

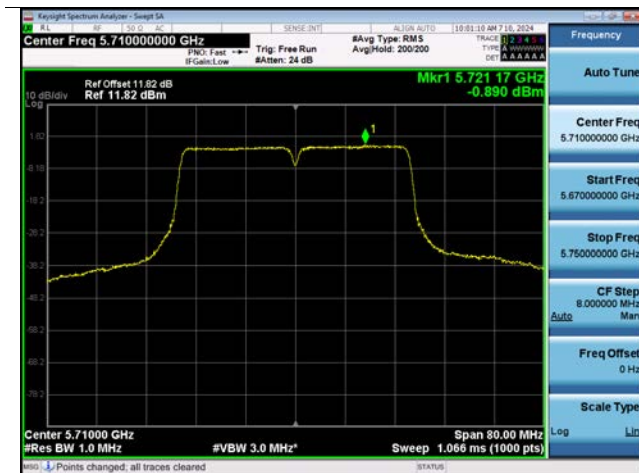
802.11n(HT40) UNII 2C Band



802.11n(HT40) UNII 3 Band



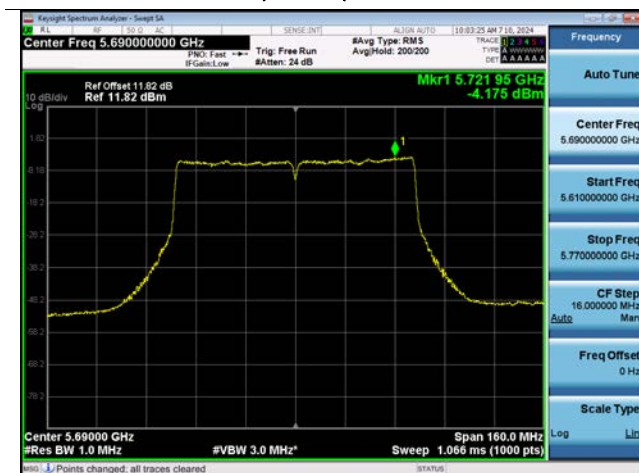
802.11ac(VHT40) UNII 2C Band



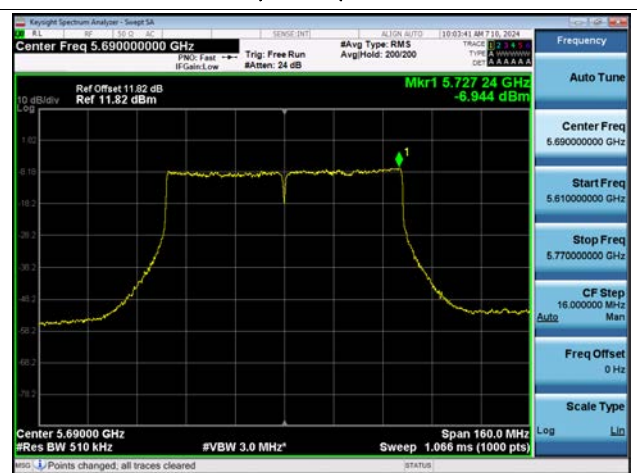
802.11ac(VHT40) UNII 3 Band



802.11ac(VHT80) UNII 2C Band



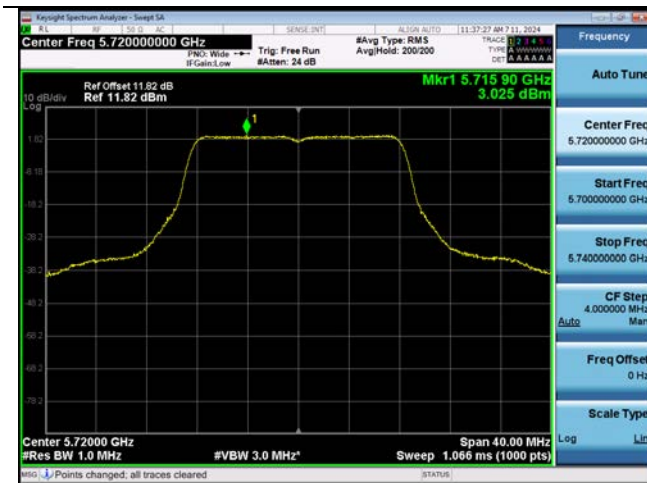
802.11ac(VHT80) UNII 3 Band



[ANT. 2]

Test Plots

802.11a UNII 2C Band



802.11a UNII 3 Band



802.11n(HT20) UNII 2C Band



802.11n(HT20) UNII 3 Band



802.11ac(VHT20) UNII 2C Band



802.11ac(VHT20) UNII 3 Band



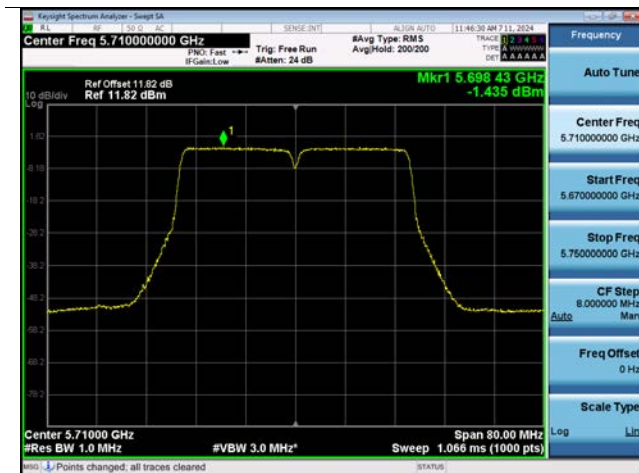
802.11n(HT40) UNII 2C Band



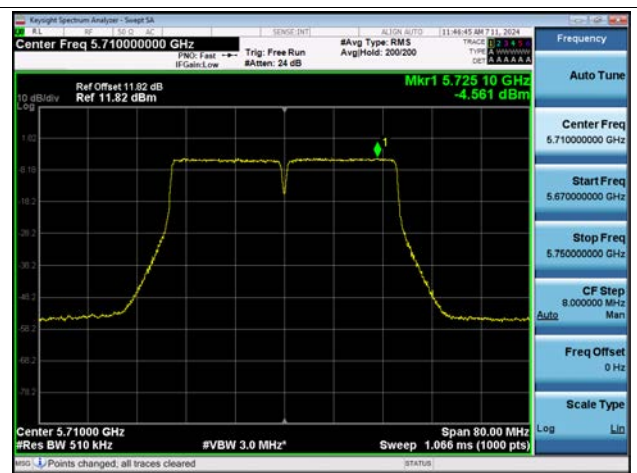
802.11n(HT40) UNII 3 Band



802.11ac(VHT40) UNII 2C Band



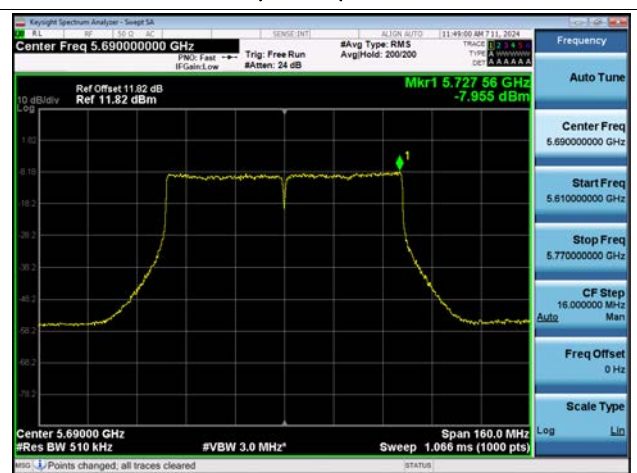
802.11ac(VHT40) UNII 3 Band



802.11ac(VHT80) UNII 2C Band



802.11ac(VHT80) UNII 3 Band



10.8 RADIATED SPURIOUS EMISSIONS

Frequency Range : 9 kHz – 30 MHz

Frequency	Measured Value	CL+AF+DF-AG	ANT. POL	Total	Limit	Margin
[MHz]	[dBμV]	[dB/m]	[H/V]	[dBμV/m]	[dBμV/m]	[dB]
No Critical peaks found						

Note:

1. The Measured Value of emissions are attenuated more than 20 dB below the permissible limits or the field strength is too small to be measured.
2. Distance extrapolation factor = $40 \log (\text{specific distance} / \text{test distance})$ (dB)
3. Limit line = specific Limits (dBμV) + Distance extrapolation factor

Frequency Range : Below 1 GHz

Frequency	Measured Value	A.F+C.L	ANT. POL	Total	Limit	Margin
[MHz]	[dBμV]	[dB/m]	[H/V]	[dBμV/m]	[dBμV/m]	[dB]
No Critical peaks found						

Note:

1. Radiated emissions measured in frequency range from 30 MHz to 1000 MHz were made with an instrument using Quasi peak detector mode

Frequency Range : Above 1 GHz

[MIMO_CDD(Ant1+Ant2)]

Band :	UNII 1
Operation Mode:	802.11 a
Transfer Rate:	6 Mbps
Operating Frequency	5180 MHz
Channel No.	36 Ch

Frequency [MHz]	Measured Value [dBμV]	C.L+A.F+ D.F-A.G [dB/m]	POL [H/V]	Total [dBμV/m]	Limit [dBμV/m]	Margin [dB]	Measurement Type
10360	48.90	0.04	V	48.94	68.20	19.26	PK
15540	46.32	7.43	V	53.75	73.98	20.23	PK
15540	34.06	7.43	V	41.49	53.98	12.49	AV
10360	48.81	0.04	H	48.85	68.20	19.35	PK
15540	45.90	7.43	H	53.33	73.98	20.65	PK
15540	34.00	7.43	H	41.43	53.98	12.55	AV

Band :	UNII 1
Operation Mode:	802.11 a
Transfer Rate:	6 Mbps
Operating Frequency	5200 MHz
Channel No.	40 Ch

Frequency [MHz]	Measured Value [dBμV]	C.L+A.F+ D.F-A.G [dB/m]	POL [H/V]	Total [dBμV/m]	Limit [dBμV/m]	Margin [dB]	Measurement Type
10400	48.53	0.21	V	48.74	68.20	19.46	PK
15600	46.67	7.51	V	54.18	73.98	19.80	PK
15600	33.60	7.51	V	41.11	53.98	12.87	AV
10400	48.86	0.21	H	49.07	68.20	19.13	PK
15600	46.33	7.51	H	53.84	73.98	20.14	PK
15600	33.61	7.51	H	41.12	53.98	12.86	AV

Band :	UNII 1
Operation Mode:	802.11 a
Transfer Rate:	6 Mbps
Operating Frequency	5240 MHz
Channel No.	48 Ch

Frequency [MHz]	Measured Value [dBμV]	C.L+A.F+ D.F-A.G [dB/m]	POL [H/V]	Total [dBμV/m]	Limit [dBμV/m]	Margin [dB]	Measurement Type
10480	49.46	0.56	V	50.02	68.20	18.18	PK
15720	45.76	6.99	V	52.75	73.98	21.23	PK
15720	33.77	6.99	V	40.76	53.98	13.22	AV
10480	49.03	0.56	H	49.59	68.20	18.61	PK
15720	46.73	6.99	H	53.72	73.98	20.26	PK
15720	33.80	6.99	H	40.79	53.98	13.19	AV

Band :	UNII 2A
Operation Mode:	802.11 a
Transfer Rate:	6 Mbps
Operating Frequency	5260 MHz
Channel No.	52 Ch

Frequency [MHz]	Measured Value [dBμV]	C.L+A.F+ D.F-A.G [dB/m]	POL [H/V]	Total [dBμV/m]	Limit [dBμV/m]	Margin [dB]	Measurement Type
10520	49.91	0.48	V	50.39	68.20	17.81	PK
15780	45.68	7.53	V	53.21	73.98	20.77	PK
15780	33.46	7.53	V	40.99	53.98	12.99	AV
10520	49.61	0.48	H	50.09	68.20	18.11	PK
15780	45.93	7.53	H	53.46	73.98	20.52	PK
15780	33.46	7.53	H	40.99	53.98	12.99	AV

Band :	UNII 2A
Operation Mode:	802.11 a
Transfer Rate:	6 Mbps
Operating Frequency	5300 MHz
Channel No.	60 Ch

Frequency [MHz]	Measured Value [dBμV]	C.L+A.F+ D.F-A.G [dB/m]	POL [H/V]	Total [dBμV/m]	Limit [dBμV/m]	Margin [dB]	Measurement Type
10600	48.57	0.32	V	48.89	73.98	25.09	PK
10600	35.53	0.32	V	35.85	53.98	18.13	AV
15900	45.71	7.98	V	53.69	73.98	20.29	PK
15900	33.15	7.98	V	41.13	53.98	12.85	AV
10600	48.66	0.32	H	48.98	73.98	25.00	PK
10600	35.71	0.32	H	36.03	53.98	17.95	AV
15900	45.90	7.98	H	53.88	73.98	20.10	PK
15900	33.11	7.98	H	41.09	53.98	12.89	AV

Band :	UNII 2A
Operation Mode:	802.11 a
Transfer Rate:	6 Mbps
Operating Frequency	5320 MHz
Channel No.	64 Ch

Frequency [MHz]	Measured Value [dBμV]	C.L+A.F+ D.F-A.G [dB/m]	POL [H/V]	Total [dBμV/m]	Limit [dBμV/m]	Margin [dB]	Measurement Type
10640	49.14	0.42	V	49.56	73.98	24.42	PK
10640	37.66	0.42	V	38.08	53.98	15.90	AV
15960	46.01	7.65	V	53.66	73.98	20.32	PK
15960	33.20	7.65	V	40.85	53.98	13.13	AV
10640	48.84	0.42	H	49.26	73.98	24.72	PK
10640	37.91	0.42	H	38.33	53.98	15.65	AV
15960	45.35	7.65	H	53.00	73.98	20.98	PK
15960	33.36	7.65	H	41.01	53.98	12.97	AV

Band :	UNII 2C
Operation Mode:	802.11 a
Transfer Rate:	6 Mbps
Operating Frequency	5500 MHz
Channel No.	100 Ch

Frequency [MHz]	Measured Value [dBμV]	C.L+A.F+ D.F-A.G [dB/m]	POL [H/V]	Total [dBμV/m]	Limit [dBμV/m]	Margin [dB]	Measurement Type
11000	49.74	0.58	V	50.32	73.98	23.66	PK
11000	39.34	0.58	V	39.92	53.98	14.06	AV
16500	45.74	8.23	V	53.97	68.20	14.23	PK
11000	48.95	0.58	H	49.53	73.98	24.45	PK
11000	40.03	0.58	H	40.61	53.98	13.37	AV
16500	45.97	8.23	H	54.20	68.20	14.00	PK

Band :	UNII 2C
Operation Mode:	802.11 a
Transfer Rate:	6 Mbps
Operating Frequency	5600 MHz
Channel No.	120 Ch

Frequency [MHz]	Measured Value [dBμV]	C.L+A.F+ D.F-A.G [dB/m]	POL [H/V]	Total [dBμV/m]	Limit [dBμV/m]	Margin [dB]	Measurement Type
11200	48.87	0.80	V	49.67	73.98	24.31	PK
11200	39.60	0.80	V	40.40	53.98	13.58	AV
16800	47.12	8.75	V	55.87	68.20	12.33	PK
11200	48.74	0.80	H	49.54	73.98	24.44	PK
11200	40.24	0.80	H	41.04	53.98	12.94	AV
16800	46.79	8.75	H	55.54	68.20	12.66	PK

Band :	UNII 2C
Operation Mode:	802.11 a
Transfer Rate:	6 Mbps
Operating Frequency	5720 MHz
Channel No.	144 Ch

Frequency [MHz]	Measured Value [dBμV]	C.L+A.F+ D.F-A.G [dB/m]	POL [H/V]	Total [dBμV/m]	Limit [dBμV/m]	Margin [dB]	Measurement Type
11440	48.64	1.01	V	49.65	73.98	24.33	PK
11440	39.95	1.01	V	40.96	53.98	13.02	AV
17160	46.73	9.00	V	55.73	68.20	12.47	PK
11440	48.97	1.01	H	49.98	73.98	24.00	PK
11440	38.92	1.01	H	39.93	53.98	14.05	AV
17160	45.53	9.00	H	54.53	68.20	13.67	PK

Band :	UNII 3
Operation Mode:	802.11 a
Transfer Rate:	6 Mbps
Operating Frequency	5745MHz
Channel No.	149 Ch

Frequency [MHz]	Measured Value [dBμV]	C.L+A.F+ D.F-A.G [dB/m]	POL [H/V]	Total [dBμV/m]	Limit [dBμV/m]	Margin [dB]	Measurement Type
11490	48.82	1.41	V	50.23	73.98	23.75	PK
11490	40.78	1.41	V	42.19	53.98	11.79	AV
17235	46.67	8.32	V	54.99	68.20	13.21	PK
11490	48.46	1.41	H	49.87	73.98	24.11	PK
11490	39.41	1.41	H	40.82	53.98	13.16	AV
17235	46.80	8.32	H	55.12	68.20	13.08	PK

Band :	UNII 3
Operation Mode:	802.11 a
Transfer Rate:	6 Mbps
Operating Frequency	5785 MHz
Channel No.	157 Ch

Frequency [MHz]	Measured Value [dBμV]	C.L+A.F+ D.F-A.G [dB/m]	POL [H/V]	Total [dBμV/m]	Limit [dBμV/m]	Margin [dB]	Measurement Type
11570	49.44	1.75	V	51.19	73.98	22.79	PK
11570	39.94	1.75	V	41.69	53.98	12.29	AV
17355	47.23	9.02	V	56.25	68.20	11.95	PK
11570	49.20	1.75	H	50.95	73.98	23.03	PK
11570	39.01	1.75	H	40.76	53.98	13.22	AV
17355	47.34	9.02	H	56.36	68.20	11.84	PK

Band :	UNII 3
Operation Mode:	802.11 a
Transfer Rate:	6 Mbps
Operating Frequency	5825 MHz
Channel No.	165 Ch

Frequency [MHz]	Measured Value [dBμV]	C.L+A.F+ D.F-A.G [dB/m]	POL [H/V]	Total [dBμV/m]	Limit [dBμV/m]	Margin [dB]	Measurement Type
11650	49.32	1.78	V	51.10	73.98	22.88	PK
11650	39.85	1.78	V	41.63	53.98	12.35	AV
17475	48.14	8.77	V	56.91	68.20	11.29	PK
11650	49.06	1.78	H	50.84	73.98	23.14	PK
11650	38.86	1.78	H	40.64	53.98	13.34	AV
17475	47.91	8.77	H	56.68	68.20	11.52	PK

Band :	UNII 4
Operation Mode:	802.11 a
Transfer Rate:	6 Mbps
Operating Frequency	5845 MHz
Channel No.	169 Ch

Frequency [MHz]	Measured Value [dBμV]	C.L+A.F+ D.F-A.G [dB/m]	POL [H/V]	Total [dBμV/m]	Limit [dBμV/m]	Margin [dB]	Measurement Type
11690	48.82	1.74	V	50.56	73.98	23.42	PK
11690	38.03	1.74	V	39.77	53.98	14.21	AV
17535	47.83	8.53	V	56.36	68.20	11.84	PK
11690	49.07	1.74	H	50.81	73.98	23.17	PK
11690	37.59	1.74	H	39.33	53.98	14.65	AV
17535	47.28	8.53	H	55.81	68.20	12.39	PK

Band :	UNII 4
Operation Mode:	802.11 a
Transfer Rate:	6 Mbps
Operating Frequency	5865 MHz
Channel No.	173 Ch

Frequency [MHz]	Measured Value [dBμV]	C.L+A.F+ D.F-A.G [dB/m]	POL [H/V]	Total [dBμV/m]	Limit [dBμV/m]	Margin [dB]	Measurement Type
11730	48.94	1.72	V	50.66	73.98	23.32	PK
11730	39.51	1.72	V	41.23	53.98	12.75	AV
17595	47.22	8.52	V	55.74	68.20	12.46	PK
11730	48.13	1.72	H	49.85	73.98	24.13	PK
11730	38.38	1.72	H	40.10	53.98	13.88	AV
17595	47.68	8.52	H	56.20	68.20	12.00	PK

Band :	UNII 4
Operation Mode:	802.11 a
Transfer Rate:	6 Mbps
Operating Frequency	5885 MHz
Channel No.	177 Ch

Frequency [MHz]	Measured Value [dBμV]	C.L+A.F+ D.F-A.G [dB/m]	POL [H/V]	Total [dBμV/m]	Limit [dBμV/m]	Margin [dB]	Measurement Type
11770	48.95	1.66	V	50.61	73.98	23.37	PK
11770	37.80	1.66	V	39.46	53.98	14.52	AV
17655	47.16	8.85	V	56.01	68.20	12.19	PK
11770	48.50	1.66	H	50.16	73.98	23.82	PK
11770	37.58	1.66	H	39.24	53.98	14.74	AV
17655	47.74	8.85	H	56.59	68.20	11.61	PK

[RSDB]

Scenario 2

Dual Bluetooth DH5_Ch.78 + Ant.2 2.4 GHz 802.11b_Ch.1_ + Ant All(MIMO) 5 GHz 802.11a_Ch.165

Frequency [MHz]	Measured Value [dBμV]	C.L+A.F+ D.F-A.G [dB/m]	POL [H/V]	Total [dBμV/m]	Limit [dBμV/m]	Margin [dB]	Measurement Type
11650	48.68	4.01	V	52.69	73.98	21.29	PK
11650	37.02	4.01	V	41.03	53.98	12.95	AV
17475	47.69	7.56	V	55.25	68.20	12.95	PK
11650	48.87	4.01	H	52.88	73.98	21.10	PK
11650	37.13	4.01	H	41.14	53.98	12.84	AV
17475	47.76	7.56	H	55.32	68.20	12.88	PK

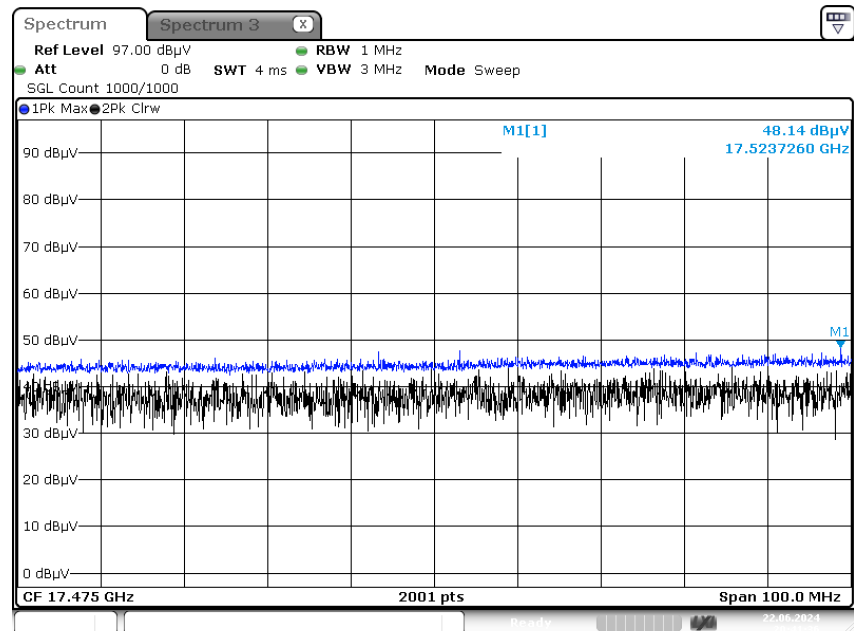
Note : BT, DTS RSDB Data refer to [BT], [DTS] Test Report

Test Plots

Note: Only the worst case plots for Radiated Spurious Emissions.

[MIMO_CDD(Ant1+Ant2)]

Radiated Spurious Emissions plot – Peak Result (802.11a, Ch.165 Spurious Emissions, Z-V)



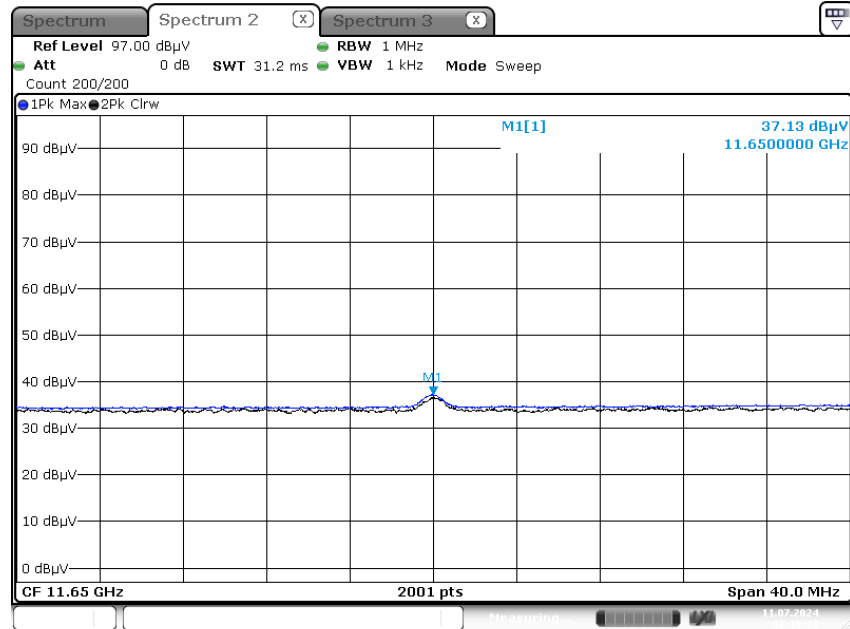
Date: 22.JUN.2024 20:41:36

[RDBS]

Scenario 2

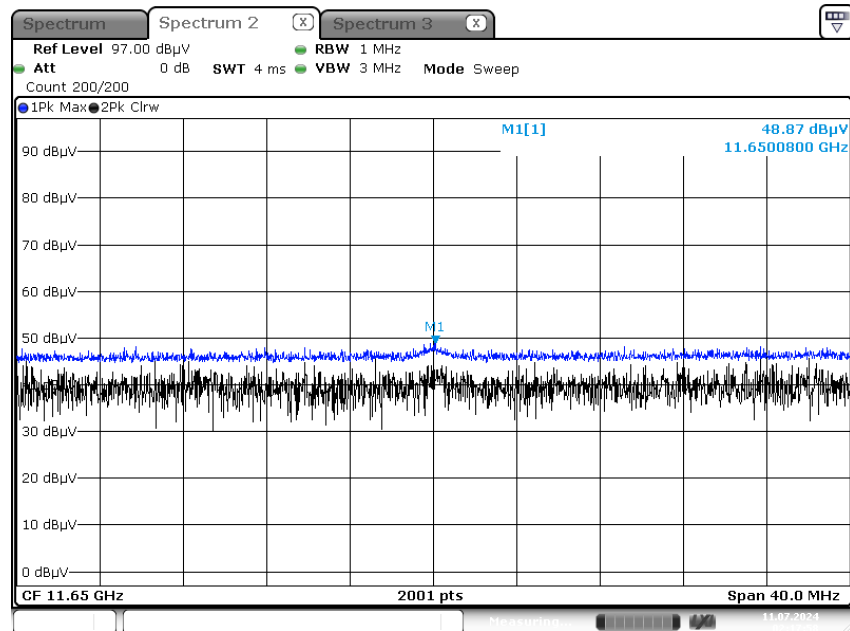
Dual Bluetooth DH5_Ch.78 + Ant.2 2.4 GHz 802.11b_Ch.1_ + Ant All(MIMO) 5 GHz 802.11a_Ch.165

Radiated Spurious Emissions plot –Average Result (2nd Harmonic, Z-H)



Date: 11.JUL.2024 02:18:21

Radiated Spurious Emissions plot – Peak Result (2nd Harmonic, Z-H)



Date: 11.JUL.2024 02:17:59

10.9 RADIATED RESTRICTED BAND EDGE

[MIMO_CDD(Ant1+Ant2)]

Band :	UNII 1
Operation Mode:	802.11 a
Transfer Rate:	6 Mbps
Operating Frequency	5180 MHz
Channel No.	36 Ch

Frequency	Measured Value	C.L+A.F+ D.F-A.G+ATT	ANT. POL	Total	Limit	Margin	Measurement Type
[MHz]	[dBμV]	[dB/m]	[H/V]	[dBμV/m]	[dBμV/m]	[dB]	
5150	57.54	-	H	57.54	73.98	16.44	PK
5150	45.06	-	H	45.06	53.98	8.92	AV
5150	57.25	-	V	57.25	73.98	16.73	PK
5150	44.91	-	V	44.91	53.98	9.07	AV

Band :	UNII 2A
Operation Mode:	802.11 a
Transfer Rate:	6 Mbps
Operating Frequency	5320 MHz
Channel No.	64 Ch

Frequency	Measured Value	C.L+A.F+ D.F-A.G+ATT	ANT. POL	Total	Limit	Margin	Measurement Type
[MHz]	[dBμV]	[dB/m]	[H/V]	[dBμV/m]	[dBμV/m]	[dB]	
5350	59.37	-	H	59.37	73.98	14.61	PK
5350	44.52	-	H	44.52	53.98	9.46	AV
5350	58.92	-	V	58.92	73.98	15.06	PK
5350	44.19	-	V	44.19	53.98	9.79	AV

Band :	UNII 2C
Operation Mode:	802.11 a
Transfer Rate:	6 Mbps
Operating Frequency	5500 MHz
Channel No.	100 Ch

Frequency	Measured Value	C.L+A.F+ D.F-A.G+ATT	ANT. POL	Total	Limit	Margin	Measurement Type
[MHz]	[dBμV]	[dB/m]	[H/V]	[dBμV/m]	[dBμV/m]	[dB]	
5460	57.18	-	H	57.18	73.98	16.80	PK
5460	44.39	-	H	44.39	53.98	9.59	AV
5470	58.35	-	H	58.35	68.20	9.85	PK
5460	56.99	-	V	56.99	73.98	16.99	PK
5460	44.28	-	V	44.28	53.98	9.70	AV
5470	57.82	-	V	57.82	68.20	10.38	PK

Band :	UNII 1
Operation Mode:	802.11 n_HT20
Transfer MCS Index:	0
Operating Frequency	5180 MHz
Channel No.	36 Ch

Frequency	Measured Value	C.L+A.F+ D.F-A.G+ATT	ANT. POL	Total	Limit	Margin	Measurement Type
[MHz]	[dBμV]	[dB/m]	[H/V]	[dBμV/m]	[dBμV/m]	[dB]	
5150	56.00	-	H	56.00	73.98	17.98	PK
5150	43.59	-	H	43.59	53.98	10.39	AV
5150	55.87	-	V	55.87	73.98	18.11	PK
5150	43.12	-	V	43.12	53.98	10.86	AV

Band :	UNII 2A
Operation Mode:	802.11 n_HT20
Transfer MCS Index:	0
Operating Frequency	5320 MHz
Channel No.	64 Ch

Frequency	Measured Value	C.L+A.F+ D.F-A.G+ATT	ANT. POL	Total	Limit	Margin	Measurement Type
[MHz]	[dBμV]	[dB/m]	[H/V]	[dBμV/m]	[dBμV/m]	[dB]	
5350	57.23	-	H	57.23	73.98	16.75	PK
5350	45.22	-	H	45.22	53.98	8.76	AV
5350	56.74	-	V	56.74	73.98	17.24	PK
5350	45.11	-	V	45.11	53.98	8.87	AV

Band :	UNII 2C
Operation Mode:	802.11 n_HT20
Transfer MCS Index:	0
Operating Frequency	5500 MHz
Channel No.	100 Ch

Frequency	Measured Value	C.L+A.F+ D.F-A.G+ATT	ANT. POL	Total	Limit	Margin	Measurement Type
[MHz]	[dBμV]	[dB/m]	[H/V]	[dBμV/m]	[dBμV/m]	[dB]	
5460	56.63	-	H	56.63	73.98	17.35	PK
5460	44.14	-	H	44.14	53.98	9.84	AV
5470	57.34	-	H	57.34	68.20	10.86	PK
5460	56.17	-	V	56.17	73.98	17.81	PK
5460	43.91	-	V	43.91	53.98	10.07	AV
5470	56.26	-	V	56.26	68.20	11.94	PK

Band :	UNII 1
Operation Mode:	802.11 ac_VHT20
Transfer MCS Index:	0
Operating Frequency	5180 MHz
Channel No.	36 Ch

Frequency	Measured Value	C.L+A.F+ D.F-A.G+ATT	ANT. POL	Total	Limit	Margin	Measurement Type
[MHz]	[dBμV]	[dB/m]	[H/V]	[dBμV/m]	[dBμV/m]	[dB]	
5150	58.14	-	H	58.14	73.98	15.84	PK
5150	45.77	-	H	45.77	53.98	8.21	AV
5150	57.83	-	V	57.83	73.98	16.15	PK
5150	45.25	-	V	45.25	53.98	8.73	AV

Band :	UNII 2A
Operation Mode:	802.11 ac_VHT20
Transfer MCS Index:	0
Operating Frequency	5320 MHz
Channel No.	64 Ch

Frequency	Measured Value	C.L+A.F+ D.F-A.G+ATT	ANT. POL	Total	Limit	Margin	Measurement Type
[MHz]	[dBμV]	[dB/m]	[H/V]	[dBμV/m]	[dBμV/m]	[dB]	
5350	57.69	-	H	57.69	73.98	16.29	PK
5350	45.34	-	H	45.34	53.98	8.64	AV
5350	57.61	-	V	57.61	73.98	16.37	PK
5350	45.15	-	V	45.15	53.98	8.83	AV

Band :	UNII 2C
Operation Mode:	802.11 ac_VHT20
Transfer MCS Index:	0
Operating Frequency	5500 MHz
Channel No.	100 Ch

Frequency	Measured Value	C.L+A.F+ D.F-A.G+ATT	ANT. POL	Total	Limit	Margin	Measurement Type
[MHz]	[dBμV]	[dB/m]	[H/V]	[dBμV/m]	[dBμV/m]	[dB]	
5460	56.75	-	H	56.75	73.98	17.23	PK
5460	43.89	-	H	43.89	53.98	10.09	AV
5470	57.58	-	H	57.58	68.20	10.62	PK
5460	56.71	-	V	56.71	73.98	17.27	PK
5460	42.97	-	V	42.97	53.98	11.01	AV
5470	57.22	-	V	57.22	68.20	10.98	PK

Band :	UNII 1
Operation Mode:	802.11 n_HT40
Transfer MCS Index:	0
Operating Frequency	5190 MHz
Channel No.	38 Ch

Frequency	Measured Value	C.L+A.F+ D.F-A.G+ATT	ANT. POL	Total	Limit	Margin	Measurement Type
[MHz]	[dBμV]	[dB/m]	[H/V]	[dBμV/m]	[dBμV/m]	[dB]	
5150	62.59	-	H	62.59	73.98	11.39	PK
5150	50.03	-	H	50.03	53.98	3.95	AV
5150	61.42	-	V	61.42	73.98	12.56	PK
5150	49.62	-	V	49.62	53.98	4.36	AV

Band :	UNII 2A
Operation Mode:	802.11 n_HT40
Transfer MCS Index:	0
Operating Frequency	5310 MHz
Channel No.	62 Ch

Frequency	Measured Value	C.L+A.F+ D.F-A.G+ATT	ANT. POL	Total	Limit	Margin	Measurement Type
[MHz]	[dBμV]	[dB/m]	[H/V]	[dBμV/m]	[dBμV/m]	[dB]	
5350	63.03	-	H	63.03	73.98	10.95	PK
5350	50.49	-	H	50.49	53.98	3.49	AV
5350	62.47	-	V	62.47	73.98	11.51	PK
5350	49.61	-	V	49.61	53.98	4.37	AV

Band :	UNII 2C
Operation Mode:	802.11 n_HT40
Transfer MCS Index:	0
Operating Frequency	5510 MHz
Channel No.	102 Ch

Frequency	Measured Value	C.L+A.F+ D.F-A.G+ATT	ANT. POL	Total	Limit	Margin	Measurement Type
[MHz]	[dBμV]	[dB/m]	[H/V]	[dBμV/m]	[dBμV/m]	[dB]	
5460	59.75	-	H	59.75	73.98	14.23	PK
5460	46.99	-	H	46.99	53.98	6.99	AV
#5470	63.46	-	H	63.46	68.20	4.74	PK
5460	58.91	-	V	58.91	73.98	15.07	PK
5460	45.58	-	V	45.58	53.98	8.40	AV
#5470	60.94	-	V	60.94	68.20	7.26	PK

Note : # Integration method Used (KDB 789033 D02 v02r01 Section 3) d) (ii)

Band :	UNII 1
Operation Mode:	802.11 ac_VHT40
Transfer MCS Index:	0
Operating Frequency	5190 MHz
Channel No.	38 Ch

Frequency	Measured Value	C.L+A.F+ D.F-A.G+ATT	ANT. POL	Total	Limit	Margin	Measurement Type
[MHz]	[dBμV]	[dB/m]	[H/V]	[dBμV/m]	[dBμV/m]	[dB]	
5150	62.27	-	H	62.27	73.98	11.71	PK
5150	46.69	-	H	46.69	53.98	7.29	AV
5150	61.99	-	V	61.99	73.98	11.99	PK
5150	46.58	-	V	46.58	53.98	7.40	AV

Band :	UNII 2A
Operation Mode:	802.11 ac_VHT40
Transfer MCS Index:	0
Operating Frequency	5310 MHz
Channel No.	62 Ch

Frequency	Measured Value	C.L+A.F+ D.F-A.G+ATT	ANT. POL	Total	Limit	Margin	Measurement Type
[MHz]	[dBμV]	[dB/m]	[H/V]	[dBμV/m]	[dBμV/m]	[dB]	
5350	65.62	-	H	65.62	73.98	8.36	PK
5350	50.68	-	H	50.68	53.98	3.30	AV
5350	64.25	-	V	64.25	73.98	9.73	PK
5350	50.02	-	V	50.02	53.98	3.96	AV

Band :	UNII 2C
Operation Mode:	802.11 ac_VHT40
Transfer MCS Index:	0
Operating Frequency	5510 MHz
Channel No.	102 Ch

Frequency	Measured Value	C.L+A.F+ D.F-A.G+ATT	ANT. POL	Total	Limit	Margin	Measurement Type
[MHz]	[dBμV]	[dB/m]	[H/V]	[dBμV/m]	[dBμV/m]	[dB]	
5460	61.20	-	H	61.20	73.98	12.78	PK
5460	46.76	-	H	46.76	53.98	7.22	AV
#5470	62.10	-	H	62.10	68.20	6.10	PK
5460	60.50	-	V	60.50	73.98	13.48	PK
5460	46.58	-	V	46.58	53.98	7.40	AV
#5470	61.99	-	V	61.99	68.20	6.21	PK

Note : # Integration method Used (KDB 789033 D02 v02r01 Section 3) d) (ii)

Band :	UNII 1
Operation Mode:	802.11 ac_VHT80
Transfer MCS Index:	0
Operating Frequency	5210 MHz
Channel No.	42 Ch

Frequency	Measured Value	C.L+A.F+ D.F-A.G+ATT	ANT. POL	Total	Limit	Margin	Measurement Type
[MHz]	[dBμV]	[dB/m]	[H/V]	[dBμV/m]	[dBμV/m]	[dB]	
5150	62.78	-	H	62.78	73.98	11.20	PK
5150	51.65	-	H	51.65	53.98	2.33	AV
5150	61.20	-	V	61.20	73.98	12.78	PK
5150	50.25	-	V	50.25	53.98	3.73	AV

Band :	UNII 2A
Operation Mode:	802.11 ac_VHT80
Transfer MCS Index:	0
Operating Frequency	5290 MHz
Channel No.	58 Ch

Frequency	Measured Value	C.L+A.F+ D.F-A.G+ATT	ANT. POL	Total	Limit	Margin	Measurement Type
[MHz]	[dBμV]	[dB/m]	[H/V]	[dBμV/m]	[dBμV/m]	[dB]	
5350	59.98	-	H	59.98	73.98	14.00	PK
5350	47.87	-	H	47.87	53.98	6.11	AV
5350	58.93	-	V	58.93	73.98	15.05	PK
5350	47.69	-	V	47.69	53.98	6.29	AV

Band :	UNII 2C
Operation Mode:	802.11 ac_VHT80
Transfer MCS Index:	0
Operating Frequency	5530 MHz
Channel No.	106 Ch

Frequency	Measured Value	C.L+A.F+ D.F-A.G+ATT	ANT. POL	Total	Limit	Margin	Measurement Type
[MHz]	[dBμV]	[dB/m]	[H/V]	[dBμV/m]	[dBμV/m]	[dB]	
5460	62.39	-	H	62.39	73.98	11.59	PK
5460	51.03	-	H	51.03	53.98	2.95	AV
5470	62.97	-	H	62.97	68.20	5.23	PK
5460	61.66	-	V	61.66	73.98	12.32	PK
5460	50.16	-	V	50.16	53.98	3.82	AV
5470	62.05	-	V	62.05	68.20	6.15	PK

Band :	UNII 1 & 2A
Operation Mode:	802.11 ac_VHT160
Transfer MCS Index:	0
Operating Frequency	5250 MHz
Channel No.	50 Ch

Frequency	Measured Value	C.L+A.F+ D.F-A.G+ATT	ANT. POL	Total	Limit	Margin	Measurement Type
[MHz]	[dBμV]	[dB/m]	[H/V]	[dBμV/m]	[dBμV/m]	[dB]	
5150	67.79	-	H	67.79	73.98	6.19	PK
5150	50.00	-	H	50.00	53.98	3.98	AV
5150	67.66	-	V	67.66	73.98	6.32	PK
5150	49.52	-	V	49.52	53.98	4.46	AV
5350	70.14	-	H	70.14	73.98	3.84	PK
5350	51.97	-	H	51.97	53.98	2.01	AV
5350	69.52	-	V	69.52	73.98	4.46	PK
5350	50.67	-	V	50.67	53.98	3.31	AV

Band :	UNII 2C
Operation Mode:	802.11 ac_VHT160
Transfer MCS Index:	0
Operating Frequency	5570 MHz
Channel No.	114 Ch

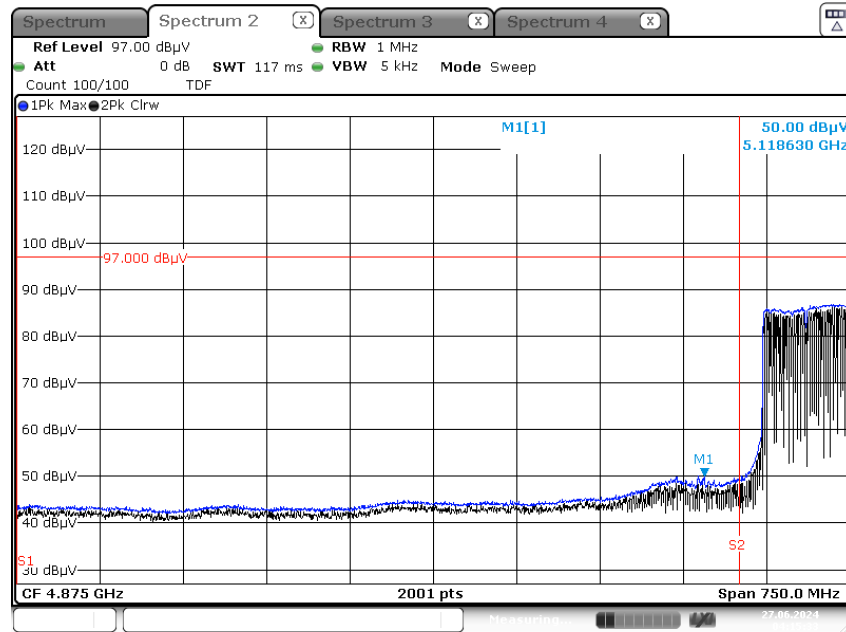
Frequency	Measured Value	C.L+A.F+ D.F-A.G+ATT	ANT. POL	Total	Limit	Margin	Measurement Type
[MHz]	[dBμV]	[dB/m]	[H/V]	[dBμV/m]	[dBμV/m]	[dB]	
5460	70.87	-	H	70.87	73.98	3.11	PK
5460	51.55	-	H	51.55	53.98	2.43	AV
#5470	62.98	-	H	62.98	68.20	5.22	PK
5460	69.75	-	V	69.75	73.98	4.23	PK
5460	51.02	-	V	51.02	53.98	2.96	AV
#5470	61.58	-	V	61.58	68.20	6.62	PK

Note : # Integration method Used (KDB 789033 D02 v02r01 Section 3) d) (ii)

Test Plots

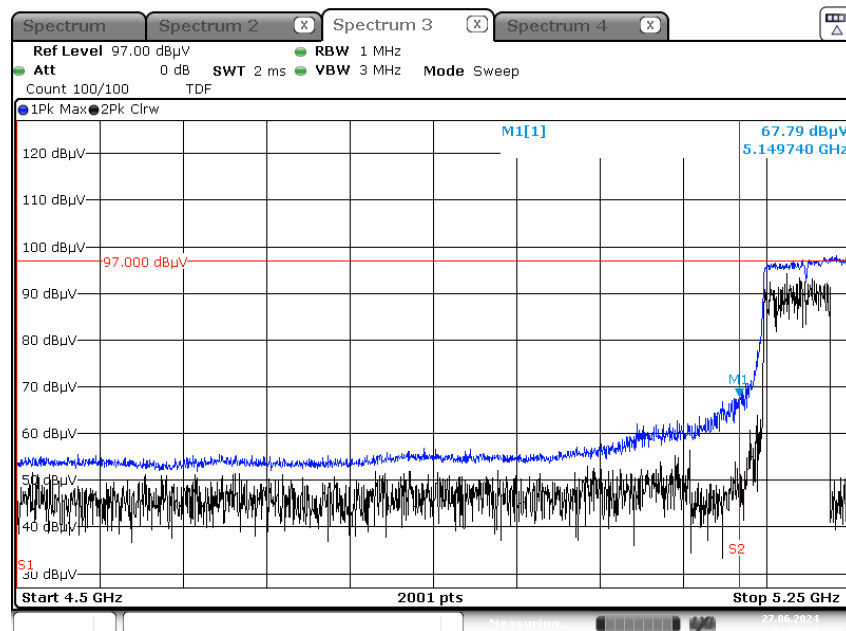
[MIMO_CDD(Ant1+Ant2)]

Average Result (802.11 ac_VHT160_ MCS0, Ch.50, X-H)



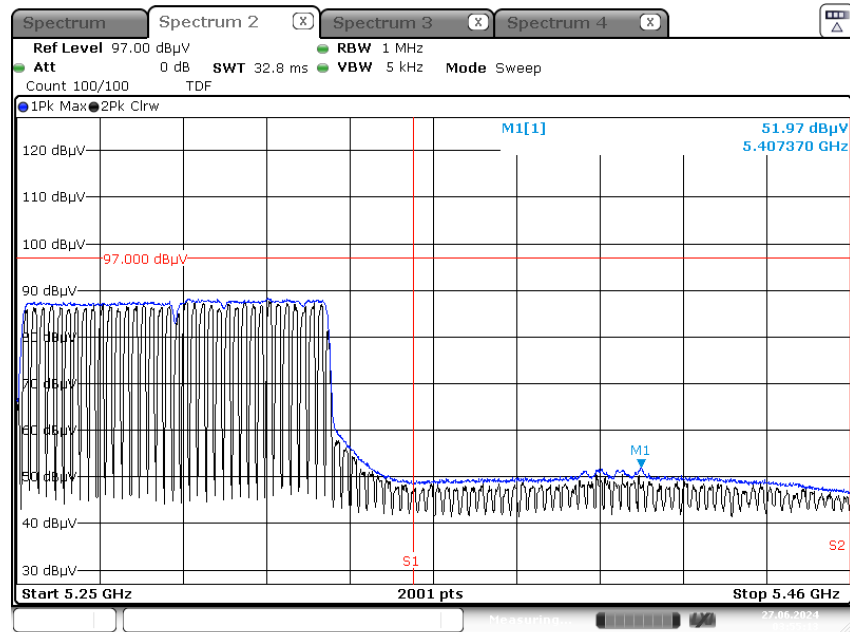
Date: 27.JUN.2024 04:15:33

Peak Result (802.11 ac_VHT160_ MCS0, Ch.50, Z-H)

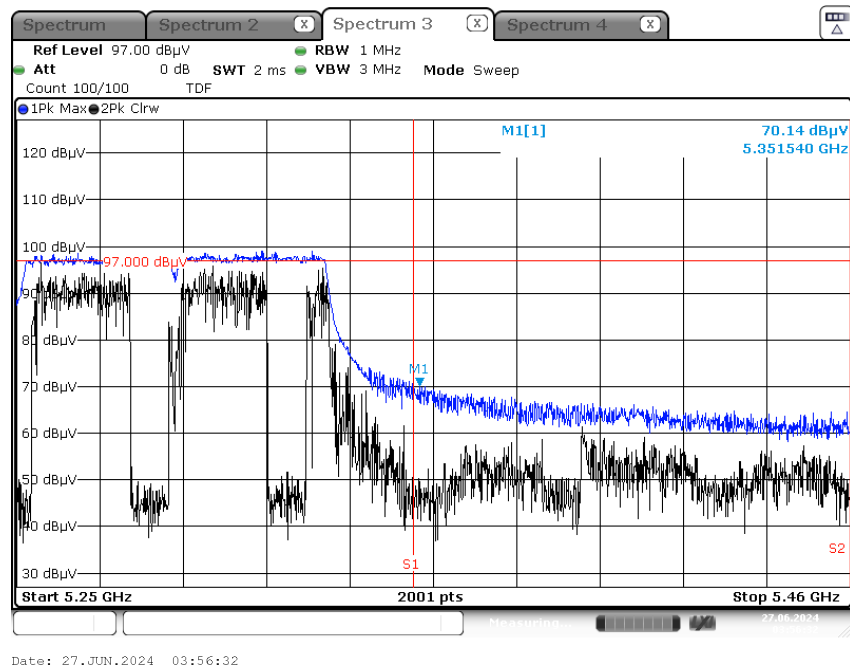


Date: 27.JUN.2024 04:08:10

Average Result (802.11 ac_VHT160_ MCS0, Ch.50, Z-H)



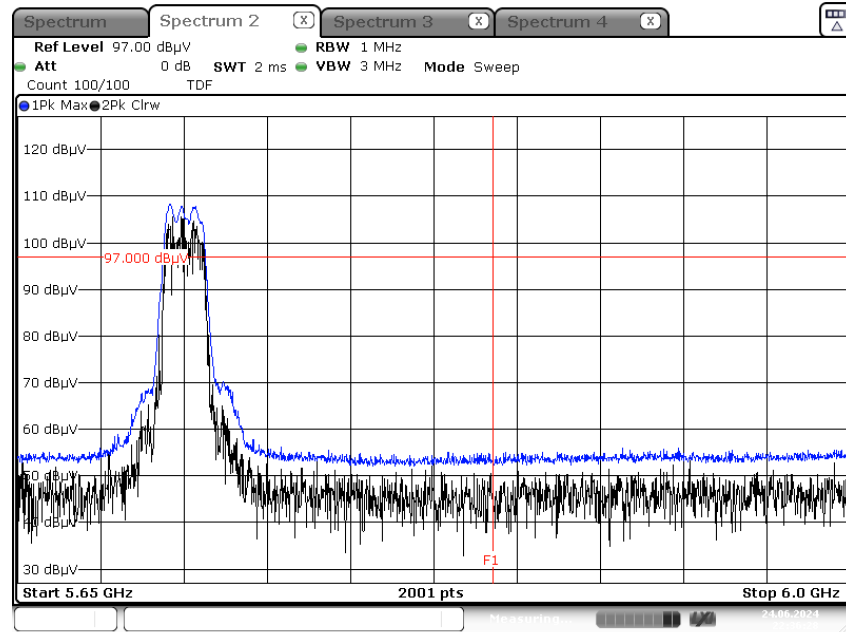
Peak Result (802.11 ac_VHT160_ MCS0, Ch.50, Z-H)


Note:

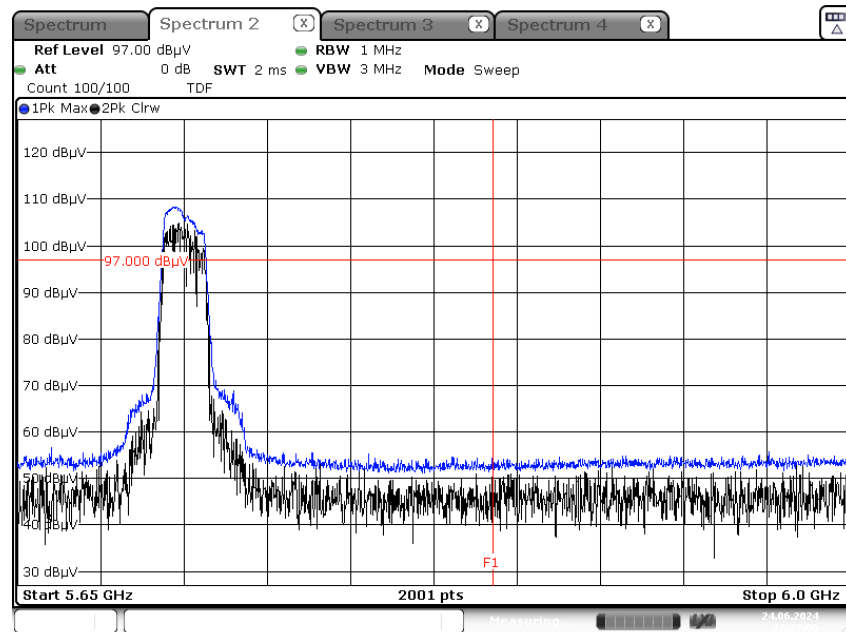
Only the worst case plots for Radiated Restricted Band Edge.

Test Plots(Straddle Channel)

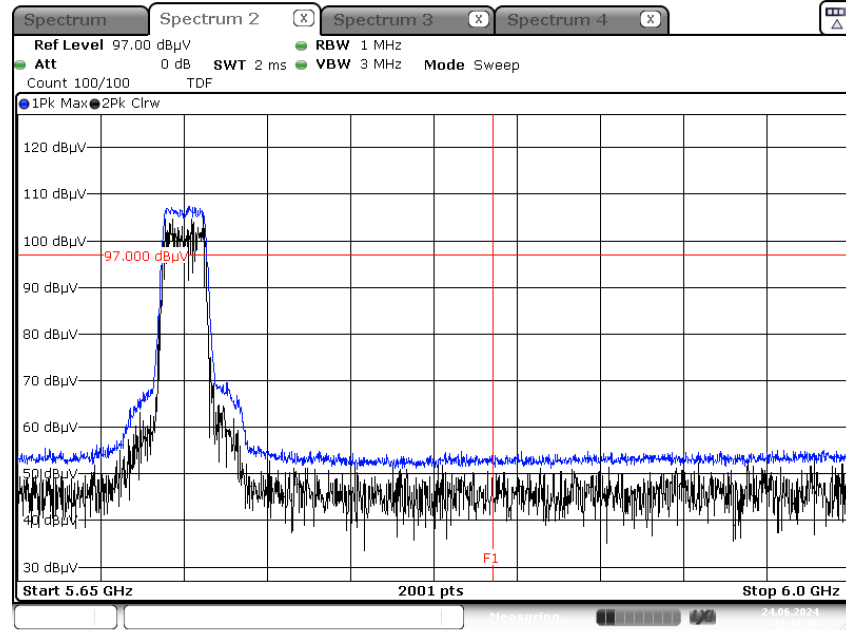
Peak Result (802.11a, Ch.144, X-H)



Peak Result (802.11n_HT20, Ch.144, X-H)

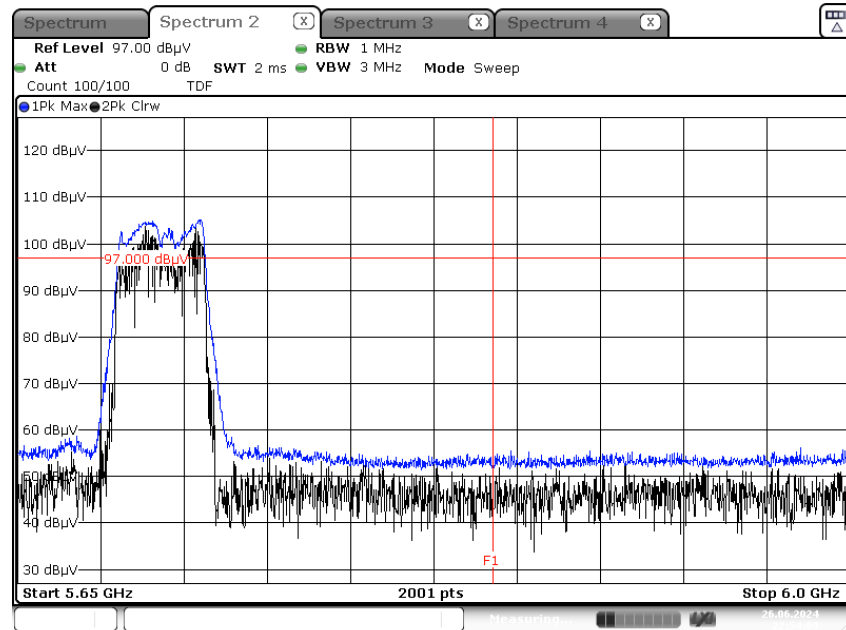


Peak Result (802.11ac_VHT20, Ch.144, X-H)



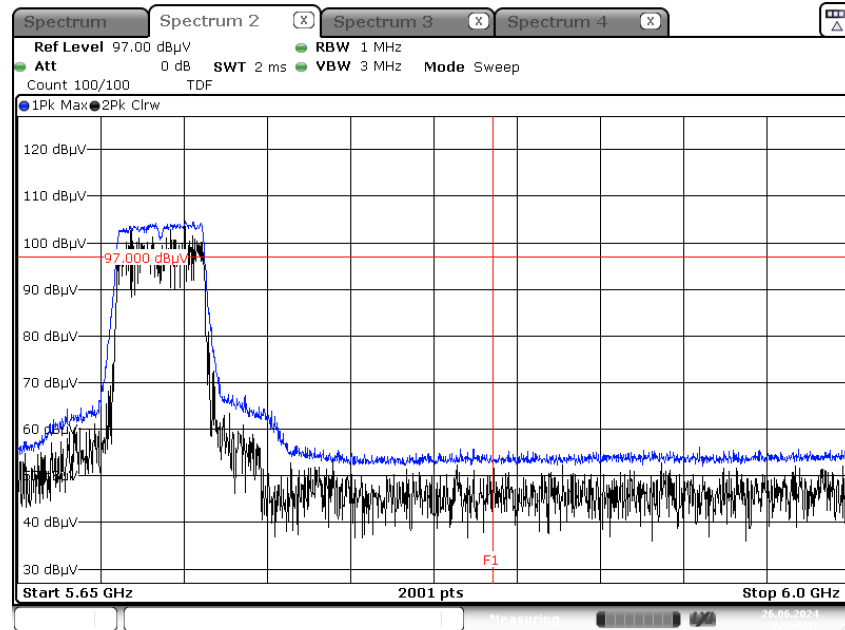
Date: 24.JUN.2024 22:37:28

Peak Result (802.11n_HT40, Ch.142, X-H)

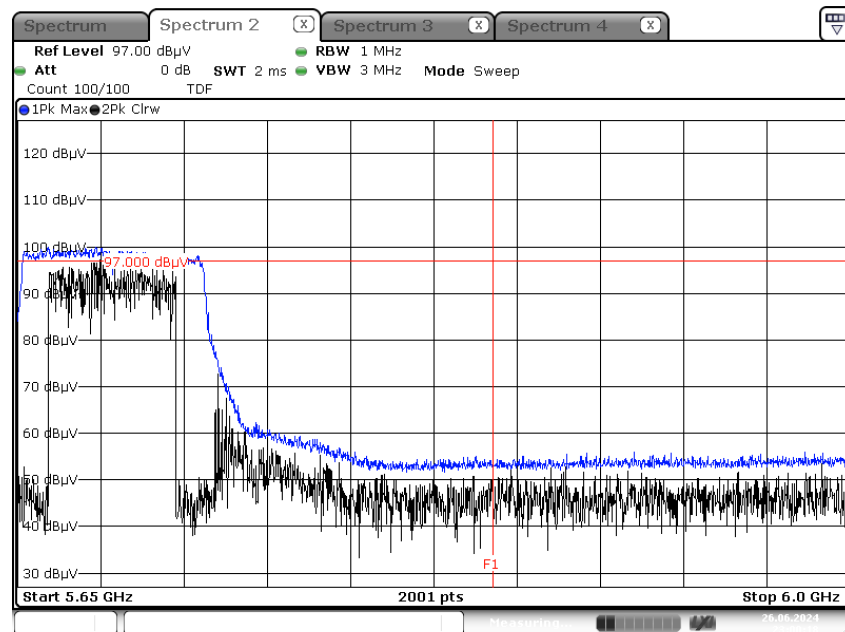


Date: 26.JUN.2024 22:54:10

Peak Result (802.11ac_VHT40, Ch.142, X-H)



Peak Result (802.11ac_VHT80, Ch.138, X-H)

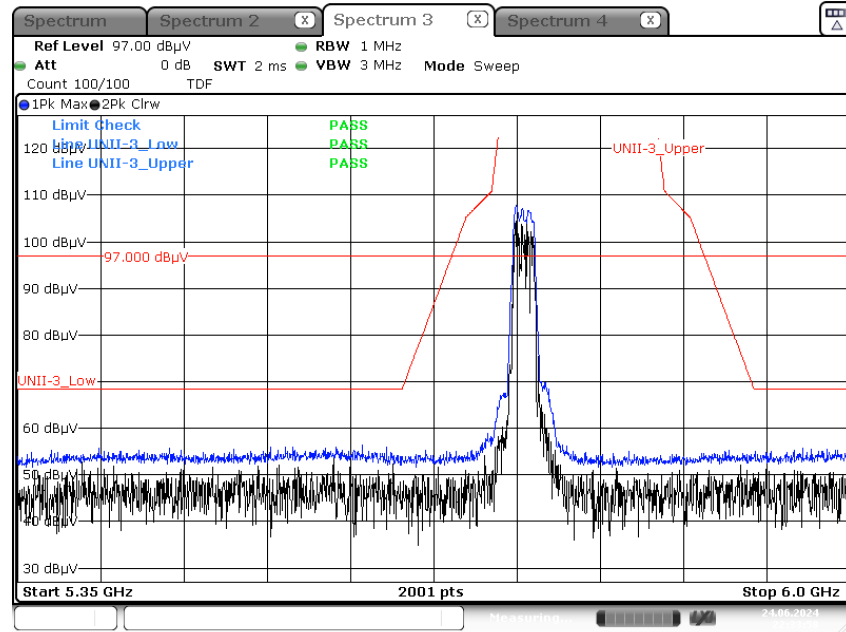


Note :

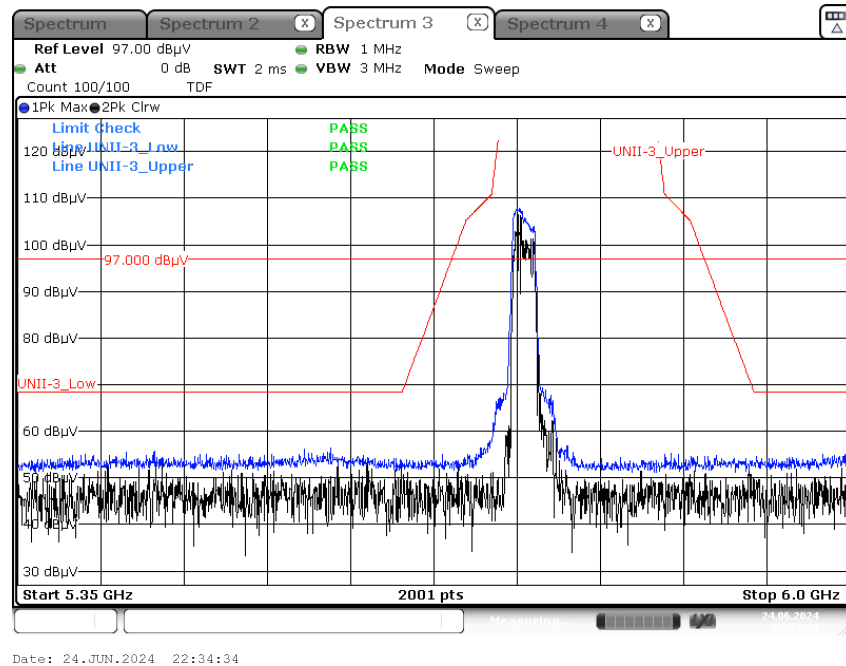
1. Only the worst case plots for Radiated Restricted Band Edge.
2. Red line : 5 850 MHz
3. Ambient Noise (Because of ambient noise, We attached only the worst plot without a data table)

Test Plots(UNII 3)

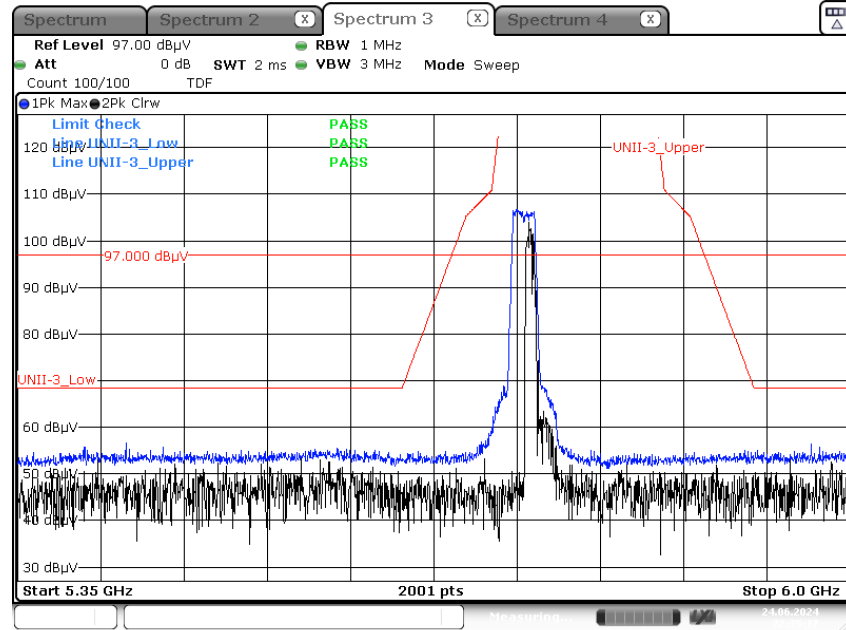
Peak Result (802.11a, Ch.149, X-H)



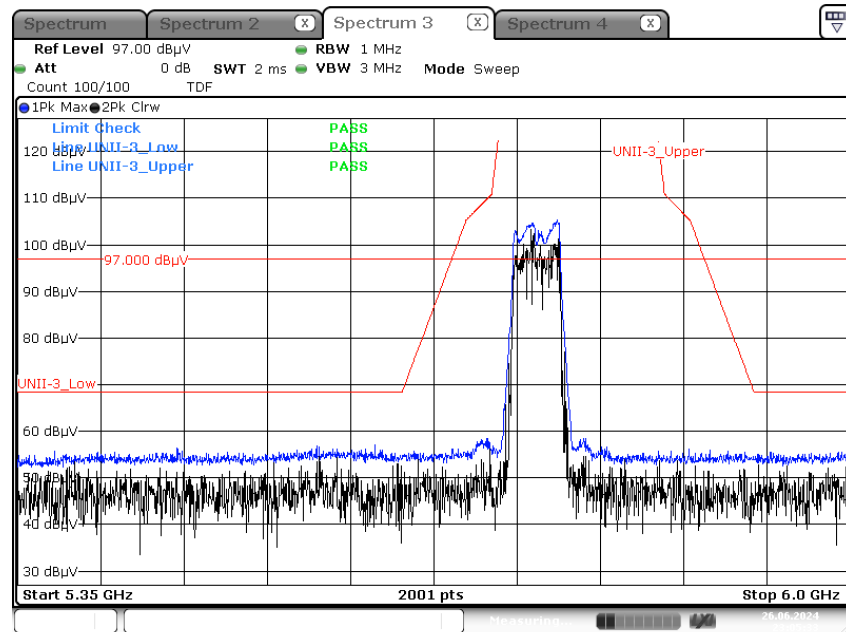
Peak Result (802.11n_HT20, Ch.149, X-H)



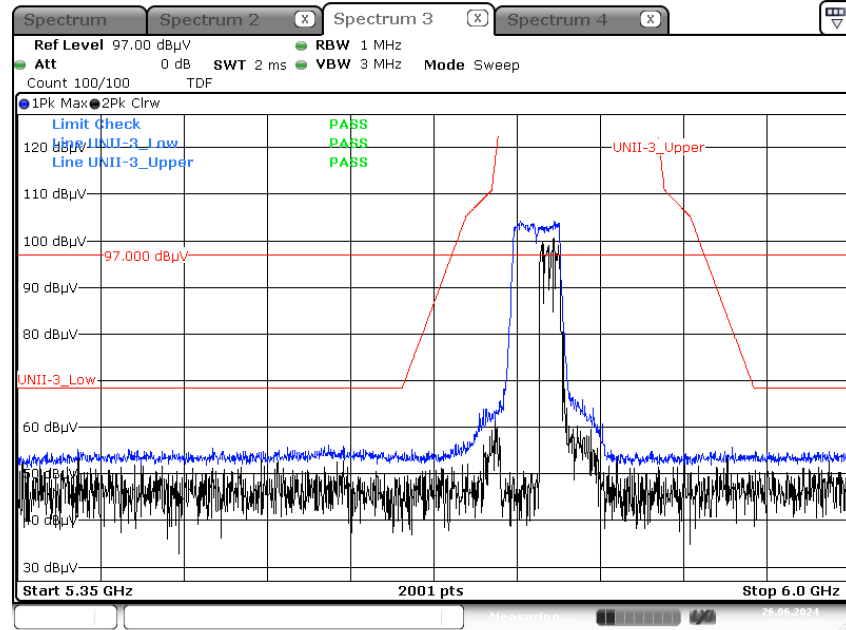
Peak Result (802.11ac_VHT20, Ch.149, X-H)



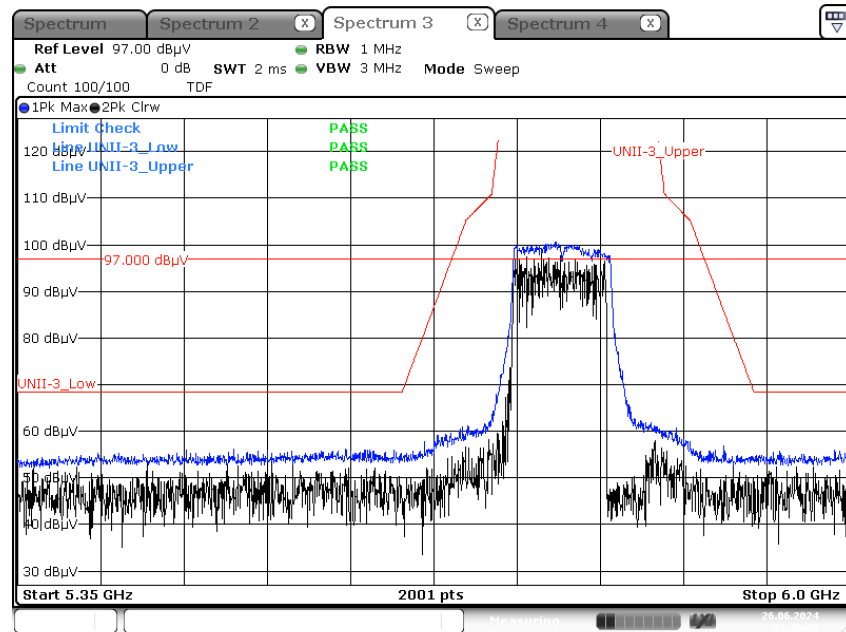
Peak Result (802.11n_HT40, Ch.151, X-H)



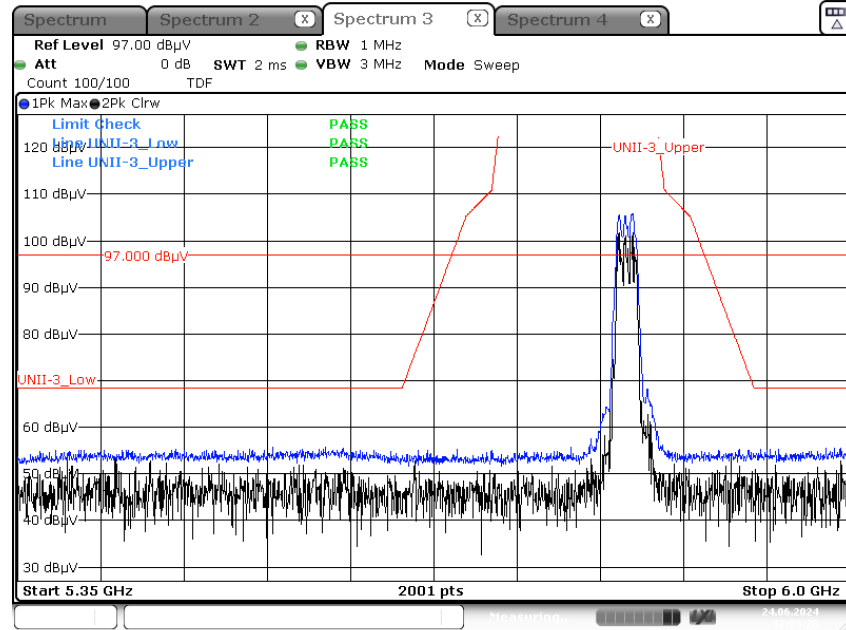
Peak Result (802.11ac_VHT40, Ch.151, X-H)



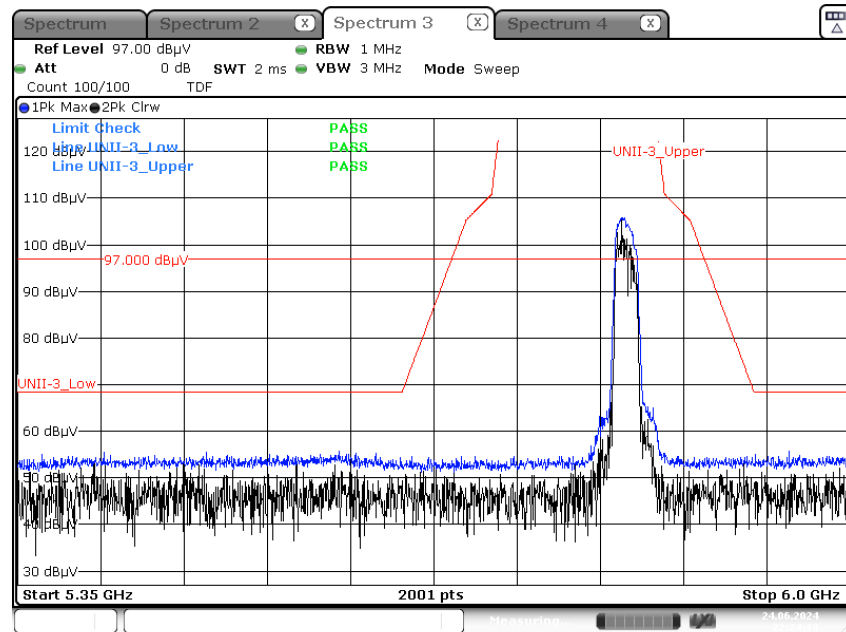
Peak Result (802.11ac_VHT80, Ch.155, X-H)



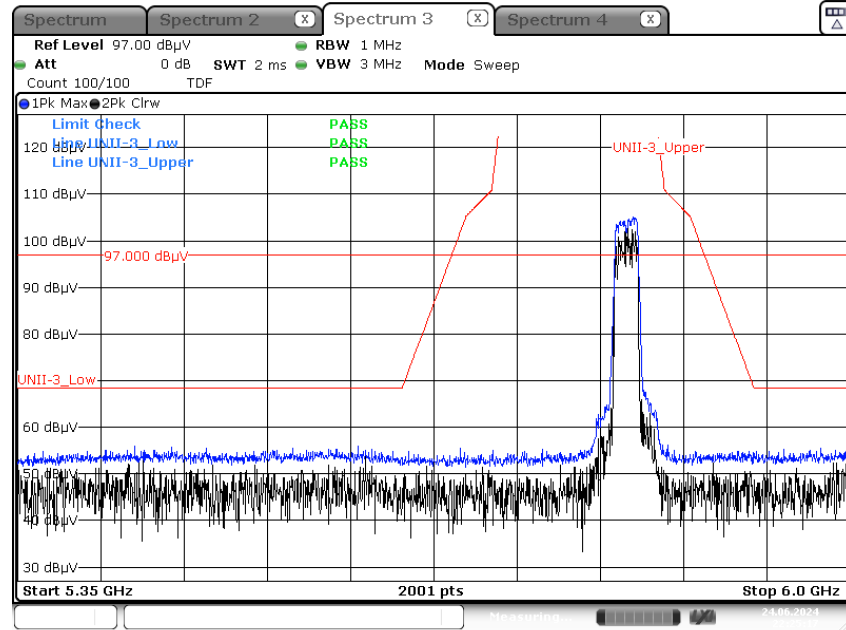
Peak Result (802.11a, Ch.165, X-H)



Peak Result (802.11n_HT20, Ch.165, X-H)

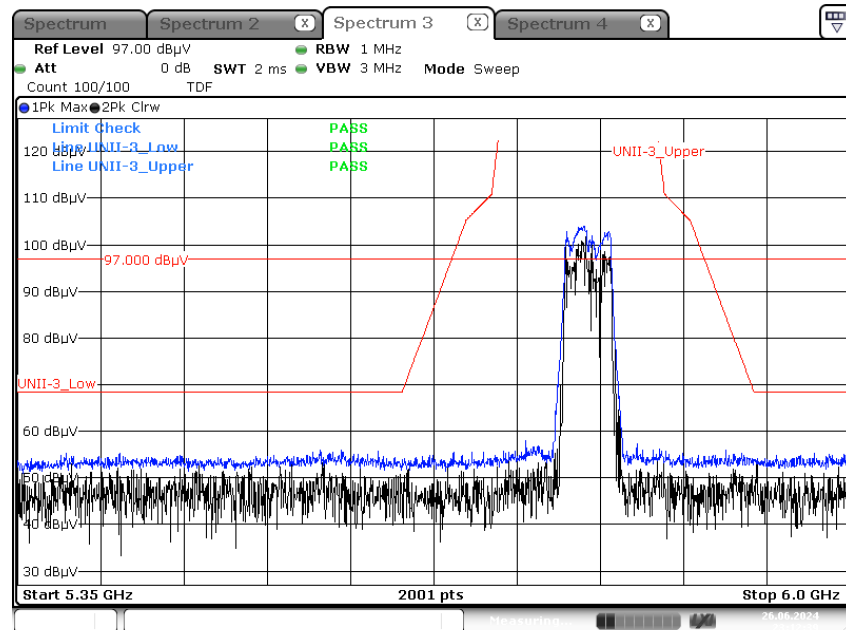


Peak Result (802.11ac_VHT20, Ch.165, X-H)



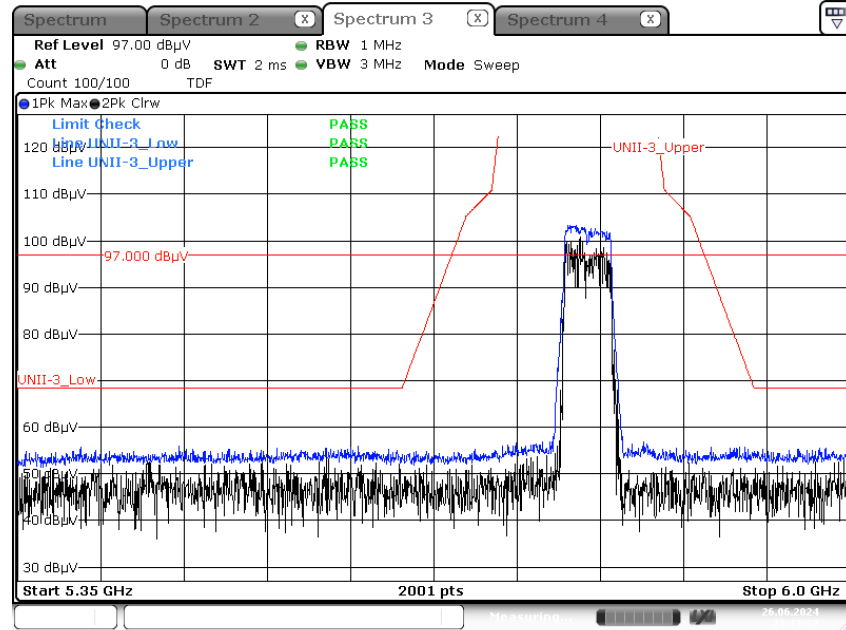
Date: 24.JUN.2024 22:25:17

Peak Result (802.11n_HT40, Ch.159, X-H)



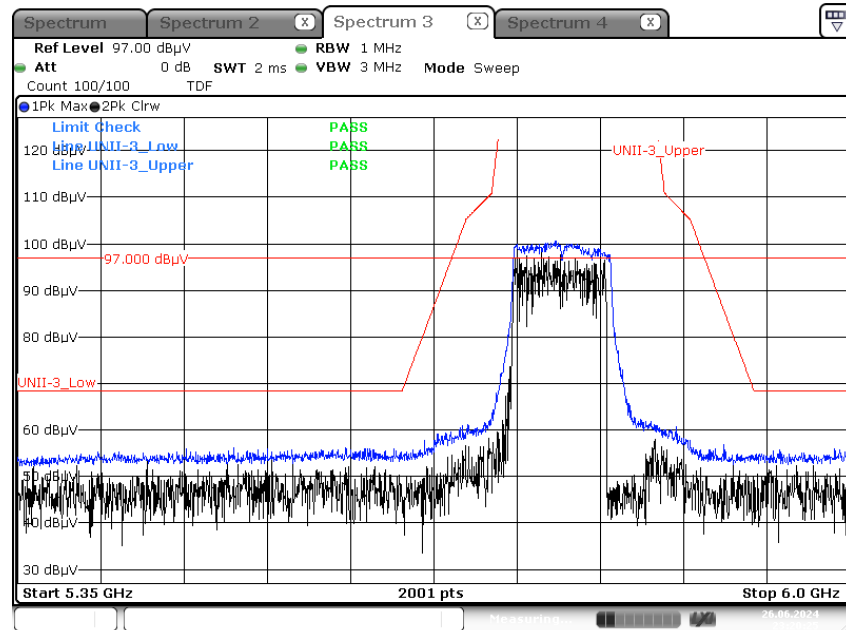
Date: 26.JUN.2024 23:12:39

Peak Result (802.11ac_VHT40, Ch.159, X-H)



Date: 26.JUN.2024 23:13:37

Peak Result (802.11ac_VHT80, Ch.155, X-H)



Date: 26.JUN.2024 23:20:26

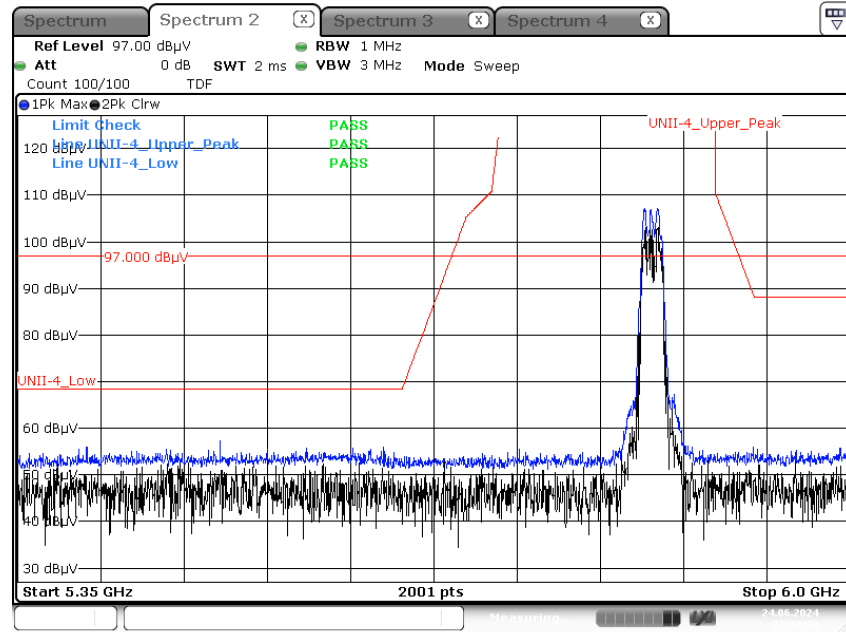
Note :

1. Only the worst case plots for U-NII-3 Out of Band e.i.r.p Emission.
2. U-NII-3 Low & High Band Edge RedLine is Final Test Limit about factor value compensation.

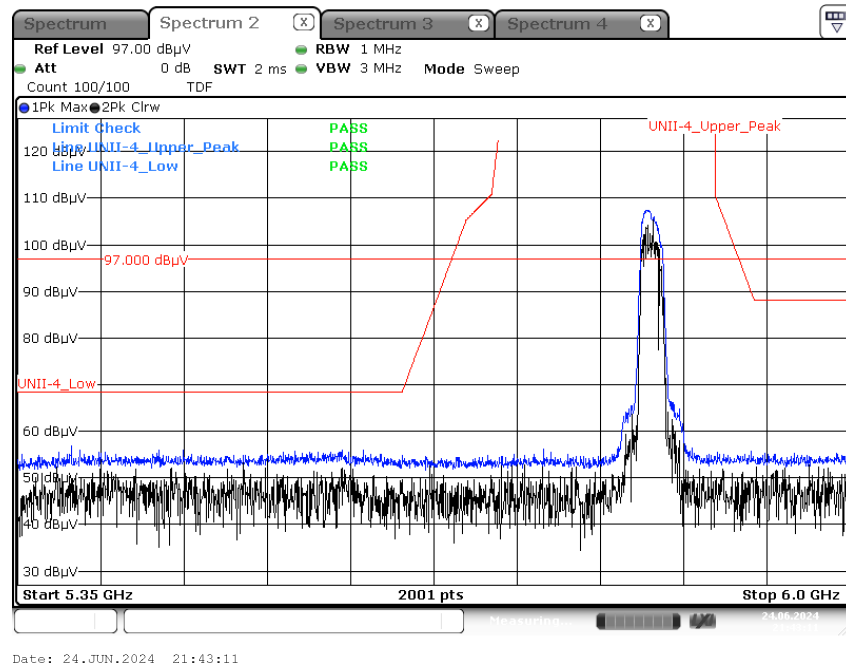
Test Plots(UNII 4) – O.O.B.E

Peak Result

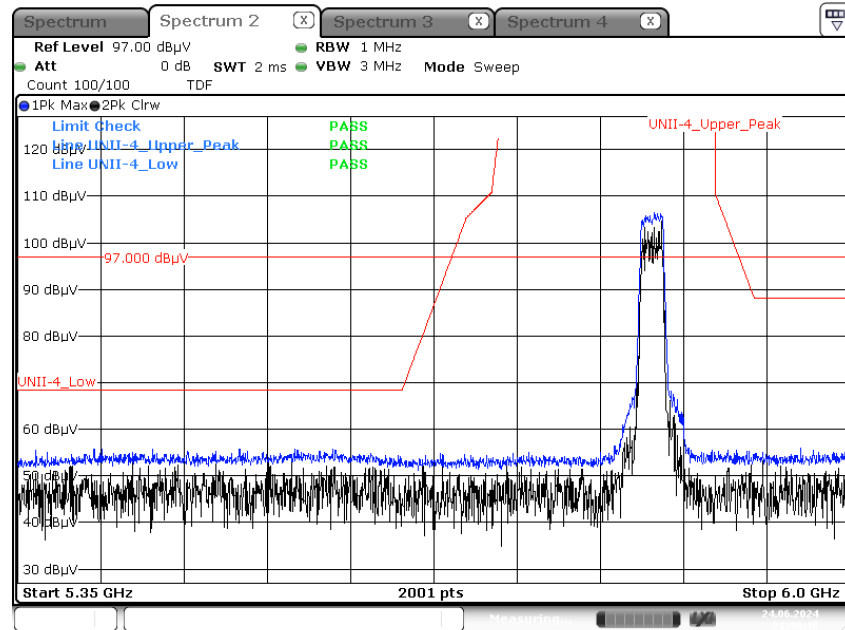
Peak Result (802.11a, Ch.169, X-H)



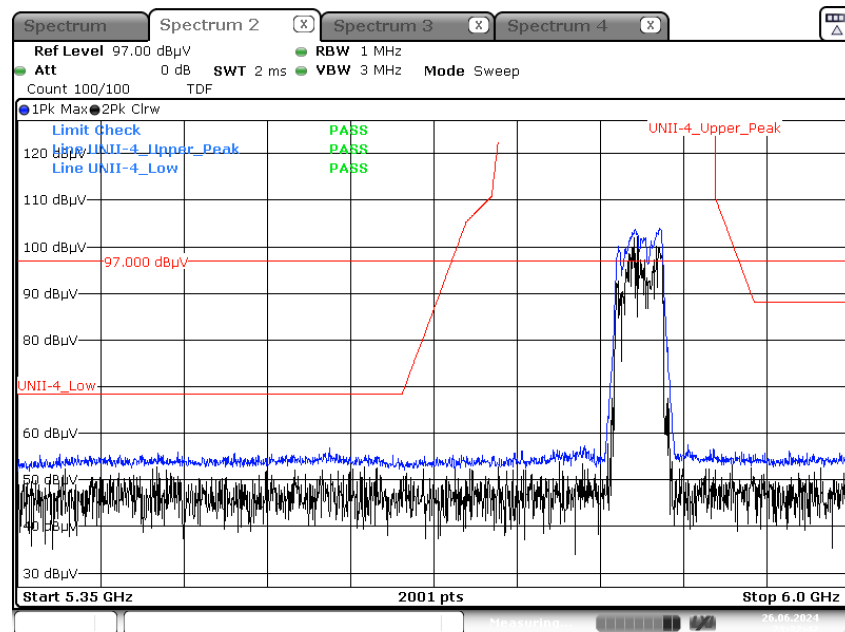
Peak Result (802.11n_HT20, Ch.169, X-H)



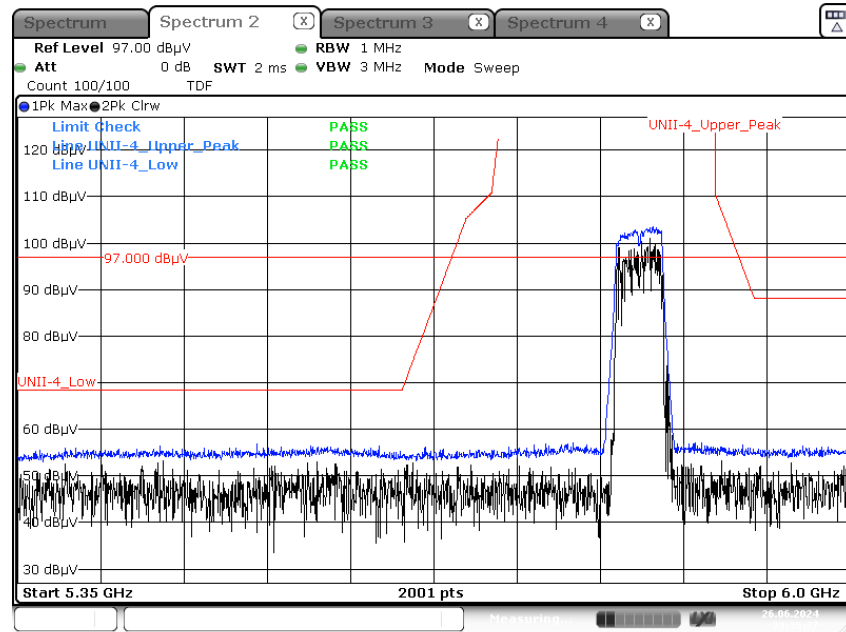
Peak Result (802.11ac_VHT20, Ch.169, X-H)



Peak Result (802.11n_HT40, Ch.167, X-H)

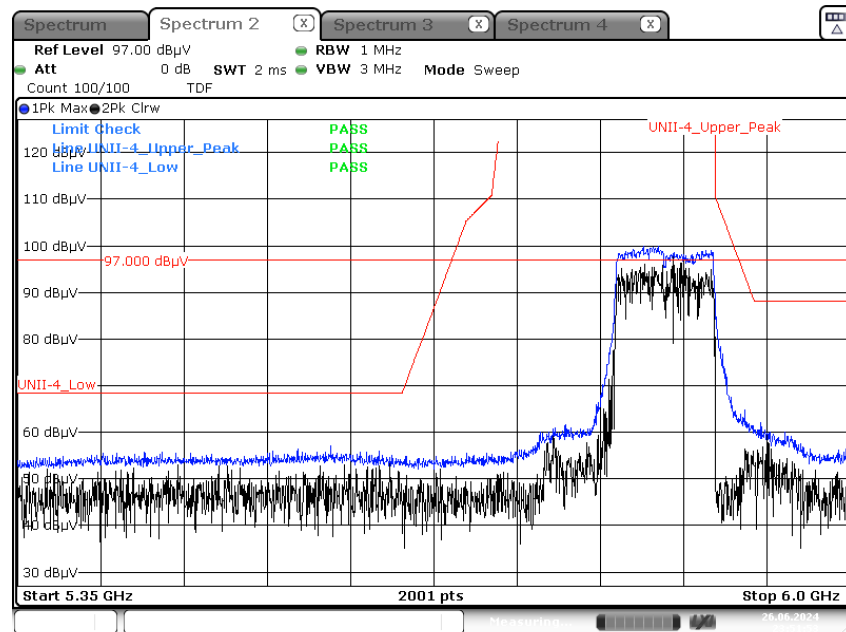


Peak Result (802.11ac_VHT40, Ch.167, X-H)



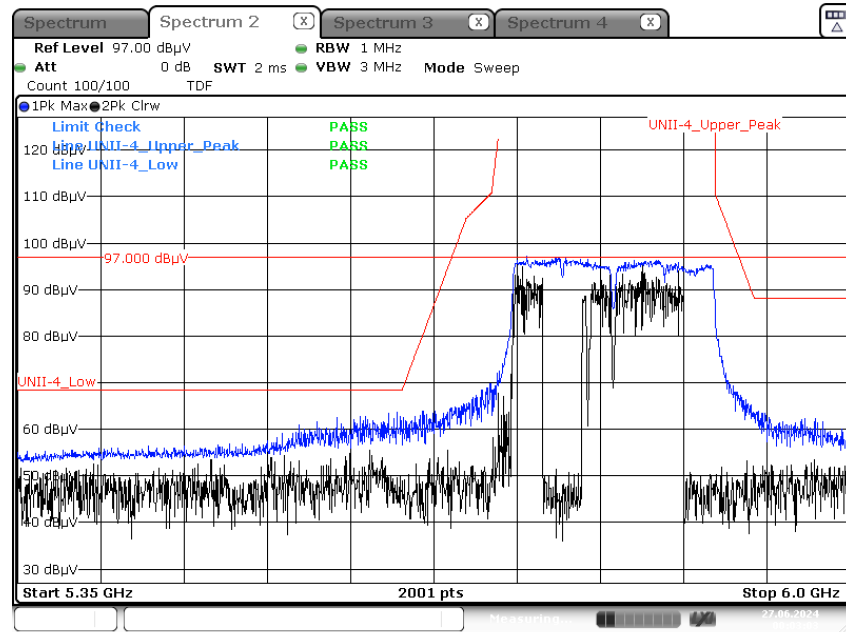
Date: 26.JUN.2024 23:35:27

Peak Result (802.11ac_VHT80, Ch.171, X-H)

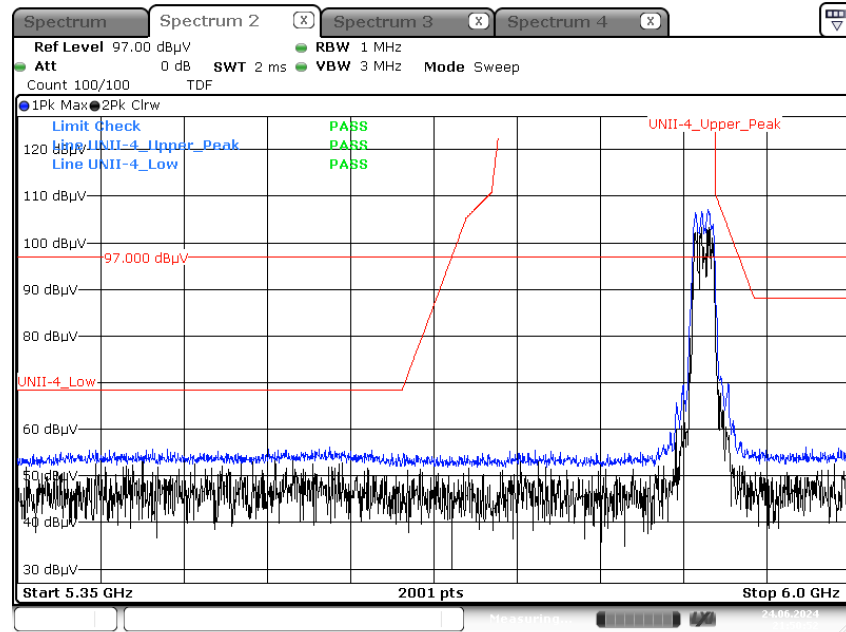


Date: 26.JUN.2024 23:51:54

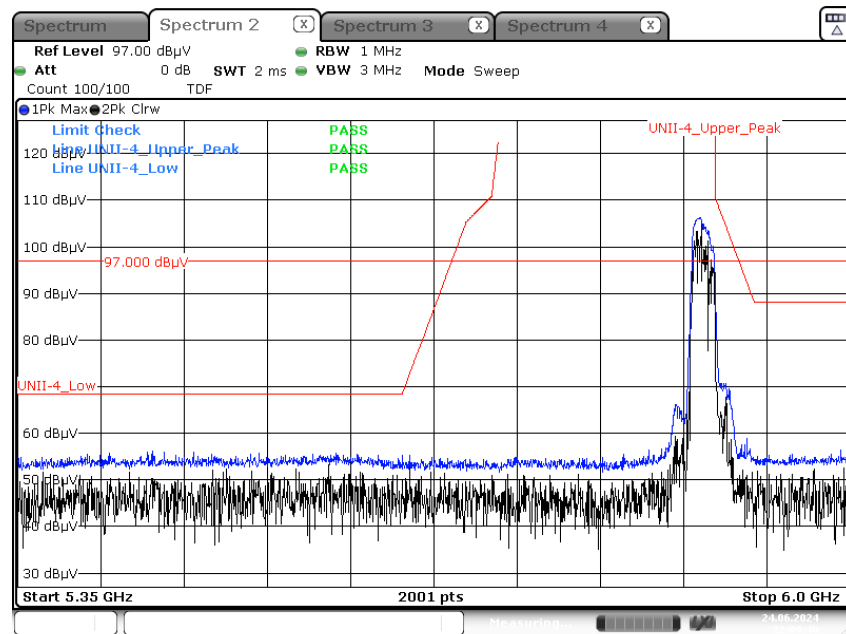
Peak Result (802.11ac_VHT160, Ch.163, X-H)



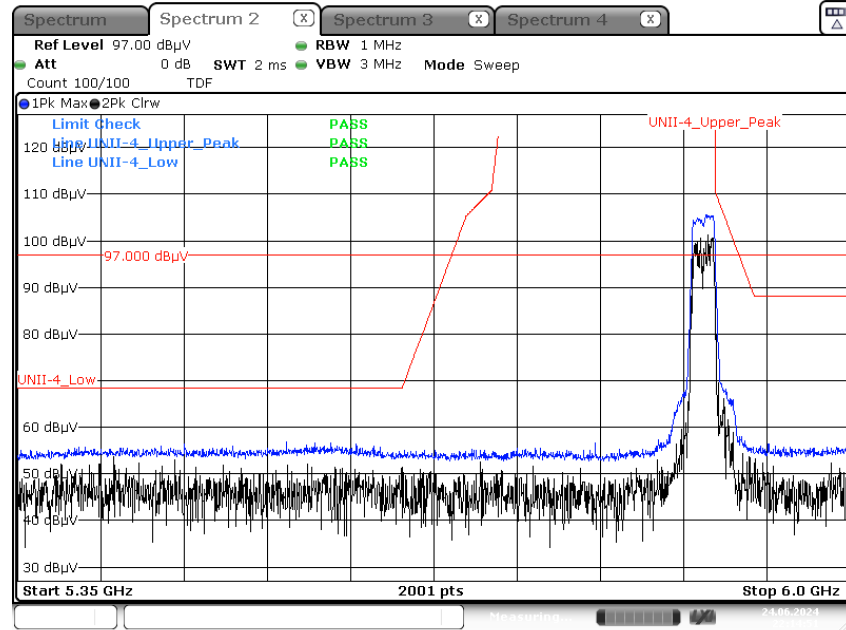
Peak Result (802.11a, Ch.177, X-H)



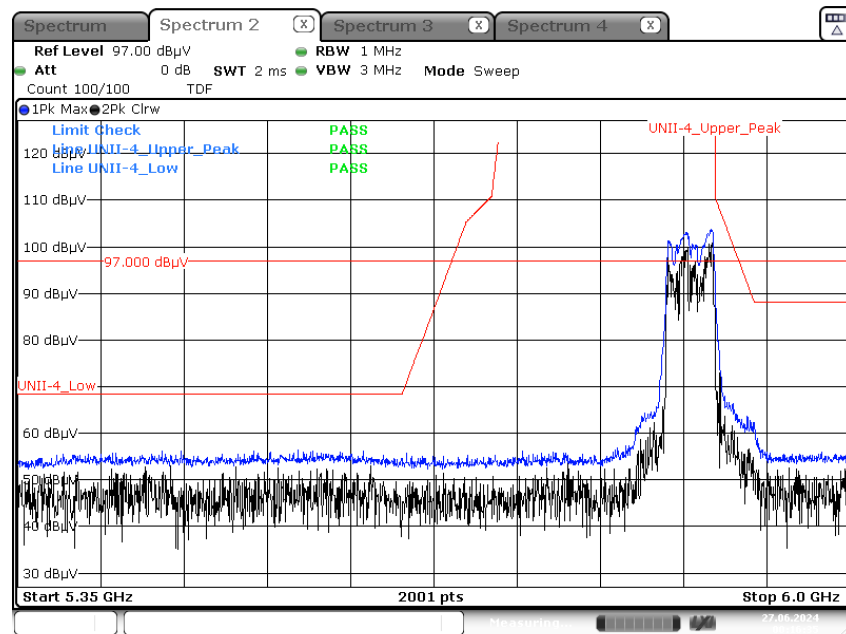
Peak Result (802.11n_HT20, Ch.177, X-H)



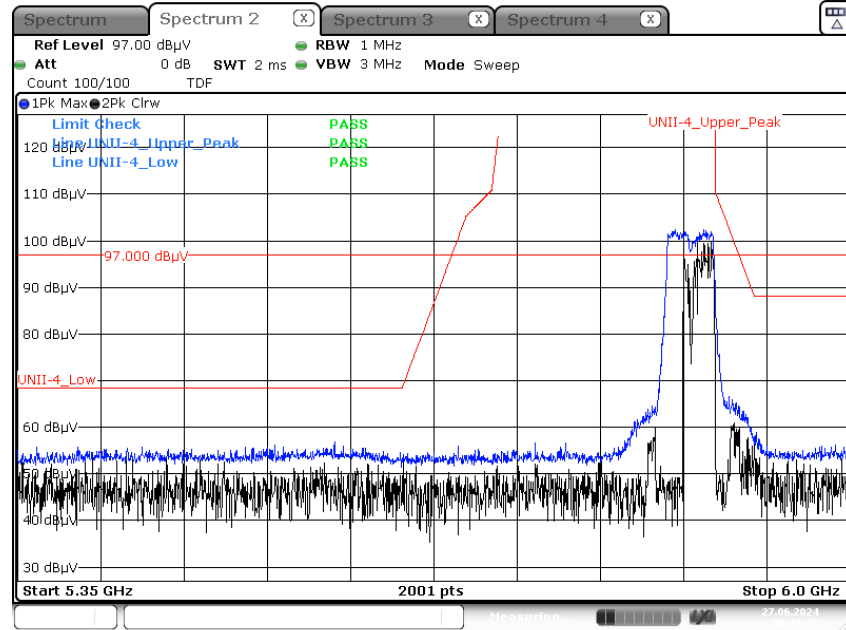
Peak Result (802.11ac_VHT20, Ch.177, X-H)



Peak Result (802.11n_HT40, Ch.175, X-H)

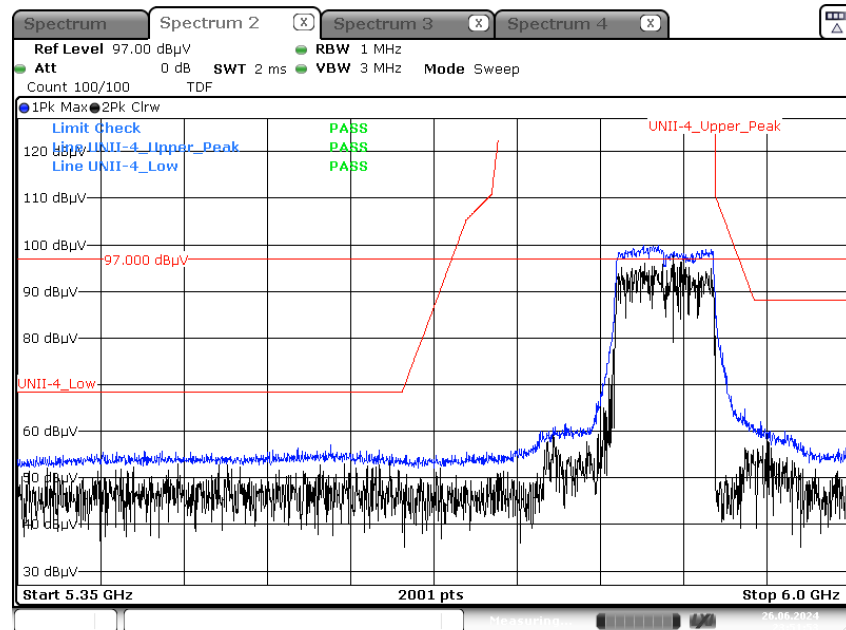


Peak Result (802.11ac_VHT40, Ch.175, X-H)



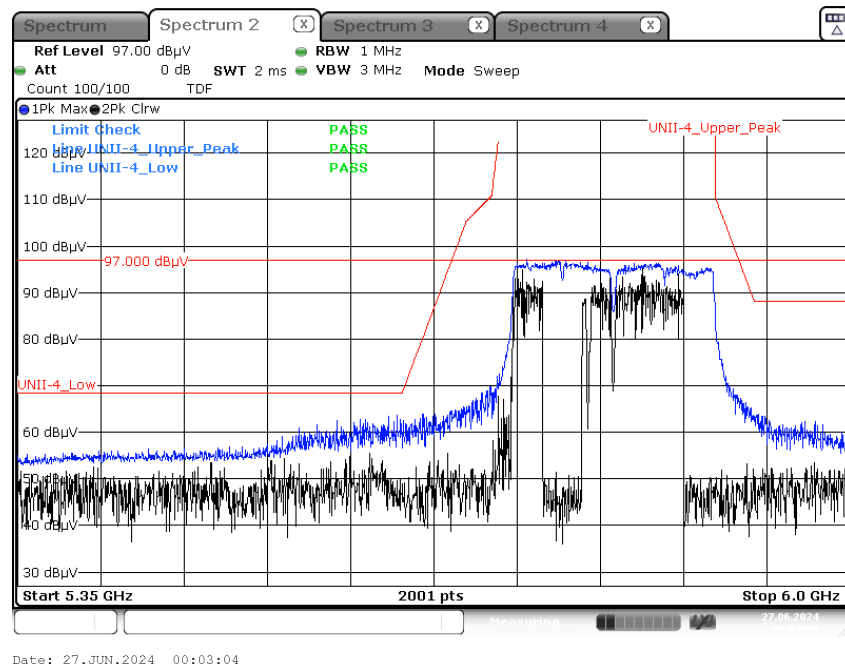
Date: 27.JUN.2024 00:18:29

Peak Result (802.11ac_VHT80, Ch.171, X-H)



Date: 26.JUN.2024 23:51:54

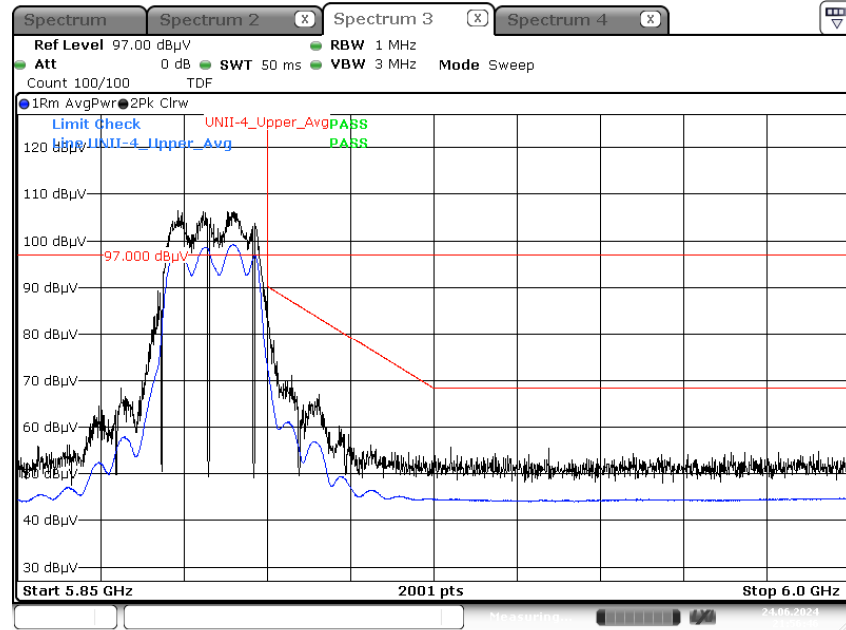
Peak Result (802.11ac_VHT160, Ch.163, X-H)


Note :

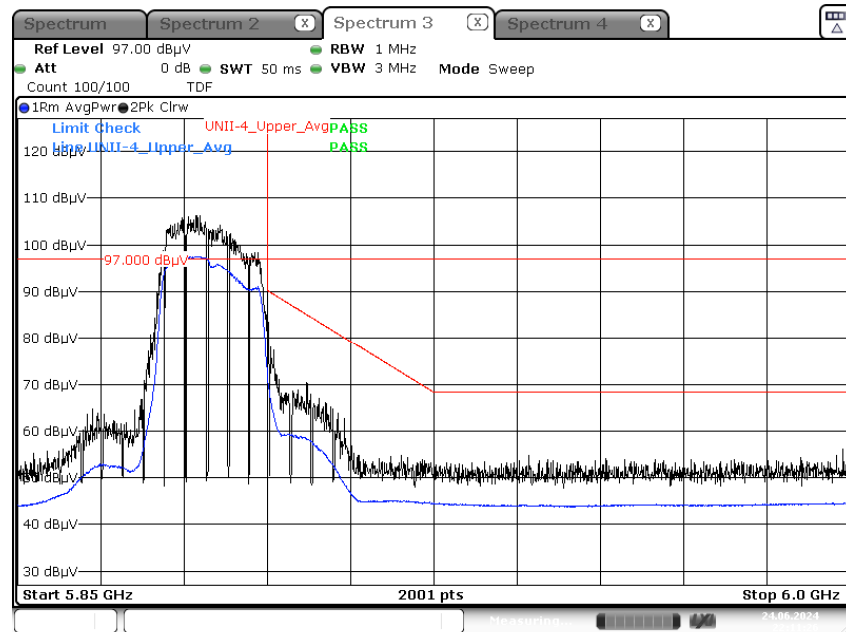
1. Only the worst case plots for U-NII-4 O.O.B.E
2. U-NII-4 Low & High O.O.B.E RedLine is Final Test Limit(Peak) about factor value compensation.

Average Result

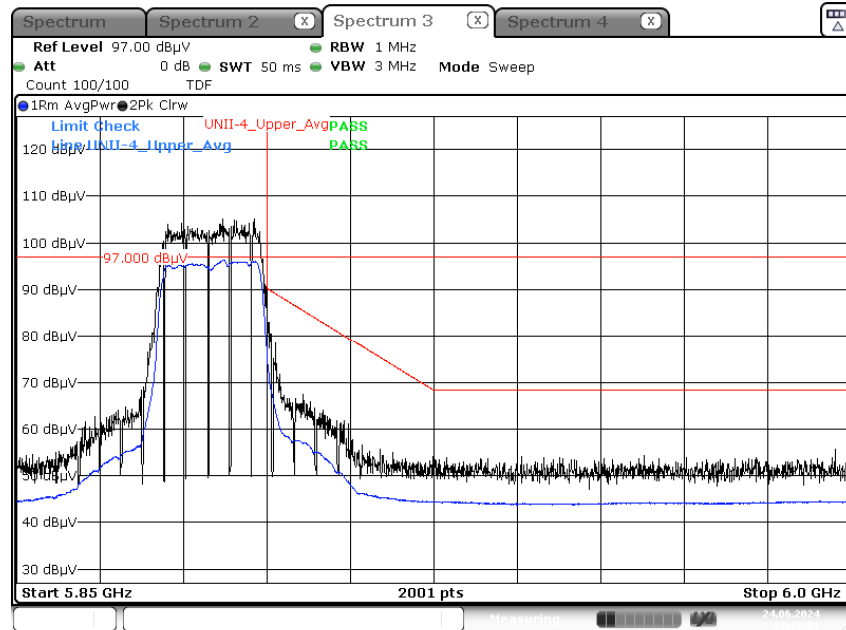
Average Result (802.11a, Ch.177, X-H)



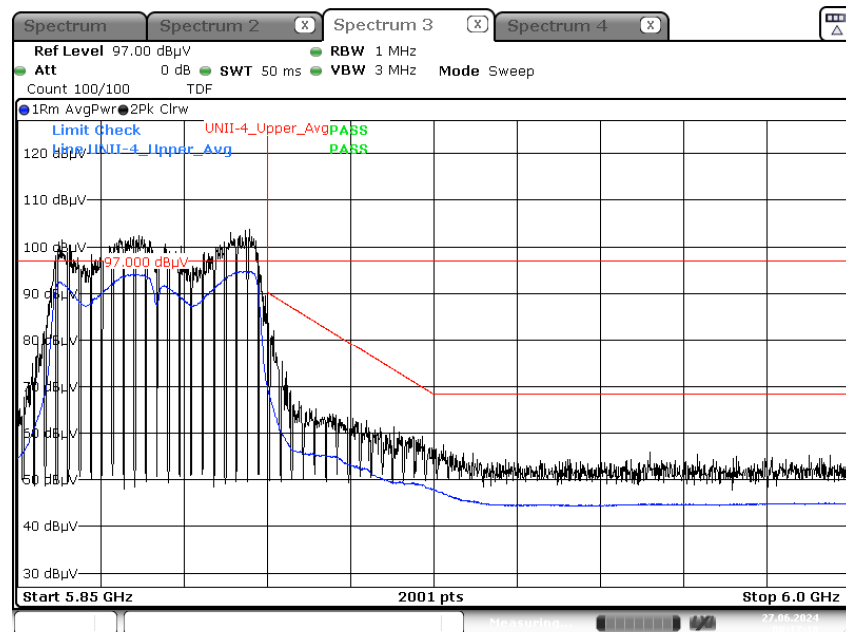
Average Result (802.11n_HT20, Ch.177, X-H)



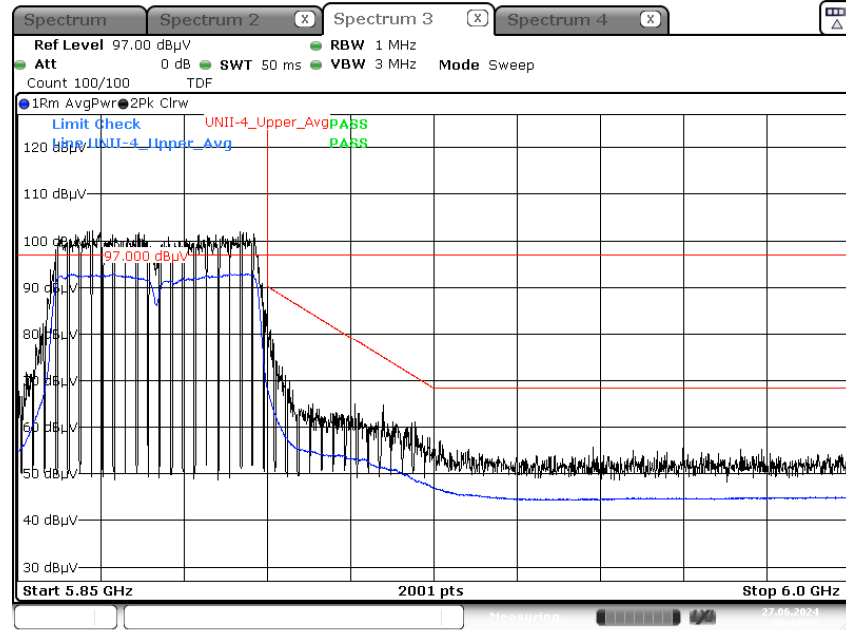
Average Result (802.11ac_VHT20, Ch.177, X-H)



Average Result (802.11n_HT40, Ch.175, X-H)

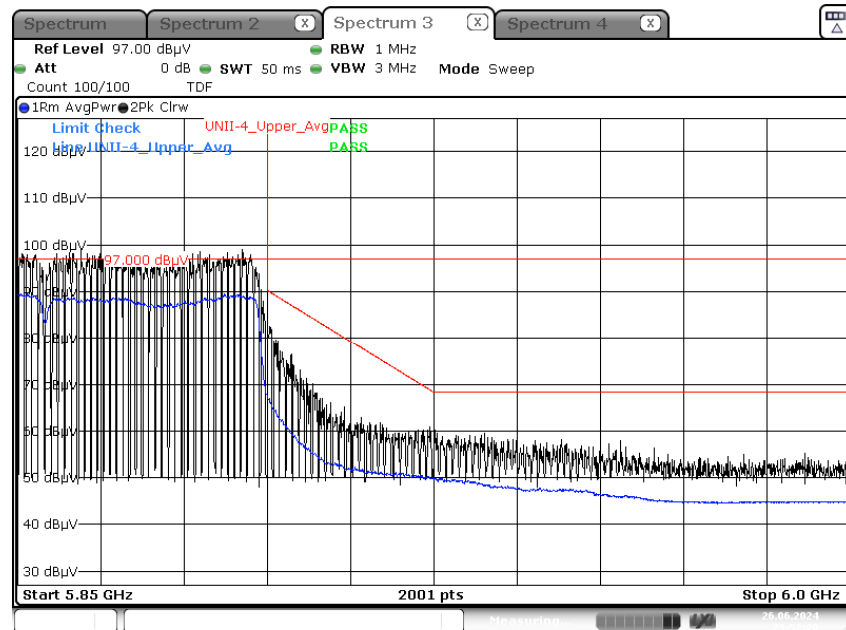


Average Result (802.11ac_VHT40, Ch.175, X-H)



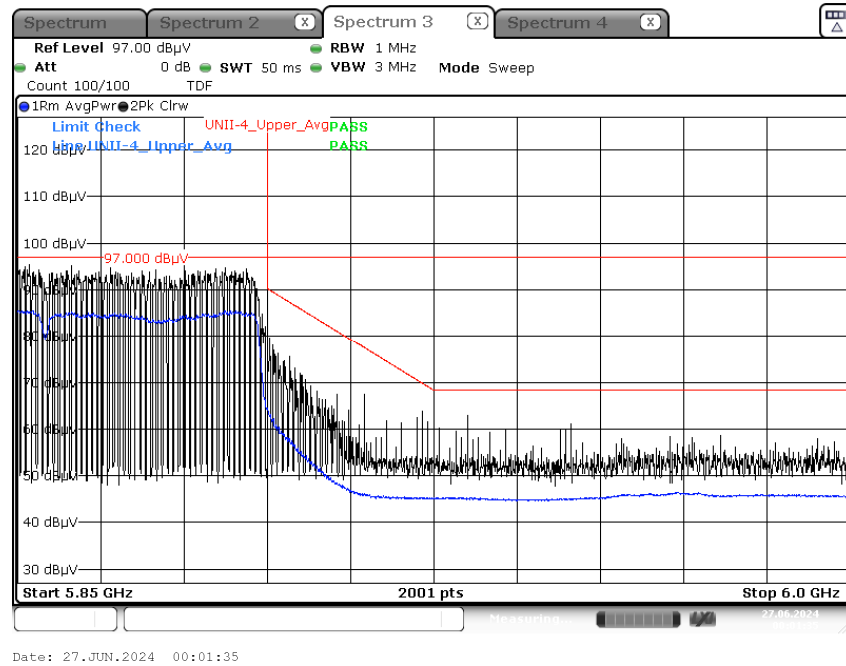
Date: 27.JUN.2024 00:18:54

Average Result (802.11ac_VHT80, Ch.171, X-H)



Date: 26.JUN.2024 23:52:20

Average Result (802.11ac_VHT160, Ch.163, X-H)


Note :

1. Only the worst case plots for U-NII-4 O.O.B.E
2. U-NII-4 Low & High O.O.B.E RedLine is Final Test Limit(Average) about factor value compensation.

10.10 POWERLINE CONDUCTED EMISSIONS

Conducted Emissions

Test

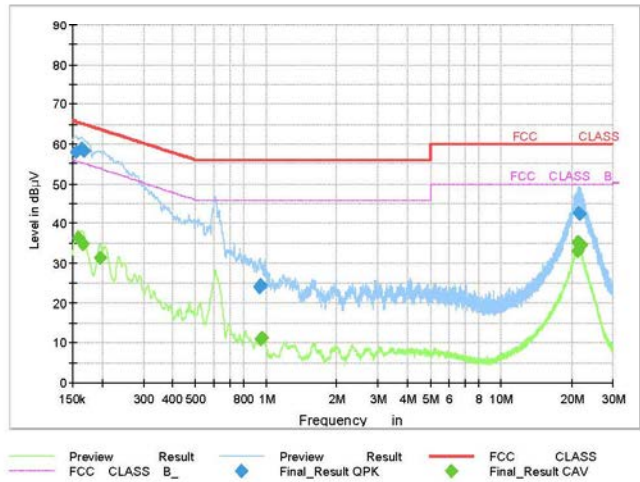
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Test Report

Common Information

EUT : SM-S721B/DS
 Operating Conditions : 5G WLAN Mode
 Comment :

Full Spectrum



Final Result QPK

Frequency (MHz)	QuasiPeak (dBµV)	Limit (dBµV)	Margin (dB)	Bandwidth (kHz)	Line	Corr. (dB)
0.1545	58.12	65.75	7.63	9.000	N	9.6
0.1635	58.86	65.28	6.42	9.000	N	9.6
0.1680	58.41	65.06	6.65	9.000	N	9.6
0.9343	23.97	56.00	32.03	9.000	L1	9.7
0.9410	24.24	56.00	31.76	9.000	L1	9.7
0.9455	24.59	56.00	31.41	9.000	L1	9.7
21.5038	42.60	60.00	17.40	9.000	L1	10.4
21.5443	42.44	60.00	17.56	9.000	L1	10.5
21.5848	42.47	60.00	17.53	9.000	L1	10.5

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Test

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Final Result CAV

Frequency (MHz)	CAverage (dBμV)	Limit (dBμV)	Margin (dB)	Bandwidth (kHz)	Line	Corr. (dB)
0.1590	36.31	55.52	19.20	9.000	L1	9.6
0.1658	34.82	55.17	20.35	9.000	N	9.6
0.1973	31.34	53.73	22.38	9.000	L1	9.6
0.9455	10.92	46.00	35.08	9.000	L1	9.7
0.9613	11.23	46.00	34.77	9.000	L1	9.7
21.1393	33.26	50.00	16.74	9.000	L1	10.4
21.2653	35.10	50.00	14.90	9.000	L1	10.4
21.5038	35.20	50.00	14.80	9.000	L1	10.4
21.8683	34.74	50.00	15.26	9.000	L1	10.5

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11. LIST OF TEST EQUIPMENT

Conducted Test

Equipment	Model	Manufacturer	Serial No.	Due to Calibration	Calibration Interval
LISN	ENV216	Rohde & Schwarz	102245	07/17/2025	Annual
EMI Test Receiver	ESR	Rohde & Schwarz	101910	07/02/2025	Annual
Temperature Chamber	SU-642	ESPEC	93008124	02/19/2025	Annual
Signal Analyzer	N9030A	Keysight	MY55410508	09/04/2024	Annual
Power Meter	N1911A	Agilent	MY45100523	02/28/2025	Annual
Power Sensor	N1921A	Agilent	MY57820067	02/22/2025	Annual
Directional Coupler	87300B	Agilent	3116A03621	10/30/2024	Annual
Power Splitter	11667B	Hewlett Packard	10545	02/06/2025	Annual
DC Power Supply	E3632A	Agilent	KR01009150	04/18/2025	Annual
Attenuator(10 dB)(DC-26.5 GHz)	8493C-010	Agilent	08285	05/28/2025	Annual
Attenuator(20 dB)	18N-20dB	Rohde & Schwarz	8	02/20/2025	Annual
Software	EMC32	Rohde & Schwarz	N/A	N/A	N/A
FCC WLAN&BT&BLE Conducted Test Software v3.0	N/A	HCT CO., LTD.	N/A	N/A	N/A
Bluetooth Tester	CBT	Rohde & Schwarz	100808	02/15/2025	Annual

Note:

1. Equipment listed above that calibrated during the testing period was set for test after the calibration.
2. Equipment listed above that has a calibration due date during the testing period, the testing is completed before equipment expiration date.

Radiated Test

Equipment	Model	Manufacturer	Serial No.	Due to Calibration	Calibration Interval
Controller (Antenna mast & Turn Table)	CO3000	Innco system	CO3000/ 15421/57580623/G	N/A	N/A
Antenna Position Tower	MA4640	Innco system	9320422	04/05/2025	Biennial
Turn Table	N/A	Innco system	5930623	N/A	N/A
Loop Antenna	FMZB 1513	Schwarzbeck	1513-333	03/07/2026	Biennial
Hybrid Antenna	VULB 9168	Schwarzbeck	9168-0895	08/16/2024	Biennial
Horn Antenna	HF907	Rohde & Schwarz	103224	05/07/2026	Biennial
Horn Antenna	BBHA 9120D	Schwarzbeck	1151	07/14/2025	Biennial
Horn Antenna (15 GHz ~ 40 GHz)	BBHA9170	Schwarzbeck	BBHA9170124	03/28/2025	Biennial
Amp & Filter Bank Switch Controller	FBSM-01B	T&M system	TM2009001	N/A	N/A
Band Reject Filter	WRCJV2400/2483.5- 2370/2520-60/12SS	Wainwright Instruments	2	01/02/2025	Annual
Band Reject Filter	WRCJV12-4900-5100- 5900-6100-50SS	Wainwright Instruments	5	06/04/2025	Annual
Band Reject Filter	WRCJV12-4900-5100- 5900-6100-50SS	Wainwright Instruments	6	06/04/2025	Annual
Band Reject Filter	WRCJV5100/5850- 40/50-8EEK	Wainwright Instruments	1	02/14/2025	Annual
RF Switching System	FMSR-05B (HPF(3~18GHz) + LNA1(1~18GHz))	T&M system	S5L1	03/12/2025	Annual
RF Switching System	FMSR -05B (ATT(10dB) + LNA1(1~18GHz))	T&M system	S5L2	03/12/2025	Annual
RF Switching System	FMSR -05B (ATT(3dB) + LNA1(1~18GHz))	T&M system	S5L3	03/12/2025	Annual
RF Switching System	FMSR -05B (LNA1(1~18GHz))	T&M system	S5L4	03/12/2025	Annual
RF Switching System	FMSR -05B (HPF(7~18GHz) + LNA2(6~18GHz))	T&M system	S5L5	03/12/2025	Annual
RF Switching System	FMSR -05B (Thru(30MHz ~ 18GHz))	T&M system	S5L6	03/12/2025	Annual
Power Amplifier	CBL18265035	CERNEX	22966	11/17/2024	Annual
Power Amplifier	CBL26405040	CERNEX	25956	02/26/2025	Annual
Bluetooth Tester	TC-3000C	TESCOM	3000C000175	03/19/2025	Annual
Spectrum Analyzer	FSV40 (9 kHz ~ 40 GHz)	Rohde & Schwarz	101510	03/28/2025	Annual

Note:

- Equipment listed above that calibrated during the testing period was set for test after the calibration.
- Equipment listed above that has a calibration due date during the testing period, the testing is

completed before equipment expiration date.

3. Especially, all antenna for measurement is calibrated in accordance with the requirements of C63.5 (Version : 2017).

12. ANNEX A_ TEST SETUP PHOTO

Please refer to test setup photo file no. as follows;

No.	Description
1	HCT-RF-2407-FC071-P