



## Absorptive Coaxial SP2T Switch 8 - 40GHz



### Features

- Wide Band Operation 8-40GHz
- TTL compatible driver included
- Fast Switching Speed
- Low Insertion Loss and High Isolation
- Customization available upon request

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

Description	PN: RFSP2TA0840G									
	SP2T Absorptive Switch									
	Low Power Cold Switching									
Parameters	Min	Typ	Max	Min	Typ	Max	Min	Typ	Max	Units
Frequency Range	8-18			18-30			30-40			GHz
Insertion Loss		2.2	3		3.0	4		3.5	4.5	dB
Insertion Loss Temperature Coefficient		0.003			0.003			0.003		dB/°C
Isolation	55	65		50	60		45	50		dB
Input VSWR		1.5	2		1.8	2		2	2.5	: 1
Output VSWR		2	2.5		2.5	3		2.5	3	: 1
RF Input power			+23			+23			+23	dBm
DC Power Dissipation		0.5			0.5			0.5		W
0.1dB Compression Point ( $P_{0.1dB}$ )		23			23			23		dBm
IIP <sub>3</sub>		55			50			48		dBm
Switching Speed	50									ns
Weight	0.35									ounces
Impedance	50									$\Omega$
Bias Current (+5V / -5V)	80/50									mA
Input / Output Connectors	2.92mm-Female									
Finish	Gold Plated									
Material	Aluminum									
Sealing	Hermetically Sealed (Optional)									



**Absolute Maximum Ratings**

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

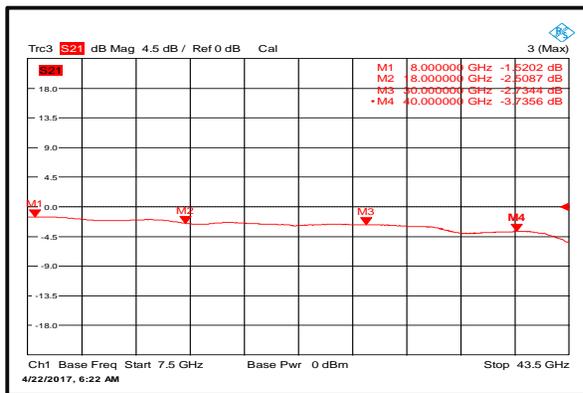
**Note:** TTL pins cannot be connected to the negative voltage otherwise the internal driver will be damaged.

**Ordering Information**

Part No.	ECCN	Description
RFSP2TA0840G	EAR99	SP2T 8-40GHz PIN Diode Switch

**Typical Performance Plots**

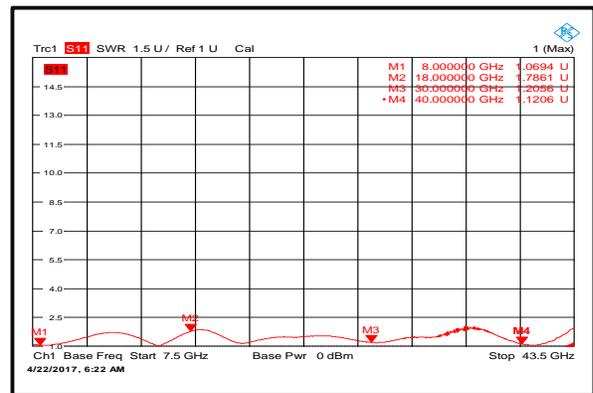
**Insertion Loss @+25°C**



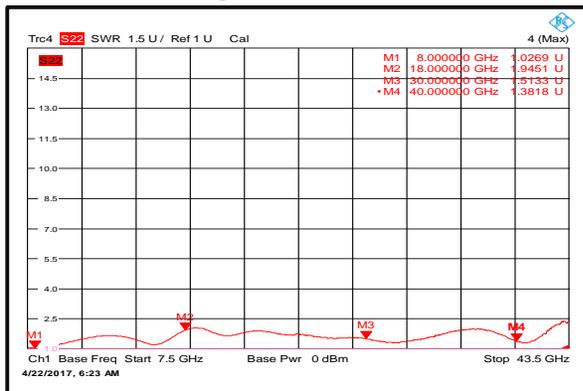
**Environmental Specifications**

Operational Temperature (°C)	-45 ~ +85
Storage Temperature (°C)	-50 ~ +125
Altitude	30,000 ft. (Epoxy Sealed Controlled environment)
	60,000 ft. 1.0psi min (Hermetically Sealed Uncontrolled environment) (Optional)
Vibration	25g RMS (15 degrees 2KHz) endurance, 1 hour per axis
Humidity	100% RH at 35c, 95%RH at 40°C
Shock	20G for 11msec half sine wave, 3 axis both directions

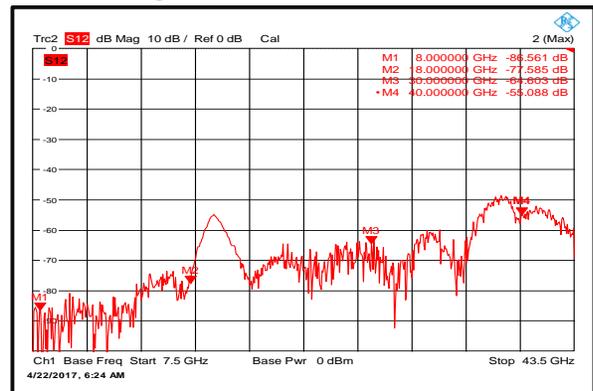
**Input VSWR @+25°C**



**Output VSWR @+25°C**



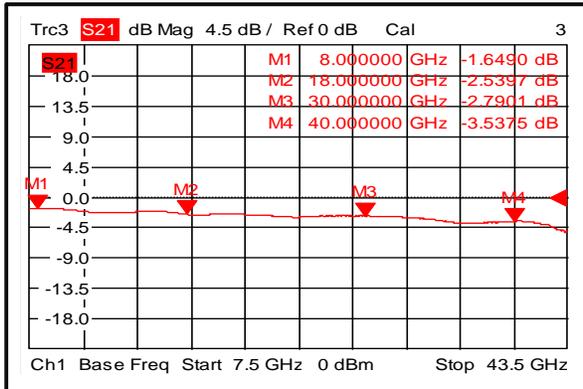
**Isolation @+25°C**



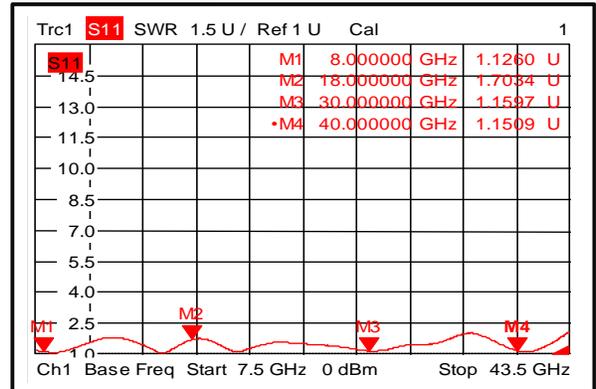
**AbsorptiveCoaxial Single Pole Double Throw Switch 8 - 40GHz**



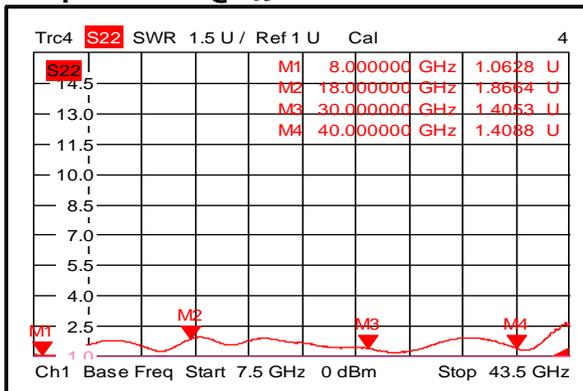
### Insertion Loss @-45°C



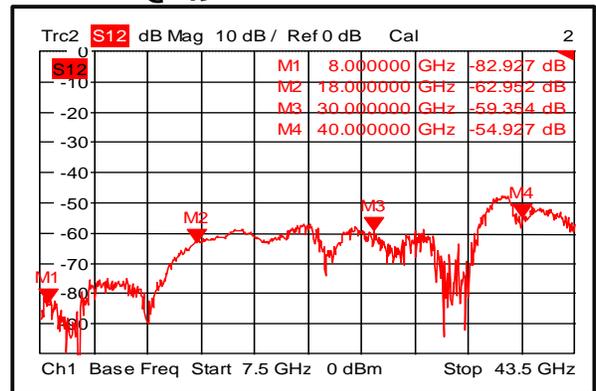
### Input VSWR @-45°C



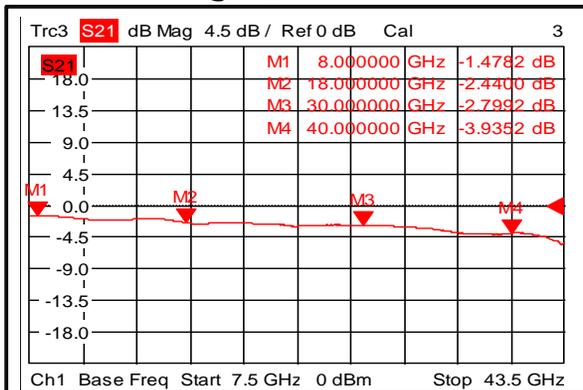
### Output VSWR @-45°C



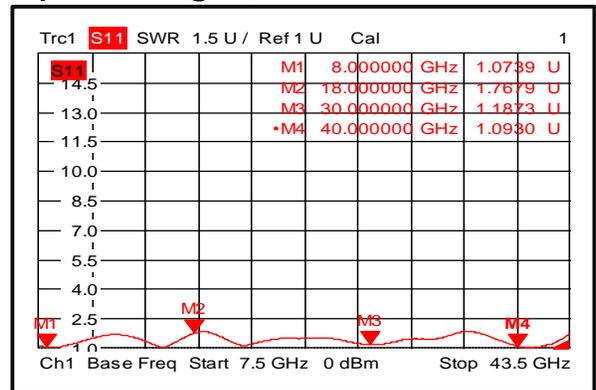
### Isolation @-45°C



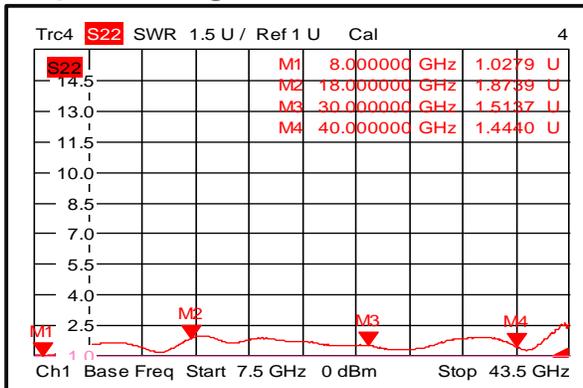
### Insertion Loss @+85°C



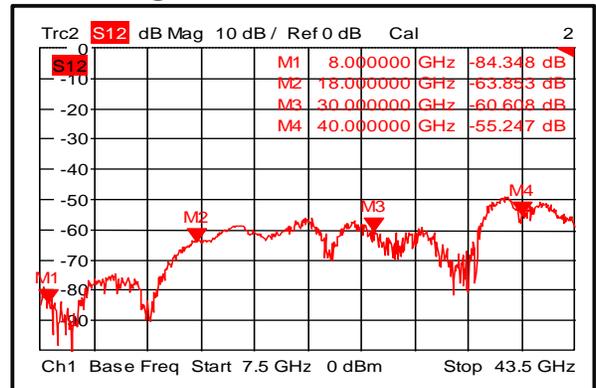
### Input VSWR @+85°C



### Output VSWR @+85°C

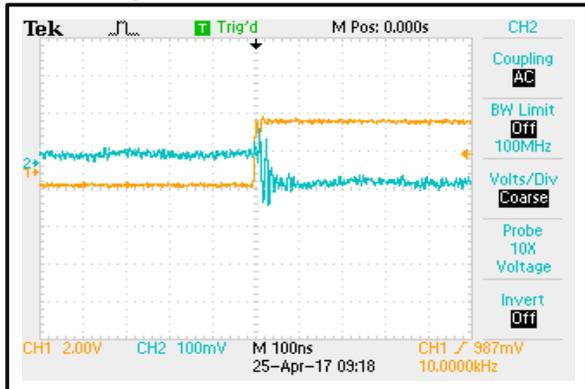


### Isolation @+85°C

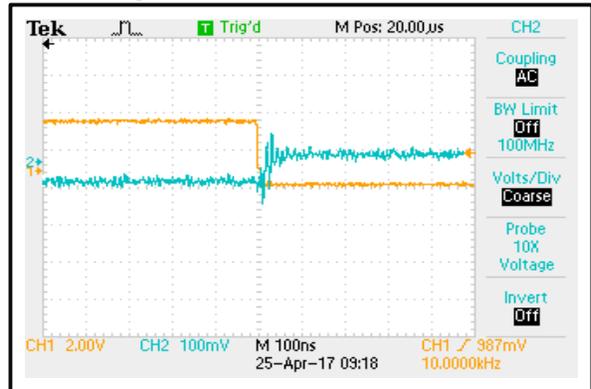




**Switching Speed**



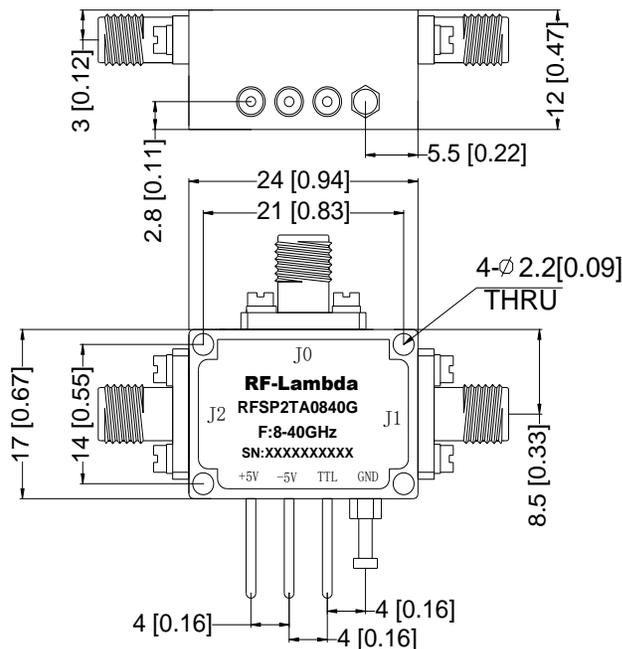
**Switching Speed**



**Outline Drawing:**

All Dimensions in mm [inches]

[X202]



**Truth Table**

Control Input TTL	Signal Path State
0	J0-J2
1	J0-J1
Control Pin Customization available upon request	



**Important Notice**

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**Absorptive Coaxial Single Pole Double Throw Switch 8 - 40GHz**