

Air Interface Adapter AIAD-2/2+

MTS-No.: 25091

Application

With the MTS AIAD 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 AIAD to mobile devices.

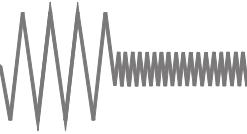
Description

The Air Interface Adapter series AIAD is our most flexible solution for air interface emulation. With the AIAD it is possible to emulate the in- and outputs according to the demands of the customer. The design allows program controlled attenuation of each port at the same time. The function is carried out by dividers and attenuators. Additionally connections for test signal are attached to each in- output.



Characteristics

- ▶ Ring system with 2 inputs coupled to 2 outputs through 95 dB attenuators and monitor connections for every port
- ▶ Frequency range from 30 MHz to 3000 MHz
- ▶ Attenuation range from 0 dB to 95 dB in 0.5 dB steps at each attenuator resp. in 0.25 dB steps up to 32 dB adjustment
- ▶ Switching time up to 0.1 ms per transmitted binary sign (S A F 1 5 *ETX* are six signs).
- ▶ One additional binary sign per attenuator for using quarters or half values (S A F 1 'h' 5 *ETX* are seven signs).
- ▶ Integrated power supply 100 V - 240 V AC
- ▶ 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 user blocking of separate components (with name / name and keyword available)
- ▶ Air Interface Adapters can be designed according to customers individual requirements



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Configuration:

Ring system with 2 inputs coupled to 2 outputs through 95 dB attenuators, monitor port for each input and output

Technical data:

1 RF-specifications:

1.1 Impedance	50 Ω		
1.2 Input power	+30 dBm max. @ the inputs +30 dBm max. @ the outputs +20 dBm max. @ the monitoring		
1.3 Frequency range	30 MHz - 3000 MHz		
1.4 RF-connections	N female		
1.5 Attenuation @ in-out	0 dB - 95 dB in 0.5 dB steps resp. 0.25 dB up to 32 dB adjustment		
	min.	typ.	max.
1.6 VSWR @ in- and outputs @ monitoring	1.3 1.2	1.5 1.4	
1.7 Insertion loss (IL) @ in- and outputs @ monitoring	36 dB 16 dB	38 dB 17 dB	
1.8 IL derating / 100 MHz	0.5 dB		
1.9 Isolation (own att >50 dB)	33 dB	38 dB	
1.10 Attenuation accuracy @ 0.25 - 30 dB @ 30.25 - 60 dB @ 60.5 - 95 dB	(negative means more attenuation) ±0.1 ±0.4 ±0.8		
1.11 Switching time per transmitted binary sign(S A F 1 5 ETX are six signs).	0.1 ms		

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	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 370 mm (dimensions without handles and connections)
3.10 Colour	Front side colourless anodized Rear side colourless anodized
3.11 Weight	8.2 kg

4 Delivered parts:

- AIAD-2/2+
- Power cable
- CD with operating manual

2 Connections:

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

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:

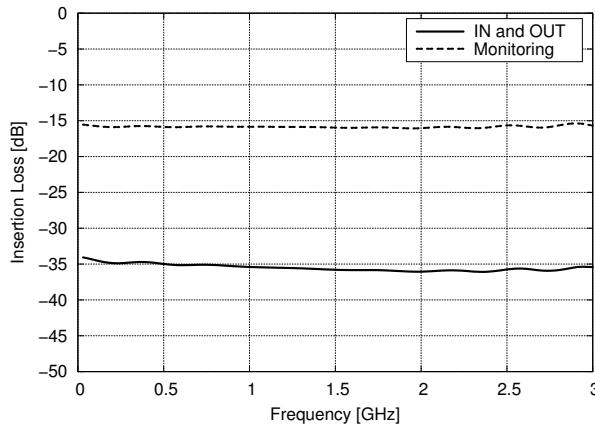


Fig. 1: Input port to output / mon. port insertion loss

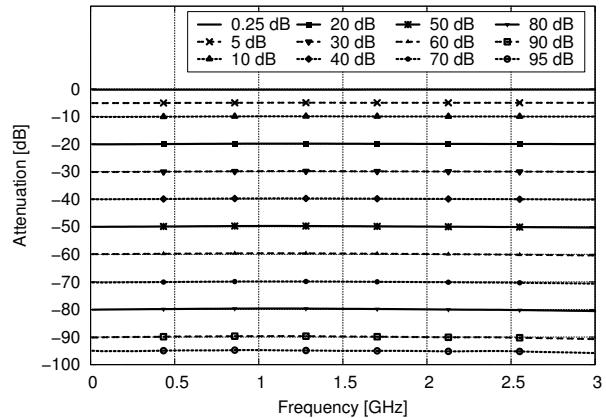


Fig. 2: Attenuation relative to insertion loss

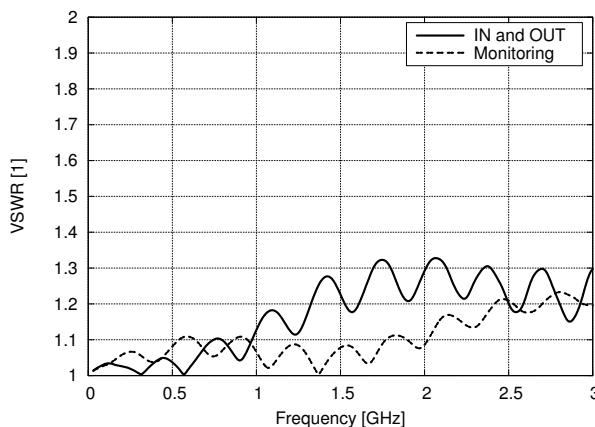


Fig. 3: VSWR for in-, output and monitoring ports

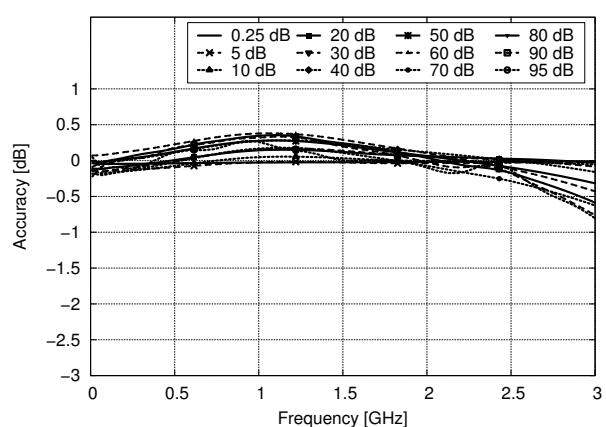


Fig. 4: Attenuation accuracy

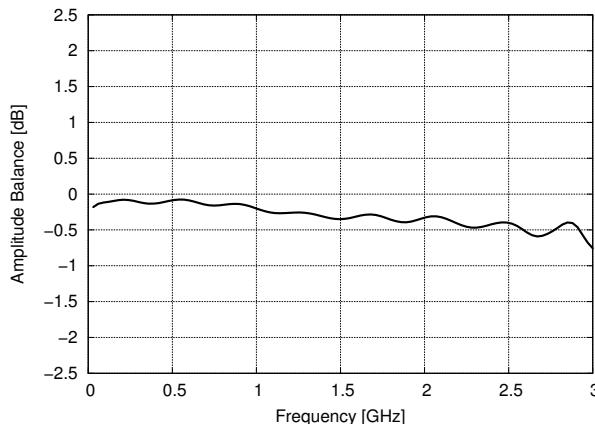


Fig. 5: Amplitude balance between ports

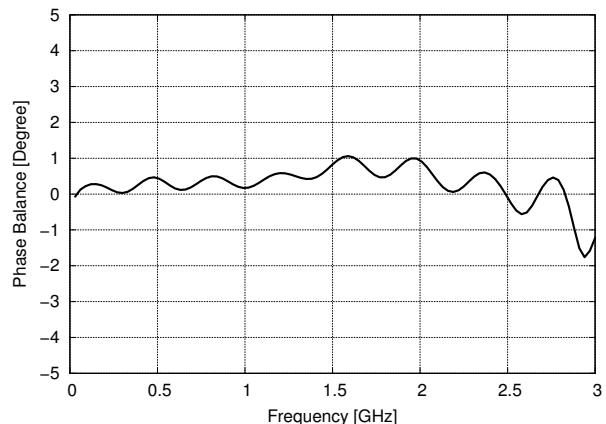
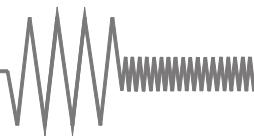


Fig. 6: Phase balance between ports



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Views:

