9.8 Test data for 802.11ac_VHT40 RLAN Mode

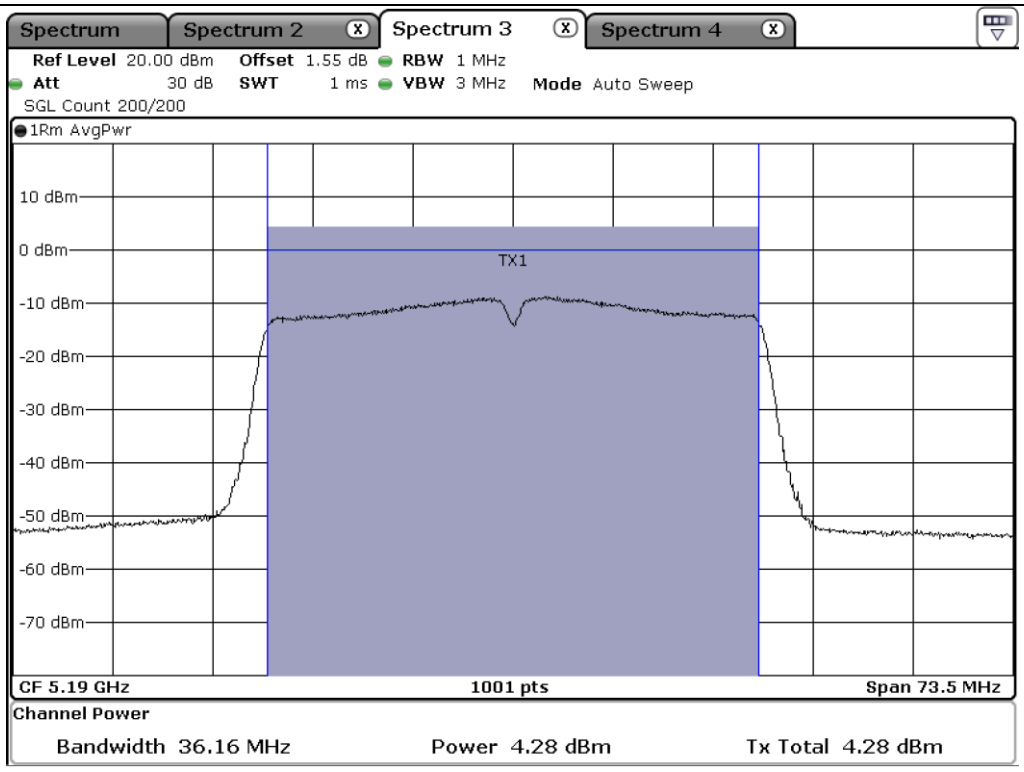
9.8.1 Test data for Antenna 0

-. Test Result : Pass

-. Duty Cycle : 84.42 % (UNII 1) / 84.21 % (UNII 3)

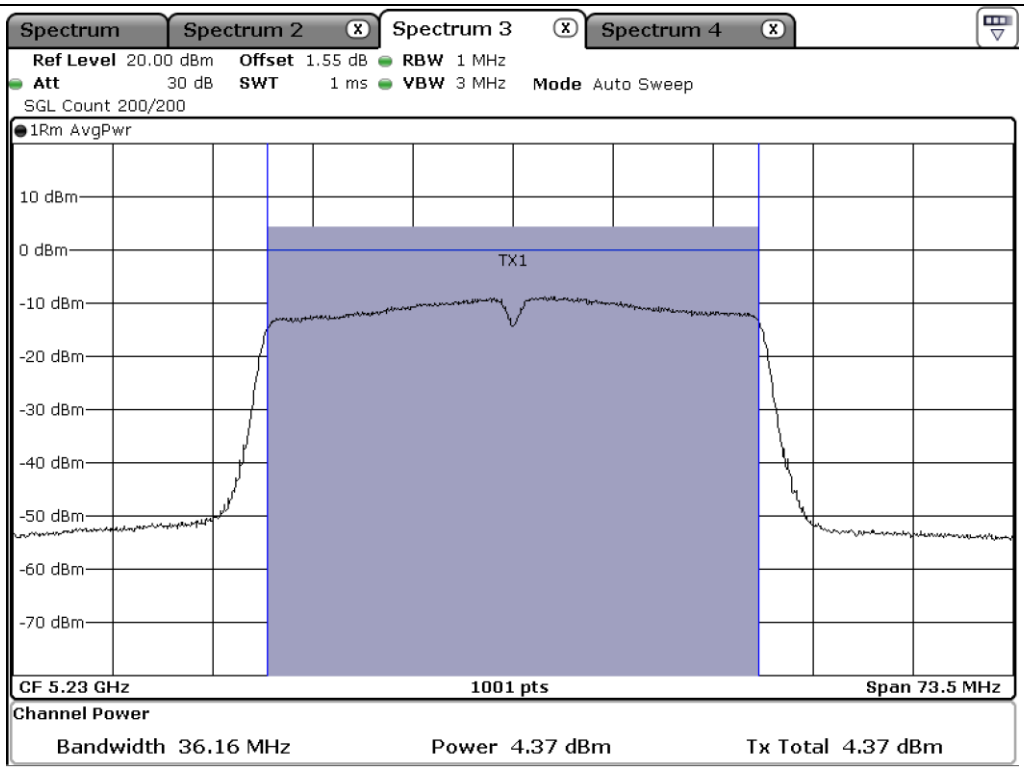
Frequency Range (MHz)	Channel	Frequency (MHz)	99% Band Width	Measured Value (dBm)	DUTY Factor (dB)	Result (dBm)	Linit (dBm)	Margin (dB)
5 150 ~ 5 250	Low	5 190.00	36.16	4.28	0.74	5.02	23.97	18.95
	High	5 230.00	36.16	4.37	0.74	5.11	23.97	18.86
5 725 ~ 5 850	Low	5 755.00	36.06	4.95	0.75	5.70	30.00	24.30
	High	5 795.00	36.06	4.81	0.75	5.56	30.00	24.44

Remark : Margin = Limit – Result Value (Measured value + Duty Factor)

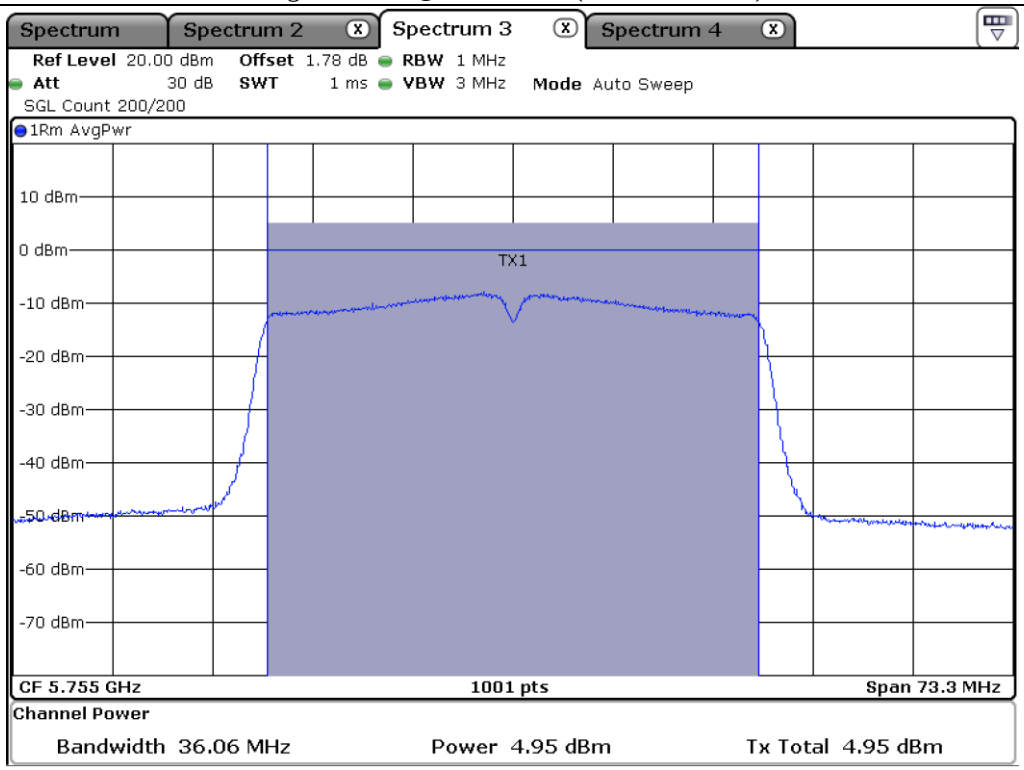


Low Channel @ 5 190 MHz (99% Bandwidth)

ONETECH Corp.: 43-14, Jinsaegol-gil, Chowol-eup, Gwangju-si, Gyeonggi-do, 12735, Korea (TEL: 82-31-799-9500, FAX: 82-31-799-9599)

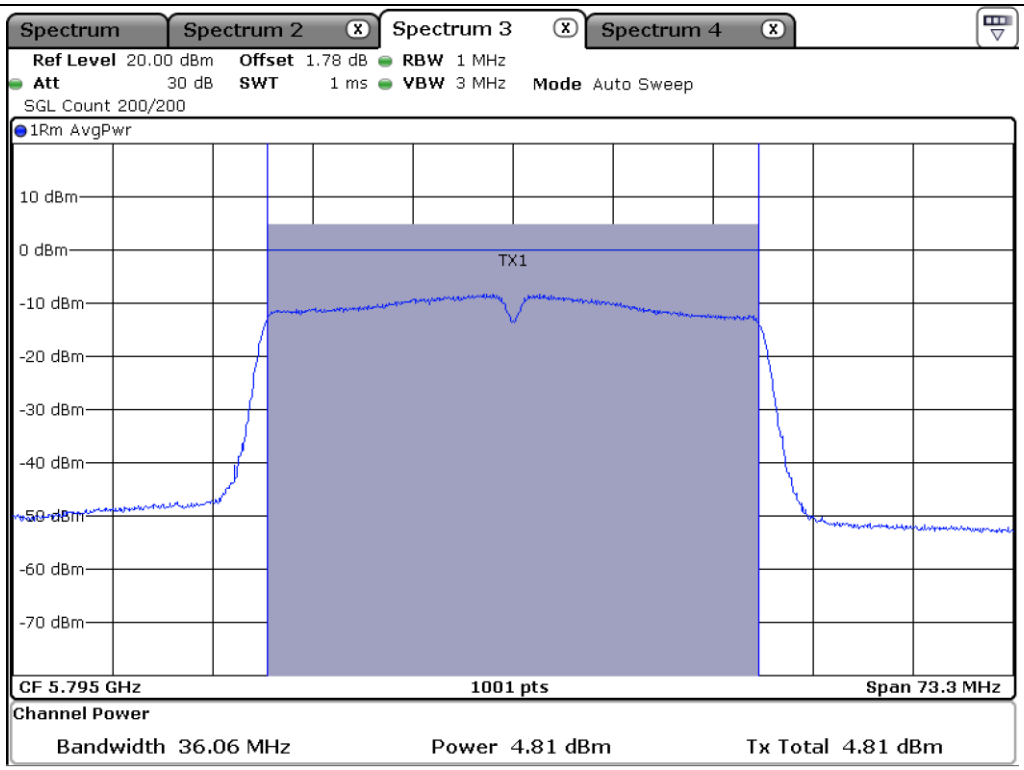


High Channel @ 5 230 MHz (99% Bandwidth)



Low Channel @ 5 755 MHz (99% Bandwidth)

ONETECH Corp.: 43-14, Jinsaegol-gil, Chowol-eup, Gwangju-si, Gyeonggi-do, 12735, Korea (TEL: 82-31-799-9500, FAX: 82-31-799-9599)



High Channel @ 5 795 MHz (99% Bandwidth)

ONETECH Corp.: 43-14, Jinsaegol-gil, Chowol-eup, Gwangju-si, Gyeonggi-do, 12735, Korea (TEL: 82-31-799-9500, FAX: 82-31-799-9599)

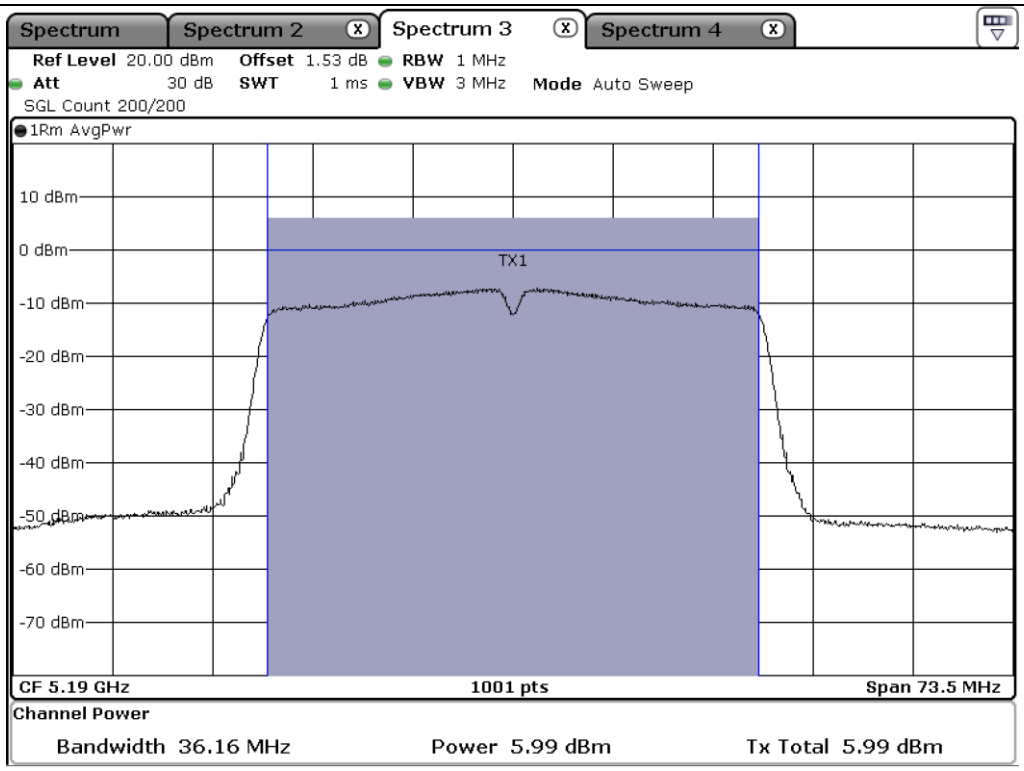
9.8.2 Test data for Antenna 1

-. Test Result : Pass

-. Duty Cycle : 83.33 % (UNII 1) / 83.12 % (UNII 3)

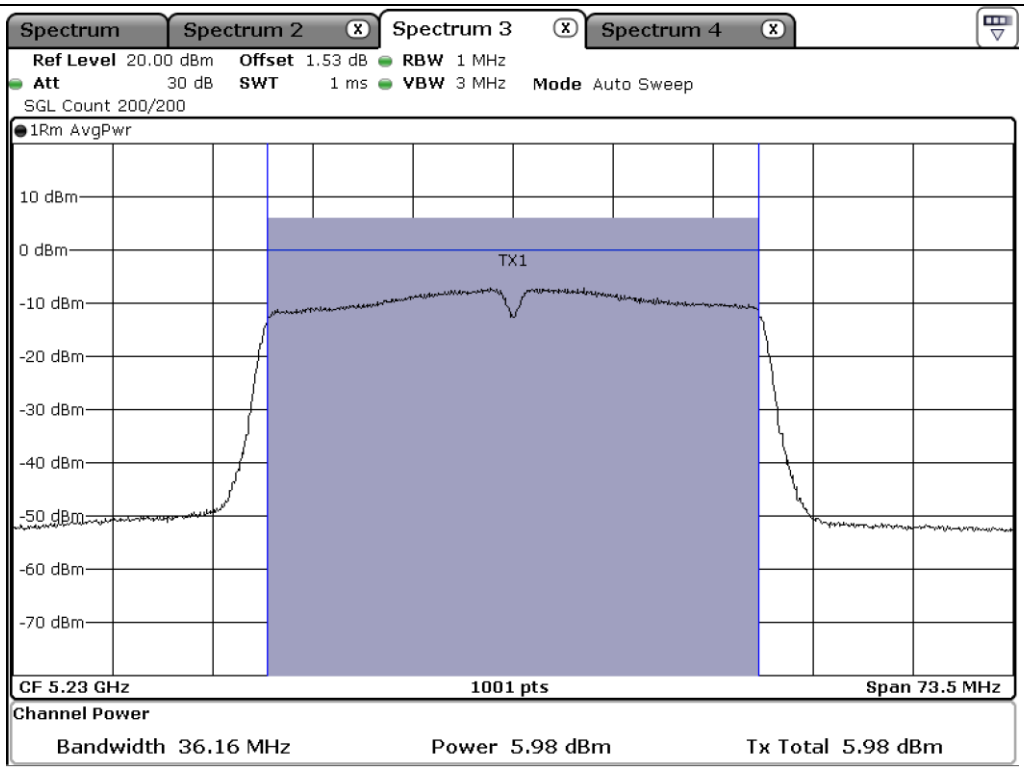
Frequency Range (MHz)	Channel	Frequency (MHz)	99% Band Width	Measured Value (dBm)	DUTY Factor (dB)	Result (dBm)	Linit (dBm)	Margin (dB)
5 150 ~ 5 250	Low	5 190.00	36.16	5.99	0.79	6.78	23.97	17.19
	High	5 230.00	36.16	5.98	0.79	6.77	23.97	17.20
5 725 ~ 5 850	Low	5 755.00	36.26	7.72	0.80	8.52	30.00	21.48
	High	5 795.00	36.16	7.56	0.80	8.36	30.00	21.64

Remark : Margin = Limit – Result Value (Measured value + Duty Factor)

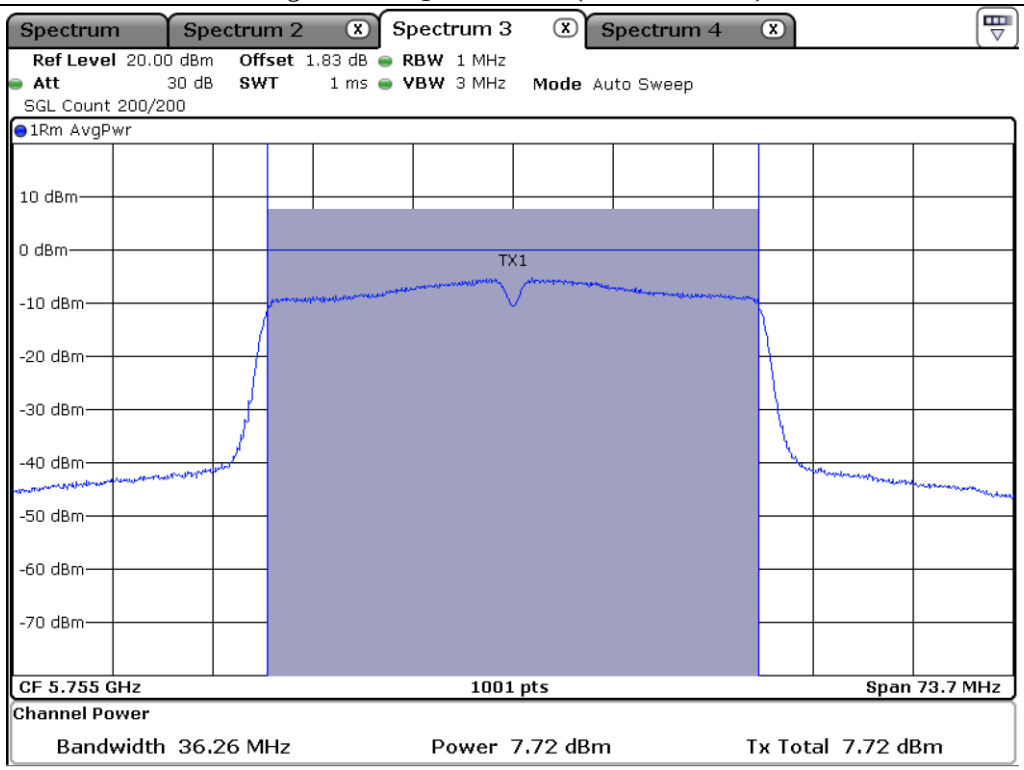


Low Channel @ 5 190 MHz (99% Bandwidth)

ONETECH Corp.: 43-14, Jinsaegol-gil, Chowol-eup, Gwangju-si, Gyeonggi-do, 12735, Korea (TEL: 82-31-799-9500, FAX: 82-31-799-9599)

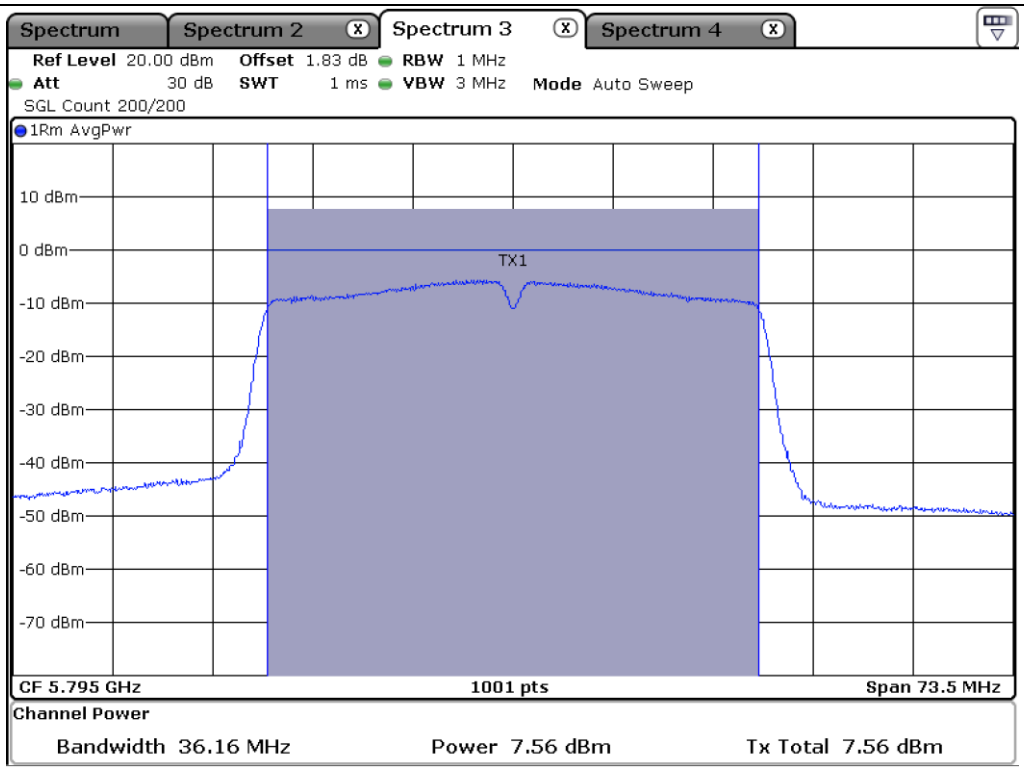


High Channel @ 5 230 MHz (99% Bandwidth)



Low Channel @ 5 755 MHz (99% Bandwidth)

ONETECH Corp.: 43-14, Jinsaegol-gil, Chowol-eup, Gwangju-si, Gyeonggi-do, 12735, Korea (TEL: 82-31-799-9500, FAX: 82-31-799-9599)



High Channel @ 5 795 MHz (99% Bandwidth)

9.8.3 Test data for Multiple Transmit

-. Test Result : Pass

Frequency Range (MHz)	Channel	Frequency (MHz)	Result (dBm)	Limit (dBm)	Margin (dB)
5 150 ~ 5 250	Low	5 190.00	9.00	23.97	14.97
	High	5 230.00	9.03	23.97	14.94
5 725 ~ 5 850	Low	5 755.00	10.35	30.00	19.65
	High	5 795.00	10.19	30.00	19.81

Remark 1 : Margin = Limit – Result Value (Measured value + Duty Factor)

Remark 2: Calculated Output Power= $10\log(10^{(\text{Antenna0 Output Power}/10)} + 10^{(\text{Antenna1 Output Power}/10)})$

ONETECH Corp.: 43-14, Jinsaegol-gil, Chowol-eup, Gwangju-si, Gyeonggi-do, 12735, Korea (TEL: 82-31-799-9500, FAX: 82-31-799-9599)

9.9 Test data for 802.11ac_HT80 RLAN Mode

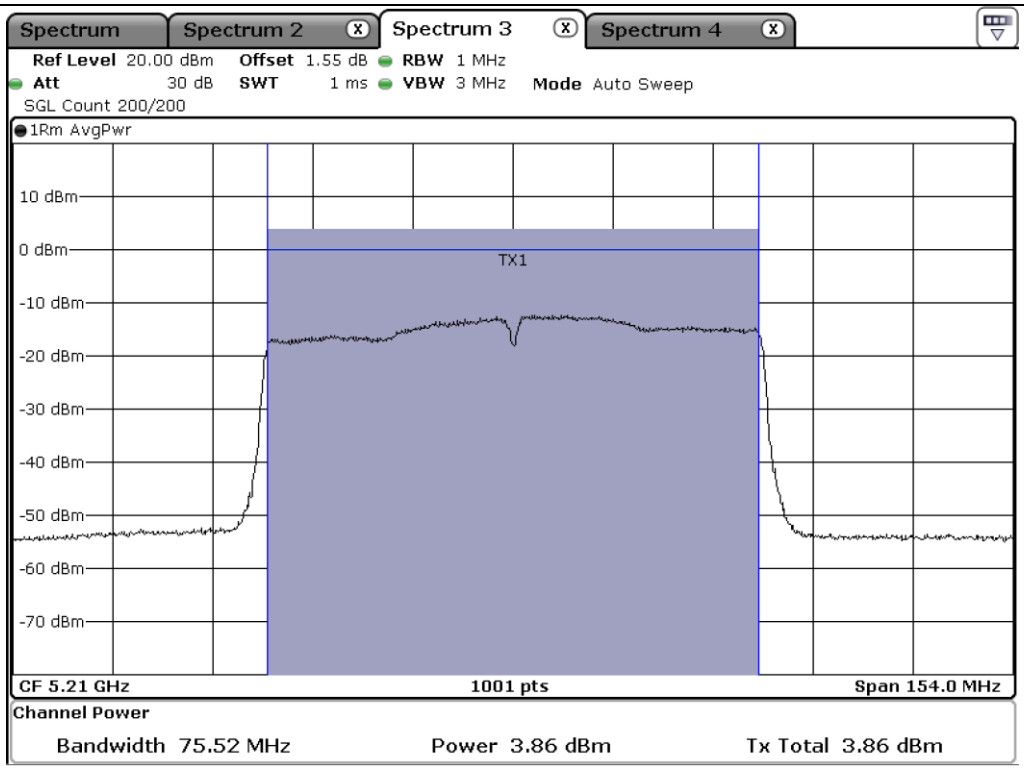
9.9.1 Test data for Antenna 0

-. Test Result : Pass

-. Duty Cycle : 72.73 % (UNII 1) / 70.45 % (UNII 3)

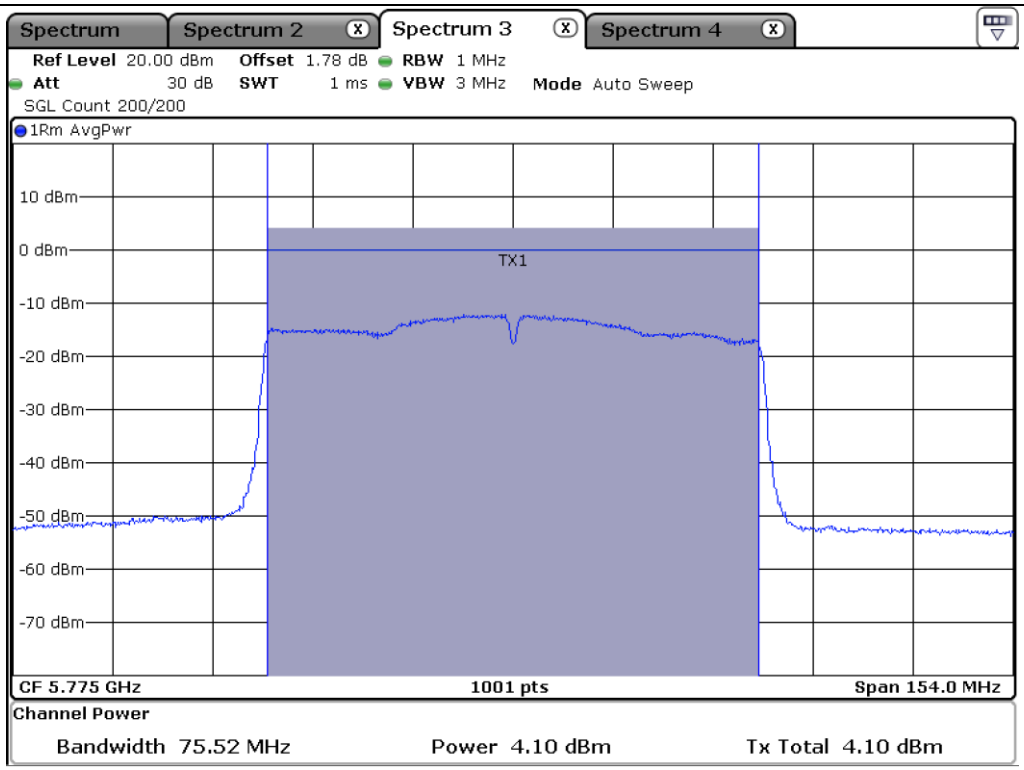
Frequency Ragne (MHz)	Channel	Frequency (MHz)	99% Band Width	Measured Value (dBm)	DUTY Factor (dB)	Result (dBm)	Limit (dBm)	Margin (dB)
5 150 ~ 5 250	Middle	5 210.00	75.52	3.86	1.38	5.24	23.97	18.73
5 725 ~ 5 850	Middle	5 775.00	75.52	4.10	1.52	5.62	30.00	24.38

Remark : Margin = Limit – Result Value (Measured value + Duty Factor)



Middle Channel @ 5 210 MHz (99% Bandwidth)

ONETECH Corp.: 43-14, Jinsaegol-gil, Chowol-eup, Gwangju-si, Gyeonggi-do, 12735, Korea (TEL: 82-31-799-9500, FAX: 82-31-799-9599)



Middle Channel @ 5 775 MHz (99% Bandwidth)

ONETECH Corp.: 43-14, Jinsaegol-gil, Chowol-eup, Gwangju-si, Gyeonggi-do, 12735, Korea (TEL: 82-31-799-9500, FAX: 82-31-799-9599)

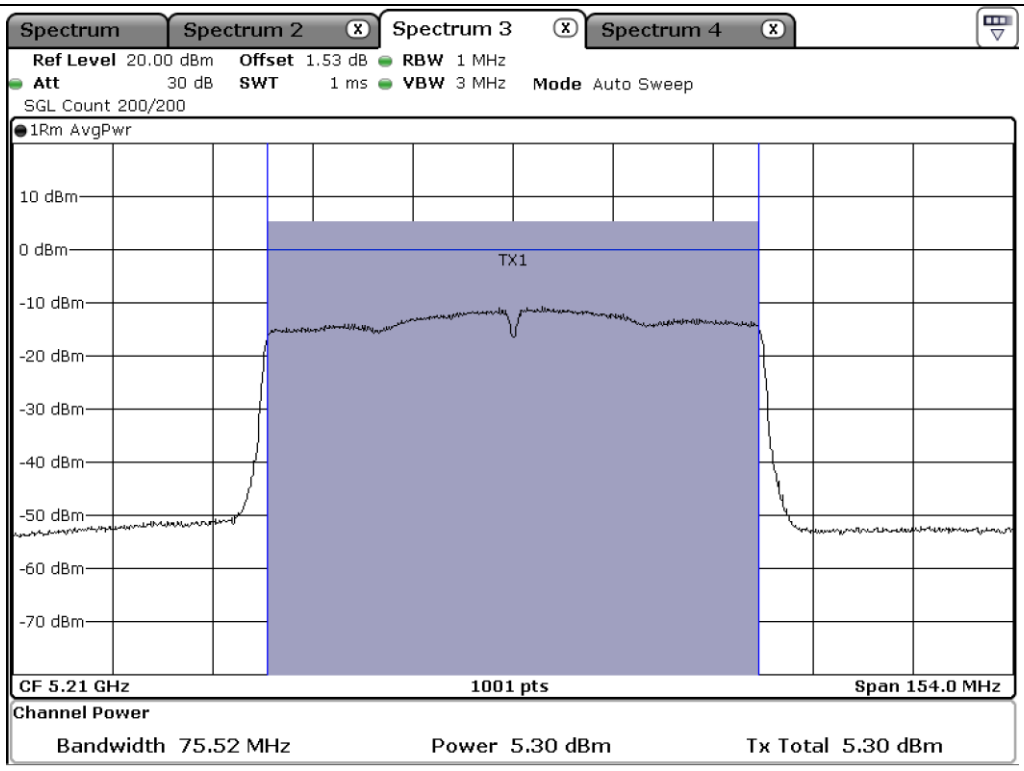
9.9.2 Test data for Antenna 1

-. Test Result : Pass

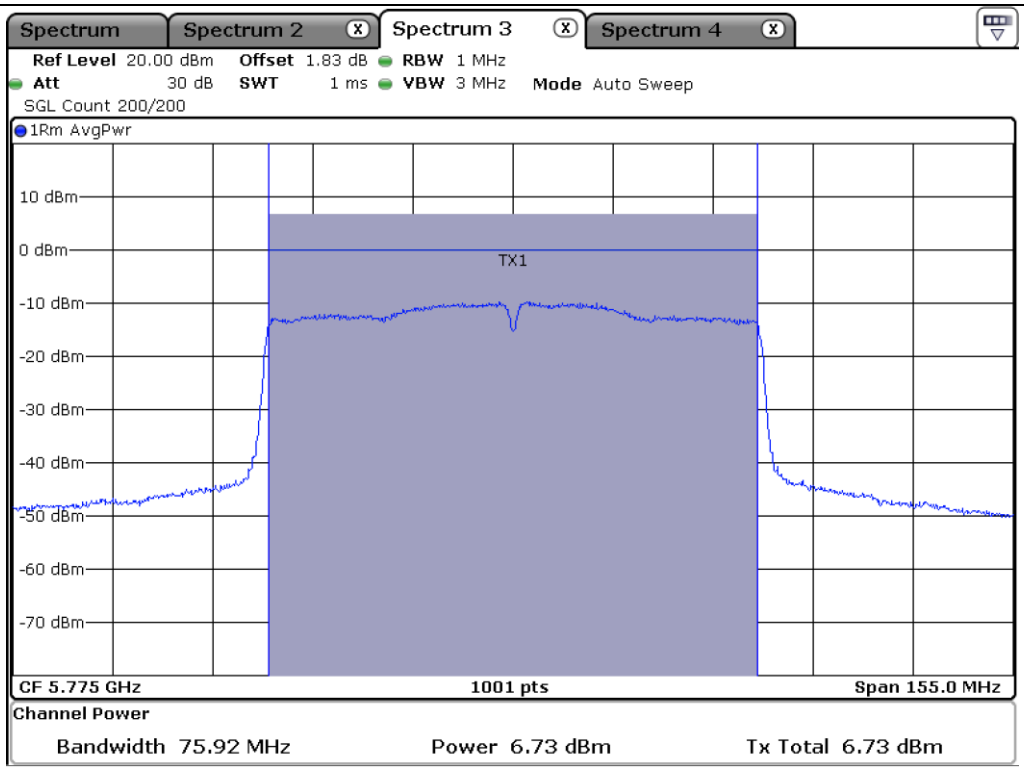
-. Duty Cycle : 72.09 % (UNII 1) / 72.09 % (UNII 3)

Frequency Range (MHz)	Channel	Frequency (MHz)	99% Band Width	Measured Value (dBm)	DUTY Factor (dB)	Result (dBm)	Limit (dBm)	Margin (dB)
5 150 ~ 5 250	Middle	5 210.00	75.52	5.30	1.42	6.72	23.97	17.25
5 725 ~ 5 850	Middle	5 775.00	75.92	6.73	1.42	8.15	30.00	21.85

Remark : Margin = Limit – Result Value (Measured value + Duty Factor)



Middle Channel @ 5 210 MHz (99% Bandwidth)



Middle Channel @ 5 775 MHz (99% Bandwidth)

9.9.3 Test data for Multiple Transmit

-. Test Result : Pass

Frequency Range (MHz)	Channel	Frequency (MHz)	Result (dBm)	Limit (dBm)	Margin (dB)
5 150 ~ 5 250	Low	5 210.00	9.05	23.97	14.92
5 725 ~ 5 850	Low	5 775.00	10.08	30.00	19.92

Remark 1 : Margin = Limit – Result Value (Measured value + Duty Factor)

Remark 2: Calculated Output Power= $10\log(10^{(\text{Antenna0 Output Power}/10)} + 10^{(\text{Antenna1 Output Power}/10)})$

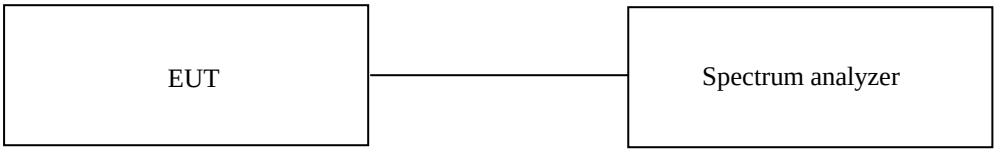
10. PEAK POWER SPECTRAL DENSITY

10.1 Operating environment

Temperature	:	23 °C
Relative humidity	:	45 % R.H.

10.2 Test set-up

The antenna output of the EUT was connected to the spectrum analyzer. The resolution bandwidth is set to 1 MHz(UNII 1) and 500 kHz(UNII 3), the video bandwidth is set to 3 times the resolution bandwidth. The maximum level for the EUT in 1 MHz bandwidth was measured with above condition.



10.3 Test Date

January 07, 2021 ~ January 28, 2021

ONETECH Corp.: 43-14, Jinsaegol-gil, Chowol-eup, Gwangju-si, Gyeonggi-do, 12735, Korea (TEL: 82-31-799-9500, FAX: 82-31-799-9599)

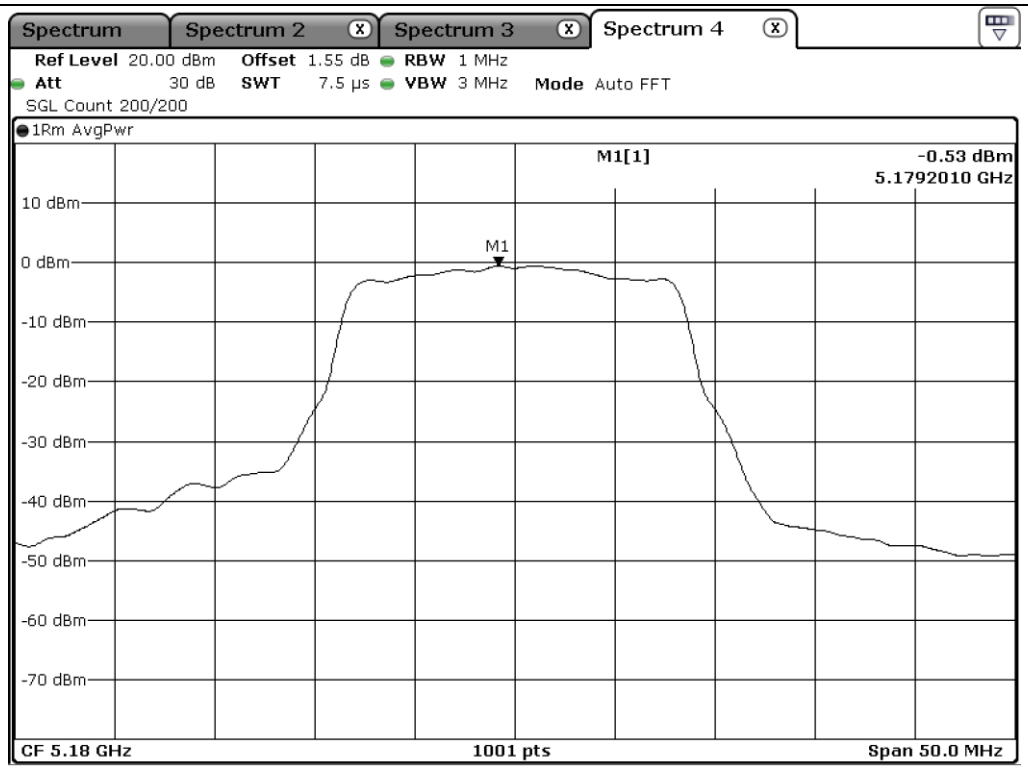
10.4 Test data for 802.11a RLAN Mode

10.4.1 Test data for Antenna 0

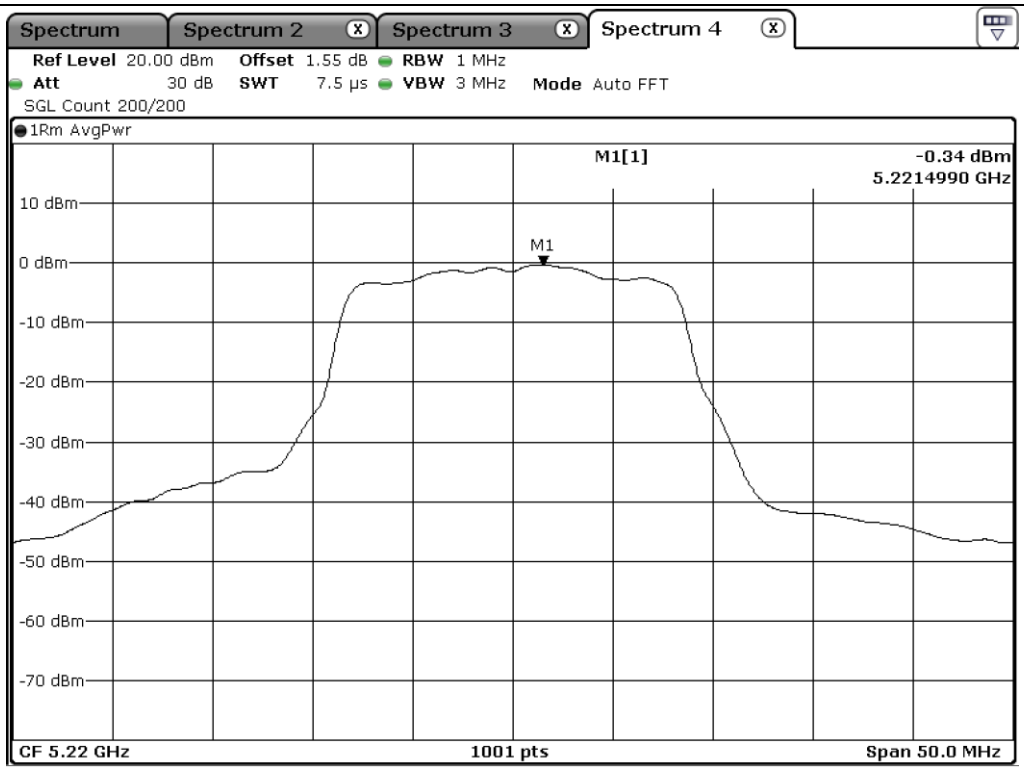
-. Operating condition : Highest Output Power Transmitting Mode

-. Test Result : Pass

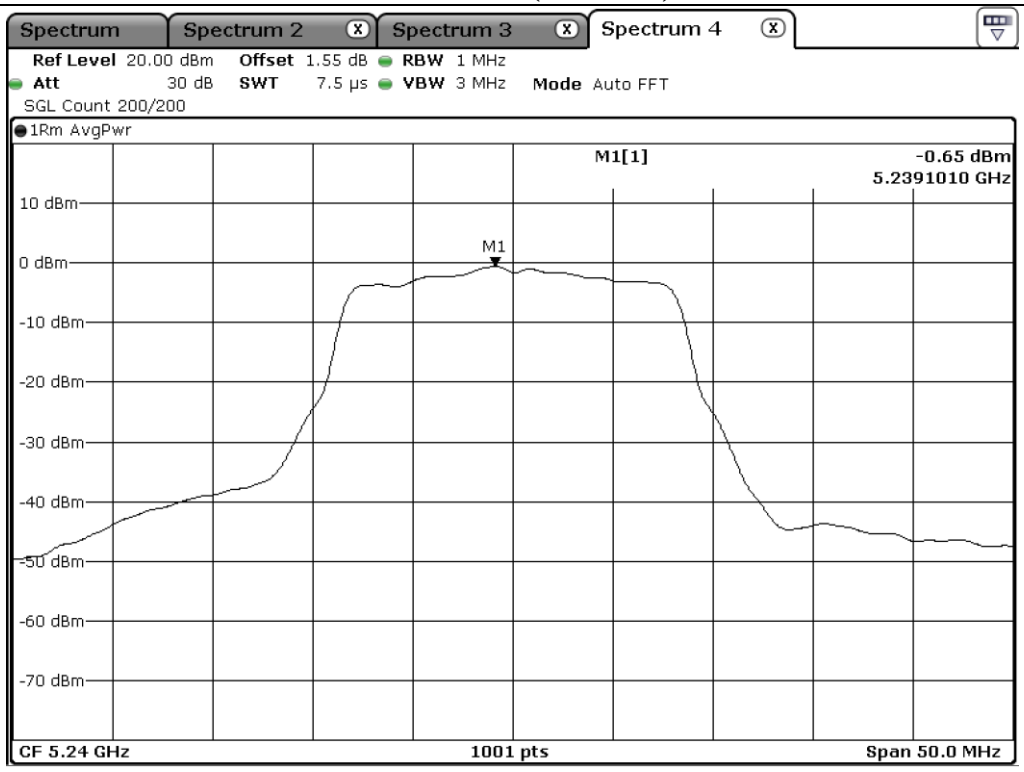
Frequency Range (MHz)	Channel	Frequency (MHz)	Measured Value (dBm)	DUTY Factor (dB)	Result (dBm)	Limit (dBm)	Margin (dB)
5 150 ~ 5 250	Low	5 180.00	-0.53	0.42	-0.11	11.00	11.11
	Middle	5 220.00	-0.34	0.42	0.08	11.00	10.92
	High	5 240.00	-0.65	0.42	-0.23	11.00	11.23
5 725 ~ 5 850	Low	5 745.00	-3.10	0.44	-2.66	30.00	32.66
	Middle	5 785.00	-3.30	0.44	-2.86	30.00	32.86
	High	5 825.00	-3.20	0.44	-2.76	30.00	32.76



Low Channel (5 180 MHz)

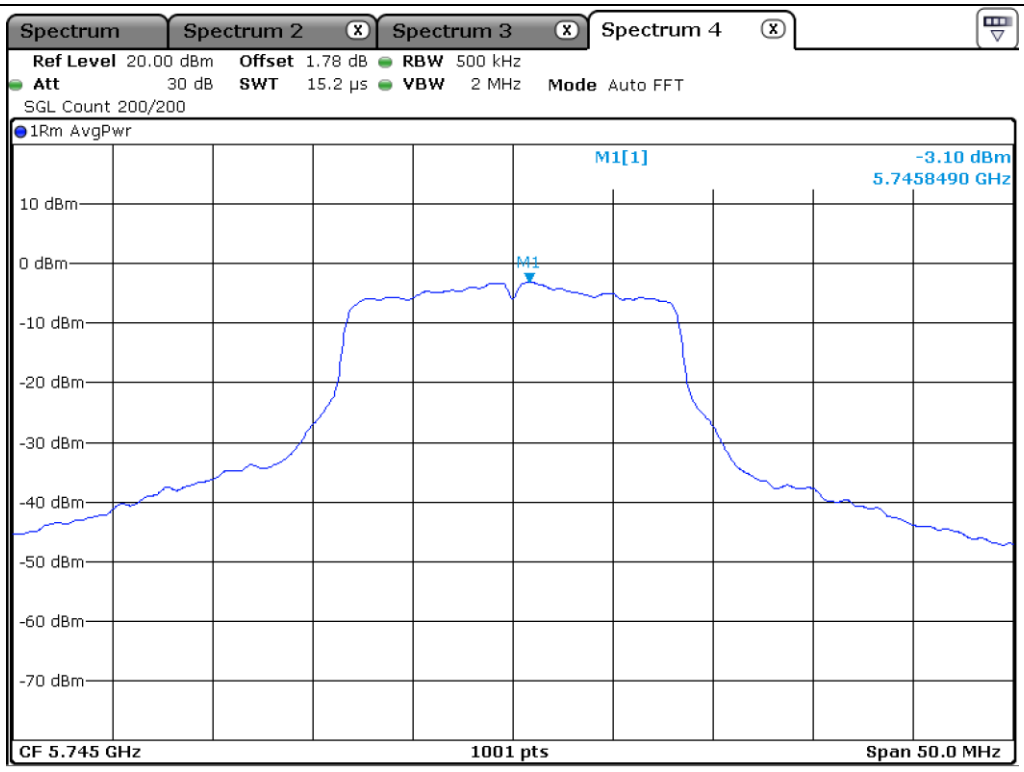


Middle Channel (5 220 MHz)

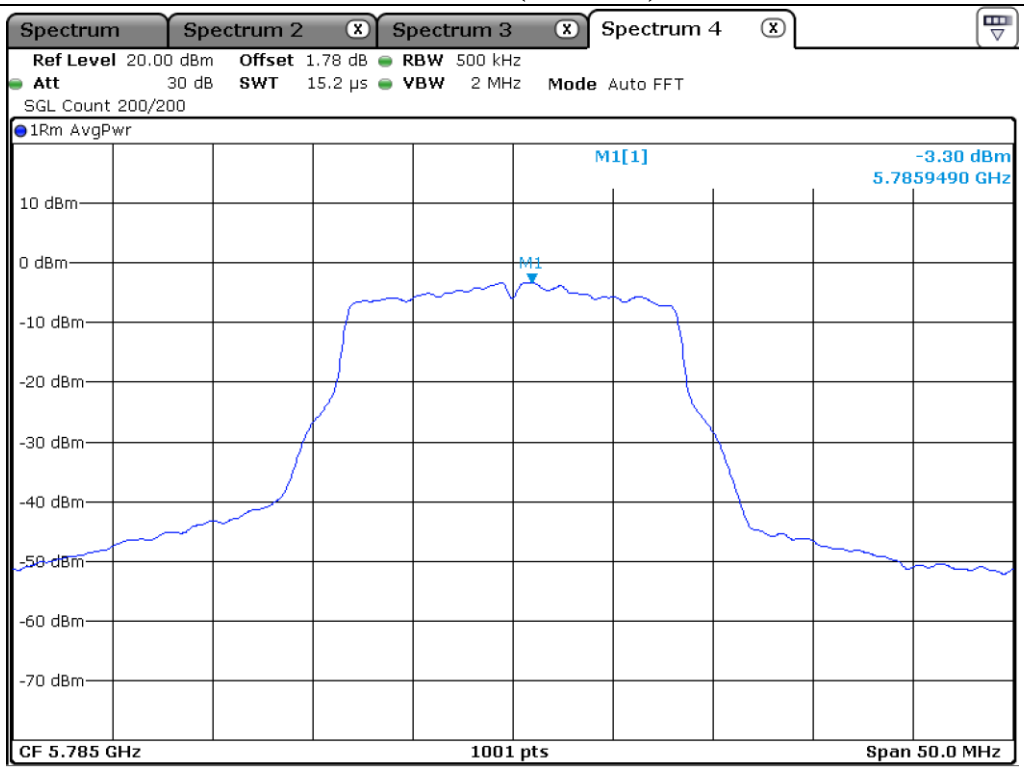


High Channel (5 240 MHz)

ONETECH Corp.: 43-14, Jinsaegol-gil, Chowol-eup, Gwangju-si, Gyeonggi-do, 12735, Korea (TEL: 82-31-799-9500, FAX: 82-31-799-9599)

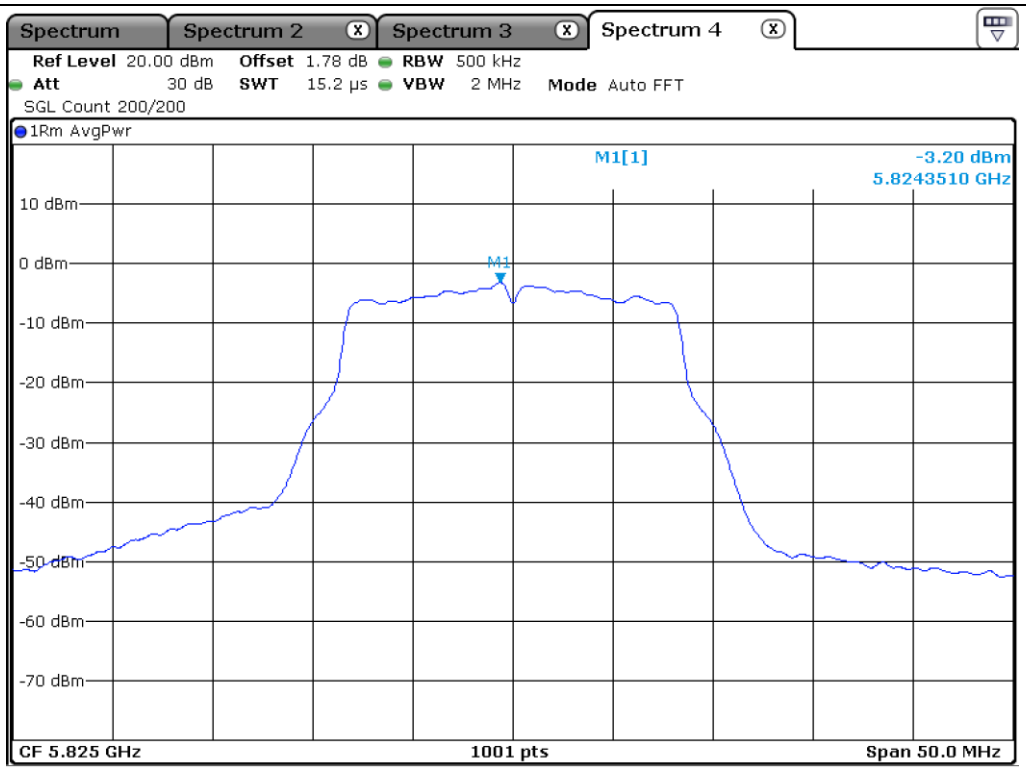


Low Channel (5 745 MHz)



Middle Channel (5 785 MHz)

ONETECH Corp.: 43-14, Jinsaegol-gil, Chowol-eup, Gwangju-si, Gyeonggi-do, 12735, Korea (TEL: 82-31-799-9500, FAX: 82-31-799-9599)



High Channel (5 825 MHz)

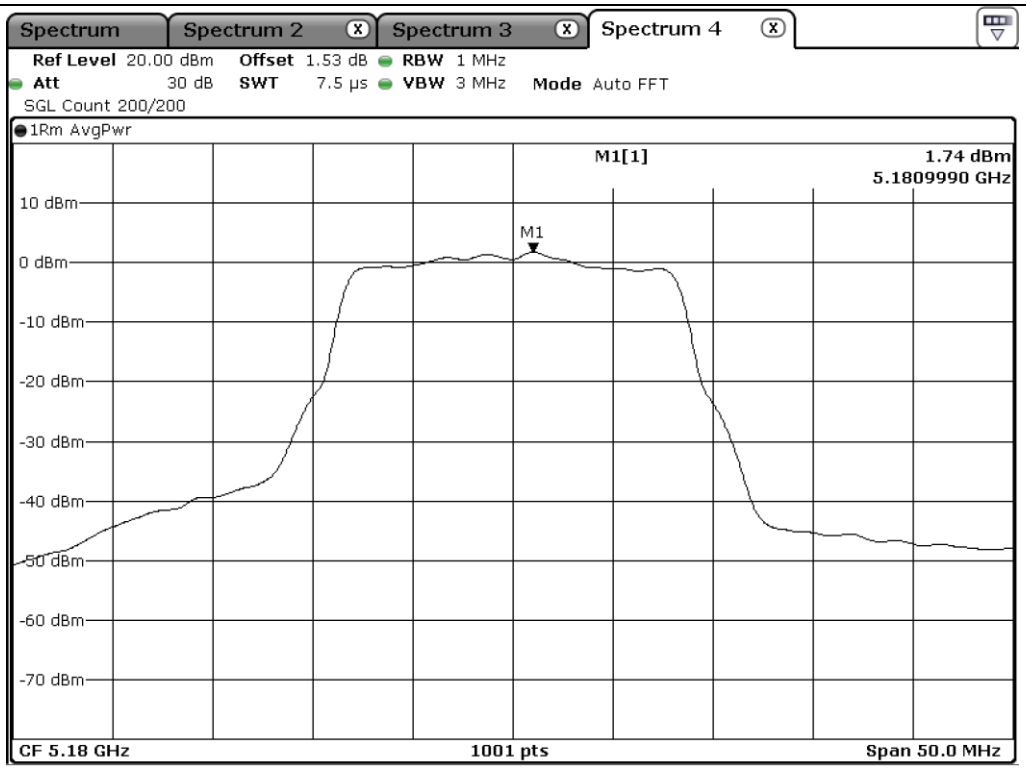
ONETECH Corp.: 43-14, Jinsaegol-gil, Chowol-eup, Gwangju-si, Gyeonggi-do, 12735, Korea (TEL: 82-31-799-9500, FAX: 82-31-799-9599)

10.4.2 Test data for Antenna 1

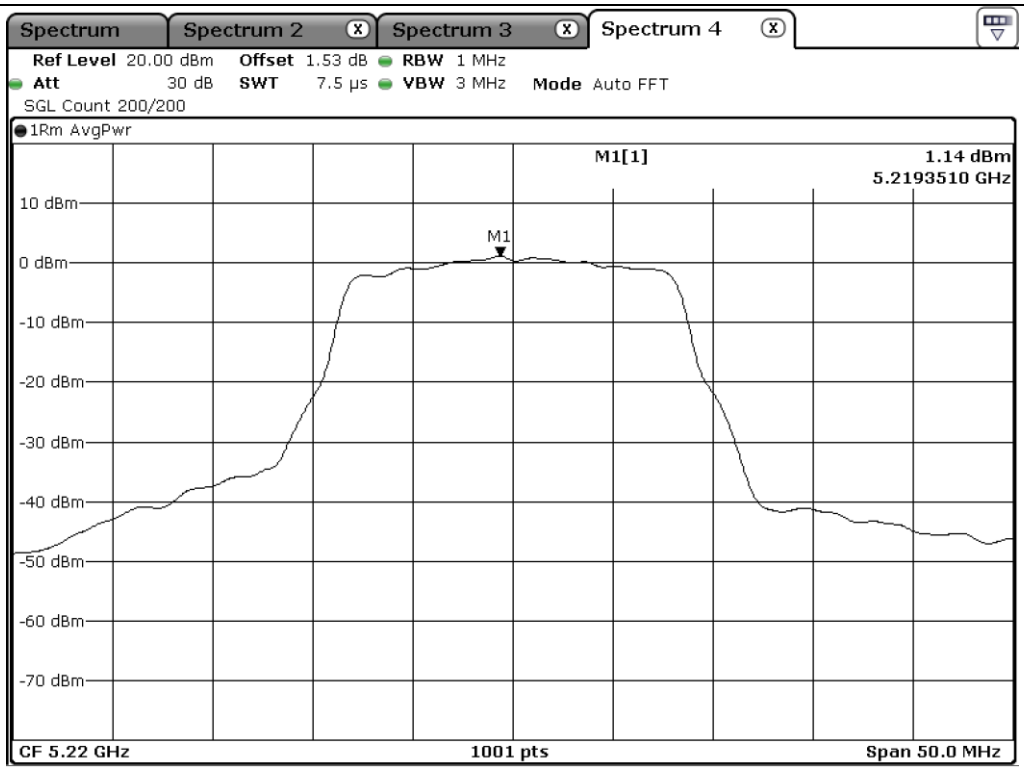
-. Operating condition : Highest Output Power Transmitting Mode

-. Test Result : Pass

Frequency Range (MHz)	Channel	Frequency (MHz)	Measured Value (dBm)	DUTY Factor (dB)	Result (dBm)	Limit (dBm)	Margin (dB)
5 150 ~ 5 250	Low	5 180.00	1.74	0.45	2.19	11.00	8.81
	Middle	5 220.00	1.14	0.45	1.59	11.00	9.41
	High	5 240.00	1.12	0.45	1.57	11.00	9.43
5 725 ~ 5 850	Low	5 745.00	-1.64	0.44	-1.20	30.00	31.20
	Middle	5 785.00	-1.49	0.44	-1.05	30.00	31.05
	High	5 825.00	-2.28	0.44	-1.84	30.00	31.84

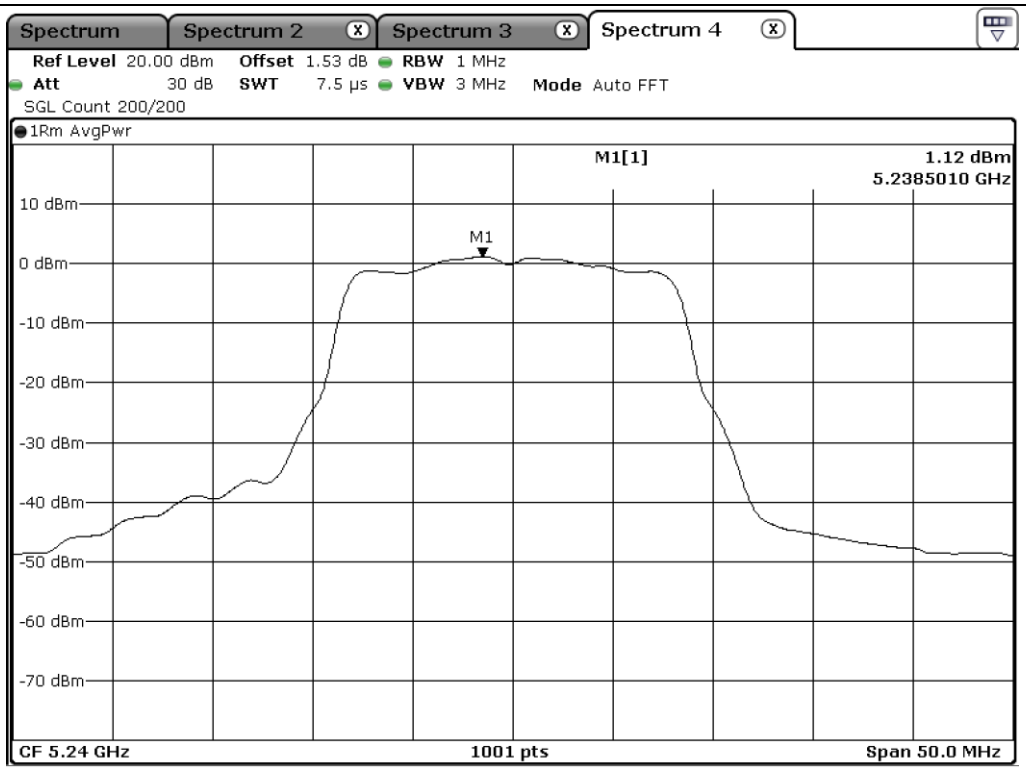


Low Channel (5 180 MHz)



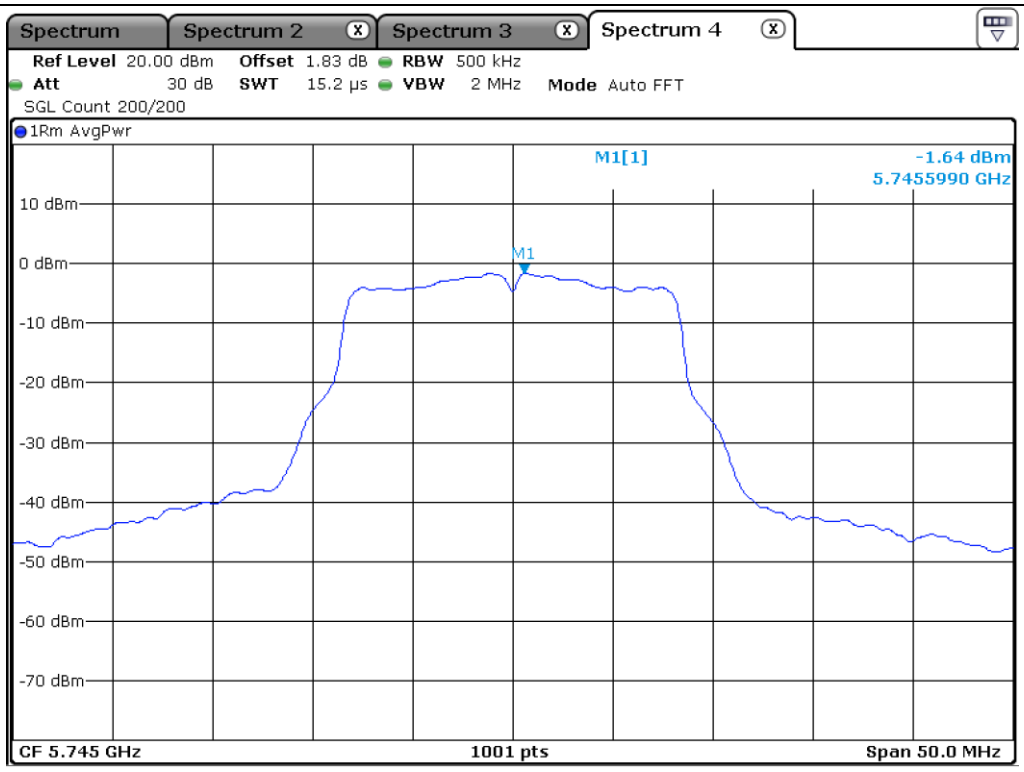
Middle Channel (5 220 MHz)

ONETECH Corp.: 43-14, Jinsaegol-gil, Chowol-eup, Gwangju-si, Gyeonggi-do, 12735, Korea (TEL: 82-31-799-9500, FAX: 82-31-799-9599)

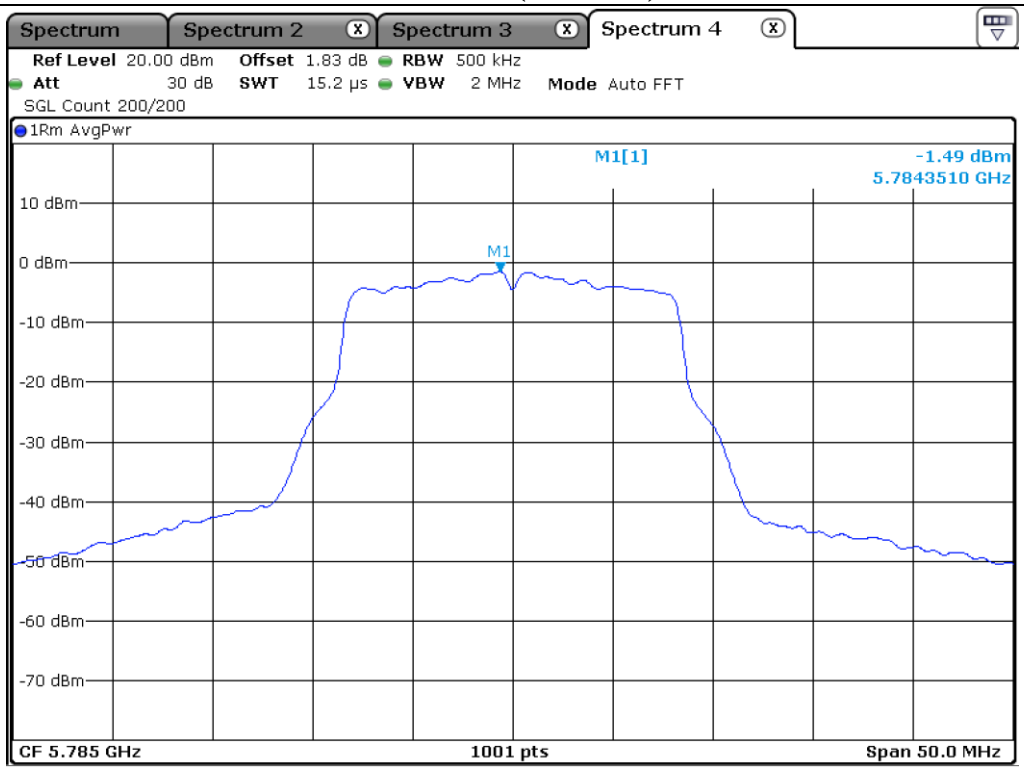


High Channel (5 240 MHz)

ONETECH Corp.: 43-14, Jinsaegol-gil, Chowol-eup, Gwangju-si, Gyeonggi-do, 12735, Korea (TEL: 82-31-799-9500, FAX: 82-31-799-9599)

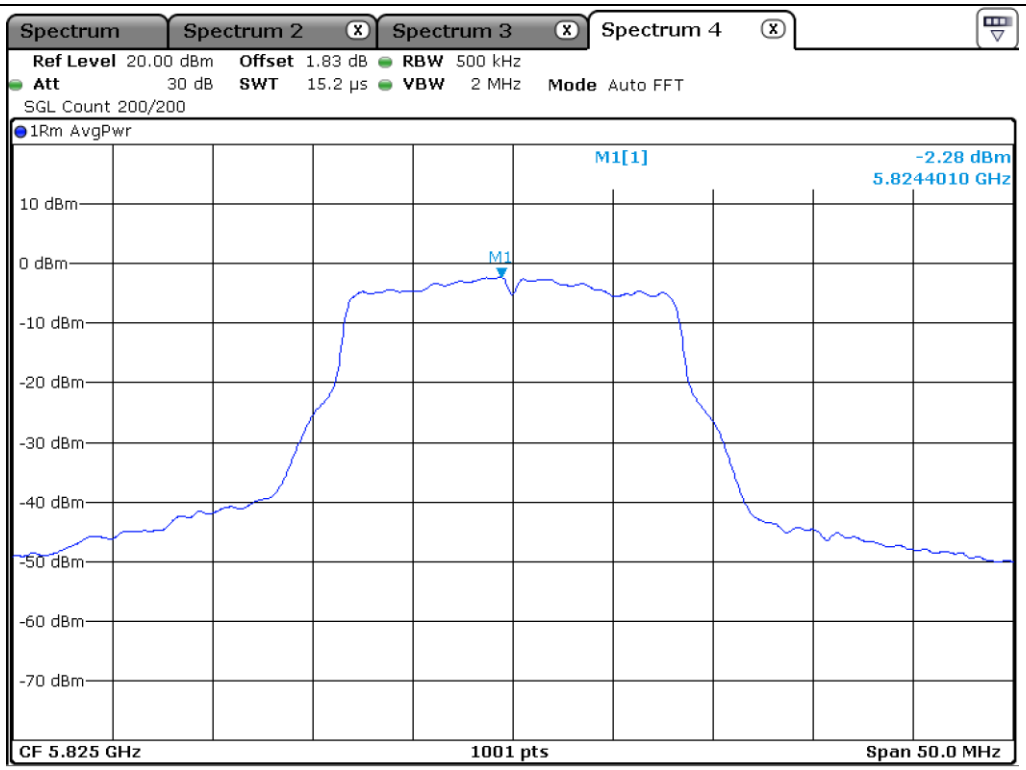


Low Channel (5 745 MHz)



Middle Channel (5 785 MHz)

ONETECH Corp.: 43-14, Jinsaegol-gil, Chowol-eup, Gwangju-si, Gyeonggi-do, 12735, Korea (TEL: 82-31-799-9500, FAX: 82-31-799-9599)



High Channel (5 825 MHz)

ONETECH Corp.: 43-14, Jinsaegol-gil, Chowol-eup, Gwangju-si, Gyeonggi-do, 12735, Korea (TEL: 82-31-799-9500, FAX: 82-31-799-9599)

10.4.3 Test data for Multiple Transmit

-. Operating condition : Highest Output Power Transmitting Mode

-. Test Result : Pass

Frequency Range (MHz)	Channel	Frequency (MHz)	Measured Value (dBm)	Limit (dBm)	Margin (dB)
5 150 ~ 5 250	Low	5 180.00	4.20	11.00	6.80
	Middle	5 220.00	3.91	11.00	7.09
	High	5 240.00	3.77	11.00	7.23
5 725 ~ 5 850	Low	5 745.00	1.14	30.00	28.86
	Middle	5 785.00	1.15	30.00	28.85
	High	5 825.00	0.73	30.00	29.27

ONETECH Corp.: 43-14, Jinsaegol-gil, Chowol-eup, Gwangju-si, Gyeonggi-do, 12735, Korea (TEL: 82-31-799-9500, FAX: 82-31-799-9599)

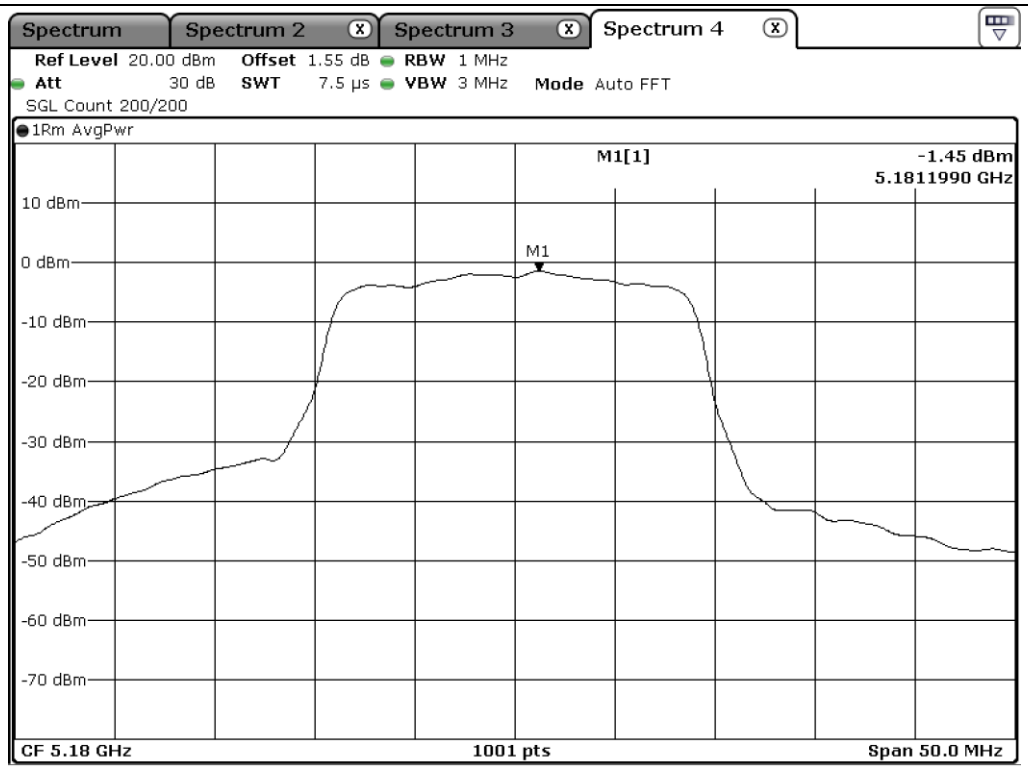
10.5 Test data for 802.11n_HT20 RLAN Mode

10.5.1 Test data for Antenna 0

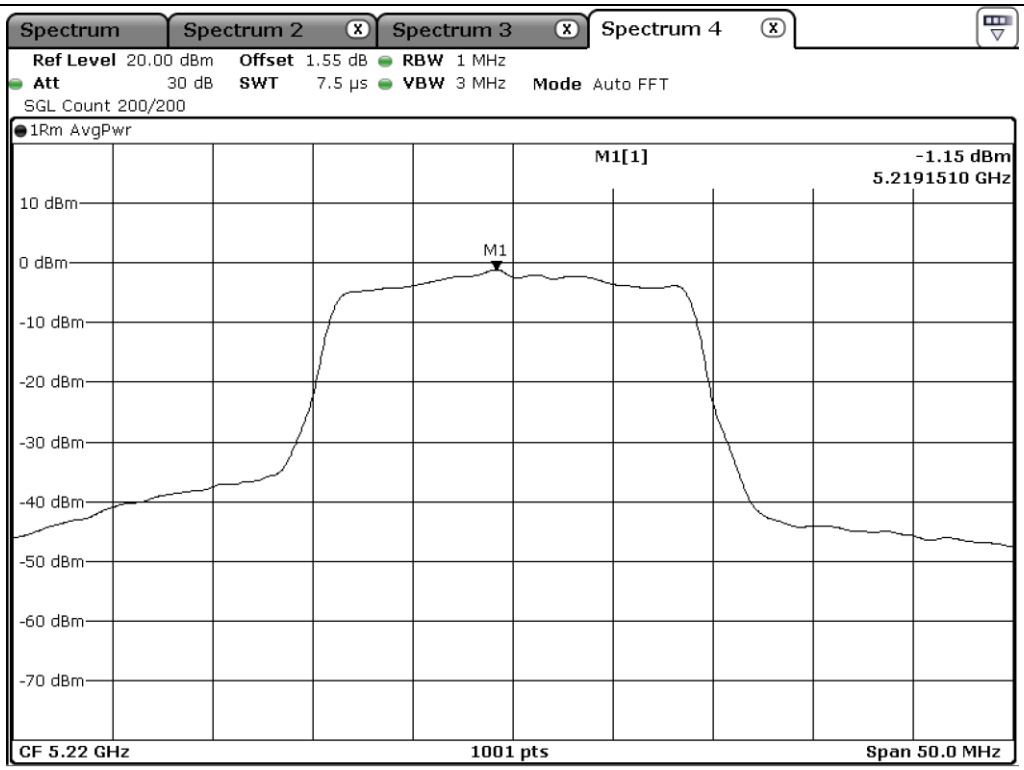
-. Operating condition : Highest Output Power Transmitting Mode

-. Test Result : Pass

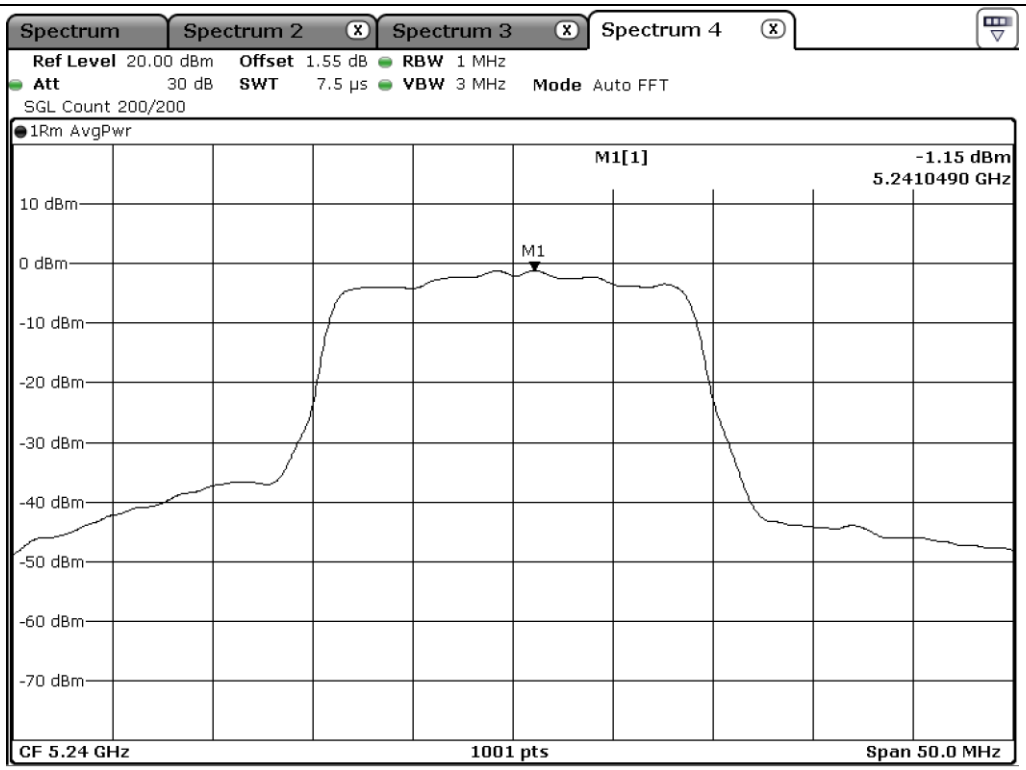
Frequency Range (MHz)	Channel	Frequency (MHz)	Measured Value (dBm)	DUTY Factor (dB)	Result (dBm)	Limit (dBm)	Margin (dB)
5 150 ~ 5 250	Low	5 180.00	-1.45	0.77	-0.68	11.00	11.68
	Middle	5 220.00	-1.15	0.77	-0.38	11.00	11.38
	High	5 240.00	-1.15	0.77	-0.38	11.00	11.38
5 725 ~ 5 850	Low	5 745.00	-3.79	0.78	-3.01	30.00	33.01
	Middle	5 785.00	-4.29	0.78	-3.51	30.00	33.51
	High	5 825.00	-4.37	0.78	-3.59	30.00	33.59



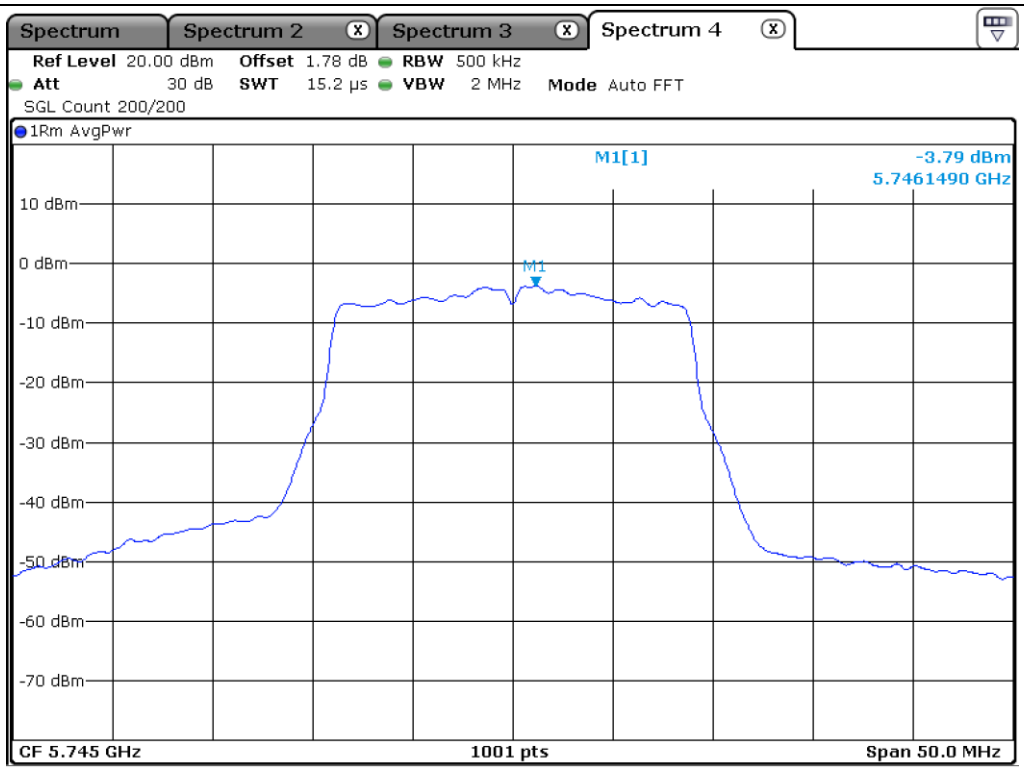
Low Channel (5 180 MHz)



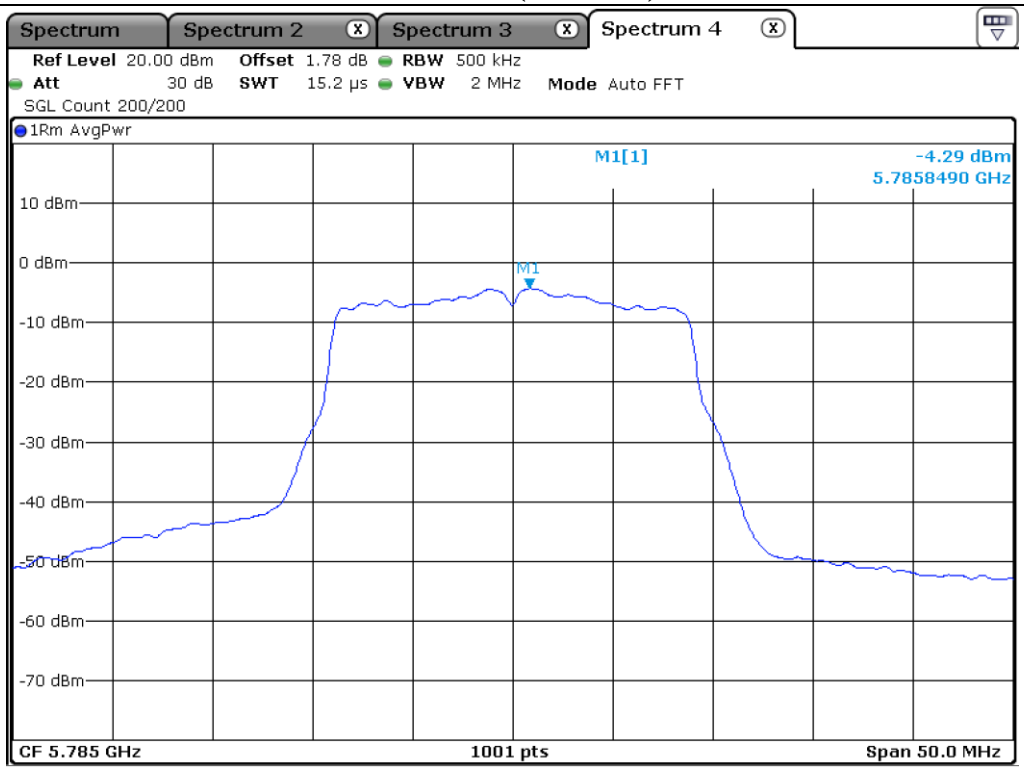
Middle Channel (5 220 MHz)



High Channel (5 240 MHz)

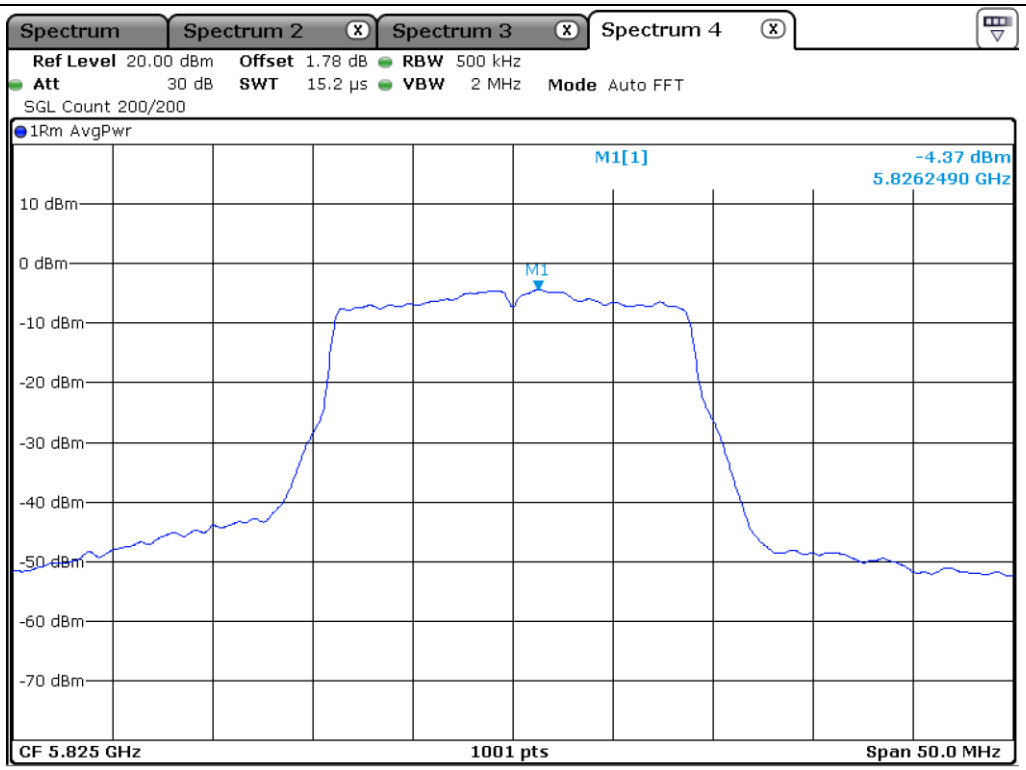


Low Channel (5 745 MHz)



Middle Channel (5 785 MHz)

ONETECH Corp.: 43-14, Jinsaegol-gil, Chowol-eup, Gwangju-si, Gyeonggi-do, 12735, Korea (TEL: 82-31-799-9500, FAX: 82-31-799-9599)



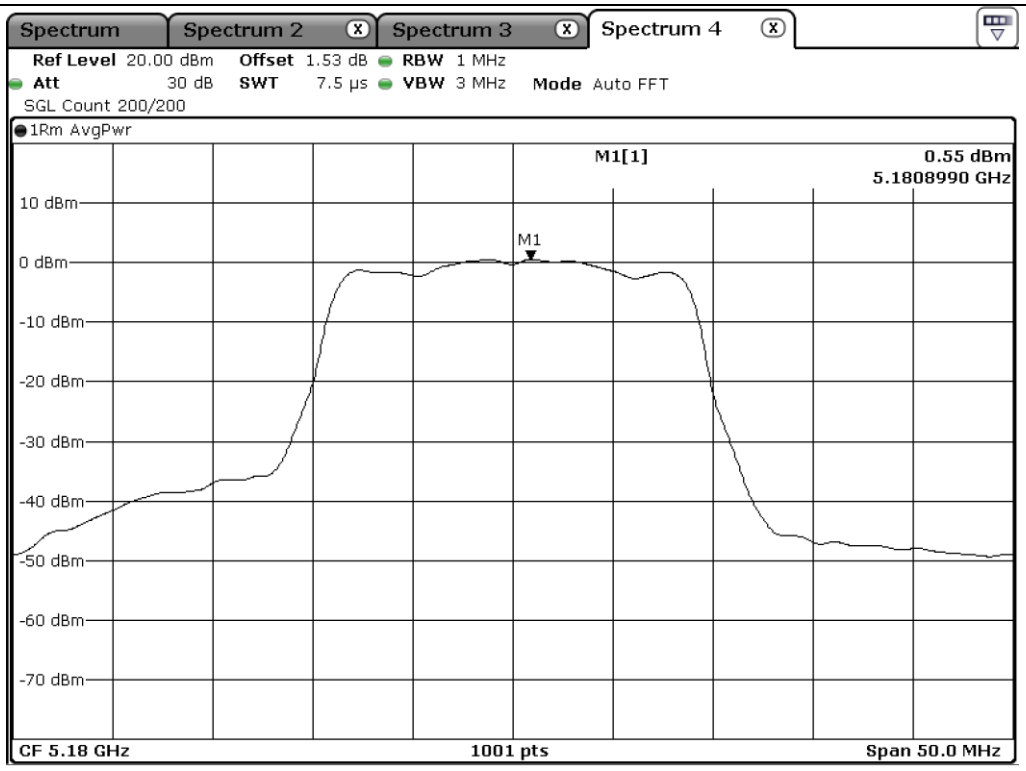
High Channel (5 825 MHz)

10.5.2 Test data for Antenna 1

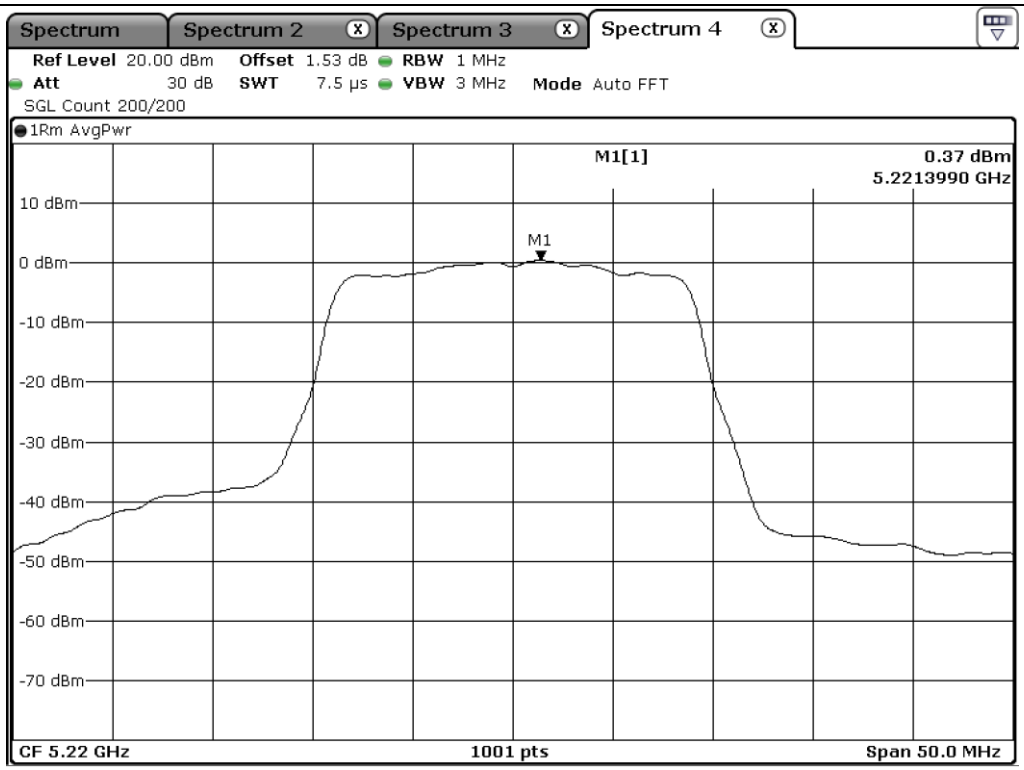
-. Operating condition : Highest Output Power Transmitting Mode

-. Test Result : Pass

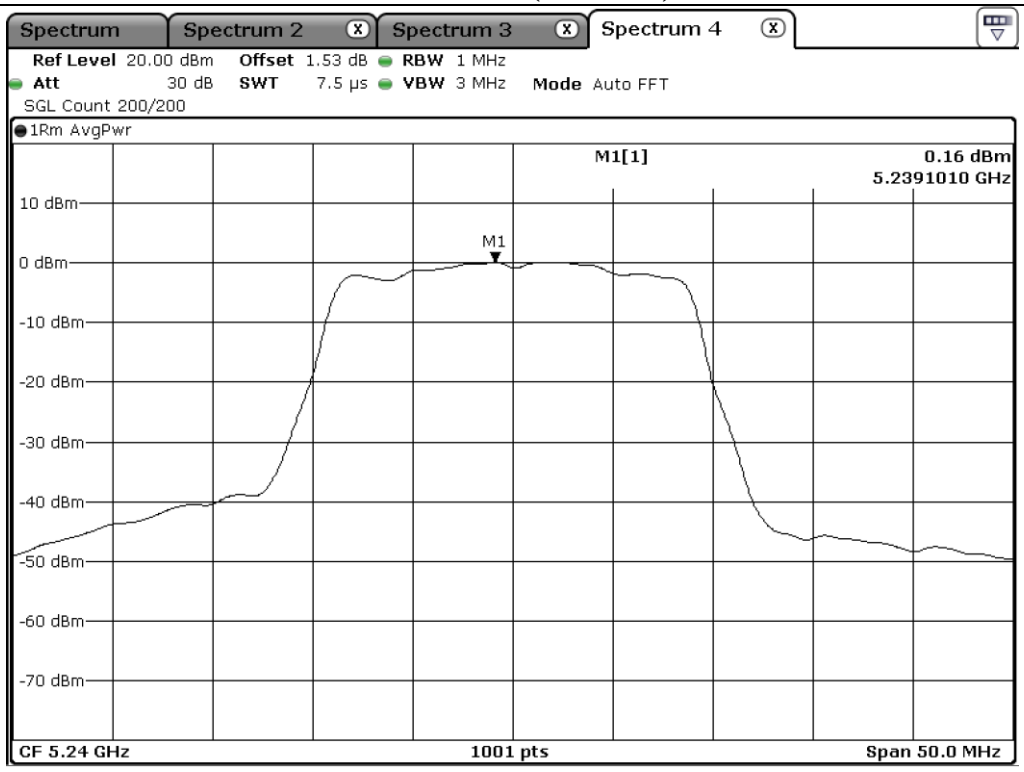
Frequency Range (MHz)	Channel	Frequency (MHz)	Measured Value (dBm)	DUTY Factor (dB)	Result (dBm)	Limit (dBm)	Margin (dB)
5 150 ~ 5 250	Low	5 180.00	0.55	0.78	1.33	11.00	9.67
	Middle	5 220.00	0.37	0.78	1.15	11.00	9.85
	High	5 240.00	0.16	0.78	0.94	11.00	10.06
5 725 ~ 5 850	Low	5 745.00	-2.32	0.78	-1.54	30.00	31.54
	Middle	5 785.00	-1.96	0.78	-1.18	30.00	31.18
	High	5 825.00	-2.83	0.78	-2.05	30.00	32.05



Low Channel (5 180 MHz)

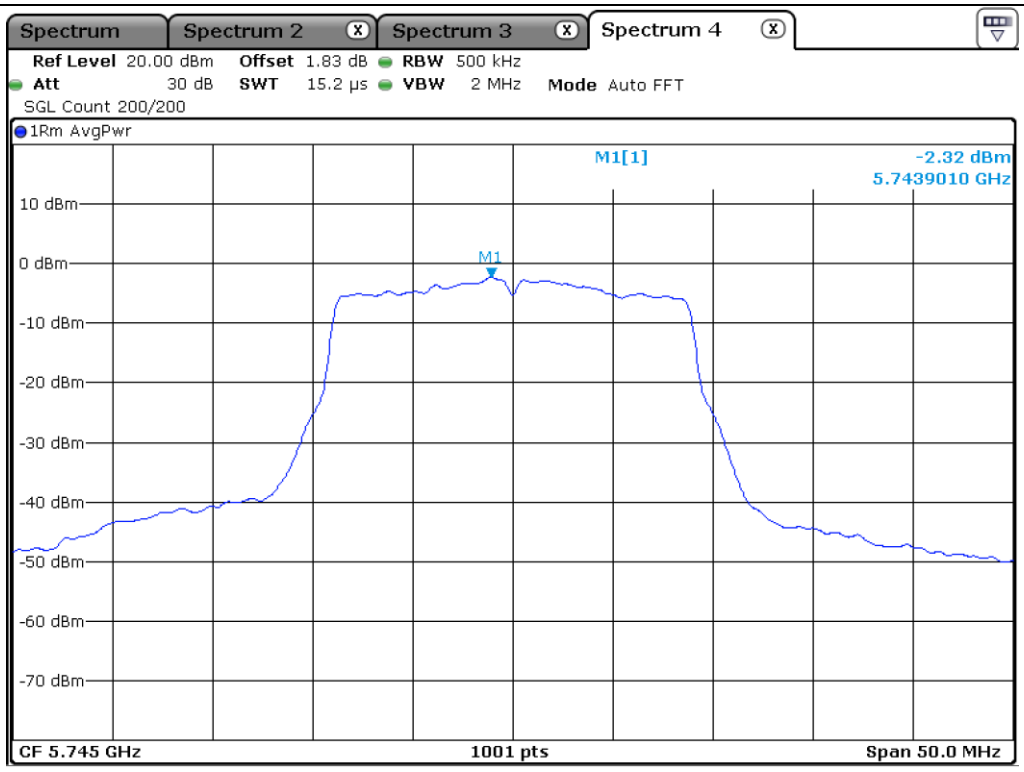


Middle Channel (5 220 MHz)

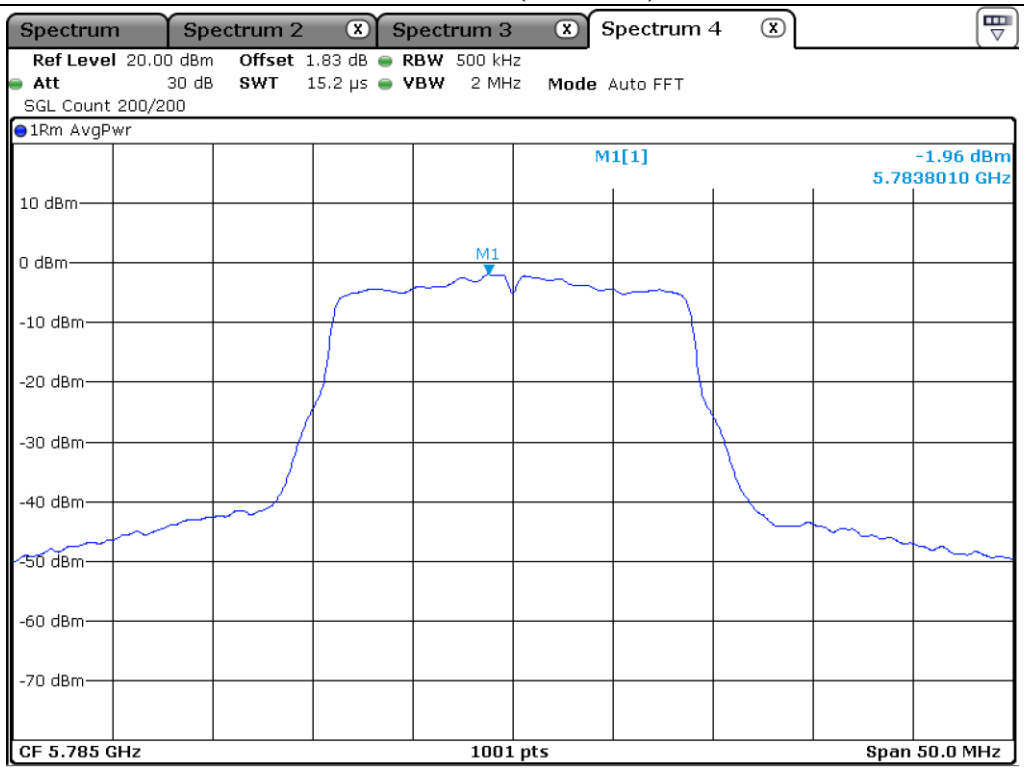


High Channel (5 240 MHz)

ONETECH Corp.: 43-14, Jinsaegol-gil, Chowol-eup, Gwangju-si, Gyeonggi-do, 12735, Korea (TEL: 82-31-799-9500, FAX: 82-31-799-9599)

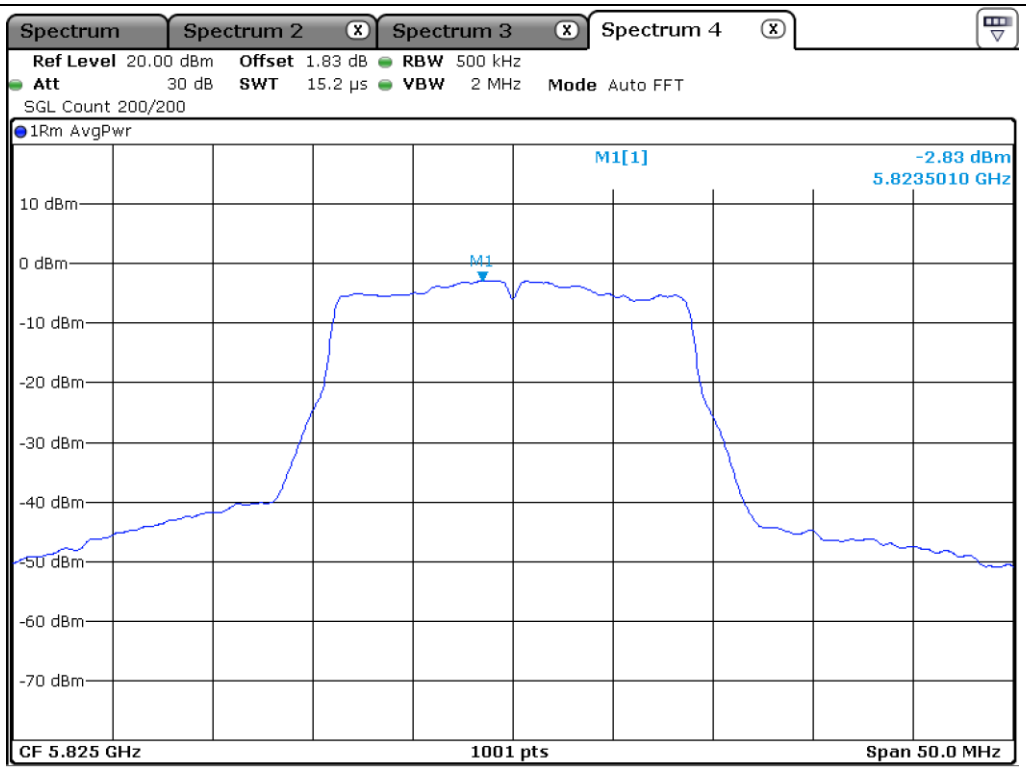


Low Channel (5 745 MHz)



Middle Channel (5 785 MHz)

ONETECH Corp.: 43-14, Jinsaegol-gil, Chowol-eup, Gwangju-si, Gyeonggi-do, 12735, Korea (TEL: 82-31-799-9500, FAX: 82-31-799-9599)



High Channel (5 825 MHz)

10.5.3 Test data for Multiple Transmit

-. Operating condition : Highest Output Power Transmitting Mode

-. Test Result : Pass

Frequency Range (MHz)	Channel	Frequency (MHz)	Measured Value (dBm)	Limit (dBm)	Margin (dB)
5 150 ~ 5 250	Low	5 180.00	3.45	11.00	7.55
	Middle	5 220.00	3.46	11.00	7.54
	High	5 240.00	3.34	11.00	7.66
5 725 ~ 5 850	Low	5 745.00	0.80	30.00	29.20
	Middle	5 785.00	0.82	30.00	29.18
	High	5 825.00	0.26	30.00	29.74

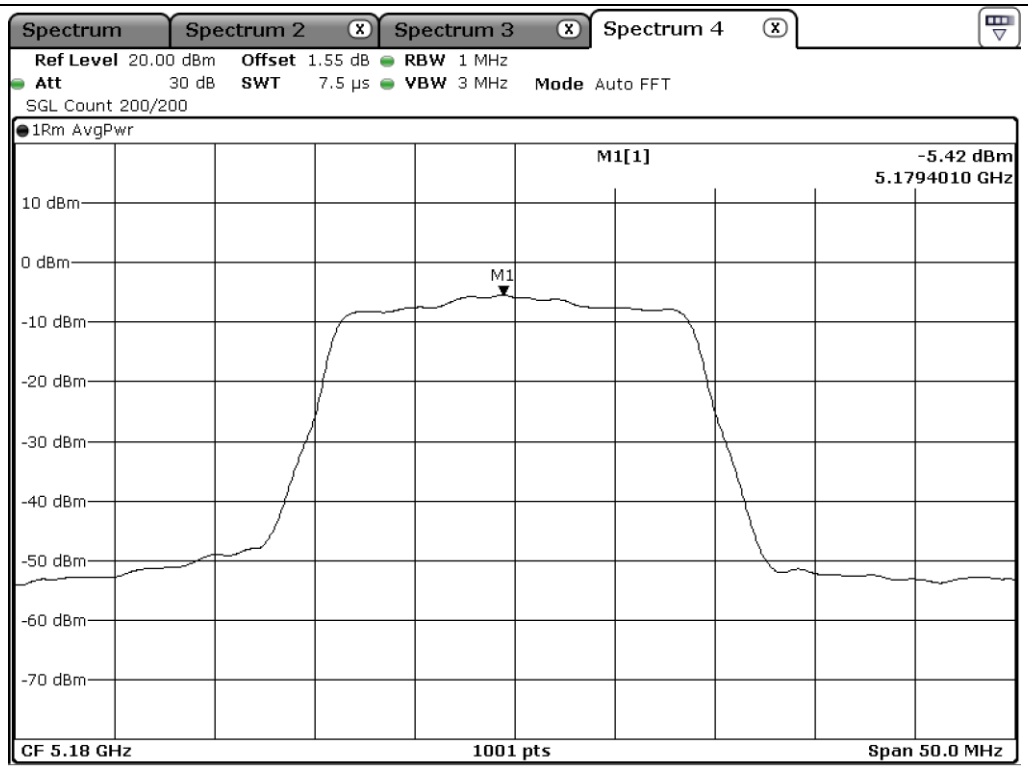
10.6 Test data for 802.11ac_VHT20 RLAN Mode

10.6.1 Test data for Antenna 0

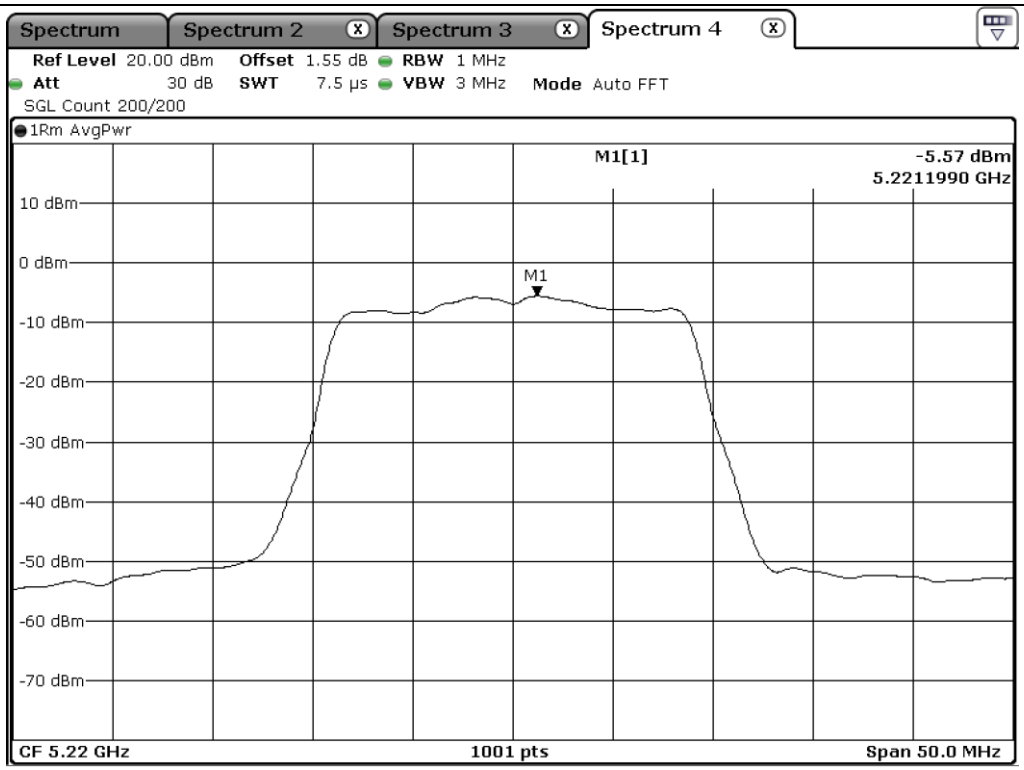
-. Operating condition : Highest Output Power Transmitting Mode

-. Test Result : Pass

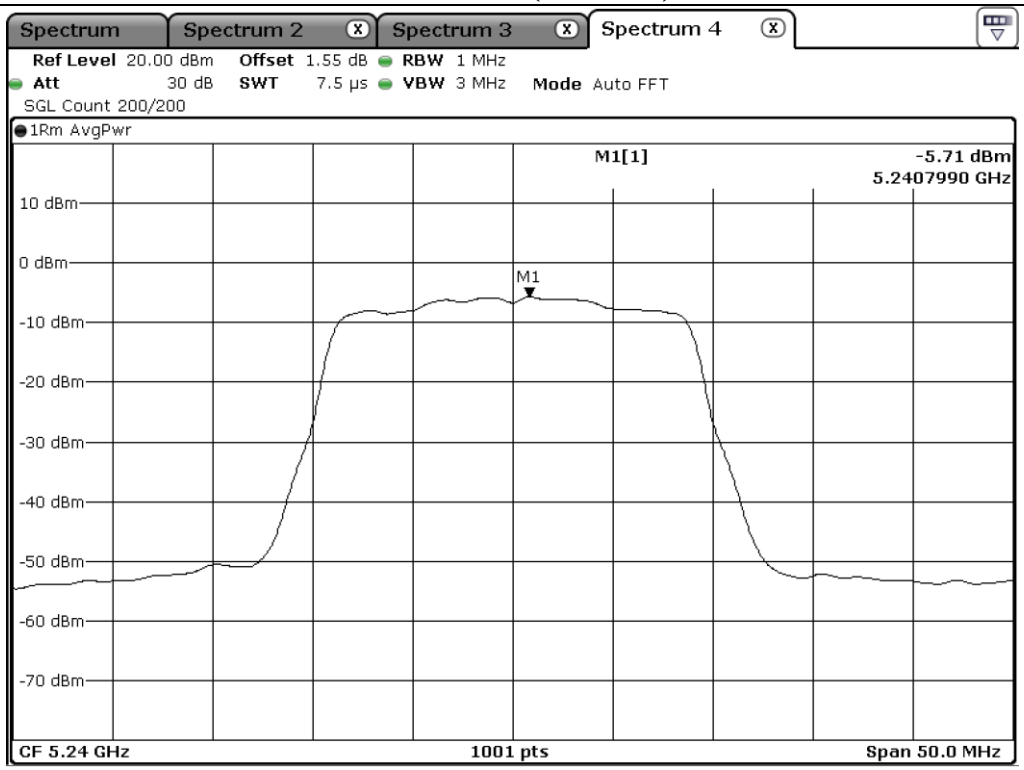
Frequency Range (MHz)	Channel	Frequency (MHz)	Measured Value (dBm)	DUTY Factor (dB)	Result (dBm)	Limit (dBm)	Margin (dB)
5 150 ~ 5 250	Low	5 180.00	-5.42	0.38	-5.04	11.00	16.04
	Middle	5 220.00	-5.57	0.38	-5.19	11.00	16.19
	High	5 240.00	-5.71	0.38	-5.33	11.00	16.33
5 725 ~ 5 850	Low	5 745.00	-7.63	0.38	-7.25	30.00	37.25
	Middle	5 785.00	-8.14	0.38	-7.76	30.00	37.76
	High	5 825.00	-7.50	0.38	-7.12	30.00	37.12



Low Channel (5 180 MHz)

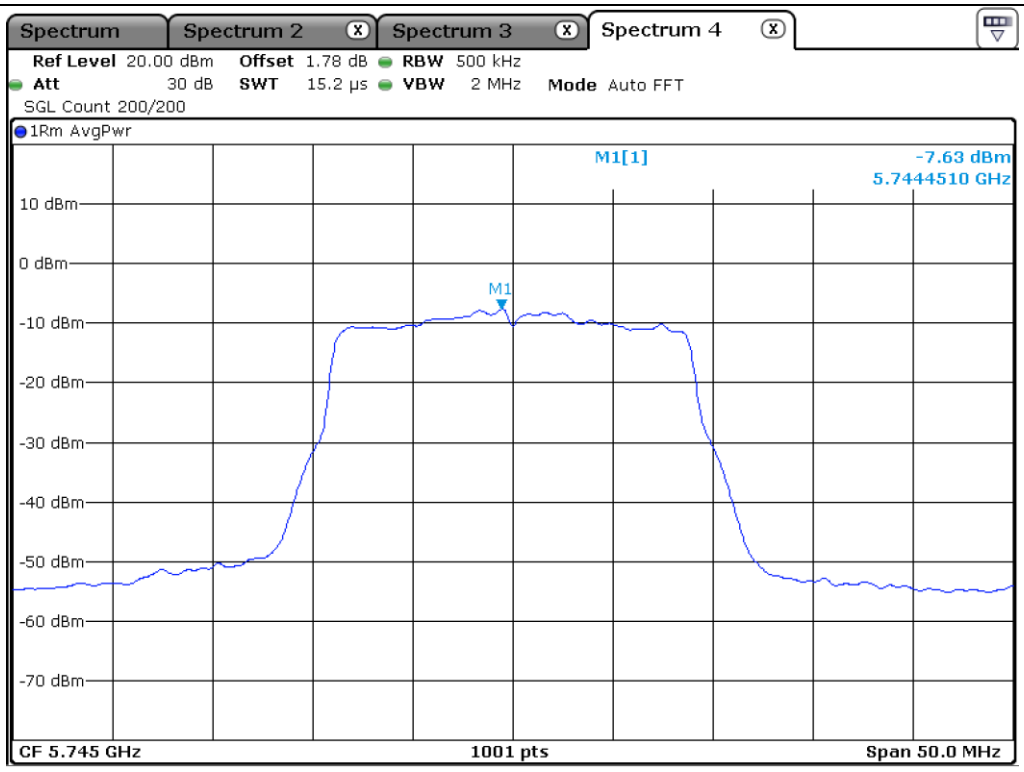


Middle Channel (5 220 MHz)

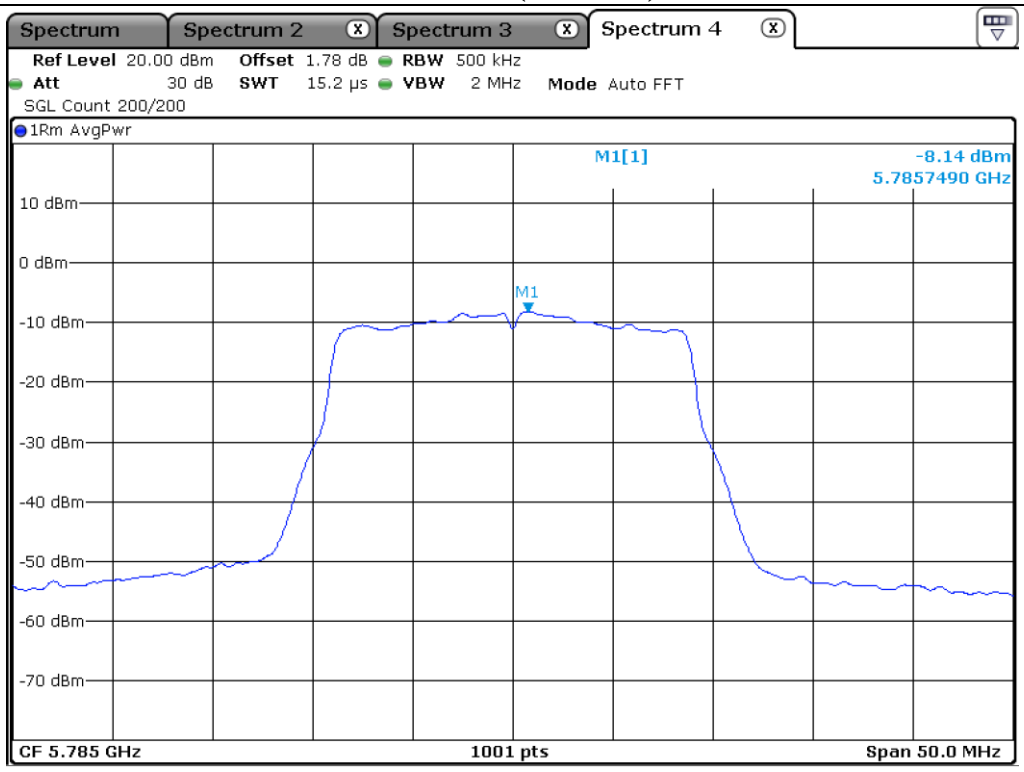


High Channel (5 240 MHz)

ONETECH Corp.: 43-14, Jinsaegol-gil, Chowol-eup, Gwangju-si, Gyeonggi-do, 12735, Korea (TEL: 82-31-799-9500, FAX: 82-31-799-9599)

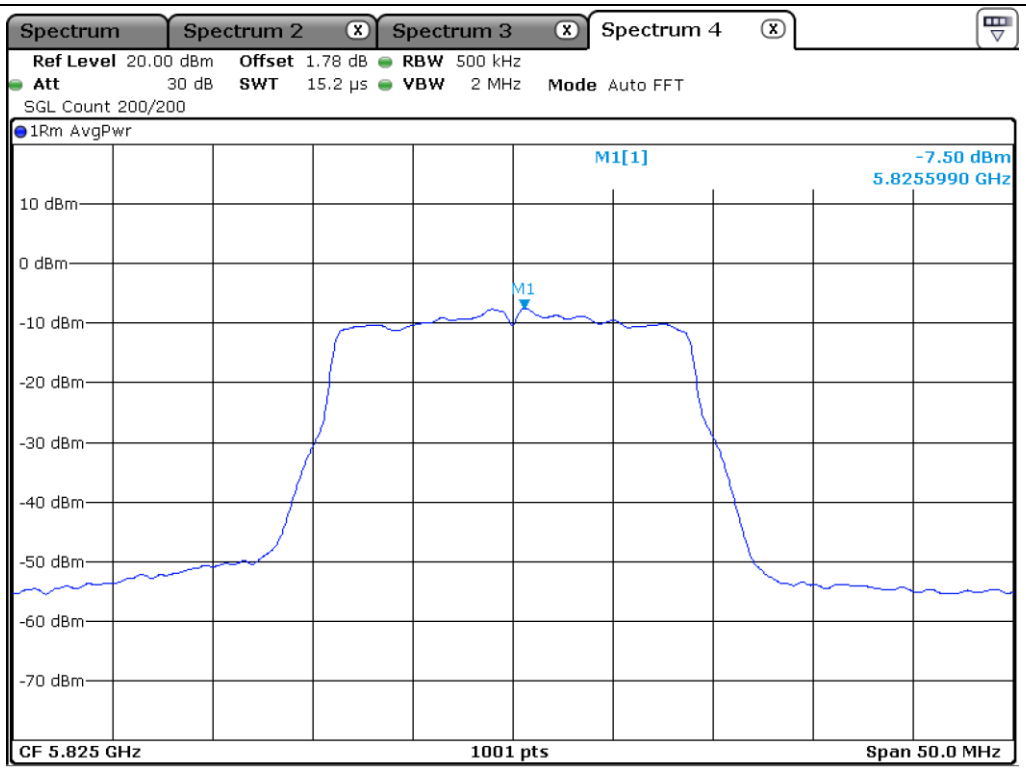


Low Channel (5 745 MHz)



Middle Channel (5 785 MHz)

ONETECH Corp.: 43-14, Jinsaegol-gil, Chowol-eup, Gwangju-si, Gyeonggi-do, 12735, Korea (TEL: 82-31-799-9500, FAX: 82-31-799-9599)



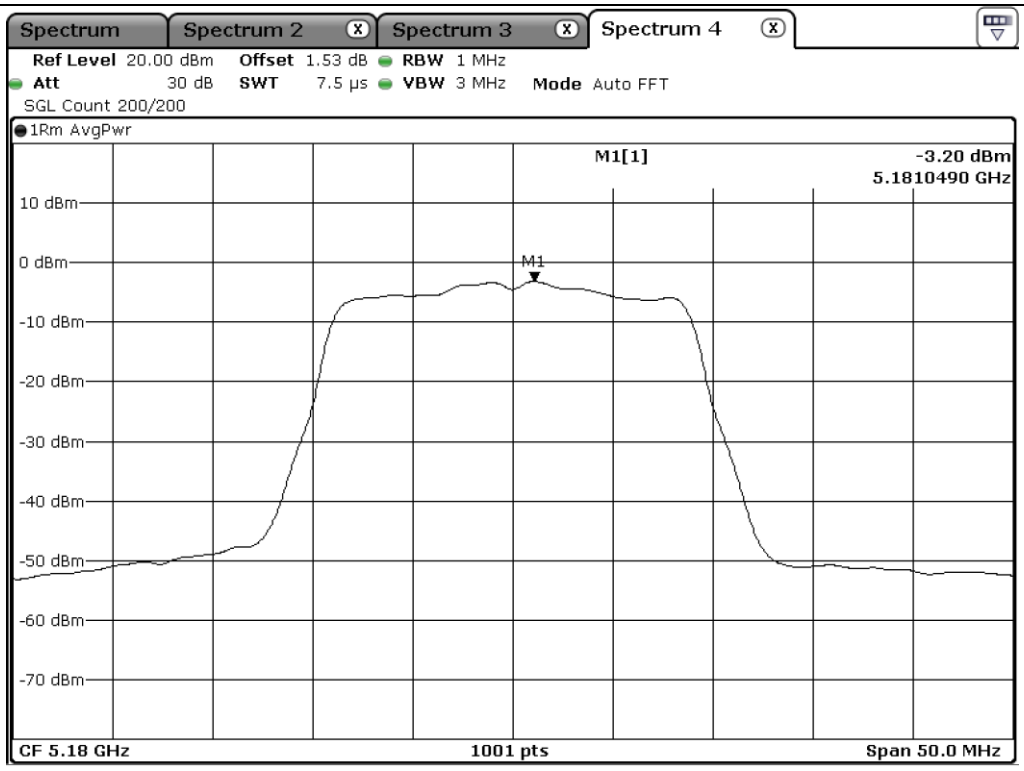
High Channel (5 825 MHz)

10.6.2 Test data for Antenna 1

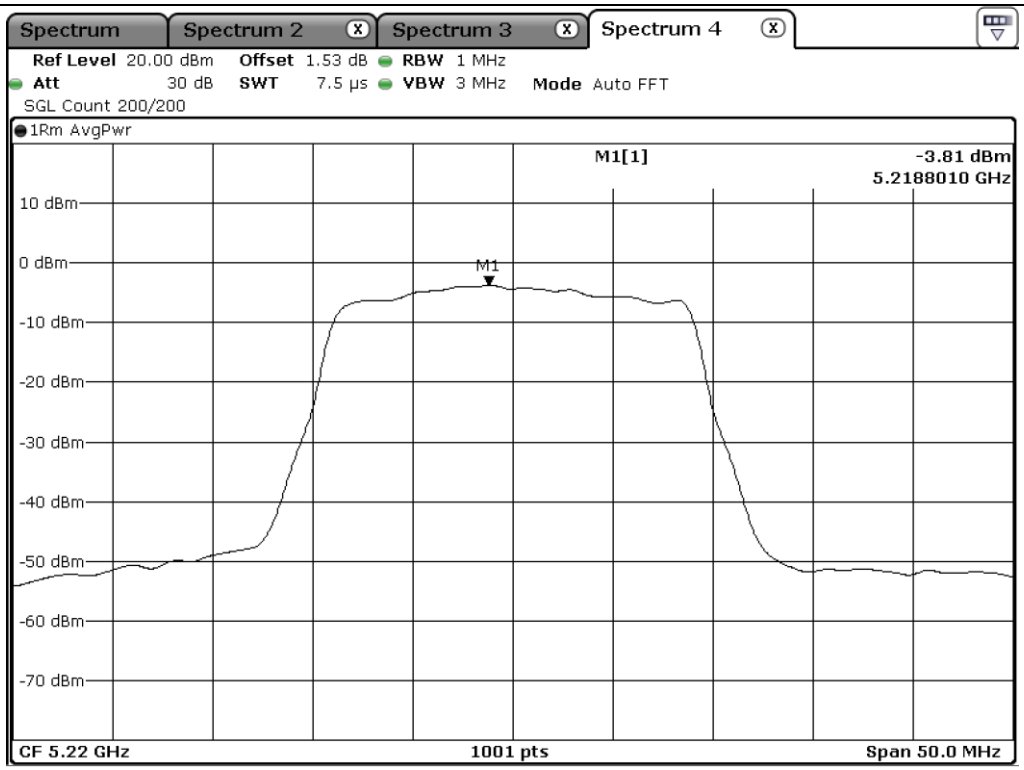
-. Operating condition : Highest Output Power Transmitting Mode

-. Test Result : Pass

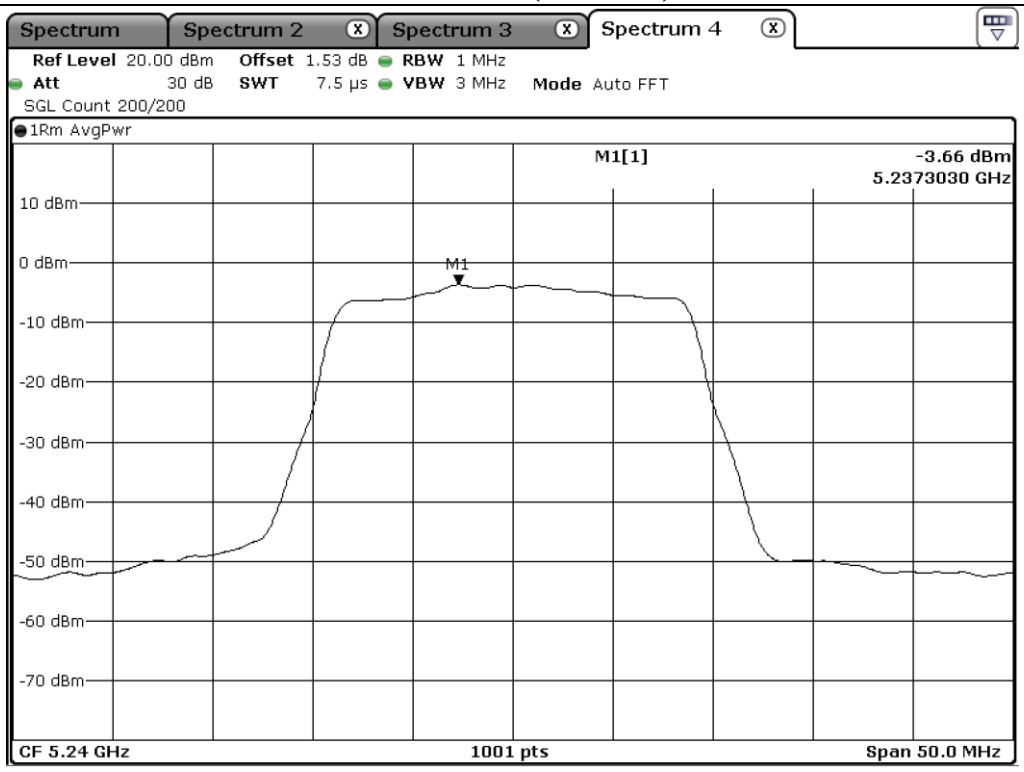
Frequency Range (MHz)	Channel	Frequency (MHz)	Measured Value (dBm)	DUTY Factor (dB)	Result (dBm)	Limit (dBm)	Margin (dB)
5 150 ~ 5 250	Low	5 180.00	-3.20	0.44	-2.76	11.00	13.76
	Middle	5 220.00	-3.81	0.44	-3.37	11.00	14.37
	High	5 240.00	-3.66	0.44	-3.22	11.00	14.22
5 725 ~ 5 850	Low	5 745.00	-4.57	0.38	-4.19	30.00	34.19
	Middle	5 785.00	-5.20	0.38	-4.82	30.00	34.82
	High	5 825.00	-5.45	0.38	-5.07	30.00	35.07



Low Channel (5 180 MHz)

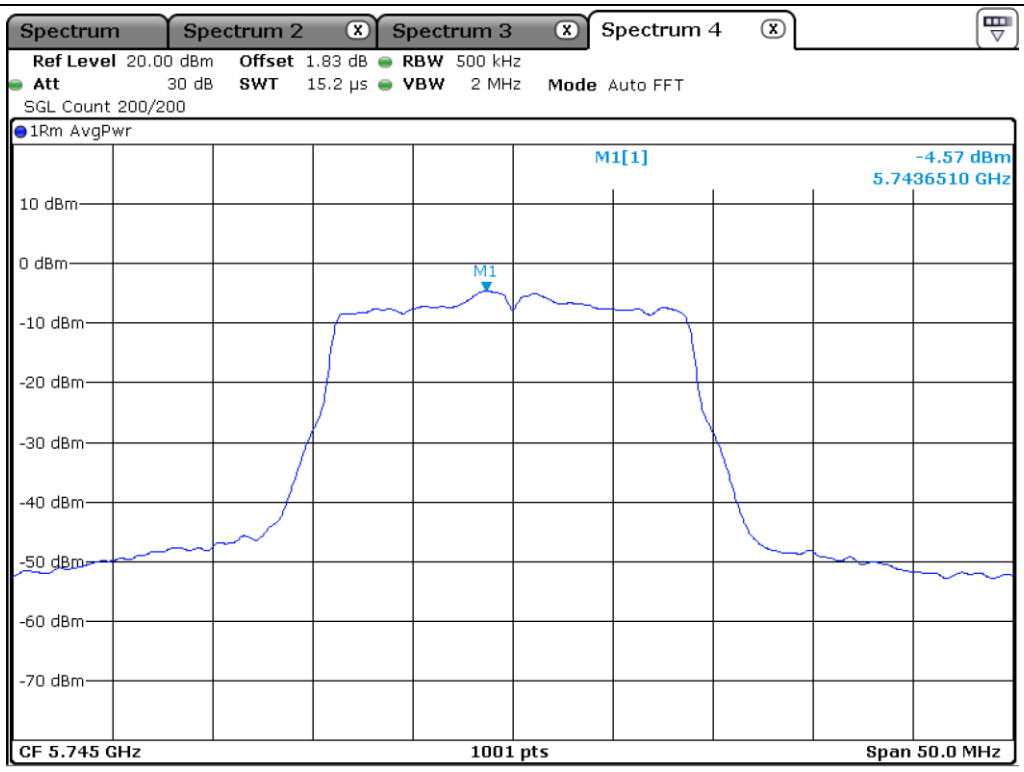


Middle Channel (5 220 MHz)

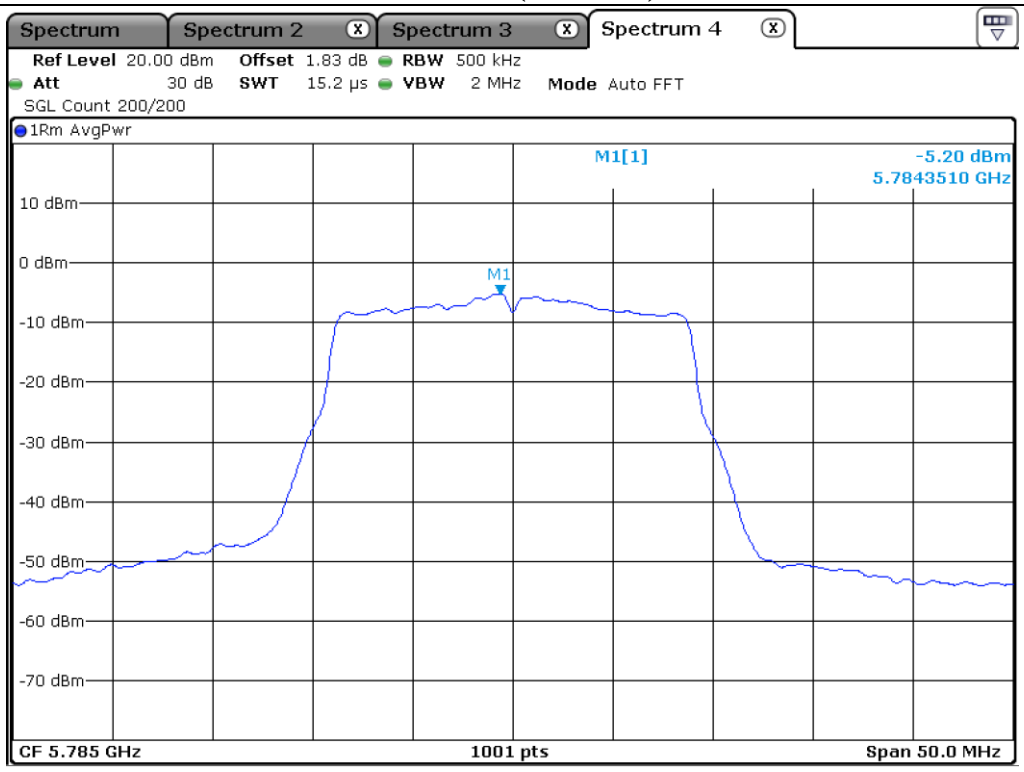


High Channel (5 240 MHz)

ONETECH Corp.: 43-14, Jinsaegol-gil, Chowol-eup, Gwangju-si, Gyeonggi-do, 12735, Korea (TEL: 82-31-799-9500, FAX: 82-31-799-9599)

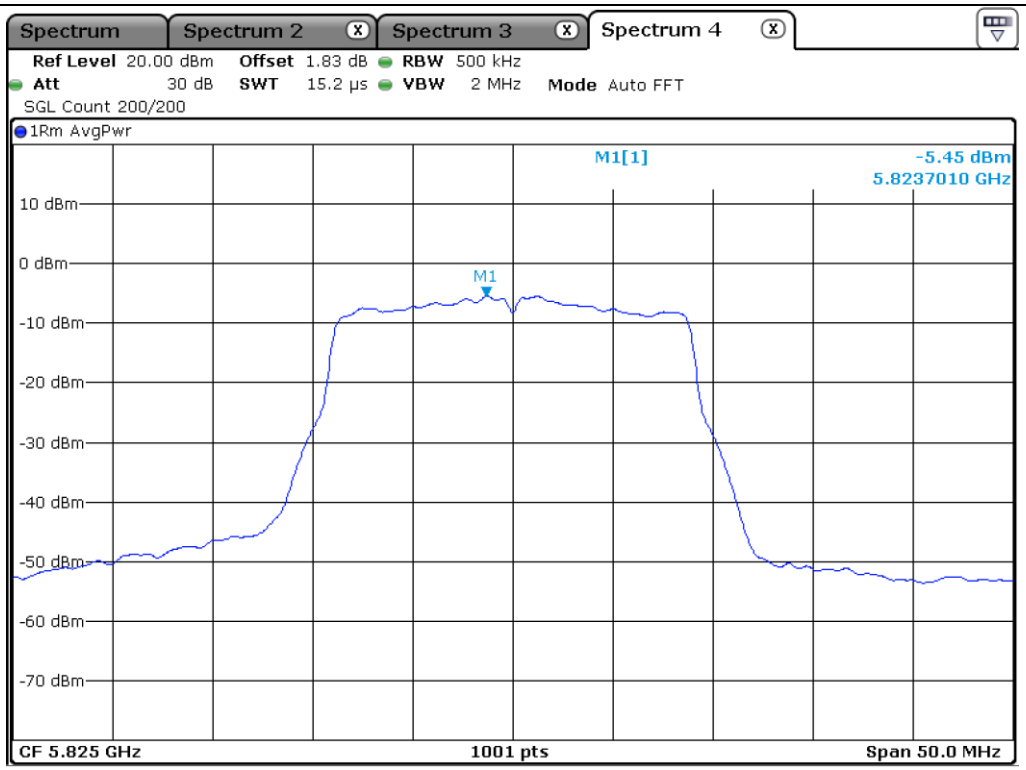


Low Channel (5 745 MHz)



Middle Channel (5 785 MHz)

ONETECH Corp.: 43-14, Jinsaegol-gil, Chowol-eup, Gwangju-si, Gyeonggi-do, 12735, Korea (TEL: 82-31-799-9500, FAX: 82-31-799-9599)



High Channel (5 825 MHz)

ONETECH Corp.: 43-14, Jinsaegol-gil, Chowol-eup, Gwangju-si, Gyeonggi-do, 12735, Korea (TEL: 82-31-799-9500, FAX: 82-31-799-9599)

10.6.3 Test data for Multiple Transmit

-. Operating condition : Highest Output Power Transmitting Mode

-. Test Result : Pass

Frequency Range (MHz)	Channel	Frequency (MHz)	Measured Value (dBm)	Limit (dBm)	Margin (dB)
5 150 ~ 5 250	Low	5 180.00	-0.74	11.00	11.74
	Middle	5 220.00	-1.18	11.00	12.18
	High	5 240.00	-1.14	11.00	12.14
5 725 ~ 5 850	Low	5 745.00	-2.45	30.00	32.45
	Middle	5 785.00	-3.04	30.00	33.04
	High	5 825.00	-2.96	30.00	32.96

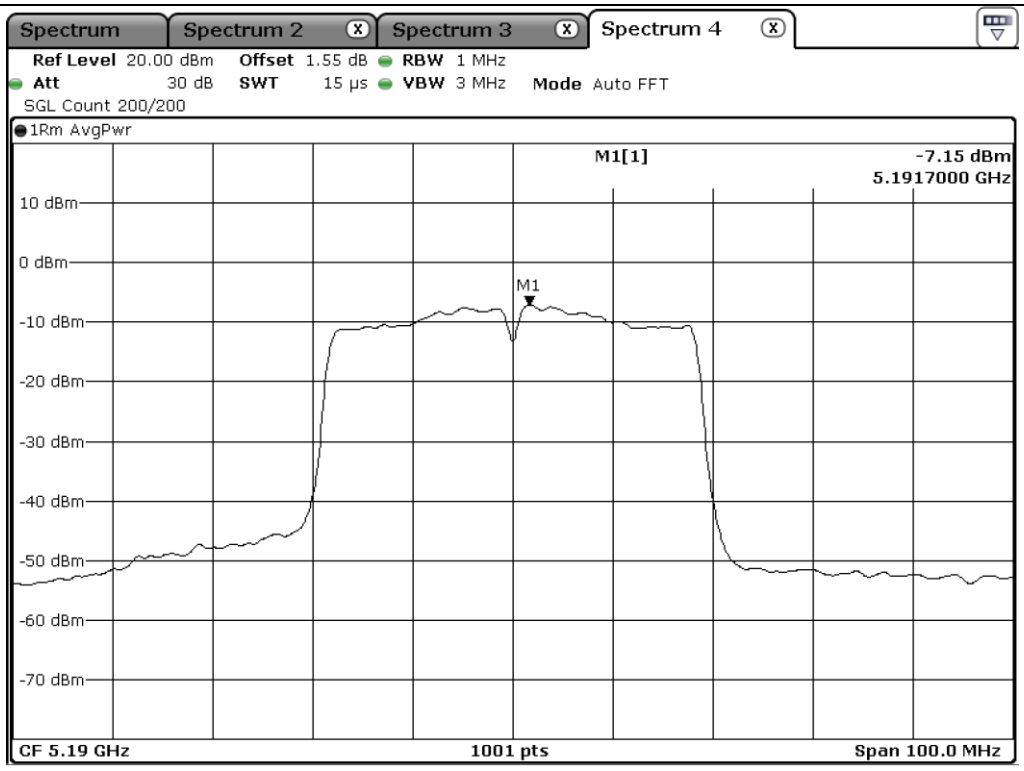
10.7 Test data for 802.11n_HT40 RLAN Mode

10.7.1 Test data for Antenna 0

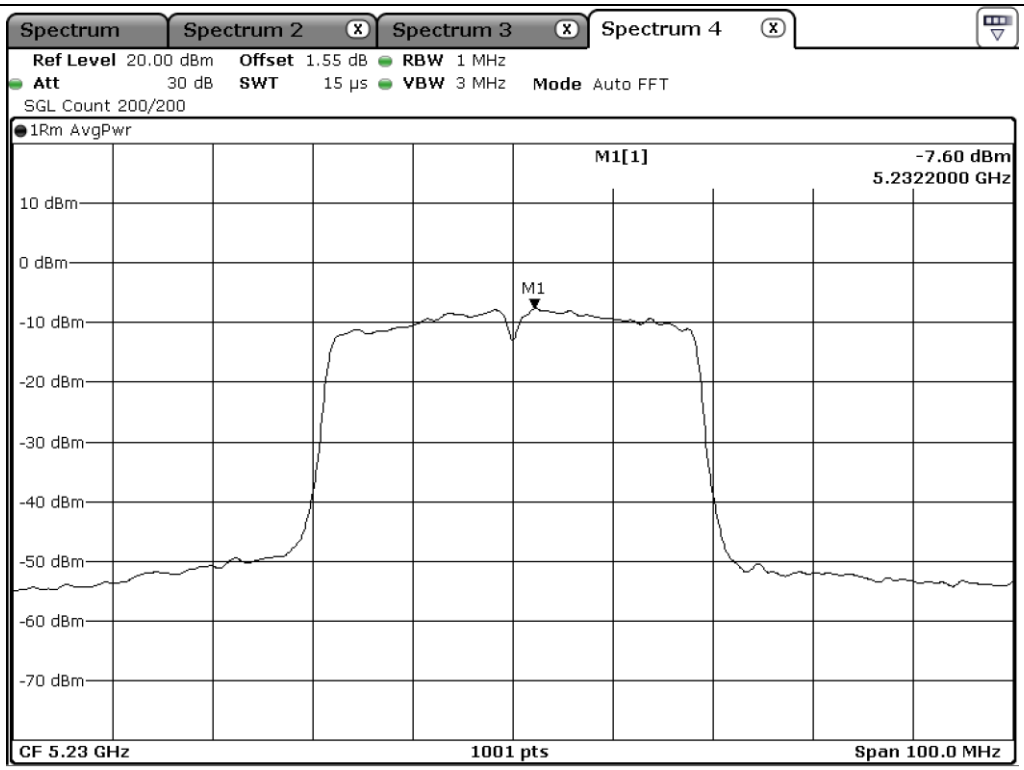
-. Operating condition : Highest Output Power Transmitting Mode

-. Test Result : Pass

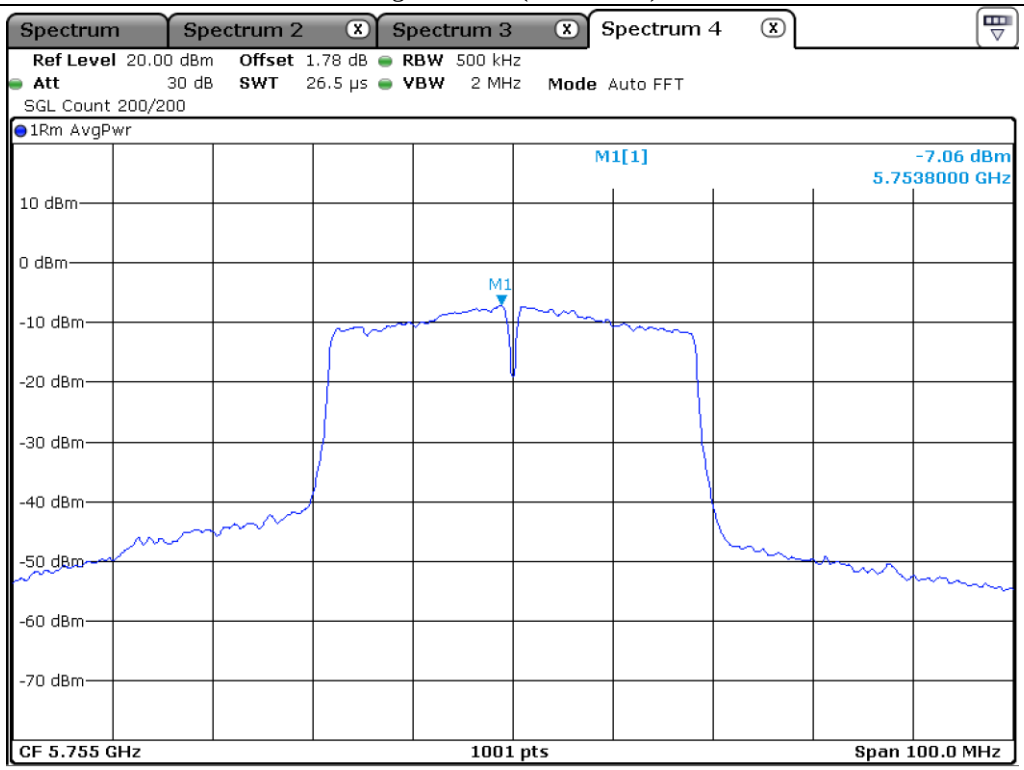
Frequency Range (MHz)	Channel	Frequency (MHz)	Measured Value (dBm)	DUTY Factor (dB)	Result (dBm)	Limit (dBm)	Margin (dB)
5 150 ~ 5 250	Low	5 190.00	-7.15	1.31	-5.84	11.00	16.84
	High	5 230.00	-7.60	1.31	-6.29	11.00	17.29
5 725 ~ 5 850	Low	5 755.00	-7.06	1.31	-5.75	30.00	35.75
	High	5 795.00	-8.32	1.31	-7.01	30.00	37.01



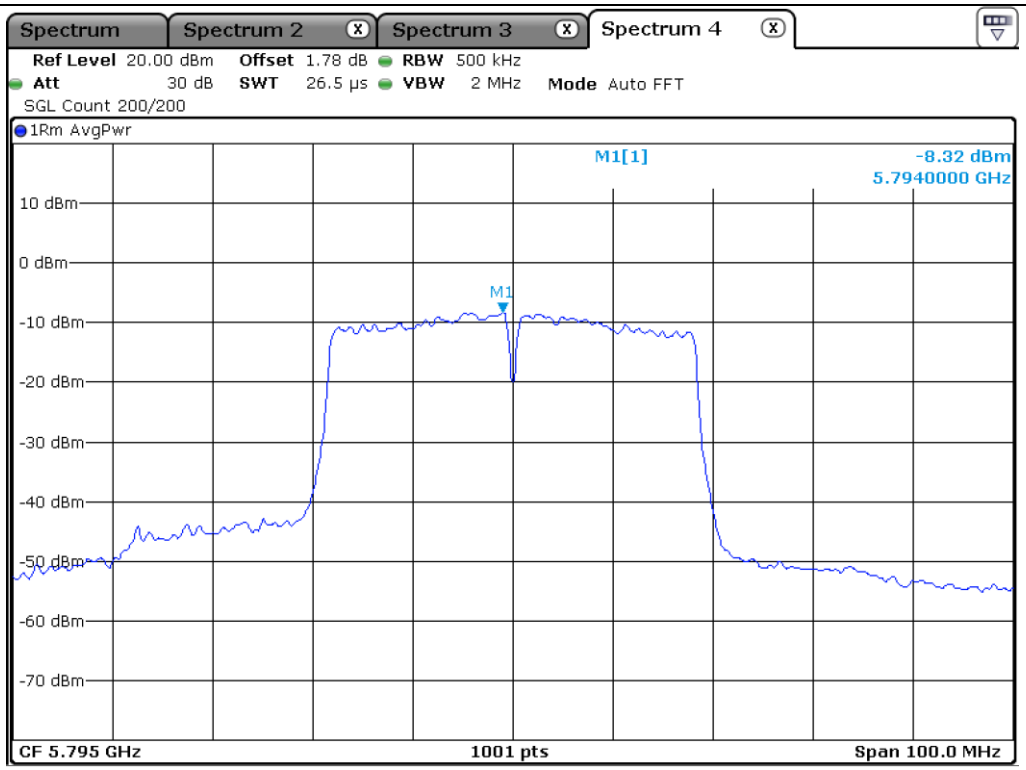
Low Channel (5 190 MHz)



High Channel (5 230 MHz)



Low Channel (5 755 MHz)



High Channel (5 795 MHz)

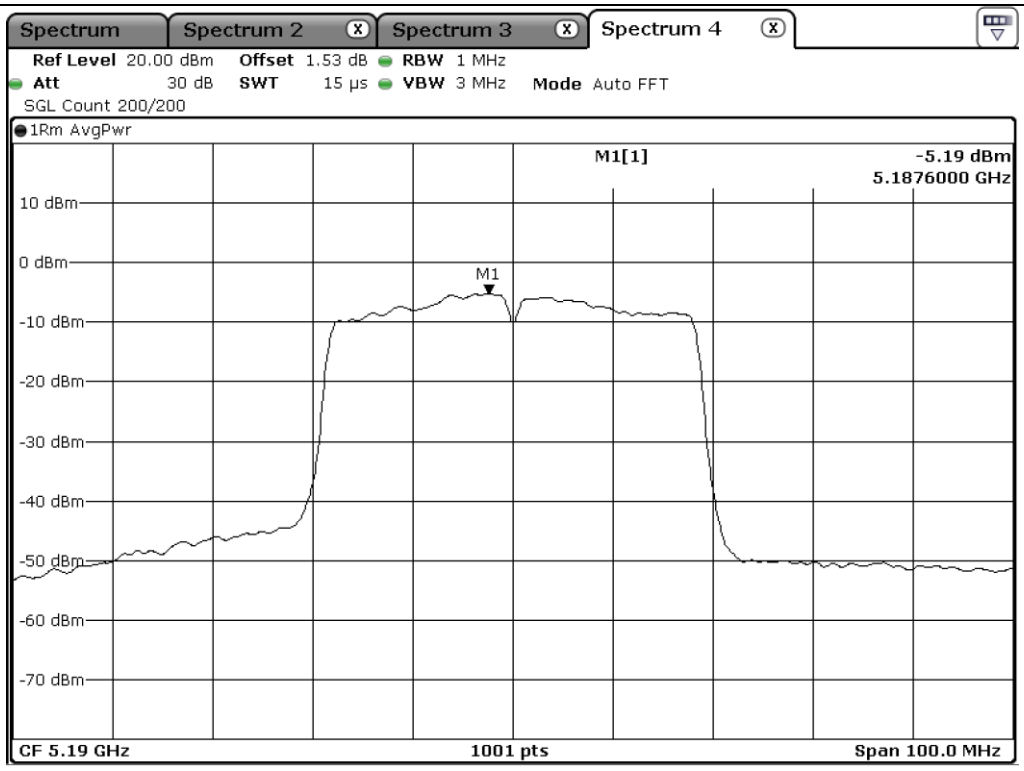
ONETECH Corp.: 43-14, Jinsaegol-gil, Chowol-eup, Gwangju-si, Gyeonggi-do, 12735, Korea (TEL: 82-31-799-9500, FAX: 82-31-799-9599)

10.7.2 Test data for Antenna 1

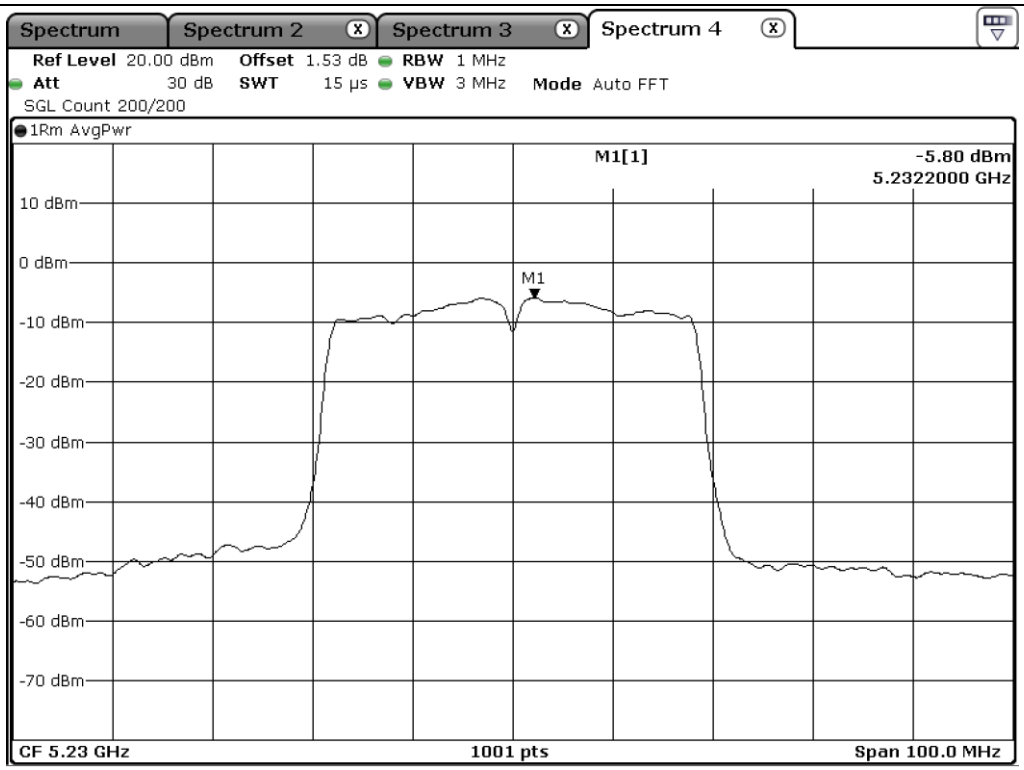
-. Operating condition : Highest Output Power Transmitting Mode

-. Test Result : Pass

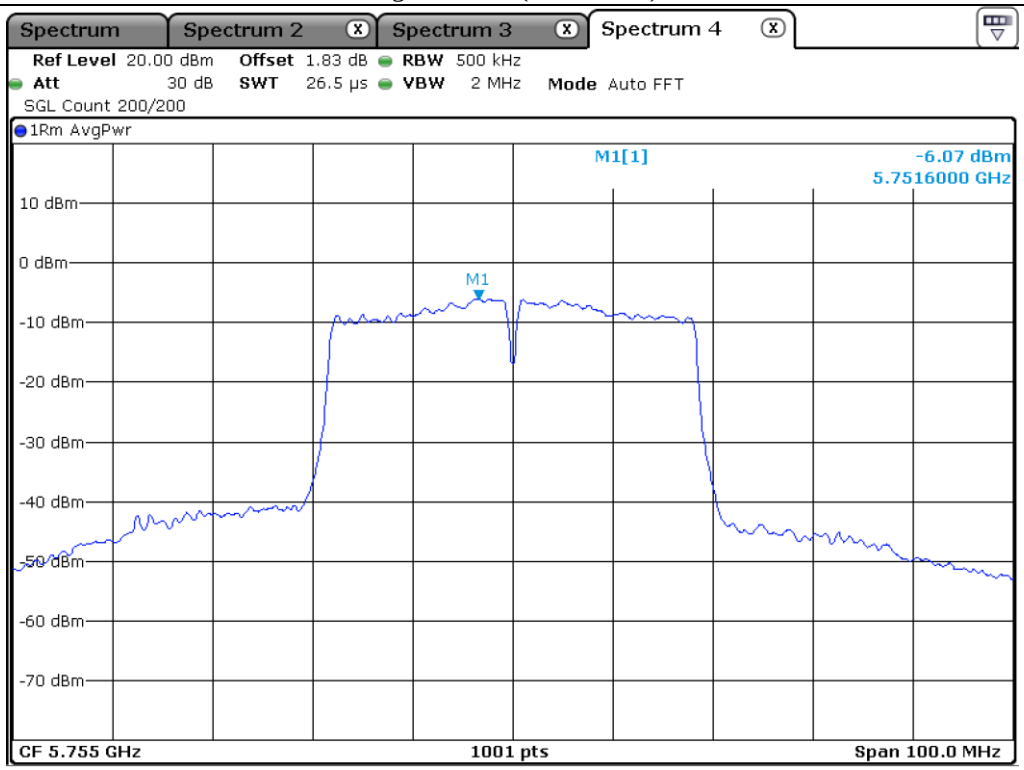
Frequency Range (MHz)	Channel	Frequency (MHz)	Measured Value (dBm)	DUTY Factor (dB)	Result (dBm)	Limit (dBm)	Margin (dB)
5 150 ~ 5 250	Low	5 190.00	-5.19	1.44	-3.75	11.00	14.75
	High	5 230.00	-5.80	1.44	-4.36	11.00	15.36
5 725 ~ 5 850	Low	5 755.00	-6.07	1.44	-4.63	30.00	34.63
	High	5 795.00	-6.06	1.44	-4.62	30.00	34.62



Low Channel (5 190 MHz)

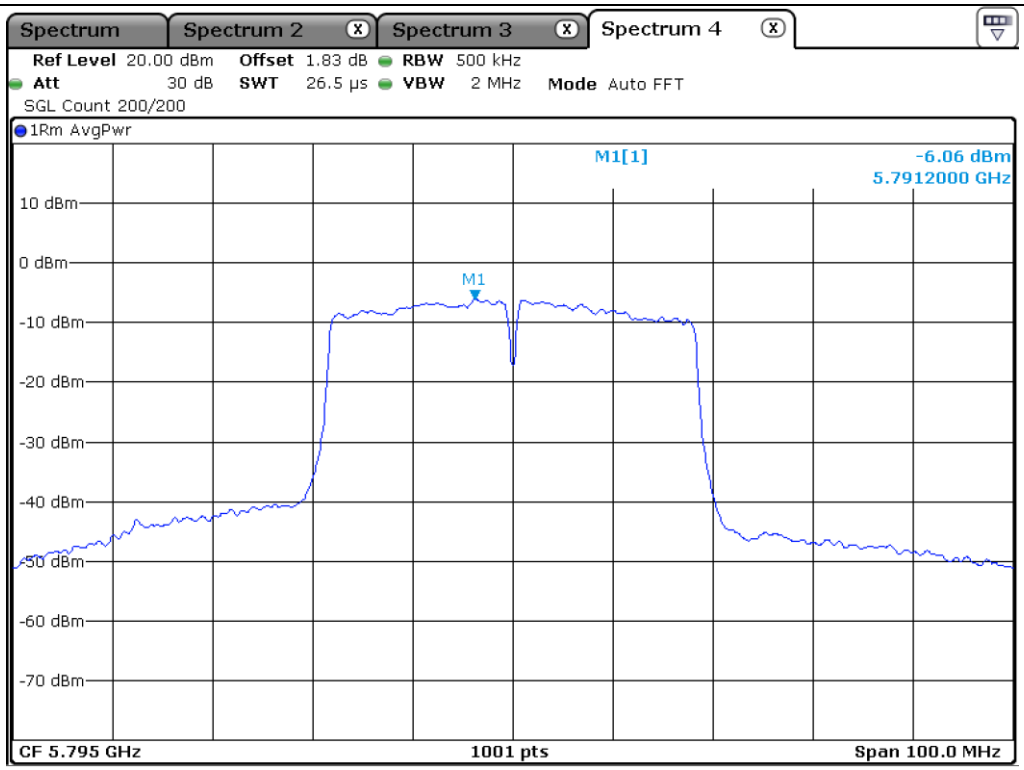


High Channel (5 230 MHz)



Low Channel (5 755 MHz)

ONETECH Corp.: 43-14, Jinsaegol-gil, Chowol-eup, Gwangju-si, Gyeonggi-do, 12735, Korea (TEL: 82-31-799-9500, FAX: 82-31-799-9599)



High Channel (5 795 MHz)

10.7.3 Test data for Multiple Transmit

-. Operating condition : Highest Output Power Transmitting Mode

-. Test Result : Pass

Frequency Range (MHz)	Channel	Frequency (MHz)	Measured Value (dBm)	Limit (dBm)	Margin (dB)
5 150 ~ 5 250	Low	5 190.00	-1.66	23.97	25.63
	High	5 230.00	-2.21	23.97	26.18
5 725 ~ 5 850	Low	5 755.00	-2.14	30.00	32.14
	High	5 795.00	-2.64	30.00	32.64

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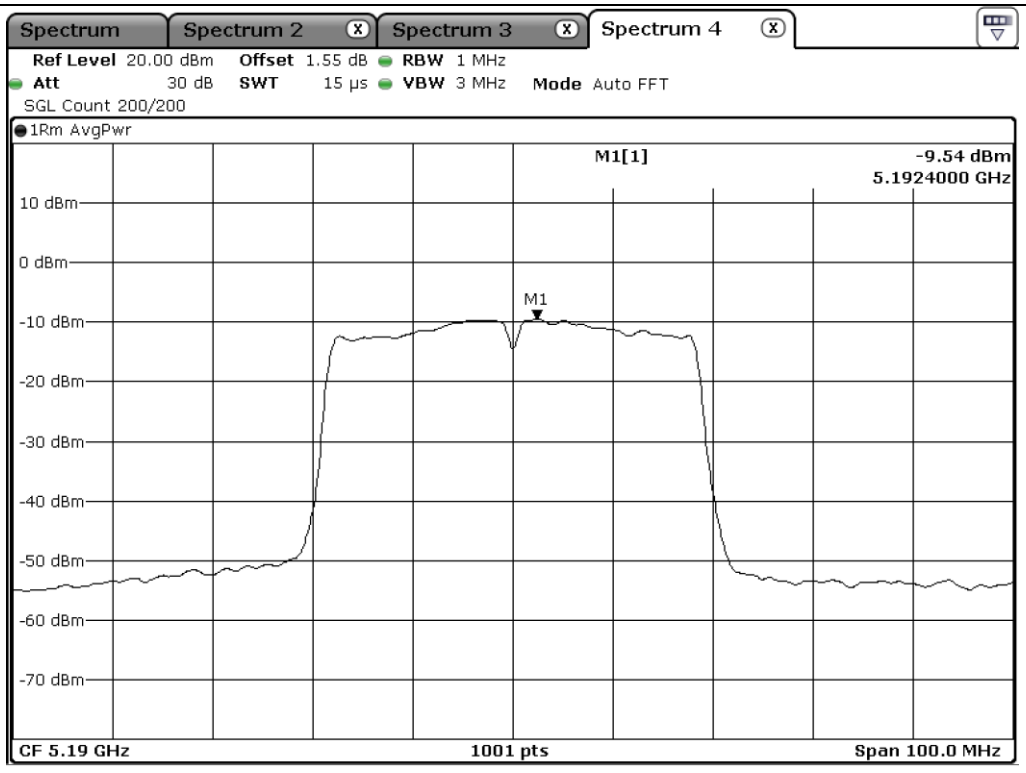
10.8 Test data for 802.11ac_VHT40 RLAN Mode

10.8.1 Test data for Antenna 0

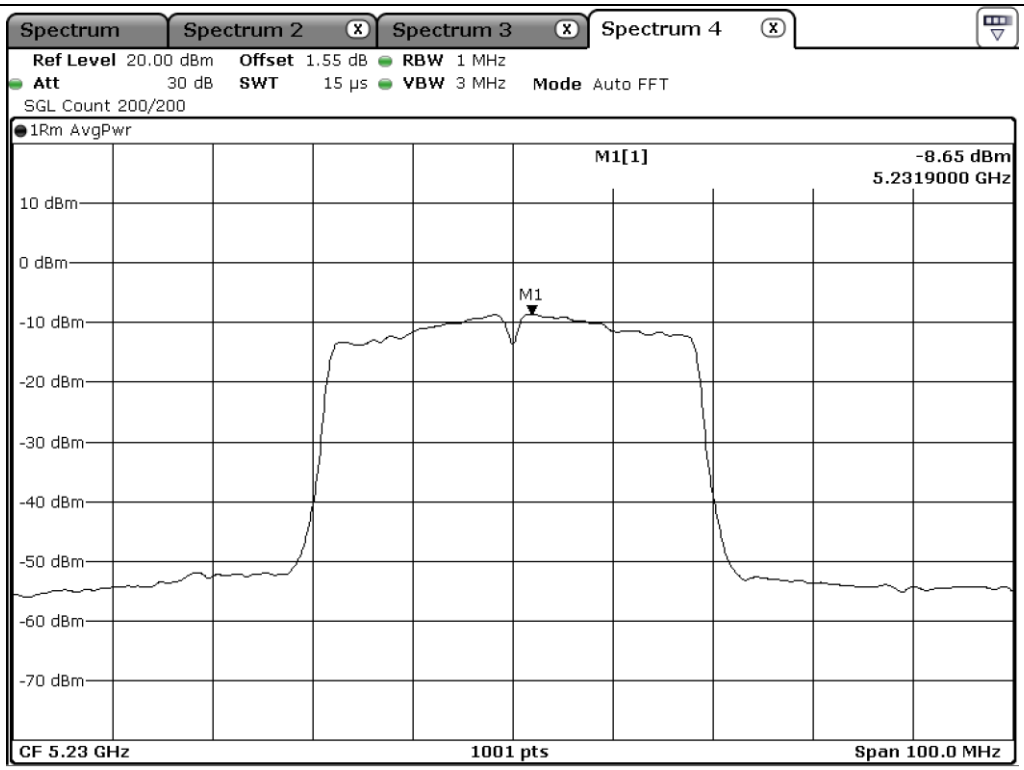
-. Operating condition : Highest Output Power Transmitting Mode

-. Test Result : Pass

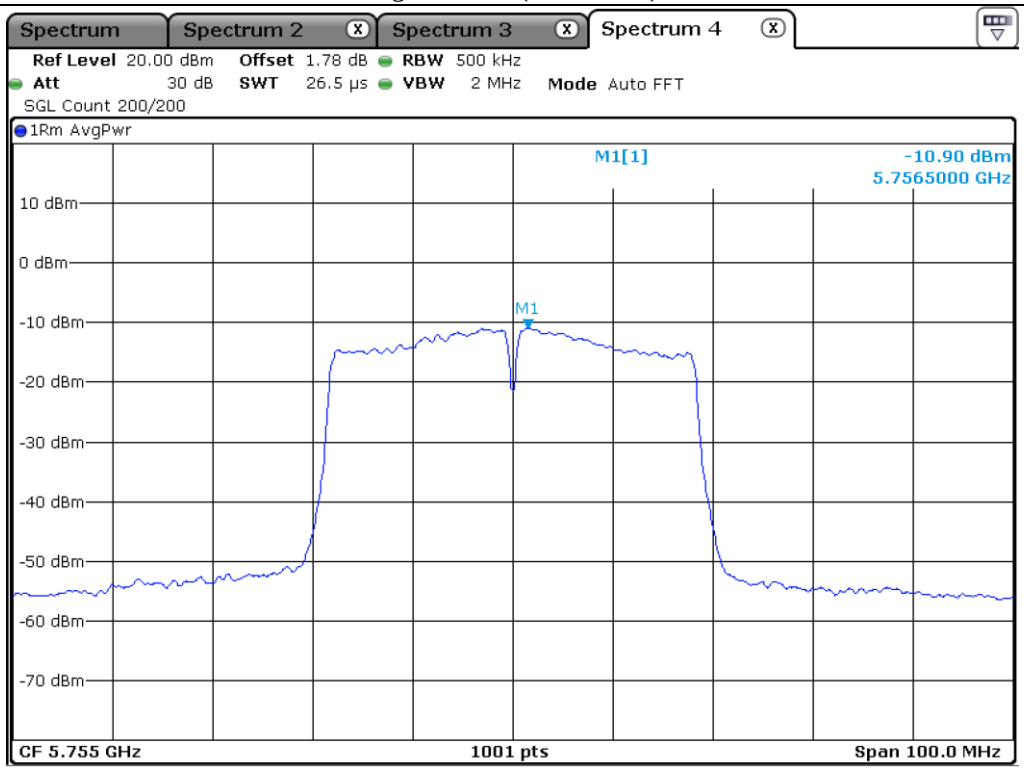
Frequency Range (MHz)	Channel	Frequency (MHz)	Measured Value (dBm)	DUTY Factor (dB)	Result (dBm)	Limit (dBm)	Margin (dB)
5 150 ~ 5 250	Low	5 190.00	-9.54	0.74	-8.80	11.00	19.80
	High	5 230.00	-8.65	0.74	-7.91	11.00	18.91
5 725 ~ 5 850	Low	5 755.00	-10.90	0.75	-10.15	30.00	40.15
	High	5 795.00	-11.73	0.75	-10.98	30.00	40.98



Low Channel (5 190 MHz)

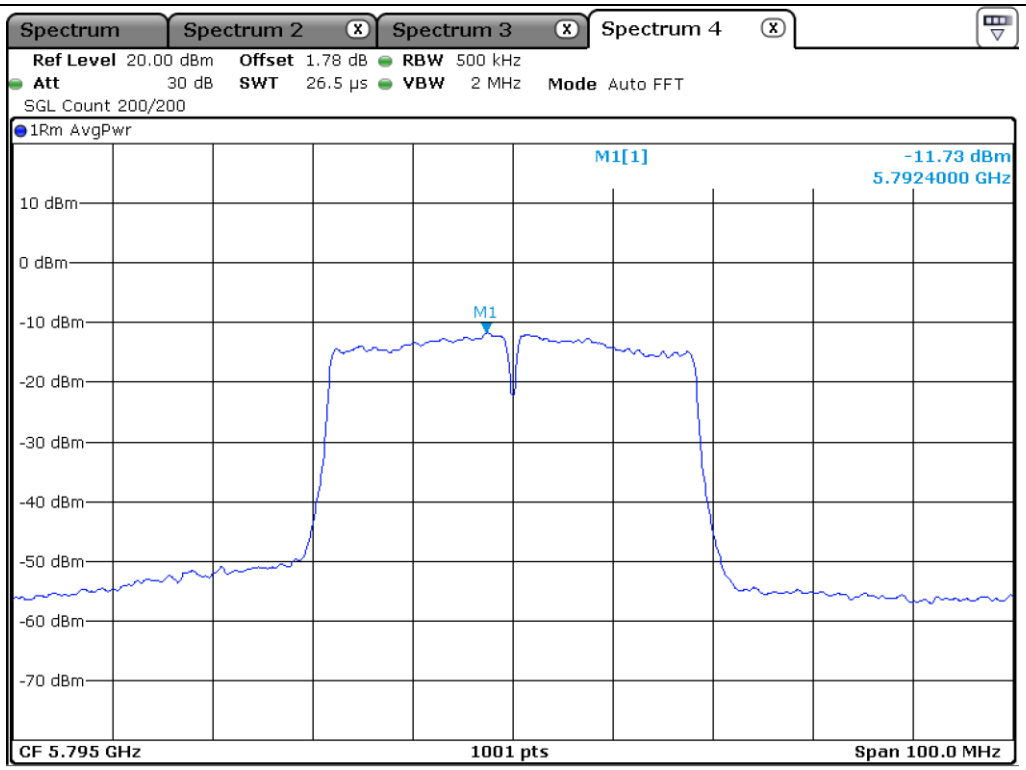


High Channel (5 230 MHz)



Low Channel (5 755 MHz)

ONETECH Corp.: 43-14, Jinsaegol-gil, Chowol-eup, Gwangju-si, Gyeonggi-do, 12735, Korea (TEL: 82-31-799-9500, FAX: 82-31-799-9599)



High Channel (5 795 MHz)

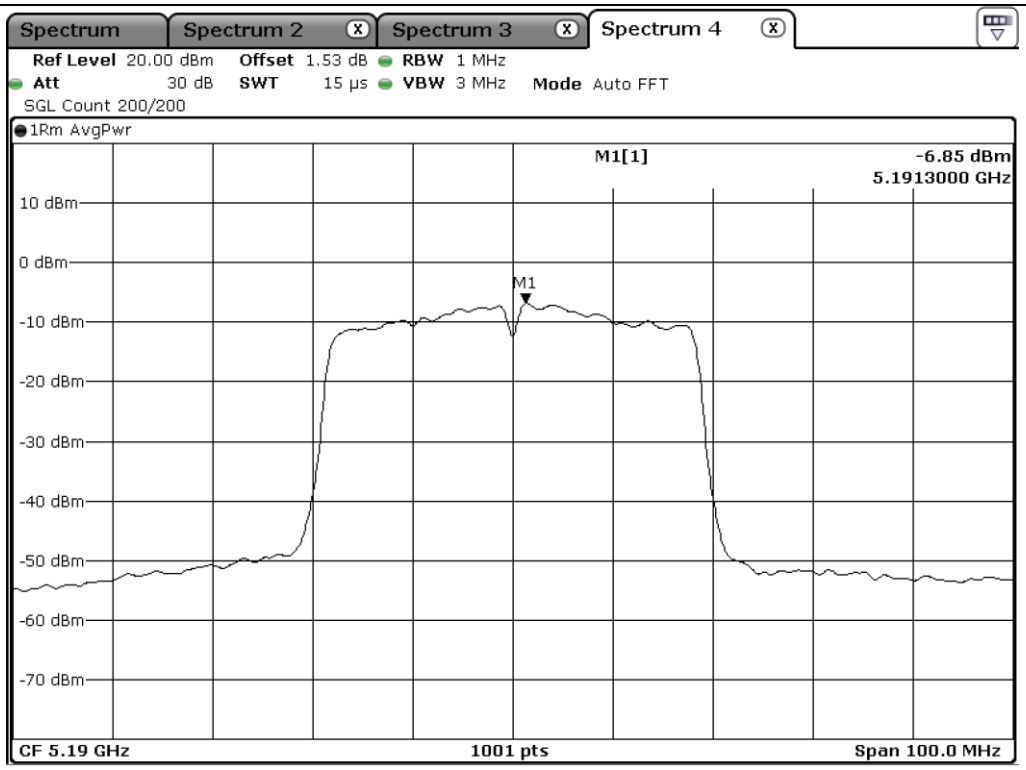
ONETECH Corp.: 43-14, Jinsaegol-gil, Chowol-eup, Gwangju-si, Gyeonggi-do, 12735, Korea (TEL: 82-31-799-9500, FAX: 82-31-799-9599)

10.8.2 Test data for Antenna 1

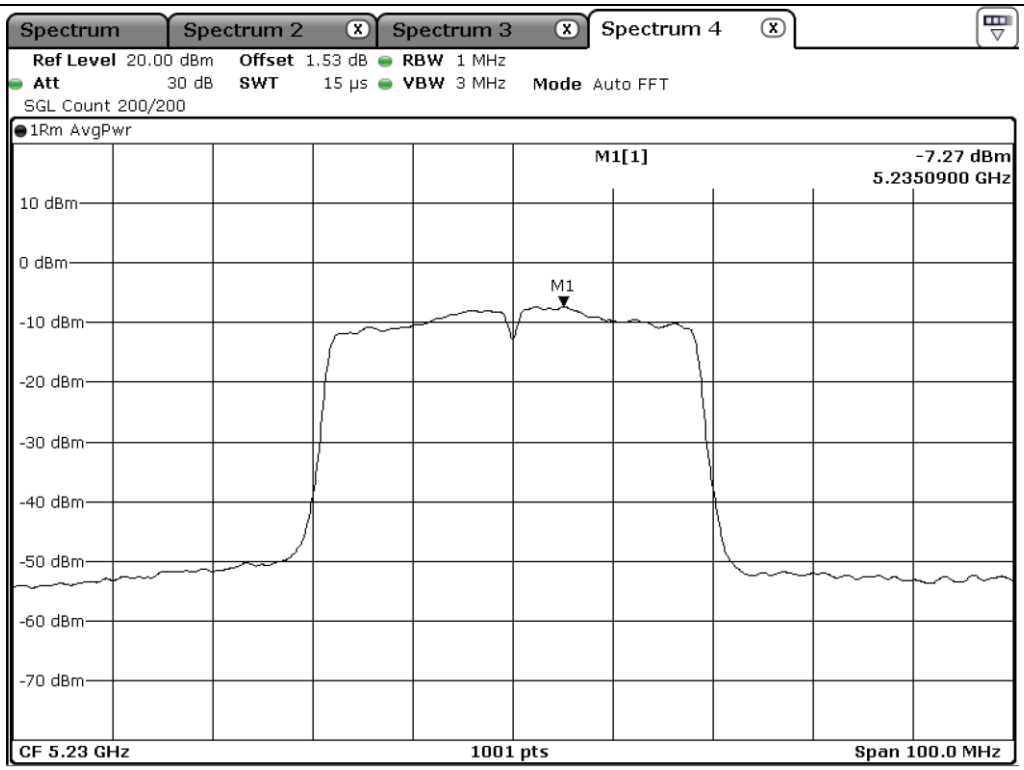
-. Operating condition : Highest Output Power Transmitting Mode

-. Test Result : Pass

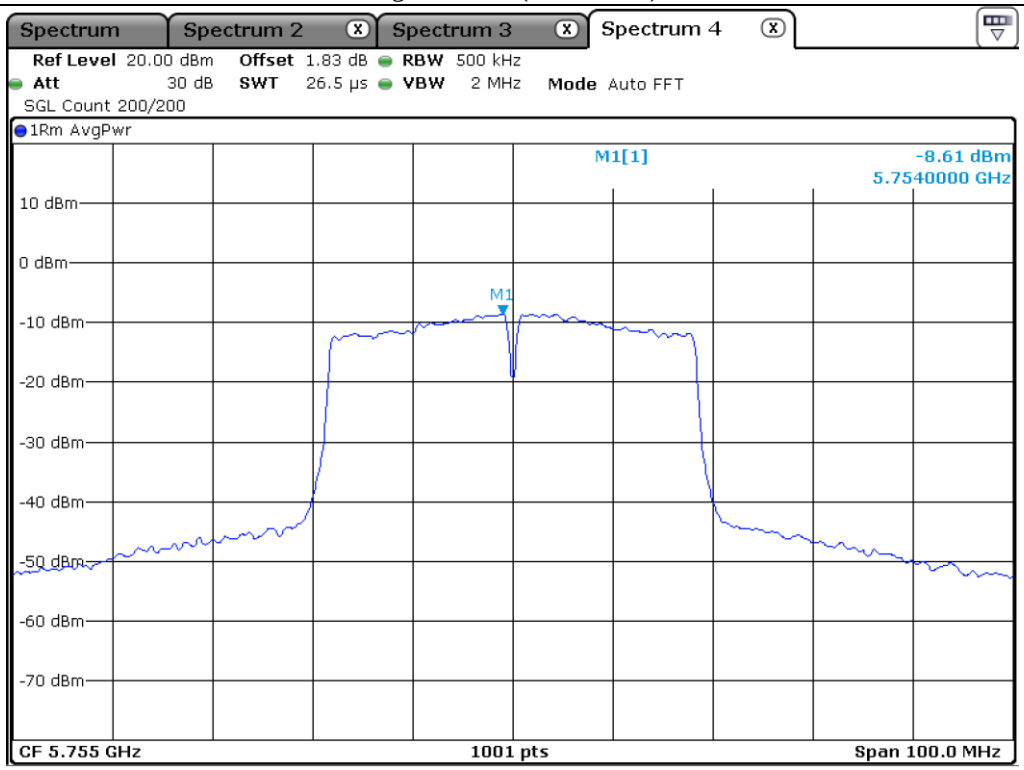
Frequency Range (MHz)	Channel	Frequency (MHz)	Measured Value (dBm)	DUTY Factor (dB)	Result (dBm)	Limit (dBm)	Margin (dB)
5 150 ~ 5 250	Low	5 190.00	-6.85	0.79	-6.06	11.00	17.06
	High	5 230.00	-7.27	0.79	-6.48	11.00	17.48
5 725 ~ 5 850	Low	5 755.00	-8.61	0.80	-7.81	30.00	37.81
	High	5 795.00	-8.48	0.80	-7.68	30.00	37.68



Low Channel (5 190 MHz)



High Channel (5 230 MHz)



Low Channel (5 755 MHz)

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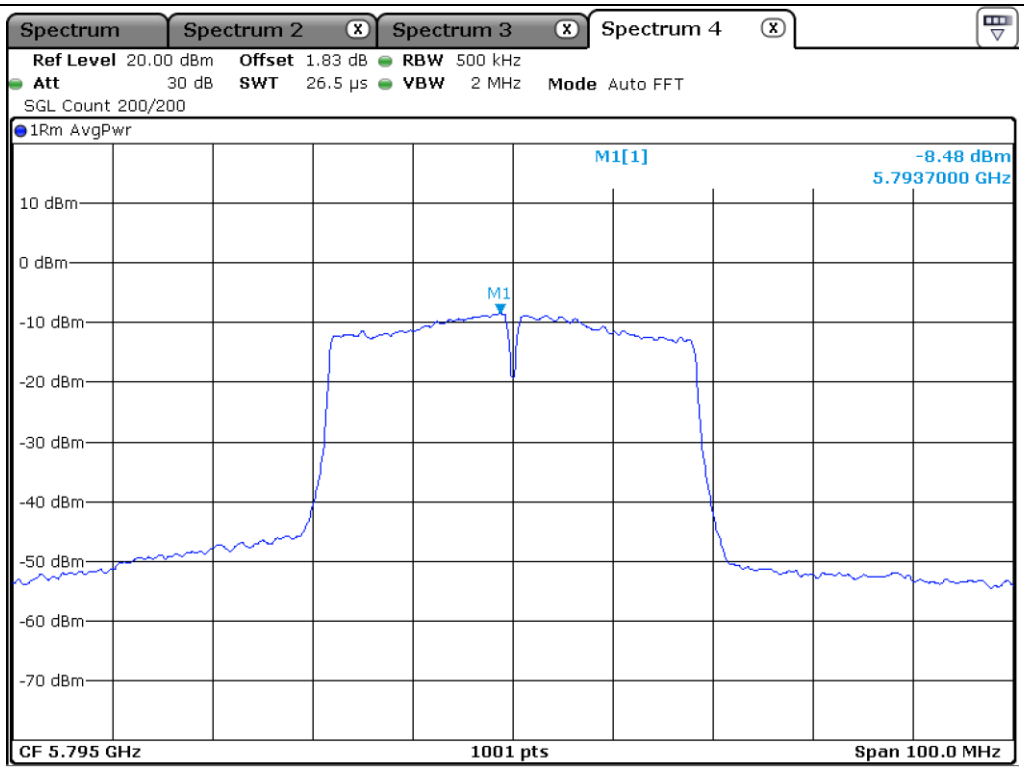

High Channel (5 795 MHz)

10.8.3 Test data for Multiple Transmit

-. Operating condition : Highest Output Power Transmitting Mode

-. Test Result : Pass

Frequency Range (MHz)	Channel	Frequency (MHz)	Measured Value (dBm)	Limit (dBm)	Margin (dB)
5 150 ~ 5 250	Low	5 190.00	-4.21	11.00	15.21
	High	5 230.00	-4.13	11.00	15.13
5 725 ~ 5 850	Low	5 755.00	-5.81	30.00	35.81
	High	5 795.00	-6.01	30.00	36.01

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10.9 Test data for 802.11ac_HT80 RLAN Mode

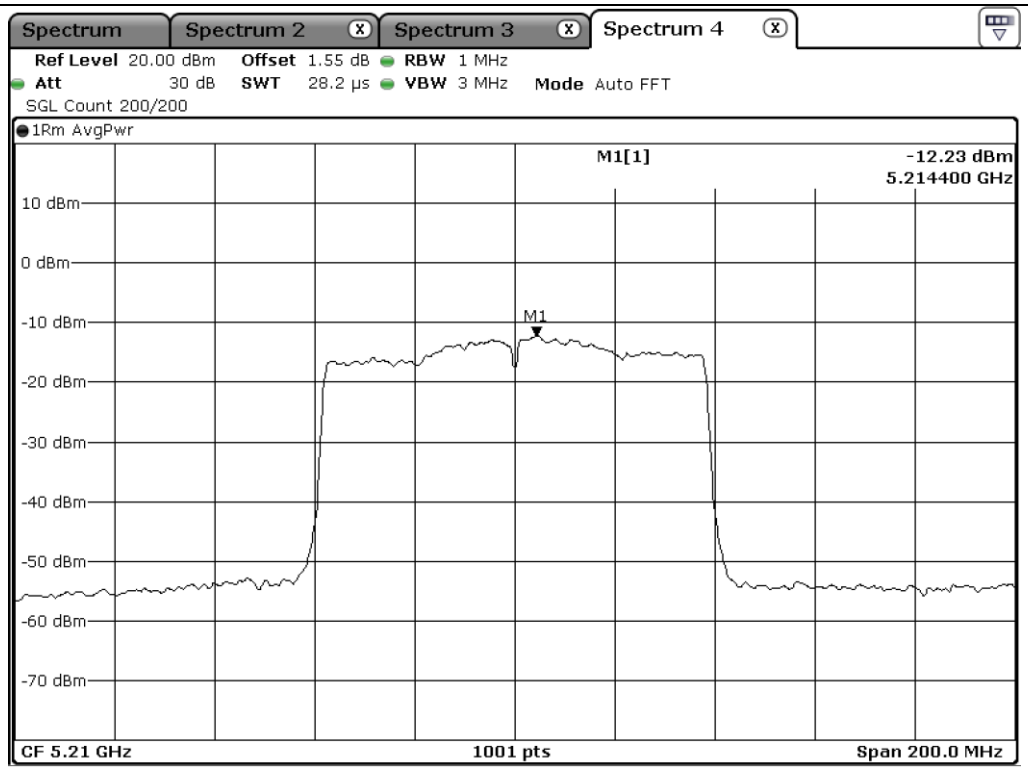
10.9.1 Test data for Antenna 0

-. Operating condition : Highest Output Power Transmitting Mode

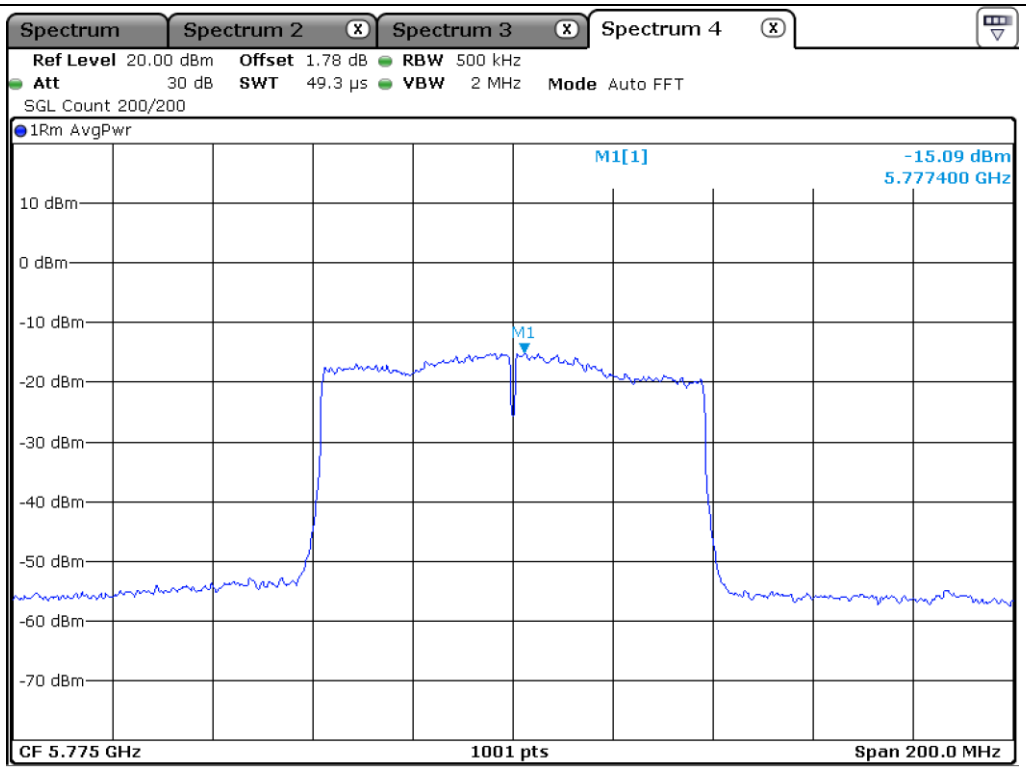
-. Test Result : Pass

Frequency Range (MHz)	Channel	Frequency (MHz)	Measured Value (dBm)	DUTY Factor (dB)	Result (dBm)	Limit (dBm)	Margin (dB)
5 150 ~ 5 250	Middle	5 210.00	-12.23	1.38	-10.85	11.00	21.85
5 725 ~ 5 850	Middle	5 775.00	-15.09	1.52	-13.57	30.00	43.57

Remark: See next page for measurement data.



Middle Channel (5 210 MHz)



Middle Channel (5 775 MHz)

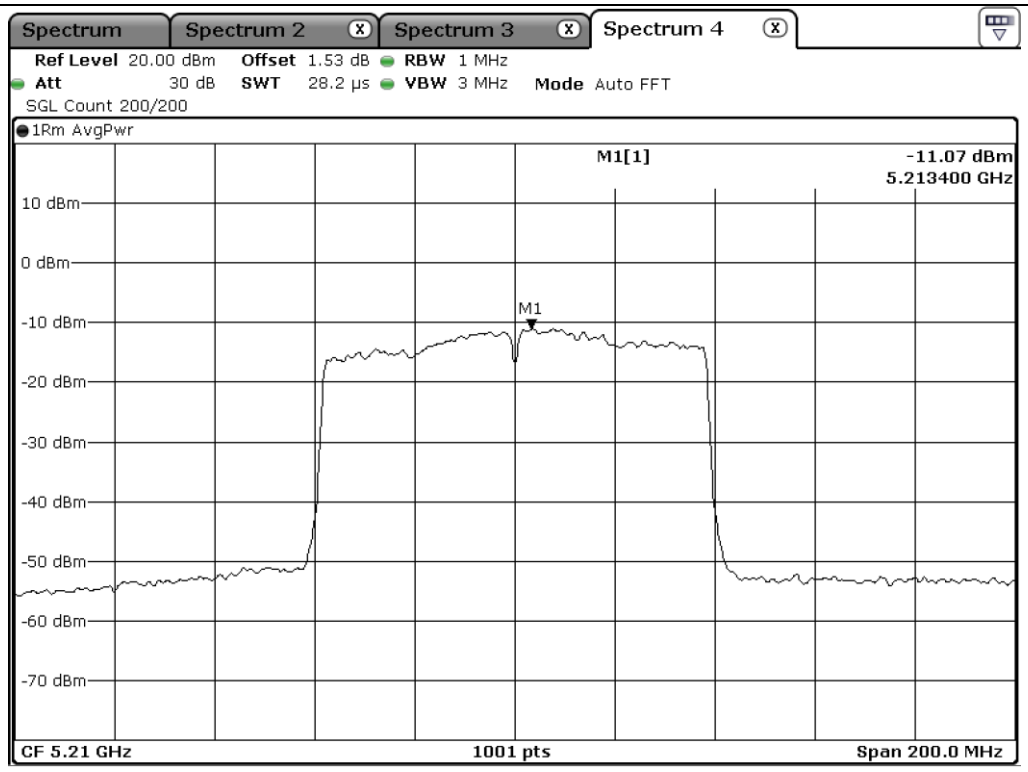
10.9.2 Test data for Antenna 1

-. Operating condition : Highest Output Power Transmitting Mode

-. Test Result : Pass

Frequency Range (MHz)	Channel	Frequency (MHz)	Measured Value (dBm)	DUTY Factor (dB)	Result (dBm)	Limit (dBm)	Margin (dB)
5 150 ~ 5 250	Middle	5 210.00	-11.07	1.42	-9.65	11.00	20.65
5 725 ~ 5 850	Middle	5 775.00	-12.51	1.42	-11.09	30.00	41.09

Remark: See next page for measurement data.



Middle Channel (5 210 MHz)

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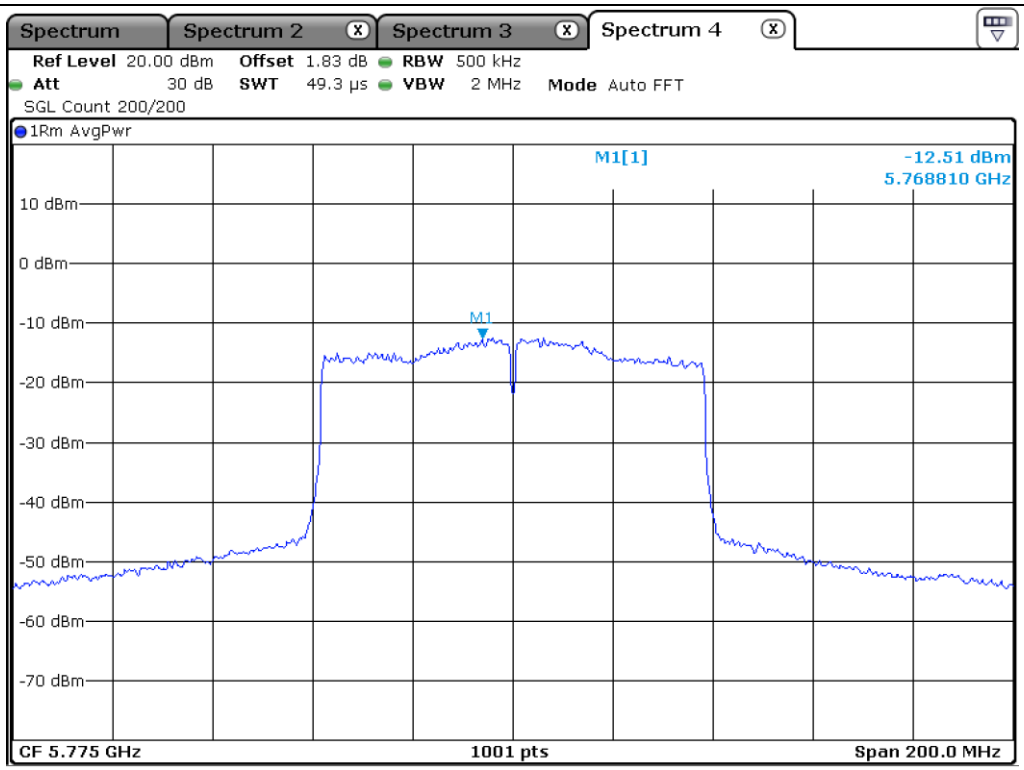


Middle Channel (5 775 MHz)

10.9.3 Test data for Multiple Transmit

-. Operating condition : Highest Output Power Transmitting Mode

-. Test Result : Pass

Frequency Range (MHz)	Channel	Frequency (MHz)	Measured Value (dBm)	Limit (dBm)	Margin (dB)
5 150 ~ 5 250	Middle	5 210.00	-7.20	11.00	18.20
5 725 ~ 5 850	Middle	5 775.00	-9.15	30.00	39.15

11. FREQUENCY STABILITY WITH TEMPERATURE VARIATION

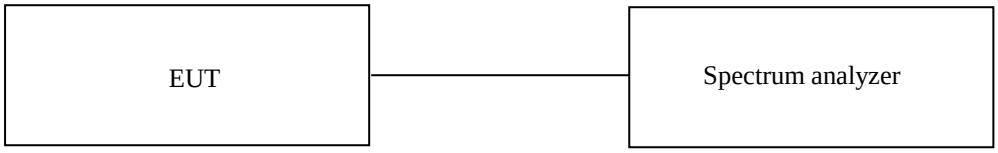
11.1 Operating environment

Temperature : 23 °C

Relative humidity : 45 % R.H.

11.2 Test set-up

Turn EUT off and set chamber temperature to -20 °C and then allow sufficient time (approximately 20 min to 30 min after chamber reach the assigned temperature) for EUT to stabilize. Turn on the EUT and measure the EUT operating frequency and then turn off the EUT after the measurement. The temperature in the chamber was raised 10 °C step from -20 °C to +80 °C. Repeat above method for frequency measurements every 10 °C step and then record all measured frequencies on each temperature step.



11.3 Test Date

January 07, 2021 ~ January 28, 2021

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11.4 Test Data for U-NII-1

-. Result : Pass

Temperature (˚C)	Carrier Freq. (Hz)	Measured Freq. (Hz)	Frequency Error (Hz)
-20	5 180 000 000	5 179 974 550	-25 450
-10		5 179 965 612	-34 388
0		5 179 964 981	-35 019
10		5 179 952 607	-47 393
20		5 179 947 624	-52 376
30		5 180 019 445	19 445
40		5 180 035 326	35 326
50		5 180 047 357	47 357
-20	5 220 000 000	5 219 973 785	-26 215
-10		5 219 964 878	-35 122
0		5 219 964 206	-35 794
10		5 219 951 802	-48 198
20		5 219 946 849	-53 151
30		5 220 018 642	18 642
40		5 220 034 632	34 632
50		5 220 046 654	46 654
-20	5 240 000 000	5 239 974 115	-25 885
-10		5 239 965 154	-34 846
0		5 239 964 499	-35 501
10		5 239 952 156	-47 844
20		5 239 947 196	-52 804
30		5 240 018 960	18 960
40		5 240 034 971	34 971
50		5 240 046 898	46 898

Note : While maintaining a constant temperature inside the environmental chamber, turn the EUT ON and record the operating frequency at startup, and at 2 minutes, 5 minutes, and 10 minutes after the EUT is energized. Four measurements in total are made.(ANSI C63.10-2013)

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11.5 Test Data for U-NII-3

-. Result : Pass

Temperature (˚C)	Carrier Freq. (Hz)	Measured Freq. (Hz)	**Frequency Error (Hz)**
-20	5 745 000 000	5 744 975 115	-24 885
-10		5 744 966 094	-33 906
0		5 744 965 427	-34 573
10		5 744 953 092	-46 908
20		5 744 948 157	-51 843
30		5 745 019 989	19 989
40		5 745 035 902	35 902
50		5 745 047 995	47 995
-20	5 785 000 000	5 784 975 315	-24 685
-10		5 784 966 295	-33 705
0		5 784 965 747	-34 253
10		5 784 953 310	-46 690
20		5 784 948 345	-51 655
30		5 785 020 129	20 129
40		5 785 036 093	36 093
50		5 785 048 116	48 116
-20	5 825 000 000	5 824 975 227	-24 773
-10		5 824 966 295	-33 705
0		5 824 965 704	-34 296
10		5 824 953 317	-46 683
20		5 824 948 310	-51 690
30		5 825 020 020	20 020
40		5 825 036 101	36 101
50		5 825 048 064	48 064

Note : While maintaining a constant temperature inside the environmental chamber, turn the EUT ON and record the operating frequency at startup, and at 2 minutes, 5 minutes, and 10 minutes after the EUT is energized. Four measurements in total are made.(ANSI C63.10-2013)

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12. FREQUENCY STABILITY WITH VOLTAGE VARIATION

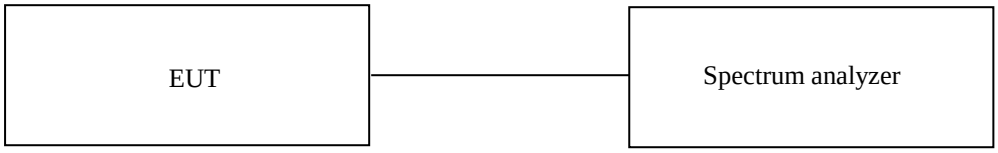
12.1 Operating environment

Temperature : 23 °C

Relative humidity : 45 % R.H.

12.2 Test set-up

An external DC power supply was connected to the input of the EUT. The voltage of EUT set to 110.0 % of the nominal value and then was reduced to 90.0 % of nominal voltage. The output frequency was recorded at each step.



12.3 Test Date

January 07, 2021 ~ January 28, 2021

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12.4 Test Data for U-NII-1

-. Result : Pass

Voltage (VDC)	Carrier Freq. (Hz)	Measured Freq. (Hz)	Frequency Error (Hz)
12.0	5 180 000 000	5 179 947 624	-52 376
10.2		5 179 947 247	-52 753
13.8		5 179 947 674	-52 326
12.0	5 220 000 000	5 219 946 849	-53 151
10.2		5 219 946 512	-53 488
13.8		5 219 946 853	-53 147
12.0	5 240 000 000	5 239 947 196	-52 804
10.2		5 239 946 839	-53 161
13.8		5 239 947 111	-52 889

12.5 Test Data for U-NII-3

-. Result : Pass

Voltage (VDC)	Carrier Freq. (Hz)	Measured Freq. (Hz)	Frequency Error (Hz)
12.0	5 745 000 000	5 744 948 157	-51 843
10.2		5 744 947 776	-52 224
13.8		5 744 948 256	-51 744
12.0	5 785 000 000	5 784 948 345	-51 655
10.2		5 784 947 920	-52 080
13.8		5 784 948 372	-51 628
12.0	5 825 000 000	5 824 948 310	-51 690
10.2		5 824 947 919	-52 081
13.8		5 824 948 241	-51 759

13. RADIATED SPURIOUS EMISSIONS

13.1 Operating environment

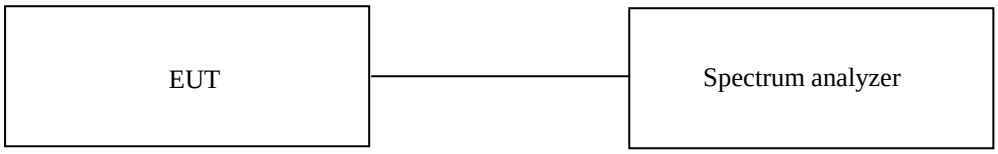
Temperature : 23 °C

Relative humidity : 45 % R.H.

13.2 Test set-up for conducted measurement

The radiated emissions measurements were on the 3 m semi anechoic chamber. The EUT and other support equipment were placed on a non-conductive turntable above the ground plane. The interconnecting cables from outside test site were inserted into ferrite clamps at the point where the cables reach the turntable.

The frequency spectrum from 30 MHz to 40 GHz was scanned and maximum emission levels at each frequency recorded. The system was rotated 360°, and the antenna was varied in the height between 1.0 m and 4.0 m in order to determine the maximum emission levels. This procedure was performed for horizontal and vertical polarization of the receiving antenna.



13.3 Test Date

January 07, 2021 ~ January 28, 2021

13.4 Test data for Below 30 MHz

-. Resolution bandwidth : 200 Hz (from 9 kHz to 0.15 MHz), 9 kHz (from 0.15 MHz to 30 MHz)

-. Frequency range : 9 kHz ~ 30 MHz

-. Measurement distance : 3 m

-. Operating mode : Transmitting mode

Frequency (MHz)	Reading (dBµV)	Ant. Pol. (H/V)	Ant. Height (m)	Angle (°)	Ant. Factor (dB/m)	Cable Loss	Emission Level(dBµV/m)	Limits (dBµV/m)	Margin (dB)
Emission from the EUT more than 20 dB below the limit in each frequency range.									

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13.5 Test data for 30 MHz ~ 1 000 MHz

13.5.1 Test data for WLAN 5 GHz

Humidity Level : 45 % R.H. Temperature: 23 °C

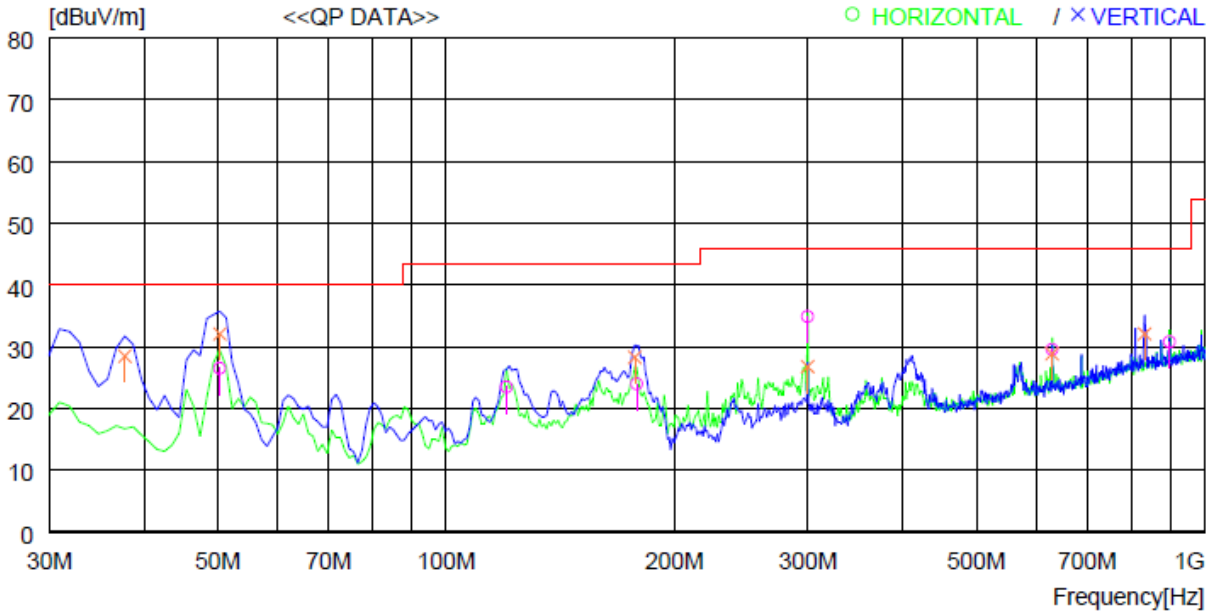
Limits apply to : FCC CFR 47, PART 15, SUBPART C, SECTION 15.247

Result : PASSED

EUT : CAR NAVIGATION SYSTEM

Detector : CISPR Quasi-Peak (6 dB Bandwidth: 120 kHz)

-.Antenna 0, Antenna 1 and Multiple transmit tested, but the worst data were recorded.



No.	FREQ [MHz]	READING QP [dBuV]	ANT FACTOR [dB]	LOSS [dB]	GAIN [dB]	RESULT [dBuV/m]	LIMIT [dBuV/m]	MARGIN [dB]	ANTENNA [cm]	TABLE [DEG]
----- Horizontal ------										
1	50.370	44.6	13.1	0.9	32.1	26.5	40.0	13.5	400	203
2	120.210	35.5	18.6	1.4	32.0	23.5	43.5	20.0	300	0
3	178.410	37.6	16.7	1.7	32.0	24.0	43.5	19.5	200	46
4	299.660	45.6	19.2	2.1	32.0	34.9	46.0	11.1	100	0
5	629.457	34.3	24.6	3.1	32.4	29.6	46.0	16.4	200	151
6	899.109	30.4	27.5	4.6	31.7	30.8	46.0	15.2	100	40
----- Vertical ------										
7	37.760	41.5	18.1	0.9	32.0	28.5	40.0	11.5	100	359
8	50.370	50.2	13.1	0.9	32.1	32.1	40.0	7.9	100	188
9	177.440	41.8	16.8	1.7	32.0	28.3	43.5	15.2	100	359
10	299.660	37.5	19.2	2.1	32.0	26.8	46.0	19.2	100	359
11	629.457	33.6	24.6	3.1	32.4	28.9	46.0	17.1	200	216
12	833.151	32.6	27.2	4.2	31.9	32.1	46.0	13.9	300	344

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13.5.2 Test data for Intermodulation Mode(Bluetooth + WLAN 5 GHz)

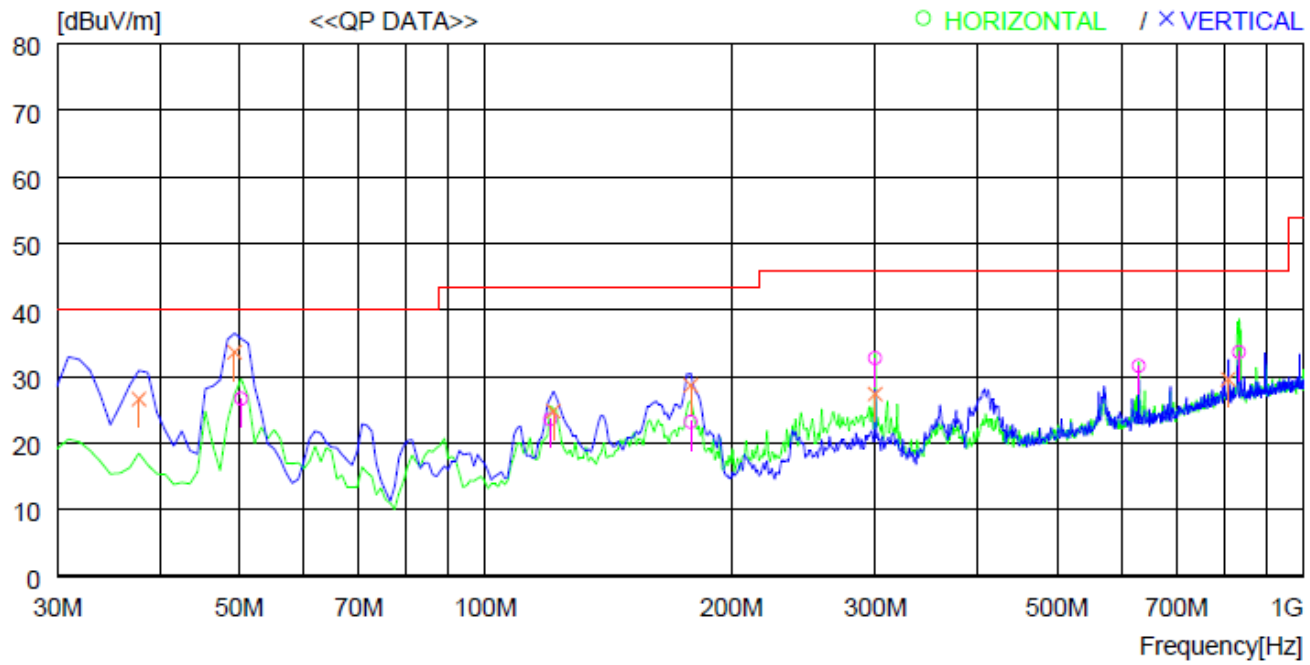
Humidity Level : 45 % R.H. Temperature: 23 °C

Limits apply to : FCC CFR 47, PART 15, SUBPART C, SECTION 15.247

Result : PASSED

EUT : CAR NAVIGATION SYSTEM

Detector : CISPR Quasi-Peak (6 dB Bandwidth: 120 kHz)



No.	FREQ [MHz]	READING QP [dBuV]	ANT FACTOR [dB]	LOSS [dB]	GAIN [dB]	RESULT [dBuV/m]	LIMIT [dBuV/m]	MARGIN [dB]	ANTENNA [cm]	TABLE [DEG]
----- Horizontal ------										
1	50.370	44.8	13.1	0.9	32.1	26.7	40.0	13.3	400	359
2	120.210	35.6	18.6	1.4	32.0	23.6	43.5	19.9	300	0
3	178.410	36.8	16.7	1.7	32.0	23.2	43.5	20.3	300	58
4	299.660	43.5	19.2	2.1	32.0	32.8	46.0	13.2	100	0
5	629.457	36.3	24.6	3.1	32.4	31.6	46.0	14.4	200	359
6	835.091	34.2	27.2	4.2	31.9	33.7	46.0	12.3	300	0
----- Vertical ------										
7	37.760	39.6	18.1	0.9	32.0	26.6	40.0	13.4	100	263
8	49.400	51.5	13.4	0.9	32.1	33.7	40.0	6.3	100	196
9	121.180	36.7	18.7	1.4	32.0	24.8	43.5	18.7	100	91
10	178.410	42.3	16.7	1.7	32.0	28.7	43.5	14.8	100	128
11	299.660	38.1	19.2	2.1	32.0	27.4	46.0	18.6	100	359
12	809.872	30.5	27.1	4.0	32.0	29.6	46.0	16.4	100	359

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13.6 Test data for Above 1 GHz

13.6.1 Test data for Frequency UNII I

13.6.1.1 Test data for 802.11a RLAN Mode

-. Resolution bandwidth : 1 MHz and Peak Detector for Peak Mode for the emissions fall in restricted band,
1 MHz and RMS Detector for Average Mode for the emissions fall in restricted band
100 kHz for Peak Mode for the emissions outside restricted band

-. Video bandwidth : 3 MHz for Peak and Average Mode

-. Frequency range : 1 GHz ~ 40 GHz

-. Measurement distance : 3 m

-. Duty Cycle : 90.79 % [Antenna 0] / 90.13 % [Antenna 1]

-. Operating mode : Transmitting mode

Frequency (MHz)	Reading (dBµV)	Detector Mode	Ant. Pol. (H/V)	Ant. Factor	Cable Loss	DUTY Factor	AMP Factor	Total (dBµV/m)	Limits (dBµV/m)	Margin (dB)
Low Channel										
10 360.00	50.65	Peak	H	39.20	18.07	-	46.00	61.92	68.20	6.28
10 360.00	50.21	Peak	V	39.20	18.07	-	46.00	61.48	68.20	6.72
Middle Channel										
10 440.00	50.31	Peak	H	39.30	18.07	-	46.00	61.68	68.20	6.52
10 440.00	50.18	Peak	V	39.30	18.07	-	46.00	61.55	68.20	6.65
High Channel										
10 480.00	50.37	Peak	H	39.40	18.07	-	46.00	61.84	68.20	6.36
10 480.00	50.25	Peak	V	39.40	18.07	-	46.00	61.72	68.20	6.48

Remark - “H”: Horizontal, “V”: Vertical

Margin (dB) = Limits (dBµV/m) - Emission Level (dBµV/m)

13.6.1.2 Test data for 802.11n_HT20 RLAN Mode

-. Resolution bandwidth : 1 MHz and Peak Detector for Peak Mode for the emissions fall in restricted band,
1 MHz and RMS Detector for Average Mode for the emissions fall in restricted band
100 kHz for Peak Mode for the emissions outside restricted band

-. Video bandwidth : 3 MHz for Peak and Average Mode

-. Frequency range : 1 GHz ~ 40 GHz

-. Measurement distance : 3 m

-. Duty Cycle : 83.75 % [Antenna 0] / 83.54 % [Antenna 1]

-. Operating mode : Transmitting mode

Frequency (MHz)	Reading (dBµV)	Detector Mode	Ant. Pol. (H/V)	Ant. Factor	Cable Loss	DUTY Factor	AMP Factor	Total (dBµV/m)	Limits (dBµV/m)	Margin (dB)
Low Channel										
10 360.00	51.28	Peak	H	39.20	18.07	-	46.00	62.55	68.20	5.65
10 360.00	51.06	Peak	V	39.20	18.07	-	46.00	62.33	68.20	5.87
Middle Channel										
10 440.00	51.64	Peak	H	39.30	18.07	-	46.00	63.01	68.20	5.19
10 440.00	50.91	Peak	V	39.30	18.07	-	46.00	62.28	68.20	5.92
High Channel										
10 480.00	50.18	Peak	H	39.40	18.07	-	46.00	61.65	68.20	6.55
10 480.00	49.56	Peak	V	39.40	18.07	-	46.00	61.03	68.20	7.17

Remark - “H”: Horizontal, “V”: Vertical

Margin (dB) = Limits (dBµV/m) - Emission Level (dBµV/m)

13.6.1.2 Test data for 802.11ac_VHT20 RLAN Mode

-. Resolution bandwidth : 1 MHz and Peak Detector for Peak Mode for the emissions fall in restricted band,
1 MHz and RMS Detector for Average Mode for the emissions fall in restricted band
100 kHz for Peak Mode for the emissions outside restricted band

-. Video bandwidth : 3 MHz for Peak and Average Mode

-. Frequency range : 1 GHz ~ 40 GHz

-. Measurement distance : 3 m

-. Duty Cycle : 91.67 % [Antenna 0] / 90.34 % [Antenna 1]

-. Operating mode : Transmitting mode

Frequency (MHz)	Reading (dBµV)	Detector Mode	Ant. Pol. (H/V)	Ant. Factor	Cable Loss	DUTY Factor	AMP Factor	Total (dBµV/m)	Limits (dBµV/m)	Margin (dB)
Low Channel										
10 360.00	50.95	Peak	H	39.20	18.07	-	46.00	62.22	68.20	5.98
10 360.00	50.70	Peak	V	39.20	18.07	-	46.00	61.97	68.20	6.23
Middle Channel										
10 440.00	50.16	Peak	H	39.30	18.07	-	46.00	61.53	68.20	6.67
10 440.00	49.91	Peak	V	39.30	18.07	-	46.00	61.28	68.20	6.92
High Channel										
10 480.00	49.82	Peak	H	39.40	18.07	-	46.00	61.29	68.20	6.91
10 480.00	50.17	Peak	V	39.40	18.07	-	46.00	61.64	68.20	6.56

Remark - “H”: Horizontal, “V”: Vertical

Margin (dB) = Limits (dBµV/m) - Emission Level (dBµV/m)

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13.6.1.3 Test data for 802.11n_HT40 RLAN Mode

-. Resolution bandwidth : 1 MHz and Peak Detector for Peak Mode for the emissions fall in restricted band,
1 MHz and RMS Detector for Average Mode for the emissions fall in restricted band
100 kHz for Peak Mode for the emissions outside restricted band

-. Video bandwidth : 3 MHz for Peak and Average Mode

-. Frequency range : 1 GHz ~ 40 GHz

-. Measurement distance : 3 m

-. Duty Cycle : 73.91 % [Antenna 0] / 71.74 % [Antenna 1]

-. Operating mode : Transmitting mode

Frequency (MHz)	Reading (dBµV)	Detector Mode	Ant. Pol. (H/V)	Ant. Factor	Cable Loss	DUTY Factor	AMP Factor	Total (dBµV/m)	Limits (dBµV/m)	Margin (dB)
Low Channel										
10 380.00	50.36	Peak	H	39.20	18.07	-	46.00	61.63	68.20	6.57
10 380.00	51.90	Peak	V	39.20	18.07	-	46.00	63.17	68.20	5.03
High Channel										
10 460.00	50.40	Peak	H	39.30	18.07	-	46.00	61.77	68.20	6.43
10 460.00	50.02	Peak	V	39.30	18.07	-	46.00	61.39	68.20	6.81

Remark - “H”: Horizontal, “V”: Vertical

Margin (dB) = Limits (dBµV/m) - Emission Level (dBµV/m)

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13.6.1.4 Test data for 802.11ac_VHT40 RLAN Mode

-. Resolution bandwidth : 1 MHz and Peak Detector for Peak Mode for the emissions fall in restricted band,
1 MHz and RMS Detector for Average Mode for the emissions fall in restricted band
100 kHz for Peak Mode for the emissions outside restricted band

-. Video bandwidth : 3 MHz for Peak and Average Mode

-. Frequency range : 1 GHz ~ 40 GHz

-. Measurement distance : 3 m

-. Duty Cycle : 84.42 % [Antenna 0] / 83.33 % [Antenna 1]

-. Operating mode : Transmitting mode

Frequency (MHz)	Reading (dBµV)	Detector Mode	Ant. Pol. (H/V)	Ant. Factor	Cable Loss	DUTY Factor	AMP Factor	Total (dBµV/m)	Limits (dBµV/m)	Margin (dB)
Low Channel										
10 380.00	50.61	Peak	H	39.20	18.07	-	46.00	61.88	68.20	6.32
10 380.00	49.89	Peak	V	39.20	18.07	-	46.00	61.16	68.20	7.04
High Channel										
10 460.00	50.22	Peak	H	39.30	18.07	-	46.00	61.59	68.20	6.61
10 460.00	48.64	Peak	V	39.30	18.07	-	46.00	60.01	68.20	8.19

Remark - “H”: Horizontal, “V”: Vertical

Margin (dB) = Limits (dBµV/m) - Emission Level (dBµV/m)

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13.6.1.5 Test data for 802.11ac_HT80 RLAN Mode

-. Resolution bandwidth : 1 MHz and Peak Detector for Peak Mode for the emissions fall in restricted band,
1 MHz and RMS Detector for Average Mode for the emissions fall in restricted band
100 kHz for Peak Mode for the emissions outside restricted band

-. Video bandwidth : 3 MHz for Peak and Average Mode

-. Frequency range : 1 GHz ~ 40 GHz

-. Measurement distance : 3 m

-. Duty Cycle : 72.73 % [Antenna 0] / 72.09 % [Antenna 1]

-. Operating mode : Transmitting mode

Frequency (MHz)	Reading (dBµV)	Detector Mode	Ant. Pol. (H/V)	Ant. Factor	Cable Loss	DUTY Factor	AMP Factor	Total (dBµV/m)	Limits (dBµV/m)	Margin (dB)
Middle Channel										
10 420.00	50.41	Peak	H	39.30	18.07	-	46.00	61.78	68.20	6.42
10 420.00	50.13	Peak	V	39.30	18.07	-	46.00	61.50	68.20	6.70

Remark - “H”: Horizontal, “V”: Vertical

Margin (dB) = Limits (dBµV/m) - Emission Level (dBµV/m)

13.6.2 Test data for Frequency UNII 3

13.6.2.1 Test data for 802.11a RLAN Mode

-. Resolution bandwidth : 1 MHz and Peak Detector for Peak Mode for the emissions fall in restricted band,
1 MHz and RMS Detector for Average Mode for the emissions fall in restricted band
100 kHz for Peak Mode for the emissions outside restricted band

-. Video bandwidth : 3 MHz for Peak and Average Mode

-. Frequency range : 1 GHz ~ 40 GHz

-. Measurement distance : 3 m

-. Duty Cycle : 90.38 % [Antenna 0] / 90.38 % [Antenna 1]

-. Operating mode : Transmitting mode

Frequency (MHz)	Reading (dBµV)	Detector Mode	Ant. Pol. (H/V)	Ant. Factor	Cable Loss	DUTY Factor	AMP Factor	Total (dBµV/m)	Limits (dBµV/m)	Margin (dB)
Low Channel										
11 490.00	48.56	Peak	H	39.30	18.65	-	46.35	60.16	74.00	13.84
11 490.00	35.36	Average	H	39.30	18.65	0.44	46.35	47.40	54.00	6.60
11 490.00	48.81	Peak	V	39.30	18.65	-	46.35	60.41	74.00	13.59
11 490.00	35.21	Average	V	39.30	18.65	0.44	46.35	47.25	54.00	6.75
Middle Channel										
11 570.00	49.81	Peak	H	39.40	18.67	-	46.35	61.53	74.00	12.47
11 570.00	35.61	Average	H	39.40	18.67	0.44	46.35	47.77	54.00	6.23
11 570.00	48.99	Peak	V	39.40	18.67	-	46.35	60.71	74.00	13.29
11 570.00	35.43	Average	V	39.40	18.67	0.44	46.35	47.59	54.00	6.41
High Channel										
11 650.00	48.98	Peak	H	39.70	18.71	-	46.35	61.04	74.00	12.96
11 650.00	35.56	Average	H	39.70	18.71	0.44	46.35	48.06	54.00	5.94
11 650.00	48.56	Peak	V	39.70	18.71	-	46.35	60.62	74.00	13.38
11 650.00	34.95	Average	V	39.70	18.71	0.44	46.35	47.45	54.00	6.55

Remark - “H”: Horizontal, “V”: Vertical

Margin (dB) = Limits (dBµV/m) - Emission Level (dBµV/m)

13.6.2.2 Test data for 802.11n_HT20 RLAN Mode

-. Resolution bandwidth : 1 MHz and Peak Detector for Peak Mode for the emissions fall in restricted band,
1 MHz and RMS Detector for Average Mode for the emissions fall in restricted band
100 kHz for Peak Mode for the emissions outside restricted band

-. Video bandwidth : 3 MHz for Peak and Average Mode

-. Frequency range : 1 GHz ~ 40 GHz

-. Measurement distance : 3 m

-. Duty Cycle : 83.54 % [Antenna 0] / 83.54 % [Antenna 1]

-. Operating mode : Transmitting mode

Frequency (MHz)	Reading (dBµV)	Detector Mode	Ant. Pol. (H/V)	Ant. Factor	Cable Loss	DUTY Factor	AMP Factor	Total (dBµV/m)	Limits (dBµV/m)	Margin (dB)
Low Channel										
11 490.00	48.95	Peak	H	39.30	18.65	-	46.35	60.55	74.00	13.45
11 490.00	35.16	Average	H	39.30	18.65	0.78	46.35	47.54	54.00	6.46
11 490.00	48.89	Peak	V	39.30	18.65	-	46.35	60.49	74.00	13.51
11 490.00	35.06	Average	V	39.30	18.65	0.78	46.35	47.44	54.00	6.56
Middle Channel										
11 570.00	48.76	Peak	H	39.40	18.67	-	46.35	60.48	74.00	13.52
11 570.00	34.93	Average	H	39.40	18.67	0.78	46.35	47.43	54.00	6.57
11 570.00	48.85	Peak	V	39.40	18.67	-	46.35	60.57	74.00	13.43
11 570.00	35.12	Average	V	39.40	18.67	0.78	46.35	47.62	54.00	6.38
High Channel										
11 650.00	48.88	Peak	H	39.70	18.71	-	46.35	60.94	74.00	13.06
11 650.00	35.98	Average	H	39.70	18.71	0.78	46.35	48.82	54.00	5.18
11 650.00	48.68	Peak	V	39.70	18.71	-	46.35	60.74	74.00	13.26
11 650.00	35.09	Average	V	39.70	18.71	0.78	46.35	47.93	54.00	6.07

Remark - “H”: Horizontal, “V”: Vertical

Margin (dB) = Limits (dBµV/m) - Emission Level (dBµV/m)

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13.6.2.3 Test data for 802.11ac_VHT20 RLAN Mode

-. Resolution bandwidth : 1 MHz and Peak Detector for Peak Mode for the emissions fall in restricted band,
1 MHz and RMS Detector for Average Mode for the emissions fall in restricted band
100 kHz for Peak Mode for the emissions outside restricted band

-. Video bandwidth : 3 MHz for Peak and Average Mode

-. Frequency range : 1 GHz ~ 40 GHz

-. Measurement distance : 3 m

-. Duty Cycle : 91.72 % [Antenna 0] / 91.67 % [Antenna 1]

-. Operating mode : Transmitting mode

Frequency (MHz)	Reading (dBµV)	Detector Mode	Ant. Pol. (H/V)	Ant. Factor	Cable Loss	DUTY Factor	AMP Factor	Total (dBµV/m)	Limits (dBµV/m)	Margin (dB)
Low Channel										
11 490.00	48.95	Peak	H	39.30	18.65	-	46.35	60.55	74.00	13.45
11 490.00	35.16	Average	H	39.30	18.65	0.38	46.35	47.14	54.00	6.86
11 490.00	48.89	Peak	V	39.30	18.65	-	46.35	60.49	74.00	13.51
11 490.00	35.09	Average	V	39.30	18.65	0.38	46.35	47.07	54.00	6.93
Middle Channel										
11 570.00	48.95	Peak	H	39.40	18.67	-	46.35	60.67	74.00	13.33
11 570.00	35.31	Average	H	39.40	18.67	0.38	46.35	47.41	54.00	6.59
11 570.00	48.95	Peak	V	39.40	18.67	-	46.35	60.67	74.00	13.33
11 570.00	35.61	Average	V	39.40	18.67	0.38	46.35	47.71	54.00	6.29
High Channel										
11 650.00	48.91	Peak	H	39.70	18.71	-	46.35	60.97	74.00	13.03
11 650.00	35.91	Average	H	39.70	18.71	0.38	46.35	48.35	54.00	5.65
11 650.00	48.68	Peak	V	39.70	18.71	-	46.35	60.74	74.00	13.26
11 650.00	35.38	Average	V	39.70	18.71	0.38	46.35	47.82	54.00	6.18

Remark - “H”: Horizontal, “V”: Vertical

Margin (dB) = Limits (dBµV/m) - Emission Level (dBµV/m)

13.6.2.4 Test data for 802.11n_HT40 RLAN Mode

-. Resolution bandwidth : 1 MHz and Peak Detector for Peak Mode for the emissions fall in restricted band,
1 MHz and RMS Detector for Average Mode for the emissions fall in restricted band
100 kHz for Peak Mode for the emissions outside restricted band

-. Video bandwidth : 3 MHz for Peak and Average Mode

-. Frequency range : 1 GHz ~ 40 GHz

-. Measurement distance : 3 m

-. Duty Cycle : 73.91 % [Antenna 0] / 71.74 % [Antenna 1]

-. Operating mode : Transmitting mode

Frequency (MHz)	Reading (dBµV)	Detector Mode	Ant. Pol. (H/V)	Ant. Factor	Cable Loss	DUTY Factor	AMP Factor	Total (dBµV/m)	Limits (dBµV/m)	Margin (dB)
Low Channel										
11 510.00	48.95	Peak	H	39.30	18.65	-	46.35	60.55	74.00	13.45
11 510.00	35.11	Average	H	39.30	18.65	1.44	46.35	48.15	54.00	5.85
11 510.00	49.31	Peak	V	39.30	18.65	-	46.35	60.91	74.00	13.09
11 510.00	35.33	Average	V	39.30	18.65	1.44	46.35	48.37	54.00	5.63
High Channel										
11 590.00	48.92	Peak	H	39.40	18.67	-	46.35	60.64	74.00	13.36
11 590.00	35.21	Average	H	39.40	18.67	1.44	46.35	48.37	54.00	5.63
11 590.00	48.96	Peak	V	39.40	18.67	-	46.35	60.68	74.00	13.32
11 590.00	35.18	Average	V	39.40	18.67	1.44	46.35	48.34	54.00	5.66

Remark - “H”: Horizontal, “V”: Vertical

Margin (dB) = Limits (dBµV/m) - Emission Level (dBµV/m)

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13.6.2.5 Test data for 802.11ac_VHT40 RLAN Mode

-. Resolution bandwidth : 1 MHz and Peak Detector for Peak Mode for the emissions fall in restricted band,
1 MHz and RMS Detector for Average Mode for the emissions fall in restricted band
100 kHz for Peak Mode for the emissions outside restricted band

-. Video bandwidth : 3 MHz for Peak and Average Mode

-. Frequency range : 1 GHz ~ 40 GHz

-. Measurement distance : 3 m

-. Duty Cycle : 84.21 % [Antenna 0] / 83.12 % [Antenna 1]

-. Operating mode : Transmitting mode

Frequency (MHz)	Reading (dBµV)	Detector Mode	Ant. Pol. (H/V)	Ant. Factor	Cable Loss	DUTY Factor	AMP Factor	Total (dBµV/m)	Limits (dBµV/m)	Margin (dB)
Low Channel										
11 510.00	48.88	Peak	H	39.30	18.65	-	46.35	60.48	74.00	13.52
11 510.00	35.16	Average	H	39.30	18.65	0.80	46.35	47.56	54.00	6.44
11 510.00	49.31	Peak	V	39.30	18.65	-	46.35	60.91	74.00	13.09
11 510.00	35.38	Average	V	39.30	18.65	0.80	46.35	47.78	54.00	6.22
High Channel										
11 590.00	48.92	Peak	H	39.40	18.67	-	46.35	60.64	74.00	13.36
11 590.00	35.61	Average	H	39.40	18.67	0.80	46.35	48.13	54.00	5.87
11 590.00	48.89	Peak	V	39.40	18.67	-	46.35	60.61	74.00	13.39
11 590.00	35.67	Average	V	39.40	18.67	0.80	46.35	48.19	54.00	5.81

Remark - “H”: Horizontal, “V”: Vertical

Margin (dB) = Limits (dBµV/m) - Emission Level (dBµV/m)

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13.6.2.6 Test data for 802.11ac_HT80 RLAN Mode

13.6.2.6.1 Test data for Multiple Transmit

-. Resolution bandwidth : 1 MHz and Peak Detector for Peak Mode for the emissions fall in restricted band,
1 MHz and RMS Detector for Average Mode for the emissions fall in restricted band
100 kHz for Peak Mode for the emissions outside restricted band

-. Video bandwidth : 3 MHz for Peak and Average Mode

-. Frequency range : 1 GHz ~ 40 GHz

-. Measurement distance : 3 m

-. Duty Cycle : 70.45 % [Antenna 0] / 72.09 % [Antenna 1]

-. Operating mode : Transmitting mode

Frequency (MHz)	Reading (dBµV)	Detector Mode	Ant. Pol. (H/V)	Ant. Factor	Cable Loss	DUTY Factor	AMP Factor	Total (dBµV/m)	Limits (dBµV/m)	Margin (dB)
Middle Channel										
11 550.00	49.95	Peak	H	39.40	18.67	-	46.35	61.67	68.20	6.53
11 550.00	49.91	Peak	V	39.40	18.67	-	46.35	61.63	68.20	6.57

Remark - “H”: Horizontal, “V”: Vertical

Margin (dB) = Limits (dBµV/m) - Emission Level (dBµV/m)

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14. RADIATED RESTRICTED BAND EDGE MEASUREMENTS

14.1 Operating environment

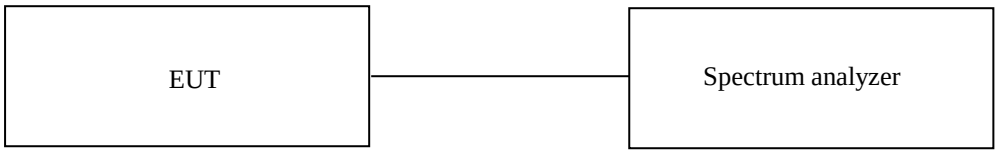
Temperature : 23 °C

Relative humidity : 45 % R.H.

14.2 Test set-up for conducted measurement

The radiated emissions measurements were performed on the 3 m, open-field test site. The EUT was placed on a non-conductive turntable above the ground plane.

The system was rotated 360°, and the antenna was varied in the height between 1.0 m and 4.0 m in order to determine the maximum emission levels. This procedure was performed for horizontal and vertical polarization of the receiving antenna.



14.3 Test Date

January 07, 2021 ~ January 28, 2021

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14.4 Test data for Frequency UNII I

14.4.1 Test data for 802.11a RLAN Mode

-. Resolution bandwidth : 1 MHz and Peak Detector for Peak Mode
1 MHz and RMS Detector for Average Mode

-. Video bandwidth : 3 MHz for Peak and Average Mode

-. Measurement distance : 3 m

-. Duty Cycle : 90.79 % [Antenna 0] / 90.13 % [Antenna 1]

-. Result : Pass

Frequency (MHz)	Reading (dBµV)	Detector Mode	Ant. Pol. (H/V)	Ant. Factor	Cable Loss	DUTY Factor	AMP FACTOR	Total (dBµV/m)	Limits (dBµV/m)	Margin (dB)
5 149.026	65.54	Peak	H	34.20	12.50	-	46.30	65.94	74.00	8.06
5 112.660	47.64	Average	H	34.20	12.50	0.45	46.30	48.49	54.00	5.51
5 147.080	64.69	Peak	V	34.20	12.50	-	46.30	65.09	74.00	8.91
5 147.730	47.97	Average	V	34.20	12.50	0.45	46.30	48.82	54.00	5.18

Tabulated test data for Restricted Band

Remark - “H”: Horizontal, “V”: Vertical

Margin (dB) = Limits (dBµV/m) - Emission Level (dBµV/m)

14.4.2 Test data for 802.11n_HT20 RLAN Mode

-. Resolution bandwidth : 1 MHz and Peak Detector for Peak Mode
1 MHz and RMS Detector for Average Mode

-. Video bandwidth : 3 MHz for Peak and Average Mode

-. Measurement distance : 3 m

-. Duty Cycle : 83.75 % [Antenna 0] / 83.54 % [Antenna 1]

-. Result : Pass

Frequency (MHz)	Reading (dBµV)	Detector Mode	Ant. Pol. (H/V)	Ant. Factor	Cable Loss	DUTY Factor	AMP FACTOR	Total (dBµV/m)	Limits (dBµV/m)	Margin (dB)
5 121.100	62.11	Peak	H	34.20	12.50	-	46.30	62.51	74.00	11.49
5 147.730	47.61	Average	H	34.20	12.50	0.78	46.30	48.79	54.00	5.21
5 149.680	62.05	Peak	V	34.20	12.50	-	46.30	62.45	74.00	11.55
5 147.080	47.57	Average	V	34.20	12.50	0.78	46.30	48.75	54.00	5.25

Tabulated test data for Restricted Band

Remark - “H”: Horizontal, “V”: Vertical

Margin (dB) = Limits (dBµV/m) - Emission Level (dBµV/m)

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14.4.3 Test data for 802.11ac_VHT20 RLAN Mode

-. Resolution bandwidth : 1 MHz and Peak Detector for Peak Mode
1 MHz and RMS Detector for Average Mode

-. Video bandwidth : 3 MHz for Peak and Average Mode

-. Measurement distance : 3 m

-. Duty Cycle : 91.67 % [Antenna 0] / 90.34 % [Antenna 1]

-. Result : Pass

Frequency (MHz)	Reading (dBµV)	Detector Mode	Ant. Pol. (H/V)	Ant. Factor	Cable Loss	DUTY Factor	AMP FACTOR	Total (dBµV/m)	Limits (dBµV/m)	Margin (dB)
5 132.520	53.63	Peak	H	34.20	12.50	-	46.30	54.03	74.00	19.97
5 106.640	41.40	Average	H	34.20	12.50	0.44	46.30	42.24	54.00	11.76
5 143.010	53.91	Peak	V	34.20	12.50	-	46.30	54.31	74.00	19.69
5 110.840	41.89	Average	V	34.20	12.50	0.44	46.30	42.73	54.00	11.27

Tabulated test data for Restricted Band

Remark - “H”: Horizontal, “V”: Vertical

Margin (dB) = Limits (dBµV/m) - Emission Level (dBµV/m)

14.4.4 Test data for 802.11n_HT40 RLAN Mode

-. Resolution bandwidth : 1 MHz and Peak Detector for Peak Mode
1 MHz and RMS Detector for Average Mode

-. Video bandwidth : 3 MHz for Peak and Average Mode

-. Measurement distance : 3 m

-. Duty Cycle : 73.91 % [Antenna 0] / 71.74 % [Antenna 1]

-. Result : Pass

Frequency (MHz)	Reading (dBµV)	Detector Mode	Ant. Pol. (H/V)	Ant. Factor	Cable Loss	DUTY Factor	AMP FACTOR	Total (dBµV/m)	Limits (dBµV/m)	Margin (dB)
5 149.030	61.23	Peak	H	34.20	12.50	-	46.30	61.63	74.00	12.37
5 149.030	48.84	Average	H	34.20	12.50	1.44	46.30	50.68	54.00	3.32
5 148.380	59.83	Peak	V	34.20	12.50	-	46.30	60.23	74.00	13.77
5 149.680	48.59	Average	V	34.20	12.50	1.44	46.30	50.43	54.00	3.57

Tabulated test data for Restricted Band

Remark - “H”: Horizontal, “V”: Vertical

Margin (dB) = Limits (dBµV/m) - Emission Level (dBµV/m)

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14.4.5 Test data for 802.11ac_VHT40 RLAN Mode

-. Resolution bandwidth : 1 MHz and Peak Detector for Peak Mode
1 MHz and RMS Detector for Average Mode

-. Video bandwidth : 3 MHz for Peak and Average Mode

-. Measurement distance : 3 m

-. Duty Cycle : 84.42 % [Antenna 0] / 83.33 % [Antenna 1]

-. Result : Pass

Frequency (MHz)	Reading (dBµV)	Detector Mode	Ant. Pol. (H/V)	Ant. Factor	Cable Loss	DUTY Factor	AMP FACTOR	Total (dBµV/m)	Limits (dBµV/m)	Margin (dB)
5 149.300	59.19	Peak	H	34.20	12.50	-	46.30	59.59	74.00	14.41
5 150.000	43.19	Average	H	34.20	12.50	0.79	46.30	44.38	54.00	9.62
5 148.600	54.74	Peak	V	34.20	12.50	-	46.30	55.14	74.00	18.86
5 150.000	43.34	Average	V	34.20	12.50	0.79	46.30	44.53	54.00	9.47

Tabulated test data for Restricted Band

Remark - “H”: Horizontal, “V”: Vertical

Margin (dB) = Limits (dBµV/m) - Emission Level (dBµV/m)

14.4.6 Test data for 802.11ac_VHT80 RLAN Mode

-. Resolution bandwidth : 1 MHz and Peak Detector for Peak Mode
1 MHz and RMS Detector for Average Mode

-. Video bandwidth : 3 MHz for Peak and Average Mode

-. Measurement distance : 3 m

-. Duty Cycle : 72.73 % [Antenna 0] / 72.09 % [Antenna 1]

-. Result : Pass

Frequency (MHz)	Reading (dBµV)	Detector Mode	Ant. Pol. (H/V)	Ant. Factor	Cable Loss	DUTY Factor	AMP FACTOR	Total (dBµV/m)	Limits (dBµV/m)	Margin (dB)
5 143.180	59.90	Peak	H	34.20	12.50	-	46.30	60.30	74.00	13.70
5 149.030	48.14	Average	H	34.20	12.50	1.42	46.30	49.96	54.00	4.04
5 147.730	57.76	Peak	V	34.20	12.50	-	46.30	58.16	74.00	15.84
5 148.380	47.75	Average	V	34.20	12.50	1.42	46.30	49.57	54.00	4.43

Tabulated test data for Restricted Band

Remark - “H”: Horizontal, “V”: Vertical

Margin (dB) = Limits (dBµV/m) - Emission Level (dBµV/m)

14.5 Test data for Frequency U-NII-3

14.5.1 Test data for 802.11a RLAN Mode

-. Resolution bandwidth : 1 MHz and Peak Detector for Peak Mode
1 MHz and RMS Detector for Average Mode

-. Video bandwidth : 3 MHz for Peak and Average Mode

-. Measurement distance : 3 m

-. Duty Cycle : 90.38 % [Antenna 0] / 90.38 % [Antenna 1]

-. Result : Pass

Frequency (MHz)	Reading (dBµV)	Detector Mode	Ant. Pol. (H/V)	Ant. Factor	Cable Loss	AMP FACTOR	Total (dBµV/m)	Limits (dBµV/m)	Margin (dB)
Low Channel									
5 699.780	63.04	Peak	H	34.10	15.39	46.25	66.28	105.04	38.76
5 719.950	72.18	Peak	H	34.10	15.39	46.25	75.42	110.78	35.36
5 723.280	76.25	Peak	H	34.10	15.39	46.25	79.49	118.27	38.78
5 850.760	59.01	Peak	H	34.40	15.55	46.23	62.73	120.46	57.73
5 855.450	58.30	Peak	H	34.40	15.55	46.23	62.02	110.67	48.65
5 877.870	58.54	Peak	H	34.40	15.55	46.23	62.26	103.08	40.82
5 697.880	62.89	Peak	V	34.10	15.39	46.25	66.13	103.63	37.50
5 719.950	75.25	Peak	V	34.10	15.39	46.25	78.49	112.58	34.09
5 723.040	77.70	Peak	V	34.10	15.39	46.25	80.94	117.73	36.79
5 854.410	58.66	Peak	V	34.40	15.55	46.23	62.38	112.14	49.76
5 856.090	57.84	Peak	V	34.40	15.55	46.23	61.56	110.49	48.93
5 893.760	58.07	Peak	V	34.40	15.55	46.23	61.79	91.32	29.53

Frequency (MHz)	Reading (dBμV)	Detector Mode	Ant. Pol. (H/V)	Ant. Factor	Cable Loss	AMP FACTOR	Total (dBμV/m)	Limits (dBμV/m)	Margin (dB)
High Channel									
5 653.670	58.57	Peak	H	34.10	15.39	46.25	61.81	70.92	9.11
5 713.720	59.56	Peak	H	34.10	15.39	46.25	62.80	109.04	46.24
5 720.830	58.35	Peak	H	34.10	15.39	46.25	61.59	112.69	51.10
5 850.020	65.94	Peak	H	34.40	15.55	46.23	69.66	122.15	52.49
5 855.870	62.20	Peak	H	34.40	15.55	46.23	65.92	110.55	44.63
5 901.800	59.22	Peak	H	34.40	15.55	46.23	62.94	85.37	22.43
5 677.400	58.10	Peak	V	34.10	15.39	46.25	61.34	88.48	27.14
5 708.560	58.44	Peak	V	34.10	15.39	46.25	61.68	107.59	45.91
5 722.020	58.73	Peak	V	34.10	15.39	46.25	61.97	115.40	53.43
5 852.310	63.67	Peak	V	34.40	15.55	46.23	67.39	116.93	49.54
5 855.490	61.59	Peak	V	34.40	15.55	46.23	65.31	110.66	45.35
5 878.320	59.76	Peak	V	34.40	15.55	46.23	63.48	102.74	39.26

Tabulated test data for Restricted Band

Remark - “H”: Horizontal, “V”: Vertical

Margin (dB) = Limits (dBμV/m) - Emission Level (dBμV/m)

14.5.2 Test data for 802.11n_HT20 RLAN Mode

-. Resolution bandwidth : 1 MHz and Peak Detector for Peak Mode
1 MHz and RMS Detector for Average Mode

-. Video bandwidth : 3 MHz for Peak and Average Mode

-. Measurement distance : 3 m

-. Duty Cycle : 83.54 % [Antenna 0] / 83.54 % [Antenna 1]

-. Result : Pass

Frequency (MHz)	Reading (dBµV)	Detector Mode	Ant. Pol. (H/V)	Ant. Factor	Cable Loss	AMP FACTOR	Total (dBµV/m)	Limits (dBµV/m)	Margin (dB)
Low Channel									
5 671.500	61.71	Peak	H	34.10	15.39	46.25	64.95	84.11	19.16
5 717.930	69.79	Peak	H	34.10	15.39	46.25	73.03	110.22	37.19
5 724.190	74.04	Peak	H	34.10	15.39	46.25	77.28	120.35	43.07
5 851.690	58.61	Peak	H	34.40	15.55	46.23	62.33	118.34	56.01
5 856.390	58.40	Peak	H	34.40	15.55	46.23	62.12	110.41	48.29
5 889.710	57.40	Peak	H	34.40	15.55	46.23	61.12	94.31	33.19
5 666.610	62.67	Peak	V	34.10	15.39	46.25	65.91	80.49	14.58
5 718.550	68.50	Peak	V	34.10	15.39	46.25	71.74	110.39	38.65
5 724.930	72.97	Peak	V	34.10	15.39	46.25	76.21	122.04	45.83
5 852.800	58.44	Peak	V	34.40	15.55	46.23	62.16	115.81	53.65
5 858.650	58.27	Peak	V	34.40	15.55	46.23	61.99	109.77	47.78
5 904.250	57.80	Peak	V	34.40	15.55	46.23	61.52	83.56	22.04

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Frequency (MHz)	Reading (dBμV)	Detector Mode	Ant. Pol. (H/V)	Ant. Factor	Cable Loss	AMP FACTOR	Total (dBμV/m)	Limits (dBμV/m)	Margin (dB)
High Channel									
5 681.140	57.65	Peak	H	34.10	15.39	46.25	60.89	91.24	30.35
5 719.930	59.63	Peak	H	34.10	15.39	46.25	62.87	110.78	47.91
5 722.590	58.75	Peak	H	34.10	15.39	46.25	61.99	116.70	54.71
5 850.660	67.85	Peak	H	34.40	15.55	46.23	71.57	120.69	49.12
5 855.230	62.23	Peak	H	34.40	15.55	46.23	65.95	110.73	44.78
5 897.650	59.88	Peak	H	34.40	15.55	46.23	63.60	88.44	24.84
5 687.590	57.71	Peak	V	34.10	15.39	46.25	60.95	96.02	35.07
5 714.280	58.50	Peak	V	34.10	15.39	46.25	61.74	109.19	47.45
5 724.730	58.37	Peak	V	34.10	15.39	46.25	61.61	121.58	59.97
5 850.420	66.66	Peak	V	34.40	15.55	46.23	70.38	121.24	50.86
5 856.270	60.89	Peak	V	34.40	15.55	46.23	64.61	110.44	45.83
5 894.260	58.58	Peak	V	34.40	15.55	46.23	62.30	90.95	28.65

Tabulated test data for Restricted Band

Remark - “H”: Horizontal, “V”: Vertical

Margin (dB) = Limits (dBμV/m) - Emission Level (dBμV/m)

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14.5.3 Test data for 802.11ac_VHT20 RLAN Mode

-. Resolution bandwidth : 1 MHz and Peak Detector for Peak Mode
1 MHz and RMS Detector for Average Mode

-. Video bandwidth : 3 MHz for Peak and Average Mode

-. Measurement distance : 3 m

-. Duty Cycle : 91.72 % [Antenna 0] / 91.67 % [Antenna 1]

-. Result : Pass

Frequency (MHz)	Reading (dBµV)	Detector Mode	Ant. Pol. (H/V)	Ant. Factor	Cable Loss	AMP FACTOR	Total (dBµV/m)	Limits (dBµV/m)	Margin (dB)
Low Channel									
5 674.650	56.10	Peak	H	34.10	15.39	46.25	59.34	86.44	27.10
5 706.900	57.19	Peak	H	34.10	15.39	46.25	60.43	107.13	46.70
5 721.480	61.19	Peak	H	34.10	15.39	46.25	64.43	114.17	49.74
5 853.000	49.49	Peak	H	34.40	15.55	46.23	53.21	115.36	62.15
5 867.500	49.19	Peak	H	34.40	15.55	46.23	52.91	107.30	54.39
5 893.610	50.29	Peak	H	34.40	15.55	46.23	54.01	91.43	37.42
5 677.000	55.12	Peak	V	34.10	15.39	46.25	58.36	88.18	29.82
5 711.480	55.87	Peak	V	34.10	15.39	46.25	59.11	108.41	49.30
5 723.370	57.85	Peak	V	34.10	15.39	46.25	61.09	118.48	57.39
5 853.370	49.73	Peak	V	34.40	15.55	46.23	53.45	114.51	61.06
5 864.060	49.50	Peak	V	34.40	15.55	46.23	53.22	108.26	55.04
5 891.860	49.63	Peak	V	34.40	15.55	46.23	53.35	92.72	39.37

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Frequency (MHz)	Reading (dBμV)	Detector Mode	Ant. Pol. (H/V)	Ant. Factor	Cable Loss	AMP FACTOR	Total (dBμV/m)	Limits (dBμV/m)	Margin (dB)
High Channel									
5 670.650	50.60	Peak	H	34.10	15.39	46.25	53.84	83.48	29.64
5 717.050	50.81	Peak	H	34.10	15.39	46.25	54.05	109.97	55.92
5 724.970	49.60	Peak	H	34.10	15.39	46.25	52.84	122.13	69.29
5 851.250	57.44	Peak	H	34.40	15.55	46.23	61.16	119.35	58.19
5 866.800	56.71	Peak	H	34.40	15.55	46.23	60.43	107.49	47.06
5 898.800	53.15	Peak	H	34.40	15.55	46.23	56.87	87.59	30.72
5 676.900	50.04	Peak	V	34.10	15.39	46.25	53.28	88.11	34.83
5 716.670	50.78	Peak	V	34.10	15.39	46.25	54.02	109.86	55.84
5 722.200	50.56	Peak	V	34.10	15.39	46.25	53.80	115.81	62.01
5 850.140	54.94	Peak	V	34.40	15.55	46.23	58.66	121.88	63.22
5 855.350	54.89	Peak	V	34.40	15.55	46.23	58.61	110.70	52.09
5 896.000	53.70	Peak	V	34.40	15.55	46.23	57.42	89.66	32.24

Tabulated test data for Restricted Band

Remark - “H”: Horizontal, “V”: Vertical

Margin (dB) = Limits (dBμV/m) - Emission Level (dBμV/m)

14.5.4 Test data for 802.11n_HT40 RLAN Mode

-. Resolution bandwidth : 1 MHz and Peak Detector for Peak Mode
1 MHz and RMS Detector for Average Mode

-. Video bandwidth : 3 MHz for Peak and Average Mode

-. Measurement distance : 3 m

-. Duty Cycle : 73.91 % [Antenna 0] / 71.74 % [Antenna 1]

-. Result : Pass

Frequency (MHz)	Reading (dBµV)	Detector Mode	Ant. Pol. (H/V)	Ant. Factor	Cable Loss	AMP FACTOR	Total (dBµV/m)	Limits (dBµV/m)	Margin (dB)
Low Channel									
5 699.630	65.99	Peak	H	34.10	15.39	46.25	69.23	104.93	35.70
5 719.890	75.33	Peak	H	34.10	15.39	46.25	78.57	110.76	32.19
5 720.030	76.29	Peak	H	34.10	15.39	46.25	79.53	110.86	31.33
5 850.630	57.82	Peak	H	34.40	15.55	46.23	61.54	120.76	59.22
5 864.660	58.19	Peak	H	34.40	15.55	46.23	61.91	108.09	46.18
5 904.200	58.09	Peak	H	34.40	15.55	46.23	61.81	83.59	21.78
5 698.280	63.26	Peak	V	34.10	15.39	46.25	66.50	103.93	37.43
5 719.670	72.92	Peak	V	34.10	15.39	46.25	76.16	110.70	34.54
5 721.500	72.57	Peak	V	34.10	15.39	46.25	75.81	114.22	38.41
5 854.730	57.72	Peak	V	34.40	15.55	46.23	61.44	111.41	49.97
5 871.990	57.78	Peak	V	34.40	15.55	46.23	61.50	106.04	44.54
5 887.110	58.06	Peak	V	34.40	15.55	46.23	61.78	96.24	34.46

Frequency (MHz)	Reading (dBμV)	Detector Mode	Ant. Pol. (H/V)	Ant. Factor	Cable Loss	AMP FACTOR	Total (dBμV/m)	Limits (dBμV/m)	Margin (dB)
High Channel									
5 694.580	59.19	Peak	H	34.10	15.39	46.25	62.43	101.19	38.76
5 713.800	61.23	Peak	H	34.10	15.39	46.25	64.47	109.06	44.59
5 722.660	61.32	Peak	H	34.10	15.39	46.25	64.56	116.86	52.30
5 850.820	60.28	Peak	H	34.40	15.55	46.23	64.00	120.33	56.33
5 856.390	59.61	Peak	H	34.40	15.55	46.23	63.33	110.41	47.08
5 875.170	58.87	Peak	H	34.40	15.55	46.23	62.59	105.07	42.48
5 690.980	58.67	Peak	V	34.10	15.39	46.25	61.91	98.53	36.62
5 708.400	60.46	Peak	V	34.10	15.39	46.25	63.70	107.55	43.85
5 722.330	60.78	Peak	V	34.10	15.39	46.25	64.02	116.11	52.09
5 851.250	59.84	Peak	V	34.40	15.55	46.23	63.56	119.35	55.79
5 857.970	58.92	Peak	V	34.40	15.55	46.23	62.64	109.96	47.32
5 895.850	57.79	Peak	V	34.40	15.55	46.23	61.51	89.77	28.26

Tabulated test data for Restricted Band

Remark - “H”: Horizontal, “V”: Vertical

Margin (dB) = Limits (dBμV/m) - Emission Level (dBμV/m)

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14.5.5 Test data for 802.11ac_VHT40 RLAN Mode

-. Resolution bandwidth : 1 MHz and Peak Detector for Peak Mode
1 MHz and RMS Detector for Average Mode

-. Video bandwidth : 3 MHz for Peak and Average Mode

-. Measurement distance : 3 m

-. Duty Cycle : 84.21 % [Antenna 0] / 83.12 % [Antenna 1]

-. Result : Pass

Frequency (MHz)	Reading (dBµV)	Detector Mode	Ant. Pol. (H/V)	Ant. Factor	Cable Loss	AMP FACTOR	Total (dBµV/m)	Limits (dBµV/m)	Margin (dB)
Low Channel									
5 684.040	56.42	Peak	H	34.10	15.39	46.25	59.66	93.39	33.73
5 714.660	62.58	Peak	H	34.10	15.39	46.25	65.82	109.30	43.48
5 720.300	65.45	Peak	H	34.10	15.39	46.25	68.69	111.48	42.79
5 851.770	52.23	Peak	H	34.40	15.55	46.23	55.95	118.16	62.21
5 864.820	51.87	Peak	H	34.40	15.55	46.23	55.59	108.05	52.46
5 877.670	50.79	Peak	H	34.40	15.55	46.23	54.51	103.22	48.71
5 678.250	56.44	Peak	V	34.10	15.39	46.25	59.68	89.11	29.43
5 718.590	63.00	Peak	V	34.10	15.39	46.25	66.24	110.40	44.16
5 724.880	61.88	Peak	V	34.10	15.39	46.25	65.12	121.92	56.80
5 854.990	50.07	Peak	V	34.40	15.55	46.23	53.79	110.82	57.03
5 861.640	50.62	Peak	V	34.40	15.55	46.23	54.34	108.94	54.60
5 880.370	50.08	Peak	V	34.40	15.55	46.23	53.80	101.23	47.43

Frequency (MHz)	Reading (dBμV)	Detector Mode	Ant. Pol. (H/V)	Ant. Factor	Cable Loss	AMP FACTOR	Total (dBμV/m)	Limits (dBμV/m)	Margin (dB)
High Channel									
5 698.280	52.75	Peak	H	34.10	15.39	46.25	55.99	103.93	47.94
5 718.850	56.36	Peak	H	34.10	15.39	46.25	59.60	110.47	50.87
5 721.590	57.07	Peak	H	34.10	15.39	46.25	60.31	114.42	54.11
5 853.830	53.85	Peak	H	34.40	15.55	46.23	57.57	113.46	55.89
5 859.110	54.06	Peak	H	34.40	15.55	46.23	57.78	109.64	51.86
5 875.270	51.29	Peak	H	34.40	15.55	46.23	55.01	105.00	49.99
5 695.780	51.87	Peak	V	34.10	15.39	46.25	55.11	102.08	46.97
5 711.260	54.96	Peak	V	34.10	15.39	46.25	58.20	108.35	50.15
5 721.370	55.22	Peak	V	34.10	15.39	46.25	58.46	113.92	55.46
5 853.240	52.66	Peak	V	34.40	15.55	46.23	56.38	114.81	58.43
5 860.300	52.26	Peak	V	34.40	15.55	46.23	55.98	109.31	53.33
5 876.570	51.00	Peak	V	34.40	15.55	46.23	54.72	104.04	49.32

Tabulated test data for Restricted Band

Remark - “H”: Horizontal, “V”: Vertical

Margin (dB) = Limits (dBμV/m) - Emission Level (dBμV/m)

14.5.6 Test data for 802.11ac_HT80 RLAN Mode

-. Resolution bandwidth : 1 MHz and Peak Detector for Peak Mode
1 MHz and RMS Detector for Average Mode

-. Video bandwidth : 3 MHz for Peak and Average Mode

-. Measurement distance : 3 m

-. Duty Cycle : 70.45 % [Antenna 0] / 72.09 % [Antenna 1]

-. Result : Pass

Frequency (MHz)	Reading (dBµV)	Detector Mode	Ant. Pol. (H/V)	Ant. Factor	Cable Loss	AMP FACTOR	Total (dBµV/m)	Limits (dBµV/m)	Margin (dB)
Middle Channel									
5 678.450	60.17	Peak	H	34.10	15.39	46.25	63.41	89.25	25.84
5 714.040	63.01	Peak	H	34.10	15.39	46.25	66.25	109.13	42.88
5 724.020	63.68	Peak	H	34.10	15.39	46.25	66.92	119.96	53.04
5 851.390	57.10	Peak	H	34.40	15.55	46.23	60.82	119.03	58.21
5 858.770	59.12	Peak	H	34.40	15.55	46.23	62.84	109.74	46.90
5 912.190	51.77	Peak	H	34.40	15.55	46.23	55.49	77.68	22.19
5 697.080	59.41	Peak	V	34.10	15.39	46.25	62.65	103.04	40.39
5 718.430	63.40	Peak	V	34.10	15.39	46.25	66.64	110.36	43.72
5 724.080	63.98	Peak	V	34.10	15.39	46.25	67.22	120.10	52.88
5 850.210	55.71	Peak	V	34.40	15.55	46.23	59.43	121.72	62.29
5 868.840	53.96	Peak	V	34.40	15.55	46.23	57.68	106.92	49.24
5 876.820	50.94	Peak	V	34.40	15.55	46.23	54.66	103.85	49.19

Tabulated test data for Restricted Band

Remark - “H”: Horizontal, “V”: Vertical

Margin (dB) = Limits (dBµV/m) - Emission Level (dBµV/m)

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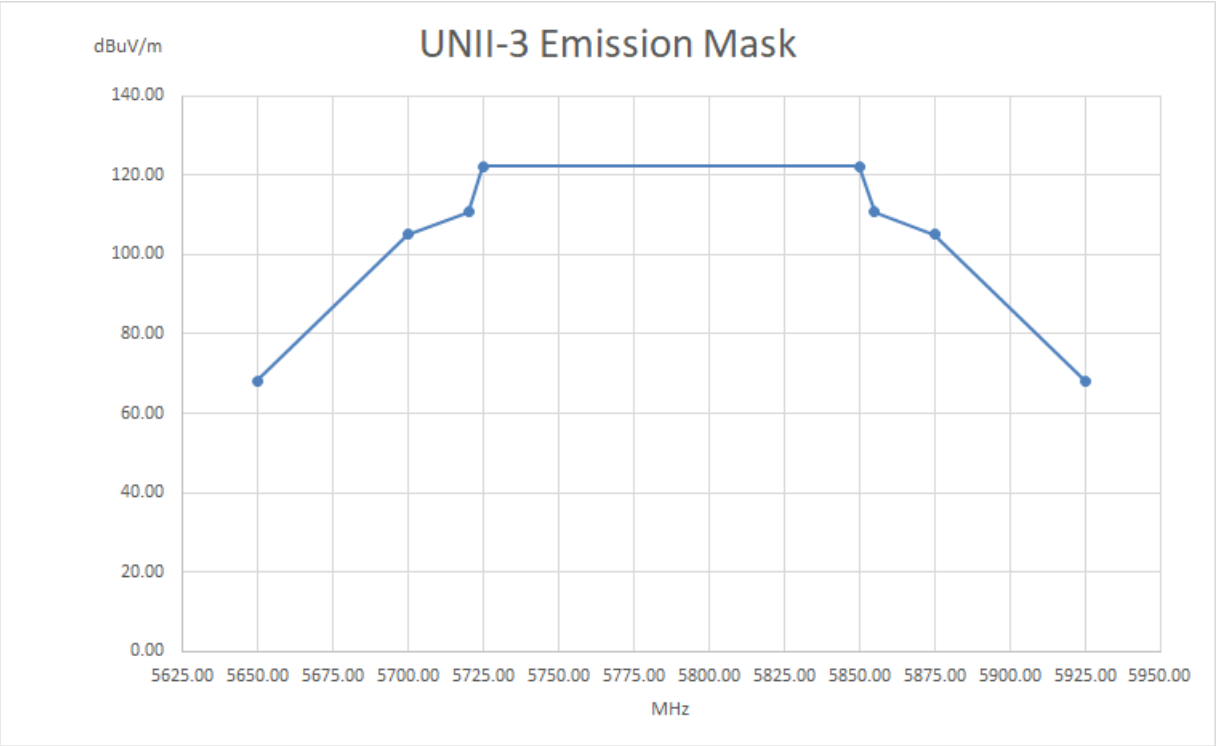
14.5.7 U-NII-3 Emission Limits

14.5.7.1 Emission Mask Plots



Remark.

-. Title 47 → Part 15 → Subpart E—UNLICENSED NATIONAL INFORMATION INFRASTRUCTURE DEVICES

§ 15.407 General technical requirements.

(4) For transmitters operating in the 5.725-5.85 GHz band:

(i) All emissions shall be limited to a level of −27 dBm/MHz at 75 MHz or more above or below the band edge increasing linearly to 10 dBm/MHz at 25 MHz above or below the band edge, and from 25 MHz above or below the band edge increasing linearly to a level of 15.6 dBm/MHz at 5 MHz above or below the band edge, and from 5 MHz above or below the band edge increasing linearly to a level of 27 dBm/MHz at the band edge.

15. LIST OF TEST EQUIPMENT

Model Number	Manufacturer	Description	Serial Number	Last Cal.(Interval)
FSV40-N	Rohde & Schwarz	Signal Analyzer	102177	Apr. 20, 2020 (1Y)
FSW43	Rohde & Schwarz	Signal Analyzer	104544	Jul. 15, 2020 (1Y)
ESW	Rohde & Schwarz	EMI Test Receiver	101851	Mar. 27, 2020 (1Y)
CMW500	Rohde & Schwarz	WIDEBAND RADIO COMMUNICATION TESTER	145762	Feb. 09, 2021 (1Y)
NRP-Z81	Rohde & Schwarz	Wide band Sensor	101975	Feb. 19, 2020 (1Y)
PSL-2KP	ESPEC	Humidity Chamber	14009407	Feb. 16, 2021 (1Y)
E3632A	FinePower	DC Power supply	MY50370016	Feb. 19, 2020 (1Y)
310N	Sonoma Instrument	Pre-Amplifier	392756	Oct. 16, 2020 (1Y)
PAM-118A	Com-Power	Pre-Amplifier	18040081	Oct. 12, 2020 (1Y)
PAM-840A	Com-Power	Pre-Amplifier	461339	Oct. 16, 2020 (1Y)
DT3000-3t	Innco System	Turn Table	DT3000/093	N/A
MA-4000XPET	Innco System	Antenna Master	MA4000/509	N/A
FMZB 1513	Schwarzbeck	Loop Antenna	1513-235	Mar. 24, 2020 (2Y)
HLP-2008	TDK	Hybrid Antenna	131316	Feb. 27, 2020 (2Y)
AH-118	Com-Power	Horn Antenna	10050061	Oct. 15, 2020 (1Y)
BBHA9170	Schwarzbeck	Horn Antenna	BBHA9170178	Jan. 07, 2021(1Y)

All test equipment used is calibrated on a regular basis.