

MA1012 BOOSTER AMPLIFIER



- 1006 MHz forward path bandwidth
- Even 204 MHz reverse path bandwidth
- For cost-effective network upgrade

GENERAL DESCRIPTION

This amplifier takes place between the optical node and the first amplifier on the line. It is built in the system in case of forward path bandwidth upgrade and its function is to improve the gain and establish high enough signal level also in the extended, higher frequency range by this. The return path frequency range is not hindered by additional filters, so it is easy to realize a return path bandwidth upgrade up to 204 MHz. The device has very low power consumption and allows to set the exact output level and an additional tilt.

TECHNICAL SPECIFICATIONS

Forward path RF parameters

Amplifier type	GaAs MMIC
Gain [dB]	10
Frequency range [MHz]	47...1006 ⁽¹⁾
Equaliser breakpoint frequency [MHz]	862, 1006 ⁽²⁾
RF attenuator range [dB]	0...22 ⁽³⁾
RF equaliser range [dB]	0...16 ⁽³⁾
Flatness [dB]	±0.75
Return loss (40MHz -1.5dB/octave) [dB]	>16
RF testpoint attenuation [dB]	30±1
CTB [dB]	-82 ⁽⁴⁾
CSO [dB]	-80 ⁽⁴⁾
Noise-to-power ratio (NPR) maximum / Dynamic range of NPR > 42 [dB]	56 / 36 ^{(5) (6)}
Noise figure [dB]	3.5

Reverse path RF parameters

Gain [dB]	-3
Frequency range [MHz]	5...204
Diplex filter [MHz]	65/85, 85/105, 204/258
Input return loss (40MHz -1.5dB/octave) [dB]	>16

Specifications are subject to change without notice!

General parameters

RF connector	5/8"
Power supply voltage [VAC]	~ 30...65, □ 35...90
Maximum power consumption [W]	3
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]	152x160x100
Weight [kg]	1.1

(1) Lower frequency limit is defined by the diplexer

(2) Breakpoint is defined by the mounted equaliser modules

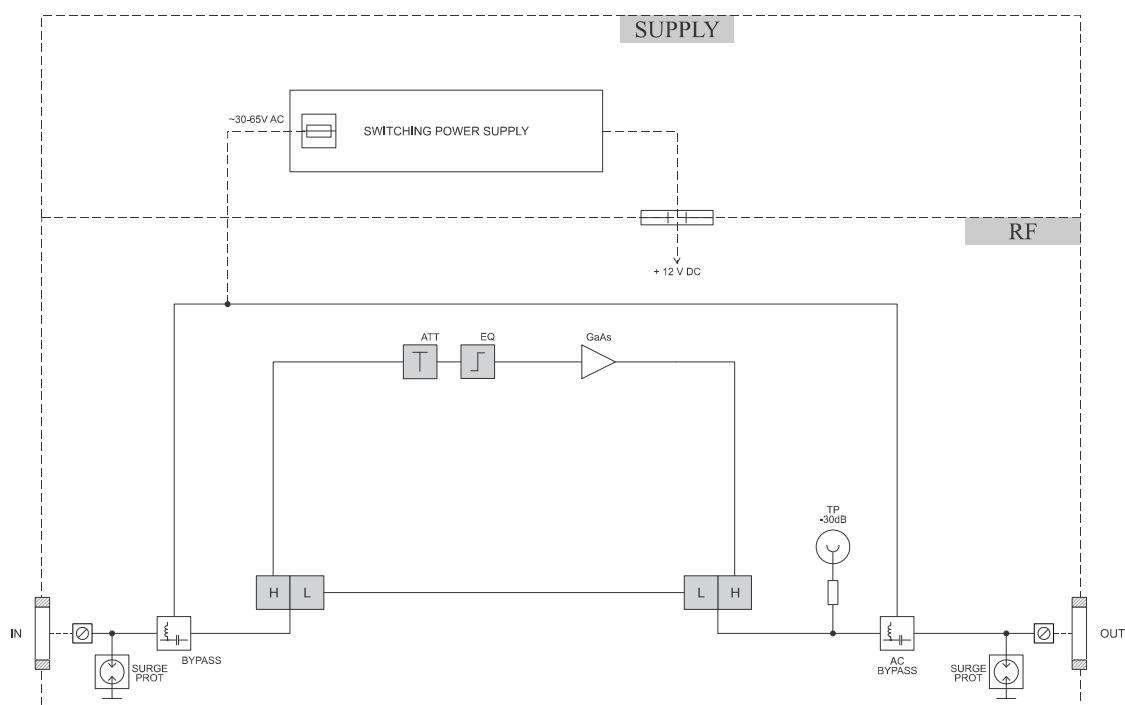
(3) 2 dB steps (in case of attenuators 1 dB steps are possible between 0 dB and 5 dB)

(4) 30 dBmV at 1006 MHz, 3 dB extrapolated tilt, 77 analog channels + digital load up to 1006 MHz (-6 dB offset)

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

(6) NPR_{max} at TCP = 45 dBmV

BLOCK DIAGRAM



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ORDERING INFORMATION _____

M	A	1	0	1	2	R	-	X	X
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Type of the duplex filter	
65	Pluggable 65/85MHz duplex filter
85	Pluggable 85/105MHz duplex filter
204	Pluggable 204/258MHz duplex filter

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