



Absorptive Coaxial SP4T 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		18	18		43.5	43.5		50	GHz
Insertion Loss		3.3	4.0		5.0	6.0		6.5	7.0	dB
Insertion Loss Temperature Coefficient		0.003			0.003			0.003		dB/ °C
Isolation	60	70		40	55		45	55		dB
Input VSWR		1.8	2.5		2.5	3		2	2.5	: 1
Output VSWR		1.8	2.5		2.5	3		2	2.5	: 1
RF Input Power (CW)			23			23			23	dBm
Power Dissipation		0.8			0.8			0.8		W
0.1dB Compression Point (P0.1dB)		23			23			23		dBm
IIP3		43			38			33		dBm
Switching Speed	100 Max.									ns
Weight	1 Max.									ounces
Impedance	50									Ω
Bias Current (+5V/-15V)	150/50 Max.									mA
Input / Output Connectors	2.4mm-Female									
Finish	Gold Plated									
Material	Aluminum									
Sealing	Hermetically Sealed (Optional)									



Absolute Maximum Ratings

Biasing	+5V±10%/-15V±10% @25°C
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Ordering Information

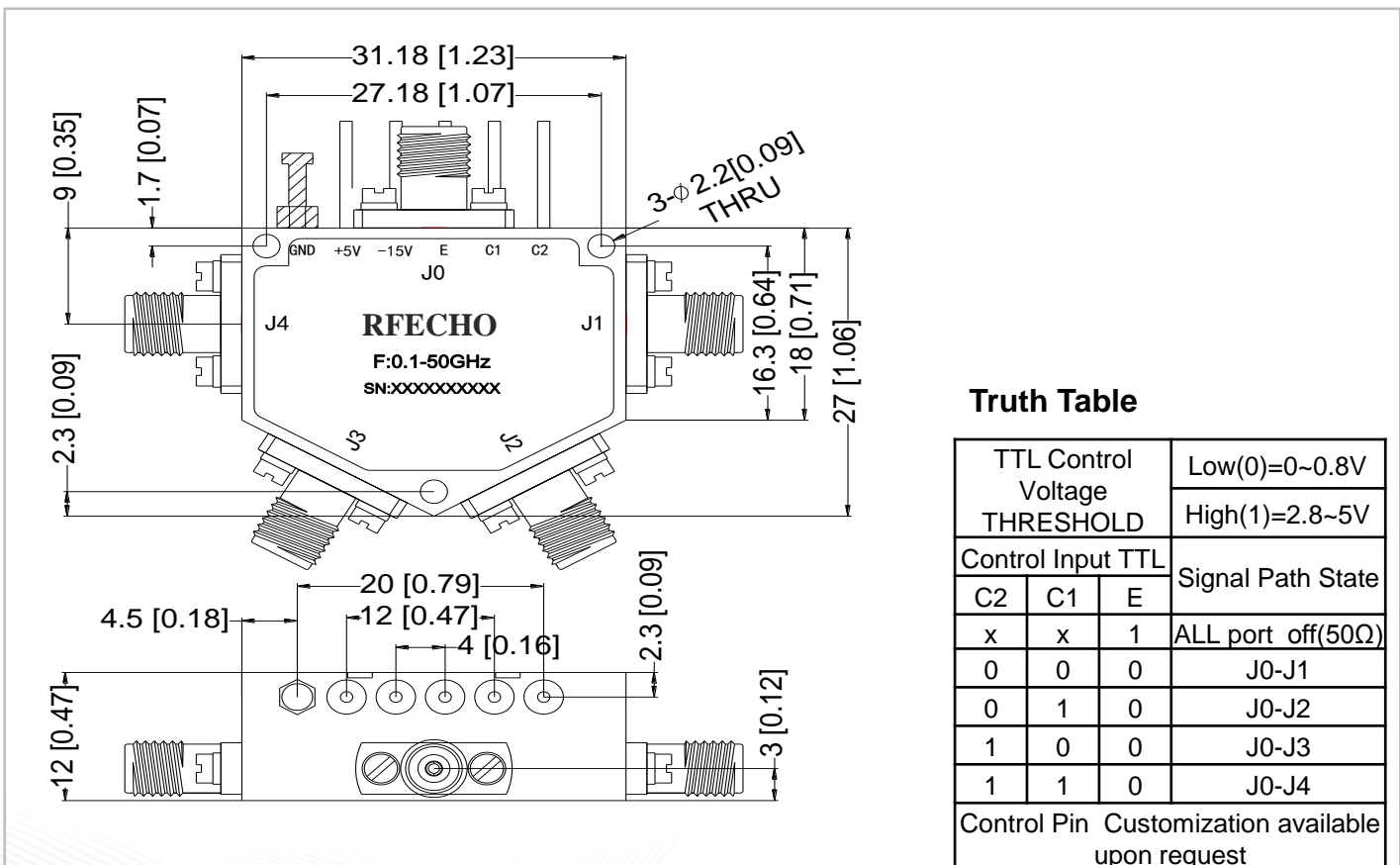
Part No.	Description
DBSA0400105000B	SP4T 0.1-50GHz PIN Diode Switch

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 40°C
Shock	20G for 11msec half sine wave, 3 axis both directions

Outline Drawing:

All Dimensions in mm (inches)

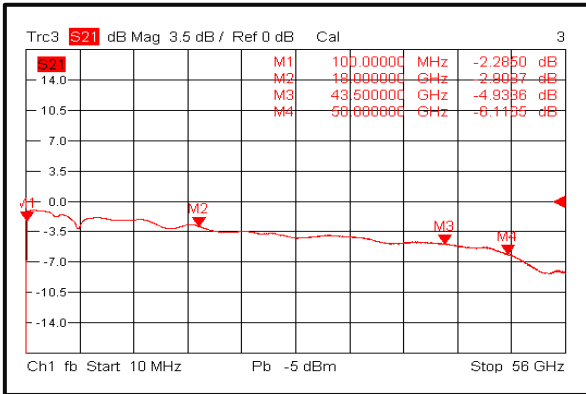


Truth Table

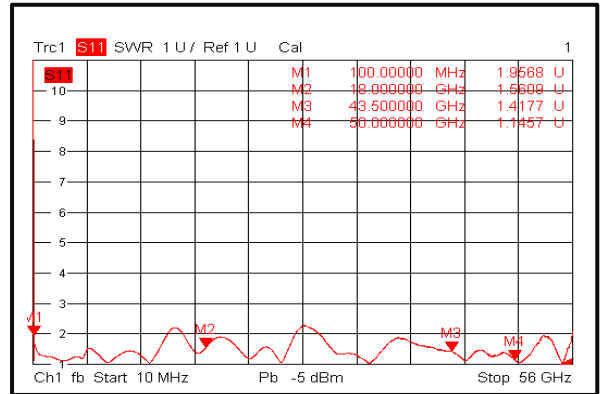
TTL Control Voltage THRESHOLD			Low(0)=0~0.8V
			High(1)=2.8~5V
Control Input TTL			Signal Path State
C2	C1	E	
x	x	1	ALL port off(50Ω)
0	0	0	J0-J1
0	1	0	J0-J2
1	0	0	J0-J3
1	1	0	J0-J4
Control Pin Customization available upon request			



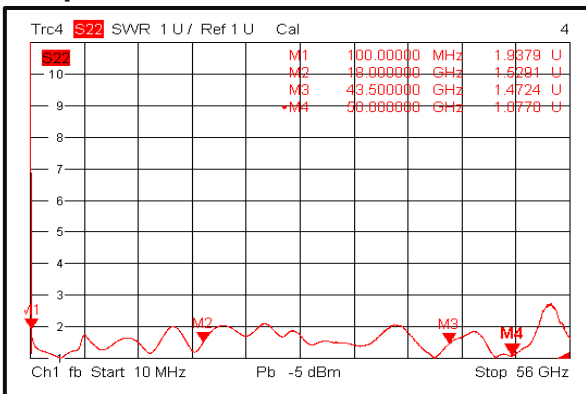
Insertion Loss @+25°C



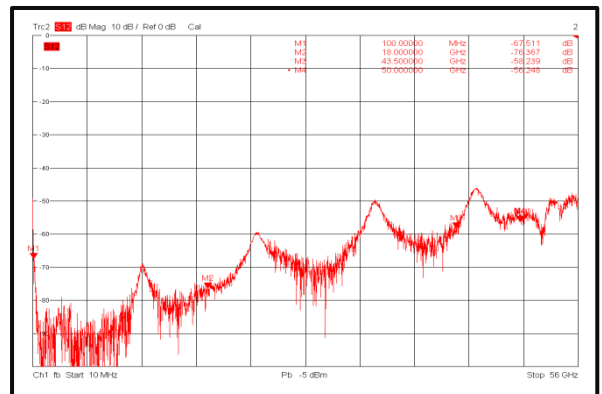
Input VSWR @+25°C



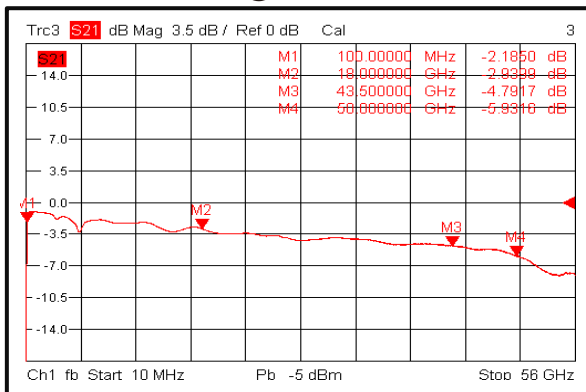
Output VSWR @+25°C



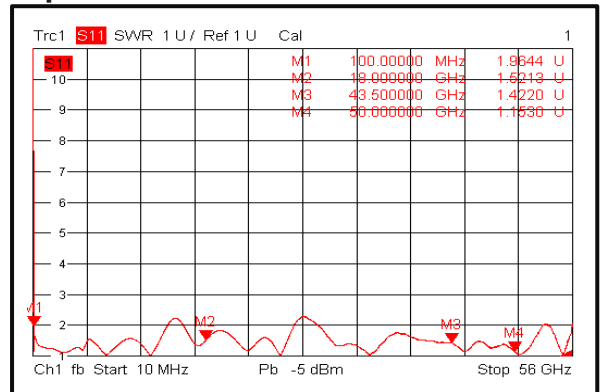
Isolation @+25°C



Insertion Loss @-40°C

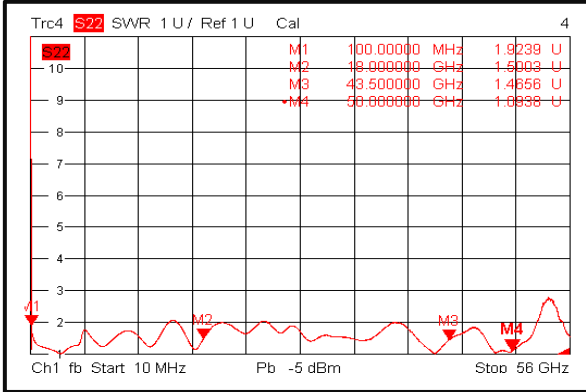


Input VSWR @-40°C

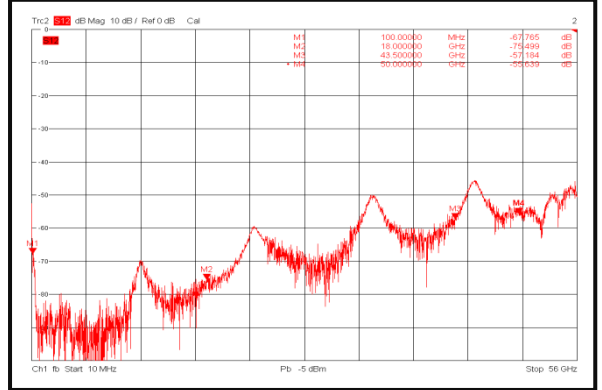




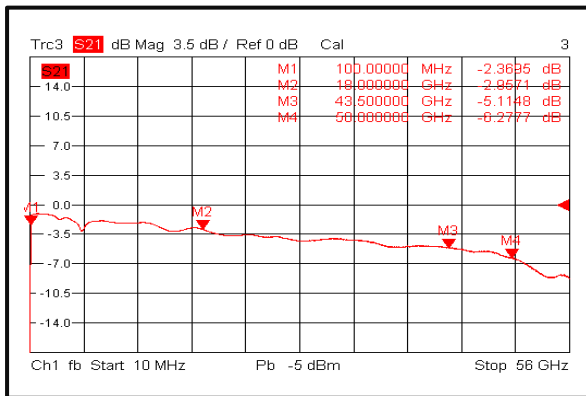
Output VSWR @-40°C



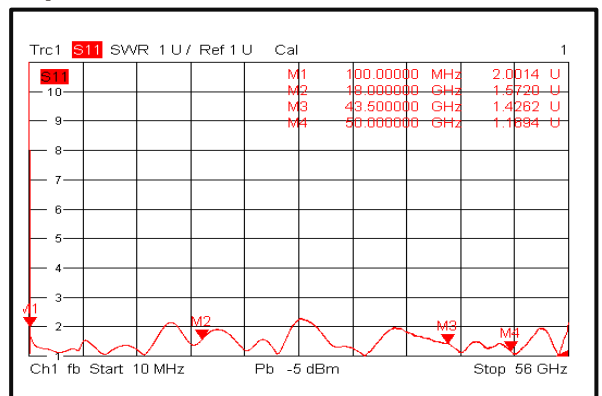
Isolation @-40°C



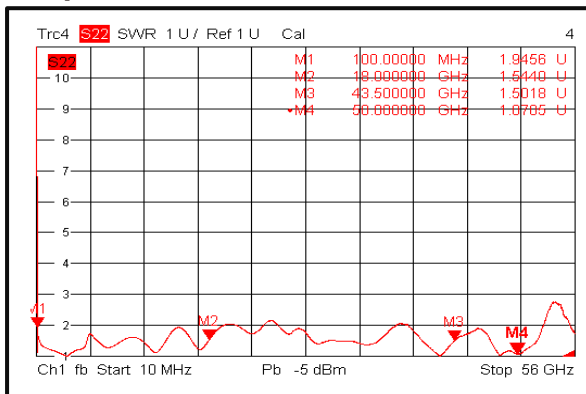
Insertion Loss @+85°C



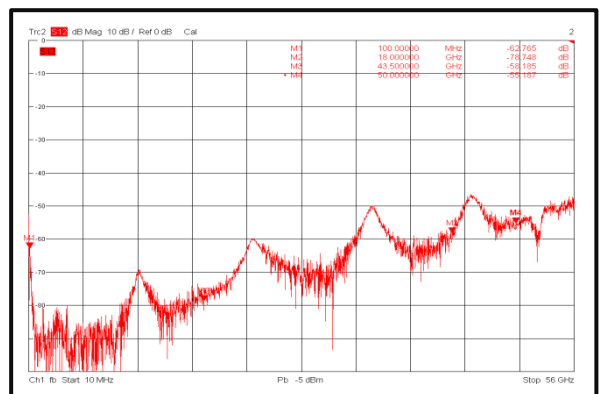
Input VSWR @+85°C



Output VSWR @+85°C

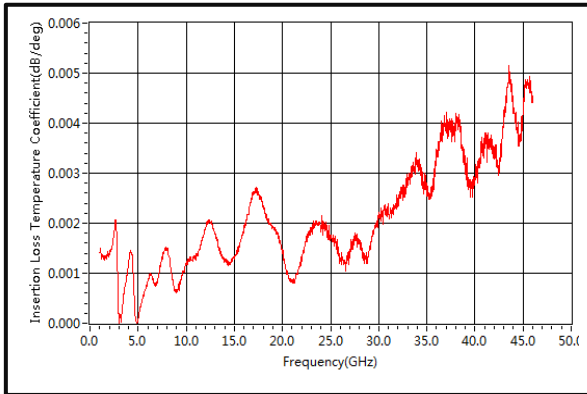


Isolation @+85°C

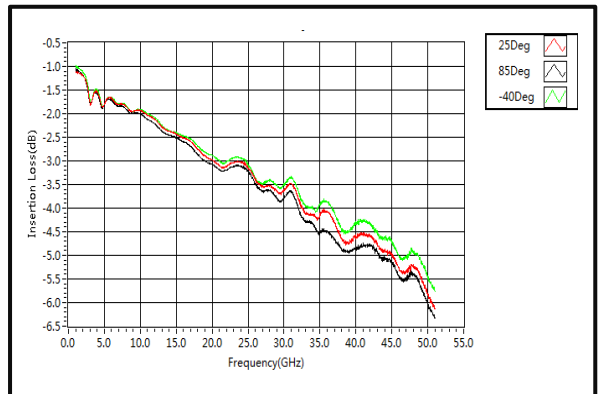




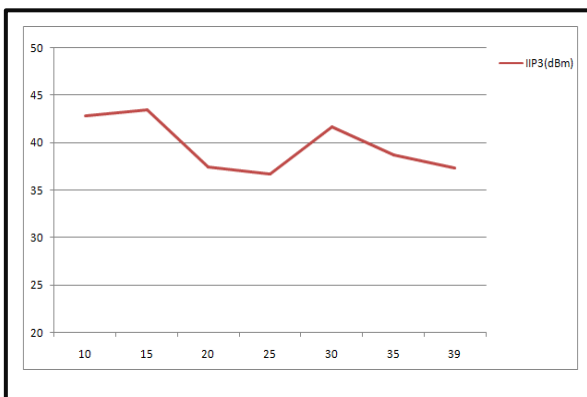
Insertion Loss Temperature Coefficient



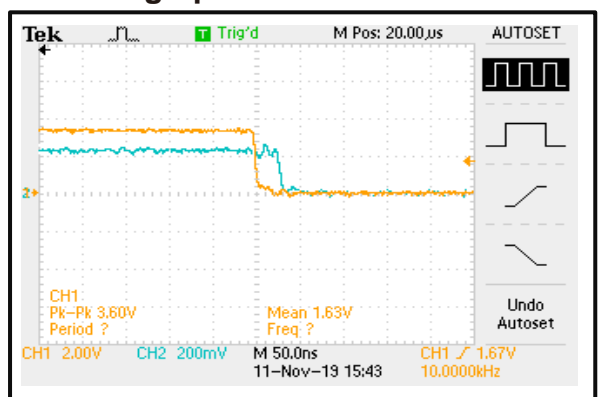
Insertion Loss vs. Temperature



IIP3



Switching Speed



Switching Speed

