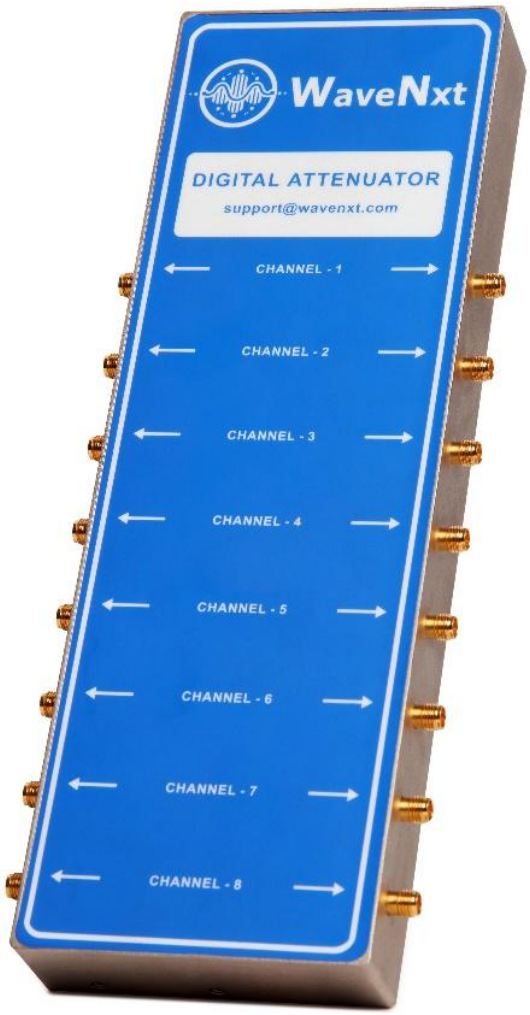
MT-88A Programmable Digital Attenuator



Key Features/ Benefits

- Frequency range: 200MHz to 8000MHz
- Number of individual channels: 8
- Dynamic Range: 95 dB
- Step: 0.25 dB
- Insertion loss: 4.5dB at 2.4 GHz, 6dB at 5 GHz, 8dB at 7 GHz
- 0.1 dB compression: 34 dBm
- IP3: 58 dBm
- PoE Powered and Ethernet or USB Interface
- Programmable via Browser or APIs
- Completely shielded and very good accuracy
- Supports Windows, Linux and Mac OS

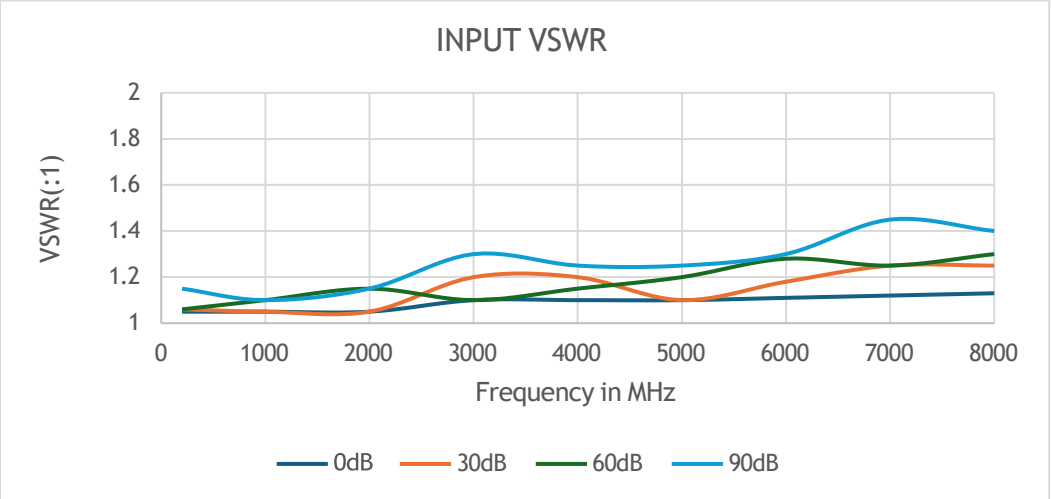
Applications

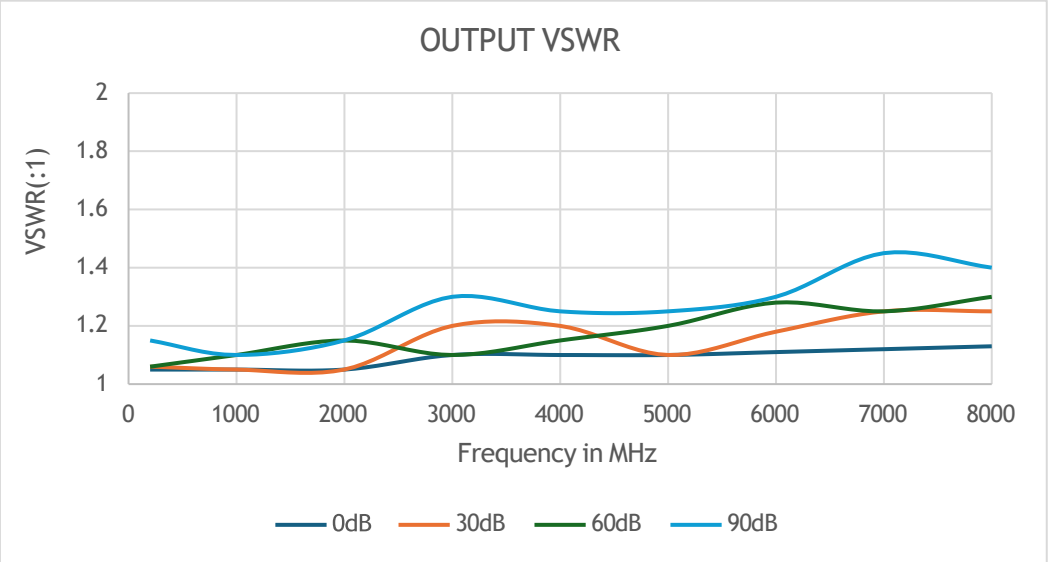
- Wi-Fi up to 802.11be and cellular technologies (GSM, UMPS, LTE-FDD, LTE-TDD, 5G-FR1) testing
- Throughput vs Range measurements
- Wi-Fi or Cellular Roaming measurements
- Mesh, Band-steering
- Receiver Sensitivity Measurements
- System design or device verification testbeds
- Engineering Development and Automated Manufacturing Test

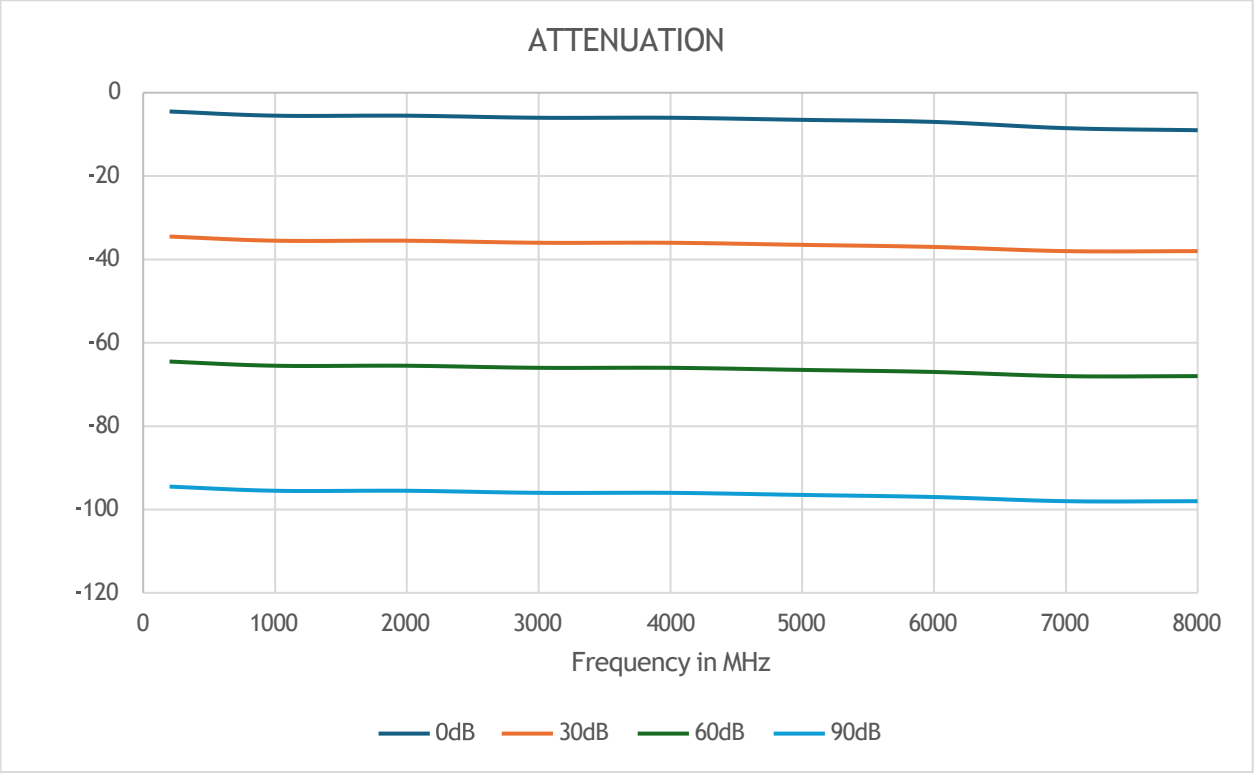
Overview

The MT-88A programmable digital attenuator is a completely shielded, high performance, digitally controlled, 8-channel RF attenuator system. It is intended for any automated RF testing where high accuracy signal power control is needed. The MT-88A offers very good attenuation accuracy, high dynamic range and speed. The high performance of the attenuator is obtained through high precision attenuator design and calibration

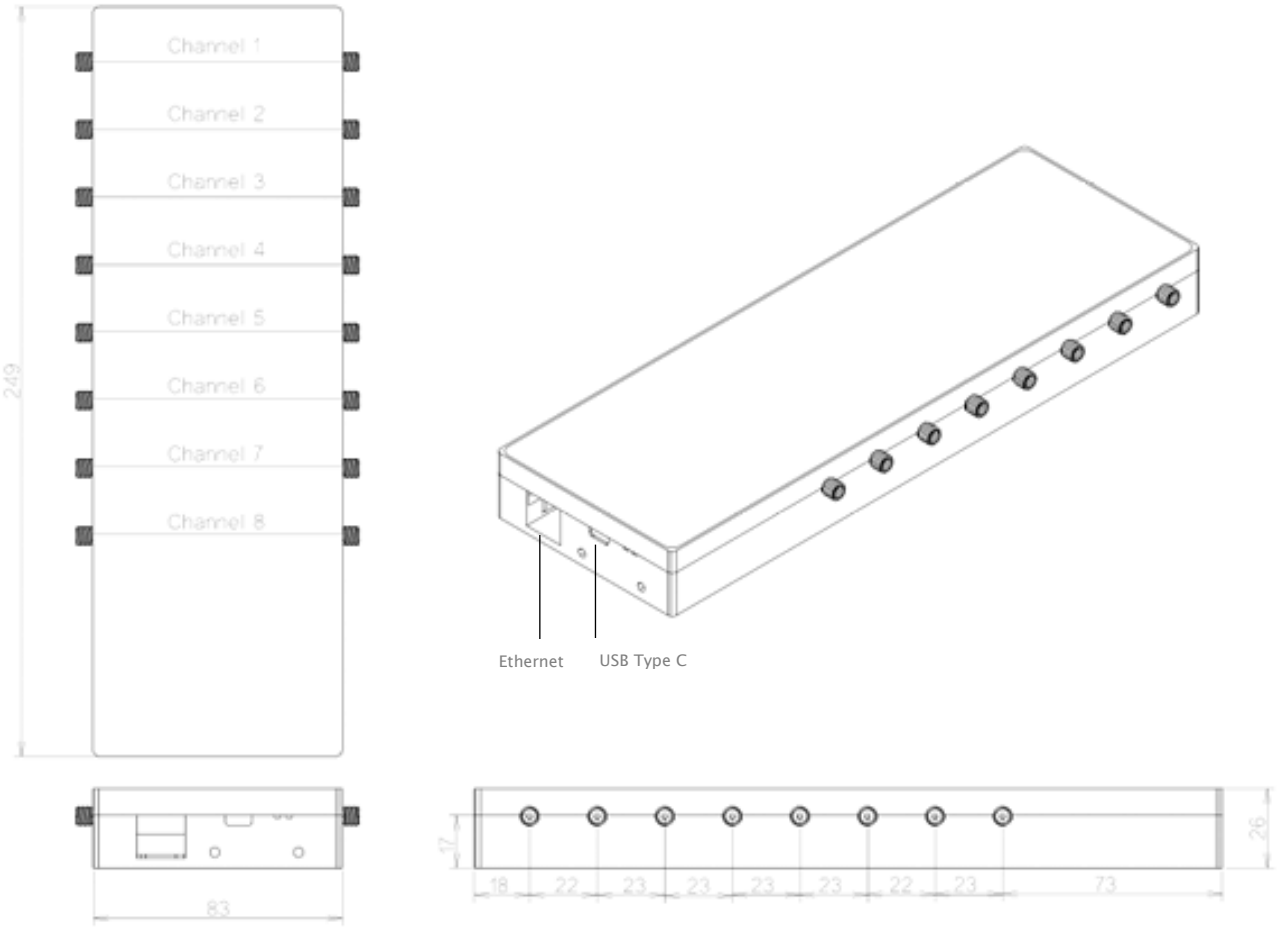
Parameter		Min	Typ	Max
Frequency Range (MHz)		200		8000
Impedance (Ω)			50	
Channels			8	
Attenuation Range (dB)		95		
Shielding (dB)			90	
Isolation between Channels (dB)			90	
Step Size (dB)		0.25		
Insertion Loss (dB)	< 2.5 GHz		4.5	6
	< 6 GHz		6	7
	< 8 GHz		8	10
Attenuation Accuracy (dB)			0.25	1.5
Switching Speed (µs)			2	
Maximum Input Level (dBm)			+28 (operating) +33 (absolute max)	
Input IP3 (dBm)			58	
Operating modes	Uni/Bi-Directional GUI control or APIs			
Power	Power over Ethernet (PoE)			
Operating Temperature	−30 °C to +70 °C			
RF connectors	SMA			
Control Interface	Ethernet or USB			
Operating System	Windows, Linux and Mac			
Custom APIs as per user requirements	Yes			




OUTPUT VSWR
VSWR(:1)
2
1.8
1.6
1.4
1.2
1
0
1000
2000
3000
4000
5000
6000
7000
8000
Frequency in MHz
0dB
30dB
60dB
90dB


ATTENUATION
0
-20
-40
-60
-80
-100
-120
0
1000
2000
3000
4000
5000
6000
7000
8000
Frequency in MHz
0dB
30dB
60dB
90dB

Mechanical Outline:



Note: All dimensions are in millimeters (mm). Tolerance ±0.5 mm.