Frequency Selective Attenuation Network FSAN-1/3/7/8/20/BPF-42+43 MTS-No.: 30936

Application

With the MTS FSAN you can select (standalone) or combine (carrier aggregation) different live radio standards from each other. These signals can be directly connected with cables from base stations or signal generators (passband).

Description

In addition you can distribute the desired radio standards which correspond to the MTS AIAD principle by using several FSAN and power dividers. The function is carried out by 6 variable attenuators and frequency filters.

Characteristics

- 2 inputs leading through 95 dB attenuators and frequency filters to 1 output (2 inputs, 1 output)
- Frequency range from 790 MHz to 3800 MHz
- LTE frequency bands @ IN B:
  - Band 20: 790 MHz – 862 MHz
  - Band 8: 880 MHz – 960 MHz
  - Band 3: 1710 MHz – 1880 MHz
  - Band 1: 1920 MHz – 2170 MHz
  - Band 7: 2500 MHz – 2690 MHz

  LTE frequency band @ IN NR n78
  - Band 42+43: 3400 MHz – 3800 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) or up to 122 dB (by other hardware)
- On request additional information text (2 lines, up to 20 signs per line)
- Switching time up to 10 ms
- Integrated power supply 100 V - 240 V AC
- Manual control (colour display with touch-panel)
- Remote control by USB 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)
- Air Interface Adapters can be designed according to customers individual requirements

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Configuration:

2 inputs leading through 95 dB attenuators and frequency filters to 1 output (2 inputs, 1 output)

Technical data:

1 RF-specifications:

1.1	FSAN type	LTE bands 1 / 3 / 7 / 8 / 20 / 42+43		
1.2	Impedance	50 Ω		
1.3	Input power @ no damage @ operating @ RSRP < -140 dBm	 33 dBm max. 30 dBm max. -45 dBm max.		
1.4	Frequency range	790 MHz - 3800 MHz		
1.5	RF-connections @ inputs @output	 SMA female N female		
1.6	Attenuation	0 dB - 95 dB in 1 dB steps 0.5 / 0.25 dB on request		
		min.	**typ.**	**max.**
1.7	VSWR in / out		1.2	1.6
1.8	Insertion loss @ w/o attenuation @ w/ max. attenuation	 95 dB	7.2 dB 100 dB	9.2 dB
1.9	IL derating / 200 MHz		0.3 dB	
1.10	Attenuation accuracy @ 790 - 3000 MHz	(negative means more attenuation)		
	@ 1 - 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
	@ 3000 - 3800 MHz			
	@ 1 - 30 dB		0/-0.3	±0.8 dB
	@ 31 - 45 dB		0/-1.1	+0.8/-1.5 dB
	@ 46 - 60 dB		0/-1.1	+0.8/-2.0 dB
	@ 61 - 85 dB		0/-1.9	+1.5/-2.5 dB
	@ 86 - 95 dB		0/-1.9	+1.5/-3.5 dB
1.11	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	USB
		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	11.3 kg

4 Delivered parts:

FSAN-1/3/7/8/20/BPF-42+43
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:

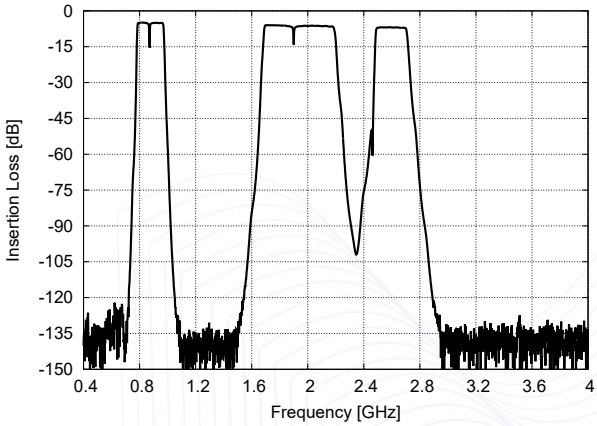

Fig. 1: Insertion loss @ IN B (all bands w/o attenuation)

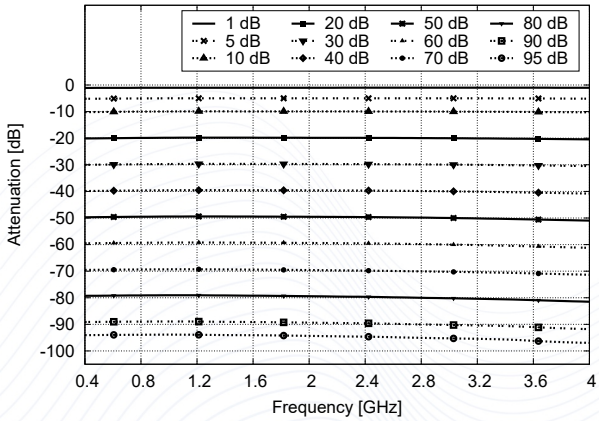

Fig. 2: Attenuation relative to insertion loss

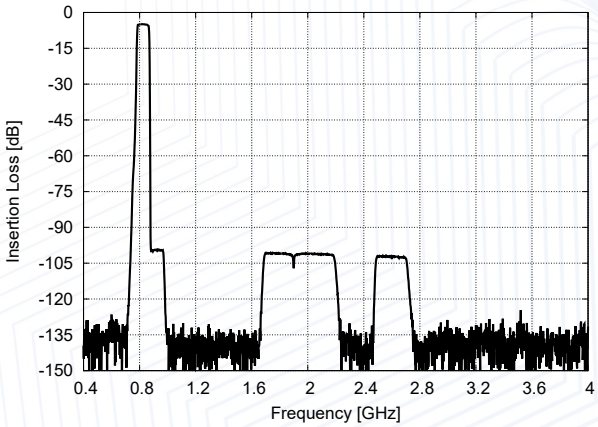

Fig. 3: Insertion loss @ IN B (band 20 w/o attenuation)

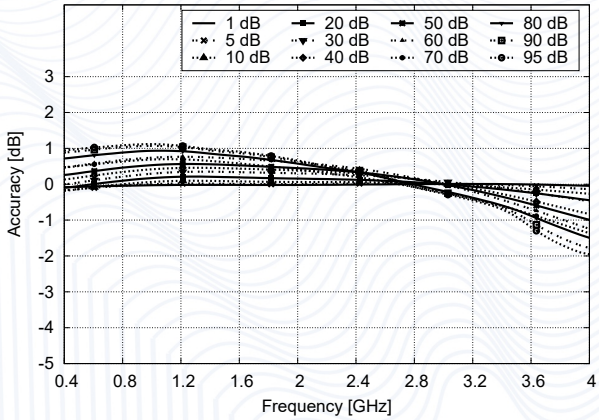

Fig. 4: Attenuation accuracy

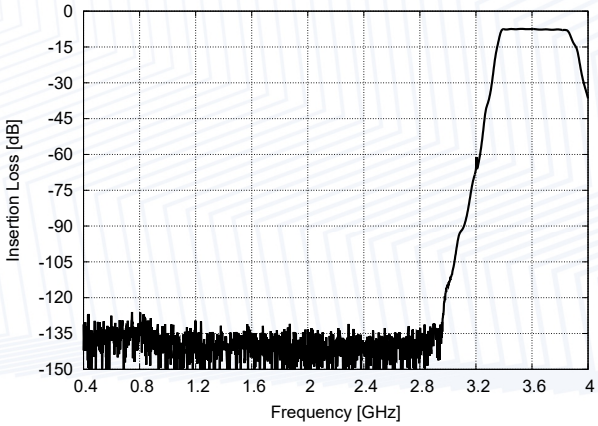

Fig. 5: Insertion loss @ IN NR n78 (w/o attenuation)

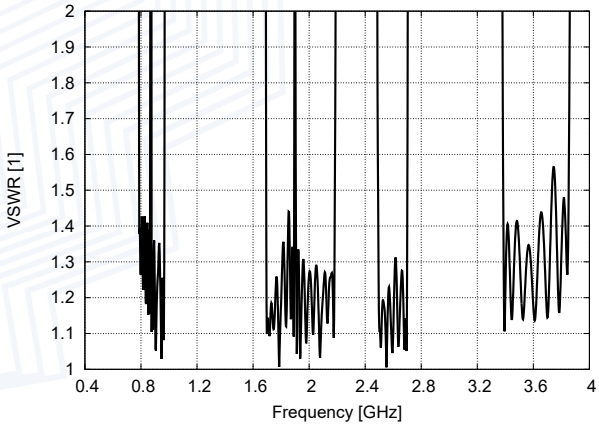

Fig. 6: VSWR @ OUT shielding box

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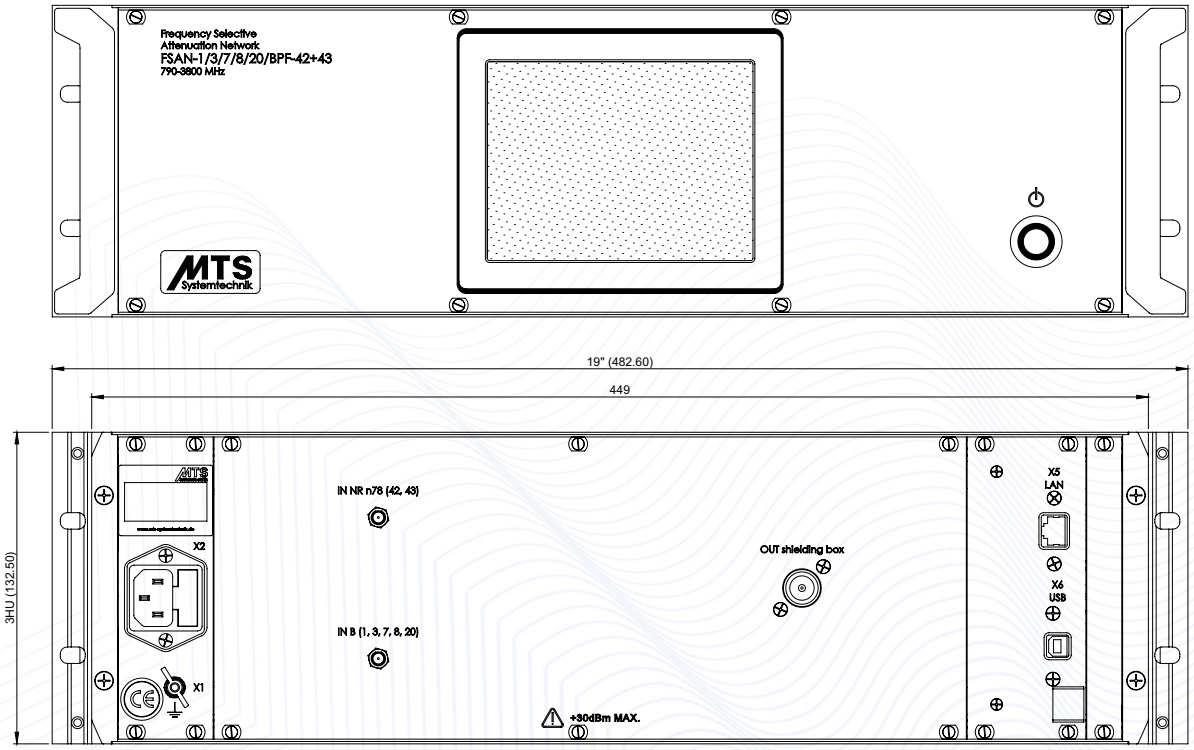
Views:



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