LPS-123 Lab Brick® Phase Shifter

8 – 12 GHz Frequency | 360 Degrees | 1.0 Degree Step Size

Features/Benefits

- Reliable and Repeatable solid state digital phase shift
- Includes GUI, Windows and Linux SDK, LabVIEW driver
- Programmable phase control ramps and profiles
- Operate multiple devices directly from a PC or self powered hub
- Easily portable USB powered device
- Sized to fit into a single rack unit for ATE applications

Applications

- Beam Forming
- Phased Array Antenna Systems
- Amplifier Linearization
- 5G, Wi-Fi Channel Simulator Systems
- Automated Test Equipment (ATE)

The Lab Brick LPS series of Phase Shifters bring affordability, functionality, reliability and simplicity to the microwave test bench. The LPS products range from 2 GHz to 12 GHz with 360 degrees of control range in a compact and rugged package.

The LPS-123 Digital Phase Shifter is a highly accurate, bidirectional, phase shifter. The LPS-123 provides calibrated phase control from 8 to 12 GHz with a 360 degree range and 1.0 degree phase step size. The phase shifters are easily programmable for fixed phase, swept phase ramps and phase profiles directly from the included Graphical User Interface (GUI). Alternatively, for users wishing to develop their own interface, Vaunix supplies LabVIEW drivers, Windows API DLL files, Linux drivers, Python examples and much more.

Lab Bricks 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.

vaunix

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LPS-123 Specifications

Parameter	*Test Conditions*	*Min*	*Typ*	*Max*
Frequency Range (GHz)		8		12
Impedance (Ω)			50	
Phase Control Range (degrees)		360		
Step Size (degrees)		1		360
Insertion Loss (dB)			10	11.5
Phase Accuracy (dB)			1.5	3
Switching Speed (µs)			10	
Maximum Input Level (dBm)	For Linear Operation		10	
VSWR			1.5:1	

Parameter	*Test Conditions/Notes*	
Power Requirements	From the USB connection	+5 VDC 50 mA
Environmental	Operating Temperature	0 °C to +50 °C
	Relative Humidity (non-condensing)	<95%
Physical Connections	Power and Control	USB Type miniB – female
	RF Connectors	SMA – female
Operating Modes	Manual Phase Control Swept Phase – uni/bi directional – one time/repeat Profile	
Mechanical	Size	3.86 x 2.52 x 1.35 inches 98 x 64 x 34.3 millimeters
	Weight	0.6 pounds 0.272 kilograms

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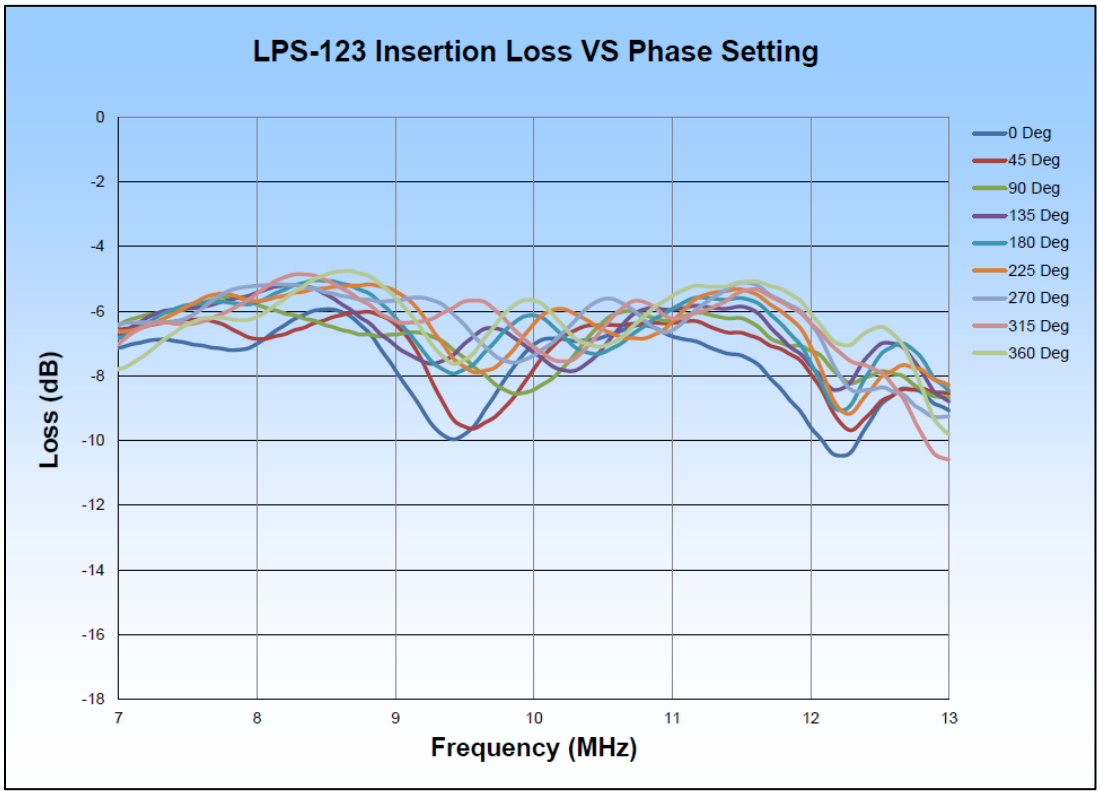
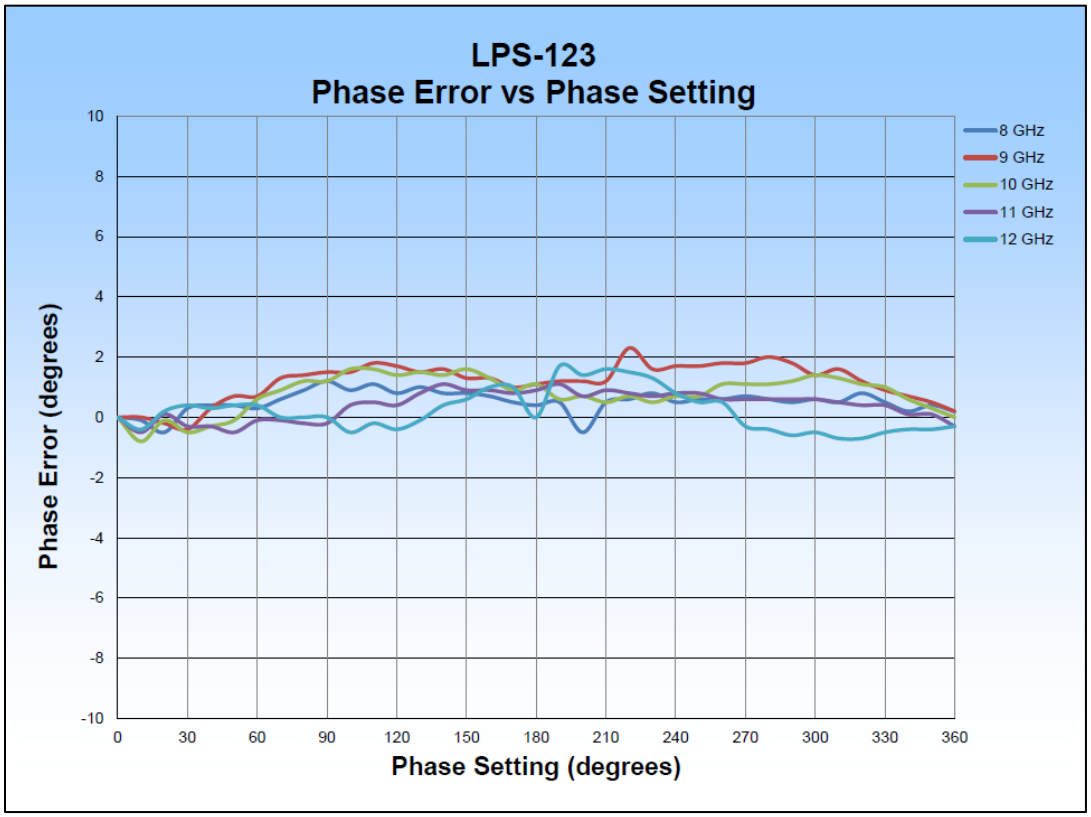
LPS-123 Performance Plots





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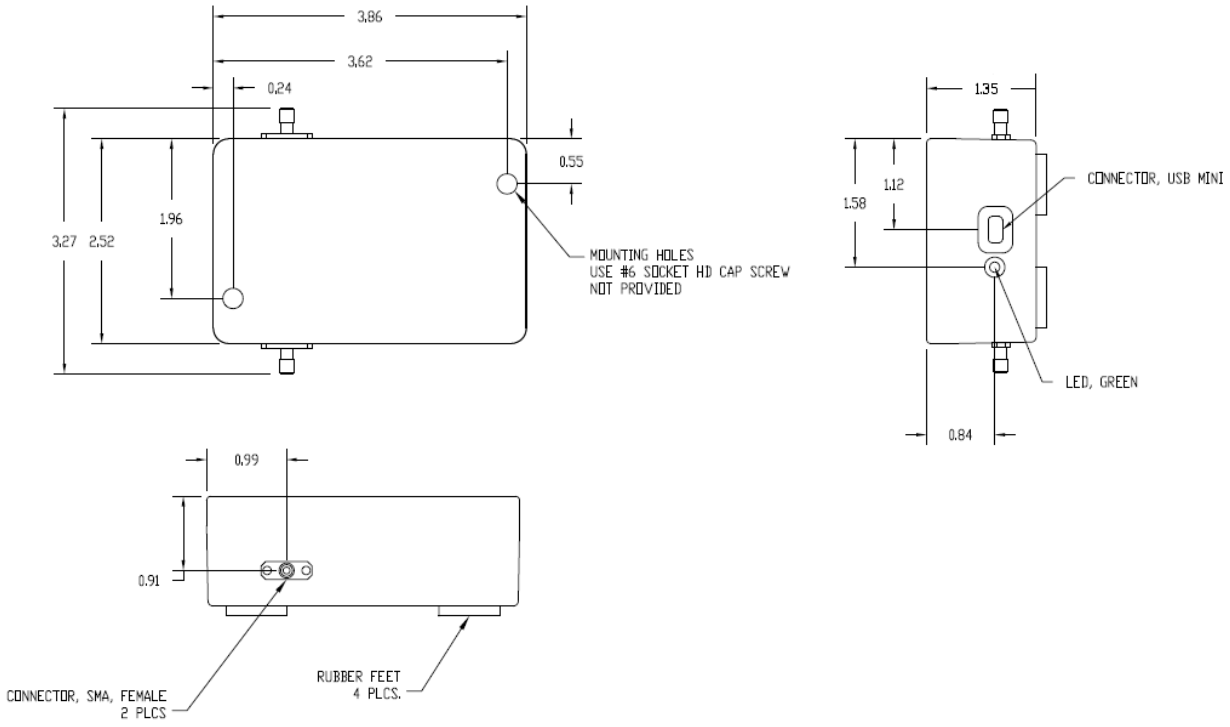
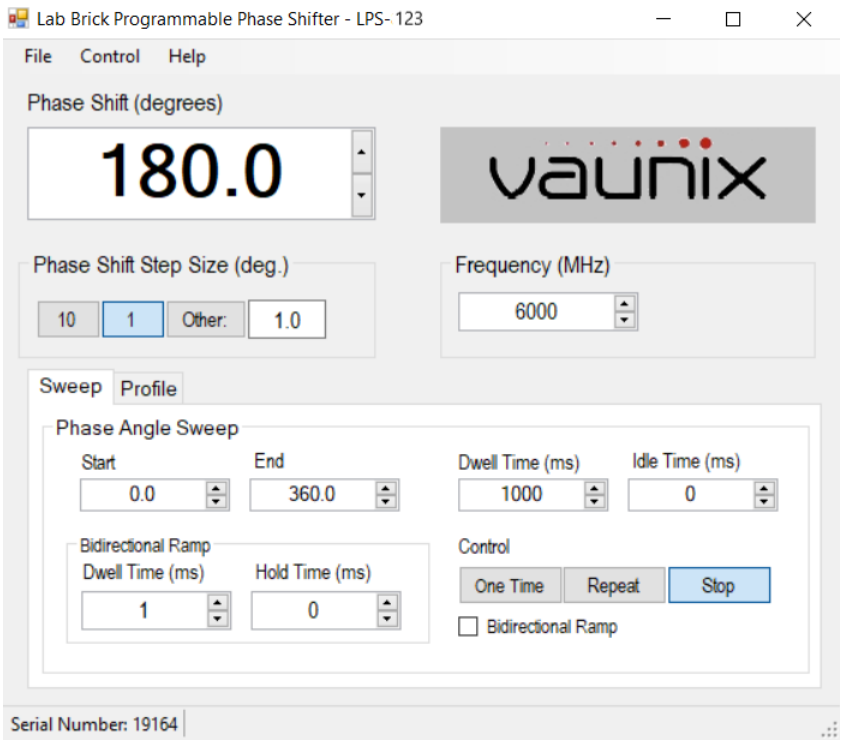
LPS-802 Mechanical Outline



LPS-123 Software Interface



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