

USB / Ethernet Absorptive Coaxial SP6T Switch 0.5- 50GHz



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

Features

- Ultra Wide Band Operation 0.5-50GHz
- USB / Ethernet Control
- Low Insertion Loss and High Isolation
- Customization available upon request
- Control SW included.

Typical Applications

- Test and Measurement
- Aerospace and Military Applications

Electrical Specifications, TA = +25°C, DC Powered

Description	PN: RFSP6TA5M50GUSB									
	SP6T Absorptive Switch									
	Low Power Cold Switching									
Parameters	Min.	Typ.	Max.	Min.	Typ.	Max.	Min.	Typ.	Max.	Units
Frequency Range	0.1-18			18-43.5			43.5-50			GHz
Insertion Loss		5.5	6.5		7.5	8.5		9.5	10.0	dB
Insertion Loss Temperature Coefficient		0.003			0.003			0.003		dB/°C
Isolation	50	65		48	55		45	53		dB
Input VSWR		2.0	3.0		2.5	3.0		2.0	2.5	: 1
Output VSWR		2.0	3.0		2.5	3.0		2.0	2.5	: 1
RF Input Power (CW)			23			23			23	dBm
DC Power Dissipation		1.5			1.5			1.5		W
0.1dB Compression Point (Po.1dB)		23			23			23		dBm
IIP3		43			38			33		dBm
Weight	/ Max.									ounces
Impedance	50									Ω
Bias Current	300 Typ.									mA
Power Supply	DC (+5.0V)									
Control Interface	USB2.0 & Ethernet (IPv4) (Control Cable Included)									
Input / Output Connectors	2.4mm-Female									
Finish	Nickel Plated									
Material	Aluminum									

USB / Ethernet Absorptive Coaxial SP6T Switch 0.5 – 50GHz

Ordering Information

Part No.	Description
RFSP6TA5M50USB	SP6T 0.5-50GHz USB / Ethernet Controlled Switch

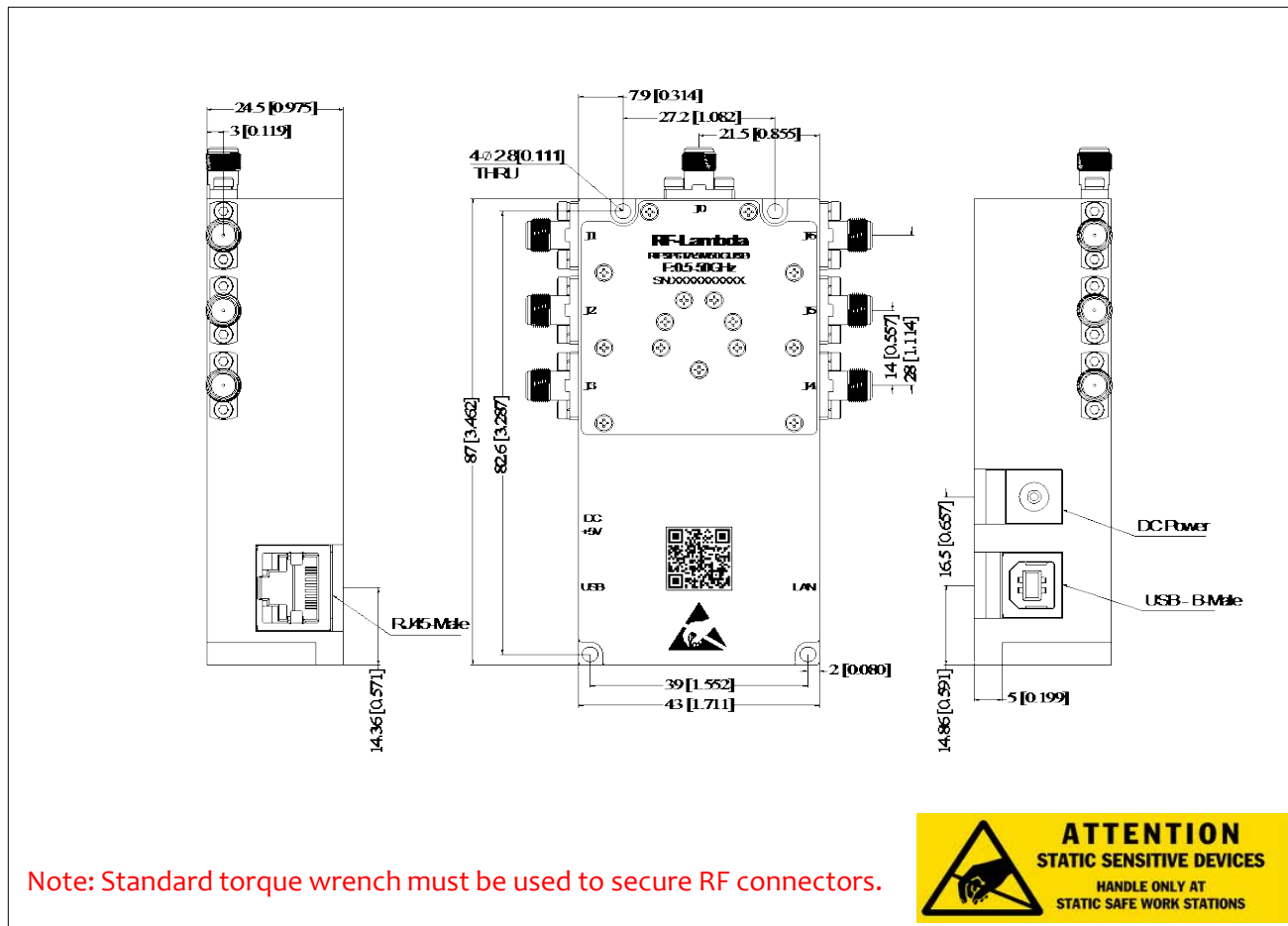
Environmental Specifications and Test Standards

Parameter	Description
Operational Temperature	-40°C~+85°C (Case Temperature)
Storage Temperature	-50°C~+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)

Outline Drawing:

All Dimensions in mm [inches]

Housing Tolerances ± 0.2 [0.008]



ID	Packing List	QTY
1	Fig a. USB/Ethernet Control RF Switch	1
2	Fig b. USB2.0 Cable (5 feet / 1.5 meter)	1
3	Fig c. Network Cable (6 feet / 2 meter)	1
4	Fig d. International Universal AC Power Adapter (For SP6T or higher)	1



Fig b.



Fig c.



Fig d.

Control Content Description			
Format Requirement	USB (virtual serial port) Configuration	LAN Interface	Range of Parameters
a.All commands must end with a semicolon. b.All commands are case insensitive. c.Comma is used to separate multiple parameters in commands. d.All commands are suitable for USB(virtual serial port) and LAN interface.	Baud Rate :115200 Data bits : 8 Parity : None Stop bits : 1 Flow Type :None	IP address and Port. Default:192.168.1.225 :5100 Use 'USB Control Panel.exe' to set.	x(channel):1~n. y(period ,ms): 0.01~2000 z(pulse ,ms): 0.01~2000

Command Specification				
ID	Order	Description	Return	Example
1	*IDN?;	Query product information	Product PN ,SN, Manufacturer , version	*IDN?;
2	Reset;	Reset the product	/	Reset;
3	SW:Sopen x;	Open channel x	SOx	SW:Sopen 2; Return : SO2
4	SW:Sloop x,y,z;	Automatic cycle opening channel x with period as y (ms) and pulse width as z(ms)	SLx	SW:Sloop 2,0.1,0.05; Return :SL2
5	SW:Mloop x1,x2,...,z;	Cycle on channels x1, x2,... with pulse width as z(ms)	MLx1	SW:Mloop 1,2,0.1; Return :ML1
6	SW:Close;	Close all channel. Stop loop ,close all channel.	SCo	SW:Close; Return: SCo
Error Code Query				
ID	Return	Description		
1	E1	Missing semicolon		
2	E2	Incorrect command		
3	E3	Missing space character		
4	E4	Incorrect parameter format		
5	E5	Out of range parameters		

USB Control Panel

RF-LAMBDA
THE LEADER OF RF BROADBAND SOLUTIONS

Download Quit Continue >>

Select Device

Digital Control Switch ☒ 1

Digital Control Attenuator ☐

Digital Control Phase Shifter ☐

Control Interface 2 ☒ USB ☐ ETHERNET

Please select a COM port COM62 3

Connect Device 4

The device number is: 2020041100151
Device IP: 192.168.1.225:5100

Note

1. Please refer to the product manual for power supply.
2. Please refer to the product manual to configure the port.

2020.03 v2.01

USB Control Panel

RF-LAMBDA
THE LEADER OF RF BROADBAND SOLUTIONS

<< Goback

Select Path J0 J1 1

Manual Control ☒ 2 OFF 3

Single Channel Auto Cycle ☐

Pulse Period(ms) 10.00

Pulse Width(ms) 5.000

Start

Multi Channel Auto Cycle ☐

J1 J2 J3 J4 Use Input ☐

J5 J6 J7 J8

Input the channel which you want to use,
Separated by commas. For example: 3,1,6,7

Pulse Width(ms) 0.100

Start

Device Name: Digital Control Switch

Part Number: RFSP2TA5M50GUSB

Serials Number: 2020041100151

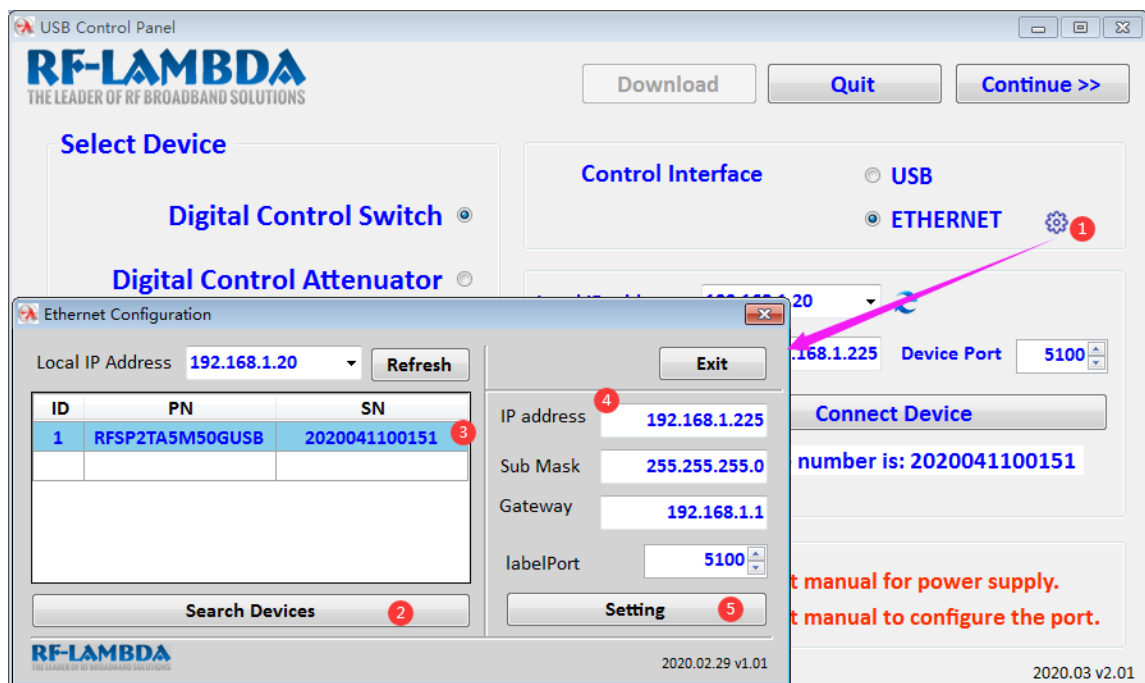
Control Model: USB

Control Port: COM62

Send String SW:Sopen 1;

Recevie String S01

2020.03 v2.01



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.