

LSW-203PDT Lab Brick® Absorptive Phase Matched SPDT RF Switch

.1 – 20 GHz Frequency | 50 dB Isolation | 3.0 dB Insertion Loss

Features/Benefits

- Reliable and Repeatable, Single Pole Double Throw Solid-State Microwave Switch
- Easily Portable USB Powered Device
- Includes Windows GUI, Windows and Linux SDK, LabVIEW Driver
- USB and Ethernet Control
- Phase Matched Outputs
- Sized to Fit into a Single Rack Unit for ATE Applications



Applications

- Antenna Switching
- Engineering/Production Test Stations
- Automated Test Equipment (ATE)

The Lab Brick LSW series of Switches bring affordability, functionality, reliability, and simplicity to the microwave test bench.

The LSW-203 Switch series is a solid-state, 50 Ohm absorptive RF/Microwave Switch. The switches are easily programmable for fast switching or sequenced switching directly from the Windows Graphical User Interface (GUI) or the WebUI. Alternatively, for users wishing to develop their own interface, Vaunix supplies LabVIEW drivers, Windows/Linux SDK files, Python examples and much more.

The Vaunix USB connection use a native USB HID interface to avoid the difficulties inherent in using older serial or IEEE-488 interfaces implemented over USB. As a result, Lab Brick users can get to work faster without having to install kernel level drivers, and Lab Brick devices can be easily used on any system that supports USB HID devices, including low cost embedded computers using Linux or similar operating systems.

The Vaunix advanced Ethernet functionality provides a 10/100 Ethernet network interface with selectable static/dynamic IP assignment. The included WebUI allows for simple device management and enables the user to configure the WebUI port and login credentials for maximum security.

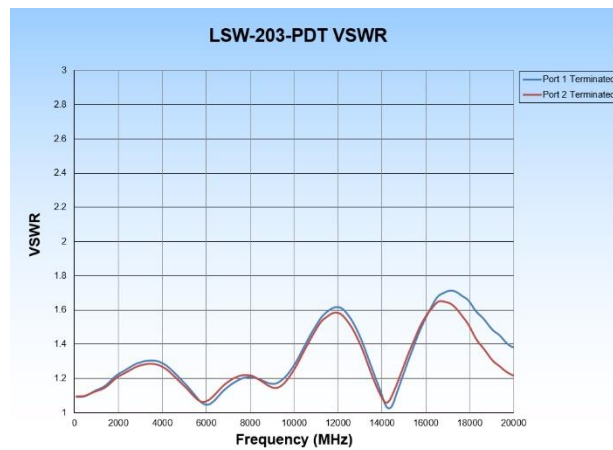
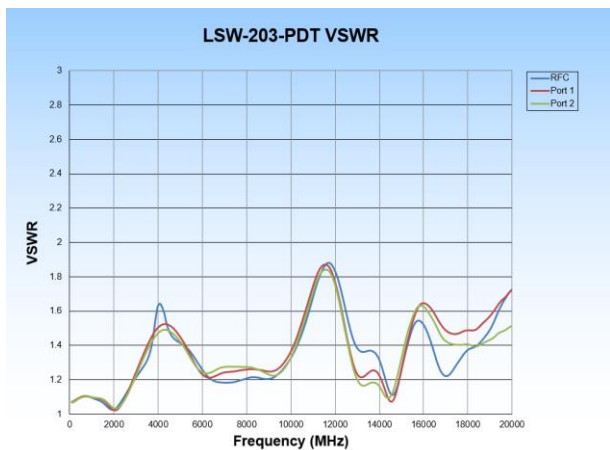
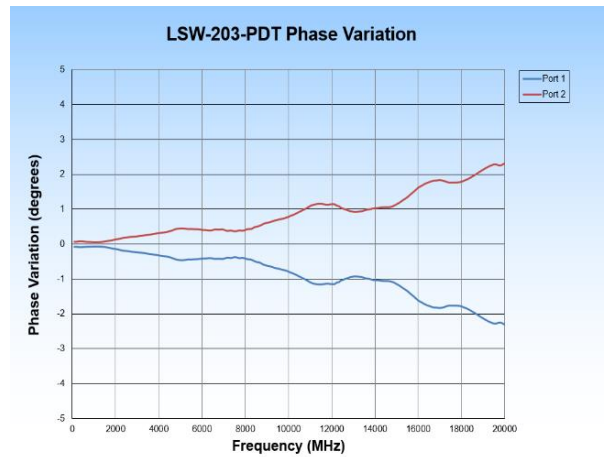
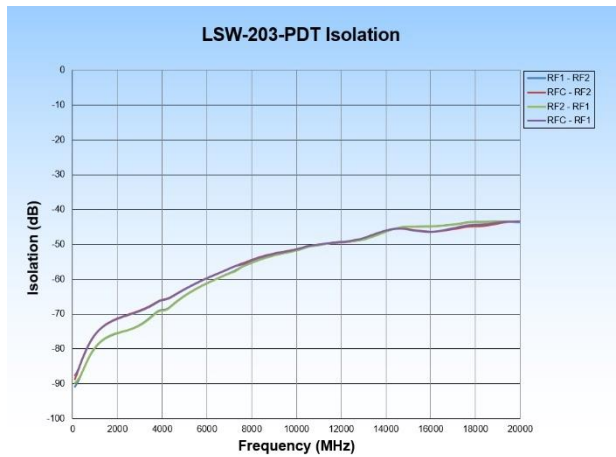
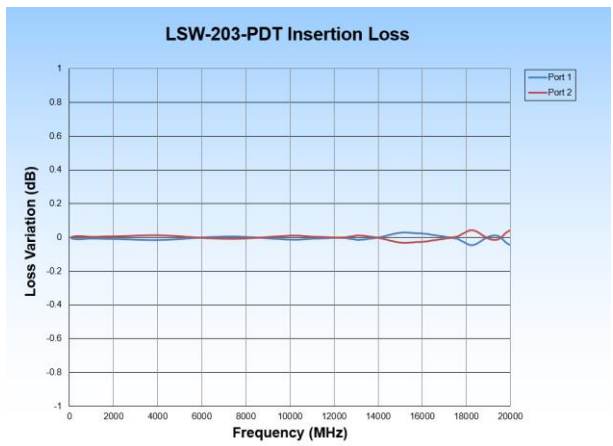
Multiple LSW-203 units can be powered and controlled through a single connection to a PC by linking the expansion bus of the switches.

LSW-203PDT Specifications

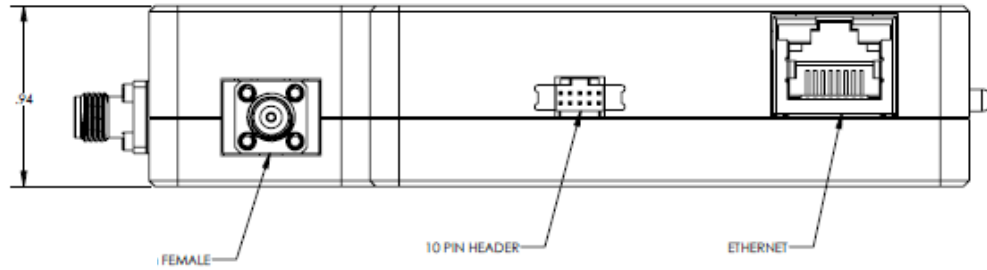
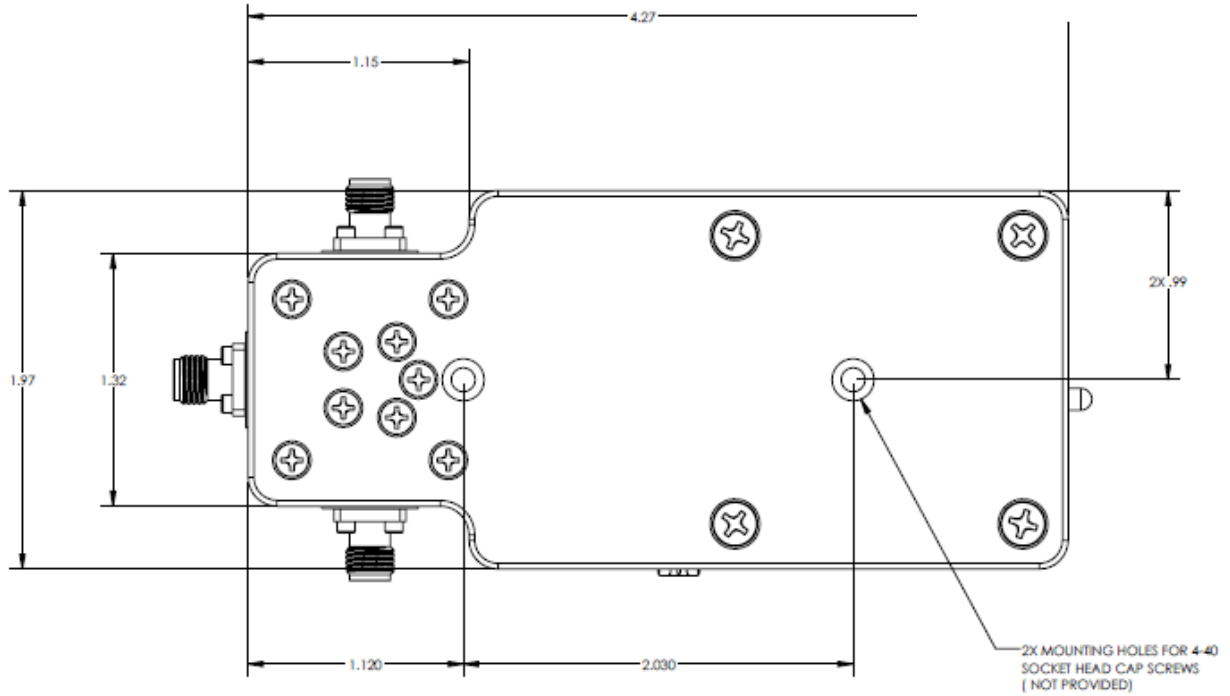
Parameter	Test Conditions	Min	Typ	Max
Frequency Range (GHz)		0.1		20
Impedance (Ohms)			50	
Insertion Loss (dB)	<10 GHz		2.5	3
	<20 GHz		3	4
Insertion Loss Variation (dB)			0.1	
Phase Variation (degrees)			+3	
Isolation - RFC to RF1/RF2 (dB)	<10 GHz	48	55	
	<20 GHz	40	45	
Isolation - RF1 to RF2 (dB)	<10 GHz	48	55	
	<20 GHz	40	45	
Switching Characteristics (ns)	Trise/fall (10-90% of RF Out)		3	
	Ton/off (50% Vctrl to 90% RF Out)		14	
	0.1 dB settling (50% Vctrl to RF out)		40	
	0.05 dB settling (50% Vctrl to RF out)		45	
P1dB (dBm)			27	
Maximum Input Level (dBm)	Insertion Loss Path		26	
	Isolation Path		25	
	Hot Switching		25	
Input IP3 (dBm)			53	
VSWR	RFC, RF1/RF2 On		1.5:1	
	RF1/RF2 Off		1.3:1	

Parameter	Test Conditions/Notes	
Power Requirements	From the USB connection	+5 VDC 75 mA
Environmental	Operating Temperature	-5 °C to +55 °C
	Relative Humidity (non-condensing)	<95%
Physical Connections	Power	USB Type C – female
	Control	USB/Ethernet
	RF Connectors	SMA – female
	Expansion Bus	Samtec FTSH-105-01-L-D-RA-K
Operating Modes	Manual Switch Control (GUI/API)	
Mechanical	Size	4.0 x 1.4 x 0.86 inches 101.6 x 35.6 x 21.8 millimeters
	Weight	0.35 pounds 136 grams

LSW-203PDT Performance Plots

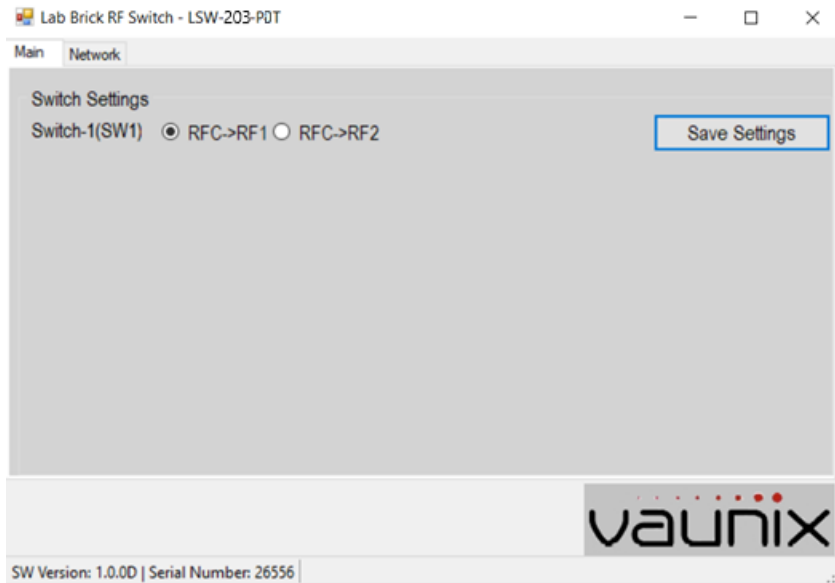


LSW-203PDT Mechanical Outline



LSW-203PDT Software Interface

Windows GUI



Web UI

