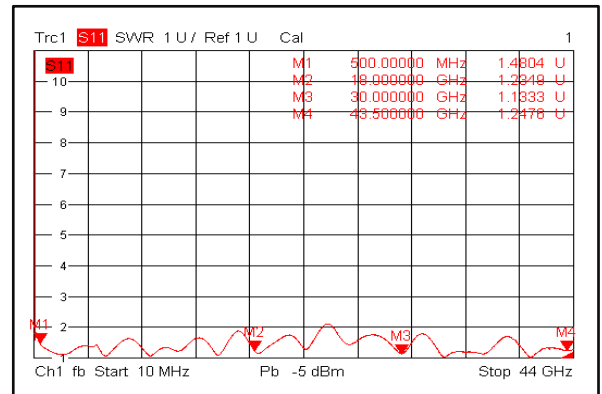




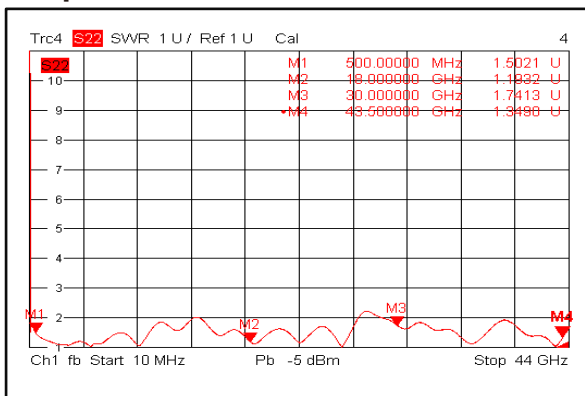
### Insertion Loss @+85°C



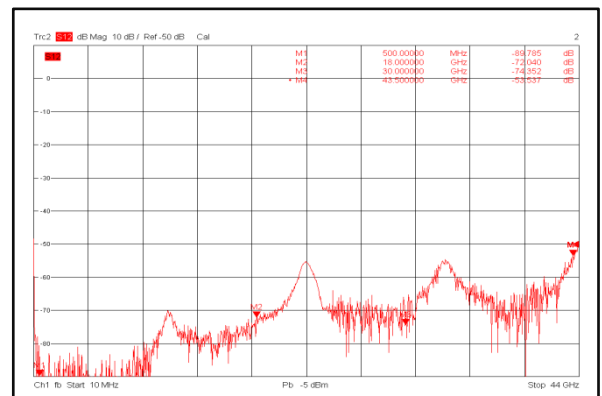
### Input VSWR @+85°C



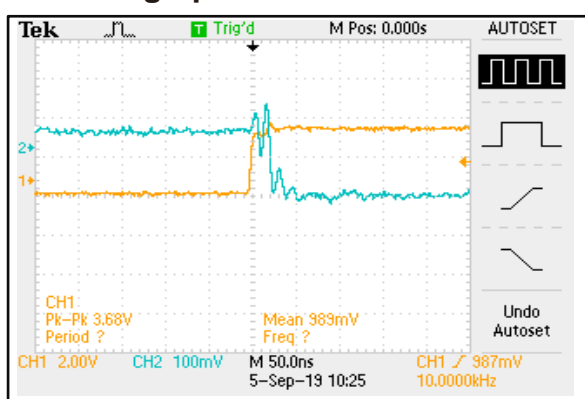
### Output VSWR @+85°C



### Isolation @+85°C



### Switching Speed



### Switching Speed

