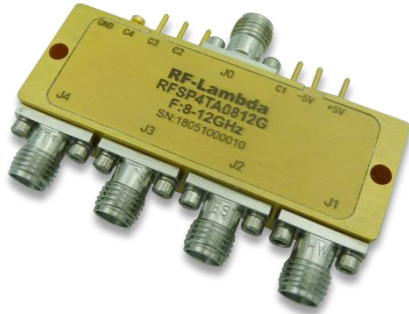




Absorptive Coaxial SP4T Switch 8 – 12GHz



Features

- Wide Band Operation 8-12GHz
- TTL compatible driver included
- Fast Switching Speed
- Low Insertion Loss and High Isolation

Typical Applications

- Wireless Infrastructure
- Test and Measurement
- Military and Aerospace

Electrical Specifications, TA = +25 °C, With Vdd = +5V, Vss = -5V & VCTL = 0/ +5V

Description	PN: RFSP4TA0812G			
	SP4T Absorptive Switch			
	Low Power Cold Switching			
Parameters	Min.	Typ.	Max.	Units
Frequency Range	8 - 12			GHz
Insertion Loss		2.1	2.6	dB
Insertion Loss Temperature Coefficient		0.003		dB/ °C
Isolation	60	70		dB
Input VSWR		1.5	1.8	: 1
Output VSWR		1.5	1.8	: 1
RF Input power			30	dBm
Power Dissipation (CW)		0.5		W
0.1dB Compression Point (Po.1dB)		30		dBm
IIP3		55		dBm
Switching Speed		50	100	ns
Weight	1.06			ounces
Impedance	50			Ω
Biasing(+5V/-5V)	160/50			mA
Input / Output Connectors	SMA-Female			
Finish	Gold Plated			
Material	Aluminum			
Sealing	Hermetically Sealed (Optional)			

Absorptive Coaxial Single Pole Four Throw Switch 8 - 12GHz



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.

Ordering Information

Part No.	ECCN	Description
RFSP4TA0812G	EAR99	SP4T 8-12GHz PIN Diode Switch

Environmental Specifications and Test Standards

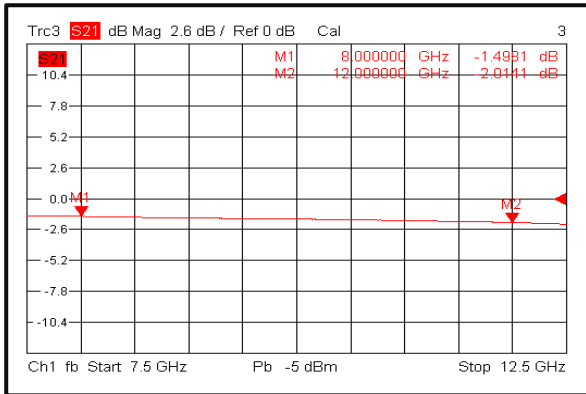
Parameter	Standard	Description
Operational Temperature	MIL-STD-39016	-45°C~+85°C (Case Temperature)
Storage Temperature		-50°C~+125°C
Thermal Shock		1 Hour@ -45°C → 1 Hour @ +85°C (5 Cycles)
Random Vibration		Acceleration Spectral Density 6 (m/s) Total 92.6 RMS
Electrical & Temperature Burn In		Temperature +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)

Absorptive Coaxial Single Pole Four Throw Switch 8 - 12GHz

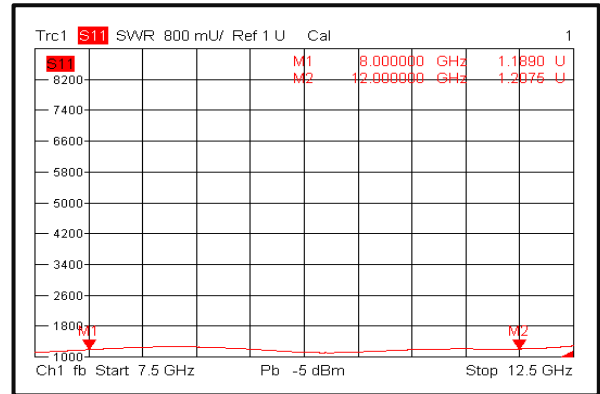


Typical Performance Plots

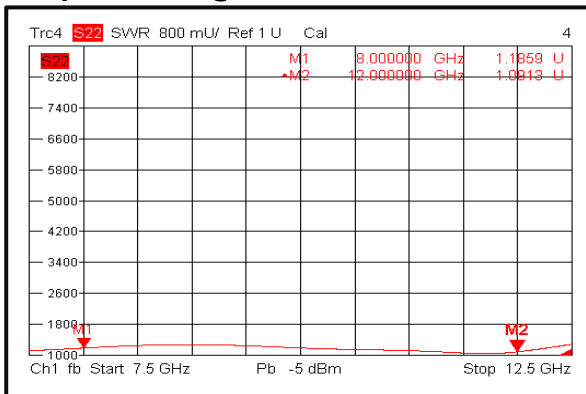
Insertion Loss @+25°C



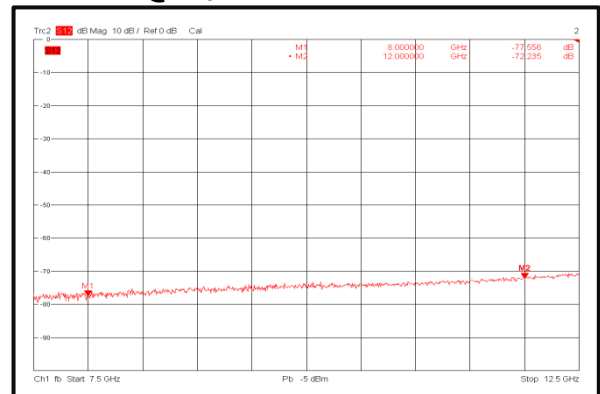
Input VSWR @+25°C



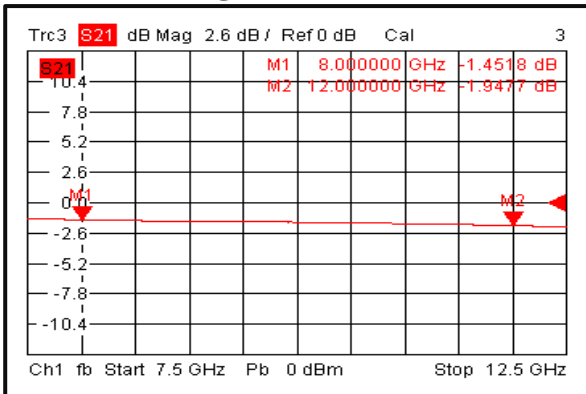
Output VSWR @+25°C



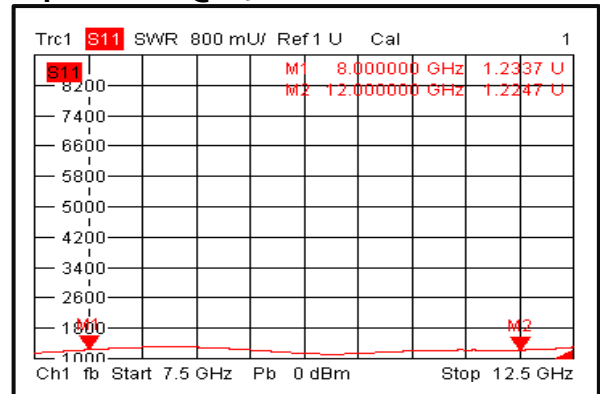
Isolation @+25°C



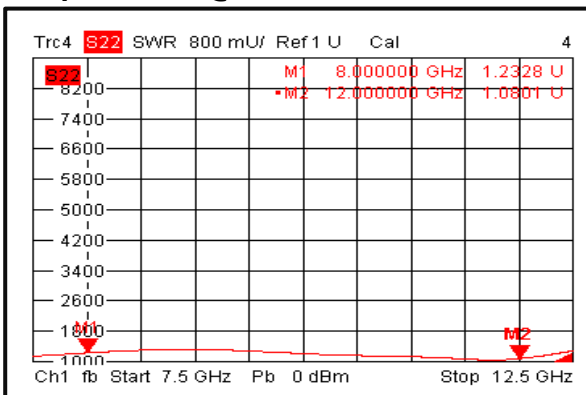
Insertion Loss @-45°C



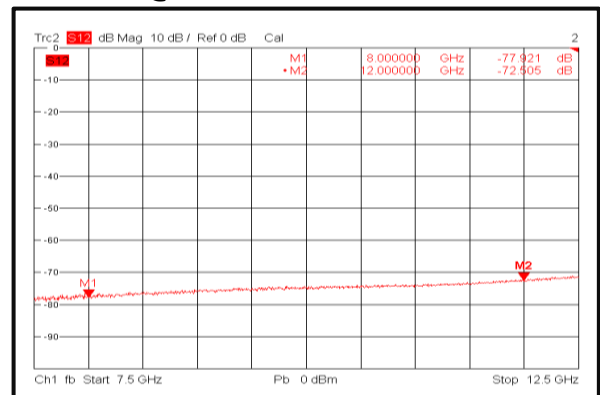
Input VSWR @-45°C



Output VSWR @-45°C

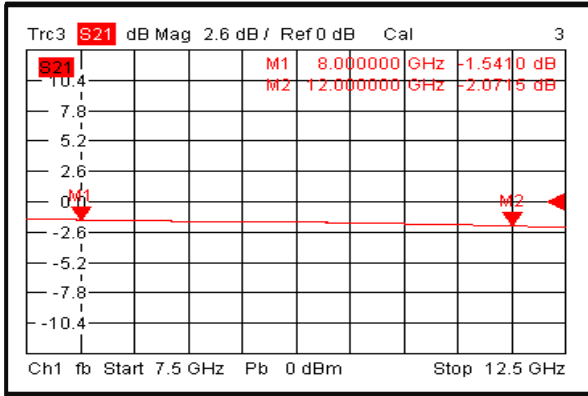


Isolation @-45°C

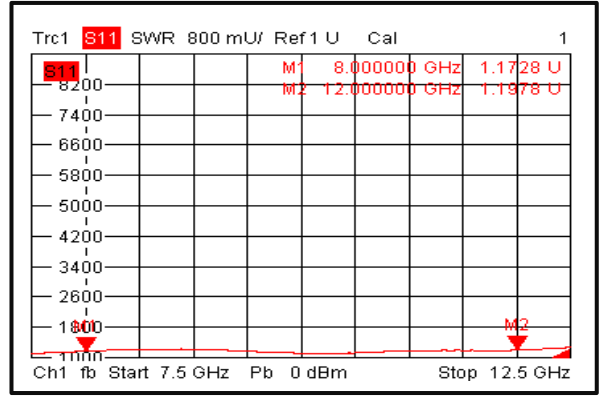




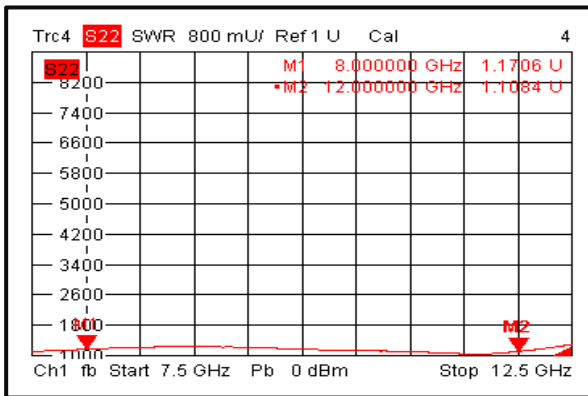
Insertion Loss @+85°C



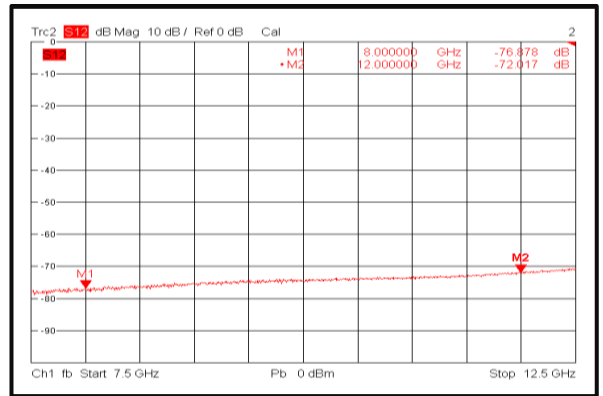
Input VSWR @+85°C



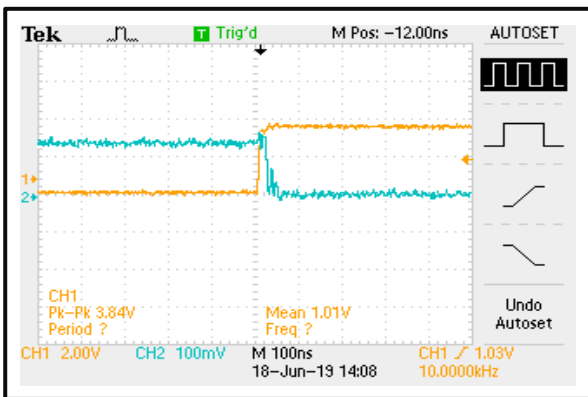
Output VSWR @+85°C



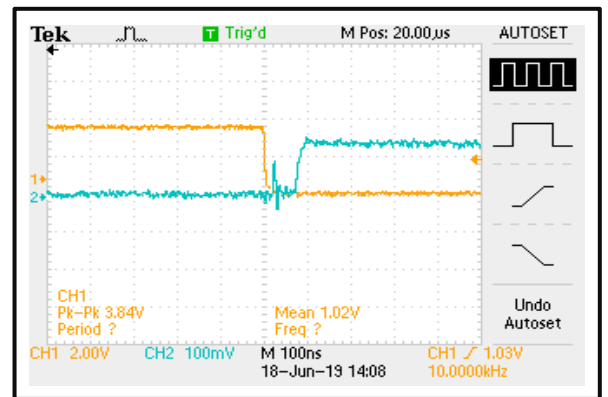
Isolation @+85°C



Switching Speed



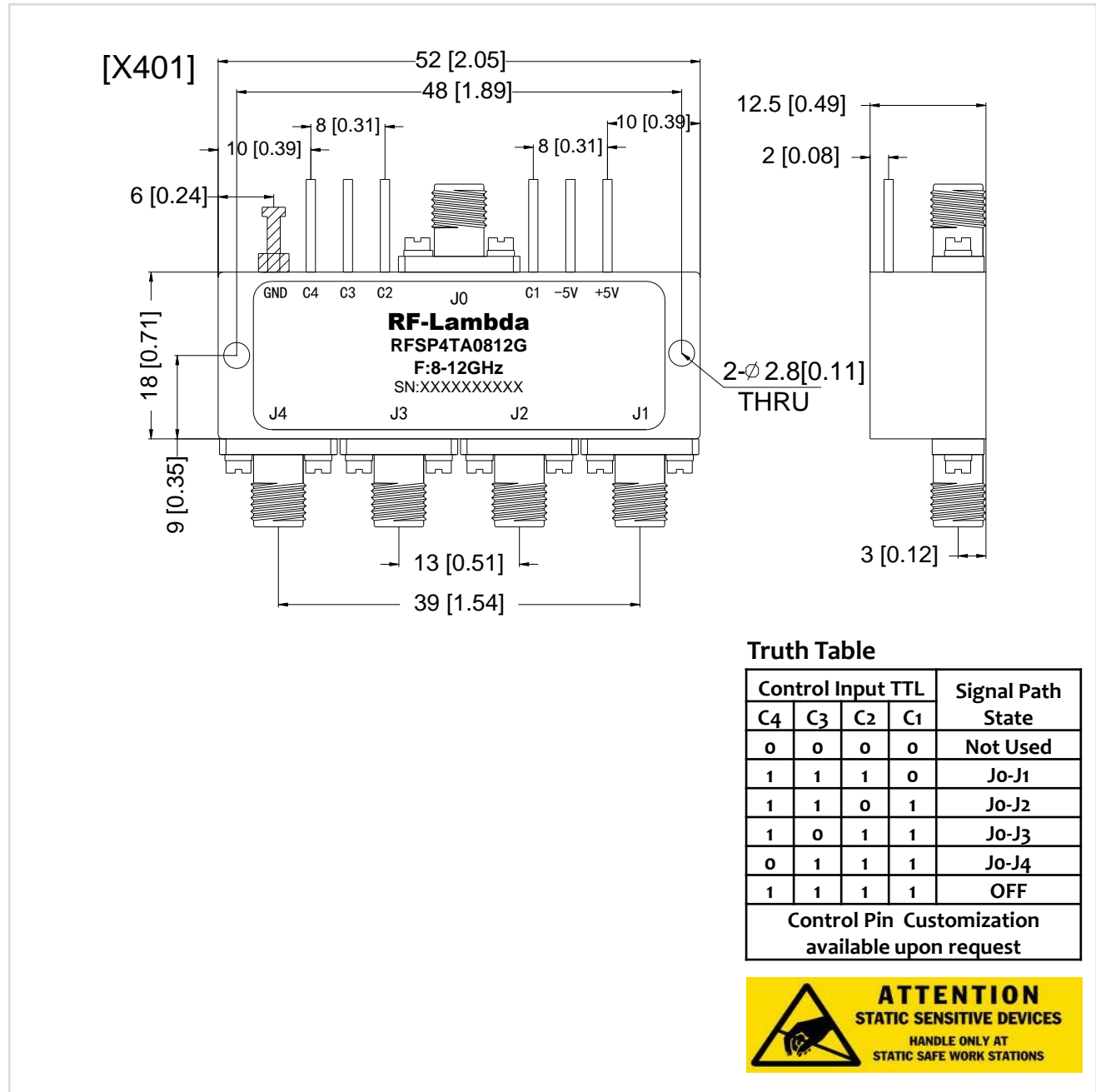
Switching Speed





Outline Drawing:

All Dimensions in mm [inches]



Absorptive Coaxial Single Pole Four Throw Switch 8 - 12GHz

Important Notice

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