

RF Electronics

## Compact Mini Amplifier Model 93188

### Description

The Compact Mini Amplifier Model 93188 is a small, cost-effective RF amplifier that addresses the divergent needs of today's broadband networks. The mini amplifier is designed with GaAsFET technology for longer system reach and superior distortion performance. A compact design and reduced power consumption enable these mini amplifiers to make significant contributions to efficient end-of-line applications.

The Compact Mini Amplifier shares common plug-in accessories with the Compact Amplifier Platform to lower your cost of spares.

The Compact Mini Amplifier utilizes a reverse amplifier module with push-pull technology, and is equipped with a reverse input attenuator to maximize the cable modem transmitter output levels. The plug-in reverse amplifier module and diplex filters provide a free choice of frequency range.

The Compact Mini Amplifier is equipped with directional coupler RF test points at the forward output allowing for accurate signal level measurement, and reverse signal injection during setup and alignment. Surge protection is provided for all input and output ports and the mini amplifiers are equipped with a double gasket, including an RF and a water-dust gasket.

The amplifiers are available in different versions for mains. See section on ordering information.

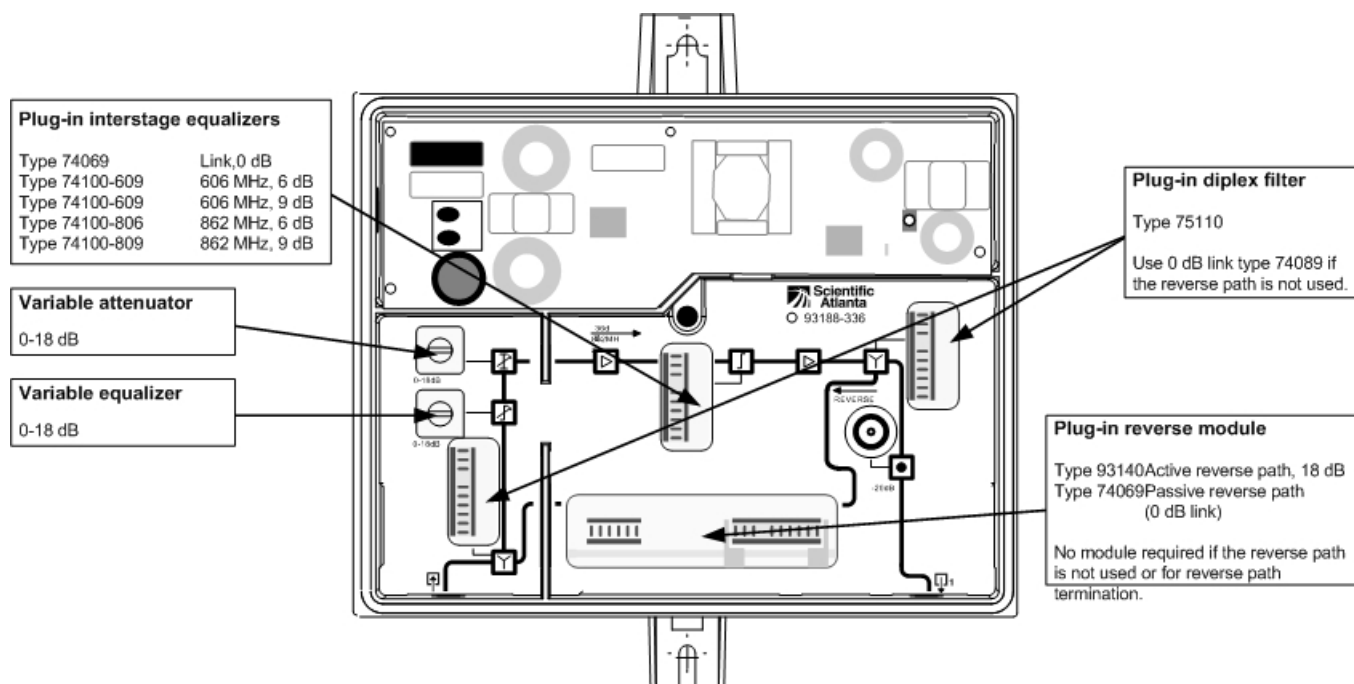


### Features

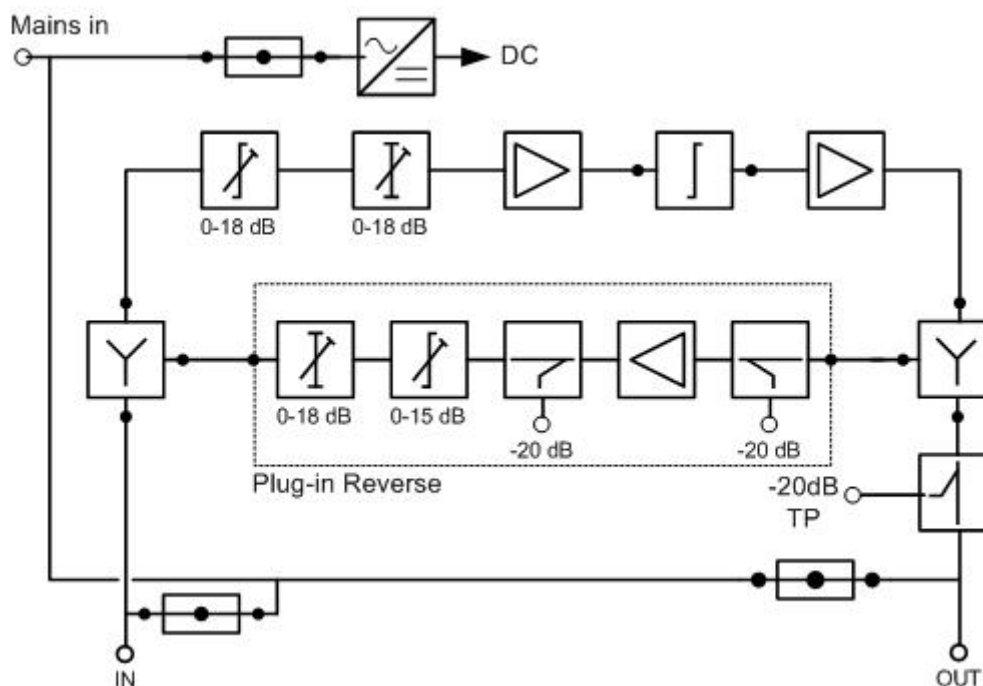
- GaAsFET gain block technology for improved distortion and lower noise figure
- Optimized for end-of-line applications
- Compact space-saving design
- Plug-in reverse amplifier and diplex filters enable future reverse path upgrades
- Output-measuring point for precise setting gives best picture quality
- Transient protection at all inputs and outputs for higher system reliability

# Compact Mini Amplifier Model 93188

## Overview



## Block Diagram



# Compact Mini Amplifier Model 93188

## Specifications

General Performance	Units	Specifications	Notes
Forward path	MHz	40 to 862	1
Reverse path	MHz	5 to 80	1
Gain	dB	36	
Attenuator, variable	dB	0 to 18	
Equalizer, variable	dB	0 to 18	
Output tilt	dB	0 / 3 / 6 / 9	
Number of outputs	–	1	
Return loss, 5 to 40 MHz	dB	20	
Return loss, 40 to 862 MHz	dB	20 red. 1.5 / octave	
Passive reverse loss, with 74069	dB	1.8	
Output level: CTB $\geq$ 60 dB, typical	dB $\mu$ V	107.5	2
Output level: CSO $\geq$ 60 dB, typical	dB $\mu$ V	110.0	2
Noise figure	dB	$\leq$ 7.5	
<b>Electrical</b>			
Supply voltage, mains powered	V AC	207 to 244 / 187 to 250 / 90 to 146	3
Power consumption, mains powered (207 to 244)	W	13.5	4
Power consumption, mains powered (other)	W	11.5	4
Max. current, input/output	A AC	3	
Hum modulation, at max. current	dB	< - 65	
Over-voltage protection	$\mu$ s	2 kV, 1.2 / 50	
<b>Environmental</b>			
Operating temperature range	$^{\circ}$ C	-20 to + 55	
	$^{\circ}$ F	-4 to + 131	
Enclosure category	–	IP 64	
<b>Mechanical</b>			
Connectors, input	–	F-connector	
Connectors, output and test point	–	F-connector	
Housing dimensions excl. mounting fittings (W x H x D)	mm	185 x 145 x 95	
	in.	7.3 x 5.7 x 3.7	
Emission, EN 50083-2	dBpW	< 20	
Screening efficiency	dB	> 85	
Weight	kg	< 2.2	
	lbs	< 4.9	
All specifications are measured with 0 dB link 74089 at the filter connectors.			

### Notes:

1. Frequency range depends on the diplex filters
2. CTB/CSO is measured with 6 dB pre-equalizer, EN 50083-3.2.
3. Voltage range depends on the selected type of power supply
4. Exclusive active reverse; for active reverse add 1.5 W

# Compact Mini Amplifier Model 93188



## Ordering Information

Description	Part Number
93188 Compact Mini Amplifier, 862 MHz, 36 dB, Low level output, 115 V, Variable Att. and EQ.	A93188.10136
93188 Compact Mini Amplifier, 862 MHz, 36 dB, Low level output, 230 V (Europe only), Variable Att. and EQ.	A93188.10236
93188 Compact Mini Amplifier, 862 MHz, 36 dB, Low level output, 230 V (World wide), Variable Att. and EQ.	A93188.15236

## Required Accessories for Compact Mini Amplifier

*Below table contains ordering information for required and optional accessories. Please consult your account representative or customer service for ordering assistance.*

*The following **Required Accessories** must be ordered separately.*

Required Accessories	Part Number
Plug-in Diplex Filter <ul style="list-style-type: none"><li>• 2 required, xx/yy MHz split</li></ul>	A75110.10xxyy
Plug-in at Interstage - 1 required, chose from below: <ul style="list-style-type: none"><li>• 1 link 0 dB</li><li>• 1 equalizer x dB</li></ul>	A74069.10 A74100.10xxx
Plug-in Reverse Amplifier <ul style="list-style-type: none"><li>• 1 required x MHz reverse band (passive reverse)</li></ul>	A93140.10x21 A74069.10
For more information on the above, see the "Compact Amplifier and Node Accessories" (P/N: A541441) data sheet.	



Scientific Atlanta and Scientific Atlanta logo are registered trademarks of Scientific-Atlanta, Inc.  
Cisco, the Cisco logo, and Cisco Systems are trademarks or registered trademarks of Cisco Systems, Inc. and/or its affiliates in the U.S. and certain other countries.  
*All other trademarks shown are trademarks of their respective owners.*  
Specifications and product availability are subject to change without notice.  
© 2007 Scientific-Atlanta, Inc. All rights reserved.

Americas  
1-800-722-2009 or 770-236-6900  
[www.scientificatlanta.com](http://www.scientificatlanta.com)

Europe & Asia  
+32 56 445 445  
[www.saeurope.com](http://www.saeurope.com)

Part Number 7013427 Rev A  
December 2007