



3933 US Route 11
Cortland, New York 13045

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

Project Number: G10028364
Certificate of Conformance Number: 2034143CRT-003

Date Issued: 5/29/2015

Test Report Number: G100283649CRT-039h



Applicant:
Berk-Tek LLC
132 White Oak Rd.
New Holland, PA 17557
Applicant Contact: Mr. Darren Scott

Manufacturer:
Berk-Tek LLC
132 White Oak Rd.
New Holland, PA 17557
Mfg. Contact: Mr. Darren Scott

Dear Mr. Darren Scott;

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: 10170687. The sample was selected from your manufacturer facility, Berk-Tek LLC, by the Intertek Inspector Mr. Joseph Wade on 3/24/2015, for Quarter 1 2015 Quarterly Follow-up Testing.

The testing was performed at Intertek located in Cortland, NY on 5/5/2015, to the TIA-568-C.2; ISO/IEC 11801 and LANmark-2000 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,

Antoine Pelletier
Engineer
Global Cabling Products Testing
Phone: (607) 758-6718

John Cash
Technician
Global Cabling Products Testing
Phone: (607) 758-6677

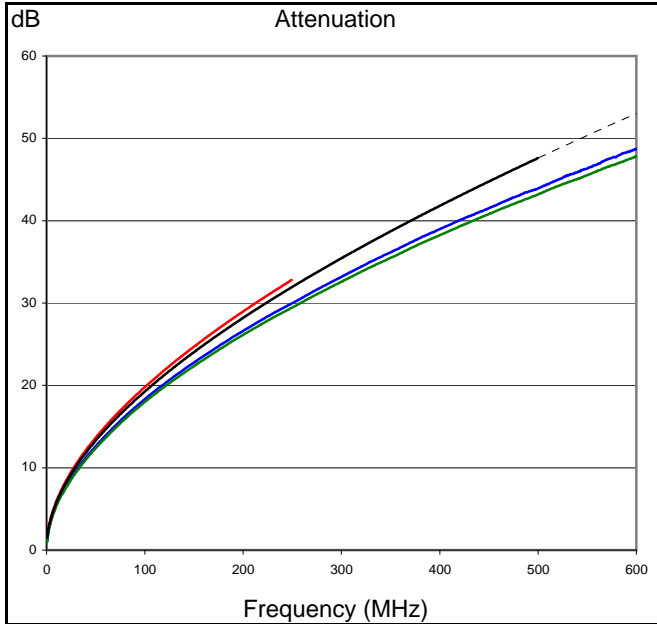


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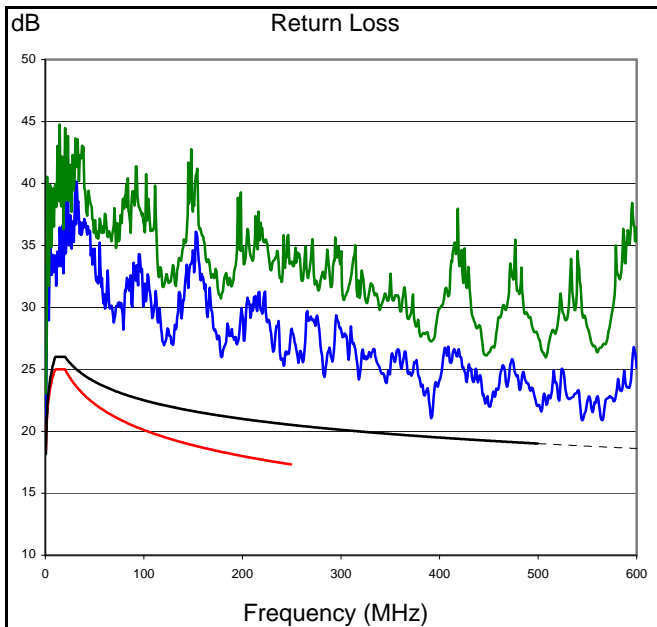
Summary

Client Berk-Tek LLC
Specifications Berk-Tek LANmark-2000
 ANSI/TIA-568-C.2 Category 6
 ISO/IEC 11801, Category 6
Part Number 10170687
Description **Berk-Tek LANmark-2000 CMR**
 4X23 UTP-CMR-Solid

Test Started 5/5/2015 8:52
Technician John Cash
Report No. 100283649CRT-039h
Length (m) 100
Temperature 22 °C
Test Status **PASS**



Attenuation					
Freq. MHz	Worst Case	Average	LANmark Spec	TIA Spec	ISO/IEC Spec
1	1.8	1.7	2.0	2.0	N/A
4	3.5	3.4	3.7	3.8	3.8
8	4.9	4.8	5.2	5.3	5.4
10	5.6	5.4	5.8	6.0	6.0
16	7.0	6.8	7.4	7.6	7.6
20	7.8	7.6	8.2	8.5	8.5
25	8.8	8.6	9.3	9.5	9.6
31.25	9.9	9.6	10.4	10.7	10.7
62.5	14.2	14.0	15.0	15.4	15.5
100	18.4	18.0	19.3	19.8	19.9
250	30.0	29.4	32.0	32.8	33.0
350	36.2	35.5	38.7		
500	43.9	43.2	47.6		
600	48.7	47.8			
Limit Margin (dB) :			0.28	0.39	0.44
Frequency (MHz) :			7.24	4.25	5.00



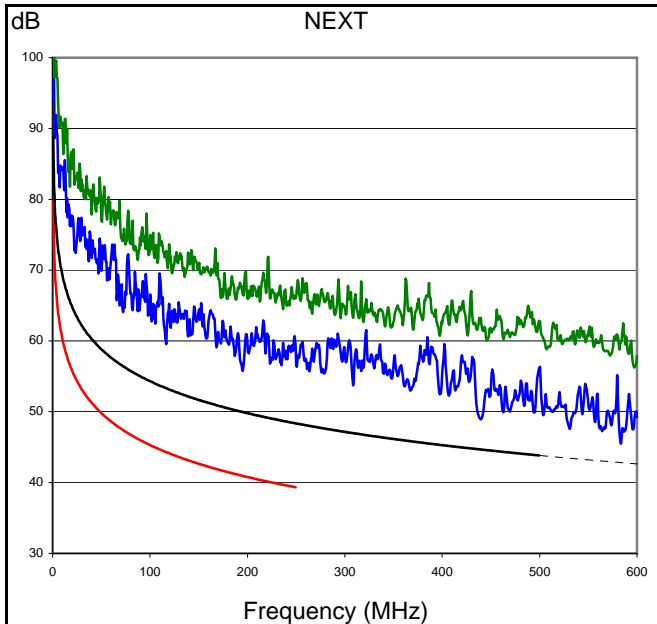
Return Loss					
Freq. MHz	Worst Case	Average	LANmark Spec	TIA Spec	ISO/IEC Spec
1	26.0	26.9	20.0	20.0	N/A
4	32.9	36.2	23.6	23.0	23.0
8	32.8	37.8	25.4	24.5	24.5
10	34.1	40.0	26.0	25.0	25.0
16	33.3	38.2	26.0	25.0	25.0
20	40.3	44.5	26.0	25.0	25.0
25	37.4	41.5	25.5	24.3	24.3
31.25	36.7	41.3	25.0	23.6	23.6
62.5	31.9	35.8	23.5	21.5	21.5
100	31.4	36.5	22.5	20.1	20.1
250	28.1	33.6	20.5	17.3	17.3
350	24.6	31.9	19.8		
500	22.1	27.5	19.0		
600	25.1	36.5			
Limit Margin (dB) :			1.52	5.50	6.75
Frequency (MHz) :			391.67	1.25	10.99

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

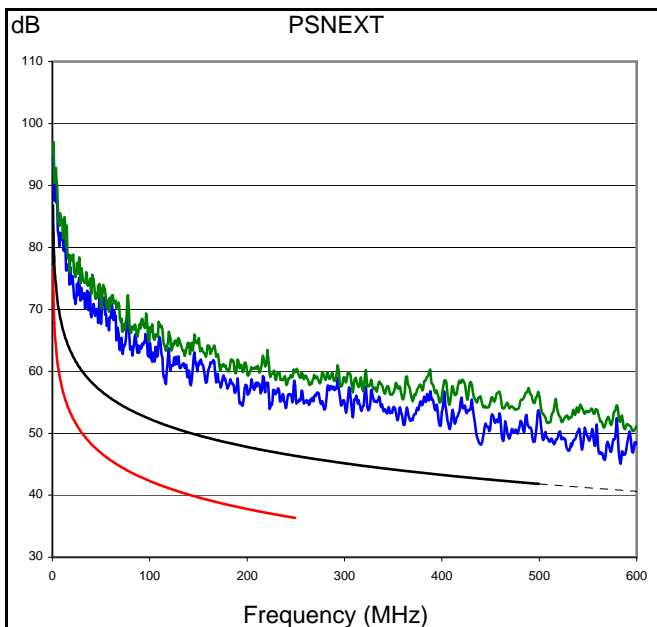
Summary

Client Berk-Tek LLC
Specifications Berk-Tek LANmark-2000
 ANSI/TIA-568-C.2 Category 6
 ISO/IEC 11801, Category 6
Part Number 10170687
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 4X23 UTP-CMR-Solid

Test Started 5/5/2015 8:52
Technician John Cash
Report No. 100283649CRT-039h
Length (m) 100
Temperature 22 °C
Test Status **PASS**



NEXT					
Freq. MHz	Worst Case	Average	LANmark Spec	TIA Spec	ISO/IEC Spec
1	97.5	103.6	84.3	74.3	N/A
4	89.5	97.2	75.3	65.3	66.3
8	84.8	91.7	70.8	60.8	61.8
10	84.3	90.4	69.3	59.3	60.3
16	79.3	83.9	66.3	56.2	57.2
20	77.7	84.3	64.8	54.8	55.8
25	74.8	83.8	63.3	53.3	54.3
31.25	75.2	81.8	61.9	51.9	52.9
62.5	71.4	78.3	57.4	47.4	48.4
100	66.6	75.0	54.3	44.3	45.3
250	59.5	66.0	48.3	38.3	39.3
350	55.9	62.6	46.2		
500	56.3	62.8	43.8		
600	49.2	57.9			
Limit Margin (dB) :			4.29	15.83	14.83
Frequency (MHz) :			439.63	195.34	195.34



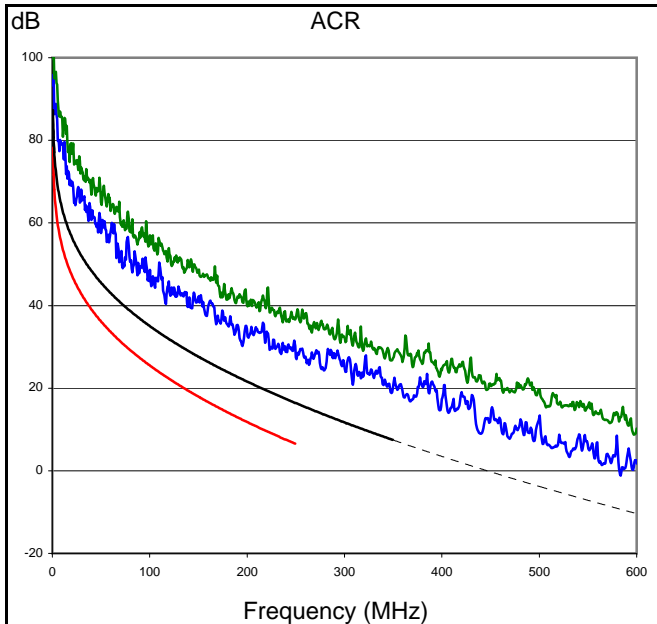
PSNEXT					
Freq. MHz	Worst Case	Average	LANmark Spec	TIA Spec	ISO/IEC Spec
1	95.6	97.0	82.3	72.3	N/A
4	87.1	90.8	73.3	63.3	63.3
8	82.4	85.5	68.8	58.8	58.8
10	81.7	84.3	67.3	57.3	57.3
16	76.5	78.2	64.3	54.2	54.2
20	74.6	77.9	62.8	52.8	52.8
25	74.1	77.5	61.3	51.3	51.3
31.25	72.1	75.1	59.9	49.9	49.9
62.5	68.2	71.3	55.4	45.4	45.4
100	64.6	67.1	52.3	42.3	42.3
250	57.7	59.8	46.3	36.3	36.3
350	54.0	56.5	44.2		
500	53.0	55.7	41.8		
600	48.1	51.2			
Limit Margin (dB) :			5.49	16.48	16.48
Frequency (MHz) :			439.63	195.34	195.34

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

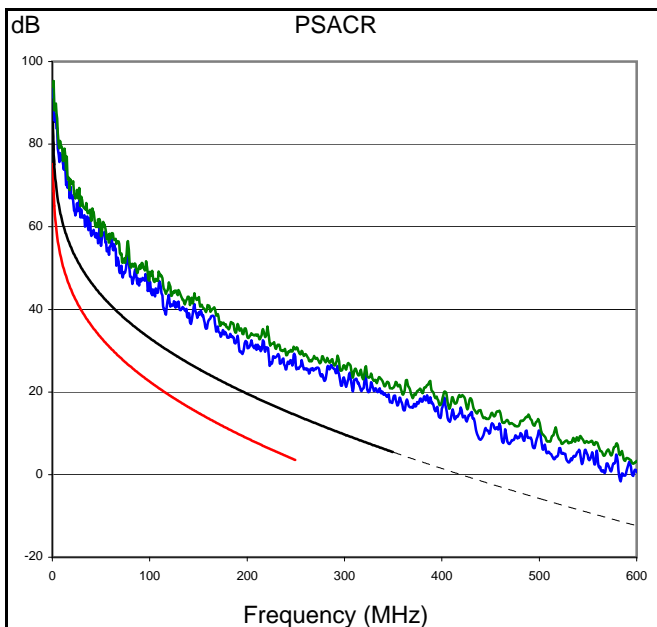
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Technician John Cash
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Temperature 22 °C
Test Status **PASS**



ACR					
Freq. MHz	Worst Case	Average	LANmark Spec	TIA Spec	ISO/IEC Spec
1	95.9	102.0	82.3	72.3	N/A
4	86.2	93.9	71.6	61.5	62.4
8	80.1	87.0	65.6	55.4	56.4
10	78.9	85.1	63.5	53.3	54.3
16	72.6	77.1	58.9	48.7	49.6
20	70.0	76.8	56.6	46.3	47.3
25	66.4	75.2	54.1	43.8	44.8
31.25	65.6	72.2	51.5	41.2	42.1
62.5	57.5	64.4	42.4	32.0	32.9
100	48.7	57.0	35.0	24.5	25.4
250	30.2	36.6	16.4	5.5	6.3
350	20.0	27.2	7.4		
500	13.4	19.7			
600	1.8	10.2			
Limit Margin (dB) :			8.00	18.58	17.71
Frequency (MHz) :			116.65	116.65	116.65



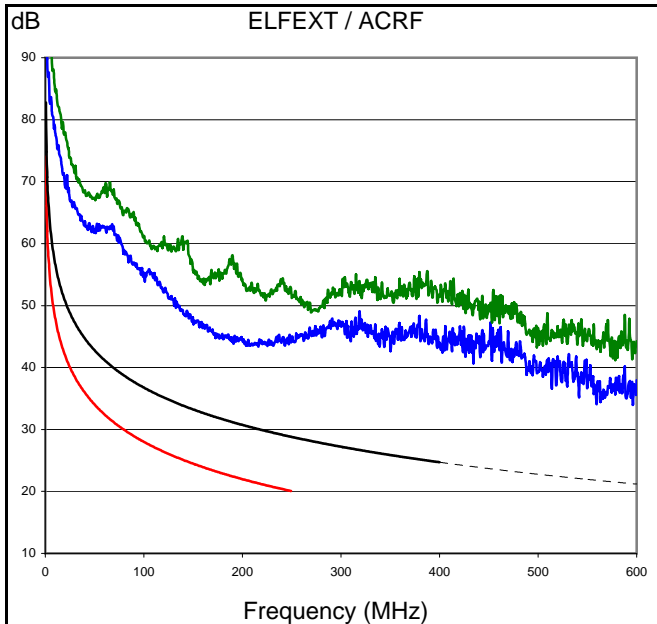
PSACR					
Freq. MHz	Worst Case	Average	LANmark Spec	TIA Spec	ISO/IEC Spec
1	93.7	95.3	80.3	70.3	N/A
4	83.8	87.4	69.6	59.5	59.4
8	77.9	80.8	63.6	53.4	53.4
10	76.4	78.9	61.5	51.3	51.3
16	69.8	71.4	56.9	46.7	46.6
20	67.3	70.4	54.6	44.3	44.3
25	65.7	68.9	52.1	41.8	41.8
31.25	62.3	65.4	49.5	39.2	39.1
62.5	54.3	57.3	40.4	30.0	29.9
100	46.7	49.1	33.0	22.5	22.4
250	28.5	30.4	14.4	3.5	3.3
350	18.0	21.0	5.4		
500	10.6	12.5			
600	0.6	3.3			
Limit Margin (dB) :			8.37	18.95	19.08
Frequency (MHz) :			116.65	116.65	116.65

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

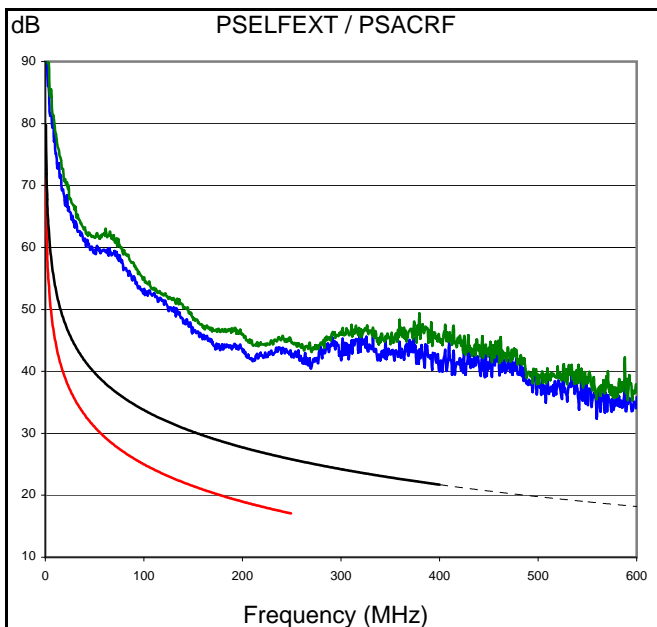
Summary

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Specifications Berk-Tek LANmark-2000
 ANSI/TIA-568-C.2 Category 6
 ISO/IEC 11801, Category 6
Part Number 10170687
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 4X23 UTP-CMR-Solid

Test Started 5/5/2015 8:52
Technician John Cash
Report No. 100283649CRT-039h
Length (m) 100
Temperature 22 °C
Test Status **PASS**



ELFEXT / ACRF					
Freq. MHz	Worst Case	Average	LANmark Spec	TIA Spec	ISO/IEC Spec
1	92.7	100.1	76.8	67.8	N/A
4	83.2	92.4	64.7	55.8	56.0
8	80.4	88.2	58.7	49.7	49.9
10	77.6	84.4	56.8	47.8	48.0
16	73.0	79.9	52.7	43.7	43.9
20	69.1	77.9	50.7	41.8	42.0
25	66.8	73.9	48.8	39.8	40.0
31.25	65.6	71.0	46.9	37.9	38.1
62.5	62.7	67.6	40.8	31.9	32.1
100	55.3	61.3	36.8	27.8	28.0
250	44.1	52.7	28.8	19.8	20.0
350	45.1	51.6	25.9		
500	39.4	45.8			
600	38.0	44.3			
Limit Margin (dB) :			12.68	21.63	21.43
Frequency (MHz) :			190.84	190.84	190.84



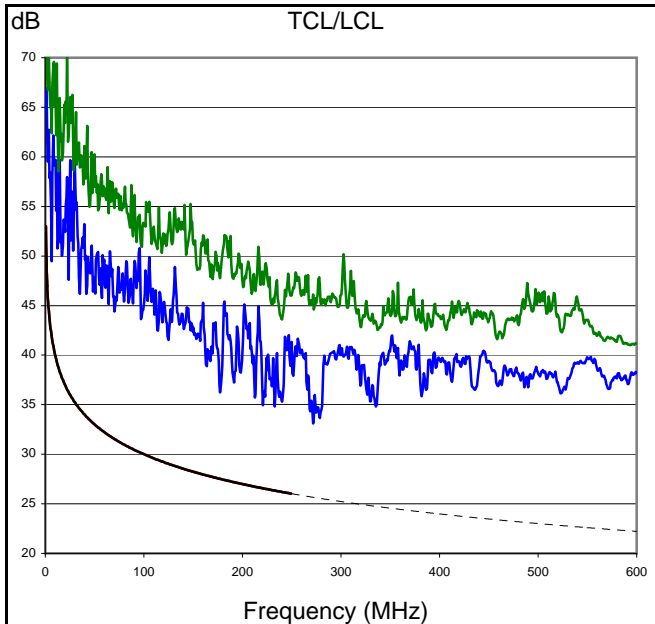
PSELFEXT / PSACRF					
Freq. MHz	Worst Case	Average	LANmark Spec	TIA Spec	ISO/IEC Spec
1	91.7	92.8	73.8	64.8	N/A
4	82.3	85.8	61.7	52.8	53.0
8	79.9	81.4	55.7	46.7	46.9
10	75.1	78.5	53.8	44.8	45.0
16	70.4	73.8	49.7	40.7	40.9
20	66.8	71.1	47.7	38.8	39.0
25	65.7	67.9	45.8	36.8	37.0
31.25	64.0	65.5	43.9	34.9	35.1
62.5	59.1	61.7	37.8	28.9	29.1
100	53.3	55.2	33.8	24.8	25.0
250	42.5	45.0	25.8	16.8	17.0
350	43.2	45.4	22.9		
500	37.5	39.5			
600	35.8	36.7			
Limit Margin (dB) :			14.29	23.24	23.04
Frequency (MHz) :			210.33	210.33	210.33

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

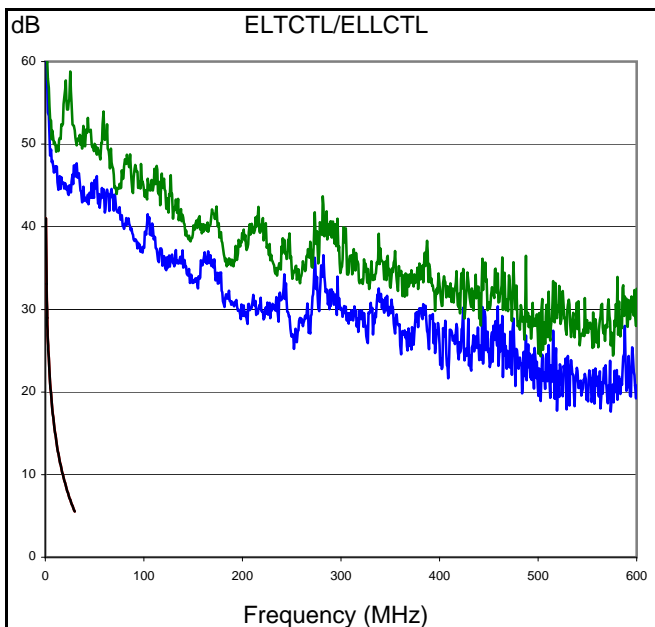
Summary

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Specifications Berk-Tek LANmark-2000
 ANSI/TIA-568-C.2 Category 6
 ISO/IEC 11801, Category 6
Part Number 10170687
Description **Berk-Tek LANmark-2000 CMR**
 4X23 UTP-CMR-Solid

Test Started 5/5/2015 8:52
Technician John Cash
Report No. 100283649CRT-039h
Length (m) 100
Temperature 22 °C
Test Status **PASS**



TCL/LCL					
Freq. MHz	Worst Case	Average	LANmark Spec	TIA Spec	ISO/IEC Spec
1	66.9	74.6	50.0	40.0	50.0
4	57.9	67.5	44.0	40.0	44.0
8	62.2	69.1	41.0	40.0	41.0
10	59.7	65.8	40.0	40.0	40.0
16	51.5	62.3	38.0	38.0	38.0
20	52.5	63.4	37.0	37.0	37.0
25	59.7	66.0	36.0	36.0	36.0
31.25	54.7	64.5	35.1	35.1	35.1
62.5	49.0	57.2	32.0	32.0	32.0
100	45.4	53.1	30.0	30.0	30.0
250	40.8	46.1	26.0	26.0	26.0
350	40.4	44.1			
500	38.1	46.3			
600	38.2	41.2			
Limit Margin (dB) :			7.60	8.39	7.60
Frequency (MHz) :			6.50	220.82	6.50



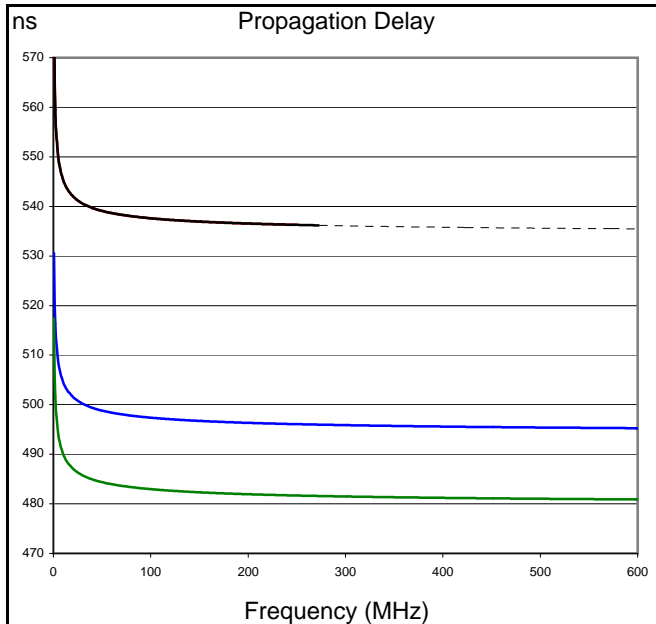
ELTCTL/ELLCTL					
Freq. MHz	Worst Case	Average	LANmark Spec	TIA Spec	ISO/IEC Spec
1	61.2	65.2	35.0	35.0	35.0
4	51.0	54.6	23.0	23.0	23.0
8	47.3	50.6	16.9	16.9	16.9
10	47.3	49.8	15.0	15.0	15.0
16	46.0	52.4	10.9	10.9	10.9
20	45.3	56.6	9.0	9.0	9.0
25	45.0	58.8	7.0	7.0	7.0
31.25	46.8	50.3			
62.5	44.5	52.4			
100	37.4	44.3			
250	27.1	36.4			
350	29.8	32.8			
500	19.5	24.6			
600	20.8	32.5			
Limit Margin (dB) :			27.60	27.60	27.60
Frequency (MHz) :			5.00	5.00	5.00

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

Summary

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 ISO/IEC 11801, Category 6
Part Number 10170687
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 4X23 UTP-CMR-Solid

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Test Status **PASS**



Propagation Delay					
Freq. MHz	Worst Case	Average	LANmark Spec	TIA Spec	ISO/IEC Spec
1	520.5	505.9	570.0	570.0	N/A
4	509.9	495.4	552.0	552.0	552.0
8	505.8	491.3	546.7	546.7	546.7
10	504.5	490.0	545.4	545.4	545.4
16	502.5	488.0	543.0	543.0	543.0
20	501.6	487.1	542.0	542.0	542.0
25	500.8	486.3	541.2	541.2	541.2
31.25	500.1	485.6	540.4	540.4	540.4
62.5	498.3	483.9	538.6	538.6	538.6
100	497.4	483.0	537.6	537.6	537.6
250	496.1	481.7	536.3	536.3	536.3
350	495.7	481.3	535.9		
500	495.4	481.0	535.6		
600	495.3	480.9			
Limit Margin (dB) :			40.20	40.20	40.20
Frequency (MHz) :			177.35	177.35	177.35

Delay Skew				
Freq. MHz	Worst case	LANmark Spec	TIA Spec	ISO/IEC Spec
1-250	27.58	35	45	45

Low frequency measurements								
Parameter	Worst Case	Average	LANmark		TIA		ISO/IEC	
			Spec	Margin	Spec	Margin	Spec	Margin
Mutual capacitance (nF/100m)	4.70	4.56	5.60	0.90	5.60	0.90	N/A	N/A
Maximum Capacitance Unbalance Pair-to-Ground (pF/100m)	20.43	14.89	160.00	139.58	330.00	309.58	160.00	139.58
Conductor DC resistance (Ω)	7.47	7.41	9.38	1.91	9.38	1.91	9.50	2.03
DC Resistance Unbalance within a pair (%) using IEC calculation method	0.22%	0.13%	1.50%	1.28%	2.50%	2.28%	2.00%	1.78%

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