

WR12 Reflective Coaxial SP8T Switch 60GHz-86GHz



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

Product Description

RFSP8TR6090GW12 is a WR12 reflective coaxial single pole eight throw switch with a frequency range of 60 to 86GHz.

The maximum power input of this switch is 23dBm. The insertion loss is 15dB with a typical isolation of 35dB.

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

- Wide Band Operation 60 - 86GHz
- Functional Bandwidth : 50 - 90GHz
- TTL compatible driver included
- Fast Switching Speed
- Low Power Cold Switching
- Insertion Loss 15dB Typical
- Isolation 35dB 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	Units
Frequency Range		60-75			75-86		GHz
Insertion Loss			13		22		dB
Insertion Loss Temperature Coefficient		0.003			0.003		dB/ °C
Isolation	30	35		24	27		dB
Input VSWR		2.2	3		3		: 1
Output VSWR		2.5	3		3		: 1
RF Input Power (CW)			23			23	dBm
DC Power Dissipation		0.3			0.3		W
0.1dB Compression Point(P0.1dB)		23			23		dBm
IIP3		45			45		dBm
Switching Speed		100			100		ns
Bias Current (+5V / -5V)			150/100Max.				mA
Weight			-Max.				lbs
Impedance			50				Ω
Input / Output Connectors					WR12		
Package					Epoxy Sealed (Standard)		
					Hermetically Sealed (Optional)		

Absolute Maximum Ratings

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

Notes:

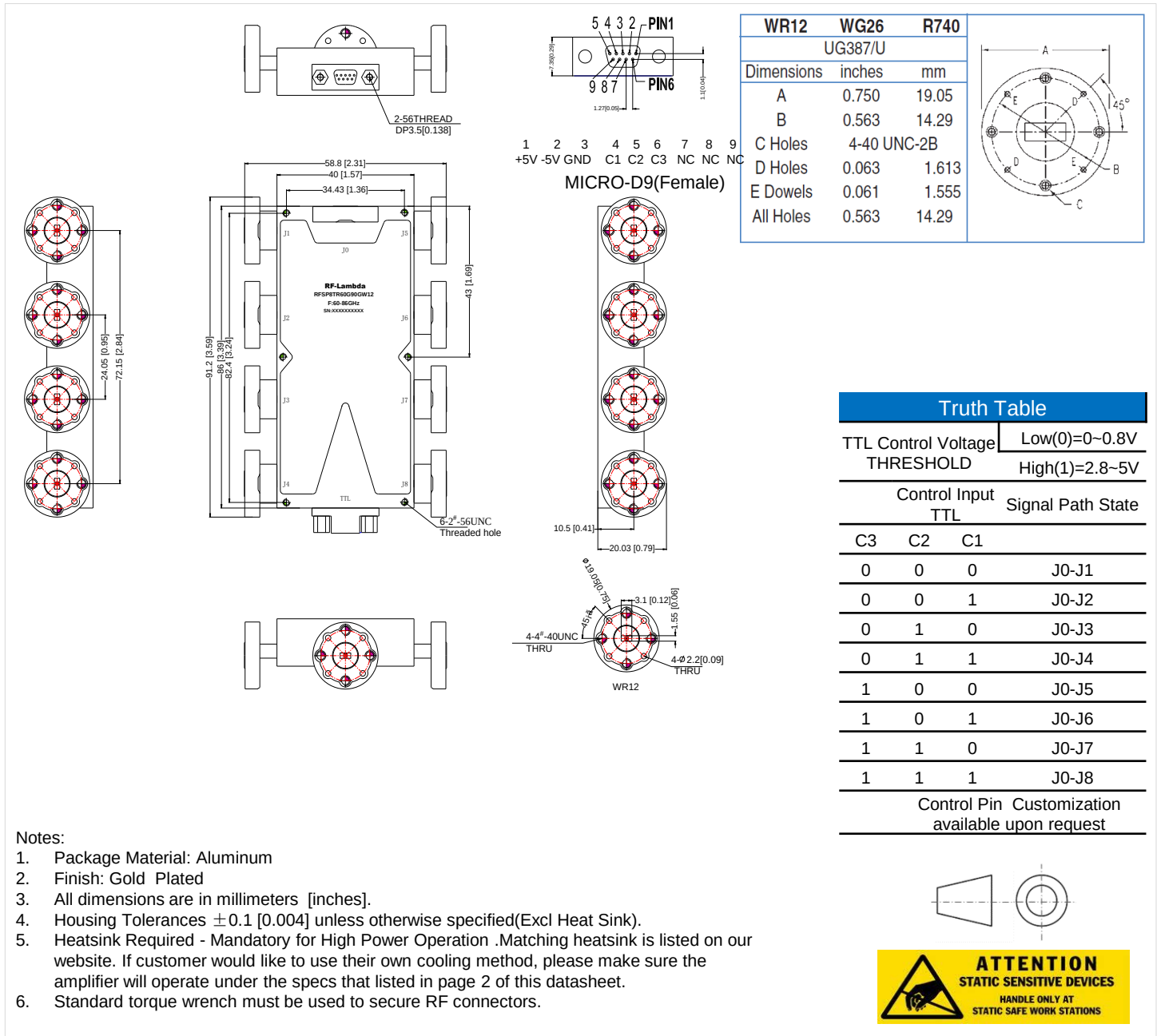
1. TTL pins cannot be connected to the negative voltage otherwise the internal driver will be damaged.

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

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
RFSP8TR6090GW12	WR12	60GHz-86GHz SP8T PIN Diode Switch

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