

Project Number: G104239938

Date Issued: 6/13/2022

ETL Verified Certificate of Conformance number: 102713771CRT-002a

Test Report Number: 104239938CRT-004e



Applicant:

Berk-Tek LLC
132 White Oak Rd
New Holland, PA 17557

Manufacturer:

Berk-Tek LLC
132 White Oak Rd
New Holland, PA 17557

Applicant Contact: Mr. Michael Boland

Mfg. Contact: Mr. Michael Boland

Dear Mr. Boland

Intertek is pleased to provide this letter report covering the testing of your 4-pair, 23 AWG, U/UTP, OSP, horizontal (solid) cable covered by ETL Verified certificate of conformance number 102713771CRT-002a. The sample was randomly selected by an Intertek inspector from your manufacturing facility, Berk-Tek LLC, on 4/8/2021 for Quarter 1 2021 follow-up testing.

The testing was performed at Intertek located in Cortland, NY from 4/14/2021 through 4/23/2021, to the ANSI/TIA-568.2-D standard(s) for category 6A and passed the applicable requirements.

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.

Sincerely,

A handwritten signature in black ink that reads "Antoine Pelletier".

Antoine Pelletier
Project Engineer
Global Cabling Products Testing
e-mail: antoine.pelletier@intertek.com
Phone: (607) 758-6718

A handwritten signature in black ink that reads "David Ayers".

David Ayers
Technician
Global Cabling Products Testing
Phone: (607) 758-6321

Summary

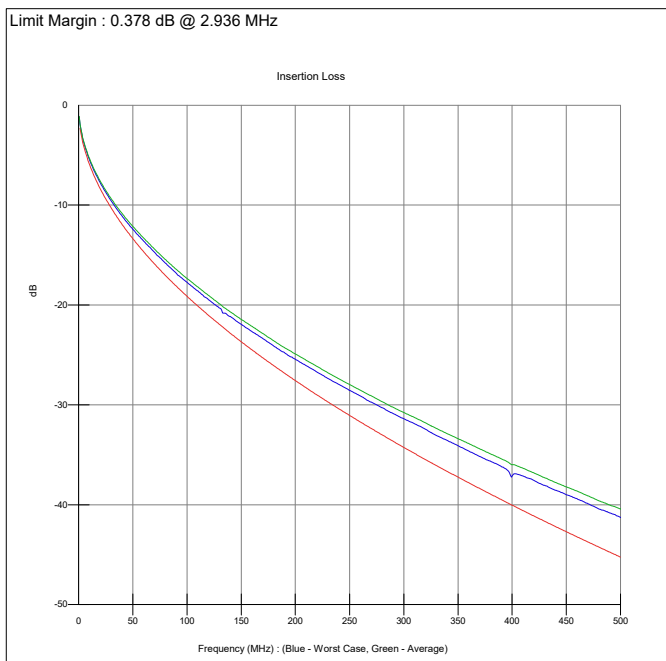
Client	Berk-Tek	Report No	104239938CRT-004e
Specification	ANSI-TIA-568-2-D Cat 6A Cable		
Part No	LM-10G OSP	Length (m)	100.
Test Started	4/14/2021 9:55:16 AM	Temperature	21.6 °C
Description	4 Pair 23 AWG UTP OSP Solid		
Operator Name	Craig Williams	Test Status	Complies

DC Resistance (Ohms)		
Worst Case	Average	Spec
7.3	7.2	9.4
7.3	7.2	9.4

DC Resistance Unbalance (%)		
Worst Case	Average	Spec
0.4	0.1	5.0

DC Resistance Unbalance Pair-Pair (%)		
Worst Case	Average	Spec
2.1	1.2	

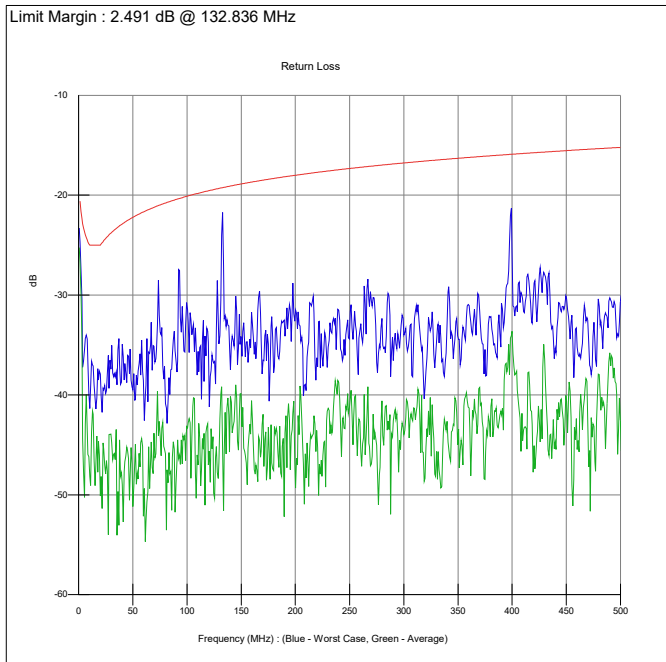
Capacitance Unbalance Pair-Ground (pF/100m)		
Worst Case	Average	Spec
8.9	4.2	330.0



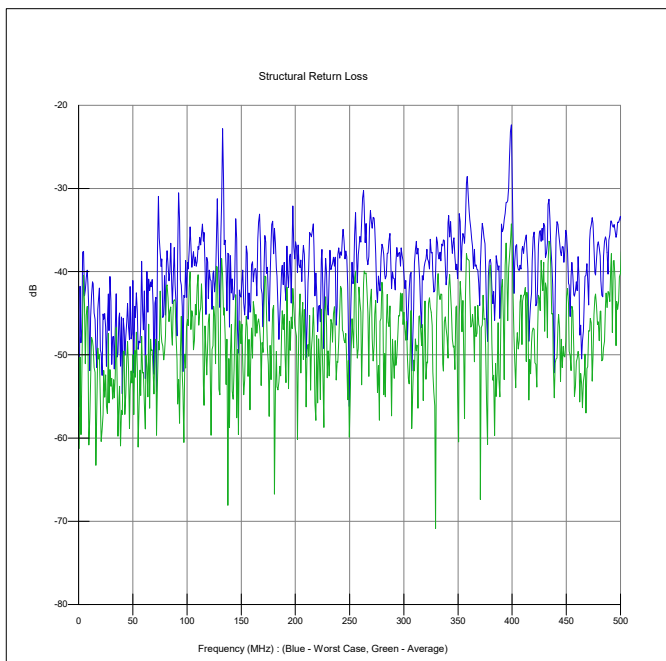
Insertion Loss			
Freq	Worst Case	Average	Spec
1.	1.6	1.6	2.1
4.	3.4	3.3	3.8
8.	4.9	4.8	5.3
10.	5.5	5.3	5.9
16.	6.9	6.8	7.5
20.	7.8	7.6	8.4
25.	8.7	8.5	9.4
31.25	9.8	9.5	10.5
62.5	13.9	13.6	15.0
100.	17.7	17.3	19.1
250.	28.6	28.0	31.1
500.	41.3	40.4	45.2

Summary

Client	Berk-Tek	Report No	104239938CRT-004e
Specification	ANSI-TIA-568-2-D Cat 6A Cable		
Part No	LM-10G OSP	Length (m)	100.
Test Started	4/14/2021 9:55:16 AM	Temperature	21.6 °C
Description	4 Pair 23 AWG UTP OSP Solid		
Operator Name	Craig Williams	Test Status	Complies



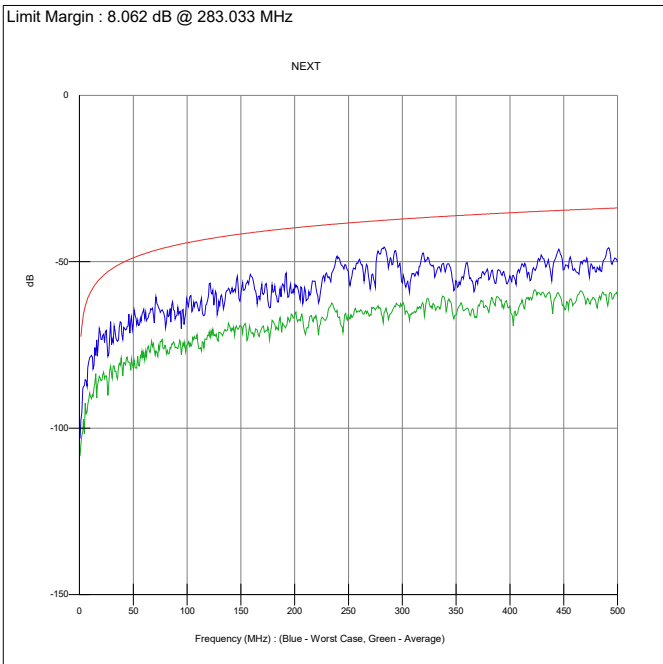
Return Loss			
Freq	Worst Case	Average	Spec
1.	24.2	26.2	20.2
4.	38.0	45.4	23.0
8.	35.0	44.1	24.5
10.	40.9	47.6	25.0
16.	41.5	46.7	25.0
20.	38.0	50.1	25.0
25.	40.2	47.7	24.3
31.25	37.5	46.3	23.6
62.5	37.3	52.0	21.5
100.	31.1	43.3	20.1
250.	33.5	41.1	17.3
500.	30.5	43.3	15.2



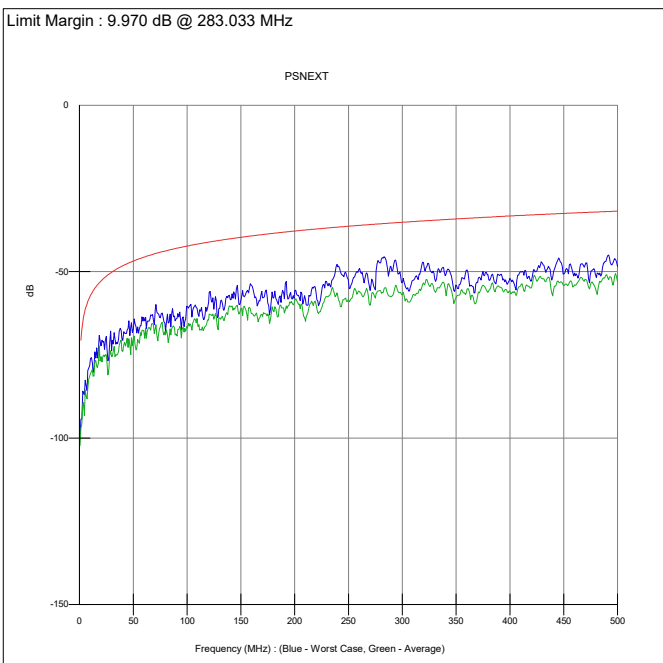
Structural Return Loss			
Freq	Worst Case	Average	Spec
1.	47.3	54.5	
4.	37.6	43.9	
8.	40.7	44.9	
10.	49.7	58.6	
16.	49.4	62.6	
20.	49.6	55.6	
25.	47.5	53.1	
31.25	48.3	55.0	
62.5	46.1	50.6	
100.	41.9	46.1	
250.	54.6	58.3	
500.	33.5	39.6	

Summary

Client	Berk-Tek	Report No	104239938CRT-004e
Specification	ANSI-TIA-568-2-D Cat 6A Cable		
Part No	LM-10G OSP	Length (m)	100.
Test Started	4/14/2021 9:55:16 AM	Temperature	21.6 °C
Description	4 Pair 23 AWG UTP OSP Solid		
Operator Name	Craig Williams	Test Status	Complies



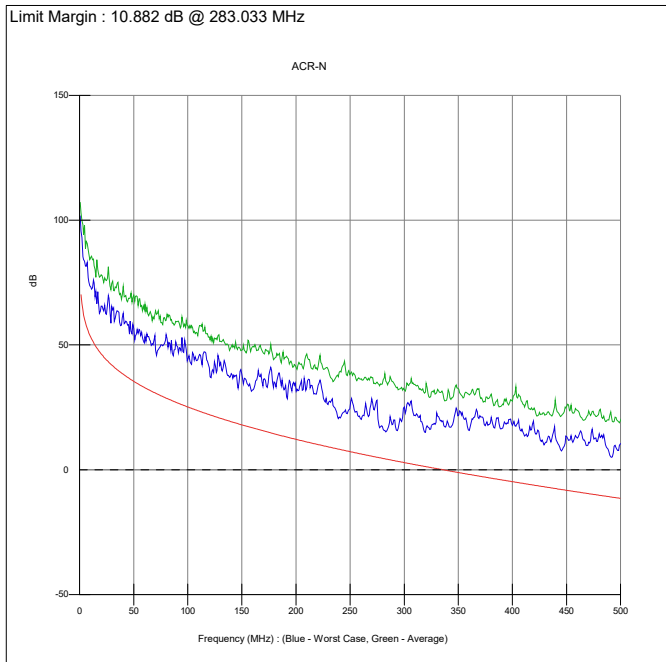
NEXT			
Freq	Worst Case	Average	Spec
1.	100.3	106.2	73.7
4.	87.5	98.7	65.3
8.	82.1	92.6	60.8
10.	78.6	90.1	59.3
16.	74.0	90.6	56.2
20.	73.5	85.7	54.8
25.	71.3	84.5	53.3
31.25	74.3	81.8	51.9
62.5	68.4	77.7	47.4
100.	61.8	75.0	44.3
250.	53.8	66.3	38.3
500.	49.9	60.2	33.8



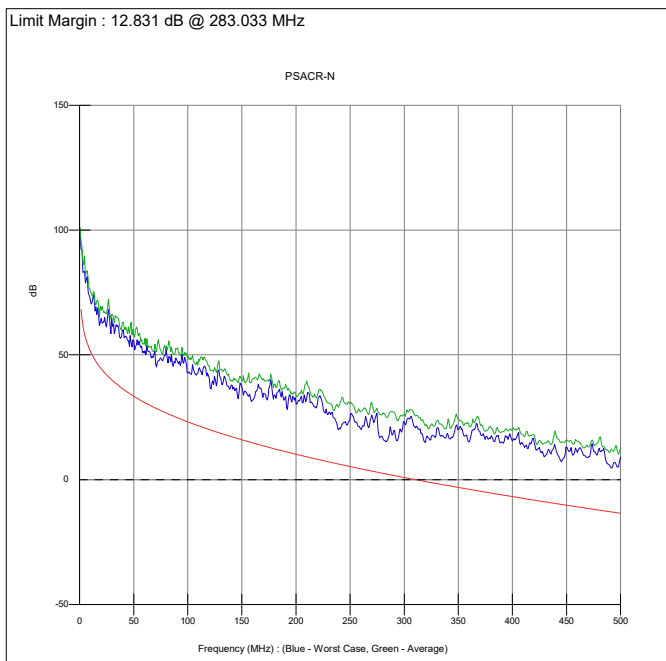
PSNEXT			
Freq	Worst Case	Average	Spec
1.	97.1	99.0	71.7
4.	86.8	90.5	63.3
8.	80.1	84.5	58.8
10.	76.8	80.9	57.3
16.	73.3	78.5	54.2
20.	72.5	75.6	52.8
25.	70.0	75.4	51.3
31.25	71.6	74.2	49.9
62.5	66.3	69.2	45.4
100.	60.4	66.8	42.3
250.	53.2	58.6	36.3
500.	48.4	52.9	31.8

Summary

Client	Berk-Tek	Report No	104239938CRT-004e
Specification	ANSI-TIA-568-2-D Cat 6A Cable		
Part No	LM-10G OSP	Length (m)	100.
Test Started	4/14/2021 9:55:16 AM	Temperature	21.6 °C
Description	4 Pair 23 AWG UTP OSP Solid		
Operator Name	Craig Williams	Test Status	Complies



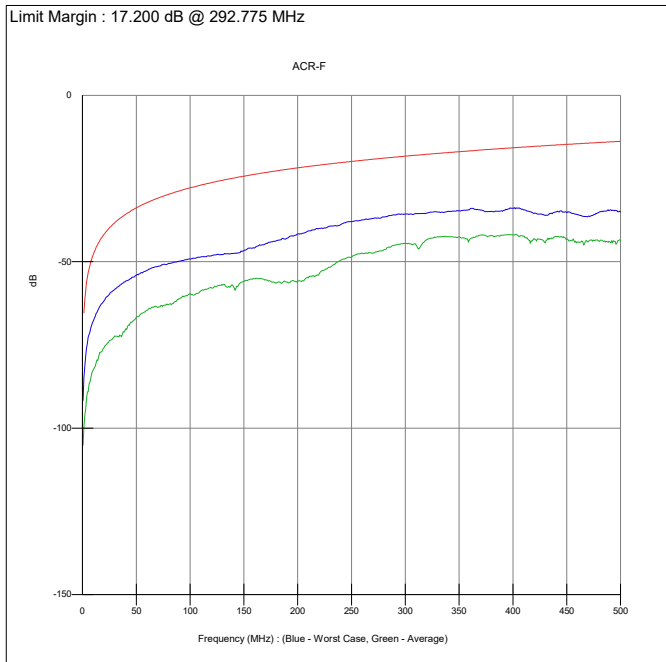
ACR-N			
Freq	Worst Case	Average	Spec
1.	98.6	104.6	71.6
4.	84.0	95.3	61.5
8.	77.3	87.8	55.5
10.	73.4	84.8	53.4
16.	67.1	83.8	48.8
20.	65.7	78.1	46.4
25.	62.9	76.0	44.0
31.25	64.9	72.3	41.4
62.5	55.1	64.1	32.4
100.	44.2	57.7	25.2
250.	25.3	38.3	7.3
500.	10.4	19.8	-11.4



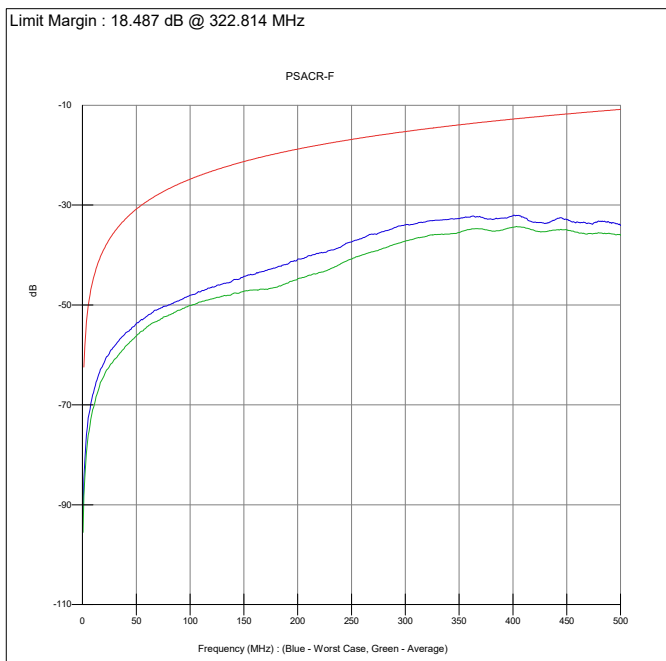
PSACR-N			
Freq	Worst Case	Average	Spec
1.	95.5	97.5	69.6
4.	83.4	87.2	59.5
8.	75.4	79.7	53.5
10.	71.5	75.5	51.4
16.	66.4	71.7	46.8
20.	64.8	68.0	44.4
25.	61.7	66.9	42.0
31.25	62.2	64.7	39.4
62.5	53.0	55.6	30.4
100.	42.8	49.4	23.2
250.	24.7	30.6	5.3
500.	8.9	12.5	-13.4

Summary

Client	Berk-Tek	Report No	104239938CRT-004e
Specification	ANSI-TIA-568-2-D Cat 6A Cable		
Part No	LM-10G OSP	Length (m)	100.
Test Started	4/14/2021 9:55:16 AM	Temperature	21.6 °C
Description	4 Pair 23 AWG UTP OSP Solid		
Operator Name	Craig Williams	Test Status	Complies



ACR-F			
Freq	Worst Case	Average	Spec
1.	87.9	101.9	67.0
4.	75.7	90.6	55.8
8.	69.6	84.7	49.7
10.	67.8	82.5	47.8
16.	63.5	77.3	43.7
20.	61.7	75.8	41.8
25.	59.8	73.7	39.8
31.25	58.0	72.4	37.9
62.5	52.2	64.0	31.9
100.	49.2	59.6	27.8
250.	37.9	48.6	19.8
500.	35.0	43.5	13.8

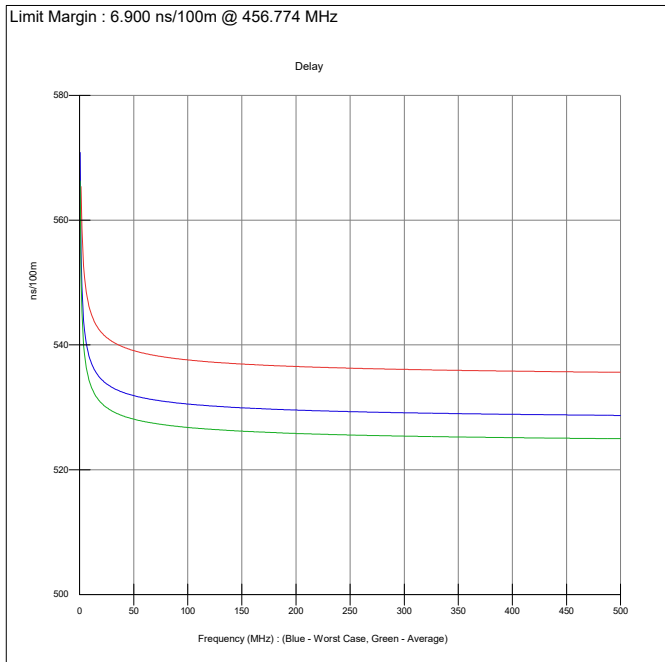


PSACR-F			
Freq	Worst Case	Average	Spec
1.	87.9	91.1	64.0
4.	75.5	79.0	52.8
8.	69.6	72.7	46.7
10.	67.7	70.7	44.8
16.	63.4	66.1	40.7
20.	61.6	64.2	38.8
25.	59.7	62.3	36.8
31.25	57.9	60.6	34.9
62.5	51.9	54.0	28.9
100.	48.1	50.1	24.8
250.	37.4	40.8	16.8
500.	34.0	36.0	10.8

Summary

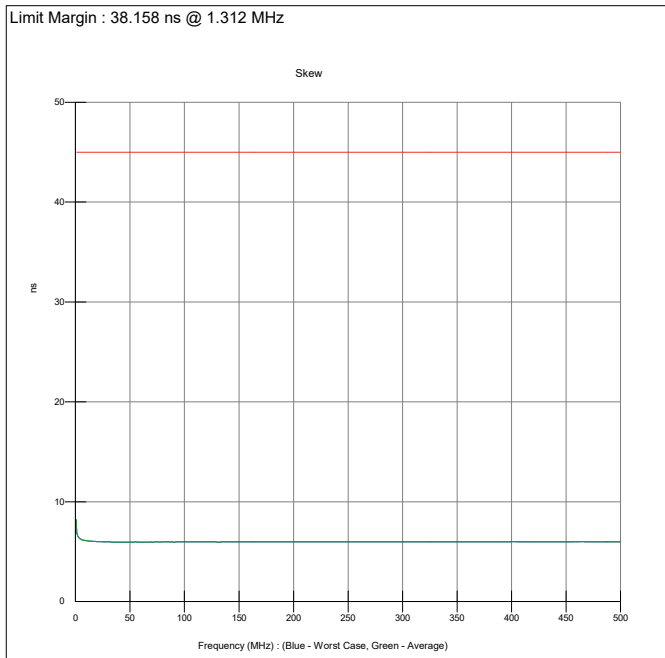
Client	Berk-Tek	Report No	104239938CRT-004e
Specification	ANSI-TIA-568-2-D Cat 6A Cable		
Part No	LM-10G OSP	Length (m)	100.
Test Started	4/14/2021 9:55:16 AM	Temperature	21.6 °C
Description	4 Pair 23 AWG UTP OSP Solid		
Operator Name	Craig Williams	Test Status	Complies

Limit Margin : 6.900 ns/100m @ 456.774 MHz



Delay			
Freq	Worst Case	Average	Spec
1.	561.2	556.9	568.0
4.	543.4	539.5	552.1
8.	538.7	534.8	546.7
10.	537.5	533.7	545.4
16.	535.4	531.6	543.0
20.	534.5	530.7	542.0
25.	533.8	530.0	541.2
31.25	533.1	529.3	540.4
62.5	531.4	527.6	538.6
100.	530.5	526.8	537.6
250.	529.3	525.6	536.3
500.	528.7	525.0	535.6

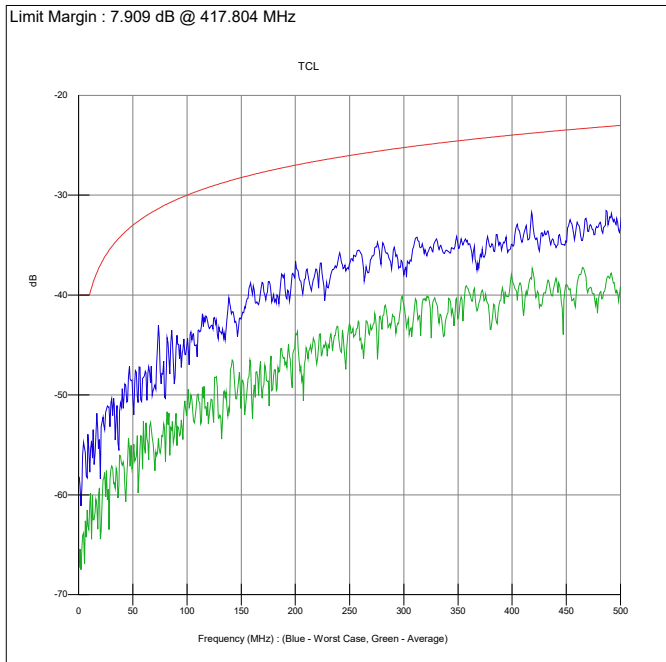
Limit Margin : 38.158 ns @ 1.312 MHz



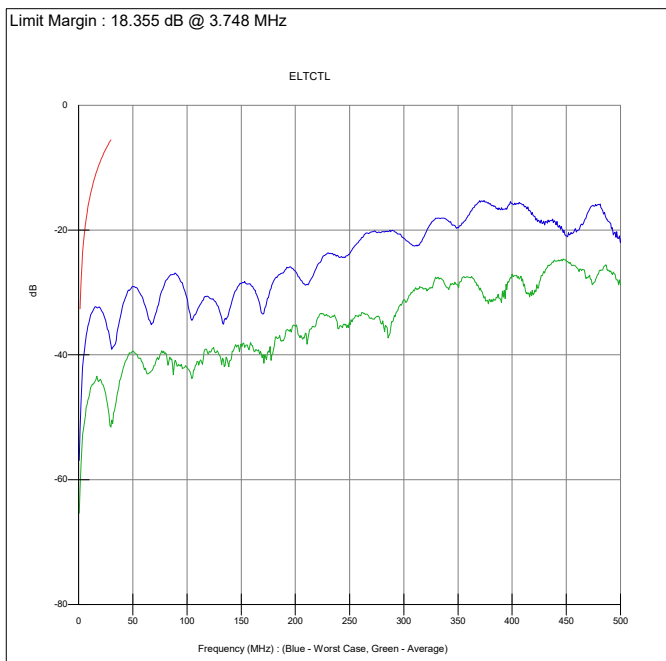
Skew			
Freq	Worst Case	Average	Spec
1.	7.4	7.4	45.0
4.	6.3	6.3	45.0
8.	6.1	6.1	45.0
10.	6.1	6.1	45.0
16.	6.0	6.0	45.0
20.	6.0	6.0	45.0
25.	6.0	6.0	45.0
31.25	6.0	6.0	45.0
62.5	6.0	6.0	45.0
100.	6.0	6.0	45.0
250.	6.0	6.0	45.0
500.	6.0	6.0	45.0

Summary

Client	Berk-Tek	Report No	104239938CRT-004e
Specification	ANSI-TIA-568-2-D Cat 6A Cable		
Part No	LM-10G OSP	Length (m)	100.
Test Started	4/14/2021 9:55:16 AM	Temperature	21.6 °C
Description	4 Pair 23 AWG UTP OSP Solid		
Operator Name	Craig Williams	Test Status	Complies



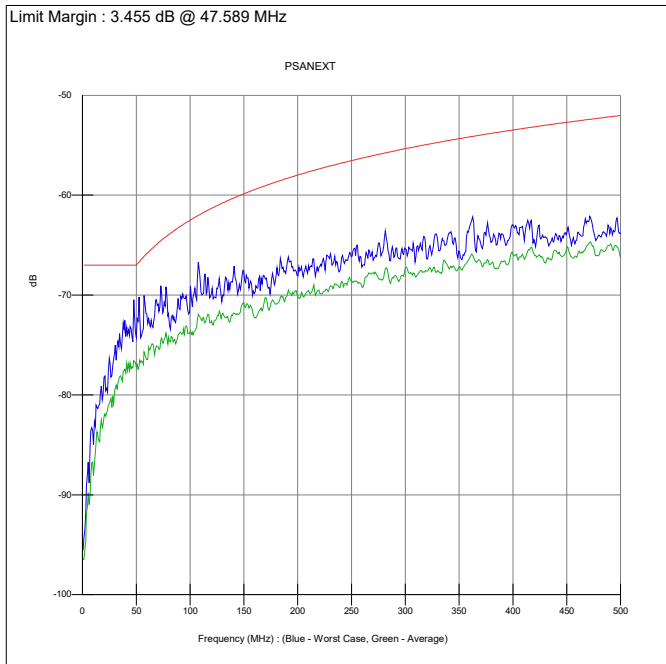
TCL			
Freq	Worst Case	Average	Spec
1.	58.8	66.2	40.0
4.	55.6	64.0	40.0
8.	57.3	61.9	40.0
10.	57.5	61.6	39.9
16.	53.9	60.5	38.0
20.	58.3	64.4	37.0
25.	51.7	59.8	36.0
31.25	52.1	57.3	35.1
62.5	49.0	53.4	32.0
100.	44.8	51.1	30.0
250.	36.9	43.0	26.0
500.	33.0	39.2	23.0



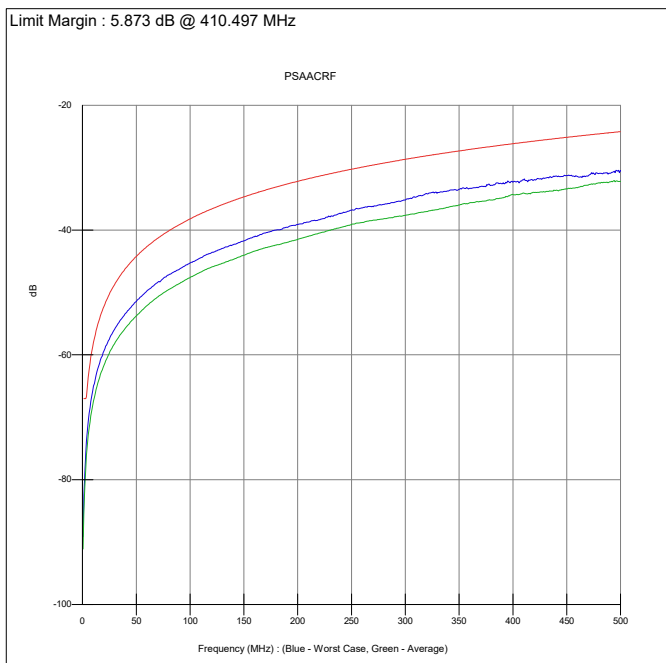
ELTCTL			
Freq	Worst Case	Average	Spec
1.	53.9	63.1	34.2
4.	41.4	52.5	23.0
8.	35.9	47.8	16.9
10.	34.4	46.3	15.0
16.	32.3	43.9	10.9
20.	32.6	43.9	9.0
25.	34.6	46.3	7.0
31.25	38.8	51.0	
62.5	32.7	42.7	
100.	31.0	42.1	
250.	23.8	34.9	
500.	22.2	28.6	

Summary

Client	Berk-Tek	Report No	104239938CRT-004e
Specification	ANSI-TIA-568-2-D Cat 6A Cable		
Part No	LM-10G OSP	Length (m)	100.
Test Started	4/14/2021 9:55:16 AM	Temperature	21.6 °C
Description	4 Pair 23 AWG UTP OSP Solid		
Operator Name	Craig Williams	Test Status	Complies



PSANEXT			
Freq	Worst Case	Average	Spec
1.	94.9	96.5	67.0
4.	89.6	91.7	67.0
8.	84.1	87.9	67.0
10.	85.2	87.7	67.0
16.	80.9	84.6	67.0
20.	78.2	82.2	67.0
25.	76.4	80.8	67.0
31.25	76.3	79.0	67.0
62.5	73.2	75.5	65.6
100.	70.3	73.7	62.5
250.	66.4	68.6	56.5
500.	63.8	66.2	52.0



PSAACRF			
Freq	Worst Case	Average	Spec
1.	85.0	87.4	67.0
4.	73.3	75.5	66.2
8.	67.3	69.6	60.1
10.	65.2	67.6	58.2
16.	61.3	63.6	54.1
20.	59.3	61.6	52.2
25.	57.5	59.7	50.2
31.25	55.5	57.8	48.3
62.5	49.4	51.7	42.3
100.	45.3	47.6	38.2
250.	36.8	39.1	30.2
500.	30.5	32.2	24.2