

## Reverse Amplifier 93146

The reverse amplifier type 93146 provides a plug-in option for Compact amplifiers, to enable two-way amplification in support of bi-directional services.

The reverse amplifier's fixed-value plug-in pads provide maximum user-friendliness, enable sharing common plug-in accessories with Compact amplifiers, thereby lowering operator's cost of spares.

Furthermore, the unit features improved flatness and re-arranged test point reference for more straightforward reverse path alignment, and common reference for signal injection point and test point. Both test point and signal injection point utilizes directional couplers, to ensure a precise reverse alignment that is virtually independent of impedance mismatches in the network.

The reverse amplifier features push-pull circuits, which are extremely overloading proof with very low inter-modulation distortion at high output levels. The reverse amplifier is equipped with equalizer and attenuator at the output.

If no reverse amplification is needed, a 0 dB link type 74069 is used.

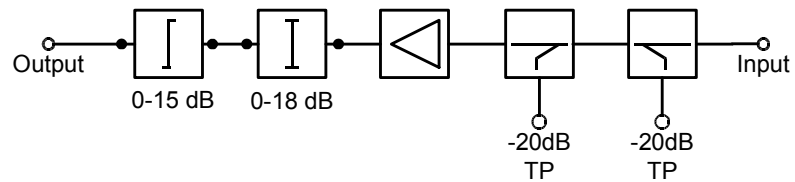
**Figure 1.** Reverse Amplifier 93146



## Features

- Field-upgradeable plug-in option for Compact amplifiers
- Plug-in pads with fixed values for improved user-friendliness
- 5 – 65 MHz bandwidth
- Compact, reliable, flexible, and efficient design
- Equalizer and attenuator at output
- Directional coupled, dedicated -20 dB test point and signal injection point
- Temperature compensation for minimum gain variation

**Figure 2.** Block Diagram



## Product Specifications

**Table 1.** Electrical Specifications

Item	Unit	Value	
		A93146.10621	A93146.10625
Reverse path <sup>1</sup>	MHz	5 - 65	
Gain	dB	21	25
Attenuator, plug-in	dB	0 - 18	
Equalizer, plug-in	dB	0 - 15	
Number of inputs	–	1	
Return loss, typical	dB	23	20
Output level; IMD <sub>3</sub> ≥60 dB, EN 50083-5,3.2	dBμV	118.0	117.0
Output level; IMD <sub>2</sub> ≥60 dB, EN 50083-3,4.2.2	dBμV	112.0	109.0
Noise figure	dB	≤4.5	
Note:			
1. Frequency range depends on the duplex filters.			

**Table 2.** Power Supply and Consumption Specifications

Item	Unit	Value
Supply voltage	VDC	24
Power consumption (in amplifier) <sup>1</sup>	W	1.5
Note:		
1. Depends on amplifier type (2 W in 230 V versions within the 9318x series).		

**Table 3.** Environmental and Mechanical Specifications

Item	Unit	Value
<b>Environmental</b>		
Operating temperature range	°C	–20 to +55
<b>Mechanical</b>		
Connectors	–	F
Housing dimensions	mm	76 W x 22 H x 37 D

## Ordering Information

Refer to the table below for product ordering information.

**Table 4.** Ordering Information

Description	Part Number for Ordering
Reverse Amplifier, 5-65 MHz, 21 dB, one input, fixed-value plug-in attenuator and equalizer	A93146.10621
Reverse Amplifier, 5-65 MHz, 25 dB, one input, fixed-value plug-in attenuator and equalizer	A93146.10625



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