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PROJECT NO.: 3022866-311

DATE: February 19, 2009

TEST REPORT NO.: 3022866CRT-083

RENDERED TO:

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

TEST:

Performance testing of the Category 6 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.

Proposed 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:

10/23/2008

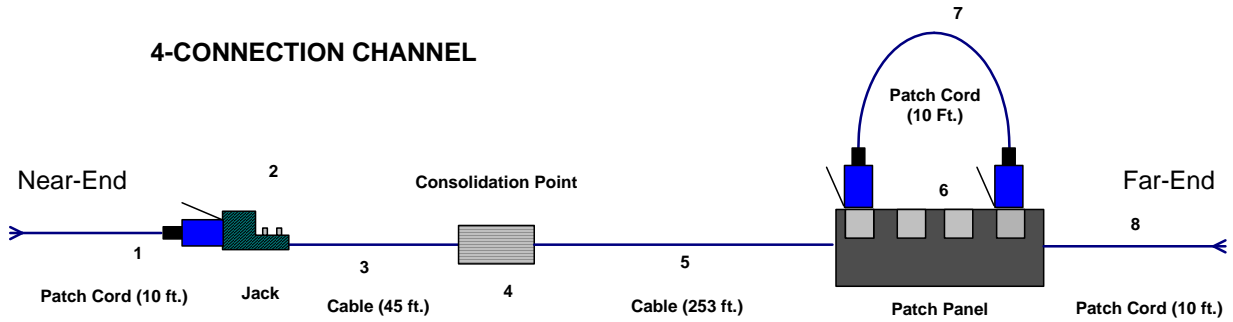
TEST REPORT REVISION HISTORY:

First Issue: February 19, 2009 Original Document

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SAMPLE DESCRIPTION:

4-CONNECTION CHANNEL



<u>Component ID</u>	<u>Manufacturer</u>	<u>Part Number</u>	<u>Description</u>
1, 7, 8	Hubbell Premise Wiring	PCX6XX ¹ 10	10' C6 Patch Cord
2	Hubbell Premise Wiring	HXJ6	C6 Jack
3, 5	Hubbell Premise Wiring	C6x ² X ³	NEXTSPEED C6 CMP Cable
4	Hubbell Premise Wiring	NS6-110	110 Block
6	Hubbell Premise Wiring	P6E**U ⁴	C6 Patch Panel

- 1. XX is the color of patch cord (black, blue, etc...)
- 2. x is spool or reel.
- 3. X is cable color (blue, grey, etc...)
- 4. '**' is the placeholder for to 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>
Agilent ENA Series Network Analyzer	E5070B	MY42401505	01/14/08

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

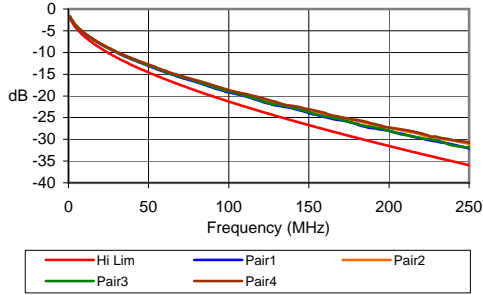
Appendix A
Test results

Any data reported above 250 MHz is for indication only.

This appendix contains 2 Pages.

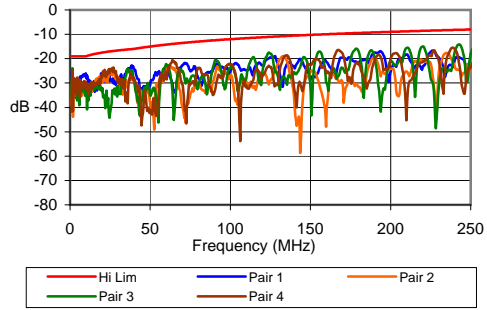
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Insertion Loss



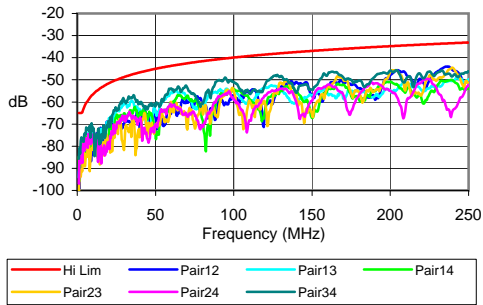
Frequency	Worst Case	Average	TIA Spec
1.0	-1.8	-1.7	-2.2
10.0	-5.6	-5.5	-6.2
31.3	-10.2	-10.0	-11.4
62.5	-14.8	-14.6	-16.4
100.0	-19.2	-18.8	-21.2
155.0	-24.4	-23.9	-27.2
200.0	-28.0	-27.6	-31.5
250.0	-32.0	-31.3	-35.9

Return Loss



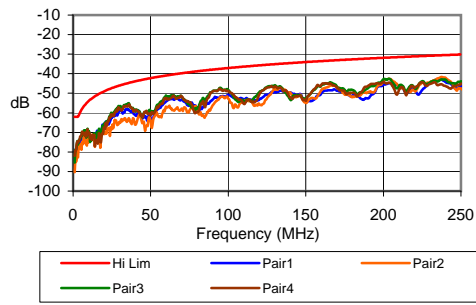
Frequency	Worst Case	Average	TIA Spec
1.0	-26.0	-34.5	-19.0
10.0	-26.1	-31.4	-19.0
31.3	-27.7	-31.9	-16.5
62.5	-23.1	-26.9	-14.1
100.0	-22.4	-26.9	-12.0
155.0	-17.2	-25.0	-10.1
200.0	-20.5	-24.9	-9.0
250.0	-19.4	-25.9	-8.0

NEXT



Frequency	Worst Case	Average	TIA Spec
1.0	-84.74	-91.79	-65
10.0	-73.06	-78.49	-56.78
31.3	-60.61	-67.80	-48.45
62.5	-54.58	-61.60	-43.43
100.0	-50.76	-57.82	-39.96
155.0	-49.83	-57.30	-36.68
200.0	-45.75	-52.01	-34.79
250.0	-46.3	-53.12	-33.12

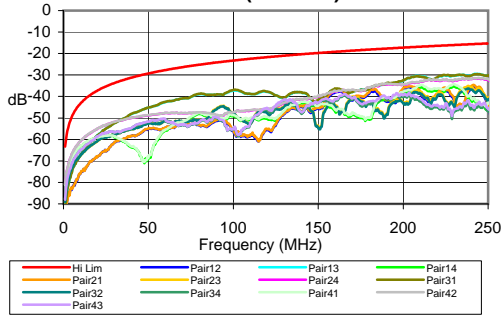
PSNEXT



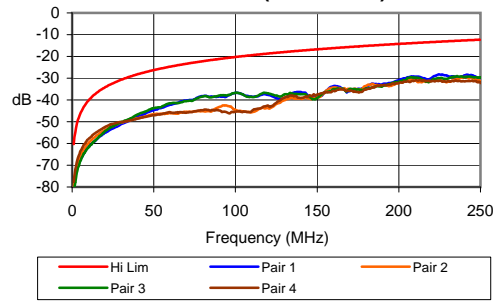
Frequency	Worst Case	Average	TIA Spec
1.00	-82.02	-85.76	-62.00
10.00	-70.46	-73.15	-54.19
31.30	-57.45	-62.56	-45.74
62.50	-51.60	-56.18	-40.64
100.00	-47.91	-52.45	-37.11
155.00	-48.10	-51.69	-33.78
200.00	-42.82	-46.53	-31.85
250.00	-44.15	-47.56	-30.16

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ACR-F (ELFEXT)



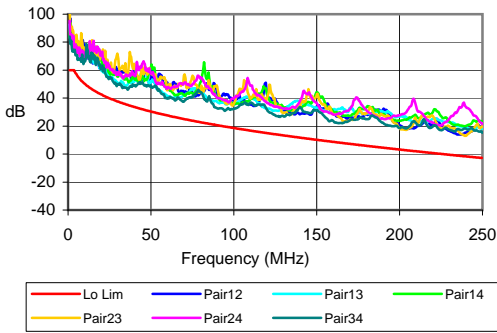
PSACR-F (PSELFEXT)



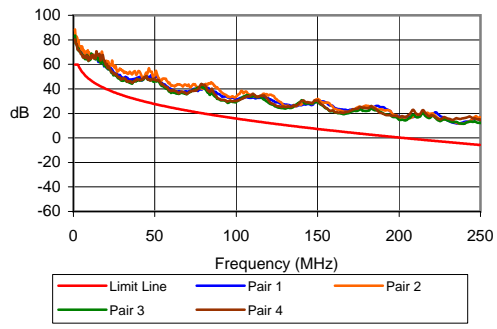
Frequency	Worst Case	Average	TIA Spec
1.0	-80.8	-86.3	-63.3
10.0	-61.0	-65.9	-43.5
31.3	-51.6	-56.0	-33.4
62.5	-42.1	-49.8	-27.4
100.0	-37.0	-47.3	-23.3
155.0	-38.5	-42.2	-19.5
200.0	-32.5	-38.0	-17.2
250.0	-30.2	-37.9	-15.3

Frequency	Worst Case	Average	TIA Spec
1.0	-77.7	-80.6	-60.3
10.0	-58.2	-60.5	-40.5
31.3	-50.0	-50.6	-30.4
62.5	-41.3	-43.8	-24.4
100.0	-36.8	-40.6	-20.3
155.0	-36.1	-36.9	-16.5
200.0	-30.9	-32.4	-14.2
250.0	-29.7	-30.9	-12.3

ACR



PSACR



Frequency	Worst Case	Average	TIA Spec
1.0	83.0	95.3	60.0
10.0	67.6	75.5	50.5
31.3	50.6	60.3	37.1
62.5	40.2	52.4	27.0
100.0	32.2	44.5	18.7
155.0	26.4	37.0	9.5
200.0	18.5	28.3	3.3
250.0	15.7	28.3	-2.8

Frequency	Worst Case	Average	TIA Spec
1.0	82.3	85.5	59.7
10.0	67.5	68.2	48.0
31.3	56.6	54.5	34.4
62.5	45.0	43.3	24.2
100.0	36.0	35.1	15.9
155.0	27.3	28.4	6.6
200.0	19.7	20.3	0.3
250.0	12.3	16.9	-5.8