



Hermetically Sealed Absorptive Coaxial SP2T 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

Parameters	Min.	Typ.	Max.	Min.	Typ.	Max.	Min.	Typ.	Max.	Units
Frequency Range	0.02~6			6~12			12~18			GHz
Insertion Loss		1.5	2.0		3.5	3.8		4.2	4.5	dB
Insertion Loss Temperature Coefficient		0.003			0.003			0.003		dB/ ° C
Isolation	60	75		60	75		60	67		dB
Input VSWR		1.4	1.8		1.5	1.6		1.5	1.8	: 1
Output VSWR		1.4	1.8		1.5	1.6		1.5	1.8	: 1
RF Input power (CW)			30			30			30	dBm
DC Power Dissipation		0.65			0.65			0.65		W
0.1dB Compression Point (P0.1dB)		30			30			30		dBm
IIP3		48			45			43		dBm
Switching Speed	250 Max.									ns
Weight	0.75 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 (Laser Welded)									



Absolute Maximum Ratings

Biasing	+5V $\pm$ 10%/-5V $\pm$ 10%
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Ordering Information

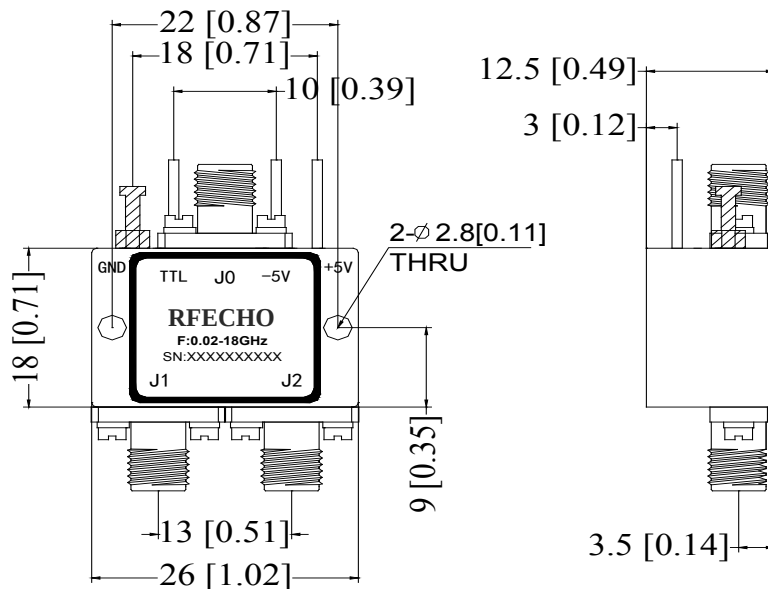
Part No.	Description
DBSA0200021800B	SP2T 0.02-18GHz PIN Diode Switch

Environmental Specifications

Operational Temperature	-40°C~+85°C
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

Outline Drawing:

All Dimensions in mm (inches) Tolerances $\pm$ 0.1 (0.004)

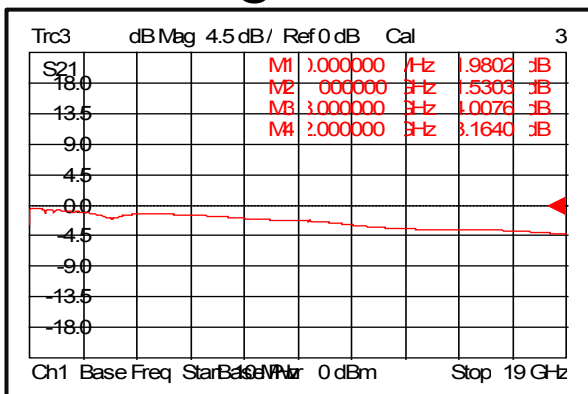


Truth Table

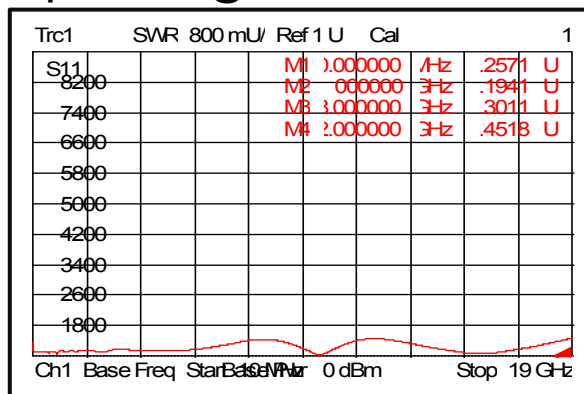
TTL Control Voltage THRESHOLD	Low(0)=0~0.8V
	High(1)=2.8~5V
Control Input TTL	Signal Path State
TTL	
1	J0-J1
0	J0-J2
Control Pin Customization available upon request	



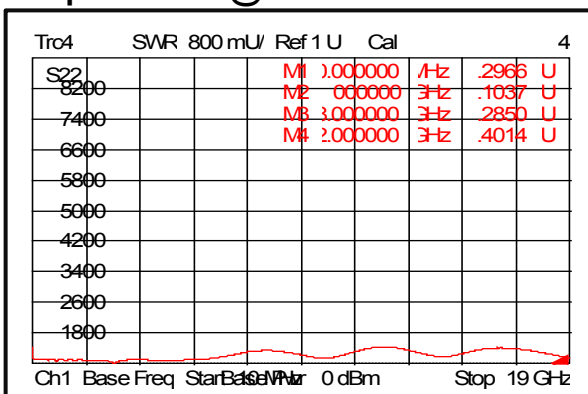
Insertion Loss @+25°C



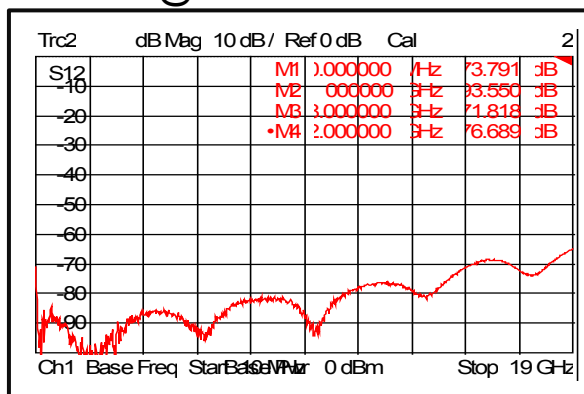
Input VSWR @+25°C



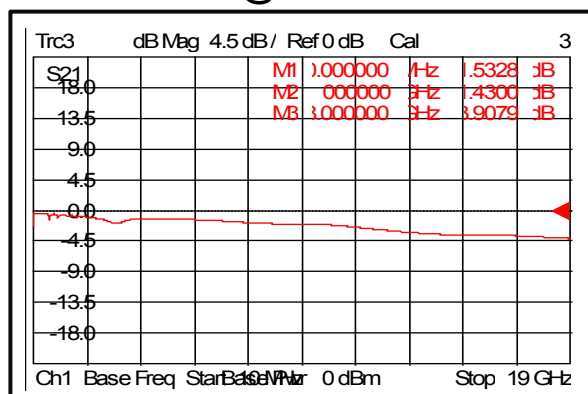
Output VSWR @+25°C



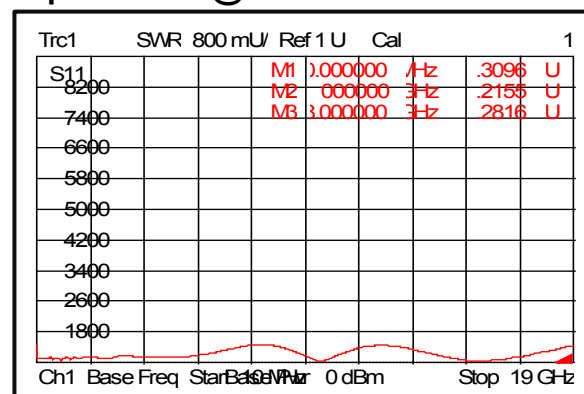
Isolation @+25°C



Insertion Loss @-40°C

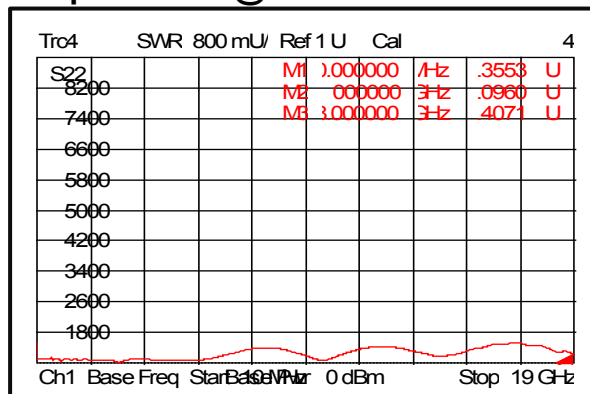


Input VSWR @-40°C

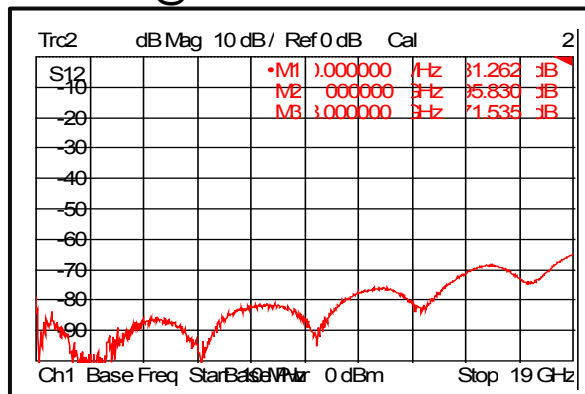




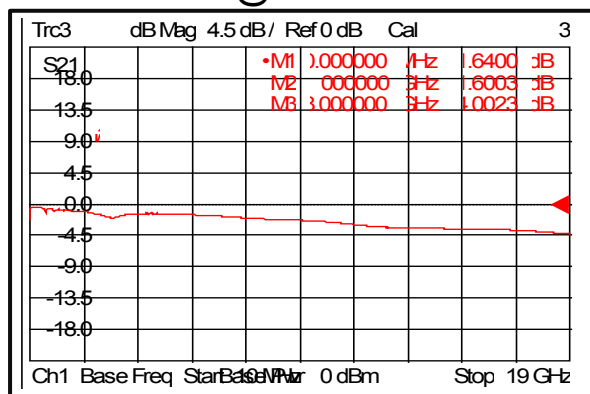
Output VSWR @-40°C



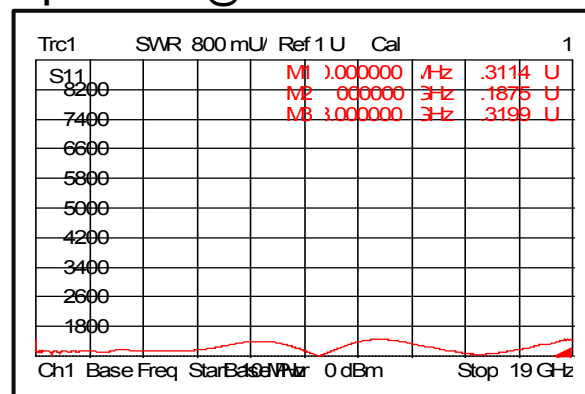
Isolation @-40°C



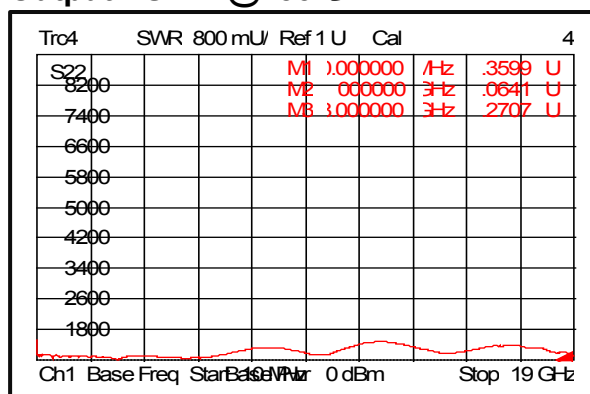
Insertion Loss @+85°C



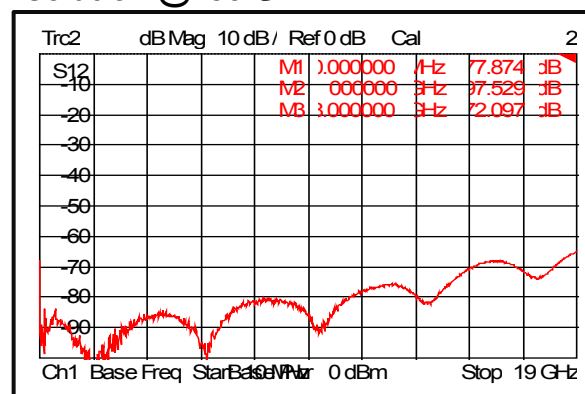
Input VSWR @+85°C



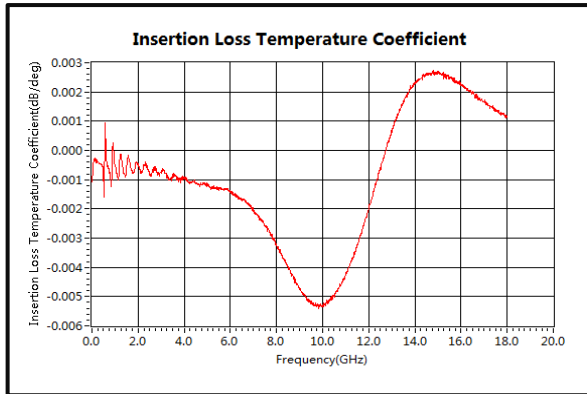
Output VSWR @+85°C



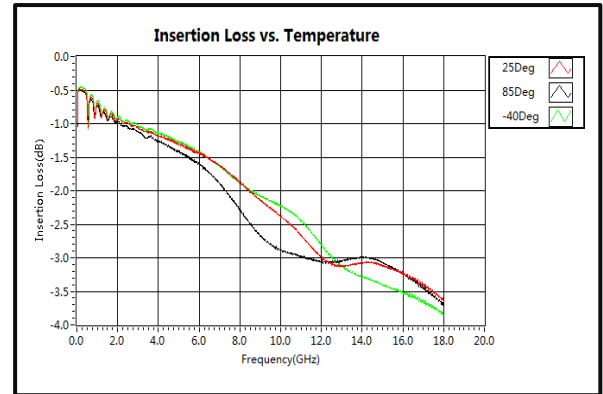
Isolation @+85°C



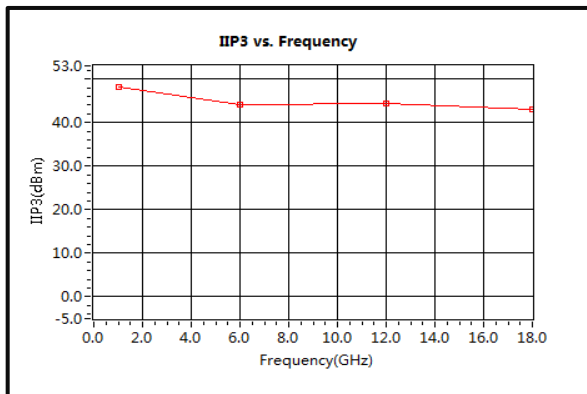
Insertion Loss Temperature Coefficient



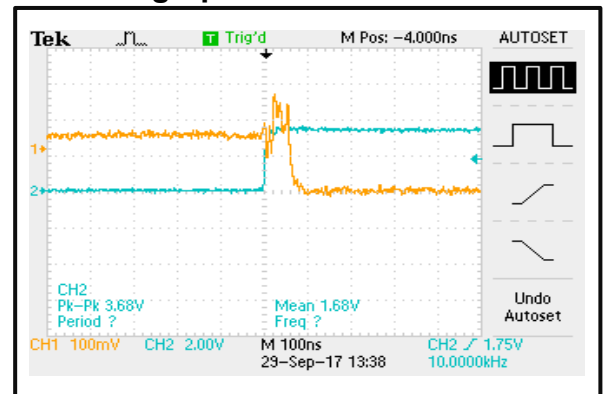
Insertion Loss vs. Temperature



IIP3



Switching Speed



Switching Speed

