

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

Frequency [MHz]	Measured Level [dBμV]	A.F+C.L -A.G+D.F [dB]	ANT. POL [H/V]	Total [dBμV/m]	Limit [dBμV/m]	Margin [dB]	Measurement Type
10480	56.22	5.17	V	61.39	68.20	6.81	PK
15720	52.36	3.76	V	56.12	73.98	17.86	PK
15720	37.73	3.76	V	41.49	53.98	12.49	AV
10480	55.21	5.17	H	60.38	68.20	7.82	PK
15720	52.92	3.76	H	56.68	73.98	17.30	PK
15720	37.65	3.76	H	41.41	53.98	12.57	AV

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

Frequency [MHz]	Measured Level [dBμV]	A.F+C.L -A.G+D.F [dB]	ANT. POL [H/V]	Total [dBμV/m]	Limit [dBμV/m]	Margin [dB]	Measurement Type
10520	56.26	4.93	V	61.19	68.20	7.01	PK
15780	52.19	4.08	V	56.27	73.98	17.71	PK
15780	37.89	4.08	V	41.97	53.98	12.01	AV
10520	55.30	4.93	H	60.23	68.20	7.97	PK
15780	53.20	4.08	H	57.28	73.98	16.70	PK
15780	38.18	4.08	H	42.26	53.98	11.72	AV

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

Frequency [MHz]	Measured Level [dBμV]	A.F+C.L -A.G+D.F [dB]	ANT. POL [H/V]	Total [dBμV/m]	Limit [dBμV/m]	Margin [dB]	Measurement Type
10600	54.50	5.16	V	59.66	73.98	14.32	PK
10600	40.91	5.16	V	46.07	53.98	7.91	AV
15900	50.40	5.46	V	55.86	73.98	18.12	PK
15900	36.23	5.46	V	41.69	53.98	12.29	AV
10600	54.05	5.16	H	59.21	73.98	14.77	PK
10600	40.61	5.16	H	45.77	53.98	8.21	AV
15900	50.49	5.46	H	55.95	73.98	18.03	PK
15900	36.36	5.46	H	41.82	53.98	12.16	AV

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

Frequency [MHz]	Measured Level [dBμV]	A.F+C.L -A.G+D.F [dB]	ANT. POL [H/V]	Total [dBμV/m]	Limit [dBμV/m]	Margin [dB]	Measurement Type
10640	54.12	5.36	V	59.48	73.98	14.50	PK
10640	40.68	5.36	V	46.04	53.98	7.94	AV
15960	50.62	4.92	V	55.54	73.98	18.44	PK
15960	36.58	4.92	V	41.50	53.98	12.48	AV
10640	54.44	5.36	H	59.80	73.98	14.18	PK
10640	41.00	5.36	H	46.36	53.98	7.62	AV
15960	51.60	4.92	H	56.52	73.98	17.46	PK
15960	37.57	4.92	H	42.49	53.98	11.49	AV

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

Frequency [MHz]	Measured Level [dBμV]	A.F+C.L -A.G+D.F [dB]	ANT. POL [H/V]	Total [dBμV/m]	Limit [dBμV/m]	Margin [dB]	Measurement Type
11000	52.17	5.57	V	57.74	73.98	16.24	PK
11000	38.41	5.57	V	43.98	53.98	10.00	AV
16500	50.30	7.18	V	57.48	68.20	10.72	PK
11000	49.91	5.57	H	55.48	73.98	18.50	PK
11000	37.06	5.57	H	42.63	53.98	11.35	AV
16500	49.60	7.18	H	56.78	68.20	11.42	PK

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

Frequency [MHz]	Measured Level [dBμV]	A.F+C.L -A.G+D.F [dB]	ANT. POL [H/V]	Total [dBμV/m]	Limit [dBμV/m]	Margin [dB]	Measurement Type
11200	50.50	5.43	V	55.93	73.98	18.05	PK
11200	36.37	5.43	V	41.80	53.98	12.18	AV
16800	47.21	8.86	V	56.07	68.20	12.13	PK
11200	50.01	5.43	H	55.44	73.98	18.54	PK
11200	36.16	5.43	H	41.59	53.98	12.39	AV
16800	47.64	8.86	H	56.50	68.20	11.70	PK

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

Frequency [MHz]	Measured Level [dB μ V]	A.F+C.L -A.G+D.F. [dB]	ANT. POL [H/V]	Total [dB μ V/m]	Limit [dB μ V/m]	Margin [dB]	Measurement Type
11440	52.03	5.08	V	57.11	73.98	16.87	PK
11440	36.18	5.08	V	41.26	53.98	12.72	AV
17160	47.55	8.92	V	56.47	68.20	11.73	PK
11440	51.67	5.08	H	56.75	73.98	17.23	PK
11440	35.66	5.08	H	40.74	53.98	13.24	AV
17160	47.02	8.92	H	55.94	68.20	12.26	PK

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

Frequency [MHz]	Measured Level [dB μ V]	A.F+C.L -A.G+D.F. [dB]	ANT. POL [H/V]	Total [dB μ V/m]	Limit [dB μ V/m]	Margin [dB]	Measurement Type
11490	51.42	5.07	V	56.49	73.98	17.49	PK
11490	36.15	5.07	V	41.22	53.98	12.76	AV
17235	49.96	9.49	V	59.45	68.20	8.75	PK
11490	50.78	5.07	H	55.85	73.98	18.13	PK
11490	35.69	5.07	H	40.76	53.98	13.22	AV
17235	49.42	9.49	H	58.91	68.20	9.29	PK

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

Frequency [MHz]	Measured Level [dBμV]	A.F+C.L -A.G+D.F [dB]	ANT. POL [H/V]	Total [dBμV/m]	Limit [dBμV/m]	Margin [dB]	Measurement Type
11570	51.59	5.07	V	56.66	73.98	17.32	PK
11570	36.44	5.07	V	41.51	53.98	12.47	AV
17355	50.05	10.50	V	60.55	68.20	7.65	PK
11570	51.53	5.07	H	56.60	73.98	17.38	PK
11570	37.01	5.07	H	42.08	53.98	11.90	AV
17355	49.46	10.78	H	60.24	68.20	7.96	PK

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

Frequency [MHz]	Measured Level [dBμV]	A.F+C.L -A.G+D.F [dB]	ANT. POL [H/V]	Total [dBμV/m]	Limit [dBμV/m]	Margin [dB]	Measurement Type
11650	51.58	4.76	V	56.34	73.98	17.64	PK
11650	37.16	4.76	V	41.92	53.98	12.06	AV
17475	52.57	10.29	V	62.86	68.20	5.34	PK
11650	54.72	4.76	H	59.48	73.98	14.50	PK
11650	40.69	4.76	H	45.45	53.98	8.53	AV
17475	52.94	10.29	H	63.23	68.20	4.97	PK

Note:

All Modes of operation were investigated and the worst case configuration results are reported.

[Worst case]

UNII 1, UNII 2A, UNII 2C, UNII 3 : 802.11a_6Mbps

[DBS Mode] – Tese case 1

802.11b Ch.11 2 462 GHz Ant 1 & 802.11a Ch.165 5 825 GHz UNII-1 Ant ALL

Frequency [MHz]	Measured Level [dBμV]	A.F.+C.L. -A.G+D.F [dB]	ANT. POL [H/V]	Total [dBμV/m]	Limit [dBμV/m]	Margin [dB]	Measurement Type
11650	50.01	4.76	V	54.77	73.98	19.21	PK
11650	36.12	4.76	V	40.88	53.98	13.10	AV
17235	49.81	10.29	V	60.10	68.20	8.10	PK
11650	50.54	4.76	H	55.30	73.98	18.68	PK
11650	36.44	4.76	H	41.20	53.98	12.78	AV
17235	48.84	10.29	H	59.13	68.20	9.07	PK

[DBS Mode] – Tese case 2

802.11g Ch.6 2 437 GHz Ant ALL & 802.11a Ch.165 5 825 GHz UNII-1 Ant ALL

Frequency [MHz]	Measured Level [dBμV]	A.F.+C.L. -A.G+D.F [dB]	ANT. POL [H/V]	Total [dBμV/m]	Limit [dBμV/m]	Margin [dB]	Measurement Type
11650	49.88	4.76	V	54.64	73.98	19.34	PK
11650	35.64	4.76	V	40.40	53.98	13.58	AV
17355	48.98	10.29	V	59.27	68.20	8.93	PK
11650	50.65	4.76	H	55.41	73.98	18.57	PK
11650	36.41	4.76	H	41.17	53.98	12.81	AV
17355	49.13	10.29	H	59.42	68.20	8.78	PK

[Non-DBS Mode] – Tese case 3

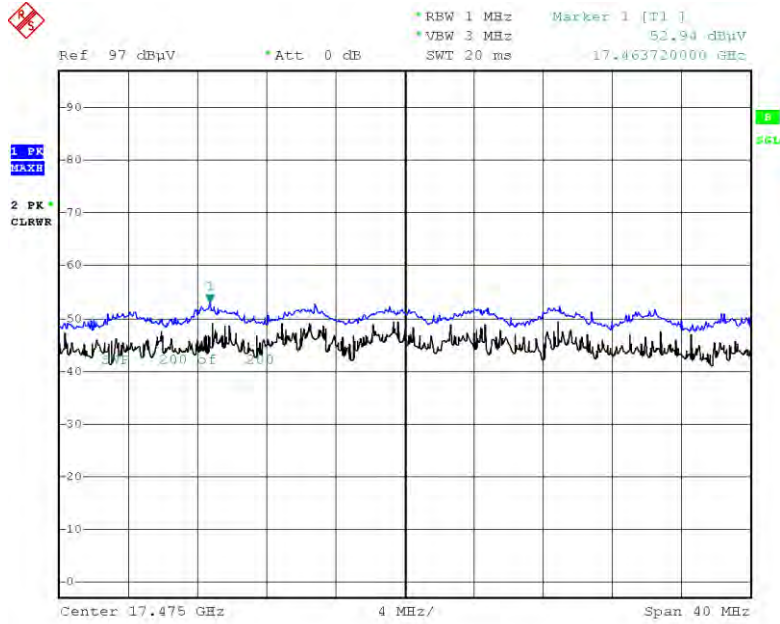
WLAN/BT Ant : Bluetooth GFSK Ch.78 2 480 GHz & 802.11a Ch.165 5 825 GHz UNII-1 Ant ALL

Frequency [MHz]	Measured Level [dBμV]	A.F.+C.L. -A.G+D.F [dB]	ANT. POL [H/V]	Total [dBμV/m]	Limit [dBμV/m]	Margin [dB]	Measurement Type
11650	54.57	4.76	V	59.33	73.98	14.65	PK
11650	40.59	4.76	V	45.35	53.98	8.63	AV
17475	51.95	10.29	V	62.24	68.20	5.96	PK
11650	54.88	4.76	H	59.64	73.98	14.34	PK
11650	41.16	4.76	H	45.92	53.98	8.06	AV
17475	51.88	10.29	H	62.17	68.20	6.03	PK

Note : Bluetooth Non-DBS Data refer to [BT] Test Report.

☐ Test Plots [Ant.1&Ant.2_MIMO(CDD)]

Peak Result (802.11a, Ch.165 3rd Harmonic, Y-H)



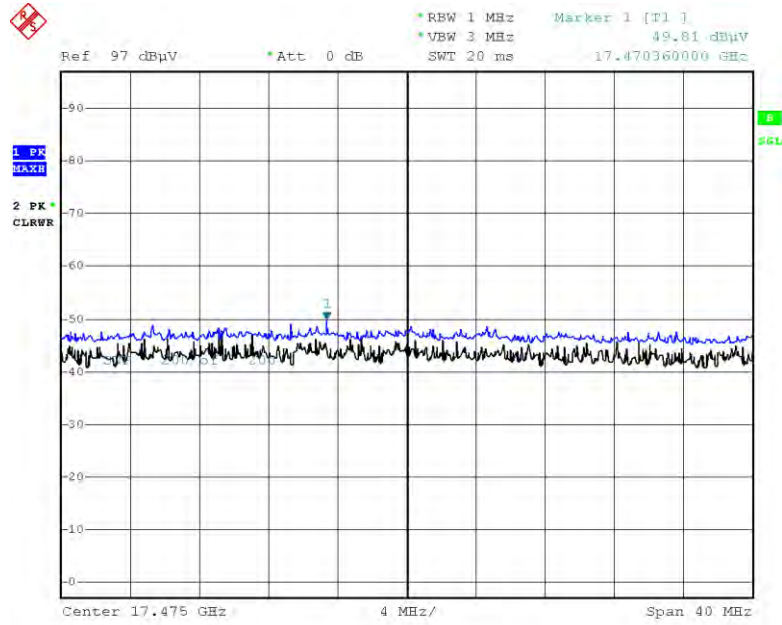
Date: 30.AUG.2021 13:12:14

Note:

Only the worst case plots for Radiated Spurious Emissions.

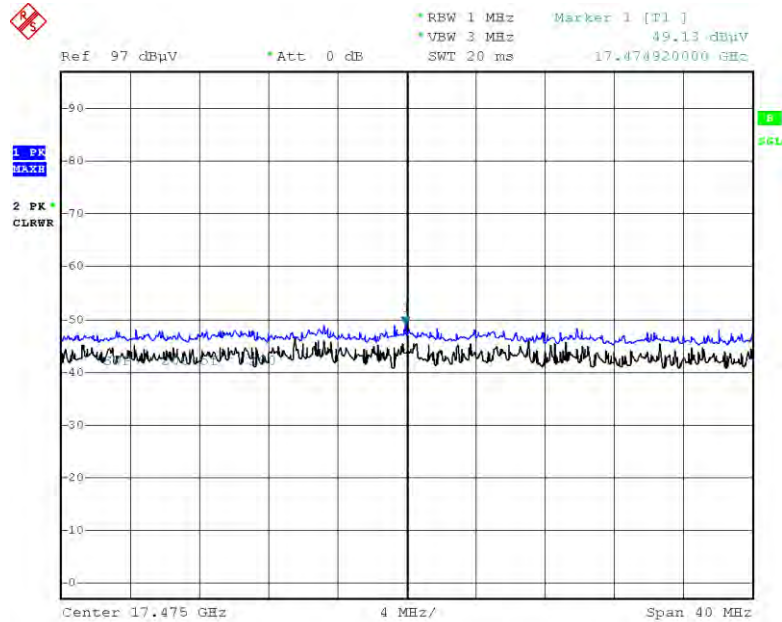
■ Test Plots (DBS)

Radiated Spurious Emissions plot – Peak Result (Test case 1_ 3rd Harmonic, V)



Date: 30.AUG.2021 16:52:15

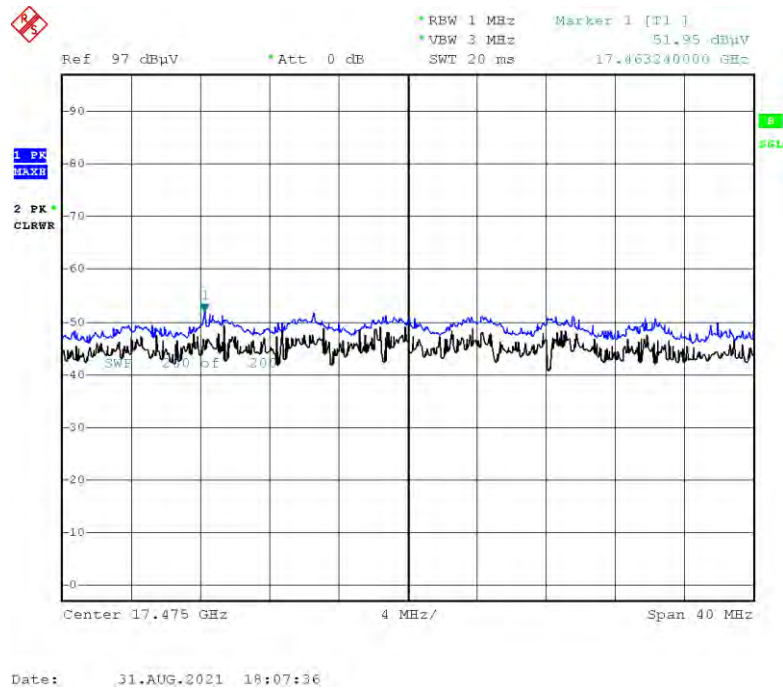
Radiated Spurious Emissions plot – Peak Result (Test case 2_ 3rd Harmonic, Y)



Date: 30.AUG.2021 17:20:44

■ Test Plots (Non-DBS, Z-V)

Radiated Spurious Emissions plot – Peak Result (Test case 3_ 3rd Harmonic)



Note:

Only the worst case plots for Radiated Spurious Emissions.

10.8 RADIATED RESTRICTED BAND EDGE
[Ant.1&Ant.2_MIMO(CDD)]

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

Frequency [MHz]	Measured Level dB μ V	A.F+ C.L+ D.F-A.G + ATT [dB]	ANT. POL [H/V]	Total [dB μ V/m]	Limit [dB μ V/m]	Margin [dB]	Measurement Type
5150	51.39	12.12	H	63.51	73.98	10.47	PK
5150	35.96	12.12	H	48.08	53.98	5.90	AV
5150	50.68	12.12	V	62.80	73.98	11.18	PK
5150	33.89	12.12	V	46.01	53.98	7.97	AV

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

Frequency [MHz]	Measured Level dB μ V	A.F+ C.L+ D.F-A.G + ATT [dB]	ANT. POL [H/V]	Total [dB μ V/m]	Limit [dB μ V/m]	Margin [dB]	Measurement Type
5350	54.37	12.14	H	66.51	73.98	7.47	PK
5350	37.07	12.14	H	49.21	53.98	4.77	AV
5350	53.74	12.14	V	65.88	73.98	8.10	PK
5350	36.64	12.14	V	48.78	53.98	5.20	AV

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

Frequency [MHz]	Measured Level DB μ V	A.F+ C.L+ D.F-A.G + ATT [dB]	ANT. POL [H/V]	Total [dB μ V/m]	Limit [dB μ V/m]	Margin [dB]	Measurement Type
5460	47.03	12.67	H	59.70	73.98	14.28	PK
5460	33.77	12.67	H	46.44	53.98	7.54	AV
5470	52.25	12.70	H	64.95	68.20	3.25	PK
5460	46.38	12.67	V	59.05	73.98	14.93	PK
5460	32.75	12.67	V	45.42	53.98	8.56	AV
5470	50.98	12.70	V	63.68	68.20	4.52	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 Level dB μ V	A.F+ C.L+ D.F-A.G + ATT [dB]	ANT. POL [H/V]	Total [dB μ V/m]	Limit [dB μ V/m]	Margin [dB]	Measurement Type
5150	50.29	12.12	H	62.41	73.98	11.57	PK
5150	36.47	12.12	H	48.59	53.98	5.39	AV
5150	49.57	12.12	V	61.69	73.98	12.29	PK
5150	35.98	12.12	V	48.10	53.98	5.88	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 Level dB μ V	A.F+ C.L+ D.F-A.G + ATT [dB]	ANT. POL [H/V]	Total [dB μ V/m]	Limit [dB μ V/m]	Margin [dB]	Measurement Type
5350	52.30	12.14	H	64.44	73.98	9.54	PK
5350	37.52	12.14	H	49.66	53.98	4.32	AV
5350	51.74	12.14	V	63.88	73.98	10.10	PK
5350	36.88	12.14	V	49.02	53.98	4.96	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 Level dB μ V	A.F+ C.L+ D.F-A.G + ATT [dB]	ANT. POL [H/V]	Total [dB μ V/m]	Limit [dB μ V/m]	Margin [dB]	Measurement Type
5460	46.66	12.67	H	59.33	73.98	14.65	PK
5460	33.58	12.67	H	46.25	53.98	7.73	AV
5470	51.70	12.70	H	64.40	68.20	3.80	PK
5460	45.98	12.67	V	58.65	73.98	15.33	PK
5460	32.71	12.67	V	45.38	53.98	8.60	AV
5470	50.58	12.70	V	63.28	68.20	4.92	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 Level dB μ V	A.F+ C.L+ D.F-A.G + ATT [dB]	ANT. POL [H/V]	Total [dB μ V/m]	Limit [dB μ V/m]	Margin [dB]	Measurement Type
5150	49.68	12.12	H	61.80	73.98	12.18	PK
5150	36.16	12.12	H	48.28	53.98	5.70	AV
5150	48.99	12.12	V	61.11	73.98	12.87	PK
5150	35.90	12.12	V	48.02	53.98	5.96	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 Level dB μ V	A.F+ C.L+ D.F-A.G + ATT [dB]	ANT. POL [H/V]	Total [dB μ V/m]	Limit [dB μ V/m]	Margin [dB]	Measurement Type
5350	56.65	12.14	H	68.79	73.98	5.19	PK
5350	37.07	12.14	H	49.21	53.98	4.77	AV
5350	55.42	12.14	V	67.56	73.98	6.42	PK
5350	36.48	12.14	V	48.62	53.98	5.36	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 Level dB μ V	A.F+ C.L+ D.F-A.G + ATT [dB]	ANT. POL [H/V]	Total [dB μ V/m]	Limit [dB μ V/m]	Margin [dB]	Measurement Type
5460	46.53	12.67	H	59.20	73.98	14.78	PK
5460	33.59	12.67	H	46.26	53.98	7.72	AV
5470	51.71	12.70	H	64.41	68.20	3.79	PK
5460	45.93	12.67	V	58.60	73.98	15.38	PK
5460	32.71	12.67	V	45.38	53.98	8.60	AV
5470	50.79	12.70	V	63.49	68.20	4.71	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 Level dB μ V	A.F+ C.L+ D.F-A.G + ATT [dB]	ANT. POL [H/V]	Total [dB μ V/m]	Limit [dB μ V/m]	Margin [dB]	Measurement Type
5150	52.68	12.12	H	64.80	73.98	9.18	PK
5150	34.62	12.12	H	46.74	53.98	7.24	AV
5150	51.90	12.12	V	64.02	73.98	9.96	PK
5150	33.58	12.12	V	45.70	53.98	8.28	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 Level dB μ V	A.F+ C.L+ D.F-A.G + ATT [dB]	ANT. POL [H/V]	Total [dB μ V/m]	Limit [dB μ V/m]	Margin [dB]	Measurement Type
5350	56.45	12.14	H	68.59	73.98	5.39	PK
5350	35.23	12.14	H	47.37	53.98	6.61	AV
5350	55.82	12.14	V	67.96	73.98	6.02	PK
5350	34.48	12.14	V	46.62	53.98	7.36	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 Level dB μ V	A.F+ C.L+ D.F-A.G + ATT [dB]	ANT. POL [H/V]	Total [dB μ V/m]	Limit [dB μ V/m]	Margin [dB]	Measurement Type
5460	45.43	12.67	H	58.10	73.98	15.88	PK
5460	32.64	12.67	H	45.31	53.98	8.67	AV
5470	45.55	12.70	H	58.25	68.20	9.95	PK
5460	44.97	12.67	V	57.64	73.98	16.34	PK
5460	31.68	12.67	V	44.35	53.98	9.63	AV
5470	45.08	12.70	V	57.78	68.20	10.42	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 Level dB μ V	A.F+ C.L+ D.F-A.G + ATT [dB]	ANT. POL [H/V]	Total [dB μ V/m]	Limit [dB μ V/m]	Margin [dB]	Measurement Type
5150	54.47	12.12	H	66.59	73.98	7.39	PK
5150	37.04	12.12	H	49.16	53.98	4.82	AV
5150	54.01	12.12	V	66.13	73.98	7.85	PK
5150	36.29	12.12	V	48.41	53.98	5.57	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 Level dB μ V	A.F+ C.L+ D.F-A.G + ATT [dB]	ANT. POL [H/V]	Total [dB μ V/m]	Limit [dB μ V/m]	Margin [dB]	Measurement Type
5350.5	57.59	12.14	H	69.73	73.98	4.25	PK
5350	35.70	12.14	H	47.84	53.98	6.14	AV
5350	56.82	12.14	V	68.96	73.98	5.02	PK
5350	35.05	12.14	V	47.19	53.98	6.79	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 Level dB μ V	A.F+ C.L+ D.F-A.G + ATT [dB]	ANT. POL [H/V]	Total [dB μ V/m]	Limit [dB μ V/m]	Margin [dB]	Measurement Type
5460	45.31	12.67	H	57.98	73.98	16.00	PK
5460	32.76	12.67	H	45.43	53.98	8.55	AV
5470	48.39	12.70	H	61.09	68.20	7.11	PK
5460	44.80	12.67	V	57.47	73.98	16.51	PK
5460	31.69	12.67	V	44.36	53.98	9.62	AV
5470	48.21	12.70	V	60.91	68.20	7.29	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 Level dB μ V	A.F+ C.L+ D.F-A.G + ATT [dB]	ANT. POL [H/V]	Total [dB μ V/m]	Limit [dB μ V/m]	Margin [dB]	Measurement Type
5150	48.07	12.12	H	60.19	73.98	13.79	PK
5150	35.65	12.12	H	47.77	53.98	6.21	AV
5150	47.47	12.12	V	59.59	73.98	14.39	PK
5150	35.08	12.12	V	47.20	53.98	6.78	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 Level dB μ V	A.F+ C.L+ D.F-A.G + ATT [dB]	ANT. POL [H/V]	Total [dB μ V/m]	Limit [dB μ V/m]	Margin [dB]	Measurement Type
5350	51.44	12.14	H	63.58	73.98	10.40	PK
5350	35.52	12.14	H	47.66	53.98	6.32	AV
5350	50.73	12.14	V	62.87	73.98	11.11	PK
5350	34.63	12.14	V	46.77	53.98	7.21	AV

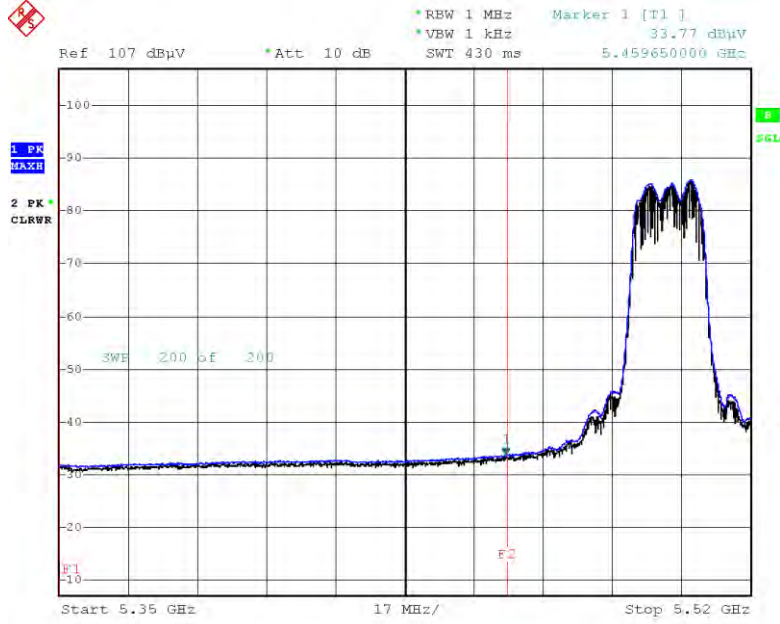
Band :	UNII 2C
Operation Mode:	802.11 ac_VHT80
Transfer MCS Index:	0
Operating Frequency	5530 MHz
Channel No.	106 Ch

Frequency [MHz]	Measured Level dB μ V	A.F+ C.L+ D.F-A.G + ATT [dB]	ANT. POL [H/V]	Total [dB μ V/m]	Limit [dB μ V/m]	Margin [dB]	Measurement Type
5460	46.12	12.67	H	58.79	73.98	15.19	PK
5460	34.99	12.67	H	47.66	53.98	6.32	AV
5470	48.62	12.70	H	61.32	68.20	6.88	PK
5460	45.85	12.67	V	58.52	73.98	15.46	PK
5460	34.35	12.67	V	47.02	53.98	6.96	AV
5470	47.00	12.70	V	59.70	68.20	8.50	PK

[Ant.1&Ant.2_MIMO(CDD)]

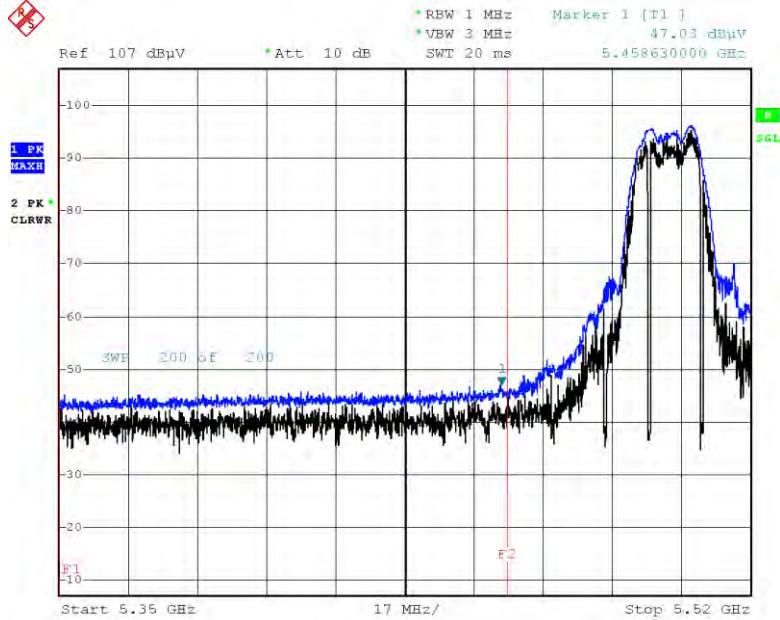
☑ Test Plots(UNII 1, 2A, 2C)

Average Result (802.11 a_6 Mbps, Ch.100, X-H)



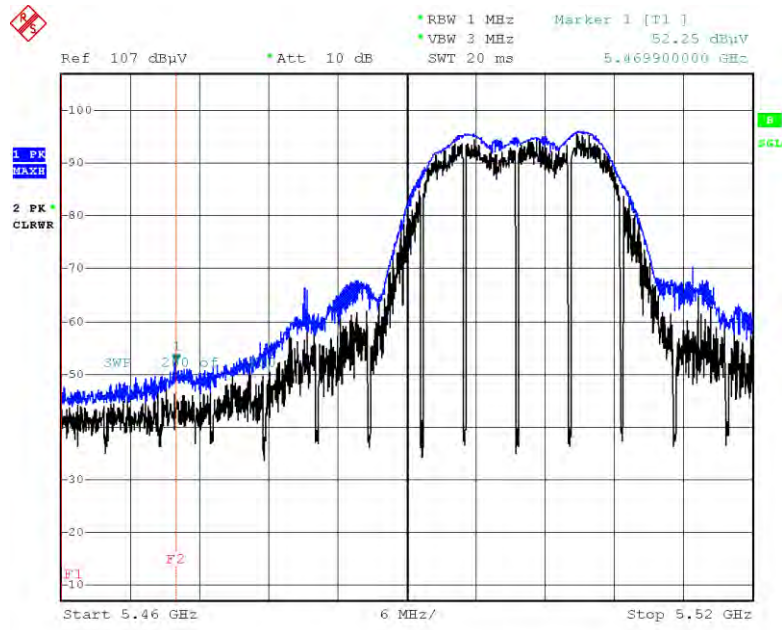
Date: 29.AUG.2021 16:41:51

Peak Result (802.11 a_6 Mbps, Ch.100, X-H)



Date: 29.AUG.2021 16:42:37

Peak Result (802.11 a_6 Mbps, Ch.100, X-H)



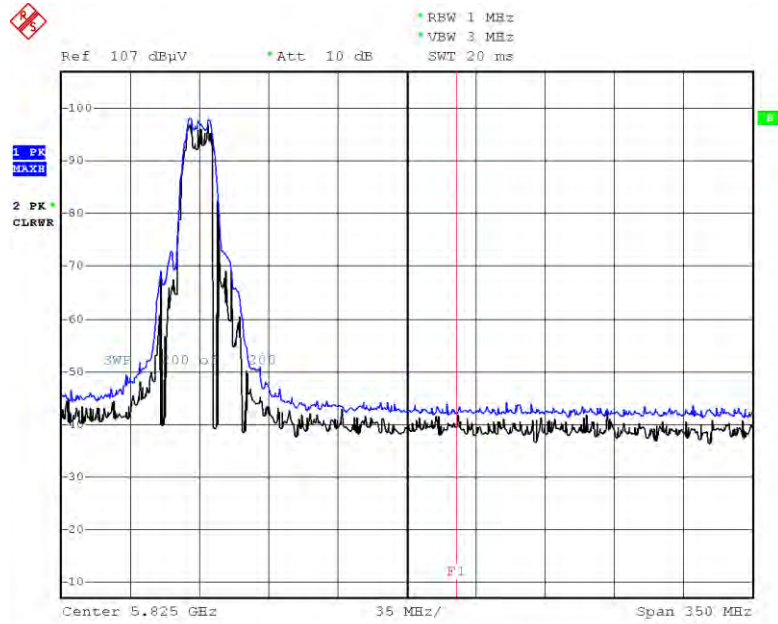
Date: 24.AUG.2021 16:43:08

Note:

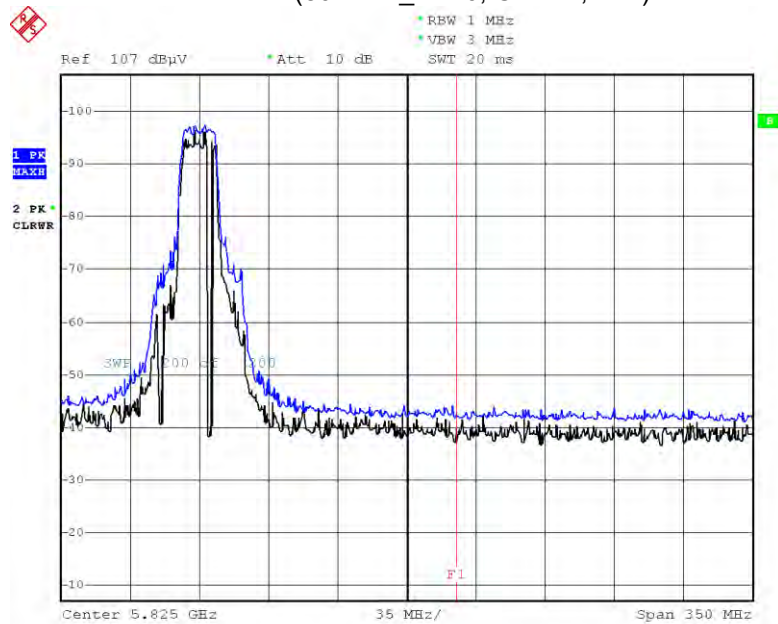
Only the worst case plots for Radiated Restricted Band Edge.

▣ Test Plots(Straddle Channel)

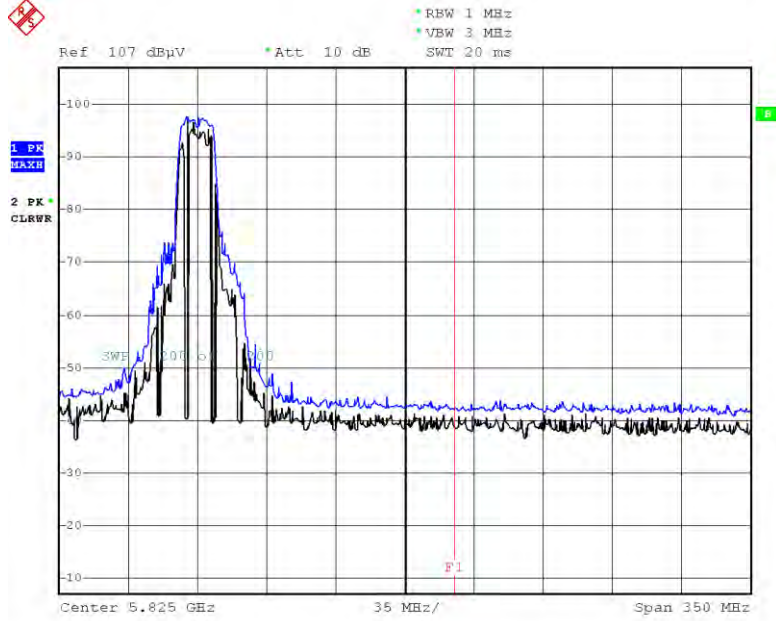
Peak Result (802.11a, Ch.144, X-H)



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

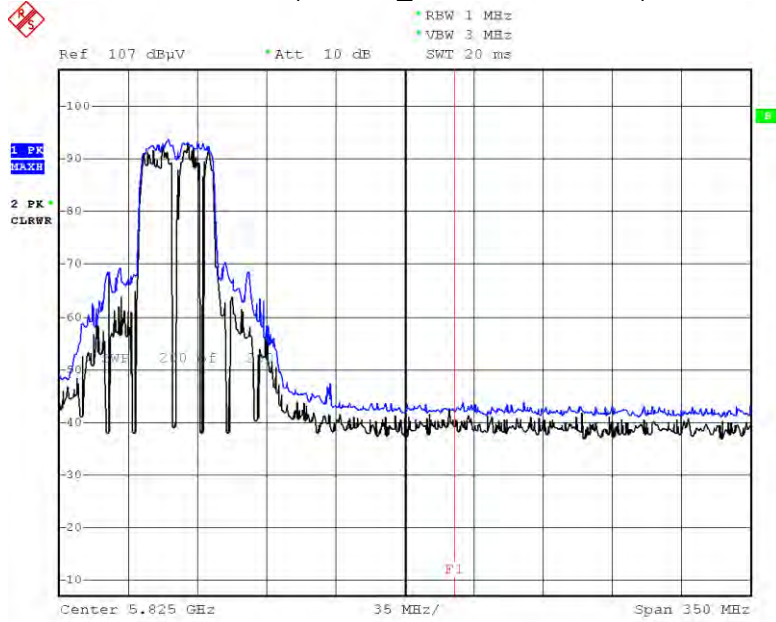


Peak Result (802.11ac_VHT20, Ch.144, X-H)



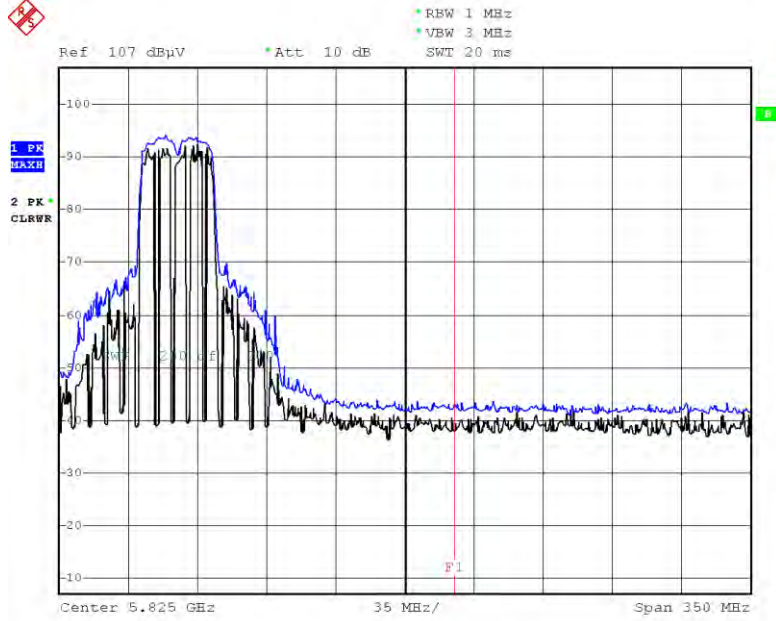
Date: 29.AUG.2021 18:25:54

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



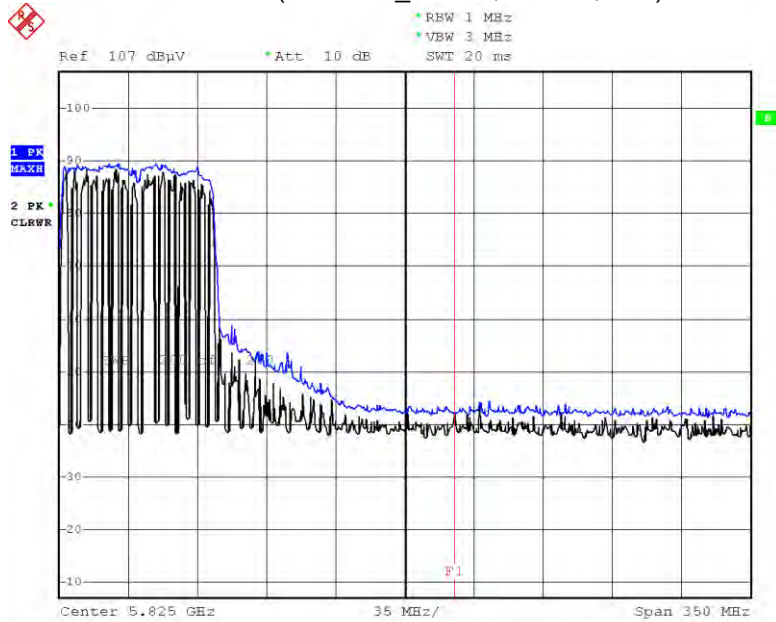
Date: 29.AUG.2021 21:50:20

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



Date: 24.AUG.2021 21:51:32

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

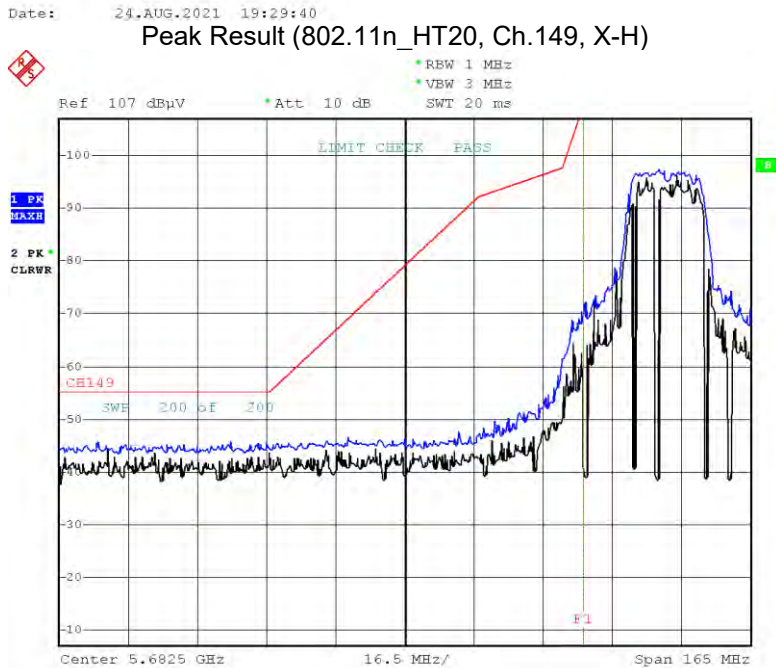
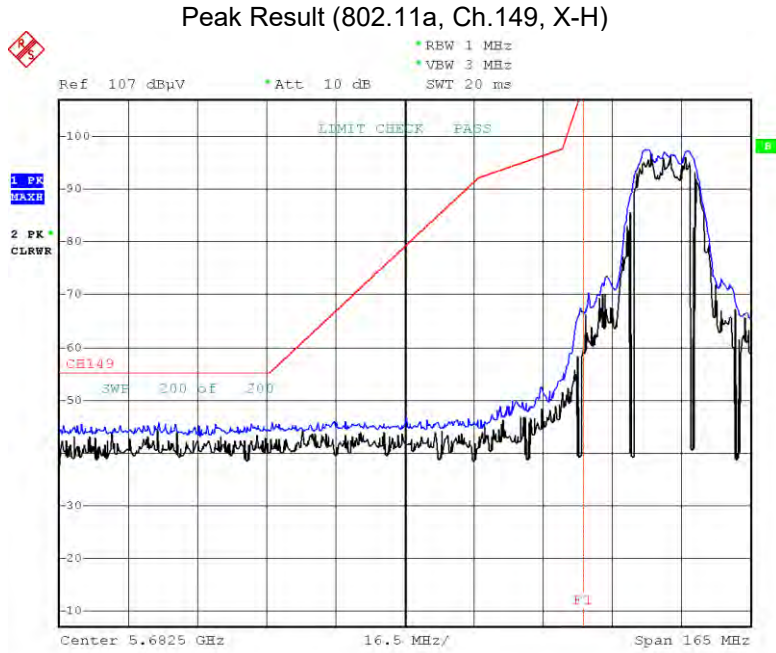


Date: 25.AUG.2021 09:12:41

Note :

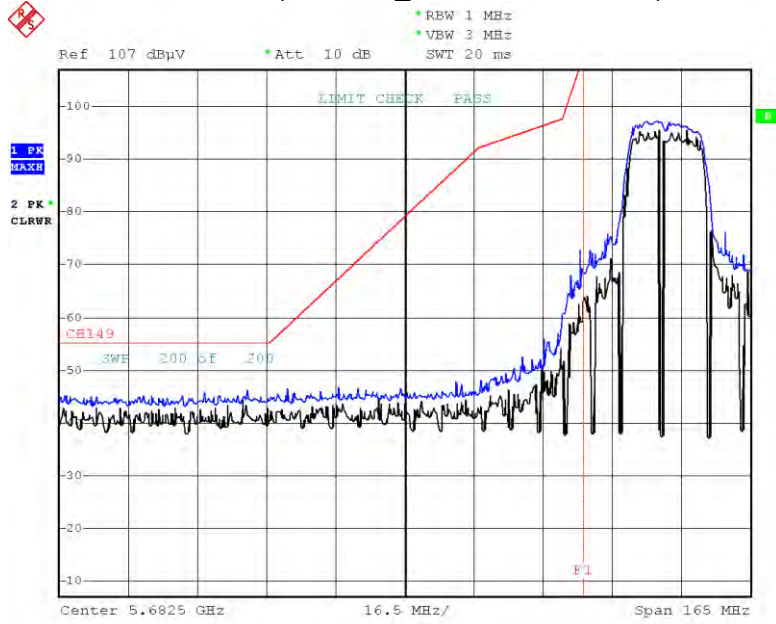
1. Only the worst case plots for Radiated Restricted Band Edge.
2. Red line : 5850 MHz
3. Ambient Noise (Because of ambient noise, We attached only the worst plot without a data table)

▣ Test Plots(UNII 3)



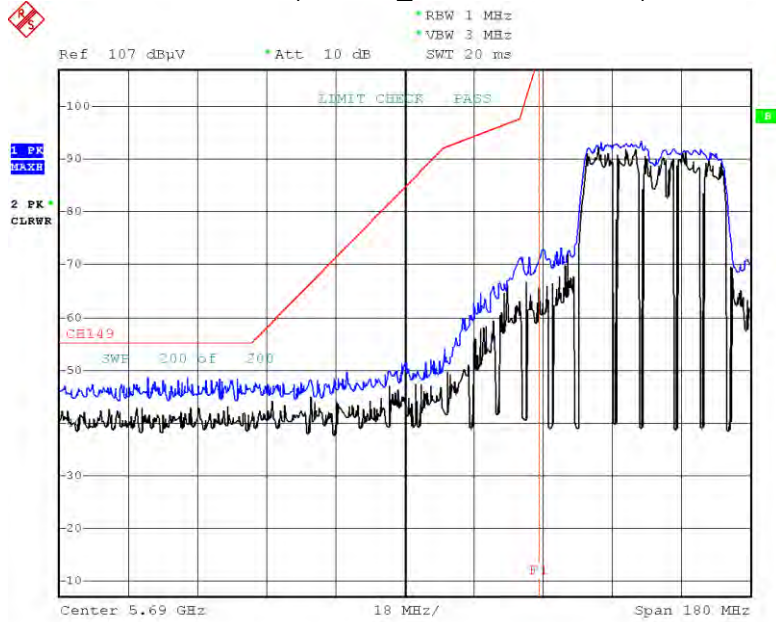
Date: 24.AUG.2021 19:27:39

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



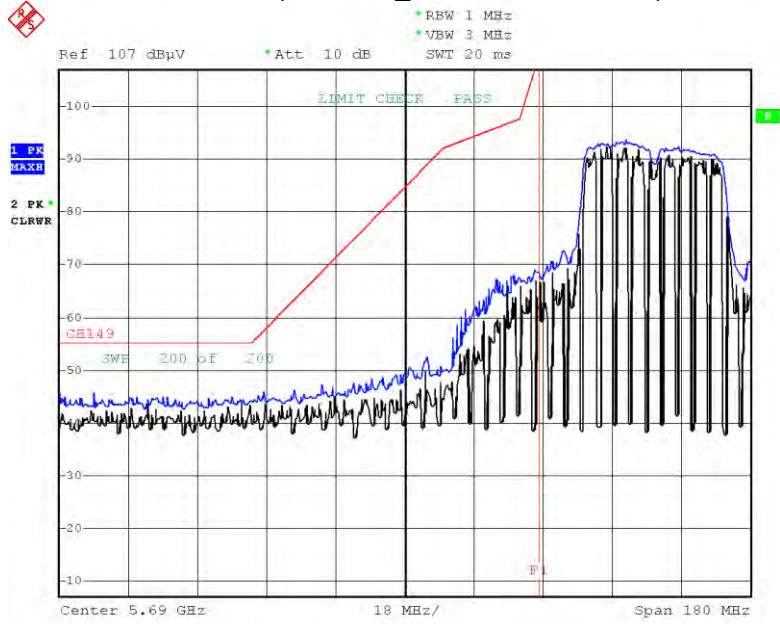
Date: 24.AUG.2021 19:30:54

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



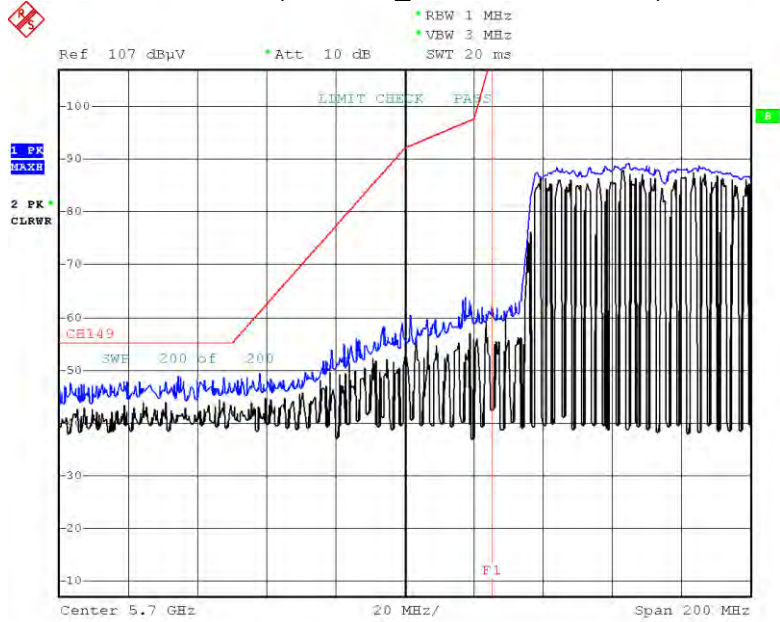
Date: 24.AUG.2021 21:56:21

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



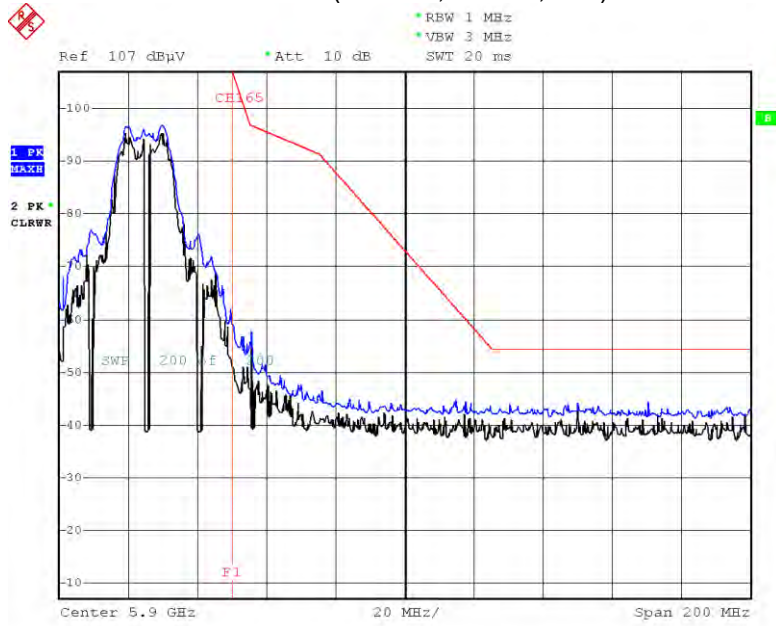
Date: 24.AUG.2021 21:58:10

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



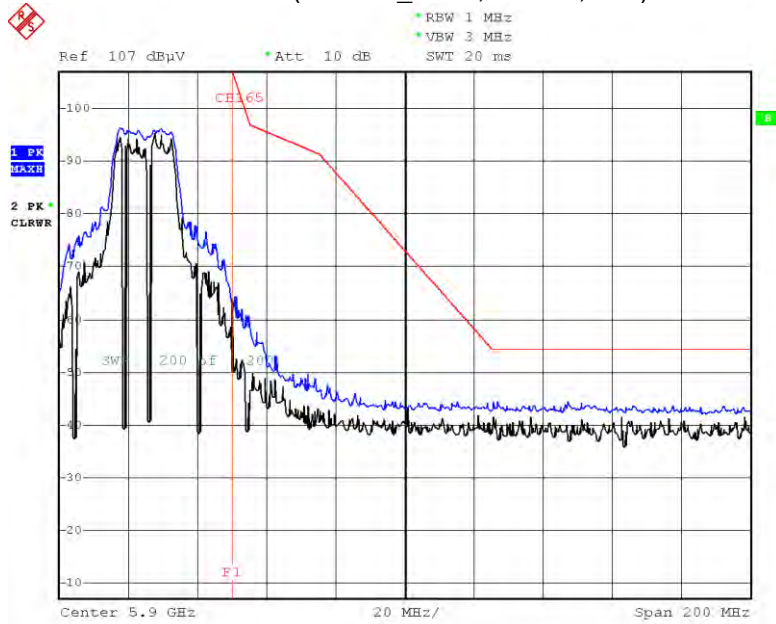
Date: 25.AUG.2021 09:18:44

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



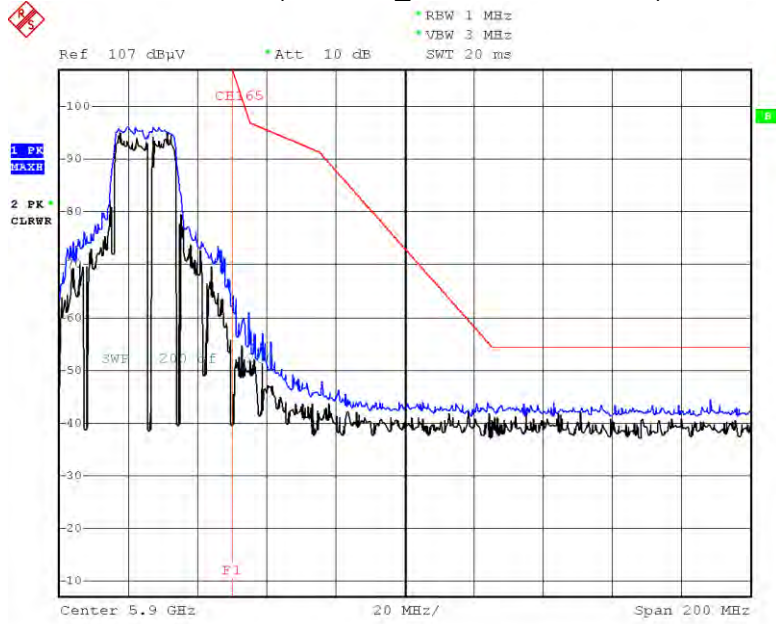
Date: 24.AUG.2021 19:48:12

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



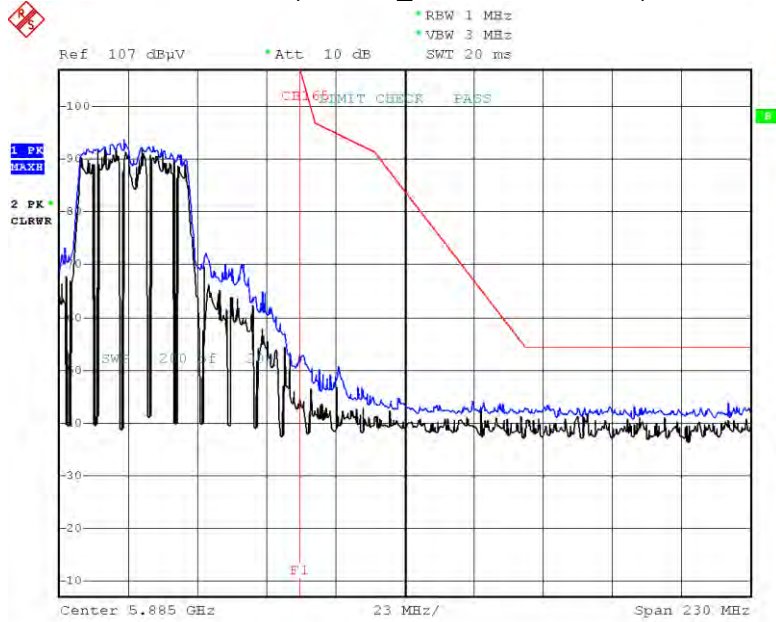
Date: 24.AUG.2021 19:47:12

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



Date: 24.AUG.2021 19:49:09

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



Date: 24.AUG.2021 22:03:26

10.9 POWERLINE CONDUCTED EMISSIONS

Conducted Emissions (Line 1)

Test

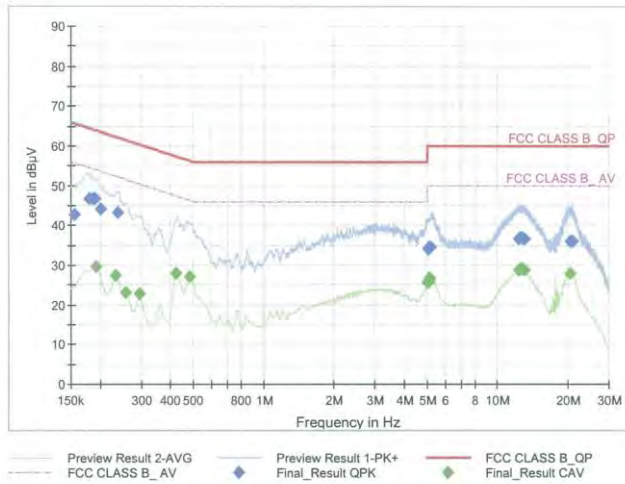
1 / 2

Test Report

Common Information

EUT : SM-G990E/DS
 Manufacturer : SAMSUNG
 Test Site: SHIELD ROOM
 Operating Conditions : 5G WLAN L1
 Operator Name:
 Comment:

Full Spectrum



Final Result QPK

Frequency (MHz)	QuasiPeak (dBuV)	Limit (dBuV)	Margin (dB)	Bandwidth (kHz)	Line	Filter	Corr. (dB)
0.1545	42.57	65.75	23.18	9.000	L1	OFF	9.6
0.1793	46.78	64.52	17.74	9.000	L1	OFF	9.6
0.1860	46.85	64.21	17.36	9.000	L1	OFF	9.6
0.1905	46.65	64.02	17.36	9.000	L1	OFF	9.6
0.2018	44.13	63.54	19.41	9.000	L1	OFF	9.6
0.2378	43.22	62.17	18.95	9.000	L1	OFF	9.6
5.0585	34.10	60.00	25.90	9.000	L1	OFF	9.9
5.0698	34.27	60.00	25.73	9.000	L1	OFF	9.9
5.0788	33.94	60.00	26.06	9.000	L1	OFF	9.9
5.0855	34.20	60.00	25.80	9.000	L1	OFF	9.9
5.1193	34.33	60.00	25.67	9.000	L1	OFF	9.9
5.1665	34.52	60.00	25.48	9.000	L1	OFF	9.9
12.2720	36.76	60.00	23.24	9.000	L1	OFF	10.1
12.4408	36.90	60.00	23.10	9.000	L1	OFF	10.1
12.8030	36.86	60.00	23.14	9.000	L1	OFF	10.2
13.0460	36.73	60.00	23.27	9.000	L1	OFF	10.2
20.5093	36.08	60.00	23.92	9.000	L1	OFF	10.4
20.8670	35.96	60.00	24.04	9.000	L1	OFF	10.4

Final_Result_CAV

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Test

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Frequency (MHz)	CAverage (dBuV)	Limit (dBuV)	Margin (dB)	Bandwidth (kHz)	Line	Filter	Corr. (dB)
0.1928	29.75	53.92	24.17	9.000	L1	OFF	9.6
0.2333	27.29	52.33	25.05	9.000	L1	OFF	9.6
0.2580	23.09	51.50	28.41	9.000	L1	OFF	9.6
0.2940	22.67	50.41	27.74	9.000	L1	OFF	9.6
0.4245	28.03	47.36	19.33	9.000	L1	OFF	9.6
0.4853	27.15	46.25	19.10	9.000	L1	OFF	9.6
5.0428	25.80	50.00	24.20	9.000	L1	OFF	9.9
5.0473	25.80	50.00	24.20	9.000	L1	OFF	9.9
5.1080	26.66	50.00	23.34	9.000	L1	OFF	9.9
5.1215	26.52	50.00	23.48	9.000	L1	OFF	9.9
5.1305	26.70	50.00	23.30	9.000	L1	OFF	9.9
5.1350	26.63	50.00	23.37	9.000	L1	OFF	9.9
12.2720	28.78	50.00	21.22	9.000	L1	OFF	10.1
12.5938	29.13	50.00	20.87	9.000	L1	OFF	10.1
12.7288	29.00	50.00	21.00	9.000	L1	OFF	10.2
12.7963	29.05	50.00	20.95	9.000	L1	OFF	10.2
13.0595	28.91	50.00	21.09	9.000	L1	OFF	10.2
20.5070	28.02	50.00	21.98	9.000	L1	OFF	10.4

2021-09-01

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Conducted Emissions (Line 2)

Test

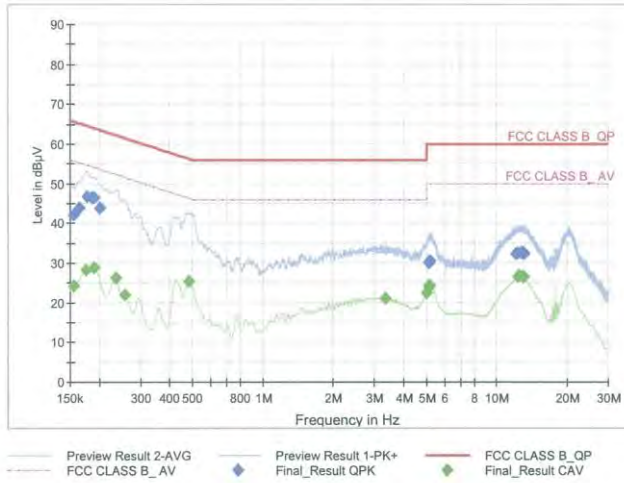
1 / 2

Test Report

Common Information

EUT : SM-G990E/DS
 Manufacturer : SAMSUNG
 Test Site: SHIELD ROOM
 Operating Conditions : 5G WLAN N
 Operator Name:
 Comment:

Full Spectrum



Final Result QPK

Frequency (MHz)	QuasiPeak (dBuV)	Limit (dBuV)	Margin (dB)	Bandwidth (kHz)	Line	Filter	Corr. (dB)
0.1545	42.24	65.75	23.52	9.000	N	OFF	9.6
0.1635	43.86	65.28	21.42	9.000	N	OFF	9.6
0.1770	46.77	64.63	17.86	9.000	N	OFF	9.6
0.1860	46.44	64.21	17.78	9.000	N	OFF	9.6
0.1905	46.38	64.02	17.63	9.000	N	OFF	9.6
0.2018	43.97	63.54	19.57	9.000	N	OFF	9.6
5.1013	30.10	60.00	29.90	9.000	N	OFF	9.9
5.1103	30.17	60.00	29.83	9.000	N	OFF	9.9
5.1170	30.19	60.00	29.81	9.000	N	OFF	9.9
5.1508	30.18	60.00	29.82	9.000	N	OFF	9.9
5.1665	30.51	60.00	29.49	9.000	N	OFF	9.9
5.1733	30.59	60.00	29.41	9.000	N	OFF	9.9
12.0695	32.23	60.00	27.77	9.000	N	OFF	10.2
12.3823	32.53	60.00	27.47	9.000	N	OFF	10.2
12.8053	32.61	60.00	27.39	9.000	N	OFF	10.2
12.9110	32.46	60.00	27.54	9.000	N	OFF	10.2
13.0190	32.29	60.00	27.71	9.000	N	OFF	10.2
13.0595	32.53	60.00	27.47	9.000	N	OFF	10.2

Final Result_CAV

2021-09-01

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Test

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Frequency (MHz)	CAverage (dBuV)	Limit (dBuV)	Margin (dB)	Bandwidth (kHz)	Line	Filter	Corr. (dB)
0.1545	24.37	55.75	31.38	9.000	N	OFF	9.6
0.1748	28.38	54.73	26.35	9.000	N	OFF	9.6
0.1905	28.94	54.02	25.08	9.000	N	OFF	9.6
0.2355	26.18	52.25	26.07	9.000	N	OFF	9.6
0.2580	22.01	51.50	29.48	9.000	N	OFF	9.6
0.4853	25.50	46.25	20.75	9.000	N	OFF	9.6
3.3575	21.11	46.00	24.89	9.000	N	OFF	9.8
5.0000	22.48	46.00	23.52	9.000	N	OFF	9.9
5.1193	24.12	50.00	25.88	9.000	N	OFF	9.9
5.1350	24.05	50.00	25.95	9.000	N	OFF	9.9
5.1463	24.18	50.00	25.82	9.000	N	OFF	9.9
5.1688	24.37	50.00	25.63	9.000	N	OFF	9.9
12.3328	26.59	50.00	23.41	9.000	N	OFF	10.2
12.5105	26.76	50.00	23.24	9.000	N	OFF	10.2
12.8570	26.56	50.00	23.44	9.000	N	OFF	10.2
12.9020	26.52	50.00	23.48	9.000	N	OFF	10.2
12.9110	26.40	50.00	23.60	9.000	N	OFF	10.2
13.0573	26.51	50.00	23.49	9.000	N	OFF	10.2

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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	08/23/2022	Annual
Test Receiver	ESCI	Rohde & Schwarz	100033	06/15/2022	Annual
Temperature Chamber	SU-642	ESPAC	0093008124	03/15/2022	Annual
Signal Analyzer	N9020A	Agilent	MY47380318	01/28/2022	Annual
Signal Analyzer	N9030A	Agilent	MY49431210	01/11/2022	Annual
Power Meter	N1911A	Agilent	MY45100523	04/08/2022	Annual
Power Sensor	N1921A	Agilent	MY57820067	04/08/2022	Annual
Directional Coupler	87300B	Agilent	3116A03621	11/10/2021	Annual
Power Splitter	11667B	Hewlett Packard	05001	05/20/2022	Annual
DC Power Supply	E3632A	Hewlett Packard	KR75303960	06/10/2022	Annual
Attenuator (10 dB)	5910-N-50-010	H+S	00801	10/28/2021	Annual
Software	EMC32	Rohde & Schwarz	N/A	N/A	N/A
FCC WLAN&BT&BLE Conducted Test Software v3.0	FCC WLAN&BT&BLE Conducted Test Software v3.0	HCT CO., LTD.	N/A	N/A	N/A

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	N/A	N/A	N/A
Controller	2090	Emco	060520	N/A	N/A
Turn Table	Turn Table	Ets	N/A	N/A	N/A
Loop Antenna	Loop Antenna	Rohde & Schwarz	1513-333	03/19/2022	Biennial
Hybrid Antenna	VULB 9168	Schwarzbeck	9168-0895	09/04/2022	Biennial
Horn Antenna	BBHA 9120D	Schwarzbeck	9120D-1191	11/18/2021	Biennial
Horn Antenna (15 GHz ~ 40 GHz)	BBHA9170	Schwarzbeck	BBHA9170541	11/29/2021	Biennial
Spectrum Analyzer	FSP (9 kHz ~ 30 GHz)	Rohde & Schwarz	836650/016	09/14/2021	Annual
Spectrum Analyzer	FSV40-N	Rohde & Schwarz	101068-SZ	09/22/2021	Annual
Band Reject Filter	WRCJV2400/2483.5-2370/2520-60/12SS	Wainwright Instruments	2	01/06/2022	Annual
Band Reject Filter	WRCJV5100/5850-40/50-8EEK	Wainwright Instruments	1	02/08/2022	Annual
Attenuator (10 dB) 56-10	CBLU1183540B-01 56-10	CERNEX WEINSCHEL	N/A	12/23/2021	Annual
Broadband Low Noise Amplifier	CBL06185030	CERNEX	N/A	12/23/2021	Annual
Attenuator (3 dB)	18B-03	Api tech.	N/A	12/23/2021	Annual
High Pass Filter	WHKX10-2700-3000-18000-40SS	Wainwright Instruments	N/A	12/23/2021	Annual
High Pass Filter	WHKX8-6090-7000-18000-40SS	Wainwright Instruments	N/A	12/23/2021	Annual
Thru	COAXIAL ATTENUATOR	T&M SYSTEM	N/A	12/23/2021	Annual
Power Amplifier	CBL18265035	CERNEX	22966	12/04/2021	Annual
Power Amplifier	CBL26405040	CERNEX	25956	03/23/2022	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-2109-FC016-P