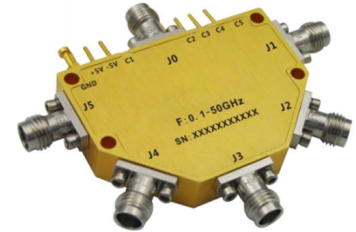




Absorptive Coaxial SP5T Switch 0.1 - 50GHz

Features

- Ultra Wide Band Operation 0.1-50GHz
- 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	0.1-20		20-30		30-50					GHz
Insertion Loss		4.5	5.0		5.0	5.5		7.1	8.0	dB
Insertion Loss Temperature Coefficient		0.003			0.003			0.003		dB/ ° C
Isolation	60	75		50	55		40	50		dB
Input VSWR		2.0	2.5		2.2	3		2.5	3	: 1
Output VSWR		2.0	2.5		2.2	3		2.2	3	: 1
RF Input Power			23			23			23	dBm
DC Power Dissipation		0.6			0.6			0.6		W
0.1dB Compression Point (P0.1dB)		23			23			23		dBm
IIP3		43			38			33		dBm
Switching Speed	100 Max.									ns
Weight	1.45 Max.									Ounces
Impedance	50									Ω
Bias Current (+5V/-5V)	240/50 Max.									mA
Input / Output Connectors	2.4mm-Female									
Finish	Gold Plated									
Material	Aluminum									
Sealing	Hermetically Sealed (Optional)									



Absolute Maximum Ratings

Biassing	+5V±10%/-5V±10% @25°C
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Environmental Specifications

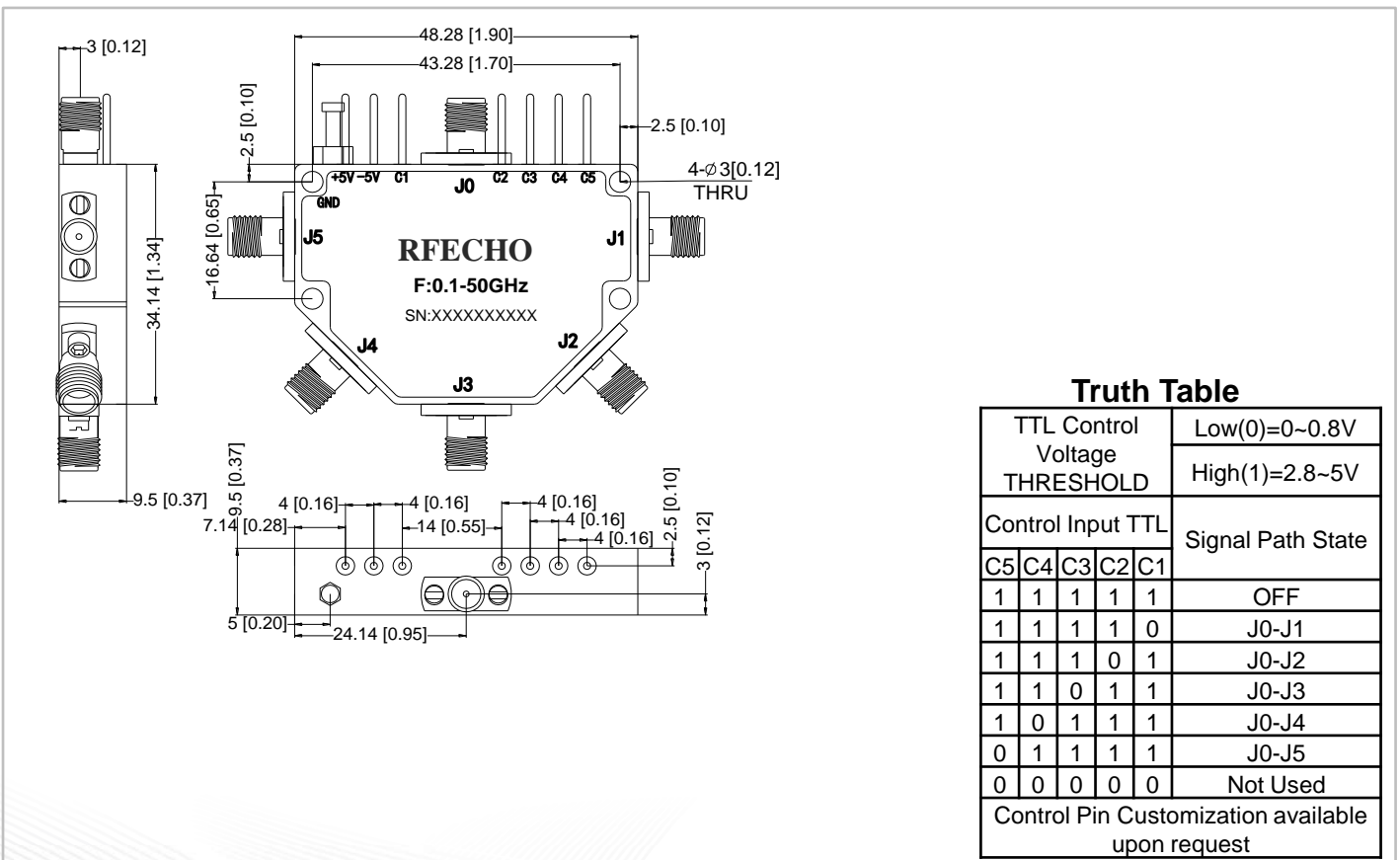
Operational Temperature	-40°C~+85°C (Case Temperature)
Storage Temperature	-50°C~+105°C
Altitude	30,000 ft. (Epoxy Sealed Controlled environment)
	60,000 ft. 1.0psi min (Hermetically Sealed Un-controlled environment) (Optional)
Vibration	25g RMS (15 degrees 2KHz) endurance, 1 hour per axis
Humidity	100%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

Ordering Information

Part No.	Description
DBSA0500105000A	SP5T 0.1-50GHz PIN Diode Switch

Outline Drawing:

All Dimensions in mm (inches)



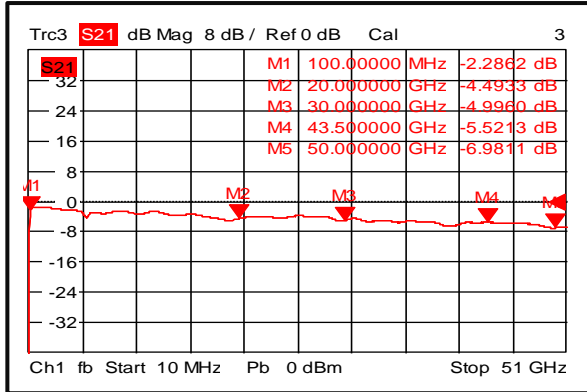
Truth Table

TTL Control Voltage THRESHOLD		Signal Path State				
		Signal Path State				
Low(0)=0~0.8V		Signal Path State				
High(1)=2.8~5V		Signal Path State				
Control Input TTL		Signal Path State				
C5	C4	C3	C2	C1	Signal Path State	
1	1	1	1	1	OFF	
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	
0	0	0	0	0	Not Used	

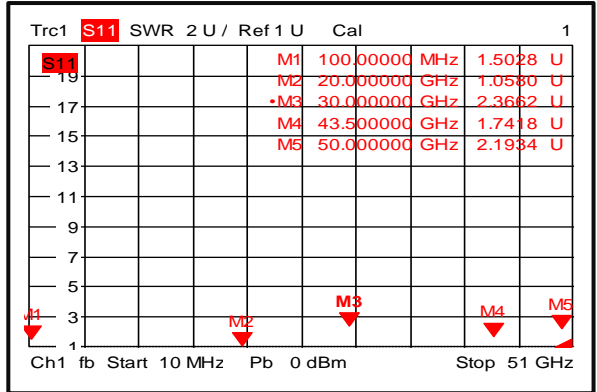
Control Pin Customization available upon request



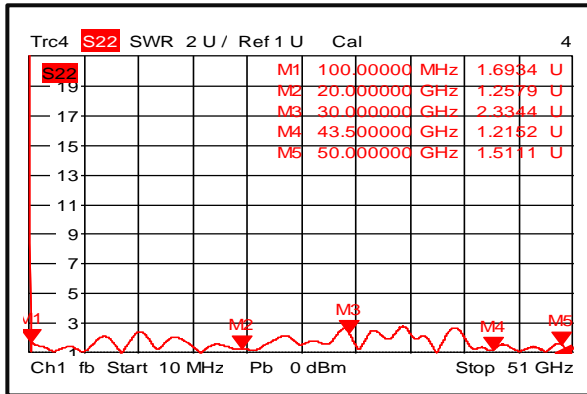
Insertion Loss @+25°C



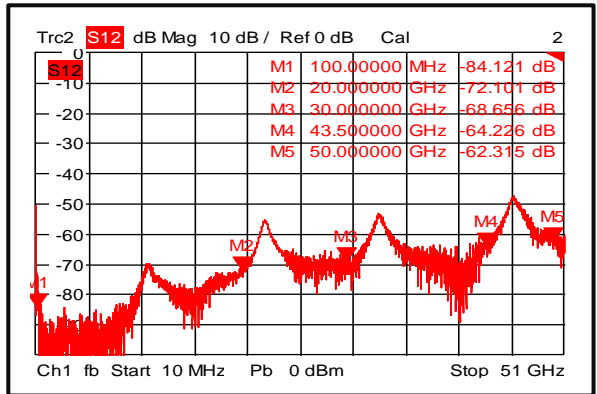
Input VSWR @+25°C



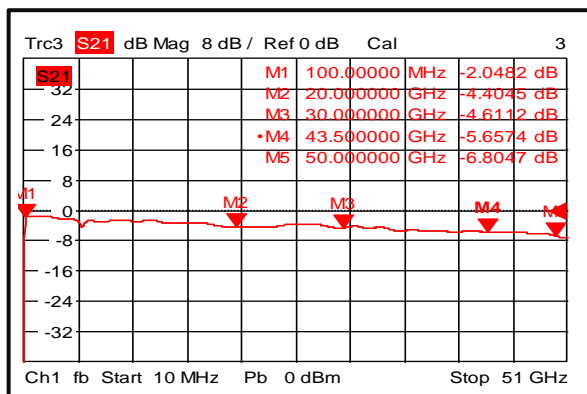
Output VSWR @+25°C



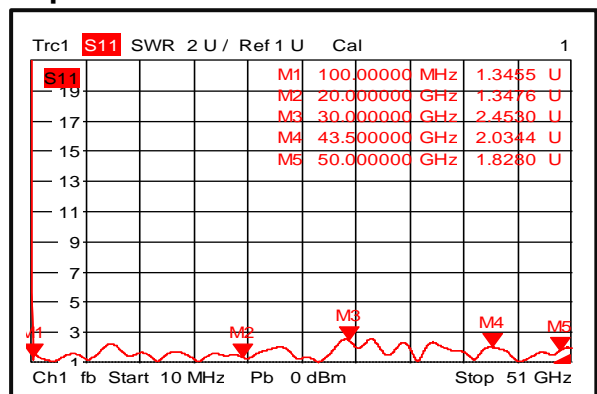
Isolation @+25°C



Insertion Loss @-40°C

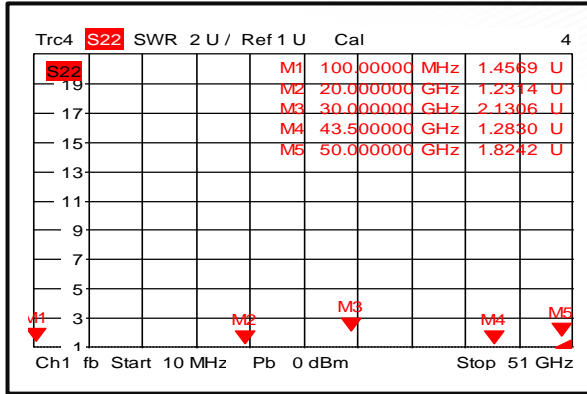


Input VSWR @-40°C

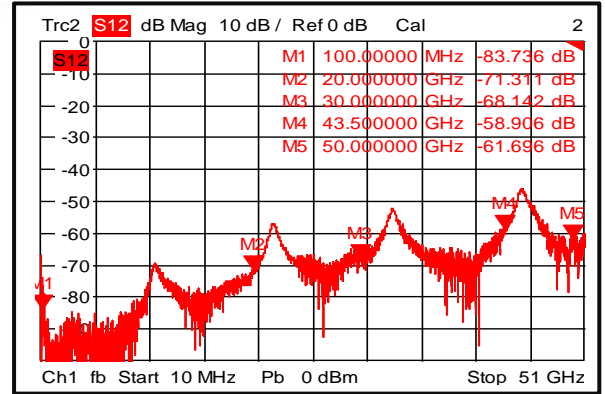




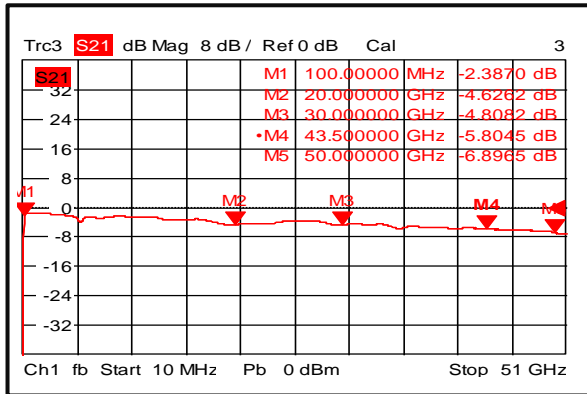
Output VSWR @-40°C



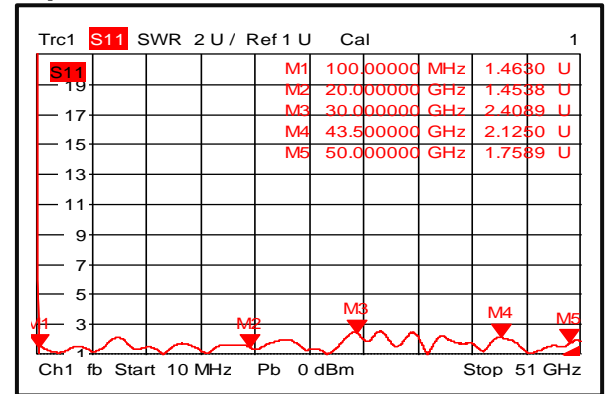
Isolation @-40°C



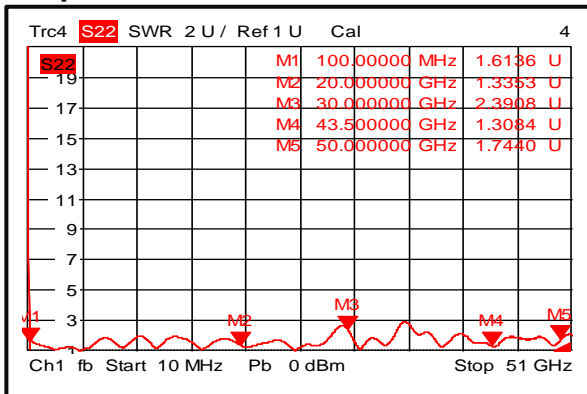
Insertion Loss @+85°C



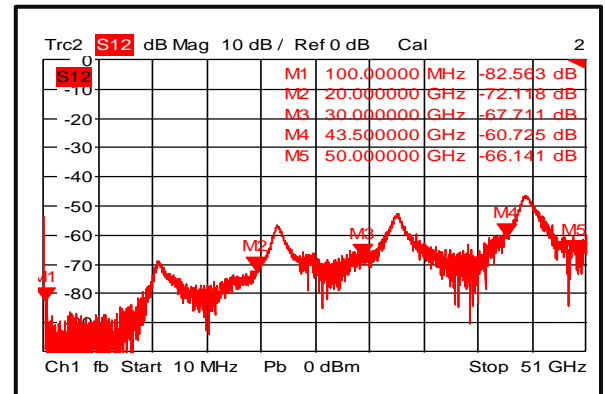
Input VSWR @+85°C



Output VSWR @+85°C

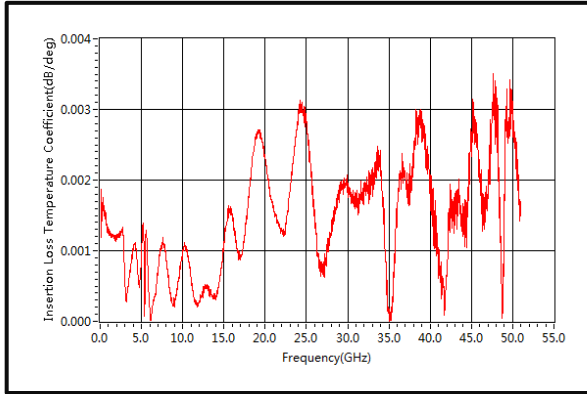


Isolation @+85°C

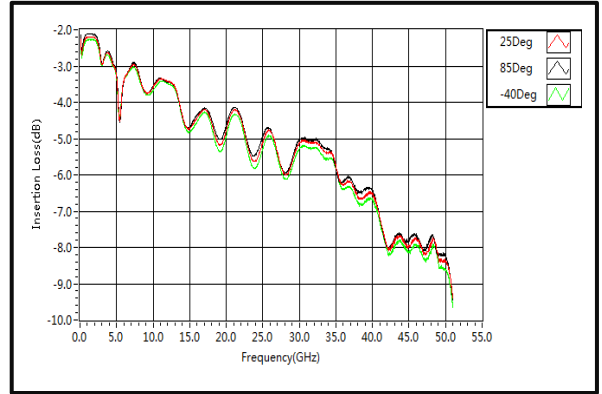




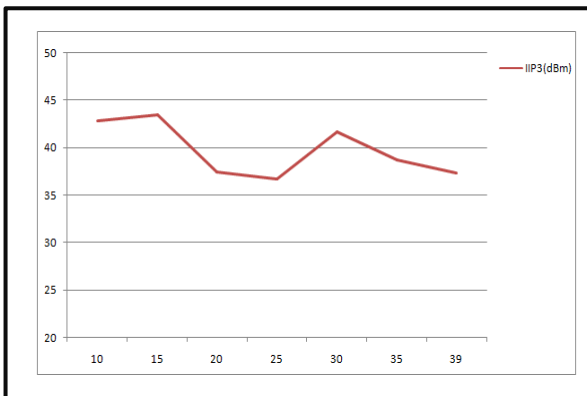
Insertion Loss Temperature Coefficient



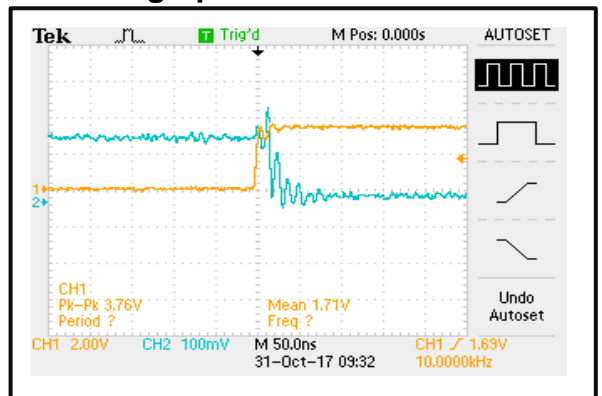
Insertion Loss vs. Temperature



IIP3



Switching Speed



Switching Speed

