

Taps & Passives

Surge-Gap™ Passives

Description

Today's advanced broadband networks must support a variety of voice, video, and data services. A key requirement of these systems is the reliability of the network. Scientific-Atlanta's family of Surge-Gap™ Passives are designed for deployment in these networks. The 6 kV surge specification, industry leading hum modulation and the power soak ratings of the directional couplers, splitters, and power inserters, coupled with the outstanding insertion loss specifications ensure the reliable performance required in the most demanding applications.



Features

- 6 kV surge protection
- 15 ampere current carrying capability of splitters and directional couplers and 20 ampere input rating of power inserters enable network powering of cable telephony services
- Industry leading insertion loss specifications reduce amplifier requirements
- Unique, patented AC bypass coil provides superior hum modulation performance, which is important in advanced, high current networks
- Superior return loss specifications enable more reliable transmission of digital signals
- Versatile housing design permits aerial or pedestal mounting
- Power passing/blocking jumpers for increased architectural flexibility
- Interchangeability of faceplates for all directional couplers and splitters simplifies and cost reduces address of architectural changes
- Durable powder-paint coating for superior environmental protection
- Compliant to 25 amp, 2 hour 149°F (65°C) power soak rated

Surge-Gap Passives

Specifications

	Freq.	8 dB		12 dB		16 dB		2-Way		3-Way		3-Way Unbalanced				PI	
	MHz	Typ	Max	Typ	Max	Typ	Max	Typ	Max	Typ	Max	Typ	Max	Typ	Max	Typ	Max
												Low		High			
Insertion Loss	5	1.7	1.9	0.9	1.1	0.9	1.1	3.9	4.4	5.5	6.1	7.3	7.5	3.7	3.9	0.6	0.9
(dB)	40	1.4	1.8	0.8	1.1	0.7	1.0	3.7	4.2	5.3	5.8	6.7	7.4	3.5	3.8	0.2	0.6
	50	1.4	1.7	0.8	1.1	0.7	1.0	3.6	4.0	5.3	5.6	6.8	7.2	3.5	3.8	0.2	0.7
	450	1.6	1.9	0.9	1.2	0.9	1.1	3.8	4.2	5.5	6.1	7.1	7.8	3.7	4.1	0.4	0.7
	550	1.7	2.0	1.0	1.3	0.9	1.2	3.8	4.3	5.6	6.2	7.2	7.9	3.7	4.2	0.4	0.7
	750	2.0	2.2	1.2	1.5	1.1	1.4	4.0	4.5	6.1	6.5	7.7	8.0	4.2	4.6	0.5	0.8
	870	2.2	2.4	1.4	1.7	1.2	1.5	4.1	4.7	6.3	6.6	7.7	8.1	4.3	4.7	0.6	0.9
	1000	2.4	2.5	1.6	1.9	1.3	1.6	4.3	4.9	6.3	6.9	7.9	8.3	4.4	4.9	0.7	1.0
Tap Loss	5	8.5	9.3	13.0	13.8	16.2	17.0	-	-	-	-	-	-	-	-	-	-
(dB)	40	8.3	9.1	12.5	13.3	15.7	16.5	-	-	-	-	-	-	-	-	-	-
(Max tolerance ±1 dB)	50	8.3	9.1	12.5	13.3	15.8	16.6	-	-	-	-	-	-	-	-	-	-
	450	8.3	9.1	12.4	13.2	15.8	16.7	-	-	-	-	-	-	-	-	-	-
	550	8.3	9.1	12.3	13.1	15.8	16.6	-	-	-	-	-	-	-	-	-	-
	750	8.5	9.3	12.4	13.2	16.2	17.0	-	-	-	-	-	-	-	-	-	-
	870	8.6	9.4	12.4	13.2	16.3	17.1	-	-	-	-	-	-	-	-	-	-
	1000	8.7	9.5	12.1	12.9	16.0	16.8	-	-	-	-	-	-	--	-	-	-
Flatness	5-1000	0.50		0.50		0.50		0.50		0.50		0.50				0.35	
Return Loss	5	16		15		15		16		15		15				16	
(dB, min)	10	16		15		15		16		15		15				16	
	50	18		18		17		18		18		18				18	
	750	18		18		18		18		18		18				18	
	870	18		18		18		18		18		16				18	
	1000	17		17		17		16		17		16				18	
Isolation	5	16		20		20		20		18		19				56	
(dB, min)	750	20		23		24		23		23		23				58	
	1000	18		18		22		20		20		20				53	

Specifications, continued

Electrical Specifications	
Power Inserter	Hum modulation @ 15 amps: – 60 dBc (5-10 MHz) – 65 dBc (11-869 MHz) – 60 dBc (870-1000 MHz) Power passing: – 20 A, 60/90 V AC max input port – 15 A, 60/90 V AC max output port – 6 kV Surge Resistant
Splitters and Directional Couplers	Hum modulation @ 15 amps: – 60 dBc (5-10 MHz) – 65 dBc (11-869 MHz) – 60 dBc (870-1000 MHz) Power passing: – 15 A, 60/90 V AC, 60 Hz – 6 kV Surge Resistant
Mechanical Specifications	
Dimensions	5.5 in. W x 4.5 in. H x 3 in. D 139.7 mm W x 114.3 mm H x 76.2 mm D
Bolt Torque Requirements	Center conductor seizure: – 15 in-lb to 20 in-lb (1.7 Nm to 2.3 Nm) Housing closure: – 50 in-lb to 60 in-lb (5.6 Nm to 6.8 Nm) Port plugs: – 50 in-lb to 60 in-lb (5.6 Nm to 6.8 Nm)
Connector pull out	100 lb. min.
Standards Compliance	
Mechanical	SCTE IPS-SP-400 – F-port interface specification SCTE IPS-SP-420 - entry port interface specification
Emissions	FCC – Part 76, Subpart K EN 50083-2
Environmental	ASTM G 53 - weathering specification ASTM B 117 - salt spray specification ASTM D 3170 - chip resistance specification ASTM G 21 - fungus growth rate of zero EN 50083-1

Ordering Information

Description	Part Number
8 dB Directional Coupler	712968
12 dB Directional Coupler	712969
16 dB Directional Coupler	712970
2-Way Splitter	712971
3-Way Splitter – Balanced	712972
3-Way Splitter – Unbalanced	712973
Power Inserter	712974



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