

USB / Ethernet Absorptive Coaxial SP6T Switch 1- 18GHz



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

Features

- Ultra Wide Band Operation 1-18GHz
- 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: RFSP6TA0118GUSB									
	SP6T Absorptive Switch									
	Low Power Cold Switching									
Parameters	Min.	Typ.	Max.	Min.	Typ.	Max.	Min.	Typ.	Max.	Units
Frequency Range	1-8			8-12			12-18			GHz
Insertion Loss		1.4	2.0		2	2.7		3.3	3.7	dB
Insertion Loss Temperature Coefficient		0.003			0.003			0.003		dB/°C
Isolation	60	75		60	70		56	58		dB
Input VSWR		1.5	2.0		1.5	2.0		1.5	2.0	: 1
Output VSWR		1.5	2.0		1.5	2.0		1.5	2.0	: 1
RF Input Power (CW)			30			30			30	dBm
DC Power Dissipation		1.8			1.8			1.8		W
0.1dB Compression Point (Po.1dB)		30			30			30		dBm
IIP3		40			40			39		dBm
Weight	/ Max.									ounces
Impedance	50									Ω
Bias Current	360 Typ.									mA
Power Supply	DC (+5.0V)									
Control Interface	USB2.0 & Ethernet (IPv4) (Control Cable Included)									
Input / Output Connectors	SMA-Female									
Finish	Nickel Plated									
Material	Aluminum									

Ordering Information

Part No.	Description
RFSP6TA0118USB	SP6T 1-18GHz USB / Ethernet Controlled Switch

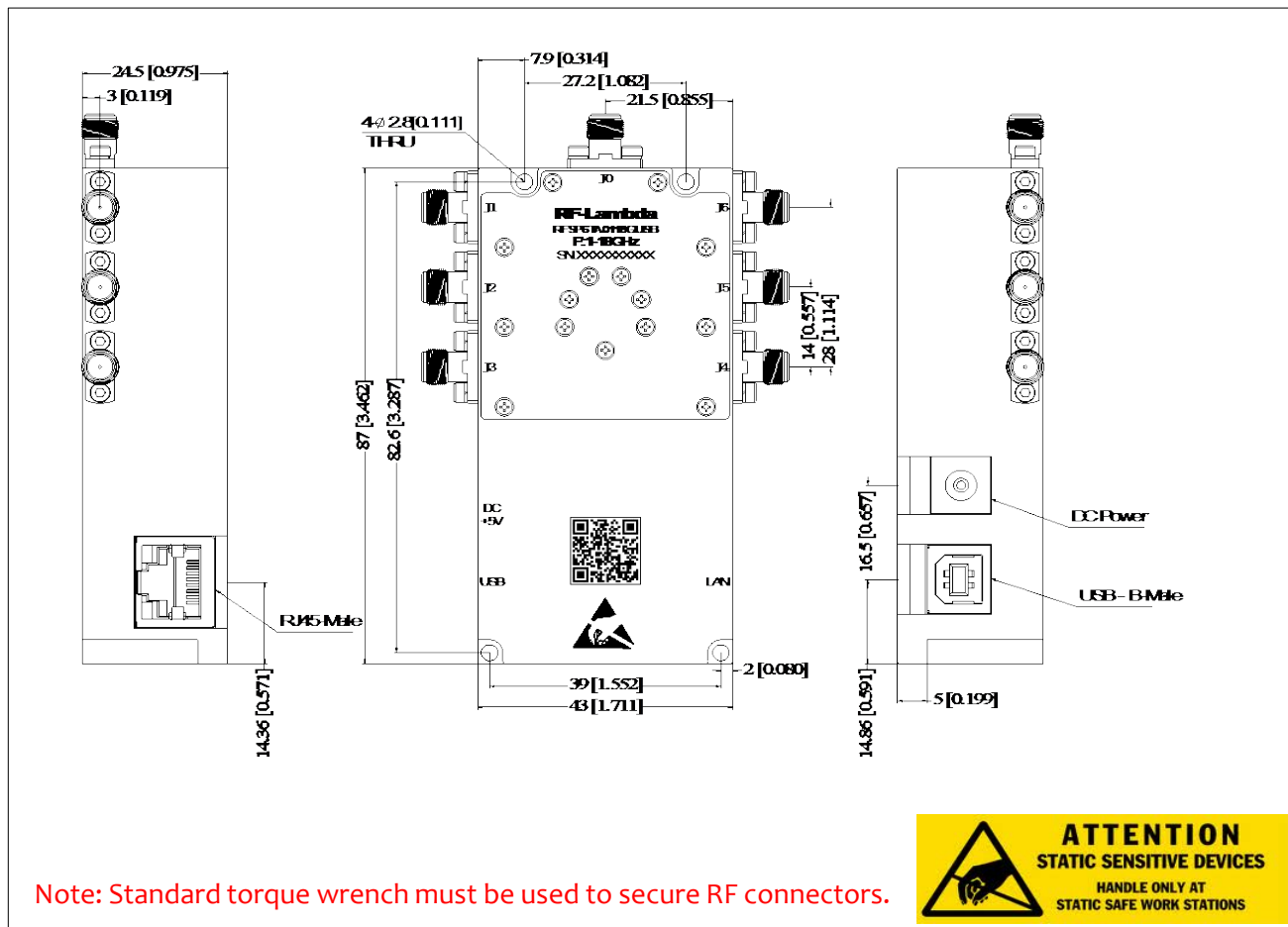
Environmental Specifications and Test Standards

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]



Note: Standard torque wrench must be used to secure RF connectors.

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

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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.

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USB Control Panel

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<< Goback

Select Path J0 J1 ¹

Manual Control ²

Single Channel Auto Cycle

OFF ³

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

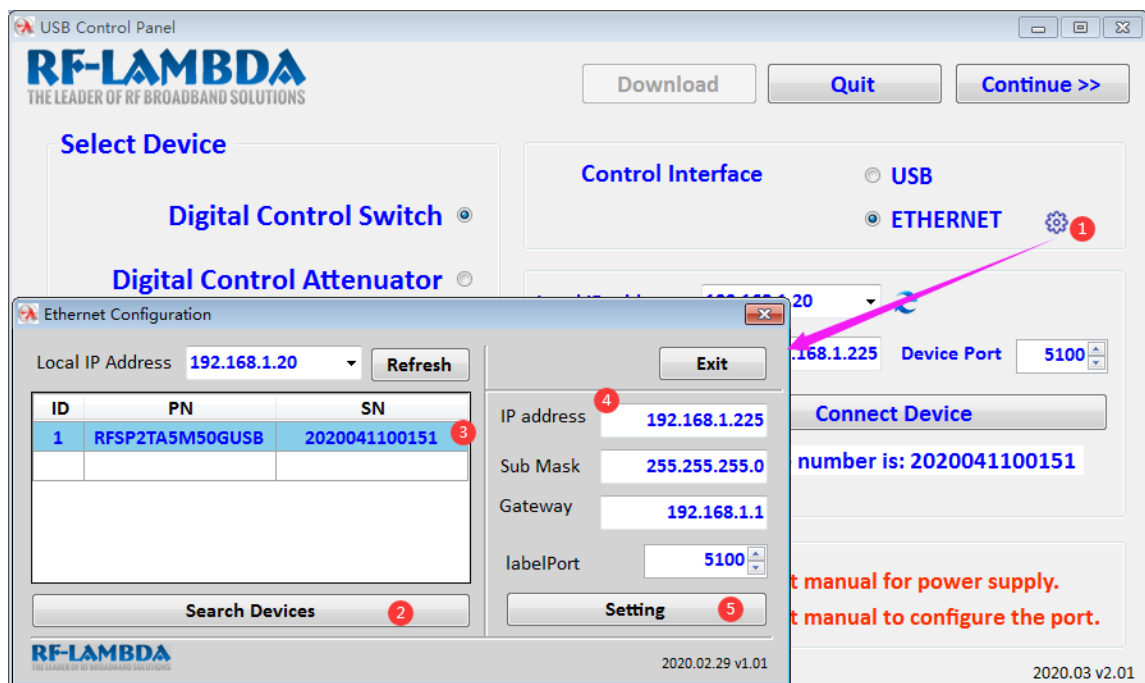
Control Model: USB

Control Port: COM62

Send String SW:Sopen 1;

Recevie String S01

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