



Absorptive Coaxial SP2T Switch 2 - 4GHz



Features

- Wide Band Operation 2-4GHz
- TTL compatible driver included
- Fast Switching Speed
- Low Insertion Loss and High Isolation
- Customization available upon request

Typical Applications

- Wireless Infrastructure
- Military and Aerospace
- Test and Measurement

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

Description	PN: RFSP2TA0204G5W			
	SP2T Absorptive Switch			
	High Power Cold Switching			
Parameter	Min	Typ.	Max	Units
Frequency Range	2		4	GHz
Insertion Loss		1.1	1.3	dB
Insertion Loss Temperature Coefficient		0.003		dB/°C
Isolation	70	85		dB
Input VSWR		1.3	1.5	: 1
Output VSWR		1.3	1.5	: 1
RF Input Power (CW)			5	W
DC Power Dissipation		1		W
0.1dB Compression Point (Po.1dB)		37		dBm
IIP3		55		dBm
Switching Speed		300	500	ns
Weight	1.8 Max.			ounces
Impedance	50			Ω
Bias Current (+5V)	200			mA
Input / Output Connectors	SMA - Female			
Finish	Gold Plated			
Material	Aluminum			
Sealing	Hermetically Sealed (Optional)			

Absorptive Coaxial Single Pole Double Throw Switch 2 - 4GHz



Absolute Maximum Ratings

Biassing Voltage	+5V±10%
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Ordering Information

Part No.	ECCN	Description
RFSP2TA0204G5W	EAR99	SP2T 2-4GHz 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.

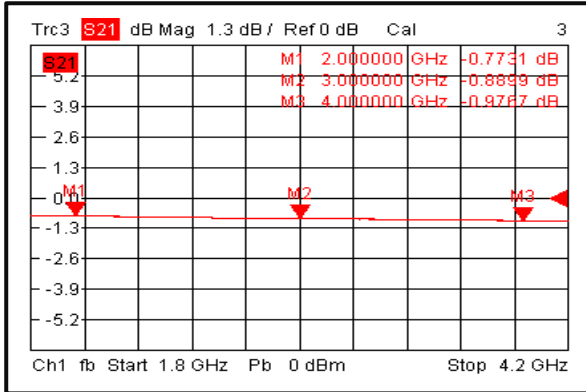
Environmental Specifications and Test Standards

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)

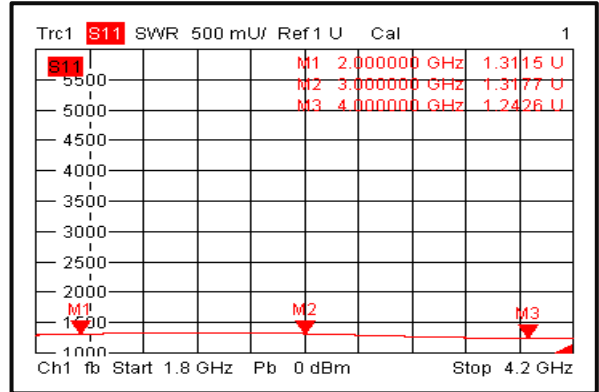


Typical Performance Plots

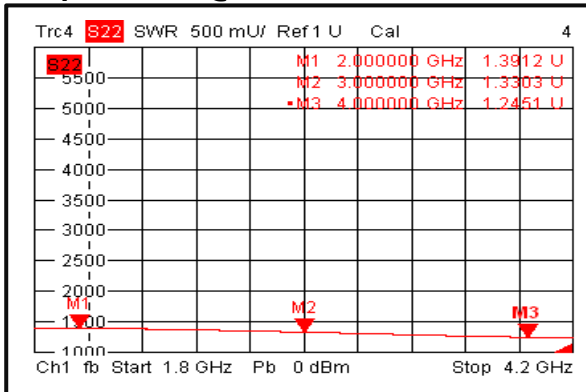
Insertion Loss @+25°C



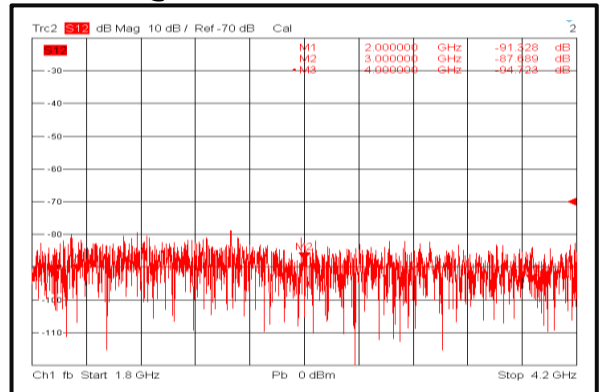
Input VSWR @+25°C



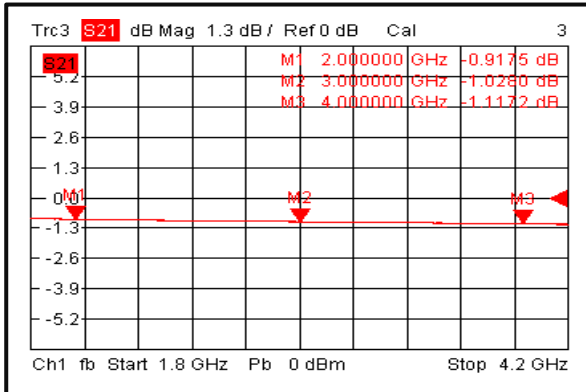
Output VSWR @+25°C



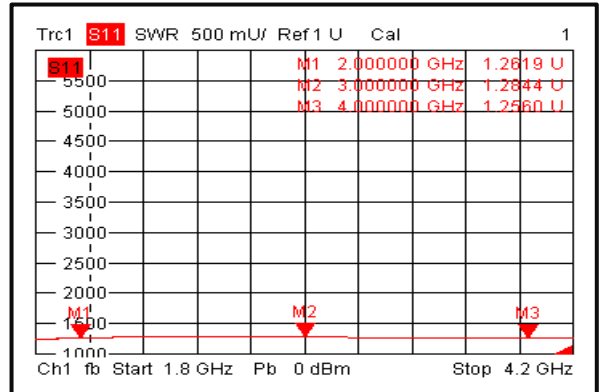
Isolation @+25°C



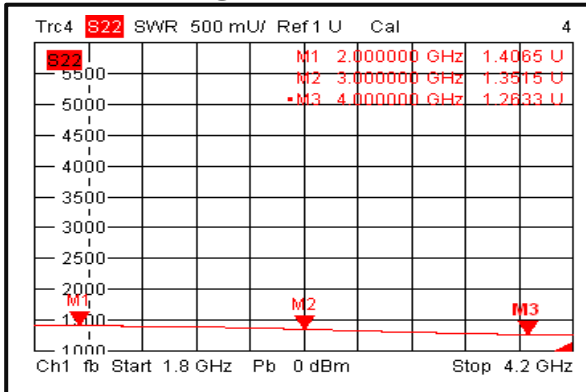
Insertion Loss @-45°C



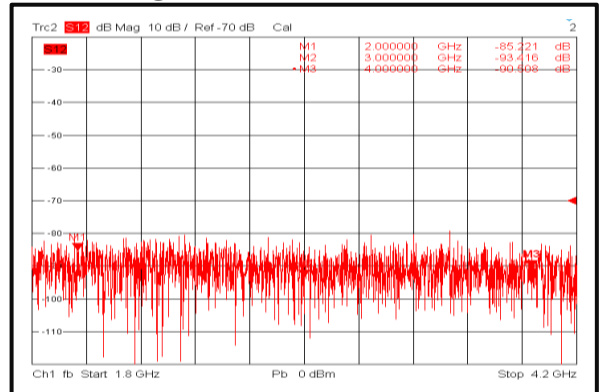
Input VSWR @-45°C



Output VSWR @-45°C

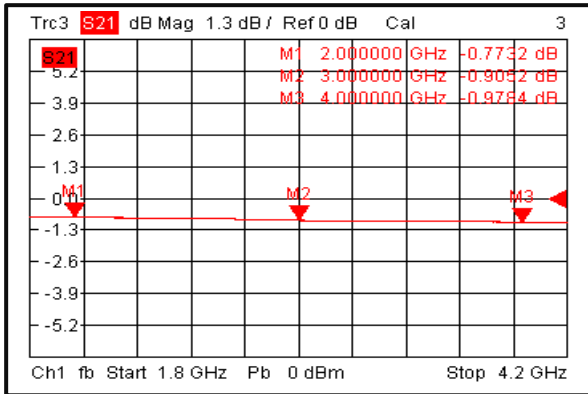


Isolation @-45°C

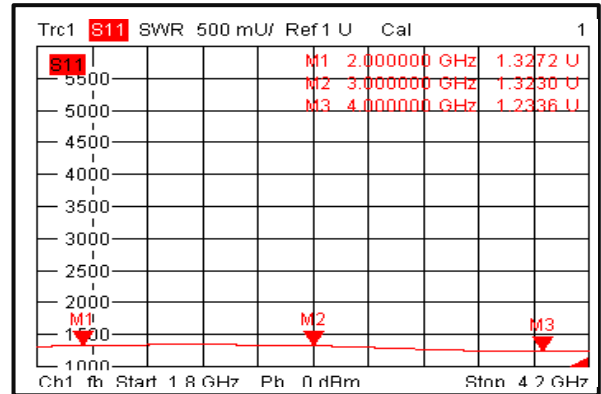




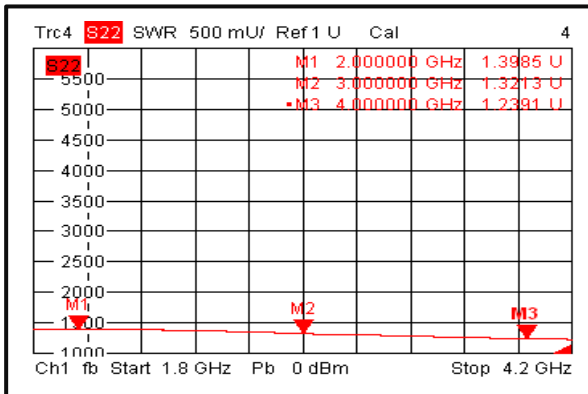
Insertion Loss @+85°C



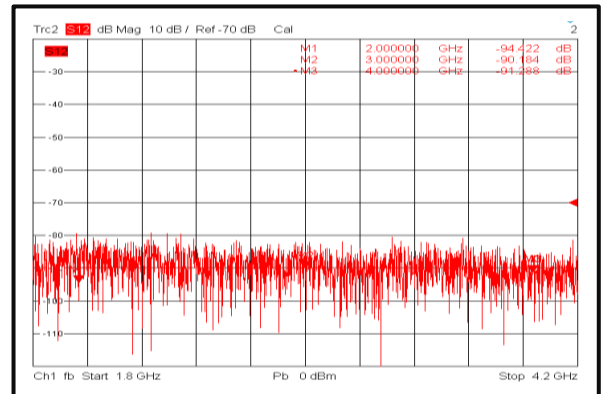
Input VSWR @+85°C



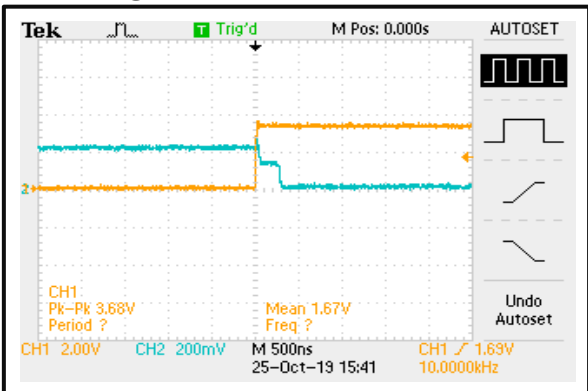
Output VSWR @+85°C



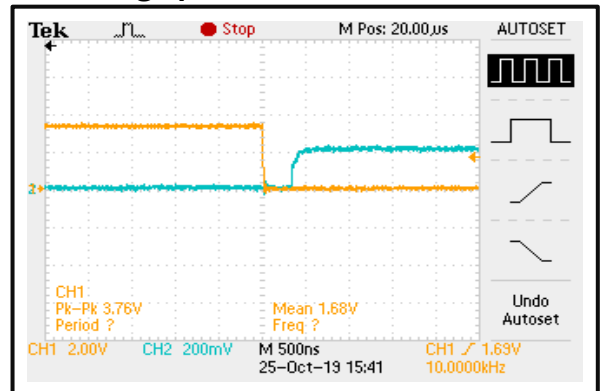
Isolation @+85°C



Switching Speed



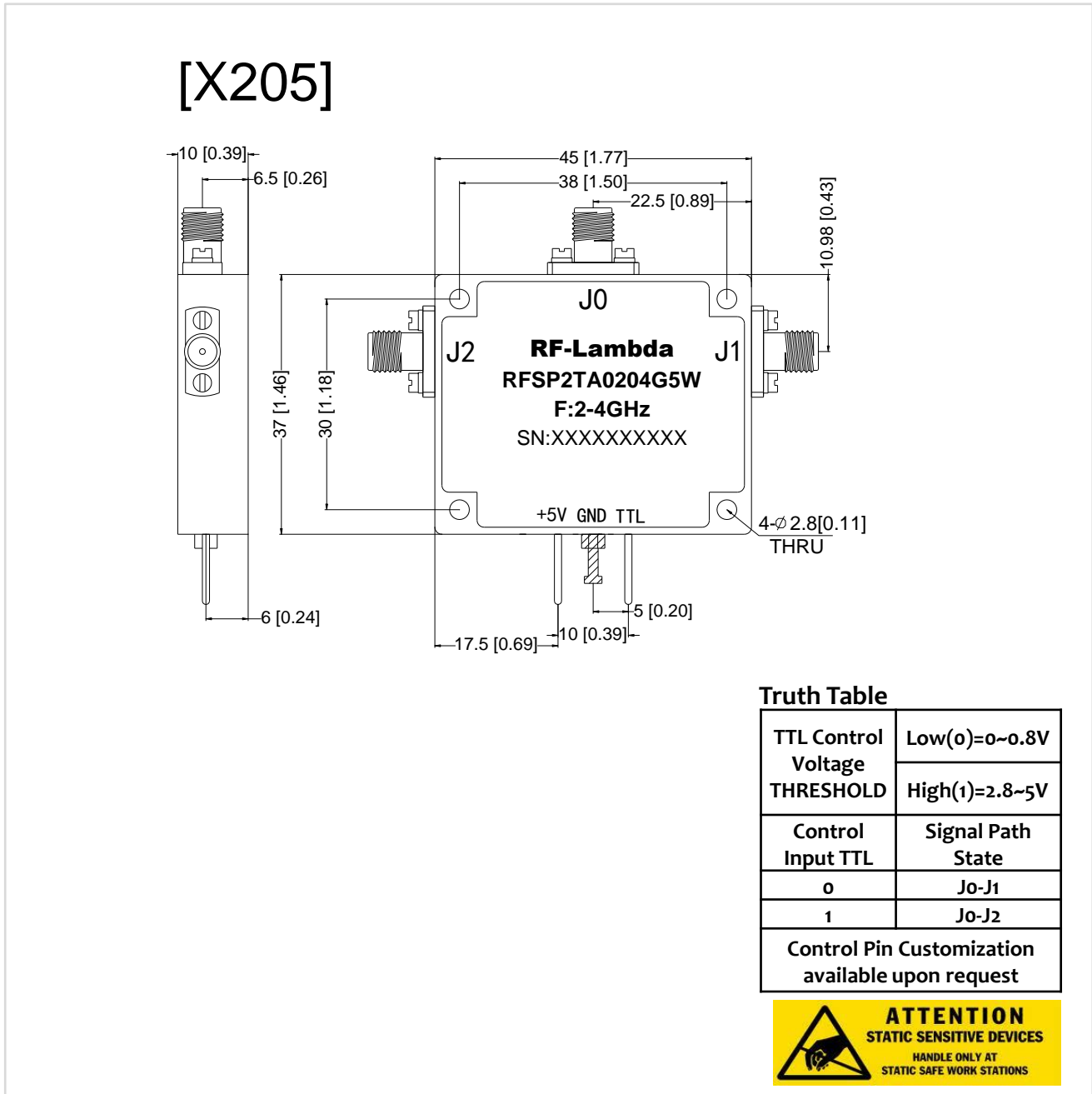
Switching Speed





Outline Drawing:

All Dimensions in mm [inches]



Truth Table

TTL Control Voltage THRESHOLD	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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