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Phone Number: 1-800-345-3851 Fax Number: 607-758-3648

PROJECT NO.: 3022866-311

DATE: February 19, 2009

TEST REPORT NO.: 3022866CRT-075

**RENDERED TO:**

Hubbell Premise Wiring  
14 Lord's Hill Road  
Stonington, CT. 06378

**TEST:**

10G Permanent Link testing of the cabling configuration as defined in and to the requirements of TIA-568-C.2 (Draft 2.2), *Balanced Twisted Pair Telecommunications Cabling And Components Standard*

**STATEMENT OF LIMITATIONS:**

The purpose of this report is to provide electrical performance data on the test sample. It is not valid to use this report for any other purpose.

**STANDARD USED:**

ASTM D4566-98 dated December 1998, Standard Test Methods for Electrical Performance Properties of Insulations and Jackets for Telecommunications Wire and Cable.

TIA-568-C.2 (Draft 2.2): *Balanced Twisted Pair Telecommunications Cabling And Components Standard*, dated December 2008.

**AUTHORIZATION:**

The project was authorized by, Dr. Shadi AbuGhazaleh, representing Hubbell Premise Wiring.

**DATE OF TEST:**

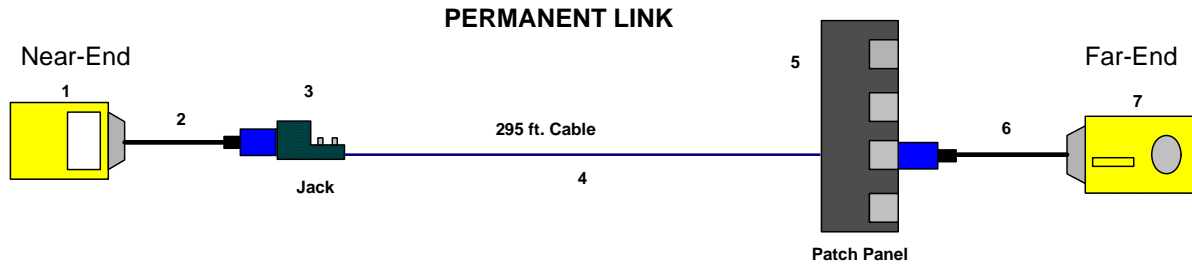
11/05/2008

**TEST REPORT REVISION HISTORY:**

First Issue: February 19, 2009 Original Document

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Permanent Link (2 connectors)

**SAMPLE DESCRIPTION:**

<u>Component ID</u>	<u>Manufacturer</u>	<u>Part Number</u>	<u>Description</u>
1, 7	Fluke Networks	DTX-1800	Fluke MAIN & REMOTE Units
2,6	Fluke Networks	DTX-PLA002	Fluke C6A Permanent Link Adapters
3	Hubbell	HXJ6AXX <sup>1</sup>	C6A Jack
4	Hubbell	C6ASPX <sup>2</sup>	NEXTSPEED C6A CMP Cable
5	Hubbell	HP6A**U <sup>3</sup>	C6A Patch Panel

- 1. XX is Jack color option (almond, black, gold, gray,...)
- 2. X is cable color (blue, grey, etc.)
- 3.\*\* is for the number of ports in the panel (24, 48)

**EQUIPMENT LIST:**

The following equipment was employed in conducting the tests.

<u>Equipment Used</u>	<u>Model Number</u>	<u>Serial Number</u>	<u>Calibration Date</u>
Fluke Networks (Portable Cable Analyzer)	DTX-1800	8582073	04/29/08

**RESULTS:**

See appendix A for the test results.

**CONCLUSION:**

The channel configuration, as previously described, was tested under the SAT program of Intertek in accordance with the standard contained herein, and did comply with the indicated applicable transmission requirements.

These procedures and requirements were taken from the standards referred to on page 1.

Reviewed and approved by:

Antoine Pelletier  
 Engineer  
 Global Cabling Products Testing

Kathy Heath  
 Project Coordinator  
 Global Cabling Products Testing

**Appendix A**

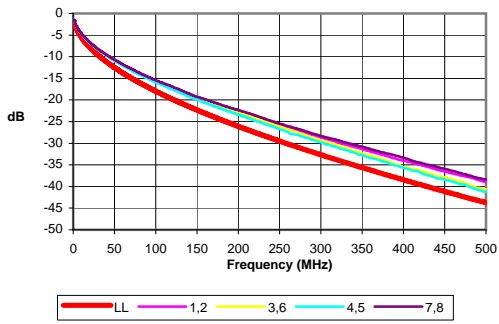
Test results

Any data reported above 500 MHz is for indication only.

This appendix contains 5 Pages.

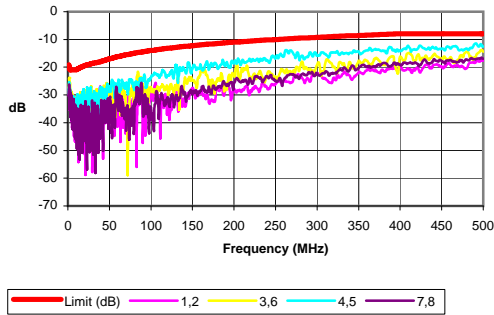
# TEST REPORT 3022866-075

MAIN - Insertion Loss



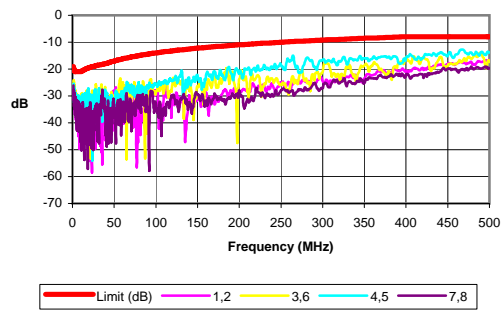
Frequency	Worst Case	TIA Spec
1.0	-1.5	-3.0
10.0	-4.7	-5.5
31.3	-8.5	-9.8
62.5	-12.3	-14.0
100.0	-15.9	-18.0
155.0	-20.3	-22.7
200.0	-23.4	-26.1
250.0	-26.7	-29.5
350.0	-32.7	-35.6
500.0	-41.2	-43.8

MAIN - Return Loss



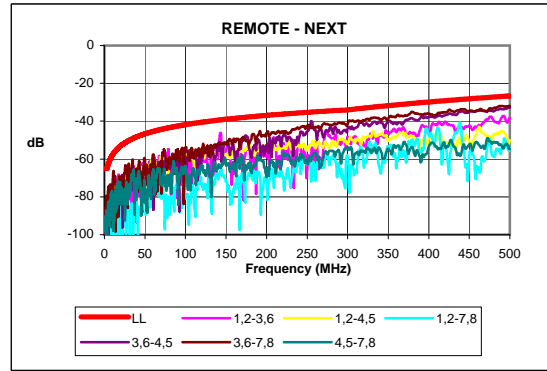
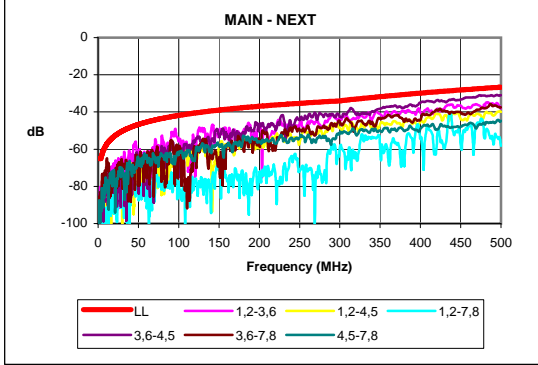
Frequency	Worst Case	TIA Spec
1	-27.1	-19.1
10	-33.2	-21
31.3	-30	-18.5
62.5	-28.8	-16
100	-23.9	-14
155	-20.6	-12.1
200	-18.7	-11
250	-16.8	-10
350	-14.3	-8.6
500	-12.6	-8

REMOTE - Return Loss



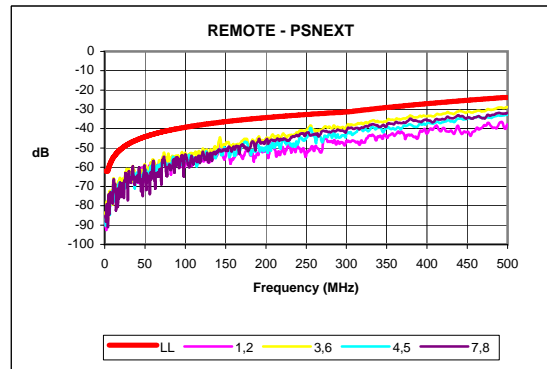
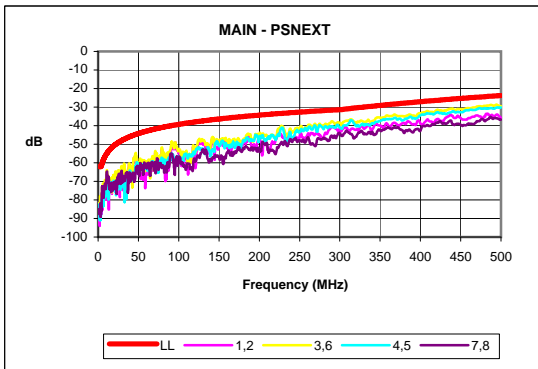
Frequency	Worst Case	TIA Spec
1	-25.3	-19.1
10	-32.7	-21
31.3	-31.7	-18.5
62.5	-26.1	-16
100	-25.7	-14
155	-26.3	-12.1
200	-21.7	-11
250	-18.5	-10
350	-15.9	-8.6
500	-13.8	-8

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Frequency	Worst Case	TIA Spec
1	-85.6	-65
10	-72.2	-57.8
31.3	-67.2	-50
62.5	-61.6	-45.1
100	-55.8	-41.8
155	-48.9	-38.7
200	-47.1	-36.9
250	-44.4	-35.3
350	-38.3	-31.8
500	-30.9	-26.7

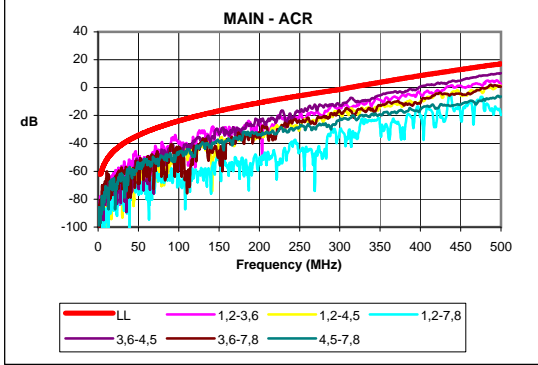
Frequency	Worst Case	TIA Spec
1	-87.6	-65
10	-74.9	-57.8
31.3	-66.5	-50
62.5	-61.6	-45.1
100	-54.5	-41.8
155	-49.7	-38.7
200	-46.4	-36.9
250	-42.4	-35.3
350	-38.8	-31.8
500	-31.9	-26.7



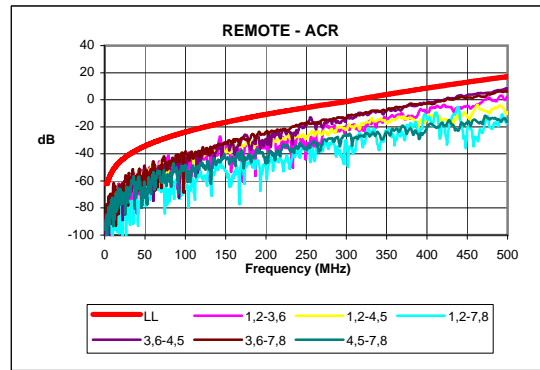
Frequency	Worst Case	TIA Spec
1.0	-82.3	-62.0
10.0	-70.1	-55.5
31.3	-65.1	-47.5
62.5	-58.7	-42.7
100.0	-53.7	-39.3
155.0	-47.1	-36.2
200.0	-44.3	-34.3
250.0	-41.5	-32.7
350.0	-35.7	-29.1
500.0	-29.4	-23.8

Frequency	Worst Case	TIA Spec
1	-86.2	-62.0
10	-73.2	-55.5
31.3	-64.4	-47.5
62.5	-58.8	-42.7
100	-53.5	-39.3
155	-48.5	-36.2
200	-45.2	-34.3
250	-40.6	-32.7
350	-36.1	-29.1
500	-28.9	-23.8

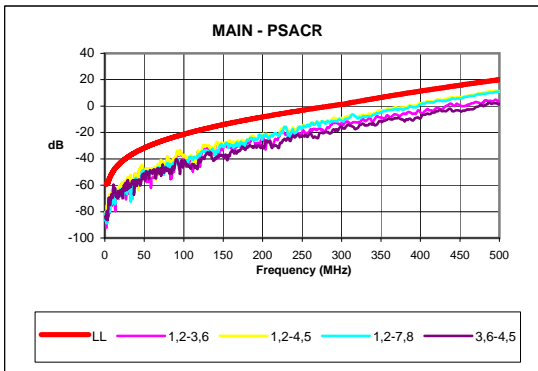
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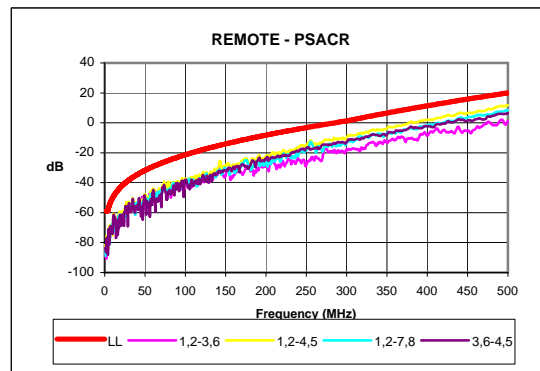
Frequency	Worst Case	TIA Spec
1	-84.1	-62.0
10	-67.6	-52.3
31.3	-58.8	-40.2
62.5	-49.6	-31.1
100	-40.2	-23.8
155	-28.6	-16.0
200	-24.2	-10.8
250	-17.7	-5.8
350	-5.6	3.8
500	10.3	17.1



Frequency	Worst Case	TIA Spec
1	-86.1	-62.0
10	-70.2	-52.3
31.3	-58	-40.2
62.5	-49.3	-31.1
100	-39.1	-23.8
155	-30.1	-16.0
200	-24.1	-10.8
250	-16.9	-5.8
350	-7.7	3.8
500	8.3	17.1

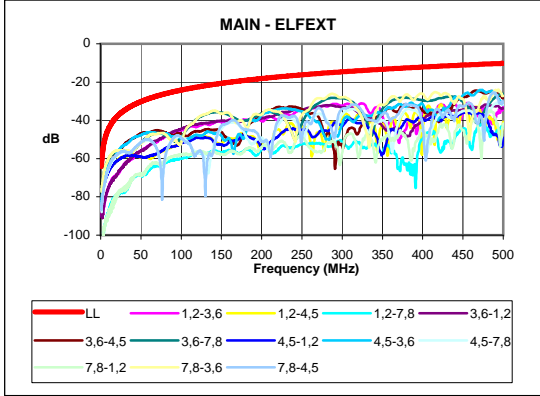


Frequency	Worst Case	TIA Spec
1	-80.8	-59.0
10	-65.5	-50.0
31.3	-56.7	-37.7
62.5	-46.6	-28.7
100	-38.1	-21.3
155	-27.2	-13.5
200	-21.4	-8.2
250	-15.4	-3.2
350	-3.4	6.5
500	11.3	20.0

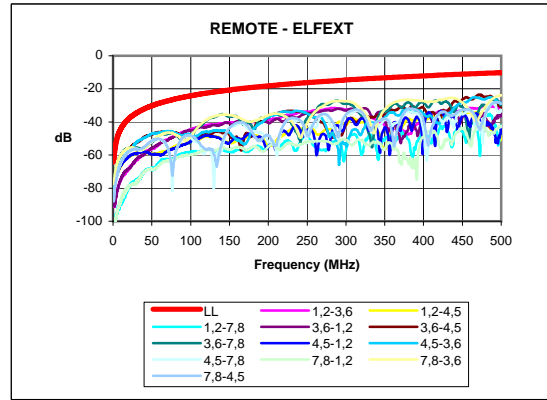


Frequency	Worst Case	TIA Spec
1.0	-84.7	-59.0
10.0	-68.5	-50.0
31.3	-55.9	-37.7
62.5	-46.7	-28.7
100.0	-37.9	-21.3
155.0	-28.6	-13.5
200.0	-22.3	-8.2
250.0	-14.5	-3.2
350.0	-3.8	6.5
500.0	11.8	20.0

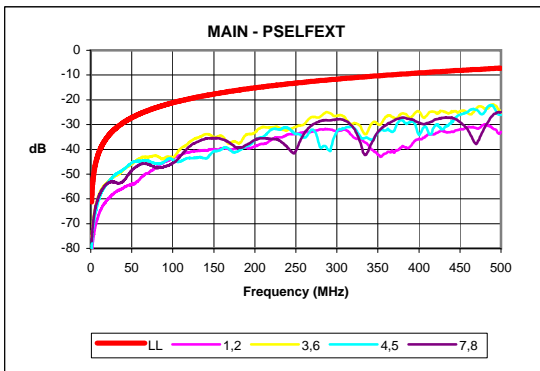
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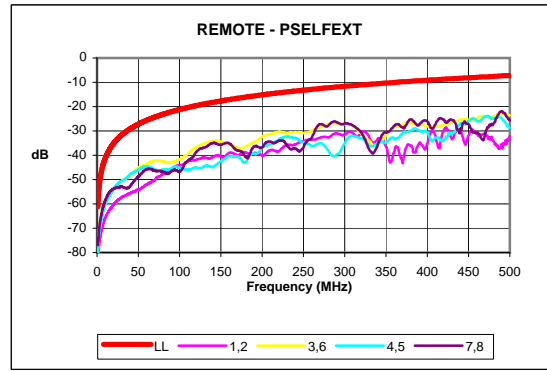
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1	-77.5	-64.2
10	-59.8	-44.2
31.3	-51.8	-34.3
62.5	-46.1	-28.3
100	-44.4	-24.2
155	-36	-20.4
200	-36.5	-18.2
250	-34.3	-16.2
350	-31.8	-13.3
500	-26.1	-10.2



Frequency	Worst Case	TIA Spec
1	-77.5	-64.2
10	-59.8	-44.2
31.3	-51.9	-34.3
62.5	-45.9	-28.3
100	-44.5	-24.2
155	-36.2	-20.4
200	-35.9	-18.2
250	-34	-16.2
350	-32.5	-13.3
500	-23.8	-10.2



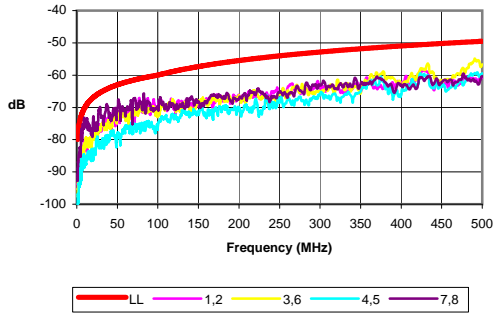
Frequency	Worst Case	TIA Spec
1.0	-76.2	-61.2
10.0	-58.2	-41.2
31.3	-49.9	-31.3
62.5	-43.1	-25.3
100.0	-43.2	-21.2
155.0	-34.8	-17.4
200.0	-33.2	-15.2
250.0	-30.9	-13.2
350.0	-29.8	-10.3
500.0	-25.0	-7.2



Frequency	Worst Case	TIA Spec
1	-76.3	-61.2
10	-58.6	-41.2
31.3	-50.2	-31.3
62.5	-43.2	-25.3
100	-41.7	-21.2
155	-34.8	-17.4
200	-32.4	-15.2
250	-30.9	-13.2
350	-30.7	-10.3
500	-23.6	-7.2

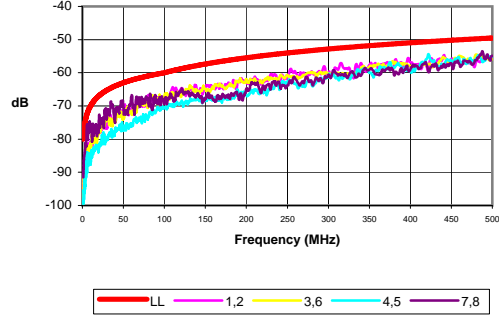
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END #1 (Jack-Side)- PSANEXT



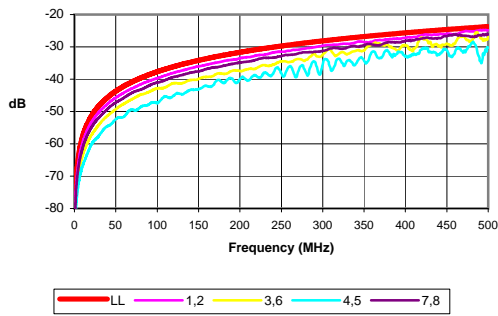
Frequency	Worst Case	TIA Spec
1	-92.8	-80.0
10	-74.2	-70.0
31.3	-73.1	-65.1
62.5	-69.6	-62.0
100	-69.9	-60.0
155	-68.0	-57.1
200	-66.2	-55.5
250	-65.4	-54.0
350	-62.7	-51.8
500	-56.7	-49.5

END #2 (Panel-Side)- PSANEXT



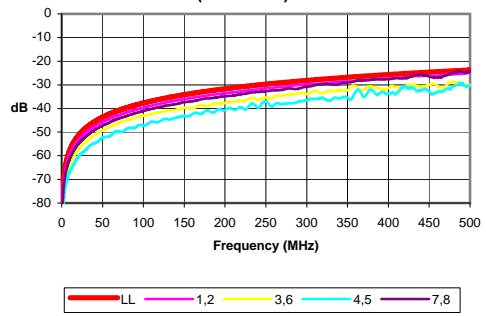
Frequency	Worst Case	TIA Spec
1	-91.5	-80.0
10	-76.1	-70.0
31.3	-71.2	-65.1
62.5	-69.9	-62.0
100	-67.6	-60.0
155	-64.4	-57.1
200	-61.9	-55.5
250	-60.6	-54.0
350	-57.5	-51.8
500	-54.8	-49.5

END #1 (Jack-Side)- PSAACR



Frequency	Worst Case	TIA Spec
1	-79.1	-77.7
10	-59.6	-57.7
31.3	-49.7	-47.8
62.5	-43.8	-41.8
100	-39.7	-37.7
155	-35.8	-33.9
200	-33.6	-31.7
250	-31.5	-29.7
350	-28.6	-26.8
500	-24.9	-23.7

END #2 (Panel-Side)- PSAACR



Frequency	Worst Case	TIA Spec
1	-79.0	-77.7
10	-59.5	-57.7
31.3	-49.7	-47.8
62.5	-43.8	-41.8
100	-39.7	-37.7
155	-35.8	-33.9
200	-33.6	-31.7
250	-31.5	-29.7
350	-28.6	-26.8
500	-24.4	-23.7