



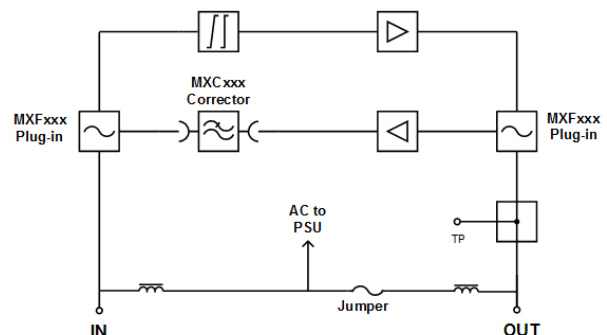
RF Amplifiers

## HOUSE CONNECTION AMPLIFIER 3RE100-13S-AR

The 3RE100-13S-AR is a 5-1218 MHz amplifier with a 13 dB downstream slope, between 85 and 1218 MHz and an active upstream path suited to the new Docsis 3.1 distribution lines. Once installed on the field, the band split can be easily changed by the use of diplexers plugins optimized to provide small insertion losses in the edges of filters. Downstream path is using GaAs FET technology, which guarantees the highest CTB and CSO performance with optimal power need.

### 3RE100-13S-AR features

- Plug-in diplex filters
- Fixed downstream slope equalization
- High performance GaAs Push Pull in downstream
- Efficient surge and ESD protection
- Connectors on both sides and on top
- Testpoint on lid
- No adjustments needed



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## HOUSE CONNECTION AMPLIFIER / 3RE100-13S-AR

TECHNICAL SPECIFICATIONS			
Downstream signal path		Upstream signal path	
Frequency range	85/105/258...1218 MHz	Frequency range	5...65/85/204 MHz
Return loss	18 dB <sup>(1)</sup>	Return loss	18 dB <sup>(8)</sup>
Gain	14 dB <sup>(2)</sup>	Gain	4 dB <sup>(9)</sup>
Fixed input equalization	13/10 dB <sup>(3)</sup>	Flatness	+/- 0.5 dB <sup>(10)</sup>
Flatness	+/- 0.75 dB <sup>(4)</sup>	Noise figure	≤ 6 dB <sup>(11)</sup>
Noise figure at 85 MHz at 258 MHz at 1218 MHz	≤ 18 dB <sup>(5)</sup> ≤ 16 dB <sup>(5)</sup> ≤ 7 dB	Output connector Plugin <sup>(12)</sup>	
Testpoint	20 dB <sup>(6)</sup>	Output level acc. to DINH450004B	114 dBμV <sup>(13)</sup>
CTB (41 channels)	105 dBμV <sup>(7)</sup>		
CSO (41 channels)	105 dBμV <sup>(7)</sup>		
GENERAL SPECIFICATIONS			
Supply voltage	30...65 VAC	Dimensions	160 x 140 x 80 mm
Maximum feed through current	8.0 A / port	Operating temperature	-15...+65 °C
Power consumption	≤ 5 W at 65 VAC	Class of enclosure	IP67
Hum modulation	70 dB <sup>(14)</sup>	Connectors Input/Output Testpoint	5/8" thread and screwing block on RF board F female
NOTES			
<p>(1) The limiting curve is defined at 40 MHz -1.5 dB/octave, min. 12 dB between 1006 MHz and 1218 MHz.</p> <p>(2) This is the nominal gain at 1218 MHz with 13 dB slope. Maximum gain could vary between 15.5 dB at cold start and 13.5 dB at 65°C. It is defined with 2 pcs of diplexer filters.</p> <p>(3) Cable equivalent slope measured respectively between 85 and 1218 MHz and, between 258 and 1218 MHz, with a Eupen 7118 cable.</p> <p>(4) Guaranteed value over the full temperature range. Flatness is defined starting at 109 MHz with 2 pcs of 65/85 MHz MXF065 diplexer plugins, MXC065 and Eupen 7118 cable with 13 dB slope between 85 and 1218 MHz. Flatness is defined starting at 271 MHz with 2 pcs of 204/258 MHz MXF204 diplexer plugins, MXC204 and Eupen 7118 cable with 10 dB slope between 258 and 1218 MHz.</p> <p>(5) Guaranteed value. Noise Figure is defined with 2 pcs of 65/85 MHz MXF065 diplexer plugins.</p> <p>(6) This bidirectional TP located at output is primary intended for monitoring 3RE100-13S-AR downstream path but can be used as a 20 dB injection point for return path.</p> <p>(7) EN50083-3 with sloped output. Max. level indicated is measured at 862 MHz. All results are typical values in room temperature. XMOD is measured at the lowest channel. Guaranteed values are 2 dB lower.</p> <p>(8) According to IEC60728-3:2017. Valid over the band 8-85 MHz.</p> <p>(9) This is the guaranteed minimum gain at 65/85/204 MHz measured with 2 pcs of MXFxxx diplexer plugins. Maximum gain could reach 5.5 dB at cold start.</p> <p>(10) This extra plugin must be paired with MXFxxx in use. It contains a 65/204 MHz roll-off corrector for best flatness and a 65/204 MHz lowpass filter to improve the upstream intermodulation falling into downstream when used with high level ddc3.1 upstream signals.</p> <p>(11) Guaranteed value over the full temperature range. Flatness is defined starting at 8 MHz with 2 pcs of 204/258 MHz MXF204 diplexer plugins and MXC204 corrector.</p> <p>(12) Guaranteed value over the band 10-204 MHz.</p> <p>(13) Typical value at room temperature.</p> <p>(14) At any frequency from 15 to 1218 MHz when the remote current is less than 8 A. Value is for one port.</p>			
MOUNTING POSSIBILITIES			
<p>1) Fixed mounting blocks on the sides</p> <p>2) Mounting brackets can be used</p> <p>3) Wire mounting</p>			
ORDERING INFORMATION			
3RE100-13S-AR204 Plugins	Repeater amplifier, 5-1218 MHz, 13dB slope with 2 x MXF204 diplex filters (splitband 204/258 MHz) and MXC204		
Adapters	1) Diplexers: MXF204 MXF065, MXF085, optimized for repeater amplifier 2) Flatness corrector: MXC204, MXC065 5/8"-3.5/12		

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