



**HCS Official Test Report**

HCS Part Number: H5E-00412

Cable Type: CAT5e FTP Horizontal 4x2x24# LSOH

Date: 28.01.2007

Batch Number: 25206420-01

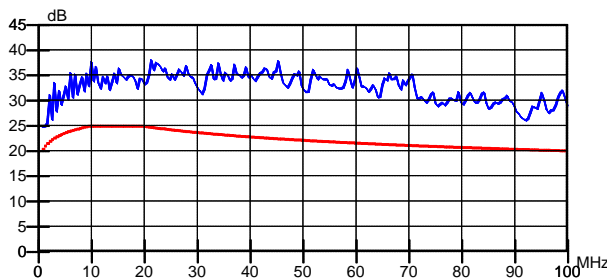
Test Standard: TIA/EIA-568-B.2 CAT 5e FTP Horizontal  
 Customer : HCS  
 Reel Number: AFT JACK

**Test Result: PASS**

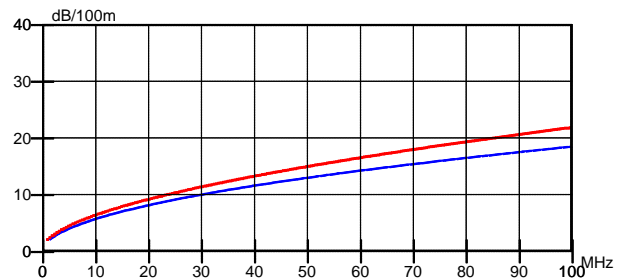
**Worst Case Results**

Parameter	Specification	Measured	Margin	Freq. [MHz]
RL [dB]	22.01	26.20	4.20	2.52
Attenuation [dB/100m]	2.24	2.18	0.05	1.21
NEXT [dB]	47.22	56.67	9.45	16.05
PS NEXT [dB]	36.92	49.24	12.32	49.23
ELFEXT [dB]	43.12	62.59	19.47	10.81
PS ELFEXT [dB]	52.78	74.24	21.46	2.52
Input Impedance [ohm]	115.00	108.11	6.89	92.44
Prop Delay [ns/100m]	537.61	502.64	34.97	99.43
Delay Skew [ns/100m]	40.00	22.95	17.05	1.21

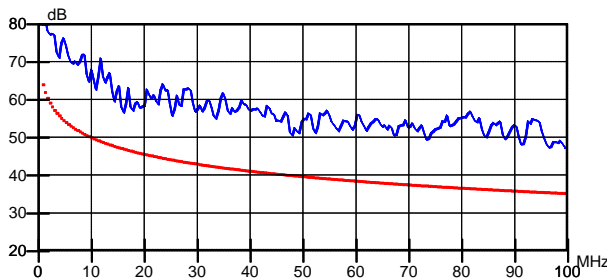
Return Loss



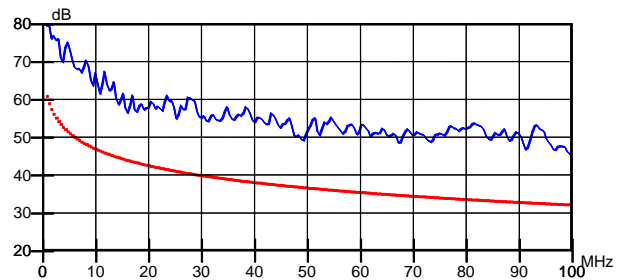
Attenuation



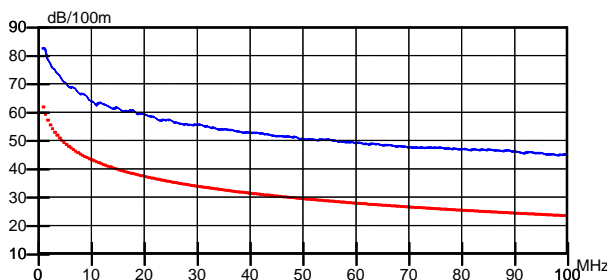
NEXT



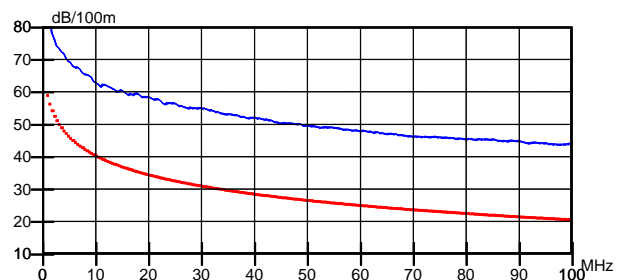
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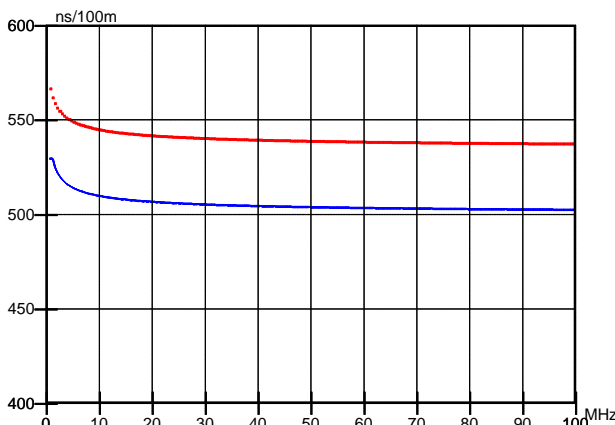
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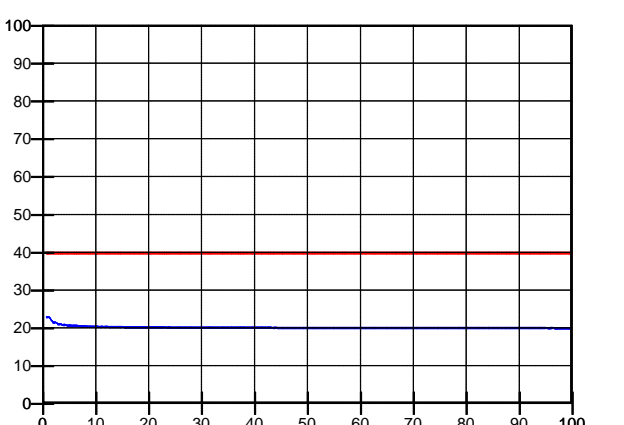
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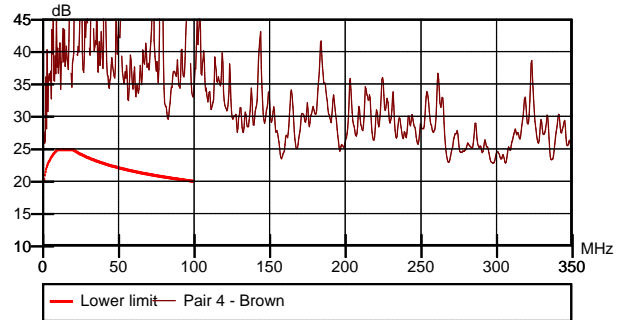
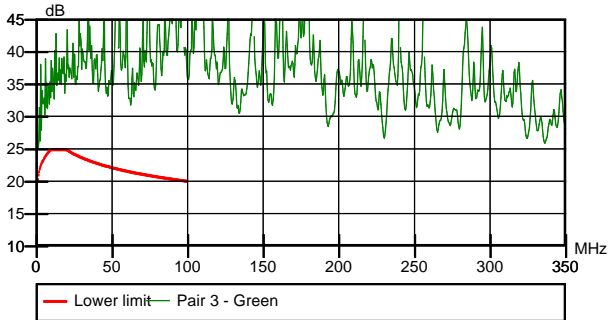
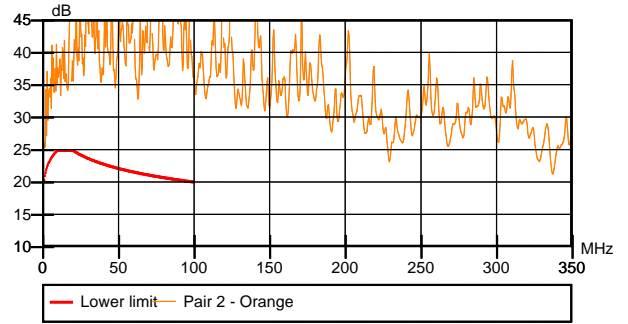
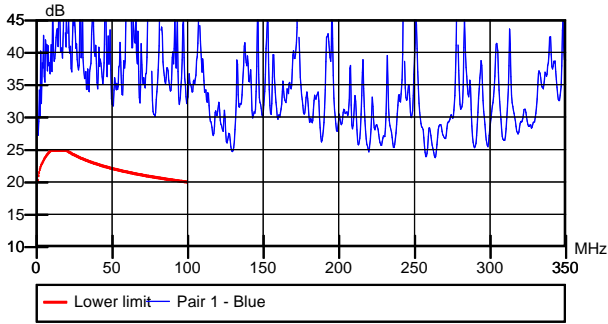
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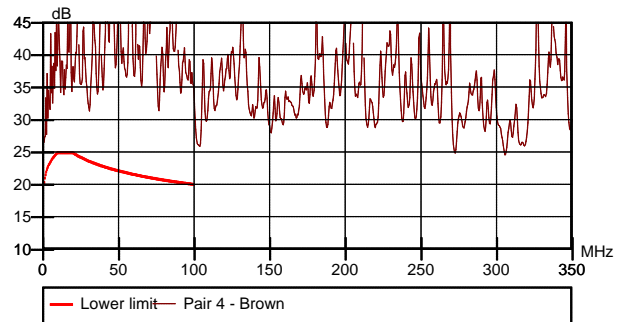
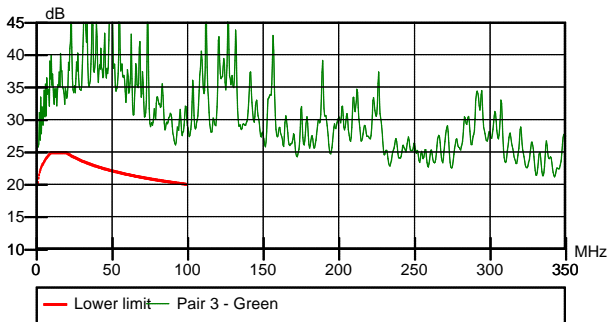
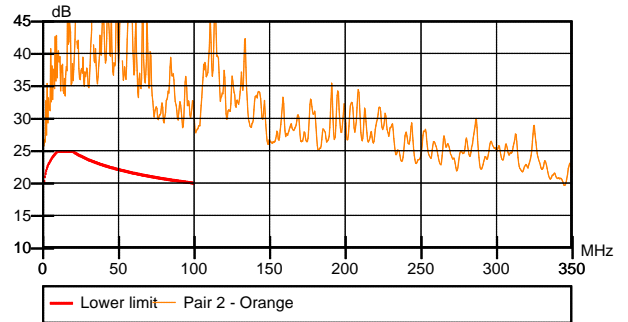
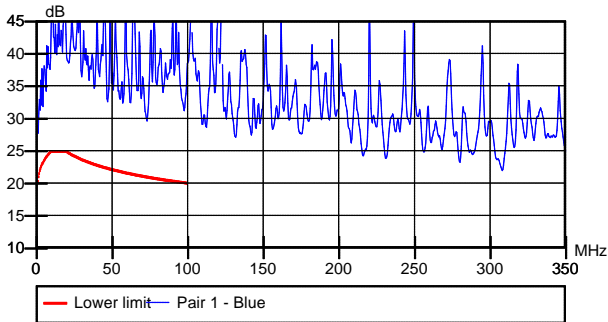
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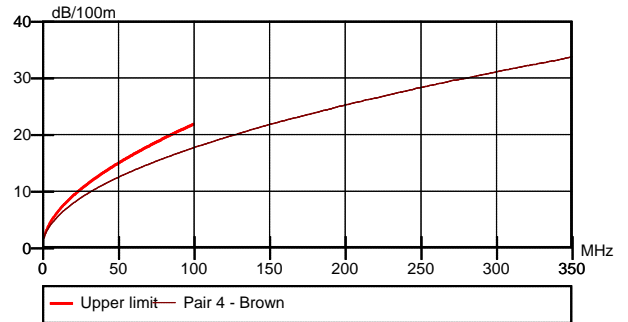
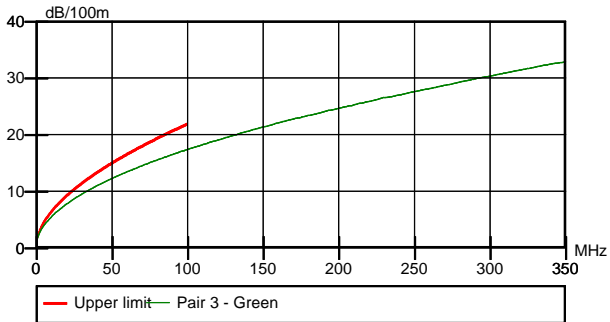
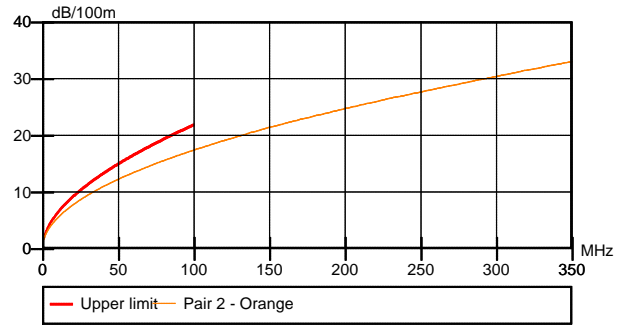
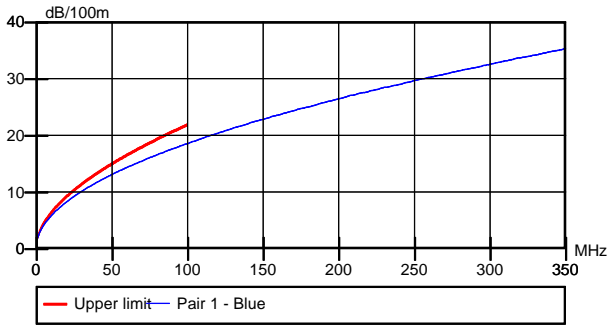
**Return Loss Forward**



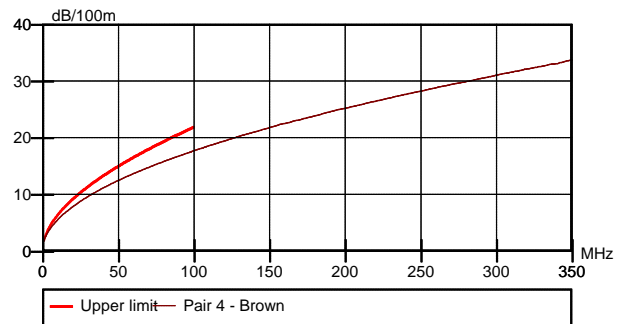
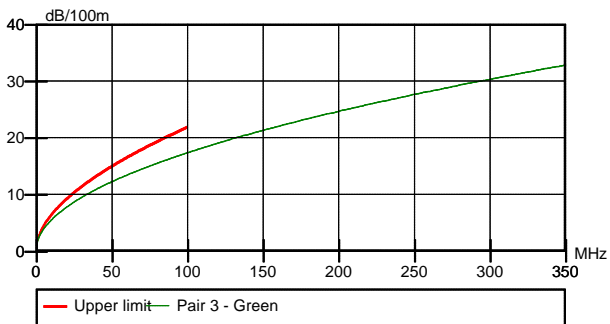
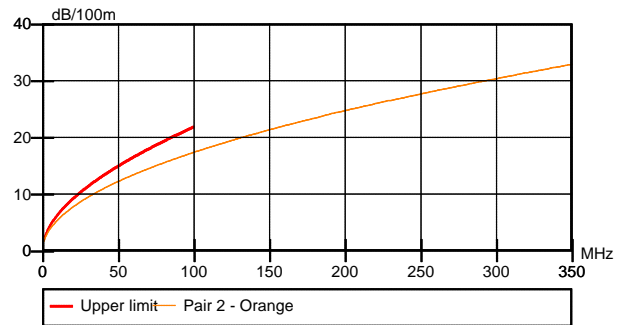
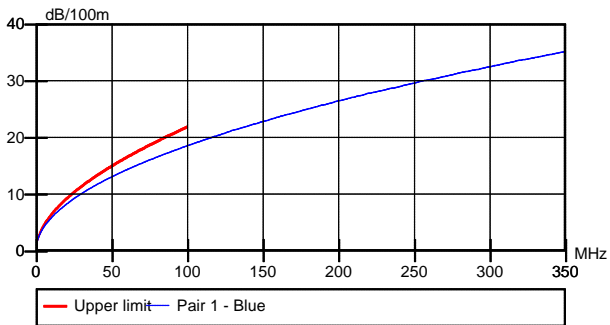
**Return Loss Reverse**



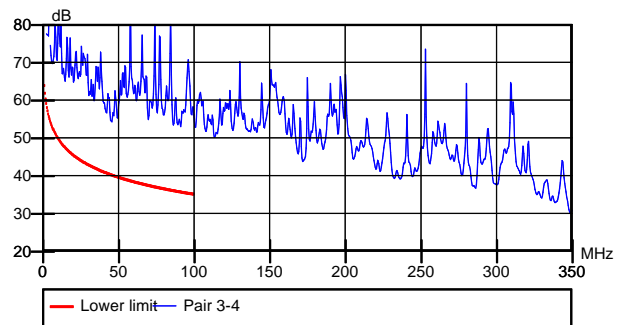
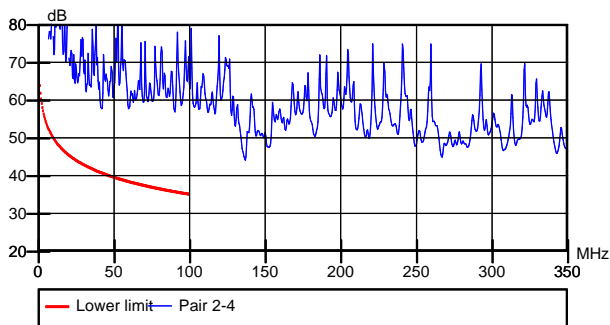
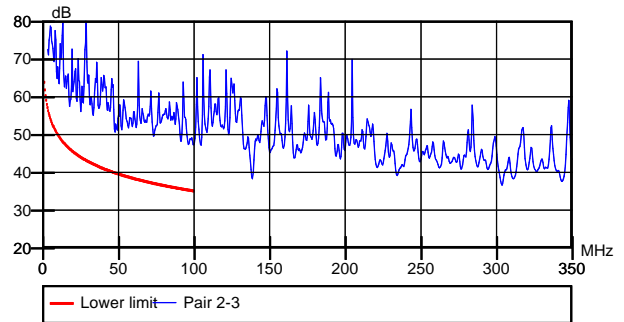
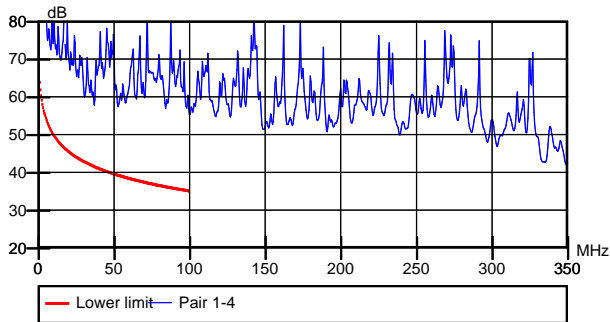
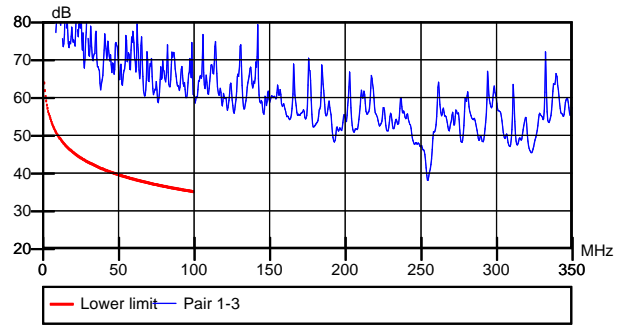
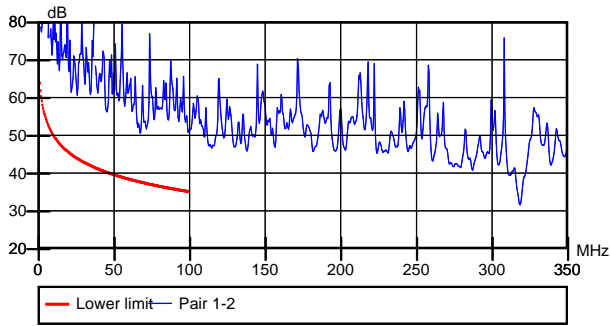
Pair	Margin dB	Value dB	Freq. MHz
1	6.77	27.18	1.21
2	4.44	25.52	1.65
3	4.20	26.20	2.52
4	5.20	26.28	1.65
1 REV	7.32	27.73	1.21
2 REV	5.25	26.33	1.65
3 REV	4.80	26.81	2.52
4 REV	5.71	27.71	2.52



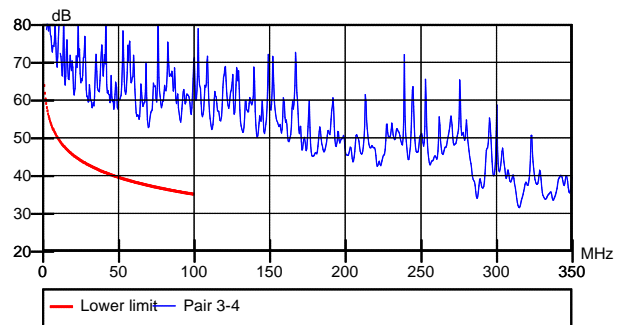
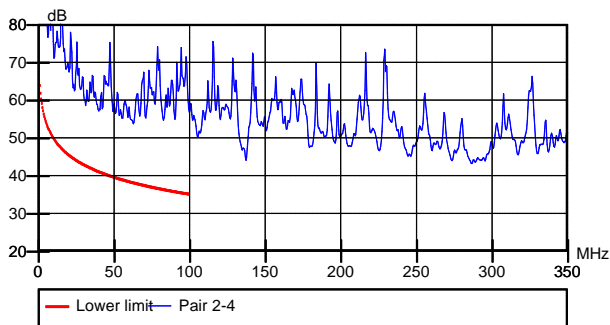
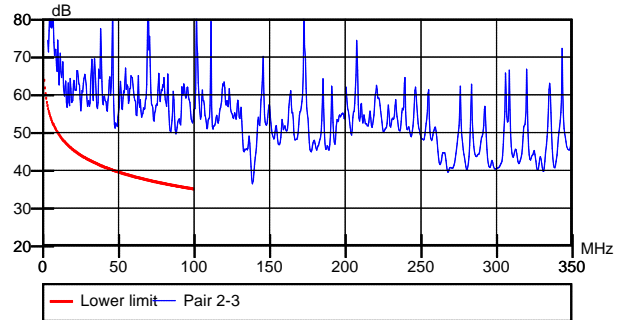
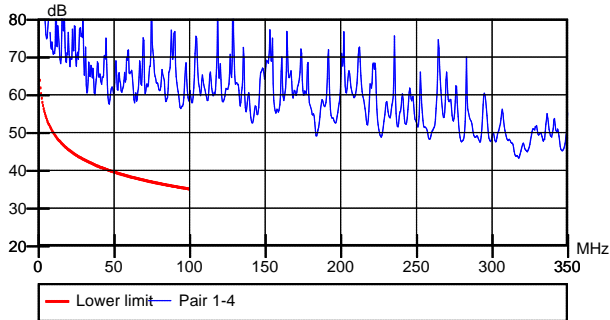
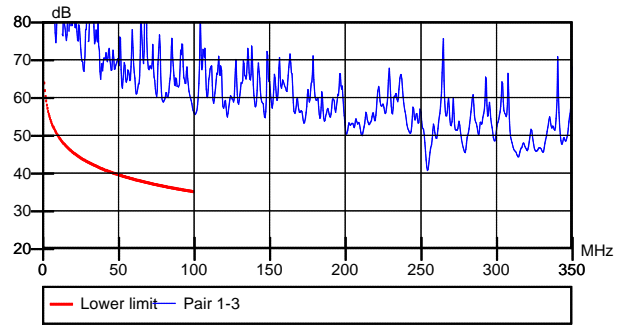
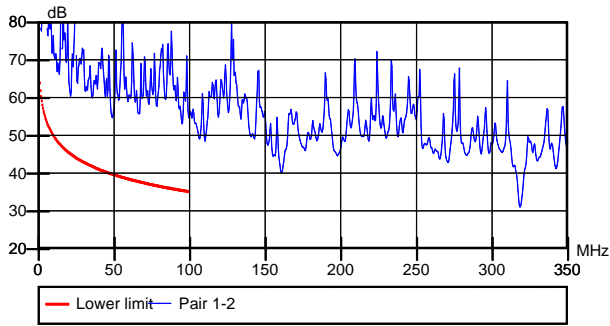
**Attenuation Reverse**



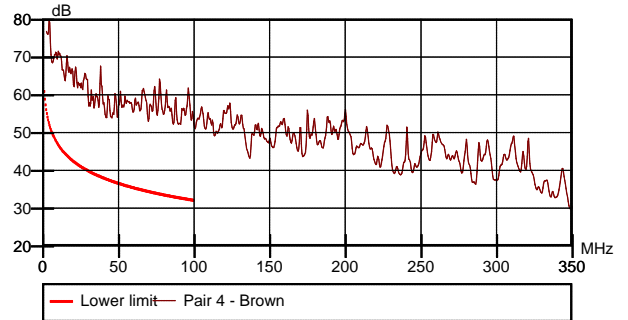
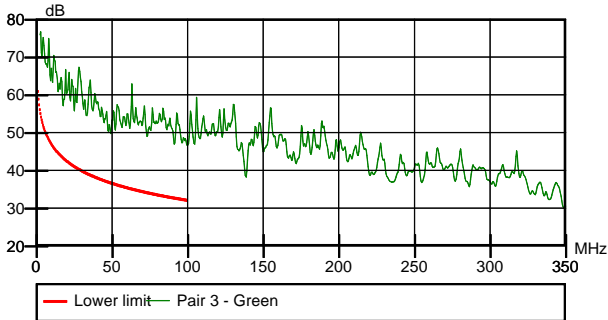
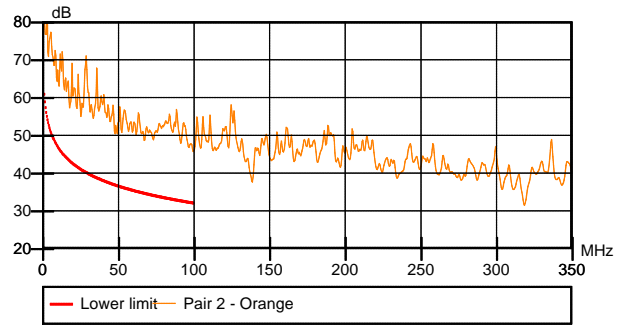
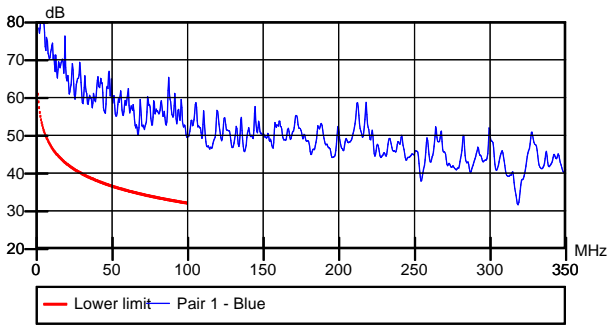
Pair	Margin dB/100m	Value dB/100m	Freq. MHz
1	0.05	2.18	1.21
2	0.18	2.05	1.21
3	0.17	2.07	1.21
4	0.13	2.10	1.21
1 REV	0.07	2.17	1.21
2 REV	0.19	2.04	1.21
3 REV	0.18	2.05	1.21
4 REV	0.14	2.09	1.21



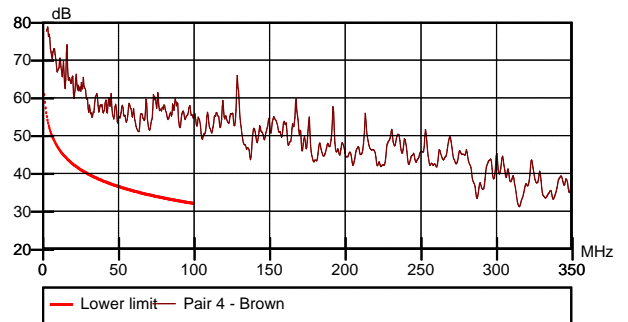
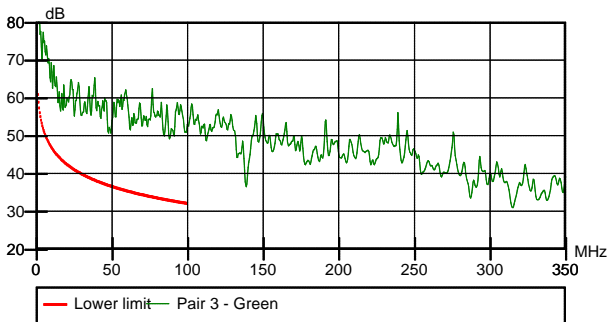
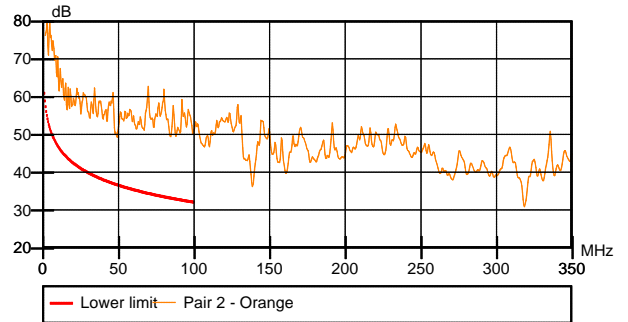
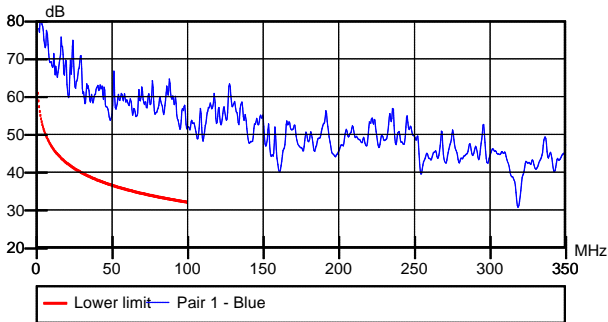
Pair	Margin dB	Value dB	Freq. MHz
1-2	12.71	50.61	67.13
1-3	20.43	61.98	38.31
1-4	15.97	57.75	37.00
2-3	10.55	50.64	47.92
2-4	16.71	57.70	41.81
3-4	13.85	54.25	45.74
1-2 REV	14.65	54.62	48.79
1-3 REV	20.83	56.13	99.87
1-4 REV	17.34	57.55	47.04
2-3 REV	9.45	56.67	16.05
2-4 REV	15.41	53.74	62.76
3-4 REV	15.04	52.68	69.74



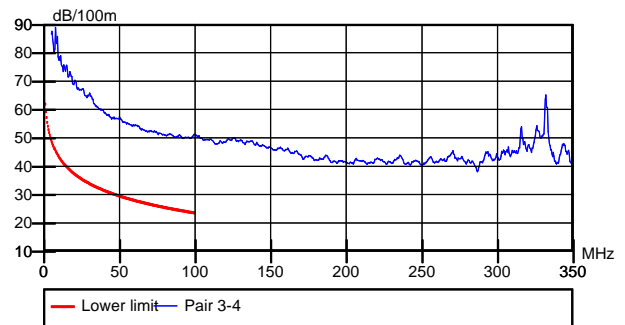
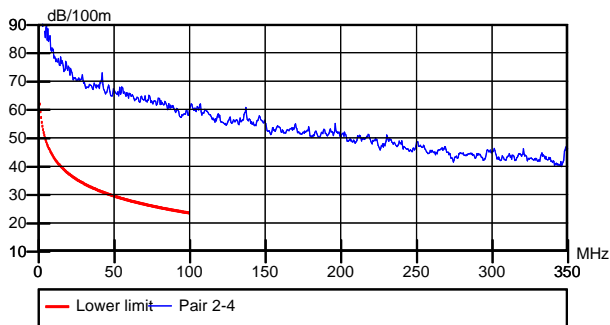
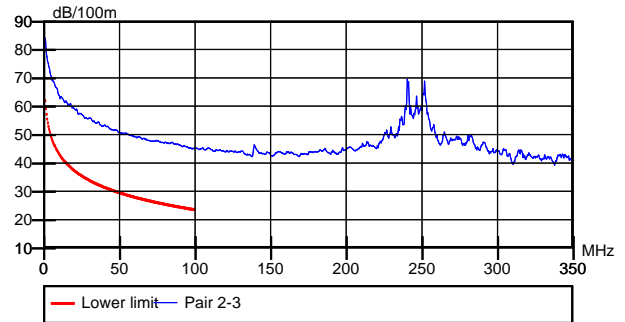
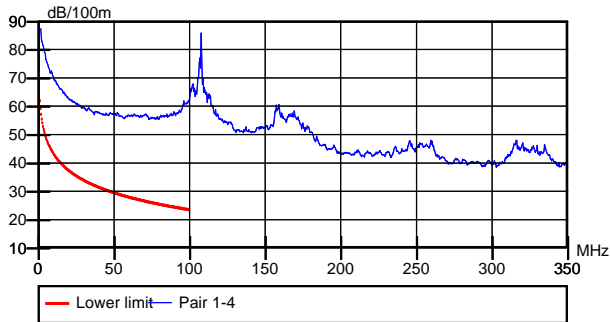
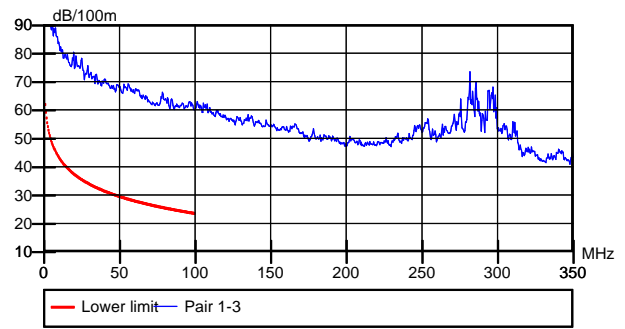
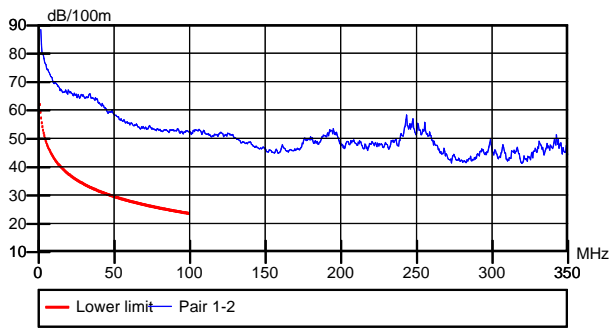
Pair	Margin dB	Value dB	Freq. MHz
1-2	12.71	50.61	67.13
1-3	20.43	61.98	38.31
1-4	15.97	57.75	37.00
2-3	10.55	50.64	47.92
2-4	16.71	57.70	41.81
3-4	13.85	54.25	45.74
1-2 REV	14.65	54.62	48.79
1-3 REV	20.83	56.13	99.87
1-4 REV	17.34	57.55	47.04
2-3 REV	9.45	56.67	16.05
2-4 REV	15.41	53.74	62.76
3-4 REV	15.04	52.68	69.74



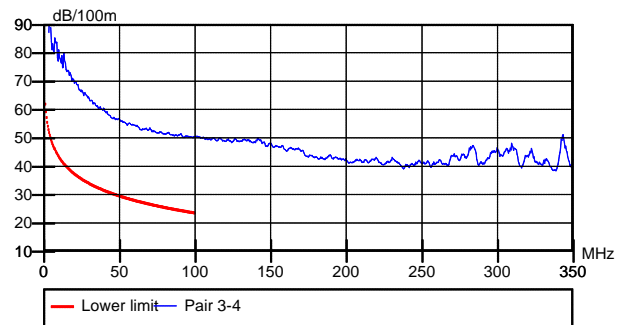
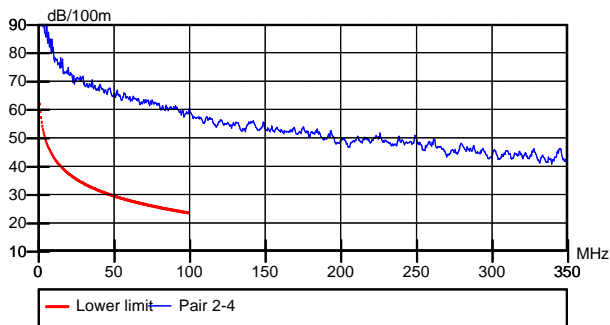
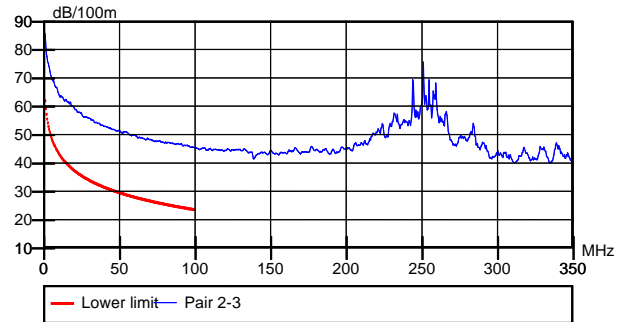
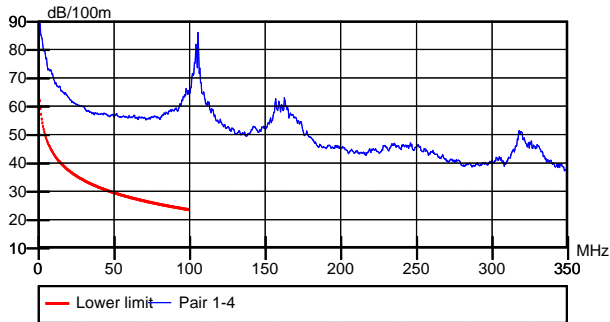
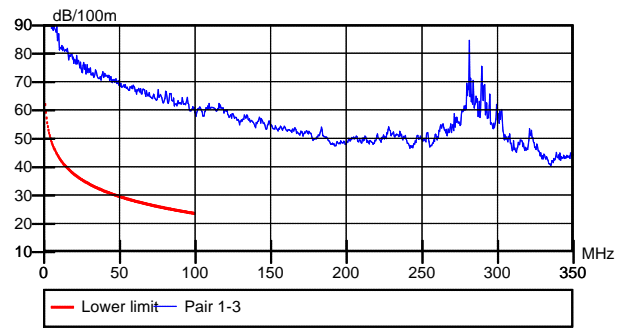
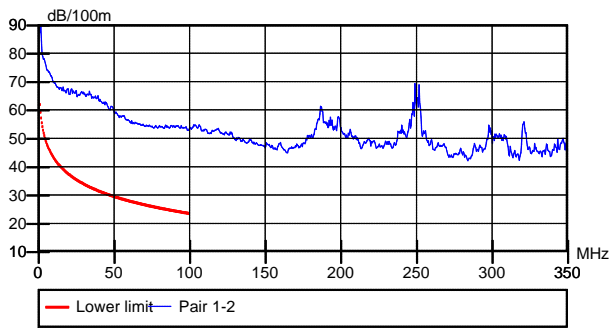
**PS NEXT Reverse**



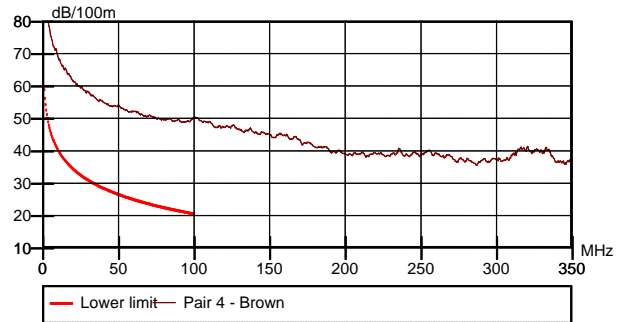
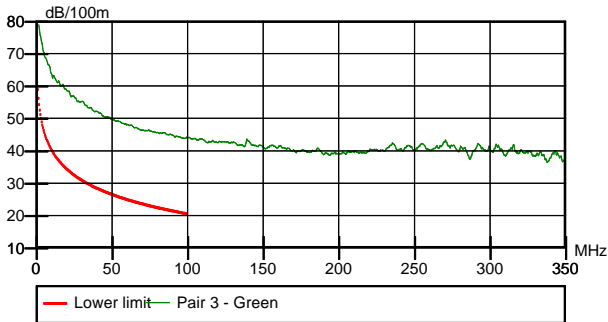
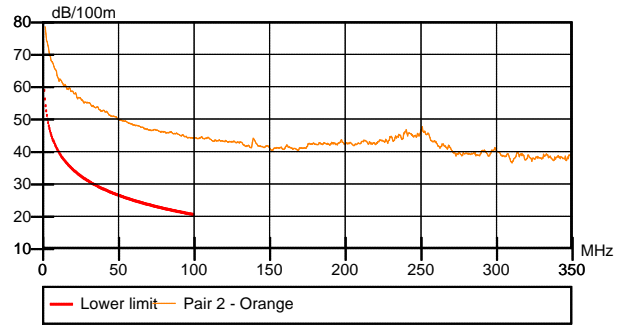
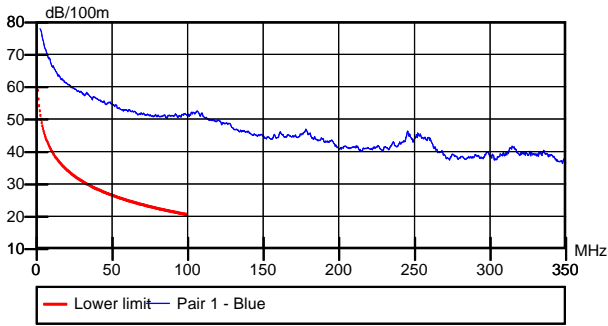
Pair	Margin dB	Value dB	Freq. MHz
1	15.26	50.16	67.13
2	13.32	50.41	47.92
3	12.82	49.74	49.23
4	16.04	54.02	41.81
1 REV	16.81	53.78	48.79
2 REV	12.32	49.24	49.23
3 REV	12.36	56.58	16.05
4 REV	15.22	54.81	32.64



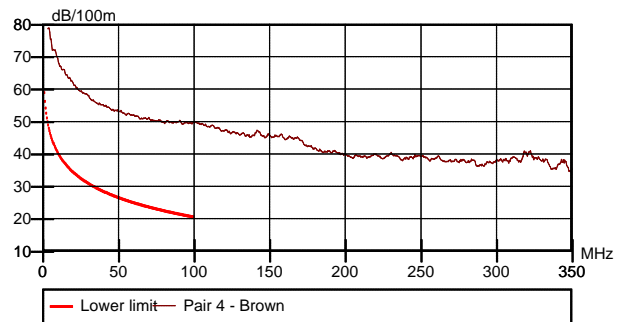
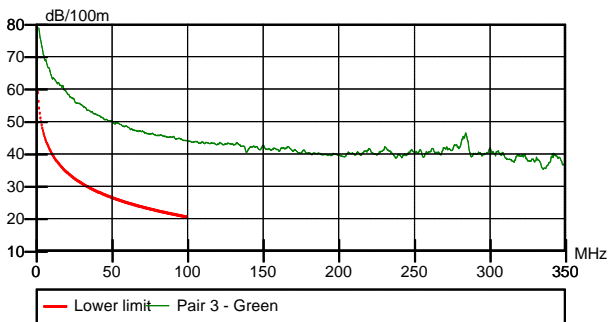
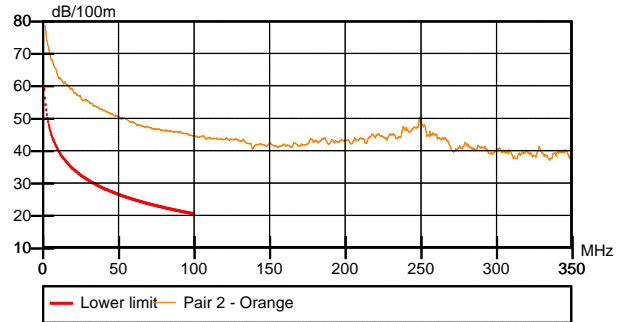
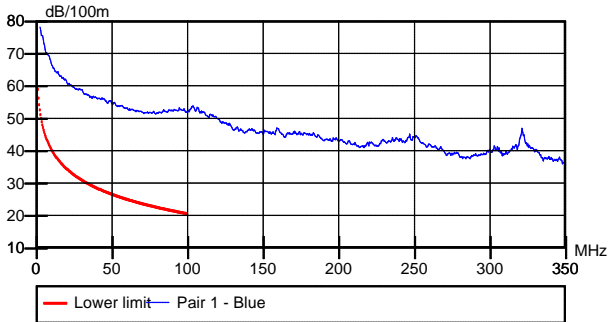
Pair	Margin dB/100m	Value dB/100m	Freq. MHz
1-2	23.98	79.76	2.52
1-3	34.96	60.35	83.28
1-4	24.56	57.00	37.00
2-3	19.47	62.59	10.81
2-4	32.85	57.17	94.19
3-4	24.95	51.99	68.87
1-2 REV	23.78	79.56	2.52
1-3 REV	35.24	59.05	99.87
1-4 REV	24.37	61.26	22.16
2-3 REV	19.50	78.97	1.65
2-4 REV	32.73	68.96	23.91
3-4 REV	25.19	52.91	63.63



Pair	Margin dB/100m	Value dB/100m	Freq. MHz
1-2	23.98	79.76	2.52
1-3	34.96	60.35	83.28
1-4	24.56	57.00	37.00
2-3	19.47	62.59	10.81
2-4	32.85	57.17	94.19
3-4	24.95	51.99	68.87
1-2 REV	23.78	79.56	2.52
1-3 REV	35.24	59.05	99.87
1-4 REV	24.37	61.26	22.16
2-3 REV	19.50	78.97	1.65
2-4 REV	32.73	68.96	23.91
3-4 REV	25.19	52.91	63.63

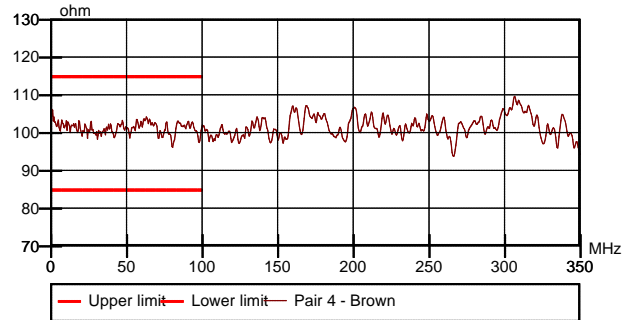
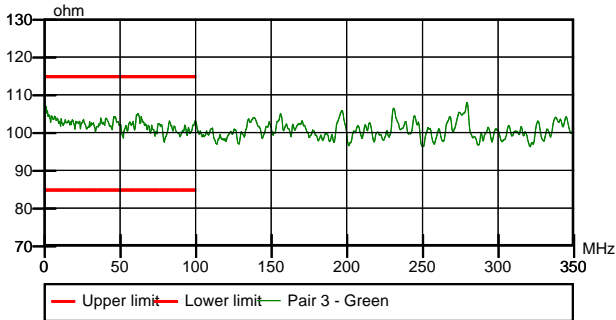
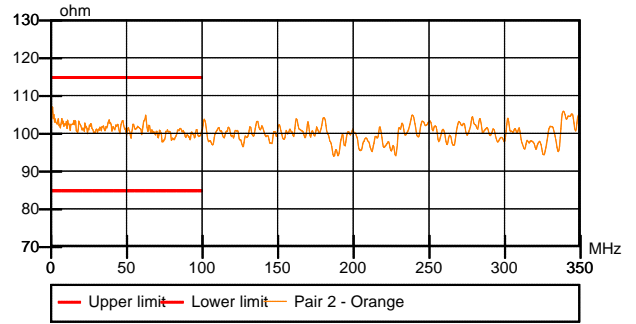
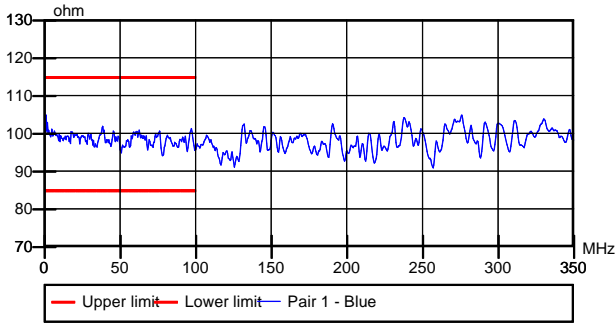


**PS ELFEXT Reverse**

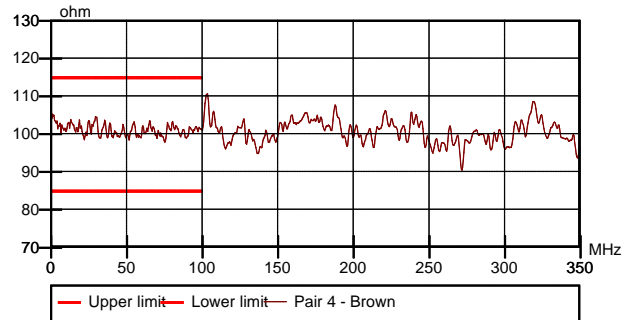
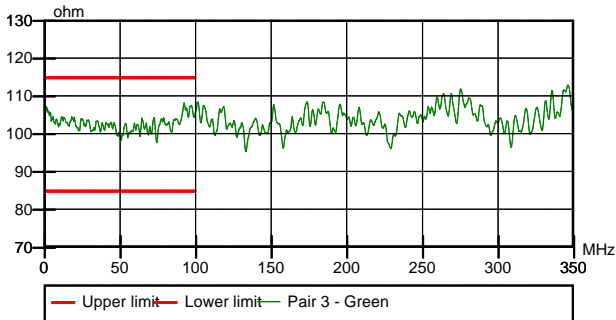
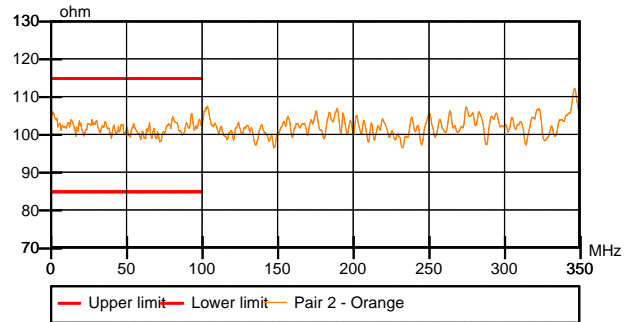
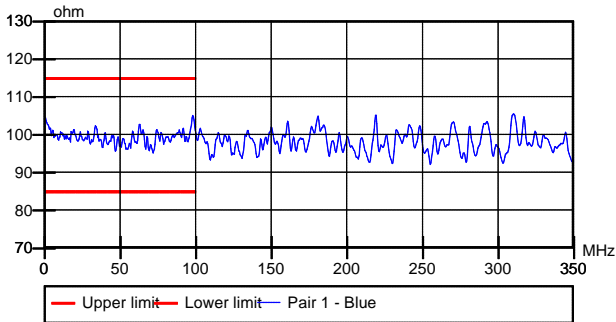


Pair	Margin Ohm	Value Ohm	Freq. MHz
1	25.12	77.89	2.52
1 REV	25.34	78.12	2.52
2	21.50	74.28	2.52
2 REV	21.46	74.24	2.52
3	22.26	62.38	10.81
3 REV	22.46	78.93	1.65
4	25.70	55.14	37.00
4 REV	25.76	55.19	37.00

**Input Impedance Forward**

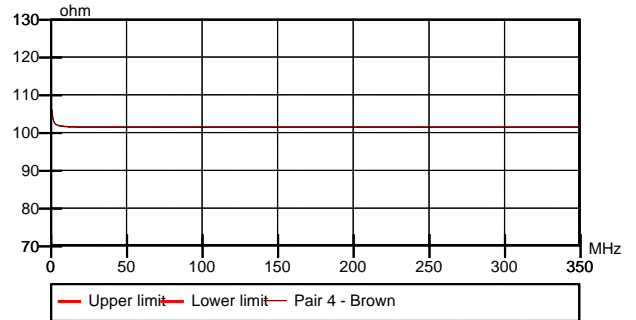
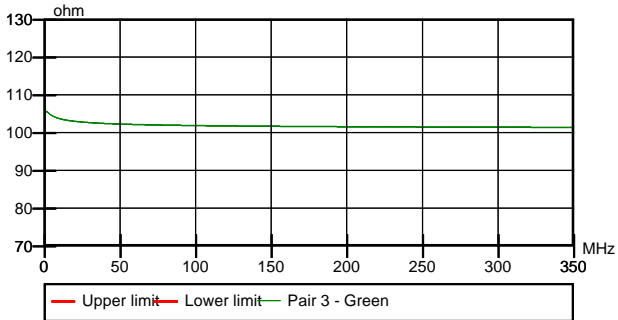
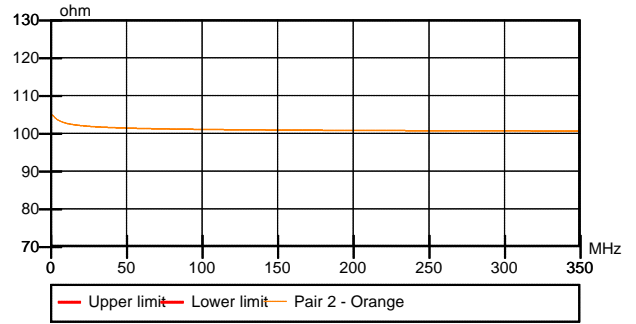
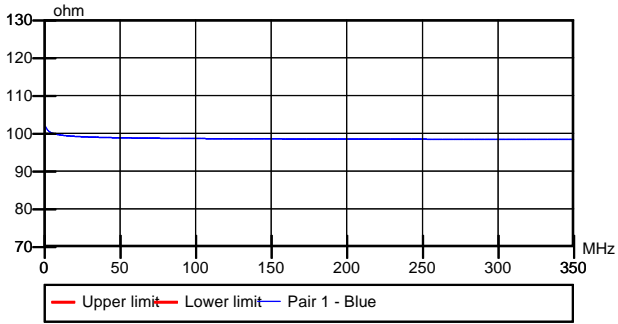


**Input Impedance Reverse**

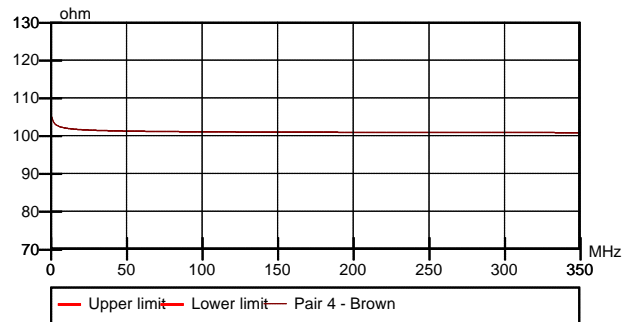
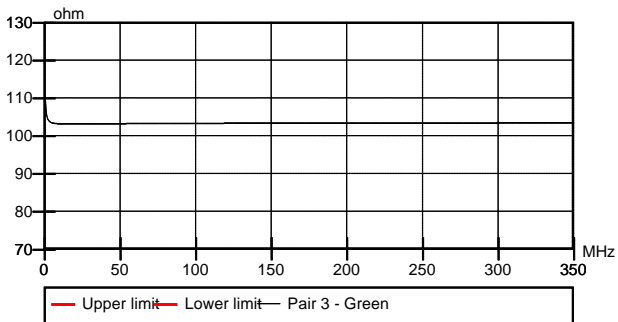
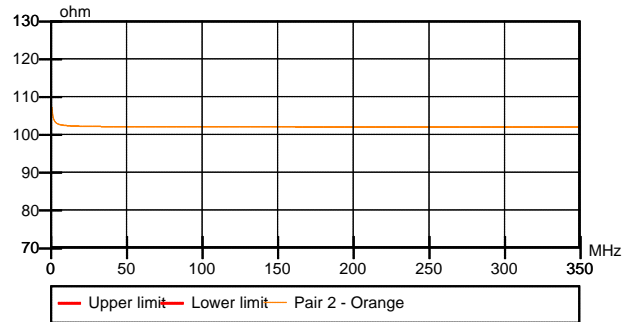
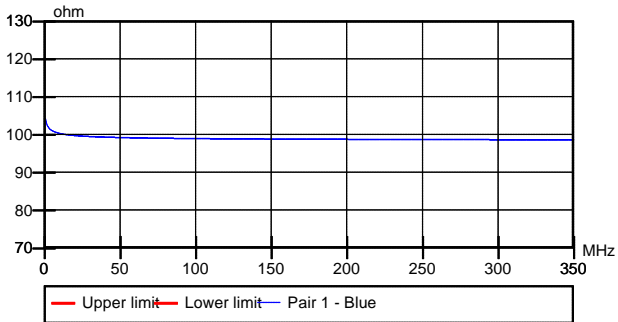


Pair	Margin Ohm	Value Ohm	Freq. MHz
1	9.10	94.10	78.04
2	8.07	106.93	1.21
3	8.03	106.97	1.21
4	8.95	106.05	1.21
1 REV	10.01	104.99	98.12
2 REV	8.99	106.01	1.21
3 REV	6.89	108.11	92.44
4 REV	9.86	105.14	1.21

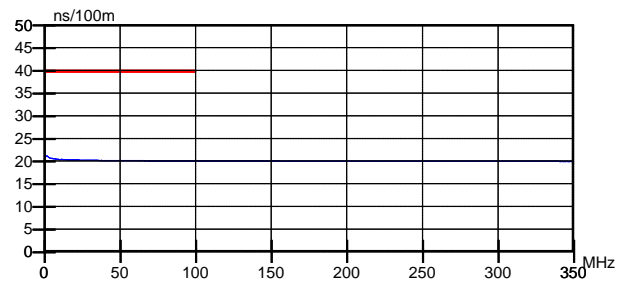
Fitted Impedance Forward



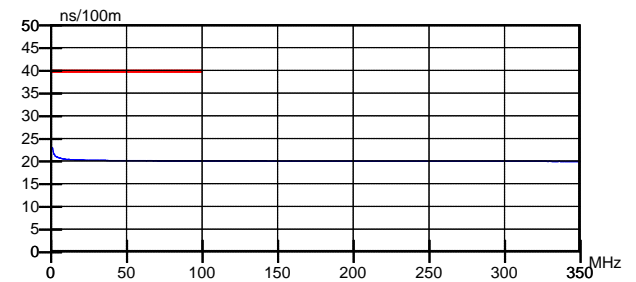
Fitted Impedance Reverse



Delay Skew Forward



Delay Skew Reverse



**Attenuation [dB/100m] @ discrete frequencies**

Freq. (Mhz)	Pair 1	Pair 2	Pair 3	Pair 4	Spec max
1.000	1.99	1.85	1.87	1.91	2.04
4.000	3.72	3.50	3.52	3.56	4.05
8.000	5.21	4.90	4.90	4.97	5.77
10.000	5.84	5.46	5.47	5.55	6.47
16.000	7.36	6.89	6.90	7.00	8.25
20.000	8.23	7.72	7.74	7.85	9.27
25.000	9.23	8.64	8.65	8.80	10.42
31.250	10.32	9.68	9.67	9.85	11.72
62.500	14.63	13.70	13.69	13.95	16.99
100.000	18.54	17.40	17.37	17.71	21.97

**Propagation Delay [ns/100m]**

Freq. (MHz)	Pair 1	Pair 2	Pair 3	Pair 4	Upper limit
5.000	514.19	495.29	502.01	493.60	550.10

**Volacity of Propagation [%]**

Freq. (MHz)	Pair 1	Pair 2	Pair 3	Pair 4	Specs Min.
5.000	64.87	67.35	66.44	67.58	59.66