

Absorptive Coaxial SP2T Switch 2-4GHz



Features

- Ultra Wide Band Operation 2-4GHz
- 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, TA = +25°C, Vdd = +5V/-5V, TTL = 0 / +5V

Description	PN: RFSP2TA0204G			
	SP2T Absorptive Switch			
	Low Power Cold Switching			
Parameters	Min.	Typ.	Max.	Units
Frequency Range	2~4			GHz
Insertion Loss		1.3	1.5	dB
Insertion Loss Temperature Coefficient		0.003		dB/°C
Isolation	80	85		dB
Input VSWR		1.3	1.5	: 1
Output VSWR		1.3	1.5	: 1
RF Input Power			30	dBm
DC Power Dissipation		0.4		W
0.1dB Compression Point (Po.1dB)		30		dBm
IIP3		55		dBm
Switching Speed			100	ns
Weight	0.71			ounces
Impedance	50			Ω
Bias Current (+5V / -5V)	80/50			mA
Input / Output Connectors	SMA-Female			
Finish	Gold Plated			
Material	Aluminum			
Sealing	Hermetically Sealed (Optional)			

Absolute Maximum Ratings

Biasing Voltage	+5V±10%/-5V±10%
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Note: TTL pins cannot be connected to the negative voltage otherwise the internal driver will be damaged.

Ordering Information

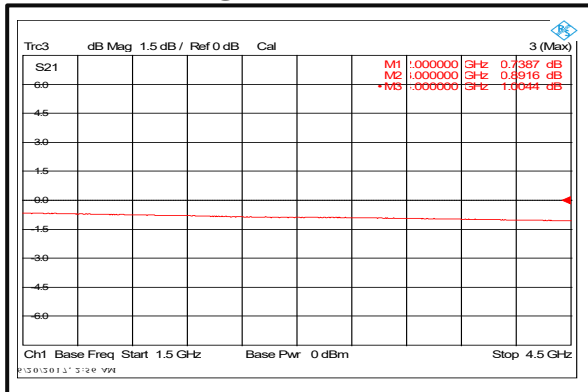
Part No.	Description
RFSP2TA0204G	SP2T 2-4GHz PIN Diode Switch

Environmental Specifications and Test Standards

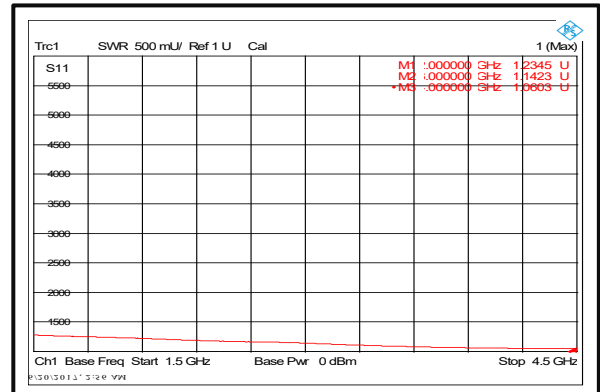
Parameter	Description
Operational Temperature	-40°C~+85°C (Case Temperature)
Storage Temperature	-50°C~+105°C
Thermal Shock	-40°C → +85°C (5 Cycles / 10 hours)
Random Vibration	MIL-STD-202G Table 214-I, Test Condition Letter C 1.5 Hours Per Axis
High Temperature Burn In	Temperature +85°C for 72 Hours
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 (For Hermetically Sealed Units)

Typical Performance Plots

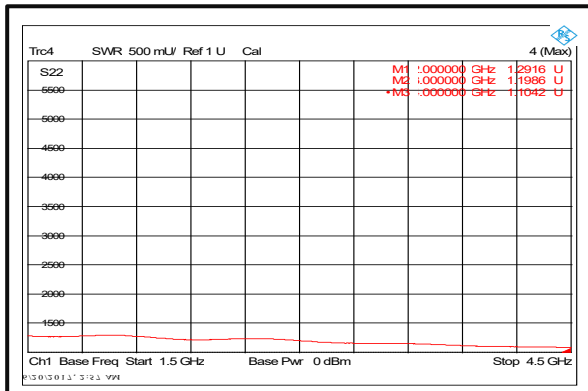
Insertion Loss @+25°C



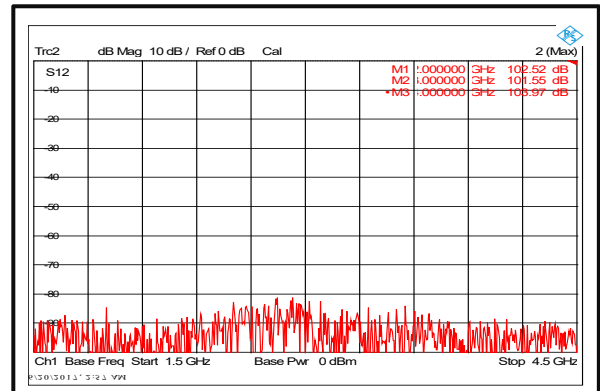
Input VSWR @+25°C



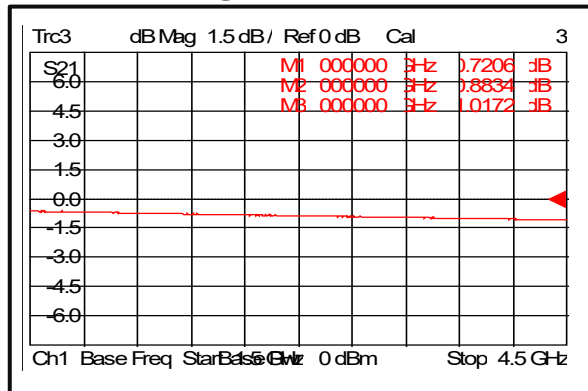
Output VSWR @+25°C



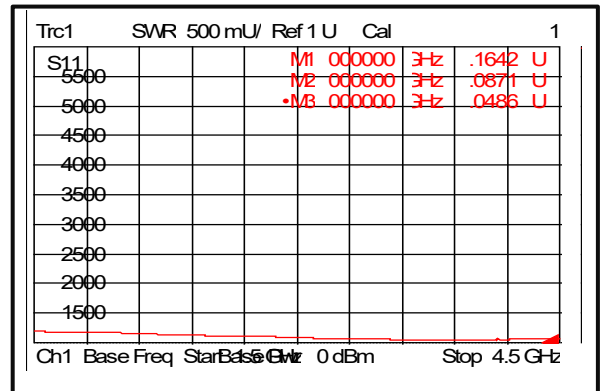
Isolation @+25°C



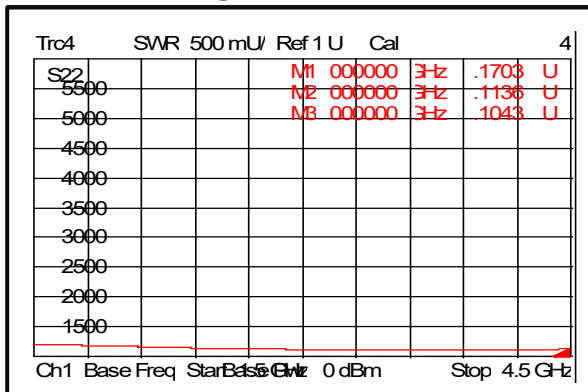
Insertion Loss @-40°C



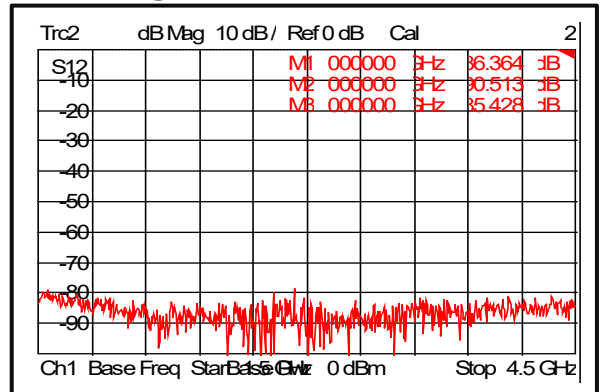
Input VSWR @-40°C



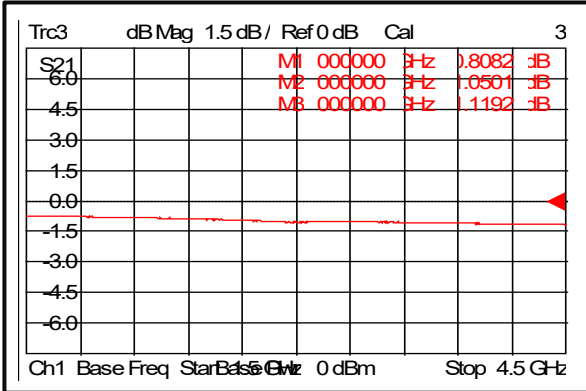
Output VSWR @-40°C



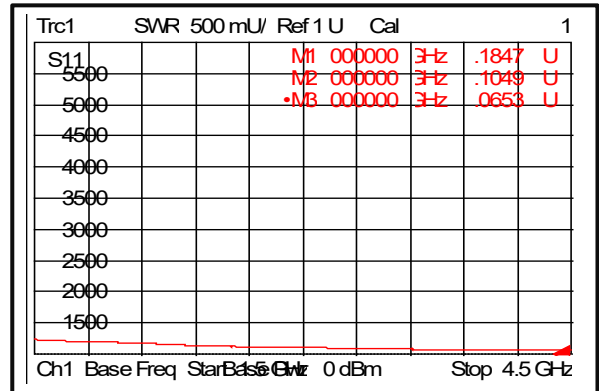
Isolation @-40°C



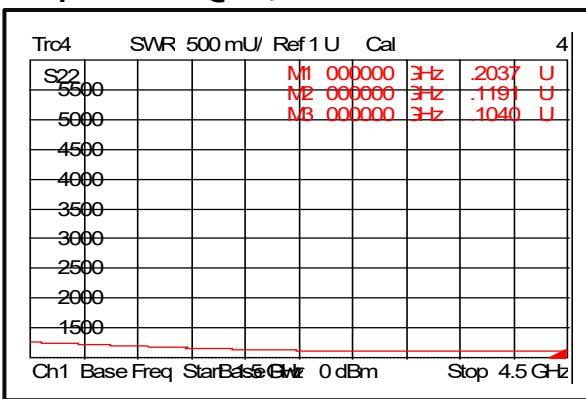
Insertion Loss @+85°C



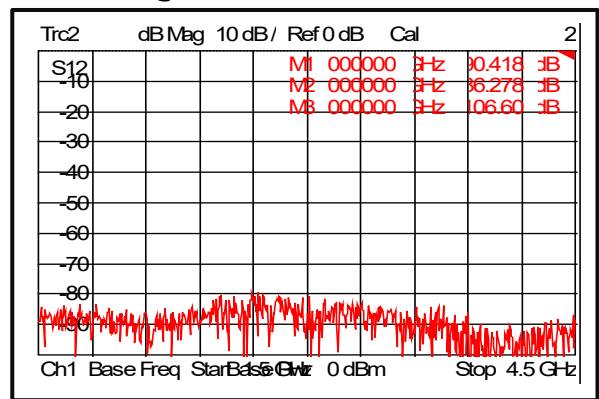
Input VSWR @+85°C



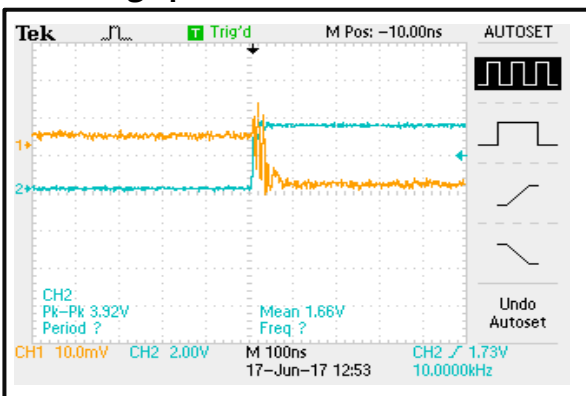
Output VSWR @+85°C



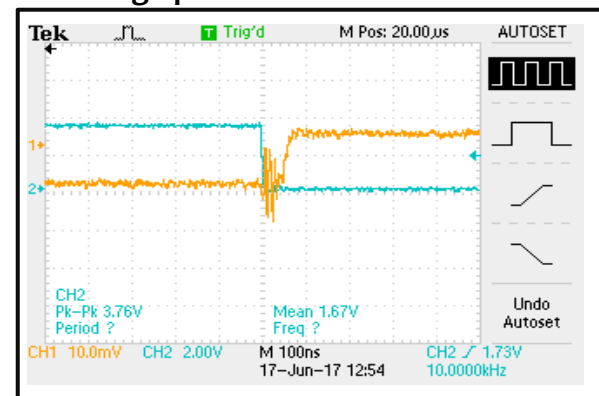
Isolation @+85°C



Switching Speed



Switching Speed

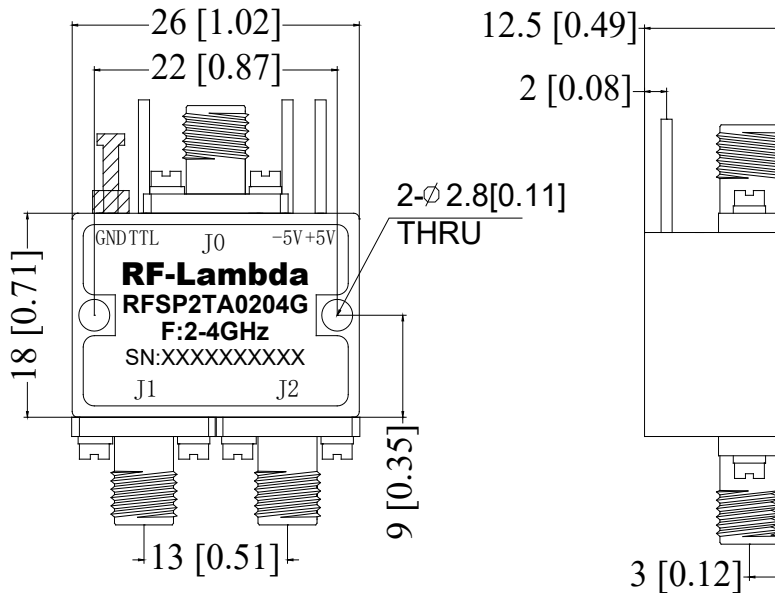


Absorptive Coaxial Single Pole Double Throw Switch 2-4GHz

Outline Drawing:

All Dimensions in mm [inches]
Housing Tolerances ± 0.1 [0.004]

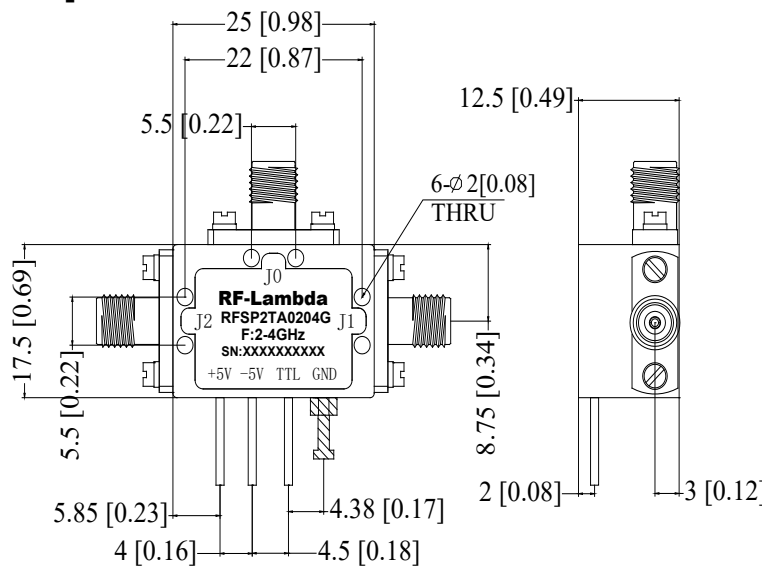
[X201]: Default Package



Truth Table

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

[X-202]



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