

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 ISO/IEC 11801-1 for Category 6 horizontal cable.

REPORT NUMBER

103777015CRT-003b

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-003b

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 6 cable per IEC 61156-5 as referenced in ISO/IEC 11801-1

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):

ISO/IEC 11801-1 Edition 1.0, Information technology – Generic cabling for customer premises - Part 1: General requirements, dated November 2017

IEC 61156-5 Edition 2.1, Multicore and symmetrical pair/quad cables for digital communications - Part 5: Symmetrical pair/quad cables with transmission characteristics up to 1000MHz - Horizontal floor wiring - Sectional specification, 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 IEC 61156-5 sections 6.2 and 6.3 for horizontal cable transmission performance.

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SECTION 2
NON-CONFORMANCES

None

SECTION 3
TESTING

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

Test description	IEC 61156-5 section	Result
Conductor resistance	6.2.1	Compliant
DC resistance unbalance	6.2.2	Compliant
Dielectric strength	6.2.3	Not tested
Insulation resistance	6.2.4	Not tested
Mutual Capacitance	6.2.5	Compliant
Capacitance Unbalance	6.2.6	Compliant
Transfer Impedance	6.2.7	Not applicable
Coupling attenuation	6.2.8	Not applicable
Current-carrying capacity	6.2.9	Not specified
Velocity of propagation (phase velocity)	6.3.1	Compliant
Phase delay and differential delay (delay skew)	6.3.2	Compliant
Attenuation	6.3.3	Compliant
Unbalance attenuation (TCL)	6.3.4	Compliant
Near-end crosstalk (NEXT)	6.3.5	Compliant
Far-end crosstalk (ACR-F)	6.3.6	Compliant
Alien (exogenous) near-end crosstalk (ANEXT)	6.3.7	Not applicable
Alien (exogenous) far-end crosstalk (AACR-F)	6.3.8	Not applicable
Alien (exogenous) crosstalk of bundled cables	6.3.9	Not applicable
Impedance	6.3.10	Compliant
Return loss (RL)	6.3.11	Compliant

Test equipment used	Model number	Control number	Calibration due date
Keysight Network Analyzer	E5080A	J387	27-November-2018
Keysight LCR Meter	4263B	R171	29-January-2019
Temperature/humidity meter	OM-EL-USB-2-LCD	H243	19-March-2019
Environmental chamber	Bally	3069	02-May-2019

SECTION 4

SAMPLE DESCRIPTION

The client submitted a Category 6, 4-Pair, 23 AWG, U/UTP, CM, horizontal (solid) cable identified as part number FA0423AUC6V.

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 ISO/IEC 11801-1 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-003b
Specification	ISO-IEC 11801-1 Cat 6 Cable		
Part No	FA0423AUC6V	Length (m)	100.
Test Started	12/19/2018 4:11:03 PM	Temperature	23 °C
Description	4 pair 23 AWG UTP Solid		
Operator Name	David Ayers	Test Status	Complies

DC Resistance (Ohms)

Blue	Orange	Green	Brown	Limit (Ohms)
7.1746	6.8540	7.0497	6.8617	9.5000
7.2028	6.8226	7.0360	6.8475	9.5000

Resistance Unbalanced (%)

Blue	Orange	Green	Brown	Limit (%)
0.20	0.23	0.10	0.10	2.00

Resistance Unbalanced Pair-Pair (%)

Blue - Orange	Blue - Green	Blue - Brown	Orange - Green	Orange - Brown	Green - Brown	Limit (%)
2.50	1.02	2.38	1.47	0.12	1.35	

Capacitance Unbalance Pair-Ground (pF/100m)

Blue	Orange	Green	Brown	Limit (PF/100m)
12.99	7.06	1.04	10.24	160.00

Mutual Capacitance (nF/100m)

Blue	Orange	Green	Brown	Limit (nF/100m)
5.13	4.67	4.93	4.71	



Insertion Loss

Client	Ningbo Feynman	Report No	103777015CRT-003b
Specification	ISO-IEC 11801-1 Cat 6 Cable		
Part No	FA0423AUC6V	Length (m)	100.
Test Started	12/19/2018 4:11:03 PM	Temperature	23 °C
Description	4 pair 23 AWG UTP Solid		
Operator Name	David Ayers	Test Status	Complies

Insertion Loss (dB)					
Freq (MHz)	Limit	Blue	Orange	Green	Brown
1.		-1.75	-1.63	-1.68	-1.64
4.		-3.56	-3.30	-3.42	-3.31
8.	-5.37	-5.07	-4.72	-4.87	-4.73
10.	-6.00	-5.69	-5.29	-5.46	-5.30
16.	-7.61	-7.24	-6.74	-6.95	-6.76
20.	-8.53	-8.12	-7.57	-7.80	-7.58
25.	-9.57	-9.10	-8.50	-8.76	-8.51
31.25	-10.75	-10.21	-9.54	-9.83	-9.55
62.5	-15.48	-14.57	-13.64	-14.04	-13.65
100.	-19.92	-18.62	-17.43	-17.94	-17.43
155.	-25.30	-23.42	-21.93	-22.55	-21.93
200.	-29.14	-26.76	-25.09	-25.80	-25.09
250.	-33.02	-30.08	-28.22	-29.01	-28.22



NEXT - Near End

Client	Ningbo Feynman	Report No	103777015CRT-003b
Specification	ISO-IEC 11801-1 Cat 6 Cable		
Part No	FA0423AUC6V	Length (m)	100.
Test Started	12/19/2018 4:11:03 PM	Temperature	23 °C
Description	4 pair 23 AWG UTP 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.		-102.95	-106.32	-109.11	-104.04	-103.41	-92.64
4.		-107.75	-99.73	-103.01	-93.87	-94.77	-90.44
8.	-61.75	-96.53	-105.48	-93.01	-93.63	-97.88	-88.88
10.	-60.30	-82.85	-96.53	-95.58	-89.71	-84.42	-79.42
16.	-57.24	-81.91	-88.92	-89.51	-91.25	-89.20	-78.00
20.	-55.78	-88.86	-93.12	-84.03	-87.67	-86.26	-82.74
25.	-54.33	-86.41	-87.87	-83.07	-73.47	-82.39	-81.95
31.25	-52.88	-84.56	-83.91	-79.03	-78.37	-80.21	-76.56
62.5	-48.36	-75.51	-80.07	-82.00	-82.50	-78.58	-67.12
100.	-45.30	-72.56	-79.38	-75.97	-64.48	-73.49	-60.71
155.	-42.44	-69.87	-75.53	-59.73	-73.97	-76.86	-71.55
200.	-40.78	-72.09	-92.65	-62.31	-60.62	-76.59	-57.98
250.	-39.33	-64.33	-75.05	-55.01	-65.65	-63.99	-63.41



NEXT - Far End

Client	Ningbo Feynman	Report No	103777015CRT-003b
Specification	ISO-IEC 11801-1 Cat 6 Cable		
Part No	FA0423AUC6V	Length (m)	100.
Test Started	12/19/2018 4:11:03 PM	Temperature	23 °C
Description	4 pair 23 AWG UTP 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.		-111.95	-106.66	-102.63	-108.52	-104.02	-99.33
4.		-107.14	-94.75	-103.74	-94.92	-95.09	-94.46
8.	-61.75	-101.94	-92.38	-90.92	-100.00	-91.63	-91.47
10.	-60.30	-85.12	-92.10	-84.75	-90.40	-89.71	-79.67
16.	-57.24	-81.96	-98.46	-80.84	-95.57	-87.42	-78.46
20.	-55.78	-93.51	-93.70	-79.37	-83.34	-88.48	-80.41
25.	-54.33	-97.17	-87.50	-78.74	-82.93	-79.09	-80.14
31.25	-52.88	-81.27	-79.48	-84.85	-76.98	-77.39	-85.35
62.5	-48.36	-78.67	-82.64	-77.57	-76.45	-86.38	-76.47
100.	-45.30	-66.68	-74.05	-71.22	-77.11	-75.65	-62.06
155.	-42.44	-68.46	-73.67	-70.51	-61.92	-69.10	-67.77
200.	-40.78	-72.78	-85.35	-64.92	-75.78	-71.16	-60.78
250.	-39.33	-74.80	-66.52	-76.11	-70.86	-68.91	-63.41



PSNEXT - Near End

Client	Ningbo Feynman	Report No	103777015CRT-003b
Specification	ISO-IEC 11801-1 Cat 6 Cable		
Part No	FA0423AUC6V	Length (m)	100.
Test Started	12/19/2018 4:11:03 PM	Temperature	23 °C
Description	4 pair 23 AWG UTP Solid		
Operator Name	David Ayers	Test Status	Complies

PSNEXT - Near End (dB)					
Freq (MHz)	Limit	Blue	Orange	Green	Brown
1.		-100.38	-97.31	-91.96	-92.05
4.		-97.39	-90.95	-88.39	-88.51
8.	-58.75	-91.14	-90.80	-87.51	-87.09
10.	-57.30	-82.35	-80.05	-78.95	-78.10
16.	-54.24	-80.48	-80.61	-77.45	-77.29
20.	-52.78	-82.39	-82.64	-80.35	-78.05
25.	-51.33	-80.18	-72.68	-72.72	-77.44
31.25	-49.88	-76.96	-75.52	-73.89	-73.53
62.5	-45.36	-73.52	-73.09	-66.78	-66.68
100.	-42.30	-70.34	-63.40	-59.15	-60.37
155.	-39.44	-59.22	-67.85	-68.46	-59.36
200.	-37.78	-61.85	-60.19	-56.09	-56.57
250.	-36.33	-54.49	-59.83	-61.19	-53.97



PSNEXT - Far End

Client	Ningbo Feynman	Report No	103777015CRT-003b
Specification	ISO-IEC 11801-1 Cat 6 Cable		
Part No	FA0423AUC6V	Length (m)	100.
Test Started	12/19/2018 4:11:03 PM	Temperature	23 °C
Description	4 pair 23 AWG UTP Solid		
Operator Name	David Ayers	Test Status	Complies

PSNEXT - Far End (dB)					
Freq (MHz)	Limit	Blue	Orange	Green	Brown
1.		-100.17	-99.34	-96.75	-95.95
4.		-93.51	-91.56	-89.90	-91.09
8.	-58.75	-88.20	-90.53	-88.37	-86.50
10.	-57.30	-81.50	-82.77	-78.92	-78.17
16.	-54.24	-78.26	-80.64	-78.28	-75.97
20.	-52.78	-79.02	-81.83	-78.16	-76.30
25.	-51.33	-77.96	-77.18	-77.31	-74.43
31.25	-49.88	-76.48	-73.39	-74.64	-76.01
62.5	-45.36	-74.36	-74.12	-72.92	-73.68
100.	-42.30	-64.82	-65.82	-61.66	-61.39
155.	-39.44	-65.60	-60.41	-60.69	-64.21
200.	-37.78	-64.22	-67.90	-60.58	-59.07
250.	-36.33	-65.52	-66.13	-61.19	-62.16



ACR - Near End

Client	Ningbo Feynman	Report No	103777015CRT-003b
Specification	ISO-IEC 11801-1 Cat 6 Cable		
Part No	FA0423AUC6V	Length (m)	100.
Test Started	12/19/2018 4:11:03 PM	Temperature	23 °C
Description	4 pair 23 AWG UTP 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.		101.32	104.64	107.47	102.36	101.77	91.00
4.		104.45	96.31	99.70	90.45	91.46	87.13
8.	56.38	91.81	100.60	88.29	88.76	93.15	84.16
10.	54.30	77.56	91.06	90.28	84.25	79.12	74.12
16.	49.63	75.16	81.96	82.75	84.30	82.44	71.24
20.	47.25	81.29	85.31	76.45	79.87	78.68	75.16
25.	44.76	77.90	79.12	74.56	64.71	73.88	73.44
31.25	42.13	75.02	74.08	69.49	68.54	70.66	67.02
62.5	32.89	61.87	66.03	68.35	68.46	64.93	53.46
100.	25.38	55.13	61.45	58.54	46.54	56.06	43.28
155.	17.15	47.94	52.98	37.80	51.41	54.94	49.63
200.	11.65	47.00	66.85	37.22	34.82	51.50	32.89
250.	6.31	36.10	46.04	26.79	36.64	35.78	35.19



ACR - Far End

Client	Ningbo Feynman	Report No	103777015CRT-003b
Specification	ISO-IEC 11801-1 Cat 6 Cable		
Part No	FA0423AUC6V	Length (m)	100.
Test Started	12/19/2018 4:11:03 PM	Temperature	23 °C
Description	4 pair 23 AWG UTP 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.		110.31	104.98	100.99	106.84	102.38	97.69
4.		103.83	91.33	100.43	91.50	91.78	91.15
8.	56.38	97.21	87.50	86.19	95.12	86.90	86.74
10.	54.30	79.82	86.62	79.45	84.92	84.40	74.36
16.	49.63	75.21	91.50	74.08	88.60	80.66	71.70
20.	47.25	85.93	85.89	71.78	75.53	80.90	72.83
25.	44.76	88.66	78.74	70.23	74.17	70.58	71.63
31.25	42.13	71.73	69.65	75.30	67.15	67.84	75.80
62.5	32.89	65.02	68.60	63.92	62.41	72.73	62.82
100.	25.38	49.25	56.11	53.78	59.17	58.21	44.62
155.	17.15	46.52	51.09	48.56	39.34	47.15	45.82
200.	11.65	47.68	59.51	39.82	49.94	46.06	35.67
250.	6.31	46.57	37.46	47.87	41.80	40.67	35.17



PSACR - Near End

Client	Ningbo Feynman	Report No	103777015CRT-003b
Specification	ISO-IEC 11801-1 Cat 6 Cable		
Part No	FA0423AUC6V	Length (m)	100.
Test Started	12/19/2018 4:11:03 PM	Temperature	23 °C
Description	4 pair 23 AWG UTP Solid		
Operator Name	David Ayers	Test Status	Complies

PSACR - Near End (dB)					
Freq (MHz)	Limit	Blue	Orange	Green	Brown
1.		98.63	95.67	90.28	90.41
4.		93.83	87.65	84.97	85.20
8.	53.38	86.07	86.08	82.64	82.36
10.	51.30	76.66	74.75	73.48	72.80
16.	46.63	73.24	73.87	70.49	70.53
20.	44.25	74.28	75.07	72.54	70.47
25.	41.76	71.07	64.18	63.96	68.93
31.25	39.13	66.74	65.98	64.07	63.99
62.5	29.89	58.95	59.46	52.74	53.03
100.	22.38	51.72	45.97	41.21	42.94
155.	14.15	35.80	45.92	45.91	37.43
200.	8.65	35.09	35.10	30.29	31.47
250.	3.31	24.41	31.61	32.19	25.75



PSACR - Far End

Client	Ningbo Feynman	Report No	103777015CRT-003b
Specification	ISO-IEC 11801-1 Cat 6 Cable		
Part No	FA0423AUC6V	Length (m)	100.
Test Started	12/19/2018 4:11:03 PM	Temperature	23 °C
Description	4 pair 23 AWG UTP Solid		
Operator Name	David Ayers	Test Status	Complies

PSACR - Far End (dB)					
Freq (MHz)	Limit	Blue	Orange	Green	Brown
1.		98.42	97.70	95.06	94.31
4.		89.94	88.25	86.47	87.77
8.	53.38	83.13	85.80	83.49	81.77
10.	51.30	75.80	77.47	73.45	72.86
16.	46.63	71.02	73.89	71.32	69.21
20.	44.25	70.90	74.25	70.35	68.72
25.	41.76	68.85	68.67	68.55	65.92
31.25	39.13	66.26	63.85	64.81	66.46
62.5	29.89	59.80	60.47	58.89	60.03
100.	22.38	46.20	48.39	43.72	43.95
155.	14.15	42.16	38.47	38.11	42.26
200.	8.65	37.42	42.80	34.74	33.97
250.	3.31	35.41	37.90	32.13	33.92



FEXT - Near End

Client	Ningbo Feynman	Report No	103777015CRT-003b
Specification	ISO-IEC 11801-1 Cat 6 Cable		
Part No	FA0423AUC6V	Length (m)	100.
Test Started	12/19/2018 4:11:03 PM	Temperature	23 °C
Description	4 pair 23 AWG UTP 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.	-101.66	-114.81	-100.18	-102.48	-96.00	-100.96	-111.81	-96.92	-88.95	-98.98	-100.91	-88.73
4.	-89.81	-99.33	-88.39	-91.41	-87.36	-90.35	-99.18	-87.90	-79.59	-90.45	-89.34	-79.60
8.	-86.81	-92.15	-82.83	-87.52	-83.89	-86.27	-93.64	-83.98	-75.52	-85.08	-85.81	-75.06
10.	-87.39	-89.98	-80.62	-86.42	-82.74	-82.97	-90.16	-82.96	-74.70	-82.40	-83.50	-74.24
16.	-86.53	-84.88	-77.10	-86.65	-81.75	-79.94	-84.17	-81.96	-72.41	-76.51	-79.94	-72.23
20.	-88.95	-82.59	-75.19	-88.85	-82.03	-77.70	-82.07	-82.41	-71.51	-74.73	-77.87	-71.53
25.	-88.80	-79.26	-74.25	-88.24	-81.47	-75.18	-79.62	-82.43	-70.79	-74.21	-75.77	-71.16
31.25	-84.50	-76.84	-75.37	-83.99	-82.13	-72.96	-76.77	-82.38	-71.43	-75.17	-73.07	-70.98
62.5	-70.43	-69.36	-69.74	-70.41	-73.03	-66.09	-69.68	-73.60	-70.07	-69.93	-66.38	-70.08
100.	-82.34	-66.81	-79.62	-83.42	-77.21	-63.22	-66.95	-77.21	-70.05	-78.29	-63.44	-69.94
155.	-83.21	-71.21	-74.97	-84.08	-86.82	-63.36	-71.13	-87.92	-69.53	-75.32	-63.46	-69.25
200.	-83.15	-85.85	-78.03	-83.25	-82.04	-66.74	-83.92	-81.99	-72.97	-78.30	-67.04	-73.11
250.	-82.38	-75.15	-75.11	-83.00	-80.42	-78.87	-75.01	-80.74	-71.90	-74.96	-79.33	-72.52

FEXT - Far End

Client	Ningbo Feynman	Report No	103777015CRT-003b
Specification	ISO-IEC 11801-1 Cat 6 Cable		
Part No	FA0423AUC6V	Length (m)	100.
Test Started	12/19/2018 4:11:03 PM	Temperature	23 °C
Description	4 pair 23 AWG UTP 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.	-100.99	-113.01	-98.60	-99.60	-100.13	-102.47	-113.90	-99.29	-88.92	-100.32	-102.20	-88.84
4.	-90.70	-101.74	-89.91	-89.66	-88.01	-89.04	-98.95	-87.63	-79.57	-87.96	-91.05	-79.58
8.	-87.41	-92.80	-84.97	-86.29	-84.21	-85.70	-91.82	-83.92	-75.19	-82.73	-86.72	-75.61
10.	-86.05	-90.35	-82.47	-86.65	-82.86	-83.06	-90.66	-83.10	-74.17	-80.63	-83.02	-74.64
16.	-86.88	-84.29	-76.68	-86.54	-81.95	-79.85	-85.16	-82.34	-72.18	-76.91	-80.06	-72.40
20.	-88.41	-81.91	-74.66	-88.86	-82.09	-77.59	-82.38	-82.11	-71.50	-75.10	-77.78	-71.41
25.	-88.23	-79.63	-74.20	-88.50	-82.26	-75.60	-79.58	-81.63	-71.14	-74.23	-75.23	-70.71
31.25	-83.87	-76.77	-75.07	-84.82	-82.12	-72.88	-76.73	-82.07	-71.02	-75.26	-72.94	-71.47
62.5	-70.45	-69.58	-69.90	-70.32	-73.32	-66.19	-69.41	-73.09	-70.01	-69.81	-66.23	-70.04
100.	-83.50	-66.92	-78.29	-82.20	-76.91	-63.31	-66.80	-77.39	-70.02	-79.41	-63.28	-70.09
155.	-84.12	-71.11	-75.36	-83.01	-88.01	-63.34	-71.19	-86.63	-69.29	-74.89	-63.46	-69.44
200.	-83.18	-83.84	-78.12	-83.14	-81.67	-66.96	-86.03	-82.41	-73.32	-78.47	-66.87	-72.91
250.	-82.99	-74.79	-74.55	-82.34	-80.12	-79.10	-75.22	-80.69	-72.44	-75.25	-79.11	-71.78



ACRF (ELFEXT) - Near End

Client	Ningbo Feynman	Report No	103777015CRT-003b
Specification	ISO-IEC 11801-1 Cat 6 Cable		
Part No	FA0423AUC6V	Length (m)	100.
Test Started	12/19/2018 4:11:03 PM	Temperature	23 °C
Description	4 pair 23 AWG UTP 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.		-100.02	-113.14	-98.54	-100.73	-94.32	-99.32	-110.06	-95.29	-87.31	-97.24	-99.27	-87.05
4.		-86.51	-95.91	-85.08	-87.85	-83.95	-87.04	-95.62	-84.60	-76.28	-86.89	-86.05	-76.19
8.	-49.94	-82.09	-87.28	-78.10	-82.45	-79.02	-81.54	-88.57	-79.27	-70.80	-80.00	-81.09	-70.19
10.	-48.00	-82.09	-84.51	-75.32	-80.74	-77.28	-77.66	-84.48	-77.67	-69.40	-76.71	-78.21	-68.78
16.	-43.92	-79.78	-77.93	-70.34	-79.42	-74.79	-73.18	-76.94	-75.22	-65.65	-69.27	-73.19	-65.27
20.	-41.98	-81.38	-74.79	-67.61	-80.73	-74.23	-70.12	-73.95	-74.84	-63.93	-66.61	-70.29	-63.72
25.	-40.04	-80.30	-70.50	-65.74	-79.14	-72.71	-66.67	-70.52	-73.93	-62.28	-65.11	-67.27	-62.40
31.25	-38.10	-74.96	-67.01	-65.83	-73.77	-72.30	-63.41	-66.55	-72.84	-61.88	-64.96	-63.52	-61.15
62.5	-32.08	-56.79	-55.33	-56.09	-55.85	-58.99	-52.44	-55.11	-59.97	-56.42	-55.36	-52.75	-56.04
100.	-28.00	-64.91	-48.88	-62.19	-64.80	-59.27	-45.79	-48.34	-59.79	-52.62	-59.67	-46.01	-52.00
155.	-24.19	-61.28	-48.66	-53.04	-60.66	-64.27	-41.44	-47.71	-65.99	-47.60	-51.91	-41.53	-46.70
200.	-21.98	-58.06	-60.04	-52.94	-56.49	-56.24	-41.65	-57.17	-56.90	-47.88	-51.55	-41.95	-47.31
250.	-20.04	-54.16	-46.14	-46.89	-52.91	-51.41	-50.65	-44.93	-52.52	-43.68	-44.88	-51.10	-43.51



ACRF (ELFEXT) - Far End

Client	Ningbo Feynman	Report No	103777015CRT-003b
Specification	ISO-IEC 11801-1 Cat 6 Cable		
Part No	FA0423AUC6V	Length (m)	100.
Test Started	12/19/2018 4:11:03 PM	Temperature	23 °C
Description	4 pair 23 AWG UTP 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.		-99.35	-111.33	-96.96	-97.85	-98.45	-100.83	-112.15	-97.65	-87.28	-98.57	-100.56	-87.16
4.		-87.39	-98.31	-86.59	-86.10	-84.59	-85.73	-95.38	-84.32	-76.25	-84.40	-87.74	-76.16
8.	-49.94	-82.69	-87.92	-80.24	-81.21	-79.33	-80.97	-86.74	-79.19	-70.46	-77.66	-82.00	-70.73
10.	-48.00	-80.75	-84.88	-77.17	-80.95	-77.39	-77.75	-84.97	-77.79	-68.86	-74.94	-77.71	-69.17
16.	-43.92	-80.13	-77.33	-69.92	-79.30	-74.99	-73.09	-77.92	-75.58	-65.42	-69.67	-73.30	-65.44
20.	-41.98	-80.83	-74.10	-67.08	-80.74	-74.28	-70.01	-74.26	-74.53	-63.91	-66.99	-70.20	-63.60
25.	-40.04	-79.72	-70.87	-65.69	-79.40	-73.50	-67.09	-70.47	-73.13	-62.63	-65.13	-66.73	-61.95
31.25	-38.10	-74.32	-66.94	-65.52	-74.61	-72.29	-63.33	-66.52	-72.52	-61.47	-65.04	-63.39	-61.64
62.5	-32.08	-56.81	-55.54	-56.25	-55.76	-59.28	-52.54	-54.85	-59.44	-56.36	-55.26	-52.59	-56.00
100.	-28.00	-66.07	-48.98	-60.85	-63.57	-58.97	-45.87	-48.18	-59.95	-52.58	-60.78	-45.84	-52.15
155.	-24.19	-62.18	-48.53	-53.41	-59.58	-65.44	-41.39	-47.75	-64.68	-47.34	-51.45	-41.52	-46.87
200.	-21.98	-58.09	-58.00	-53.01	-56.35	-55.83	-41.85	-59.24	-57.32	-48.22	-51.67	-41.77	-47.07
250.	-20.04	-54.76	-45.73	-46.31	-52.23	-51.06	-50.86	-45.11	-52.46	-44.20	-45.14	-50.88	-42.72



PSFEXT - Near End

Client	Ningbo Feynman	Report No	103777015CRT-003b
Specification	ISO-IEC 11801-1 Cat 6 Cable		
Part No	FA0423AUC6V	Length (m)	100.
Test Started	12/19/2018 4:11:03 PM	Temperature	23 °C
Description	4 pair 23 AWG UTP Solid		
Operator Name	David Ayers	Test Status	Complies

PSFEXT - Near End (dB)				
Freq (MHz)	Blue	Orange	Green	Brown
1.	-97.64	-93.87	-88.28	-88.07
4.	-85.83	-84.58	-78.94	-78.85
8.	-81.02	-80.85	-74.89	-74.33
10.	-79.39	-78.97	-73.99	-73.19
16.	-76.02	-77.21	-71.70	-70.34
20.	-74.31	-76.10	-70.83	-69.20
25.	-72.95	-74.09	-70.00	-68.51
31.25	-72.74	-72.17	-70.05	-67.97
62.5	-65.05	-64.13	-66.03	-63.67
100.	-66.48	-63.01	-64.95	-62.44
155.	-69.50	-63.31	-67.21	-62.22
200.	-76.35	-66.52	-72.16	-65.83
250.	-71.73	-75.67	-69.81	-70.02



PSFEXT - Far End

Client	Ningbo Feynman	Report No	103777015CRT-003b
Specification	ISO-IEC 11801-1 Cat 6 Cable		
Part No	FA0423AUC6V	Length (m)	100.
Test Started	12/19/2018 4:11:03 PM	Temperature	23 °C
Description	4 pair 23 AWG UTP Solid		
Operator Name	David Ayers	Test Status	Complies

PSFEXT - Far End (dB)				
Freq (MHz)	Blue	Orange	Green	Brown
1.	-96.40	-95.74	-88.49	-88.33
4.	-87.10	-84.07	-78.89	-78.73
8.	-82.58	-80.54	-74.56	-74.57
10.	-80.43	-79.11	-73.56	-73.19
16.	-75.65	-77.22	-71.59	-70.56
20.	-73.76	-76.04	-70.82	-69.21
25.	-72.97	-74.57	-70.23	-68.16
31.25	-72.50	-72.15	-69.72	-68.18
62.5	-65.19	-64.20	-65.79	-63.55
100.	-66.53	-63.07	-64.86	-62.37
155.	-69.57	-63.28	-67.08	-62.24
200.	-76.13	-66.71	-72.62	-65.67
250.	-71.35	-75.55	-70.19	-69.65



PSACRF (PSELFEXT) - Near End

Client	Ningbo Feynman	Report No	103777015CRT-003b
Specification	ISO-IEC 11801-1 Cat 6 Cable		
Part No	FA0423AUC6V	Length (m)	100.
Test Started	12/19/2018 4:11:03 PM	Temperature	23 °C
Description	4 pair 23 AWG UTP Solid		
Operator Name	David Ayers	Test Status	Complies

PSACRF (PSELFEXT) - Near End (dB)					
Freq (MHz)	Limit	Blue	Orange	Green	Brown
1.		-95.90	-92.24	-86.60	-86.43
4.		-82.27	-81.28	-75.53	-75.54
8.	-46.94	-75.95	-76.14	-70.02	-69.61
10.	-45.00	-73.70	-73.68	-68.53	-67.89
16.	-40.92	-68.79	-70.47	-64.74	-63.59
20.	-38.98	-66.19	-68.53	-63.03	-61.62
25.	-37.04	-63.84	-65.59	-61.24	-60.00
31.25	-35.10	-62.52	-62.63	-60.22	-58.42
62.5	-29.08	-50.48	-50.49	-51.99	-50.02
100.	-25.00	-47.86	-45.58	-47.02	-45.01
155.	-21.19	-46.08	-41.38	-44.65	-40.30
200.	-18.98	-49.59	-41.43	-46.36	-40.73
250.	-17.04	-41.65	-47.45	-40.80	-41.80



PSACRF (PSELFEXT) - Far End

Client	Ningbo Feynman	Report No	103777015CRT-003b
Specification	ISO-IEC 11801-1 Cat 6 Cable		
Part No	FA0423AUC6V	Length (m)	100.
Test Started	12/19/2018 4:11:03 PM	Temperature	23 °C
Description	4 pair 23 AWG UTP Solid		
Operator Name	David Ayers	Test Status	Complies

PSACRF (PSELFEXT) - Far End (dB)					
Freq (MHz)	Limit	Blue	Orange	Green	Brown
1.		-94.65	-94.10	-86.81	-86.69
4.		-83.53	-80.76	-75.47	-75.41
8.	-46.94	-77.50	-75.81	-69.68	-69.84
10.	-45.00	-74.73	-73.80	-68.09	-67.88
16.	-40.92	-68.41	-70.47	-64.62	-63.81
20.	-38.98	-65.64	-68.46	-63.01	-61.63
25.	-37.04	-63.87	-66.07	-61.47	-59.65
31.25	-35.10	-62.28	-62.61	-59.89	-58.63
62.5	-29.08	-50.63	-50.56	-51.75	-49.90
100.	-25.00	-47.90	-45.64	-46.92	-44.93
155.	-21.19	-46.13	-41.34	-44.50	-40.29
200.	-18.98	-49.34	-41.62	-46.78	-40.57
250.	-17.04	-41.24	-47.32	-41.14	-41.41



Impedance - Near End

Client	Ningbo Feynman	Report No	103777015CRT-003b
Specification	ISO-IEC 11801-1 Cat 6 Cable		
Part No	FA0423AUC6V	Length (m)	100.
Test Started	12/19/2018 4:11:03 PM	Temperature	23 °C
Description	4 pair 23 AWG UTP Solid		
Operator Name	David Ayers	Test Status	Complies

Impedance - Near End (ohms)				
Freq (MHz)	Blue	Orange	Green	Brown
1.	104.25	103.67	104.90	104.10
4.	101.54	100.99	102.86	101.43
8.	99.89	100.45	102.51	101.40
10.	100.01	101.48	102.44	101.89
16.	99.20	101.82	101.59	101.48
20.	98.86	101.07	101.59	101.94
25.	98.80	101.79	100.87	101.72
31.25	99.37	100.56	101.21	101.01
62.5	97.38	100.57	101.21	100.87
100.	99.01	98.86	100.38	101.14
155.	98.21	100.46	100.64	100.88
200.	97.12	99.75	100.84	100.17
250.	97.88	99.95	100.62	101.02

Impedance - Far End

Client	Ningbo Feynman	Report No	103777015CRT-003b
Specification	ISO-IEC 11801-1 Cat 6 Cable		
Part No	FA0423AUC6V	Length (m)	100.
Test Started	12/19/2018 4:11:03 PM	Temperature	23 °C
Description	4 pair 23 AWG UTP Solid		
Operator Name	David Ayers	Test Status	Complies

Impedance - Far End (ohms)				
Freq (MHz)	Blue	Orange	Green	Brown
1.	103.69	102.85	104.49	103.53
4.	102.41	102.43	103.61	102.98
8.	99.94	101.78	102.79	101.87
10.	99.47	102.14	102.26	102.29
16.	99.88	100.83	101.76	101.59
20.	100.25	101.86	102.00	101.09
25.	100.11	102.79	102.28	102.98
31.25	100.24	102.87	102.07	101.87
62.5	99.51	100.42	101.23	101.16
100.	100.37	101.11	102.47	100.99
155.	100.06	102.91	100.97	103.10
200.	103.72	100.00	101.61	101.12
250.	98.99	97.62	101.78	102.75



Fitted Impedance - Near End

Client	Ningbo Feynman	Report No	103777015CRT-003b
Specification	ISO-IEC 11801-1 Cat 6 Cable		
Part No	FA0423AUC6V	Length (m)	100.
Test Started	12/19/2018 4:11:03 PM	Temperature	23 °C
Description	4 pair 23 AWG UTP Solid		
Operator Name	David Ayers	Test Status	Complies

Fitted Impedance - Near End (ohms)				
Freq (MHz)	Blue	Orange	Green	Brown
1.	104.20	106.79	106.00	107.42
4.	101.50	103.25	102.94	103.63
8.	100.35	102.20	102.08	102.62
10.	100.03	101.94	101.87	102.37
16.	99.43	101.46	101.48	101.93
20.	99.18	101.26	101.32	101.75
25.	98.96	101.09	101.19	101.59
31.25	98.75	100.94	101.07	101.45
62.5	98.23	100.56	100.77	101.12
100.	97.95	100.37	100.62	100.95
155.	97.75	100.23	100.50	100.82
200.	97.65	100.16	100.45	100.76
250.	97.57	100.10	100.40	100.71



Fitted Impedance - Far End

Client	Ningbo Feynman	Report No	103777015CRT-003b
Specification	ISO-IEC 11801-1 Cat 6 Cable		
Part No	FA0423AUC6V	Length (m)	100.
Test Started	12/19/2018 4:11:03 PM	Temperature	23 °C
Description	4 pair 23 AWG UTP Solid		
Operator Name	David Ayers	Test Status	Complies

Fitted Impedance - Far End (ohms)				
Freq (MHz)	Blue	Orange	Green	Brown
1.	103.30	106.83	105.72	106.73
4.	100.78	104.06	102.49	103.25
8.	100.46	103.05	102.09	102.61
10.	100.41	102.78	102.03	102.48
16.	100.34	102.28	101.94	102.26
20.	100.32	102.07	101.92	102.18
25.	100.31	101.88	101.91	102.11
31.25	100.31	101.71	101.91	102.06
62.5	100.31	101.28	101.92	101.94
100.	100.32	101.06	101.93	101.89
155.	100.33	100.90	101.95	101.85
200.	100.34	100.82	101.96	101.83
250.	100.35	100.75	101.97	101.82



Return Loss - Near End

Client	Ningbo Feynman	Report No	103777015CRT-003b
Specification	ISO-IEC 11801-1 Cat 6 Cable		
Part No	FA0423AUC6V	Length (m)	100.
Test Started	12/19/2018 4:11:03 PM	Temperature	23 °C
Description	4 pair 23 AWG UTP Solid		
Operator Name	David Ayers	Test Status	Complies

Return Loss - Near End (dB)					
Freq (MHz)	Limit	Blue	Orange	Green	Brown
1.		-40.36	-45.46	-42.34	-42.83
4.		-42.45	-65.96	-37.23	-48.46
8.	-24.52	-66.68	-54.55	-38.15	-43.42
10.	-24.98	-69.93	-42.84	-38.38	-40.74
16.	-25.00	-47.95	-40.96	-42.27	-42.75
20.	-24.99	-44.93	-46.30	-42.40	-40.35
25.	-24.32	-44.41	-41.32	-47.68	-41.70
31.25	-23.64	-50.02	-53.26	-44.72	-46.06
62.5	-21.54	-37.54	-51.24	-44.44	-47.28
100.	-20.11	-46.09	-44.85	-54.53	-44.89
155.	-18.77	-40.89	-52.77	-50.16	-47.33
200.	-18.00	-36.75	-58.43	-47.54	-61.36
250.	-17.32	-39.39	-72.81	-50.25	-45.94



Return Loss - Far End

Client	Ningbo Feynman	Report No	103777015CRT-003b
Specification	ISO-IEC 11801-1 Cat 6 Cable		
Part No	FA0423AUC6V	Length (m)	100.
Test Started	12/19/2018 4:11:03 PM	Temperature	23 °C
Description	4 pair 23 AWG UTP Solid		
Operator Name	David Ayers	Test Status	Complies

Return Loss - Far End (dB)					
Freq (MHz)	Limit	Blue	Orange	Green	Brown
1.		-37.81	-36.65	-38.60	-37.29
4.		-38.72	-39.84	-35.15	-37.58
8.	-24.52	-73.95	-41.23	-37.25	-40.86
10.	-24.98	-56.61	-39.64	-39.04	-39.12
16.	-25.00	-65.05	-49.26	-41.22	-42.11
20.	-24.99	-57.89	-40.77	-40.19	-45.37
25.	-24.32	-68.05	-37.24	-38.96	-36.73
31.25	-23.64	-58.82	-37.00	-39.80	-40.69
62.5	-21.54	-52.33	-53.61	-44.28	-44.82
100.	-20.11	-54.93	-45.22	-38.27	-46.21
155.	-18.77	-66.33	-36.88	-46.40	-36.32
200.	-18.00	-34.78	-83.51	-41.94	-45.05
250.	-17.32	-45.90	-38.37	-41.12	-37.37



SRL - Near End

Client	Ningbo Feynman	Report No	103777015CRT-003b
Specification	ISO-IEC 11801-1 Cat 6 Cable		
Part No	FA0423AUC6V	Length (m)	100.
Test Started	12/19/2018 4:11:03 PM	Temperature	23 °C
Description	4 pair 23 AWG UTP Solid		
Operator Name	David Ayers	Test Status	Complies

SRL - Near End (dB)				
Freq (MHz)	Blue	Orange	Green	Brown
1.	-34.81	-47.86	-35.36	-61.91
4.	-64.55	-38.00	-50.61	-37.79
8.	-52.98	-41.32	-52.58	-43.83
10.	-74.30	-55.06	-50.99	-61.80
16.	-58.93	-56.31	-59.51	-54.55
20.	-57.75	-53.91	-55.97	-60.86
25.	-62.18	-51.35	-73.89	-54.14
31.25	-50.11	-56.66	-56.46	-53.22
62.5	-47.26	-68.87	-53.34	-58.70
100.	-45.49	-42.42	-58.53	-60.20
155.	-52.61	-58.85	-64.23	-65.55
200.	-55.07	-53.95	-54.13	-50.67
250.	-56.01	-62.59	-59.54	-56.52



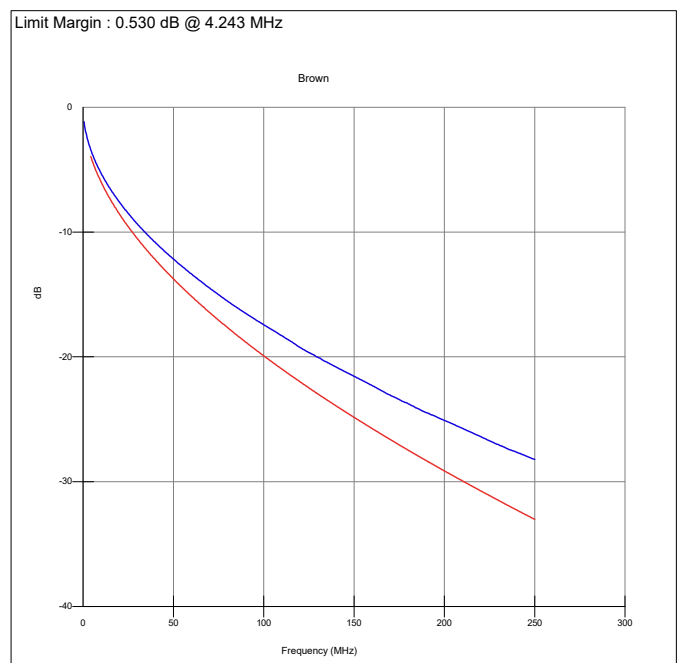
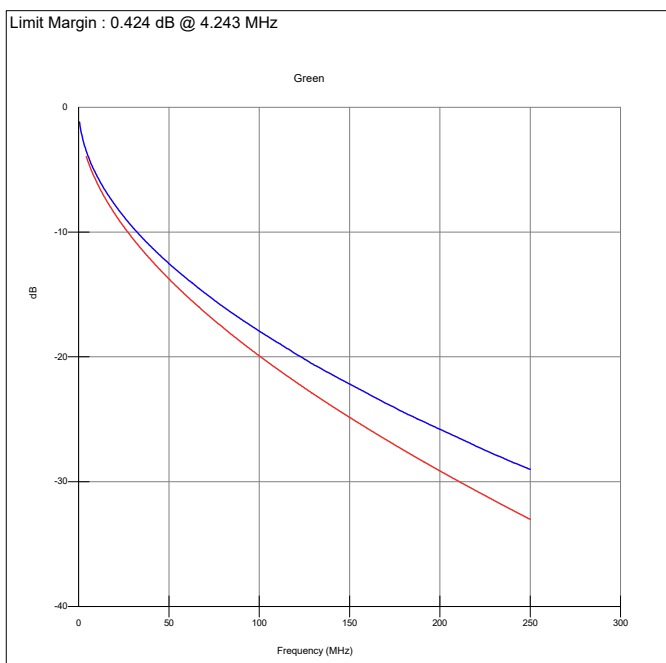
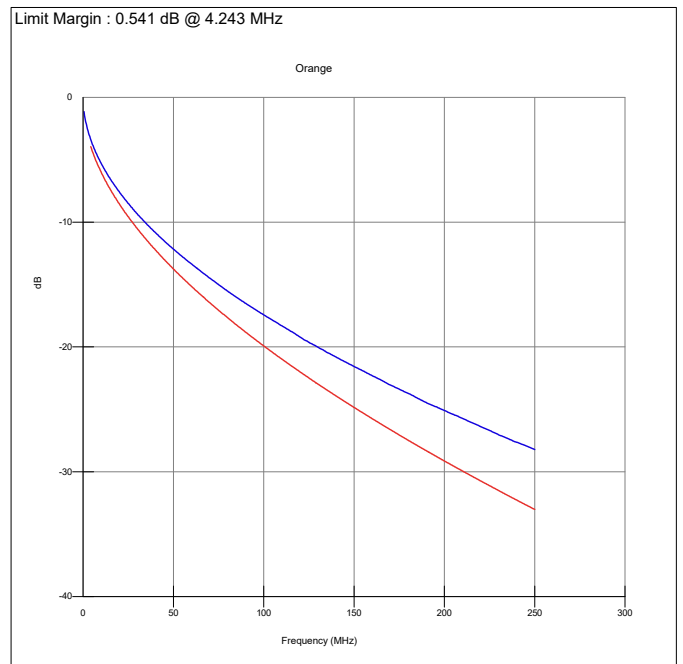
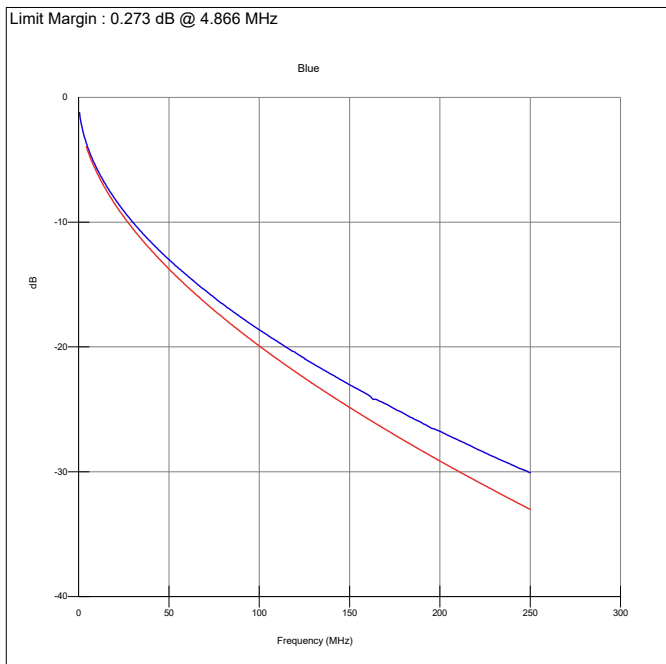
SRL - Far End

Client	Ningbo Feynman	Report No	103777015CRT-003b
Specification	ISO-IEC 11801-1 Cat 6 Cable		
Part No	FA0423AUC6V	Length (m)	100.
Test Started	12/19/2018 4:11:03 PM	Temperature	23 °C
Description	4 pair 23 AWG UTP Solid		
Operator Name	David Ayers	Test Status	Complies

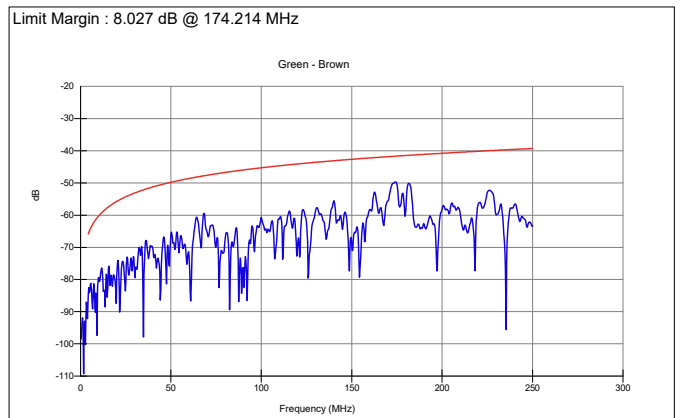
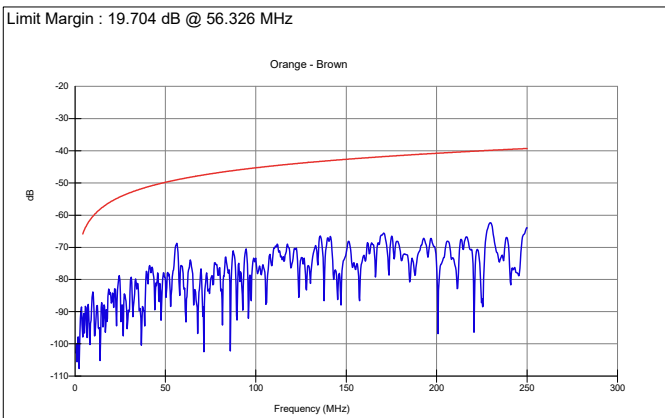
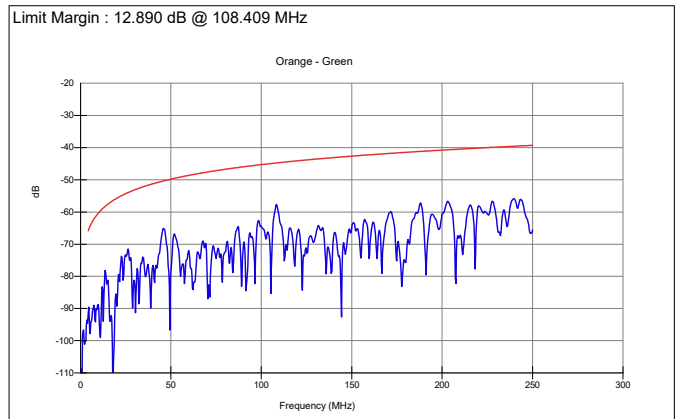
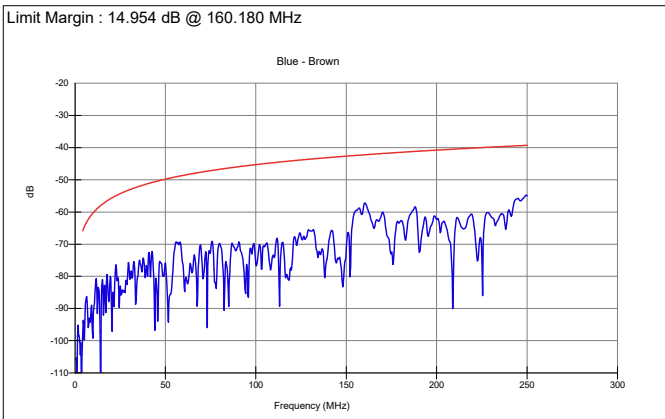
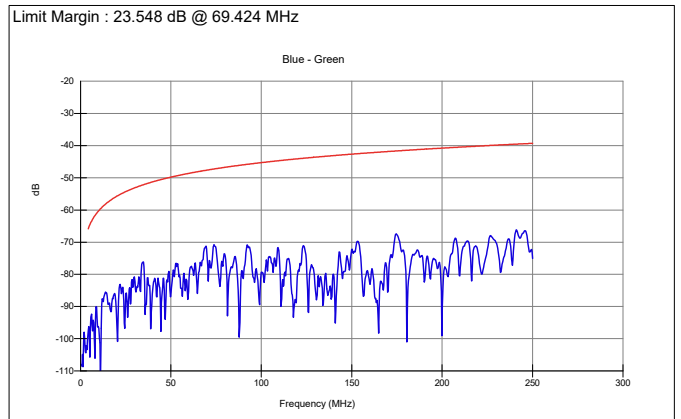
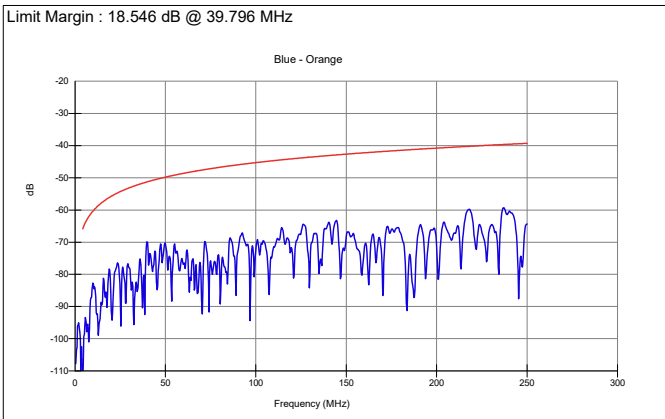
SRL - Far End (dB)				
Freq (MHz)	Blue	Orange	Green	Brown
1.	-34.13	-38.85	-34.71	-47.15
4.	-42.46	-39.25	-46.51	-43.59
8.	-51.86	-43.91	-49.24	-47.38
10.	-47.75	-51.59	-59.35	-53.50
16.	-52.92	-43.92	-60.66	-50.21
20.	-70.65	-67.95	-57.15	-45.47
25.	-66.60	-47.08	-55.58	-48.23
31.25	-68.37	-44.98	-62.29	-76.36
62.5	-48.02	-47.38	-49.44	-48.26
100.	-76.75	-76.99	-51.59	-47.06
155.	-58.73	-40.12	-46.46	-44.31
200.	-35.62	-47.77	-55.52	-49.15
250.	-43.37	-36.03	-60.51	-46.90

Insertion Loss

Client	Ningbo Feynman	Report No	103777015CRT-003b
Specification	ISO-IEC 11801-1 Cat 6 Cable	Length (m)	100.
Part No	FA0423AUC6V	Temperature	23 °C
Test Started	12/19/2018 4:11:03 PM	Test Status	Complies
Description	4 pair 23 AWG UTP Solid		
Operator Name	David Ayers		

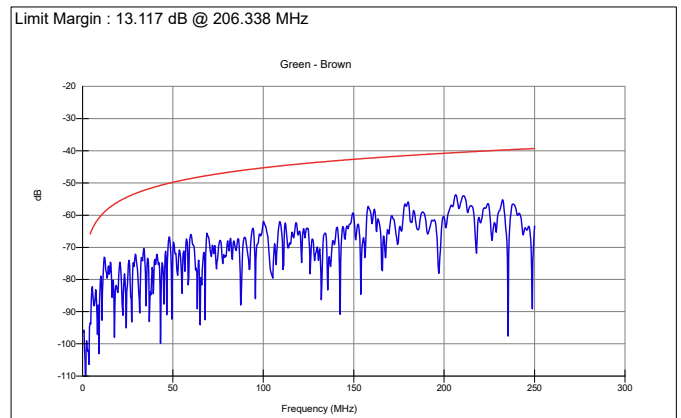
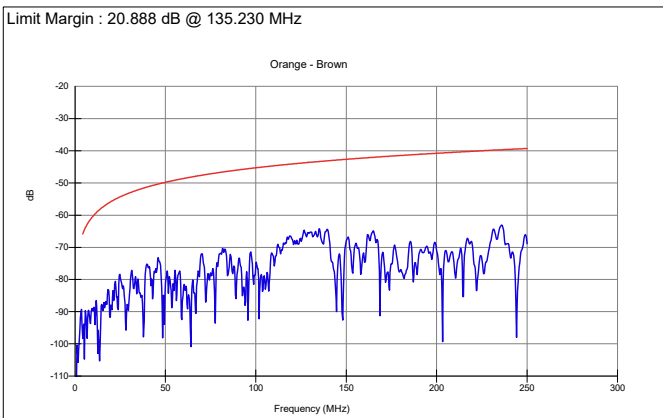
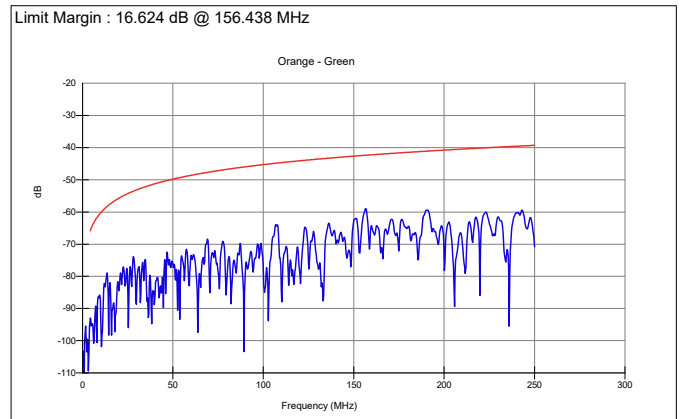
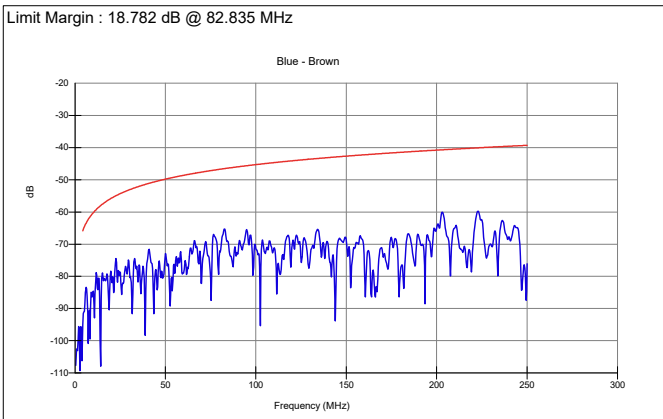
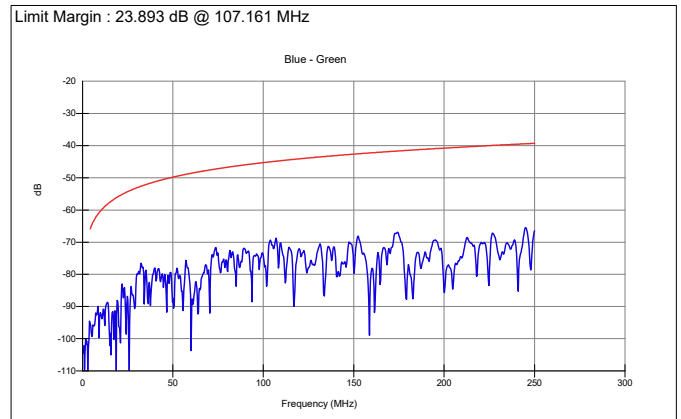
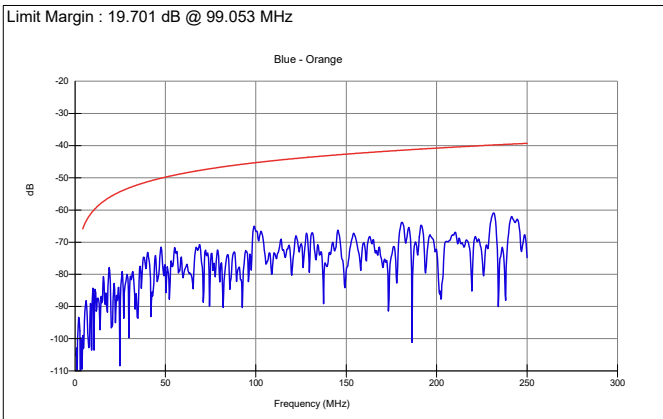


Client	Ningbo Feynman	Report No	103777015CRT-003b
Specification	ISO-IEC 11801-1 Cat 6 Cable	Length (m)	100.
Part No	FA0423AUC6V	Temperature	23 °C
Test Started	12/19/2018 4:11:03 PM	Test Status	Complies
Description	4 pair 23 AWG UTP Solid		
Operator Name	David Ayers		



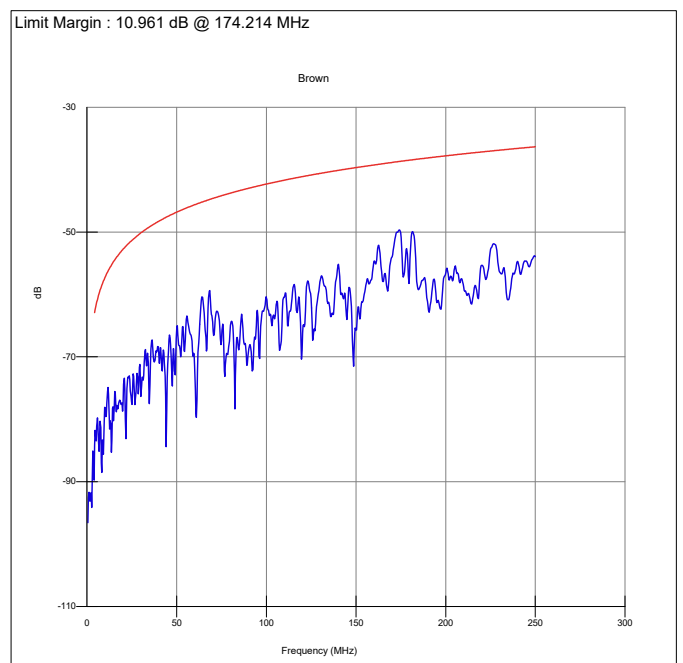
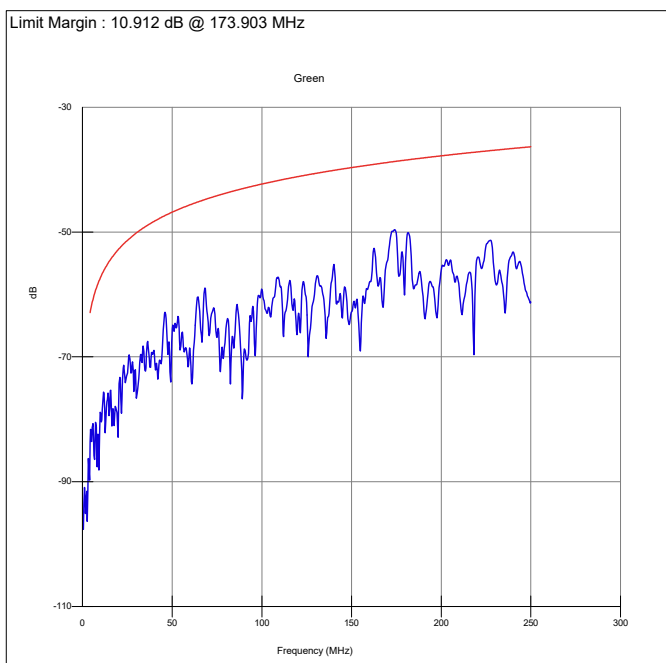
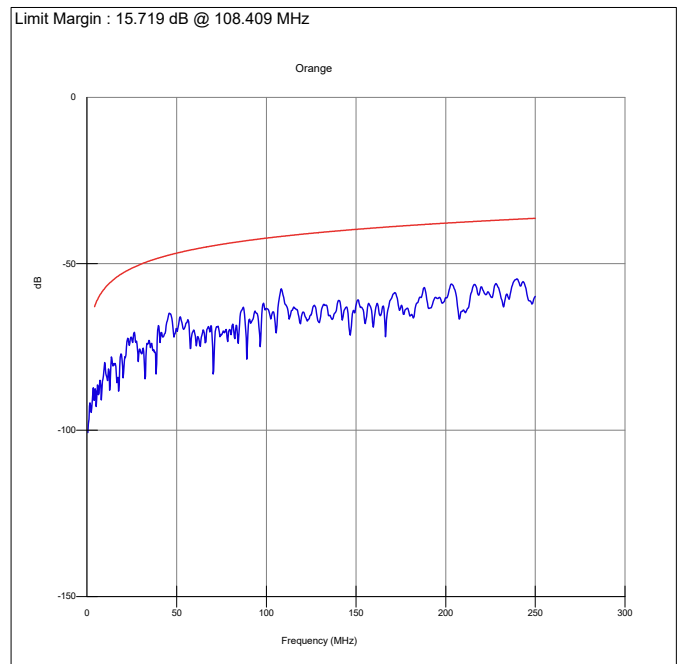
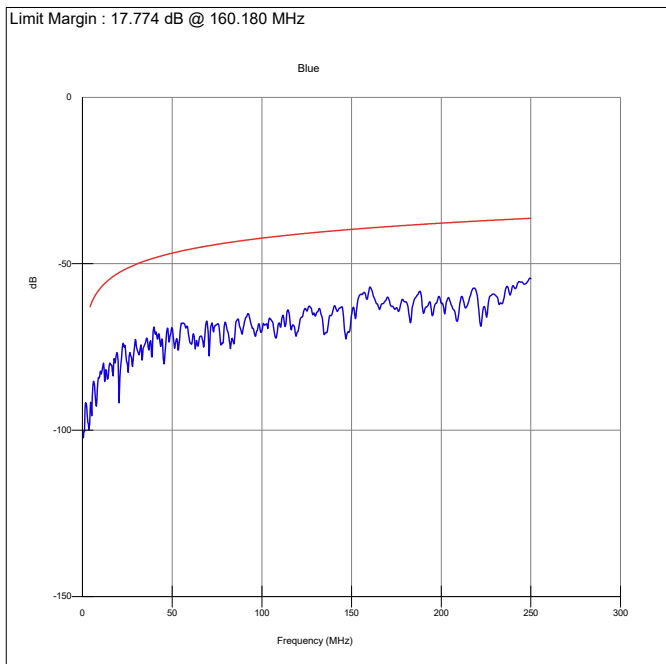
NEXT - Far End

Client	Ningbo Feynman	Report No	103777015CRT-003b
Specification	ISO-IEC 11801-1 Cat 6 Cable		
Part No	FA0423AUC6V	Length (m)	100.
Test Started	12/19/2018 4:11:03 PM	Temperature	23 °C
Description	4 pair 23 AWG UTP Solid		
Operator Name	David Ayers	Test Status	Complies



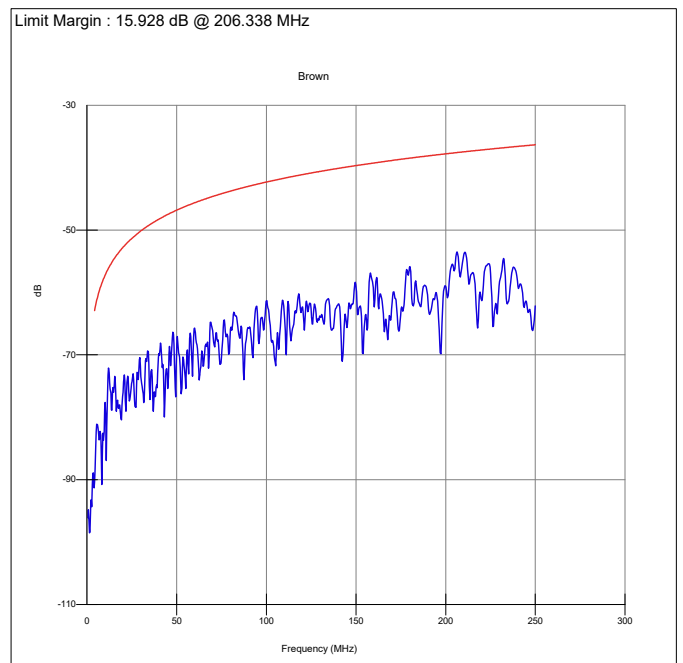
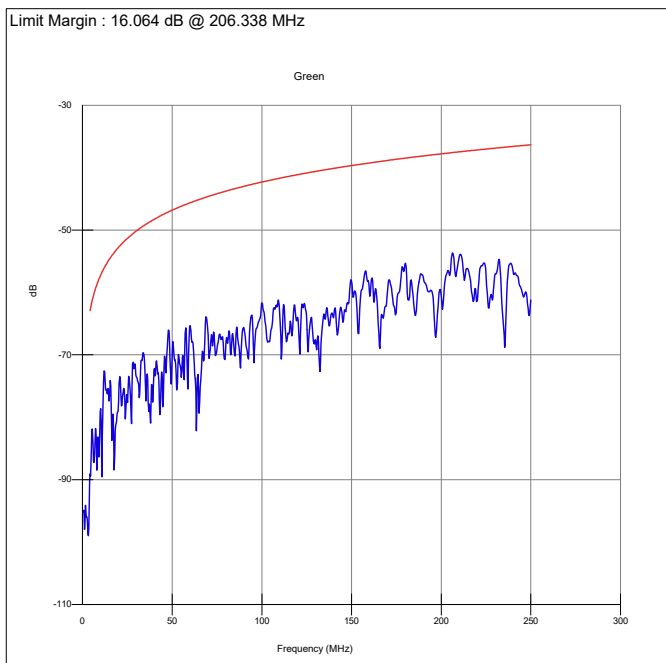
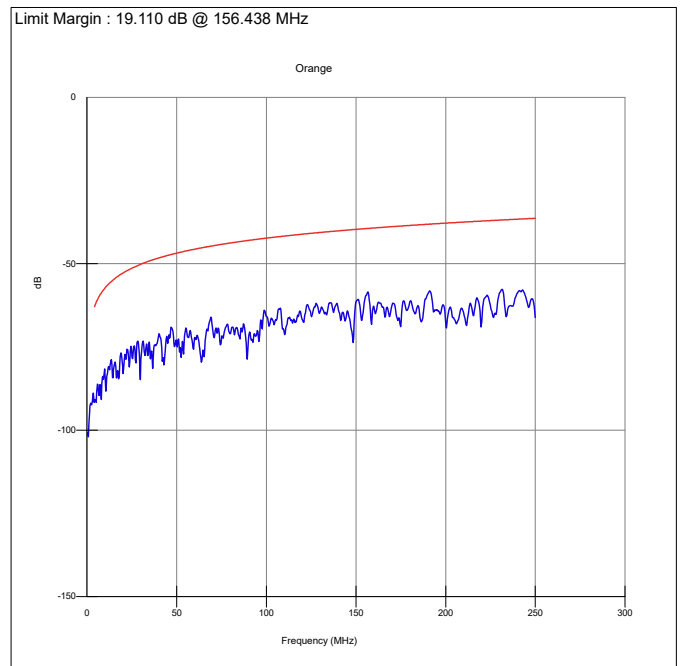
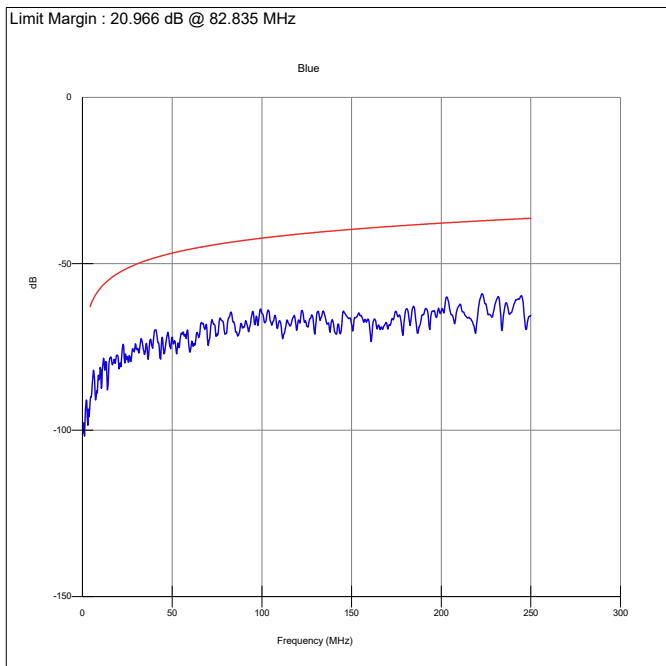
PSNEXT - Near End

Client	Ningbo Feynman	Report No	103777015CRT-003b
Specification	ISO-IEC 11801-1 Cat 6 Cable		
Part No	FA0423AUC6V	Length (m)	100.
Test Started	12/19/2018 4:11:03 PM	Temperature	23 °C
Description	4 pair 23 AWG UTP Solid		
Operator Name	David Ayers	Test Status	Complies



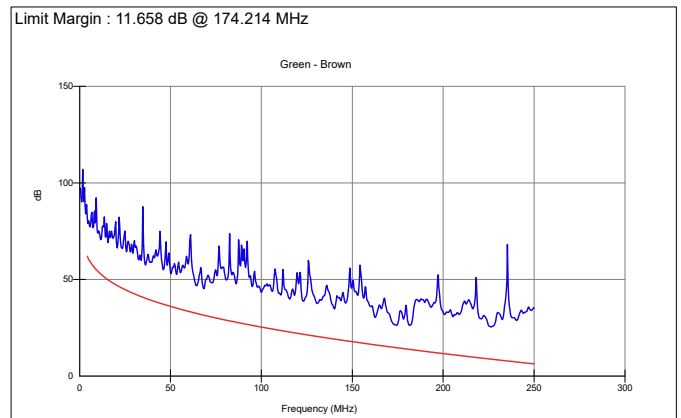
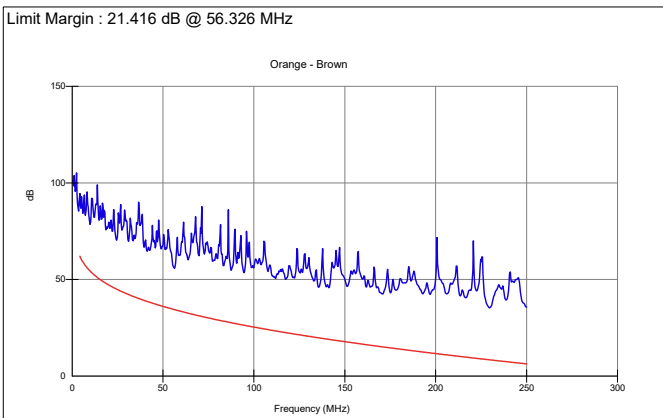
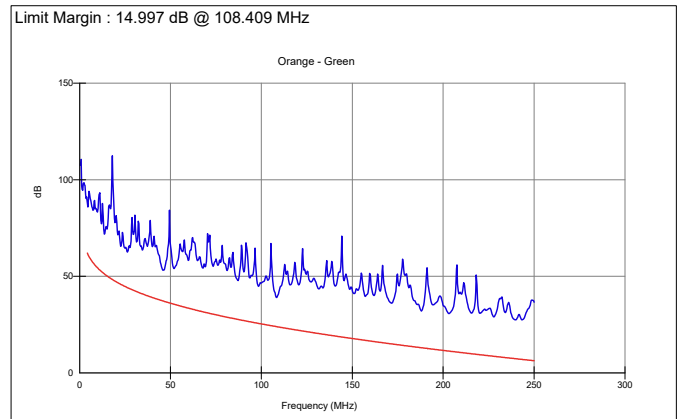
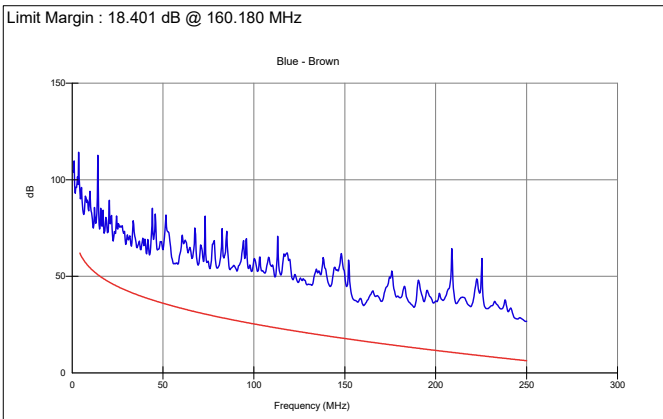
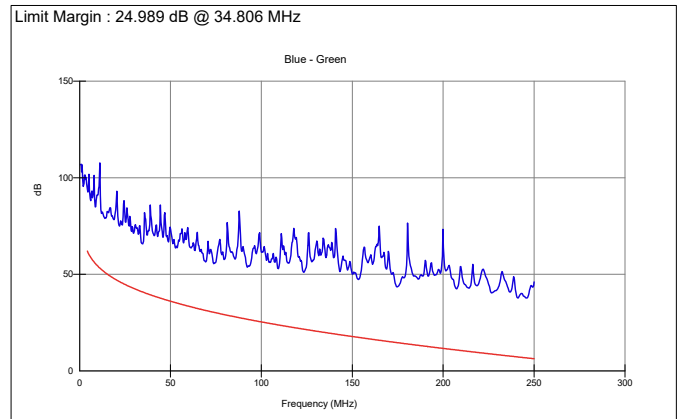
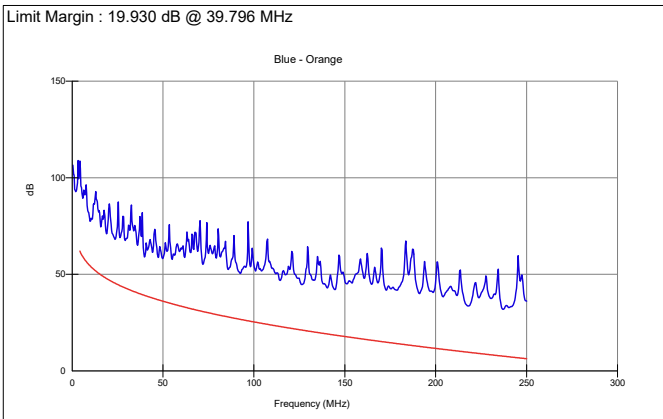
PSNEXT - Far End

Client	Ningbo Feynman	Report No	103777015CRT-003b
Specification	ISO-IEC 11801-1 Cat 6 Cable		
Part No	FA0423AUC6V	Length (m)	100.
Test Started	12/19/2018 4:11:03 PM	Temperature	23 °C
Description	4 pair 23 AWG UTP Solid		
Operator Name	David Ayers	Test Status	Complies



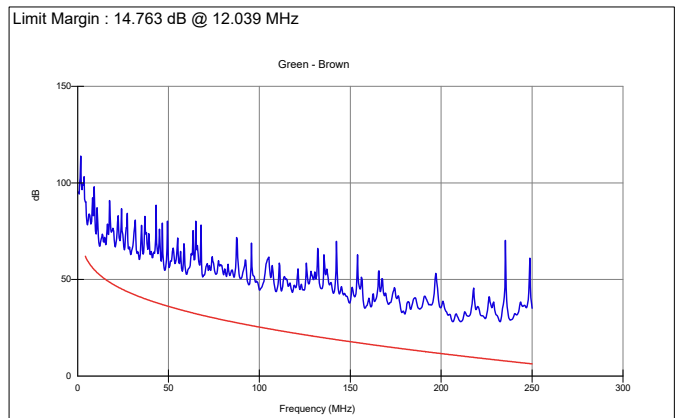
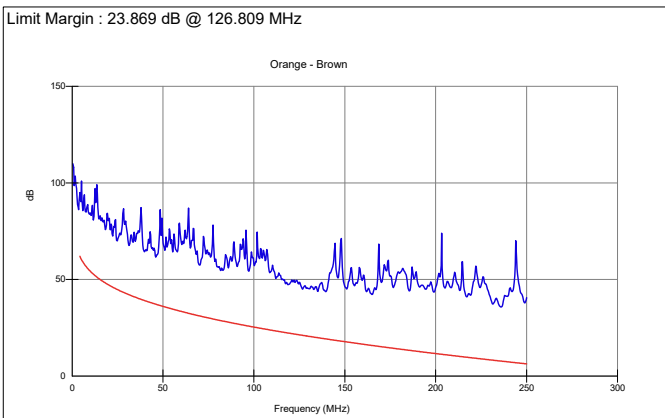
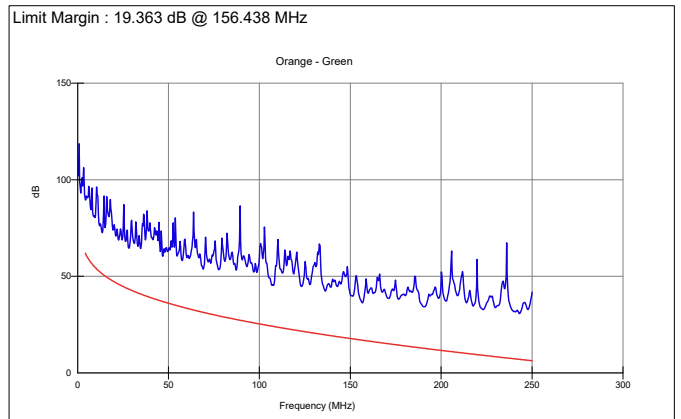
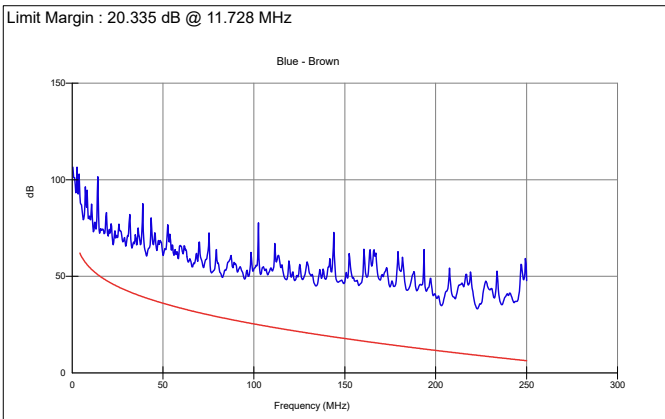
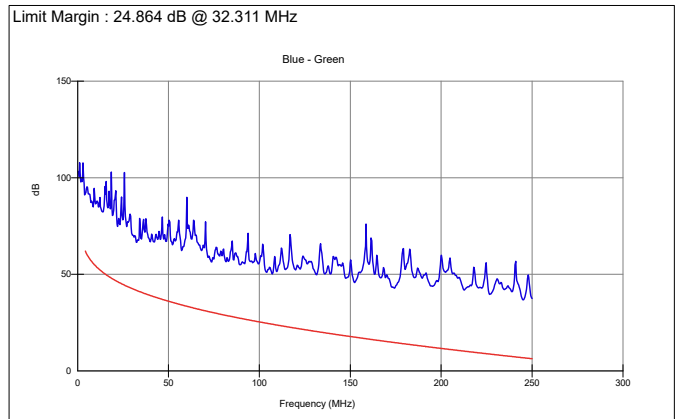
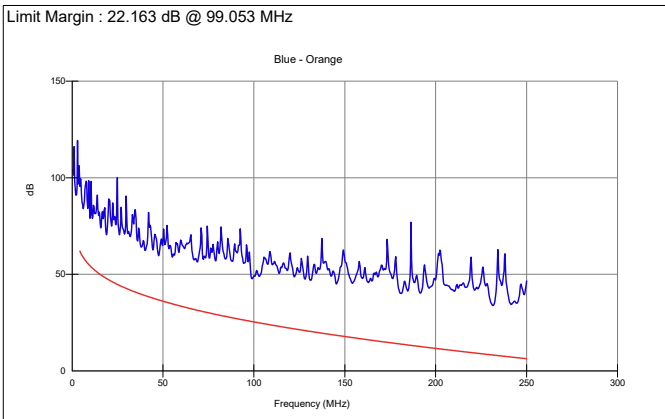
ACR - Near End

Client	Ningbo Feynman	Report No	103777015CRT-003b
Specification	ISO-IEC 11801-1 Cat 6 Cable	Length (m)	100.
Part No	FA0423AUC6V	Temperature	23 °C
Test Started	12/19/2018 4:11:03 PM	Test Status	Complies
Description	4 pair 23 AWG UTP Solid		
Operator Name	David Ayers		



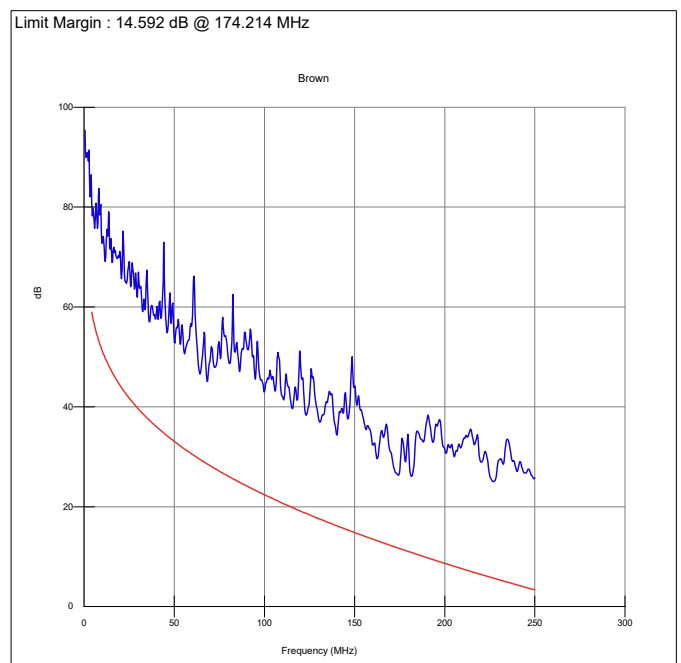
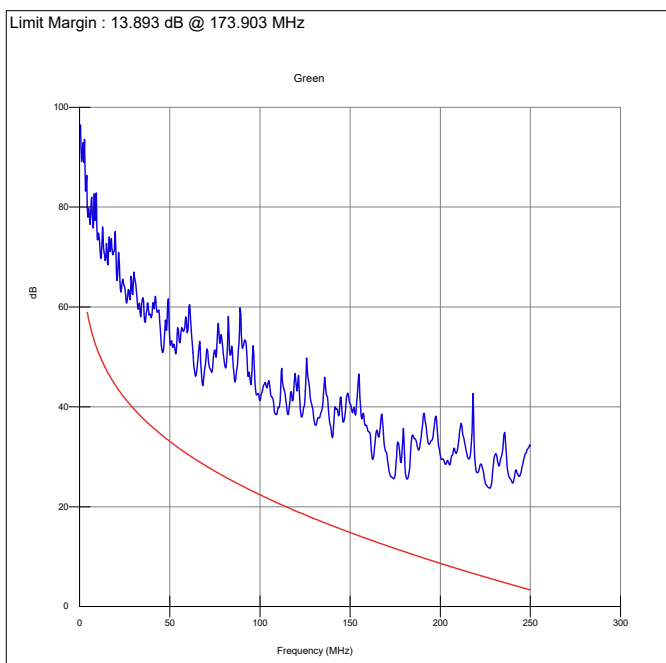
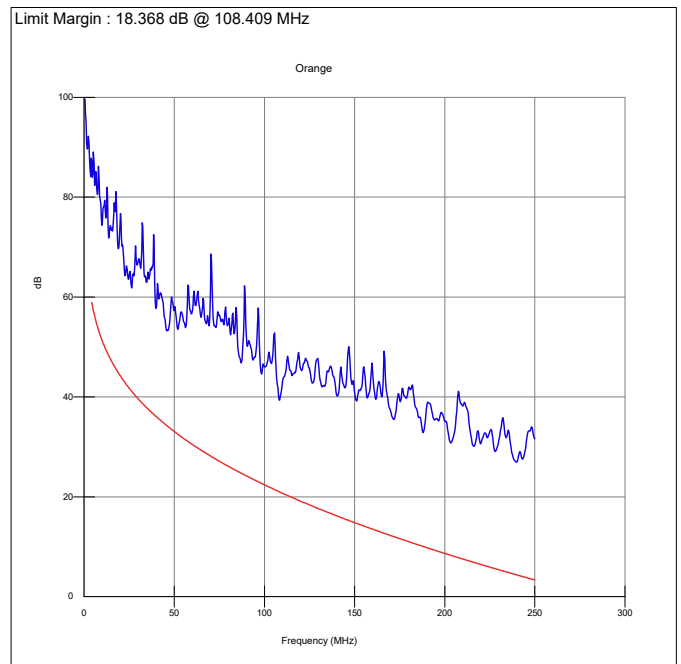
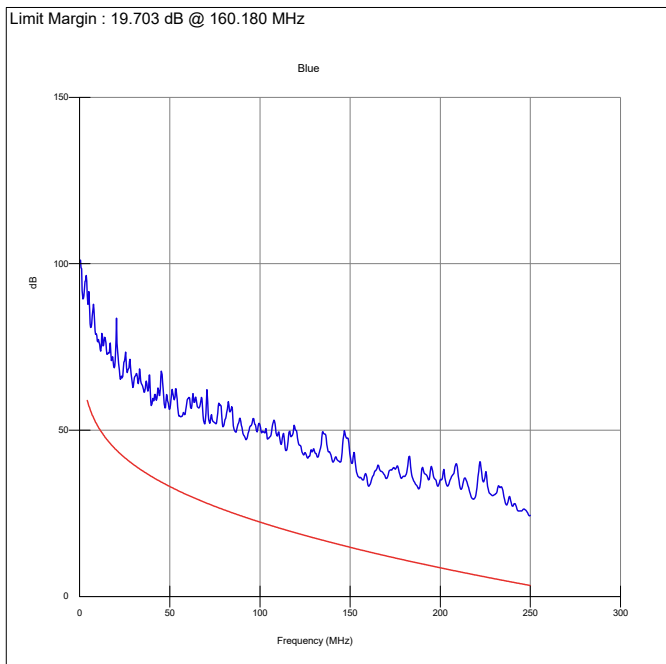
ACR - Far End

Client	Ningbo Feynman	Report No	103777015CRT-003b
Specification	ISO-IEC 11801-1 Cat 6 Cable	Length (m)	100.
Part No	FA0423AUC6V	Temperature	23 °C
Test Started	12/19/2018 4:11:03 PM	Test Status	Complies
Description	4 pair 23 AWG UTP Solid		
Operator Name	David Ayers		



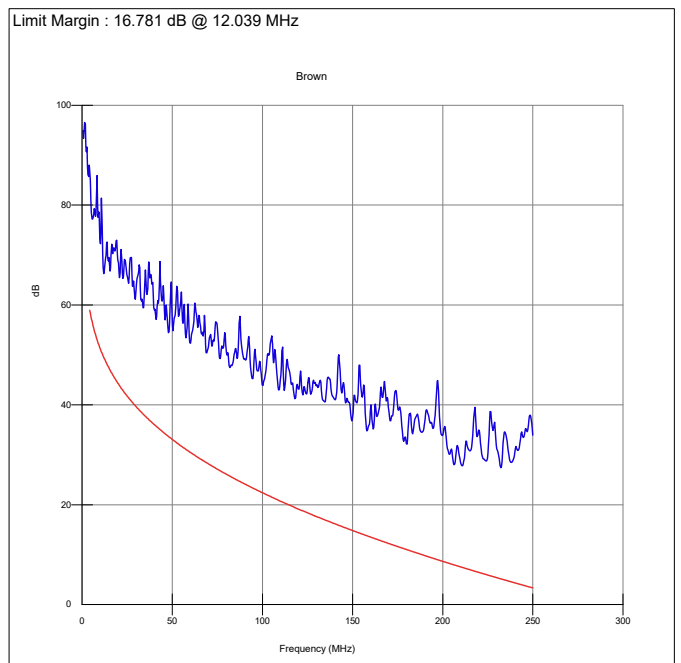
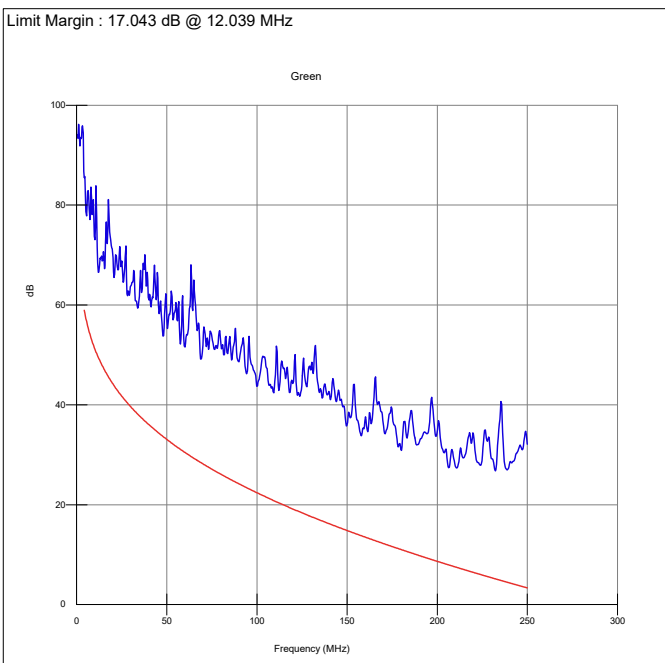
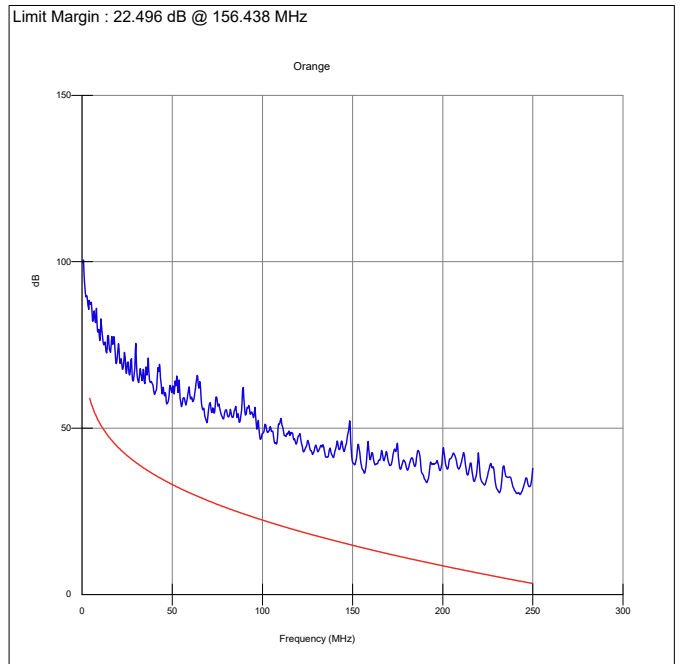
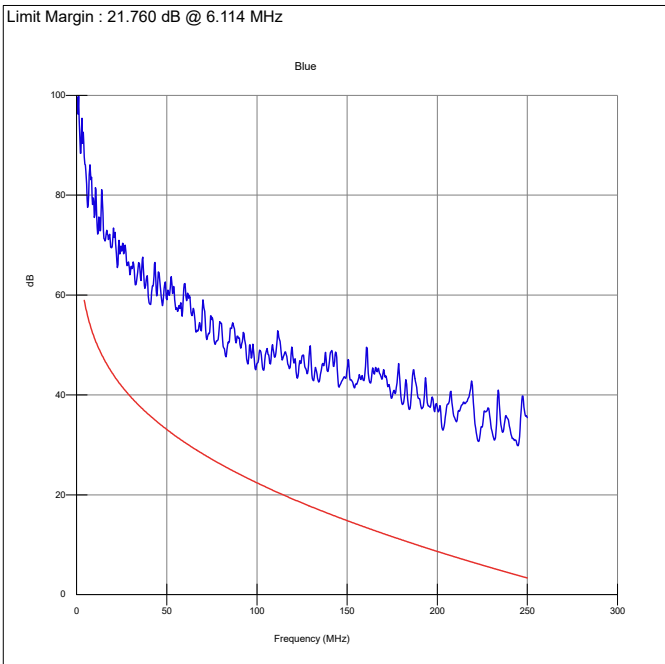
PSACR - Near End

Client	Ningbo Feynman	Report No	103777015CRT-003b
Specification	ISO-IEC 11801-1 Cat 6 Cable	Length (m)	100.
Part No	FA0423AUC6V	Temperature	23 °C
Test Started	12/19/2018 4:11:03 PM	Test Status	Complies
Description	4 pair 23 AWG UTP Solid		
Operator Name	David Ayers		



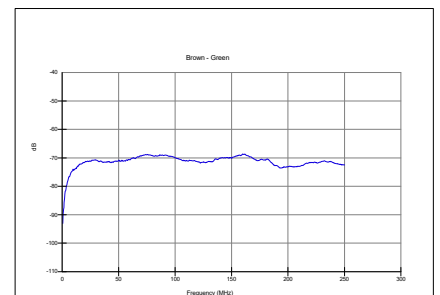
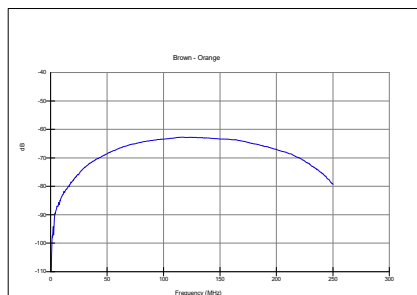
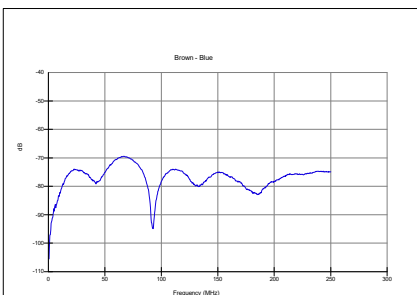
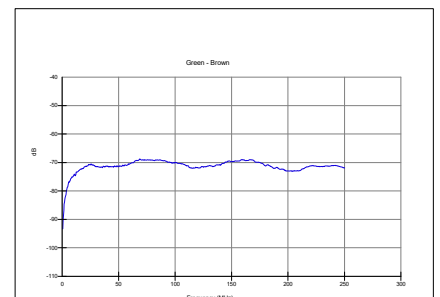
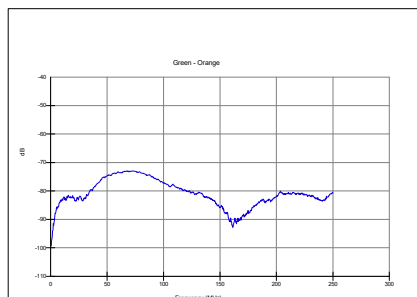
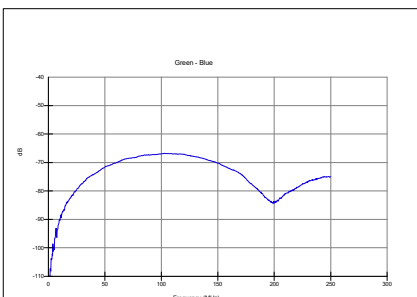
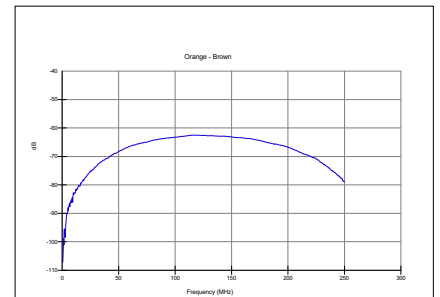
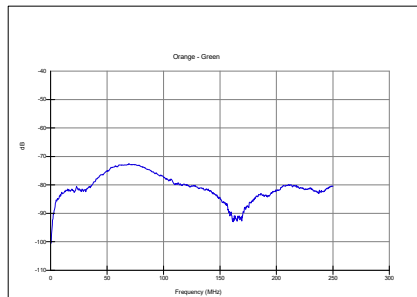
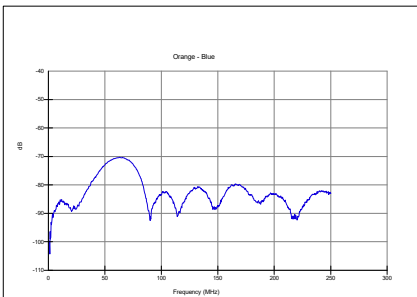
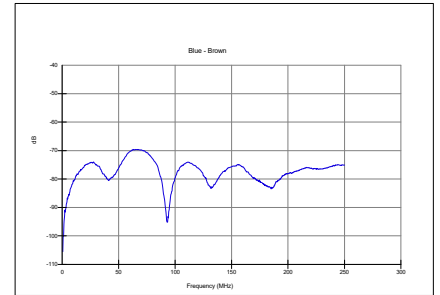
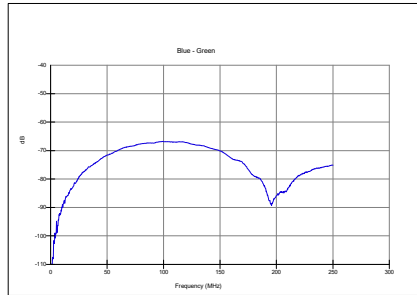
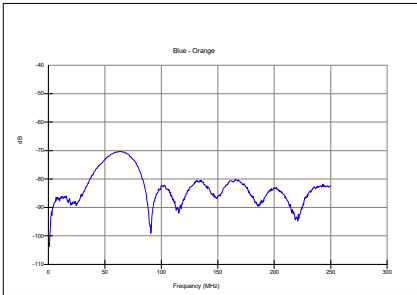
PSACR - Far End

Client	Ningbo Feynman	Report No	103777015CRT-003b
Specification	ISO-IEC 11801-1 Cat 6 Cable	Length (m)	100.
Part No	FA0423AUC6V	Temperature	23 °C
Test Started	12/19/2018 4:11:03 PM	Test Status	Complies
Description	4 pair 23 AWG UTP Solid		
Operator Name	David Ayers		



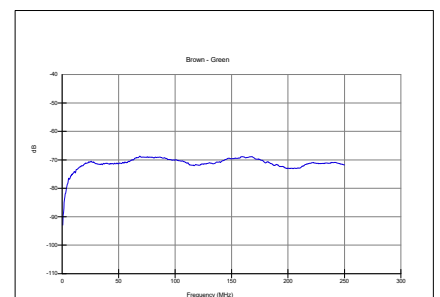
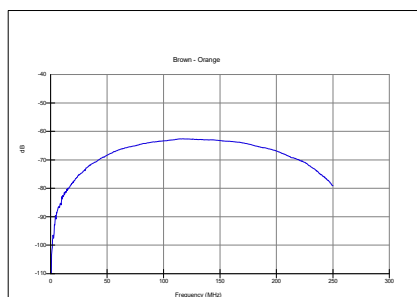
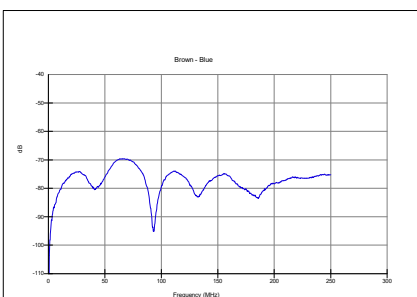
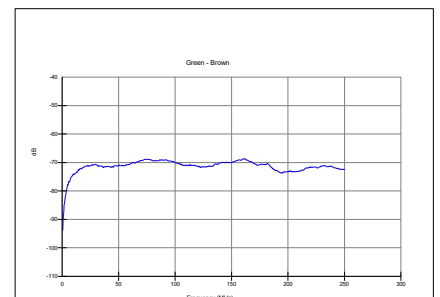
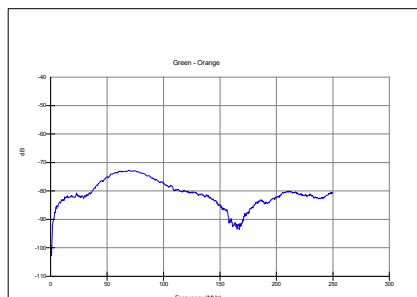
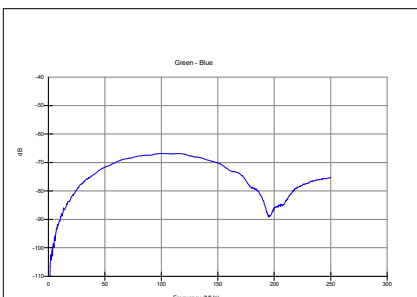
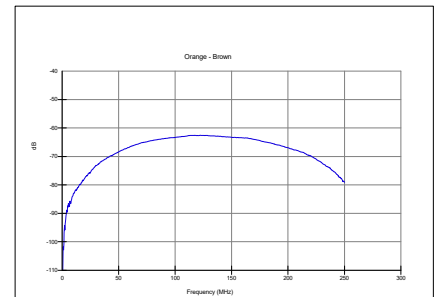
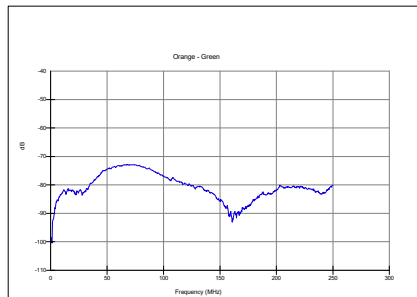
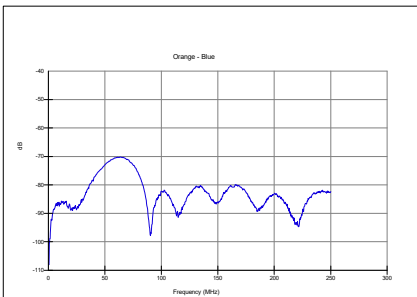
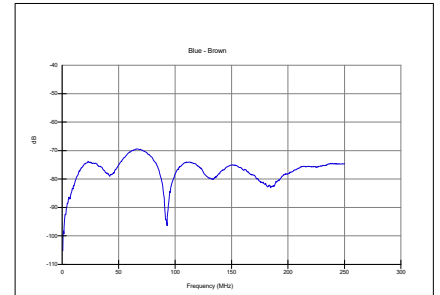
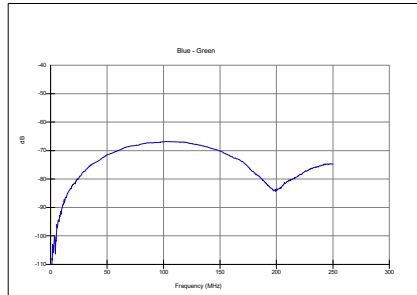
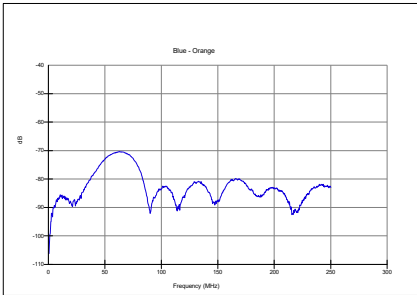
FEXT - Near End

Client	Ningbo Feynman	Report No	103777015CRT-003b
Specification	ISO-IEC 11801-1 Cat 6 Cable		
Part No	FA0423AUC6V	Length (m)	100.
Test Started	12/19/2018 4:11:03 PM	Temperature	23 °C
Description	4 pair 23 AWG UTP Solid		
Operator Name	David Ayers	Test Status	Complies



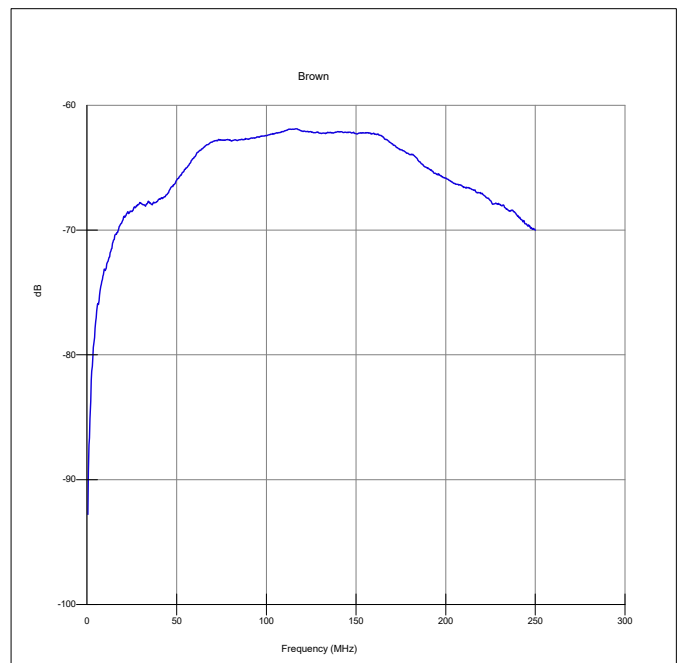
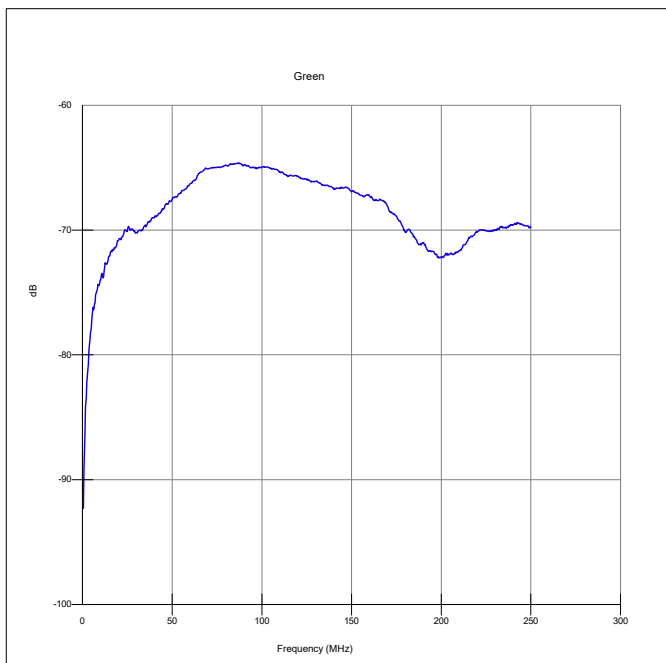
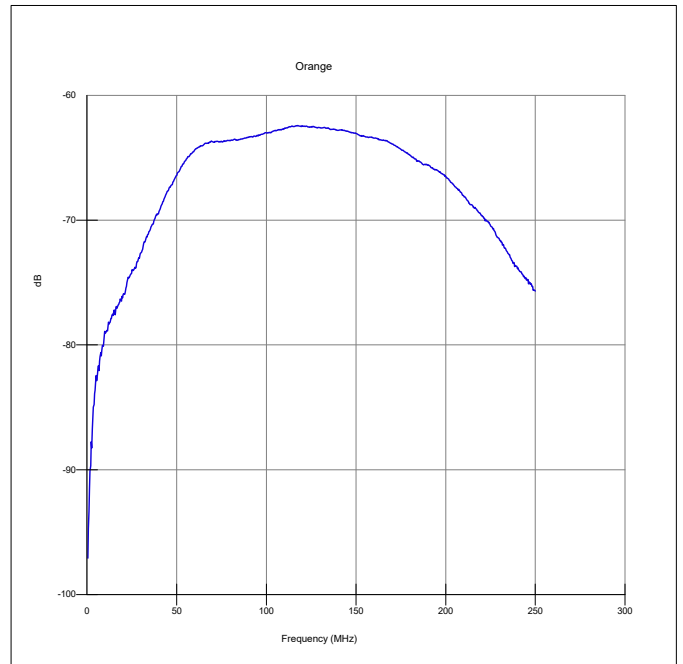
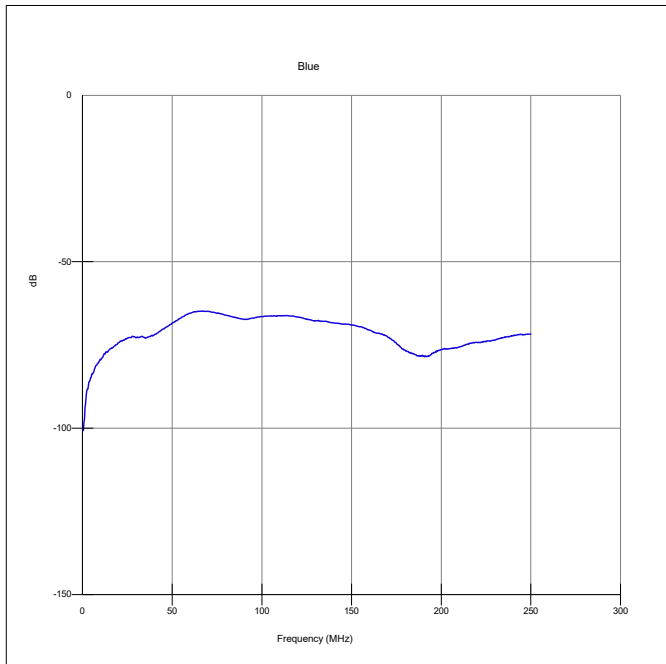
FEXT - Far End

Client	Ningbo Feynman	Report No	103777015CRT-003b
Specification	ISO-IEC 11801-1 Cat 6 Cable		
Part No	FA0423AUC6V	Length (m)	100.
Test Started	12/19/2018 4:11:03 PM	Temperature	23 °C
Description	4 pair 23 AWG UTP Solid		
Operator Name	David Ayers	Test Status	Complies



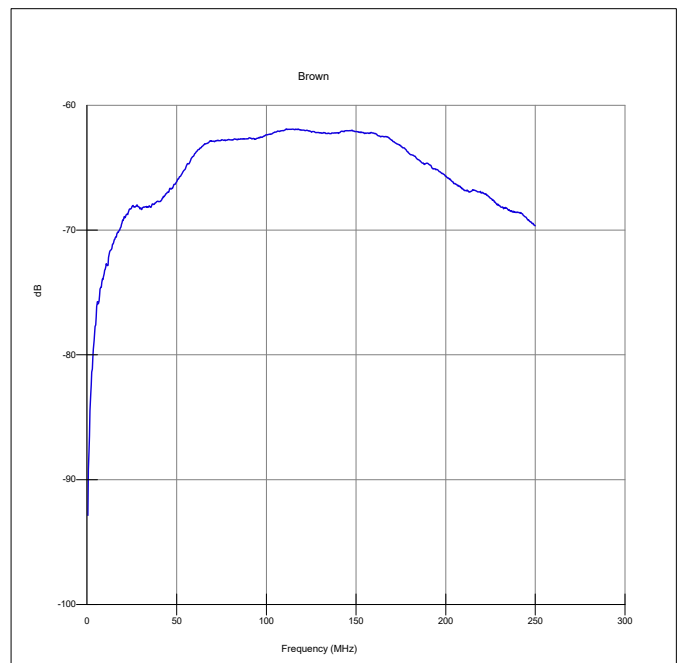
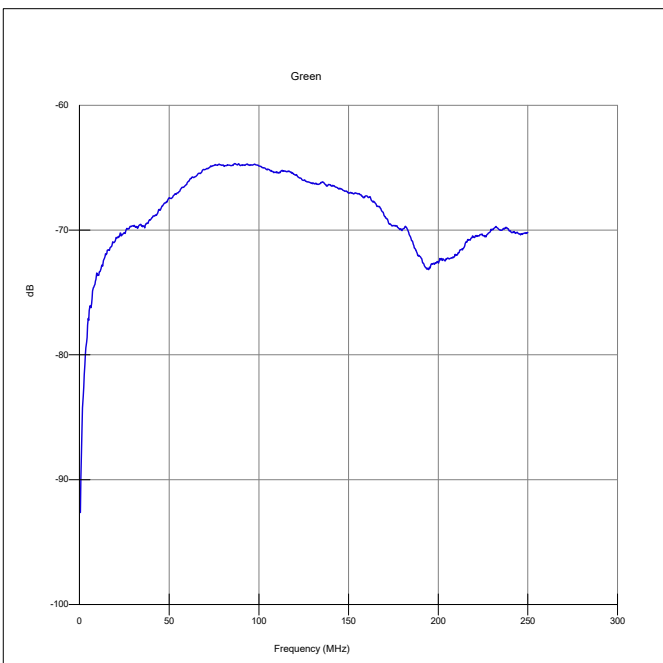
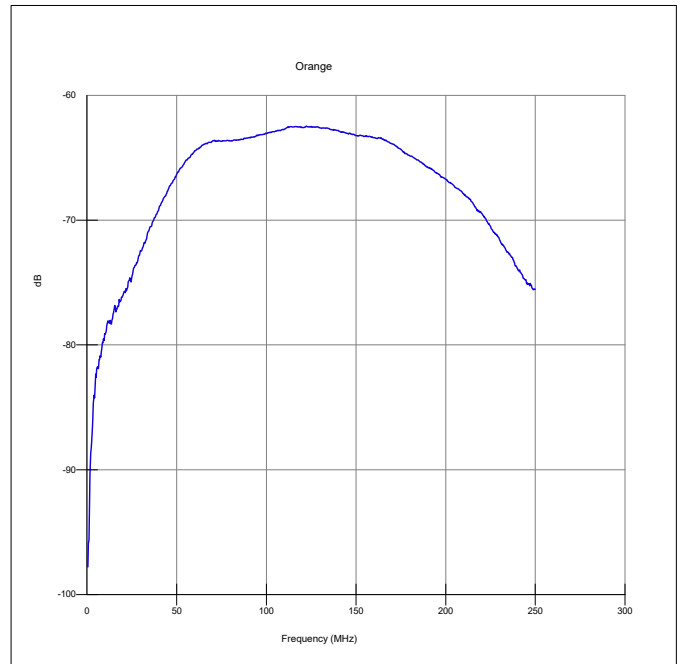
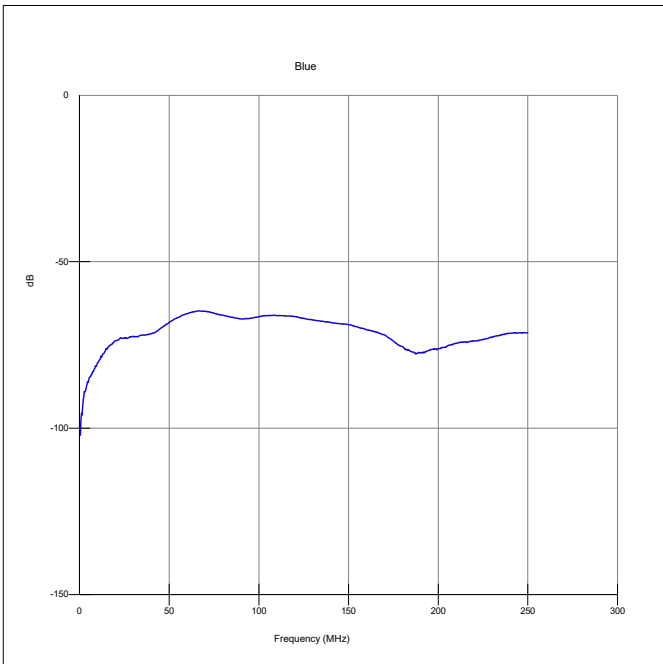
PSFEXT - Near End

Client	Ningbo Feynman	Report No	103777015CRT-003b
Specification	ISO-IEC 11801-1 Cat 6 Cable	Length (m)	100.
Part No	FA0423AUC6V	Temperature	23 °C
Test Started	12/19/2018 4:11:03 PM	Test Status	Complies
Description	4 pair 23 AWG UTP Solid		
Operator Name	David Ayers		



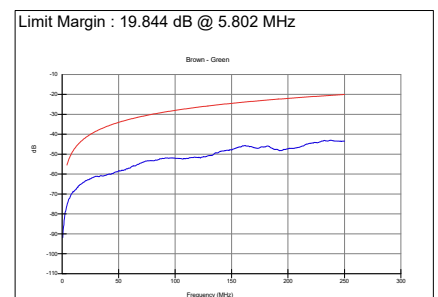
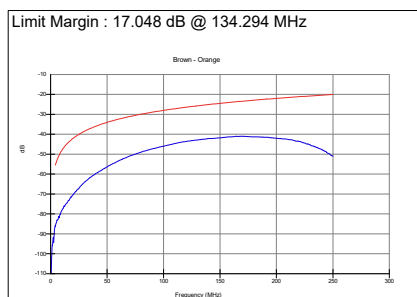
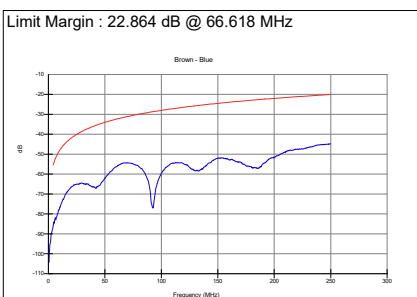
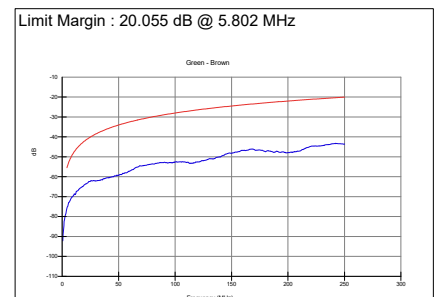
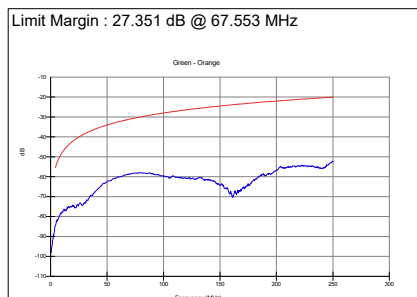
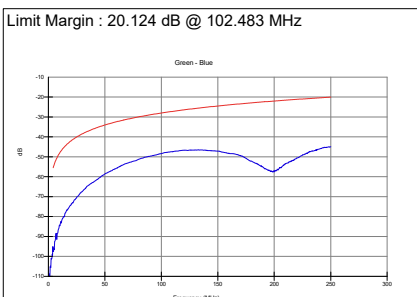
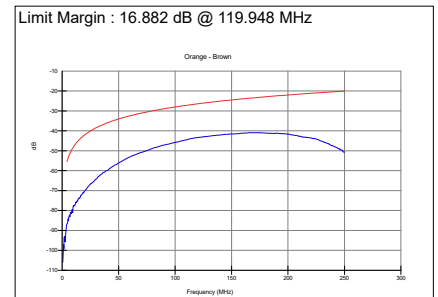
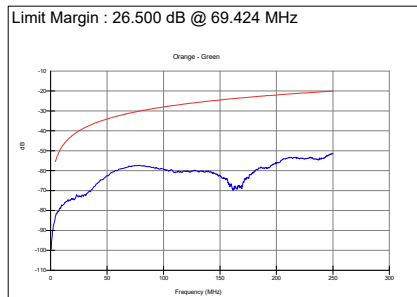
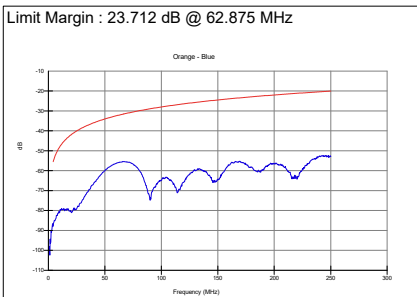
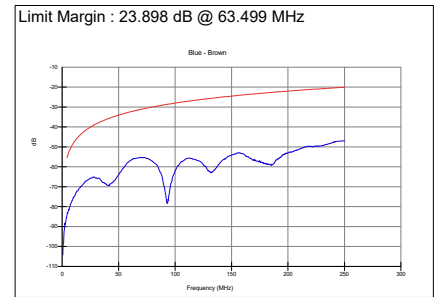
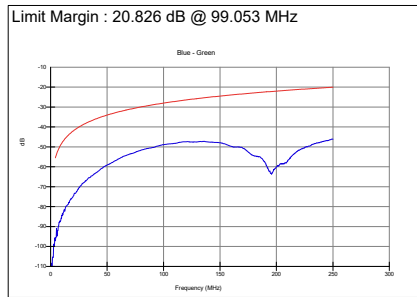
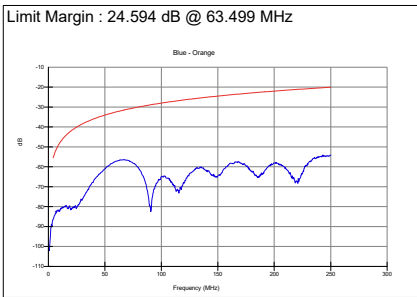
PSFEXT - Far End

Client	Ningbo Feynman	Report No	103777015CRT-003b
Specification	ISO-IEC 11801-1 Cat 6 Cable	Length (m)	100.
Part No	FA0423AUC6V	Temperature	23 °C
Test Started	12/19/2018 4:11:03 PM	Test Status	Complies
Description	4 pair 23 AWG UTP Solid		
Operator Name	David Ayers		



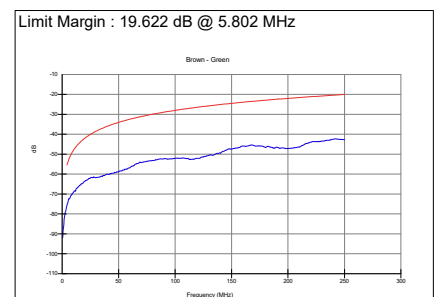
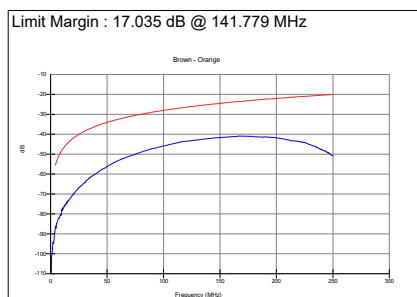
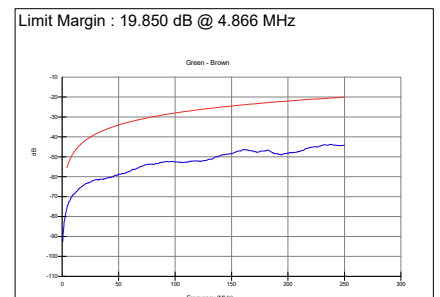
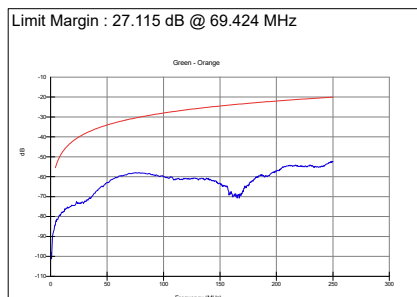
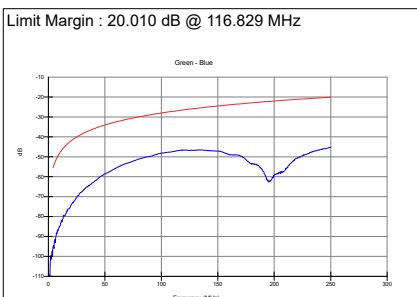
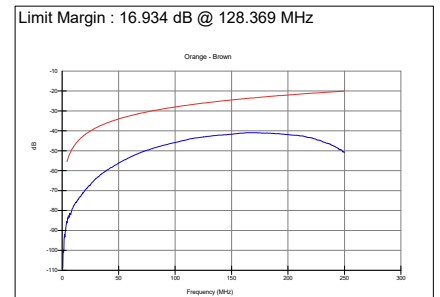
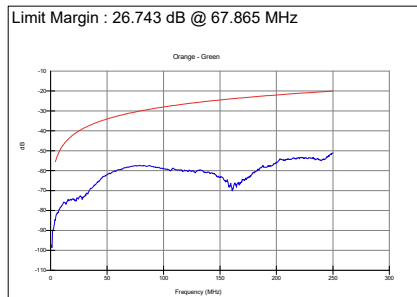
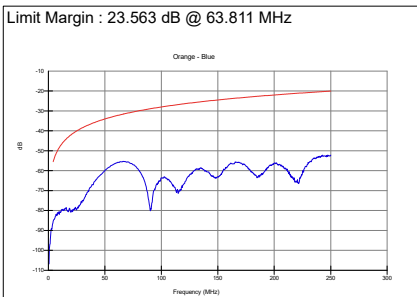
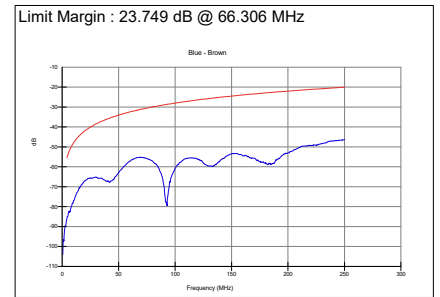
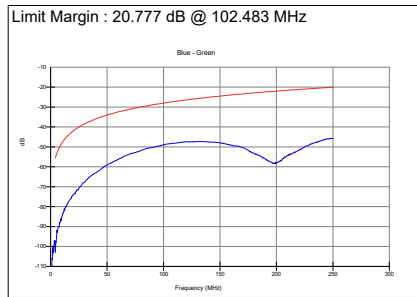
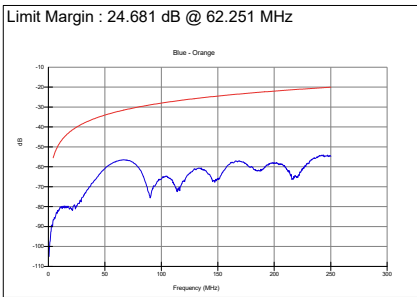
ACRF (ELFEXT) - Near End

Client	Ningbo Feynman	Report No	103777015CRT-003b
Specification	ISO-IEC 11801-1 Cat 6 Cable		
Part No	FA0423AUC6V	Length (m)	100.
Test Started	12/19/2018 4:11:03 PM	Temperature	23 °C
Description	4 pair 23 AWG UTP Solid		
Operator Name	David Ayers	Test Status	Complies



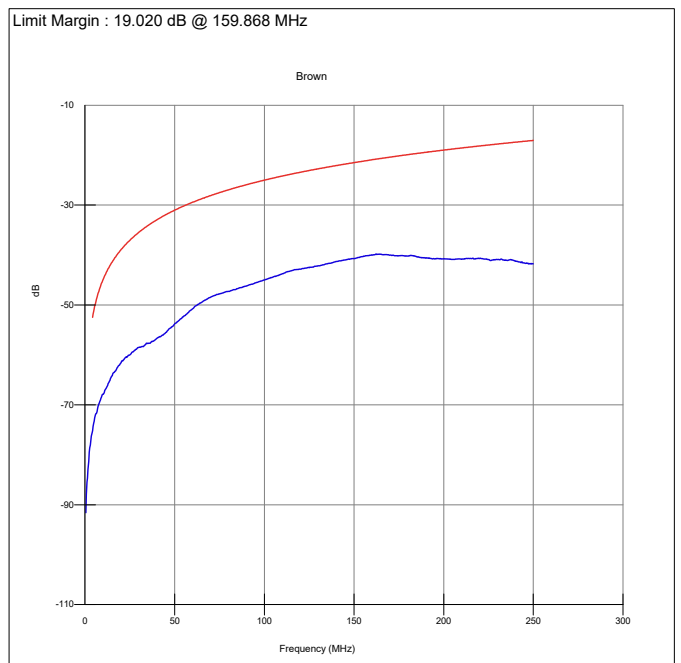
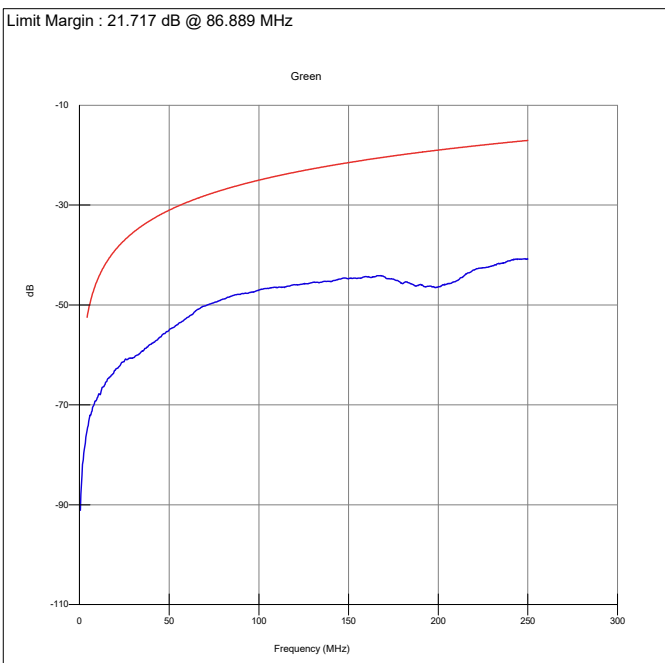
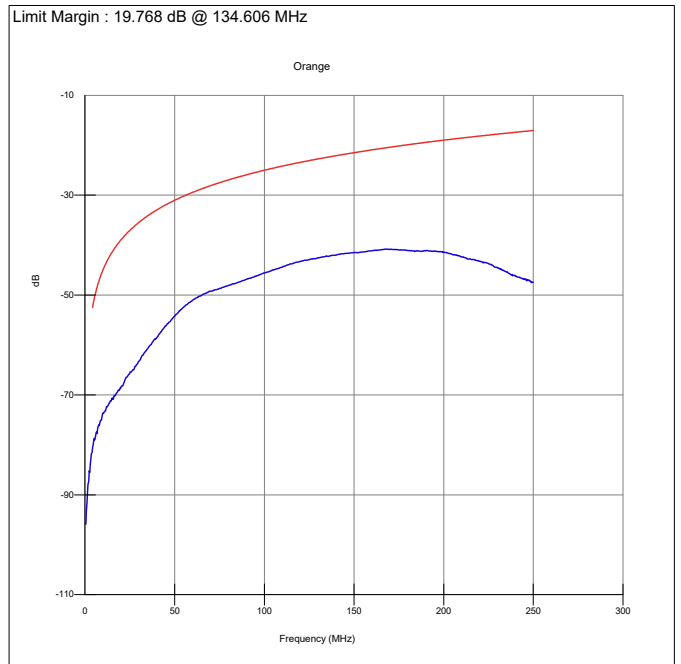
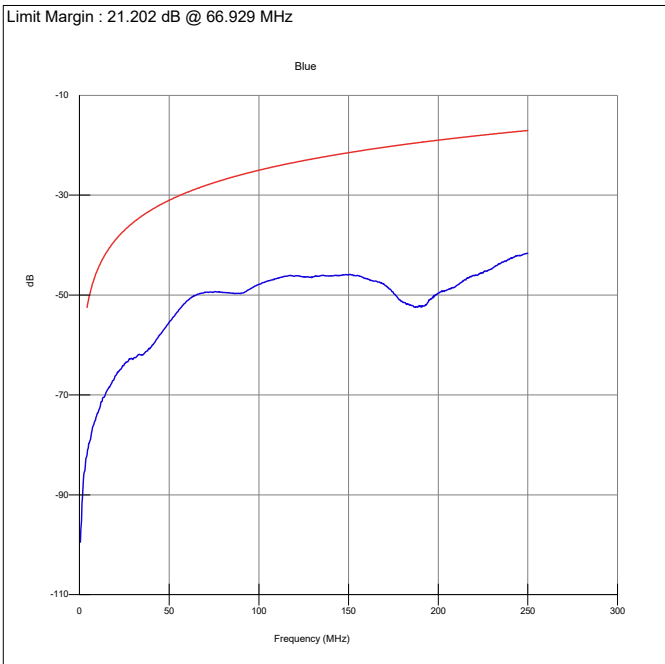
ACRF (ELFEXT) - Far End

Client	Ningbo Feynman	Report No	103777015CRT-003b
Specification	ISO-IEC 11801-1 Cat 6 Cable		
Part No	FA0423AUC6V	Length (m)	100.
Test Started	12/19/2018 4:11:03 PM	Temperature	23 °C
Description	4 pair 23 AWG UTP Solid		
Operator Name	David Ayers	Test Status	Complies



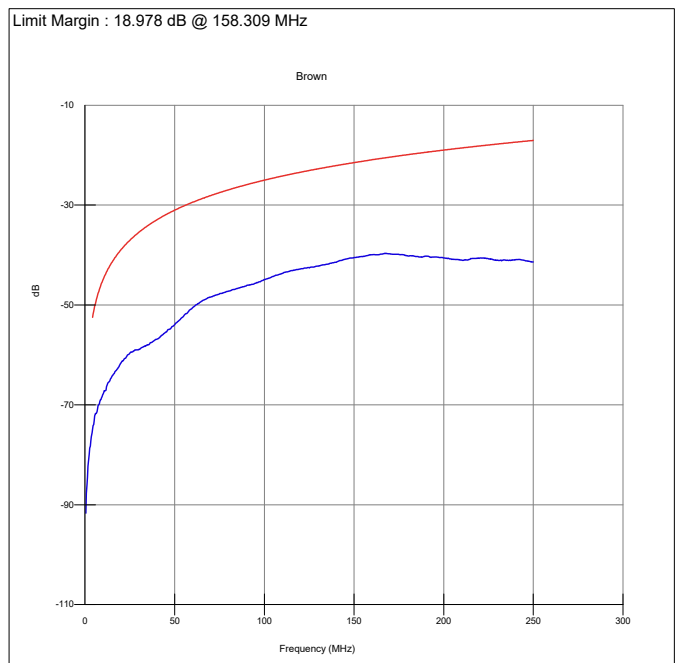
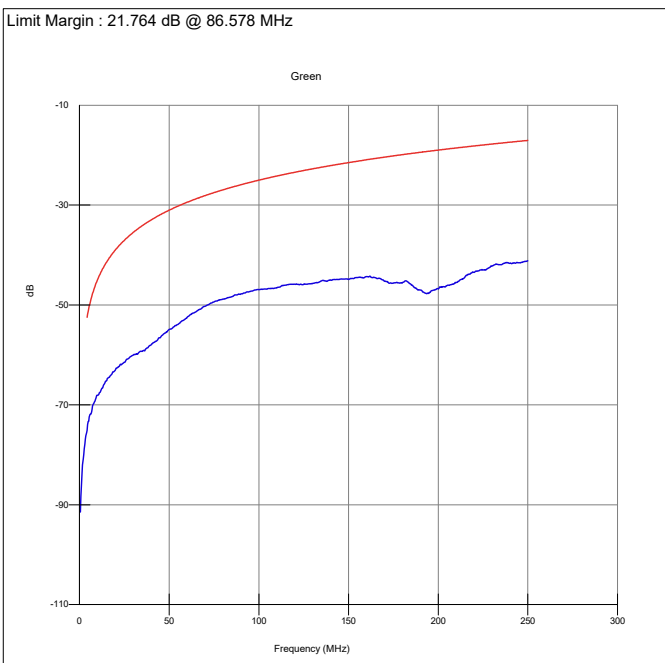
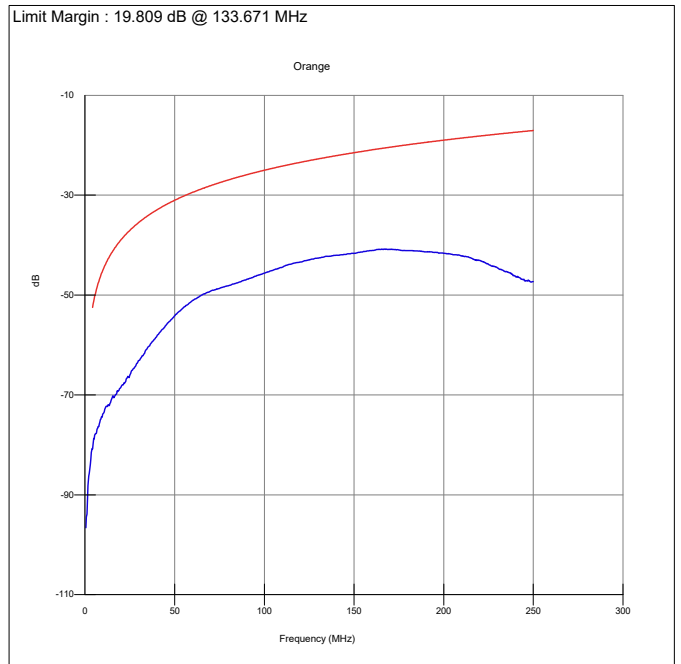
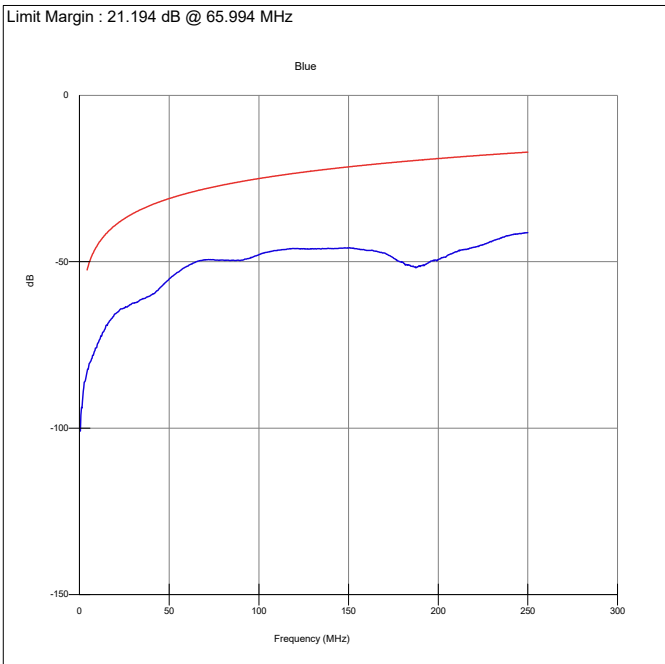
PSACRF (PSELFEXT) - Near End

Client	Ningbo Feynman	Report No	103777015CRT-003b
Specification	ISO-IEC 11801-1 Cat 6 Cable		
Part No	FA0423AUC6V	Length (m)	100.
Test Started	12/19/2018 4:11:03 PM	Temperature	23 °C
Description	4 pair 23 AWG UTP Solid		
Operator Name	David Ayers	Test Status	Complies



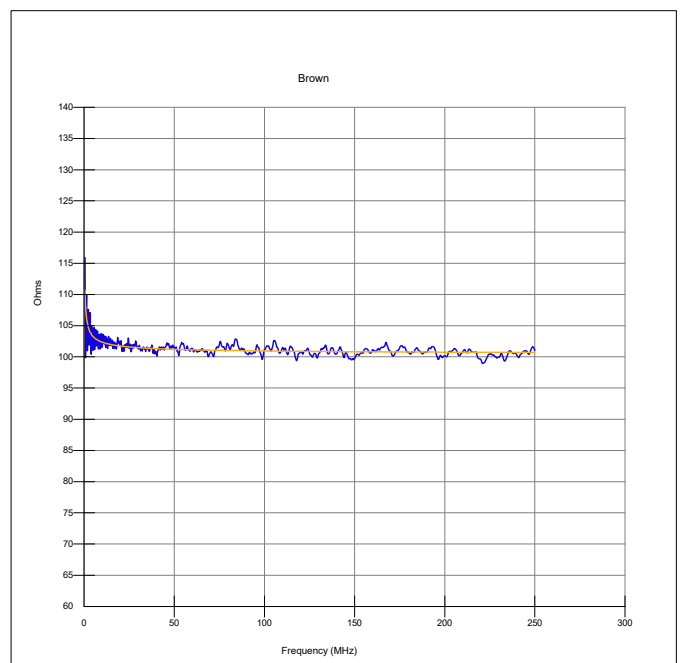
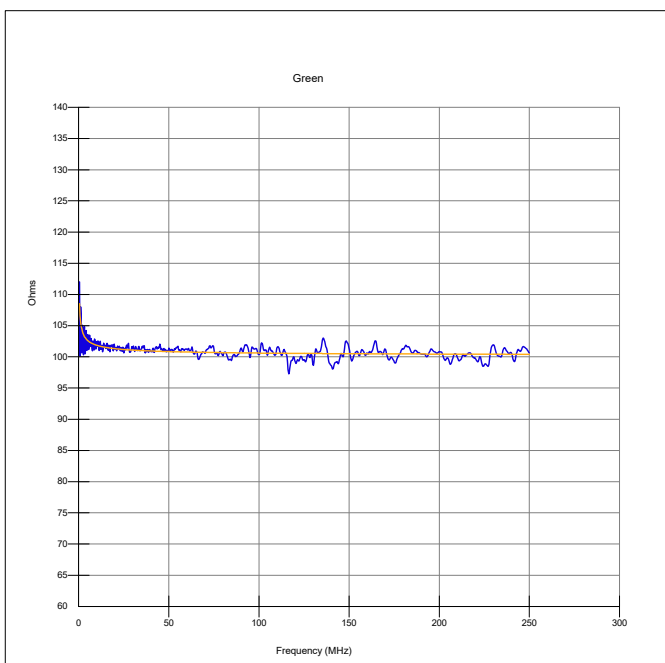
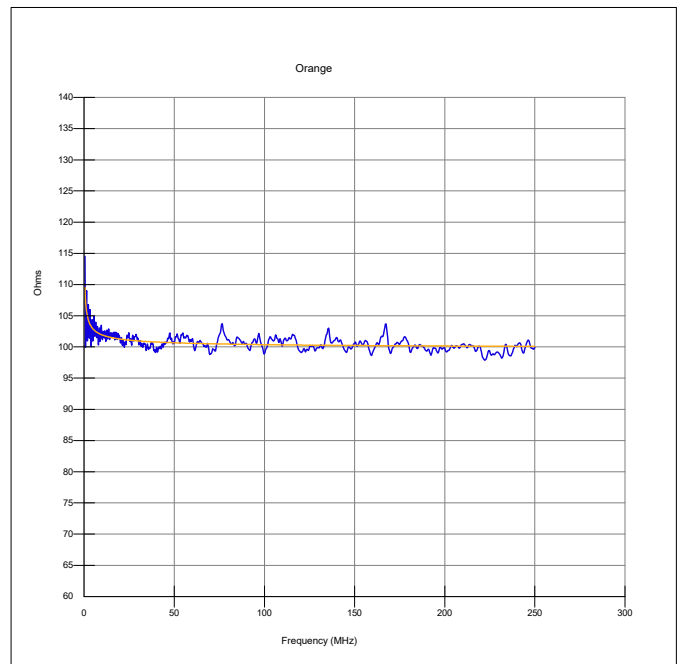
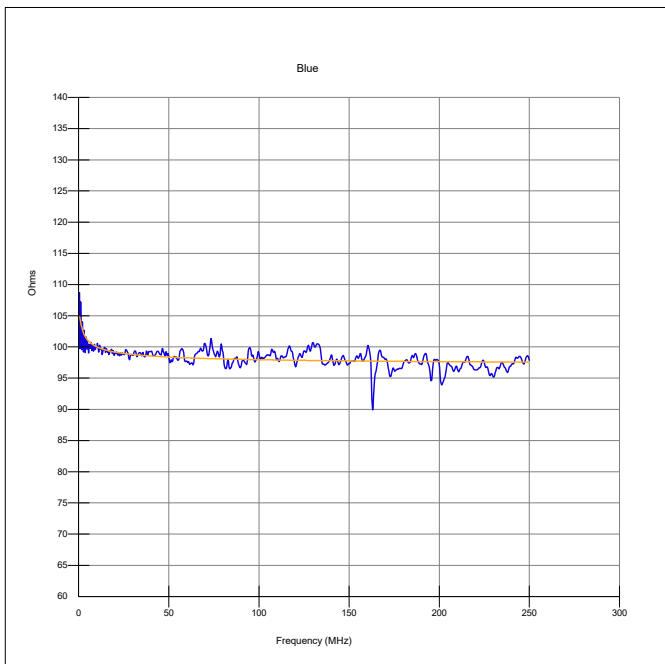
PSACRF (PSELFEXT) - Far End

Client	Ningbo Feynman	Report No	103777015CRT-003b
Specification	ISO-IEC 11801-1 Cat 6 Cable		
Part No	FA0423AUC6V	Length (m)	100.
Test Started	12/19/2018 4:11:03 PM	Temperature	23 °C
Description	4 pair 23 AWG UTP Solid		
Operator Name	David Ayers	Test Status	Complies



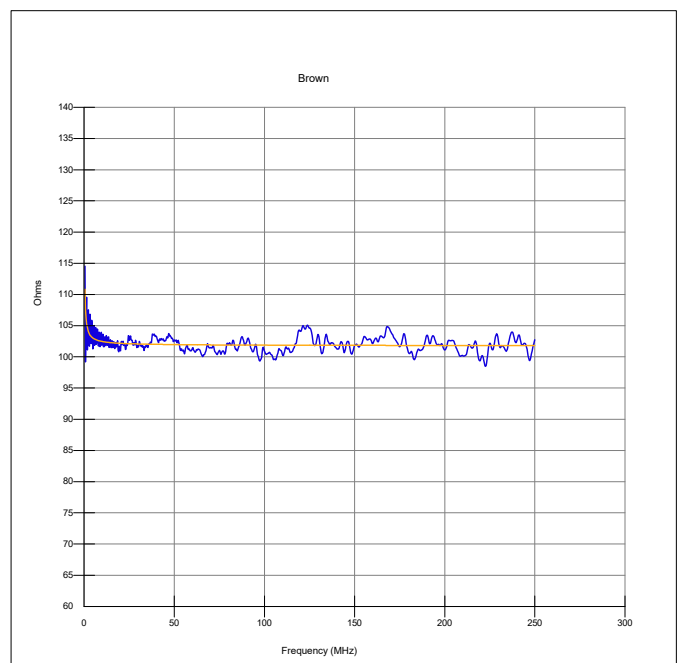
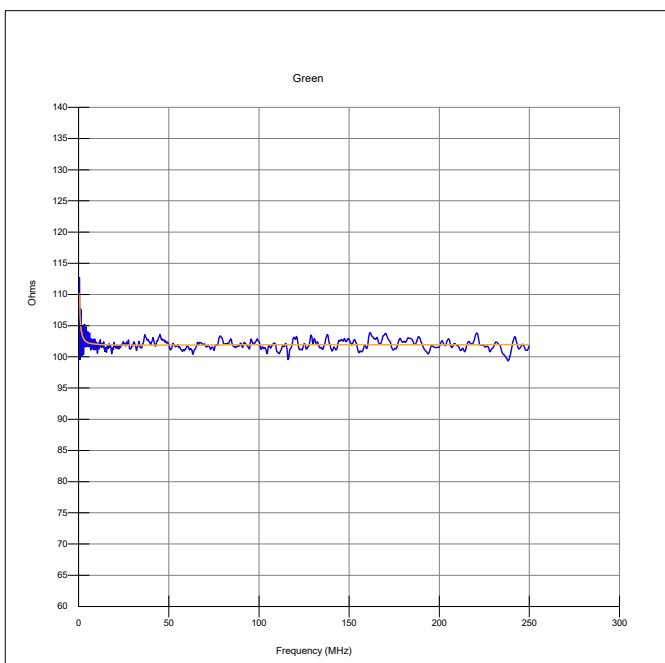
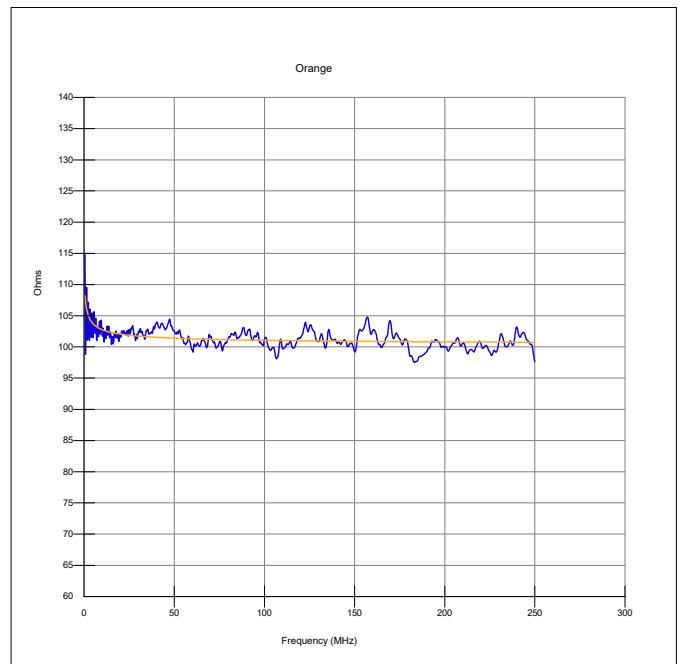
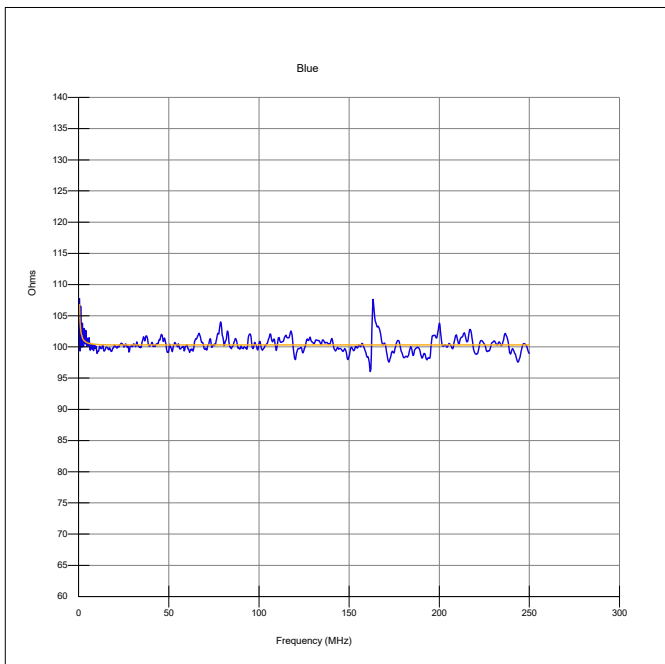
Impedance - Near End

Client	Ningbo Feynman	Report No	103777015CRT-003b
Specification	ISO-IEC 11801-1 Cat 6 Cable	Length (m)	100.
Part No	FA0423AUC6V	Temperature	23 °C
Test Started	12/19/2018 4:11:03 PM	Test Status	Complies
Description	4 pair 23 AWG UTP Solid		
Operator Name	David Ayers		



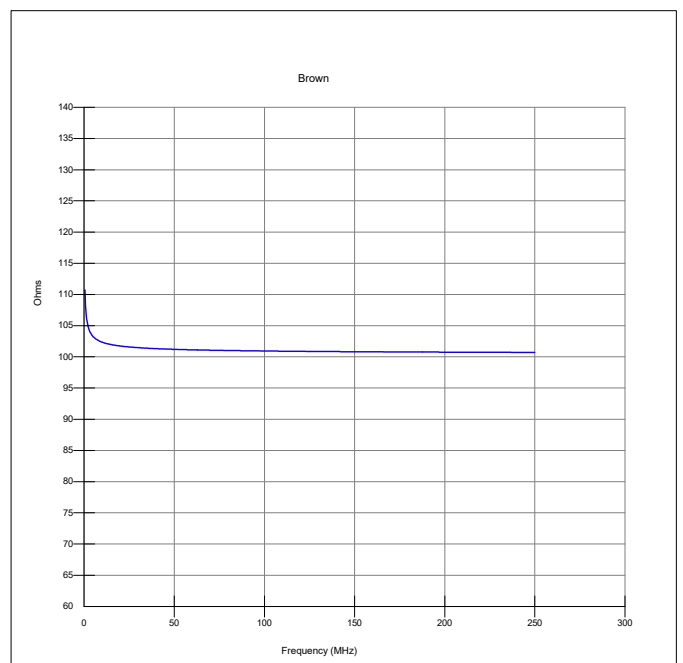
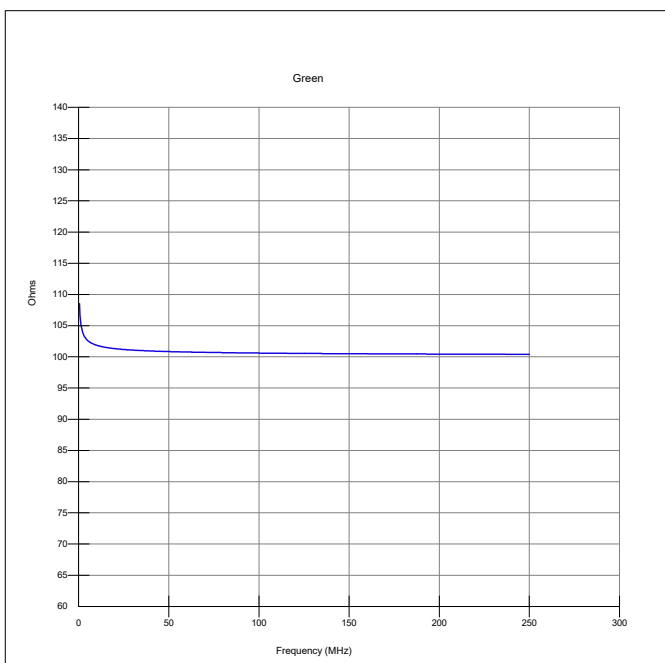
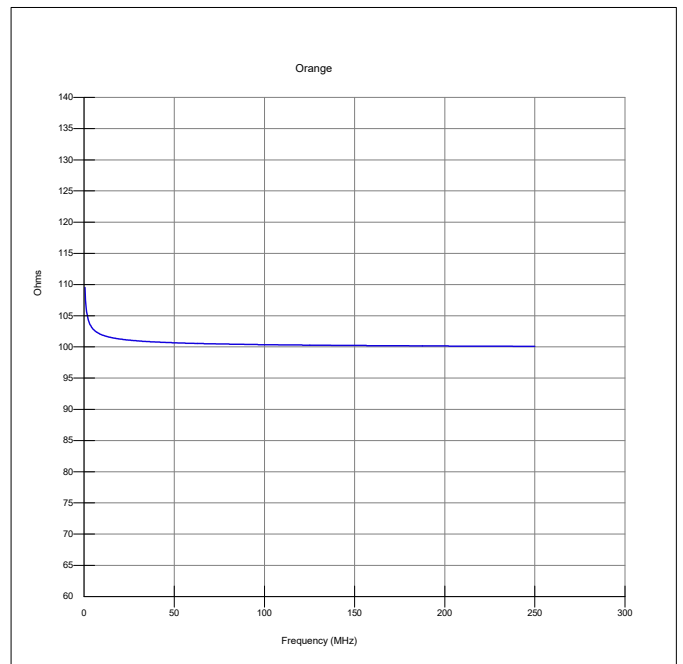
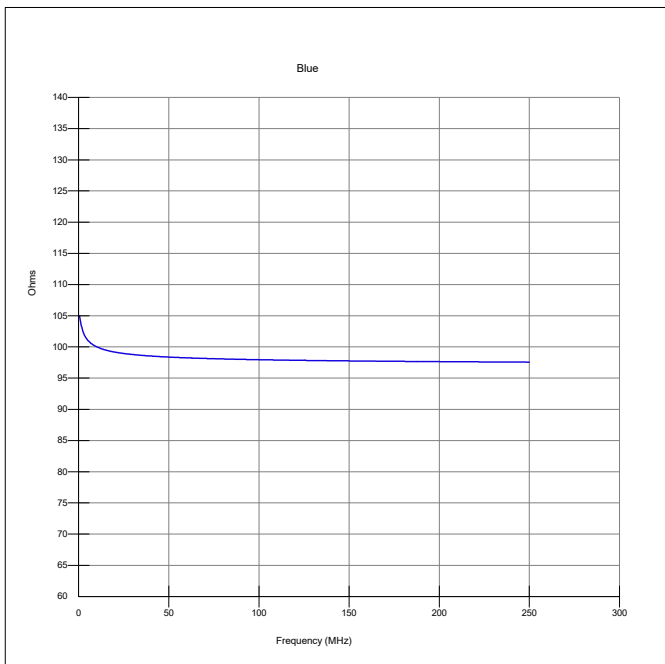
Impedance - Far End

Client	Ningbo Feynman	Report No	103777015CRT-003b
Specification	ISO-IEC 11801-1 Cat 6 Cable	Length (m)	100.
Part No	FA0423AUC6V	Temperature	23 °C
Test Started	12/19/2018 4:11:03 PM	Test Status	Complies
Description	4 pair 23 AWG UTP Solid		
Operator Name	David Ayers		



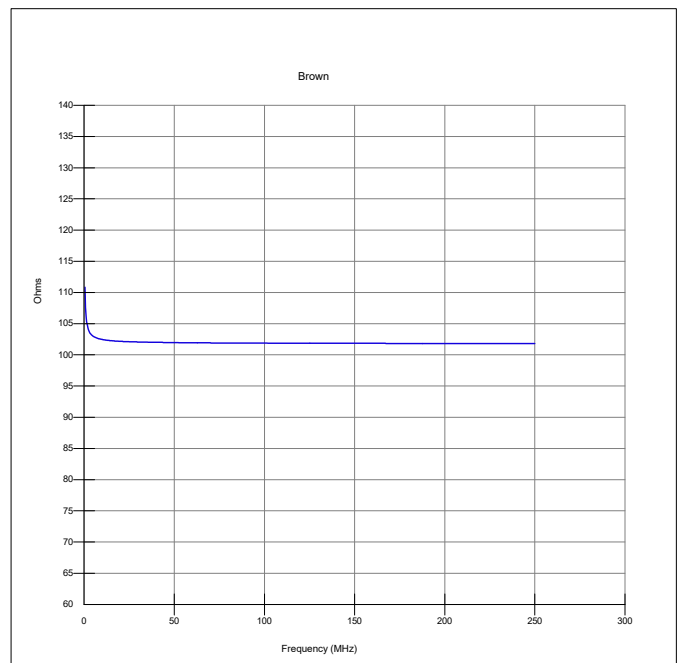
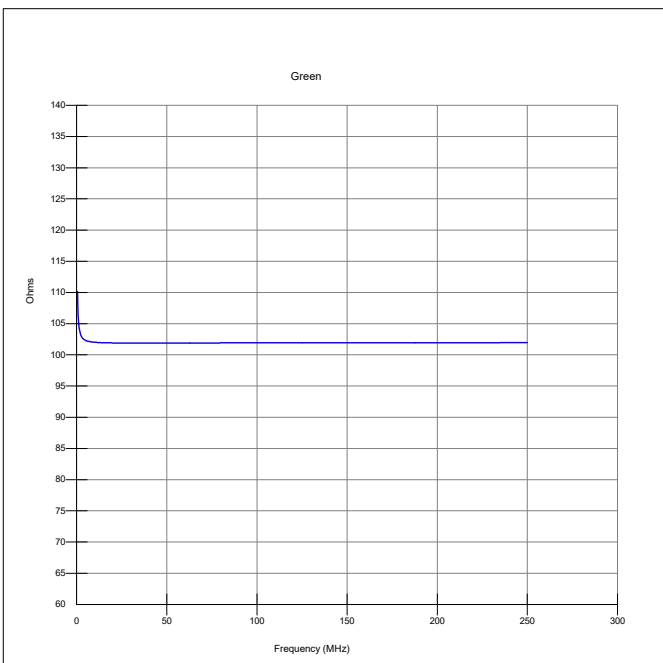
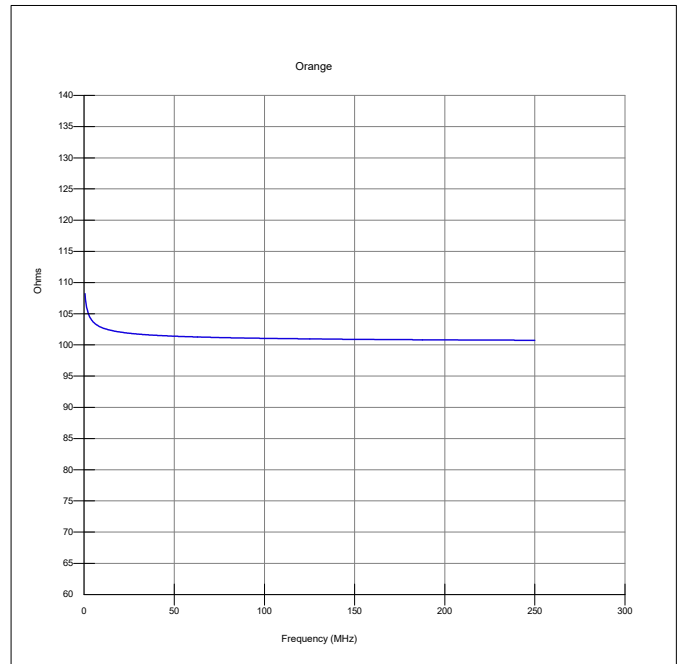
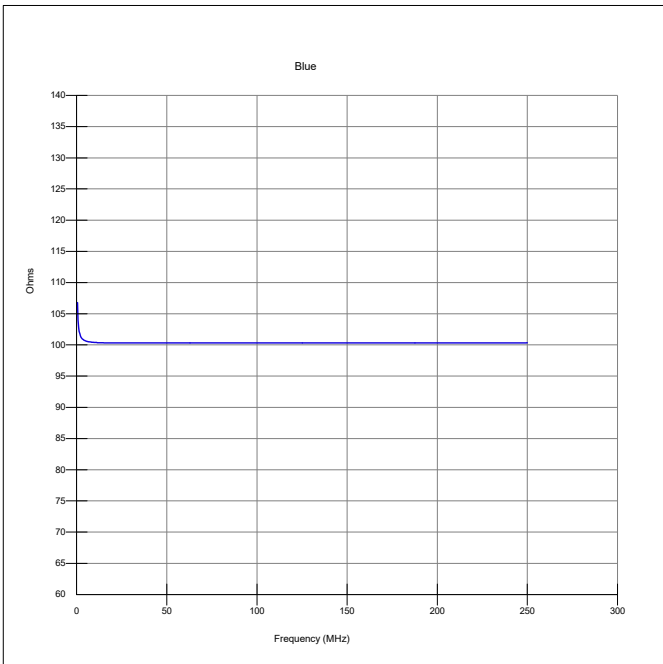
Fitted Impedance - Near End

Client	Ningbo Feynman	Report No	103777015CRT-003b
Specification	ISO-IEC 11801-1 Cat 6 Cable	Length (m)	100.
Part No	FA0423AUC6V	Temperature	23 °C
Test Started	12/19/2018 4:11:03 PM	Test Status	Complies
Description	4 pair 23 AWG UTP Solid		
Operator Name	David Ayers		



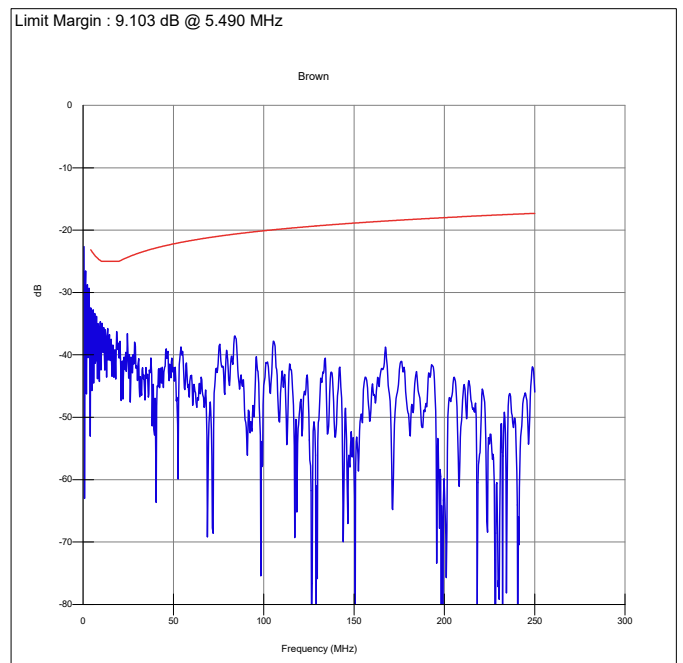
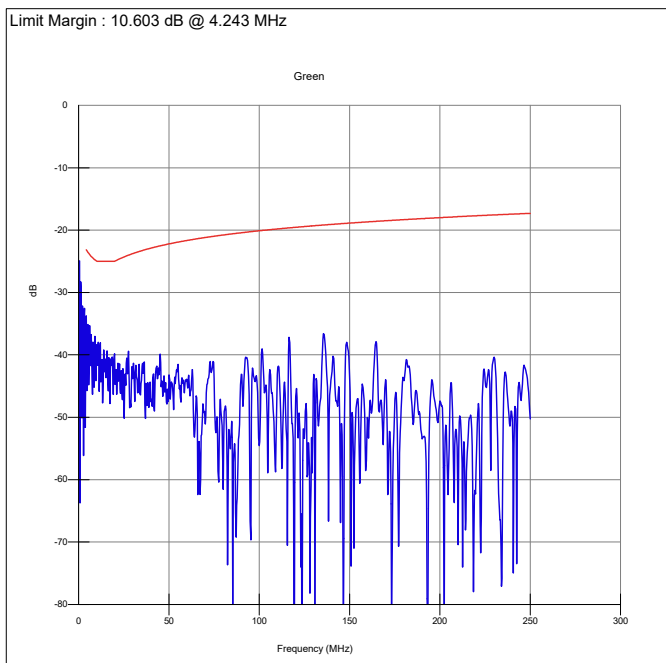
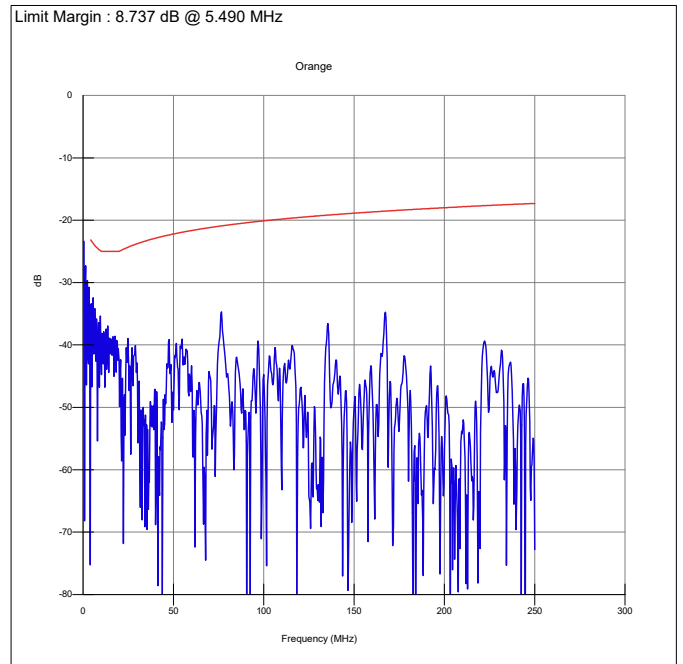
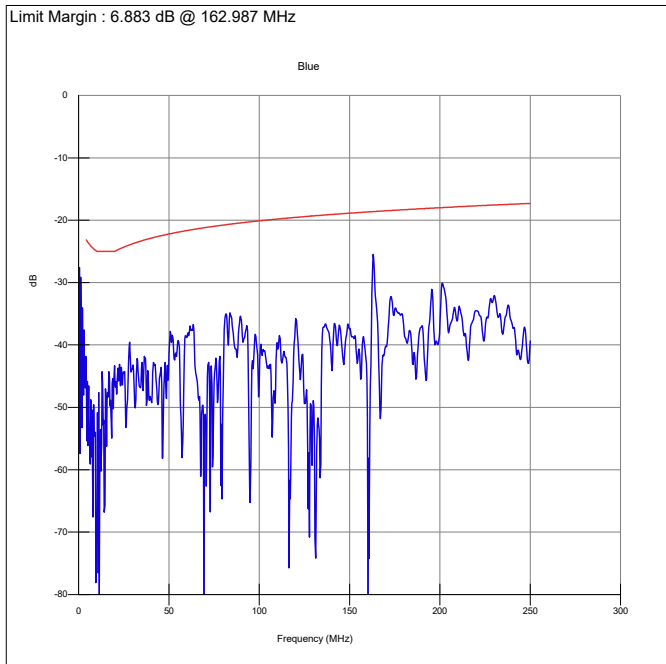
Fitted Impedance - Far End

Client	Ningbo Feynman	Report No	103777015CRT-003b
Specification	ISO-IEC 11801-1 Cat 6 Cable	Length (m)	100.
Part No	FA0423AUC6V	Temperature	23 °C
Test Started	12/19/2018 4:11:03 PM	Test Status	Complies
Description	4 pair 23 AWG UTP Solid		
Operator Name	David Ayers		



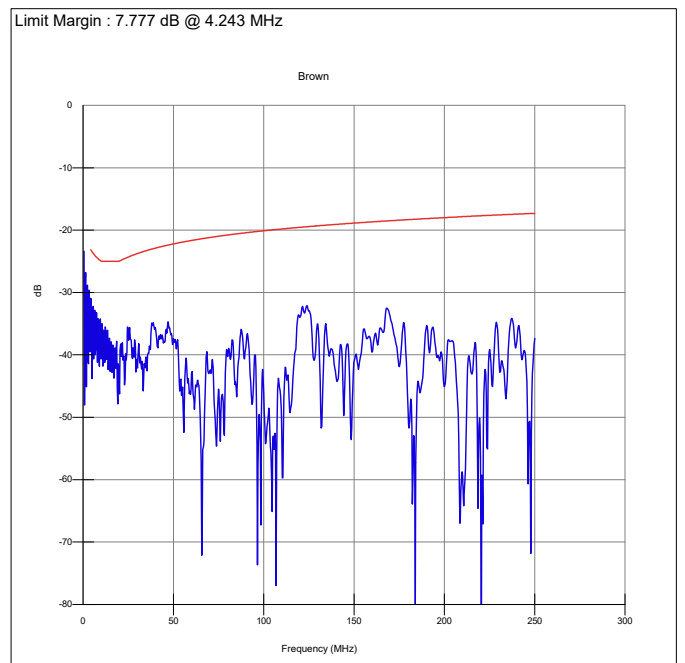
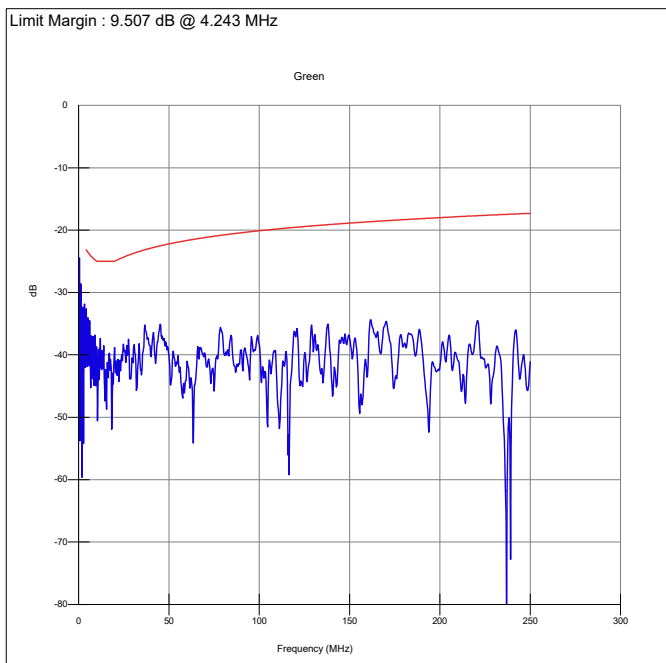
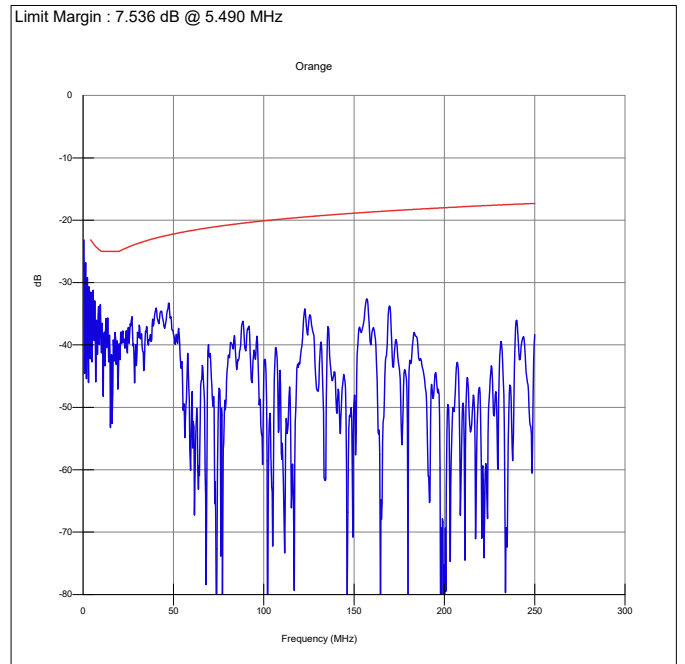
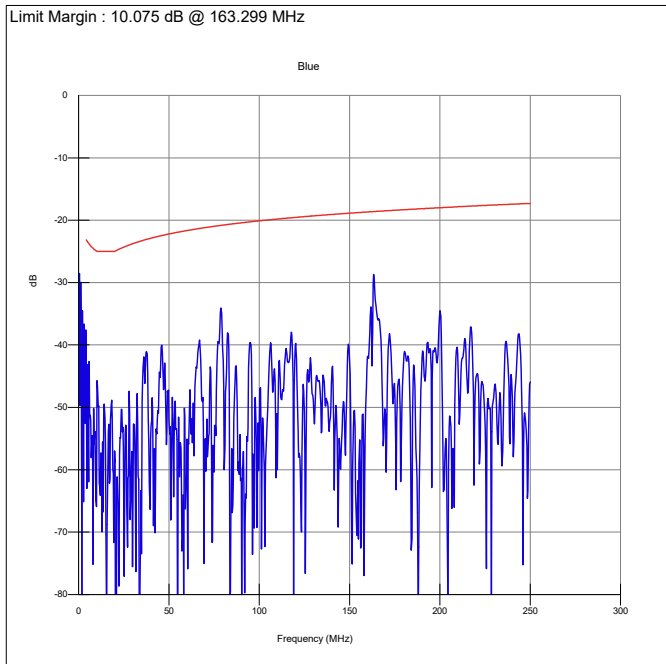
Return Loss - Near End

Client	Ningbo Feynman	Report No	103777015CRT-003b
Specification	ISO-IEC 11801-1 Cat 6 Cable	Length (m)	100.
Part No	FA0423AUC6V	Temperature	23 °C
Test Started	12/19/2018 4:11:03 PM	Test Status	Complies
Description	4 pair 23 AWG UTP Solid		
Operator Name	David Ayers		



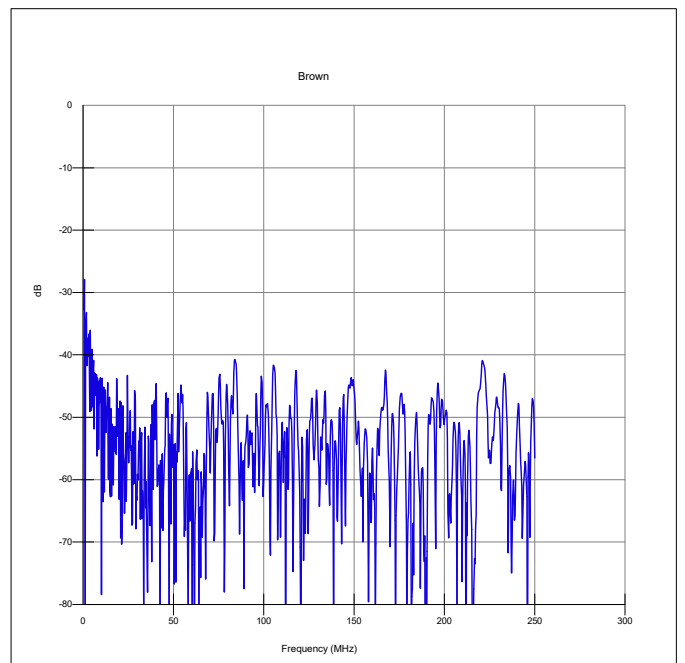
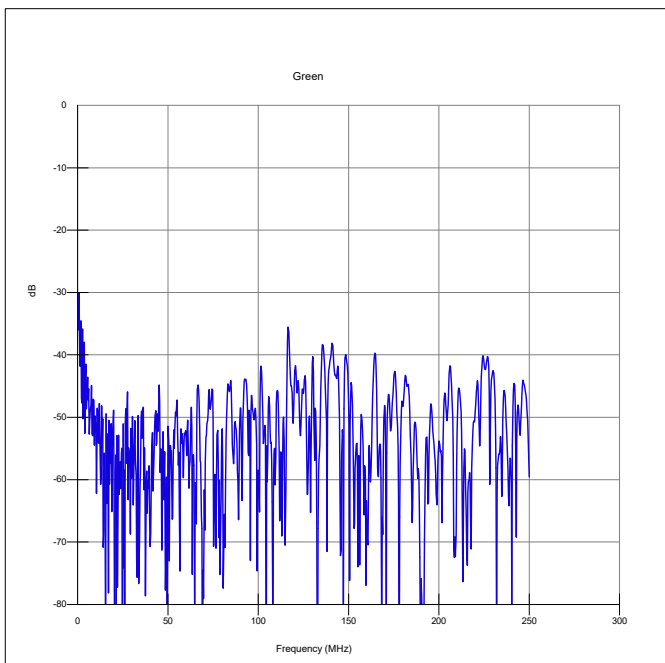
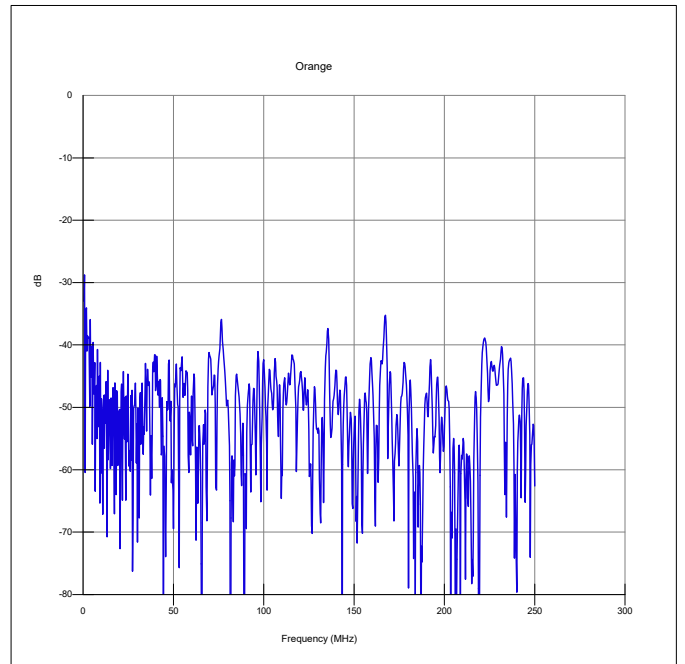
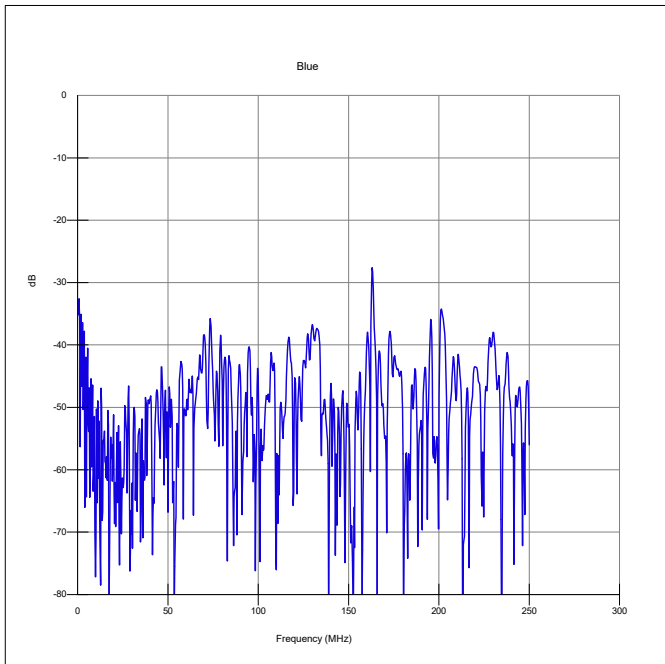
Return Loss - Far End

Client	Ningbo Feynman	Report No	103777015CRT-003b
Specification	ISO-IEC 11801-1 Cat 6 Cable	Length (m)	100.
Part No	FA0423AUC6V	Temperature	23 °C
Test Started	12/19/2018 4:11:03 PM	Test Status	Complies
Description	4 pair 23 AWG UTP Solid		
Operator Name	David Ayers		



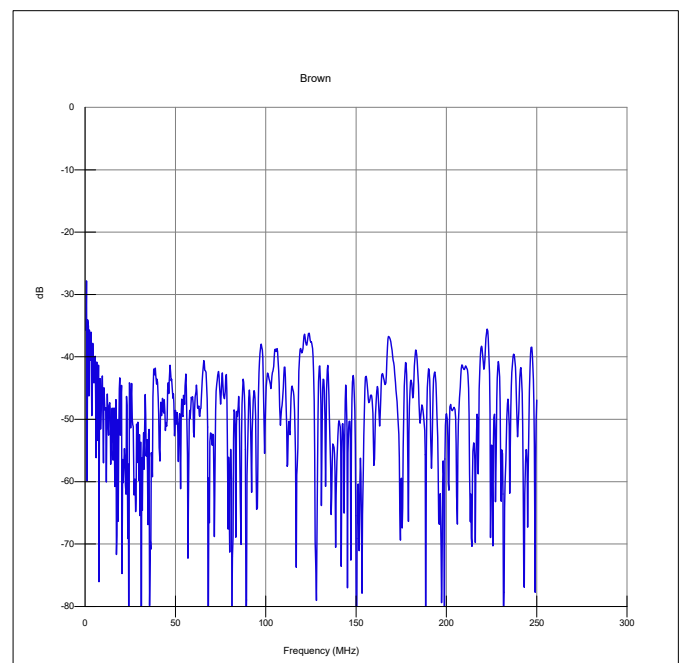
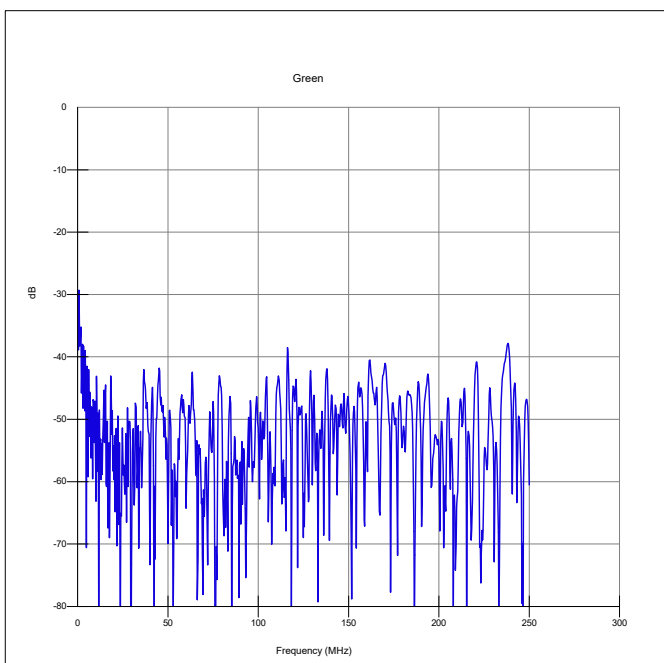
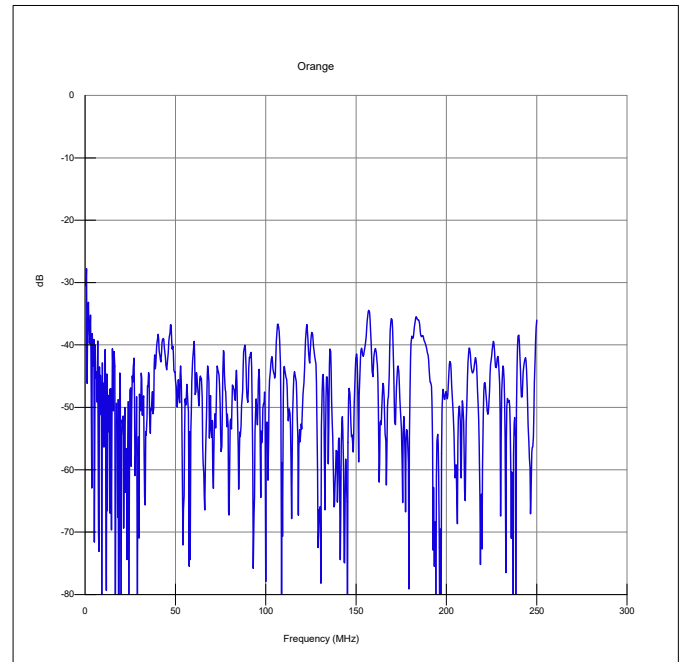
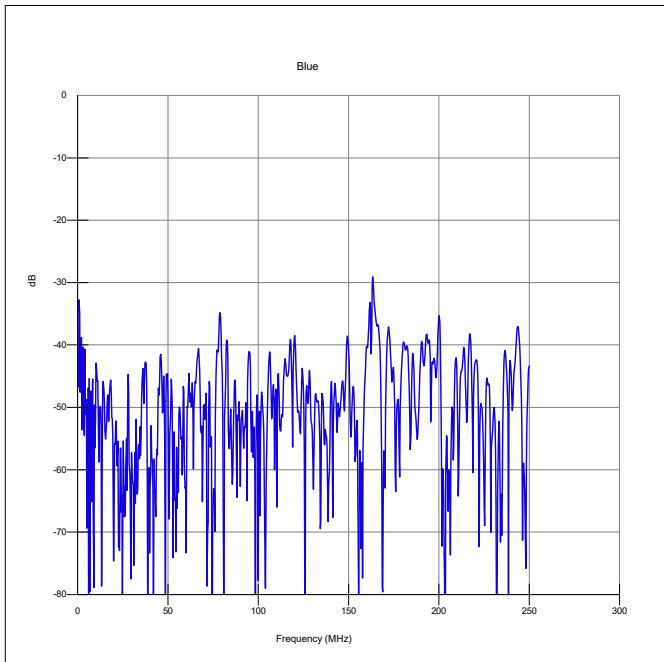
SRL - Near End

Client	Ningbo Feynman	Report No	103777015CRT-003b
Specification	ISO-IEC 11801-1 Cat 6 Cable	Length (m)	100.
Part No	FA0423AUC6V	Temperature	23 °C
Test Started	12/19/2018 4:11:03 PM	Test Status	Complies
Description	4 pair 23 AWG UTP Solid		
Operator Name	David Ayers		



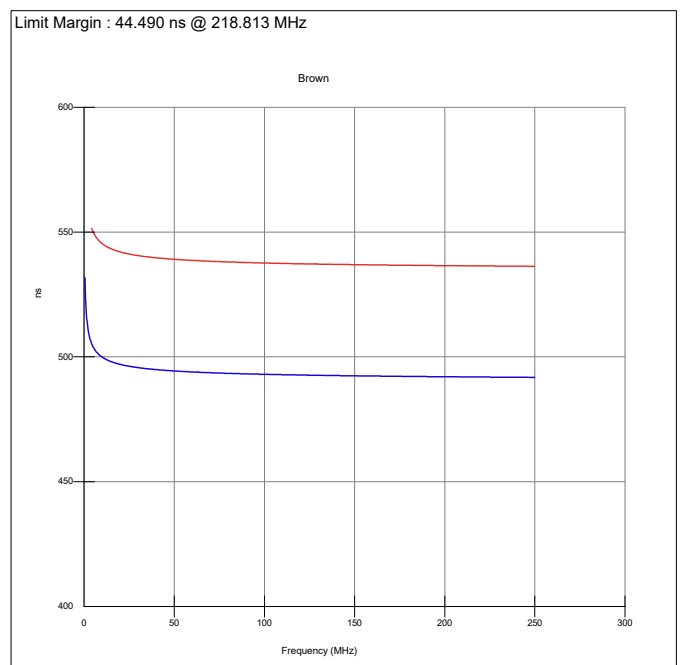
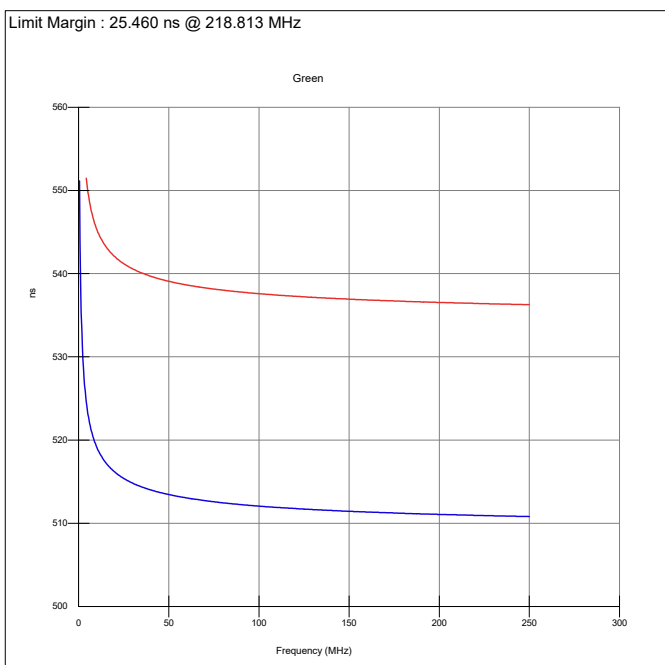
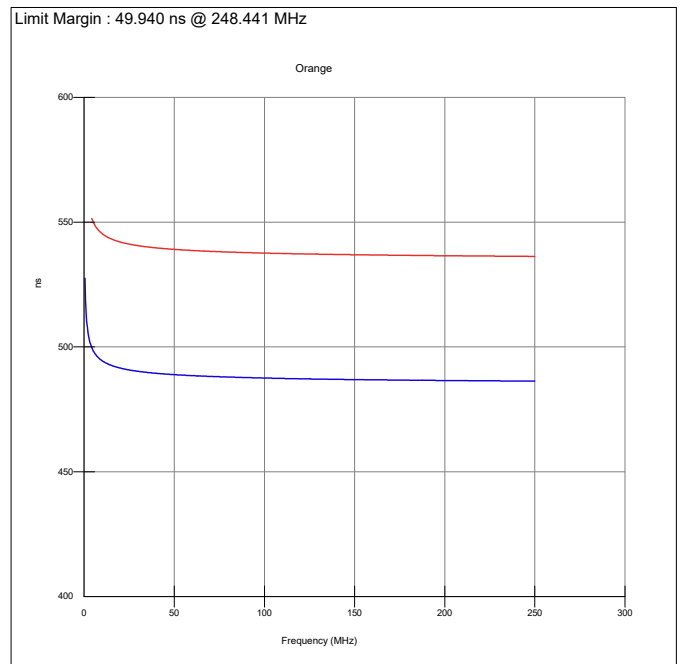
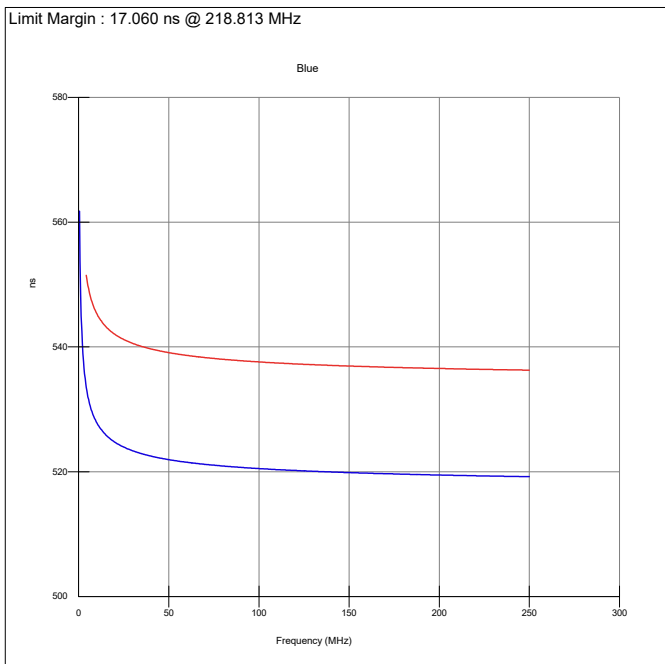
SRL - Far End

Client	Ningbo Feynman	Report No	103777015CRT-003b
Specification	ISO-IEC 11801-1 Cat 6 Cable	Length (m)	100.
Part No	FA0423AUC6V	Temperature	23 °C
Test Started	12/19/2018 4:11:03 PM	Test Status	Complies
Description	4 pair 23 AWG UTP Solid		
Operator Name	David Ayers		



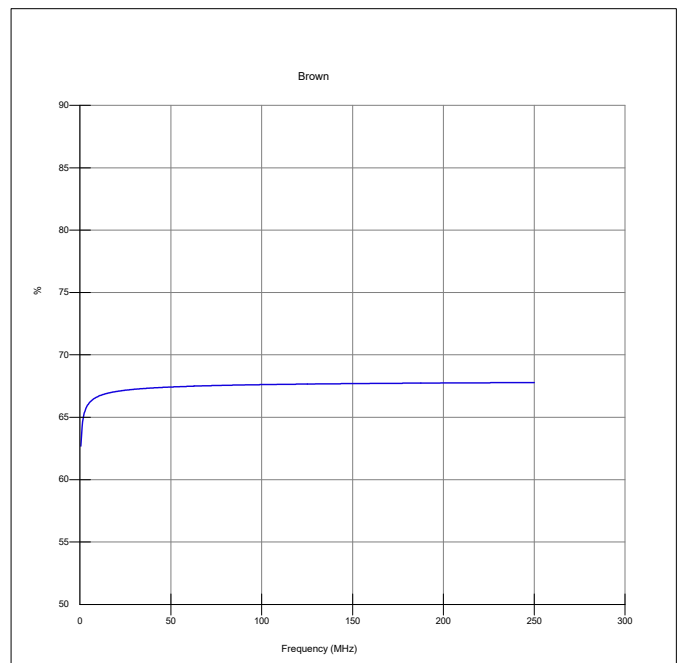
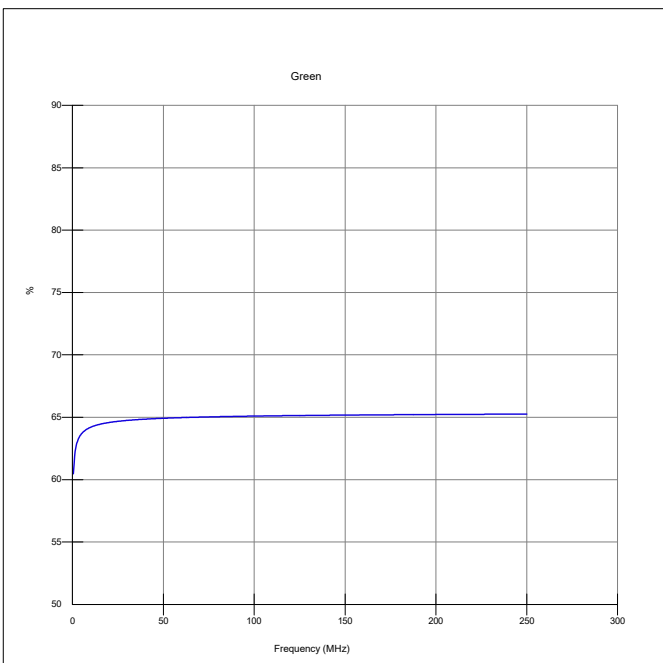
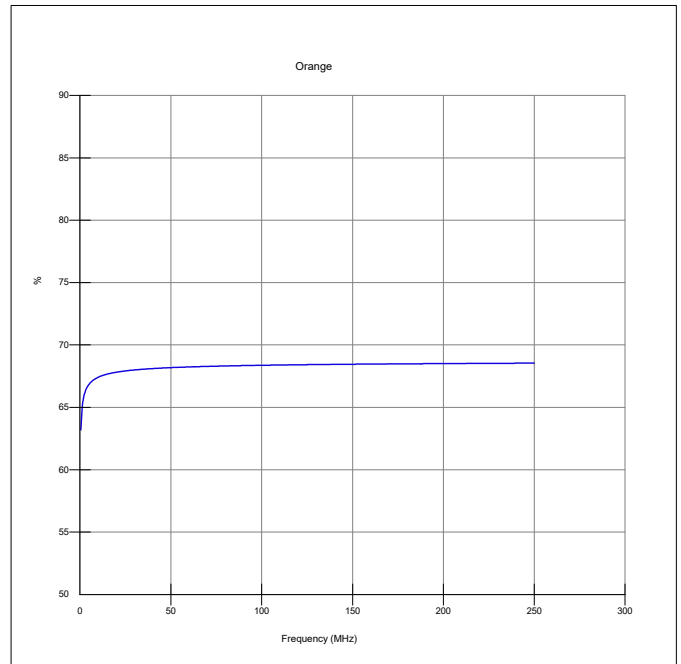
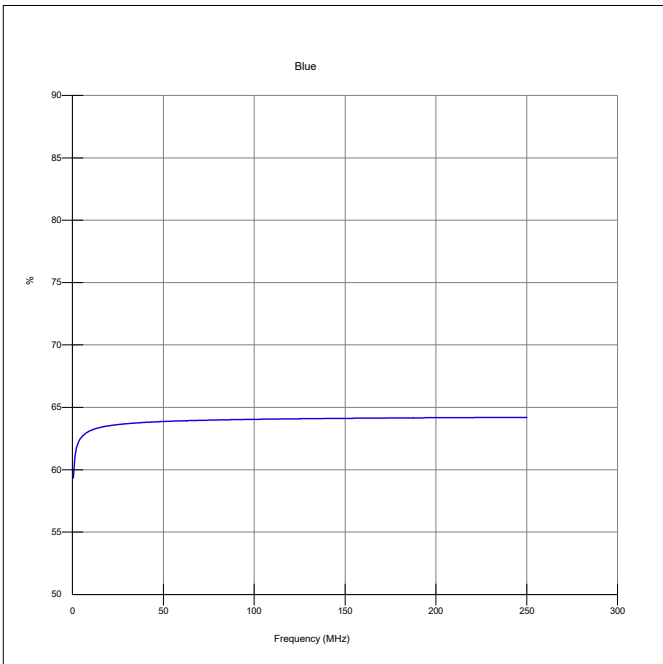
Propagation Delay - Near End

Client	Ningbo Feynman	Report No	103777015CRT-003b
Specification	ISO-IEC 11801-1 Cat 6 Cable	Length (m)	100.
Part No	FA0423AUC6V	Temperature	23 °C
Test Started	12/19/2018 4:11:03 PM	Test Status	Complies
Description	4 pair 23 AWG UTP Solid		
Operator Name	David Ayers		



Velocity of Propagation - Near End

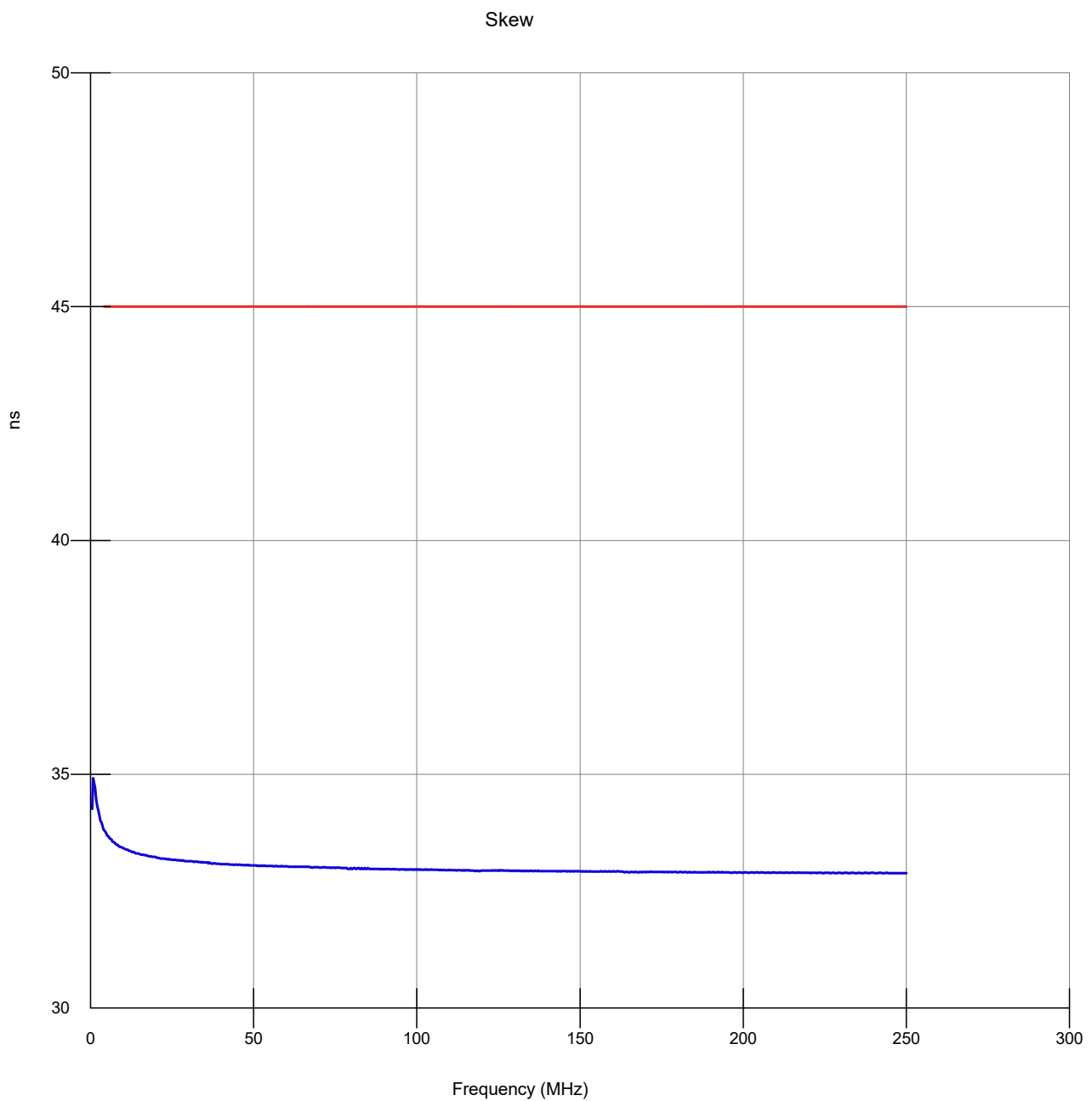
Client	Ningbo Feynman	Report No	103777015CRT-003b
Specification	ISO-IEC 11801-1 Cat 6 Cable	Length (m)	100.
Part No	FA0423AUC6V	Temperature	23 °C
Test Started	12/19/2018 4:11:03 PM	Test Status	Complies
Description	4 pair 23 AWG UTP Solid		
Operator Name	David Ayers		



Propagation Delay Skew - Near End

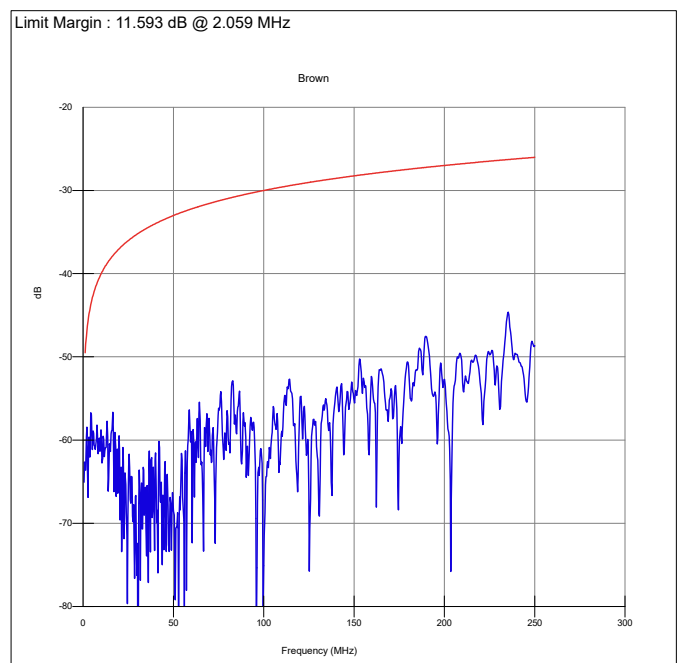
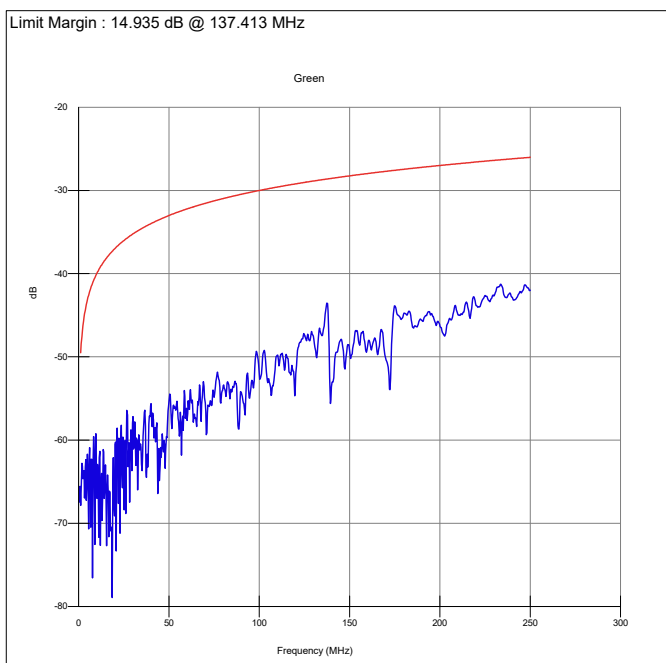
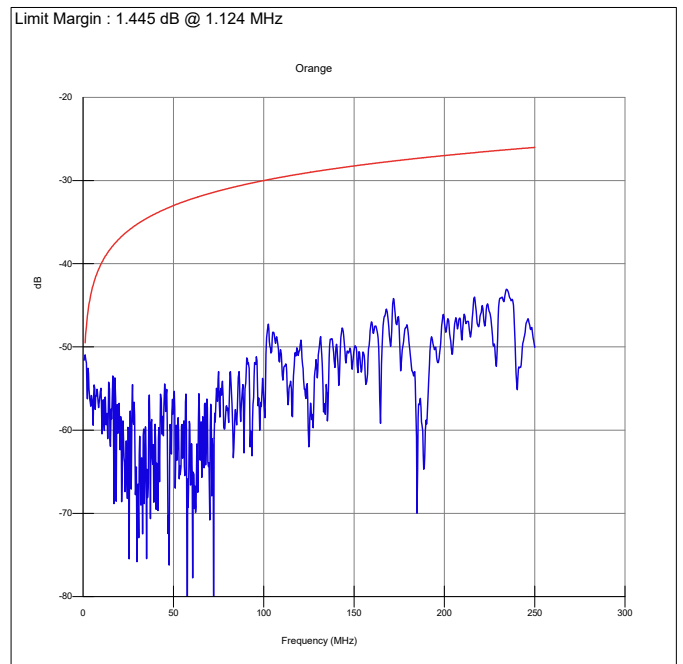
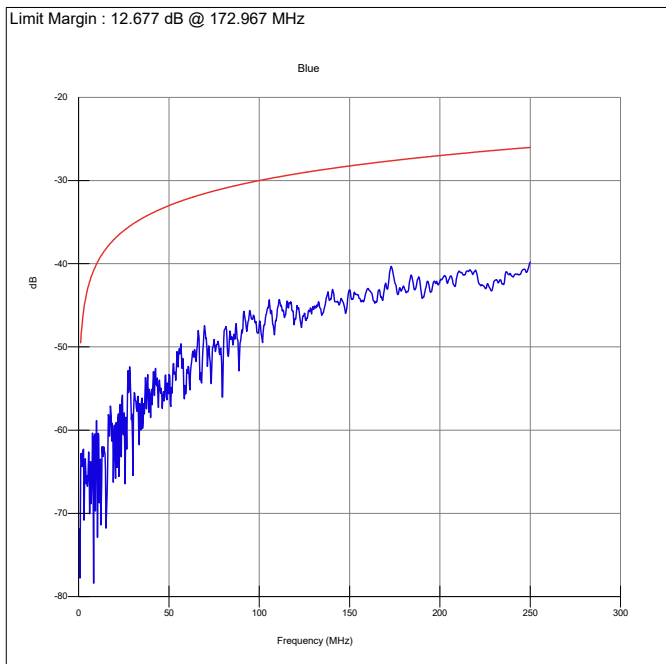
Client	Ningbo Feynman	Report No	103777015CRT-003b
Specification	ISO-IEC 11801-1 Cat 6 Cable		
Part No	FA0423AUC6V	Length (m)	100.
Test Started	12/19/2018 4:11:03 PM	Temperature	23 °C
Description	4 pair 23 AWG UTP Solid		
Operator Name	David Ayers	Test Status	Complies

Limit Margin : 11.200 ns @ 4.243 MHz



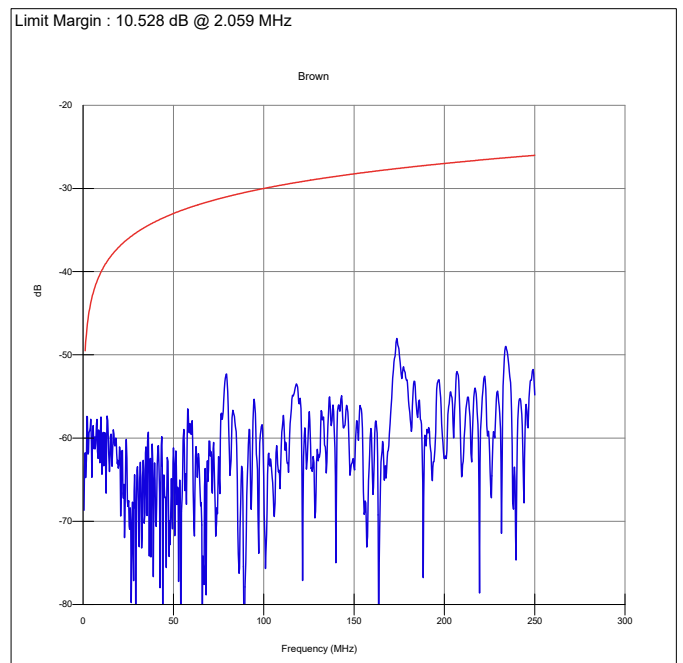
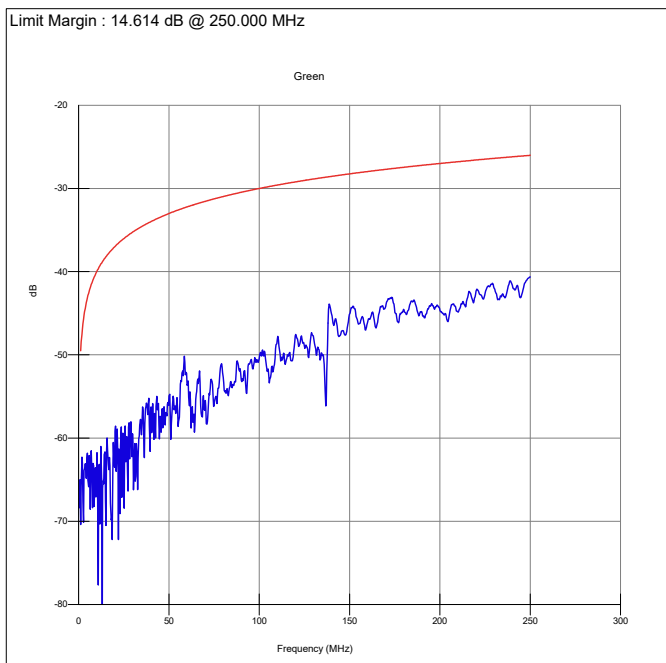
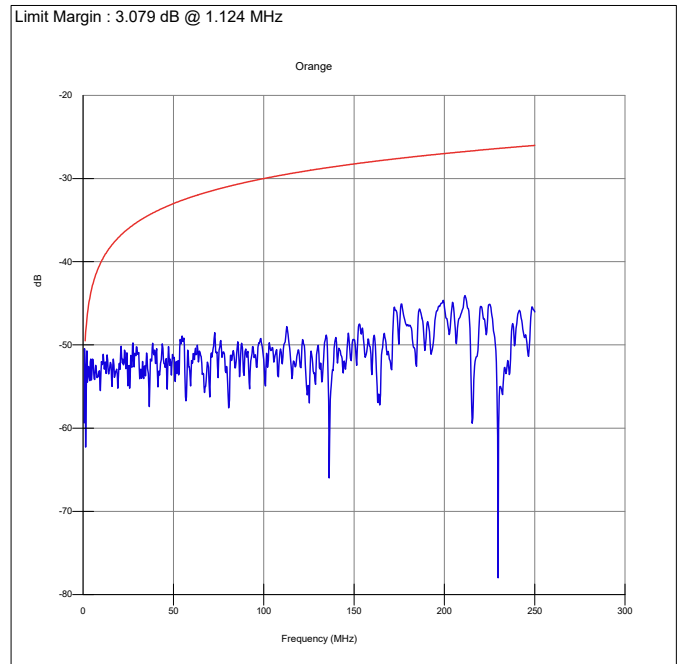
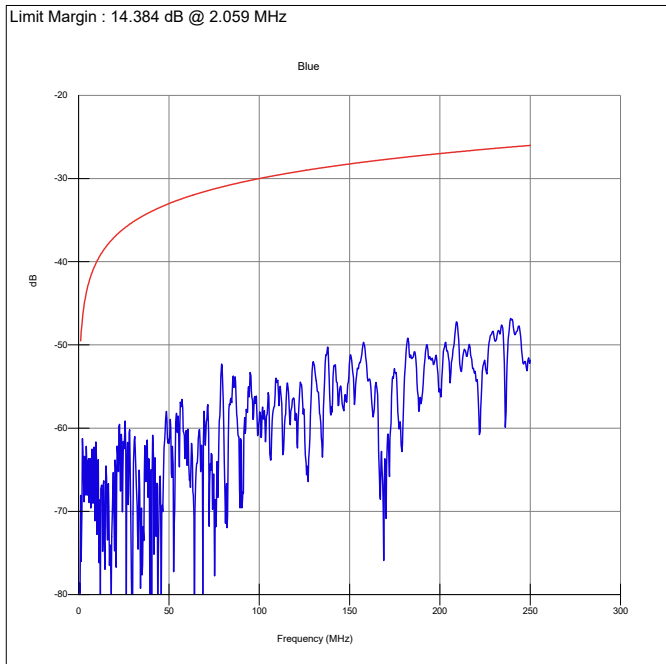
TCL - Near End

Client	Ningbo Feynman	Report No	103777015CRT-003b
Specification	ISO-IEC 11801-1 Cat 6 Cable	Length (m)	100.
Part No	FA0423AUC6V	Temperature	23 °C
Test Started	12/19/2018 4:11:03 PM	Test Status	Complies
Description	4 pair 23 AWG UTP Solid		
Operator Name	David Ayers		



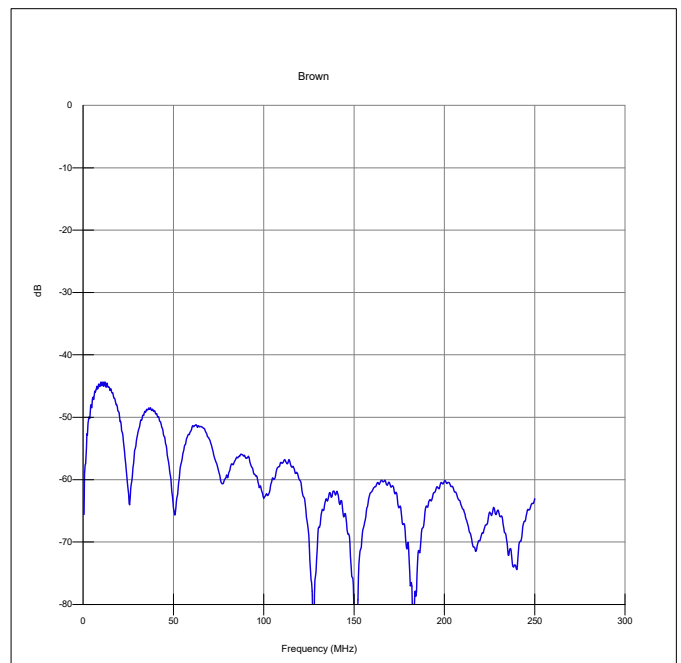
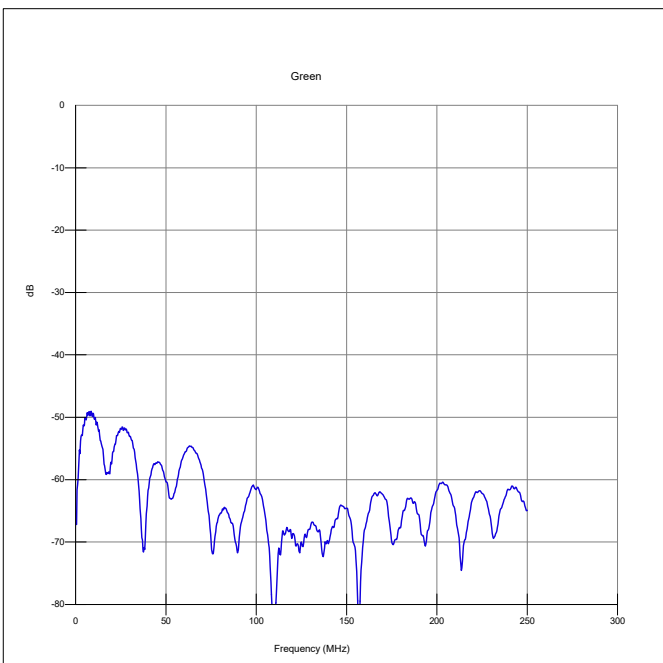
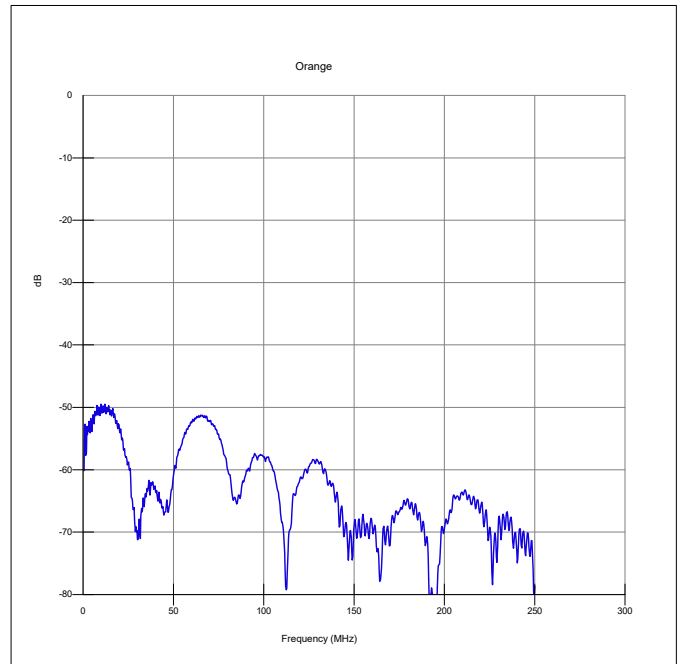
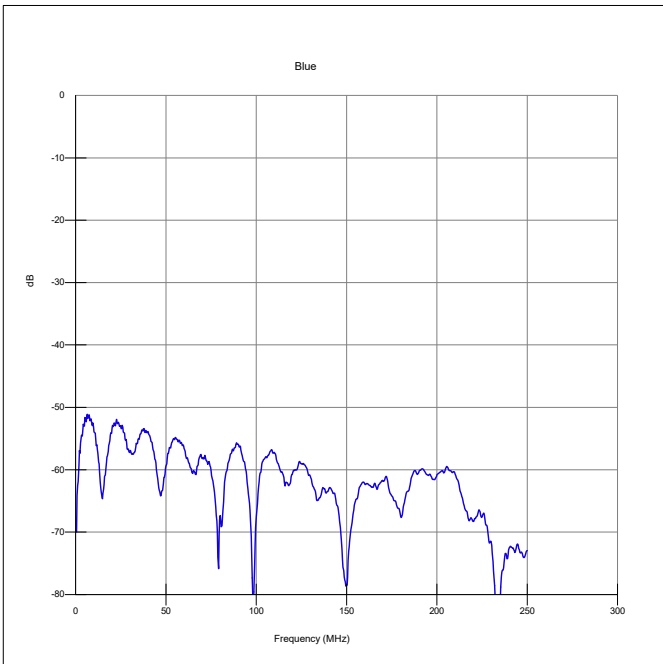
TCL - Far End

Client	Ningbo Feynman	Report No	103777015CRT-003b
Specification	ISO-IEC 11801-1 Cat 6 Cable	Length (m)	100.
Part No	FA0423AUC6V	Temperature	23 °C
Test Started	12/19/2018 4:11:03 PM	Test Status	Complies
Description	4 pair 23 AWG UTP Solid		
Operator Name	David Ayers		



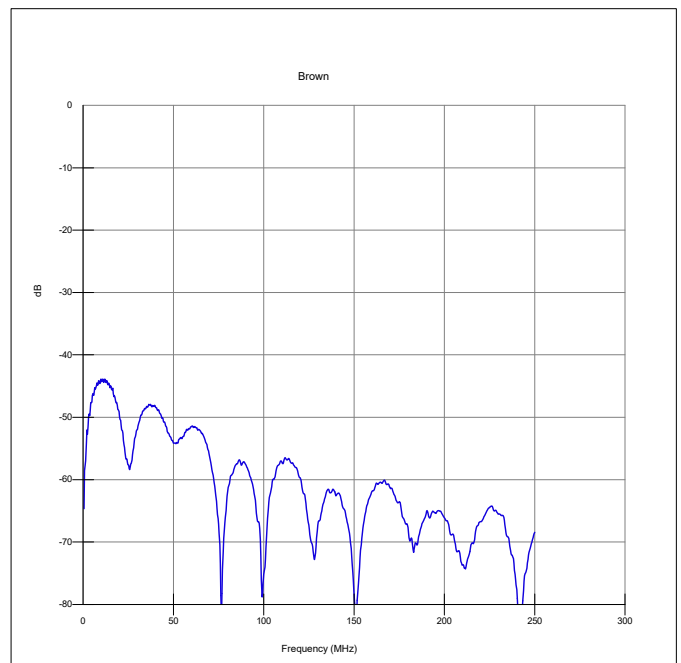
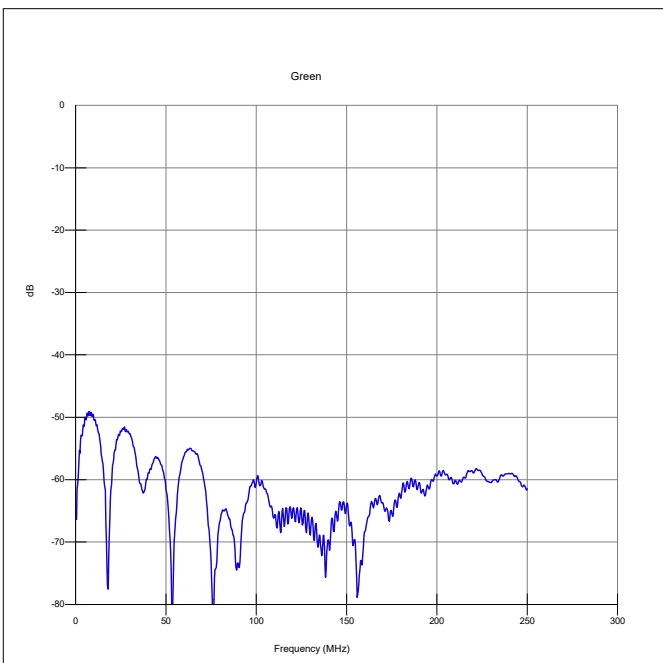
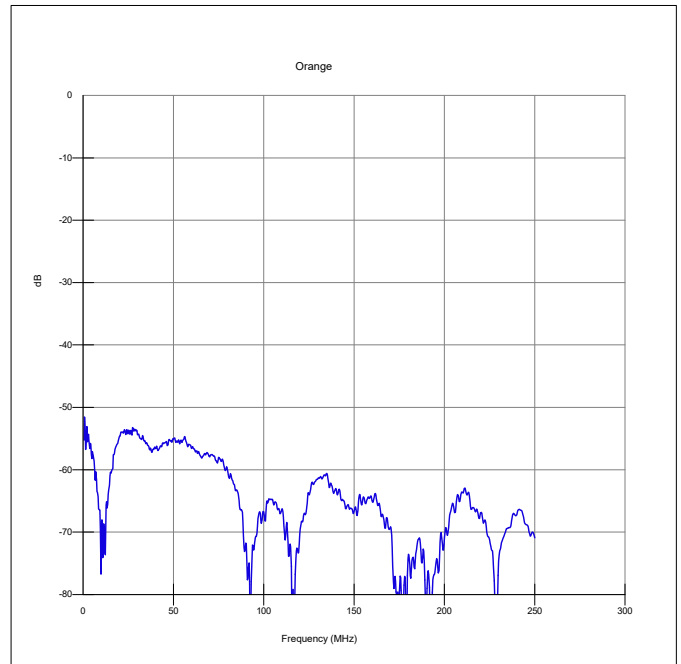
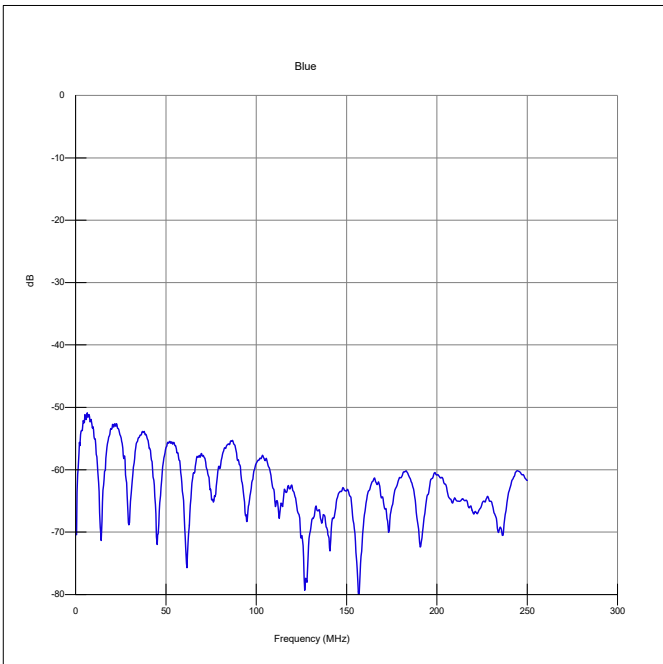
TCTL - Near End

Client	Ningbo Feynman	Report No	103777015CRT-003b
Specification	ISO-IEC 11801-1 Cat 6 Cable	Length (m)	100.
Part No	FA0423AUC6V	Temperature	23 °C
Test Started	12/19/2018 4:11:03 PM	Test Status	Complies
Description	4 pair 23 AWG UTP Solid		
Operator Name	David Ayers		



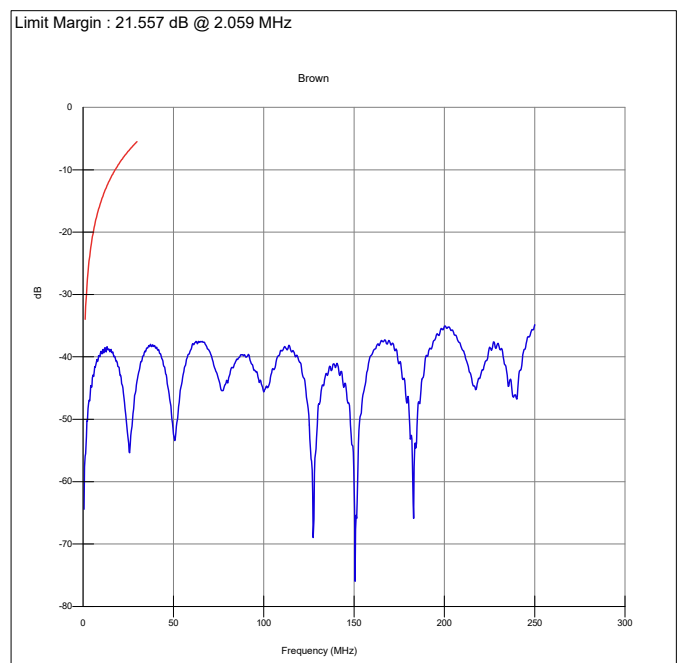
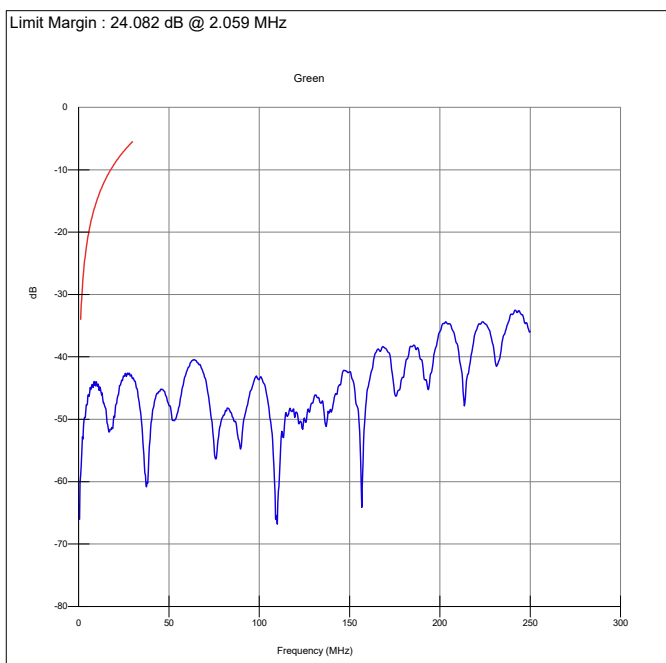
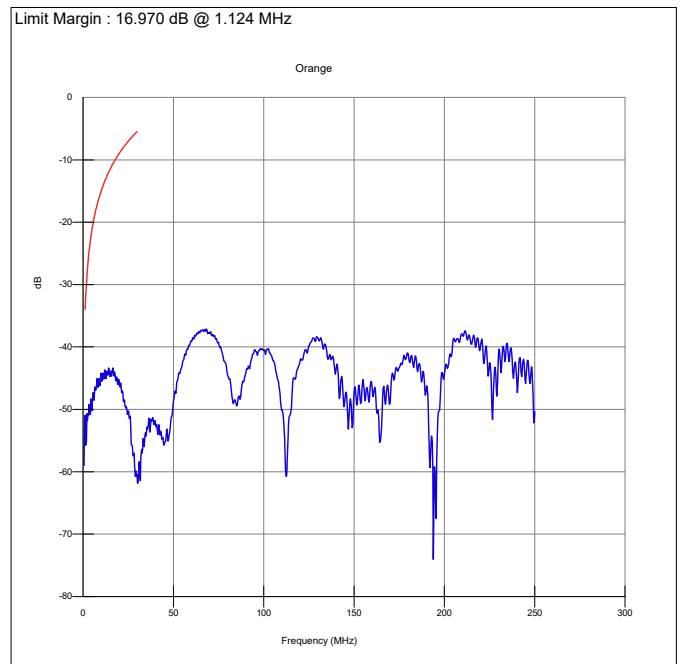
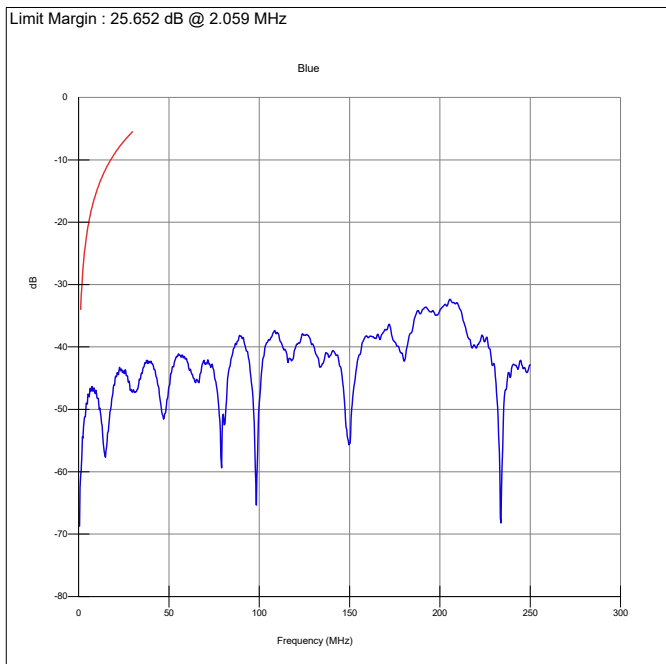
TCTL - Far End

Client	Ningbo Feynman	Report No	103777015CRT-003b
Specification	ISO-IEC 11801-1 Cat 6 Cable	Length (m)	100.
Part No	FA0423AUC6V	Temperature	23 °C
Test Started	12/19/2018 4:11:03 PM	Test Status	Complies
Description	4 pair 23 AWG UTP Solid		
Operator Name	David Ayers		



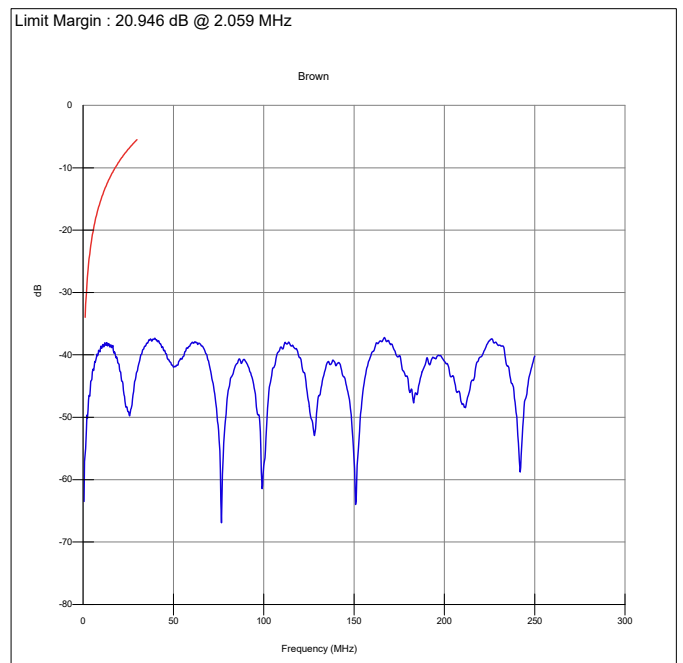
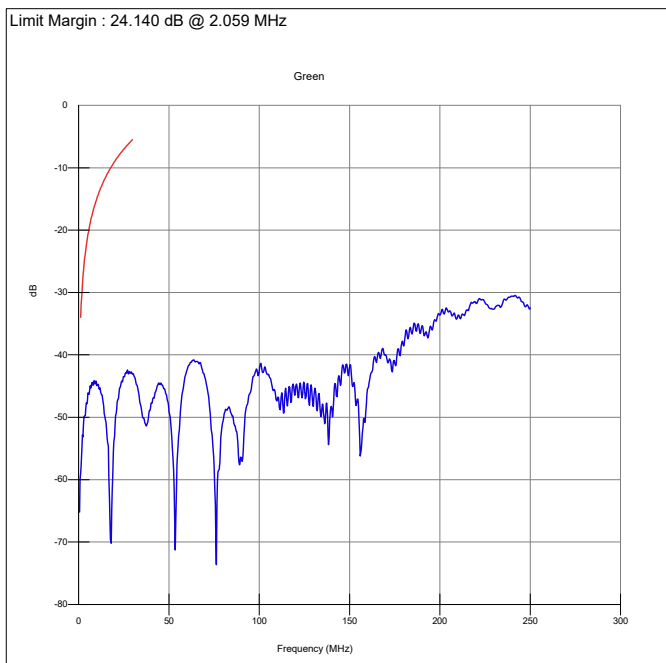
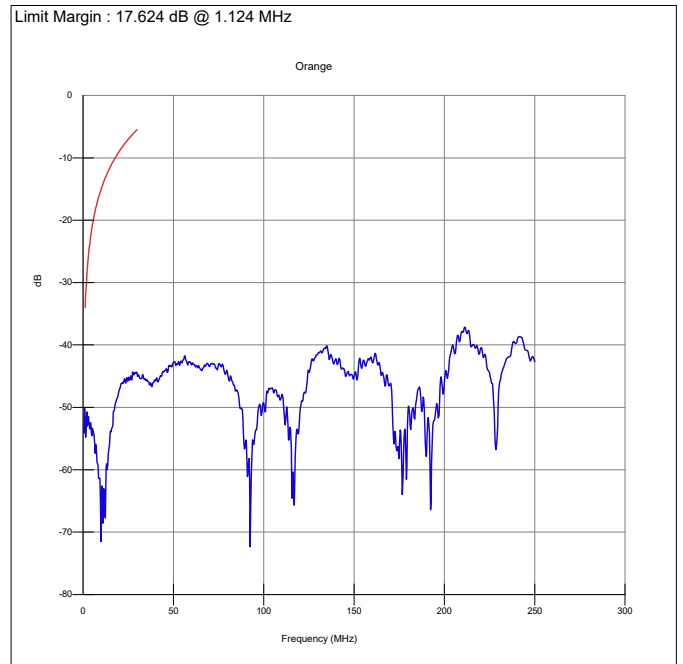
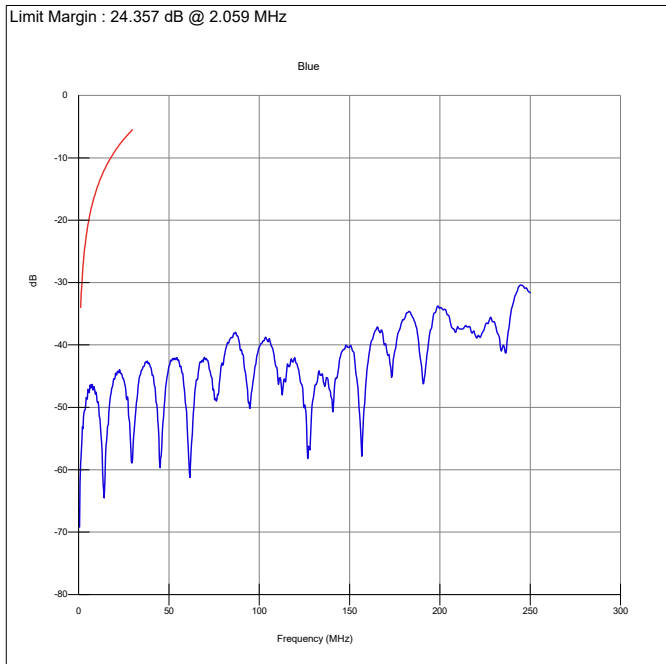
ELTCTL - Near End

Client	Ningbo Feynman	Report No	103777015CRT-003b
Specification	ISO-IEC 11801-1 Cat 6 Cable	Length (m)	100.
Part No	FA0423AUC6V	Temperature	23 °C
Test Started	12/19/2018 4:11:03 PM	Test Status	Complies
Description	4 pair 23 AWG UTP Solid		
Operator Name	David Ayers		



ELTCTL - Far End

Client	Ningbo Feynman	Report No	103777015CRT-003b
Specification	ISO-IEC 11801-1 Cat 6 Cable	Length (m)	100.
Part No	FA0423AUC6V	Temperature	23 °C
Test Started	12/19/2018 4:11:03 PM	Test Status	Complies
Description	4 pair 23 AWG UTP Solid		
Operator Name	David Ayers		





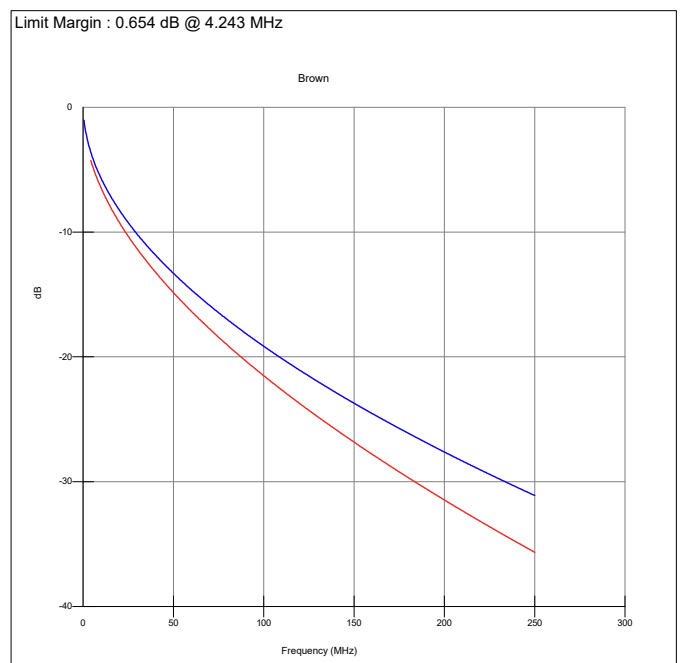
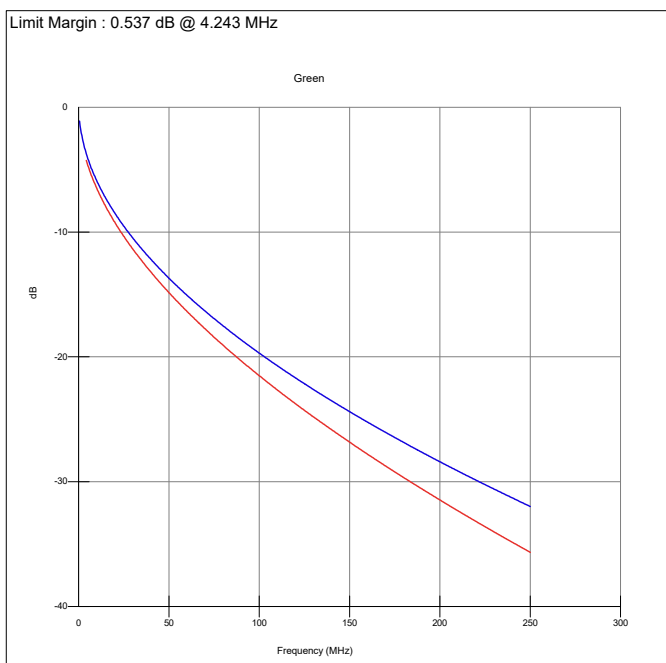
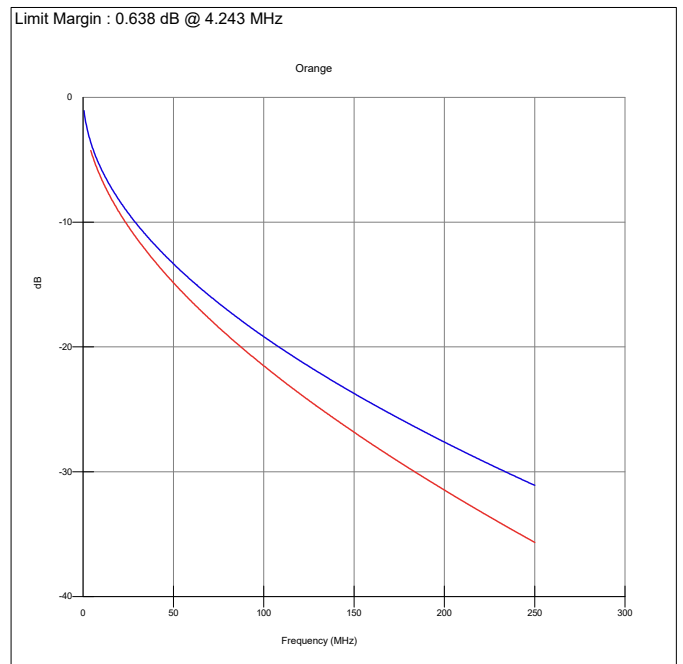
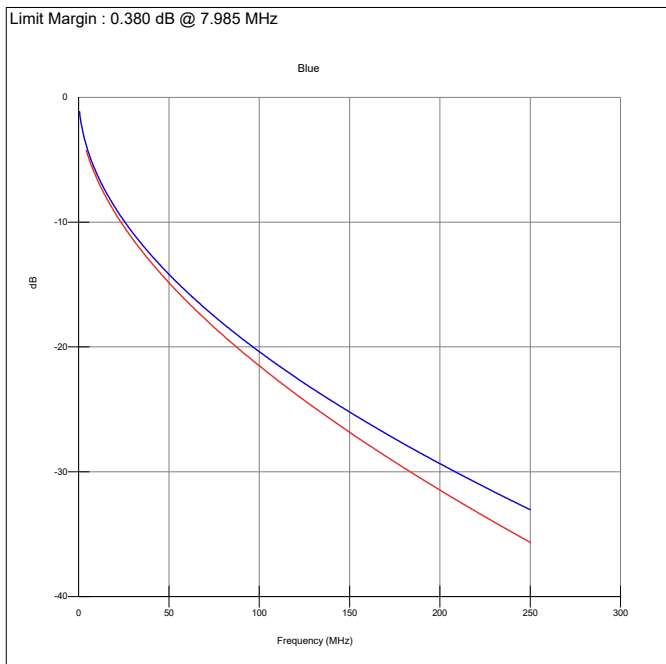
Insertion Loss

Client	Ningbo Feynman	Report No	103777015CRT-003b@40C
Specification	ISO-IEC 11801-1 Cat 6 Cable		
Part No	FA0423AUC6V	Length (m)	100.
Test Started	12/20/2018 11:25:14 AM	Temperature	40 °C
Description	4 pair 23 AWG UTP Solid		
Operator Name	Craig Williams	Test Status	Complies

Insertion Loss (dB)					
Freq (MHz)	Limit	Blue	Orange	Green	Brown
1.		-1.72	-1.60	-1.65	-1.59
4.		-3.74	-3.50	-3.60	-3.49
8.	-5.80	-5.42	-5.09	-5.23	-5.07
10.	-6.48	-6.10	-5.73	-5.88	-5.71
16.	-8.22	-7.81	-7.34	-7.54	-7.32
20.	-9.22	-8.78	-8.25	-8.47	-8.23
25.	-10.34	-9.87	-9.28	-9.53	-9.25
31.25	-11.61	-11.09	-10.43	-10.71	-10.40
62.5	-16.71	-15.93	-14.99	-15.39	-14.96
100.	-21.51	-20.38	-19.17	-19.70	-19.15
155.	-27.32	-25.65	-24.14	-24.82	-24.13
200.	-31.47	-29.35	-27.62	-28.40	-27.62
250.	-35.66	-33.04	-31.09	-31.99	-31.11

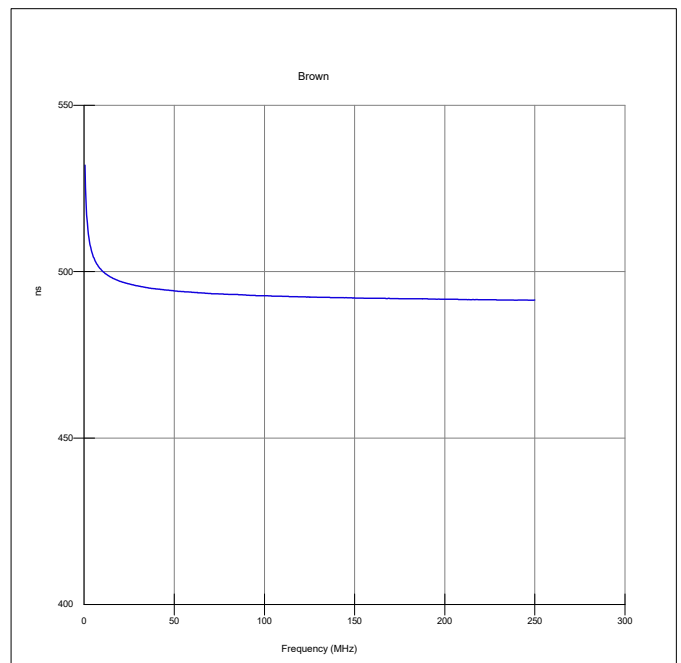
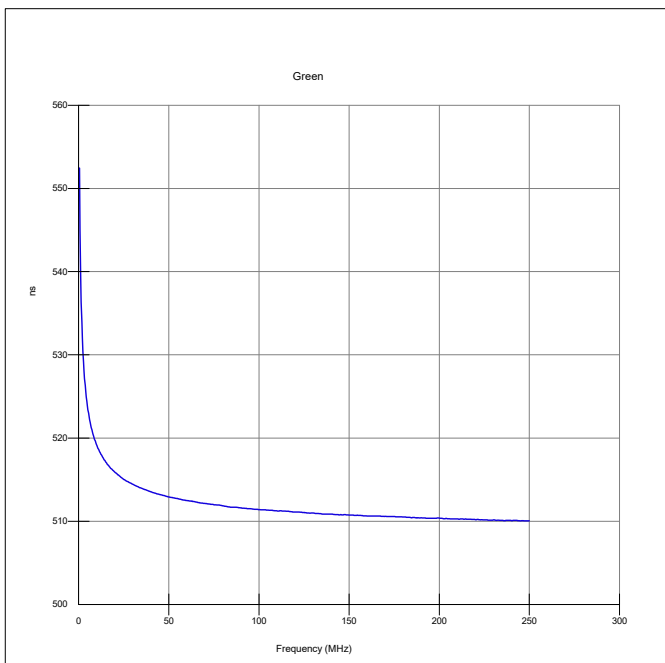
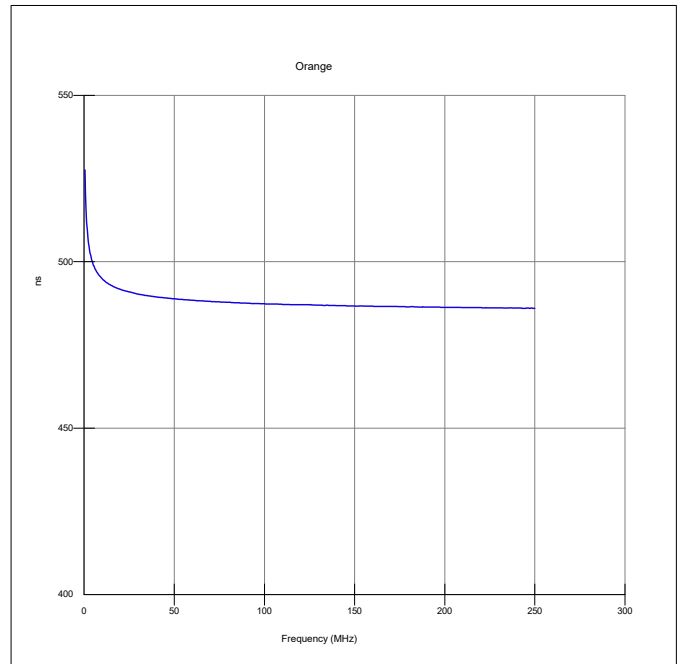
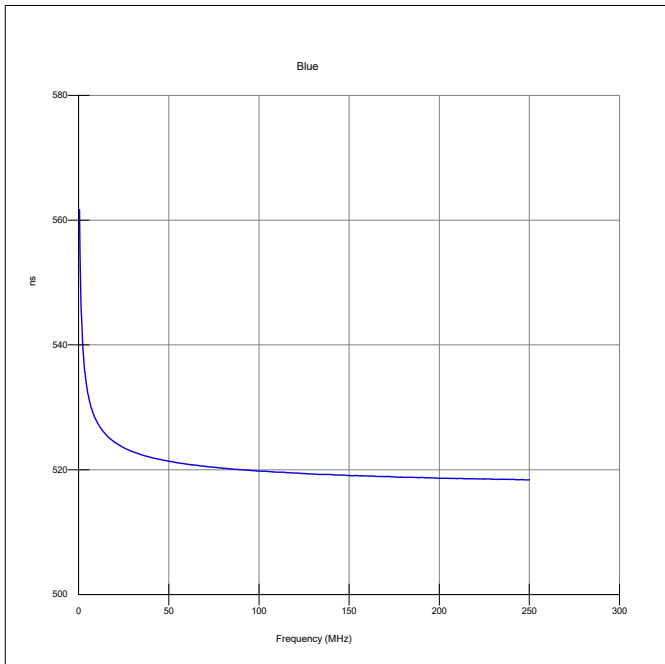
Insertion Loss

Client	Ningbo Feynman	Report No	103777015CRT-003b@40C
Specification	ISO-IEC 11801-1 Cat 6 Cable	Length (m)	100.
Part No	FA0423AUC6V	Temperature	40 °C
Test Started	12/20/2018 11:25:14 AM	Test Status	Complies
Description	4 pair 23 AWG UTP Solid		
Operator Name	Craig Williams		



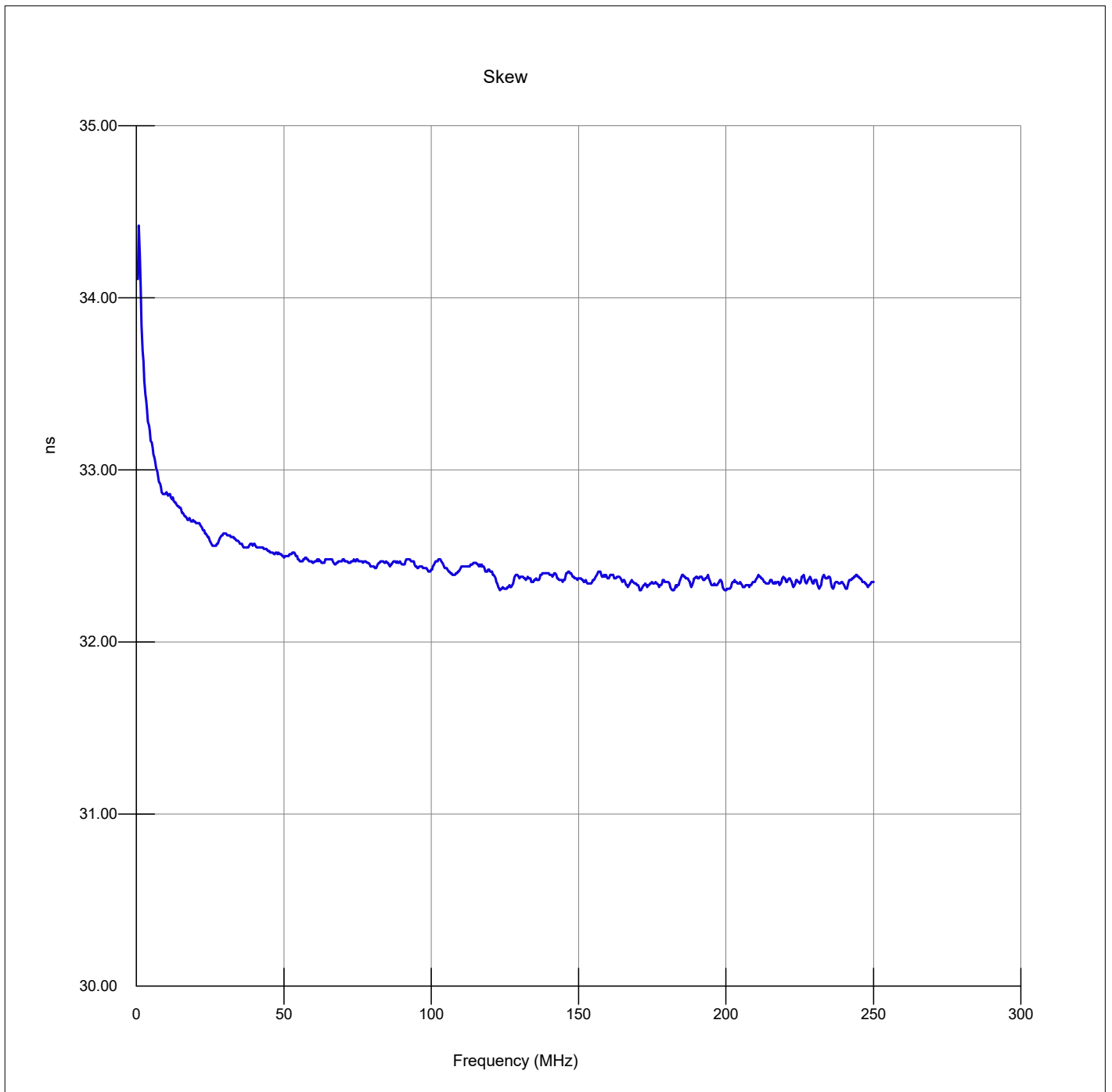
Propagation Delay - Near End

Client	Ningbo Feynman	Report No	103777015CRT-003b@40C
Specification	ISO-IEC 11801-1 Cat 6 Cable	Length (m)	100.
Part No	FA0423AUC6V	Temperature	40 °C
Test Started	12/20/2018 11:25:14 AM	Test Status	Complies
Description	4 pair 23 AWG UTP Solid		
Operator Name	Craig Williams		



Propagation Delay Skew - Near End

Client	Ningbo Feynman	Report No	103777015CRT-003b@40C
Specification	ISO-IEC 11801-1 Cat 6 Cable		
Part No	FA0423AUC6V	Length (m)	100.
Test Started	12/20/2018 11:25:14 AM	Temperature	40 °C
Description	4 pair 23 AWG UTP Solid		
Operator Name	Craig Williams	Test Status	Complies





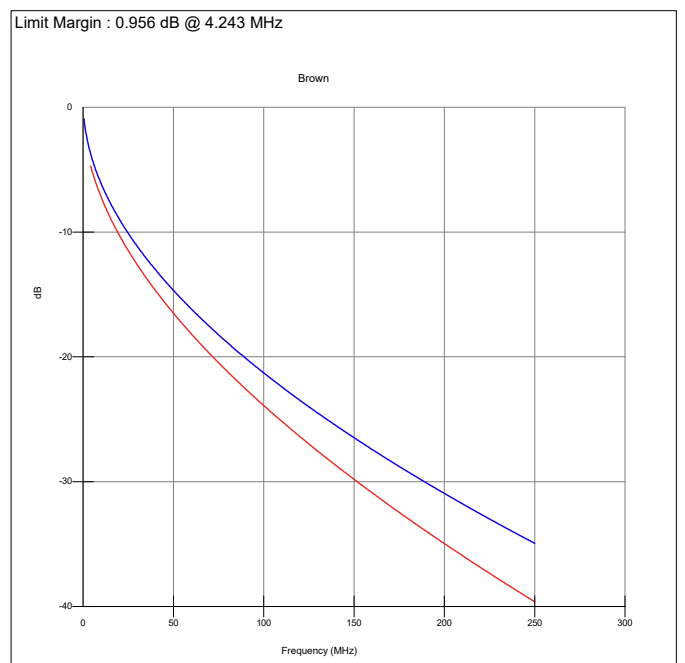
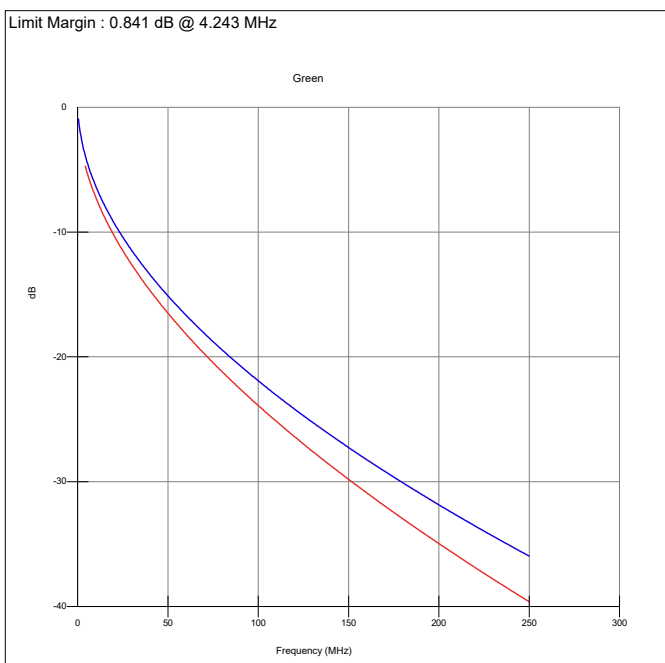
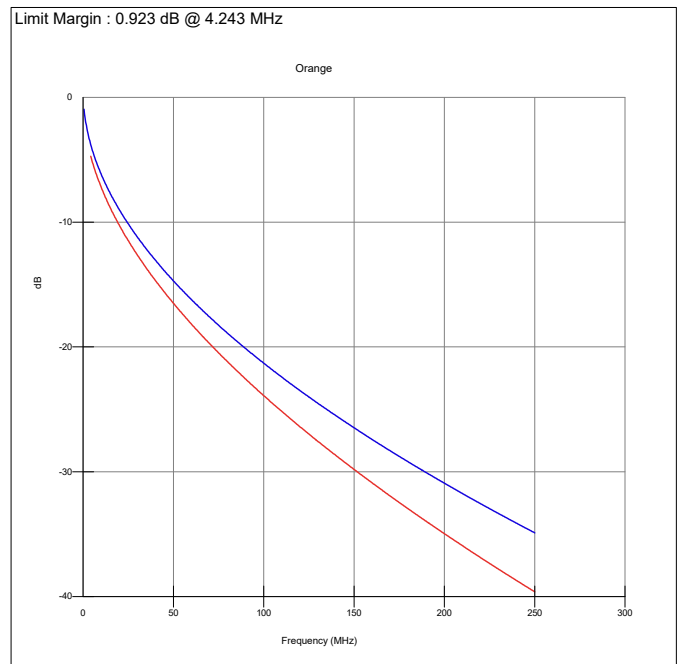
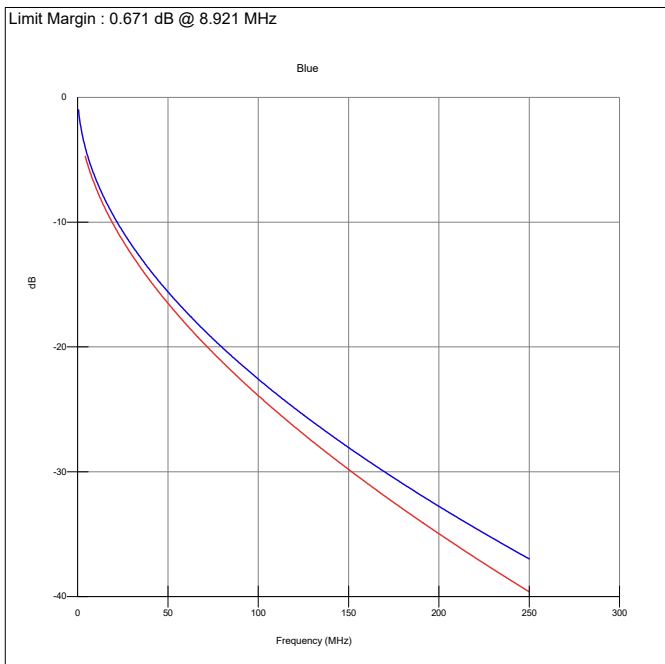
Insertion Loss

Client	Ningbo Feynman	Report No	103777015CRT-003b@60C
Specification	ISO-IEC 11801-1 Cat 6 Cable		
Part No	FA0423AUC6V	Length (m)	100.
Test Started	12/20/2018 1:40:52 PM	Temperature	60 °C
Description	4 pair 23 AWG UTP Solid		
Operator Name	Craig Williams	Test Status	Complies

Insertion Loss (dB)					
Freq (MHz)	Limit	Blue	Orange	Green	Brown
1.		-1.66	-1.56	-1.58	-1.53
4.		-3.90	-3.68	-3.76	-3.65
8.	-6.45	-5.77	-5.45	-5.57	-5.41
10.	-7.20	-6.53	-6.16	-6.31	-6.12
16.	-9.14	-8.44	-7.97	-8.17	-7.93
20.	-10.24	-9.53	-8.99	-9.22	-8.95
25.	-11.49	-10.75	-10.14	-10.41	-10.10
31.25	-12.90	-12.11	-11.43	-11.74	-11.39
62.5	-18.57	-17.56	-16.57	-17.03	-16.53
100.	-23.90	-22.57	-21.30	-21.92	-21.28
155.	-30.36	-28.56	-26.95	-27.75	-26.95
200.	-34.96	-32.77	-30.92	-31.86	-30.94
250.	-39.62	-36.98	-34.89	-35.97	-34.94

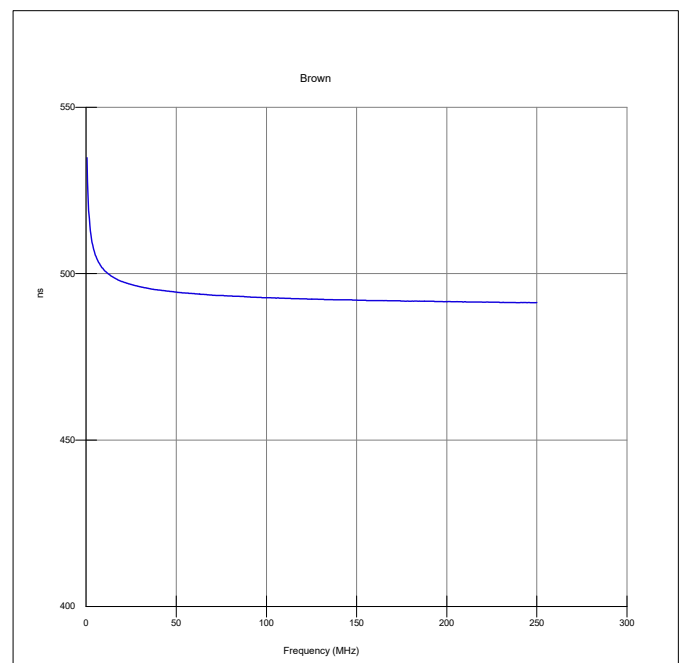
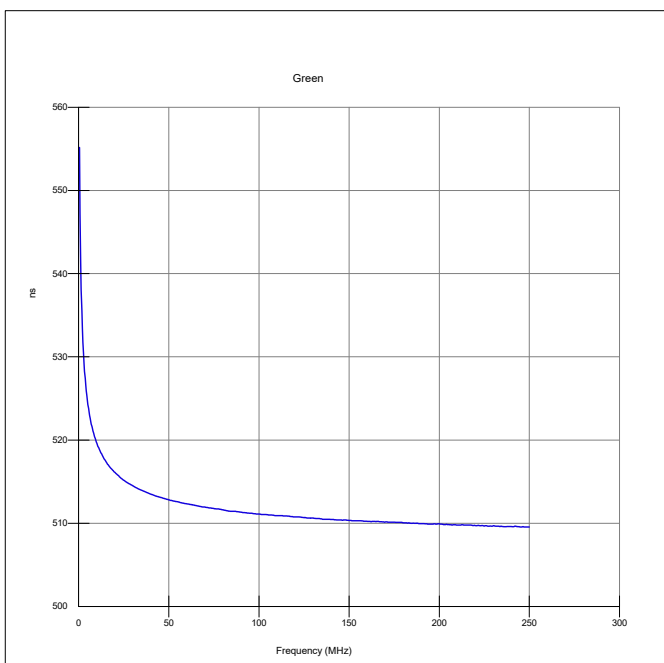
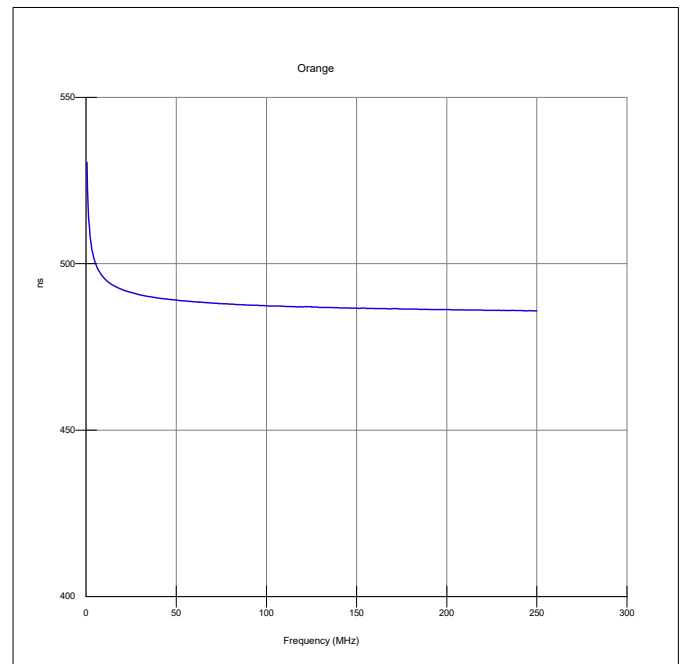
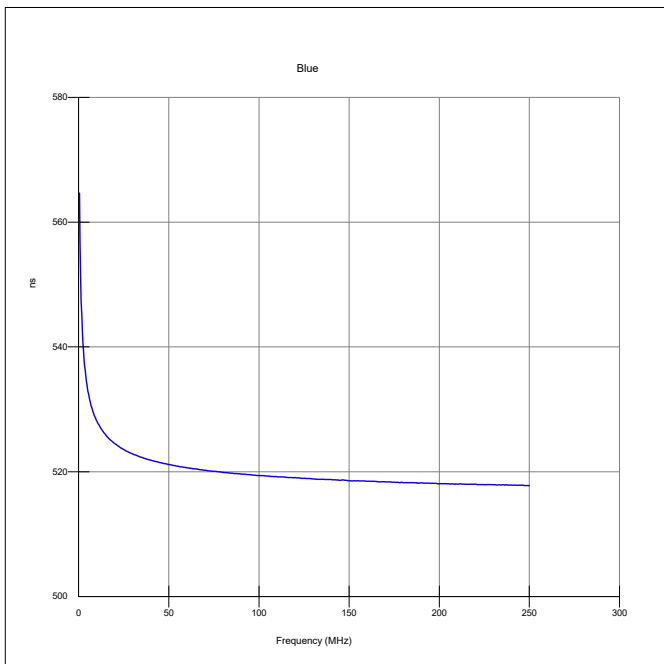
Insertion Loss

Client	Ningbo Feynman	Report No	103777015CRT-003b@60C
Specification	ISO-IEC 11801-1 Cat 6 Cable	Length (m)	100.
Part No	FA0423AUC6V	Temperature	60 °C
Test Started	12/20/2018 1:40:52 PM	Test Status	Complies
Description	4 pair 23 AWG UTP Solid		
Operator Name	Craig Williams		



Propagation Delay - Near End

Client	Ningbo Feynman	Report No	103777015CRT-003b@60C
Specification	ISO-IEC 11801-1 Cat 6 Cable	Length (m)	100.
Part No	FA0423AUC6V	Temperature	60 °C
Test Started	12/20/2018 1:40:52 PM	Test Status	Complies
Description	4 pair 23 AWG UTP Solid		
Operator Name	Craig Williams		



Propagation Delay Skew - Near End

Client	Ningbo Feynman	Report No	103777015CRT-003b@60C
Specification	ISO-IEC 11801-1 Cat 6 Cable		
Part No	FA0423AUC6V	Length (m)	100.
Test Started	12/20/2018 1:40:52 PM	Temperature	60 °C
Description	4 pair 23 AWG UTP Solid		
Operator Name	Craig Williams	Test Status	Complies

