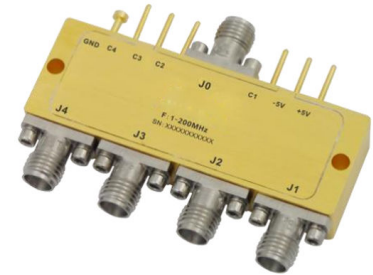




Absorptive Coaxial SP4T Switch 1 – 200MHz



Features

- Wide Band Operation 1-200MHz
- 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.	Units
Frequency Range		1~2			2~200		MHz
Insertion Loss		2.0	4.5		0.6	1.2	dB
Insertion Loss Temperature Coefficient		0.003			0.003		dB/ ° C
Isolation	70	75		70	80		dB
Input VSWR		1.25	2.0		1.18	1.4	: 1
Output VSWR		1.25	2.0		1.18	1.4	: 1
RF Input Power			30			30	dBm
DC Power Dissipation		0.9			0.9		W
0.1dB Compression Point (P0.1dB)		30			30		dBm
IIP3		43			43		dBm
Switching Speed		7 Typ. 13 Max.					us
Weight		1.1 Max.					ounces
Impedance		50					Ω
Bias Current (+5V / -5V)		160/50 Max.					mA
Input / Output Connectors		SMA - Female					
Finish		Gold Plated					
Material		Aluminum					
Sealing		Hermetically Sealed (Optional)					



Absolute Maximum Ratings

Biasing	+5V±10%/-5V±10%
---------	-----------------

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
DBSA0400000020A	SP4T 1-200MHz PIN Diode Switch

Outline Drawing:

All Dimensions in mm (inches) Tolerances ±0.1 (0.004)

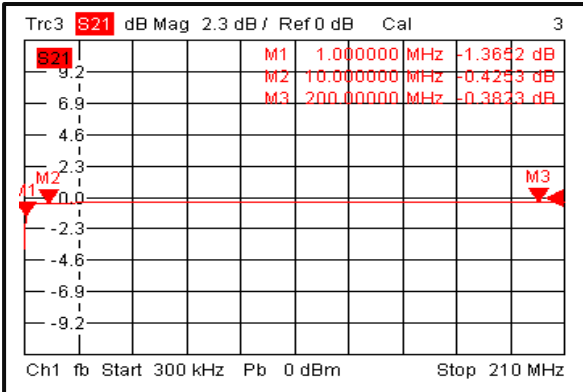
The drawing shows a rectangular component with a top view and a side view. The top view includes dimensions for the overall size (52 [2.05] mm) and various pin spacings (4, 6, 16, 24, 32, 48 mm). Pin labels include GND, C4, C3, C2, J0, C1, -5V, +5V, J4, J3, J2, and J1. A central label reads 'RFECHO F:1-200MHz SN:XXXXXXXXXX'. A side view shows a height of 9.5 [0.37] mm and a diameter of 2 [0.08] mm. A thru-hole dimension is given as 2-Ø 2.8 [0.11] THRU. A bottom view shows a width of 39 [1.54] mm and a distance of 13 [0.51] mm between two bottom pins. A distance of 9 [0.35] mm is shown from the bottom edge to the center of the component.

TTL Control Voltage THRESHOLD				Low(0)=0~0.8V
				High(1)=2.8~5V
Control Input TTL				Signal Path State
C4	C3	C2	C1	
1	1	1	1	OFF
1	1	1	0	J0-J1
1	1	0	1	J0-J2
1	0	1	1	J0-J3
0	1	1	1	J0-J4
0	0	0	0	Not used

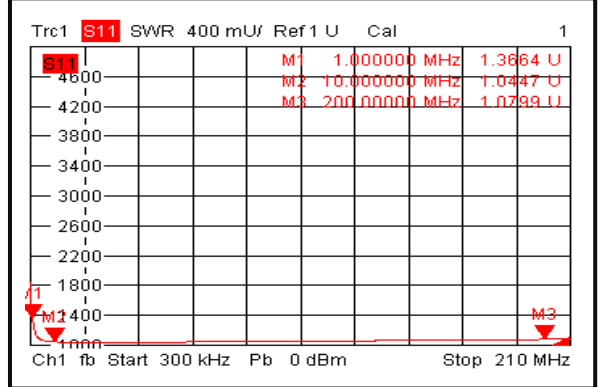
Control Pin Customization available upon request



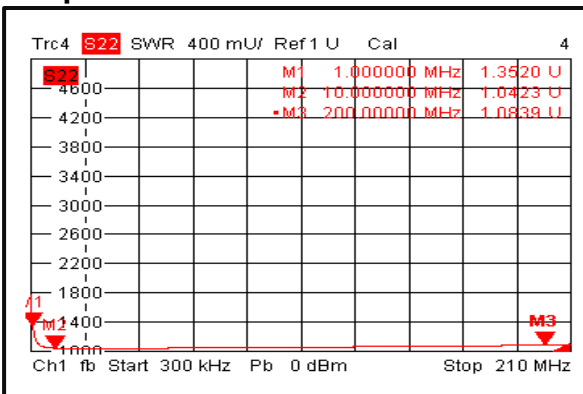
Insertion Loss @+25°C



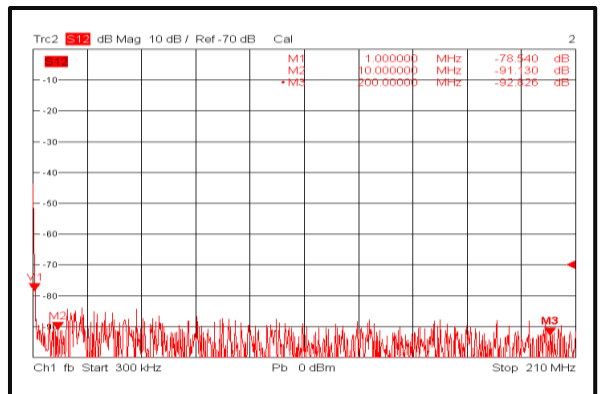
Input VSWR @+25°C



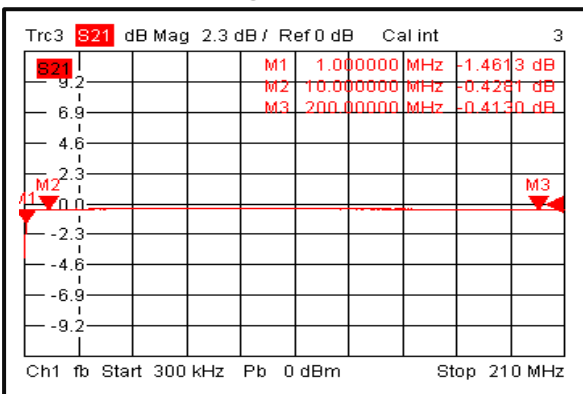
Output VSWR @+25°C



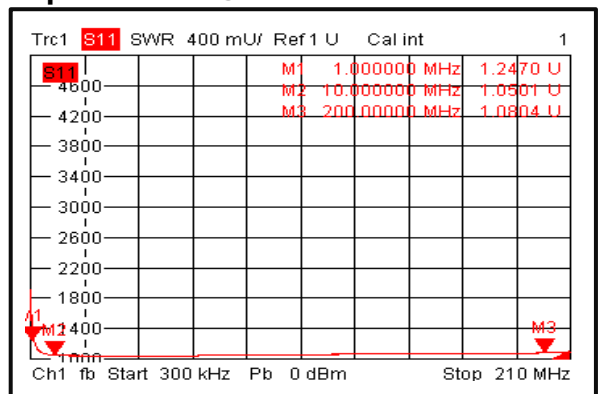
Isolation @+25°C



Insertion Loss @-40°C

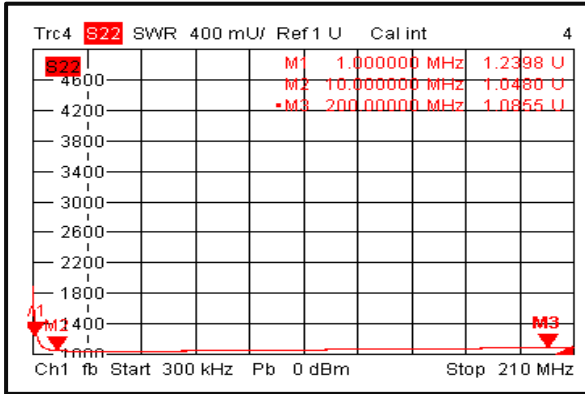


Input VSWR @-40°C

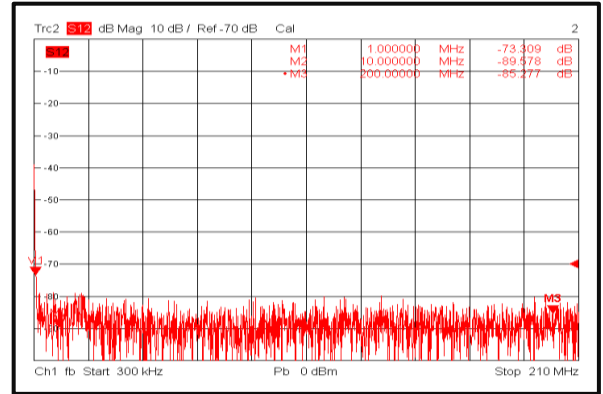




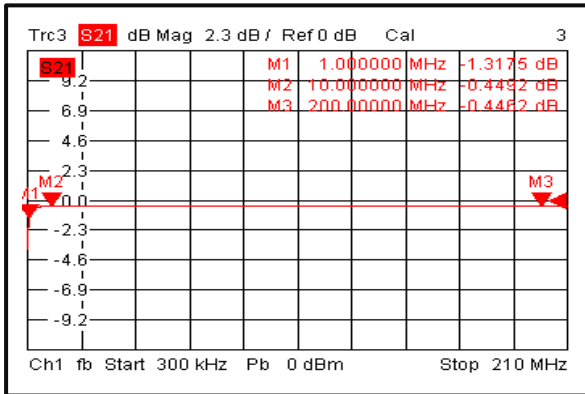
Output VSWR @-40°C



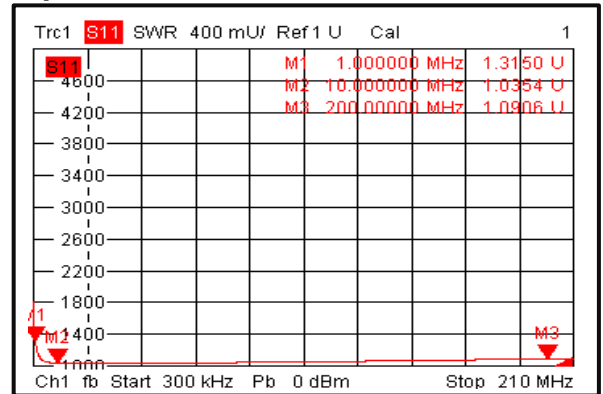
Isolation @-40°C



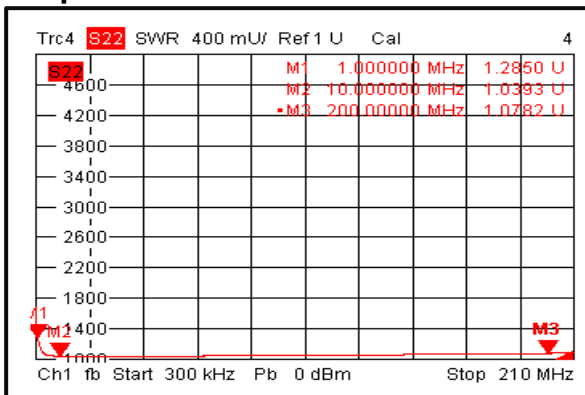
Insertion Loss @+85°C



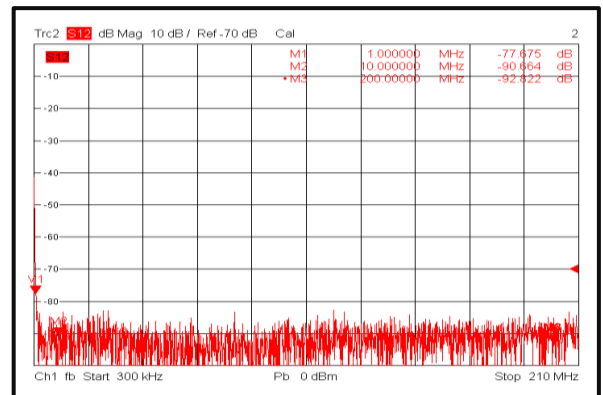
Input VSWR @+85°C



Output VSWR @+85°C

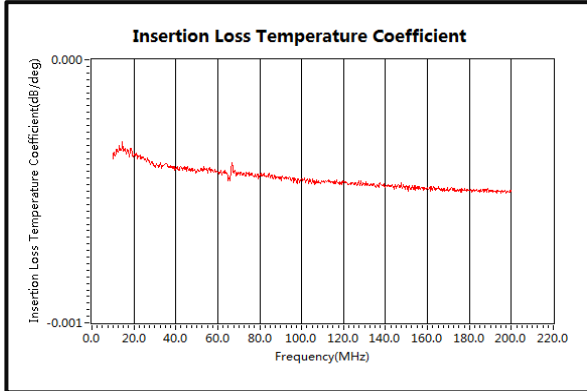


Isolation @+85°C

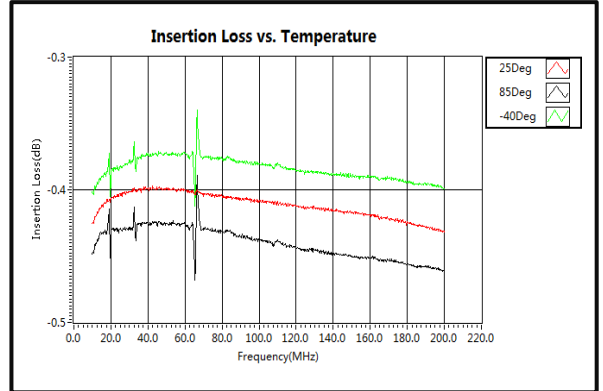




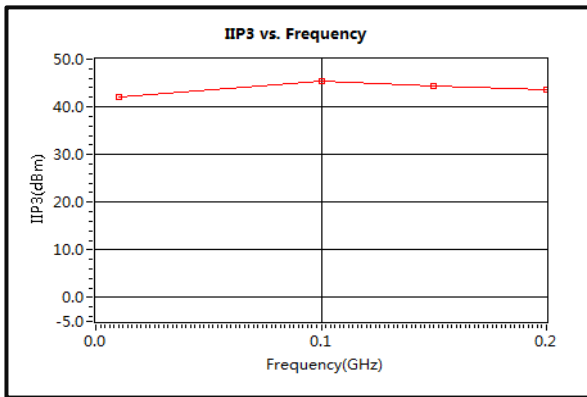
Insertion Loss Temperature Coefficient



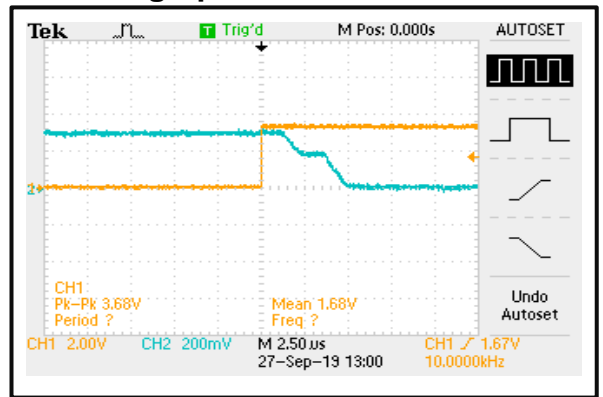
Insertion Loss vs. Temperature



IIP3



Switching Speed



Switching Speed

