

Absorptive 0.001-4.5GHz Coaxial SP2T Switch

Features

- Wide Band Operation 0.001-4.5GHz
- 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	0.001		0.0015	0.0015		4.5	GHz
Insertion Loss		3.0	4.0		2.1	2.5	dB
Insertion Loss Temperature Coefficient		0.003			0.003		dB/ ° C
Isolation		70	85	70	85		dB
Input VSWR		1.5	1.8		1.5	1.8	: 1
Output VSWR		1.5	1.8		1.5	1.8	: 1
RF Input Power (CW)			30			30	dBm
DC Power Dissipation			0.3		0.3		W
0.1dB Compression Point (P0.1dB)		30			30		dBm
IIP3		55			55		dBm
Switching Speed		5	7		5	7	us
Weight	0.71						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

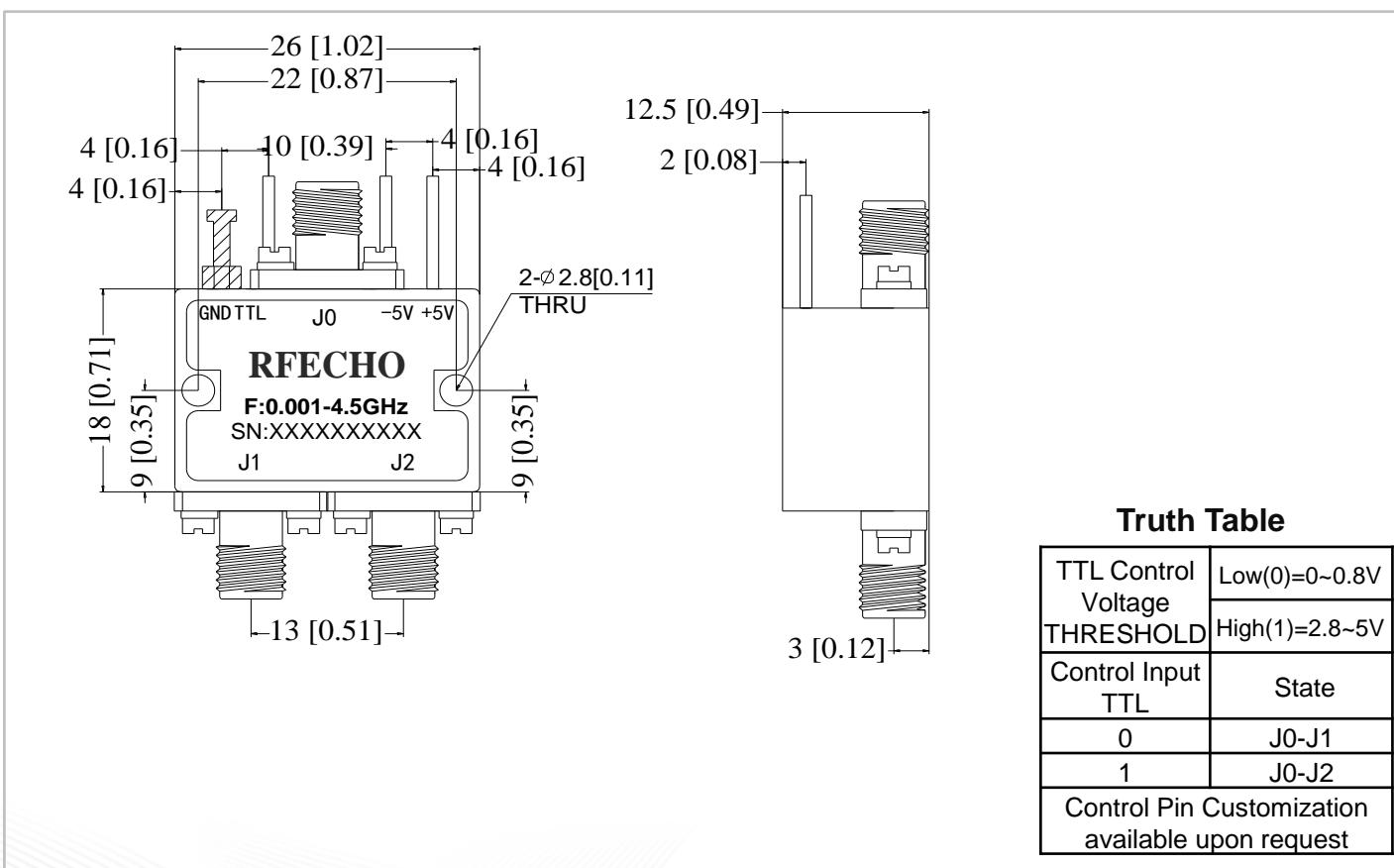
Operational Temperature	-40°C~+85°C
Storage Temperature	-50°C~+105°C
Altitude	30,000 ft. (Epoxy Sealed Controlled environment)
	60,000 ft. 1.0psi min (Hermetically Sealed Uncontrolled environment) (Optional)
Vibration	25g RMS (15 degrees 2KHz) endurance, 1 hour per axis
Humidity	100% RH at 35°C, 95%RH at 40°C
Shock	20G for 11msec half sine wave, 3 axis both directions

Ordering Information

Part No.	Description
DBSA0200000450A	SP2T 0.001-4.5GHz PIN Diode Switch

Outline Drawing:

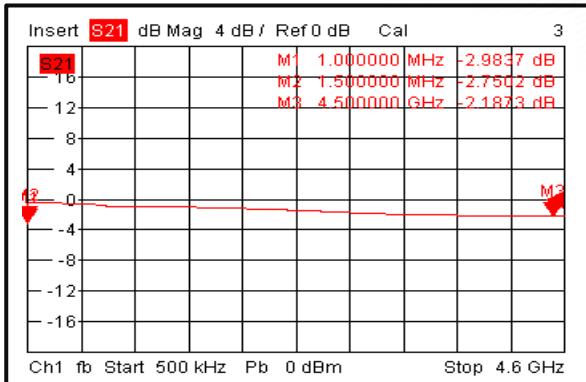
All Dimensions in mm (inches)



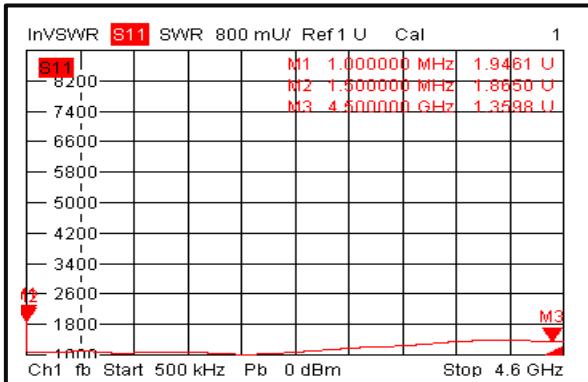
Truth Table

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

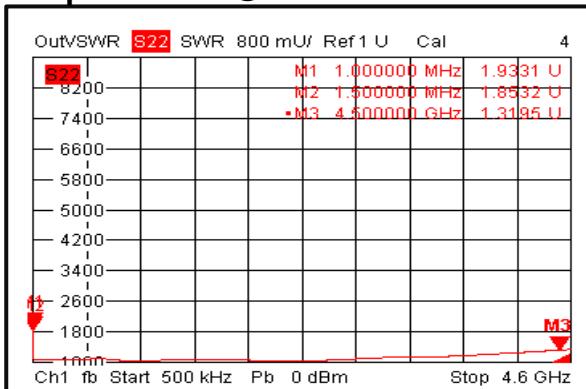
Insertion Loss @+25°C



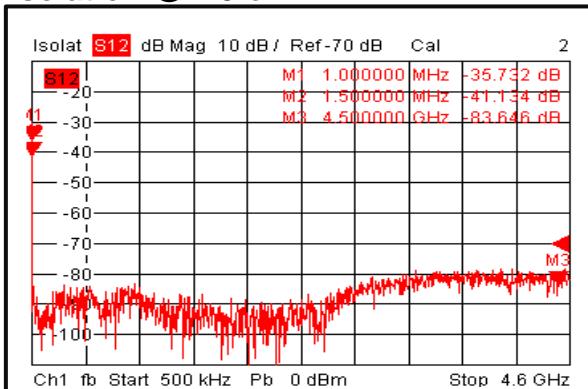
Input VSWR @+25°C



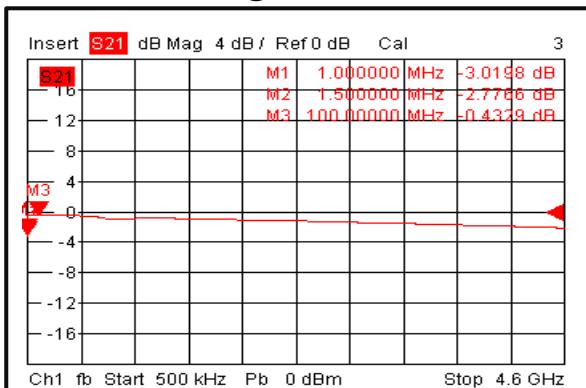
Output VSWR @+25°C



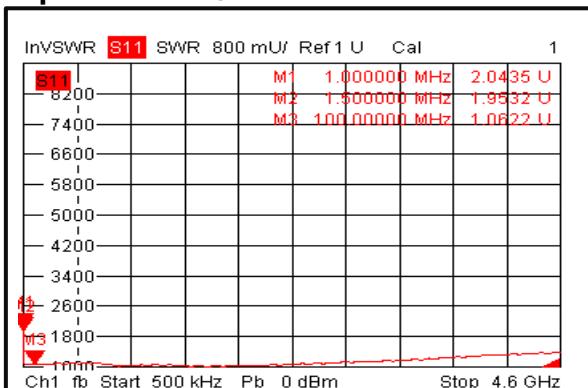
Isolation @+25°C



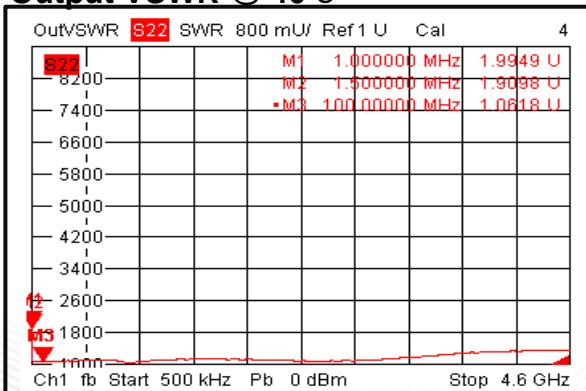
Insertion Loss @-40°C



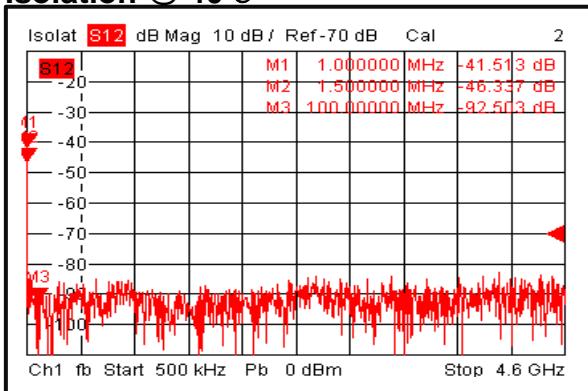
Input VSWR @-40°C



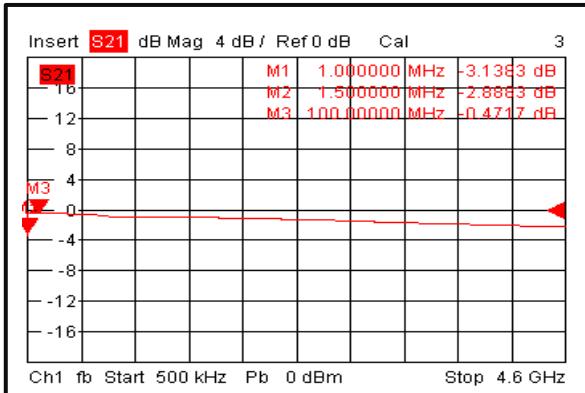
Output VSWR @-40°C



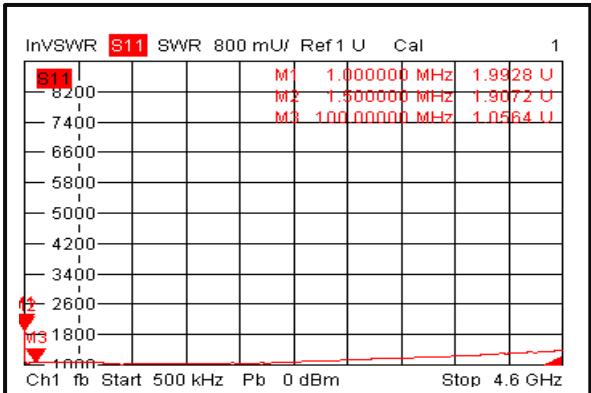
Isolation @-40°C



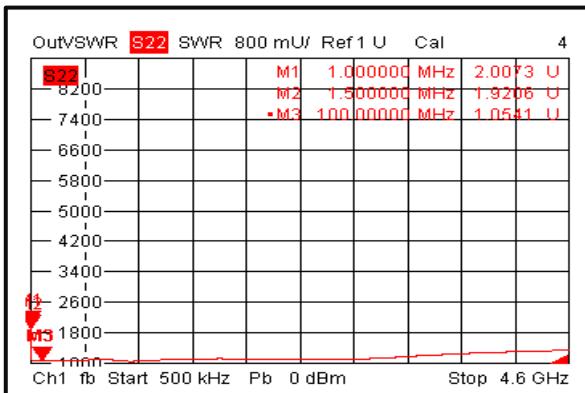
Insertion Loss @+85°C



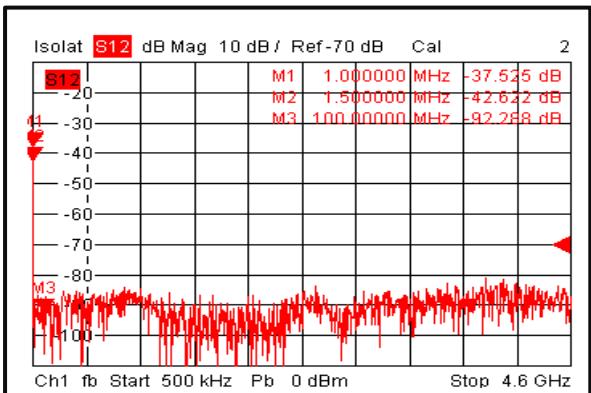
Input VSWR @+85°C



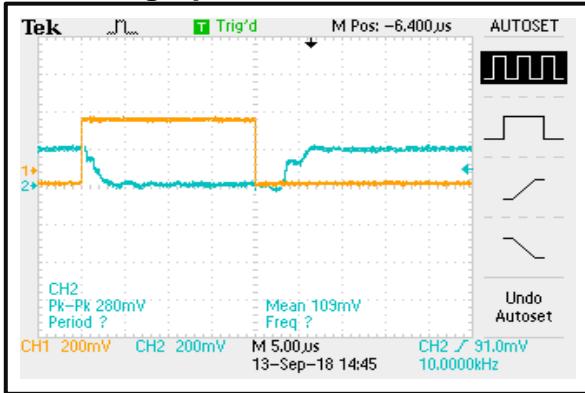
Output VSWR @+85°C



Isolation @+85°C



Switching Speed



Switching Speed

