

LDA-133

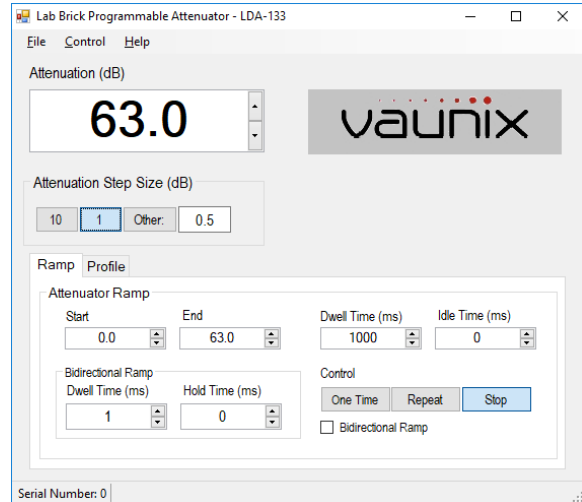
Lab Brick® High Resolution Digital Attenuator

Features/Benefits

- > Reliable and Repeatable solid state digital attenuation
- > Includes GUI, Windows and Linux SDK, LabVIEW driver
- > Programmable attenuation ramp and fading 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

- > WiMAX, 3G, 4G, 5G, LTE, Microwave Radio and Satcom Fading Simulators
- > Engineering/Production Test Labs
- > Automated Test Equipment (ATE)



Overview

The Lab Brick LDA series of Digital Attenuators bring affordability, functionality, reliability and simplicity to the microwave test bench. The LDA products range from 6 MHz to 20 GHz with input level tolerance to 2 Watts and step size as small as 0.1 dB.

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.

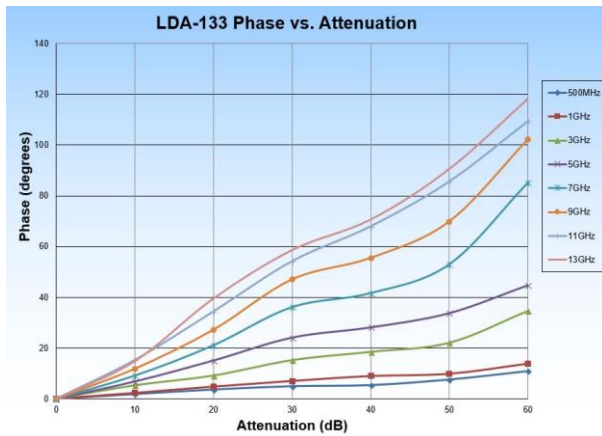
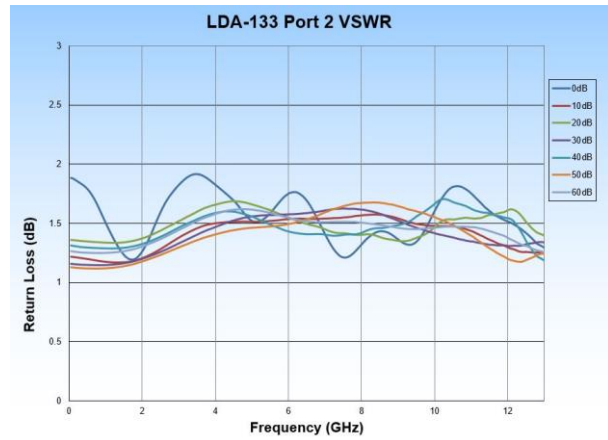
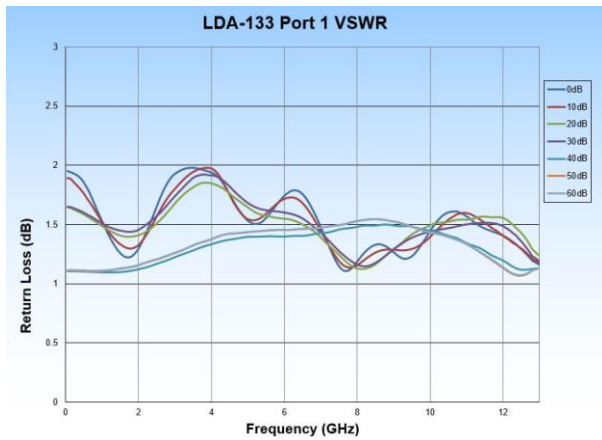
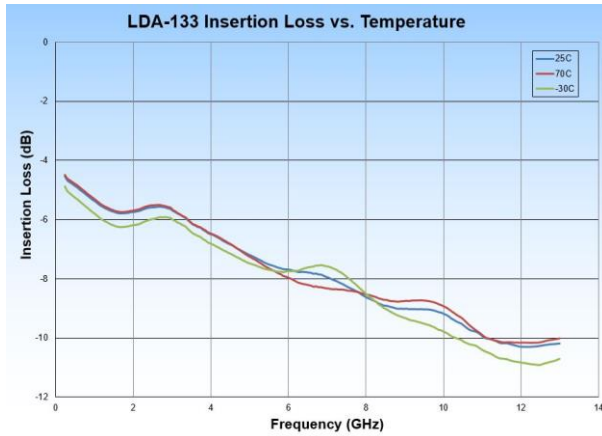
The LDA-133 Digital Attenuator is a bidirectional, 50 Ohm step attenuator. The LDA-133 provides fast attenuation changes from 10 to 13000 MHz with a step size of 0.5 dB and 63 dB of control range. The attenuators are easily programmable for fixed attenuation, swept attenuation ramps and fading profiles 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.

Specifications

Parameter	Test Conditions/Notes	Min	Typ	Max	Units
Frequency Range		10		13000	MHz
Impedance			50		Ω
Attenuation Range		63			dB
Step Size		0.5			dB
Insertion Loss	< 2 GHz		6.0	7.0	dB
	< 6 GHz		8.0	9.0	
	< 13 GHz		10.0	11.5	
Attenuation Accuracy	@ +25C		1.5	3.5	dB
	@ -30C to +70C		2.0	4.0	
Switching Speed			50		ns
Maximum Input Level	<.5 GHz		+12		dBm
	0.5 – 13 GHz		+22		
Input IP3		+40	+45		dBm
VSWR			1.5:1		
Operating Modes	Manual Attenuation Control Swept Attenuation – uni/bi directional – one time/repeat Profile				
Power Requirements	From the USB connection	+4.75	+5.0 65	+5.25	VDC mA
Environmental	Operating Temperature	-30		+70	C
	Relative Humidity (non-condensing)			<95	%
Mechanical	Dimensions	4.27 x 1.97 x 0.86 108.5 x 50 x 21.8			In. mm.
	Weight	0.4 0.182			lb. Kg
Physical Connections	Power and Control RF Connectors	USB Type B – female SMA – female			

Performance Plots



Mechanical Outline

