Cisco Compact Micro Amplifier Model A93262

The Cisco Compact Micro Amplifier Model A93262 is a small-size, cost-effective RF amplifier that addresses the divergent needs of today's broadband networks. The amplifier is designed with GaAsFET technology for longer system reach and superior distortion performance. A compact design and reduced power consumption enable these micro amplifiers to make significant contributions to efficient end-of-line applications.

The amplifier has up to 1 GHz bandwidth to meet the demand for increased bandwidth.

All attenuators and equalizers are easily accessible on the amplifier to reduce the installation and configuration time.

The amplifier has a reverse tri-state attenuator and a reverse output attenuator to help maximize the cable modem transmitter output levels.

The 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 a single RF and water-dust gasket is equipped in the lid.

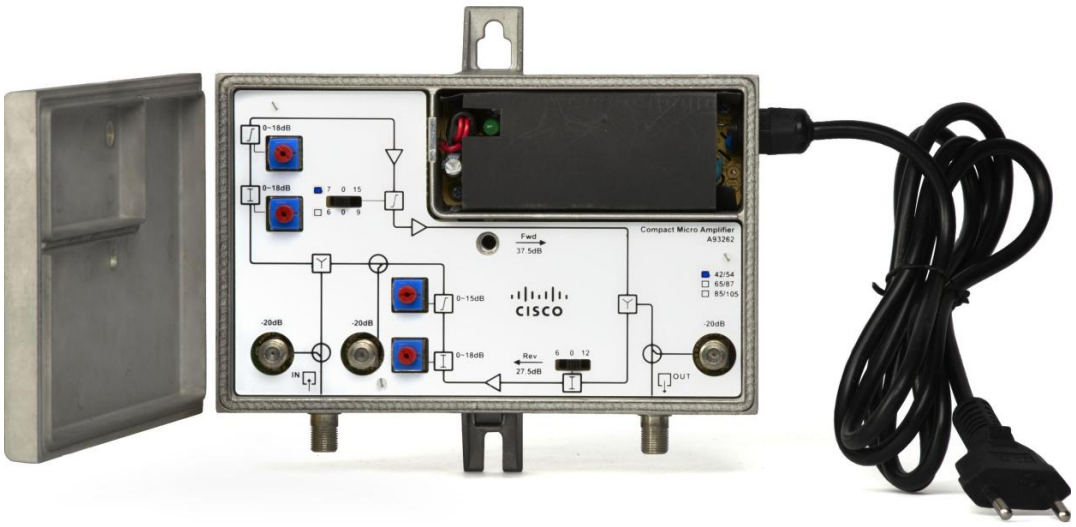
The amplifiers are available in different frequency split versions. See **Ordering Information** on page 7 for details.

Features

- Optimized for end-of-line applications
- Forward bandwidth to 1 GHz
- Compact space-saving design
- No additional accessories required
- GaAsFET gain block technology for improved distortion and lower noise figure
- Output-measuring point for precise setting gives best picture quality
- Transient protection at all inputs and outputs for higher system reliability
- Product power consumption < 11 W
- Unique main board compatible with forward/reverse frequency splits including: 42/54 MHz, 65/87 MHz and 85-105 MHz

Figure 1. Cisco Compact Micro Amplifier A92362, Covered

Figure 2. Cisco Compact Micro Amplifier A93262, Uncovered (Power cord included)



Product Diagrams

Figure 3. Overview Diagram

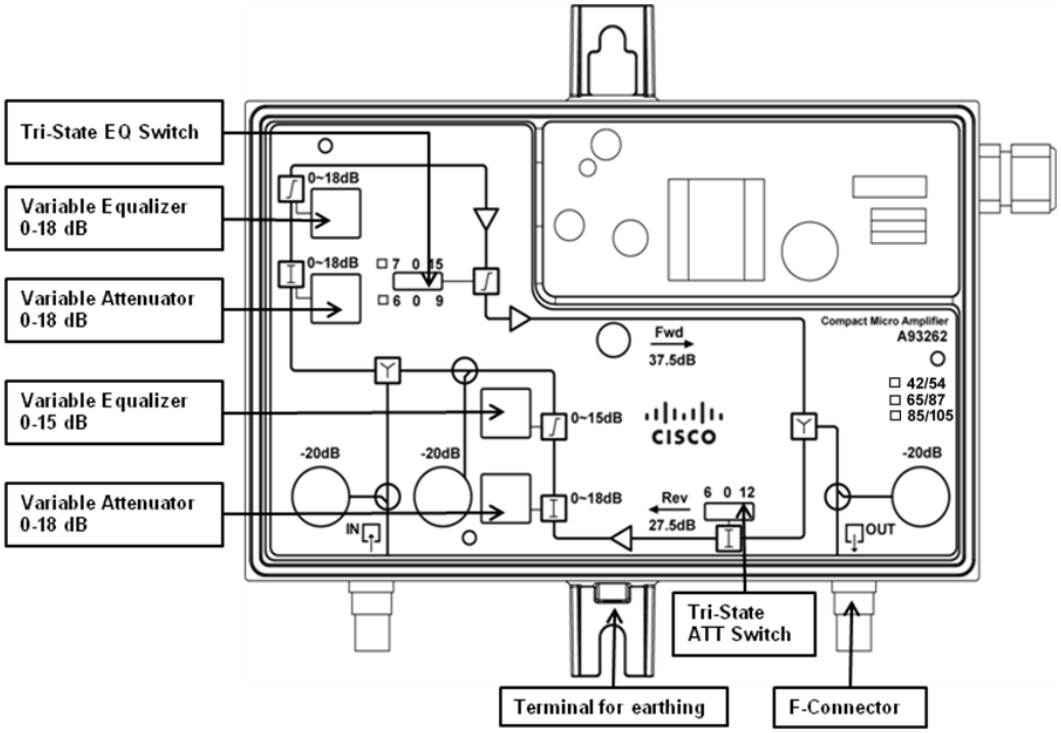
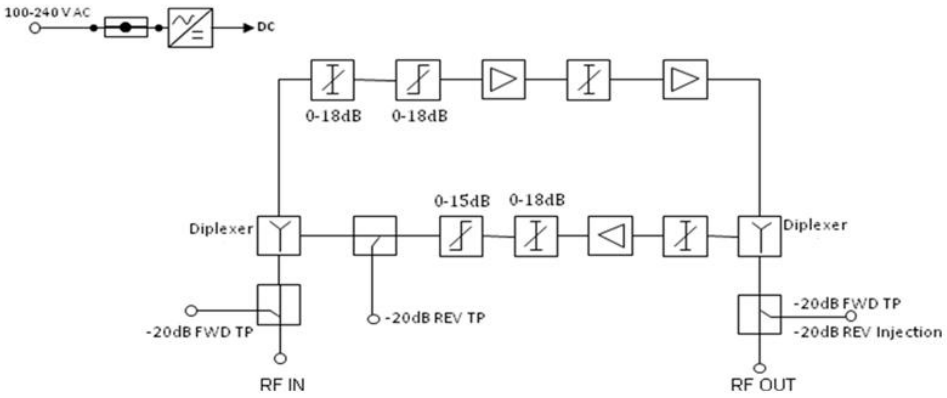


Figure 4. Block Diagram



Note: Refer to the RF Specification table in the Product Specification section for reference on the 3-state interstage equalizer/attenuator values.

Product Specifications

See the tables below for product specifications.

Table 1. Forward RF Specifications

Item	Value			
Forward RF				
Product Model	A93262.1023642 A93262.1123642	A93262.1123665	A93262.1023685 A93262.1223685 A93262.1723685	A93262.1123685
Frequency Range	54-1002 MHz	87-1002 MHz	105-1002 MHz	
Gain	37.5 ±0.75 dB			
Input Attenuator	0-18 dB			
Input Equalizer	0-18 dB			
Interstage Equalizer	0 dB/7 dB/15 dB	0 dB/6 dB/9 dB	0 dB/7 dB/15 dB	0 dB/6 dB/9 dB
Frequency Response	without cable: ⩽ ±0.75 dB with RG6 cable: ⩽ ±1 dB			
Input Return Loss	≥ 16 dB	≥ 18 dB @ 40 MHz reduce with 1.5 dB / Octave	≥ 16 dB	≥ 18 dB @ 40 MHz reduce with 1.5 dB / Octave
Output Return Loss	≥ 16 dB	≥ 18 dB @ 40 MHz reduce with 1.5 dB / Octave	≥ 16 dB	≥ 18 dB @ 40 MHz reduce with 1.5 dB / Octave
Input Test Point Accuracy[1]	-20 ±1.0 dB			
Input Test Point Return Loss	≥ 16 dB			
Output Test Point Accuracy[2]	-20 ±0.75 dB			
Output Test Point Return Loss	≥ 16 dB			
Reference Output level	48 dBmV[3]	47 dBmV[4]	48 dBmV[3,5]	48 dBmV[3,4]
Composite Triple Beat	⩽ -63 dBc @ NTSC[3]	⩽ -60 dBc @ CENELEC[4,5]	⩽ -60 dBc @ CENELEC[3]	⩽ -60 dBc @ CENELEC[4,5]
Composite Second Order	⩽ -64 dBc @ NTSC[3]	⩽ -60 dBc @ CENELEC[4,5]	⩽ -60 dBc @ CENELEC[3]	⩽ -60 dBc @ CENELEC[4,5]
Noise Figure	⩽ 7.8 dB			
Thermal Stability (-20 to 55 °C)	±1.0 dB			
Group Delay	⩽ 40 nsec @ 55.25 to 58.83 MHz ⩽ 30 nsec @ 61.25 to 64.83 MHz ⩽ 20 nsec @ 67.25 to 70.83 MHz ⩽ 15 nsec @ 77.25 to 80.83 MHz	⩽ 20 nsec @ 112.25 to 116.68 MHz ⩽ 20 nsec @ 119.25 to 123.68 MHz ⩽ 15 nsec @ 126.25 to 130.68 MHz ⩽ 15 nsec @ 133.25 to 137.68 MHz	⩽ 20 nsec @ 109.28 to 112.86 MHz ⩽ 20 nsec @ 115.28 to 118.86 MHz ⩽ 15 nsec @ 121.26 to 124.84 MHz ⩽ 15 nsec @ 127.26 to 130.84 MHz	

Notes:

1. Relative to normalized RF Input level
2. Relative to normalized RF output level
3. NTSC 79 channels plus QAMs to 1 GHz, 48 dBmV @ 1 GHz, 15 dB tilt
4. CENELEC 42 channels, 47 dBmV@ 862 MHz, 6 dB tilt
5. CENELEC 42 channels, 48 dBmV@ 862 MHz, 6 dB tilt

Table 2. Reverse RF Specifications

Item	Value			
Reverse RF				
Product Model	A93262.1023642 A93262.1123642	A93262.1123665	A93262.1023685 A93262.1223685 A93262.1723685	A93262.1123685
Frequency Range	5-42 MHz	5-65 MHz	5-85 MHz	
Gain	27.5 ±0.75 dB			
Output Attenuator	0-18 dB			
Output Equalizer	0-15 dB			
Inter stage Attenuator	0 dB/6 dB/12 dB			
Frequency Response	without cable: ⩽±0.75 dB with RG6 cable: ⩽±1 dB			
Input Return Loss	≥ 16 dB	≥ 18 dB	≥ 16 dB	≥ 18 dB
Output Return Loss	≥ 16 dB	≥ 18 dB	≥ 16 dB	≥ 18 dB
Output Test Point Accuracy[1]	-20 ±0.75 dB			
Reverse Injection Accuracy[2]	-20 ±0.50 dB			
IMD2[3]	≤ -60 dBc			
IMD3[4]	≤ -60 dBc			
Noise Figure	≤ 9 dB			
Thermal Stability (-20 to 55 °C)	±0.8 dB			
Group Delay	⩽ 35 nsec @ 5 to 6.5 MHz ⩽ 15 nsec @ 6.5 to 8 MHz ⩽ 10 nsec @ 8 to 9.5 MHz ⩽ 35 nsec @ 39 to 40.5 MHz ⩽ 50 nsec @ 40.5 to 42 MHz	⩽ 35 nsec @ 5 to 6 MHz ⩽ 15 nsec @ 6 to 7 MHz ⩽ 10 nsec @ 7 to 8 MHz ⩽ 30 nsec @ 63 to 64 MHz ⩽ 40 nsec @ 64 to 65 MHz	⩽ 35 nsec @ 5 to 6.5 MHz ⩽ 15 nsec @ 6.5 to 8 MHz ⩽ 10 nsec @ 8 to 9.5 MHz ⩽ 30 nsec @ 82 to 83.5 MHz ⩽ 40 nsec @ 83.5 to 85 MHz	

Notes:

1. Relative to normalized RF output level.
2. Relative to normalized RF Input level.
3. Tested at 50 dBmV output level.
4. Tested at 58 dBmV output level.

Table 3. Powering Specifications

Item	Value
Power	
Supply voltage, mains powered	100-240 VAC
Power consumption	< 11 W

Table 4. Environmental, Mechanical, and Compliance/Safety Specifications

Item	Value
Environmental	
Operating temperature range	-20 to +55 °C
	-4 to +131 °F
Storage temperature range	-40 to +85 °C
	-40 to 185 °F
Surge protection	6 KV (1.2/50 µs)
Water/Dust Ingress Rating	IP54 (EN60529)
Mechanical	
Connectors	F-type Female
Housing dimensions (W x H x D)	180 x 156 x 63 mm
	7.1 x 6.1 x 2.5 in.
Weight	< 1.3 kg
	< 2.87 lbs
Compliance/Safety	
Electrical Safety	EN 50083-1, EN 60065, IEC 60065
EMC Emissions	EN 50083-2, FCC PART76 PART 15
RoHS	Directive 2002/95/EC on the Restriction of the Use of Certain Hazardous Substances in Electrical and Electronic Equipment, O.J. (L 19)

Ordering Information

See the table below for ordering information.

Table 5. Cisco Compact Micro Amplifier 93262 Ordering Information

Description	Part Number
Cisco Compact Micro Amplifier, 42/54 MHz, for US	A93262.1023642
Cisco Compact Micro Amplifier, 42/54 MHz, for Brazil	A93262.1123642
Cisco Compact Micro Amplifier, 42/54 MHz, for Argentina	A93262.1723642
Cisco Compact Micro Amplifier, 65/87 MHz, for EU	A93262.1123665
Cisco Compact Micro Amplifier, 85/105 MHz, for US	A93262.1023685
Cisco Compact Micro Amplifier, 85/105 MHz, for Brazil	A93262.1223685
Cisco Compact Micro Amplifier, 85/105 MHz, for Argentina	A93262.1723685
Cisco Compact Micro Amplifier, 85/105 MHz, for EU	A93262.1123685

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