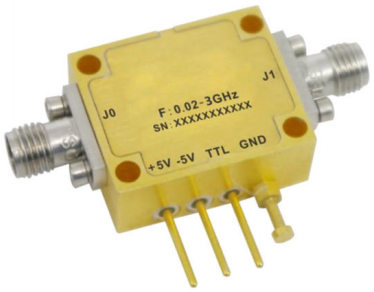
Absorptive Coaxial SPST Switch 0.02 - 3GHz

Features

- Wide Band Operation 0.02-3GHz
- Functional Bandwidth : 0.02GHz – 12.5GHz
- 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.	Units
Frequency Range		0.02-3			3-12.5		GHz
Insertion Loss		0.9	1.3		3.2	3.6	dB
Insertion Loss Temperature Coefficient		0.003			0.003		dB/ ° C
Isolation (J0→J1)	80	85		80	85		dB
Input VSWR		1.3	1.5		1.7	2.0	: 1
Output VSWR		1.3	1.5		1.7	2.0	: 1
RF Input Power (CW)			30			30	dBm
DC Power Dissipation		0.3			0.3		W
0.1dB Compression Point (P0.1dB)		30			30		dBm
IIP3		45			43		dBm
Switching Speed	250 Max.						ns
Weight	0.5 Max.						ounces
Impedance	50						Ω
Bias Current (+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

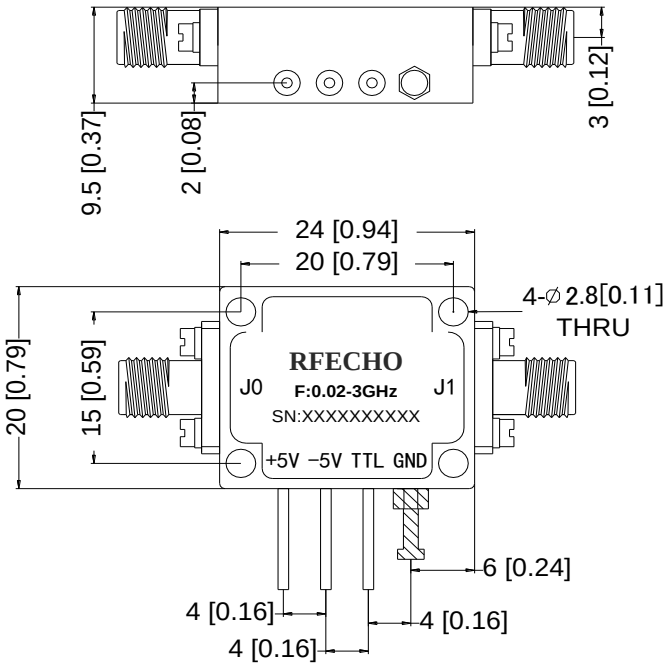
Operational Temperature	-40ºC~+85ºC(Case Temperature)
Storage Temperature	-50ºC~+105ºC
Altitude	30,000 ft. (Epoxy Sealed Controlled environment)
	60,000 ft. 1.0psi min (Hermetically Sealed Un-controlled environment) (Optional)
Vibration	25g RMS (15 degrees 2KHz) endurance, 1 hour per axis
Humidity	100%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

Ordering Information

Part No.	Description
DBSA0100020300B	SPST 0.02-3GHz PIN Diode Switch

Outline Drawing:

All Dimensions in mm (inches)

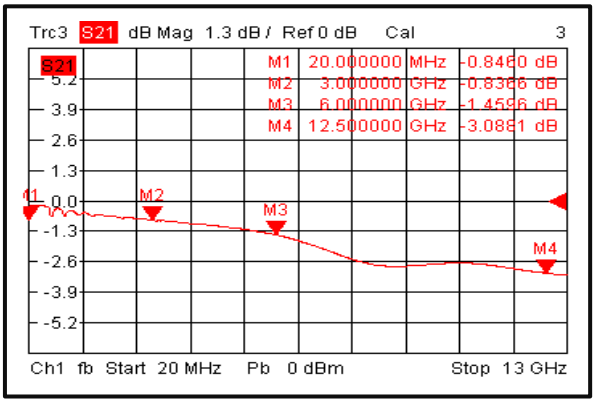


Notes:
J0: Absorptive Port
J1: Reflective port

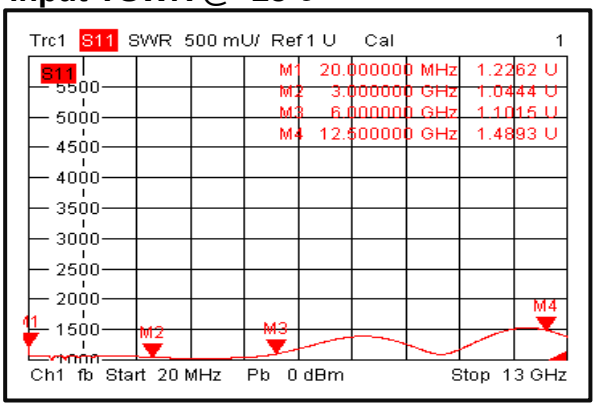
Truth Table

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

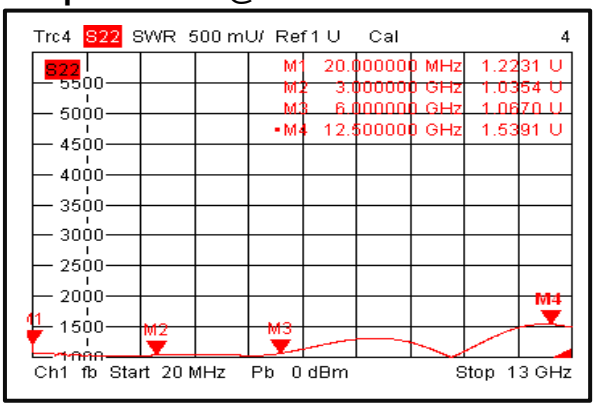
Insertion Loss @+25℃



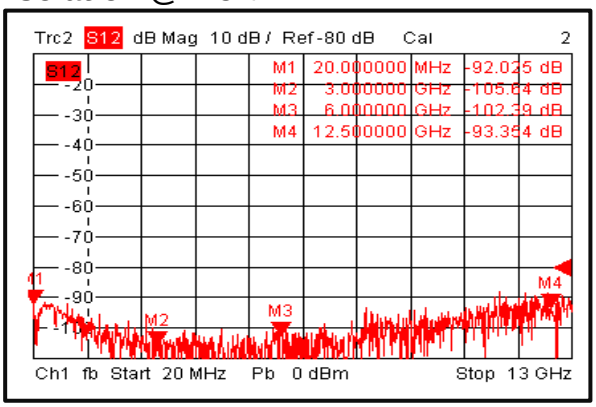
Input VSWR @+25℃



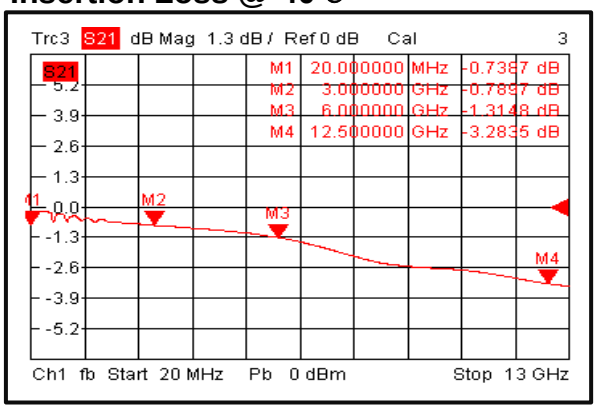
Output VSWR @+25℃



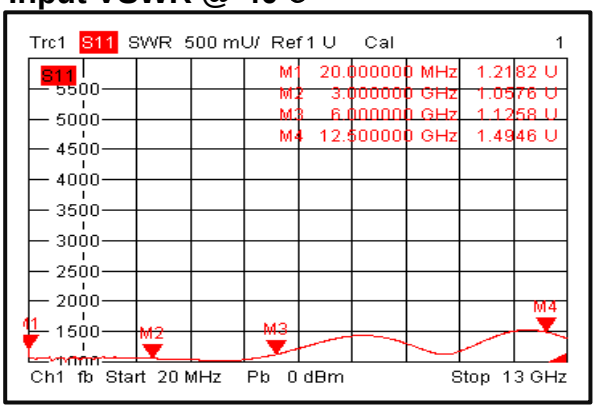
Isolation @+25℃



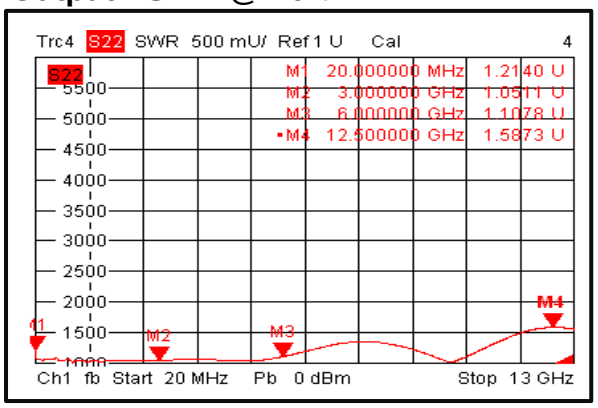
Insertion Loss @-40℃



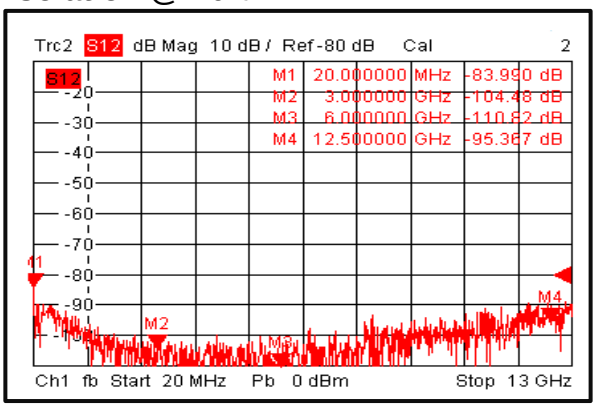
Input VSWR @-40℃



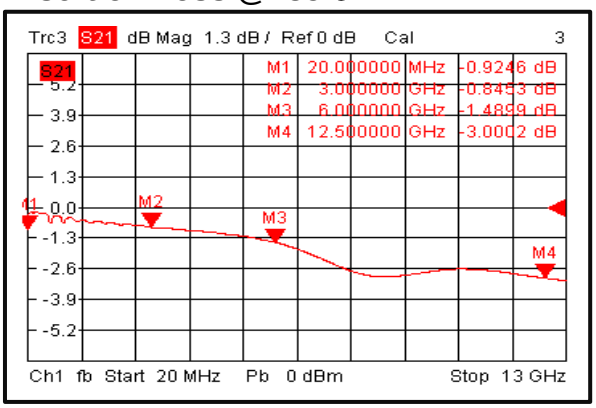
Output VSWR @-40℃



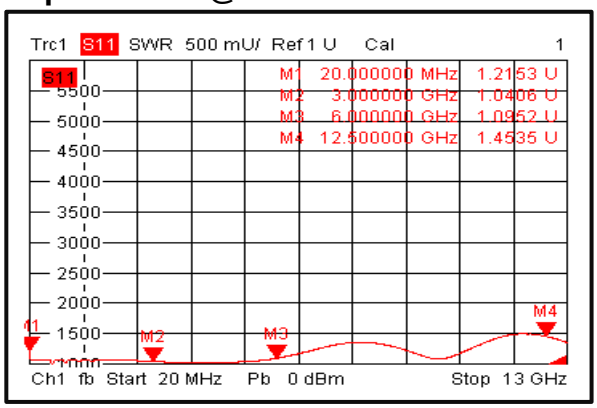
Isolation @-40℃



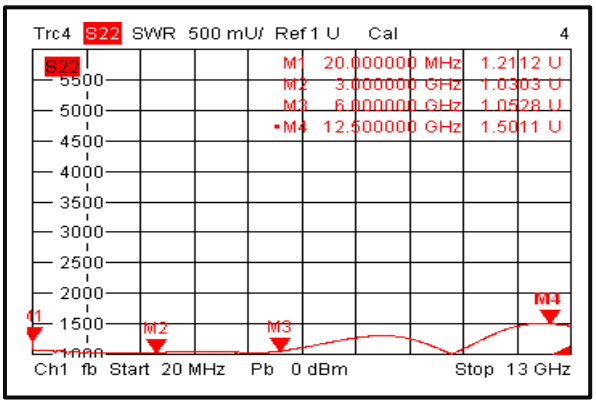
Insertion Loss @+85℃



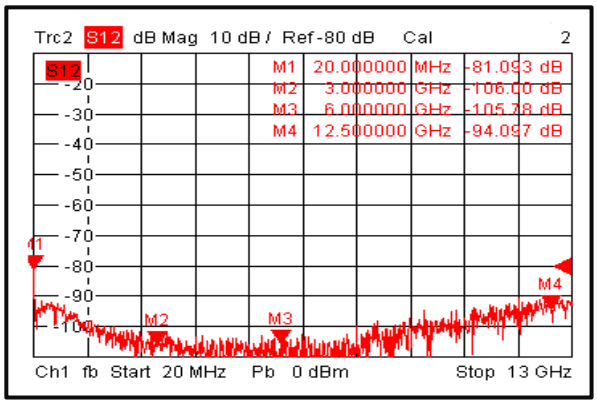
Input VSWR @+85℃



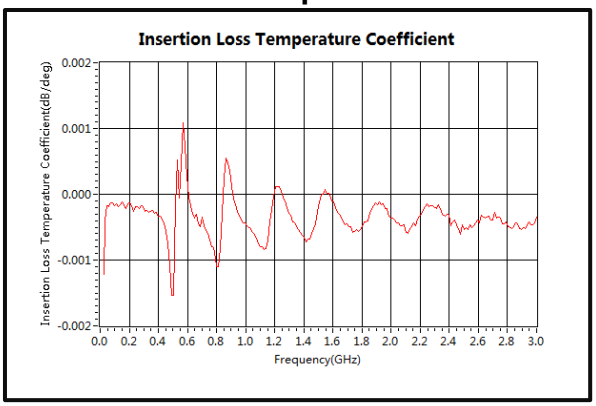
Output VSWR @+85℃



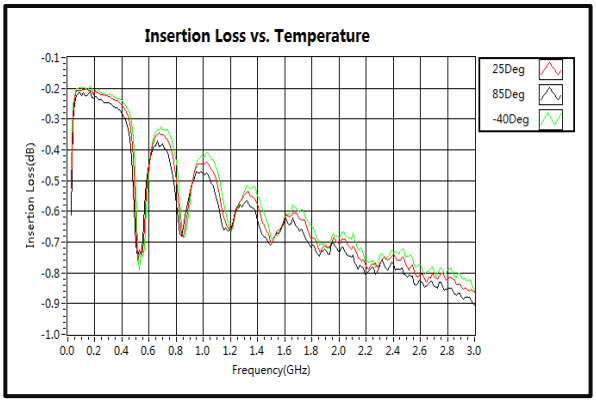
Isolation @+85℃



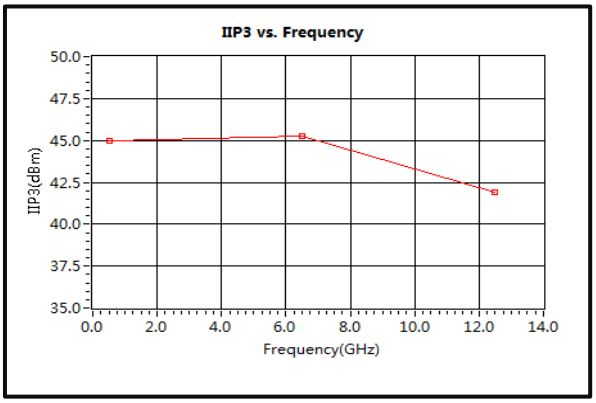
Insertion Loss Temperature Coefficient



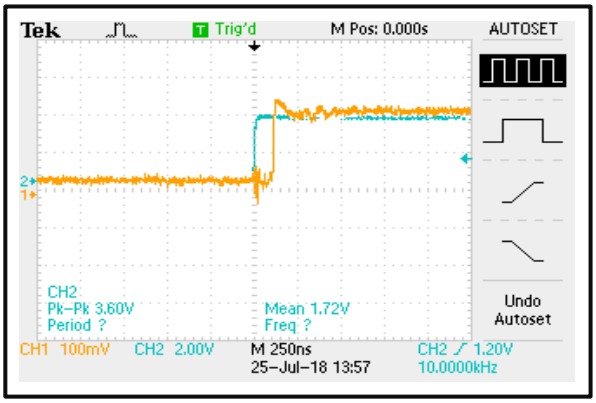
Insertion Loss vs. Temperature



IIP3



Switching Speed



Switching Speed