



3933 US ROUTE 11, CORTLAND, NEW YORK 13045, U.S.A.

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

PROJECT NO.: 3022866-311

DATE: February 09, 2009

TEST REPORT NO.: 3022866CRT-078

RENDERED TO:

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

TEST:

C6 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*, with internal channel parameter limits extended per guidelines of TIA TSB-155 (excluding ANEXT).

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.

TSB-155, Guidelines for the Assessment and Mitigation of Installed Category 6 Cabling to Support 10GBASE-T dated March 2007.

AUTHORIZATION:

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

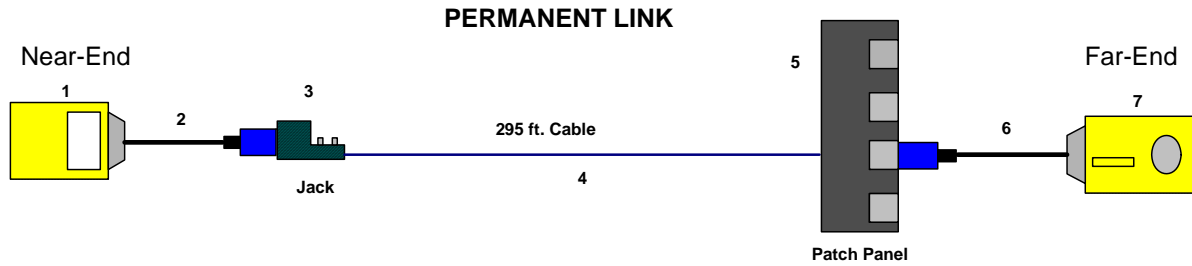
DATE OF TEST:

10/17/2008

TEST REPORT REVISION HISTORY:

First Issue: February 09, 2009 Original Document

This report is for the exclusive use of Intertek's Client and is provided pursuant to the agreement between Intertek and its Client. Intertek's responsibility and liability are limited to the terms and conditions of the agreement. Intertek assumes no liability to any party, other than to the Client in accordance with the agreement, for any loss, expense or damage occasioned by the use of this report. Only the Client is authorized to copy or distribute this report and then only in its entirety. Any use of the Intertek name or one of its marks for the sale or advertisement of the tested material, product or service must first be approved in writing by Intertek. The observations and test results in this report are relevant only to the sample tested. This report by itself does not imply that the material, product, or service is or has ever been under an Intertek certification program.



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	FlukeC6A Permanent Link Adapters
3	Hubbell	HXJ6	C6 Jack
4	Hubbell	C6ESPX ¹	NEXTSPEED C6E CMP Cable
5	Hubbell	P6E**U ²	C6 Patch Panel

- 1. X is cable color (blue, grey, etc.)
- 2. '**' is 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. Alien Crosstalk was not measured.

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

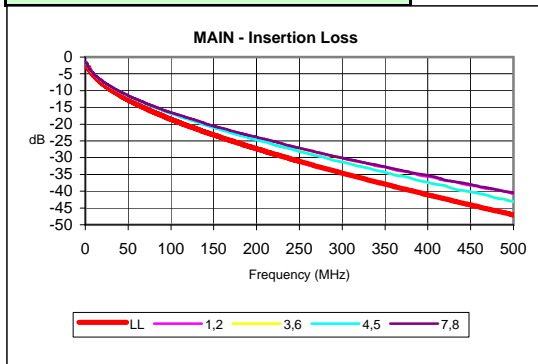
Appendix A

Test results

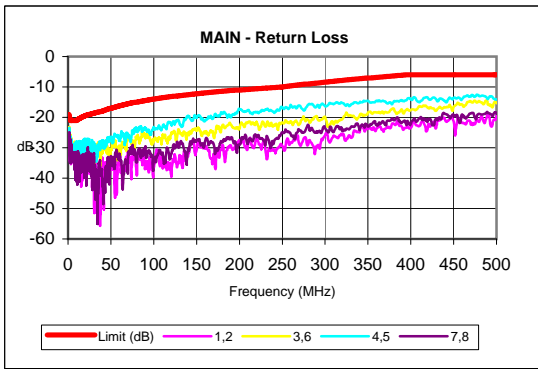
Any data reported above 500 MHz is for indication only.

This appendix contains 4 Pages.

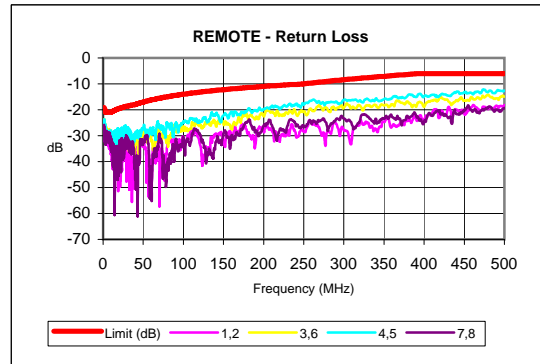
TEST REPORT 3022866-078



Frequency	Worst Case	TIA Spec
1.0	-1.6	-3.0
10.0	-5.0	-5.5
31.3	-9.1	-10.0
62.5	-13.0	-14.4
100.0	-16.8	-18.6
155.0	-21.4	-23.7
200.0	-24.7	-27.4
250.0	-28.2	-31.1
350.0	-34.4	-37.9
500.0	-43.0	-47.1

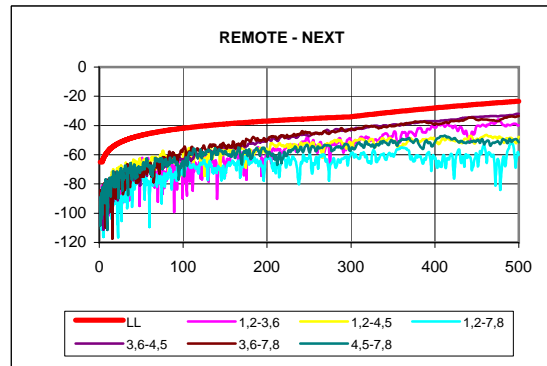
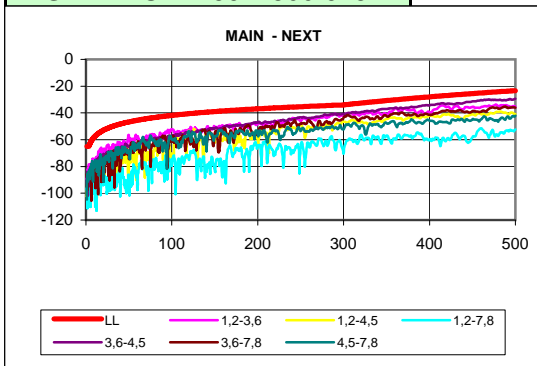


Frequency	Worst Case	TIA Spec
1	-26.2	-19.1
10	-28.2	-21
31.3	-29.1	-18.5
62.5	-24.6	-16
100	-23.2	-14
155	-20.1	-12.1
200	-17.3	-11
250	-16.6	-10
350	-14.5	-7.1
500	-14.1	-6



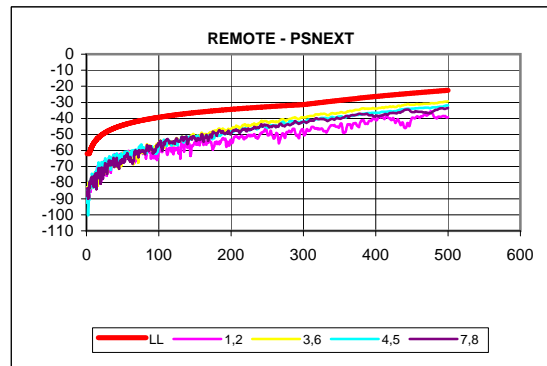
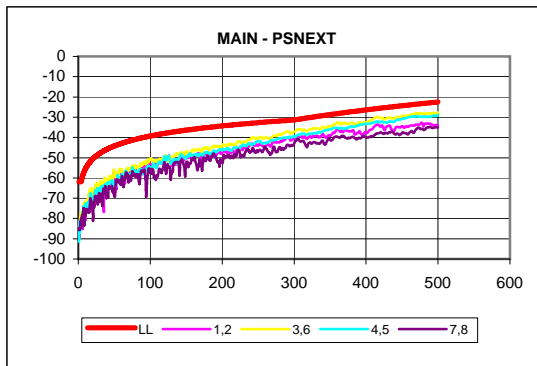
Frequency	Worst Case	TIA Spec
1	-24.8	-19.1
10	-28	-21
31.3	-26.8	-18.5
62.5	-27	-16
100	-24.4	-14
155	-22.8	-12.1
200	-19.8	-11
250	-18	-10
350	-15.9	-7.1
500	-12.6	-6

TEST REPORT 3022866-078



Frequency	Worst Case	TIA Spec
1	-86.2	-65
10	-77.6	-57.8
31.3	-63.7	-50
62.5	-60.8	-45.1
100	-52.8	-41.8
155	-49.7	-38.7
200	-47.2	-36.9
250	-43.3	-35.3
350	-37	-30.8
500	-29.4	-23.4

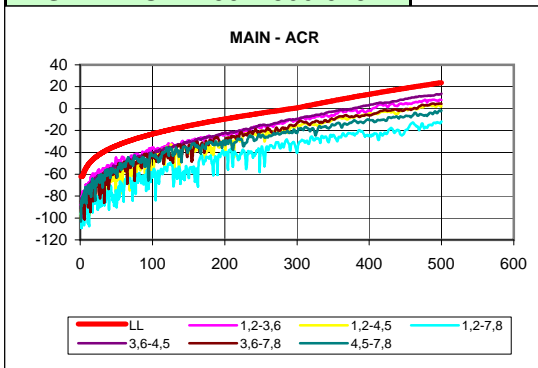
Frequency	Worst Case	TIA Spec
1	-84.8	-65
10	-79.3	-57.8
31.3	-67.4	-50
62.5	-61.6	-45.1
100	-55.8	-41.8
155	-53.9	-38.7
200	-49.4	-36.9
250	-44.6	-35.3
350	-39.4	-30.8
500	-32	-23.4



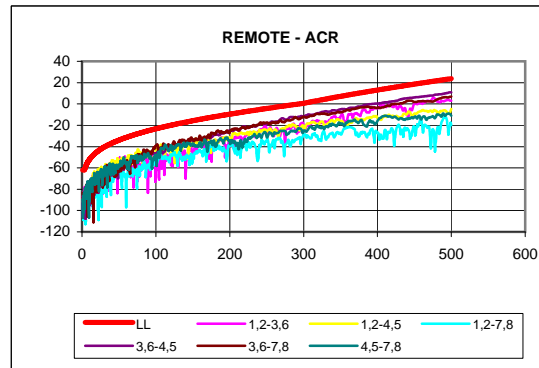
Frequency	Worst Case	TIA Spec
1	-84	-62
10	-74.4	-55.5
31.3	-61.6	-47.5
62.5	-57.9	-42.7
100	-51.1	-39.3
155	-47.8	-36.2
200	-44.2	-34.3
250	-40.7	-32.7
350	-34.7	-28.7
500	-27.7	-22.5

Frequency	Worst Case	TIA Spec
1	-82.9	-62
10	-76.4	-55.5
31.3	-64.4	-47.5
62.5	-60.1	-42.7
100	-55.2	-39.3
155	-51.2	-36.2
200	-46.5	-34.3
250	-42.2	-32.7
350	-36.4	-28.7
500	-29.3	-22.5

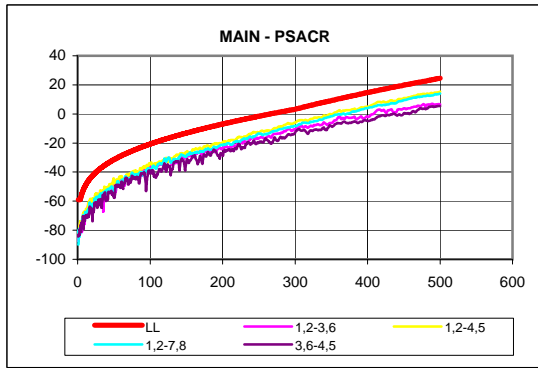
TEST REPORT 3022866-078



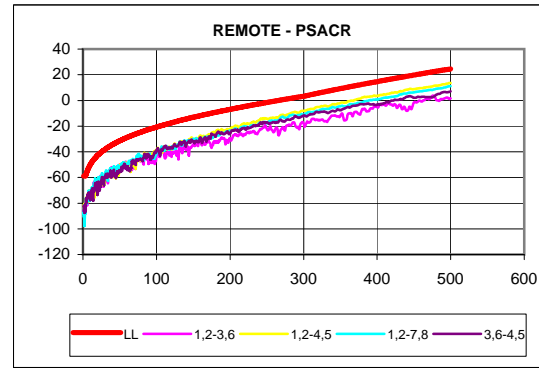
Frequency	Worst Case	TIA Spec
1	-84.7	-62
10	-72.6	-52.3
31.3	-54.7	-40
62.5	-47.8	-30.7
100	-36.1	-23.2
155	-28.4	-15
200	-22.5	-9.5
250	-15.1	-4.2
350	-2.6	7.1
500	13.6	23.7



Frequency	Worst Case	TIA Spec
1	-83.3	-62
10	-74.3	-52.3
31.3	-58.4	-40
62.5	-48.6	-30.7
100	-39.3	-23.2
155	-33	-15
200	-24.7	-9.5
250	-17.5	-4.2
350	-5	7.1
500	11	23.7

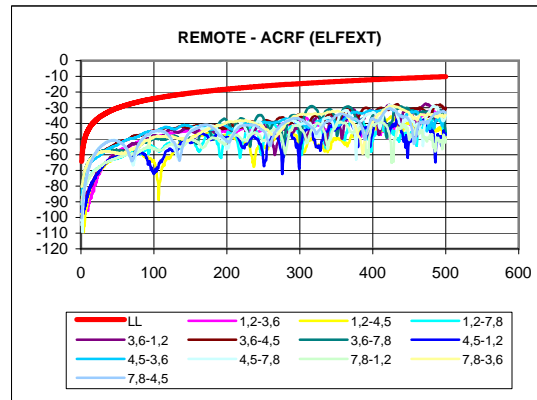
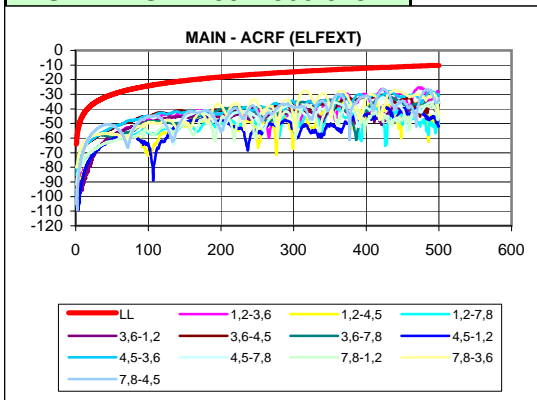


Frequency	Worst Case	TIA Spec
1	-82.4	-59
10	-69.4	-50
31.3	-52.6	-37.5
62.5	-44.9	-28.3
100	-34.4	-20.7
155	-26.5	-12.5
200	-19.7	-6.9
250	-12.8	-1.6
350	-0.3	9.2
500	15.3	24.6



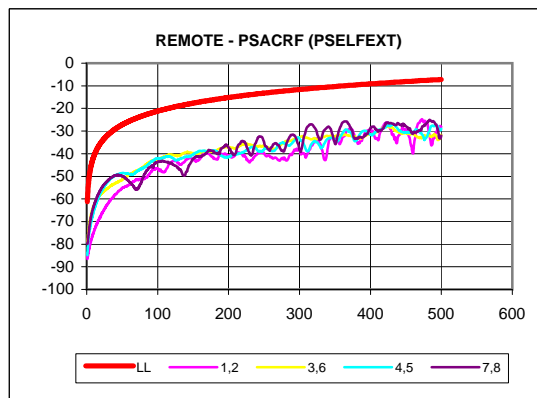
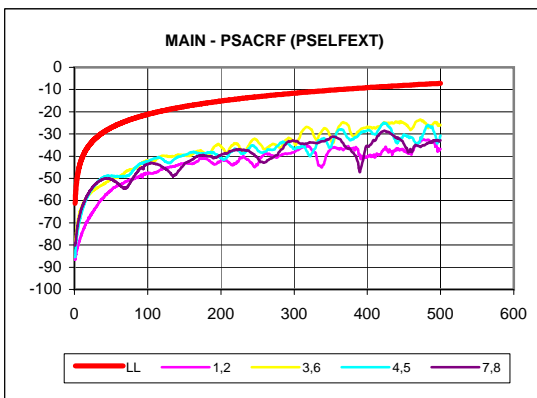
Frequency	Worst Case	TIA Spec
1	-81.3	-59
10	-71.4	-50
31.3	-55.3	-37.5
62.5	-47.1	-28.3
100	-38.5	-20.7
155	-29.9	-12.5
200	-22	-6.9
250	-14.3	-1.6
350	-2	9.2
500	13.7	24.6

TEST REPORT 3022866-078



Frequency	Worst Case	TIA Spec
1	-80.2	-64.2
10	-64.5	-44.2
31.3	-53	-34.3
62.5	-50.6	-28.3
100	-45	-24.2
155	-41.8	-20.4
200	-37.7	-18.2
250	-35.7	-16.2
350	-33.9	-13.3
500	-28.3	-10.2

Frequency	Worst Case	TIA Spec
1	-80.3	-64.2
10	-64.5	-44.2
31.3	-53.1	-34.3
62.5	-50.6	-28.3
100	-44.9	-24.2
155	-41.7	-20.4
200	-38.3	-18.2
250	-36.5	-16.2
350	-32.2	-13.3
500	-30	-10.2



Frequency	Worst Case	TIA Spec
1	-78.6	-61.2
10	-62.6	-41.2
31.3	-51.7	-31.3
62.5	-48.9	-25.3
100	-42	-21.2
155	-39	-17.4
200	-35.5	-15.2
250	-33	-13.2
350	-31.4	-10.3
500	-26	-7.2

Frequency	Worst Case	TIA Spec
1	-79	-61.2
10	-62.9	-41.2
31.3	-51.5	-31.3
62.5	-48.9	-25.3
100	-42.2	-21.2
155	-39.5	-17.4
200	-37	-15.2
250	-34.7	-13.2
350	-32.2	-10.3
500	-28.2	-7.2