

Ningbo Feynman Cable Co., Ltd

LETTER REPORT

SCOPE OF WORK

ETL Verification initial qualification testing of a 100 Ω , 4-pair telecommunication cable electrical transmission performance to the requirements of EN 50173-1 for Category 6A horizontal cable.

REPORT NUMBER

103777015CRT-004c

ISSUE DATE

26-December-2018

REVISED DATE

None

TESTS START DATE

19-December-2018

TESTS END DATE

20-December-2018

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LETTER REPORT

26-December-2018

Intertek Report No. 103777015CRT-004c

Intertek Project No. G103777015

Mr. Shen Hongbing
Ningbo Feynman Cable Co., Ltd
No.9, Binhaisan Road, Hangzhou Bay New Zone
Ningbo City, Zhejiang Province
China

Subject: Initial qualification testing of Category 6A cable per EN 50288-10-1 as referenced in EN 50173-1

Dear Mr. Hongbing:

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

EN 50173-1, Information technology - Generic cabling systems - Part 1: General Requirements, dated June 2018

EN 50288-10-1, Multi-element metallic cables used in analogue and digital communication and control -- Part 10-1: Sectional specification for screened cables characterized up to 500 MHz - Horizontal and building backbone cables, dated December 2012

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 G103777015 and quotation QSH180802067 issued 27-November-2018. Compliant results were obtained for the relevant tests contained in EN 50288-10-1 section 5.1 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	EN 50288-10-1 section	Result
Conductor loop resistance	5.1.1.1	Compliant
Conductor resistance unbalance	5.1.1.2	Compliant
Dielectric strength	5.1.1.3	Not tested
Insulation resistance	5.1.1.4	Not tested
Mutual capacitance	5.1.1.5	Not specified
Capacitance unbalance to earth	5.1.1.6	Compliant
Velocity of propagation	5.1.2.1	Compliant
Propagation delay difference (skew)	5.1.2.2	Compliant
Longitudinal attenuation	5.1.2.3	Compliant
Near-end unbalance attenuation	5.1.2.4	Compliant
Near-end crosstalk (NEXT)	5.1.2.5	Compliant
Attenuation to crosstalk ratio at the far end (ACR-F)	5.1.2.6	Compliant
Power sum near-end crosstalk (PSNEXT)	5.1.2.7.1	Compliant
Power sum attenuation to crosstalk ratio at the far end (PSACR-F)	5.1.2.7.2	Compliant
Power Sum Exogenous Crosstalk PExNEXT	5.1.2.7.4	Compliant
Power Sum Attenuation to crosstalk ratio at the far end Exogenous Crosstalk PExACR-F	5.1.2.7.6	Compliant
Mean characteristic impedance	5.1.2.8	Compliant
Return loss	5.1.2.9	Compliant
Coupling attenuation	5.1.2.10	Compliant
Transfer impedance	5.1.2.11	Compliant

Test equipment used	Model number	Control number	Calibration due date
Keysight Network Analyzer	E5080A	J387	06-December-2019
Keysight LCR Meter	4263B	R171	29-January-2019
Temperature/humidity meter	OM-EL-USB-2-LCD	H243	19-March-2019
Keysight Network Analyzer	8753E	E307	06-April-2019
Environmental chamber	Bally	3069	02-May-2019

SECTION 4

SAMPLE DESCRIPTION

The client submitted a Category 6A, 4-Pair, 23 AWG, U/FTP, CM, horizontal (solid) cable identified as part number FA0423APC6AV.

The sample was received on 26-November-2018 and was a production sample in undamaged condition.

SECTION 5

PROJECT STATUS & ACTION

Issuance of this letter report completes the initial qualification testing of this cable electrical transmission performance per EN 50173-1 covered by Intertek Project No. G103777015 and quotation QSH180802067. The test results are compliant with the requirements of the standard 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:	<u>26-December-2018</u>	Date:	<u>26-December-2018</u>

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



Low Frequency Report

Client	Ningbo Feynman	Report No	103777015CRT-004c
Specification	EN 50173-1 Cat 6A Cable		
Part No	FA0423APC6AV	Length (m)	100.
Test Started	12/20/2018 8:21:19 AM	Temperature	21.5 °C
Description	4 pair 23 AWG UFTP Solid		
Operator Name	David Ayers	Test Status	Complies

DC Resistance (Ohms)

Blue	Orange	Green	Brown	Limit (Ohms)
6.7191	6.7942	6.7946	6.8235	9.5000
6.7306	6.7948	6.7875	6.8339	9.5000

Resistance Unbalanced (%)

Blue	Orange	Green	Brown	Limit (%)
0.09	0.00	0.05	0.08	2.00

Resistance Unbalanced Pair-Pair (%)

Blue - Orange	Blue - Green	Blue - Brown	Orange - Green	Orange - Brown	Green - Brown	Limit (%)
0.52	0.49	0.77	0.03	0.25	0.28	

Capacitance Unbalance Pair-Ground (pF/100m)

Blue	Orange	Green	Brown	Limit (PF/100m)
39.21	6.94	22.64	3.48	120.00

Mutual Capacitance (nF/100m)

Blue	Orange	Green	Brown	Limit (nF/100m)
4.09	4.18	4.15	4.24	



Insertion Loss

Client	Ningbo Feynman	Report No	103777015CRT-004c
Specification	EN 50173-1 Cat 6A Cable		
Part No	FA0423APC6AV	Length (m)	100.
Test Started	12/20/2018 8:21:19 AM	Temperature	21.5 °C
Description	4 pair 23 AWG UFTP Solid		
Operator Name	David Ayers	Test Status	Complies

Insertion Loss (dB)					
Freq (MHz)	Limit	Blue	Orange	Green	Brown
1.		-1.91	-2.00	-1.92	-1.93
4.		-3.46	-3.56	-3.51	-3.48
8.	-5.31	-4.79	-4.89	-4.83	-4.82
10.	-5.92	-5.37	-5.46	-5.40	-5.40
16.	-7.49	-6.90	-6.97	-6.91	-6.94
20.	-8.38	-7.79	-7.86	-7.79	-7.83
25.	-9.38	-8.78	-8.86	-8.78	-8.83
31.25	-10.50	-9.88	-9.96	-9.88	-9.95
62.5	-14.99	-14.00	-14.16	-14.05	-14.19
100.	-19.14	-17.80	-17.96	-17.85	-18.03
155.	-24.09	-22.27	-22.44	-22.31	-22.56
200.	-27.58	-25.38	-25.62	-25.53	-25.77
250.	-31.07	-28.38	-28.68	-28.56	-28.93
300.	-34.27	-31.14	-31.47	-31.34	-31.72
350.	-37.25	-33.73	-34.04	-33.85	-34.30
400.	-40.05	-36.22	-36.55	-36.31	-36.82
450.	-42.71	-38.60	-38.90	-38.80	-39.15
500.	-45.26	-40.79	-41.07	-40.89	-41.40



NEXT - Near End

Client	Ningbo Feynman	Report No	103777015CRT-004c
Specification	EN 50173-1 Cat 6A Cable		
Part No	FA0423APC6AV	Length (m)	100.
Test Started	12/20/2018 8:21:19 AM	Temperature	21.5 °C
Description	4 pair 23 AWG UFTP Solid		
Operator Name	David Ayers	Test Status	Complies

NEXT - Near End (dB)							
Freq (MHz)	Limit	Blue - Orange	Blue - Green	Blue - Brown	Orange - Green	Orange - Brown	Green - Brown
1.	-75.11	-111.77	-118.71	-111.79	-134.88	-107.38	-112.18
4.	-66.29	-111.89	-110.93	-116.11	-112.88	-114.80	-110.47
8.	-61.75	-104.78	-118.43	-110.74	-125.09	-114.58	-125.13
10.	-60.30	-106.61	-114.24	-107.28	-120.56	-111.24	-114.07
16.	-57.24	-104.22	-116.53	-111.56	-111.33	-109.29	-113.00
20.	-55.79	-112.86	-112.22	-108.29	-117.31	-110.44	-114.72
25.	-54.33	-103.11	-113.03	-112.88	-113.72	-112.81	-111.42
31.25	-52.88	-109.09	-112.74	-113.29	-114.29	-103.45	-111.55
62.5	-48.36	-96.30	-115.23	-118.21	-125.54	-104.57	-118.02
100.	-45.30	-86.91	-114.98	-111.03	-110.10	-93.28	-118.93
155.	-42.45	-97.21	-114.89	-112.32	-110.10	-93.51	-110.12
200.	-40.78	-98.89	-115.89	-105.54	-112.43	-106.70	-109.71
250.	-39.33	-89.97	-130.08	-111.02	-123.85	-90.87	-108.82
300.	-38.14	-89.16	-108.12	-98.06	-99.27	-71.76	-104.97
350.	-37.14	-104.25	-104.05	-98.62	-98.69	-91.95	-99.51
400.	-36.27	-93.64	-106.67	-89.91	-112.28	-87.87	-99.81
450.	-35.50	-91.15	-91.28	-99.95	-101.33	-101.13	-108.43
500.	-34.82	-91.44	-91.03	-88.21	-96.57	-86.15	-104.72



NEXT - Far End

Client	Ningbo Feynman	Report No	103777015CRT-004c
Specification	EN 50173-1 Cat 6A Cable		
Part No	FA0423APC6AV	Length (m)	100.
Test Started	12/20/2018 8:21:19 AM	Temperature	21.5 °C
Description	4 pair 23 AWG UFTP Solid		
Operator Name	David Ayers	Test Status	Complies

NEXT - Far End (dB)							
Freq (MHz)	Limit	Blue - Orange	Blue - Green	Blue - Brown	Orange - Green	Orange - Brown	Green - Brown
1.	-75.11	-105.86	-106.25	-108.87	-114.59	-115.91	-109.32
4.	-66.29	-108.69	-128.21	-112.69	-116.94	-113.80	-106.97
8.	-61.75	-101.75	-115.26	-113.71	-111.09	-106.10	-124.84
10.	-60.30	-115.22	-113.17	-112.49	-118.06	-112.39	-116.11
16.	-57.24	-106.70	-117.13	-115.34	-109.58	-117.35	-118.10
20.	-55.79	-109.15	-122.54	-113.14	-113.96	-105.96	-113.72
25.	-54.33	-107.63	-113.44	-110.17	-118.30	-122.06	-115.52
31.25	-52.88	-102.28	-120.85	-108.91	-114.32	-122.22	-106.89
62.5	-48.36	-97.98	-116.70	-123.53	-116.13	-98.93	-116.09
100.	-45.30	-85.23	-107.60	-108.63	-117.84	-102.36	-115.33
155.	-42.45	-95.74	-108.45	-102.95	-111.96	-94.88	-114.88
200.	-40.78	-105.77	-103.88	-100.50	-117.38	-97.38	-110.12
250.	-39.33	-92.88	-102.89	-100.59	-105.59	-97.59	-102.87
300.	-38.14	-91.43	-104.68	-99.24	-98.65	-66.56	-97.26
350.	-37.14	-94.81	-104.83	-96.41	-102.52	-83.96	-96.32
400.	-36.27	-87.29	-97.81	-89.29	-98.55	-89.71	-99.21
450.	-35.50	-102.44	-103.82	-87.98	-101.12	-95.26	-94.80
500.	-34.82	-91.66	-94.47	-96.97	-94.22	-83.62	-94.68



PSNEXT - Near End

Client	Ningbo Feynman	Report No	103777015CRT-004c
Specification	EN 50173-1 Cat 6A Cable		
Part No	FA0423APC6AV	Length (m)	100.
Test Started	12/20/2018 8:21:19 AM	Temperature	21.5 °C
Description	4 pair 23 AWG UFTP Solid		
Operator Name	David Ayers	Test Status	Complies

PSNEXT - Near End (dB)					
Freq (MHz)	Limit	Blue	Orange	Green	Brown
1.	-72.11	-107.83	-104.96	-111.21	-103.07
4.	-63.29	-107.35	-108.18	-106.49	-108.11
8.	-58.75	-103.59	-104.31	-116.87	-108.89
10.	-57.30	-103.38	-105.10	-109.49	-105.00
16.	-54.24	-103.22	-102.42	-107.99	-106.18
20.	-52.79	-105.63	-107.75	-108.89	-105.57
25.	-51.33	-102.24	-102.24	-107.67	-107.04
31.25	-49.88	-105.69	-102.07	-107.43	-102.17
62.5	-45.36	-96.17	-95.47	-111.34	-103.89
100.	-42.30	-86.88	-85.96	-108.34	-93.17
155.	-39.45	-96.94	-91.88	-105.74	-93.35
200.	-37.78	-97.93	-98.01	-105.89	-101.90
250.	-36.33	-89.94	-87.38	-108.49	-90.76
300.	-35.14	-88.58	-71.68	-97.77	-71.75
350.	-34.14	-96.53	-90.89	-95.35	-90.43
400.	-33.27	-88.30	-86.83	-98.67	-85.57
450.	-32.50	-87.90	-90.37	-90.79	-97.11
500.	-31.82	-85.21	-84.73	-89.82	-84.01



PSNEXT - Far End

Client	Ningbo Feynman	Report No	103777015CRT-004c
Specification	EN 50173-1 Cat 6A Cable		
Part No	FA0423APC6AV	Length (m)	100.
Test Started	12/20/2018 8:21:19 AM	Temperature	21.5 °C
Description	4 pair 23 AWG UFTP Solid		
Operator Name	David Ayers	Test Status	Complies

PSNEXT - Far End (dB)					
Freq (MHz)	Limit	Blue	Orange	Green	Brown
1.	-72.11	-101.56	-104.55	-103.96	-105.48
4.	-63.29	-106.86	-106.92	-106.30	-105.12
8.	-58.75	-101.30	-100.01	-109.54	-105.30
10.	-57.30	-108.54	-109.56	-110.38	-108.40
16.	-54.24	-105.74	-104.10	-108.33	-111.05
20.	-52.79	-107.41	-103.75	-110.52	-104.46
25.	-51.33	-104.82	-107.09	-110.48	-108.52
31.25	-49.88	-101.28	-101.47	-105.92	-103.86
62.5	-45.36	-97.87	-95.07	-111.37	-98.63
100.	-42.30	-85.18	-85.11	-105.89	-101.15
155.	-39.45	-94.74	-91.85	-105.89	-94.10
200.	-37.78	-98.05	-96.73	-102.59	-95.46
250.	-36.33	-91.78	-91.44	-98.75	-94.94
300.	-35.14	-90.59	-66.54	-94.43	-66.55
350.	-34.14	-92.25	-83.55	-94.87	-83.48
400.	-33.27	-84.93	-85.12	-93.71	-86.26
450.	-32.50	-87.68	-93.59	-93.46	-86.52
500.	-31.82	-89.06	-82.67	-89.68	-83.11



ACR - Near End

Client	Ningbo Feynman	Report No	103777015CRT-004c
Specification	EN 50173-1 Cat 6A Cable		
Part No	FA0423APC6AV	Length (m)	100.
Test Started	12/20/2018 8:21:19 AM	Temperature	21.5 °C
Description	4 pair 23 AWG UFTP Solid		
Operator Name	David Ayers	Test Status	Complies

ACR - Near End (dB)							
Freq (MHz)	Limit	Blue - Orange	Blue - Green	Blue - Brown	Orange - Green	Orange - Brown	Green - Brown
1.		109.77	116.79	109.86	132.95	105.45	110.25
4.		108.33	107.43	112.62	109.37	111.32	106.99
8.	56.44	99.89	113.61	105.93	120.27	109.75	120.32
10.	54.38	101.15	108.84	101.88	115.16	105.84	108.68
16.	49.75	97.25	109.63	104.62	104.42	102.36	106.06
20.	47.41	105.00	104.43	100.46	109.52	102.61	106.89
25.	44.95	94.25	104.26	104.04	104.95	103.98	102.58
31.25	42.37	99.14	102.86	103.34	104.42	93.50	101.60
62.5	33.37	82.15	101.17	104.01	111.49	90.38	103.82
100.	26.16	68.95	97.12	92.99	92.24	75.25	100.90
155.	18.36	74.77	92.57	89.76	87.79	70.95	87.56
200.	13.21	73.26	90.36	79.76	86.90	80.93	83.94
250.	8.26	61.29	101.52	82.10	95.29	61.94	79.90
300.	3.88	57.70	76.78	66.34	67.93	40.04	73.25
350.	-0.11	70.22	70.20	64.33	64.84	57.65	65.22
400.	-3.78	57.08	70.36	53.09	75.97	51.05	62.99
450.	-7.21	52.25	52.48	60.80	62.53	61.97	69.27
500.	-10.44	50.37	50.15	46.81	55.68	44.76	63.33



ACR - Far End

Client	Ningbo Feynman	Report No	103777015CRT-004c
Specification	EN 50173-1 Cat 6A Cable		
Part No	FA0423APC6AV	Length (m)	100.
Test Started	12/20/2018 8:21:19 AM	Temperature	21.5 °C
Description	4 pair 23 AWG UFTP Solid		
Operator Name	David Ayers	Test Status	Complies

ACR - Far End (dB)							
Freq (MHz)	Limit	Blue - Orange	Blue - Green	Blue - Brown	Orange - Green	Orange - Brown	Green - Brown
1.		103.87	104.33	106.94	112.67	113.98	107.39
4.		105.14	124.68	109.21	113.42	110.31	103.49
8.	56.44	96.86	110.42	108.88	106.25	101.28	120.02
10.	54.38	109.76	107.76	107.09	112.66	106.99	110.71
16.	49.75	99.73	110.23	108.41	102.67	110.41	111.17
20.	47.41	101.28	114.75	105.31	106.17	98.13	105.89
25.	44.95	98.77	104.66	101.33	109.52	113.23	106.68
31.25	42.37	92.32	110.96	98.96	104.44	112.28	96.94
62.5	33.37	83.82	102.62	109.34	102.06	84.75	101.91
100.	26.16	67.27	89.72	90.59	99.96	84.31	97.28
155.	18.36	73.26	86.07	80.34	89.58	72.27	92.27
200.	13.21	80.09	78.36	74.71	91.86	71.59	84.34
250.	8.26	64.16	74.31	71.66	77.01	68.67	73.95
300.	3.88	59.94	73.30	67.48	67.27	34.81	65.50
350.	-0.11	60.71	70.86	62.02	68.55	49.57	61.94
400.	-3.78	50.69	61.41	52.43	62.15	52.85	62.36
450.	-7.21	63.42	64.96	48.75	62.26	56.04	55.58
500.	-10.44	50.51	53.53	55.46	53.28	42.11	53.17



PSACR - Near End

Client	Ningbo Feynman	Report No	103777015CRT-004c
Specification	EN 50173-1 Cat 6A Cable		
Part No	FA0423APC6AV	Length (m)	100.
Test Started	12/20/2018 8:21:19 AM	Temperature	21.5 °C
Description	4 pair 23 AWG UFTP Solid		
Operator Name	David Ayers	Test Status	Complies

PSACR - Near End (dB)					
Freq (MHz)	Limit	Blue	Orange	Green	Brown
1.		105.92	102.96	109.29	101.14
4.		103.89	104.63	102.99	104.62
8.	53.44	98.79	99.42	112.04	104.07
10.	51.38	98.02	99.64	104.09	99.60
16.	46.75	96.32	95.45	101.09	99.24
20.	44.41	97.85	99.89	101.10	97.74
25.	41.95	93.46	93.38	98.89	98.20
31.25	39.37	95.81	92.12	97.55	92.22
62.5	30.37	82.17	81.32	97.29	89.71
100.	23.16	69.08	68.00	90.49	75.14
155.	15.36	74.67	69.44	83.43	70.79
200.	10.21	72.54	72.38	80.36	76.13
250.	5.26	61.56	58.70	79.93	61.83
300.	0.88	57.45	40.21	66.43	40.03
350.	-3.11	62.80	56.85	61.50	56.14
400.	-6.78	52.08	50.27	62.35	48.75
450.	-10.21	49.30	51.47	51.98	57.96
500.	-13.44	44.41	43.67	48.93	42.62



PSACR - Far End

Client	Ningbo Feynman	Report No	103777015CRT-004c
Specification	EN 50173-1 Cat 6A Cable		
Part No	FA0423APC6AV	Length (m)	100.
Test Started	12/20/2018 8:21:19 AM	Temperature	21.5 °C
Description	4 pair 23 AWG UFTP Solid		
Operator Name	David Ayers	Test Status	Complies

PSACR - Far End (dB)					
Freq (MHz)	Limit	Blue	Orange	Green	Brown
1.		99.65	102.56	102.03	103.55
4.		103.40	103.37	102.78	101.63
8.	53.44	96.50	95.12	104.70	100.48
10.	51.38	103.16	104.10	104.98	102.99
16.	46.75	98.84	97.13	101.43	104.12
20.	44.41	99.62	95.88	102.73	96.63
25.	41.95	96.03	98.23	101.70	99.68
31.25	39.37	91.40	91.52	96.03	93.91
62.5	30.37	83.86	80.92	97.29	84.45
100.	23.16	67.38	67.15	88.00	83.10
155.	15.36	72.42	69.37	83.51	71.49
200.	10.21	72.58	71.05	77.07	69.68
250.	5.26	63.37	62.72	70.17	66.02
300.	0.88	59.43	35.05	63.05	34.80
350.	-3.11	58.45	49.45	60.89	49.09
400.	-6.78	48.67	48.52	57.31	49.40
450.	-10.21	49.08	54.57	54.60	47.30
500.	-13.44	48.37	41.52	48.74	41.60



FEXT - Near End

Client	Ningbo Feynman	Report No	103777015CRT-004c
Specification	EN 50173-1 Cat 6A Cable		
Part No	FA0423APC6AV	Length (m)	100.
Test Started	12/20/2018 8:21:19 AM	Temperature	21.5 °C
Description	4 pair 23 AWG UFTP Solid		
Operator Name	David Ayers	Test Status	Complies

FEXT - Near End (dB)												
f (MHz)	1-2	1-3	1-4	2-1	2-3	2-4	3-1	3-2	3-4	4-1	4-2	4-3
1.	-112.34	-115.58	-110.35	-108.61	-113.38	-109.37	-113.18	-110.97	-113.05	-116.58	-116.91	-107.35
4.	-110.54	-117.02	-128.26	-121.27	-115.16	-115.52	-113.15	-109.90	-116.45	-111.32	-111.25	-117.83
8.	-111.81	-111.24	-108.77	-115.04	-114.05	-108.10	-105.91	-113.73	-105.54	-106.78	-119.66	-109.62
10.	-108.01	-113.07	-117.03	-117.10	-110.79	-116.11	-110.69	-112.83	-113.74	-131.44	-109.96	-114.27
16.	-109.38	-110.16	-113.80	-113.31	-115.26	-117.67	-121.64	-112.79	-121.40	-119.63	-110.61	-117.37
20.	-120.34	-113.11	-112.96	-115.32	-111.92	-111.82	-113.73	-113.55	-115.99	-122.65	-112.26	-120.10
25.	-110.24	-113.50	-110.39	-111.16	-113.13	-110.64	-116.60	-108.79	-120.30	-115.63	-122.05	-113.93
31.25	-110.89	-124.08	-110.63	-109.94	-115.98	-112.81	-109.83	-114.92	-114.64	-113.14	-114.57	-123.66
62.5	-105.91	-112.88	-115.23	-107.63	-113.39	-123.12	-118.02	-117.20	-123.93	-112.67	-125.65	-113.14
100.	-104.38	-116.44	-115.78	-105.14	-110.59	-112.66	-113.40	-119.99	-112.36	-116.53	-113.90	-117.75
155.	-104.49	-116.60	-120.10	-104.95	-118.53	-116.23	-114.72	-118.11	-117.69	-116.65	-112.79	-113.07
200.	-108.59	-115.27	-114.25	-109.02	-114.60	-116.92	-117.68	-114.37	-114.54	-122.30	-117.73	-112.19
250.	-114.12	-115.64	-119.49	-119.02	-118.44	-113.55	-120.89	-116.68	-114.57	-108.73	-114.34	-117.06
300.	-106.68	-113.60	-113.70	-116.02	-122.80	-111.57	-121.82	-117.44	-121.99	-135.63	-120.12	-115.88
350.	-114.61	-120.48	-112.45	-117.40	-116.77	-116.23	-117.66	-111.97	-117.97	-118.10	-117.35	-112.54
400.	-104.62	-111.03	-117.45	-128.85	-114.94	-116.66	-114.94	-111.31	-117.89	-113.44	-122.85	-118.26
450.	-106.92	-111.61	-112.20	-110.97	-110.87	-113.64	-114.51	-116.71	-119.74	-118.57	-126.01	-115.98
500.	-107.19	-112.75	-111.41	-114.01	-110.94	-113.50	-117.34	-106.46	-111.64	-106.29	-109.14	-113.19



FEXT - Far End

Client	Ningbo Feynman	Report No	103777015CRT-004c
Specification	EN 50173-1 Cat 6A Cable		
Part No	FA0423APC6AV	Length (m)	100.
Test Started	12/20/2018 8:21:19 AM	Temperature	21.5 °C
Description	4 pair 23 AWG UFTP Solid		
Operator Name	David Ayers	Test Status	Complies

FEXT - Far End (dB)												
f (MHz)	1-2	1-3	1-4	2-1	2-3	2-4	3-1	3-2	3-4	4-1	4-2	4-3
1.	-110.28	-113.55	-111.56	-111.32	-112.51	-114.13	-108.50	-109.40	-114.18	-110.32	-108.68	-112.77
4.	-113.27	-109.02	-111.98	-113.02	-110.70	-113.35	-123.43	-114.77	-114.85	-121.56	-112.62	-119.34
8.	-110.16	-113.37	-111.56	-108.29	-119.37	-116.14	-112.85	-115.47	-114.01	-110.46	-103.90	-109.35
10.	-110.82	-113.00	-133.41	-115.89	-113.57	-111.56	-116.06	-118.81	-109.23	-113.04	-114.36	-120.39
16.	-114.05	-119.90	-118.42	-113.60	-113.80	-113.86	-115.87	-111.67	-119.40	-109.07	-110.07	-118.88
20.	-111.85	-122.49	-111.39	-118.63	-110.13	-110.64	-118.85	-113.39	-108.67	-115.68	-116.67	-118.13
25.	-109.81	-124.49	-116.02	-108.47	-113.90	-125.64	-115.73	-117.13	-117.61	-125.66	-115.51	-117.80
31.25	-120.45	-113.84	-113.19	-105.60	-113.76	-121.07	-111.50	-116.68	-113.58	-109.08	-119.82	-119.56
62.5	-107.06	-114.64	-107.41	-109.86	-110.60	-113.76	-117.08	-112.29	-117.69	-116.05	-108.97	-112.60
100.	-105.07	-121.33	-115.11	-102.77	-118.90	-123.79	-113.92	-112.70	-116.25	-134.07	-115.84	-124.46
155.	-105.78	-112.37	-111.72	-103.57	-114.31	-116.89	-115.03	-118.13	-113.41	-109.21	-114.58	-113.34
200.	-108.12	-118.48	-118.81	-106.47	-127.61	-122.27	-116.35	-109.69	-116.21	-115.81	-116.87	-110.14
250.	-106.68	-116.41	-112.06	-112.37	-116.57	-113.05	-112.45	-120.71	-125.81	-115.26	-111.75	-112.95
300.	-115.54	-116.49	-110.96	-112.13	-120.35	-117.07	-116.81	-113.35	-127.80	-118.41	-110.91	-112.10
350.	-107.86	-119.48	-113.82	-113.32	-109.60	-128.02	-114.89	-112.77	-117.13	-115.52	-112.24	-121.02
400.	-110.00	-116.84	-119.39	-108.90	-110.50	-110.40	-117.15	-119.80	-122.11	-111.97	-121.85	-111.08
450.	-108.14	-111.03	-122.02	-108.26	-109.51	-121.94	-118.14	-110.51	-110.05	-110.71	-113.80	-127.53
500.	-113.38	-111.79	-113.76	-112.14	-108.89	-114.52	-124.47	-118.44	-108.51	-113.57	-122.22	-106.48



ACRF (ELFEXT) - Near End

Client	Ningbo Feynman	Report No	103777015CRT-004c
Specification	EN 50173-1 Cat 6A Cable		
Part No	FA0423APC6AV	Length (m)	100.
Test Started	12/20/2018 8:21:19 AM	Temperature	21.5 °C
Description	4 pair 23 AWG UFTP Solid		
Operator Name	David Ayers	Test Status	Complies

ACRF (ELFEXT) - Near End (dB)													
f (MHz)	Limit	1-2	1-3	1-4	2-1	2-3	2-4	3-1	3-2	3-4	4-1	4-2	4-3
1.	-67.75	-110.34	-113.66	-108.43	-106.70	-111.46	-107.45	-111.27	-108.97	-111.12	-114.67	-114.92	-105.43
4.	-55.98	-106.99	-113.51	-124.77	-117.82	-111.65	-112.04	-109.69	-106.34	-112.97	-107.86	-107.70	-114.32
8.	-49.94	-106.92	-106.40	-103.96	-110.25	-109.23	-103.29	-101.12	-108.85	-100.73	-101.98	-114.77	-104.80
10.	-48.00	-102.55	-107.67	-111.63	-111.74	-105.40	-110.71	-105.32	-107.37	-108.34	-126.07	-104.50	-108.88
16.	-43.92	-102.40	-103.25	-106.87	-106.41	-108.36	-110.73	-114.75	-105.81	-114.46	-112.74	-103.64	-110.46
20.	-41.98	-112.48	-105.32	-105.13	-107.53	-104.13	-103.99	-105.95	-105.69	-108.16	-114.87	-104.40	-112.31
25.	-40.04	-101.38	-104.72	-101.55	-102.37	-104.35	-101.80	-107.81	-99.93	-111.46	-106.84	-113.20	-105.15
31.25	-38.10	-100.93	-114.20	-100.68	-100.06	-106.09	-102.86	-99.95	-104.96	-104.70	-103.27	-104.61	-113.78
62.5	-32.08	-91.76	-98.83	-101.04	-93.62	-99.33	-108.93	-104.02	-103.05	-109.74	-98.66	-111.50	-99.09
100.	-28.00	-86.42	-98.58	-97.74	-87.35	-92.74	-94.63	-95.60	-102.03	-94.33	-98.73	-95.93	-99.89
155.	-24.19	-82.05	-94.29	-97.54	-82.69	-96.21	-93.67	-92.45	-95.67	-95.13	-94.38	-90.35	-90.75
200.	-21.98	-82.96	-89.73	-88.48	-83.64	-89.07	-91.15	-92.29	-88.74	-88.77	-96.91	-92.10	-86.65
250.	-20.04	-85.44	-87.08	-90.57	-90.64	-89.88	-84.63	-92.51	-87.99	-85.64	-80.35	-85.65	-88.49
300.	-18.46	-75.21	-82.27	-81.98	-84.88	-91.47	-79.85	-90.68	-85.97	-90.27	-104.50	-88.65	-84.54
350.	-17.12	-80.57	-86.62	-78.15	-83.67	-82.91	-81.93	-83.93	-77.93	-83.68	-84.37	-83.32	-78.69
400.	-15.96	-68.06	-74.72	-80.63	-92.62	-78.63	-79.84	-78.71	-74.76	-81.08	-77.22	-86.30	-81.95
450.	-14.94	-68.02	-72.80	-73.05	-72.36	-72.06	-74.48	-75.92	-77.81	-80.58	-79.98	-87.10	-77.18
500.	-14.02	-66.13	-71.86	-70.01	-73.21	-70.06	-72.10	-76.55	-65.39	-70.24	-65.49	-68.08	-72.30



ACRF (ELFEXT) - Far End

Client	Ningbo Feynman	Report No	103777015CRT-004c
Specification	EN 50173-1 Cat 6A Cable		
Part No	FA0423APC6AV	Length (m)	100.
Test Started	12/20/2018 8:21:19 AM	Temperature	21.5 °C
Description	4 pair 23 AWG UFTP Solid		
Operator Name	David Ayers	Test Status	Complies

ACRF (ELFEXT) - Far End (dB)													
f (MHz)	Limit	1-2	1-3	1-4	2-1	2-3	2-4	3-1	3-2	3-4	4-1	4-2-3	
1.	-67.75	-108.28	-111.61	-109.62	-109.40	-110.58	-112.20	-106.59	-107.41	-112.24	-108.41	-106.68	-110.84
4.	-55.98	-109.71	-105.50	-108.50	-109.55	-107.17	-109.87	-119.97	-111.22	-111.37	-118.09	-109.06	-115.82
8.	-49.94	-105.27	-108.53	-106.74	-103.49	-114.53	-111.32	-108.05	-110.59	-109.19	-105.66	-99.02	-104.51
10.	-48.00	-105.36	-107.60	-128.00	-110.51	-108.16	-106.16	-110.69	-113.35	-103.83	-107.68	-108.90	-114.98
16.	-43.92	-107.07	-112.99	-111.49	-106.69	-106.89	-106.93	-108.97	-104.70	-112.47	-102.18	-103.09	-111.97
20.	-41.98	-103.99	-114.70	-103.55	-110.84	-102.34	-102.80	-111.06	-105.53	-100.84	-107.89	-108.80	-110.33
25.	-40.04	-100.95	-115.71	-107.18	-99.68	-105.12	-116.80	-106.95	-108.27	-108.77	-116.88	-106.65	-109.02
31.25	-38.10	-110.48	-103.95	-103.25	-95.71	-103.88	-111.12	-101.62	-106.71	-103.63	-99.20	-109.87	-109.68
62.5	-32.08	-92.91	-100.57	-93.23	-95.85	-96.53	-99.57	-103.08	-98.13	-103.51	-102.04	-94.82	-98.52
100.	-28.00	-87.11	-103.45	-97.07	-84.97	-101.02	-105.75	-96.11	-94.73	-98.20	-116.26	-97.88	-106.57
155.	-24.19	-83.30	-89.99	-89.12	-81.25	-91.93	-94.28	-92.71	-95.65	-90.80	-86.90	-92.10	-90.96
200.	-21.98	-82.44	-92.95	-93.02	-81.00	-102.09	-96.48	-90.88	-84.01	-90.42	-90.34	-91.19	-84.62
250.	-20.04	-77.96	-87.83	-83.14	-83.96	-87.99	-84.12	-84.04	-92.00	-96.89	-86.85	-83.03	-84.37
300.	-18.46	-84.05	-85.12	-79.21	-80.97	-88.96	-85.31	-85.65	-81.86	-96.05	-87.25	-79.42	-80.71
350.	-17.12	-73.76	-85.51	-79.44	-79.51	-75.62	-93.63	-81.09	-78.67	-82.74	-81.72	-78.14	-87.04
400.	-15.96	-73.40	-80.44	-82.53	-72.63	-74.09	-73.54	-80.89	-83.20	-85.25	-75.71	-85.24	-74.68
450.	-14.94	-69.12	-72.16	-82.79	-69.66	-70.65	-82.71	-79.54	-71.48	-70.82	-72.11	-74.77	-88.67
500.	-14.02	-72.24	-70.85	-72.25	-71.46	-67.95	-73.01	-83.78	-77.29	-67.00	-72.89	-81.07	-65.54



PSFEXT - Near End

Client	Ningbo Feynman	Report No	103777015CRT-004c
Specification	EN 50173-1 Cat 6A Cable		
Part No	FA0423APC6AV	Length (m)	100.
Test Started	12/20/2018 8:21:19 AM	Temperature	21.5 °C
Description	4 pair 23 AWG UFTP Solid		
Operator Name	David Ayers	Test Status	Complies

PSFEXT - Near End (dB)				
Freq (MHz)	Blue	Orange	Green	Brown
1.	-107.45	-105.11	-107.35	-106.35
4.	-109.58	-108.58	-107.13	-107.28
8.	-105.58	-106.39	-102.35	-104.81
10.	-106.01	-108.26	-106.60	-108.12
16.	-105.83	-109.95	-109.62	-108.34
20.	-109.25	-106.89	-108.47	-110.56
25.	-106.30	-106.70	-107.59	-109.76
31.25	-107.59	-107.29	-107.61	-110.49
62.5	-104.68	-106.39	-112.00	-109.71
100.	-103.78	-103.47	-109.00	-110.69
155.	-103.83	-104.14	-111.47	-108.92
200.	-106.20	-107.29	-109.42	-109.70
250.	-107.63	-109.59	-111.09	-106.94
300.	-104.80	-108.94	-114.33	-112.62
350.	-109.24	-110.87	-109.86	-110.44
400.	-103.42	-111.33	-108.71	-111.65
450.	-104.65	-106.61	-111.30	-113.50
500.	-105.00	-107.83	-105.05	-103.93



PSFEXT - Far End

Client	Ningbo Feynman	Report No	103777015CRT-004c
Specification	EN 50173-1 Cat 6A Cable		
Part No	FA0423APC6AV	Length (m)	100.
Test Started	12/20/2018 8:21:19 AM	Temperature	21.5 °C
Description	4 pair 23 AWG UFTP Solid		
Operator Name	David Ayers	Test Status	Complies

PSFEXT - Far End (dB)				
Freq (MHz)	Blue	Orange	Green	Brown
1.	-106.45	-107.53	-104.60	-105.44
4.	-105.71	-107.26	-111.09	-109.91
8.	-106.72	-107.34	-109.19	-102.08
10.	-107.65	-107.49	-106.78	-109.81
16.	-111.87	-108.85	-109.53	-105.60
20.	-108.25	-106.40	-106.94	-111.14
25.	-108.46	-107.16	-111.16	-113.13
31.25	-108.54	-104.87	-108.17	-107.72
62.5	-103.68	-106.08	-110.19	-105.82
100.	-104.52	-102.60	-108.39	-114.90
155.	-103.92	-102.78	-106.46	-106.95
200.	-107.13	-105.99	-107.84	-107.81
250.	-104.88	-108.79	-111.57	-107.07
300.	-108.36	-107.56	-111.51	-106.88
350.	-106.07	-107.98	-109.75	-109.86
400.	-108.70	-105.06	-113.87	-108.10
450.	-106.22	-105.69	-106.84	-108.23
500.	-108.12	-106.47	-107.99	-105.61



PSACRF (PSELFEXT) - Near End

Client	Ningbo Feynman	Report No	103777015CRT-004c
Specification	EN 50173-1 Cat 6A Cable		
Part No	FA0423APC6AV	Length (m)	100.
Test Started	12/20/2018 8:21:19 AM	Temperature	21.5 °C
Description	4 pair 23 AWG UFTP Solid		
Operator Name	David Ayers	Test Status	Complies

PSACRF (PSELFEXT) - Near End (dB)					
Freq (MHz)	Limit	Blue	Orange	Green	Brown
1.	-64.75	-105.55	-103.11	-105.43	-104.42
4.	-52.98	-106.12	-105.03	-103.62	-103.80
8.	-46.94	-100.79	-101.49	-97.53	-99.99
10.	-45.00	-100.64	-102.80	-101.21	-102.72
16.	-40.92	-98.93	-102.98	-102.71	-101.41
20.	-38.98	-101.46	-99.03	-100.69	-102.73
25.	-37.04	-97.51	-97.85	-98.81	-100.93
31.25	-35.10	-97.72	-97.33	-97.74	-100.54
62.5	-29.08	-90.68	-92.24	-97.95	-95.52
100.	-25.00	-85.98	-85.50	-91.15	-92.65
155.	-21.19	-81.56	-81.70	-89.15	-86.36
200.	-18.98	-80.82	-81.66	-83.88	-83.93
250.	-17.04	-79.25	-80.90	-82.53	-78.02
300.	-15.46	-73.66	-77.48	-83.00	-80.89
350.	-14.12	-75.51	-76.83	-76.00	-76.15
400.	-12.96	-67.20	-74.78	-72.40	-74.83
450.	-11.94	-66.06	-67.70	-72.50	-74.35
500.	-11.02	-64.21	-66.76	-64.16	-62.53



PSACRF (PSELFEXT) - Far End

Client	Ningbo Feynman	Report No	103777015CRT-004c
Specification	EN 50173-1 Cat 6A Cable		
Part No	FA0423APC6AV	Length (m)	100.
Test Started	12/20/2018 8:21:19 AM	Temperature	21.5 °C
Description	4 pair 23 AWG UFTP Solid		
Operator Name	David Ayers	Test Status	Complies

PSACRF (PSELFEXT) - Far End (dB)					
Freq (MHz)	Limit	Blue	Orange	Green	Brown
1.	-64.75	-104.54	-105.54	-102.67	-103.51
4.	-52.98	-102.25	-103.70	-107.57	-106.43
8.	-46.94	-101.92	-102.45	-104.35	-97.27
10.	-45.00	-102.28	-102.02	-101.37	-104.41
16.	-40.92	-104.98	-101.88	-102.61	-98.66
20.	-38.98	-100.46	-98.53	-99.15	-103.31
25.	-37.04	-99.68	-98.30	-102.38	-104.30
31.25	-35.10	-98.66	-94.91	-98.28	-97.77
62.5	-29.08	-89.67	-91.92	-96.11	-91.63
100.	-25.00	-86.71	-84.64	-90.50	-96.86
155.	-21.19	-81.60	-80.30	-84.08	-84.34
200.	-18.98	-81.66	-80.31	-82.31	-82.02
250.	-17.04	-76.47	-80.07	-82.99	-78.14
300.	-15.46	-77.20	-76.07	-80.13	-75.12
350.	-14.12	-72.26	-73.88	-75.78	-75.48
400.	-12.96	-72.44	-68.46	-77.47	-71.25
450.	-11.94	-67.63	-66.66	-67.98	-69.00
500.	-11.02	-67.43	-65.32	-67.05	-64.10



Impedance - Near End

Client	Ningbo Feynman	Report No	103777015CRT-004c
Specification	EN 50173-1 Cat 6A Cable		
Part No	FA0423APC6AV	Length (m)	100.
Test Started	12/20/2018 8:21:19 AM	Temperature	21.5 °C
Description	4 pair 23 AWG UFTP Solid		
Operator Name	David Ayers	Test Status	Complies

Impedance - Near End (ohms)				
Freq (MHz)	Blue	Orange	Green	Brown
1.	106.98	106.62	106.13	104.87
4.	101.64	101.46	101.49	100.19
8.	103.40	103.72	104.01	103.76
10.	100.73	101.00	100.38	99.68
16.	100.24	99.82	99.76	99.31
20.	101.70	100.95	101.20	100.05
25.	100.58	99.94	98.94	99.64
31.25	102.27	101.65	102.58	100.83
62.5	100.55	101.36	100.25	99.74
100.	98.04	96.99	97.28	97.94
155.	99.00	98.65	99.21	96.84
200.	97.21	99.10	97.94	95.16
250.	97.26	99.78	96.81	95.09
300.	95.87	94.99	95.75	95.62
350.	101.89	99.16	97.20	93.95
400.	100.81	93.08	95.84	93.44
450.	99.42	102.50	105.64	94.44
500.	103.58	100.89	96.90	101.09



Impedance - Far End

Client	Ningbo Feynman	Report No	103777015CRT-004c
Specification	EN 50173-1 Cat 6A Cable		
Part No	FA0423APC6AV	Length (m)	100.
Test Started	12/20/2018 8:21:19 AM	Temperature	21.5 °C
Description	4 pair 23 AWG UFTP Solid		
Operator Name	David Ayers	Test Status	Complies

Impedance - Far End (ohms)				
Freq (MHz)	Blue	Orange	Green	Brown
1.	106.04	106.76	105.95	104.85
4.	102.40	102.71	102.06	101.81
8.	101.56	103.12	102.52	103.24
10.	102.42	101.80	102.09	101.08
16.	102.29	99.73	101.00	100.38
20.	102.47	101.76	100.99	100.26
25.	101.93	100.55	99.95	99.24
31.25	101.41	101.94	100.45	100.32
62.5	99.90	100.24	99.91	99.10
100.	101.05	100.81	102.95	98.87
155.	98.03	96.73	97.30	97.80
200.	99.03	99.23	94.70	96.41
250.	97.34	97.00	96.76	91.00
300.	94.69	94.52	94.49	92.79
350.	95.98	96.50	96.52	95.58
400.	94.52	97.63	98.53	103.55
450.	94.87	101.74	104.68	98.71
500.	91.69	102.06	99.66	100.30



Fitted Impedance - Near End

Client	Ningbo Feynman	Report No	103777015CRT-004c
Specification	EN 50173-1 Cat 6A Cable		
Part No	FA0423APC6AV	Length (m)	100.
Test Started	12/20/2018 8:21:19 AM	Temperature	21.5 °C
Description	4 pair 23 AWG UFTP Solid		
Operator Name	David Ayers	Test Status	Complies

Fitted Impedance - Near End (ohms)				
Freq (MHz)	Blue	Orange	Green	Brown
1.	108.93	109.04	110.98	111.17
4.	103.46	103.20	103.74	103.07
8.	101.95	101.60	101.75	100.84
10.	101.57	101.20	101.25	100.28
16.	100.89	100.47	100.35	99.28
20.	100.62	100.18	100.00	98.88
25.	100.38	99.93	99.68	98.52
31.25	100.17	99.70	99.39	98.20
62.5	99.63	99.13	98.68	97.41
100.	99.36	98.84	98.33	97.01
155.	99.16	98.63	98.06	96.71
200.	99.06	98.52	97.93	96.57
250.	98.98	98.44	97.83	96.45
300.	98.93	98.38	97.76	96.37
350.	98.88	98.33	97.70	96.31
400.	98.85	98.30	97.65	96.25
450.	98.82	98.26	97.61	96.21
500.	98.79	98.24	97.58	96.17



Fitted Impedance - Far End

Client	Ningbo Feynman	Report No	103777015CRT-004c
Specification	EN 50173-1 Cat 6A Cable		
Part No	FA0423APC6AV	Length (m)	100.
Test Started	12/20/2018 8:21:19 AM	Temperature	21.5 °C
Description	4 pair 23 AWG UFTP Solid		
Operator Name	David Ayers	Test Status	Complies

Fitted Impedance - Far End (ohms)				
Freq (MHz)	Blue	Orange	Green	Brown
1.	117.30	112.49	111.66	110.79
4.	105.71	104.41	103.97	103.10
8.	102.52	102.19	101.85	100.99
10.	101.71	101.63	101.31	100.45
16.	100.28	100.62	100.36	99.50
20.	99.71	100.23	99.98	99.12
25.	99.20	99.87	99.64	98.78
31.25	98.74	99.55	99.34	98.48
62.5	97.61	98.76	98.59	97.73
100.	97.04	98.36	98.21	97.35
155.	96.61	98.07	97.92	97.07
200.	96.40	97.92	97.79	96.93
250.	96.24	97.81	97.68	96.82
300.	96.12	97.73	97.60	96.74
350.	96.03	97.66	97.54	96.68
400.	95.95	97.61	97.49	96.63
450.	95.89	97.57	97.45	96.59
500.	95.84	97.53	97.41	96.56



Return Loss - Near End

Client	Ningbo Feynman	Report No	103777015CRT-004c
Specification	EN 50173-1 Cat 6A Cable		
Part No	FA0423APC6AV	Length (m)	100.
Test Started	12/20/2018 8:21:19 AM	Temperature	21.5 °C
Description	4 pair 23 AWG UFTP Solid		
Operator Name	David Ayers	Test Status	Complies

Return Loss - Near End (dB)					
Freq (MHz)	Limit	Blue	Orange	Green	Brown
1.		-31.66	-31.44	-33.64	-38.25
4.		-45.08	-48.21	-40.69	-37.26
8.	-24.51	-35.58	-34.85	-34.18	-34.80
10.	-24.98	-52.43	-46.19	-63.88	-50.03
16.	-25.00	-61.81	-60.93	-62.77	-49.97
20.	-24.98	-41.86	-46.51	-44.65	-61.43
25.	-24.32	-50.75	-51.50	-48.25	-53.27
31.25	-23.64	-39.00	-41.73	-37.92	-47.71
62.5	-21.54	-51.72	-43.47	-61.87	-59.28
100.	-20.11	-40.30	-36.48	-37.32	-39.66
155.	-18.77	-45.98	-43.34	-49.35	-35.91
200.	-18.00	-37.17	-46.90	-39.71	-32.14
250.	-17.31	-37.14	-63.33	-35.84	-32.02
300.	-17.30	-33.51	-31.84	-33.29	-33.03
350.	-17.30	-40.62	-48.78	-36.96	-30.11
400.	-17.30	-47.85	-28.91	-33.45	-29.39
450.	-17.30	-50.69	-38.18	-31.23	-30.87
500.	-17.30	-35.10	-47.03	-36.07	-45.32



Return Loss - Far End

Client	Ningbo Feynman	Report No	103777015CRT-004c
Specification	EN 50173-1 Cat 6A Cable		
Part No	FA0423APC6AV	Length (m)	100.
Test Started	12/20/2018 8:21:19 AM	Temperature	21.5 °C
Description	4 pair 23 AWG UFTP Solid		
Operator Name	David Ayers	Test Status	Complies

Return Loss - Far End (dB)					
Freq (MHz)	Limit	Blue	Orange	Green	Brown
1.		-33.43	-31.54	-34.54	-37.63
4.		-40.04	-38.50	-44.17	-50.64
8.	-24.51	-42.25	-36.30	-38.10	-35.99
10.	-24.98	-38.60	-41.07	-39.93	-46.21
16.	-25.00	-38.98	-49.16	-46.65	-58.11
20.	-24.98	-38.33	-41.17	-46.35	-57.77
25.	-24.32	-40.48	-51.63	-56.85	-48.97
31.25	-23.64	-43.23	-40.40	-53.07	-56.47
62.5	-21.54	-65.66	-60.46	-58.42	-59.13
100.	-20.11	-45.78	-49.38	-37.01	-46.28
155.	-18.77	-40.23	-35.63	-37.30	-39.08
200.	-18.00	-46.47	-51.40	-31.33	-34.78
250.	-17.31	-37.43	-36.37	-35.74	-26.55
300.	-17.30	-31.35	-31.02	-30.96	-28.55
350.	-17.30	-33.77	-34.99	-35.04	-32.93
400.	-17.30	-31.00	-38.53	-42.59	-35.18
450.	-17.30	-31.59	-41.37	-32.82	-43.75
500.	-17.30	-27.26	-39.85	-55.46	-56.63



SRL - Near End

Client	Ningbo Feynman	Report No	103777015CRT-004c
Specification	EN 50173-1 Cat 6A Cable		
Part No	FA0423APC6AV	Length (m)	100.
Test Started	12/20/2018 8:21:19 AM	Temperature	21.5 °C
Description	4 pair 23 AWG UFTP Solid		
Operator Name	David Ayers	Test Status	Complies

SRL - Near End (dB)				
Freq (MHz)	Blue	Orange	Green	Brown
1.	-33.78	-35.46	-31.66	-31.44
4.	-38.92	-41.53	-37.84	-40.67
8.	-43.09	-39.69	-39.29	-36.89
10.	-45.07	-56.73	-44.48	-47.70
16.	-50.96	-49.73	-51.53	-57.72
20.	-46.63	-48.44	-44.64	-44.85
25.	-60.03	-52.43	-48.84	-45.28
31.25	-39.67	-40.26	-36.05	-37.59
62.5	-46.86	-39.10	-42.13	-38.55
100.	-43.96	-40.96	-46.19	-46.58
155.	-64.42	-86.84	-45.13	-69.31
200.	-40.95	-50.66	-57.46	-42.99
250.	-41.14	-43.72	-45.92	-43.54
300.	-36.08	-35.20	-39.78	-49.76
350.	-36.51	-48.07	-52.02	-38.13
400.	-40.13	-31.29	-40.56	-36.58
450.	-50.40	-33.51	-28.06	-40.65
500.	-32.53	-37.50	-49.16	-32.07



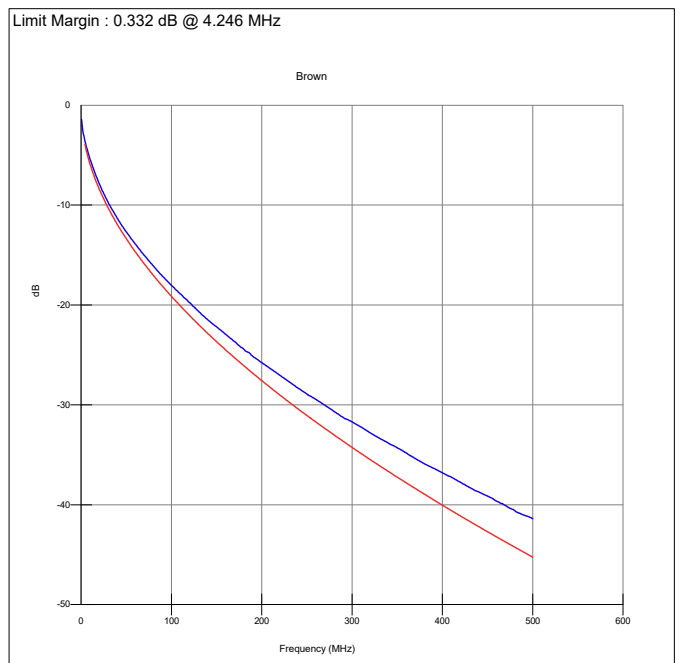
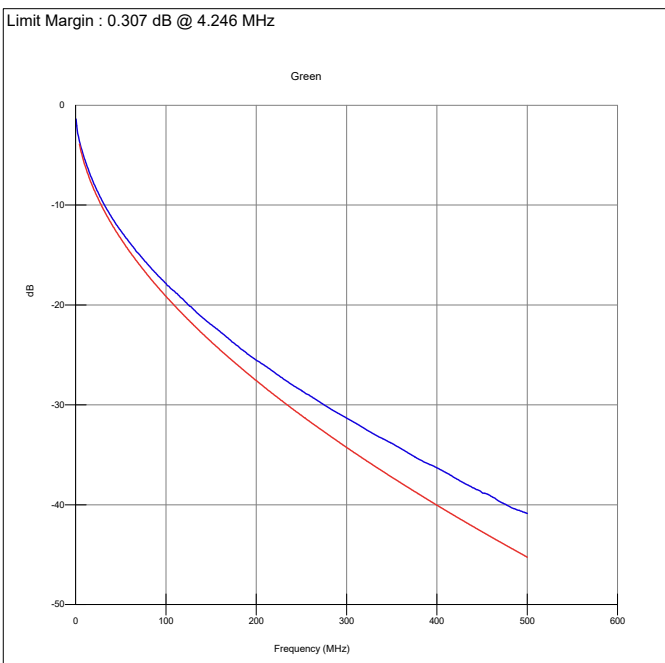
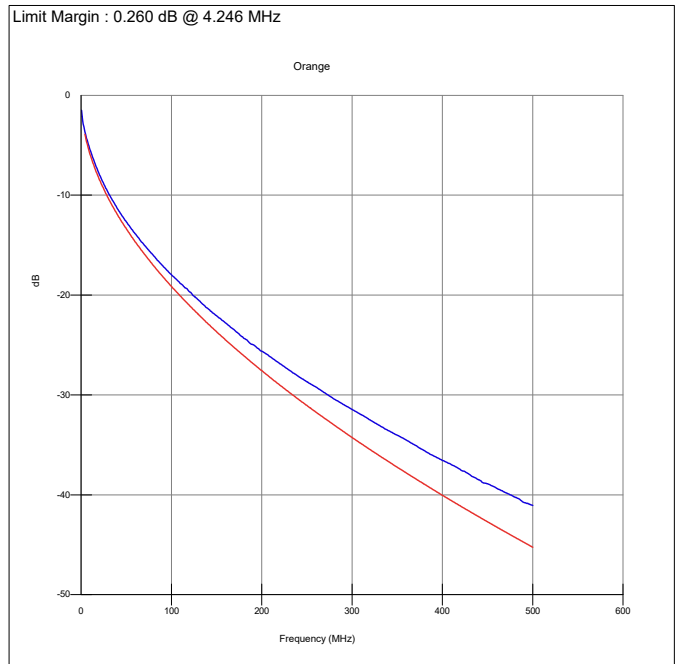
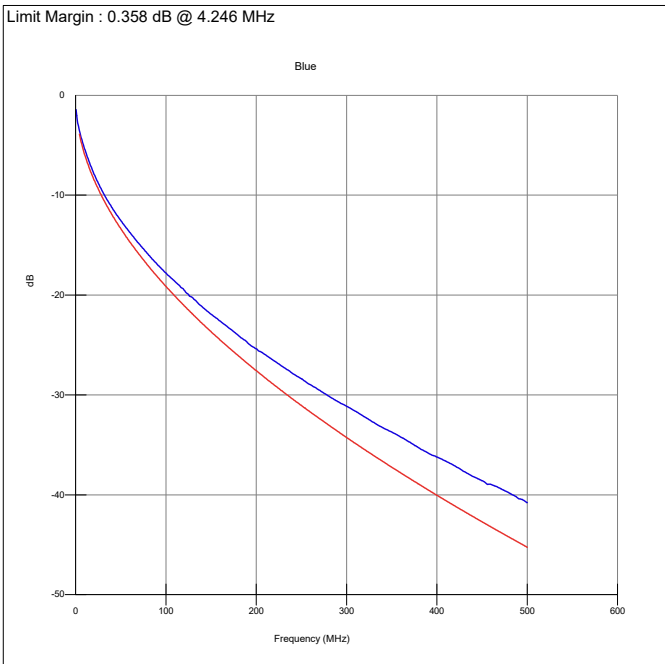
SRL - Far End

Client	Ningbo Feynman	Report No	103777015CRT-004c
Specification	EN 50173-1 Cat 6A Cable		
Part No	FA0423APC6AV	Length (m)	100.
Test Started	12/20/2018 8:21:19 AM	Temperature	21.5 °C
Description	4 pair 23 AWG UFTP Solid		
Operator Name	David Ayers	Test Status	Complies

SRL - Far End (dB)				
Freq (MHz)	Blue	Orange	Green	Brown
1.	-26.08	-33.81	-30.99	-31.93
4.	-36.40	-44.58	-49.22	-41.40
8.	-46.62	-47.40	-49.82	-39.29
10.	-51.19	-72.77	-50.13	-52.80
16.	-40.12	-45.29	-51.12	-47.86
20.	-37.33	-42.38	-46.22	-44.88
25.	-37.37	-49.71	-51.48	-53.86
31.25	-37.54	-38.57	-45.10	-40.70
62.5	-38.72	-42.64	-43.64	-43.85
100.	-33.88	-38.39	-32.65	-43.29
155.	-43.01	-43.58	-50.25	-48.50
200.	-37.46	-44.48	-35.97	-52.07
250.	-45.12	-47.80	-47.77	-30.20
300.	-43.36	-35.59	-35.82	-33.64
350.	-63.50	-44.50	-45.64	-44.97
400.	-42.47	-60.74	-45.52	-29.23
450.	-45.41	-33.60	-28.93	-39.32
500.	-33.10	-32.89	-38.85	-34.43

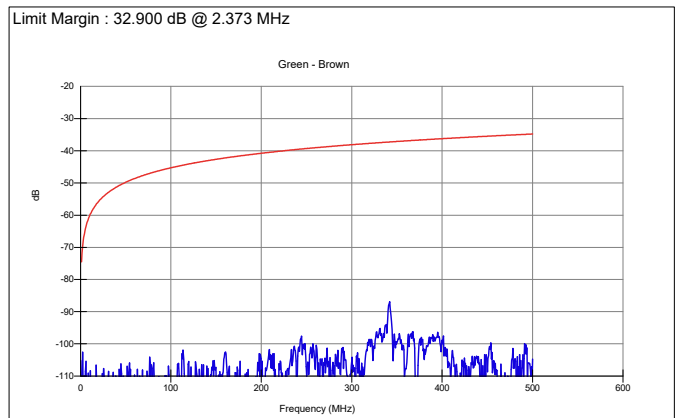
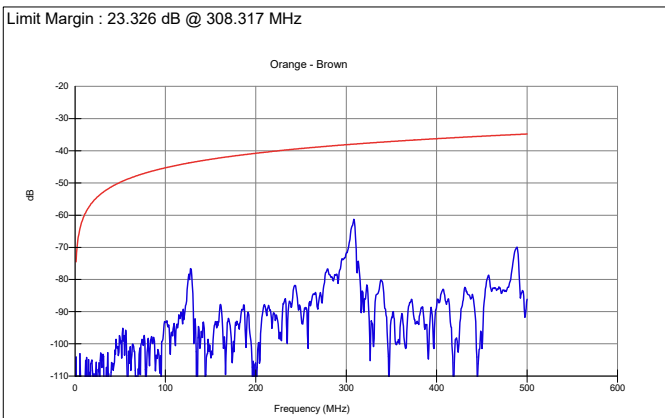
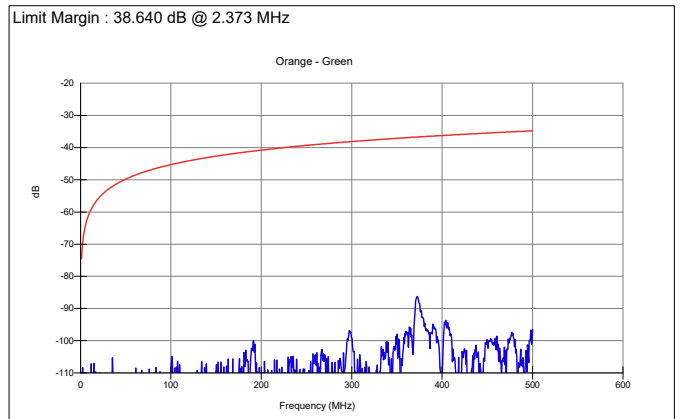
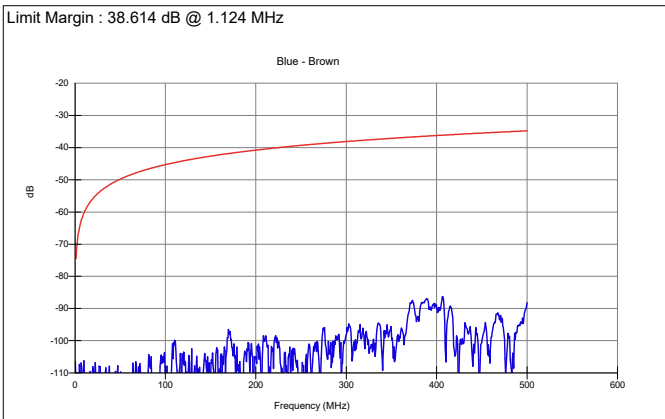
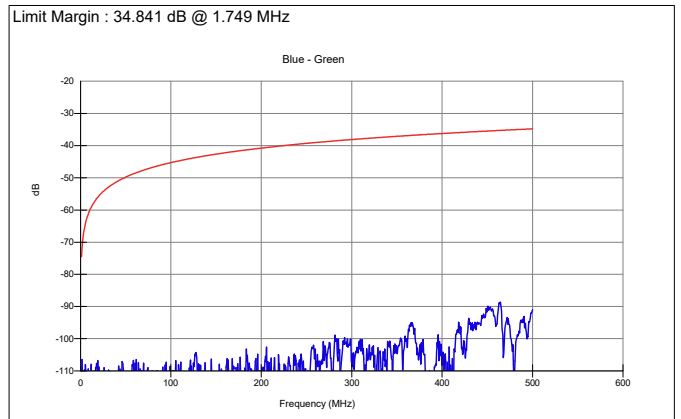
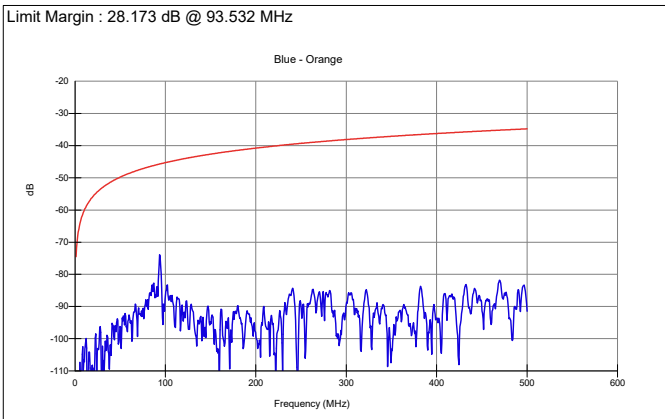
Insertion Loss

Client	Ningbo Feynman	Report No	103777015CRT-004c
Specification	EN 50173-1 Cat 6A Cable	Length (m)	100.
Part No	FA0423APC6AV	Temperature	21.5 °C
Test Started	12/20/2018 8:21:19 AM	Test Status	Complies
Description	4 pair 23 AWG UFTP Solid		
Operator Name	David Ayers		



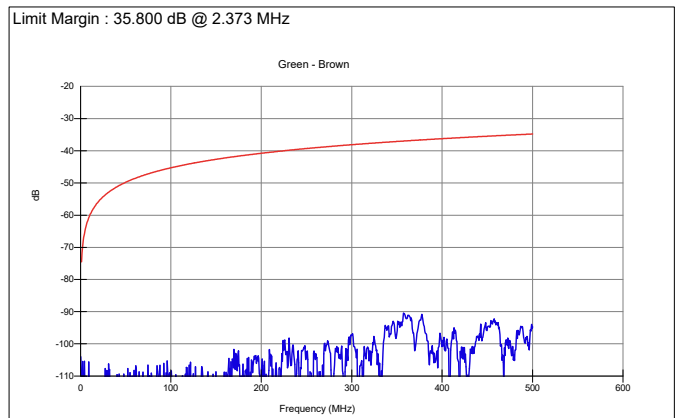
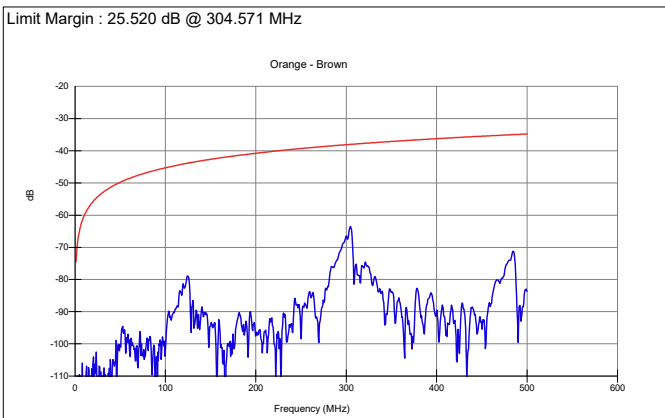
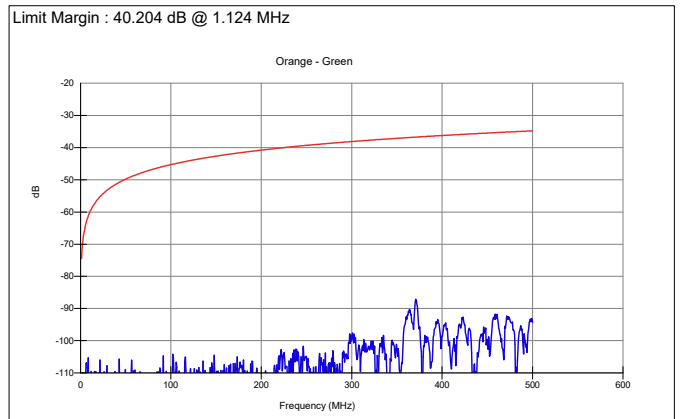
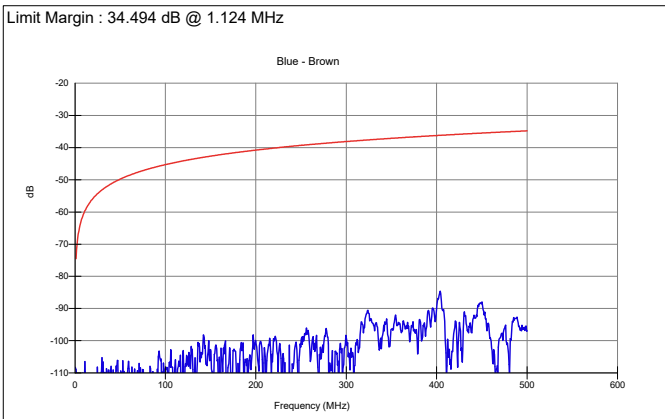
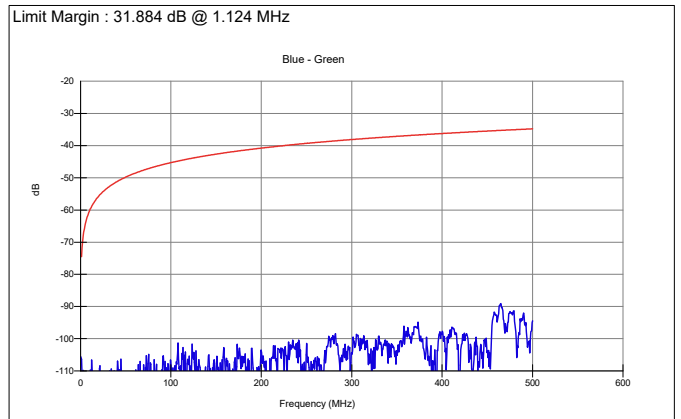
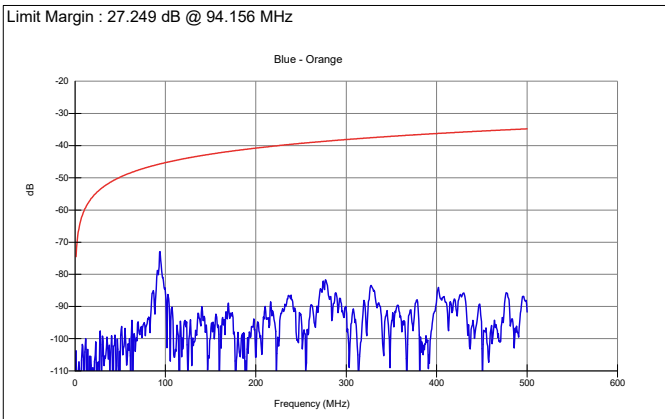
NEXT - Near End

Client	Ningbo Feynman	Report No	103777015CRT-004c
Specification	EN 50173-1 Cat 6A Cable	Length (m)	100.
Part No	FA0423APC6AV	Temperature	21.5 °C
Test Started	12/20/2018 8:21:19 AM	Test Status	Complies
Description	4 pair 23 AWG UFTP Solid		
Operator Name	David Ayers		



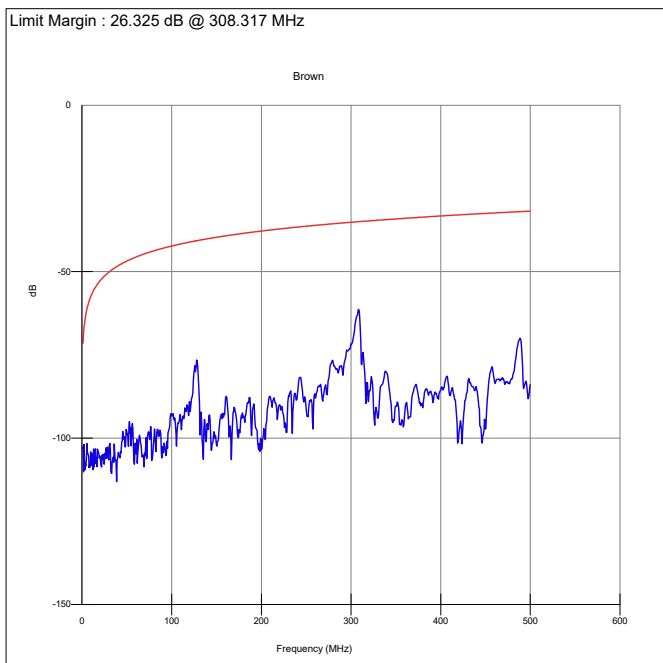
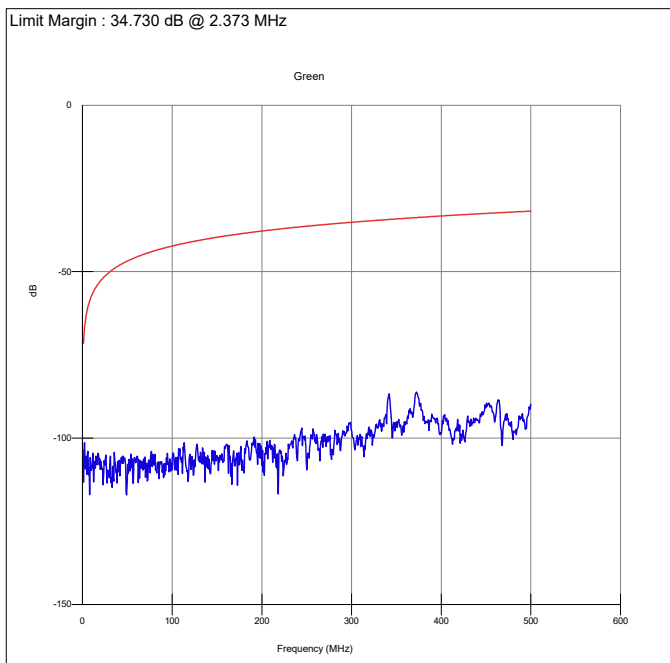
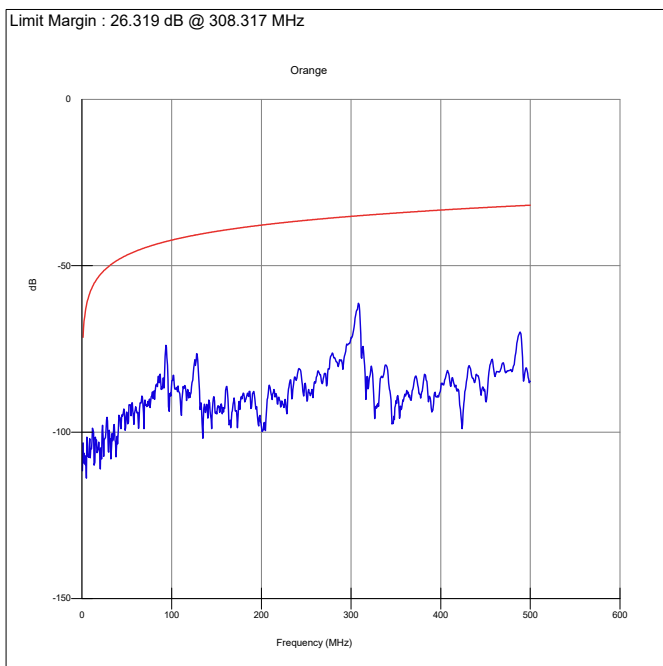
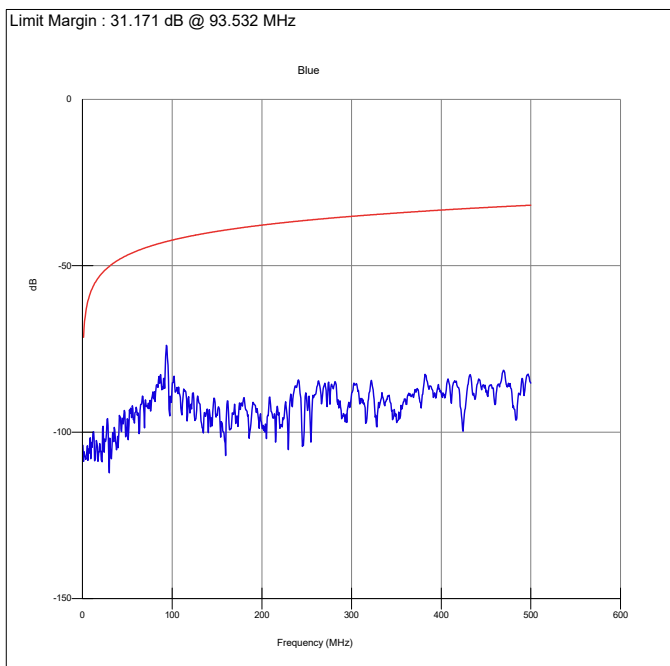
NEXT - Far End

Client	Ningbo Feynman	Report No	103777015CRT-004c
Specification	EN 50173-1 Cat 6A Cable	Length (m)	100.
Part No	FA0423APC6AV	Temperature	21.5 °C
Test Started	12/20/2018 8:21:19 AM	Test Status	Complies
Description	4 pair 23 AWG UFTP Solid		
Operator Name	David Ayers		



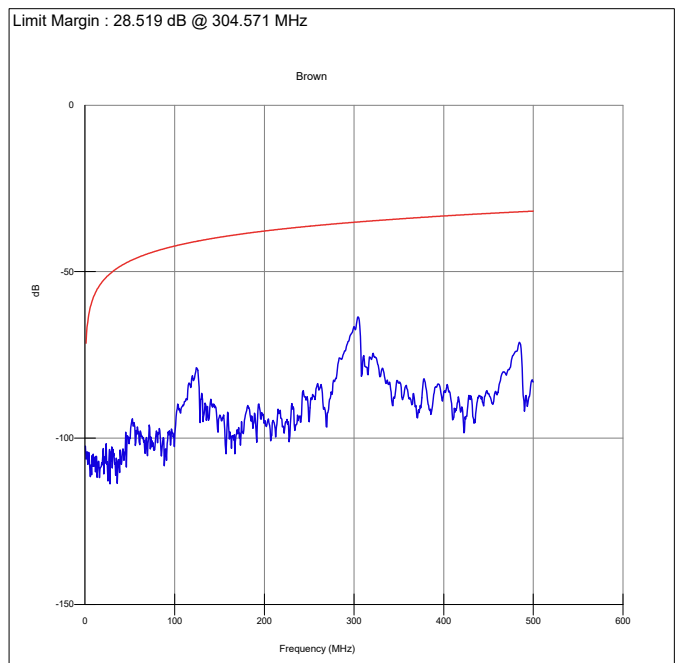
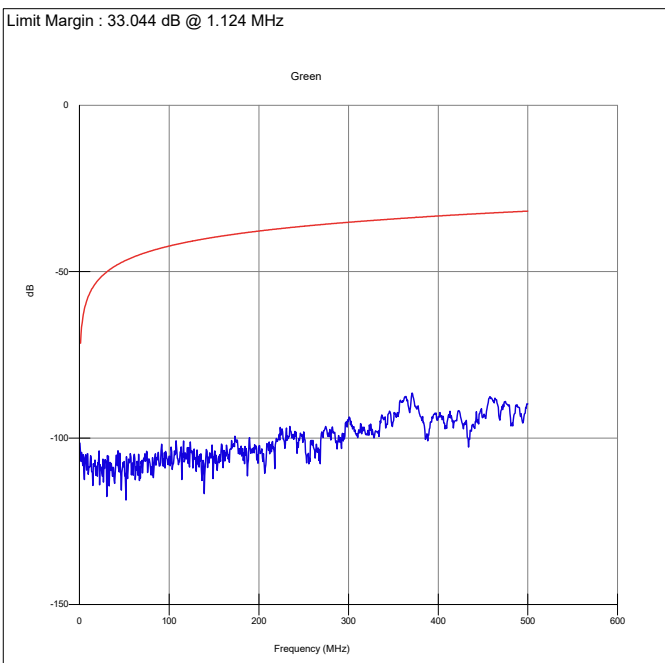
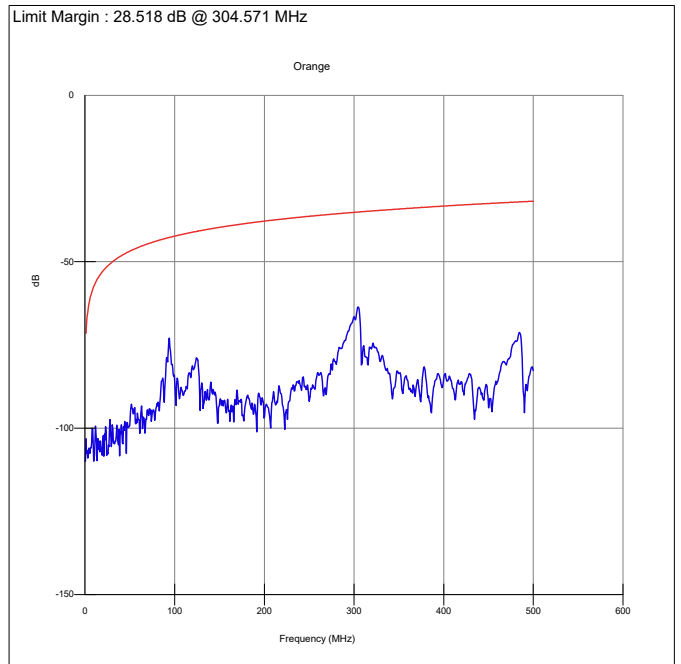
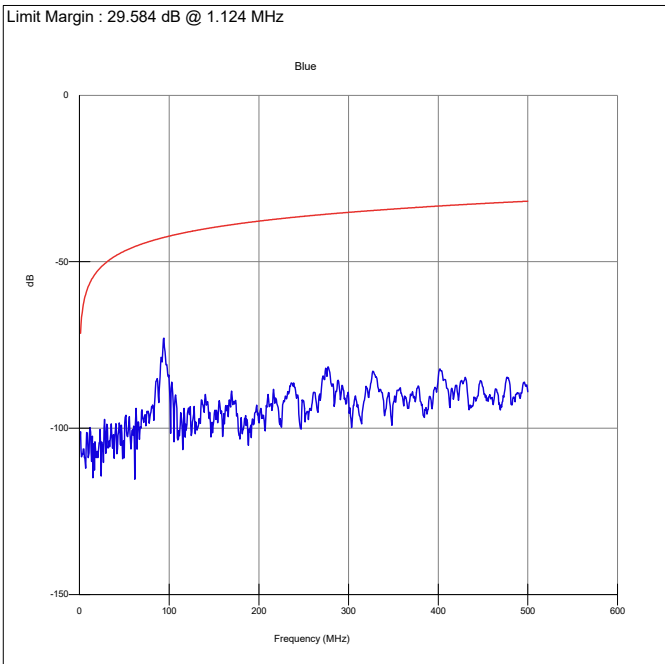
PSNEXT - Near End

Client	Ningbo Feynman	Report No	103777015CRT-004c
Specification	EN 50173-1 Cat 6A Cable	Length (m)	100.
Part No	FA0423APC6AV	Temperature	21.5 °C
Test Started	12/20/2018 8:21:19 AM	Test Status	Complies
Description	4 pair 23 AWG UFTP Solid		
Operator Name	David Ayers		



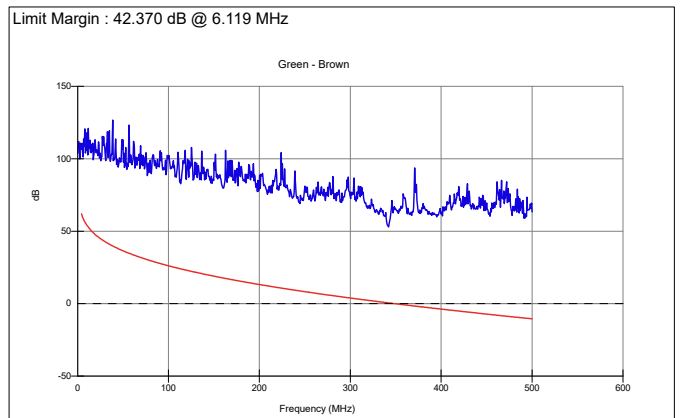
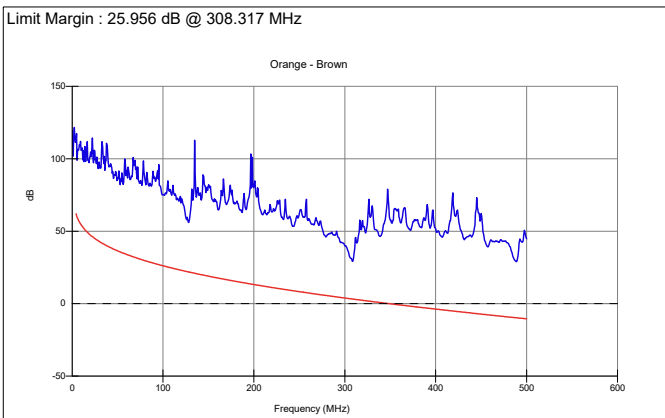
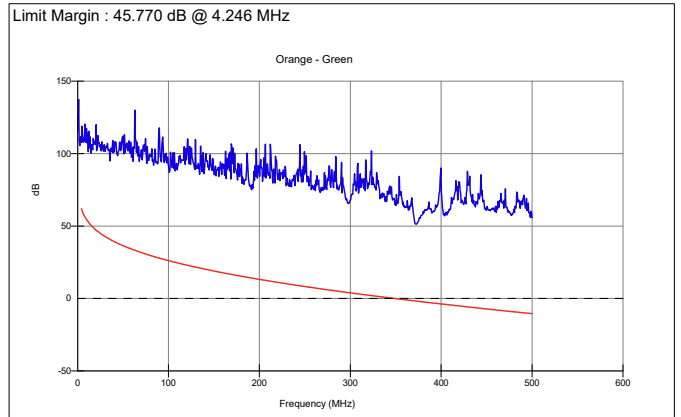
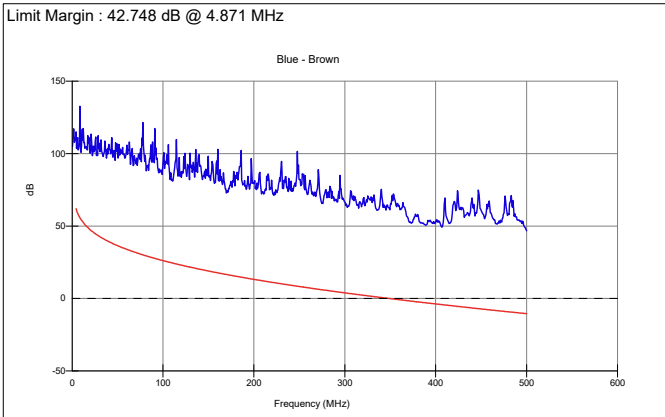
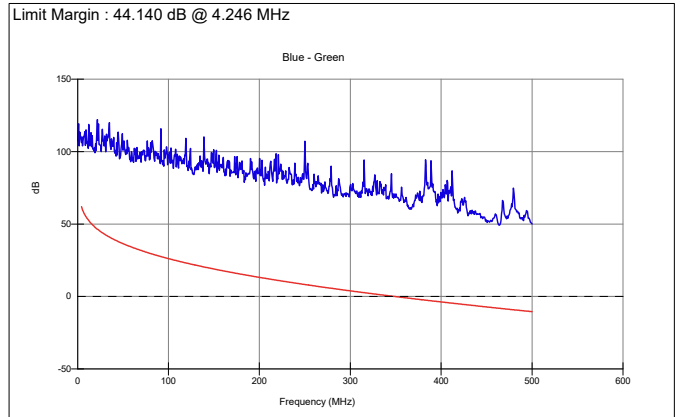
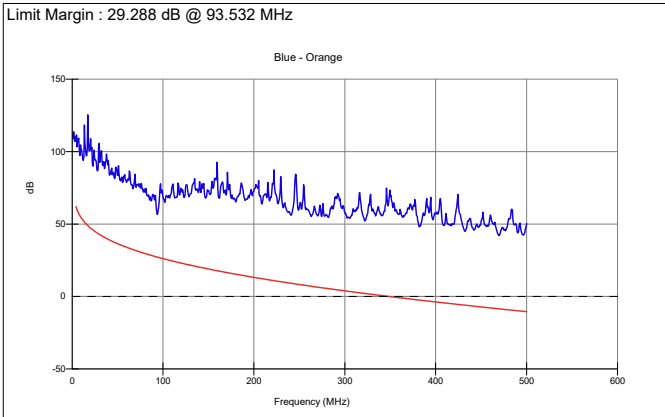
PSNEXT - Far End

Client	Ningbo Feynman	Report No	103777015CRT-004c
Specification	EN 50173-1 Cat 6A Cable	Length (m)	100.
Part No	FA0423APC6AV	Temperature	21.5 °C
Test Started	12/20/2018 8:21:19 AM	Test Status	Complies
Description	4 pair 23 AWG UFTP Solid		
Operator Name	David Ayers		



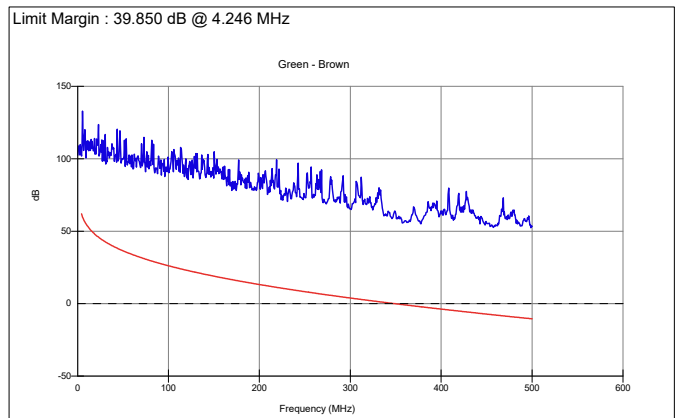
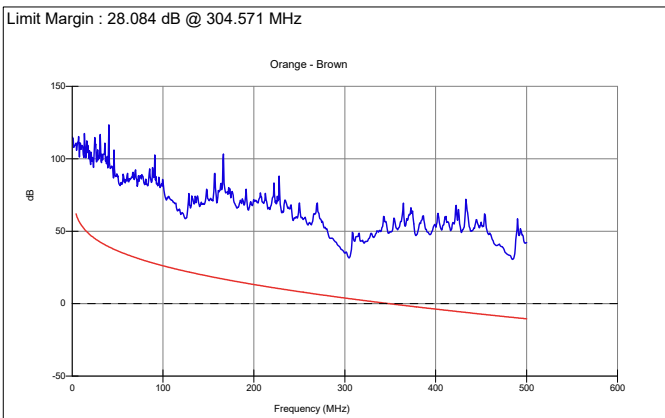
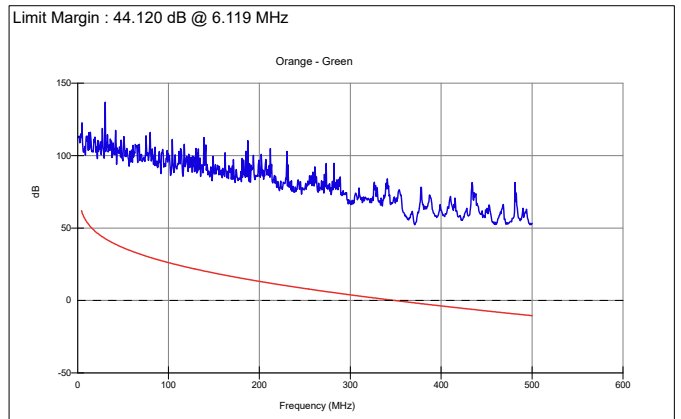
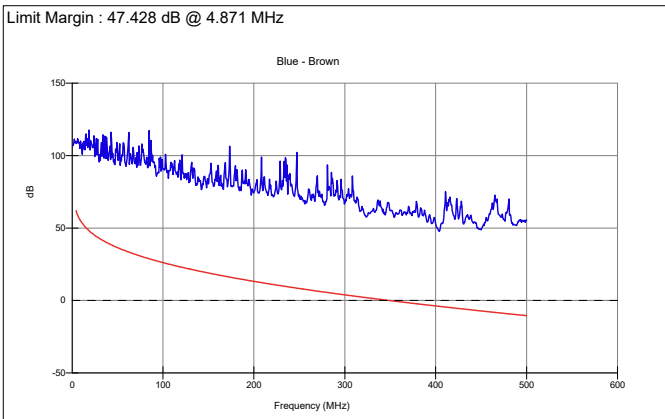
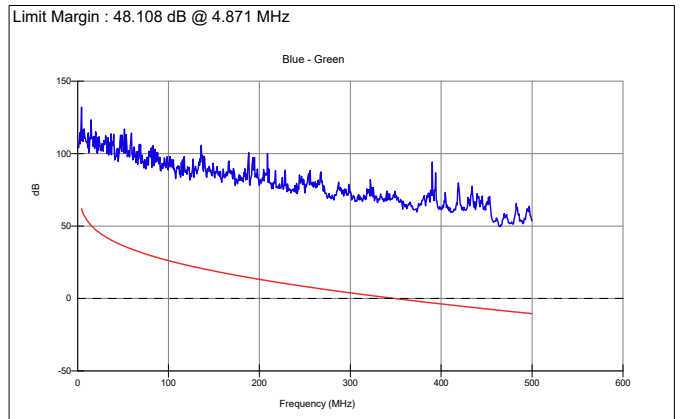
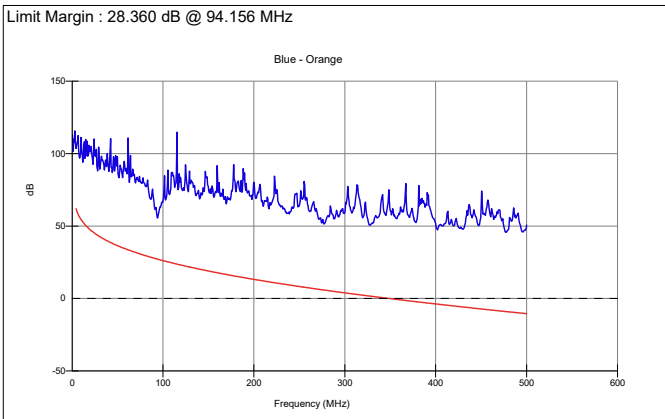
ACR - Near End

Client	Ningbo Feynman	Report No	103777015CRT-004c
Specification	EN 50173-1 Cat 6A Cable	Length (m)	100.
Part No	FA0423APC6AV	Temperature	21.5 °C
Test Started	12/20/2018 8:21:19 AM	Test Status	Complies
Description	4 pair 23 AWG UFTP Solid		
Operator Name	David Ayers		



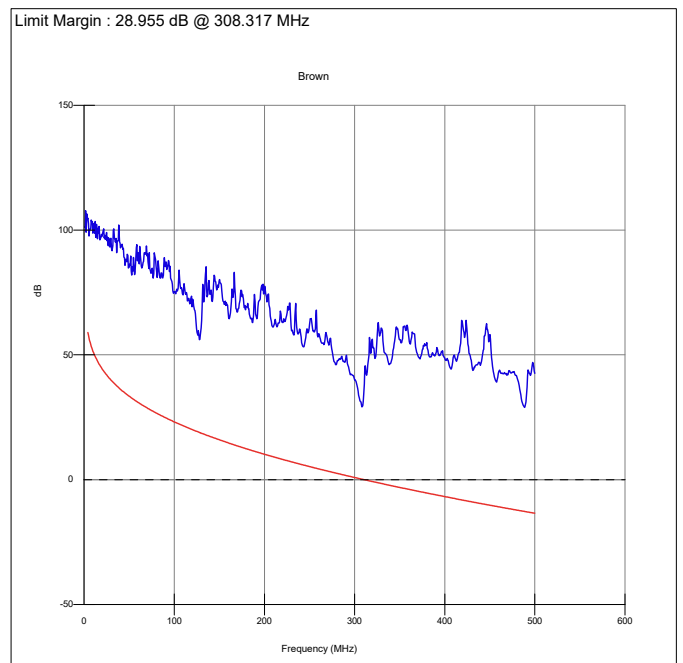
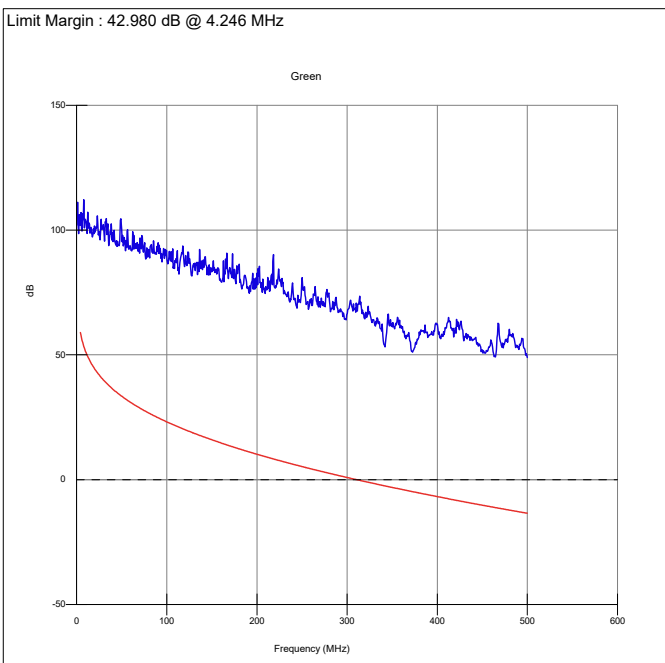
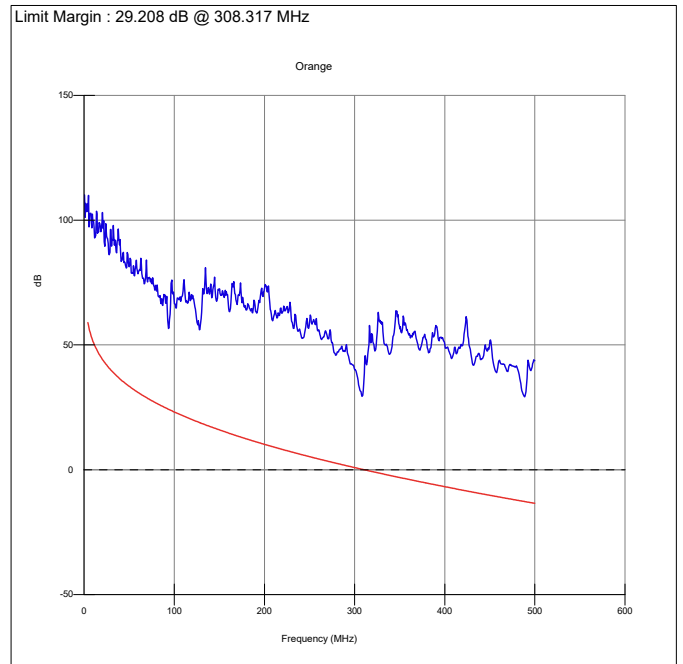
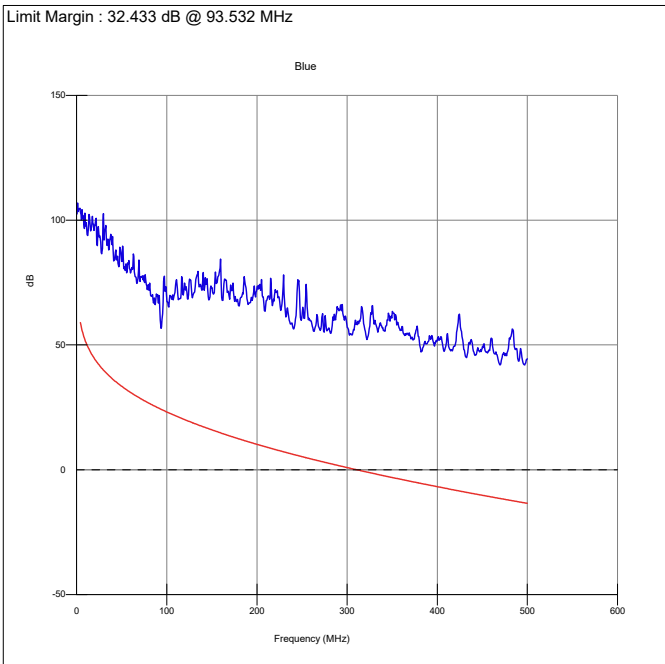
ACR - Far End

Client	Ningbo Feynman	Report No	103777015CRT-004c
Specification	EN 50173-1 Cat 6A Cable	Length (m)	100.
Part No	FA0423APC6AV	Temperature	21.5 °C
Test Started	12/20/2018 8:21:19 AM	Test Status	Complies
Description	4 pair 23 AWG UFTP Solid		
Operator Name	David Ayers		



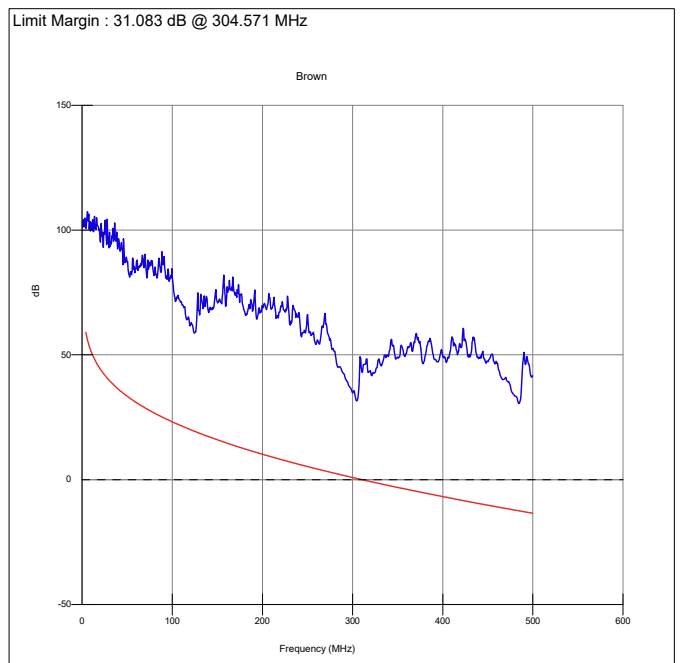
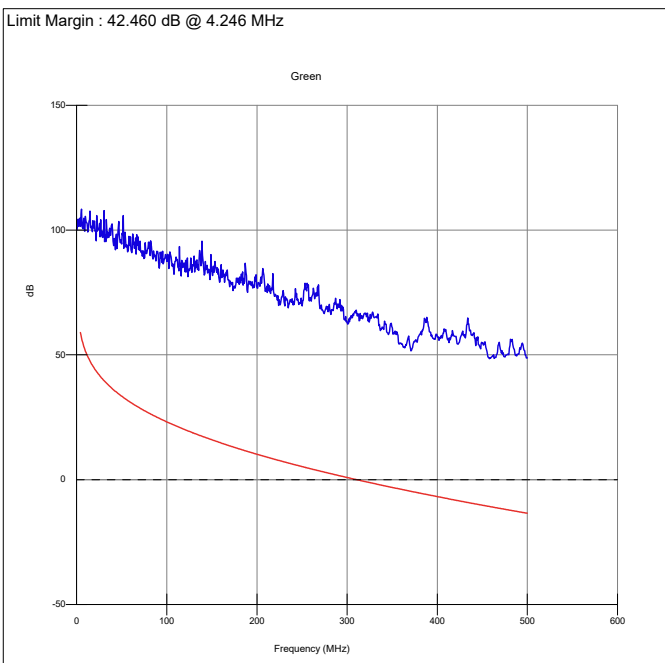
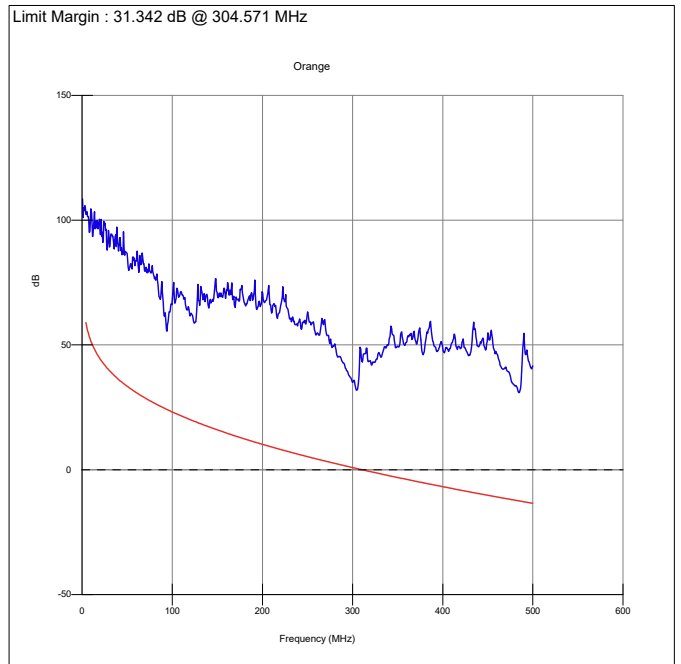
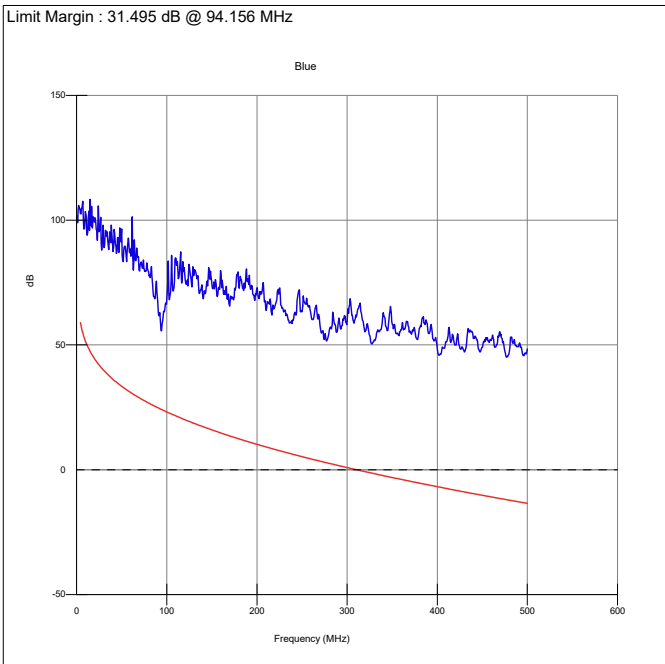
PSACR - Near End

Client	Ningbo Feynman	Report No	103777015CRT-004c
Specification	EN 50173-1 Cat 6A Cable	Length (m)	100.
Part No	FA0423APC6AV	Temperature	21.5 °C
Test Started	12/20/2018 8:21:19 AM	Test Status	Complies
Description	4 pair 23 AWG UFTP Solid		
Operator Name	David Ayers		



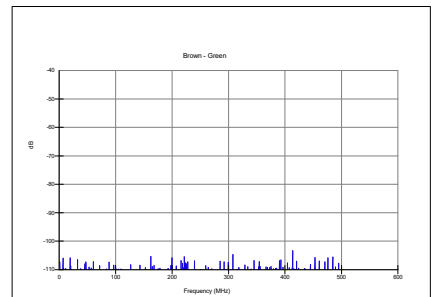
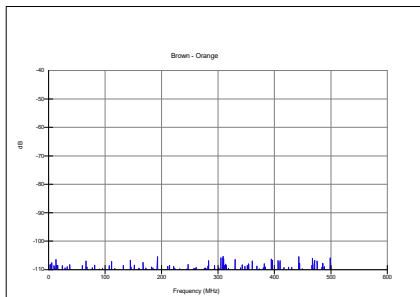
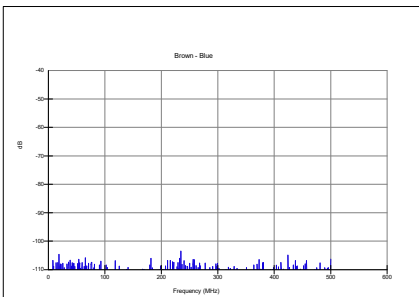
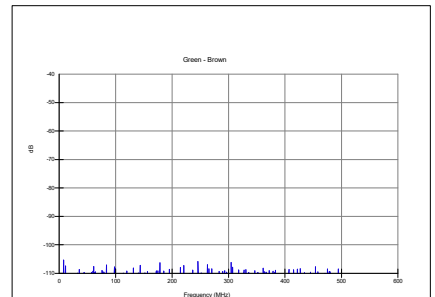
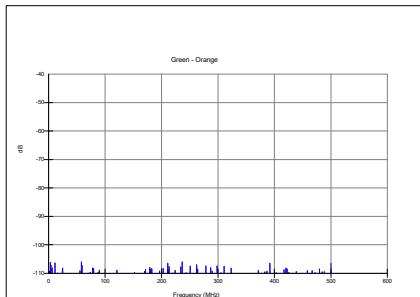
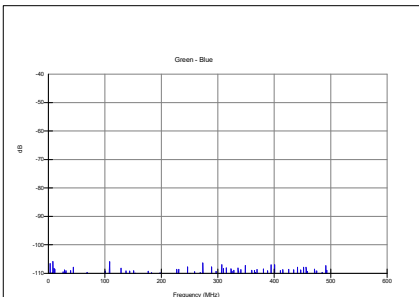
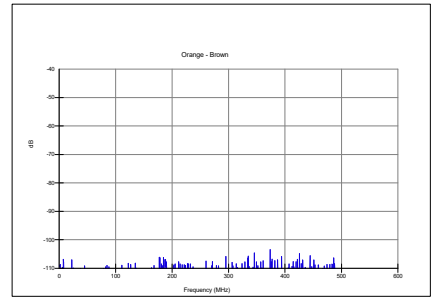
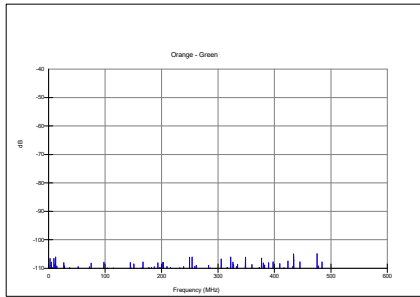
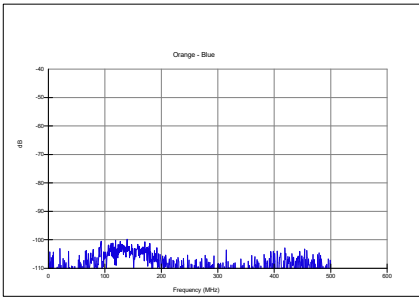
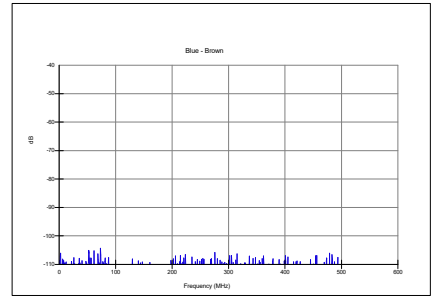
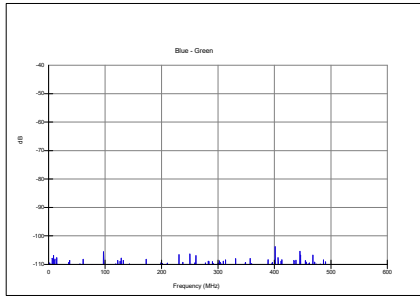
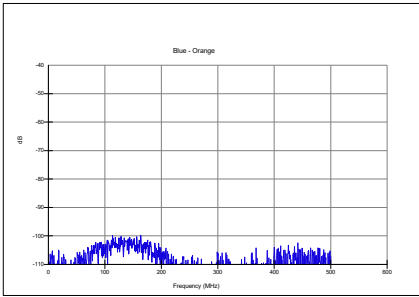
PSACR - Far End

Client	Ningbo Feynman	Report No	103777015CRT-004c
Specification	EN 50173-1 Cat 6A Cable	Length (m)	100.
Part No	FA0423APC6AV	Temperature	21.5 °C
Test Started	12/20/2018 8:21:19 AM	Test Status	Complies
Description	4 pair 23 AWG UFTP Solid		
Operator Name	David Ayers		



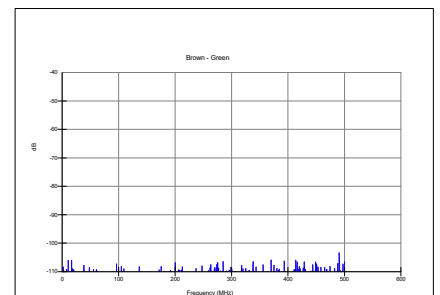
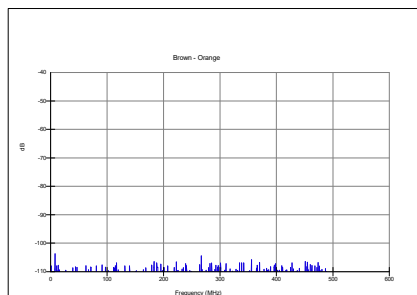
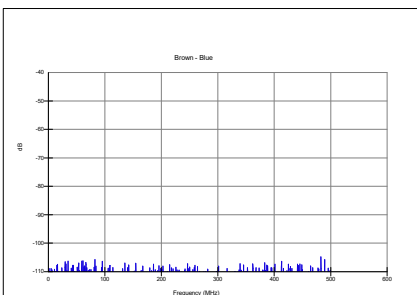
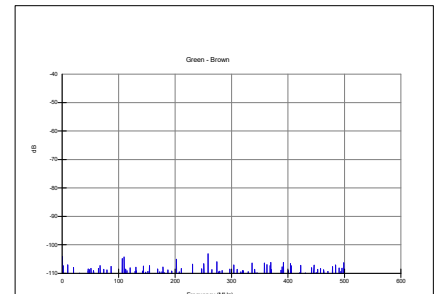
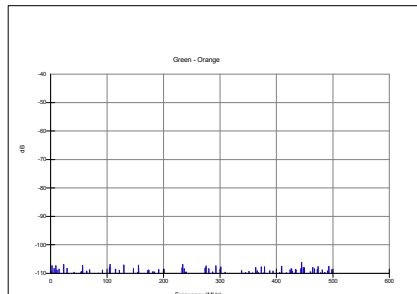
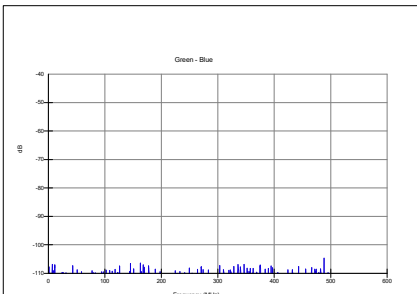
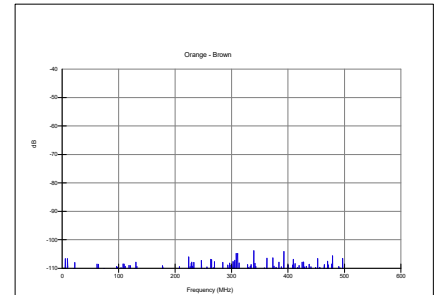
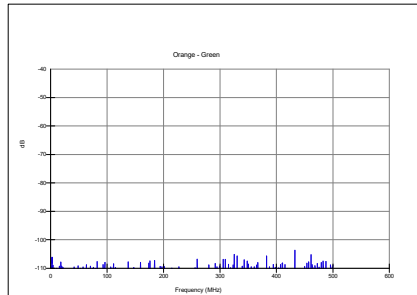
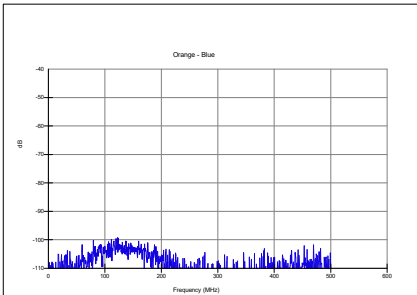
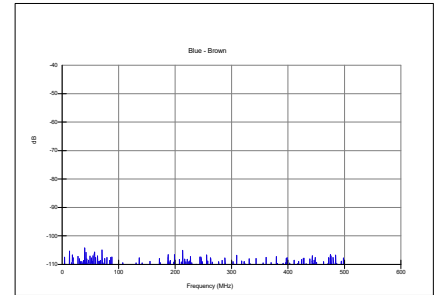
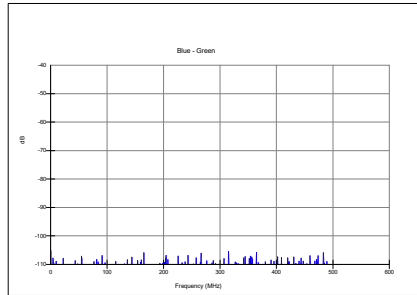
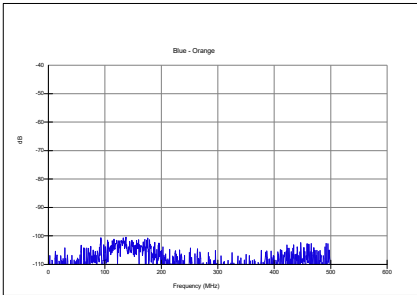
FEXT - Near End

Client	Ningbo Feynman	Report No	103777015CRT-004c
Specification	EN 50173-1 Cat 6A Cable		
Part No	FA0423APC6AV	Length (m)	100.
Test Started	12/20/2018 8:21:19 AM	Temperature	21.5 °C
Description	4 pair 23 AWG UFTP Solid		
Operator Name	David Ayers	Test Status	Complies



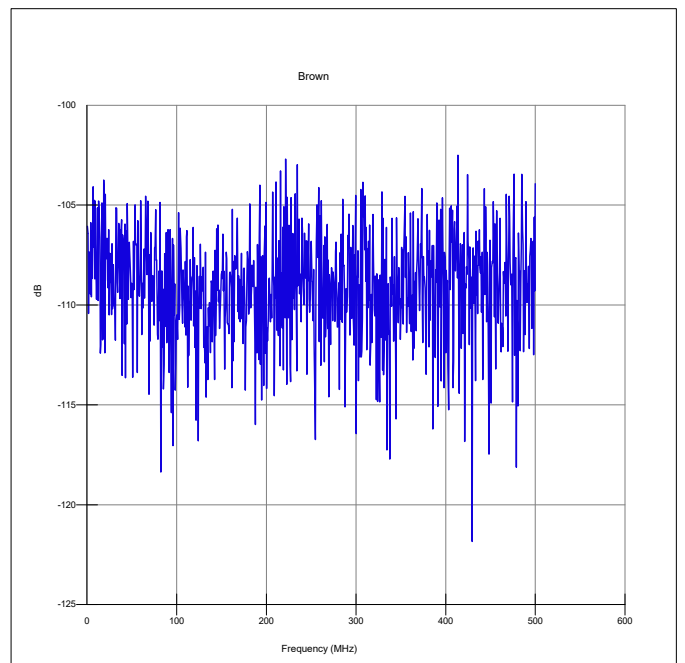
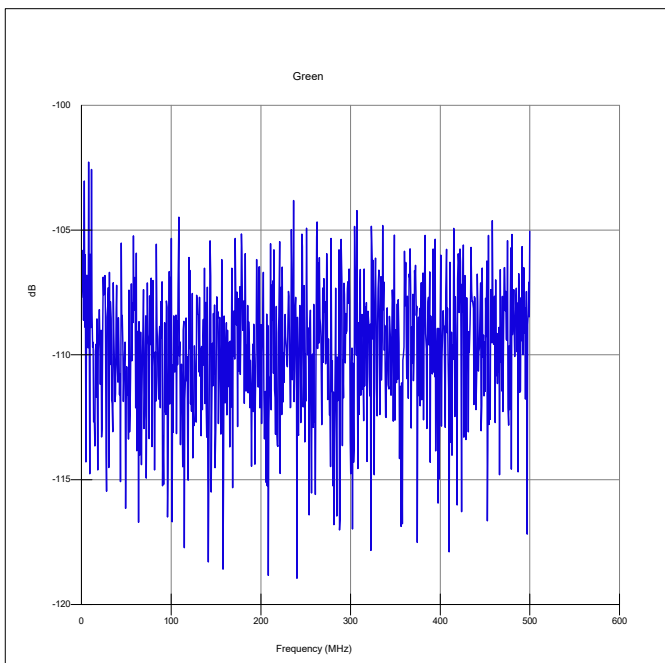
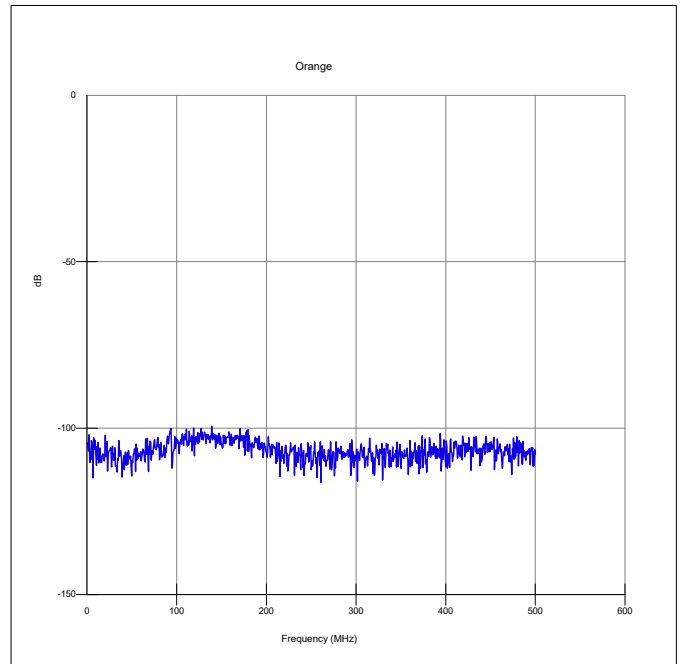
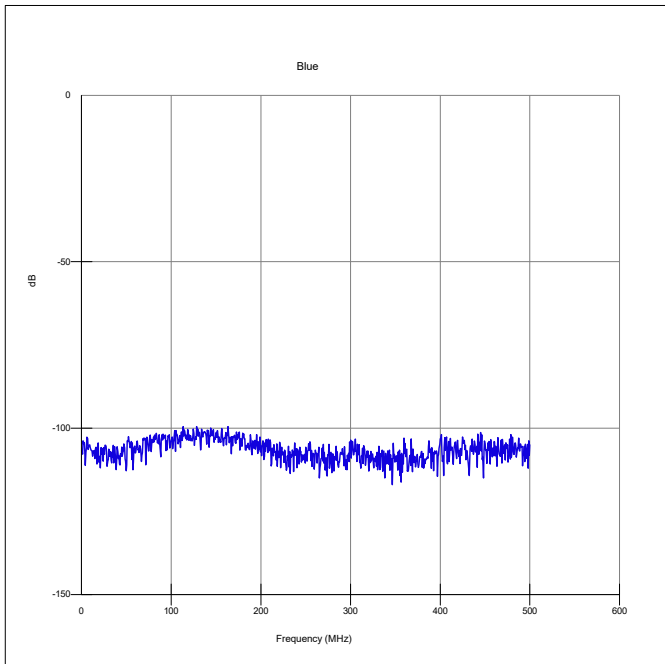
FEXT - Far End

Client	Ningbo Feynman	Report No	103777015CRT-004c
Specification	EN 50173-1 Cat 6A Cable		
Part No	FA0423APC6AV	Length (m)	100.
Test Started	12/20/2018 8:21:19 AM	Temperature	21.5 °C
Description	4 pair 23 AWG UFTP Solid		
Operator Name	David Ayers	Test Status	Complies



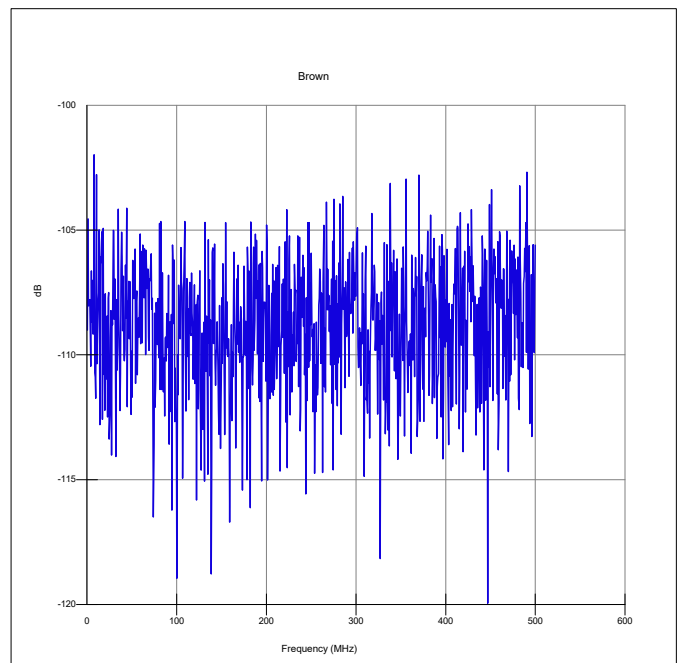
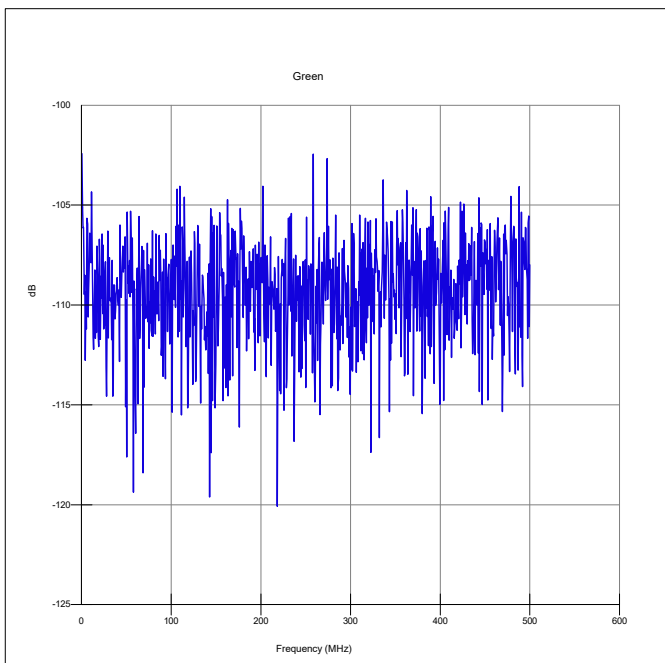
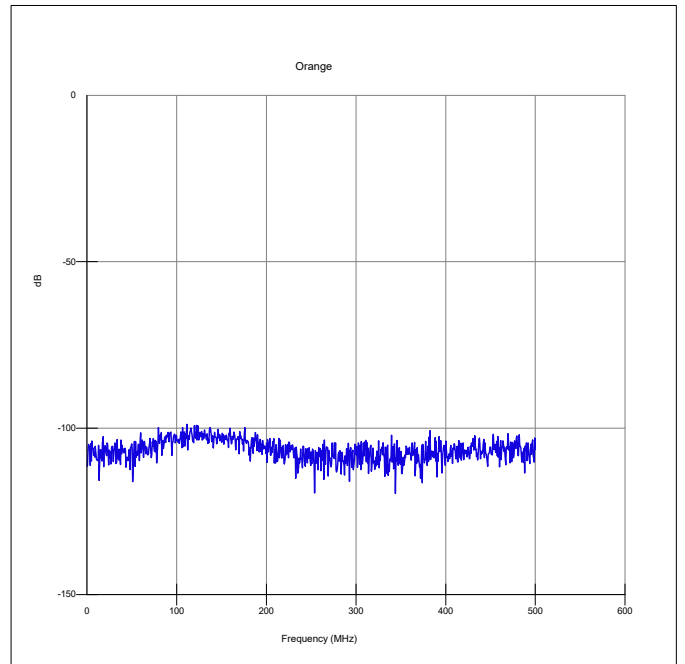
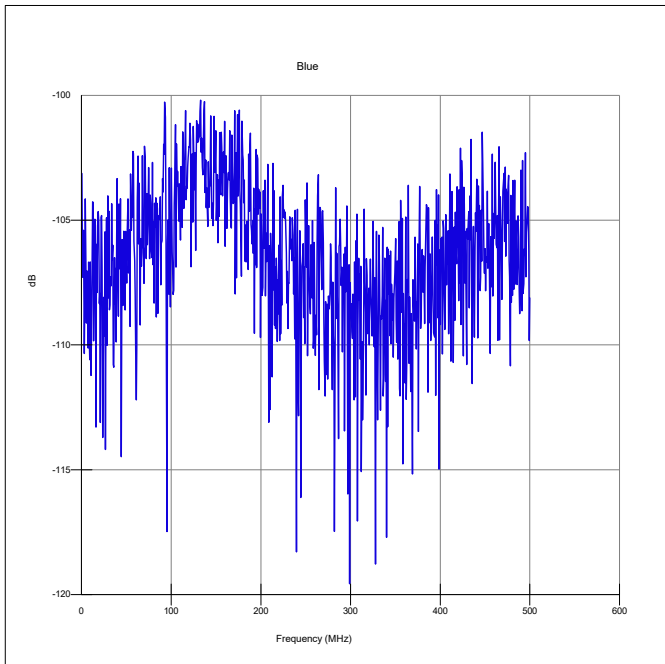
PSFEXT - Near End

Client	Ningbo Feynman	Report No	103777015CRT-004c
Specification	EN 50173-1 Cat 6A Cable	Length (m)	100.
Part No	FA0423APC6AV	Temperature	21.5 °C
Test Started	12/20/2018 8:21:19 AM	Test Status	Complies
Description	4 pair 23 AWG UFTP Solid		
Operator Name	David Ayers		



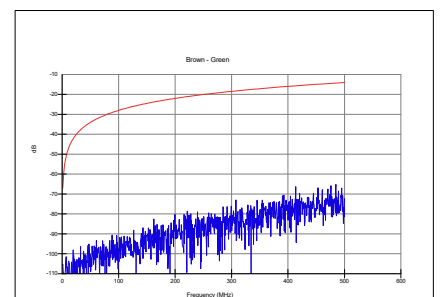
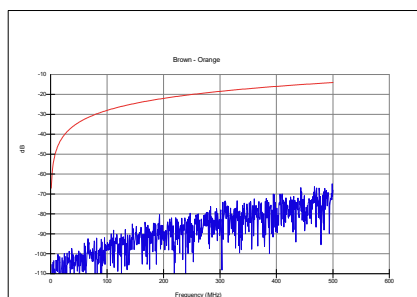
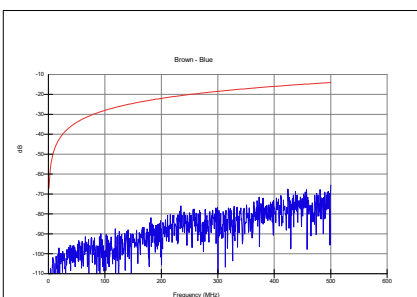
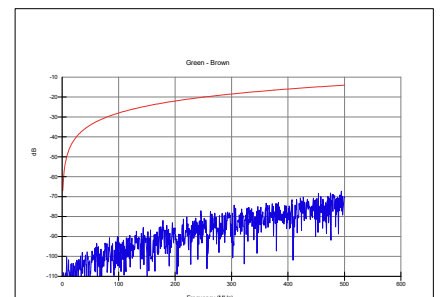
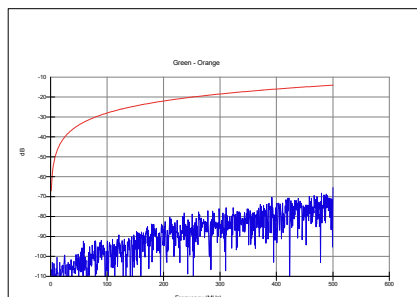
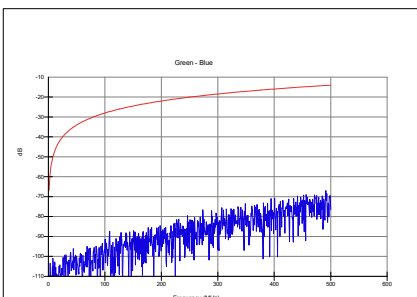
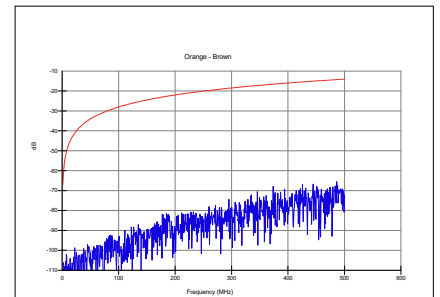
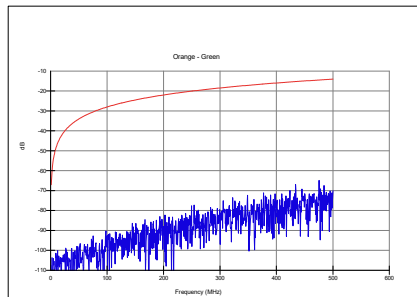
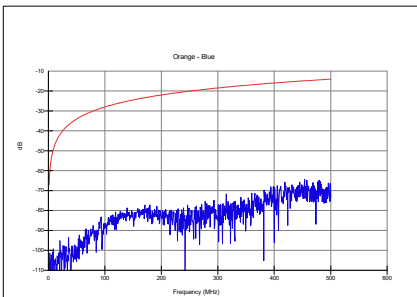
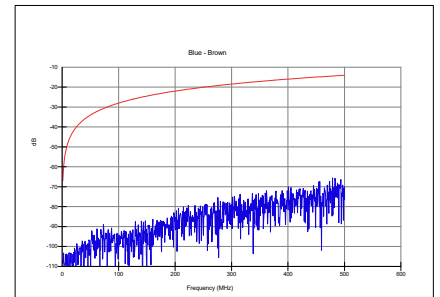
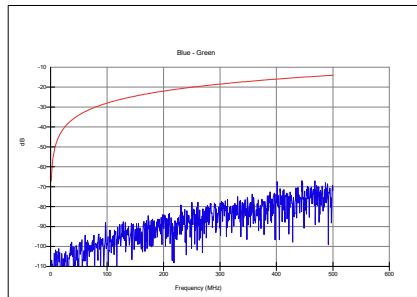
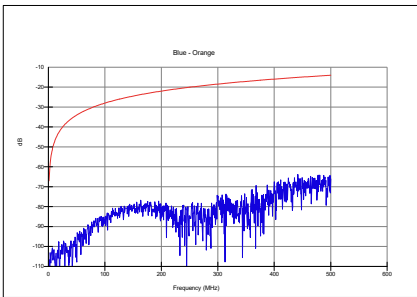
PSFEXT - Far End

Client	Ningbo Feynman	Report No	103777015CRT-004c
Specification	EN 50173-1 Cat 6A Cable	Length (m)	100.
Part No	FA0423APC6AV	Temperature	21.5 °C
Test Started	12/20/2018 8:21:19 AM	Test Status	Complies
Description	4 pair 23 AWG UFTP Solid		
Operator Name	David Ayers		



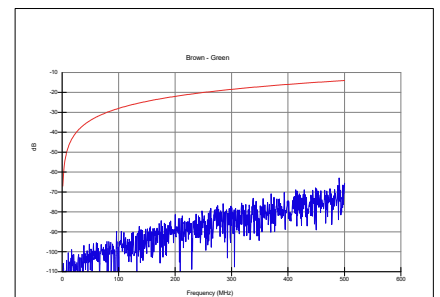
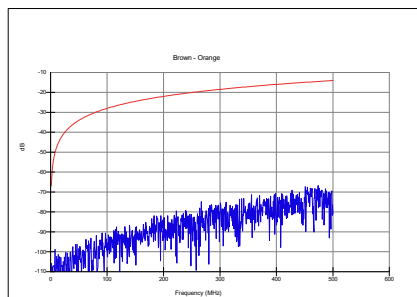
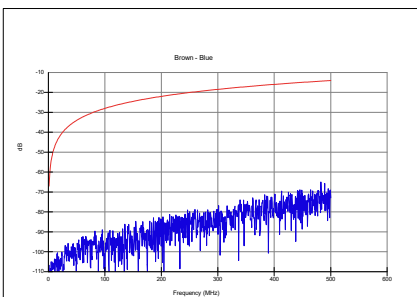
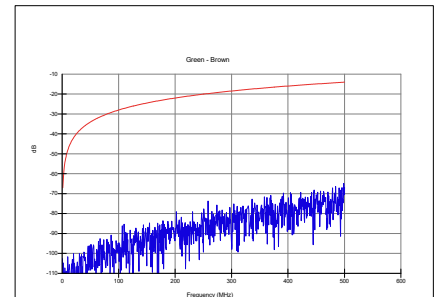
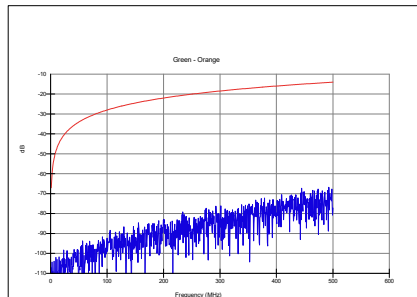
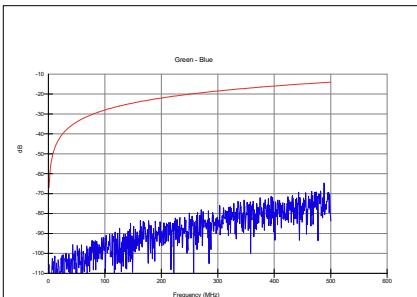
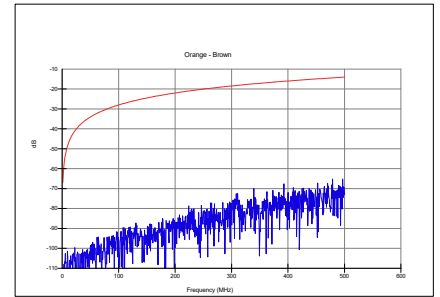
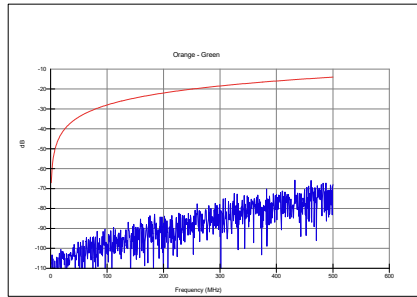
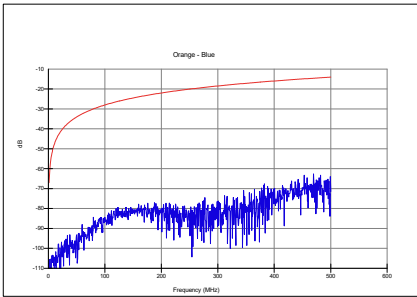
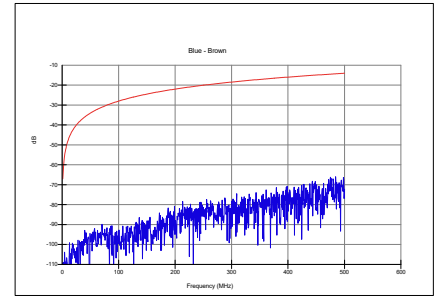
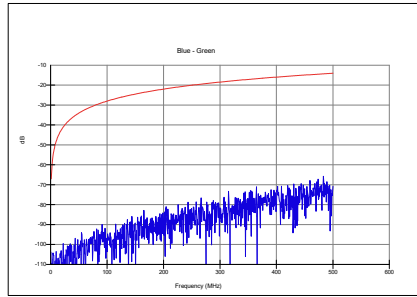
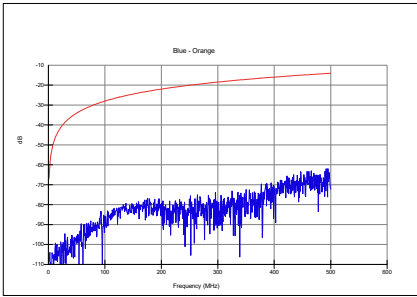
ACRF (ELFEXT) - Near End

Client	Ningbo Feynman	Report No	103777015CRT-004c
Specification	EN 50173-1 Cat 6A Cable	Length (m)	100.
Part No	FA0423APC6AV	Temperature	21.5 °C
Test Started	12/20/2018 8:21:19 AM	Test Status	Complies
Description	4 pair 23 AWG UFTP Solid		
Operator Name	David Ayers		



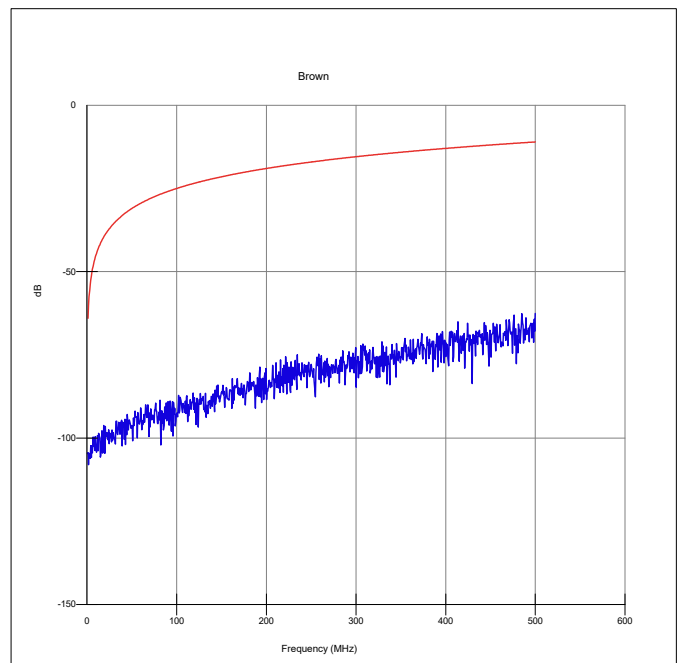
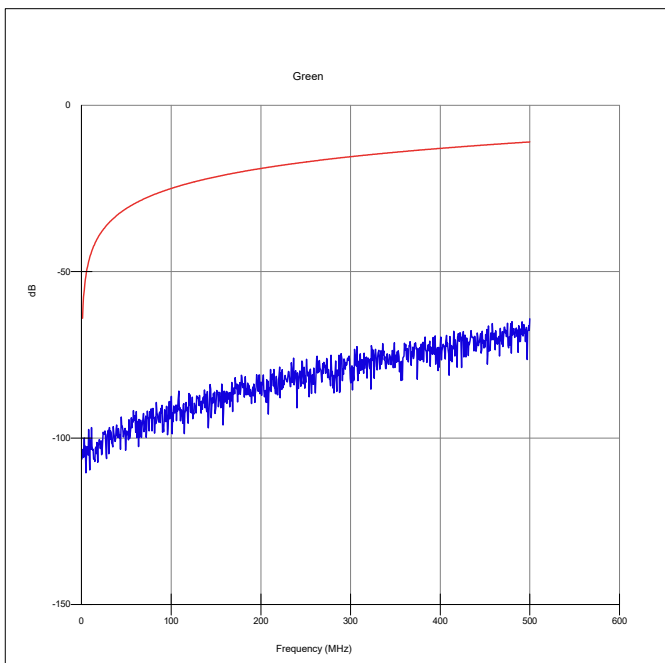
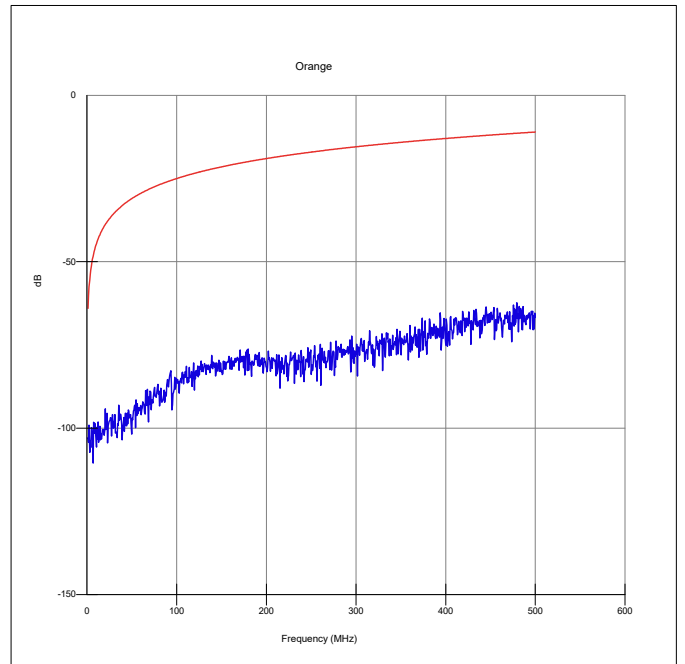
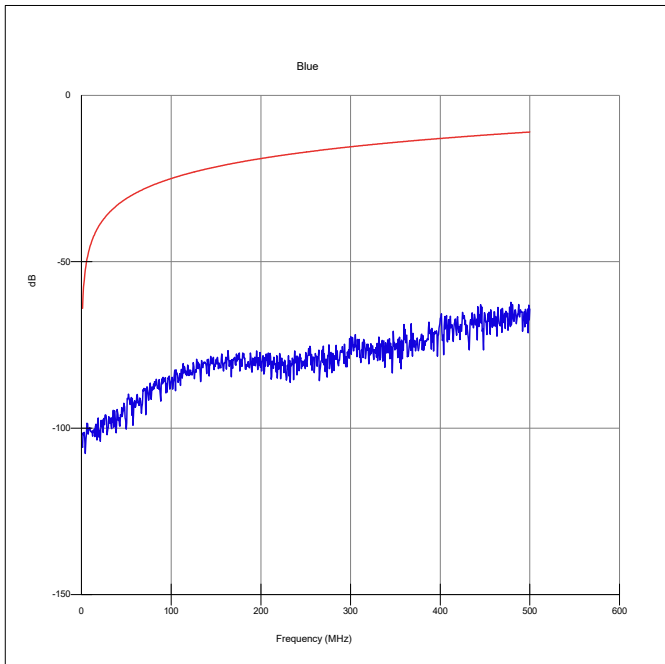
ACRF (ELFEXT) - Far End

Client	Ningbo Feynman	Report No	103777015CRT-004c
Specification	EN 50173-1 Cat 6A Cable	Length (m)	100.
Part No	FA0423APC6AV	Temperature	21.5 °C
Test Started	12/20/2018 8:21:19 AM	Test Status	Complies
Description	4 pair 23 AWG UFTP Solid		
Operator Name	David Ayers		



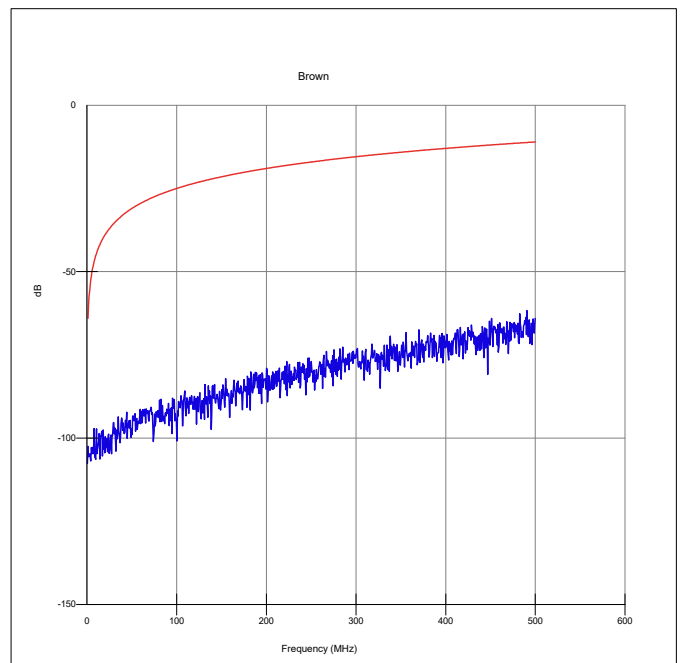
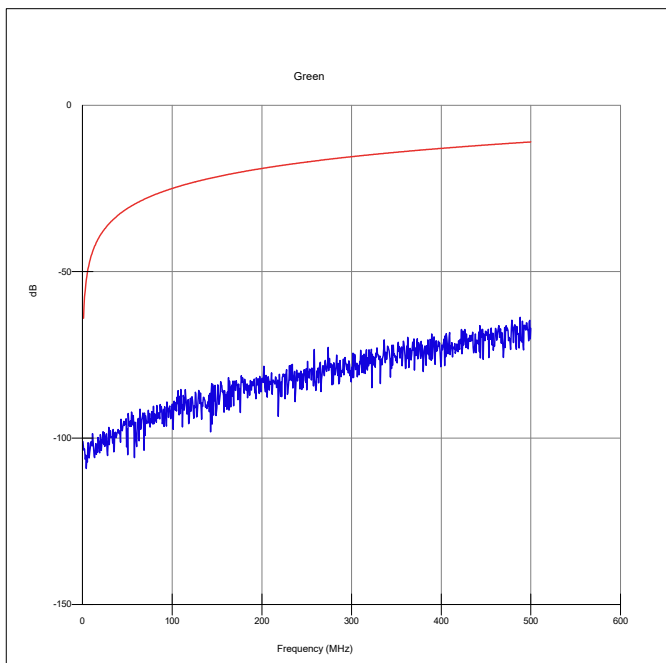
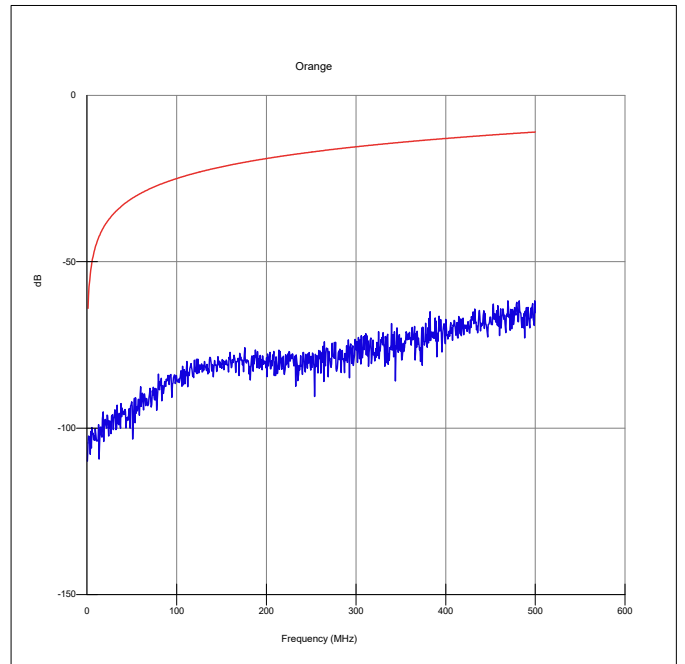
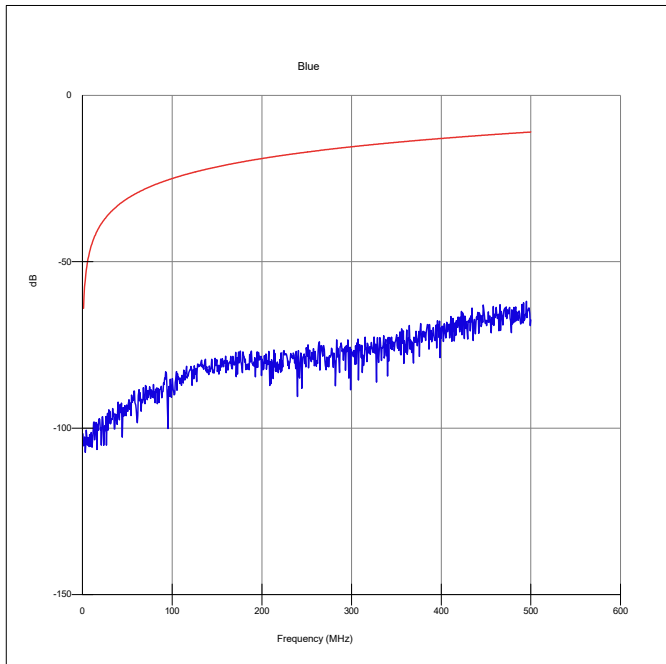
PSACRF (PSELFEXT) - Near End

Client	Ningbo Feynman	Report No	103777015CRT-004c
Specification	EN 50173-1 Cat 6A Cable	Length (m)	100.
Part No	FA0423APC6AV	Temperature	21.5 °C
Test Started	12/20/2018 8:21:19 AM	Test Status	Complies
Description	4 pair 23 AWG UFTP Solid		
Operator Name	David Ayers		



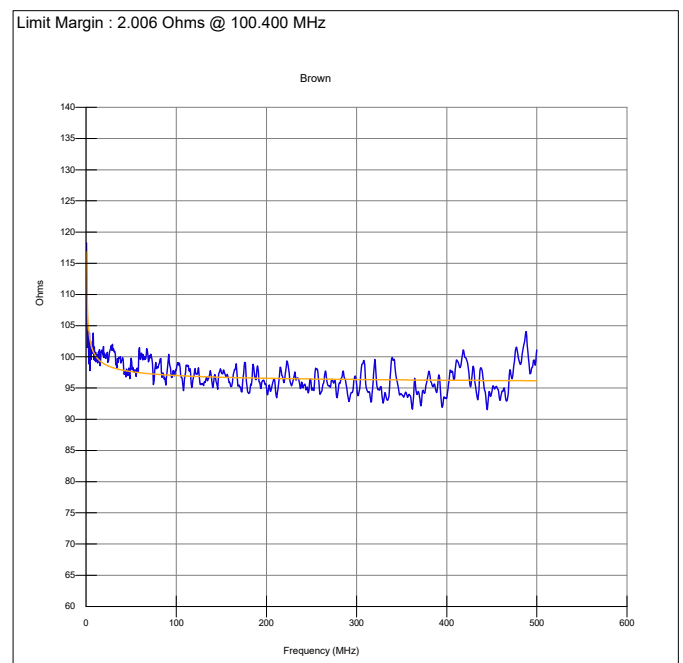
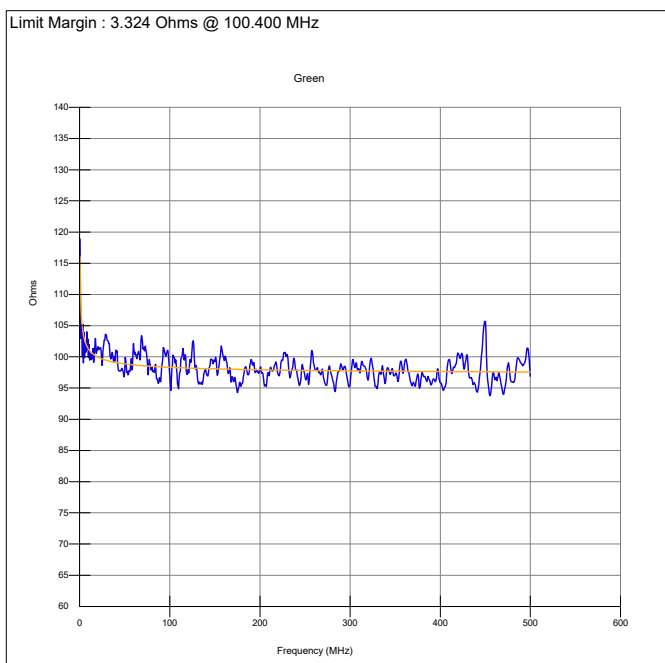
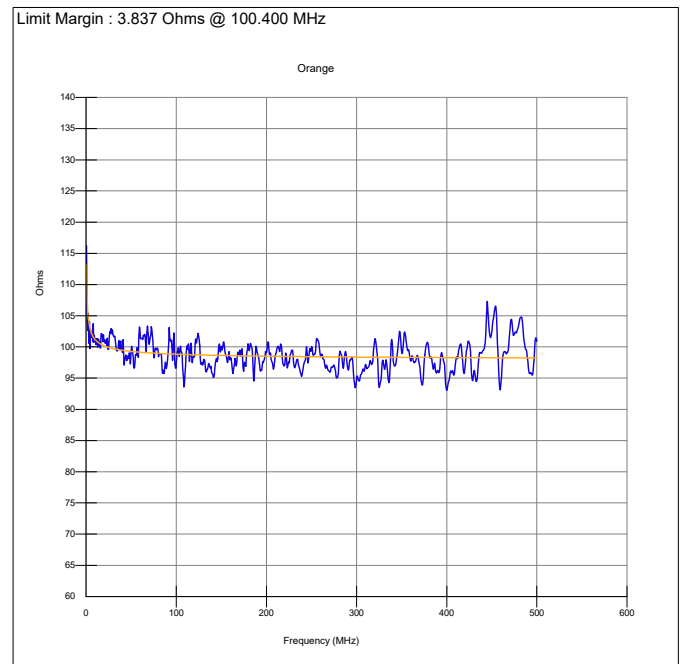
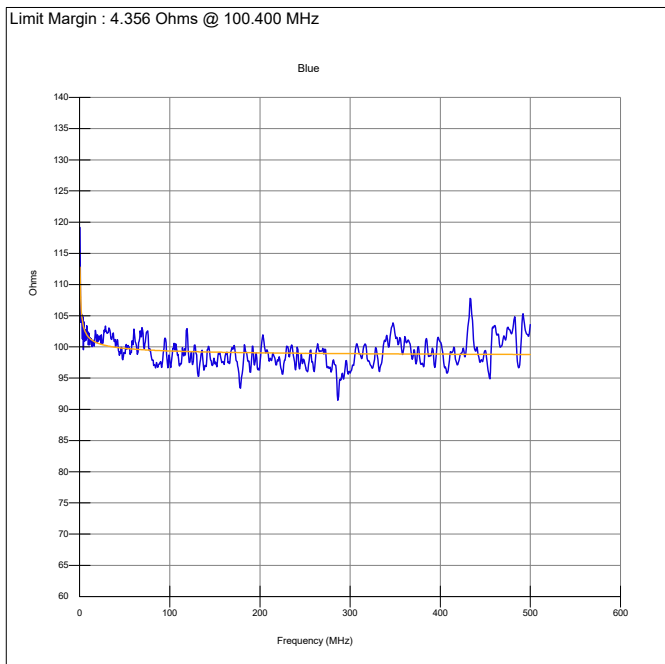
PSACRF (PSELFEXT) - Far End

Client	Ningbo Feynman	Report No	103777015CRT-004c
Specification	EN 50173-1 Cat 6A Cable	Length (m)	100.
Part No	FA0423APC6AV	Temperature	21.5 °C
Test Started	12/20/2018 8:21:19 AM	Test Status	Complies
Description	4 pair 23 AWG UFTP Solid		
Operator Name	David Ayers		



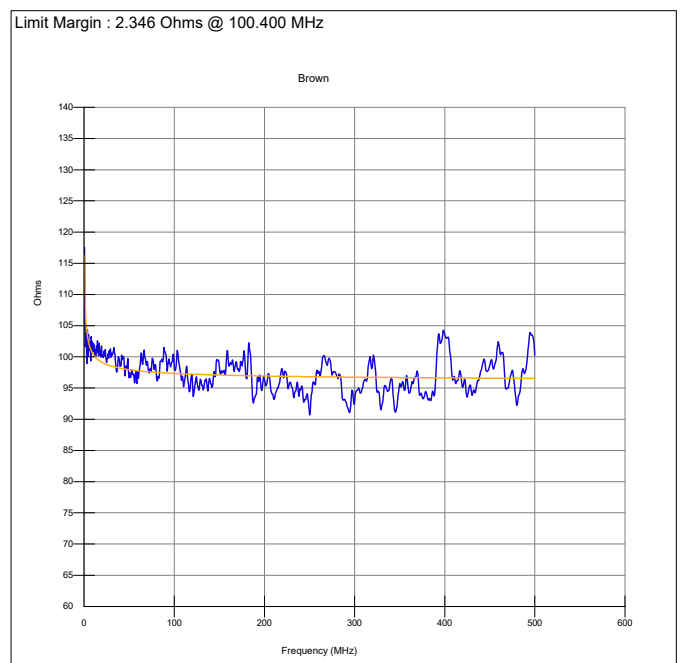
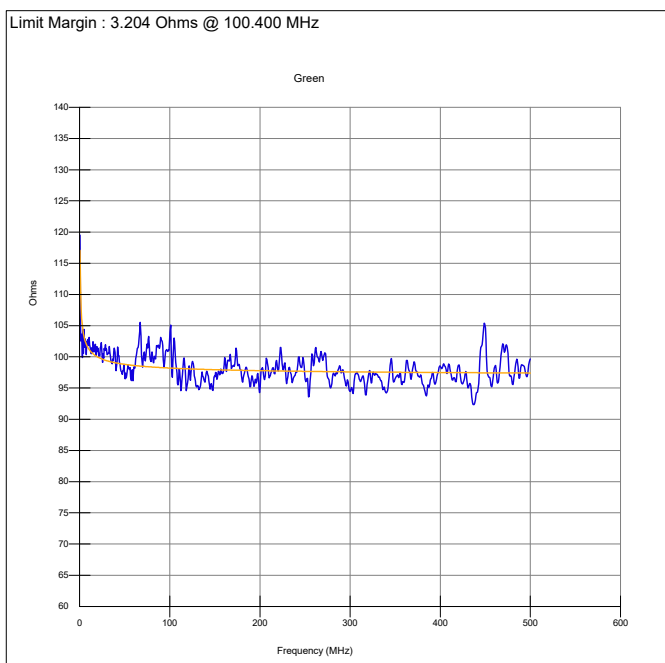
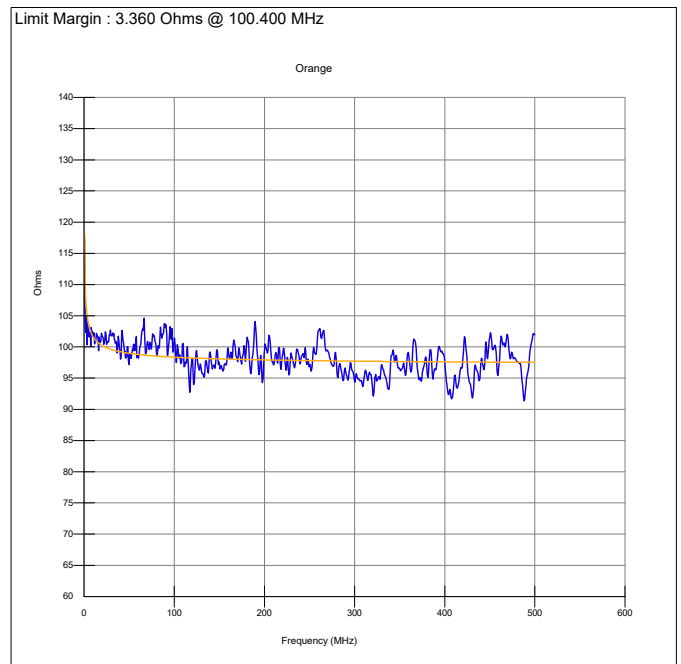
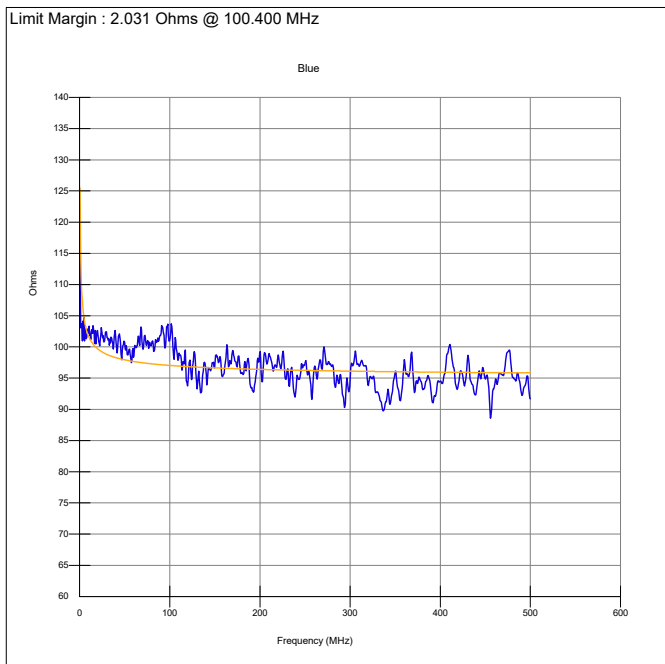
Impedance - Near End

Client	Ningbo Feynman	Report No	103777015CRT-004c
Specification	EN 50173-1 Cat 6A Cable	Length (m)	100.
Part No	FA0423APC6AV	Temperature	21.5 °C
Test Started	12/20/2018 8:21:19 AM	Test Status	Complies
Description	4 pair 23 AWG UFTP Solid		
Operator Name	David Ayers		



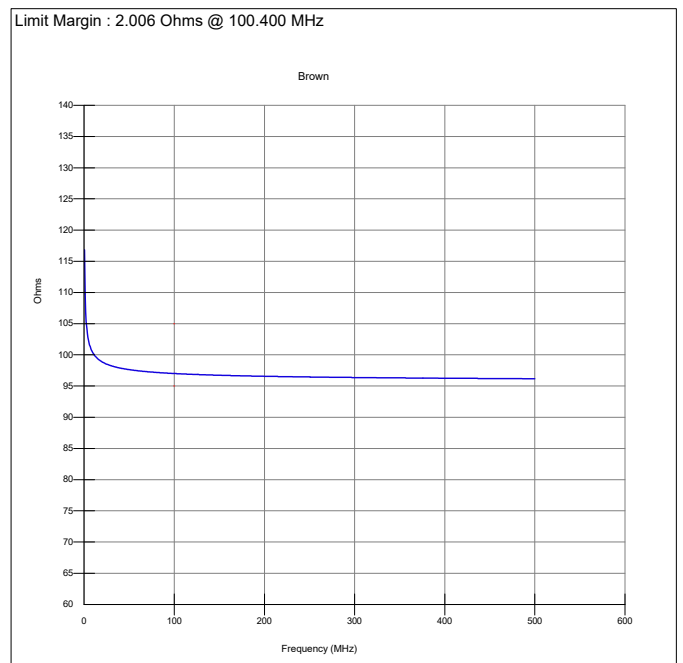
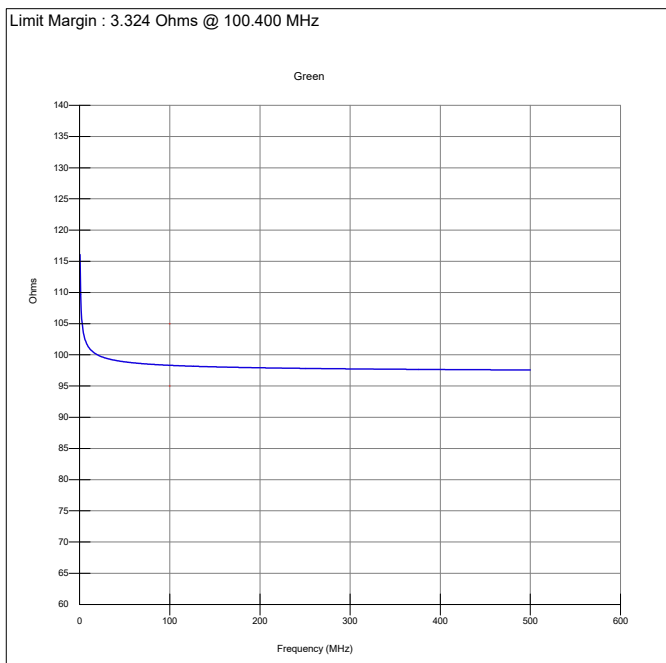
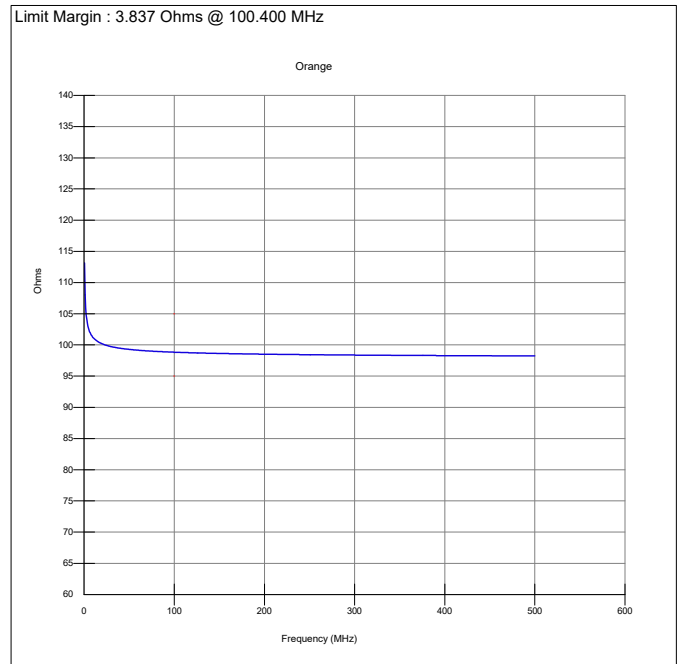
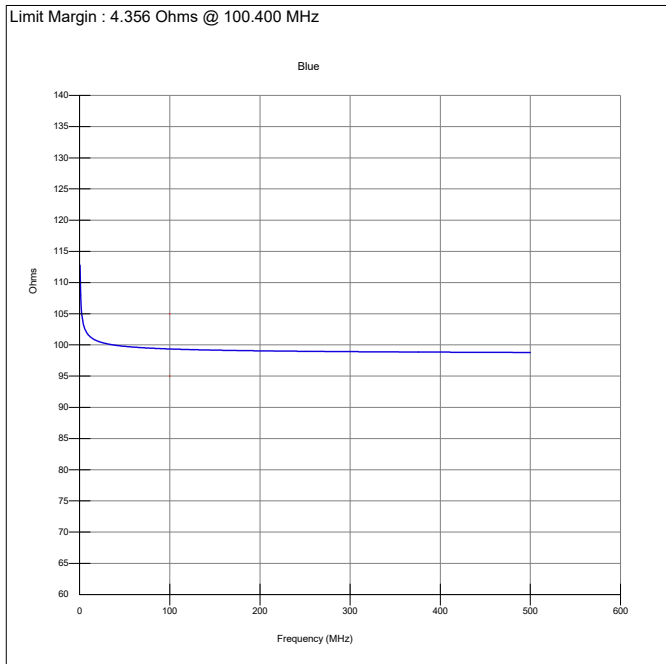
Impedance - Far End

Client	Ningbo Feynman	Report No	103777015CRT-004c
Specification	EN 50173-1 Cat 6A Cable	Length (m)	100.
Part No	FA0423APC6AV	Temperature	21.5 °C
Test Started	12/20/2018 8:21:19 AM	Test Status	Complies
Description	4 pair 23 AWG UFTP Solid		
Operator Name	David Ayers		



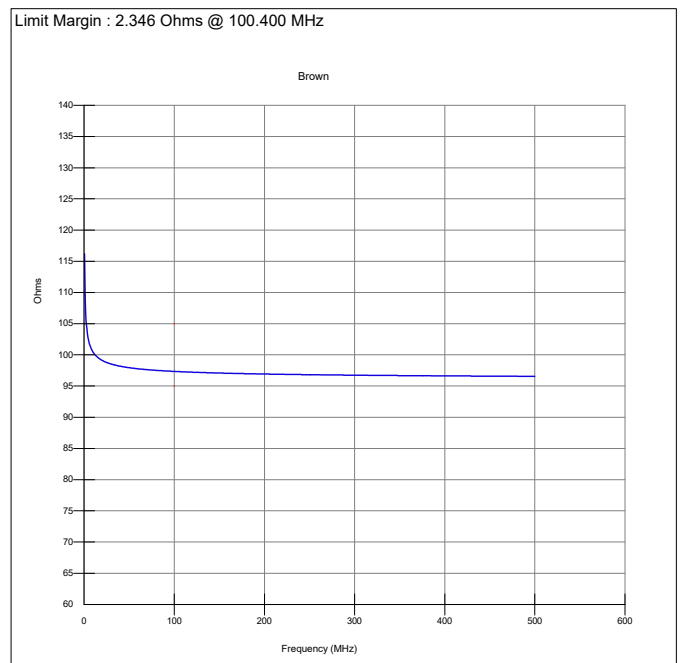
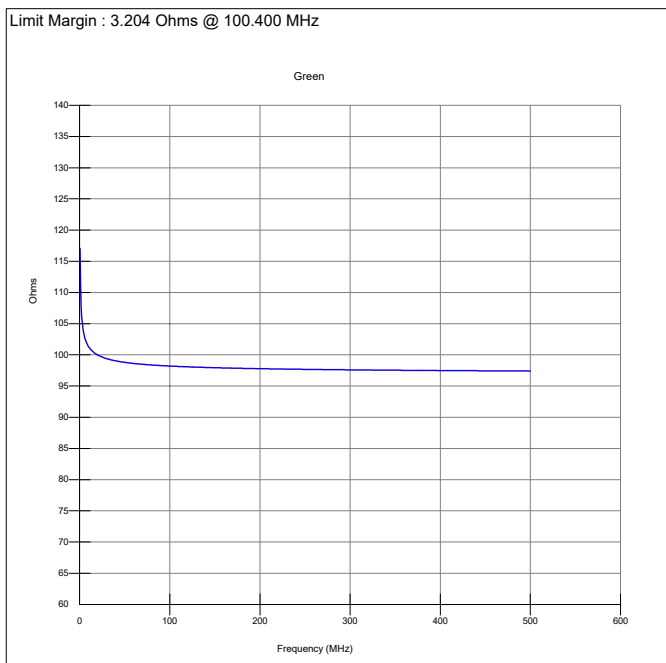
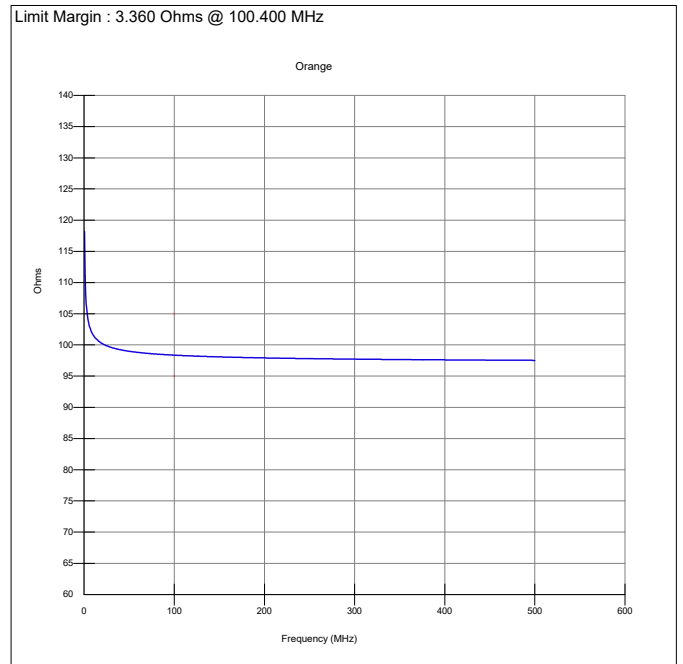
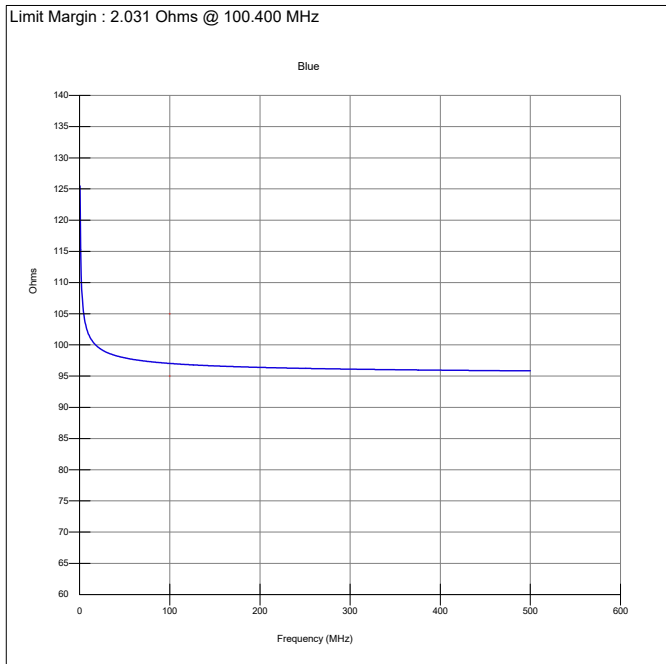
Fitted Impedance - Near End

Client	Ningbo Feynman	Report No	103777015CRT-004c
Specification	EN 50173-1 Cat 6A Cable	Length (m)	100.
Part No	FA0423APC6AV	Temperature	21.5 °C
Test Started	12/20/2018 8:21:19 AM	Test Status	Complies
Description	4 pair 23 AWG UFTP Solid		
Operator Name	David Ayers		



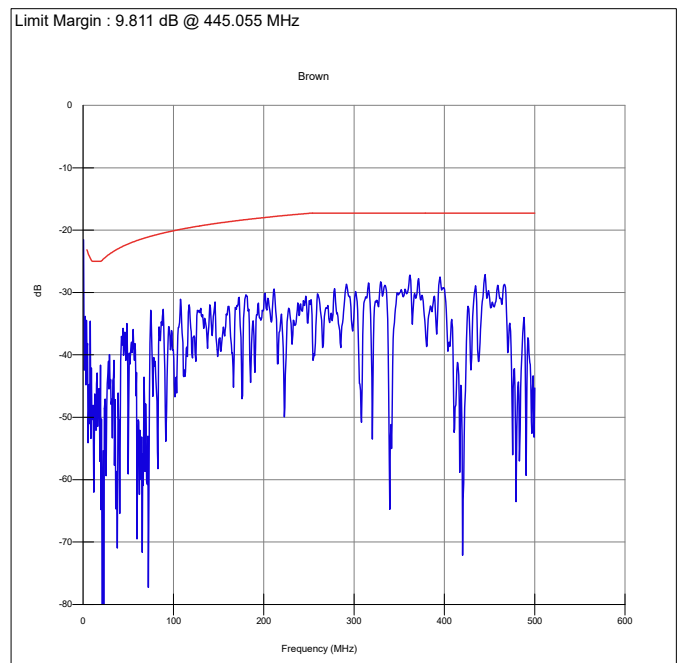
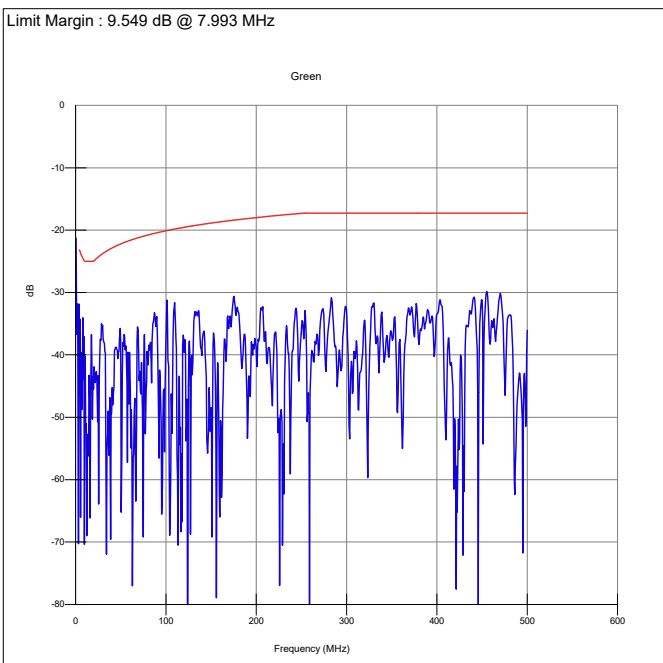
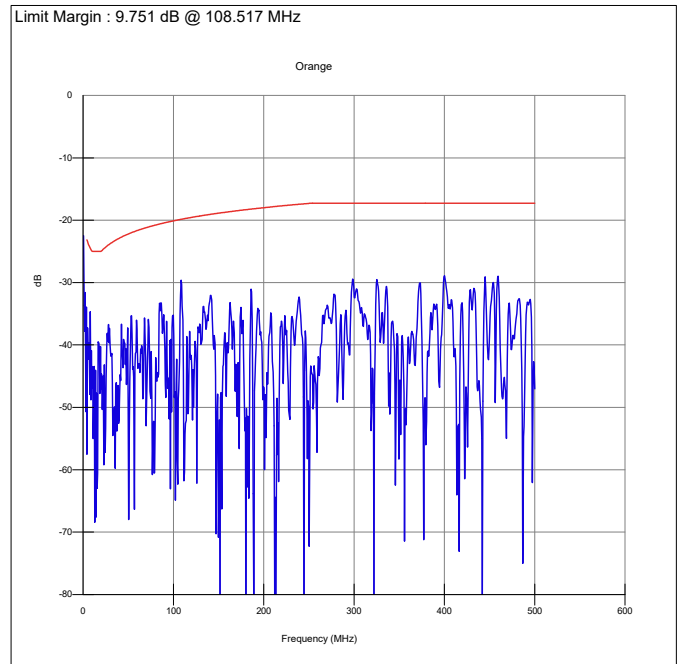
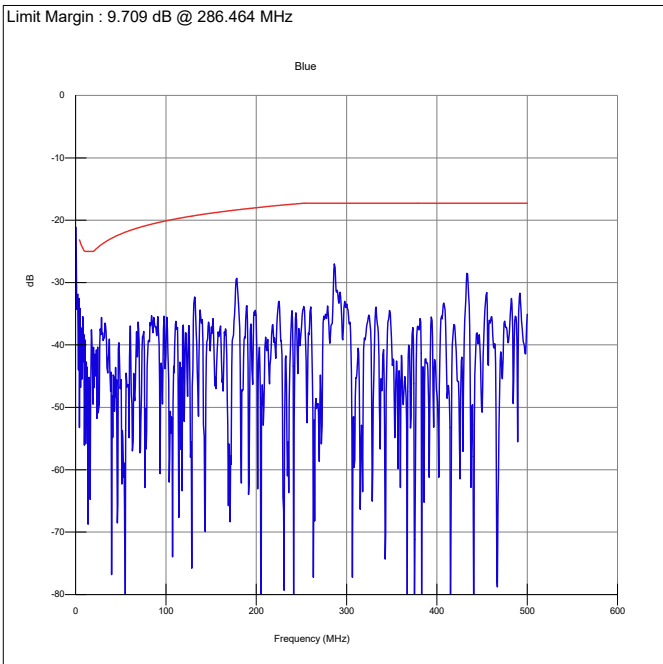
Fitted Impedance - Far End

Client	Ningbo Feynman	Report No	103777015CRT-004c
Specification	EN 50173-1 Cat 6A Cable	Length (m)	100.
Part No	FA0423APC6AV	Temperature	21.5 °C
Test Started	12/20/2018 8:21:19 AM	Test Status	Complies
Description	4 pair 23 AWG UFTP Solid		
Operator Name	David Ayers		



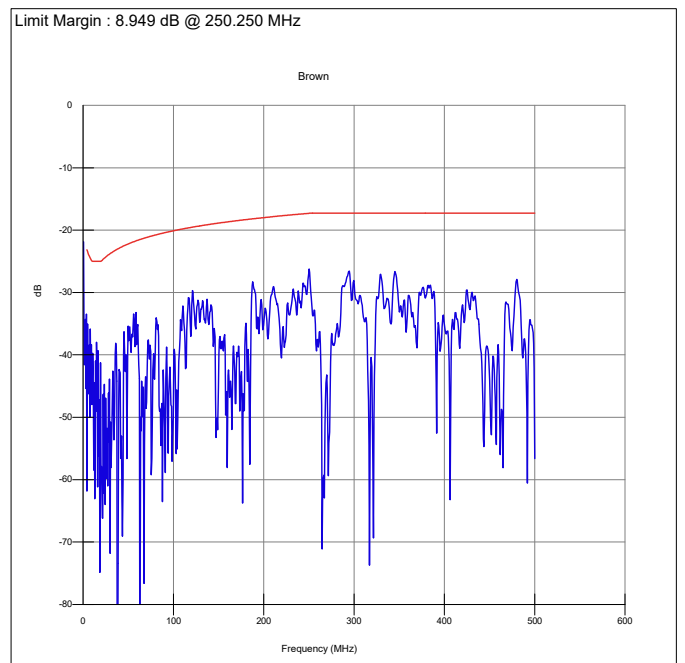
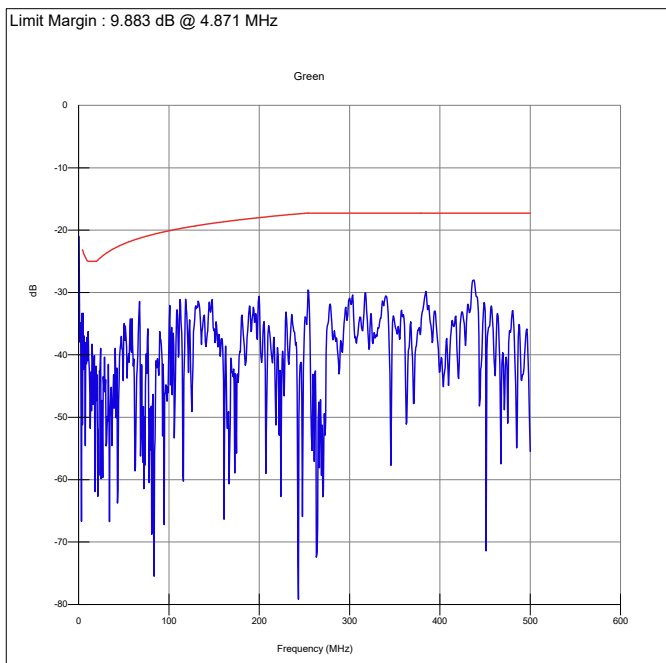
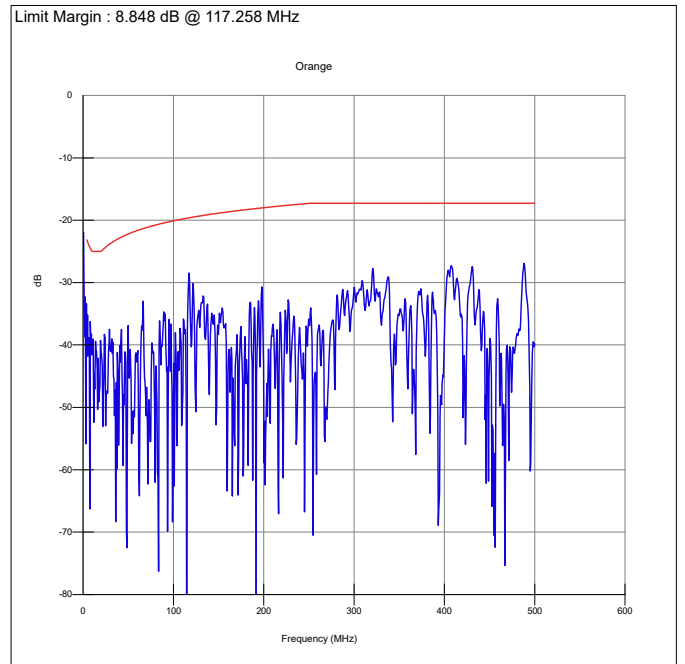
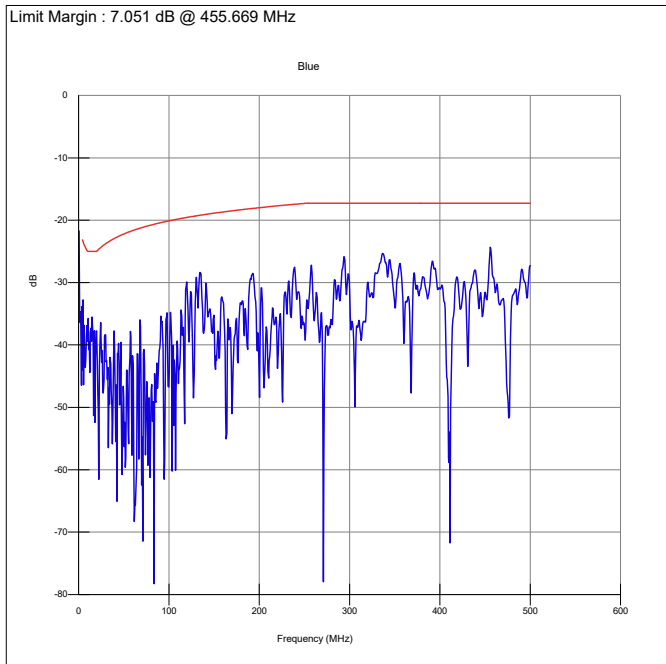
Return Loss - Near End

Client	Ningbo Feynman	Report No	103777015CRT-004c
Specification	EN 50173-1 Cat 6A Cable	Length (m)	100.
Part No	FA0423APC6AV	Temperature	21.5 °C
Test Started	12/20/2018 8:21:19 AM	Test Status	Complies
Description	4 pair 23 AWG UFTP Solid		
Operator Name	David Ayers		



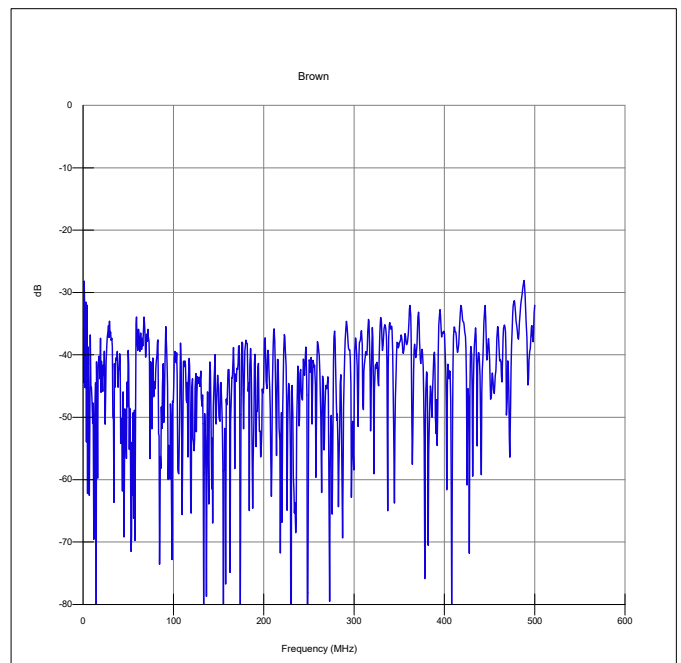
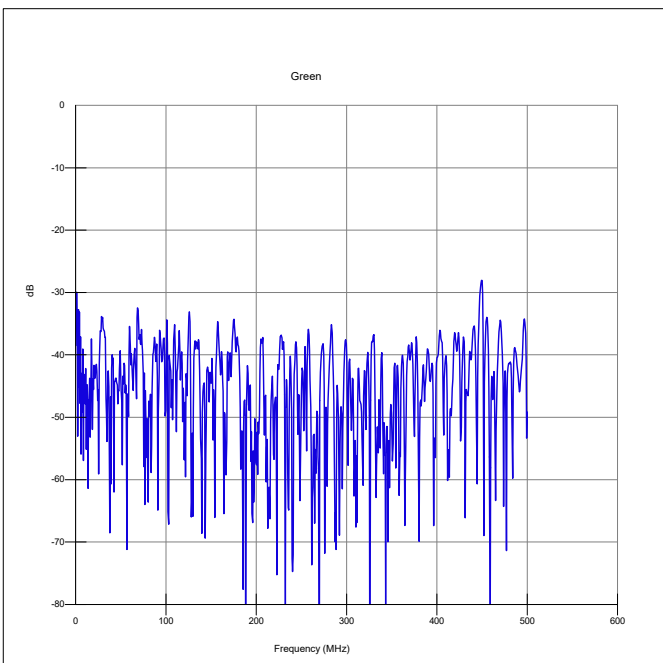
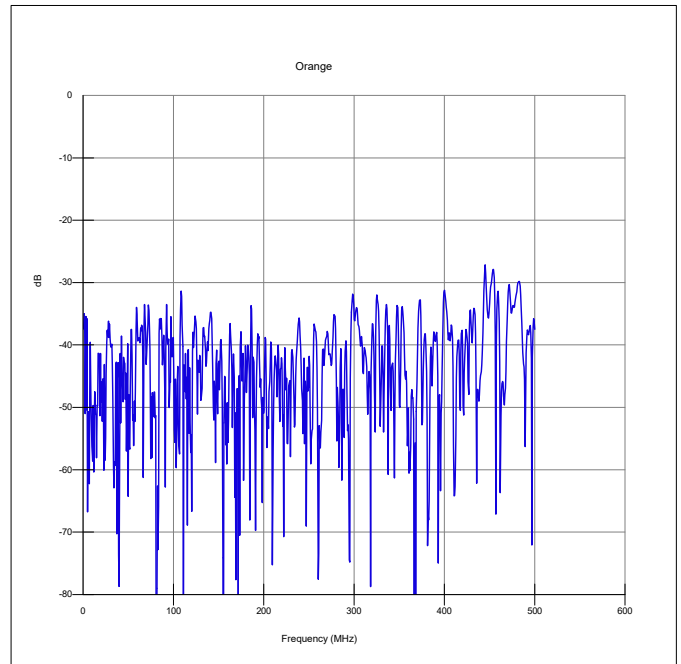
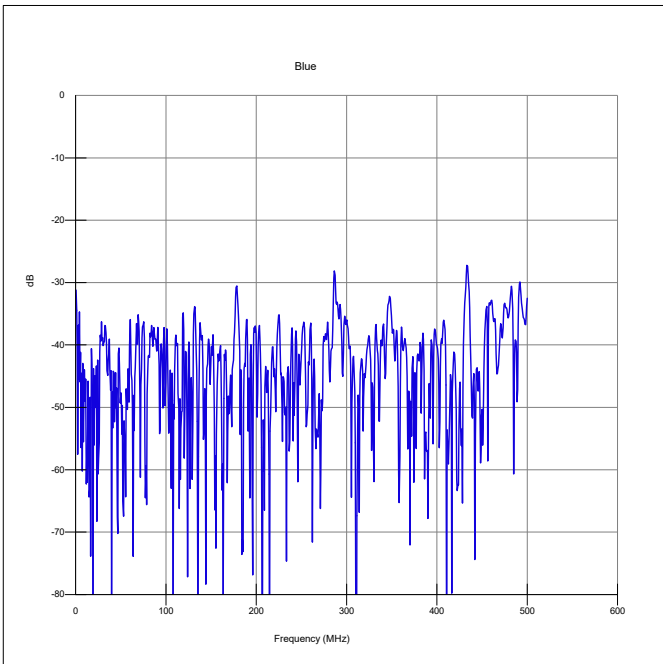
Return Loss - Far End

Client	Ningbo Feynman	Report No	103777015CRT-004c
Specification	EN 50173-1 Cat 6A Cable	Length (m)	100.
Part No	FA0423APC6AV	Temperature	21.5 °C
Test Started	12/20/2018 8:21:19 AM	Test Status	Complies
Description	4 pair 23 AWG UFTP Solid		
Operator Name	David Ayers		



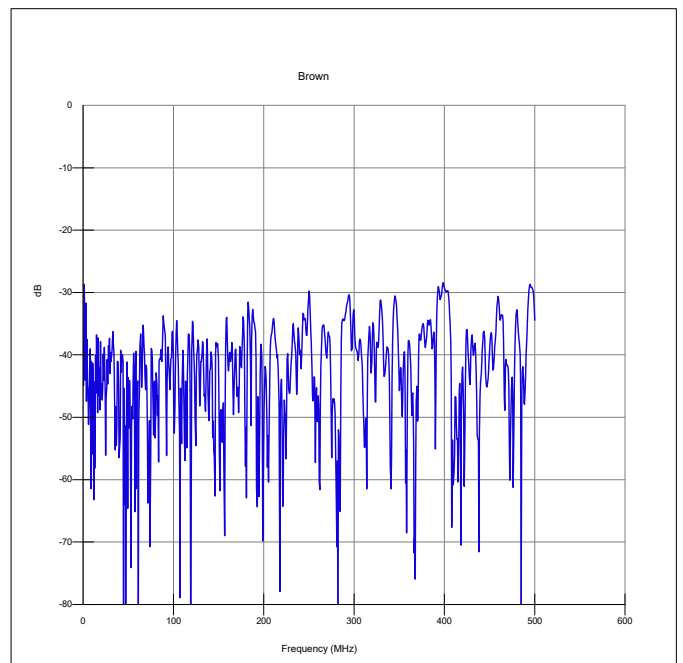
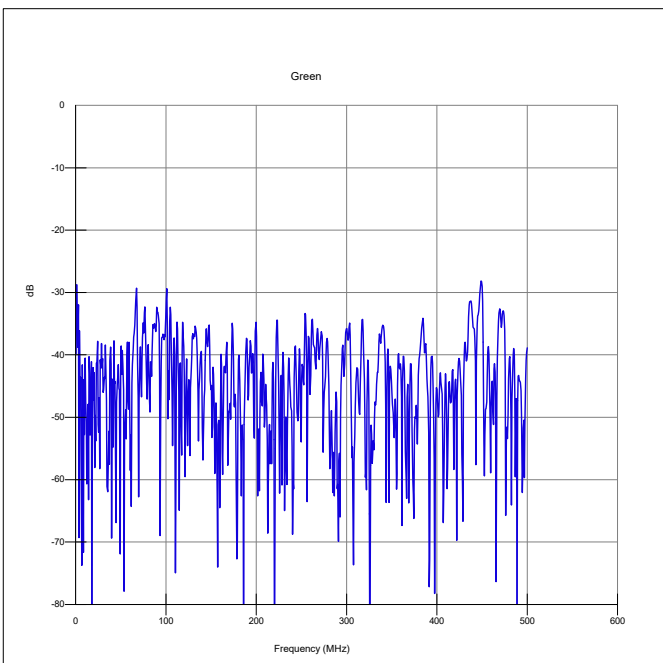
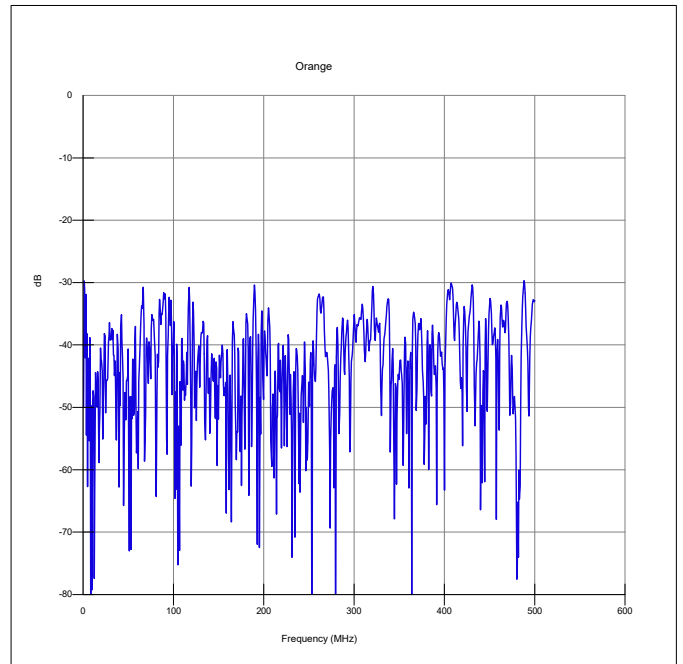
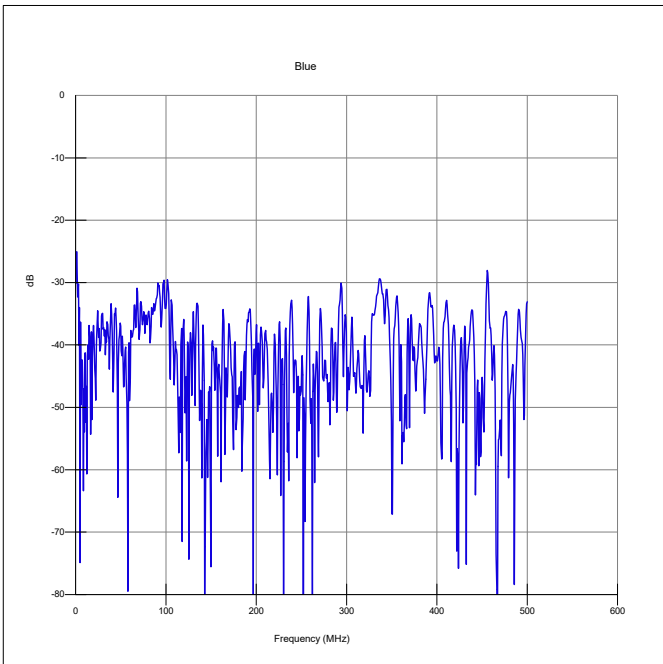
SRL - Near End

Client	Ningbo Feynman	Report No	103777015CRT-004c
Specification	EN 50173-1 Cat 6A Cable	Length (m)	100.
Part No	FA0423APC6AV	Temperature	21.5 °C
Test Started	12/20/2018 8:21:19 AM	Test Status	Complies
Description	4 pair 23 AWG UFTP Solid		
Operator Name	David Ayers		



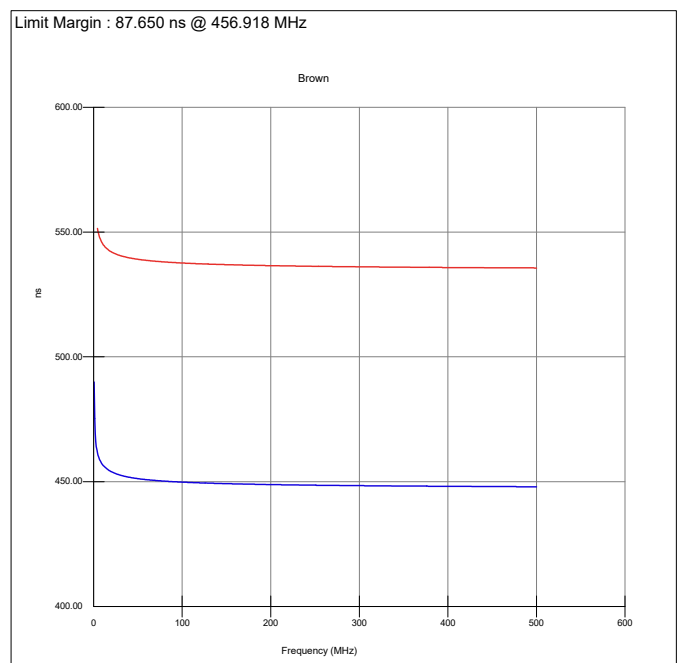
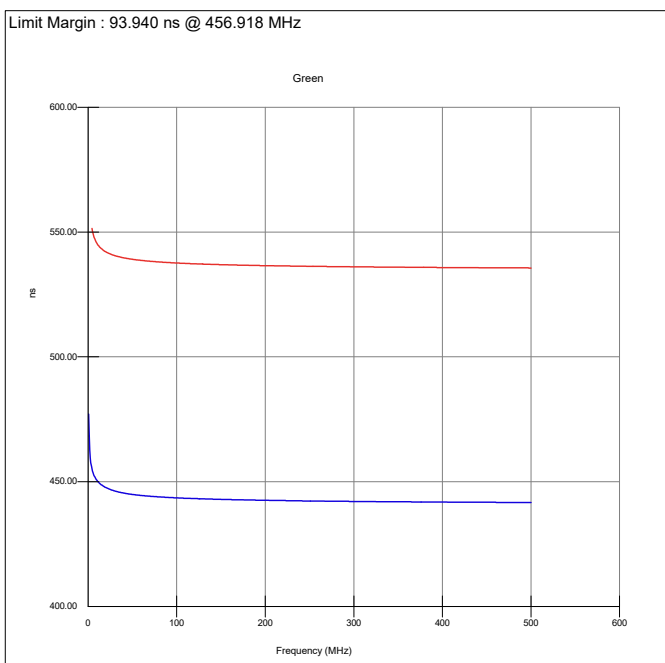
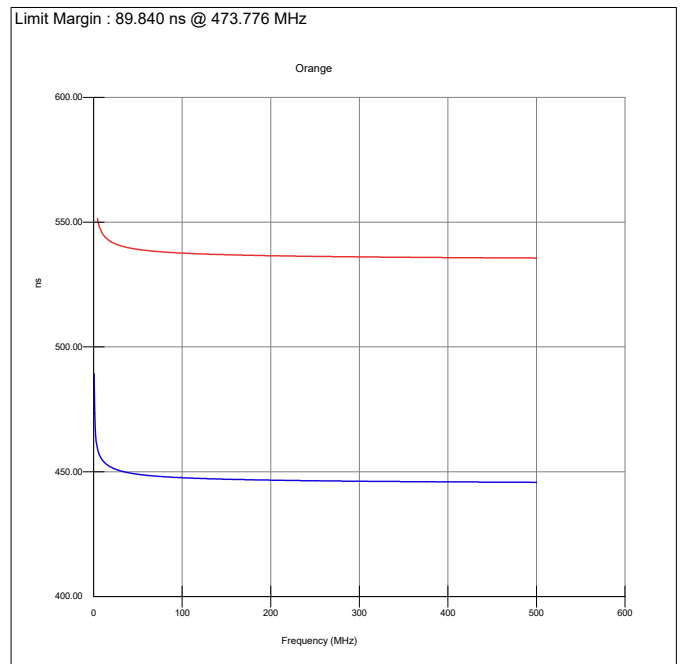
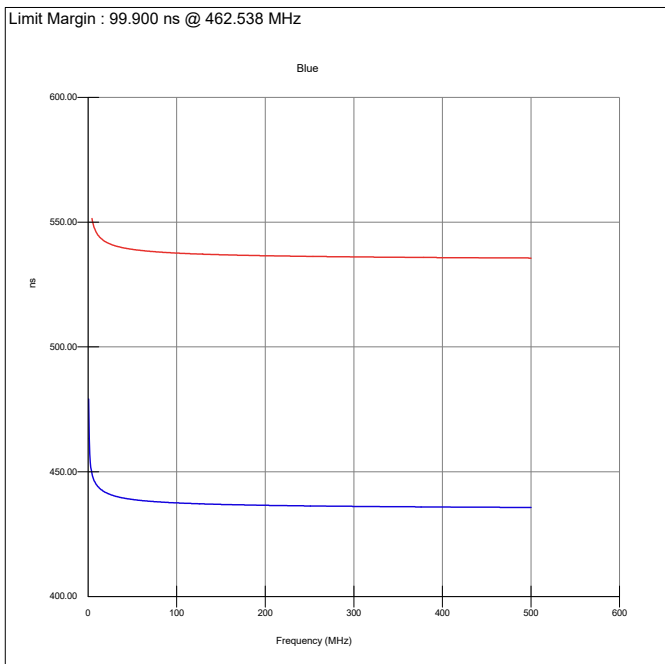
SRL - Far End

Client	Ningbo Feynman	Report No	103777015CRT-004c
Specification	EN 50173-1 Cat 6A Cable	Length (m)	100.
Part No	FA0423APC6AV	Temperature	21.5 °C
Test Started	12/20/2018 8:21:19 AM	Test Status	Complies
Description	4 pair 23 AWG UFTP Solid		
Operator Name	David Ayers		



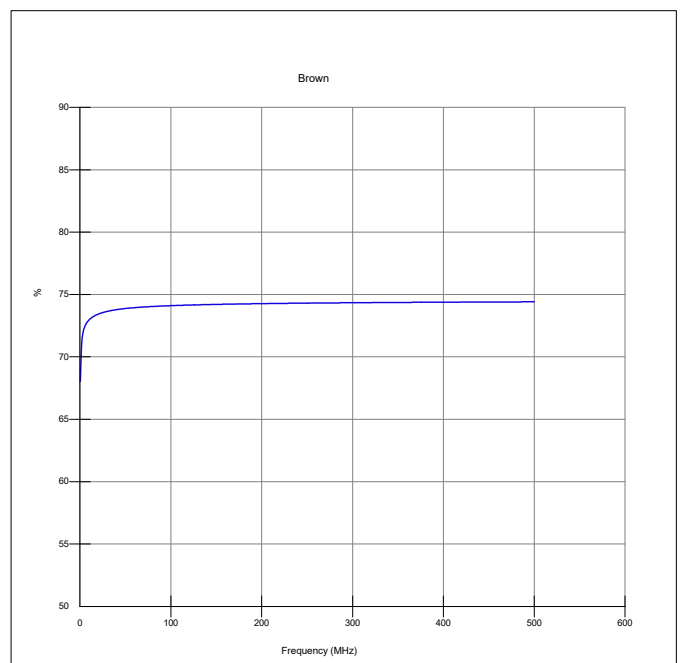
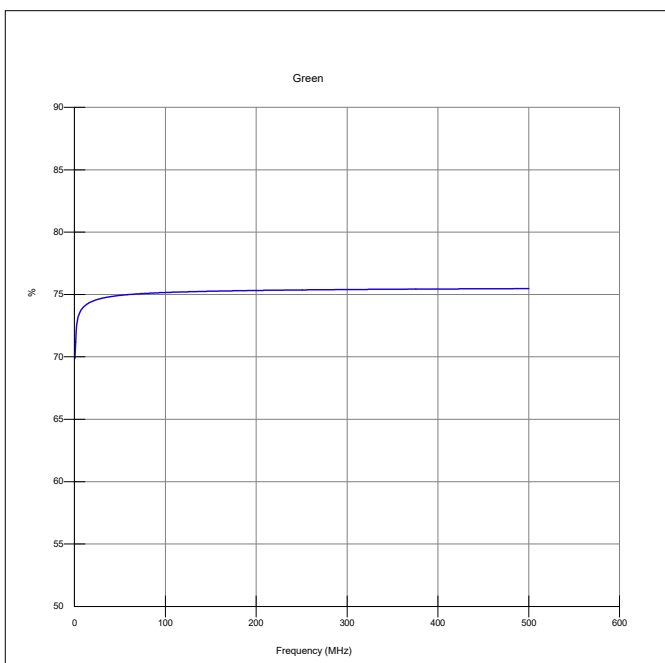
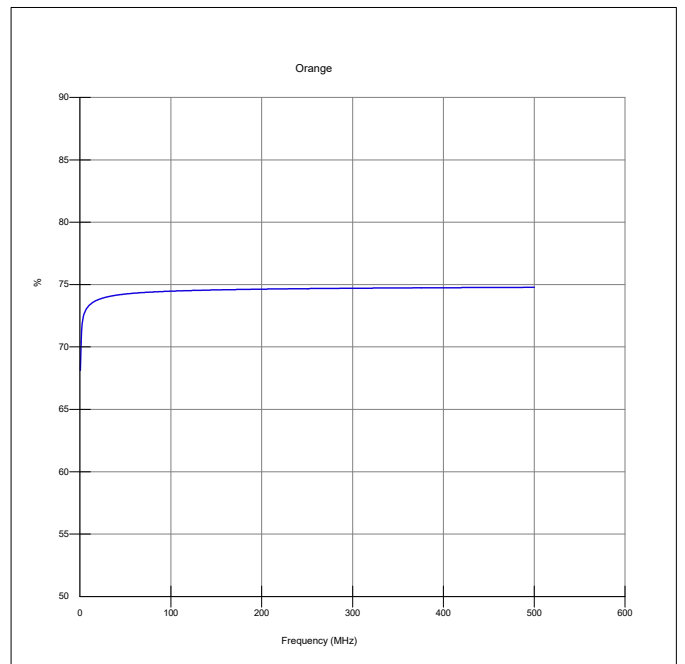
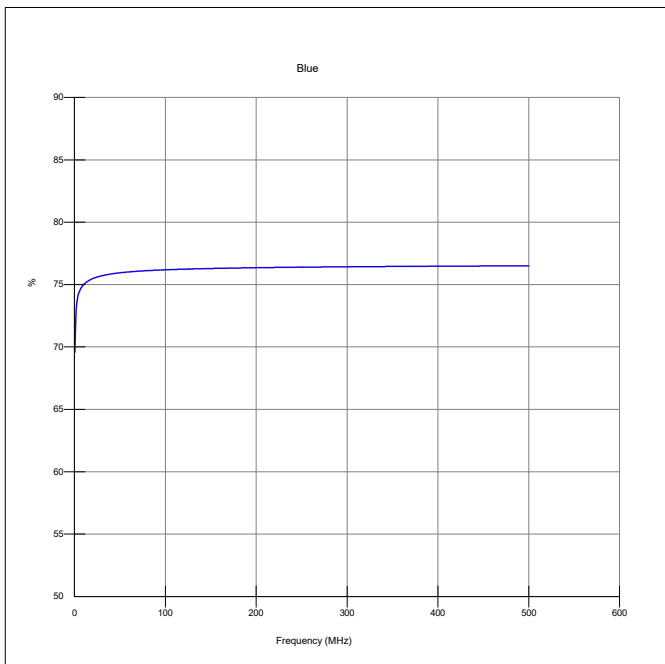
Propagation Delay - Near End

Client	Ningbo Feynman	Report No	103777015CRT-004c
Specification	EN 50173-1 Cat 6A Cable	Length (m)	100.
Part No	FA0423APC6AV	Temperature	21.5 °C
Test Started	12/20/2018 8:21:19 AM	Test Status	Complies
Description	4 pair 23 AWG UFTP Solid		
Operator Name	David Ayers		



Velocity of Propagation - Near End

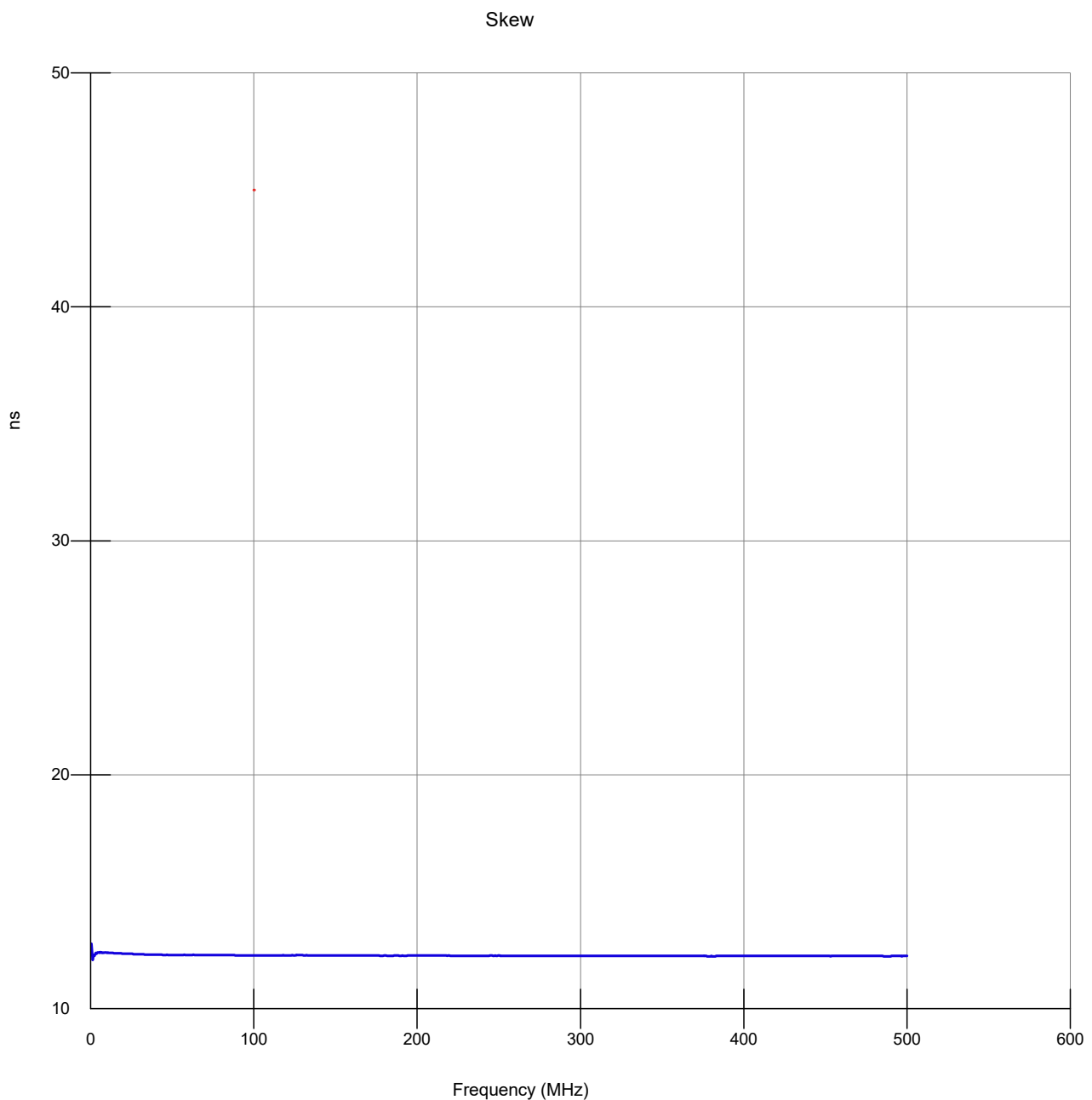
Client	Ningbo Feynman	Report No	103777015CRT-004c
Specification	EN 50173-1 Cat 6A Cable	Length (m)	100.
Part No	FA0423APC6AV	Temperature	21.5 °C
Test Started	12/20/2018 8:21:19 AM	Test Status	Complies
Description	4 pair 23 AWG UFTP Solid		
Operator Name	David Ayers		



Propagation Delay Skew - Near End

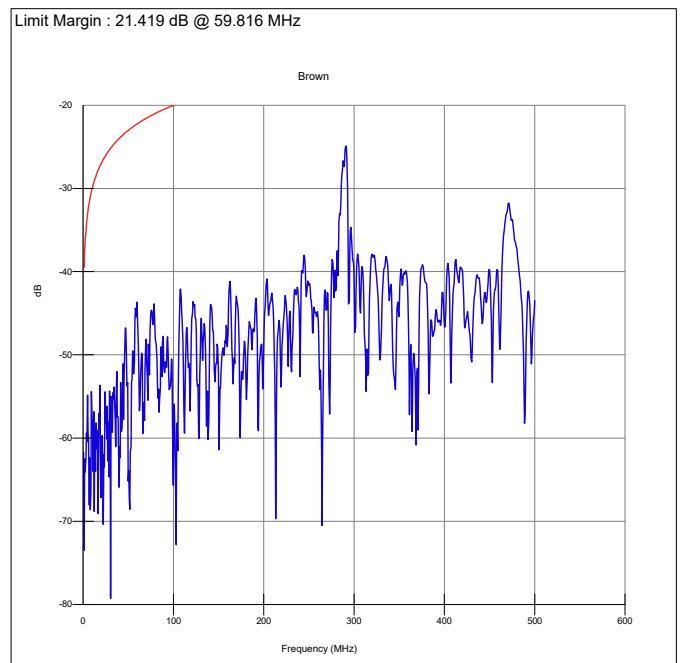
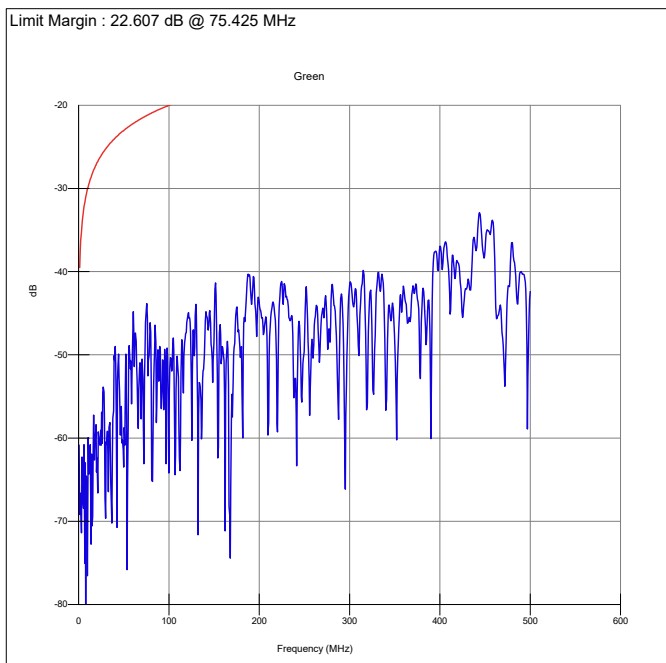
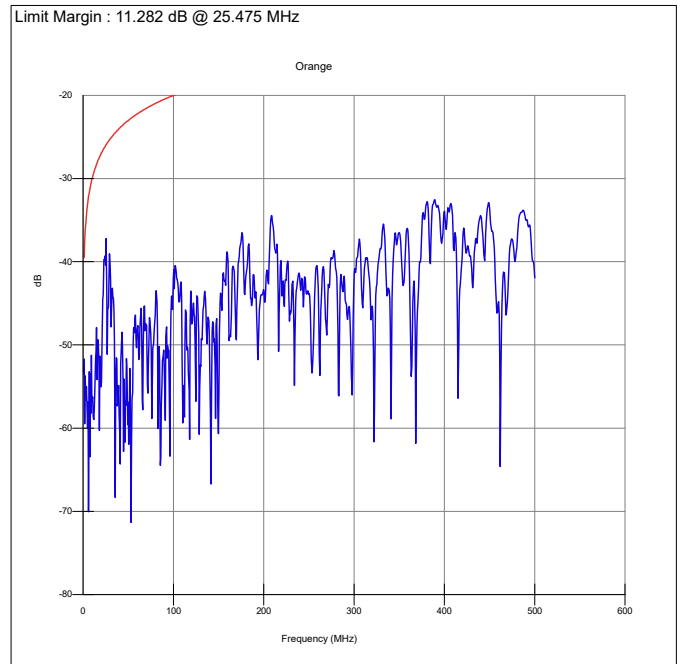
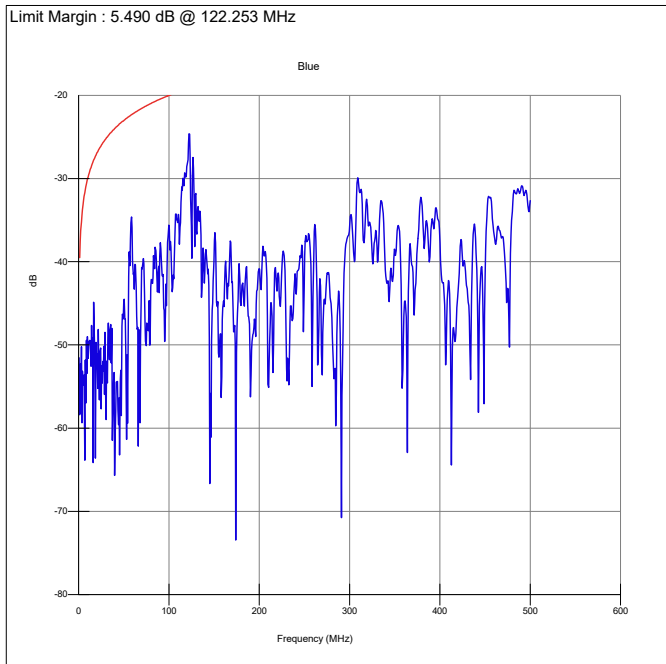
Client	Ningbo Feynman	Report No	103777015CRT-004c
Specification	EN 50173-1 Cat 6A Cable		
Part No	FA0423APC6AV	Length (m)	100.
Test Started	12/20/2018 8:21:19 AM	Temperature	21.5 °C
Description	4 pair 23 AWG UFTP Solid		
Operator Name	David Ayers	Test Status	Complies

Limit Margin : 32.723 ns @ 99.776 MHz

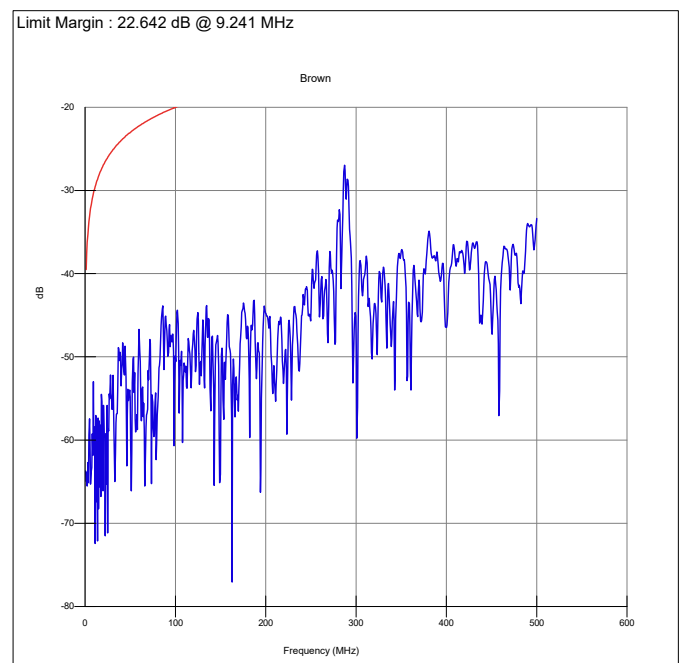
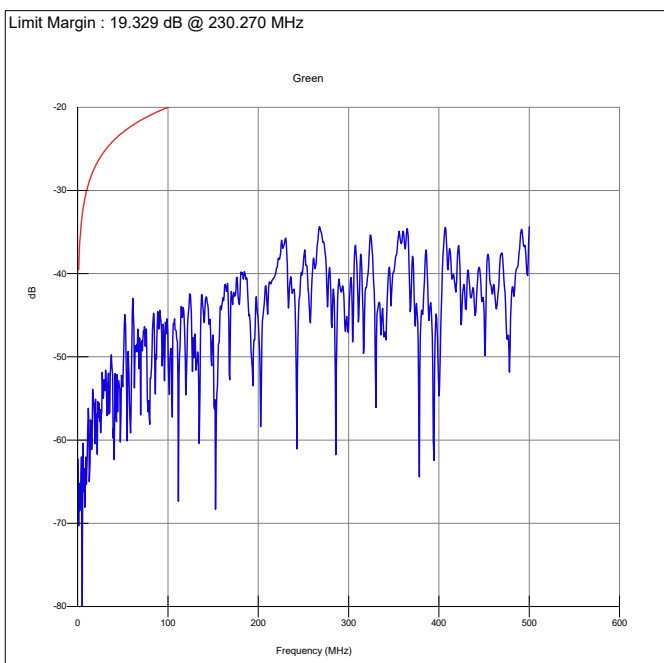
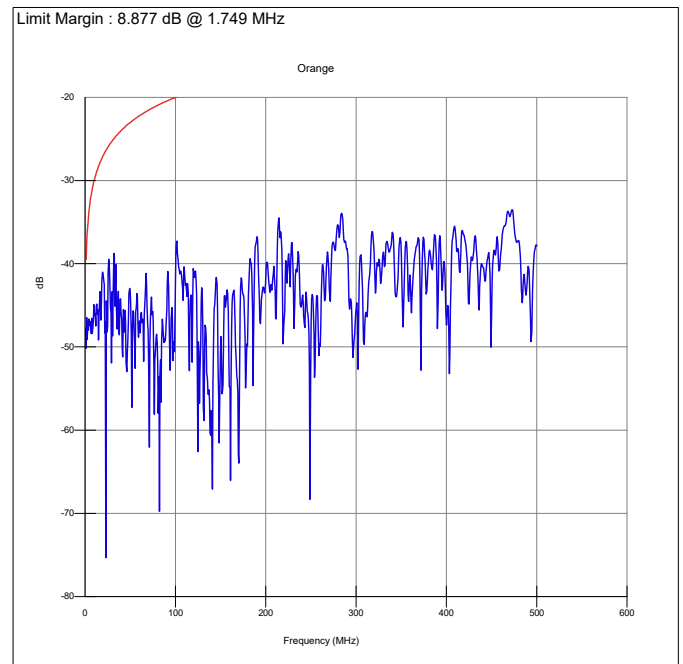
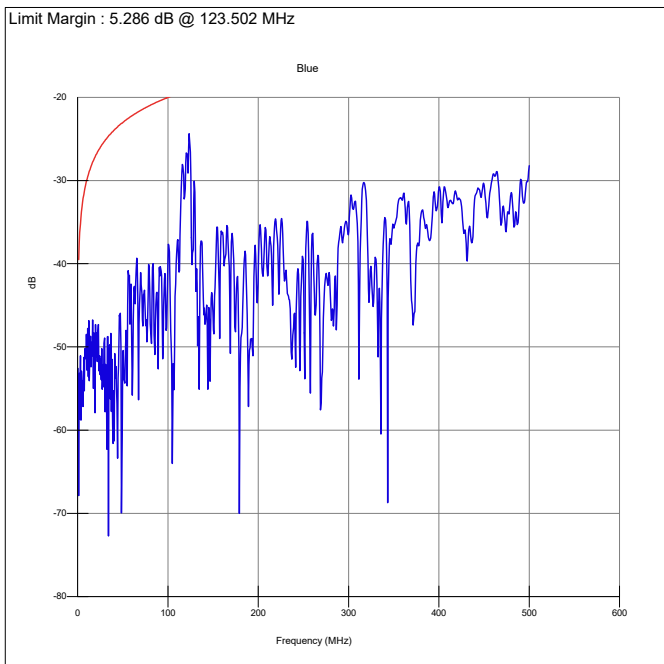


TCL - Near End

Client	Ningbo Feynman	Report No	103777015CRT-004c
Specification	EN 50173-1 Cat 6A Cable	Length (m)	100.
Part No	FA0423APC6AV	Temperature	21.5 °C
Test Started	12/20/2018 8:21:19 AM	Test Status	Complies
Description	4 pair 23 AWG UFTP Solid		
Operator Name	David Ayers		

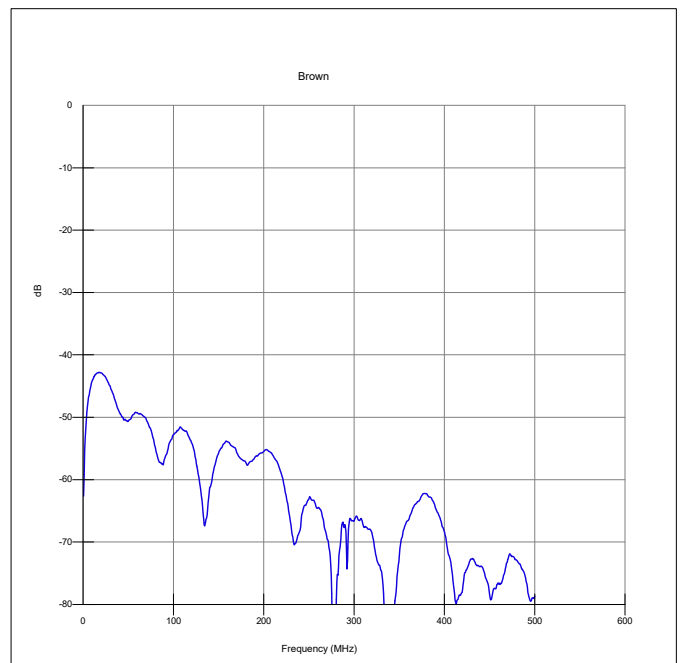
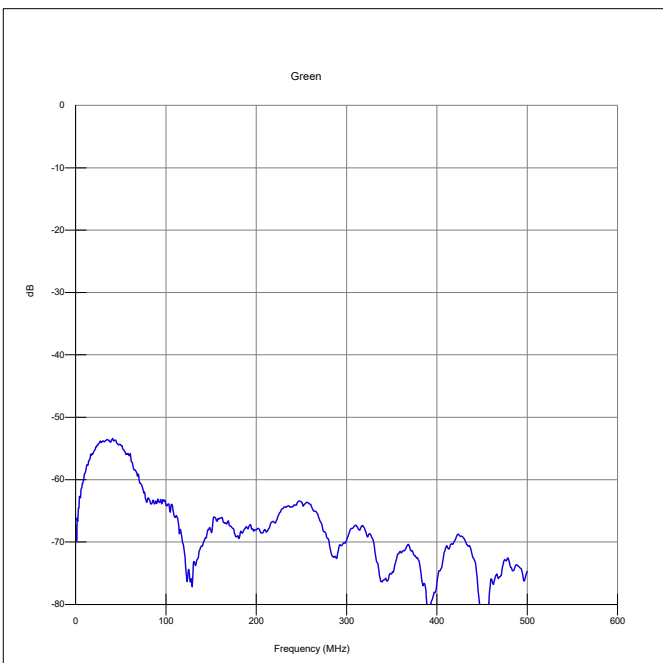
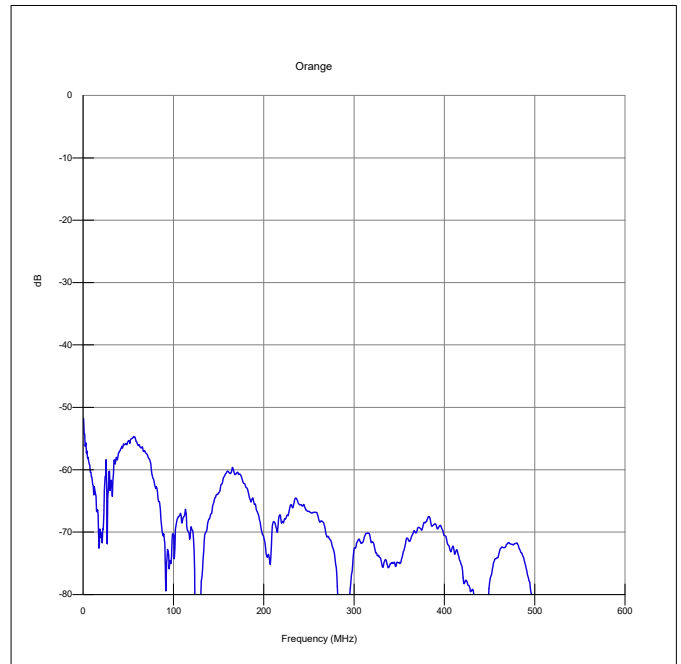
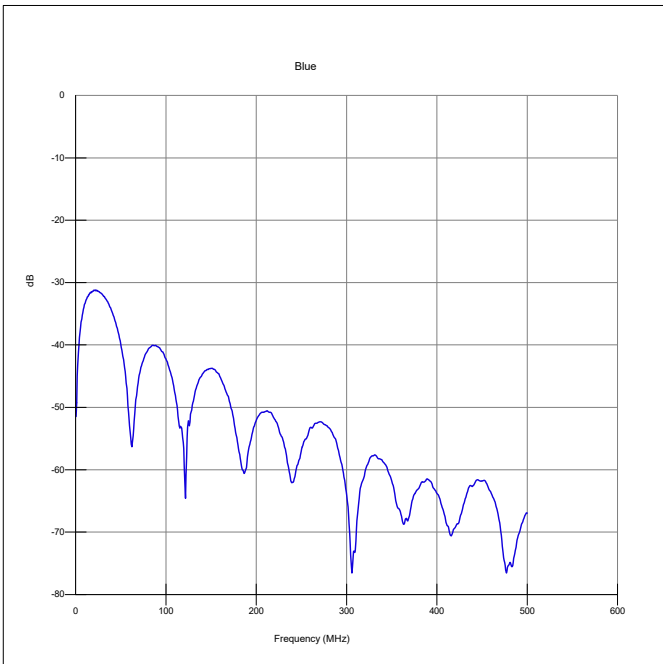


Client	Ningbo Feynman	Report No	103777015CRT-004c
Specification	EN 50173-1 Cat 6A Cable	Length (m)	100.
Part No	FA0423APC6AV	Temperature	21.5 °C
Test Started	12/20/2018 8:21:19 AM	Test Status	Complies
Description	4 pair 23 AWG UFTP Solid		
Operator Name	David Ayers		



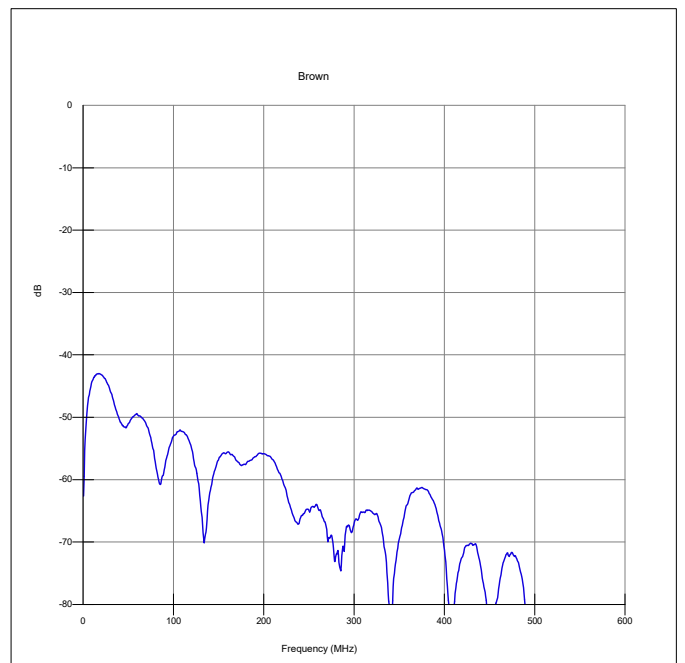
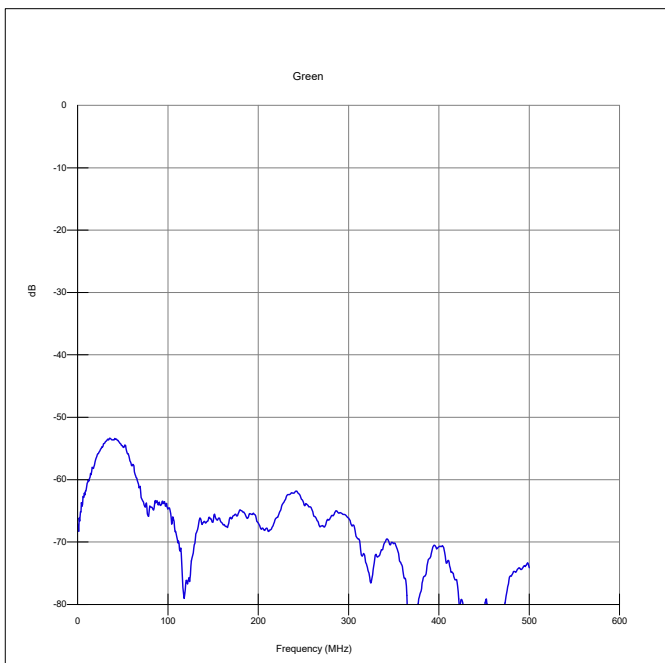
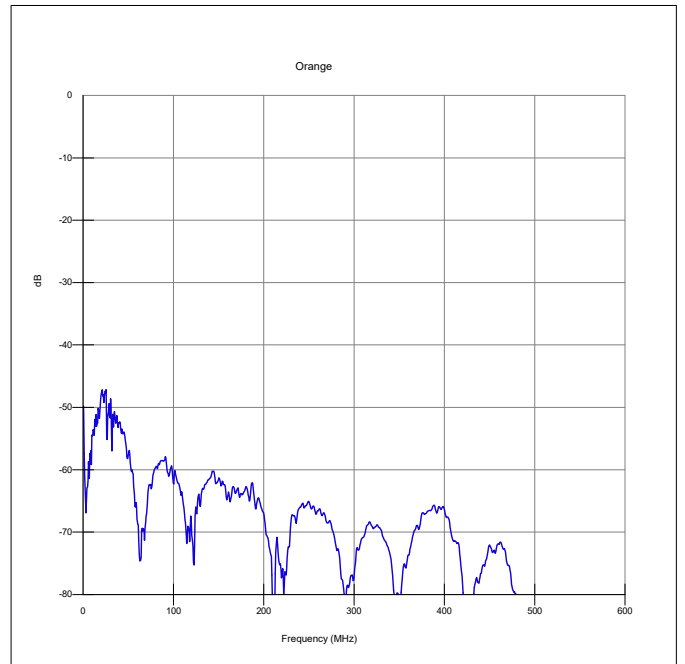
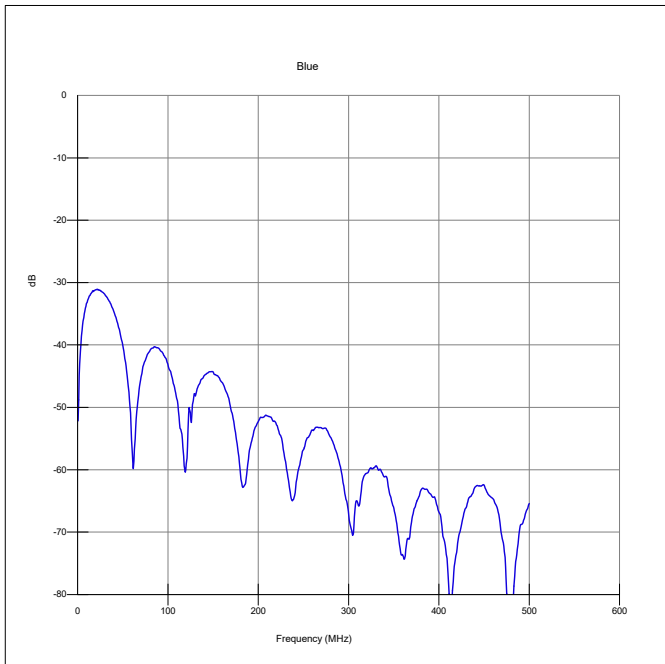
TCTL - Near End

Client	Ningbo Feynman	Report No	103777015CRT-004c
Specification	EN 50173-1 Cat 6A Cable	Length (m)	100.
Part No	FA0423APC6AV	Temperature	21.5 °C
Test Started	12/20/2018 8:21:19 AM	Test Status	Complies
Description	4 pair 23 AWG UFTP Solid		
Operator Name	David Ayers		



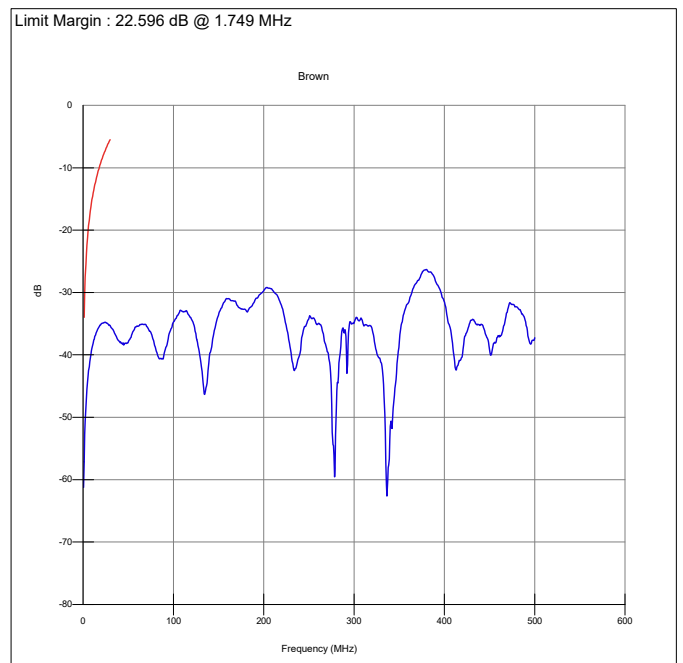
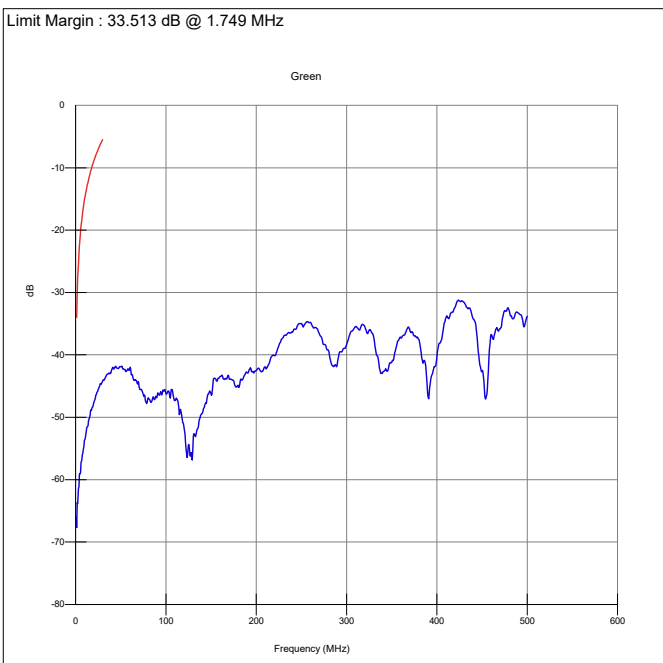
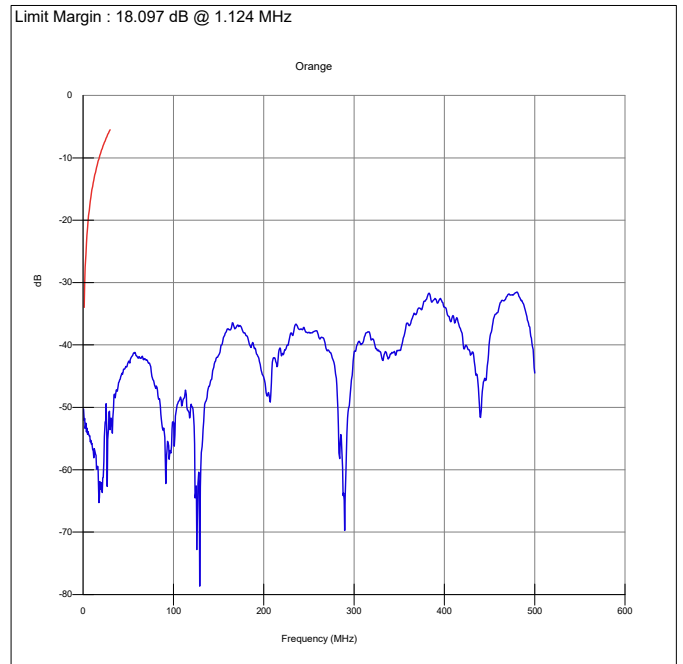
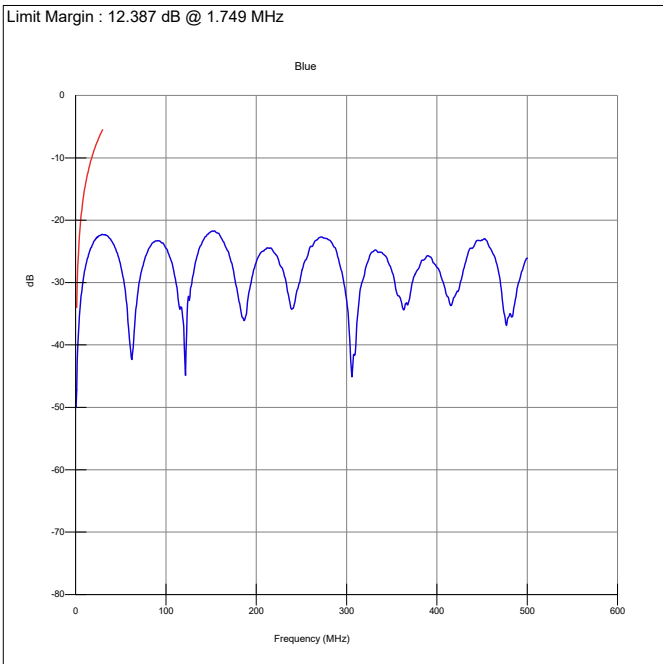
TCTL - Far End

Client	Ningbo Feynman	Report No	103777015CRT-004c
Specification	EN 50173-1 Cat 6A Cable	Length (m)	100.
Part No	FA0423APC6AV	Temperature	21.5 °C
Test Started	12/20/2018 8:21:19 AM	Test Status	Complies
Description	4 pair 23 AWG UFTP Solid		
Operator Name	David Ayers		



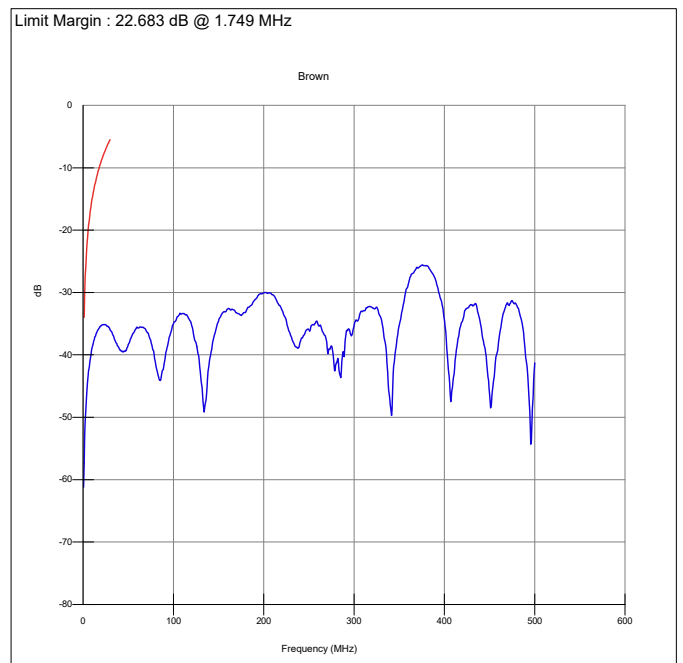
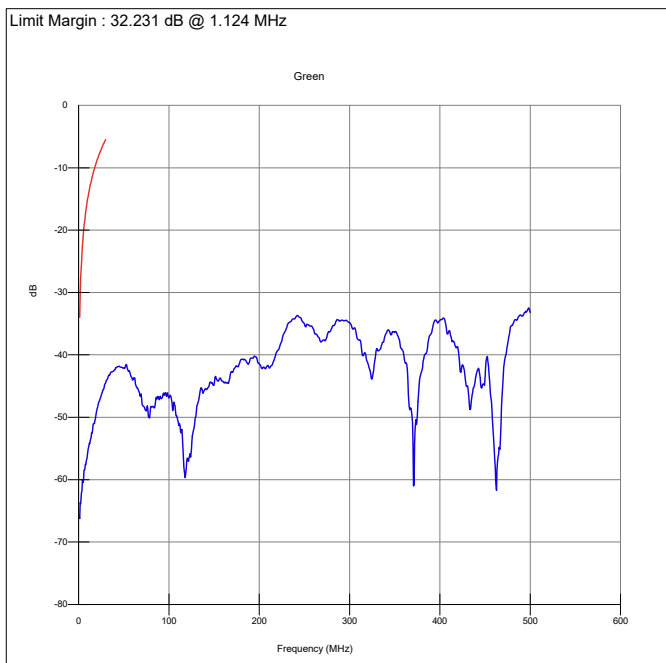
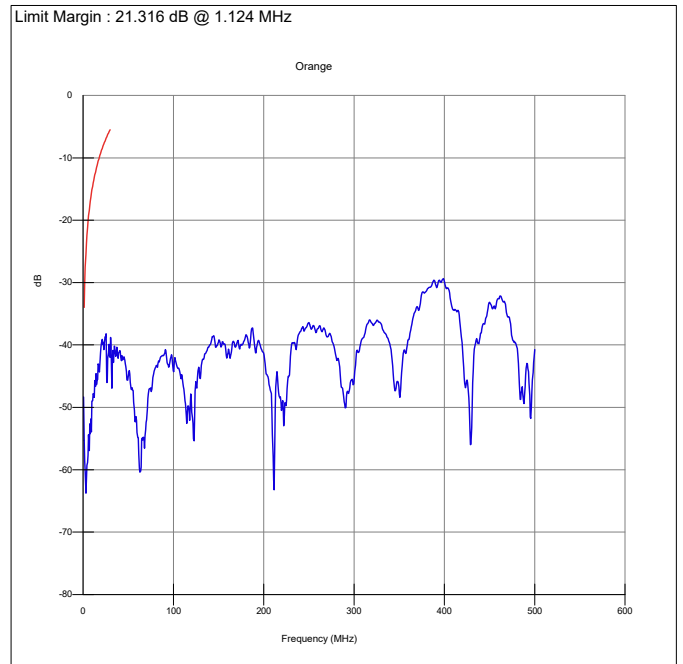
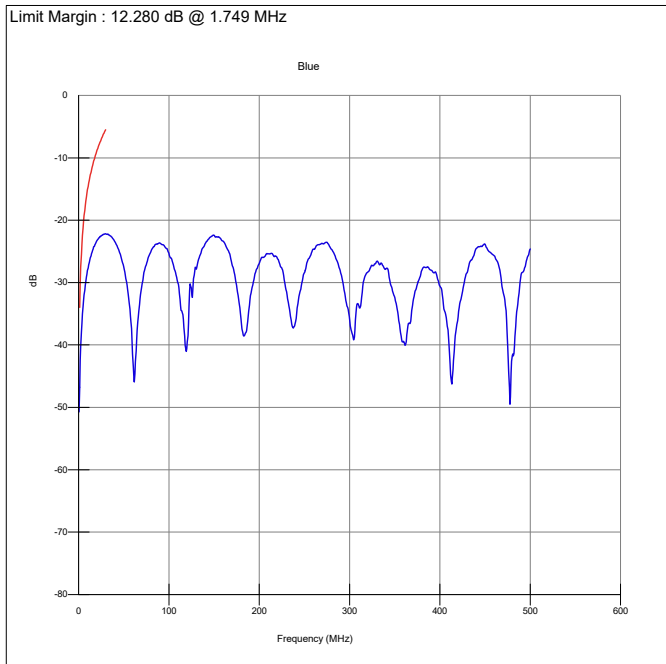
ELTCTL - Near End

Client	Ningbo Feynman	Report No	103777015CRT-004c
Specification	EN 50173-1 Cat 6A Cable	Length (m)	100.
Part No	FA0423APC6AV	Temperature	21.5 °C
Test Started	12/20/2018 8:21:19 AM	Test Status	Complies
Description	4 pair 23 AWG UFTP Solid		
Operator Name	David Ayers		



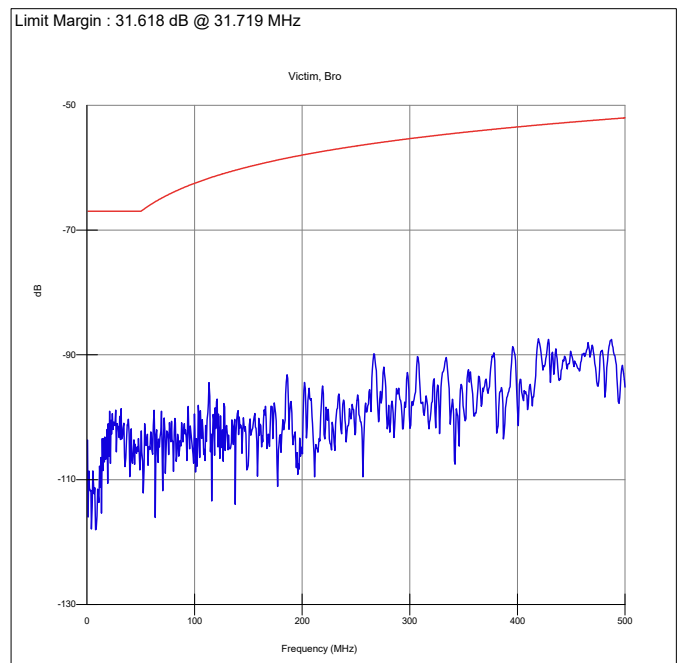
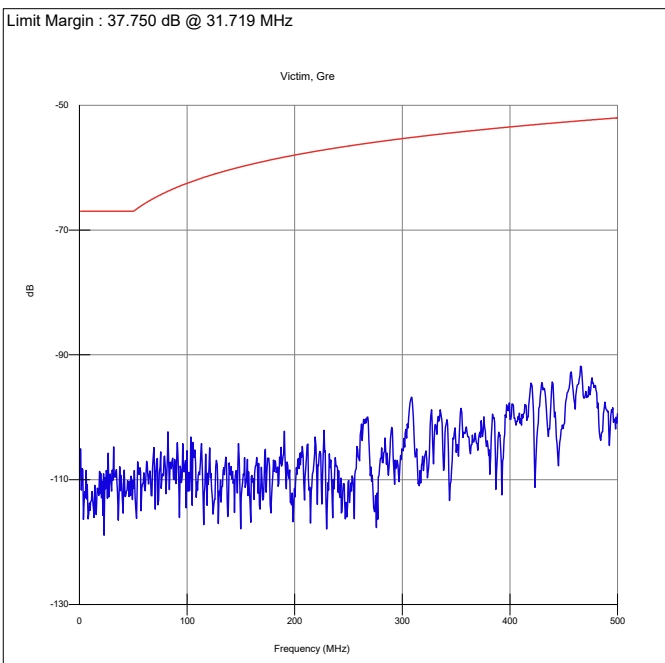
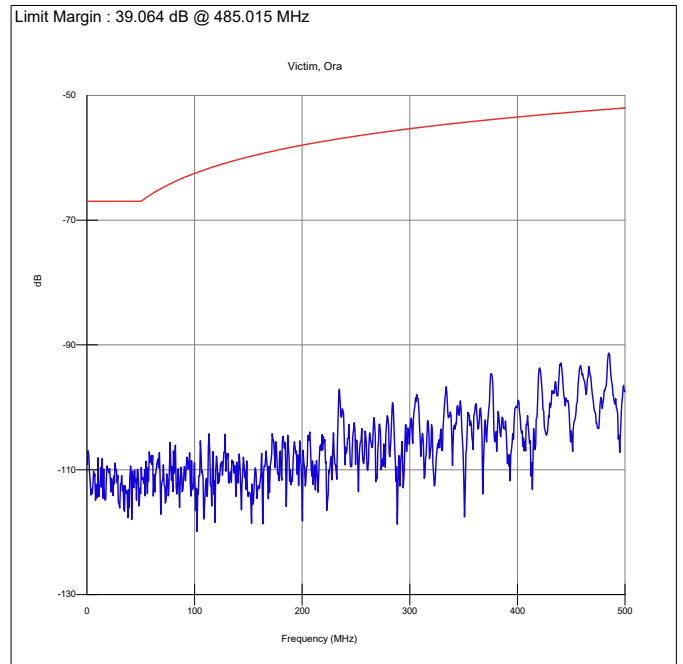
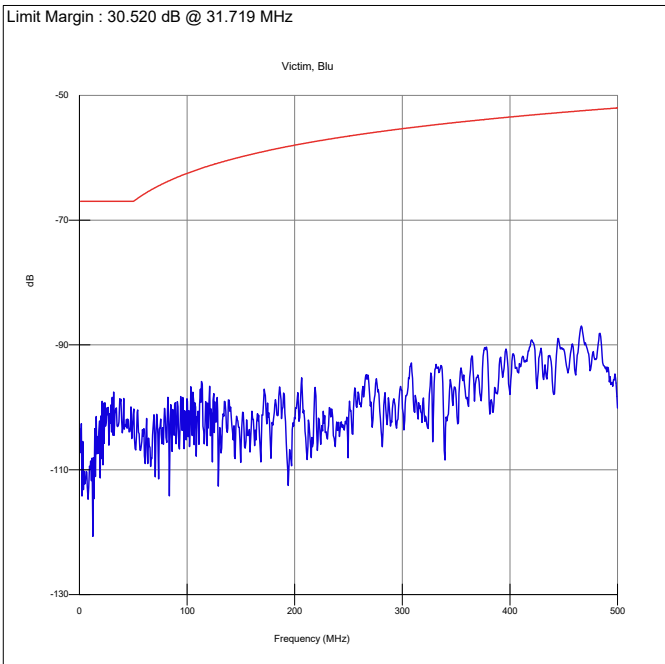
ELTCTL - Far End

Client	Ningbo Feynman	Report No	103777015CRT-004c
Specification	EN 50173-1 Cat 6A Cable	Length (m)	100.
Part No	FA0423APC6AV	Temperature	21.5 °C
Test Started	12/20/2018 8:21:19 AM	Test Status	Complies
Description	4 pair 23 AWG UFTP Solid		
Operator Name	David Ayers		



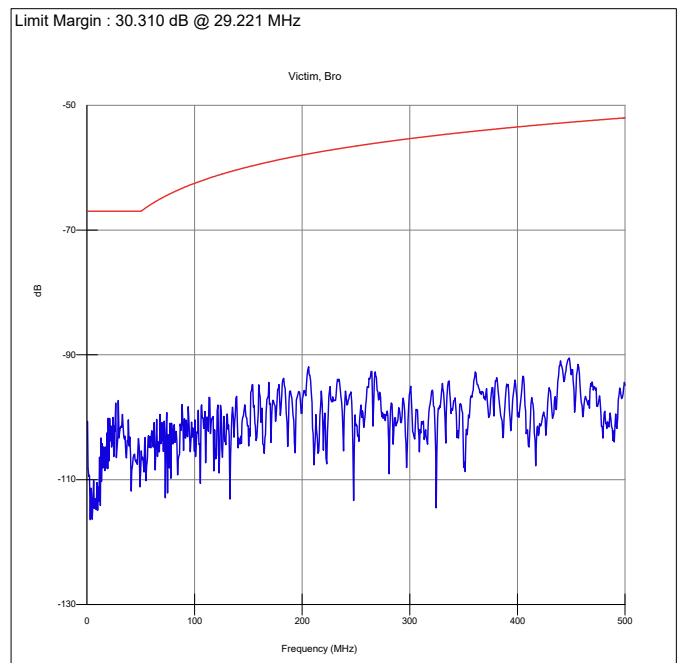
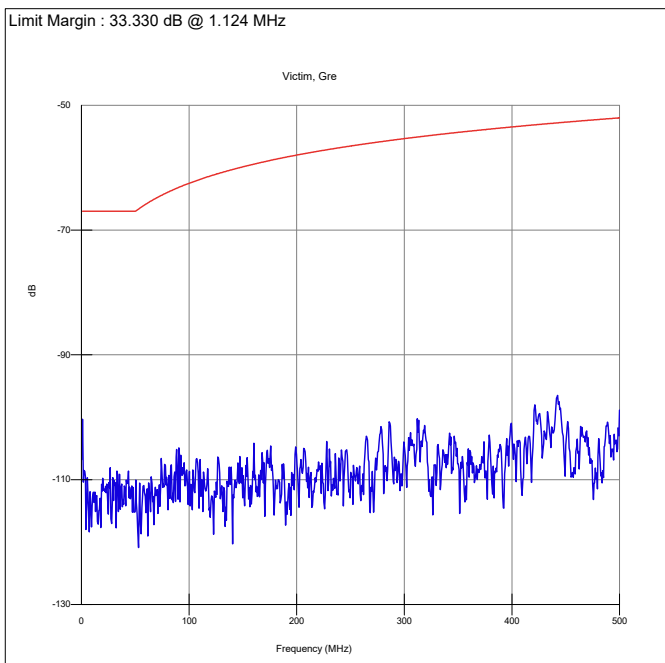
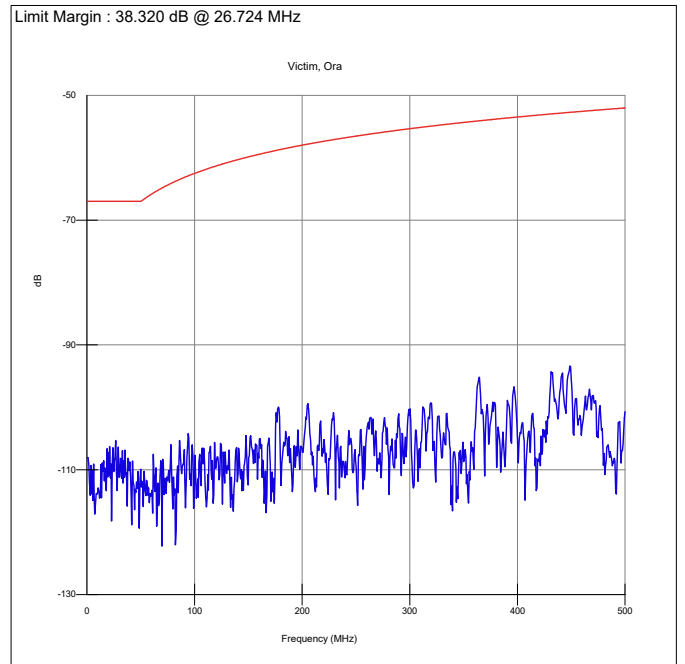
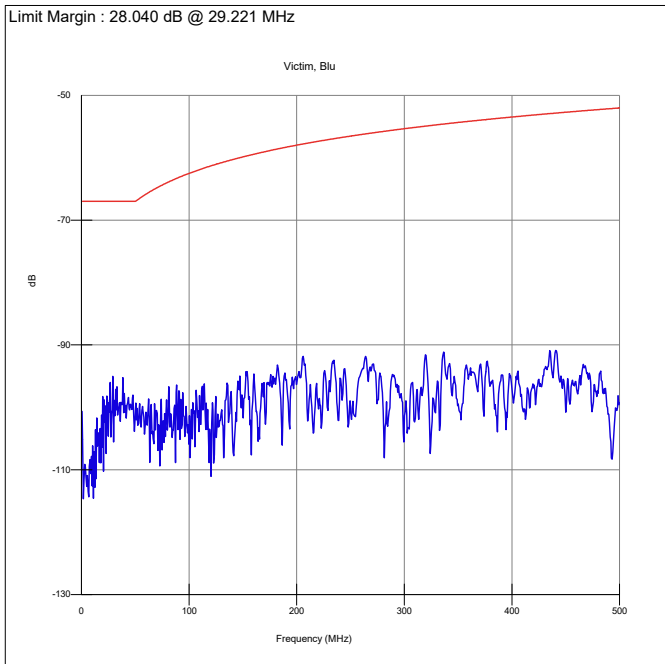
PSANEXT - Near End

Client	Ningbo Feynman	Report No	103777015CRT-004c
Specification	EN 50173-1 Cat 6A Cable	Length (m)	100.
Part No	Cat 6A UFTP	Temperature	21.5 °C
Test Started	12/20/2018 10:11:43 AM	Test Status	Complies
Description	4 pair 23 AWG UFTP Solid		
Operator Name	David Ayers		



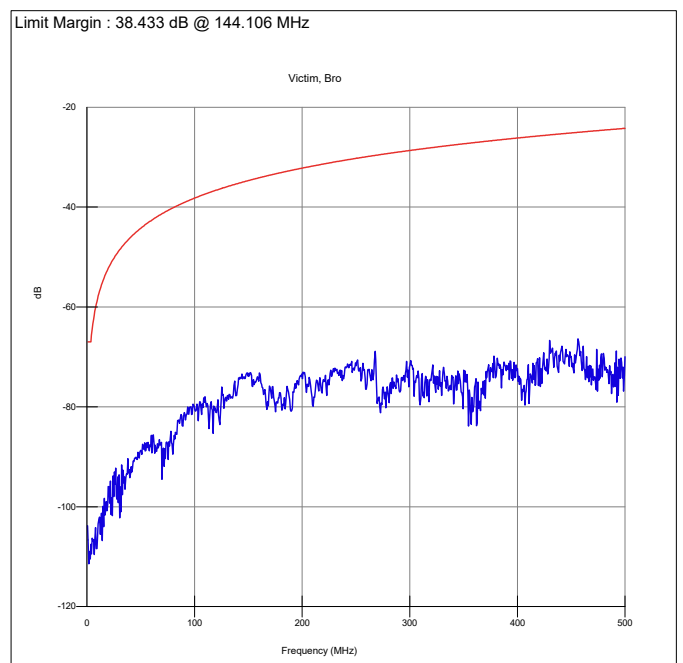
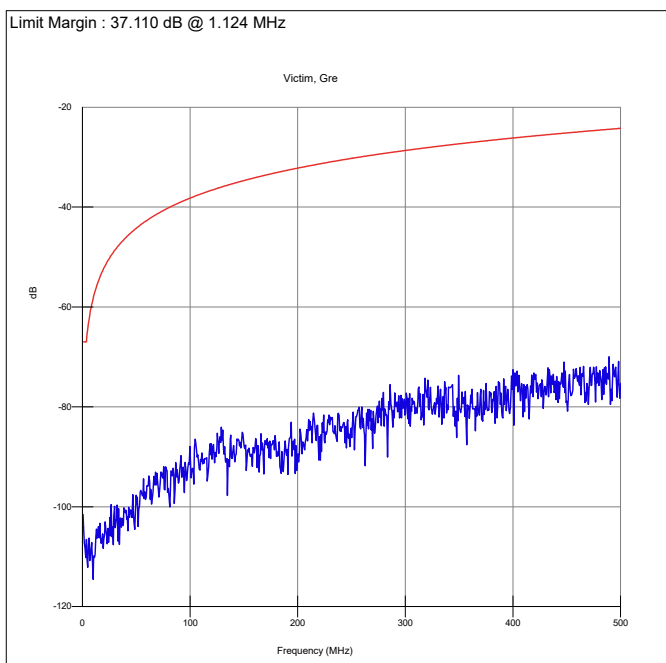
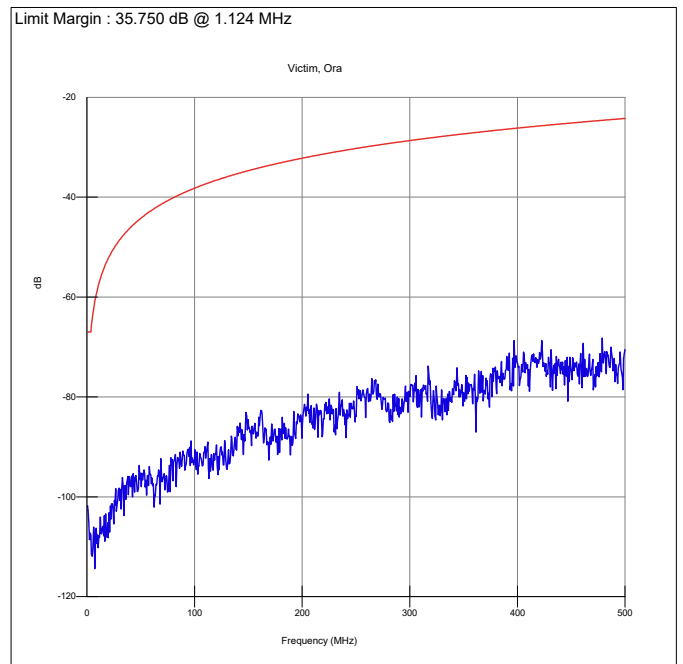
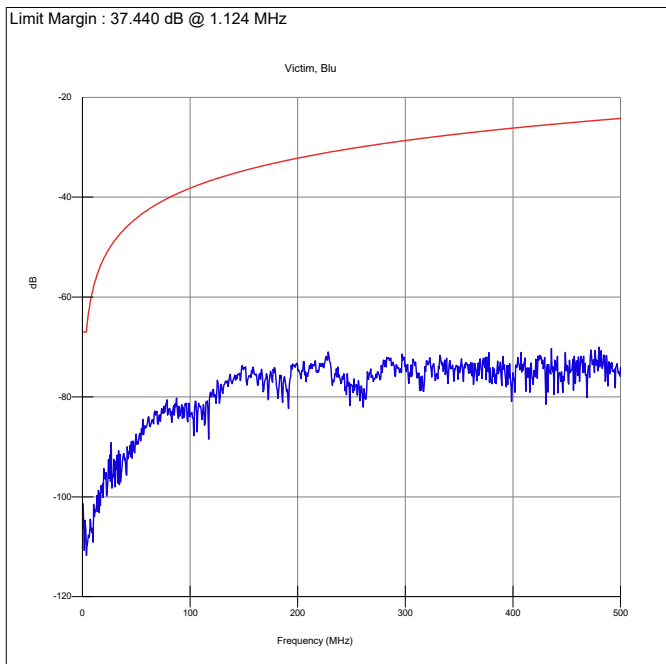
PSANEXT - Far End

Client	Ningbo Feynman	Report No	103777015CRT-004c
Specification	EN 50173-1 Cat 6A Cable	Length (m)	100.
Part No	Cat 6A UFTP	Temperature	21.5 °C
Test Started	12/20/2018 10:11:43 AM	Test Status	Complies
Description	4 pair 23 AWG UFTP Solid		
Operator Name	David Ayers		



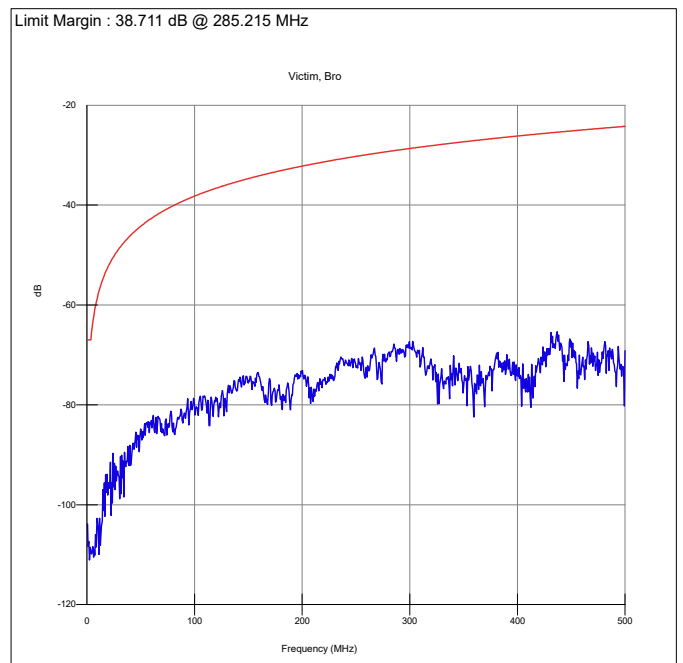
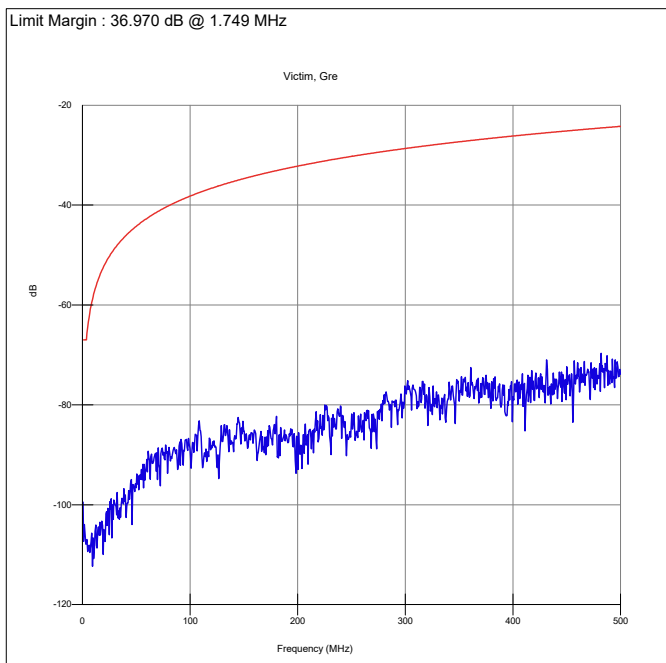
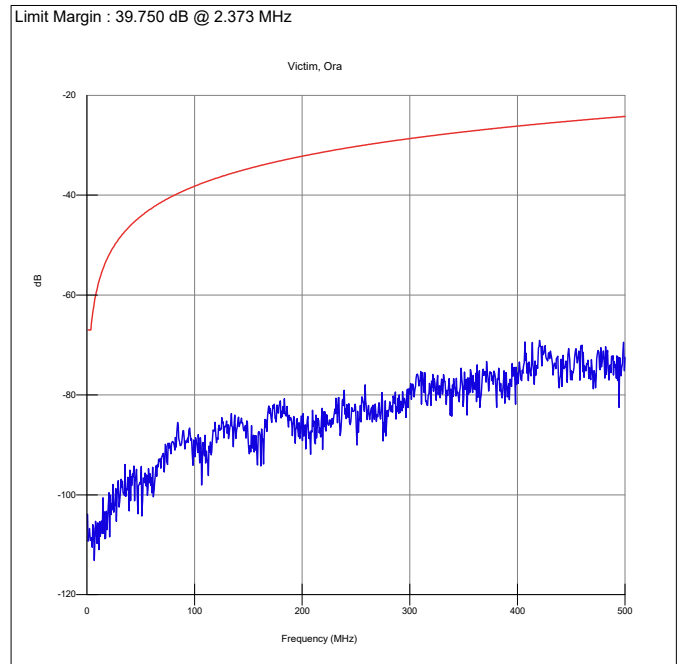
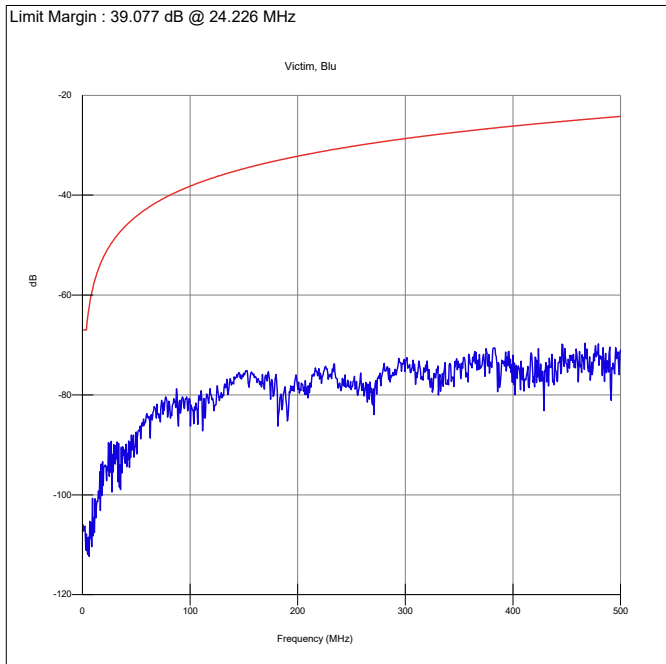
PSAACRF (PSAELFEXT) - Near End

Client	Ningbo Feynman	Report No	103777015CRT-004c
Specification	EN 50173-1 Cat 6A Cable	Length (m)	100.
Part No	Cat 6A UFTP	Temperature	21.5 °C
Test Started	12/20/2018 10:11:43 AM	Test Status	Complies
Description	4 pair 23 AWG UFTP Solid		
Operator Name	David Ayers		



PSAACRF (PSAELFEXT) - Far End

Client	Ningbo Feynman	Report No	103777015CRT-004c
Specification	EN 50173-1 Cat 6A Cable	Length (m)	100.
Part No	Cat 6A UFTP	Temperature	21.5 °C
Test Started	12/20/2018 10:11:43 AM	Test Status	Complies
Description	4 pair 23 AWG UFTP Solid		
Operator Name	David Ayers		





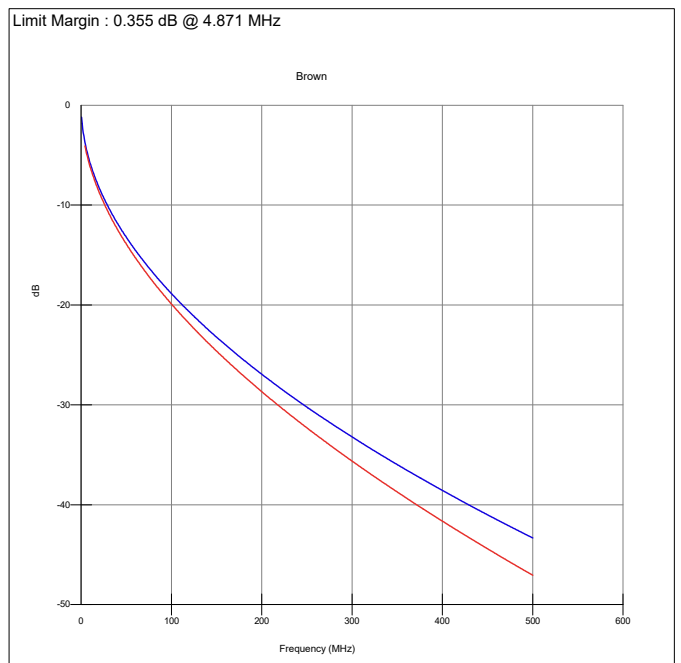
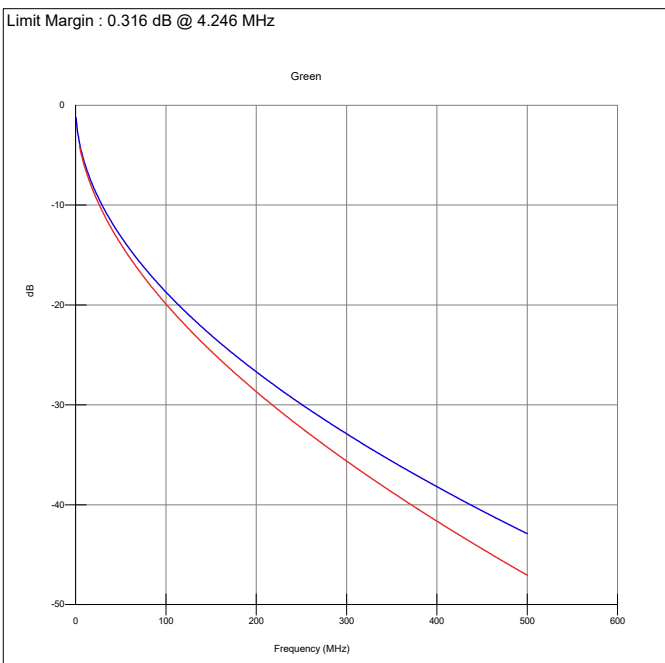
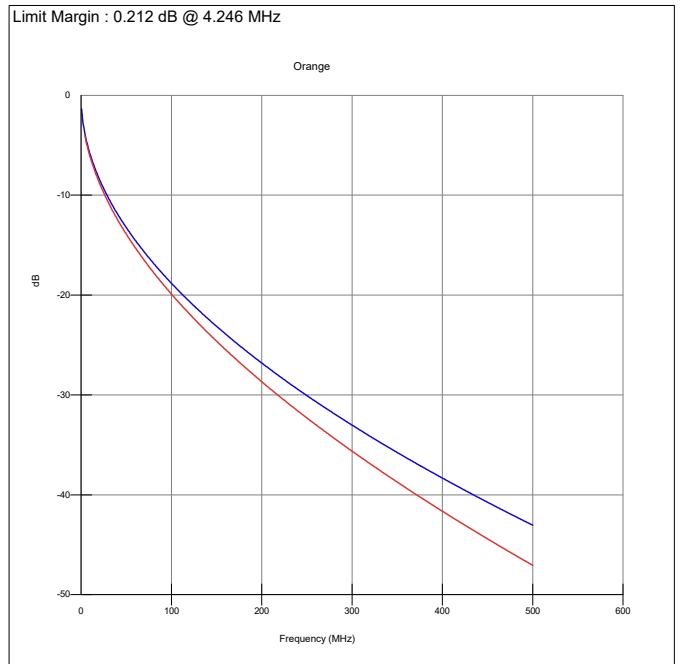
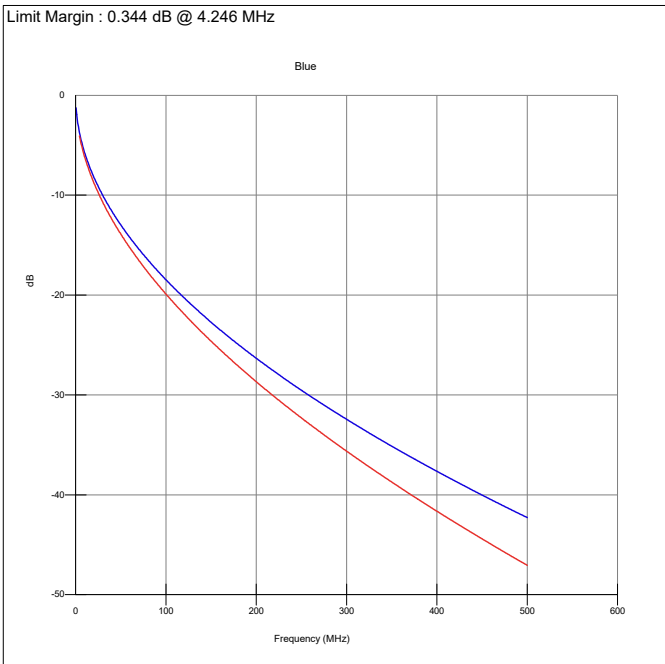
Insertion Loss

Client	Ningbo Feynman	Report No	103777015CRT-004c@40C
Specification	EN 50173-1 Cat 6A Cable		
Part No	FA0423APC6AV	Length (m)	100.
Test Started	12/20/2018 11:45:56 AM	Temperature	40 °C
Description	4 pair 23 AWG UFTP Solid		
Operator Name	Craig Williams	Test Status	Complies

Insertion Loss (dB)					
Freq (MHz)	Limit	Blue	Orange	Green	Brown
1.		-1.77	-1.87	-1.77	-1.70
4.		-3.61	-3.74	-3.64	-3.59
8.	-5.52	-5.13	-5.28	-5.18	-5.16
10.	-6.16	-5.74	-5.90	-5.80	-5.79
16.	-7.79	-7.28	-7.47	-7.36	-7.37
20.	-8.71	-8.15	-8.35	-8.24	-8.26
25.	-9.75	-9.13	-9.34	-9.23	-9.27
31.25	-10.92	-10.22	-10.45	-10.34	-10.39
62.5	-15.59	-14.54	-14.82	-14.72	-14.82
100.	-19.90	-18.47	-18.82	-18.71	-18.86
155.	-25.05	-23.11	-23.53	-23.42	-23.62
200.	-28.68	-26.33	-26.81	-26.69	-26.94
250.	-32.31	-29.54	-30.07	-29.95	-30.23
300.	-35.64	-32.45	-33.03	-32.91	-33.22
350.	-38.74	-35.14	-35.77	-35.64	-35.99
400.	-41.65	-37.66	-38.33	-38.20	-38.58
450.	-44.42	-40.03	-40.75	-40.62	-41.02
500.	-47.07	-42.29	-43.05	-42.91	-43.34

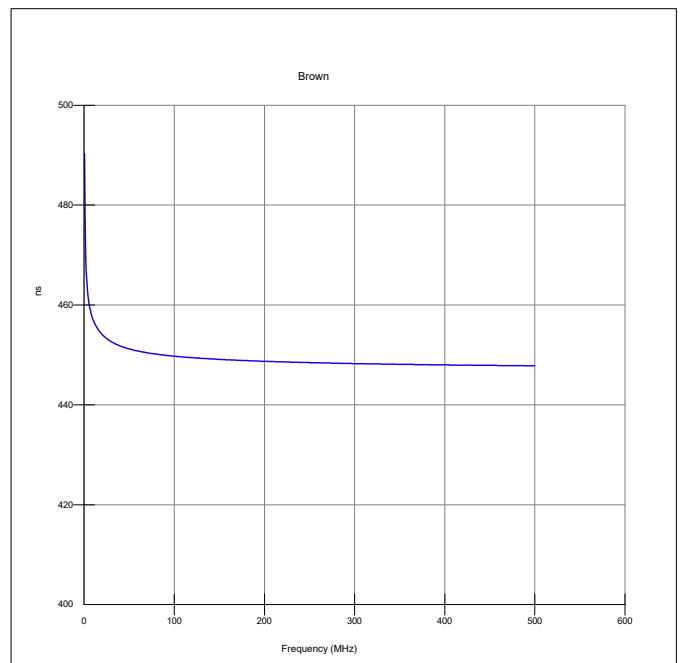
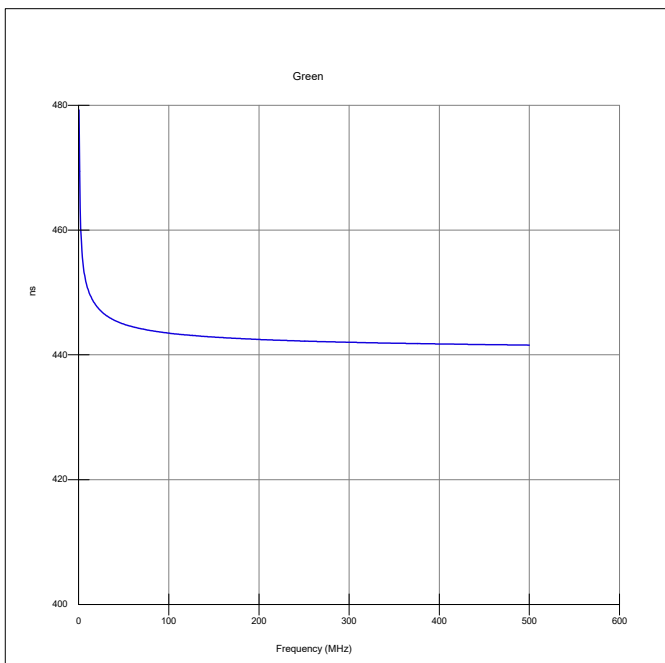
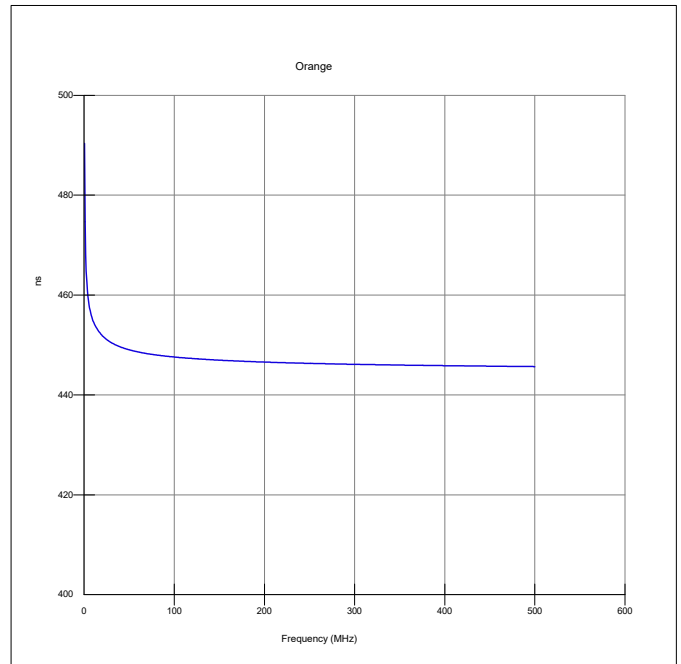
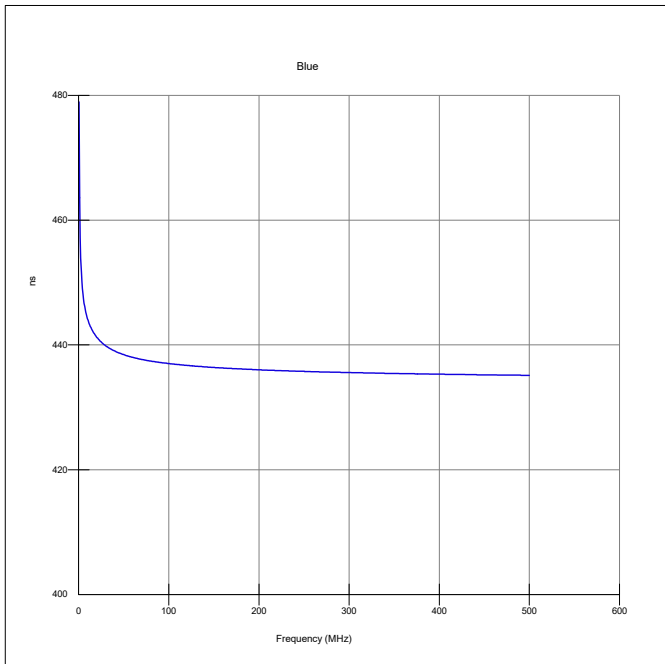
Insertion Loss

Client	Ningbo Feynman	Report No	103777015CRT-004c@40C
Specification	EN 50173-1 Cat 6A Cable	Length (m)	100.
Part No	FA0423APC6AV	Temperature	40 °C
Test Started	12/20/2018 11:45:56 AM	Test Status	Complies
Description	4 pair 23 AWG UFTP Solid		
Operator Name	Craig Williams		



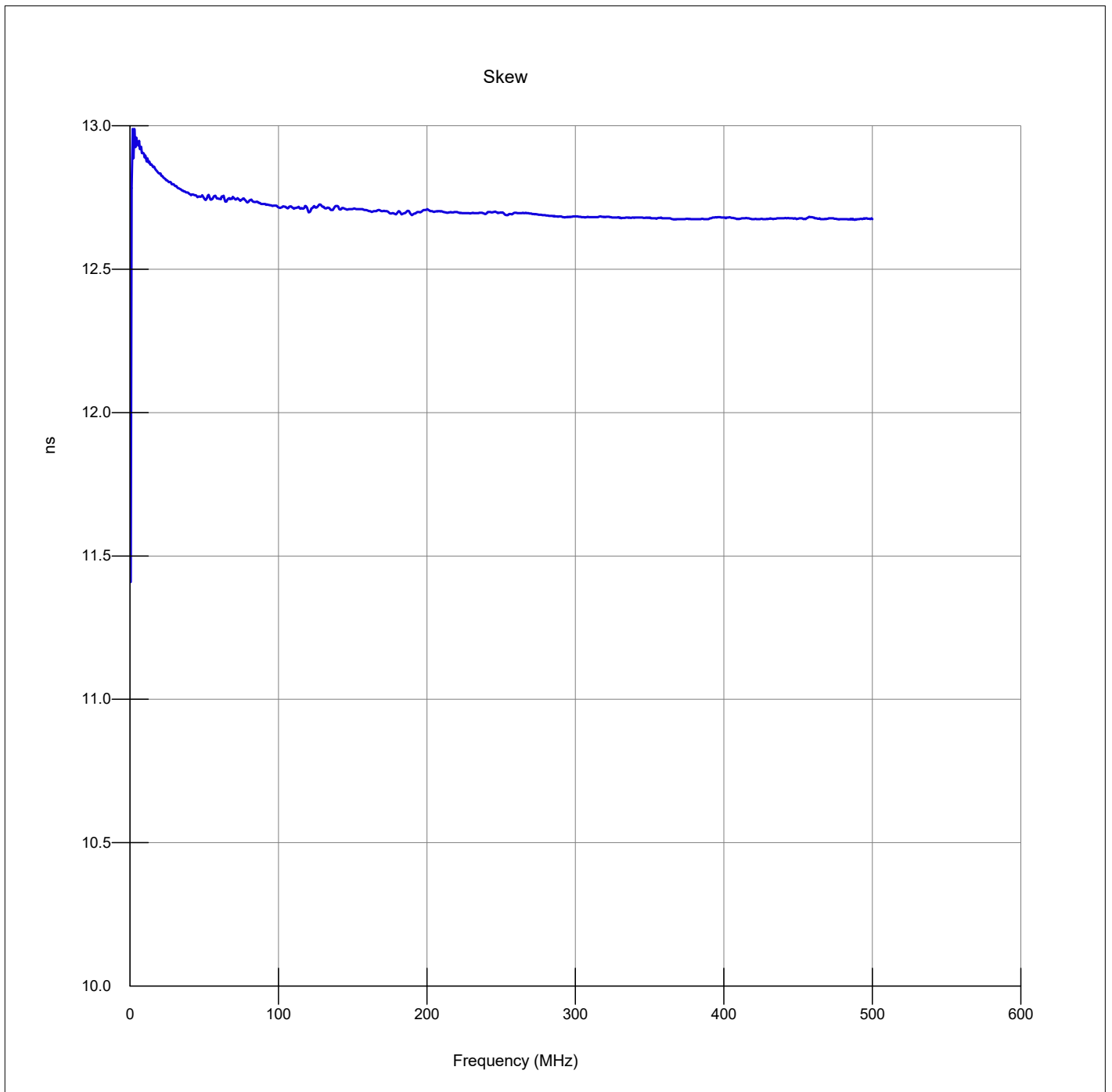
Propagation Delay - Near End

Client	Ningbo Feynman	Report No	103777015CRT-004c@40C
Specification	EN 50173-1 Cat 6A Cable	Length (m)	100.
Part No	FA0423APC6AV	Temperature	40 °C
Test Started	12/20/2018 11:45:56 AM	Test Status	Complies
Description	4 pair 23 AWG UFTP Solid		
Operator Name	Craig Williams		



Propagation Delay Skew - Near End

Client	Ningbo Feynman	Report No	103777015CRT-004c@40C
Specification	EN 50173-1 Cat 6A Cable		
Part No	FA0423APC6AV	Length (m)	100.
Test Started	12/20/2018 11:45:56 AM	Temperature	40 °C
Description	4 pair 23 AWG UFTP Solid		
Operator Name	Craig Williams	Test Status	Complies





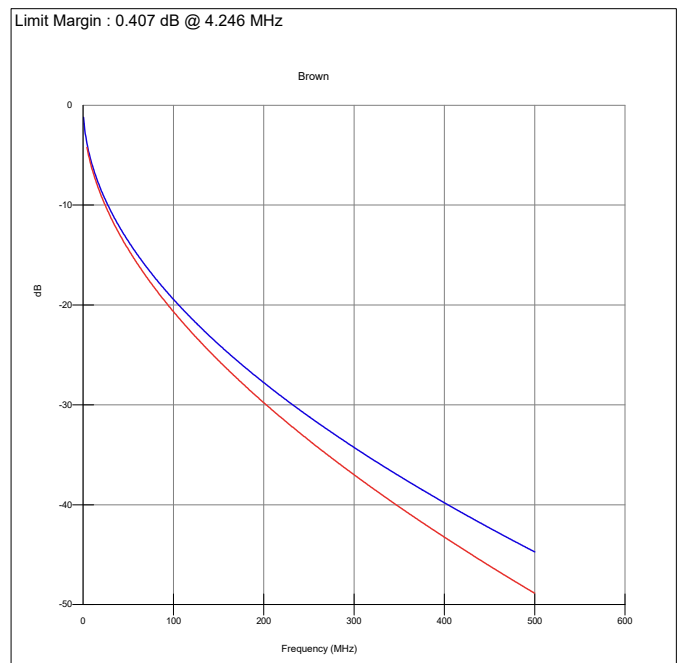
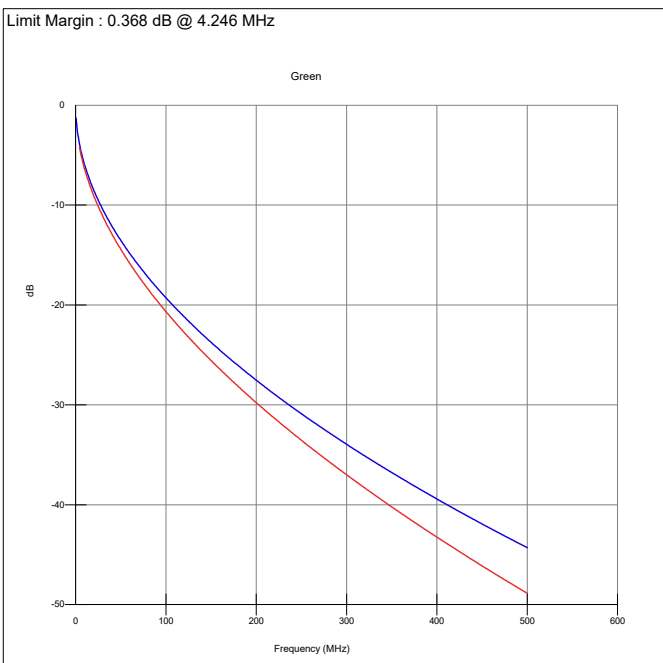
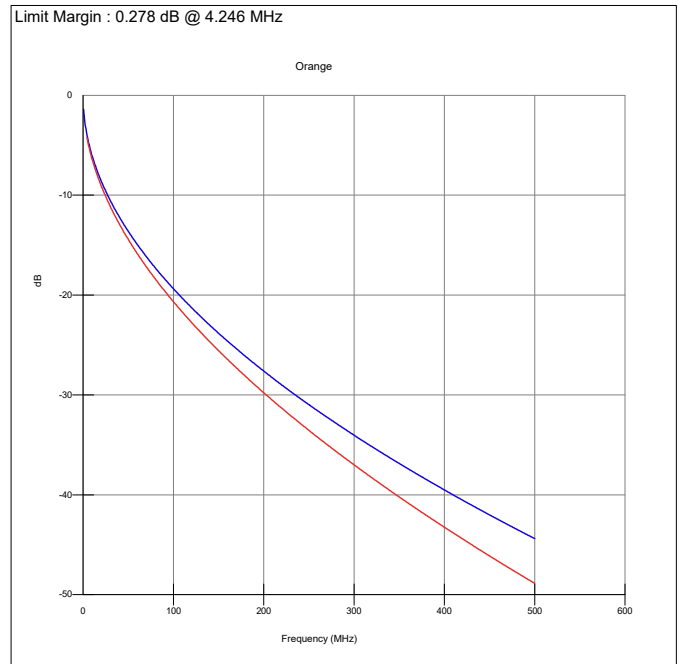
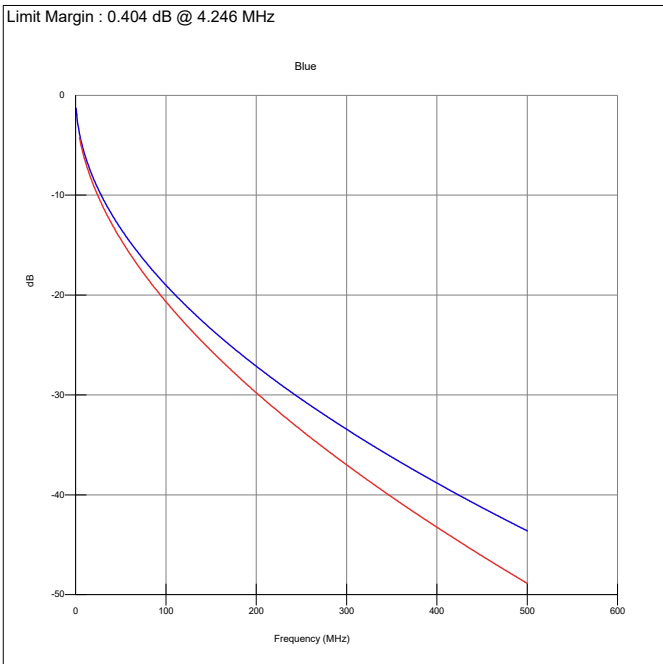
Insertion Loss

Client	Ningbo Feynman	Report No	103777015CRT-004c@60C
Specification	EN 50173-1 Cat 6A Cable		
Part No	FA0423APC6AV	Length (m)	100.
Test Started	12/20/2018 1:28:39 PM	Temperature	60 °C
Description	4 pair 23 AWG UFTP Solid		
Operator Name	Craig Williams	Test Status	Complies

Insertion Loss (dB)					
Freq (MHz)	Limit	Blue	Orange	Green	Brown
1.		-1.81	-1.90	-1.81	-1.75
4.		-3.70	-3.83	-3.74	-3.70
8.	-5.73	-5.27	-5.41	-5.32	-5.30
10.	-6.40	-5.90	-6.05	-5.97	-5.95
16.	-8.09	-7.49	-7.66	-7.58	-7.58
20.	-9.05	-8.38	-8.57	-8.49	-8.51
25.	-10.13	-9.39	-9.59	-9.51	-9.54
31.25	-11.34	-10.52	-10.74	-10.65	-10.70
62.5	-16.19	-14.96	-15.25	-15.17	-15.26
100.	-20.67	-19.01	-19.37	-19.28	-19.43
155.	-26.02	-23.80	-24.23	-24.15	-24.35
200.	-29.78	-27.13	-27.62	-27.53	-27.78
250.	-33.55	-30.44	-30.98	-30.90	-31.18
300.	-37.01	-33.45	-34.04	-33.96	-34.27
350.	-40.23	-36.23	-36.87	-36.79	-37.13
400.	-43.26	-38.83	-39.52	-39.43	-39.81
450.	-46.13	-41.29	-42.02	-41.93	-42.34
500.	-48.88	-43.62	-44.40	-44.31	-44.74

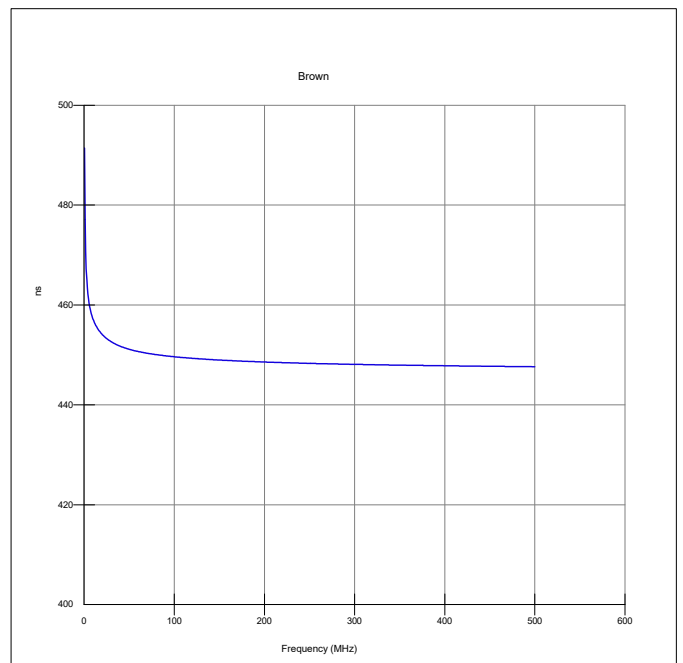
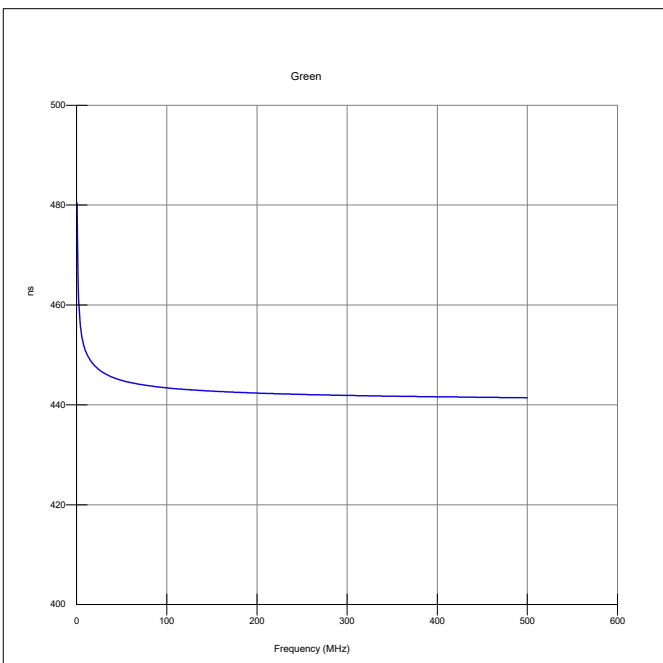
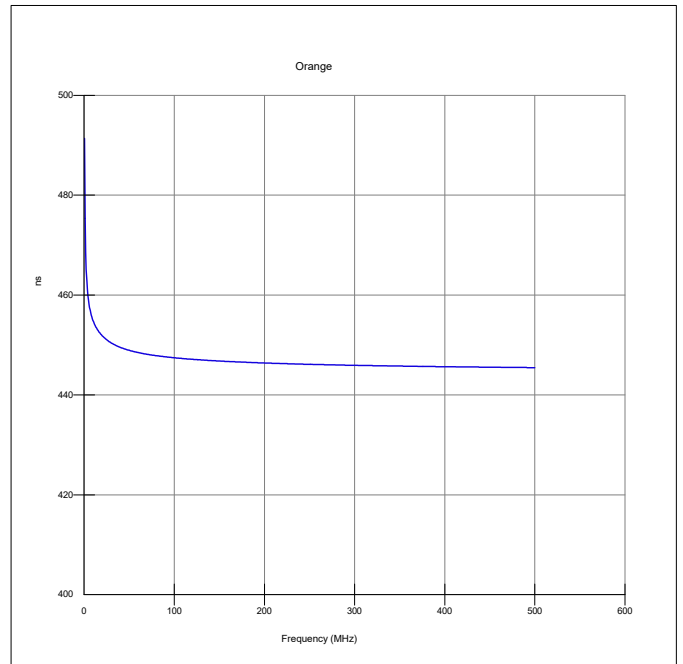
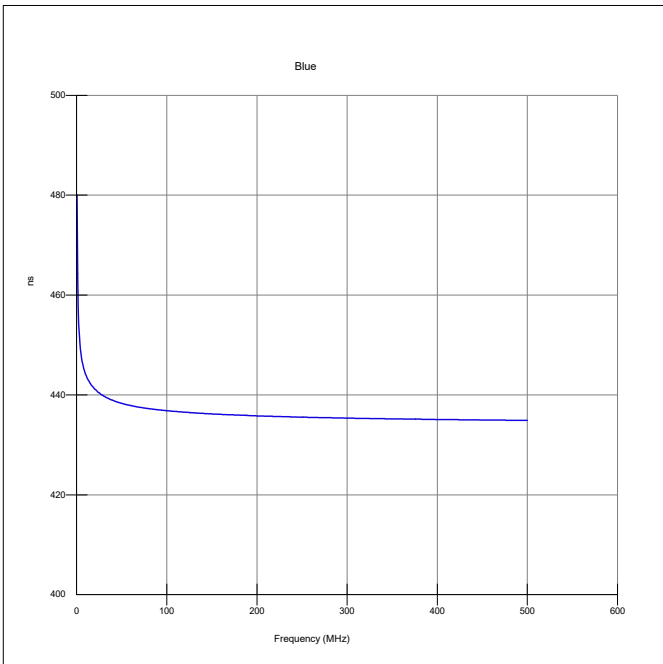
Insertion Loss

Client	Ningbo Feynman	Report No	103777015CRT-004c@60C
Specification	EN 50173-1 Cat 6A Cable	Length (m)	100.
Part No	FA0423APC6AV	Temperature	60 °C
Test Started	12/20/2018 1:28:39 PM	Test Status	Complies
Description	4 pair 23 AWG UFTP Solid		
Operator Name	Craig Williams		



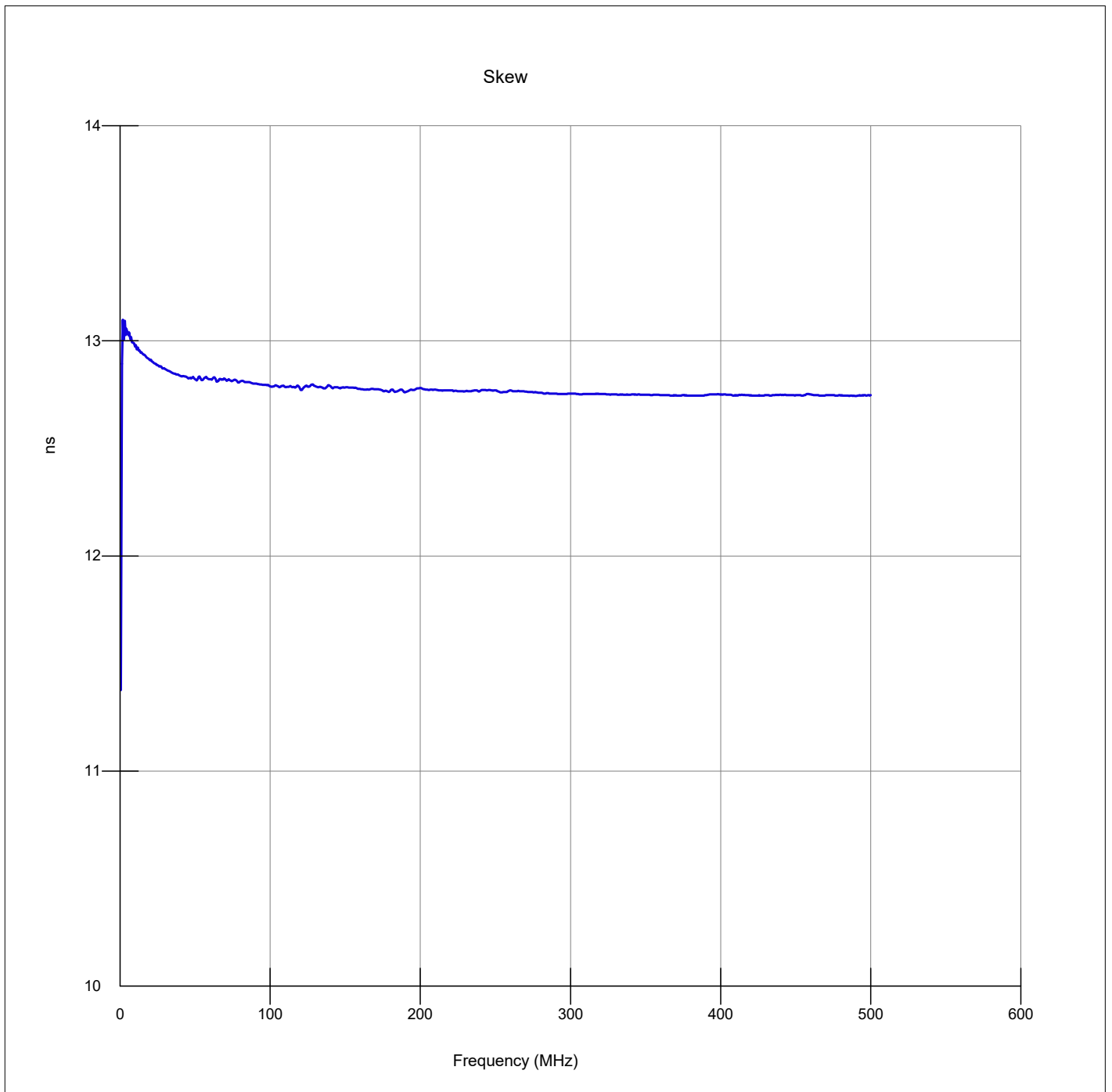
Propagation Delay - Near End

Client	Ningbo Feynman	Report No	103777015CRT-004c@60C
Specification	EN 50173-1 Cat 6A Cable	Length (m)	100.
Part No	FA0423APC6AV	Temperature	60 °C
Test Started	12/20/2018 1:28:39 PM	Test Status	Complies
Description	4 pair 23 AWG UFTP Solid		
Operator Name	Craig Williams		



Propagation Delay Skew - Near End

Client	Ningbo Feynman	Report No	103777015CRT-004c@60C
Specification	EN 50173-1 Cat 6A Cable		
Part No	FA0423APC6AV	Length (m)	100.
Test Started	12/20/2018 1:28:39 PM	Temperature	60 °C
Description	4 pair 23 AWG UFTP Solid		
Operator Name	Craig Williams	Test Status	Complies



CATS-3000 Coupling Attenuation Test Report

Cable Type : Cat 6A U/FTP	Factory Number :	Data File Name : DA000254.CAS
Cable ID : FA0423APC6AV	Order Number : 103777015CRT-004c-CA	Spec File : EN 50288 Type Ib.CAT
Temperature : 22.50 degreeC	Operator : David	Test Date : 12/20/2018
Coupling Length : 5.50 m	Number of Pairs to Test : 4	Test Time : 11:10:52 AM
Relative Humidity : 39 %	Screen Type : foil	Customer Name : Ningbo Feynman

Pass - Fail Test Certificate - 4 Pairs

Coupling Attenuation

Test Type	Test Result
Coupling Attenuation	OK

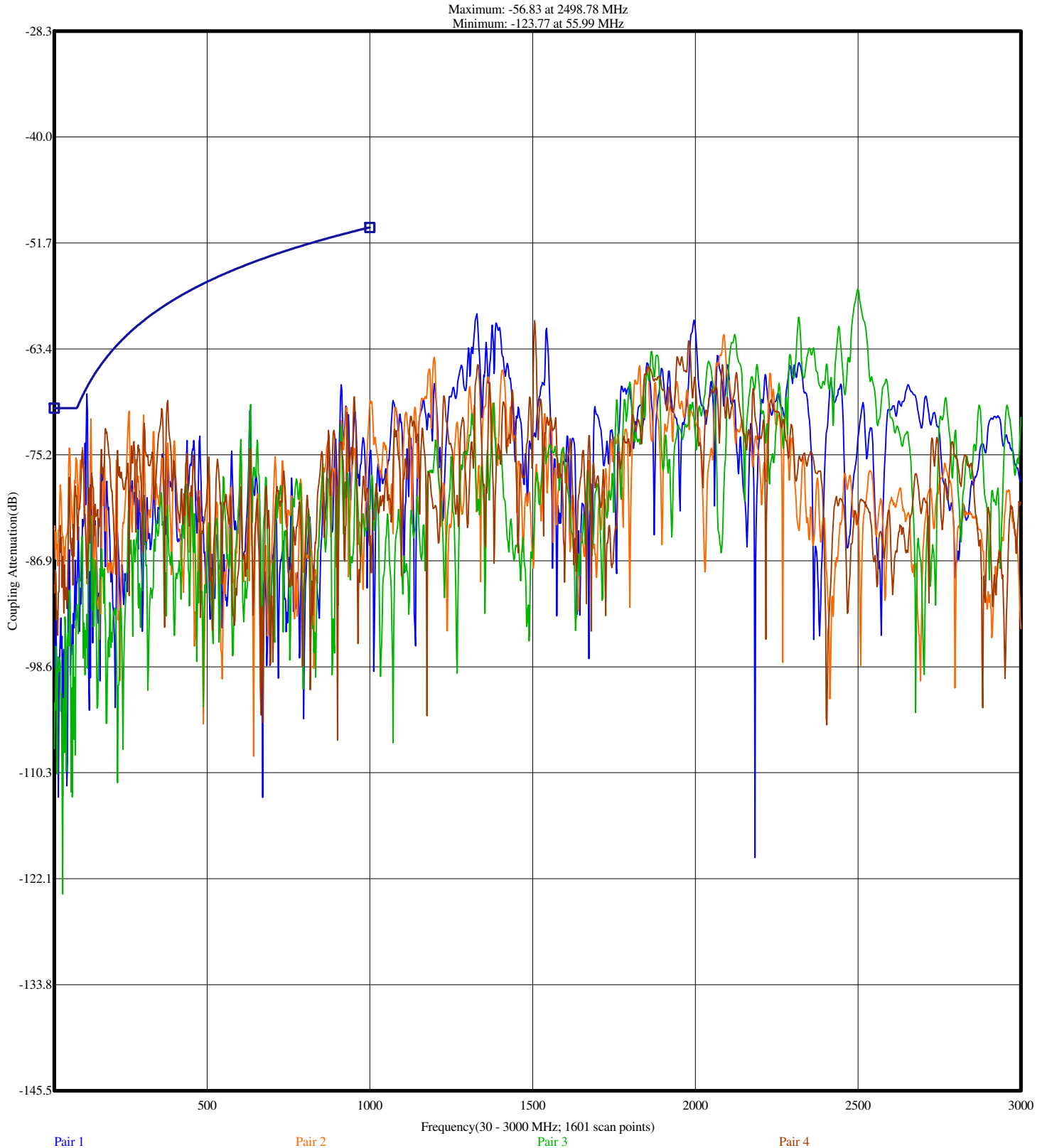
Signature:	Approved:	Date:
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CATS-3000 Coupling Attenuation Test Report

Cable Type : Cat 6A U/FTP	Factory Number :	Data File Name : DA000254.CAS
Cable ID : FA0423APC6AV	Order Number : 103777015CRT-004c-CA	Spec File : EN 50288 Type Ib.CAT
Temperature : 22.50 degreeC	Operator : David	Test Date : 12/20/2018
Coupling Length : 5.50 m	Number of Pairs to Test : 4	Test Time : 11:10:52 AM
Relative Humidity : 39 %	Screen Type : foil	Customer Name : Ningbo Feynman

Worst Case Summary

Test Type	Specification	Measured (Pair)	Margin	@ Frequency (MHz)	Test Result
Coupling Attenuation	67.71 (Min)	68.42 (Pair 1)	0.71	130.24	Passed

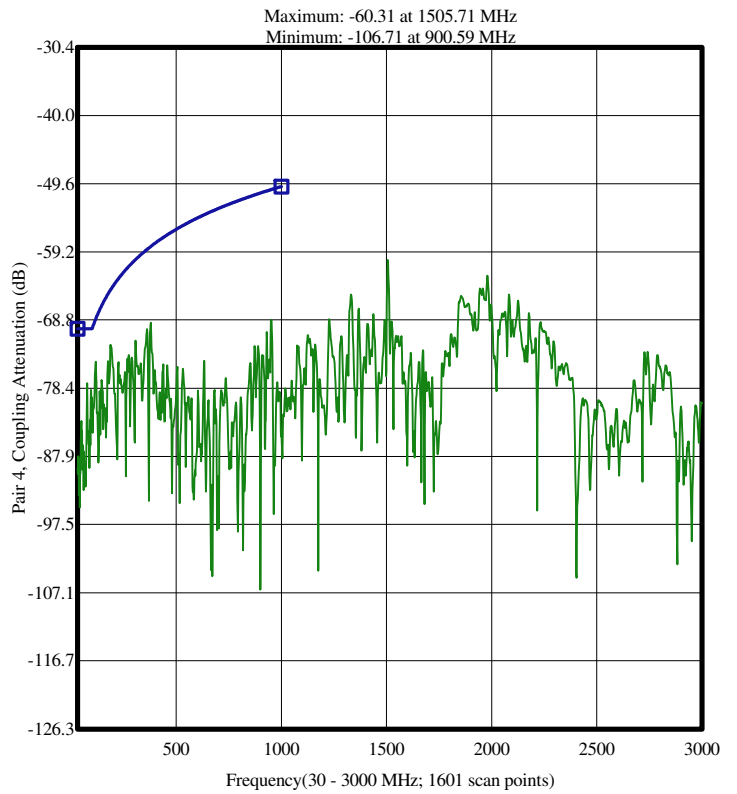
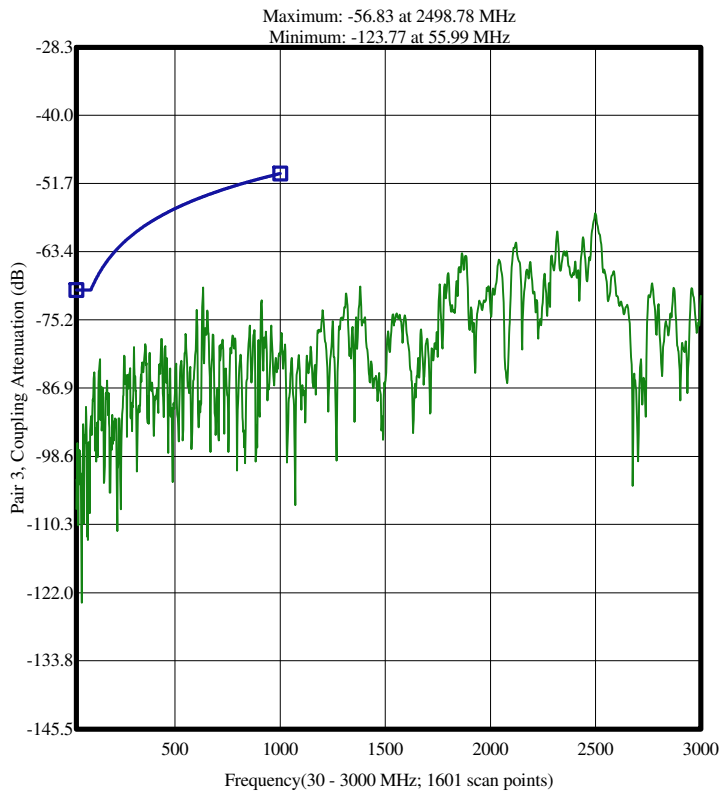
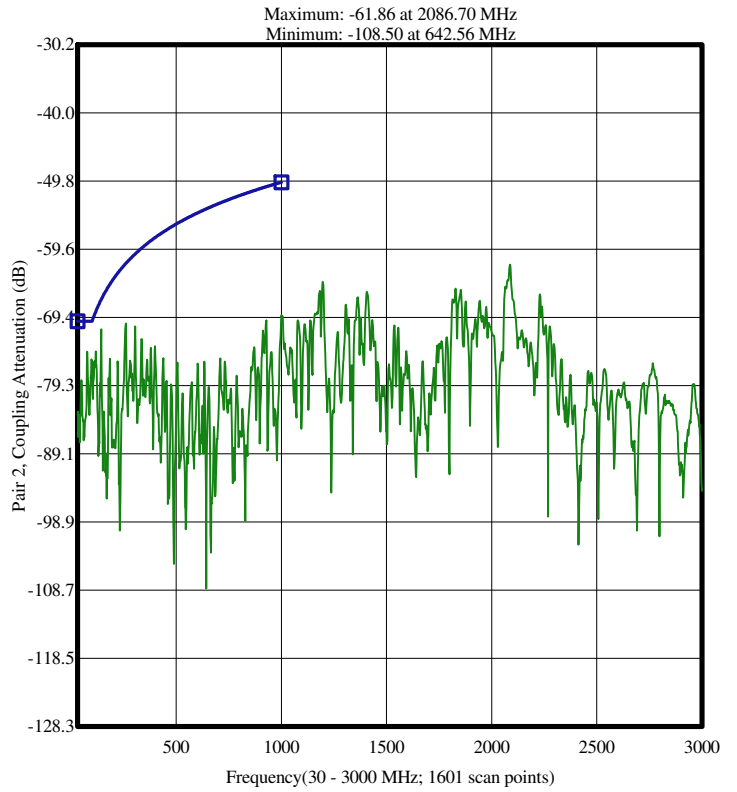
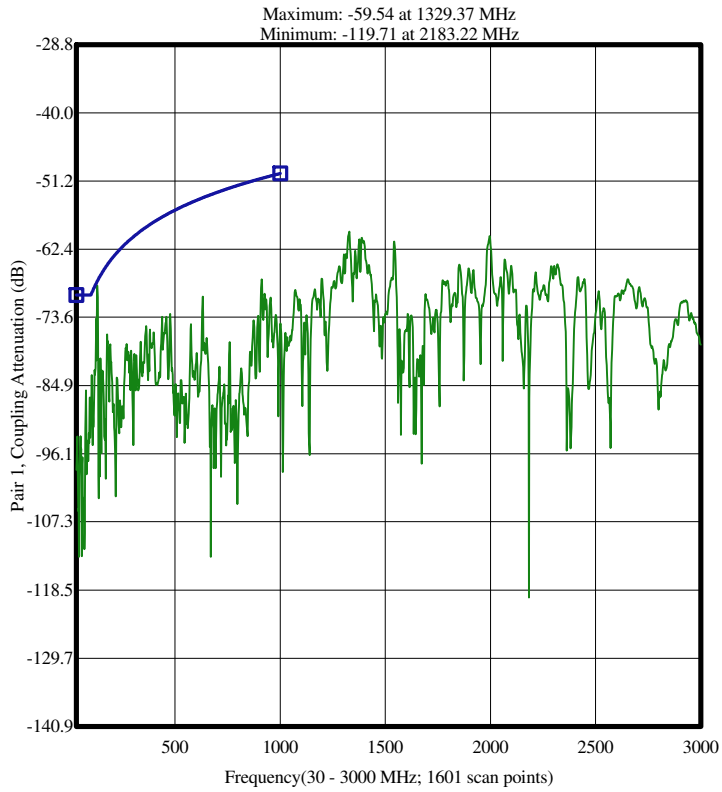


N/A = Not Applicable.

* = Measured value out of spec.
xxx = No entry.

Summary and Graphic: Coupling Attenuation

Pair	Spec (Min) (dB)	Measured (dB)	Margin (dB)	@ Frequency (MHz)	Test Result
1	67.71	68.42	0.71	130.24	Pass
2	66.88	71.17	4.29	143.23	Pass
3	66.88	81.90	15.02	143.23	Pass
4	68.62	74.66	6.04	117.24	Pass



N/A = Not Applicable.

* = Measured value out of spec.
xxx = No entry.

Detail Discrete Frequencies ---Coupling Attenuation (dB)

Frequency	30.00	100.00	250.00	500.00	750.00	1000.00				
Spec Min	70.00	70.00	62.04	56.02	52.50	50.00				
Pair 1	98.72	89.30	88.70	86.66	89.96	75.16				
Pair 2	83.40	76.13	79.14	82.61	81.32	69.39				
Pair 3	107.68	91.92	90.77	87.23	88.30	81.22				
Pair 4	89.59	81.54	77.87	79.07	88.35	84.57				

N/A = Not Applicable.

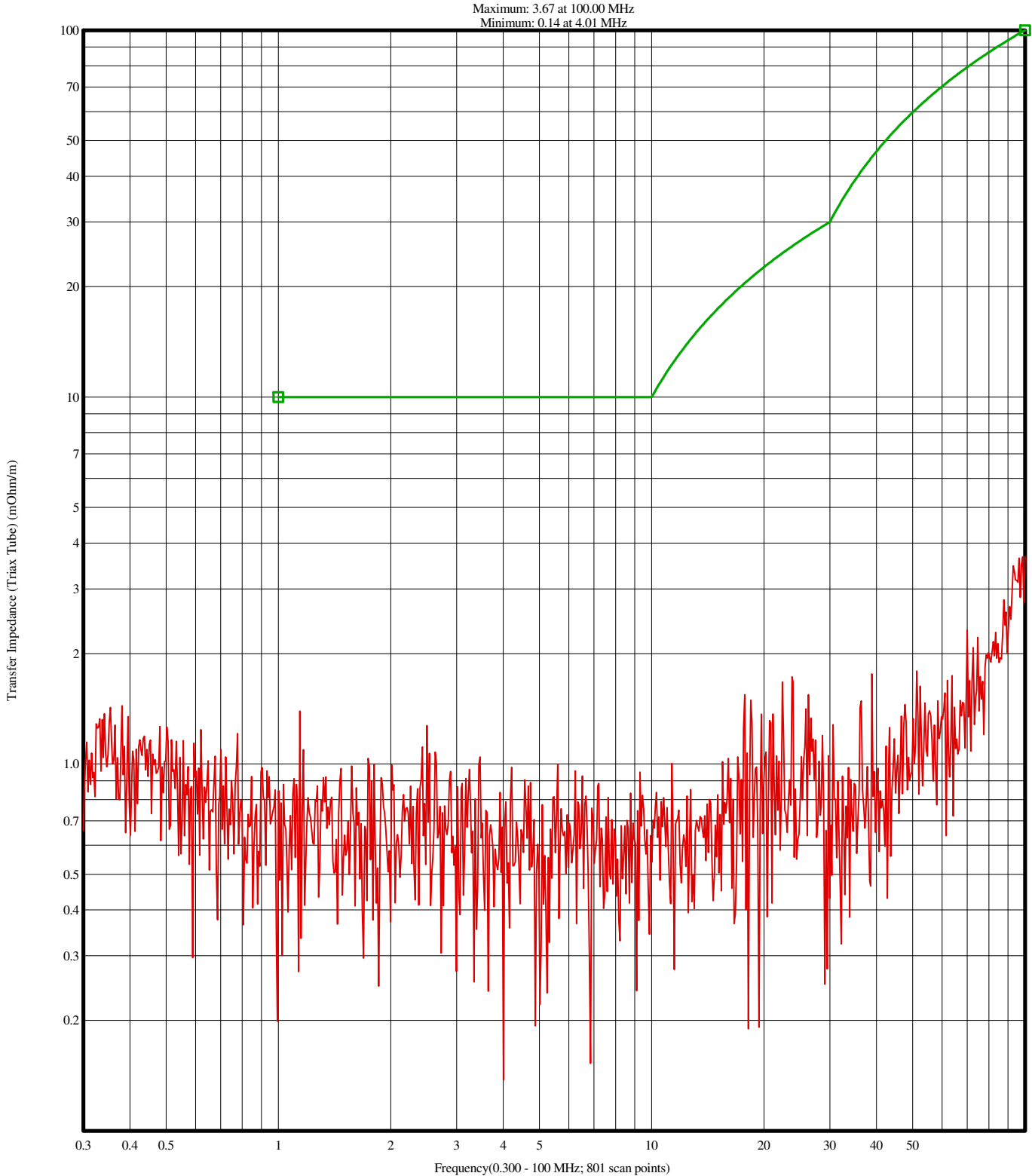
* = Measured value out of spec.
xxx = No entry.

TI-3000 Test Report

Cable Type : Cat 6A U/FTP	Coupling Length TI (cm) : 47.10 cm	Data File Name : DA000566.ZTD
Factory Number : FA0423APC6AV	Coupling Length -ScAT(m) : N/A	Test Date/Time : 12/20/2018 01:24:16 PM
Reel/Drum Number : 103777015CRT-004c-TI	Terminating R1 : 18.2 Ohms	Selected Adapter Numb : None
Mesh Type : Foil	Damping Resistor R2 : 0.0 Ohms	Operator : David
Customer Name : Ningbo Feynman	Fixture Size : N/A	Specification File : EN 50288-5-1 Grade 1.ZTS
Temperature : 22.5 °C	Screen Diameter : N/A	Analyzer Type : HP8753
Relative Humidity : 24.00 %	Coaxial Impedance : 18.20 Ohms	

Summary and Graphic: Transfer Impedance (TI)

TI	Spec (Max) (mOhm/m)	Measured (mOhm/m)	Margin (mOhm/m)	@ Frequency (MHz)	Test Result
	10.00	1.39	8.61	1.14	Passed



N/A = Not Applicable.

* = Measured value out of spec.
 xxx = No entry.

Detail Discrete Frequencies ---Transfer Impedance (TI) (mOhm/m)

Frequency(Mhz)	1.00	10.00	30.00	100.00						
Max Spec	10.00	10.00	30.00	100.00						
Measured	0.72	0.55	0.48	3.67						

N/A = Not Applicable.

* = Measured value out of spec.
 xxx = No entry.