

# Absorptive Coaxial SP4T Switch 30 - 90GHz



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



#### **Features**

- Wide Band Operation 30-90GHz
- TTL compatible driver included
- Fast Switching Speed
- Low Insertion Loss and High Isolation

#### **Typical Applications**

- Wireless Infrastructure
- Military and Aerospace
- Test and Measurement

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

Description	PN: RFSP4TA3090G			
	SP4T Absorptive Switch			
	Low Power Cold Switching			
Parameter	Min.	Тур.	Max.	Units
Frequency Range	30-90		GHz	
Insertion Loss		20		dB
Insertion Loss Temperature Coefficient		0.003		dB/°C
Isolation		25		dB
Input VSWR		3.0		:1
Output VSWR		3.0		:1
RF Input Power (CW)			15	dBm
DC Power Dissipation		0.8		W
o.1dB Compression Point (Po.1dB )		15		dBm
IIP3		45		dBm
Switching Speed		100		ns
Weight	1		ounces	
Impedance	50		Ω	
Bias Current (+5V / -5V)	160/50		mA	
Input / Output Connectors	1.0mm-Female			
Finish	Gold Plated			
Material	Aluminum			
Sealing	Hermetically Sealed (Optional)			





### **Absolute Maximum Ratings**

Biasing	+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
RFSP4TA3090G	EAR99	SP4T 30-90GHz PIN Diode Switch

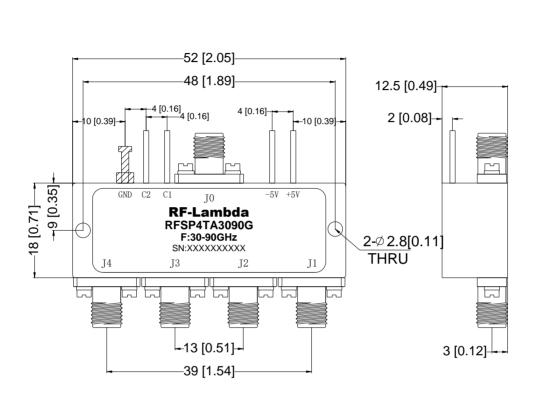
### **Environmental Specifications and Test Standards**

Parameter	Standard	Description
Operational Temperature		-45°C~+85°C (Case Temperature)
Storage Temperature		-50°C~+125°C
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	MIL-STD-39016	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	MIL-STD-883 (For Hermetically Sealed Units)



## **Outline Drawing:**

All Dimensions in mm [inches]



#### **Truth Table**

Control Input TTL		Signal Path
C2	C1	State
0	0	Jo-J1
0	1	Jo-J2
1	0	Jo-J3
1	1	Jo-J4
Control Pin Customization		
available upon request		



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