

MT-248A

DIGITAL ATTENUATOR

Programmable Digital
Attenuator
200 to 8000 MHz



OVERVIEW

The MT-248A programmable digital attenuator is a completely shielded, high performance, digitally controlled, 24-channel RF attenuator system. It is intended for any automated RF testing where high accuracy signal power control is needed. The MT-248A offers very good attenuation accuracy, high dynamic range and speed. The high performance of the attenuator is obtained through a high precision attenuator design and calibration.

Applications

- Wi-Fi up to 802.11be and cellular technologies (GSM, UGPS, 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

Key Features/Benefits

- Frequency range: 200MHz to 8000MHz
- Number of individual channels: 24
- Dynamic Range: 95 dB
- Step: 0.25 dB
- Insertion loss: 5.5dB at 2.4 GHz, 7dB at 6 GHz, 9dB at 8 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

SPECIFICATION

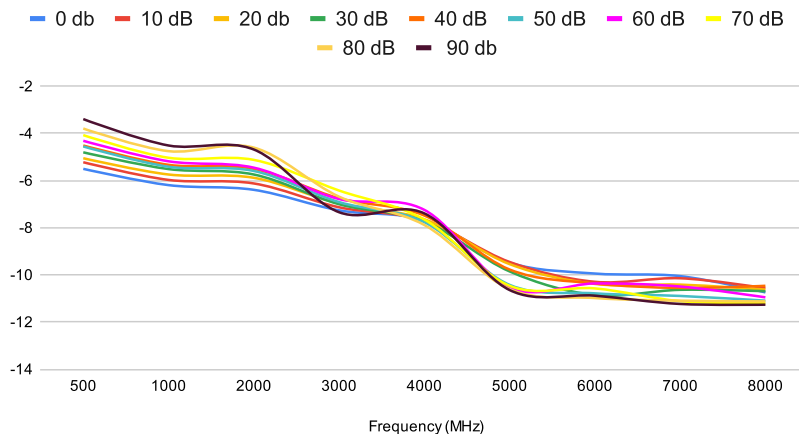
Parameter		Min	Typ	Max
Frequency Range (MHz)		200		8000
Impedance (Ω)			50	
Channels			24	
Attenuation Range (dB)		95		
Shielding (dB)			110	
Isolation between Channels (dB)			90	
Step Size (dB)		0.25		
Insertion Loss (dB)	< 2.5 GHz		5.5	7
	< 6 GHz		7	8
	< 8 GHz		9	11
Attenuation Accuracy (dB)			± 0.25	± 1.5
Switching Speed (μ s)			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			

MECHANICAL SPECIFICATIONS

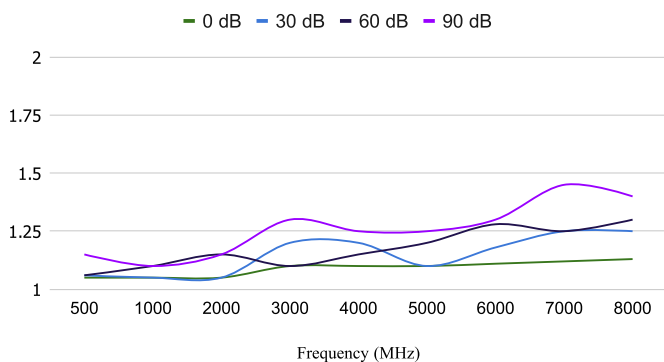
Parameter	Test Conditions
Power Requirements	100 – 240 V AC, 50/60 Hz
Environmental Conditions	Operating Temperature: 0°C to +40°C
Physical Connections	Power Connector: Power Cord Control: USB/Ethernet RF Connectors: SMA – female

PERFORMANCE CURVES

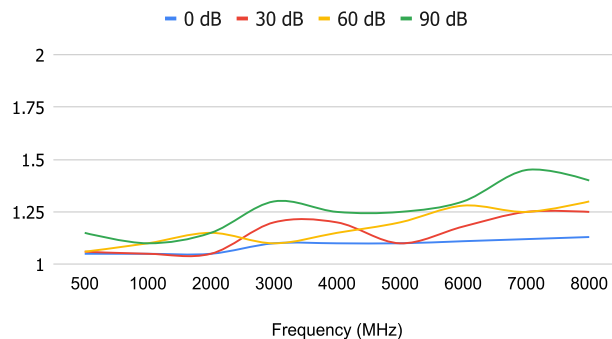
Frequency vs Insertion Loss



INPUT VSWR



OUTPUT VSWR



Attenuation accuracy vs frequency

