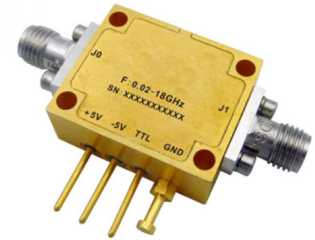




Absorptive 0.02-18GHz Coaxial SPST Switch

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		2.0	2.2		4.0	4.2		4.5	4.8	dB
Insertion Loss Temperature Coefficient		0.003			0.003			0.003		dB/°C
Isolation (J0→J1)	80	82		70	75		60	65		dB
Input VSWR		1.5	1.8		1.5	1.8		1.6	2	: 1
Output VSWR		1.5	1.8		1.5	1.8		1.6	2	: 1
RF Input power			30			30			30	dBm
DC Power Dissipation		0.3			0.4			0.5		W
0.1dB Compression (P0.1dB)		30			30			30		dBm
IIP3		55			55			55		dBm
Switching Speed	250									ns
Weight	0.35									ounces
Impedance	50									Ω
Bias Current (+5V/-5V)	80/50									mA
Input / Output Connectors	SMA-Female									
Finish	Gold Plated									
Material	Aluminum									
Sealing	Hermetically Sealed (optional)									



Absolute Maximum Ratings

Biasing	+5V ± 10% / -5V ± 10%
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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 35°C, 95%RH at 40°C
Shock	20G for 11msec half sine wave, 3 axis both directions

Ordering Information

Part No.	Description
DBSA0100021800A	SPST 0.02-18GHz PIN Diode Switch

Outline Drawing:

All Dimensions in mm (inches)

The drawing shows a rectangular component with two SMA connectors (J0 and J1) on the top surface. The component has four control pins on the bottom surface. Dimensions are provided in mm [inches]. Key dimensions include: total length 24 [0.94], distance from left SMA to center 20 [0.79], distance from right SMA to center 4 [0.16], and pin spacing of 4 [0.16]. Labels include 'RFECHO', 'J0 F:0.02-18GHz J1', 'SN:XXXXXXXXXX', and '+5V -5V TTL GND'. A 'THRU' hole is also indicated.

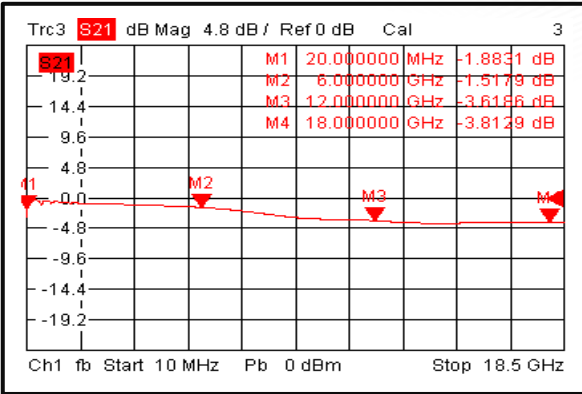
Notes:
J0: Absorptive Port
J1: Reflective port

Truth Table

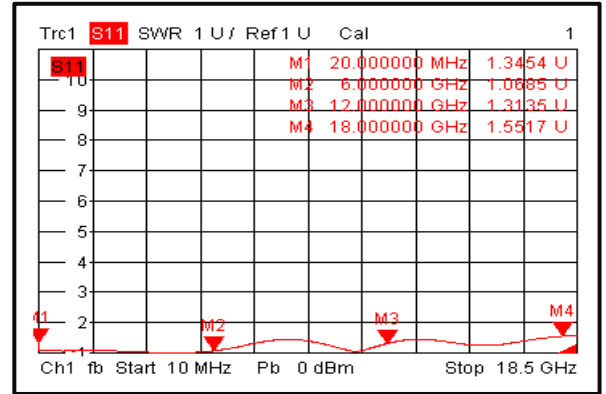
TTL Control Voltage THRESHOLD	Low(0)=0~0.8V
	High(1)=2.8~5V
Control Input TTL	Signal Path State
0	OFF
1	ON
Control Pin Customization available upon request	



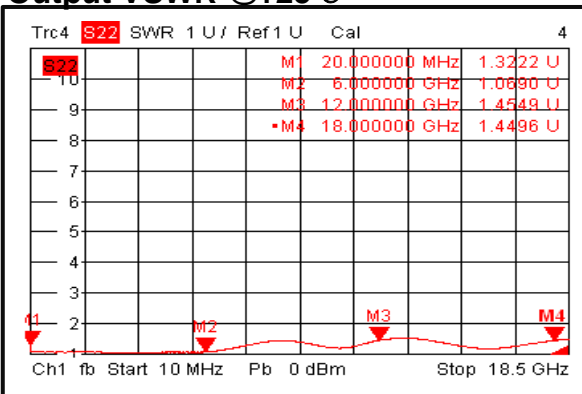
Insertion Loss @+25°C



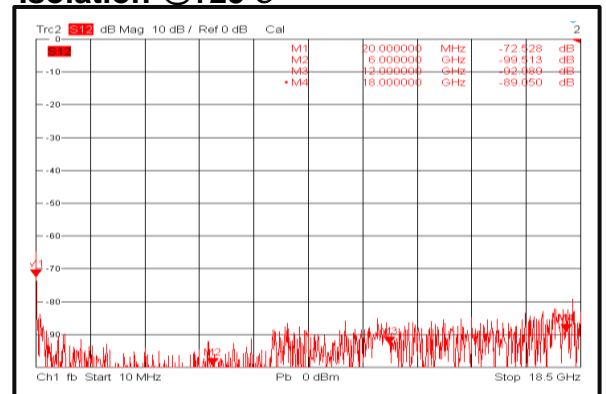
Input VSWR @+25°C



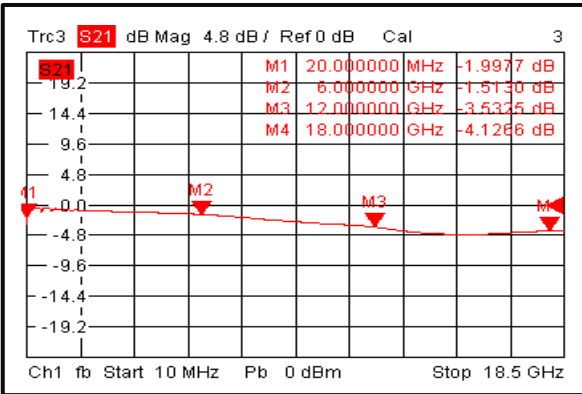
Output VSWR @+25°C



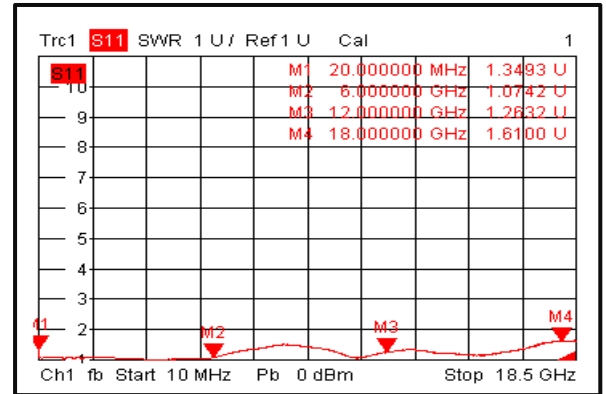
Isolation @+25°C



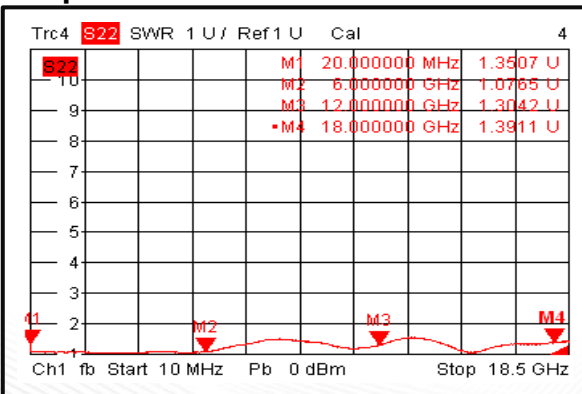
Insertion Loss @-40°C



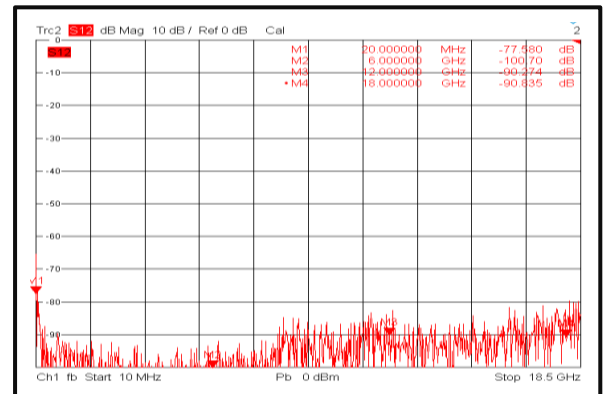
Input VSWR @-40°C



Output VSWR @-40°C

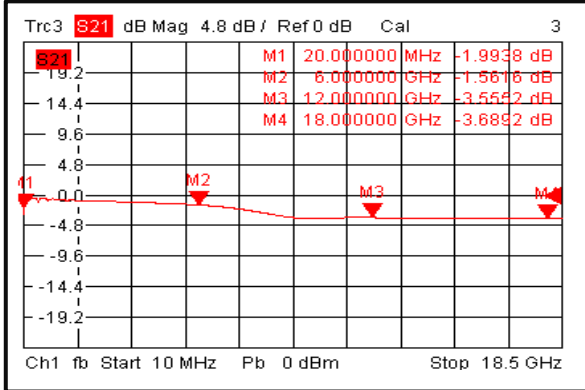


Isolation @-40°C

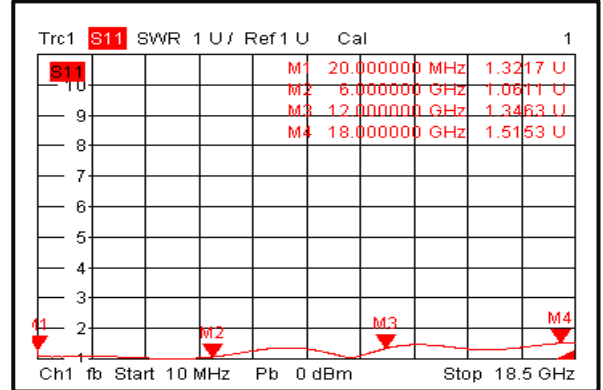




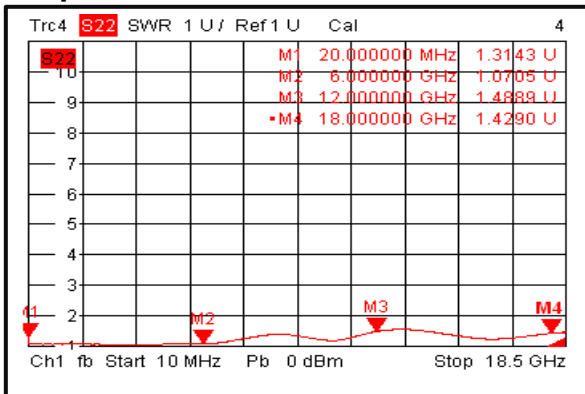
Insertion Loss @+85°C



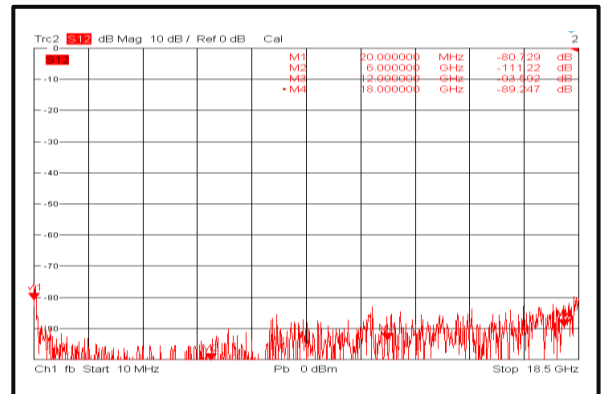
Input VSWR @+85°C



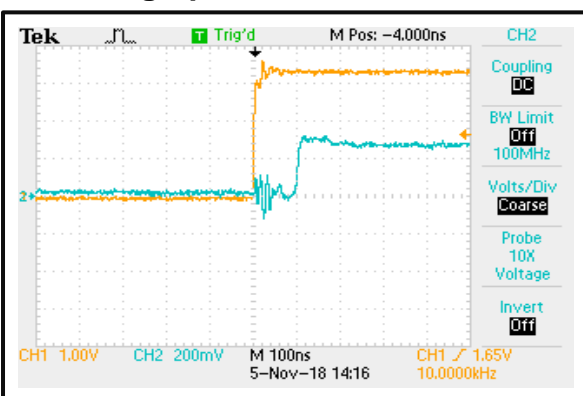
Output VSWR @+85°C



Isolation @+85°C



Switching Speed



Switching Speed

