

[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



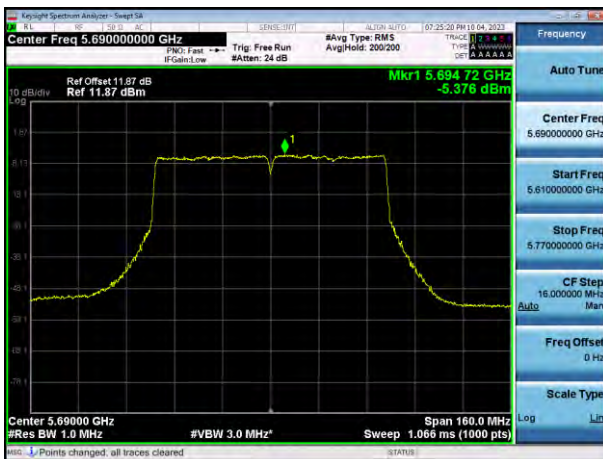
802.11ac(VHT40) UNII 2C Band



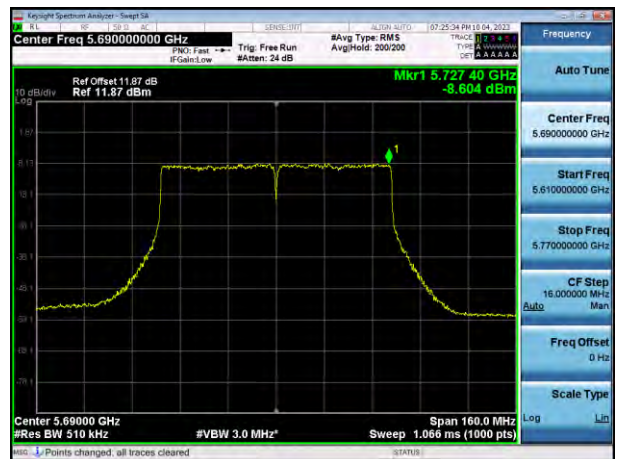
802.11ac(VHT40) UNII 3 Band



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	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	52.94	V	52.94	68.20	15.26	PK
15540	53.04	V	53.04	73.98	20.94	PK
15540	39.91	V	39.91	53.98	14.07	AV
10360	53.24	H	53.24	68.20	14.96	PK
15540	53.24	H	53.24	73.98	20.74	PK
15540	40.09	H	40.09	53.98	13.89	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	52.48	V	52.48	68.20	15.72	PK
15600	52.07	V	52.07	73.98	21.91	PK
15600	39.25	V	39.25	53.98	14.73	AV
10400	53.00	H	53.00	68.20	15.20	PK
15600	52.26	H	52.26	73.98	21.72	PK
15600	39.38	H	39.38	53.98	14.60	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	53.02	V	53.02	68.20	15.18	PK
15720	51.89	V	51.89	73.98	22.09	PK
15720	39.08	V	39.08	53.98	14.90	AV
10480	52.56	H	52.56	68.20	15.64	PK
15720	51.92	H	51.92	73.98	22.06	PK
15720	39.10	H	39.10	53.98	14.88	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	53.84	V	53.84	68.20	14.36	PK
15780	52.17	V	52.17	73.98	21.81	PK
15780	39.01	V	39.01	53.98	14.97	AV
10520	53.56	H	53.56	68.20	14.64	PK
15780	52.11	H	52.11	73.98	21.87	PK
15780	38.94	H	38.94	53.98	15.04	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	53.56	V	53.56	73.98	20.42	PK
10600	40.22	V	40.22	53.98	13.76	AV
15900	53.26	V	53.26	73.98	20.72	PK
15900	40.14	V	40.14	53.98	13.84	AV
10600	53.82	H	53.82	73.98	20.16	PK
10600	40.33	H	40.33	53.98	13.65	AV
15900	53.02	H	53.02	73.98	20.96	PK
15900	40.08	H	40.08	53.98	13.90	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	53.27	V	53.27	73.98	20.71	PK
10640	40.60	V	40.60	53.98	13.38	AV
15960	53.40	V	53.40	73.98	20.58	PK
15960	39.76	V	39.76	53.98	14.22	AV
10640	53.57	H	53.57	73.98	20.41	PK
10640	40.36	H	40.36	53.98	13.62	AV
15960	53.10	H	53.10	73.98	20.88	PK
15960	39.64	H	39.64	53.98	14.34	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	53.25	V	53.25	73.98	20.73	PK
11000	40.14	V	40.14	53.98	13.84	AV
16500	52.93	V	52.93	68.20	15.27	PK
11000	53.05	H	53.05	73.98	20.93	PK
11000	39.72	H	39.72	53.98	14.26	AV
16500	52.67	H	52.67	68.20	15.53	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	52.11	V	52.11	73.98	21.87	PK
11200	39.56	V	39.56	53.98	14.42	AV
16800	54.79	V	54.79	68.20	13.41	PK
11200	53.05	H	53.05	73.98	20.93	PK
11200	40.15	H	40.15	53.98	13.83	AV
16800	55.27	H	55.27	68.20	12.93	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	51.49	V	51.49	73.98	22.49	PK
11440	39.65	V	39.65	53.98	14.33	AV
17160	54.08	V	54.08	68.20	14.12	PK
11440	51.54	H	51.54	73.98	22.44	PK
11440	39.69	H	39.69	53.98	14.29	AV
17160	54.11	H	54.11	68.20	14.09	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	52.08	V	52.08	73.98	21.90	PK
11490	39.05	V	39.05	53.98	14.93	AV
17235	54.57	V	54.57	68.20	13.63	PK
11490	51.97	H	51.97	73.98	22.01	PK
11490	39.02	H	39.02	53.98	14.96	AV
17235	54.48	H	54.48	68.20	13.72	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	53.00	V	53.00	73.98	20.98	PK
11570	39.93	V	39.93	53.98	14.05	AV
17355	56.02	V	56.02	68.20	12.18	PK
11570	52.64	H	52.64	73.98	21.34	PK
11570	39.79	H	39.79	53.98	14.19	AV
17355	55.76	H	55.76	68.20	12.44	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	53.04	V	53.04	73.98	20.94	PK
11650	40.07	V	40.07	53.98	13.91	AV
17475	57.24	V	57.24	68.20	10.96	PK
11650	52.97	H	52.97	73.98	21.01	PK
11650	39.72	H	39.72	53.98	14.26	AV
17475	57.09	H	57.09	68.20	11.11	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	52.39	V	52.39	73.98	21.59	PK
11690	40.06	V	40.06	53.98	13.92	AV
17535	56.53	V	56.53	68.20	11.67	PK
11690	52.11	H	52.11	73.98	21.87	PK
11690	39.97	H	39.97	53.98	14.01	AV
17535	56.47	H	56.47	68.20	11.73	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	52.82	V	52.82	73.98	21.16	PK
11730	40.02	V	40.02	53.98	13.96	AV
17595	58.22	V	58.22	68.20	9.98	PK
11730	52.61	H	52.61	73.98	21.37	PK
11730	39.87	H	39.87	53.98	14.11	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 [dBμV]	POL [H/V]	Total [dBμV/m]	Limit [dBμV/m]	Margin [dB]	Measurement Type
11770	52.85	V	52.85	73.98	21.13	PK
11770	39.46	V	39.46	53.98	14.52	AV
17655	59.06	V	59.06	68.20	9.14	PK
11770	52.61	H	52.61	73.98	21.37	PK
11770	39.39	H	39.39	53.98	14.59	AV
17655	58.83	H	58.83	68.20	9.37	PK

[RSDB]

Scenario 1

Ant All(MIMO) 2.4 GHz 802.11b_Ch.11 + Ant All(MIMO) 5 GHz 802.11a_Ch.177

Frequency [MHz]	Measured Value [dBμV]	POL [H/V]	Total [dBμV/m]	Limit [dBμV/m]	Margin [dB]	Measurement Type
11770	53.03	V	53.03	73.98	20.95	PK
11770	39.51	V	39.51	53.98	14.47	AV
17655	59.81	V	59.81	68.20	8.39	PK
11770	52.97	H	52.97	73.98	21.01	PK
11770	39.50	H	39.50	53.98	14.48	AV
17655	58.91	H	58.91	68.20	9.29	PK

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

Scenario 2

Dual Bluetooth DH5_Ch.39 + Ant All(MIMO) 5 GHz 802.11a_Ch.177

Frequency [MHz]	Measured Value [dBμV]	POL [H/V]	Total [dBμV/m]	Limit [dBμV/m]	Margin [dB]	Measurement Type
11770	52.77	V	52.77	73.98	21.21	PK
11770	39.50	V	39.50	53.98	14.48	AV
17655	59.26	V	59.26	68.20	8.94	PK
11770	52.67	H	52.67	73.98	21.31	PK
11770	39.42	H	39.42	53.98	14.56	AV
17655	59.17	H	59.17	68.20	9.03	PK

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

Scenario 3

Bluetooth Ant.1 8DPSK_Ch.78 + Ant.2 2.4 GHz 802.11b_Ch.11 + Ant All(MIMO) 5 GHz 802.11a_Ch.177

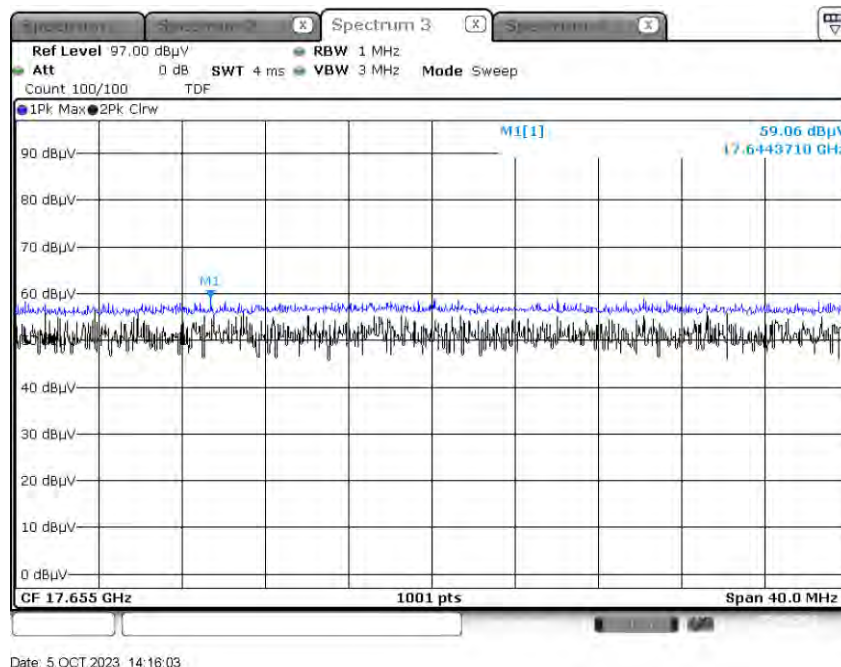
Frequency [MHz]	Measured Value [dBμV]	POL [H/V]	Total [dBμV/m]	Limit [dBμV/m]	Margin [dB]	Measurement Type
11770	52.20	V	52.20	73.98	21.78	PK
11770	39.21	V	39.21	53.98	14.77	AV
17655	59.67	V	59.67	68.20	8.53	PK
11770	52.17	H	52.17	73.98	21.81	PK
11770	39.20	H	39.20	53.98	14.78	AV
17655	59.61	H	59.61	68.20	8.59	PK

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

▣ Test Plots

[MIMO_CDD(Ant1+Ant2)]

Radiated Spurious Emissions plot – Peak Result (802.11a, Ch.177 Spurious Emissions, X-V)



Note:

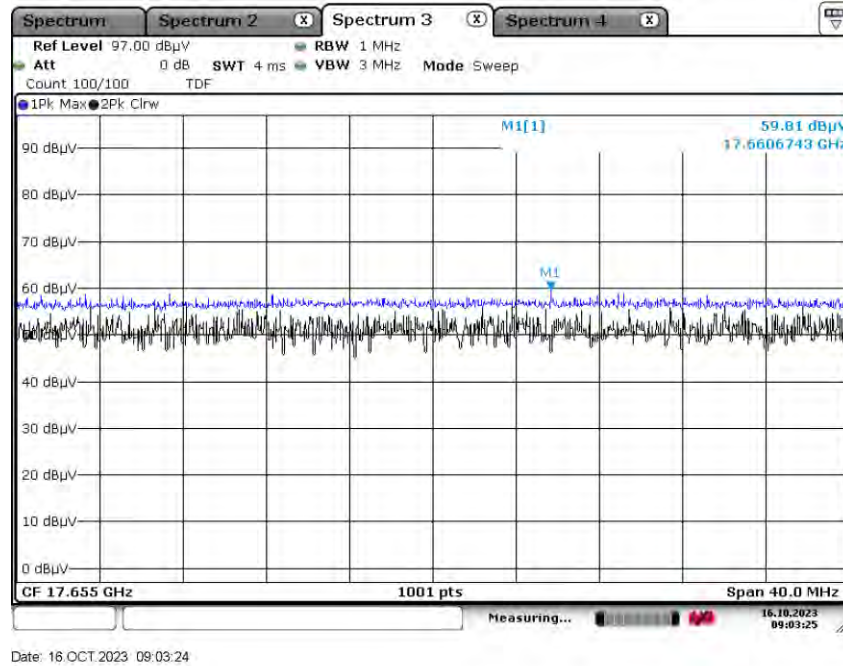
Only the worst case plots for Radiated Spurious Emissions.

[RSDB]

Scenario 1

Ant All(MIMO) 2.4 GHz 802.11b_Ch.11 + Ant All(MIMO) 5 GHz 802.11a_Ch.177

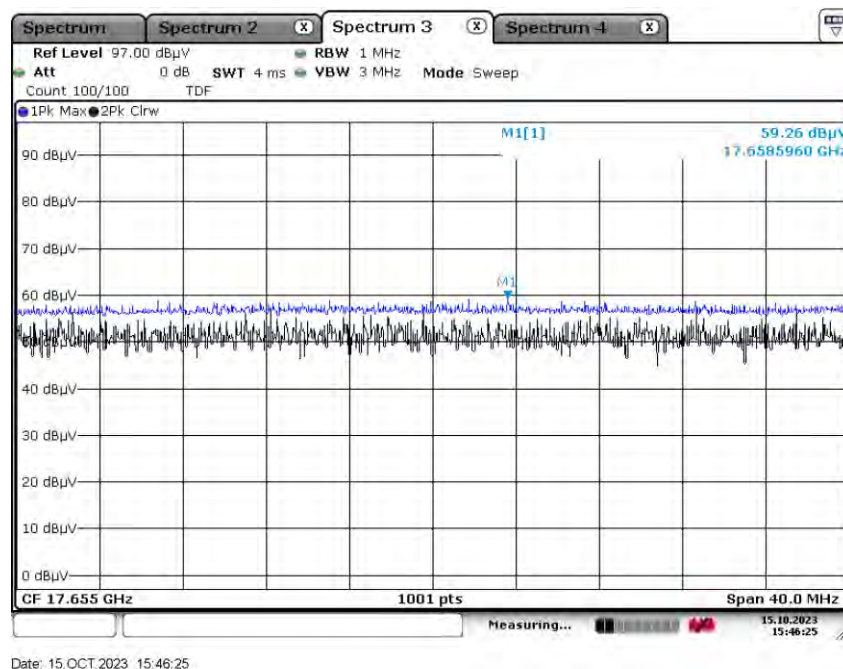
Radiated Spurious Emissions plot – Peak Result (Spurious Emissions, 3rd, Y-V)



Scenario 2

Dual Bluetooth DH5_Ch.39 + Ant All(MIMO) 5 GHz 802.11a_Ch.177

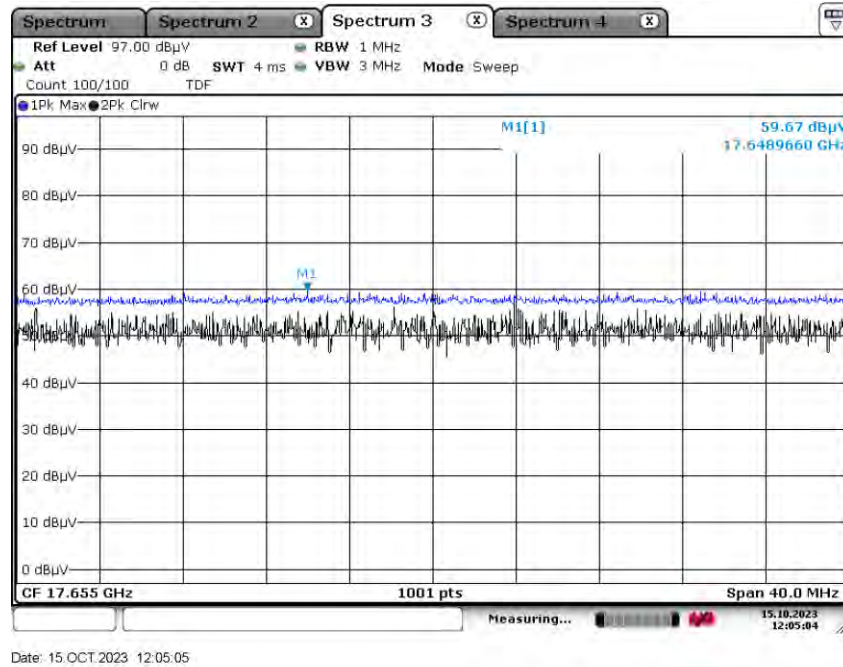
Radiated Spurious Emissions plot – Peak Result (Spurious Emissions, 3rd, Y-V)



Scenario 3

Bluetooth Ant.1 8DPSK_Ch.78 + Ant.2 2.4 GHz 802.11b_Ch.11 + Ant All(MIMO) 5 GHz 802.11a_Ch.177

Radiated Spurious Emissions plot – Peak Result (Spurious Emissions, 3rd, Y-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	64.64	H	64.64	73.98	9.34	PK
4500-5150	48.74	H	48.74	53.98	5.24	AV
4500-5150	64.58	V	64.58	73.98	9.40	PK
4500-5150	48.69	V	48.69	53.98	5.29	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	67.87	H	67.87	73.98	6.11	PK
5350-5460	51.41	H	51.41	53.98	2.57	AV
5350-5460	67.42	V	67.42	73.98	6.56	PK
5350-5460	51.33	V	51.33	53.98	2.65	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]	ANT. POL [H/V]	Total [dBμV/m]	Limit [dBμV/m]	Margin [dB]	Measurement Type
5350-5460	59.19	H	59.19	73.98	14.79	PK
5350-5460	44.80	H	44.80	53.98	9.18	AV
5460-5470	64.33	H	64.33	68.20	3.87	PK
5350-5460	58.51	V	58.51	73.98	15.47	PK
5350-5460	44.58	V	44.58	53.98	9.40	AV
5460-5470	63.20	V	63.20	68.20	5.00	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	65.65	H	65.65	73.98	8.33	PK
4500-5150	49.39	H	49.39	53.98	4.59	AV
4500-5150	65.17	V	65.17	73.98	8.81	PK
4500-5150	48.81	V	48.81	53.98	5.17	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	66.77	H	66.77	73.98	7.21	PK
5350-5460	49.38	H	49.38	53.98	4.60	AV
5350-5460	66.02	V	66.02	73.98	7.96	PK
5350-5460	48.62	V	48.62	53.98	5.36	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 [dBμV]	ANT. POL [H/V]	Total [dBμV/m]	Limit [dBμV/m]	Margin [dB]	Measurement Type
5350-5460	62.26	H	62.26	73.98	11.72	PK
5350-5460	45.86	H	45.86	53.98	8.12	AV
5460-5470	65.53	H	65.53	68.20	2.67	PK
5350-5460	61.37	V	61.37	73.98	12.61	PK
5350-5460	45.28	V	45.28	53.98	8.70	AV
5460-5470	63.84	V	63.84	68.20	4.36	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 [dBμV]	ANT. POL [H/V]	Total [dBμV/m]	Limit [dBμV/m]	Margin [dB]	Measurement Type
4500-5150	65.54	H	65.54	73.98	8.44	PK
4500-5150	51.26	H	51.26	53.98	2.72	AV
4500-5150	64.85	V	64.85	73.98	9.13	PK
4500-5150	50.32	V	50.32	53.98	3.66	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 [dBμV]	ANT. POL [H/V]	Total [dBμV/m]	Limit [dBμV/m]	Margin [dB]	Measurement Type
5350-5460	63.91	H	63.91	73.98	10.07	PK
5350-5460	48.39	H	48.39	53.98	5.59	AV
5350-5460	62.11	V	62.11	73.98	11.87	PK
5350-5460	48.25	V	48.25	53.98	5.73	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 [dBμV]	ANT. POL [H/V]	Total [dBμV/m]	Limit [dBμV/m]	Margin [dB]	Measurement Type
5350-5460	60.56	H	60.56	73.98	13.42	PK
5350-5460	46.08	H	46.08	53.98	7.90	AV
#5460-5470	62.30	H	62.30	68.20	5.90	PK
5350-5460	59.76	V	59.76	73.98	14.22	PK
5350-5460	45.21	V	45.21	53.98	8.77	AV
#5460-5470	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 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	61.50	H	61.50	73.98	12.48	PK
4500-5150	48.10	H	48.10	53.98	5.88	AV
4500-5150	60.63	V	60.63	73.98	13.35	PK
4500-5150	47.96	V	47.96	53.98	6.02	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	64.47	H	64.47	73.98	9.51	PK
5350-5460	49.40	H	49.40	53.98	4.58	AV
5350-5460	64.28	V	64.28	73.98	9.70	PK
5350-5460	49.31	V	49.31	53.98	4.67	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 [dBμV]	ANT. POL [H/V]	Total [dBμV/m]	Limit [dBμV/m]	Margin [dB]	Measurement Type
5350-5460	59.37	H	59.37	73.98	14.61	PK
5350-5460	44.96	H	44.96	53.98	9.02	AV
#5460-5470	65.15	H	65.15	68.20	3.05	PK
5350-5460	59.14	V	59.14	73.98	14.84	PK
5350-5460	44.58	V	44.58	53.98	9.40	AV
#5460-5470	64.28	V	64.28	68.20	3.92	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 [MHz]	Measured Value [dBμV]	ANT. POL [H/V]	Total [dBμV/m]	Limit [dBμV/m]	Margin [dB]	Measurement Type
4500-5150	62.74	H	62.74	73.98	11.24	PK
4500-5150	49.26	H	49.26	53.98	4.72	AV
4500-5150	61.85	V	61.85	73.98	12.13	PK
4500-5150	49.01	V	49.01	53.98	4.97	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	67.47	H	67.47	73.98	6.51	PK
5350-5460	51.65	H	51.65	53.98	2.33	AV
5350-5460	66.86	V	66.86	73.98	7.12	PK
5350-5460	50.55	V	50.55	53.98	3.43	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 [dBμV]	ANT. POL [H/V]	Total [dBμV/m]	Limit [dBμV/m]	Margin [dB]	Measurement Type
5350-5460	59.17	H	59.17	73.98	14.81	PK
5350-5460	44.86	H	44.86	53.98	9.12	AV
#5460-5470	65.37	H	65.37	68.20	2.83	PK
5350-5460	58.91	V	58.91	73.98	15.07	PK
5350-5460	44.72	V	44.72	53.98	9.26	AV
#5460-5470	64.72	V	64.72	68.20	3.48	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 [MHz]	Measured Value [dBμV]	ANT. POL [H/V]	Total [dBμV/m]	Limit [dBμV/m]	Margin [dB]	Measurement Type
4500-5150	61.63	H	61.63	73.98	12.35	PK
4500-5150	50.17	H	50.17	53.98	3.81	AV
4500-5150	61.28	V	61.28	73.98	12.70	PK
4500-5150	49.64	V	49.64	53.98	4.34	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	65.21	H	65.21	73.98	8.77	PK
5350-5460	51.76	H	51.76	53.98	2.22	AV
5350-5460	64.75	V	64.75	73.98	9.23	PK
5350-5460	51.34	V	51.34	53.98	2.64	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 [dBμV]	ANT. POL [H/V]	Total [dBμV/m]	Limit [dBμV/m]	Margin [dB]	Measurement Type
5350-5460	63.23	H	63.23	73.98	10.75	PK
5350-5460	50.34	H	50.34	53.98	3.64	AV
5460-5470	63.35	H	63.35	68.20	4.85	PK
5350-5460	62.37	V	62.37	73.98	11.61	PK
5350-5460	50.17	V	50.17	53.98	3.81	AV
5460-5470	62.45	V	62.45	68.20	5.75	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 [dBμV]	Duty Cycle Factor [dB]	ANT. POL [H/V]	Total [dBμV/m]	Limit [dBμV/m]	Margin [dB]	Measurement Type
4500-5150	67.20	0.00	H	67.20	73.98	6.78	PK
4500-5150	48.09	2.74	H	50.83	53.98	3.15	AV
4500-5150	66.73	0.00	V	66.73	73.98	7.25	PK
4500-5150	47.67	2.74	V	50.41	53.98	3.57	AV
5350-5460	69.18	0.00	H	69.18	73.98	4.80	PK
5350-5460	49.18	2.74	H	51.92	53.98	2.06	AV
5350-5460	68.83	0.00	V	68.83	73.98	5.15	PK
5350-5460	49.11	2.74	V	51.85	53.98	2.13	AV

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

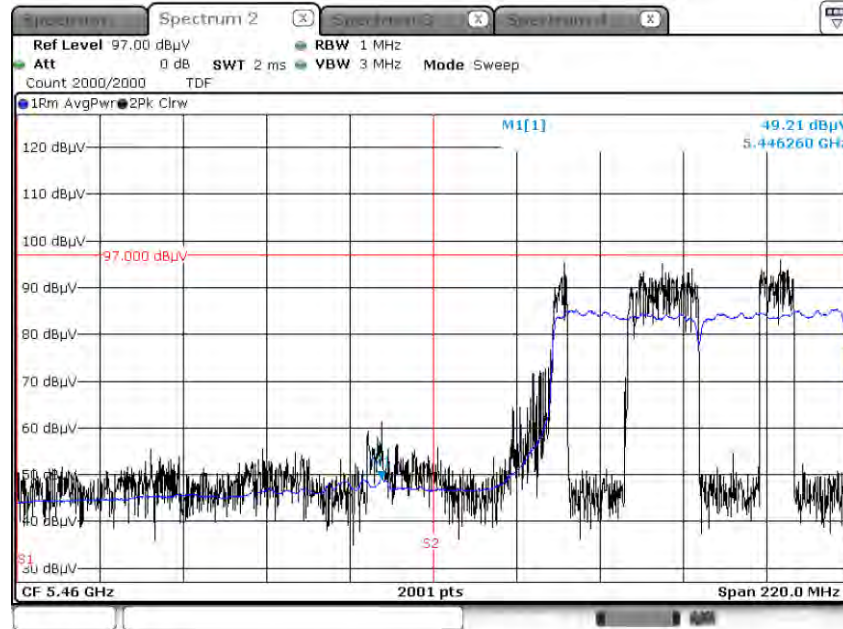
Frequency [MHz]	Measured Value [dBμV]	Duty Cycle Factor [dB]	ANT. POL [H/V]	Total [dBμV/m]	Limit [dBμV/m]	Margin [dB]	Measurement Type
5350-5460	65.31	0.00	H	65.31	73.98	8.67	PK
5350-5460	49.21	2.74	H	51.95	53.98	2.03	AV
#5460-5470	60.10	0.00	H	60.10	68.20	8.10	PK
5350-5460	64.79	0.00	V	64.79	73.98	9.19	PK
5350-5460	49.08	2.74	V	51.82	53.98	2.16	AV
#5460-5470	59.72	0.00	V	59.72	68.20	8.48	PK

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

[MIMO_CDD(Ant1+Ant2)]

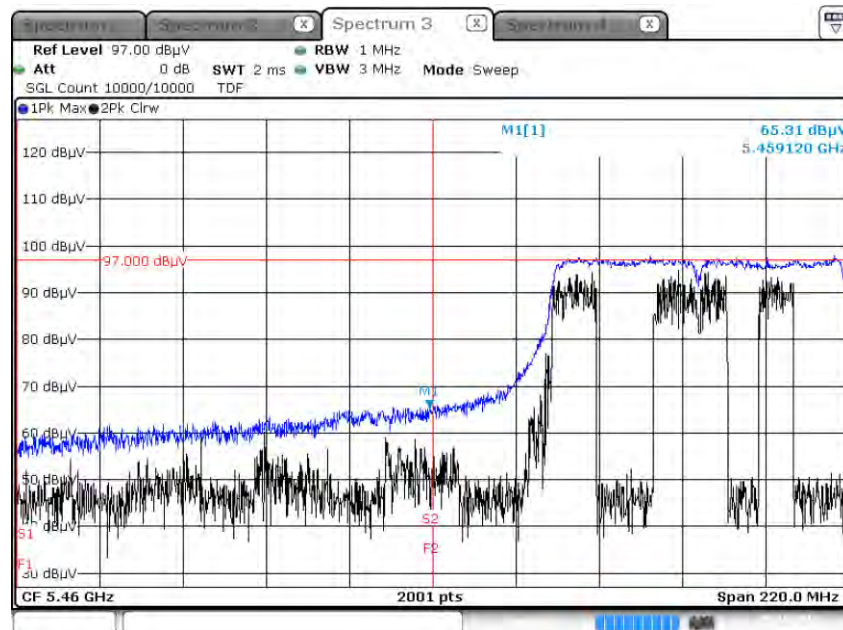
▣ Test Plots(UNII 1, 2A, 2C)

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



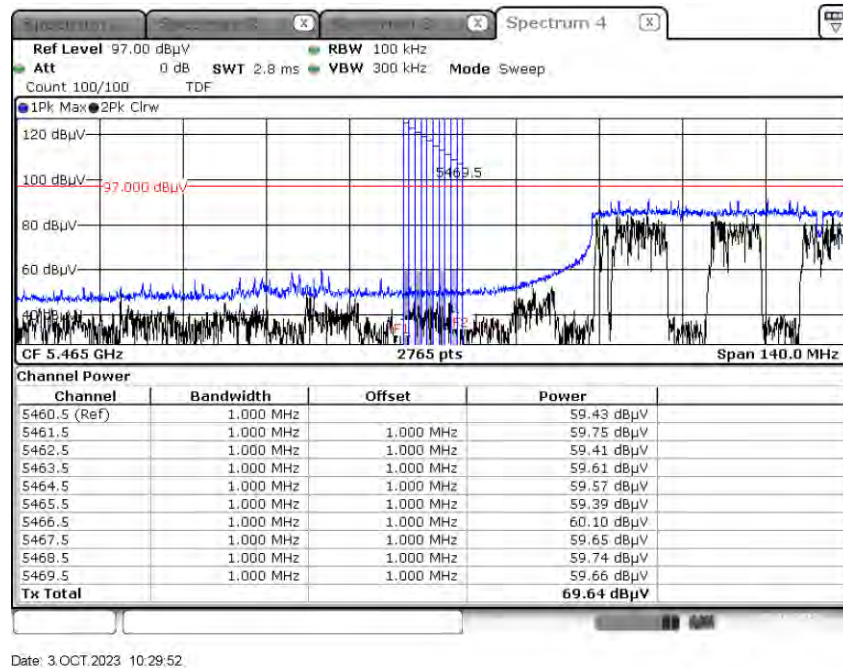
Date: 13.OCT.2023 14:41:41

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



Date: 3.OCT.2023 10:27:10

Peak Result (802.11 ac_VHT160_ MCS0, Ch.114, X-H)

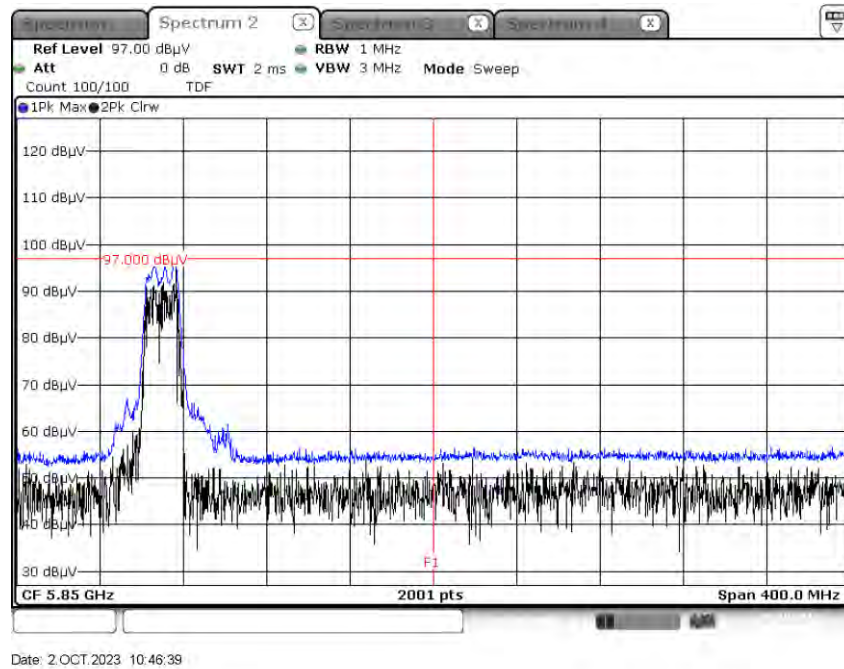


Note:

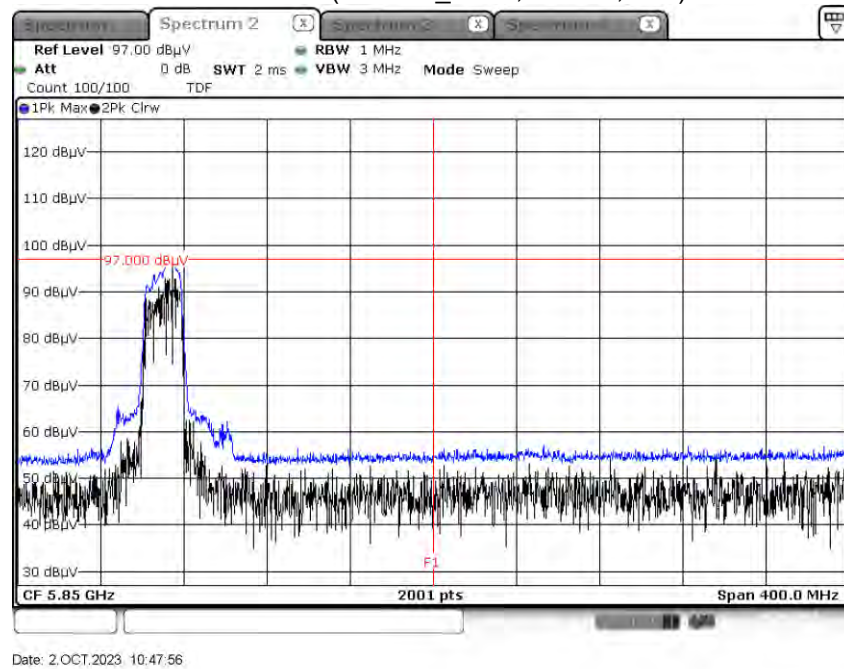
Only the worst case plots for Radiated Restricted Band Edge.

▣ Test Plots(Straddle Channel)

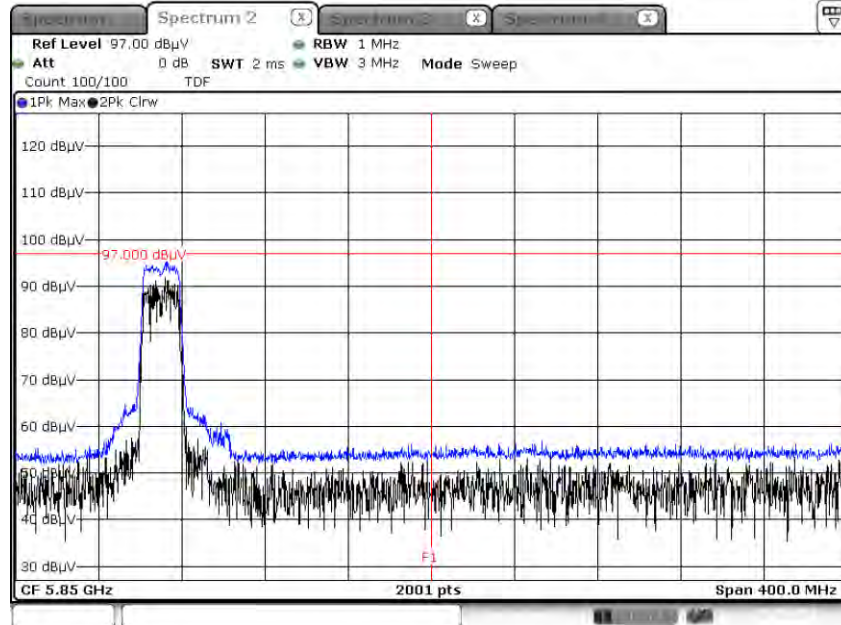
Peak Result (802.11a, Ch.144, X-H)



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

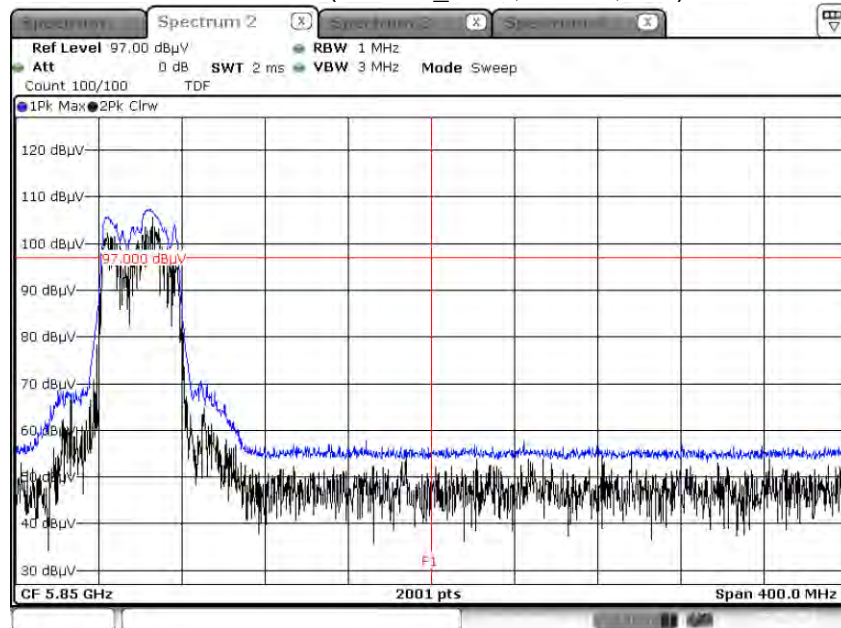


Peak Result (802.11ac_VHT20, Ch.144, X-H)



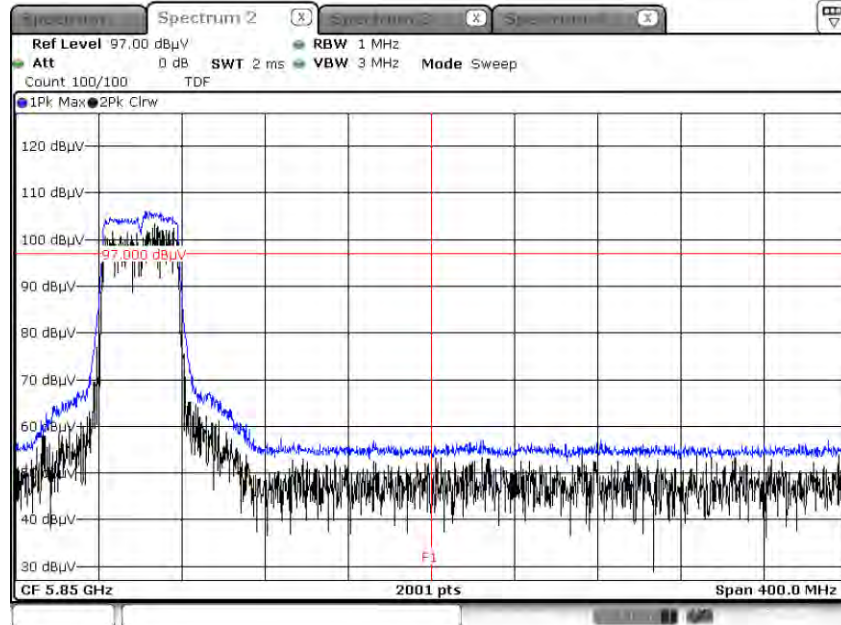
Date: 2.OCT.2023 10:49:58

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



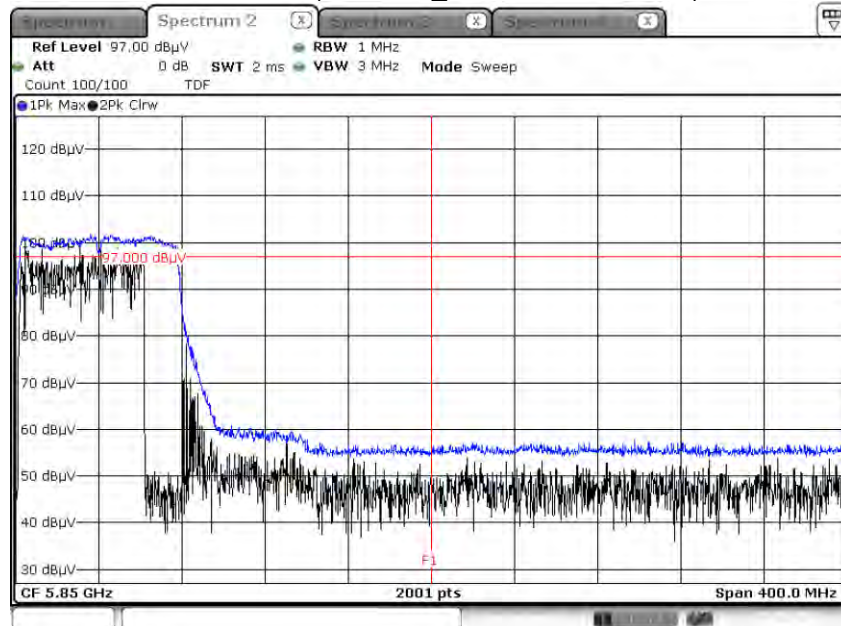
Date: 3.OCT.2023 11:23:49

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



Date: 3.OCT.2023 11:24:44

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



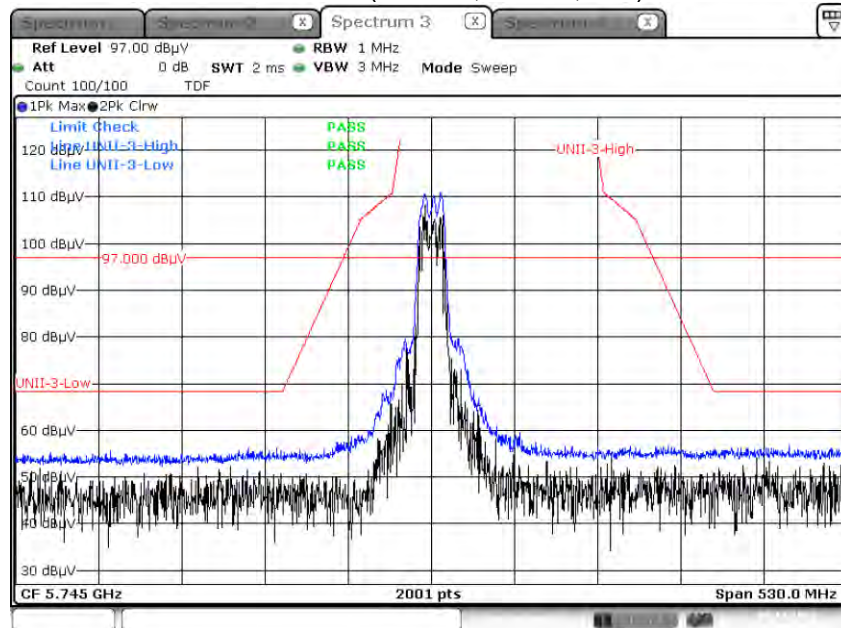
Date: 3.OCT.2023 11:12:59

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)

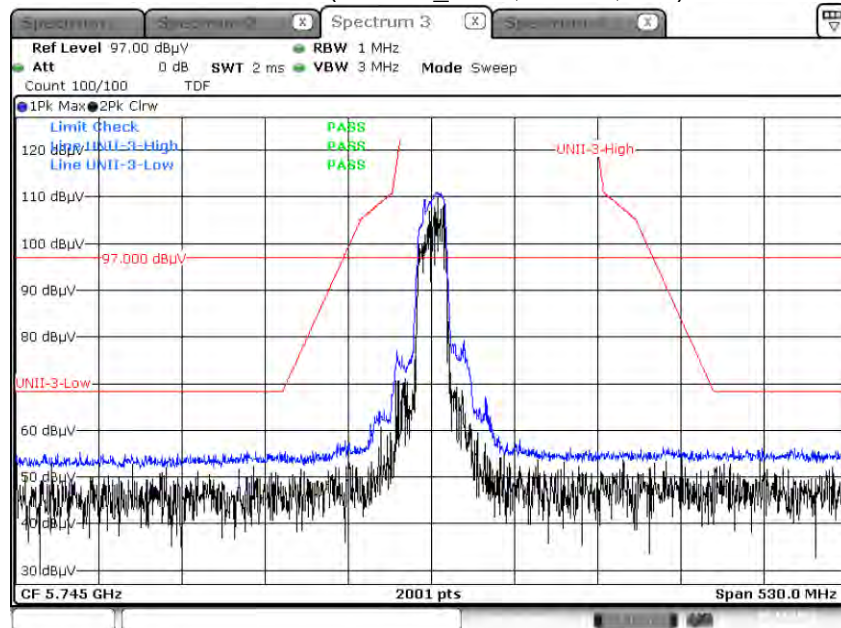
▣ Test Plots(UNII 3)

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



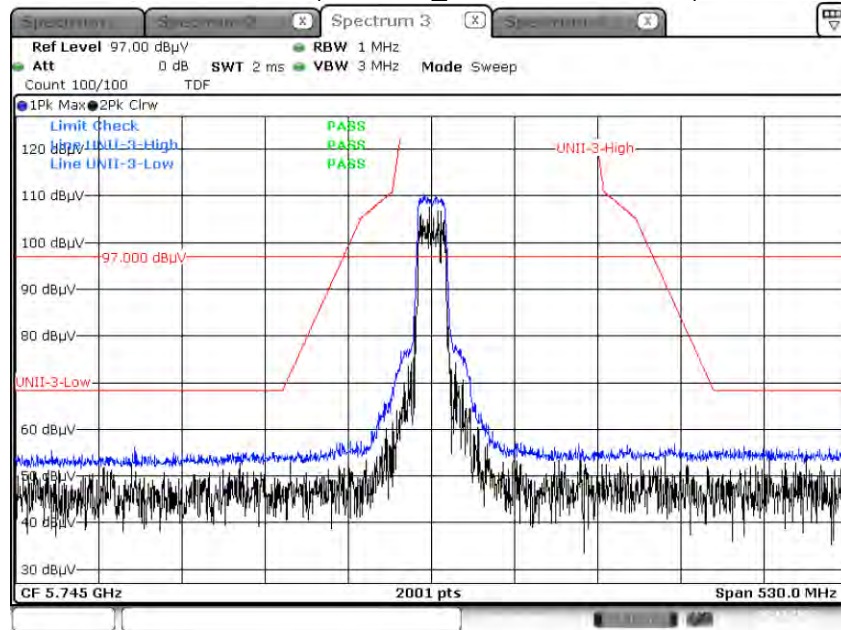
Date: 2.OCT.2023 11:35:41

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



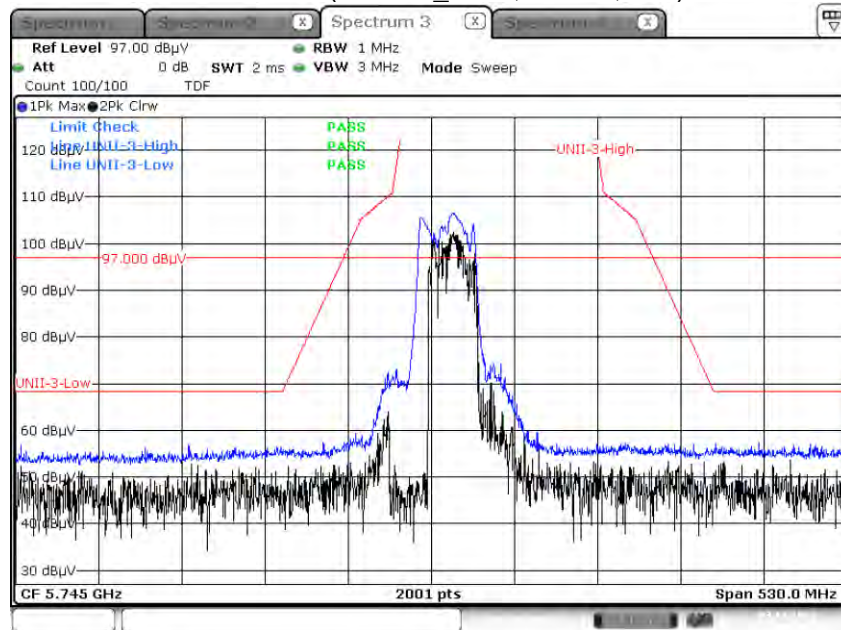
Date: 2.OCT.2023 11:36:29

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



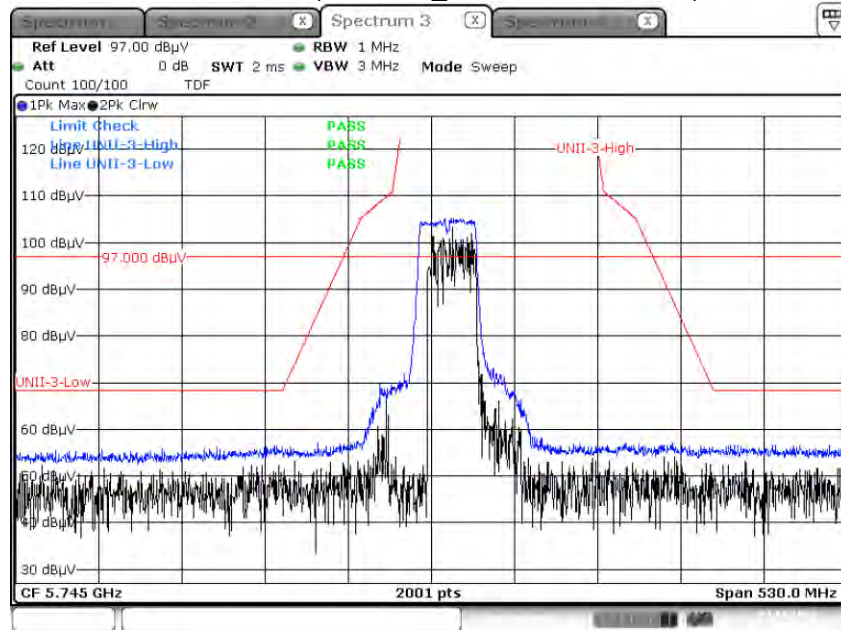
Date: 2.OCT.2023 11:37:11

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



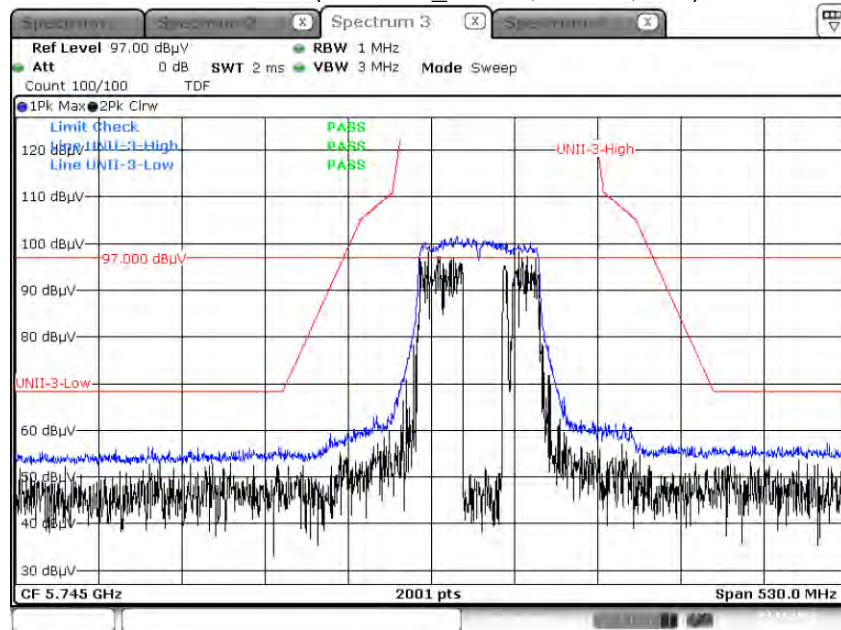
Date: 3.OCT.2023 11:31:26

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



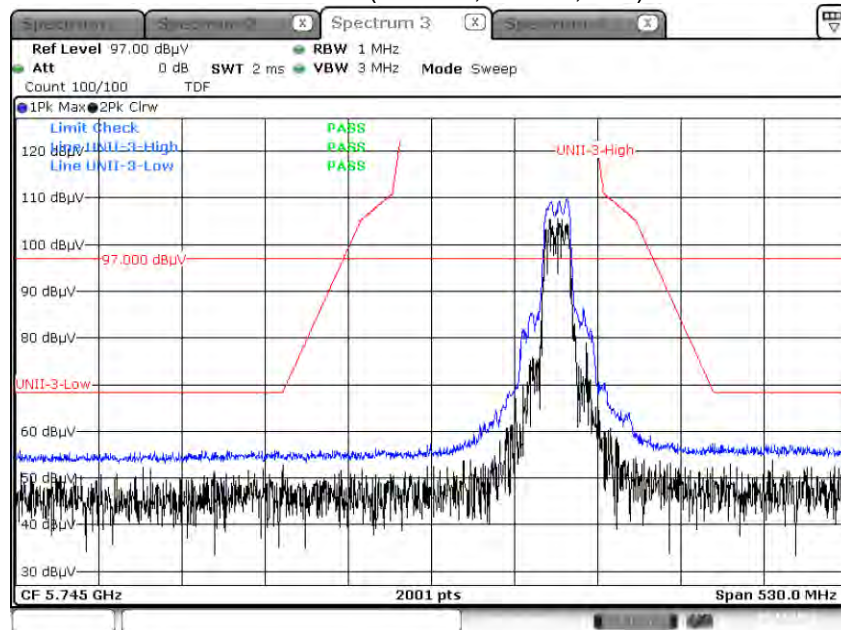
Date: 3.OCT.2023 11:33:19

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



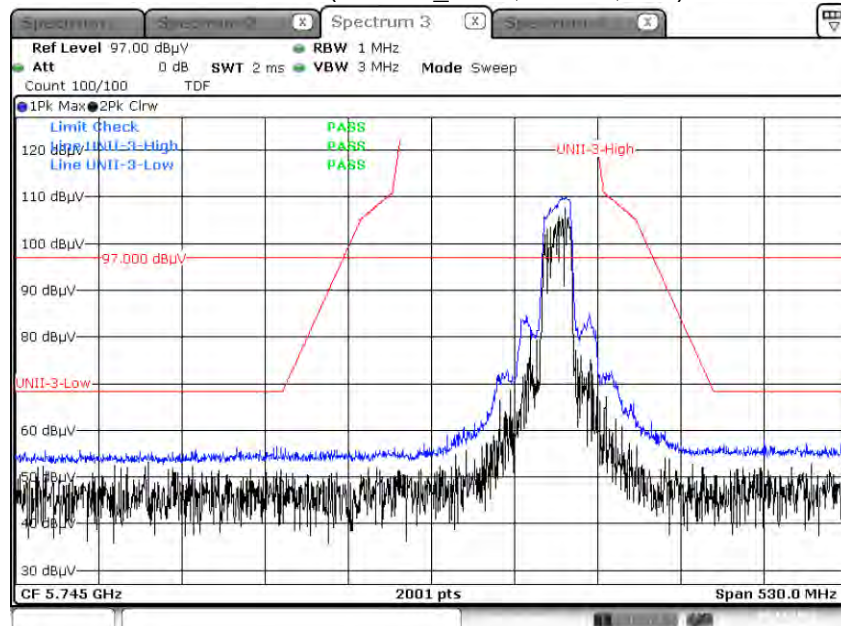
Date: 3.OCT.2023 11:04:58

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



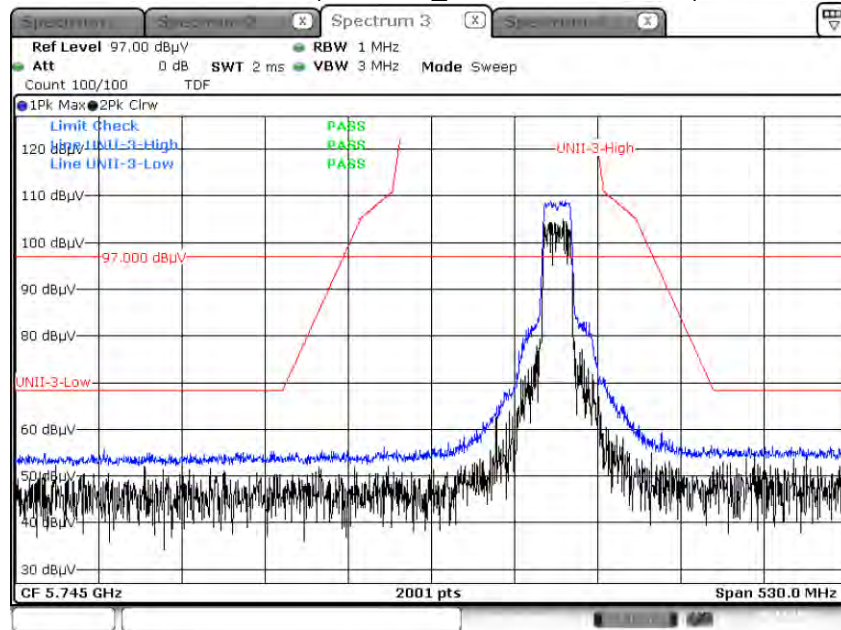
Date: 2 OCT.2023 13:44:18

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



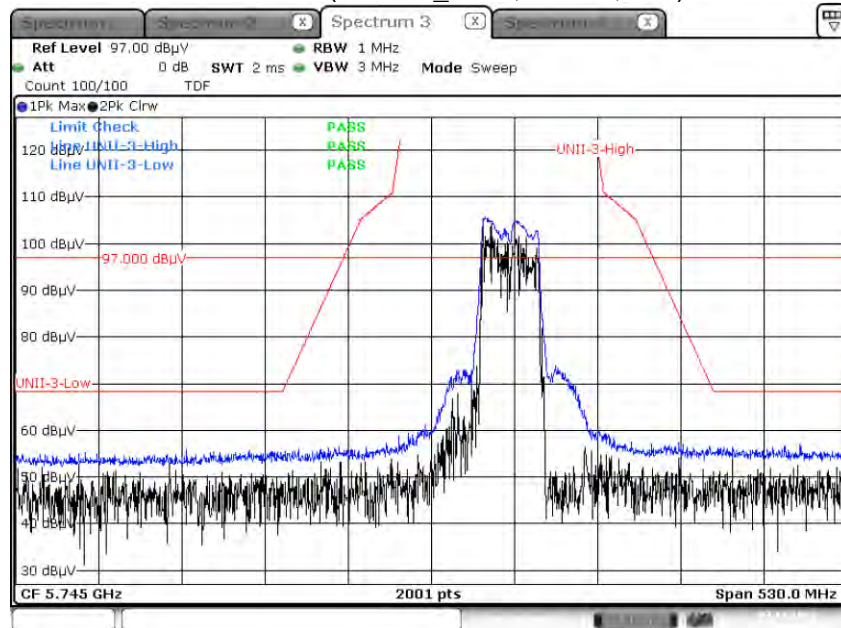
Date: 2 OCT.2023 14:03:43

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



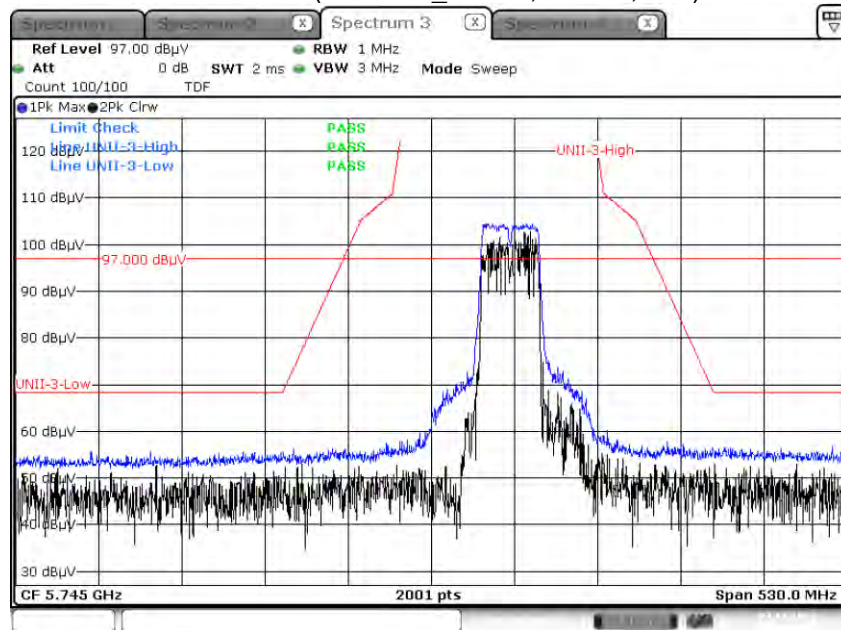
Date: 2.OCT.2023 14:04:43

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



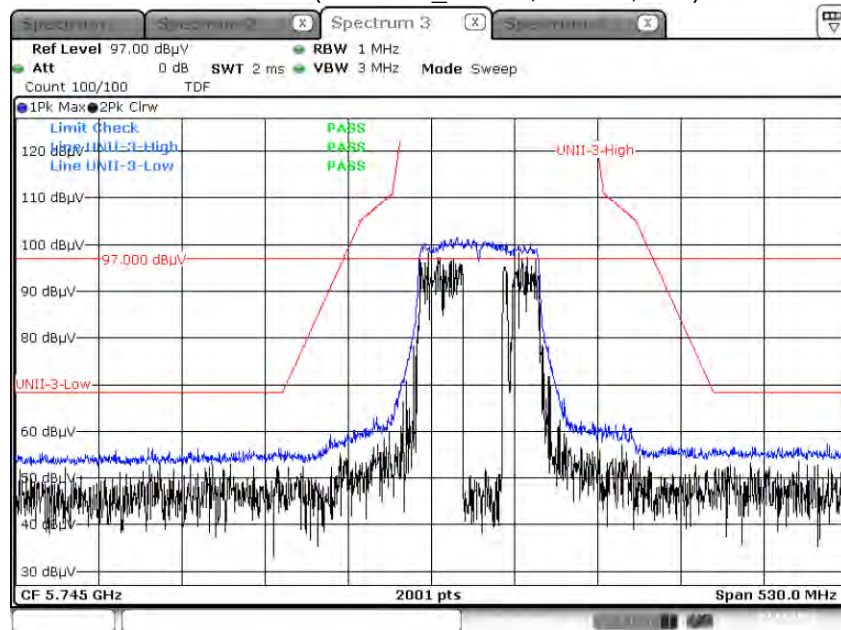
Date: 3.OCT.2023 11:38:45

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



Date: 3.OCT.2023 11:40:06

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



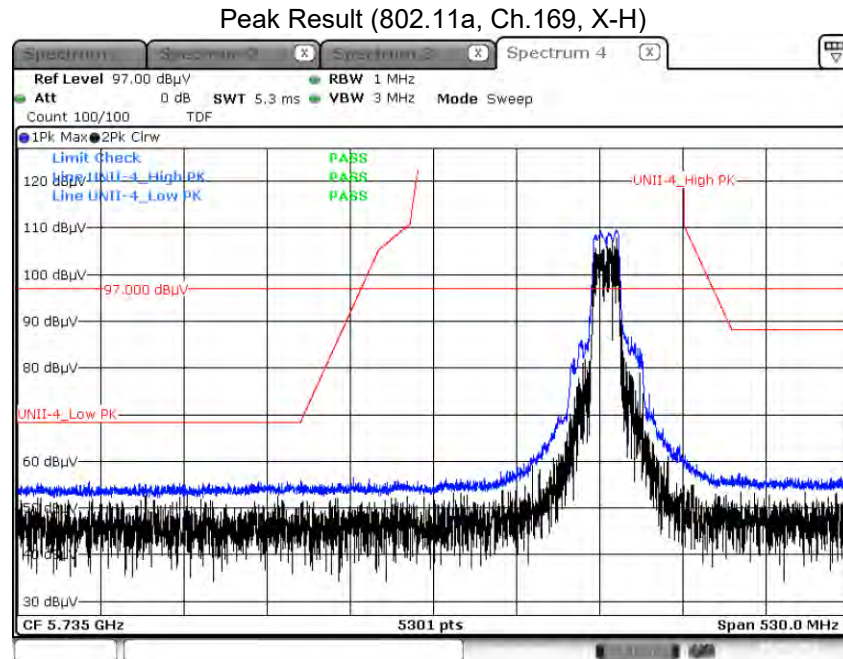
Date: 3.OCT.2023 11:04:58

Note :

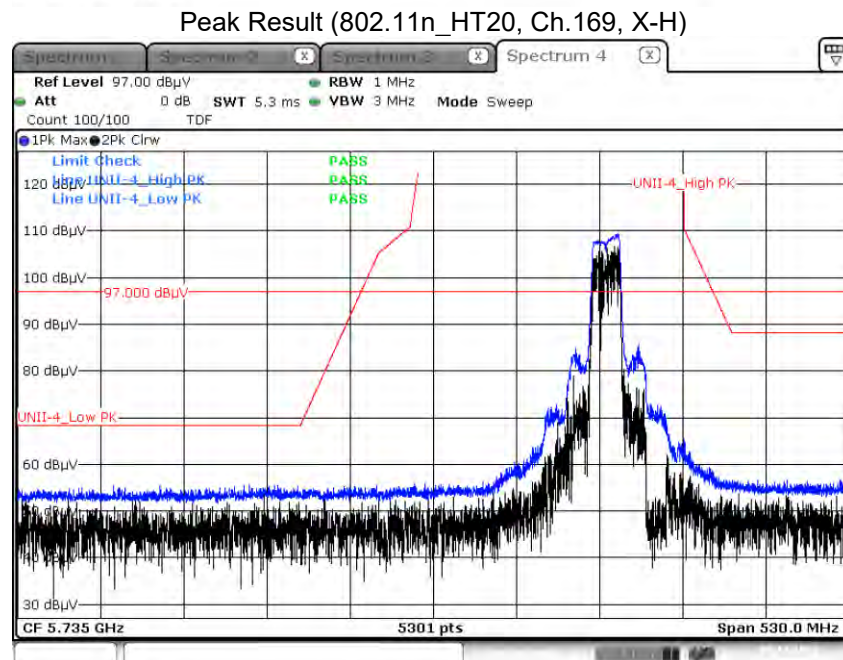
1. Only the worst case plots for U-NII-3 Out of Band e.i.r.p Emission.
2. U-NII-3 Low & High Band Edge RedLine is Final Test Limit about factor value compensation.

▣ Test Plots(UNII 4) – O.O.B.E

Peak Result

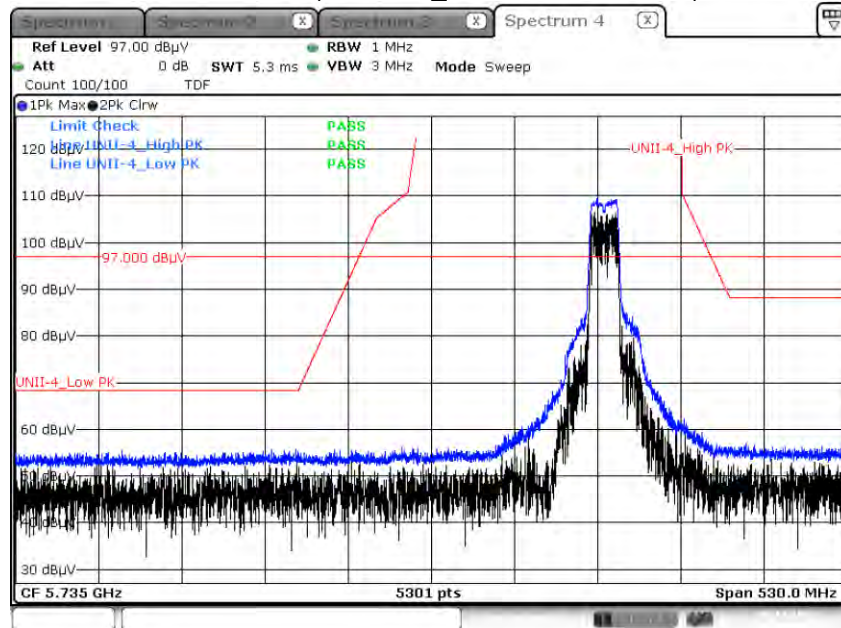


Date: 2.OCT.2023 14:57:22



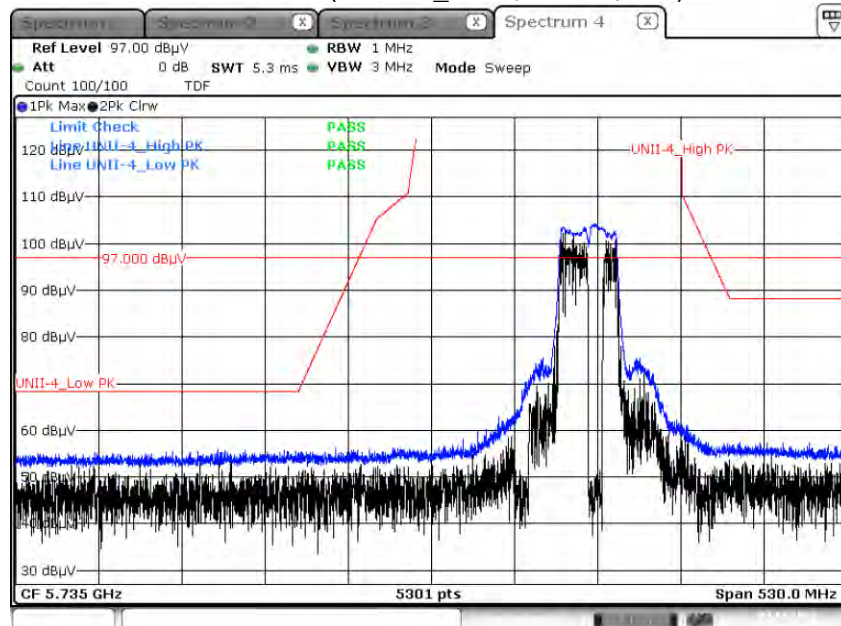
Date: 2.OCT.2023 14:58:22

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



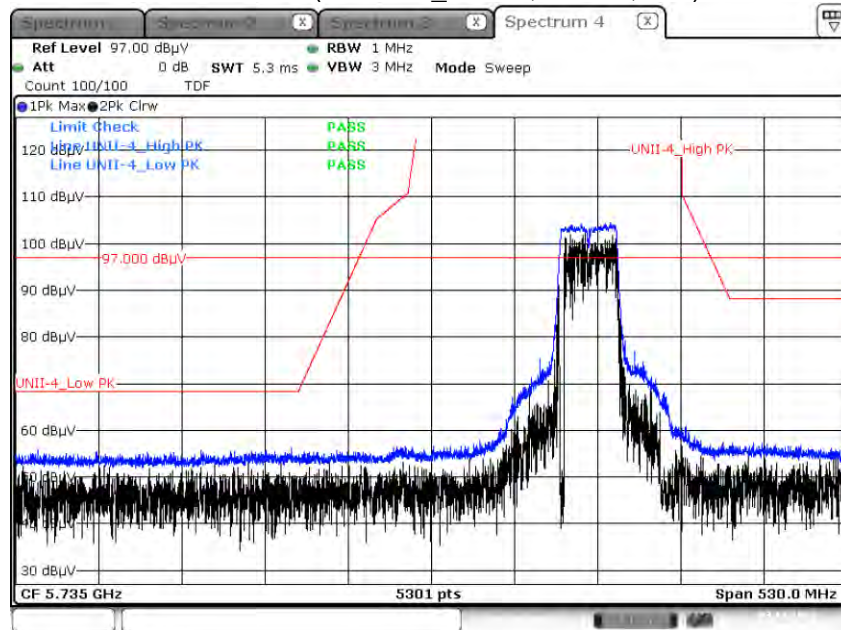
Date: 2.OCT.2023 14:59:23

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



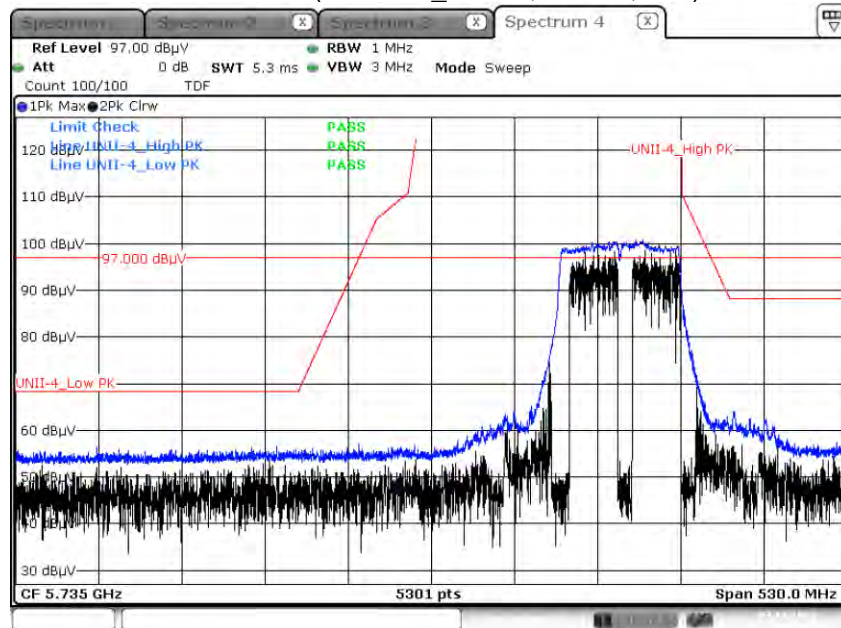
Date: 3.OCT.2023 11:45:25

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



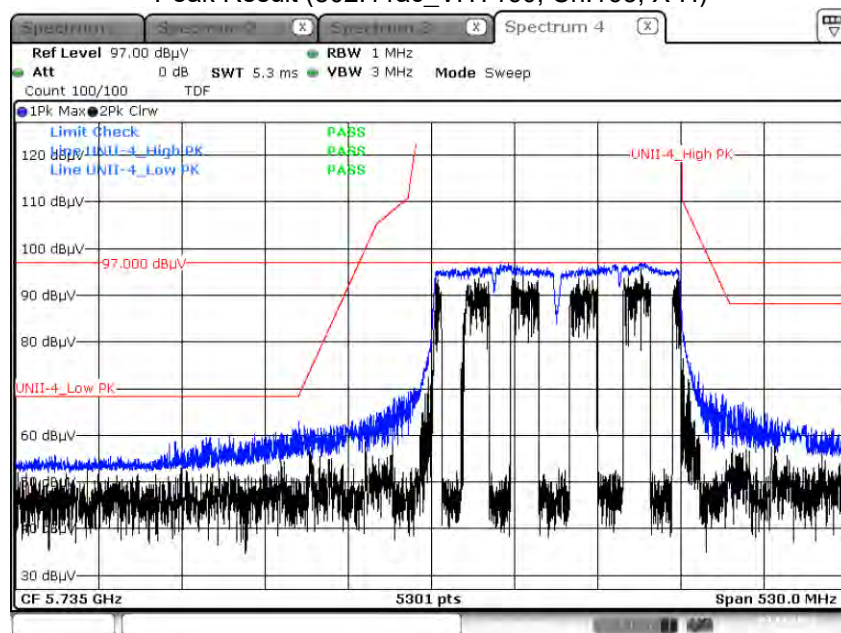
Date: 3.OCT.2023 11:47:03

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



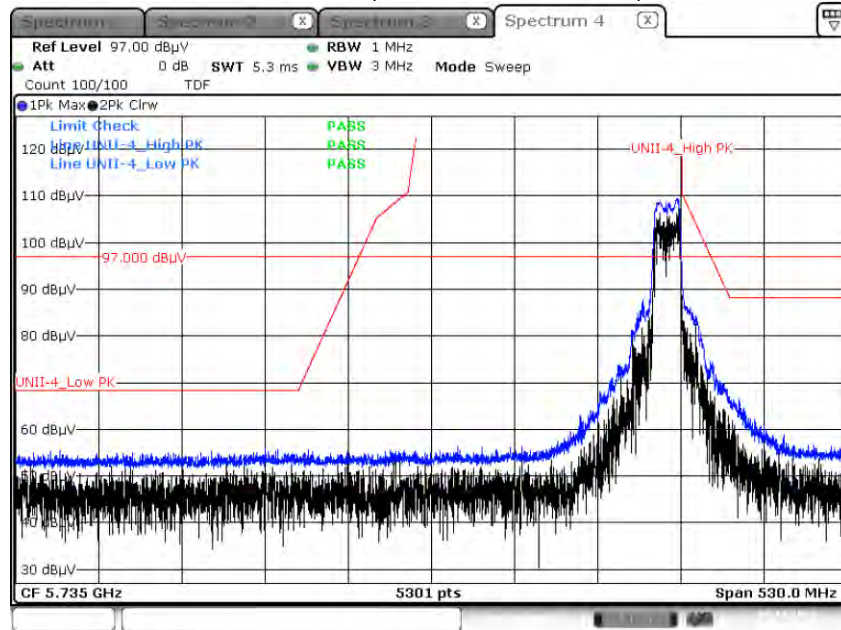
Date: 3.OCT.2023 10:45:12

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

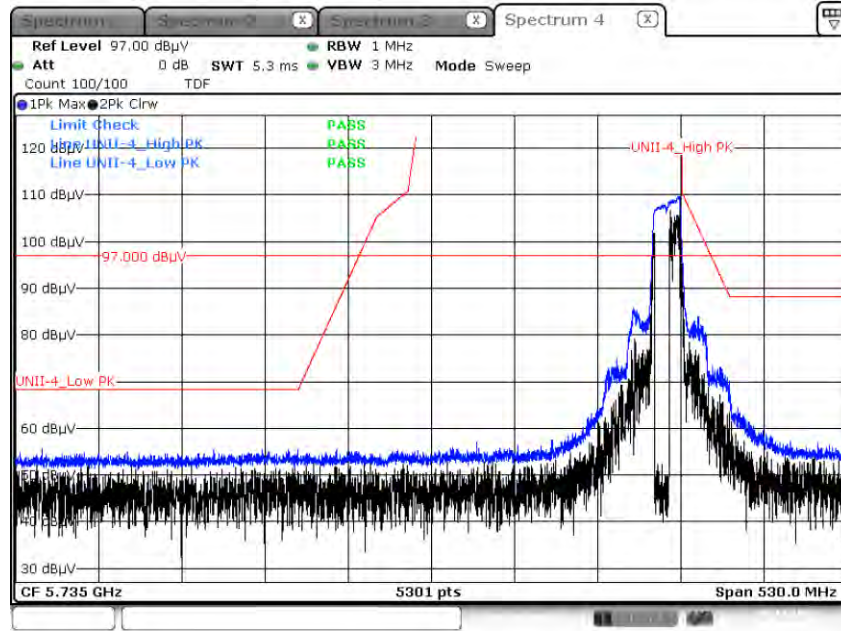


Date: 3.OCT.2023 10:36:36

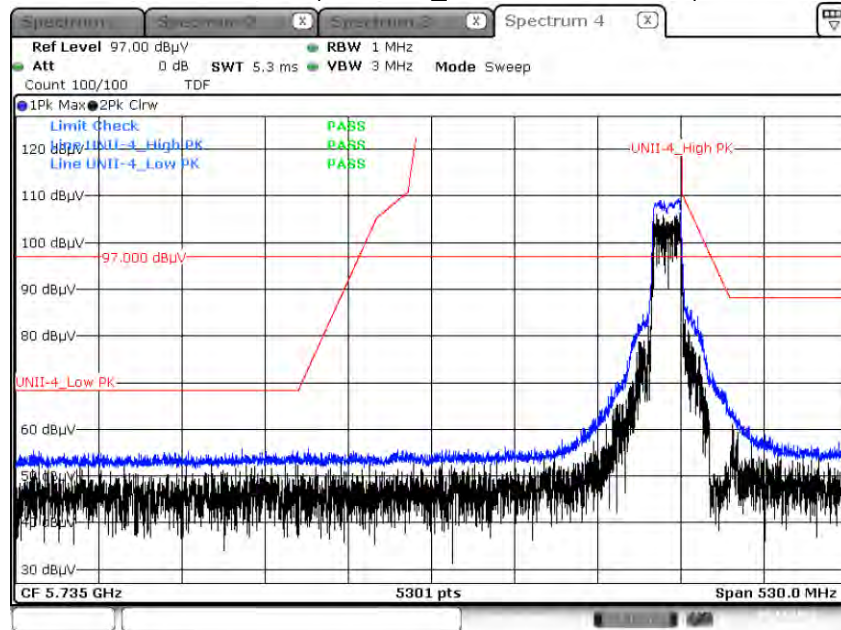
Peak Result (802.11a, Ch.177, X-H)



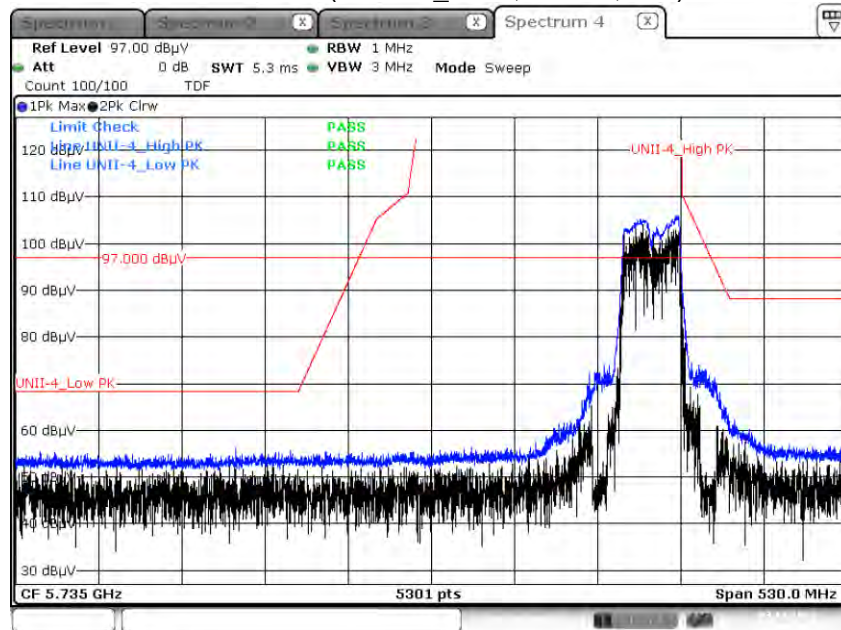
Peak Result (802.11n_HT20, Ch.177, X-H)

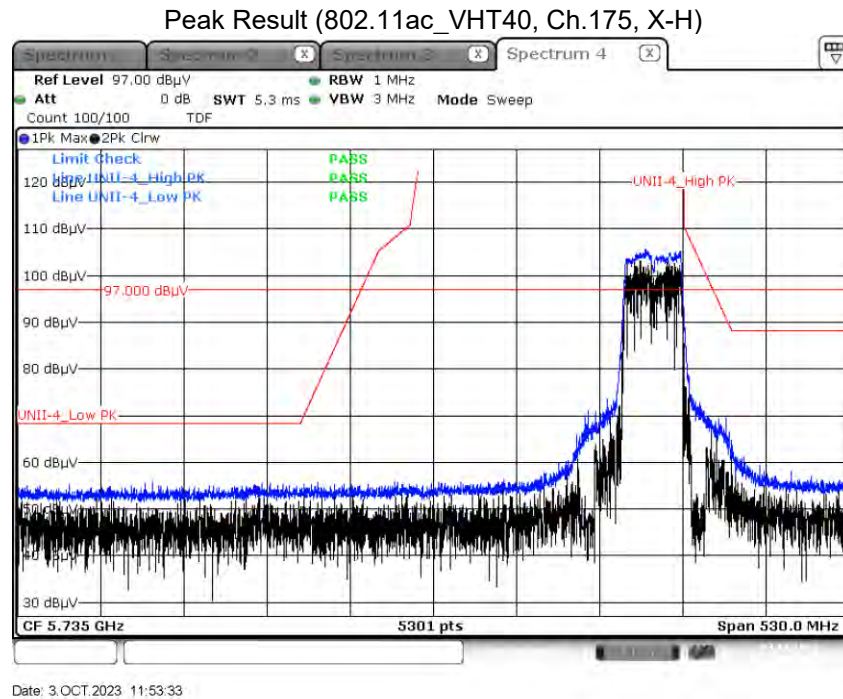


Peak Result (802.11ac_VHT20, Ch.177, X-H)



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



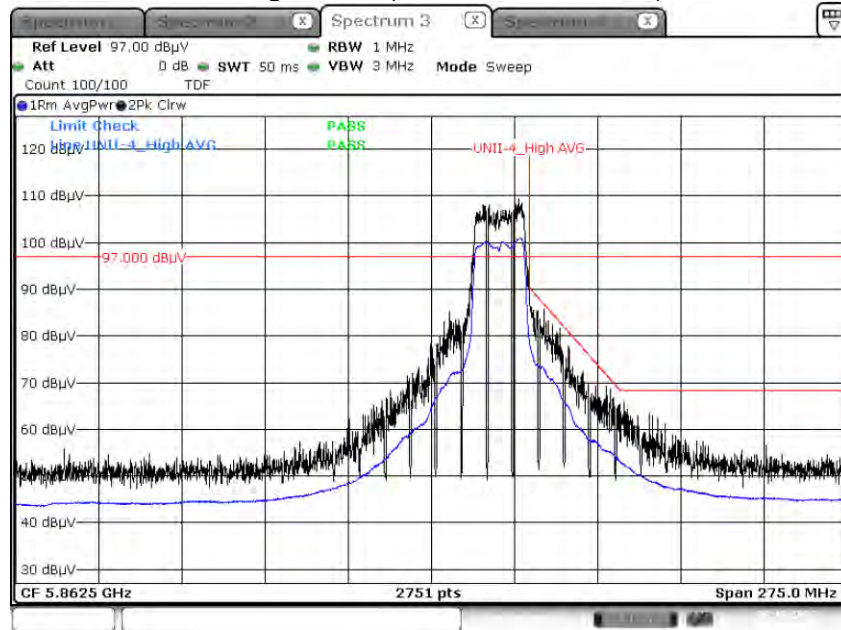


Note :

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.

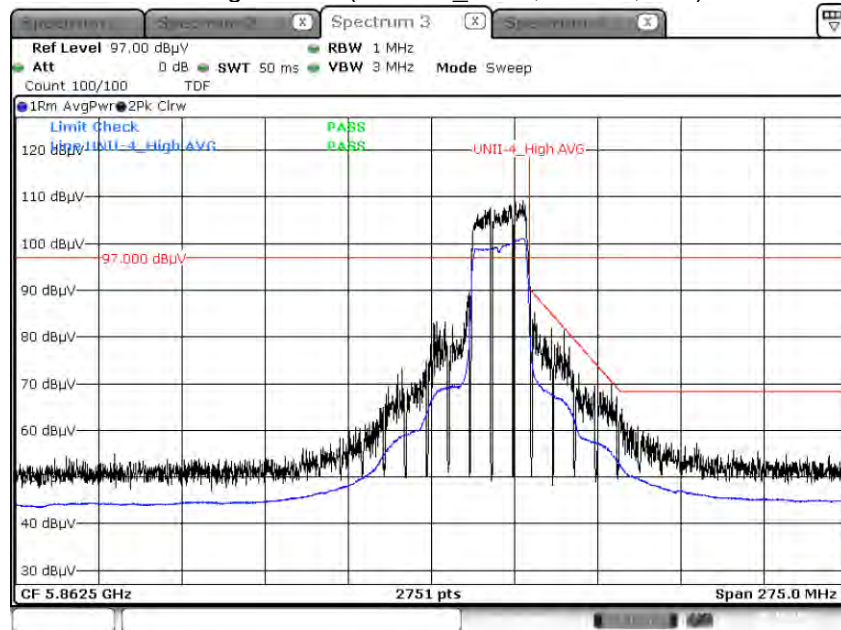
Average Result

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



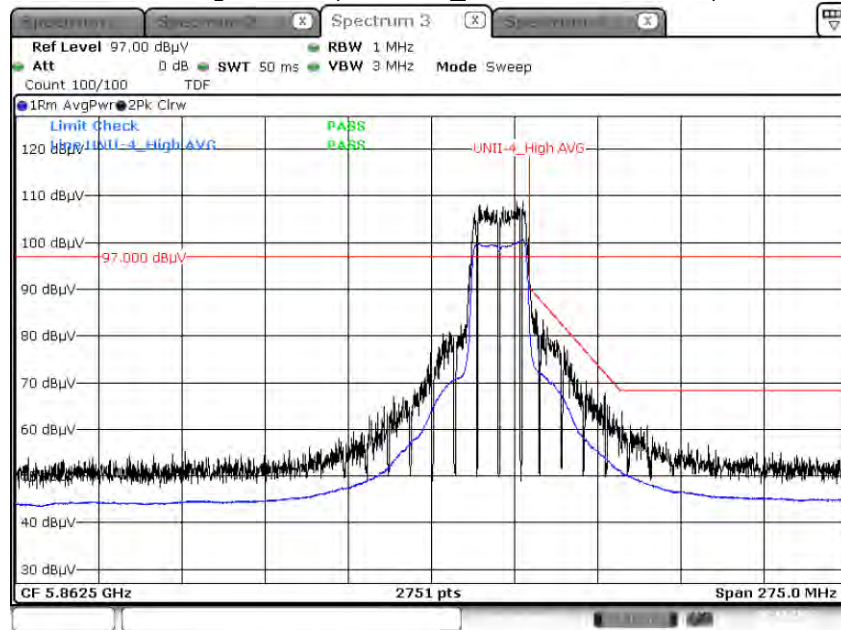
Date: 2 OCT.2023 15:06:58

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



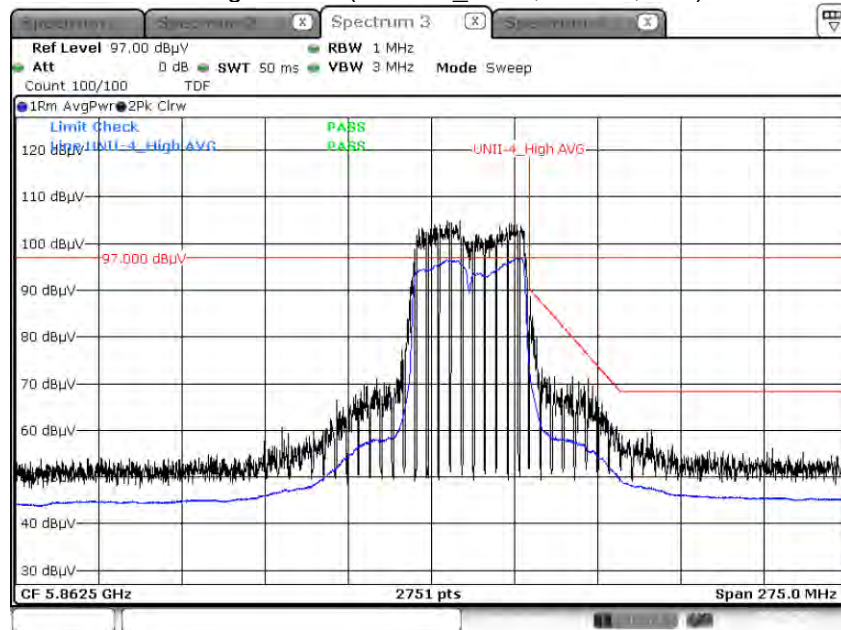
Date: 2 OCT.2023 15:08:30

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



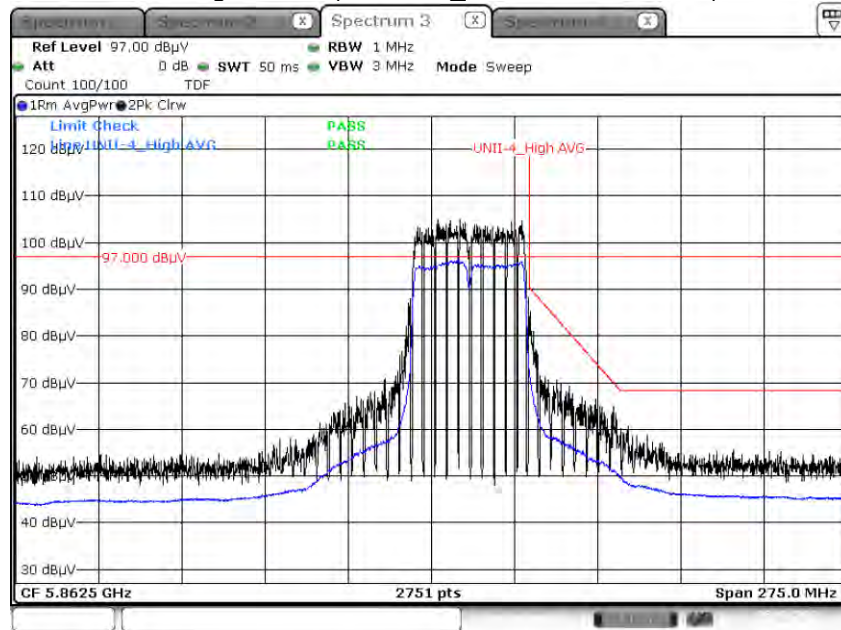
Date: 2.OCT.2023 15:10:07

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



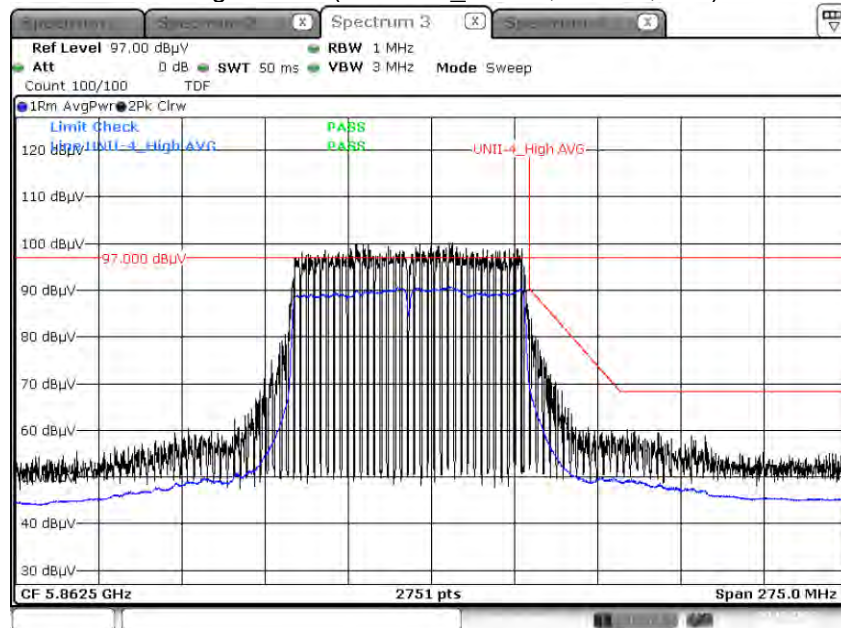
Date: 3.OCT.2023 11:52:14

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

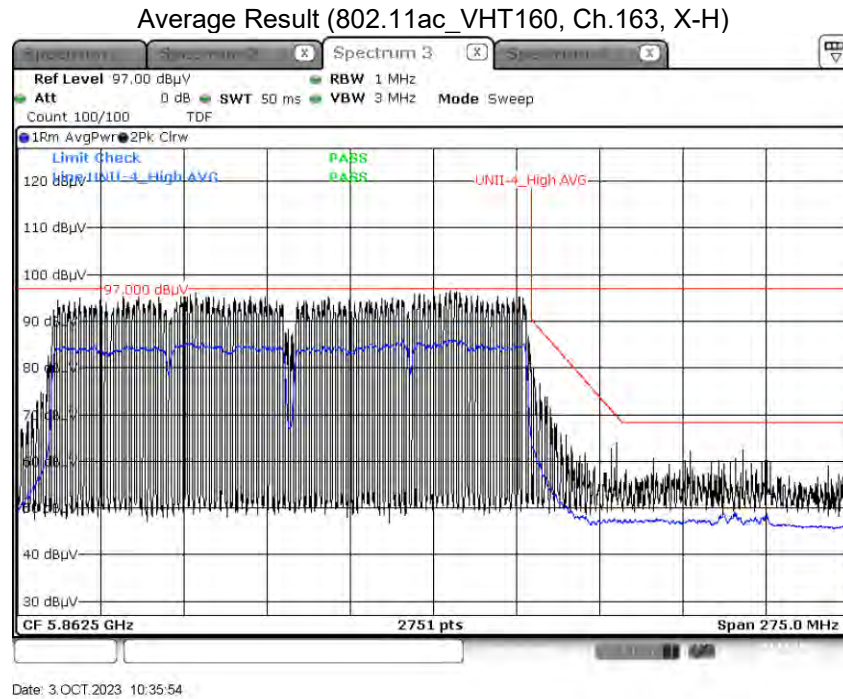


Date: 3.OCT.2023 11:53:15

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



Date: 3.OCT.2023 10:44:05



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

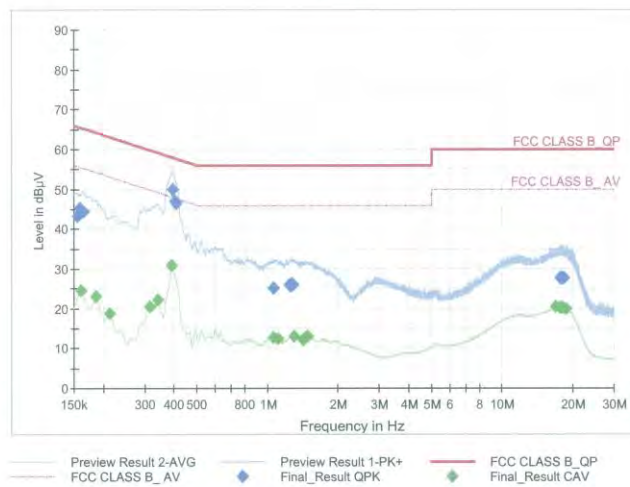
1 / 2

Test Report

Common Information

EUT : SM-S926U
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	43.25	65.75	22.51	9.000	N	9.6
0.1590	45.17	65.52	20.35	9.000	N	9.6
0.1635	44.35	65.28	20.93	9.000	N	9.6
0.3953	49.85	57.95	8.10	9.000	L1	9.6
0.4043	46.88	57.77	10.89	9.000	N	9.6
0.4088	46.31	57.67	11.36	9.000	L1	9.6
1.0603	25.08	56.00	30.92	9.000	N	9.7
1.2493	25.89	56.00	30.11	9.000	L1	9.7
1.2560	25.70	56.00	30.30	9.000	L1	9.7
1.2740	26.11	56.00	29.89	9.000	L1	9.7
1.2808	26.10	56.00	29.90	9.000	L1	9.7
1.2853	26.04	56.00	29.96	9.000	L1	9.7
17.6968	27.80	60.00	32.20	9.000	N	10.4
17.7575	27.77	60.00	32.23	9.000	N	10.4
17.9600	27.78	60.00	32.22	9.000	N	10.4
18.0050	27.70	60.00	32.30	9.000	N	10.4
18.2075	27.71	60.00	32.29	9.000	N	10.4
18.2998	27.77	60.00	32.23	9.000	N	10.4

2023-09-26

오후 3:44:52

Test

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Final Result CAV

Frequency (MHz)	CAverage (dBμV)	Limit (dBμV)	Margin (dB)	Bandwidth (kHz)	Line	Corr. (dB)
0.1613	24.47	55.40	30.93	9.000	N	9.6
0.1860	22.93	54.21	31.28	9.000	N	9.6
0.2130	18.63	53.09	34.46	9.000	N	9.6
0.3143	20.38	49.86	29.48	9.000	N	9.6
0.3413	22.17	49.17	27.00	9.000	N	9.6
0.3908	30.85	48.05	17.19	9.000	N	9.6
1.0603	12.59	46.00	33.41	9.000	N	9.7
1.1053	12.41	46.00	33.59	9.000	N	9.7
1.3010	12.94	46.00	33.06	9.000	N	9.7
1.4203	12.16	46.00	33.84	9.000	N	9.7
1.4630	12.68	46.00	33.32	9.000	N	9.7
1.4968	12.96	46.00	33.04	9.000	N	9.7
16.8778	20.42	50.00	29.58	9.000	N	10.4
17.6675	20.13	50.00	29.87	9.000	N	10.4
17.9465	20.17	50.00	29.83	9.000	N	10.4
17.9713	20.06	50.00	29.94	9.000	N	10.4
18.0568	20.27	50.00	29.73	9.000	N	10.4
18.6058	20.01	50.00	29.99	9.000	N	10.4

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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:

- 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.

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-FC012-P