Features and Benefits

Power Inserter/Line Splitter/Directional Coupler
Milenium NXT Series 2.0 GHz Line Passives
MHPI-2000F/MHLS-xF/MHDC-21xxF

Antronix offers a complete main line product family to meet every design requirement. The line passives feature a screwless seizure mechanism which supports low insertion loss.

The NXT line passives series are fully complaint with DOCSIS4.0 requirements containing 2.0 GHz electronics mounted in a 3.0 GHz future proof housing. The 2.0 GHz power inserters, line splitters and directional couplers can handle high current continuously on all ports. The main line passives can also withstand multiple 6 kV surges.

Antronix main line passives have a four-stage corrosion protection process to withstand harsh environments. To ensure our main line passives exceed industry performance standards, Antronix has developed a proprietary ferrite core material and circuit design. This design, when combined with the surge withstand capability and environmentally robust housing, provides the user with unmatched performance and reliability.

- **2.0 GHz Bandwidth**
- **6kV Combination Wave Surge on all Ports**
  Antronix line passives have the capacity to withstand 6kV combination wave surges (per IEEE C62.41Cat. B3) on each port.
- **Integrated Strip Gauge**
  Allows for quick and accurate connector pin length.
- **Four-Stage Corrosion Protection**
  - A 360 aluminum alloy housing.
  - Housing is then impregnated with a sealer to eliminate porosity.
  - Clear chromate coatings are then applied inside and out to protect the aluminum and prevent corrosion.
  - Two polyurethane coatings are applied for superior protection.
- **High Current Capacity for Extreme Situations**
  The power inserter can withstand 25 amperes for a short duration, if main line short-circuited under extreme fault conditions.
- **Available High-Current Electronic Crowbar Device**
  Engages when voltage exceeds 180 V.
- **Fuse Holder for Each Leg**
  Provides the ability to direct and conserve power on each output leg.
- **Interlocking Tongue-and-Groove Housing and Faceplate**
  Also include a wire mesh gasket to guarantee excellent RF isolation.

440 Forsgate Drive, Cranbury, NJ 08512 • T: 609.860.0160 • F: 609.860.1687 • antronix.com

ANTRONIX®

Electrical Specifications
Milenium NXT Series 2.0 GHz Line Passives

Model / Description		MHPI-2000F Power Inserter		MHLS-2F 2 Way Splitter		MHLS-3F 3 Way Splitter		MHLS-3BF 3 Way Bal Splitter		MHDC-2108F 8dB Coupler		MHDC-2112F 12dB Coupler		MHDC-2116F 16dB Coupler	
Specification	**Freq (MHz)**	**Max**	**Avg**	**Max**	**Avg**	**Max**	**Avg**	**Max**	**Avg**	**Max**	**Avg**	**Max**	**Avg**	**Max**	**Avg**
Tap Loss Max/Avg (dB)	5	-	-	-	-	-	-	-	-	8.5	8.3	13.5	12.8	18.5	18.0
	12	-	-	-	-	-	-	-	-	8.5	7.9	13.0	11.7	17.5	16.9
	50	-	-	-	-	-	-	-	-	8.5	7.9	13.0	11.8	17.5	16.7
	108	-	-	-	-	-	-	-	-	8.5	8.0	13.0	12.0	17.5	16.9
	258	-	-	-	-	-	-	-	-	8.5	8.0	13.0	11.9	17.5	16.8
	492	-	-	-	-	-	-	-	-	9.0	8.0	13.0	11.9	17.5	16.7
	870	-	-	-	-	-	-	-	-	9.0	8.0	13.0	11.7	17.5	16.5
	1002	-	-	-	-	-	-	-	-	9.0	8.1	13.0	11.9	17.5	16.5
	1218	-	-	-	-	-	-	-	-	9.0	8.0	13.5	12.1	17.5	16.4
	1794	-	-	-	-	-	-	-	-	10.0	8.4	14.0	12.7	18.0	16.1
	2000	-	-	-	-	-	-	-	-	10.5	9.3	14.5	13.4	18.5	16.7
Insertion Loss Max/Avg (dB)	5	1.4	1.2	5.0	4.5	5.2/8.2	4.9/7.9	7.2	6.7	2.8	2.5	1.9	1.7	1.6	1.4
	12	0.8	0.6	4.5	4.1	4.5/7.7	4.1/7.3	6.5	6.1	2.6	2.3	1.5	1.3	1.4	1.2
	50	0.7	0.4	4.3	4.0	4.3/7.5	3.9/7.1	6.5	6.2	2.5	2.2	1.4	1.2	1.3	1.1
	108	0.9	0.5	4.5	4.1	4.5/7.8	4.0/7.3	7.0	6.6	2.7	2.4	1.8	1.5	1.5	1.2
	258	1.0	0.6	4.7	4.3	4.6/8.5	4.2/7.6	7.5	7.1	2.9	2.5	2.0	1.5	1.7	1.3
	492	1.0	0.8	5.1	4.6	4.8/8.5	4.4/8.0	7.5	7.0	3.2	2.8	2.2	1.8	1.9	1.5
	870	1.1	0.7	5.6	4.6	5.2/8.9	4.7/8.2	7.8	6.8	3.5	2.9	2.5	1.9	2.3	1.7
	1002	1.1	0.8	5.8	4.8	5.5/9.1	5.0/8.5	8.2	7.2	3.6	3.1	2.6	2.1	2.4	1.9
	1218	1.2	0.8	6.0	5.0	5.7/9.5	5.0/8.8	8.6	7.6	3.8	3.2	2.7	2.2	2.5	1.9
	1794	1.7	1.4	7.2	6.3	7.1/12.2	6.3/11.0	11.5	10.6	4.6	4.3	3.6	2.9	3.2	2.6
	2000	2.0	1.7	8.5	7.5	8.5/14.5	7.5/12.8	13.5	12.5	5.7	5.2	4.2	3.8	3.9	3.5
Specification	**Freq (MHz)**	**AC/RF Min**		**Min**		**P2-P3/P2-P4 Min**		**P2-P3/P2-P4 Min**		**Min**		**Min**		**Min**	
Output to Tap Isolation Min (dB)	5-12	60		-		20		16		16		20		22	
	12-50	60		-		28		22		25		28		28	
	50-108	60		-		28		22		28		28		30	
	108-258	60		-		26		22		25		27		30	
	258-492	60		-		22		22		25		23		30	
	492-870	60		-		22		21		22		20		24	
	870-1002	60		-		21		21		20		20		24	
	1002-1218	55		-		21		21		20		20		24	
	1218-1794	45		-		16		16		18		18		20	
	1794-2000	45		-		16		16		18		18		20	

440 Forsgate Drive, Cranbury, NJ 08512 • T: 609.860.0160 • F: 609.860.1687 • antronix.com

ANTRONIX®

Electrical Specifications
Milenium NXT Series 2.0 GHz Line Passives

Model Description		MHPI-2000F Power Inserter	MHLS-2F 2 Way Splitter	MHLS-3F 3 Way Splitter	MHLS-3BF 3 Way Bal Splitter	MHDC-2108F 8dB Coupler	MHDC-2112F 12dB Coupler	MHDC-2116F 16dB Coupler
Specification	**Freq (MHz)**	**Min**	**Min**	**P3-P4 Min**	**P3-P4 Min**	**Min**	**Min**	**Min**
Tap to Tap Isolation Min (dB)	5-12	-	18	20	15	-	-	-
	12-50	-	24	25	18	-	-	-
	50-108	-	24	25	18	-	-	-
	108-258	-	20	20	17	-	-	-
	258-492	-	17	18	17	-	-	-
	492-870	-	17	18	17	-	-	-
	870-1002	-	17	18	17	-	-	-
	1002-1218	-	17	18	17	-	-	-
	1218-1794	-	16	16	16	-	-	-
	1794-2000	-	16	16	16	-	-	-
Input Return Loss Min (dB)	5-12	15	15	14	14	14	15	15
	12-50	15	15	15	15	14	15	15
	50-108	16	16	15	15	15	15	16
	108-258	16	16	15	15	15	15	16
	258-1218	16	16	15	15	16	16	16
	1218-1794	15	15	15	15	15	15	15
	1794-2000	13	13	13	15	13	13	13
Output Return Loss Min (dB)	5-10	15	15	15	12	15	15	15
	10-20	15	15	15	15	15	15	15
	20-108	16	16	16	15	16	16	16
	108-258	16	16	16	15	16	16	16
	258-1218	16	16	16	15	16	16	16
	1218-1794	15	15	15	15	15	15	15
	1794-2000	13	13	13	15	13	13	13
Specification	**Freq (MHz)**	**Min**	**Min**	**Min**	**Min**	**Min**	**Min**	**Min**
Tap Port Return Loss Min (dB)	5-12	-	15	15	13	15	13	10
	12-50	-	15	15	13	15	15	15
	50-108	-	16	16	14	16	16	16
	108-258	-	16	16	14	16	16	16
	258-1218	-	16	16	15	16	16	16
	1218-1794	-	15	15	15	15	15	15
	1794-2000	-	13	13	13	13	13	13
Specification	**Freq (MHz)**	**Max**						
Hum Modulation @ 12 Amps Max (dB)	5-12	-60						
	12-1218	-60						
	1218-1794	-55						
	1794-2000	-55						

440 Forsgate Drive, Cranbury, NJ 08512 • T: 609.860.0160 • F: 609.860.1687 • antronix.com

Specifications
Milenium NXT Series 2.0 GHz Line Passives

General	
Impedance	75Ω
Power Rating	15 Amps Continuous, 60 to 90 VAC 18 Amps Continuous, 60 to 90 VAC, Power Inserter RF Ports 20 Amps Continuous, 60 to 90 VAC, Power Inserter AC Port
KS Pin Cut Length	32 mm per SCTE-265-2021 section 7.6
Screening Effectiveness	105 dB (min)
Dimensions	5.6" L x 5.1" W x 2.5" H
Environmental	
Operating Temperature	-40°C to +60°C
Pressure Seal (psi)	15 psi
Surge Withstand	6 kV Combination Wave Surge per IEEE C62.41 Category B3 on all ports
Corrosion Resistance	ANSI/SCTE-143 salt spray for 1000 hours

Patent Pending

440 Forsgate Drive, Cranbury, NJ 08512 • T: 609.860.0160 • F: 609.860.1687 • antronix.com