550W Reflective Coaxial SP8T Switch 1GHz-1.1GHz

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

Product Description

RFSP8TR1030M1090M is a reflective coaxial single pole eight throw switch with a frequency range of 1.0 to 1.1GHz.

The maximum power input of this switch is 550 Watts Peak. The insertion loss is 1.0dB with a typical isolation of 60dB.

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

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

Features

- TTL compatible driver included
- Fast Switching Speed
- High Power Cold Switching
- Insertion Loss 1.0dB
- Isolation 60dB
- 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/-28V, TTL = 0 / +5V

Parameter		Min	Typ	Max	Units
Frequency Range		1.0		1.1	GHz
Insertion Loss			1.0		dB
Insertion Loss Temperature Coefficient			0.003		dB/ °C
Isolation		60			dB
Input VSWR				1.5	: 1
Output VSWR				1.5	: 1
RF Input Power	CW			100	W
	pulsed, 0.02% Duty Cycle, 20us pulse width			550	W
DC Power Dissipation			2.5		W
0.1dB Compression Point (P0.1dB)			57		dBm
IIP3			55		dBm
Switching Speed			0.25 Typ. 1.0MAX.		us
Bias Current (+5V / -28V)			280/180 Max.		mA
Weight			-		lbs
Impedance			50		Ω
Input / Output Connectors			SMA-Female(Input) – SMA-Female(Output)		
Package			Epoxy Sealed (Standard)		
			Hermetically Sealed (Optional)		

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Absolute Maximum Ratings

Parameter	Rating
Biasing	+5V±10%/-28V±10%

*TTL pins cannot be connected to the negative voltage otherwise the internal driver will be damaged.
**If the device operates in high power state, case temperature must be lower than 40℃.
***Cold Switching: Before changing any TTL signal(s), the RF input power must be blanked or the switch could be damaged.

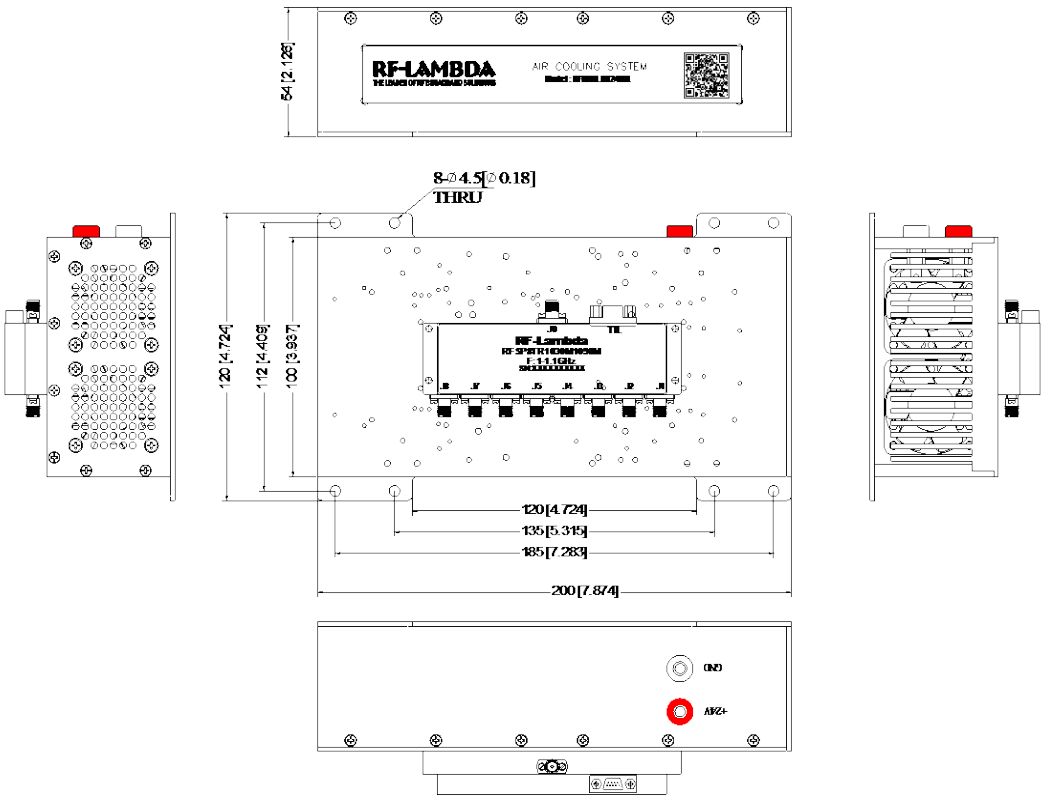
Environmental Specifications and Test Standards

Parameter	Description
Operational Temperature	-40ºC to +85ºC (Case Temperature)
Storage Temperature	-50ºC to +105ºC
Thermal Shock	-40ºC → +85ºC (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 +85ºC 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

Air Cooling Option Outline Drawing



Notes:

1. Package Material: Aluminum
2. Plating: Gold
3. All dimensions are in millimeters [inches].
4. Housing Tolerances±0.2 [0.008]unless otherwise specified.
5. Recommended Cooling Option (Required for 550W Power Handling).
6. Heatsink Included - Mandatory for Operation .Matching heatsink is listed on our website. If customer would like to use their own cooling method, please make sure the amplifier will operate under the specs that listed in page 2 of this datasheet.

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
RFSP8TR1030M1090M	Standard	1-1.1GHz SP8T PIN Diode Switch

Important Notice

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