

Project Number: G104239938

Date Issued: 6/13/2022

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

Test Report Number: 104239938CRT-004f



**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 4/23/2021 through 4/23/2021, to the ISO/IEC 11801-1 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

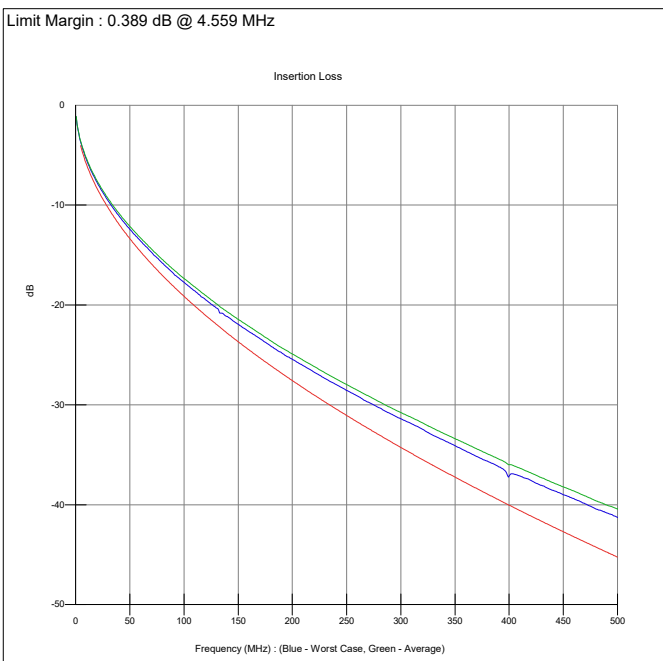
<b>Client</b>	Berk-Tek	<b>Report No</b>	104239938CRT-004f
<b>Specification</b>	ISO-IEC 11801-1 Cat 6A Cable		
<b>Part No</b>	LM-10G OSP	<b>Length (m)</b>	100.
<b>Test Started</b>	4/14/2021 9:34:50 AM	<b>Temperature</b>	21.6 °C
<b>Description</b>	4 Pair 23 AWG UTP OSP Solid		
<b>Operator Name</b>	Craig Williams	<b>Test Status</b>	Complies

DC Resistance (Ohms)		
Worst Case	Average	Spec
7.3	7.2	9.5
7.3	7.2	9.5

DC Resistance Unbalance (%)		
Worst Case	Average	Spec
0.2	0.1	2.0

DC Resistance Unbalance Pair-Pair (%)		
Worst Case	Average	Spec
2.1	1.2	5.0

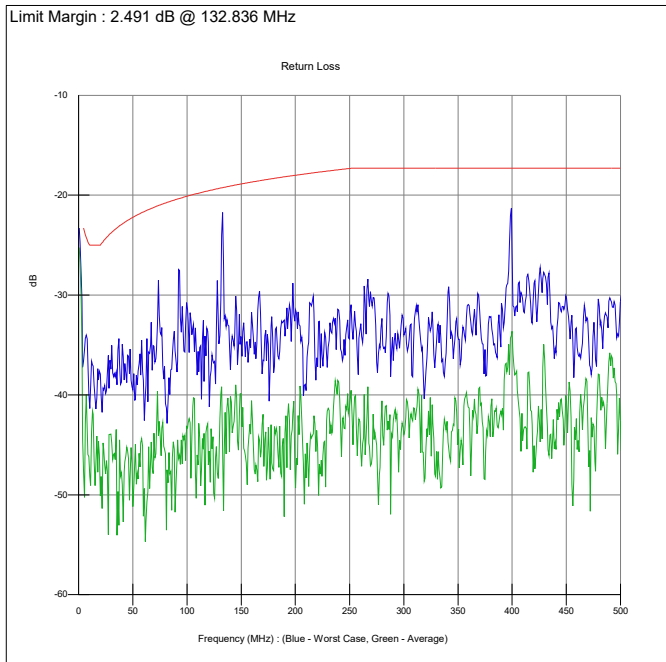
Capacitance Unbalance Pair-Ground (pF/100m)		
Worst Case	Average	Spec
8.9	4.2	160.0



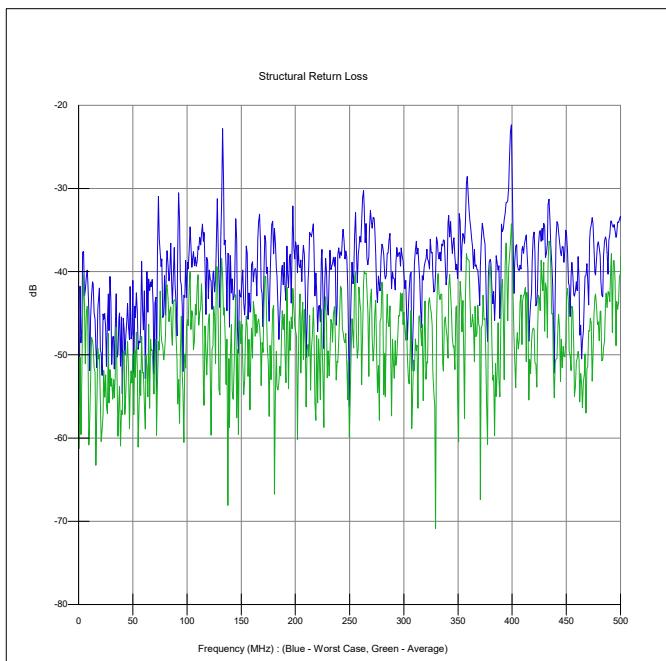
Insertion Loss			
Freq	Worst Case	Average	Spec
1.	1.6	1.6	
4.	3.4	3.3	
8.	4.9	4.8	5.3
10.	5.5	5.3	5.9
16.	6.9	6.8	7.5
20.	7.8	7.6	8.4
25.	8.7	8.5	9.4
31.25	9.8	9.5	10.5
62.5	13.9	13.6	15.0
100.	17.7	17.3	19.1
250.	28.6	28.0	31.1
500.	41.3	40.4	45.2

## Summary

<b>Client</b>	Berk-Tek	<b>Report No</b>	104239938CRT-004f
<b>Specification</b>	ISO-IEC 11801-1 Cat 6A Cable		
<b>Part No</b>	LM-10G OSP	<b>Length (m)</b>	100.
<b>Test Started</b>	4/14/2021 9:34:50 AM	<b>Temperature</b>	21.6 °C
<b>Description</b>	4 Pair 23 AWG UTP OSP Solid		
<b>Operator Name</b>	Craig Williams	<b>Test Status</b>	Complies



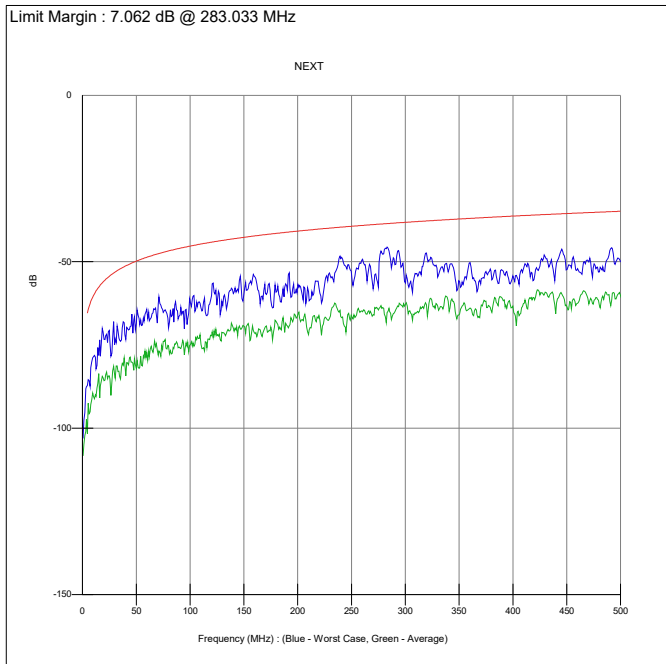
Return Loss			
Freq	Worst Case	Average	Spec
1.	24.2	26.2	
4.	38.0	45.4	
8.	35.0	44.1	24.5
10.	40.9	47.6	25.0
16.	41.5	46.7	25.0
20.	38.0	50.1	25.0
25.	40.2	47.7	24.3
31.25	37.5	46.3	23.6
62.5	37.3	52.0	21.5
100.	31.1	43.3	20.1
250.	33.5	41.1	17.3
500.	30.5	43.3	17.3



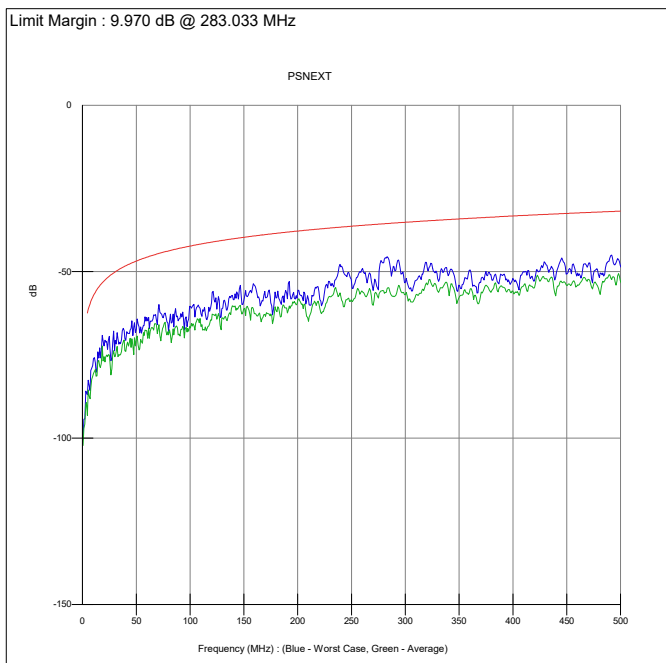
Structural Return Loss			
Freq	Worst Case	Average	Spec
1.	47.3	54.5	
4.	37.6	43.9	
8.	40.7	44.9	
10.	49.7	58.6	
16.	49.4	62.6	
20.	49.6	55.6	
25.	47.5	53.1	
31.25	48.3	55.0	
62.5	46.1	50.6	
100.	41.9	46.1	
250.	54.6	58.3	
500.	33.5	39.6	

## Summary

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<b>Specification</b>	ISO-IEC 11801-1 Cat 6A Cable		
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<b>Test Started</b>	4/14/2021 9:34:50 AM	<b>Temperature</b>	21.6 °C
<b>Description</b>	4 Pair 23 AWG UTP OSP Solid		
<b>Operator Name</b>	Craig Williams	<b>Test Status</b>	Complies



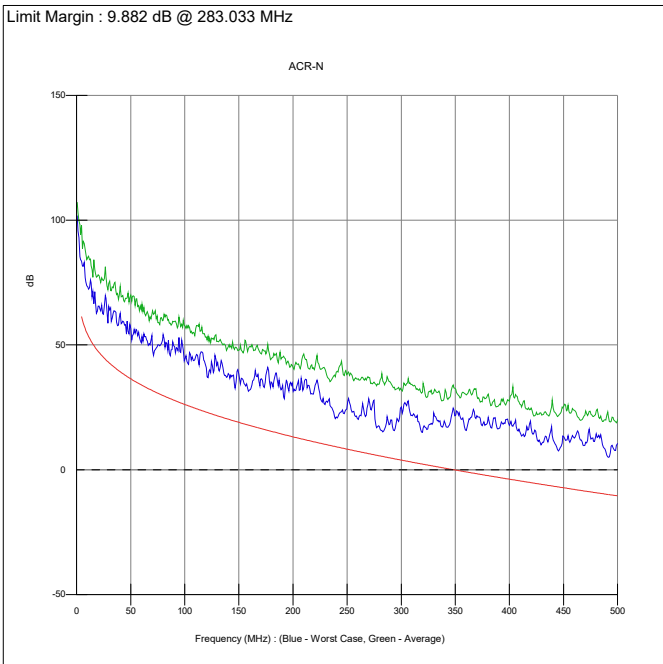
NEXT			
Freq	Worst Case	Average	Spec
1.	100.3	106.2	
4.	87.5	98.7	
8.	82.1	92.6	61.8
10.	78.6	90.1	60.3
16.	74.0	90.6	57.2
20.	73.5	85.7	55.8
25.	71.3	84.5	54.3
31.25	74.3	81.8	52.9
62.5	68.4	77.7	48.4
100.	61.8	75.0	45.3
250.	53.8	66.3	39.3
500.	49.9	60.2	34.8



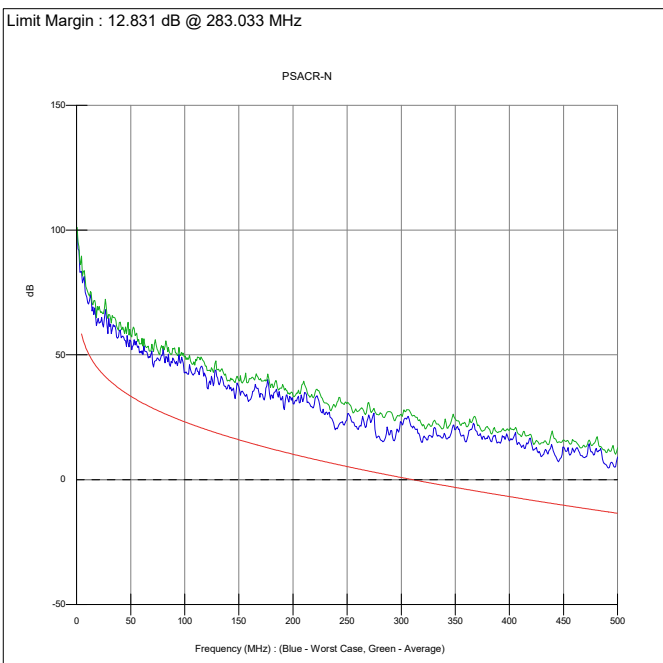
PSNEXT			
Freq	Worst Case	Average	Spec
1.	97.1	99.0	
4.	86.8	90.5	
8.	80.1	84.5	58.8
10.	76.8	80.9	57.3
16.	73.3	78.5	54.2
20.	72.5	75.6	52.8
25.	70.0	75.4	51.3
31.25	71.6	74.2	49.9
62.5	66.3	69.2	45.4
100.	60.4	66.8	42.3
250.	53.2	58.6	36.3
500.	48.4	52.9	31.8

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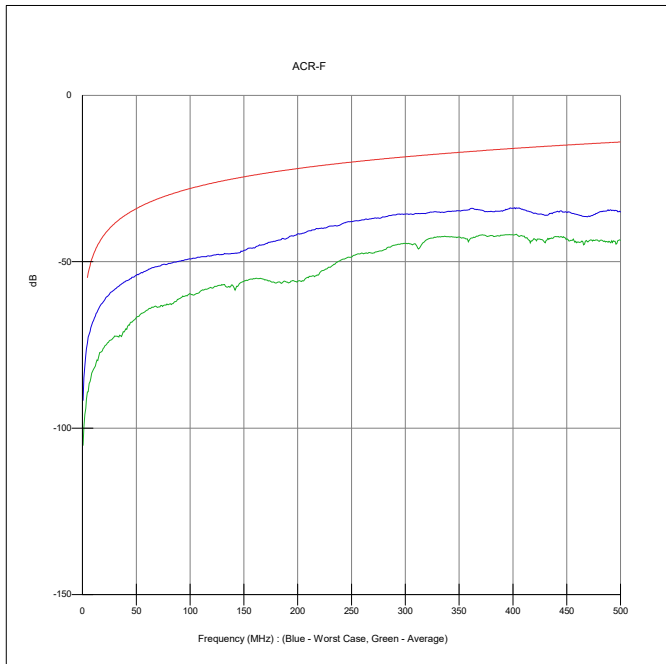
ACR-N			
Freq	Worst Case	Average	Spec
1.	98.6	104.6	
4.	84.0	95.3	
8.	77.3	87.8	56.5
10.	73.4	84.8	54.4
16.	67.1	83.8	49.8
20.	65.7	78.1	47.4
25.	62.9	76.0	45.0
31.25	64.9	72.3	42.4
62.5	55.1	64.1	33.4
100.	44.2	57.7	26.2
250.	25.3	38.3	8.3
500.	10.4	19.8	-10.4



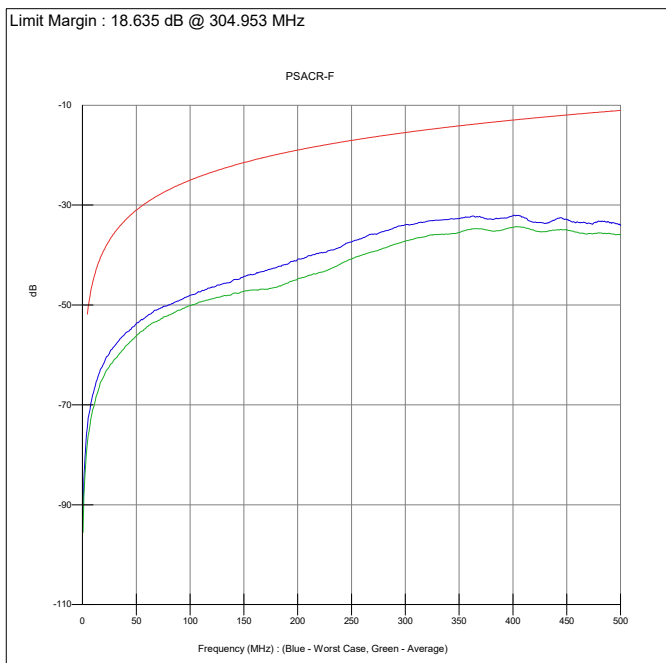
PSACR-N			
Freq	Worst Case	Average	Spec
1.	95.5	97.5	
4.	83.4	87.2	
8.	75.4	79.7	53.5
10.	71.5	75.5	51.4
16.	66.4	71.7	46.8
20.	64.8	68.0	44.4
25.	61.7	66.9	42.0
31.25	62.2	64.7	39.4
62.5	53.0	55.6	30.4
100.	42.8	49.4	23.2
250.	24.7	30.6	5.3
500.	8.9	12.5	-13.4

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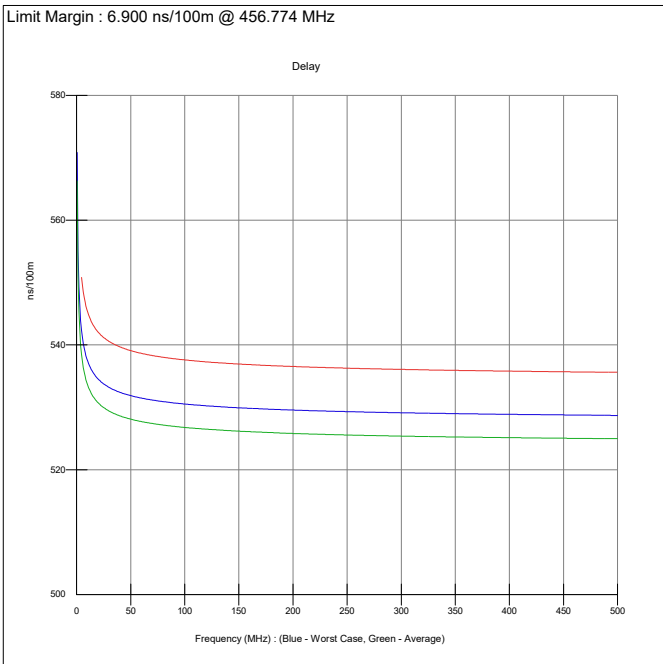
ACR-F			
Freq	Worst Case	Average	Spec
1.	87.9	101.9	
4.	75.7	90.6	
8.	69.6	84.7	49.9
10.	67.8	82.5	48.0
16.	63.5	77.3	43.9
20.	61.7	75.8	42.0
25.	59.8	73.7	40.0
31.25	58.0	72.4	38.1
62.5	52.2	64.0	32.1
100.	49.2	59.6	28.0
250.	37.9	48.6	20.0
500.	35.0	43.5	14.0



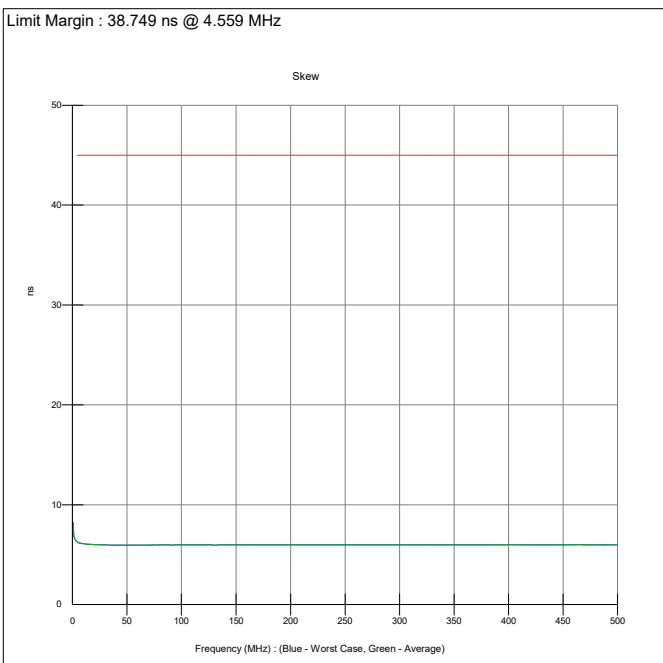
PSACR-F			
Freq	Worst Case	Average	Spec
1.	87.9	91.1	
4.	75.5	79.0	
8.	69.6	72.7	46.9
10.	67.7	70.7	45.0
16.	63.4	66.1	40.9
20.	61.6	64.2	39.0
25.	59.7	62.3	37.0
31.25	57.9	60.6	35.1
62.5	51.9	54.0	29.1
100.	48.1	50.1	25.0
250.	37.4	40.8	17.0
500.	34.0	36.0	11.0

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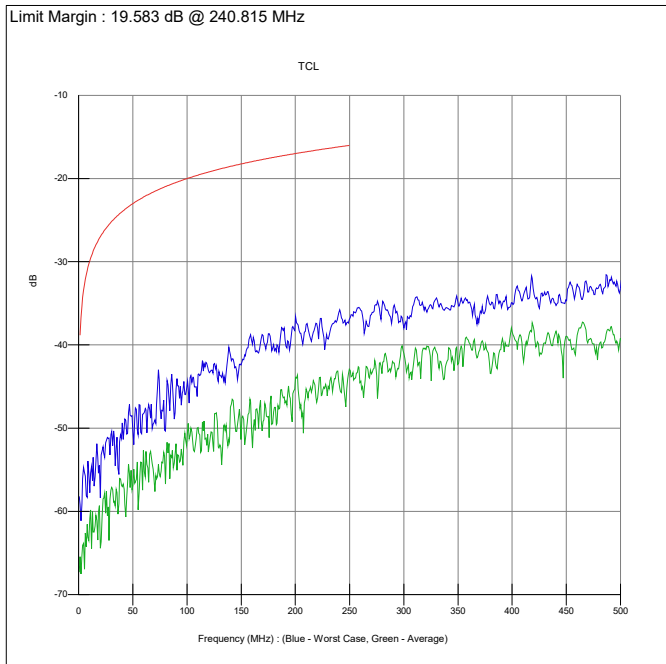
Delay			
Freq	Worst Case	Average	Spec
1.	561.2	556.9	
4.	543.4	539.5	
8.	538.7	534.8	546.7
10.	537.5	533.7	545.4
16.	535.4	531.6	543.0
20.	534.5	530.7	542.0
25.	533.8	530.0	541.2
31.25	533.1	529.3	540.4
62.5	531.4	527.6	538.6
100.	530.5	526.8	537.6
250.	529.3	525.6	536.3
500.	528.7	525.0	535.6



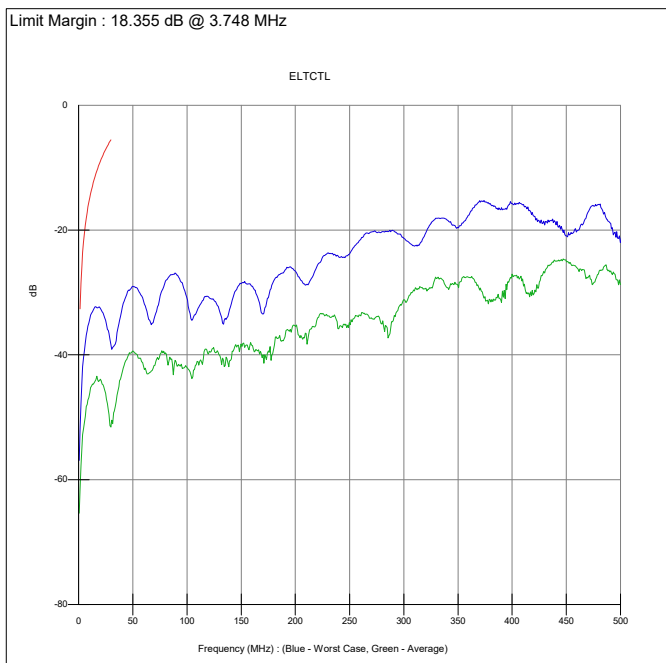
Skew			
Freq	Worst Case	Average	Spec
1.	7.4	7.4	
4.	6.3	6.3	
8.	6.1	6.1	45.0
10.	6.1	6.1	45.0
16.	6.0	6.0	45.0
20.	6.0	6.0	45.0
25.	6.0	6.0	45.0
31.25	6.0	6.0	45.0
62.5	6.0	6.0	45.0
100.	6.0	6.0	45.0
250.	6.0	6.0	45.0
500.	6.0	6.0	45.0

## Summary

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TCL			
Freq	Worst Case	Average	Spec
1.	58.8	66.2	39.6
4.	55.6	64.0	34.0
8.	57.3	61.9	31.0
10.	57.5	61.6	30.0
16.	53.9	60.5	28.0
20.	58.3	64.4	27.0
25.	51.7	59.8	26.0
31.25	52.1	57.3	25.1
62.5	49.0	53.4	22.0
100.	44.8	51.1	20.0
250.	36.9	43.0	16.0
500.	33.0	39.2	

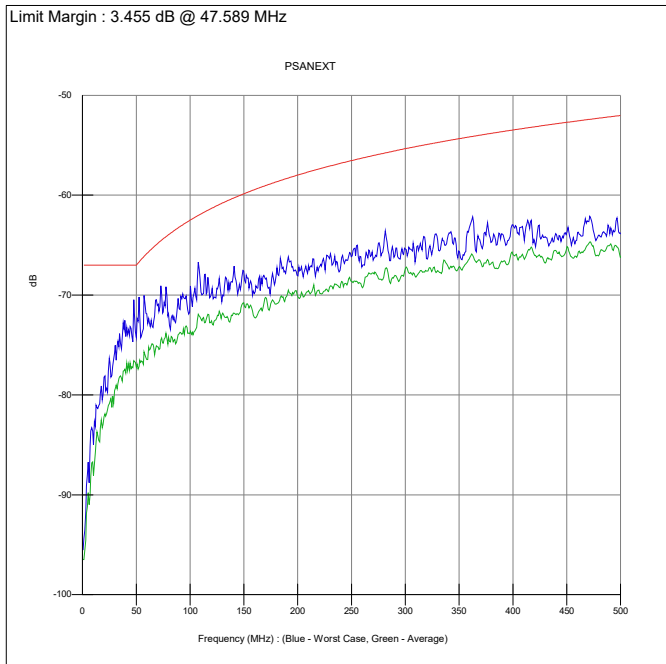


ELTCTL			
Freq	Worst Case	Average	Spec
1.	53.9	63.1	34.2
4.	41.4	52.5	23.0
8.	35.9	47.8	16.9
10.	34.4	46.3	15.0
16.	32.3	43.9	10.9
20.	32.6	43.9	9.0
25.	34.6	46.3	7.0
31.25	38.8	51.0	
62.5	32.7	42.7	
100.	31.0	42.1	
250.	23.8	34.9	
500.	22.2	28.6	

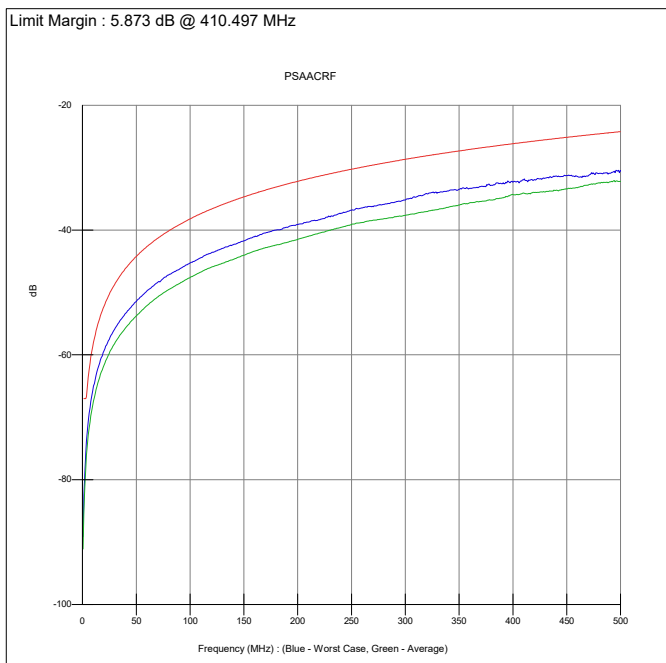


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<b>Operator Name</b>	Craig Williams	<b>Test Status</b>	Complies



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