

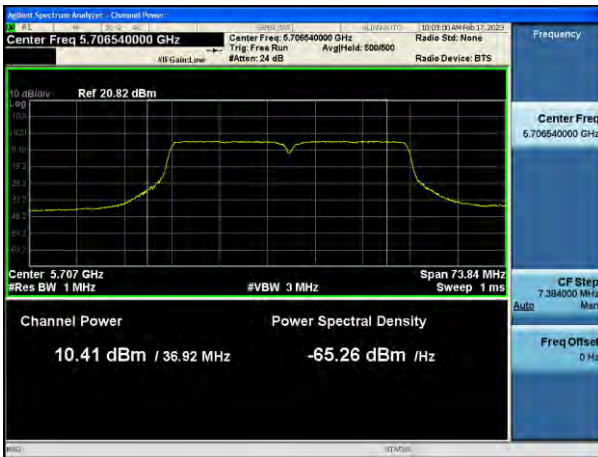
802.11n(HT40) UNII 2C Band



802.11n(HT40) UNII 3 Band



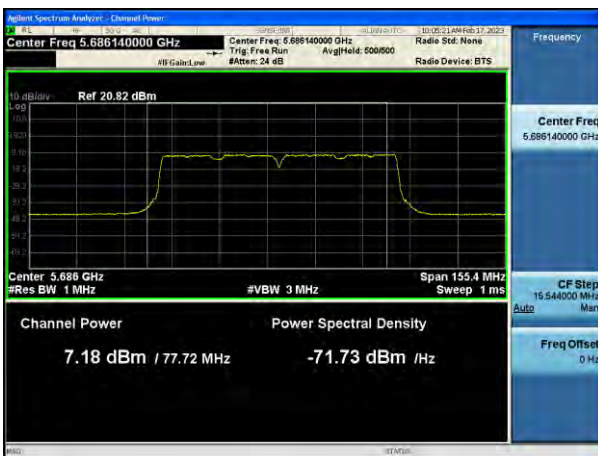
802.11ac(VHT40) UNII 2C Band



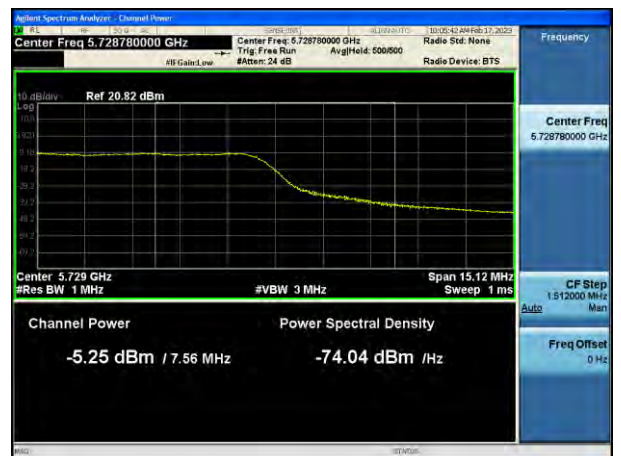
802.11ac(VHT40) UNII 3 Band



802.11ac(VHT80) UNII 2C Band



802.11ac(VHT80) UNII 3 Band



10.7.4 Power Spectral Density

[Ant.1]

Mode	Frequency [MHz]	Channel	Measured Density [dBm]	Duty Cycle Factor [dB]	Total PSD [dBm]	Limit [dBm]	Worstcase Datarate
802.11a	5720	144	4.438	0.942	5.380	11 dBm/ MHz	18 Mbps
802.11n(HT20)	(UNII 2C		3.470	1.630	5.100		MCS4
802.11ac(VHT20)	Band)		3.693	1.732	5.425		MCS4
802.11a	5720	144	1.540	0.942	2.482	30 dBm/ 500 kHz	18 Mbps
802.11n(HT20)	(UNII 3		0.596	1.630	2.226		MCS4
802.11ac(VHT20)	Band)		0.726	1.732	2.459		MCS4

Mode	Frequency [MHz]	Channel	Measured Density [dBm]	Duty Cycle Factor [dB]	Total PSD [dBm]	Limit [dBm]	Worstcase Datarate
802.11n(HT40)	5710	142	-2.125	2.612	0.487	11 dBm/ MHz	MCS4
802.11ac(VHT40)	(UNII 2C Band)		-1.913	2.578	0.665		MCS4
802.11n(HT40)	5710	142	-5.157	2.612	0.487	30 dBm/ 500 kHz	MCS4
802.11ac(VHT40)	(UNII 3 Band)		-5.564	2.578	0.665		MCS4

Mode	Frequency [MHz]	Channel	Measured Density [dBm]	Duty Cycle Factor [dB]	Total PSD [dBm]	Limit [dBm]	Worstcase Datarate
802.11ac(VHT80)	5690	138	-8.968	3.575	-5.393	11 dBm/ MHz	MCS4
	(UNII 2C Band)						
	5690	138	-12.090	3.575	-8.515	30 dBm/ 500 kHz	MCS4
	(UNII 3 Band)						

[Ant.2]

Mode	Frequency [MHz]	Channel	Measured Density [dBm]	Duty Cycle Factor [dB]	Total PSD [dBm]	Limit [dBm]	Worstcase Datarate
802.11a	5720	144	3.119	0.942	4.061	11 dBm/ MHz	18 Mbps
802.11n(HT20)	(UNII 2C		2.837	1.630	4.467		MCS4
802.11ac(VHT20)	Band)		2.697	1.732	4.430		MCS4
802.11a	5720	144	-0.085	0.942	0.857	30 dBm/ 500 kHz	18 Mbps
802.11n(HT20)	(UNII 3		0.381	1.630	2.011		MCS4
802.11ac(VHT20)	Band)		-0.450	1.732	1.283		MCS4

Mode	Frequency [MHz]	Channel	Measured Density [dBm]	Duty Cycle Factor [dB]	Total PSD [dBm]	Limit [dBm]	Worstcase Datarate
802.11n(HT40)	5710	142	-3.222	2.612	-0.610	11 dBm/ MHz	MCS4
802.11ac(VHT40)	(UNII 2C Band)		-3.522	2.578	-0.944		MCS4
802.11n(HT40)	5710	142	-6.779	2.612	-0.610	30 dBm/ 500 kHz	MCS4
802.11ac(VHT40)	(UNII 3 Band)		-6.484	2.578	-0.944		MCS4

Mode	Frequency [MHz]	Channel	Measured Density [dBm]	Duty Cycle Factor [dB]	Total PSD [dBm]	Limit [dBm]	Worstcase Datarate
802.11ac(VHT80)	5690	138	-9.734	3.575	-6.159	11 dBm/ MHz	MCS4
	(UNII 2C Band)						
	5690	138	-12.184	3.575	-8.608	30 dBm/ 500 kHz	MCS4
	(UNII 3 Band)						

[Ant.1]

☐ 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

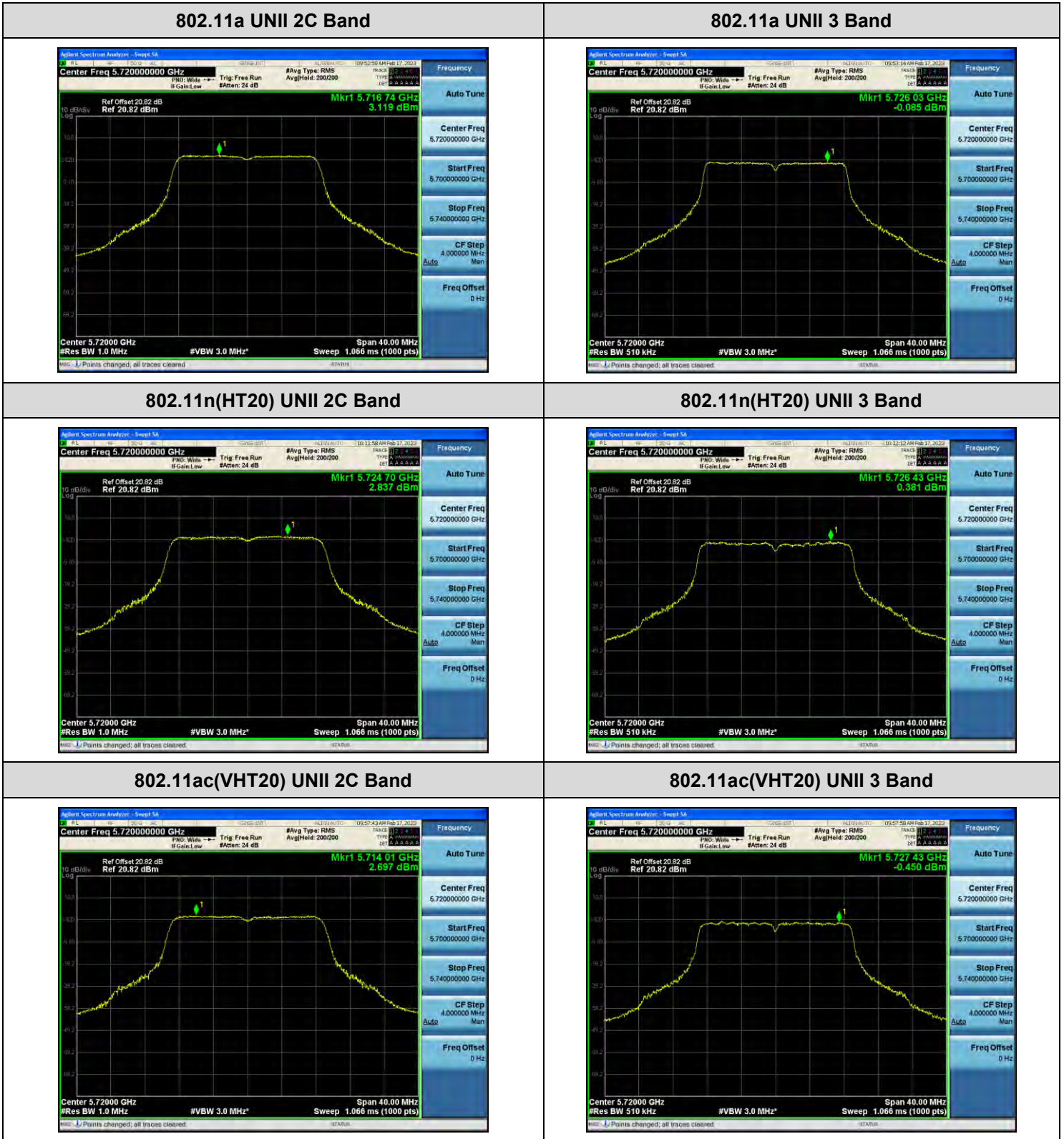


802.11ac(VHT80) UNII 3 Band



[Ant.2]

Test Plots



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]	[dB μ V]	[dB/m]	[H/V]	[dB μ V/m]	[dB μ V/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 (dB μ V) + Distance extrapolation factor

Frequency Range : Below 1 GHz

Frequency	Measured Value	A.F+C.L	POL	Total	Limit	Margin
[MHz]	[dB μ V]	[dB/m]	[H/V]	[dB μ V/m]	[dB μ V/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

[Ant.1&Ant.2_MIMO(CDD)]
Frequency Range : Above 1 GHz

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

Frequency [MHz]	Measured Value [dB μ V]	CL+AF+DF-AG [dB/m]	POL [H/V]	Total [dB μ V/m]	Limit [dB μ V/m]	Margin [dB]	Measurement Type
10360	44.57	8.12	V	52.69	68.20	15.51	PK
15540	41.15	12.95	V	54.10	73.98	19.88	PK
15540	27.21	12.95	V	40.16	53.98	13.82	AV
10360	44.73	8.12	H	52.85	68.20	15.35	PK
15540	40.80	12.95	H	53.75	73.98	20.23	PK
15540	27.10	12.95	H	40.05	53.98	13.93	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 [dB μ V]	CL+AF+DF-AG [dB/m]	POL [H/V]	Total [dB μ V/m]	Limit [dB μ V/m]	Margin [dB]	Measurement Type
10400	44.92	8.14	V	53.06	68.20	15.14	PK
15600	40.08	13.29	V	53.37	73.98	20.61	PK
15600	27.05	13.29	V	40.34	53.98	13.64	AV
10400	44.92	8.14	H	53.06	68.20	15.14	PK
15600	40.36	13.29	H	53.65	73.98	20.33	PK
15600	26.75	13.29	H	40.04	53.98	13.94	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]	CL+AF+DF-AG [dB/m]	POL [H/V]	Total [dBμV/m]	Limit [dBμV/m]	Margin [dB]	Measurement Type
10480	44.65	8.62	V	53.27	68.20	14.93	PK
15720	40.04	13.21	V	53.25	73.98	20.73	PK
15720	26.76	13.21	V	39.97	53.98	14.01	AV
10480	44.67	8.62	H	53.29	68.20	14.91	PK
15720	40.44	13.21	H	53.65	73.98	20.33	PK
15720	26.61	13.21	H	39.82	53.98	14.16	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 [dB μ V]	CL+AF+DF-AG [dB/m]	POL [H/V]	Total [dB μ V/m]	Limit [dB μ V/m]	Margin [dB]	Measurement Type
10520	44.46	8.85	V	53.31	68.20	14.89	PK
15780	41.26	12.87	V	54.13	73.98	19.85	PK
15780	27.63	12.87	V	40.50	53.98	13.48	AV
10520	44.02	8.85	H	52.87	68.20	15.33	PK
15780	41.08	12.87	H	53.95	73.98	20.03	PK
15780	27.42	12.87	H	40.29	53.98	13.69	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 [dB μ V]	CL+AF+DF-AG [dB/m]	POL [H/V]	Total [dB μ V/m]	Limit [dB μ V/m]	Margin [dB]	Measurement Type
10600	44.02	9.35	V	53.37	73.98	20.61	PK
10600	30.95	9.35	V	40.30	53.98	13.68	AV
15900	41.48	12.56	V	54.04	73.98	19.94	PK
15900	28.16	12.56	V	40.72	53.98	13.26	AV
10600	43.59	9.35	H	52.94	73.98	21.04	PK
10600	30.83	9.35	H	40.18	53.98	13.80	AV
15900	41.30	12.56	H	53.86	73.98	20.12	PK
15900	27.78	12.56	H	40.34	53.98	13.64	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]	CL+AF+DF-AG [dB/m]	POL [H/V]	Total [dBμV/m]	Limit [dBμV/m]	Margin [dB]	Measurement Type
10640	44.13	9.15	V	53.28	73.98	20.70	PK
10640	31.07	9.15	V	40.22	53.98	13.76	AV
15960	41.69	12.21	V	53.90	73.98	20.08	PK
15960	28.43	12.21	V	40.64	53.98	13.34	AV
10640	43.81	9.15	H	52.96	73.98	21.02	PK
10640	30.23	9.15	H	39.38	53.98	14.60	AV
15960	41.05	12.21	H	53.26	73.98	20.72	PK
15960	27.86	12.21	H	40.07	53.98	13.91	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]	CL+AF+DF-AG [dB/m]	POL [H/V]	Total [dBμV/m]	Limit [dBμV/m]	Margin [dB]	Measurement Type
11000	43.44	10.19	V	53.63	73.98	20.35	PK
11000	30.60	10.19	V	40.79	53.98	13.19	AV
16500	45.29	12.17	V	57.46	68.20	10.74	PK
11000	43.53	10.19	H	53.72	73.98	20.26	PK
11000	29.95	10.19	H	40.14	53.98	13.84	AV
16500	44.07	12.17	H	56.24	68.20	11.96	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]	CL+AF+DF-AG [dB/m]	POL [H/V]	Total [dBμV/m]	Limit [dBμV/m]	Margin [dB]	Measurement Type
11200	42.61	10.29	V	52.90	73.98	21.08	PK
11200	29.40	10.29	V	39.69	53.98	14.29	AV
16800	43.04	13.25	V	56.29	68.20	11.91	PK
11200	43.00	10.29	H	53.29	73.98	20.69	PK
11200	29.38	10.29	H	39.67	53.98	14.31	AV
16800	43.25	13.25	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 Value [dBμV]	CL+AF+DF-AG [dB/m]	POL [H/V]	Total [dBμV/m]	Limit [dBμV/m]	Margin [dB]	Measurement Type
11440	42.27	10.43	V	52.70	73.98	21.28	PK
11440	28.97	10.43	V	39.40	53.98	14.58	AV
17160	42.52	13.78	V	56.30	68.20	11.90	PK
11440	42.47	10.43	H	52.90	73.98	21.08	PK
11440	28.39	10.43	H	38.82	53.98	15.16	AV
17160	41.69	13.78	H	55.47	68.20	12.73	PK

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

Frequency [MHz]	Measured Value [dB μ V]	CL+AF+DF-AG [dB/m]	POL [H/V]	Total [dB μ V/m]	Limit [dB μ V/m]	Margin [dB]	Measurement Type
11490	42.20	10.81	V	53.01	73.98	20.97	PK
11490	28.98	10.81	V	39.79	53.98	14.19	AV
17235	41.52	14.28	V	55.80	68.20	12.40	PK
11490	42.21	10.81	H	53.02	73.98	20.96	PK
11490	28.76	10.81	H	39.57	53.98	14.41	AV
17235	41.49	14.28	H	55.77	68.20	12.43	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 [dB μ V]	CL+AF+DF-AG [dB/m]	POL [H/V]	Total [dB μ V/m]	Limit [dB μ V/m]	Margin [dB]	Measurement Type
11570	42.21	10.13	V	52.34	73.98	21.64	PK
11570	29.60	10.13	V	39.73	53.98	14.25	AV
17355	41.45	15.62	V	57.07	68.20	11.13	PK
11570	42.51	10.13	H	52.64	73.98	21.34	PK
11570	29.02	10.13	H	39.15	53.98	14.83	AV
17355	41.15	15.62	H	56.77	68.20	11.43	PK

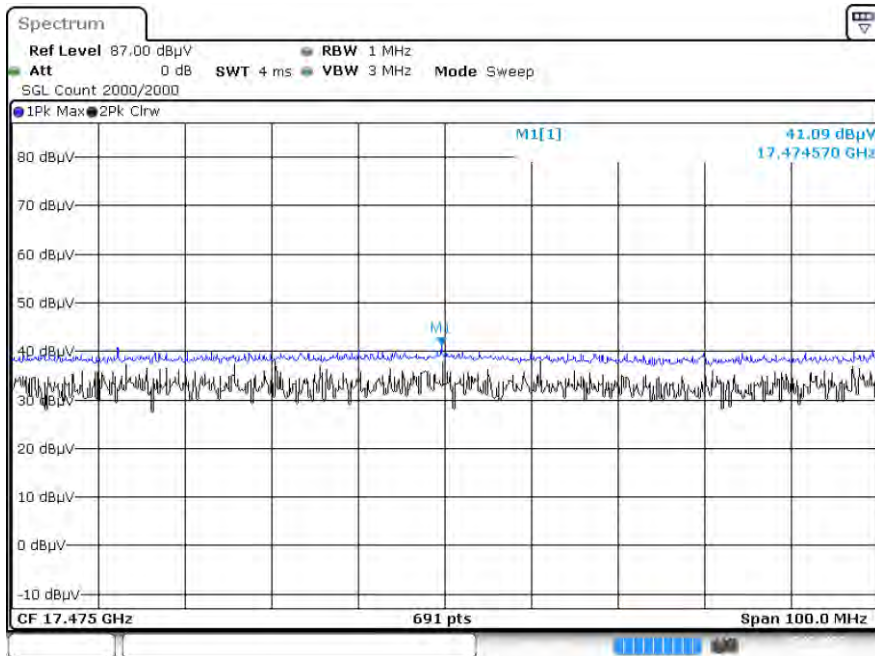
Band :	UNII 3
Operation Mode:	802.11 a
Transfer Rate:	6 Mbps
Operating Frequency	5825 MHz
Channel No.	165 Ch

Frequency [MHz]	Measured Value [dB μ V]	CL+AF+DF-AG [dB/m]	POL [H/V]	Total [dB μ V/m]	Limit [dB μ V/m]	Margin [dB]	Measurement Type
11650	42.99	9.58	V	52.57	73.98	21.41	PK
11650	29.80	9.58	V	39.38	53.98	14.60	AV
17475	40.80	17.18	V	57.98	68.20	10.22	PK
11650	43.12	9.58	H	52.70	73.98	21.28	PK
11650	29.29	9.58	H	38.87	53.98	15.11	AV
17475	41.09	17.18	H	58.27	68.20	9.93	PK

▣ Test Plots

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

Radiated Spurious Emissions plot – Peak Result (X-H)



Note:

Only the worst case plots for Radiated Spurious Emissions.

10.9 RADIATED RESTRICTED BAND EDGE
[MIMO]

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]	A.F+C.L-A.G +ATT+D.F [dB/m]	ANT. POL [H/V]	Total [dBμV/m]	Limit [dBμV/m]	Margin [dB]	Measurement Type
5150	55.01	8.43	H	63.44	73.98	10.54	PK
5150	38.53	8.43	H	46.96	53.98	7.02	AV
5150	55.65	8.43	V	64.08	73.98	9.90	PK
5150	39.03	8.43	V	47.46	53.98	6.52	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]	A.F+C.L-A.G +ATT+D.F [dB/m]	ANT. POL [H/V]	Total [dBμV/m]	Limit [dBμV/m]	Margin [dB]	Measurement Type
5350	50.89	8.23	H	59.12	73.98	14.86	PK
5350	35.85	8.23	H	44.08	53.98	9.90	AV
5350	51.21	8.23	V	59.44	73.98	14.54	PK
5350	36.34	8.23	V	44.57	53.98	9.41	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]	A.F+C.L-A.G +ATT+D.F [dB/m]	ANT. POL [H/V]	Total [dBμV/m]	Limit [dBμV/m]	Margin [dB]	Measurement Type
5460	48.55	8.98	H	57.53	73.98	16.45	PK
5460	34.81	8.98	H	43.79	53.98	10.19	AV
# 5470	48.02	8.75	H	56.77	68.20	11.43	PK
5460	49.86	8.98	V	58.84	73.98	15.14	PK
5460	35.18	8.98	V	44.16	53.98	9.82	AV
# 5470	48.51	8.75	V	57.26	68.20	10.94	PK

Note : integration method Used (ANSI C63.10 Section12.7.4.4.3)

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 [dB μ V]	A.F+C.L-A.G +ATT+D.F [dB/m]	ANT. POL [H/V]	Total [dB μ V/m]	Limit [dB μ V/m]	Margin [dB]	Measurement Type
5150	56.95	8.43	H	65.38	73.98	8.60	PK
5150	38.62	8.43	H	47.05	53.98	6.93	AV
5150	57.46	8.43	V	65.89	73.98	8.09	PK
5150	39.40	8.43	V	47.83	53.98	6.15	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 [dB μ V]	A.F+C.L-A.G +ATT+D.F [dB/m]	ANT. POL [H/V]	Total [dB μ V/m]	Limit [dB μ V/m]	Margin [dB]	Measurement Type
5350	54.85	8.23	H	63.08	73.98	10.90	PK
5350	36.51	8.23	H	44.74	53.98	9.24	AV
5350	55.29	8.23	V	63.52	73.98	10.46	PK
5350	37.49	8.23	V	45.72	53.98	8.26	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]	A.F+C.L-A.G +ATT+D.F [dB/m]	ANT. POL [H/V]	Total [dBμV/m]	Limit [dBμV/m]	Margin [dB]	Measurement Type
5460	50.88	8.98	H	59.86	73.98	14.12	PK
5460	34.88	8.98	H	43.86	53.98	10.12	AV
# 5470	47.51	8.75	H	56.26	68.20	11.94	PK
5460	51.11	8.98	V	60.09	73.98	13.89	PK
5460	35.50	8.98	V	44.48	53.98	9.50	AV
# 5470	48.00	8.75	V	56.75	68.20	11.45	PK

Note : integration method Used (ANSI C63.10 Section12.7.4.4.3)

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]	A.F+C.L-A.G +ATT+D.F [dB/m]	ANT. POL [H/V]	Total [dB μ V/m]	Limit [dB μ V/m]	Margin [dB]	Measurement Type
5150	54.85	8.43	H	63.28	73.98	10.70	PK
5150	38.56	8.43	H	46.99	53.98	6.99	AV
5150	55.17	8.43	V	63.60	73.98	10.38	PK
5150	39.18	8.43	V	47.61	53.98	6.37	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]	A.F+C.L-A.G +ATT+D.F [dB/m]	ANT. POL [H/V]	Total [dB μ V/m]	Limit [dB μ V/m]	Margin [dB]	Measurement Type
5350	51.85	8.23	H	60.08	73.98	13.90	PK
5350	36.81	8.23	H	45.04	53.98	8.94	AV
5350	52.48	8.23	V	60.71	73.98	13.27	PK
5350	37.10	8.23	V	45.33	53.98	8.65	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]	A.F+C.L-A.G +ATT+D.F [dB/m]	ANT. POL [H/V]	Total [dBμV/m]	Limit [dBμV/m]	Margin [dB]	Measurement Type
5460	54.99	8.98	H	63.97	73.98	10.01	PK
5460	34.81	8.98	H	43.79	53.98	10.19	AV
# 5470	48.44	8.75	H	57.19	68.20	11.01	PK
5460	55.05	8.98	V	64.03	73.98	9.95	PK
5460	35.35	8.98	V	44.33	53.98	9.65	AV
# 5470	48.92	8.75	V	57.67	68.20	10.53	PK

Note : integration method Used (ANSI C63.10 Section12.7.4.4.3)

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]	A.F+C.L-A.G +ATT+D.F [dB/m]	ANT. POL [H/V]	Total [dBμV/m]	Limit [dBμV/m]	Margin [dB]	Measurement Type
# 5150	49.62	15.59	H	65.21	73.98	8.77	PK
5150	34.98	15.59	H	50.57	53.98	3.41	AV
# 5150	50.17	15.59	V	65.76	73.98	8.22	PK
5150	35.65	15.59	V	51.24	53.98	2.74	AV

Note : integration method Used (ANSI C63.10 Section12.7.4.4.3)

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]	A.F+C.L-A.G +ATT+D.F [dB/m]	ANT. POL [H/V]	Total [dBμV/m]	Limit [dBμV/m]	Margin [dB]	Measurement Type
# 5350	57.98	8.23	H	66.21	73.98	7.77	PK
5350	38.24	8.23	H	46.47	53.98	7.51	AV
# 5350	58.31	8.23	V	66.54	73.98	7.44	PK
5350	38.68	8.23	V	46.91	53.98	7.07	AV

Note : integration method Used (ANSI C63.10 Section12.7.4.4.3)

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]	A.F+C.L-A.G +ATT+D.F [dB/m]	ANT. POL [H/V]	Total [dBμV/m]	Limit [dBμV/m]	Margin [dB]	Measurement Type
# 5460	60.95	8.98	H	69.93	73.98	4.05	PK
5460	35.85	8.98	H	44.83	53.98	9.15	AV
# 5470	54.95	8.75	H	63.70	68.20	4.50	PK
# 5460	61.37	8.98	V	70.35	73.98	3.63	PK
5460	36.21	8.98	V	45.19	53.98	8.79	AV
# 5470	55.36	8.75	V	64.11	68.20	4.09	PK

Note : integration method Used (ANSI C63.10 Section12.7.4.4.3)

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 [dB μ V]	A.F+C.L-A.G +ATT+D.F [dB/m]	ANT. POL [H/V]	Total [dB μ V/m]	Limit [dB μ V/m]	Margin [dB]	Measurement Type
# 5150	46.55	15.59	H	62.14	73.98	11.84	PK
5150	34.89	15.59	H	50.48	53.98	3.50	AV
# 5150	47.32	15.59	V	62.91	73.98	11.07	PK
5150	35.45	15.59	V	51.04	53.98	2.94	AV

Note : integration method Used (ANSI C63.10 Section12.7.4.4.3)

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 [dB μ V]	A.F+C.L-A.G +ATT+D.F [dB/m]	ANT. POL [H/V]	Total [dB μ V/m]	Limit [dB μ V/m]	Margin [dB]	Measurement Type
# 5350	57.85	8.23	H	66.08	73.98	7.90	PK
5350	38.22	8.23	H	46.45	53.98	7.53	AV
# 5350	58.26	8.23	V	66.49	73.98	7.49	PK
5350	38.69	8.23	V	46.92	53.98	7.06	AV

Note : integration method Used (ANSI C63.10 Section12.7.4.4.3)

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]	A.F+C.L-A.G +ATT+D.F [dB/m]	ANT. POL [H/V]	Total [dBμV/m]	Limit [dBμV/m]	Margin [dB]	Measurement Type
5460	57.62	8.98	H	66.60	73.98	7.38	PK
5460	35.88	8.98	H	44.86	53.98	9.12	AV
# 5470	51.02	8.75	H	59.77	68.20	8.43	PK
5460	57.80	8.98	V	66.78	73.98	7.20	PK
5460	36.06	8.98	V	45.04	53.98	8.94	AV
# 5470	51.45	8.75	V	60.20	68.20	8.00	PK

Note : integration method Used (ANSI C63.10 Section12.7.4.4.3)

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]	A.F+C.L-A.G +ATT+D.F [dB/m]	ANT. POL [H/V]	Total [dBμV/m]	Limit [dBμV/m]	Margin [dB]	Measurement Type
5150	51.32	15.59	H	66.91	73.98	7.07	PK
5150	34.51	15.59	H	50.10	53.98	3.88	AV
5150	51.54	15.59	V	67.13	73.98	6.85	PK
5150	34.95	15.59	V	50.54	53.98	3.44	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]	A.F+C.L-A.G +ATT+D.F [dB/m]	ANT. POL [H/V]	Total [dBμV/m]	Limit [dBμV/m]	Margin [dB]	Measurement Type
5350	49.89	8.23	H	58.12	73.98	15.86	PK
5350	38.05	8.23	H	46.28	53.98	7.70	AV
5350	50.18	8.23	V	58.41	73.98	15.57	PK
5350	38.38	8.23	V	46.61	53.98	7.37	AV

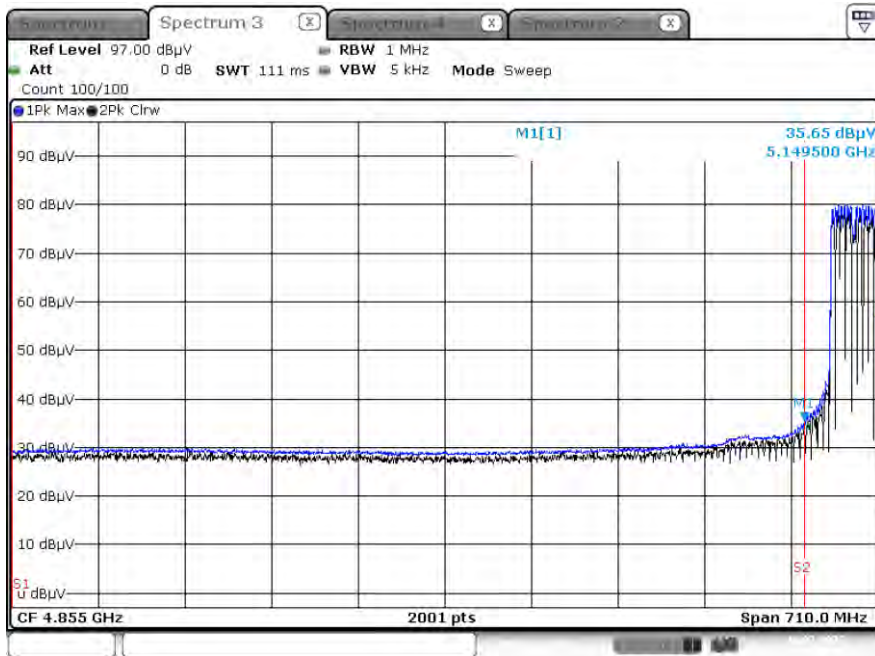
Band :	UNII 2C
Operation Mode:	802.11 ac_VHT80
Transfer MCS Index:	0
Operating Frequency	5530 MHz
Channel No.	106 Ch

Frequency [MHz]	Measured Value [dB μ V]	A.F+C.L-A.G +ATT+D.F [dB/m]	ANT. POL [H/V]	Total [dB μ V/m]	Limit [dB μ V/m]	Margin [dB]	Measurement Type
5460	50.85	8.98	H	59.83	73.98	14.15	PK
5460	36.01	8.98	H	44.99	53.98	8.99	AV
5470	51.01	8.75	H	59.76	68.20	8.44	PK
5460	51.36	8.98	V	60.34	73.98	13.64	PK
5460	36.44	8.98	V	45.42	53.98	8.56	AV
5470	51.26	8.75	V	60.01	68.20	8.19	PK

▣ Test Plots(UNII 1, 2A, 2C)

[MIMO(CDD)]

Average Result (802.11 n_HT40_ MCS0, Ch.38, Y-V)



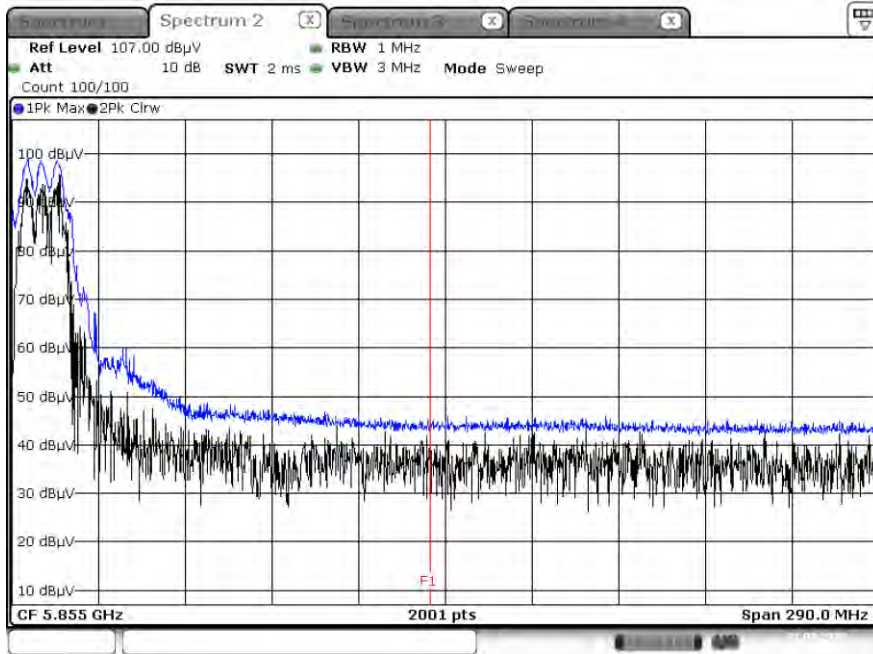
Note:

Only the worst case plots for Radiated Restricted Band Edge.

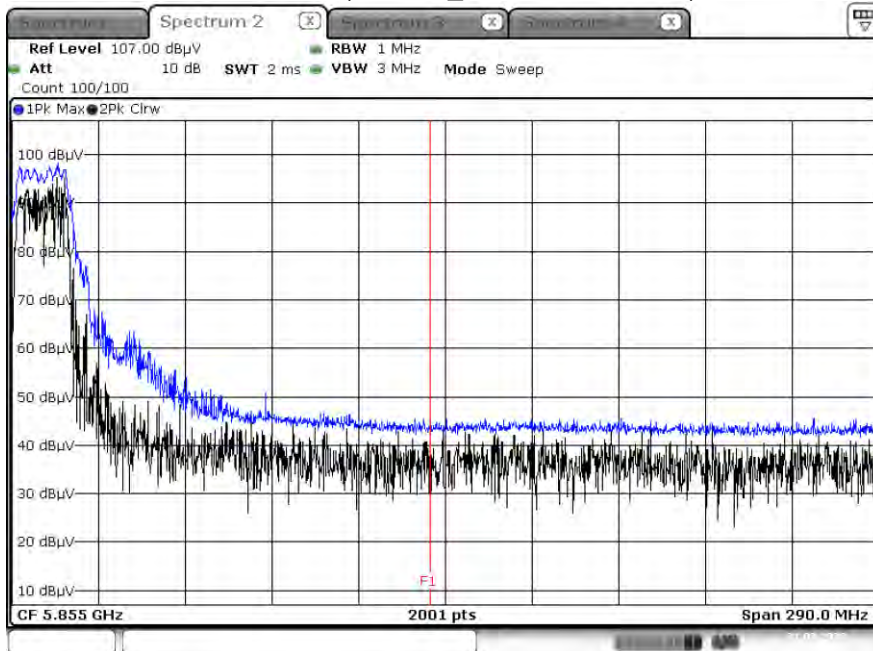
▣ Test Plots(Straddle Channel)

[MIMO]

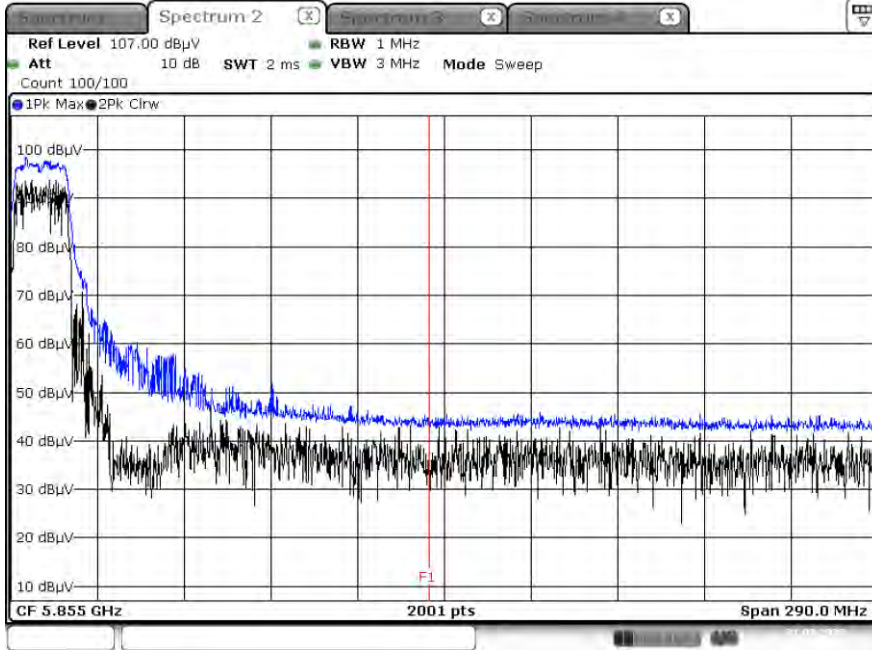
Peak Result (802.11a, Ch.144, Y-V)



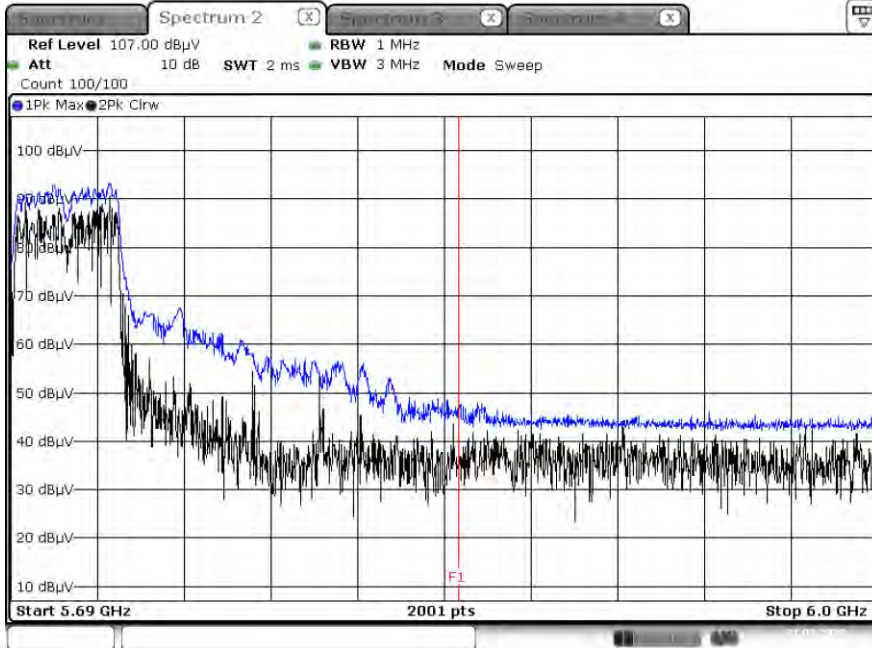
Peak Result (802.11n_HT20, Ch.144, Y-V)

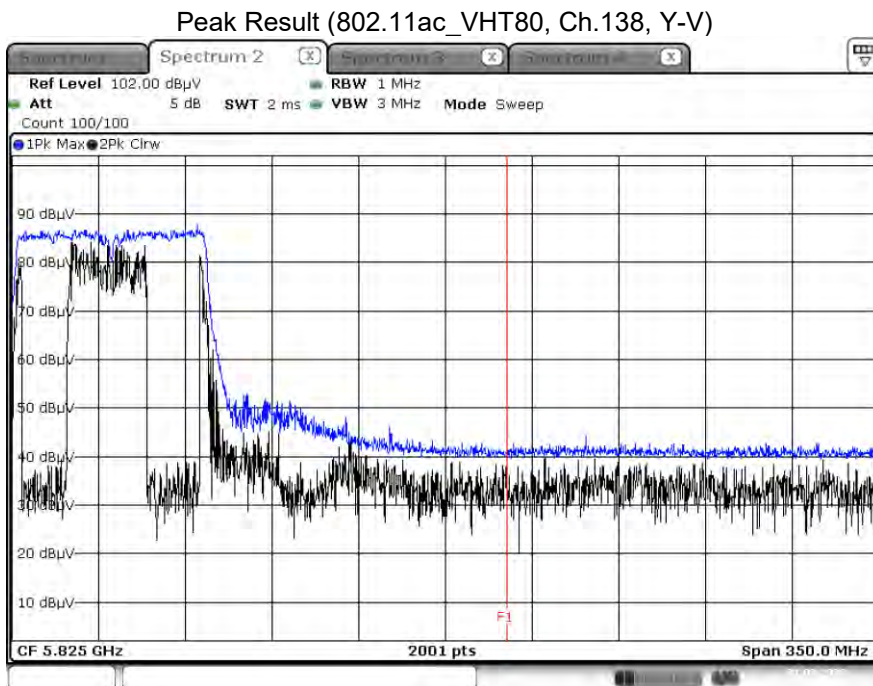
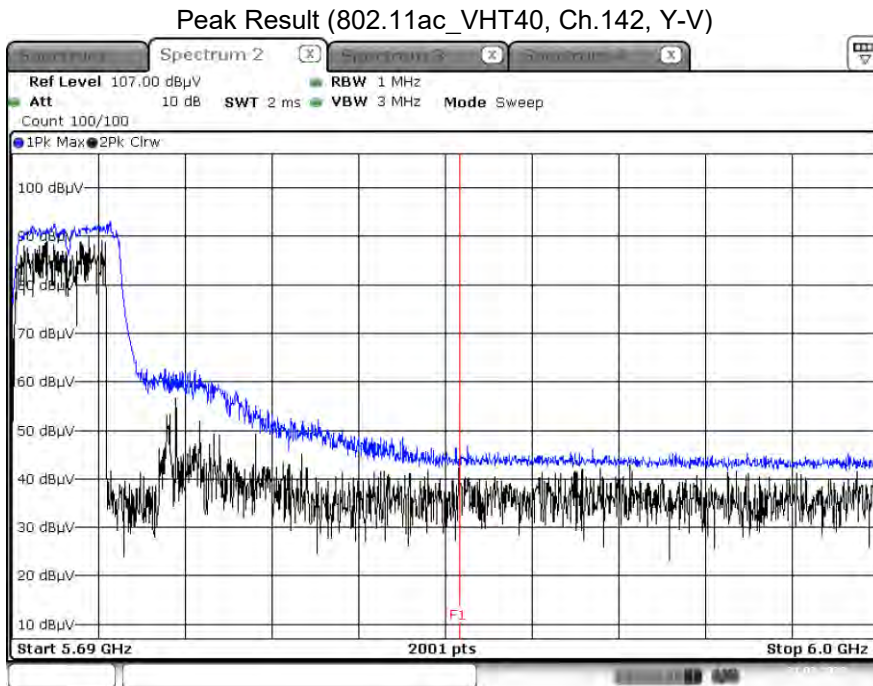


Peak Result (802.11ac_VHT20, Ch.144, Y-V)



Peak Result (802.11n_HT40, Ch.142, Y-V)





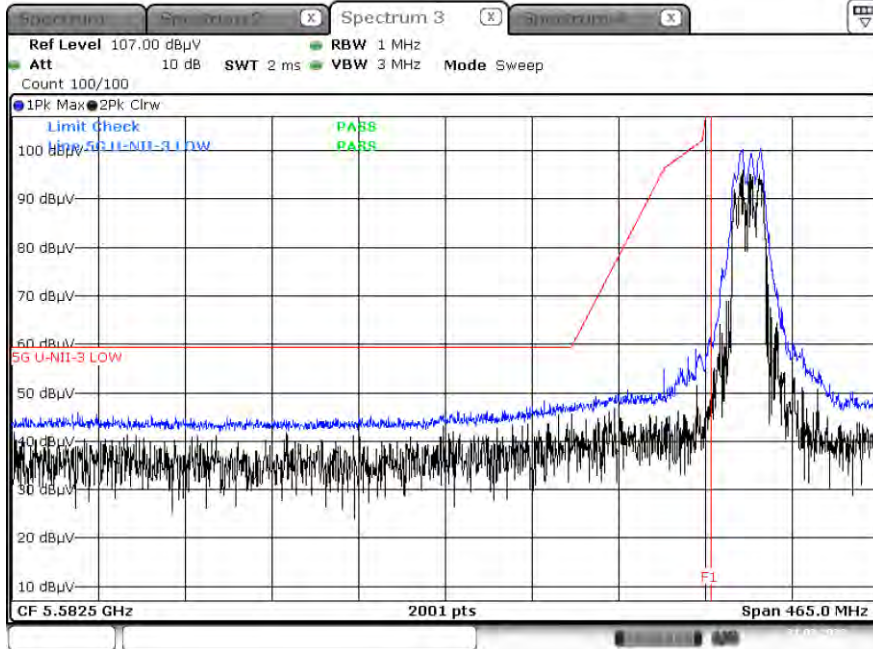
Note :

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)

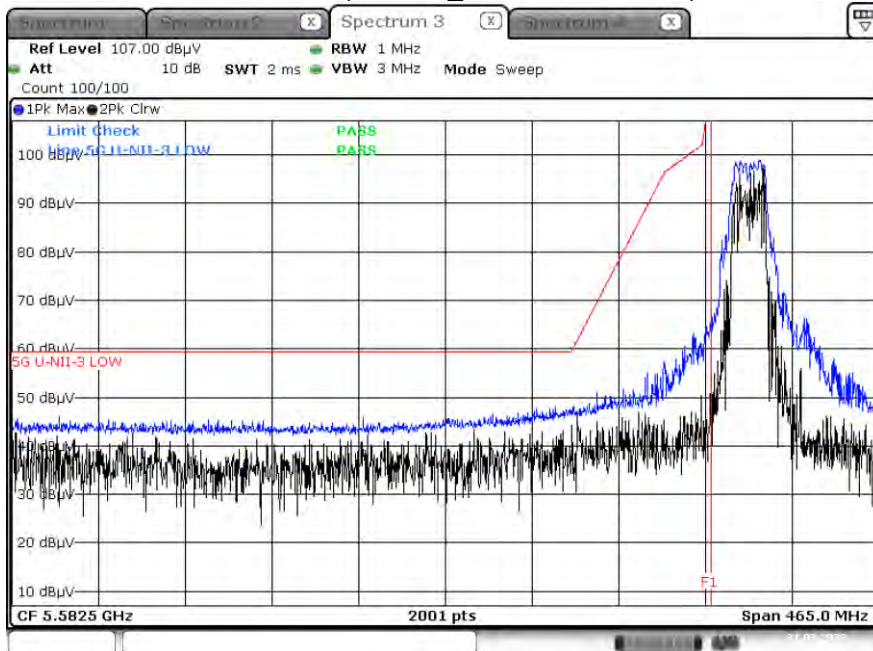
▣ Test Plots(UNII 3)

[MIMO]

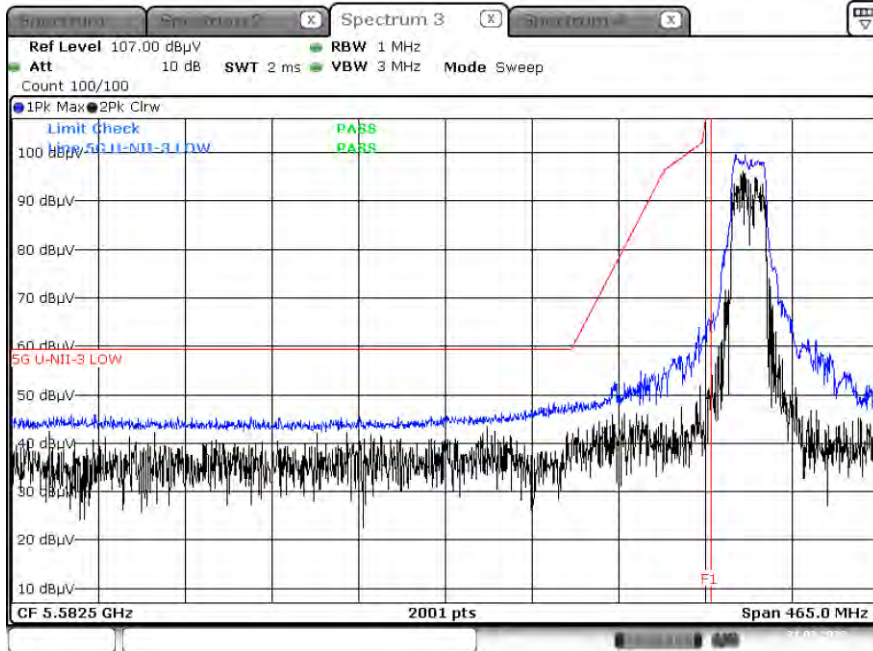
Peak Result (802.11a, Ch.149, Y-V)



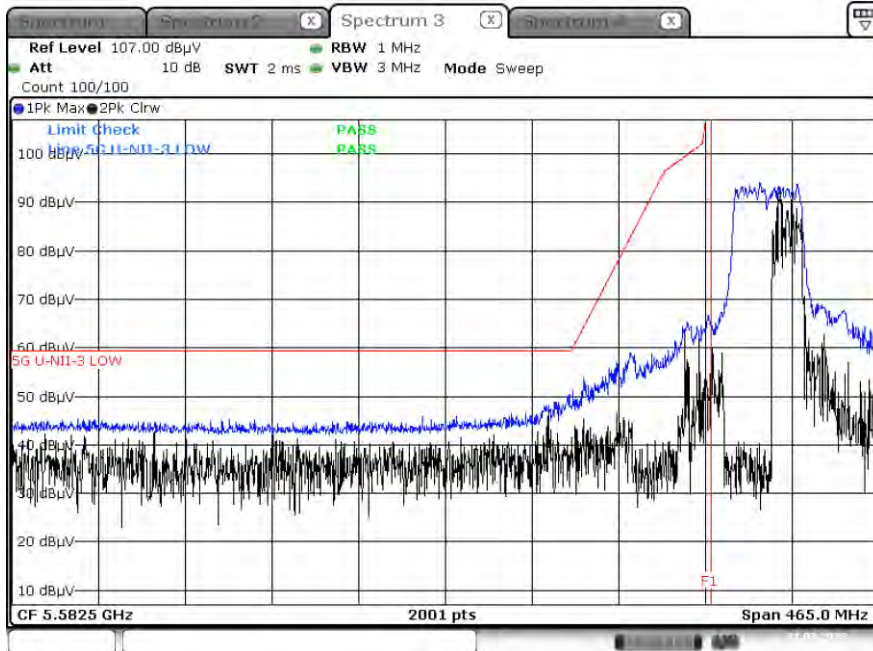
Peak Result (802.11n_HT20, Ch.149, Y-V)



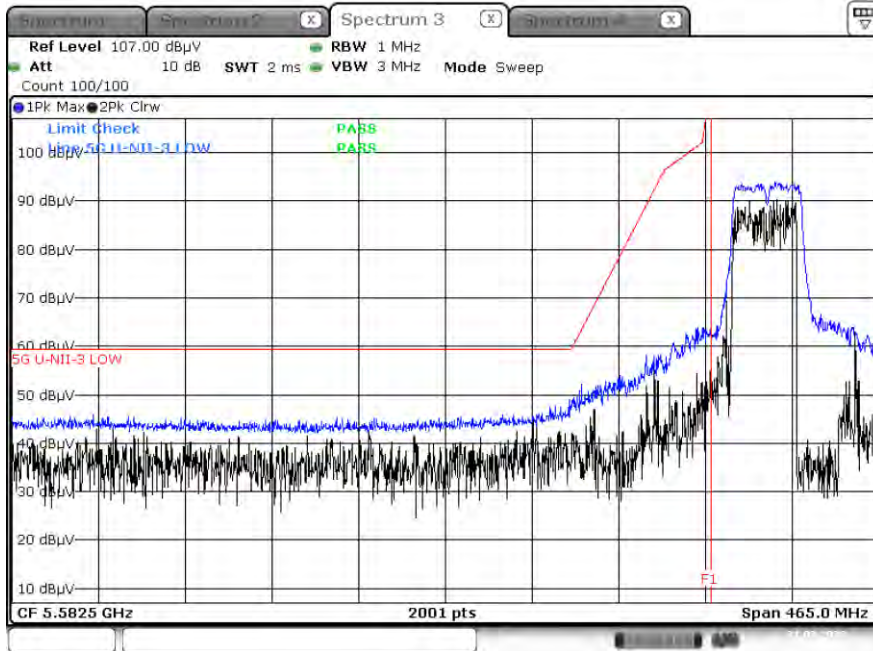
Peak Result (802.11ac_VHT20, Ch.149, Y-V)



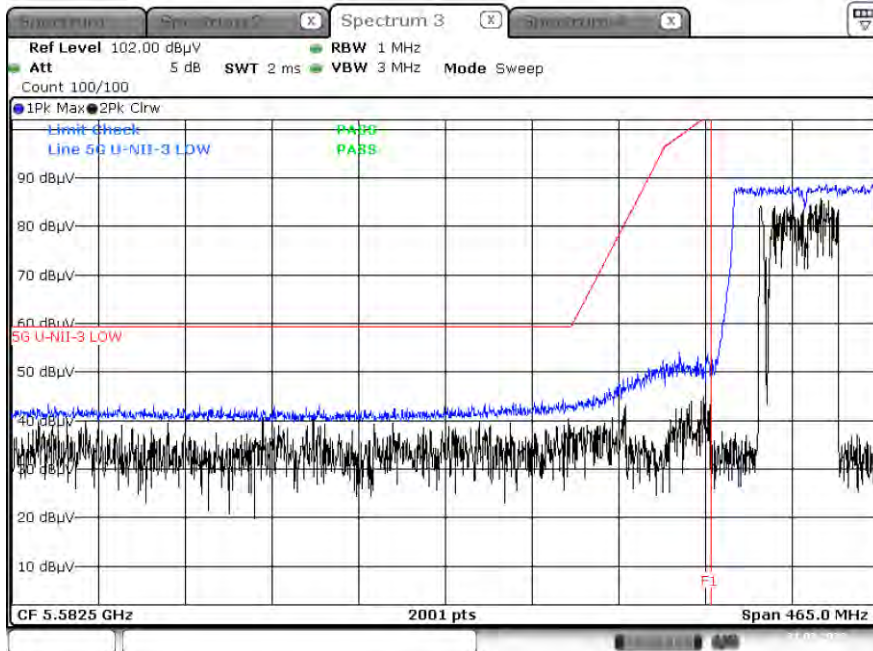
Peak Result (802.11n_HT40, Ch.151, Y-V)



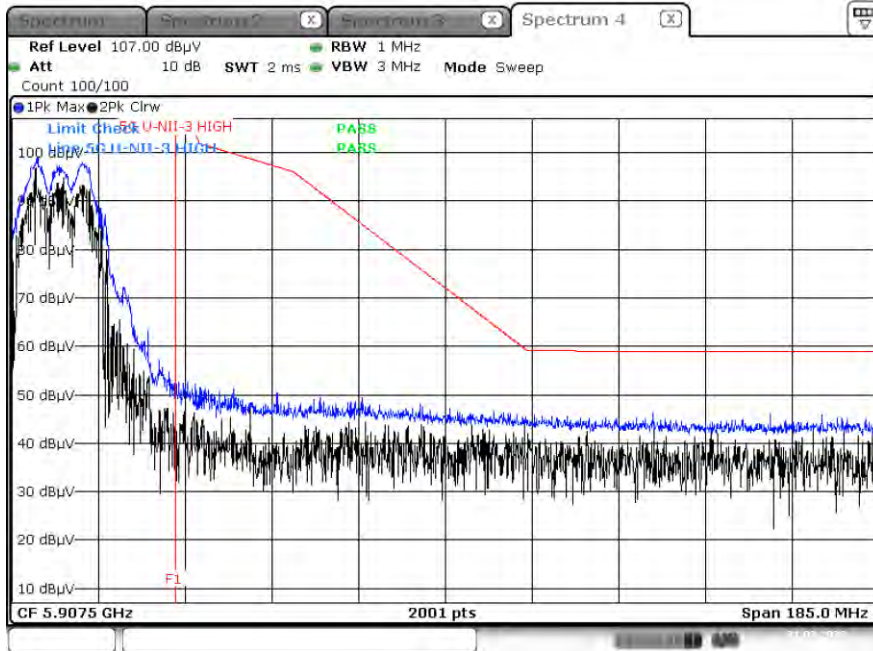
Peak Result (802.11ac_VHT40, Ch.151, Y-V)



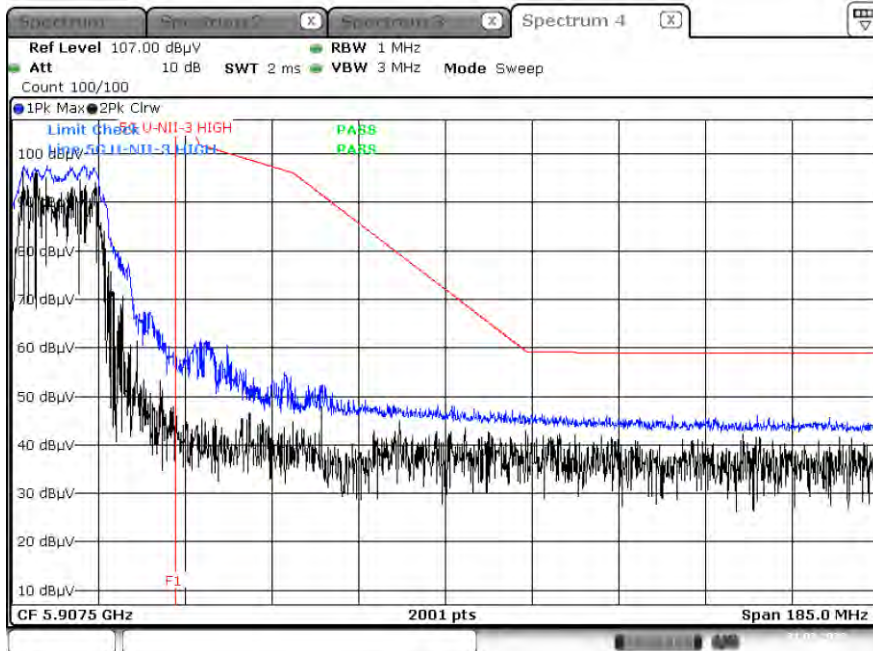
Peak Result (802.11ac_VHT80, Ch.155, Y-V)



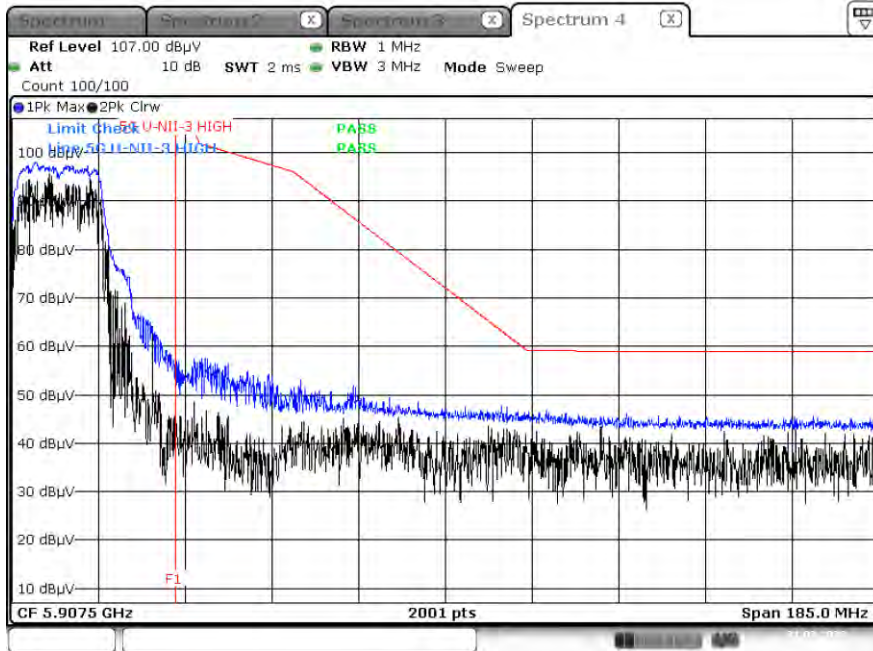
Peak Result (802.11a, Ch.165, Z-H)



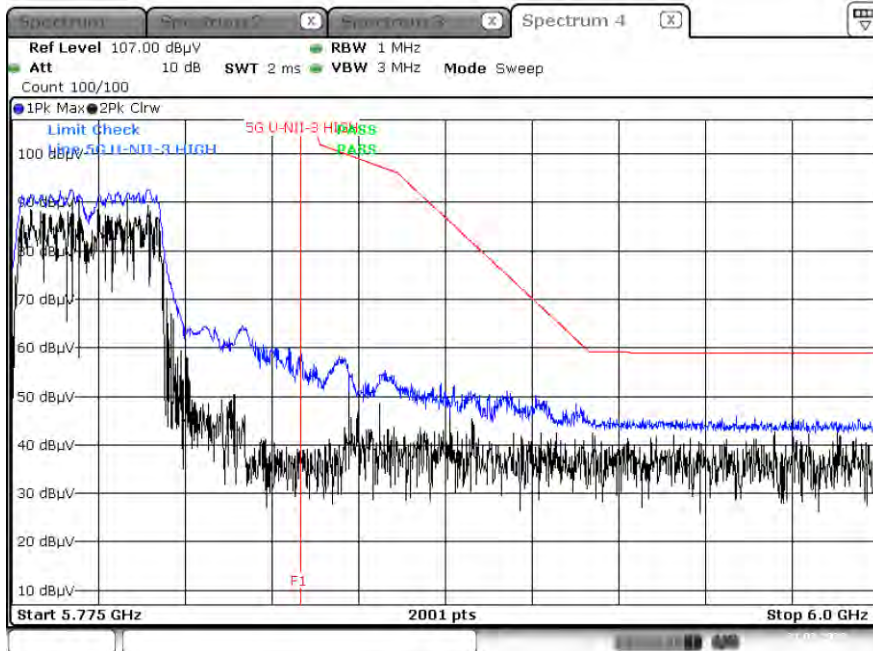
Peak Result (802.11n_HT20, Ch.165, Z-H)



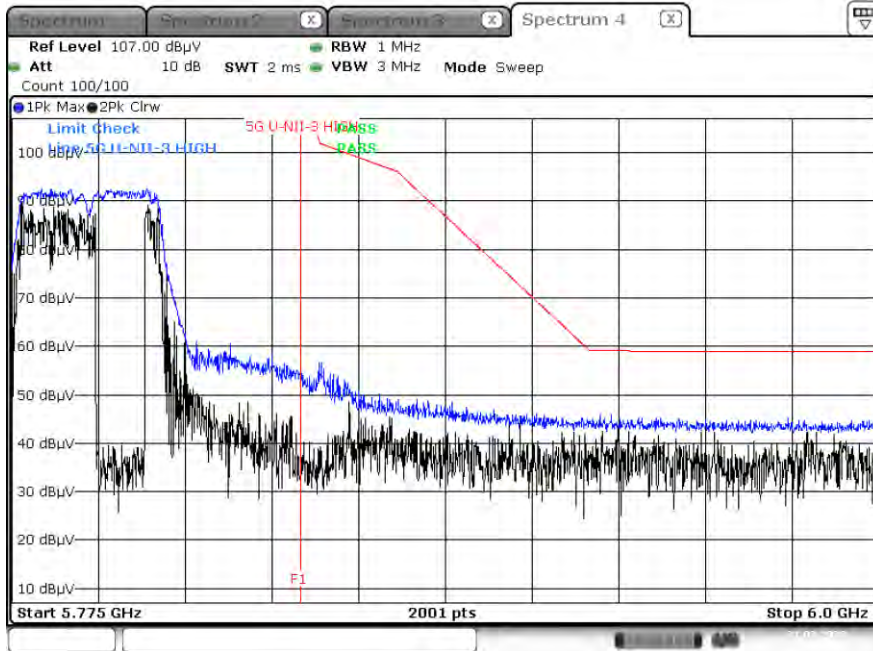
Peak Result (802.11ac_VHT20, Ch.165, Z-H)



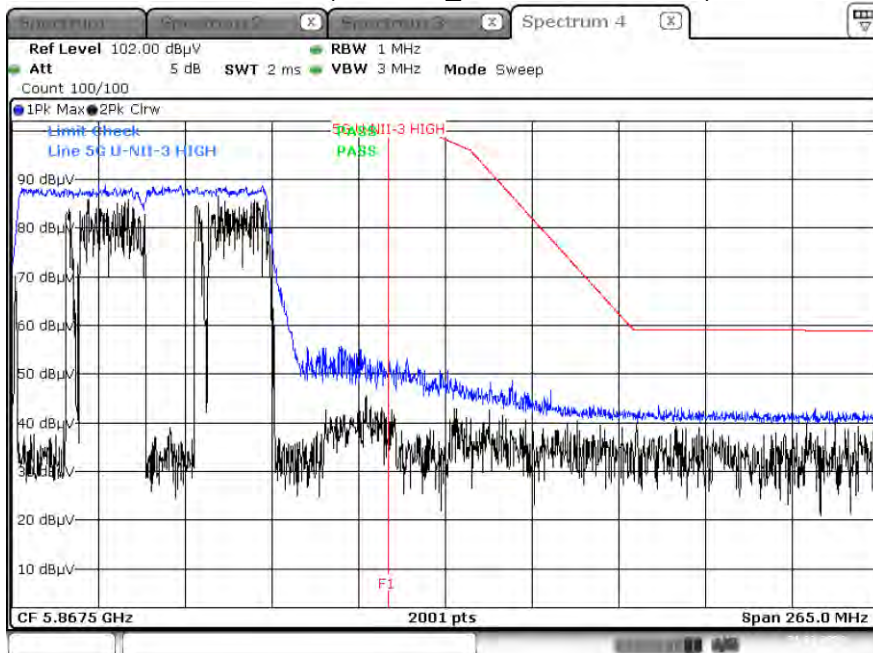
Peak Result (802.11n_HT40, Ch.159, Z-H)



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



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



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.

10.10 POWERLINE CONDUCTED EMISSIONS

Conducted Emissions

Test

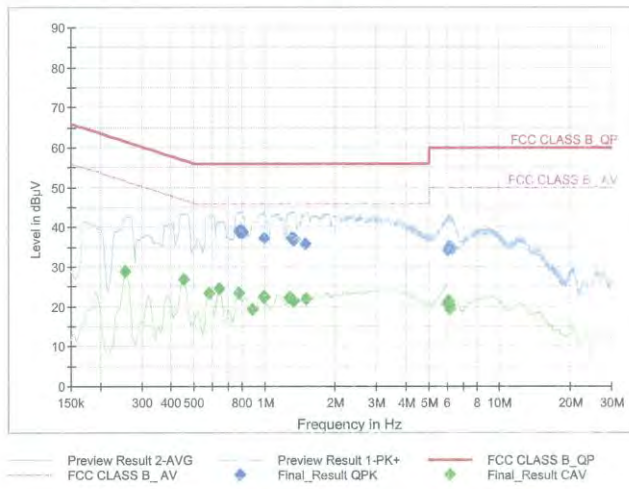
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Test Report

Common Information

EUT : SC-53D
 Operating Conditions : 5G WLAN Mode
 Comment :

Full Spectrum



Final Result QPK

Frequency (MHz)	QuasiPeak (dBµV)	Limit (dBµV)	Margin (dB)	Meas. Time (ms)	Bandwidth (kHz)	Line	Filter	Corr. (dB)
0.7768	38.95	56.00	17.05	1000.0	9.000	L1	OFF	9.7
0.7835	38.94	56.00	17.06	1000.0	9.000	L1	OFF	9.7
0.7880	38.61	56.00	17.39	1000.0	9.000	L1	OFF	9.7
0.7948	39.19	56.00	16.81	1000.0	9.000	L1	OFF	9.7
0.8015	38.90	56.00	17.10	1000.0	9.000	L1	OFF	9.7
0.8060	38.69	56.00	17.31	1000.0	9.000	L1	OFF	9.7
0.9950	37.27	56.00	18.73	1000.0	9.000	L1	OFF	9.7
1.3033	37.08	56.00	18.92	1000.0	9.000	L1	OFF	9.7
1.3235	37.24	56.00	18.76	1000.0	9.000	L1	OFF	9.7
1.3325	36.58	56.00	19.42	1000.0	9.000	L1	OFF	9.7
1.3370	37.05	56.00	18.95	1000.0	9.000	L1	OFF	9.7
1.4923	35.89	56.00	20.11	1000.0	9.000	L1	OFF	9.7
5.9855	34.38	60.00	25.62	1000.0	9.000	L1	OFF	9.9
6.0418	34.63	60.00	25.37	1000.0	9.000	L1	OFF	9.9
6.0710	34.80	60.00	25.20	1000.0	9.000	L1	OFF	9.9
6.1250	34.65	60.00	25.35	1000.0	9.000	L1	OFF	9.9
6.1633	34.87	60.00	25.13	1000.0	9.000	L1	OFF	9.9
6.2938	34.54	60.00	25.46	1000.0	9.000	L1	OFF	9.9

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Test

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Final Result CAV

Frequency (MHz)	CAverage (dBμV)	Limit (dBμV)	Margin (dB)	Meas. Time (ms)	Bandwidth (kHz)	Line	Filter	Corr. (dB)
0.2558	28.75	51.57	22.81	1000.0	9.000	L1	OFF	9.7
0.4493	26.86	46.89	20.03	1000.0	9.000	L1	OFF	9.7
0.5788	23.44	46.00	22.56	1000.0	9.000	L1	OFF	9.7
0.6418	24.51	46.00	21.49	1000.0	9.000	L1	OFF	9.7
0.7723	23.45	46.00	22.55	1000.0	9.000	L1	OFF	9.7
0.8848	19.43	46.00	26.57	1000.0	9.000	L1	OFF	9.7
0.9883	22.47	46.00	23.53	1000.0	9.000	L1	OFF	9.7
0.9973	22.35	46.00	23.65	1000.0	9.000	L1	OFF	9.7
1.2785	22.34	46.00	23.66	1000.0	9.000	L1	OFF	9.7
1.2898	22.27	46.00	23.73	1000.0	9.000	L1	OFF	9.7
1.3280	21.39	46.00	24.61	1000.0	9.000	L1	OFF	9.7
1.5035	21.85	46.00	24.15	1000.0	9.000	L1	OFF	9.7
5.9585	20.89	50.00	29.11	1000.0	9.000	L1	OFF	9.9
6.0755	21.23	50.00	28.77	1000.0	9.000	L1	OFF	9.9
6.0890	21.31	50.00	28.69	1000.0	9.000	L1	OFF	9.9
6.1295	19.26	50.00	30.74	1000.0	9.000	L1	OFF	9.9
6.1385	20.29	50.00	29.71	1000.0	9.000	L1	OFF	9.9
6.1520	19.96	50.00	30.04	1000.0	9.000	L1	OFF	9.9

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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	08/22/2023	Annual
EMI Test Receiver	ESR	Rohde & Schwarz	101910	06/07/2023	Annual
Temperature Chamber	SU-642	ESPEC	0093008124	03/04/2023	Annual
Signal Analyzer	N9030A	Agilent	MY49432108	03/08/2023	Annual
Power Measurement Set	OSP 120	Rohde & Schwarz	101231	06/14/2023	Annual
Power Meter	N1911A	Agilent	MY45100523	03/24/2023	Annual
Power Sensor	N1921A	Agilent	MY57820067	03/24/2023	Annual
Directional Coupler	87300B	Agilent	3116A03621	11/02/2023	Annual
Power Splitter	11667B	Hewlett Packard	10545	02/06/2024	Annual
DC Power Supply	E3632A	HP	KR75303243	04/25/2023	Annual
Attenuator(10 dB) (DC-26.5 GHz)	8493C	HP	08285	06/21/2023	Annual
Attenuator(20 dB)	18N-20dB	Rohde & Schwarz	8	03/07/2023	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	N/A	N/A	N/A
EM1000 / Controller	EM1000	Audix	060520	N/A	N/A
Turn Table	N/A	Audix	N/A	N/A	N/A
Amp & Filter Bank Switch Controller	FBSM-01B	TNM system	TM19050002	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-1300	01/18/2024	Biennial
Horn Antenna(15 GHz ~ 40 GHz)	BBHA9170	Schwarzbeck	BBHA9170124	04/12/2023	Biennial
Spectrum Analyzer	FSV(10 Hz ~ 40 GHz)	Rohde & Schwarz	101055	05/16/2023	Annual
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	06/13/2023	Annual
Band Reject Filter	WRCJV12-4900-5100-5900-6100-50SS	Wainwright Instruments	6	06/13/2023	Annual
High Pass Filter(7 GHz ~ 18 GHz)	WHKX10-7150-8000-18000-50SS	Wainwright Instruments	1	03/11/2023	Annual
Power Amplifier	CBL18265035	CERNEX	22966	12/01/2023	Annual
Power Amplifier	CBL26405040	CERNEX	25956	03/11/2023	Annual
Bluetooth Tester	TC-3000C	TESCOM	3000C000175	04/05/2023	Annual
HPF(3~18GHz)+LNA1(1~18GHz)	FMSR-05B	TNM system	F6	01/17/2024	Annual
ATT(10dB) + LNA1(1~18GHz)	FMSR -05B	TNM system	None	01/17/2024	Annual
ATT(3dB) + LNA1(1~18GHz)	FMSR -05B	TNM system	None	01/17/2024	Annual
LNA1(1~18GHz)	FMSR -05B	TNM system	25540	01/17/2024	Annual
HPF(7~18GHz)+LNA2(6~18GHz)	FMSR -05B	TNM system	28550	01/17/2024	Annual
Thru(30MHz ~ 18GHz)	FMSR -05B	TNM system	None	01/17/2024	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-2302-FC023-P