

Features and Benefits

ANTRONIX®

Residential Amplifier with Active Forward & Return FRA4-0803

Antronix's FRA4-0803 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 was the first forward and return amplifier to utilize the patented auto-seizing CamPort®. This SCTE compliant F-port provides maximum contact area and reliability for multimedia applications. With the capability to endure multiple high-power surges, the FRA4-0803 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**
Highly linear push-pull return path amplification.
- **Bi-Directional Amplification**
Provides signal amplification in both the forward and return paths.
- **CamPort® 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®**
Sealed brass CamPort® 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**

Electrical Specifications FRA4-0803

Model #		FRA4-0803	
Forward Specification	Freq (MHz)	Max	Min
Gain (dB nominal)	54-1002	—	8.0 ± 1.0
Return Loss (dB)	54-1002	—	18
Isolation (dB)	54-1002	—	25
Noise Figure ¹ (dB)	54-1002	3.0	—
AC/RF Input Isolation (dB)	5-1002	—	100
Group Delay (ns)	Ch. 2	—	20
	Ch. 3	—	10
	Other Channels	—	5
Forward Distortion			
Composite Triple Beat (dB)	54-1002	—	-75
Composite Second Order (dB)	54-1002	—	-62
Cross Modulation (dB)	54-1002	—	-75
Hum Modulation (dB)	54-1002	—	-80
Return Specification			
Gain (dB nominal)	5-42	—	3.0 ± 1.0
Noise Figure ¹ (dB)	5-42	5.5	—
Return Loss (dB)	5-42	—	18
Isolation (dB)	5-42	—	25
Group Delay (ns MHz) BW = 1.5 MHz	5-8	20.0	—
	8-36	5.0	—
	36-42	20.0	—
Distortions			
1 dB Compression Point ² (dBmV)	5-42	74	—
Second Order ³ (-dBc)	5-42	—	75
Third Order ⁴ (-dBc)	5-42	—	60

1. Noise figure of gain block at room temperature

2. After Amplification

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

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

Specifications FRA4-0803

General

Nominal Impedance	75 Ω
F-connector Type	ANSI/SCTE 01 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.

Environmental

Pressure Seal	15 psi
Operating Temperature	-40 °C to +60 °C
Corrosion Resistance	Meets ANSI/SCTE Specification
Warranty	5 Years

Ordering Information

FRA~~X~~-~~XXXX~~

Return Gain
03 (4 Output)

Forward Gain
08 (4 Output)

of Outputs - 4

Residential Amp w/Active
Forward & Return

