

Reflective Coaxial SP2T Switch 5GHz-19GHz



Note: Photo is for illustration purposes only.
Please refer to outline drawing.

Product Description

RFSP2TR05G19GH is a reflective coaxial single pole double throw switch with a frequency range of 5 to 19GHz.

The maximum power input of this switch is 53dBm. The insertion loss is 3.0dB with a typical isolation of 53dB.

The product features 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
- High Power Cold Switching
- Insertion Loss 3.0dB
- Isolation 53dB 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, TTL = 0 / +5V

Parameter	Min	Typ	Max	Units
Frequency Range		5-19		GHz
Insertion Loss		3.0		dB
Insertion Loss Temperature Coefficient		0.003		dB/°C
Isolation	45	50		dB
Input VSWR		2.0		: 1
Output VSWR		2.0		: 1
RF Input Power(10us Pulse width , 0.1% duty cycle)			53	dBm
DC Power Dissipation		1		W
0.1dB Compression Point (P0.1dB)		40		dBm
IIP3		47		dbm
Switching Speed		250	350	ns
Bias Current (+5V)		200		mA
Weight		/ 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%

Notes:

Cold Switching: Before changing any TTL signal(s), the RF input power must be blanked or the switch could be damaged.

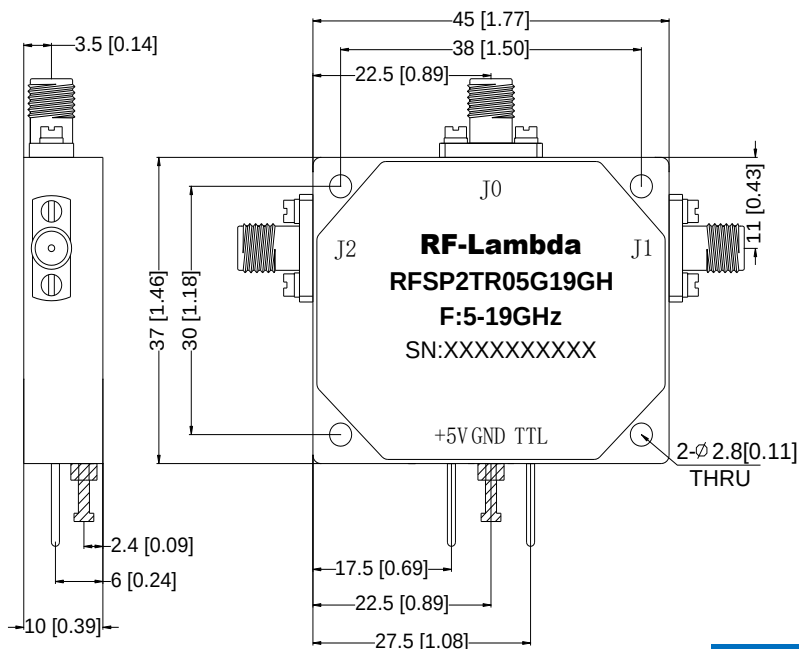
Environmental Specifications and Test Standards

Parameter	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

[X205]

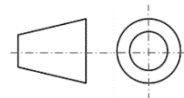


Truth Table

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

Notes:

1. Package Material: Aluminum
2. Finish: Gold Plated
3. All dimensions are in millimeters [inches].
4. Housing Tolerances $\pm 0.3[0.012]$ unless otherwise specified.
5. Standard torque wrench must be used to secure RF connectors.



Additional Information

Documentation

Webpage

ESD Policy

https://rflambda.com/pdf/rflambda_esd_control.pdf

Heatsink Lookup Specifications

https://rflambda.com/search_heatsink.jsp

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
RFSP2TR05G19GH	Standard	5GHz-19GHz SP2T PIN Diode Switch

Important Notice

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