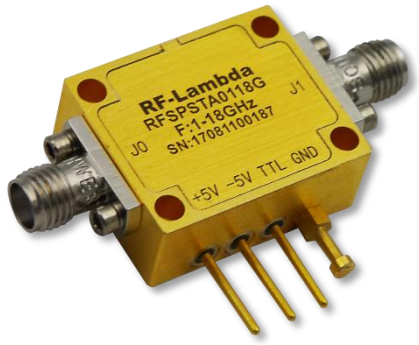
Absorptive Coaxial SPST Switch
1 - 18GHz



Features

- Wide Band Operation 1-18GHz
- TTL compatible driver included
- Fast Switching Speed
- Low Insertion Loss and High Isolation
- Customization available upon request

RoHS Compliant

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

Description	PN: RFSPSTA0118G									
	SPST Absorptive Switch J0: Absorptive Port J1: Reflective Port									
	Low Power Cold Switching									
Parameters	Min	Typ.	Max	Min	Typ.	Max	Min	Typ.	Max	Units
Frequency Range	1-8			8-12			12-18			GHz
Insertion Loss		1.3	1.5		1.5	2.0		2.0	2.5	dB
Insertion Loss Temperature Coefficient		0.003			0.003			0.003		dB/°C
Isolation （J0→J1）	80	90		80	90		70	85		dB
Input VSWR		1.5	1.8		1.5	1.8		1.5	1.8	: 1
Output VSWR		1.5	1.8		1.5	1.8		1.5	1.8	: 1
RF Input power			30			30			30	dBm
DC Power Dissipation		0.3			0.3			0.3		W
0.1dB Compression Point (P0.1dB)		30			30			30		dBm
IIP3		55			55			55		dBm
Switching Speed	100									ns
Weight	0.35									ounces
Impedance	50									Ω
Bias Current (+5V/-5V)	50/30									mA
Input / Output Connectors	SMA - Female									
Finish	Gold Plated									
Material	Aluminum									
Sealing	Hermetically Sealed (Optional)									

Absorptive Coaxial Single Pole Double Throw Switch 1 - 18GHz

Absolute Maximum Ratings

Biasing	+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.

Environmental Specifications

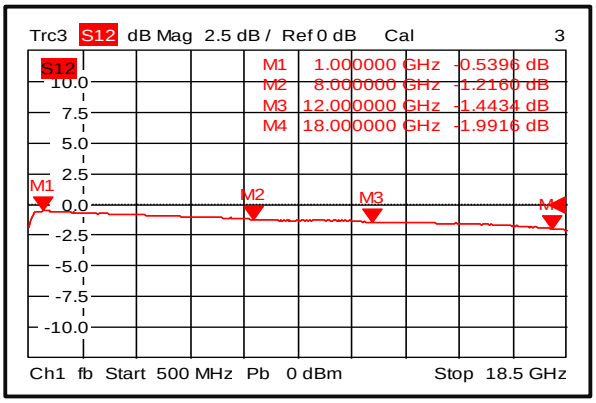
Operational Temperature (℃)	-45 ~ +85
Storage Temperature (℃)	-50 ~ +125
Altitude	30,000 ft. (Epoxy Sealed Controlled environment)
	60,000 ft. 1.0psi min (Hermetically Sealed Un-controlled environment) (Optional)
Vibration	25g RMS (15 degrees 2KHz) endurance, 1 hour per axis
Humidity	100% RH at 35c, 95%RH at 40°C
Shock	20G for 11msec half sine wave, 3 axis both directions

Ordering Information

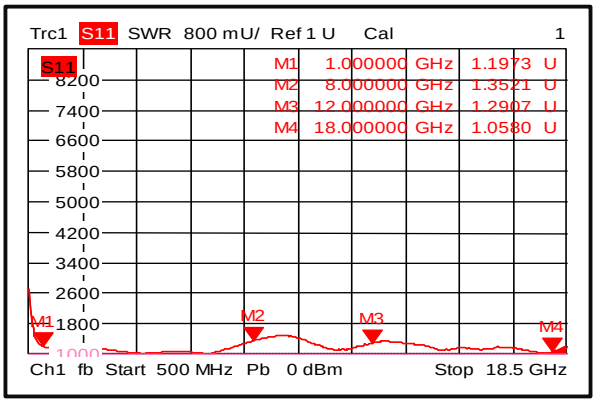
Part No.	ECCN	Description
RFSPSTA0118G	EAR99	SPST 1-18GHz PIN Diode Switch

Typical Performance Plots

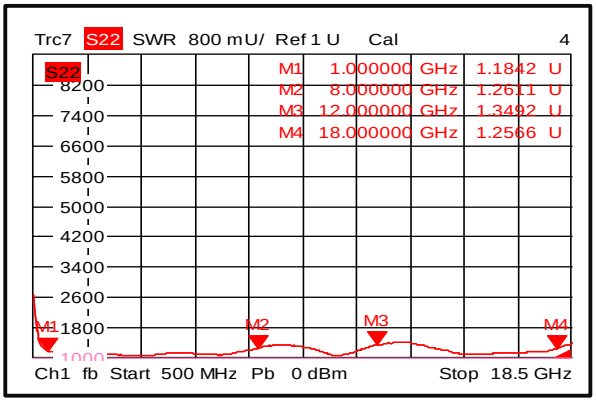
Insertion Loss @+25℃



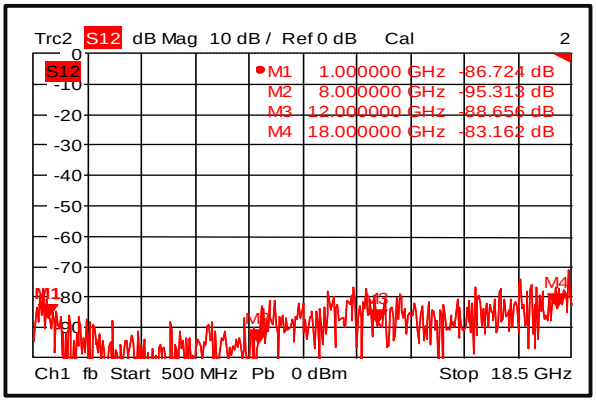
Input VSWR @+25℃



Output VSWR @+25℃



Isolation @+25℃



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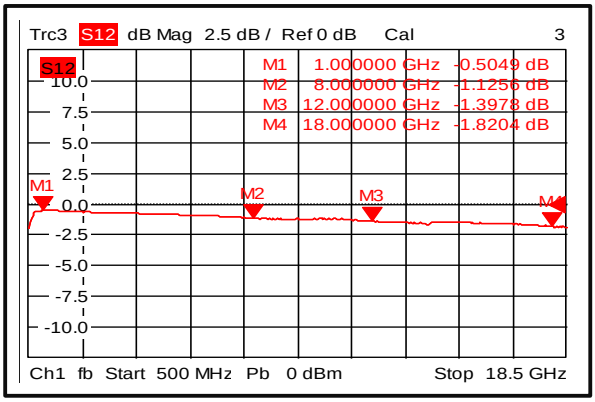
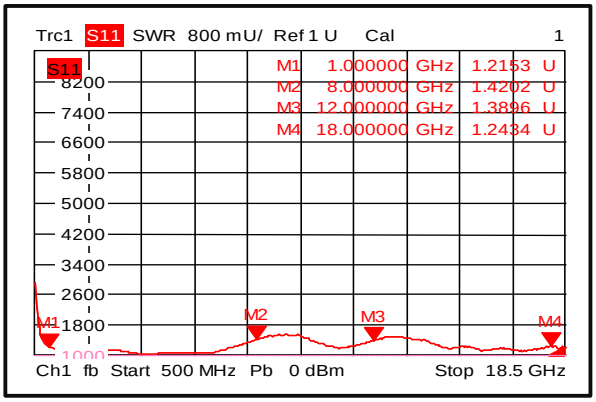
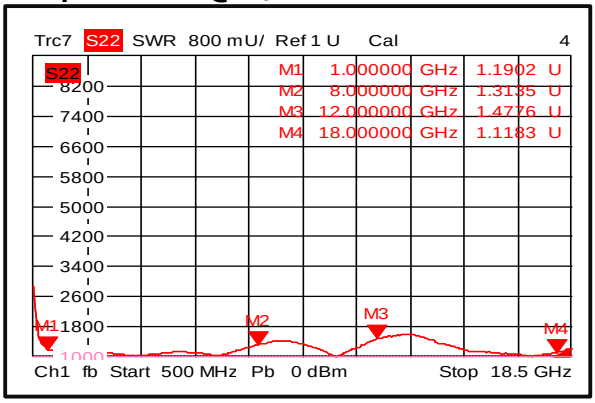
Insertion Loss @-45℃



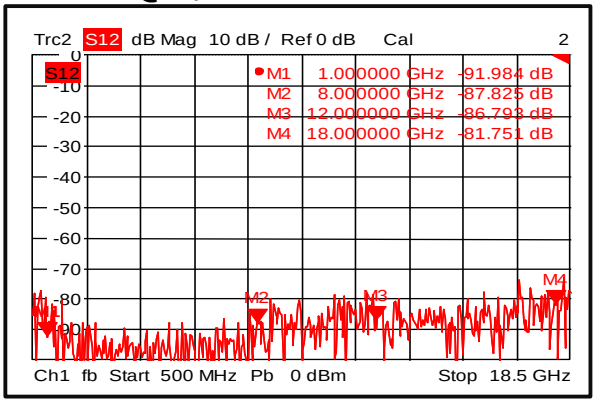
Input VSWR @-45℃



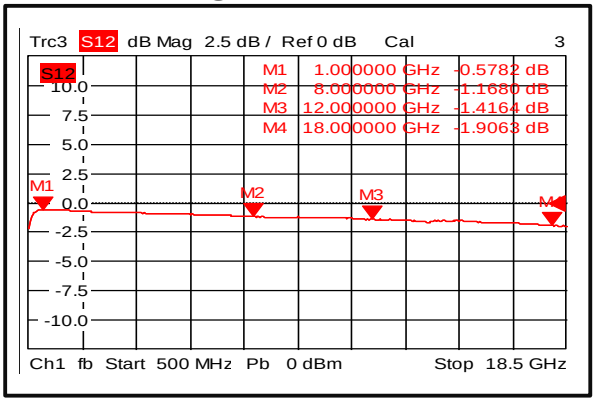
Output VSWR @-45℃



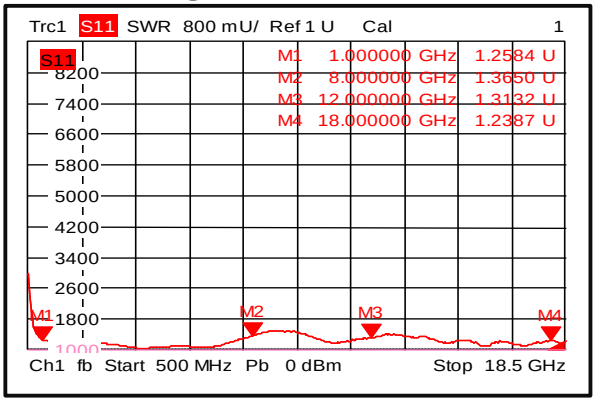
Isolation @-45℃



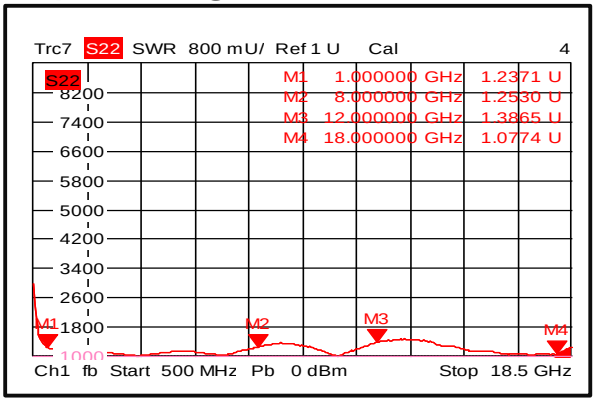
Insertion Loss @+85℃



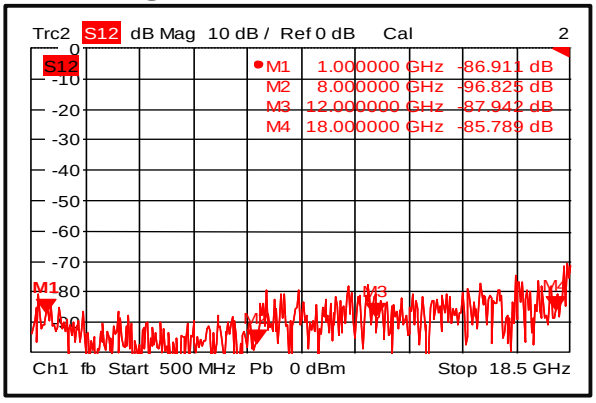
Input VSWR @+85℃



Output VSWR @+85℃



Isolation @+85℃



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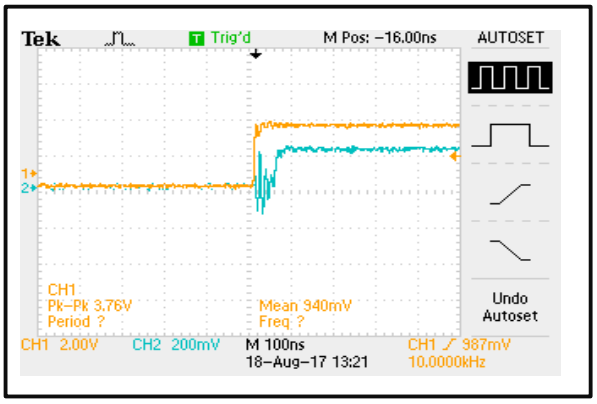
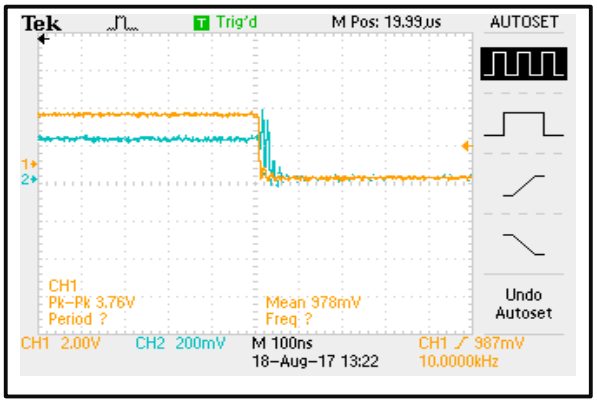
Switching Speed



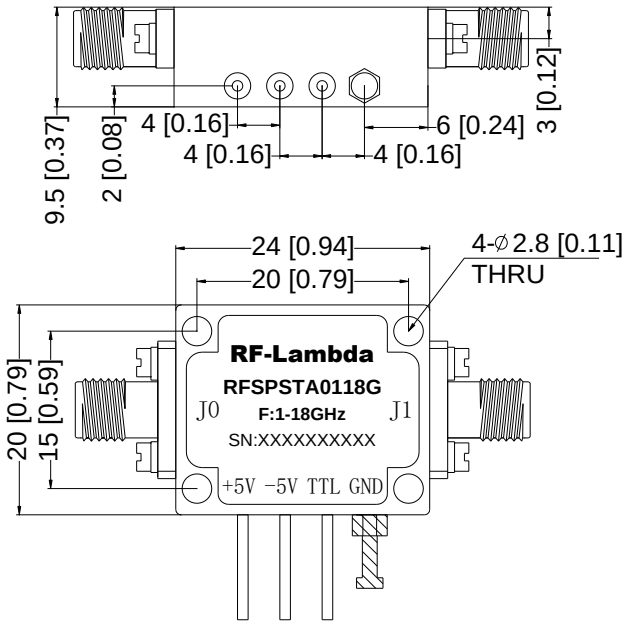
Switching Speed



Outline Drawing:

All Dimensions in mm [inches]

[X101]



Truth Table

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

Important Notice

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