

Attenuator Unit PAH-3G/95-8

MTS-No.: 30117

Application

With the MTS Attenuator Unit you can emulate air interfaces for all imaginable scenarios. To avoid the influence from the live-net, the signals can be connected with cables directly from the different signal sources, as for example GSM or UMTS base stations or signal generators etc. over the MTS Attenuator Unit to mobile devices.

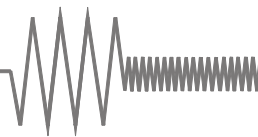
Description

The MTS Attenuator Unit is a very flexible solution for an air interface emulation. With the Attenuator Unit it is possible to emulate the in- and outputs according to the demands of the customer. The design of the shown unit is divided into 8 groups. Every group allows program controlled attenuation of 1 input to 1 output signal. The function is carried out by variable attenuators.



Characteristics

- ▶ 8 groups each with 1 input leading through a 95 dB attenuator to 1 output (8 inputs, 8 outputs)
- ▶ Frequency range from 30 MHz to 3000 MHz
- ▶ Attenuation range from 0 dB to 95 dB in 1 dB steps at each attenuator
- ▶ On request attenuation in 0.5 dB steps (up to 95 dB) or in 0.25 dB steps (up to 32 dB)
- ▶ Switching time up to 10 ms
- ▶ Integrated power supply 100 V - 240 V AC
- ▶ Manual control (colour display with touchpanel)
- ▶ Remote control by RS-232 and LAN (other interfaces or web control on request)
- ▶ 19" rack mount case with 3 HU
- ▶ Windows control programs can be offered
- ▶ High quality materials and components for extended durability
- ▶ On request increment and decrement function of separate components with defined values
- ▶ Group+Block of separate components (with name / name and keyword available)
- ▶ Attenuator Units can be designed according to customers individual requirements



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Configuration:

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Technical data:

1 RF-specifications:

1.1 Impedance	50 Ω		
1.2 Input power	+28 dBm max.		
1.3 Frequency range	30 MHz - 3000 MHz		
1.4 RF-connections	SMA female		
1.5 Attenuation	0 dB - 95 dB in 1 dB steps 0.5 / 0.25 dB on request		
	min.	typ.	max.
1.6 VSWR in / out			
@ 30 - 700 MHz			
@ 0 - 5 dB		1.5	1.9
@ 6 - 95 dB		1.2	1.5
@ 700 - 3000 MHz			
@ 0 - 5 dB		1.3	1.6
@ 6 - 95 dB		1.1	1.5
1.7 Insertion loss (IL)			
@ 30 MHz		2.9 dB	3.2 dB
@ 3000 MHz		5.2 dB	6.0 dB
1.8 IL derating / 20 MHz		0.015 dB	
1.9 Relative phase			
@ 0 - 95 dB		70°	
1.10 Attenuation accuracy (negative means more attenuation)			
@ 30 - 3000 MHz			
@ 0 - 30 dB		±0.1	±0.8 dB
@ 31 - 60 dB		±0.4	+1.5/-0.8 dB
@ 61 - 95 dB		±0.8	+2.5/-1.5 dB
1.11 Input IP3		55 dBm	
1.12 Switching time			10 ms

2 Connections:

2.1 Front side	Power switch with integrated control lamp Colour display with touchpanel
2.2 Rear side	RF-connections Control card with control interfaces Appliance plug with the integrated fuses F1 and F2 Ground connector

3 General specifications:

3.1 Power supply	100 V - 240 V 50 Hz / 60 Hz
3.2 Internal voltage	+5 V DC, +28 V DC
3.3 Control displays	Colour display with touchpanel Control lamp in the power switch
3.4 Control interfaces	RS-232 LAN
3.5 Power consumption primarily	150 mA max. @ 230 V
3.6 Voltage supply	Standard rubber connector
3.7 Operating temperature	0 °C - +50 °C
3.8 Reference temperature for specifications	+25 °C
3.9 Dimensions	19"-unit x 3 HU x 310 mm (dimensions without handles and connections)
3.10 Colour	Front side colourless anodized Rear side colourless anodized
3.11 Weight	6.6 kg

4 Delivered parts:

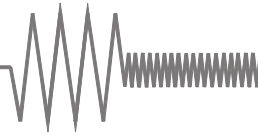
PAH-3G/95-8
Power cable
CD with operating manual

5 Comments:

Warranty 12 months
RoHS-compliant Yes

6 Recommended accessories:

Shielding box of the series
MSB-02xx or MSB-01xx
RF-cables
Control software



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Typical measurements:

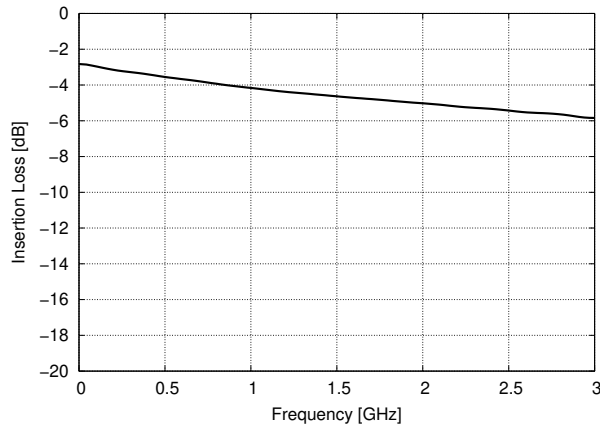


Fig. 1: Input port to output port insertion loss

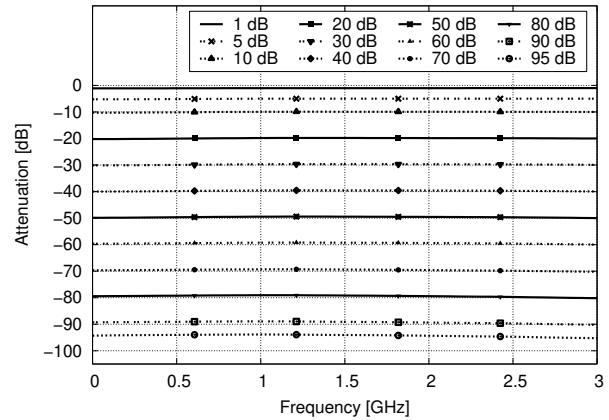


Fig. 2: Attenuation relative to insertion loss

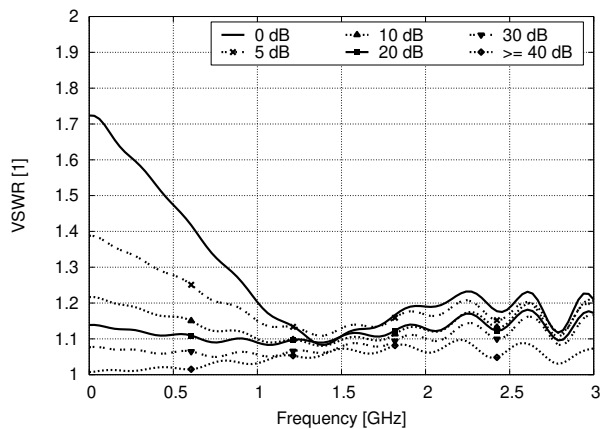


Fig. 3: VSWR for input and output ports

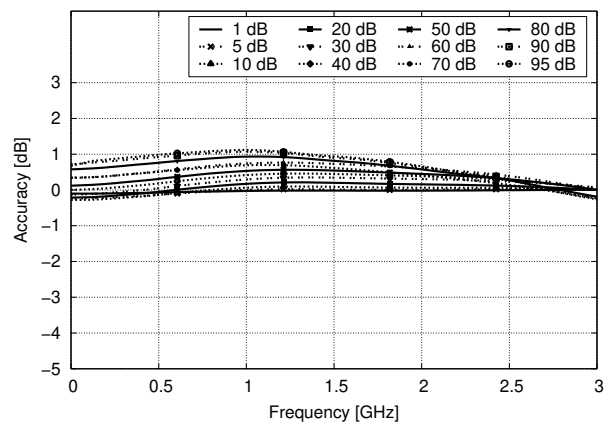


Fig. 4: Attenuation accuracy

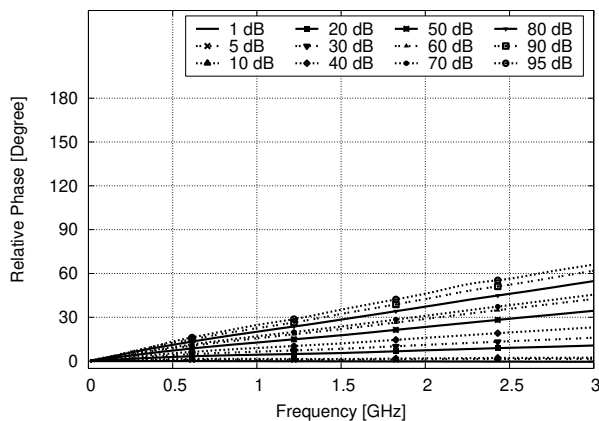
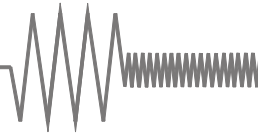


Fig. 5: Phase relative to insertion loss



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Views:

