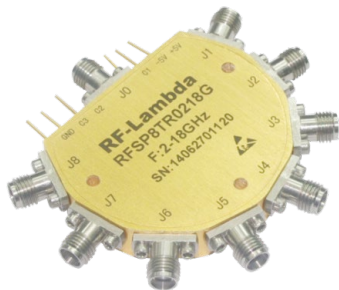


## Absorptive Coaxial SP8T Switch 2 - 20GHz



Note: The photo is for illustration purposes only.  
Please refer to the outline drawing.

### Features

- Ultra Wide Band Operation 2-20GHz
- 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: RFSP8TA0220G									
	SP8T Absorptive Switch									
	Low Power Cold Switching									
Parameter	Min.	Typ.	Max.	Min.	Typ.	Max.	Min.	Typ.	Max.	Units
Frequency Range	2-6			6-12			12-20			GHz
Insertion Loss		2.0	2.5		2.5	3.2		3.5	4.0	dB
Insertion Loss Temperature Coefficient		0.003			0.003			0.003		dB/°C
Isolation (Adjacent channels)	75	80		70	75		70	75		dB
Isolation (Between any channels)		80			75			75		dB
Input VSWR		1.6	2.0		1.6	2.0		1.8	2.0	:1
Output VSWR		1.6	2.0		1.6	2.0		1.8	2.0	:1
RF Input Power			30			30			30	dBm
DC Power Dissipation		1.5			1.5			1.5		W
0.1dB Compression Point (Po.1dB)		30			30			30		dBm
IIP3		45			43			40		dBm
Switching Speed	100 Typ.									ns
Weight	1.6Max.									ounces
Impedance	50									Ω
Bias Current (+5V/-5V)	350/50 Max.									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
RFSP8TA0220G	SP8T 2-20G PIN Diode Switch

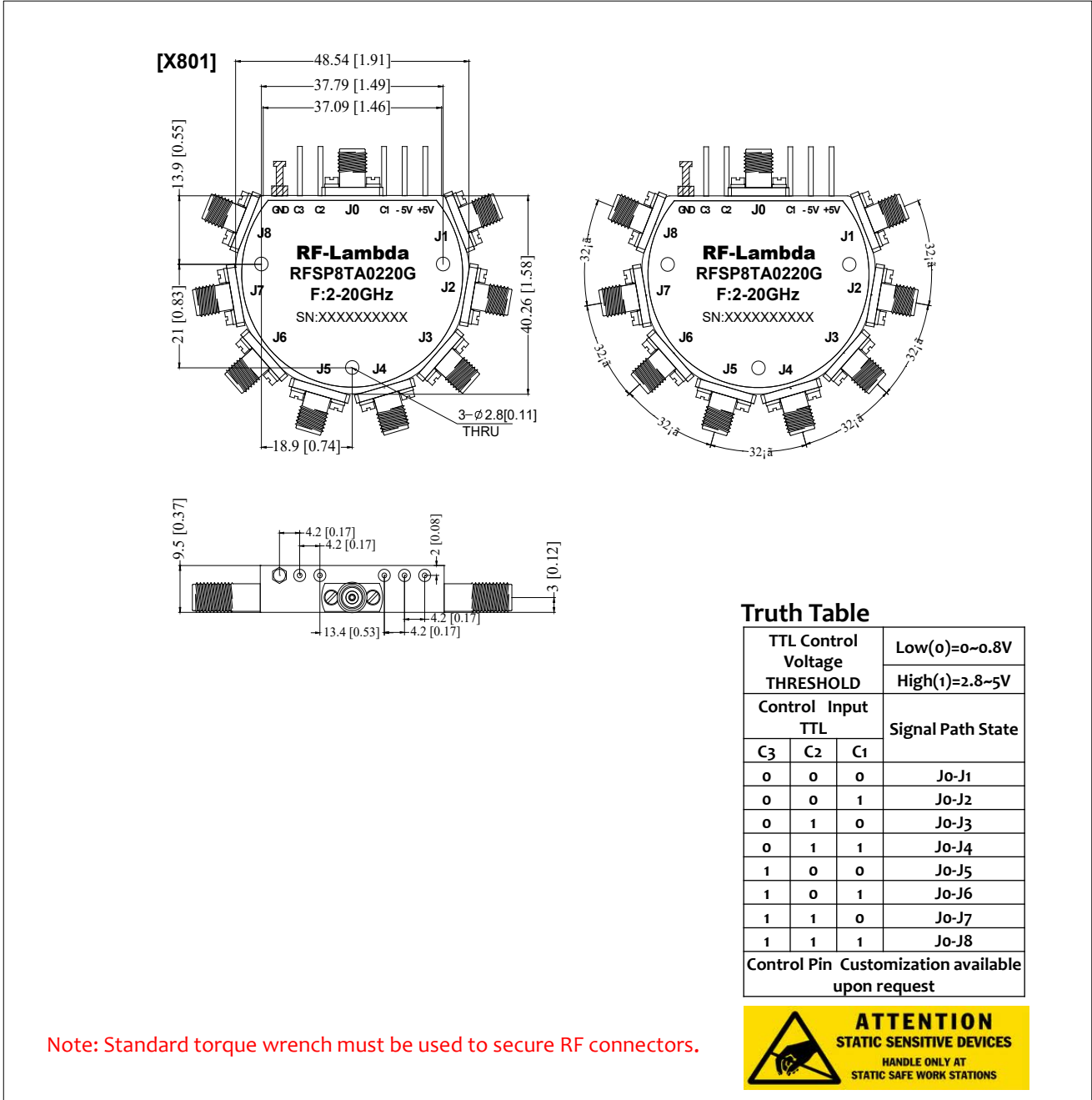
**Environmental Specifications and Test Standards**

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)

**Outline Drawing:**

All Dimensions in mm [inches]

Housing Tolerances  $\pm 0.1$  [0.004]



**Absorptive Coaxial Single Pole Eight Throw Switch 2 - 20GHz**

**Important Notice**

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