



Absorptive Coaxial SP6T Switch 0.1 – 8.5GHz

Features

- Ultra Wide Band Operation 0.1-8.5GHz
- 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.	Units
Frequency Range	0.1-8.5			GHz
Insertion Loss		2.0	2.5	dB
Flatness of Insertion Loss(Between each port)		±0.25		dB
Insertion Loss Temperature Coefficient		0.003		dB/ °C
Isolation	60	75		dB
Input VSWR		1.5	1.8	: 1
Output VSWR		1.5	1.8	: 1
RF Input power			30	dBm
DC Power Dissipation		1.1		W
0.1dB Compression Point (P0.1dB)		30		dBm
IIP3		45		dBm
Switching Speed	100 Max.			ns
Weight	1.5 Max.			Ounces
Impedance	50			Ω
Bias Current (+5V / -5V)	240/50 Max.			mA
Input / Output Connectors	SMA-Female			
Finish	Gold Plated			
Material	Aluminum			
Sealing	Hermetically Sealed (optional)			



Absolute Maximum Ratings

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

Part No.	Description
DBSA0600100850A	SP6T 0.1-8.5GHz 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 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) Tolerances ±0.1 (0.004)

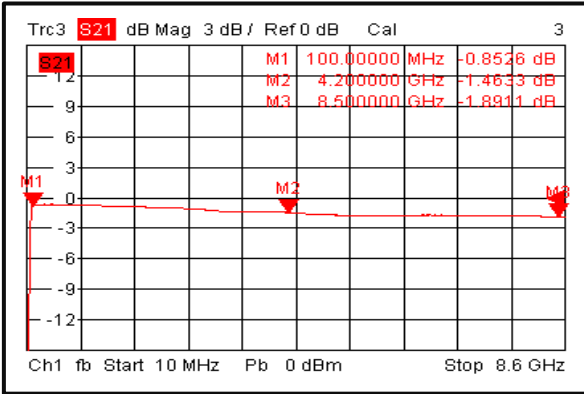
The drawing shows a top view and a side view of the component. Key dimensions include: overall width 40 [1.57], internal width 36 [1.42], pin spacing 11 [0.43], 3 [0.12], 3 [0.12], 8 [0.31], 3 [0.12], 12 [0.47], 3 [0.12], 3 [0.12], 2 [0.08], 3.2 [0.13], 2.8 [0.11], 33.03 [1.30], 28 [1.10], 12 [0.47], and 3-ø2.2[0.09] THRU. Pin configurations include J0 (+5V, GND, -5V), J1, J2, J3, J4, J5, and J6. The component is labeled 'RFECHO F:0.1-8.5GHz SN:XXXXXXXXXX'.

TTL Control Voltage THRESHOLD			Low(0)=0~0.8V
TTL Control Voltage THRESHOLD			High(1)=2.8~5V
Control Input TTL			Signal Path State
C3	C2	C1	
0	0	0	J0-J6
0	0	1	J0-J5
0	1	0	J0-J4
0	1	1	J0-J3
1	0	0	J0-J2
1	0	1	J0-J1
1	1	0	OFF
1	1	1	OFF

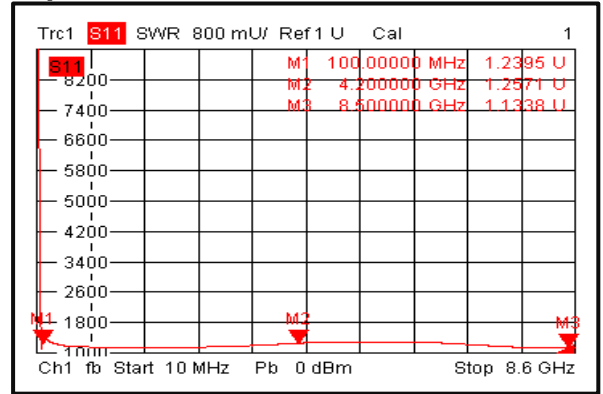
Control Pin Customization available upon request



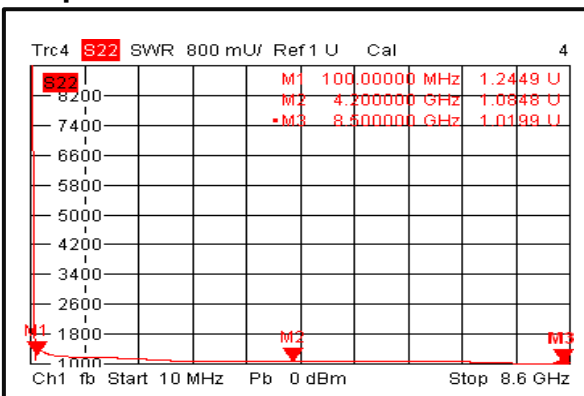
Insertion Loss @+25°C



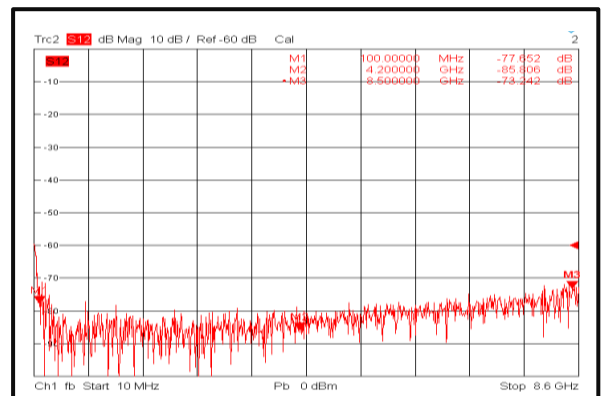
Input VSWR @+25°C



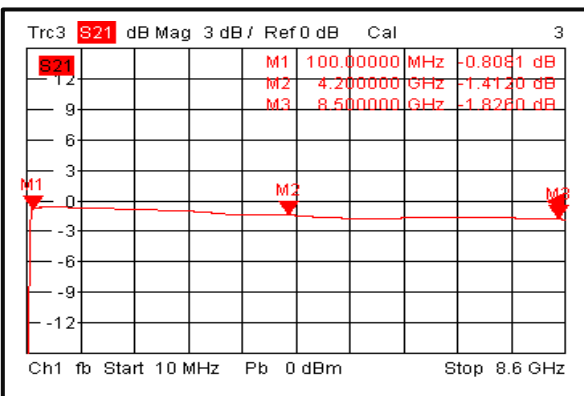
Output VSWR @+25°C



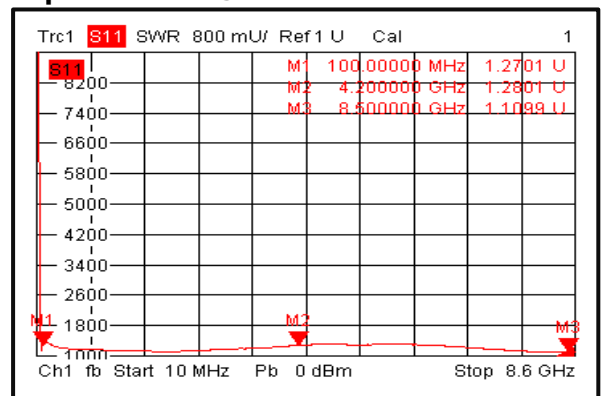
Isolation @+25°C



Insertion Loss @-40°C

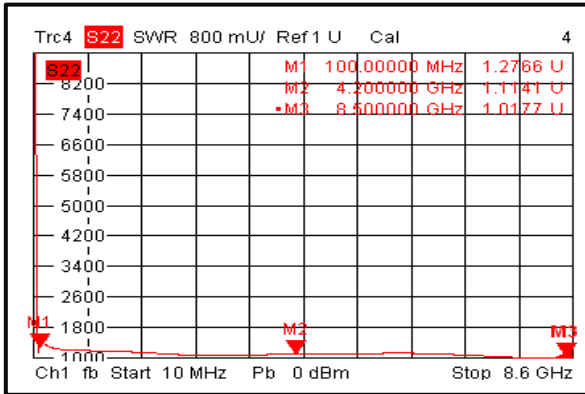


Input VSWR @-40°C

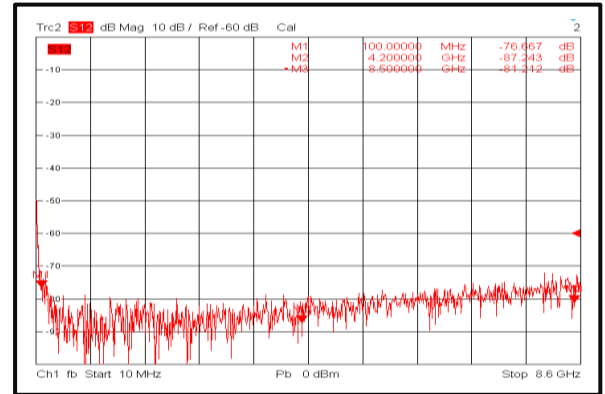




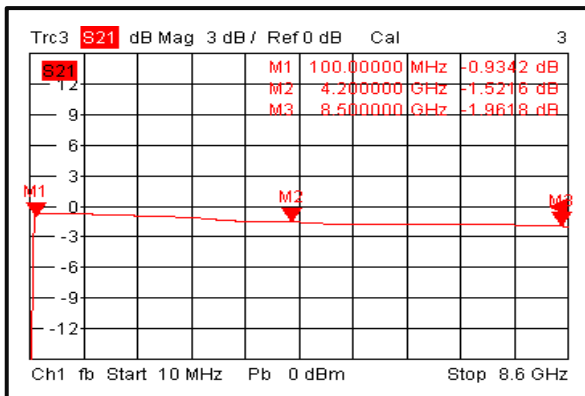
Output VSWR @-40°C



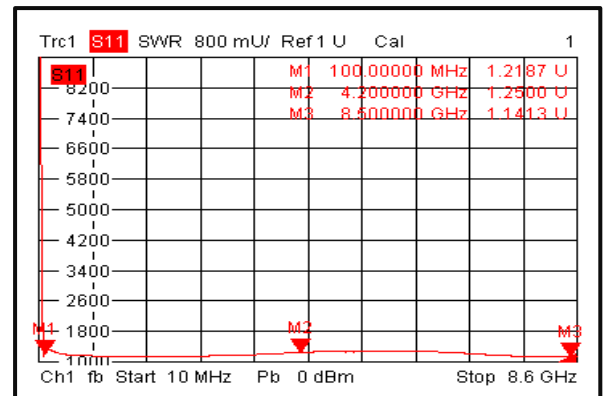
Isolation @-40°C



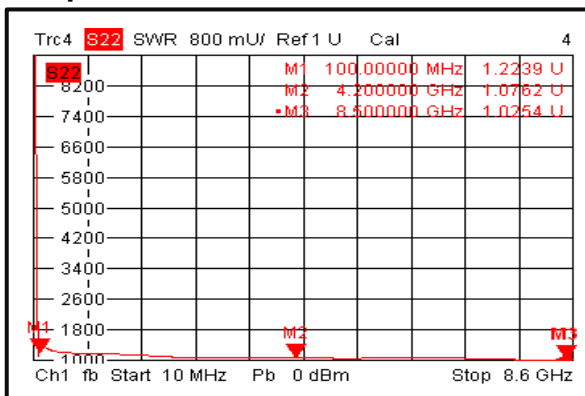
Insertion Loss @+85°C



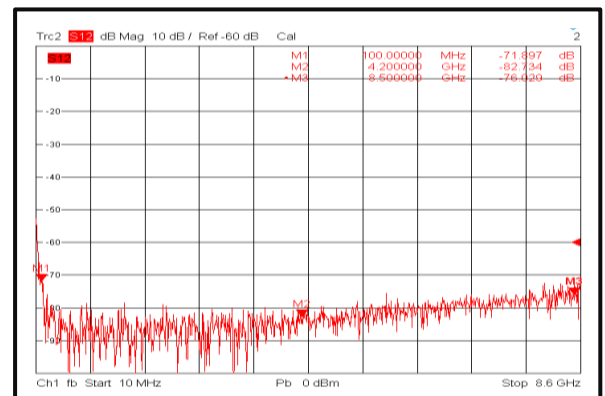
Input VSWR @+85°C



Output VSWR @+85°C

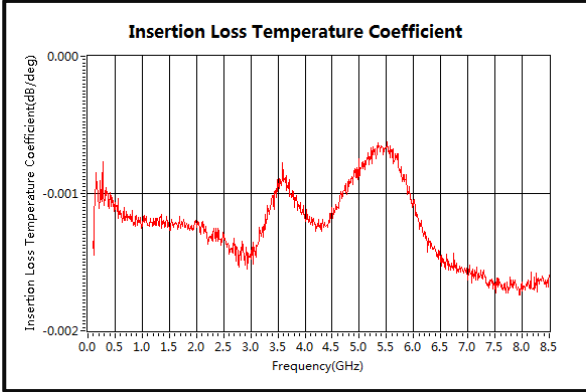


Isolation @+85°C

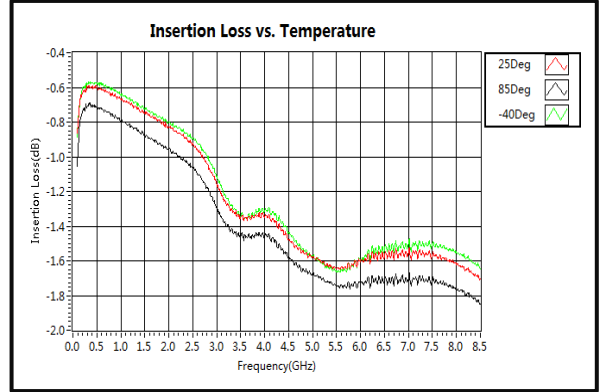




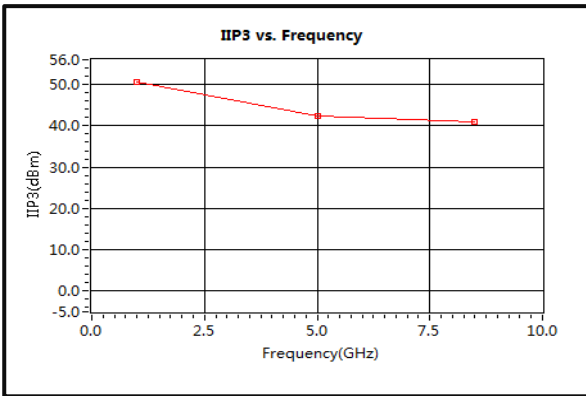
Insertion Loss Temperature Coefficient



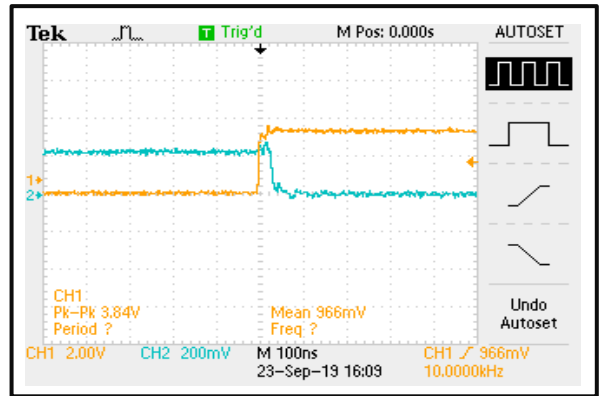
Insertion Loss vs. Temperature



IIP3



Switching Speed



Switching Speed

