



### Reflective Coaxial SP2T Switch 65 – 400MHz



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



#### Features

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

#### Typical Applications

- Wireless Infrastructure
- Military and Aerospace
- Test and Measurement

Electrical Specifications,  $T_A = +25\text{ }^\circ\text{C}$ ,  $V_{dd} = +5\text{V}/-28\text{V}$ ,  $TTL = 0 / +5\text{V}$

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 (Po.1dB)		52		dBm
IIP3		55		dBm
Switching Speed		0.8	1.2	us
Weight	1.41			ounces
Impedance	50			$\Omega$
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**

Biassing	+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.

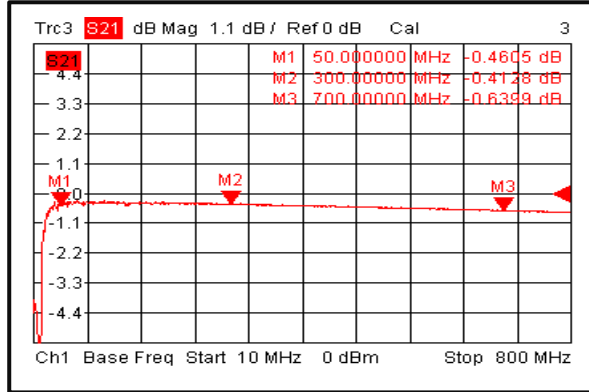
**Environmental Specifications and Test Standards**

Parameter	Standard	Description
Operational Temperature	MIL-STD-39016	-45°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)

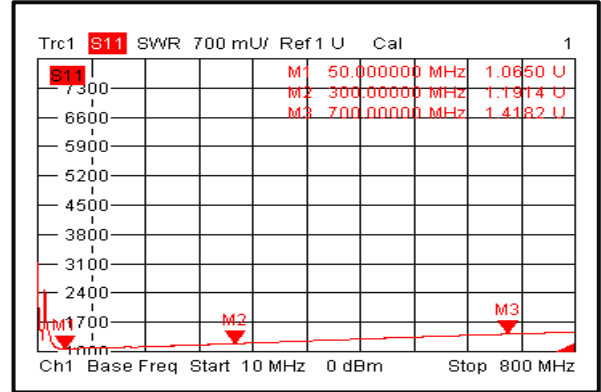


Typical Performance Plots

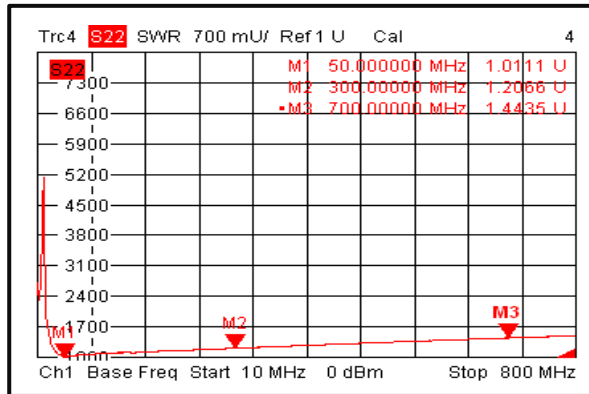
**Insertion Loss @+25°C**



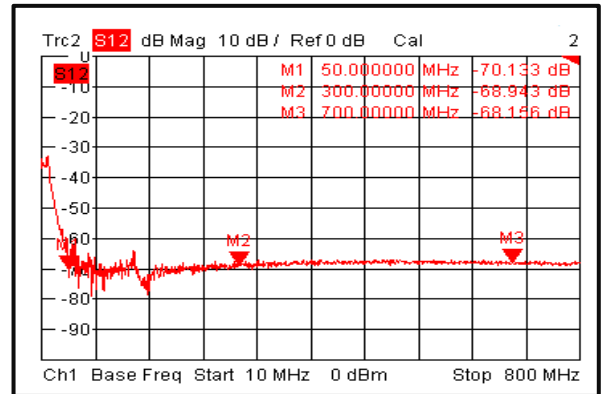
**Input VSWR @+25°C**



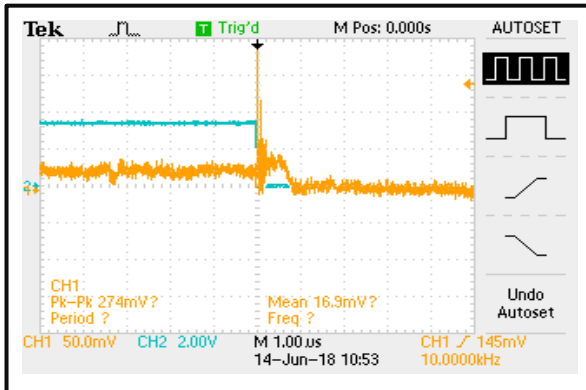
**Output VSWR @+25°C**



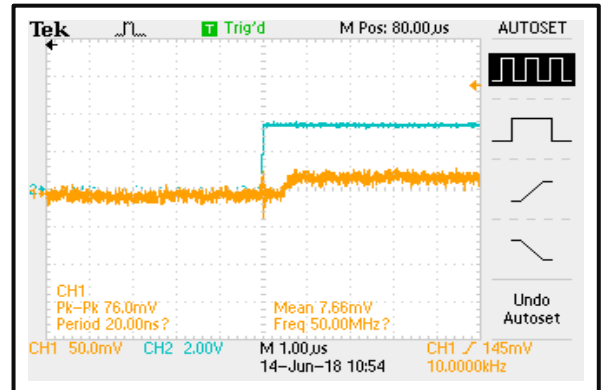
**Isolation @+25°C**



**Switching Speed**



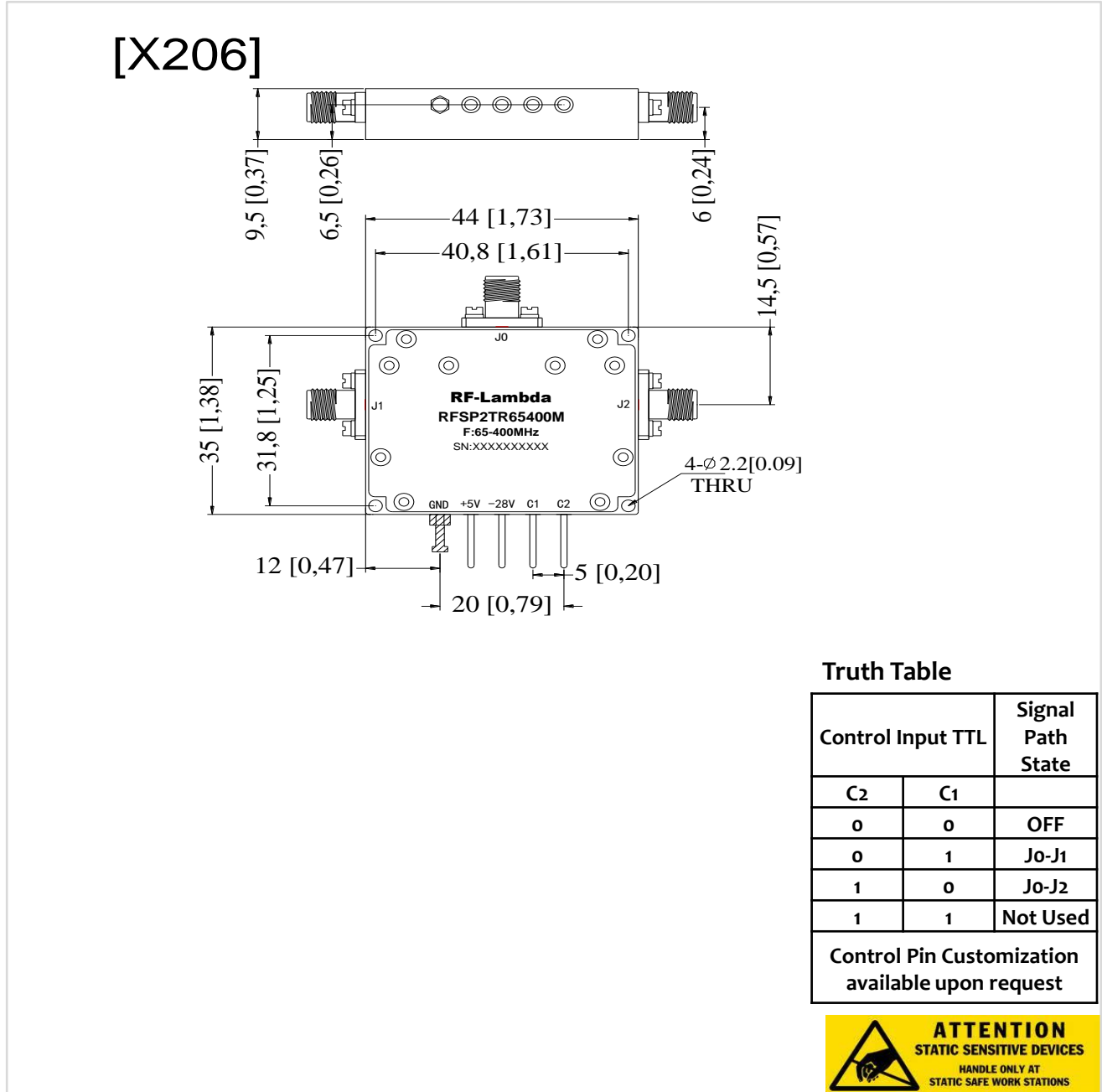
**Switching Speed**





### Outline Drawing:

All Dimensions in mm [inches]



### Truth Table

Control Input TTL		Signal Path State
C2	C1	
0	0	OFF
0	1	Jo-J1
1	0	Jo-J2
1	1	Not Used

Control Pin Customization available upon request



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