



# Absorptive Coaxial SP6T Switch 0.1-43.5GHz



## Features

- Ultra Wide Band Operation 0.1-43.5GHz
- 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	0.1		8	8		26.5	26.5		43.5	GHz
Insertion Loss		4.2	4.5		6.5	7.0		7.5	8.5	dB
Insertion Loss Temperature Coefficient		0.003			0.003			0.003		dB/ °C
Isolation	60	70		50	58		48	55		dB
Input VSWR		2	3.0		1.9	3.0		1.8	2.5	: 1
Output VSWR		2	3.0		1.9	3.0		1.8	2.5	: 1
RF Input power ( CW )			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			55			50		dBm
Switching Speed		50	100		50	100		50	100	ns
Weight	1.41									ounces
Impedance	50									Ω
Bias Current (+5V/-5V)	200/50									mA
Input / Output Connectors	2.92mm - Female									
Finishing	Gold Plating									
Material	Aluminum									
Sealing	Hermetically Sealed (optional)									



### Absolute Maximum Ratings

Biasing	$\pm 5V \pm 10\%$
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### Ordering Information

Part No.	Description
DBSA0600104350A	SP6T 0.1-43.5GHz 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 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

### Outline Drawing:

All Dimensions in mm (inches)

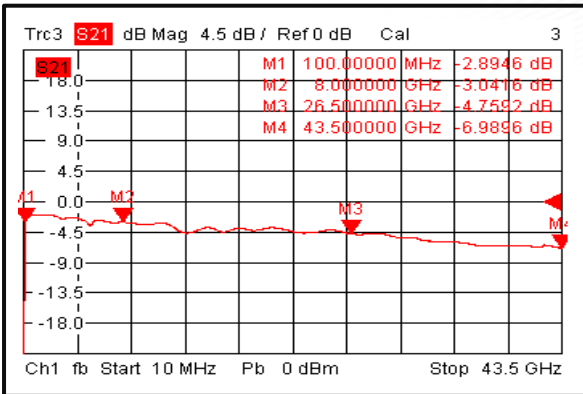
The drawing shows a top view of the switch with dimensions: 12 [0.47], 2.5 [0.10], 37 [1.45], 20.1 [0.79], 13 [0.51], 24.7 [0.97], 2.5 [0.10], 4 [0.16], 4 [0.16], 2.5 [0.10], 2-Ø2.3 [0.09] THRU, Ø38.1 [1.5], and 2.5 [0.10]. Labels include P, K, J0, J1, J2, J3, J4, J5, J6, and RFECHO F:0.1-43.5GHz SN:XXXXXX.

TTL Control Voltage THRESHOLD						Low(0)=0~0.8V	High(1)=2.8~5V
Control Input TTL						Signal Path State	
C6	C5	C4	C3	C2	C1		
1	1	1	1	1	1	OFF	
1	1	1	1	1	0	J0-J1	
1	1	1	1	0	1	J0-J2	
1	1	1	0	1	1	J0-J3	
1	1	0	1	1	1	J0-J4	
1	0	1	1	1	1	J0-J5	
0	1	1	1	1	1	J0-J6	
0	0	0	0	0	0	Not Used	

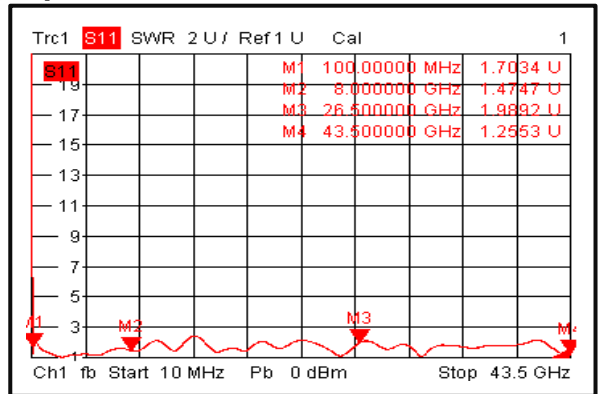
Control Pin Customization available upon request



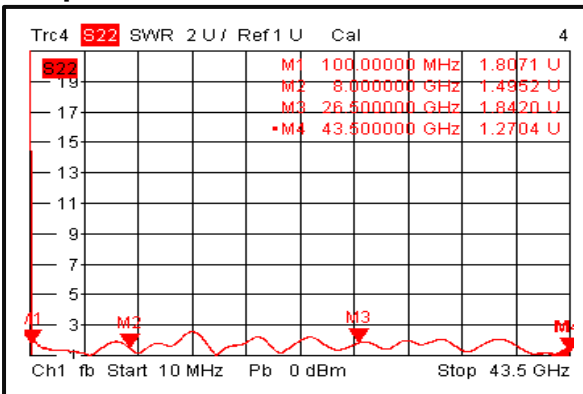
### Insertion Loss @+25°C



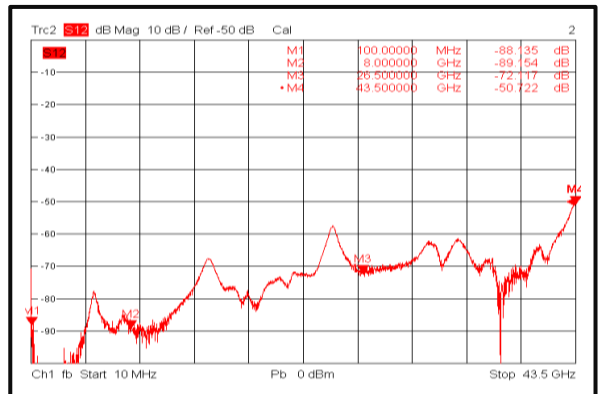
### Input VSWR @+25°C



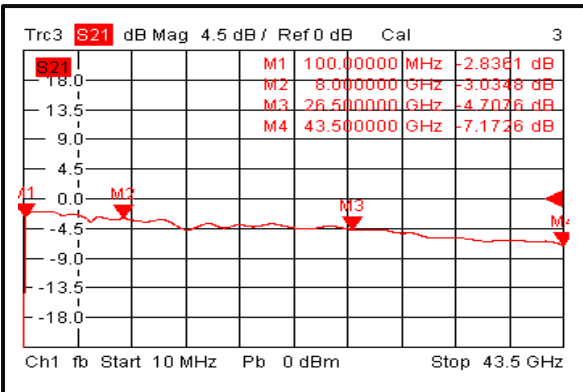
### Output VSWR @+25°C



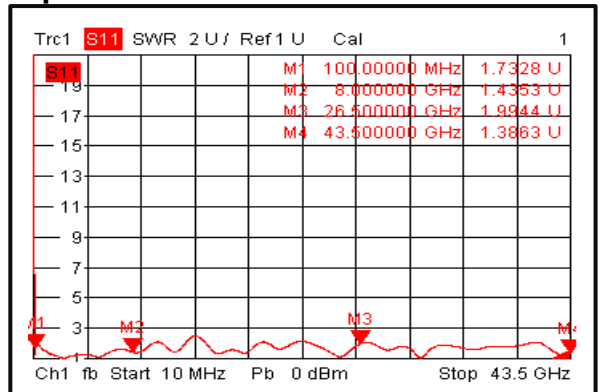
### Isolation @+25°C



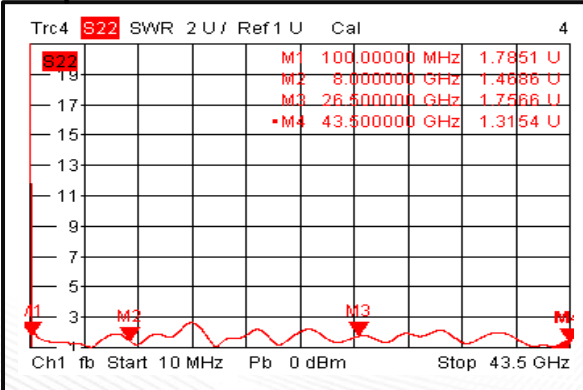
### Insertion Loss @-40°C



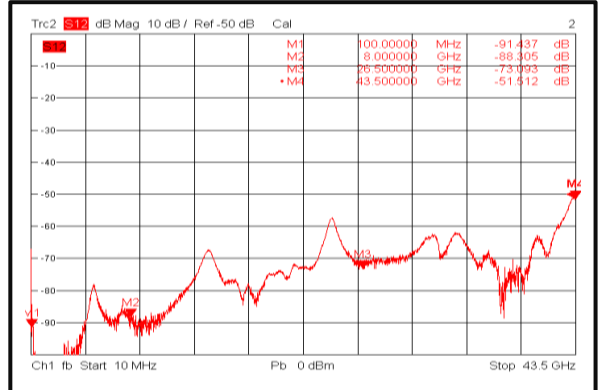
### Input VSWR @-40°C



### Output VSWR @-40°C

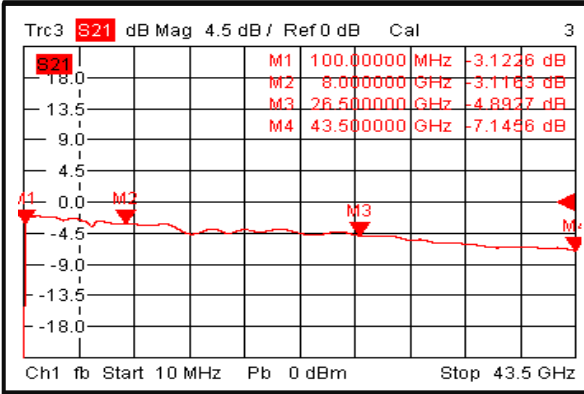


### Isolation @-40°C

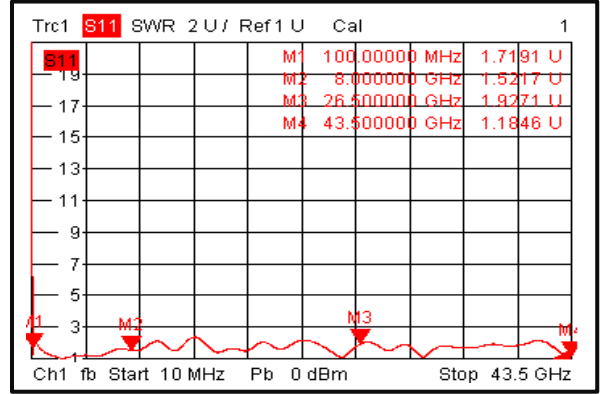




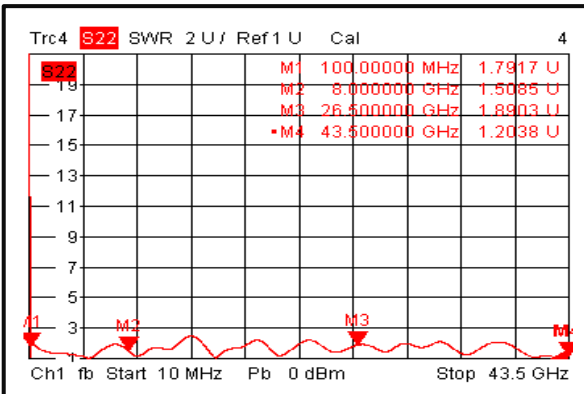
### Insertion Loss @+85°C



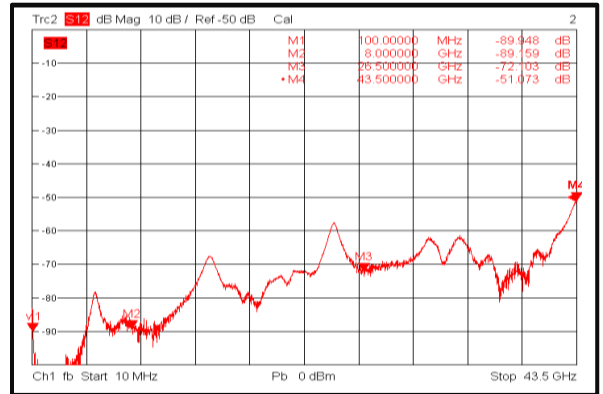
### Input VSWR @+85°C



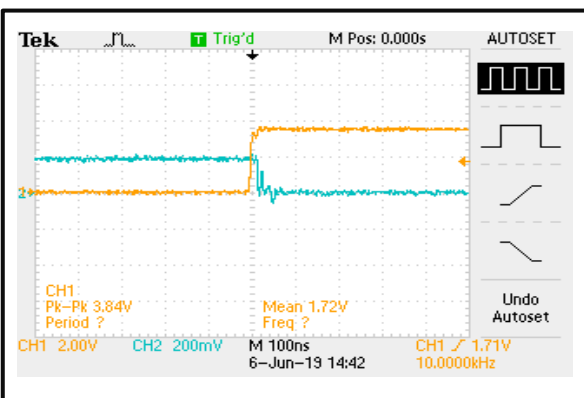
### Output VSWR @+85°C



### Isolation @+85°C



### Switching Speed



### Switching Speed

