AD-USB4AR38G95

USB/Ethernet Programmable RF Attenuator

95dB, 8Ghz, 0.25dB Step size

Key Features

- 4 RF channels in single enclosure
- Dynamic range of 95dB
- Attenuation resolution of 0.25dB
- Frequency range of 50 - 8000Mhz
- USB powered & controlled
- Ethernet for Telnet and HTTP control
- HTTP Website Interface
- Easy USB control via VCP
- Very compact size
  (181.20 x 89.30 x 25.70) mm

Ideal for

- Cellular (3G, 4G, LTE, & more)
- IoT
- WiFi MIMO
- Engineering Development and
  Automated Manufacturing Test
- U-NII-6 through U-NII-8 (5.925 to 7.125GHz)

Included Accessories

- USB flash drive containing software, drivers, manuals, and sample scripts/programs
- 6 ft. USB type A to type B cable
- 5 ft. CAT6 Ethernet cable

Overview

The AD-USB4AR38G95 is Adaura Technologies' latest design in the AD-USB series of programmable RF attenuators. Combining all the best features of the previous models, the R3 is the new series flag ship. With a completely custom machined aluminum enclosure, the AD-USB4AR38G95 boasts 95dB of attenuation with over 100dB of interchain isolation. The addition of Ethernet allows EASY implementation into the most modern of test setups by allowing network control via HTTP web interface or direct Telnet while the USB port powers the device and allows for serial communication.

Adaura Technologies
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Specifications

Attenuation Step Size (dB)		0.25			
Number of individually controlled RF chains		4			
Operating Frequency (Mhz)		50 – 8,000			
Attenuation Range (dB)		0 - 95			
Input 0.1dB Compression Power (dBm)		31			
Impedance (Ω)		50			
IP3 Input (dBm)[1]		+56			
Attenuation Accuracy (dB)		**Frequency**	**Conditions**	**Typical**	**Max**
		50 – 2000 Mhz	0.25 – 20	± 0.25	± (5.5% of Atten. + 0.25)
			20.25 – 60	± 0.50	± (2.0% of Atten. + 0.90)
			60.25 – 90	± 0.75	± (3.5% of Atten. + 0.70)
		2000 – 4000 Mhz	0.25 – 20	± 0.20	± (5.5% of Atten. + 0.25)
			20.25 – 60	± 0.30	± (2.0% of Atten. + 0.70)
			60.25 – 90	± 0.40	± (3.0% of Atten. + 0.90)
		4000 – 6000 Mhz	0.25 – 20	± 0.15	± (6.5% of Atten. + 0.15)
			20.25 – 60	± 0.35	± (3.5% of Atten. + 0.45)
			60.25 – 90	± 0.65	± (3.5% of Atten. + 0.90)
		6000 – 8000 Mhz	0.25 – 20	± 0.20	± (6.5% of Atten. + 0.45)
			20.25 – 60	± 0.40	± (6.7% of Atten. + 0.55)
			60.25 – 90	± 0.70	± (7.0% of Atten. + 0.90)
Dwell Time per Channel (µsec)[2]		72			
Min. Dwell Time for all Channels (µsec)[3]		288			
Attenuation Transition Time (ns)[4]		568			
VSWR	**50 – 2000 Mhz**	1.15		:1	
	2000 - 4000 Mhz	1.20			
	4000 - 6000 Mhz	1.25			
	6000 - 7200 Mhz	1.50			
	7200 – 8000 Mhz	1.80			
Max Input RF Power (dBm)		+28			
Power Use (mA)		115			
Power Over Ethernet[5]		IEEE802.3at Class 2 compliant			
Operating Temperature (°C)		0 to 60			
Communication[6]		USB (Hybrid Serial COM Port and HID) Ethernet (Telnet, HTTP, HTTP Web GUI, DHCP & Static IP)			
Interchain Isolation (Chain-to-chain isolation)(dB)		>115			
External Isolation (dB)		>120			
Insertion Loss (dB)		**Typical**		**Max**	
	50 Mhz	4.2		5.0	
	2400 Mhz	5.5		6.3	
	6000 Mhz	7.8		9.0	
	8000 Mhz	10.1		10.8	

[A] Exceeding absolute maximum ratings may cause permanent damage. Operation should be restricted to the limits in the Operating Ranges table. Operation between operating range maximum and absolute maximum for extended periods may reduce reliability.
[B] Attenuator RF ports are interchangeable bidirectional signal transmission.
[1] Tested with 1 MHz span between signals.
[2] Dwell Time per Channel is the time the will take an individual attenuator channel to transition to a new attenuation state (without PC communication delays).
[3] Minimum Dwell Time for All Channels is the time it takes all channels to transition to a new attenuation state (without PC communication delays).
[4] Attenuation Transition Time is the time it takes an attenuator to reach a new attenuation state.
[5] Power Over Ethernet (POE) available by optional configuration.
[6] USB support for simultaneous HID and Serial connections.

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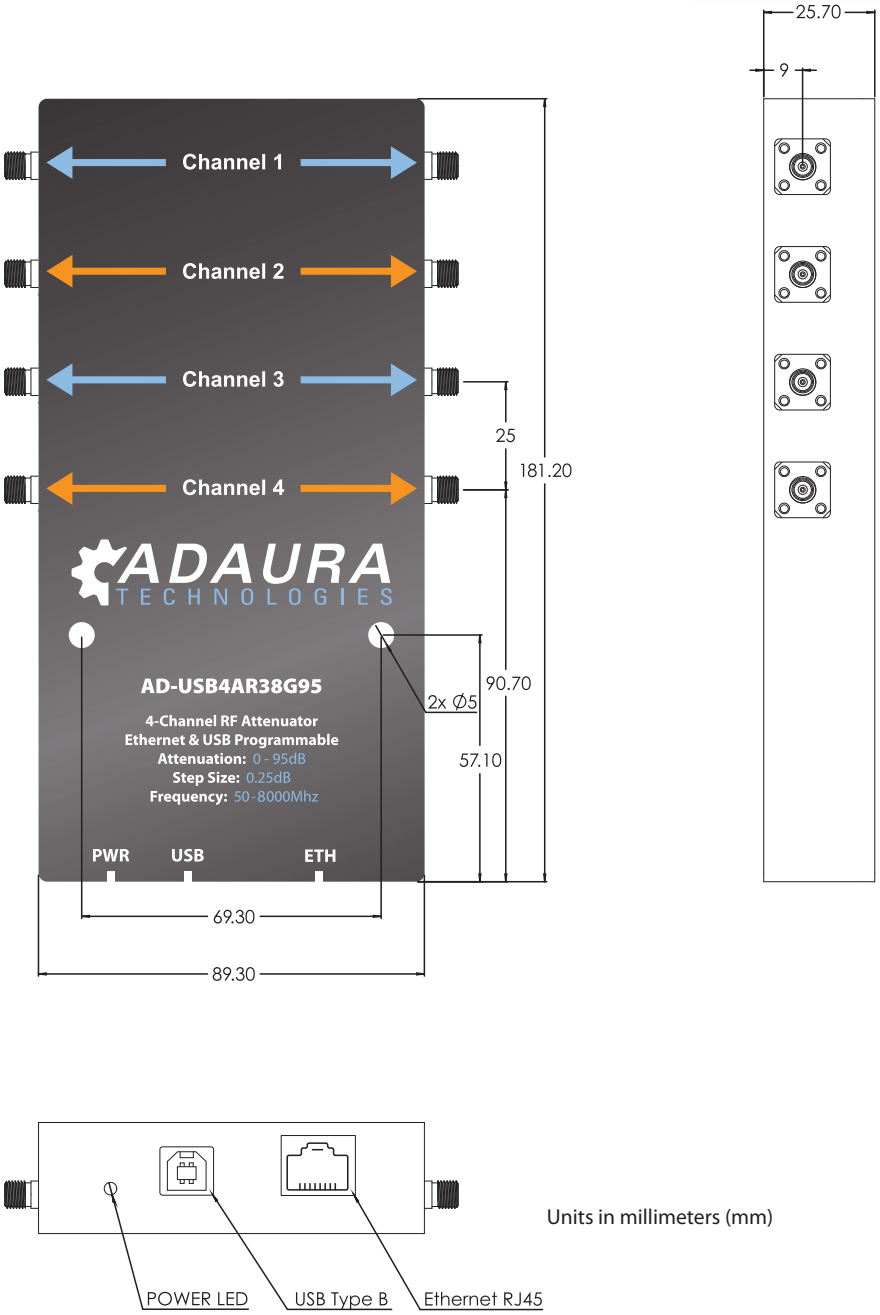
Drawing



Units in millimeters (mm)

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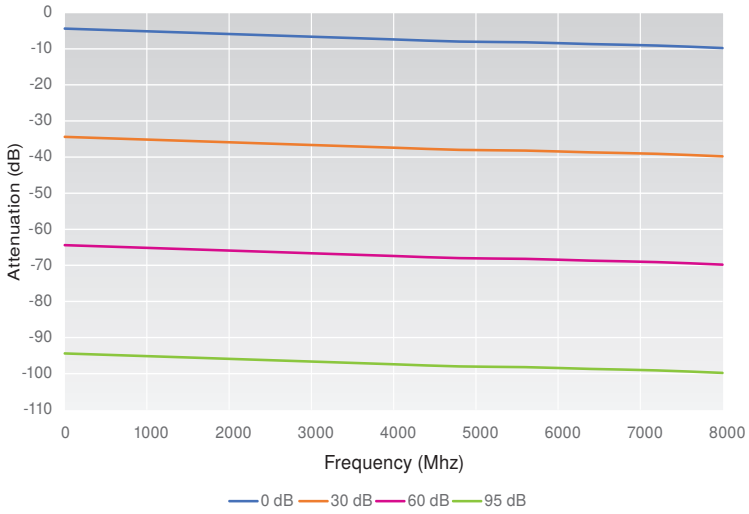
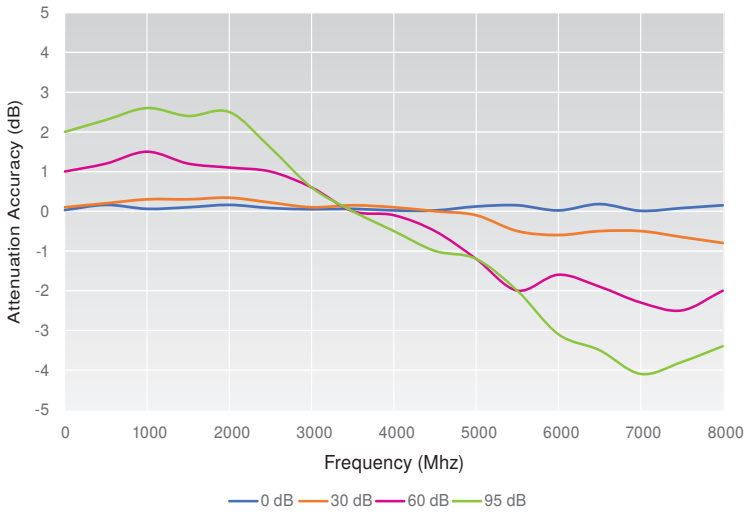
Performance

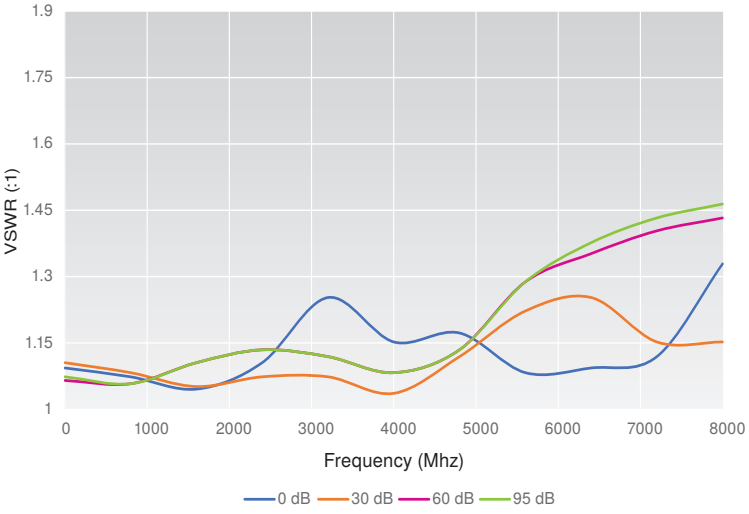
Attenuation



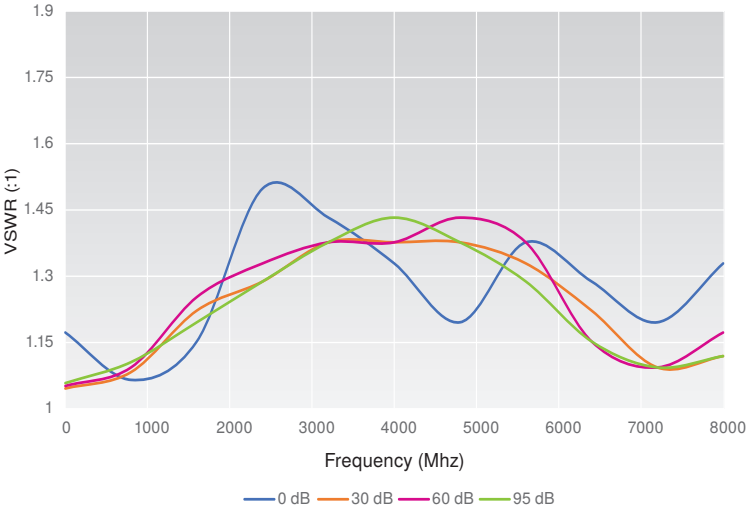
Attenuation Accuracy



Input VSWR



Output VSWR



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