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Project Number: G100283649
Certificate of Conformance Number: 9836068CRT-005

Date Issued: 8/7/2014

Test Report Number: G100283649CRT-029b



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, 24 AWG, UTP, CMP, Plenum, Horizontal (solid) Cable, Part Number: LANmark-350. The sample was selected from your manufacturer facility, Berk-Tek LLC, by the Intertek Inspector Mr. Ronald Williams on 4/1/2014, for Quarter 2, 2014 Quarterly Follow-up Testing.

The testing was performed at Intertek located in Cortland, NY on 8/6/2014, to the TIA-568-C.2; ISO/IEC 11801 and LANmark-350 Category 5e 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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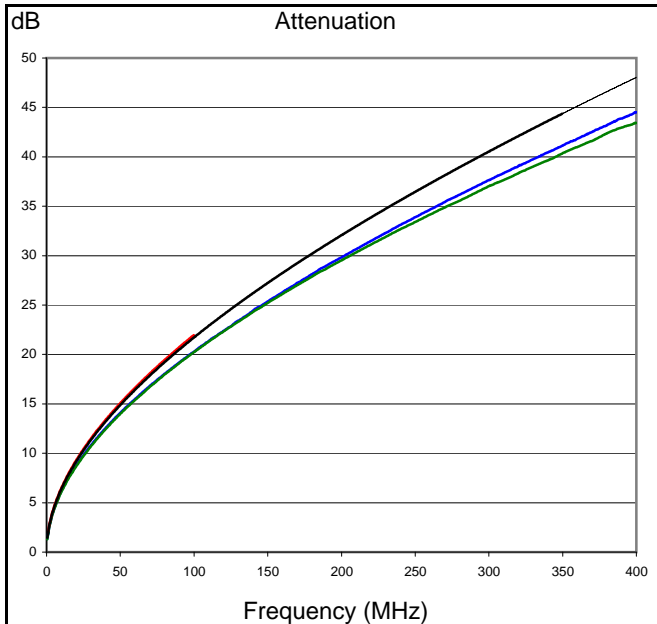
Appendix A

Test Results

Summary

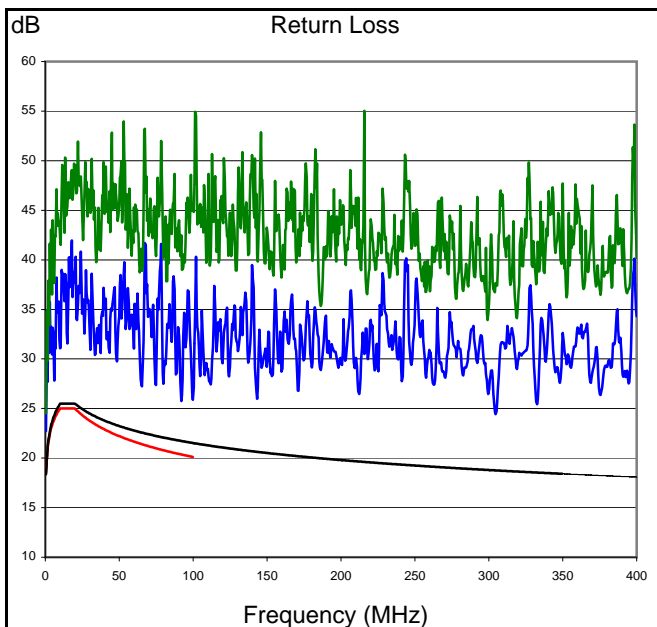
Client Berk-Tek LLC
Specifications Berk-Tek LANmark-350
 ANSI/TIA-568-C.2, Category 5e
 ISO/IEC 11801, Category 5e
Part Number LANmark-350
Description **Berk-Tek LANmark-350 CMP**
 4X24 UTP-CMP-Solid

Test Started 8/6/2014 10:26
Technician John Cash
Report No. 100283649CRT-029b
Length (m) 100
Temperature 20 °C
Test Status **PASS**



Attenuation					
Freq. MHz	Worst Case	Average	LANmark Spec	TIA Spec	ISO/IEC Spec
1	1.9	1.9	2.0	2.5	N/A
4	3.8	3.8	4.0	4.3	4.1
8	5.5	5.4	5.7	5.9	5.8
10	6.1	6.1	6.4	6.6	6.5
16	7.8	7.7	8.1	8.4	8.3
20	8.8	8.7	9.2	9.4	9.3
25	9.8	9.7	10.3	10.5	10.4
31.25	11.1	11.0	11.6	11.8	11.7
62.5	15.8	15.7	16.8	17.1	17.0
100	20.3	20.2	21.7	22.0	22.0
250	33.9	33.4	36.5		
350	41.1	40.4	44.4		
400	44.5	43.4			

Limit Margin (dB) :	0.12	0.42	0.22
Frequency (MHz) :	1.00	4.99	3.50



Return Loss					
Freq. MHz	Worst Case	Average	LANmark Spec	TIA Spec	ISO/IEC Spec
1	30.6	34.8	20.0	20.0	N/A
4	33.2	43.0	23.3	23.0	23.0
8	34.7	43.4	25.0	24.5	24.5
10	31.1	42.4	25.5	25.0	25.0
16	40.3	47.1	25.5	25.0	25.0
20	38.3	47.6	25.5	25.0	25.0
25	34.6	44.7	24.9	24.3	24.3
31.25	38.6	50.2	24.4	23.6	23.6
62.5	36.6	42.9	22.7	21.5	21.5
100	25.9	45.4	21.5	20.1	20.1
250	35.8	41.4	19.2		
350	32.6	47.7	18.4		
400	34.3	40.2			

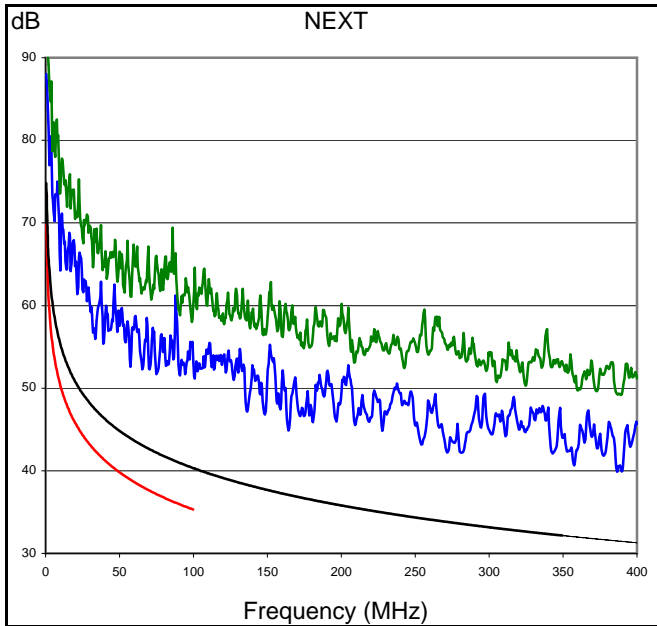
Limit Margin (dB) :	3.54	3.92	3.92
Frequency (MHz) :	5.99	5.99	5.99

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

Summary

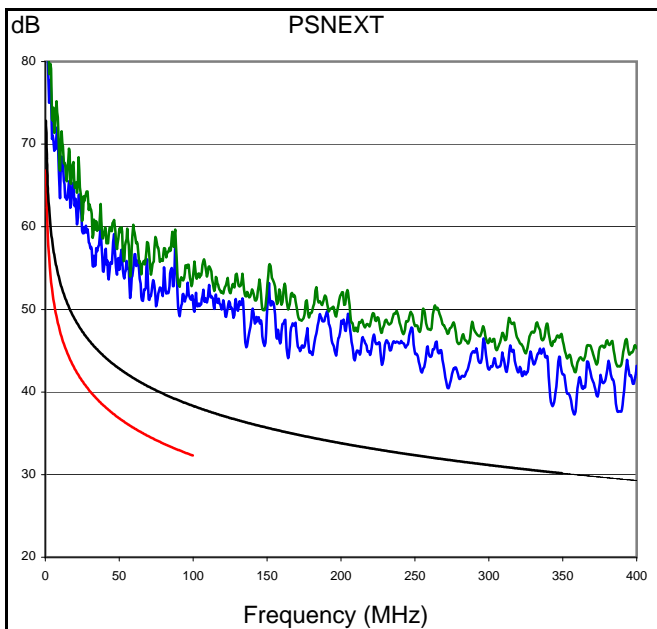
Client Berk-Tek LLC
Specifications Berk-Tek LANmark-350
 ANSI/TIA-568-C.2, Category 5e
 ISO/IEC 11801, Category 5e
Part Number LANmark-350
Description **Berk-Tek LANmark-350 CMP**
 4X24 UTP-CMP-Solid

Test Started 8/6/2014 10:26
Technician John Cash
Report No. 100283649CRT-029b
Length (m) 100
Temperature 20 °C
Test Status **PASS**



NEXT					
Freq. MHz	Worst Case	Average	LANmark Spec	TIA Spec	ISO/IEC Spec
1	86.1	93.3	70.3	65.3	N/A
4	78.9	87.1	61.3	56.3	56.3
8	75.0	80.1	56.8	51.8	51.8
10	64.3	73.6	55.3	50.3	50.3
16	68.8	75.3	52.3	47.2	47.2
20	64.7	70.5	50.8	45.8	45.8
25	61.9	68.3	49.3	44.3	44.3
31.25	58.9	67.8	47.9	42.9	42.9
62.5	56.8	64.6	43.4	38.4	38.4
100	53.6	59.9	40.3	35.3	35.3
250	45.4	55.2	34.3		
350	44.0	52.8	32.2		
400	45.7	51.2			

Limit Margin (dB) : 7.80 13.53 13.53
 Frequency (MHz) : 164.30 33.46 33.46



PSNEXT					
Freq. MHz	Worst Case	Average	LANmark Spec	TIA Spec	ISO/IEC Spec
1	84.8	87.1	68.3	62.3	N/A
4	75.9	79.1	59.3	53.3	53.3
8	72.0	73.8	54.8	48.8	48.8
10	63.4	66.8	53.3	47.3	47.3
16	65.5	69.5	50.3	44.2	44.2
20	62.5	64.7	48.8	42.8	42.8
25	59.5	60.7	47.3	41.3	41.3
31.25	57.3	61.6	45.9	39.9	39.9
62.5	55.9	57.9	41.4	35.4	35.4
100	51.2	53.8	38.3	32.3	32.3
250	44.6	48.0	32.3		
350	42.1	46.2	30.2		
400	43.2	45.3			

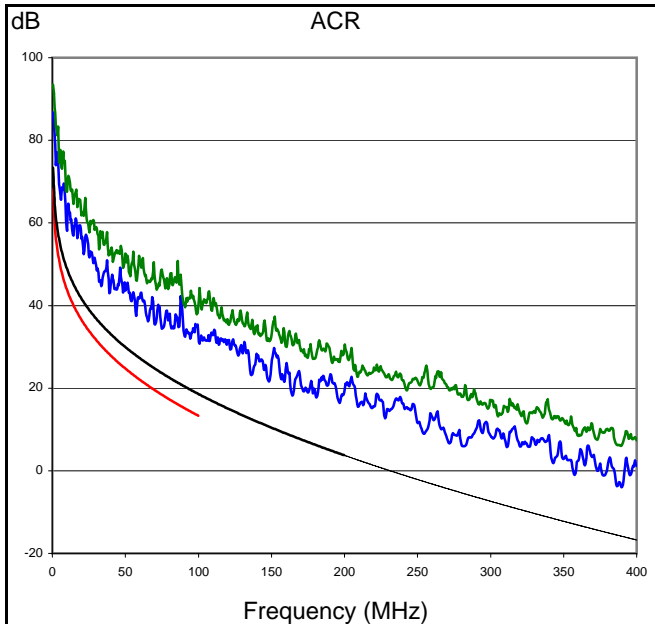
Limit Margin (dB) : 8.00 15.46 15.46
 Frequency (MHz) : 343.07 57.43 57.43

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

Summary

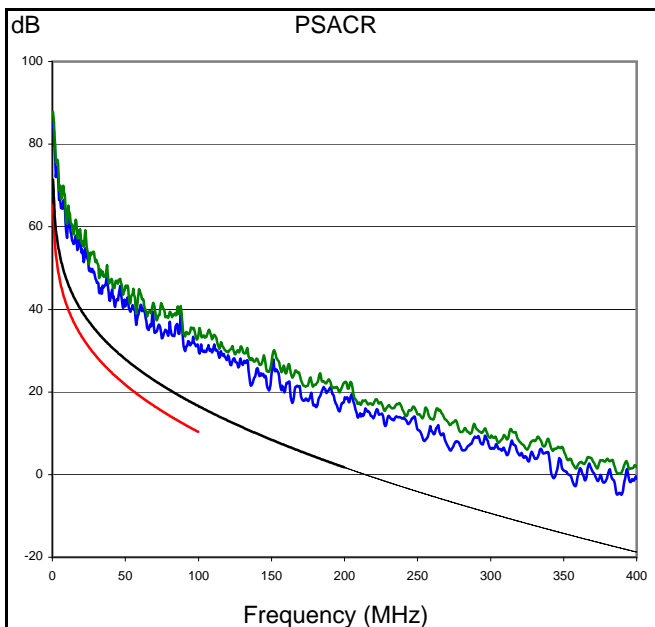
Client Berk-Tek LLC
Specifications Berk-Tek LANmark-350
 ANSI/TIA-568-C.2, Category 5e
 ISO/IEC 11801, Category 5e
Part Number LANmark-350
Description **Berk-Tek LANmark-350 CMP**
 4X24 UTP-CMP-Solid

Test Started 8/6/2014 10:26
Technician John Cash
Report No. 100283649CRT-029b
Length (m) 100
Temperature 20 °C
Test Status **PASS**



ACR					
Freq. MHz	Worst Case	Average	LANmark Spec	TIA Spec	ISO/IEC Spec
1	84.2	91.4	68.3	62.8	N/A
4	75.1	83.3	57.3	52.0	52.2
8	69.6	74.7	51.1	45.8	46.0
10	58.1	67.5	48.9	43.7	43.8
16	61.1	67.5	44.1	38.9	39.0
20	56.1	61.8	41.6	36.4	36.5
25	52.1	58.6	39.1	33.8	33.9
31.25	48.0	56.8	36.3	31.1	31.1
62.5	41.0	48.9	26.6	21.3	21.4
100	33.3	39.6	18.6	13.3	13.3
250	11.6	21.6			
350	2.9	12.3			
400	1.1	7.3			

Limit Margin (dB) : 9.17 14.40 14.28
 Frequency (MHz) : 9.99 9.99 9.99



PSACR					
Freq. MHz	Worst Case	Average	LANmark Spec	TIA Spec	ISO/IEC Spec
1	83.0	85.3	66.3	59.8	N/A
4	72.1	75.3	55.3	49.0	49.2
8	66.5	68.4	49.1	42.8	43.0
10	57.3	60.7	46.9	40.7	40.8
16	57.8	61.7	42.1	35.9	36.0
20	53.8	56.1	39.6	33.4	33.5
25	49.7	51.0	37.1	30.8	30.9
31.25	46.2	50.6	34.3	28.1	28.1
62.5	40.2	42.2	24.6	18.3	18.4
100	31.0	33.5	16.6	10.3	10.3
250	10.8	14.5			
350	1.0	5.8			
400	-1.0	1.8			

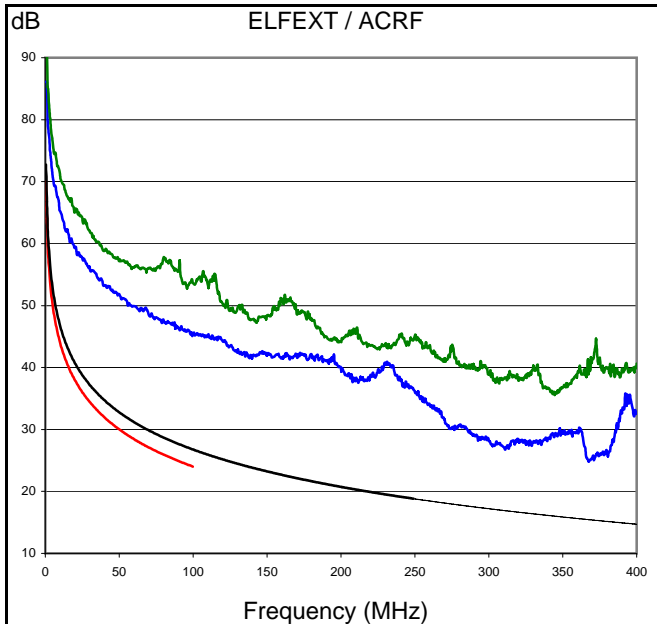
Limit Margin (dB) : 10.07 16.31 16.24
 Frequency (MHz) : 31.96 31.96 31.96

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

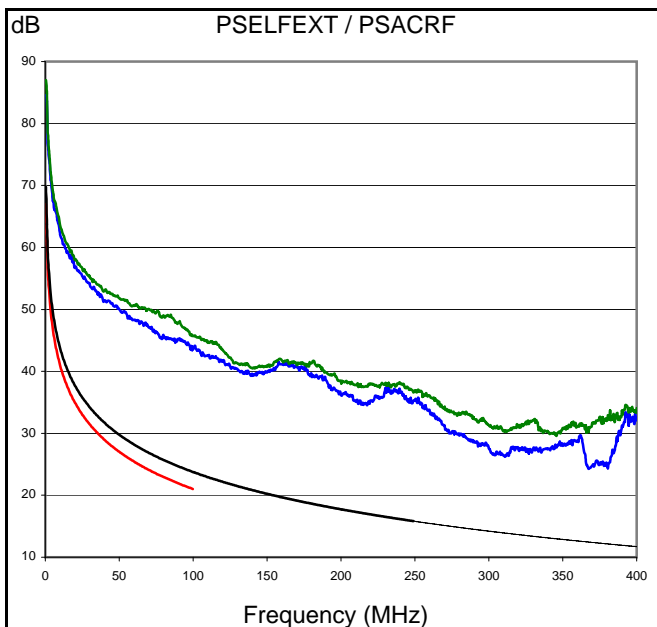
Summary

Client Berk-Tek LLC
Specifications Berk-Tek LANmark-350
 ANSI/TIA-568-C.2, Category 5e
 ISO/IEC 11801, Category 5e
Part Number LANmark-350
Description **Berk-Tek LANmark-350 CMP**
 4X24 UTP-CMP-Solid

Test Started 8/6/2014 10:26
Technician John Cash
Report No. 100283649CRT-029b
Length (m) 100
Temperature 20 °C
Test Status **PASS**



ELFEXT / ACRF					
Freq. MHz	Worst Case	Average	LANmark Spec	TIA Spec	ISO/IEC Spec
1	86.0	91.4	66.8	63.8	N/A
4	73.6	78.3	54.7	51.8	52.0
8	67.5	72.5	48.7	45.7	45.9
10	65.2	71.2	46.8	43.8	44.0
16	61.3	67.1	42.7	39.7	39.9
20	59.3	65.0	40.7	37.8	38.0
25	57.8	64.3	38.8	35.8	36.0
31.25	55.7	61.7	36.9	33.9	34.1
62.5	49.5	56.5	30.8	27.9	28.1
100	45.3	53.7	26.8	23.8	24.0
250	35.9	45.3	18.8		
350	29.3	36.7			
400	32.8	40.6			
Limit Margin (dB) : 14.65 20.43 20.61					
Frequency (MHz) : 207.74 1.50 16.48					



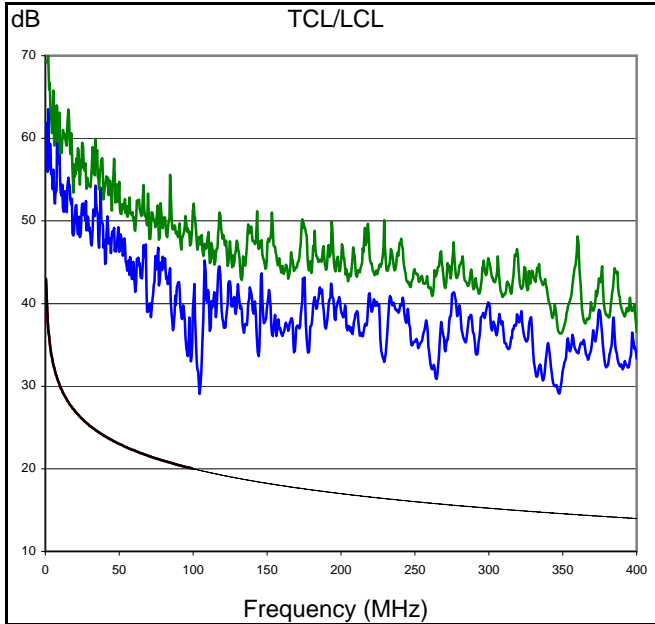
PSELFEXT / PSACRF					
Freq. MHz	Worst Case	Average	LANmark Spec	TIA Spec	ISO/IEC Spec
1	83.6	84.8	63.8	60.8	N/A
4	70.5	71.6	51.7	48.8	49.0
8	64.5	65.8	45.7	42.7	42.9
10	62.1	63.6	43.8	40.8	41.0
16	58.8	59.9	39.7	36.7	36.9
20	56.7	58.0	37.7	34.8	35.0
25	55.4	56.7	35.8	32.8	33.0
31.25	53.4	54.9	33.9	30.9	31.1
62.5	48.3	50.6	27.8	24.9	25.1
100	43.8	45.8	23.8	20.8	21.0
250	35.5	36.8	15.8		
350	28.0	30.8			
400	32.7	34.1			
Limit Margin (dB) : 16.90 20.09 20.47					
Frequency (MHz) : 1.50 1.50 4.99					

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

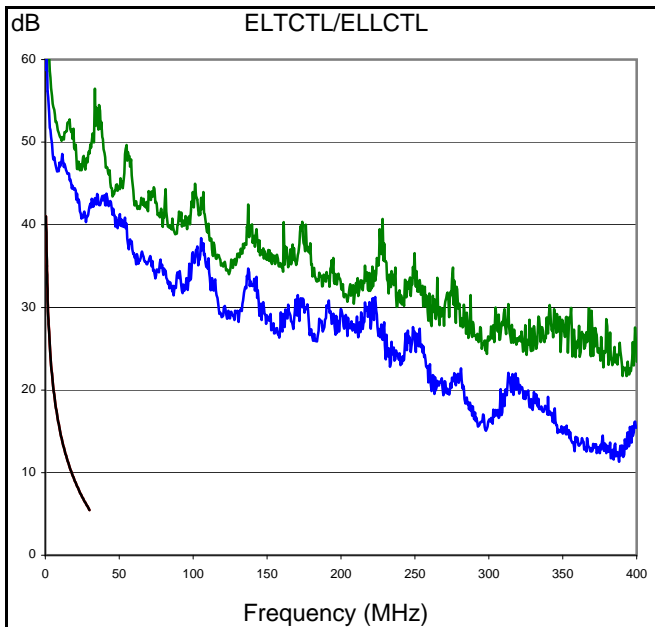
Summary

Client Berk-Tek LLC
Specifications Berk-Tek LANmark-350
 ANSI/TIA-568-C.2, Category 5e
 ISO/IEC 11801, Category 5e
Part Number LANmark-350
Description **Berk-Tek LANmark-350 CMP**
 4X24 UTP-CMP-Solid

Test Started 8/6/2014 10:26
Technician John Cash
Report No. 100283649CRT-029b
Length (m) 100
Temperature 20 °C
Test Status **PASS**



TCL/LCL					
Freq. MHz	Worst Case	Average	LANmark Spec	TIA Spec	ISO/IEC Spec
1	61.9	69.2	40.0	N/A	40.0
4	55.7	62.9	34.0	N/A	34.0
8	61.4	63.7	31.0	N/A	31.0
10	55.3	58.1	30.0	N/A	30.0
16	54.3	62.5	28.0	N/A	28.0
20	50.3	55.4	27.0	N/A	27.0
25	52.0	59.5	26.0	N/A	26.0
31.25	47.0	56.3	25.1	N/A	25.1
62.5	45.3	52.4	22.0	N/A	22.0
100	39.2	51.2	20.0	N/A	20.0
250	35.4	43.7			
350	31.9	36.7			
400	33.4	36.6			
Limit Margin (dB) :			9.22	N/A	12.92
Frequency (MHz) :			104.37	N/A	98.38



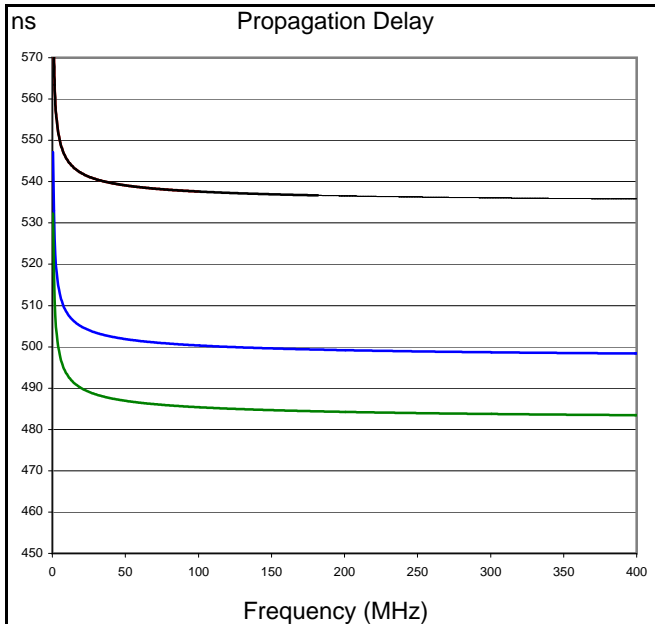
ELTCTL/ELLCTL					
Freq. MHz	Worst Case	Average	LANmark Spec	TIA Spec	ISO/IEC Spec
1	60.5	66.4	35.0	N/A	35.0
4	50.6	56.6	23.0	N/A	23.0
8	46.5	52.0	16.9	N/A	16.9
10	47.1	50.6	15.0	N/A	15.0
16	46.2	52.5	10.9	N/A	10.9
20	44.4	49.1	9.0	N/A	9.0
25	41.1	47.1	7.0	N/A	7.0
31.25	43.1	50.1			
62.5	36.2	41.9			
100	36.7	44.0			
250	25.4	33.7			
350	14.7	28.3			
400	15.5	23.4			
Limit Margin (dB) :			24.69	N/A	24.69
Frequency (MHz) :			1.50	N/A	1.50

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

Summary

Client Berk-Tek LLC
Specifications Berk-Tek LANmark-350
 ANSI/TIA-568-C.2, Category 5e
 ISO/IEC 11801, Category 5e
Part Number LANmark-350
Description **Berk-Tek LANmark-350 CMP**
 4X24 UTP-CMP-Solid

Test Started 8/6/2014 10:26
Technician John Cash
Report No. 100283649CRT-029b
Length (m) 100
Temperature 20 °C
Test Status **PASS**



Propagation Delay					
Freq. MHz	Worst Case	Average	LANmark Spec	TIA Spec	ISO/IEC Spec
1	533.0	518.3	570.0	570.0	N/A
4	515.0	500.1	552.0	552.0	552.0
8	509.6	494.7	546.7	546.7	546.7
10	508.3	493.3	545.4	545.4	545.4
16	505.9	490.9	543.0	543.0	543.0
20	504.9	490.0	542.0	542.0	542.0
25	504.0	489.1	541.2	541.2	541.2
31.25	503.3	488.3	540.4	540.4	540.4
62.5	501.3	486.4	538.6	538.6	538.6
100	500.3	485.4	537.6	537.6	537.6
250	498.9	484.0			
350	498.5	483.6			
400	498.4	483.5			

Limit Margin (dB) : 37.02 37.02 37.02
 Frequency (MHz) : 3.50 3.50 3.50

Delay Skew				
Freq. MHz	Worst case	LANmark Spec	TIA Spec	ISO/IEC Spec
1-100	31.78	25	45	45

Low frequency measurements								
Parameter	Worst Case	Average	LANmark		TIA		ISO/IEC	
			Spec	Margin	Spec	Margin	Spec	Margin
Mutual capacitance (nF/100m)	4.86	3.54	5.60	0.74	5.60	0.74	N/A	N/A
Maximum Capacitance Unbalance Pair-to-Ground (pF/100m)	25.03	11.04	160.00	134.97	330.00	304.97	160.00	134.97
Conductor DC resistance (Ω)	8.91	6.59	9.38	0.47	9.38	0.47	9.50	0.59
DC Resistance Unbalance within a pair (%) using IEC calculation method	0.36%	0.18%	2.00%	1.64%	2.50%	2.14%	2.00%	1.64%

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