

Absorptive 1-6GHz Coaxial SP4T Switch

Features

- Wide Band Operation 1-6GHz
- 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	Units
Frequency Range		1~6		GHz
Insertion Loss		1.5	2.0	dB
Insertion Loss Temperature Coefficient		0.003		dB/ °C
Isolation	55	65		dB
Input VSWR		1.3	1.6	: 1
Output VSWR		1.3	1.6	: 1
RF Input power (CW)			30	dBm
DC Power Dissipation		1		W
0.1dB Compression P0.1dB			30	dBm
IIP3		50		dBm
Switching Speed		100		ns
Weight		1.06		ounces
Impedance		50		Ω
Biasing(+5V/-5V)		160/50		mA
Input /Output Connectors	SMA-Female			
Finish	Gold Plated			
Material	Aluminum			
Seal	Hermetically Sealed (optional)			



Absolute Maximum Ratings

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

Part No.	Description
DBSA0401000600A	SP4T 1-6GHz 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 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)

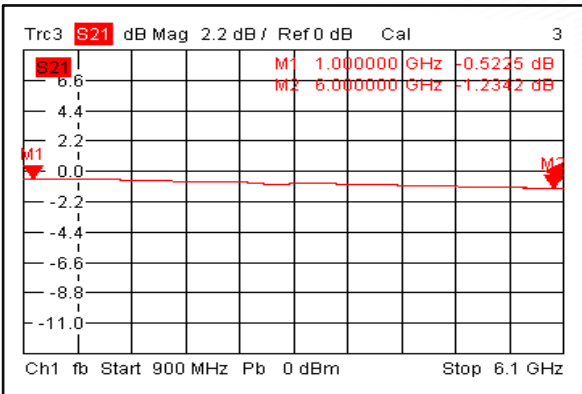
The drawing shows a top and side view of the switch. Key dimensions include a total width of 31.18 mm [1.23] and a mounting hole diameter of 3-Ø 2.2 mm [0.096]. Pin labels include GND, C4, C3, C2, C1, -5V, +5V, J0, J1, J2, J3, J4, and S. The side view shows a height of 27 mm [1.06] and a distance of 16.3 mm [0.64] from the top to the signal path.

TTL Control Voltage THRESHOLD				Low(0)=0~0.8V
				High(1)=2.8~5V
Control Input TTL				Signal Path State
C4	C3	C2	C1	
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

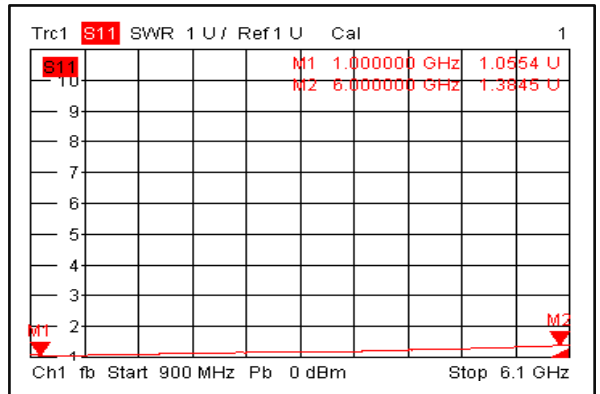
Control Pin Customization available upon request



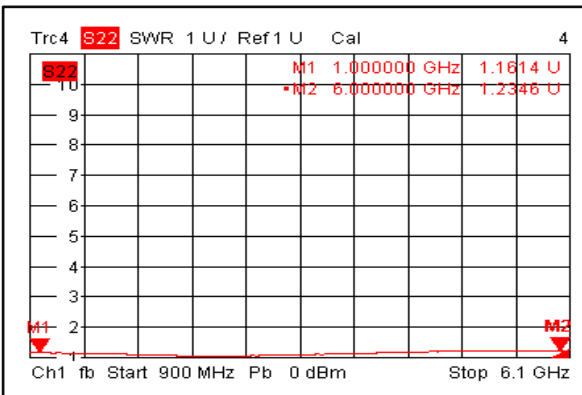
Insertion Loss @+25°C



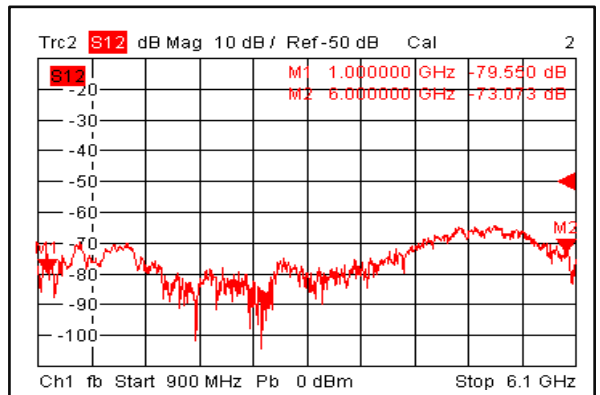
Input VSWR @+25°C



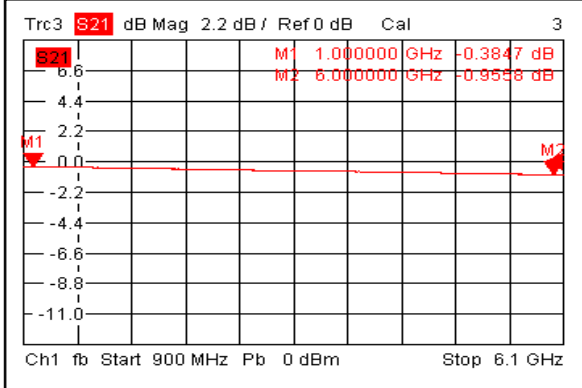
Output VSWR @+25°C



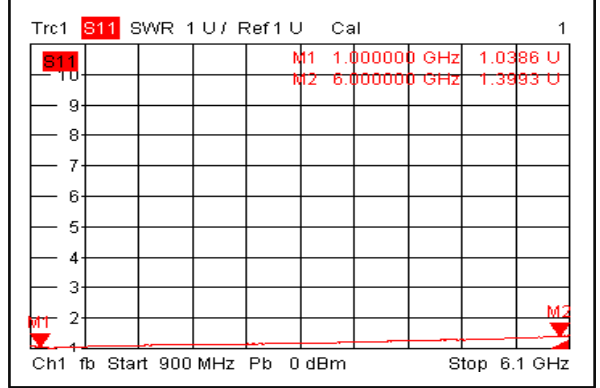
Isolation @+25°C



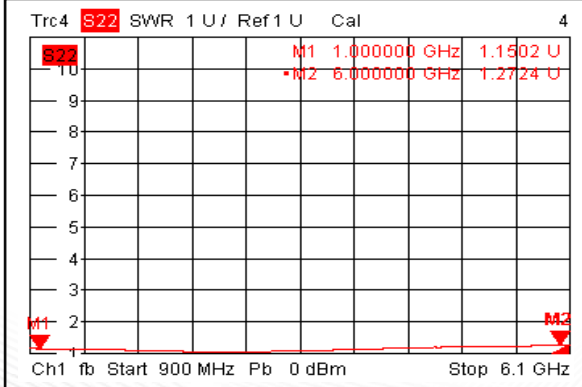
Insertion Loss @-40°C



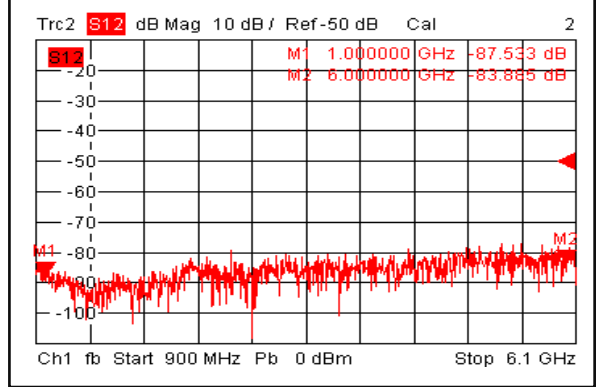
Input VSWR @-40°C



Output VSWR @-40°C

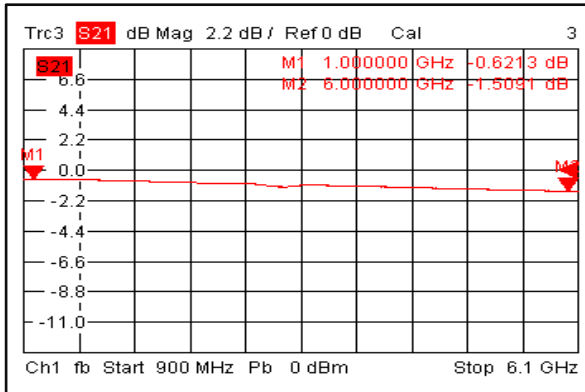


Isolation @-40°C

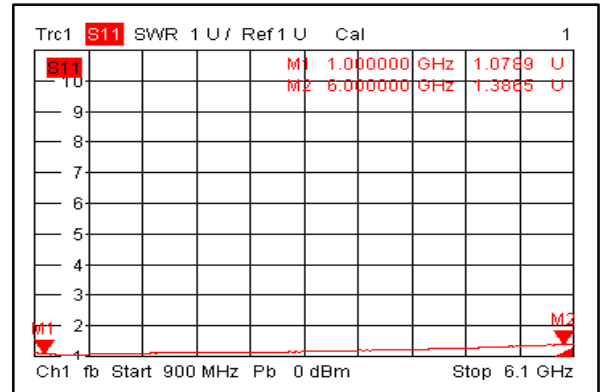




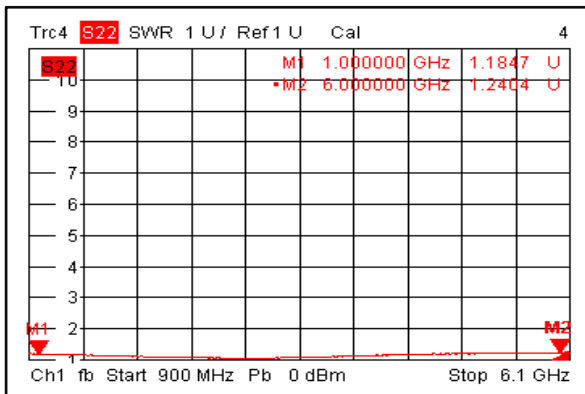
Insertion Loss @+85°C



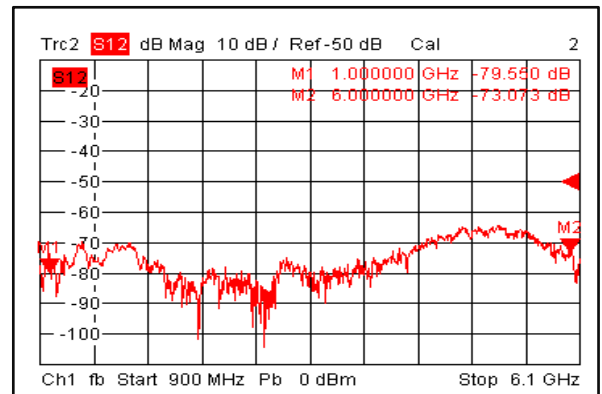
Input VSWR @+85°C



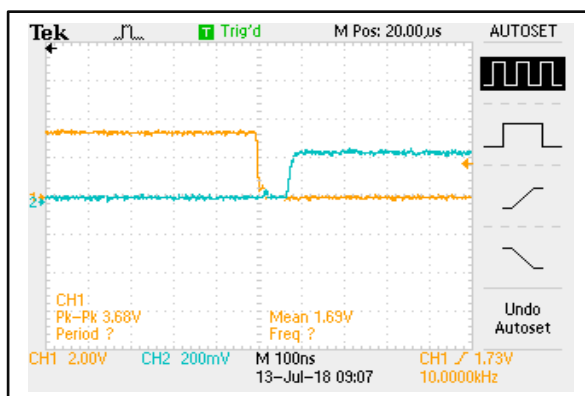
Output VSWR @+85°C



Isolation @+85°C



Switching Speed



Switching Speed

