

Absorptive 0.02-3GHz Coaxial SP2T Switch

Features

- Wide Band Operation 0.02-3GHz
- Functional Bandwidth : 20 MHz to 12 GHz
- TTL compatible driver included
- Fast Switching Speed
- Low Insertion Loss and High Isolation



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			GHz
Insertion Loss		1.5	2.0		3.8	4.2	dB
Insertion Loss Temperature Coefficient		0.003			0.003		dB/ ° C
Isolation	70	85		65	70		dB
Input VSWR		1.3	1.5		1.5	1.8	: 1
Output VSWR		1.3	1.5		1.5	1.8	: 1
RF Input Power (CW)			30			30	dBm
DC Power Dissipation		0.6			0.6		W
0.1dB Compression Point (P0.1dB)		30			30		dBm
IIP3		55			55		dBm
Switching Speed		250	500		250	500	ns
Weight	0.75 Max.						ounces
Impedance	50						Ω
Bias Current (+12/ -12V)	80/50 Max.						mA
Input / Output Connectors	SMA-Female						
Finish	Gold Plated						
Material	Aluminum						
Sealing	Hermetically Sealed (Optional)						



Absolute Maximum Ratings

Biasing	$\pm 12V \pm 5\%$
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Ordering Information

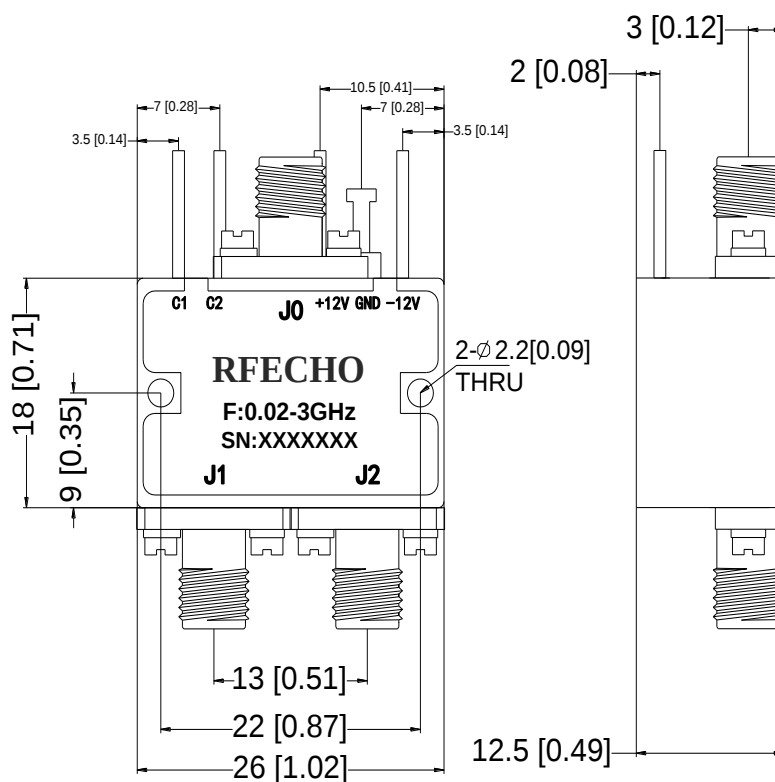
Part No.	Description
DBSA0200020300A	SP2T 0.02-3GHz PIN Diode Switch

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)

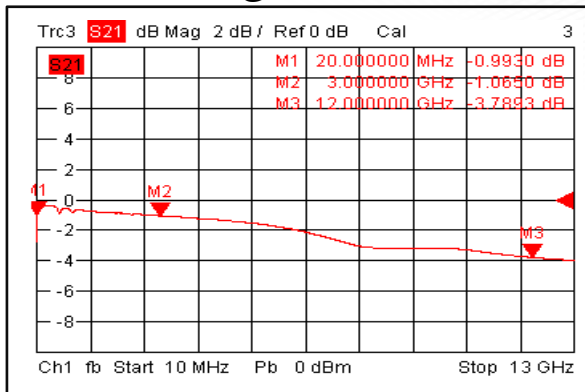


Truth Table

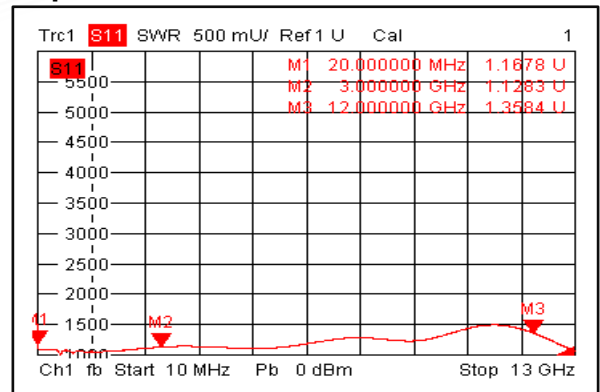
TTL Control Voltage THRESHOLD		Low(0)=0~0.8V
		High(1)=2.8~5V
Control Input TTL		State
C1	C2	
0	0	Not Used
0	1	J0-J1
1	0	J0-J2
1	1	OFF
Control Pin Customization available upon request		



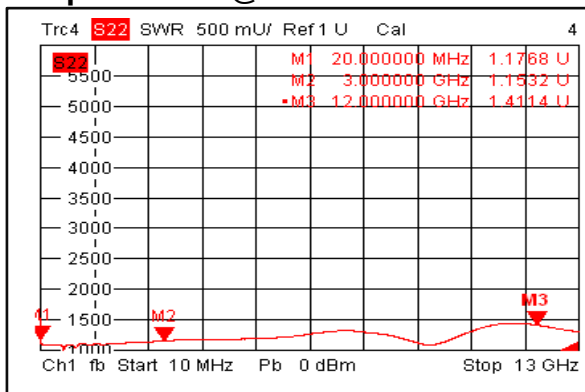
Insertion Loss @+25°C



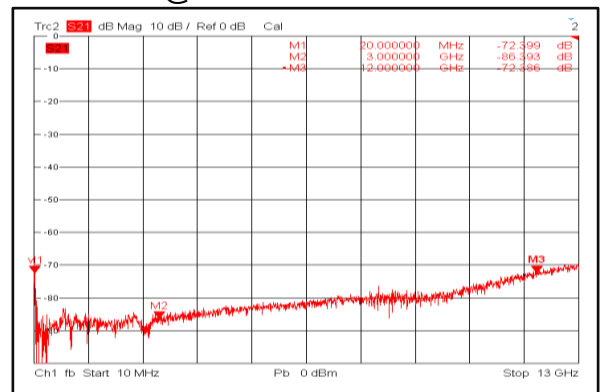
Input VSWR @+25°C



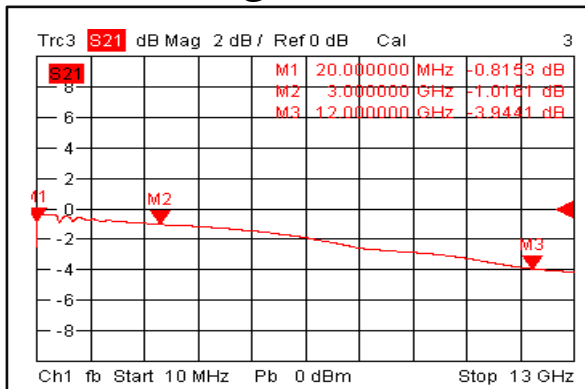
Output VSWR @+25°C



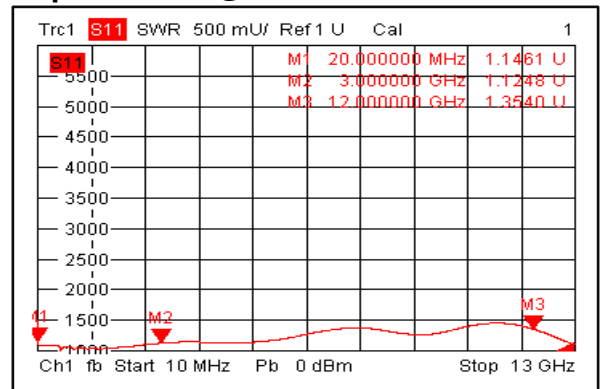
Isolation @+25°C



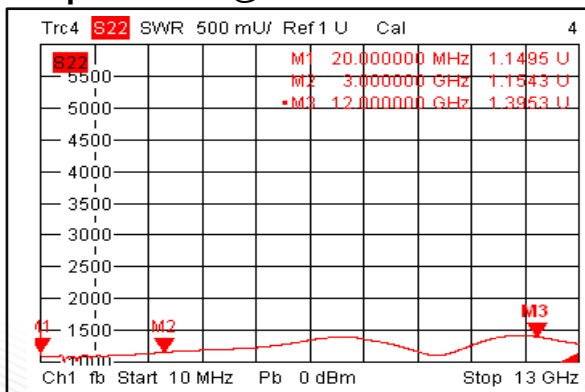
Insertion Loss @-40°C



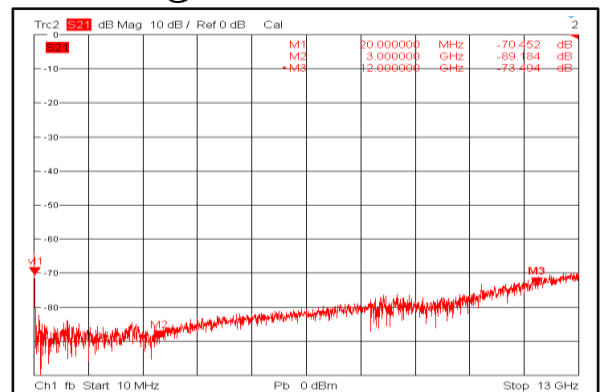
Input VSWR @-40°C



Output VSWR @-40°C

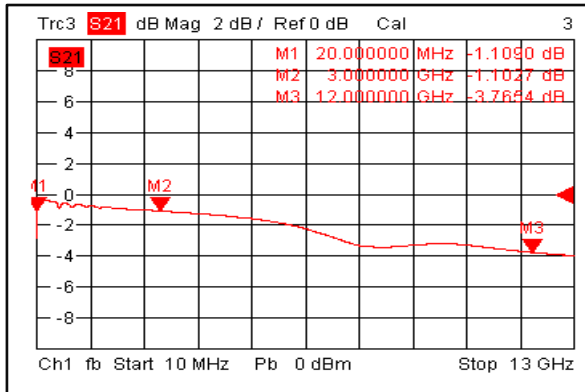


Isolation @-40°C

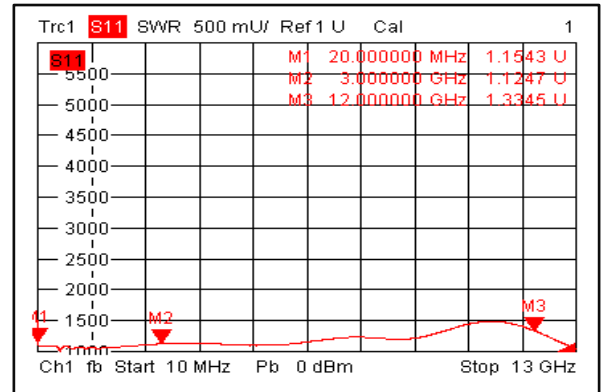




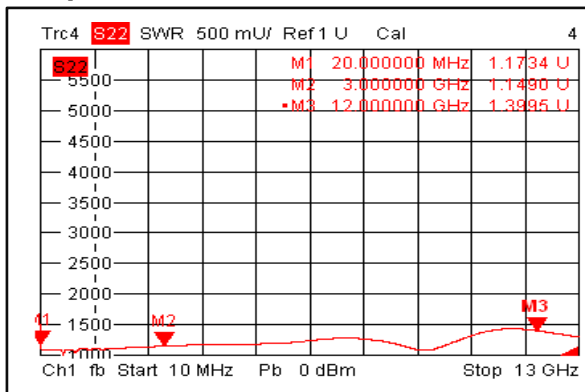
Insertion Loss @+85°C



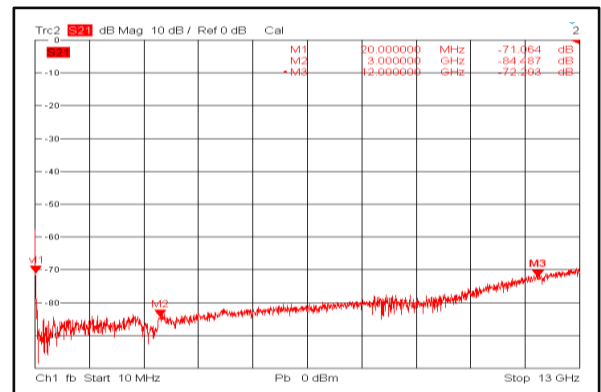
Input VSWR @+85°C



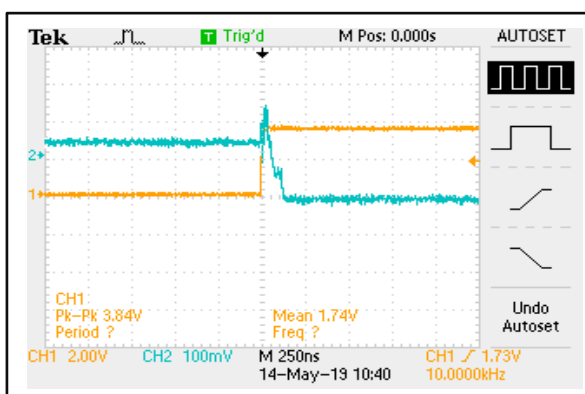
Output VSWR @+85°C



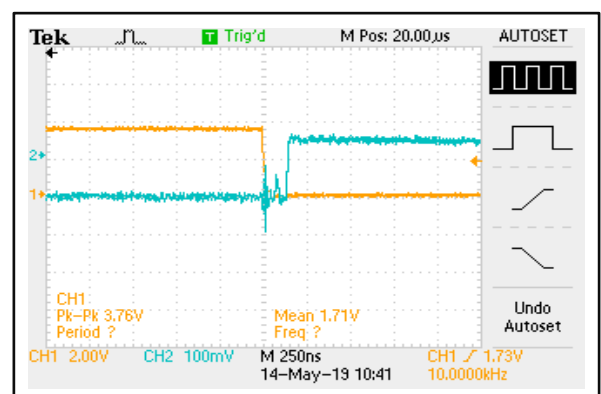
Isolation @+85°C



Switching Speed



Switching Speed





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