



REPORT INTERTEK TESTING SERVICES, INC.

3933 US ROUTE 11, CORTLAND, NEW YORK 13045

ORDER NO.: 3032622-406

DATE: October 18, 2002

REPORT NO.: 3032622-001S

RENDERED TO:

RIT Technologies, Inc.
900 Corporate Drive
Mahwah, NJ 07430

TEST: Performance testing of the cabling configurations as defined in, and to the requirements of, TIA/EIA 568-B.1 for Category 5e 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.1, dated April 12, 2001, Commercial building telecommunications Cabling Standard

TIA/EIA-568-B.2, dated April 23, 2001, Commercial Building Telecommunications Cabling Standard

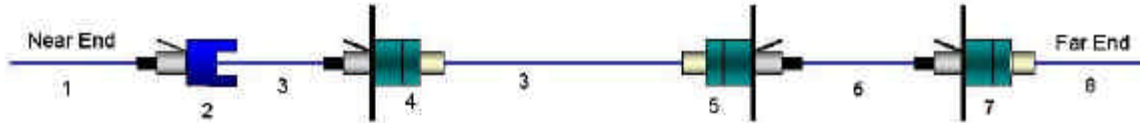
AUTHORIZATION: The tests were authorized by Mr. Motti Kleinmann, representing the client, RIT Technologies, Inc., with Purchase Order No. RIT 09270.

DATE OF TEST: October 17, 2002

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SAMPLE DESCRIPTION:

SMART Giga Cabling System (4 Connector)



<u>Component ID</u>	<u>Manufacturer</u>	<u>Part Number</u>	<u>Description</u>
3	RIT Technologies	R3729552	Horizontal Cable
4,5,7	RIT Technologies	B3892124	Patch Panel
1,8	RIT Technologies	B3208300	Equipment Cord
6	RIT Technologies	R3206300	Cross Connect
2	RIT Technologies	R3010002	Wall Outlet

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	N/A	03/18/02

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. The swept frequency measurements were performed from 0.5 MHz to 100 MHz.

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.1, Cat. 5e.

Results

The results for the 3 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 5e 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.

These Procedures and Requirements were taken from the Standards referred to on Page 1.

Reviewed and Approved By:

Robert Southworth
Lab Supervisor
Communications Products

David L. Ayers
Technician
Communications Products

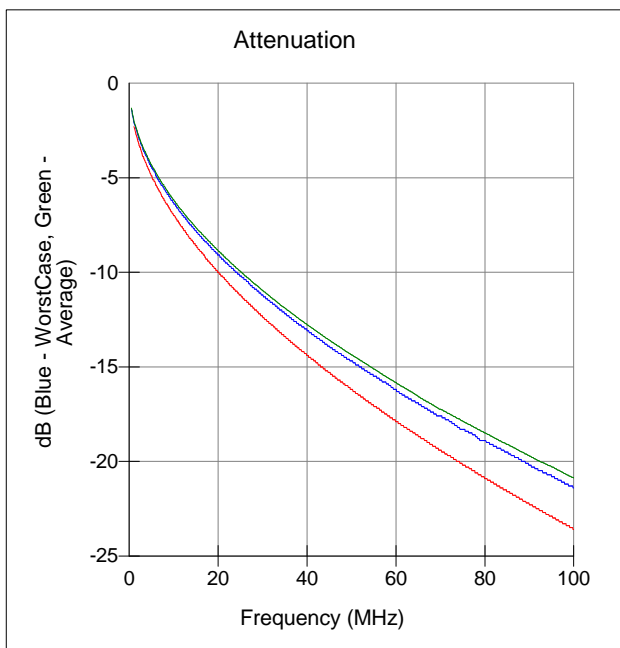
APPENDIX A

Test Results

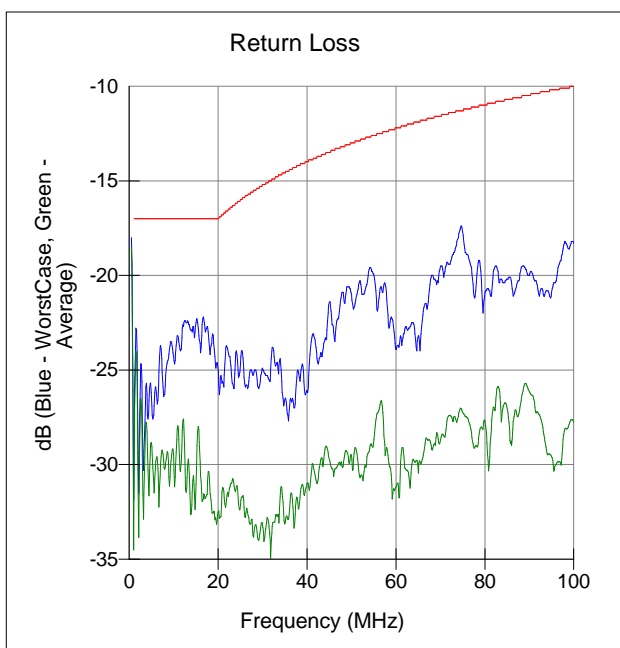
Any data reported above 100 MHz is for indication only.

Client	RIT	Report No	3032622-001S
Specification	TIA 568B1 - Cat5e 4 Conn Channel 100 MHz		
Part No	5E-1-2-3	Length	100
Test Started	10/17/02 10:45:00 AM	Temperature	21 °C
Comments	4 Conn Channel-Mohawk Cable-S100MHz L100MHz		
Technician	David Ayers	Test Status:	PASS

Summary



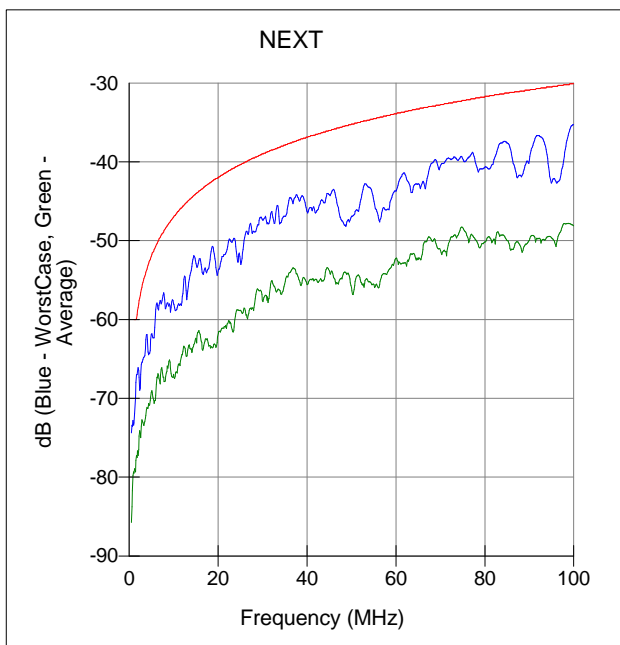
Attenuation			
Freq	Worst Case	Average	Spec
1.	2.0	1.9	2.2
4.	3.9	3.9	4.4
8.	5.6	5.5	6.2
10.	6.3	6.2	7.0
16.	8.1	7.9	8.9
20.	9.1	8.9	10.0
25.	10.2	10.0	11.2
31.25	11.5	11.2	12.6
62.5	16.6	16.2	18.2
100.	21.4	20.9	23.6



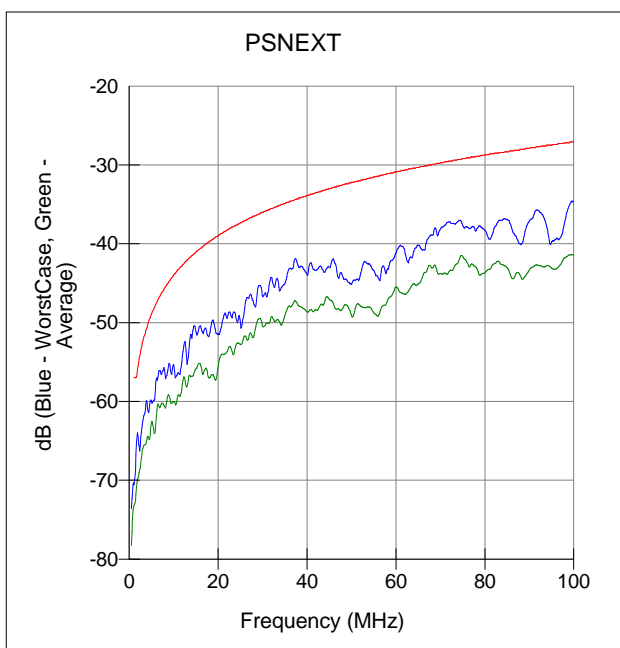
Return Loss			
Freq	Worst Case	Average	Spec
1.	31.9	34.5	17.0
4.	26.5	28.4	17.0
8.	26.1	30.2	17.0
10.	24.4	29.8	17.0
16.	23.9	30.3	17.0
20.	25.0	32.5	17.0
25.	24.7	32.2	16.0
31.25	25.4	33.0	15.1
62.5	22.8	30.3	12.1
100.	18.3	27.8	10.0

Client	RIT	Report No	3032622-001S
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Test Started	10/17/02 10:45:00 AM	Temperature	21 °C
Comments	4 Conn Channel-Mohawk Cable-S100MHz L100MHz		
Technician	David Ayers	Test Status:	PASS

Summary



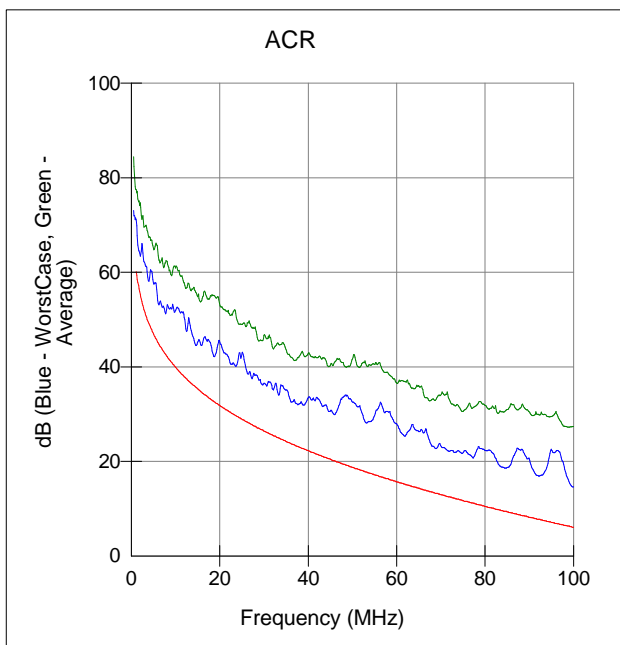
NEXT			
Freq	Worst Case	Average	Spec
1.	73.4	79.3	60.0
4.	62.0	71.2	53.6
8.	57.8	67.8	48.6
10.	58.3	67.1	47.0
16.	52.4	62.1	43.6
20.	53.8	61.8	42.0
25.	52.7	58.8	40.3
31.25	47.8	57.7	38.7
62.5	42.3	52.9	33.6
100.	35.3	48.1	30.1



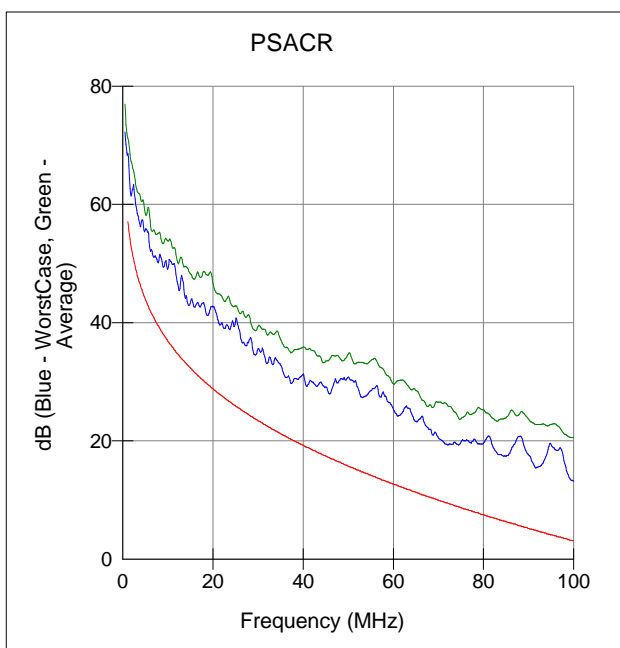
PSNEXT			
Freq	Worst Case	Average	Spec
1.	70.3	73.5	57.0
4.	60.2	64.7	50.6
8.	56.3	60.7	45.6
10.	55.4	60.0	44.0
16.	50.4	55.3	40.6
20.	51.4	55.6	39.0
25.	50.0	52.8	37.3
31.25	46.1	50.1	35.7
62.5	42.1	46.2	30.6
100.	34.7	41.4	27.1

Client	RIT	Report No	3032622-001S
Specification	TIA 568B1 - Cat5e 4 Conn Channel 100 MHz		
Part No	5E-1-2-3	Length	100
Test Started	10/17/02 10:45:00 AM	Temperature	21 °C
Comments	4 Conn Channel-Mohawk Cable-S100MHz L100MHz		
Technician	David Ayers	Test Status:	PASS

Summary



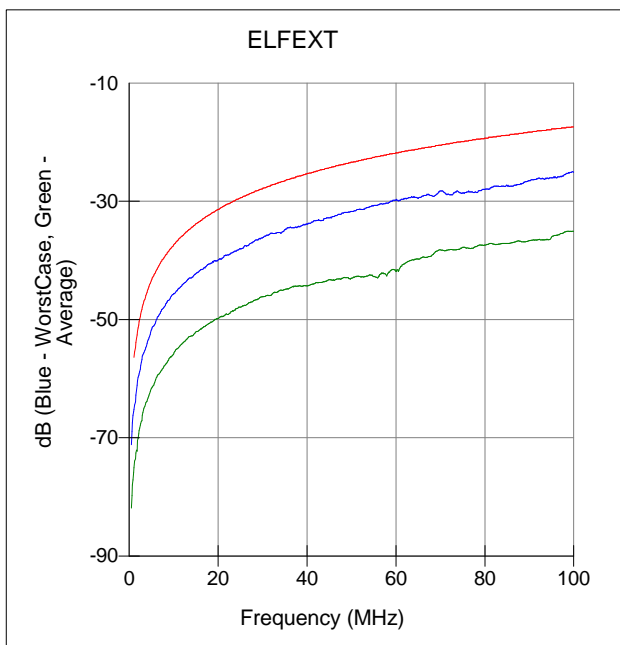
ACR			
Freq	Worst Case	Average	Spec
1.	71.5	77.5	60.9
4.	58.2	67.3	49.1
8.	52.4	62.4	42.3
10.	52.2	61.0	39.9
16.	44.6	54.3	34.5
20.	45.1	53.1	31.8
25.	42.9	49.0	28.9
31.25	36.8	46.6	25.9
62.5	26.3	36.9	15.0
100.	14.6	27.4	6.1



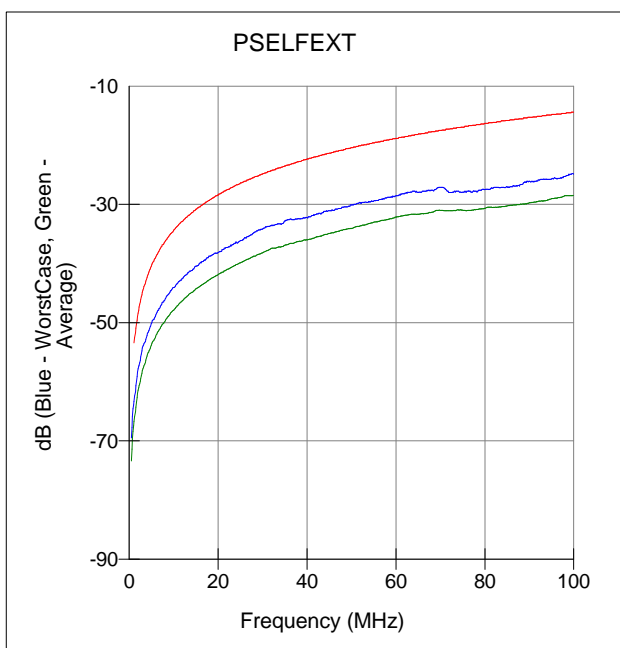
PSACR			
Freq	Worst Case	Average	Spec
1.	68.3	71.6	57.9
4.	56.4	60.8	46.1
8.	50.7	55.2	39.3
10.	49.1	53.8	36.9
16.	42.6	47.4	31.5
20.	42.6	46.8	28.8
25.	40.1	42.8	25.9
31.25	35.0	38.9	22.9
62.5	25.5	30.1	12.0
100.	13.3	20.6	3.1

Client	RIT	Report No	3032622-001S
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Technician	David Ayers	Test Status:	PASS

Summary



ELFEXT			
Freq	Worst Case	Average	Spec
1.	65.6	75.9	57.3
4.	54.1	63.8	45.4
8.	47.7	57.7	39.3
10.	45.6	55.8	37.4
16.	41.6	51.6	33.3
20.	39.9	49.8	31.4
25.	38.0	47.9	29.4
31.25	35.7	45.9	27.5
62.5	29.5	40.3	21.5
100.	25.1	35.1	17.4



PSELFEXT			
Freq	Worst Case	Average	Spec
1.	63.9	67.4	54.3
4.	52.1	55.6	42.4
8.	46.1	49.8	36.3
10.	44.1	47.9	34.4
16.	39.8	43.8	30.3
20.	38.1	41.9	28.4
25.	36.1	39.9	26.4
31.25	33.7	37.8	24.5
62.5	28.0	31.8	18.5
100.	24.9	28.4	14.4