



REPORT INTERTEK / ETL SEMKO

3933 US ROUTE 11, CORTLAND, NEW YORK 13045
Phone Number: 1-800-345-3851 Fax Number: 607-758-3648

PROJECT NO.: 3095288-311

DATE: May 16, 2006

REPORT NO.: 3095288CRT-002Sum

RENDERED TO:

Leviton Manufacturing Company
Telecom Voice & Data Division
2222 222nd St. SE
Bothell, WA 98021

TEST: Performance Testing of the cabling configurations as defined in, and to the requirements of TIA/EIA 568-B.2-1 for Category 6 Cabling Systems.

STATEMENT OF LIMITATIONS: At the client's request, 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.

STANDARDS USED:

ASTM D4566-98, dated December 10, 1998, Standard Test Methods for Electrical Performance Properties of Insulations and Jackets for Telecommunications Wire and Cable

TIA/EIA-568-B.2-1, Addendum 1: Transmission Performance Specifications for 4 Pair, 100 Ω Category 6 Cabling dated June 2002.

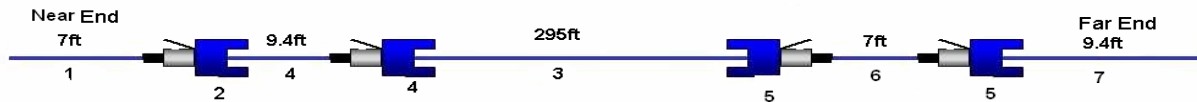
AUTHORIZATION: The project was authorized by, Mr. Jeff Seefried, representing the client, Leviton Manufacturing Company.

DATE OF TEST: April 20, 2006

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An independent organization testing for safety, performance, and certification.

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SAMPLE DESCRIPTION: Channel (4 Connector)

<u>Component ID</u>	<u>Manufacturer</u>	<u>Part Number</u>	<u>Description</u>
1	Leviton	002-6S460-07	Near End Equipment Cord
2	Leviton	010-6S180-SH6	Wall Outlet
3	SUPERIOR	6S-220-2A	Horizontal Cable
4	Leviton	010-6S180-SH6/002-6S460-9.4	Consolidation Point
5	Leviton	010-6S180-SH6	Patch Panel
6	Leviton	002-6S460-07	Cross Connect
7	Leviton	002-6S460-9.4	Far End Equipment Cord

The sample was received on March 30 and April 5, 2005 and was in good condition. All samples were supplied by the client.

EQUIPMENT LIST: The following equipment was employed in conducting the tests.

<u>Equipment Used</u>	<u>Model Number</u>	<u>Serial Number</u>	<u>Control Number</u>	<u>Calibration Date</u>
Hewlett Packard Automatic Cable Test System	HP46152A	3903U01003	E356	03/02/06

Equipment

The testing was performed using a Hewlett Packard 46152A Automatic Cable Test System. The system was calibrated using a full 2 port calibration with 801 linearly spaced data points, 300 Hz I/F bandwidth and a 5-second sweep time.

Measurements

For the cabling configurations previously described, Attenuation, Near End Cross Talk, Far End Cross Talk and Return Loss were measured in accordance with ASTM D4566. These tests were performed on three separate channels.

Requirements

Attenuation, Near End Cross Talk, Power Sum NEXT, Equal Level Far End Cross Talk (ELFEXT), Power Sum ELFEXT and Return Loss were tested to the requirements of TIA/EIA-568-B.2-1, Cat. 6.

Results

The results for the channel tests are shown in graphs 1-8. In each plot, the worst case and average readings are compared with the appropriate limits from the category 6 cabling specification.

Conclusion:

The channels, as previously described and supplied by the client, were tested in accordance with the procedures contained herein, and did comply with the indicated applicable transmission requirements. The testing was performed at Intertek ETL SEMKO located in Cortland, New York.

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

Reviewed and Approved By:



Stephen R. Comer
Laboratory Supervisor
Global Cabling Products Testing



Dean Beverley
Technician
Global Cabling Products Testing

APPENDIX A

Test Results

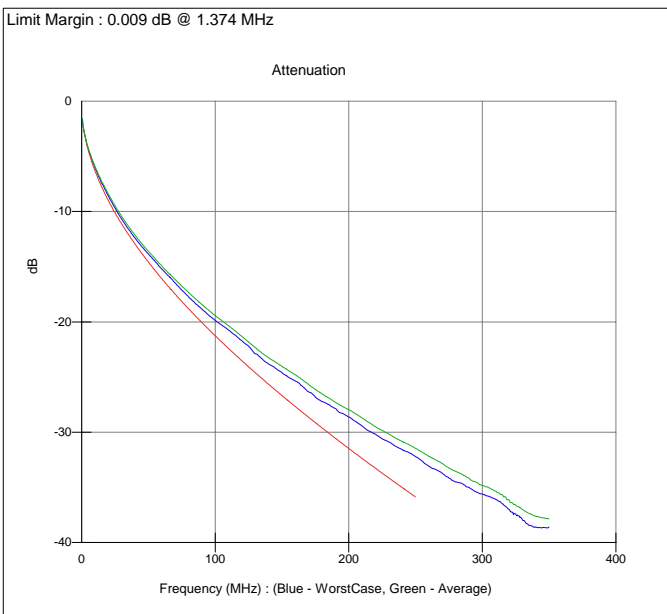
Any data reported above 250 MHz is for indication only.

This appendix contains 4 pages.

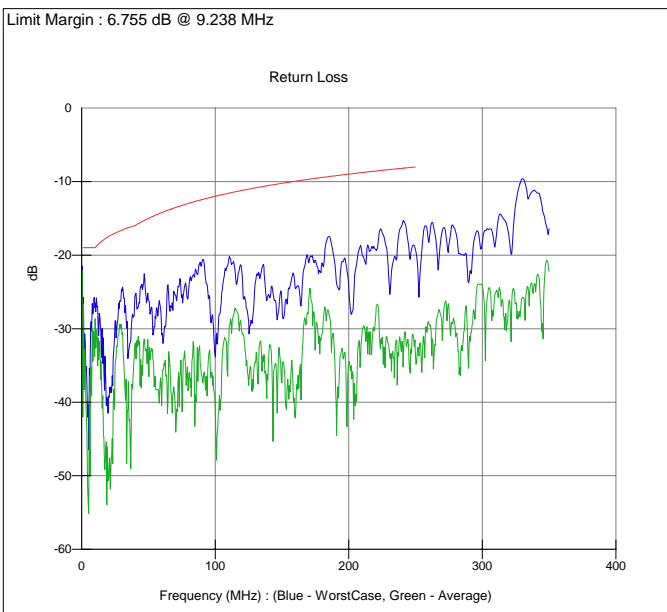


Summary

Client	Leviton	Report No	3095288CRT-002
Specification	TIA 568B2-1 - Cat 6 Chan Swept350 Limits250MHz		
Part No	Leviton with Superior	Length	100
Test Started	4/20/2006 11:09:24 AM	Temperature	20 °C
Description	Performance Testing on 4 Connector Channel Configuration		
Technician	Dean Beverley	Test Status:	Complies



Attenuation			
Freq	Worst Case	Average	Spec
1.	2.1	2.1	2.2
4.	3.9	3.9	4.0
8.	5.4	5.3	5.7
10.	6.0	5.9	6.3
16.	7.6	7.5	8.0
20.	8.6	8.4	9.0
25.	9.7	9.5	10.1
31.25	10.9	10.7	11.4
62.5	15.5	15.3	16.4
100.	19.9	19.4	21.3
200.	28.6	28.0	31.5
250.	32.2	31.5	35.9
350.	38.6	37.9	



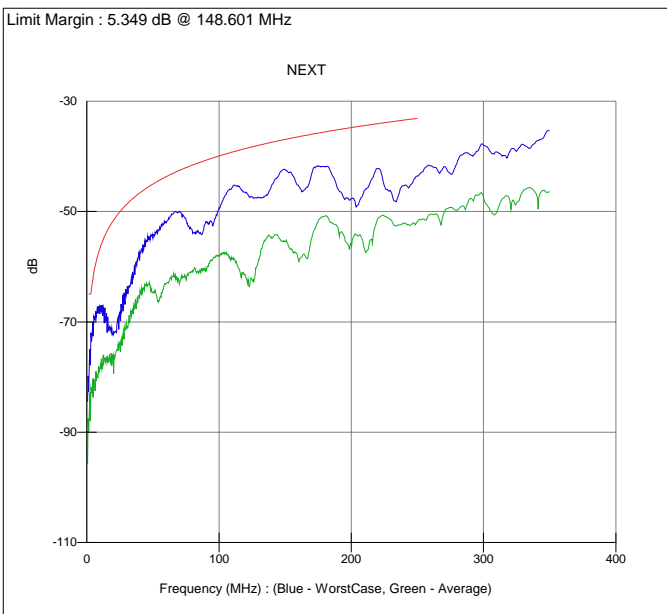
Return Loss			
Freq	Worst Case	Average	Spec
1.	35.3	39.8	19.0
4.	38.0	44.4	19.0
8.	27.8	30.7	19.0
10.	27.2	30.0	19.0
16.	33.5	41.6	18.0
20.	40.0	50.7	17.5
25.	28.9	35.1	17.0
31.25	25.3	33.7	16.5
62.5	29.8	34.4	14.0
100.	33.9	41.0	12.0
200.	24.4	34.6	9.0
250.	19.2	33.3	8.0
350.	16.4	22.2	



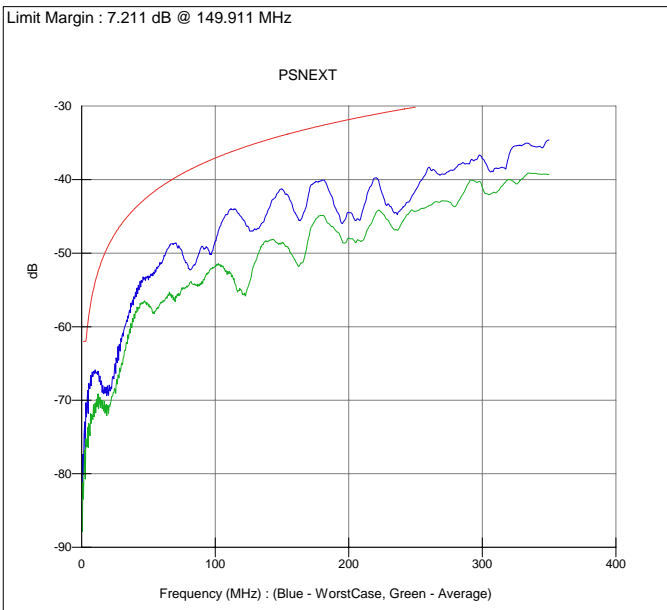
ETL SEMKO

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NEXT			
Freq	Worst Case	Average	Spec
1.	80.2	87.9	65.0
4.	71.9	82.9	63.0
8.	67.5	80.1	58.2
10.	67.4	78.0	56.6
16.	70.6	76.9	53.2
20.	72.1	78.1	51.6
25.	68.5	73.9	50.0
31.25	64.4	70.6	48.4
62.5	51.3	62.5	43.4
100.	49.4	57.9	39.9
200.	47.7	56.1	34.8
250.	43.5	51.8	33.1
350.	35.3	46.4	

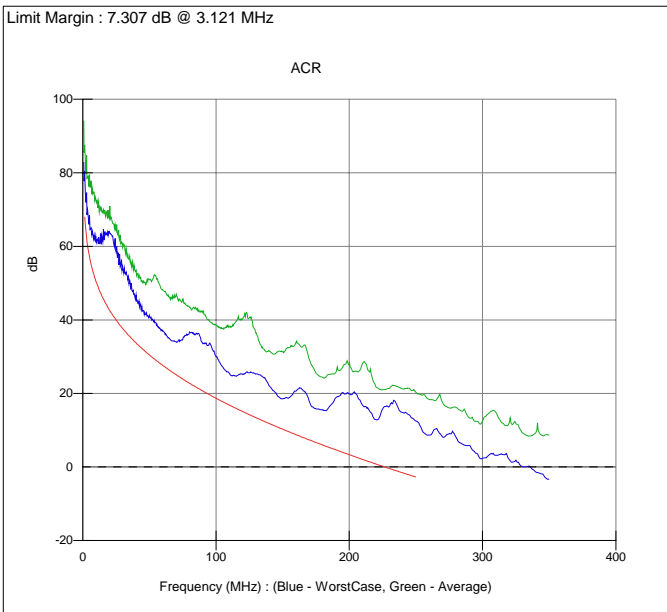


PSNEXT			
Freq	Worst Case	Average	Spec
1.	77.8	81.5	62.0
4.	70.7	76.3	60.5
8.	66.3	72.3	55.6
10.	66.0	70.6	54.0
16.	68.6	70.7	50.6
20.	69.2	71.4	49.0
25.	65.2	68.6	47.3
31.25	61.0	64.2	45.7
62.5	50.3	56.3	40.6
100.	48.4	51.8	37.1
200.	44.5	48.0	31.9
250.	41.5	44.3	30.2
350.	34.6	39.3	

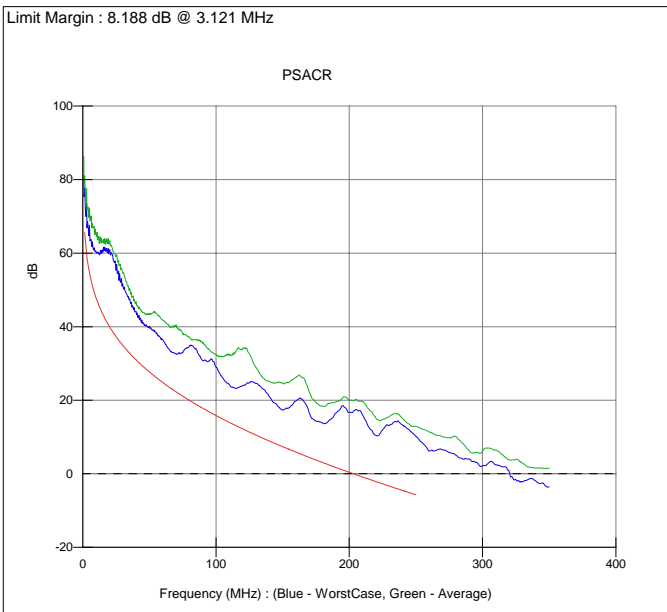


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ACR			
Freq	Worst Case	Average	Spec
1.	78.1	85.8	69.9
4.	68.0	79.0	59.0
8.	62.2	74.7	52.5
10.	61.5	72.1	50.3
16.	63.2	69.4	45.2
20.	63.7	69.7	42.6
25.	58.8	64.4	39.9
31.25	53.5	59.9	37.0
62.5	36.0	47.3	26.9
100.	30.0	38.5	18.7
200.	19.9	28.1	3.3
250.	12.5	20.3	-2.8
350.	-3.3	8.7	

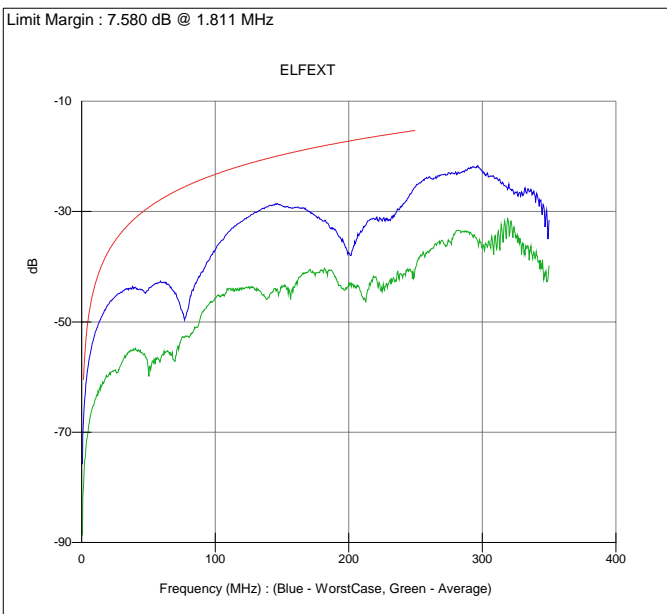


PSACR			
Freq	Worst Case	Average	Spec
1.	75.7	79.4	67.5
4.	66.9	72.5	56.5
8.	61.0	66.9	49.9
10.	60.1	64.7	47.7
16.	61.1	63.2	42.6
20.	60.8	63.0	40.0
25.	55.5	59.1	37.2
31.25	50.4	53.6	34.3
62.5	35.0	41.0	24.1
100.	29.0	32.3	15.8
200.	16.7	20.0	0.4
250.	10.2	12.9	-5.7
350.	-3.5	1.4	

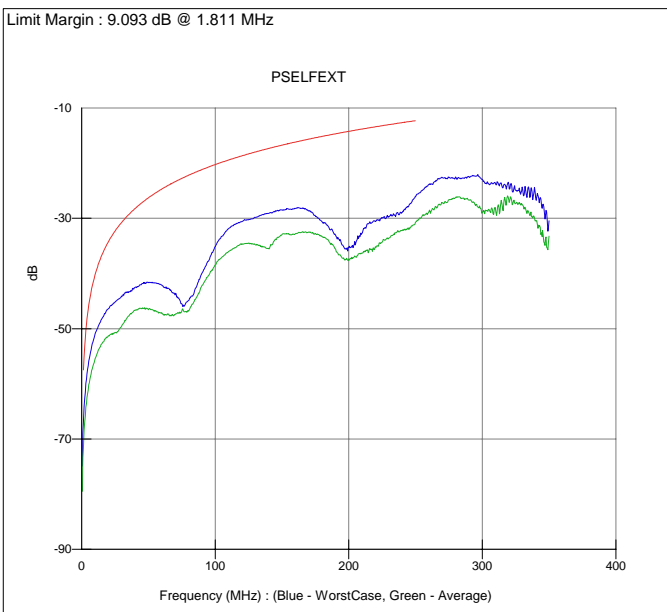


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ELFEXT			
Freq	Worst Case	Average	Spec
1.	70.0	81.7	62.6
4.	59.5	71.1	51.2
8.	53.8	65.6	45.2
10.	52.0	64.1	43.3
16.	48.5	61.0	39.2
20.	46.8	59.7	37.2
25.	45.4	58.7	35.3
31.25	44.4	56.7	33.4
62.5	42.8	55.4	27.3
100.	37.0	45.7	23.3
200.	37.5	43.2	17.2
250.	25.4	40.4	15.3
350.	31.5	39.8	



PSELFEXT			
Freq	Worst Case	Average	Spec
1.	68.7	73.0	59.6
4.	58.2	62.5	48.2
8.	52.7	57.2	42.2
10.	51.0	55.6	40.3
16.	47.8	52.4	36.2
20.	46.4	51.3	34.2
25.	45.1	50.6	32.3
31.25	43.9	49.0	30.4
62.5	42.5	47.4	24.3
100.	35.1	38.4	20.3
200.	35.2	37.5	14.2
250.	26.0	30.8	12.3
350.	30.4	33.2	