

Absorptive Coaxial SP2T Switch 2GHz-18GHz



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

Product Description

RFSP2TA0218GP is an absorptive coaxial single pole double throw switch with a frequency range of 2 to 18GHz.

The power input of this switch is 30dBm Max. The Insertion Loss is 2.0dB with a typical isolation of 70dB.

The product features of fast switching speed, low insertion loss and high isolation.

The working temperature of this product is between - 40°C and + 85°C

Features

- TTL compatible driver included
- Fast Switching Speed
- Low Power Cold Switching
- Insertion Loss 2.0dB
- Isolation 70dB Typical
- 50 Ohm Matched

Typical Applications

- Wireless Infrastructure
- Military and Aerospace Applications
- Test Instrumentation
- Radar Systems
- 5G Wireless Communications
- Microwave Radio Systems
- TR Modules
- Research and Development
- Cellular Base Stations

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

Parameter	Min	Typ	Max	Min	Typ	Max	Min	Typ	Max	Units
Frequency Range	2		8	8		12	12		18	GHz
Insertion Loss		1.5			2.0			2.6		dB
Insertion Loss Temperature Coefficient		0.003			0.003			0.003		dB/ °C
Isolation		70			70			60		dB
Input VSWR		1.5			2.0			2.0		: 1
Output VSWR		1.5			2.0			2.0		: 1
RF Input Power			30			30			30	dBm
DC Power Dissipation		0.5			0.5			0.5		W
0.1dB Compression Point (P0.1dB)		20			20			20		dBm
IIP3		40			40			40		dBm
Switching Speed					100 Max.					ns
Bias Current (+5V/ -5V)					80/50 Max.					mA
Weight					0.04 Max.					lbs
Impedance					50					Ω
Input / Output Connectors	SMA-Female(Input) – SMA-Female(Output)									
Package	Epoxy Sealed (Standard)									
	Hermetically Sealed (Optional)									

Absolute Maximum Ratings

Parameter	Rating
Biasing	+5V±10%/-5V±10%

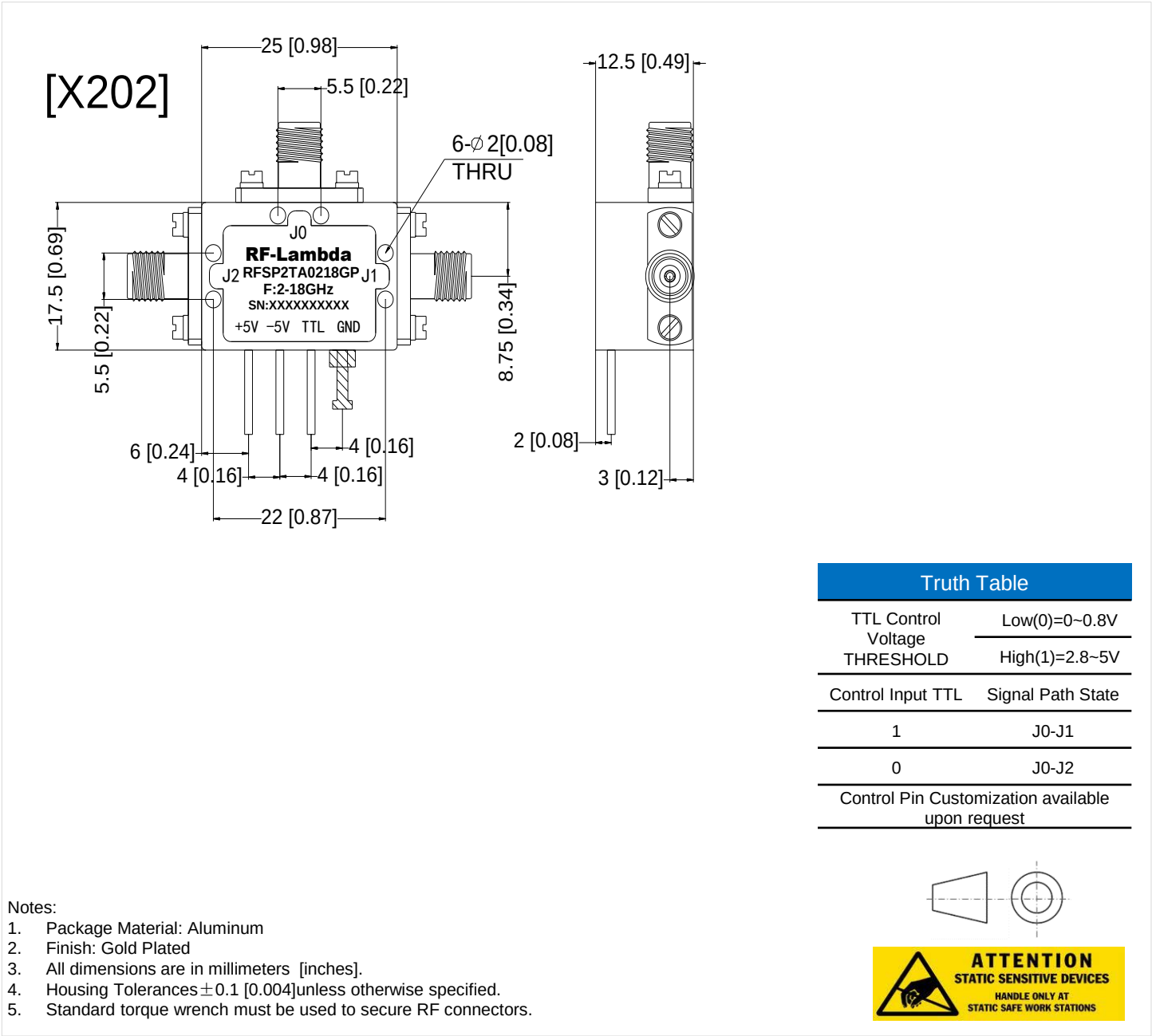
* TTL pins cannot be connected to the negative voltage otherwise the internal driver will be damaged.

Environmental Specifications and Test Standards

Parameter	Description
Operational Temperature	-40°C to +85°C (Case Temperature)
Storage Temperature	-50°C to +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)

*For vibration testing details please see additional information section.

Outline Drawing



Additional Information

Documentation	Webpage
ESD Policy	https://rflambda.com/pdf/rflambda_esd_control.pdf
Connector Torque Specifications	https://www.rflambda.com/pdf/Torque_Specifications.pdf
Random Vibration Test Standard	https://www.rflambda.com/pdf/rflambda_random_vibration_MIL-STD-202G.pdf

Ordering Information

Part Number	Modification	Description
RFSP2TA0218GP	Standard	2GHz-18GHz SP2T PIN Diode Switch

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