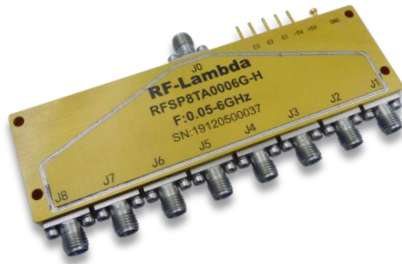




**Hermetically Sealed  
Absorptive Coaxial SP8T Switch  
0.05 - 6GHz**



Features

- Ultra Wide Band Operation 0.05-6GHz
- TTL compatible driver included
- Fast Switching Speed
- Low Insertion Loss and High Isolation

Typical Applications

- Wireless Infrastructure
- Test and Measurement
- Military and Aerospace

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

Description	PN: RFSP8TA0006G-H						
	SP8T Absorptive Switch						
	Low Power Cold Switching						
Parameters	Min	Typ	Max	Min	Typ	Max	Units
Frequency Range	0.05		2	2		6	GHz
Insertion Loss		1.6	2.0		2.8	3.2	dB
Insertion Loss Temperature Coefficient		0.003			0.003		dB/°C
Isolation	65	70		60	70		dB
Input VSWR		1.4	1.7		1.4	1.7	:1
Output VSWR		1.4	1.7		1.4	1.7	:1
RF Input Power			30			30	dBm
DC Power Dissipation		1.5			1.5		W
0.1dB Compression Point (Po.1dB)		30			30		dBm
IIP3		55			55		dBm
Switching Speed	500 Typ. 800Max.						ns
Weight	3.5 (Max.)						ounces
Impedance	50						Ω
Bias Current (+5V/-5V)	350/50						mA
Input / Output Connectors	SMA - Female						
Finish	Gold Plated						
Material	Aluminum						
Sealing	Hermetically Sealed (Laser Welded)						

Hermetically Sealed Absorptive Coaxial SP8T Switch 0.05-6GHz



**Absolute Maximum Ratings**

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

Part No.	ECCN	Description
RFSP8TA0006G-H	EAR99	SP8T 0.05-6GHz 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**

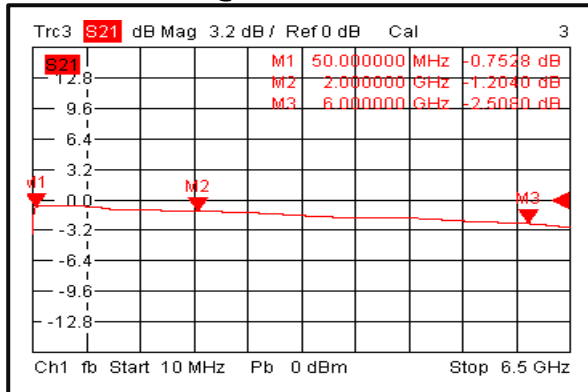
Parameter	Standard	Description
Operational Temperature	MIL-STD-39016	-45°C~+85°C (Case Temperature)
Storage Temperature		-50°C~+125°C
Thermal Shock		1 Hour@ -45°C → 1 Hour @ +85°C (5 Cycles)
Random Vibration		Acceleration Spectral Density 6 (m/s) Total 92.6 RMS
Electrical & Temperature Burn In		Temperature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

**Hermetically Sealed Absorptive Coaxial SP8T Switch 0.05-6GHz**

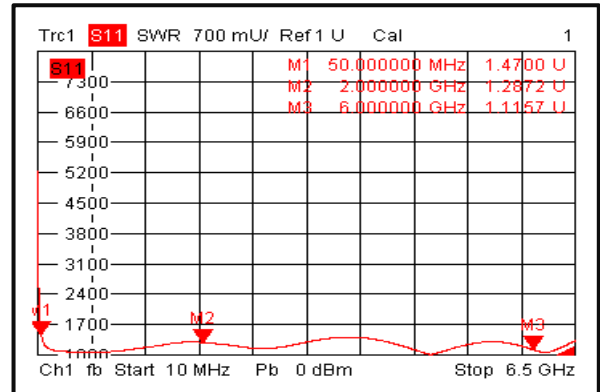


### Typical Performance Plots

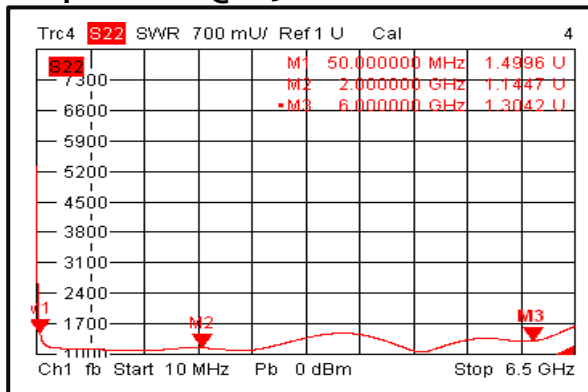
#### Insertion Loss @+25°C



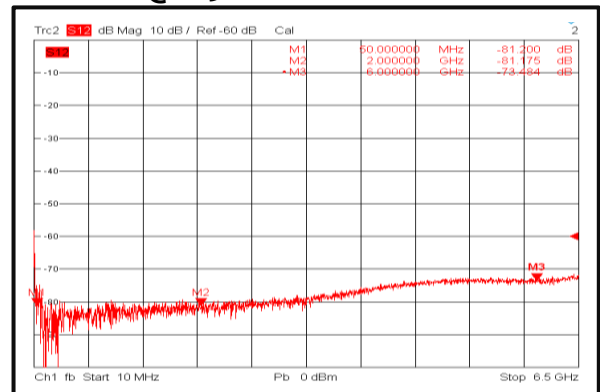
#### Input VSWR @+25°C



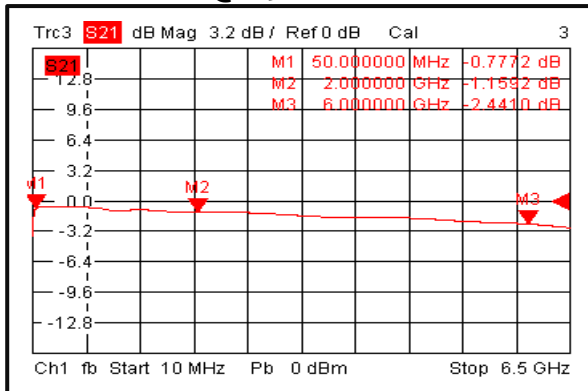
#### Output VSWR @+25°C



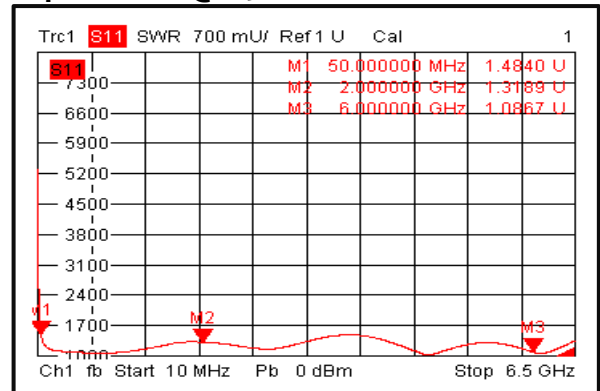
#### Isolation @+25°C



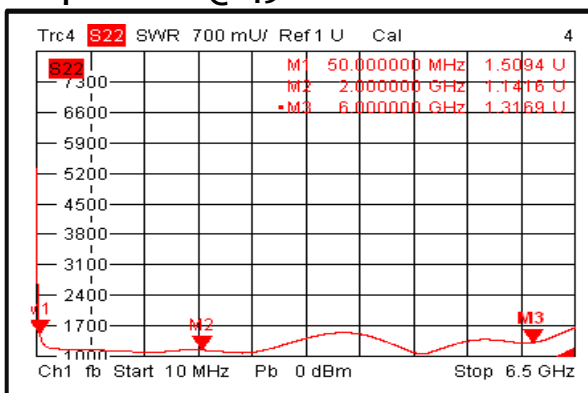
#### Insertion Loss @-45°C



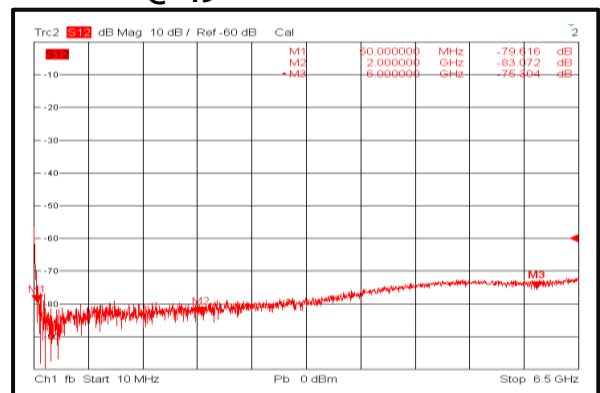
#### Input VSWR @-45°C



#### Output VSWR @-45°C



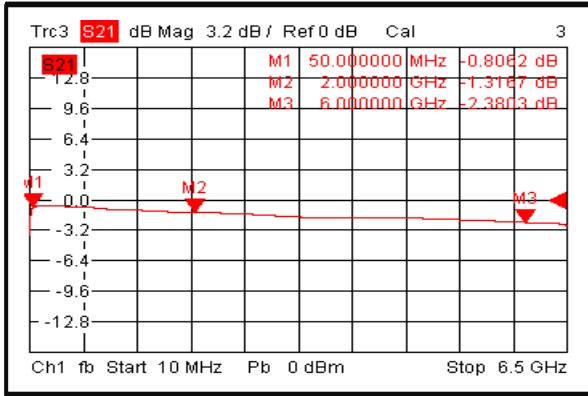
#### Isolation @-45°C



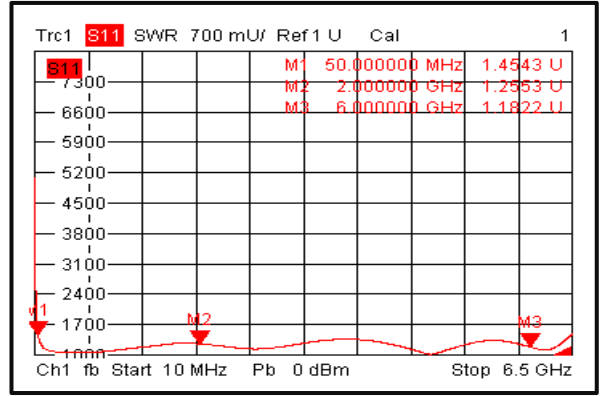
Hermetically Sealed Absorptive Coaxial SP8T Switch 0.05-6GHz



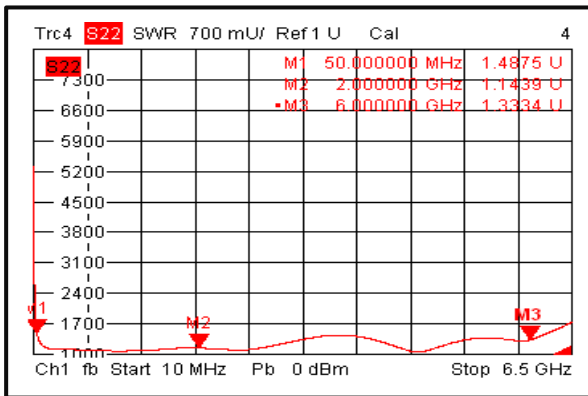
**Insertion Loss @+85°C**



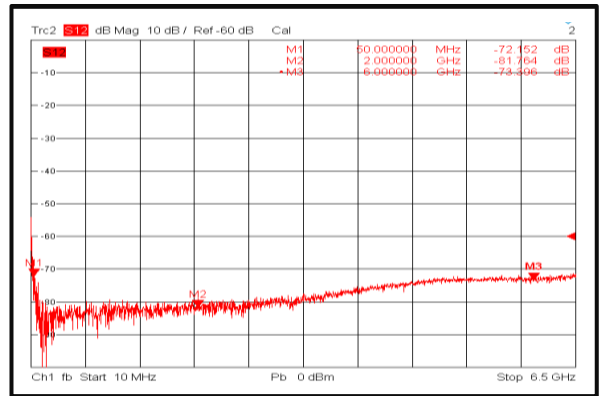
**Input VSWR @+85°C**



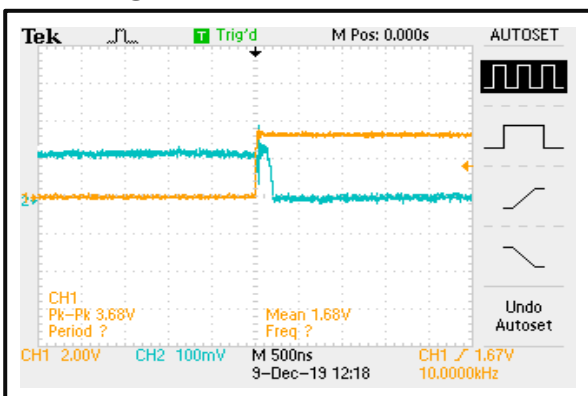
**Output VSWR @+85°C**



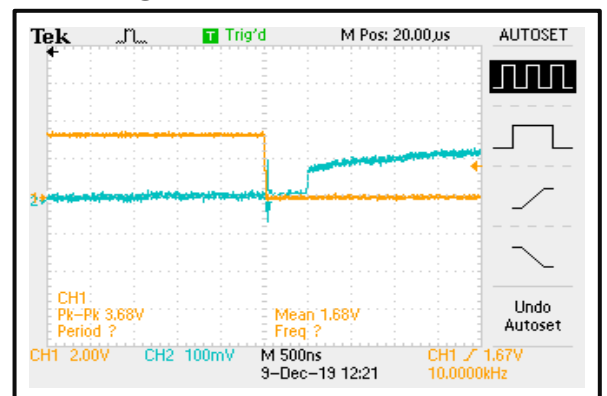
**Isolation @+85°C**



**Switching Speed**



**Switching Speed**

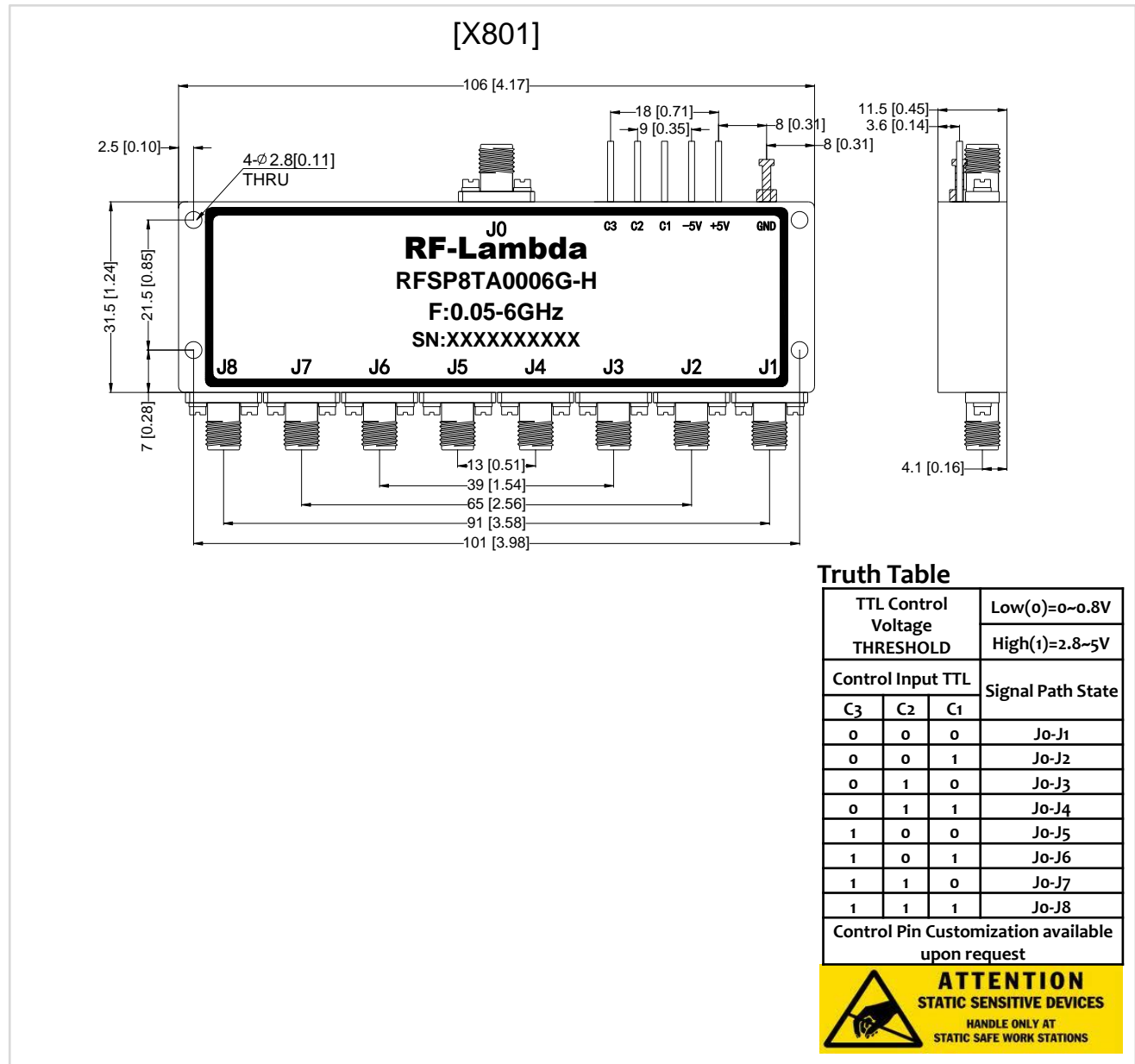


**Hermetically Sealed Absorptive Coaxial SP8T Switch 0.05-6GHz**



**Outline Drawing:**

All Dimensions in mm [inches]



**Hermetically Sealed Absorptive Coaxial SP8T Switch 0.05-6GHz**

**Important Notice**

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