

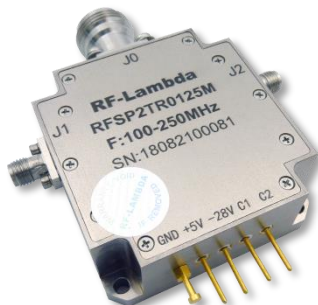


RF-LAMBDA

LEADER OF RF BROADBAND SOLUTIONS

RFSP2TR0125M

Reflective Coaxial SP2T Switch 100 – 250MHz



Features

- Wide Band Operation 100-250MHz
- 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, $T_A = +25^{\circ}\text{C}$, $V_{dd} = +5\text{V}/-28\text{V}$, $TTL = 0 / +5\text{V}$

Description	PN: RFSP2TR0125M			
	SP2T Reflective Switch			
	High Power Cold Switching			
Parameters	Min	Typ	Max	Units
Frequency Range	100-250			MHz
Insertion Loss		0.4	0.8	dB
Insertion Loss Temperature Coefficient		0.003		dB/°C
Isolation	55	65		dB
Input VSWR		1.25	1.5	: 1
Output VSWR		1.25	1.5	: 1
RF Input Power (5us Pulse width, 10% duty cycle)			300	W
DC Power Dissipation		1		W
0.1dB Compression Point (P 0.1dB)		51		dBm
IIP3		50		dbm
Switching Speed		1.2		us
Weight	4.23			Ounces
Impedance	50			Ω
Bias Current (+5V/-28V)	200/50			mA
Input / Output Connectors	N-Female/SMA-Female			
Finish	Nickel Plated			
Material	Aluminum			
Sealing	Epoxy Sealed (Standard) Hermetically Sealed (Optional)			

Reflective Coaxial Single Pole Double Throw Switch 100 – 250MHz



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Absolute Maximum Ratings

Biasing	+5V/-28V±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
RFSP2TR0125M	EAR99	SP2T 100-250MHz 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	MIL-STD-883	Standard: 30,000 Ft (Epoxy Sealed Controlled Environment) Optional: Hermetically Sealed (60,000 ft. 1.0 PSI min)
Hermetically Sealed (Optional)		MIL-STD-883 (For Hermetically Sealed Units)

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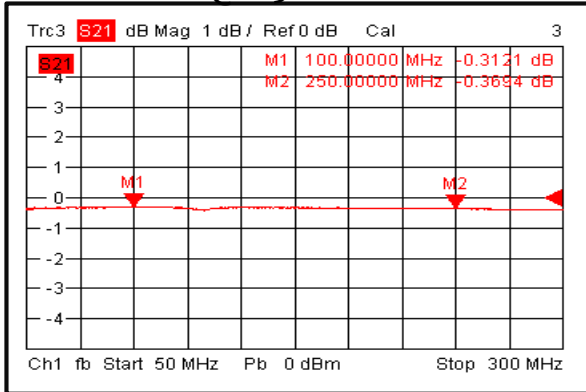
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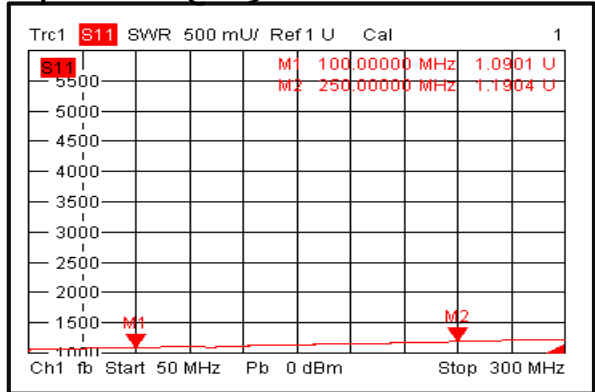
RFSP2TR0125M

Typical Performance Plots

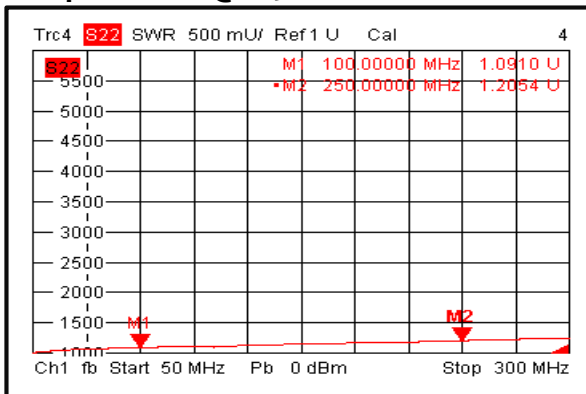
Insertion Loss @+25°C



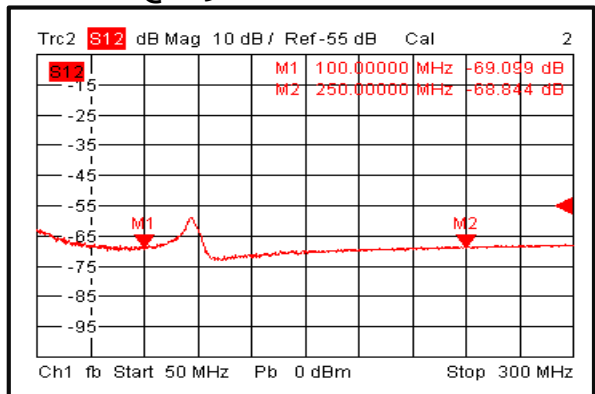
Input VSWR @+25°C



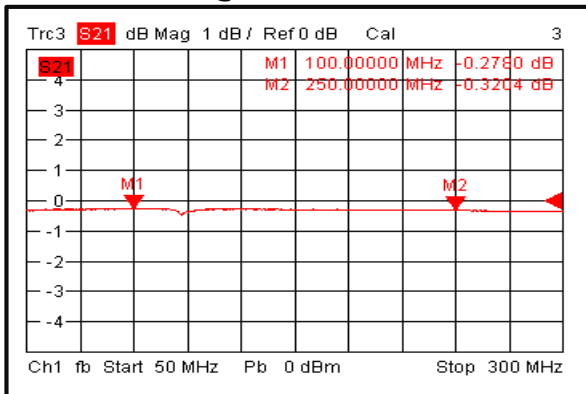
Output VSWR @+25°C



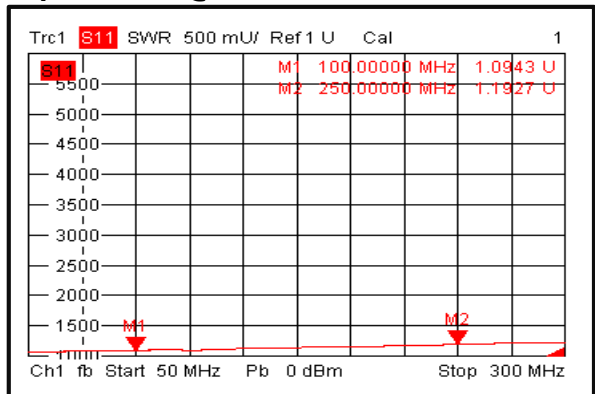
Isolation @+25°C



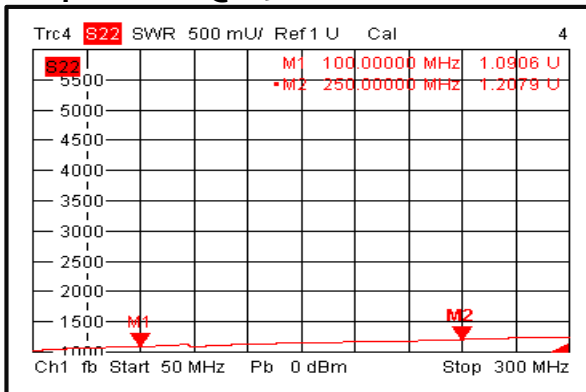
Insertion Loss @-45°C



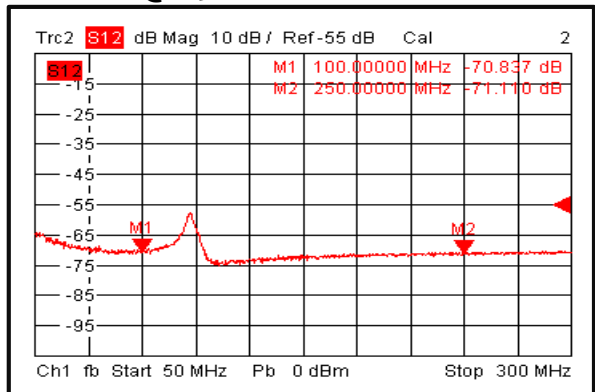
Input VSWR @-45°C



Output VSWR @-45°C



Isolation @-45°C



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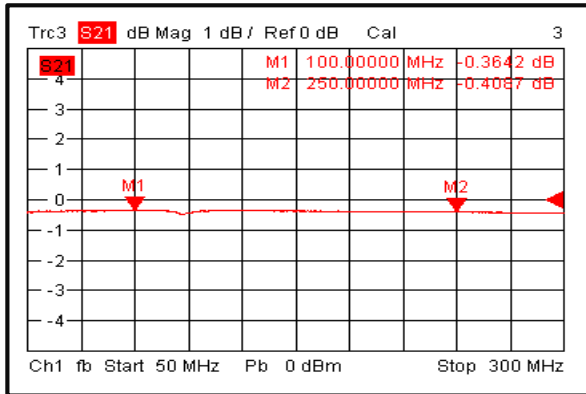
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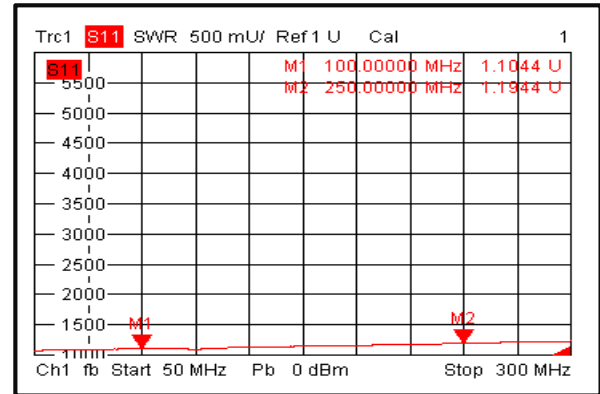
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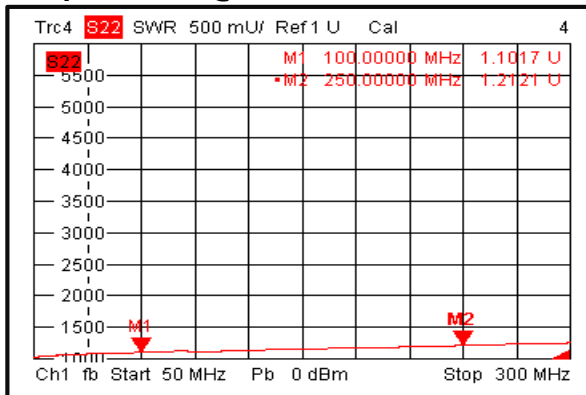
Insertion Loss @+85°C



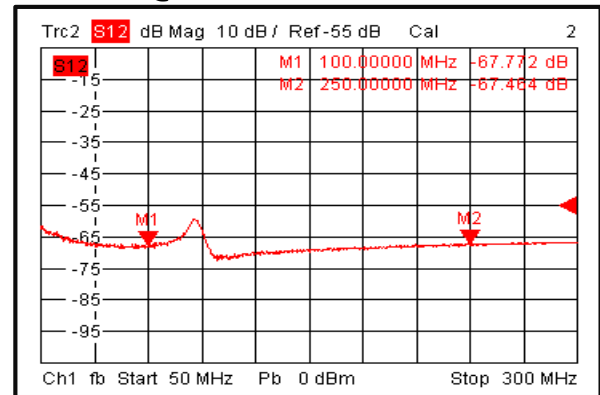
Input VSWR @+85°C



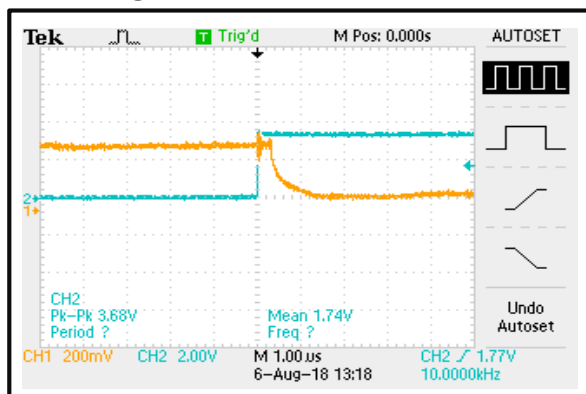
Output VSWR @+85°C



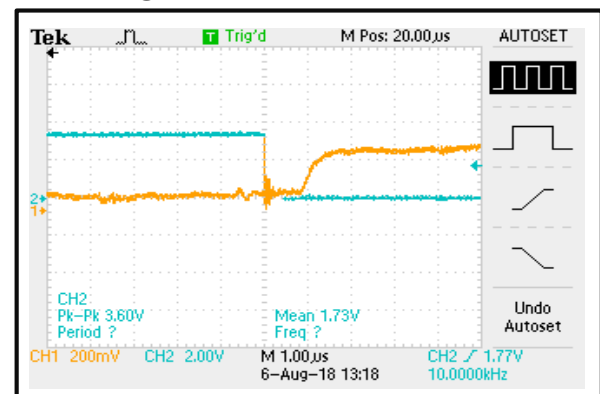
Isolation @+85°C



Switching Speed



Switching Speed

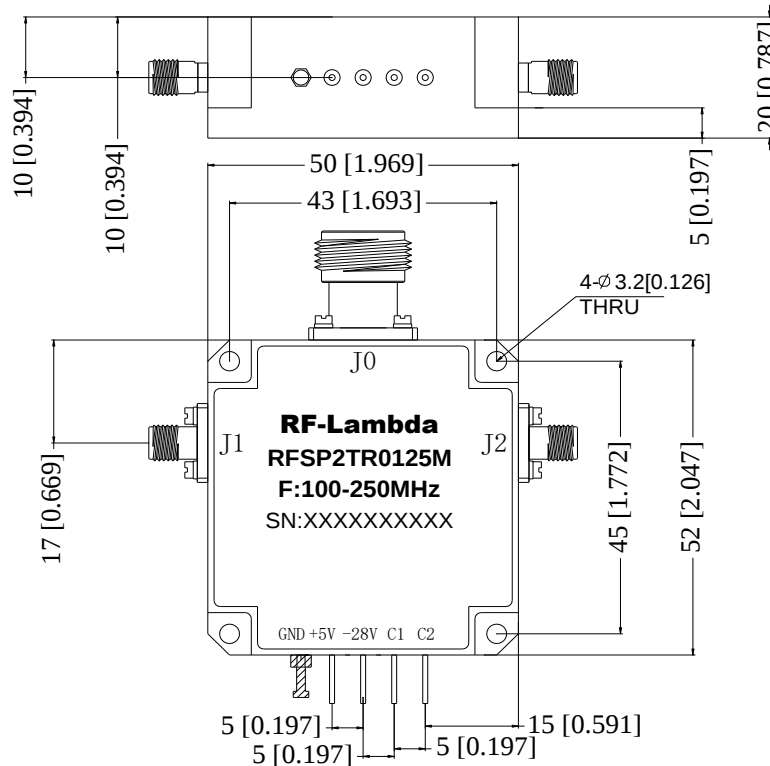




Outline Drawing:

All Dimensions in mm [inches]

[X207]



Truth Table

Control Input TTL		Signal Path State
C2	C1	
0	0	OFF
0	1	J0-J1
1	0	J0-J2
1	1	Not Used
Control Pin Customization available upon request		



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