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Project Number: G100283649
Certificate of Conformance Number: 9911244CRT-002

Date Issued: 12/20/2013

Test Report Number: G100283649CRT-028e



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: 10032476. The sample was supplied by the client and was a production sample in undamaged condition received at Intertek on 12/11/2013.

The testing was performed at Intertek located in Cortland, NY on 12/13/2013, to the TIA-568-C.2; ISO/IEC 11801 and LANmark-1000 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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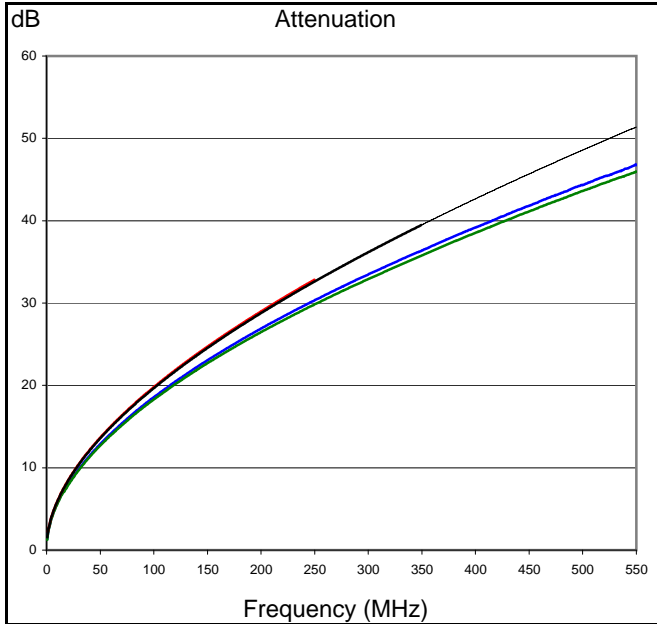
Appendix A

Test Results

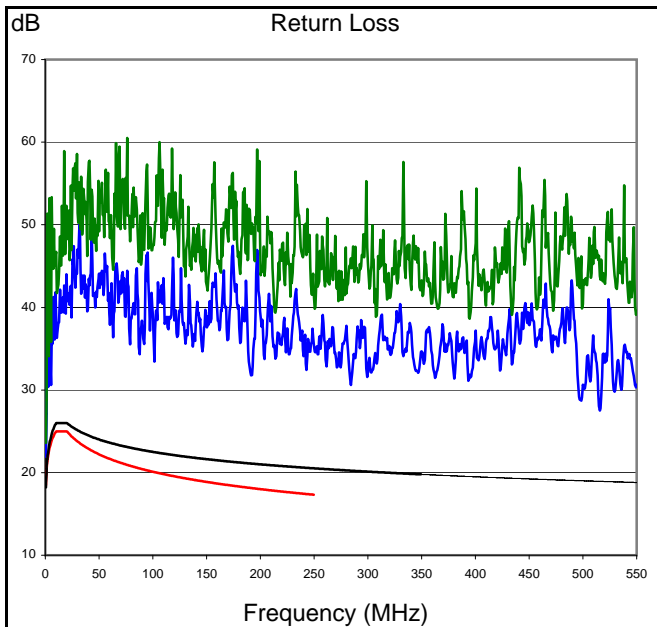
Summary

Client Berk-Tek LLC
Specifications Berk-Tek LANmark-1000
 ANSI/TIA-568-C.2, Category 6
 ISO/IEC 11801, Category 6
Part Number 10032476
Description **Berk-Tek LANmark-1000 CMR**
 4X23 UTP-CMR-Solid

Test Started 12/13/2013 7:30
Technician System Default
Report No. 100283649CRT-028e
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	1.9	2.0	2.0	N/A
4	3.6	3.5	3.8	3.8	3.8
8	5.1	5.0	5.3	5.3	5.4
10	5.7	5.6	5.9	6.0	6.0
16	7.2	7.1	7.5	7.6	7.6
20	7.9	7.8	8.4	8.5	8.5
25	9.0	8.9	9.4	9.5	9.6
31.25	10.1	10.0	10.6	10.7	10.7
62.5	14.4	14.2	15.3	15.4	15.5
100	18.6	18.3	19.7	19.8	19.9
250	30.3	29.8	32.6	32.8	33.0
350	36.4	35.8	39.5		
550	46.8	46.0			
Limit Margin (dB) :			0.15	0.16	0.22
Frequency (MHz) :			1.87	1.87	4.62



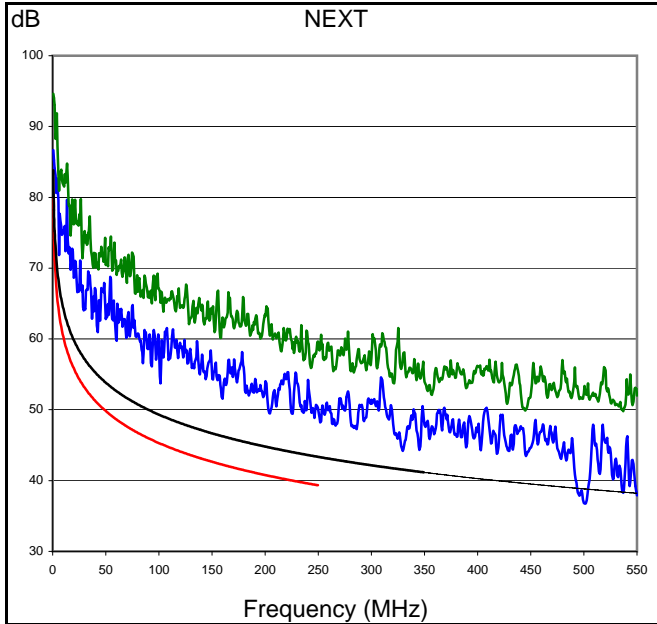
Return Loss					
Freq. MHz	Worst Case	Average	LANmark Spec	TIA Spec	ISO/IEC Spec
1	27.1	28.8	20.0	20.0	N/A
4	38.7	53.2	23.6	23.0	23.0
8	40.7	49.5	25.4	24.5	24.5
10	38.7	46.7	26.0	25.0	25.0
16	41.2	46.3	26.0	25.0	25.0
20	44.0	52.3	26.0	25.0	25.0
25	45.8	54.4	25.5	24.3	24.3
31.25	49.4	55.1	25.0	23.6	23.6
62.5	42.9	49.2	23.5	21.5	21.5
100	39.1	47.5	22.5	20.1	20.1
250	35.5	41.6	20.5	17.3	17.3
350	34.6	42.5	19.8		
550	30.6	39.6			
Limit Margin (dB) :			6.28	6.73	7.00
Frequency (MHz) :			5.31	1.19	5.31

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

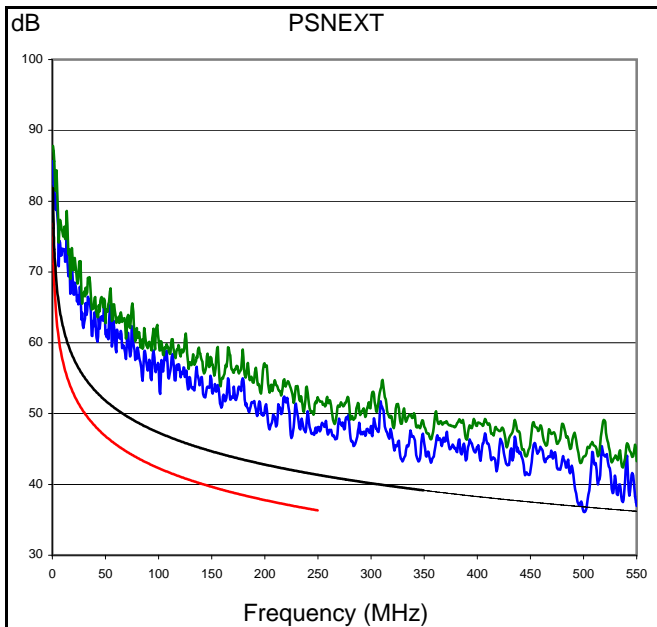
Summary

Client Berk-Tek LLC
Specifications Berk-Tek LANmark-1000
 ANSI/TIA-568-C.2, Category 6
 ISO/IEC 11801, Category 6
Part Number 10032476
Description **Berk-Tek LANmark-1000 CMR**
 4X23 UTP-CMR-Solid

Test Started 12/13/2013 7:30
Technician System Default
Report No. 100283649CRT-028e
Length (m) 100
Temperature 20 °C
Test Status **PASS**



NEXT					
Freq. MHz	Worst Case	Average	LANmark Spec	TIA Spec	ISO/IEC Spec
1	85.3	94.0	79.3	74.3	N/A
4	82.7	91.9	70.3	65.3	66.3
8	75.8	83.9	65.8	60.8	61.8
10	75.4	81.7	64.3	59.3	60.3
16	72.5	78.3	61.3	56.2	57.2
20	68.6	76.2	59.8	54.8	55.8
25	67.9	77.6	58.3	53.3	54.3
31.25	66.8	74.7	56.9	51.9	52.9
62.5	62.3	69.6	52.4	47.4	48.4
100	59.2	67.1	49.3	44.3	45.3
250	50.2	59.7	43.3	38.3	39.3
350	48.6	54.8	41.2		
550	37.9	52.0			
Limit Margin (dB) :			2.64	9.23	8.23
Frequency (MHz) :			329.51	6.00	6.00



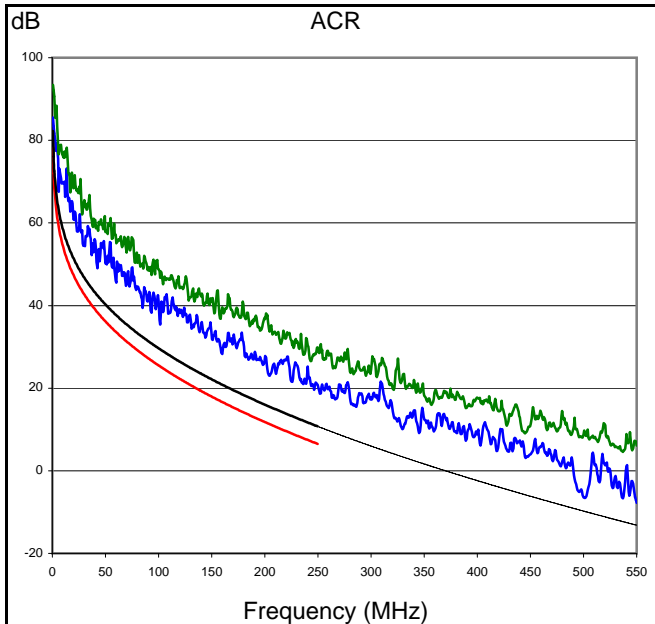
PSNEXT					
Freq. MHz	Worst Case	Average	LANmark Spec	TIA Spec	ISO/IEC Spec
1	82.4	87.1	77.3	72.3	N/A
4	80.6	84.3	68.3	63.3	63.3
8	72.3	76.6	63.8	58.8	58.8
10	73.3	75.0	62.3	57.3	57.3
16	70.8	71.8	59.3	54.2	54.2
20	66.9	70.2	57.8	52.8	52.8
25	66.2	71.5	56.3	51.3	51.3
31.25	65.6	67.8	54.9	49.9	49.9
62.5	60.8	63.4	50.4	45.4	45.4
100	56.9	60.4	47.3	42.3	42.3
250	48.1	52.3	41.3	36.3	36.3
350	46.5	48.6	39.2		
550	37.0	43.3			
Limit Margin (dB) :			3.68	9.54	9.54
Frequency (MHz) :			329.51	225.11	225.11

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

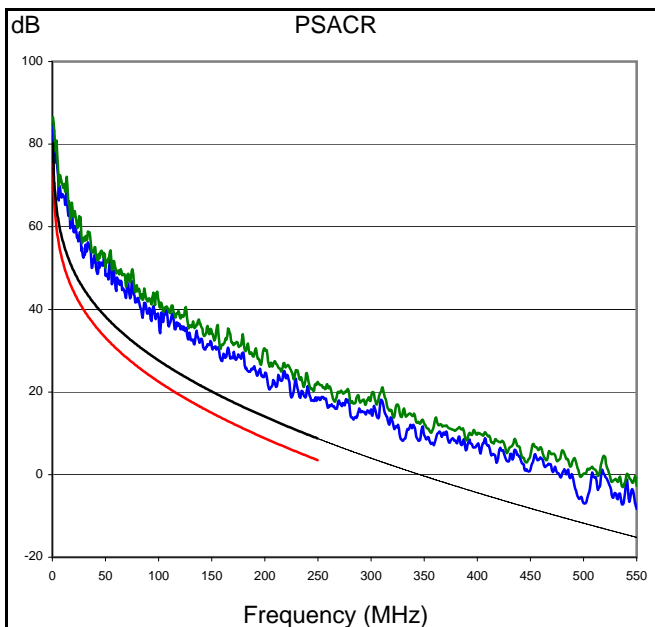
Summary

Client Berk-Tek LLC
Specifications Berk-Tek LANmark-1000
 ANSI/TIA-568-C.2, Category 6
 ISO/IEC 11801, Category 6
Part Number 10032476
Description **Berk-Tek LANmark-1000 CMR**
 4X23 UTP-CMR-Solid

Test Started 12/13/2013 7:30
Technician System Default
Report No. 100283649CRT-028e
Length (m) 100
Temperature 20 °C
Test Status **PASS**



ACR					
Freq. MHz	Worst Case	Average	LANmark Spec	TIA Spec	ISO/IEC Spec
1	83.4	92.1	77.3	72.3	N/A
4	79.3	88.4	66.5	61.5	62.4
8	70.9	78.9	60.5	55.4	56.4
10	69.8	76.1	58.4	53.3	54.3
16	65.4	71.2	53.7	48.7	49.6
20	60.9	68.4	51.4	46.3	47.3
25	59.0	68.8	48.9	43.8	44.8
31.25	56.9	64.7	46.3	41.2	42.1
62.5	48.2	55.5	37.1	32.0	32.9
100	41.0	48.8	29.6	24.5	25.4
250	20.8	29.9	10.7	5.5	6.3
350	13.3	19.0			
550	-7.7	6.1			
Limit Margin (dB) :			4.50	9.55	8.60
Frequency (MHz) :			6.00	6.00	6.00



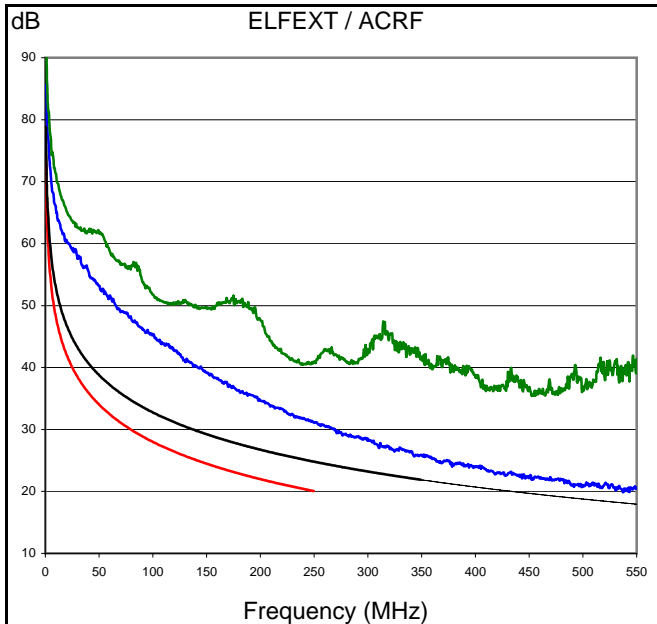
PSACR					
Freq. MHz	Worst Case	Average	LANmark Spec	TIA Spec	ISO/IEC Spec
1	80.5	85.1	75.3	70.3	N/A
4	77.2	80.8	64.5	59.5	59.4
8	67.4	71.6	58.5	53.4	53.4
10	67.7	69.4	56.4	51.3	51.3
16	63.8	64.7	51.7	46.7	46.6
20	58.8	62.4	49.4	44.3	44.3
25	57.1	62.6	46.9	41.8	41.8
31.25	55.7	57.8	44.3	39.2	39.1
62.5	46.7	49.2	35.1	30.0	29.9
100	38.3	42.1	27.6	22.5	22.4
250	18.7	22.5	8.7	3.5	3.3
350	10.2	12.8			
550	-8.3	-2.7			
Limit Margin (dB) :			5.30	10.35	10.40
Frequency (MHz) :			6.00	6.00	6.00

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

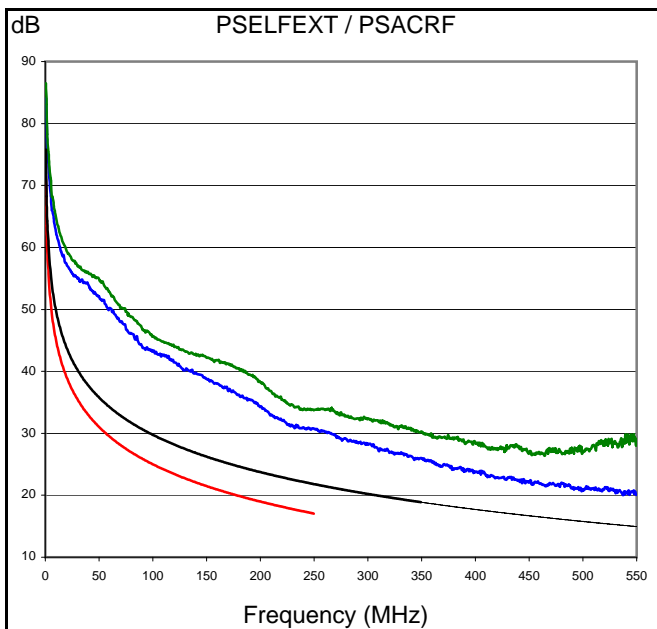
Summary

Client Berk-Tek LLC
Specifications Berk-Tek LANmark-1000
 ANSI/TIA-568-C.2, Category 6
 ISO/IEC 11801, Category 6
Part Number 10032476
Description **Berk-Tek LANmark-1000 CMR**
 4X23 UTP-CMR-Solid

Test Started 12/13/2013 7:30
Technician System Default
Report No. 100283649CRT-028e
Length (m) 100
Temperature 20 °C
Test Status **PASS**



ELFEXT / ACRF					
Freq. MHz	Worst Case	Average	LANmark Spec	TIA Spec	ISO/IEC Spec
1	84.2	89.6	72.8	67.8	N/A
4	73.5	79.1	60.7	55.8	56.0
8	67.0	72.2	54.7	49.7	49.9
10	65.0	71.1	52.8	47.8	48.0
16	61.5	67.0	48.7	43.7	43.9
20	60.6	65.3	46.7	41.8	42.0
25	58.9	63.7	44.8	39.8	40.0
31.25	57.9	62.4	42.9	37.9	38.1
62.5	51.2	58.1	36.8	31.9	32.1
100	45.3	51.8	32.8	27.8	28.0
250	31.1	40.8	24.8	19.8	20.0
350	25.9	41.8	21.9		
550	20.6	41.4			
Limit Margin (dB) :			3.59	11.28	11.08
Frequency (MHz) :			343.25	249.84	249.84



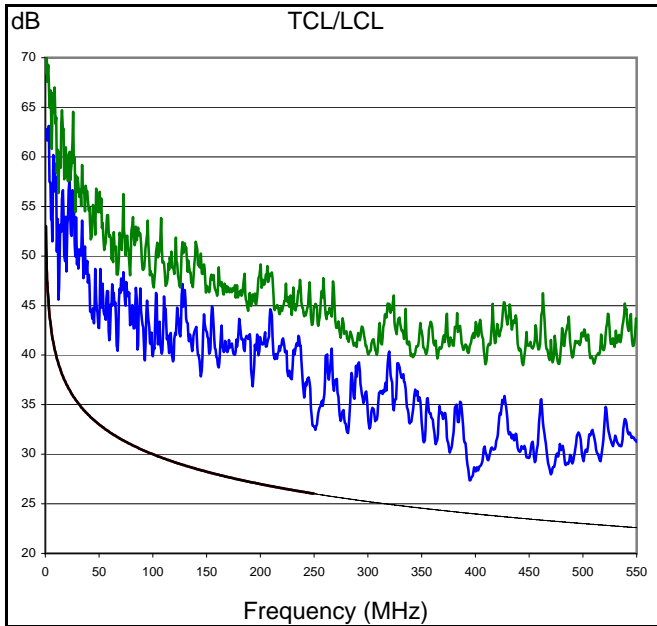
PSELFEXT / PSACRF					
Freq. MHz	Worst Case	Average	LANmark Spec	TIA Spec	ISO/IEC Spec
1	81.0	83.1	69.8	64.8	N/A
4	71.0	73.0	57.7	52.8	53.0
8	64.3	66.3	51.7	46.7	46.9
10	62.2	64.7	49.8	44.8	45.0
16	58.6	60.8	45.7	40.7	40.9
20	57.3	59.5	43.7	38.8	39.0
25	55.7	57.9	41.8	36.8	37.0
31.25	54.7	56.8	39.9	34.9	35.1
62.5	50.0	52.1	33.8	28.9	29.1
100	43.3	45.7	29.8	24.8	25.0
250	30.8	33.7	21.8	16.8	17.0
350	26.0	30.3	18.9		
550	20.2	29.1			
Limit Margin (dB) :			6.67	13.31	13.11
Frequency (MHz) :			343.25	231.98	231.98

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

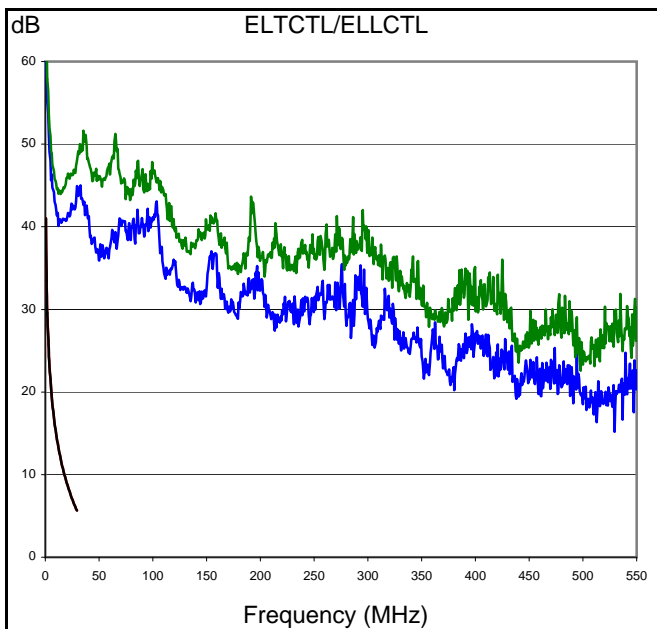
Summary

Client Berk-Tek LLC
Specifications Berk-Tek LANmark-1000
 ANSI/TIA-568-C.2, Category 6
 ISO/IEC 11801, Category 6
Part Number 10032476
Description **Berk-Tek LANmark-1000 CMR**
 4X23 UTP-CMR-Solid

Test Started 12/13/2013 7:30
Technician System Default
Report No. 100283649CRT-028e
Length (m) 100
Temperature 20 °C
Test Status **PASS**



TCL/LCL					
Freq. MHz	Worst Case	Average	LANmark Spec	TIA Spec	ISO/IEC Spec
1	62.8	70.8	50.0	40.0	50.0
4	57.5	65.0	44.0	40.0	44.0
8	56.5	64.5	41.0	40.0	41.0
10	57.9	64.0	40.0	40.0	40.0
16	56.6	62.7	38.0	38.0	38.0
20	48.4	58.3	37.0	37.0	37.0
25	56.6	61.6	36.0	36.0	36.0
31.25	50.2	56.0	35.1	35.1	35.1
62.5	45.0	49.7	32.0	32.0	32.0
100	39.9	47.2	30.0	30.0	30.0
250	32.8	44.8	26.0	26.0	26.0
350	34.4	42.6			
550	31.2	42.8			
Limit Margin (dB) :			6.44	6.44	6.44
Frequency (MHz) :			12.18	12.18	12.18



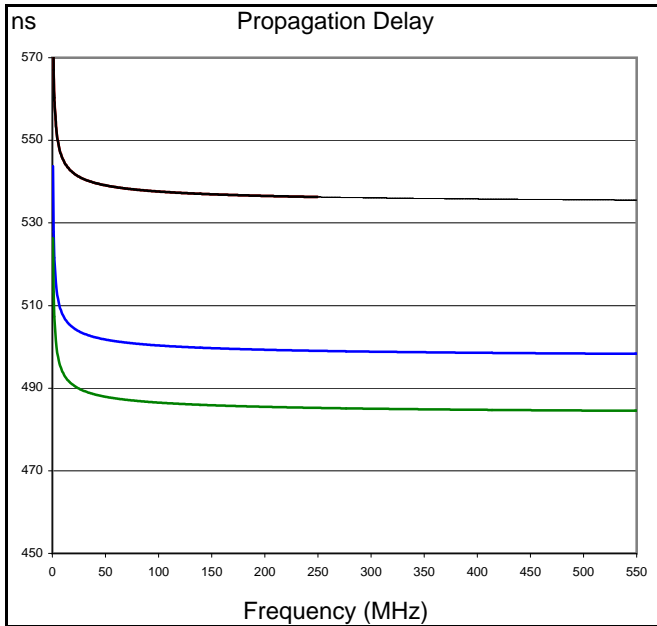
ELTCTL/ELLCTL					
Freq. MHz	Worst Case	Average	LANmark Spec	TIA Spec	ISO/IEC Spec
1	58.6	62.4	35.0	35.0	35.0
4	49.1	51.9	23.0	23.0	23.0
8	44.2	46.7	16.9	16.9	16.9
10	42.1	45.2	15.0	15.0	15.0
16	41.0	44.5	10.9	10.9	10.9
20	40.8	45.9	9.0	9.0	9.0
25	42.1	46.3	7.0	7.0	7.0
31.25	44.4	48.8			
62.5	38.7	48.0			
100	41.2	46.4			
250	29.7	37.3			
350	26.4	32.0			
550	22.6	30.3			
Limit Margin (dB) :			25.14	25.14	25.14
Frequency (MHz) :			1.19	1.19	1.19

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

Summary

Client Berk-Tek LLC
Specifications Berk-Tek LANmark-1000
 ANSI/TIA-568-C.2, Category 6
 ISO/IEC 11801, Category 6
Part Number 10032476
Description **Berk-Tek LANmark-1000 CMR**
 4X23 UTP-CMR-Solid

Test Started 12/13/2013 7:30
Technician System Default
Report No. 100283649CRT-028e
Length (m) 100
Temperature 20 °C
Test Status **PASS**



Propagation Delay					
Freq. MHz	Worst Case	Average	LANmark Spec	TIA Spec	ISO/IEC Spec
1	527.9	513.3	570.0	570.0	N/A
4	513.9	499.9	552.0	552.0	552.0
8	508.8	494.9	546.7	546.7	546.7
10	507.6	493.7	545.4	545.4	545.4
16	505.4	491.5	543.0	543.0	543.0
20	504.6	490.7	542.0	542.0	542.0
25	503.7	489.9	541.2	541.2	541.2
31.25	503.0	489.2	540.4	540.4	540.4
62.5	501.3	487.4	538.6	538.6	538.6
100	500.3	486.5	537.6	537.6	537.6
250	499.0	485.2	536.3	536.3	536.3
350	498.7	484.9			
550	498.3	484.5			
Limit Margin (dB) :			37.23	37.24	37.24
Frequency (MHz) :			227.17	227.17	227.17

Delay Skew				
Freq. MHz	Worst case	LANmark Spec	TIA Spec	ISO/IEC Spec
1-250	26.40	35	45	45

Low frequency measurements								
Parameter	Worst Case	Average	LANmark		TIA		ISO/IEC	
			Spec	Margin	Spec	Margin	Spec	Margin
Mutual capacitance (nF/100m)	4.82	3.47	5.60	0.78	5.60	0.78	N/A	N/A
Maximum Capacitance Unbalance Pair-to-Ground (pF/100m)	43.08	15.24	160.00	116.92	330.00	286.92	160.00	116.92
Conductor DC resistance (Ω)	7.47	5.56	9.38	1.91	9.38	1.91	9.50	2.03
DC Resistance Unbalance within a pair (%) using IEC calculation method	0.19%	6.72E-04	1.50%	1.31%	2.50%	2.31%	2.00%	1.81%

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