

## MB1000 MODULAR BRIDGER AMPLIFIER



- Downstream frequency range up to 1006 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 MB1000 bridger amplifier works with 2 independent output stages, the second one of them can be divided symmetrically or asymmetrically by a passive module. They have a common gain and slope control option, while the 2 independently fed lines have 2 independently managed automatic ingress switches. The device is available with 3 different gain values. Based on this and on the modular style the amplifier can act as a key part of a larger network.

### TECHNICAL SPECIFICATIONS

#### Forward path RF parameters

	MB1038D	MB1042D	MB1048D
Amplifier type	GaN PD hybrid		
Gain [dB]	38 +2/-0	42 +2/-0	48 +2/-0
Frequency range [MHz]	47...1006 <sup>(1)</sup>		
Equaliser breakpoint frequency [MHz]	862, 1006 <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]	-73 <sup>(5)</sup>		
CSO [dB]	-76 <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

	MB10xxD-xx-20	MB10xxD-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 [W]	38
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 the range is limited at 16 dB

(5) 60 dBmV at 1006 MHz, 18 dB extrapolated tilt, 79 analog + 75 digital channels (-6 dB offset)

(6) Measured with flat full spectrum load between 85 and 1006 MHz

(7)  $NPR_{max}$  at TCP = 65 dBmV

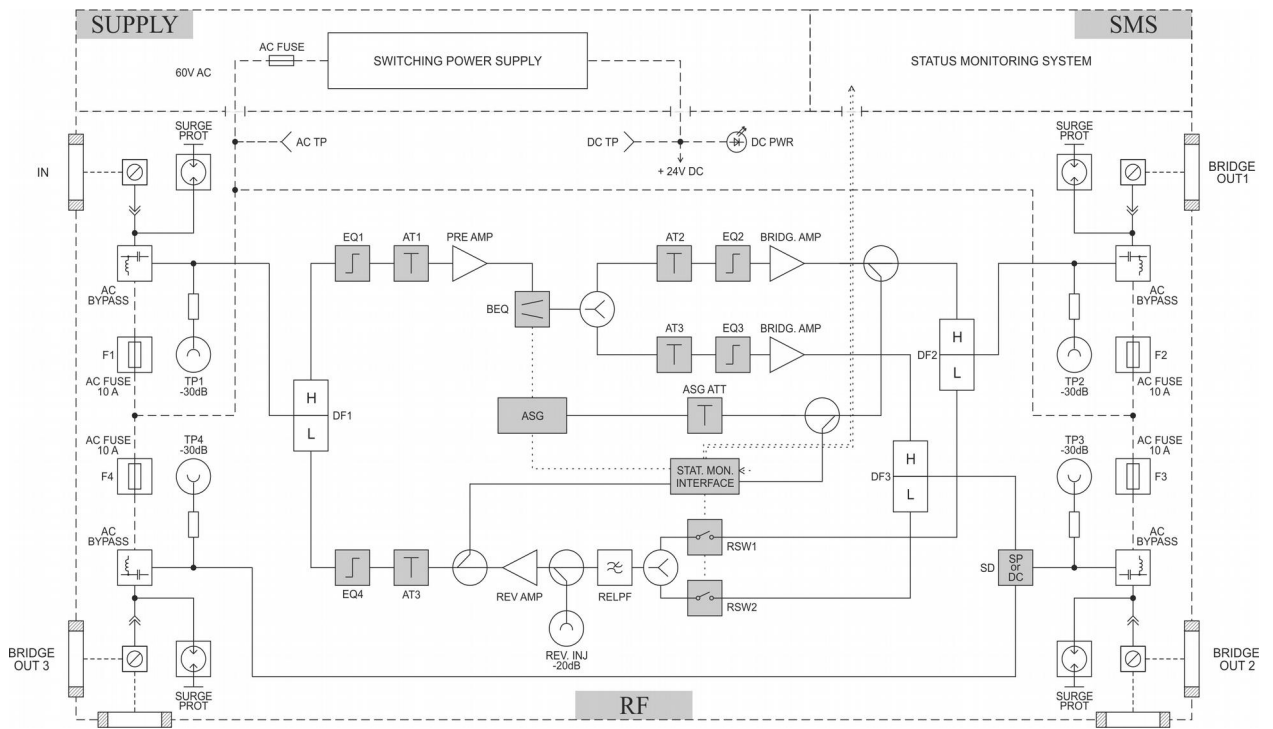
(8) In case of breakpoint of 65 MHz and 85 MHz the range is limited at 12 dB

(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



Specifications are subject to change without notice!

## ORDERING INFORMATION

<b>M</b>	<b>B</b>	<b>1</b>	<b>0</b>	<b>X</b>	<b>X</b>	<b>D</b>	<b>-</b>	<b>X</b>	<b>X</b>	<b>-</b>	<b>X</b>	<b>X</b>
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### Forward path gain

38	Minimum 38 dB
42	Minimum 42 dB
48	Minimum 48 dB

### Type of the diplex filter

65	Pluggable 65/85MHz diplex filter
85	Pluggable 85/105MHz diplex filter
204	Pluggable 204/258MHz diplex filter

### 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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