WR12 Reflective Coaxial SP2T Switch 60-90GHz

WR12 Reflective Coaxial Single Pole Double Throw Switch 60 - 90GHz

Features

- Wide Band Operation 60 - 86GHz
- Functional Bandwidth : 50 - 90GHz
- Fast Switching Speed
- Low Insertion Loss and High Isolation

Typical Applications

- Military and Aerospace
- Research and Development
- Test and Measurement

RoHS Compliant

Electrical Specifications, T_A = +25° C, Vdd = +5V / -5V, TTL = 0 / +5V

Description	PN: RFSP2TR6090GW12						
	SP2T Reflective Switch						
	Low Power Cold Switching						
Parameter	Min	Typ.	Max	Min	Typ.	Max	Units
Frequency Range	60-75			75-86 (Functional to 90)			GHz
Insertion Loss		3.5	4.5		5.5	7.0	dB
Insertion Loss Temperature Coefficient		0.003			0.003		dB/ ℃
Isolation	30	35		24	27		dB
Input VSWR		2.2			2.2		: 1
Output VSWR		2.5			2.5		: 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
Weight	/						ounces
Impedance	50						Ω
Bias Current (+5V / -5V)	50/20						mA
Input / Output Connectors	WR12						
Finish	Gold Plated						
Material	Aluminum						
Sealing	Hermetically Sealed (Optional)						

Absolute Maximum Ratings

Biasing Voltage	+5V±10% / -5V±10%
TTL Control Voltage	0~ 0.8V / 2 .8~ 5V

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

Ordering Information

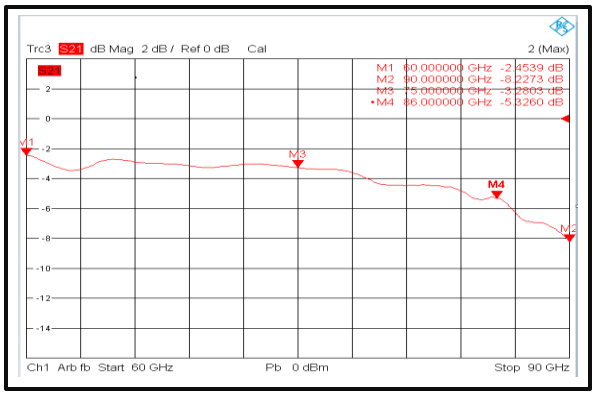
Part No.	ECCN	Description
RFSP2TR6090GW12	EAR99	SP2T 60-90GHz PIN Diode Switch

Environmental Specifications and Test Standards

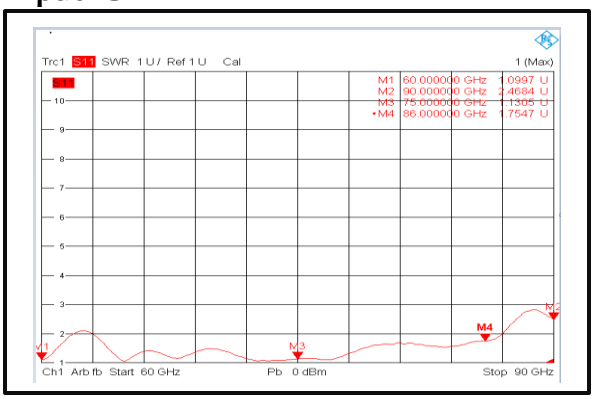
Parameter	Standard	Description
Operational Temperature	MIL-STD-39016	-45℃~+85℃ (Case Temperature)
Storage Temperature		-50℃~+125℃
Thermal Shock		1 Hour@ -45℃ → 1 Hour @ +85℃ (5 Cycles)
Random Vibration		Acceleration Spectral Density 6 (m/s) Total 92.6 RMS
Electrical & Temperature Burn In		Temperature +85℃ 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	MIL-STD-883 (For Hermetically Sealed Units)

Typical Performance Plots

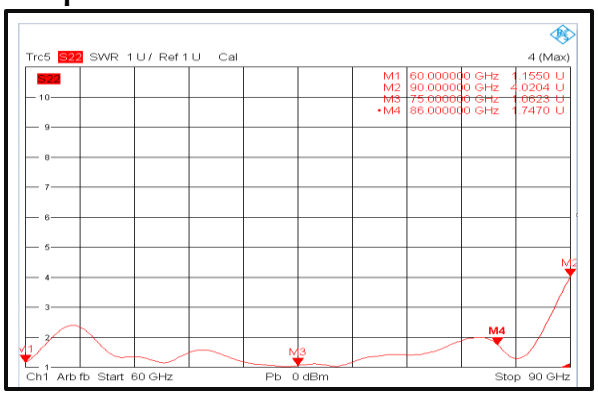
Insertion Loss



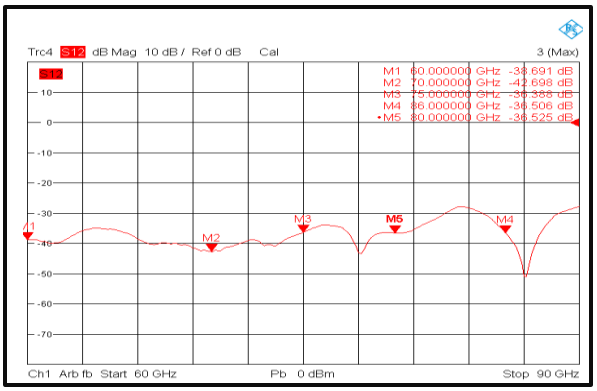
Input VSWR



Output VSWR



Isolation



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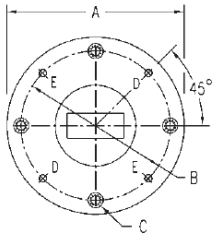
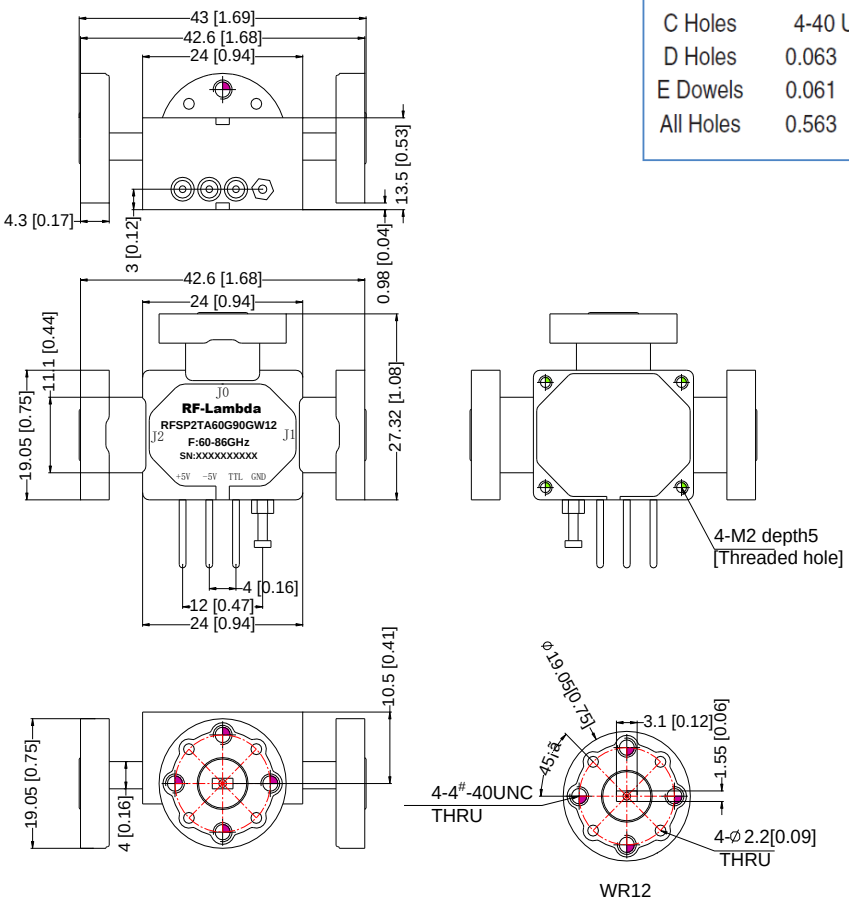
Outline Drawing:

All Dimensions in mm [inches]

WR12	WG26	R740
UG387/U		
Dimensions	inches	mm
A	0.750	19.05
B	0.563	14.29
C Holes	4-40 UNC-2B	
D Holes	0.063	1.613
E Dowels	0.061	1.555
All Holes	0.563	14.29





Truth Table

Control Input TTL	Signal Path State
0	J0-J1
1	J0-J2
Control Pin Customization available upon request	

Important Notice

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