



Absorptive Coaxial SP2T Switch 0.001 – 4.5GHz



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
- Military and Aerospace
- Test and Measurement

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

Description	PN: RFSP2TA0005G						
	SP2T Absorptive Switch						
	Low Power Cold Switching						
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	2.0		1.5	1.8	: 1
Output VSWR		1.5	2.0		1.5	1.8	: 1
RF Input Power (CW)			30			30	dBm
DC Power Dissipation			0.3		0.3		W
0.1dB Compression Point (Po.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)						

Absorptive Coaxial Single Pole Double Throw Switch 0.001 - 4.5GHz



Absolute Maximum Ratings

Biassing Voltage	+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
RFSP2TA0005G	EAR99	SP2T 0.001-4.5GHz PIN Diode Switch

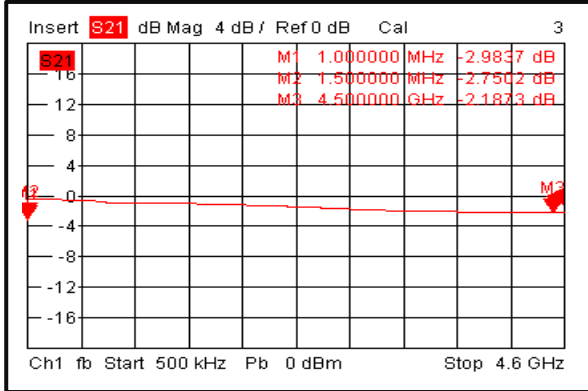
Environmental Specifications and Test Standards

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)

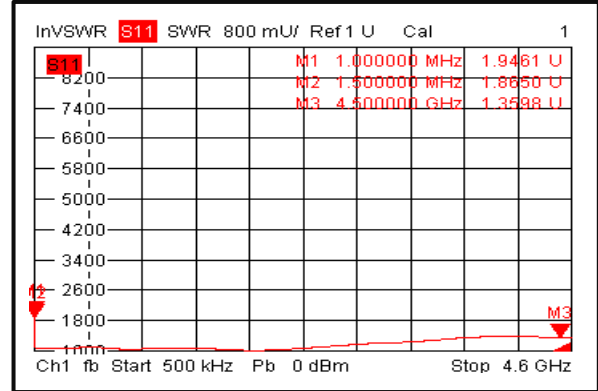


Typical Performance Plots

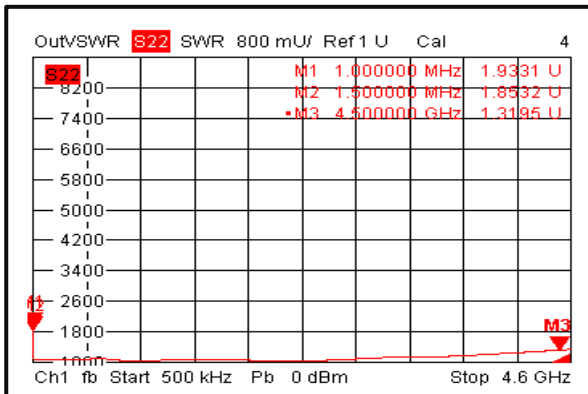
Insertion Loss @+25°C



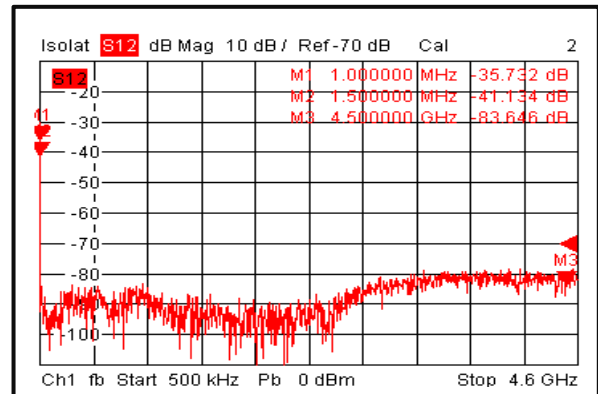
Input VSWR @+25°C



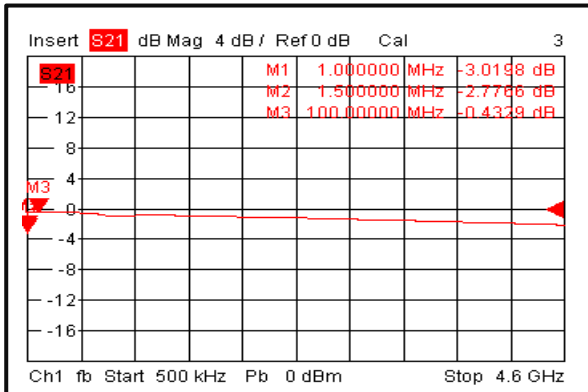
Output VSWR @+25°C



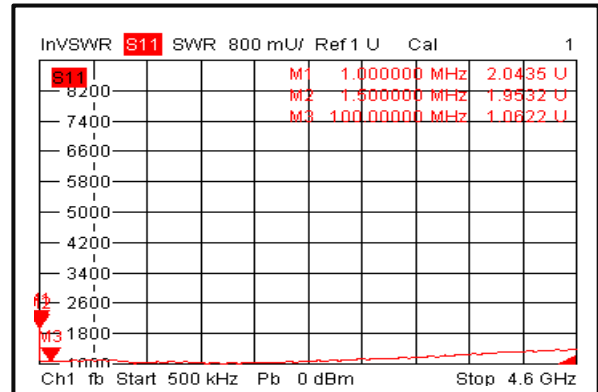
Isolation @+25°C



Insertion Loss @-45°C



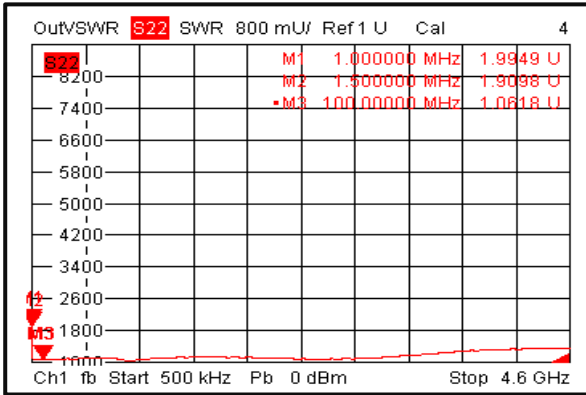
Input VSWR @-45°C



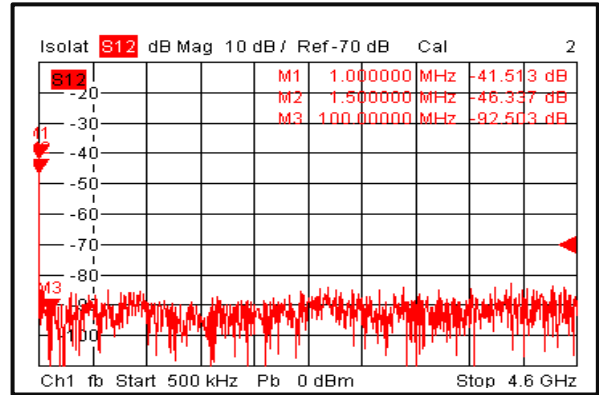
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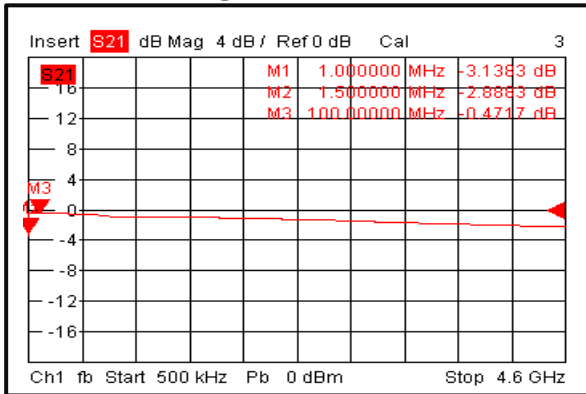
Output VSWR @-45°C



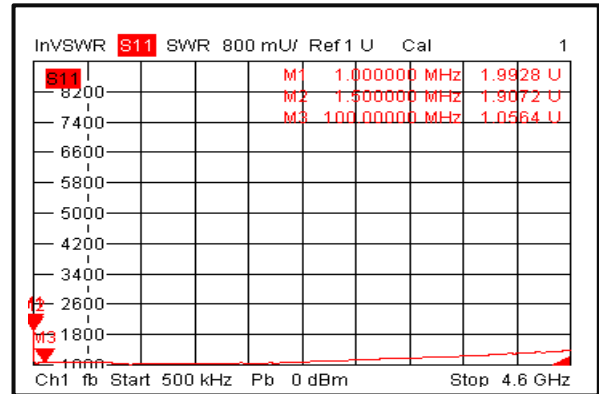
Isolation @-45°C



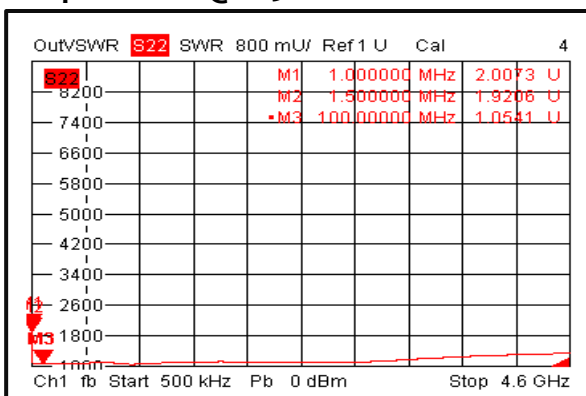
Insertion Loss @+85°C



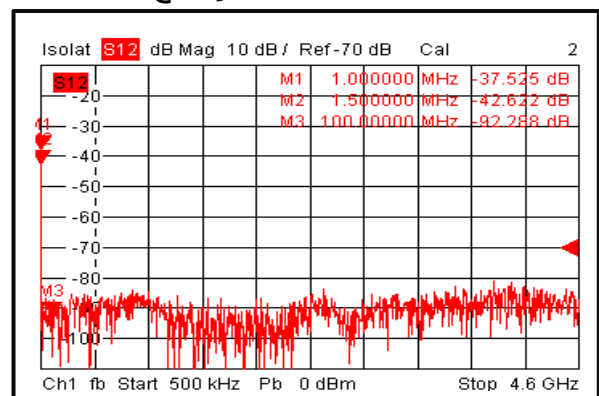
Input VSWR @+85°C



Output VSWR @+85°C

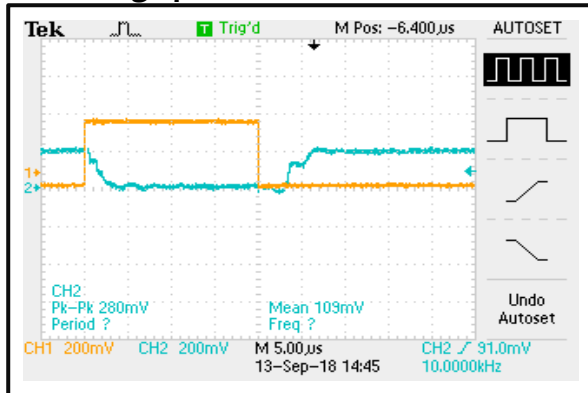


Isolation @+85°C

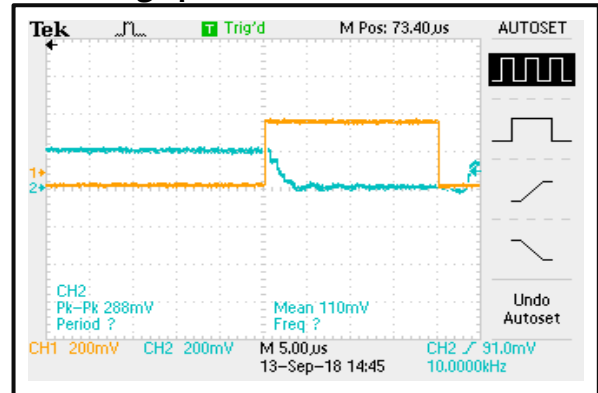




Switching Speed

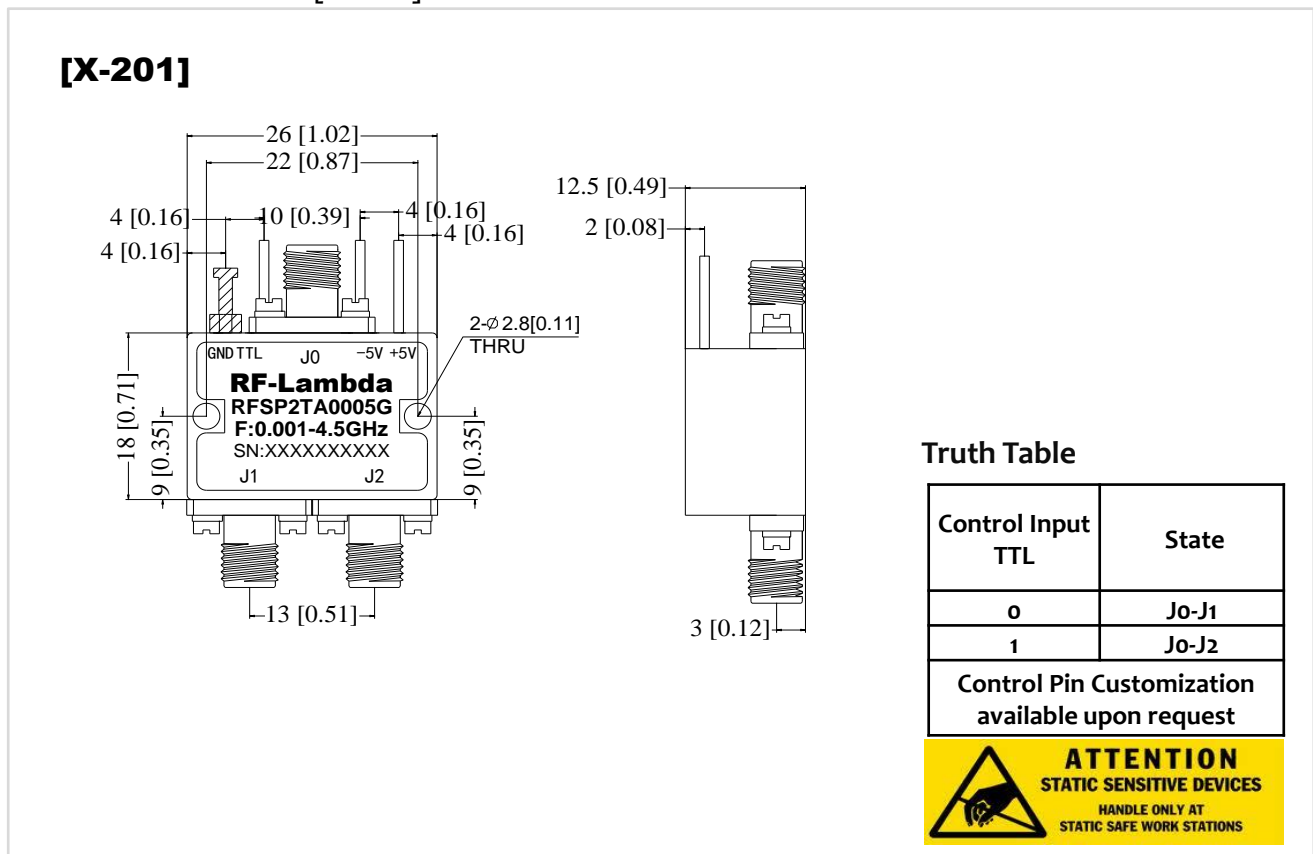


Switching Speed



Outline Drawing:

All Dimensions in mm [inches]



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