

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	A.F+D.F+C.L	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	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

Note:

1. The offset was included in the Sigantl Analyzer.

- The offset = Antenna Factor(A.F) + Cable Loss(C.L) + Distance Factor(D.F) – Amp. Gain(A.G)

[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]	POL [H/V]	Total [dBμV/m]	Limit [dBμV/m]	Margin [dB]	Measurement Type
10360	58.06	V	58.06	68.20	10.14	PK
15540	53.34	V	53.34	73.98	20.64	PK
15540	40.22	V	40.22	53.98	13.76	AV
10360	56.68	H	56.68	68.20	11.52	PK
15540	53.08	H	53.08	73.98	20.90	PK
15540	40.13	H	40.13	53.98	13.85	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]	POL [H/V]	Total [dBμV/m]	Limit [dBμV/m]	Margin [dB]	Measurement Type
10400	58.17	V	58.17	68.20	10.03	PK
15600	52.46	V	52.46	73.98	21.52	PK
15600	39.36	V	39.36	53.98	14.62	AV
10400	57.83	H	57.83	68.20	10.37	PK
15600	52.42	H	52.42	73.98	21.56	PK
15600	36.33	H	36.33	53.98	17.65	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]	POL [H/V]	Total [dBμV/m]	Limit [dBμV/m]	Margin [dB]	Measurement Type
10480	59.28	V	59.28	68.20	8.92	PK
15720	51.73	V	51.73	73.98	22.25	PK
15720	38.79	V	38.79	53.98	15.19	AV
10480	58.67	H	58.67	68.20	9.53	PK
15720	51.63	H	51.63	73.98	22.35	PK
15720	38.67	H	38.67	53.98	15.31	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]	POL [H/V]	Total [dBμV/m]	Limit [dBμV/m]	Margin [dB]	Measurement Type
10520	59.25	V	59.25	68.20	8.95	PK
15780	51.96	V	51.96	73.98	22.02	PK
15780	38.73	V	38.73	53.98	15.25	AV
10520	58.18	H	58.18	68.20	10.02	PK
15780	51.76	H	51.76	73.98	22.22	PK
15780	38.49	H	38.49	53.98	15.49	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]	POL [H/V]	Total [dBμV/m]	Limit [dBμV/m]	Margin [dB]	Measurement Type
10600	59.74	V	59.74	73.98	14.24	PK
10600	45.97	V	45.97	53.98	8.01	AV
15900	54.00	V	54.00	73.98	19.98	PK
15900	40.31	V	40.31	53.98	13.67	AV
10600	59.58	H	59.58	73.98	14.40	PK
10600	45.35	H	45.35	53.98	8.63	AV
15900	53.86	H	53.86	73.98	20.12	PK
15900	40.29	H	40.29	53.98	13.69	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]	POL [H/V]	Total [dBμV/m]	Limit [dBμV/m]	Margin [dB]	Measurement Type
10640	59.30	V	59.30	73.98	14.68	PK
10640	46.39	V	46.39	53.98	7.59	AV
15960	52.05	V	52.05	73.98	21.93	PK
15960	39.34	V	39.34	53.98	14.64	AV
10640	56.94	H	56.94	73.98	17.04	PK
10640	43.78	H	43.78	53.98	10.20	AV
15960	51.62	H	51.62	73.98	22.36	PK
15960	39.25	H	39.25	53.98	14.73	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]	POL [H/V]	Total [dBμV/m]	Limit [dBμV/m]	Margin [dB]	Measurement Type
11000	59.81	V	59.81	73.98	14.17	PK
11000	45.95	V	45.95	53.98	8.03	AV
16500	53.84	V	53.84	68.20	14.36	PK
11000	61.21	H	61.21	73.98	12.77	PK
11000	47.21	H	47.21	53.98	6.77	AV
16500	53.69	H	53.69	68.20	14.51	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]	POL [H/V]	Total [dBμV/m]	Limit [dBμV/m]	Margin [dB]	Measurement Type
11200	59.47	V	59.47	73.98	14.51	PK
11200	46.34	V	46.34	53.98	7.64	AV
16800	55.05	V	55.05	68.20	13.15	PK
11200	58.91	H	58.91	73.98	15.07	PK
11200	43.58	H	43.58	53.98	10.40	AV
16800	54.97	H	54.97	68.20	13.23	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]	POL [H/V]	Total [dBμV/m]	Limit [dBμV/m]	Margin [dB]	Measurement Type
11440	55.08	V	55.08	73.98	18.90	PK
11440	43.89	V	43.89	53.98	10.09	AV
17160	55.14	V	55.14	68.20	13.06	PK
11440	54.95	H	54.95	73.98	19.03	PK
11440	43.08	H	43.08	53.98	10.90	AV
17160	55.02	H	55.02	68.20	13.18	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]	POL [H/V]	Total [dBμV/m]	Limit [dBμV/m]	Margin [dB]	Measurement Type
11490	53.80	V	53.80	73.98	20.18	PK
11490	41.92	V	41.92	53.98	12.06	AV
17235	55.94	V	55.94	68.20	12.26	PK
11490	52.99	H	52.99	73.98	20.99	PK
11490	41.58	H	41.58	53.98	12.40	AV
17235	55.86	H	55.86	68.20	12.34	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]	POL [H/V]	Total [dBμV/m]	Limit [dBμV/m]	Margin [dB]	Measurement Type
11570	56.37	V	56.37	73.98	17.61	PK
11570	45.65	V	45.65	53.98	8.33	AV
17355	57.63	V	57.63	68.20	10.57	PK
11570	56.28	H	56.28	73.98	17.70	PK
11570	44.59	H	44.59	53.98	9.39	AV
17355	57.58	H	57.58	68.20	10.62	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]	POL [H/V]	Total [dBμV/m]	Limit [dBμV/m]	Margin [dB]	Measurement Type
11650	54.87	V	54.87	73.98	19.11	PK
11650	43.99	V	43.99	53.98	9.99	AV
17475	57.35	V	57.35	68.20	10.85	PK
11650	53.99	H	53.99	73.98	19.99	PK
11650	42.42	H	42.42	53.98	11.56	AV
17475	57.28	H	57.28	68.20	10.92	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]	POL [H/V]	Total [dBμV/m]	Limit [dBμV/m]	Margin [dB]	Measurement Type
11690	53.95	V	53.95	73.98	20.03	PK
11690	44.65	V	44.65	53.98	9.33	AV
17535	58.08	V	58.08	68.20	10.12	PK
11690	54.10	H	54.10	73.98	19.88	PK
11690	45.15	H	45.15	53.98	8.83	AV
17535	58.40	H	58.40	68.20	9.80	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]	POL [H/V]	Total [dBμV/m]	Limit [dBμV/m]	Margin [dB]	Measurement Type
11730	54.13	V	54.13	73.98	19.85	PK
11730	44.04	V	44.04	53.98	9.94	AV
17595	58.11	V	58.11	68.20	10.09	PK
11730	53.84	H	53.84	73.98	20.14	PK
11730	43.20	H	43.20	53.98	10.78	AV
17595	58.07	H	58.07	68.20	10.13	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 [dB μ V]	POL [H/V]	Total [dB μ V/m]	Limit [dB μ V/m]	Margin [dB]	Measurement Type
11770	54.68	V	54.68	73.98	19.30	PK
11770	43.09	V	43.09	53.98	10.89	AV
17655	58.11	V	58.11	68.20	10.09	PK
11770	54.29	H	54.29	73.98	19.69	PK
11770	44.32	H	44.32	53.98	9.66	AV
17655	59.12	H	59.12	68.20	9.08	PK

[RSDB]

Scenario 1

WLAN_2.4 GHz_MIMO 802.11b_Ch.11_1 Mbps + WLAN_5 GHz_MIMO 802.11a_Ch.100_6 Mbps

Frequency [MHz]	Measured Value [dB μ V]	POL [H/V]	Total [dB μ V/m]	Limit [dB μ V/m]	Margin [dB]	Measurement Type
11000	59.78	V	59.78	73.98	14.20	PK
11000	46.01	V	46.01	53.98	7.97	AV
16500	53.10	V	53.10	68.20	15.10	PK
11000	58.18	H	58.18	73.98	15.80	PK
11000	44.69	H	44.69	53.98	9.29	AV
16500	52.52	H	52.52	68.20	15.68	PK

Note :

1. DTS DBS data refer to [DTS] Test Report.

Scenario 2

Ant.1 Bluetooth_Ch.39_GFSK + Ant.2 WLAN_2.4 GHz_802.11b_Ch.11_1 Mbps + MIMO WLAN_5 GHz_802.11a_Ch.100_6 Mbps

Frequency [MHz]	Measured Value [dB μ V]	POL [H/V]	Total [dB μ V/m]	Limit [dB μ V/m]	Margin [dB]	Measurement Type
11000	59.98	V	59.98	73.98	14.00	PK
11000	45.63	V	45.63	53.98	8.35	AV
16500	52.36	V	52.36	68.20	15.84	PK
11000	58.64	H	58.64	73.98	15.34	PK
11000	44.32	H	44.32	53.98	9.66	AV
16500	52.28	H	52.28	68.20	15.92	PK

Note :

1. BT, DTS DBS data refer to [BT], [DTS] Test Report.

Scenario 3**Dual Bluetooth_Ch.0_GFSK + MIMO WLAN_5 GHz_802.11g_Ch.100_6 Mbps**

Frequency [MHz]	Measured Value [dB μ V]	POL [H/V]	Total [dB μ V/m]	Limit [dB μ V/m]	Margin [dB]	Measurement Type
11000	58.83	V	58.83	73.98	15.15	PK
11000	45.68	V	45.68	53.98	8.30	AV
16500	53.37	V	53.37	68.20	14.83	PK
11000	58.61	H	58.61	73.98	15.37	PK
11000	45.58	H	45.58	53.98	8.40	AV
16500	53.25	H	53.25	68.20	14.95	PK

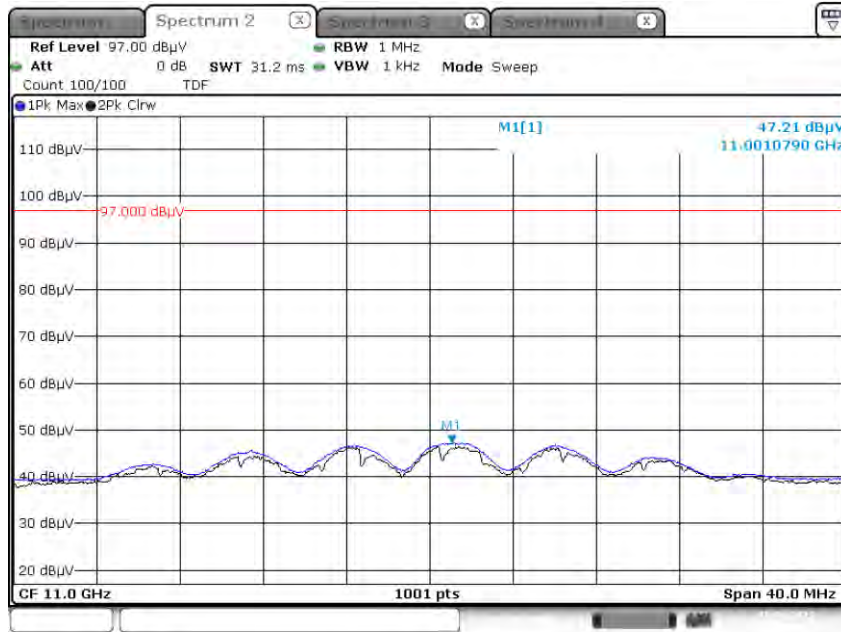
Note :

1. BT DBS data refer to [BT] Test Report.

▣ Test Plots

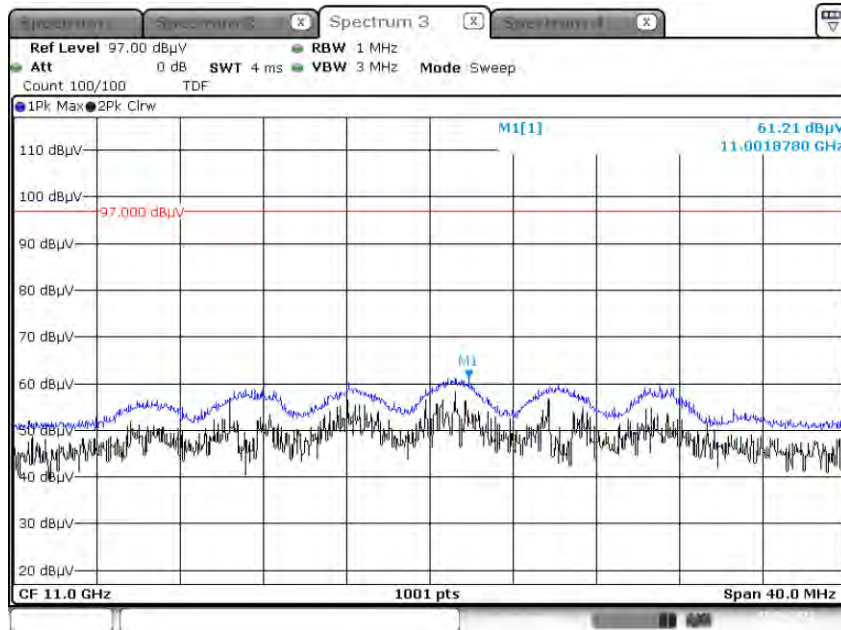
[MIMO_CDD(Ant1+Ant2)]

Radiated Spurious Emissions plot – Average Result (802.11a, Ch.100 Spurious Emissions, Y-H)



Date: 18.SEP.2023 12:44:46

Radiated Spurious Emissions plot – Peak Result (802.11a, Ch.100 Spurious Emissions, Y-H)



Date: 18.SEP.2023 12:45:16

Note:

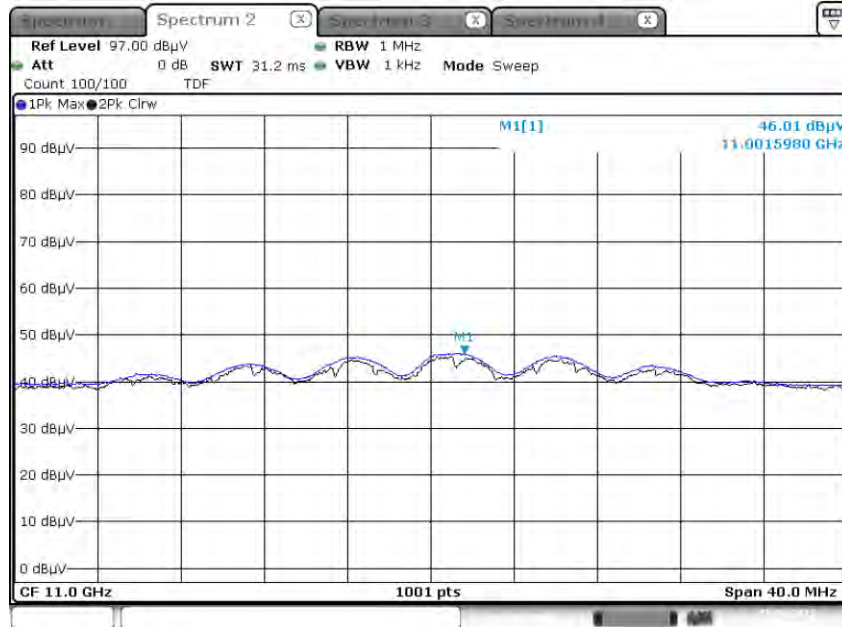
Only the worst case plots for Radiated Spurious Emissions.

[RSDB]

Scenario 1

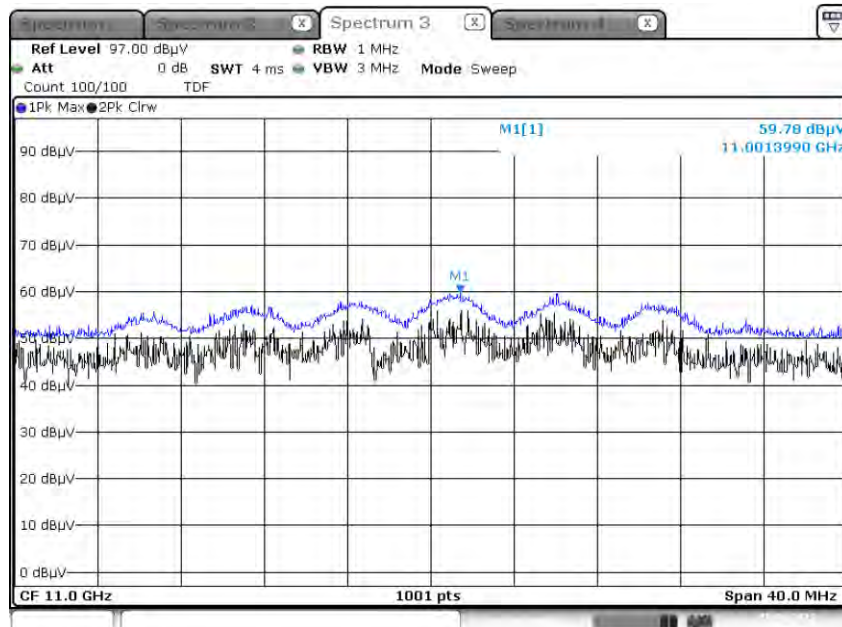
WLAN_2.4 GHz_MIMO 802.11b_Ch.11_1 Mbps + WLAN_5 GHz_MIMO 802.11a_Ch.100_6 Mbps

Radiated Spurious Emissions plot – Average Result (Spurious Emissions, 2nd, X-V)



Date: 20.SEP.2023 17:41:45

Radiated Spurious Emissions plot – Peak Result (Spurious Emissions, 2nd, X-V)

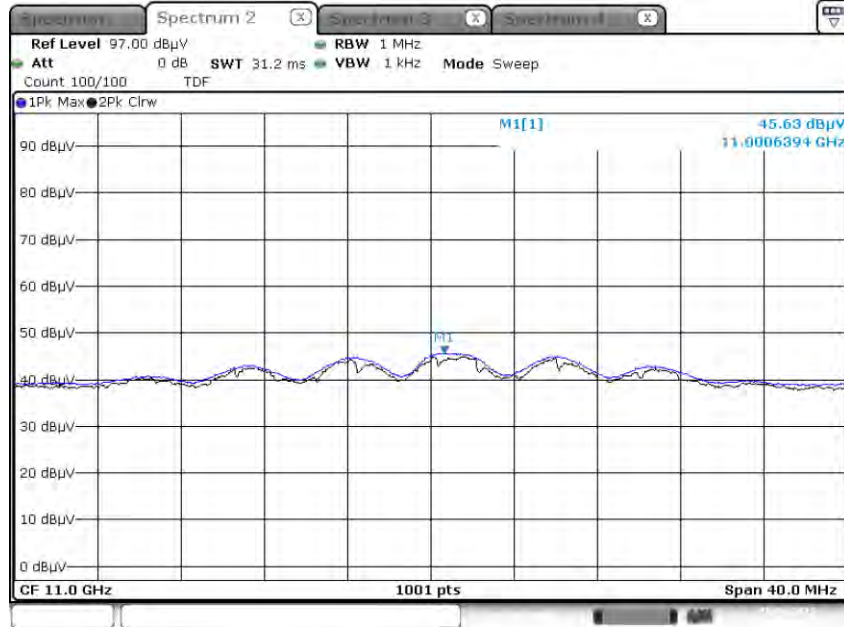


Date: 20.SEP.2023 17:42:10

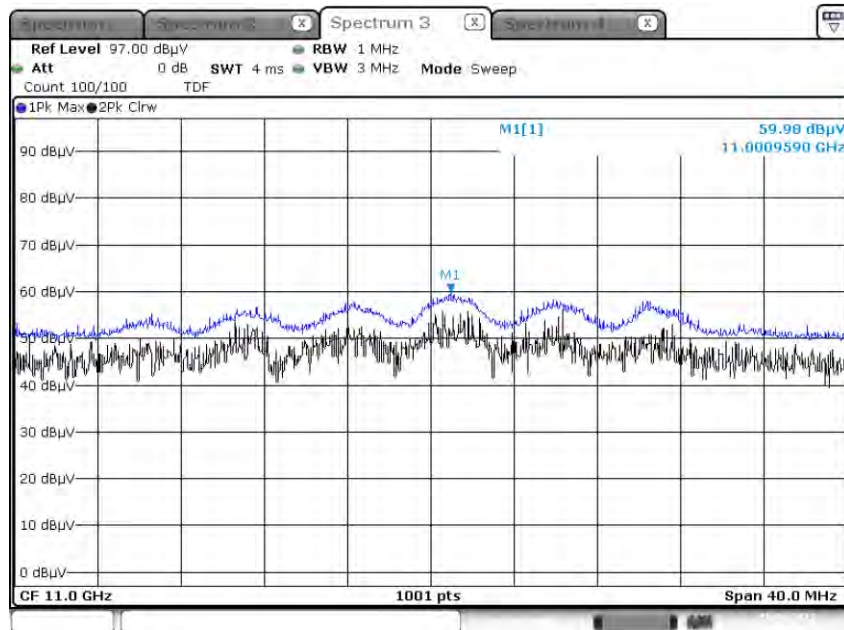
Scenario 2

Ant.1 Bluetooth_Ch.39_GFSK + Ant.2 WLAN_2.4 GHz_802.11b_Ch.11_1 Mbps + MIMO WLAN_5 GHz_802.11a_Ch.100_6 Mbps

Radiated Spurious Emissions plot – Average Result (Spurious Emissions, 2nd, X-V)



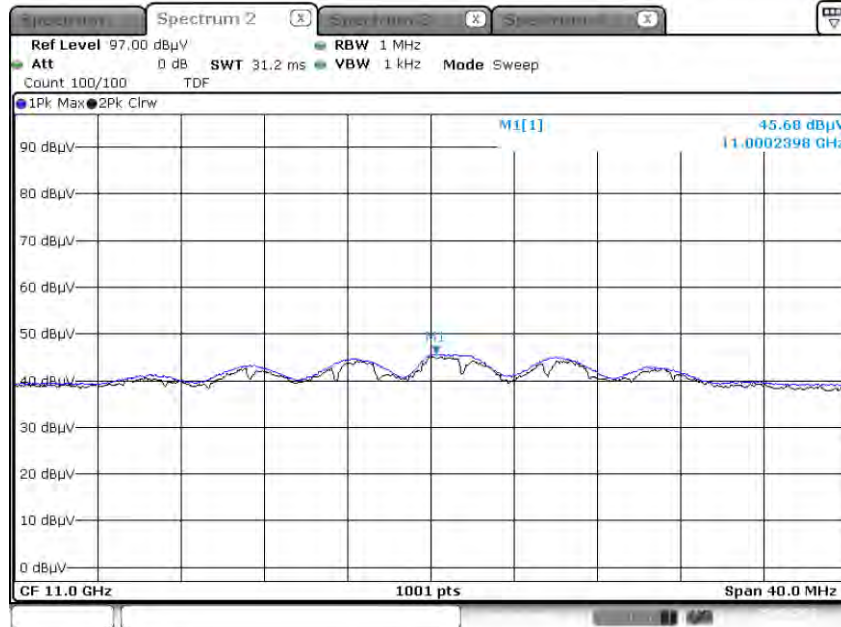
Radiated Spurious Emissions plot – Peak Result (Spurious Emissions, 2nd, X-V)



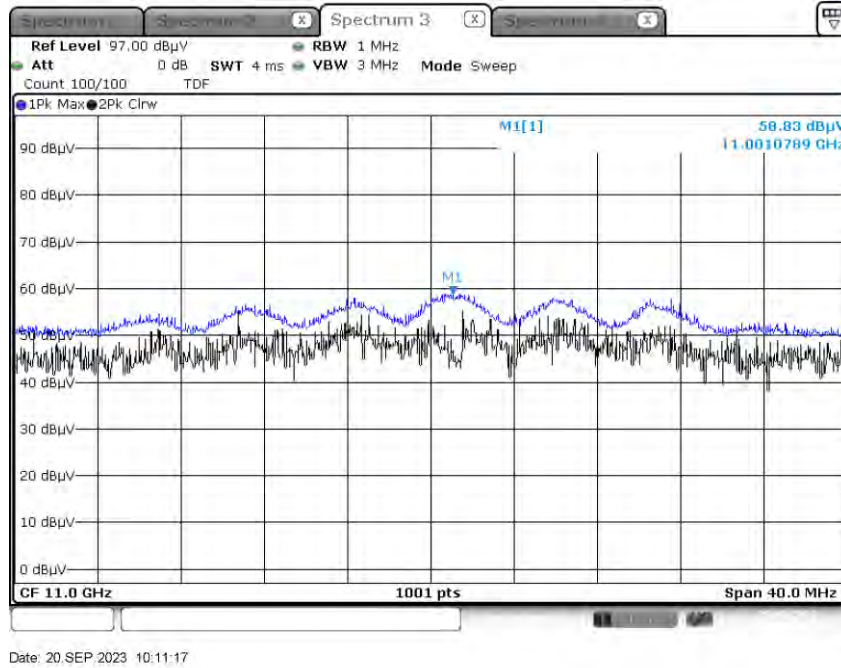
Scenario 3

Dual Ant.1+ Ant.2 Bluetooth_Ch.0_GFSK + MIMO WLAN_5 GHz_802.11a_Ch.100_6 Mbps

Radiated Spurious Emissions plot – Average Result (Spurious Emissions, 2nd, X-V)



Radiated Spurious Emissions plot – Peak Result (Spurious Emissions, 2nd, X-V)



Note:

Only the worst case plots for Radiated Spurious Emissions.

10.9 RADIATED RESTRICTED BAND EDGE

Note:

1. The offset was included in the Sigant Analyzer.

- The offset = Antenna Factor(A.F) + Cable Loss(C.L) + Distance Factor(D.F) – Amp. Gain(A.G)

[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]	ANT. POL [H/V]	Total [dBμV/m]	Limit [dBμV/m]	Margin [dB]	Measurement Type
4500-5150	56.39	H	56.39	73.98	17.59	PK
4500-5150	43.62	H	43.62	53.98	10.36	AV
4500-5150	56.24	V	56.24	73.98	17.74	PK
4500-5150	43.58	V	43.58	53.98	10.40	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]	ANT. POL [H/V]	Total [dBμV/m]	Limit [dBμV/m]	Margin [dB]	Measurement Type
5350-5460	56.28	H	56.28	73.98	17.70	PK
5350-5460	43.17	H	43.17	53.98	10.81	AV
5350-5460	56.17	V	56.17	73.98	17.81	PK
5350-5460	43.11	V	43.11	53.98	10.87	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 [dB μ V]	ANT. POL [H/V]	Total [dB μ V/m]	Limit [dB μ V/m]	Margin [dB]	Measurement Type
5350-5460	56.19	H	56.19	73.98	17.79	PK
5350-5460	43.71	H	43.71	53.98	10.27	AV
5460-5470	57.34	H	57.34	68.20	10.86	PK
5350-5460	56.02	V	56.02	73.98	17.96	PK
5350-5460	43.39	V	43.39	53.98	10.59	AV
5460-5470	56.97	V	56.97	68.20	11.23	PK

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

Frequency [MHz]	Measured Value [dBμV]	ANT. POL [H/V]	Total [dBμV/m]	Limit [dBμV/m]	Margin [dB]	Measurement Type
4500-5150	56.55	H	56.55	73.98	17.43	PK
4500-5150	43.78	H	43.78	53.98	10.20	AV
4500-5150	56.32	V	56.32	73.98	17.66	PK
4500-5150	43.39	V	43.39	53.98	10.59	AV

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

Frequency [MHz]	Measured Value [dBμV]	ANT. POL [H/V]	Total [dBμV/m]	Limit [dBμV/m]	Margin [dB]	Measurement Type
5350-5460	56.15	H	56.15	73.98	17.83	PK
5350-5460	43.28	H	43.28	53.98	10.70	AV
5350-5460	55.97	V	55.97	73.98	18.01	PK
5350-5460	43.20	V	43.20	53.98	10.78	AV

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

Frequency [MHz]	Measured Value [dB μ V]	ANT. POL [H/V]	Total [dB μ V/m]	Limit [dB μ V/m]	Margin [dB]	Measurement Type
5350-5460	56.86	H	56.86	73.98	17.12	PK
5350-5460	43.75	H	43.75	53.98	10.23	AV
5460-5470	56.98	H	56.98	68.20	11.22	PK
5350-5460	56.37	V	56.37	73.98	17.61	PK
5350-5460	43.28	V	43.28	53.98	10.70	AV
5460-5470	56.58	V	56.58	68.20	11.62	PK

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

Frequency [MHz]	Measured Value [dB μ V]	ANT. POL [H/V]	Total [dB μ V/m]	Limit [dB μ V/m]	Margin [dB]	Measurement Type
4500-5150	55.86	H	55.86	73.98	18.12	PK
4500-5150	43.60	H	43.60	53.98	10.38	AV
4500-5150	55.67	V	55.67	73.98	18.31	PK
4500-5150	43.52	V	43.52	53.98	10.46	AV

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

Frequency [MHz]	Measured Value [dB μ V]	ANT. POL [H/V]	Total [dB μ V/m]	Limit [dB μ V/m]	Margin [dB]	Measurement Type
5350-5460	56.19	H	56.19	73.98	17.79	PK
5350-5460	43.32	H	43.32	53.98	10.66	AV
5350-5460	56.08	V	56.08	73.98	17.90	PK
5350-5460	43.28	V	43.28	53.98	10.70	AV

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

Frequency [MHz]	Measured Value [dB μ V]	ANT. POL [H/V]	Total [dB μ V/m]	Limit [dB μ V/m]	Margin [dB]	Measurement Type
5350-5460	57.15	H	57.15	73.98	16.83	PK
5350-5460	43.73	H	43.73	53.98	10.25	AV
5460-5470	56.60	H	56.60	68.20	11.60	PK
5350-5460	57.11	V	57.11	73.98	16.87	PK
5350-5460	43.67	V	43.67	53.98	10.31	AV
5460-5470	56.58	V	56.58	68.20	11.62	PK

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

Frequency [MHz]	Measured Value [dBμV]	ANT. POL [H/V]	Total [dBμV/m]	Limit [dBμV/m]	Margin [dB]	Measurement Type
4500-5150	56.00	H	56.00	73.98	17.98	PK
4500-5150	43.78	H	43.78	53.98	10.20	AV
4500-5150	55.27	V	55.27	73.98	18.71	PK
4500-5150	43.56	V	43.56	53.98	10.42	AV

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

Frequency [MHz]	Measured Value [dBμV]	ANT. POL [H/V]	Total [dBμV/m]	Limit [dBμV/m]	Margin [dB]	Measurement Type
5350-5460	60.18	H	60.18	73.98	13.80	PK
5350-5460	46.51	H	46.51	53.98	7.47	AV
5350-5460	59.94	V	59.94	73.98	14.04	PK
5350-5460	46.48	V	46.48	53.98	7.50	AV

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

Frequency [MHz]	Measured Value [dB μ V]	ANT. POL [H/V]	Total [dB μ V/m]	Limit [dB μ V/m]	Margin [dB]	Measurement Type
5350-5460	56.20	H	56.20	73.98	17.78	PK
5350-5460	43.84	H	43.84	53.98	10.14	AV
5460-5470	59.59	H	59.59	68.20	8.61	PK
5350-5460	56.02	V	56.02	73.98	17.96	PK
5350-5460	43.69	V	43.69	53.98	10.29	AV
5460-5470	59.37	V	59.37	68.20	8.83	PK

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

Frequency [MHz]	Measured Value [dBμV]	ANT. POL [H/V]	Total [dBμV/m]	Limit [dBμV/m]	Margin [dB]	Measurement Type
4500-5150	55.70	H	55.70	73.98	18.28	PK
4500-5150	43.81	H	43.81	53.98	10.17	AV
4500-5150	55.67	V	55.67	73.98	18.31	PK
4500-5150	43.59	V	43.59	53.98	10.39	AV

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

Frequency [MHz]	Measured Value [dBμV]	ANT. POL [H/V]	Total [dBμV/m]	Limit [dBμV/m]	Margin [dB]	Measurement Type
5350-5460	57.33	H	57.33	73.98	16.65	PK
5350-5460	45.15	H	45.15	53.98	8.83	AV
5350-5460	57.02	V	57.02	73.98	16.96	PK
5350-5460	44.93	V	44.93	53.98	9.05	AV

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

Frequency [MHz]	Measured Value [dB μ V]	ANT. POL [H/V]	Total [dB μ V/m]	Limit [dB μ V/m]	Margin [dB]	Measurement Type
5350-5460	56.56	H	56.56	73.98	17.42	PK
5350-5460	43.58	H	43.58	53.98	10.40	AV
5460-5470	58.75	H	58.75	68.20	9.45	PK
5350-5460	56.48	V	56.48	73.98	17.50	PK
5350-5460	43.50	V	43.50	53.98	10.48	AV
5460-5470	58.37	V	58.37	68.20	9.83	PK

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

Frequency [MHz]	Measured Value [dBμV]	ANT. POL [H/V]	Total [dBμV/m]	Limit [dBμV/m]	Margin [dB]	Measurement Type
4500-5150	56.30	H	56.30	73.98	17.68	PK
4500-5150	45.39	H	45.39	53.98	8.59	AV
4500-5150	56.21	V	56.21	73.98	17.77	PK
4500-5150	45.05	V	45.05	53.98	8.93	AV

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

Frequency [MHz]	Measured Value [dBμV]	ANT. POL [H/V]	Total [dBμV/m]	Limit [dBμV/m]	Margin [dB]	Measurement Type
5350-5460	58.82	H	58.82	73.98	15.16	PK
5350-5460	46.10	H	46.10	53.98	7.88	AV
5350-5460	58.39	V	58.39	73.98	15.59	PK
5350-5460	45.76	V	45.76	53.98	8.22	AV

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

Frequency [MHz]	Measured Value [dB μ V]	ANT. POL [H/V]	Total [dB μ V/m]	Limit [dB μ V/m]	Margin [dB]	Measurement Type
5350-5460	58.32	H	58.32	73.98	15.66	PK
5350-5460	46.29	H	46.29	53.98	7.69	AV
5460-5470	58.04	H	58.04	68.20	10.16	PK
5350-5460	54.21	V	54.21	73.98	19.77	PK
5350-5460	46.05	V	46.05	53.98	7.93	AV
5460-5470	57.95	V	57.95	68.20	10.25	PK

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

Frequency [MHz]	Measured Value [dB μ V]	ANT. POL [H/V]	Total [dB μ V/m]	Limit [dB μ V/m]	Margin [dB]	Measurement Type
4500-5150	63.11	H	63.11	73.98	10.87	PK
4500-5150	48.82	H	48.82	53.98	5.16	AV
4500-5150	62.97	V	62.97	73.98	11.01	PK
4500-5150	48.69	V	48.69	53.98	5.29	AV
5350-5460	68.88	H	68.88	73.98	5.10	PK
5350-5460	49.17	H	49.17	53.98	4.81	AV
5350-5460	68.69	V	68.69	73.98	5.29	PK
5350-5460	48.55	V	48.55	53.98	5.43	AV

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

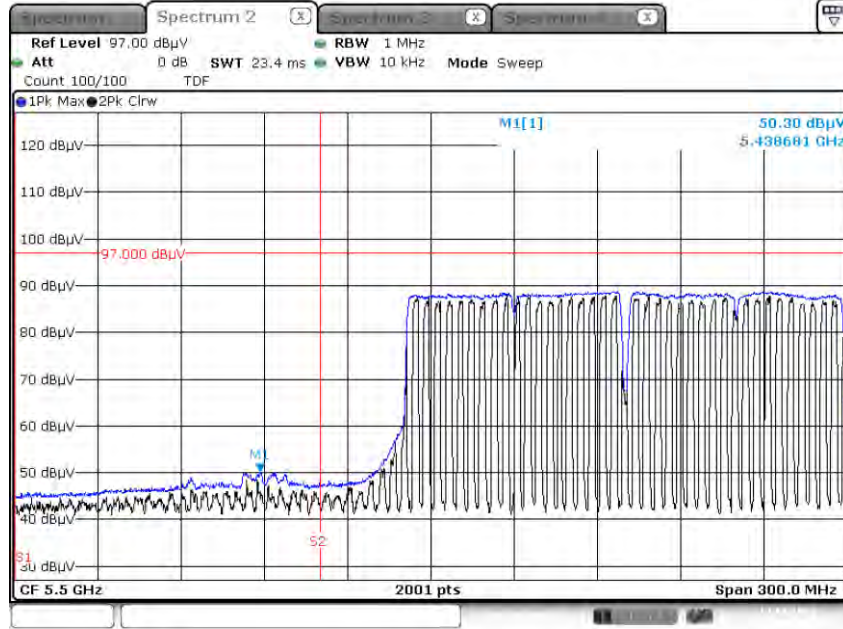
Frequency [MHz]	Measured Value [dB μ V]	ANT. POL [H/V]	Total [dB μ V/m]	Limit [dB μ V/m]	Margin [dB]	Measurement Type
5350-5460	66.11	H	66.11	73.98	7.87	PK
5350-5460	50.30	H	50.30	53.98	3.68	AV
#5460-5470	58.87	H	58.87	68.20	9.33	PK
5350-5460	66.02	V	66.02	73.98	7.96	PK
5350-5460	50.02	V	50.02	53.98	3.96	AV
#5460-5470	58.67	V	58.67	68.20	9.53	PK

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

[MIMO_CDD(Ant1+Ant2)]

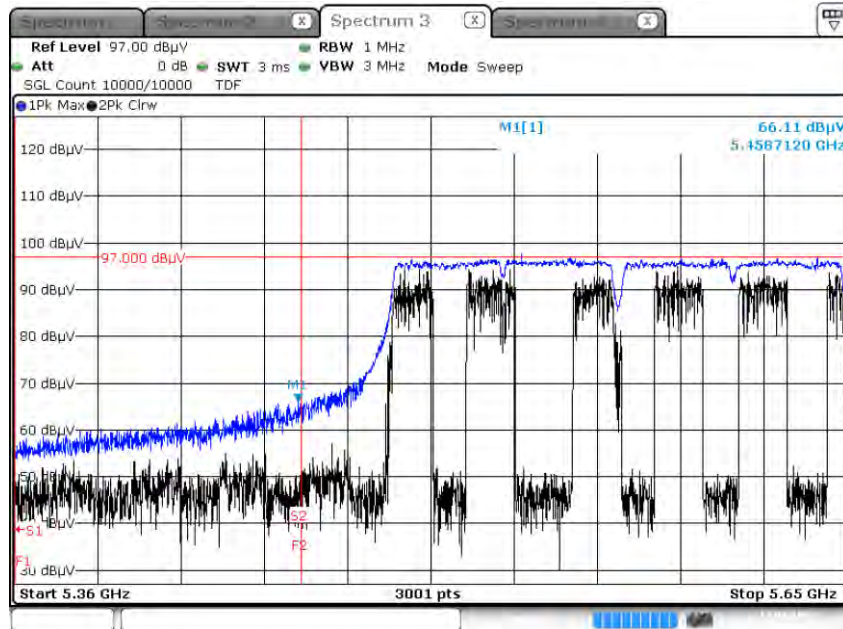
▣ Test Plots(UNII 1, 2A, 2C)

Average Result (802.11 ac_VHT160_MCS0, Ch.114, X-H)



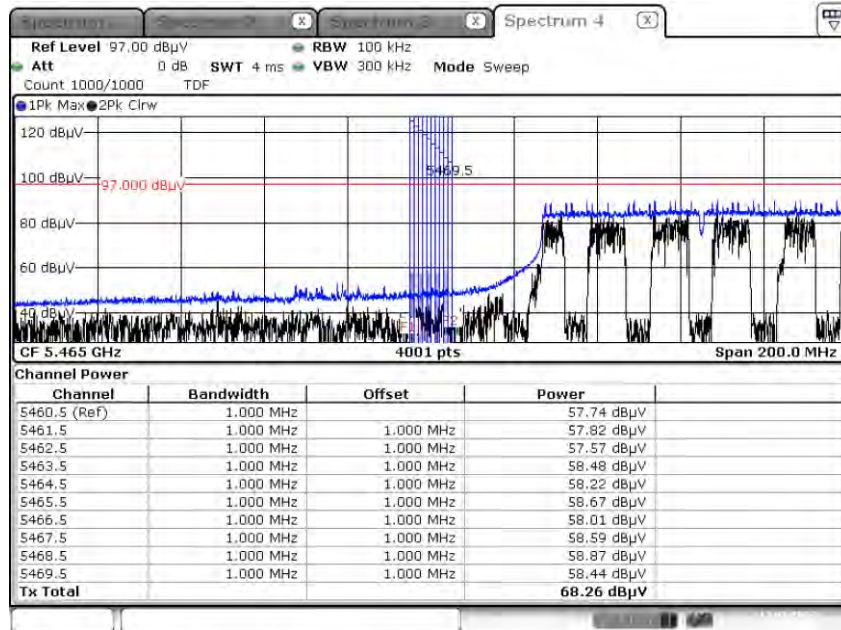
Date: 13.OCT.2023 12:02:06

Peak Result (802.11 ac_VHT160_MCS0, Ch.114, X-H)



Date: 17.SEP.2023 11:28:28

Peak Result (802.11 ac_VHT160_MCS0, Ch.114, X-H)



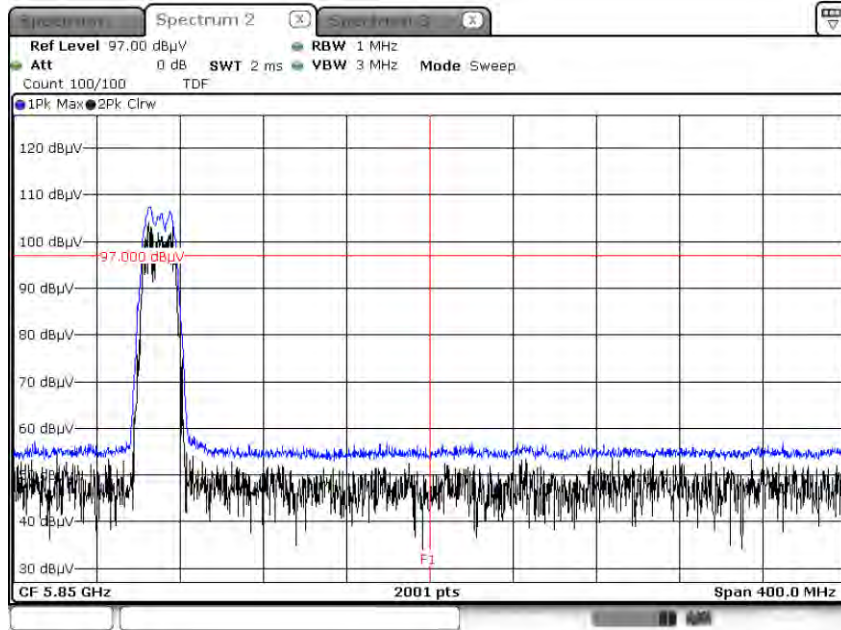
Date: 17.SEP.2023 11:32:02

Note:

Only the worst case plots for Radiated Restricted Band Edge.

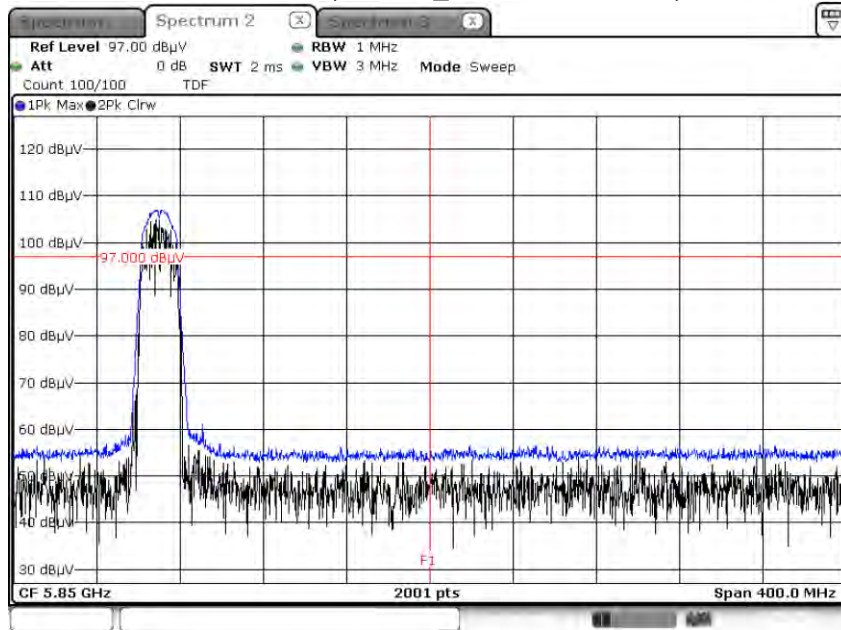
▣ Test Plots(Straddle Channel)

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



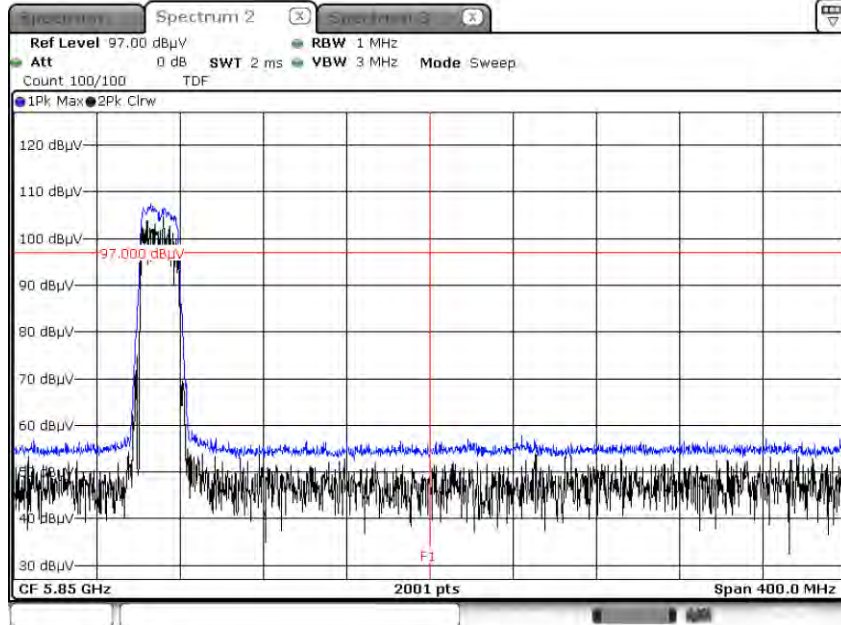
Date: 15.SEP.2023 14:10:14

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



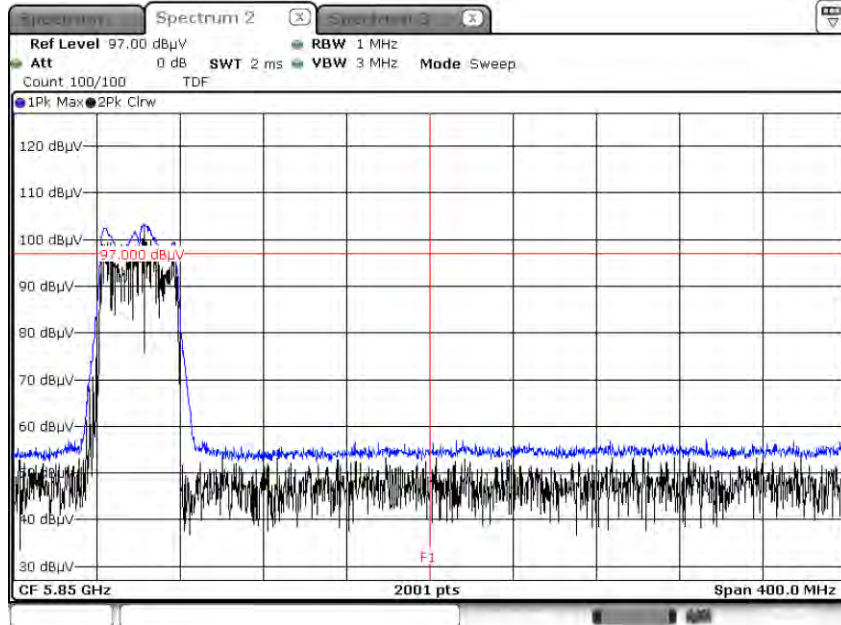
Date: 15.SEP.2023 14:11:59

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



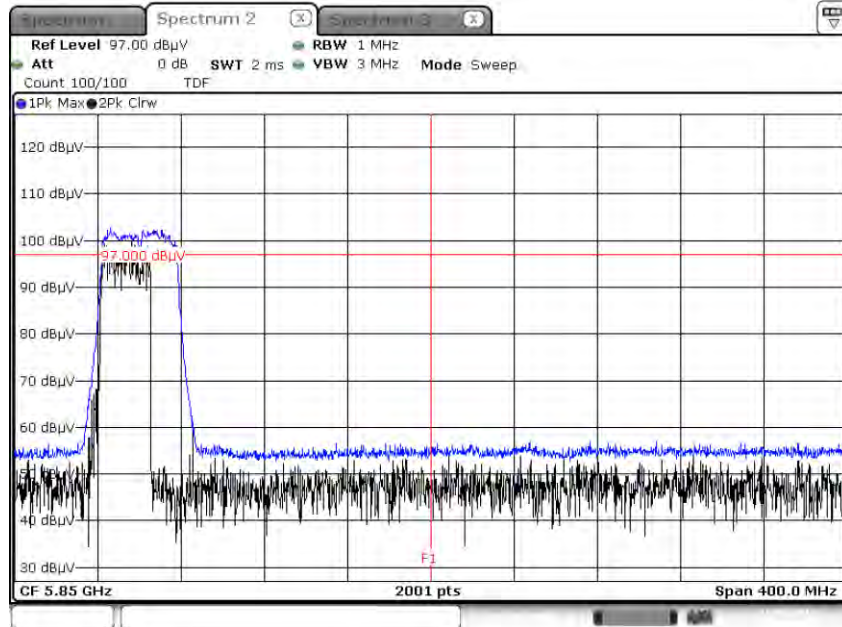
Date: 15.SEP.2023 14:12:53

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



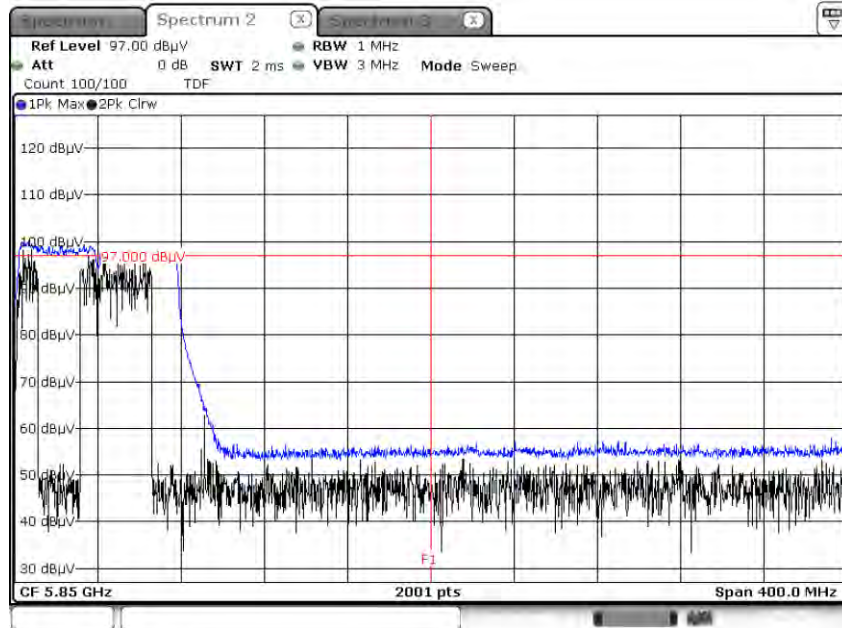
Date: 15.SEP.2023 14:30:37

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



Date: 15.SEP.2023 14:29:52

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



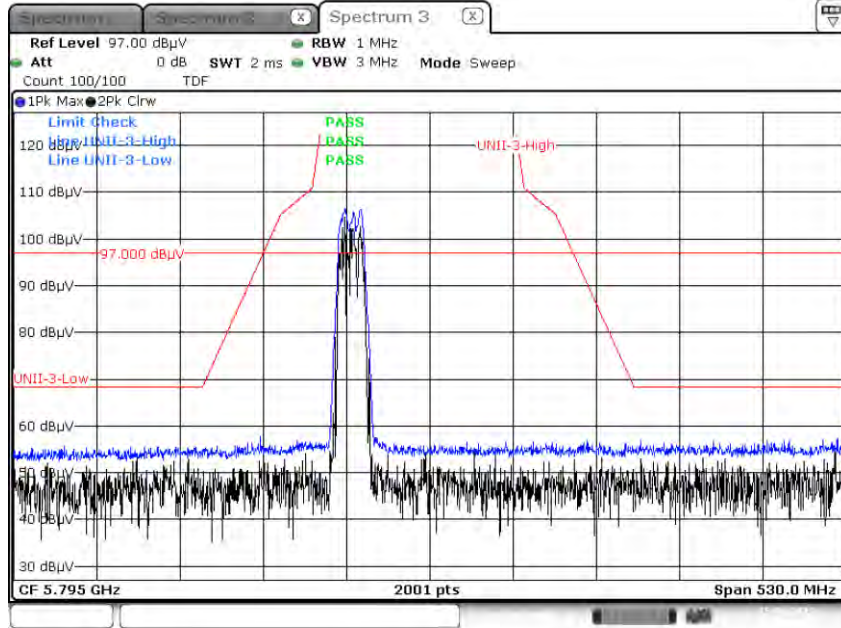
Date: 15.SEP.2023 14:47:02

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)

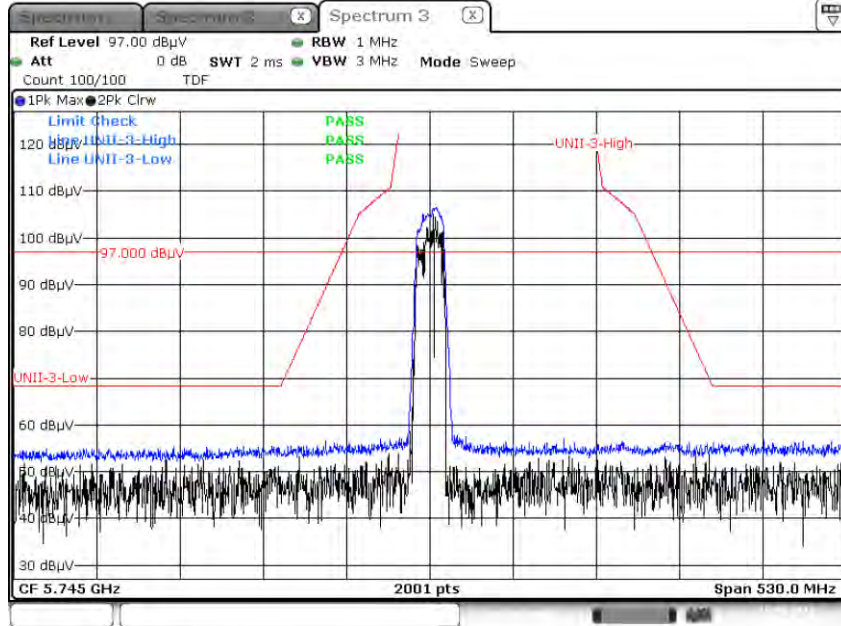
▣ Test Plots(UNII 3)

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



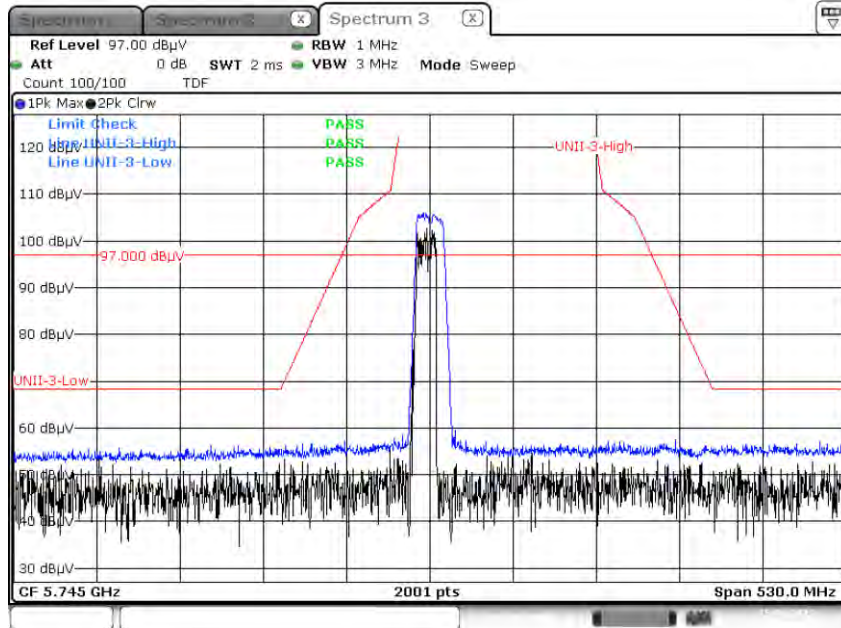
Date: 15.SEP.2023 12:26:10

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



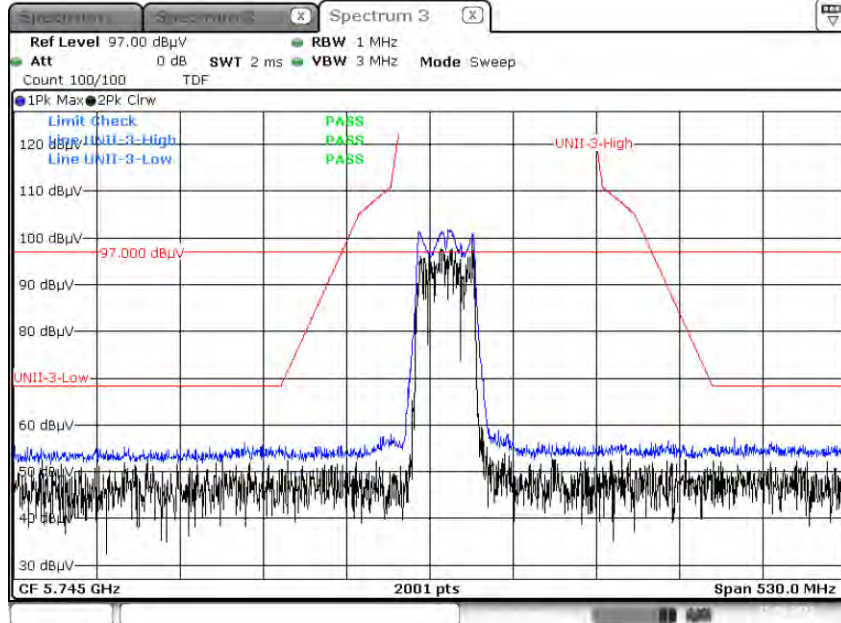
Date: 15.SEP.2023 12:27:21

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



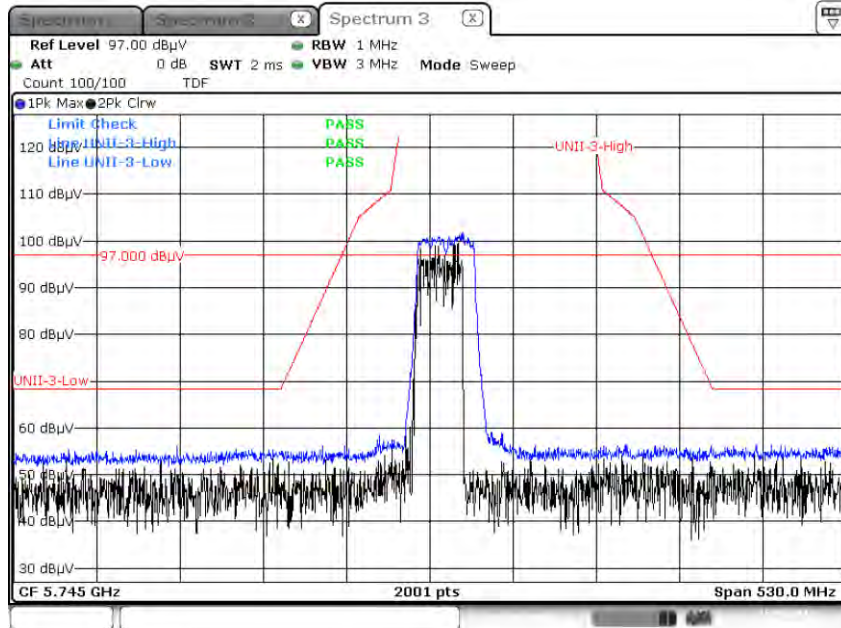
Date: 15.SEP.2023 12:28:32

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



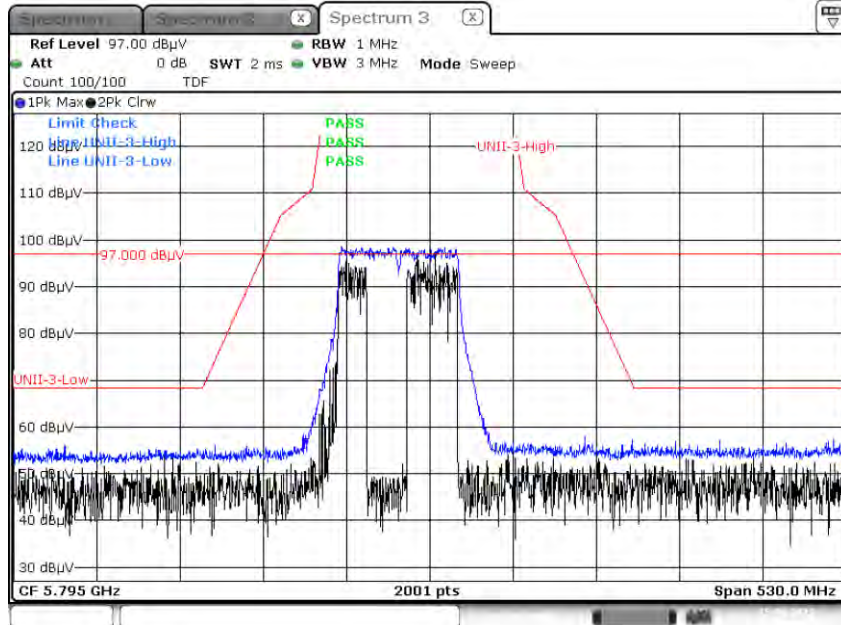
Date: 15.SEP.2023 12:38:11

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



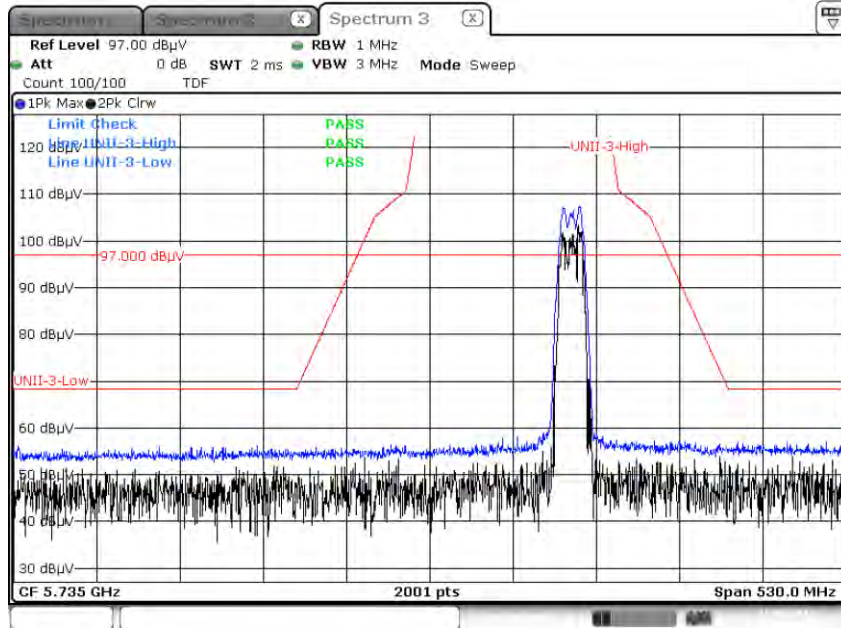
Date: 15.SEP.2023 12:39:03

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



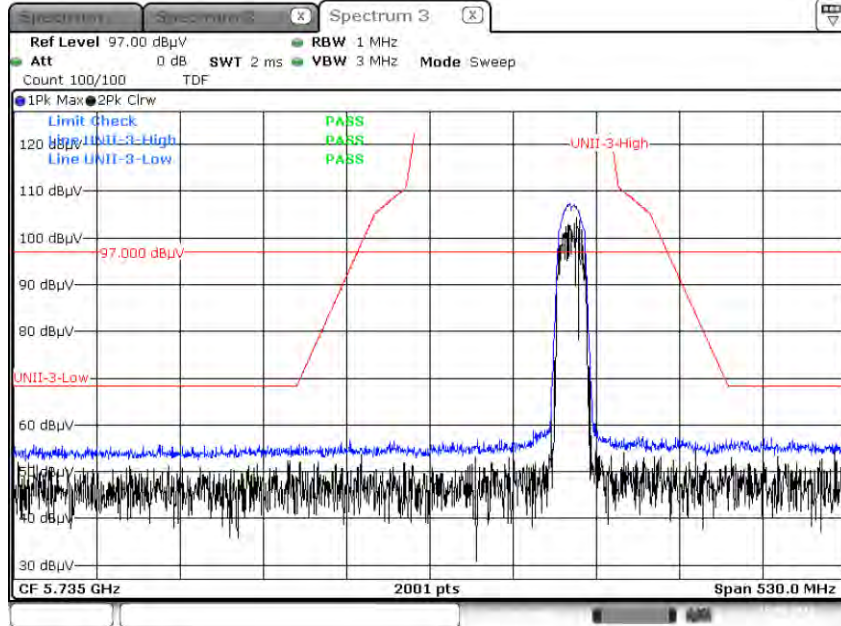
Date: 15.SEP.2023 12:04:38

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



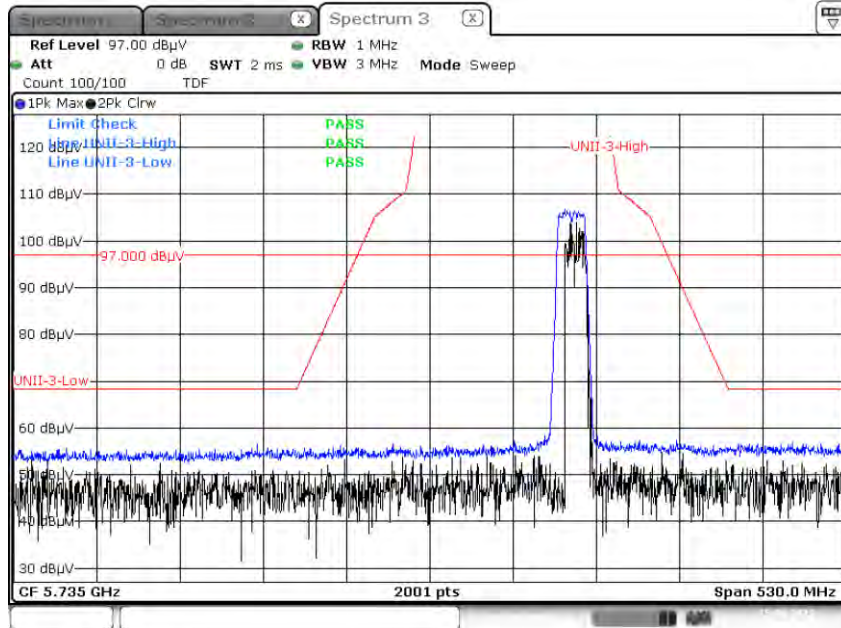
Date: 15.SEP.2023 10:34:21

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



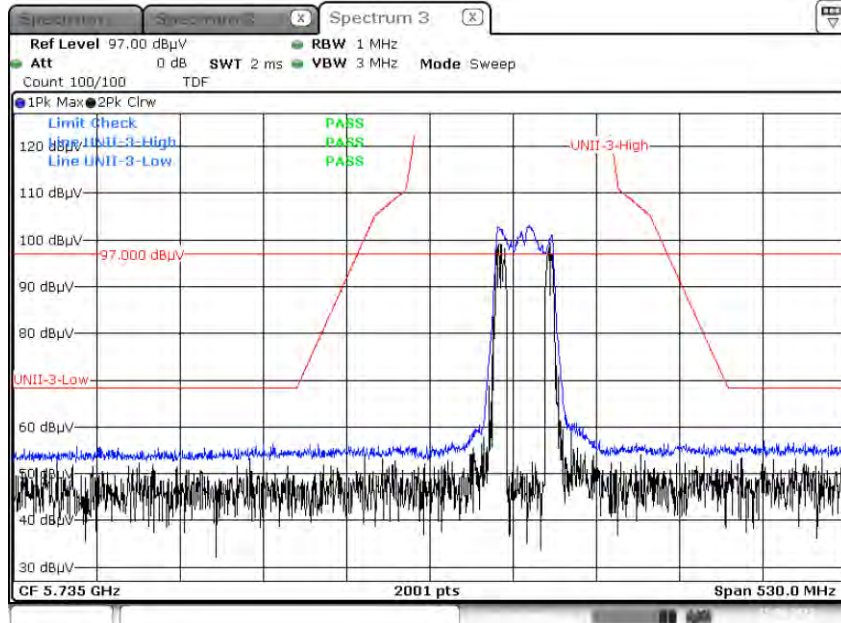
Date: 15.SEP.2023 10:35:45

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



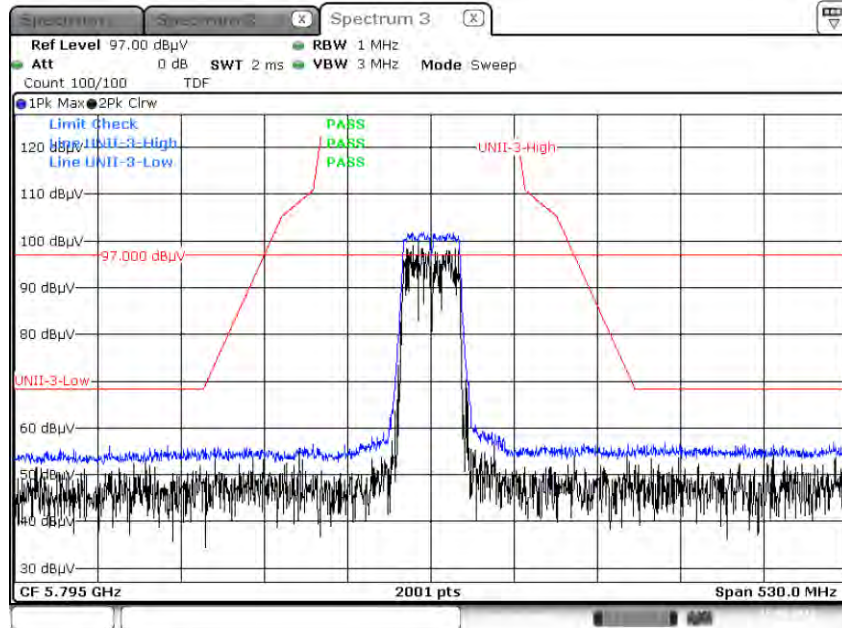
Date: 15.SEP.2023 10:37:28

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



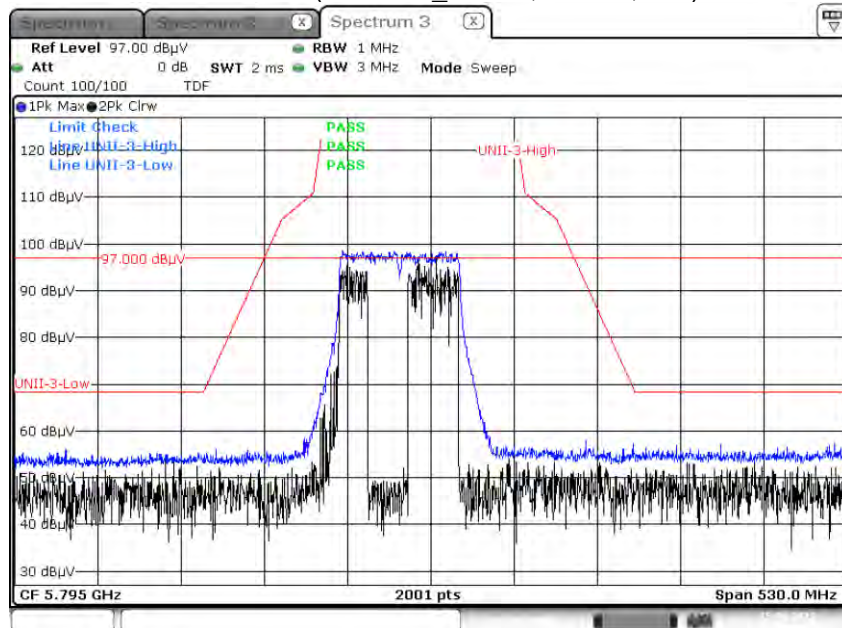
Date: 15.SEP.2023 11:55:36

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



Date: 15.SEP.2023 11:56:42

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



Date: 15.SEP.2023 12:04:38

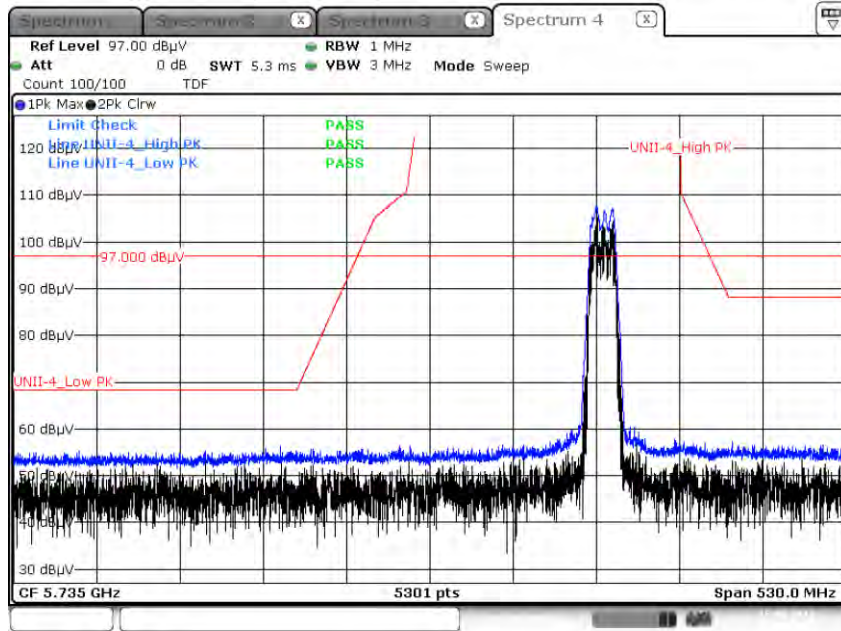
Note :

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

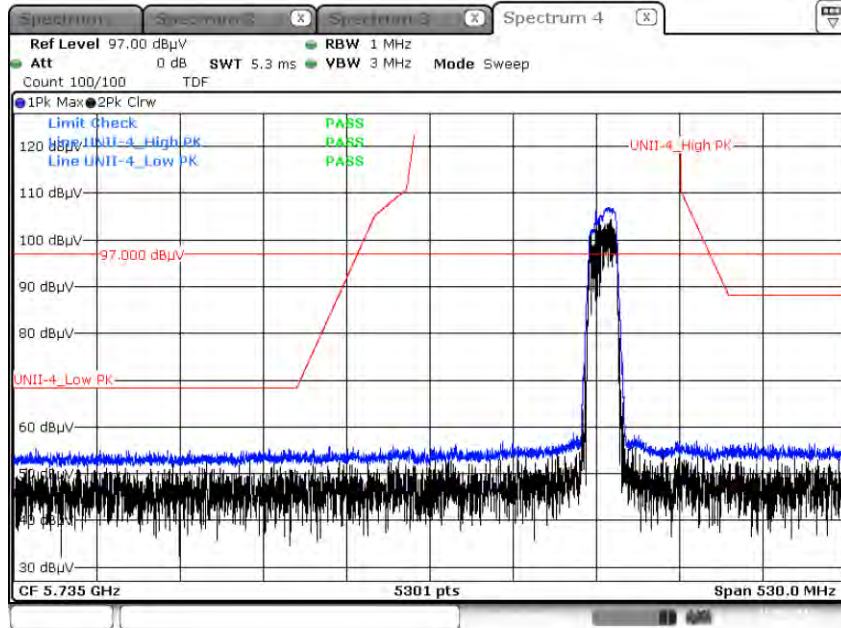
Peak Result

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



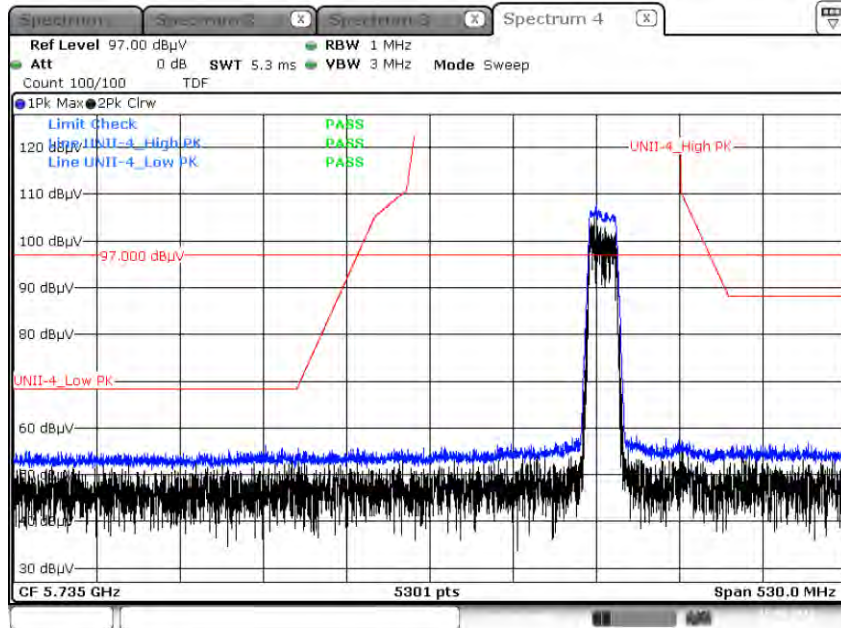
Date: 15.SEP.2023 09:32:09

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



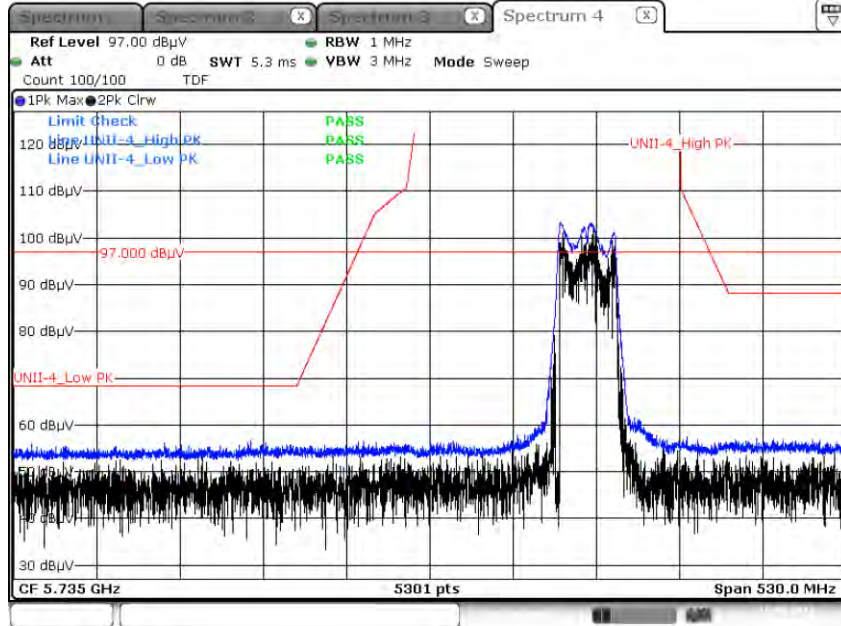
Date: 15.SEP.2023 09:33:04

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



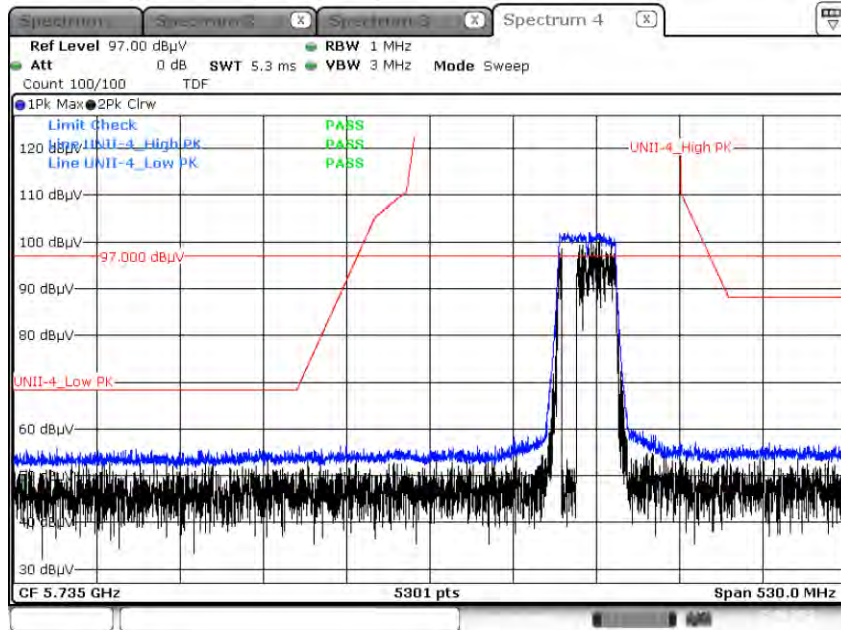
Date: 15.SEP.2023 09:33:46

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



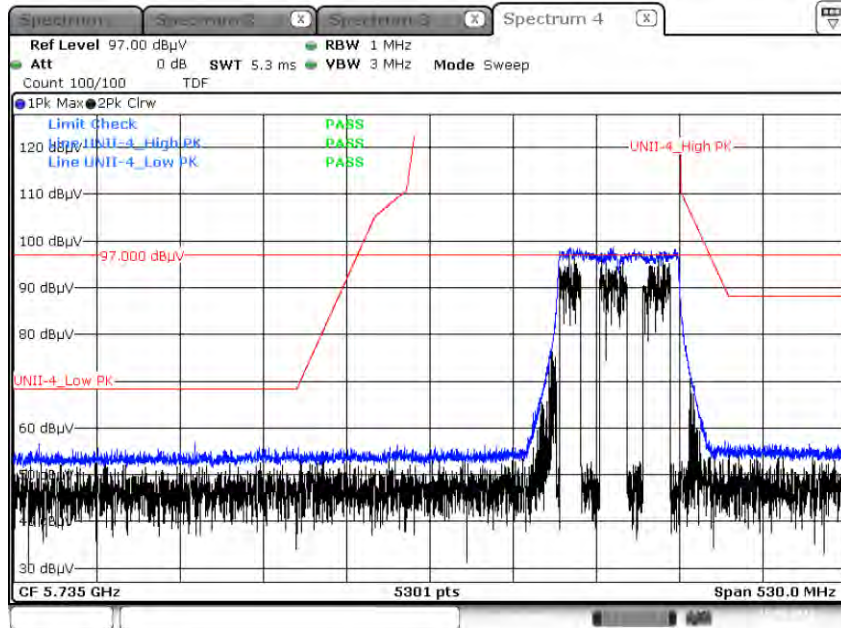
Date: 15.SEP.2023 10:04:13

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



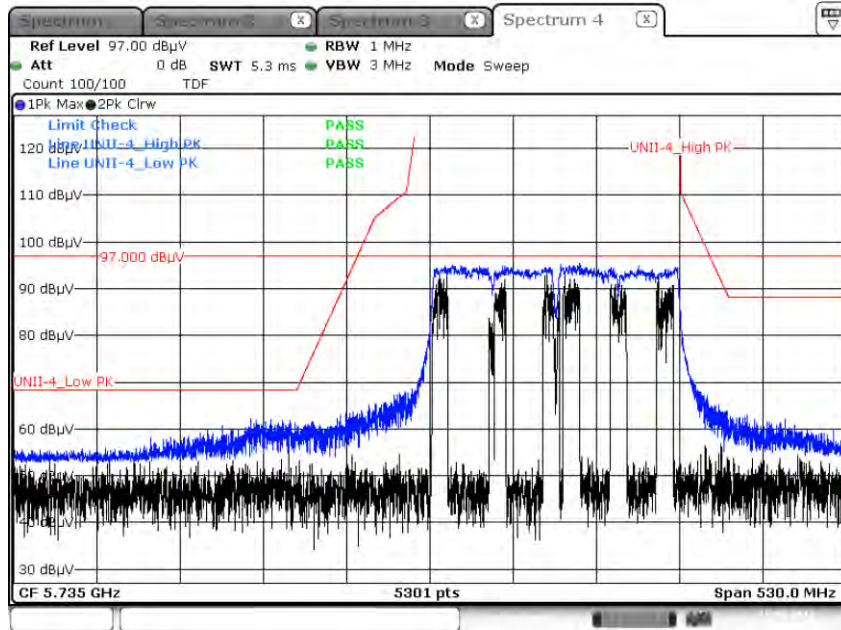
Date: 15.SEP.2023 10:05:03

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



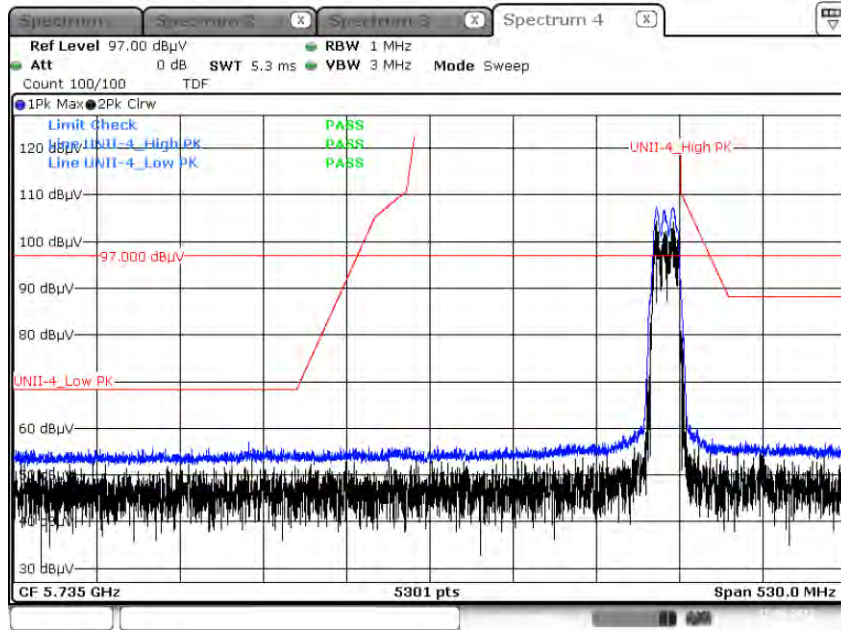
Date: 15.SEP.2023 09:49:06

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



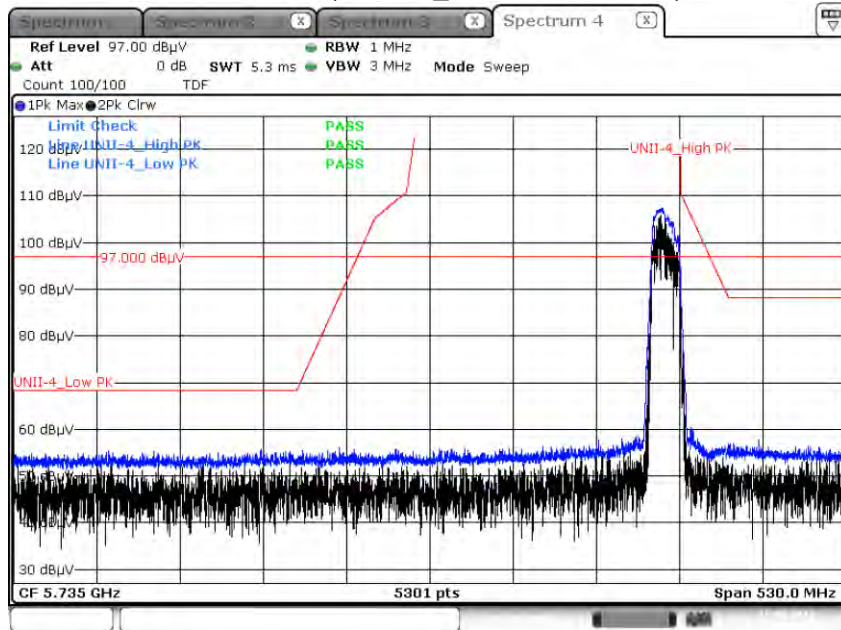
Date: 15,SEP,2023 09:50:27

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



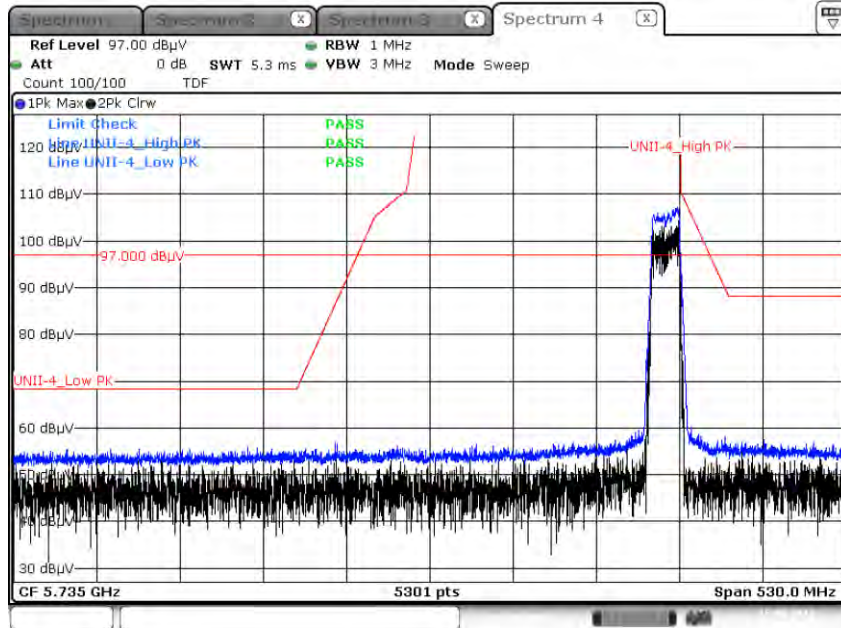
Date: 15.SEP.2023 09:40:58

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



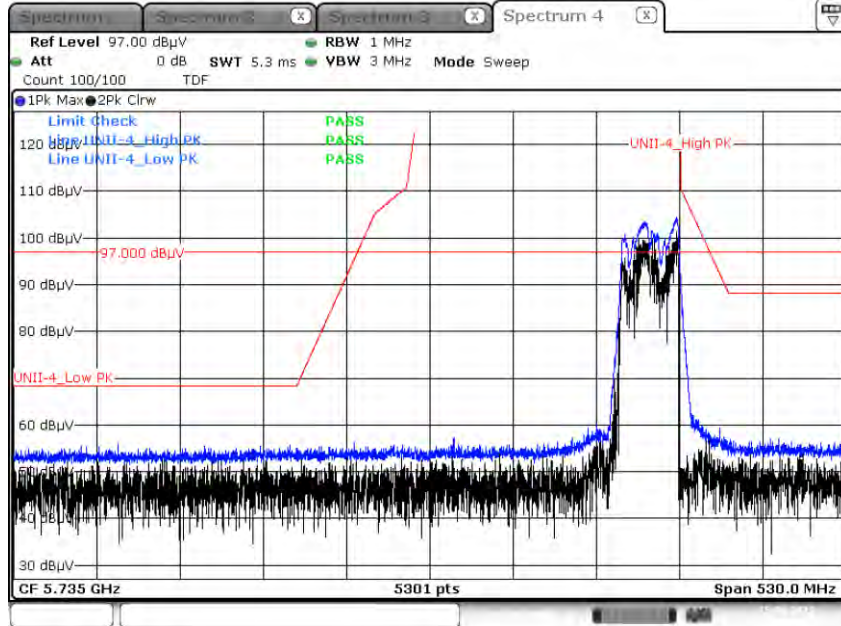
Date: 15.SEP.2023 09:41:49

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



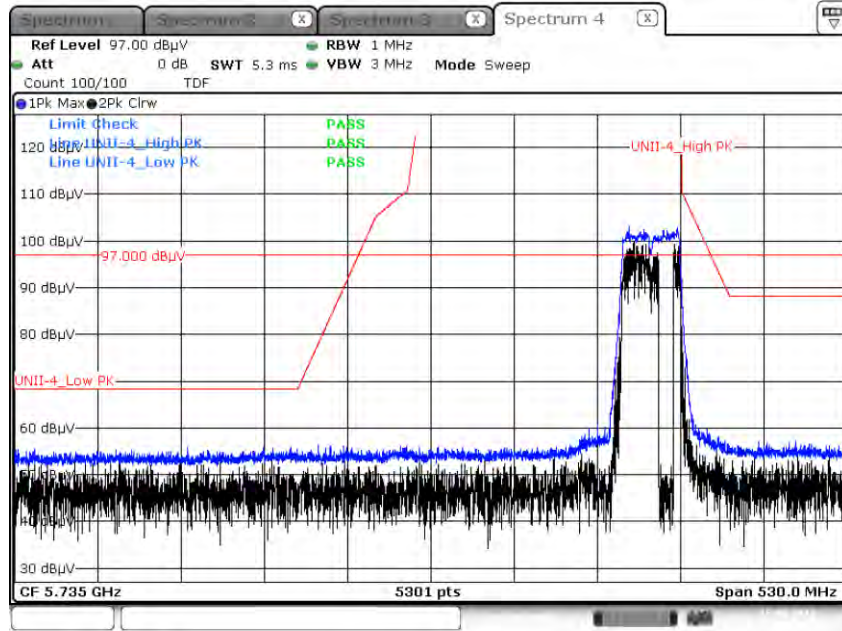
Date: 15.SEP.2023 09:42:47

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



Date: 15.SEP.2023 09:46:48

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



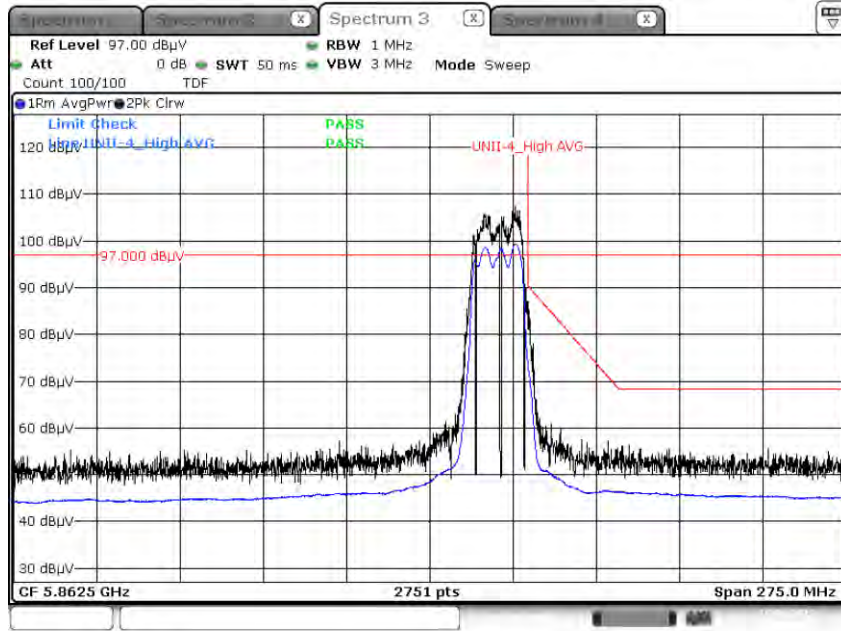
Date: 15_SEP.2023 09:47:40

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.

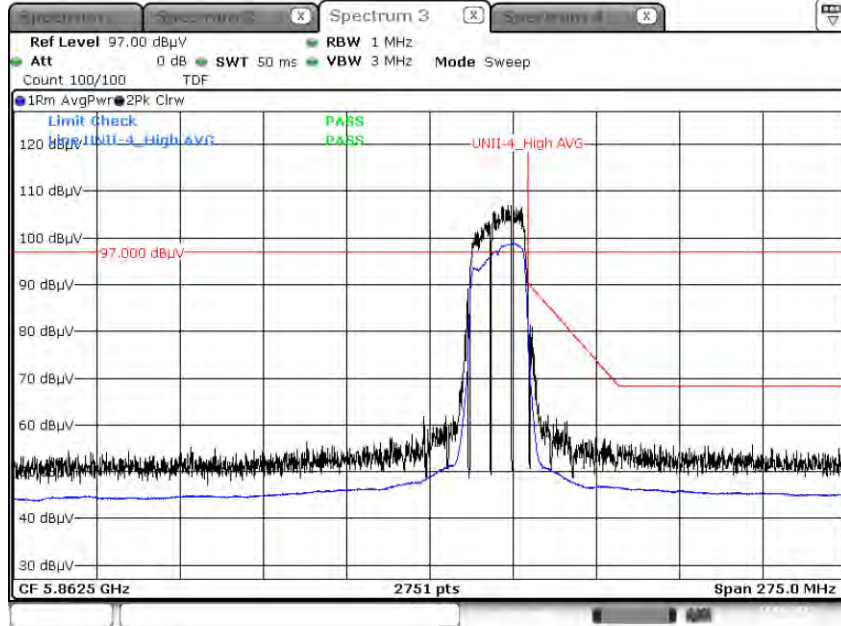
Average Result

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



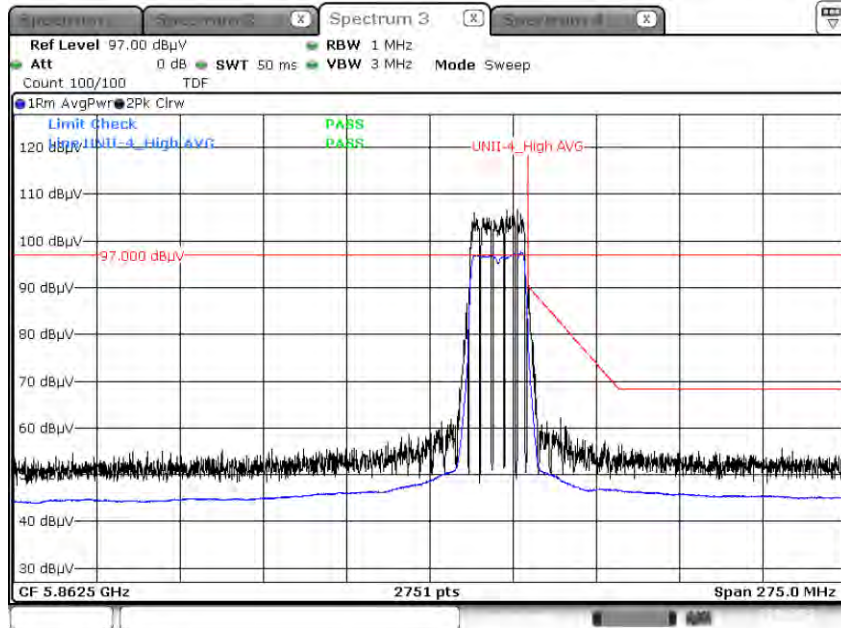
Date: 14.SEP.2023 19:36:58

Average Result (802.11n HT20, Ch.177, Z-H)

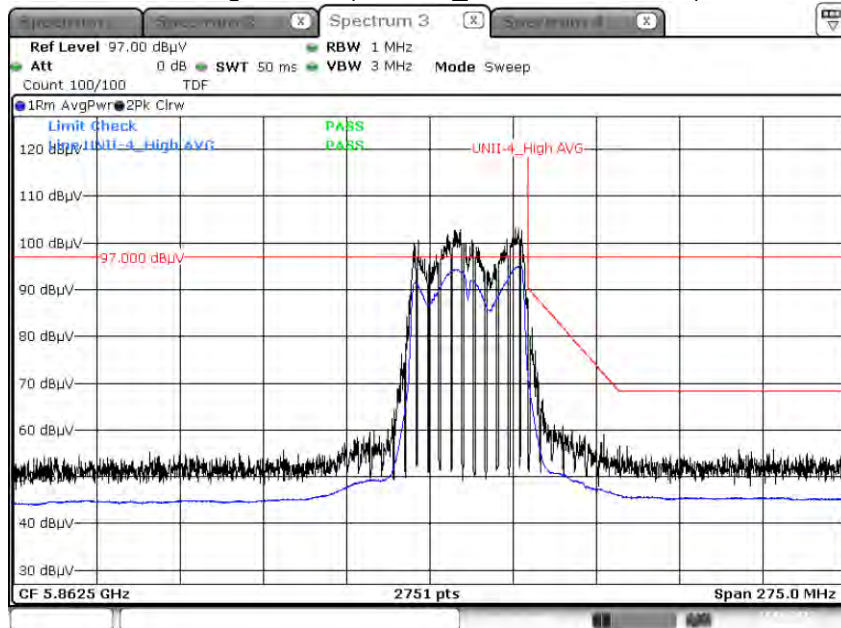


Date: 14.SEP.2023 19:35:07

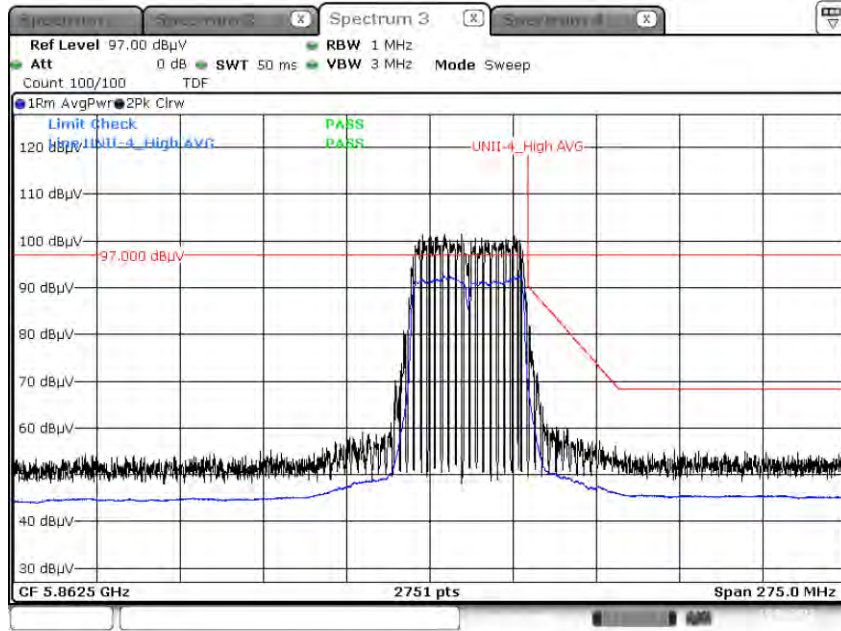
Average Result (802.11ac_VHT20, Ch.177, Z-H)



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

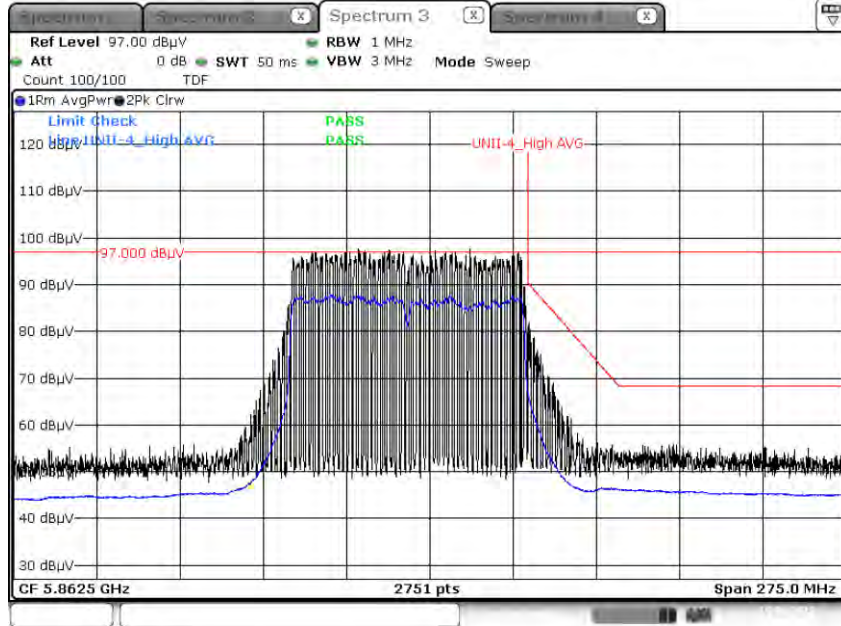


Average Result (802.11ac_VHT40, Ch.175, Z-H)



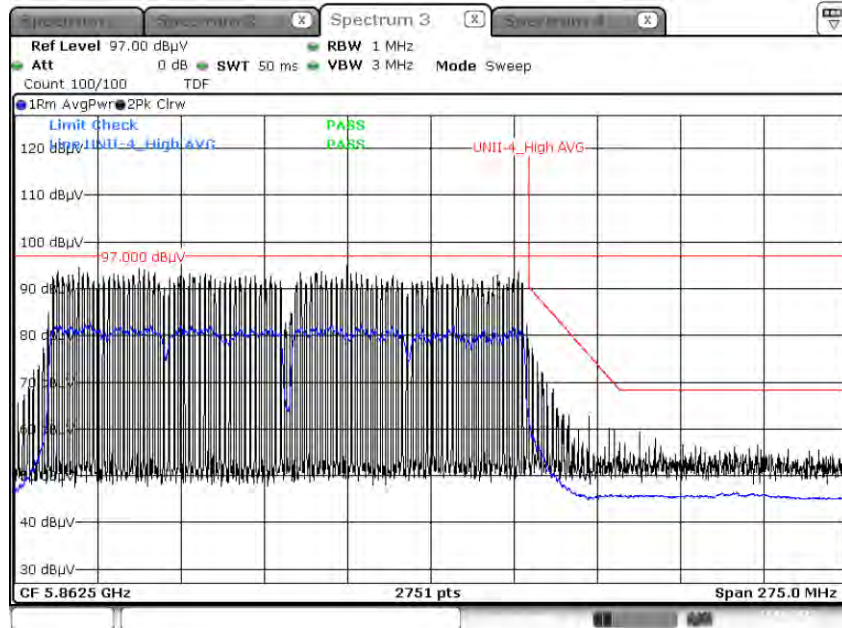
Date: 14.SEP.2023 19:14:50

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



Date: 14.SEP.2023 19:51:52

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



Date: 14 SEP. 2023 20:02:49

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

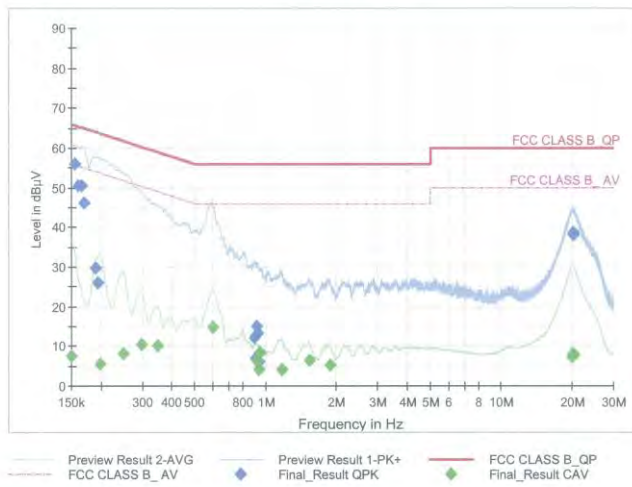
1 / 2

Test Report

Common Information

EUT : SM-S926B/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	56.09	65.75	9.67	9.000	L1	9.6
0.1613	50.44	65.40	14.96	9.000	L1	9.6
0.1658	50.48	65.17	14.69	9.000	L1	9.6
0.1703	46.10	64.95	18.85	9.000	L1	9.6
0.1905	29.67	64.02	34.34	9.000	N	9.6
0.1950	25.95	63.82	37.87	9.000	N	9.6
0.9005	12.12	56.00	43.88	9.000	N	9.7
0.9050	6.83	56.00	49.17	9.000	N	9.7
0.9185	14.95	56.00	41.05	9.000	N	9.7
0.9275	13.18	56.00	42.82	9.000	N	9.7
0.9365	6.17	56.00	49.83	9.000	N	9.7
0.9410	8.08	56.00	47.92	9.000	N	9.7
20.2370	38.48	60.00	21.52	9.000	L1	10.3
20.2640	38.46	60.00	21.54	9.000	L1	10.3
20.2888	38.56	60.00	21.44	9.000	L1	10.3
20.3068	38.40	60.00	21.60	9.000	L1	10.3
20.3203	38.34	60.00	21.66	9.000	L1	10.3
20.3383	38.21	60.00	21.79	9.000	L1	10.3

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Final Result_CAV

Frequency (MHz)	CAverage (dBμV)	Limit (dBμV)	Margin (dB)	Bandwidth (kHz)	Line	Corr. (dB)
0.1500	7.52	56.00	48.48	9.000	N	9.6
0.1995	5.55	53.63	48.09	9.000	N	9.6
0.2490	8.05	51.79	43.74	9.000	L1	9.6
0.2985	10.32	50.28	39.96	9.000	L1	9.6
0.3480	9.99	49.01	39.02	9.000	L1	9.6
0.5968	14.82	46.00	31.18	9.000	L1	9.6
0.9140	6.25	46.00	39.75	9.000	L1	9.6
0.9365	3.98	46.00	42.02	9.000	L1	9.6
0.9500	8.32	46.00	37.68	9.000	L1	9.6
1.1705	4.13	46.00	41.87	9.000	L1	9.7
1.5418	6.22	46.00	39.78	9.000	L1	9.7
1.8770	5.07	46.00	40.93	9.000	L1	9.7
19.9468	7.39	50.00	42.61	9.000	L1	10.3
19.9985	7.28	50.00	42.72	9.000	L1	10.3
20.1920	7.45	50.00	42.55	9.000	L1	10.3
20.2078	7.81	50.00	42.19	9.000	L1	10.3
20.2235	7.39	50.00	42.61	9.000	L1	10.3
20.3383	8.21	50.00	41.79	9.000	L1	10.3

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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	08/02/2024	Annual
EMI Test Receiver	ESR	Rohde & Schwarz	101910	05/26/2024	Annual
Temperature Chamber	SU-642	ESPEC	93008124	02/22/2024	Annual
Signal Analyzer	N9030A	Keysight	MY55410508	09/04/2024	Annual
Power Meter	N1911A	Agilent	MY45100523	03/06/2024	Annual
Power Sensor	N1921A	Agilent	MY57820067	03/06/2024	Annual
Directional Coupler	87300B	Agilent	3116A03621	11/02/2023	Annual
Power Splitter	11667B	Hewlett Packard	10545	02/06/2024	Annual
DC Power Supply	E3632A	Agilent	KR75305528	01/03/2024	Annual
Attenuator(10 dB)(DC-26.5 GHz)	8493C-010	Agilent	08285	06/02/2024	Annual
Attenuator(20 dB)	18N-20dB	Rohde & Schwarz	8	03/08/2024	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	02/16/2024	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)	CO3000	Innco system	CO3000-4p	N/A	N/A
Antenna Position Tower	MA4640/800-XP-EP	Innco system	S3AM	08/03/2025	Biennial
Controller	EM2090	Emco	060520	N/A	N/A
Turn Table	N/A	Ets	N/A	N/A	N/A
Loop Antenna	FMZB 1513	Rohde & Schwarz	1513-333	03/17/2024	Biennial
Hybrid Antenna	VULB 9168	Schwarzbeck	9168-0895	08/16/2024	Biennial
Horn Antenna	BBHA 9120D	Schwarzbeck	9120D-1191	11/18/2023	Biennial
Horn Antenna(15 GHz ~ 40 GHz)	BBHA9170	Schwarzbeck	BBHA9170124	03/28/2025	Biennial
Amp & Filter Bank Switch Controller	FBSM-01A	TNM system	0	N/A	N/A
Band Reject Filter	WRCJV2400/2483.5-2370/2520-60/12SS	Wainwright Instruments	2	01/05/2024	Annual
Band Reject Filter	WRCJV12-4900-5100-5900-6100-50SS	Wainwright Instruments	5	06/12/2024	Annual
Band Reject Filter	WRCJV12-4900-5100-5900-6100-50SS	Wainwright Instruments	6	06/12/2024	Annual
Band Reject Filter	WRCJV5100/5850-40/50-8EEK	Wainwright Instruments	1	02/09/2024	Annual
RF Switching System	FBSR-03A (3G HPF+LNA)	T&M SYSTEM	S3L1	12/05/2023	Annual
RF Switching System	FBSR-03A (10dB ATT+LNA)	T&M SYSTEM	S3L2	12/05/2023	Annual
RF Switching System	FBSR-03A (7G HPF+LNA)	T&M SYSTEM	S3L3	12/05/2023	Annual
RF Switching System	FBSR-03A (3dB ATT+LNA)	T&M SYSTEM	S3L4	12/05/2023	Annual
Power Amplifier	CBL18265035	CERNEX	22966	12/01/2023	Annual
Power Amplifier	CBL26405040	CERNEX	25956	03/02/2024	Annual
Bluetooth Tester	TC-3000C	TESCOM	3000C000175	03/28/2024	Annual
Spectrum Analyzer	FSVA40 (10 Hz ~ 40 GHz)	Rohde & Schwarz	101502	03/17/2024	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.
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-2310-FC055-P