

## MB1200 MODULAR AMPLIFIER WITH SWITCHABLE LINE/BRIDGER OPERATION MODE



- Downstream frequency range up to 1218 MHz
- Upstream frequency range up to 204 MHz
- Optional connection to Monitoring System
- GaN output stage
- Automatic gain and slope control
- Automatic ingress management by the RSW module

### GENERAL DESCRIPTION

The MB1200 can work either as a line amplifier or as a bridger amplifier - the mode can be set by using jumpers. This makes possible to utilize the low power consumption and the high adaptability at the same device. Thanks to the module based breakpoint setup and the ASG automatic this type can be used in any coaxial network. The flexibility is improved by the 4th RF port, which can be configured as an input bypass port or a 3rd output.

### TECHNICAL SPECIFICATIONS

#### Forward path RF parameters

#### MB1235D MB1240D MB1246D

	GaN PD hybrid		
Amplifier type	GaN PD hybrid		
Gain [dB]	35±1	40±1	46±1
Frequency range [MHz]	47...1218 <sup>(1)</sup>		
Equaliser breakpoint frequency [MHz]	862, 1006, 1218 <sup>(2)</sup>		
RF attenuator range [dB]	0...22 <sup>(3)</sup>		
RF equaliser range [dB]	0...18 <sup>(4)</sup>		
Flatness [dB]	±0.75		
Return loss (40MHz -1.5dB/octave) [dB]	>18		
RF testpoint attenuation [dB]	30±1		
CTB [dB]	-80 <sup>(5)</sup>		
CSO [dB]	-80 <sup>(5)</sup>		
Noise-to-power ratio (NPR) maximum / Dynamic range of NPR > 42 [dB]	60 / 25 <sup>(6) (7)</sup>		
ASG insertion loss (20°C) [dB]	6.5		
ASG control range [dB]	±4		
ASG flatness [dB]	±0.5		
Noise figure [dB]	7		
Output splitter, directional coupler (Bridge out 2/3) [dB]	Plug-in 4, 8, 12, 16, 20		

Specifications are subject to change without notice!

**Reverse path RF parameters**

**MB12xxD-xx-20    MB12xxD-xx-25**

Gain [dB]	20±1	25±1
Frequency range [MHz]	5...204	
Diplex filter [MHz]	65/85, 85/105, 204/258	
RF attenuator range [dB]	0...22 <sup>(3)</sup>	
RF equaliser range [dB]	0...14 <sup>(3) (8)</sup>	
Flatness [dB]	±0.75	
Input return loss (40MHz -1.5dB/octave) [dB]	>18	
RF testpoint attenuation [dB]	30±1	
Ingress control switch (RSW) states	0dB/-6dB/-50dB, 0dB/-6dB/-50dB/HPF20	
Noise-to-power ratio (NPR) maximum / Dynamic range of NPR > 36 [dB]	57 / 27 <sup>(9) (10)</sup>	

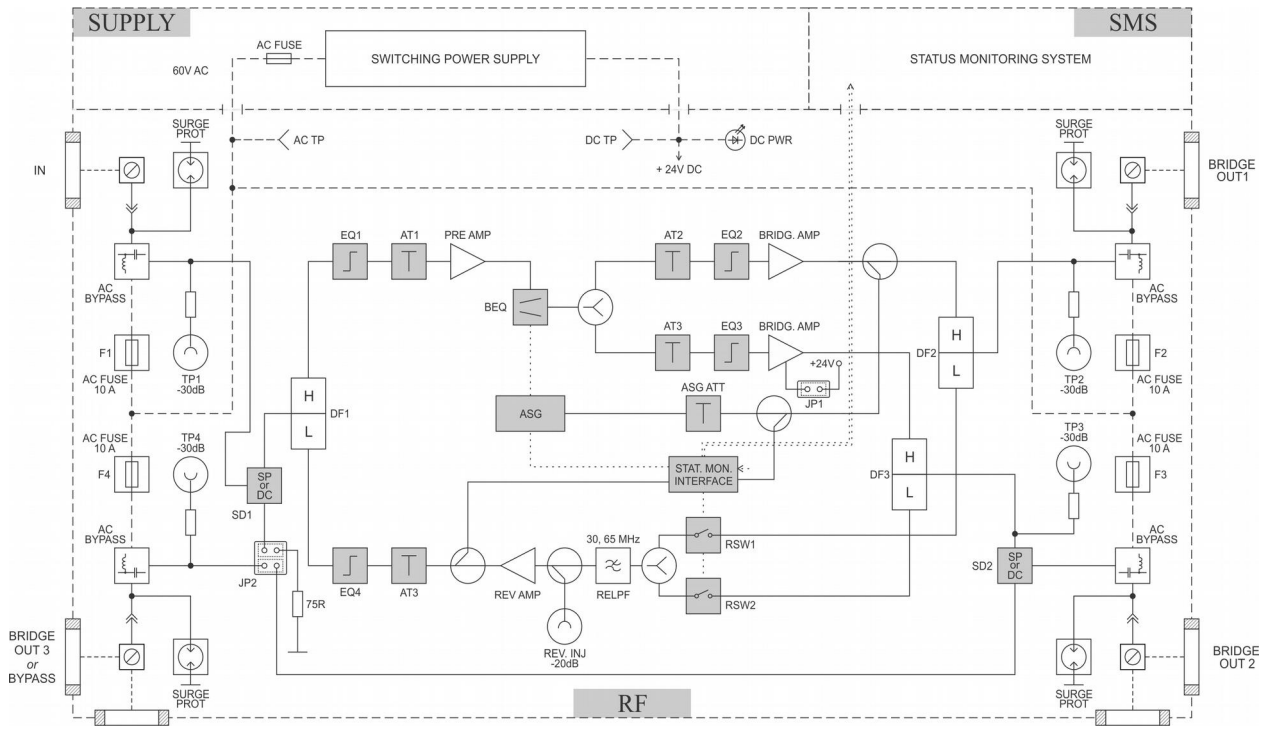
**General parameters**

RF connector	5/8"
Power supply voltage [VAC]	~ 30..65, □ 35...90
Maximum power consumption (in full configuration) [W]	38 (42)
Maximum current feed-through [A]	10
Hum modulation [dB]	70
Screening factor [dB]	80
Degree of protection	IP65
Operational temperature range [°C]	-40...+60
Dimensions [mm]	275x200x122
Weight [kg]	4.1

- (1) Lower frequency limit is defined by the diplexer
- (2) Breakpoint is defined by the mounted equaliser modules
- (3) 2 dB steps (in case of attenuators 1 dB steps are possible between 0 dB and 5 dB)
- (4) 2 dB steps. In case of breakpoint of 1006 MHz and 1218 MHz the range is limited at 16 dB
- (5) 60 dBmV at 1218 MHz, 22 dB extrapolated tilt, 79 analog + 111 digital channels (-6 dB offset)
- (6) Measured with flat full spectrum load between 85 and 1218 MHz
- (7)  $NPR_{max}$  at TCP = 65 dBmV
- (8) In case of breakpoint of 65 MHz and 85 MHz the range is limited at 12 dB
- (9) Measured with flat full spectrum load between 5 and 204 MHz
- (7)  $NPR_{max}$  at 39 dBmV/channel

Specifications are subject to change without notice!

BLOCK DIAGRAM



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ORDERING INFORMATION \_\_\_\_\_

**M** **B** **1** **2** **X** **X** **D** **-** **X** **X** **-** **X** **X**

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Forward path gain	
35	Typically 35 dB
40	Typically 40 dB
46	Typically 46 dB

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Type of the diplex filter	
65	Pluggable 65/85MHz diplex filter
85	Pluggable 85/105MHz diplex filter
204	Pluggable 204/258MHz diplex filter

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Reverse path gain	
20	20 dB
25	25 dB

Option	Required modules	Ordering codes
ASG option	1pc ASGxxx-C, 1pc BEQxxx-A, 1pc ATxx	ASGxxx-C, BEQxxx-A, ATxx
Monitoring option	1pc NMT-FE, 2pc RSW2-A or 2pc RSW2-H20	NMT-FE, RSW-2A, RSW2-H20
Wall mount kit	1pc WMK-1 (double)	WMK-1

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