Reflective Coaxial SP2T Switch
65 – 400MHz

Note: The photo is for illustration purposes only. Please refer to the outline drawing.

RoHS Compliant

Features

- Wide Band Operation 65-400MHz
- TTL compatible driver included
- Fast Switching Speed
- Low Insertion Loss and High Isolation

Typical Applications

- Wireless Infrastructure
- Military & Aerospace
- Test & Measurement

Electrical Specifications, TA = +25°C, Vdd = +5V/-28V, TTL = 0 / +5V

Description	PN: RFSP2TR65400M SP2T Reflective Switch High Power Cold Switching			
Parameters	Min	Typ	Max	Units
Frequency Range		65 - 400		MHz
Insertion Loss		0.5	0.55	dB
Insertion Loss Temperature Coefficient		0.003		dB/°C
Isolation	60	65		dB
Input VSWR		1.2	1.3	: 1
Output VSWR		1.2	1.3	: 1
RF Input Power (CW)			150	W
DC Power Dissipation		1.3		W
0.1dB Compression Point (P0.1dB)		52		dBm
IIP3		55		dBm
Switching Speed		0.8	1.2	us
Weight		1.41		ounces
Impedance		50		Ω
Bias Current (+5V/-28V)		250/50		mA
Input / Output Connectors	SMA - Female			
Finish	Gold Plated			
Material	Aluminum			
Seal	Hermetically Sealed (Optional)			

Reflective Coaxial Single Pole Double Throw Switch 65 – 400MHz

Absolute Maximum Ratings

Biasing	+5V±10%/-28V±10%
TTL Control Voltage	0~0.8V/2.8~5V

Ordering Information

Part No.	ECCN	Description
RFSP2TR65400M	EAR99	SP2T 65-400MHz PIN Diode Switch

Notes:

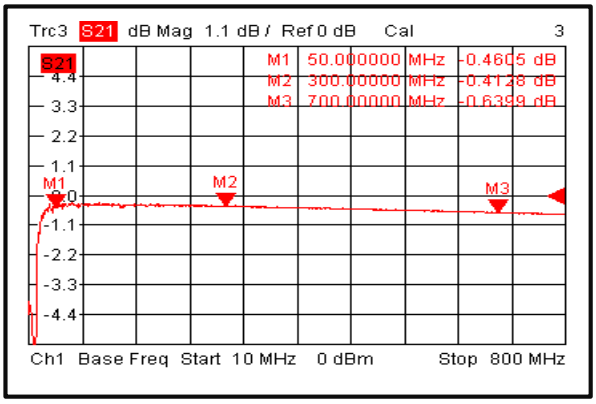
- TTL pins cannot be connected to the negative voltage otherwise the internal driver will be damaged.
- Cold Switching: Before changing any TTL signal(s), the RF input power must be blanked or the switch could be damaged.

Environmental Specifications and Test Standards

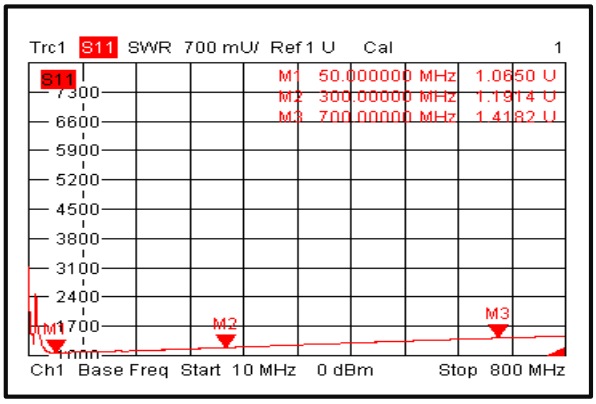
Parameter	Standard	Description
Operational Temperature	MIL-STD-39016	-45℃~+85℃ (Case Temperature)
Storage Temperature		-50℃~+125℃
Thermal Shock		1 Hour@ -45℃ → 1 Hour @ +85℃ (5 Cycles)
Random Vibration		Acceleration Spectral Density 6 (m/s) Total 92.6 RMS
Electrical & Temperature Burn In		Temperature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

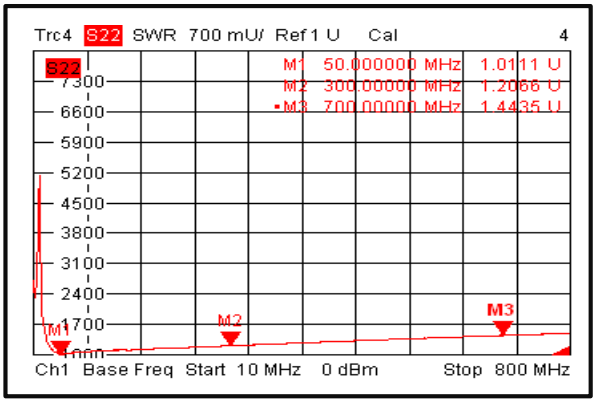
Insertion Loss @+25°C



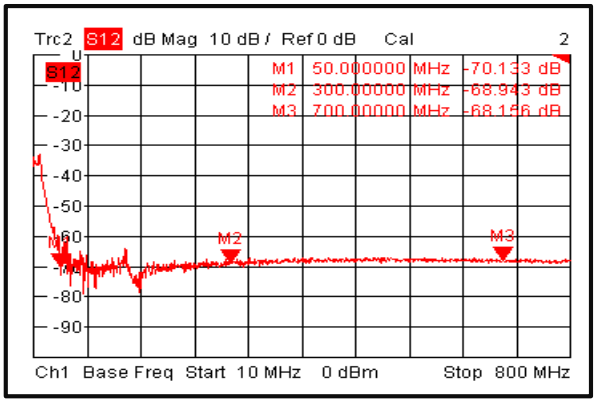
Input VSWR @+25°C



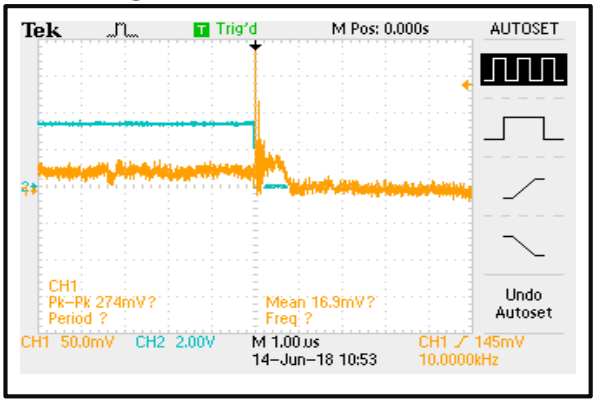
Output VSWR @+25°C



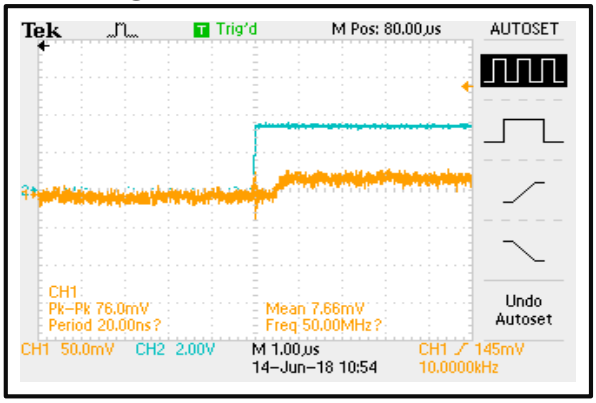
Isolation @+25°C



Switching Speed



Switching Speed



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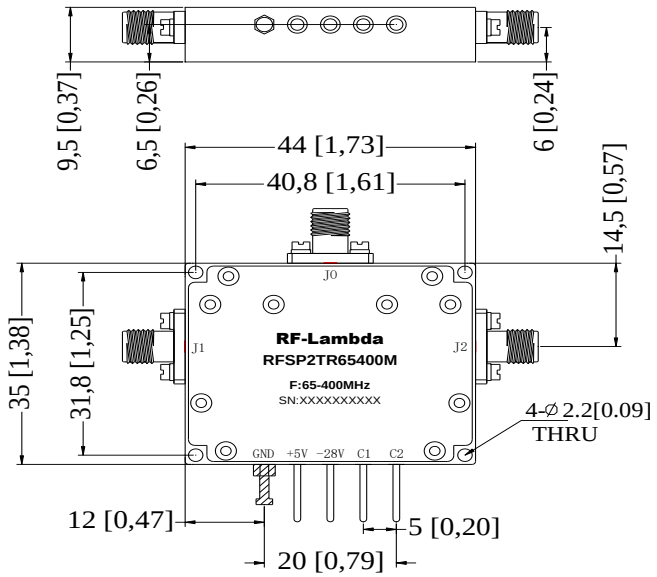
Outline Drawing:

All Dimensions in mm [inches]

[X206]



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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