

# 1.8 GHz hardline passive splitters / directional couplers / power inserters (3 GHz upgradeable)

## LH100-1.8G series (LHSx / LHCx / LHIx)



Technetix' 100-series hardline passives deliver reliable DOCSIS® 4.0 frequencies to 1.8 GHz today, with the newly designed housing ready to accept 3 GHz field upgrades in the future.

MSOs benefit from low insertion losses and superior electrical and mechanical performance, which increase network reliability and service quality to their demanding customers.

The 100-series hardline passives are available in configurations that include splitters, directional couplers (DCs), and a power inserter. These 2-way, AC power passing, outdoor hardened devices are 6 kV surge protected and 15 PSI pressure tested. The enclosure is a polyurethane coated, aluminum alloy housing, complete with stainless steel hardware. These hardline passives use a hinged lid for non-disruptive service and configuration. They are standards-compliant line passives with high current power coils and shorting bars for power grid configurations to block or pass power.



LHS102-1.8G  
(front angled view)

### FEATURES

- Supports DOCSIS 4.0 bandwidth 5-1800 MHz
- Housing ready for future 3 GHz upgrade
- 20/15 A current capacity
- 6 kV surge protection
- Low insertion loss
- 15 PSI pressure withstand
- Polyurethane coated, aluminum alloy housing
- Separate gaskets for weatherproofing and RFI integrity
- Shorting bars to disable power
- Non-destructive connector pin mechanism
- Strand and pedestal mounting
- SCTE standards-compliant

### SPECIFICATIONS

Parameter	Specification													
	LHS102		LHS103 (Ports 2 & 3)		LHS103 (Port 4)		LHC108		LHC112		LHC116		LHI100	
	Typ.	Max.	Typ.	Max.	Typ.	Max.	Typ.	Max.	Typ.	Max.	Typ.	Max.	Typ.	Max.
<b>Insertion Loss (-dB) <sup>(1)</sup></b>														
5 MHz	3.8	4.1	7.3	8.0	4.0	4.1	2.4	2.8	1.5	1.7	1.3	1.5	0.9	1.1
10 MHz	3.4	4.1	7.1	7.8	3.7	4.1	1.9	2.2	1.3	1.5	1.2	1.5	0.5	1.1
42 MHz	3.3	4.0	6.9	7.6	3.5	4.0	1.8	2.2	1.2	1.5	1.0	1.3	0.4	0.9
54 MHz	3.3	4.0	6.9	7.6	3.5	4.0	1.8	2.2	1.2	1.5	1.0	1.3	0.4	0.9
85 MHz	3.3	3.9	6.9	7.6	3.5	3.9	1.8	2.2	1.2	1.5	1.0	1.2	0.5	0.9
108 MHz	3.3	3.9	6.9	7.6	3.6	3.9	1.8	2.2	1.2	1.5	1.0	1.2	0.5	0.9
204 MHz	3.3	3.9	6.9	7.6	3.6	3.9	1.7	2.2	1.2	1.5	1.0	1.2	0.5	0.9
258 MHz	3.3	3.9	6.9	7.6	3.7	3.9	1.7	2.2	1.2	1.5	0.9	1.2	0.5	0.9
300 MHz	3.3	3.9	7.0	7.7	3.7	3.9	1.7	2.2	1.2	1.5	0.9	1.2	0.5	0.9
372 MHz	3.3	3.9	7.0	7.7	3.7	3.9	1.7	2.2	1.1	1.5	0.9	1.3	0.4	0.9
396 MHz	3.3	3.9	7.0	7.7	3.8	3.9	1.7	2.2	1.1	1.6	0.9	1.3	0.4	0.9
492 MHz	3.3	4.0	7.1	7.8	3.8	4.0	1.7	2.2	1.2	1.6	1.0	1.4	0.4	0.9
606 MHz	3.5	4.1	7.1	7.8	4.0	4.1	1.9	2.3	1.3	1.7	1.2	1.5	0.5	0.9
684 MHz	3.6	4.2	7.2	7.9	4.0	4.2	2.0	2.4	1.4	1.8	1.2	1.6	0.6	0.9
750 MHz	3.7	4.3	7.2	8.0	4.1	4.3	2.1	2.5	1.5	1.9	1.3	1.6	0.6	0.9
834 MHz	3.8	4.4	7.3	8.1	4.2	4.4	2.1	2.6	1.5	2.0	1.3	1.7	0.6	0.9
870 MHz	3.8	4.4	7.4	8.1	4.2	4.4	2.1	2.6	1.4	2.0	1.3	1.7	0.6	0.9
1002 MHz	3.9	4.5	7.5	8.3	4.4	4.5	2.2	2.8	1.6	2.2	1.3	1.9	0.7	1.0
1026 MHz	3.9	4.6	7.6	8.3	4.4	4.6	2.3	2.8	1.6	2.2	1.4	1.9	0.7	1.0

# 1.8 GHz hardline passive splitters / directional couplers / power inserters (3 GHz upgradeable)



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### SPECIFICATIONS CONT'D.

Parameter	Specification													
	LHS102		LHS103 (Ports 2 & 3)		LHS103 (Port 4)		LHC108		LHC112		LHC116		LH100	
	Typ.	Max.	Typ.	Max.	Typ.	Max.	Typ.	Max.	Typ.	Max.	Typ.	Max.	Typ.	Max.
<b>Insertion Loss (-dB) <sup>(1)</sup></b>														
1218 MHz	4.2	4.8	7.9	8.7	4.7	4.8	2.6	3.2	1.9	2.5	1.7	2.1	0.8	1.2
1410 MHz	4.4	5.1	8.3	9.1	4.9	5.1	3.1	3.5	2.2	2.8	1.9	2.4	1.1	1.4
1602 MHz	4.9	5.5	8.8	9.7	5.2	5.5	3.4	3.8	2.5	3.0	2.2	2.6	1.3	1.6
1800 MHz	5.4	6.0	9.6	10.6	5.4	6.0	4.1	4.5	3.1	3.5	2.7	3.1	1.4	1.8
<b>Tap Loss (-dB Max.) <sup>(1) (2)</sup></b>														
5-1800 MHz	--		--				9.0		12.0		16.0		--	
<b>Isolation (Out-Tap or Out-Out) (-dB Min.)</b>														
5-15 MHz	20.0		23.0				18.0		20.0		22.0		--	
15-400 MHz	22.0		25.0				25.0		25.0		25.0		--	
400-600 MHz	22.0		25.0				25.0		25.0		25.0		--	
600-800 MHz	22.0		22.0				25.0		25.0		25.0		--	
800-1218 MHz	22.0		20.0				20.0		22.0		22.0		--	
1218-1800 MHz	20.0		18.0				17.0		20.0		20.0		--	
<b>Isolation (AC-RF) (-dB Min.)</b>														
5-10 MHz	--											55.0		
10-1218 MHz	--											60.0		
1218-1800 MHz	--											45.0		
<b>Return Loss (-dB Min.)</b>														
	In	Out			In	Out	In	Out	In	Out	In	Out	In	Out
5-20 MHz	12.0	15.0	--		12.0	12.0	15.0	12.0	14.0	16.0	14.0	15.0	16.0	16.0
20-40 MHz	14.0	16.0	--		15.0	16.0	16.0	16.0	16.0	16.0	16.0	16.0	16.0	16.0
40-1218 MHz	16.0	16.0	--		16.0	16.0	16.0	16.0	16.0	16.0	16.0	16.0	16.0	16.0
1218-1800 MHz	14.0	14.0	--		14.0	14.0	14.0	14.0	14.0	14.0	14.0	14.0	14.0	14.0
<b>Hum Modulation (-dB Max.) @ 10/15 Amps</b>														
5-10 MHz	50/50													
10-1600 MHz	65/60													
1600-1800 MHz	55/50													
<b>Current Capacity (Amps Max.)</b>														
AC/RF Ports 1, 2 & 4	15.0												15.0	
AC Port 3	15.0												20.0	
<b>Environmental &amp; Physical</b>														
RFI	100 dB (min.)													
Surge	ANSI/SCTE 81 2018-Cat B3, Combination Wave, 6 kV, 3 kA													
Enclosure Seal	15 PSI, IP68													
Housing Closure Screws	50-65 in-lb (5.6-11.3 Nm)													
Operating Temperature	-40°C to +60°C (-40°F to +140°F)													
Dimensions (H x W x D)	6.2"H x 6.3"W x 2.5"D (15.8H x 16.0W x 6.4D cm)													
Weight	1.5 lb (0.7 kg)													

#### NOTES:

- (1) Add 0.5 dB for +60°C (+140°F) insertion loss & tap loss
- (2) ± 1.0 dB (5-1400 MHz), ± 1.5 dB (1400-1800 MHz) tap tolerance/flatness

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**ORDERING INFORMATION**

Item Code	Model Code	Description
19200547	LHS102-1.8G	Hardline 2-way line splitter, 1.8 GHz
19200549	LHS103-1.8G	Hardline 3-way line splitter, 1.8 GHz
19200541	LHC108-1.8G	Hardline 8 dB directional coupler, 1.8 GHz
19200543	LHC112-1.8G	Hardline 12 dB directional coupler, 1.8 GHz
19200545	LHC116-1.8G	Hardline 16 dB directional coupler, 1.8 GHz
19200551	LHI100-1.8G	Hardline power inserter, 1.8 GHz