10. PEAK POWER SPECTRUL DENSITY

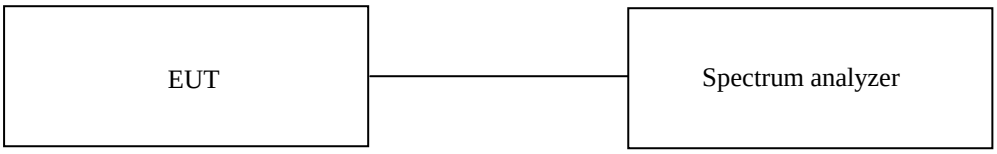
10.1 Operating environment

Temperature : 23 ℃

Relative humidity : 47 % 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 equipment used

	Model Number	Manufacturer	Description	Serial Number	Last Cal.
■ -	FSV40	Rohde & Schwarz	Signal Analyzer	101009	April 05, 2017 (1Y)

All test equipment used is calibrated on a regular basis.

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

10.4 Test data for 802.11a RLAN Mode

10.4.1 Test data for Antenna 0

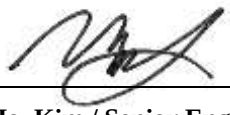
-. Test Date : March 27, 2017

-. Operating condition : Highest Output Power Transmitting Mode

-. Test Result : Pass

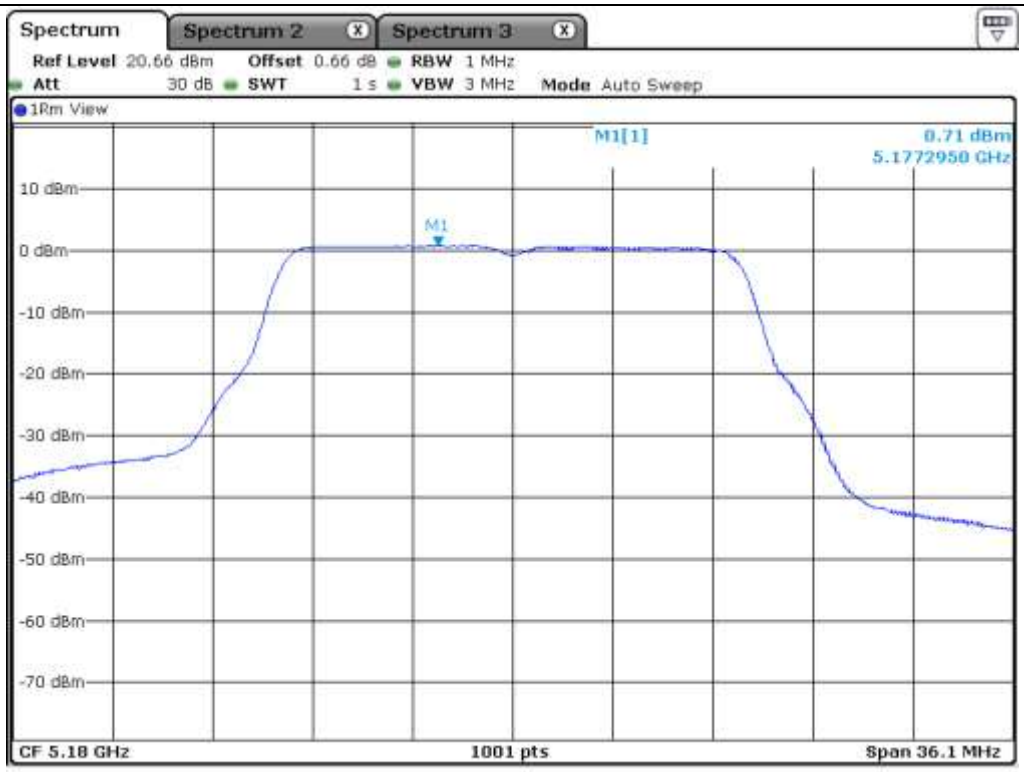
FREQUENCY RANGE (MHz)	CHANNEL	FREQUENCY (MHz)	MEASURED VALUE (dBm)	LIMIT (dBm)	MARGIN (dB)
5 150 ~ 5 250	Low	5 180.00	0.71	11.00	10.29
	Middle	5 220.00	0.91	11.00	10.09
	High	5 240.00	0.85	11.00	10.15
5 250 ~ 5 350	Low	5 260.00	2.62	11.00	8.38
	Middle	5 300.00	2.21	11.00	8.79
	High	5 320.00	2.30	11.00	8.70
5 470 ~ 5 725	Low	5 500.00	4.19	11.00	6.81
	Middle	5 560.00	2.44	11.00	8.56
	High	5 720.00	2.78	11.00	8.22
5 725 ~ 5 850	Low	5 745.00	3.52	30.00	26.48
	Middle	5 785.00	2.57	30.00	27.43
	High	5 825.00	2.32	30.00	27.68

Remark: See next page for measurement data.

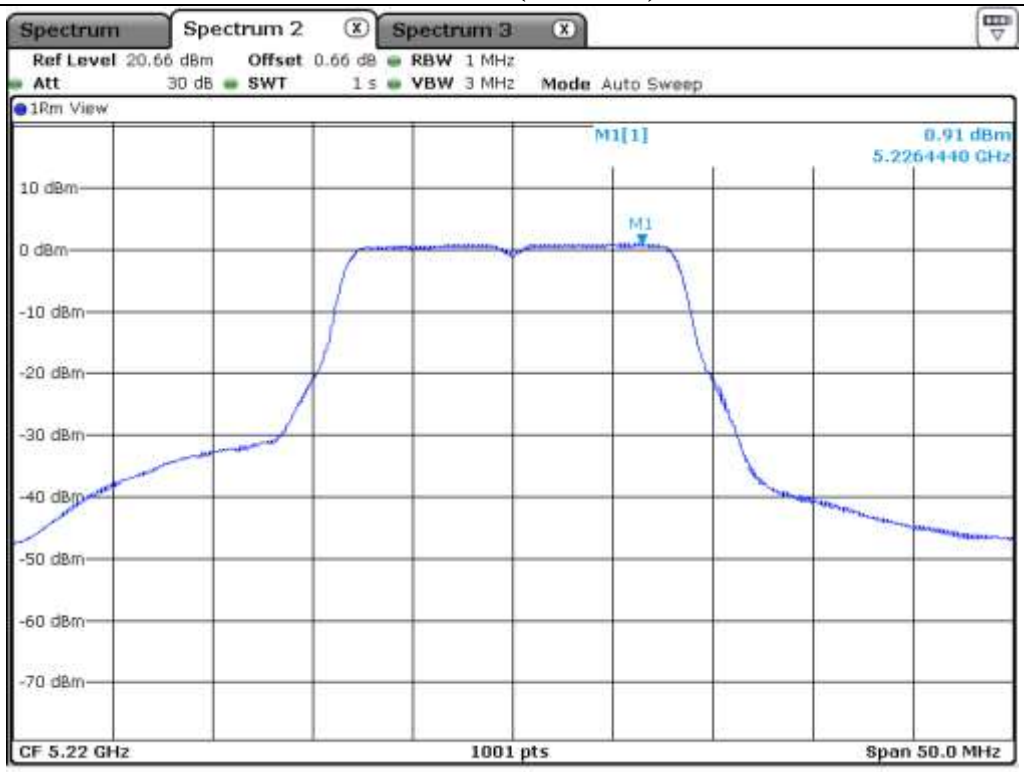


Tested by: Tae-Ho, Kim / Senior Engineer

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

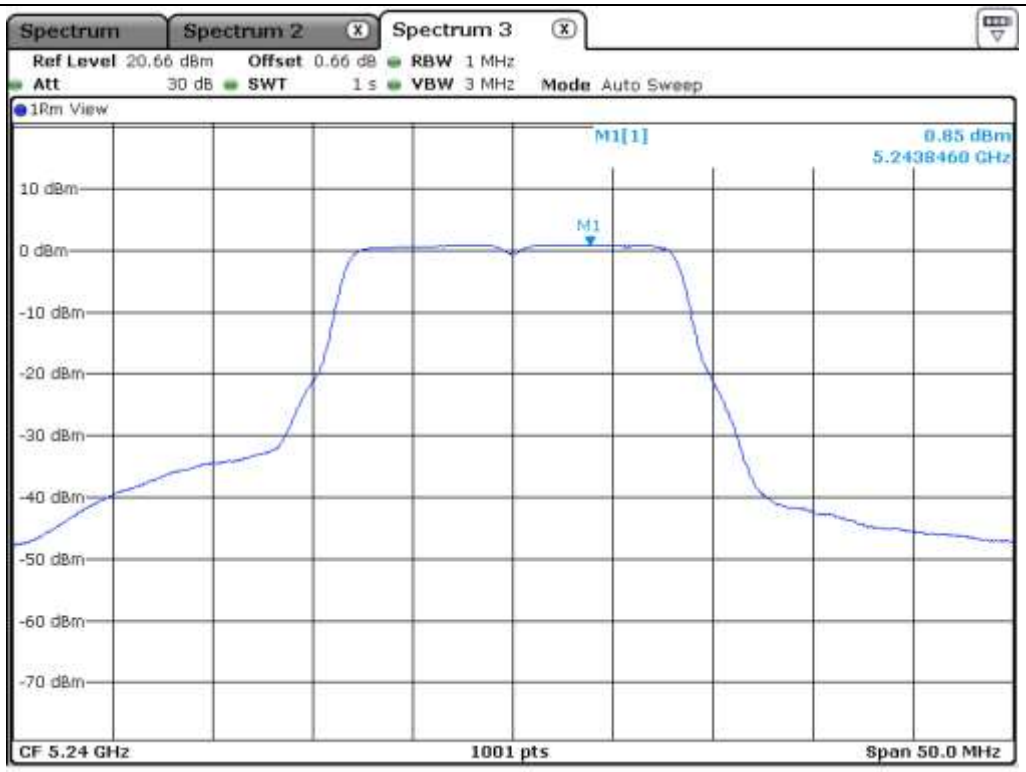


Low Channel (5 180 MHz)



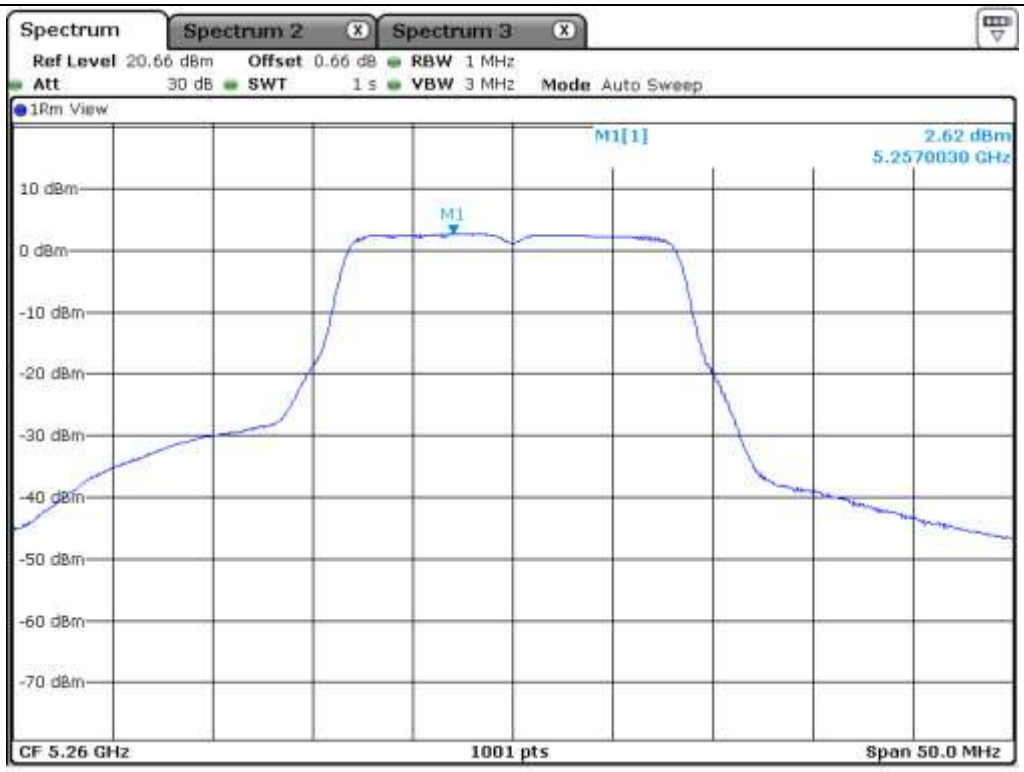
Middle Channel (5 220 MHz)

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

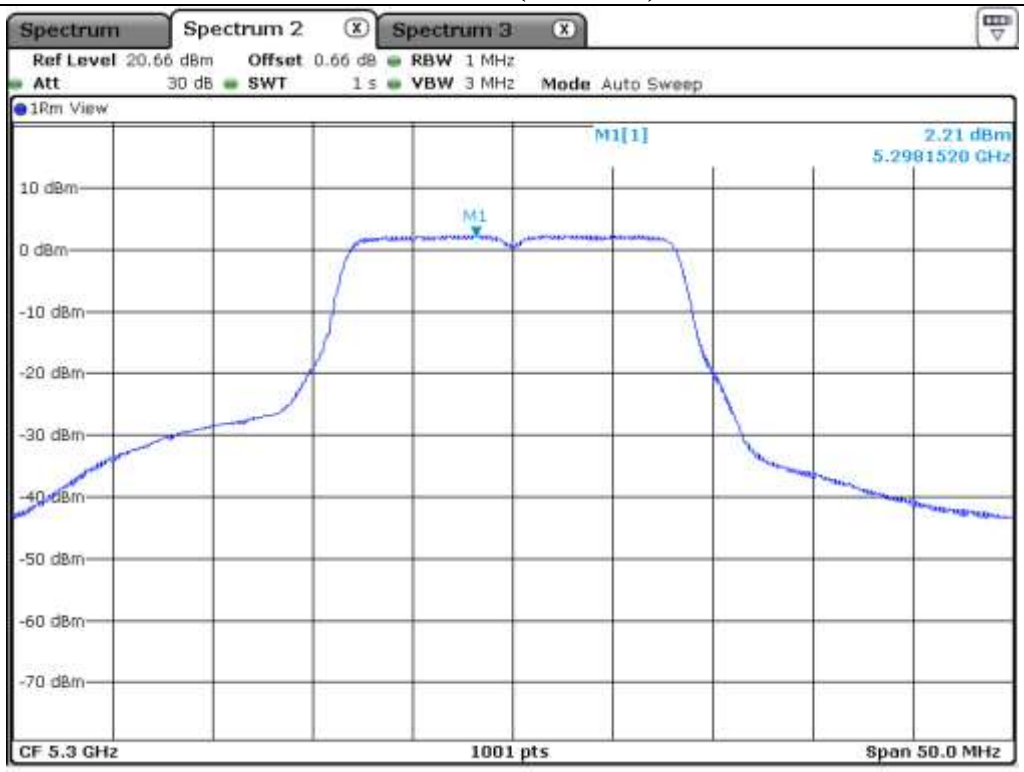


High Channel (5 240 MHz)

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

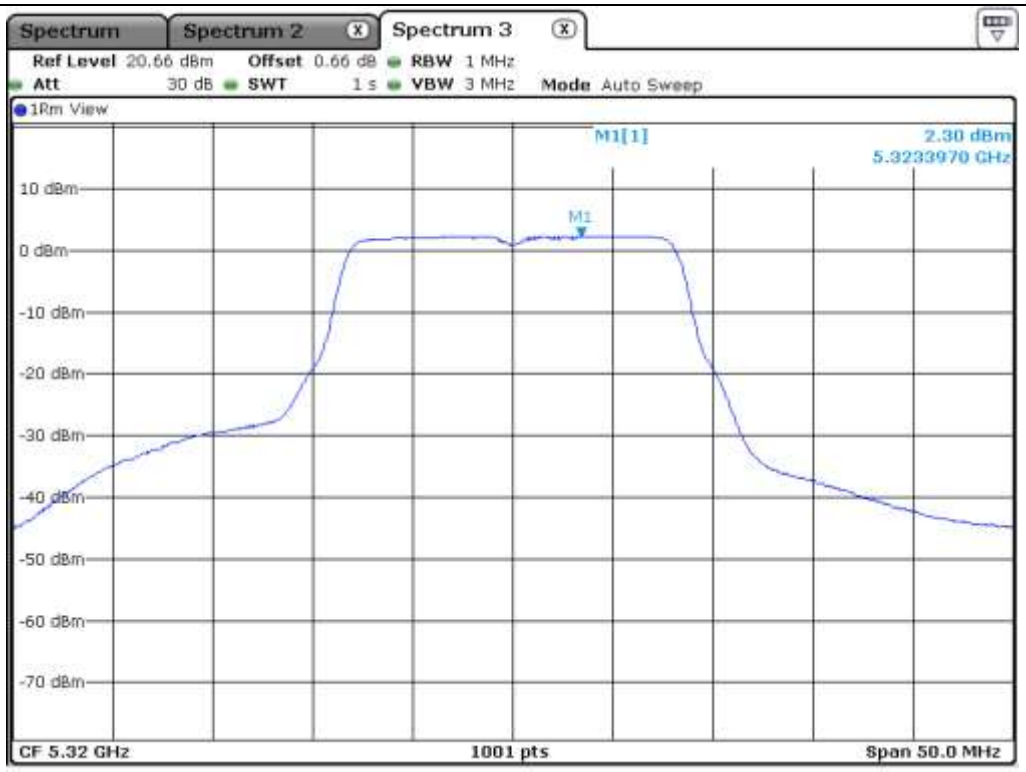


Low Channel (5 260 MHz)

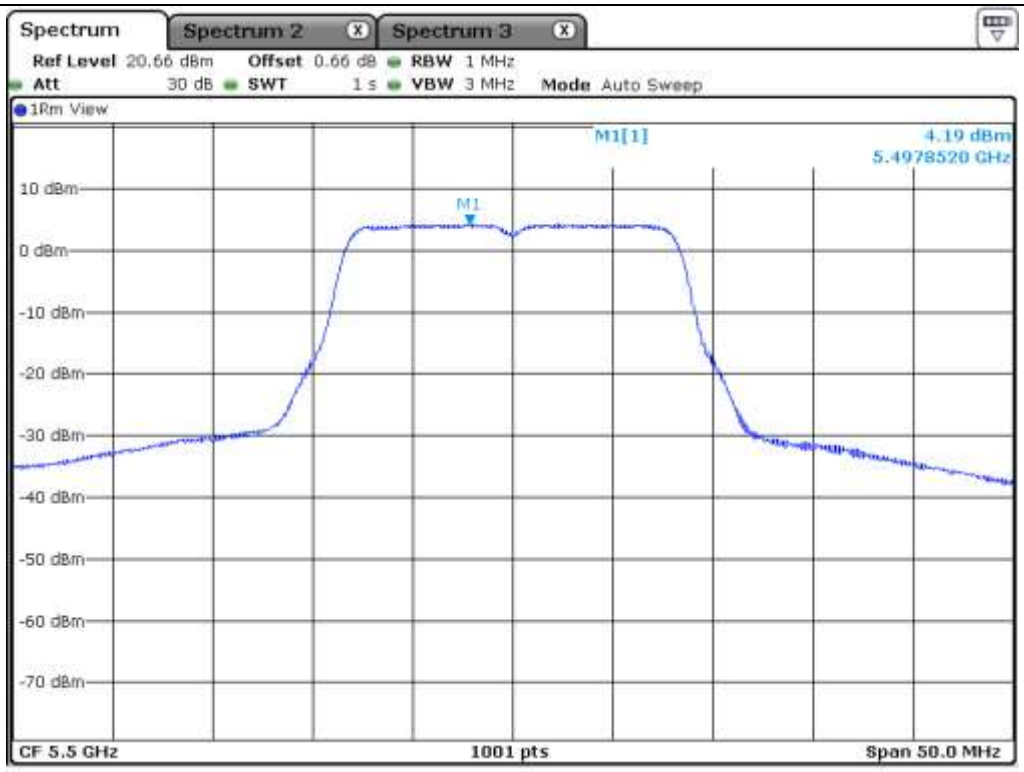


Middle Channel (5 300 MHz)

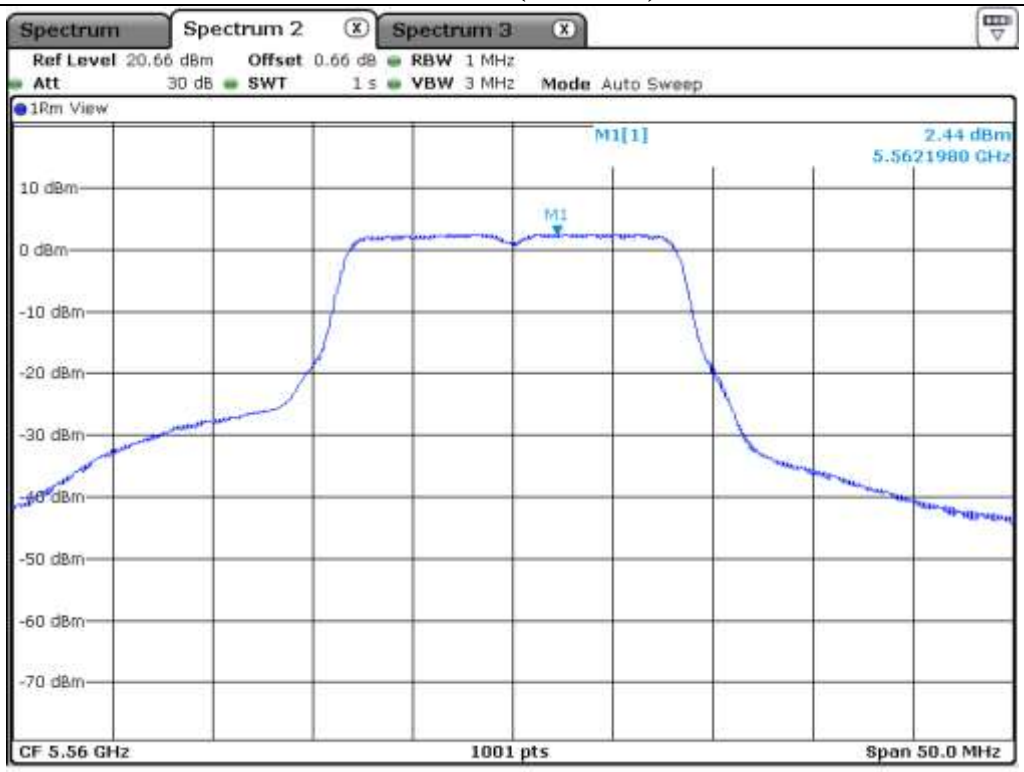
ONETECH Corp.: 43-14, Jinsaegol-gil, Chowol-eup, Gwangju-si, Gyeonggi-do, 12735, Korea (TEL: 82-31-799-9500, FAX: 82-31-799-9599)



High Channel (5 320 MHz)

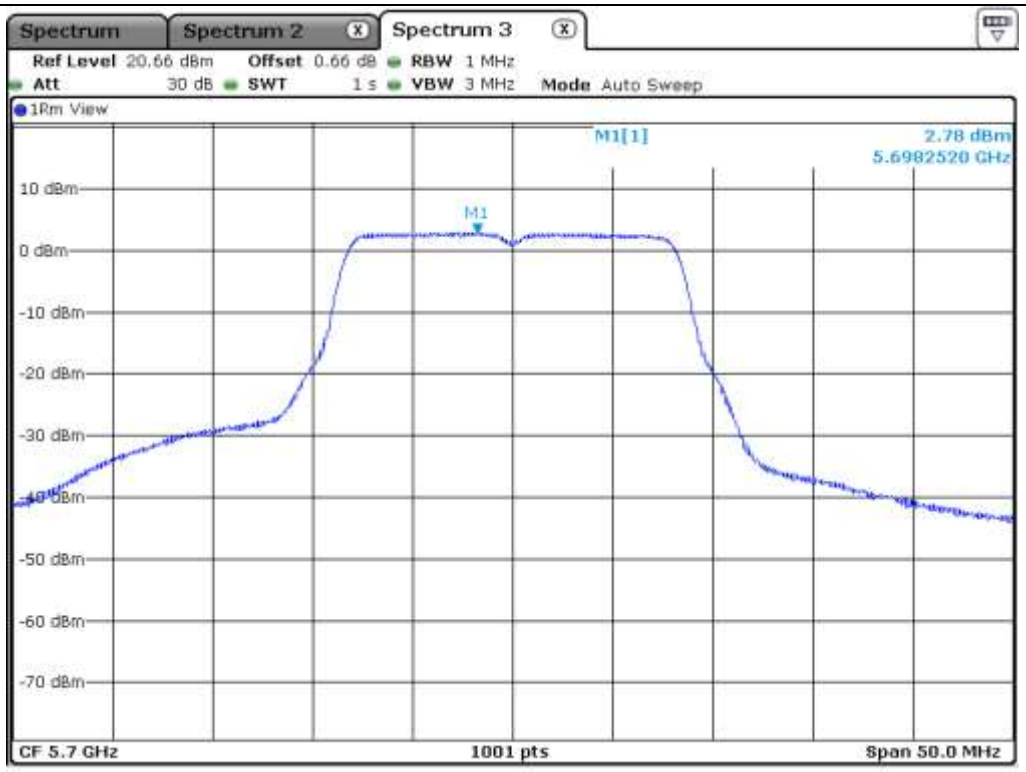


Low Channel (5 500 MHz)



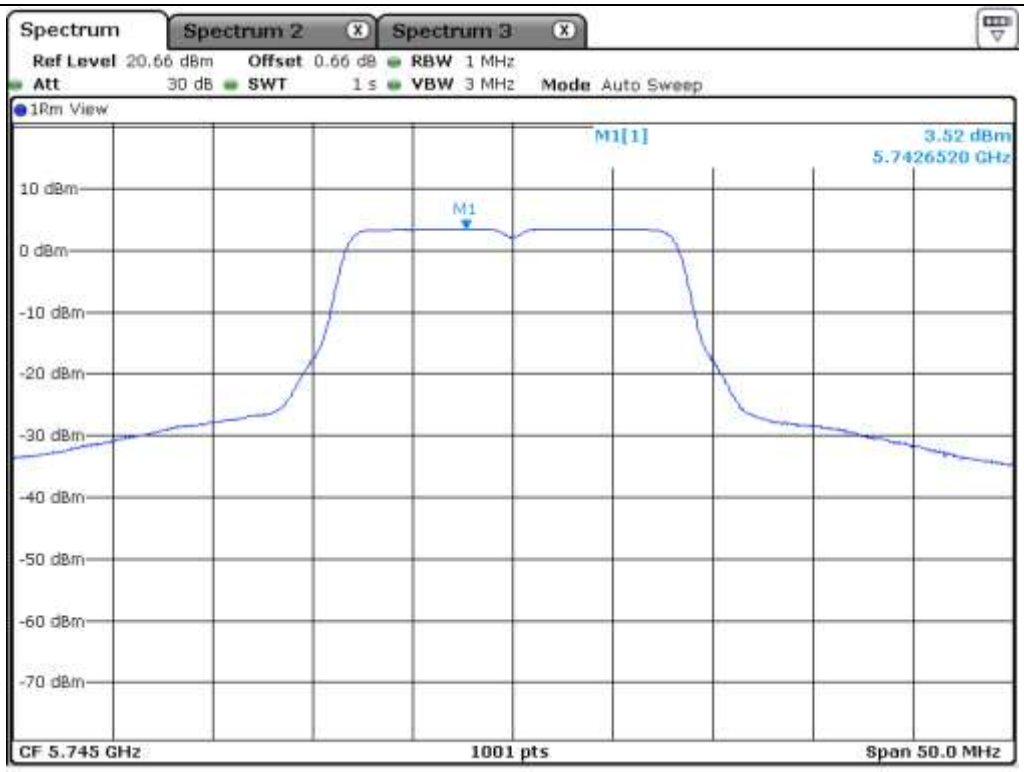
Middle Channel (5 560 MHz)

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

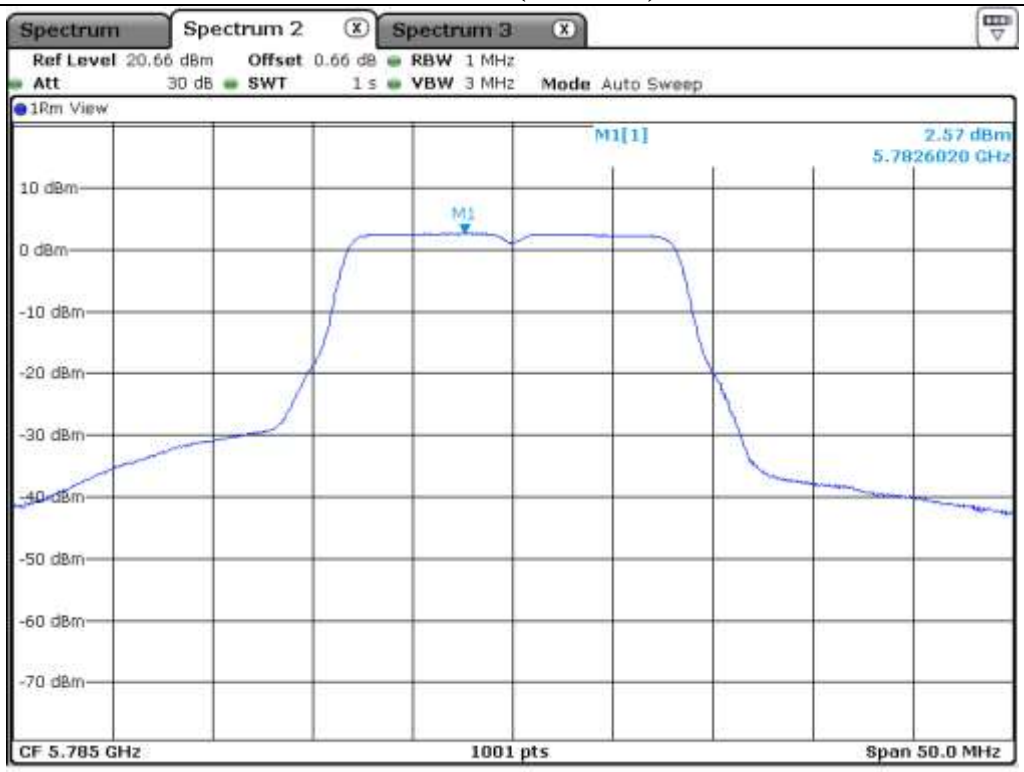


High Channel (5 720 MHz)

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

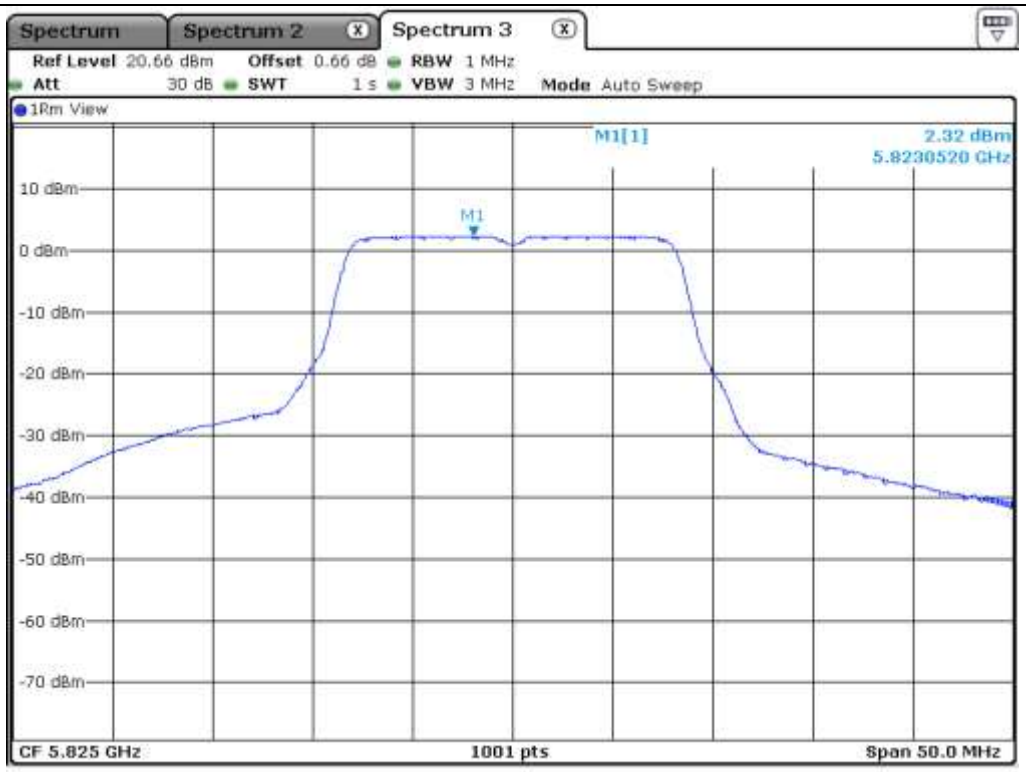


Low Channel (5 745 MHz)



Middle Channel (5 785 MHz)

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



High Channel (5 825 MHz)

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

10.4.2 Test data for Antenna 1

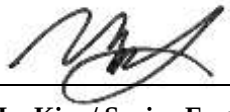
-. Test Date : March 27, 2017

-. Operating condition : Highest Output Power Transmitting Mode

-. Test Result : Pass

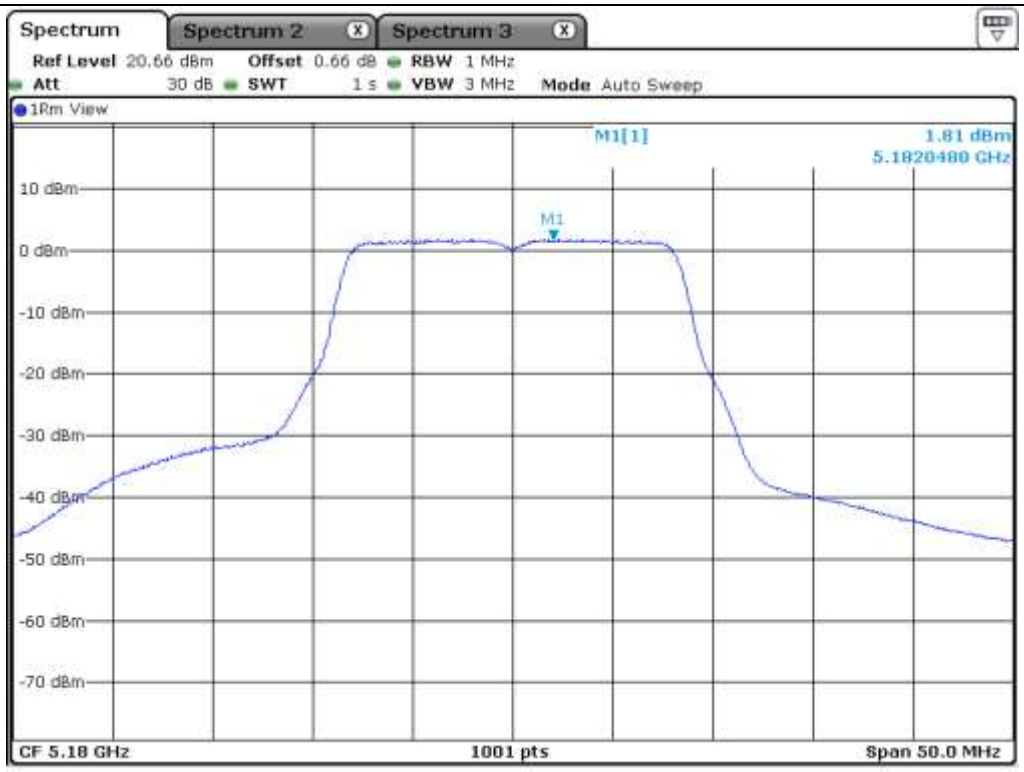
FREQUENCY RANGE (MHz)	CHANNEL	FREQUENCY (MHz)	MEASURED VALUE (dBm)	LIMIT (dBm)	MARGIN (dB)
5 150 ~ 5 250	Low	5 180.00	1.81	11.00	9.19
	Middle	5 220.00	1.38	11.00	9.62
	High	5 240.00	1.47	11.00	9.53
5 250 ~ 5 350	Low	5 260.00	3.47	11.00	7.53
	Middle	5 300.00	2.13	11.00	8.87
	High	5 320.00	2.13	11.00	8.87
5 470 ~ 5 725	Low	5 500.00	4.19	11.00	6.81
	Middle	5 560.00	2.53	11.00	8.47
	High	5 720.00	2.58	11.00	8.42
5 725 ~ 5 850	Low	5 745.00	4.64	30.00	25.36
	Middle	5 785.00	3.66	30.00	26.34
	High	5 825.00	3.41	30.00	26.59

Remark: See next page for measurement data.

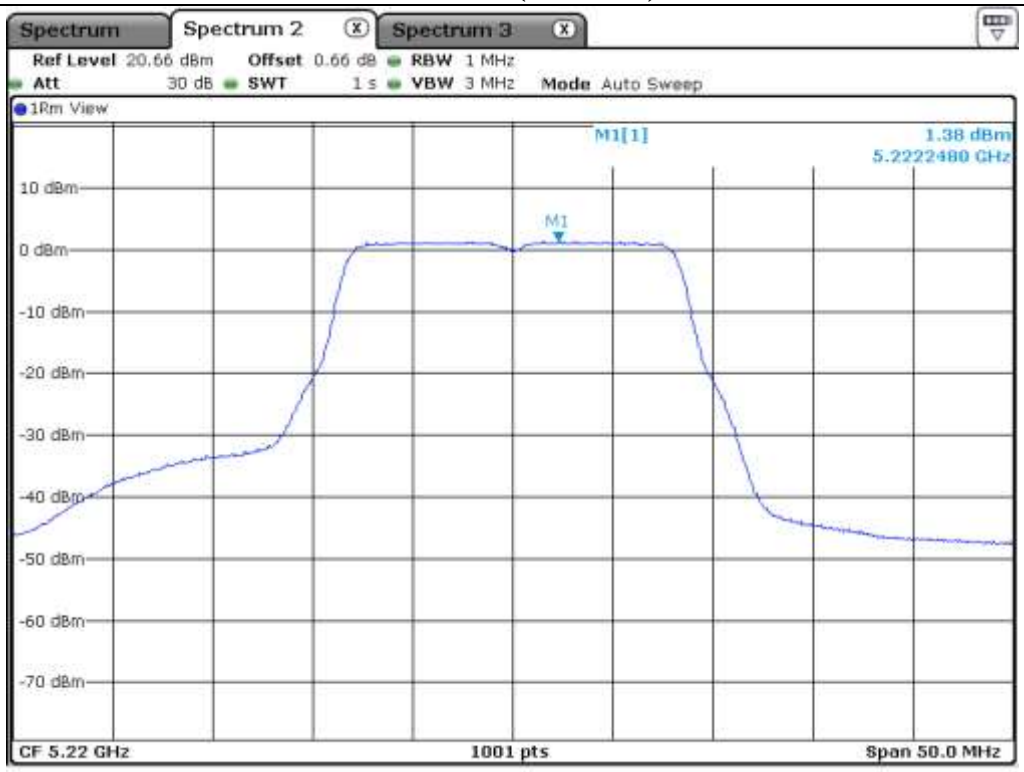


Tested by: Tae-Ho, Kim / Senior Engineer

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

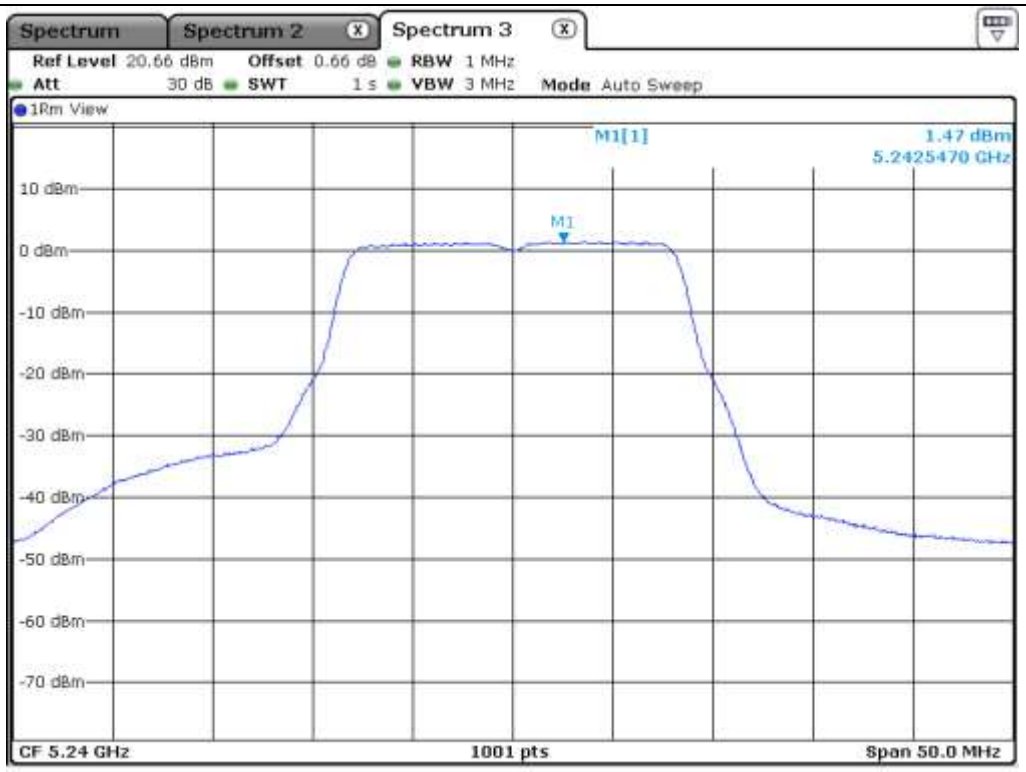


Low Channel (5 180 MHz)



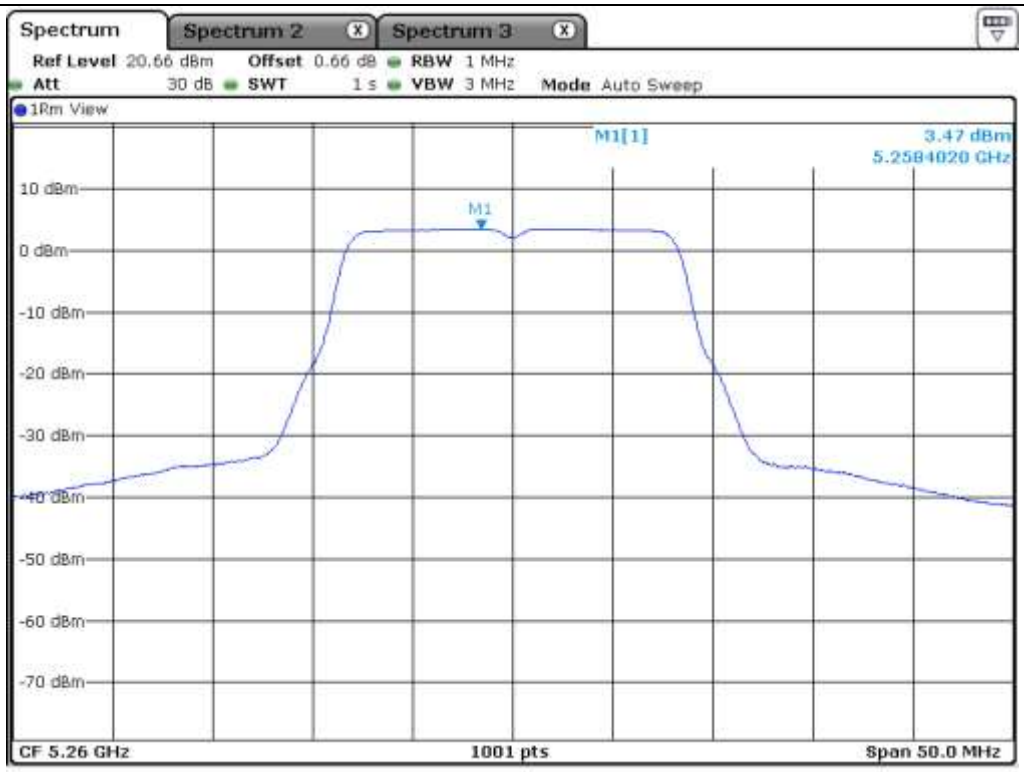
Middle Channel (5 220 MHz)

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

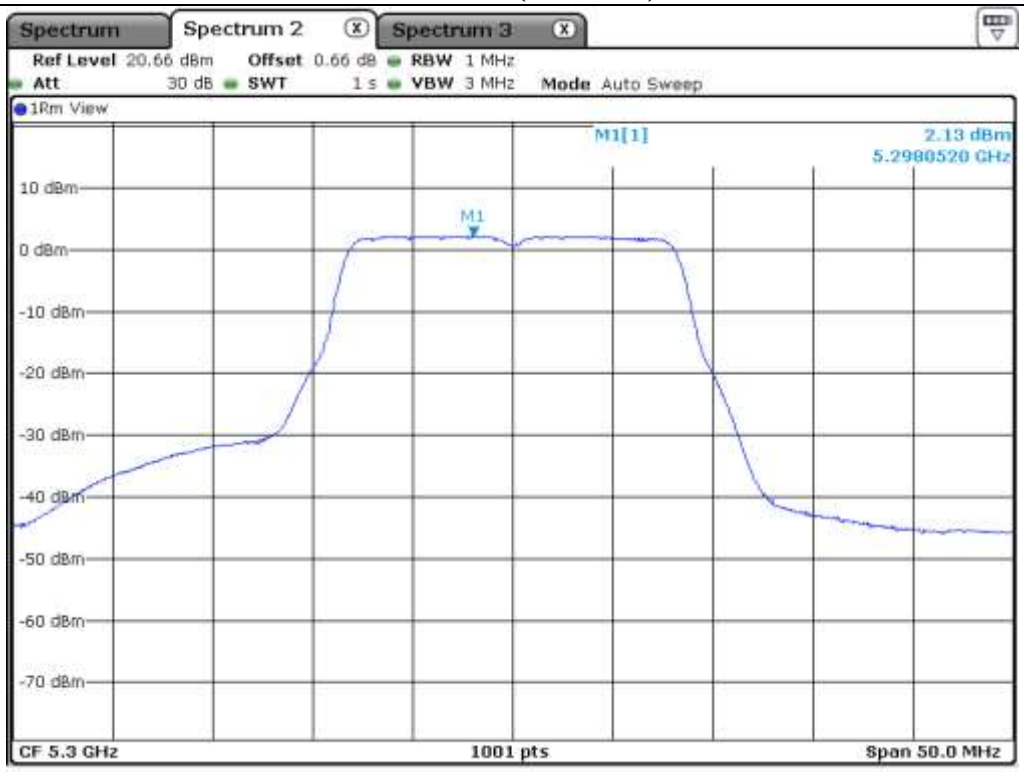


High Channel (5 240 MHz)

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

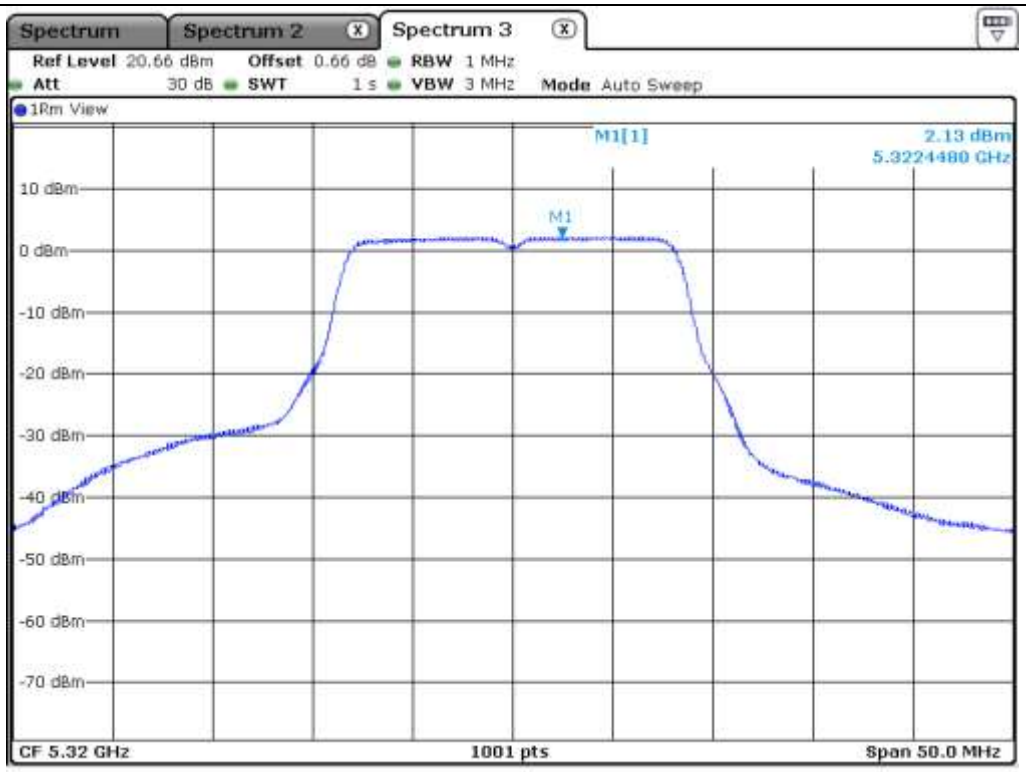


Low Channel (5 260 MHz)

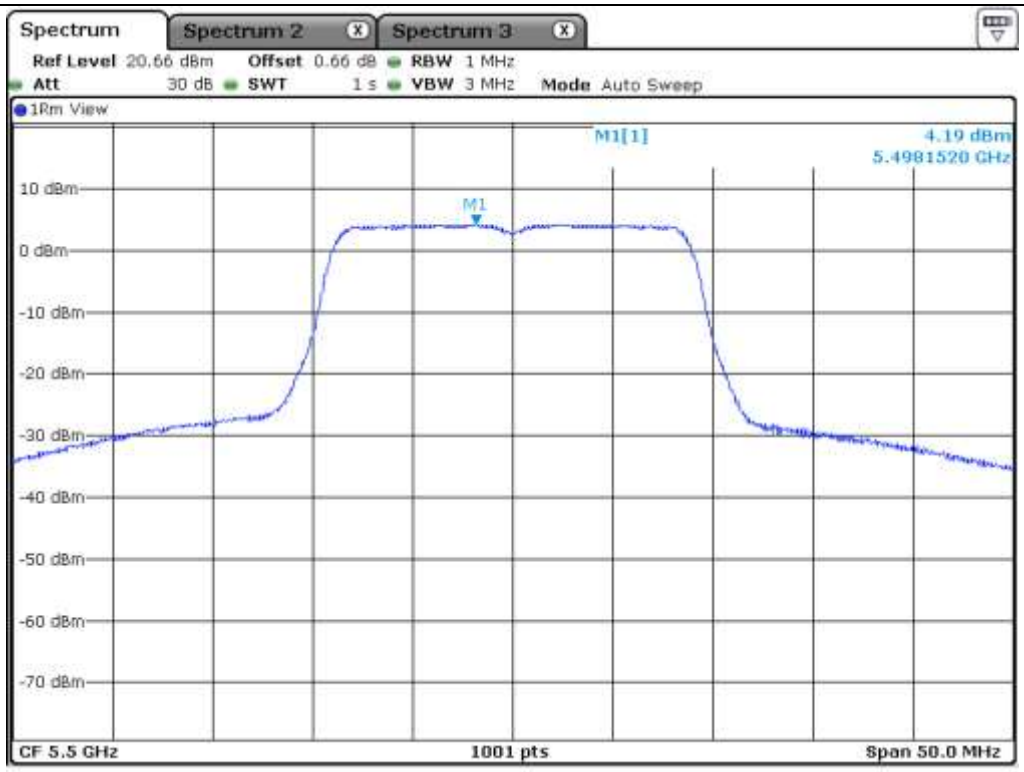


Middle Channel (5 300 MHz)

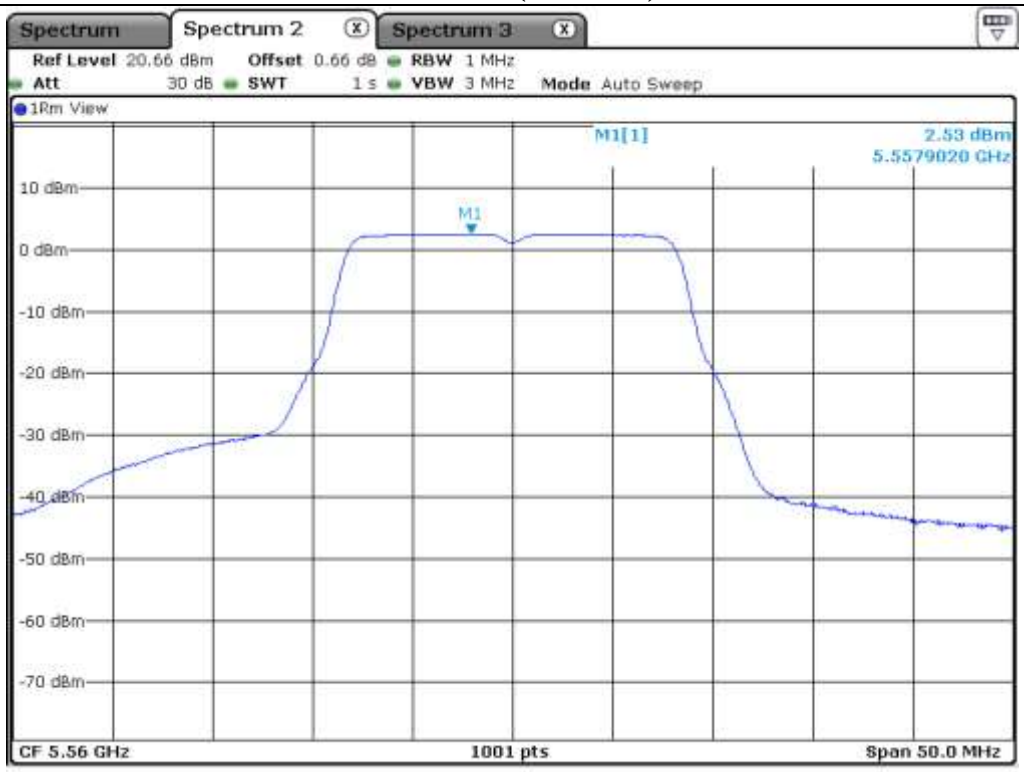
ONETECH Corp.: 43-14, Jinsaegol-gil, Chowol-eup, Gwangju-si, Gyeonggi-do, 12735, Korea (TEL: 82-31-799-9500, FAX: 82-31-799-9599)



High Channel (5 320 MHz)

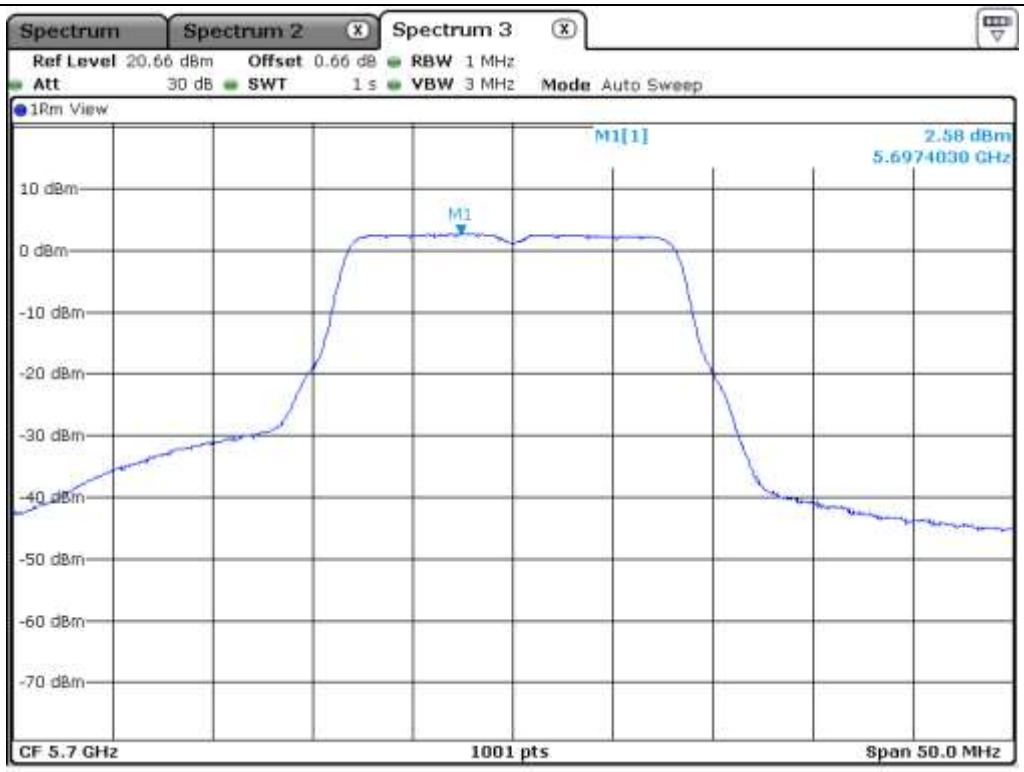


Low Channel (5 500 MHz)



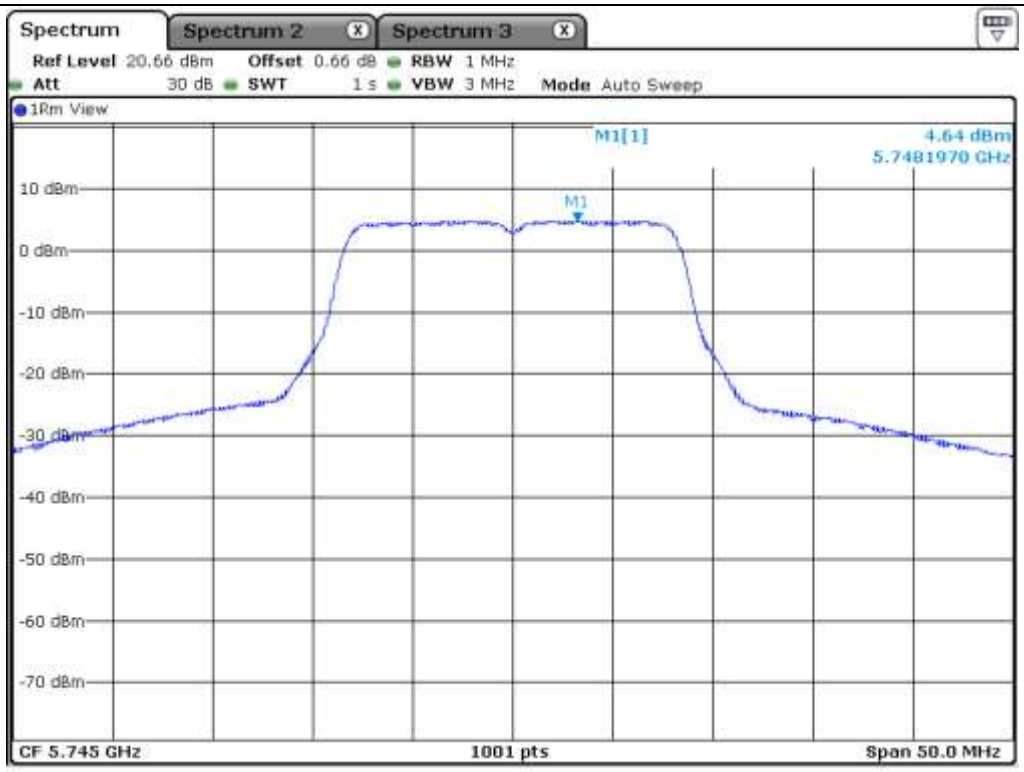
Middle Channel (5 560 MHz)

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

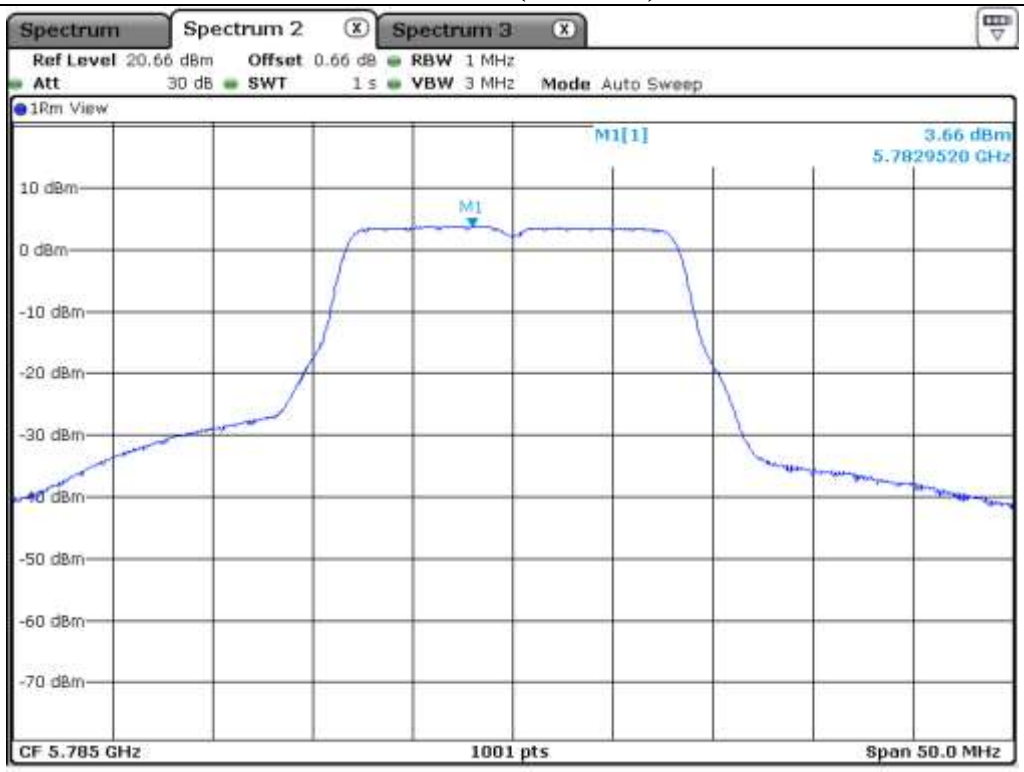


High Channel (5 720 MHz)

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

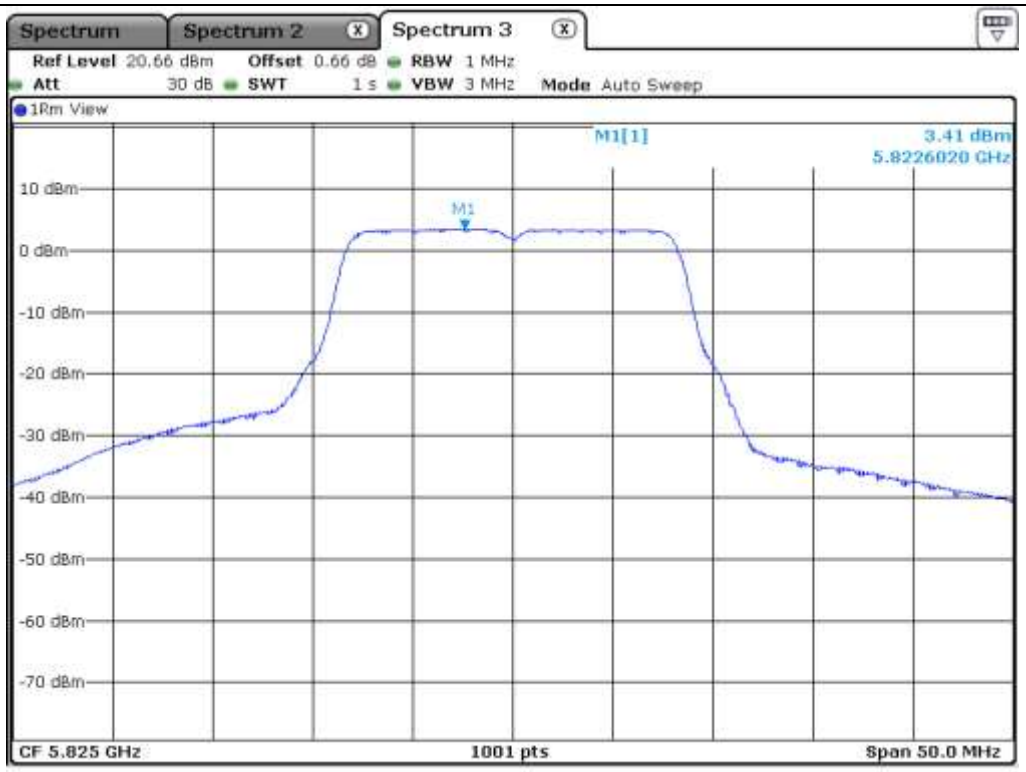


Low Channel (5 745 MHz)



Middle Channel (5 785 MHz)

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



High Channel (5 825 MHz)

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

10.5 Test data for 802.11n_HT20 RLAN Mode

10.5.1 Test data for Antenna 0

-. Test Date : March 27, 2017

-. Operating condition : Highest Output Power Transmitting Mode

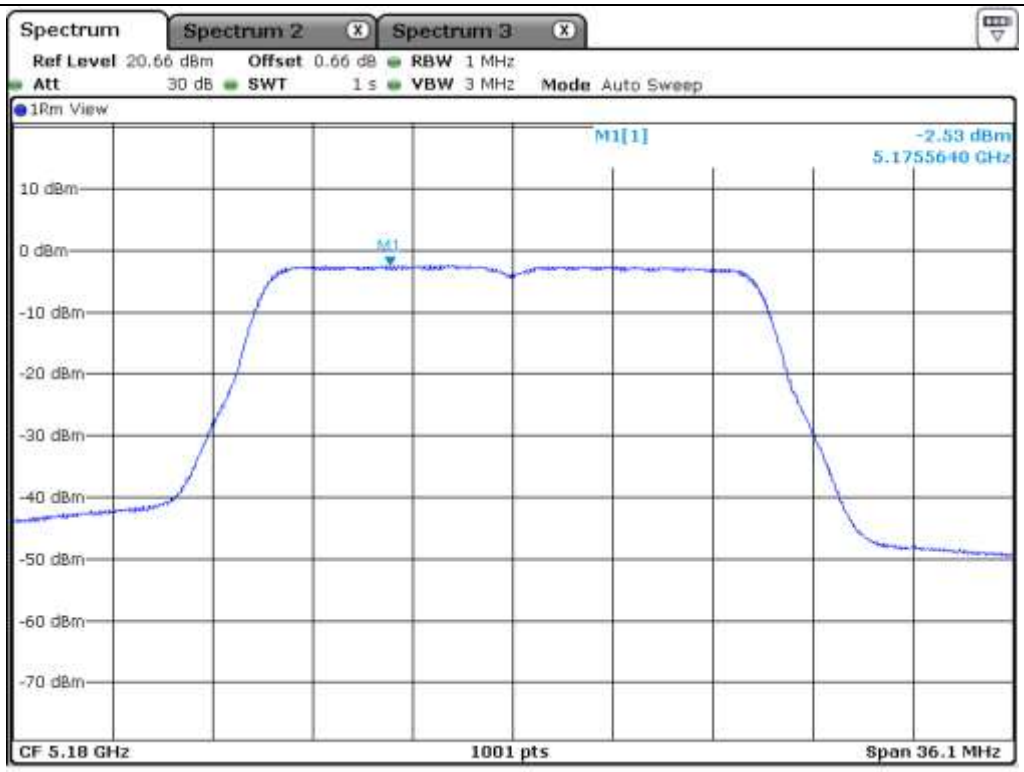
-. Test Result : Pass

FREQUENCY RANGE (MHz)	CHANNEL	FREQUENCY (MHz)	MEASURED VALUE (dBm)	LIMIT (dBm)	MARGIN (dB)
5 150 ~ 5 250	Low	5 180.00	-2.53	11.00	13.53
	Middle	5 220.00	-2.21	11.00	13.21
	High	5 240.00	-2.48	11.00	13.48
5 250 ~ 5 350	Low	5 260.00	2.17	11.00	8.83
	Middle	5 300.00	1.87	11.00	9.13
	High	5 320.00	2.26	11.00	8.74
5 470 ~ 5 725	Low	5 500.00	2.76	11.00	8.24
	Middle	5 560.00	2.28	11.00	8.72
	High	5 720.00	2.57	11.00	8.43
5 725 ~ 5 850	Low	5 745.00	2.03	30.00	27.97
	Middle	5 785.00	2.32	30.00	27.68
	High	5 825.00	2.27	30.00	27.73

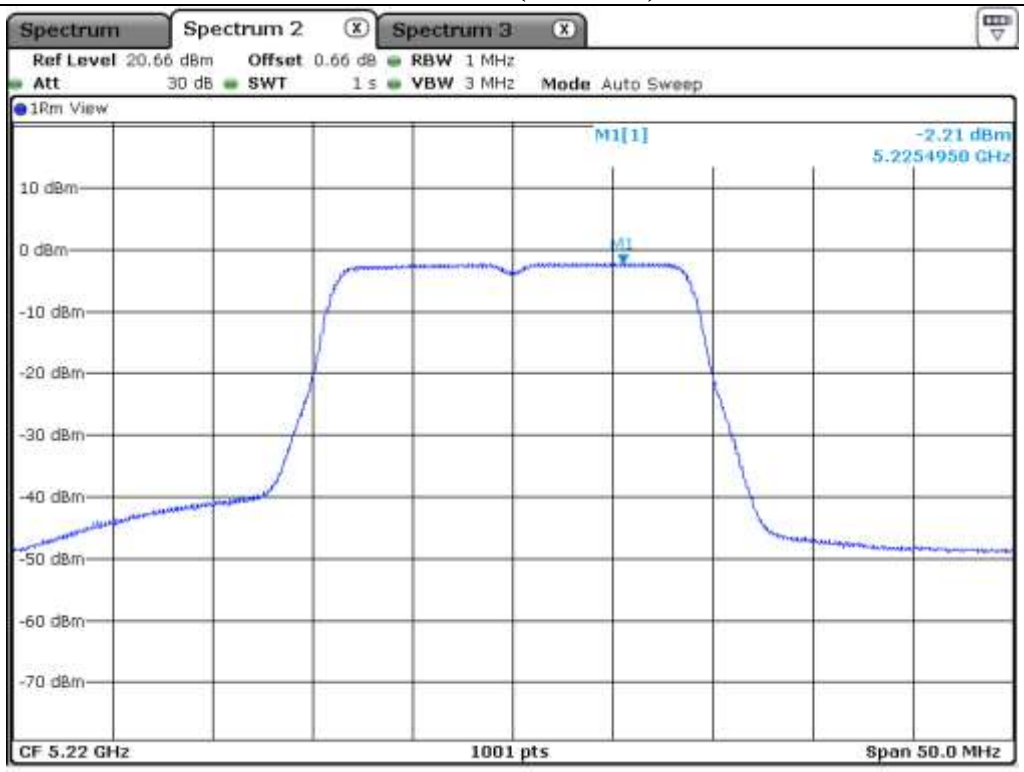
Remark: See next page for measurement data.

Tested by: Tae-Ho, Kim / Senior Engineer

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

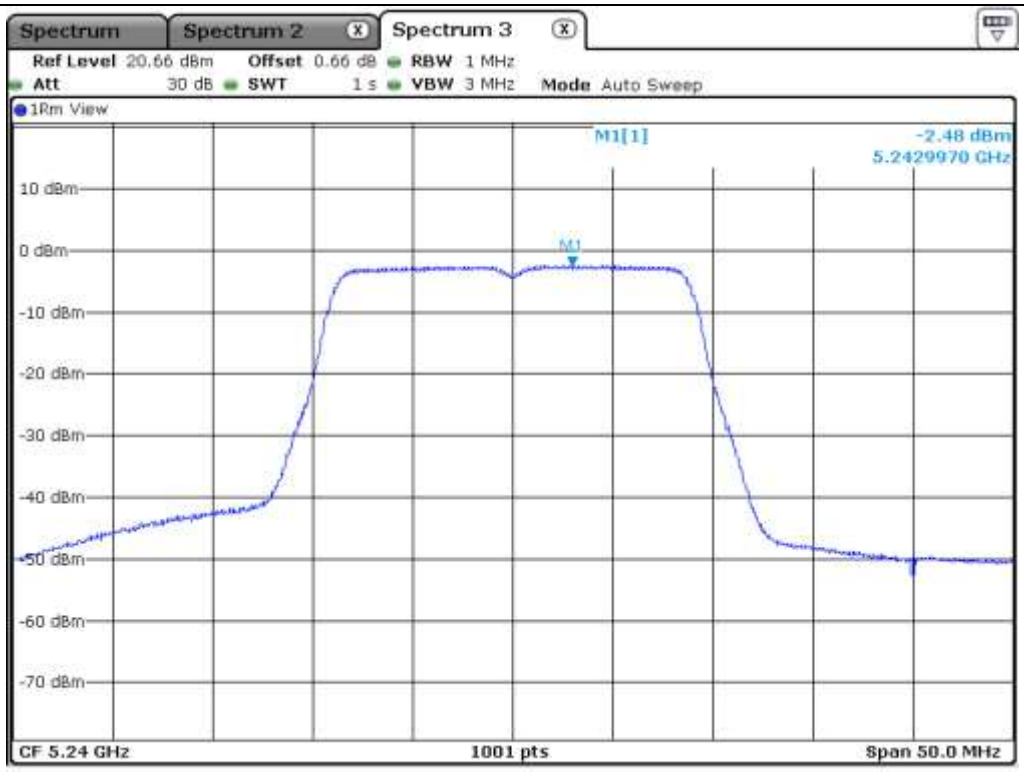


Low Channel (5 180 MHz)



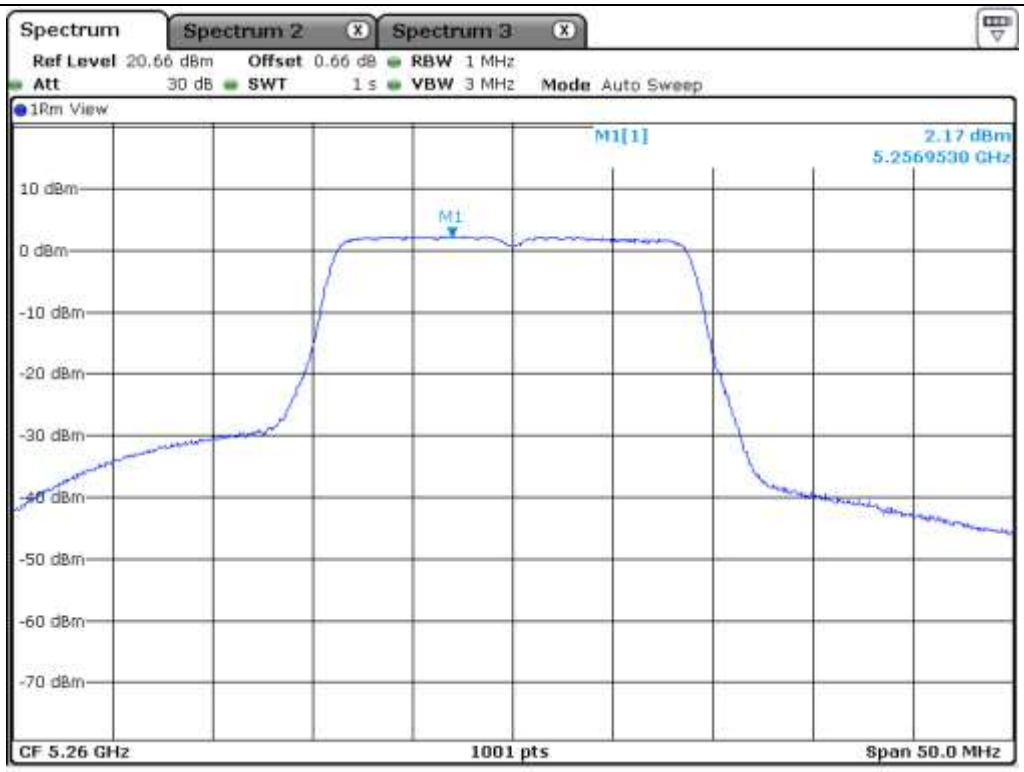
Middle Channel (5 220 MHz)

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

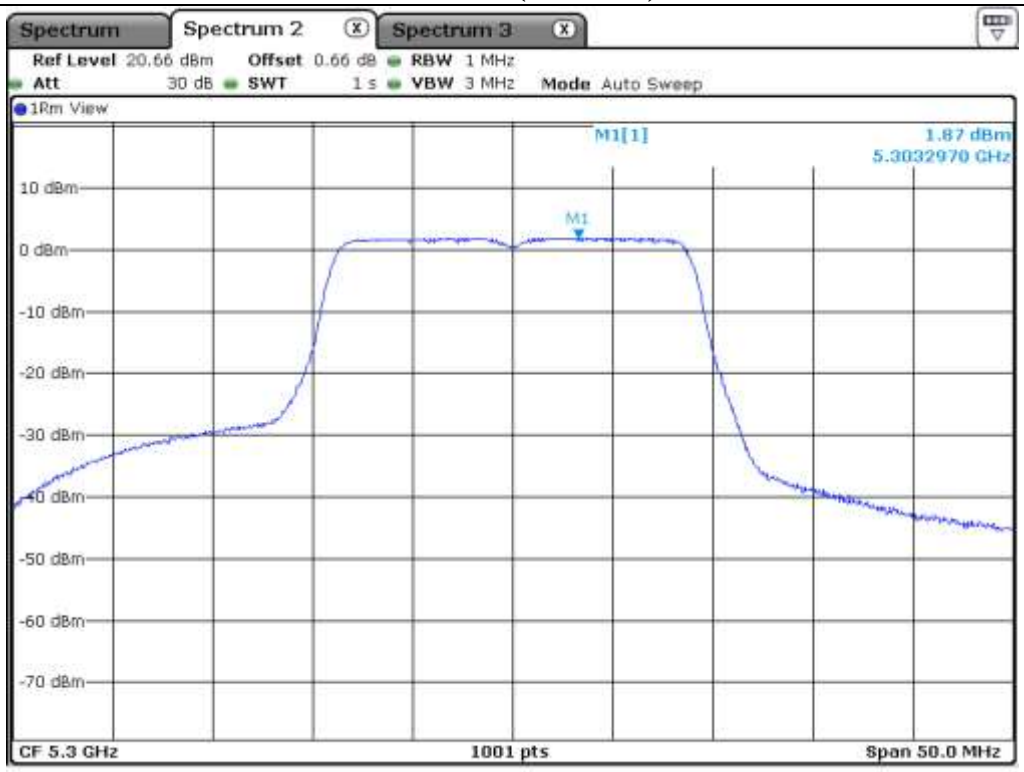


High Channel (5 240 MHz)

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

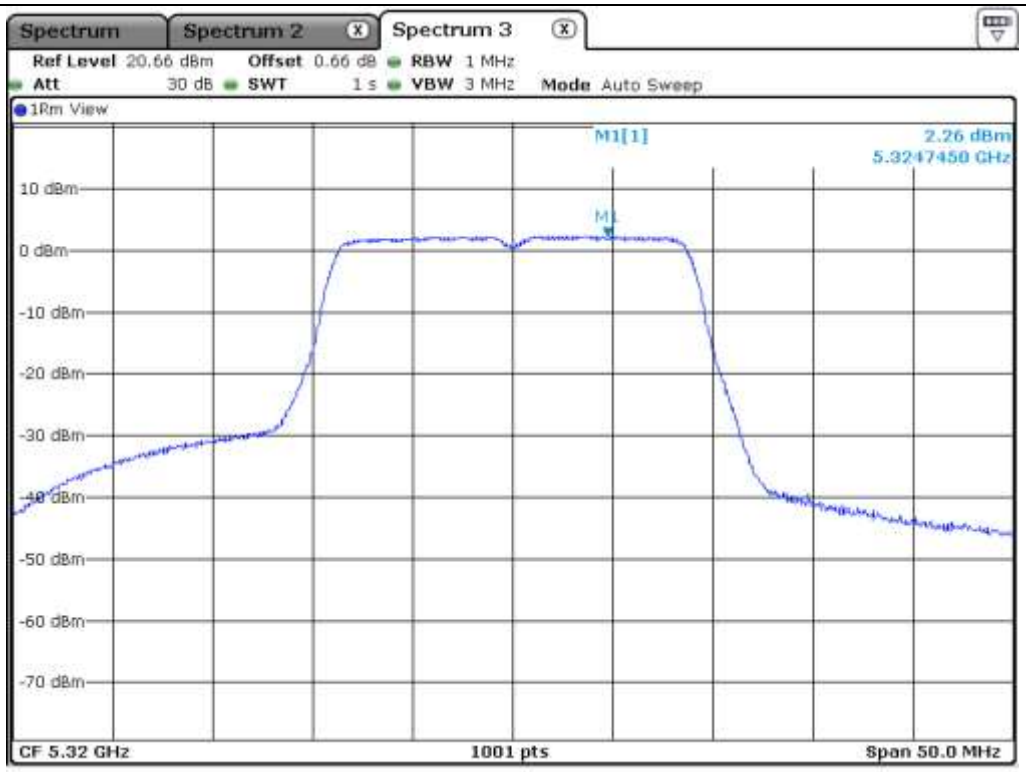


Low Channel (5 260 MHz)



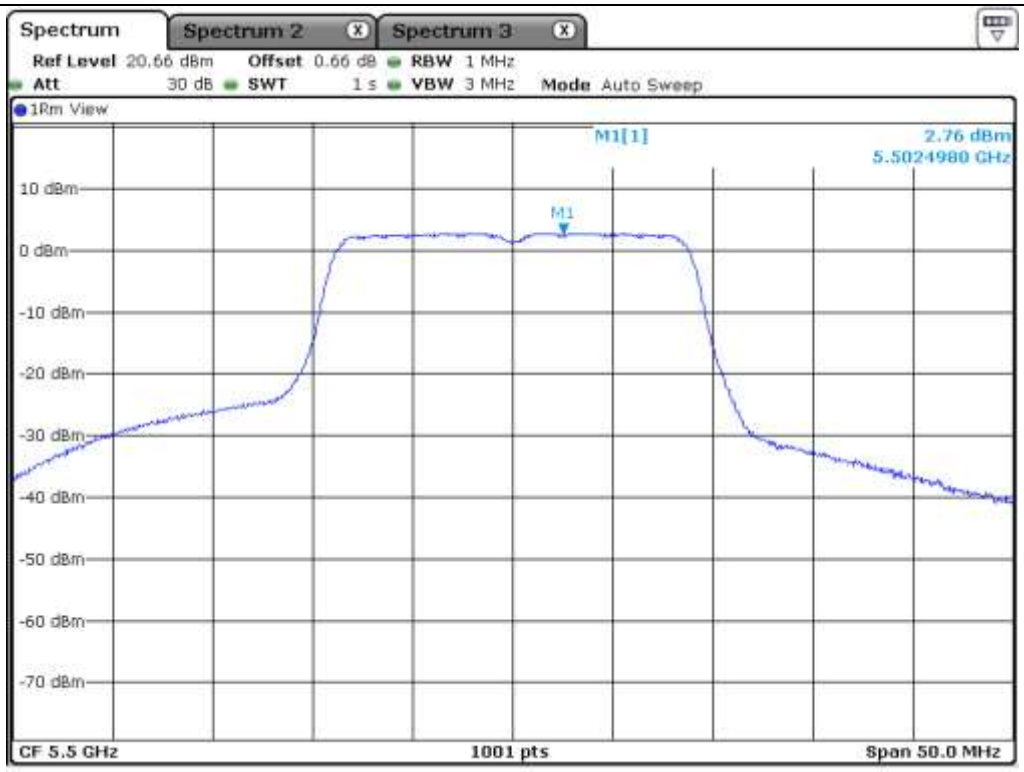
Middle Channel (5 300 MHz)

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

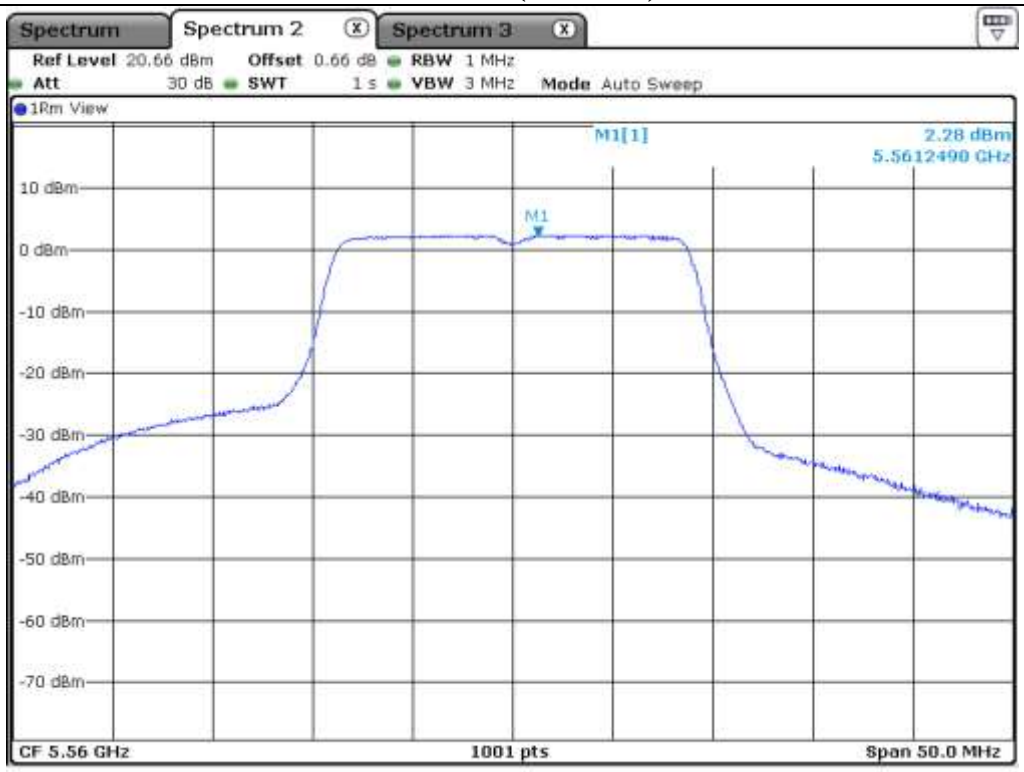


High Channel (5 320 MHz)

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

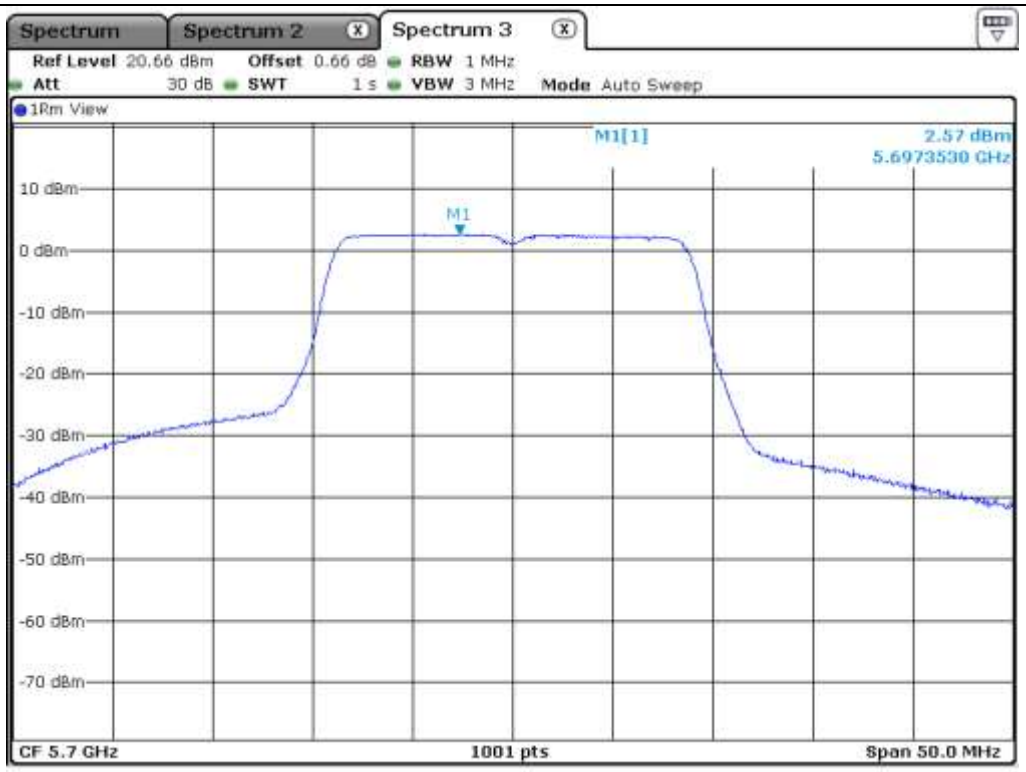


Low Channel (5 500 MHz)

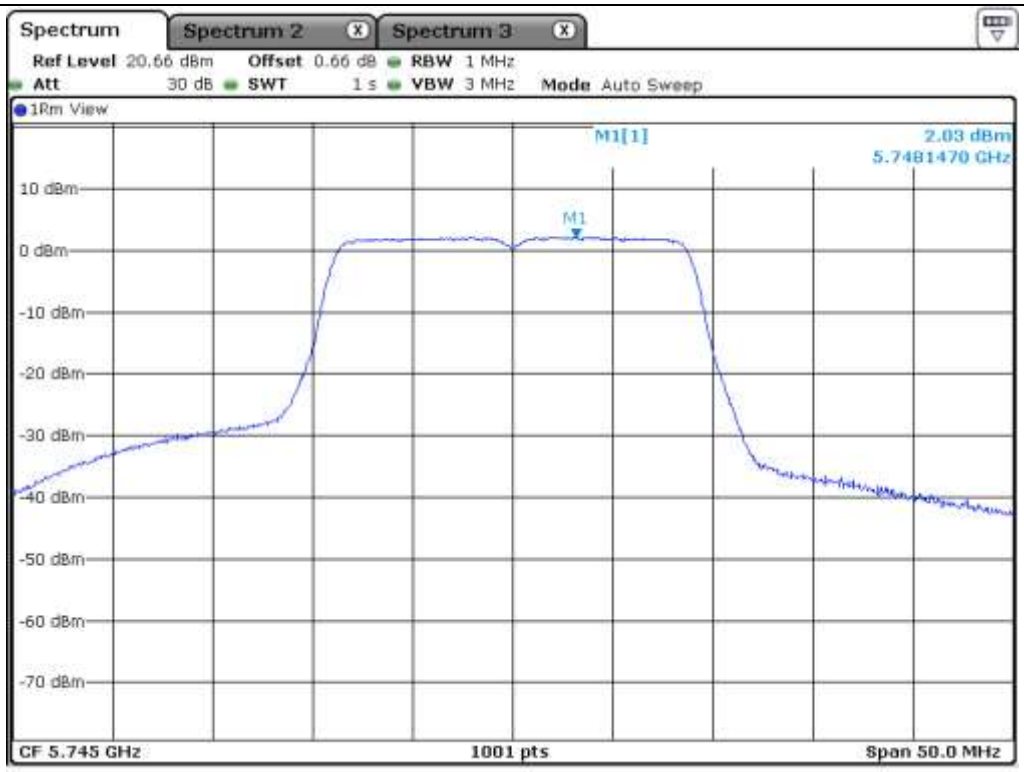


Middle Channel (5 560 MHz)

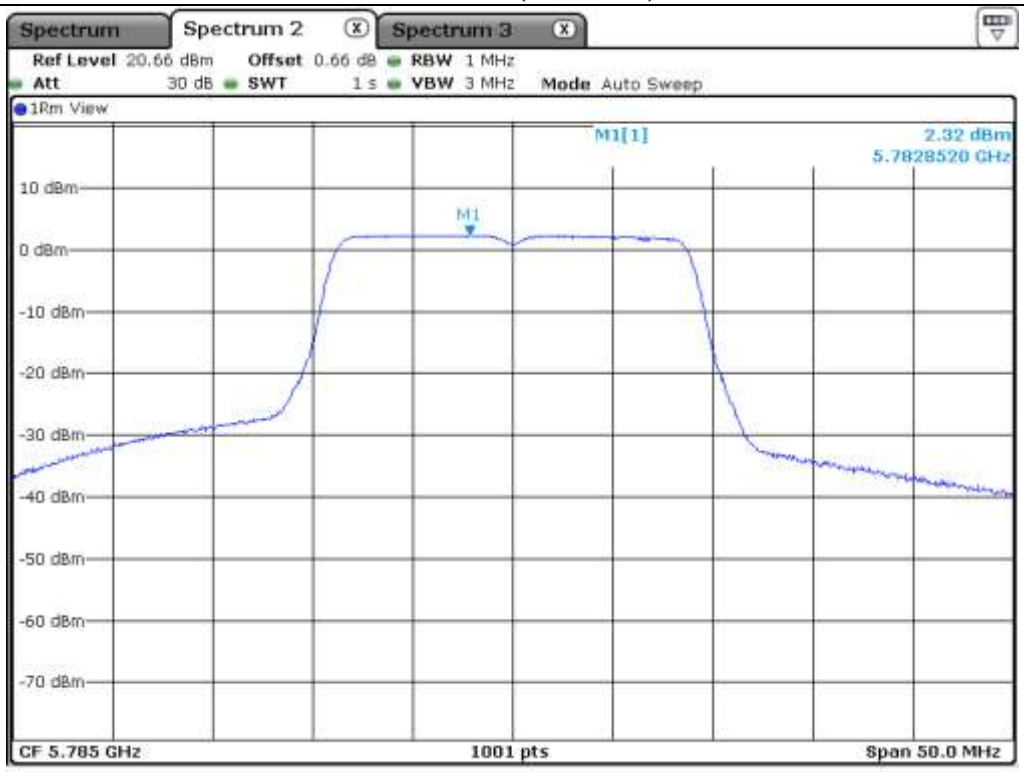
ONETECH Corp.: 43-14, Jinsaegol-gil, Chowol-eup, Gwangju-si, Gyeonggi-do, 12735, Korea (TEL: 82-31-799-9500, FAX: 82-31-799-9599)



High Channel (5 720 MHz)

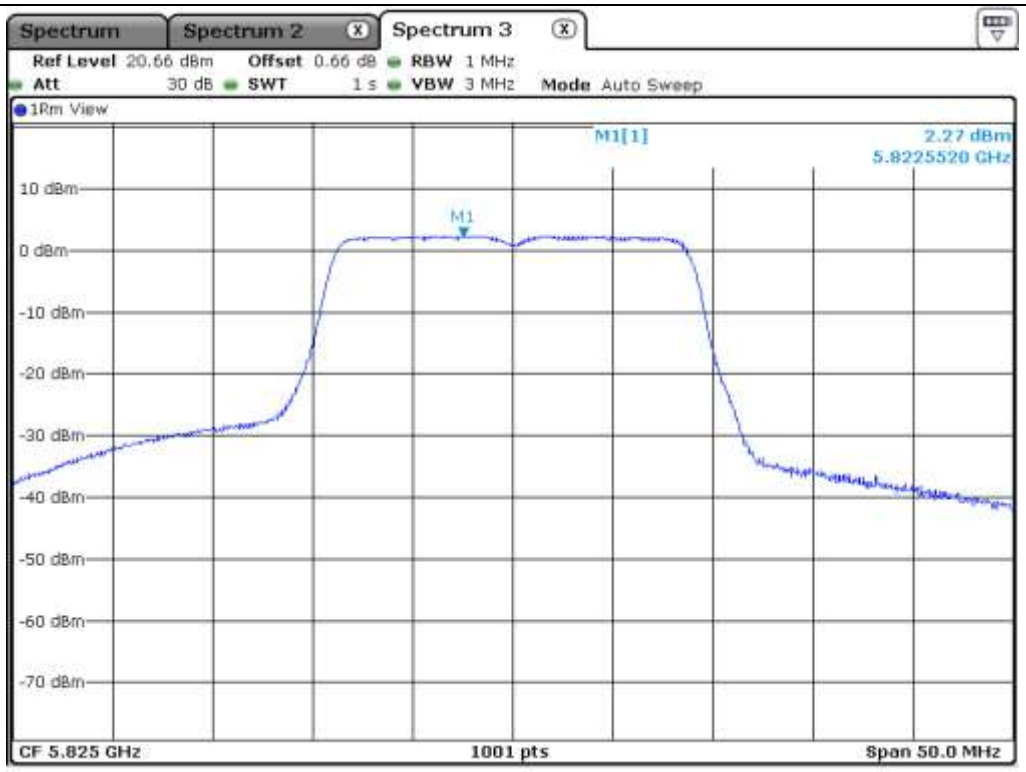


Low Channel (5 745 MHz)



Middle Channel (5 785 MHz)

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



High Channel (5 825 MHz)

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

10.5.2 Test data for Antenna 1

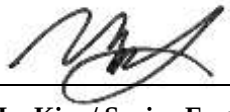
-. Test Date : March 27, 2017

-. Operating condition : Highest Output Power Transmitting Mode

-. Test Result : Pass

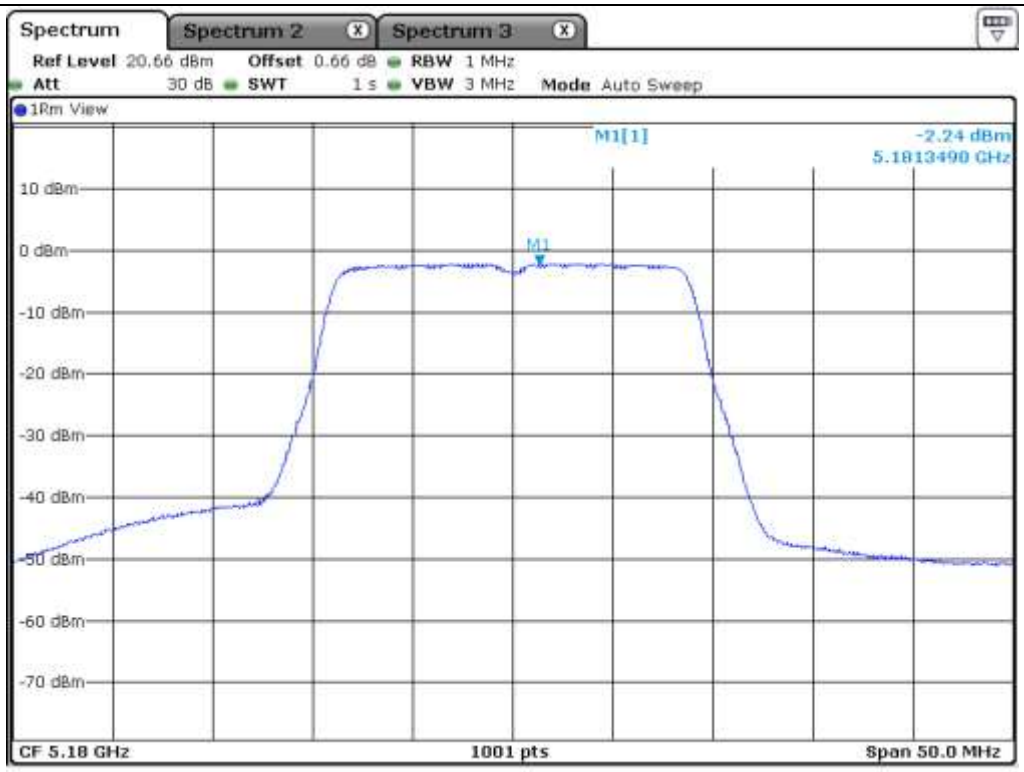
FREQUENCY RANGE (MHz)	CHANNEL	FREQUENCY (MHz)	MEASURED VALUE (dBm)	LIMIT (dBm)	MARGIN (dB)
5 150 ~ 5 250	Low	5 180.00	-2.24	11.00	13.24
	Middle	5 220.00	-2.17	11.00	13.17
	High	5 240.00	-2.10	11.00	13.10
5 250 ~ 5 350	Low	5 260.00	1.83	11.00	9.17
	Middle	5 300.00	1.88	11.00	9.12
	High	5 320.00	1.74	11.00	9.26
5 470 ~ 5 725	Low	5 500.00	2.56	11.00	8.44
	Middle	5 560.00	2.09	11.00	8.91
	High	5 720.00	2.18	11.00	8.82
5 725 ~ 5 850	Low	5 745.00	3.03	30.00	26.97
	Middle	5 785.00	3.29	30.00	26.71
	High	5 825.00	2.76	30.00	27.24

Remark: See next page for measurement data.



Tested by: Tae-Ho, Kim / Senior Engineer

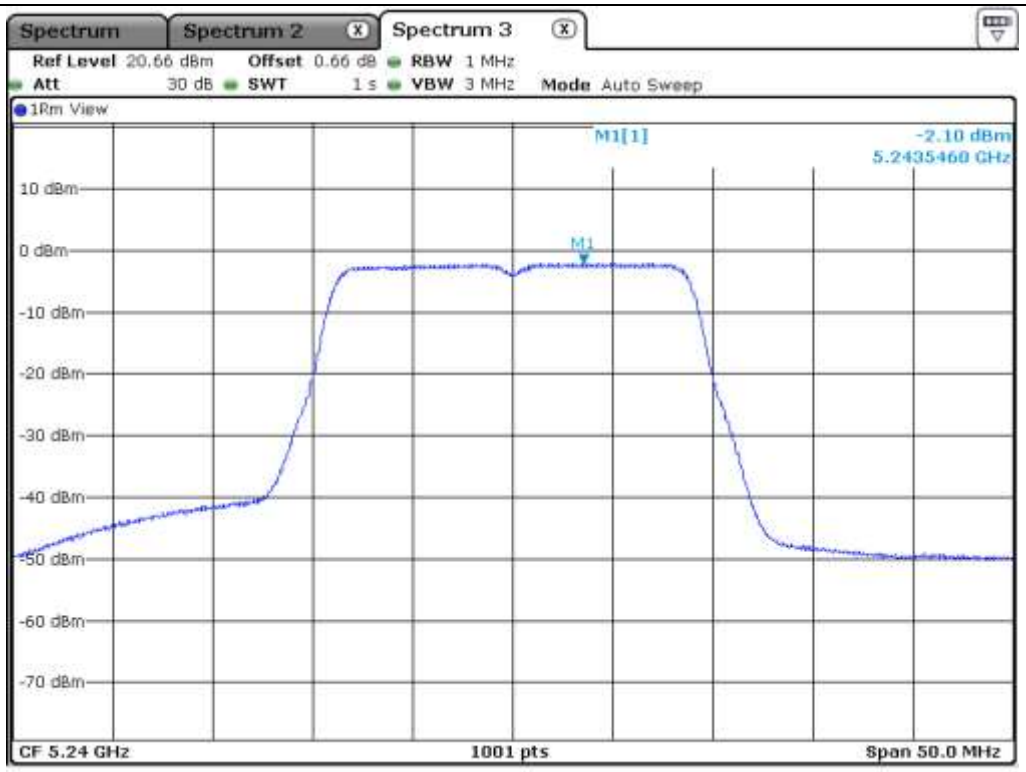
ONETECH Corp.: 43-14, Jinsaegol-gil, Chowol-eup, Gwangju-si, Gyeonggi-do, 12735, Korea (TEL: 82-31-799-9500, FAX: 82-31-799-9599)



Low Channel (5 180 MHz)

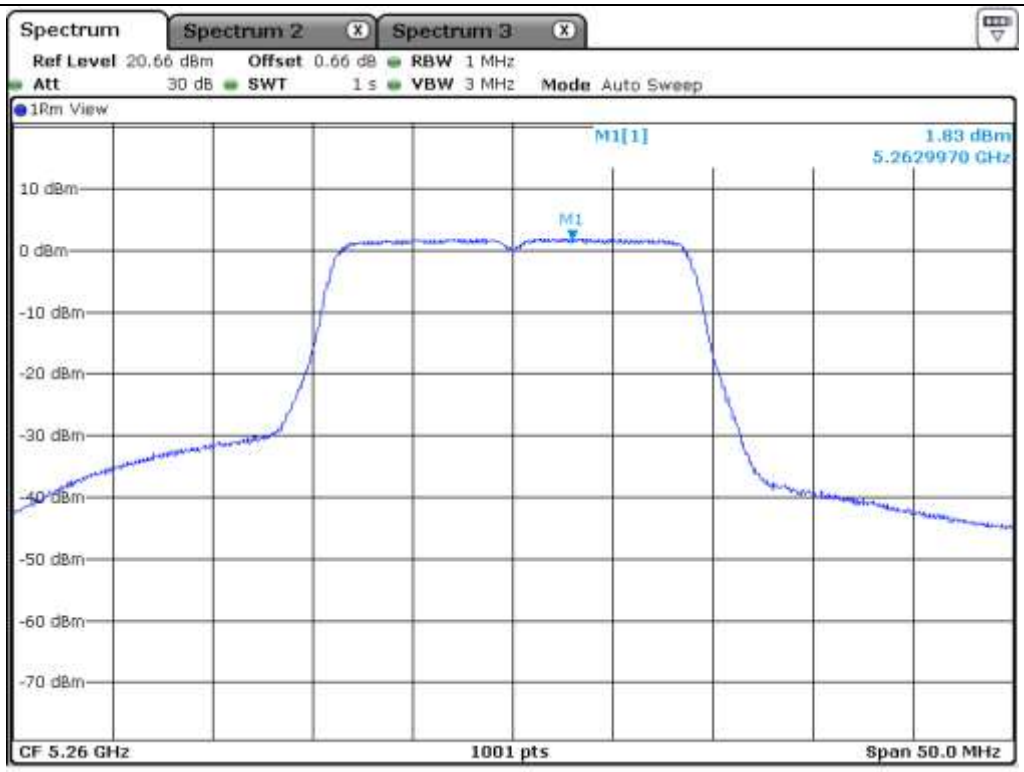
Middle Channel (5 220 MHz)

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

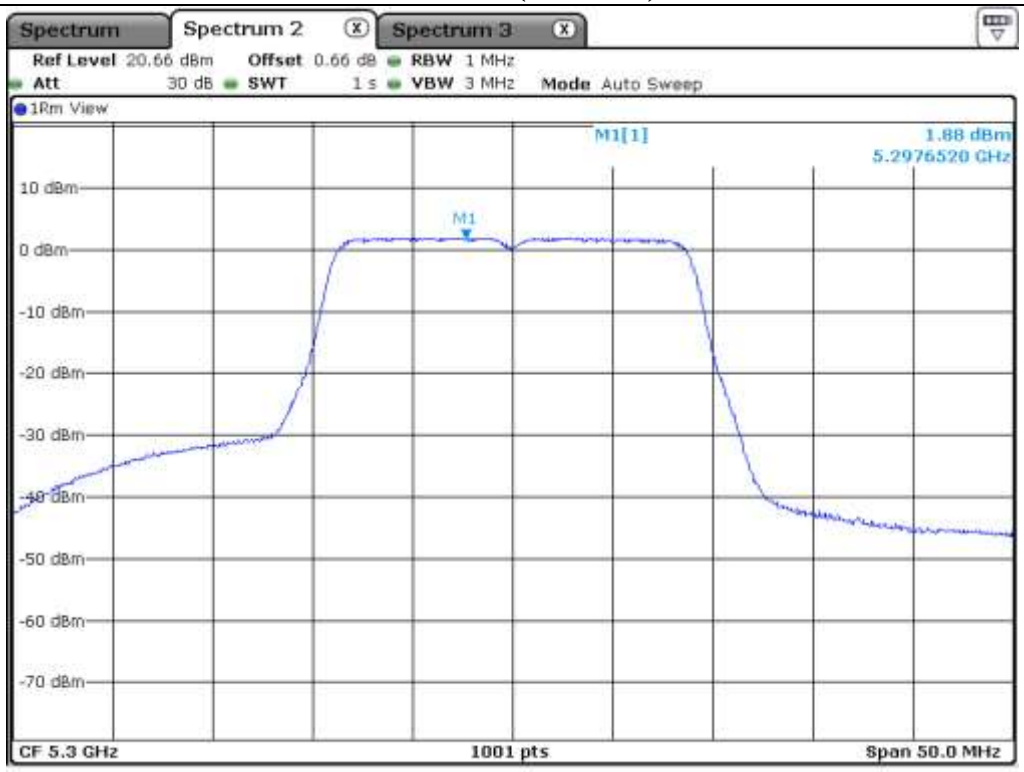


High Channel (5 240 MHz)

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

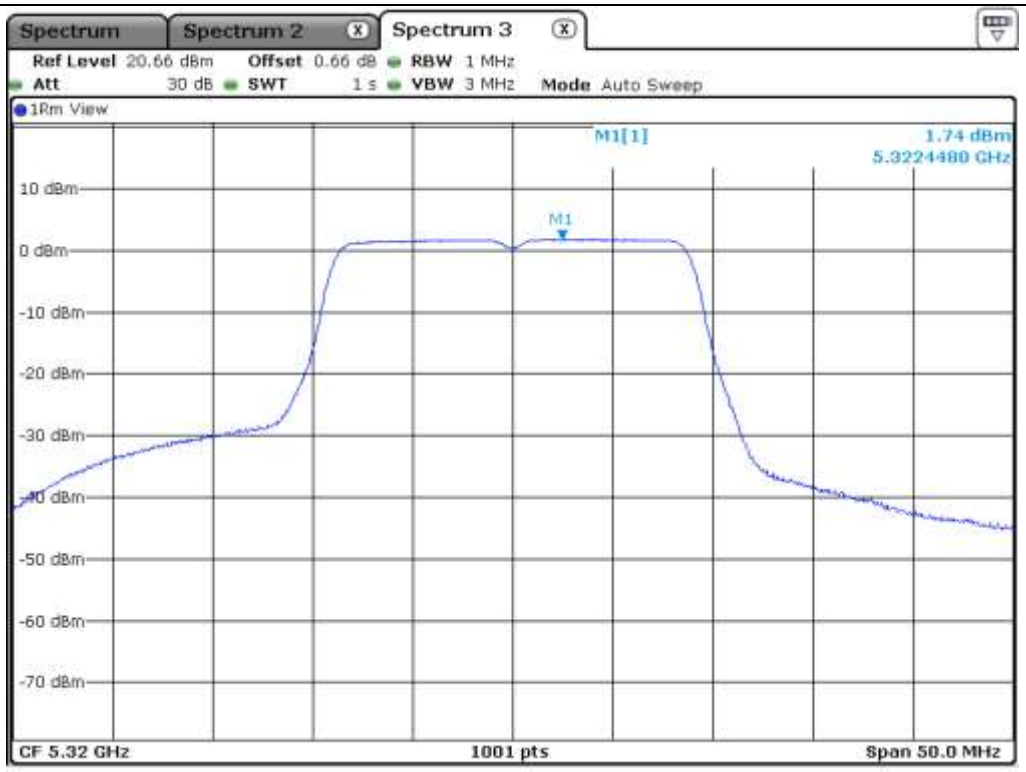


Low Channel (5 260 MHz)

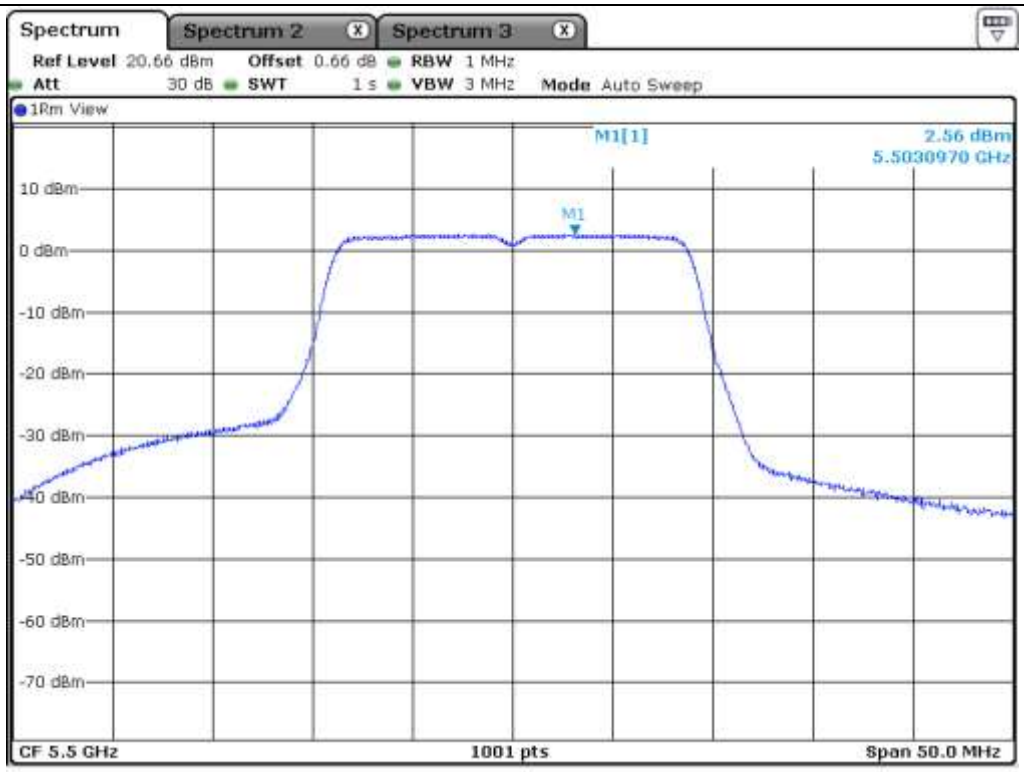


Middle Channel (5 300 MHz)

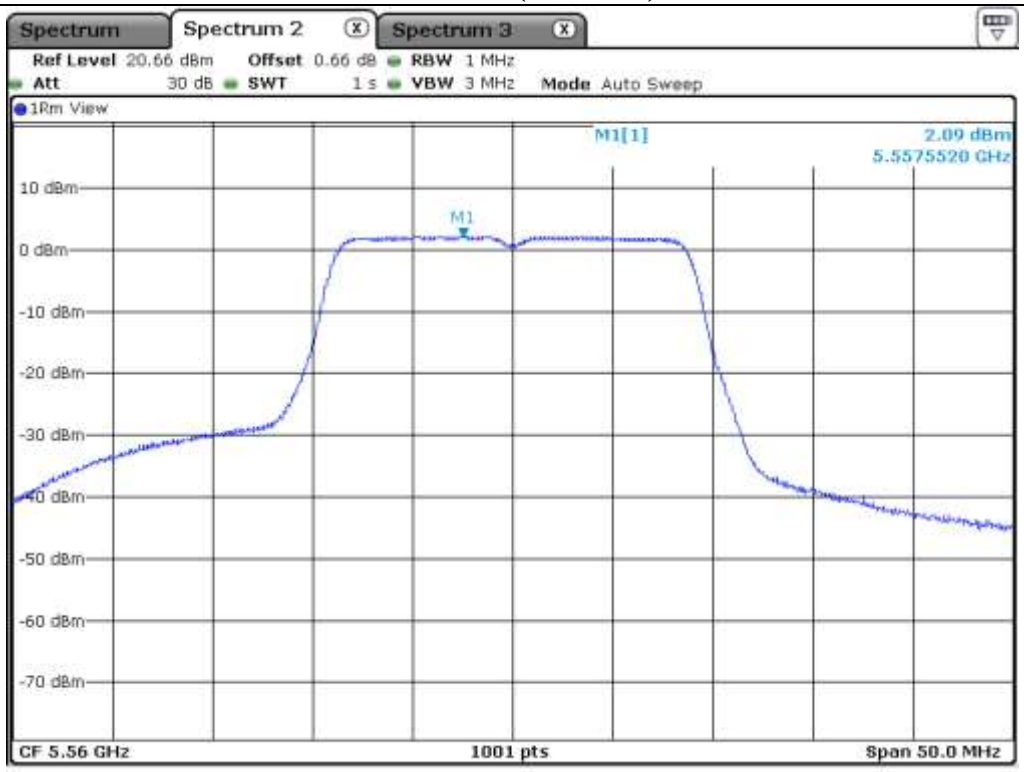
ONETECH Corp.: 43-14, Jinsaegol-gil, Chowol-eup, Gwangju-si, Gyeonggi-do, 12735, Korea (TEL: 82-31-799-9500, FAX: 82-31-799-9599)



High Channel (5 320 MHz)

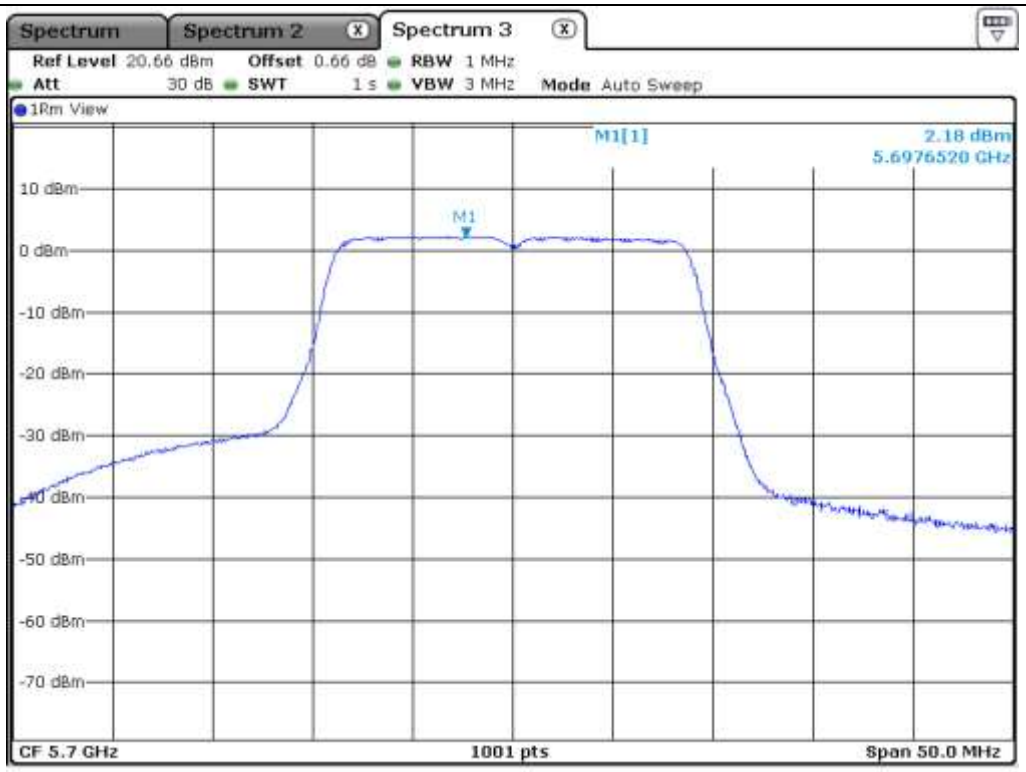


Low Channel (5 500 MHz)



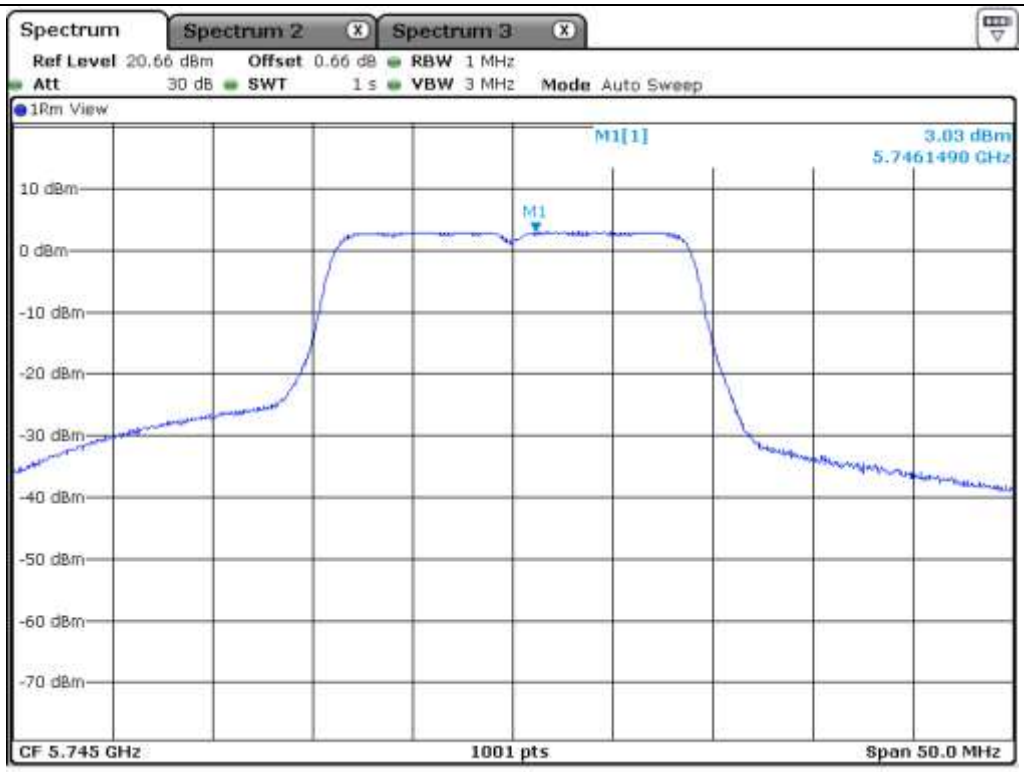
Middle Channel (5 560 MHz)

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

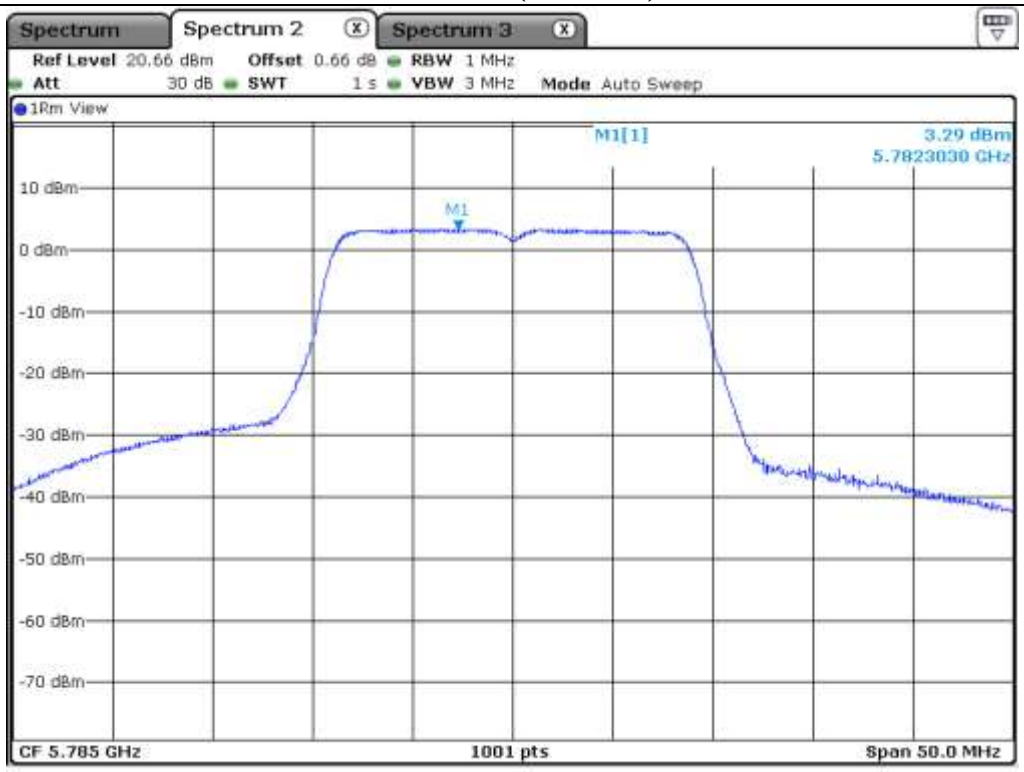


High Channel (5 720 MHz)

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

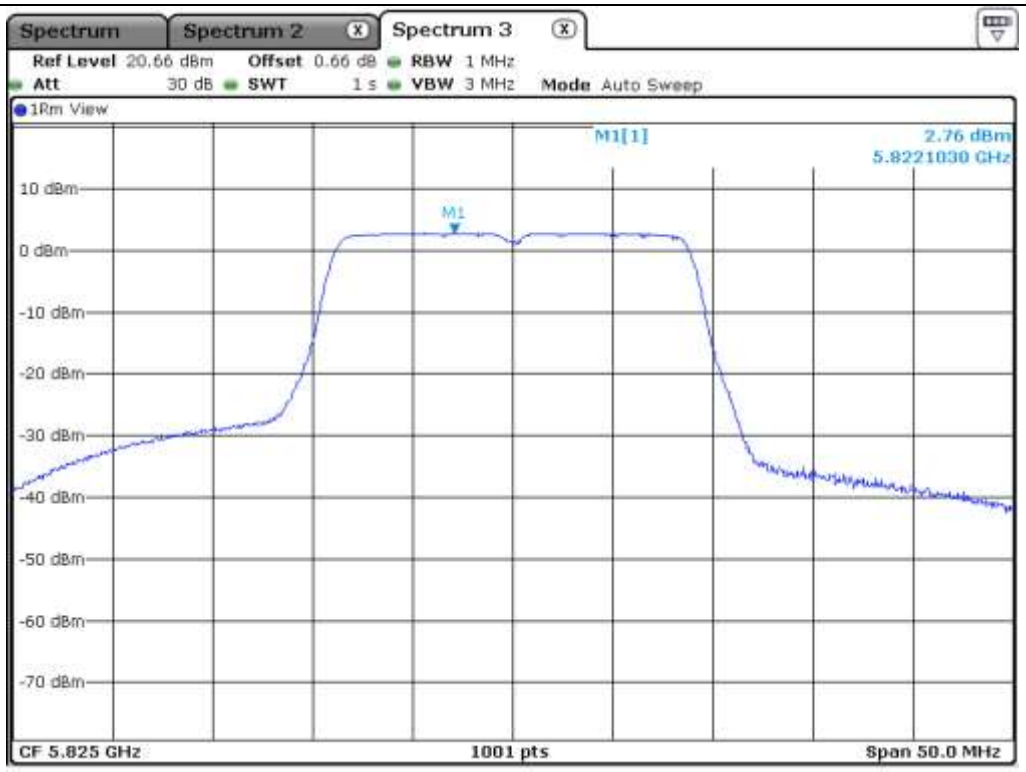


Low Channel (5 745 MHz)



Middle Channel (5 785 MHz)

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



High Channel (5 825 MHz)

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

10.5.3 Test data for Multiple Transmit

-. Test Date : March 27, 2017

-. Operating condition : Highest Output Power Transmitting Mode

-. Test Result : Pass

FREQUENCY RANGE (MHz)	CHANNEL	FREQUENCY (MHz)	MEASURED VALUE (dBm)	LIMIT (dBm)	MARGIN (dB)
5 150 ~ 5 250	Low	5 180.00	0.63	8.44	7.81
	Middle	5 220.00	0.82	8.44	7.62
	High	5 240.00	0.72	8.44	7.72
5 250 ~ 5 350	Low	5 260.00	5.01	8.77	3.76
	Middle	5 300.00	4.89	8.77	3.88
	High	5 320.00	5.02	8.77	3.75
5 470 ~ 5 725	Low	5 500.00	5.67	8.49	2.82
	Middle	5 560.00	5.20	8.49	3.29
	High	5 720.00	5.39	8.49	3.10
5 725 ~ 5 850	Low	5 745.00	5.57	27.69	22.12
	Middle	5 785.00	5.84	27.69	21.85
	High	5 825.00	5.53	27.69	22.16

Tested by: Tae-Ho, Kim / Senior Engineer

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

10.6 Test data for 802.11n_HT40 RLAN Mode

10.6.1 Test data for Antenna 0

-. Test Date : March 27, 2017

-. Operating condition : Highest Output Power Transmitting Mode

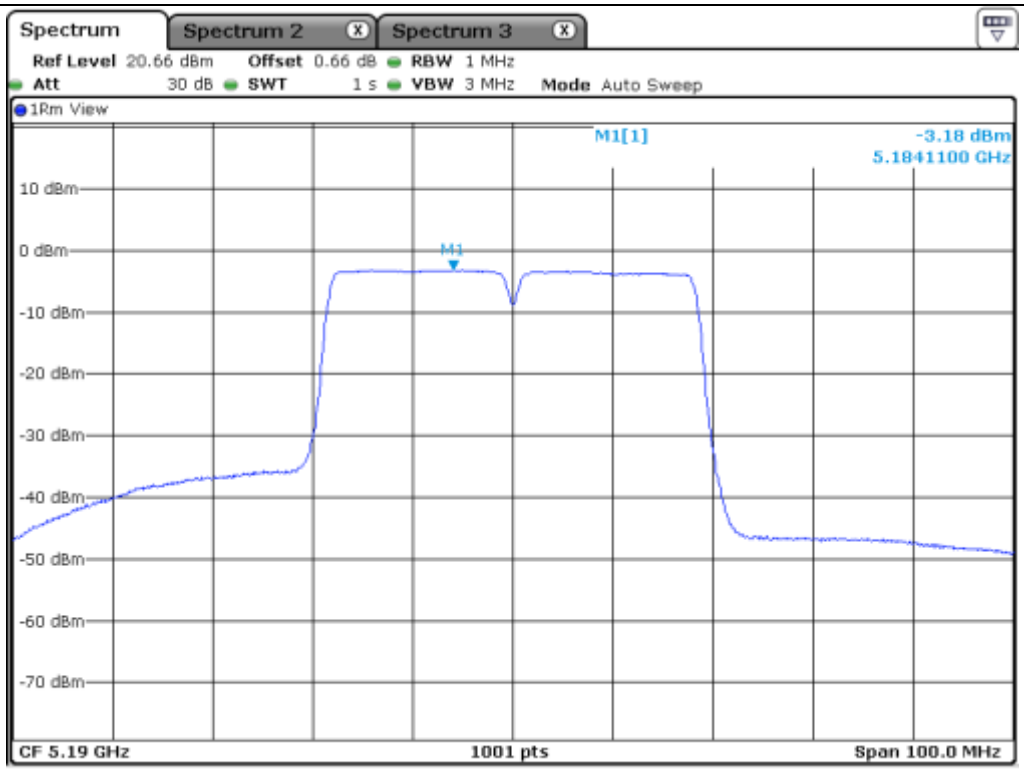
-. Test Result : Pass

FREQUENCY RANGE (MHz)	CHANNEL	FREQUENCY (MHz)	MEASURED VALUE (dBm)	LIMIT (dBm)	MARGIN (dB)
5 150 ~ 5 250	Low	5 190.00	-3.18	11.00	14.18
	High	5 230.00	-2.85	11.00	13.85
5 250 ~ 5 350	Low	5 270.00	-1.35	11.00	12.35
	High	5 310.00	-1.27	11.00	12.27
5 470 ~ 5 725	Low	5 510.00	-0.83	11.00	11.83
	Middle	5 550.00	-1.18	11.00	12.18
	High	5 710.00	-0.78	11.00	11.78
5 725 ~ 5 850	Low	5 755.00	-1.01	30.00	31.01
	High	5 795.00	-0.98	30.00	30.98

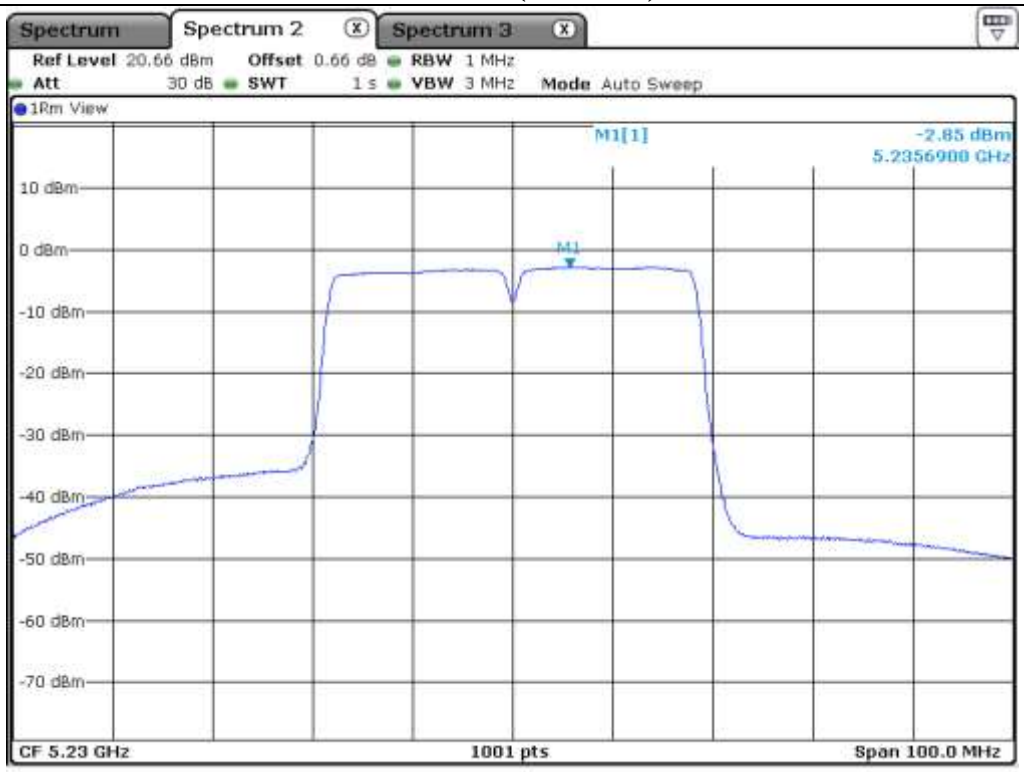
Remark: See next page for measurement data.

Tested by: Tae-Ho, Kim / Senior Engineer

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

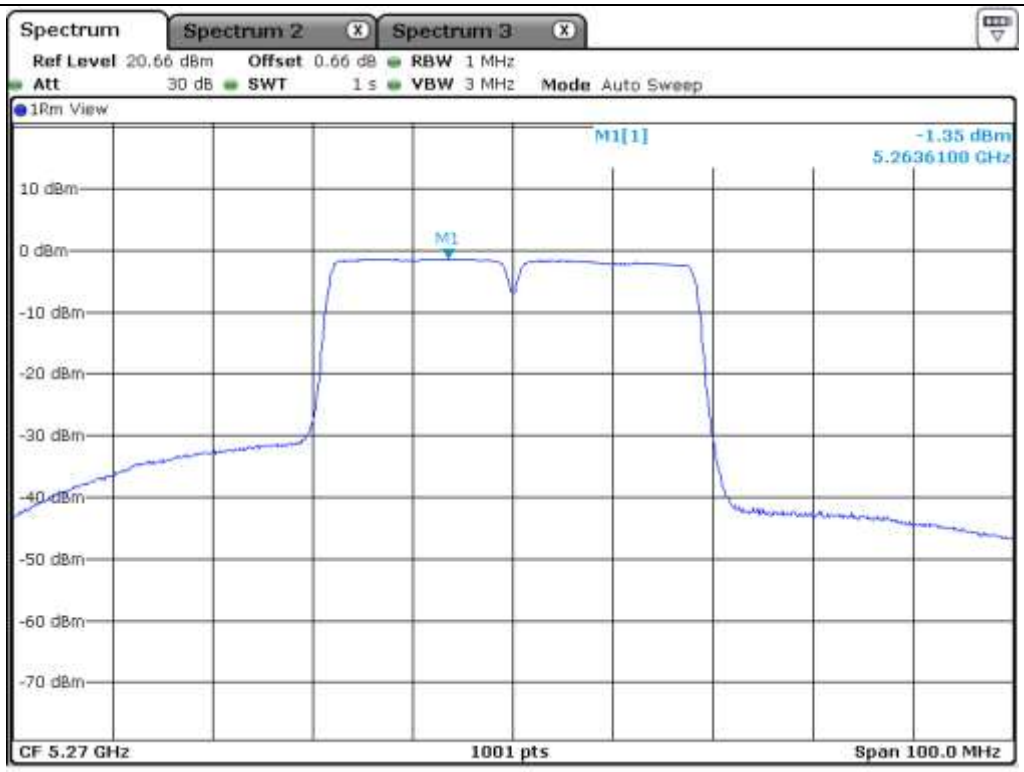


Low Channel (5 190 MHz)

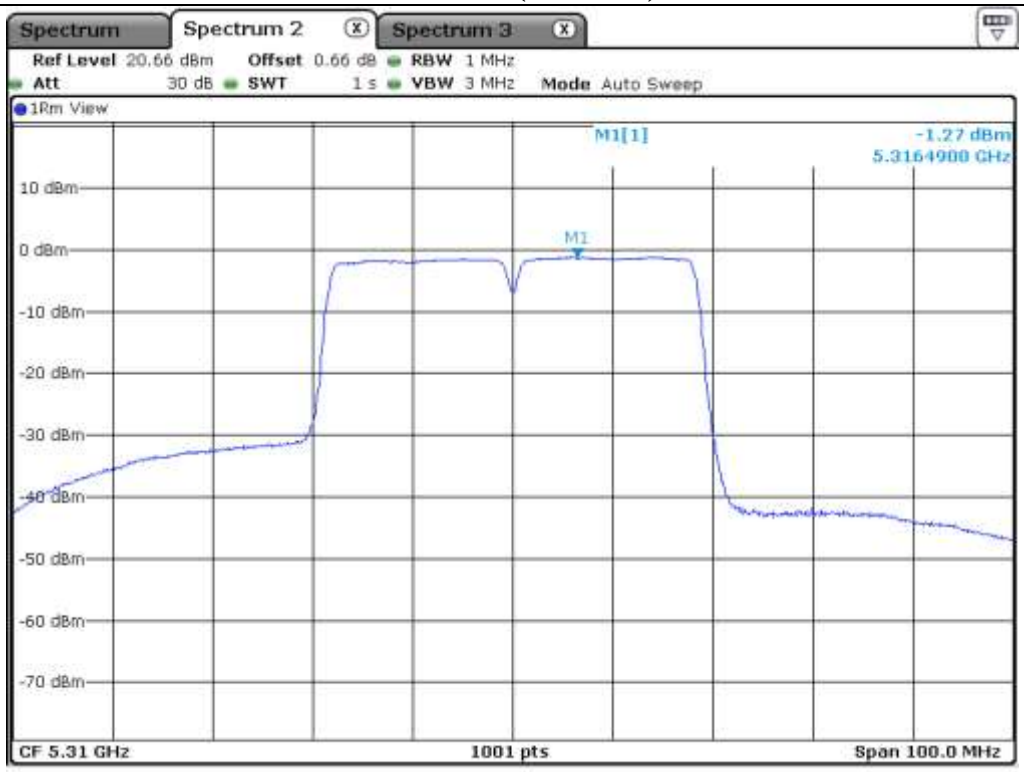


High Channel (5 230 MHz)

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

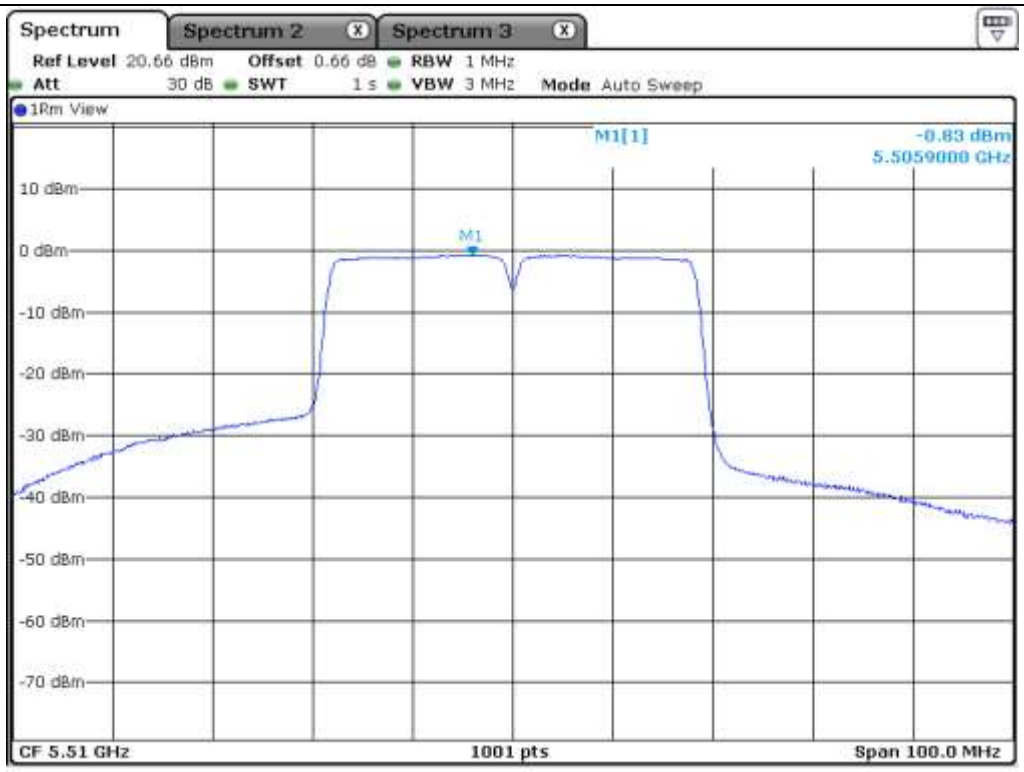


Low Channel (5 270 MHz)

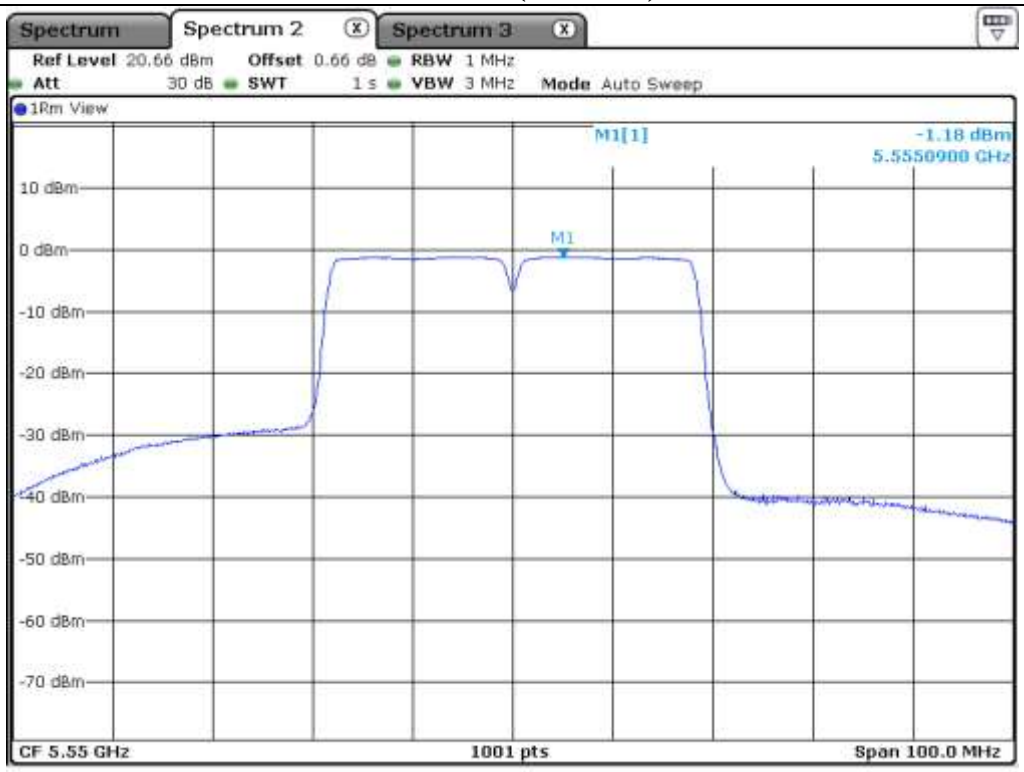


High Channel (5 310 MHz)

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

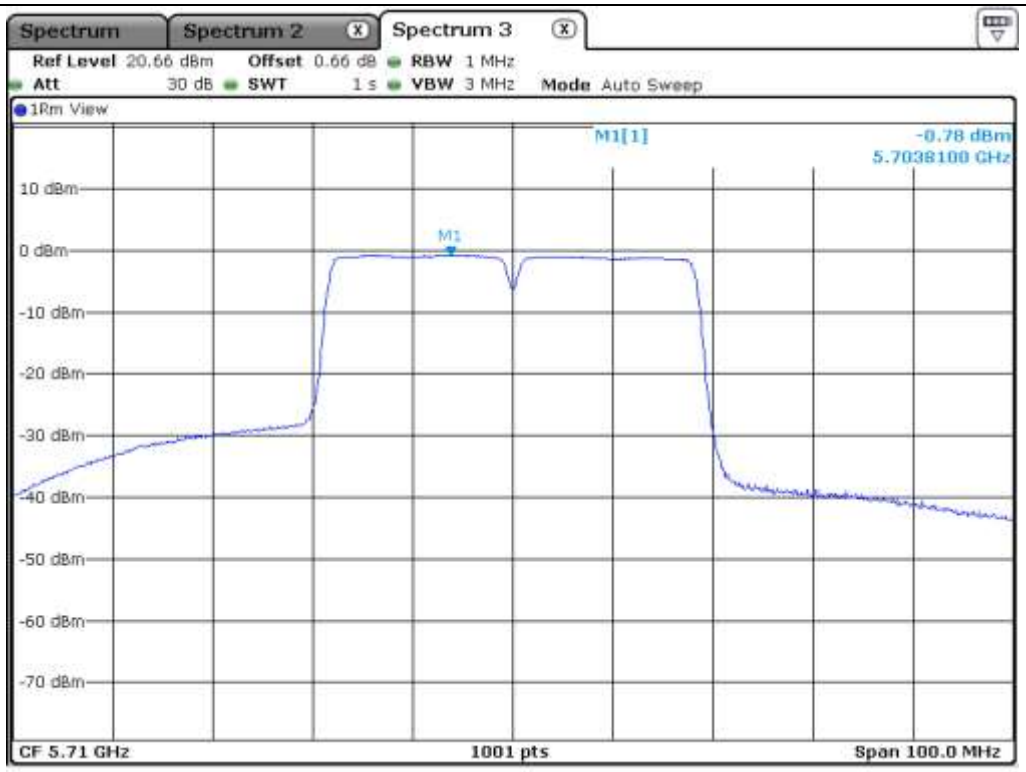


Low Channel (5 510 MHz)



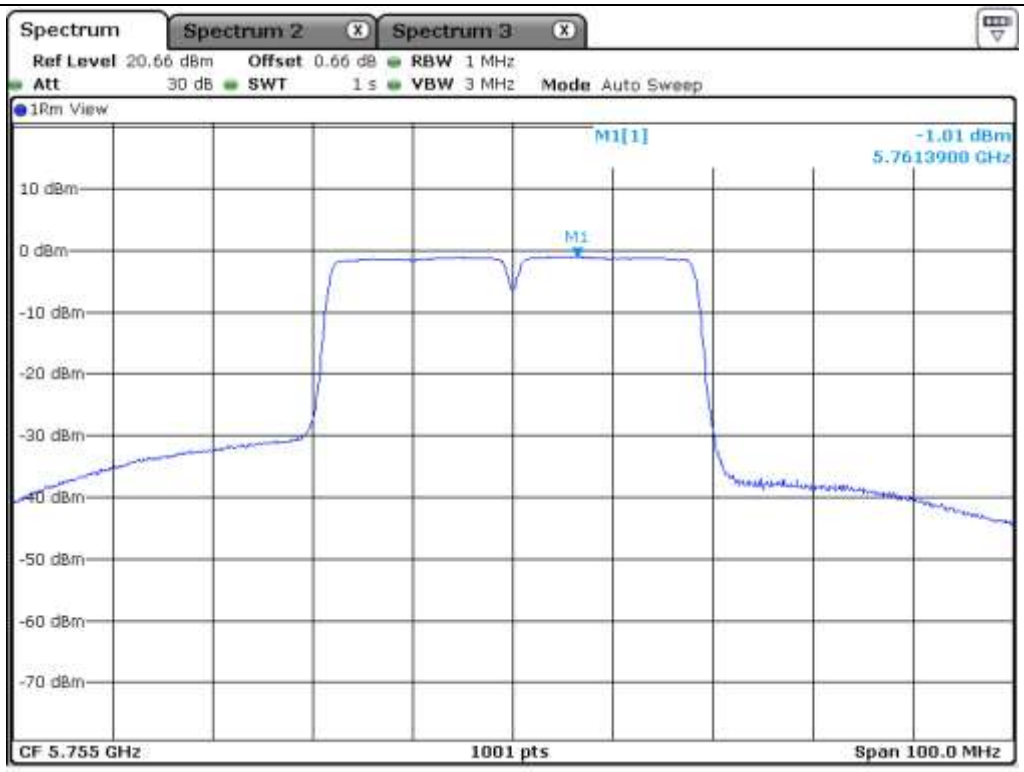
Middle Channel (5 550 MHz)

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

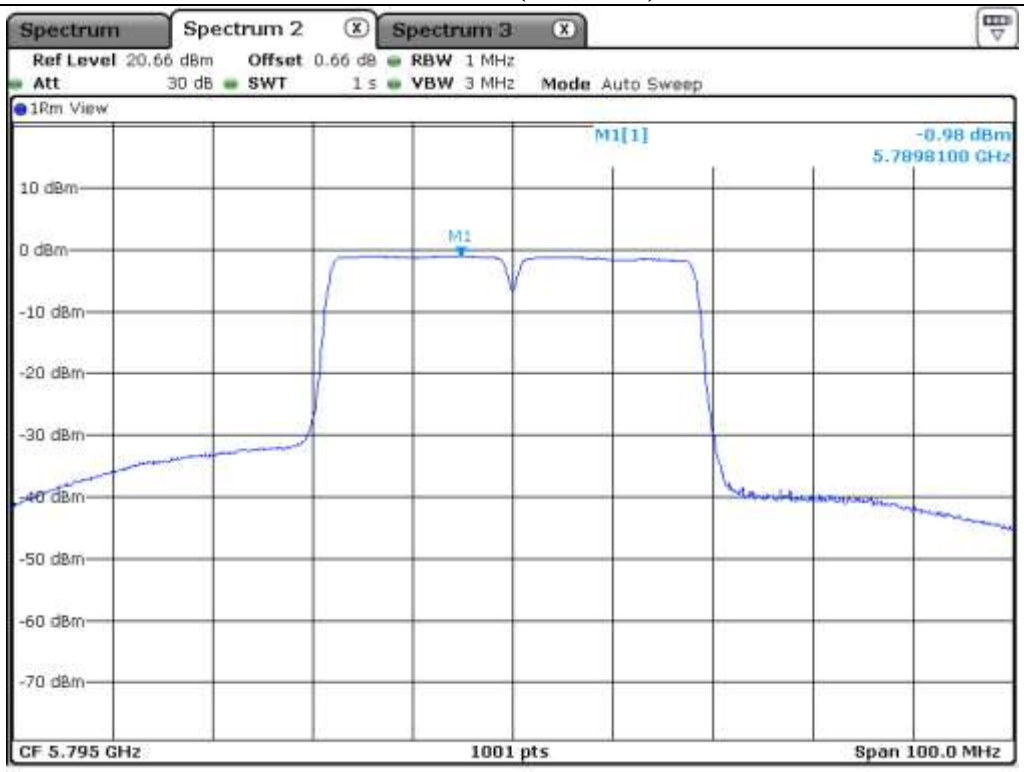


High Channel (5 710 MHz)

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



Low Channel (5 755 MHz)



High Channel (5 795 MHz)

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

10.6.2 Test data for Antenna 1

-. Test Date : March 27, 2017

-. Operating condition : Highest Output Power Transmitting Mode

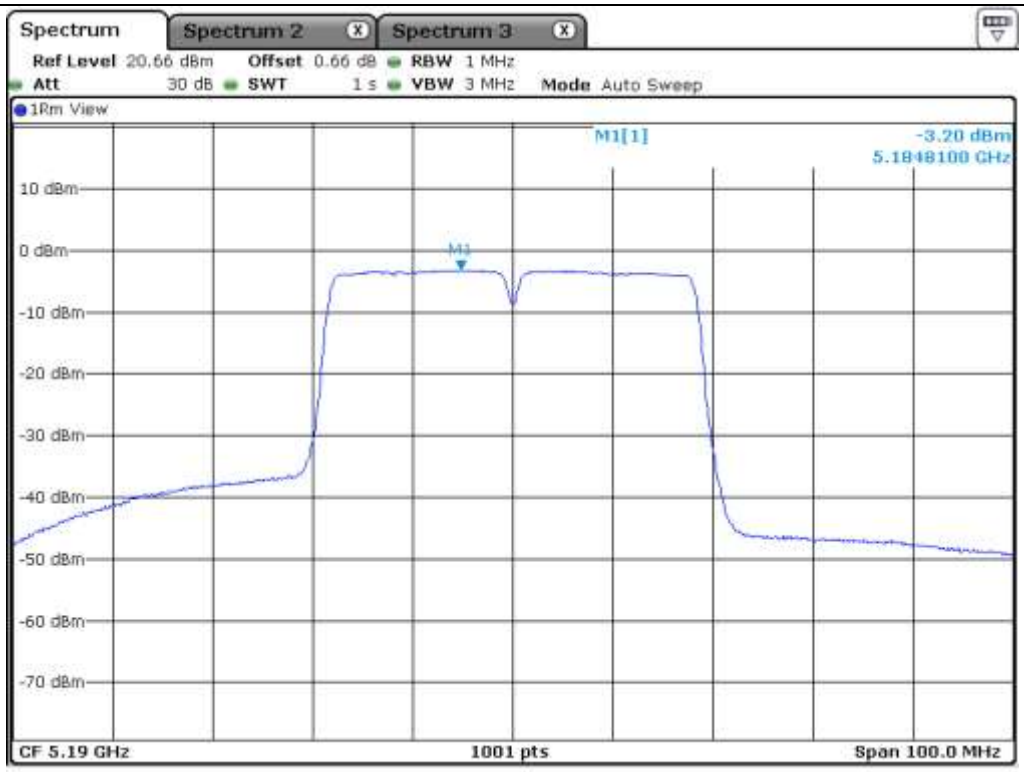
-. Test Result : Pass

FREQUENCY RANGE (MHz)	CHANNEL	FREQUENCY (MHz)	MEASURED VALUE (dBm)	LIMIT (dBm)	MARGIN (dB)
5 150 ~ 5 250	Low	5 190.00	-3.20	11.00	14.20
	High	5 230.00	-3.37	11.00	14.37
5 250 ~ 5 350	Low	5 270.00	-1.35	10.87	12.22
	High	5 310.00	-2.05	10.87	12.92
5 470 ~ 5 725	Low	5 510.00	-1.13	11.00	12.13
	Middle	5 550.00	-1.04	11.00	12.04
	High	5 710.00	-1.28	11.00	12.28
5 725 ~ 5 850	Low	5 755.00	-0.13	30.00	30.13
	High	5 795.00	0.09	30.00	29.91

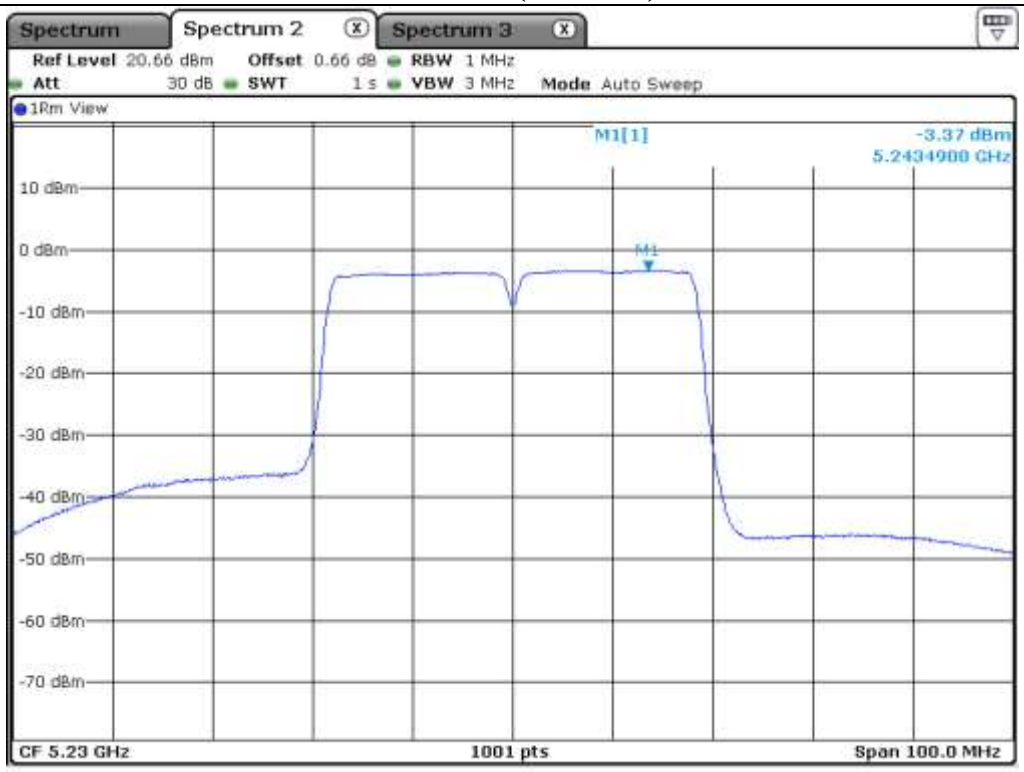
Remark: See next page for measurement data.

Tested by: Tae-Ho, Kim / Senior Engineer

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

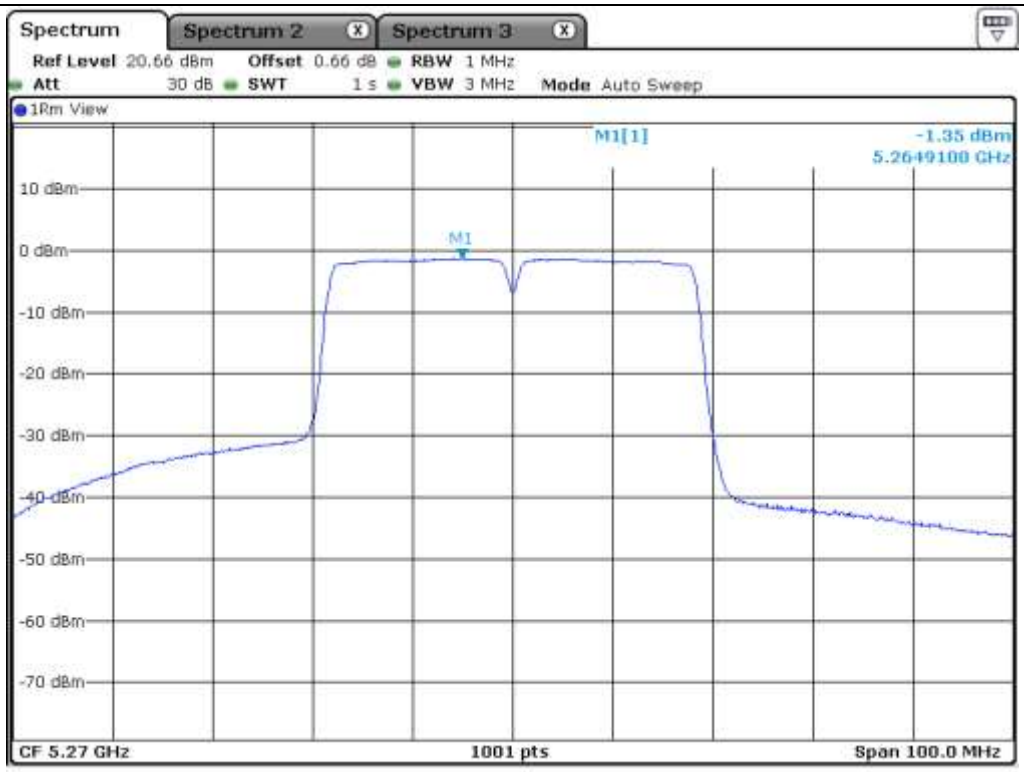


Low Channel (5 190 MHz)

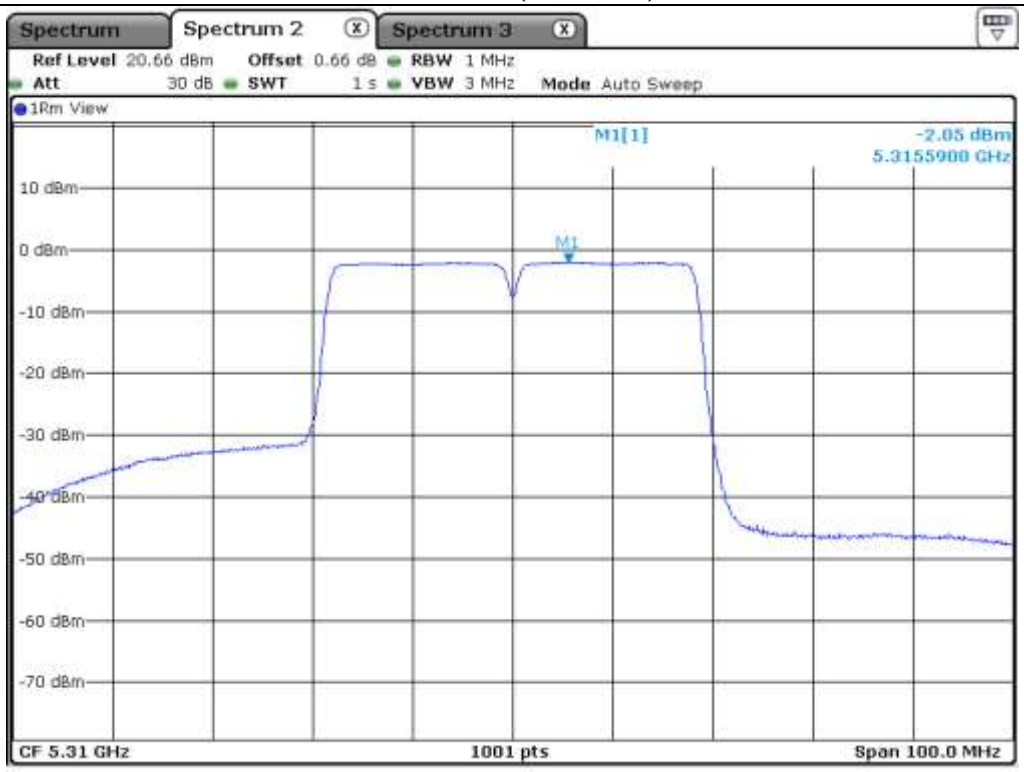


High Channel (5 230 MHz)

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

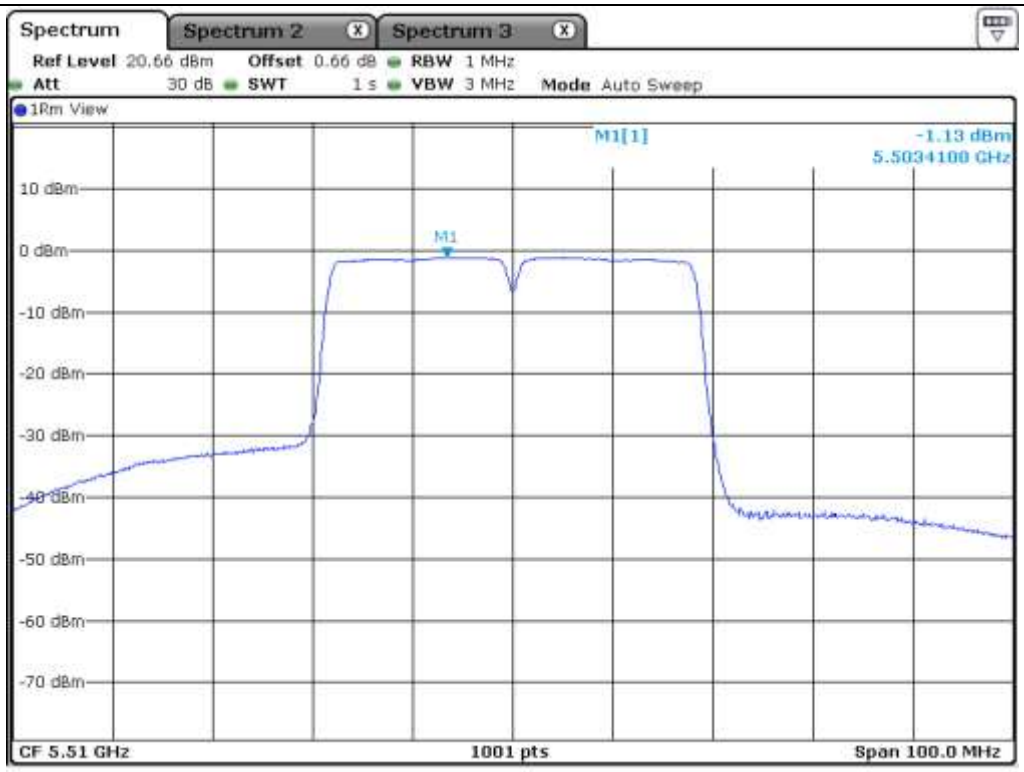


Low Channel (5 270 MHz)

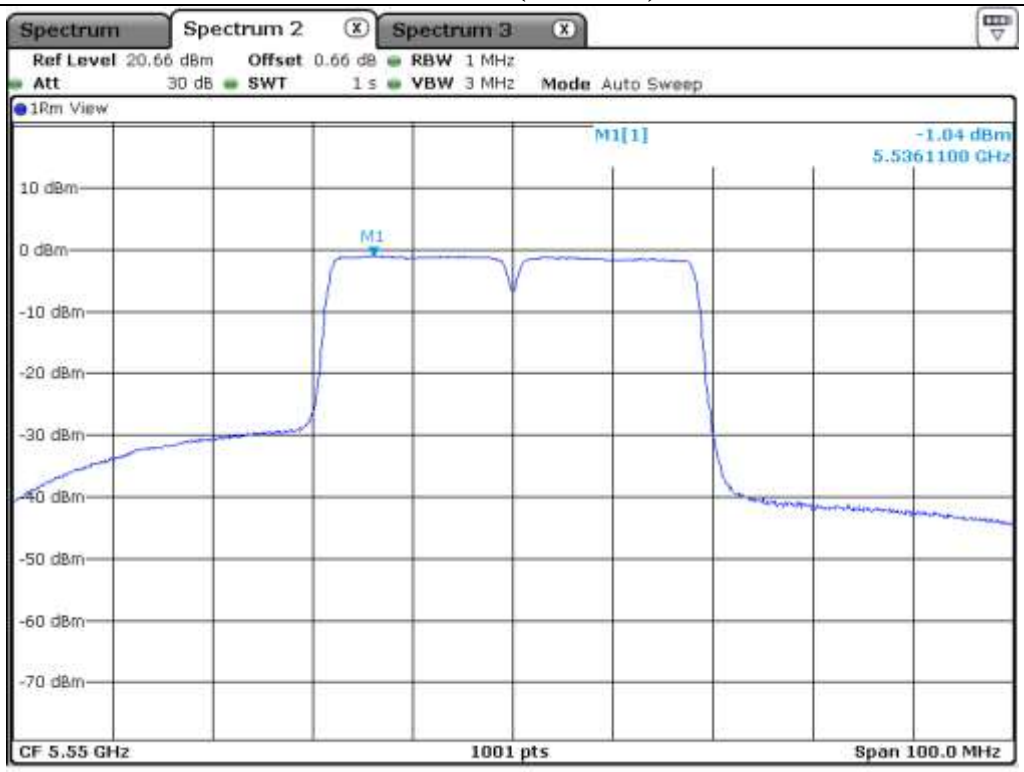


High Channel (5 310 MHz)

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

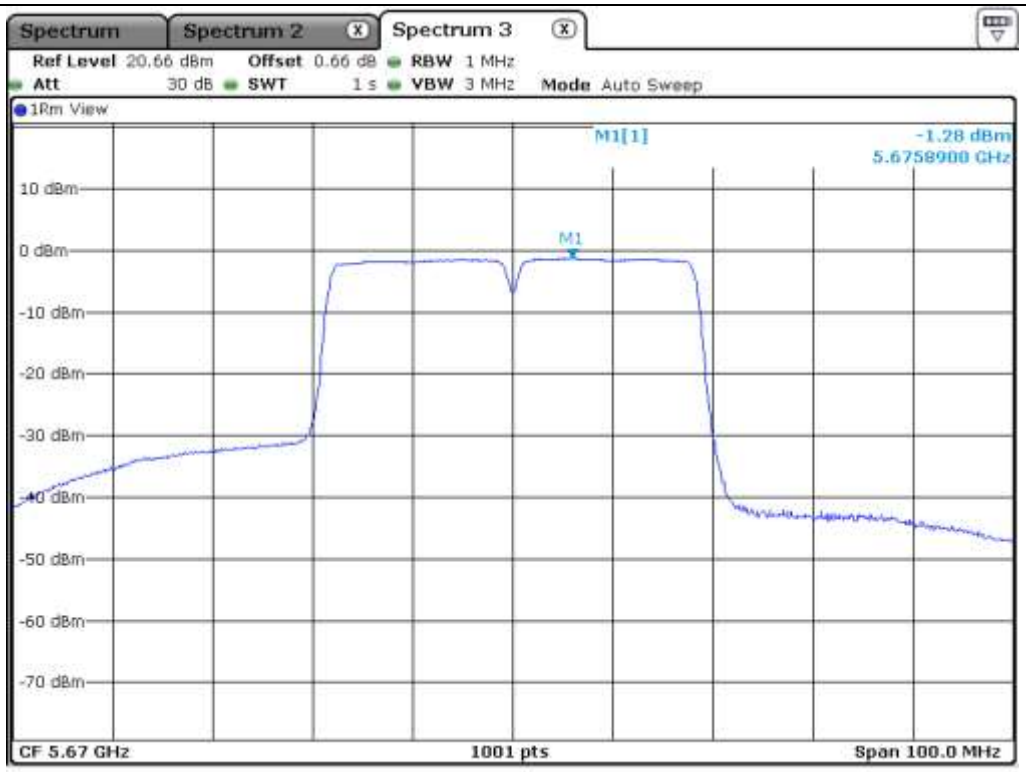


Low Channel (5 510 MHz)

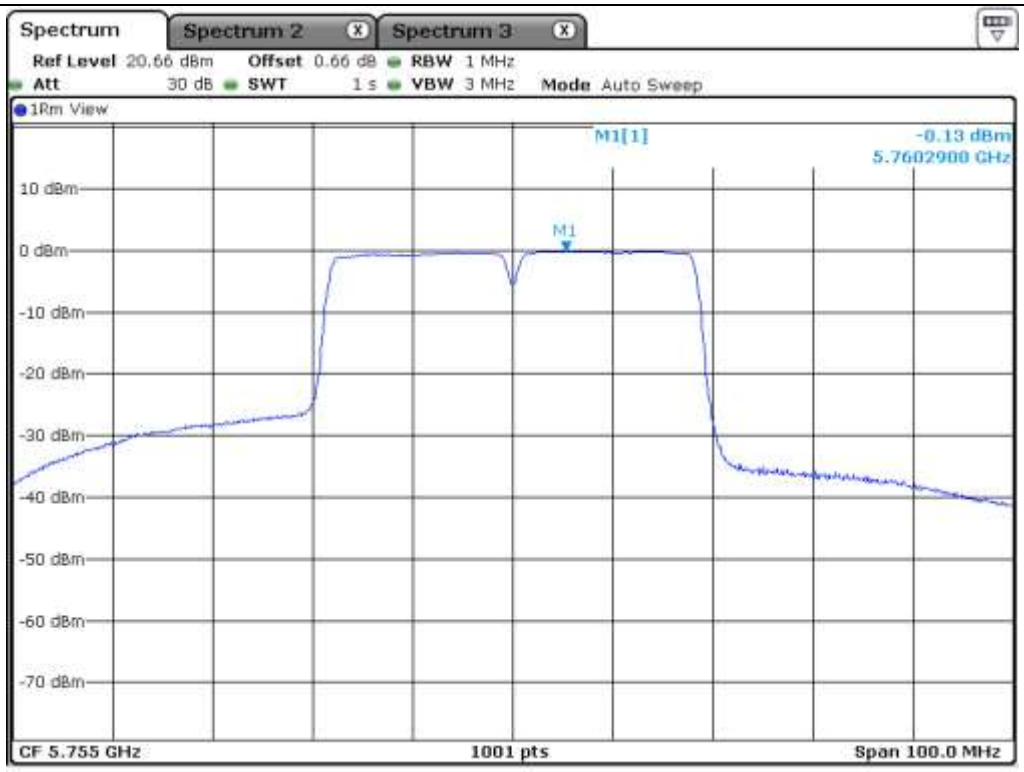


Middle Channel (5 550 MHz)

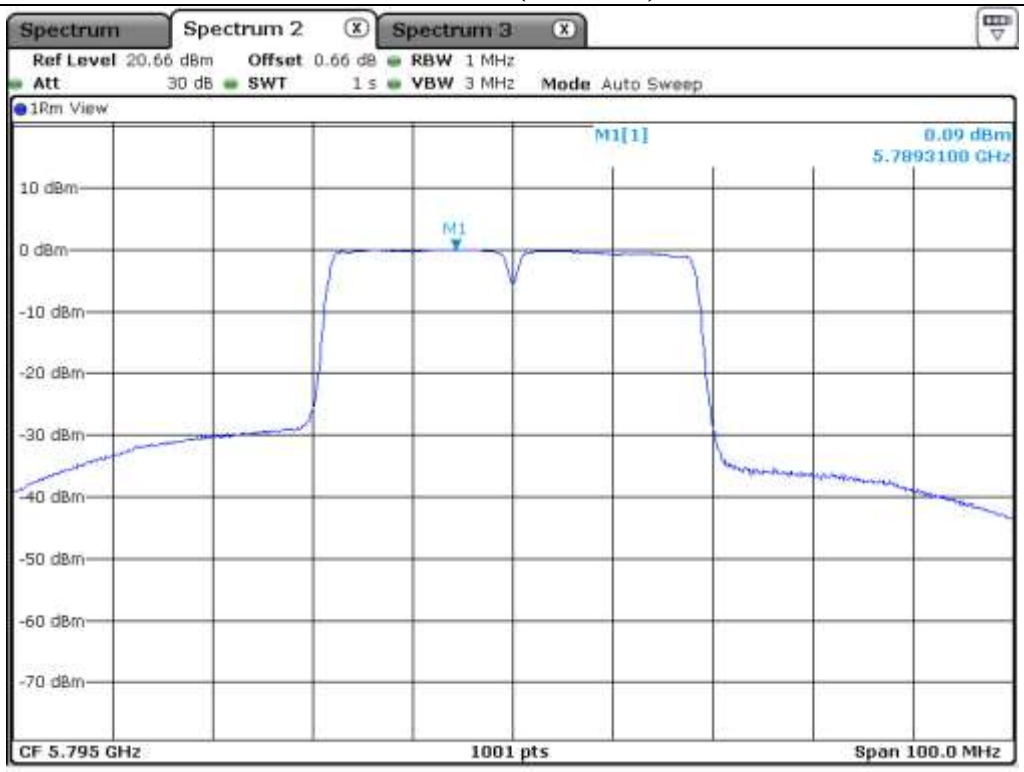
ONETECH Corp.: 43-14, Jinsaegol-gil, Chowol-eup, Gwangju-si, Gyeonggi-do, 12735, Korea (TEL: 82-31-799-9500, FAX: 82-31-799-9599)



High Channel (5 710 MHz)



Low Channel (5 755 MHz)



High Channel (5 795 MHz)

10.6.3 Test data for Multiple Transmit

-. Test Date : March 27, 2017

-. 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	-0.18	8.44	8.62
	High	5 230.00	-0.09	8.44	8.53
5 250 ~ 5 350	Low	5 270.00	1.66	8.77	7.11
	High	5 310.00	1.37	8.77	7.40
5 470 ~ 5 725	Low	5 510.00	2.03	8.49	6.46
	Middle	5 550.00	1.90	8.49	6.59
	High	5 710.00	1.99	8.49	6.50
5 725 ~ 5 850	Low	5 755.00	2.46	27.69	25.23
	High	5 795.00	2.60	27.69	25.09

Remark: See next page for measurement data.

Tested by: Tae-Ho, Kim / Senior Engineer

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

10.7 Test data for 802.11ac_HT80 RLAN Mode

10.7.1 Test data for Antenna 0

-. Test Date : March 27, 2017

-. Operating condition : Highest Output Power Transmitting Mode

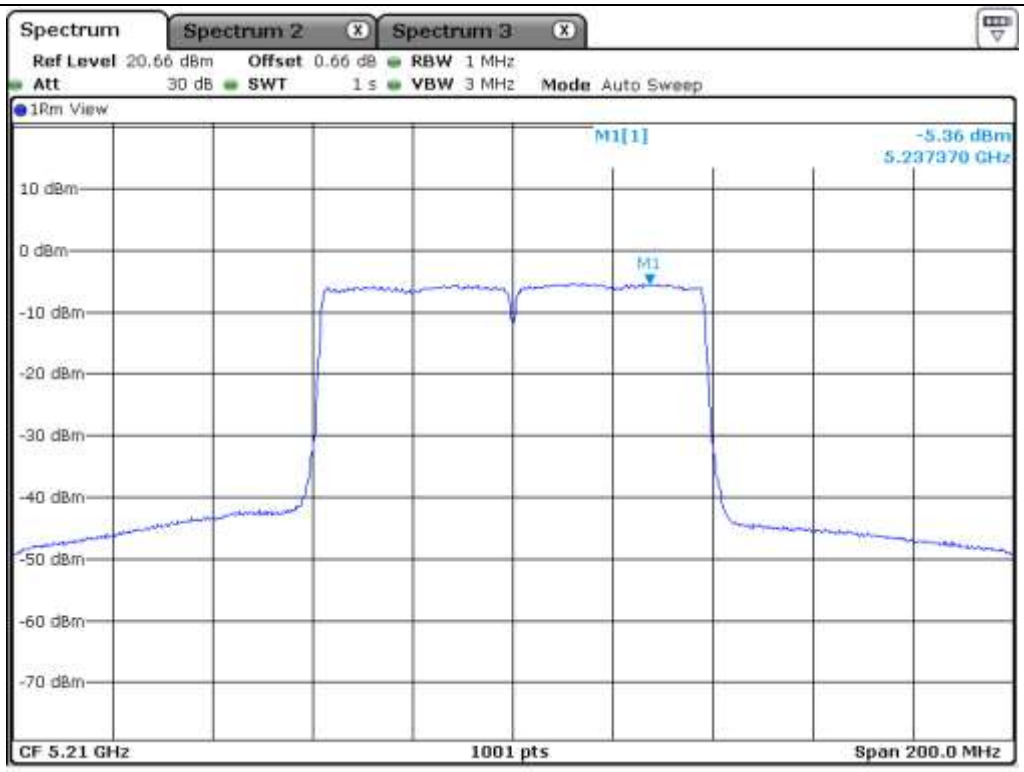
-. Test Result : Pass

FREQUENCY RANGE (MHz)	CHANNEL	FREQUENCY (MHz)	MEASURED VALUE (dBm)	LIMIT (dBm)	MARGIN (dB)
5 150 ~ 5 250	Middle	5 210.00	-5.36	11.00	16.36
5 250 ~ 5 350	Middle	5 290.00	-5.25	11.00	16.25
5 470 ~ 5 725	Middle	5 530.00	-4.25	11.00	15.25
5 725 ~ 5 850	Middle	5 775.00	-4.73	30.00	34.73

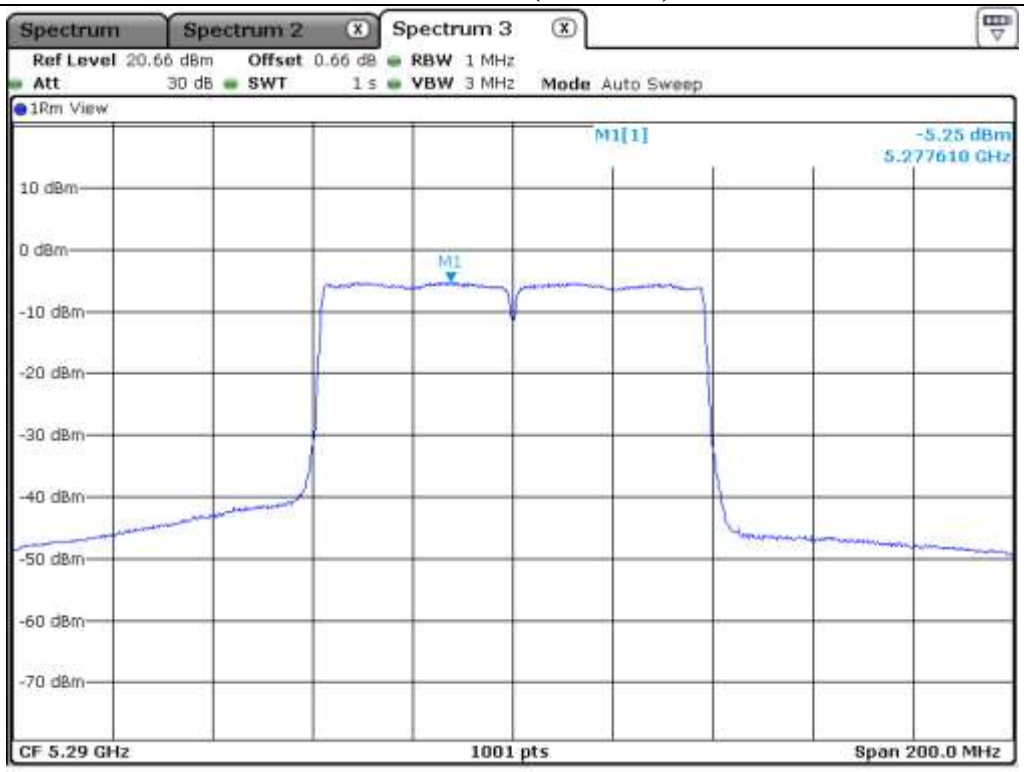
Remark: See next page for measurement data.

Tested by: Tae-Ho, Kim / Senior Engineer

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

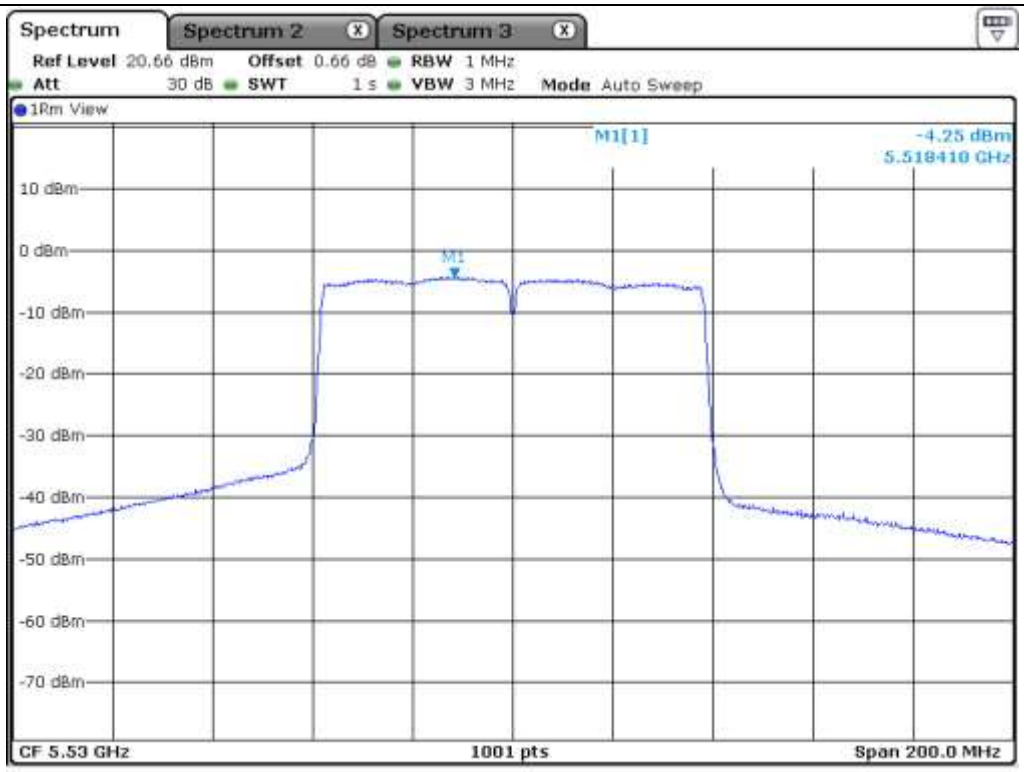


Middle Channel (5 210 MHz)

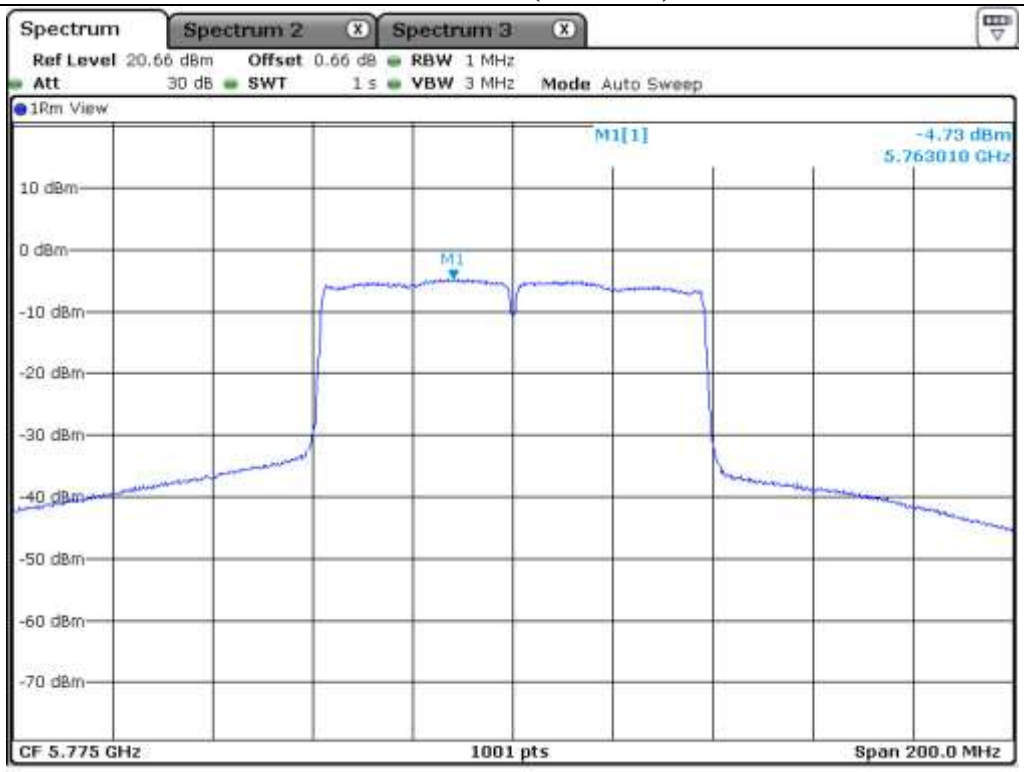


Middle Channel (5 290 MHz)

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



Middle Channel (5 530 MHz)



Middle Channel (5 775 MHz)

10.7.2 Test data for Antenna 1

-. Test Date : March 27, 2017

-. Operating condition : Highest Output Power Transmitting Mode

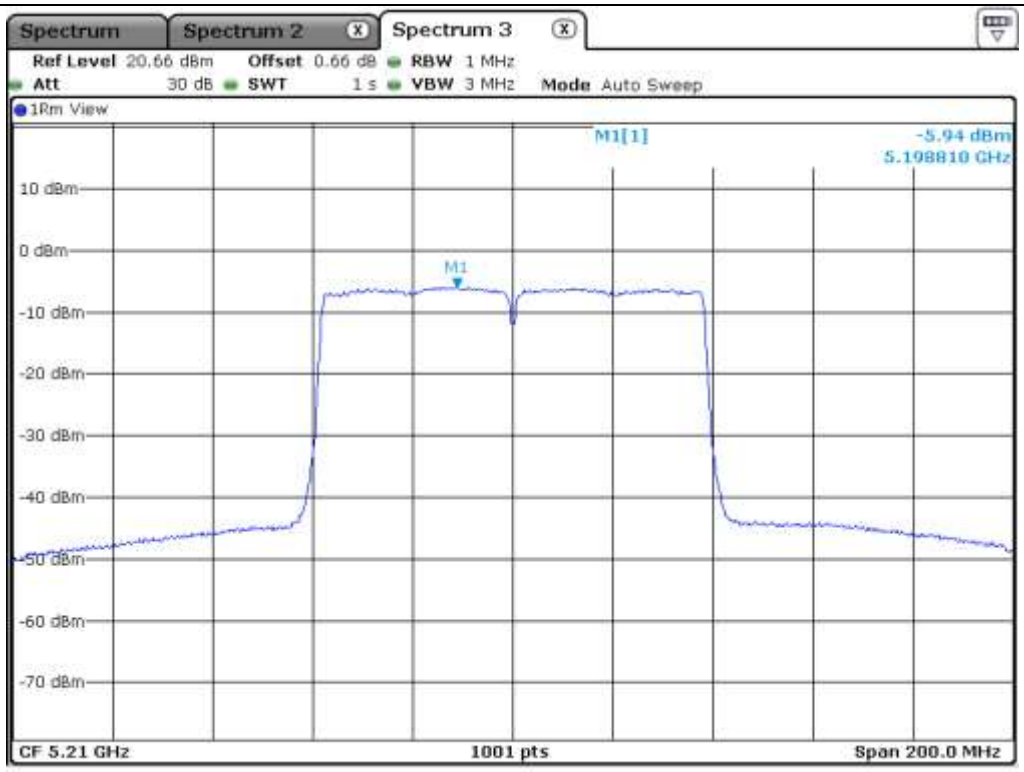
-. Test Result : Pass

FREQUENCY RANGE (MHz)	CHANNEL	FREQUENCY (MHz)	MEASURED VALUE (dBm)	LIMIT (dBm)	MARGIN (dB)
5 150 ~ 5 250	Middle	5 210.00	-5.94	11.00	16.94
5 250 ~ 5 350	Middle	5 290.00	-5.59	11.00	16.59
5 470 ~ 5 725	Middle	5 530.00	-4.47	11.00	15.47
5 725 ~ 5 850	Middle	5 775.00	-3.46	30.00	33.46

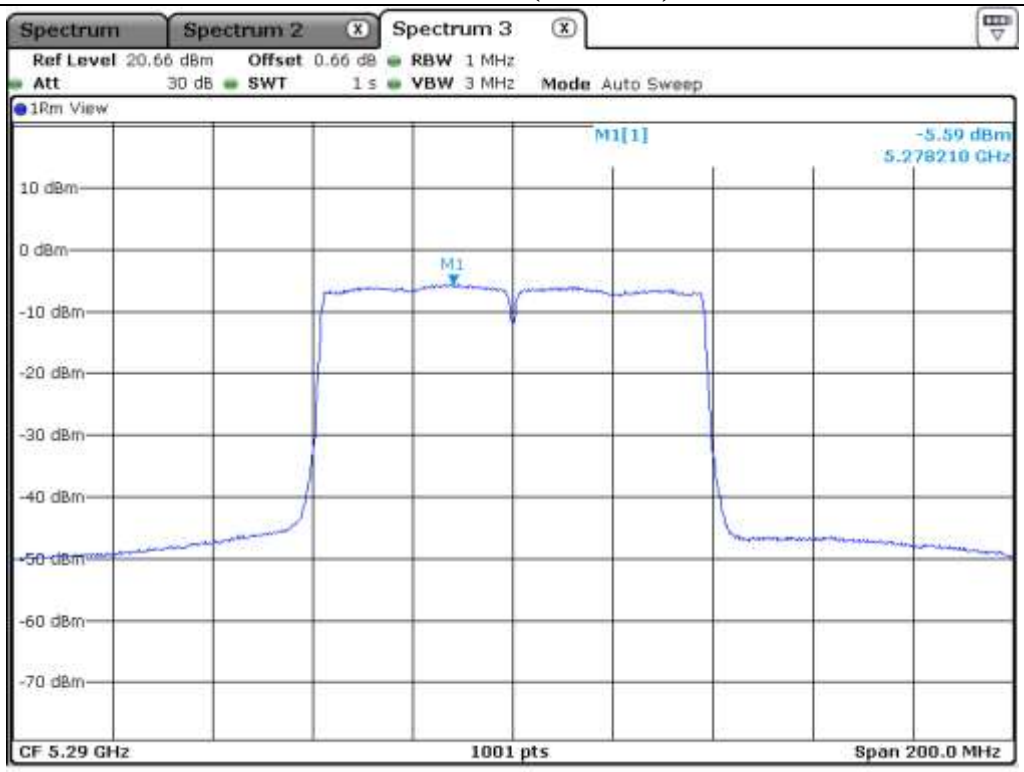
Remark: See next page for measurement data.

Tested by: Tae-Ho, Kim / Senior Engineer

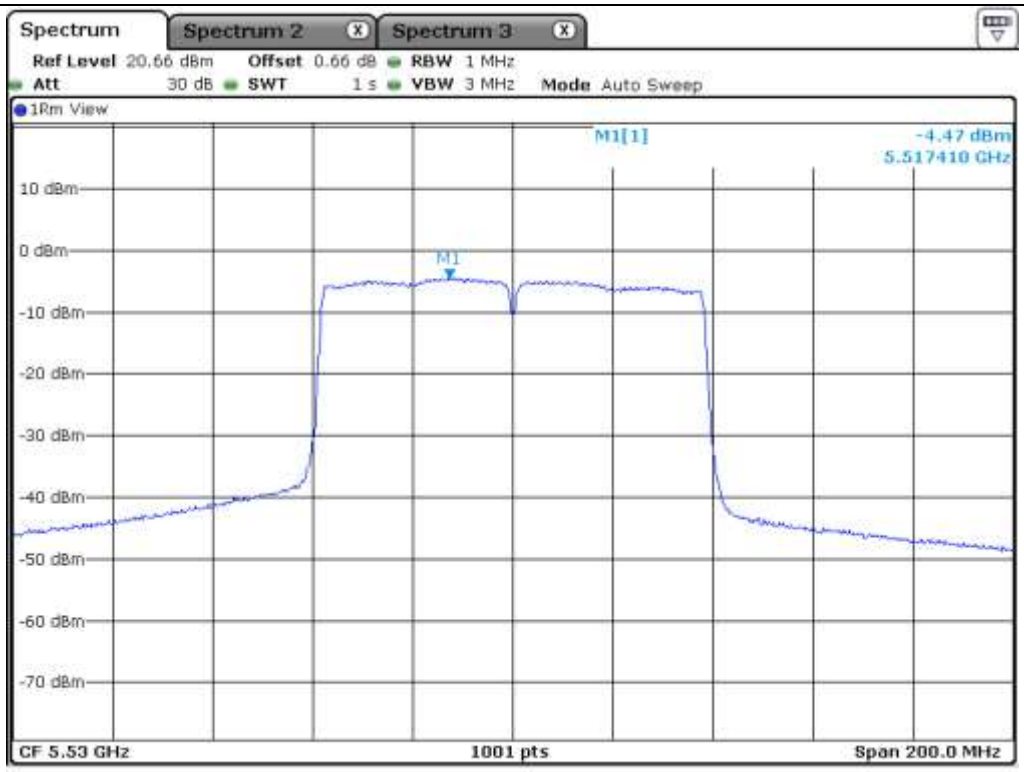
ONETECH Corp.: 43-14, Jinsaegol-gil, Chowol-eup, Gwangju-si, Gyeonggi-do, 12735, Korea (TEL: 82-31-799-9500, FAX: 82-31-799-9599)



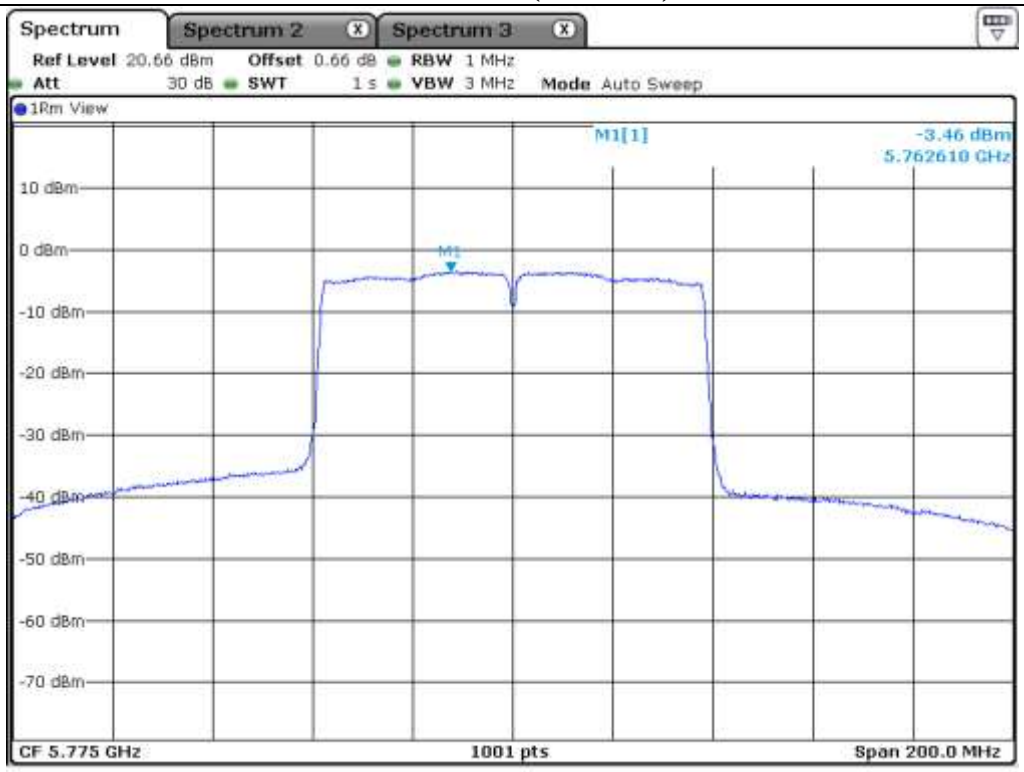
Middle Channel (5 210 MHz)



Middle Channel (5 290 MHz)



Middle Channel (5 530 MHz)



Middle Channel (5 775 MHz)

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

10.7.3 Test data for Multiple Transmit

-. Test Date : March 27, 2017

-. Operating condition : Highest Output Power Transmitting Mode

-. Test Result : Pass

FREQUENCY RANGE (MHz)	CHANNEL	FREQUENCY (MHz)	MEASURED VALUE (dBm)	LIMIT (dBm)	MARGIN (dB)
5 150 ~ 5 250	Middle	5 210.00	-2.63	8.44	11.07
5 250 ~ 5 350	Middle	5 290.00	-2.41	8.77	11.18
5 470 ~ 5 725	Middle	5 530.00	-1.35	8.49	9.84
5 725 ~ 5 850	Middle	5 775.00	-1.04	27.69	28.73

Remark: See next page for measurement data.

Tested by: Tae-Ho, Kim / Senior Engineer

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

11. FREQUENCY STABILITY WITH TEMPERATURE VARIATION

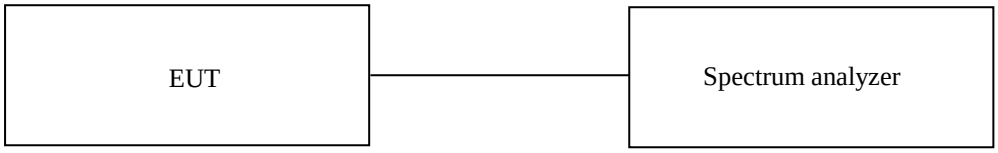
11.1 Operating environment

Temperature : 23 ℃

Relative humidity : 47 % R.H.

11.2 Test set-up

Turn EUT off and set chamber temperature to -20 ℃ 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 ℃ step from -20 ℃ to +50 ℃. Repeat above method for frequency measurements every 10 ℃ step and then record all measured frequencies on each temperature step.



11.3 Test equipment used

	Model Number	Manufacturer	Description	Serial Number	Last Cal.(Interval)
■ -	FSV40	Rohde & Schwarz	Signal Analyzer	101009	April 05, 2017 (1Y)
■ -	SSE-43CI-A	Samkun Tech	Humidity Chamber	60712	Apr. 06, 2017 (1Y)
■ -	DRP-305DN	DIGITAL Elec.	DC Power supply	4030195	Sep. 02, 2016 (1Y)

All test equipment used is calibrated on a regular basis.

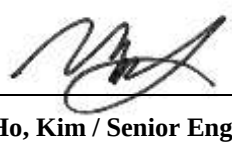
ONETECH Corp.: 43-14, Jinsaegol-gil, Chowol-eup, Gwangju-si, Gyeonggi-do, 12735, Korea (TEL: 82-31-799-9500, FAX: 82-31-799-9599)

11.4 Test Data for U-NII-1

-. Test Date : March 27, 2017

-. Result : Pass

Temperature (˚C)	Carrier Freq. (Hz)	Measured Freq. (Hz)	Freequency Error (kHz)
-20	5 180 000 000	5 179 980 970	-19.030
-10		5 179 980 414	-19.586
0		5 179 979 900	-20.100
10		5 179 979 394	-20.606
20		5 179 978 800	-21.200
30		5 179 978 219	-21.781
40		5 179 977 667	-22.333
50		5 219 980 430	-19.570
-20	5 220 000 000	5 219 979 846	-20.154
-10		5 219 979 307	-20.693
0		5 219 978 719	-21.281
10		5 219 978 202	-21.798
20		5 219 977 674	-22.326
30		5 219 977 157	-22.843
40		5 239 980 870	-19.130
50		5 239 980 337	-19.663
-20	5 240 000 000	5 239 979 738	-20.262
-10		5 239 979 226	-20.774
0		5 239 978 681	-21.319
10		5 239 978 120	-21.880
20		5 239 977 547	-22.453
30		5 179 980 970	-19.030
40		5 179 980 414	-19.586
50		5 179 979 900	-20.100



Tested by: Tae-Ho, Kim / Senior Engineer

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

11.5 Test Data for U-NII-2A

-. Test Date : March 27, 2017

-. Result : Pass

Temperature (˚C)	Carrier Freq. (Hz)	Measured Freq. (Hz)	Freequency Error (kHz)
-20	5 260 000 000	5 259 979 700	-20.300
-10		5 259 979 171	-20.829
0		5 259 978 651	-21.349
10		5 259 978 070	-21.930
20		5 259 977 498	-22.502
30		5 259 976 933	-23.067
40		5 259 976 354	-23.646
50		5 299 980 300	-19.700
-20	5 300 000 000	5 299 979 759	-20.241
-10		5 299 979 206	-20.794
0		5 299 978 615	-21.385
10		5 299 978 115	-21.885
20		5 299 977 599	-22.401
30		5 299 977 007	-22.993
40		5 319 979 400	-20.600
50		5 319 978 852	-21.148
-20	5 32 000 0000	5 319 978 266	-21.734
-10		5 319 977 709	-22.291
0		5 319 977 204	-22.796
10		5 319 976 635	-23.365
20		5 319 976 069	-23.931
30		5 259 979 700	-20.300
40		5 259 979 171	-20.829
50		5 259 978 651	-21.349

Tested by: Tae-Ho, Kim / Senior Engineer

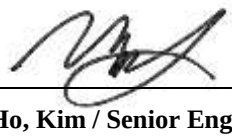
ONETECH Corp.: 43-14, Jinsaegol-gil, Chowol-eup, Gwangju-si, Gyeonggi-do, 12735, Korea (TEL: 82-31-799-9500, FAX: 82-31-799-9599)

11.6 Test Data for U-NII-2C

-. Test Date : March 27, 2017

-. Result : Pass

Temperature (˚C)	Carrier Freq. (Hz)	Measured Freq. (Hz)	Freequency Error (kHz)
-20	5 500 000 000	5 499 979 100	-20.900
-10		5 499 978 589	-21.411
0		5 499 978 068	-21.932
10		5 499 977 488	-22.512
20		5 499 976 913	-23.087
30		5 499 976 385	-23.615
40		5 499 975 838	-24.162
50		5 559 979 900	-20.100
-20	5 560 000 000	5 559 979 330	-20.670
-10		5 559 978 799	-21.201
0		5 559 978 270	-21.730
10		5 559 977 709	-22.291
20		5 559 977 110	-22.890
30		5 559 976 569	-23.431
40		5 699 980 200	-19.800
50		5 699 979 695	-20.305
-20	5 720 000 000	5 699 979 173	-20.827
-10		5 699 978 650	-21.350
0		5 699 978 135	-21.865
10		5 699 977 557	-22.443
20		5 699 976 975	-23.025
30		5 499 979 100	-20.900
40		5 499 978 589	-21.411
50		5 499 978 068	-21.932



Tested by: Tae-Ho, Kim / Senior Engineer

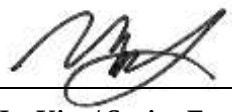
ONETECH Corp.: 43-14, Jinsaegol-gil, Chowol-eup, Gwangju-si, Gyeonggi-do, 12735, Korea (TEL: 82-31-799-9500, FAX: 82-31-799-9599)

11.7 Test Data for U-NII-3

-. Test Date : March 27, 2017

-. Result : Pass

Temperature (˚C)	Carrier Freq. (Hz)	Measured Freq. (Hz)	Freequency Error (kHz)
-20	5 745 000 000	5 744 980 800	-19.200
-10		5 744 980 278	-19.722
0		5 744 979 712	-20.288
10		5 744 979 162	-20.838
20		5 744 978 594	-21.406
30		5 744 978 052	-21.948
40		5 744 977 465	-22.535
50		5 784 979 370	-20.630
-20	5 785 000 000	5 784 978 839	-21.161
-10		5 784 978 310	-21.690
0		5 784 977 736	-22.264
10		5 784 977 217	-22.783
20		5 784 976 685	-23.315
30		5 784 976 121	-23.879
40		5 824 979 260	-20.740
50		5 824 978 733	-21.267
-20	5 825 000 000	5 824 978 190	-21.810
-10		5 824 977 596	-22.404
0		5 824 977 011	-22.989
10		5 824 976 440	-23.560
20		5 824 975 940	-24.060
30		5 744 980 800	-19.200
40		5 744 980 278	-19.722
50		5 744 979 712	-20.288



Tested by: Tae-Ho, Kim / Senior Engineer

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

12. FREQUENCY STABILITY WITH VOLTAGE VARIATION

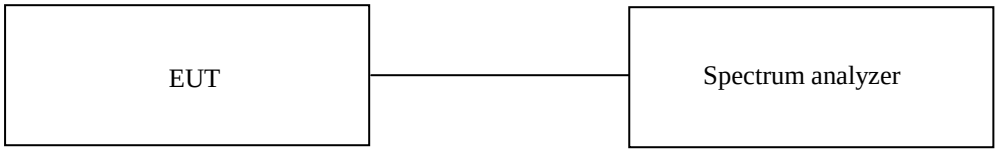
12.1 Operating environment

Temperature : 23 ℃

Relative humidity : 47 % 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 % of the nominal value and then was reduced to 85 % of nominal voltage. The output frequency was recorded at each step.



12.3 Test equipment used

	Model Number	Manufacturer	Description	Serial Number	Last Cal.(Interval)
■ -	FSV40	Rohde & Schwarz	Signal Analyzer	101009	April 05, 2017 (1Y)
■ -	DRP-305DN	DIGITAL Elec.	DC Power supply	4030195	Sep. 02, 2016 (1Y)

All test equipment used is calibrated on a regular basis.

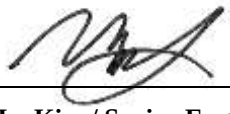
ONETECH Corp.: 43-14, Jinsaegol-gil, Chowol-eup, Gwangju-si, Gyeonggi-do, 12735, Korea (TEL: 82-31-799-9500, FAX: 82-31-799-9599)

12.4 Test Data for U-NII-1

-. Test Date : March 27, 2017

-. Result : Pass

Voltage (VDC)	Carrier Freq. (Hz)	Measured Freq. (Hz)	Freequency Error (kHz)
2.97	5 180 000 000	5 179 979 260	-20.740
3.30		5 179 978 837	-21.163
3.63		5 179 978 337	-21.663
2.97	5 220 000 000	5 219 979 260	-20.740
3.30		5 219 978 824	-21.176
3.63		5 219 978 322	-21.678
2.97	5 240 000 000	5 239 979 260	-20.740
3.30		5 239 978 797	-21.203
3.63		5 239 978 294	-21.706



Tested by: Tae-Ho, Kim / Senior Engineer

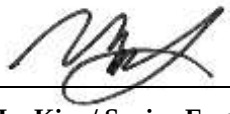
ONETECH Corp.: 43-14, Jinsaegol-gil, Chowol-eup, Gwangju-si, Gyeonggi-do, 12735, Korea (TEL: 82-31-799-9500, FAX: 82-31-799-9599)

12.5 Test Data for U-NII-2A

-. Test Date : March 27, 2017

-. Result : Pass

Voltage (VDC)	Carrier Freq. (Hz)	Measured Freq. (Hz)	Freequency Error (kHz)
2.97	5 260 000 000	5 259 979 260	-20.740
3.30		5 259 978 844	-21.156
3.63		5 259 978 338	-21.662
2.97	5 300 000 000	5 299 979 260	-20.740
3.30		5 299 978 770	-21.230
3.63		5 299 978 262	-21.738
2.97	5 320 000 000	5 319 979 260	-20.740
3.30		5 319 978 771	-21.229
3.63		5 319 978 263	-21.737



Tested by: Tae-Ho, Kim / Senior Engineer

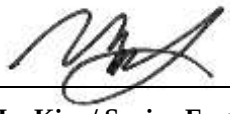
ONETECH Corp.: 43-14, Jinsaegol-gil, Chowol-eup, Gwangju-si, Gyeonggi-do, 12735, Korea (TEL: 82-31-799-9500, FAX: 82-31-799-9599)

12.6 Test Data for U-NII-2C

-. Test Date : March 27, 2017

-. Result : Pass

Voltage (VDC)	Carrier Freq. (Hz)	Measured Freq. (Hz)	Freequency Error (kHz)
2.97	5 500 000 000	5 499 979 260	-20.740
3.30		5 499 978 771	-21.229
3.63		5 499 978 269	-21.731
2.97	5 560 000 000	5 559 979 260	-20.740
3.30		5 559 978 811	-21.189
3.63		5 559 978 302	-21.698
2.97	5 700 000 000	5 699 979 260	-20.740
3.30		5 699 978 797	-21.203
3.63		5 699 978 297	-21.703



Tested by: Tae-Ho, Kim / Senior Engineer

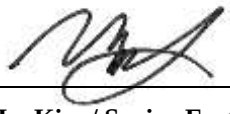
ONETECH Corp.: 43-14, Jinsaegol-gil, Chowol-eup, Gwangju-si, Gyeonggi-do, 12735, Korea (TEL: 82-31-799-9500, FAX: 82-31-799-9599)

12.7 Test Data for U-NII-3

-. Test Date : March 27, 2017

-. Result : Pass

Voltage (VDC)	Carrier Freq. (Hz)	Measured Freq. (Hz)	Freequency Error (kHz)
2.97	5 745 000 000	5 744 979 260	-20.740
3.30		5 744 978 819	-21.181
3.63		5 744 978 316	-21.684
2.97	5 785 000 000	5 784 979 260	-20.740
3.30		5 784 978 783	-21.217
3.63		5 784 978 283	-21.717
2.97	5 825 000 000	5 824 979 260	-20.740
3.30		5 824 978 822	-21.178
3.63		5 824 978 314	-21.686



Tested by: Tae-Ho, Kim / Senior Engineer

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

13. RADIATED SPURIOUS EMISSIONS

13.1 Operating environment

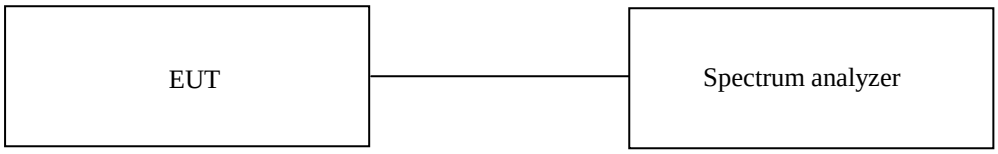
Temperature : 21 ℃

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 equipment used

	Model Number	Manufacturer	Description	Serial Number	Last Cal.(Interval)
■ -	FSV40	Rohde & Schwarz	Signal Analyzer	101009	April 05, 2017 (1Y)
■ -	ESCI	Rohde & Schwarz	Test Receiver	101012	Nov. 01, 2016 (1Y)
■ -	310N	Sonoma Instrument	Pre-Amplifier	312544	Apr. 05, 2017 (1Y)
■ -	SCU-18	Rohde & Schwarz	Pre-Amplifier	102209	May 31, 2016 (1Y)
■ -	DT3000-3t	Innco System	Turn Table	DT3000/093	N/A
■ -	MA-4000XPET	Innco System	Antenna Master	MA4000/509	N/A
■ -	VULB9163	Schwarzbeck	TRILOG Broadband Antenna	9163-421	Apr. 15, 2016 (1Y)
■ -	BBHA9120D	Schwarzbeck	Horn Antenna	BBHA9120D295	Aug. 31, 2015 (2Y)
■ -	BBHA9170	Schwarzbeck	Horn Antenna	BBHA9170178	Aug. 31, 2015 (2Y)
■ -	HFH2-Z2	Rohde & Schwarz	Loop Antenna	879285/26	Dec. 09, 2016 (2Y)
■ -	SCU40A	Rohde & Schwarz	Signal Conditioning unit	100436	May 31, 2016 (1Y)

All test equipment used is calibrated on a regular basis.

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13.4 Test data for Below 30 MHz

-. Test Date : March 23, 2017

-. 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)
It was not observed any emissions from the EUT.									

Tested by: Tae-Ho, Kim / Senior Engineer

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

13.5 Test data for 30 MHz ~ 1 000 MHz

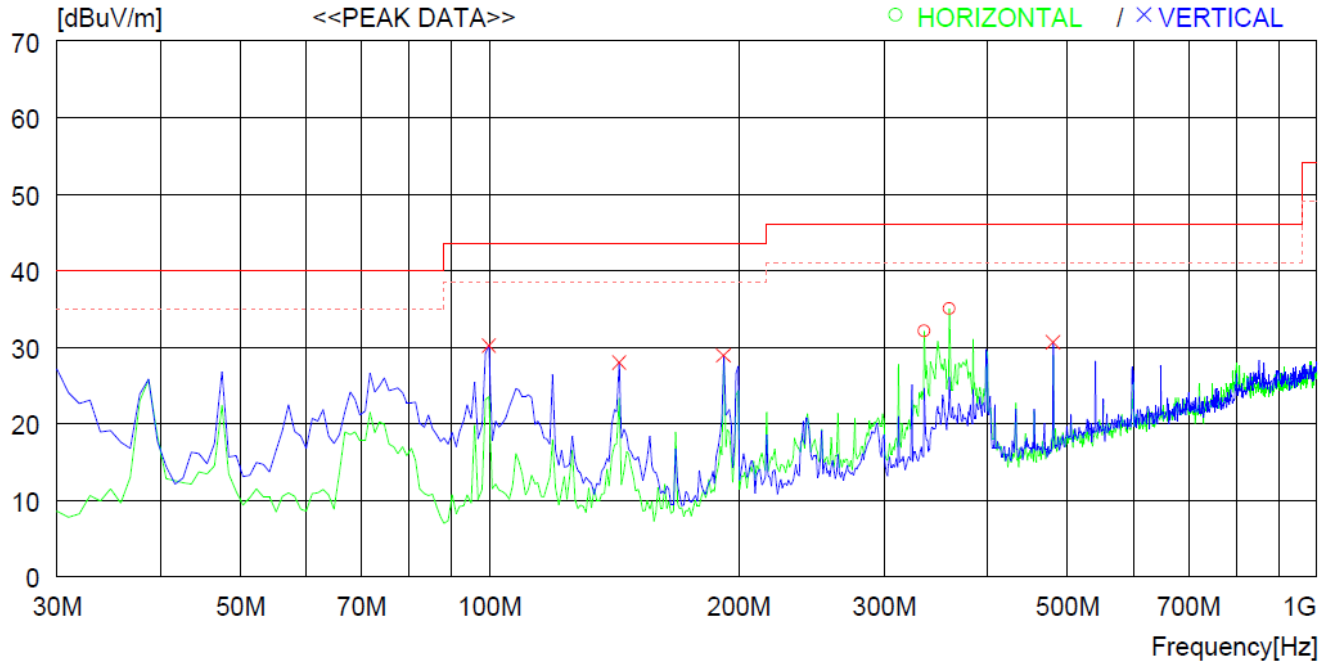
Humidity Level : 45 % R.H. Temperature: 21 ℃

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

Result : PASSED

EUT : BT(V4.2) + WLAN(802.11a/b/g/n/ac) 2x2 MIMO Module Date: March 23, 2016

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



No.	FREQ [MHz]	READING PEAK [dBuV]	ANT FACTOR [dB]	LOSS [dB]	GAIN [dB]	RESULT [dBuV/m]	LIMIT [dBuV/m]	MARGIN [dB]	ANTENNA [cm]	TABLE [DEG]
----- Horizontal ------										
1	335.550	45.8	14.4	4.9	33.0	32.1	46.0	13.9	100	340
2	359.800	48.0	15.0	5.1	33.1	35.0	46.0	11	100	226
----- Vertical ------										
3	99.840	48.2	12.4	2.7	33.1	30.2	43.5	13.3	135	359
4	143.490	49.4	8.5	3.2	33.1	28.0	43.5	15.5	100	190
5	191.990	47.3	10.9	3.7	33.0	28.9	43.5	14.6	135	359
6	480.081	41.3	16.6	5.9	33.2	30.6	46.0	15.4	100	168

Tested by: Tae-Ho, Kim / Senior Engineer

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

13.6 Test data for Above 1 GHz

13.6.1 Test data for Frequency U-NII-1

13.6.1.1 Test data for 802.11a RLAN Mode

-. Test Date : March 23, 2017

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

-. Video bandwidth : 1 MHz for Peak Mode, 10 Hz for Average Mode

-. Frequency range : 1 GHz ~ 40 GHz

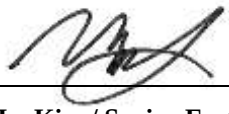
-. Measurement distance : 3 m

-.Operating mode : Transmitting mode

Frequency (MHz)	Reading (dBμV)	Detector Mode	Ant. Pol. (H/V)	Ant. Factor	Cable Loss	Amp Gain	Total (dBμV/m)	Limits (dBμV/m)	Margin (dB)
Low Channel									
10 360.00	26.31	Peak	H	39.66	26.38	41.13	51.22	68.20	16.98
	25.75	Peak	V				50.66	68.20	17.54
Middle Channel									
10 400.00	27.39	Peak	H	39.84	26.74	41.27	52.70	68.20	15.50
	25.94	Peak	V				51.25	68.20	16.95
High Channel									
10 480.00	26.08	Peak	H	40.02	27.09	41.41	51.78	68.20	16.42
	25.88	Peak	V				51.58	68.20	16.62

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

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



Tested by: Tae-Ho, Kim / Senior Engineer

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

13.6.1.2 Test data for 802.11n_HT20 RLAN Mode

-. Test Date : March 23, 2017

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

-. Video bandwidth : 1 MHz for Peak Mode, 10 Hz for Average Mode

-. Frequency range : 1 GHz ~ 40 GHz

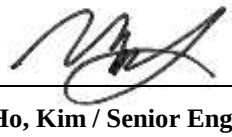
-. Measurement distance : 3 m

-.Operating mode : Transmitting mode

Frequency (MHz)	Reading (dBμV)	Detector Mode	Ant. Pol. (H/V)	Ant. Factor	Cable Loss	Amp Gain	Total (dBμV/m)	Limits (dBμV/m)	Margin (dB)
Low Channel									
10 360.00	25.11	Peak	H	39.66	26.38	41.13	50.02	68.20	18.18
	24.35	Peak	V				49.26	68.20	18.94
Middle Channel									
10 400.00	26.59	Peak	H	39.84	26.74	41.27	51.90	68.20	16.30
	25.19	Peak	V				50.50	68.20	17.70
High Channel									
10 480.00	24.78	Peak	H	40.02	27.09	41.41	50.48	68.20	17.72
	24.09	Peak	V				49.79	68.20	18.41

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

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



Tested by: Tae-Ho, Kim / Senior Engineer

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13.6.1.3Test data for 802.11n_HT40 RLAN Mode

-. Test Date : March 23, 2017

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

-. Video bandwidth : 1 MHz for Peak Mode, 10 Hz for Average Mode

-. Frequency range : 1 GHz ~ 40 GHz

-. Measurement distance : 3 m

-.Operating mode : Transmitting mode

Frequency (MHz)	Reading (dBμV)	Detector Mode	Ant. Pol. (H/V)	Ant. Factor	Cable Loss	Amp Gain	Total (dBμV/m)	Limits (dBμV/m)	Margin (dB)
Low Channel									
10 380.00	26.71	Peak	H	39.93	26.88	41.27	52.25	68.20	15.95
	24.45	Peak	V				49.99	68.20	18.21
High Channel									
10 460.00	26.79	Peak	H	40.02	27.05	41.41	52.45	68.20	15.75
	26.09	Peak	V				51.75	68.20	16.45

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

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

Tested by: Tae-Ho, Kim / Senior Engineer

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

13.6.1.4 Test data for 802.11ac_HT80 RLAN Mode

-. Test Date : March 23, 2017

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

-. Video bandwidth : 1 MHz for Peak Mode, 10 Hz for Average Mode

-. Frequency range : 1 GHz ~ 40 GHz

-. Measurement distance : 3 m

-.Operating mode : Transmitting mode

Frequency (MHz)	Reading (dBμV)	Detector Mode	Ant. Pol. (H/V)	Ant. Factor	Cable Loss	Amp Gain	Total (dBμV/m)	Limits (dBμV/m)	Margin (dB)
Middle Channel									
10 420.00	25.58	Peak	H	39.98	26.97	41.34	51.19	68.20	17.01
	26.09	Peak	V				51.70	68.20	16.50

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

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

Tested by: Tae-Ho, Kim / Senior Engineer

13.6.2 Test data for Frequency U-NII-2A

13.6.2.1 Test data for 802.11a RLAN Mode

-. Test Date : March 23, 2017

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

-. Video bandwidth : 1 MHz for Peak Mode, 10 Hz for Average Mode

-. Frequency range : 1 GHz ~ 40 GHz

-. Measurement distance : 3 m

-.Operating mode : Transmitting mode

Frequency (MHz)	Reading (dBµV)	Detector Mode	Ant. Pol. (H/V)	Ant. Factor	Cable Loss	Amp Gain	Total (dBµV/m)	Limits (dBµV/m)	Margin (dB)
Low Channel									
10 520.00	27.04	Peak	H	40.02	27.04	41.41	52.69	68.20	15.51
	25.06	Peak	V				50.71	68.20	17.49
Middle Channel									
10 600.00	26.37	Peak	H	40.11	27.21	41.29	52.40	73.98	21.58
	17.91	Average	H				43.94	53.98	10.04
	25.74	Peak	V				51.77	73.98	22.21
	15.93	Average	V				41.96	53.98	12.02
High Channel									
10 640.00	26.34	Peak	H	40.30	27.37	41.16	52.85	73.98	21.13
	17.01	Average	H				43.52	53.98	10.46
	26.58	Peak	V				53.09	73.98	20.89
	17.49	Average	V				44.00	53.98	9.98

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

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

Tested by: Tae-Ho, Kim / Senior Engineer

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

13.6.2.2 Test data for 802.11n_HT20 RLAN Mode

-. Test Date : March 23, 2017

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

-. Video bandwidth : 1 MHz for Peak Mode, 10 Hz for Average Mode

-. Frequency range : 1 GHz ~ 40 GHz

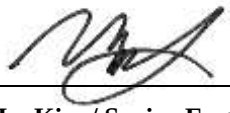
-. Measurement distance : 3 m

-.Operating mode : Transmitting mode

Frequency (MHz)	Reading (dBμV)	Detector Mode	Ant. Pol. (H/V)	Ant. Factor	Cable Loss	Amp Gain	Total (dBμV/m)	Limits (dBμV/m)	Margin (dB)
Low Channel									
10 520.00	27.54	Peak	H	40.02	27.04	41.41	53.19	68.20	15.01
	24.66	Peak	V				50.31	68.20	17.89
Middle Channel									
10 600.00	27.67	Peak	H	40.11	27.21	41.29	53.70	73.98	20.28
	18.61	Average	H				44.64	53.98	9.34
	26.54	Peak	V				52.57	73.98	21.41
	15.63	Average	V				41.66	53.98	12.32
High Channel									
10 640.00	27.34	Peak	H	40.30	27.37	41.16	53.85	73.98	20.13
	18.11	Average	H				44.62	53.98	9.36
	26.18	Peak	V				52.69	73.98	21.29
	17.89	Average	V				44.40	53.98	9.58

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

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



Tested by: Tae-Ho, Kim / Senior Engineer

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

13.6.2.3 Test data for 802.11n_HT40 RLAN Mode

-. Test Date : March 23, 2017

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

-. Video bandwidth : 1 MHz for Peak Mode, 10 Hz for Average Mode

-. Frequency range : 1 GHz ~ 40 GHz

-. Measurement distance : 3 m

-.Operating mode : Transmitting mode

Frequency (MHz)	Reading (dBμV)	Detector Mode	Ant. Pol. (H/V)	Ant. Factor	Cable Loss	Amp Gain	Total (dBμV/m)	Limits (dBμV/m)	Margin (dB)
Low Channel									
10 540.00	26.84	Peak	H	40.02	27.04	41.41	52.49	68.20	15.71
	26.76	Peak	V				52.41	68.20	15.79
High Channel									
10 620.00	26.57	Peak	H	40.16	27.20	41.29	52.64	73.98	21.34
	18.51	Average	H				44.58	53.98	9.40
	26.94	Peak	V				53.01	73.98	20.97
	18.23	Average	V				44.30	53.98	9.68

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

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

Tested by: Tae-Ho, Kim / Senior Engineer

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

13.6.2.4 Test data for 802.11ac_HT80 RLAN Mode

-. Test Date : March 23, 2017

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

-. Video bandwidth : 1 MHz for Peak Mode, 10 Hz for Average Mode

-. Frequency range : 1 GHz ~ 40 GHz

-. Measurement distance : 3 m

-.Operating mode : Transmitting mode

Frequency (MHz)	Reading (dBμV)	Detector Mode	Ant. Pol. (H/V)	Ant. Factor	Cable Loss	Amp Gain	Total (dBμV/m)	Limits (dBμV/m)	Margin (dB)
Middle Channel									
10 580.00	27.22	Peak	H	40.10	27.12	41.35	53.09	68.20	15.11
	26.84	Peak	V				52.71	68.20	15.49

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

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

Tested by: Tae-Ho, Kim / Senior Engineer

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

13.6.3 Test data for Frequency U-NII-2C

13.6.3.1 Test data for 802.11a RLAN Mode

-. Test Date : March 23, 2017

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

-. Video bandwidth : 1 MHz for Peak Mode, 10 Hz for Average Mode

-. Frequency range : 1 GHz ~ 40 GHz

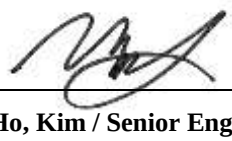
-. Measurement distance : 3 m

-.Operating mode : Transmitting mode

Frequency (MHz)	Reading (dBμV)	Detector Mode	Ant. Pol. (H/V)	Ant. Factor	Cable Loss	Amp Gain	Total (dBμV/m)	Limits (dBμV/m)	Margin (dB)
Low Channel									
11 000.00	24.76	Peak	H	40.37	27.70	40.90	51.93	73.98	22.05
	20.35	Average	H				47.52	53.98	6.46
	25.75	Peak	V				52.92	73.98	21.06
	19.68	Average	V				46.85	53.98	7.13
Middle Channel									
11 160.00	25.28	Peak	H	40.07	28.32	40.75	52.92	73.98	21.06
	18.60	Average	H				46.24	53.98	7.74
	24.67	Peak	V				52.31	73.98	21.67
	18.24	Average	V				45.88	53.98	8.10
High Channel									
11 440.00	25.43	Peak	H	39.78	28.94	40.60	53.55	73.98	20.43
	18.04	Average	H				46.16	53.98	7.82
	24.65	Peak	V				52.77	73.98	21.21
	17.64	Average	V				45.76	53.98	8.22

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

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



Tested by: Tae-Ho, Kim / Senior Engineer

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13.6.3.2 Test data for 802.11n_HT20 RLAN Mode

-. Test Date : March 23, 2017

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

-. Video bandwidth : 1 MHz for Peak Mode, 10 Hz for Average Mode

-. Frequency range : 1 GHz ~ 40 GHz

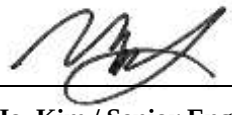
-. Measurement distance : 3 m

-.Operating mode : Transmitting mode

Frequency (MHz)	Reading (dBμV)	Detector Mode	Ant. Pol. (H/V)	Ant. Factor	Cable Loss	Amp Gain	Total (dBμV/m)	Limits (dBμV/m)	Margin (dB)
Low Channel									
11 000.00	27.36	Peak	H	40.37	27.70	40.90	54.53	73.98	19.45
	19.53	Average	H				46.70	53.98	7.28
	26.73	Peak	V				53.90	73.98	20.08
	18.04	Average	V				45.21	53.98	8.77
Middle Channel									
11 160.00	27.28	Peak	H	40.07	28.32	40.75	54.92	73.98	19.06
	19.24	Average	H				46.88	53.98	7.10
	25.76	Peak	V				53.40	73.98	20.58
	18.87	Average	V				46.51	53.98	7.47
High Channel									
11 440.00	27.28	Peak	H	39.78	28.94	40.60	55.40	73.98	18.58
	19.64	Average	H				47.76	53.98	6.22
	25.82	Peak	V				53.94	73.98	20.04
	18.53	Average	V				46.65	53.98	7.33

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

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



Tested by: Tae-Ho, Kim / Senior Engineer

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

13.6.3.3 Test data for 802.11n_HT40 RLAN Mode

-. Test Date : March 23, 2017

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

-. Video bandwidth : 1 MHz for Peak Mode, 10 Hz for Average Mode

-. Frequency range : 1 GHz ~ 40 GHz

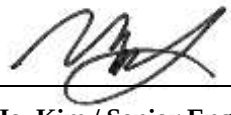
-. Measurement distance : 3 m

-.Operating mode : Transmitting mode

Frequency (MHz)	Reading (dBμV)	Detector Mode	Ant. Pol. (H/V)	Ant. Factor	Cable Loss	Amp Gain	Total (dBμV/m)	Limits (dBμV/m)	Margin (dB)
Low Channel									
11 020.00	28.24	Peak	H	40.37	27.70	40.90	55.41	73.98	18.57
	18.62	Average	H				45.79	53.98	8.19
	25.56	Peak	V				52.73	73.98	21.25
	18.25	Average	V				45.42	53.98	8.56
Middle Channel									
11 100.00	27.58	Peak	H	40.25	27.95	40.85	54.93	73.98	19.05
	18.57	Average	H				45.92	53.98	8.06
	26.50	Peak	V				53.85	73.98	20.13
	17.62	Average	V				44.97	53.98	9.01
High Channel									
11 420.00	27.24	Peak	H	39.78	28.94	40.66	55.30	73.98	18.68
	17.98	Average	H				46.04	53.98	7.94
	26.82	Peak	V				54.88	73.98	19.10
	17.24	Average	V				45.30	53.98	8.68

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

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



Tested by: Tae-Ho, Kim / Senior Engineer

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13.6.3.4 Test data for 802.11ac_HT80 RLAN Mode

-. Test Date : March 23, 2017

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

-. Video bandwidth : 1 MHz for Peak Mode, 10 Hz for Average Mode

-. Frequency range : 1 GHz ~ 40 GHz

-. Measurement distance : 3 m

-.Operating mode : Transmitting mode

Frequency (MHz)	Reading (dBμV)	Detector Mode	Ant. Pol. (H/V)	Ant. Factor	Cable Loss	Amp Gain	Total (dBμV/m)	Limits (dBμV/m)	Margin (dB)
Low Channel									
11 060.00	27.89	Peak	H	40.37	27.70	40.66	55.30	73.98	18.68
	18.34	Average	H				45.75	53.98	8.23
	26.04	Peak	V				53.45	73.98	20.53
	17.68	Average	V				45.09	53.98	8.89
Middle Channel									
11 380.00	28.34	Peak	H	39.90	28.69	40.71	56.22	73.98	17.76
	17.68	Average	H				45.56	53.98	8.42
	27.83	Peak	V				55.71	73.98	18.27
	17.32	Average	V				45.20	53.98	8.78

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

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

Tested by: Tae-Ho, Kim / Senior Engineer

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

13.6.4 Test data for Frequency U-NII-3

13.6.4.1 Test data for 802.11a RLAN Mode

-. Test Date : March 23, 2017

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

-. Video bandwidth : 1 MHz for Peak Mode, 10 Hz for Average Mode

-. Frequency range : 1 GHz ~ 40 GHz

-. Measurement distance : 3 m

-.Operating mode : Transmitting mode

Frequency (MHz)	Reading (dBµV)	Detector Mode	Ant. Pol. (H/V)	Ant. Factor	Cable Loss	Amp Gain	Total (dBµV/m)	Limits (dBµV/m)	Margin (dB)
Low Channel									
11 490.00	25.48	Peak	H	40.07	28.32	40.78	53.09	73.98	20.89
	16.87	Average	H				44.48	53.98	9.50
	25.04	Peak	V				52.65	73.98	21.33
	16.54	Average	V				44.15	53.98	9.83
Middle Channel									
11 570.00	26.43	Peak	H	39.78	28.94	40.66	54.49	73.98	19.49
	16.52	Average	H				44.58	53.98	9.40
	26.24	Peak	V				54.30	73.98	19.68
	16.42	Average	V				44.48	53.98	9.50
High Channel									
11 650.00	25.86	Peak	H	39.49	29.56	40.72	54.19	73.98	19.79
	17.02	Average	H				45.35	53.98	8.63
	25.24	Peak	V				53.57	73.98	20.41
	16.89	Average	V				45.22	53.98	8.76

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

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

Tested by: Tae-Ho, Kim / Senior Engineer

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

13.6.4.2 Test data for 802.11n_HT20 RLAN Mode

-. Test Date : March 23, 2017

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

-. Video bandwidth : 1 MHz for Peak Mode, 10 Hz for Average Mode

-. Frequency range : 1 GHz ~ 40 GHz

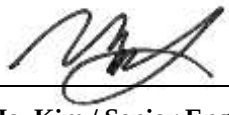
-. Measurement distance : 3 m

-.Operating mode : Transmitting mode

Frequency (MHz)	Reading (dBμV)	Detector Mode	Ant. Pol. (H/V)	Ant. Factor	Cable Loss	Amp Gain	Total (dBμV/m)	Limits (dBμV/m)	Margin (dB)
Low Channel									
11 490.00	26.68	Peak	H	40.07	28.32	40.78	54.29	73.98	19.69
	16.92	Average	H				44.53	53.98	9.45
	25.48	Peak	V				53.09	73.98	20.89
	17.72	Average	V				45.33	53.98	8.65
Middle Channel									
11 570.00	26.89	Peak	H	39.78	28.94	40.66	54.95	73.98	19.03
	18.43	Average	H				46.49	53.98	7.49
	25.56	Peak	V				53.62	73.98	20.36
	19.04	Average	V				47.10	53.98	6.88
High Channel									
11 650.00	27.28	Peak	H	39.49	29.56	40.72	55.61	73.98	18.37
	19.23	Average	H				47.56	53.98	6.42
	25.68	Peak	V				54.01	73.98	19.97
	17.47	Average	V				45.80	53.98	8.18

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

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



Tested by: Tae-Ho, Kim / Senior Engineer

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13.6.4.3 Test data for 802.11n_HT40 RLAN Mode

-. Test Date : March 23, 2017

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

-. Video bandwidth : 1 MHz for Peak Mode, 10 Hz for Average Mode

-. Frequency range : 1 GHz ~ 40 GHz

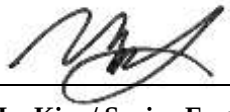
-. Measurement distance : 3 m

-.Operating mode : Transmitting mode

Frequency (MHz)	Reading (dBμV)	Detector Mode	Ant. Pol. (H/V)	Ant. Factor	Cable Loss	Amp Gain	Total (dBμV/m)	Limits (dBμV/m)	Margin (dB)
Low Channel									
11 510.00	28.14	Peak	H	39.78	28.94	40.66	56.20	73.98	17.78
	17.24	Average	H				45.30	53.98	8.68
	24.83	Peak	V				52.89	73.98	21.09
	18.04	Average	V				46.10	53.98	7.88
High Channel									
11 590.00	27.14	Peak	H	39.66	29.19	40.69	55.30	73.98	18.68
	18.34	Average	H				46.50	53.98	7.48
	26.49	Peak	V				54.65	73.98	19.33
	17.95	Average	V				46.11	53.98	7.87

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

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



Tested by: Tae-Ho, Kim / Senior Engineer

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

13.6.4.4 Test data for 802.11ac_HT80 RLAN Mode

-. Test Date : March 23, 2017

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

-. Video bandwidth : 1 MHz for Peak Mode, 10 Hz for Average Mode

-. Frequency range : 1 GHz ~ 40 GHz

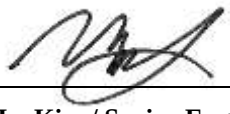
-. Measurement distance : 3 m

-.Operating mode : Transmitting mode

Frequency (MHz)	Reading (dBμV)	Detector Mode	Ant. Pol. (H/V)	Ant. Factor	Cable Loss	Amp Gain	Total (dBμV/m)	Limits (dBμV/m)	Margin (dB)
Middle Channel									
11 550.00	27.84	Peak	H	39.78	28.94	40.66	55.90	73.98	18.08
	18.63	Average	H				46.69	53.98	7.29
	25.43	Peak	V				53.49	73.98	20.49
	17.67	Average	V				45.73	53.98	8.25

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

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



Tested by: Tae-Ho, Kim / Senior Engineer

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14. RADIATED RESTRICTED BAND EDGE MEASUREMENTS

14.1 Operating environment

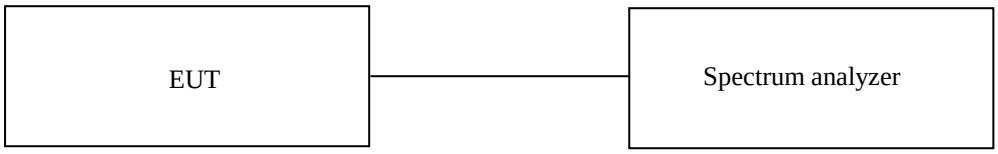
Temperature : 21 ℃

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 equipment used

	Model Number	Manufacturer	Description	Serial Number	Last Cal.(Interval)
■ -	FSV40	Rohde & Schwarz	Signal Analyzer	101009	April 05, 2017 (1Y)
■ -	ESCI	Rohde & Schwarz	Test Receiver	101012	Nov. 01, 2016 (1Y)
■ -	310N	Sonoma Instrument	Pre-Amplifier	312544	Apr. 05, 2017 (1Y)
■ -	SCU-18	Rohde & Schwarz	Pre-Amplifier	102209	May 31, 2016 (1Y)
■ -	DT3000	Innco System	Turn Table	930611	N/A
■ -	MA4000-EP	Innco System	Antenna Master	3320611	N/A
■ -	VULB9163	Schwarzbeck	TRILOG Broadband Antenna	9163-421	Apr. 15, 2016 (1Y)
■ -	BBHA9120D	Schwarzbeck	Horn Antenna	BBHA9120D295	Aug. 31, 2015 (2Y)
■ -	BBHA9170	Schwarzbeck	Horn Antenna	BBHA9170178	Aug. 31, 2015 (2Y)

All test equipment used is calibrated on a regular basis.

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14.4 Test data for Frequency U-NII-1

14.4.1 Test data for 802.11a RLAN Mode

-. Test Date : March 23, 2017

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

-. Video bandwidth : 1 MHz for Peak Mode, 10 Hz for Average Mode

-. Measurement distance : 3 m

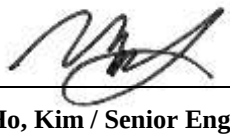
-. Result : Pass

Frequency (MHz)	Reading (dBµV)	Detector Mode	Ant. Pol. (H/V)	Ant. Factor	Cable Loss	Amp Gain	Total (dBµV/m)	Limits (dBµV/m)	Margin (dB)
5 150.00	58.19	Peak	H	31.28	12.65	40.70	61.42	74.00	12.58
	44.71	Average	H				47.94	54.00	6.06
	50.71	Peak	V				53.94	74.00	20.06
	41.87	Average	V				45.10	54.00	8.90

Tabulated test data for Restricted Band

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

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



Tested by: Tae-Ho, Kim / Senior Engineer

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14.4.2 Test data for 802.11n_HT20 RLAN Mode

-. Test Date : March 23, 2017

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

-. Video bandwidth : 1 MHz for Peak Mode, 10 Hz for Average Mode

-. Measurement distance : 3 m

-. Result : Pass

Frequency (MHz)	Reading (dBµV)	Detector Mode	Ant. Pol. (H/V)	Ant. Factor	Cable Loss	Amp Gain	Total (dBµV/m)	Limits (dBµV/m)	Margin (dB)
5 150.00	58.29	Peak	H	31.28	12.65	40.70	61.52	74.00	12.48
	46.50	Average	H				49.73	54.00	4.27
	50.81	Peak	V				54.04	74.00	19.96
	42.07	Average	V				45.30	54.00	8.70

Tabulated test data for Restricted Band

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

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

Tested by: Tae-Ho, Kim / Senior Engineer

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

14.4.3 Test data for 802.11n_HT40 RLAN Mode

-. Test Date : March 23, 2017

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

-. Video bandwidth : 1 MHz for Peak Mode, 10 Hz for Average Mode

-. Measurement distance : 3 m

-. Result : Pass

Frequency (MHz)	Reading (dBµV)	Detector Mode	Ant. Pol. (H/V)	Ant. Factor	Cable Loss	Amp Gain	Total (dBµV/m)	Limits (dBµV/m)	Margin (dB)
5 150.00	58.19	Peak	H	31.28	12.65	40.70	61.42	74.00	12.58
	45.71	Average	H				48.94	54.00	5.06
	50.91	Peak	V				54.14	74.00	19.86
	39.47	Average	V				42.70	54.00	11.30

Tabulated test data for Restricted Band

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

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

Tested by: Tae-Ho, Kim / Senior Engineer

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

14.4.4 Test data for 802.11ac_HT80 RLAN Mode

-. Test Date : March 23, 2017

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

-. Video bandwidth : 1 MHz for Peak Mode, 10 Hz for Average Mode

-. Measurement distance : 3 m

-. Result : Pass

Frequency (MHz)	Reading (dBµV)	Detector Mode	Ant. Pol. (H/V)	Ant. Factor	Cable Loss	Amp Gain	Total (dBµV/m)	Limits (dBµV/m)	Margin (dB)
5 150.00	56.69	Peak	H	31.28	12.65	40.70	59.92	74.00	14.08
	47.41	Average	H				50.64	54.00	3.36
	49.21	Peak	V				52.44	74.00	21.56
	41.07	Average	V				44.30	54.00	9.70

Tabulated test data for Restricted Band

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

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

Tested by: Tae-Ho, Kim / Senior Engineer

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

14.5 Test data for Frequency U-NII-2A

14.5.1 Test data for 802.11a RLAN Mode

-. Test Date : March 23, 2017

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

-. Video bandwidth : 1 MHz for Peak Mode, 10 Hz for Average Mode

-. Measurement distance : 3 m

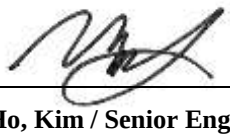
-. Result : Pass

Frequency (MHz)	Reading (dBµV)	Detector Mode	Ant. Pol. (H/V)	Ant. Factor	Cable Loss	Amp Gain	Total (dBµV/m)	Limits (dBµV/m)	Margin (dB)
5 350.00	57.49	Peak	H	31.50	12.33	40.87	60.45	74.00	13.55
	46.51	Average	H				49.47	54.00	4.53
	49.01	Peak	V				51.97	74.00	22.03
	41.87	Average	V				44.83	54.00	9.17

Tabulated test data for Restricted Band

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

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



Tested by: Tae-Ho, Kim / Senior Engineer

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14.5.2 Test data for 802.11n_HT20 RLAN Mode

-. Test Date : March 23, 2017

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

-. Video bandwidth : 1 MHz for Peak Mode, 10 Hz for Average Mode

-. Measurement distance : 3 m

-. Result : Pass

Frequency (MHz)	Reading (dBµV)	Detector Mode	Ant. Pol. (H/V)	Ant. Factor	Cable Loss	Amp Gain	Total (dBµV/m)	Limits (dBµV/m)	Margin (dB)
5 350.00	56.74	Peak	H	31.50	12.33	40.87	59.70	74.00	14.30
	45.84	Average	H				48.80	54.00	5.20
	49.91	Peak	V				52.87	74.00	21.13
	39.97	Average	V				42.93	54.00	11.07

Tabulated test data for Restricted Band

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

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

Tested by: Tae-Ho, Kim / Senior Engineer

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14.5.3 Test data for 802.11n_HT40 RLAN Mode

-. Test Date : March 23, 2017

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

-. Video bandwidth : 1 MHz for Peak Mode, 10 Hz for Average Mode

-. Measurement distance : 3 m

-. Result : Pass

Frequency (MHz)	Reading (dBµV)	Detector Mode	Ant. Pol. (H/V)	Ant. Factor	Cable Loss	Amp Gain	Total (dBµV/m)	Limits (dBµV/m)	Margin (dB)
5 350.00	58.64	Peak	H	31.50	12.33	40.87	61.60	74.00	12.40
	47.51	Average	H				50.47	54.00	3.53
	49.81	Peak	V				52.77	74.00	21.23
	39.37	Average	V				42.33	54.00	11.67

Tabulated test data for Restricted Band

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

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

Tested by: Tae-Ho, Kim / Senior Engineer

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14.5.4 Test data for 802.11ac_HT80 RLAN Mode

-. Test Date : March 23, 2017

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

-. Video bandwidth : 1 MHz for Peak Mode, 10 Hz for Average Mode

-. Measurement distance : 3 m

-. Result : Pass

Frequency (MHz)	Reading (dBµV)	Detector Mode	Ant. Pol. (H/V)	Ant. Factor	Cable Loss	Amp Gain	Total (dBµV/m)	Limits (dBµV/m)	Margin (dB)
5 350.00	56.51	Peak	H	31.50	12.33	40.87	59.47	74.00	14.53
	46.41	Average	H				49.37	54.00	4.63
	50.71	Peak	V				53.67	74.00	20.33
	41.67	Average	V				44.63	54.00	9.37

Tabulated test data for Restricted Band

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

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

Tested by: Tae-Ho, Kim / Senior Engineer

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

14.6 Test data for Frequency U-NII-2C

14.6.1 Test data for 802.11a RLAN Mode

-. Test Date : March 23, 2017

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

-. Video bandwidth : 1 MHz for Peak Mode, 10 Hz for Average Mode

-. Measurement distance : 3 m

-. Result : Pass

Frequency (MHz)	Reading (dBµV)	Detector Mode	Ant. Pol. (H/V)	Ant. Factor	Cable Loss	Amp Gain	Total (dBµV/m)	Limits (dBµV/m)	Margin (dB)
5 460.00	48.16	Peak	H	31.60	12.17	40.94	50.99	74.00	23.01
	38.16	Average	H				40.99	54.00	13.01
	47.61	Peak	V				50.44	74.00	23.56
	37.69	Average	V				40.52	54.00	13.48
5 470.00	53.94	Peak	H				56.77	68.20	11.43
	49.64	Peak	V				52.47	68.20	15.73

Tabulated test data for Restricted Band

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

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

Tested by: Tae-Ho, Kim / Senior Engineer

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

14.6.2 Test data for 802.11n_HT20 RLAN Mode

-. Test Date : March 23, 2017

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

-. Video bandwidth : 1 MHz for Peak Mode, 10 Hz for Average Mode

-. Measurement distance : 3 m

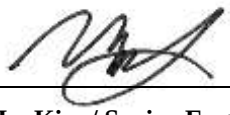
-. Result : Pass

Frequency (MHz)	Reading (dBµV)	Detector Mode	Ant. Pol. (H/V)	Ant. Factor	Cable Loss	Amp Gain	Total (dBµV/m)	Limits (dBµV/m)	Margin (dB)
5 460.00	46.66	Peak	H	31.60	12.17	40.94	49.49	74.00	24.51
	38.96	Average	H				41.79	54.00	12.21
	49.01	Peak	V				51.84	74.00	22.16
	38.84	Average	V				41.67	54.00	12.33
5 470.00	54.04	Peak	H				56.87	68.20	11.33
	49.29	Peak	V				52.12	68.20	16.08

Tabulated test data for Restricted Band

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

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



Tested by: Tae-Ho, Kim / Senior Engineer

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14.6.3 Test data for 802.11n_HT40 RLAN Mode

-. Test Date : March 23, 2017

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

-. Video bandwidth : 1 MHz for Peak Mode, 10 Hz for Average Mode

-. Measurement distance : 3 m

-. Result : Pass

Frequency (MHz)	Reading (dBµV)	Detector Mode	Ant. Pol. (H/V)	Ant. Factor	Cable Loss	Amp Gain	Total (dBµV/m)	Limits (dBµV/m)	Margin (dB)
5 460.00	48.06	Peak	H	31.60	12.17	40.94	50.89	74.00	23.11
	39.56	Average	H				42.39	54.00	11.61
	47.51	Peak	V				50.34	74.00	23.66
	36.54	Average	V				39.37	54.00	14.63
5 470.00	52.64	Peak	H				55.47	68.20	12.73
	48.39	Peak	V				51.22	68.20	16.98

Tabulated test data for Restricted Band

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

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

Tested by: Tae-Ho, Kim / Senior Engineer

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

14.6.4 Test data for 802.11ac_HT80 RLAN Mode

-. Test Date : March 23, 2017

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

-. Video bandwidth : 1 MHz for Peak Mode, 10 Hz for Average Mode

-. Measurement distance : 3 m

-. Result : Pass

Frequency (MHz)	Reading (dBµV)	Detector Mode	Ant. Pol. (H/V)	Ant. Factor	Cable Loss	Amp Gain	Total (dBµV/m)	Limits (dBµV/m)	Margin (dB)
5 460.00	49.36	Peak	H	31.60	12.17	40.94	52.19	74.00	21.81
	38.56	Average	H				41.39	54.00	12.61
	48.51	Peak	V				51.34	74.00	22.66
	38.44	Average	V				41.27	54.00	12.73
5 470.00	53.84	Peak	H				56.67	68.20	11.53
	50.19	Peak	V				53.02	68.20	15.18

Tabulated test data for Restricted Band

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

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

Tested by: Tae-Ho, Kim / Senior Engineer

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14.7 Test data for Frequency U-NII-3

14.7.1 Test data for 802.11a RLAN Mode

-. Test Date : March 23, 2017

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

-. Video bandwidth : 1 MHz for Peak Mode, 10 Hz for Average Mode

-. Measurement distance : 3 m

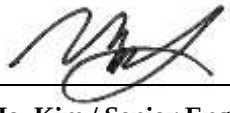
-. Result : Pass

Frequency (MHz)	Reading (dBµV)	Detector Mode	Ant. Pol. (H/V)	Ant. Factor	Cable Loss	Amp Gain	Total (dBµV/m)	Limits (dBµV/m)	Margin (dB)
Low Channel									
5 725.00	68.20	Peak	H	32.17	12.09	40.96	71.50	78.20	6.70
	55.10	Peak	V				58.40	78.20	19.80
5 715.00	54.09	Peak	H				57.39	68.20	10.81
	44.60	Peak	V				47.90	68.20	20.30
High Channel									
5 850.00	69.77	Peak	H	32.17	12.09	40.96	73.07	78.20	5.13
	56.21	Peak	V				59.51	78.20	18.69
5 860.00	53.17	Peak	H				56.47	68.20	11.73
	43.61	Peak	V				46.91	68.20	21.29

Tabulated test data for Restricted Band

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

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



Tested by: Tae-Ho, Kim / Senior Engineer

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14.7.2 Test data for 802.11n_HT20 RLAN Mode

-. Test Date : March 23, 2017

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

-. Video bandwidth : 1 MHz for Peak Mode, 10 Hz for Average Mode

-. Measurement distance : 3 m

-. Result : Pass

Frequency (MHz)	Reading (dBμV)	Detector Mode	Ant. Pol. (H/V)	Ant. Factor	Cable Loss	Amp Gain	Total (dBμV/m)	Limits (dBμV/m)	Margin (dB)
Low Channel									
5 725.00	67.00	Peak	H	32.17	12.09	40.96	70.30	78.20	7.90
	55.10	Peak	V				58.40	78.20	19.80
5 715.00	54.39	Peak	H				57.69	68.20	10.51
	45.90	Peak	V				49.20	68.20	19.00
High Channel									
5 850.00	70.07	Peak	H	32.17	12.09	40.96	73.37	78.20	4.83
	57.11	Peak	V				60.41	78.20	17.79
5 860.00	52.97	Peak	H				56.27	68.20	11.93
	42.81	Peak	V				46.11	68.20	22.09

Tabulated test data for Restricted Band

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

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

Tested by: Tae-Ho, Kim / Senior Engineer

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14.7.3 Test data for 802.11n_HT40 RLAN Mode

-. Test Date : March 23, 2017

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

-. Video bandwidth : 1 MHz for Peak Mode, 10 Hz for Average Mode

-. Measurement distance : 3 m

-. Result : Pass

Frequency (MHz)	Reading (dBµV)	Detector Mode	Ant. Pol. (H/V)	Ant. Factor	Cable Loss	Amp Gain	Total (dBµV/m)	Limits (dBµV/m)	Margin (dB)
Low Channel									
5 725.00	69.40	Peak	H	32.17	12.09	40.96	72.70	78.20	5.50
	53.90	Peak	V				57.20	78.20	21.00
5 715.00	54.39	Peak	H				57.69	68.20	10.51
	44.40	Peak	V				47.70	68.20	20.50
High Channel									
5 850.00	68.27	Peak	H	32.17	12.09	40.96	71.57	78.20	6.63
	55.01	Peak	V				58.31	78.20	19.89
5 860.00	51.77	Peak	H				55.07	68.20	13.13
	43.21	Peak	V				46.51	68.20	21.69

Tabulated test data for Restricted Band

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

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

Tested by: Tae-Ho, Kim / Senior Engineer

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14.7.4 Test data for 802.11ac_HT80 RLAN Mode

-. Test Date : March 23, 2017

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

-. Video bandwidth : 1 MHz for Peak Mode, 10 Hz for Average Mode

-. Measurement distance : 3 m

-. Result : Pass

Frequency (MHz)	Reading (dBµV)	Detector Mode	Ant. Pol. (H/V)	Ant. Factor	Cable Loss	Amp Gain	Total (dBµV/m)	Limits (dBµV/m)	Margin (dB)
Low Channel									
5 725.00	68.50	Peak	H	32.17	12.09	40.96	71.80	78.20	6.40
	53.60	Peak	V				56.90	78.20	21.30
5 715.00	53.09	Peak	H				56.39	68.20	11.81
	43.50	Peak	V				46.80	68.20	21.40
High Channel									
5 850.00	70.97	Peak	H	32.17	12.09	40.90	74.33	78.20	3.87
	54.81	Peak	V				58.17	78.20	20.03
5 860.00	53.67	Peak	H				57.03	68.20	11.17
	42.11	Peak	V				45.47	68.20	22.73

Tabulated test data for Restricted Band

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

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

Tested by: Tae-Ho, Kim / Senior Engineer

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15. CONDUCTED EMISSION TEST

15.1 Operating environment

Temperature : (23 ~ 24) ℃

Relative humidity : (46 ~ 47) % 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 μH + 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 equipment used

	Model Number	Manufacturer	Description	Serial Number	Last Cal. (Interval)
■ -	ESPI	Rohde & Schwarz	Test Receiver	101012	Nov. 01, 2016 (1Y)
□ -	ESHS10	Rohde & Schwarz	Test Receiver	834467/007	Apr. 05, 2017 (1Y)
□ -	NSLK8128	Schwarzbeck	AMN	8128-216	Apr. 06, 2017 (1Y)
■ -	NSLK8126	Schwarzbeck	AMN	8126-404	Apr. 05, 2017 (1Y)
□ -	3825/2	EMCO	AMN	9109-1869	Apr. 06, 2017 (1Y)
■ -	3825/2	EMCO	AMN	9109-1867	Apr. 06, 2017 (1Y)

All test equipment used is calibrated on a regular basis.

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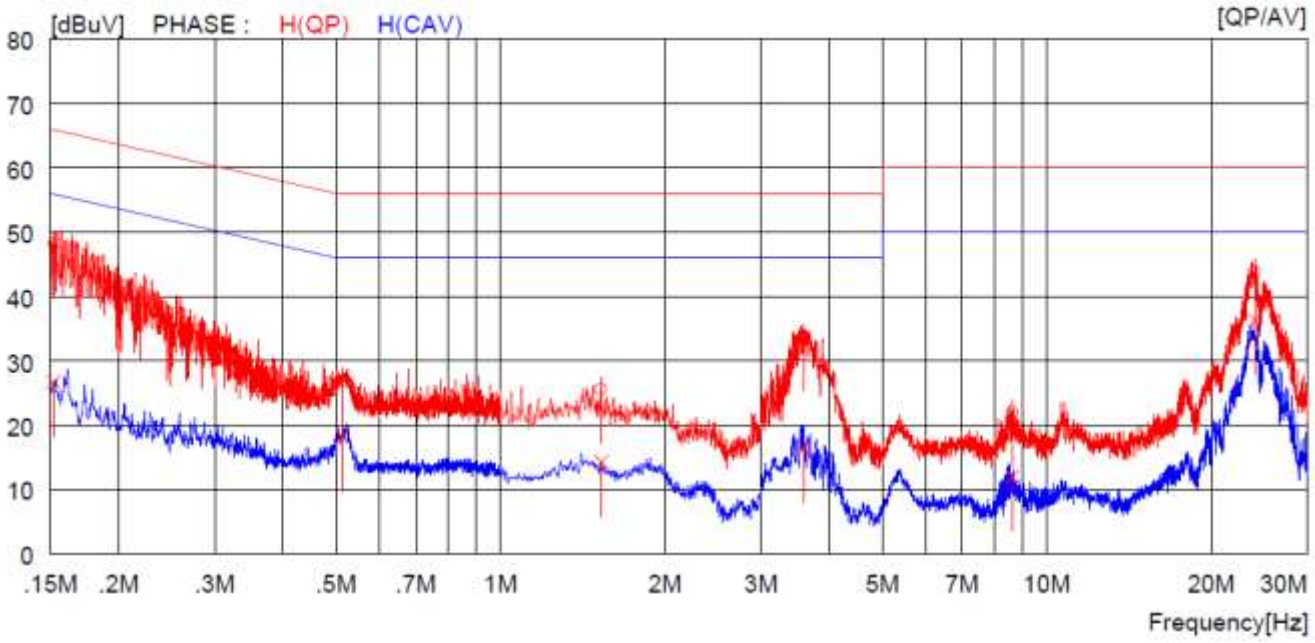
15.4 Test data

-. Test Date : March 27, 2017

-. Resolution bandwidth : 9 kHz

-. Frequency range : 0.15 MHz ~ 30 MHz

-. Tested Line : HOT LINE



NO	FREQ [MHz]	READING QP [dBuV]	READING AV [dBuV]	C.FACTOR [dB]	RESULT QP [dBuV]	RESULT AV [dBuV]	LIMIT QP [dBuV]	LIMIT AV [dBuV]	MARGIN QP [dBuV]	MARGIN AV [dBuV]	PHASE
1	0.15200	48.1	----	0.1	48.2	----	65.9	----	17.7	----	H(QP)
2	0.51200	26.7	----	0.1	26.8	----	56.0	----	29.2	----	H(QP)
3	1.52800	25.5	----	0.1	25.6	----	56.0	----	30.4	----	H(QP)
4	3.59200	33.6	----	0.1	33.7	----	56.0	----	22.3	----	H(QP)
5	8.64500	21.8	----	0.2	22.0	----	60.0	----	38.0	----	H(QP)
6	24.00000	43.4	----	0.5	43.9	----	60.0	----	16.1	----	H(QP)
7	0.15200	----	26.6	0.1	----	26.7	----	55.9	----	29.2	H(CAV)
8	0.51200	----	18.1	0.1	----	18.2	----	46.0	----	27.8	H(CAV)
9	1.52800	----	14.2	0.1	----	14.3	----	46.0	----	31.7	H(CAV)
10	3.59200	----	16.3	0.1	----	16.4	----	46.0	----	29.6	H(CAV)
11	8.64500	----	11.8	0.2	----	12.0	----	50.0	----	38.0	H(CAV)
12	24.00000	----	35.8	0.5	----	36.3	----	50.0	----	13.7	H(CAV)

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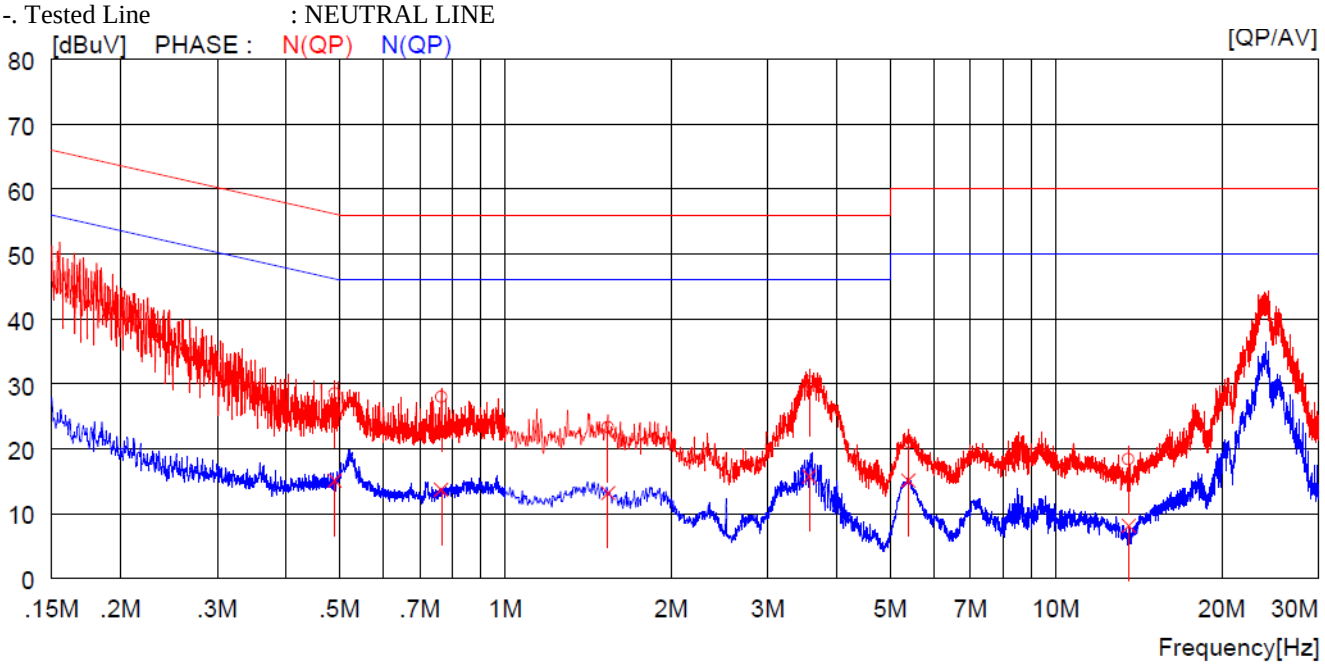
-. Tested Line : NEUTRAL LINE



NO	FREQ [MHz]	READING QP [dBuV]	READING AV [dBuV]	C.FACTOR [dB]	RESULT QP [dBuV]	RESULT AV [dBuV]	LIMIT QP [dBuV]	LIMIT AV [dBuV]	MARGIN QP [dBuV]	MARGIN AV [dBuV]	PHASE
1	0.49000	28.4	----	0.1	28.5	----	56.2	----	27.7	----	N(QP)
2	0.76500	27.9	----	0.1	28.0	----	56.0	----	28.0	----	N(QP)
3	1.53600	23.2	----	0.1	23.3	----	56.0	----	32.7	----	N(QP)
4	3.56400	30.2	----	0.1	30.3	----	56.0	----	25.7	----	N(QP)
5	5.39500	20.9	----	0.1	21.0	----	60.0	----	39.0	----	N(QP)
6	13.56000	18.0	----	0.4	18.4	----	60.0	----	41.6	----	N(QP)
7	0.49000	----	15.0	0.1	----	15.1	----	46.2	----	31.1	N(CAV)
8	0.76500	----	13.6	0.1	----	13.7	----	46.0	----	32.3	N(CAV)
9	1.53600	----	13.1	0.1	----	13.2	----	46.0	----	32.8	N(CAV)
10	3.56400	----	15.6	0.1	----	15.7	----	46.0	----	30.3	N(CAV)
11	5.39500	----	15.0	0.1	----	15.1	----	50.0	----	34.9	N(CAV)
12	13.56000	----	7.7	0.4	----	8.1	----	50.0	----	41.9	N(CAV)

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.

Tested by: Tae-Ho, Kim / Senior Engineer

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16. DYNAMIC FREQUENCY SELECTION (DFS)

16.1 Operating environment

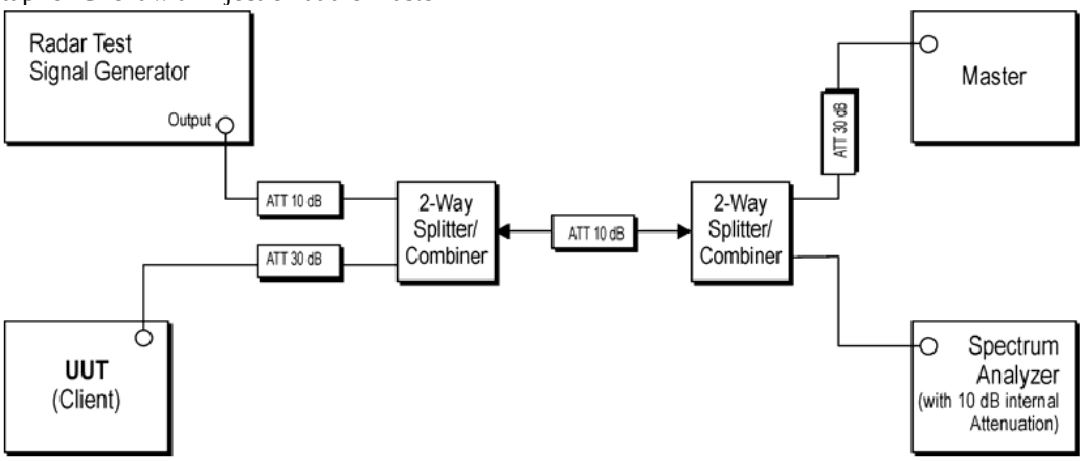
Temperature : 24 ℃

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



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	Roundup $\left\{\left(\frac{1}{360}\right)\cdot\left(\frac{19\cdot 10^6}{PRI_{\mu sec}}\right)\right\}$	60%	30
		Test B: 15 unique PRI values randomly selected within the range of 518-3066 μ sec, with a minimum increment of 1 μ sec, excluding PRI values selected in Test A			
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

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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)
Non-Occupancy Period	Yes	Not required	Yes
DFS Detection Threshold	Yes	Not required	Yes
Channel Availability Check Time	Yes	Not required	Not required
Uniform Spreading	Yes	Not required	Not required
U-NII Detection Bandwidth	Yes	Not required	Yes

Table 2: Applicability of DFS requirements during normal operation

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

16.5 Test equipment used

	Model Number	Manufacturer	Description	Serial Number	Last Cal. (Interval)
■ -	FSV40	Rohde & Schwarz	Signal Analyzer	101009	April 05, 2017 (1Y)
■ -	D-05180-2	RLC Electronis Inc.	Combiner	0813	Apr. 11, 2016 (1Y)
■ -	11636B	Hewlett Packard	Combiner	12268	N/A
■ -	SMJ100A	R/S	Signal Generator	101038	Oct. 21, 2016 (1Y)
■ -	DRP-305DN	DIGITAL Elec.	DC Power supply	4030195	Sep. 02, 2016 (1Y)
■	AIR-AP1252AG-K-K9	CISCO	AP	FGL1439Z0KE	N/A

All test equipment used is calibrated on a regular basis.

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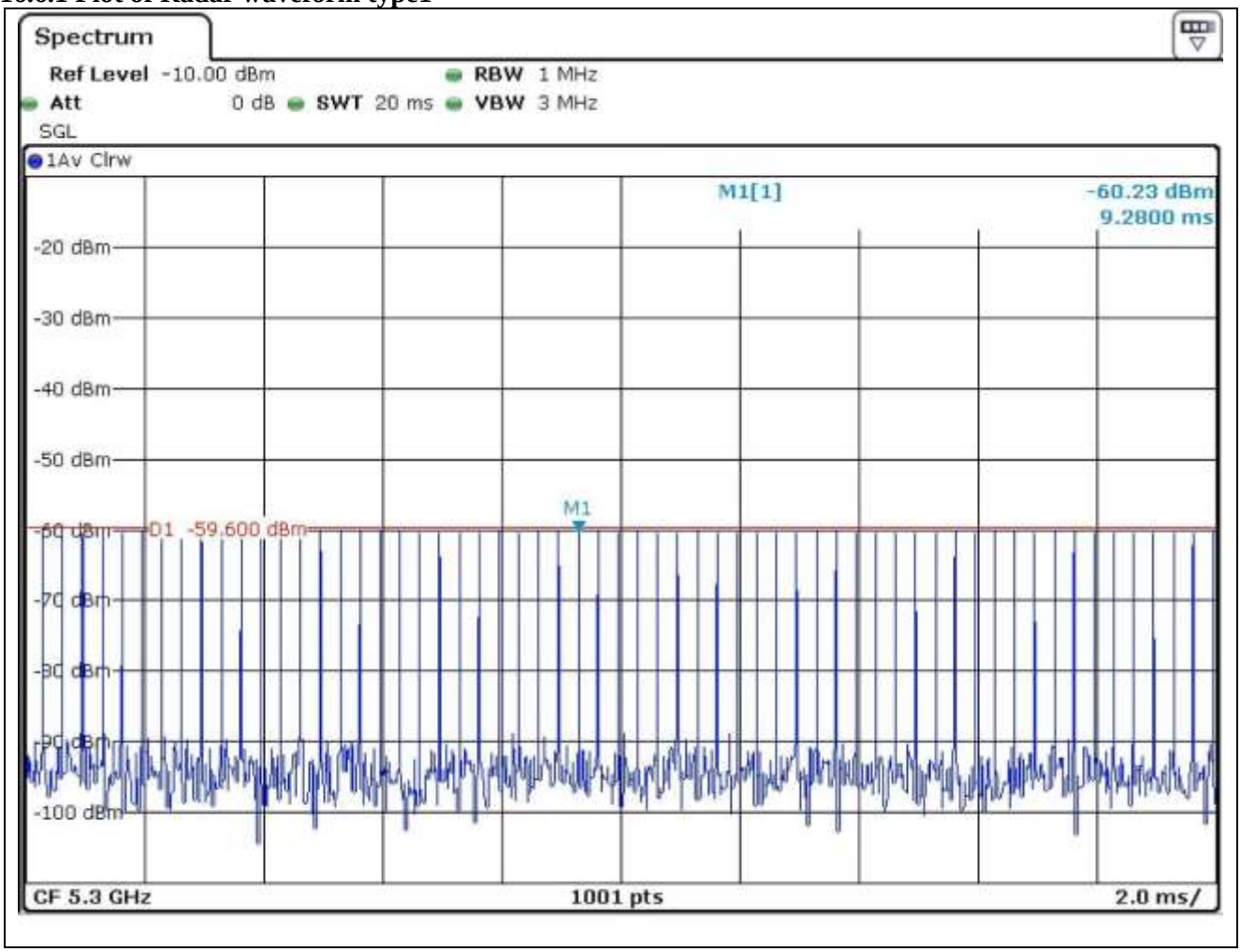
16.6 Test data for 5 250 MHz ~ 5 350 MHz Band

-. Test Date : March 29, 2017

Frequency (MHz)	Channel move time(s)		Channel closing transmission time(ms)	
	Measured	Limit		Measured
5 300	0.128	10	5 300	0.128

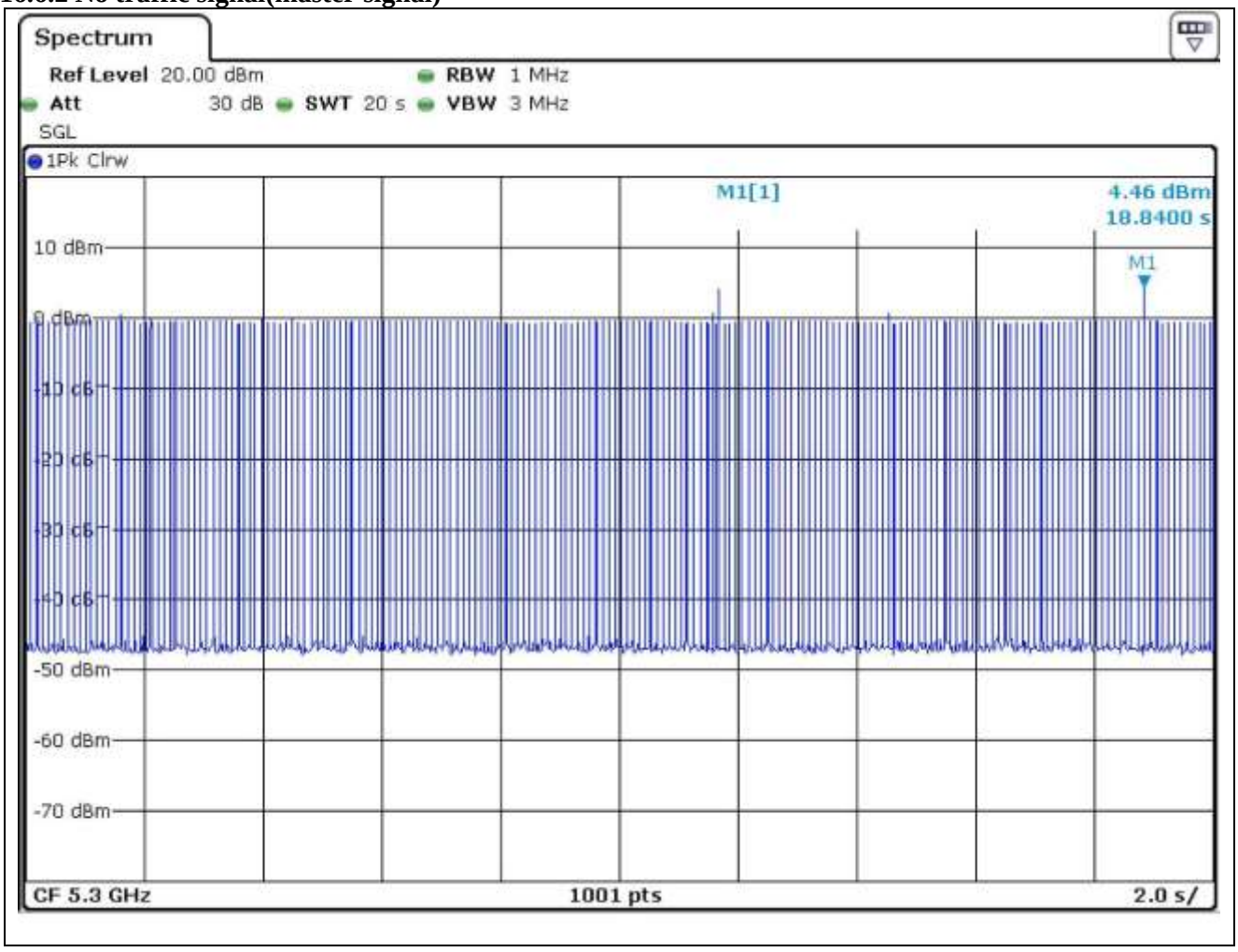
Note. Channel closing transmission time: 4 * 275.36 us = 1.101 ms

16.6.1 Plot of Radar waveform type1



Note: The calibrated conducted DFS detection threshold level is set to -59.5 dBm (-62+1+0.15=-60.85)

16.6.2 No traffic signal(master signal)



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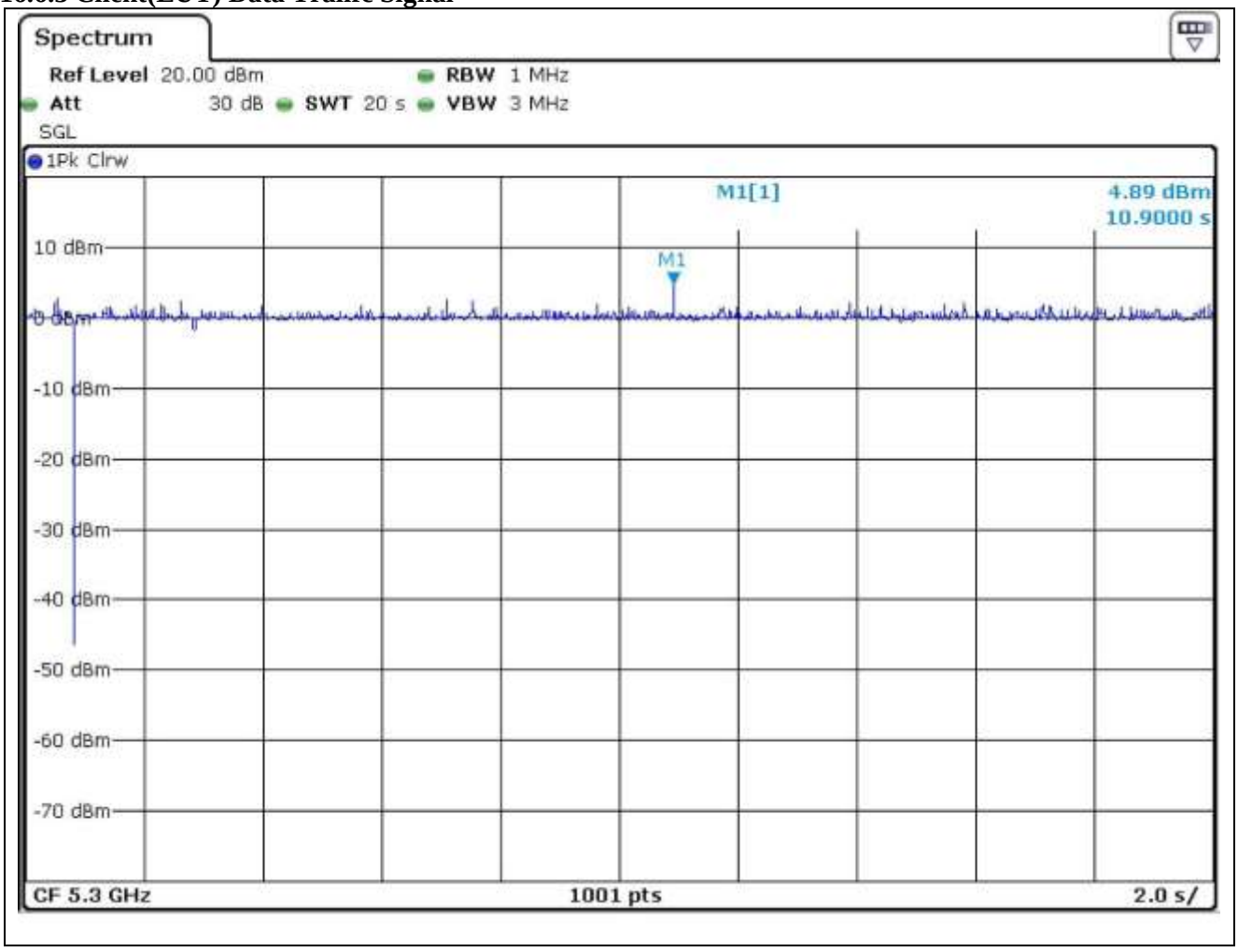
16.6.3 Client(EUT) Data Traiifc Signal



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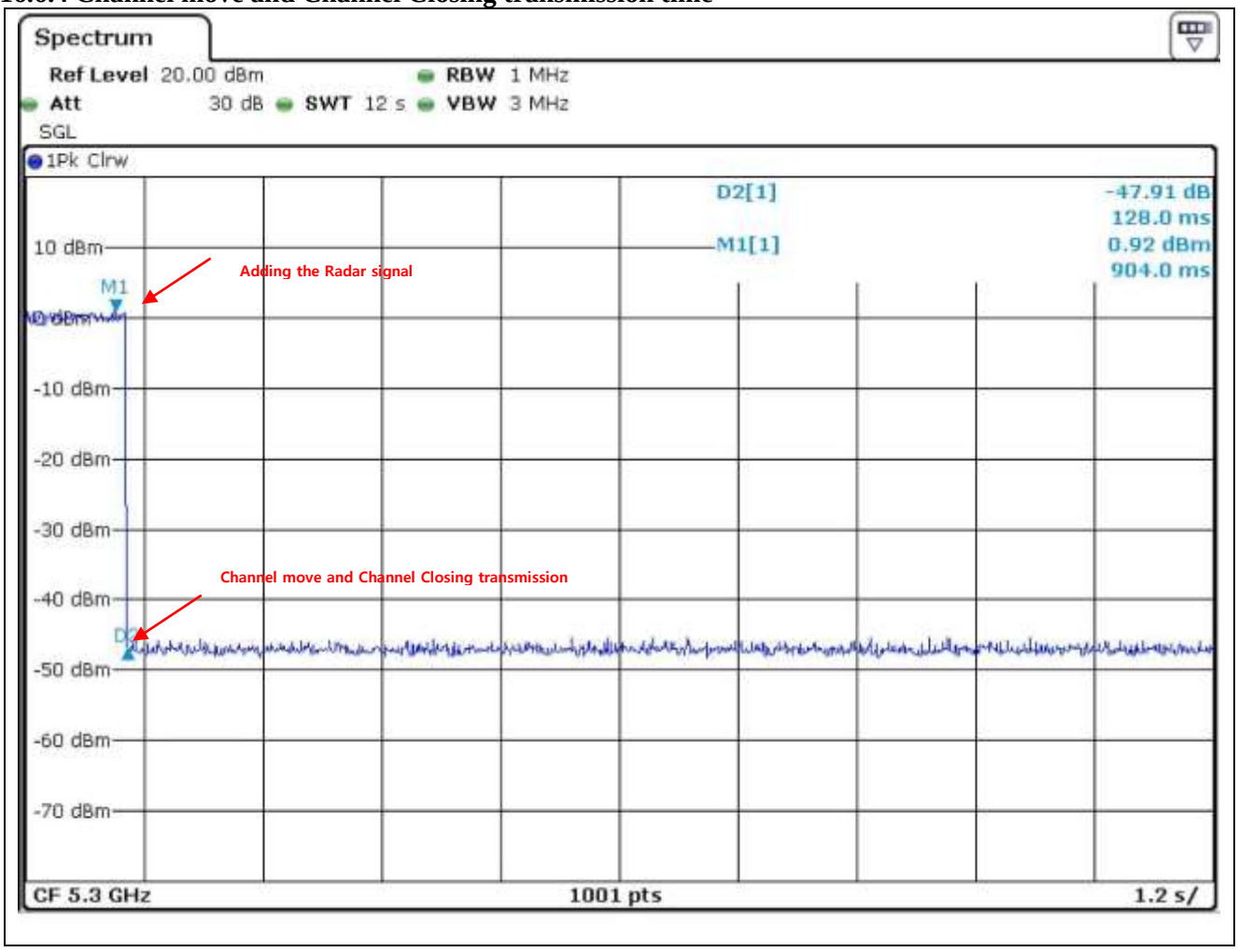
16.6.4 Channel move and Channel Closing transmission time



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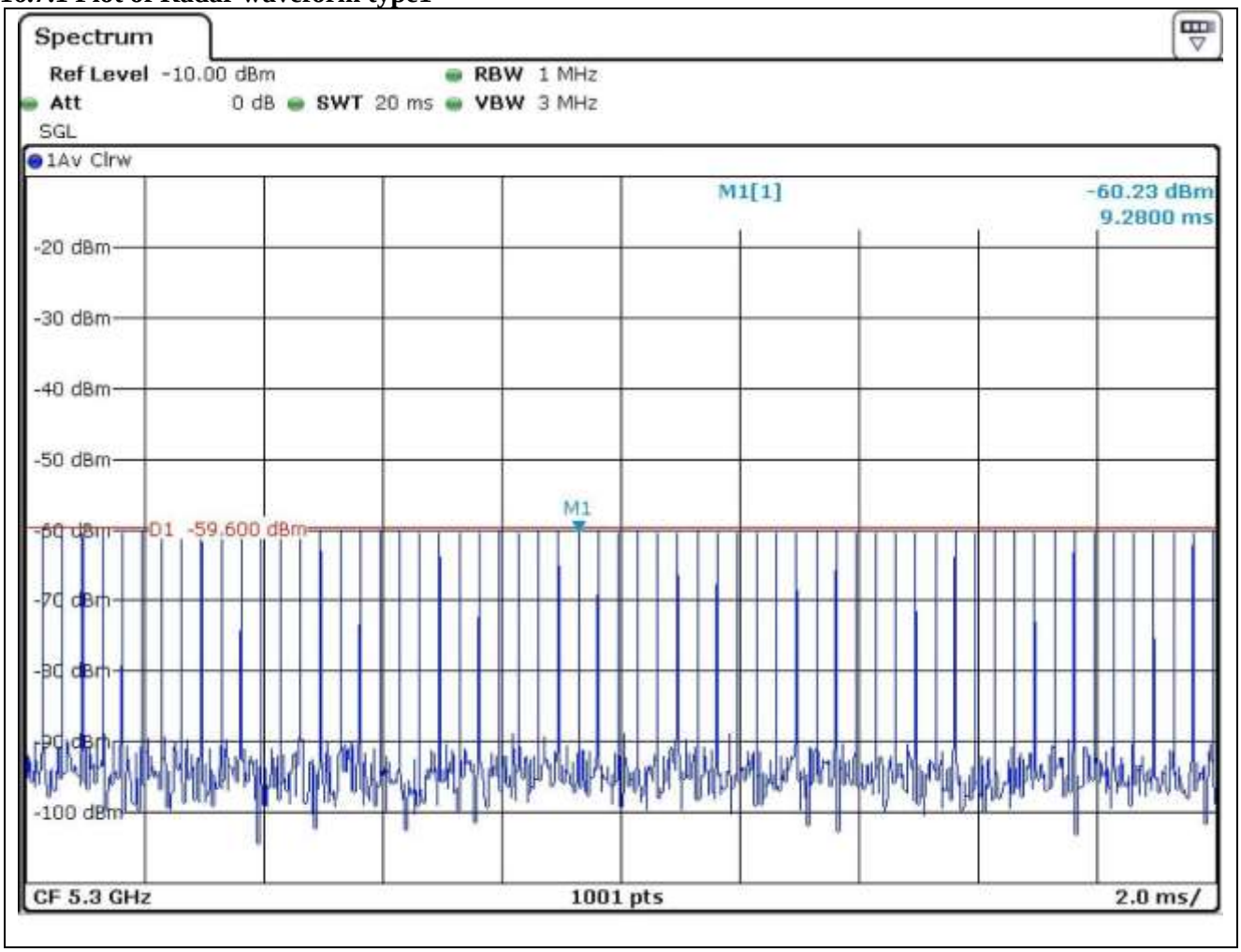
16.7 Test data for 5 470 MHz ~ 5 725 MHz Band

-. Test Date : March 29, 2017

Frequency (MHz)	Channel move time(s)		Channel closing transmission time(ms)	
	Measured	Limit		Measured
5 600	0.176	10	5 600	0.176

Note. Channel closing transmission time: 4 * 275.36 us = 1.101 ms

16.7.1 Plot of Radar waveform type1



Note: The calibrated conducted DFS detection threshold level is set to -59.5 dBm (-62+1+(-2.42)=-63.42)

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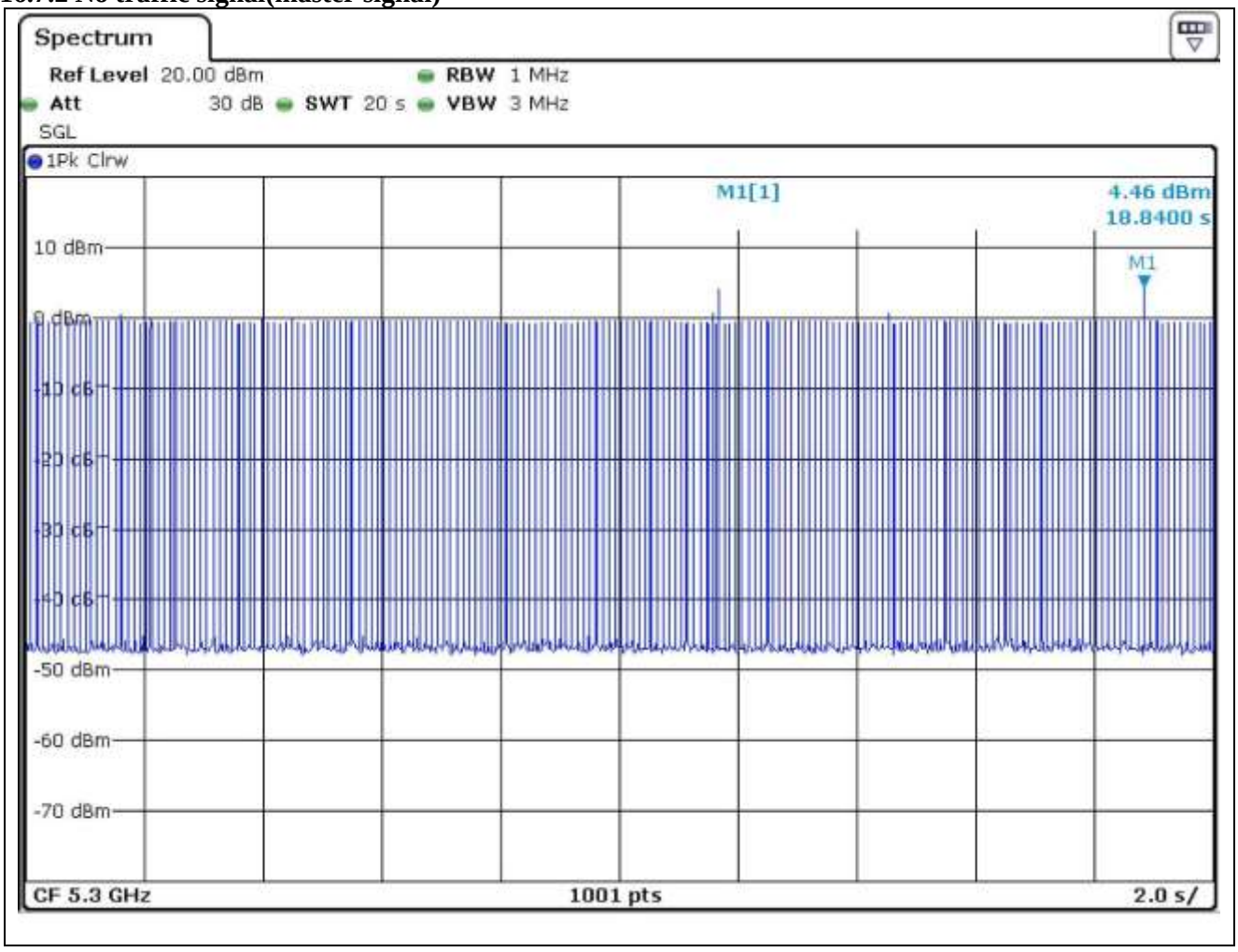
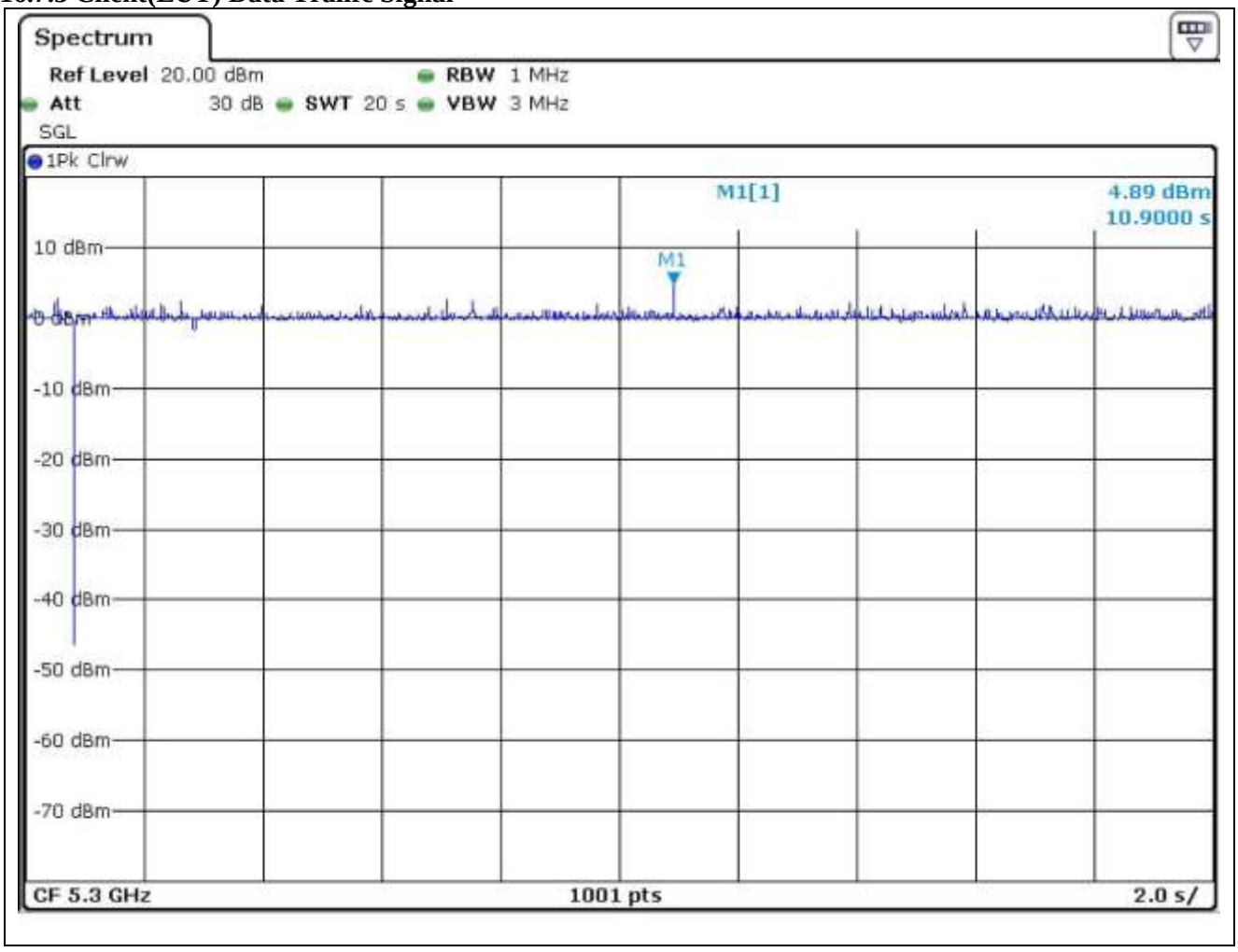
16.7.2 No traffic signal(master signal)



16.7.3 Client(EUT) Data Traiifc Signal



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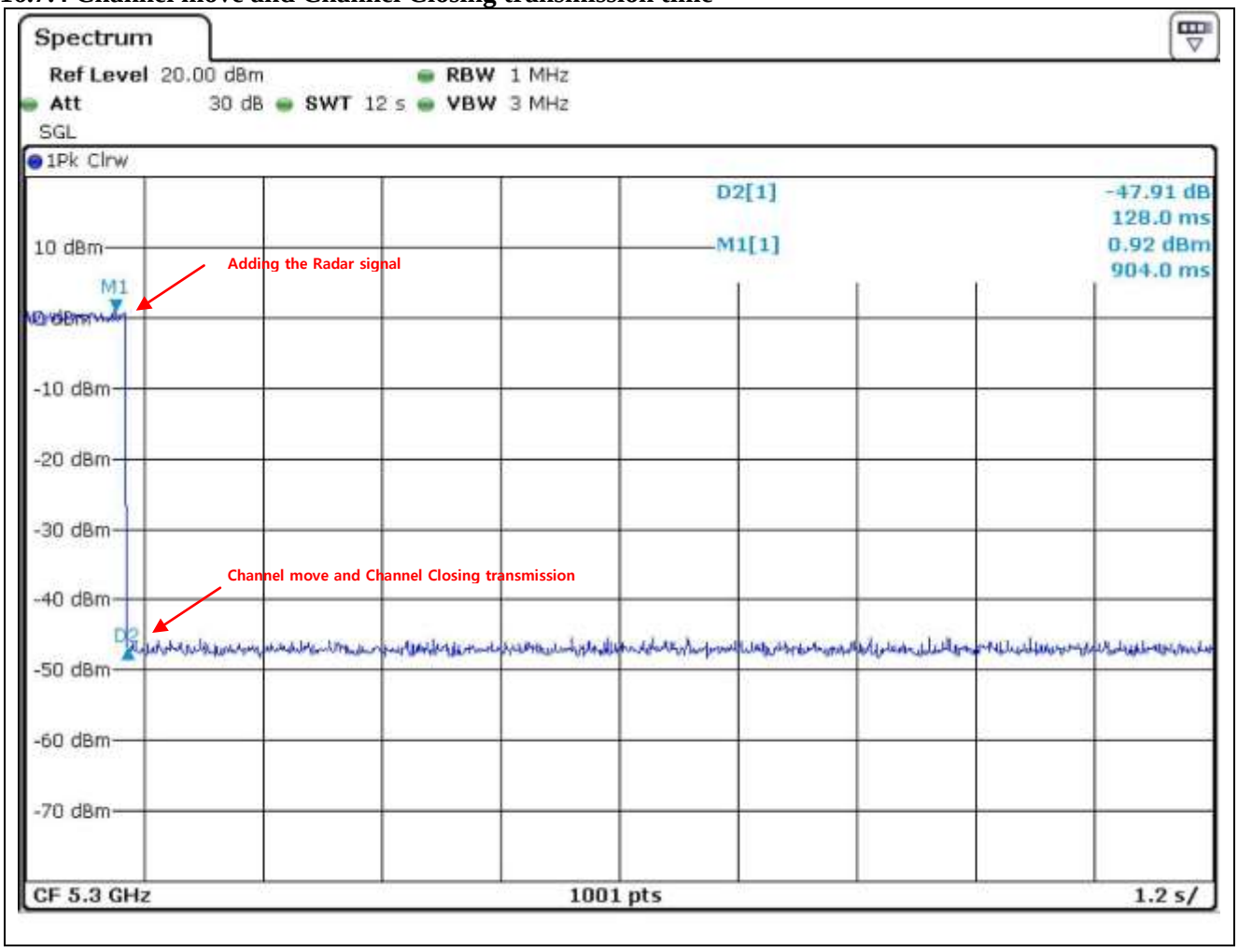
16.7.4 Channel move and Channel Closing transmission time



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