



Test Report

Designation : 250MHz UTP
Testorder : OR Cat6
Length : 100m

Temp : 23.6°C

Test Date/Time : 2018-03-29 16:37:16

Sample-ID-No. : 00000EMRQM

Customer / Musteri : : TELEDAN-WITRONIC
Cable type / Kablo Tipi : : CAT6 F/UTP HF
Lot No. / Is Emri No. : : 181627
Operator : : ONUR BASARAN

PO No./ Siparis No. : : 9998
Cable Structure/ Kablo Yapisi :
Drum No/ / Makara No. :

Test Result: PASS

Final inspection

Worst Case Summary

{ v = Value l = Limit m = Margin f = Frequency (MHz) p = Pair / Combo < = Lower Limit > = Upper Limit }

Parameter	Frequency	Points	Minimum	{ v [f] p }	Maximum	{ v [f] p }	Min. Margin	{ m (v l) [f] p }	Result
IL (dB/100m) at 20°C	1-250	401		1.80 [1] 1	30.23 [250] 1		0.24 (3.04 > 3.28)	[2.867] 1	ü
Phase delay (ns/100m)	1-250	401		-456.15 [1] 1	508.53 [250] 1		27.75 (508.53 > 536.28)	[250] 1	ü
V % (%)	1-600	1601	-140,769.33	[1.896] 4	1,299.87	[1.967] 1	5.34 (65.34 < 60.00)	[595.9] 1	ü
Skew (ns/100m)	1-250	401		6.25 [1.622] 2-3	25.68 [1] 1-3		19.32 (25.68 > 45.00)	[1] 1-3	ü
NEXT (dB)	1-250	401		44.19 [205.8] 1-4	92.36 [1] 3-4		0.26 (45.21 < 44.95)	[105.6] 2-3	ü
ACR (dB)	1-250	401		16.7 [205.8] 1-4	90.7 [1] 3-4				
PS NEXT (dB)	1-250	401		43.91 [205.8] 1	89.60 [1] 4		3.22 (45.17 < 41.95)	[105.6] 3	ü
PS ACR (dB)	1-250	401		16.4 [205.8] 1	87.9 [1] 4				
ELFEXT (dB)	1-250	401		25.92 [224.5] 2-3	77.48 [1] 2-3		4.29 (26.56 < 22.27)	[193.4] 2-3	ü
ACR-F (dB)	1-250	401		26.3 [227.6] 2-3	77.5 [1] 2-3		4.8 (28.3 < 23.6)	[162.8] 2-3	ü
PS ELFEXT (dB)	1-250	401		25.69 [227.6] 3	76.93 [1] 3				
PS ACR-F (dB)	1-250	401		25.8 [227.6] 2	76.9 [1] 2		7.6 (28.2 < 20.6)	[162.8] 1	ü
ZIN (Ohm)	1-250	401		96.96 [156.6] 4	111.03 [2.245] 2				
Z0 (Ohm) (4th Order)	1-250	401		101.07 [44.57] 1	106.83 [1.622] 2		11.28 (103.72 > 115.00)	[99.98] 2	ü
RL (dB)	1-250	401		25.32 [2.245] 2	40.19 [32.75] 2		3.56 (25.32 < 21.76)	[2.245] 2	ü

Legend

IL = Insertion loss

Skew = Skew

PS NEXT = Power Sum NEXT

ACR-F = Attenuation Crosstalk-F Ratio

ZIN = Input Impedance

Phase delay = Phase delay

NEXT = Near End Crosstalk

PS ACR = Power Sum ACR

PS ELFEXT = Power Sum ELFEXT

Z0 = Fitted Impedance

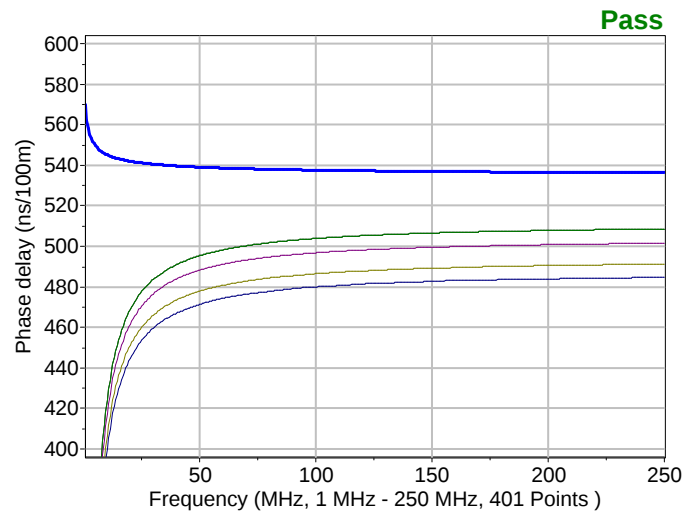
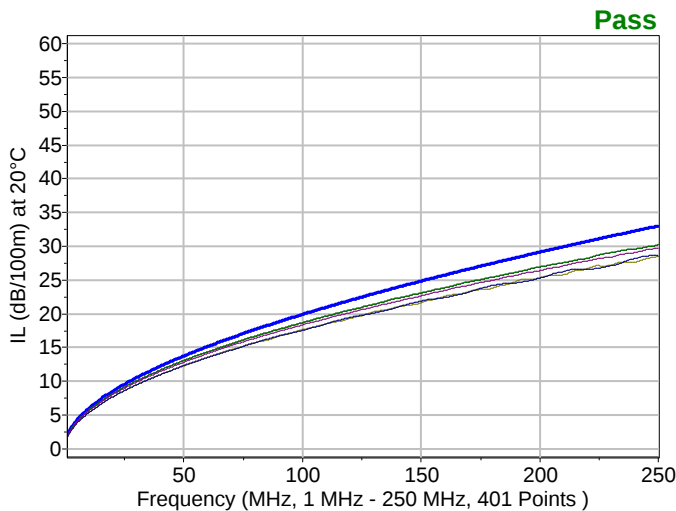
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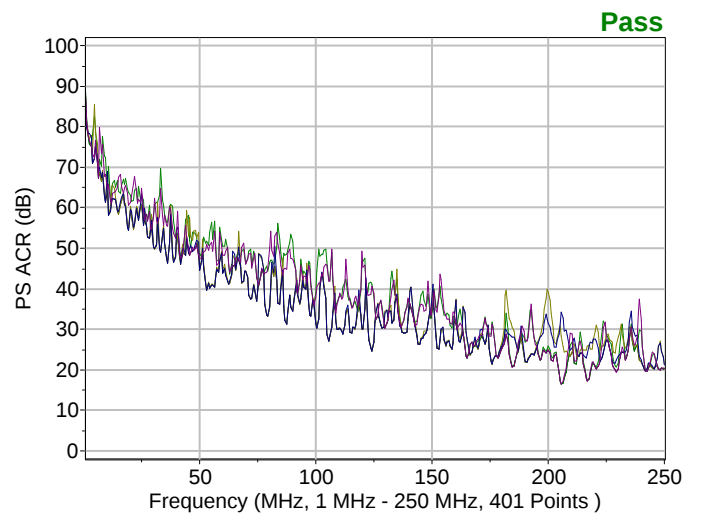
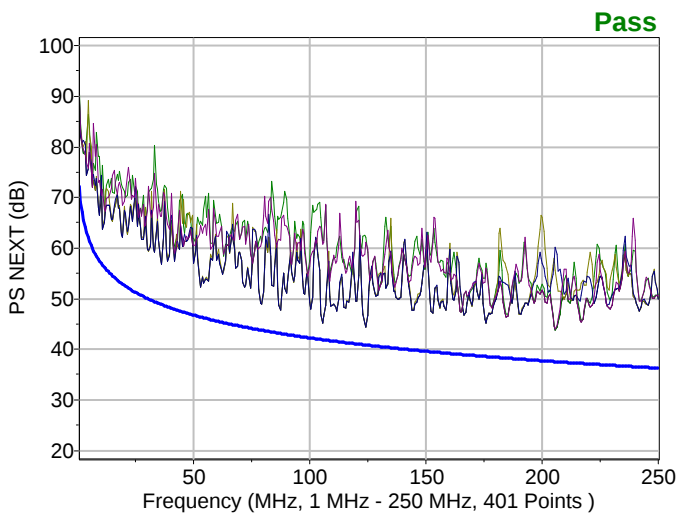
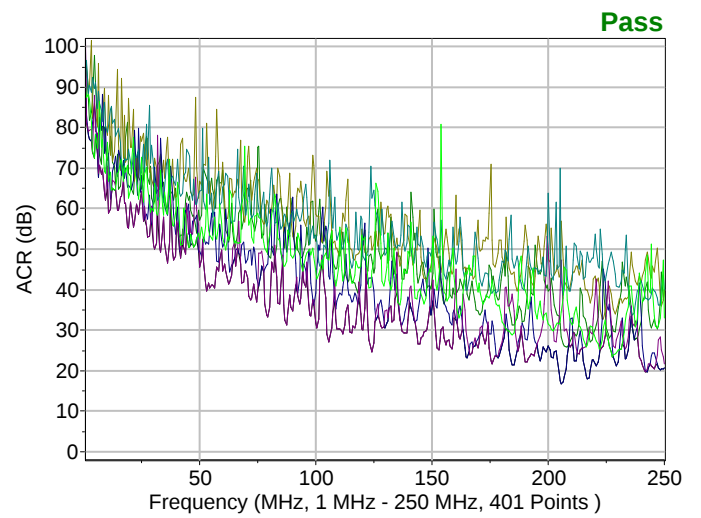
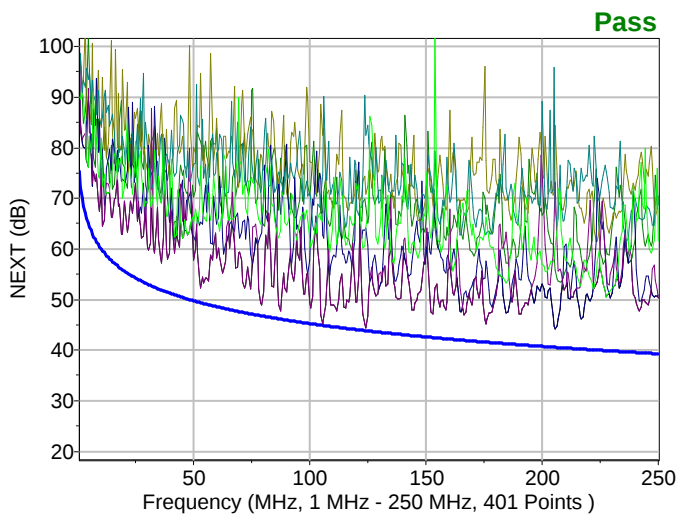
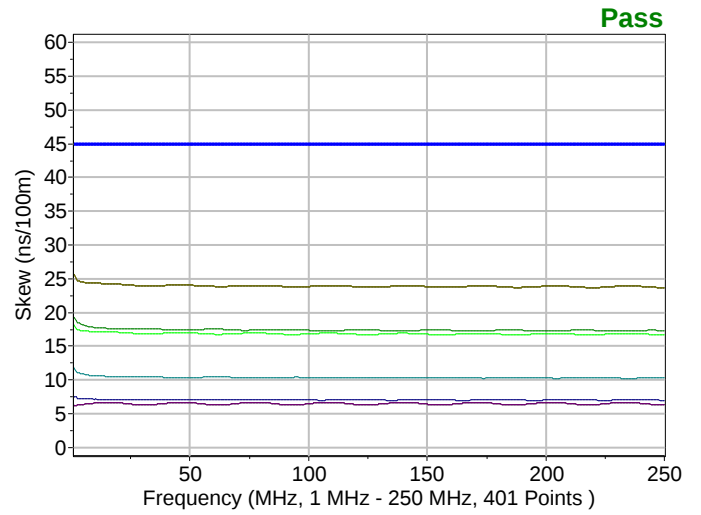
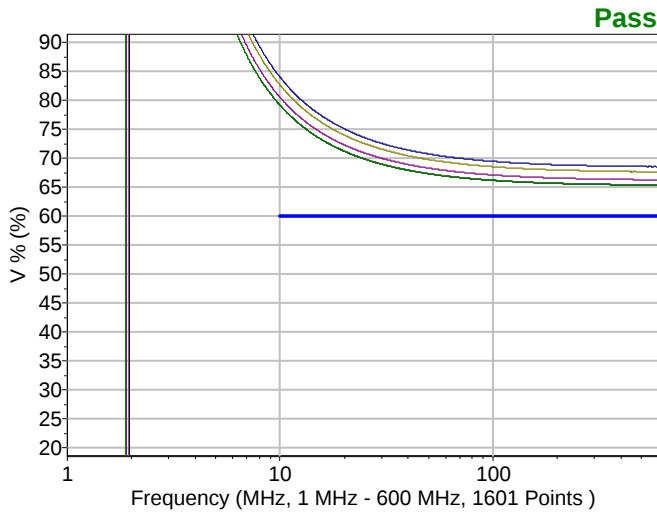
ACR = Attenuation Crosstalk Ratio

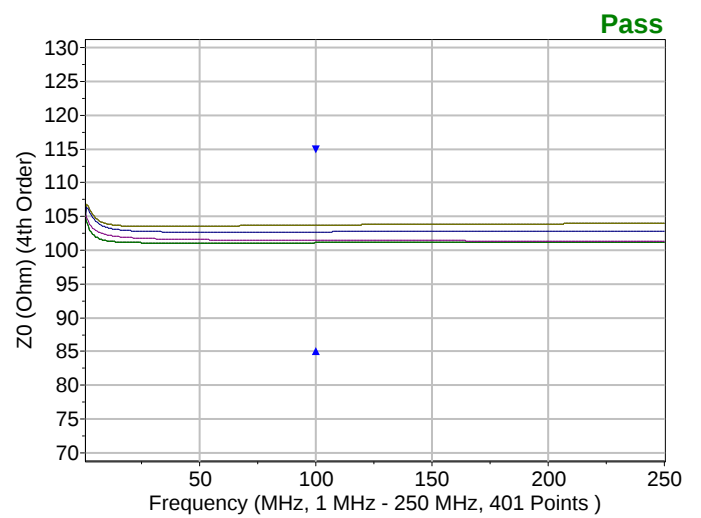
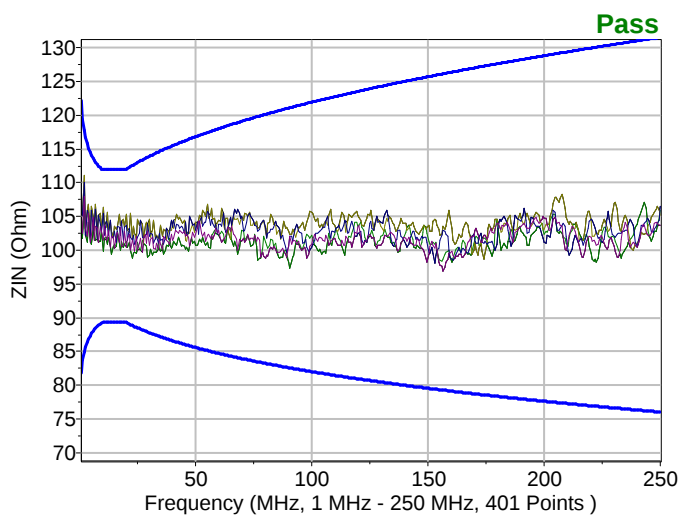
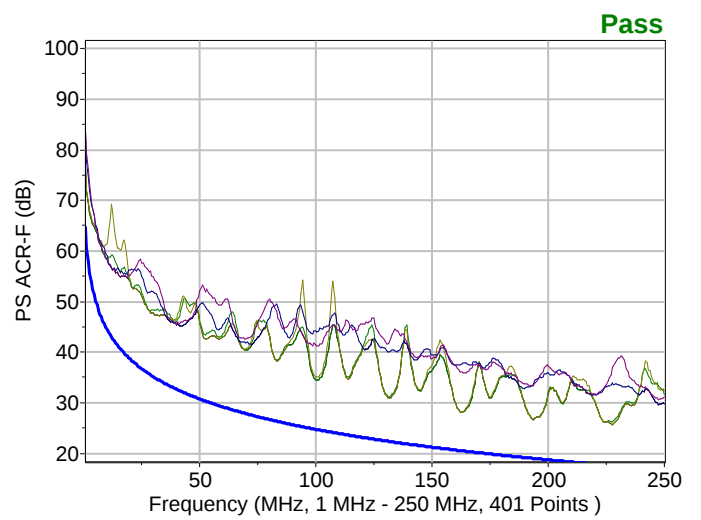
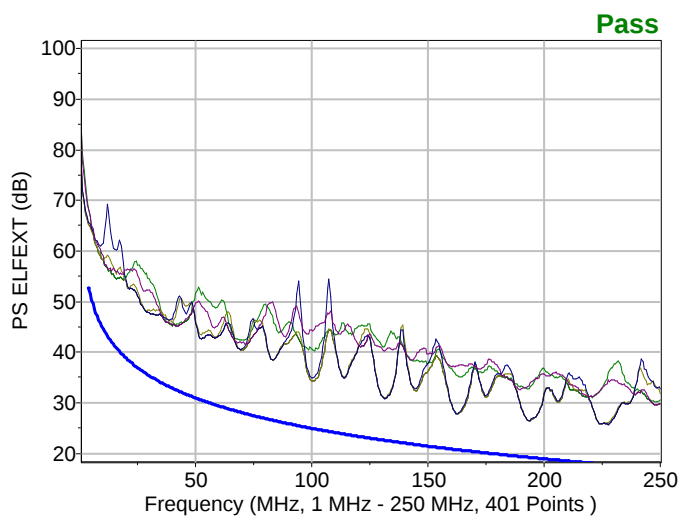
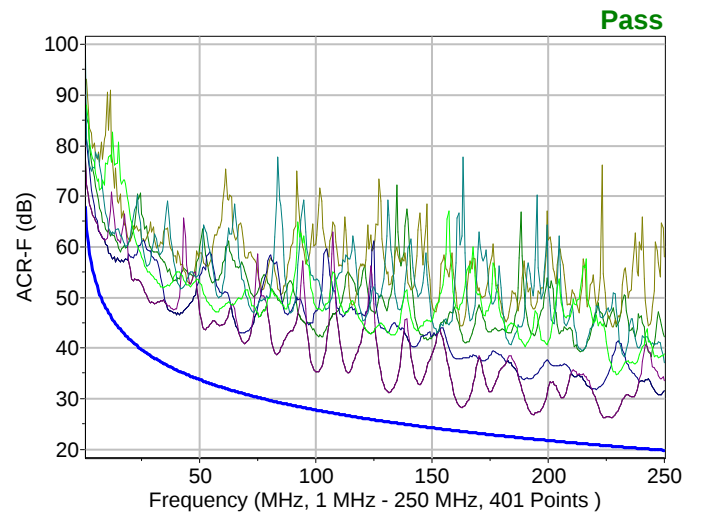
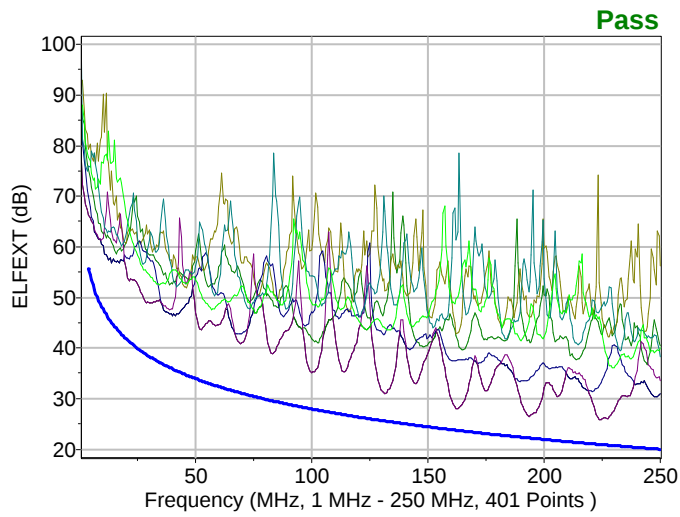
ELFEXT = Equal Level FEXT

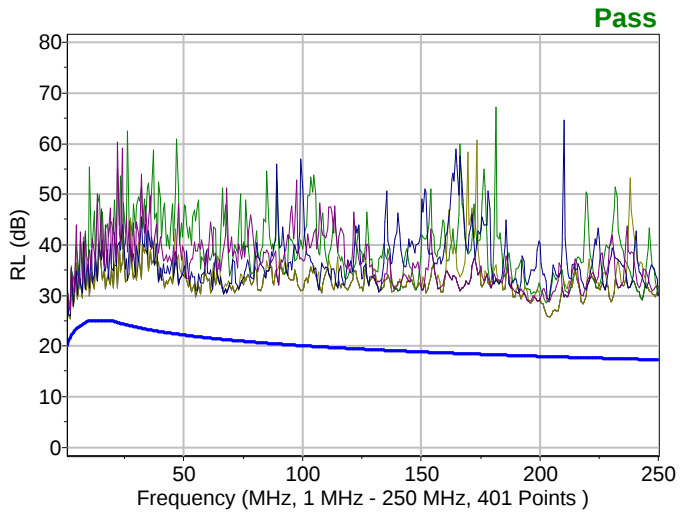
PS ACR-F = Power Sum ACR-F

RL = Return Loss





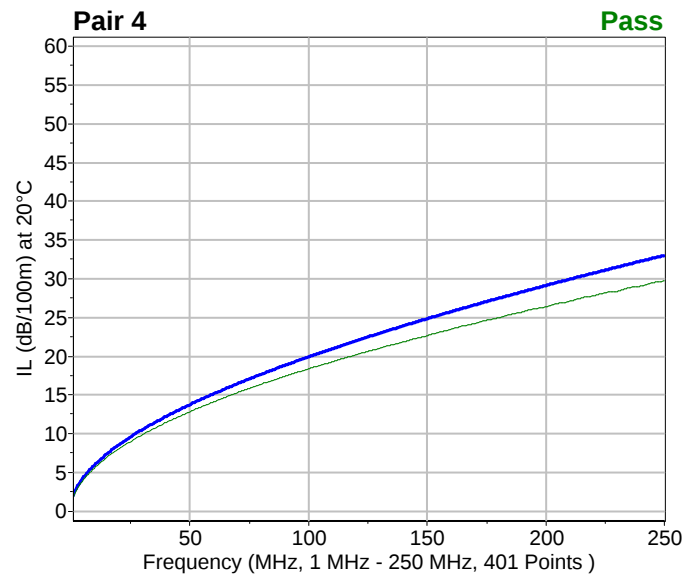
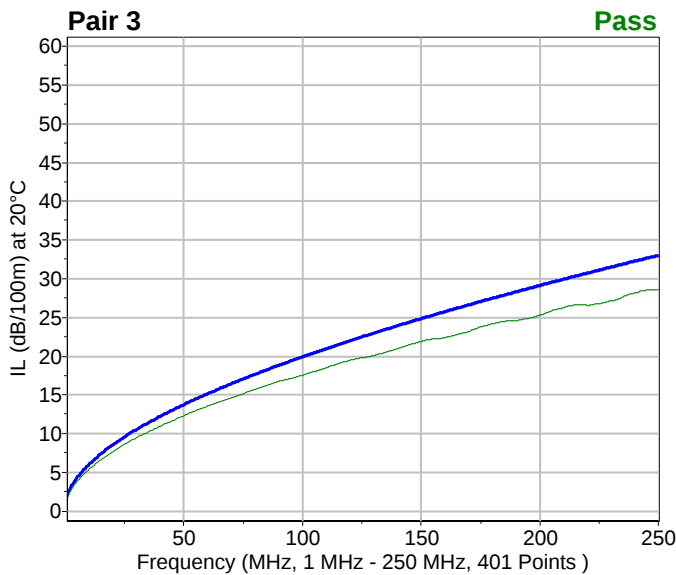
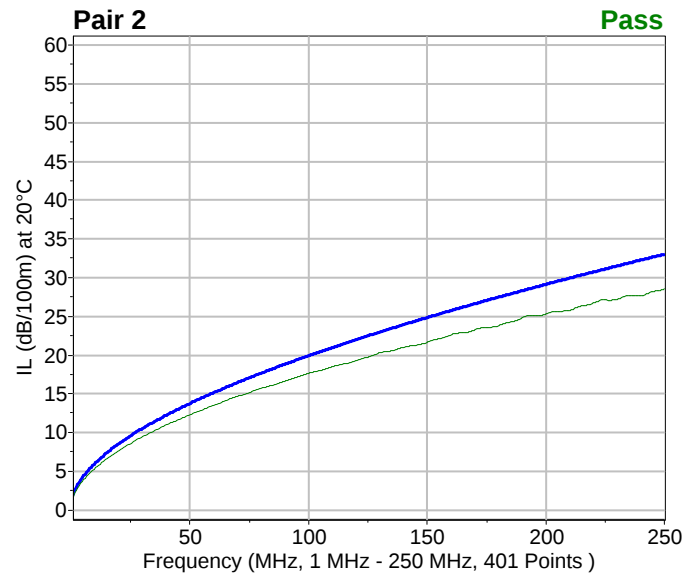
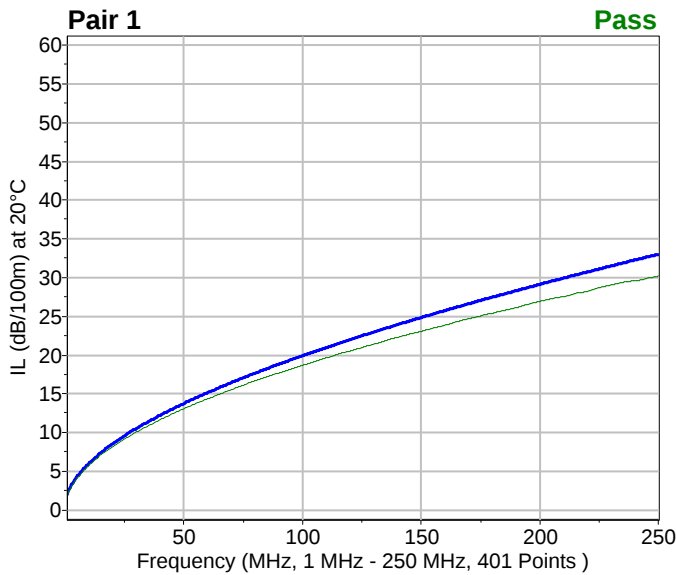




Summary and Graphic: Insertion loss (IL)

{ v = Value (dB/100m) at 20°C l = Limit (dB/100m) at 20°C m = Margin (dB/100m) at 20°C f = Frequency (MHz) }

Pair	Start f	Stop f	Points	Minimum	{ v [f] }	Maximum	{ v [f] }	Min. Margin	{ m (v l) [f] }	Result
1	1	250	401	1.80	[1]	30.23	[250]	0.24	(3.04 > 3.28) [2.867]	ü
2	1	250	401	1.70	[1]	28.57	[250]	0.39	(1.70 > 2.09) [1]	ü
3	1	250	401	1.68	[1]	28.64	[246.9]	0.41	(1.68 > 2.09) [1]	ü
4	1	250	401	1.77	[1]	29.73	[250]	0.30	(2.98 > 3.28) [2.867]	ü



Detail Discrete Frequencies: Insertion loss IL (dB/100m)

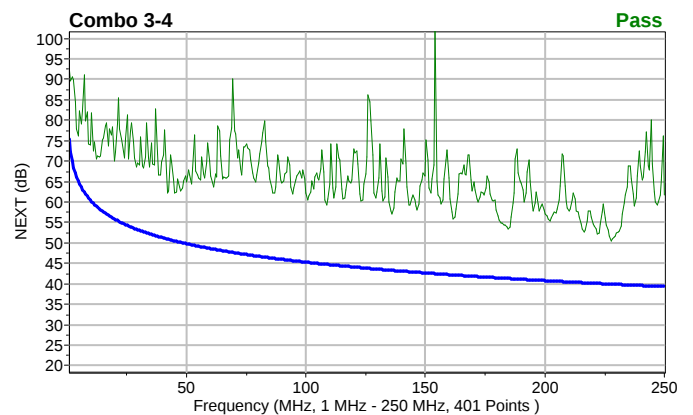
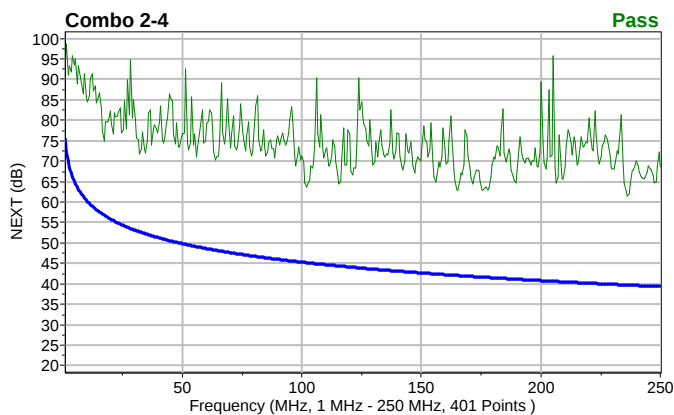
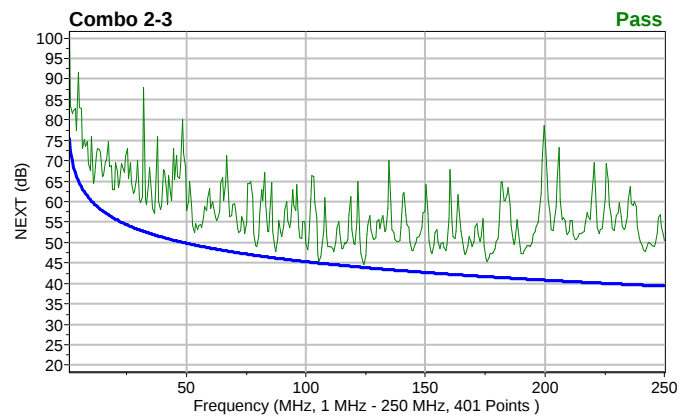
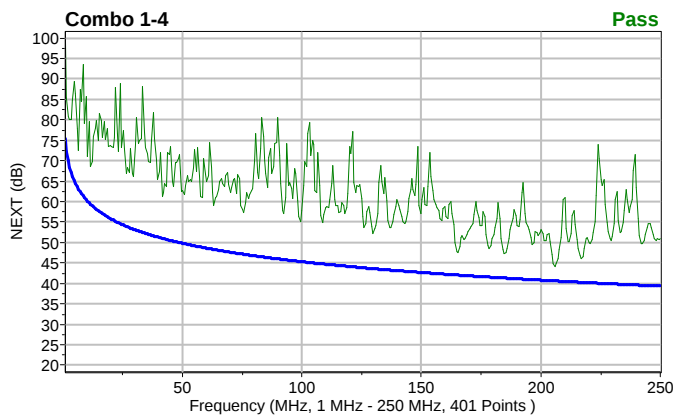
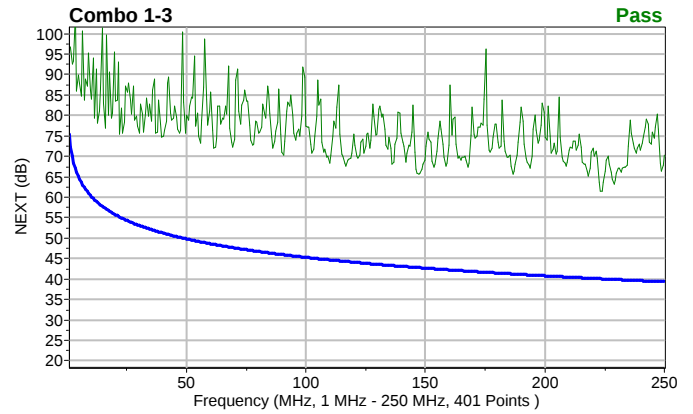
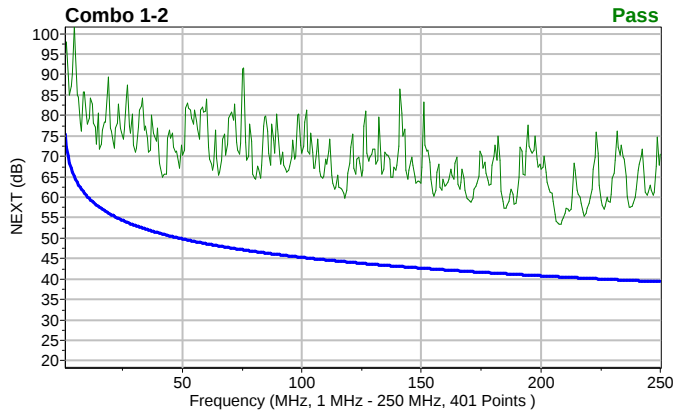
Frequency [MHz]	1.00	4.00	8.00	10.00	16.00	20.00	31.25	62.50	100.00	No. of
Freq. found [MHz]	1.00	4.11	7.85	9.71	15.94	20.30	31.50	62.63	99.98	Error Points
Max. Spec.	2.09	3.88	5.32	5.92	7.60	8.60	10.79	15.49	19.91	
Pair 1	1.80	3.64	5.06	5.65	7.29	8.23	10.29	14.66	18.67	-
Pair 2	1.70	3.42	4.75	5.30	6.83	7.73	9.68	13.81	17.66	-
Pair 3	1.68	3.42	4.75	5.30	6.84	7.75	9.70	13.83	17.54	-
Pair 4	1.77	3.56	4.97	5.54	7.13	8.07	10.11	14.42	18.35	-

Frequency [MHz]	200.00	250.00	300.00	400.00	No. of
Freq. found [MHz]	200.20	250.00	250.00	250.00	Error Points
Max. Spec.	29.15	33.02	33.02	33.02	
Pair 1	26.95	30.23	30.23	30.23	-
Pair 2	25.34	28.57	28.57	28.57	-
Pair 3	25.30	28.57	28.57	28.57	-
Pair 4	26.40	29.73	29.73	29.73	-

Summary and Graphic: Near End Crosstalk (NEXT)

{ v = Value (dB) l = Limit (dB) m = Margin (dB) f = Frequency (MHz) }

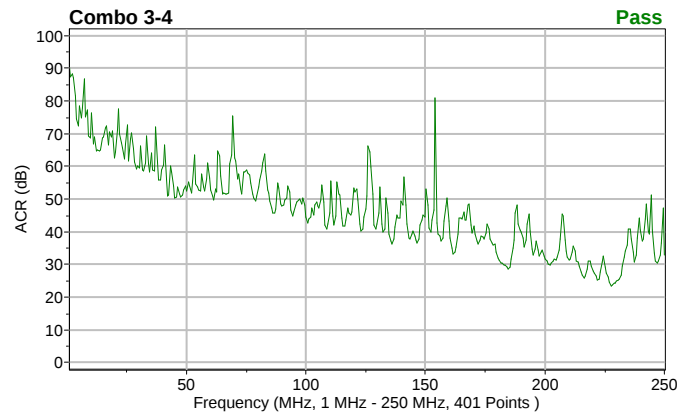
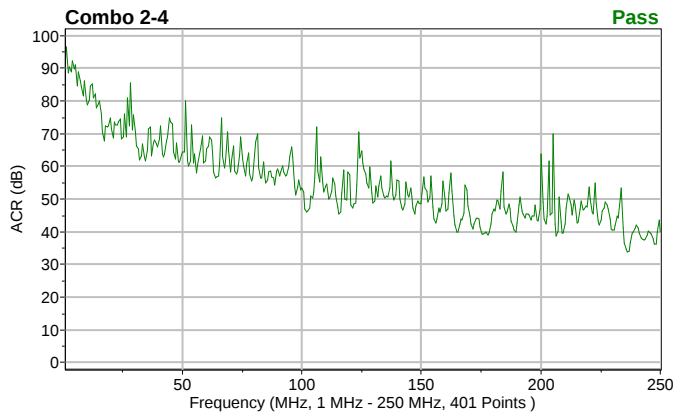
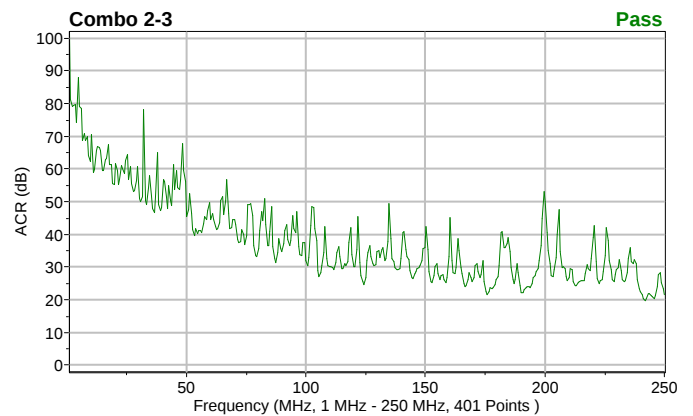
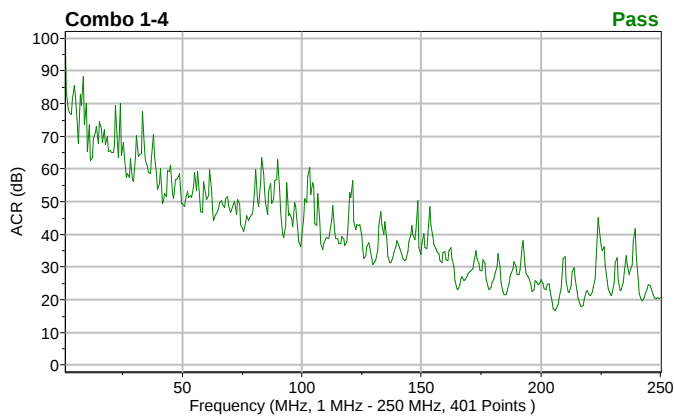
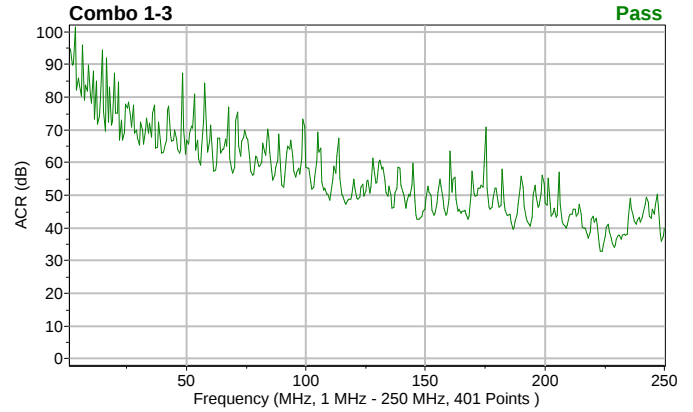
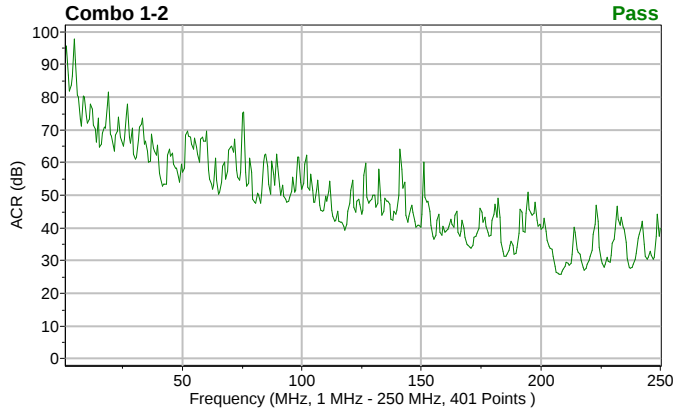
Combo	Start f	Stop f	Points	Minimum { v [f] }	Maximum { v [f] }	Min. Margin { m (v l) [f] }	Result
1-2	1	250	401	53.50 [207.7]	101.73 [4.735]	12.96 (53.50 < 40.54) [207.7]	ü
1-3	1	250	401	61.57 [223.2]	104.77 [3.49]	19.48 (78.16 < 58.68) [12.83]	ü
1-4	1	250	401	44.19 [205.8]	101.57 [1]	3.59 (44.19 < 40.60) [205.8]	ü
2-3	1	250	401	44.50 [124.3]	105.29 [1]	0.26 (45.21 < 44.95) [105.6]	ü
2-4	1	250	401	61.58 [236.3]	98.70 [1.622]	18.19 (74.97 < 56.77) [17.18]	ü
3-4	1	250	401	50.55 [227.6]	103.19 [154.1]	10.61 (50.55 < 39.94) [227.6]	ü



Summary and Graphic: Attenuation Crosstalk Ratio (ACR)

{ v = Value (dB) l = Limit (dB) m = Margin (dB) f = Frequency (MHz) }

Combo	Start f	Stop f	Points	Minimum { v [f] }	Maximum { v [f] }	Result
1-2	1	250	401	25.8 [208.3]	97.8 [4.735]	ü
1-3	1	250	401	32.8 [223.9]	101.4 [3.49]	ü
1-4	1	250	401	16.7 [205.8]	99.8 [1]	ü
2-3	1	250	401	19.7 [241.9]	103.6 [1]	ü
2-4	1	250	401	33.7 [236.3]	96.6 [1.622]	ü
3-4	1	250	401	23.4 [227.6]	90.7 [1]	ü



Detail Discrete Frequencies: Near End Crosstalk NEXT (dB)

Frequency [MHz]	1.00	4.00	8.00	10.00	16.00	20.00	31.25	62.50	100.00	No. of
Freq. found [MHz]	1.00	4.11	7.85	9.71	15.94	20.30	31.50	62.63	99.98	Error Points
Min. Spec.	75.30	66.09	61.88	60.49	57.26	55.69	52.82	48.35	45.30	
Combo 1-2	93.83	90.02	76.16	79.97	72.91	76.20	77.10	66.56	70.70	-
Combo 1-3	95.84	85.85	88.86	86.13	76.88	83.37	80.23	74.42	77.37	-
Combo 1-4	101.57	84.73	84.36	85.76	79.81	73.35	74.10	62.09	57.89	-
Combo 2-3	105.29	77.47	73.34	67.46	69.78	69.43	61.19	55.36	49.64	-
Combo 2-4	93.51	95.72	89.15	85.72	82.91	79.17	75.16	78.09	71.16	-
Combo 3-4	92.36	77.87	79.88	74.05	78.61	72.23	68.70	66.02	62.24	-

Frequency [MHz]	200.00	250.00	300.00	400.00	No. of
Freq. found [MHz]	200.20	250.00	250.00	250.00	Error Points
Min. Spec.	40.78	39.33	39.33	39.33	
Combo 1-2	66.74	70.43	70.43	70.43	-
Combo 1-3	74.63	70.24	70.24	70.24	-
Combo 1-4	53.15	51.00	51.00	51.00	-
Combo 2-3	75.39	50.33	50.33	50.33	-
Combo 2-4	89.27	68.66	68.66	68.66	-
Combo 3-4	57.09	61.66	61.66	61.66	-

Detail Discrete Frequencies: Attenuation Crosstalk Ratio ACR (dB)

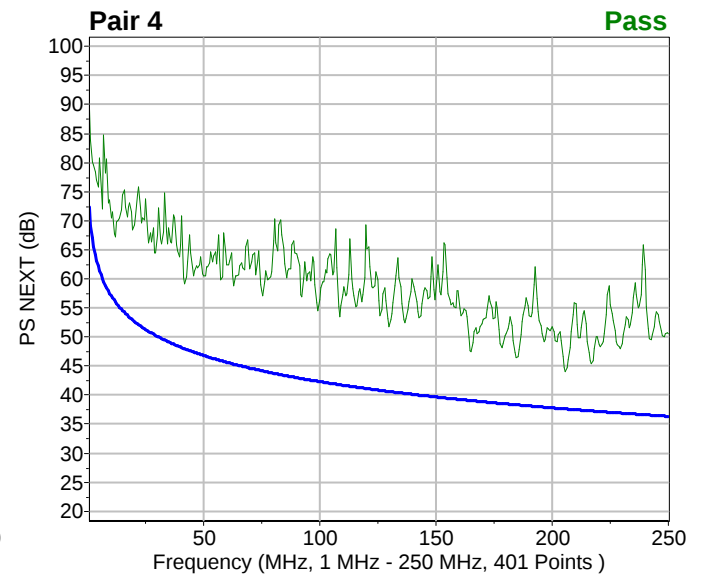
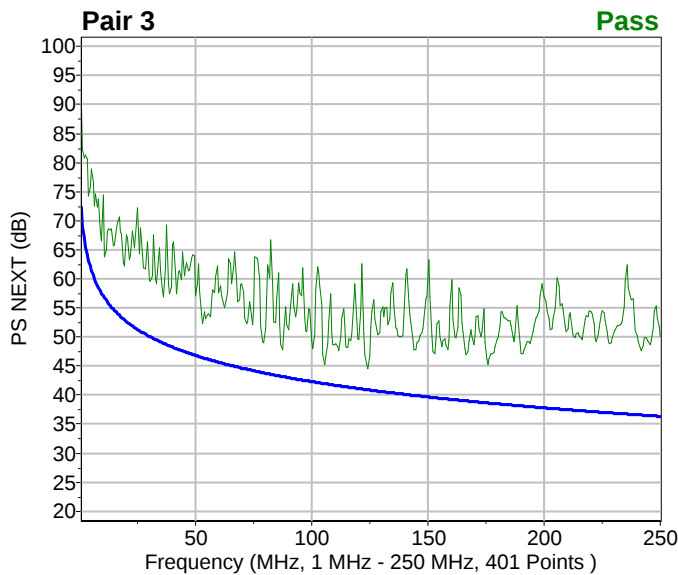
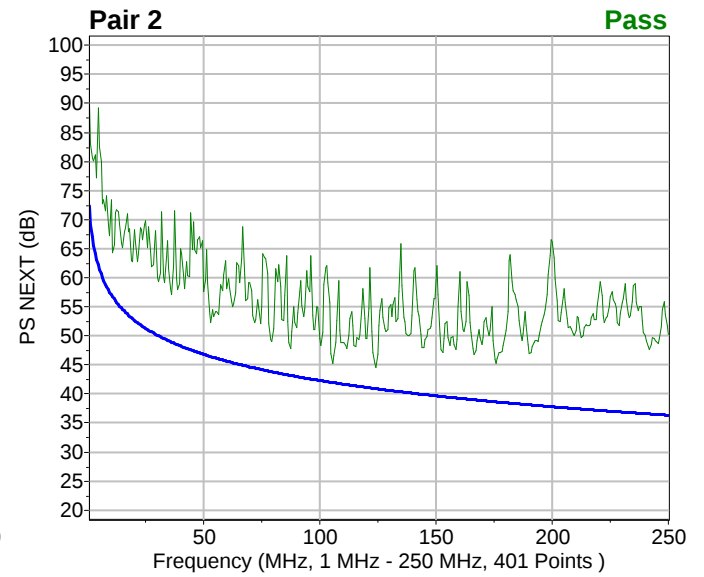
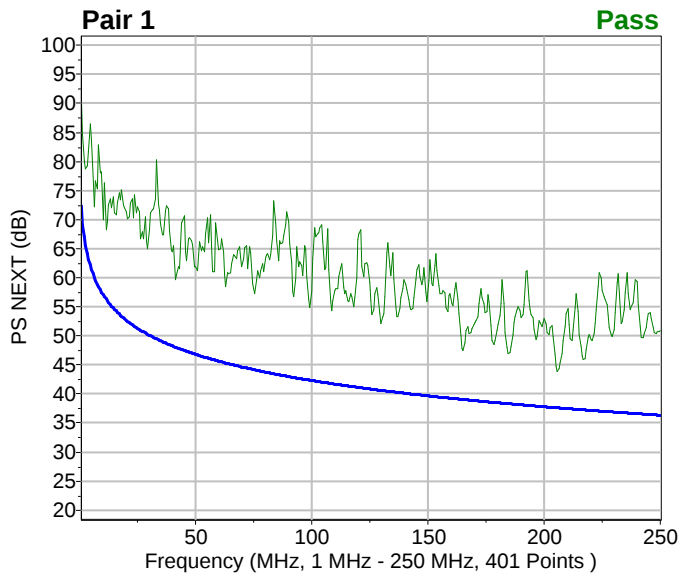
Frequency [MHz]	1.00	4.00	8.00	10.00	16.00	20.00	31.25	62.50	100.00	No. of
Freq. found [MHz]	1.00	4.11	7.85	9.71	15.94	20.30	31.50	62.63	99.98	Error Points
Combo 1-2	92.0	86.4	71.1	74.3	65.6	67.9	66.7	51.8	51.9	-
Combo 1-3	94.0	82.2	83.8	80.4	69.5	75.1	69.9	59.7	58.6	-
Combo 1-4	99.8	81.1	79.3	80.1	72.5	65.1	63.7	47.3	39.1	-
Combo 2-3	103.6	74.0	68.6	62.1	62.9	61.7	51.4	41.5	31.9	-
Combo 2-4	91.8	92.3	84.4	80.4	76.0	71.4	65.4	64.2	53.4	-
Combo 3-4	90.7	74.4	75.1	68.7	71.7	64.4	58.9	52.1	44.6	-

Frequency [MHz]	200.00	250.00	300.00	400.00	No. of
Freq. found [MHz]	200.20	250.00	250.00	250.00	Error Points
Combo 1-2	39.6	40.0	40.0	40.0	-
Combo 1-3	47.5	39.8	39.8	39.8	-
Combo 1-4	26.0	20.6	20.6	20.6	-
Combo 2-3	49.9	21.6	21.6	21.6	-
Combo 2-4	63.8	39.9	39.9	39.9	-
Combo 3-4	31.6	32.9	32.9	32.9	-

Summary and Graphic: Power Sum NEXT (PS NEXT)

{ v = Value (dB) } / = Limit (dB) m = Margin (dB) f = Frequency (MHz) }

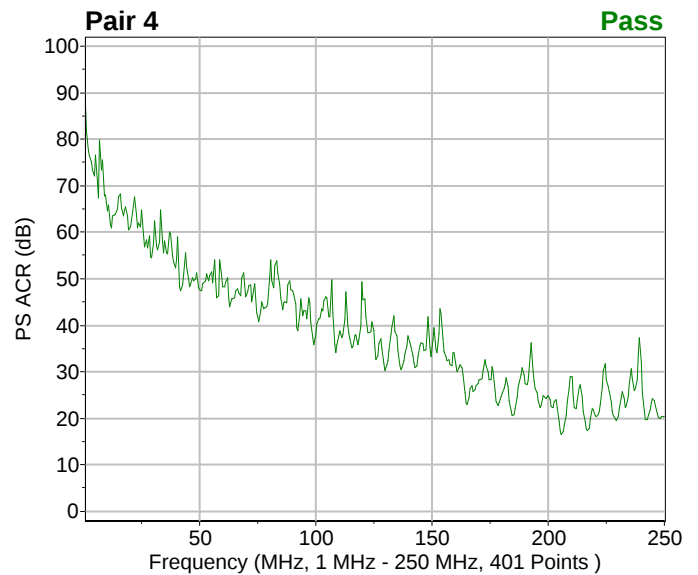
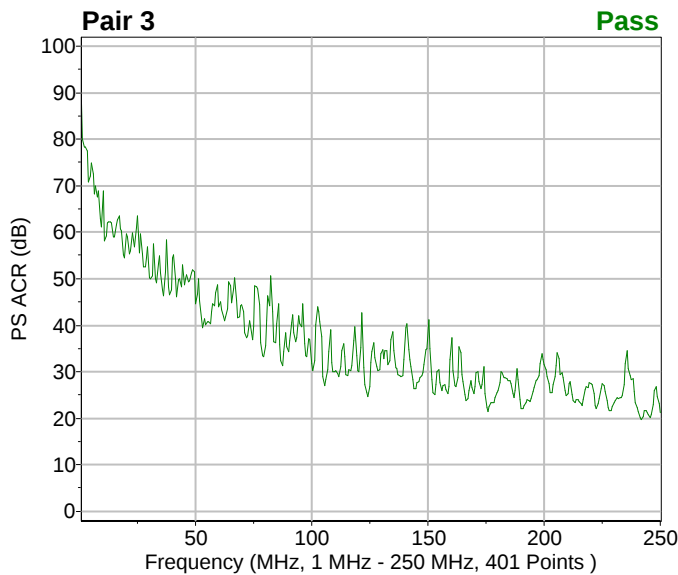
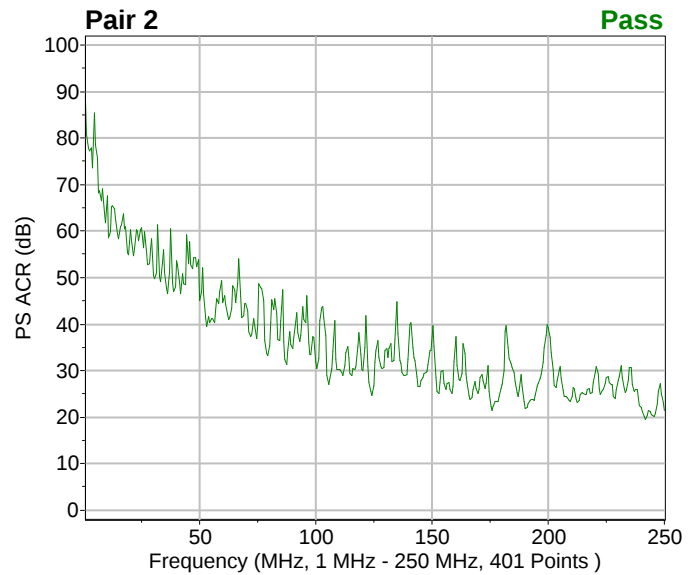
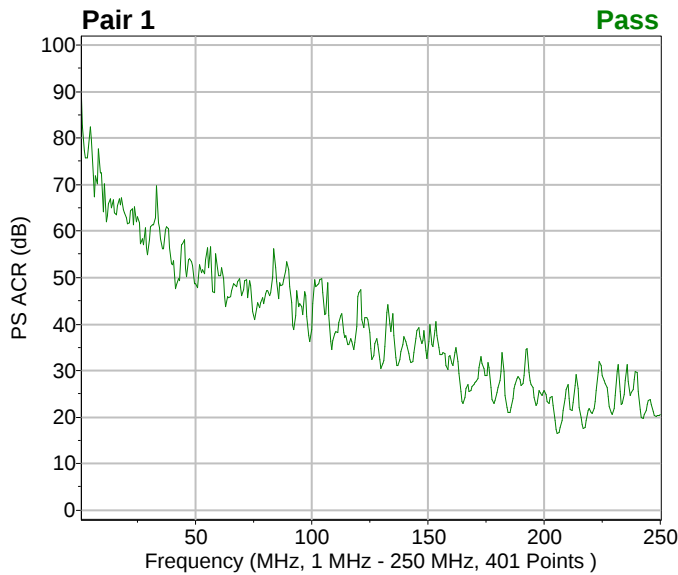
Pair	Start f	Stop f	Points	Minimum { $v[f]$ }	Maximum { $v[f]$ }	Min. Margin { $m(v/l)[f]$ }	Result
1	1	250	401	43.91 [205.8]	91.29 [1]	6.31 (43.91 < 37.60) [205.8]	ü
2	1	250	401	44.48 [124.3]	90.51 [1]	3.23 (45.18 < 41.95) [105.6]	ü
3	1	250	401	44.45 [124.3]	90.60 [1]	3.22 (45.17 < 41.95) [105.6]	ü
4	1	250	401	44.07 [205.8]	89.60 [1]	6.47 (44.07 < 37.60) [205.8]	ü



Summary and Graphic: Power Sum ACR (PS ACR)

{ v = Value (dB) l = Limit (dB) m = Margin (dB) f = Frequency (MHz) }

Pair	Start f	Stop f	Points	Minimum { v [f] }	Maximum { v [f] }	Result
1	1	250	401	16.4 [205.8]	89.5 [1]	ü
2	1	250	401	19.6 [241.9]	88.8 [1]	ü
3	1	250	401	19.7 [241.9]	88.9 [1]	ü
4	1	250	401	16.6 [205.8]	87.9 [1]	ü



Detail Discrete Frequencies: Power Sum NEXT PS NEXT (dB)

Frequency [MHz]	1.00	4.00	8.00	10.00	16.00	20.00	31.25	62.50	100.00	No. of
Freq. found [MHz]	1.00	4.11	7.85	9.71	15.94	20.30	31.50	62.63	99.98	Error Points
Min. Spec.	72.30	63.09	58.88	57.49	54.26	52.69	49.82	45.35	42.30	
Pair 1	91.29	81.58	75.35	78.19	70.85	71.26	71.68	60.58	57.62	-
Pair 2	90.51	77.17	71.44	67.17	67.92	68.24	60.91	55.02	49.58	-
Pair 3	90.60	74.34	72.37	66.56	68.56	67.49	60.43	54.95	49.40	-
Pair 4	89.60	77.00	78.19	73.50	75.33	69.28	66.90	60.54	56.38	-

Frequency [MHz]	200.00	250.00	300.00	400.00	No. of
Freq. found [MHz]	200.20	250.00	250.00	250.00	Error Points
Min. Spec.	37.78	36.33	36.33	36.33	
Pair 1	52.93	50.90	50.90	50.90	-
Pair 2	66.16	50.23	50.23	50.23	-
Pair 3	56.95	49.98	49.98	49.98	-
Pair 4	51.67	50.57	50.57	50.57	-

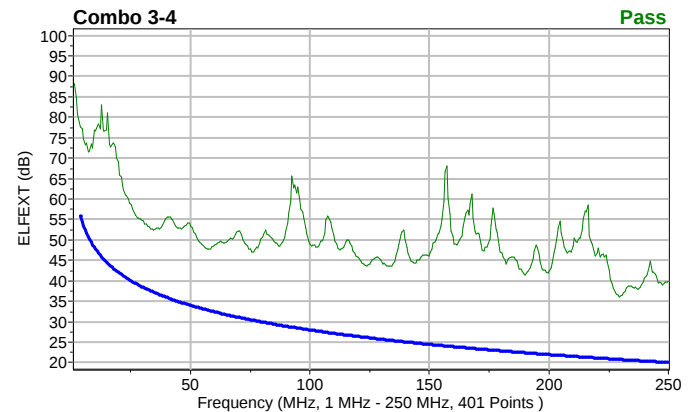
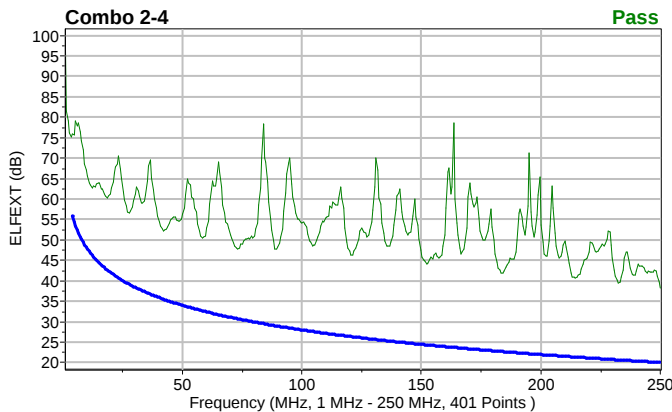
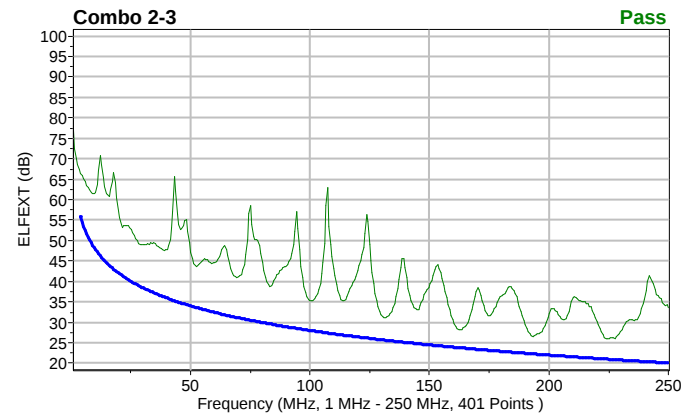
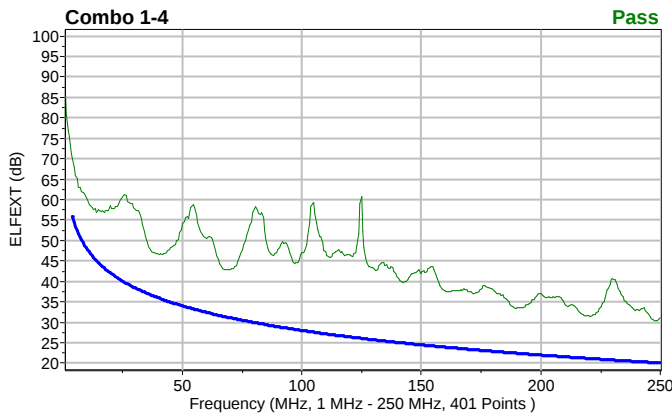
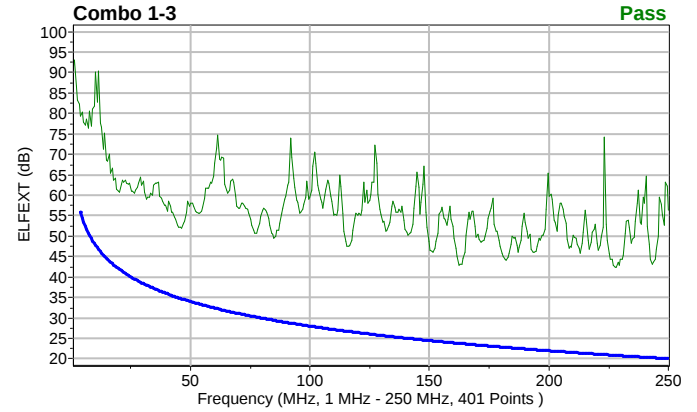
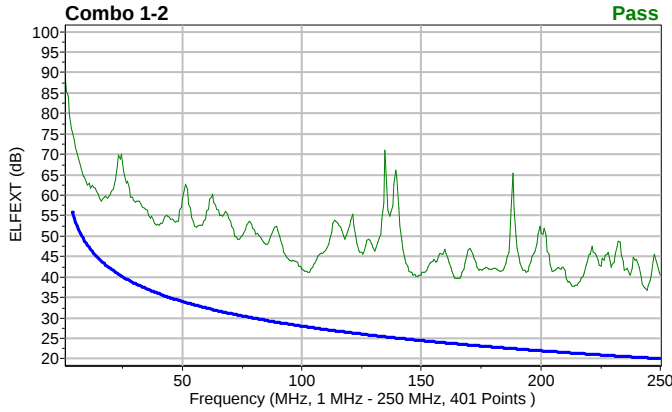
Detail Discrete Frequencies: Power Sum ACR PS ACR (dB)

Frequency [MHz]	1.00	4.00	8.00	10.00	16.00	20.00	31.25	62.50	100.00	No. of
Freq. found [MHz]	1.00	4.11	7.85	9.71	15.94	20.30	31.50	62.63	99.98	Error Points
Pair 1	89.5	77.9	70.2	72.5	63.5	63.0	61.3	45.8	38.8	-
Pair 2	88.8	73.7	66.5	61.8	60.9	60.4	51.1	41.0	31.8	-
Pair 3	88.9	70.9	67.6	61.2	61.6	59.7	50.7	41.0	31.6	-
Pair 4	87.9	73.5	73.3	68.1	68.3	61.3	57.0	46.0	37.9	-
Frequency [MHz]	200.00	250.00	300.00	400.00	No. of					
Freq. found [MHz]	200.20	250.00	250.00	250.00	Error Points					
Pair 1	25.8	20.5	20.5	20.5	-					
Pair 2	39.2	21.4	21.4	21.4	-					
Pair 3	31.4	21.2	21.2	21.2	-					
Pair 4	25.0	20.3	20.3	20.3	-					

Summary and Graphic: Equal Level FEXT (ELFEXT)

{ v = Value (dB) l = Limit (dB) m = Margin (dB) f = Frequency (MHz) }

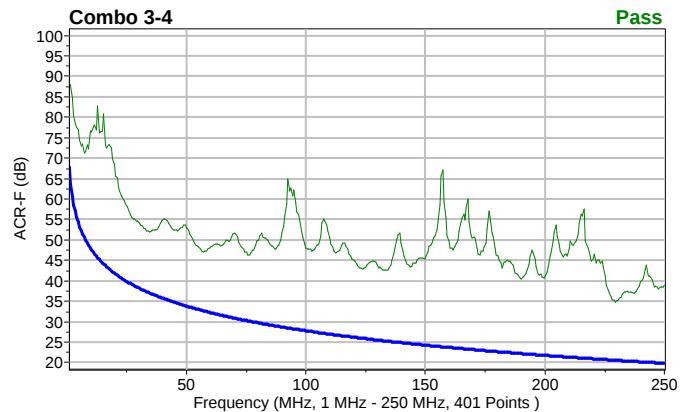
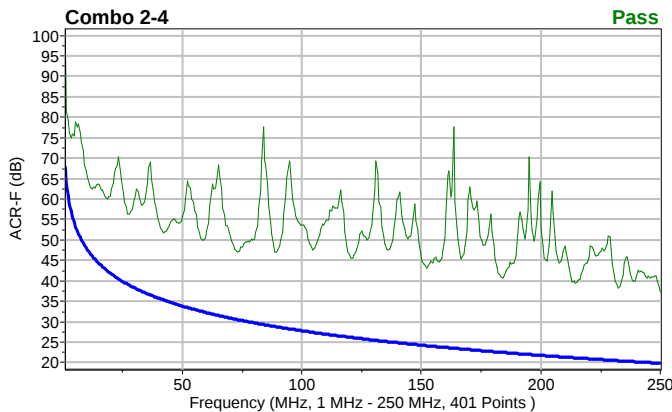
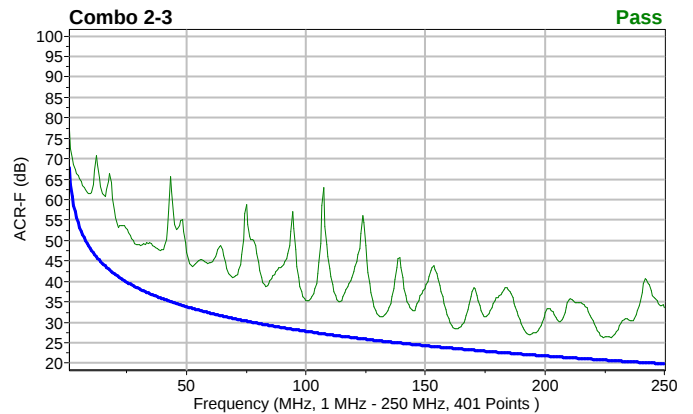
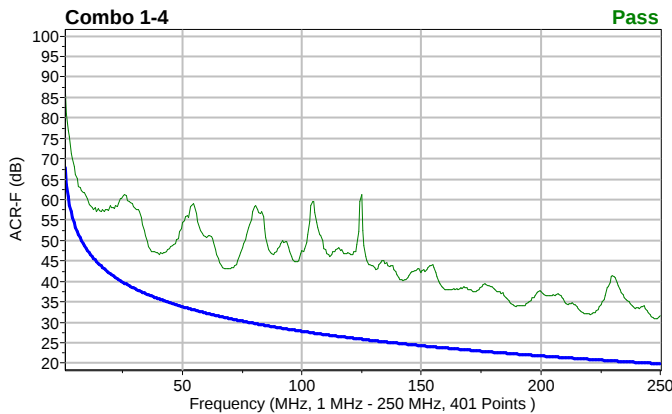
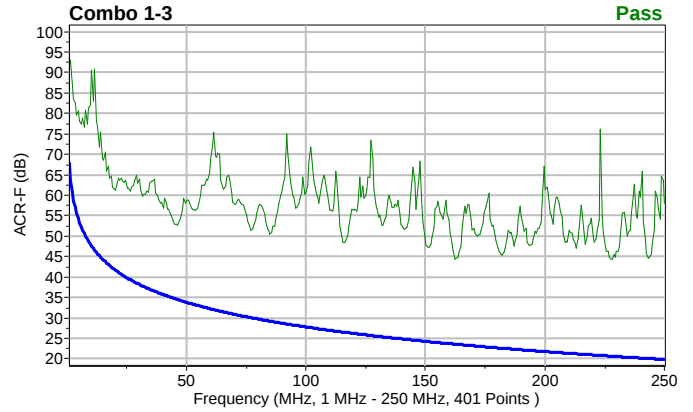
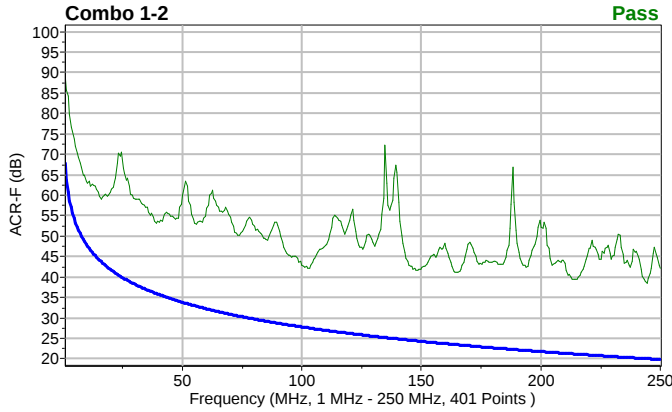
Combo	Start f	Stop f	Points	Minimum { v [f] }	Maximum { v [f] }	Min. Margin { m (v l) [f] }	Result
1-2	1	250	401	36.65 [244.4]	88.81 [1]	13.32 (41.11 < 27.79) [102.5]	ü
1-3	1	250	401	42.27 [227.6]	92.95 [1.622]	17.26 (52.16 < 34.90) [45.2]	ü
1-4	1	250	401	30.37 [247.5]	86.94 [1]	10.20 (31.32 < 21.12) [220.7]	ü
2-3	1	250	401	25.92 [224.5]	77.48 [1]	4.29 (26.56 < 22.27) [193.4]	ü
2-4	1	250	401	38.32 [250]	99.07 [1]	16.41 (62.68 < 46.27) [12.2]	ü
3-4	1	250	401	36.06 [229.5]	88.07 [1.622]	14.77 (47.65 < 32.88) [57.02]	ü



Summary and Graphic: Attenuation Crosstalk-F Ratio (ACR-F)

{ v = Value (dB) l = Limit (dB) m = Margin (dB) f = Frequency (MHz) }

Combo	Start f	Stop f	Points	Minimum { v [f] }	Maximum { v [f] }	Min. Margin { m (v l) [f] }	Result
1-2	1	250	401	38.4 [244.4]	88.9 [1]	14.6 (42.2 < 27.6) [102.5]	ü
1-3	1	250	401	44.2 [227.6]	93.1 [1.622]	18.2 (52.9 < 34.7) [45.2]	ü
1-4	1	250	401	30.8 [247.5]	87.0 [1]	10.8 (31.8 < 20.9) [220.7]	ü
2-3	1	250	401	26.3 [227.6]	77.5 [1]	4.8 (28.3 < 23.6) [162.8]	ü
2-4	1	250	401	37.2 [250]	99.0 [1]	16.3 (62.4 < 46.1) [12.2]	ü
3-4	1	250	401	34.8 [229.5]	88.0 [1.622]	14.2 (34.8 < 20.6) [229.5]	ü



Detail Discrete Frequencies: Equal Level FEXT ELFEXT (dB)

Frequency [MHz]	1.00	4.00	8.00	10.00	16.00	20.00	31.25	62.50	100.00	No. of
Freq. found [MHz]	1.00	4.11	7.85	9.71	15.94	20.30	31.50	62.63	99.98	Error Points
Min. Spec.		55.72	50.11	48.25	43.95	41.85	38.03	32.06	28.00	
Combo 1-2	88.81	75.40	66.42	63.14	58.54	61.05	58.42	60.30	41.87	-
Combo 1-3	91.40	79.25	80.47	81.71	69.97	60.74	59.11	68.47	59.47	-
Combo 1-4	86.94	70.07	61.99	60.57	56.95	57.89	57.28	50.18	47.14	-
Combo 2-3	77.48	66.29	62.46	61.37	60.82	55.52	49.04	46.82	35.24	-
Combo 2-4	99.07	75.99	74.22	66.97	62.46	62.74	62.03	64.40	54.24	-
Combo 3-4	87.75	77.68	71.76	76.85	73.55	65.86	53.81	49.69	48.90	-

Frequency [MHz]	200.00	250.00	300.00	400.00	No. of
Freq. found [MHz]	200.20	250.00	250.00	250.00	Error Points
Min. Spec.	21.97	20.04	20.04	20.04	
Combo 1-2	50.62	40.54	40.54	40.54	-
Combo 1-3	59.74	56.28	56.28	56.28	-
Combo 1-4	36.91	31.04	31.04	31.04	-
Combo 2-3	32.22	33.61	33.61	33.61	-
Combo 2-4	53.65	38.32	38.32	38.32	-
Combo 3-4	42.33	40.03	40.03	40.03	-

Detail Discrete Frequencies: Attenuation Crosstalk-F Ratio ACR-F (dB)

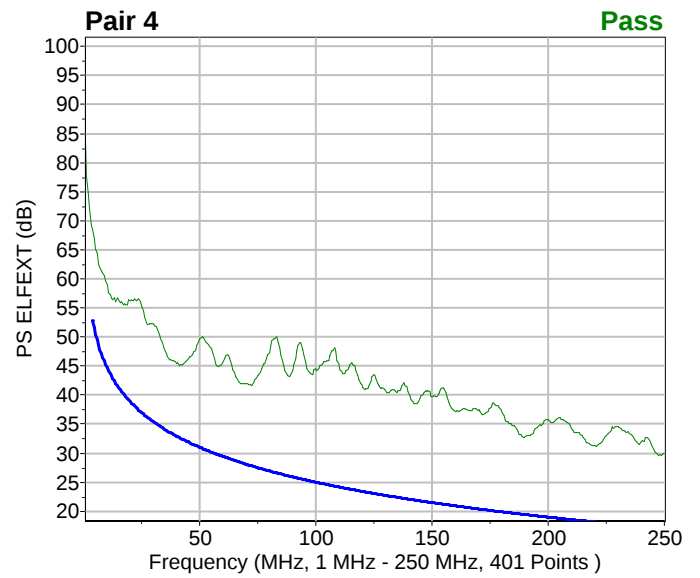
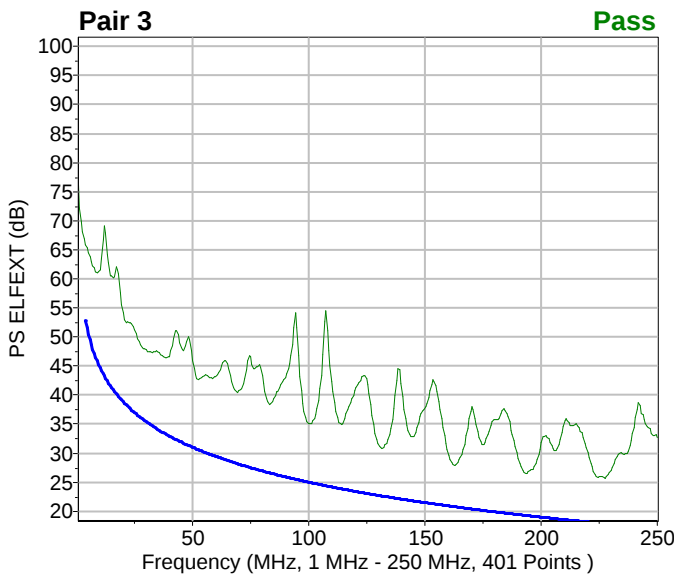
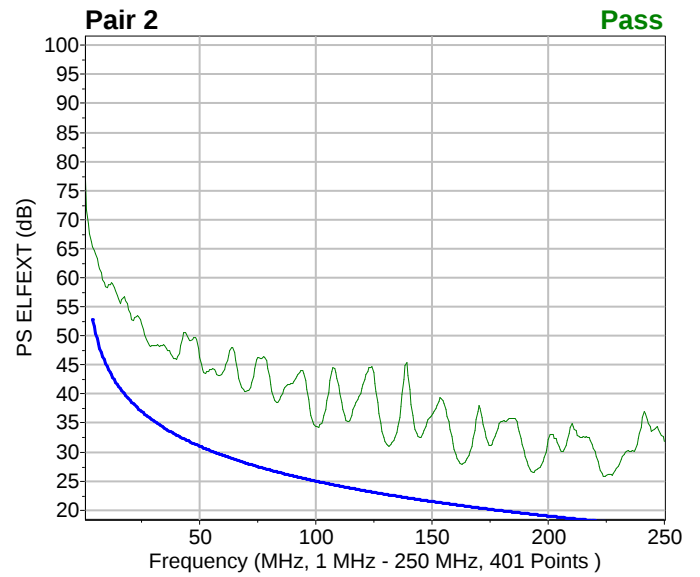
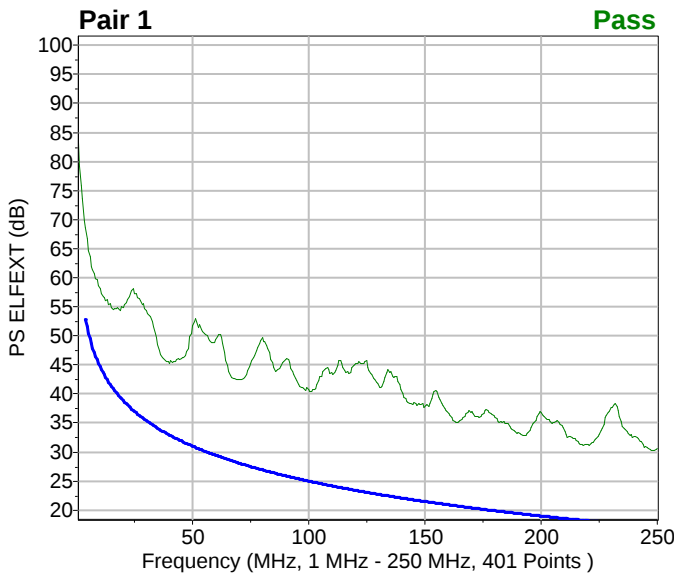
Frequency [MHz]	1.00	4.00	8.00	10.00	16.00	20.00	31.25	62.50	100.00	No. of
Freq. found [MHz]	1.00	4.11	7.85	9.71	15.94	20.30	31.50	62.63	99.98	Error Points
Min. Spec.	67.8	55.5	49.9	48.1	43.8	41.7	37.8	31.9	27.8	
Combo 1-2	88.9	75.6	66.7	63.5	59.0	61.6	59.0	61.2	42.9	-
Combo 1-3	91.5	79.5	80.8	82.1	70.4	61.2	59.7	69.3	60.6	-
Combo 1-4	87.0	70.1	62.1	60.7	57.1	58.1	57.5	50.4	47.5	-
Combo 2-3	77.5	66.3	62.5	61.4	60.8	55.5	49.0	46.8	35.3	-
Combo 2-4	99.0	75.8	74.0	66.7	62.2	62.4	61.6	63.8	53.5	-
Combo 3-4	87.6	77.5	71.5	76.6	73.3	65.5	53.4	49.1	48.1	-

Frequency [MHz]	200.00	250.00	300.00	400.00	No. of
Freq. found [MHz]	200.20	250.00	250.00	250.00	Error Points
Min. Spec.	21.8	19.8	19.8	19.8	
Combo 1-2	52.2	42.2	42.2	42.2	-
Combo 1-3	61.4	58.0	58.0	58.0	-
Combo 1-4	37.5	31.6	31.6	31.6	-
Combo 2-3	32.3	33.6	33.6	33.6	-
Combo 2-4	52.6	37.2	37.2	37.2	-
Combo 3-4	41.2	38.9	38.9	38.9	-

Summary and Graphic: Power Sum ELFEXT (PS ELFEXT)

{ v = Value (dB) } / = Limit (dB) m = Margin (dB) f = Frequency (MHz) }

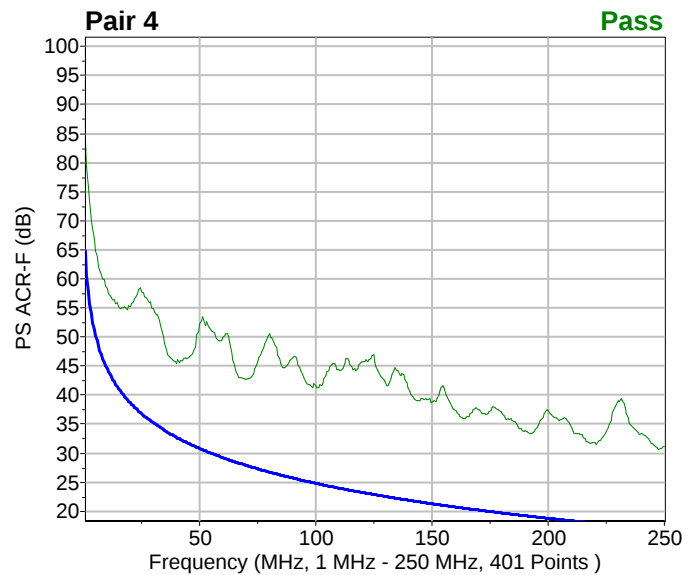
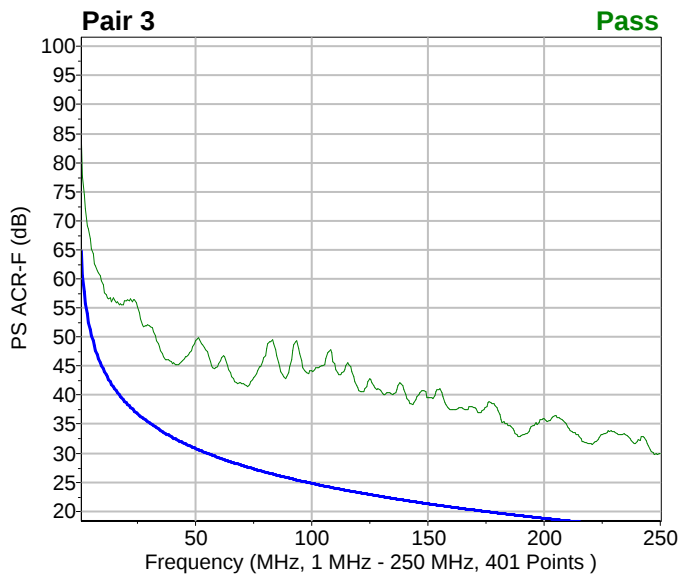
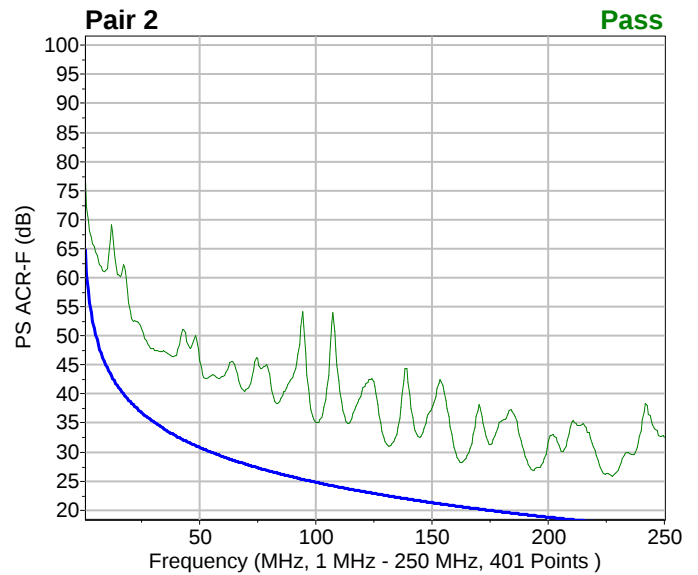
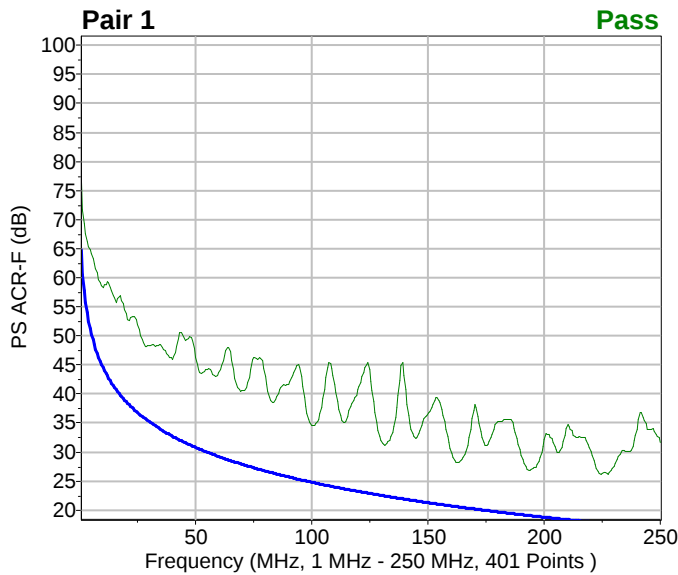
Pair	Start f	Stop f	Points	Minimum { $v[f]$ }	Maximum { $v[f]$ }	Min. Margin { $m(v/l)[f]$ }	Result
1	1	250	401	30.23 [247.5]	83.91 [1]		ü
2	1	250	401	25.80 [224.5]	77.14 [1]		ü
3	1	250	401	25.69 [227.6]	76.93 [1]		ü
4	1	250	401	29.59 [247.5]	84.17 [1]		ü



Summary and Graphic: Power Sum ACR-F (PS ACR-F)

{ v = Value (dB) l = Limit (dB) m = Margin (dB) f = Frequency (MHz) }

Pair	Start f	Stop f	Points	Minimum { v [f] }	Maximum { v [f] }	Min. Margin { m (v l) [f] }	Result
1	1	250	401	26.2 [224.5]	77.2 [1]	7.6 (28.2 < 20.6) [162.8]	ü
2	1	250	401	25.8 [227.6]	76.9 [1]	7.6 (28.2 < 20.6) [162.8]	ü
3	1	250	401	29.7 [247.5]	84.1 [1]	12.7 (45.4 < 32.7) [40.22]	ü
4	1	250	401	30.7 [247.5]	84.0 [1]	12.8 (45.5 < 32.7) [40.22]	ü



Detail Discrete Frequencies: Power Sum ELFE XT PS ELFE XT (dB)

Frequency [MHz]	1.00	4.00	8.00	10.00	16.00	20.00	31.25	62.50	100.00	No. of
Freq. found [MHz]	1.00	4.11	7.85	9.71	15.94	20.30	31.50	62.63	99.98	Error Points
Pair 1	83.91	68.56	60.60	58.63	54.54	54.87	53.43	49.72	40.68	-
Pair 2	77.14	65.39	60.79	58.49	55.54	53.85	48.38	46.56	34.34	-
Pair 3	76.93	65.79	61.92	61.21	60.12	54.08	47.48	45.00	35.04	-
Pair 4	84.17	68.52	61.32	59.59	55.80	56.16	51.77	46.84	44.44	-

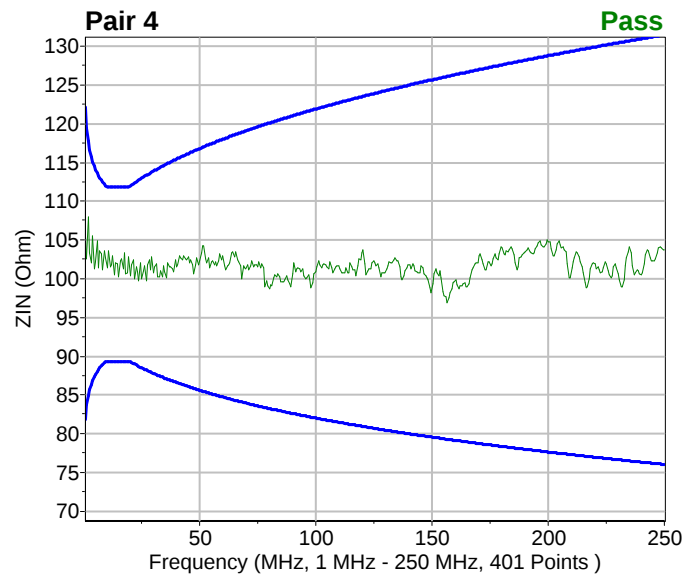
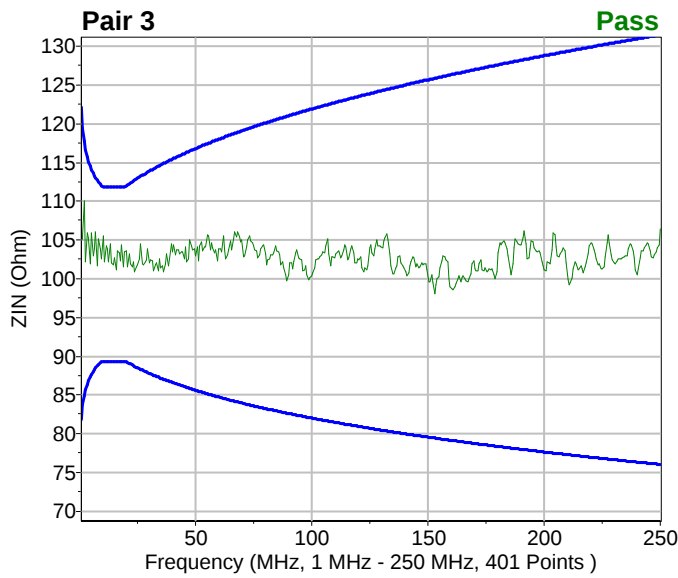
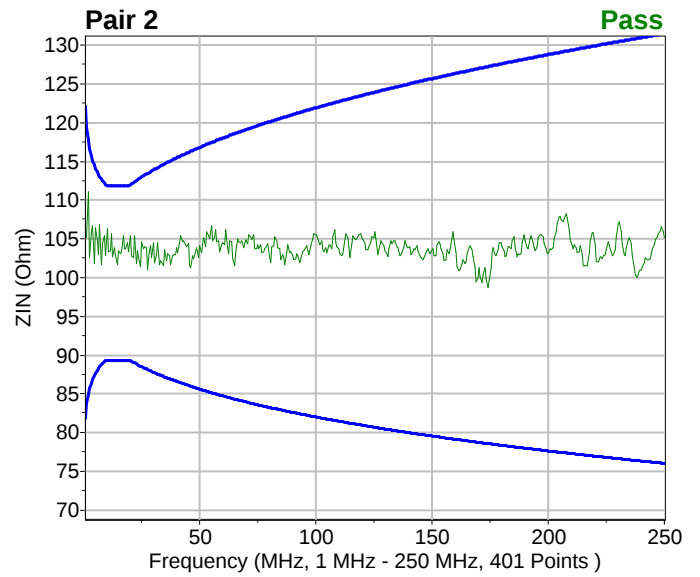
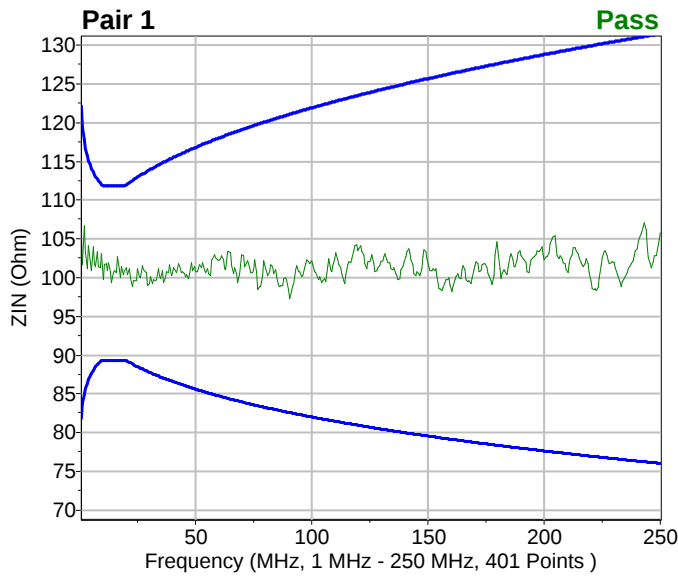
Frequency [MHz]	200.00	250.00	300.00	400.00	No. of
Freq. found [MHz]	200.20	250.00	250.00	250.00	Error Points
Pair 1	36.71	30.57	30.57	30.57	-
Pair 2	32.13	31.73	31.73	31.73	-
Pair 3	31.81	32.70	32.70	32.70	-
Pair 4	35.74	29.86	29.86	29.86	-

Detail Discrete Frequencies: Power Sum ACR-F PS ACR-F (dB)										
Frequency [MHz]	1.00	4.00	8.00	10.00	16.00	20.00	31.25	62.50	100.00	No. of
Freq. found [MHz]	1.00	4.11	7.85	9.71	15.94	20.30	31.50	62.63	99.98	Error Points
Min. Spec.	64.8	52.5	46.9	45.1	40.8	38.7	34.8	28.9	24.8	
Pair 1	77.2	65.4	60.9	58.6	55.7	53.9	48.4	46.6	34.6	-
Pair 2	76.9	65.8	61.9	61.2	60.1	54.1	47.4	44.8	35.1	-
Pair 3	84.1	68.5	61.4	59.6	55.8	56.2	51.5	46.6	44.2	-
Pair 4	84.0	68.7	60.8	58.8	54.8	55.2	53.9	50.0	41.5	-
Frequency [MHz]	200.00	250.00	300.00	400.00	No. of					
Freq. found [MHz]	200.20	250.00	250.00	250.00	Error Points					
Min. Spec.	18.8	16.8	16.8	16.8						
Pair 1	32.2	31.6	31.6	31.6	-					
Pair 2	31.7	32.5	32.5	32.5	-					
Pair 3	35.8	29.9	29.9	29.9	-					
Pair 4	37.3	31.2	31.2	31.2	-					

Summary and Graphic: Input Impedance (ZIN)

{ v = Value (Ohm) l = Limit (Ohm) m = Margin (Ohm) f = Frequency (MHz) }

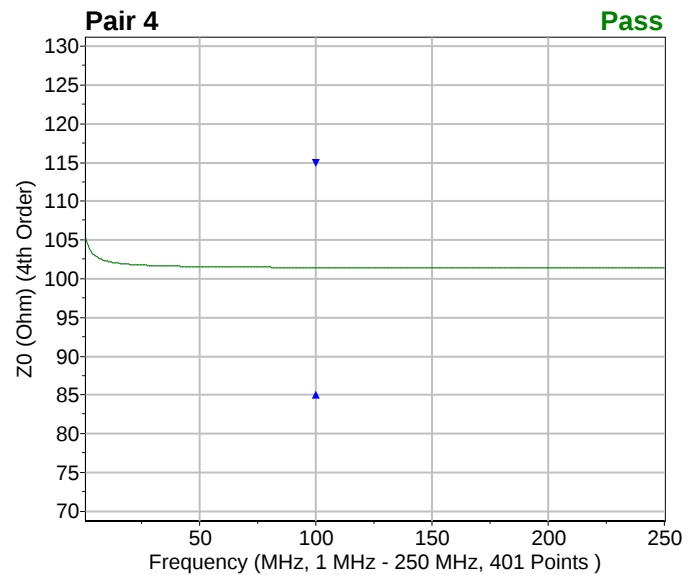
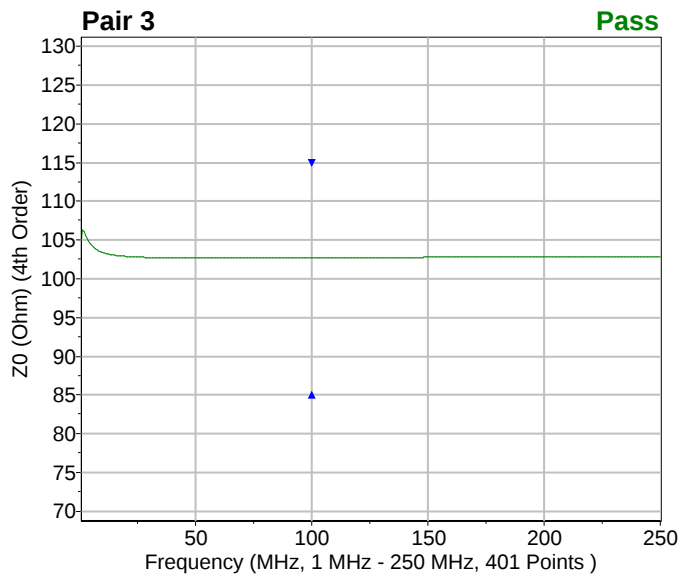
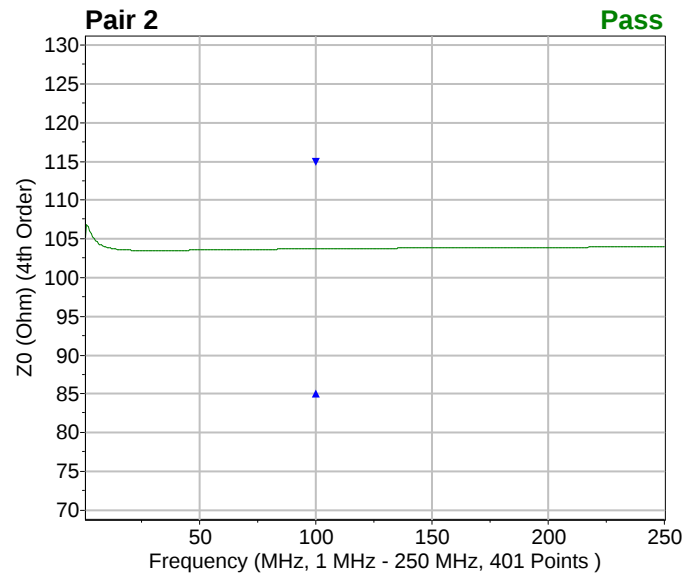
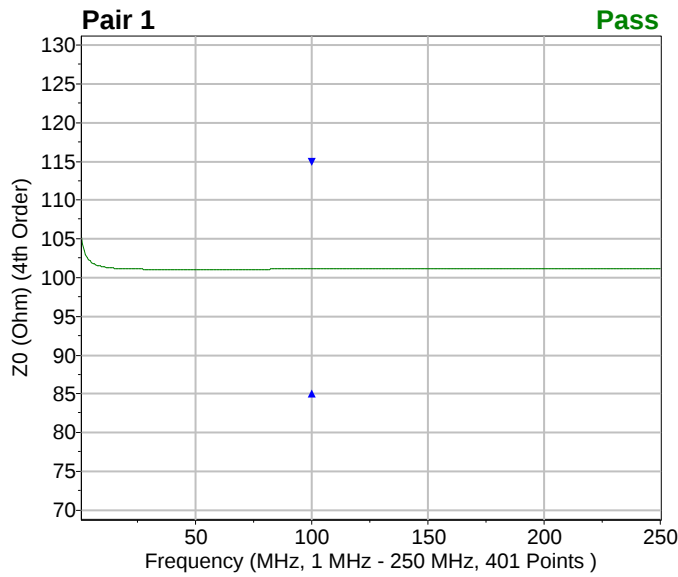
Pair	Start f	Stop f	Points	Minimum { v [f] }	Maximum { v [f] }	Min. Margin { m (v l) [f] }	Result
1	1	250	401	97.36 [90.64]	107.15 [243.2]		ü
2	1	250	401	98.74 [174.1]	111.03 [2.245]		ü
3	1	250	401	98.05 [152.9]	110.07 [2.245]		ü
4	1	250	401	96.96 [156.6]	107.95 [2.245]		ü



Summary and Graphic: Fitted Impedance (Z0 (4th Order))

{ v = Value (Ohm) l = Limit (Ohm) m = Margin (Ohm) f = Frequency (MHz) }

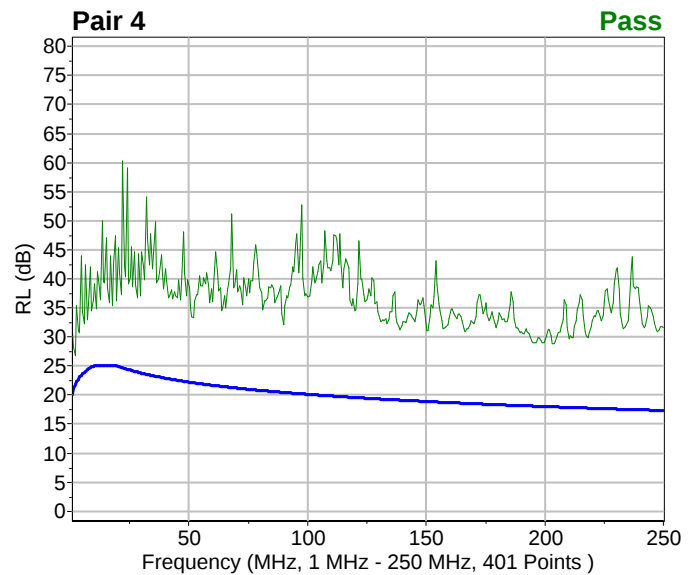
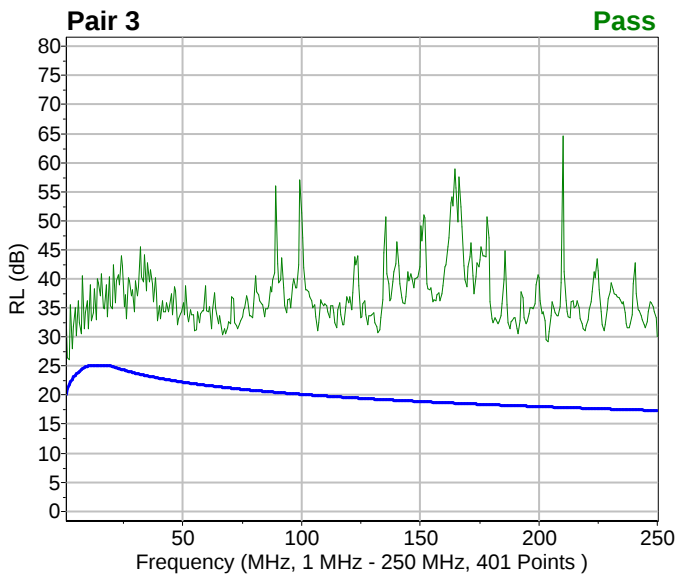
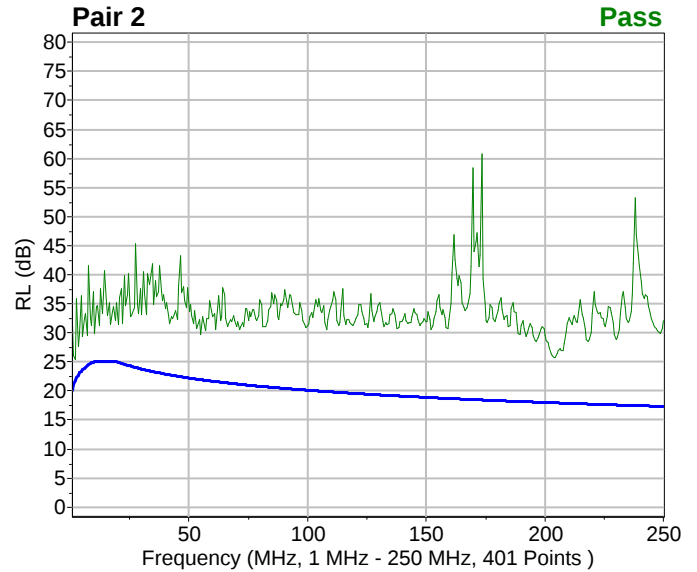
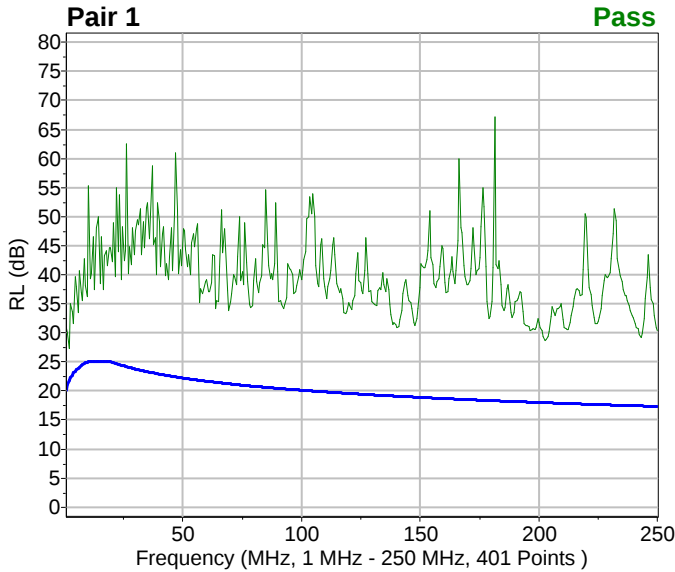
Pair	Start f	Stop f	Points	Minimum { v [f] }	Maximum { v [f] }	Min. Margin { m (v l) [f] }	Result
1	1	250	401	101.07 [44.57]	105.41 [1]	13.89 (101.11 > 115.00) [99.98]	ü
2	1	250	401	103.51 [29.63]	106.83 [1.622]	11.28 (103.72 > 115.00) [99.98]	ü
3	1	250	401	102.70 [56.4]	106.37 [1.622]	12.27 (102.73 > 115.00) [99.98]	ü
4	1	250	401	101.38 [250]	105.44 [1]	13.55 (101.45 > 115.00) [99.98]	ü



Summary and Graphic: Return Loss (RL)

{ v = Value (dB) l = Limit (dB) m = Margin (dB) f = Frequency (MHz) }

Pair	Start f	Stop f	Points	Minimum { v [f] }	Maximum { v [f] }	Min. Margin { m (v l) [f] }	Result
1	1	250	401	27.36 [2.245]	67.18 [181.5]	5.60 (27.36 < 21.76) [2.245]	ü
2	1	250	401	25.32 [2.245]	60.72 [173.4]	3.56 (25.32 < 21.76) [2.245]	ü
3	1	250	401	26.00 [2.245]	64.55 [210.2]	4.24 (26.00 < 21.76) [2.245]	ü
4	1	250	401	26.84 [2.245]	60.26 [22.16]	5.08 (26.84 < 21.76) [2.245]	ü



Detail Discrete Frequencies: Return Loss RL (dB)

Frequency [MHz]	1.00	4.00	8.00	10.00	16.00	20.00	31.25	62.50	100.00	No. of
Freq. found [MHz]	1.00	4.11	7.85	9.71	15.94	20.30	31.50	62.63	99.98	Error Points
Min. Spec.	20.00	23.07	24.47	24.94	25.00	24.96	23.62	21.53	20.11	
Pair 1	30.95	31.63	35.56	36.20	46.59	42.18	48.65	43.46	39.12	-
Pair 2	31.91	29.71	41.58	37.01	33.01	31.48	36.68	36.42	31.22	-
Pair 3	32.46	31.77	40.53	36.24	40.89	34.87	38.65	34.61	51.36	-
Pair 4	31.07	30.65	35.55	36.38	38.47	45.28	39.78	37.90	36.96	-

Frequency [MHz]	200.00	250.00	300.00	400.00	No. of
Freq. found [MHz]	200.20	250.00	250.00	250.00	Error Points
Min. Spec.	18.00	17.32	17.32	17.32	
Pair 1	31.70	30.36	30.36	30.36	-
Pair 2	29.53	32.01	32.01	32.01	-
Pair 3	40.18	29.99	29.99	29.99	-
Pair 4	29.44	31.66	31.66	31.66	-

LF open/short test

Open/Short-Test OK

LF RCKE 800 Hz

No	From	To	Ra Ohm/RFL+20° /100m	Rb Ohm/RFL+20° /100m	R1 Ohm/RFL+20° /100m	RD1% /100m	Ca %	Cb nF	C1 nF	E nF	pF
1	1-		7.68	7.66	15.34	0.109	6.72	6.76	5.28	-40	ü
2	2-		7.42	7.38	14.80	0.286	6.41	6.42	4.98	-4	ü
3	3-		7.39	7.29	14.68	0.625	6.40	6.43	4.94	-24	ü
4	4-		7.55	7.54	15.09	0.091	6.65	6.67	5.18	-14	ü

LF K triangle 800 Hz

#LK cap-unbalance s/s K pairs 800 Hz

	2	3	4	
1	2	-3	0	1
2		3	0	2
3			0	3
	2	3	4	

Worst Case Summary

Units	Units	Ra-b Ohm	R Ohm	D% %	Ca-b nF	C nF	E pF	K pF
RefLength	Ref.length	100	100	1000	100	100	100	100
ULim	UL Limit Meas. Values	9.50	19.00			5.60		160
Max	Maximum value							
Min	Minimum value							
LLim	LL Limit Meas. Values							-160
SX	Average value							
SSX	Standarddeviation							

Final control authorized signature:

End of report