

1.2 GHz MDU Amplifier

ARF120G Series



- **1.2GHz forward path bandwidth**
- **85MHz or 204MHz return path bandwidth with plug-in diplexers**
- **GaAs technology**
- **Lightweight and compact design**
- **6KV surge protection**

ARF120G Series 1.2 GHz GaAs amplifier is part of ACT Advanced Fiber Deep HFC solution, which has been designed to deliver interactive CATV, high capacity DOCSIS and other advanced services. The cost effective last mile amplifier platform helps operators expand bandwidth of their existing HFC network while minimizing capital investment. The ARF120G compact housing has compact housing with embedded RF module and is suitable for MDU, FTTB or FTTC applications with output up to 108 dBμV.

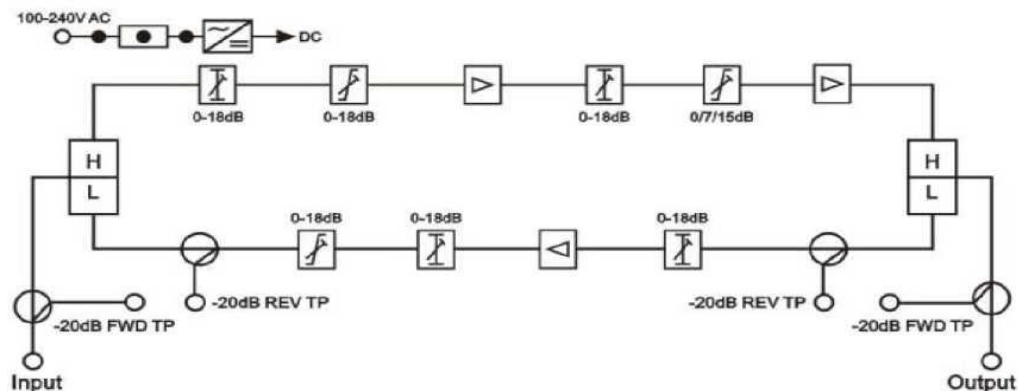
The ARF120G 1.2 GHz GaAs amplifier has up to 204MHz return path bandwidth with plug-in diplexers. Forward amplifier output test point can be used to insert return path carriers while monitoring the carriers signal level at the return path input test point.

ARF120G amplifier has low power consumption and supports local or remote power options. Combined with ACT's converged headend AH1000 optical system and AON node series, ARF120G is an ideal product to provide MSOs with an economical, flexible HFC access solution.

Key Features

- 1.2GHz forward path bandwidth
- 85MHz or 204MHz return path bandwidth with plug-in diplexers
- GaAs technology
- Forward path directional coupler input and output test points
- Forward amplifier output test point can be used to insert return path carriers while monitoring the carriers signal level at the return path input test point and/or the return path directional coupler input and output test points
- No additional accessories required
- Lightweight and compact design
- 6KV surge protection

Block Diagram



Specifications

Item	Unit	Technical Parameters		Note
Forward Path RF				
Frequency Range	MHz	105 to 1218	258 to 1218	1
Gain (min.)	dB	37	37	
Frequency Response Flatness	dB	+/-0.75	+/-0.75	
Reference Output Level	dBmV	48	48	
CTB	dBc	<=-60	<=-60	2
CSO	dBc	<=-60	<=-60	2
Noise Figure	dB	<=8	<=8	2
Input Attenuator	dB	0 to 18dB variable	0 to 18dB variable	
Input Equalizer	dB	0 to 18dB variable	0 to 18dB variable	
Interstage Attenuator	dB	0 to 18dB variable	0 to 18dB variable	
Interstage Equalizer	dB	0/7/15 selectable	0/7/15 selectable	
Return Loss	dB	>16	>16	
Input Test Point	dB	-20 +/- 1.25	-20 +/- 1.25	
Output Test Point	dB	-20 +/- 1.25	-20 +/- 1.25	
Return Path RF				
Frequency Range	MHz	5 to 85	5 to 204	1
Gain (min.)	dB	27	27	
Frequency Response Flatness	dB	+/-0.75	+/-0.75	
IMD2	dBc	-60	-60	
Noise Figure	dB	<=8	<=8	1
Input Attenuator	dB	0 to 18dB variable	0 to 118dB variable	
Output Attenuator	dB	0 to 18dB variable	0 to 118dB variable	
Output Equalizer	dB	0 to 18dB variable	0 to 118dB variable	
Return Loss	dB	>16	>16	
Input Test Point	dB	-20 +/- 1	-20 +/- 1	
Output Test Point	dB	-20 +/- 1	-20 +/- 1	
General	dB			
Power Consumption	W	<=15	<=15	
Power Supply Voltage (AC)	V	100 to 240	100 to 240	
RF Connectors		F Female	F Female	
Dimensions (WxHxD)	mm	182 x 140 x 84	182 x 140 x 84	
Weight	kg	1.5	1.5	
Operating Temperature	°C	-20 to 55	-20 to 55	
Storage Temperature	°C	-40 to 80	-40 to 80	
Relative Humidity	%	5 to 95 (non-condensing)	5 to 95 (non-condensing)	
Safety		IEC 62368-01:2018	IEC 62368-01:2018	
Surge		6kV Combination Wave per IEEE C62.41	6kV Combination Wave per IEEE C62.41	

Notes:

1. Gain and Noise Figure measured with 0 dB input EQ and 0 dB input pad.
2. CTB and SCO are specified with 79 NTSC channels plus QAMs to 1GHz, 48dB extrapolated at 1GHz, 16dB tilt.
3. IMD specified with output level of 47dBmV.



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