DATASHEET

OCTOBOX® quadAtten Programmable Attenuator

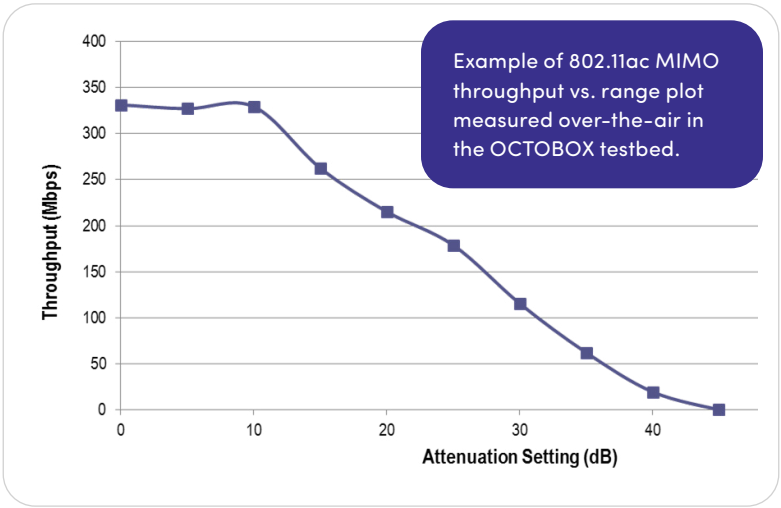
Module with 4 RF attenuators controllable via USB or Ethernet, 90 dB range

OCTOBOX quadAtten module contains 4 individually programmable RF attenuators. quadAtten offers the best RF isolation on the market, making it suitable for controlled OCTOBOX wireless testbed environment. With its high power handling, quadAtten can be directly connected to an antenna port of a device while maintaining signal linearity.

OCTOBOX quadAtten is exceptionally well isolated with filtered USB and Ethernet interfaces.

OCTOBOX software suite controls attenuators to produce throughput vs. range and throughput vs. range vs. orientation plots.

OCTOBOX quadAtten module



Plot produced by OB-THROUGHPUT script

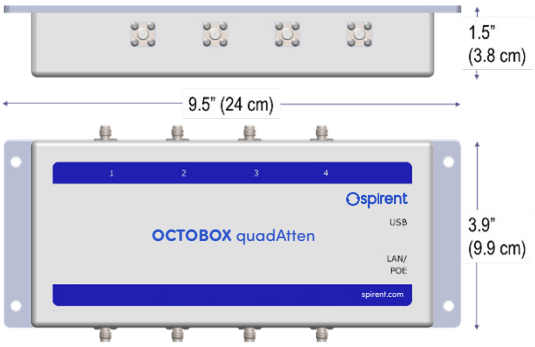
Features and Benefits

- Frequency range: DC to 7500 MHz
- Dynamic range: 90 dB
- Step: 0.5 dB
- Insertion loss: 9 dB at 7500 MHz, typical
- 1 dB compression: 30 dBm
- IP3: 55 dBm
- Ethernet/PoE power and control interface
- USB power and control interface
- Programmable via browser

Applications

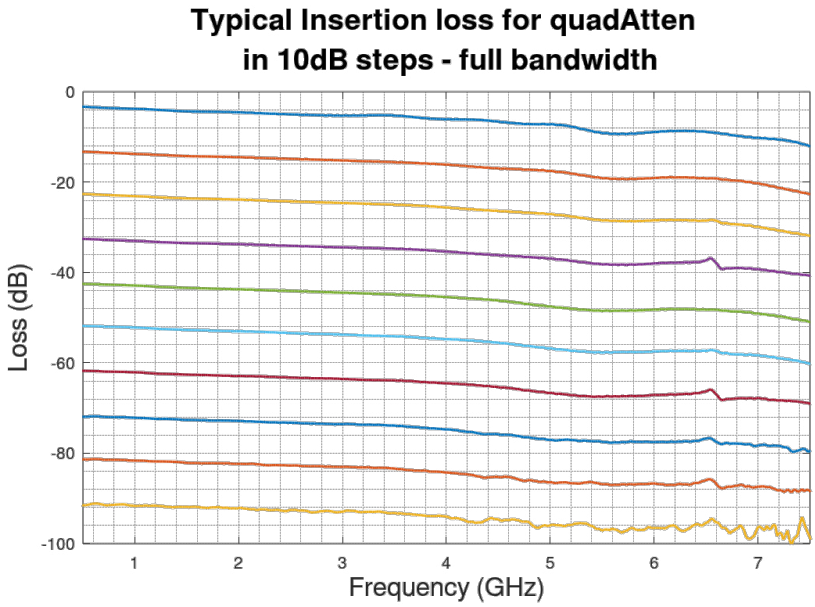
- Wi-Fi up to 6E and cellular (GSM, UMTS, LTE, FDD, TD-LTE and LTE-Advanced, 5G) testing
- Throughput vs. range measurements when used with the OCTOBOX testbed
- RX sensitivity measurements

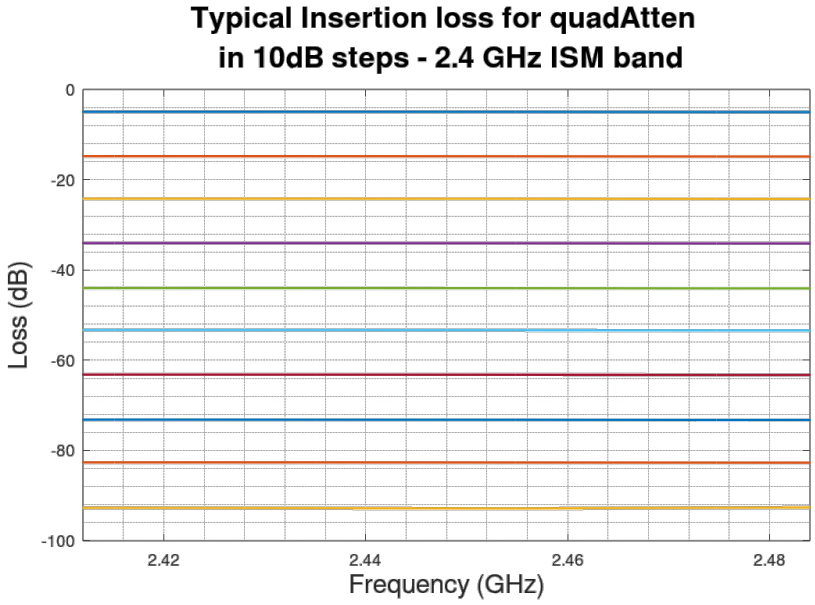
Specifications

Parameter	Specification	
Frequency range	DC to 7500 MHz	
Dynamic range	0 to 90 dB	
Insertion loss	<3 GHz: 6 dB typical, 7 dB max	3-7.5 GHz: 9 dB typical, 10 dB max
RF power	1 dB compression: 30 dBm	IP3: 55 dBm
Resolution and accuracy	Resolution: +/- 0.5 dB steps	Accuracy: +/- 0.6 dB + 6% of value
Isolation between attenuators	80 dB min	
RF connectors	SMA	
Dimensions		
Power	Power over Ethernet (PoE), 2W max	

Attenuator Programming

quadAttenuator Control command line parameters		
	Example Example	**Description Description**
-d	-d COM11 -d QuadName -d 192.168.15.56 -d QA40516-02	Selects the device to use either the com port, name, IP address, or serial number. If –d is not specified will look for a quadAtten that is connected via USB.
-c	-a 14.5 –c 1	Specifies the channel to set.
-a	-a 14.5 -a 14.5 –c 1	Sets the attenuation value. If no channel is specified will set all channels equal to this value.
-i	-i 192.168.15.56	Sets the IP address of the device.
-g	-g 192.168.15.1	Sets the Gateway address of the device.
-s	-s 255.255.255.0	Sets the subnet mask of the device.
-n	-n SignalAtten1	Sets a custom name used to help identify and address multiple quadAttens. (Max 20 characters no spaces)
-z	-z	Returns information settings of the device. (Name, serial, firmware, IP address, subnet, gateway, MAC address, Ch1/2/3/4 settings)

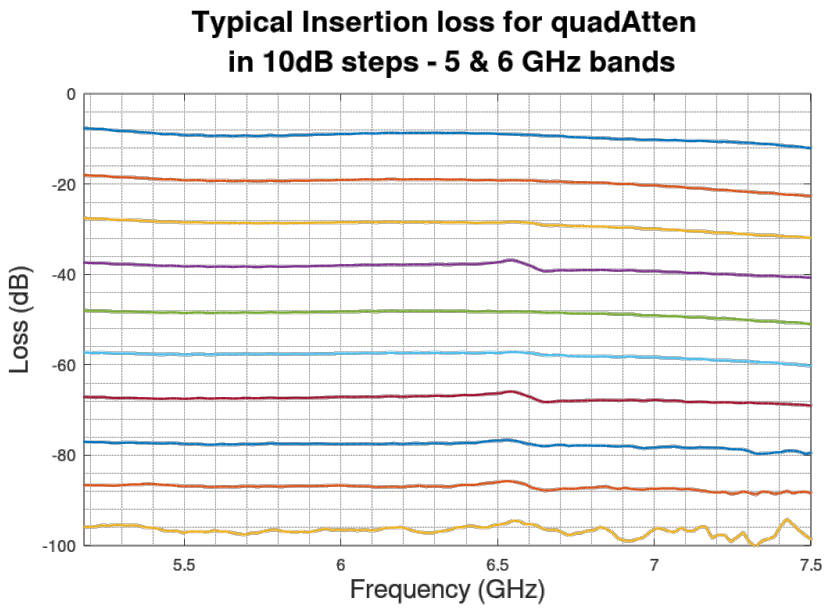

Typical Insertion loss for quadAtten
in 10dB steps - full bandwidth
Loss (dB)
0
-20
-40
-60
-80
-100
1
2
3
4
5
6
7
Frequency (GHz)


Typical Insertion loss for quadAtten
in 10dB steps - 2.4 GHz ISM band
Loss (dB)
0
-20
-40
-60
-80
-100
2.42
2.44
2.46
2.48
Frequency (GHz)

About Spirent

Spirent Communications (LSE: SPT) is a global leader with deep expertise and decades of experience in testing, assurance, analytics and security, serving developers, service providers, and enterprise networks. We help bring clarity to increasingly complex technological and business challenges. Spirent's customers have made a promise to their customers to deliver superior performance. Spirent assures that those promises are fulfilled.

For more information visit: www.spirent.com



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