

Surge-Gap[®] Drop Amplifier

Description

As data, advanced video, and voice services are made available over broadband networks, the demand for signal level at the customer premises has increased. Typically, this increased demand is distributed over various customer segments and is not universal. With that in mind, deployment of amplifiers to only high-revenue customers is the most cost-effective solution.

Scientific-Atlanta's *Surge-Gap*[™] Drop Amplifier was specifically designed for the delivery of these advanced services. It provides high-quality RF performance and supports both forward and reverse signal transmissions. Its surge protection, coated housing, and sealed ports ensure reliable operation in even the harshest environments.



Features

- 6 kV surge resistant input and outputs improve system reliability
- 1 GHz capability minimizes obsolescence concerns
- Available in 1-, 2- and 4-output versions
- High-quality RF performance supports successful digital signal transmission
- Local or remote powering capable
- Improved system reliability
- Coated and sealed housing enables outdoor application
- Advanced heat sinking design enables worry-free indoor application
- Power indicator (optional)

Surge-Gap[®] Drop Amplifier

General Station Performance Data

	Units	Forward	Reverse
Pass Band	MHz	51-1000	5-40
Amplifier Type	---	GaAs FET	N/A
Frequency Response (+/-)	dB	0.8	N/A
Return Loss (min)	dB	18	18
Port-to-Port Isolation (min)	dB	20	20
Input & Output Impedance (all ports)	Ohm	75	
RFI Shielding	dB	> 100	

Station Performance

	Units	1 Output	2 Output	4 Output
Operational Gain	dB	15	11 ¹	7 ¹
Noise Figure @ 1000 MHz (Typ./Max.)	dB	2.4/3.5	2.4/3.5	2.4/3.5
Return Path Insertion Loss	dB	1.0	4.4 ¹	7.4 ¹

Typical Distortion Performance

	Units	Maximum
Composite Triple Beat ⁴	dBc	-73
Cross Modulation ⁴	dBc	-68
Composite Second Order ⁴	dBc	-60

Electrical/Mechanical Specifications

	Units	Specifications
RF Input & Output Connectors		"F" - female
AC Power Input Connector		"F" - female
Power Supply Voltage	V DC	12-15
Power Consumption	W	3.0
Amplifier Operation Temperature	°F (°C)	-40 to +140 (-40 to +60)
Housing		powder paint coated AL360
Housing Dimensions	in.	5.2 W x 4.7 H x 1.2 D
Housing Dimensions	mm	132.1 W x 119.4 H x 30.5 D
Surge Suppression	V	6 kV Ring Wave, 500 A
Weight	lbs/kg	1.1/0.5

Typical Group Delay

Reverse Band			Forward Band		
5-40 MHz			51-1000 MHz		
Frequency ³ (MHz)	Power Inserter		Frequency ² (MHz)	Power Inserter	
	With £ (nS)	Without £ (nS)		With £ (nS)	Without £ (nS)
5-6.5	49	37	55.25-58.83	16	16
6.5-8	23	16	61.25-64.83	7	6
8-9.5	11	8	67.25-70.83	4	3
9.5-11	7	5	77.25-80.83	2	2
34-35.5	5	5	--	--	--
35.5-37	7	7	--	--	--
37-38.5	9	9	--	--	--
38.5-40	13	14	--	--	--

Notes:

1. Includes loss of internal splitter(s)
2. Chrominance to luminance delay at 3.58 MHz above Channel 2 video carrier
3. Propagation delay in 1.5 MHz bandwidth
4. 79 channel Analog with 33 digital QAM channels, +10 dBmV input, 0 dB Tilt

Standards Compliance

Scientific-Atlanta Drop Amplifiers meet or exceed the following industry standards:

Mechanical

- SCTE IPS-SP-400 – F-port interface specification
- Sealed F-Ports

Emission

- FCC – Part 76, Subpart K
- EN 50083-2

Safety

- UL 1409
- EN50083-1/A1
- EN60065

Environmental

- ASTM G 53 - weathering specification
- ASTM B 117 - salt spray specification
- ASTM D 3170 - chip resistance specification

Specifications and product availability are subject to change.

Ordering Information

Product Description	Without Power Indicator			With Power Indicator		
	1 Output	2 Output	4 Output	1 Output	2 Output	4 Output
Amplifier w/120 volt, 60 Hz AC power inserter	562775	562776	562777	730214	730215	730216
Amplifier w/240 volt, 50 Hz AC power inserter	562778	562779	562780			
Replacement Inserter	562781					
Replacement Power Supply 120 V	591704					



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