



Absorptive Coaxial SP16T 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		8	8		26.5	26.5		43.5	GHz
Insertion Loss		4.2	5.5		8	10.0		10.5	13.0	dB
Insertion Loss Temperature Coefficient		0.003			0.003			0.003		dB/ ° C
Isolation	60	70		50	60		45	50		dB
Input VSWR		2.5	3		2.5	3		2.5	3	: 1
Output VSWR		2.5	3		2.5	3		2.5	3	: 1
RF Input Power (CW)			23			23			23	dBm
DC Power Dissipation		2.5			2.5			2.5		W
0.1dB Compression Point (P0.1dB)		23			23			23		dBm
IIP3		55			55			50		dBm
Switching Speed		60	100		60	100		60	100	ns
Weight	5.7 Max.									ounces
Impedance	50									Ω
Bias Current (+5V/-5V)	380/100 Max.									mA
Input / Output Connectors	2.92mm - Female									
Finish	Nickel Plated									
Material	Aluminum									
Sealing	Hermetically Sealed (Optional)									



Absolute Maximum Ratings

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

Part No.	Description
DBSA1600504350A	SP16T 0.5-43.5GHz PIN Diode Switch

Outline Drawing:

All Dimensions in mm (inches)

The drawing includes a top view of the circular component with 16 ports labeled J0 through J15. Dimensions include a diameter of 72.8 [2.87] mm and a thickness of 17.5 [0.69] mm. A side view shows a height of 20 [0.79] mm. A pin view shows a MICRO-D9(Female) connector with pins 1-9 labeled: 1: +5V, 2: -5V, 3: GND, 4: C1, 5: C2, 6: C3, 7: C4, 8: NC, 9: NC. A label on the component reads: RFECHO, F:0.5-43.5GHz, SN:XXXXXX. A note indicates a 2.56mm THREAD DP3.5 [0.138] and a 4-φ2.8 [0.11] THRU hole.

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 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

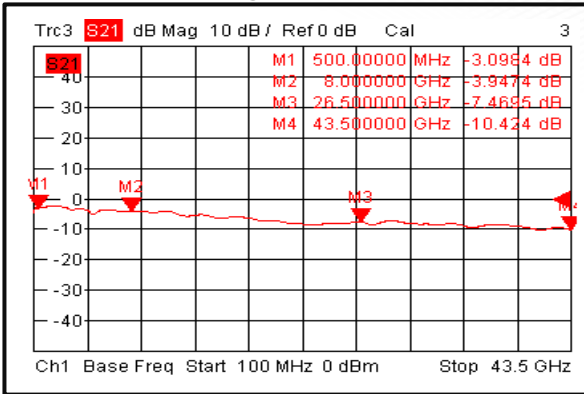
Truth Table

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	J0-J1
0	0	0	1	J0-J2
0	0	1	0	J0-J3
0	0	1	1	J0-J4
0	1	0	0	J0-J5
0	1	0	1	J0-J6
0	1	1	0	J0-J7
0	1	1	1	J0-J8
1	0	0	0	J0-J9
1	0	0	1	J0-J10
1	0	1	0	J0-J11
1	0	1	1	J0-J12
1	1	0	0	J0-J13
1	1	0	1	J0-J14
1	1	1	0	J0-J15
1	1	1	1	J0-J16

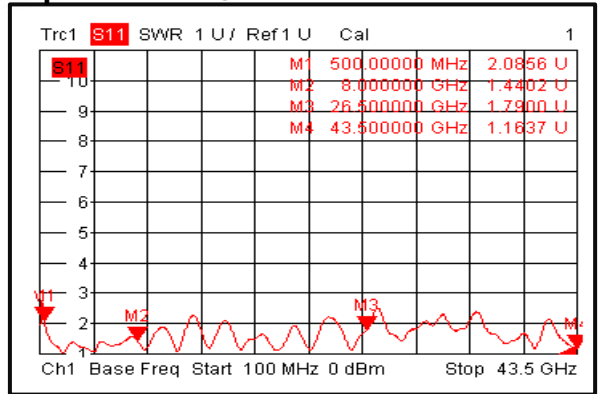
Control Pin Customization Available Upon Request



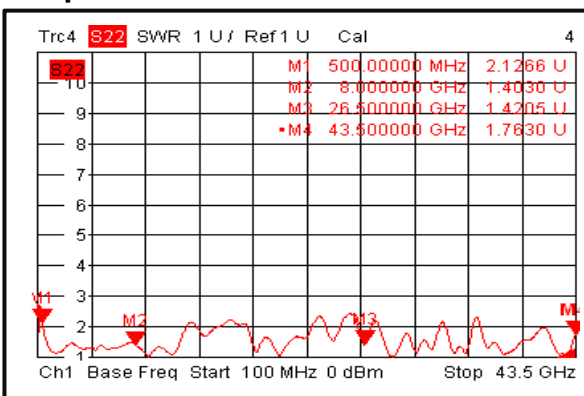
Insertion Loss @+25°C



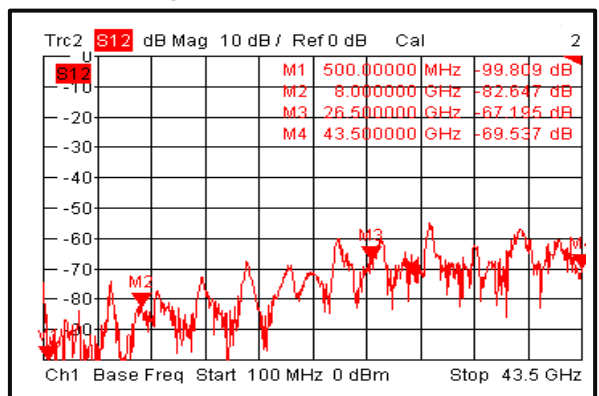
Input VSWR @+25°C



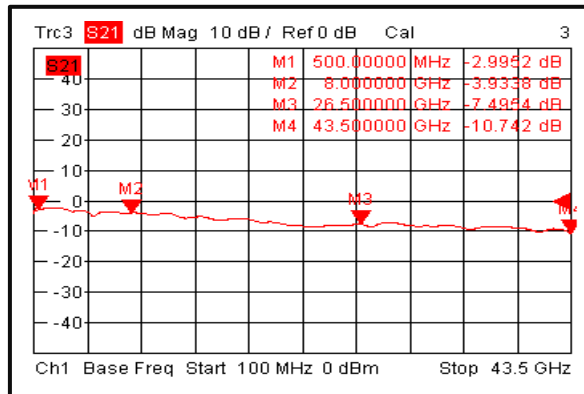
Output VSWR @+25°C



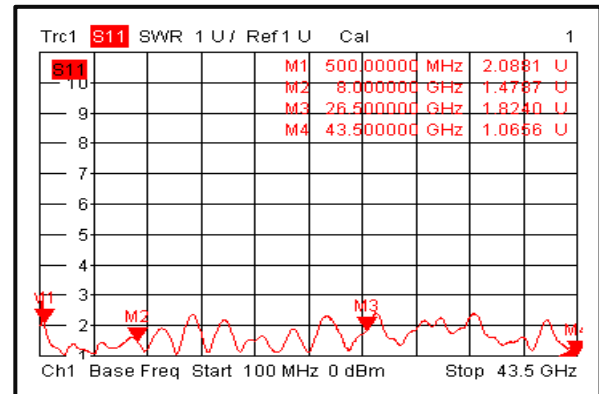
Isolation @+25°C



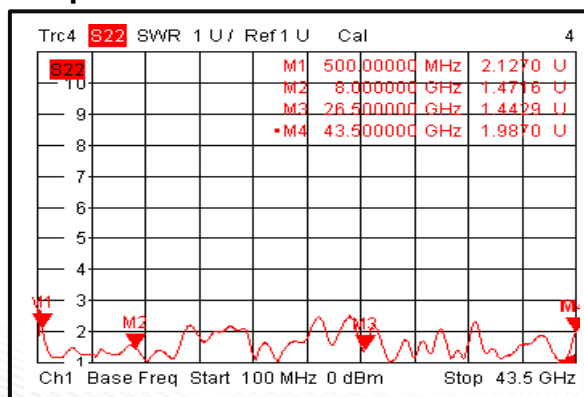
Insertion Loss @-40°C



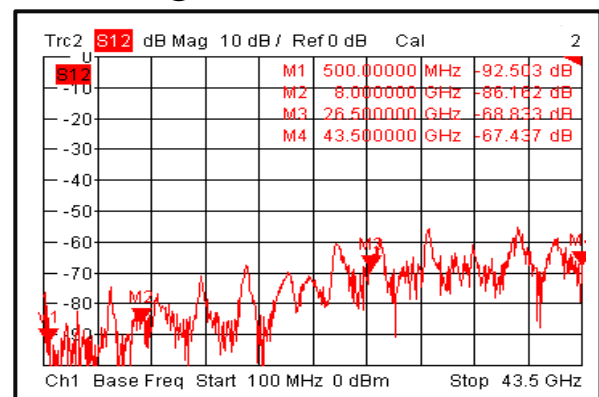
Input VSWR @-40°C



Output VSWR @-40°C

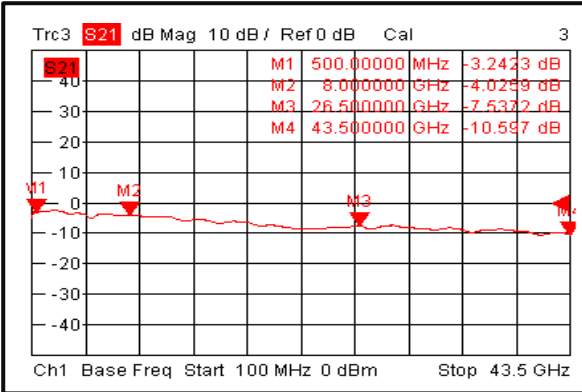


Isolation @-40°C

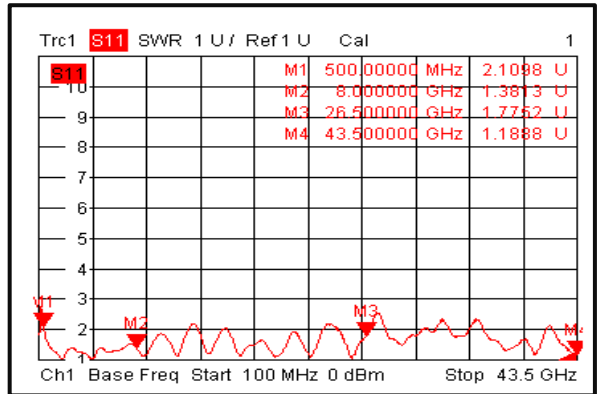




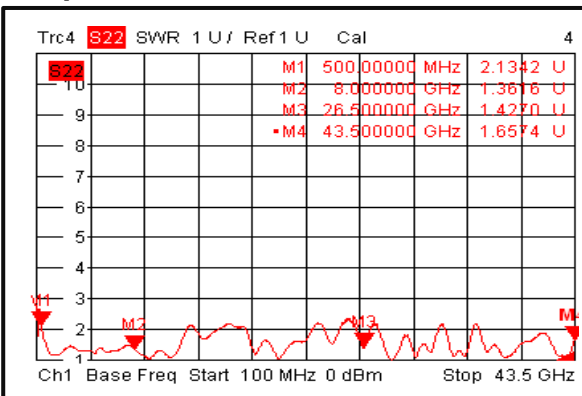
Insertion Loss @+85°C



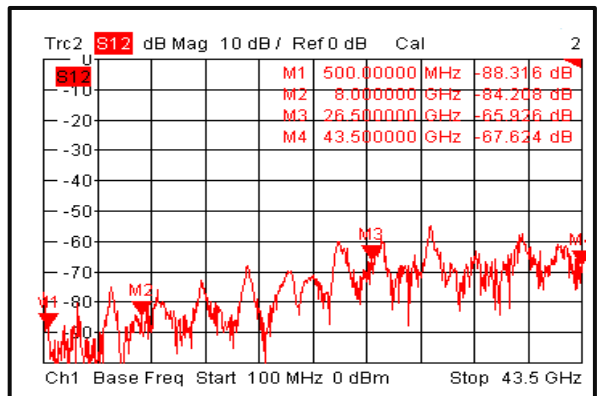
Input VSWR @+85°C



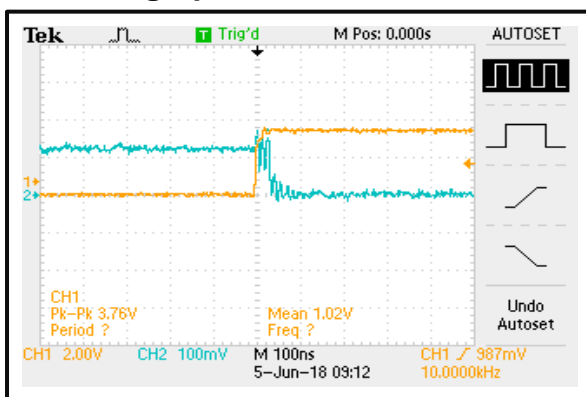
Output VSWR @+85°C



Isolation @+85°C



Switching Speed



Switching Speed

