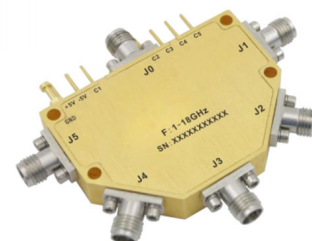




Absorptive 1-18GHz Coaxial SP5T Switch

Features

- Ultra Wide Band Operation 1-18GHz
- 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	1-8			8-12			12-18			GHz
Insertion Loss		1.5	2		1.9	2.5		2.8	3.5	dB
Insertion Loss Temperature Coefficient		0.003			0.003			0.003		dB/ ° C
Isolation	70	80		60	80		60	75		dB
Input VSWR		1.6	1.8		1.4	1.8		1.6	1.8	: 1
Output VSWR		1.6	1.8		1.4	1.8		1.6	1.8	: 1
RF Input power			30			30			30	dBm
DC Power Dissipation(CW)		0.3			0.35			0.45		W
0.1dB Compression Point (P0.1dB)		30			30			30		dBm
IIP3		45			40			38		dBm
Switching Speed	100 Max.									ns
Weight	1.5 Max.									Ounces
Impedance	50									Ω
Bias Current (+5V / -5V)	200/50 Max.									mA
Input / Output Connectors	SMA-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

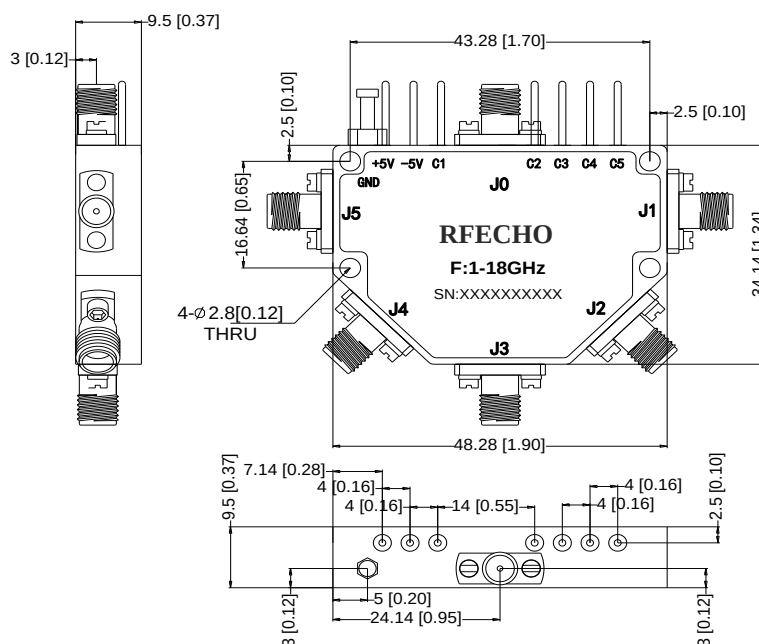
Part No.	Description
DBSA0501001800A	SP5T 1-18GHz PIN Diode Switch

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 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:

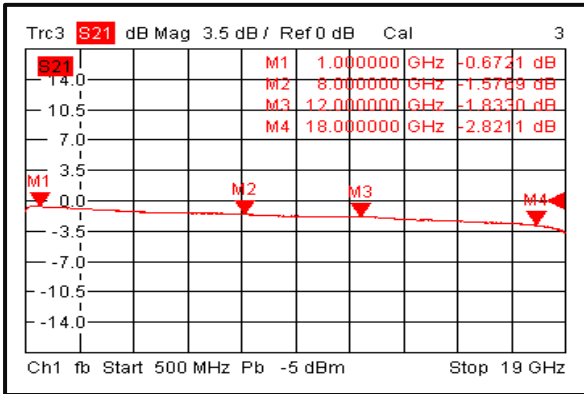
All Dimensions in mm (inches) Housing Tolerances $\pm 0.1(0.004)$



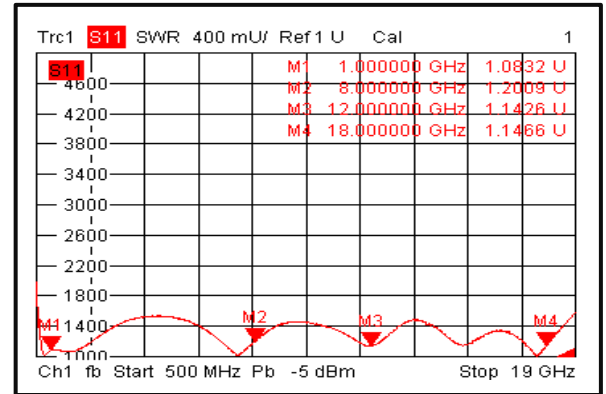
Truth Table

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

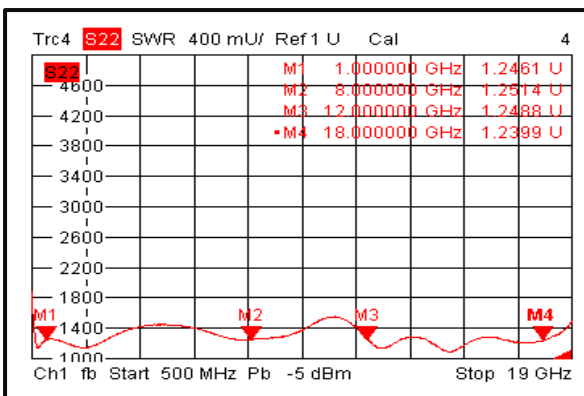
Insertion Loss @+25°C



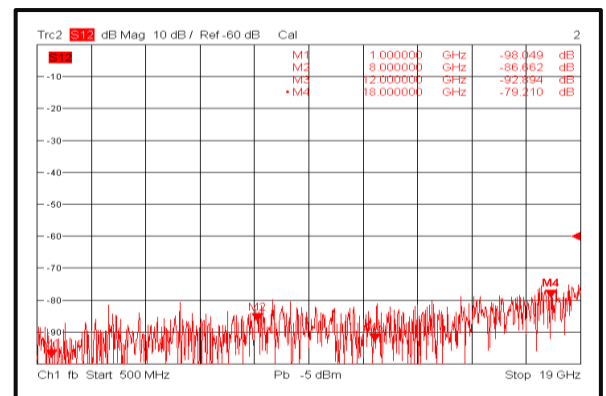
Input VSWR @+25°C



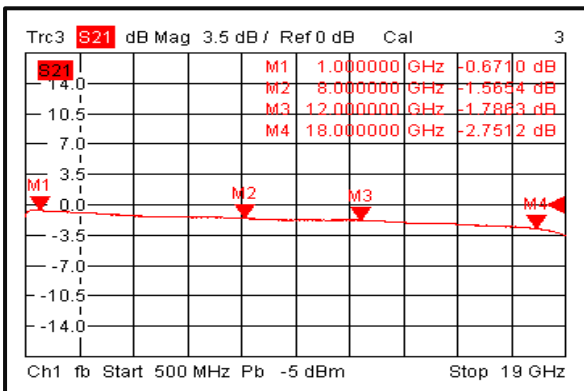
Output VSWR @+25°C



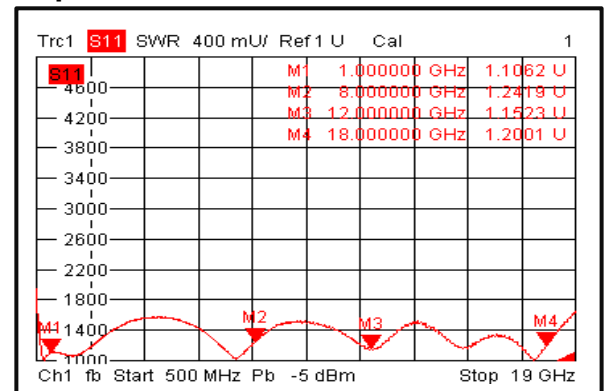
Isolation @+25°C



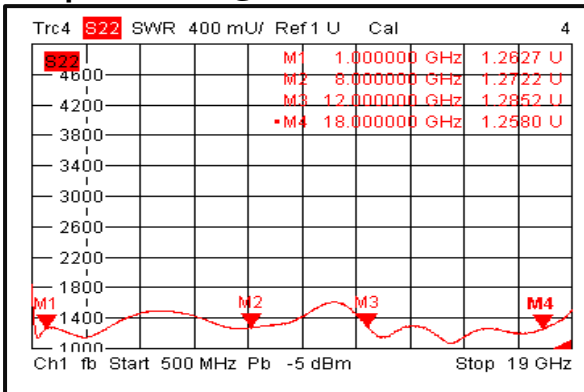
Insertion Loss @-40°C



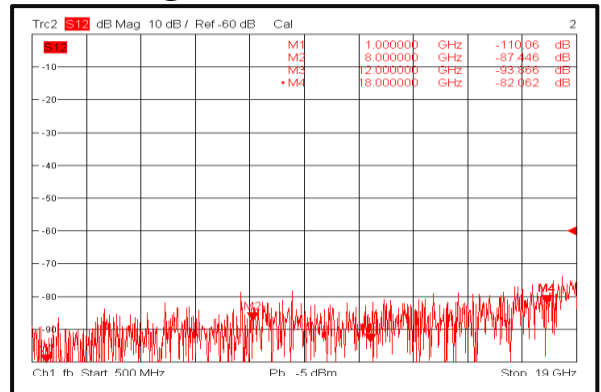
Input VSWR @-40°C



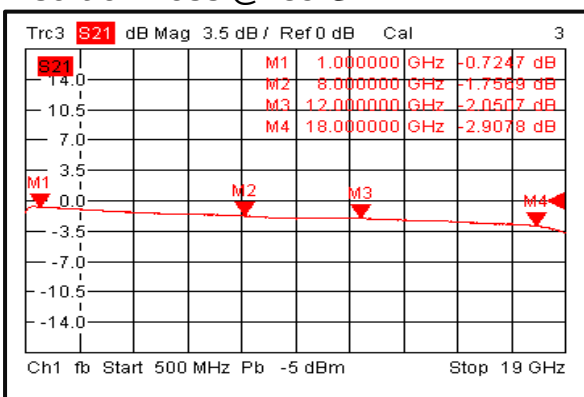
Output VSWR @-40°C



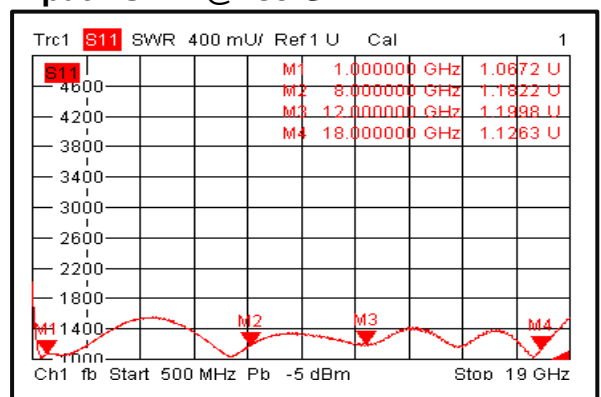
Isolation @-40°C



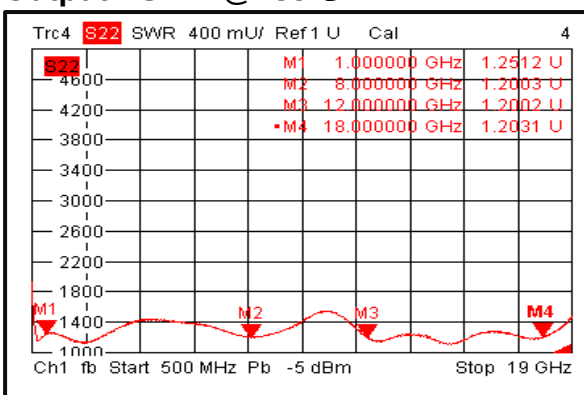
Insertion Loss @+85°C



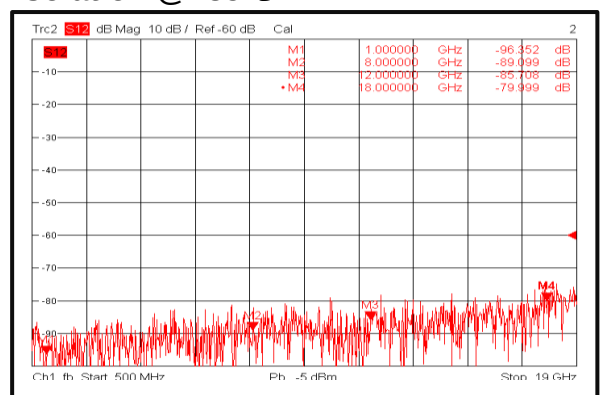
Input VSWR @+85°C



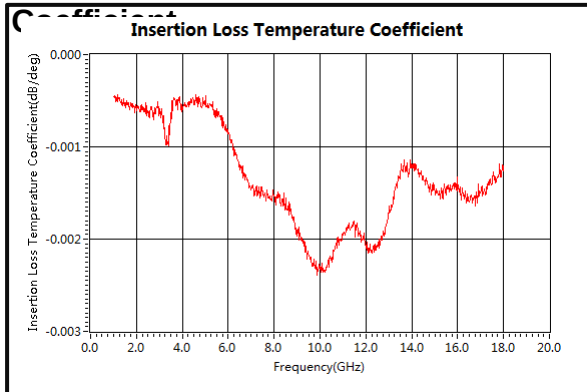
Output VSWR @+85°C



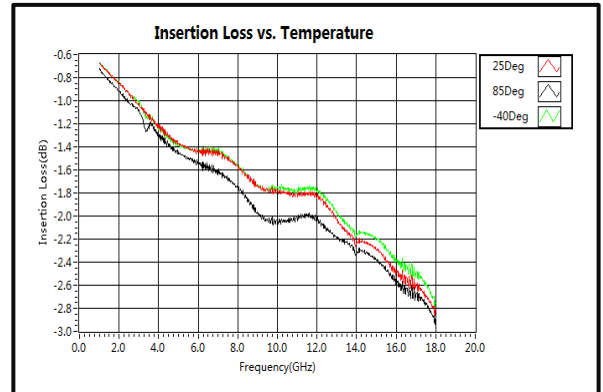
Isolation @+85°C



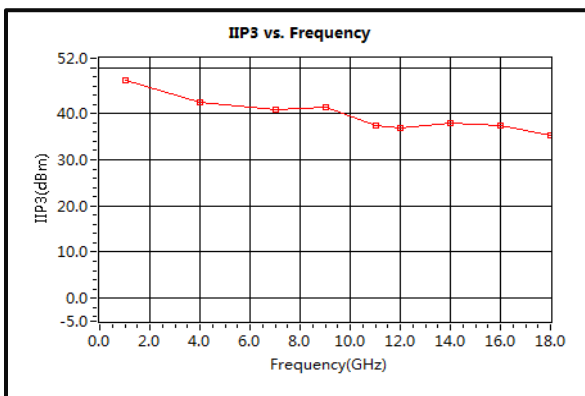
Insertion Loss Temperature



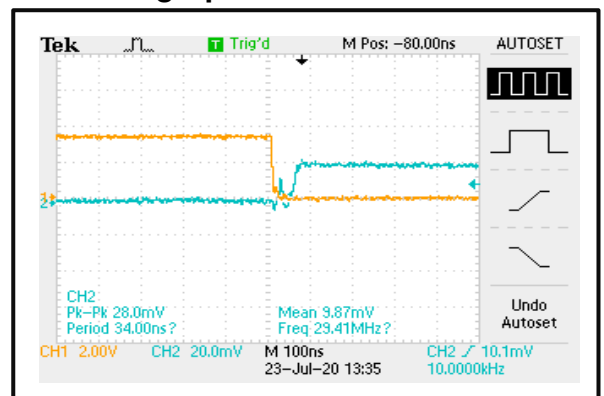
Insertion Loss vs. Temperature



IIP3



Switching Speed



Switching Speed

