▣ Test Plots (26dB Bandwidth)

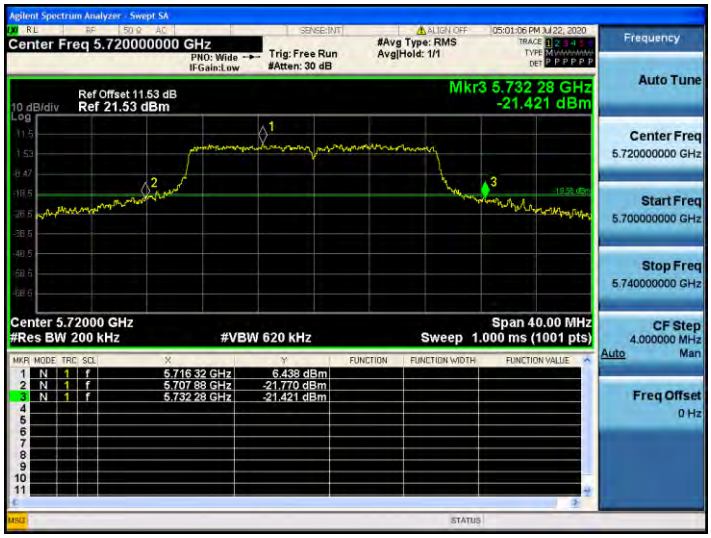
802.11n(HT40) UNII Band	802.11ac(VHT40) UNII Band

802.11ac(VHT80) UNII Band

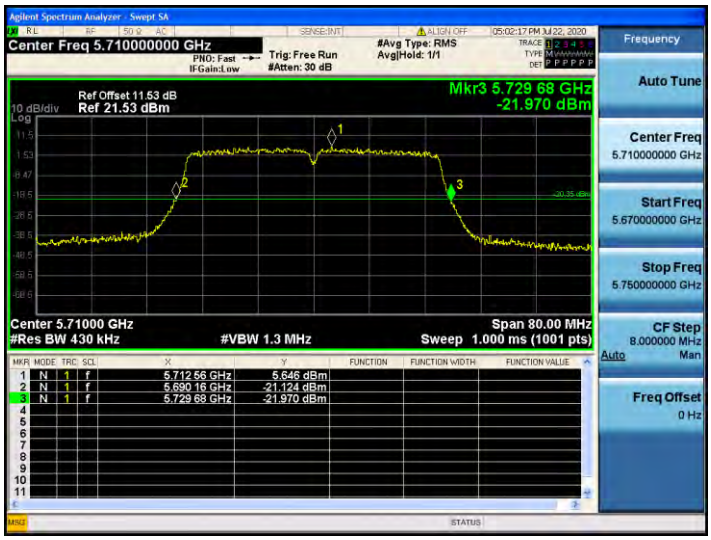
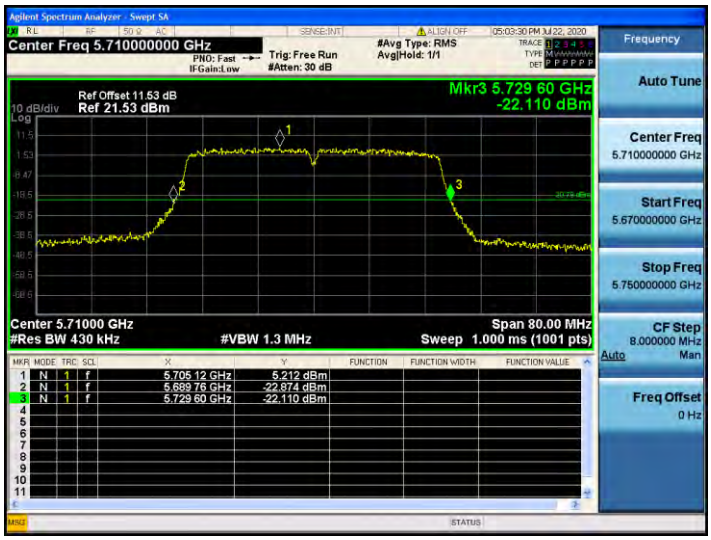
[ANT.2]

▣ Test Plots (26dB Bandwidth)

802.11a UNII Band	802.11n(HT20) UNII Band

802.11ac(VHT20) UNII Band


▣ Test Plots (26dB Bandwidth)

802.11n(HT40) UNII Band	802.11ac(VHT40) UNII Band
	

802.11ac(VHT80) UNII Band

10.7.2 6dB Bandwidth

[ANT.1]

Mode	Band	Frequency [MHz]	Channel	Measured Frequency [MHz]	6dB Bandwidth [MHz]	Limit [MHz]
802.11a	UNII 3	5720	144	5728.16	3.16	> 0.5
802.11n(HT20)				5728.88	3.88	> 0.5
802.11ac(VHT20)				5728.92	3.92	> 0.5

Mode	Band	Frequency [MHz]	Channel	Measured Frequency [MHz]	6dB Bandwidth [MHz]	Limit [MHz]
802.11n(HT40)	UNII 3	5710	142	5728.16	3.16	> 0.5
802.11ac(VHT40)				5728.24	3.24	> 0.5

Mode	Band	Frequency [MHz]	Channel	Measured Frequency [MHz]	6dB Bandwidth [MHz]	Limit [MHz]
802.11ac(VHT80)	UNII 3	5690	138	5728.08	3.08	> 0.5

Note:

6dB Bandwidth = Measured Frequency[MHz] – 5725MHz

[ANT.2]

Mode	Band	Frequency [MHz]	Channel	Measured Frequency [MHz]	6dB Bandwidth [MHz]	Limit [MHz]
802.11a	UNII 3	5720	144	5728.16	3.16	> 0.5
802.11n(HT20)				5728.88	3.88	> 0.5
802.11ac(VHT20)				5728.84	3.84	> 0.5

Mode	Band	Frequency [MHz]	Channel	Measured Frequency [MHz]	6dB Bandwidth [MHz]	Limit [MHz]
802.11n(HT40)	UNII 3	5710	142	5727.60	2.60	> 0.5
802.11ac(VHT40)				5728.24	3.24	> 0.5

Mode	Band	Frequency [MHz]	Channel	Measured Frequency [MHz]	6dB Bandwidth [MHz]	Limit [MHz]
802.11ac(VHT80)	UNII 3	5690	138	5728.24	3.24	> 0.5

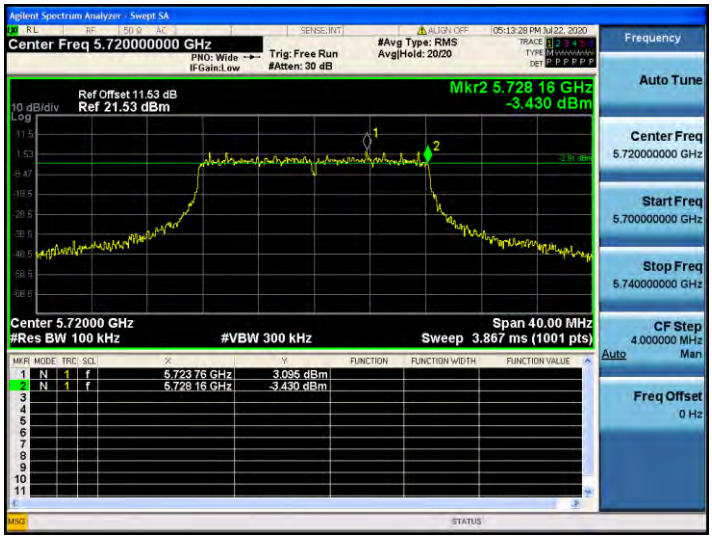
Note:

6dB Bandwidth = Measured Frequency[MHz] – 5725MHz

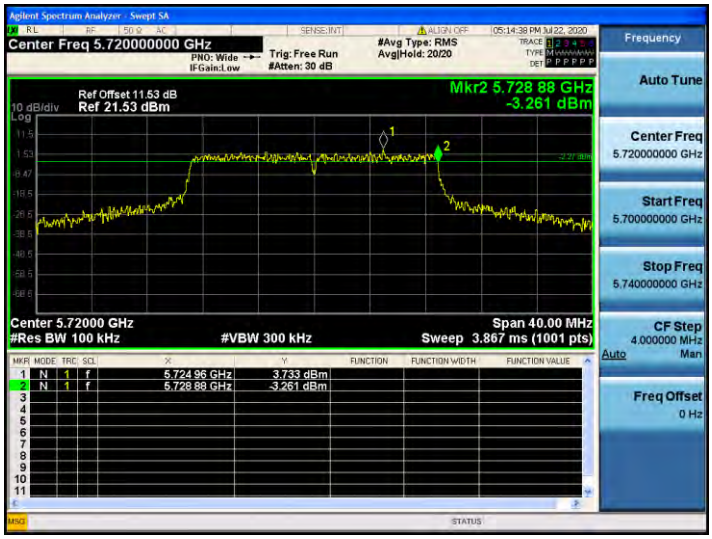
[ANT.1]

▣ Test Plots(UNII 3 Band 6dB Bandwidth)

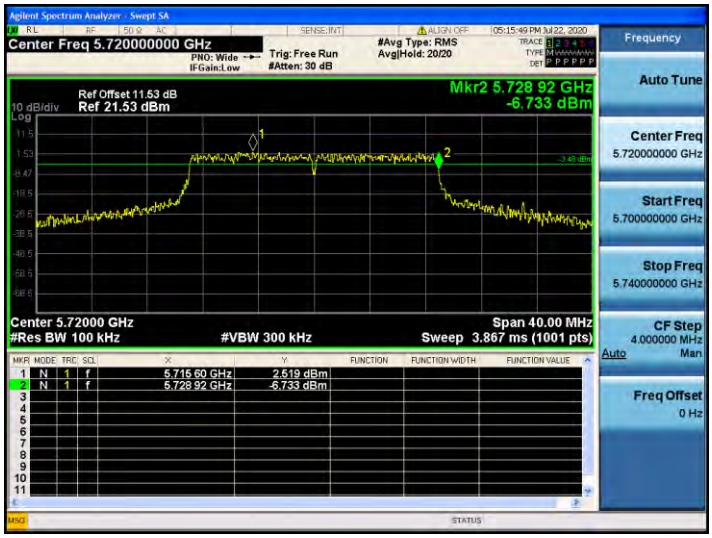
802.11a CH.144

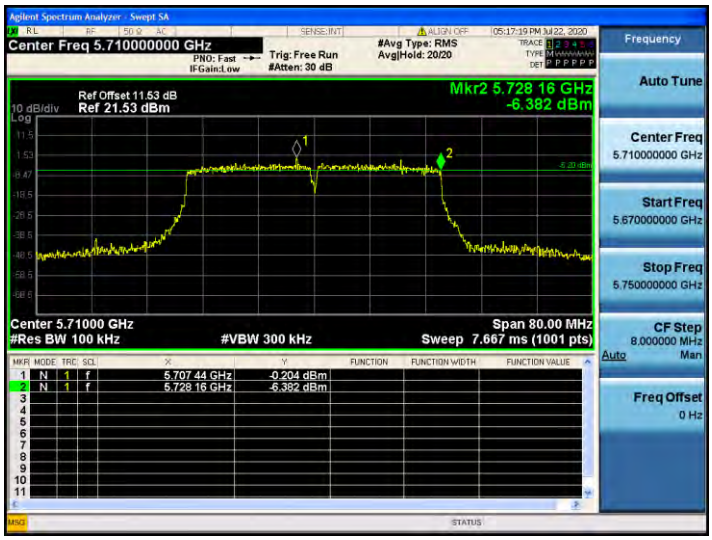
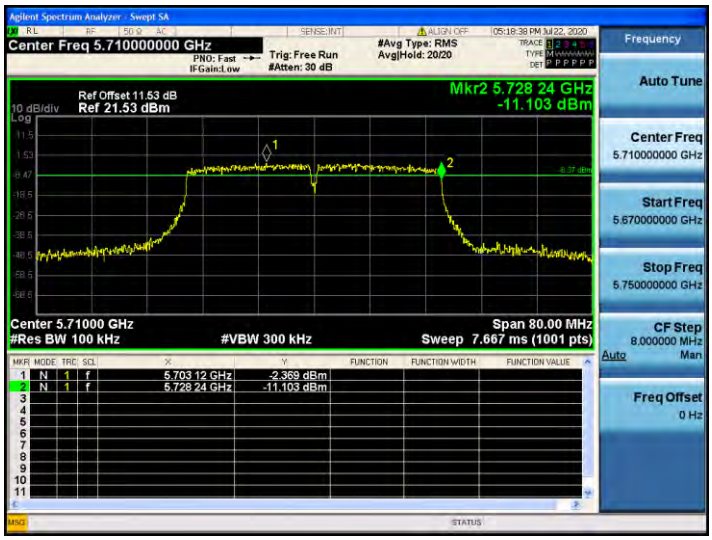


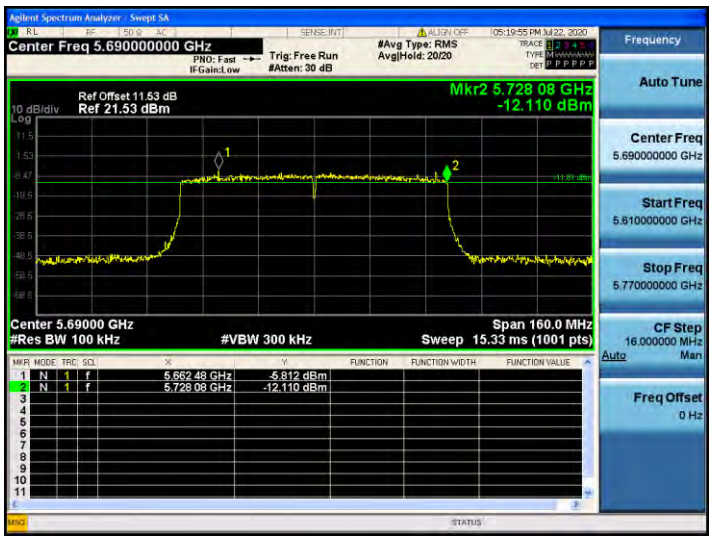
802.11n_HT20 CH.144



802.11ac_VHT20 CH.144

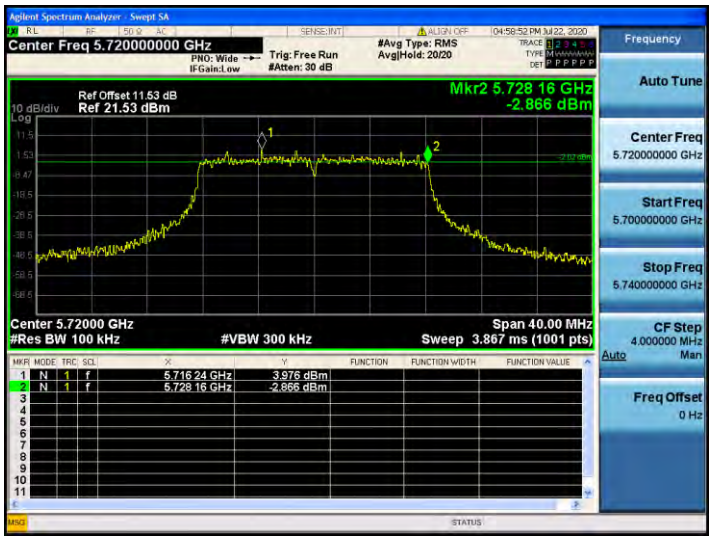
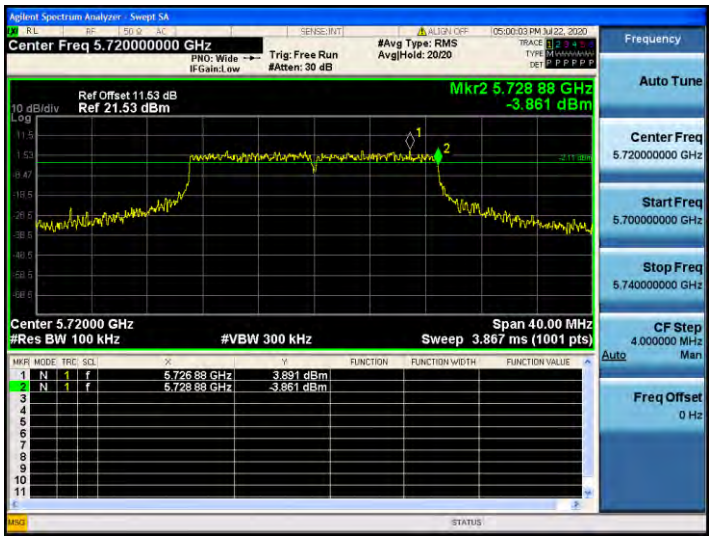


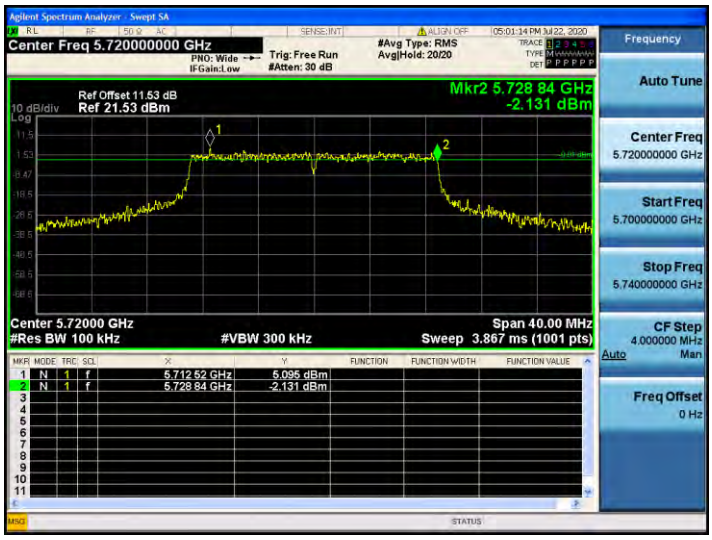
802.11n_HT40 CH.142	802.11ac_VHT40 CH.142
	

802.11ac_VHT80 CH.138


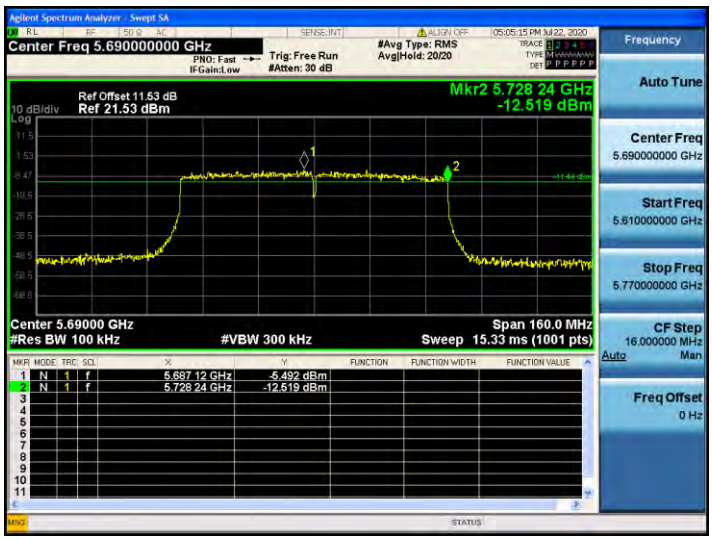
[ANT.2]

▣ Test Plots(UNII 3 Band 6dB Bandwidth)

802.11a CH.144	802.11n_HT20 CH.144
	

802.11ac_VHT20 CH.144


802.11n_HT40 CH.142	802.11ac_VHT40 CH.142

802.11ac_VHT80 CH.138


10.7.3 Output Power

[ANT.1]

Mode	Frequency [MHz]	Channel	Measured Power (dBm)	Duty Cycle Factor (dB)	Total Power (dBm)	Limit (dBm)
802.11a	5720 (UNII 2C Band)	144	13.55	0.152	13.70	22.54
802.11n(HT20)			15.09	0.013	15.10	23.32
802.11ac(VHT20)			15.04	0.012	15.05	23.68
802.11a	5720 (UNII 3 Band)	144	6.93	0.152	7.08	30.00
802.11n(HT20)			9.54	0.013	9.56	30.00
802.11ac(VHT20)			9.54	0.012	9.55	30.00

Mode	Frequency [MHz]	Channel	Measured Power (dBm)	Duty Cycle Factor (dB)	Total Power (dBm)	Limit (dBm)
802.11n(HT40)	5710 (UNII 2C Band)	142	14.45	0.018	14.47	23.98
802.11ac(VHT40)			14.45	0.012	14.46	23.98
802.11n(HT40)	5710 (UNII 3 Band)	142	3.11	0.018	3.13	30.00
802.11ac(VHT40)			3.09	0.012	3.10	30.00

Mode	Frequency [MHz]	Channel	Measured Power (dBm)	Duty Cycle Factor (dB)	Total Power (dBm)	Limit (dBm)
802.11ac(VHT80)	5690 (UNII 2C Band)	138	12.95	0.013	12.97	23.98
	5690 (UNII 3 Band)	138	-2.30	0.013	-2.29	30.00

[ANT.2]

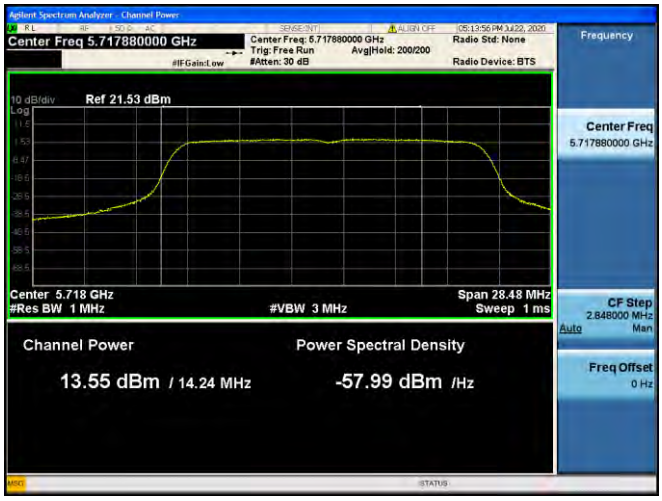
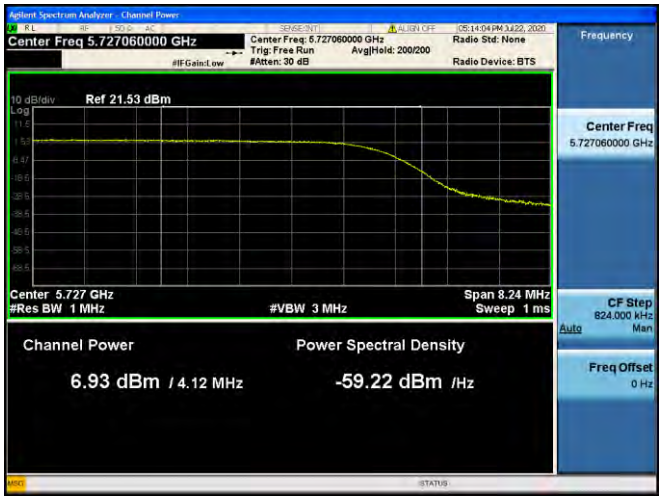
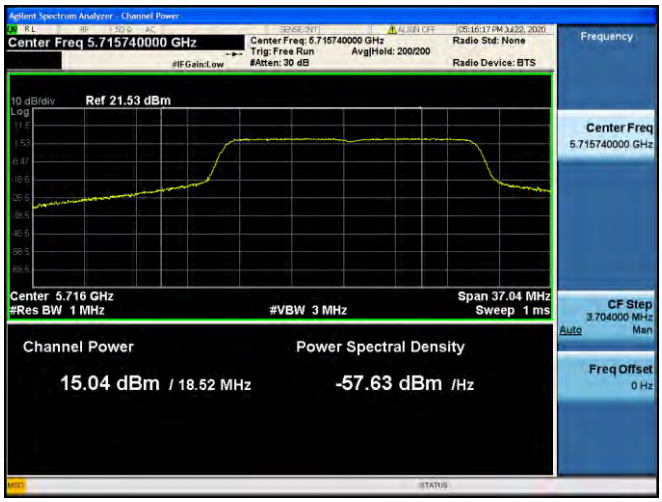
Mode	Frequency [MHz]	Channel	Measured Power (dBm)	Duty Cycle Factor (dB)	Total Power (dBm)	Limit (dBm)
802.11a	5720 (UNII 2C Band)	144	14.43	0.152	14.58	22.54
802.11n(HT20)			15.99	0.013	16.00	23.10
802.11ac(VHT20)			15.97	0.012	15.98	23.34
802.11a	5720 (UNII 3 Band)	144	7.62	0.152	7.78	30.00
802.11n(HT20)			10.30	0.013	10.31	30.00
802.11ac(VHT20)			10.21	0.012	10.22	30.00

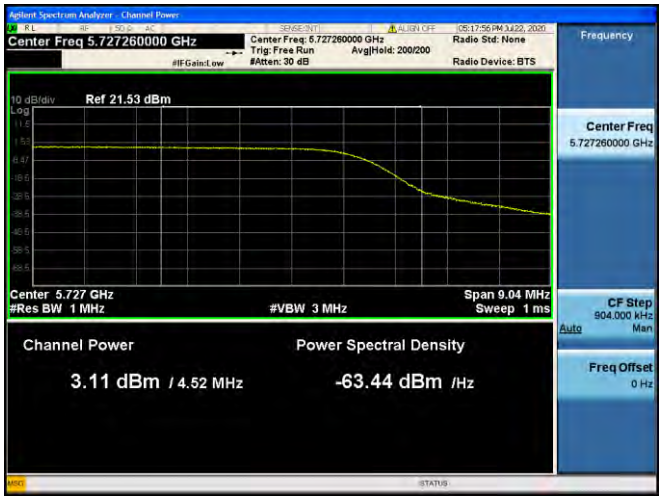
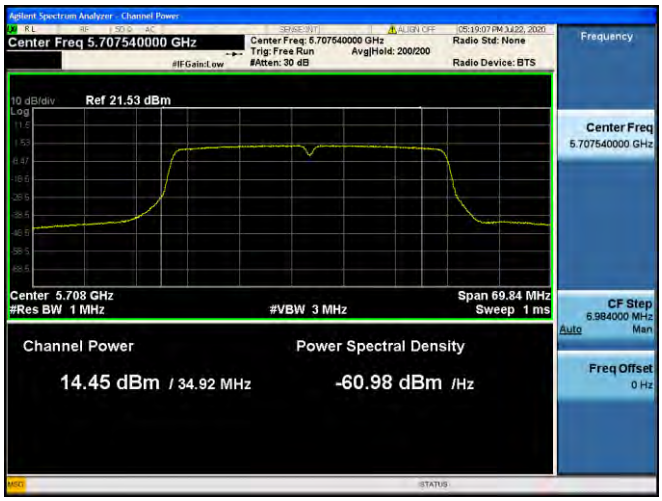
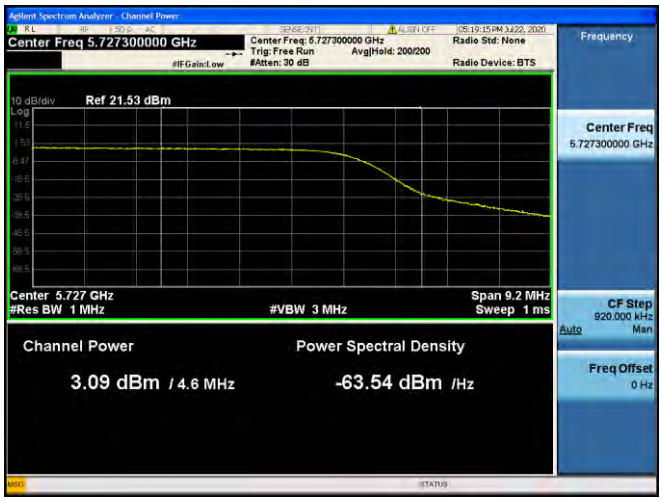
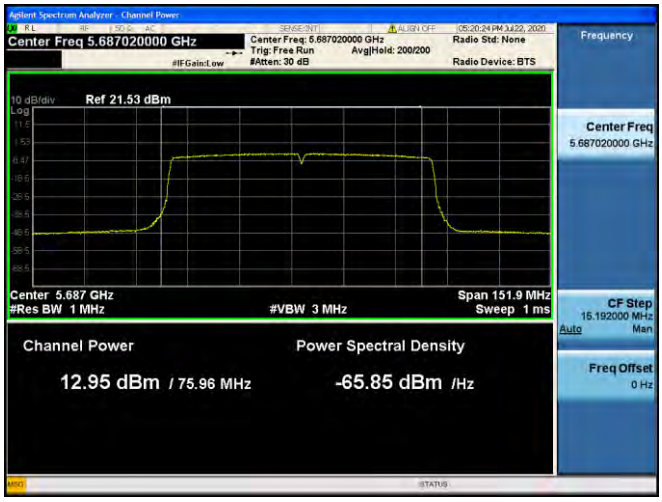
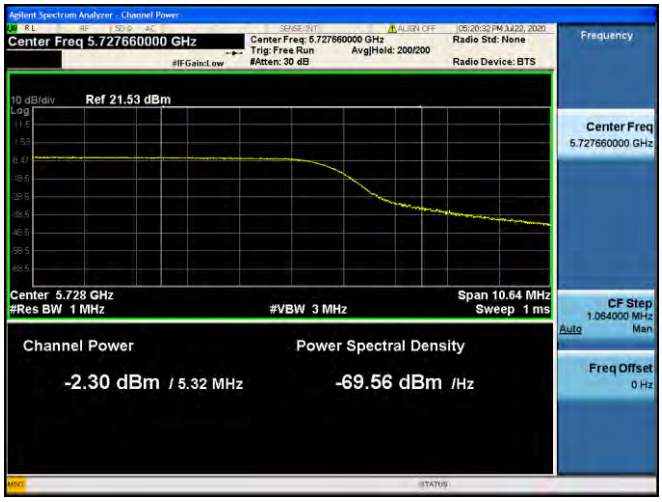
Mode	Frequency [MHz]	Channel	Measured Power (dBm)	Duty Cycle Factor (dB)	Total Power (dBm)	Limit (dBm)
802.11n(HT40)	5710 (UNII 2C Band)	142	15.49	0.018	15.51	23.98
802.11ac(VHT40)			15.51	0.018	15.53	23.98
802.11n(HT40)	5710 (UNII 3 Band)	142	3.77	0.018	3.79	30.00
802.11ac(VHT40)			3.75	0.018	3.77	30.00

Mode	Frequency [MHz]	Channel	Measured Power (dBm)	Duty Cycle Factor (dB)	Total Power (dBm)	Limit (dBm)
802.11ac(VHT80)	5690 (UNII 2C Band)	138	14.12	0.013	14.13	23.98
	5690 (UNII 3 Band)	138	-1.85	0.013	-1.84	30.00

[ANT.1]

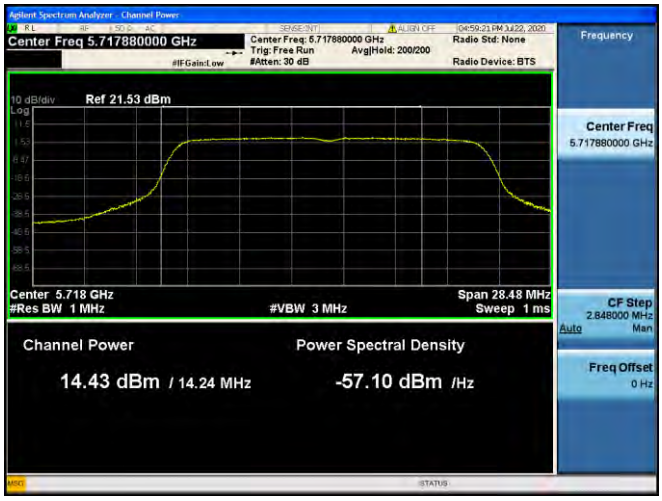
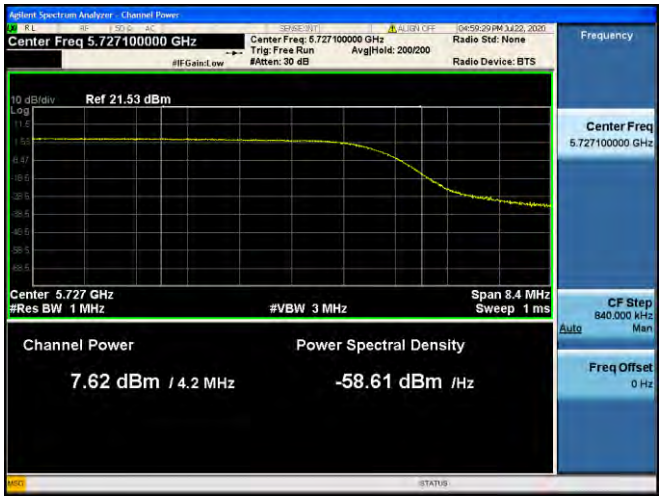
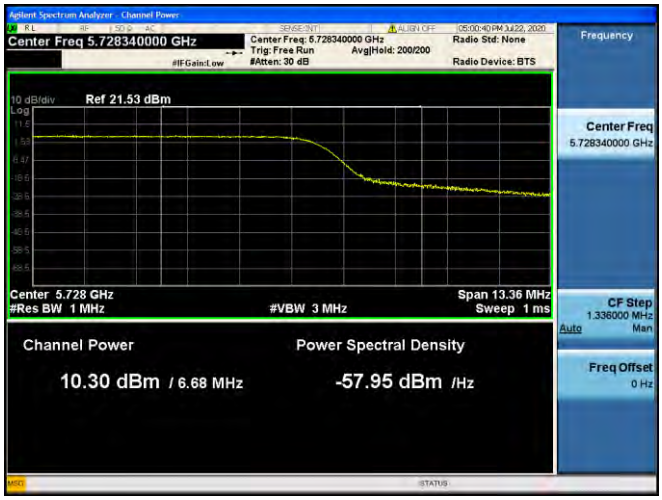
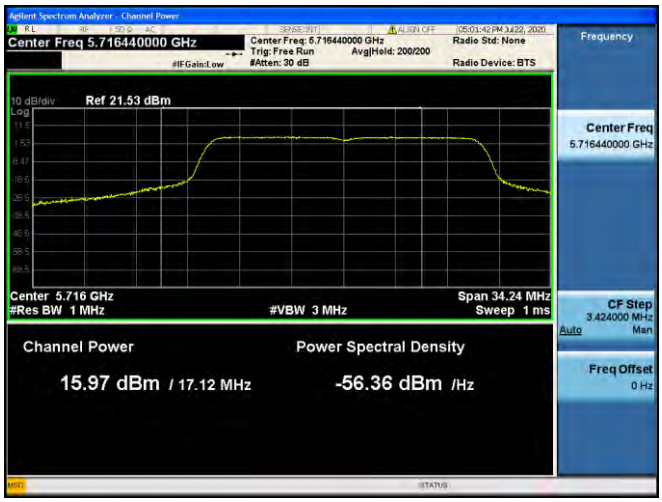
▣ Test Plots_

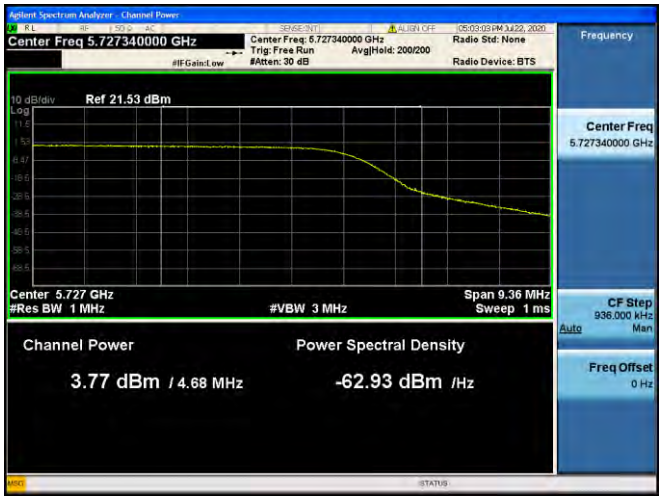
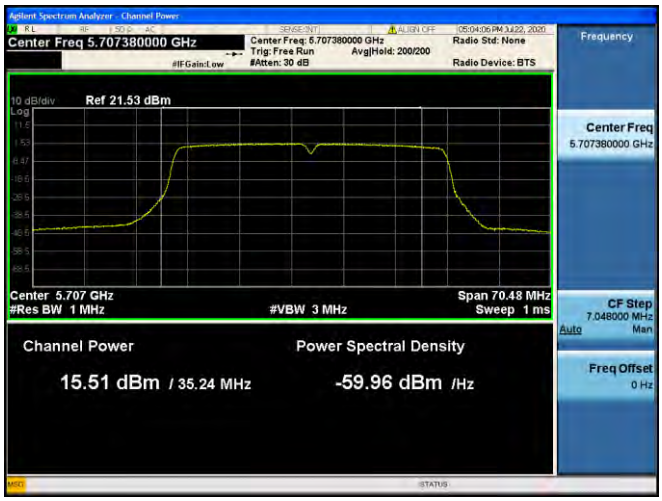
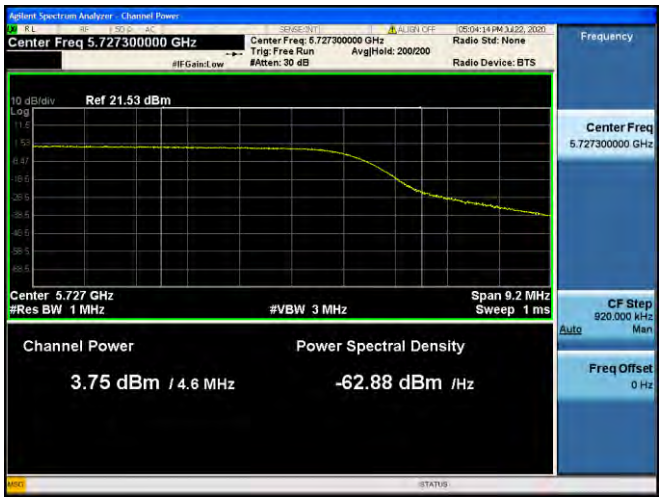
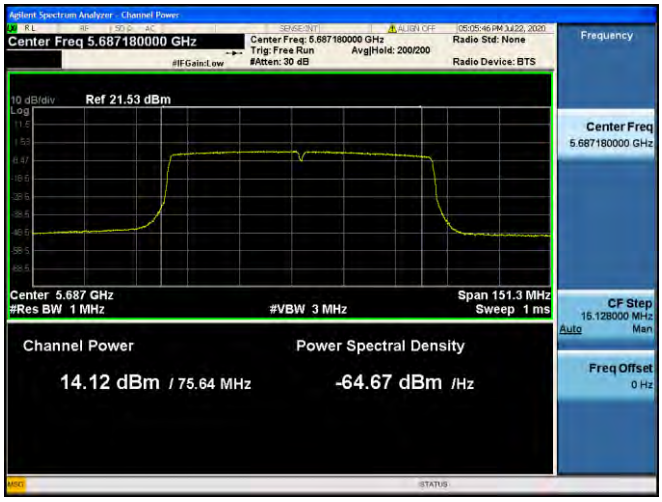
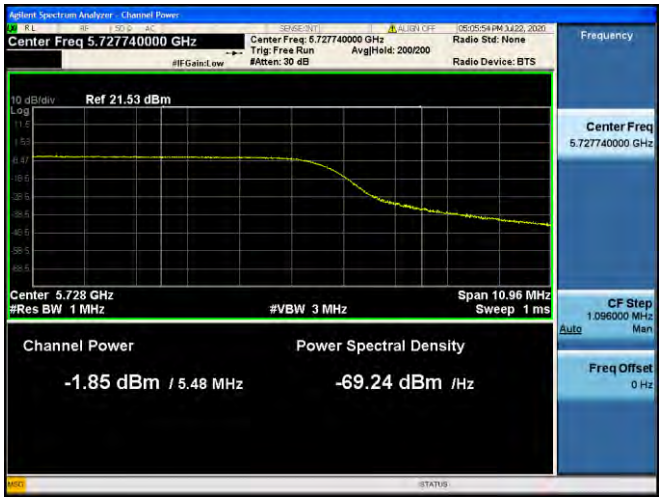
802.11a UNII 2C Band	802.11a UNII 3 Band
	
802.11n(HT20) UNII 2C Band	**802.11n(HT20) UNII 3 Band**
802.11ac(VHT20) UNII 2C Band	**802.11ac(VHT20) UNII 3 Band**
	

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_

802.11a 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**
	

10.7.4 Power Spectral Density

[ANT.1]

Mode	Frequency [MHz]	Channel	Measured Density (dBm)	Duty Cycle Factor (dB)	Total PSD (dBm)	Limit (dBm)
802.11a	5720 (UNII 2C Band)	144	3.678	0.152	3.830	11dBm/ MHz
802.11n(HT20)			4.802	0.013	4.815	
802.11ac(VHT20)			4.725	0.012	4.737	
802.11a	5720 (UNII 3 Band)	144	0.342	0.152	0.495	30 dBm/ 500kHz
802.11n(HT20)			1.810	0.013	1.823	
802.11ac(VHT20)			1.683	0.012	1.695	

Mode	Frequency [MHz]	Channel	Measured Density (dBm)	Duty Cycle Factor (dB)	Total PSD (dBm)	Limit (dBm)
802.11n(HT40)	5710 (UNII 2C Band)	142	0.612	0.018	0.631	11dBm/ MHz
802.11ac(VHT40)			0.993	0.012	1.005	
802.11n(HT40)	5710 (UNII 3 Band)	142	-3.678	0.018	-3.660	30 dBm/ 500kHz
802.11ac(VHT40)			-3.860	0.012	-3.848	

Mode	Frequency [MHz]	Channel	Measured Density (dBm)	Duty Cycle Factor (dB)	Total PSD (dBm)	Limit (dBm)
802.11ac(VHT80)	5690 (UNII 2C Band)	138	-4.324	0.013	-4.311	11dBm/ MHz
	5690 (UNII 3 Band)	138	-9.327	0.013	-9.314	30 dBm/ 500kHz

[ANT.2]

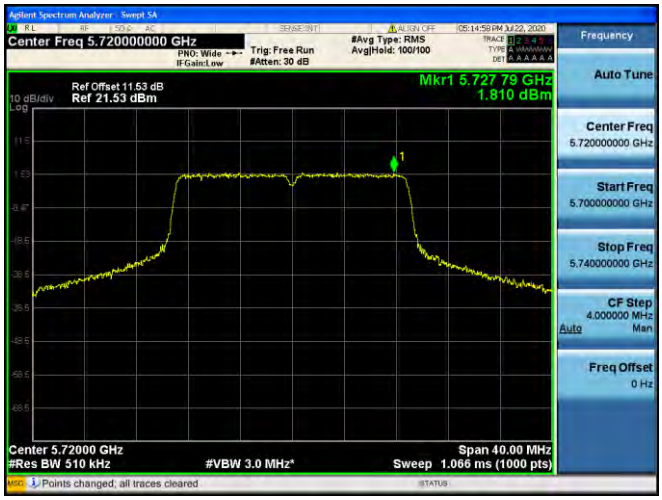
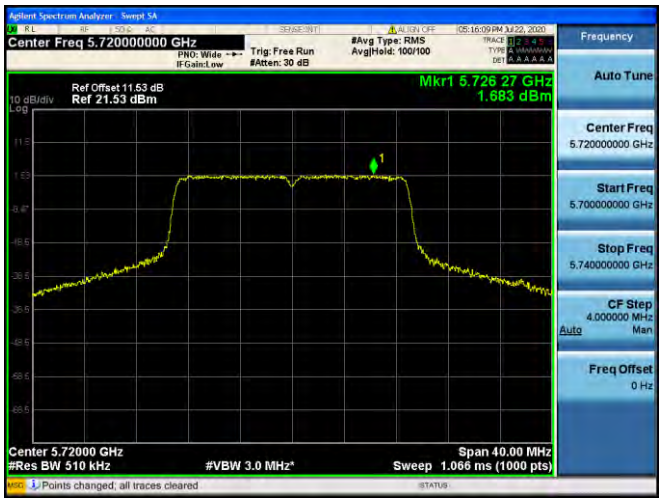
Mode	Frequency [MHz]	Channel	Measured Density (dBm)	Duty Cycle Factor (dB)	Total PSD (dBm)	Limit (dBm)
802.11a	5720 (UNII 2C Band)	144	4.605	0.152	4.758	11dBm/ MHz
802.11n(HT20)			5.770	0.013	5.783	
802.11ac(VHT20)			5.711	0.012	5.723	
802.11a	5720 (UNII 3 Band)	144	0.920	0.152	1.073	30 dBm/ 500kHz
802.11n(HT20)			2.671	0.013	2.684	
802.11ac(VHT20)			2.885	0.012	2.897	

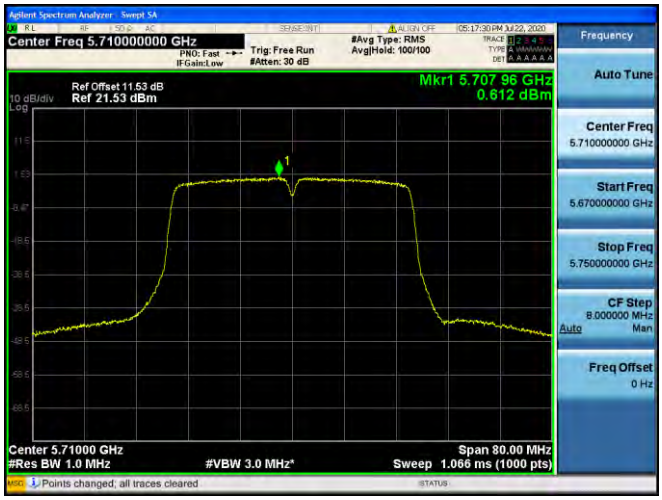
Mode	Frequency [MHz]	Channel	Measured Density (dBm)	Duty Cycle Factor (dB)	Total PSD (dBm)	Limit (dBm)
802.11n(HT40)	5710 (UNII 2C Band)	142	1.745	0.018	1.764	11dBm/ MHz
802.11ac(VHT40)			1.850	0.018	1.868	
802.11n(HT40)	5710 (UNII 3 Band)	142	-2.799	0.018	-2.781	30 dBm/ 500kHz
802.11ac(VHT40)			-2.976	0.018	-2.958	

Mode	Frequency [MHz]	Channel	Measured Density (dBm)	Duty Cycle Factor (dB)	Total PSD (dBm)	Limit (dBm)
802.11ac(VHT80)	5690 (UNII 2C Band)	138	-2.961	0.013	-2.949	11dBm/ MHz
	5690 (UNII 3 Band)	138	-8.493	0.013	-8.480	30 dBm/ 500kHz

[ANT.1]

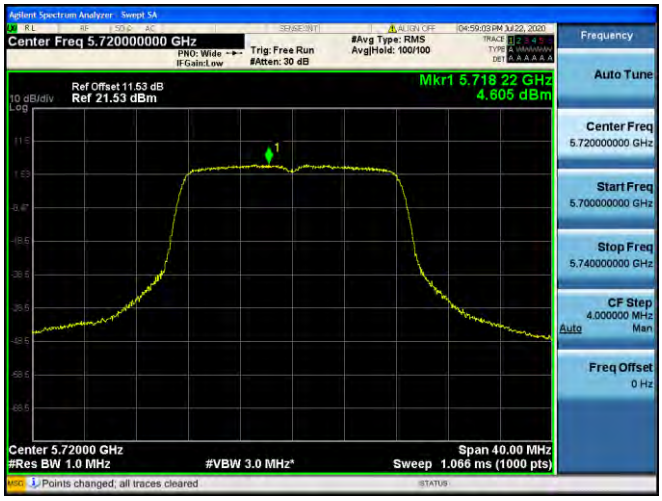
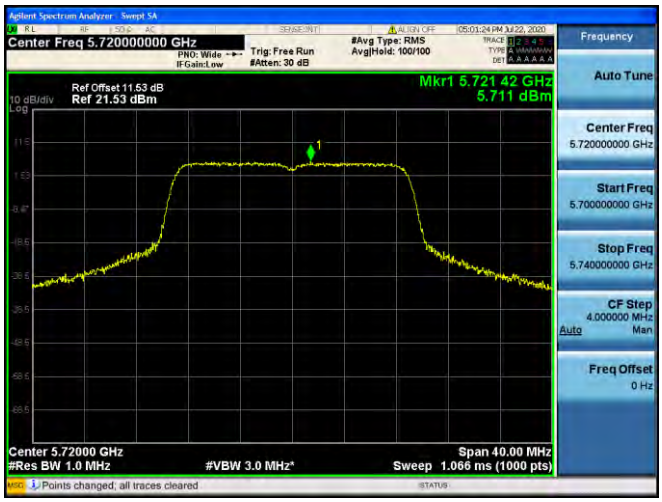
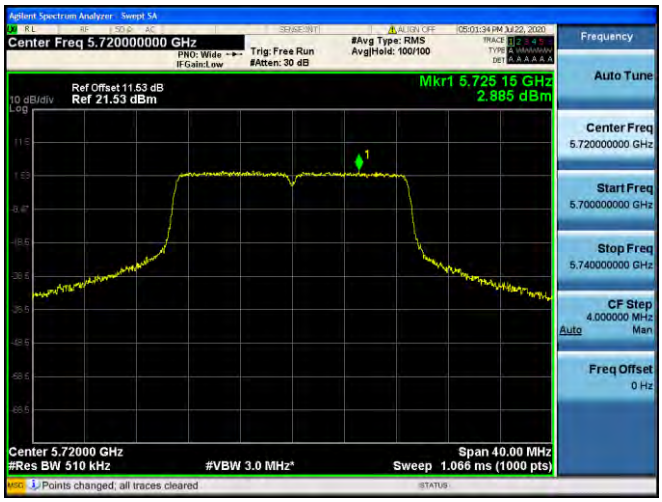
▣ Test Plots

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

802.11a 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 – 30MHz

Frequency	Reading	Ant. factor	Cable loss	Ant. POL	Total	Limit	Margin
MHz	dBuV/m	dBm/m	dBm	(H/V)	dBuV/m	dBuV/m	dB
No Critical peaks found							

Note:

1. The reading 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 = 40log (specific distance / test distance) (dB)
3. Limit line = specific Limits (dBuV) + Distance extrapolation factor

Frequency Range : Below 1 GHz

Frequency	Reading	Ant. factor	Cable loss	Ant. POL	Total	Limit	Margin
MHz	dBuV/m	dBm/m	dBm	(H/V)	dBuV/m	dBuV/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]	Reading [dBuV]	A.F.+C.L. -A.G [dB]	ANT. POL [H/V]	Total [dBuV/m]	Limit [dBuV/m]	Margin [dB]	Measurement Type
10360	52.19	0.49	V	52.68	68.20	15.52	PK
15540	49.51	2.62	V	52.13	73.98	21.85	PK
15540	37.06	2.62	V	39.68	53.98	14.30	AV
10360	52.59	0.49	H	53.08	68.20	15.12	PK
15540	49.97	2.62	H	52.59	73.98	21.39	PK
15540	37.04	2.62	H	39.66	53.98	14.32	AV

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

Frequency [MHz]	Reading [dBuV]	A.F.+C.L. -A.G [dB]	ANT. POL [H/V]	Total [dBuV/m]	Limit [dBuV/m]	Margin [dB]	Measurement Type
10400	51.46	1.38	V	52.84	68.20	15.36	PK
15600	49.64	1.50	V	51.14	73.98	22.84	PK
15600	36.43	1.50	V	37.93	53.98	16.05	AV
10400	50.78	1.38	H	52.16	68.20	16.04	PK
15600	50.11	1.50	H	51.61	73.98	22.37	PK
15600	36.75	1.50	H	38.25	53.98	15.73	AV

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

Frequency [MHz]	Reading [dBuV]	A.F.+C.L. -A.G [dB]	ANT. POL [H/V]	Total [dBuV/m]	Limit [dBuV/m]	Margin [dB]	Measurement Type
10480	51.75	-0.33	V	51.42	68.20	16.78	PK
15720	49.70	0.56	V	50.26	73.98	23.72	PK
15720	36.70	0.56	V	37.26	53.98	16.72	AV
10480	51.30	-0.33	H	50.97	68.20	17.23	PK
15720	49.56	0.56	H	50.12	73.98	23.86	PK
15720	36.75	0.56	H	37.31	53.98	16.67	AV

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

Frequency [MHz]	Reading [dBuV]	A.F.+C.L. -A.G [dB]	ANT. POL [H/V]	Total [dBuV/m]	Limit [dBuV/m]	Margin [dB]	Measurement Type
10520	51.57	-0.06	V	51.51	68.20	16.69	PK
15780	49.95	0.96	V	50.91	73.98	23.07	PK
15780	36.43	0.96	V	37.39	53.98	16.59	AV
10520	52.11	-0.06	H	52.05	68.20	16.15	PK
15780	49.35	0.96	H	50.31	73.98	23.67	PK
15780	36.57	0.96	H	37.53	53.98	16.45	AV

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

Frequency [MHz]	Reading [dBuV]	A.F.+C.L. -A.G [dB]	ANT. POL [H/V]	Total [dBuV/m]	Limit [dBuV/m]	Margin [dB]	Measurement Type
10600	52.32	-0.18	V	52.14	73.98	21.84	PK
10600	38.74	-0.18	V	38.56	53.98	15.42	AV
15900	50.49	-0.13	V	50.36	73.98	23.62	PK
15900	37.40	-0.13	V	37.27	53.98	16.71	AV
10600	51.32	-0.18	H	51.14	73.98	22.84	PK
10600	38.94	-0.18	H	38.76	53.98	15.22	AV
15900	49.53	-0.13	H	49.40	73.98	24.58	PK
15900	37.33	-0.13	H	37.20	53.98	16.78	AV

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

Frequency [MHz]	Reading [dBuV]	A.F.+C.L. -A.G [dB]	ANT. POL [H/V]	Total [dBuV/m]	Limit [dBuV/m]	Margin [dB]	Measurement Type
10640	51.68	-0.04	V	51.64	73.98	22.34	PK
10640	38.77	-0.04	V	38.73	53.98	15.25	AV
15960	50.07	-0.36	V	49.71	73.98	24.27	PK
15960	37.41	-0.36	V	37.05	53.98	16.93	AV
10640	51.28	-0.04	H	51.24	73.98	22.74	PK
10640	38.85	-0.04	H	38.81	53.98	15.17	AV
15960	50.55	-0.36	H	50.19	73.98	23.79	PK
15960	37.55	-0.36	H	37.19	53.98	16.79	AV

Band : UNII 2C
Operation Mode: 802.11 n(HT20)
Transfer Rate: MCS0
Operating Frequency 5500 MHz
Channel No. 100 Ch

Frequency [MHz]	Reading [dBuV]	A.F.+C.L. -A.G [dB]	ANT. POL [H/V]	Total [dBuV/m]	Limit [dBuV/m]	Margin [dB]	Measurement Type
11000	51.77	1.75	V	53.52	73.98	20.46	PK
11000	38.52	1.75	V	40.27	53.98	13.71	AV
16500	50.27	1.06	V	51.33	68.20	16.87	PK
11000	51.12	1.75	H	52.87	73.98	21.11	PK
11000	38.72	1.75	H	40.47	53.98	13.51	AV
16500	49.26	1.06	H	50.32	68.20	17.88	PK

Band : UNII 2C
Operation Mode: 802.11 n(HT20)
Transfer Rate: MCS0
Operating Frequency 5600 MHz
Channel No. 120 Ch

Frequency [MHz]	Reading [dBuV]	A.F.+C.L. -A.G [dB]	ANT. POL [H/V]	Total [dBuV/m]	Limit [dBuV/m]	Margin [dB]	Measurement Type
11200	50.50	0.26	V	50.76	73.98	23.22	PK
11200	38.50	0.26	V	38.76	53.98	15.22	AV
16800	49.87	3.41	V	53.28	68.20	14.92	PK
11200	52.20	0.26	H	52.46	73.98	21.52	PK
11200	38.54	0.26	H	38.80	53.98	15.18	AV
16800	50.63	3.41	H	54.04	68.20	14.16	PK

Band : UNII 2C
Operation Mode: 802.11 n(HT20)
Transfer Rate: MCS0
Operating Frequency 5720 MHz
Channel No. 144 Ch

Frequency [MHz]	Reading [dBuV]	A.F.+C.L. -A.G [dB]	ANT. POL [H/V]	Total [dBuV/m]	Limit [dBuV/m]	Margin [dB]	Measurement Type
11440	51.20	0.74	V	51.94	73.98	22.04	PK
11440	39.43	0.74	V	40.17	53.98	13.81	AV
17160	50.81	5.47	V	56.28	68.20	11.92	PK
11440	52.40	0.74	H	53.14	73.98	20.84	PK
11440	39.56	0.74	H	40.30	53.98	13.68	AV
17160	49.61	5.47	H	55.08	68.20	13.12	PK

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

Frequency [MHz]	Reading [dBuV]	A.F.+C.L. -A.G [dB]	ANT. POL [H/V]	Total [dBuV/m]	Limit [dBuV/m]	Margin [dB]	Measurement Type
11490	51.46	0.57	V	52.03	73.98	21.95	PK
11490	39.14	0.57	V	39.71	53.98	14.27	AV
17235	50.19	5.22	V	55.41	68.20	12.79	PK
11490	51.64	0.57	H	52.21	73.98	21.77	PK
11490	39.35	0.57	H	39.92	53.98	14.06	AV
17235	51.40	5.22	H	56.62	68.20	11.58	PK

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

Frequency [MHz]	Reading [dBuV]	A.F.+C.L. -A.G [dB]	ANT. POL [H/V]	Total [dBuV/m]	Limit [dBuV/m]	Margin [dB]	Measurement Type
11570	51.88	0.73	V	52.61	73.98	21.37	PK
11570	39.48	0.73	V	40.21	53.98	13.77	AV
17355	50.32	6.04	V	56.36	68.20	11.84	PK
11570	52.46	0.73	H	53.19	73.98	20.79	PK
11570	39.52	0.73	H	40.25	53.98	13.73	AV
17355	50.86	6.04	H	56.90	68.20	11.30	PK

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

Frequency [MHz]	Reading [dBuV]	A.F.+C.L. -A.G [dB]	ANT. POL [H/V]	Total [dBuV/m]	Limit [dBuV/m]	Margin [dB]	Measurement Type
11650	52.40	-0.65	V	51.75	73.98	22.23	PK
11650	39.05	-0.65	V	38.40	53.98	15.58	AV
17475	49.84	7.62	V	57.46	68.20	10.74	PK
11650	51.95	-0.65	H	51.30	73.98	22.68	PK
11650	39.76	-0.65	H	39.11	53.98	14.87	AV
17475	50.78	7.62	H	58.40	68.20	9.80	PK

Note:

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

[Worst case]

- UNII 1, 2A, 3 : 802.11a
- UNII 2C : 802.11n_HT20

[DBS Mode] – Tese case 1

Frequency [MHz]	Reading [dBuV]	A.F.+C.L. -A.G [dB]	ANT. POL [H/V]	Total [dBuV/m]	Limit [dBuV/m]	Margin [dB]	Measurement Type
11650	53.16	-0.65	V	52.51	73.98	21.47	PK
11650	41.31	-0.65	V	40.66	53.98	13.32	AV
17385	48.97	7.62	V	56.59	68.20	11.61	PK
11650	53.89	-0.65	H	53.24	73.98	20.74	PK
11650	41.67	-0.65	H	41.02	53.98	12.96	AV
17385	50.52	7.62	H	58.14	68.20	10.06	PK

[DBS Mode] – Tese case 2

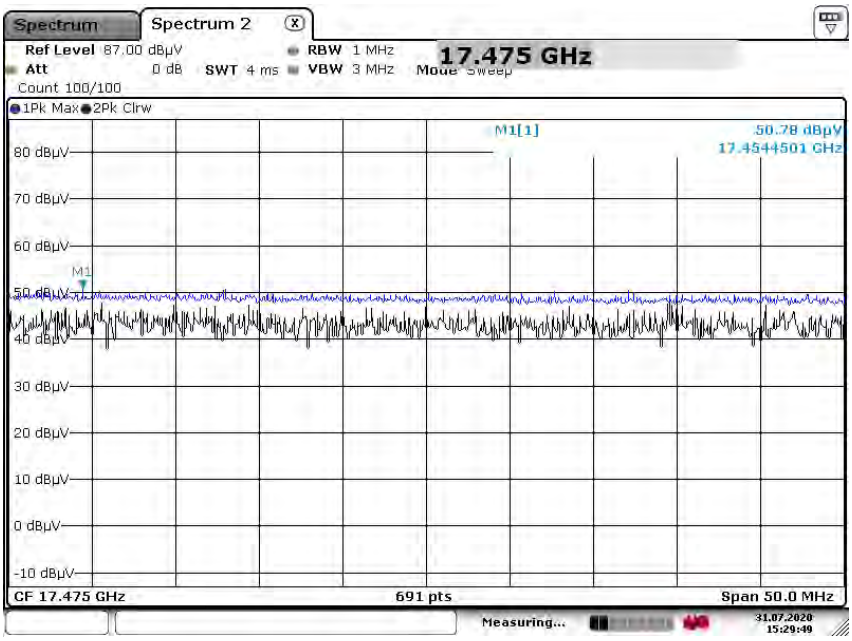
Frequency [MHz]	Reading [dBuV]	A.F.+C.L. -A.G [dB]	ANT. POL [H/V]	Total [dBuV/m]	Limit [dBuV/m]	Margin [dB]	Measurement Type
11650	53.96	-0.65	V	53.31	73.98	20.67	PK
11650	41.44	-0.65	V	40.79	53.98	13.19	AV
17385	49.81	7.62	V	57.43	68.20	10.77	PK
11650	54.44	-0.65	H	53.79	73.98	20.19	PK
11650	41.61	-0.65	H	40.96	53.98	13.02	AV
17385	50.29	7.62	H	57.91	68.20	10.29	PK

[Non-DBS Mode] – Tese case 3

Frequency [MHz]	Reading [dBuV]	A.F.+C.L. -A.G [dB]	ANT. POL [H/V]	Total [dBuV/m]	Limit [dBuV/m]	Margin [dB]	Measurement Type
11650	54.46	-0.65	V	53.81	73.98	20.17	PK
11650	41.76	-0.65	V	41.11	53.98	12.87	AV
17385	49.98	7.62	V	57.60	68.20	10.60	PK
11650	55.02	-0.65	H	54.37	73.98	19.61	PK
11650	42.27	-0.65	H	41.62	53.98	12.36	AV
17385	50.60	7.62	H	58.22	68.20	9.98	PK

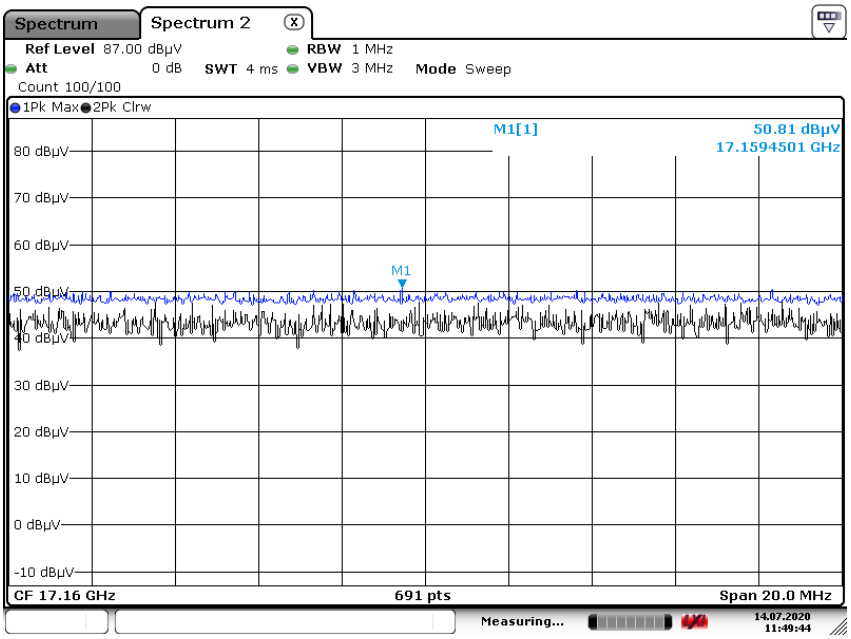
▣ Test Plots [Ant.1&Ant.2_MIMO(CDD)]

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



Date: 31.JUL.2020 15:29:48

Peak Reading (802.11 n(HT20), Ch.144 3rd Harmonic, Y-V)



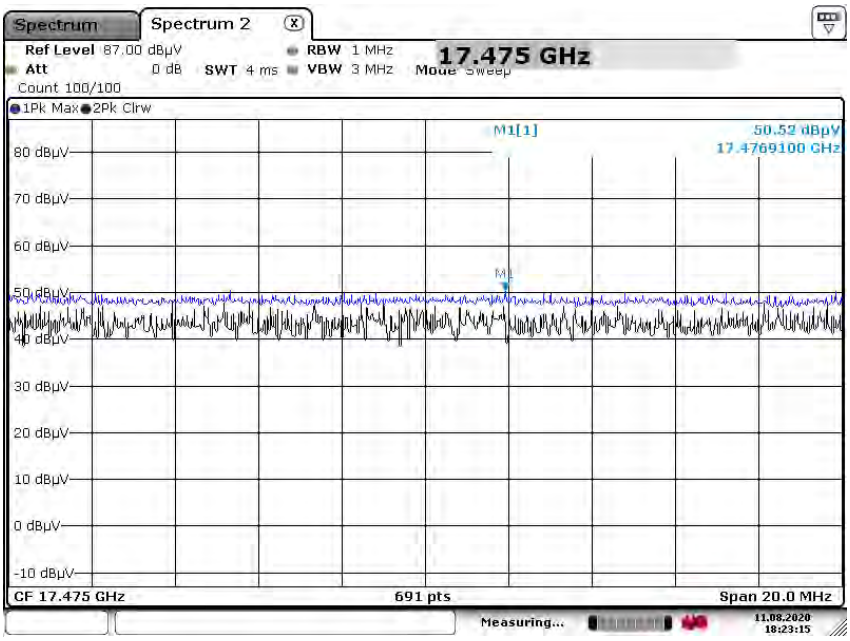
Date: 14.JUL.2020 11:49:44

Note:

Only the worst case plots for Radiated Spurious Emissions.

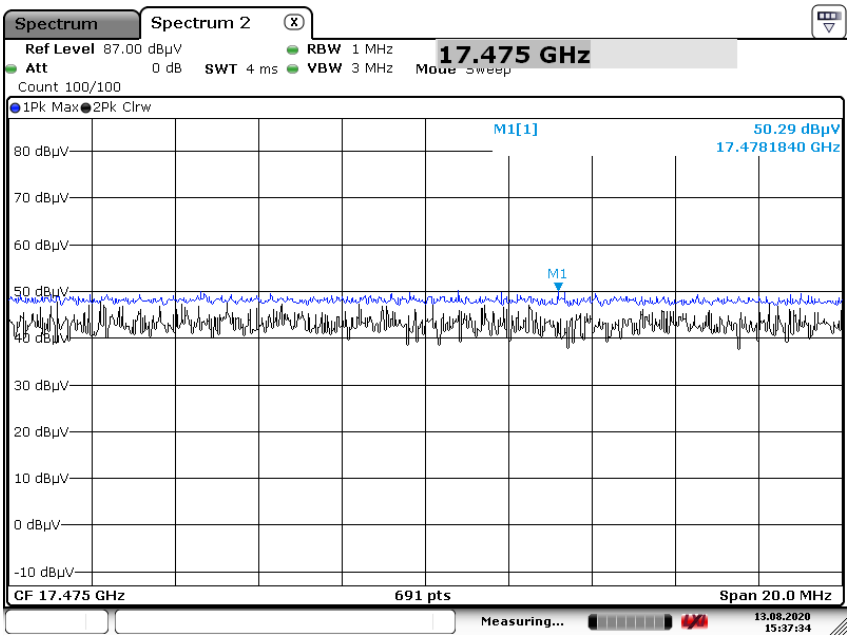
▣ Test Plots (DBS) _ Worst case : Y-H

Radiated Spurious Emissions plot – Peak Reading (Test case 1_ 3rd Harmonic)



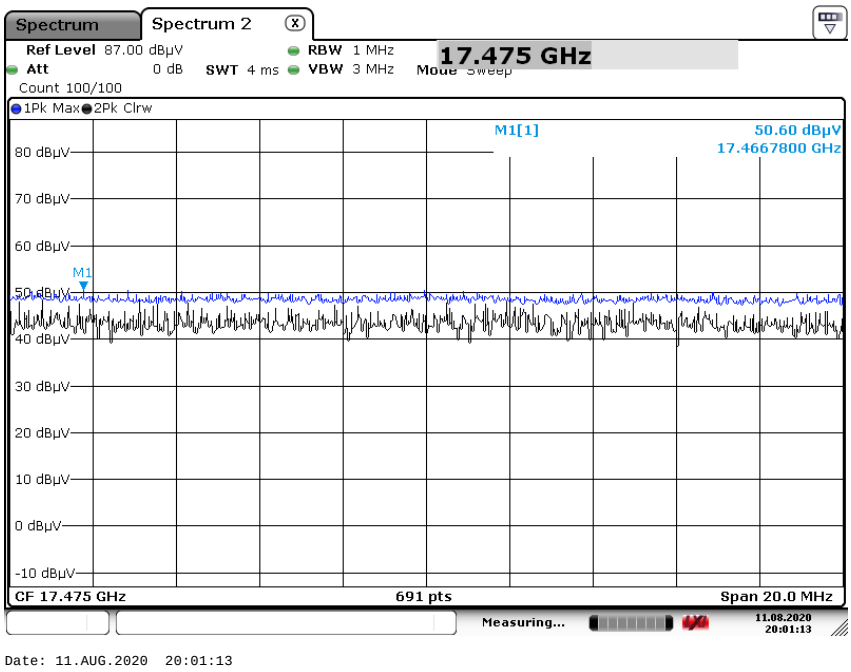
Date: 11.AUG.2020 18:23:15

Radiated Spurious Emissions plot – Peak Reading (Test case 2_ 3rd Harmonic)



Date: 13.AUG.2020 15:37:35

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



Note:

Only the worst case plots for Radiated Spurious Emissions.

10.9 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]	Reading dBuV	C.L+A.F+ D.F-A.G + ATT [dB]	ANT. POL [H/V]	Total [dBuV/m]	Limit [dBuV/m]	Margin [dB]	Measurement Type
5150	44.69	5.75	H	50.44	73.98	23.54	PK
5150	33.37	5.75	H	39.12	53.98	14.86	AV
5150	43.96	5.75	V	49.71	73.98	24.27	PK
5150	33.00	5.75	V	38.75	53.98	15.23	AV

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

Frequency [MHz]	Reading dBuV	C.L+A.F+ D.F-A.G + ATT [dB]	ANT. POL [H/V]	Total [dBuV/m]	Limit [dBuV/m]	Margin [dB]	Measurement Type
5350	50.14	5.52	H	55.66	73.98	18.32	PK
5350	34.56	5.52	H	40.08	53.98	13.90	AV
5350	49.61	5.52	V	55.13	73.98	18.85	PK
5350	34.17	5.52	V	39.69	53.98	14.29	AV

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

Frequency [MHz]	Reading DBuV	C.L+A.F+ D.F-A.G + ATT [dB]	ANT. POL [H/V]	Total [dBuV/m]	Limit [dBuV/m]	Margin [dB]	Measurement Type
5460	45.34	7.05	H	52.39	73.98	21.59	PK
5460	32.41	7.05	H	39.46	53.98	14.52	AV
5470	47.20	6.59	H	53.79	68.20	14.41	PK
5460	45.34	7.05	V	52.39	73.98	21.59	PK
5460	32.41	7.05	V	39.46	53.98	14.52	AV
5470	47.20	6.59	V	53.79	68.20	14.41	PK

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

Frequency [MHz]	Reading dBuV	C.L+A.F+ D.F-A.G + ATT [dB]	ANT. POL [H/V]	Total [dBuV/m]	Limit [dBuV/m]	Margin [dB]	Measurement Type
5150	44.15	5.75	H	49.90	73.98	24.08	PK
5150	32.93	5.75	H	38.68	53.98	15.30	AV
5150	43.70	5.75	V	49.45	73.98	24.53	PK
5150	32.90	5.75	V	38.65	53.98	15.33	AV

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

Frequency [MHz]	Reading dBuV	C.L+A.F+ D.F-A.G + ATT [dB]	ANT. POL [H/V]	Total [dBuV/m]	Limit [dBuV/m]	Margin [dB]	Measurement Type
5350	47.97	5.52	H	53.49	73.98	20.49	PK
5350	34.36	5.52	H	39.88	53.98	14.10	AV
5350	46.56	5.52	V	52.08	73.98	21.90	PK
5350	34.08	5.52	V	39.6	53.98	14.38	AV

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

Frequency [MHz]	Reading DBuV	C.L+A.F+ D.F-A.G + ATT [dB]	ANT. POL [H/V]	Total [dBuV/m]	Limit [dBuV/m]	Margin [dB]	Measurement Type
5460	45.42	7.05	H	52.47	73.98	21.51	PK
5460	32.34	7.05	H	39.39	53.98	14.59	AV
5470	45.99	6.59	H	52.58	68.20	15.62	PK
5460	44.88	7.05	V	51.93	73.98	22.05	PK
5460	32.29	7.05	V	39.34	53.98	14.64	AV
5470	45.86	6.59	V	52.45	68.20	15.75	PK

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

Frequency [MHz]	Reading dBuV	C.L+A.F+ D.F-A.G + ATT [dB]	ANT. POL [H/V]	Total [dBuV/m]	Limit [dBuV/m]	Margin [dB]	Measurement Type
5150	44.96	5.75	H	50.71	73.98	23.27	PK
5150	33.07	5.75	H	38.82	53.98	15.16	AV
5150	43.20	5.75	V	48.95	73.98	25.03	PK
5150	32.89	5.75	V	38.64	53.98	15.34	AV

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

Frequency [MHz]	Reading dBuV	C.L+A.F+ D.F-A.G + ATT [dB]	ANT. POL [H/V]	Total [dBuV/m]	Limit [dBuV/m]	Margin [dB]	Measurement Type
5350	47.57	5.52	H	53.09	73.98	20.89	PK
5350	34.14	5.52	H	39.66	53.98	14.32	AV
5350	46.91	5.52	V	52.43	73.98	21.55	PK
5350	33.92	5.52	V	39.44	53.98	14.54	AV

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

Frequency [MHz]	Reading DBuV	C.L+A.F+ D.F-A.G + ATT [dB]	ANT. POL [H/V]	Total [dBuV/m]	Limit [dBuV/m]	Margin [dB]	Measurement Type
5460	45.12	7.05	H	52.17	73.98	21.81	PK
5460	32.30	7.05	H	39.35	53.98	14.63	AV
5470	46.18	6.59	H	52.77	68.20	15.43	PK
5460	44.59	7.05	V	51.64	73.98	22.34	PK
5460	32.04	7.05	V	39.09	53.98	14.89	AV
5470	45.66	6.59	V	52.25	68.20	15.95	PK

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

Frequency [MHz]	Reading dBuV	C.L+A.F+ D.F-A.G + ATT [dB]	ANT. POL [H/V]	Total [dBuV/m]	Limit [dBuV/m]	Margin [dB]	Measurement Type
5150	46.17	12.72	H	58.89	73.98	15.09	PK
5150	35.06	12.72	H	47.78	53.98	6.20	AV
5150	44.18	12.72	V	56.9	73.98	17.08	PK
5150	34.83	12.72	V	47.55	53.98	6.43	AV

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

Frequency [MHz]	Reading dBuV	C.L+A.F+ D.F-A.G + ATT [dB]	ANT. POL [H/V]	Total [dBuV/m]	Limit [dBuV/m]	Margin [dB]	Measurement Type
5350	49.26	12.38	H	61.64	73.98	12.34	PK
5350	36.08	12.38	H	48.46	53.98	5.52	AV
5350	48.08	12.38	V	60.46	73.98	13.52	PK
5350	35.16	12.38	V	47.54	53.98	6.44	AV

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

Frequency [MHz]	Reading DBuV	C.L+A.F+ D.F-A.G + ATT [dB]	ANT. POL [H/V]	Total [dBuV/m]	Limit [dBuV/m]	Margin [dB]	Measurement Type
5460	45.04	13.91	H	58.95	73.98	15.03	PK
5460	32.36	13.91	H	46.27	53.98	7.71	AV
5470	48.05	13.46	H	61.51	68.20	6.69	PK
5460	45.04	13.91	V	58.95	73.98	15.03	PK
5460	32.36	13.91	V	46.27	53.98	7.71	AV
5470	48.05	13.46	V	61.51	68.20	6.69	PK

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

Frequency [MHz]	Reading dBuV	C.L+A.F+ D.F-A.G + ATT [dB]	ANT. POL [H/V]	Total [dBuV/m]	Limit [dBuV/m]	Margin [dB]	Measurement Type
5150	43.90	12.72	H	56.62	73.98	17.36	PK
5150	34.00	12.72	H	46.72	53.98	7.26	AV
5150	43.02	12.72	V	55.74	73.98	18.24	PK
5150	33.81	12.72	V	46.53	53.98	7.45	AV

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

Frequency [MHz]	Reading dBuV	C.L+A.F+ D.F-A.G + ATT [dB]	ANT. POL [H/V]	Total [dBuV/m]	Limit [dBuV/m]	Margin [dB]	Measurement Type
5350	47.29	12.38	H	59.67	73.98	14.31	PK
5350	34.55	12.38	H	46.93	53.98	7.05	AV
5350	45.46	12.38	V	57.84	73.98	16.14	PK
5350	34.20	12.38	V	46.58	53.98	7.40	AV

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

Frequency [MHz]	Reading DBuV	C.L+A.F+ D.F-A.G + ATT [dB]	ANT. POL [H/V]	Total [dBuV/m]	Limit [dBuV/m]	Margin [dB]	Measurement Type
5460	44.35	13.91	H	58.26	73.98	15.72	PK
5460	32.00	13.91	H	45.91	53.98	8.07	AV
5470	47.00	13.46	H	60.46	68.20	7.74	PK
5460	44.00	13.91	V	57.91	73.98	16.07	PK
5460	31.85	13.91	V	45.76	53.98	8.22	AV
5470	46.30	13.46	V	59.76	68.20	8.44	PK

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

Frequency [MHz]	Reading dBuV	C.L+A.F+ D.F-A.G + ATT [dB]	ANT. POL [H/V]	Total [dBuV/m]	Limit [dBuV/m]	Margin [dB]	Measurement Type
5150	45.03	12.72	H	57.75	73.98	16.23	PK
5150	33.52	12.72	H	46.24	53.98	7.74	AV
5150	44.61	12.72	V	57.33	73.98	16.65	PK
5150	33.40	12.72	V	46.12	53.98	7.86	AV

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

Frequency [MHz]	Reading dBuV	C.L+A.F+ D.F-A.G + ATT [dB]	ANT. POL [H/V]	Total [dBuV/m]	Limit [dBuV/m]	Margin [dB]	Measurement Type
5350	46.13	12.38	H	58.51	73.98	15.47	PK
5350	34.15	12.38	H	46.53	53.98	7.45	AV
5350	45.19	12.38	V	57.57	73.98	16.41	PK
5350	33.76	12.38	V	46.14	53.98	7.84	AV

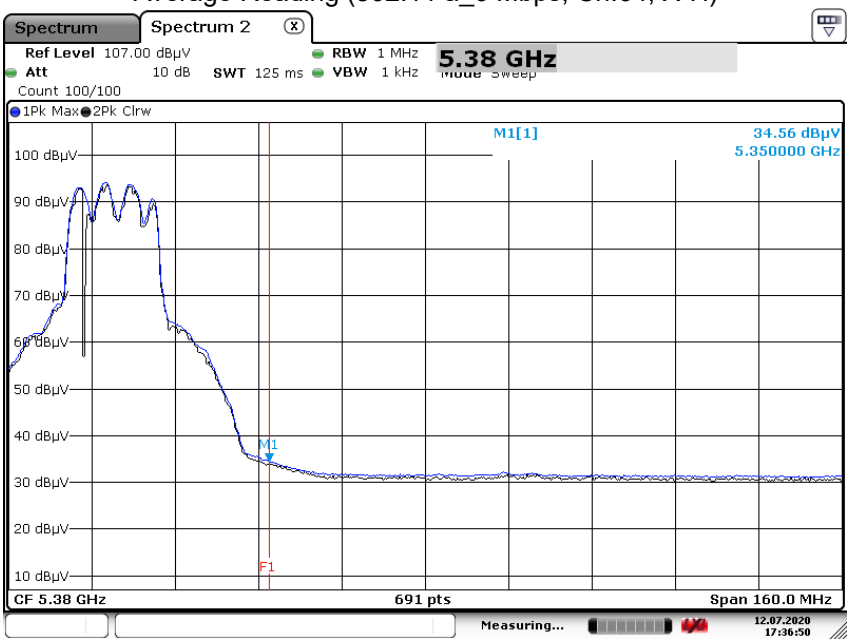
Band :	UNII 2C
Operation Mode:	802.11 ac_VHT80
Transfer MCS Index:	0
Operating Frequency	5530 MHz
Channel No.	106 Ch

Frequency [MHz]	Reading DBuV	C.L+A.F+ D.F-A.G + ATT [dB]	ANT. POL [H/V]	Total [dBuV/m]	Limit [dBuV/m]	Margin [dB]	Measurement Type
5460	45.48	13.91	H	59.39	73.98	14.59	PK
5460	32.34	13.91	H	46.25	53.98	7.73	AV
5470	46.17	13.46	H	59.63	68.20	8.57	PK
5460	44.60	13.91	V	58.51	73.98	15.47	PK
5460	32.21	13.91	V	46.12	53.98	7.86	AV
5470	45.11	13.46	V	58.57	68.20	9.63	PK

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

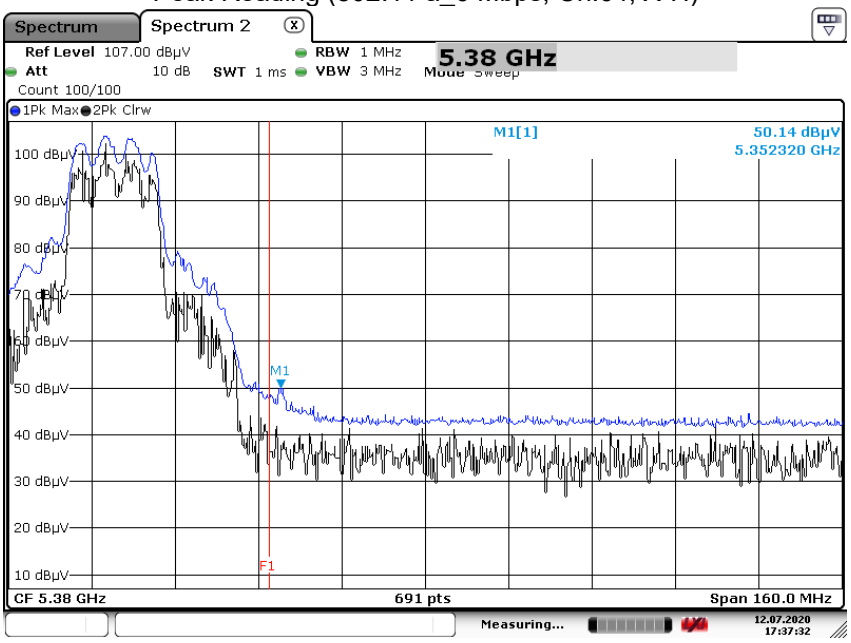
▣ Test Plots(UNII 1, 2A, 2C)

Average Reading (802.11 a_6 Mbps, Ch.64, X-H)



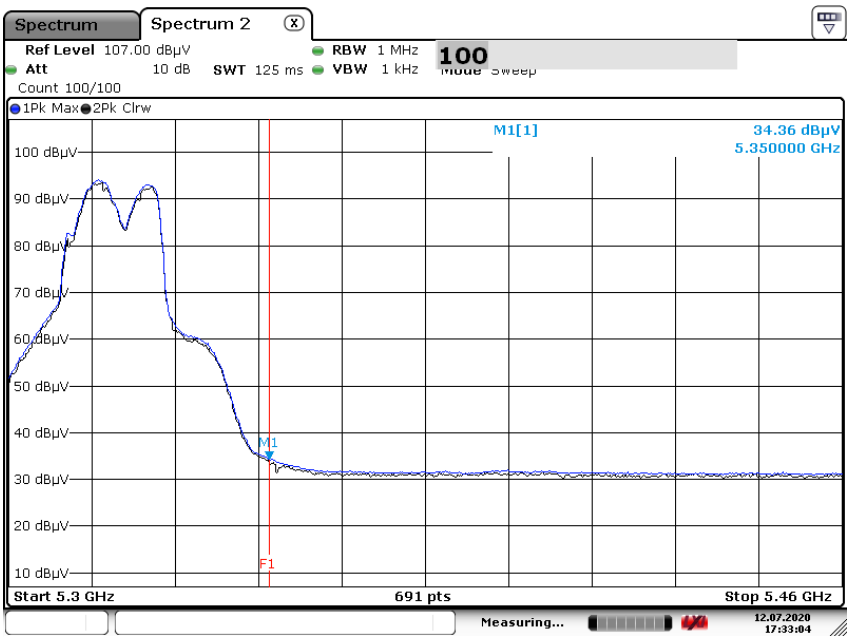
Date: 12.JUL.2020 17:36:49

Peak Reading (802.11 a_6 Mbps, Ch.64, X-H)



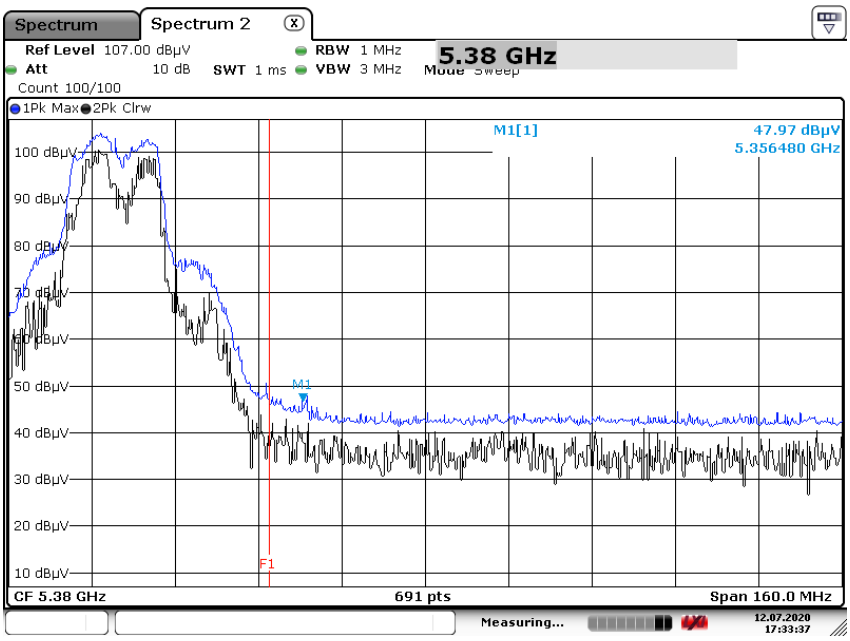
Date: 12.JUL.2020 17:37:32

Average Reading (802.11 n(HT20)_MCS0, Ch.64, X-H)



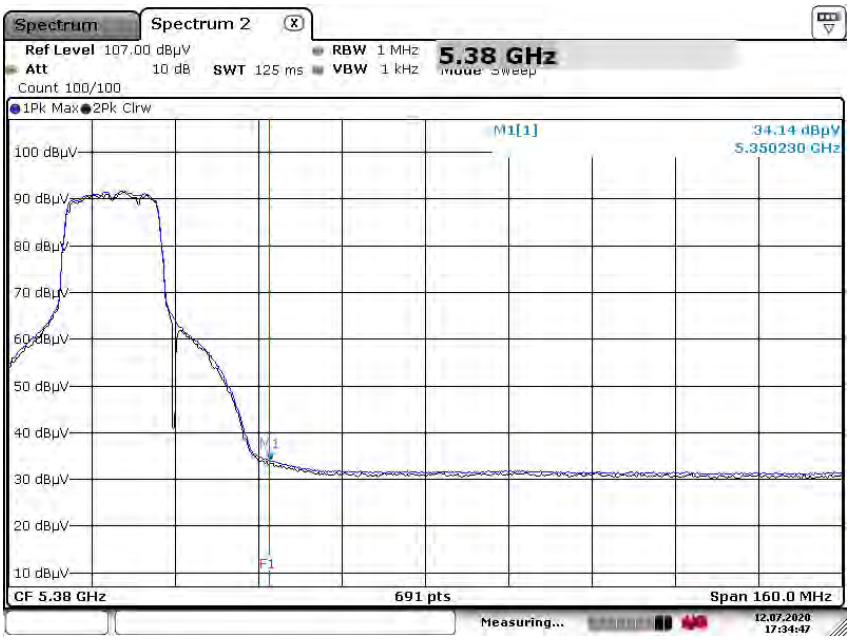
Date: 12.JUL.2020 17:33:04

Peak Reading (802.11 n(HT20)_MCS0, Ch.64, X-H)



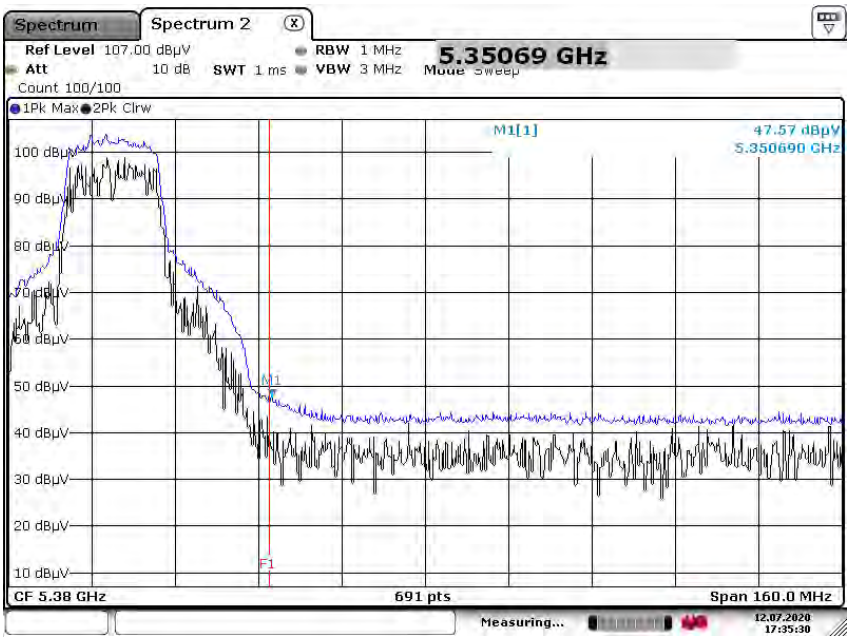
Date: 12.JUL.2020 17:33:37

Average Reading (802.11 ac(VHT20)_MCS0, Ch.64, X-H)



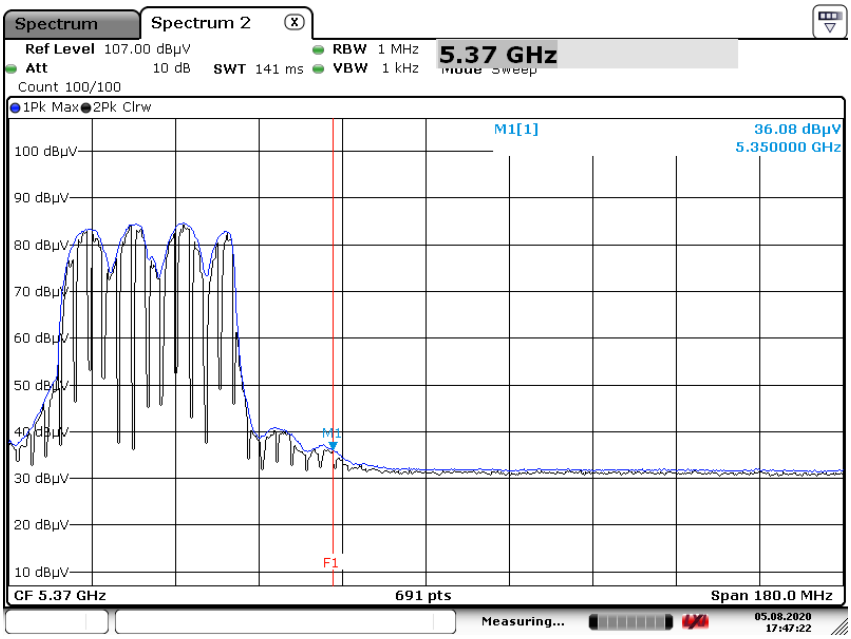
Date: 12.JUL.2020 17:34:47

Peak Reading (802.11 ac(VHT20)_MCS0, Ch.64, X-H)



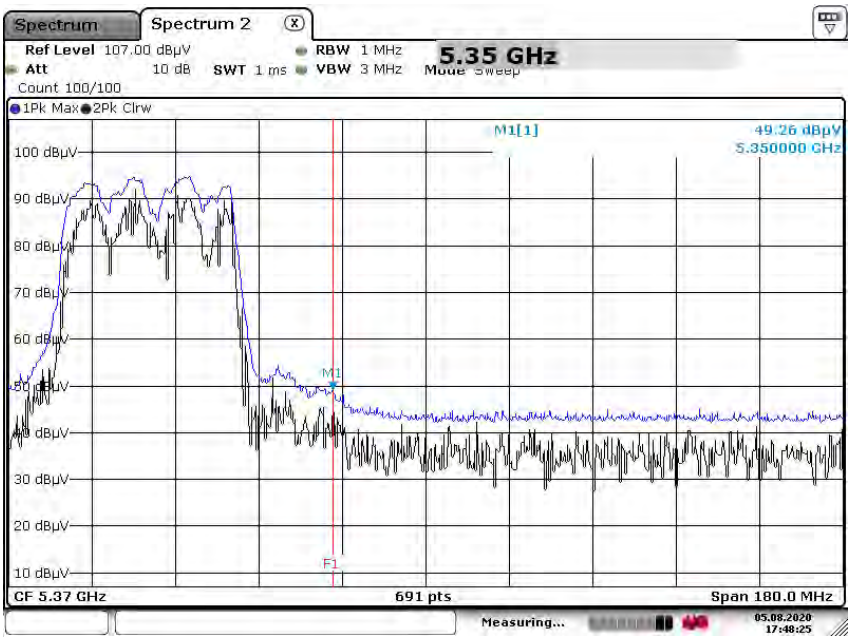
Date: 12.JUL.2020 17:35:30

Average Reading (802.11 n(HT40)_MCS0, Ch.62, X-H)



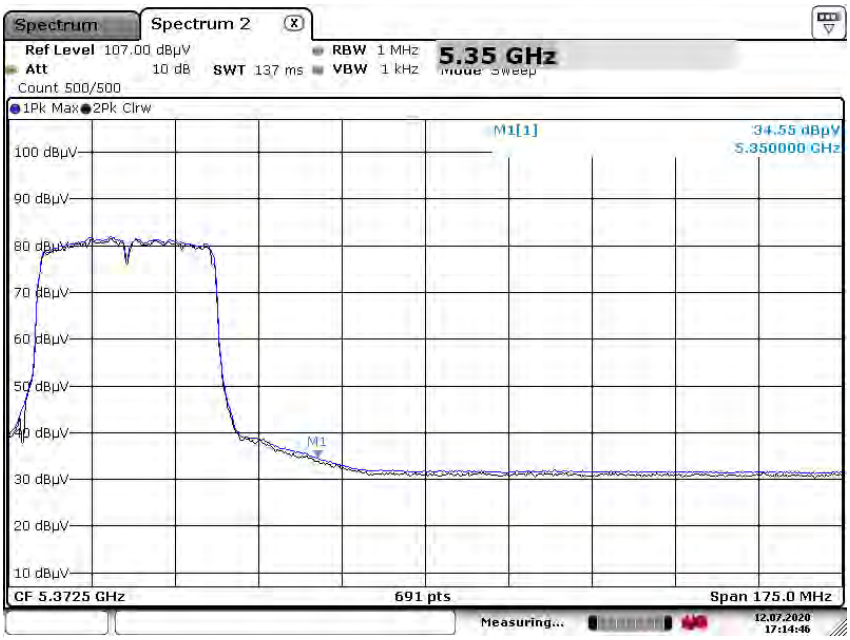
Date: 5.AUG.2020 17:47:21

Peak Reading (802.11 n(HT40)_MCS0, Ch.62, X-H)



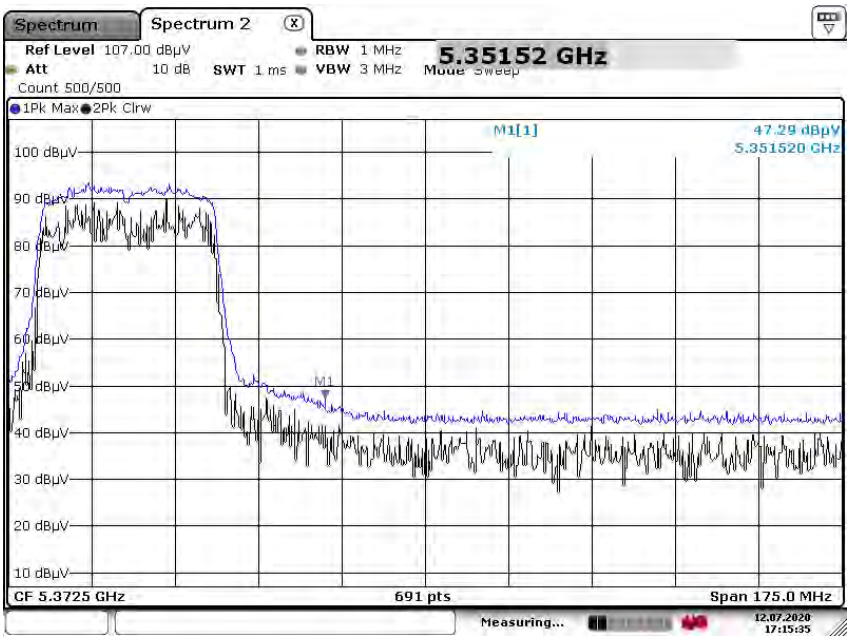
Date: 5.AUG.2020 17:48:25

Average Reading (802.11 ac(VHT40)_MCS0, Ch.62, X-H)



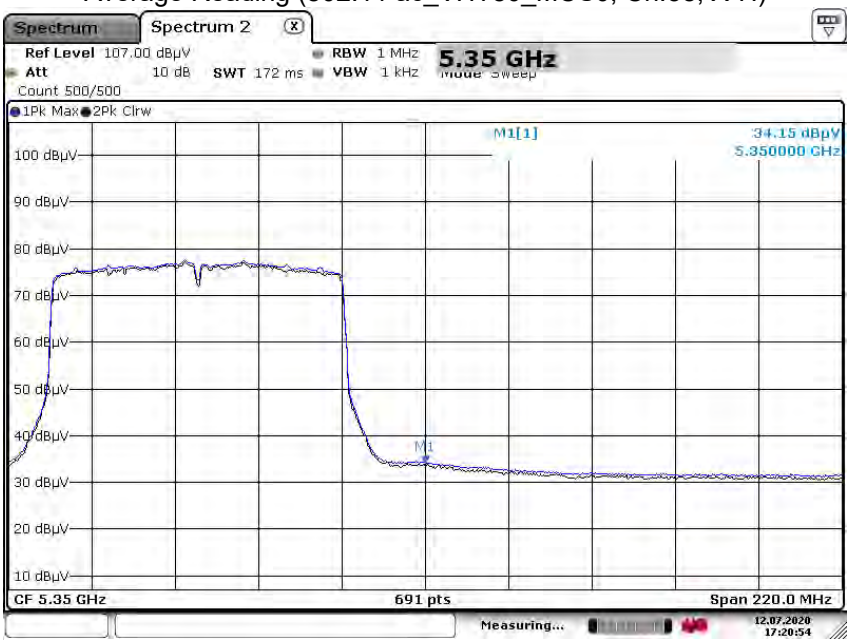
Date: 12.JUL.2020 17:14:46

Peak Reading (802.11 ac(VHT40)_MCS0, Ch.62, X-H)



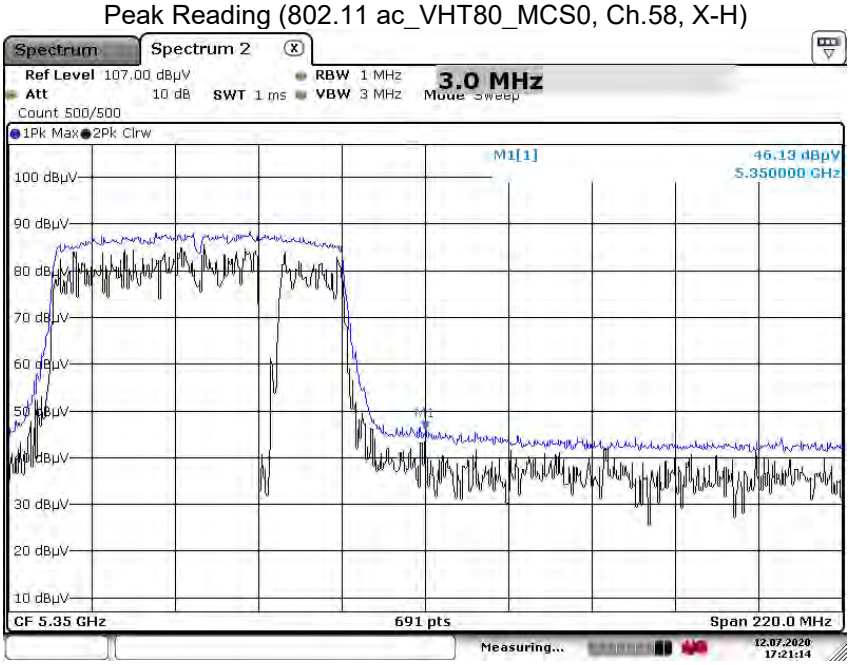
Date: 12.JUL.2020 17:15:35

Average Reading (802.11 ac_VHT80_MCS0, Ch.58, X-H)



Date: 12.JUL.2020 17:20:53

Peak Reading (802.11 ac_VHT80_MCS0, Ch.58, X-H)



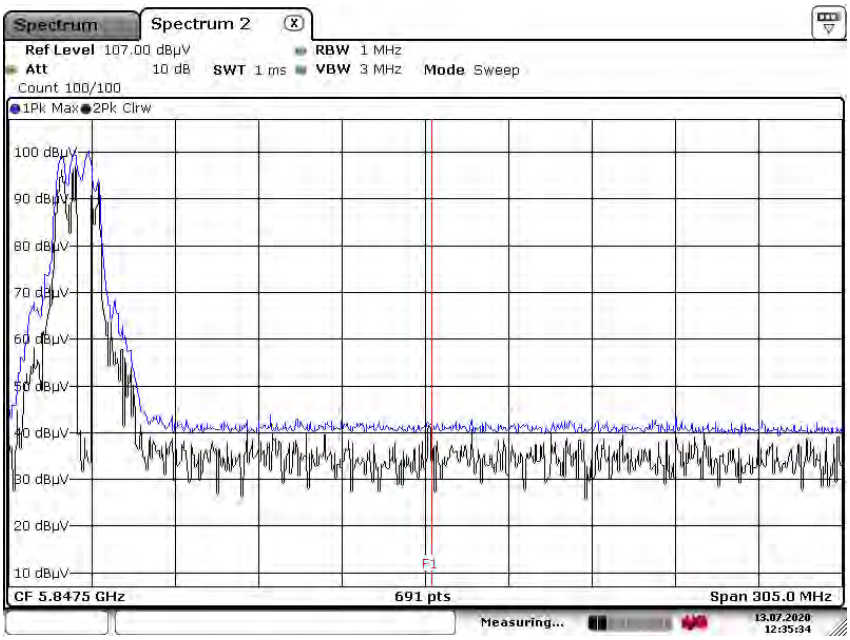
Date: 12.JUL.2020 17:21:14

Note:

Only the worst case plots for Radiated Restricted Band Edge.

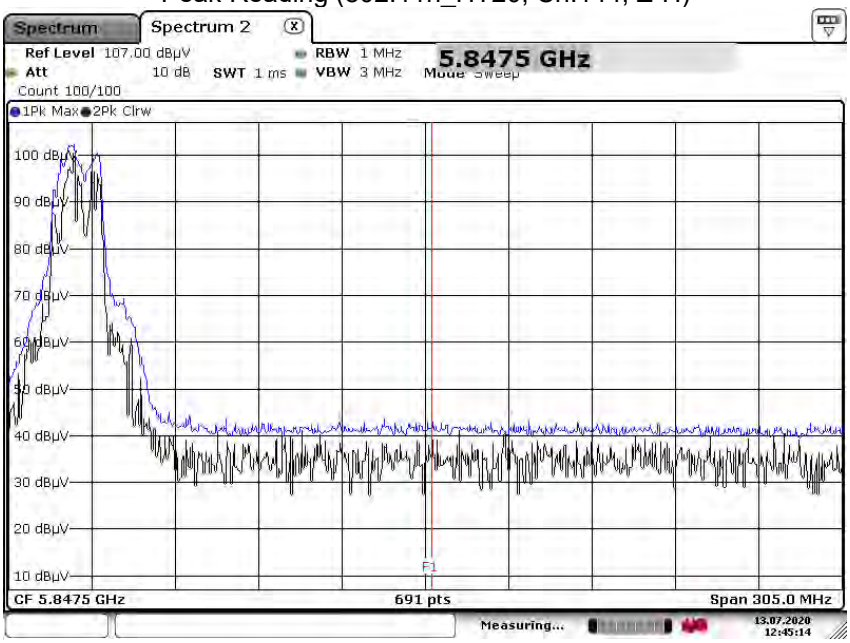
▣ Test Plots(Straddle Channel)

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



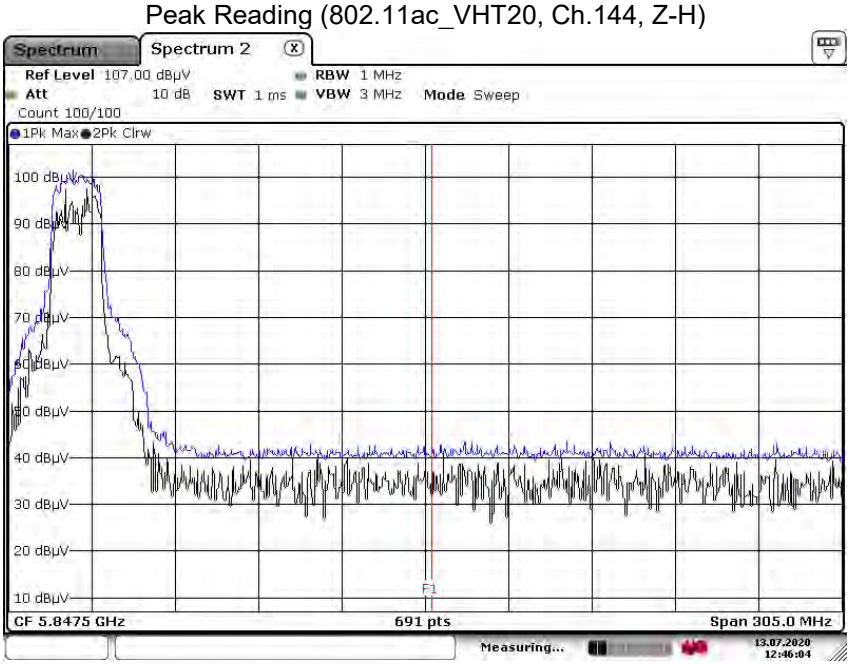
Date: 13.JUL.2020 12:35:33

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



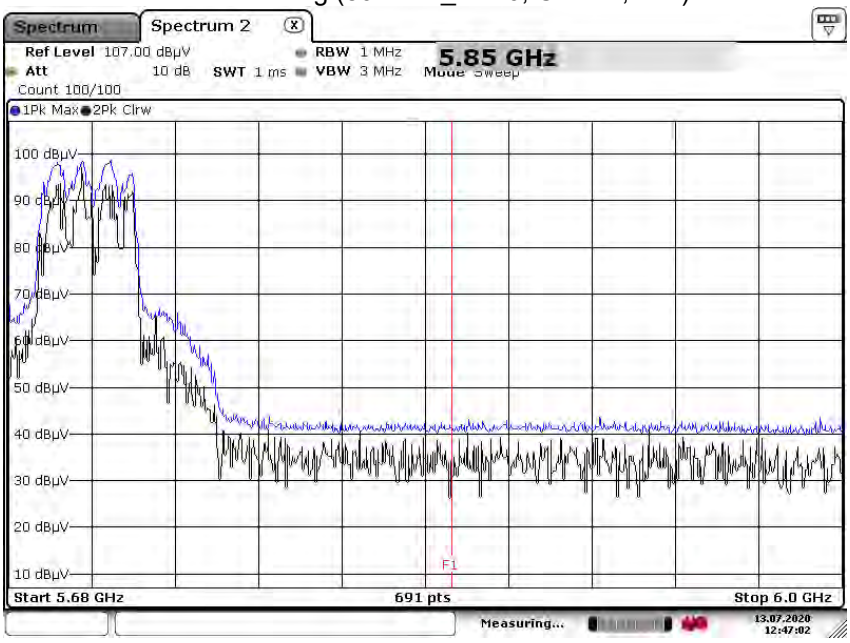
Date: 13.JUL.2020 12:45:14

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



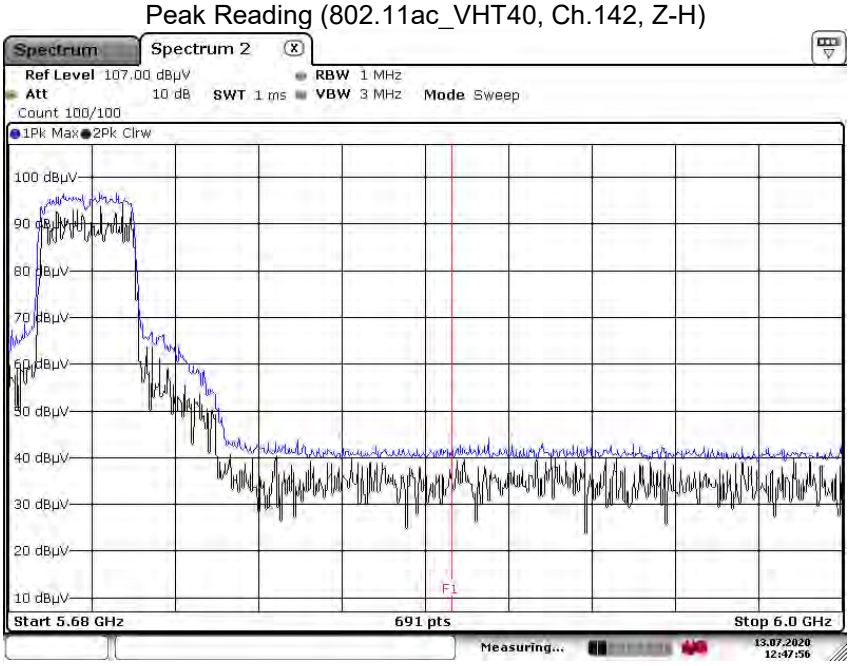
Date: 13.JUL.2020 12:46:03

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



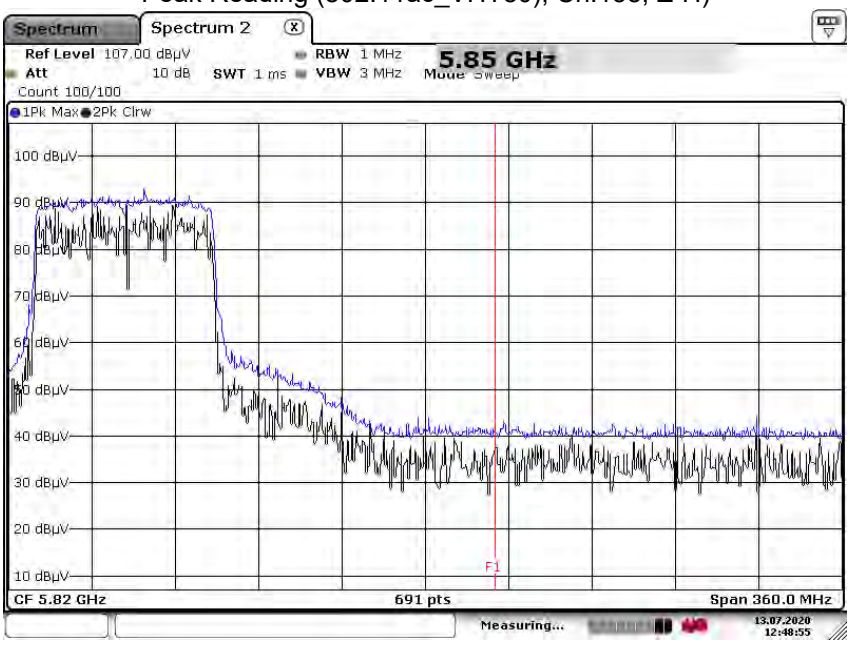
Date: 13.JUL.2020 12:47:02

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



Date: 13.JUL.2020 12:47:56

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



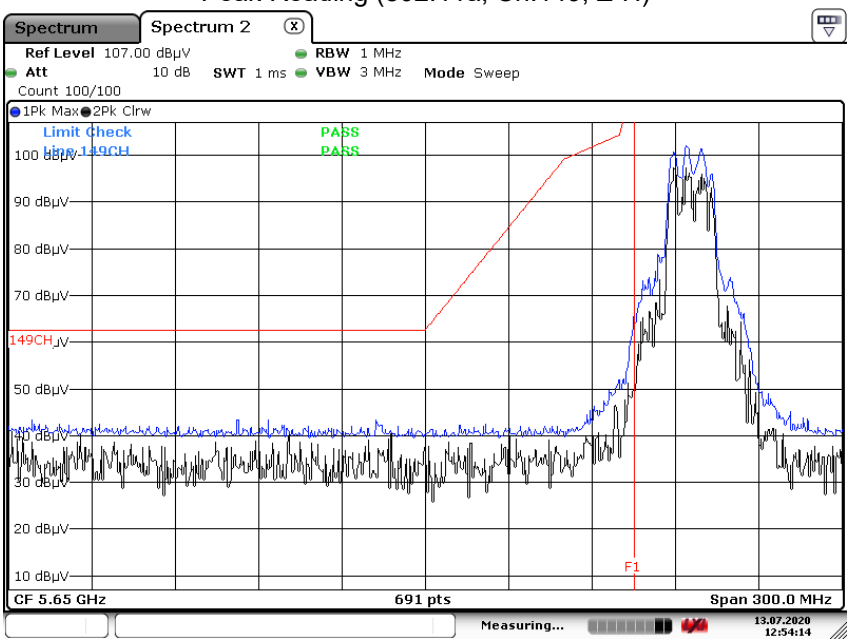
Date: 13.JUL.2020 12:48:56

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)

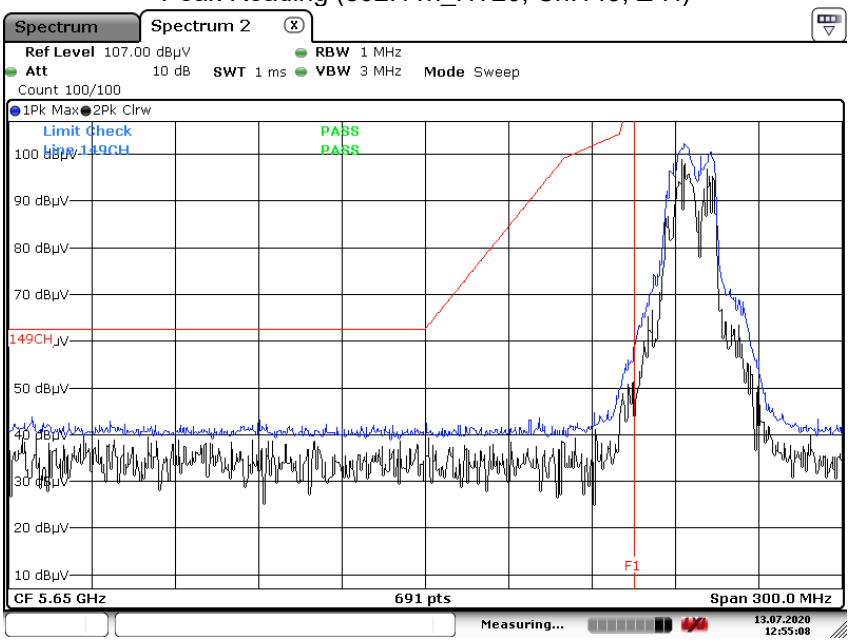
▣ Test Plots(UNII 3)

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



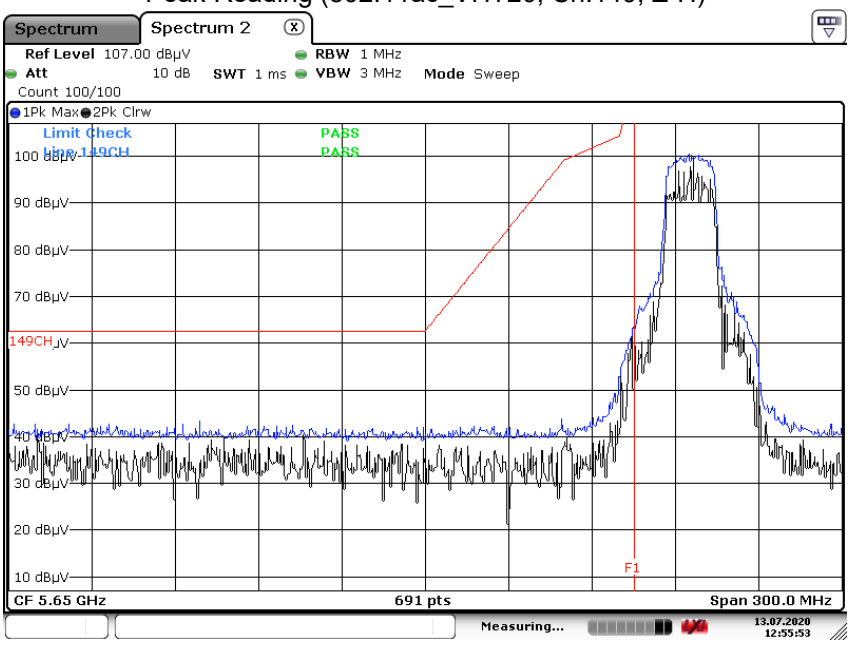
Date: 13.JUL.2020 12:54:15

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



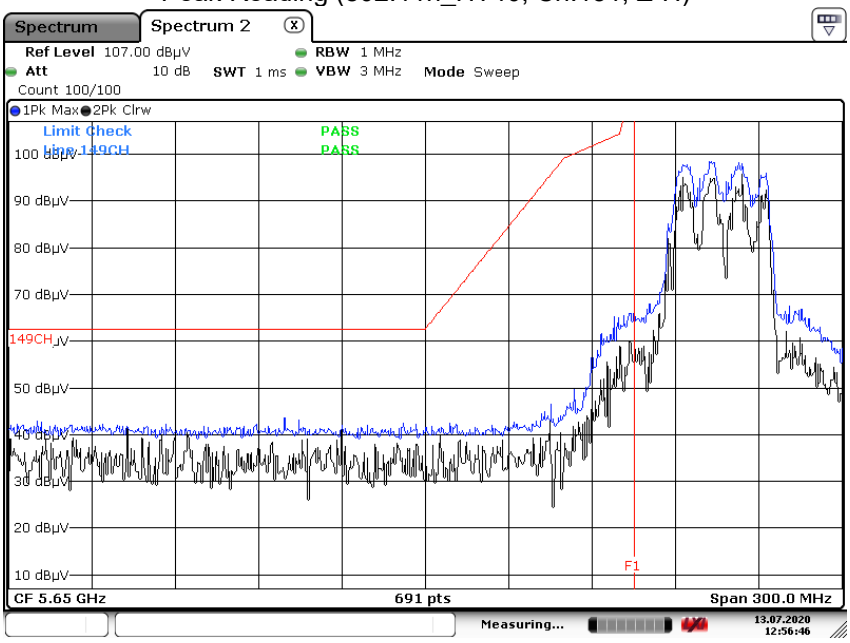
Date: 13.JUL.2020 12:55:09

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



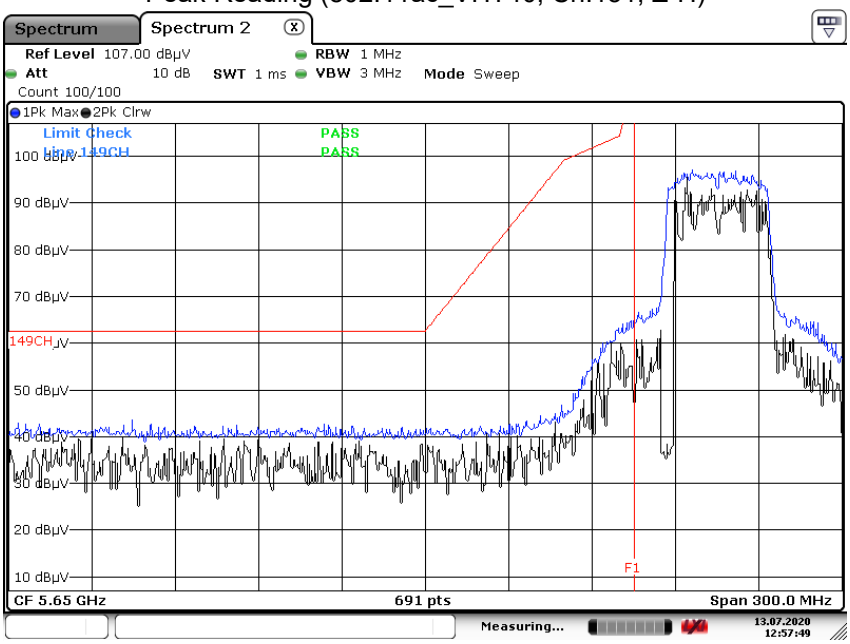
Date: 13.JUL.2020 12:55:53

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



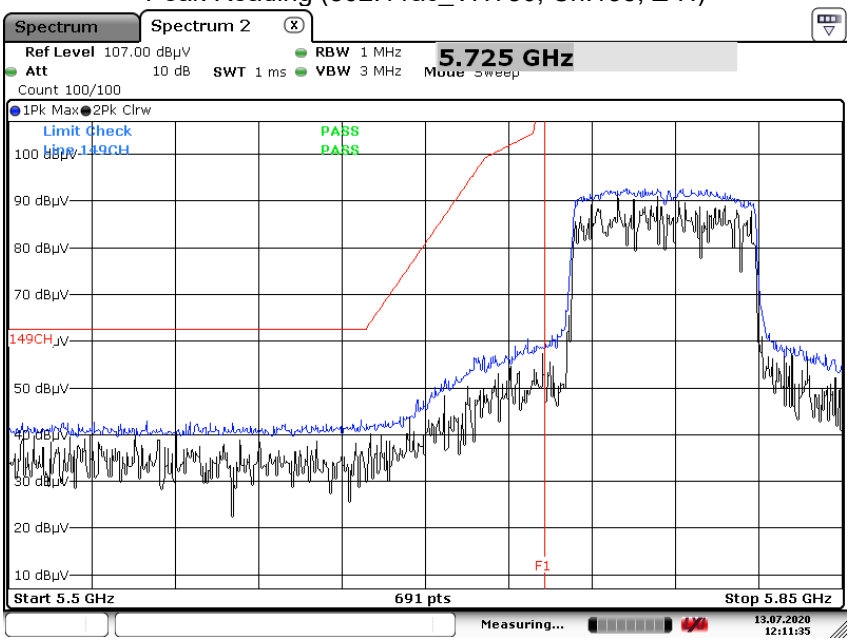
Date: 13.JUL.2020 12:56:46

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



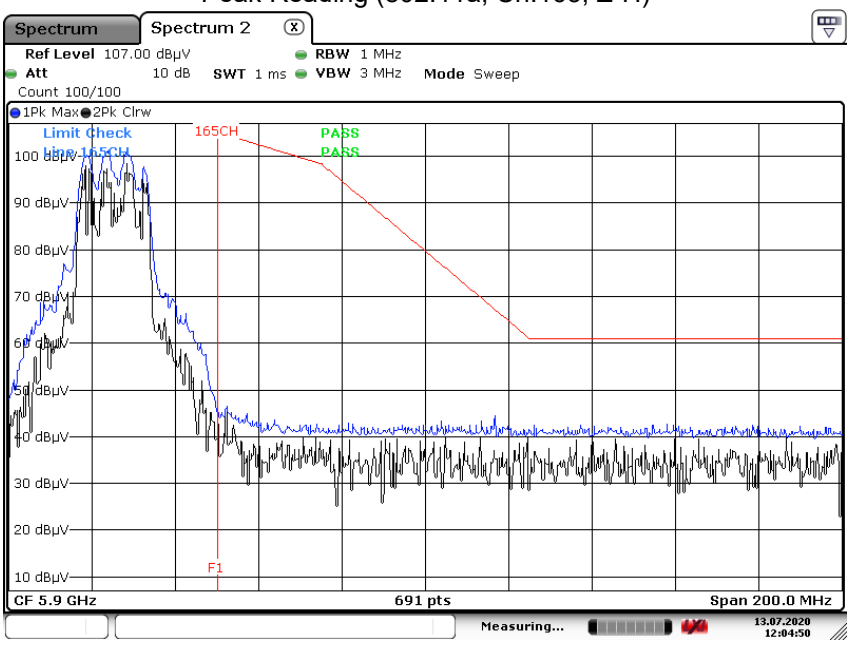
Date: 13.JUL.2020 12:57:50

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



Date: 13.JUL.2020 12:11:35

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

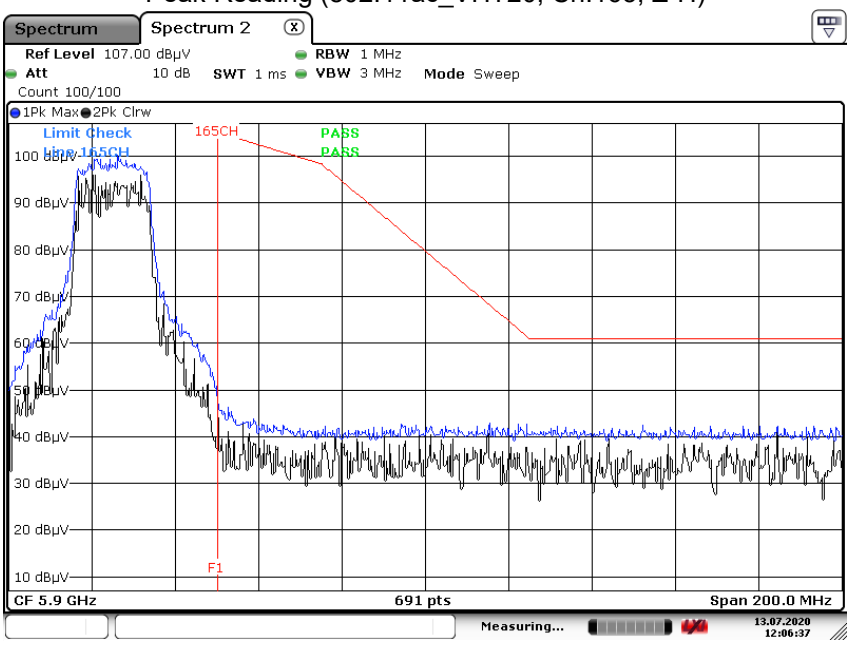


Date: 13.JUL.2020 12:04:50

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

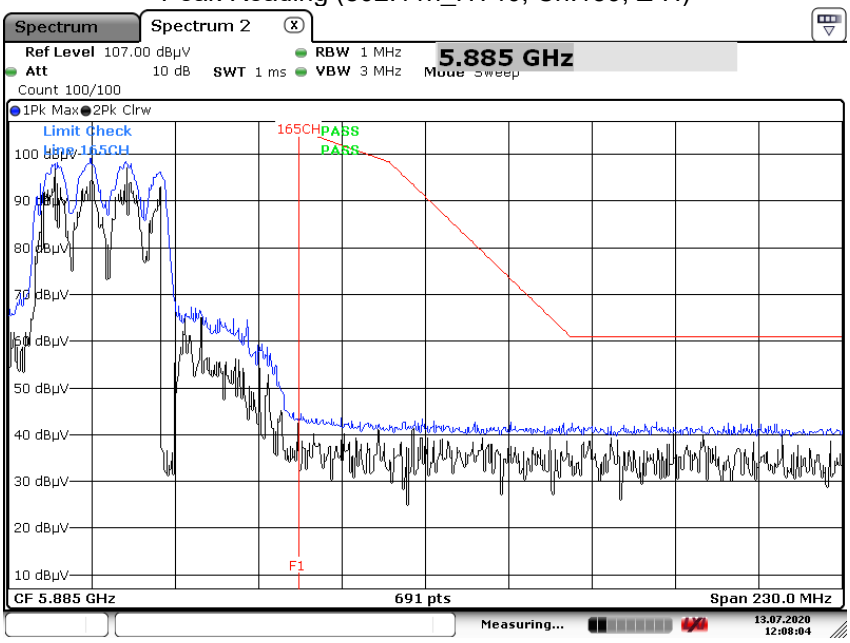
Date: 13.JUL.2020 12:05:48

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



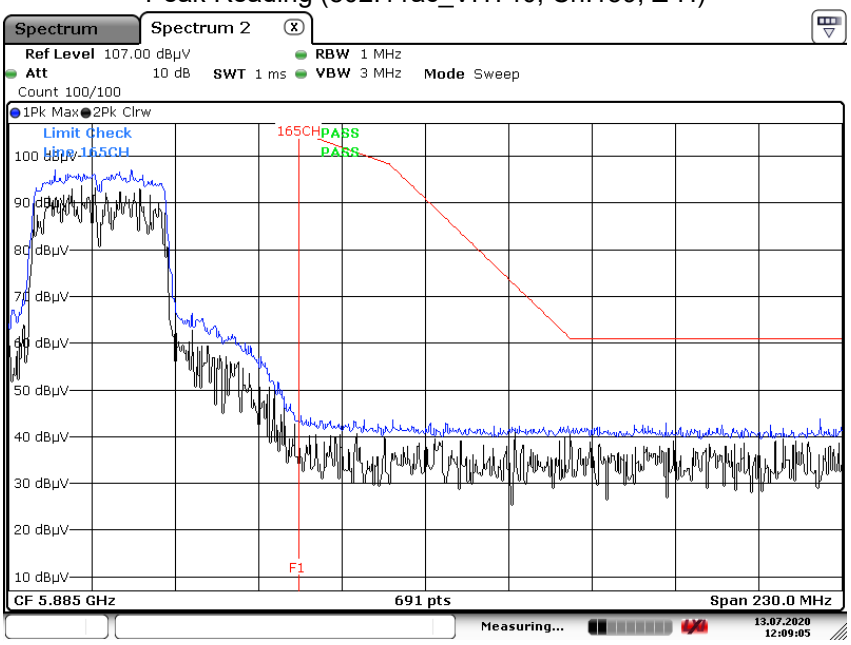
Date: 13.JUL.2020 12:06:37

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



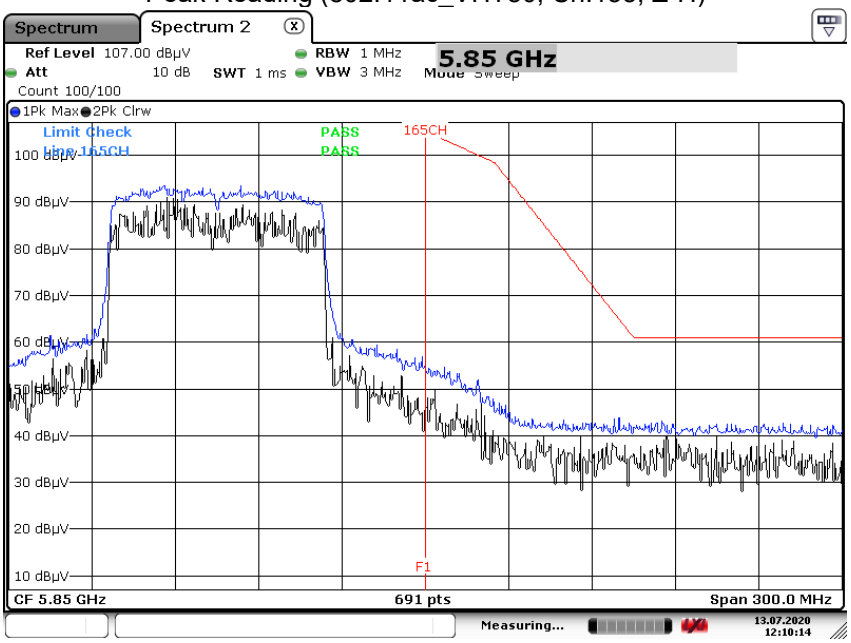
Date: 13.JUL.2020 12:08:04

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



Date: 13.JUL.2020 12:09:05

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



Date: 13.JUL.2020 12:10:14

10.10 POWERLINE CONDUCTED EMISSIONS

[T/A : 15 W] Conducted Emissions (Line 1)

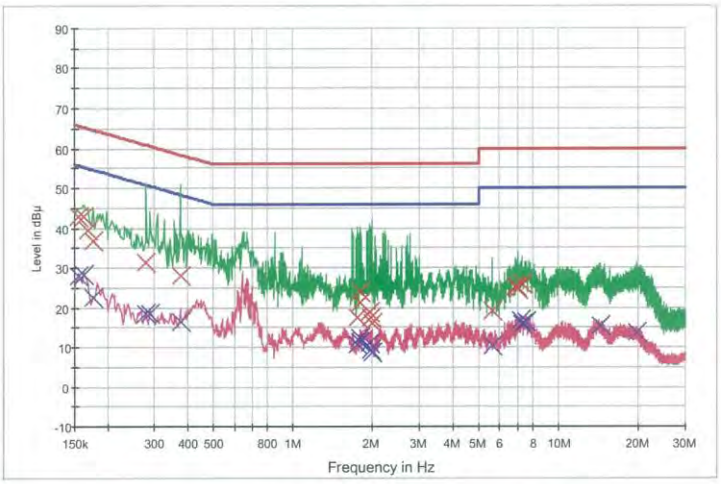
5GHz WLAN MODE L1 1 / 2

HCT TEST Report

Common Information

EUT:	SM-G781V
Manufacturer:	SAMSUNG
Test Site:	SHIELD ROOM
Operating Conditions:	5GHz WLAN MODE L1

FCC CLASS B_Exten Cable



FCC CLASS B_QP
Preview Result 2-AVG
FCC CLASS B_ AV
Final Result 1-QPK
Preview Result 1-PK+
Final Result 2-CAV

Final Result 1

Frequency (MHz)	QuasiPeak (dBuV)	Bandwidth (kHz)	Filter	Line	Corr. (dB)	Margin (dB)	Limit (dBuV)
0.156000	43.0	9.000	Off	L1	9.8	22.6	65.7
0.162000	42.9	9.000	Off	L1	9.8	22.4	65.4
0.168000	39.6	9.000	Off	L1	9.8	25.5	65.1
0.176000	36.9	9.000	Off	L1	9.8	27.8	64.7
0.280000	31.5	9.000	Off	L1	9.8	29.3	60.8
0.376000	27.9	9.000	Off	L1	9.8	30.4	58.4
1.756000	17.6	9.000	Off	L1	9.9	38.4	56.0
1.796000	23.9	9.000	Off	L1	9.9	32.1	56.0
1.800000	21.1	9.000	Off	L1	9.9	34.9	56.0
1.936000	18.8	9.000	Off	L1	9.9	37.2	56.0
1.958000	17.4	9.000	Off	L1	9.9	38.6	56.0
1.990000	16.0	9.000	Off	L1	9.9	40.0	56.0
5.636000	19.1	9.000	Off	L1	10.0	40.9	60.0
6.912000	25.2	9.000	Off	L1	10.1	34.8	60.0
6.982000	25.2	9.000	Off	L1	10.1	34.8	60.0
7.044000	24.5	9.000	Off	L1	10.1	35.5	60.0
7.306000	25.8	9.000	Off	L1	10.1	34.2	60.0
7.320000	26.1	9.000	Off	L1	10.1	33.9	60.0

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5GHz WLAN MODE L1 2 / 2

Final Result 2

Frequency (MHz)	CAverage (dBuV)	Bandwidth (kHz)	Filter	Line	Corr. (dB)	Margin (dB)	Limit (dBuV)
0.156000	28.0	9.000	Off	L1	9.8	27.7	55.7
0.162000	28.4	9.000	Off	L1	9.8	26.9	55.4
0.176000	22.5	9.000	Off	L1	9.8	32.2	54.7
0.280000	18.5	9.000	Off	L1	9.8	32.3	50.8
0.290000	18.3	9.000	Off	L1	9.8	32.2	50.5
0.376000	16.4	9.000	Off	L1	9.8	32.0	48.4
1.756000	10.7	9.000	Off	L1	9.9	35.3	46.0
1.794000	11.5	9.000	Off	L1	9.9	34.5	46.0
1.800000	12.5	9.000	Off	L1	9.9	33.5	46.0
1.936000	11.2	9.000	Off	L1	9.9	34.8	46.0
1.958000	9.5	9.000	Off	L1	9.9	36.5	46.0
1.988000	8.5	9.000	Off	L1	9.9	37.5	46.0
5.636000	10.2	9.000	Off	L1	10.0	39.8	50.0
7.202000	16.7	9.000	Off	L1	10.1	33.3	50.0
7.320000	15.7	9.000	Off	L1	10.1	34.3	50.0
7.546000	16.5	9.000	Off	L1	10.1	33.5	50.0
14.362000	15.4	9.000	Off	L1	10.4	34.6	50.0
19.668000	13.7	9.000	Off	L1	10.5	36.3	50.0

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[T/A : 15 W] Conducted Emissions (Line 2)

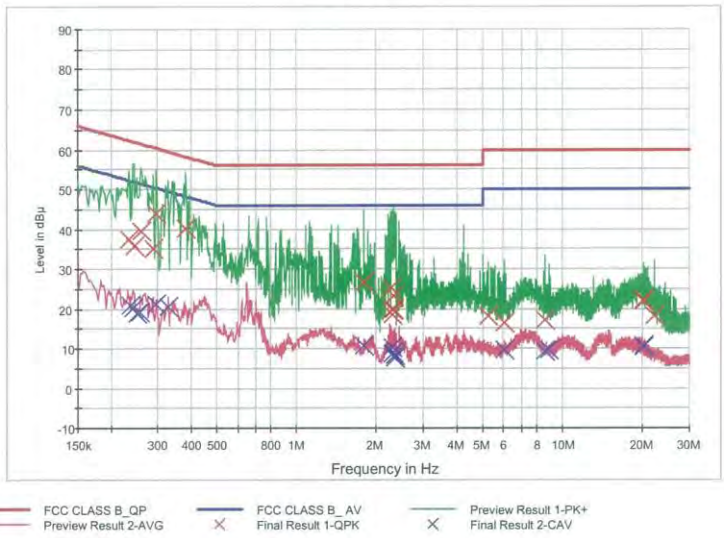
5GHz WLAN MODE N 1 / 2

HCT TEST Report

Common Information

EUT:	SM-G781V
Manufacturer:	SAMSUNG
Test Site:	SHIELD ROOM
Operating Conditions:	5GHz WLAN MODE N

FCC CLASS B_Exten Cable



Final Result 1

Frequency (MHz)	QuasiPeak (dBuV)	Bandwidth (kHz)	Filter	Line	Corr. (dB)	Margin (dB)	Limit (dBuV)
0.234000	37.5	9.000	Off	N	9.8	24.8	62.3
0.244000	35.9	9.000	Off	N	9.8	26.0	62.0
0.260000	39.6	9.000	Off	N	9.8	21.9	61.4
0.290000	35.2	9.000	Off	N	9.8	25.3	60.5
0.296000	43.9	9.000	Off	N	9.8	16.5	60.4
0.384000	40.3	9.000	Off	N	9.8	17.9	58.2
1.784000	26.5	9.000	Off	N	9.9	29.5	56.0
2.256000	25.4	9.000	Off	N	9.9	30.6	56.0
2.286000	18.4	9.000	Off	N	9.9	37.6	56.0
2.302000	19.8	9.000	Off	N	9.9	36.2	56.0
2.314000	19.7	9.000	Off	N	9.9	36.3	56.0
2.320000	23.3	9.000	Off	N	9.9	32.7	56.0
5.232000	18.0	9.000	Off	N	10.0	42.0	60.0
6.056000	16.5	9.000	Off	N	10.1	43.5	60.0
8.572000	17.2	9.000	Off	N	10.2	42.8	60.0
20.076000	22.2	9.000	Off	N	10.6	37.8	60.0
20.268000	21.9	9.000	Off	N	10.6	38.1	60.0
22.214000	18.2	9.000	Off	N	10.7	41.8	60.0

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5GHz WLAN MODE N 2 / 2

Final Result 2

Frequency (MHz)	CAverage (dBuV)	Bandwidth (kHz)	Filter	Line	Corr. (dB)	Margin (dB)	Limit (dBuV)
0.238000	20.9	9.000	Off	N	9.8	31.2	52.2
0.242000	20.1	9.000	Off	N	9.8	32.0	52.0
0.250000	18.8	9.000	Off	N	9.8	33.0	51.8
0.258000	19.3	9.000	Off	N	9.8	32.2	51.5
0.296000	21.3	9.000	Off	N	9.8	29.0	50.4
0.330000	20.4	9.000	Off	N	9.8	29.0	49.5
1.784000	10.5	9.000	Off	N	9.9	35.5	46.0
2.278000	10.4	9.000	Off	N	9.9	35.6	46.0
2.302000	8.6	9.000	Off	N	9.9	37.4	46.0
2.320000	9.1	9.000	Off	N	9.9	36.9	46.0
2.334000	8.2	9.000	Off	N	9.9	37.8	46.0
2.356000	7.5	9.000	Off	N	9.9	38.5	46.0
6.056000	9.6	9.000	Off	N	10.1	40.4	50.0
8.572000	9.3	9.000	Off	N	10.2	40.7	50.0
8.898000	9.6	9.000	Off	N	10.2	40.4	50.0
20.058000	10.8	9.000	Off	N	10.6	39.2	50.0
20.076000	10.6	9.000	Off	N	10.6	39.4	50.0
20.268000	10.5	9.000	Off	N	10.6	39.5	50.0

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[T/A : 25 W] Conducted Emissions (Line 1)

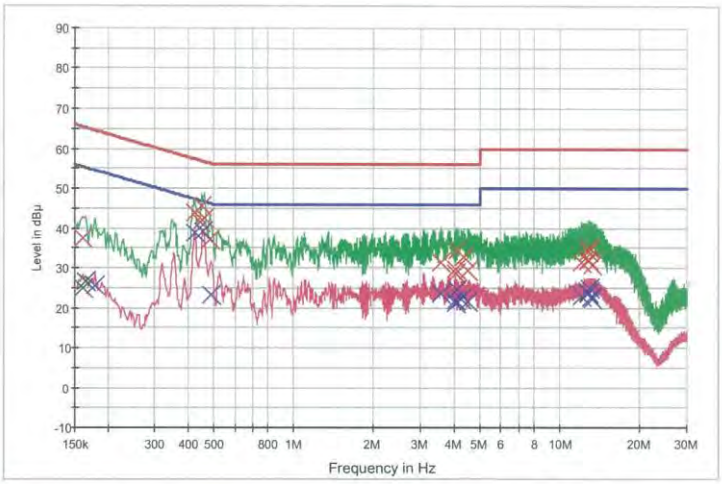
5GHz WLAN MODE L1 1 / 2

HCT TEST Report

Common Information

EUT:	SM-G781V
Manufacturer:	SAMSUNG
Test Site:	SHIELD ROOM
Operating Conditions:	5GHz WLAN MODE L1

FCC CLASS B_Exten Cable



Final Result 1

Frequency (MHz)	QuasiPeak (dBµV)	Bandwidth (kHz)	Filter	Line	Corr. (dB)	Margin (dB)	Limit (dBµV)
0.160000	37.3	9.000	Off	L1	9.8	28.1	65.5
0.424000	44.1	9.000	Off	L1	9.8	13.3	57.4
0.446000	41.7	9.000	Off	L1	9.8	15.3	56.9
0.450000	45.5	9.000	Off	L1	9.8	11.4	56.9
0.462000	42.4	9.000	Off	L1	9.8	14.3	56.7
0.484000	37.2	9.000	Off	L1	9.8	19.1	56.3
3.578000	31.3	9.000	Off	L1	9.9	24.7	56.0
4.072000	29.5	9.000	Off	L1	10.0	26.5	56.0
4.078000	28.6	9.000	Off	L1	10.0	27.4	56.0
4.120000	34.6	9.000	Off	L1	10.0	21.4	56.0
4.340000	32.8	9.000	Off	L1	10.0	23.2	56.0
4.536000	29.3	9.000	Off	L1	10.0	26.7	56.0
11.984000	31.4	9.000	Off	L1	10.3	28.6	60.0
12.728000	31.9	9.000	Off	L1	10.3	28.1	60.0
12.754000	31.5	9.000	Off	L1	10.3	28.5	60.0
12.760000	34.1	9.000	Off	L1	10.3	25.9	60.0
12.954000	34.9	9.000	Off	L1	10.3	25.1	60.0
13.224000	30.8	9.000	Off	L1	10.3	29.2	60.0

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5GHz WLAN MODE L1 2 / 2

Final Result 2

Frequency (MHz)	CAverage (dBµV)	Bandwidth (kHz)	Filter	Line	Corr. (dB)	Margin (dB)	Limit (dBµV)
0.160000	24.8	9.000	Off	L1	9.8	30.7	55.5
0.164000	26.6	9.000	Off	L1	9.8	28.6	55.3
0.178000	25.4	9.000	Off	L1	9.8	29.2	54.6
0.424000	38.7	9.000	Off	L1	9.8	8.7	47.4
0.458000	39.2	9.000	Off	L1	9.8	7.5	46.7
0.488000	23.3	9.000	Off	L1	9.8	22.9	46.2
3.578000	23.4	9.000	Off	L1	9.9	22.6	46.0
4.072000	21.8	9.000	Off	L1	10.0	24.2	46.0
4.078000	21.3	9.000	Off	L1	10.0	24.7	46.0
4.120000	24.6	9.000	Off	L1	10.0	21.4	46.0
4.266000	22.2	9.000	Off	L1	10.0	23.8	46.0
4.536000	21.5	9.000	Off	L1	10.0	24.5	46.0
11.984000	22.7	9.000	Off	L1	10.3	27.3	50.0
12.728000	23.6	9.000	Off	L1	10.3	26.4	50.0
12.762000	24.1	9.000	Off	L1	10.3	25.9	50.0
12.954000	25.0	9.000	Off	L1	10.3	25.0	50.0
13.012000	22.4	9.000	Off	L1	10.3	27.6	50.0
13.224000	22.3	9.000	Off	L1	10.3	27.7	50.0

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[T/A : 25 W] Conducted Emissions (Line 2)

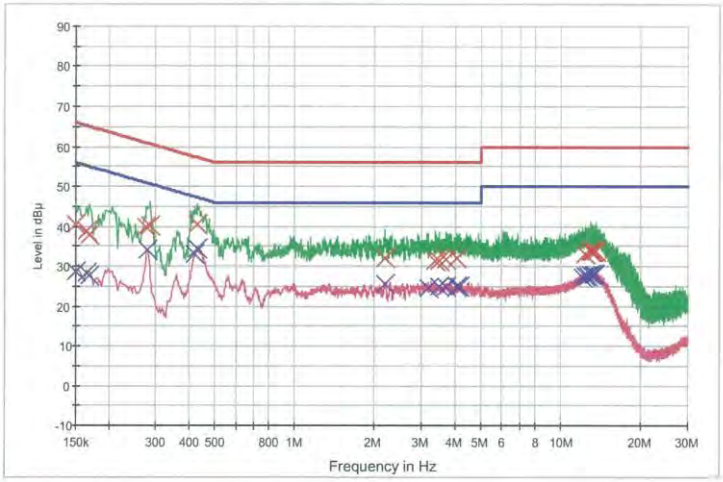
5GHz WLAN MODE N 1 / 2

HCT TEST Report

Common Information

EUT:	SM-G781V
Manufacturer:	SAMSUNG
Test Site:	SHIELD ROOM
Operating Conditions:	5GHz WLAN MODE N

FCC CLASS B_Exten Cable



FCC CLASS B_QP
Preview Result 2-AVG
FCC CLASS B_ AV
Final Result 1-QPK
Preview Result 1-PK+
Final Result 2-CAV

Final Result 1

Frequency (MHz)	QuasiPeak (dBµV)	Bandwidth (kHz)	Filter	Line	Corr. (dB)	Margin (dB)	Limit (dBµV)
0.150000	40.6	9.000	Off	N	9.8	25.4	66.0
0.164000	38.7	9.000	Off	N	9.8	26.6	65.3
0.168000	37.8	9.000	Off	N	9.8	27.2	65.1
0.276000	40.0	9.000	Off	N	9.8	21.0	60.9
0.286000	40.1	9.000	Off	N	9.8	20.5	60.6
0.428000	40.4	9.000	Off	N	9.8	16.8	57.3
2.184000	32.1	9.000	Off	N	9.9	23.9	56.0
2.188000	31.9	9.000	Off	N	9.9	24.1	56.0
3.360000	31.4	9.000	Off	N	9.9	24.6	56.0
3.494000	31.5	9.000	Off	N	9.9	24.5	56.0
3.712000	31.8	9.000	Off	N	10.0	24.2	56.0
4.050000	31.9	9.000	Off	N	10.0	24.1	56.0
12.370000	33.2	9.000	Off	N	10.3	26.8	60.0
12.990000	33.8	9.000	Off	N	10.4	26.2	60.0
13.102000	33.7	9.000	Off	N	10.4	26.3	60.0
13.178000	33.8	9.000	Off	N	10.4	26.2	60.0
13.488000	33.7	9.000	Off	N	10.4	26.3	60.0
13.616000	33.8	9.000	Off	N	10.4	26.2	60.0

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5GHz WLAN MODE N

2 / 2

Final Result 2

Frequency (MHz)	CAverage (dBuV)	Bandwidth (kHz)	Filter	Line	Corr. (dB)	Margin (dB)	Limit (dBuV)
0.150000	28.7	9.000	Off	N	9.8	27.3	56.0
0.164000	28.3	9.000	Off	N	9.8	26.9	55.3
0.168000	27.7	9.000	Off	N	9.8	27.4	55.1
0.280000	34.2	9.000	Off	N	9.8	16.6	50.8
0.420000	33.1	9.000	Off	N	9.8	14.4	47.4
0.428000	34.4	9.000	Off	N	9.8	12.9	47.3
2.188000	25.5	9.000	Off	N	9.9	20.5	46.0
3.172000	24.6	9.000	Off	N	9.9	21.4	46.0
3.494000	24.9	9.000	Off	N	9.9	21.1	46.0
3.712000	25.0	9.000	Off	N	10.0	21.0	46.0
4.050000	24.8	9.000	Off	N	10.0	21.2	46.0
4.174000	25.0	9.000	Off	N	10.0	21.0	46.0
12.092000	27.1	9.000	Off	N	10.3	22.9	50.0
12.318000	27.5	9.000	Off	N	10.3	22.5	50.0
12.698000	27.8	9.000	Off	N	10.4	22.2	50.0
12.878000	27.9	9.000	Off	N	10.4	22.1	50.0
13.178000	27.8	9.000	Off	N	10.4	22.2	50.0
13.370000	27.9	9.000	Off	N	10.4	22.1	50.0

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11. LIST OF TEST EQUIPMENT

Conducted Test

Manufacturer	Model / Equipment	Calibration Date	Calibration Interval	Serial No.
Rohde & Schwarz	ENV216 / LISN	09/11/2019	Annual	102245
Rohde & Schwarz	ESCI / Test Receiver	06/05/2020	Annual	100033
ESPAC	SU-642 /Temperature Chamber	03/18/2020	Annual	0093008124
Agilent	N9020A / Signal Analyzer	05/11/2020	Annual	MY51110085
Agilent	N9020A / Signal Analyzer	05/25/2020	Annual	MY52090906
Agilent	N9030A / Signal Analyzer	01/13/2020	Annual	MY49431210
Rohde & Schwarz	OSP 120 / Power Measurement Set	07/02/2020	Annual	101231
Agilent	N1911A / Power Meter	04/07/2020	Annual	MY45100523
Keysight	N1921A / Power Sensor	06/08/2020	Annual	MY57820067
Agilent	87300B / Directional Coupler	11/11/2019	Annual	3116A03621
Hewlett Packard	11667B / Power Splitter	05/25/2020	Annual	05001
Hewlett Packard	E3632A / DC Power Supply	06/12/2020	Annual	KR75303960
Agilent	8493C / Attenuator(10 dB)	06/26/2020	Annual	07560
Rohde & Schwarz	EMC32 / Software	N/A	N/A	N/A
HCT CO., LTD.	FCC WLAN&BT&BLE Conducted Test Software v3.0	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

Manufacturer	Model / Equipment	Calibration Date	Calibration Interval	Serial No.
Innco system	CO3000 / Controller(Antenna mast)	N/A	N/A	CO3000-4p
Innco system	MA4640/800-XP-EP / Antenna Position Tower	N/A	N/A	N/A
Audix	EM1000 / Controller	N/A	N/A	060520
Audix	Turn Table	N/A	N/A	N/A
Rohde & Schwarz	Loop Antenna	05/18/2020	Biennial	1513-175
Schwarzbeck	VULB 9168 / Hybrid Antenna	03/22/2019	Biennial	760
Schwarzbeck	BBHA 9120D / Horn Antenna	04/29/2019	Biennial	9120D-937
Schwarzbeck	BBHA9170 / Horn Antenna(15 GHz ~ 40 GHz)	11/29/2019	Biennial	BBHA9170541
Rohde & Schwarz	FSP(9 kHz ~ 30 GHz) / Spectrum Analyzer	04/27/2020	Annual	100854
Rohde & Schwarz	FSV40-N / Spectrum Analyzer	09/26/2019	Annual	101068-SZ
Agilent	N9020A / Signal Analyzer	05/11/2020	Annual	MY51110085
Wainwright Instruments	WRCJV2400/2483.5-2370/2520-60/12SS / Band Reject Filter	01/21/2020	Annual	2
Wainwright Instruments	WRCJV5100/5850-40/50-8EEK / Band Reject Filter	02/10/2020	Annual	1
Wainwright Instruments	WHK3.0/18G-10EF / High Pass Filter	03/02/2020	Annual	8
Wainwright Instruments	WHKX8-6090-7000-18000-40SS/ High Pass Filter	03/02/2020	Annual	25
Api tech.	18B-03 / Attenuator (3 dB)	03/02/2020	Annual	1
Agilent	8493C-10 / Attenuator(10 dB)	03/02/2020	Annual	08285
CERNEX	CBLU1183540 / Power Amplifier	03/02/2020	Annual	22964
CERNEX	CBL06185030 / Power Amplifier	03/02/2020	Annual	22965
CERNEX	CBL18265035 / Power Amplifier	12/26/2019	Annual	22966
CERNEX	CBL26405040 / Power Amplifier	03/23/2020	Annual	25956

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-2008-FC063-P