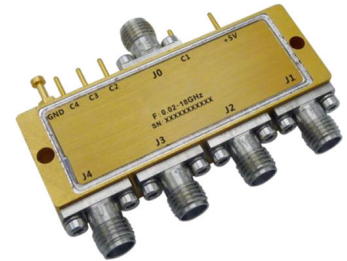




Hermetically Sealed Absorptive Coaxial SP4T Switch 0.02 - 18GHz

Features

- Ultra Wide Band Operation 0.02-18GHz
- 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

Parameter	Min.	Typ.	Max.	Min.	Typ.	Max.	Min.	Typ.	Max.	Units
Frequency Range	0.02-6			6-12			12-18			GHz
Insertion Loss		2.4	2.8		3.5	3.8		4.1	4.5	dB
Insertion Loss Temperature Coefficient		0.003			0.003			0.003		dB/ ° C
Isolation	60	80		60	75		60	65		dB
Output to Output Port Isolation	60	80		60	75		60	65		dB
Input VSWR		1.5	2.0		1.5	2.0		1.8	2.0	: 1
Output VSWR		1.5	2.0		1.5	2.0		1.8	2.0	: 1
RF Input Power (CW)			30			30			30	dBm
DC Power Dissipation		1			1			1		W
0.1dB Compression Point (P0.1dB)		30			30			30		dBm
IIP3		45			42			40		dbm
Switching Speed	100 Typ. 250 Max.									ns
Weight	1.25max.									Ounces
Impedance	50									Ω
Bias Current (+5V)	210 Max.									mA
Input / Output Connectors	SMA-Female									
Finish	Gold Plated									
Material	Aluminum									
Sealing	Hermetically Sealed (Laser Welded)									



Absolute Maximum Ratings

Biasing	+5V±10%
---------	---------

Environmental Specifications

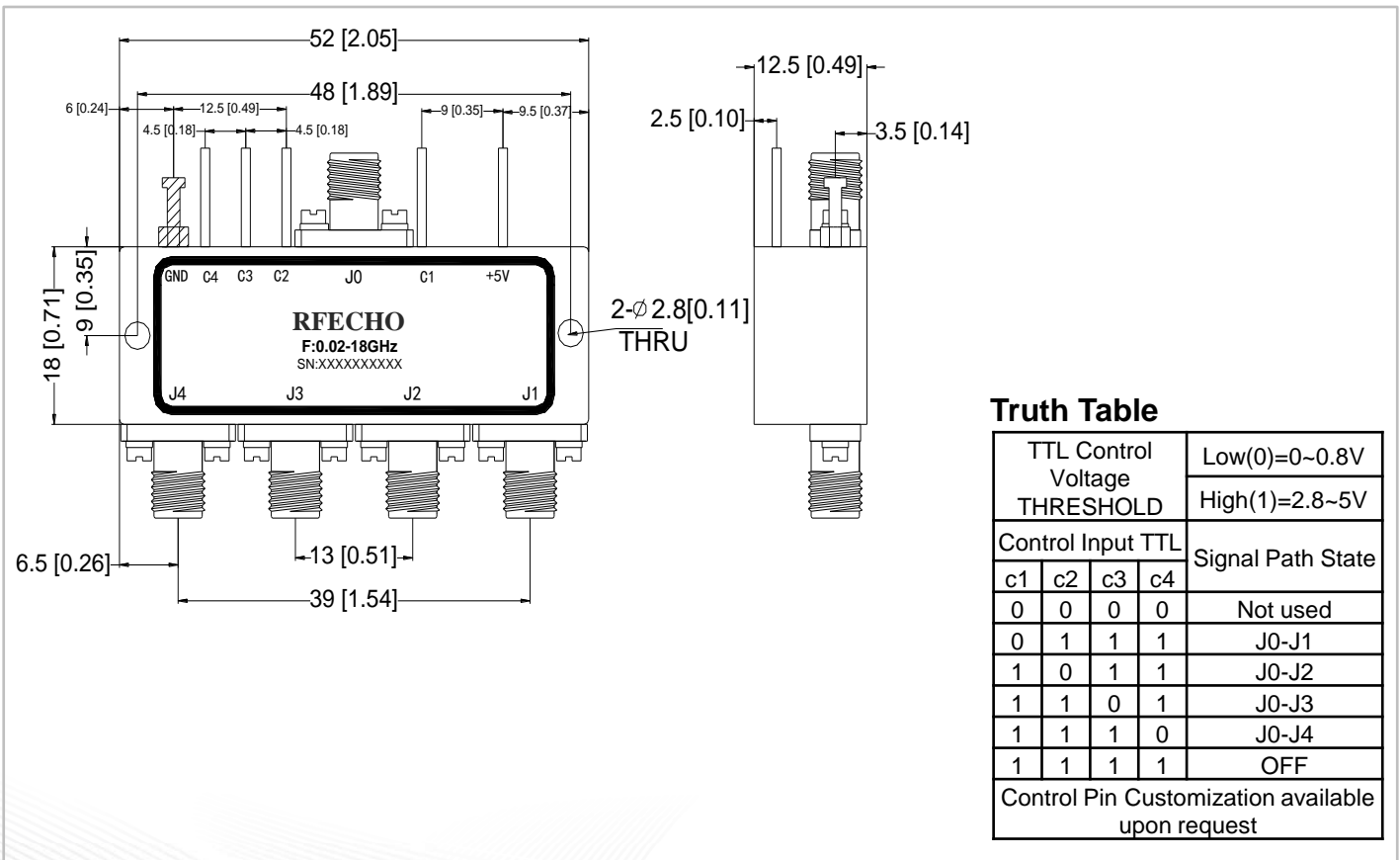
Operational Temperature	-40°C~+85°C (Case Temperature)
Storage Temperature	-50°C~+105°C
Altitude	30,000 ft. (Epoxy Sealed Controlled environment)
	60,000 ft. 1.0psi min (Hermetically Sealed Un-controlled environment) (Optional)
Vibration	25g RMS (15 degrees 2KHz) endurance, 1 hour per axis
Humidity	100%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

Ordering Information

Part No.	Description
DBSA0400021800G	SP4T 0.02-18GHz PIN Diode Switch

Outline Drawing:

All Dimensions in mm (inches)

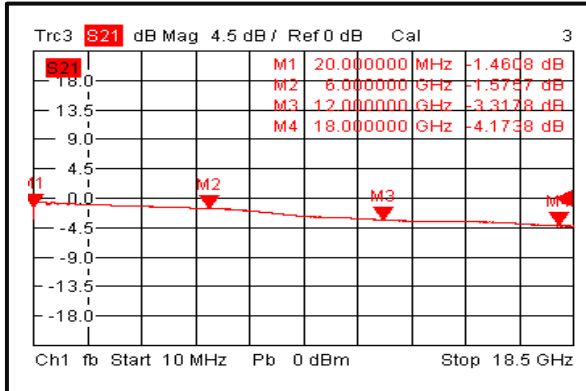


Truth Table

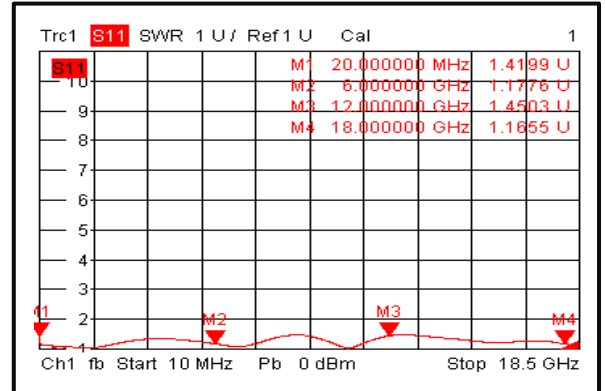
TTL Control Voltage THRESHOLD		Low(0)=0~0.8V		High(1)=2.8~5V	
Control Input TTL				Signal Path State	
c1	c2	c3	c4		
0	0	0	0	Not used	
0	1	1	1	J0-J1	
1	0	1	1	J0-J2	
1	1	0	1	J0-J3	
1	1	1	0	J0-J4	
1	1	1	1	OFF	
Control Pin Customization available upon request					



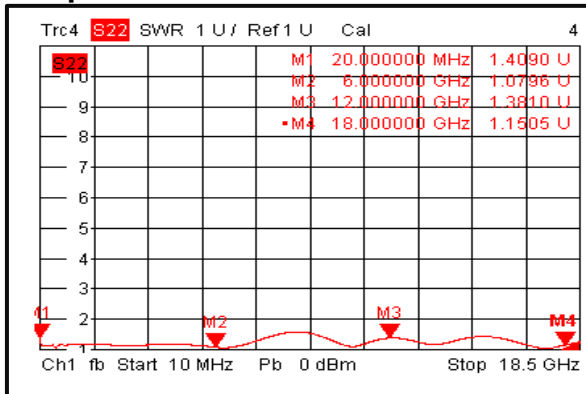
Insertion Loss @+25°C



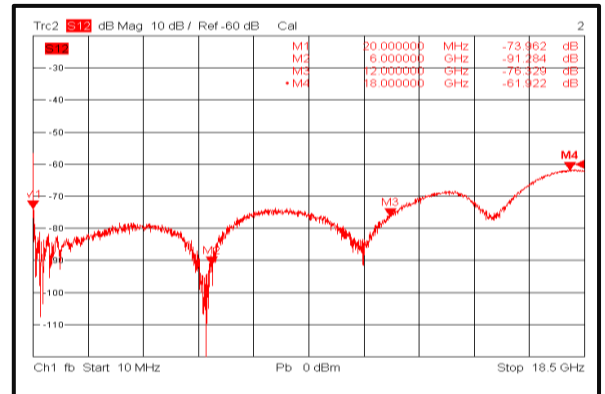
Input VSWR @+25°C



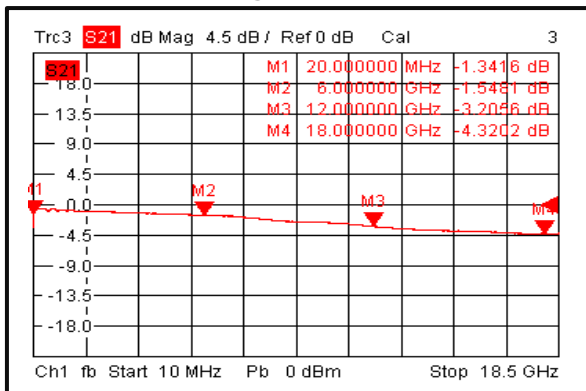
Output VSWR @+25°C



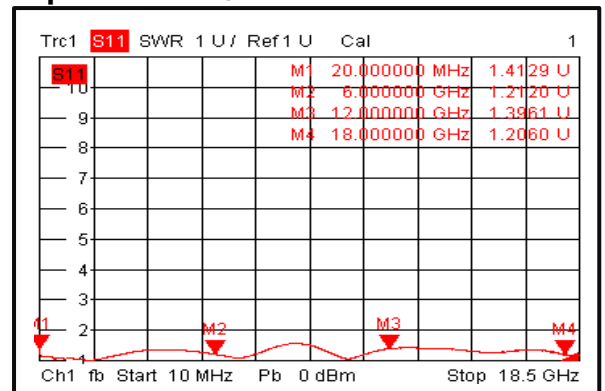
Isolation @+25°C



Insertion Loss @-40°C

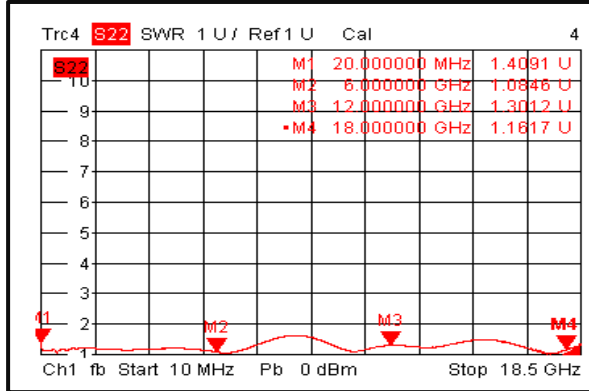


Input VSWR @-40°C

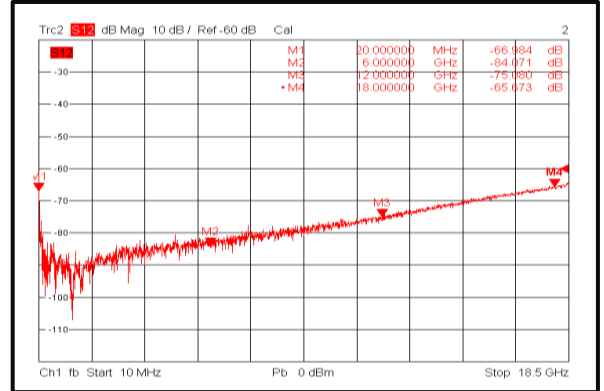




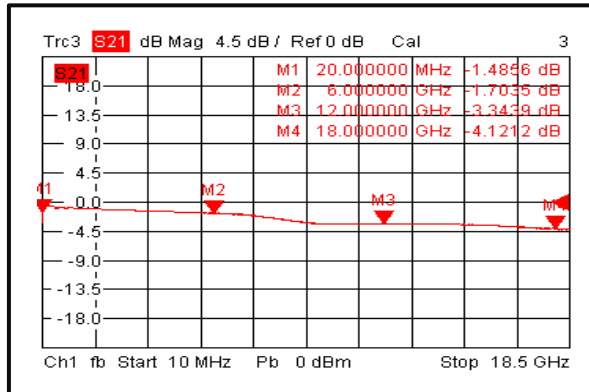
Output VSWR @-40°C



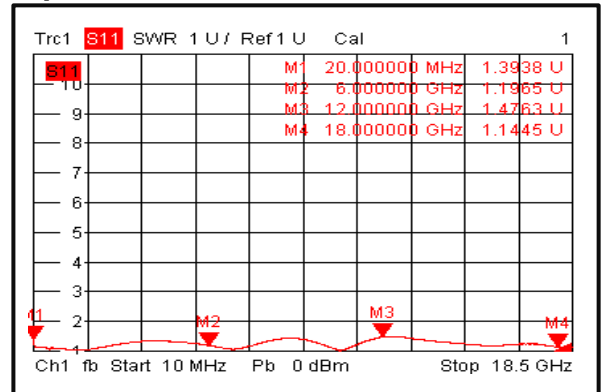
Isolation @-40°C



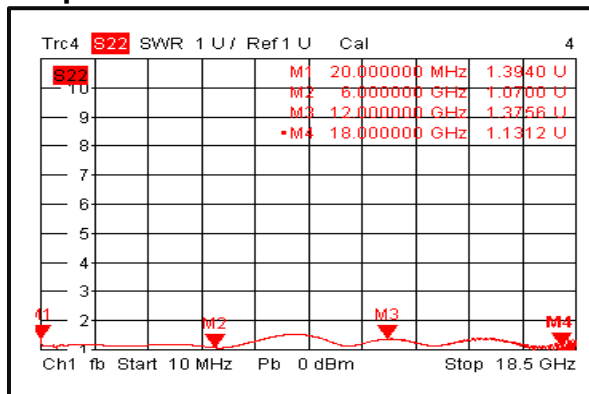
Insertion Loss @+85°C



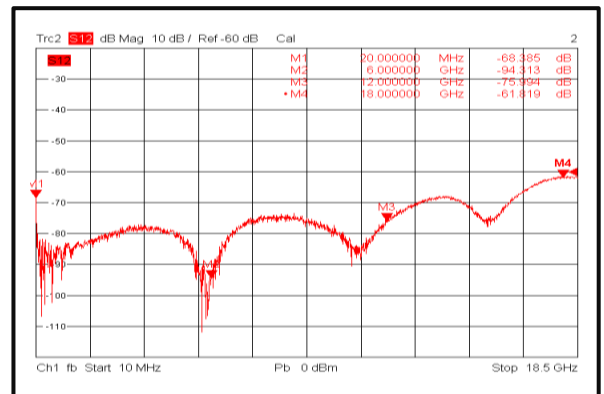
Input VSWR @+85°C



Output VSWR @+85°C

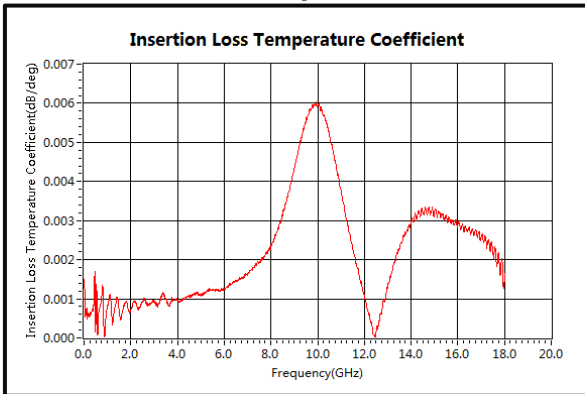


Isolation @+85°C

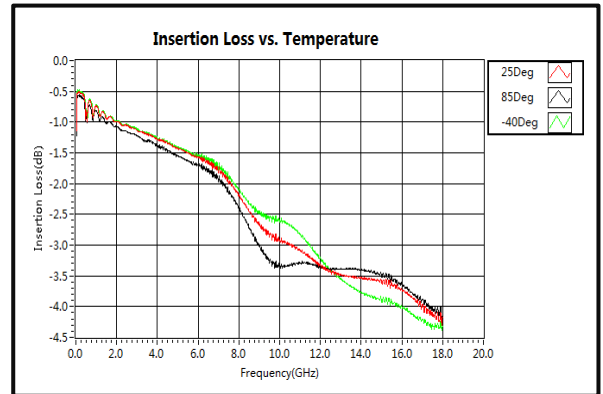




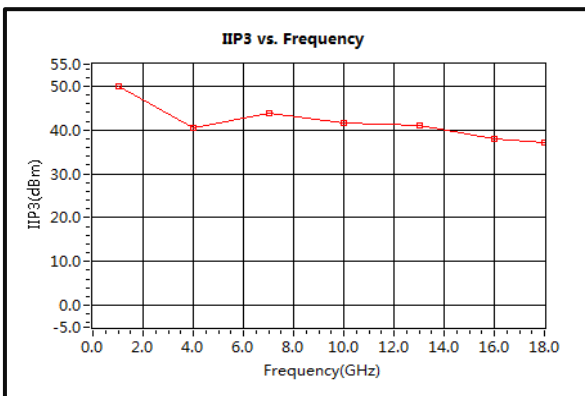
Insertion Loss Temperature Coefficient



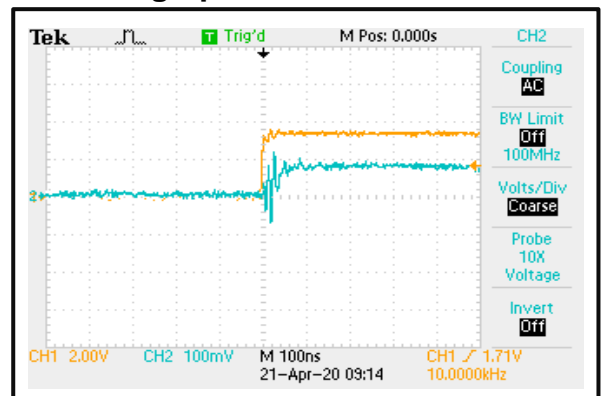
Insertion Loss vs. Temperature



IIP3



Switching Speed



Switching Speed

