



Absorptive 0.5-18GHz Coaxial SPST Switch

Features

- Ultra Wide Band Operation 0.5-18GHz
- 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	0.5-6			6-12			12-18			GHz
Insertion Loss		1.1	1.5		1.5	1.8		2.0	2.5	dB
Insertion Loss Temperature Coefficient		0.003			0.003			0.003		dB/ °C
Isolation (J0→J1)	80	85		80	85		70	80		dB
Input VSWR		1.4	1.5		1.4	1.5		1.5	1.8	: 1
Output VSWR		1.4	1.5		1.4	1.5		1.5	1.8	: 1
RF Input power (CW)			30			30			30	dBm
DC Power Dissipation		0.3			0.3			0.3		W
0.1dB Compression P0.1dB		30			30			30		dBm
IIP3		55			55			55		dBm
Switching Speed	100									ns
Weight	0.35									ounces
Impedance	50									Ω
Biasing(+5V/-5V)	80/50									mA
Input /Output Connectors	SMA-Female									
Finish	Gold Plated									
Material	Aluminum									
Seal	Hermetically Sealed (optional)									



Absolute Maximum Ratings

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

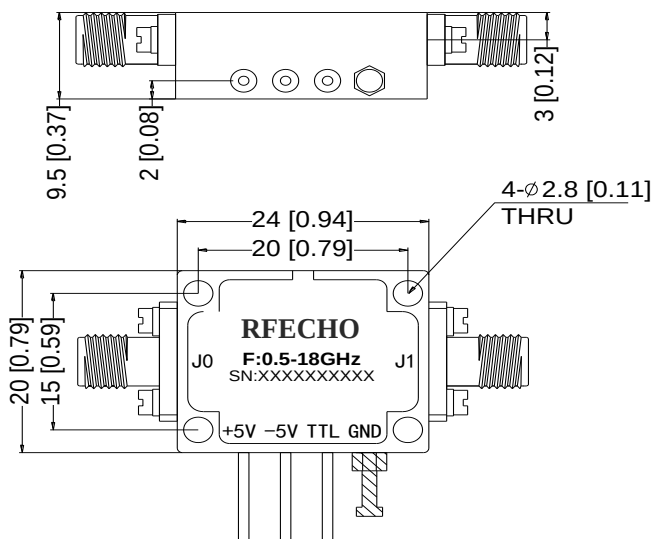
Part No.	Description
DBSA0100501800B	SPST 0.5-18GHz PIN Diode Switch

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)



Notes:

J0: Absorptive Port

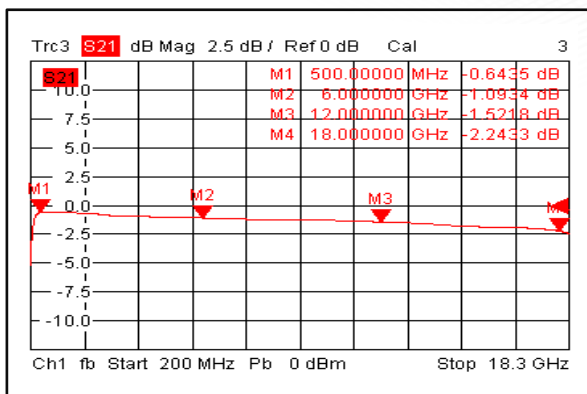
J1: Reflective port

Truth Table

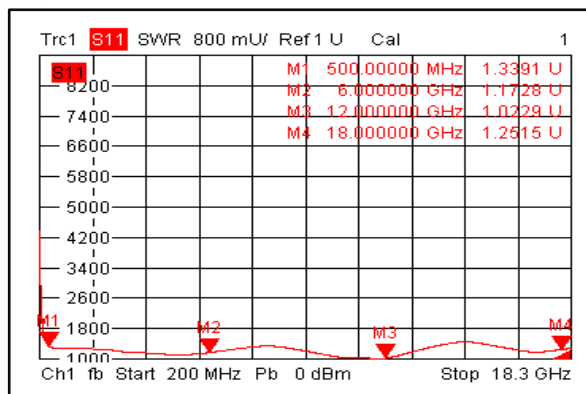
TTL Control Voltage THRESHOLD	Low(0)=0~0.8V
	High(1)=2.8~5V
Control Input TTL	Signal Path State
1	OFF
0	ON
Control Pin Customization available upon request	



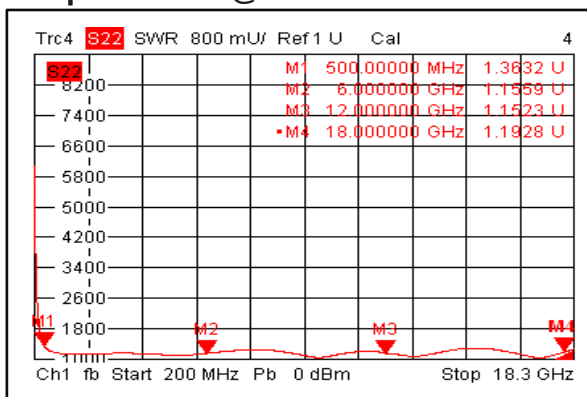
Insertion Loss @+25°C



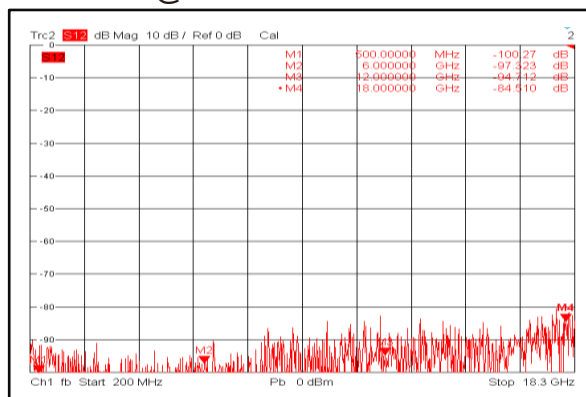
Input VSWR @+25°C



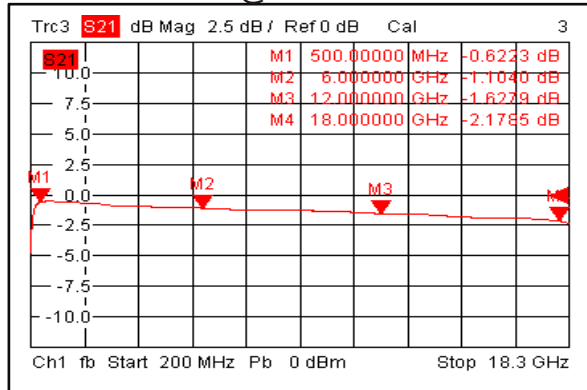
Output VSWR @+25°C



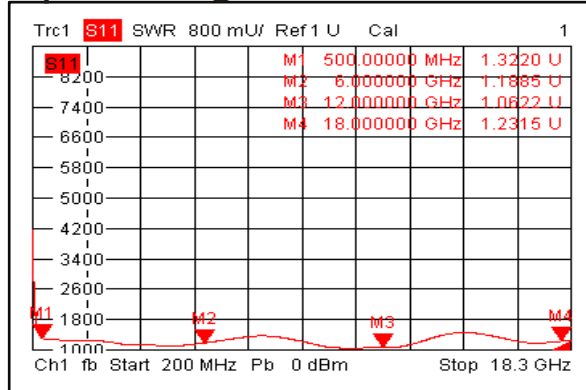
Isolation @+25°C



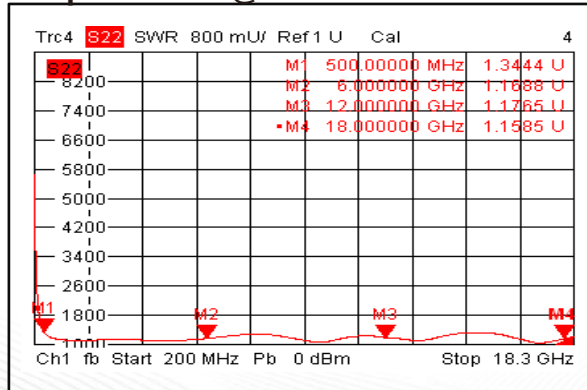
Insertion Loss @-40°C



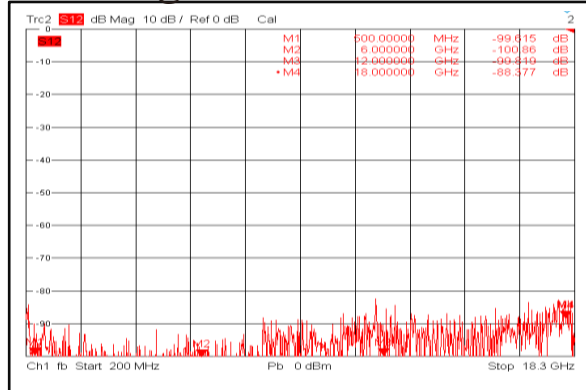
Input VSWR @-40°C



Output VSWR @-40°C

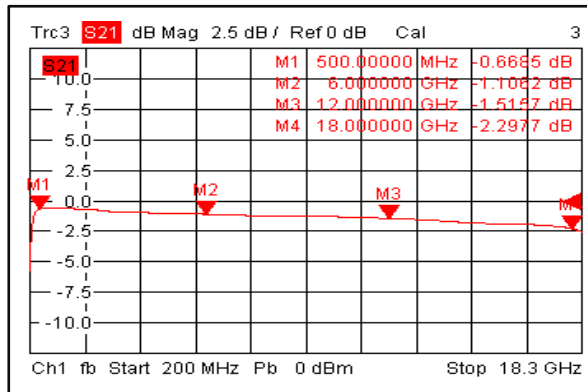


Isolation @-40°C

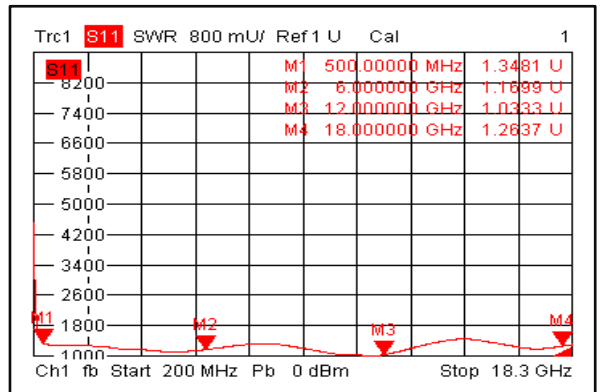




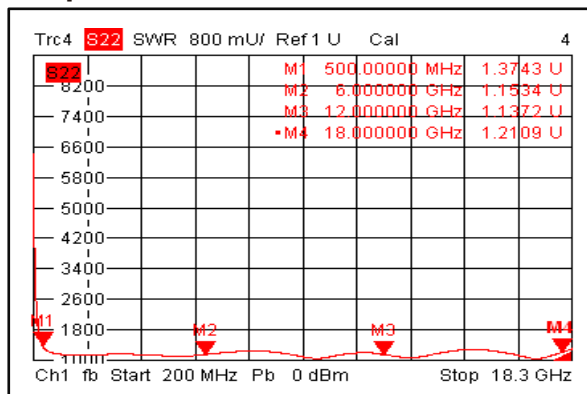
Insertion Loss @+85°C



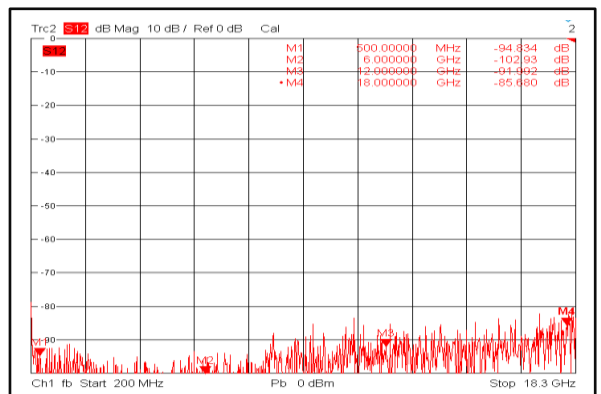
Input VSWR @+85°C



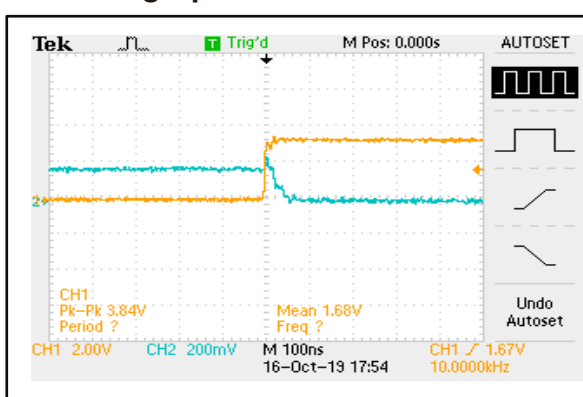
Output VSWR @+85°C



Isolation @+85°C



Switching Speed



Switching Speed

