



RF-LAMBDA

LEADER OF RF BROADBAND SOLUTIONS

RFSP8TA5M43GUSB

USB / Ethernet Absorptive Coaxial SP8T Switch 0.5- 43.5GHz



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

Features

- Ultra Wide Band Operation 0.5-43.5GHz
- USB / Ethernet Controlled.
- Low Insertion Loss and High Isolation
- Customization available upon request
- Control SW included.

Typical Applications

- Automated Test
- Aerospace and military applications

Electrical Specifications, TA = +25°C

Description	PN: RFSP8TA5M43GUSB									
	SP8T Absorptive Switch									
	Low Power Cold Switching									
Parameters	Min.	Typ.	Max.	Min.	Typ.	Max.	Min.	Typ.	Max.	Units
Frequency Range	0.5		8	8		26.5	26.5		43.5	GHz
Insertion Loss		5.0			7.5			9.0		dB
Insertion Loss Temperature Coefficient		0.003			0.003			0.003		dB/°C
Isolation	60			50			48			
Input VSWR		2	3		1.9	3		1.8	2.5	: 1
Output VSWR		2	3		1.9	3		1.8	2.5	: 1
RF Input Power (CW)			23			23			23	dBm
DC Power Dissipation		0.8			0.8			0.8		W
0.1dB Compression Point (P 0.1dB)		23			23			23		dBm
IIP3		43			40			38		dBm
Weight	/									ounces
Impedance	50									Ω
Bias Current	320 Typ.									mA
Power Supply	USB(+5.0V)									
Control Interface	USB2.0 & Ethernet (IPv4) (Control Cable Included)									
Input / Output Connectors	2.92mm-Female									
Finishing	Nickel Plated									
Material	Aluminum									

USB / Ethernet Absorptive Coaxial SP8T Switch 0.5 – 43.5GHz



RF-LAMBDA

LEADER OF RF BROADBAND SOLUTIONS

RFSP8TA5M43GUSB

Ordering Information

Part No.	Description
RFSP8TA5M43GUSB	SP8T 0.5-43.5GHz PIN Diode Switch

Environmental Specifications and Test Standards

Parameter	Standard	Description
Operational Temperature	MIL-STD-39016	-40°C~+85°C
Storage Temperature		-50°C~+105°C
Thermal Shock		1 Hour@ -40°C → 1 Hour @ +85°C (5 Cycles)
Random Vibration		Acceleration Spectral Density 6 (m/s) Total 92.6 RMS
Electrical & 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	MIL-STD-883 (For Hermetically Sealed Units)

USB / Ethernet Absorptive Coaxial SP8T Switch 0.5 – 43.5GHz



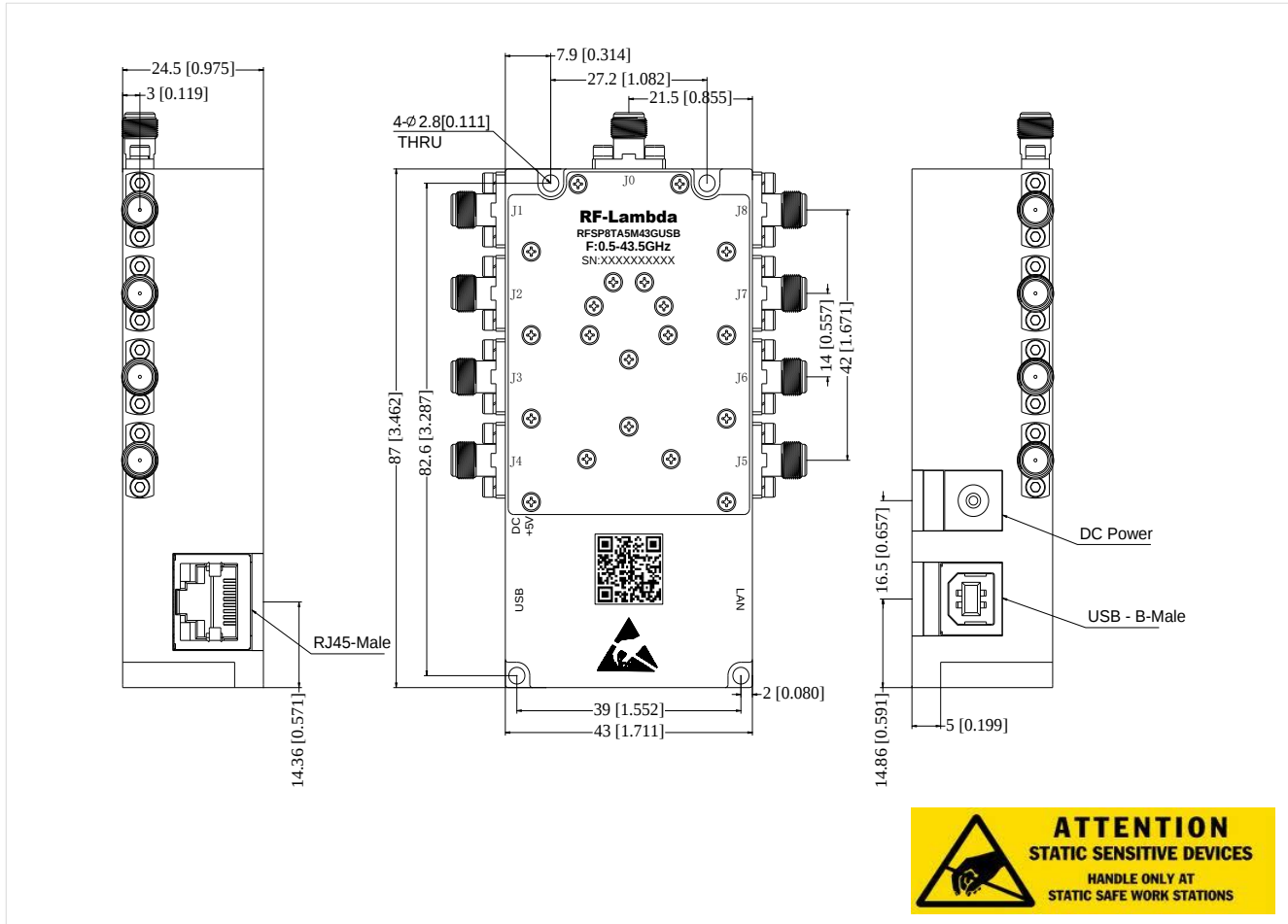
RF-LAMBDA

LEADER OF RF BROADBAND SOLUTIONS

RFSP8TA5M43GUSB

Outline Drawing:

All Dimensions in mm [inches]



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.



RF-LAMBDA

LEADER OF RF BROADBAND SOLUTIONS

RFSP8TA5M43GUSB

USB / Ethernet Absorptive Coaxial SP8T Switch 0.5 – 43.5GHz

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



RF-LAMBDA

LEADER OF RF BROADBAND SOLUTIONS

RFSP8TA5M43GUSB

USB Control Panel

RF-LAMBDA
THE LEADER OF RF BROADBAND SOLUTIONS

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

Select Path J0 ¹ J1

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

2020.03 v2.01

USB / Ethernet Absorptive Coaxial SP8T Switch 0.5 – 43.5GHz



RF-LAMBDA

LEADER OF RF BROADBAND SOLUTIONS

RFSP8TA5M43GUSB

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.