

# AT8 Electronic Attenuator 300 kHz – 8 GHz 0 – 111.5 dB



## Key Features of AT8:

- Frequency range: **300 kHz – 8 GHz**
- Attenuation range: **0 – 111.5 dB**
- Attenuation step: **0.5 dB**
- Unlimited switching cycles
- Remote control: **RS-232, USB**
- Command set: **SCPI**
- Dimensions: H x W x D:  
**2U x 42HP (½ 19") x 315 mm**

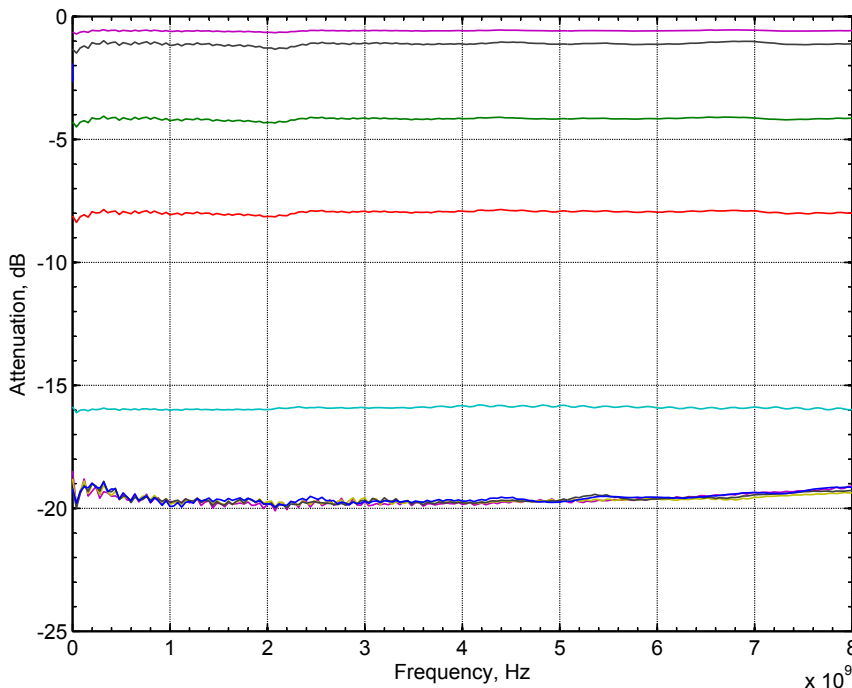


Fig. 1. Uncalibrated relative attenuation

Advantex AT8 Electronic Attenuator is based on GaAs IC broadband bidirectional attenuators and supports two operation modes:

- Continuous attenuation
- Sweep attenuation

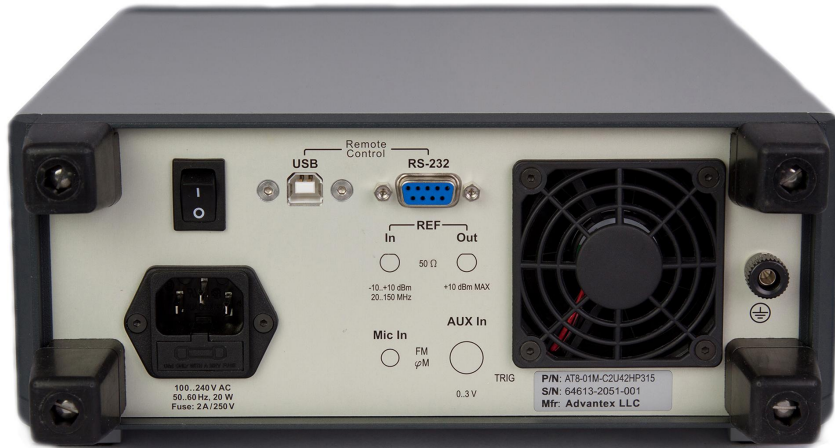
There are four adjustable parameters in sweep mode:

- Start and Stop Attenuation Value
- Dwell Time
- Shape: Saw or Triangle
- Triggering: Internal or External
- Triggering mode: Auto, Single or Manual.

Since digital attenuators imply some insertion loss, which depends on frequency, input frequency value is used for correction. Cable loss can also be taken into correction.

The instrument has USB and RS-232 interfaces for SCPI remote control and firmware updating capability.

# AT8 Electronic Attenuator Specification

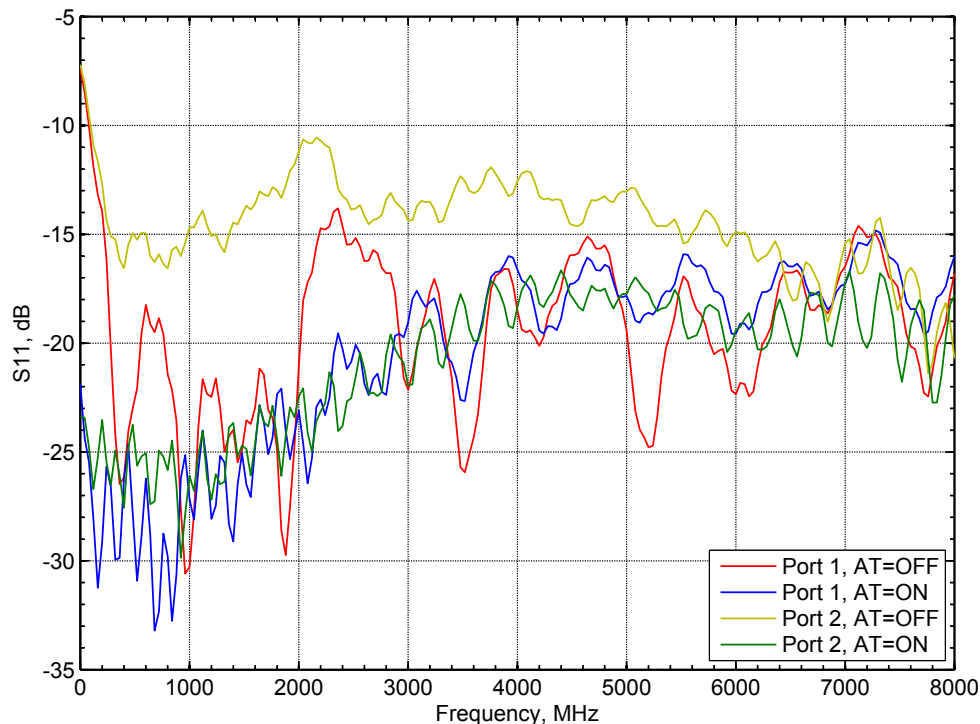
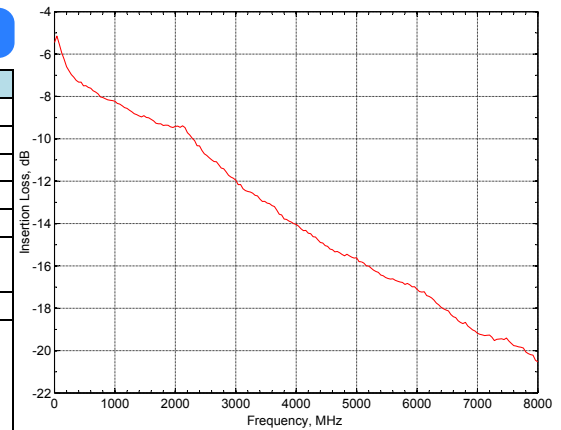


## Rear panel of AT8

- AC power ON/OFF switch;
- USB – type B connector (for remote control);
- RS-232 – for remote control via PC COM-port, D-sub, 9-pin, female connector;
- FAN;
- GND – ground terminal;
- AC power supply connector with fuse.

## Parameters of RF Out signal

Parameter	Conditions	min.	typ.	max.	Unit
Impedance				50	$\Omega$
RF Connector		SMA female			
Frequency Range		0.3		8	GHz
Attenuation Range	relative to IL	0		111.5	dB
Attenuation Step				0.5	dB
Return Loss	attenuation is ON	-25	-20	-15	dB
	attenuation is OFF	-20	-15	-10	
Attenuation Error		0.3dB+1% of att. value			
Insertion Loss	300 MHz			5	dB
	1 GHz			8.5	
	2 GHz			9.5	
	3 GHz			12	
	4 GHz			14	
	5 GHz			15.5	
	6 GHz			17	
	7 GHz			19	
8 GHz			20.5		
Correction Data Frequency Spacing			40		MHz
Maximum Input Power			+25		dBm
Input/Output DC Voltage Offset		-10		+10	V
Switching Time	from rising edge of triggering signal		1		ms



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