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Project Number: G100283649  
Certificate of Conformance Number: 2034143CRT-003

Date Issued: 2/17/2012

**Test Report Number: G100283649CRT-013g**



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, 23 AWG, UTP, CMR, Non-Plenum Riser, Horizontal (solid) Cable, Part Number: P/N 10167477 LANmark 2000. The sample was selected from your manufacturer facility, Nexans Inc. DBA Berk-Tek, by the Intertek Inspector Mr. Ronald Williams on 1/27/2012, for Quarter 1 2012 Quarterly Follow-up Testing.

The testing was performed at Intertek located in Cortland, NY on 2/13/2012, to the ANSI/TIA-568-C.2, LANmark-2000, and ISO/IEC 11801 Category 6 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*  
Kathy Heath  
Program Coordinator  
Global Cabling Products Testing  
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*John Cash*  
John Cash  
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Antoine Pelletier  
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Global Cabling Products Testing  
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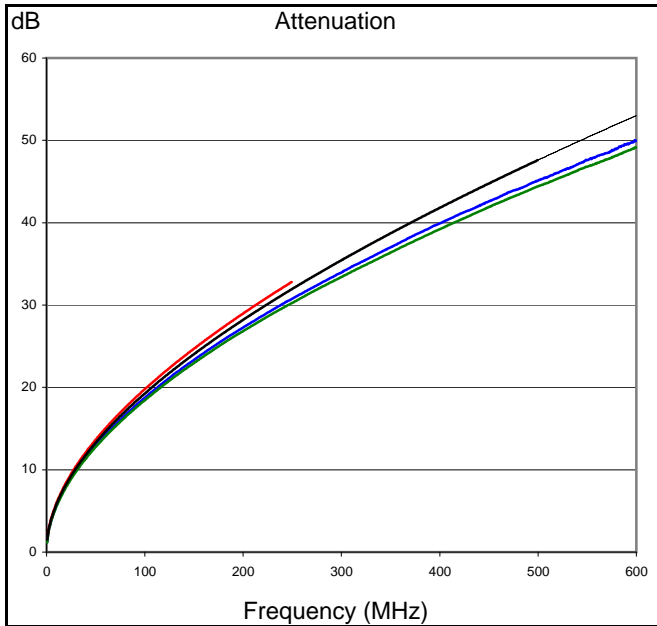
Appendix A

Test Results

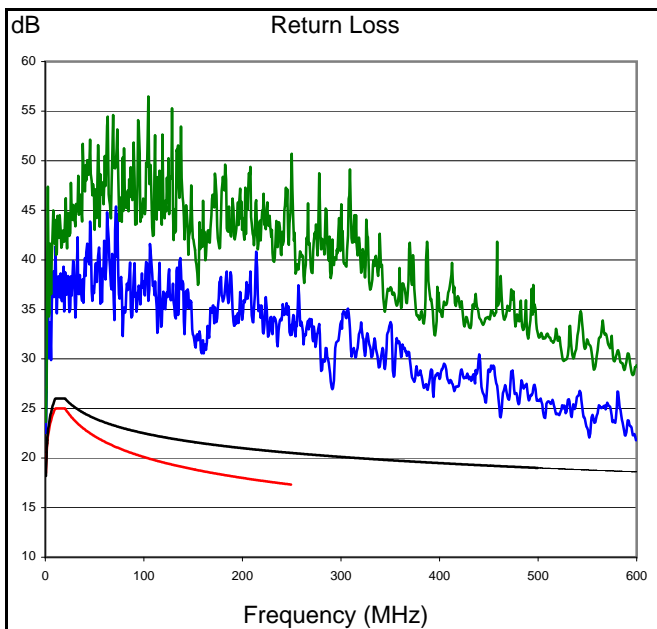
Summary

**Client** Nexans Inc., DBA Berk-Tek  
**Specifications** Berk-Tek LANmark-2000  
 ANSI/TIA-568-C.2 Category 6  
 ISO/IEC 11801, Category 6  
**Part Number** LANmark 2000 10167477  
**Description** **Berk-Tek LANmark-2000 CMR**  
 4X23 UTP-CMR-Solid

**Test Started** 2/13/2012 14:41  
**Technician** John Cash  
**Report No.** 100283649CRT-013g  
**Length (m)** 100  
**Temperature** 23 °C  
**Test Status** **PASS**



Attenuation					
Freq. MHz	Worst Case	Average	LANmark Spec	TIA Spec	ISO/IEC Spec
1	2.0	1.9	2.0	2.0	N/A
4	3.6	3.6	3.7	3.8	3.8
8	5.0	4.9	5.2	5.3	5.4
10	5.7	5.6	5.8	6.0	6.0
16	7.2	7.1	7.4	7.6	7.6
20	8.0	7.9	8.2	8.5	8.5
25	9.1	8.9	9.3	9.5	9.6
31.25	10.1	10.0	10.4	10.7	10.7
62.5	14.6	14.4	15.0	15.4	15.5
100	18.8	18.5	19.3	19.8	19.9
250	30.7	30.2	32.0	32.8	33.0
350	37.0	36.4	38.7		
500	45.1	44.4	47.6		
600	49.9	49.1			
Limit Margin (dB) :			0.17	0.26	0.32
Frequency (MHz) :			5.00	2.75	5.00



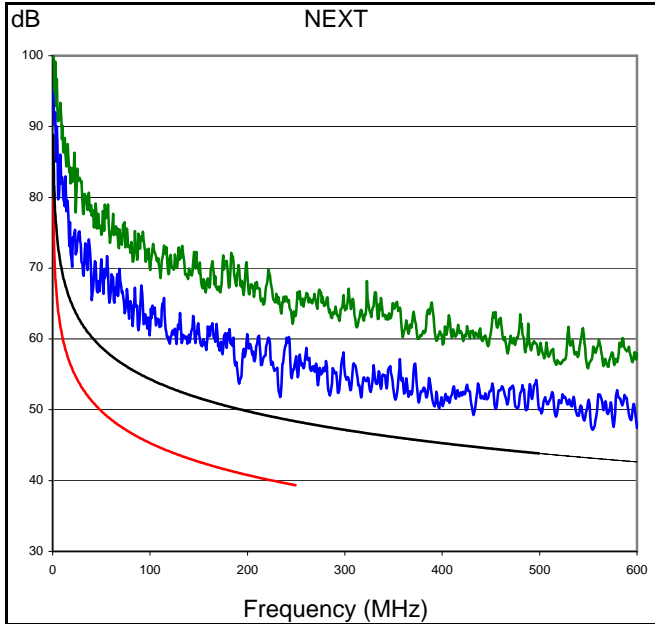
Return Loss					
Freq. MHz	Worst Case	Average	LANmark Spec	TIA Spec	ISO/IEC Spec
1	26.7	27.1	20.0	20.0	N/A
4	33.3	34.6	23.6	23.0	23.0
8	38.8	45.0	25.4	24.5	24.5
10	41.3	44.0	26.0	25.0	25.0
16	36.2	41.2	26.0	25.0	25.0
20	38.8	44.4	26.0	25.0	25.0
25	35.0	42.7	25.5	24.3	24.3
31.25	35.6	45.6	25.0	23.6	23.6
62.5	44.8	53.5	23.5	21.5	21.5
100	37.5	45.2	22.5	20.1	20.1
250	33.4	47.3	20.5	17.3	17.3
350	33.5	37.1	19.8		
500	25.8	32.3	19.0		
600	21.9	29.4			
Limit Margin (dB) :			4.92	6.07	6.07
Frequency (MHz) :			462.12	5.75	5.75

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

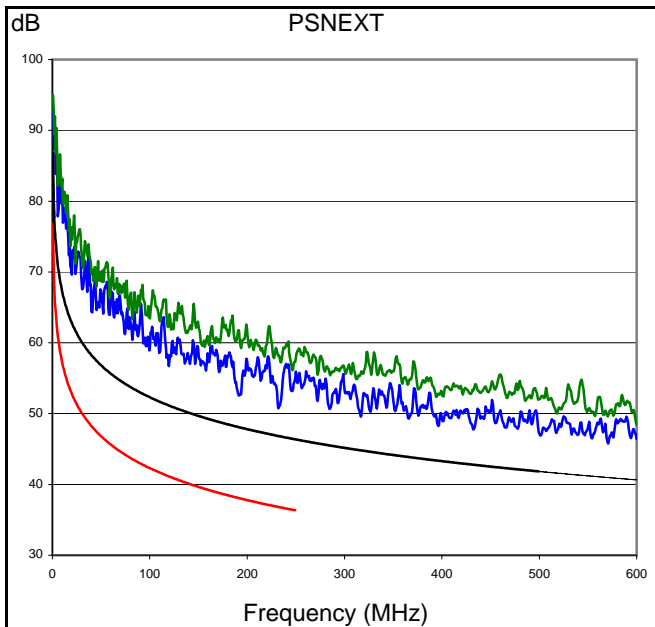
Summary

**Client** Nexans Inc., DBA Berk-Tek  
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 ANSI/TIA-568-C.2 Category 6  
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**Length (m)** 100  
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**Test Status** **PASS**



NEXT					
Freq. MHz	Worst Case	Average	LANmark Spec	TIA Spec	ISO/IEC Spec
1	91.8	98.9	84.3	74.3	N/A
4	90.0	96.7	75.3	65.3	66.3
8	86.0	93.3	70.8	60.8	61.8
10	82.4	90.1	69.3	59.3	60.3
16	77.4	85.7	66.3	56.2	57.2
20	70.2	82.2	64.8	54.8	55.8
25	73.8	84.0	63.3	53.3	54.3
31.25	69.1	77.7	61.9	51.9	52.9
62.5	65.4	74.7	57.4	47.4	48.4
100	61.9	69.7	54.3	44.3	45.3
250	57.1	63.2	48.3	38.3	39.3
350	53.1	65.1	46.2		
500	49.9	58.6	43.8		
600	47.4	58.0			
Limit Margin (dB) :			3.00	13.02	12.02
Frequency (MHz) :			233.56	233.56	233.56



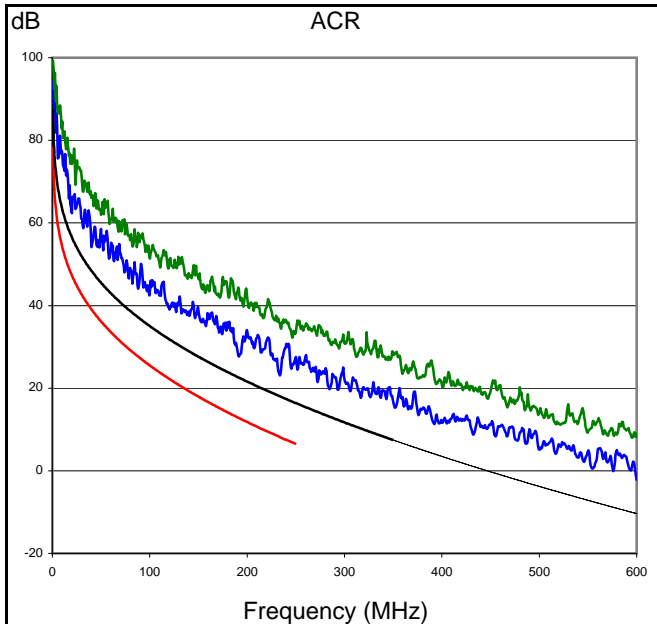
PSNEXT					
Freq. MHz	Worst Case	Average	LANmark Spec	TIA Spec	ISO/IEC Spec
1	90.8	93.0	82.3	72.3	N/A
4	88.0	90.3	73.3	63.3	63.3
8	84.1	86.6	68.8	58.8	58.8
10	81.5	83.2	67.3	57.3	57.3
16	75.4	78.7	64.3	54.2	54.2
20	69.6	74.6	62.8	52.8	52.8
25	71.6	74.2	61.3	51.3	51.3
31.25	67.7	70.6	59.9	49.9	49.9
62.5	64.1	68.0	55.4	45.4	45.4
100	59.6	63.4	52.3	42.3	42.3
250	55.0	57.3	46.3	36.3	36.3
350	52.4	56.0	44.2		
500	47.1	52.0	41.8		
600	46.4	48.4			
Limit Margin (dB) :			3.93	13.95	13.95
Frequency (MHz) :			232.06	232.06	232.06

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

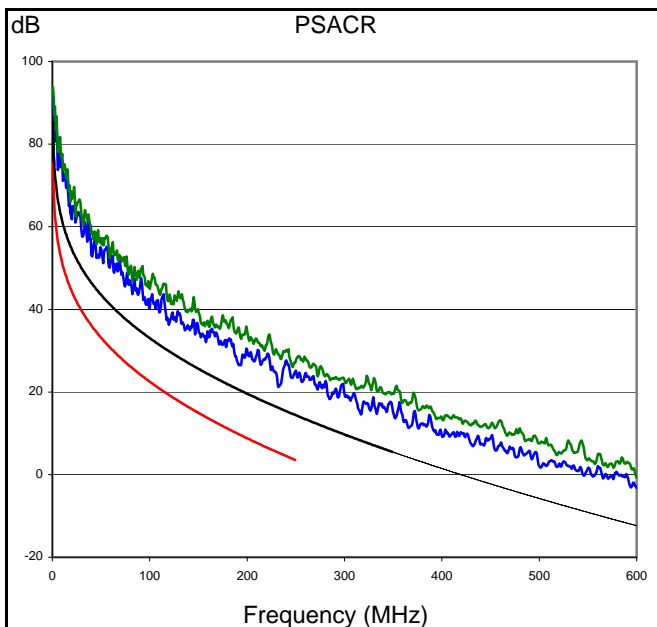
Summary

**Client** Nexans Inc., DBA Berk-Tek  
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 ANSI/TIA-568-C.2 Category 6  
 ISO/IEC 11801, Category 6  
**Part Number** LANmark 2000 10167477  
**Description** **Berk-Tek LANmark-2000 CMR**  
 4X23 UTP-CMR-Solid

**Test Started** 2/13/2012 14:41  
**Technician** John Cash  
**Report No.** 100283649CRT-013g  
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**Temperature** 23 °C  
**Test Status** **PASS**



ACR					
Freq. MHz	Worst Case	Average	LANmark Spec	TIA Spec	ISO/IEC Spec
1	89.9	97.0	82.3	72.3	N/A
4	86.4	93.2	71.6	61.5	62.4
8	81.1	88.4	65.6	55.4	56.4
10	76.8	84.6	63.5	53.3	54.3
16	70.4	78.6	58.9	48.7	49.6
20	62.3	74.3	56.6	46.3	47.3
25	64.8	75.1	54.1	43.8	44.8
31.25	59.2	67.7	51.5	41.2	42.1
62.5	51.1	60.3	42.4	32.0	32.9
100	43.7	51.3	35.0	24.5	25.4
250	27.1	33.1	16.4	5.5	6.3
350	17.1	28.9	7.4		
500	5.1	14.4			
600	-2.2	9.1			
Limit Margin (dB) :			5.06	15.84	14.99
Frequency (MHz) :			233.56	191.59	191.59



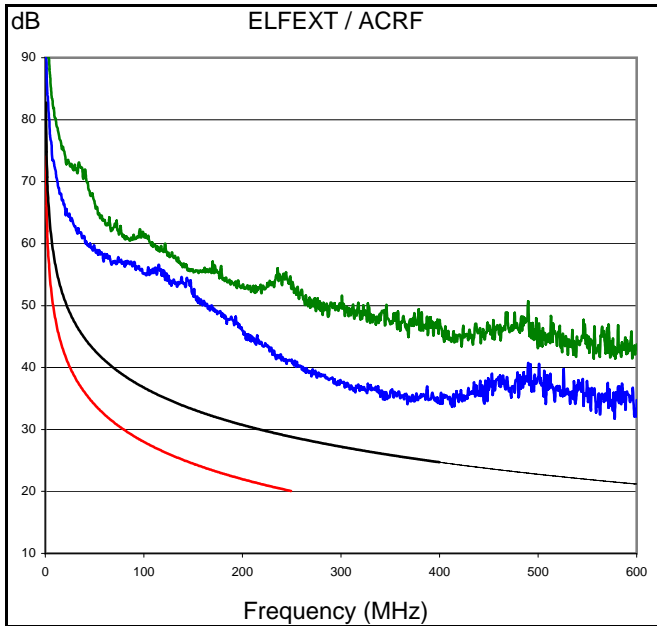
PSACR					
Freq. MHz	Worst Case	Average	LANmark Spec	TIA Spec	ISO/IEC Spec
1	88.9	91.1	80.3	70.3	N/A
4	84.4	86.8	69.6	59.5	59.4
8	79.1	81.7	63.6	53.4	53.4
10	75.9	77.6	61.5	51.3	51.3
16	68.4	71.5	56.9	46.7	46.6
20	61.8	66.7	54.6	44.3	44.3
25	62.8	65.3	52.1	41.8	41.8
31.25	57.6	60.6	49.5	39.2	39.1
62.5	49.5	53.6	40.4	30.0	29.9
100	40.8	45.0	33.0	22.5	22.4
250	24.9	27.1	14.4	3.5	3.3
350	15.4	19.6	5.4		
500	1.9	7.6			
600	-3.2	-0.7			
Limit Margin (dB) :			5.01	15.87	16.03
Frequency (MHz) :			232.06	232.06	232.06

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

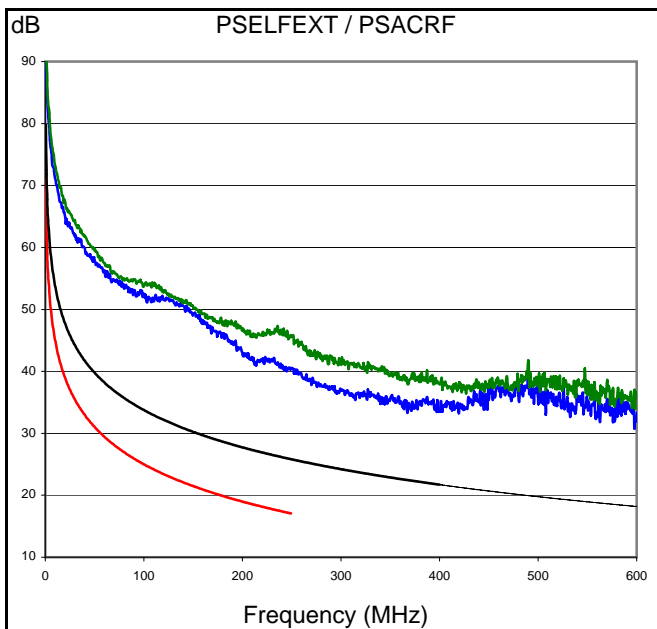
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**Test Status** **PASS**



ELFEXT / ACRF					
Freq. MHz	Worst Case	Average	LANmark Spec	TIA Spec	ISO/IEC Spec
1	88.3	97.4	76.8	67.8	N/A
4	79.4	88.1	64.7	55.8	56.0
8	73.5	81.9	58.7	49.7	49.9
10	71.8	80.2	56.8	47.8	48.0
16	67.9	76.0	52.7	43.7	43.9
20	65.7	74.2	50.7	41.8	42.0
25	64.1	72.4	48.8	39.8	40.0
31.25	62.2	72.1	46.9	37.9	38.1
62.5	58.2	62.9	40.8	31.9	32.1
100	55.1	61.0	36.8	27.8	28.0
250	41.1	53.0	28.8	19.8	20.0
350	35.4	47.3	25.9		
500	38.3	45.3			
600	34.7	43.7			
Limit Margin (dB) :			8.63	20.62	20.42
Frequency (MHz) :			367.69	244.80	244.80



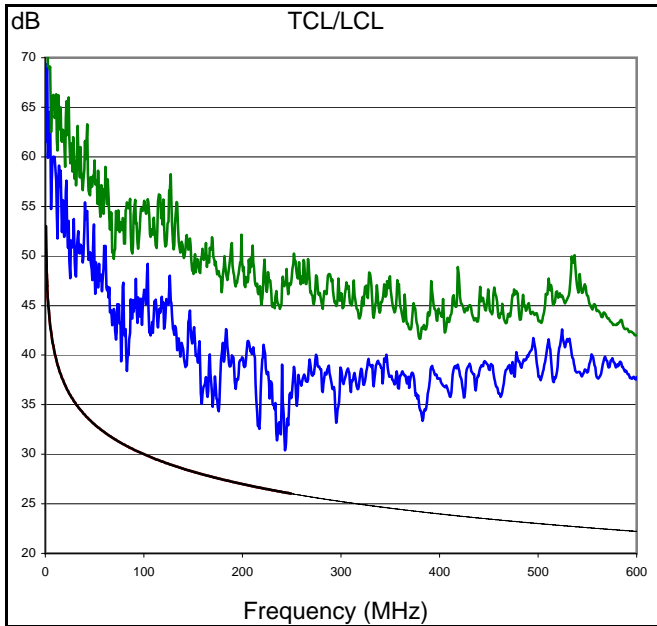
PSELFEXT / PSACRF					
Freq. MHz	Worst Case	Average	LANmark Spec	TIA Spec	ISO/IEC Spec
1	86.4	90.5	73.8	64.8	N/A
4	78.8	81.5	61.7	52.8	53.0
8	72.9	75.2	55.7	46.7	46.9
10	70.9	73.0	53.8	44.8	45.0
16	67.1	69.4	49.7	40.7	40.9
20	64.9	67.3	47.7	38.8	39.0
25	63.3	65.5	45.8	36.8	37.0
31.25	61.3	63.6	43.9	34.9	35.1
62.5	56.2	56.9	37.8	28.9	29.1
100	52.5	53.9	33.8	24.8	25.0
250	40.4	45.6	25.8	16.8	17.0
350	35.3	39.6	22.9		
500	34.8	37.6			
600	33.3	36.1			
Limit Margin (dB) :			10.86	22.71	22.51
Frequency (MHz) :			367.69	214.07	214.07

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

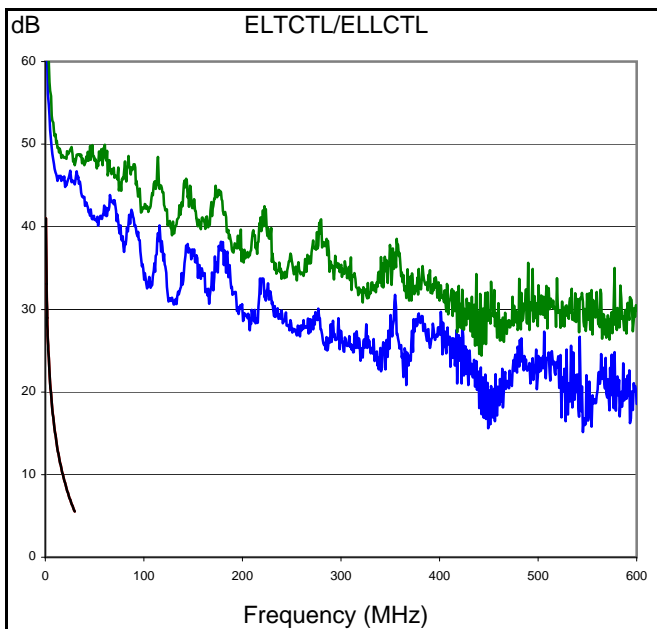
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**Temperature** 23 °C  
**Test Status** **PASS**



TCL/LCL					
Freq. MHz	Worst Case	Average	LANmark Spec	TIA Spec	ISO/IEC Spec
1	67.8	74.8	50.0	40.0	50.0
4	64.0	68.8	44.0	40.0	44.0
8	60.0	66.2	41.0	40.0	41.0
10	58.6	64.4	40.0	40.0	40.0
16	55.4	61.7	38.0	38.0	38.0
20	52.9	59.0	37.0	37.0	37.0
25	47.7	59.4	36.0	36.0	36.0
31.25	47.9	57.1	35.1	35.1	35.1
62.5	46.5	55.2	32.0	32.0	32.0
100	46.6	55.6	30.0	30.0	30.0
250	35.7	47.2	26.0	26.0	26.0
350	37.9	48.0			
500	37.8	43.4			
600	37.8	42.0			
Limit Margin (dB) :			4.25	4.25	4.25
Frequency (MHz) :			243.30	243.30	243.30



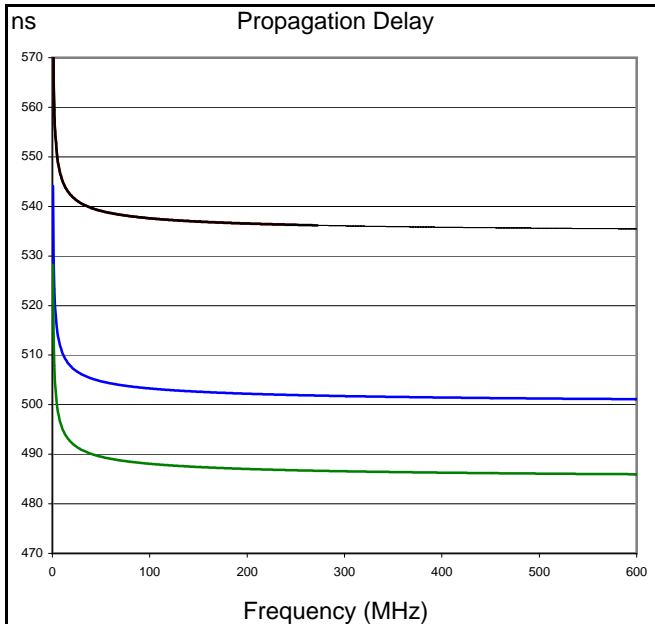
ELTCTL/ELLCTL					
Freq. MHz	Worst Case	Average	LANmark Spec	TIA Spec	ISO/IEC Spec
1	64.0	68.0	35.0	35.0	35.0
4	53.5	57.5	23.0	23.0	23.0
8	48.1	52.6	16.9	16.9	16.9
10	46.6	51.2	15.0	15.0	15.0
16	45.6	48.3	10.9	10.9	10.9
20	44.8	48.3	9.0	9.0	9.0
25	46.8	49.3	7.0	7.0	7.0
31.25	46.2	48.2			
62.5	41.3	49.2			
100	33.6	42.2			
250	28.3	36.6			
350	27.0	37.8			
500	24.4	32.9			
600	18.5	29.8			
Limit Margin (dB) :			29.86	29.86	29.86
Frequency (MHz) :			2.75	2.75	2.75

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

**Summary**

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**Test Status** **PASS**



Propagation Delay						
Freq. MHz	Worst Case	Average	LANmark Spec	TIA Spec	ISO/IEC Spec	
1	529.1	513.6	570.0	570.0	N/A	
4	516.2	500.8	552.0	552.0	552.0	
8	511.9	496.6	546.7	546.7	546.7	
10	510.5	495.2	545.4	545.4	545.4	
16	508.4	493.1	543.0	543.0	543.0	
20	507.5	492.3	542.0	542.0	542.0	
25	506.7	491.5	541.2	541.2	541.2	
31.25	506.0	490.8	540.4	540.4	540.4	
62.5	504.2	489.0	538.6	538.6	538.6	
100	503.3	488.1	537.6	537.6	537.6	
250	501.9	486.8	536.3	536.3	536.3	
350	501.6	486.4	535.9			
500	501.3	486.1	535.6			
600	501.1	486.0				
Limit Margin (dB) :			34.31	34.31	34.31	
Frequency (MHz) :			127.14	127.14	127.14	

Delay Skew				
Freq. MHz	Worst case	LANmark Spec	TIA Spec	ISO/IEC Spec
1-250	28.53	35	45	45

Low frequency measurements								
Parameter	Worst Case	Average	LANmark		TIA		ISO/IEC	
			Spec	Margin	Spec	Margin	Spec	Margin
Mutual capacitance (nF/100m)	4.86	4.69	5.60	0.74	5.60	0.74	N/A	N/A
Maximum Capacitance Unbalance Pair-to-Ground (pF/100m)	15.82	8.84	160.00	144.19	330.00	314.19	160.00	144.19
Conductor DC resistance (Ω)	7.41	7.36	9.38	1.97	9.38	1.97	9.50	2.09
DC Resistance Unbalance within a pair (%) using IEC calculation method	0.65%	0.17%	1.50%	0.85%	2.50%	1.85%	2.00%	1.35%
DC Resistance Unbalance between pairs (%)	0.87%	0.50%	4.00%	3.13%	N/A	N/A	4.00%	3.13%

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