



3933 US Route 11  
Cortland, New York 13045

Telephone: +1 (800) 345-3851  
Facsimile: +1 (607) 758-6637  
www.intertek.com

Project Number: 3193544

Date Issued: 2/12/2010

Certificate of Conformance Number: 9836069CRT-005

**Test Report Number: 3193544CRT-041g**



**Applicant:**

Nexans Inc.  
dba Berk-Tek  
132 White Oak Road  
New Holland, PA 17557

Applicant Contact: Mr. Joel Fasnacht

**Manufacturer:**

Nexans Inc.  
dba Berk-Tek  
132 White Oak Road  
New Holland, PA 17557USA

Mfg. Contact: Mr. Joel Fasnacht

Dear Mr. Joel Fasnacht;

Intertek is pleased to provide this letter report covering the testing of one (1) 4 Pair, 24 AWG, UTP, CMR, Non-Plenum Riser, Horizontal (solid) Cable, Part Number: LANmark 350 p/n 10032426. The sample was selected from your manufacturer facility, Nexans Inc. DBA Berk-Tek, by the Intertek Inspector Mr. Ronald Williams on 2/4/2010, for Quarter 1 2010 Quarterly Follow-up Testing.

The testing was performed at Intertek located in Cortland, NY on 2/12/2010, to the TIA 568-C.2, ISO 11801 Category 5e, and the Berk-Tek LanMark 350 specifications and did comply with the applicable requirements of the specifications.

We have appreciated this opportunity to be of service to you. If there are any questions regarding this letter or any other services offered by Intertek, Please do not hesitate to contact us.

Refer to Appendix A for test summary results

Sincerely,

Kathy Heath  
Program Coordinator  
Global Cabling Products Testing  
Phone: (607) 758-6641  
Email: kathy.heath@intertek.com

John Cash  
Technician  
Global Cabling Products Testing  
Phone: (607) 758-6677  
Email: john.cash@intertek.com

Antoine Pelletier  
Engineer  
Global Cabling Products Testing  
Phone: (607) 758-6718  
Email: antoine.pelletier@intertek.com



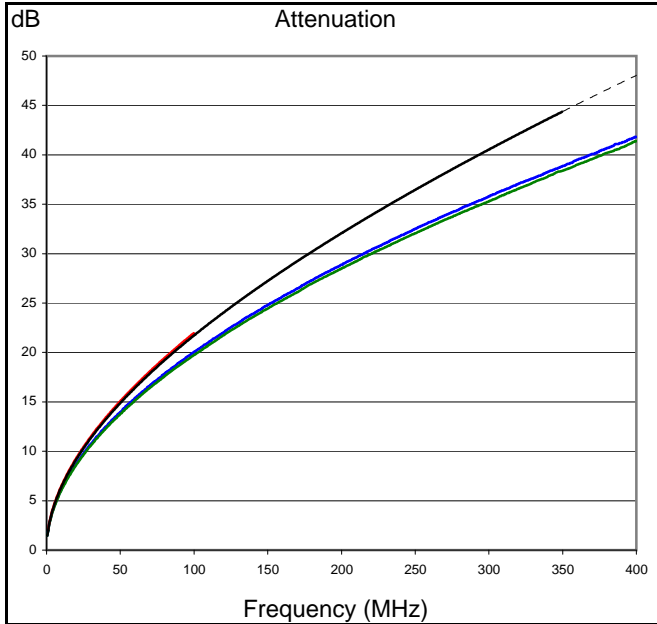
Appendix A

Test Results

**Summary**

**Client** Nexans, INC, DBA Berk-Tek  
**Specifications** Berk-Tek LANmark-350  
 ANSI/TIA-568-C.2, Category 5e  
 ISO/IEC 11801, Category 5e  
**Part number** 10032426  
**Description** **Berk-Tek LANmark-350 CMR**  
 4X24 UTP-CMR-Solid

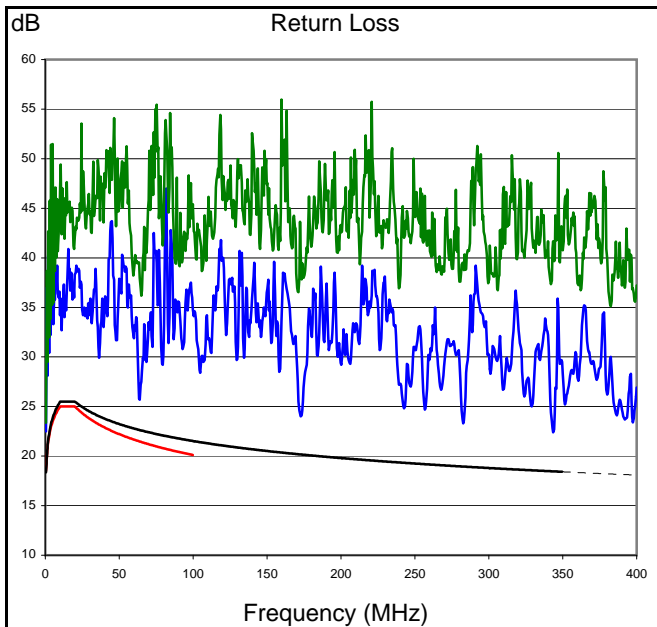
**Test Started** 2/12/2010 10:53  
**Technician** John Cash  
**Report No.** 3193544CRT-041g  
**Length (m)** 100  
**Temperature** 20 °C  
**Test Status** **PASS**



Attenuation					
Freq. MHz	Worst Case	Average	LANmark Spec	TIA Spec	ISO/IEC Spec
1	2.0	2.0	2.0	2.5	N/A
4	3.9	3.8	4.0	4.3	4.1
8	5.5	5.4	5.7	5.9	5.8
10	6.1	6.0	6.4	6.6	6.5
16	7.8	7.7	8.1	8.4	8.3
20	8.7	8.6	9.1	9.4	9.3
25	9.8	9.6	10.3	10.5	10.4
31.25	11.0	10.9	11.6	11.8	11.8
62.5	15.7	15.5	16.8	17.0	17.0
100	20.0	19.7	21.7	22.0	22.0
250	32.5	32.1	36.5		
350	38.9	38.4	44.4		
400	41.8	41.4			

Limit Margin (dB) :	0.02	0.38	0.16
Frequency (MHz) :	1.00	2.50	3.50



Return Loss					
Freq. MHz	Worst Case	Average	LANmark Spec	TIA Spec	ISO/IEC Spec
1	37.0	38.7	20.0	20.0	N/A
4	44.2	51.4	23.3	23.0	23.0
8	39.2	45.9	25.0	24.5	24.5
10	34.2	46.7	25.5	25.0	25.0
16	38.4	45.3	25.5	25.0	25.0
20	38.3	42.1	25.5	25.0	25.0
25	34.8	44.8	25.0	24.3	24.3
31.25	33.4	42.5	24.4	23.6	23.6
62.5	31.1	39.5	22.7	21.5	21.5
100	34.8	45.4	21.5	20.1	20.1
250	30.7	44.1	19.2		
350	28.3	40.8	18.4		
400	26.9	37.2			

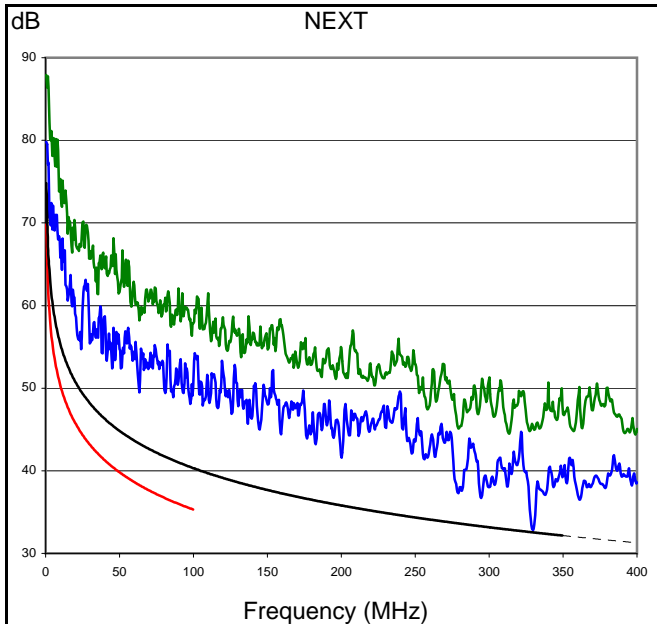
Limit Margin (dB) :	3.08	4.23	4.23
Frequency (MHz) :	63.92	63.92	63.92

Legend : Blue - Worst Case; Green - Average; Red - TIA and ISO/IEC Specifications; Black - LANmark Specification

Summary

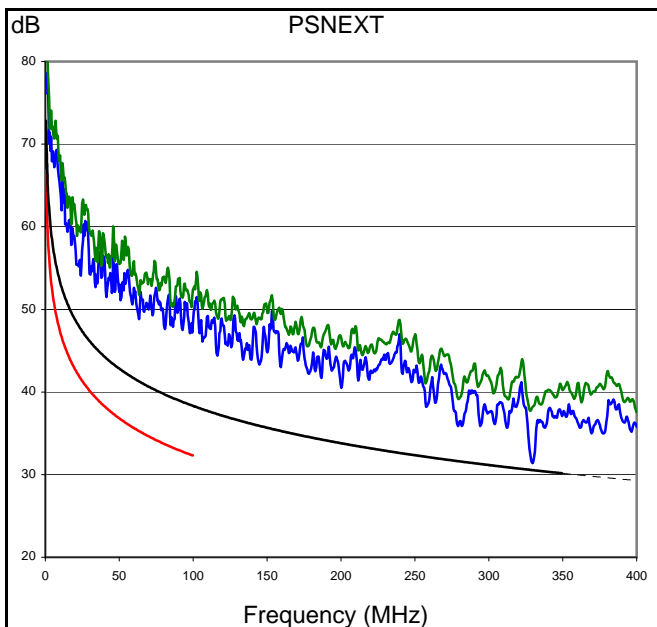
**Client** Nexans, INC, DBA Berk-Tek  
**Specifications** Berk-Tek LANmark-350  
 ANSI/TIA-568-C.2, Category 5e  
 ISO/IEC 11801, Category 5e  
**Part number** 10032426  
**Description** **Berk-Tek LANmark-350 CMR**  
 4X24 UTP-CMR-Solid

**Test Started** 2/12/2010 10:53  
**Technician** John Cash  
**Report No.** 3193544CRT-041g  
**Length (m)** 100  
**Temperature** 20 °C  
**Test Status** **PASS**



NEXT					
Freq. MHz	Worst Case	Average	LANmark Spec	TIA Spec	ISO/IEC Spec
1	79.5	86.4	70.3	65.3	N/A
4	72.4	81.1	61.3	56.3	56.3
8	69.0	80.1	56.8	51.8	51.8
10	65.8	75.3	55.3	50.3	50.3
16	61.8	69.9	52.3	47.2	47.2
20	59.0	69.5	50.8	45.8	45.8
25	59.3	70.1	49.4	44.3	44.3
31.25	55.8	66.3	47.8	42.8	42.8
62.5	51.7	60.3	43.4	38.4	38.4
100	50.1	57.8	40.3	35.3	35.3
250	43.6	52.9	34.3		
350	39.4	46.9	32.2		
400	38.6	45.1			

Limit Margin (dB) : 0.26 10.10 10.10  
 Frequency (MHz) : 329.59 23.97 23.97



PSNEXT					
Freq. MHz	Worst Case	Average	LANmark Spec	TIA Spec	ISO/IEC Spec
1	78.2	80.1	68.3	62.3	N/A
4	70.9	74.1	59.3	53.3	53.3
8	68.2	70.7	54.8	48.8	48.8
10	64.7	68.7	53.3	47.3	47.3
16	60.8	63.6	50.3	44.2	44.2
20	58.4	62.2	48.8	42.8	42.8
25	57.2	62.8	47.4	41.3	41.3
31.25	54.6	58.9	45.8	39.8	39.8
62.5	49.9	52.9	41.4	35.4	35.4
100	48.2	52.3	38.3	32.3	32.3
250	42.4	47.0	32.3		
350	37.3	40.2	30.2		
400	35.8	37.5			

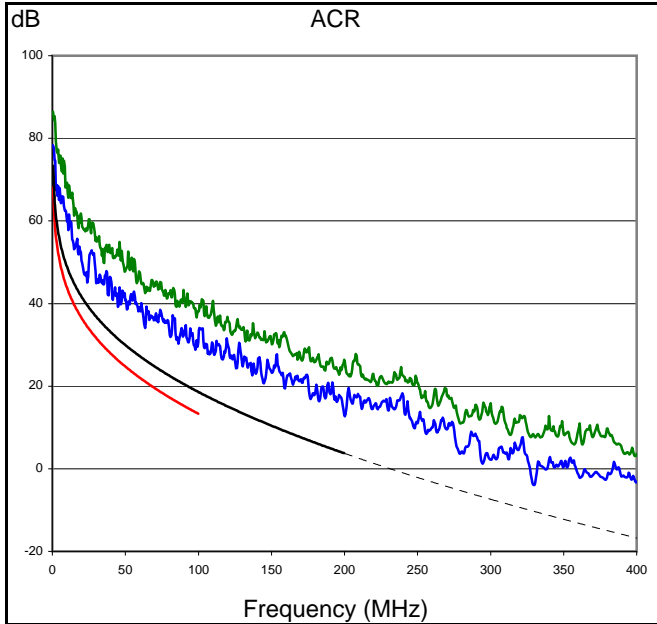
Limit Margin (dB) : 0.86 12.50 12.50  
 Frequency (MHz) : 329.59 23.97 23.97

Legend : Blue - Worst Case; Green - Average; Red - TIA and ISO/IEC Specifications; Black - LANmark Specification

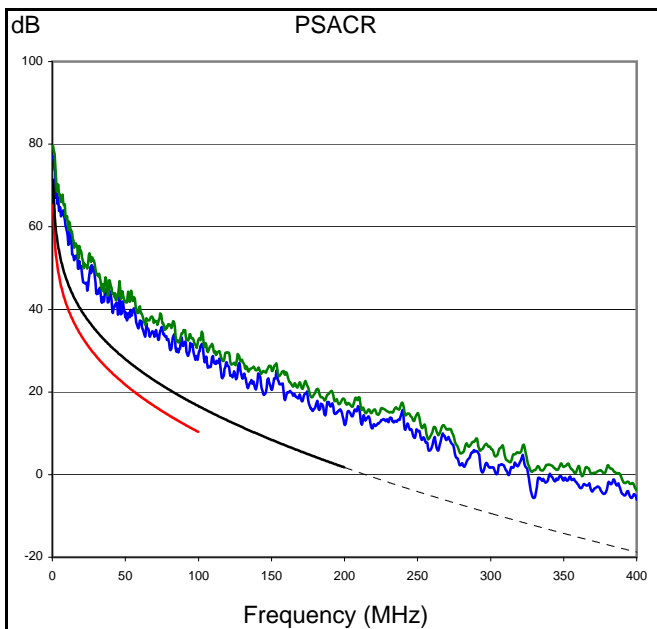
Summary

**Client** Nexans, INC, DBA Berk-Tek  
**Specifications** Berk-Tek LANmark-350  
 ANSI/TIA-568-C.2, Category 5e  
 ISO/IEC 11801, Category 5e  
**Part number** 10032426  
**Description** **Berk-Tek LANmark-350 CMR**  
 4X24 UTP-CMR-Solid

**Test Started** 2/12/2010 10:53  
**Technician** John Cash  
**Report No.** 3193544CRT-041g  
**Length (m)** 100  
**Temperature** 20 °C  
**Test Status** **PASS**



ACR					
Freq. MHz	Worst Case	Average	LANmark Spec	TIA Spec	ISO/IEC Spec
1	77.5	84.5	68.3	62.8	N/A
4	68.5	77.3	57.3	52.0	52.2
8	63.7	74.6	51.1	45.8	46.0
10	59.9	69.3	48.9	43.7	43.8
16	54.0	62.2	44.1	38.9	39.0
20	50.4	60.8	41.7	36.4	36.5
25	49.6	60.4	39.1	33.8	33.9
31.25	45.0	55.4	36.2	31.0	31.1
62.5	36.4	44.8	26.6	21.3	21.4
100	30.6	38.0	18.6	13.3	13.3
250	11.1	20.7			
350	0.5	8.4			
400	-3.2	3.6			
Limit Margin (dB) : 5.55 10.78 10.70					
Frequency (MHz) : 23.97 23.97 23.97					



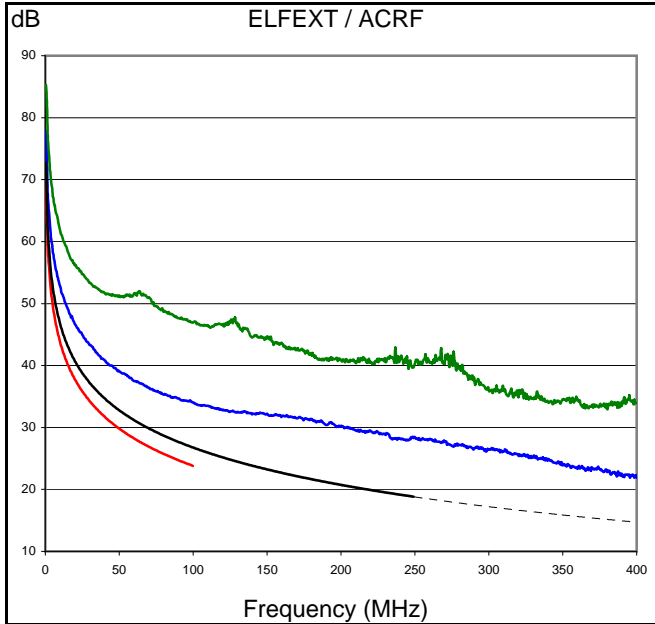
PSACR					
Freq. MHz	Worst Case	Average	LANmark Spec	TIA Spec	ISO/IEC Spec
1	76.2	78.1	66.3	59.8	N/A
4	67.1	70.2	55.3	49.0	49.2
8	62.9	65.3	49.1	42.8	43.0
10	58.7	62.6	46.9	40.7	40.8
16	53.0	56.0	42.1	35.9	36.0
20	49.8	53.6	39.7	33.4	33.5
25	47.4	53.1	37.1	30.8	30.9
31.25	43.8	48.1	34.2	28.0	28.1
62.5	34.6	37.5	24.6	18.3	18.4
100	28.7	32.6	16.6	10.3	10.3
250	10.5	14.9			
350	-1.4	1.8			
400	-6.1	-3.8			
Limit Margin (dB) : 6.95 13.18 13.10					
Frequency (MHz) : 23.97 23.97 23.97					

Legend : Blue - Worst Case; Green - Average; Red - TIA and ISO/IEC Specifications; Black - LANmark Specification

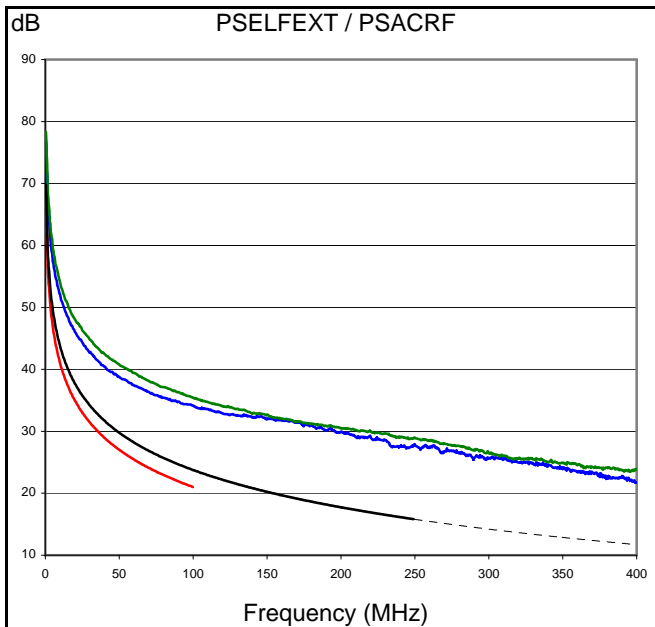
Summary

**Client** Nexans, INC, DBA Berk-Tek  
**Specifications** Berk-Tek LANmark-350  
 ANSI/TIA-568-C.2, Category 5e  
 ISO/IEC 11801, Category 5e  
**Part number** 10032426  
**Description** **Berk-Tek LANmark-350 CMR**  
 4X24 UTP-CMR-Solid

**Test Started** 2/12/2010 10:53  
**Technician** John Cash  
**Report No.** 3193544CRT-041g  
**Length (m)** 100  
**Temperature** 20 °C  
**Test Status** **PASS**



ELFEXT / ACRF					
Freq. MHz	Worst Case	Average	LANmark Spec	TIA Spec	ISO/IEC Spec
1	73.3	82.4	66.8	63.8	N/A
4	60.5	69.8	54.7	51.8	46.0
8	54.5	64.1	48.7	45.7	39.9
10	52.8	61.8	46.8	43.8	38.0
16	48.6	57.9	42.7	39.7	33.9
20	46.7	56.2	40.7	37.8	32.0
25	45.0	54.7	38.8	35.9	30.1
31.25	43.1	53.1	36.8	33.8	28.0
62.5	37.4	51.7	30.8	27.9	22.1
100	34.0	46.9	26.8	23.8	18.0
250	28.4	40.5	18.8		
350	23.9	34.6			
400	21.9	34.0			
Limit Margin (dB) :			5.46	8.41	14.47
Frequency (MHz) :			1.50	1.50	4.99



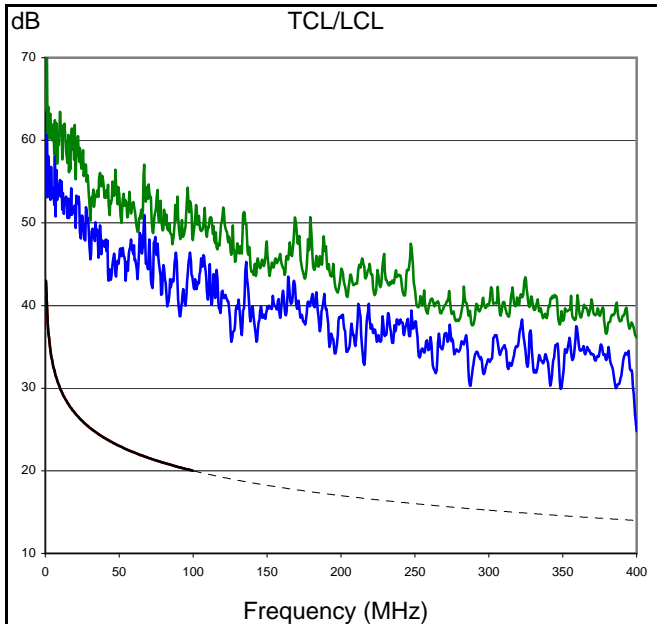
PSELFEXT / PSACRF					
Freq. MHz	Worst Case	Average	LANmark Spec	TIA Spec	ISO/IEC Spec
1	71.9	74.0	63.8	60.8	N/A
4	59.7	62.0	51.7	48.8	49.0
8	53.7	56.1	45.7	42.7	42.9
10	52.1	54.1	43.8	40.8	41.0
16	47.9	49.8	39.7	36.7	36.9
20	46.1	48.1	37.7	34.8	35.0
25	44.4	46.4	35.8	32.9	33.1
31.25	42.5	44.5	33.8	30.8	31.0
62.5	37.2	39.1	27.8	24.9	25.1
100	34.1	35.4	23.8	20.8	21.0
250	27.7	28.9	15.8		
350	23.9	24.9			
400	21.7	24.0			
Limit Margin (dB) :			7.76	10.71	10.57
Frequency (MHz) :			1.50	1.50	4.99

Legend : Blue - Worst Case; Green - Average; Red - TIA and ISO/IEC Specifications; Black - LANmark Specification

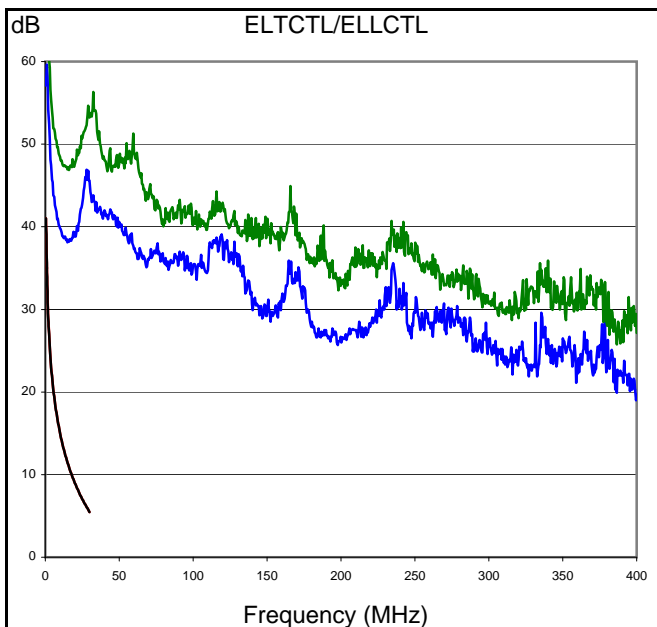
Summary

**Client** Nexans, INC, DBA Berk-Tek  
**Specifications** Berk-Tek LANmark-350  
 ANSI/TIA-568-C.2, Category 5e  
 ISO/IEC 11801, Category 5e  
**Part number** 10032426  
**Description** **Berk-Tek LANmark-350 CMR**  
 4X24 UTP-CMR-Solid

**Test Started** 2/12/2010 10:53  
**Technician** John Cash  
**Report No.** 3193544CRT-041g  
**Length (m)** 100  
**Temperature** 20 °C  
**Test Status** **PASS**



TCL/LCL					
Freq. MHz	Worst Case	Average	LANmark Spec	TIA Spec	ISO/IEC Spec
1	63.8	71.1	40.0	N/A	40.0
4	56.8	60.9	34.0	N/A	34.0
8	52.8	57.2	31.0	N/A	31.0
10	55.2	63.5	30.0	N/A	30.0
16	50.6	56.1	28.0	N/A	28.0
20	52.1	61.9	27.0	N/A	27.0
25	50.9	56.7	26.0	N/A	26.0
31.25	49.0	53.1	25.0	N/A	25.0
62.5	43.2	48.9	22.0	N/A	22.0
100	43.0	47.9	20.0	N/A	20.0
250	38.1	41.7			
350	31.3	38.2			
400	24.8	36.1			
Limit Margin (dB) :			14.86	N/A	14.86
Frequency (MHz) :			1.50	N/A	1.50



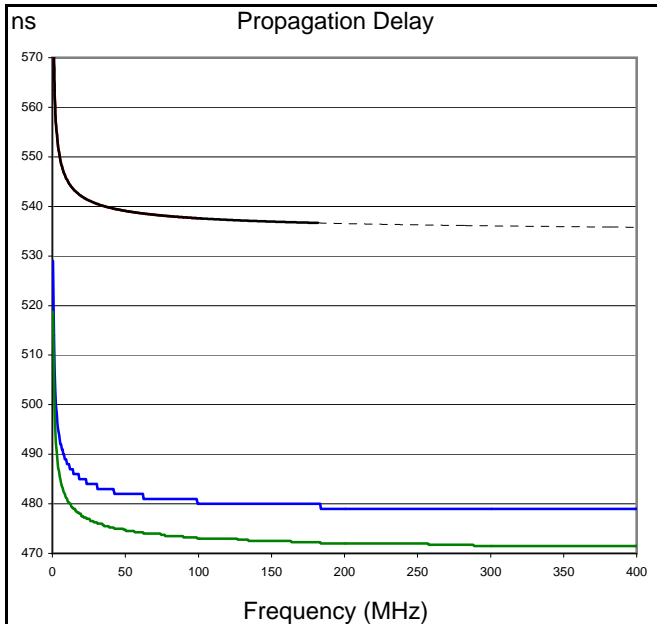
ELTCTL/ELLCTL					
Freq. MHz	Worst Case	Average	LANmark Spec	TIA Spec	ISO/IEC Spec
1	59.6	66.9	35.0	N/A	35.0
4	47.5	55.4	23.0	N/A	23.0
8	40.9	49.6	16.9	N/A	16.9
10	39.8	48.5	15.0	N/A	15.0
16	38.2	46.9	10.9	N/A	10.9
20	39.3	47.6	9.0	N/A	9.0
25	42.7	50.7	7.1	N/A	7.1
31.25	43.0	53.4			
62.5	36.1	48.3			
100	35.1	40.2			
250	29.6	38.1			
350	26.5	30.6			
400	19.7	27.1			
Limit Margin (dB) :			23.60	N/A	23.60
Frequency (MHz) :			5.49	N/A	5.49

Legend : Blue - Worst Case; Green - Average; Red - TIA and ISO/IEC Specifications; Black - LANmark Specification

**Summary**

**Client** Nexans, INC, DBA Berk-Tek  
**Specifications** Berk-Tek LANmark-350  
 ANSI/TIA-568-C.2, Category 5e  
 ISO/IEC 11801, Category 5e  
**Part number** 10032426  
**Description** **Berk-Tek LANmark-350 CMR**  
 4X24 UTP-CMR-Solid

**Test Started** 2/12/2010 10:53  
**Technician** John Cash  
**Report No.** 3193544CRT-041g  
**Length (m)** 100  
**Temperature** 20 °C  
**Test Status** **PASS**



Propagation Delay					
Freq. MHz	Worst Case	Average	LANmark Spec	TIA Spec	ISO/IEC Spec
1	514.0	506.3	570.0	570.0	N/A
4	495.0	487.3	552.0	552.0	552.0
8	490.0	482.3	546.7	546.7	546.7
10	488.0	481.0	545.4	545.4	545.4
16	486.0	478.5	543.0	543.0	543.0
20	485.0	477.5	542.1	542.1	542.1
25	484.0	477.0	541.2	541.2	541.2
31.25	483.0	476.0	540.4	540.4	540.4
62.5	481.0	474.0	538.6	538.6	538.6
100	480.0	473.0	537.6	537.6	537.6
250	479.0	472.0			
350	479.0	471.5			
400	479.0	471.5			
Limit Margin (dB) :			56.01	56.01	56.49
Frequency (MHz) :			1.00	1.00	17.98

Delay Skew				
Freq. MHz	Worst case	LANmark Spec	TIA Spec	ISO/IEC Spec
1-100	14.50	25	45	45

Low frequency measurements								
Parameter	Worst Case	Average	LANmark		TIA		ISO/IEC	
			Spec	Margin	Spec	Margin	Spec	Margin
Mutual capacitance (nF/100m)	4.66	3.45	5.60	0.94	5.60	0.94	N/A	N/A
Maximum Capacitance Unbalance Pair-to-Ground (pF/100m)	58.90	17.80	160.00	101.10	330.00	271.10	160.00	101.10
Conductor DC resistance (Ω)	8.72	6.46	9.38	0.66	9.38	0.66	9.50	0.78
DC Resistance Unbalance within a pair (%) using IEC calculation method	0.31%	0.13%	2.00%	1.70%	2.50%	2.20%	2.00%	1.70%
DC Resistance Unbalance between pairs (%)	1.05%	0.52%	4.00%	2.95%	N/A	N/A	4.00%	2.95%

Legend : Blue - Worst Case; Green - Average; Red - TIA and ISO/IEC Specifications; Black - LANmark Specification