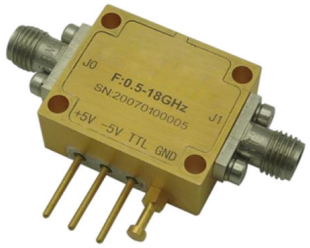
Absorptive 0.5-18GHz Coaxial SPST Switch

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		0.6			0.6			0.6		W
0.1dB Compression P0.1dB		30			30			30		dBm
IIP3		48			45			40		dBm
Switching Speed	100 Max.									ns
Weight	0.5 Max.									ounces
Impedance	50									Ω
Biasing(+5V/-5V)	80/50 Max.									mA
Input /Output Connectors	SMA-Female									
Finish	Gold Plated									
Material	Aluminum									
Sealing	Hermetically Sealed (optional)									

Absolute Maximum Ratings

Biasing	+5V±10%/-5V±10%

Environmental Specifications

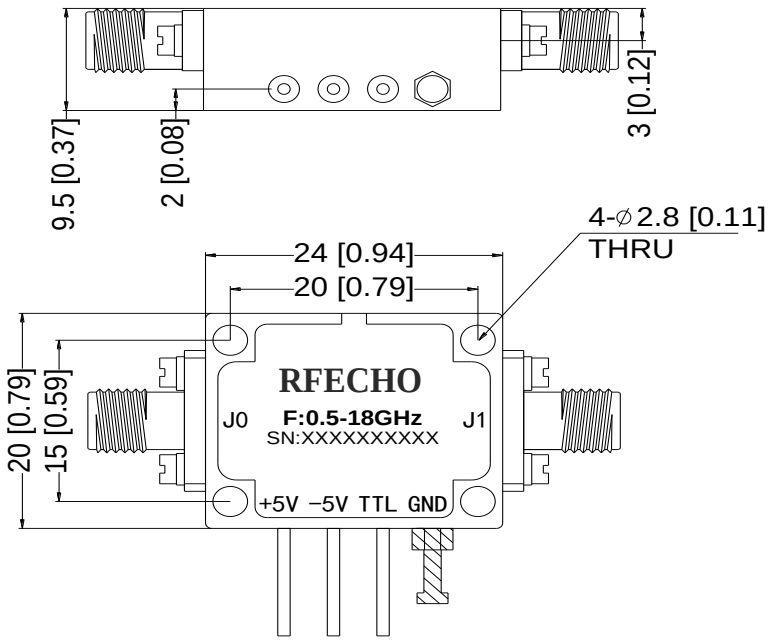
Operational Temperature	-40ºC~+85ºC(Case Temperature)
Storage Temperature	-50ºC~+105ºC
Altitude	30,000 ft. (Epoxy Sealed Controlled environment)
	60,000 ft. 1.0psi min (Hermetically Sealed Un-controlled environment) (Optional)
Vibration	25g RMS (15 degrees 2KHz) endurance, 1 hour per axis
Humidity	100% RH at 35ºc, 95%RH at 40ºc
Shock	20G for 11msec half sine wave,3 axis both directions

Ordering Information

Part No.	Description
DBSA0100501800A	SPST 0.5-18GHz PIN Diode Switch

Outline Drawing:

All Dimensions in mm (inches) Tolerances ±0.1(0.004)

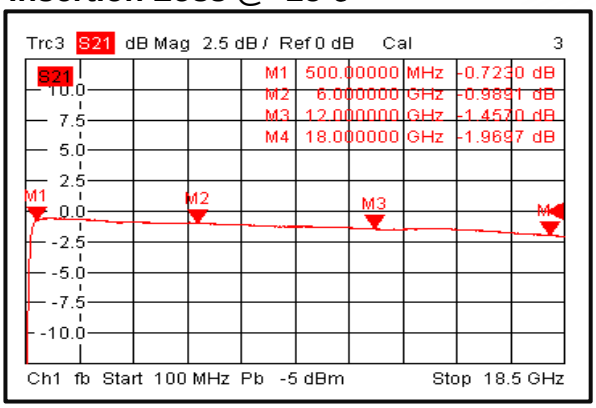


Notes:
J0: Absorptive Port
J1: Reflective port

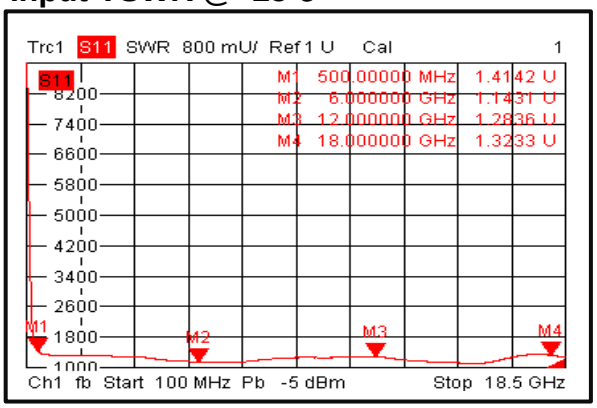
Truth Table

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

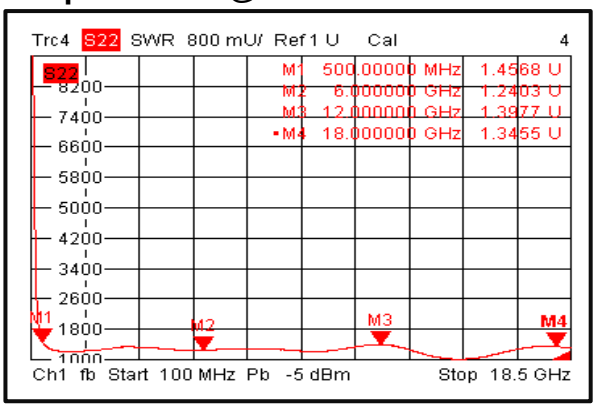
Insertion Loss @+25℃



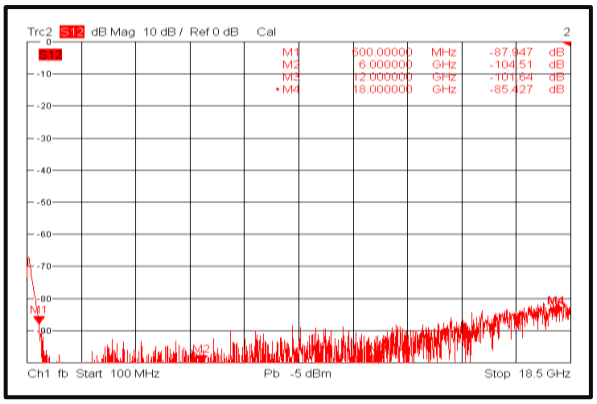
Input VSWR @+25℃



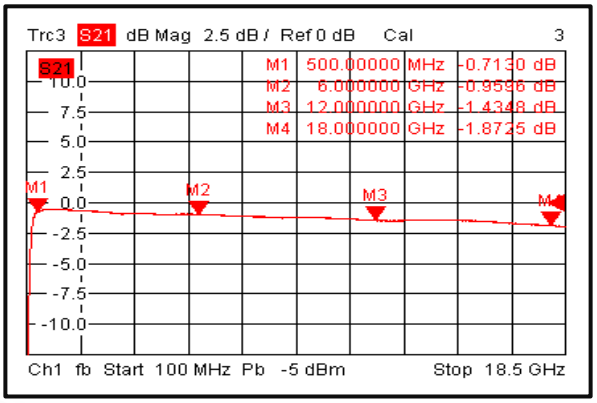
Output VSWR @+25℃



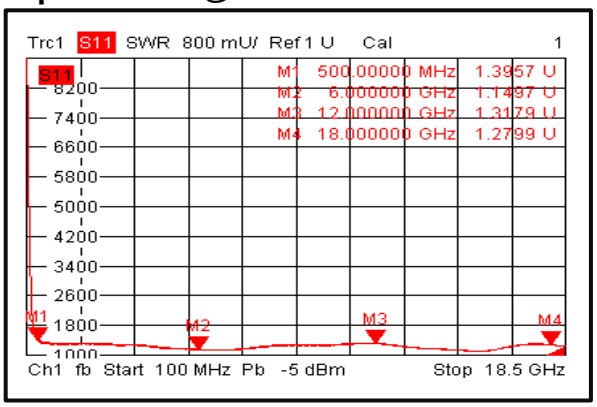
Isolation @+25℃



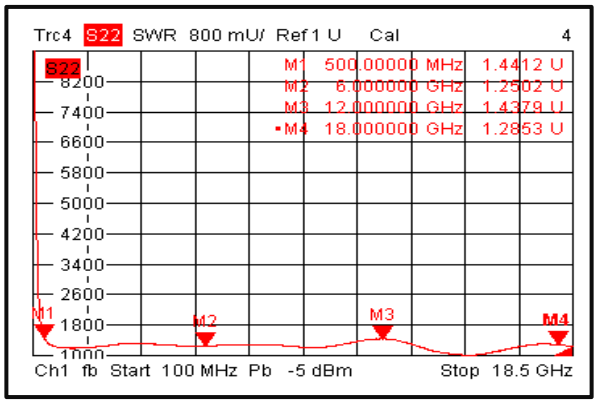
Insertion Loss @-40℃



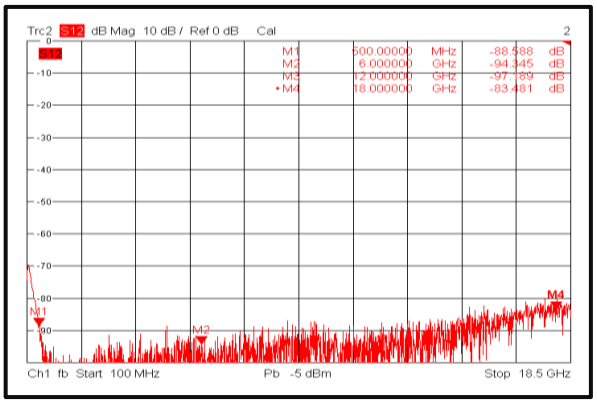
Input VSWR @-40℃



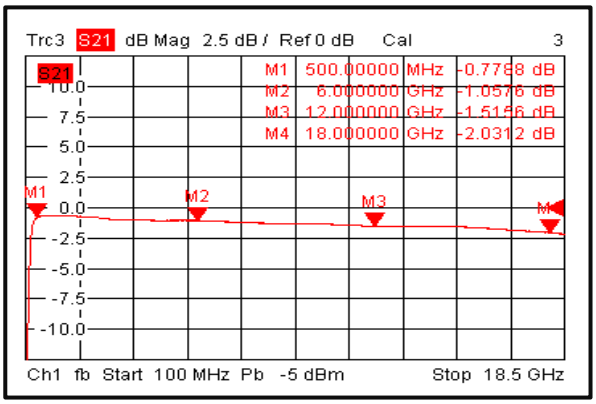
Output VSWR @-40℃



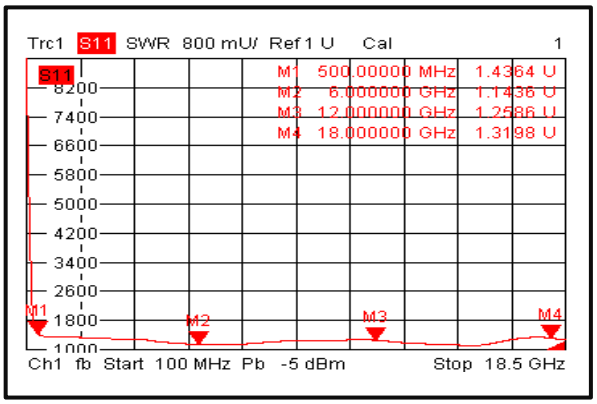
Isolation @-40℃



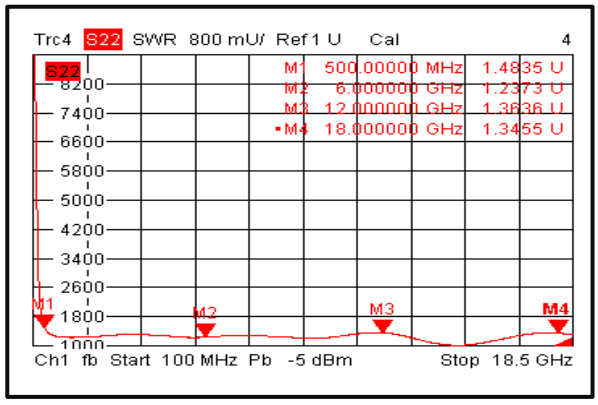
Insertion Loss @+85℃



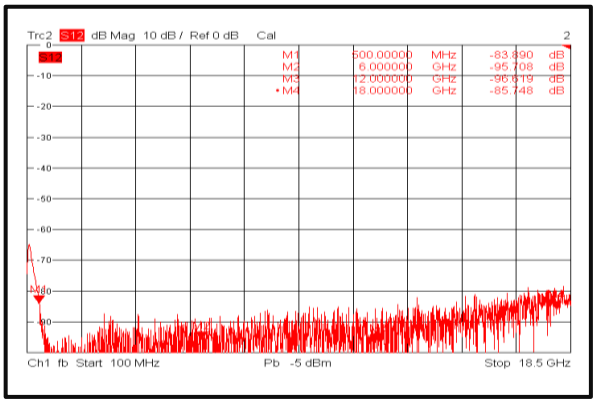
Input VSWR @+85℃



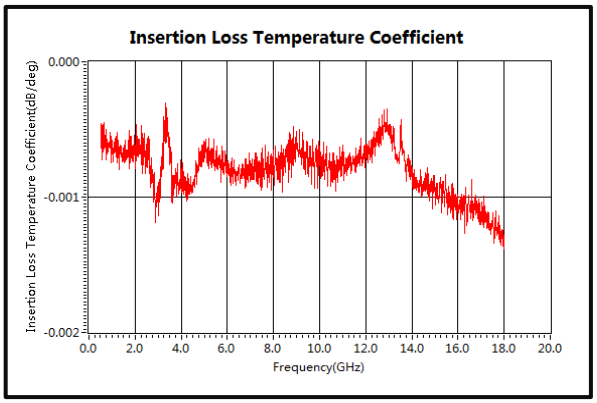
Output VSWR @+85℃



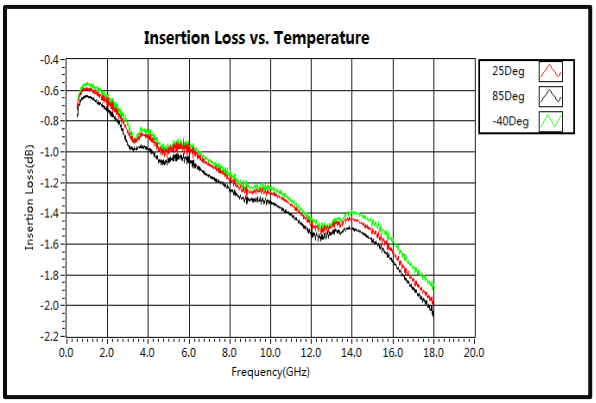
Isolation @+85℃



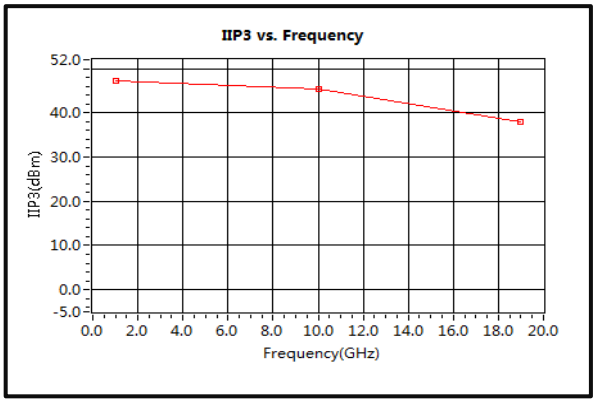
Insertion Loss Temperature Coefficient



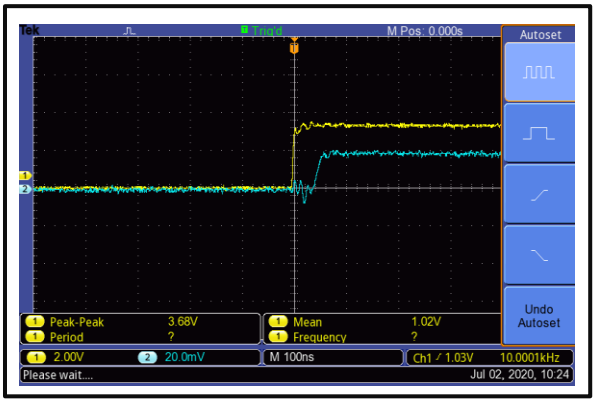
Insertion Loss vs. Temperature



IIP3



Switching Speed



Switching Speed