Drop Amplifiers

Passive Return

Evolution's drop amplifiers with passive return offer superb RF performance and high reliability. Our amplifiers provide low noise amplification of forward path signals while passing through return path signals. All of the F-ports are located on the bottom of the housing in our 1-port and 2-port models to allow for installations in small spaces.

The zinc die cast housings and back plates are plated using a proprietary multilayer nickel plating process that offers excellent corrosion protection. All back plates are soldered to ensure a hermetical seal and RFI isolation. The nickel plated, brass F-ports incorporate a patented enhanced conical seizure mechanism to maximize contact surface and center conductor retention.

Features & Benefits

- Low noise amplification
- Patented enhanced conical seizure mechanisms
- Proprietary multilayer nickel plating offers excellent corrosion protection
- Nickel plated brass F-ports
- LED power indicator
- Local or remote powering
- Conforms to all applicable ANSI/SCTE standards

EVO1-AMP-4

EVO1-AMP-1

Ideas to Solutions for a Digital World

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Drop Amplifiers
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Specifications

Forward Path	*Unit*	*EVO1-AMP-1*	*EVO1-AMP-2*	*EVO1-AMP-4*	*EVO1-AMP-8*
Frequency Range	MHz	54-1002	54-1002	54-1002	54-1002
Gain	dB	15	11.5	8	4
Gain Tolerance	dB	± 1	± 1	± 1	± 1
Flatness	dB	± 0.5	± 0.5	± 0.5	± 0.5
Return Loss	dB	≥ 20	≥ 20	≥ 20	≥ 20
Isolation	dB	N/A	28	24	20
Group Delay (54-60 MHz)	ns	<20/3.58 MHz	<20/3.58 MHz	<20/3.58 MHz	<20/3.58 MHz
Group Delay (60-66 MHz)	ns	<9/3.58 MHz	<9/3.58 MHz	<9/3.58 MHz	<9/3.58 MHz
Group Delay (66-1002 MHz)	ns	<5/3.58 MHz	<5/3.58 MHz	<5/3.58 MHz	<5/3.58 MHz
Noise Figure (1C)	dB	4 typical, 7 max.	4 typical, 7 max.	4 typical, 7 max.	4 typical, 7 max.
CSO Distortions*	dBc	<-62	<-62	<-62	<-62
CTB Distortions*	dBc	<-75	<-75	<-75	<-75
Cross Modulation Distortions*	dBc	<-75	<-75	<-75	<-75
Hum Modulation	dBc	<-90	<-90	<-90	<-90

Return Path					
Frequency Range	MHz	5-42	5-42	5-42	5-42
Insertion Loss	dB	1.5	4.5	8.0	11.5
Return Loss	dB	≥ 20	≥ 20	≥ 20	≥ 20
Isolation	dB	N/A	28	24	20
Group Delay (5-10 MHz/36-42 MHz)	ns	<20/1 MHz	<20/1 MHz	<20/1 MHz	<20/1 MHz
Group Delay (10-36 MHz)	ns	<5/1 MHz	<5/1 MHz	<5/1 MHz	<5/1 MHz

General Specifications					
RFI Isolation	dB	100	100	100	100
Surge Withstand	-	• 1 kV IEEE C62.41-1991 Cat. B3 (Combination wave), ten times • 6 kV, 3 kA IEEE C62.41-1991 Cat. B3 (combination wave) per ANSI/SCTE 81 2007 • 6 kV, 200 amperes IEEE C62.41-1991 Cat. A3 (ring wave) per ANSI/SCTE 81 2007			
F-Ports	-	Conforms to ANSI/SCTE 01 2006; conical seizures; pressure sealed "F" ports up to 15 psi			
Impedance	ohms	75	75	75	75
Warranty	years	5	5	5	5

Environmental Specifications					
Operating Temperature	˚C	-40 to +60	-40 to +60	-40 to +60	-40 to +60
Corrosion Resistance	-	1,000 hour salt spray per SCTE 143 2007	1,000 hour salt spray per SCTE 143 2007	1,000 hour salt spray per SCTE 143 2007	1,000 hour salt spray per SCTE 143 2007

**79 analog channels (54-552 MHz) at 10 dBmV/ch. + 75 digital channels (552-1002 MHz) at -6 dBc (total channel power), relative to analog carriers. All channels flat.*

All values are typical unless noted otherwise. Specifications are subject to change without notification.

evolution

Ordering Information

EVO1-AMP-1
Drop Amplifier, 1-Port, 15 dB Forward Gain, Passive Return

EVO1-AMP-2
Drop Amplifier, 2-Port, 11.5 dB Forward Gain, Passive Return

EVO1-AMP-4
Drop Amplifier, 4-Port, 8 dB Forward Gain, Passive Return

EVO1-AMP-8
Drop Amplifier, 8-Port, 4 dB Forward Gain, Passive Return