

Berk-Tek LLC

LETTER REPORT

SCOPE OF WORK

ETL Verification final qualification testing of a 100 Ω , 4-pair telecommunication cable electrical transmission performance to the requirements of ANSI/TIA-568.2-D and LM-RDT specifications for Category 6A horizontal cable.

REPORT NUMBER

104773926CRT-002

ISSUE DATE

29-September-2021

REVISED DATE

10-June-2022

TESTS START DATE

23-September-2021

TESTS END DATE

28-September-2021

PAGES

4

DOCUMENT CONTROL NUMBER

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LETTER REPORT

10-June-2022

Intertek Report No. 104773926CRT-002

Intertek Project No. G104773926

Ms. Karen Fox
Berk-Tek LLC
132 White Oak Rd
New Holland, PA 17557

Subject: Final qualification testing of Category 6A cable per ANSI/TIA-568.2-D and LM-RDT

Dear Ms. Fox:

This letter report represents the results of our evaluation of the above referenced product to the requirements contained in the following document(s):

ANSI/TIA-568.2-D-2018, Balanced Twisted-Pair Telecommunications Cabling and Components Standard, dated September 2018

ANSI/TIA-568.2-D-2-2020, Balanced Twisted-Pair Telecommunications Cabling and Components Standard Addendum 2: Power Delivery Over Balanced Twisted-Pair Cabling, dated August 2020

LM-RDT specification, CAT6A, CMP, UTP revision A dated 15-December-2021

SECTION 1 SUMMARY

Intertek wishes to inform you that the electrical transmission tests have been performed on your cable. This testing was performed under project G104773926 and quotation Qu-01192053-2 issued 27-July-2021. Compliant results were obtained for the relevant tests contained in ANSI/TIA-568.2-D section 6.6 and LM-RDT section 3 for horizontal cable transmission performance.

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SECTION 2
NON-CONFORMANCES

None

SECTION 3
TESTING

The tables below represent a summary of the tests and results. The detailed test data is enclosed to this letter report.

Test description	Result	ANSI/TIA-568.2-D section	LM-RDT section
DC Resistance	Compliant	6.6.1	Electrical characteristics
DC Resistance unbalance	Compliant	6.6.2	
DC Resistance unbalance pair-to-pair	Compliant	6.6.3	NA
Mutual capacitance	Compliant	6.6.4	Electrical characteristics
Capacitance unbalance: pair-to-ground	Compliant	6.6.5	
Characteristic impedance and SRL	Not specified	6.6.6	NA
Return loss	Compliant	6.6.7	Electrical characteristics
Insertion loss	Compliant	6.6.8	
NEXT loss	Compliant	6.6.9	
PSNEXT loss	Compliant	6.6.10	
ACRF (ELFEXT)	Compliant	6.6.12	
PSACRF (PSELFEXT)	Compliant	6.6.14	
TCL	Compliant	6.6.15	
ELTCTL	Compliant	6.6.17	
Coupling Attenuation	Not applicable	6.6.18	NA
Propagation Delay	Compliant	6.6.19	Electrical characteristics
Propagation Delay skew	Compliant	6.6.21	
Surface transfer impedance	Not applicable	6.6.23	NA
PSANEXT	Compliant	6.6.25	Electrical characteristics
PSAACRF	Compliant	6.6.29	

Test equipment used	Model number	Control number	Calibration due date
Keysight Network Analyzer	E5080A	J387	25-February-2022
Keysight Network Analyzer	E5071C	R172	24-May-2022
Keysight LCR Meter	4263B	N967	16-December-2021
Environmental chamber	Bally	3069	NCR
Hioki Humidity/Temperature Logger	LR8514	I082/I083	14-September-2022

SECTION 4

SAMPLE DESCRIPTION

The client submitted a Category 6A, 4-Pair, 23 AWG, U/UTP, CMP, horizontal (solid) cable identified as part number LM-RDT.

The sample was received on 20-September-2021 and was a production sample in undamaged condition.

SECTION 5

PROJECT STATUS & ACTION

Issuance of this letter report completes the final qualification testing of this cable electrical transmission performance per ANSI/TIA-568.2-D and LM-RDT requirements covered by Intertek Project No. G104773926 and quotation Qu-01192053-2. The test results are compliant with the requirements of the standard(s) and sections referred to on pages 2 and 3. The testing was performed at Intertek located in Cortland, NY.

If there are any questions regarding the results contained in this report, or any of the other services offered by Intertek, please do not hesitate to contact your dedicated Intertek Project Manager.

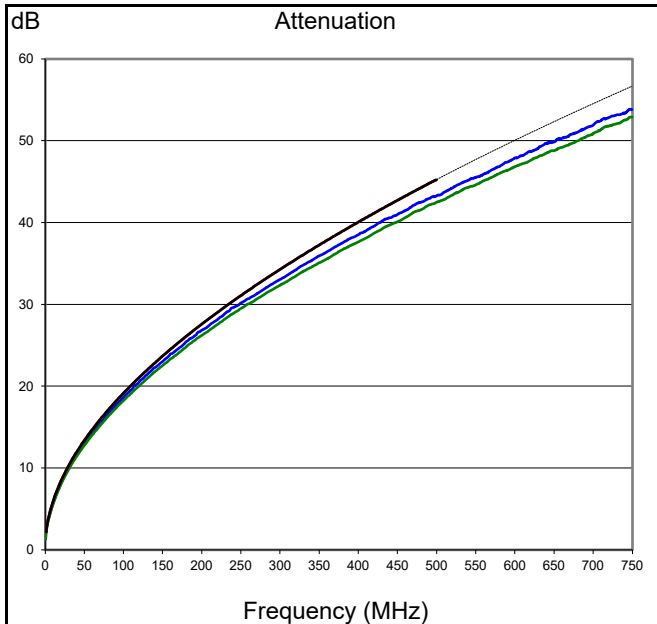
Completed by:	David Ayers	Reviewed by:	Antoine Pelletier
Title:	Technician	Title:	Project Engineer
Signature:		Signature:	
Date:	10-June-2022	Date:	10-June-2022

Please note: this Letter Report does not represent authorization for the use of any Intertek certification marks.

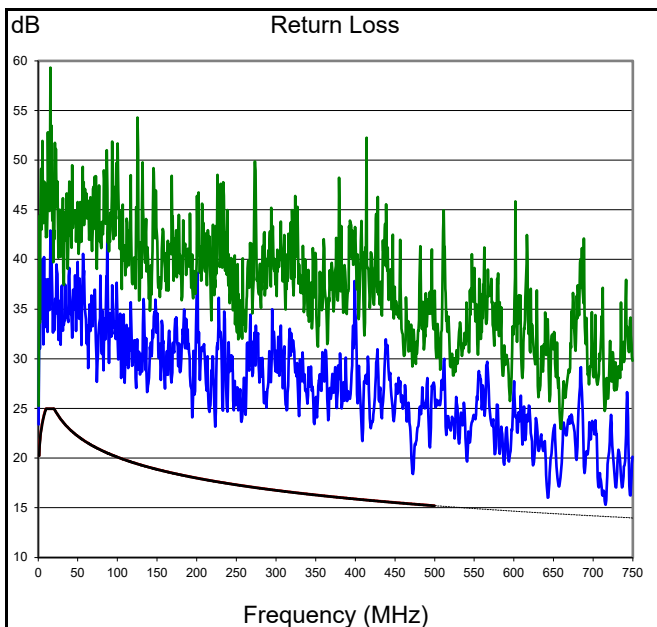
Summary

Client Berk-Tek LLC
Specifications LM-RDT
 ANSI/TIA-568.2-D, Category 6A
Part Number 11141650
Description Leviton LM-RDT CMP
 4X23 U/UTP-CMP-Solid

Test Started 9/23/2021 9:04
Technician Craig Williams
Report No. 104773926CRT-002
Length (m) 100
Temperature 19.9 °C
Test Status **PASS**



Attenuation				
Freq. MHz	Worst Case	Average	LM-RDT Spec	TIA Spec
1	2.0	2.0	2.1	2.1
4	3.7	3.6	3.8	3.8
8	5.1	5.0	5.3	5.3
10	5.6	5.5	5.9	5.9
16	7.2	7.1	7.5	7.5
20	8.0	7.9	8.4	8.4
25	9.0	8.9	9.4	9.4
31.25	9.5	9.4	10.5	10.5
62.5	14.6	14.3	15.0	15.0
100	18.6	18.2	19.1	19.1
250	30.1	29.5	31.1	31.1
500	43.2	42.5	45.3	45.3
600	47.9	46.8		
750	53.8	52.9		
Limit Margin (dB) :			0.16	0.16
Frequency (MHz) :			1.75	1.75



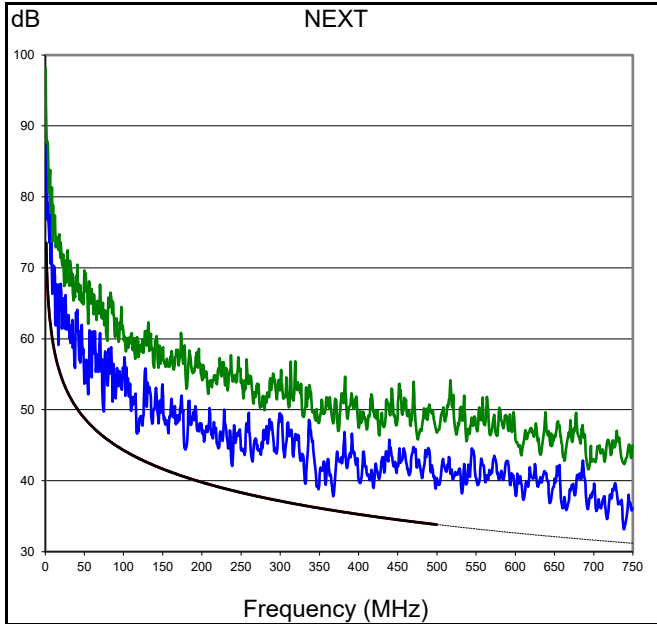
Return Loss				
Freq. MHz	Worst Case	Average	LM-RDT Spec	TIA Spec
1	28.4	31.0	20.0	20.0
4	34.1	43.0	23.0	23.0
8	34.2	44.8	24.5	24.5
10	38.0	42.2	25.0	25.0
16	39.0	45.8	25.0	25.0
20	34.9	43.0	25.0	25.0
25	36.0	45.0	24.3	24.3
31.25	34.9	45.0	23.6	23.6
62.5	33.3	46.0	21.5	21.5
100	34.8	45.2	20.1	20.1
250	26.5	33.8	17.3	17.3
500	27.2	34.8	15.2	15.2
600	27.7	33.4		
750	20.1	29.8		
Limit Margin (dB) :			3.02	3.02
Frequency (MHz) :			472.76	472.76

Legend : Blue - Worst Case; Green - Average; Red - TIA Specification; Black - LM-RDT Specification

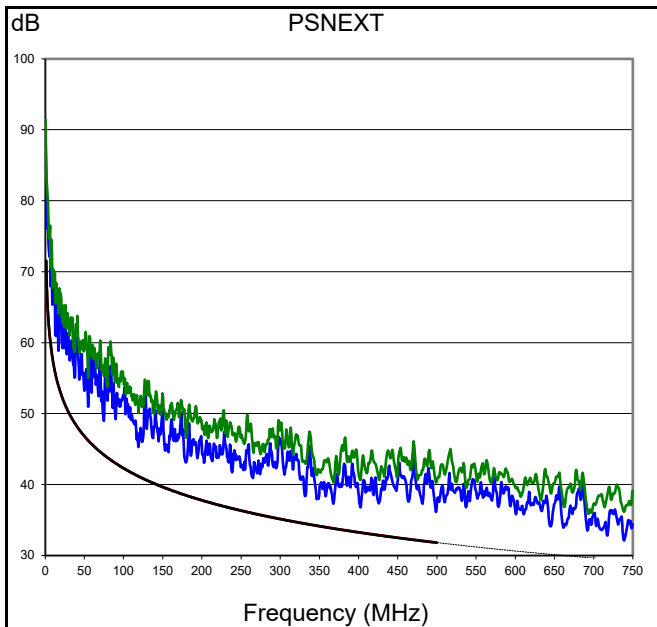
Summary

Client Berk-Tek LLC
Specifications LM-RDT
 ANSI/TIA-568.2-D, Category 6A
Part Number 11141650
Description Leviton LM-RDT CMP
 4X23 U/UTP-CMP-Solid

Test Started 9/23/2021 9:04
Technician Craig Williams
Report No. 104773926CRT-002
Length (m) 100
Temperature 19.9 °C
Test Status **PASS**



NEXT				
Freq. MHz	Worst Case	Average	LM-RDT Spec	TIA Spec
1	87.4	92.8	74.3	74.3
4	76.4	82.7	65.3	65.3
8	74.1	81.1	60.8	60.8
10	70.3	78.9	59.3	59.3
16	63.2	73.7	56.2	56.2
20	67.7	73.6	54.8	54.8
25	61.5	69.0	53.3	53.3
31.25	61.3	69.0	51.9	51.9
62.5	58.5	66.2	47.4	47.4
100	55.8	60.9	44.3	44.3
250	44.5	53.8	38.3	38.3
500	40.3	46.8	33.8	33.8
600	38.2	45.8		
750	36.1	44.9		
Limit Margin (dB) :			1.99	1.99
Frequency (MHz) :			367.82	367.82



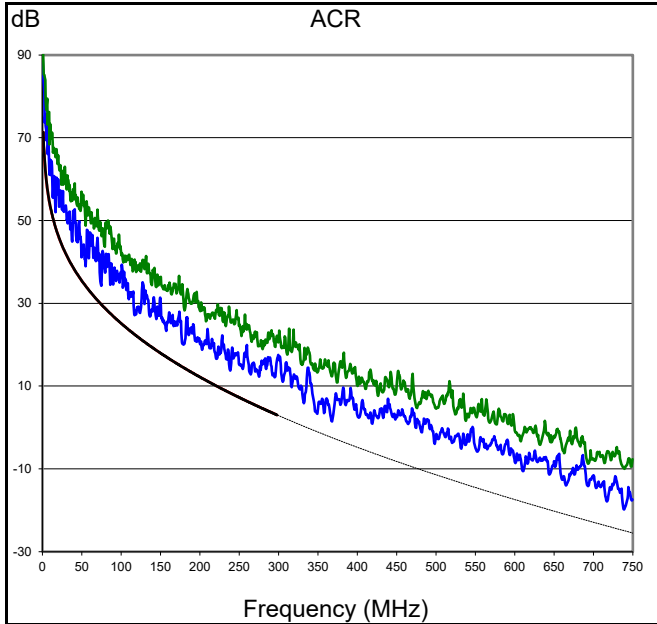
PSNEXT				
Freq. MHz	Worst Case	Average	LM-RDT Spec	TIA Spec
1	84.9	87.1	72.3	72.3
4	73.9	76.8	63.3	63.3
8	71.4	74.5	58.8	58.8
10	68.3	70.4	57.3	57.3
16	62.2	67.1	54.2	54.2
20	65.1	66.9	52.8	52.8
25	59.6	62.2	51.3	51.3
31.25	58.3	62.0	49.9	49.9
62.5	55.1	57.7	45.4	45.4
100	52.6	55.0	42.3	42.3
250	42.4	46.6	36.3	36.3
500	36.7	40.4	31.8	31.8
600	36.1	39.6		
750	34.4	39.1		
Limit Margin (dB) :			3.47	3.47
Frequency (MHz) :			367.82	367.82

Legend : Blue - Worst Case; Green - Average; Red - TIA Specification; Black - LM-RDT Specification

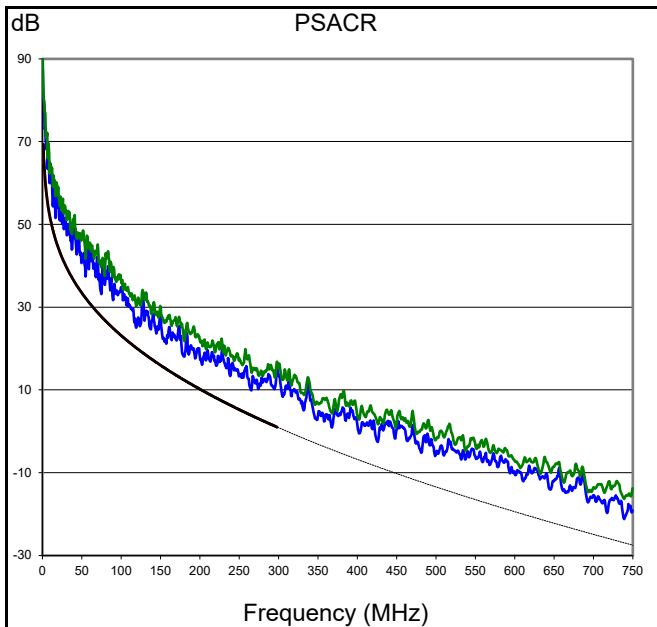
Summary

Client Berk-Tek LLC
Specifications LM-RDT
 ANSI/TIA-568.2-D, Category 6A
Part Number 11141650
Description Leviton LM-RDT CMP
 4X23 U/UTP-CMP-Solid

Test Started 9/23/2021 9:04
Technician Craig Williams
Report No. 104773926CRT-002
Length (m) 100
Temperature 19.9 °C
Test Status **PASS**



ACR				
Freq. MHz	Worst Case	Average	LM-RDT Spec	TIA Spec
1	85.4	90.8	72.2	72.2
4	72.9	79.0	61.5	61.5
8	69.2	76.1	55.4	55.4
10	64.7	73.4	53.4	53.4
16	56.2	66.7	48.8	48.8
20	60.0	65.8	46.4	46.4
25	52.7	60.1	44.0	44.0
31.25	52.1	59.7	41.4	41.4
62.5	44.1	52.0	32.4	32.4
100	37.4	42.8	25.2	25.2
250	15.4	24.5	7.3	7.3
500	-2.5	4.6		
600	-8.3	-0.7		
750	-17.4	-7.7		
Limit Margin (dB) :			3.70	3.70
Frequency (MHz) :			16.74	16.74



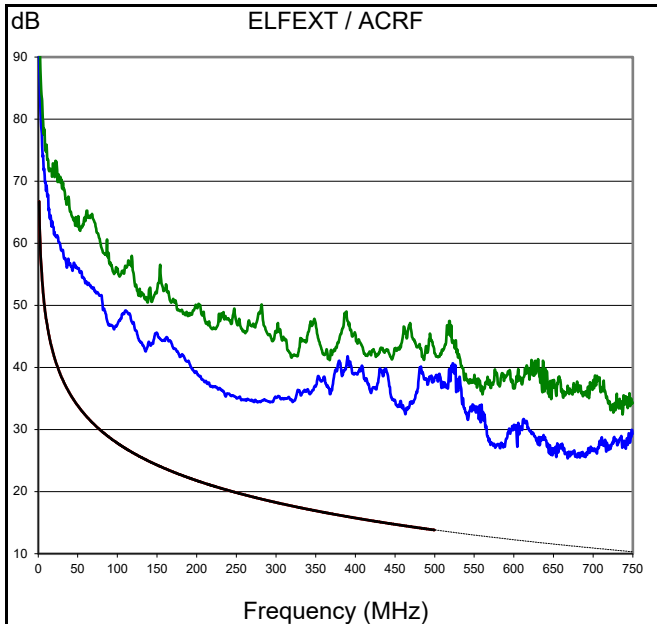
PSACR				
Freq. MHz	Worst Case	Average	LM-RDT Spec	TIA Spec
1	82.9	85.2	70.2	70.2
4	70.3	73.2	59.5	59.5
8	66.4	69.5	53.4	53.4
10	62.6	64.9	51.4	51.4
16	55.2	60.0	46.8	46.8
20	57.0	59.0	44.4	44.4
25	50.6	53.3	42.0	42.0
31.25	48.8	52.6	39.4	39.4
62.5	41.1	43.4	30.4	30.4
100	34.7	36.8	23.2	23.2
250	13.3	17.1	5.3	5.3
500	-5.7	-2.1		
600	-10.3	-7.2		
750	-19.1	-13.8		
Limit Margin (dB) :			4.82	4.82
Frequency (MHz) :			119.19	119.19

Legend : Blue - Worst Case; Green - Average; Red - TIA Specification; Black - LM-RDT Specification

Summary

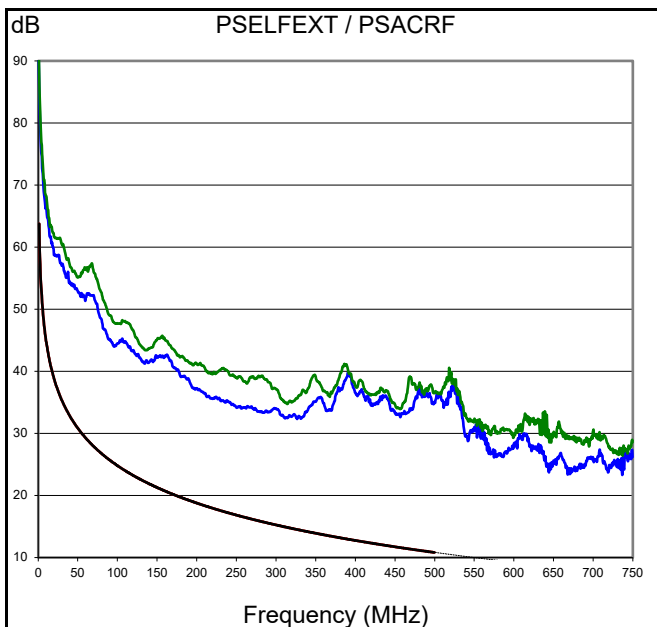
Client Berk-Tek LLC
Specifications LM-RDT
 ANSI/TIA-568.2-D, Category 6A
Part Number 11141650
Description Leviton LM-RDT CMP
 4X23 U/UTP-CMP-Solid

Test Started 9/23/2021 9:04
Technician Craig Williams
Report No. 104773926CRT-002
Length (m) 100
Temperature 19.9 °C
Test Status **PASS**



ELFEXT / ACRF				
Freq. MHz	Worst Case	Average	LM-RDT Spec	TIA Spec
1	89.2	93.5	67.8	67.8
4	77.7	83.5	55.8	55.8
8	70.9	77.7	49.7	49.7
10	68.5	74.8	47.8	47.8
16	63.8	71.8	43.7	43.7
20	61.5	71.8	41.8	41.8
25	60.9	70.5	39.8	39.8
31.25	59.9	70.3	37.9	37.9
62.5	53.3	64.1	31.9	31.9
100	46.9	56.0	27.8	27.8
250	35.1	47.4	19.8	19.8
500	38.4	42.3	13.8	13.8
600	30.8	36.7		
750	29.3	34.2		

Limit Margin (dB) : 15.01 15.01
 Frequency (MHz) : 236.63 236.63



PSELFEXT / PSACRF				
Freq. MHz	Worst Case	Average	LM-RDT Spec	TIA Spec
1	85.3	87.6	64.8	64.8
4	74.7	76.4	52.8	52.8
8	67.7	70.2	46.7	46.7
10	66.7	68.3	44.8	44.8
16	61.3	63.3	40.7	40.7
20	58.7	61.7	38.8	38.8
25	58.5	61.4	36.8	36.8
31.25	57.6	61.5	34.9	34.9
62.5	52.4	56.1	28.9	28.9
100	44.5	47.7	24.8	24.8
250	34.2	39.0	16.8	16.8
500	35.1	36.5	10.8	10.8
600	28.5	29.9		
750	26.2	28.6		

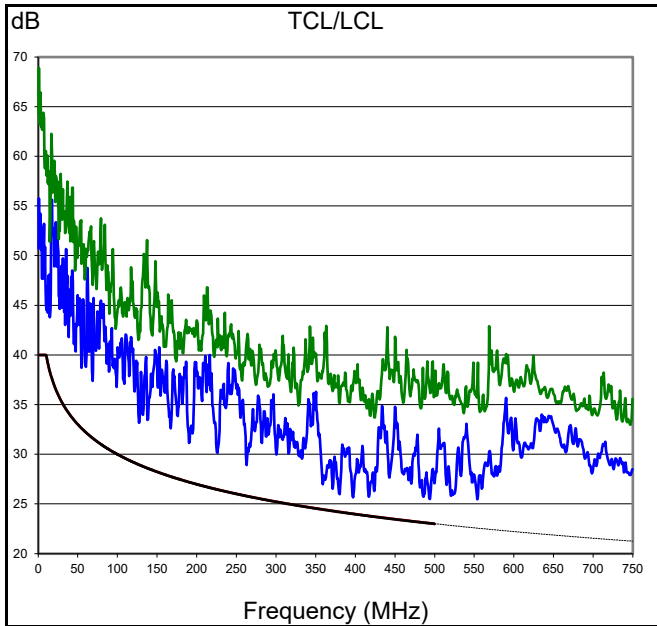
Limit Margin (dB) : 17.30 17.30
 Frequency (MHz) : 250.38 250.38

Legend : Blue - Worst Case; Green - Average; Red - TIA Specification; Black - LM-RDT Specification

Summary

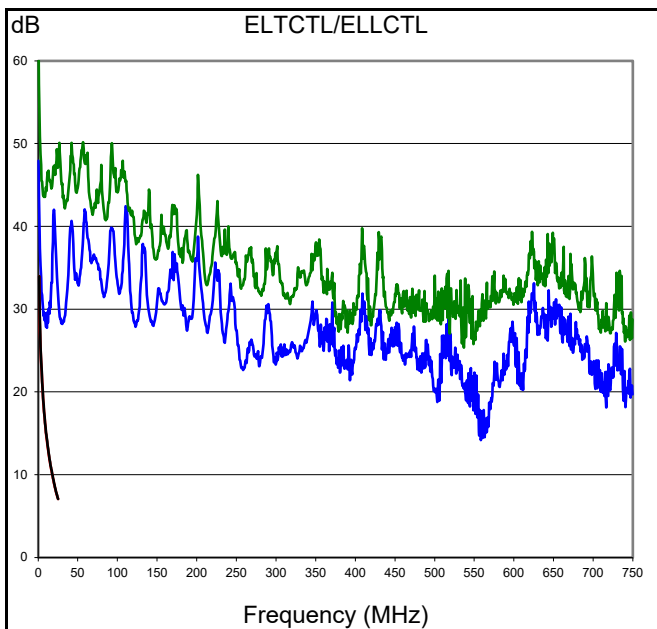
Client Berk-Tek LLC
Specifications LM-RDT
 ANSI/TIA-568.2-D, Category 6A
Part Number 11141650
Description Leviton LM-RDT CMP
 4X23 U/UTP-CMP-Solid

Test Started 9/23/2021 9:04
Technician Craig Williams
Report No. 104773926CRT-002
Length (m) 100
Temperature 19.9 °C
Test Status **PASS**



TCL/LCL				
Freq. MHz	Worst Case	Average	LM-RDT Spec	TIA Spec
1	55.8	68.9	40.0	40.0
4	52.9	63.9	40.0	40.0
8	47.7	60.1	40.0	40.0
10	45.1	60.5	40.0	40.0
16	46.2	57.0	38.0	38.0
20	52.0	57.7	37.0	37.0
25	51.0	55.6	36.0	36.0
31.25	44.6	52.5	35.1	35.1
62.5	48.8	50.6	32.0	32.0
100	38.8	44.3	30.0	30.0
250	37.0	39.9	26.0	26.0
500	27.1	35.9	23.0	23.0
600	31.3	36.3		
750	28.5	35.6		

Limit Margin (dB) : 1.64 1.64
 Frequency (MHz) : 397.18 397.18



ELTCTL/ELLCTL				
Freq. MHz	Worst Case	Average	LM-RDT Spec	TIA Spec
1	43.8	57.2	35.0	35.0
4	32.1	45.5	23.0	23.0
8	28.7	43.7	16.9	16.9
10	27.8	44.7	15.0	15.0
16	31.3	45.2	10.9	10.9
20	42.0	47.3	9.0	9.0
25	32.1	47.1	7.0	7.0
31.25	29.1	49.0		
62.5	38.6	48.9		
100	33.5	44.4		
250	27.5	35.7		
500	20.2	31.2		
600	25.6	31.4		
750	19.7	28.7		

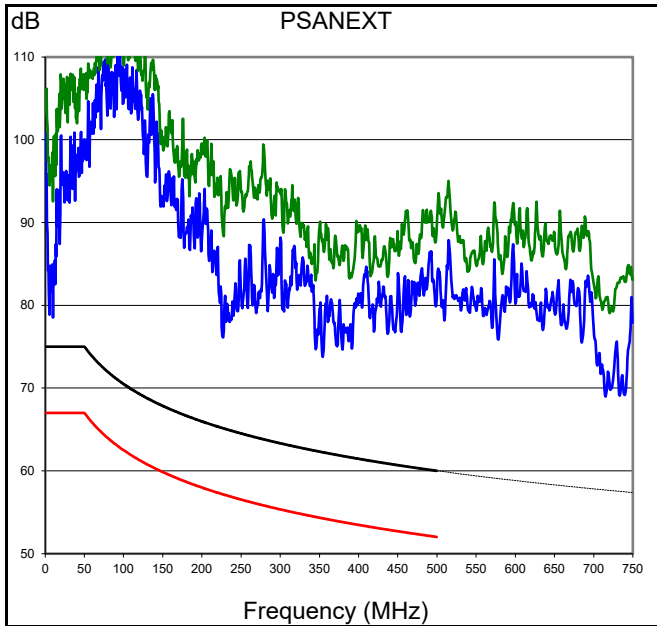
Limit Margin (dB) : 9.43 9.43
 Frequency (MHz) : 1.75 1.75

Legend : Blue - Worst Case; Green - Average; Red - TIA Specification; Black - LM-RDT Specification

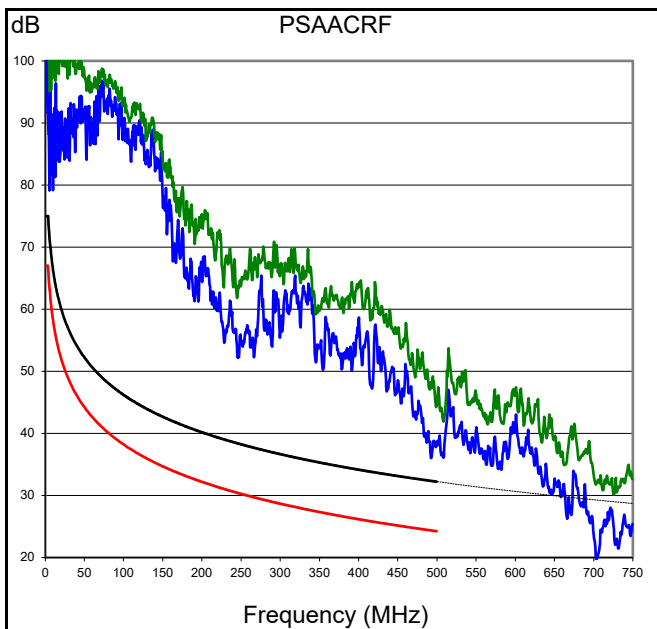
Summary

Client Berk-Tek LLC
Specifications LM-RDT
 ANSI/TIA-568.2-D, Category 6A
Part Number 11141650
Description Leviton LM-RDT CMP
 4X23 U/UTP-CMP-Solid

Test Started 9/23/2021 9:04
Technician Craig Williams
Report No. 104773926CRT-002
Length (m) 100
Temperature 19.9 °C
Test Status **PASS**



PSANEXT				
Freq. MHz	Worst Case	Average	LM-RDT Spec	TIA Spec
1	94.5	104.9	75.0	67.0
4	84.4	97.9	75.0	67.0
8	82.0	95.8	75.0	67.0
10	78.5	92.5	75.0	67.0
16	92.5	101.0	75.0	67.0
20	100.4	107.9	75.0	67.0
25	92.5	106.6	75.0	67.0
31.25	95.9	105.2	75.0	67.0
62.5	102.2	108.6	73.6	65.6
100	104.4	109.3	70.5	62.5
250	81.3	93.9	64.5	56.5
500	80.7	89.1	60.0	52.0
600	80.2	90.1		
750	77.9	83.1		
Limit Margin (dB) :			3.53	11.53
Frequency (MHz) :			9.87	9.87

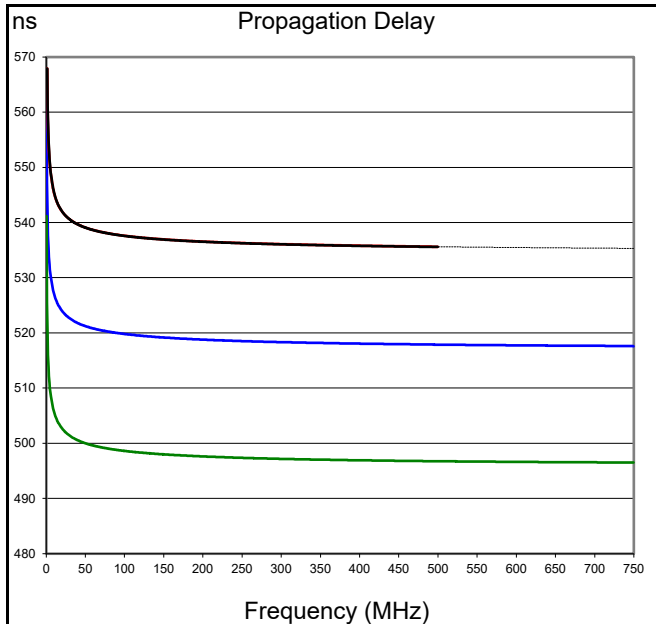


PSAACRF				
Freq. MHz	Worst Case	Average	LM-RDT Spec	TIA Spec
1	93.4	103.9	75.0	67.0
4	88.2	101.4	74.2	66.2
8	91.4	103.9	68.1	60.1
10	79.2	97.3	66.2	58.2
16	90.9	102.0	62.1	54.1
20	89.3	102.3	60.2	52.2
25	84.1	99.1	58.2	50.2
31.25	86.9	98.9	56.3	48.3
62.5	87.9	96.1	50.3	42.3
100	89.6	93.1	46.2	38.2
250	54.7	63.7	38.2	30.2
500	38.7	44.4	32.2	24.2
600	40.9	47.0		
750	25.4	32.6		
Limit Margin (dB) :			3.66	11.66
Frequency (MHz) :			492.13	492.13

Legend : Blue - Worst Case; Green - Average; Red - TIA Specification; Black - LM-RDT Specification

Summary

Client	Berk-Tek LLC	Test Started	9/23/2021 9:04
Specifications	LM-RDT ANSI/TIA-568.2-D, Category 6A	Technician	Craig Williams
Part Number	11141650	Report No.	104773926CRT-002
Description	Leviton LM-RDT CMP 4X23 U/UTP-CMP-Solid	Length (m)	100
		Temperature	19.9 °C
		Test Status	PASS



Propagation Delay				
Freq. MHz	Worst Case	Average	LM-RDT Spec	TIA Spec
1	547.2	525.5	570.0	570.0
4	532.4	510.9	552.0	552.0
8	528.3	506.8	546.7	546.7
10	527.1	505.8	545.4	545.4
16	524.9	503.6	543.0	543.0
20	524.1	502.8	542.0	542.0
25	523.3	502.0	541.2	541.2
31.25	522.9	501.7	540.4	540.4
62.5	520.7	499.5	538.6	538.6
100	519.8	498.6	537.6	537.6
250	518.5	497.4	536.3	536.3
500	517.9	496.7	535.6	535.6
600	517.8	496.6		
750	517.6	496.5		
Limit Margin (dB) :			17.73	17.73
Frequency (MHz) :			464.02	464.02

Delay Skew			
Freq. MHz	Worst case	LM-RDT Spec	TIA Spec
1-500	39.71	45	45

Low frequency measurements						
Parameter	Worst Case	Average	LM-RDT		TIA	
			Spec	Margin	Spec	Margin
Mutual capacitance (nF/100m)	4.94	4.75	5.10	0.16	5.60	0.66
Maximum Capacitance Unbalance Pair-to-Ground (pF/100m)	49.86	17.95	330.00	280.14	330.00	280.14
Conductor DC resistance (Ω)	7.78	7.45	9.38	1.60	9.38	1.60
DC Resistance Unbalance within a pair (%) using IEC calculation method	1.00%	0.36%	2.00%	1.00%	2.00%	1.00%

Legend : Blue - Worst Case; Green - Average; Red - TIA Specification; Black - LM-RDT Specification



Insertion Loss

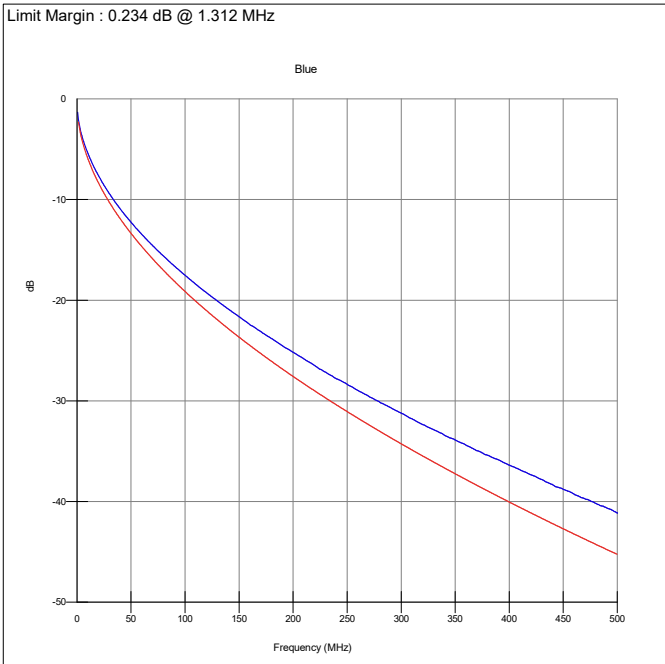
Client	Berk-Tek	Report No	104773926CRT-002@40C
Specification	Berk-Tek LM-RDT		
Part No	11141650	Length(m)	100.
Test Started	9/23/2021 1:51:11 PM	Temperature	40 °C
Description	4 Pair 23 AWG UTP CMP Solid		
Operator Name	David Ayers	Test Status	Complies

Insertion Loss (dB)					
Freq (MHz)	Limit	Blue	Orange	Green	Brown
1.	-2.11	-1.79	-1.72	-1.77	-1.74
4.	-3.80	-3.46	-3.30	-3.41	-3.35
8.	-5.31	-4.82	-4.60	-4.76	-4.67
10.	-5.92	-5.38	-5.13	-5.31	-5.21
16.	-7.49	-6.82	-6.50	-6.74	-6.60
20.	-8.38	-7.65	-7.30	-7.55	-7.40
25.	-9.38	-8.58	-8.19	-8.47	-8.31
31.25	-10.50	-9.63	-9.20	-9.51	-9.34
62.5	-14.99	-13.75	-13.16	-13.60	-13.35
100.	-19.14	-17.52	-16.78	-17.33	-17.01
155.	-24.09	-22.02	-21.09	-21.78	-21.37
200.	-27.58	-25.18	-24.11	-24.89	-24.43
250.	-31.07	-28.36	-27.12	-28.03	-27.51
300.	-34.27	-31.21	-29.88	-30.89	-30.32
350.	-37.25	-33.89	-32.46	-33.54	-32.93
400.	-40.05	-36.38	-34.88	-35.99	-35.36
450.	-42.71	-38.78	-37.25	-38.34	-37.73
500.	-45.25	-41.14	-39.43	-40.60	-39.84

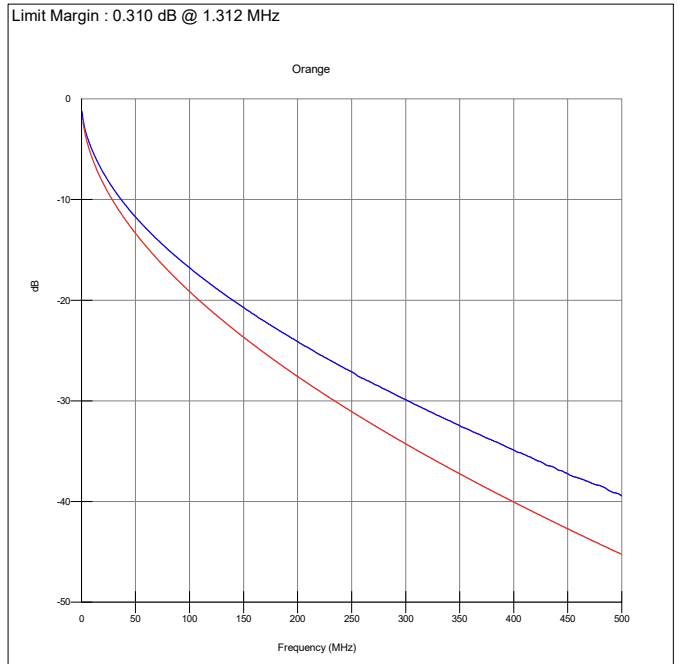
Insertion Loss

Client	Berk-Tek	Report No	104773926CRT-002@40C
Specification	Berk-Tek LM-RDT	Length(m)	100.
Part No	11141650	Temperature	40 °C
Test Started	9/23/2021 1:51:11 PM	Test Status	Complies
Description	4 Pair 23 AWG UTP CMP Solid		
Operator Name	David Ayers		

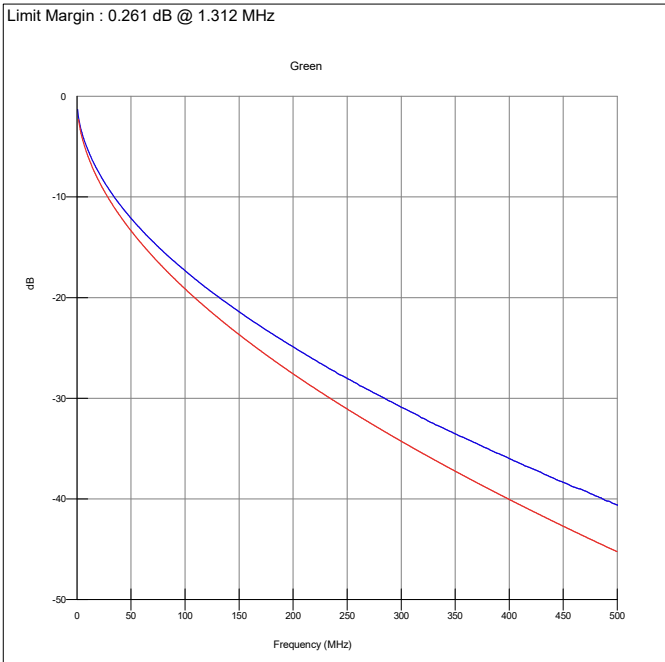
Limit Margin : 0.234 dB @ 1.312 MHz



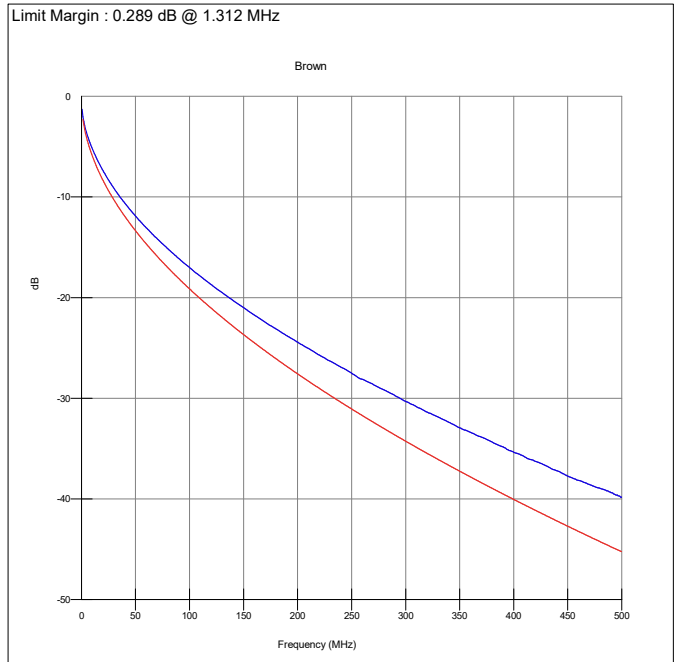
Limit Margin : 0.310 dB @ 1.312 MHz



Limit Margin : 0.261 dB @ 1.312 MHz

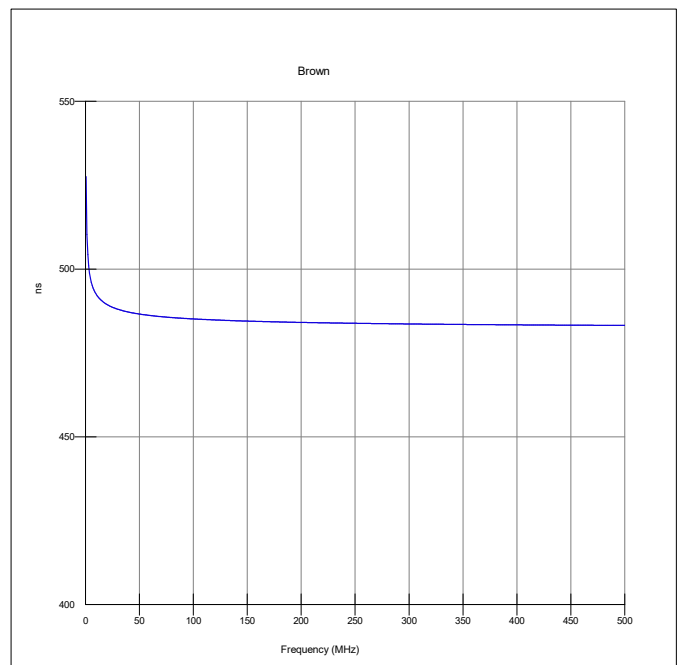
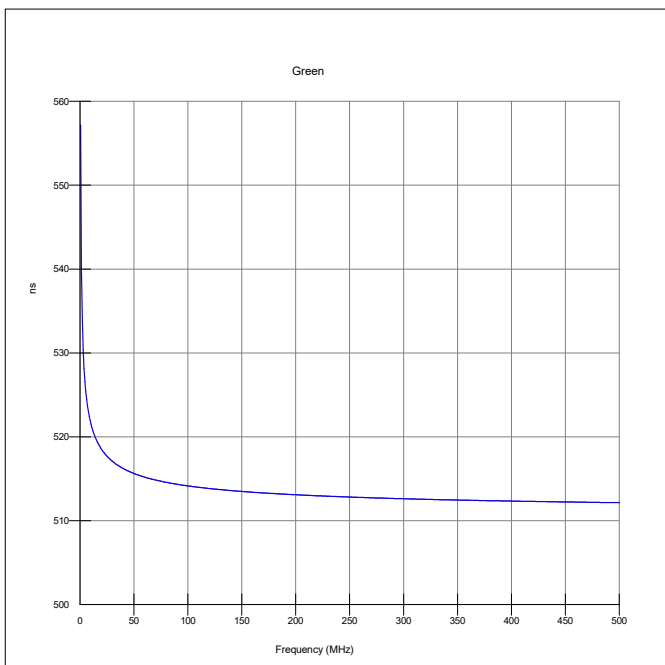
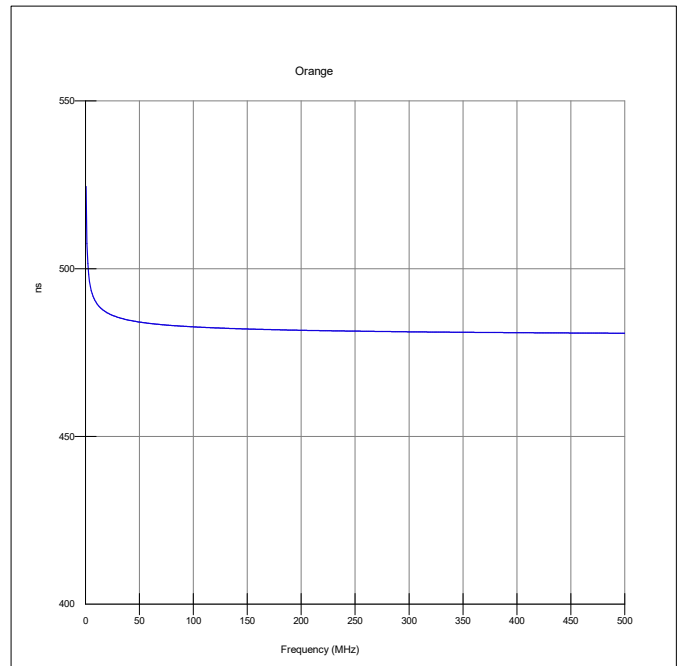
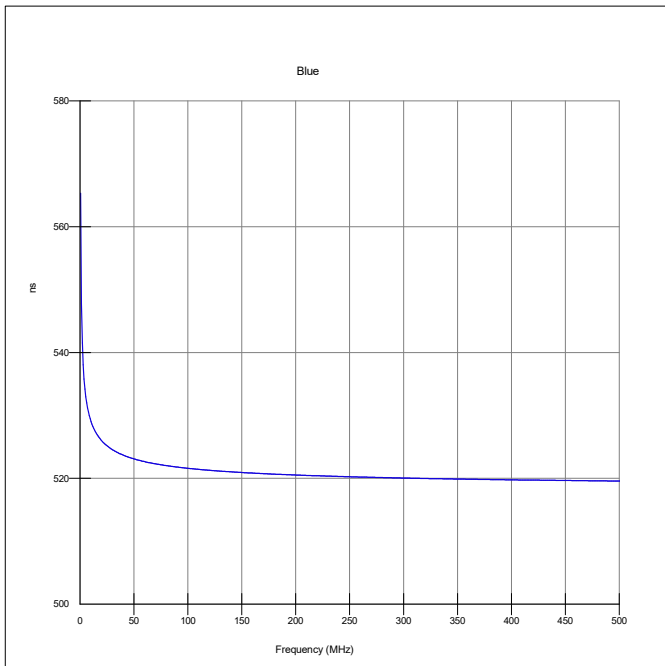


Limit Margin : 0.289 dB @ 1.312 MHz



Propagation Delay - Near End

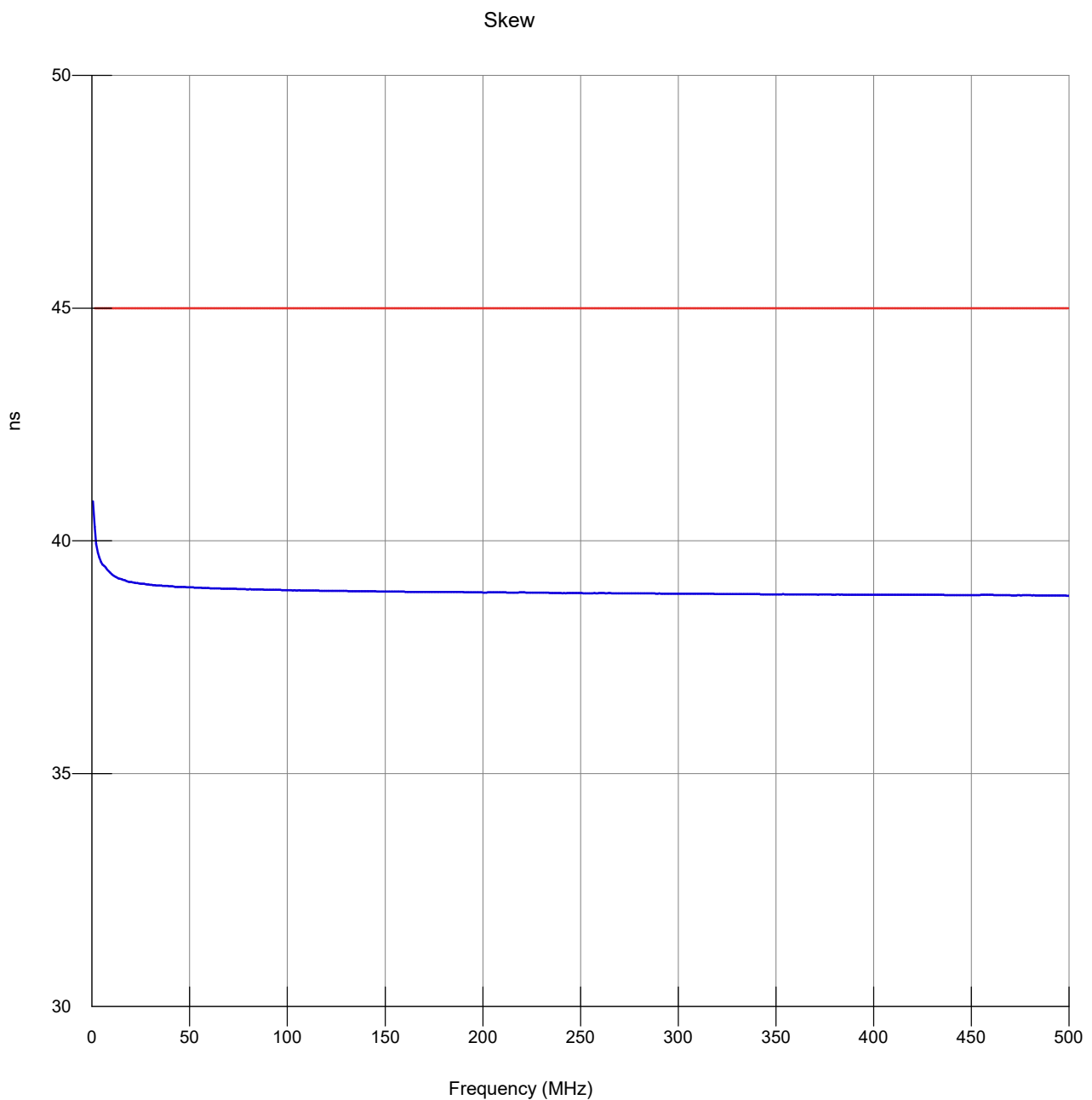
Client	Berk-Tek	Report No	104773926CRT-002@40C
Specification	Berk-Tek LM-RDT		
Part No	11141650	Length(m)	100.
Test Started	9/23/2021 1:51:11 PM	Temperature	40 °C
Description	4 Pair 23 AWG UTP CMP Solid		
Operator Name	David Ayers	Test Status	Complies



Propagation Delay Skew - Near End

Client	Berk-Tek	Report No	104773926CRT-002@40C
Specification	Berk-Tek LM-RDT		
Part No	11141650	Length(m)	100.
Test Started	9/23/2021 1:51:11 PM	Temperature	40 °C
Description	4 Pair 23 AWG UTP CMP Solid		
Operator Name	David Ayers	Test Status	Complies

Limit Margin : 4.703 ns @ 1.312 MHz





Insertion Loss

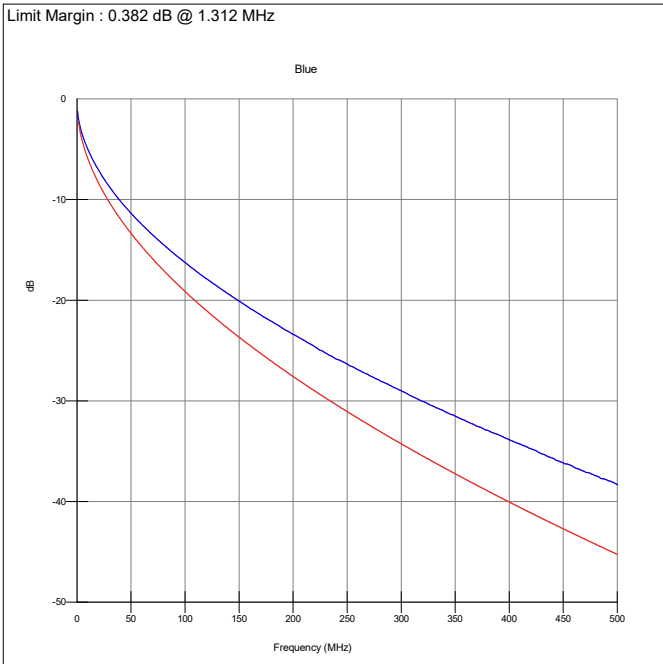
Client	Berk-Tek	Report No	104773926CRT-002@60C
Specification	Berk-Tek LM-RDT		
Part No	11141650	Length(m)	100.
Test Started	9/23/2021 4:02:53 PM	Temperature	60 °C
Description	4 Pair 23 AWG UTP CMP Solid		
Operator Name	David Ayers	Test Status	Complies

Insertion Loss (dB)					
Freq (MHz)	Limit	Blue	Orange	Green	Brown
1.	-2.11	-1.66	-1.61	-1.64	-1.63
4.	-3.80	-3.21	-3.08	-3.17	-3.12
8.	-5.31	-4.48	-4.28	-4.42	-4.35
10.	-5.92	-4.99	-4.78	-4.93	-4.85
16.	-7.49	-6.33	-6.05	-6.24	-6.13
20.	-8.38	-7.09	-6.79	-7.00	-6.88
25.	-9.38	-7.95	-7.62	-7.85	-7.72
31.25	-10.50	-8.93	-8.56	-8.82	-8.67
62.5	-14.99	-12.75	-12.25	-12.61	-12.40
100.	-19.14	-16.25	-15.63	-16.07	-15.82
155.	-24.09	-20.44	-19.66	-20.21	-19.90
200.	-27.58	-23.39	-22.50	-23.12	-22.76
250.	-31.07	-26.34	-25.30	-26.08	-25.65
300.	-34.27	-28.99	-27.91	-28.73	-28.29
350.	-37.25	-31.52	-30.33	-31.20	-30.74
400.	-40.05	-33.86	-32.65	-33.50	-33.02
450.	-42.71	-36.17	-34.85	-35.72	-35.19
500.	-45.25	-38.31	-36.94	-37.84	-37.28

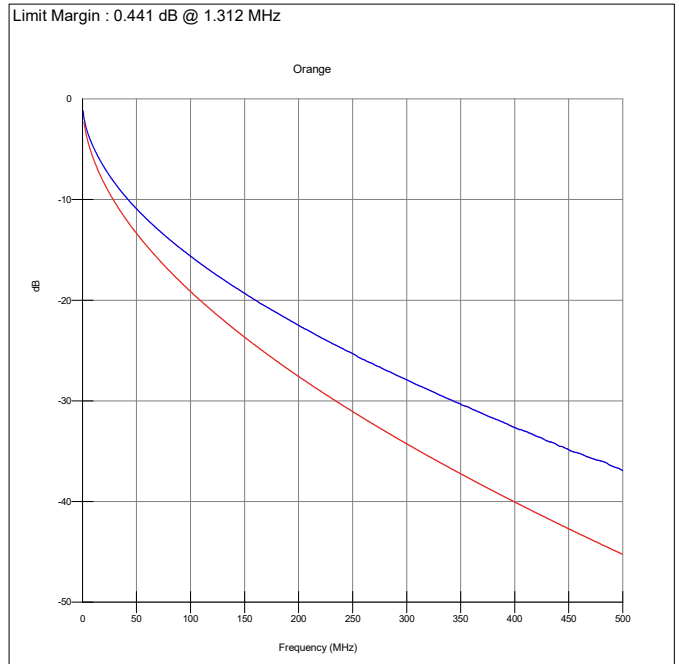
Insertion Loss

Client	Berk-Tek	Report No	104773926CRT-002@60C
Specification	Berk-Tek LM-RDT	Length(m)	100.
Part No	11141650	Temperature	60 °C
Test Started	9/23/2021 4:02:53 PM	Test Status	Complies
Description	4 Pair 23 AWG UTP CMP Solid		
Operator Name	David Ayers		

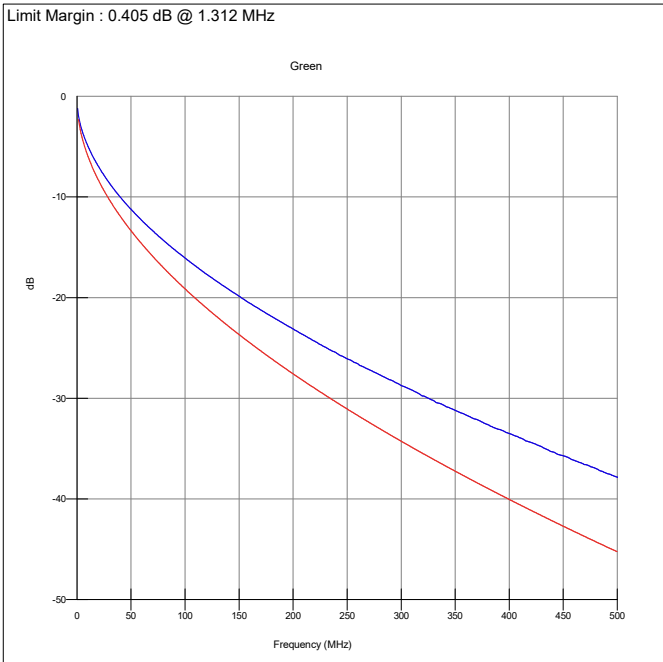
Limit Margin : 0.382 dB @ 1.312 MHz



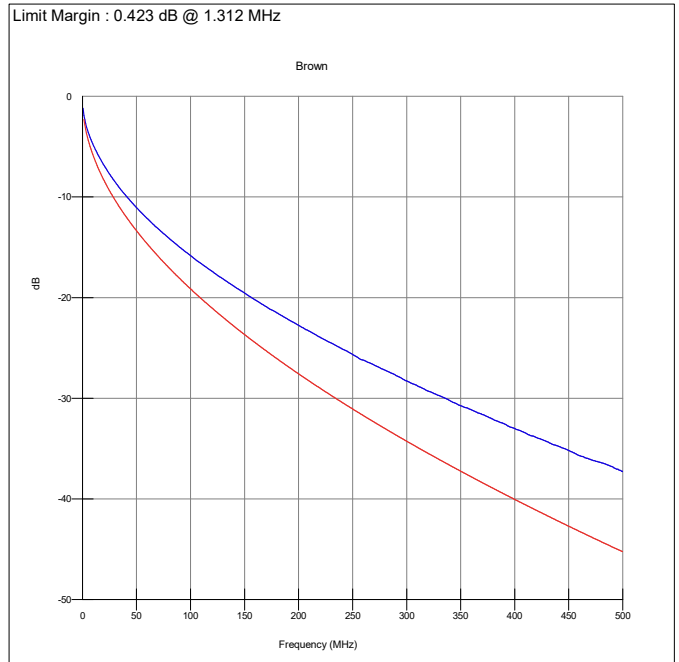
Limit Margin : 0.441 dB @ 1.312 MHz



Limit Margin : 0.405 dB @ 1.312 MHz

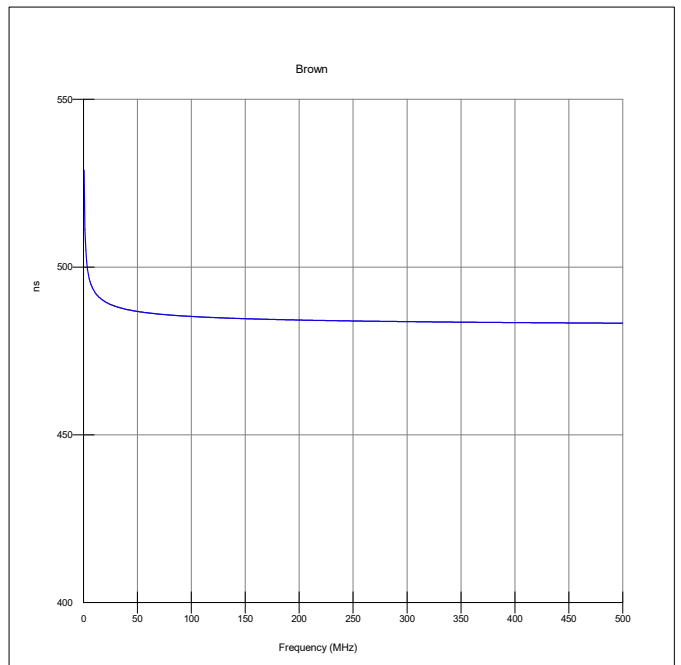
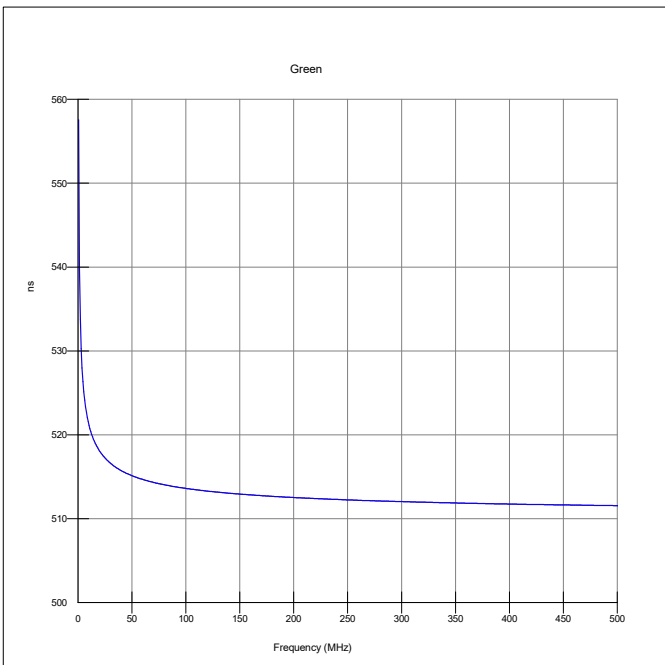
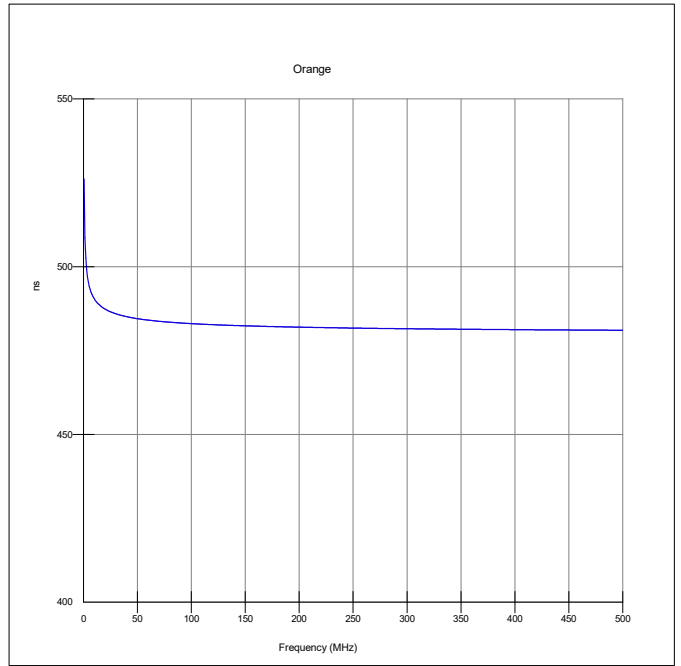
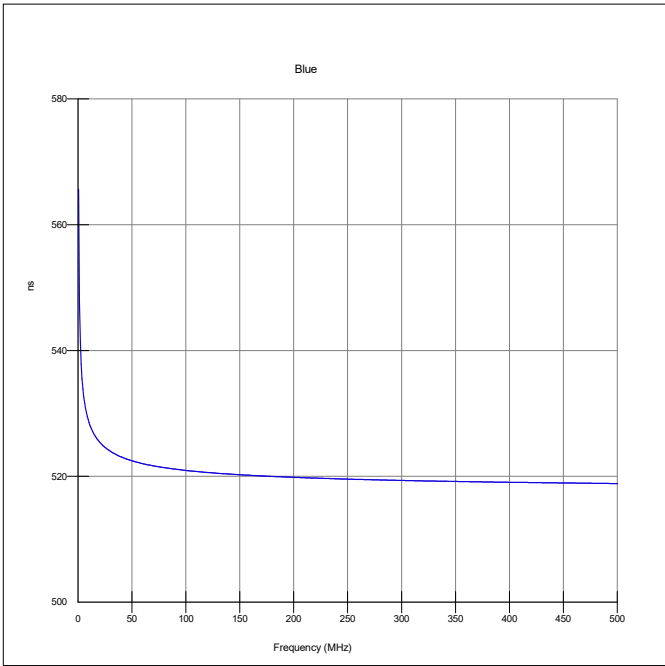


Limit Margin : 0.423 dB @ 1.312 MHz



Propagation Delay - Near End

Client	Berk-Tek	Report No	104773926CRT-002@60C
Specification	Berk-Tek LM-RDT		
Part No	11141650	Length(m)	100.
Test Started	9/23/2021 4:02:53 PM	Temperature	60 °C
Description	4 Pair 23 AWG UTP CMP Solid		
Operator Name	David Ayers	Test Status	Complies



Propagation Delay Skew - Near End

Client	Berk-Tek	Report No	104773926CRT-002@60C
Specification	Berk-Tek LM-RDT		
Part No	11141650	Length(m)	100.
Test Started	9/23/2021 4:02:53 PM	Temperature	60 °C
Description	4 Pair 23 AWG UTP CMP Solid		
Operator Name	David Ayers	Test Status	Complies

Limit Margin : 5.820 ns @ 1.312 MHz

