



### Reflective Coaxial SP2T Switch 0.001 - 75GHz



#### Features

- Ultra Wide Band Operation 0.001-75GHz
- Fast Switching Speed
- Low Insertion Loss and High Isolation

#### Typical Applications

- Wireless Infrastructure
- Military and Aerospace
- Test and Measurement

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

Description	PN: RFSP2TR0075G			
	SP2T Reflective Switch			
	Low Power Cold Switching			
Parameter	Min.	Typ.	Max.	Units
Frequency Range	0.001-75			GHz
Insertion Loss		6.0	7.0	dB
Insertion Loss Temperature Coefficient		0.003		dB/°C
Isolation	25	30		dB
Input VSWR		2.0	2.5	: 1
Output VSWR		2.0	2.5	: 1
RF Input Power (CW)			15	dBm
DC Power Dissipation		0.5		W
0.1dB Compression Point (Po.1dB)		15		dBm
IIP3		45		dBm
Switching Speed		250	500	ns
Weight	/			ounces
Impedance	50			$\Omega$
Bias Current (+5V / -5V)	80/50			mA
Input / Output Connectors	1.85mm – Female (Standard) 1.0mm -Female (Optional)			
Finish	Gold Plated			
Material	Aluminum			
Sealing	Hermetically Sealed (Optional)			

Reflective Coaxial Single Pole Double Throw Switch 0.001 - 75GHz



**Absolute Maximum Ratings**

Biasing	+5V±10%/-5V±10%
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**Ordering Information**

Part No.	ECCN	Description
RFSP2TR0075G	EAR99	SP2T 0.001-75GHz PIN Diode Switch

**Note:** TTL pins cannot be connected to the negative voltage otherwise the internal driver will be damaged.

**Environmental Specifications and Test Standards**

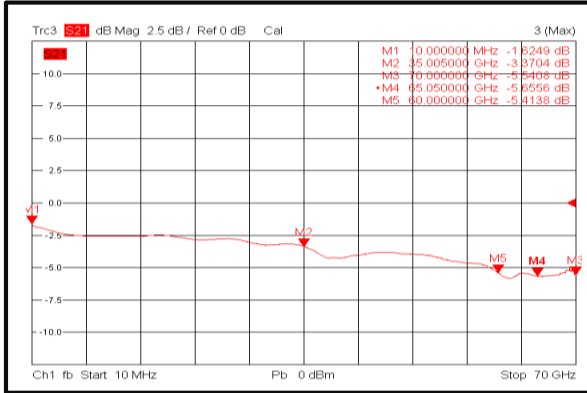
Parameter	Standard	Description
Operational Temperature	MIL-STD-39016	-45°C~+85°C (Case Temperature)
Storage Temperature		-50°C~+125°C
Thermal Shock		1 Hour@ -45°C → 1 Hour @ +85°C (5 Cycles)
Random Vibration		Acceleration Spectral Density 6 (m/s) Total 92.6 RMS
Electrical & Temperature Burn In		Temperature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

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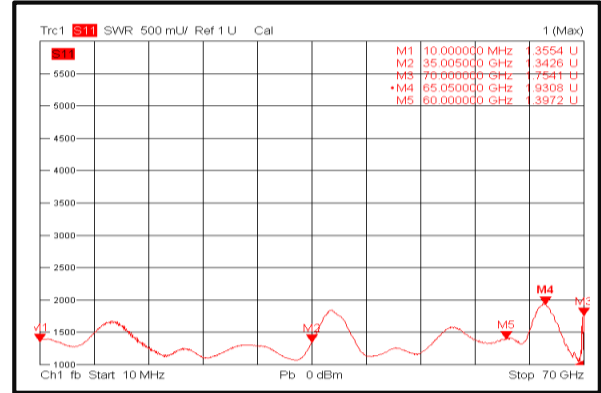


Typical Performance Plots

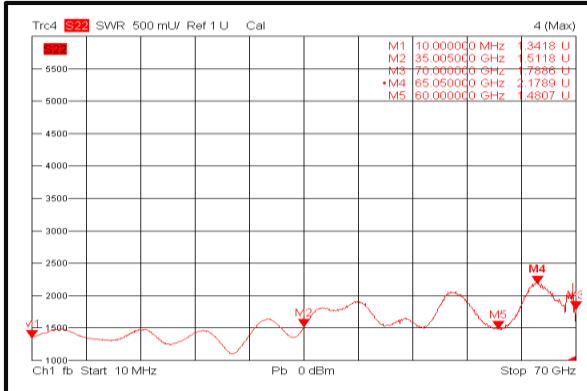
**Insertion Loss**



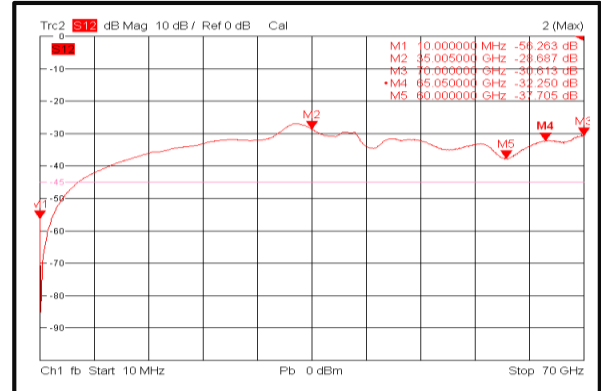
**Input VSWR**



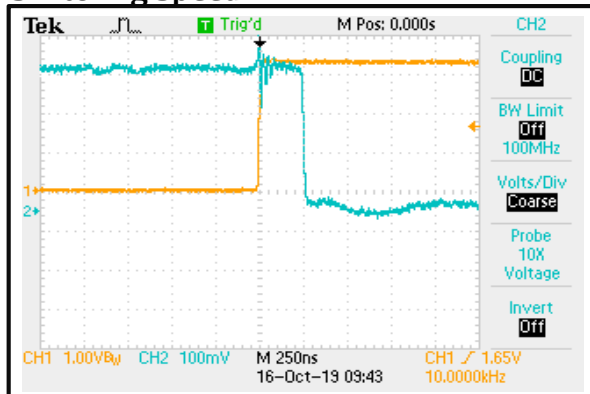
**Output VSWR**



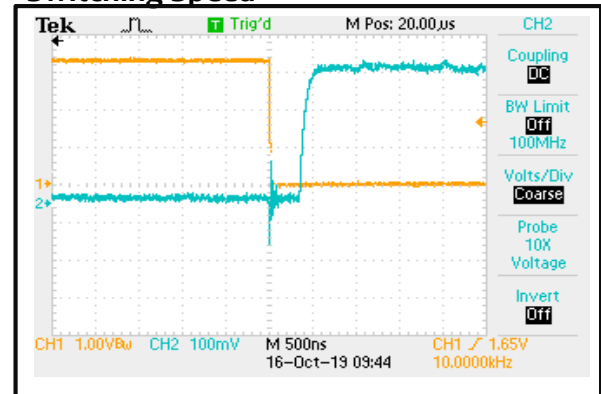
**Isolation**



**Switching Speed**



**Switching Speed**

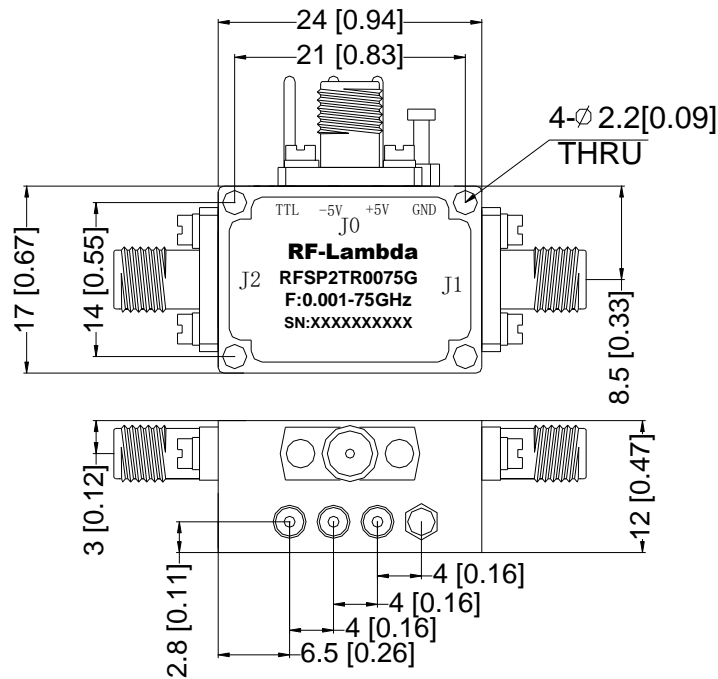


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**Outline Drawing:**

All Dimensions in mm [inches]



**Truth Table**

TTL Control Voltage	Low(0)=0~0.8V
	High(1)=2.8~5V
Control Input TTL	Signal Path State
0	J0-J1
1	J0-J2
Control Pin Customization available upon request	



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