



Reflective Coaxial SP2T Switch 1-200MHz



Features

- Wide Band Operation 1-200MHz
- TTL compatible driver included
- Low Insertion Loss and High Isolation
- Customization available upon request

Typical Applications

- Wireless Infrastructure
- Test and Measurement
- Military and Aerospace

Electrical Specifications, $T_A = +25\text{ }^\circ\text{C}$, $V_{dd} = +5\text{V}/-5\text{V}$, $TTL = 0 / +5\text{V}$

Description	PN: RFSP2TR0002M						
	SP2T Reflective Switch						
	Low Power Cold Switching						
Parameters	Min	Typ.	Max	Min	Typ.	Max	Units
Frequency Range	1~10		10~200				MHz
Insertion Loss		1.3	2.3		0.6	1.2	dB
Insertion Loss Temperature Coefficient		0.003			0.003		dB/°C
Isolation	70	75		70	80		dB
Input VSWR		1.5	1.8		1.18	1.25	:1
Output VSWR		1.5	1.8		1.18	1.25	:1
RF Input Power			30			30	dBm
DC Power Dissipation		0.4			0.4		W
0.1dB Compression Point (Po.1dB)		30			30		dBm
IIP3		55			55		dBm
Switching Speed			5.5			5.5	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)						

Reflective Coaxial Single Pole Double Throw Switch 1-200MHz



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
RFSP2TR0002M	EAR99	SP2T 1-200MHz PIN Diode Switch

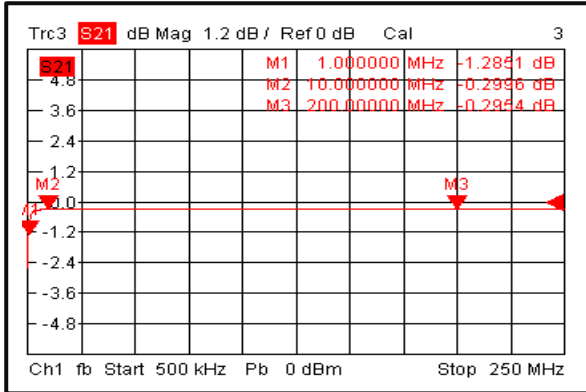
Environmental Specifications and Test Standards

Parameter	Standard	Description
Operational Temperature	MIL-STD-39016	-45°C~+85°C
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)

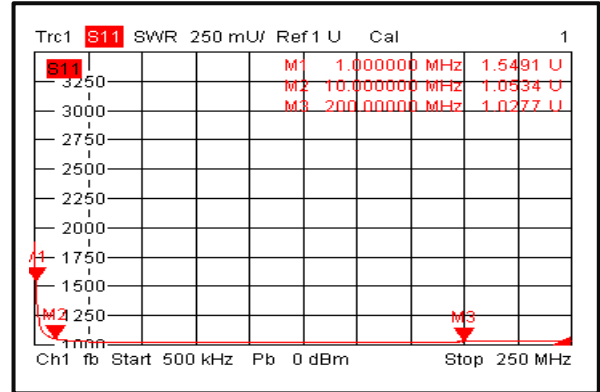


Typical Performance Plots

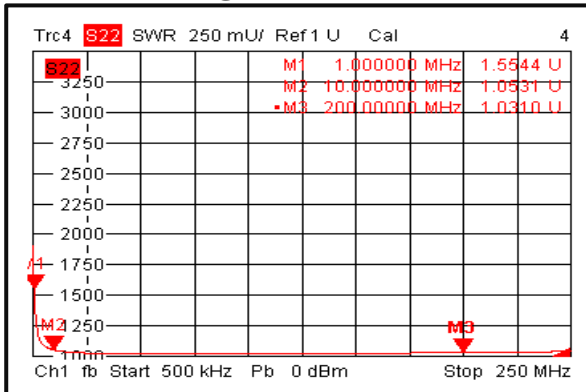
Insertion Loss @+25°C



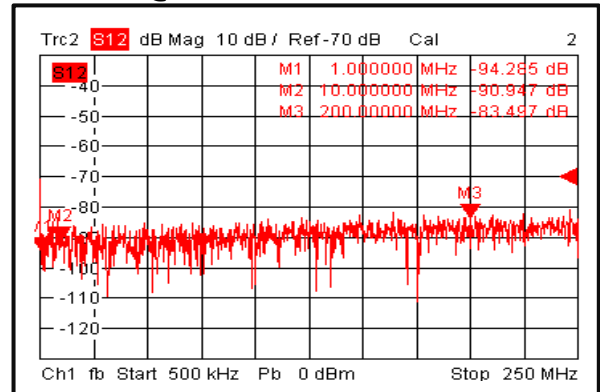
Input VSWR @+25°C



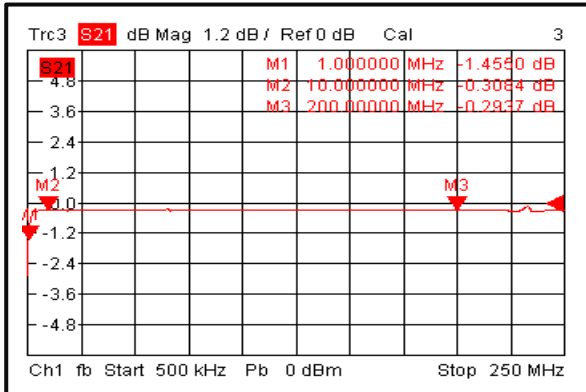
Output VSWR @+25°C



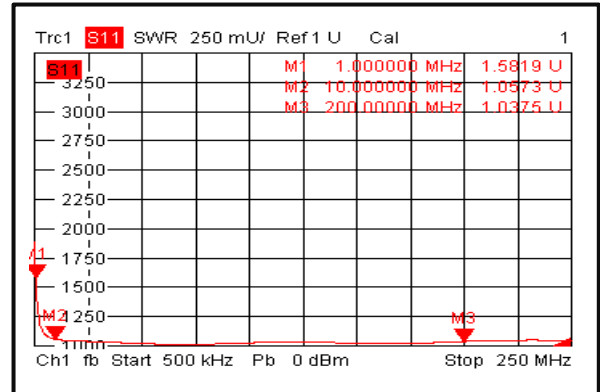
Isolation @+25°C



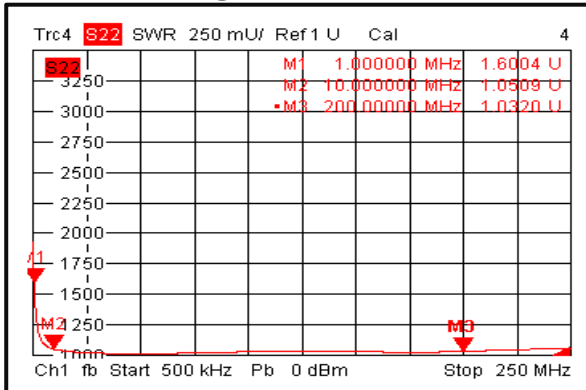
Insertion Loss @-45°C



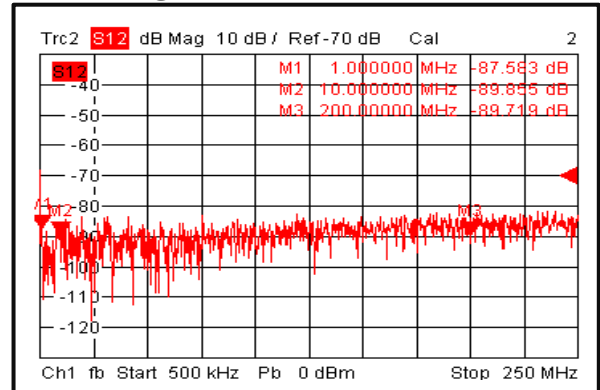
Input VSWR @-45°C



Output VSWR @-45°C



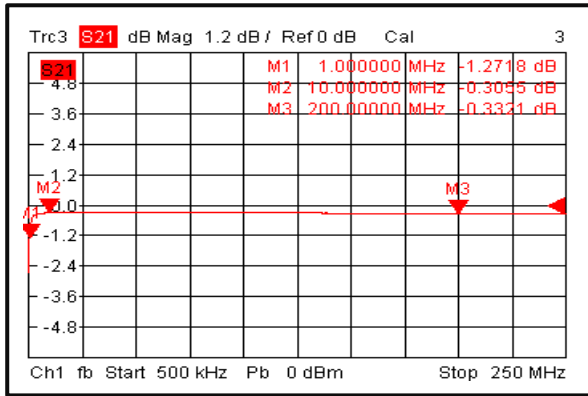
Isolation @-45°C



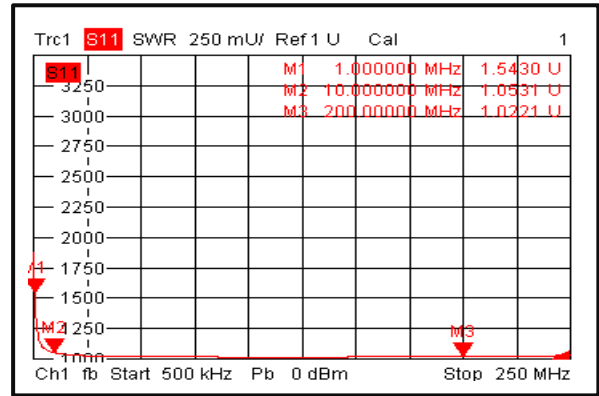
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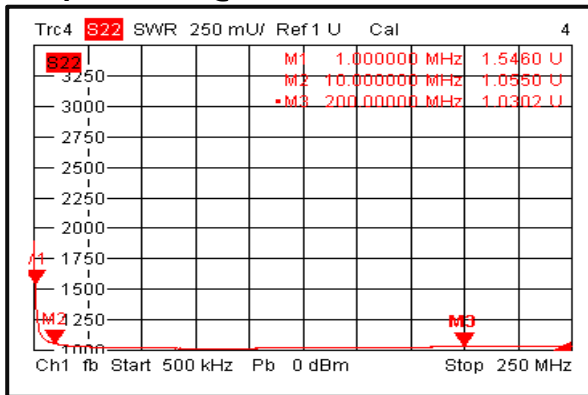
Insertion Loss @+85°C



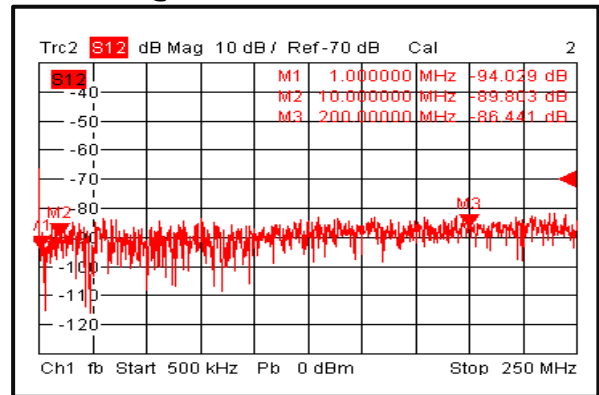
Input VSWR @+85°C



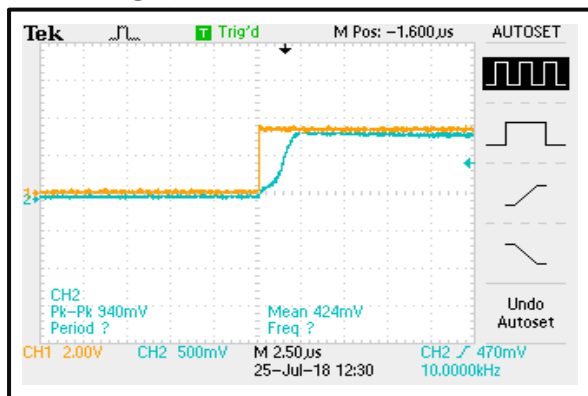
Output VSWR @+85°C



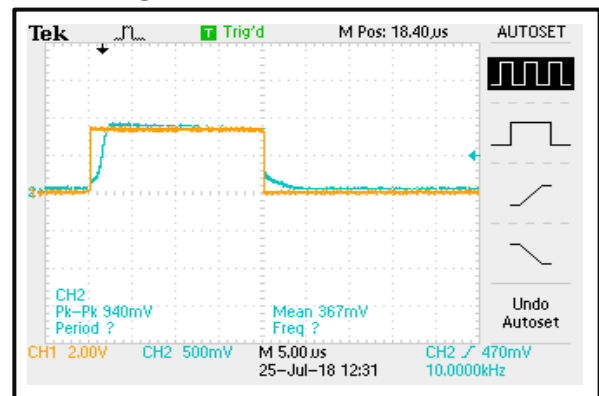
Isolation @+85°C



Switching Speed



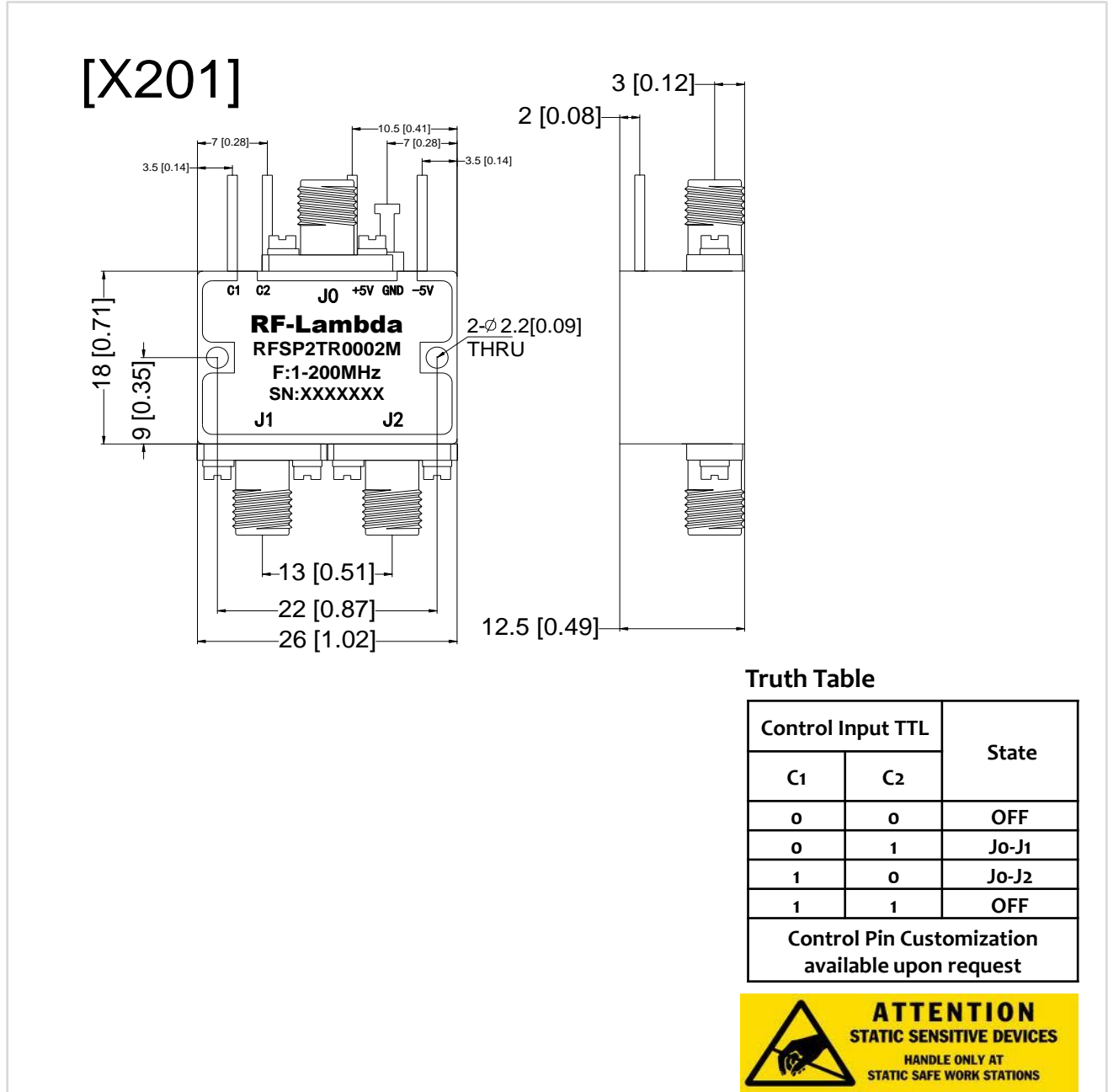
Switching Speed





Outline Drawing:

All Dimensions in mm [inches]



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