

LDA-203

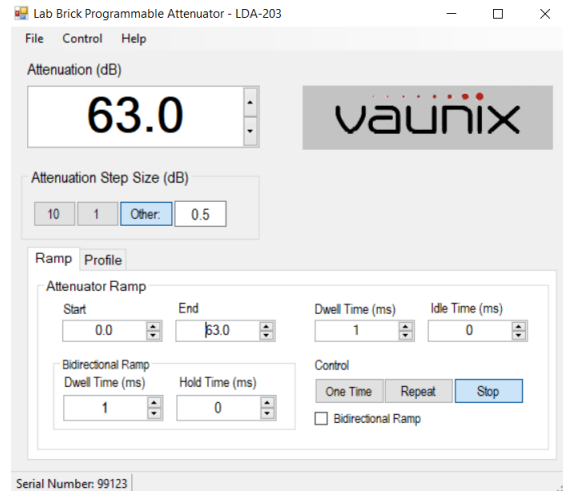
Lab Brick® Digital Attenuator

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

- > Fading Simulators, LTE, Wi-Fi, Microwave Radio Testing
- > 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.

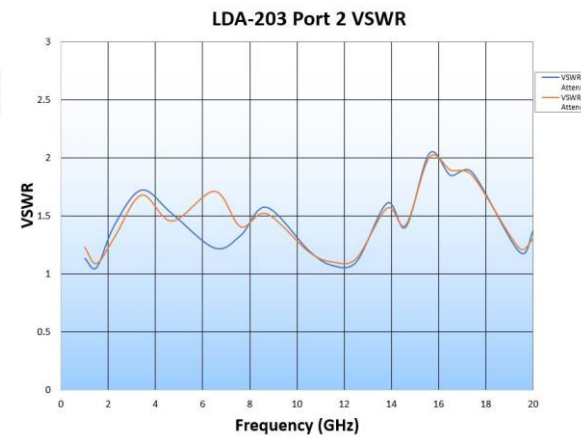
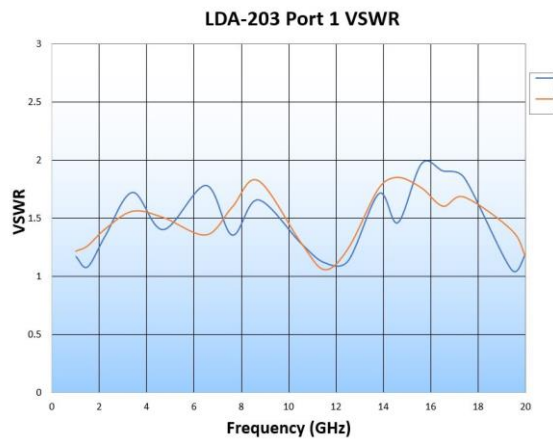
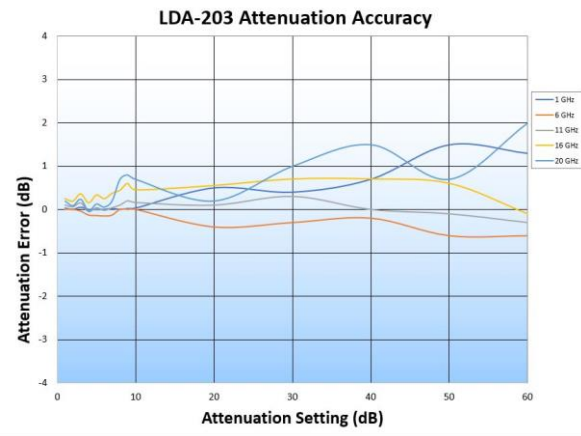
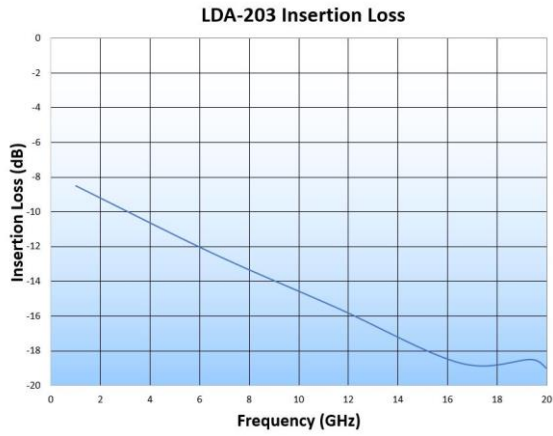
Lab Bricks use a native USB HID interface to avoid the difficulties inherent in using older serial or IEEE-488 interfaces implemented over USB. As a result, Lab Brick users can get to work faster without having to install kernel level drivers, and Lab Brick devices can be easily used on any system that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

The LDA-203 Digital Attenuator is a bidirectional, 50 Ohm step attenuator. The LDA-203 offers 63.5 dB of control range from 1 to 20 GHz with a 0.5 dB step size. 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 and a Linux driver with instruction manuals.

Specifications

Parameter	Test Conditions/Notes	Min	Typ	Max	Units
Frequency Range		1		20	GHz
Impedance			50		Ohms
Attenuation Range		63			dB
Step Size		0.5			dB
Insertion Loss			13	20	dB
Attenuation Accuracy	<30 dB <63 dB		0.5 1.0	±0.5+5% ±0.5+5%	dB
Switching Speed			100		ns
Maximum Input Level			+23		dBm
Input IP3			+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 50	+5.25	VDC mA
Environmental	Operating Temperature Relative Humidity (non-condensing)	-10		+50 <95	C %
Mechanical	Dimensions Weight	4.0 x 2.5 x 0.94 101.6 x 63.5 x 23.9 <0.625 <284			In. mm. lb. g
Physical Connections	Power and Control RF Connectors Mounting : Counter-bore holes	USB Type B – female SMA – female (x2) #6 Socket Head (x2)			

Graphs:

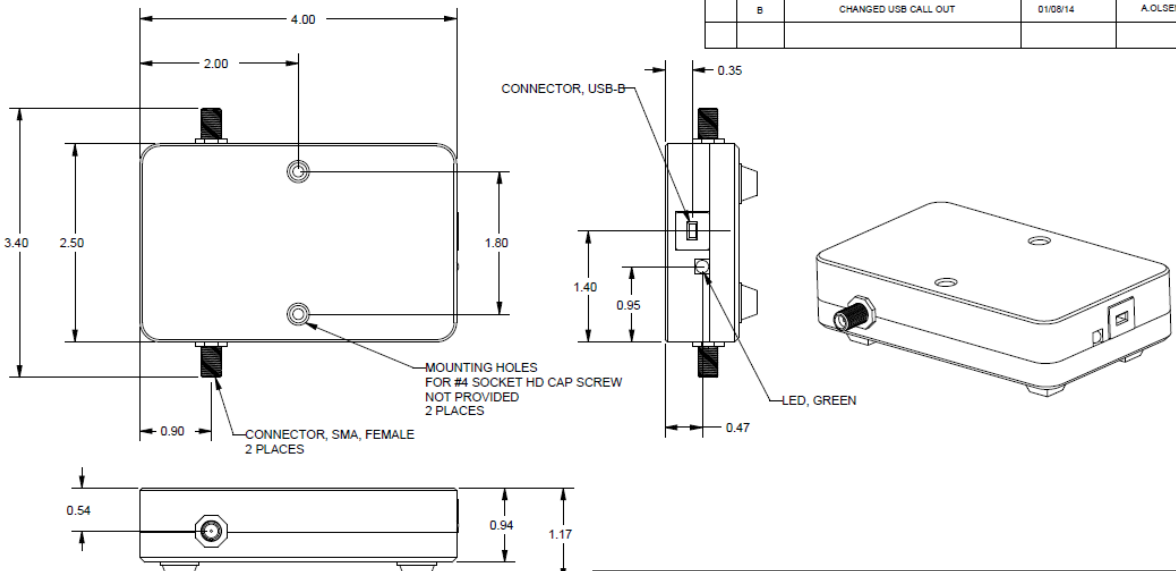


Data Sheet

LDA-203

Mechanical Outline:

REVISIONS				
ZONE	REV.	DESCRIPTION	DATE	APPROVED
	A	RELEASED	12/5/13	A.OLSEN
	B	CHANGED USB CALL OUT	01/08/14	A.OLSEN



Labels in drawing: CONNECTOR, SMA, FEMALE 2 PLACES; CONNECTOR, USB-B; LED, GREEN; RUBBER FEET 4 PLACES; MOUNTING HOLES FOR #4 SOCKET HD CAP SCREW NOT PROVIDED 2 PLACES.

Dimensions: 4.00, 2.00, 3.40, 2.50, 1.80, 0.90, 0.35, 1.40, 0.95, 0.47, 0.54, 0.94, 1.17.

NOTES:
1) DIMENSIONS ARE NOMINAL.

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UNLESS OTHERWISE SPECIFIED:		NAME	DATE
DIMENSIONS ARE IN INCHES	TOLERANCES	DRAWN	BR
FRACTIONS $\frac{1}{16}$		CHECKED	A.OLSEN
ANGULAR MATCHES/RECORD		END APPR.	
TWO PLACE DECIMAL		INFO APPR.	
THREE PLACE DECIMAL		D.A.	
WITHIN FIRST GEOMETRIC TOLERANCING PER:		COMMENTS:	
MATERIAL:			
FINISH:			
USED ON:			
APPLICATION:	DO NOT SCALE DRAWING		

VAUNIX		
TITLE: OUTLINE: LDA-102E/602E		
SIZE	DWG. NO.	REV
B	095-35052	B
SCALE: 1:1	WEIGHT:	SHEET 1 OF 1

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 3/22/18