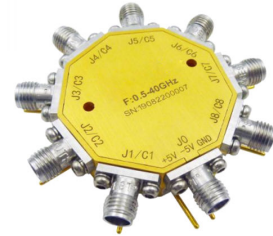




Absorptive Coaxial SP8T Switch 0.5 - 40GHz

Features

- Ultra Wide Band Operation 0.5-40GHz
- 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			30-40			GHz
Insertion Loss		4.2	4.9		6.5	7		7.5	8.5	dB
Insertion Loss Temperature Coefficient		0.003			0.003			0.003		dB/ ° C
Isolation	65	70		50	55		50	55		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			+23			+23			+23	dBm
Power Dissipation		0.6			0.6			0.6		W
0.1dB Compression Point (P0.1dB)		23			23			23		dBm
IIP3		45			38			35		dBm
Switching Speed	100Max.									ns
Weight	1.6 Max.									ounces
Impedance	50									Ω
Bias Current (+5V / -5V)	200/30 Max.									mA
Input / Output Connectors	2.92mm-Female									
Finish	Gold Plated									
Material	Aluminum									
Sealing	Hermetically Sealed (optional)									



Absolute Maximum Ratings

Biasing	+5V $\pm$ 10%/-5V $\pm$ 10%
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Ordering Information

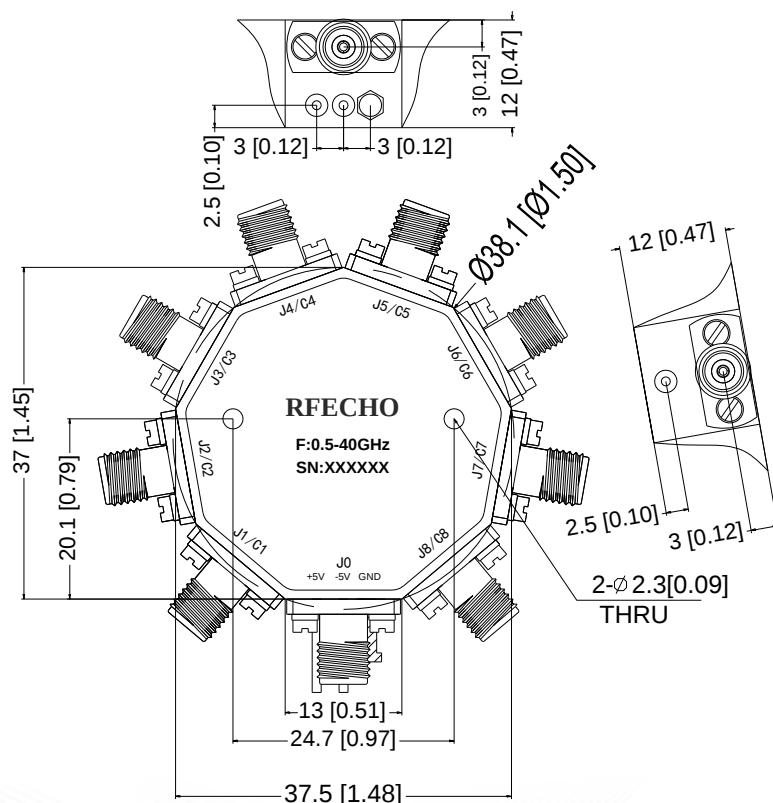
Part No.	Description
DBSA0800504000B	SP8T 0.5-40GHz PIN Diode Switch

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) Housing Tolerances $\pm 0.1(0.004)$

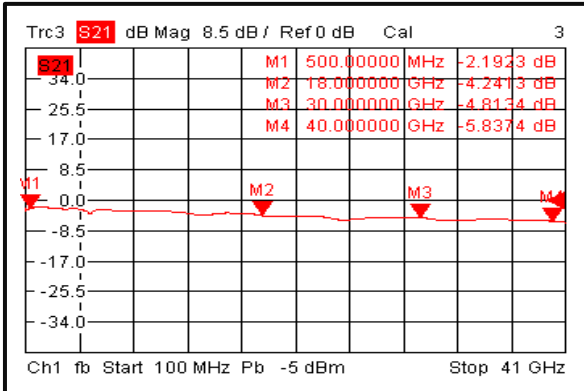


Truth Table

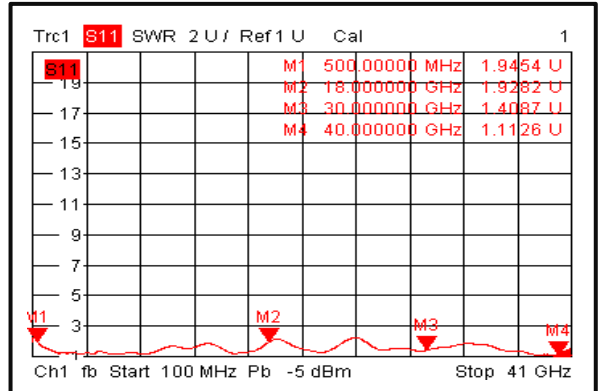
TTL Control Voltage THRESHOLD								Low(0)=0~0.8V High(1)=2.8~5V
Control Input TTL								Signal Path State
C8	C7	C6	C5	C4	C3	C2	C1	
1	1	1	1	1	1	1	0	J0-J1
1	1	1	1	1	1	0	1	J0-J2
1	1	1	1	1	0	1	1	J0-J3
1	1	1	1	0	1	1	1	J0-J4
1	1	1	0	1	1	1	1	J0-J5
1	1	0	1	1	1	1	1	J0-J6
1	0	1	1	1	1	1	1	J0-J7
0	1	1	1	1	1	1	1	J0-J8
Control Pin Customization available upon request								



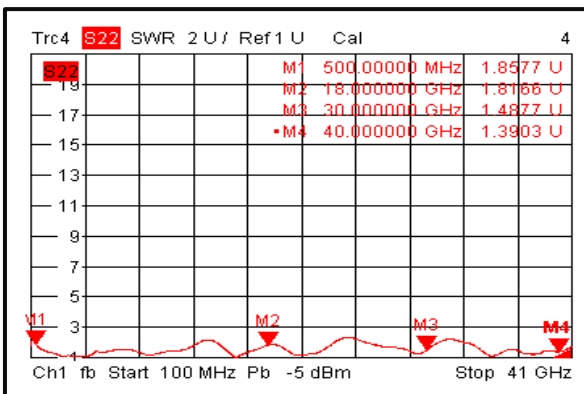
Insertion Loss @+25°C



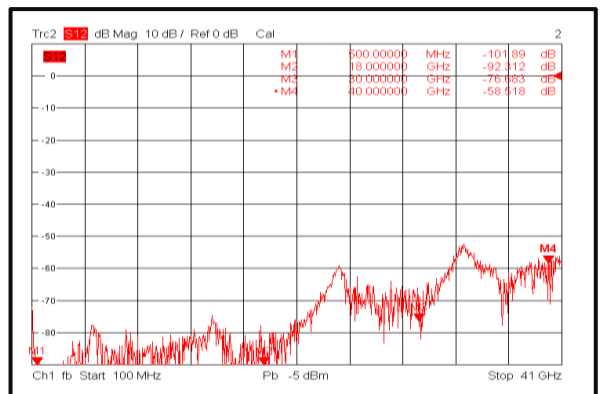
Input VSWR @+25°C



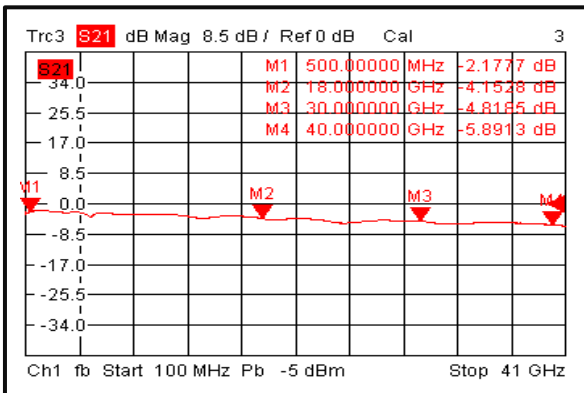
Output VSWR @+25°C



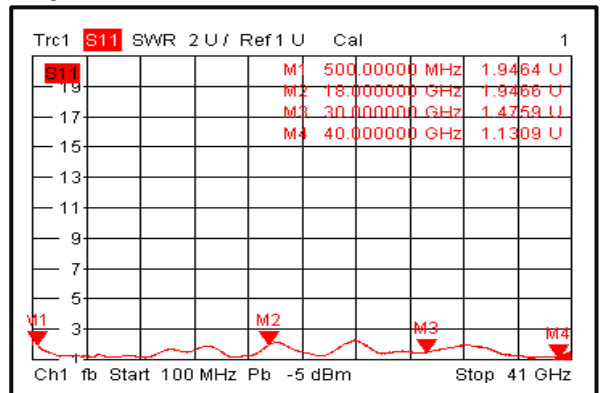
Isolation @+25°C



Insertion Loss @-40°C

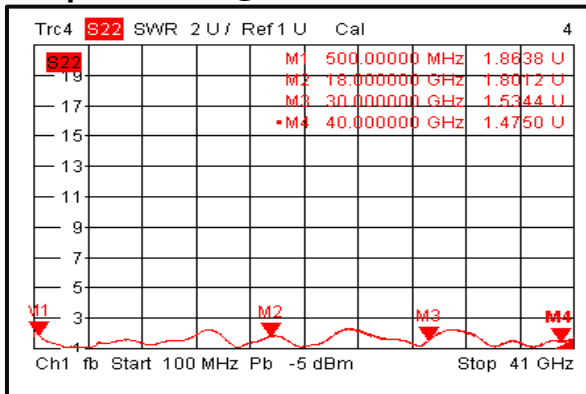


Input VSWR @-40°C

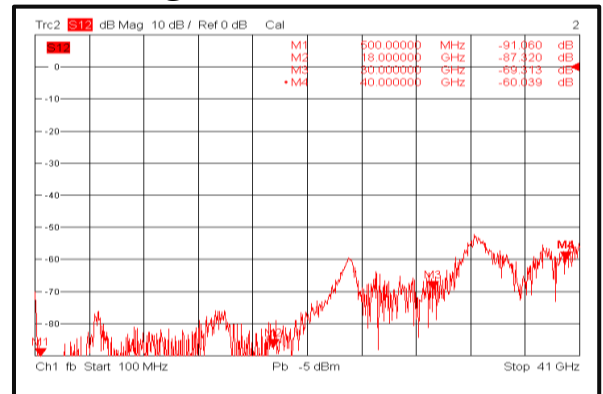




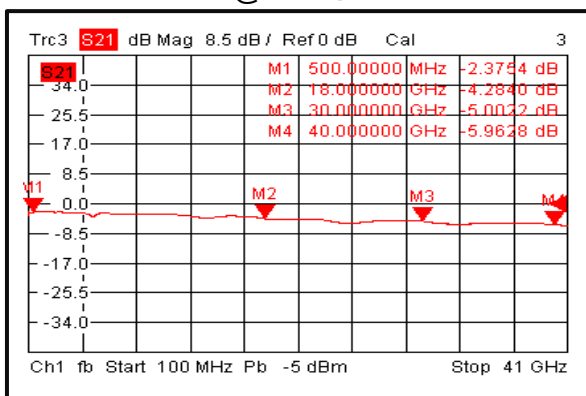
Output VSWR @-40°C



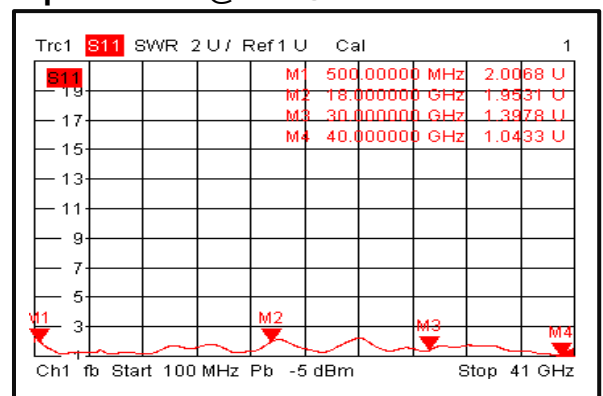
Isolation @-40°C



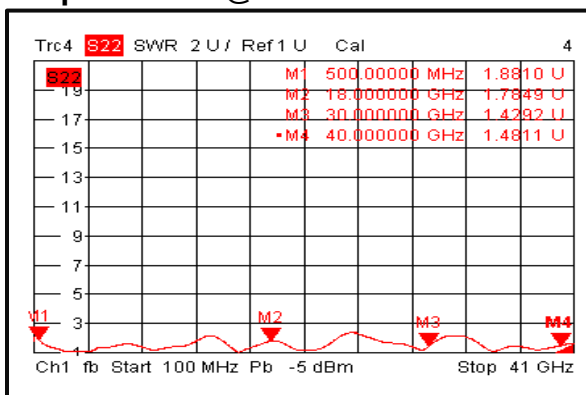
Insertion Loss @+85°C



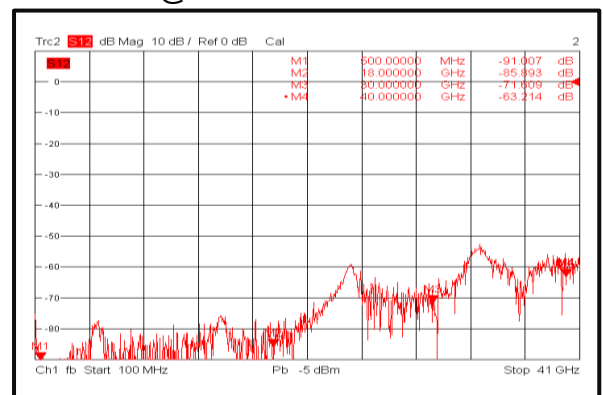
Input VSWR @+85°C



Output VSWR @+85°C

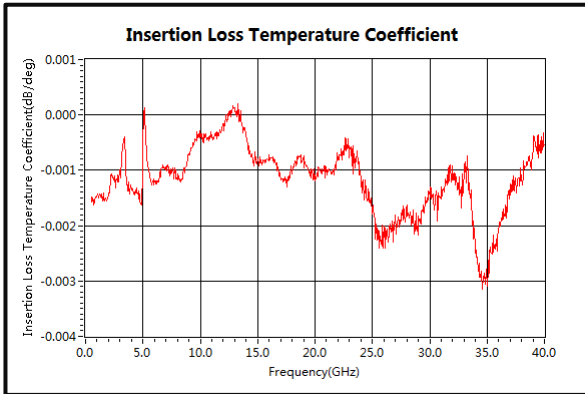


Isolation @+85°C

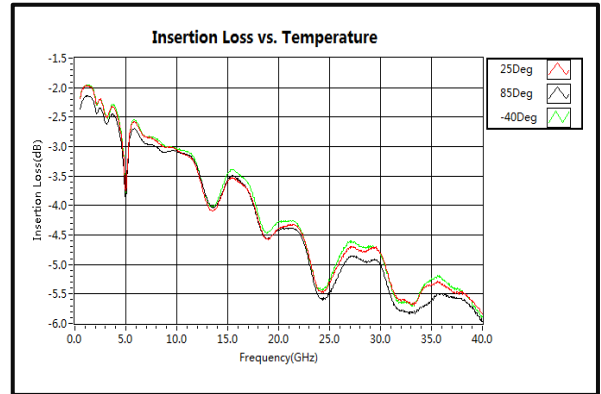




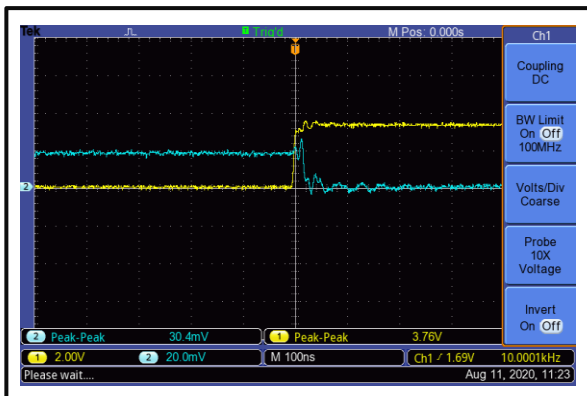
Insertion Loss Temperature Coefficient



Insertion Loss vs. Temperature



Switching Speed



Switching Speed

