

# Absorptive Coaxial SP12T Switch 1.5 – 4.5GHz

#### **Features**

- Wide Band Operation 1.5-4.5GHz
- TTL compatible driver included
- Fast Switching Speed
- Low Insertion Loss and High Isolation
- Temperature Range -45°C~+85°C
- Customization available upon request
- Hermetically sealed package up to 60,000ft available upon request.



# Electrical Specifications, $T_A = +25^{\circ} C$ , Vdd = +5V/-5V, TTL = 0 / +5V

, A		DN. DECD	-TA C		
Description	PN: RFSP12TA1545G				
	SP12T Absorptive Switch				
	Low Power Cold Switching				
Parameters	Min.	Тур.	Max.	Units	
Frequency Range	1.5 – 4.5			GHz	
Insertion Loss			2.5	dB	
Insertion Loss Temperature Coefficient		0.003		dB/°C	
Loss Imbalance			0.5	dB	
Isolation	60			dB	
Input VSWR			1.8	:1	
Output VSWR			1.8	:1	
RF Input power			30	dBm	
DC Power Dissipation(CW)		2.8		W	
o.1dB Compression Point (Po.1dB )			30	dBm	
IIP3		55		dBm	
Switching Speed			250	ns	
Weight	1			ounces	
Impedance	50			Ω	
Bias Current (+5V / -5V)	500 / 50			mA	
Input / Output Connectors	SMA-Female				
Finishing	Gold Plating				
Material	Aluminum				
Sealing	Hermetically Sealed ( optional )				





### **Absolute Maximum Ratings**

Biasing	+5V±10%/-28V±10%	
TTL Control Voltage	0~0.8V/2.8~5V	

# **Ordering Information**

Part No.	ECCN	Description
RFSP12TA1545G	EAR99	SP12T 1.5-4.5GHz PIN Diode Switch

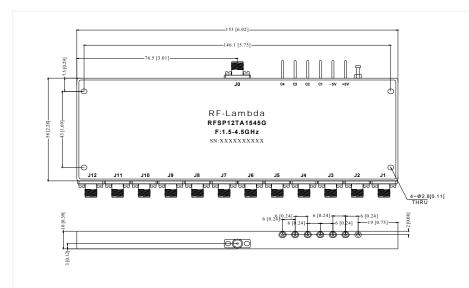
## **Environmental Specifications**

Operational Temperature (°C)	-45 ~ +85		
Storage Temperature (°C)	-50 ~ +125		
Altitude	30,000 ft. (Epoxy Sealed Controlled environment) 60,000 ft. 1.0psi min (Hermetically Sealed Uncontrolled environment) ( Optional )		
Vibration	25g RMS (15 degrees 2KHz) endurance, 1 hour per axis		
Humidity	100% RH at 35c, 95%RH at 40°C		
Shock	20G for 11msec half sine wave, 3 axis both directions		



# **Outline Drawing:**

All Dimensions in mm [inches]



#### **Truth Table**

Co	Signal Path State			
C4	c3	C2	C1	
0	0	0	0	Jo-J1
0	0	0	1	Jo-J2
0	0	1	0	Jo-J3
0	0	1	1	Jo-J4
0	1	0	0	Jo-J5
0	1	0	1	Jo-J6
0	1	1	0	Jo-J7
0	1	1	1	Jo-J8
1	0	0	0	Jo-J9
1	0	0	1	Jo-J10
1	0	1	0	J0-J11
1	0	1	1	J0-J12
_				

Control Pin Customization available upon request



#### **Important Notice**

The information contained herein is believed to be reliable. RF-Lambda makes no warranties regarding the information contained herein. RF-Lambda assumes no responsibility or liability whatsoever for any of the information contained herein. RF-Lambda assumes no responsibility or liability whatsoever for the use of the information contained herein. The information contained herein is provided "AS IS, WHERE IS" and with all faults, and the entire risk associated with such information is entirely with the user. All information contained herein is subject to change without notice. Customers should obtain and verify the latest relevant information before placing orders for RF-Lambda products. The information contained herein or any use of such information does not grant, explicitly or implicitly, to any party any patent rights, licenses, or any other intellectual property rights, whether with regard to such information itself or anything described by such information.

RF-Lambda products are not warranted or authorized for use as critical components in medical, life-saving, or life sustaining applications, or other applications where a failure would reasonably be expected to cause severe personal injury or death.