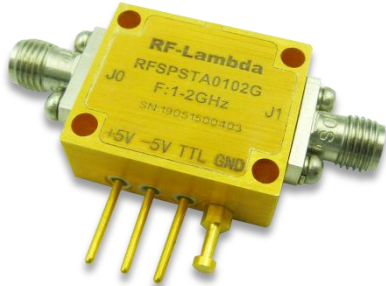




Absorptive Coaxial SPST Switch 1-2GHz



Features

- Wide Band Operation 1-2GHz
- TTL compatible driver included
- Fast Switching Speed
- Low Insertion Loss and High Isolation

Typical Applications

- Wireless Infrastructure
- Military and Aerospace
- Test and Measurement

Electrical Specifications, TA = +25 °C, Vdd = +5V/-5V, TTL = 0 / +5V

Description	PN: RFSPSTA0102G			
	SPST Absorptive Switch J0: Absorptive Port J1: Reflective port			
	Low Power Cold Switching			
Parameters	Min	Typ.	Max	Units
Frequency Range		1~2		GHz
Insertion Loss		0.6	1.0	dB
Insertion Loss Temperature Coefficient		0.003		dB/°C
Isolation (J0→J1)	80	85		dB
Input VSWR		1.3	1.5	:1
Output VSWR		1.3	1.5	:1
RF Input power			30	dBm
Power Dissipation		0.3		W
0.1dB Compression Point (Po.1dB)		30		dBm
IIP3		55		dBm
Switching Speed		50	100	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)			

Absorptive Coaxial Single Pole Single Throw Switch 1-2GHz



Absolute Maximum Ratings

Biassing	+5V±10%/-5V±10%
TTL Control Voltage	0~0.8V/2.8~5V

Note: TTL pins cannot be connected to the negative voltage otherwise the internal driver will be damaged.

Ordering Information

Part No.	ECCN	Description
RFSPSTA0102G	EAR99	SPST 1-2GHz PIN Diode Switch

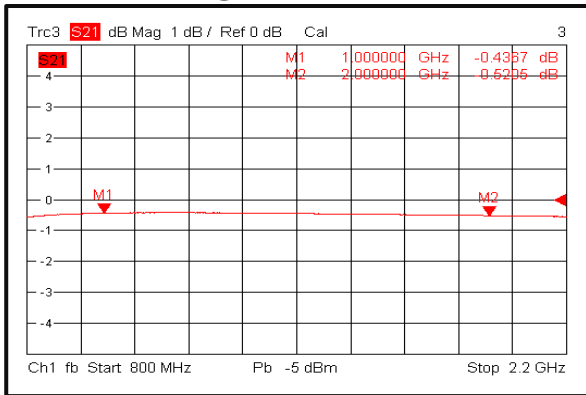
Environmental Specifications and Test Standards

Parameter	Standard	Description
Operational Temperature	MIL-STD-39016	-45°C~+85°C (Case Temperature)
Storage Temperature		-50°C~+125°C
Thermal Shock		1 Hour@ -45°C → 1 Hour @ +85°C (5 Cycles)
Random Vibration		Acceleration Spectral Density 6 (m/s) Total 92.6 RMS
Electrical & Temperature Burn In		Temperature +85°C for 72 Hours
Shock		1. Weight >20g, 50g half sine wave for 11ms, Speed variation 3.44m/s 2. Weight <=20g, 100g Half sine wave for 6ms, Speed variation 3.75m/s 3. Total 18 times (6 directions, 3 repetitions per direction).
Altitude		Standard: 30,000 Ft (Epoxy Sealed Controlled Environment) Optional: Hermetically Sealed (60,000 ft. 1.0 PSI min)
Hermetically Sealed (Optional)	MIL-STD-883	MIL-STD-883 (For Hermetically Sealed Units)

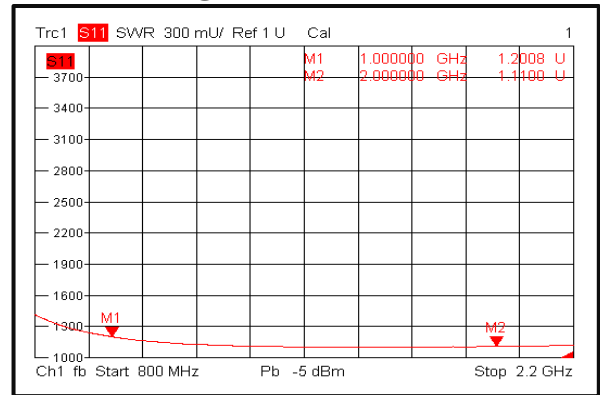


Typical Performance Plots

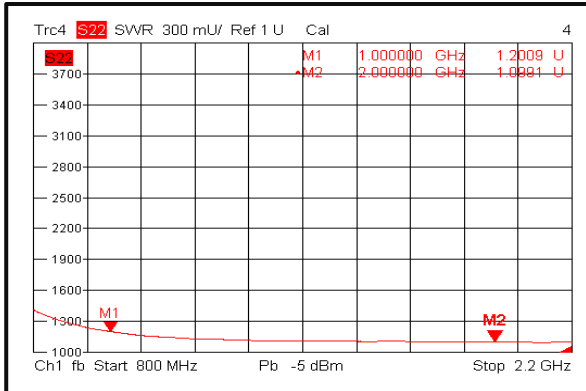
Insertion Loss @+25°C



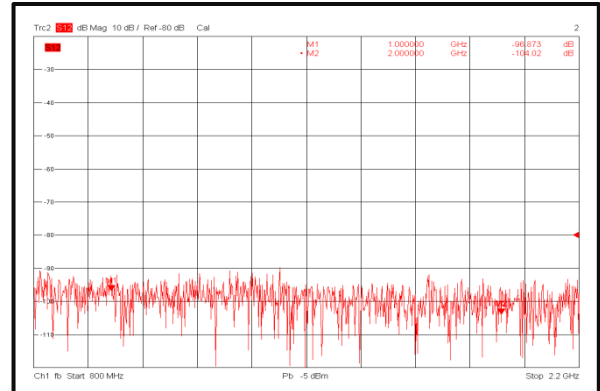
Input VSWR @+25°C



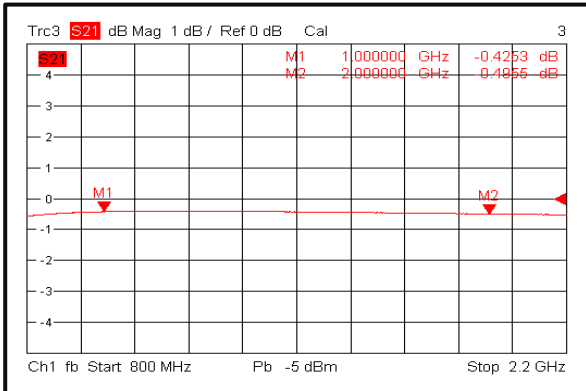
Output VSWR @+25°C



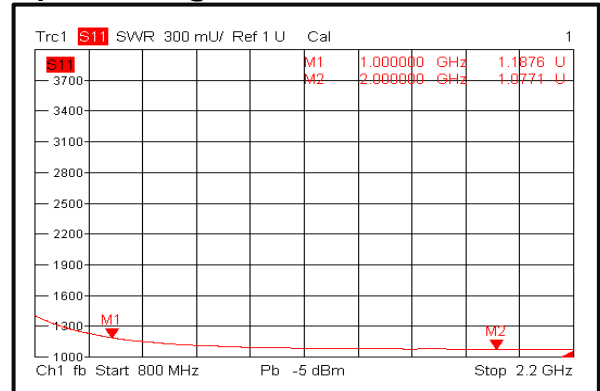
Isolation @+25°C



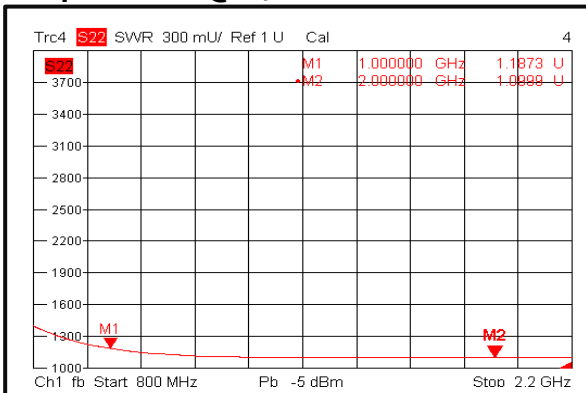
Insertion Loss @-45°C



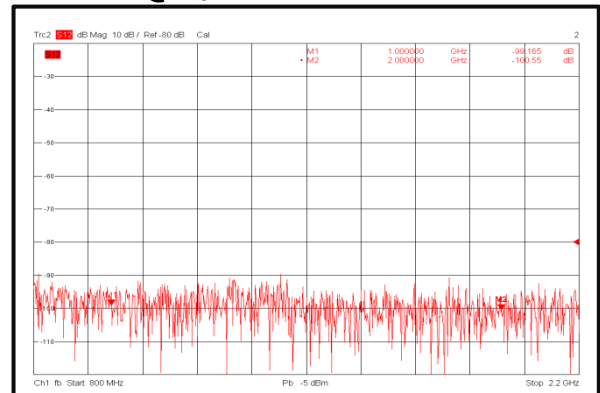
Input VSWR @-45°C



Output VSWR @-45°C



Isolation @-45°C



Absorptive Coaxial Single Pole Single Throw Switch 1-2GHz

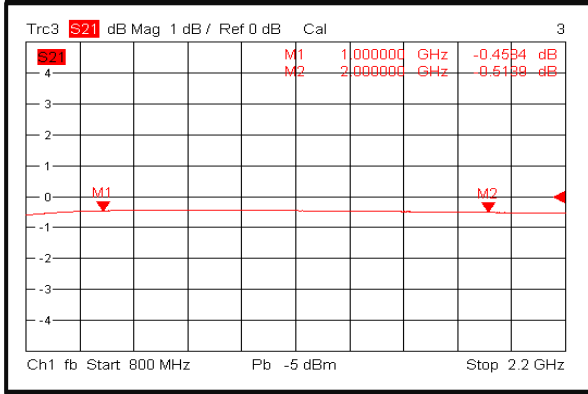


RF-LAMBDA

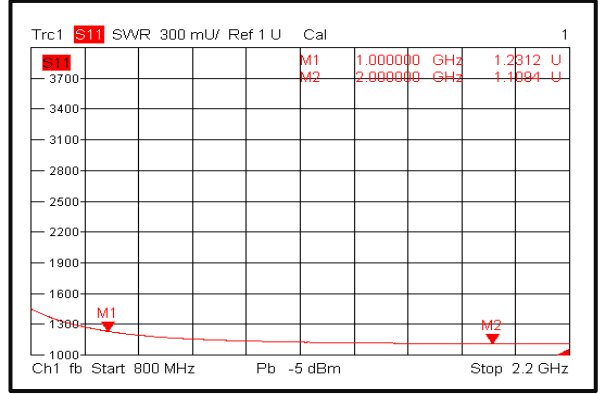
LEADER OF RF BROADBAND SOLUTIONS

RFSPSTAO102G

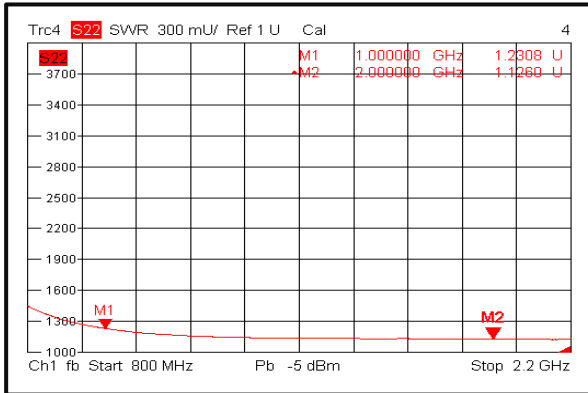
Insertion Loss @+85°C



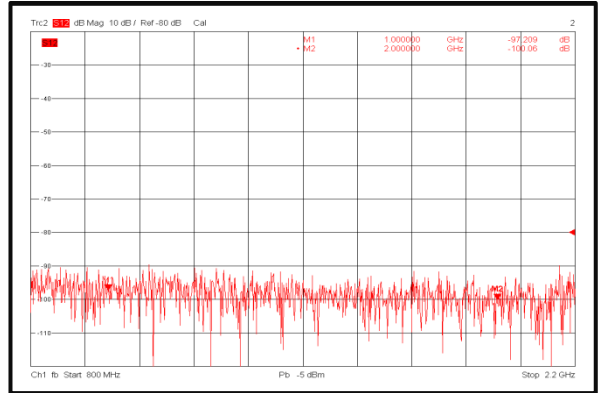
Input VSWR @+85°C



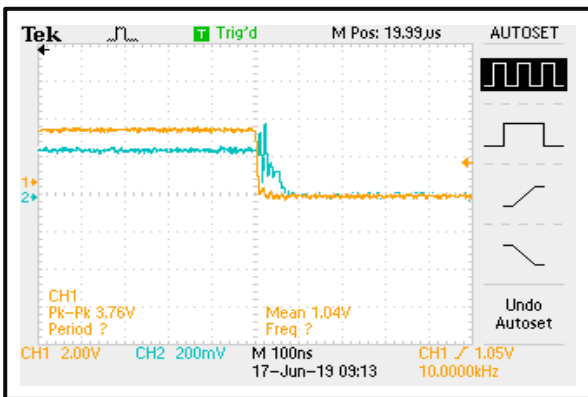
Output VSWR @+85°C



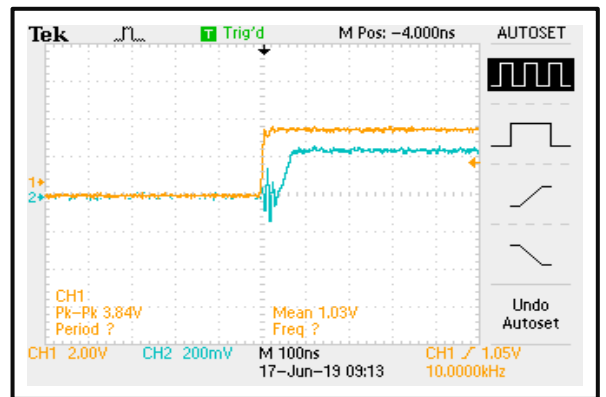
Isolation @+85°C



Switching Speed



Switching Speed



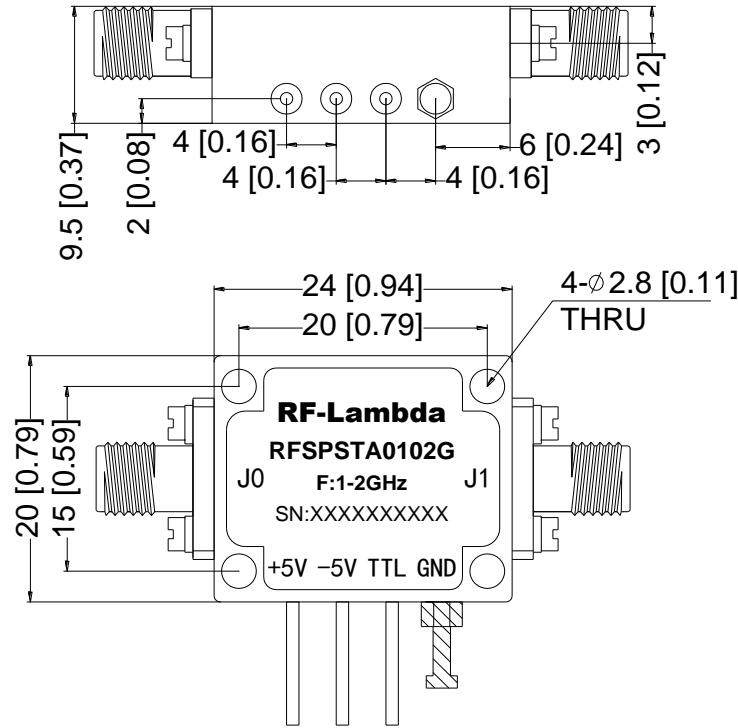
Absorptive Coaxial Single Pole Single Throw Switch 1-2GHz



Outline Drawing:

All Dimensions in mm [inches]

[X101]



Truth Table

Control Input TTL	State
1	ON
0	OFF
Control Pin Customization available upon request	



Important Notice

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Absorptive Coaxial Single Pole Single Throw Switch 1-2GHz