

9.5.6 Test data for Staddle Channel_Multiple Transmit

-. Test Result : Pass

FREQUENCY RANGE (MHz)	CHANNEL	FREQUENCY (MHz)	MEASURED VALUE (dBm)	LIMIT (dBm)	MARGIN (dB)
5 470 ~ 5 725	Middle	5 690.00	7.69	24.00	16.31
5 725 ~ 5 850	Middle	5 690.00	-8.09	30.00	38.09

Remark 1 : Margin = Limit – Measured Value (=Receiver Reading + Cable Loss)

Remark 2 : Calculated Output Power= $10\log (10^{(\text{Antenna1 Output Power}/10)}+10^{(\text{Antenna2 Output Power}/10)})$

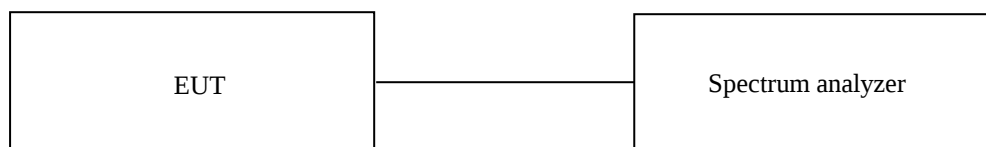
10. PEAK POWER SPECTRUL DENSITY

10.1 Operating environment

Temperature : 24 °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, the video bandwidth is set to 3 times the resolution bandwidth. The maximum level form the EUT in 1 MHz bandwidth was measured with above condition.



10.3 Test Date

March 29, 2021 ~ April 13, 2021

10.4 Test data for 802.11a RLAN Mode

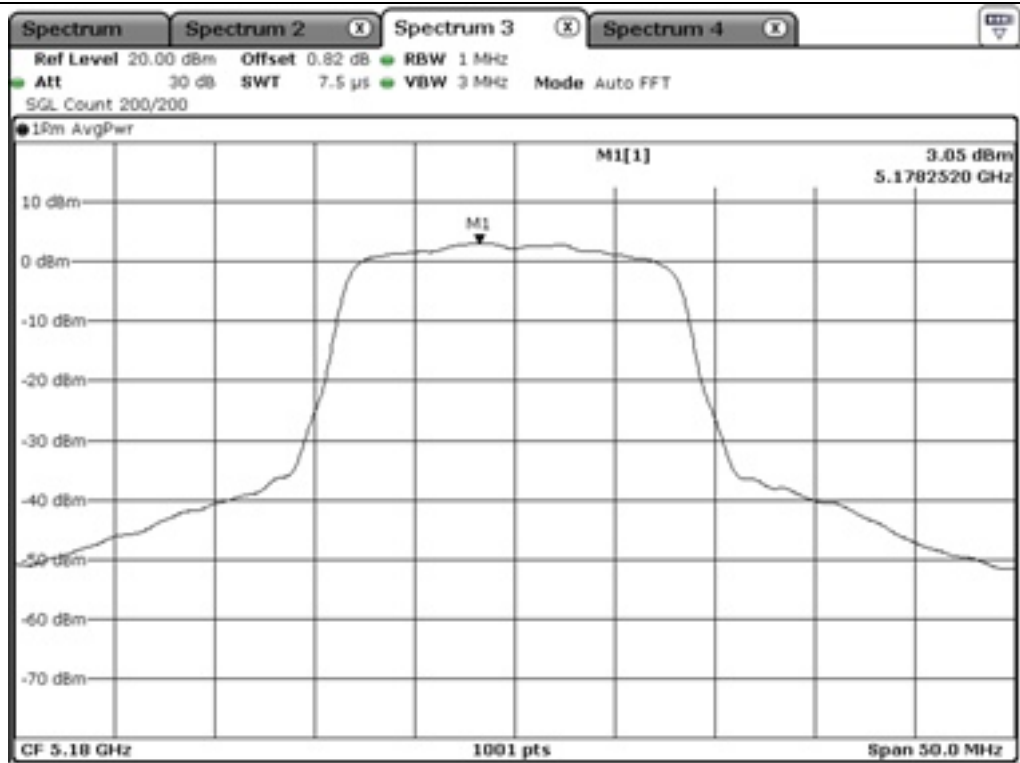
10.4.1 Test data for Antenna 0

-. Operating condition : Highest Output Power Transmitting Mode

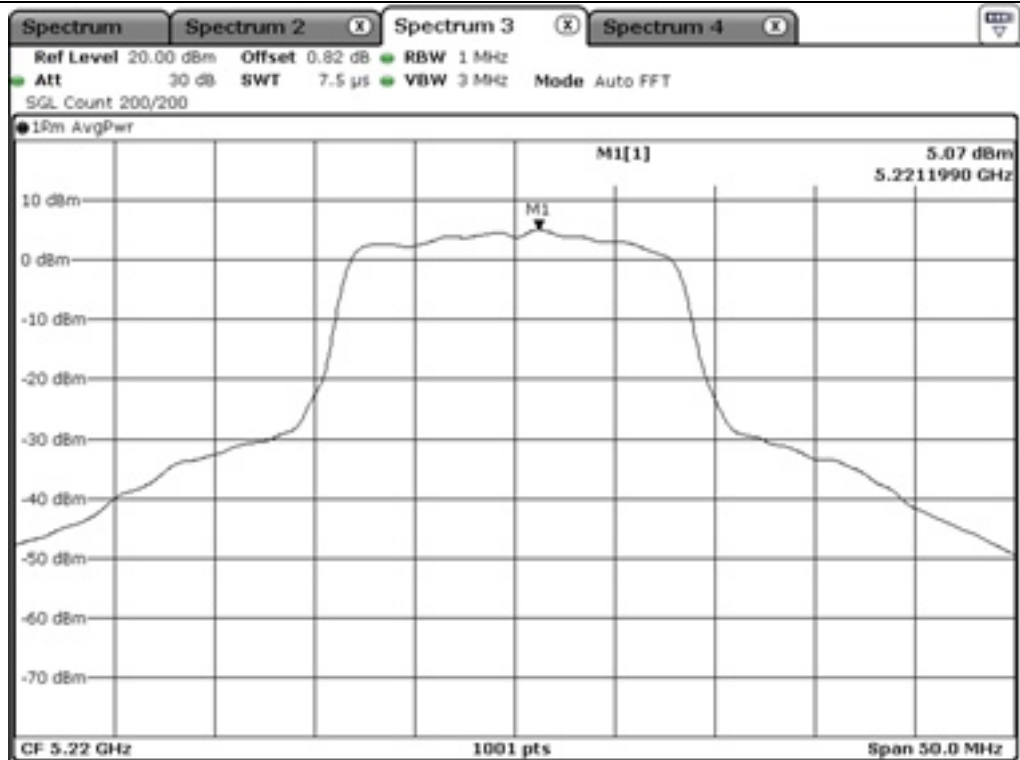
-. Test Result : Pass

FREQUENCY RANGE (MHz)	CHANNEL	FREQUENCY (MHz)	MEASURED VALUE (dBm)	Duty Factor (dB)	Result value' (dBm)	LIMIT (dBm)	MARGIN (dB)
5 150 ~ 5 250	Low	5 180.00	3.05	0.42	3.47	11.00	7.53
	Middle	5 220.00	5.07	0.42	5.49	11.00	5.51
	High	5 240.00	2.26	0.42	2.68	11.00	8.32
5 250 ~ 5 350	Low	5 260.00	5.93	0.39	6.32	11.00	4.68
	Middle	5 300.00	5.41	0.39	5.80	11.00	5.20
	High	5 320.00	4.86	0.39	5.25	11.00	5.75
5 470 ~ 5 725	Low	5 500.00	7.15	0.36	7.51	11.00	3.49
	Middle	5 660.00	6.35	0.36	6.71	11.00	4.29
	High	5 700.00	6.70	0.36	7.06	11.00	3.94
5 725 ~ 5 850	Low	5 745.00	5.72	0.36	6.08	30.00	23.92
	Middle	5 785.00	6.06	0.36	6.42	30.00	23.58
	High	5 825.00	5.66	0.36	6.02	30.00	23.98

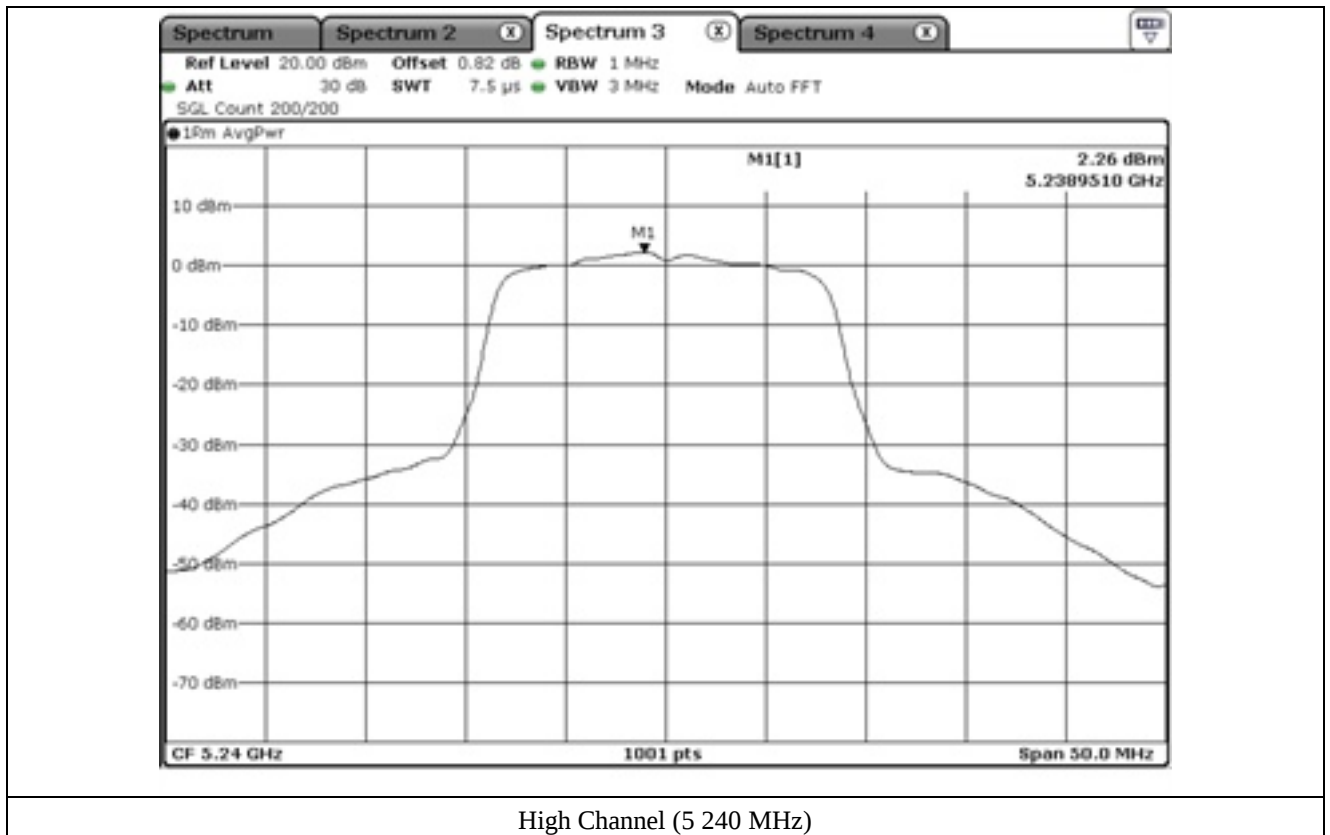
Remark: See next page for measurement data.

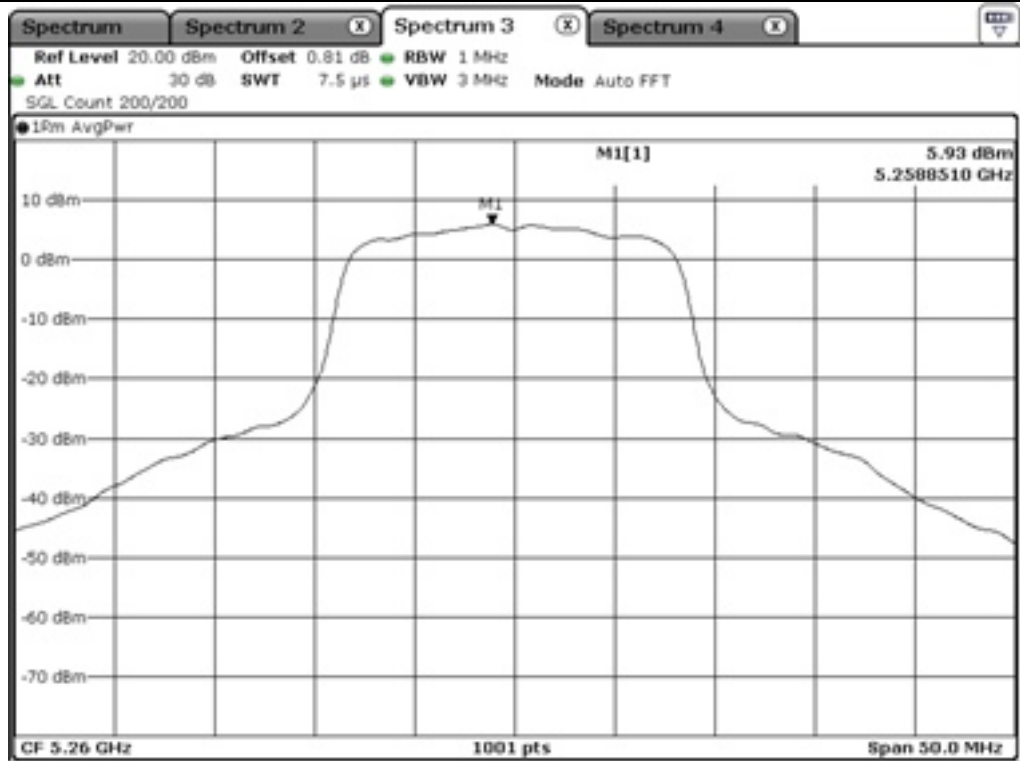


Low Channel (5 180 MHz)

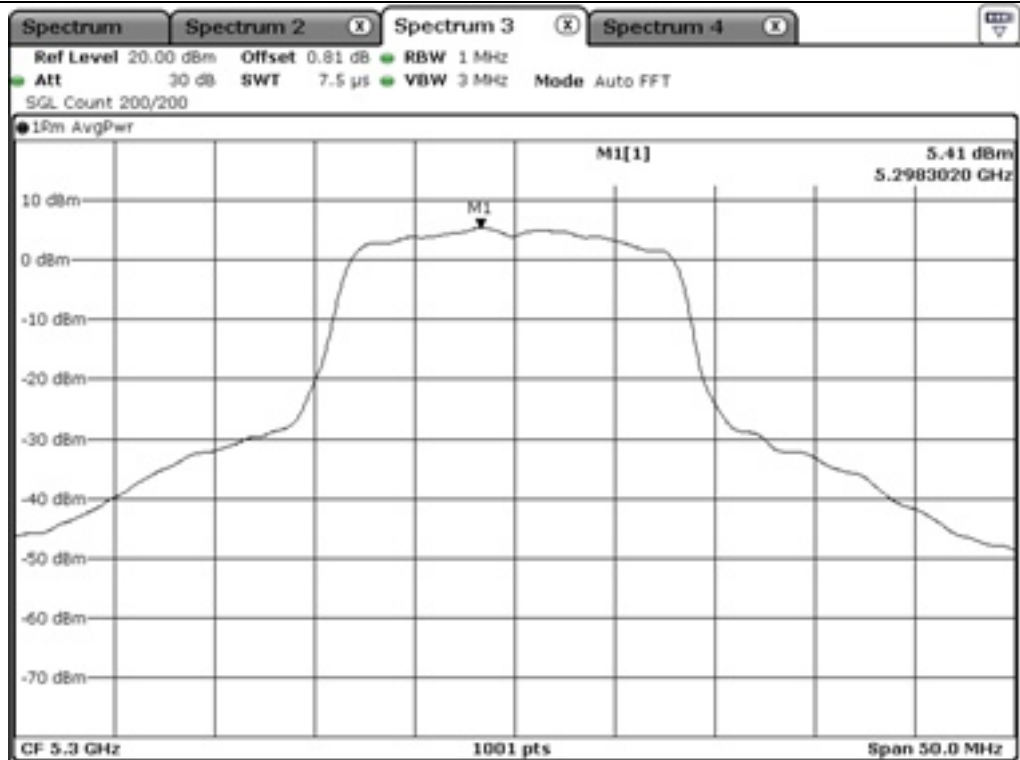


Middle Channel (5 220 MHz)

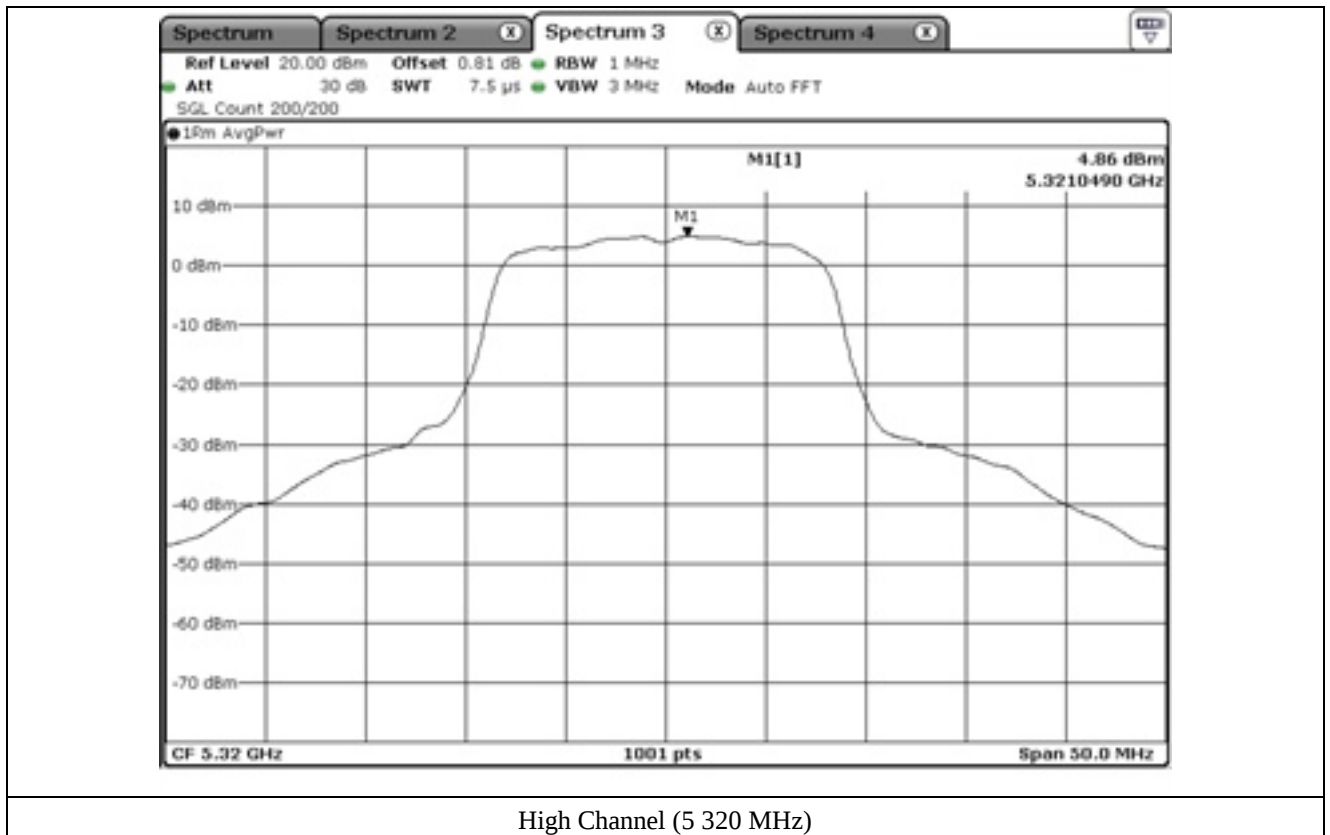


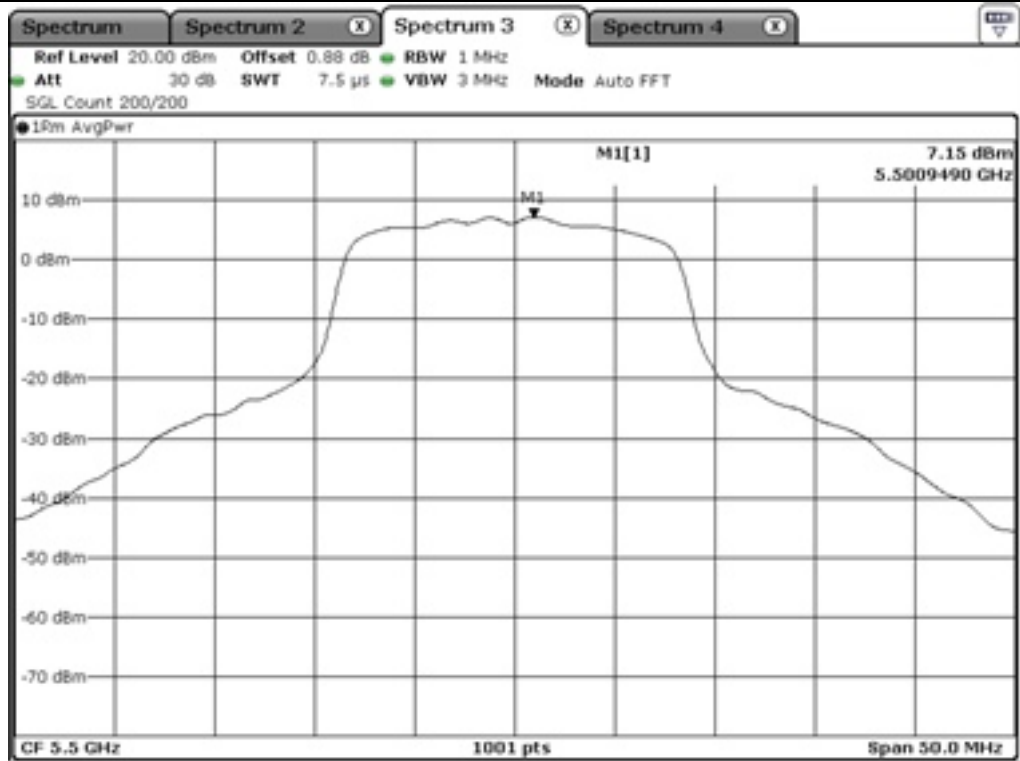


Low Channel (5 260 MHz)

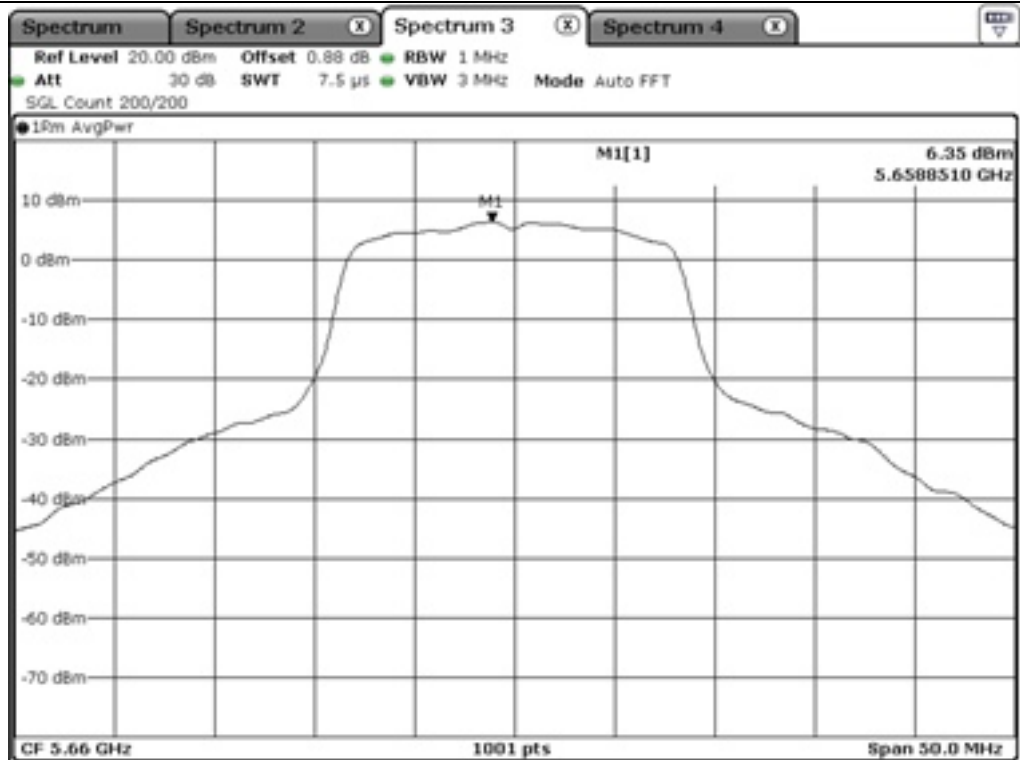


Middle Channel (5 300 MHz)

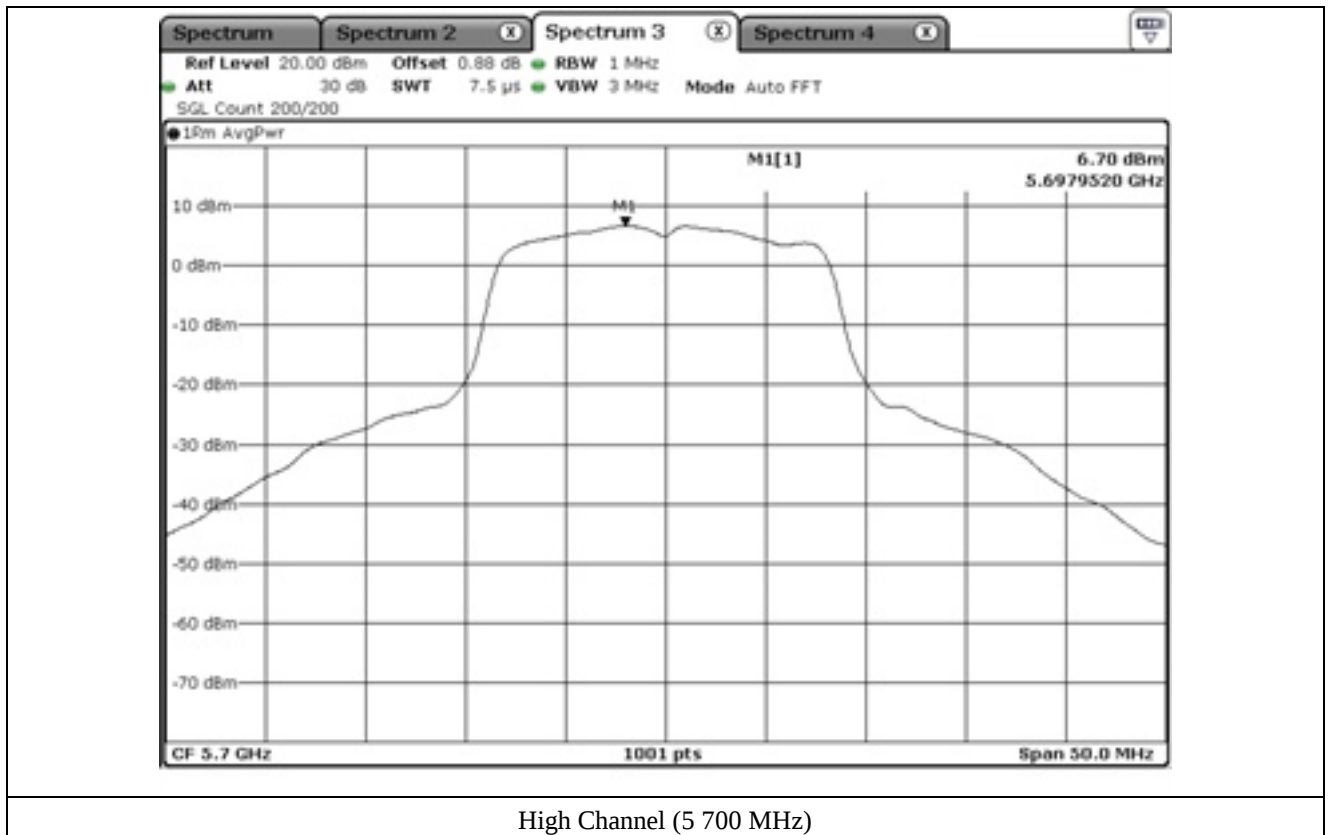


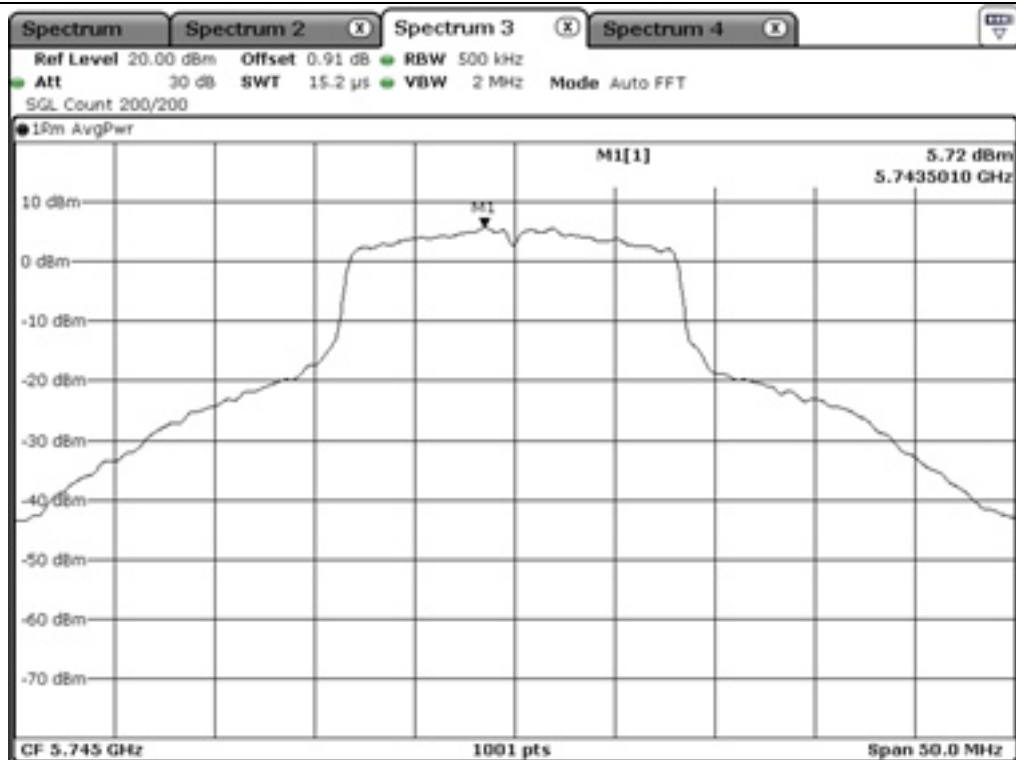


Low Channel (5 500 MHz)

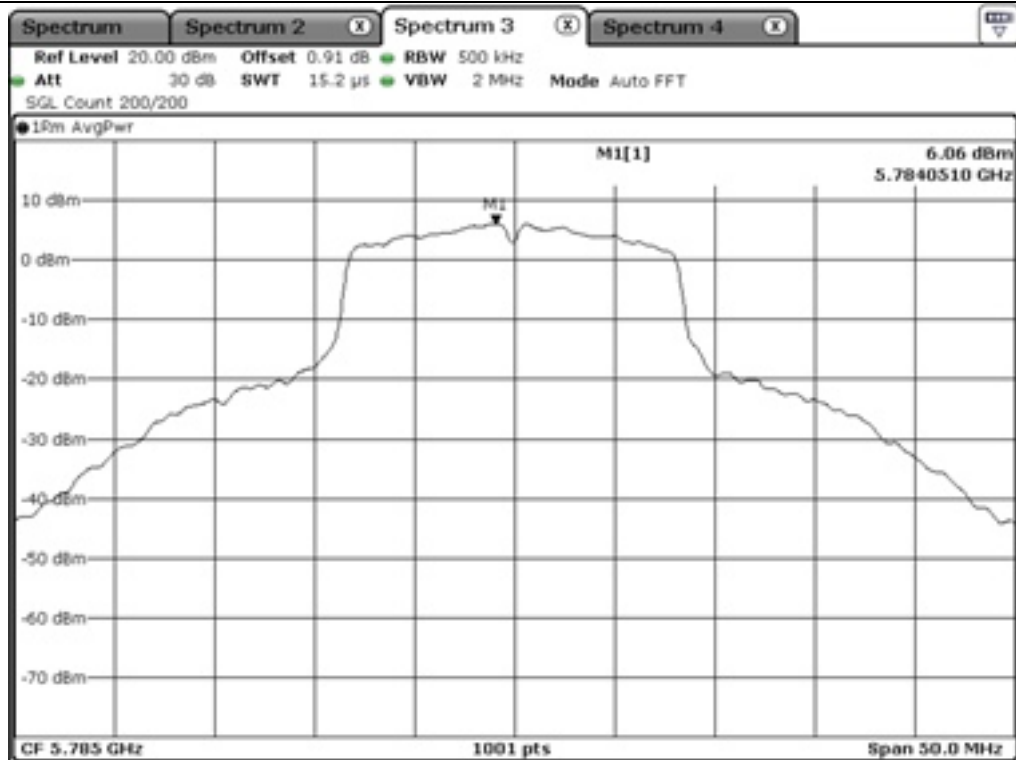


Middle Channel (5 660 MHz)

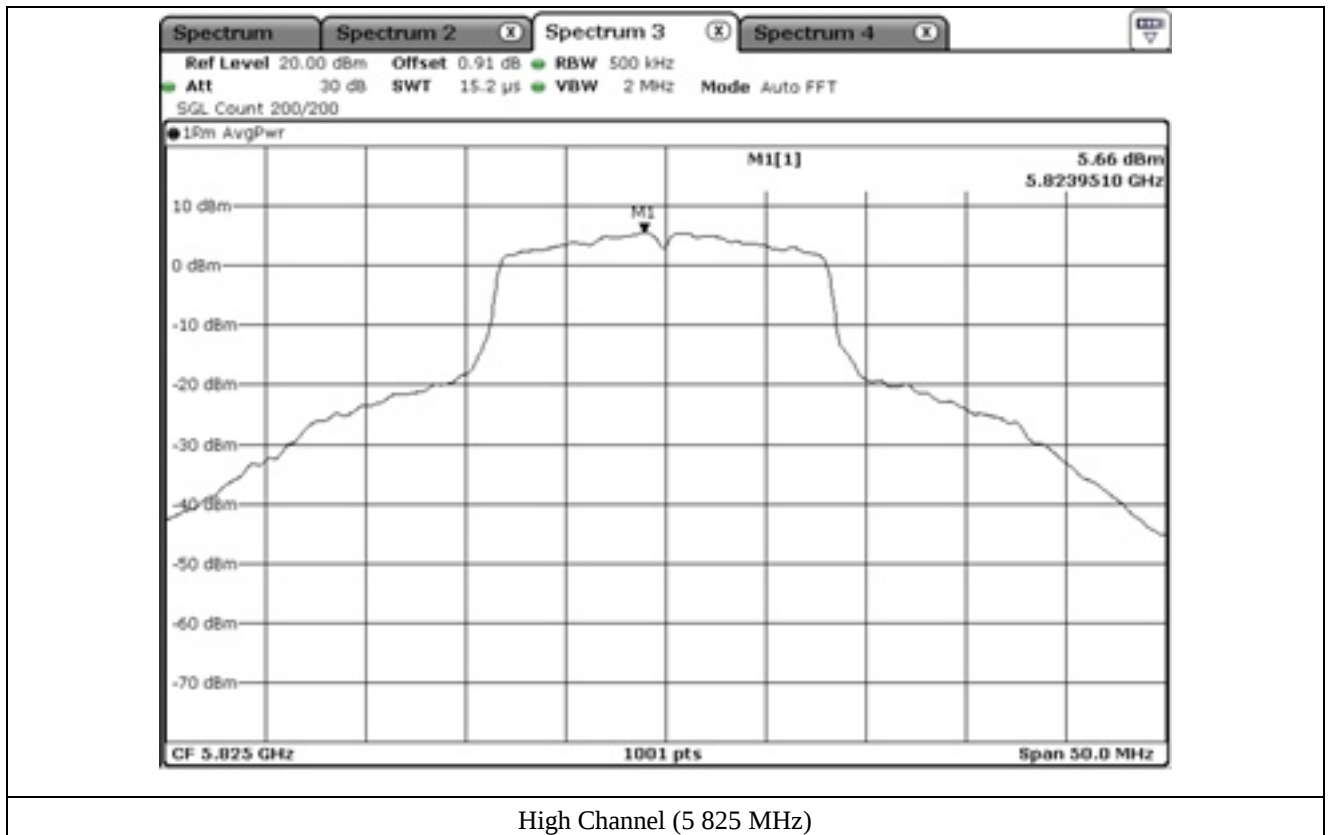




Low Channel (5 745 MHz)



Middle Channel (5 785 MHz)



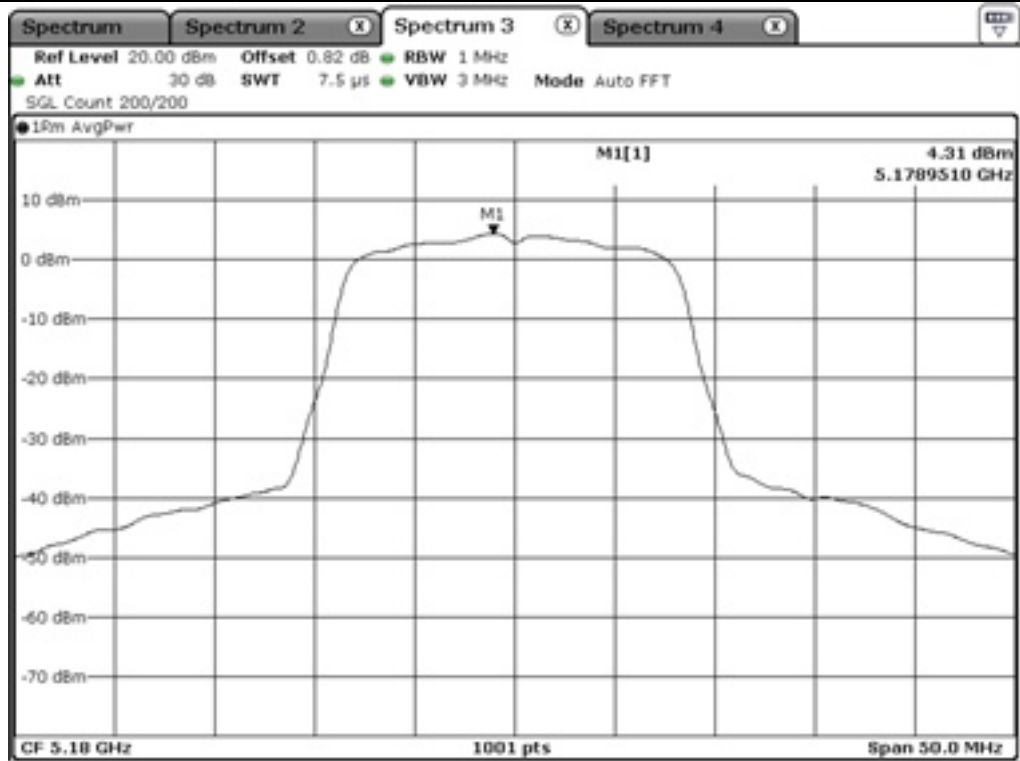
10.4.2 Test data for Antenna 1

-. Operating condition : Highest Output Power Transmitting Mode

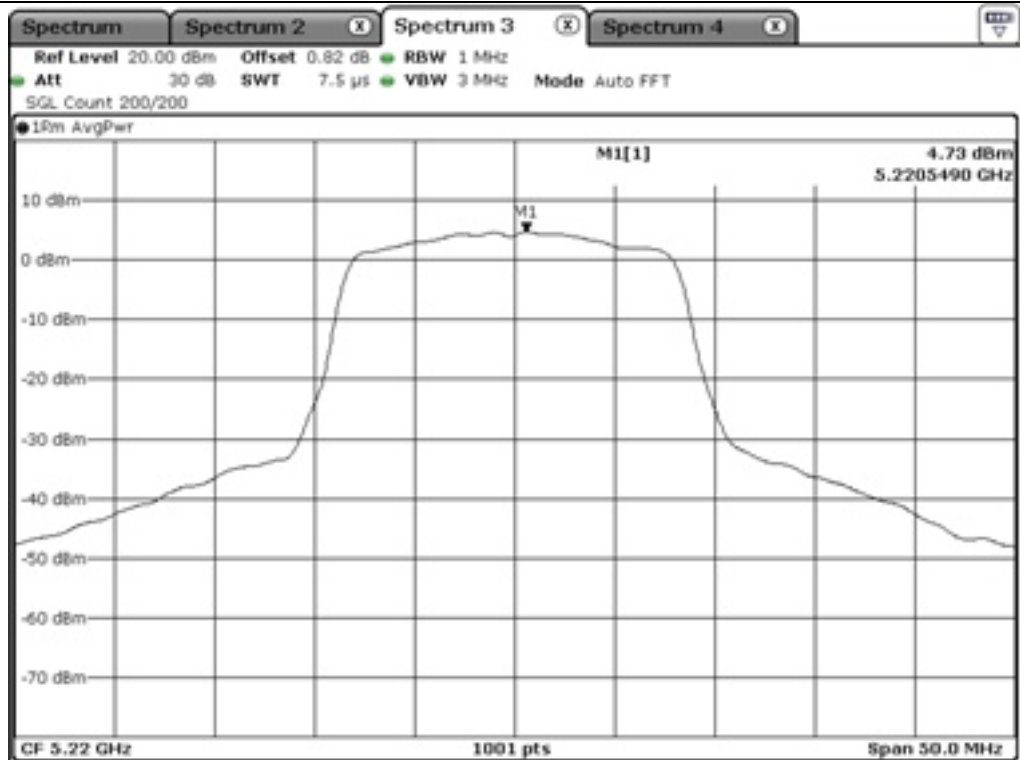
-. Test Result : Pass

FREQUENCY RANGE (MHz)	CHANNEL	FREQUENCY (MHz)	MEASURED VALUE (dBm)	Duty Factor (dB)	Result value' (dBm)	LIMIT (dBm)	MARGIN (dB)
5 150 ~ 5 250	Low	5 180.00	4.31	0.37	4.68	11.00	6.32
	Middle	5 220.00	4.73	0.37	5.10	11.00	5.90
	High	5 240.00	4.90	0.37	5.27	11.00	5.73
5 250 ~ 5 350	Low	5 260.00	5.09	0.37	5.46	11.00	5.54
	Middle	5 300.00	4.39	0.37	4.76	11.00	6.24
	High	5 320.00	4.20	0.37	4.57	11.00	6.43
5 470 ~ 5 725	Low	5 500.00	7.55	0.33	7.88	11.00	3.12
	Middle	5 660.00	7.56	0.33	7.89	11.00	3.11
	High	5 700.00	6.88	0.33	7.21	11.00	3.79
5 725 ~ 5 850	Low	5 745.00	5.31	0.36	5.67	30.00	24.33
	Middle	5 785.00	5.51	0.36	5.87	30.00	24.13
	High	5 825.00	5.07	0.36	5.43	30.00	24.57

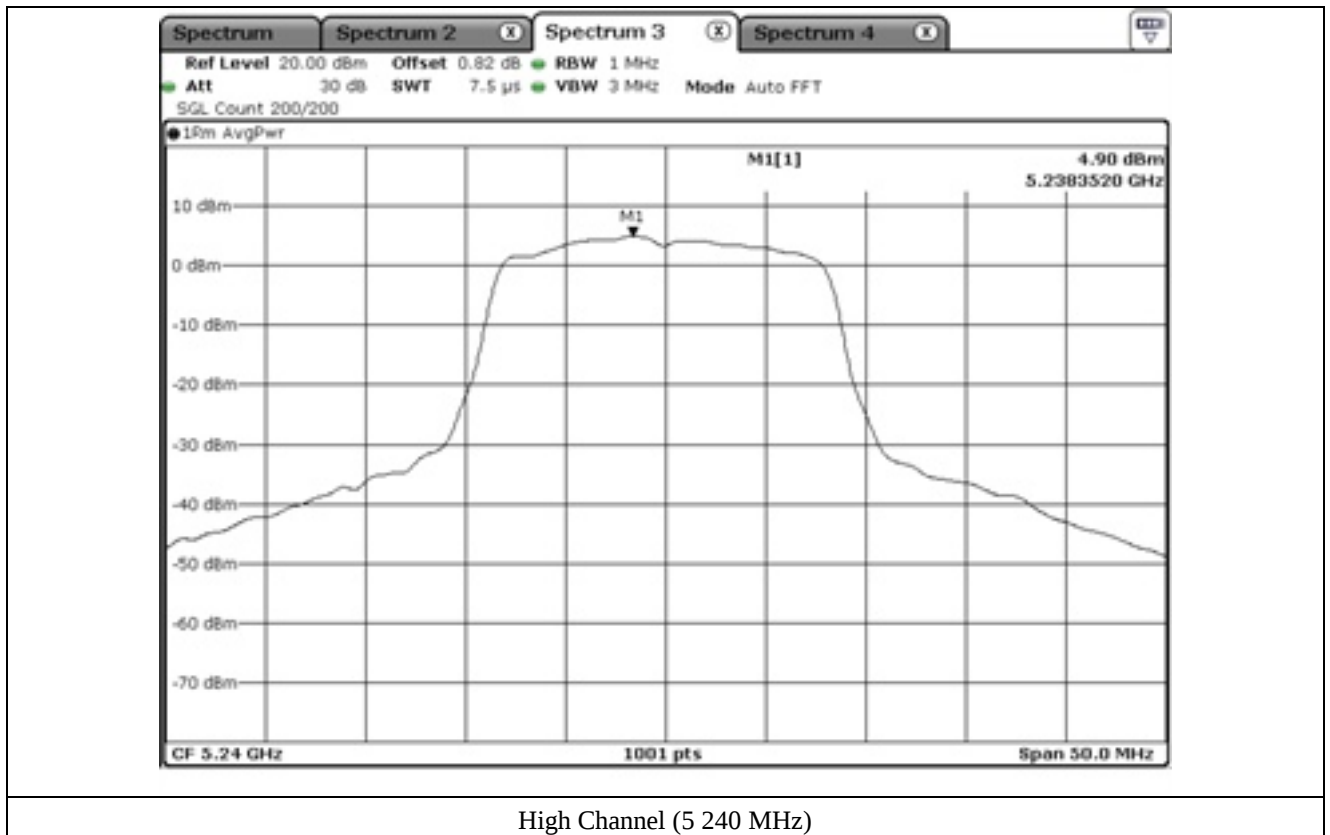
Remark: See next page for measurement data.

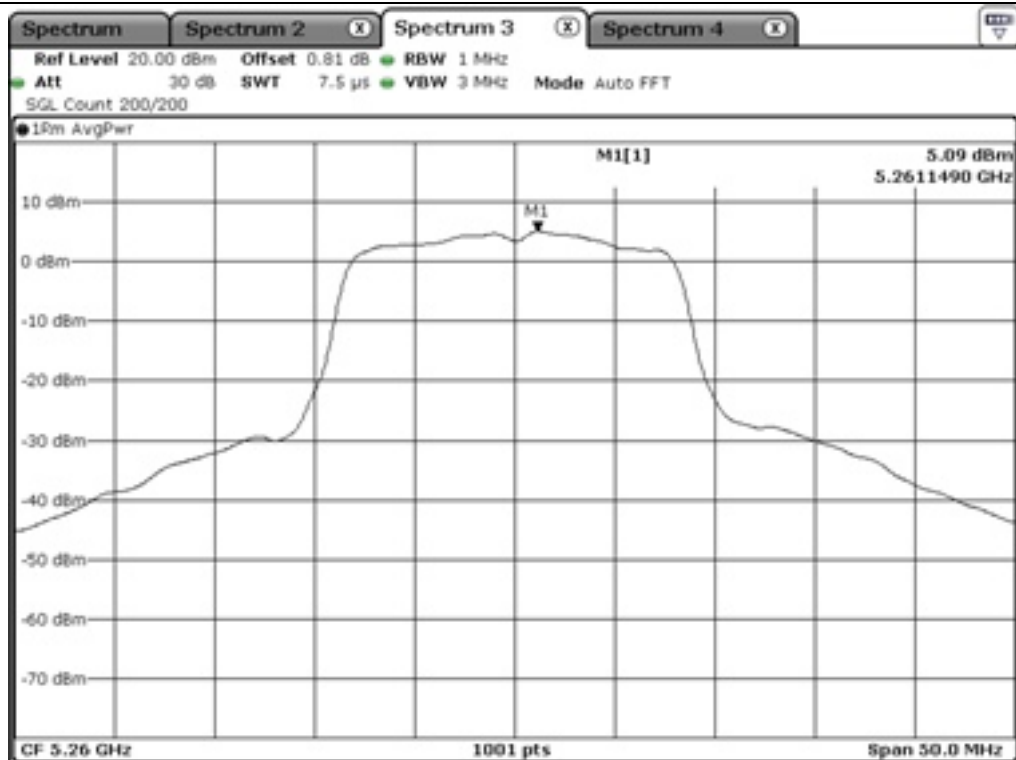


Low Channel (5 180 MHz)

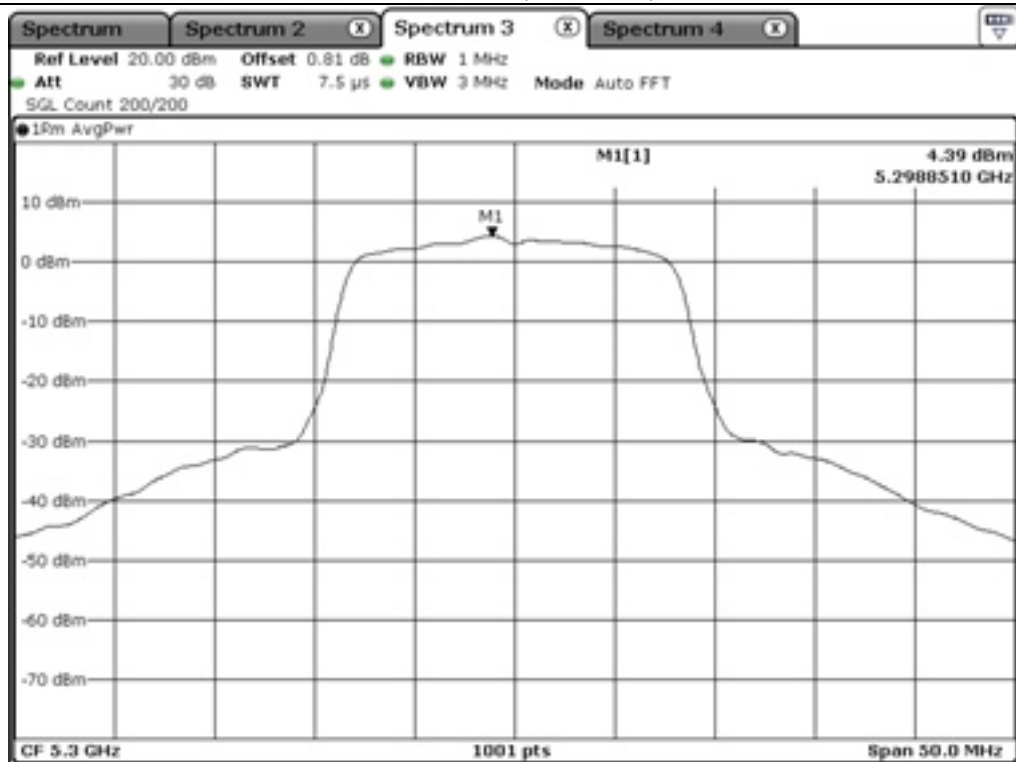


Middle Channel (5 220 MHz)

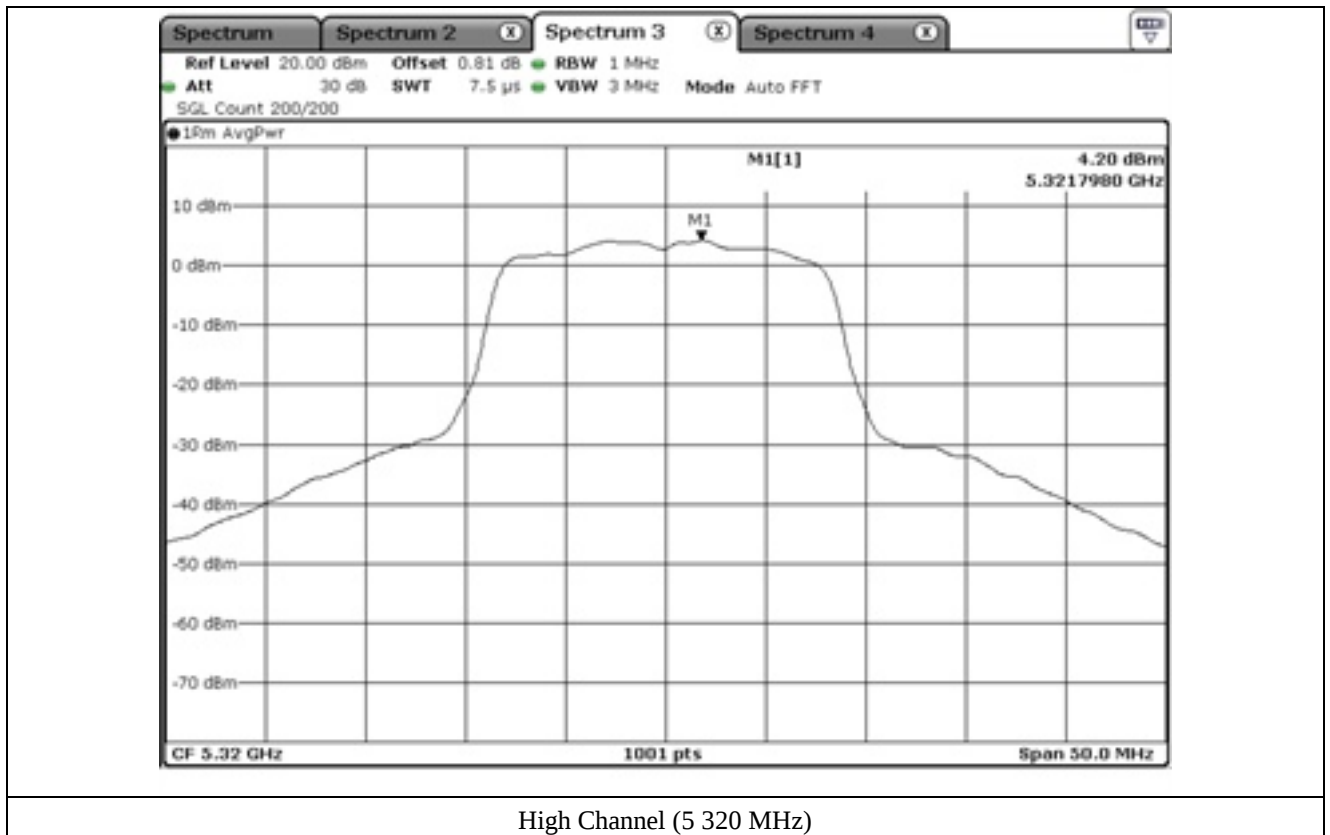


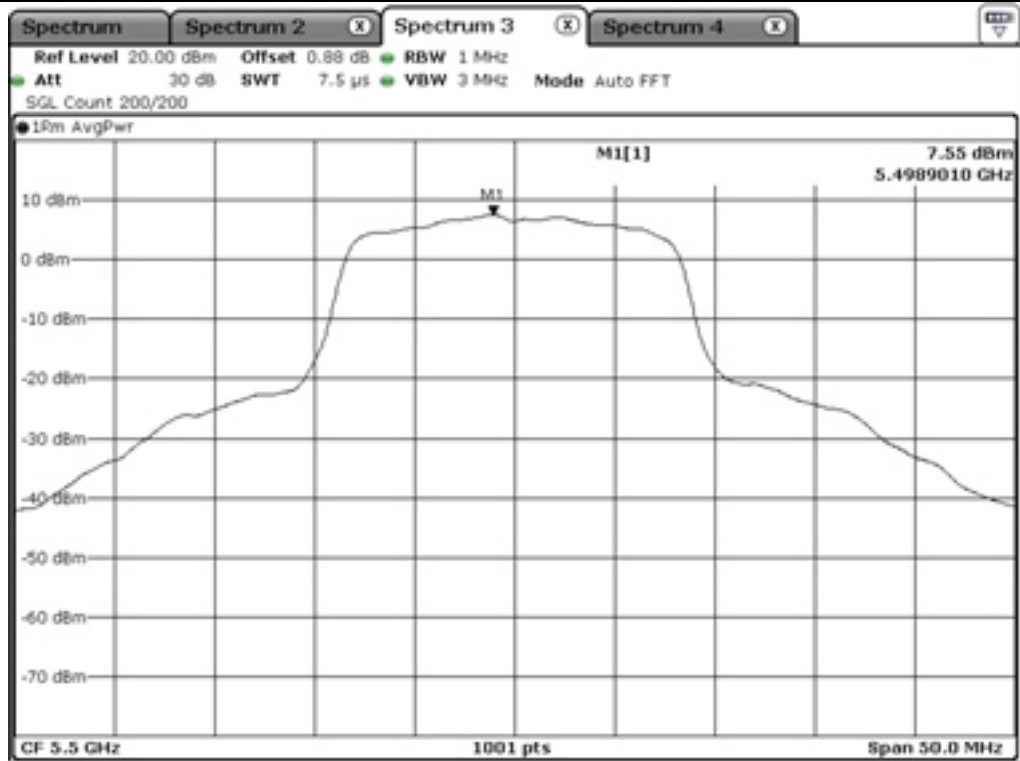


Low Channel (5 260 MHz)

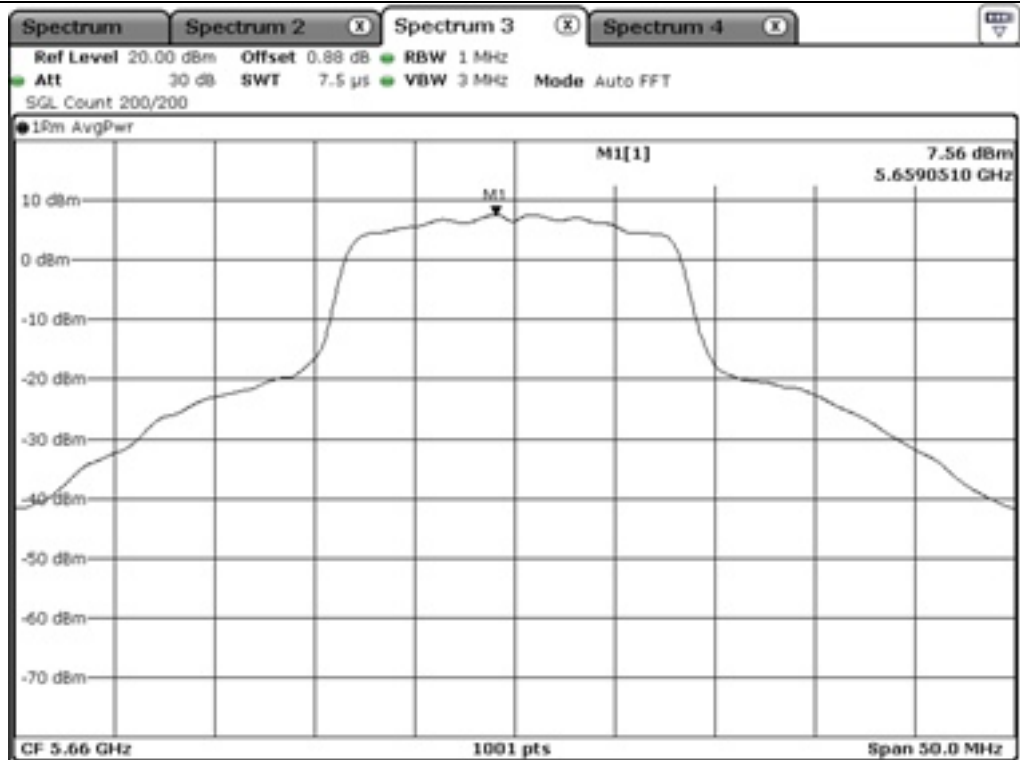


Middle Channel (5 300 MHz)

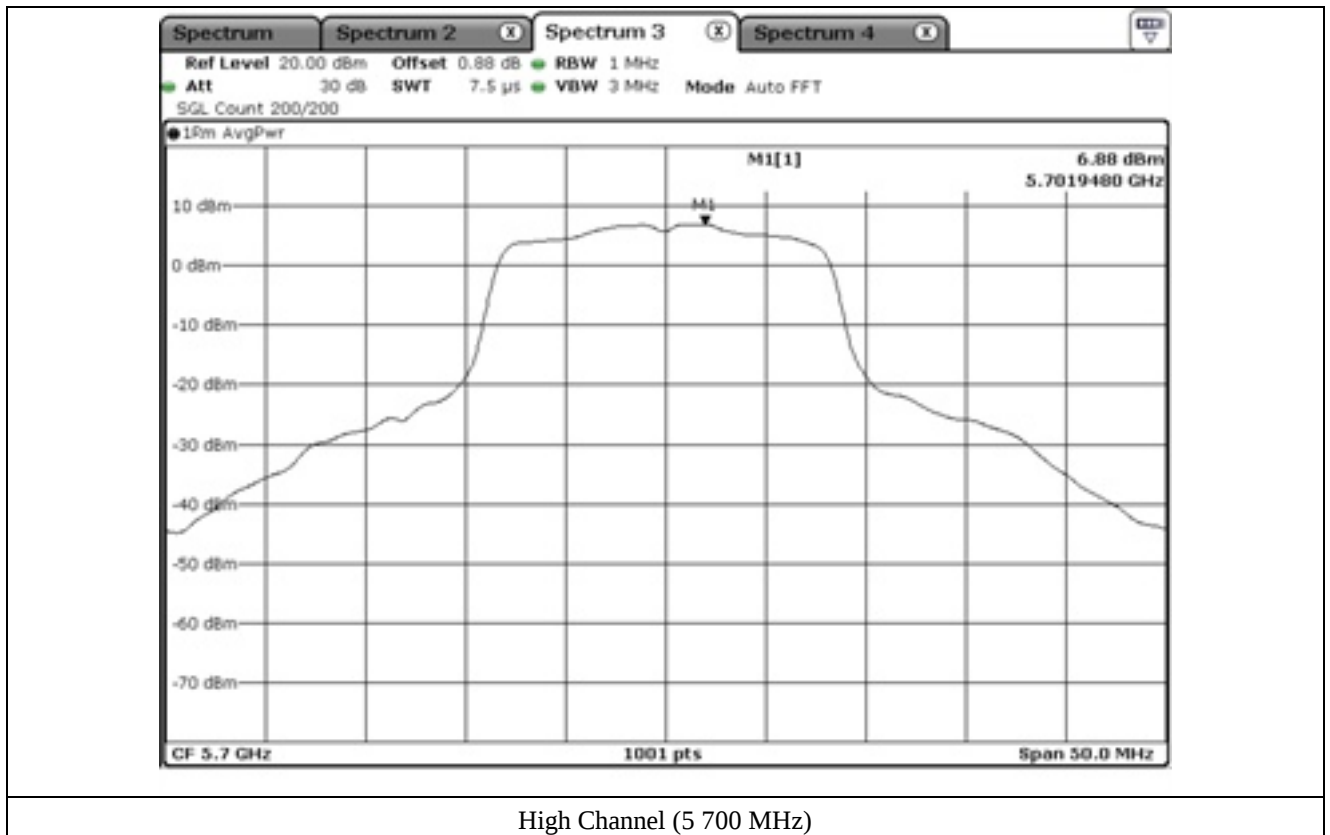


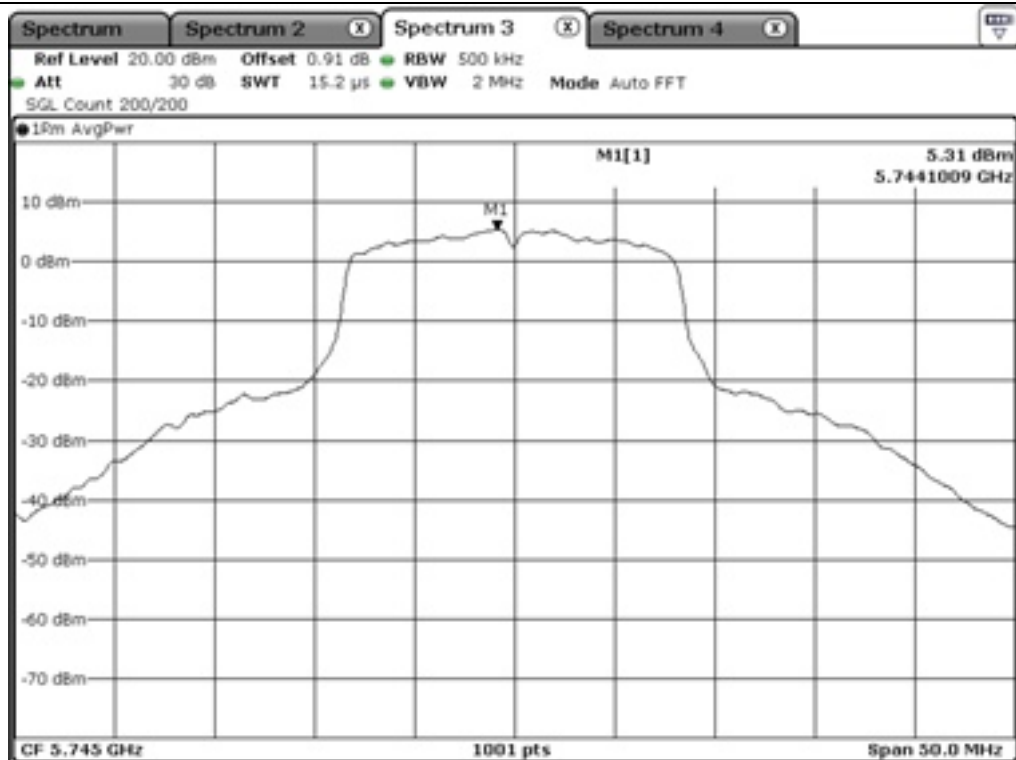


Low Channel (5 500 MHz)

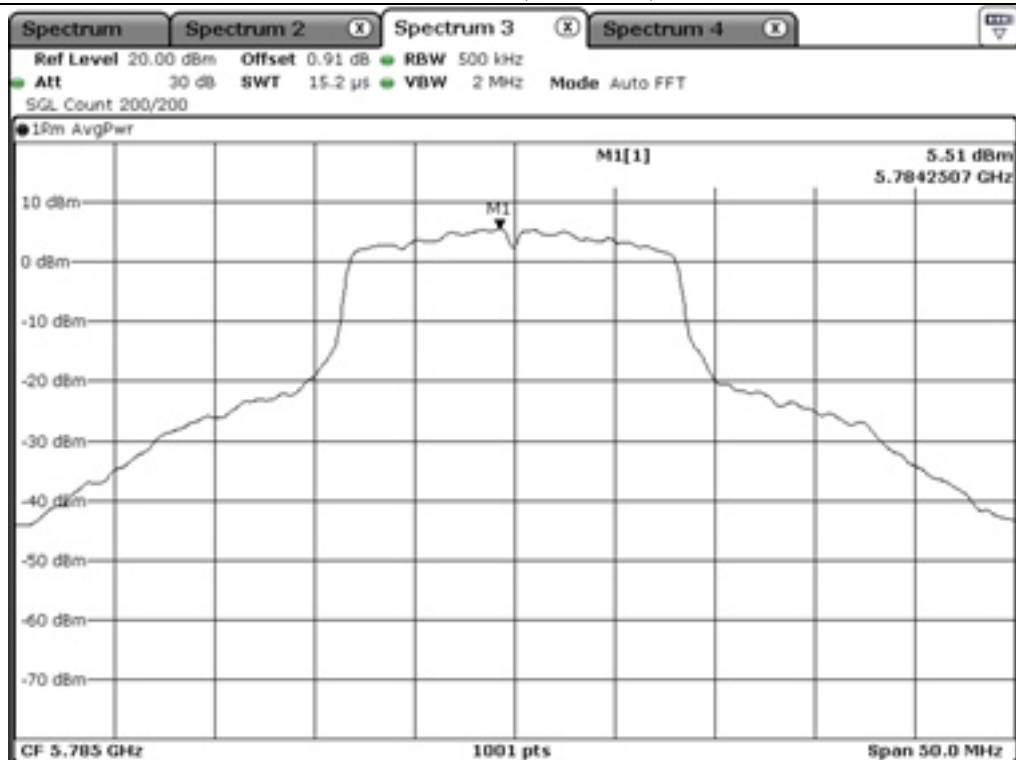


Middle Channel (5 660 MHz)

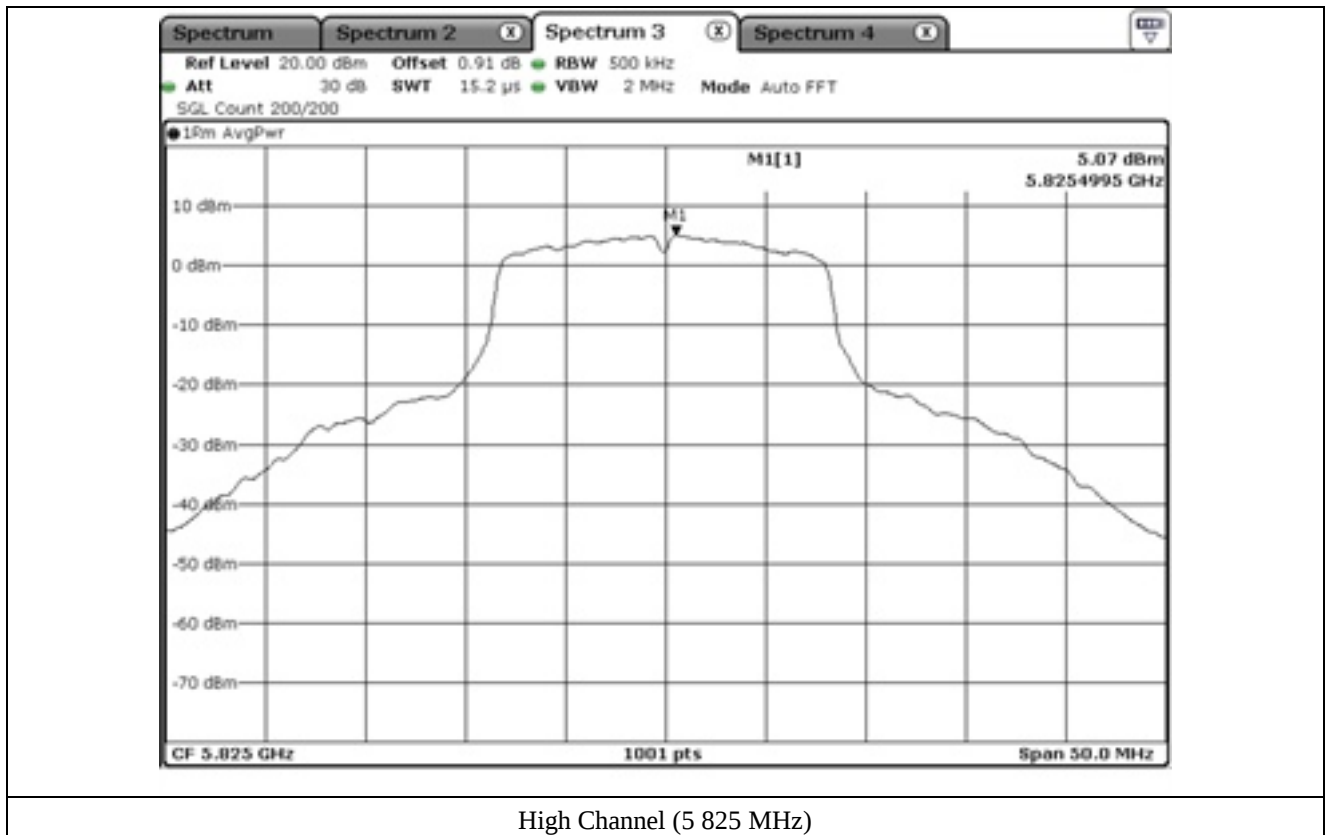




Low Channel (5 745 MHz)



Middle Channel (5 785 MHz)



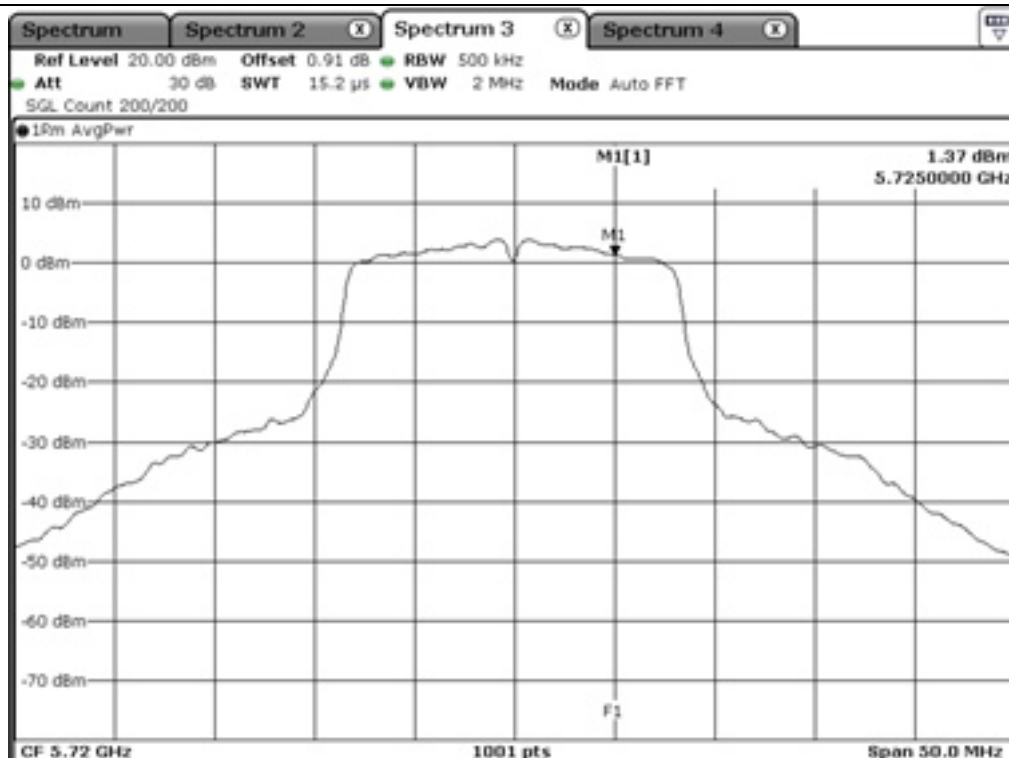
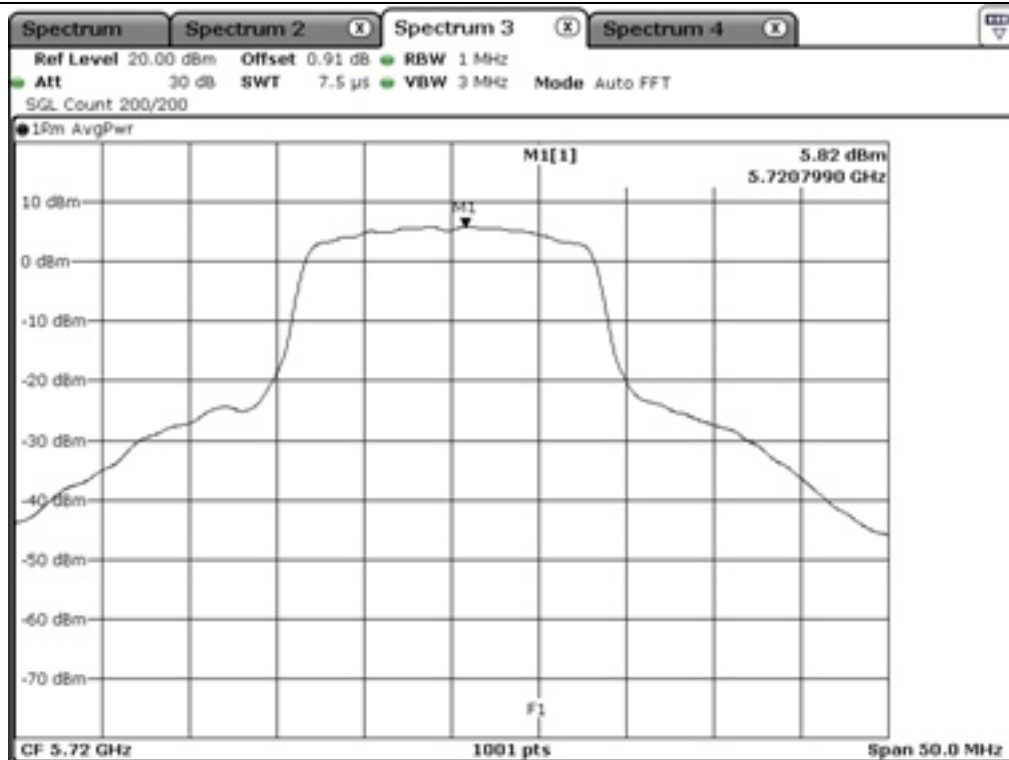
10.4.3 Test data for Staddle Channel_Antenna 0

-. Operating condition : Highest Output Power Transmitting Mode

-. Test Result : Pass

FREQUENCY RANGE (MHz)	FREQUENCY (MHz)	MEASURED VALUE (dBm)	Duty Factor (dB)	Result Value (dBm)	LIMIT (dBm)	MARGIN (dB)
5 470 ~ 5 725	5 720.00	5.82	0.36	6.18	11.00	4.82
5 725 ~ 5 850	5 720.00	1.37	0.36	1.73	30.00	28.27

Remark: See next page for measurement data.



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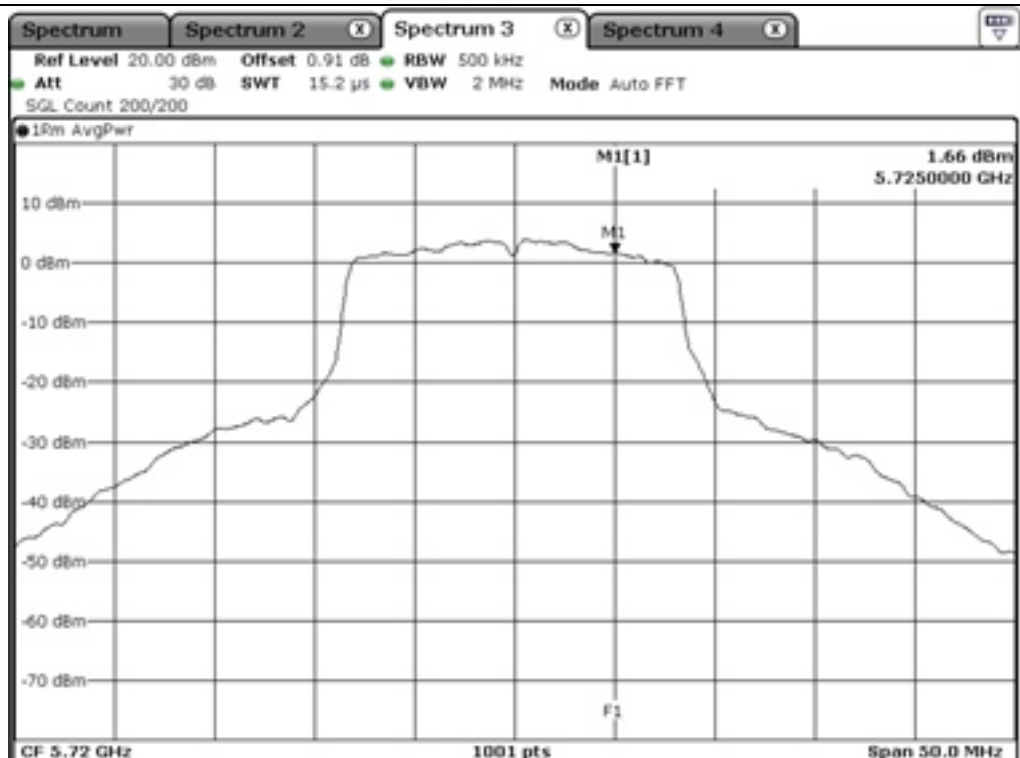
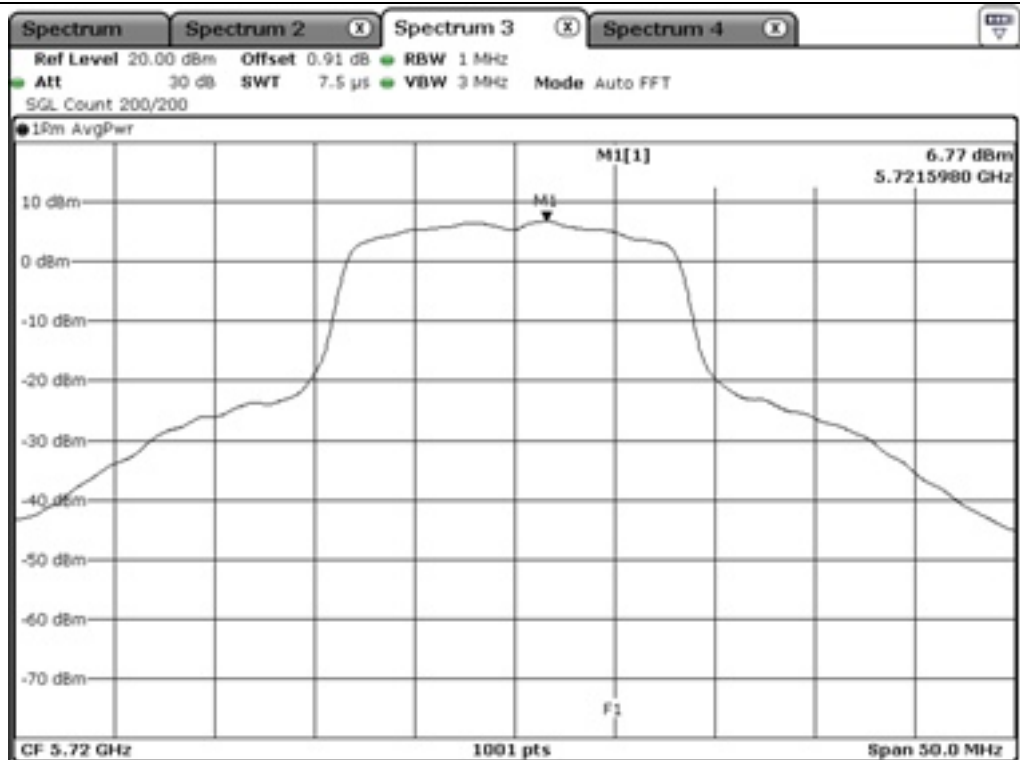
10.4.4 Test data for Staddle Channel_Antenna 1

-. Operating condition : Highest Output Power Transmitting Mode

-. Test Result : Pass

FREQUENCY RANGE (MHz)	FREQUENCY (MHz)	MEASURED VALUE (dBm)	Duty Factor (dB)	Result Value (dBm)	LIMIT (dBm)	MARGIN (dB)
5 470 ~ 5 725	5 720.00	6.77	0.39	7.16	11.00	3.84
5 725 ~ 5 850	5 720.00	1.66	0.39	2.05	30.00	27.95

Remark: See next page for measurement data.



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10.5 Test data for 802.11n_HT20 RLAN Mode

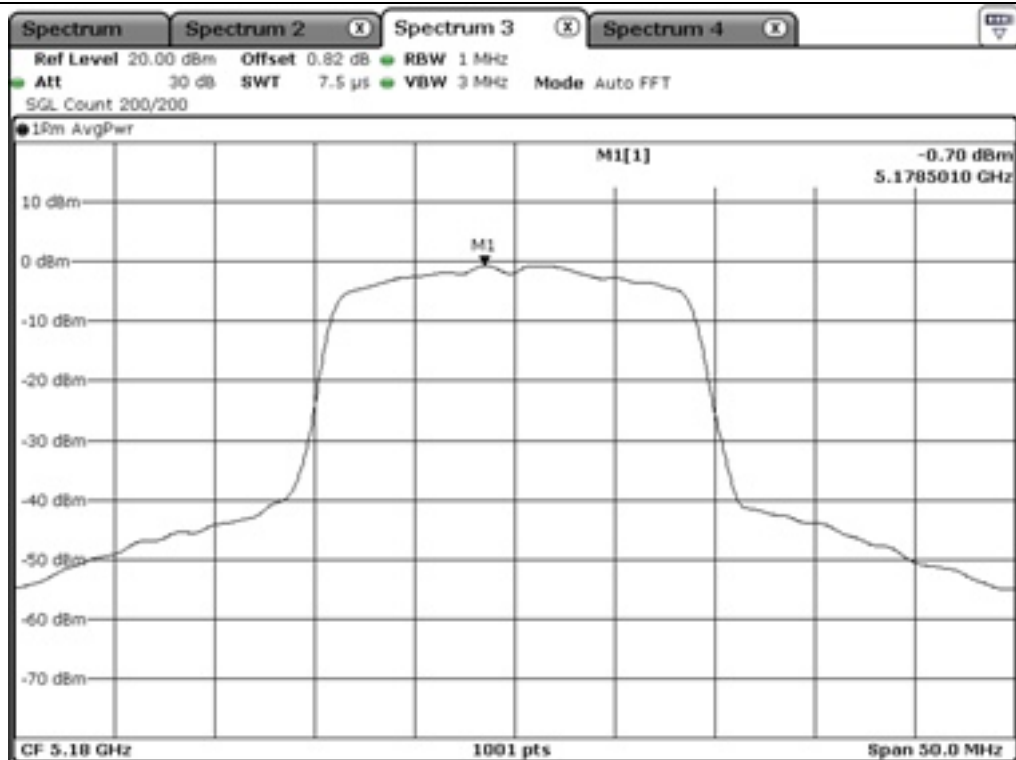
10.5.1 Test data for Antenna 0

-. Operating condition : Highest Output Power Transmitting Mode

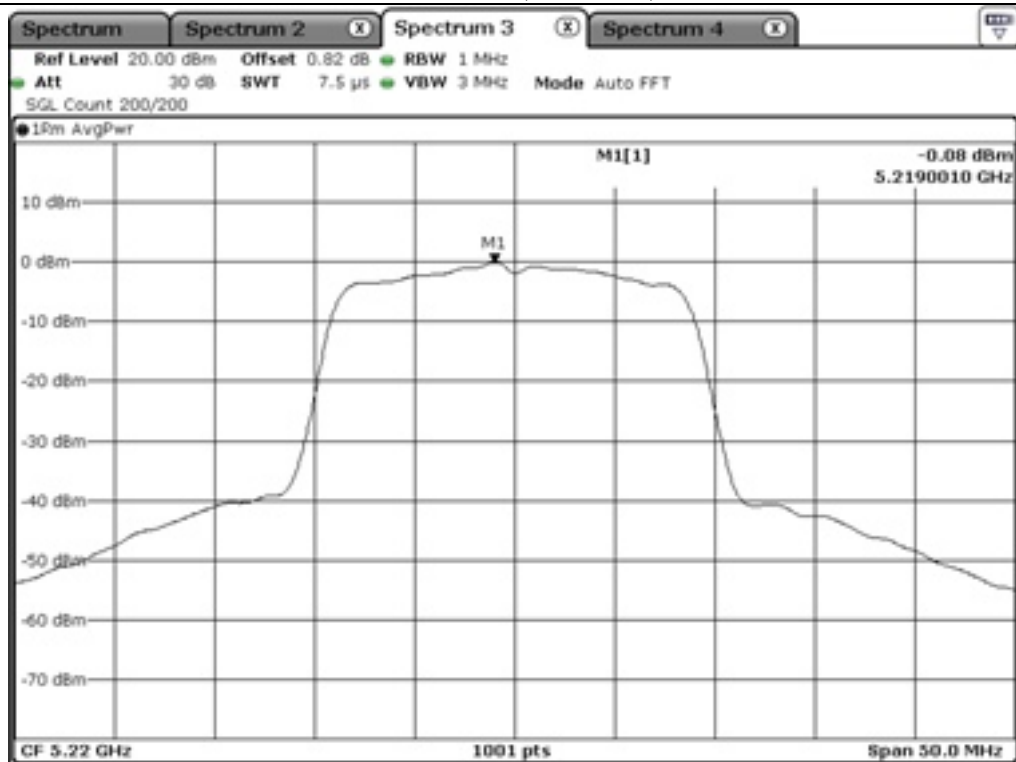
-. Test Result : Pass

FREQUENCY RANGE (MHz)	CHANNEL	FREQUENCY (MHz)	MEASURED VALUE (dBm)	Duty Factor (dB)	Result value' (dBm)	LIMIT (dBm)	MARGIN (dB)
5 150 ~ 5 250	Low	5 180.00	-0.70	0.74	0.04	11.00	10.96
	Middle	5 220.00	-0.08	0.74	0.66	11.00	10.34
	High	5 240.00	-0.24	0.74	0.50	11.00	10.50
5 250 ~ 5 350	Low	5 260.00	4.43	0.67	5.10	11.00	5.90
	Middle	5 300.00	2.28	0.67	2.95	11.00	8.05
	High	5 320.00	2.46	0.67	3.13	11.00	7.87
5 470 ~ 5 725	Low	5 500.00	4.64	0.73	5.37	11.00	5.63
	Middle	5 660.00	3.75	0.73	4.48	11.00	6.52
	High	5 700.00	3.76	0.73	4.49	11.00	6.51
5 725 ~ 5 850	Low	5 745.00	3.75	0.73	4.48	30.00	25.52
	Middle	5 785.00	4.23	0.73	4.96	30.00	25.04
	High	5 825.00	3.50	0.73	4.23	30.00	25.77

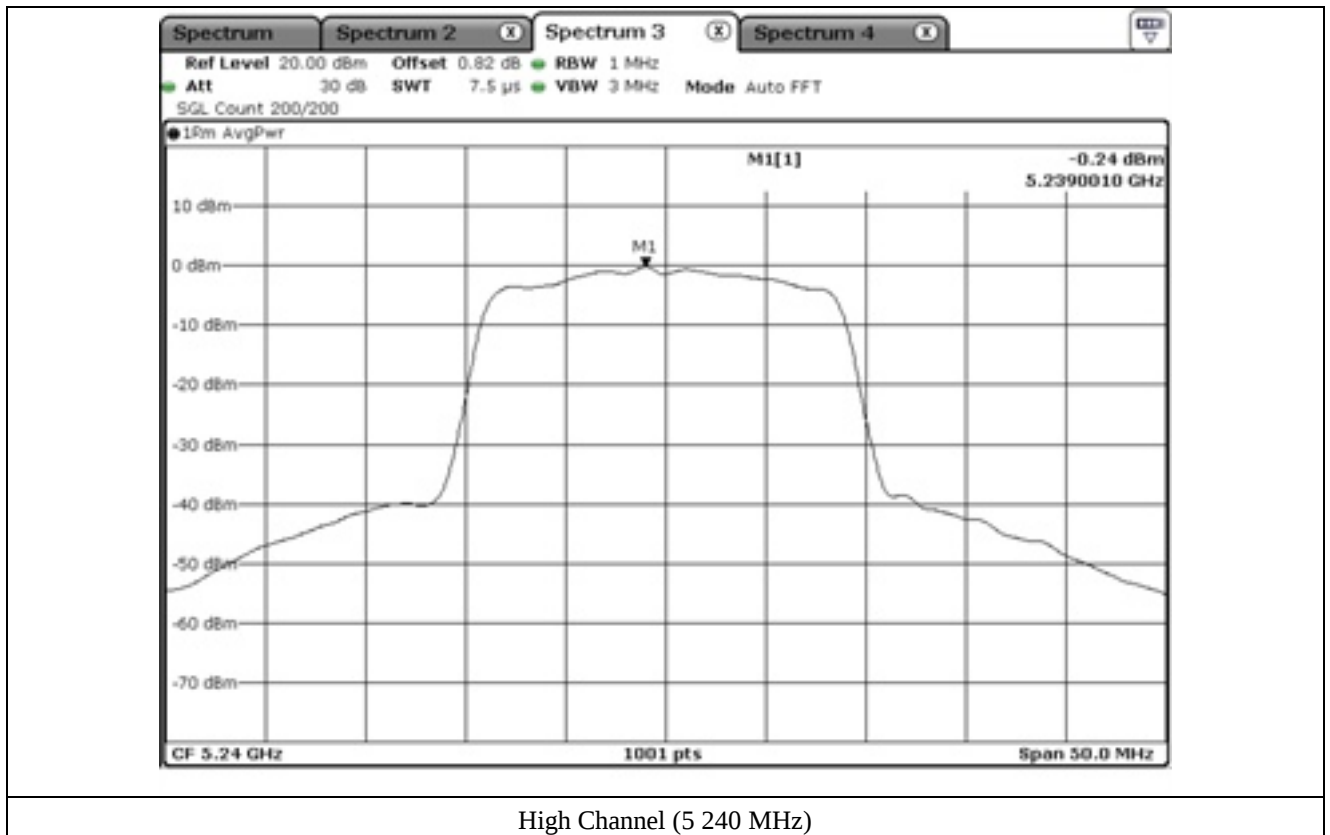
Remark: See next page for measurement data.

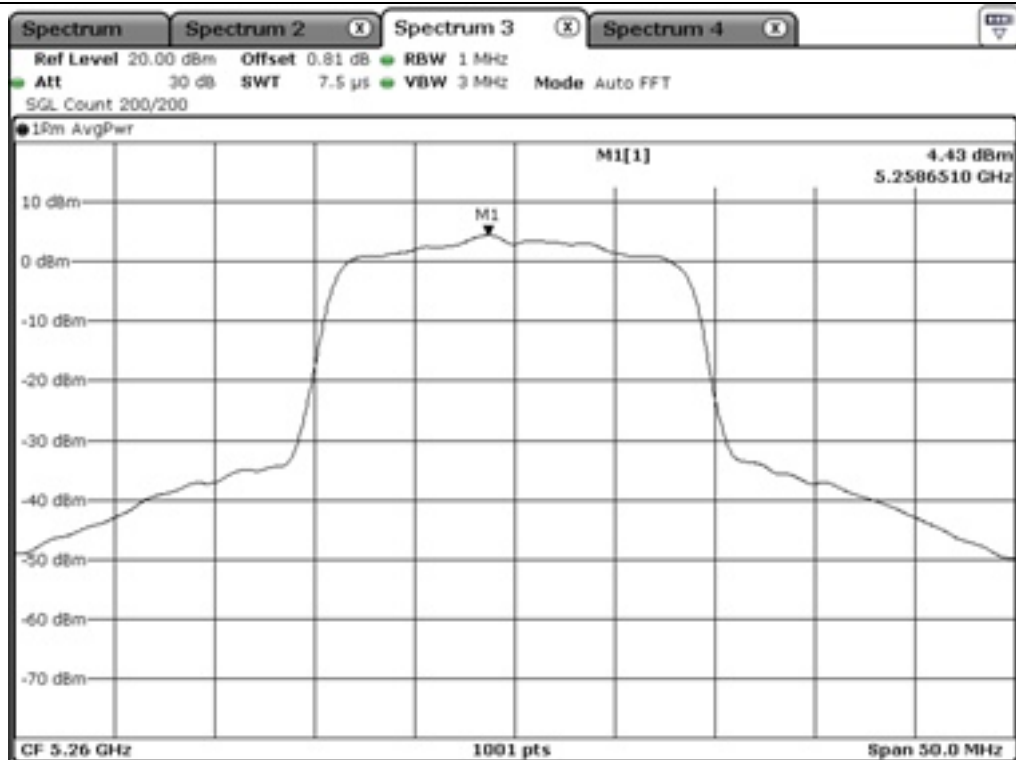


Low Channel (5 180 MHz)

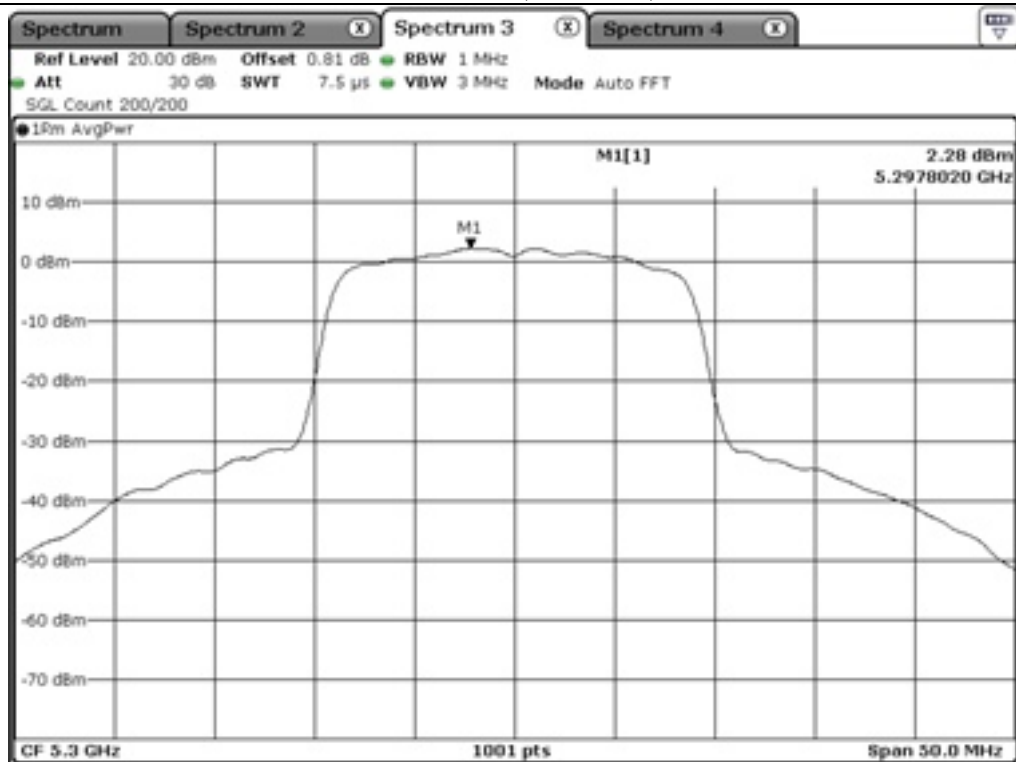


Middle Channel (5 220 MHz)

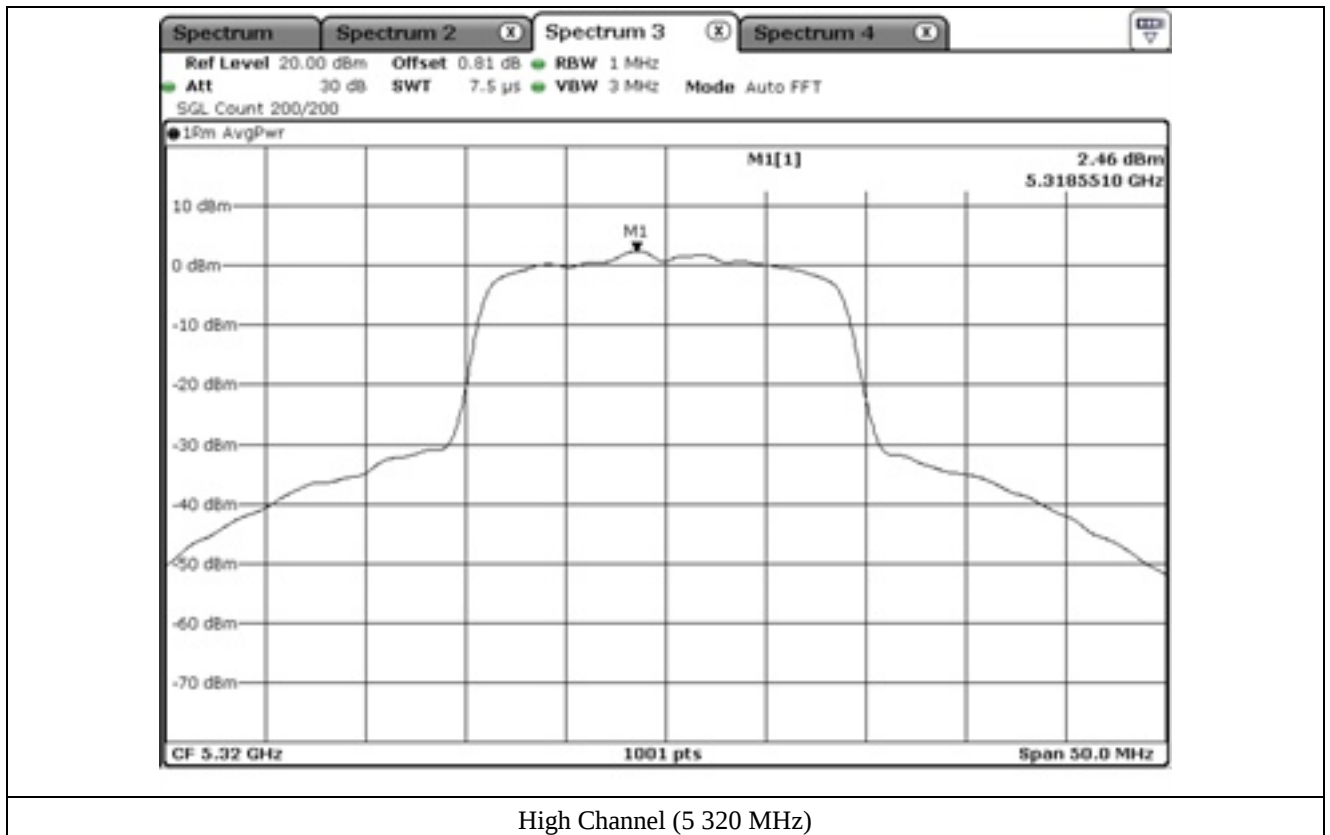


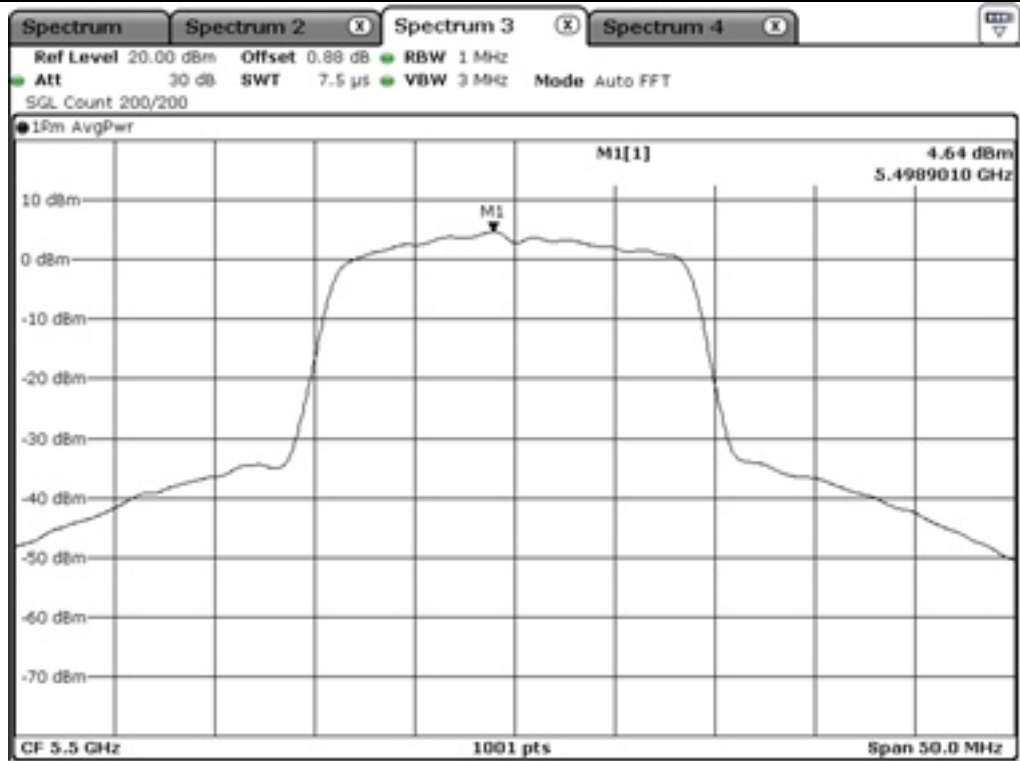


Low Channel (5 260 MHz)

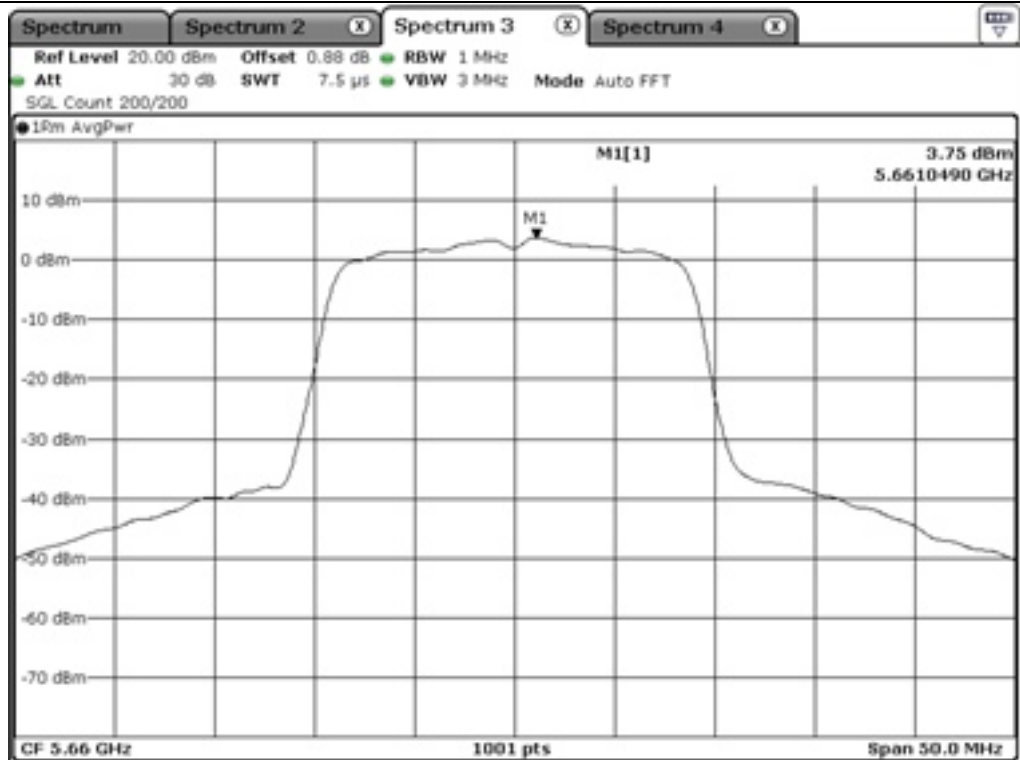


Middle Channel (5 300 MHz)

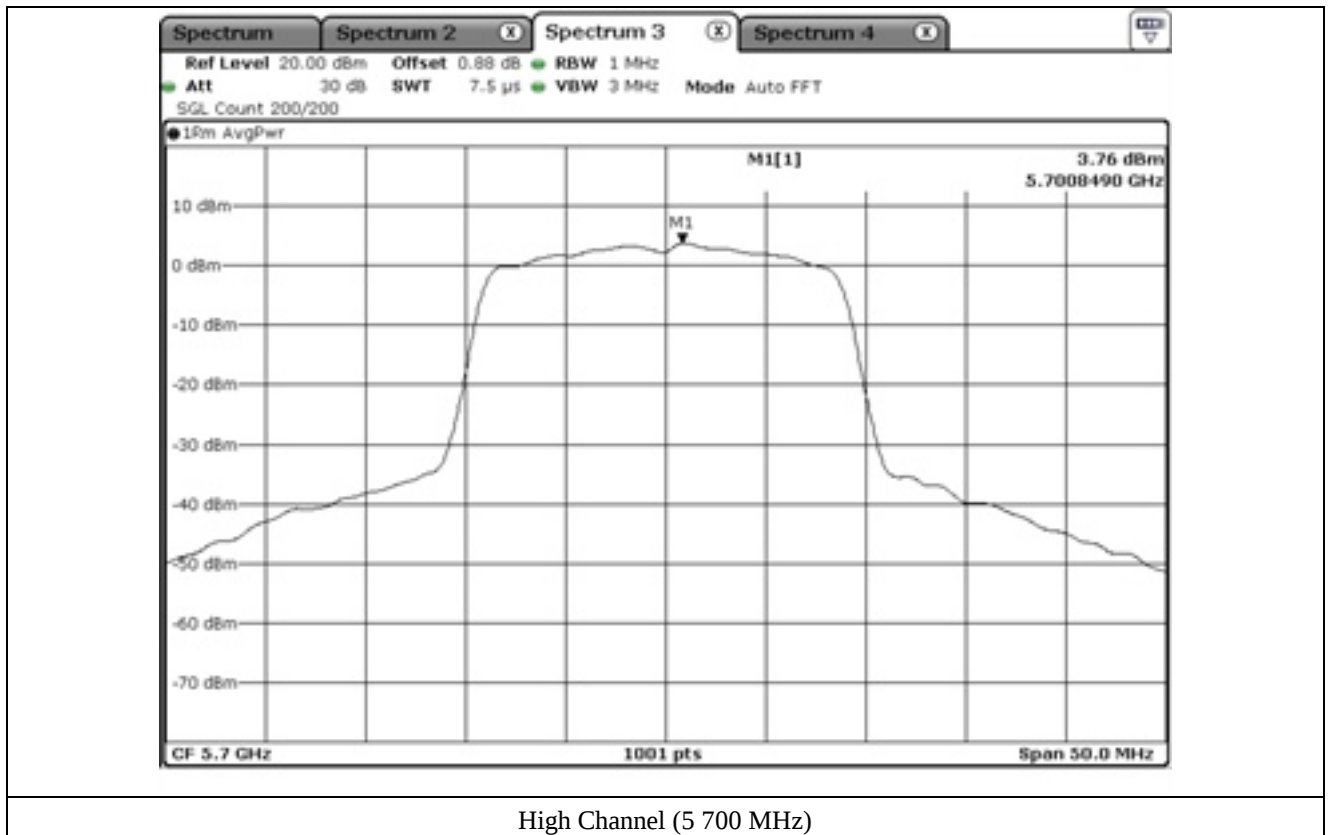


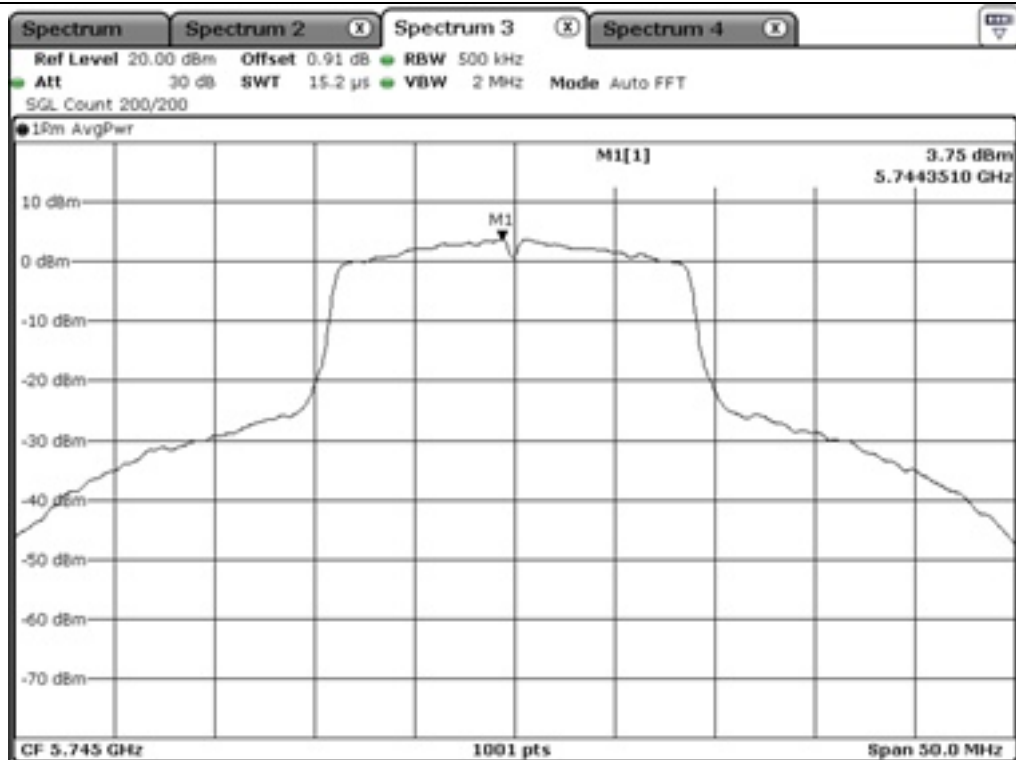


Low Channel (5 500 MHz)



Middle Channel (5 660 MHz)

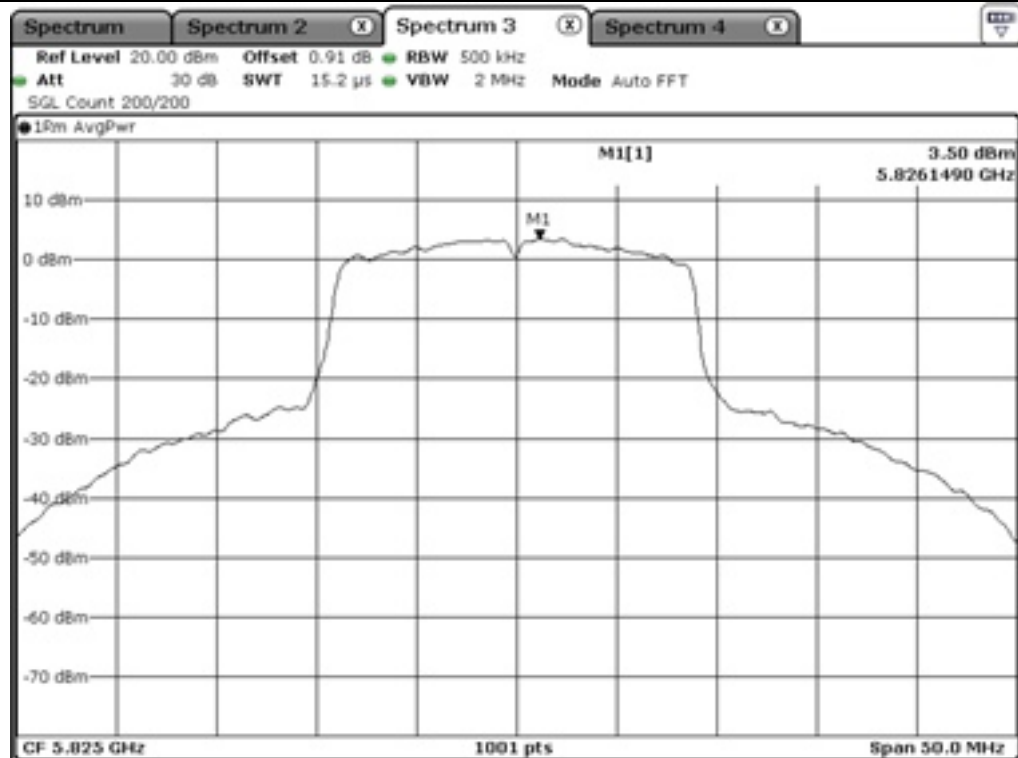




Low Channel (5 745 MHz)



Middle Channel (5 785 MHz)



High Channel (5 825 MHz)

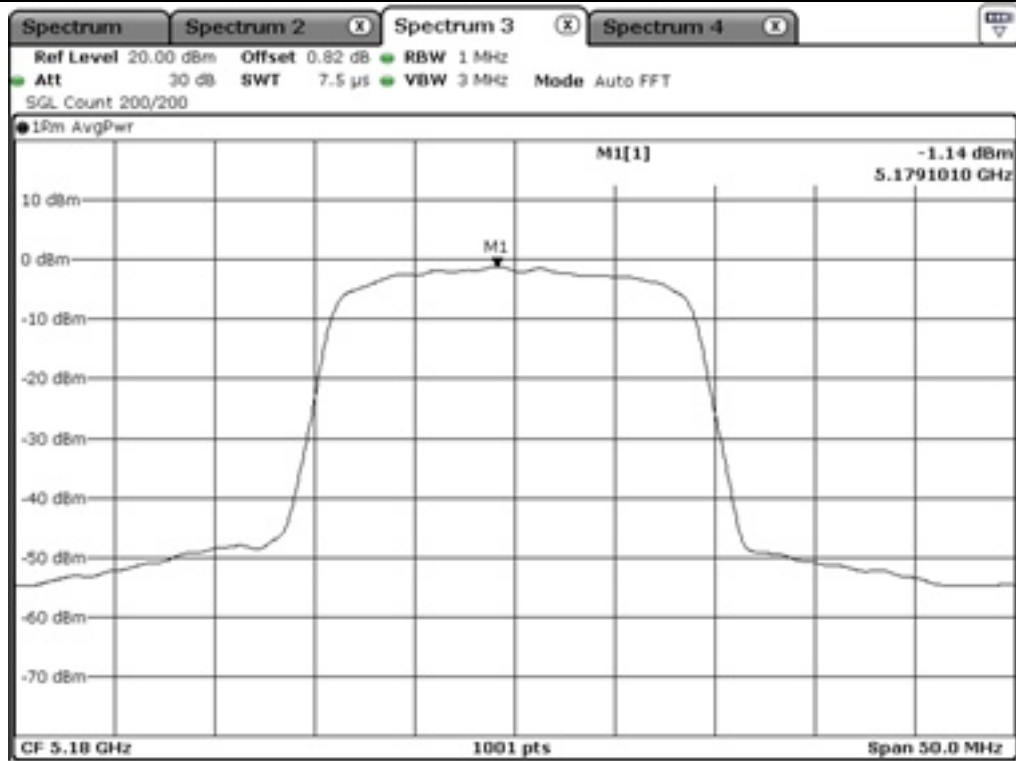
10.5.2 Test data for Antenna 1

-. Operating condition : Highest Output Power Transmitting Mode

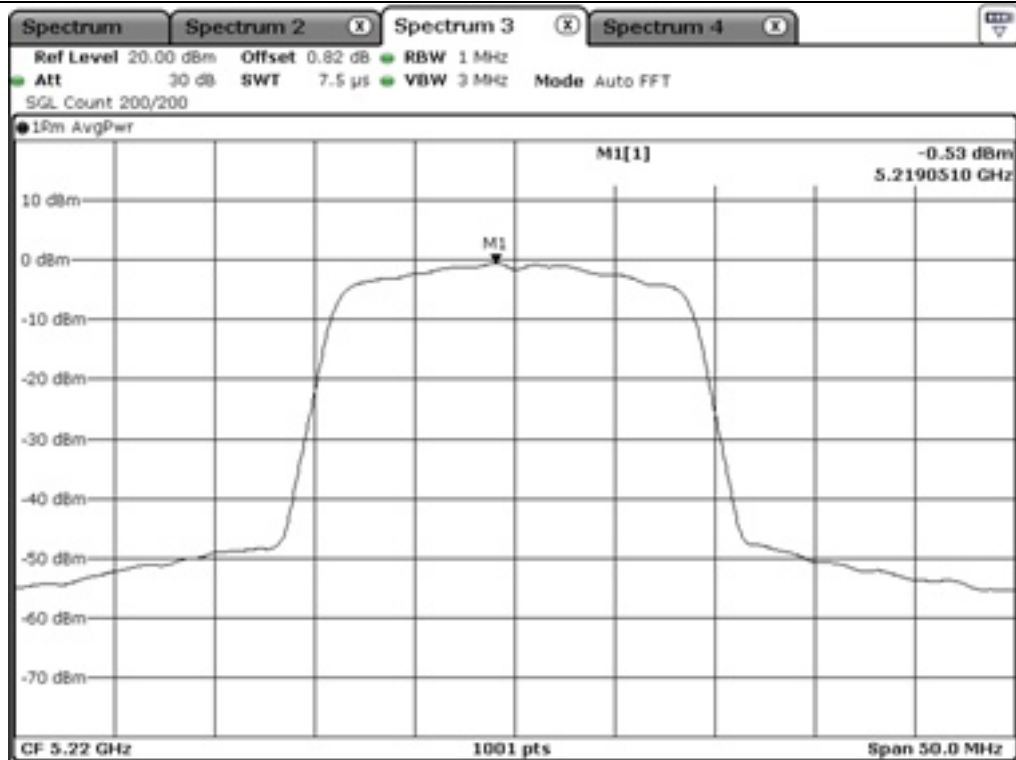
-. Test Result : Pass

FREQUENCY RANGE (MHz)	CHANNEL	FREQUENCY (MHz)	MEASURED VALUE (dBm)	Duty Factor (dB)	Result value' (dBm)	LIMIT (dBm)	MARGIN (dB)
5 150 ~ 5 250	Low	5 180.00	-1.14	0.73	-0.41	11.00	11.41
	Middle	5 220.00	-0.53	0.73	0.20	11.00	10.80
	High	5 240.00	-0.52	0.73	0.21	11.00	10.79
5 250 ~ 5 350	Low	5 260.00	1.73	0.74	2.47	11.00	8.53
	Middle	5 300.00	-0.45	0.74	0.29	11.00	10.71
	High	5 320.00	0.24	0.74	0.98	11.00	10.02
5 470 ~ 5 725	Low	5 500.00	3.46	0.80	4.26	11.00	6.74
	Middle	5 660.00	3.84	0.80	4.64	11.00	6.36
	High	5 700.00	3.97	0.80	4.77	11.00	6.23
5 725 ~ 5 850	Low	5 745.00	3.54	0.79	4.33	30.00	25.67
	Middle	5 785.00	3.97	0.79	4.76	30.00	25.24
	High	5 825.00	3.44	0.79	4.23	30.00	25.77

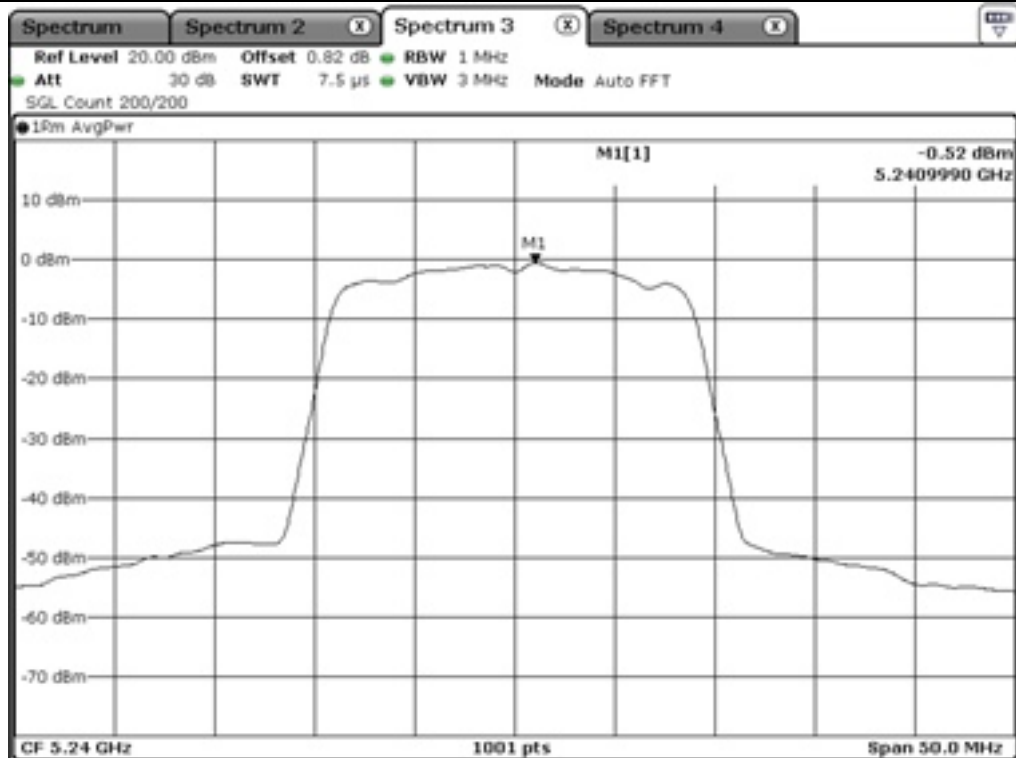
Remark: See next page for measurement data.



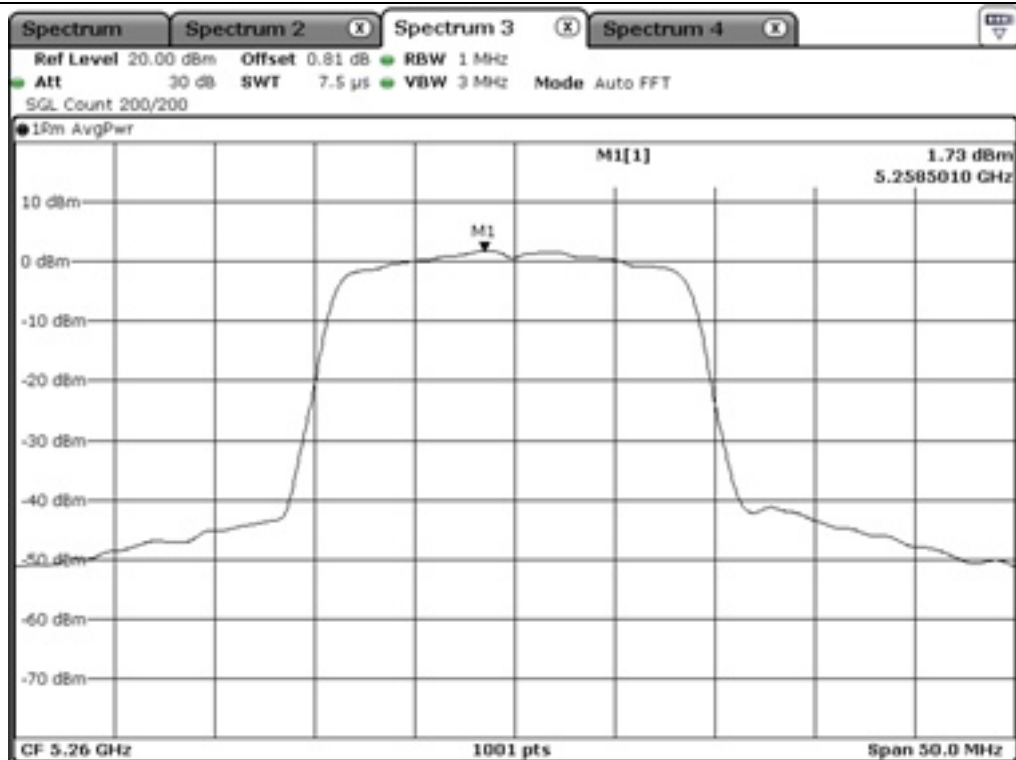
Low Channel (5 180 MHz)



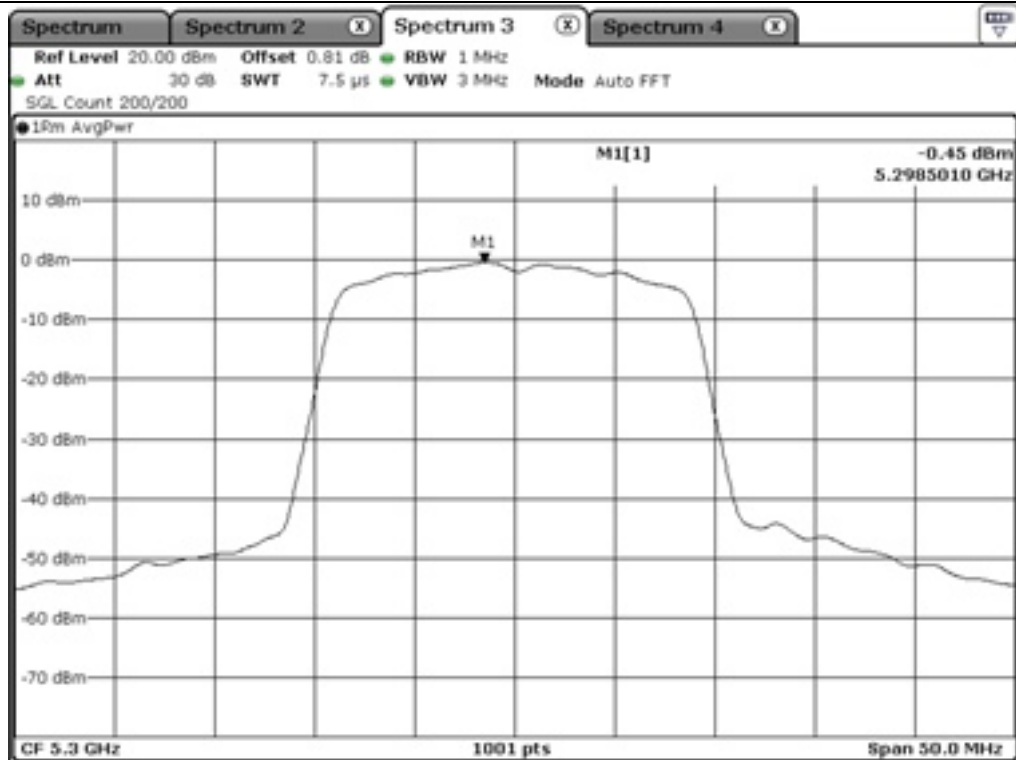
Middle Channel (5 220 MHz)



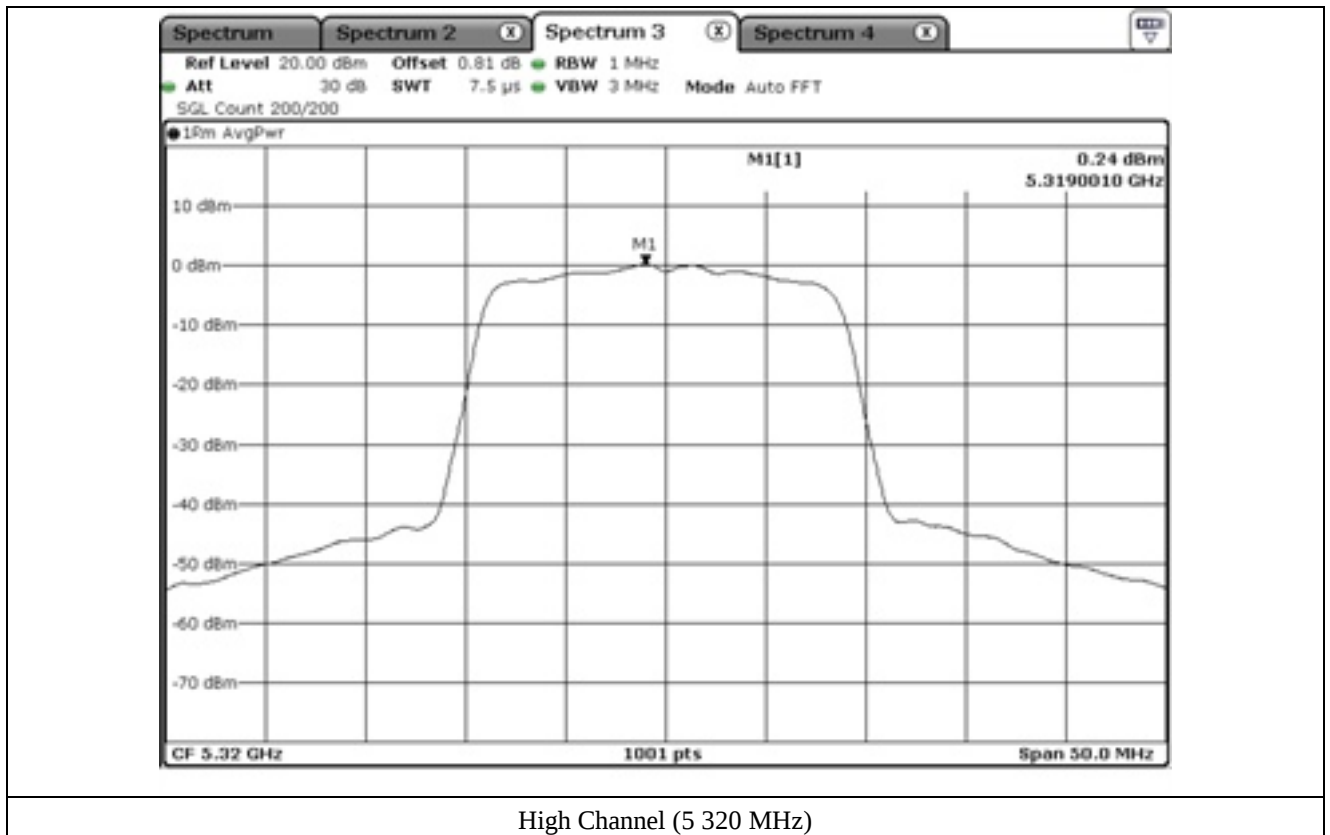
High Channel (5 240 MHz)

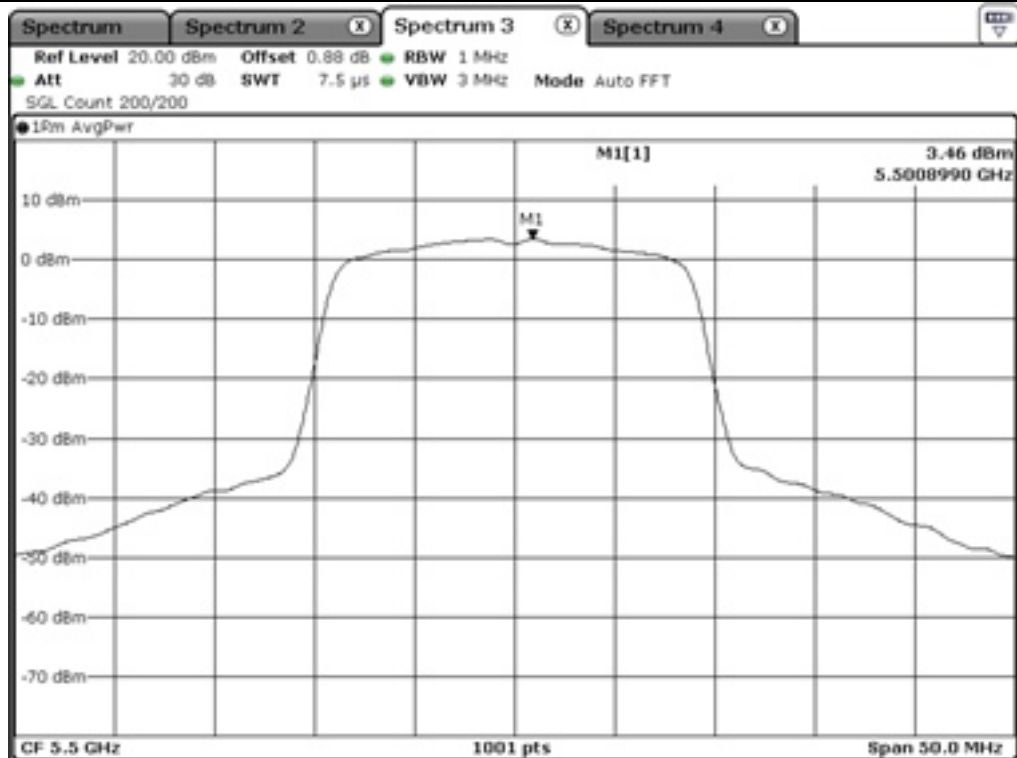


Low Channel (5 260 MHz)

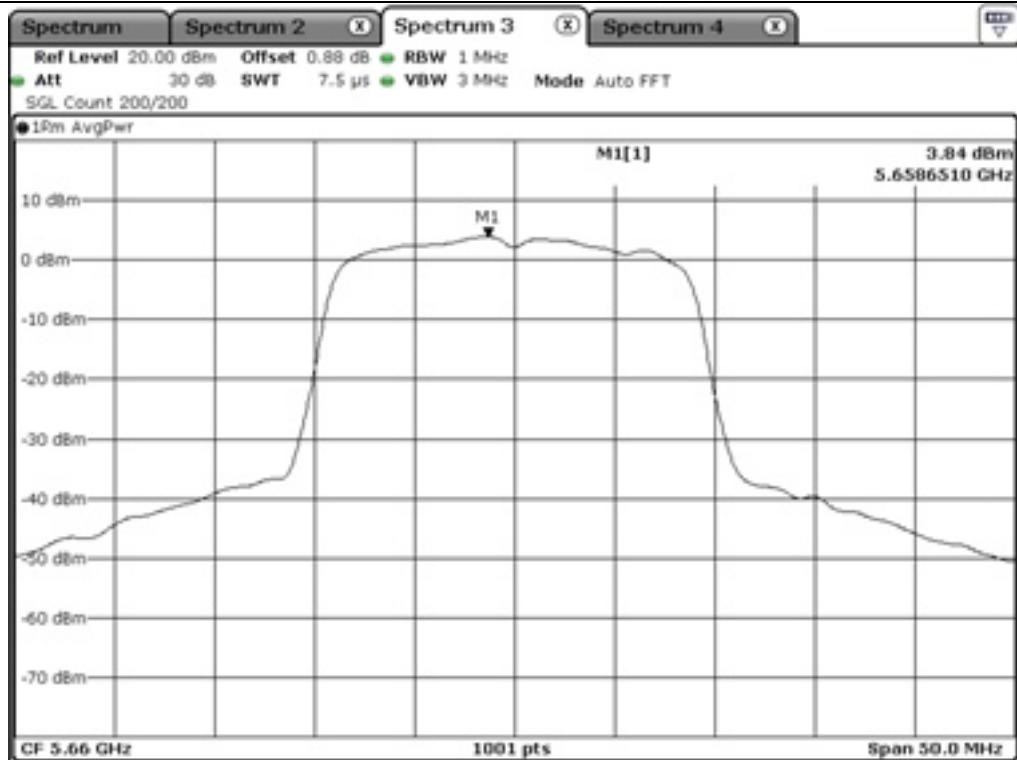


Middle Channel (5 300 MHz)

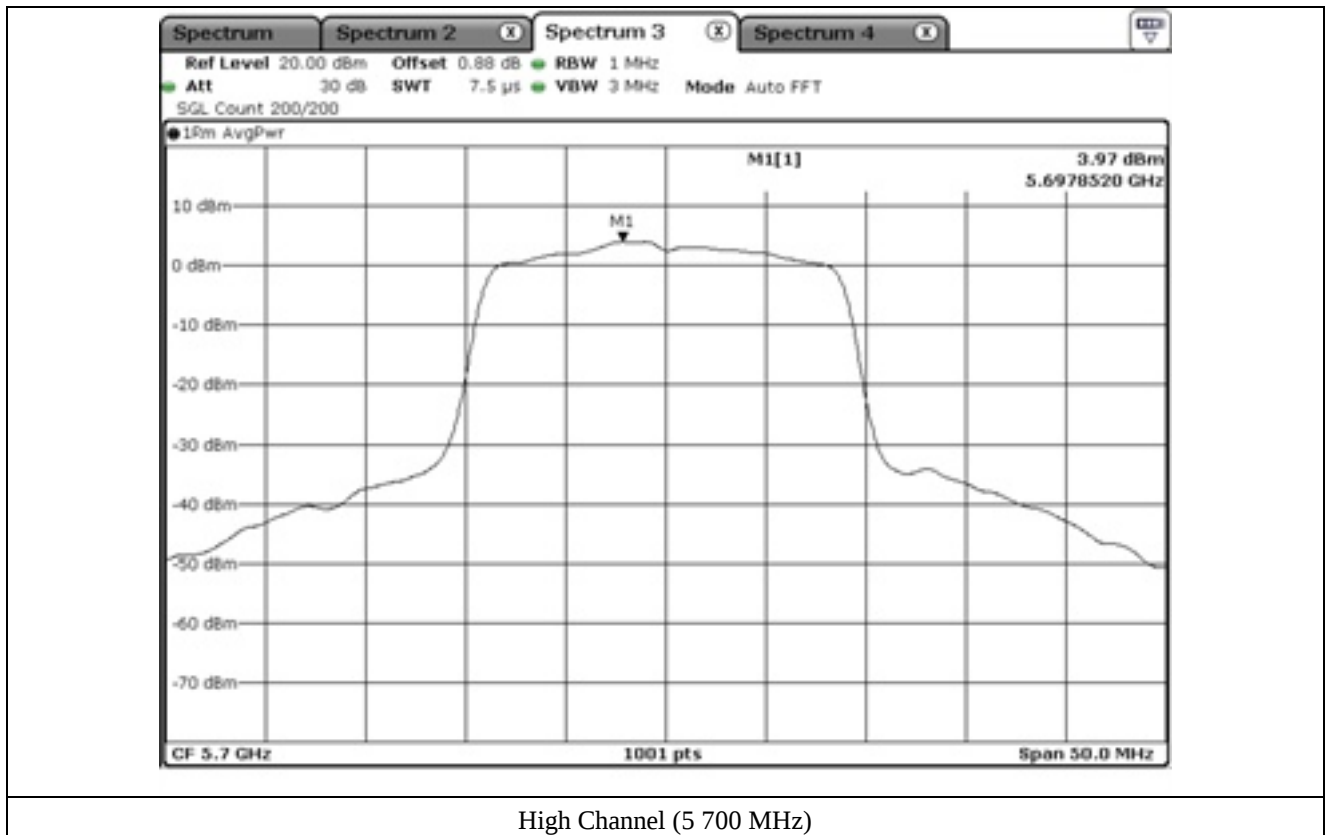


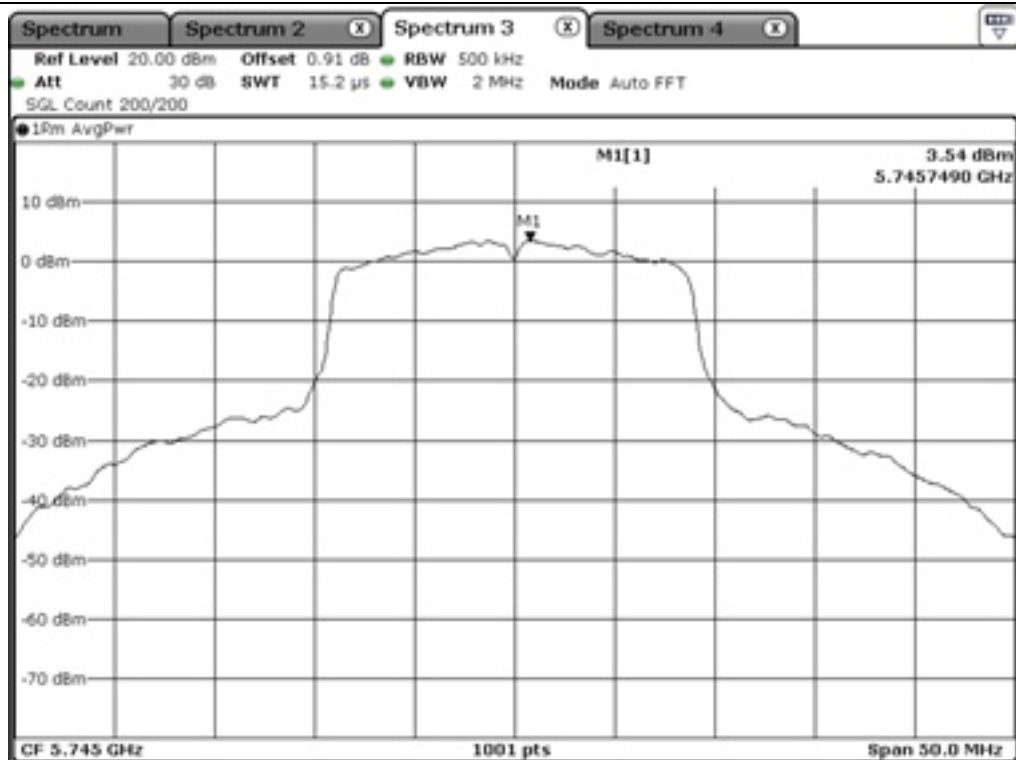


Low Channel (5 500 MHz)

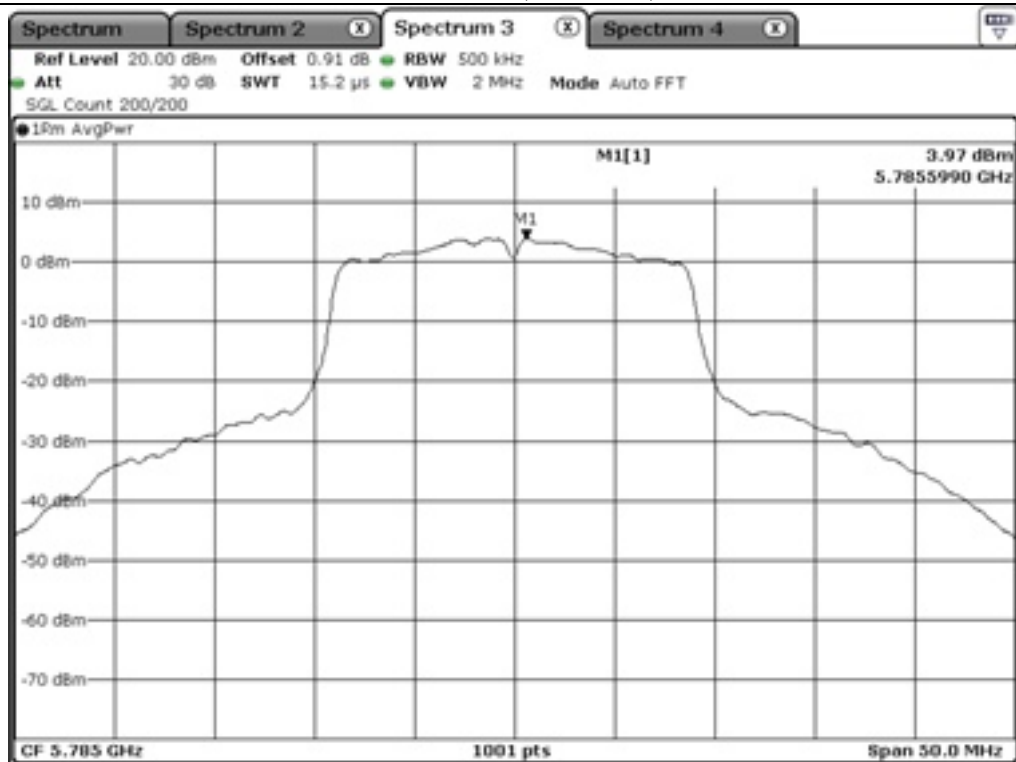


Middle Channel (5 660 MHz)

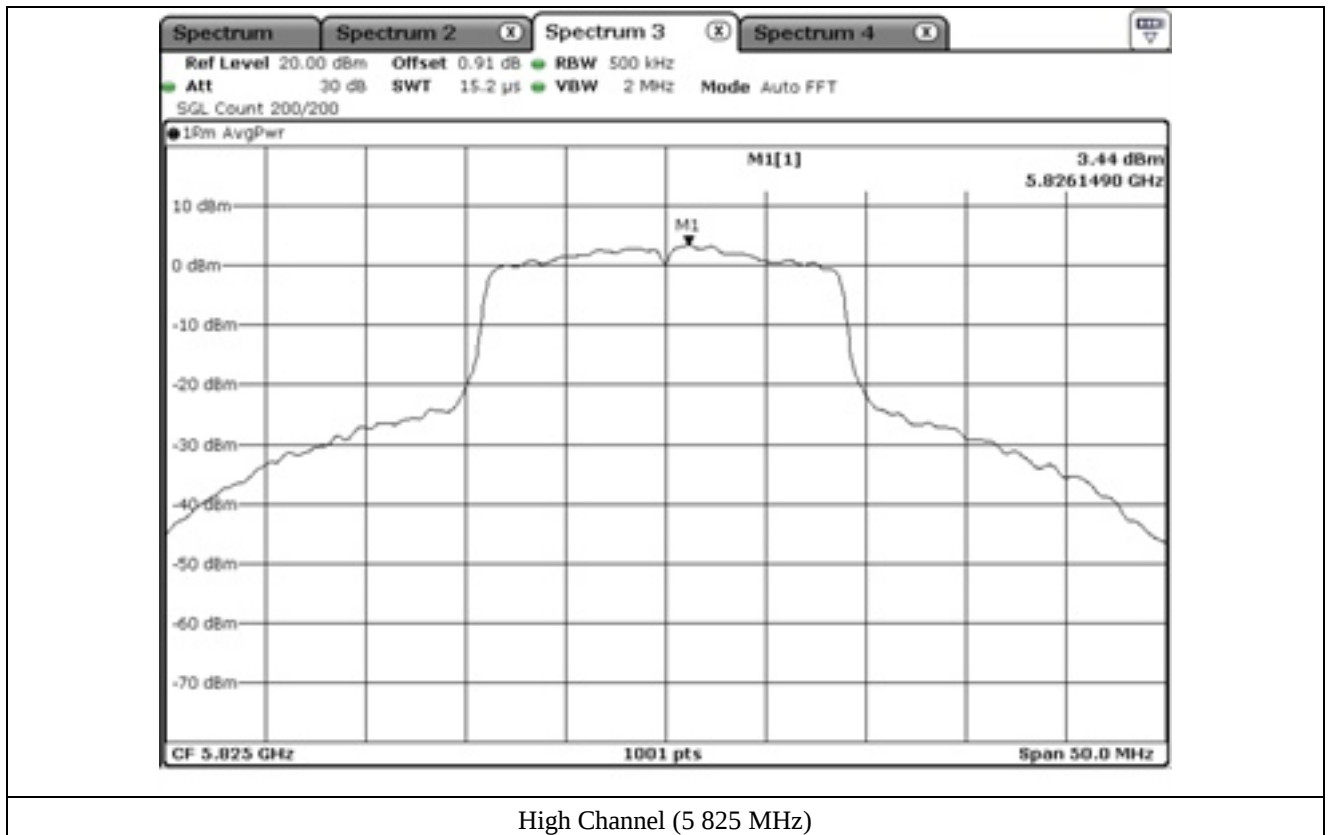




Low Channel (5 745 MHz)



Middle Channel (5 785 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)	Result VALUE (dBm)	LIMIT (dBm)	MARGIN (dB)
5 150 ~ 5 250	Low	5 180.00	2.83	11.00	8.17
	Middle	5 220.00	3.45	11.00	7.55
	High	5 240.00	3.37	11.00	7.63
5 250 ~ 5 350	Low	5 260.00	6.99	11.00	4.01
	Middle	5 300.00	4.83	11.00	6.17
	High	5 320.00	5.20	11.00	5.80
5 470 ~ 5 725	Low	5 500.00	7.86	11.00	3.14
	Middle	5 660.00	7.57	11.00	3.43
	High	5 720.00	7.64	11.00	3.36
5 725 ~ 5 850	Low	5 745.00	7.42	30.00	22.58
	Middle	5 785.00	7.87	30.00	22.13
	High	5 825.00	7.24	30.00	22.76

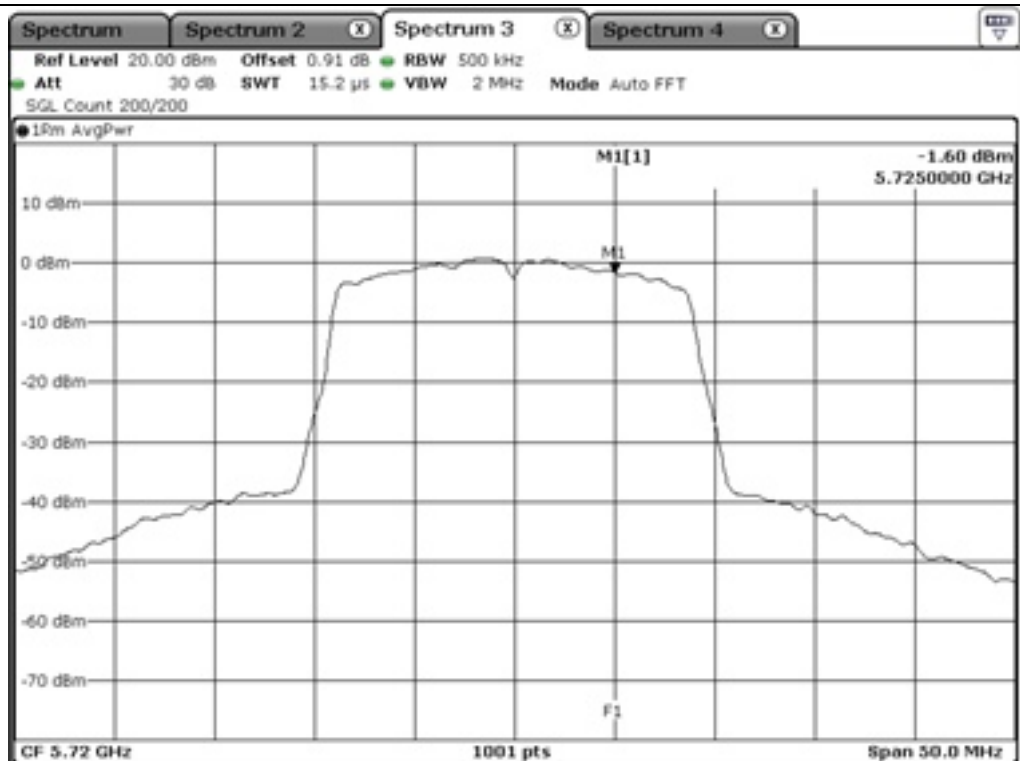
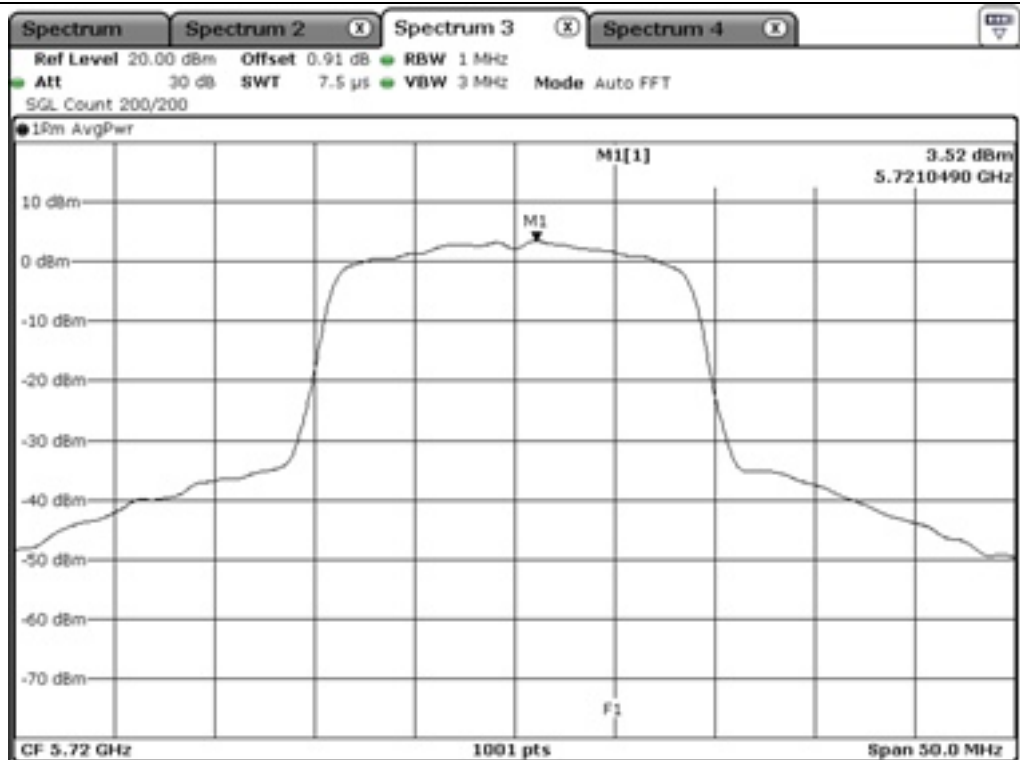
10.5.4 Test data for Staddle Channel_Antenna 0

-. Operating condition : Highest Output Power Transmitting Mode

-. Test Result : Pass

FREQUENCY RANGE (MHz)	FREQUENCY (MHz)	MEASURED VALUE (dBm)	Duty Factor (dB)	Result Value (dBm)	LIMIT (dBm)	MARGIN (dB)
5 470 ~ 5 725	5 720.00	3.52	0.74	4.26	11.00	6.74
5 725 ~ 5 850	5 720.00	-1.60	0.74	-0.86	30.00	30.86

Remark: See next page for measurement data.



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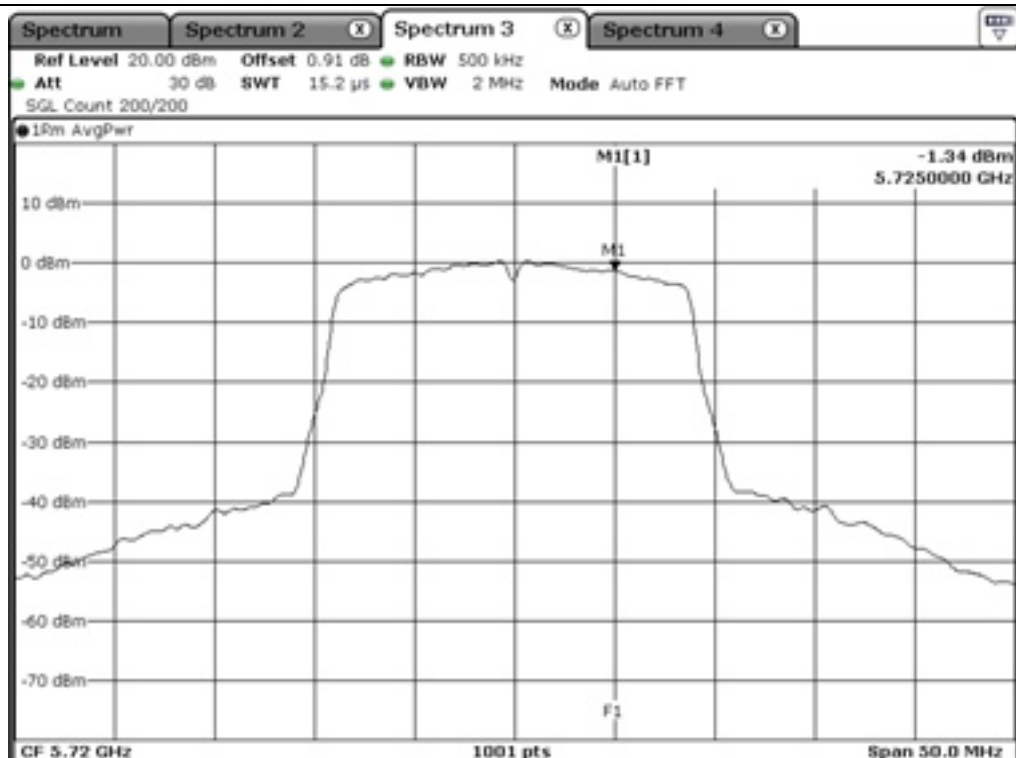
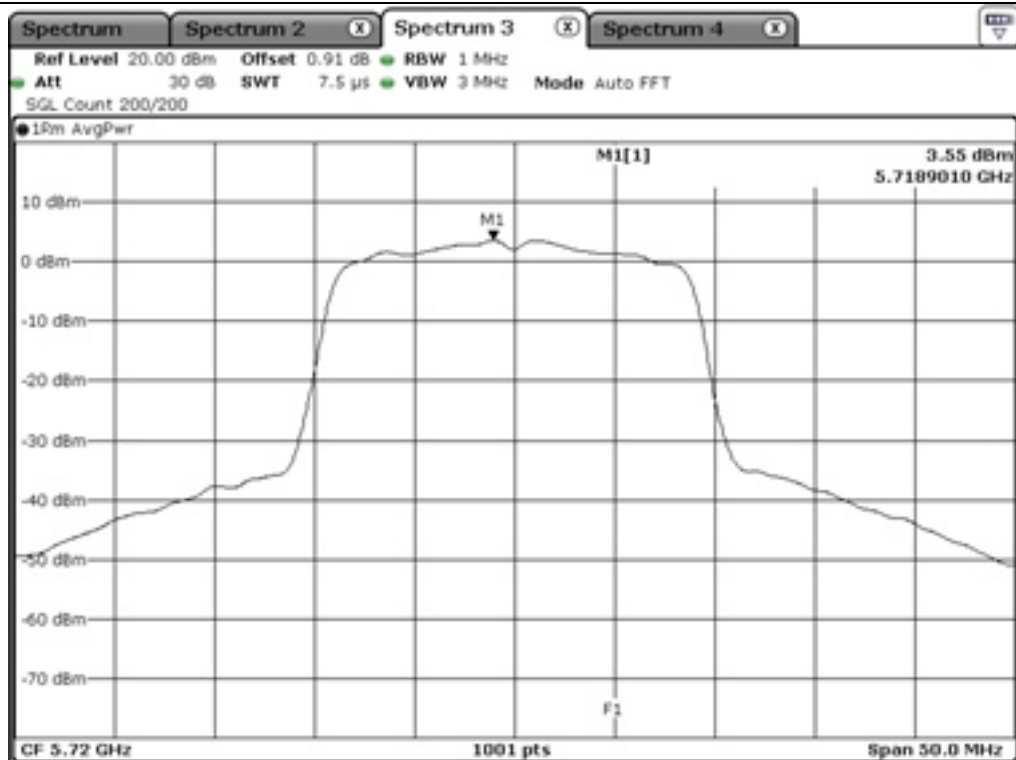
10.5.5 Test data for Staddle Channel_Antenna 1

-. Operating condition : Highest Output Power Transmitting Mode

-. Test Result : Pass

FREQUENCY RANGE (MHz)	FREQUENCY (MHz)	MEASURED VALUE (dBm)	Duty Factor (dB)	Result Value (dBm)	LIMIT (dBm)	MARGIN (dB)
5 470 ~ 5 725	5 720.00	3.55	0.74	4.29	11.00	6.71
5 725 ~ 5 850	5 720.00	-1.34	0.74	-0.60	30.00	30.60

Remark: See next page for measurement data.



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10.5.6 Test data for Staddle Channel_Multiple Transmit

-. Operating condition : Highest Output Power Transmitting Mode

-. Test Result : Pass

FREQUENCY RANGE (MHz)	FREQUENCY (MHz)	MEASURED VALUE (dBm)	LIMIT (dBm)	MARGIN (dB)
5 470 ~ 5 725	5 720.00	7.29	11.00	3.71
5 725 ~ 5 850	5 720.00	2.28	30.00	27.72

10.6 Test data for 802.11n_HT40 RLAN Mode

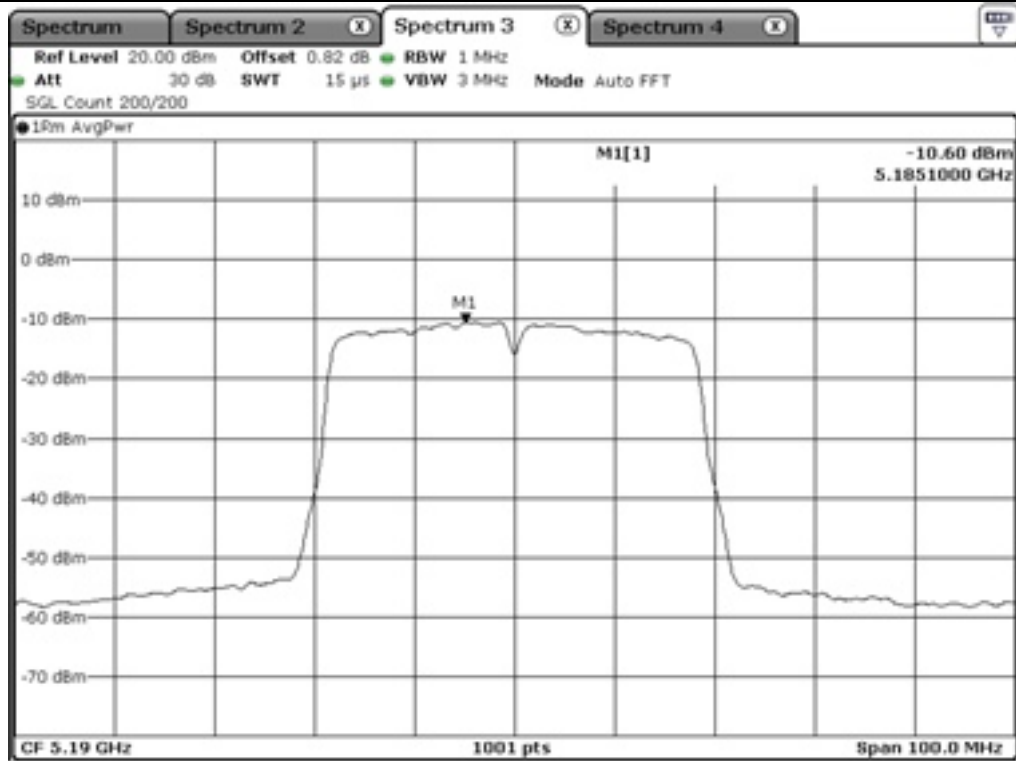
10.6.1 Test data for Antenna 0

-. Operating condition : Highest Output Power Transmitting Mode

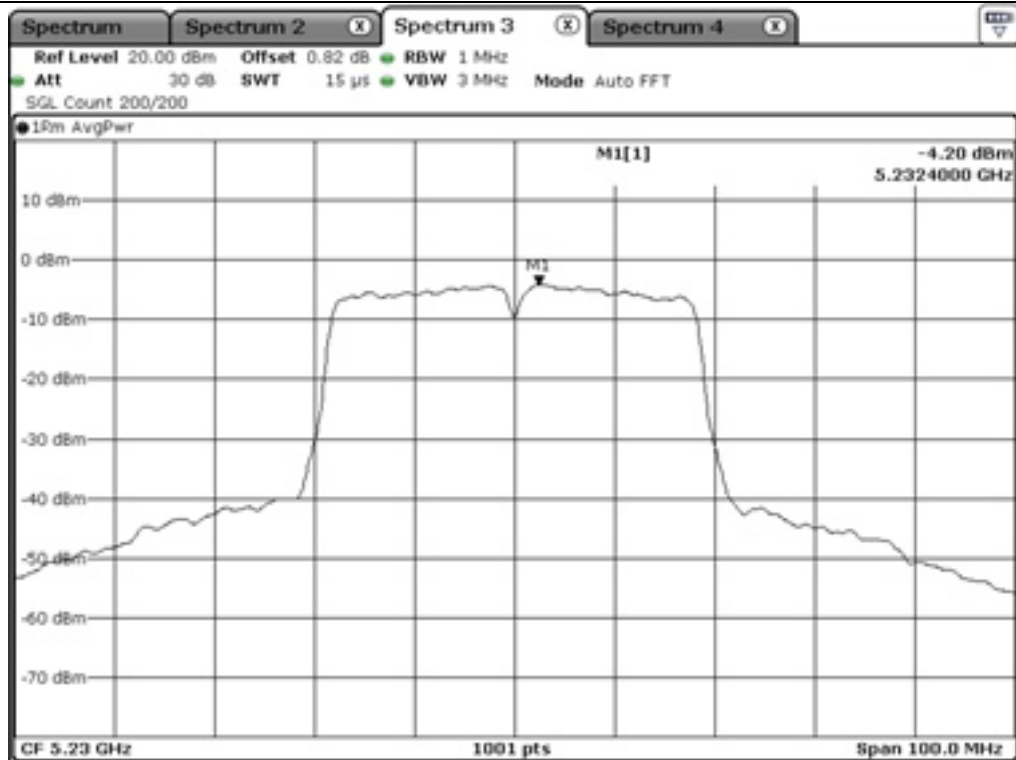
-. Test Result : Pass

FREQUENCY RANGE (MHz)	CHANNEL	FREQUENCY (MHz)	MEASURED VALUE (dBm)	Duty Factor (dB)	Result Value (dBm)	LIMIT (dBm)	MARGIN (dB)
5 150 ~ 5 250	Low	5 190.00	-10.60	1.35	-9.25	11.00	20.25
	High	5 230.00	-4.20	1.35	-2.85	11.00	13.85
5 250 ~ 5 350	Low	5 270.00	2.99	1.35	4.34	11.00	6.66
	High	5 310.00	-8.29	1.35	-6.94	11.00	17.94
5 470 ~ 5 725	Low	5 510.00	-4.44	1.35	-3.09	11.00	14.09
	Middle	5 550.00	1.15	1.35	2.50	11.00	8.50
	High	5 670.00	0.37	1.35	1.72	11.00	9.28
5 725 ~ 5 850	Low	5 755.00	-1.87	1.48	-0.39	30.00	30.39
	High	5 795.00	-2.05	1.48	-0.57	30.00	30.57

Remark: See next page for measurement data.



Low Channel (5 190 MHz)



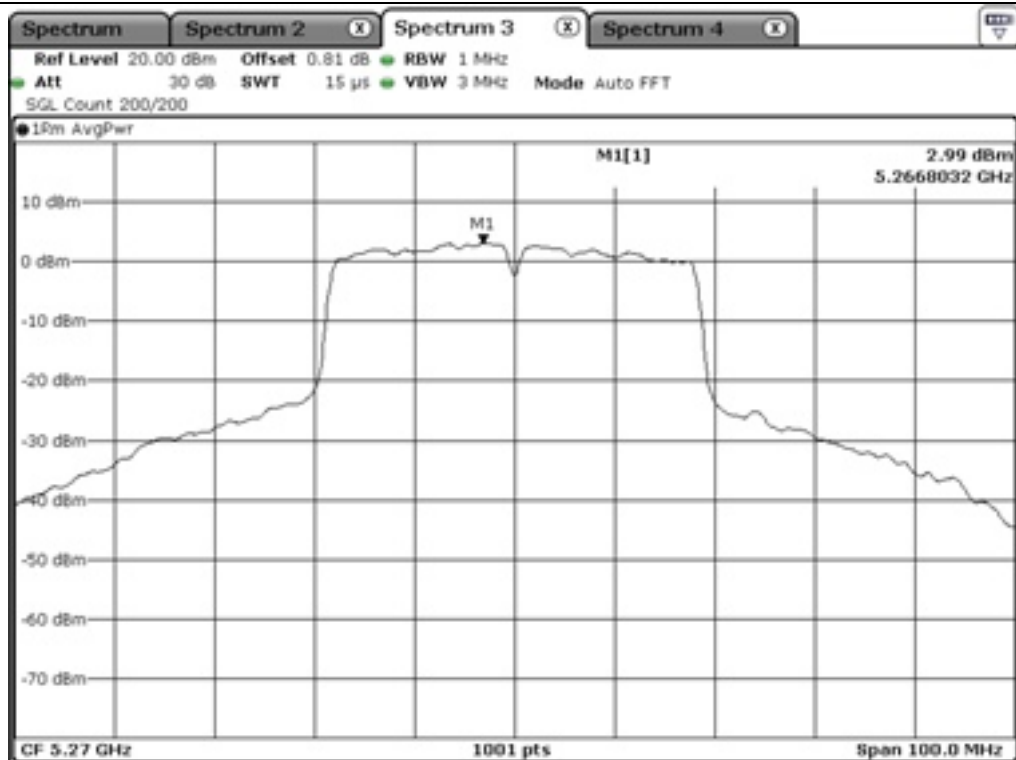
High Channel (5 230 MHz)

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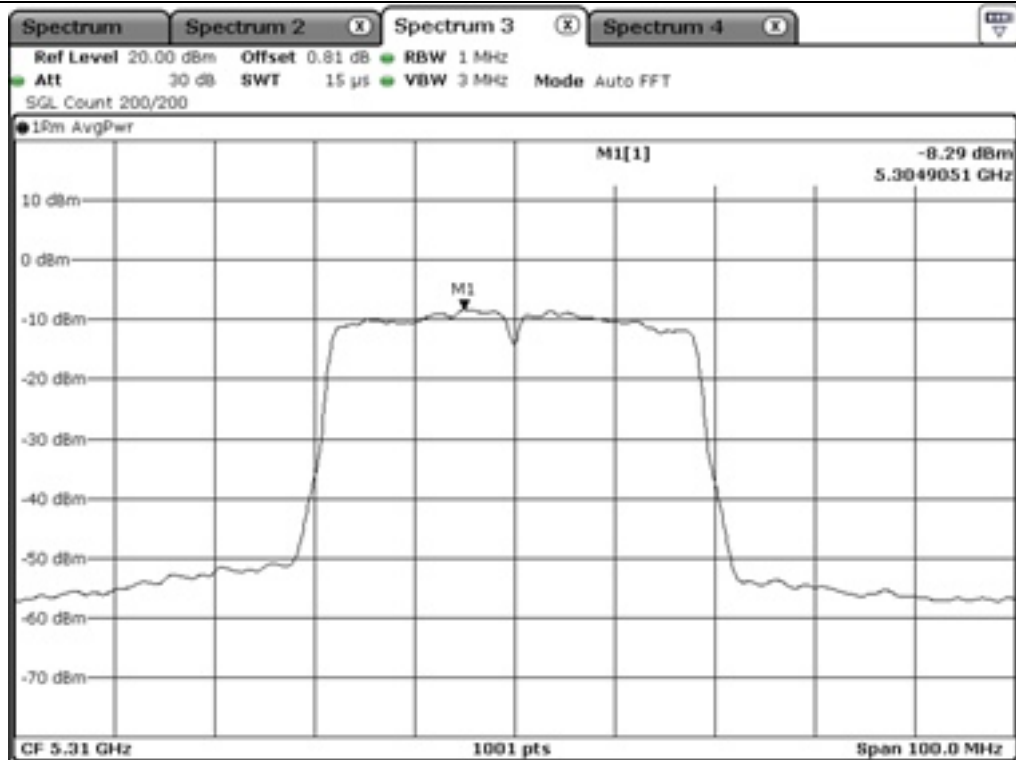
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Low Channel (5 270 MHz)



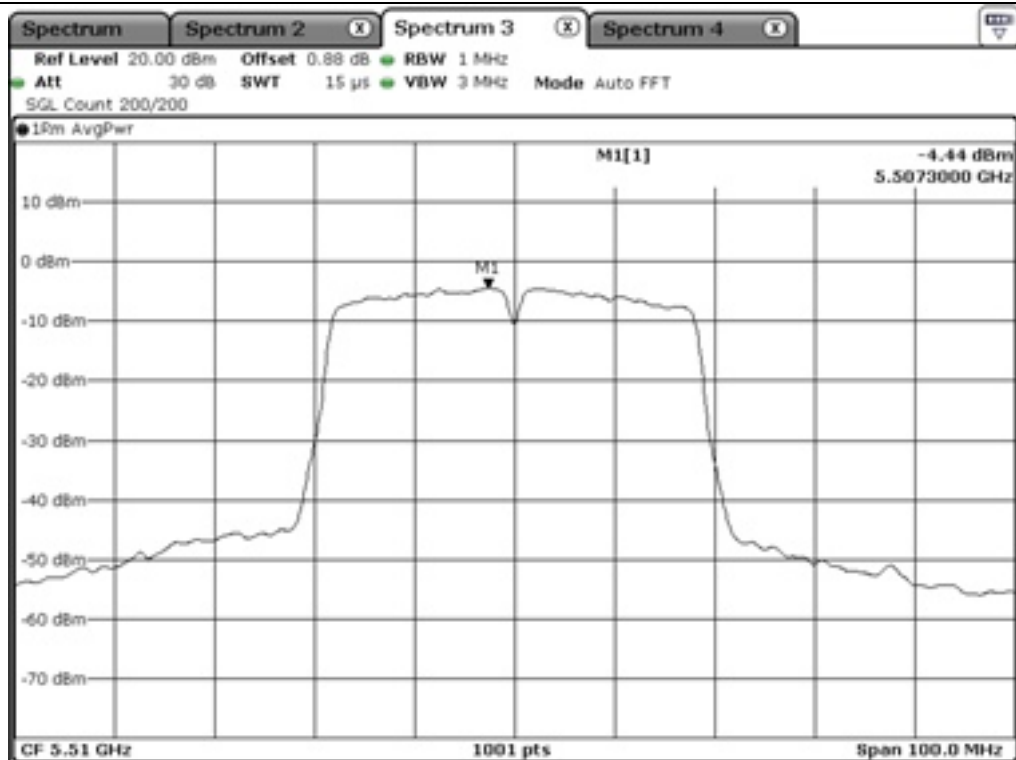
High Channel (5 310 MHz)

This Report is not correlated with the authentication of KOLAS

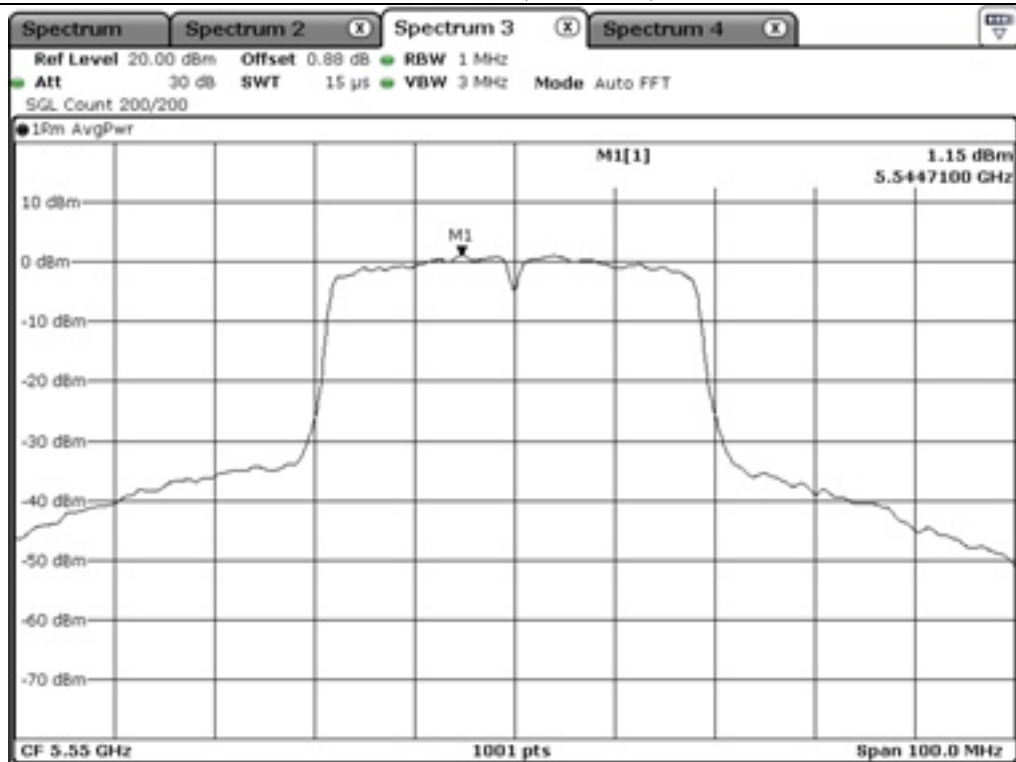
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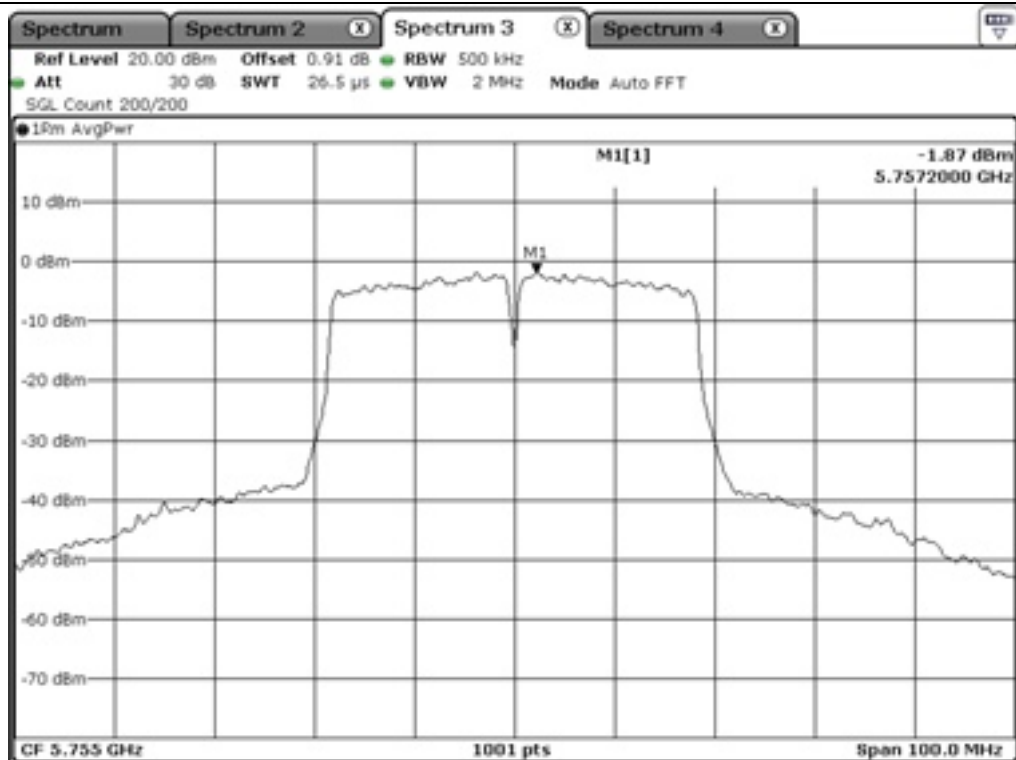
Low Channel (5 510 MHz)



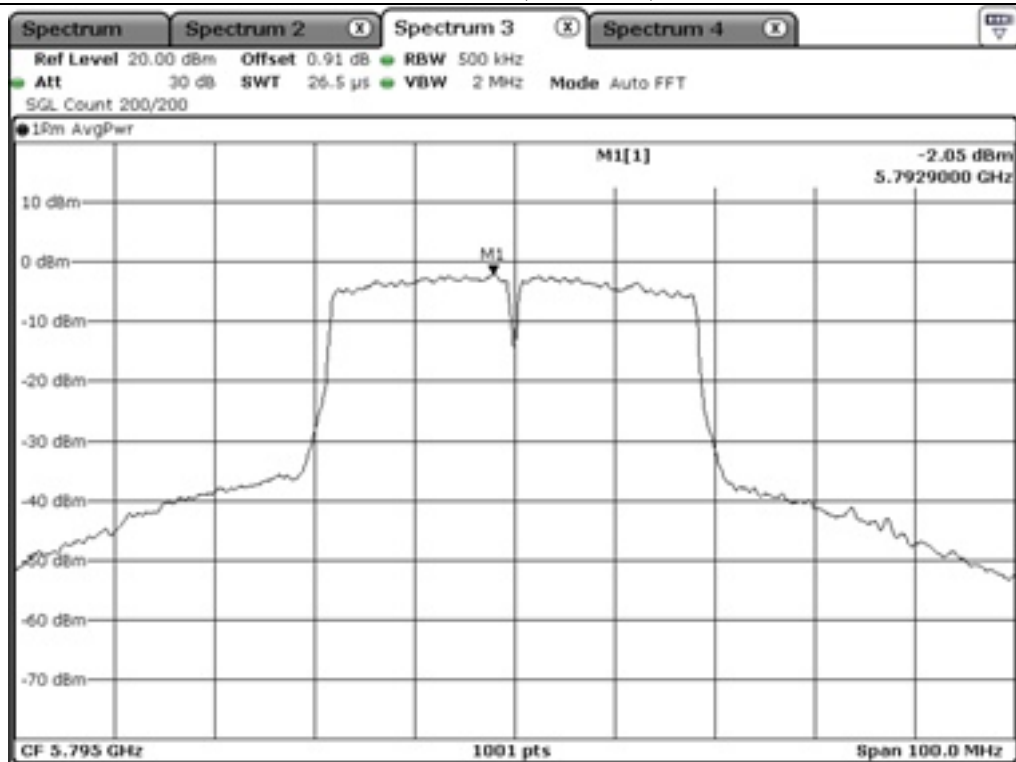
Middle Channel (5 550 MHz)



High Channel (5 670 MHz)



Low Channel (5 755 MHz)



High Channel (5 795 MHz)

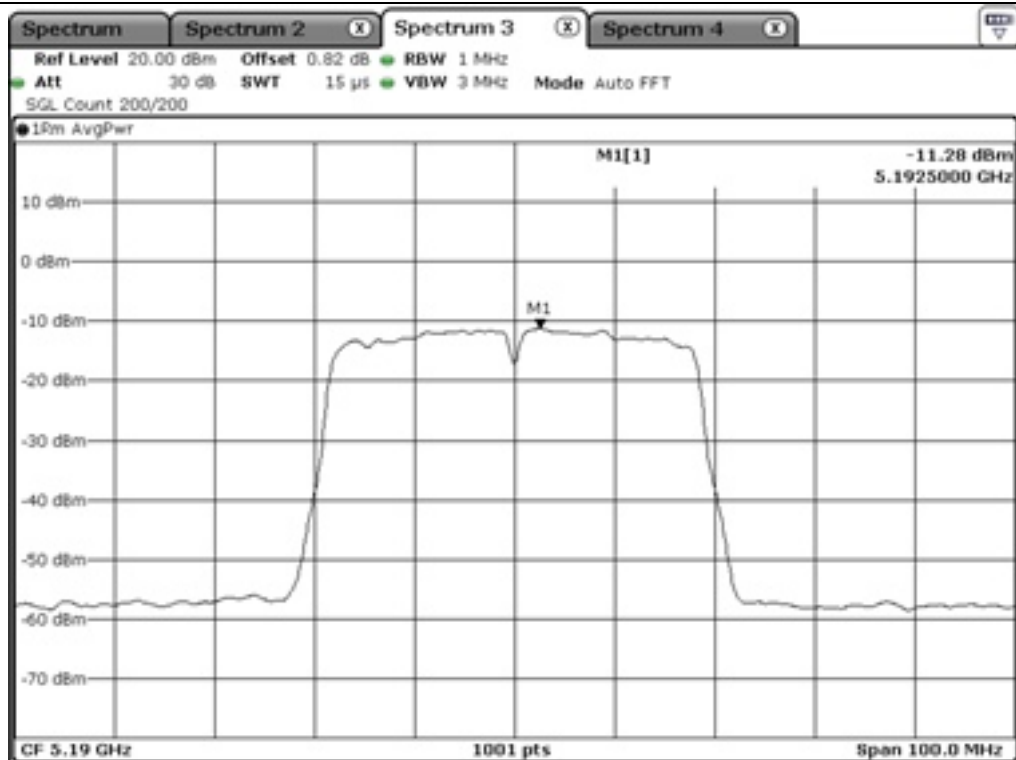
10.6.2 Test data for Antenna 1

-. Operating condition : Highest Output Power Transmitting Mode

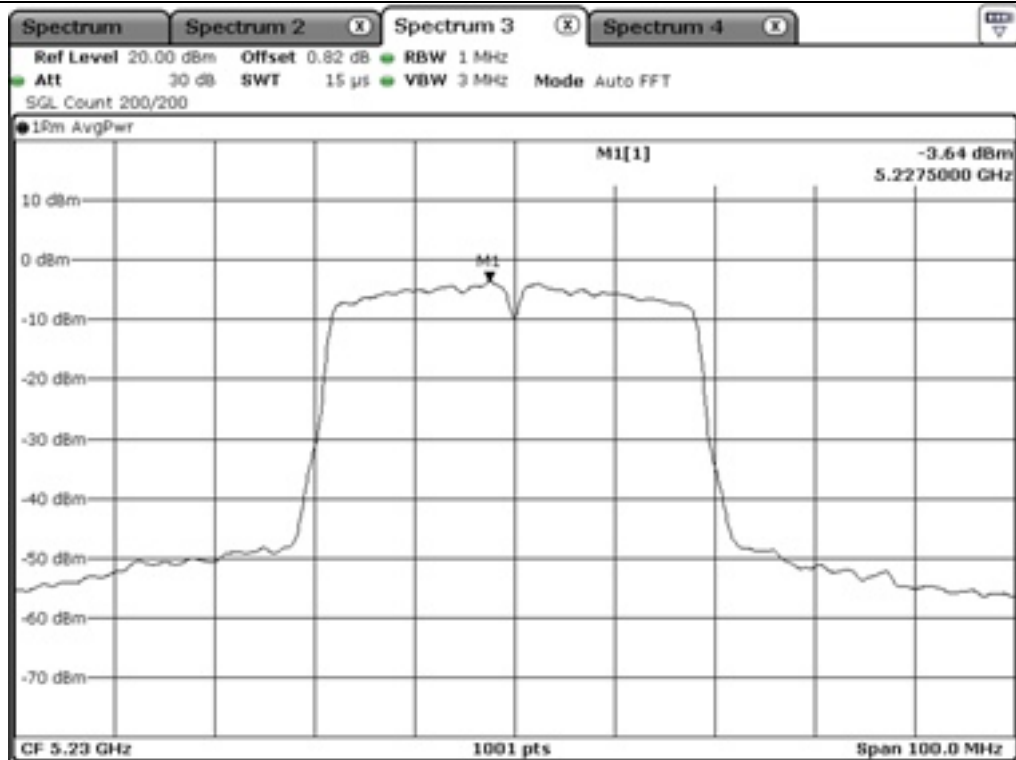
-. Test Result : Pass

FREQUENCY RANGE (MHz)	CHANNEL	FREQUENCY (MHz)	MEASURED VALUE (dBm)	Duty Factor (dB)	Result VALUE (dBm)	LIMIT (dBm)	MARGIN (dB)
5 150 ~ 5 250	Low	5 190.00	-11.28	1.52	-9.76	11.00	20.76
	High	5 230.00	-3.64	1.52	-2.12	11.00	13.12
5 250 ~ 5 350	Low	5 270.00	2.62	1.35	3.97	11.00	7.03
	High	5 310.00	-10.30	1.35	-8.95	11.00	19.95
5 470 ~ 5 725	Low	5 510.00	-5.30	1.35	-3.95	11.00	14.95
	Middle	5 550.00	1.55	1.35	2.90	11.00	8.10
	High	5 670.00	1.13	1.35	2.48	11.00	8.52
5 725 ~ 5 850	Low	5 755.00	-2.45	1.25	-1.20	30.00	31.20
	High	5 795.00	-2.32	1.25	-1.07	30.00	31.07

Remark: See next page for measurement data.



Low Channel (5 190 MHz)



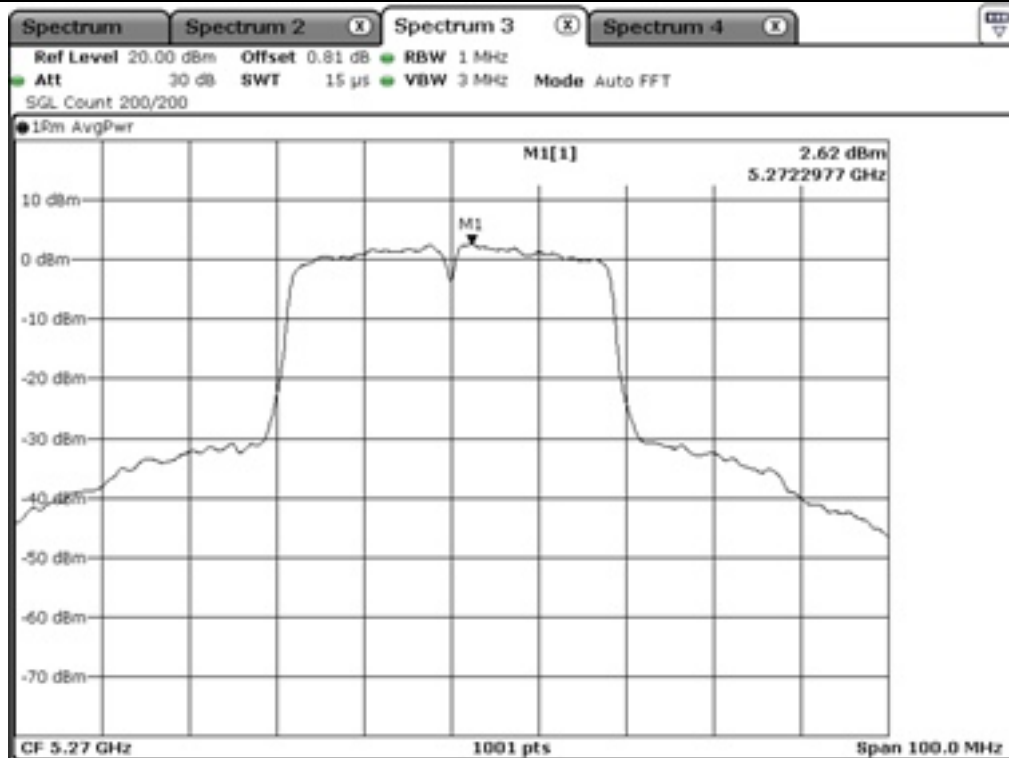
High Channel (5 230 MHz)

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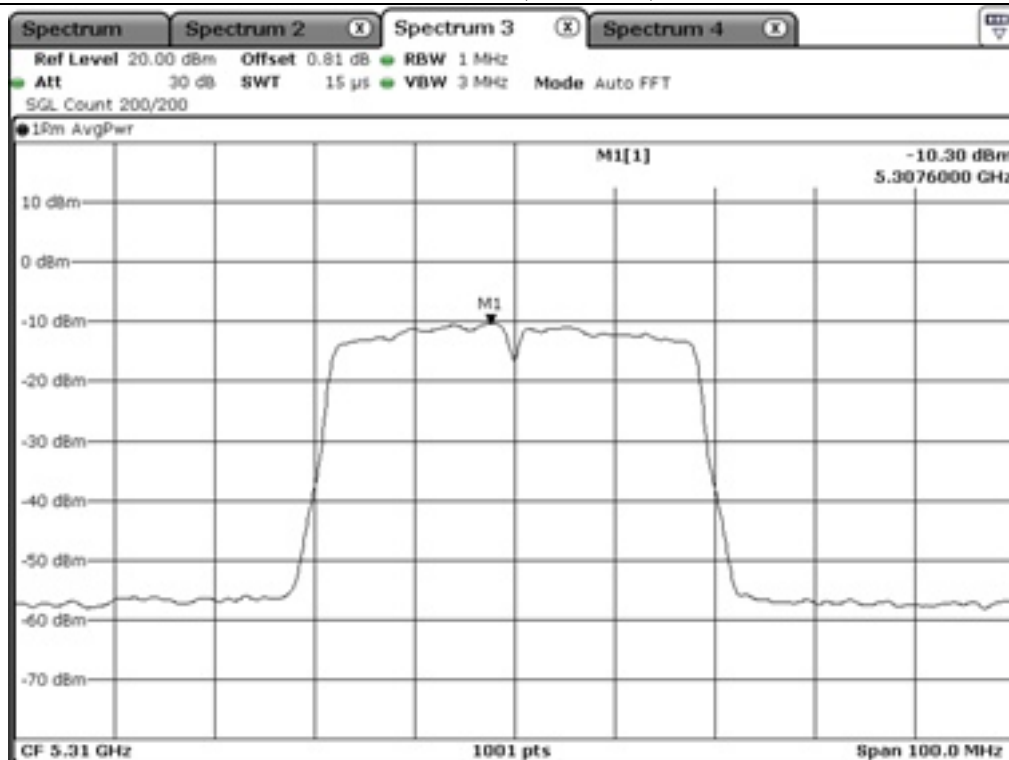
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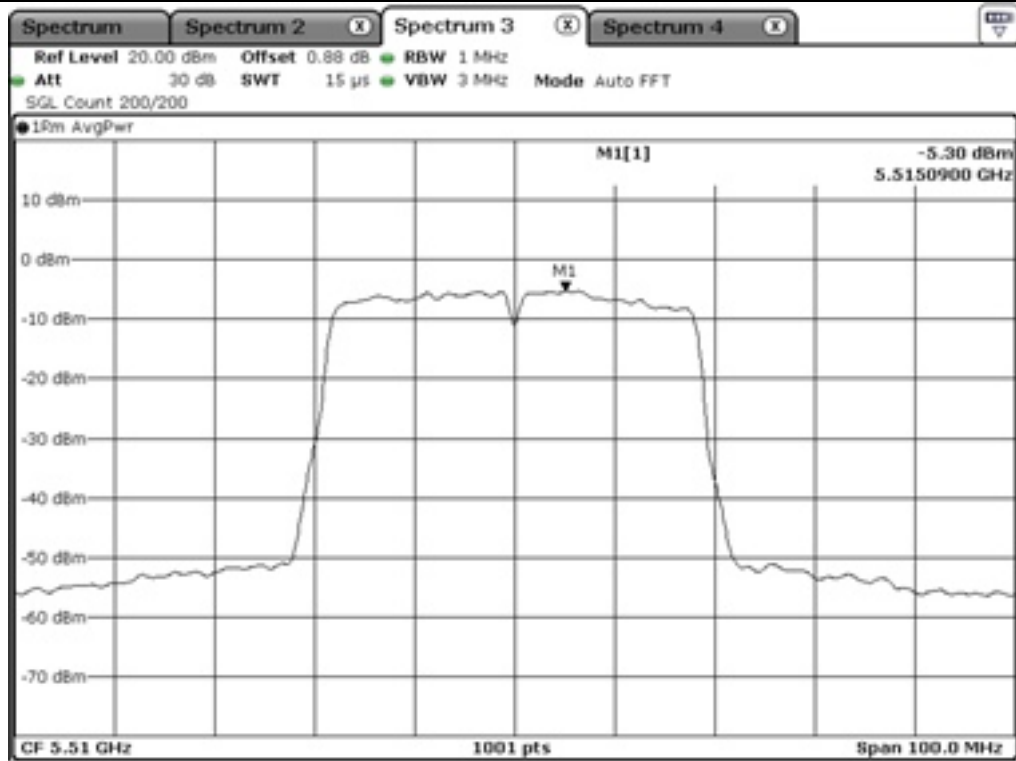
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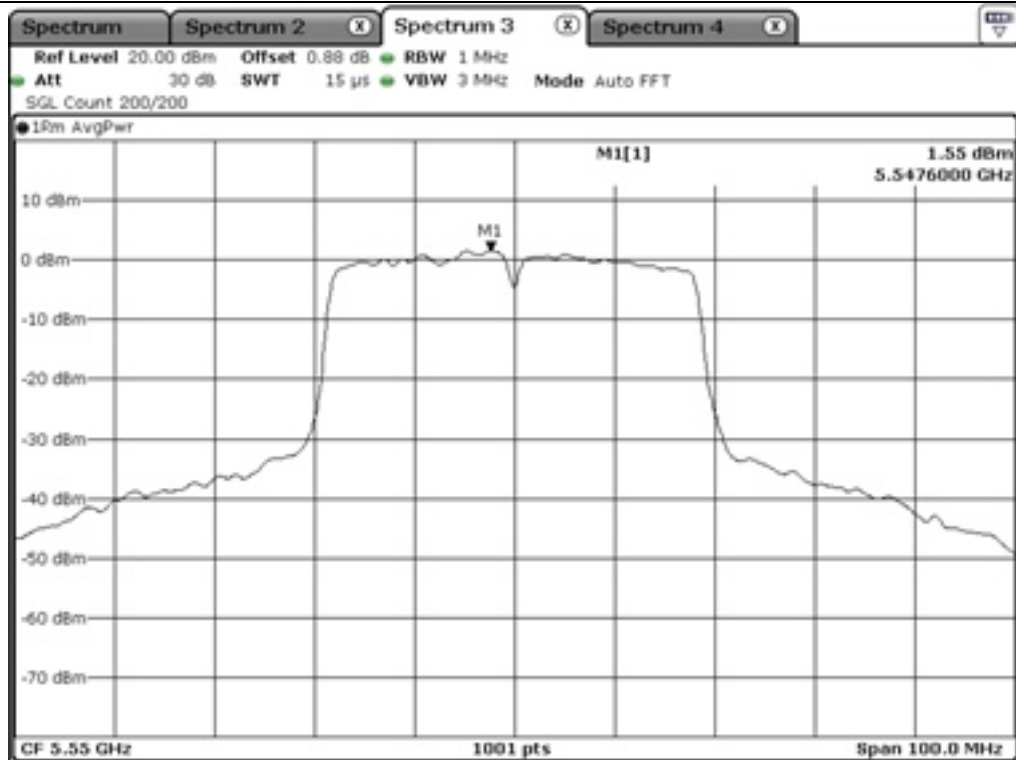
Low Channel (5 270 MHz)



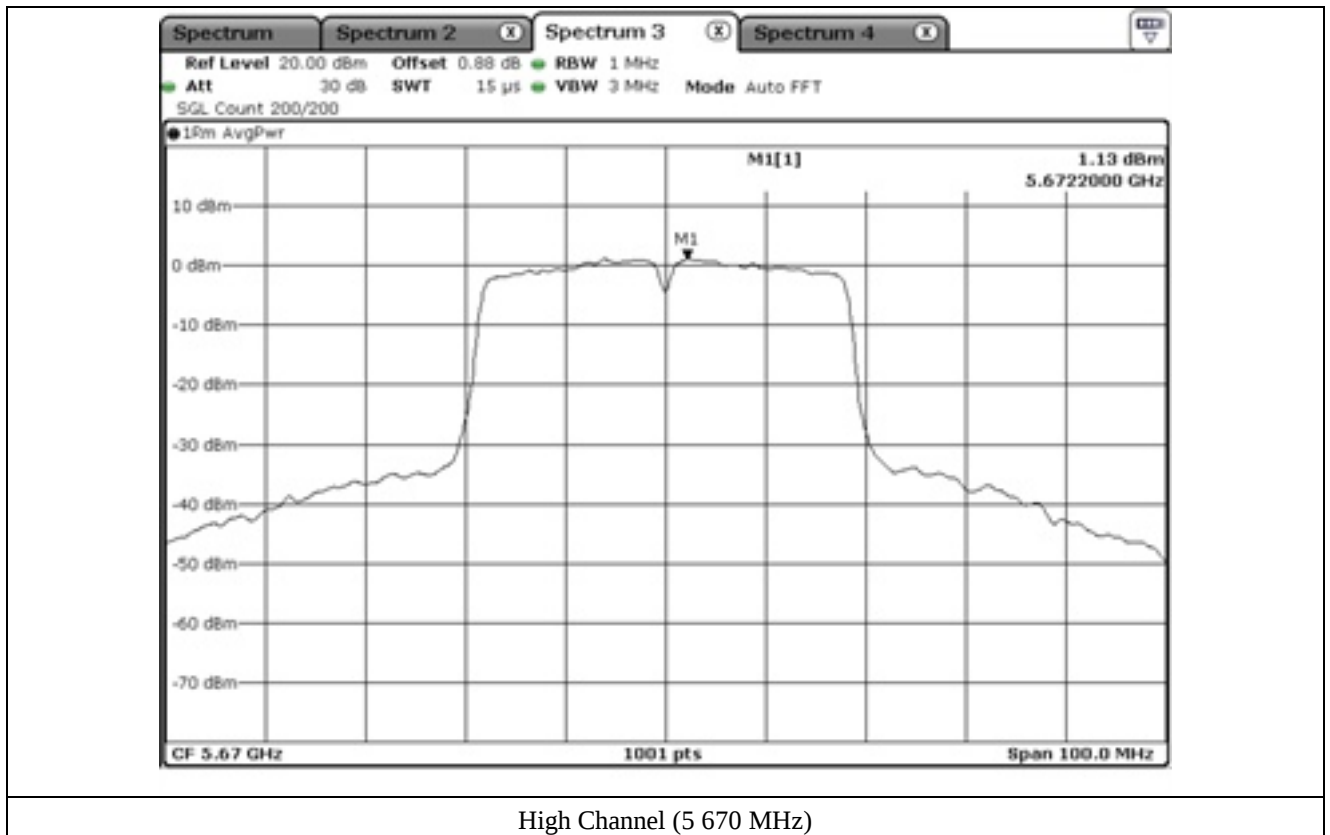
High Channel (5 310 MHz)

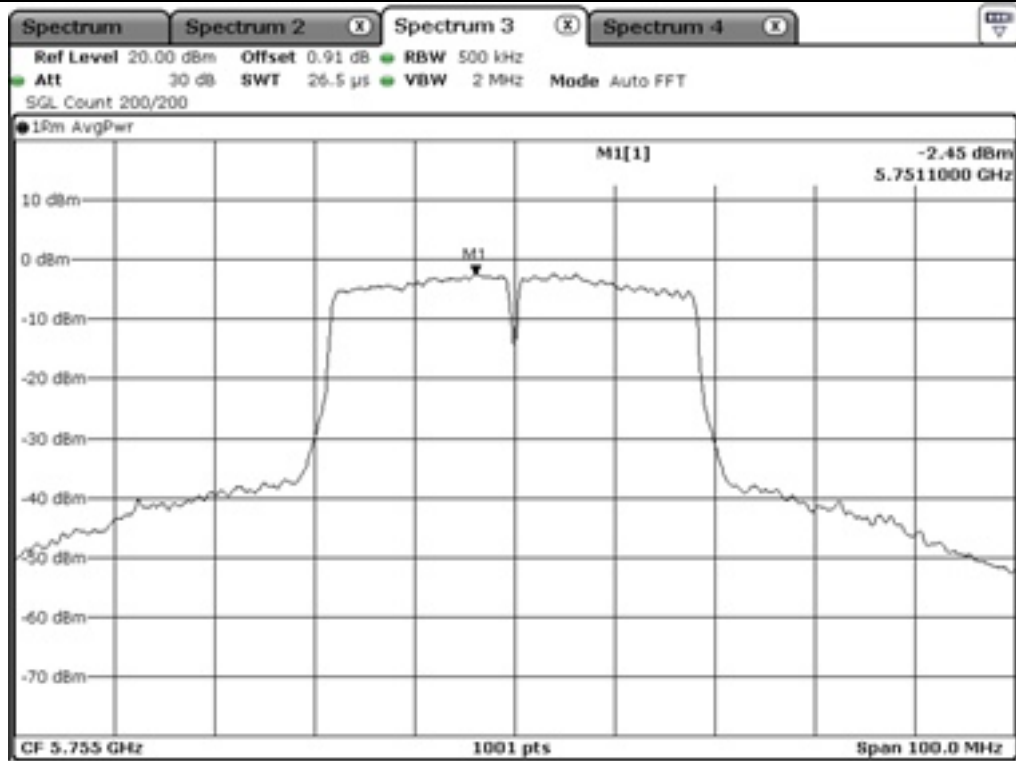


Low Channel (5 510 MHz)

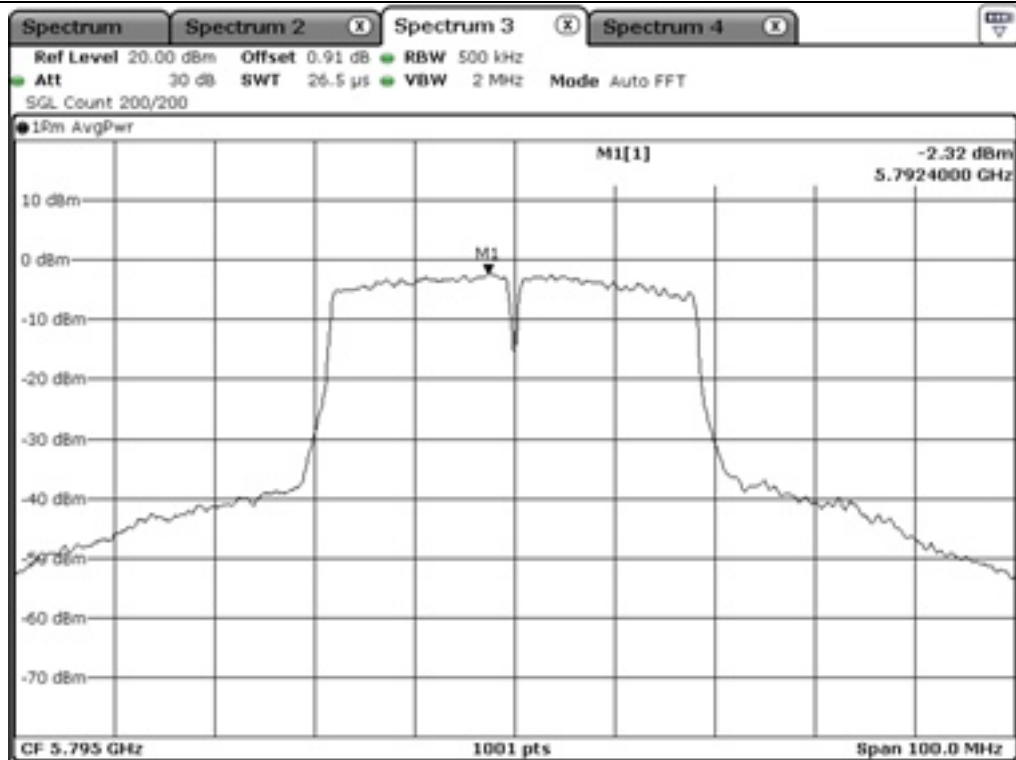


Middle Channel (5 550 MHz)





Low Channel (5 755 MHz)



High Channel (5 795 MHz)

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	5 190.00	-6.49	11.00	17.49
	High	5 230.00	0.54	11.00	10.46
5 250 ~ 5 350	Low	5 270.00	7.17	11.00	3.83
	High	5 310.00	-4.82	11.00	15.82
5 470 ~ 5 725	Low	5 510.00	-0.49	11.00	11.49
	Middle	5 550.00	5.71	11.00	5.29
	High	5 670.00	5.13	11.00	5.87
5 725 ~ 5 850	Low	5 755.00	2.23	30.00	27.77
	High	5 795.00	2.20	30.00	27.80

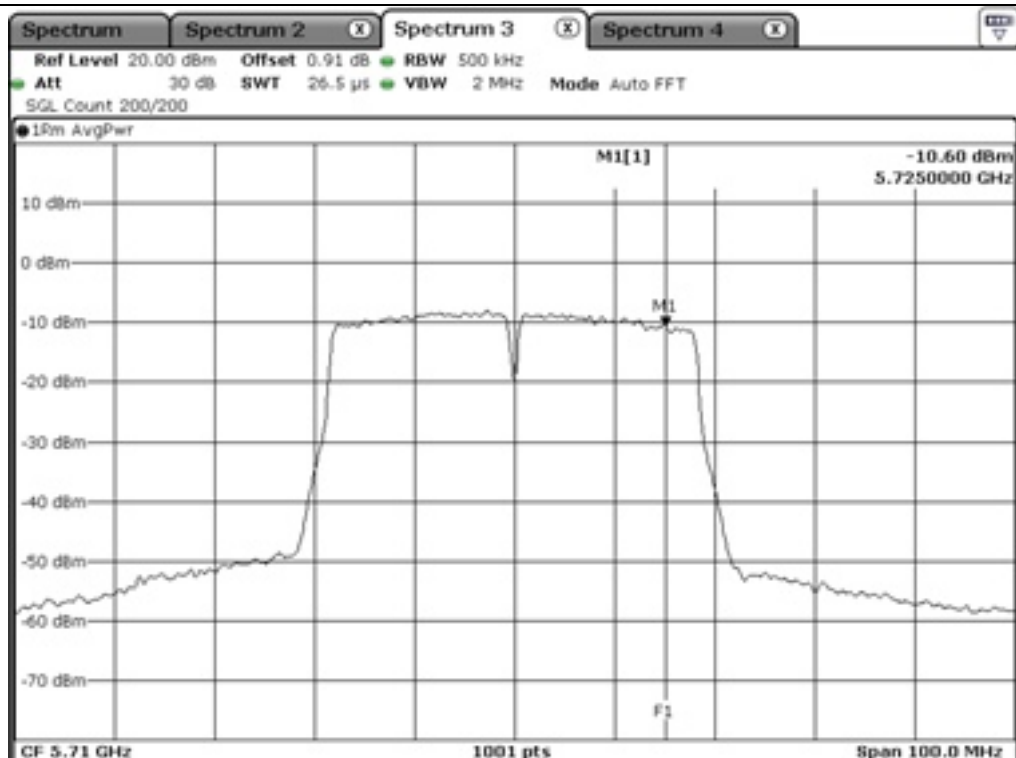
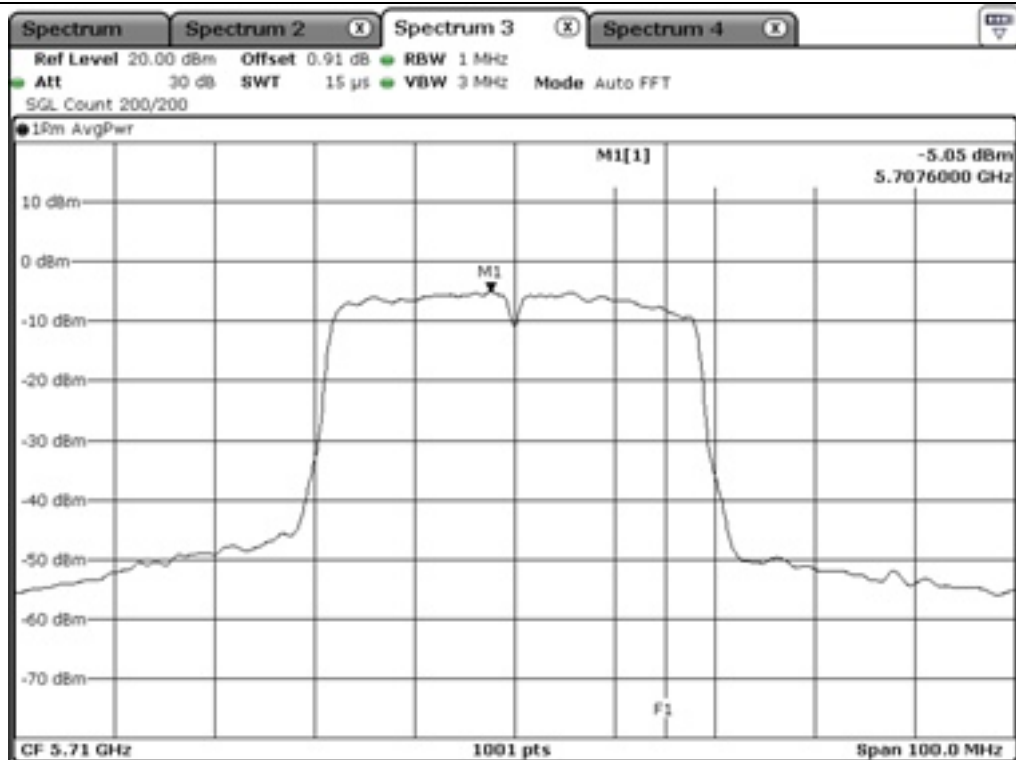
10.6.4 Test data for Staddle Channel_Antenna 0

-. Operating condition : Highest Output Power Transmitting Mode

-. Test Result : Pass

FREQUENCY RANGE (MHz)	FREQUENCY (MHz)	MEASURED VALUE (dBm)	DUTY FACTOR (dB)	Result VALUE (dBm)	LIMIT (dBm)	MARGIN (dB)
5 470 ~ 5 725	5 710.00	-5.05	1.48	-3.57	11.00	14.57
5 725 ~ 5 850	5 710.00	-10.60	1.48	-9.12	30.00	39.12

Remark: See next page for measurement data.



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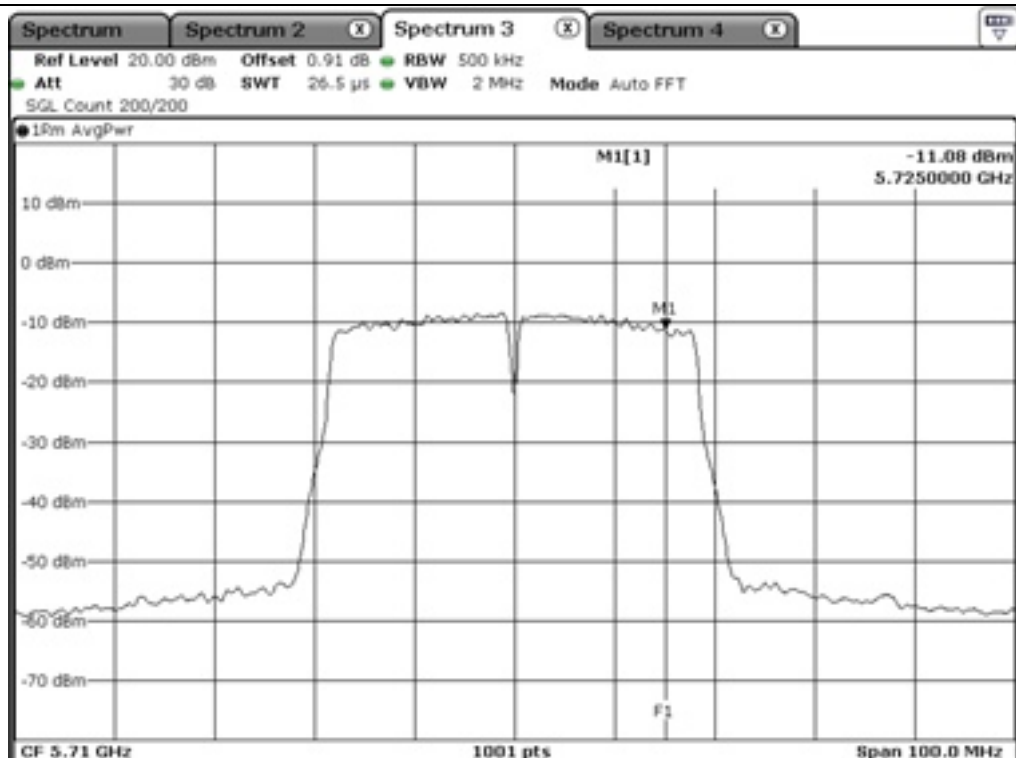
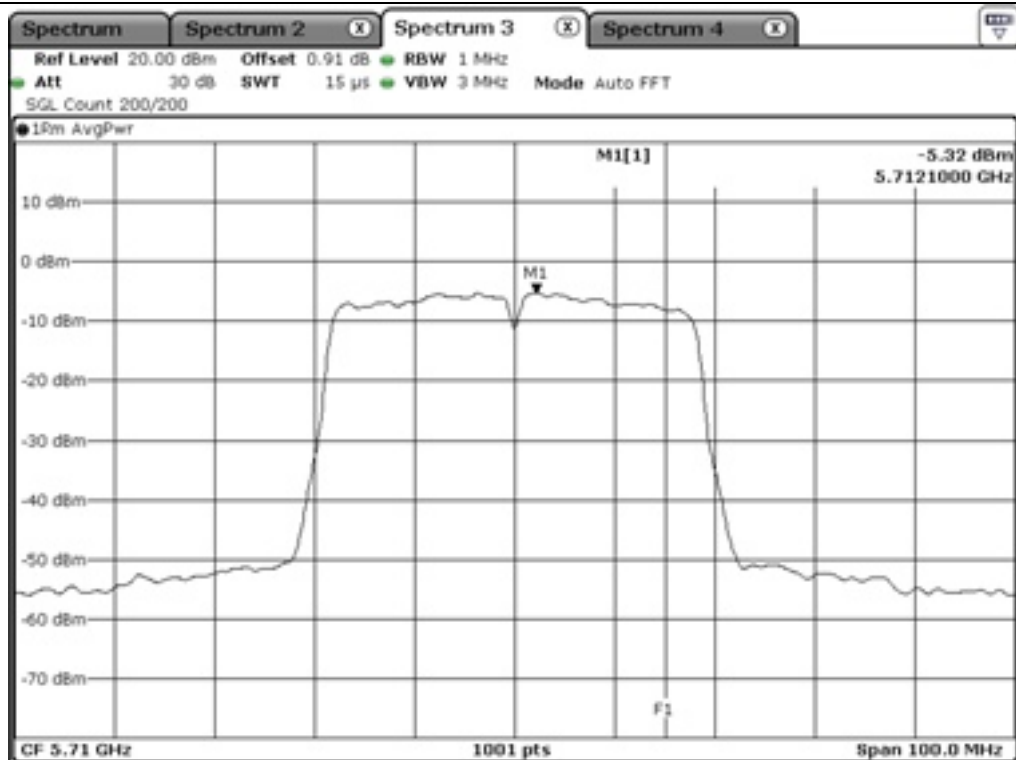
10.6.5 Test data for Staddle Channel_Antenna 1

-. Operating condition : Highest Output Power Transmitting Mode

-. Test Result : Pass

FREQUENCY RANGE (MHz)	FREQUENCY (MHz)	MEASURED VALUE (dBm)	DUTY FACTOR (dB)	Result VALUE (dBm)	LIMIT (dBm)	MARGIN (dB)
5 470 ~ 5 725	5 710.00	-5.32	1.35	-3.97	11.00	14.97
5 725 ~ 5 850	5 710.00	-11.08	1.35	-9.73	30.00	39.73

Remark: See next page for measurement data.



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10.6.6 Test data for Staddle Channel_Multiple Transmit

-. Operating condition : Highest Output Power Transmitting Mode

-. Test Result : Pass

FREQUENCY RANGE (MHz)	FREQUENCY (MHz)	MEASURED VALUE (dBm)	LIMIT (dBm)	MARGIN (dB)
5 470 ~ 5 725	5 710.00	-0.76	11.00	11.76
5 725 ~ 5 850	5 710.00	-6.40	30.00	36.40

10.7 Test data for 802.11ac_HT80 RLAN Mode

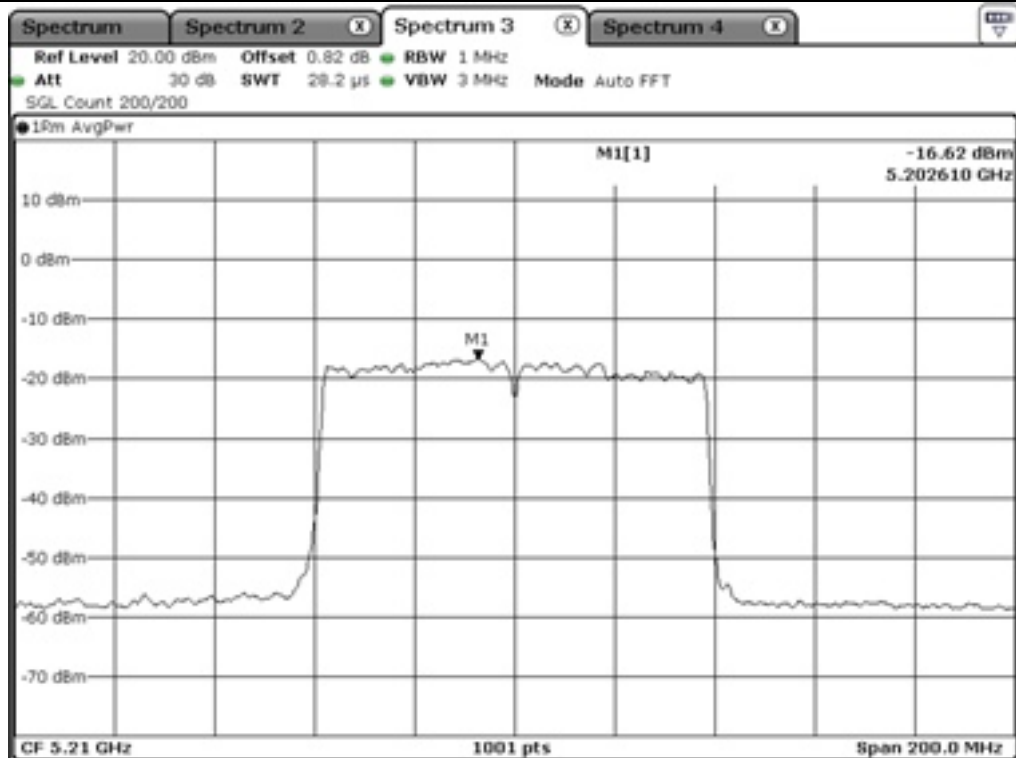
10.7.1 Test data for Antenna 0

-. Operating condition : Highest Output Power Transmitting Mode

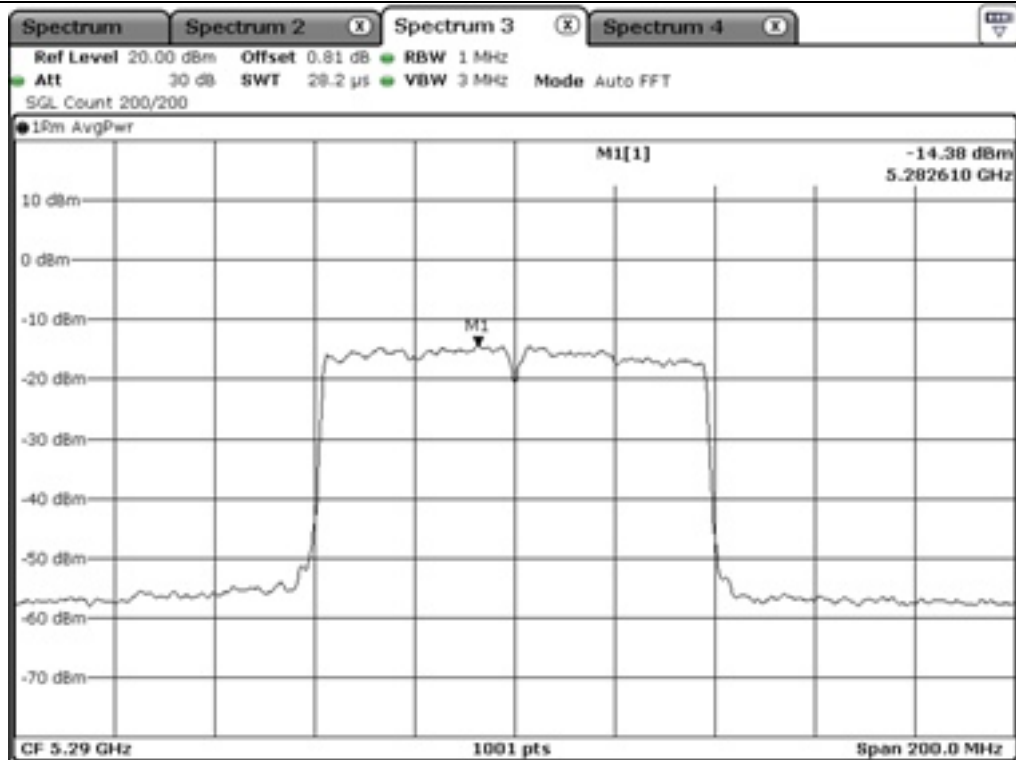
-. Test Result : Pass

FREQUENCY RANGE (MHz)	CHANNEL	FREQUENCY (MHz)	MEASURED VALUE (dBm)	Duty Factor (dB)	Result VALUE (dBm)	LIMIT (dBm)	MARGIN (dB)
5 150 ~ 5 250	Low	5 210.00	-16.62	2.83	-13.79	11.00	24.79
5 250 ~ 5 350	Low	5 290.00	-14.38	2.72	-11.66	11.00	22.66
5 470 ~ 5 725	Low	5 530.00	-14.35	2.64	-11.71	11.00	22.71
5 725 ~ 5 850	Low	5 775.00	-14.66	2.96	-11.70	30.00	41.70

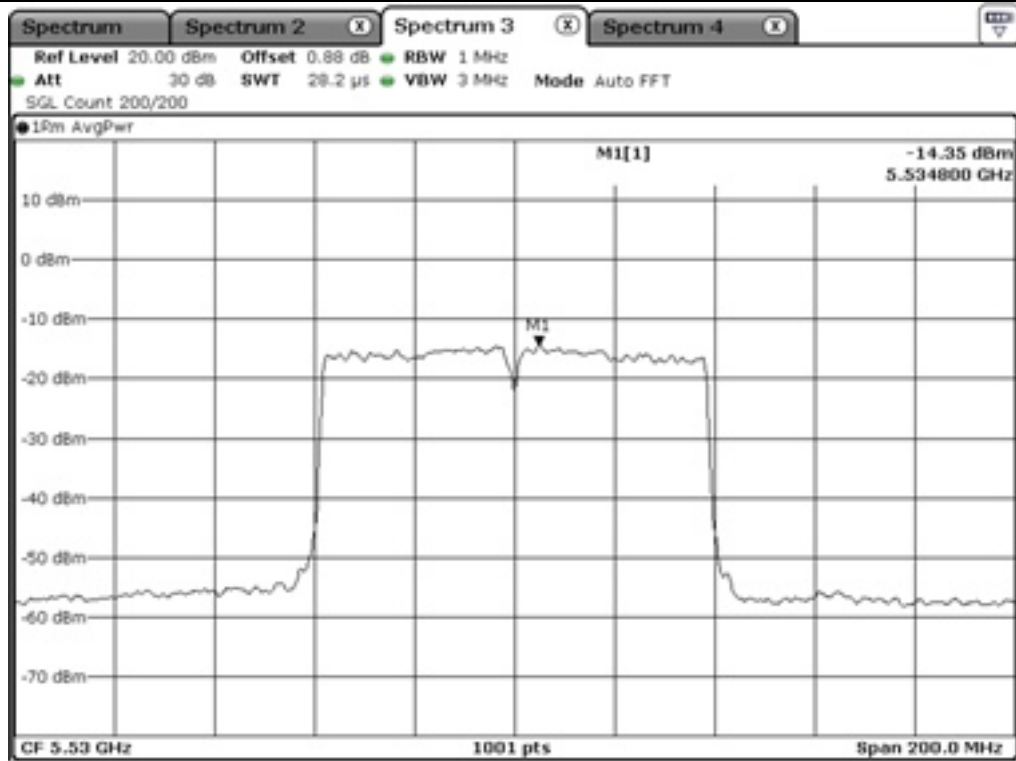
Remark: See next page for measurement data.



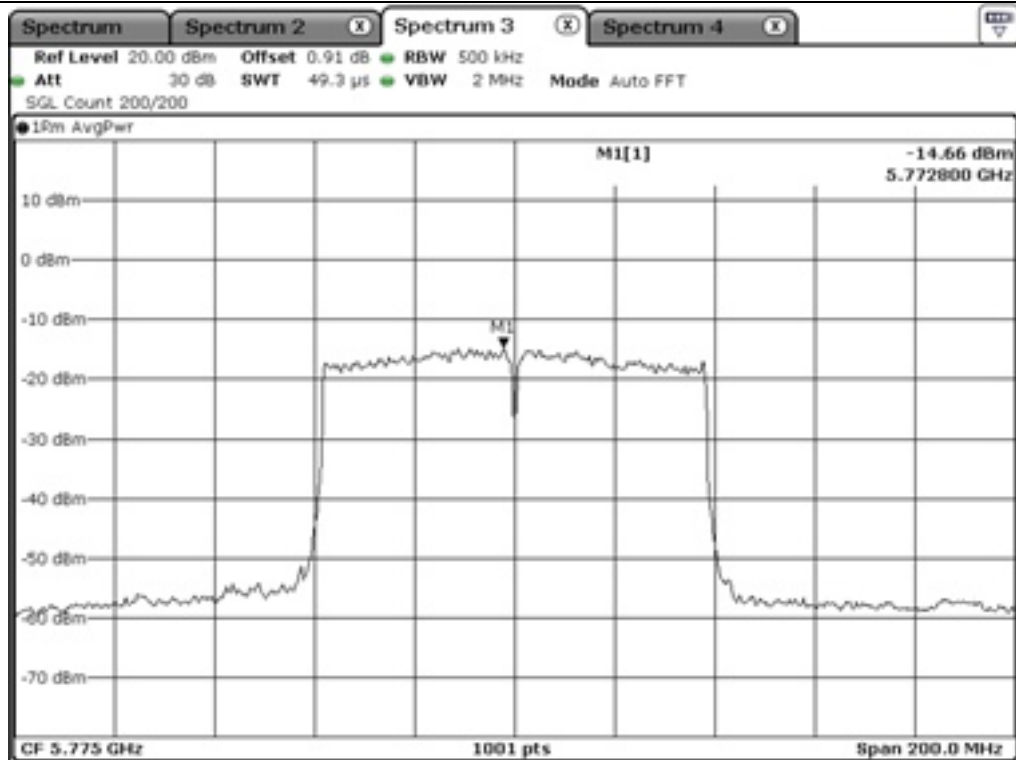
Middle Channel (5 210 MHz)



Middle Channel (5 290 MHz)



Middle Channel (5 530 MHz)



Middle Channel (5 775 MHz)

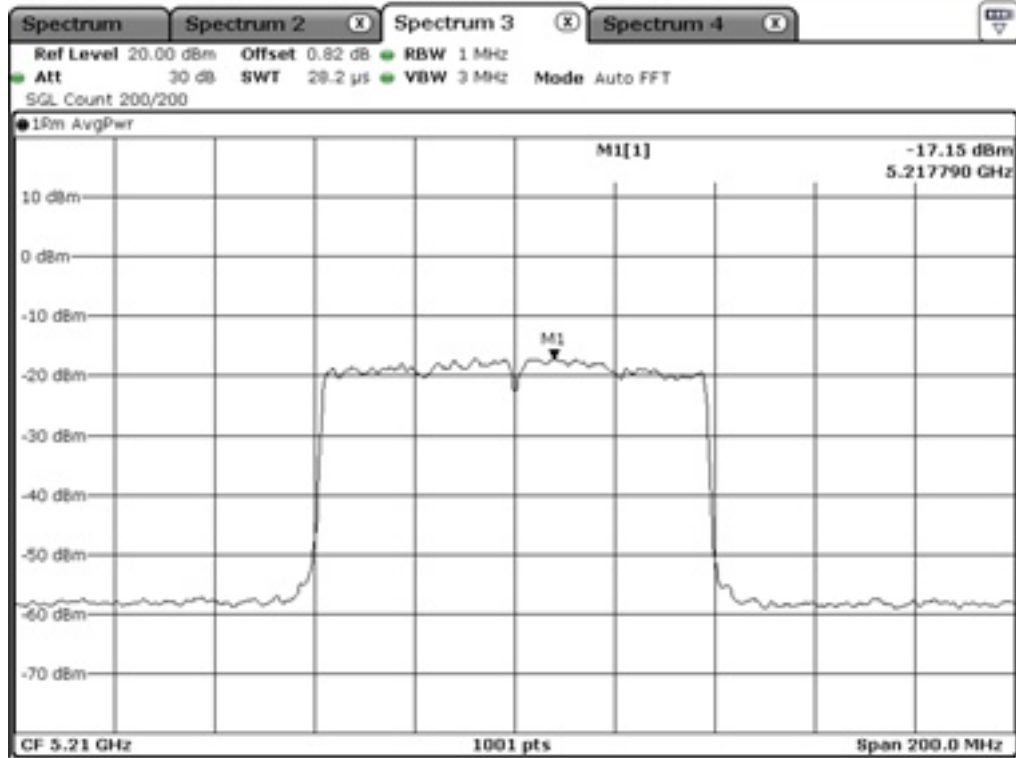
10.7.2 Test data for Antenna 1

-. Operating condition : Highest Output Power Transmitting Mode

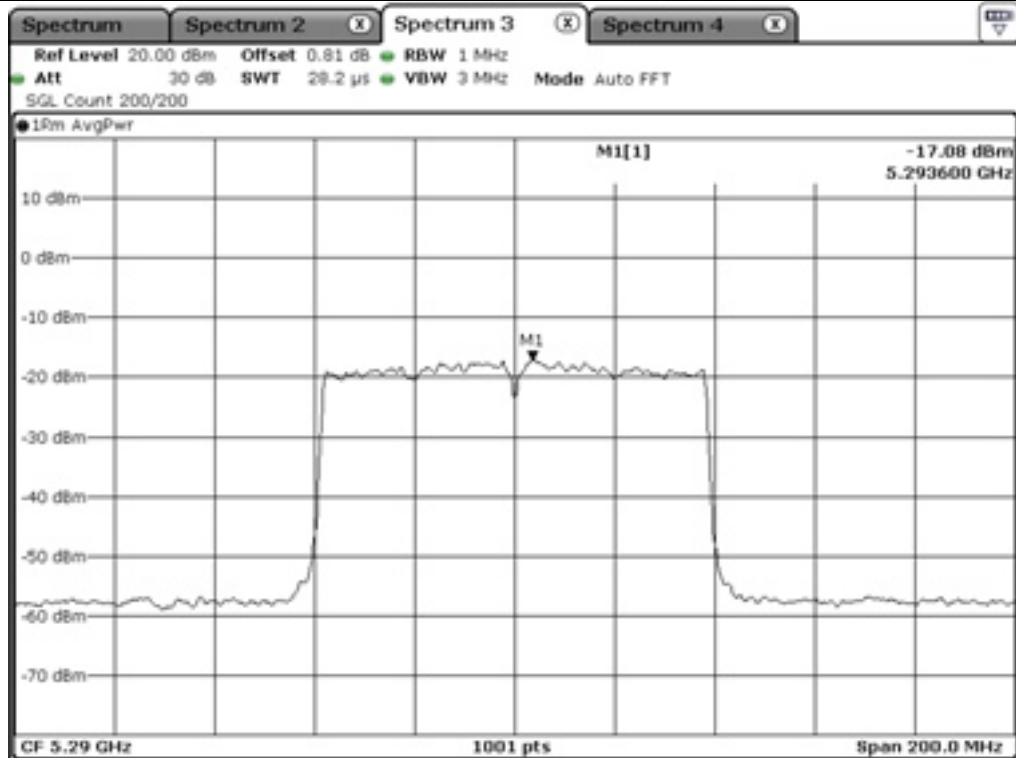
-. Test Result : Pass

FREQUENCY RANGE (MHz)	CHANNEL	FREQUENCY (MHz)	MEASURED VALUE (dBm)	Duty Factor (dB)	Result VALUE (dBm)	LIMIT (dBm)	MARGIN (dB)
5 150 ~ 5 250	Low	5 210.00	-17.15	2.66	-14.49	11.00	25.49
5 250 ~ 5 350	Low	5 290.00	-17.08	2.98	-14.10	11.00	25.10
5 470 ~ 5 725	Low	5 530.00	-14.91	2.98	-11.93	11.00	22.93
5 725 ~ 5 850	Low	5 775.00	-15.00	2.9	-12.10	30.00	42.10

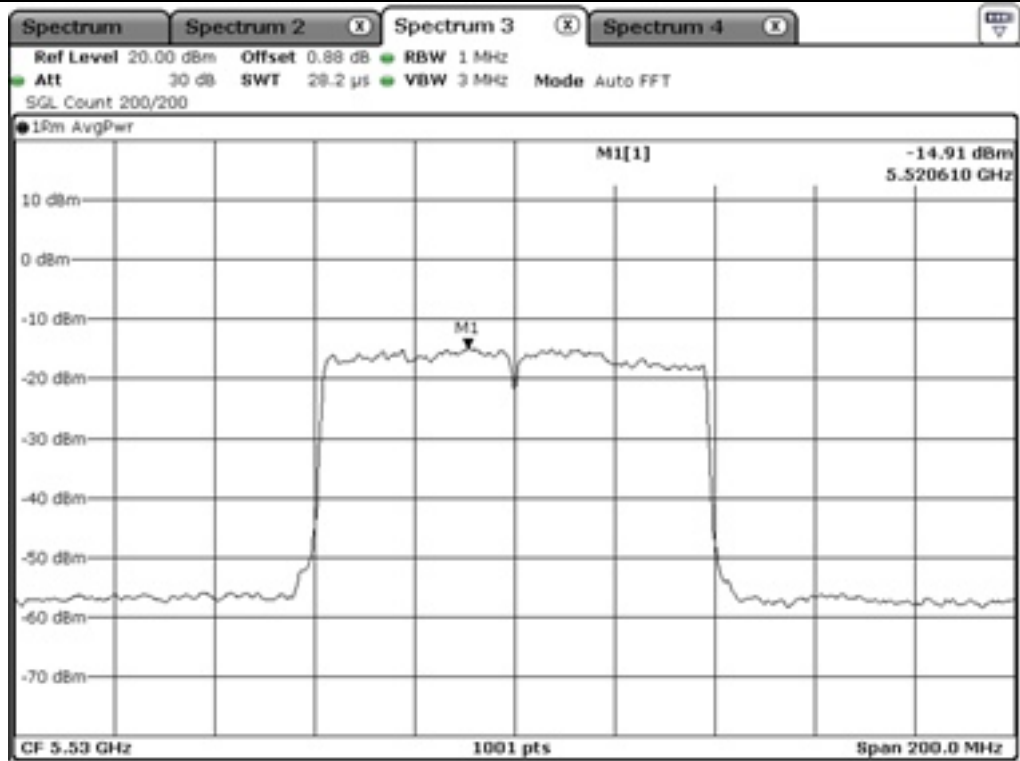
Remark: See next page for measurement data.



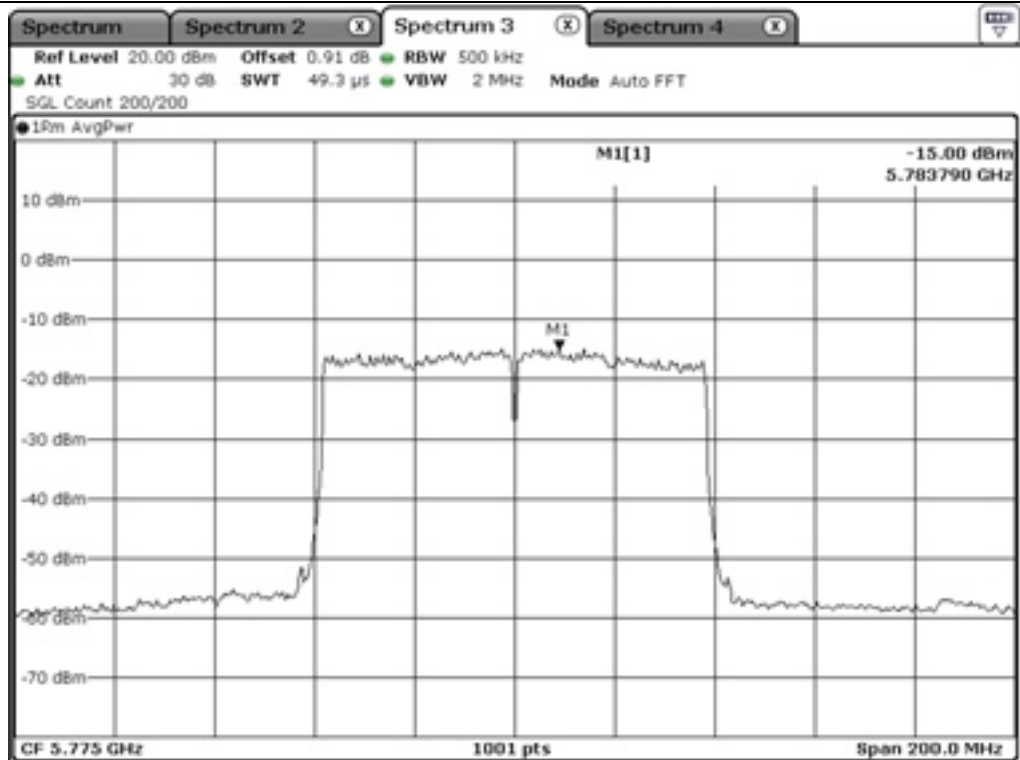
Middle Channel (5 210 MHz)



Middle Channel (5 290 MHz)



Middle Channel (5 530 MHz)



Middle Channel (5 775 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	5 210.00	-11.12	11.00	22.12
5 250 ~ 5 350	Low	5 290.00	-9.70	11.00	20.70
5 470 ~ 5 725	Low	5 530.00	-8.81	11.00	19.81
5 725 ~ 5 850	Low	5 775.00	-8.89	30.00	38.89

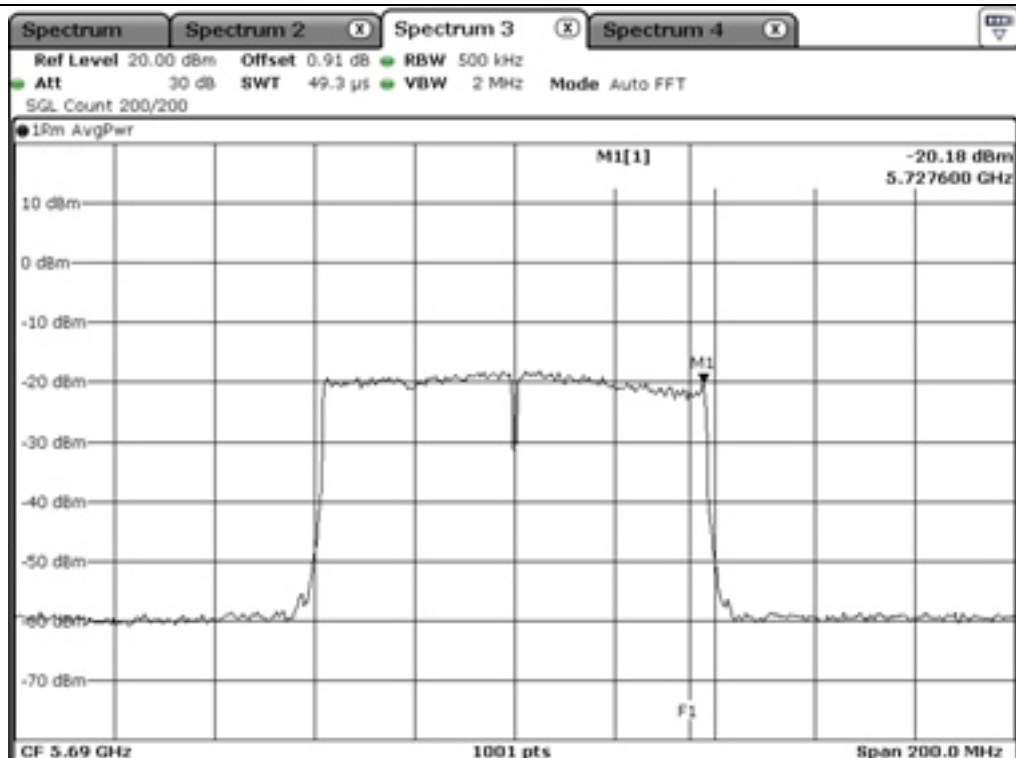
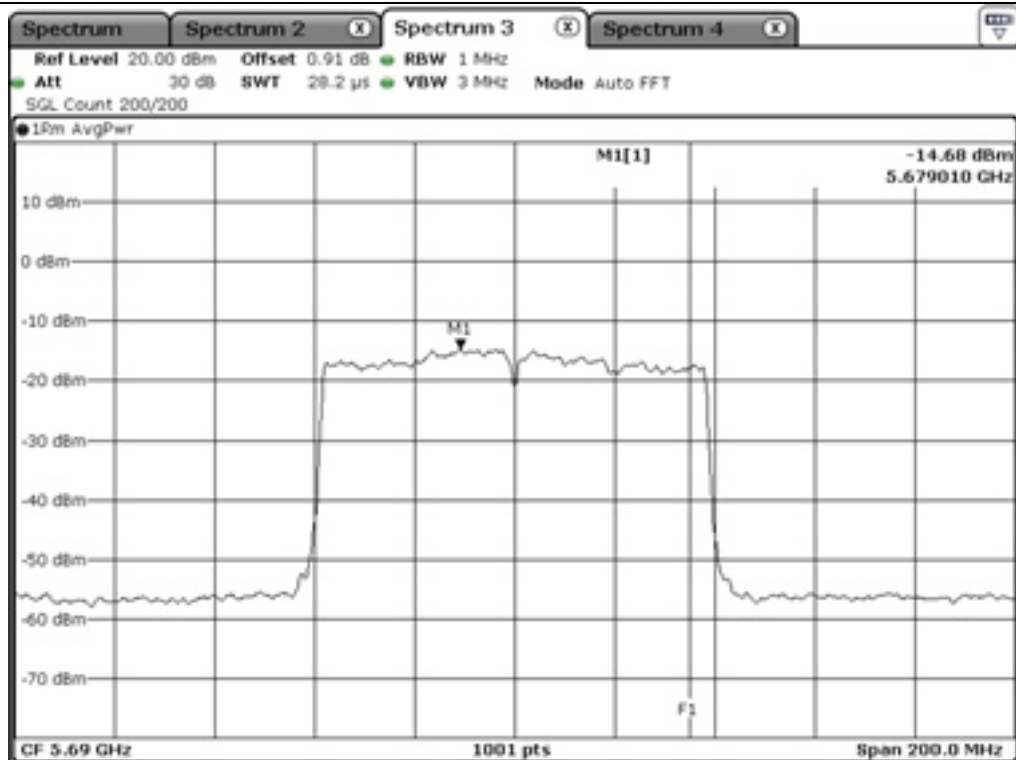
10.7.4 Test data for Staddle Channel_Antenna 0

-. Operating condition : Highest Output Power Transmitting Mode

-. Test Result : Pass

FREQUENCY RANGE (MHz)	FREQUENCY (MHz)	MEASURED VALUE (dBm)	Duty Factor (dB)	Result VALUE (dBm)	LIMIT (dBm)	MARGIN (dB)
5 470 ~ 5 725	5 690.00	-14.68	2.96	-11.72	11.00	8.04
5 725 ~ 5 850	5 690.00	-20.18	2.96	-17.22	30.00	27.04

Remark: See next page for measurement data.



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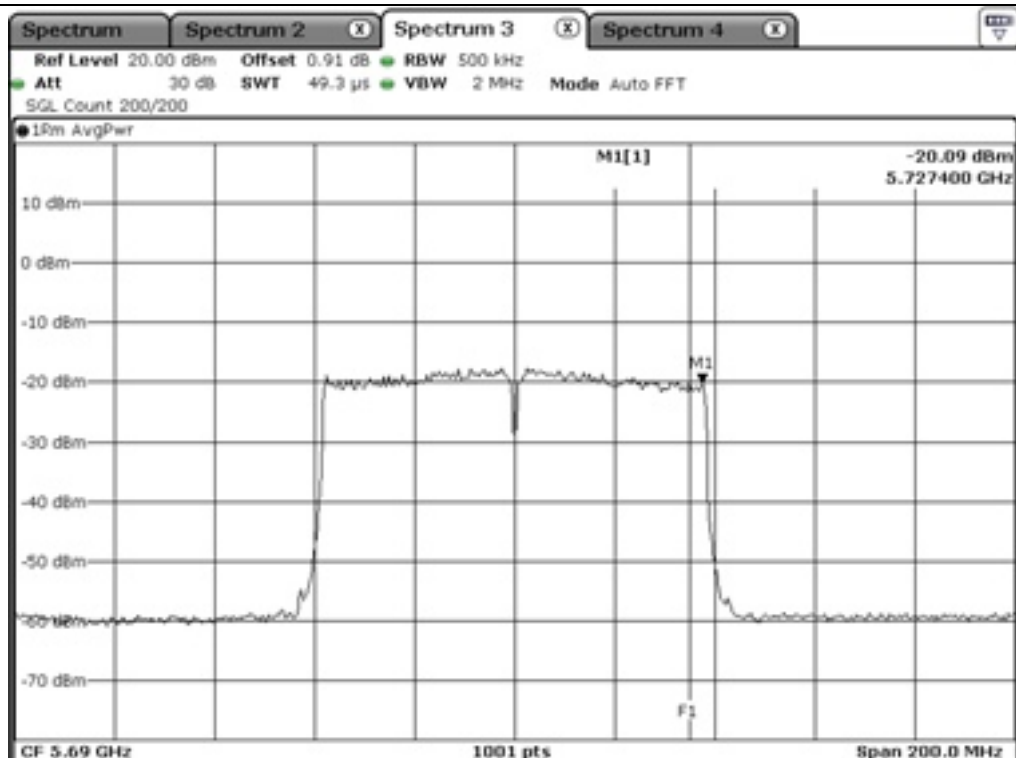
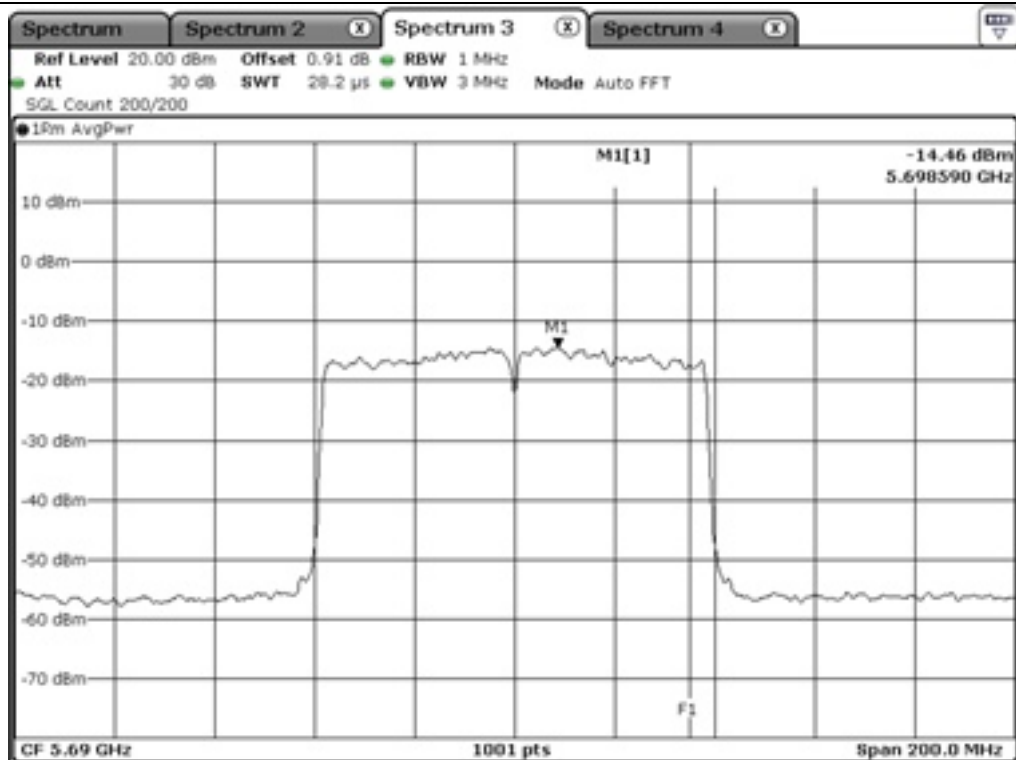
10.7.5 Test data for Staddle Channel_Antenna 1

-. Operating condition : Highest Output Power Transmitting Mode

-. Test Result : Pass

FREQUENCY RANGE (MHz)	FREQUENCY (MHz)	MEASURED VALUE (dBm)	Duty Factor (dB)	Result VALUE (dBm)	LIMIT (dBm)	MARGIN (dB)
5 470 ~ 5 725	5 690.00	-14.46	2.69	-11.77	11.00	8.31
5 725 ~ 5 850	5 690.00	-20.09	2.69	-17.40	30.00	27.31

Remark: See next page for measurement data.



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10.7.6 Test data for Staddle Channel_Multiple Transmit

-. Operating condition : Highest Output Power Transmitting Mode

-. Test Result : Pass

FREQUENCY RANGE (MHz)	FREQUENCY (MHz)	MEASURED VALUE (dBm)	LIMIT (dBm)	MARGIN (dB)
5 470 ~ 5 725	5 690.00	-8.73	11.00	19.73
5 725 ~ 5 850	5 690.00	-14.30	30.00	44.30

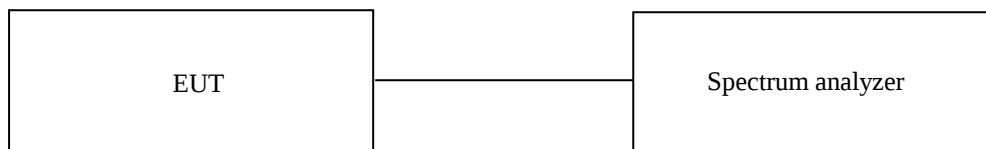
11. FREQUENCY STABILITY WITH TEMPERATURE VARIATION

11.1 Operating environment

Temperature : 24 °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

March 29, 2021 ~ April 13, 2021

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	5 179 934 888	- 65 112
-10		5 179 932 939	- 67 061
0		5 179 932 231	- 67 769
10		5 179 930 868	- 69 132
20		5 179 929 873	- 70 127
30		5 179 928 879	- 71 121
40		5 179 928 362	- 71 638
50		5 179 927 339	- 72 661
-20	5 220 000 000	5 219 935 115	- 64 885
-10		5 219 933 210	- 66 790
0		5 219 932 572	- 67 428
10		5 219 931 156	- 68 844
20		5 219 930 207	- 69 793
30		5 219 929 163	- 70 837
40		5 219 928 519	- 71 481
50		5 219 927 569	- 72 431
-20	5 240 000 000	5 239 934 333	- 65 667
-10		5 239 932 429	- 67 571
0		5 239 931 797	- 68 203
10		5 239 930 326	- 69 674
20		5 239 929 345	- 70 655
30		5 239 928 329	- 71 671
40		5 239 927 745	- 72 255
50		5 239 926 752	- 73 248

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)

11.5 Test Data for U-NII-2A

-. Result : Pass

Temperature (°C)	Carrier Freq. (Hz)	Measured Freq. (Hz)	Frequency Error (Hz)
-20	5 260 000 000	5 259 933 482	- 66 518
-10		5 259 931 483	- 68 517
0		5 259 930 919	- 69 081
10		5 259 929 465	- 70 535
20		5 259 928 562	- 71 438
30		5 259 927 466	- 72 534
40		5 259 926 887	- 73 113
50		5 259 925 932	- 74 068
-20	5 300 000 000	5 299 934 111	- 65 889
-10		5 299 932 154	- 67 846
0		5 299 931 589	- 68 411
10		5 299 930 114	- 69 886
20		5 299 929 091	- 70 909
30		5 299 928 133	- 71 867
40		5 299 927 493	- 72 507
50		5 299 926 602	- 73 398
-20	5 320 000 000	5 319 935 689	- 64 311
-10		5 319 933 696	- 66 304
0		5 319 933 023	- 66 977
10		5 319 931 688	- 68 312
20		5 319 930 664	- 69 336
30		5 319 929 717	- 70 283
40		5 319 929 185	- 70 815
50		5 319 928 123	- 71 877

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)

11.6 Test Data for U-NII-2C

-. Result : Pass

Temperature (°C)	Carrier Freq. (Hz)	Measured Freq. (Hz)	Frequency Error (Hz)
-20	5 500 000 000	5 499 932 489	- 67 511
-10		5 499 930 479	- 69 521
0		5 499 929 808	- 70 192
10		5 499 928 471	- 71 529
20		5 499 927 491	- 72 509
30		5 499 926 525	- 73 475
40		5 499 925 894	- 74 106
50		5 499 924 953	- 75 047
-20	5 660 000 000	5 659 935 225	- 64 775
-10		5 659 933 226	- 66 774
0		5 659 932 668	- 67 332
10		5 659 931 283	- 68 717
20		5 659 930 212	- 69 788
30		5 659 929 314	- 70 686
40		5 659 928 651	- 71 349
50		5 659 927 650	- 72 350
-20	5 700 000 000	5 699 936 442	- 63 558
-10		5 699 934 472	- 65 528
0		5 699 933 794	- 66 206
10		5 699 932 462	- 67 538
20		5 699 931 538	- 68 462
30		5 699 930 503	- 69 497
40		5 699 929 928	- 70 072
50		5 699 928 845	- 71 155

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)

11.7 Test Data for U-NII-3

-. Result : Pass

Temperature (°C)	Carrier Freq. (Hz)	Measured Freq. (Hz)	Frequency Error (Hz)
-20	5 745 000 000	5 744 931 448	- 68 552
-10		5 744 929 506	- 70 494
0		5 744 928 789	- 71 211
10		5 744 927 458	- 72 542
20		5 744 926 503	- 73 497
30		5 744 925 536	- 74 464
40		5 744 924 876	- 75 124
50		5 744 923 859	- 76 141
-20	5 785 000 000	5 784 932 419	- 67 581
-10		5 784 930 512	- 69 488
0		5 784 929 853	- 70 147
10		5 784 928 496	- 71 504
20		5 784 927 507	- 72 493
30		5 784 926 487	- 73 513
40		5 784 925 865	- 74 135
50		5 784 924 908	- 75 092
-20	5 825 000 000	5 824 933 005	- 66 995
-10		5 824 931 088	- 68 912
0		5 824 930 377	- 69 623
10		5 824 929 000	- 71 000
20		5 824 928 007	- 71 993
30		5 824 927 064	- 72 936
40		5 824 926 502	- 73 498
50		5 824 925 438	- 74 562

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)

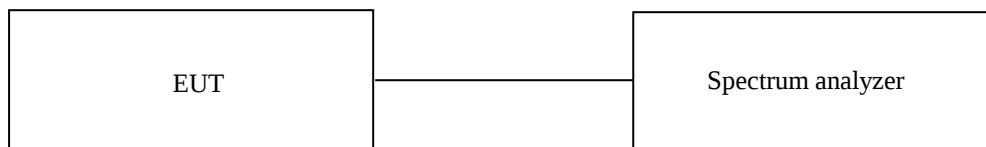
12. FREQUENCY STABILITY WITH VOLTAGE VARIATION

12.1 Operating environment

Temperature : 24 °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 115.0 % of the nominal value and then was reduced to 85.0 % of nominal voltage. The output frequency was recorded at each step.



12.3 Test Date

March 29, 2021 ~ April 13, 2021

12.4 Test Data for U-NII-1

-. Result : Pass

Voltage (VDC)	Carrier Freq. (Hz)	Measured Freq. (Hz)	Frequency Error (Hz)
5.0	5 180 000 000	5 179 929 873	-70 127
4.5		5 179 929 519	-70 481
5.5		5 179 929 861	-70 139
5.0	5 220 000 000	5 219 930 207	-69 793
4.5		5 219 929 900	-70 100
5.5		5 219 930 133	-69 867
5.0	5 240 000 000	5 239 929 345	-70 655
4.5		5 239 928 981	-71 019
5.5		5 239 929 260	-70 740

12.5 Test Data for U-NII-2A

-. Result : Pass

Voltage (VDC)	Carrier Freq. (Hz)	Measured Freq. (Hz)	Frequency Error (Hz)
5.0	5 260 000 000	5 259 928 562	-71 438
4.5		5 259 928 202	-71 798
5.5		5 259 928 561	-71 439
5.0	5 300 000 000	5 299 929 091	-70 909
4.5		5 299 928 729	-71 271
5.5		5 299 929 157	-70 843
5.0	5 320 000 000	5 319 930 664	-69 336
4.5		5 319 930 354	-69 646
5.5		5 319 930 706	-69 294

12.6 Test Data for U-NII-2C

-. Result : Pass

Voltage (VDC)	Carrier Freq. (Hz)	Measured Freq. (Hz)	Frequency Error (Hz)
5.0	5 500 000 000	5 499 927 491	-72 509
4.5		5 499 927 090	-72 910
5.5		5 499 927 459	-72 541
5.0	5 580 000 000	5 659 930 212	-69 788
4.5		5 659 929 892	-70 108
5.5		5 659 930 142	-69 858
5.0	5 700 000 000	5 699 931 538	-68 462
4.5		5 699 931 119	-68 881
5.5		5 699 931 519	-68 481

12.7 Test Data for U-NII-3

-. Result : Pass

Voltage (VDC)	Carrier Freq. (Hz)	Measured Freq. (Hz)	Frequency Error (Hz)
5.0	5 745 000 000	5 744 926 503	-73 497
4.5		5 744 926 195	-73 805
5.5		5 744 926 552	-73 448
5.0	5 785 000 000	5 784 927 507	-72 493
4.5		5 784 927 187	-72 813
5.5		5 784 927 577	-72 423
5.0	5 825 000 000	5 824 928 067	-71 933
4.5		5 824 927 738	-72 262
5.5		5 824 928 056	-71 944

13. RADIATED SPURIOUS EMISSIONS

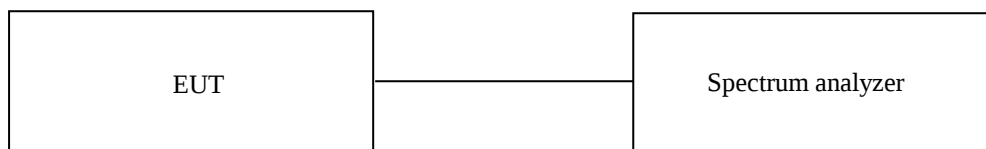
13.1 Operating environment

Temperature : 24 °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

March 29, 2021 ~ April 13, 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.									

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: 24 °C

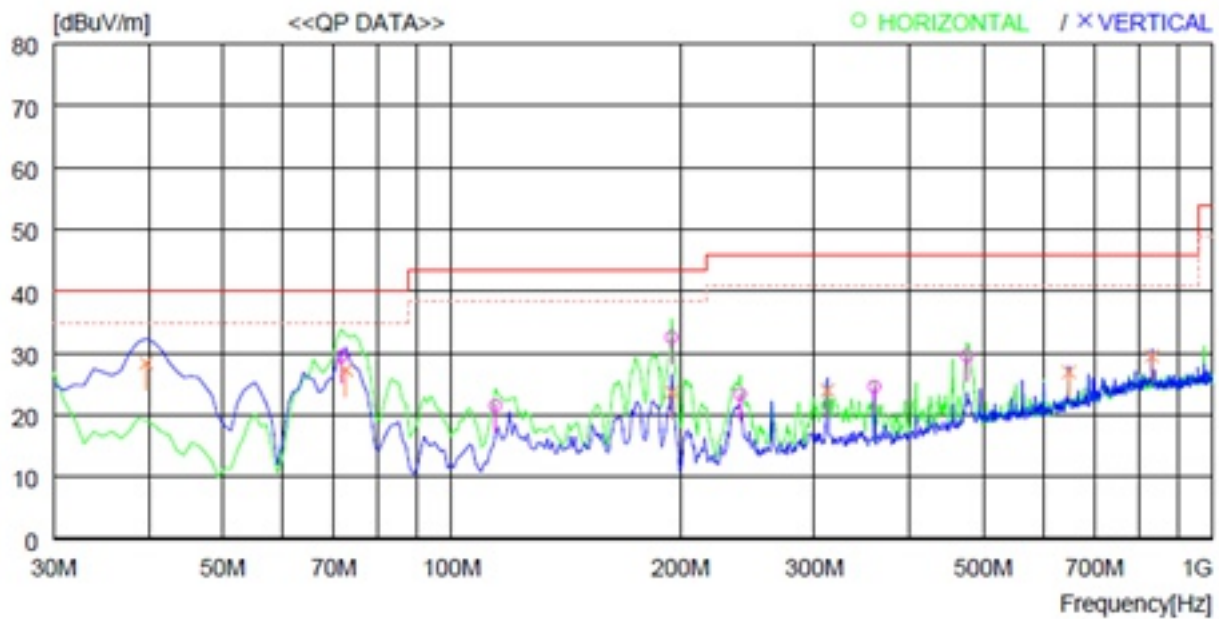
Limits apply to : FCC CFR 47, PART 15, SUBPART C, SECTION 15.247

Result : PASSED

EUT : Wireless Audio Transmitter

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	READING	ANT	LOSS	GAIN	RESULT	LIMIT	MARGIN	ANTENNA	TABLE
	[MHz]	[dBuV]	FACTOR	[dB]	[dB]	[dBuV/m]	[dBuV/m]	[dB]	[cm]	[DEG]
----- Horizontal -----										
1	71.710	47.8	12.9	0.9	32.1	29.5	40.0	10.5	400	190
2	114.390	34.6	17.7	1.2	32.0	21.5	43.5	22.0	400	199
3	194.900	47.1	15.9	1.6	32.0	32.6	43.5	10.9	200	359
4	239.520	36.2	17.3	1.9	32.0	23.4	46.0	22.6	200	345
5	359.800	34.4	20.1	2.2	32.1	24.6	46.0	21.4	100	219
6	476.201	36.7	22.5	2.7	32.3	29.6	46.0	16.4	100	338
----- Vertical -----										
7	39.700	42.3	17.4	0.7	32.0	28.4	40.0	11.6	100	189
8	72.680	45.6	12.9	0.9	32.1	27.3	40.0	12.7	400	0
9	194.900	38.2	15.9	1.6	32.0	23.7	43.5	19.8	300	359
10	312.270	34.5	19.4	2.1	32.0	24.0	46.0	22.0	200	0
11	647.887	31.3	24.9	3.2	32.4	27.0	46.0	19.0	100	263
12	833.151	30.2	27.2	4.1	31.9	29.6	46.0	16.4	100	263

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OTC-TRF-RF-001(0)

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13.5.2 Test data for Intermodulation Mode(WLAN 2.4 GHz + WLAN 5 GHz)

Humidity Level : 45 % R.H.

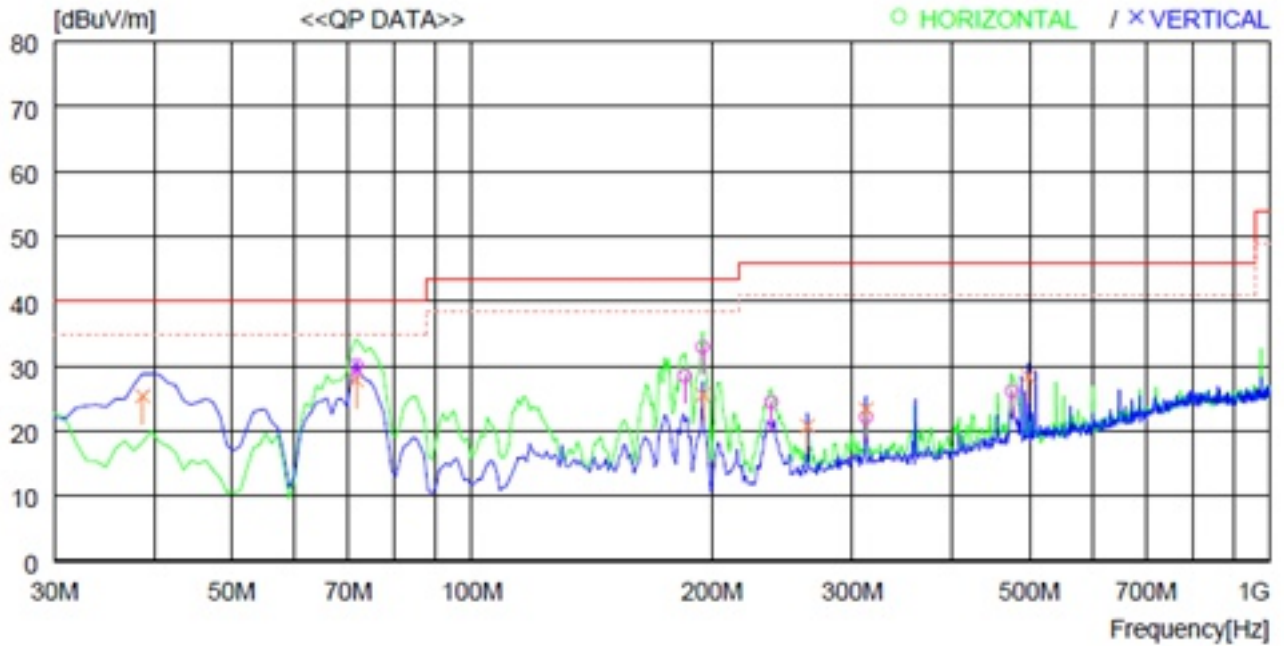
Temperature: 23 °C

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

Result : PASSED

EUT : Wireless Audio Transmitter

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



No.	FREQ	READING	ANT	LOSS	GAIN	RESULT	LIMIT	MARGIN	ANTENNA	TABLE
		QP	FACTOR							
	[MHz]	[dBuV]	[dB]	[dB]	[dB]	[dBuV/m]	[dBuV/m]	[dB]	[cm]	[DEG]
----- Horizontal -----										
1	71.710	48.5	12.9	0.9	32.1	30.2	40.0	9.8	400	344
2	185.200	42.6	16.3	1.6	32.0	28.5	43.5	15.0	200	0
3	194.900	47.5	15.9	1.6	32.0	33.0	43.5	10.5	200	0
4	237.580	37.3	17.3	1.9	32.0	24.5	46.0	21.5	200	0
5	312.270	32.7	19.4	2.1	32.0	22.2	46.0	23.8	200	66
6	475.231	33.3	22.5	2.7	32.3	26.2	46.0	19.8	200	0
----- Vertical -----										
7	38.730	38.9	17.8	0.7	32.0	25.4	40.0	14.6	200	0
8	71.710	46.2	12.9	0.9	32.1	27.9	40.0	12.1	400	0
9	194.900	40.1	15.9	1.6	32.0	25.6	43.5	17.9	300	348
10	263.770	32.7	18.2	1.9	32.0	20.8	46.0	25.2	200	229
11	312.270	33.9	19.4	2.1	32.0	23.4	46.0	22.6	200	220
12	498.511	34.9	23.1	2.8	32.3	28.5	46.0	17.5	200	0

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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 : > 98 %
- Operating mode : Transmitting mode

Frequency (MHz)	Reading (dBμV)	Detector Mode	Ant. Pol. (H/V)	Ant. Factor	Cable Loss	Duty Factor(dB)	AMP Factor	Total (dBμV/m)	Limits (dBμV/m)	Margin (dB)
Antenna 0										
10 360.00	52.11	Peak	H	39.20	15.07	-	46.00	60.38	68.20	7.82
10 360.00	51.98	Peak	V	39.20	15.07	-	46.00	60.25	68.20	7.95
10 440.00	50.87	Peak	H	39.30	15.07	-	46.00	59.24	68.20	8.96
10 440.00	50.68	Peak	V	39.30	15.07	-	46.00	59.05	68.20	9.15
10 480.00	51.88	Peak	H	39.40	15.07	-	46.00	60.35	68.20	7.85
10 480.00	50.98	Peak	V	39.40	15.07	-	46.00	59.45	68.20	8.75
Antenna 1										
10 360.00	51.68	Peak	H	39.20	15.07	-	46.00	59.95	68.20	8.25
10 360.00	50.97	Peak	V	39.20	15.07	-	46.00	59.24	68.20	8.96
10 440.00	51.66	Peak	H	39.30	15.07	-	46.00	60.03	68.20	8.17
10 440.00	50.85	Peak	V	39.30	15.07	-	46.00	59.22	68.20	8.98
10 480.00	51.22	Peak	H	39.40	15.07	-	46.00	59.69	68.20	8.51
10 480.00	50.74	Peak	V	39.40	15.07	-	46.00	59.21	68.20	8.99

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

13.6.1.2.1 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 : > 98 %
- Operating mode : Transmitting mode

Frequency (MHz)	Reading (dBμV)	Detector Mode	Ant. Pol. (H/V)	Ant. Factor	Cable Loss	Duty Factor(dB)	AMP Factor	Total (dBμV/m)	Limits (dBμV/m)	Margin (dB)
Multiple Transmit										
10 360.00	52.09	Peak	H	39.20	15.07	-	46.00	60.36	68.20	7.84
10 360.00	51.84	Peak	V	39.20	15.07	-	46.00	60.11	68.20	8.09
10 440.00	50.78	Peak	H	39.30	15.07	-	46.00	59.15	68.20	9.05
10 440.00	50.65	Peak	V	39.30	15.07	-	46.00	59.02	68.20	9.18
10 480.00	52.08	Peak	H	39.40	15.07	-	46.00	60.55	68.20	7.65
10 480.00	50.96	Peak	V	39.40	15.07	-	46.00	59.43	68.20	8.77

Remark - "H": Horizontal, "V": Vertical

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

13.6.1.3 Test data for 802.11n_HT40 RLAN Mode

13.6.1.3.1 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 : > 98 %
- Operating mode : Transmitting mode

Frequency (MHz)	Reading (dBμV)	Detector Mode	Ant. Pol. (H/V)	Ant. Factor	Cable Loss	Duty Factor(dB)	AMP Factor	Total (dBμV/m)	Limits (dBμV/m)	Margin (dB)
Multiple Transmit										
10 380.00	51.93	Peak	H	39.20	15.07	-	46.00	60.20	68.20	8.00
10 380.00	50.88	Peak	V	39.20	15.07	-	46.00	59.15	68.20	9.05
10 460.00	51.91	Peak	H	39.30	15.07	-	46.00	60.28	68.20	7.92
10 460.00	50.98	Peak	V	39.30	15.07	-	46.00	59.35	68.20	8.85

Remark - "H": Horizontal, "V": Vertical

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

13.6.1.4 Test data for 802.11ac_HT80 RLAN Mode

13.6.1.4.1 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 : > 98 %
- Operating mode : Transmitting mode

Frequency (MHz)	Reading (dBμV)	Detector Mode	Ant. Pol. (H/V)	Ant. Factor	Cable Loss	Duty Factor(dB)	AMP Factor	Total (dBμV/m)	Limits (dBμV/m)	Margin (dB)
Multiple Transmit										
10 420.00	50.23	Peak	H	39.30	15.07	-	46.00	58.60	68.20	9.60
10 420.00	50.06	Peak	V	39.30	15.07	-	46.00	58.43	68.20	9.77

Remark - "H": Horizontal, "V": Vertical

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

13.6.2 Test data for Frequency UNII 2A

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 : > 98 %
- Operating mode : Transmitting mode

Frequency (MHz)	Reading (dBμV)	Detector Mode	Ant. Pol. (H/V)	Ant. Factor	Cable Loss	Duty Factor(dB)	AMP Factor	Total (dBμV/m)	Limits (dBμV/m)	Margin (dB)
Antenna 0										
10 520.00	53.15	Peak	H	39.40	15.11	-	46.05	61.61	68.20	6.59
10 520.00	52.86	Peak	V	39.40	15.11	-	46.05	61.32	68.20	6.88
10 600.00	53.11	Peak	H	39.40	15.11	-	46.05	61.57	74.00	12.43
10 600.00	40.17	Average	H	39.40	15.11	0.39	46.05	49.02	54.00	4.98
10 600.00	52.98	Peak	V	39.40	15.11	-	46.05	61.44	74.00	12.56
10 600.00	39.91	Average	V	39.40	15.11	0.39	46.05	48.76	54.00	5.24
10 640.00	53.26	Peak	H	39.40	15.11	-	46.05	61.72	74.00	12.28
10 640.00	39.98	Average	H	39.40	15.11	0.39	46.05	48.83	54.00	5.17
10 640.00	53.12	Peak	V	39.40	15.11	-	46.05	61.97	74.00	12.03
10 640.00	39.86	Average	V	39.40	15.11	0.39	46.05	48.32	54.00	5.68

Frequency (MHz)	Reading (dBμV)	Detector Mode	Ant. Pol. (H/V)	Ant. Factor	Cable Loss	Duty Factor(dB)	AMP Factor	Total (dBμV/m)	Limits (dBμV/m)	Margin (dB)
Antenna 1										
10 520.00	53.22	Peak	H	39.40	15.11	-	46.05	61.68	68.20	6.52
10 520.00	52.95	Peak	V	39.40	15.11	-	46.05	61.41	68.20	6.79
10 600.00	53.61	Peak	H	39.40	15.11	-	46.05	62.07	74.00	11.93
10 600.00	40.11	Average	H	39.40	15.11	0.37	46.05	48.94	54.00	5.06
10 600.00	53.28	Peak	V	39.40	15.11	-	46.05	61.74	74.00	12.26
10 600.00	39.56	Average	V	39.40	15.11	0.37	46.05	48.39	54.00	5.61
10 640.00	53.15	Peak	H	39.40	15.11	-	46.05	61.61	74.00	12.39
10 640.00	39.15	Average	H	39.40	15.11	0.37	46.05	47.98	54.00	6.02
10 640.00	52.89	Peak	V	39.40	15.11	-	46.05	61.72	74.00	12.28
10 640.00	39.67	Average	V	39.40	15.11	0.37	46.05	48.13	54.00	5.87

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

13.6.2.2.1 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 : > 98 %
- Operating mode : Transmitting mode

Frequency (MHz)	Reading (dBμV)	Detector Mode	Ant. Pol. (H/V)	Ant. Factor	Cable Loss	Duty Factor(dB)	AMP Factor	Total (dBμV/m)	Limits (dBμV/m)	Margin (dB)
Multiple Transmit										
10 520.00	52.42	Peak	H	39.40	15.11	-	46.05	60.88	68.20	7.32
10 520.00	51.32	Peak	V	39.40	15.11	-	46.05	59.78	68.20	8.42
10 600.00	51.87	Peak	H	39.40	15.11	-	46.05	60.33	74.00	13.67
10 600.00	39.95	Average	H	39.40	15.11	0.74	46.05	49.15	54.00	4.85
10 600.00	51.43	Peak	V	39.40	15.11	-	46.05	59.89	74.00	14.11
10 600.00	39.93	Average	V	39.40	15.11	0.74	46.05	49.13	54.00	4.87
10 640.00	52.02	Peak	H	39.40	15.11	-	46.05	60.48	74.00	13.52
10 640.00	40.17	Average	H	39.40	15.11	0.74	46.05	49.37	54.00	4.63
10 640.00	51.85	Peak	V	39.40	15.11	-	46.05	60.31	74.00	13.69
10 640.00	39.91	Average	V	39.40	15.11	0.74	46.05	49.11	54.00	4.89

Remark - "H": Horizontal, "V": Vertical

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

13.6.2.3 Test data for 802.11n_HT40 RLAN Mode

13.6.2.3.1 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 : > 98 %
- Operating mode : Transmitting mode

Frequency (MHz)	Reading (dBμV)	Detector Mode	Ant. Pol. (H/V)	Ant. Factor	Cable Loss	Duty Factor(dB)	AMP Factor	Total (dBμV/m)	Limits (dBμV/m)	Margin (dB)
Multiple Transmit										
10 540.00	51.57	Peak	H	39.40	15.11	-	46.05	60.03	68.20	8.17
10 540.00	50.70	Peak	V	39.40	15.11	-	46.05	59.16	68.20	9.04
10 620.00	51.63	Peak	H	39.40	15.11	-	46.05	60.09	74.00	13.91
10 620.00	39.67	Average	H	39.40	15.11	1.35	46.05	49.48	54.00	4.52
10 620.00	51.54	Peak	V	39.40	15.11	-	46.05	60.00	74.00	14.00
10 620.00	39.62	Average	V	39.40	15.11	1.35	46.05	49.43	54.00	4.57

Remark - "H": Horizontal, "V": Vertical

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

13.6.2.4 Test data for 802.11ac_HT80 RLAN Mode

13.6.2.4.1 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 : > 98 %
- . Operating mode : Transmitting mode

Frequency (MHz)	Reading (dBμV)	Detector Mode	Ant. Pol. (H/V)	Ant. Factor	Cable Loss	Duty Factor(dB)	AMP Factor	Total (dBμV/m)	Limits (dBμV/m)	Margin (dB)
Multiple Transmit										
10580.00	51.46	Peak	H	39.40	15.11	-	46.05	59.92	68.20	8.28
10580.00	51.22	Peak	V	39.40	15.11	-	46.05	59.68	68.20	8.52

Remark - "H": Horizontal, "V": Vertical

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

13.6.3 Test data for Frequency UNII 2C

13.6.3.1 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 : > 98 %
- Operating mode : Transmitting mode

Frequency (MHz)	Reading (dBμV)	Detector Mode	Ant. Pol. (H/V)	Ant. Factor	Cable Loss	Duty Factor(dB)	AMP Factor	Total (dBμV/m)	Limits (dBμV/m)	Margin (dB)
Antenna 0										
11 000.00	52.55	Peak	H	39.00	15.38	-	46.50	60.43	74.00	13.57
11 000.00	41.58	Average	H	39.00	15.38	0.36	46.50	49.82	54.00	4.18
11 000.00	52.38	Peak	V	39.00	15.38	-	46.50	60.26	74.00	13.74
11 000.00	41.44	Average	V	39.00	15.38	0.36	46.50	49.68	54.00	4.32
11 320.00	52.38	Peak	H	39.00	15.41	-	46.50	60.29	74.00	13.71
11 320.00	41.51	Average	H	39.00	15.41	0.36	46.50	49.78	54.00	4.22
11 320.00	52.35	Peak	V	39.00	15.41	-	46.50	60.26	74.00	13.74
11 320.00	41.48	Average	V	39.00	15.41	0.36	46.50	49.75	54.00	4.25
11 400.00	53.15	Peak	H	39.00	15.58	-	46.50	61.23	74.00	12.77
11 400.00	41.56	Average	H	39.00	15.58	0.36	46.50	50.00	54.00	4.00
11 400.00	52.95	Peak	V	39.00	15.58	-	46.50	61.03	74.00	12.97
11 400.00	41.51	Average	V	39.00	15.58	0.36	46.50	49.95	54.00	4.05

Frequency (MHz)	Reading (dBμV)	Detector Mode	Ant. Pol. (H/V)	Ant. Factor	Cable Loss	Duty Factor(dB)	AMP Factor	Total (dBμV/m)	Limits (dBμV/m)	Margin (dB)
Antenna 1										
11 000.00	53.51	Peak	H	39.00	15.38	-	46.50	61.39	74.00	12.61
11 000.00	41.59	Average	H	39.00	15.38	0.33	46.50	49.80	54.00	4.20
11 000.00	53.24	Peak	V	39.00	15.38	-	46.50	61.12	74.00	12.88
11 000.00	41.38	Average	V	39.00	15.38	0.33	46.50	49.59	54.00	4.41
11 320.00	53.36	Peak	H	39.00	15.41	-	46.50	61.27	74.00	12.73
11 320.00	41.49	Average	H	39.00	15.41	0.33	46.50	49.73	54.00	4.27
11 320.00	53.29	Peak	V	39.00	15.41	-	46.50	61.20	74.00	12.80
11 320.00	41.58	Average	V	39.00	15.41	0.33	46.50	49.82	54.00	4.18
11 400.00	53.38	Peak	H	39.00	15.58	-	46.50	61.46	74.00	12.54
11 400.00	41.45	Average	H	39.00	15.58	0.33	46.50	49.86	54.00	4.14
11 400.00	53.19	Peak	V	39.00	15.58	-	46.50	61.27	74.00	12.73
11 400.00	41.36	Average	V	39.00	15.58	0.33	46.50	49.77	54.00	4.23

Remark - "H": Horizontal, "V": Vertical

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

13.6.3.2 Test data for 802.11n_HT20 RLAN Mode

13.6.3.2.1 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 : > 98 %
- Operating mode : Transmitting mode

Frequency (MHz)	Reading (dBμV)	Detector Mode	Ant. Pol. (H/V)	Ant. Factor	Cable Loss	Duty Factor(dB)	AMP Factor	Total (dBμV/m)	Limits (dBμV/m)	Margin (dB)
Multiple Transmit										
11 000.00	54.14	Peak	H	39.00	15.38	-	46.50	62.02	74.00	11.98
11 000.00	42.08	Average	H	39.00	15.38	0.74	46.50	50.70	54.00	3.30
11 000.00	53.95	Peak	V	39.00	15.38	-	46.50	61.83	74.00	12.17
11 000.00	41.92	Average	V	39.00	15.38	0.74	46.50	50.54	54.00	3.46
11 320.00	52.71	Peak	H	39.00	15.41	-	46.50	60.62	74.00	13.38
11 320.00	41.24	Average	H	39.00	15.41	0.74	46.50	49.89	54.00	4.11
11 320.00	52.15	Peak	V	39.00	15.41	-	46.50	60.06	74.00	13.94
11 320.00	41.22	Average	V	39.00	15.41	0.74	46.50	49.87	54.00	4.13
11 400.00	53.88	Peak	H	39.00	15.58	-	46.50	61.96	74.00	12.04
11 400.00	41.50	Average	H	39.00	15.58	0.74	46.50	50.32	54.00	3.68
11 400.00	52.91	Peak	V	39.00	15.58	-	46.50	60.99	74.00	13.01
11 400.00	41.45	Average	V	39.00	15.58	0.74	46.50	50.27	54.00	3.73

Remark - "H": Horizontal, "V": Vertical

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

13.6.3.3 Test data for 802.11n_HT40 RLAN Mode

13.6.3.3.1 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 : > 98 %
- Operating mode : Transmitting mode

Frequency (MHz)	Reading (dBμV)	Detector Mode	Ant. Pol. (H/V)	Ant. Factor	Cable Loss	Duty Factor(dB)	AMP Factor	Total (dBμV/m)	Limits (dBμV/m)	Margin (dB)
Multiple Transmit										
11 020.00	53.79	Peak	H	39.00	15.38	-	46.50	61.67	74.00	12.33
11 020.00	41.43	Average	H	39.00	15.38	1.35	46.50	50.66	54.00	3.34
11 020.00	52.88	Peak	V	39.00	15.38	-	46.50	60.76	74.00	13.24
11 020.00	41.26	Average	V	39.00	15.38	1.35	46.50	50.49	54.00	3.51
11 100.00	53.76	Peak	H	39.00	15.41	-	46.50	61.67	74.00	12.33
11 100.00	41.81	Average	H	39.00	15.41	1.35	46.50	51.07	54.00	2.93
11 100.00	52.85	Peak	V	39.00	15.41	-	46.50	60.76	74.00	13.24
11 100.00	41.58	Average	V	39.00	15.41	1.35	46.50	50.84	54.00	3.16
11 340.00	53.30	Peak	H	39.00	15.58	-	46.50	61.38	74.00	12.62
11 340.00	41.68	Average	H	39.00	15.58	1.35	46.50	51.11	54.00	2.89
11 340.00	52.98	Peak	V	39.00	15.58	-	46.50	61.06	74.00	12.94
11 340.00	41.41	Average	V	39.00	15.58	1.35	46.50	50.84	54.00	3.16

Remark - "H": Horizontal, "V": Vertical

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

13.6.3.4 Test data for 802.11ac_HT80 RLAN Mode

13.6.3.4.1 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 : > 98 %
- Operating mode : Transmitting mode

Frequency (MHz)	Reading (dBμV)	Detector Mode	Ant. Pol. (H/V)	Ant. Factor	Cable Loss	Duty Factor(dB)	AMP Factor	Total (dBμV/m)	Limits (dBμV/m)	Margin (dB)
Multiple Transmit										
11 060.00	52.96	Peak	H	39.00	15.41	-	46.50	60.87	68.20	7.33
11 060.00	52.84	Peak	V	39.00	15.41	-	46.50	60.75	68.20	7.45

Remark - "H": Horizontal, "V": Vertical

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

13.6.4 Test data for Frequency UNII 3

13.6.4.1 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 : > 98 %
- Operating mode : Transmitting mode

Frequency (MHz)	Reading (dBμV)	Detector Mode	Ant. Pol. (H/V)	Ant. Factor	Cable Loss	Duty Factor(dB)	AMP Factor	Total (dBμV/m)	Limits (dBμV/m)	Margin (dB)
Antenna 0										
11 490.00	54.22	Peak	H	39.30	15.73	-	46.35	62.90	74.00	11.10
11 490.00	41.60	Average	H	39.30	15.73	0.36	46.35	50.64	54.00	3.36
11 490.00	53.96	Peak	V	39.30	15.73	-	46.35	62.64	74.00	11.36
11 490.00	41.51	Average	V	39.30	15.73	0.36	46.35	50.55	54.00	3.45
11 570.00	53.49	Peak	H	39.40	15.72	-	46.35	62.26	74.00	11.74
11 570.00	41.55	Average	H	39.40	15.72	0.36	46.35	50.68	54.00	3.32
11 570.00	53.26	Peak	V	39.40	15.72	-	46.35	62.03	74.00	11.97
11 570.00	41.35	Average	V	39.40	15.72	0.36	46.35	50.48	54.00	3.52
11 650.00	53.13	Peak	H	39.70	15.88	-	46.35	62.36	74.00	11.64
11 650.00	41.87	Average	H	39.70	15.88	0.36	46.35	51.46	54.00	2.54
11 650.00	52.95	Peak	V	39.70	15.88	-	46.35	62.18	74.00	11.82
11 650.00	41.62	Average	V	39.70	15.88	0.36	46.35	51.21	54.00	2.79

Frequency (MHz)	Reading (dBμV)	Detector Mode	Ant. Pol. (H/V)	Ant. Factor	Cable Loss	Duty Factor(dB)	AMP Factor	Total (dBμV/m)	Limits (dBμV/m)	Margin (dB)
Antenna 1										
11 490.00	54.18	Peak	H	39.30	15.73	-	46.35	62.86	74.00	11.14
11 490.00	41.56	Average	H	39.30	15.73	0.36	46.35	50.60	54.00	3.40
11 490.00	53.75	Peak	V	39.30	15.73	-	46.35	62.43	74.00	11.57
11 490.00	41.51	Average	V	39.30	15.73	0.36	46.35	50.55	54.00	3.45
11 570.00	53.61	Peak	H	39.40	15.72	-	46.35	62.38	74.00	11.62
11 570.00	41.58	Average	H	39.40	15.72	0.36	46.35	50.71	54.00	3.29
11 570.00	53.39	Peak	V	39.40	15.72	-	46.35	62.16	74.00	11.84
11 570.00	41.47	Average	V	39.40	15.72	0.36	46.35	50.60	54.00	3.40
11 650.00	53.62	Peak	H	39.70	15.88	-	46.35	62.85	74.00	11.15
11 650.00	41.54	Average	H	39.70	15.88	0.36	46.35	51.13	54.00	2.87
11 650.00	53.48	Peak	V	39.70	15.88	-	46.35	62.71	74.00	11.29
11 650.00	41.46	Average	V	39.70	15.88	0.36	46.35	51.05	54.00	2.95

Remark - "H": Horizontal, "V": Vertical

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

13.6.4.2 Test data for 802.11n_HT20 RLAN Mode

13.6.4.2.1 Test data for 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 : > 98 %
- . Operating mode : Transmitting mode

Frequency (MHz)	Reading (dBμV)	Detector Mode	Ant. Pol. (H/V)	Ant. Factor	Cable Loss	Duty Factor(dB)	AMP Factor	Total (dBμV/m)	Limits (dBμV/m)	Margin (dB)
Multiple Transmit										
11 490.00	52.45	Peak	H	39.30	15.73	-	46.35	61.13	74.00	12.87
11 490.00	41.58	Average	H	39.30	15.73	0.80	46.35	51.06	54.00	2.94
11 490.00	51.85	Peak	V	39.30	15.73	-	46.35	60.53	74.00	13.47
11 490.00	41.37	Average	V	39.30	15.73	0.80	46.35	50.85	54.00	3.15
11 570.00	53.62	Peak	H	39.40	15.72	-	46.35	62.39	74.00	11.61
11 570.00	41.71	Average	H	39.40	15.72	0.80	46.35	51.28	54.00	2.72
11 570.00	53.38	Peak	V	39.40	15.72	-	46.35	62.15	74.00	11.85
11 570.00	41.46	Average	V	39.40	15.72	0.80	46.35	51.03	54.00	2.97
11 650.00	53.03	Peak	H	39.70	15.88	-	46.35	62.26	74.00	11.74
11 650.00	41.60	Average	H	39.70	15.88	0.80	46.35	51.63	54.00	2.37
11 650.00	52.44	Peak	V	39.70	15.88	-	46.35	61.67	74.00	12.33
11 650.00	41.54	Average	V	39.70	15.88	0.80	46.35	51.57	54.00	2.43

Remark - "H": Horizontal, "V": Vertical

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

13.6.4.3 Test data for 802.11n_HT40 RLAN Mode

13.6.4.3.1 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 : > 98 %
- Operating mode : Transmitting mode

Frequency (MHz)	Reading (dBμV)	Detector Mode	Ant. Pol. (H/V)	Ant. Factor	Cable Loss	Duty Factor(dB)	AMP Factor	Total (dBμV/m)	Limits (dBμV/m)	Margin (dB)
Multiple Transmit										
11 510.00	53.12	Peak	H	39.30	15.73	-	46.35	61.80	74.00	12.20
11 510.00	41.48	Average	H	39.30	15.73	1.48	46.35	51.64	54.00	2.36
11 510.00	52.94	Peak	V	39.30	15.73	-	46.35	61.62	74.00	12.38
11 510.00	41.35	Average	V	39.30	15.73	1.48	46.35	51.51	54.00	2.49
11 590.00	53.74	Peak	H	39.40	15.77	-	46.35	62.56	74.00	11.44
11 590.00	41.55	Average	H	39.40	15.77	1.48	46.35	51.85	54.00	2.15
11 590.00	53.64	Peak	V	39.40	15.77	-	46.35	62.46	74.00	11.54
11 590.00	41.38	Average	V	39.40	15.77	1.48	46.35	51.68	54.00	2.32

Remark - "H": Horizontal, "V": Vertical

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

13.6.4.4 Test data for 802.11ac_HT80 RLAN Mode

13.6.4.4.1 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 : > 98 %
- . Operating mode : Transmitting mode

Frequency (MHz)	Reading (dBμV)	Detector Mode	Ant. Pol. (H/V)	Ant. Factor	Cable Loss	AMP Factor	Total (dBμV/m)	Limits (dBμV/m)	Margin (dB)
Multiple Transmit									
11 550.00	53.39	Peak	H	39.40	15.77	46.35	62.21	68.20	5.99
11 550.00	52.95	Peak	V	39.40	15.77	46.35	61.77	68.20	6.43

Remark - "H": Horizontal, "V": Vertical

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

14. RADIATED RESTRICTED BAND EDGE MEASUREMENTS

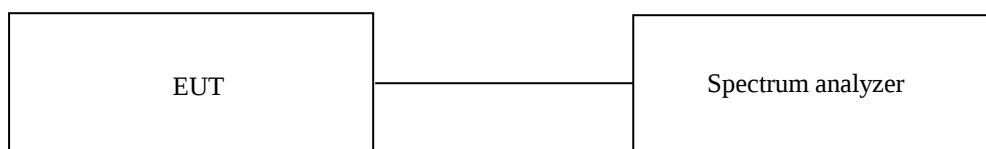
14.1 Operating environment

Temperature : 24 °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

March 29, 2021 ~ April 13, 2021

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 : > 98 %
- . Result : Pass

Frequency (MHz)	Reading (dBμV)	Detector Mode	Ant. Pol. (H/V)	Ant. Factor	Cable Loss	Duty Factor(dB)	AMP Factor	Total (dBμV/m)	Limits (dBμV/m)	Margin (dB)
Antenna 0										
5 149.320	65.25	Peak	H	34.20	12.50	-	45.89	66.06	74.00	7.94
5 150.000	49.54	Average	H	34.20	12.50	0.42	45.89	50.77	54.00	3.23
5 150.000	58.37	Peak	V	34.20	12.50	-	45.89	59.18	74.00	14.82
5 150.000	47.86	Average	V	34.20	12.50	0.42	45.89	49.09	54.00	4.91
Antenna 1										
5 148.640	62.00	Peak	H	34.20	12.50	-	45.89	62.81	74.00	11.19
5 150.000	49.65	Average	H	34.20	12.50	0.37	45.89	50.83	54.00	3.17
5 150.000	58.11	Peak	V	34.20	12.50	-	45.89	58.92	74.00	15.08
5 150.000	48.23	Average	V	34.20	12.50	0.37	45.89	49.41	54.00	4.59

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 : > 98 %
- Result : Pass

Frequency (MHz)	Reading (dBμV)	Detector Mode	Ant. Pol. (H/V)	Ant. Factor	Cable Loss	Duty Factor(dB)	AMP Factor	Total (dBμV/m)	Limits (dBμV/m)	Margin (dB)
Multiple Transmit										
5 147.960	56.70	Peak	H	34.20	12.50	-	45.89	57.51	74.00	16.49
5 150.000	44.21	Average	H	34.20	12.50	0.74	45.89	45.76	54.00	8.24
4 989.000	55.54	Peak	V	34.20	12.50	-	45.89	56.35	74.00	17.65
5 150.000	42.50	Average	V	34.20	12.50	0.74	45.89	44.05	54.00	9.95

Tabulated test data for Restricted Band

Remark - "H": Horizontal, "V": Vertical

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

14.4.3 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 : > 98 %
- Result : Pass

Frequency (MHz)	Reading (dBμV)	Detector Mode	Ant. Pol. (H/V)	Ant. Factor	Cable Loss	Duty Factor(dB)	AMP Factor	Total (dBμV/m)	Limits (dBμV/m)	Margin (dB)
Multiple Transmit										
5 149.320	58.64	Peak	H	34.20	12.50	-	45.89	59.45	74.00	14.55
5 150.000	48.87	Average	H	34.20	12.50	1.52	45.89	51.20	54.00	2.80
5 147.960	58.44	Peak	V	34.20	12.50	-	45.89	59.25	74.00	14.75
5 150.000	47.46	Average	V	34.20	12.50	1.52	45.89	49.79	54.00	4.21

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 802.11ac_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 : > 98 %
- Result : Pass

Frequency (MHz)	Reading (dBμV)	Detector Mode	Ant. Pol. (H/V)	Ant. Factor	Cable Loss	Duty Factor(dB)	AMP Factor	Total (dBμV/m)	Limits (dBμV/m)	Margin (dB)
Multiple Transmit										
5 149.320	59.50	Peak	H	34.20	12.50	-	45.89	60.31	74.00	13.69
5 150.000	47.20	Average	H	34.20	12.50	2.83	45.89	50.84	54.00	3.16
5 149.960	58.61	Peak	V	34.20	12.50	-	45.89	59.42	74.00	14.58
5 150.000	47.13	Average	V	34.20	12.50	2.83	45.89	50.77	54.00	3.23

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 UNII 2A

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 : > 98 %
- . Result : Pass

Frequency (MHz)	Reading (dBμV)	Detector Mode	Ant. Pol. (H/V)	Ant. Factor	Cable Loss	Duty Factor(dB)	AMP Factor	Total (dBμV/m)	Limits (dBμV/m)	Margin (dB)
Antenna 0										
5 350.000	58.52	Peak	H	34.10	13.31	-	45.84	60.09	74.00	13.91
5 350.000	48.88	Average	H	34.10	13.31	0.39	45.84	50.84	54.00	3.16
5 350.000	58.22	Peak	V	34.10	13.31	-	45.84	59.79	74.00	14.21
5 350.000	48.81	Average	V	34.10	13.31	0.39	45.84	50.77	54.00	3.23
Antenna 1										
5 350.000	59.79	Peak	H	34.10	13.31	-	45.84	61.36	74.00	12.64
5 350.000	48.28	Average	H	34.10	13.31	0.37	45.84	50.22	54.00	3.78
5 350.000	58.95	Peak	V	34.10	13.31	-	45.84	60.52	74.00	13.48
5 350.000	47.91	Average	V	34.10	13.31	0.37	45.84	49.85	54.00	4.15

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 : > 98 %
- Result : Pass

Frequency (MHz)	Reading (dBμV)	Detector Mode	Ant. Pol. (H/V)	Ant. Factor	Cable Loss	Duty Factor(dB)	AMP Factor	Total (dBμV/m)	Limits (dBμV/m)	Margin (dB)
Multiple Transmit										
5 358.670	57.77	Peak	H	34.10	13.31	-	45.84	59.34	74.00	14.66
5 350.000	48.13	Average	H	34.10	13.31	0.74	45.84	50.44	54.00	3.56
5 357.880	57.41	Peak	V	34.10	13.31	-	45.84	58.98	74.00	15.02
5 350.000	47.89	Average	V	34.10	13.31	0.74	45.84	50.20	54.00	3.80

Tabulated test data for Restricted Band

Remark - "H": Horizontal, "V": Vertical

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

14.5.3 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 : > 98 %
- Result : Pass

Frequency (MHz)	Reading (dBμV)	Detector Mode	Ant. Pol. (H/V)	Ant. Factor	Cable Loss	Duty Factor(dB)	AMP Factor	Total (dBμV/m)	Limits (dBμV/m)	Margin (dB)
Multiple Transmit										
5 350.420	58.18	Peak	H	34.10	13.31	-	45.84	59.75	74.00	14.25
5 350.930	47.97	Average	H	34.10	13.31	1.35	45.84	50.89	54.00	3.11
5 350.550	57.98	Peak	V	34.10	13.31	-	45.84	59.55	74.00	14.45
5 350.000	47.78	Average	V	34.10	13.31	1.35	45.84	50.70	54.00	3.30

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 802.11ac_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 : > 98 %
- Result : Pass

Frequency (MHz)	Reading (dBμV)	Detector Mode	Ant. Pol. (H/V)	Ant. Factor	Cable Loss	Duty Factor(dB)	AMP Factor	Total (dBμV/m)	Limits (dBμV/m)	Margin (dB)
Multiple Transmit										
5 350.450	57.85	Peak	H	34.10	13.31	-	45.84	59.42	74.00	14.58
5 353.640	46.92	Average	H	34.10	13.31	2.98	45.84	51.47	54.00	2.53
5 350.540	57.75	Peak	V	34.10	13.31	-	45.84	59.32	74.00	14.68
5 350.450	46.67	Average	V	34.10	13.31	2.98	45.84	51.22	54.00	2.78

Tabulated test data for Restricted Band

Remark - "H": Horizontal, "V": Vertical

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

14.6 Test data for Frequency UNII 2C

14.6.1 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 : > 98 %
- . Result : Pass

Frequency (MHz)	Reading (dBμV)	Detector Mode	Ant. Pol. (H/V)	Ant. Factor	Cable Loss	Duty Factor(dB)	AMP Factor	Total (dBμV/m)	Limits (dBμV/m)	Margin (dB)
Antenna 0										
5 460.000	61.31	Peak	H	34.10	13.31	-	45.84	62.88	74.00	11.12
5 460.000	48.90	Average	H	34.10	13.31	0.36	45.84	50.83	54.00	3.17
5 460.000	60.85	Peak	V	34.10	13.31	-	45.84	62.42	74.00	11.58
5 460.000	48.65	Average	V	34.10	13.31	0.36	45.84	50.58	54.00	3.42
Antenna 1										
5 458.560	57.79	Peak	H	34.10	13.31	-	45.84	59.36	74.00	14.64
5 460.000	46.38	Average	H	34.10	13.31	0.33	45.84	48.28	54.00	5.72
5 459.660	57.63	Peak	V	34.10	13.31	-	45.84	59.20	74.00	14.80
5 460.540	46.24	Average	V	34.10	13.31	0.33	45.84	48.14	54.00	5.86

Tabulated test data for Restricted Band

Remark - "H": Horizontal, "V": Vertical

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

14.6.2 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 : > 98 %
- Result : Pass

Frequency (MHz)	Reading (dBμV)	Detector Mode	Ant. Pol. (H/V)	Ant. Factor	Cable Loss	Duty Factor(dB)	AMP Factor	Total (dBμV/m)	Limits (dBμV/m)	Margin (dB)
Multiple Transmit										
5 458.500	58.19	Peak	H	34.10	13.31	-	45.84	59.76	74.00	14.24
5 459.620	47.92	Average	H	34.10	13.31	0.80	45.84	50.29	54.00	3.71
5 438.340	55.17	Peak	V	34.10	13.31	-	45.84	56.74	74.00	17.26
5 431.830	44.16	Average	V	34.10	13.31	0.80	45.84	46.53	54.00	7.47

Tabulated test data for Restricted Band

Remark - "H": Horizontal, "V": Vertical

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

14.6.3 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 : > 98 %
- . Result : Pass

Frequency (MHz)	Reading (dBμV)	Detector Mode	Ant. Pol. (H/V)	Ant. Factor	Cable Loss	Duty Factor(dB)	AMP Factor	Total (dBμV/m)	Limits (dBμV/m)	Margin (dB)
Multiple Transmit										
5 460.000	57.54	Peak	H	34.10	13.31	-	45.84	59.11	74.00	14.89
5 460.000	48.22	Average	H	34.10	13.31	1.35	45.84	51.14	54.00	2.86
5 460.000	54.42	Peak	V	34.10	13.31	-	45.84	55.99	74.00	18.01
5 460.000	48.18	Average	V	34.10	13.31	1.35	45.84	51.10	54.00	2.90

Tabulated test data for Restricted Band

Remark - "H": Horizontal, "V": Vertical

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

14.6.4 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 : > 98 %
- Result : Pass

Frequency (MHz)	Reading (dBμV)	Detector Mode	Ant. Pol. (H/V)	Ant. Factor	Cable Loss	Duty Factor(dB)	AMP Factor	Total (dBμV/m)	Limits (dBμV/m)	Margin (dB)
Multiple Transmit										
5 458.240	56.39	Peak	H	34.10	13.31	-	45.84	57.96	74.00	16.04
5 456.000	45.71	Average	H	34.10	13.31	2.98	45.84	50.26	54.00	3.74
5 458.310	56.18	Peak	V	34.10	13.31	-	45.84	57.75	74.00	16.25
5 458.250	45.49	Average	V	34.10	13.31	2.98	45.84	50.04	54.00	3.96

Tabulated test data for Restricted Band

Remark - "H": Horizontal, "V": Vertical

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

14.7 Test data for Frequency U-NII-3

14.7.1 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 : > 98 %
- . 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 (Antenna 0)									
5 699.430	57.17	Peak	H	34.10	14.39	46.25	59.41	104.78	45.37
5 719.990	75.30	Peak	H	34.10	14.39	46.25	77.54	110.79	33.25
5 725.000	81.85	Peak	H	34.10	14.39	46.25	84.09	122.20	38.11
5 855.000	54.83	Peak	H	34.40	14.55	46.23	57.55	110.80	53.25
5 865.500	54.74	Peak	H	34.40	14.55	46.23	57.46	107.86	50.40
5 893.860	55.86	Peak	H	34.40	14.55	46.23	58.58	91.24	32.66
5 699.510	57.01	Peak	V	34.10	14.39	46.25	59.25	104.84	45.59
5 719.950	74.89	Peak	V	34.10	14.39	46.25	77.13	110.79	33.66
5 725.000	81.61	Peak	V	34.10	14.39	46.25	83.85	122.20	38.35
5 855.000	53.21	Peak	V	34.40	14.55	46.23	55.93	110.80	54.87
5 865.500	53.55	Peak	V	34.40	14.55	46.23	56.27	107.86	51.59
5 892.980	54.91	Peak	V	34.40	14.55	46.23	57.63	91.89	34.26

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 (Antenna 0)									
5 656.270	56.22	Peak	H	34.10	14.39	46.25	58.46	72.84	14.38
5 716.670	55.05	Peak	H	34.10	14.39	46.25	57.29	109.87	52.58
5 724.910	54.28	Peak	H	34.10	14.39	46.25	56.52	121.99	65.47
5 850.000	70.88	Peak	H	34.40	14.55	46.23	73.60	122.20	48.60
5 855.010	65.29	Peak	H	34.40	14.55	46.23	68.01	110.80	42.79
5 898.000	55.49	Peak	H	34.40	14.55	46.23	58.21	88.18	29.97
5 657.210	55.91	Peak	V	34.10	14.39	46.25	58.15	73.54	15.39
5 717.670	55.15	Peak	V	34.10	14.39	46.25	57.39	110.15	52.76
5 724.380	54.11	Peak	V	34.10	14.39	46.25	56.35	120.79	64.44
5 850.000	70.56	Peak	V	34.40	14.55	46.23	73.28	122.20	48.92
5 855.000	64.89	Peak	V	34.40	14.55	46.23	67.61	110.80	43.19
5 897.310	55.38	Peak	V	34.40	14.55	46.23	58.10	88.69	30.59

Tabulated test data for Restricted Band

Remark - "H": Horizontal, "V": Vertical

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

Tabulated test data for Restricted Band

Remark - "H": Horizontal, "V": Vertical

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

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 (Antenna 1)									
5 699.980	57.47	Peak	H	34.10	14.39	46.25	59.71	105.19	45.48
5 719.990	78.46	Peak	H	34.10	14.39	46.25	80.70	110.80	30.10
5 725.000	82.05	Peak	H	34.10	14.39	46.25	84.29	122.20	37.91
5 850.670	55.52	Peak	H	34.40	14.55	46.23	58.24	120.67	62.43
5 870.950	55.30	Peak	H	34.40	14.55	46.23	58.02	106.33	48.31
5 908.340	55.36	Peak	H	34.40	14.55	46.23	58.08	80.53	22.45
5 699.990	57.31	Peak	V	34.10	14.39	46.25	59.55	105.19	45.64
5 720.000	78.28	Peak	V	34.10	14.39	46.25	80.52	110.80	30.28
5 725.000	82.15	Peak	V	34.10	14.39	46.25	84.39	122.20	37.81
5 850.130	55.41	Peak	V	34.40	14.55	46.23	58.13	121.90	63.77
5 868.910	55.28	Peak	V	34.40	14.55	46.23	58.00	106.91	48.91
5 898.210	55.26	Peak	V	34.40	14.55	46.23	57.98	88.02	30.04

Tabulated test data for Restricted Band

Remark - "H": Horizontal, "V": Vertical

$$\text{Margin (dB)} = \text{Limits (dB}\mu\text{V/m)} - \text{Emission Level (dB}\mu\text{V/m)}$$

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 (Antenna 1)									
5 695.230	56.24	Peak	H	34.10	14.39	46.25	58.48	101.67	43.19
5 710.540	55.20	Peak	H	34.10	14.39	46.25	57.44	108.15	50.71
5 720.240	55.69	Peak	H	34.10	14.39	46.25	57.93	111.35	53.42
5 850.000	70.79	Peak	H	34.40	14.55	46.23	73.51	122.20	48.69
5 856.070	62.14	Peak	H	34.40	14.55	46.23	64.86	110.50	45.64
5 879.720	56.89	Peak	H	34.40	14.55	46.23	59.61	101.71	42.10
5 694.180	55.88	Peak	V	34.10	14.39	46.25	58.12	100.89	42.77
5 711.620	55.19	Peak	V	34.10	14.39	46.25	57.43	108.45	51.02
5 722.180	55.41	Peak	V	34.10	14.39	46.25	57.65	115.77	58.12
5 850.000	70.65	Peak	V	34.40	14.55	46.23	73.37	122.20	48.83
5 855.000	61.89	Peak	V	34.40	14.55	46.23	64.61	110.80	46.19
5 877.150	57.01	Peak	V	34.40	14.55	46.23	59.73	103.61	43.88

Tabulated test data for Restricted Band

Remark - "H": Horizontal, "V": Vertical

$$\text{Margin (dB)} = \text{Limits (dB}\mu\text{V/m)} - \text{Emission Level (dB}\mu\text{V/m)}$$

14.7.2 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 : > 98 %
- . 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 (Multiple Transmit)									
5 689.090	57.06	Peak	H	34.10	14.39	46.25	59.30	97.13	37.83
5 719.770	73.10	Peak	H	34.10	14.39	46.25	75.34	110.74	35.40
5 725.000	83.75	Peak	H	34.10	14.39	46.25	85.99	122.20	36.21
5 850.770	54.85	Peak	H	34.40	14.55	46.23	57.57	120.44	62.87
5 862.360	55.33	Peak	H	34.40	14.55	46.23	58.05	108.74	50.69
5 922.930	56.24	Peak	H	34.40	14.55	46.23	58.96	69.73	10.77
5 689.190	57.15	Peak	V	34.10	14.39	46.25	59.39	97.20	37.81
5 720.000	72.88	Peak	V	34.10	14.39	46.25	75.12	110.80	35.68
5 725.000	83.65	Peak	V	34.10	14.39	46.25	85.89	122.20	36.31
5 850.810	54.91	Peak	V	34.40	14.55	46.23	57.63	120.35	62.72
5 861.550	55.21	Peak	V	34.40	14.55	46.23	57.93	108.97	51.04
5 921.830	56.12	Peak	V	34.40	14.55	46.23	58.84	70.55	11.71

Tabulated test data for Restricted Band

Remark - "H": Horizontal, "V": Vertical

$$\text{Margin (dB)} = \text{Limits (dB}\mu\text{V/m)} - \text{Emission Level (dB}\mu\text{V/m)}$$

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 (Multiple Transmit)									
5 697.280	55.73	Peak	H	34.10	14.39	46.25	57.97	103.19	45.22
5 719.770	55.89	Peak	H	34.10	14.39	46.25	58.13	110.74	52.61
5 723.710	55.42	Peak	H	34.10	14.39	46.25	57.66	119.26	61.60
5 850.000	70.49	Peak	H	34.40	14.55	46.23	73.21	122.20	48.99
5 855.870	61.77	Peak	H	34.40	14.55	46.23	64.49	110.56	46.07
5 876.347	55.95	Peak	H	34.40	14.55	46.23	58.67	104.20	45.53
5 695.280	55.65	Peak	V	34.10	14.39	46.25	57.89	101.71	43.82
5 719.860	55.43	Peak	V	34.10	14.39	46.25	57.67	110.76	53.09
5 724.150	55.31	Peak	V	34.10	14.39	46.25	57.55	120.26	62.71
5 850.000	70.51	Peak	V	34.40	14.55	46.23	73.23	122.20	48.97
5 855.000	61.59	Peak	V	34.40	14.55	46.23	64.31	110.80	46.49
5 876.150	56.13	Peak	V	34.40	14.55	46.23	58.85	104.35	45.50

Tabulated test data for Restricted Band

Remark - "H": Horizontal, "V": Vertical

$$\text{Margin (dB)} = \text{Limits (dB}\mu\text{V/m)} - \text{Emission Level (dB}\mu\text{V/m)}$$

14.7.3 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 : > 98 %
- . 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 (Multiple Transmit)									
5 699.730	61.61	Peak	H	34.10	14.39	46.25	63.85	105.00	41.15
5 719.990	84.62	Peak	H	34.10	14.39	46.25	86.86	110.80	23.94
5 721.390	82.60	Peak	H	34.10	14.39	46.25	84.84	113.97	29.13
5 853.670	55.09	Peak	H	34.40	14.55	46.23	57.81	113.83	56.02
5 860.800	55.31	Peak	H	34.40	14.55	46.23	58.03	109.18	51.15
5 879.670	55.28	Peak	H	34.40	14.55	46.23	58.00	101.74	43.74
5 700.000	61.51	Peak	V	34.10	14.39	46.25	63.75	105.20	41.45
5 719.990	84.38	Peak	V	34.10	14.39	46.25	86.62	110.80	24.18
5 722.450	82.11	Peak	V	34.10	14.39	46.25	84.35	116.39	32.04
5 854.110	55.21	Peak	V	34.40	14.55	46.23	57.93	112.83	54.90
5 863.810	55.25	Peak	V	34.40	14.55	46.23	57.97	108.33	50.36
5 878.550	55.26	Peak	V	34.40	14.55	46.23	57.98	102.57	44.59

Tabulated test data for Restricted Band

Remark - "H": Horizontal, "V": Vertical

$$\text{Margin (dB)} = \text{Limits (dB}\mu\text{V/m)} - \text{Emission Level (dB}\mu\text{V/m)}$$

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									
5 652.120	57.23	Peak	H	34.10	14.39	46.25	59.47	69.77	10.30
5 717.690	57.51	Peak	H	34.10	14.39	46.25	59.75	110.15	50.40
5 724.920	58.49	Peak	H	34.10	14.39	46.25	60.73	122.02	61.29
5 851.440	53.45	Peak	H	34.40	14.55	46.23	56.17	118.92	62.75
5 869.840	56.75	Peak	H	34.40	14.55	46.23	59.47	106.64	47.17
5 875.570	56.52	Peak	H	34.40	14.55	46.23	59.24	104.78	45.54
5 651.190	56.89	Peak	V	34.10	14.39	46.25	59.13	69.08	9.95
5 718.550	57.11	Peak	V	34.10	14.39	46.25	59.35	110.39	51.04
5 724.610	58.31	Peak	V	34.10	14.39	46.25	60.55	121.31	60.76
5 850.650	62.88	Peak	V	34.40	14.55	46.23	65.60	120.72	55.12
5 870.150	56.55	Peak	V	34.40	14.55	46.23	59.27	106.56	47.29
5 879.550	56.19	Peak	V	34.40	14.55	46.23	58.91	101.83	42.92

Tabulated test data for Restricted Band

Remark - "H": Horizontal, "V": Vertical

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

14.7.4 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 : > 98 %
- . 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 (Multiple Transmit)									
5 696.680	59.14	Peak	H	34.10	14.39	46.25	61.38	102.74	41.36
5 718.490	67.56	Peak	H	34.10	14.39	46.25	69.80	110.38	40.58
5 720.780	64.30	Peak	H	34.10	14.39	46.25	66.54	112.58	46.04
5 850.500	57.96	Peak	H	34.40	14.55	46.23	60.68	121.06	60.38
5 872.470	56.63	Peak	H	34.40	14.55	46.23	59.35	105.91	46.56
5 893.110	55.99	Peak	H	34.40	14.55	46.23	58.71	91.80	33.09
5 698.880	59.21	Peak	V	34.10	14.39	46.25	61.45	104.37	42.92
5 719.510	67.58	Peak	V	34.10	14.39	46.25	69.82	110.66	40.84
5 720.650	64.16	Peak	V	34.10	14.39	46.25	66.40	112.28	45.88
5 850.000	57.51	Peak	V	34.40	14.55	46.23	60.23	122.20	61.97
5 872.650	56.41	Peak	V	34.40	14.55	46.23	59.13	105.86	46.73
5 895.310	55.66	Peak	V	34.40	14.55	46.23	58.38	90.17	31.79

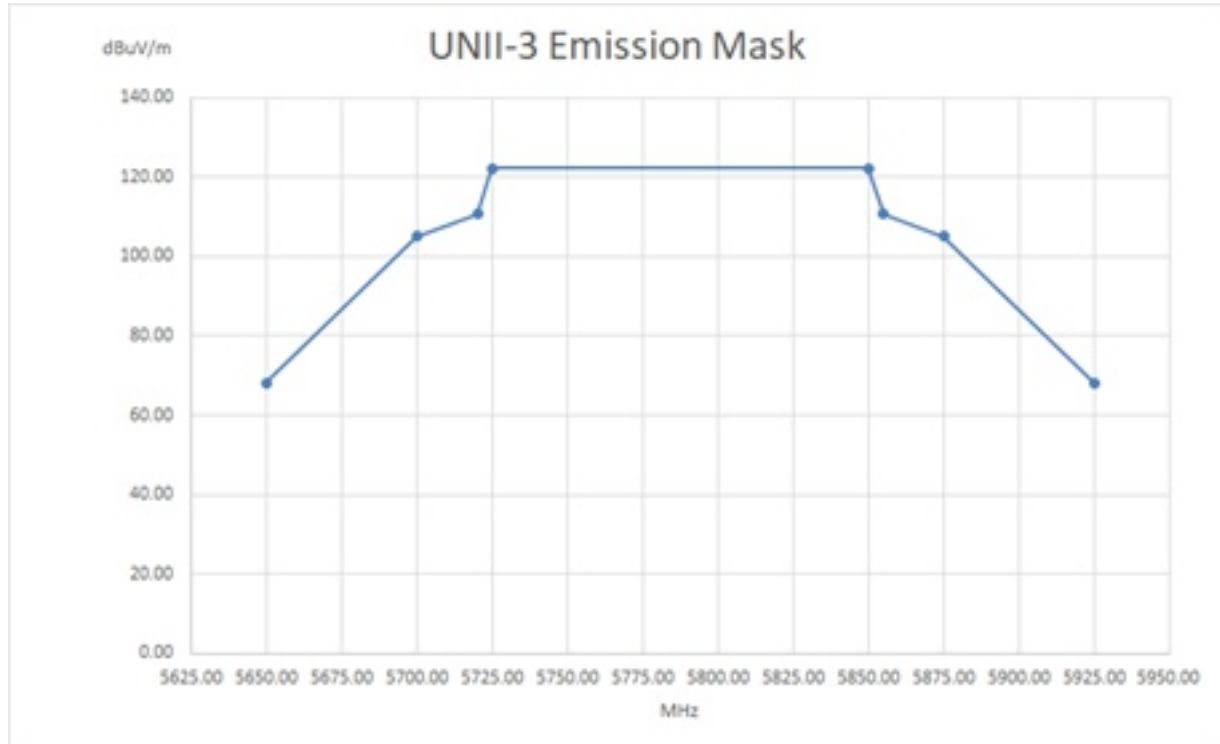
Tabulated test data for Restricted Band

Remark - "H": Horizontal, "V": Vertical

$$\text{Margin (dB)} = \text{Limits (dB}\mu\text{V/m)} - \text{Emission Level (dB}\mu\text{V/m)}$$

14.7.5 U-NII-3 Emission Limits

14.7.5.1 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. CONDUCTED EMISSION TEST

15.1 Operating environment

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

15.2 Test set-up

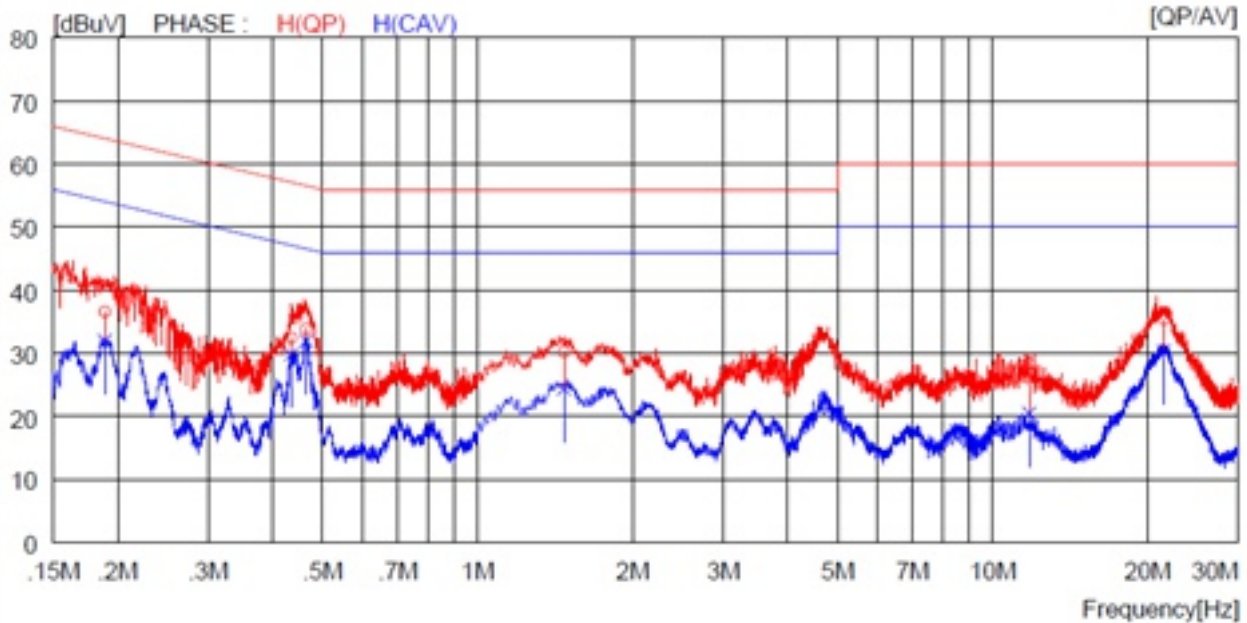
The EUT was placed on a wooden table, 0.8 m height above the floor. Power was fed to the EUT through a 50 Ω / 50 μ H + 5 Ω Artificial Mains Network (AMN). The ground plane was electrically bonded to the reference ground system and all power lines were filtered from ambient.

15.3 Test Date

March 29, 2021 ~ April 13, 2021

15.4 Test data for WLAN 5 GHz

- Resolution bandwidth : 9 kHz
- Frequency range : 0.15 MHz ~ 30 MHz
- Tested Line : LIVE LINE
- Antenna 0, Antenna 1 and Multiple transmit tested, but the worst data were recorded.

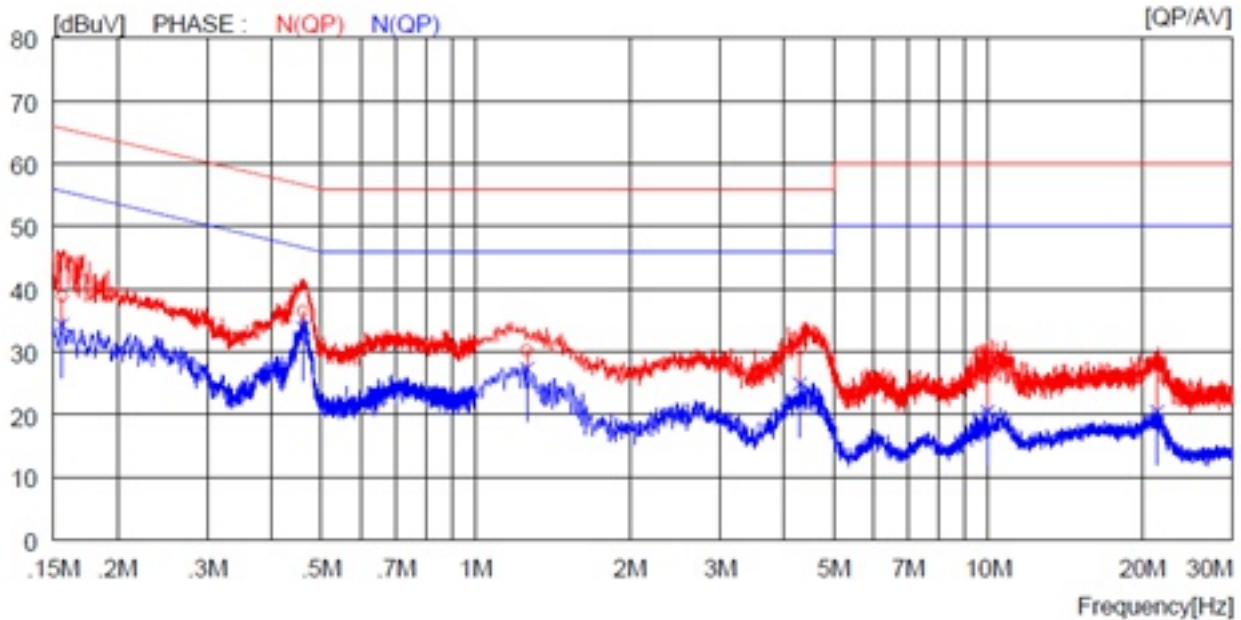


NO	FREQ [MHz]	READING		C.FACTOR [dB]	RESULT		LIMIT		MARGIN		PHASE
		QP [dBuV]	AV [dBuV]		QP [dBuV]	AV [dBuV]	QP [dBuV]	AV [dBuV]	QP [dBuV]	AV [dBuV]	
1	0.18900	26.6	----	10.0	36.6	----	64.1	----	27.5	----	H(QP)
2	0.43500	22.4	----	10.0	32.4	----	57.2	----	24.8	----	H(QP)
3	0.46500	23.8	----	10.0	33.8	----	56.6	----	22.8	----	H(QP)
4	1.47200	20.1	----	10.1	30.2	----	56.0	----	25.8	----	H(QP)
5	11.79000	18.2	----	10.2	28.4	----	60.0	----	31.6	----	H(QP)
6	21.53000	25.0	----	10.4	35.4	----	60.0	----	24.6	----	H(QP)
7	0.18900	----	22.0	10.0	----	32.0	----	54.1	----	22.1	H(CAV)
8	0.43500	----	19.8	10.0	----	29.8	----	47.2	----	17.4	H(CAV)
9	0.46500	----	22.0	10.0	----	32.0	----	46.6	----	14.6	H(CAV)
10	1.47200	----	14.3	10.1	----	24.4	----	46.0	----	21.7	H(CAV)
11	11.79000	----	10.3	10.2	----	20.5	----	50.0	----	29.6	H(CAV)
12	21.53000	----	20.0	10.4	----	30.4	----	50.0	----	19.6	H(CAV)

-, Tested Line : NEUTRAL LINE

Remark: Margin (dB) = Limit – Level (Result)

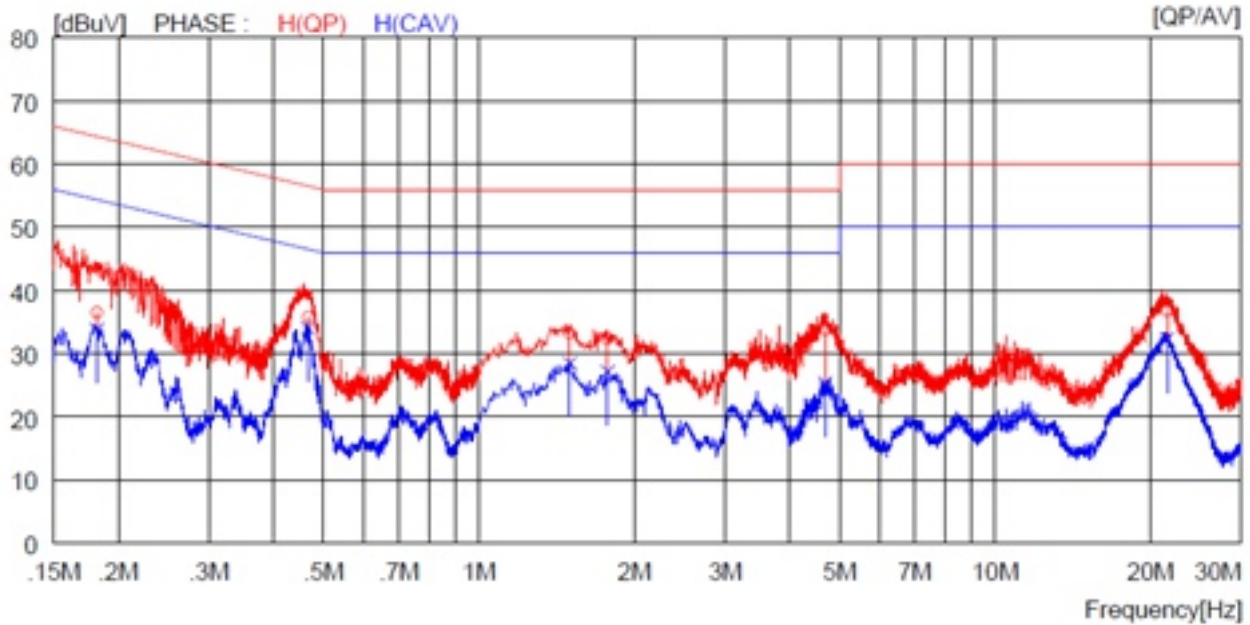
The emission level in above table is included the transducer factor that means insertion loss (LISN), cable loss and attenuator.



NO	FREQ [MHz]	READING		C.FACTOR [dB]	RESULT		LIMIT		MARGIN		PHASE
		QP [dBuV]	AV [dBuV]		QP [dBuV]	AV [dBuV]	QP [dBuV]	AV [dBuV]	QP [dBuV]	AV [dBuV]	
1	0.15600	28.9	----	10.0	38.9	----	65.7	----	26.8	----	N(QP)
2	0.46100	26.5	----	10.0	36.5	----	56.7	----	20.2	----	N(QP)
3	1.26000	20.1	----	10.1	30.2	----	56.0	----	25.8	----	N(QP)
4	4.30000	20.4	----	10.1	30.5	----	56.0	----	25.5	----	N(QP)
5	9.99000	19.3	----	10.2	29.5	----	60.0	----	30.5	----	N(QP)
6	21.40000	17.6	----	10.4	28.0	----	60.0	----	32.0	----	N(QP)
7	0.15600	----	24.3	10.0	----	34.3	----	55.7	----	21.4	N(CAV)
8	0.46100	----	23.8	10.0	----	33.8	----	46.7	----	12.9	N(CAV)
9	1.26000	----	17.2	10.1	----	27.3	----	46.0	----	18.7	N(CAV)
10	4.30000	----	14.8	10.1	----	24.9	----	46.0	----	21.1	N(CAV)
11	9.99000	----	10.3	10.2	----	20.5	----	50.0	----	29.5	N(CAV)
12	21.40000	----	10.1	10.4	----	20.5	----	50.0	----	29.5	N(CAV)

15.5 Test data for Intermodulation Mode(WLAN 2.4 GHz + WLAN 5 GHz)

- Resolution bandwidth : 9 kHz
- Frequency range : 0.15 MHz ~ 30 MHz
- Tested Line : LIVE LINE



NO	FREQ [MHz]	READING		C. FACTOR [dB]	RESULT		LIMIT		MARGIN		PHASE
		QP [dBuV]	AV [dBuV]		QP [dBuV]	AV [dBuV]	QP [dBuV]	AV [dBuV]	QP [dBuV]	AV [dBuV]	
1	0.18200	26.5	----	10.0	36.5	----	64.4	----	27.9	----	H (QP)
2	0.46700	25.8	----	10.0	35.8	----	56.6	----	20.8	----	H (QP)
3	1.50000	23.1	----	10.1	33.2	----	56.0	----	22.8	----	H (QP)
4	1.77600	22.2	----	10.1	32.3	----	56.0	----	23.7	----	H (QP)
5	4.68800	23.5	----	10.2	33.7	----	56.0	----	22.3	----	H (QP)
6	21.57000	26.4	----	10.4	36.8	----	60.0	----	23.2	----	H (QP)
7	0.18200	----	23.8	10.0	----	33.8	----	54.4	----	20.6	H (CAV)
8	0.46700	----	24.0	10.0	----	34.0	----	46.6	----	12.6	H (CAV)
9	1.50000	----	18.3	10.1	----	28.4	----	46.0	----	17.6	H (CAV)
10	1.77600	----	17.0	10.1	----	27.1	----	46.0	----	18.9	H (CAV)
11	4.68800	----	15.1	10.2	----	25.3	----	46.0	----	20.7	H (CAV)
12	21.57000	----	21.9	10.4	----	32.3	----	50.0	----	17.7	H (CAV)

This Report is not correlated with the authentication of KOLAS

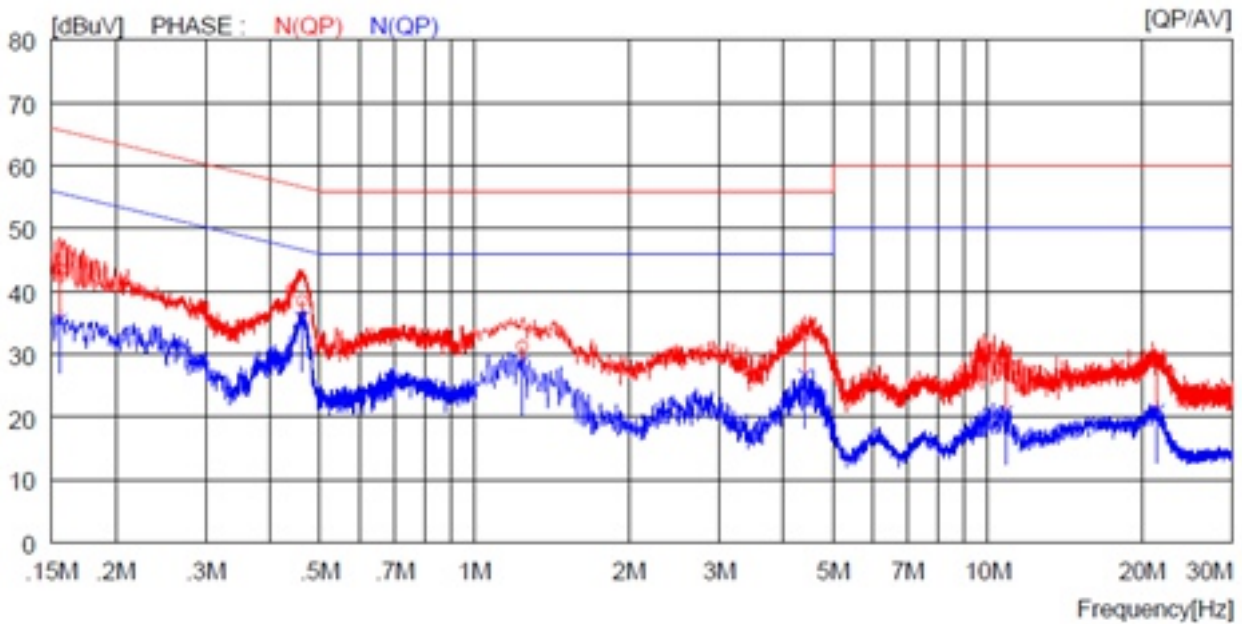
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OTC-TRF-RF-001(0)

-. Tested Line : NEUTRAL LINE

Remark: Margin (dB) = Limit – Level (Result)

The emission level in above table is included the transducer factor that means insertion loss (LISN), cable loss and attenuator.



NO	FREQ [MHz]	READING		C. FACTOR [dB]	RESULT		LIMIT		MARGIN		PHASE
		QP [dBuV]	AV [dBuV]		QP [dBuV]	AV [dBuV]	QP [dBuV]	AV [dBuV]	QP [dBuV]	AV [dBuV]	
1	0.15600	33.4	----	10.0	43.4	----	65.7	----	22.3	----	N(QP)
2	0.46200	28.5	----	10.0	38.5	----	56.7	----	18.2	----	N(QP)
3	1.24000	21.1	----	10.1	31.2	----	56.0	----	24.8	----	N(QP)
4	4.40400	22.9	----	10.1	33.0	----	56.0	----	23.0	----	N(QP)
5	10.85000	18.7	----	10.2	28.9	----	60.0	----	31.1	----	N(QP)
6	21.44000	18.2	----	10.4	28.6	----	60.0	----	31.4	----	N(QP)
7	0.15600	----	25.4	10.0	----	35.4	----	55.7	----	20.3	N(CAV)
8	0.46200	----	25.7	10.0	----	35.7	----	46.7	----	11.0	N(CAV)
9	1.24000	----	18.6	10.1	----	28.7	----	46.0	----	17.3	N(CAV)
10	4.40400	----	16.5	10.1	----	26.6	----	46.0	----	19.4	N(CAV)
11	10.85000	----	10.6	10.2	----	20.8	----	50.0	----	29.2	N(CAV)
12	21.44000	----	10.6	10.4	----	21.0	----	50.0	----	29.0	N(CAV)

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OTC-TRF-RF-001(0)

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

16. DYNAMIC FREQUENCY SELECTION (DFS)

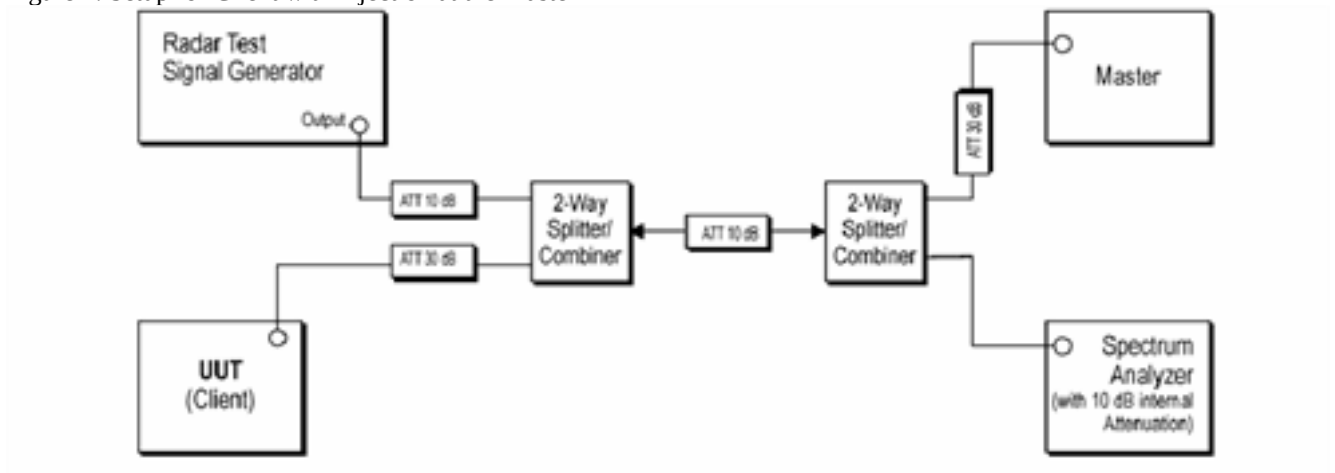
16.1 Operating environment

Temperature : 24 °C
Relative humidity : 45 % R.H.

16.2 Test set-ups

The FCC 06-96 and RSS-210 A9.3 describes a conducted test setup. A conducted test setup was user this testing. Figure 1 shows the typical test setup. Each one channel selected between 5 250 MHz and 5 350 MHz, 5 470 MHz and 5 725 MHz is chosen for the testing.

Figure 1. Setup for Client with injection at the Master



The operational behavior and individual DFS requirements that are associated with these modes are as follows:

<Master Devices>

- The Master Device will use DFS in order to detect Radar Waveforms with received signal strength above the DFS Detection Threshold in the 5 250 – 5 350 MHz and 5 470 – 5 725 MHz bands. DFS is not required in the 5 150 – 5 250 MHz or 5 725 – 5 825 MHz bands.
- Before initiating a network on a Channel, the Master Device will perform a Channel Availability Check for a specified time duration (Channel Availability Check Time) to ensure that there is no radar system operating on the Channel, using DFS described under subsection a) above.
- The Master Device initiates a U-NII network by transmitting control signals that will enable other U-NII devices to Associate with the Master Device.
- During normal operation, the Master Device will monitor the Channel (In-Service Monitoring) to ensure that there is no radar system operating on the Channel, using DFS described under a).
- If the Master Device has detected a Radar Waveform during In-Service Monitoring as described under d), the Operating Channel of the U-NII network is no longer an Available Channel. The Master Device will instruct all associated Client Device(s) to stop transmitting on this Channel within the Channel Move Time. The transmissions during the Channel Move Time will be limited to the Channel Closing Transmission Time.

f) Once the Master Device has detected a Radar Waveform it will not utilize the Channel for the duration of the Non-Occupancy Period. 3

g) If the Master Device delegates the In-Service Monitoring to a Client Device, then the combination will be tested to the requirements described under d) through f) above.

<Client Devices>

a) A Client Device will not transmit before having received appropriate control signals from a Master Device.

b) A Client Device will stop all its transmissions whenever instructed by a Master Device to which it is associated and will meet the Channel Move Time and Channel Closing Transmission Time requirements. The Client Device will not resume any transmissions until it has again received control signals from a Master Device.

c) If a Client Device is performing In-Service Monitoring and detects a Radar Waveform above the DFS Detection Threshold, it will inform the Master Device. This is equivalent to the Master Device detecting the Radar Waveform and d) through f) of section 5.1.1 apply.

d) Irrespective of Client Device or Master Device detection the Channel Move Time and Channel Closing Transmission Time requirements remain the same.

e) The client test frequency must be monitored to ensure no transmission of any type has occurred for 30 minutes. Note: If the client moves with the master, the device is considered compliant if nothing appears in the client non-occupancy period test. For devices that shut down (rather than moving channels), no beacons should appear.

<Channel Connection Information>

a) Master Devices : RF-AX88U

b) Client(=EUT) Devices : WTP3

c) Connect to test channel : See next page for measurement data.

16.3 DFS Test Signals

Table 5 – Short Pulse Radar Test Waveforms

Radar Type	Pulse Width (μsec)	PRI (μsec)	Number of Pulses	Minimum Percentage of Successful Detection	Minimum Number of Trials
0	1	1428	18	See Note 1	See Note 1
1	1	Test A: 15 unique PRI values randomly selected from the list of 23 PRI values in Table 5a Test B: 15 unique PRI values randomly selected within the range of 518-3066 μsec, with a minimum increment of 1 μsec, excluding PRI values selected in Test A	$\text{Roundup} \left\{ \left(\frac{1}{360} \right), \left(\frac{19 \cdot 10^6}{\text{PRI}_{\mu\text{sec}}} \right) \right\}$	60%	30
2	1-5	150-230	23-29	60%	30
3	6-10	200-500	16-18	60%	30
4	11-20	200-500	12-16	60%	30
Aggregate (Radar Types 1-4)				80%	120

Table 6 – Long Pulse Radar Test Waveform

Radar Type	Pulse Width (μsec)	Chirp Width (MHz)	PRI (μsec)	Number of Pulses per Burst	Number of Bursts	Minimum Percentage of Successful Detection	Minimum Number of Trials
5	50-100	5-20	1000-2000	1-3	8-20	80%	30

16.4 Technical Requirement Specification

Table 1: Applicability of DFS Requirements Prior to Use of a Channel

Requirement	Operational Mode		
	Master	Client (without DFS)	Client (with DFS)
<i>Non-Occupancy Period</i>	Yes	Not required	Yes
<i>DFS Detection Threshold</i>	Yes	Not required	Yes
<i>Channel Availability Check Time</i>	Yes	Not required	Not required
<i>Uniform Spreading</i>	Yes	Not required	Not required
<i>U-NII Detection Bandwidth</i>	Yes	Not required	Yes

Table 2: Applicability of DFS requirements during normal operation

Requirement	Operational Mode		
	Master	Client (without DFS)	Client (with DFS)
<i>DFS Detection Threshold</i>	Yes	Not required	Yes
<i>Channel Closing Transmission Time</i>	Yes	Yes	Yes
<i>Channel Move Time</i>	Yes	Yes	Yes
<i>U-NII Detection Bandwidth</i>	Yes	Not required	Yes

16.5 Test Date

March 29, 2021 ~ April 13, 2021

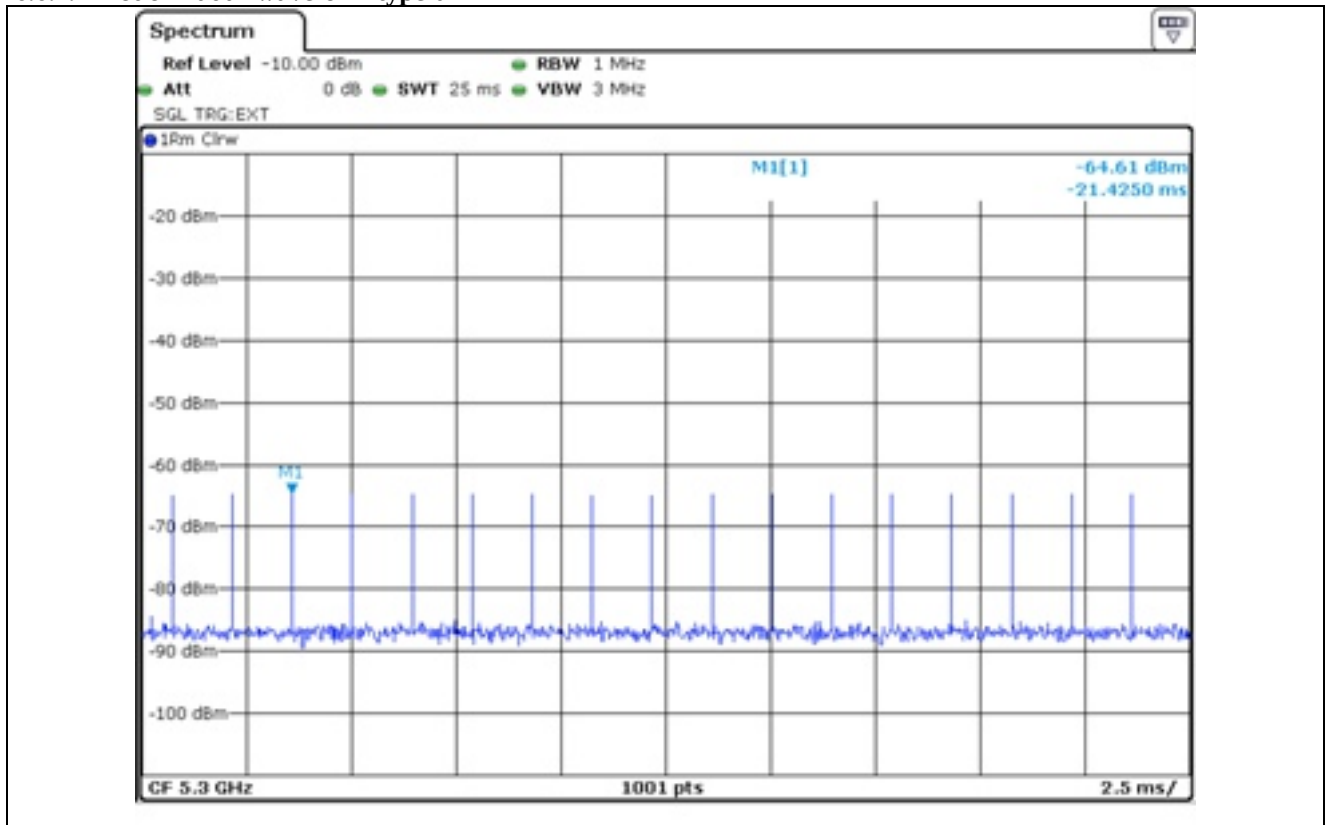
16.6 Test data

Band	Frequency (MHz)	Channel move time(s)		Channel closing transmission time(ms)	
		Measured	Limit	Measured	Limit
UNII 2A	5 300.00	0.80	10.00	1.8	200 milliseconds + an aggregate of 60 milliseconds over remaining 10 second period.
UNII 2C	5 500.00	0.82		1.6	

Note. Channel closing transmission time: $9 * 0.2 \text{ ms} = 1.8 \text{ ms}$, $8 * 0.2 \text{ ms} = 1.6 \text{ ms}$

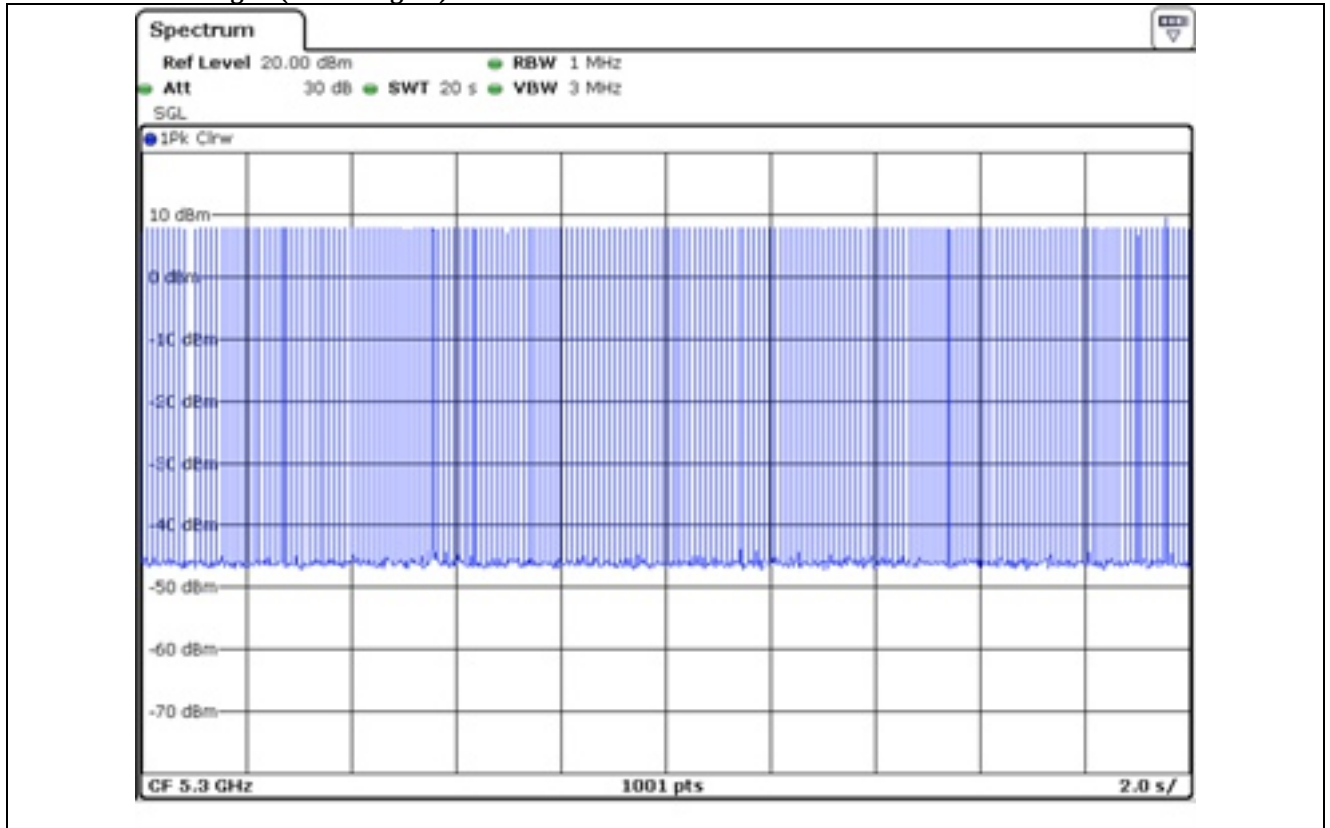
16.6.1 UNII 2A

16.6.1.1 Plot of Radar waveform type 0

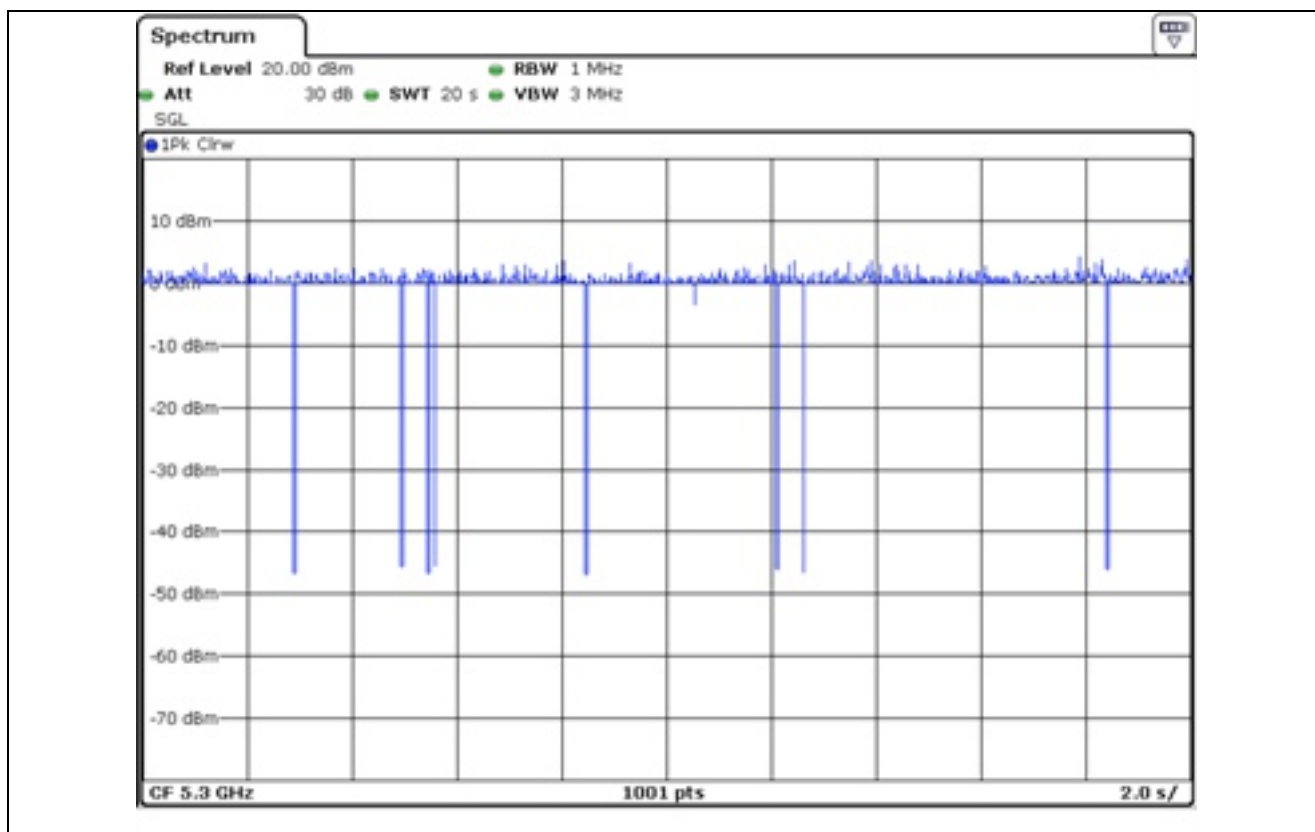


Note: The calibrated conducted DFS detection threshold level is set to -64.61 dBm ($-62+1+0.30=-60.70 \text{ dBm}$)

16.6.1.2 No traffic signal(master signal)



16.6.1.3 Client(EUT) Data Traffic Signal



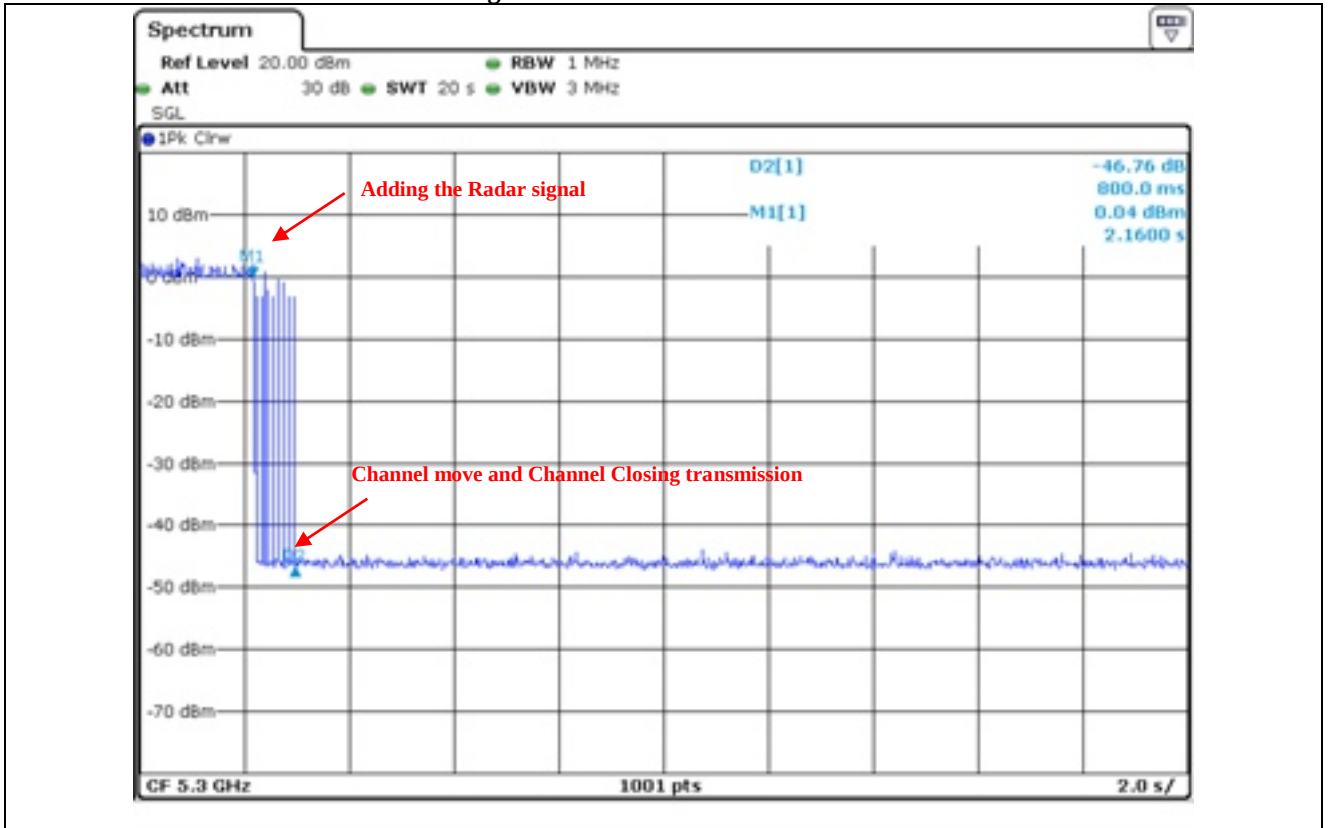
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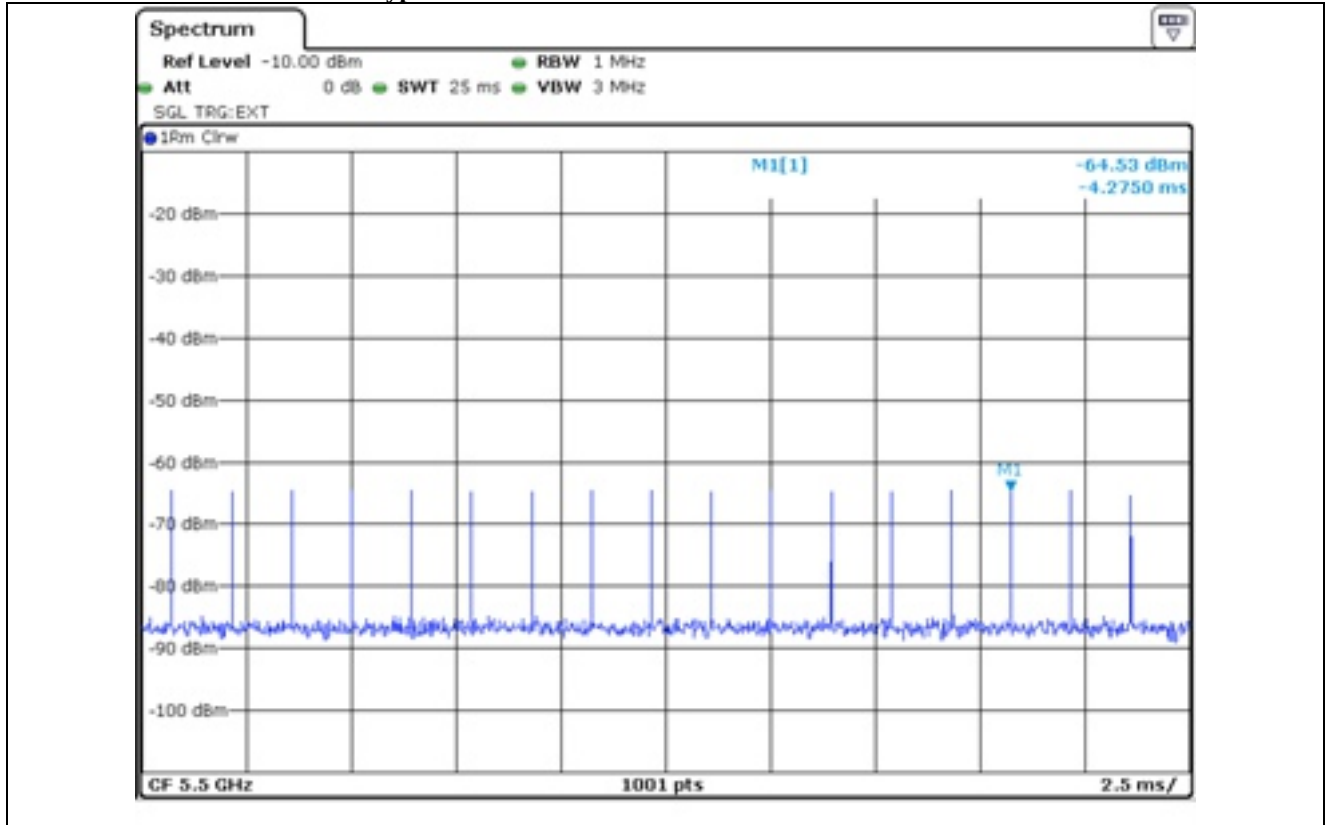
ONETECH Corp.: 43-14, Jinsaegol-gil, Chowol-eup, Gwangju-si, Gyeonggi-do, 12735, Korea (TEL: 82-31-799-9500, FAX: 82-31-799-9599)

16.6.1.4 Channel move and Channel Closing transmission time



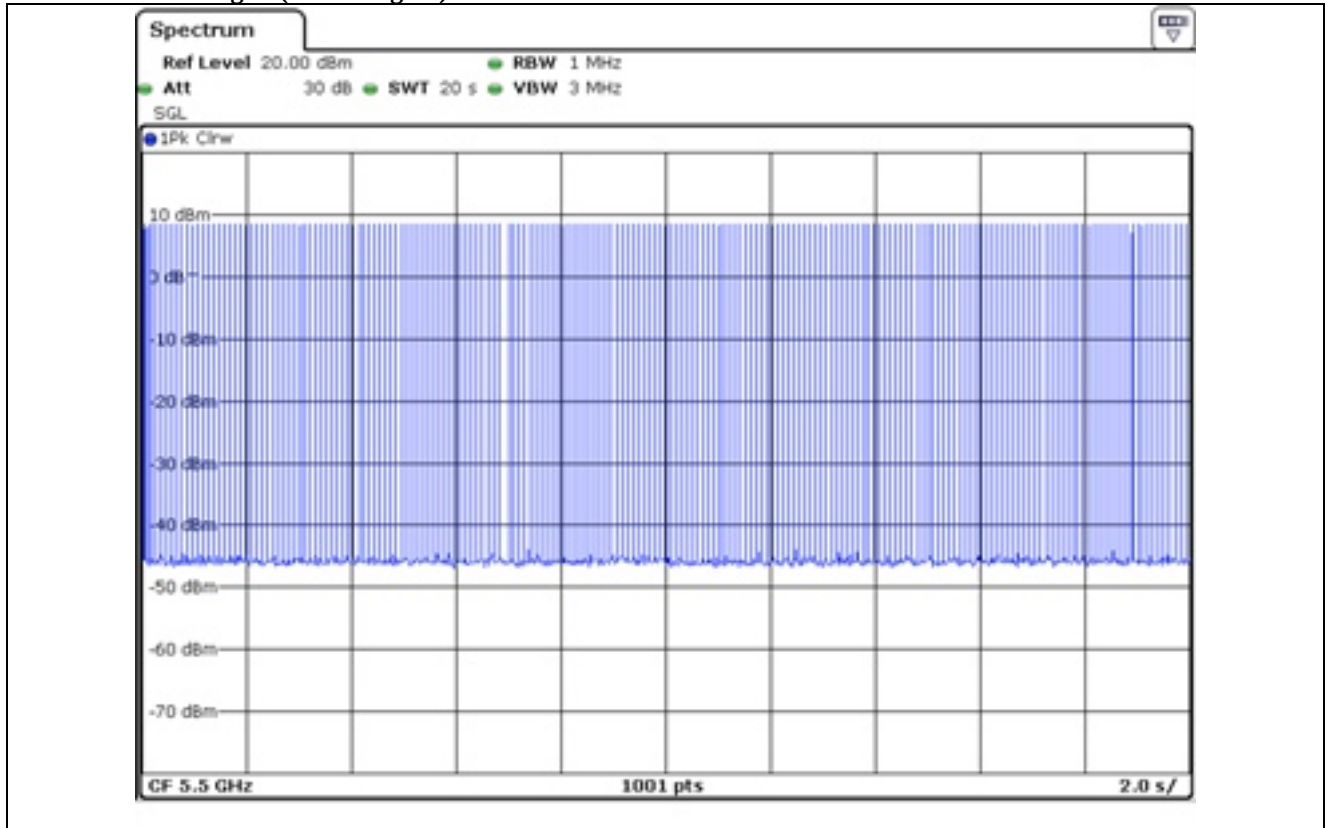
16.6.2 UNII 3

16.6.2.1 Plot of Radar waveform type 1

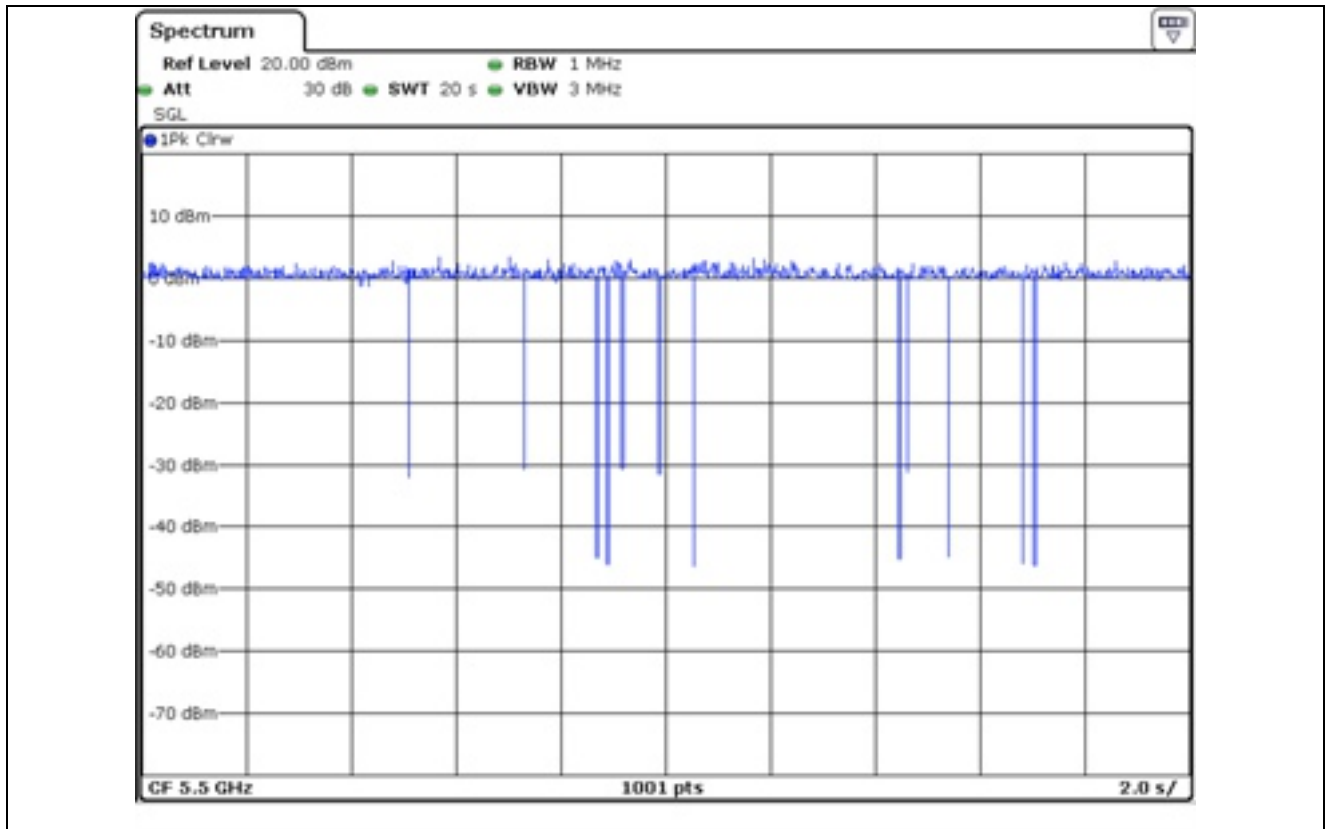


Note: The calibrated conducted DFS detection threshold level is set to -64.53 dBm ($-62+1+0.70=-60.30$ dBm)

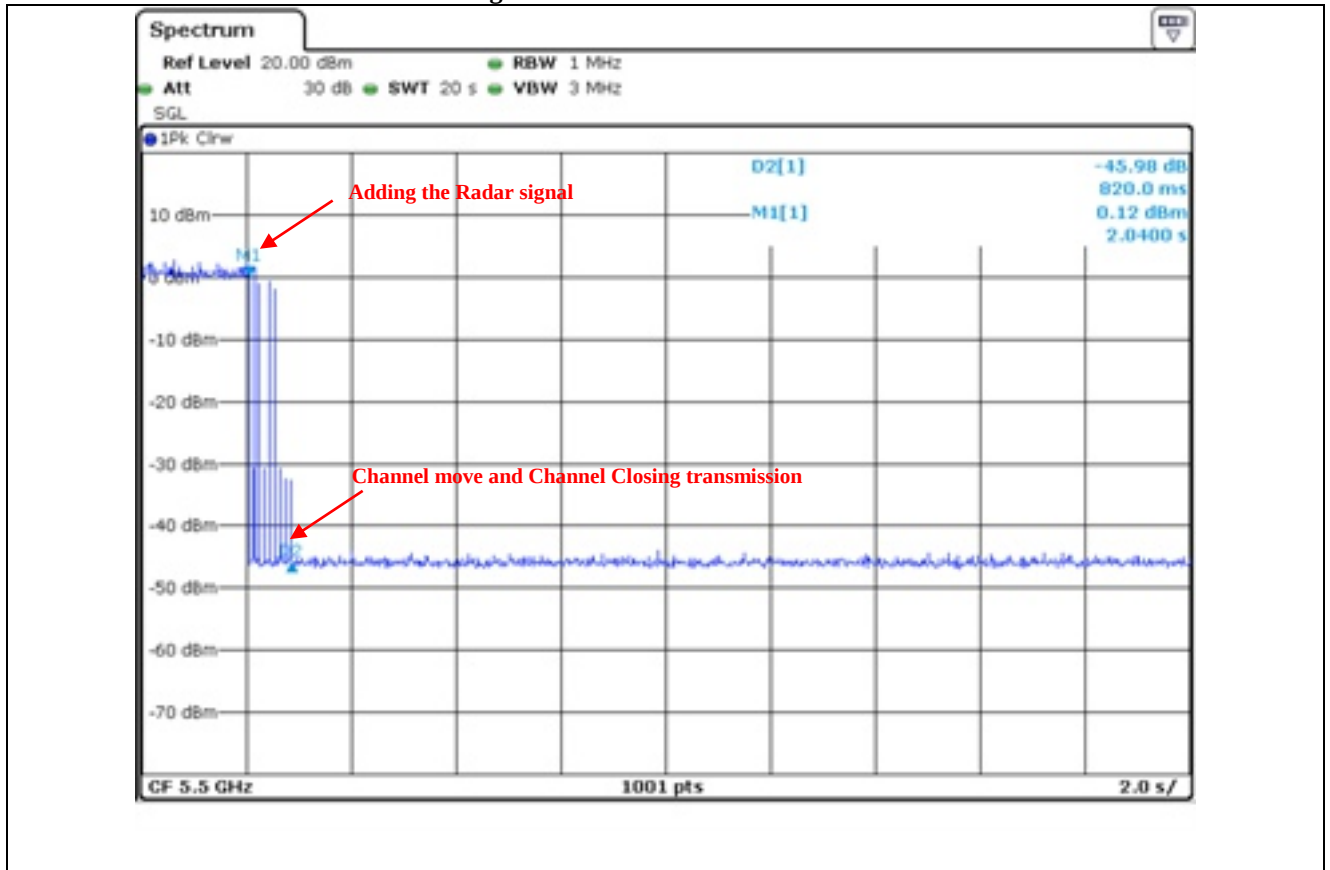
16.6.2.2 No traffic signal(master signal)



16.6.2.3 Client(EUT) Data Traffic Signal



16.6.2.4 Channel move and Channel Closing transmission time



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17. 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. 22, 2021 (1Y)
NRP-Z81	Rohde & Schwarz	Wide band Sensor	101975	Feb. 09, 2021 (1Y)
SSE-43CI-A	Samkun Tech	Humidity Chamber	60712	Feb. 09, 2021 (1Y)
E3632A	FinePower	DC Power supply	MY50370016	Feb. 08, 2021 (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)
ESR3	Rohde & Schwarz	EMI TEST RECEIVER	102602	Mar. 15, 2021 (1Y)
NSLK8126	Schwarzbeck	AMN	8126-404	Mar. 15, 2021 (1Y)
ESH3Z2	Rohde & Schwarz	PULSE LIMITER	357.8810.52	Mar. 15, 2021 (1Y)
D-05180-2	RLC Electronis Inc.	Combiner	0813	N/A
11636B	Hewlett Packard	Combiner	12268	N/A
SMBV100A	R/S	Signal Generator	260423	Feb. 09, 2021 (1Y)
RF-AX88U	ASUS	Dual Band Gigabit Router	NA	N/A

Note. Dual Band Gigabit Router(Model : RF-AX88U) Information.

; FCC ID : MSQ-RTAXHP00, IC ID : 3568A-RTAXHP00

Note. This Device not support TPC Function.

All test equipment used is calibrated on a regular basis.