

## Residential Amplifier with Active Forward & Return FRA Series

Antronix's Forward and Return Residential Amplifier (FRA) Series provides both forward and return path amplification. The FRA was designed for applications such as cable modems and two-way set-top boxes. The FRA is the first forward and return amplifier to utilize the patented auto-seizing CamPort<sup>®</sup>. This SCTE compliant F-port provides maximum contact area and reliability for multimedia applications. With the capability to endure multiple high power surges, the FRA can operate in the harshest environments. The lightweight powder coated AL 360 housing provides superior corrosion resistance for quality performance and long life.

## Ultra Low Distortion

**Features** 

and Benefits

- Highly linear push-pull return path amplification.
- Bi-Directional Amplification
   Provides signal amplification in both the forward and return paths.
- CamPort<sup>®</sup> Auto-Seizing F-port
  Patented auto-seizing F-port features a "Cam Activated Mechanism" to provide full contact pressure
  (> 2000 grams) on the center conductor for maximum reliability.
- Low Intermodulation Ferrites Proprietary ferrite blend inhibits re-magnetization of the core due to voltage spikes from impulse noise or lightning. This prevents high-level return carriers from affecting forward path video signals.
- 15 psi Sealed SCTE Compliant CamPort<sup>®</sup> Sealed brass CamPort<sup>®</sup> prevents water migration.
- Weather Sealed Housing with RFI Gasket Guarantees repeatable 120 dB RFI shielding.
- Powder Coated AL 360 Aluminum Housing
   Provides the most corrosion resistant protection against salt, fog and rust.
- Ideal for 2-way Digital and Multimedia Applications

Ideal for two-way systems deploying cable modems and set-top boxes.

- 6 kV Surge Withstand on all Ports
   Unique, non arc gap surge protection design, to provide maximum protection while eliminating high impulse noise, which can be caused during an arc gap discharge.
- Local or Remote Powering Power the amplifier locally with supplied adaptor or remotely with an optional power inserter.
- 18 VDC UL Listed Wall Adapter

Self-resetting circuit protection provides safe protection against short-circuits to minimize maintenance costs.

• 5 Year Warranty



Specifications subject to change without notice

DS-1030-AR-A06



## **Electrical Specifications** FRA Series

Model #		FRA1-1510		FRA8-0400	
Forward Specification	Freq (MHz)	Max	Min	Max	Min
Gain (dB nominal)	54-1002	-	14.5 ±1.0	-	4.5 ±1.0
Return Loss (dB)	54-1002	-	18	—	18
Flatness (dB)	54-1002	1.0	-	1.0	-
Noise Figure (dB)	54-1002	3.0	-	3.0	-
RFI Isolation (dB)	5-1002	—	120	—	120
AC/RF Input Isolation (dB)	5-1002	—	100	—	100
Group Delay (ns)	Ch. 2	—	25	—	25
	Ch. 3	_	10	—	10
	Other Channels	—	5	—	5
Forward Distortion					
Composite Triple Beat (dB)	54-1002	_	-75	—	-75
Composite Second Order (dB)	54-1002	—	-62	—	-62
Cross Modulation (dB)	54-1002	—	-75	—	-75
Hum Modulation (dB)	54-1002	—	-80	—	-80
Return Specification					
Gain (dB nominal)	5-42	-	10.0 ± 1.0	-	0.0 ± 1.0
Noise Figure (dB)	5-42	5.5	-	5.5	-
Return Loss (dB)	5-42	-	18	—	18
Group Delay (ns MHz)	5-8, 39-42	20.0	-	20.0	-
	8-39	5.0	-	5.0	-
Distortions					
1dB Compression Point <sup>1</sup> (dBmV)	5-42	74	-	74	-
Second Order <sup>2</sup> (-dBc)	5-42	-	75	-	75
Third Order <sup>3</sup> (-dBc)	5-42	-	60	-	60

1. After Amplification

2. Second Order distortion is measured at 12 MHz with three carriers (19, 25, & 31 MHz), each adjusted to +60 dBmV after amplification (+50 dBmV after amplification for the FRA8).

3. Third Order distortion is measured at 37 MHz with three carriers (19, 25, & 31 MHz), each adjusted to +60 dBmV after amplification (+50 dBmV after amplification for the FRA8).



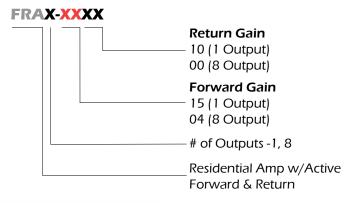
Specifications subject to change without notice



## Specifications FRA Series

General			
Amplifier Type	75 Ω		
F-connector Type	ANSI/SCTE 01 (Formerly SCTE IPS-SP-400) Compliant Sealed Brass CamPort®		
Surge withstand	6 kV Ring Wave (IEEE C62.41-1991 Cat. A3, Unused Ports terminated)		
Power Adaptor	18 VDC Output, UL Listed, PTC Short-Circuit Protected, Self-resetting		
Dimensions, Weight	4.9" x 4.0" x 1.0", 1.0 lb.(1-Output); 4.9" x 4.0" x 1.8", 1.0 lb. (8-Output)		
Environmental			
Pressure Seal	15 psi		
Operating Temperature	-40 °C to +60 °C		
Corrosion Resistance	Meets ANSI/SCTE Specification		
Warranty	5 Years		

**Ordering Information** 





Specifications subject to change without notice