10. PEAK EXCURSION RATIO

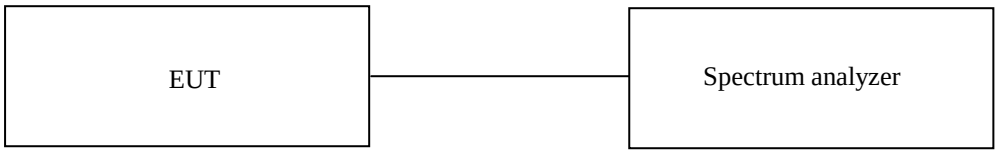
10.1 Operating environment

Temperature : 24 ℃

Relative humidity : 48 % R.H.

10.2 Test set-up for conducted measurement

The spectrum analyzer was connected to the antenna terminal while the EUT was operating in the continuous transmission mode at the appropriate center frequencies. The largest permissible difference between the modulation envelope (measured using a peak hold function) and the maximum conducted output power 13 dB/MHz.



10.3 Test equipment used

	Model Number	Manufacturer	Description	Serial Number	Last Cal.
■ -	FSV40	Rohde & Schwarz	Signal Analyzer	101009	Jul. 30, 2014 (1Y)

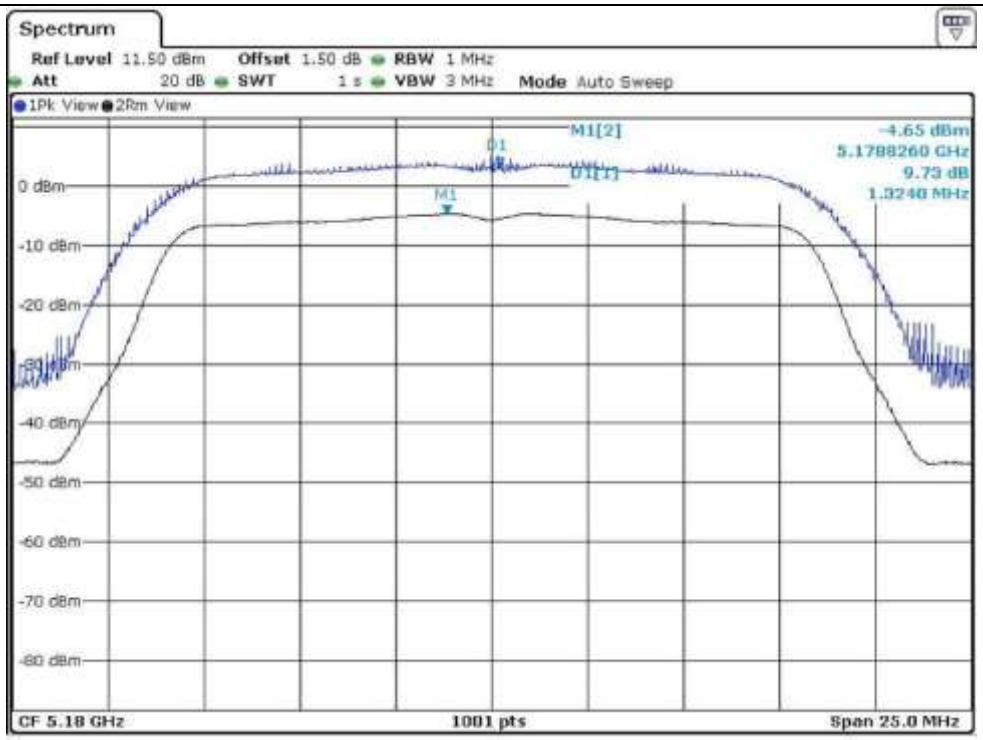
All test equipment used is calibrated on a regular basis.

HEAD OFFICE : 301-14 Daessangnyeong-ri, Chowol-eup, Gwangju-si, Gyeonggi-do 464-862 Korea (TEL: 82-31-799-9500, FAX: 82-31-799-9599)

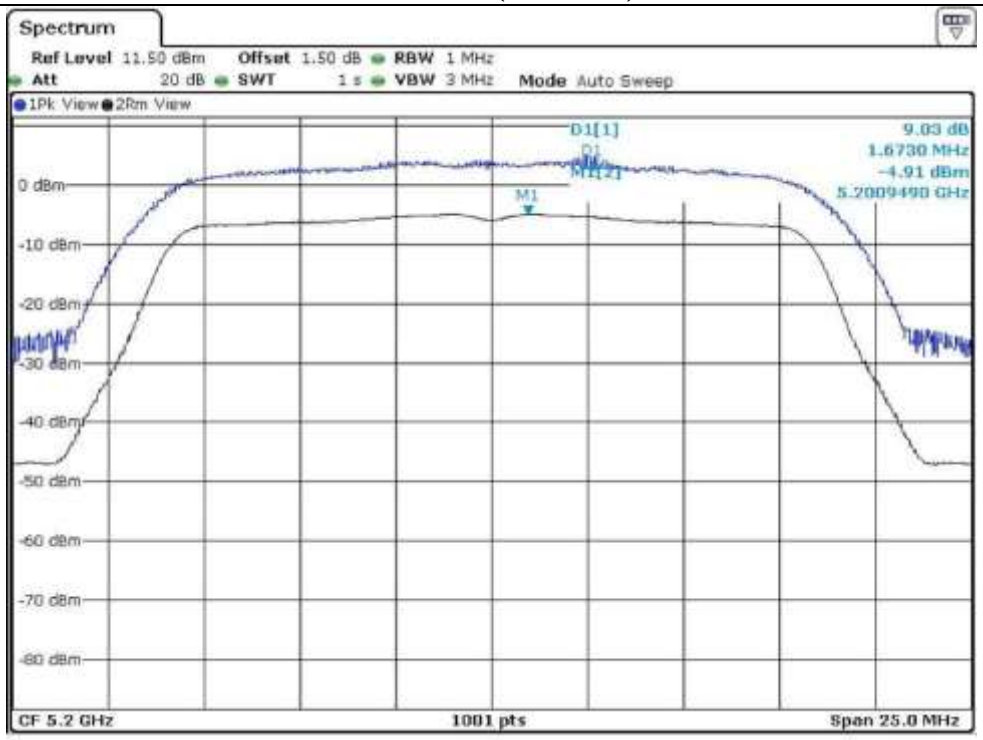
EMC Testing Div. : 307-51 Daessangnyeong-ri, Chowol-eup, Gwangju-si, Gyeonggi-do 464-862 Korea (TEL: 82-31-765-8289, FAX: 82-31-766-2904)

10.4 Test data for 802.11a RLAN Mode

10.4.1 Test data for Antenna 0

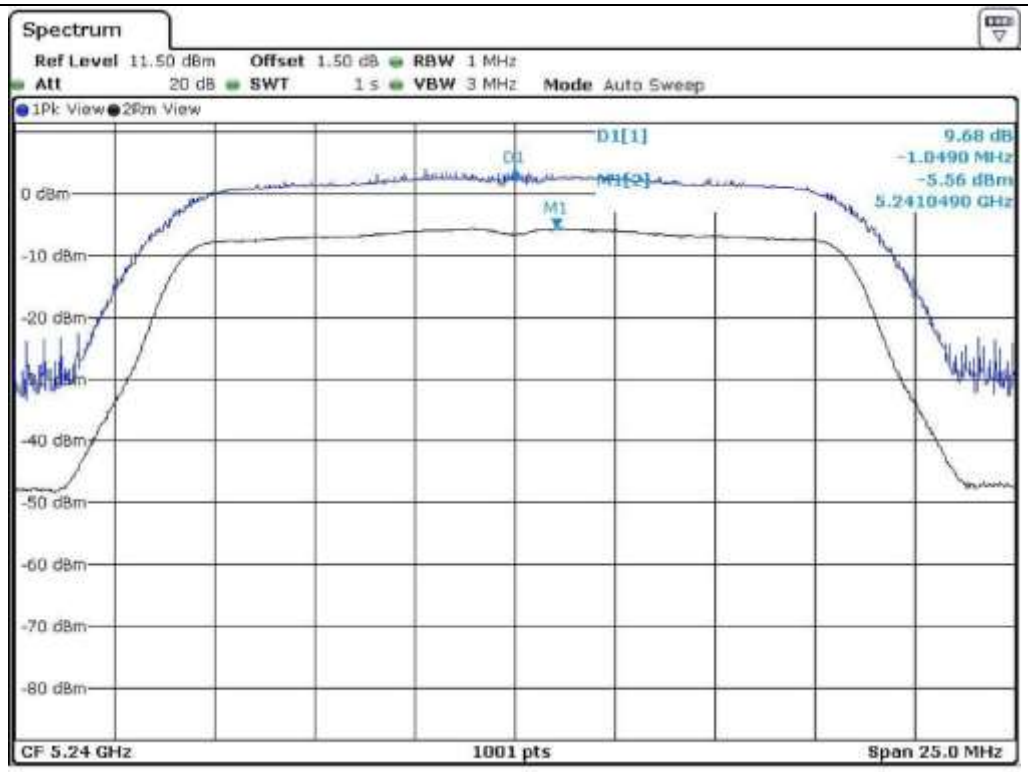


Low Channel (5 180 MHz)



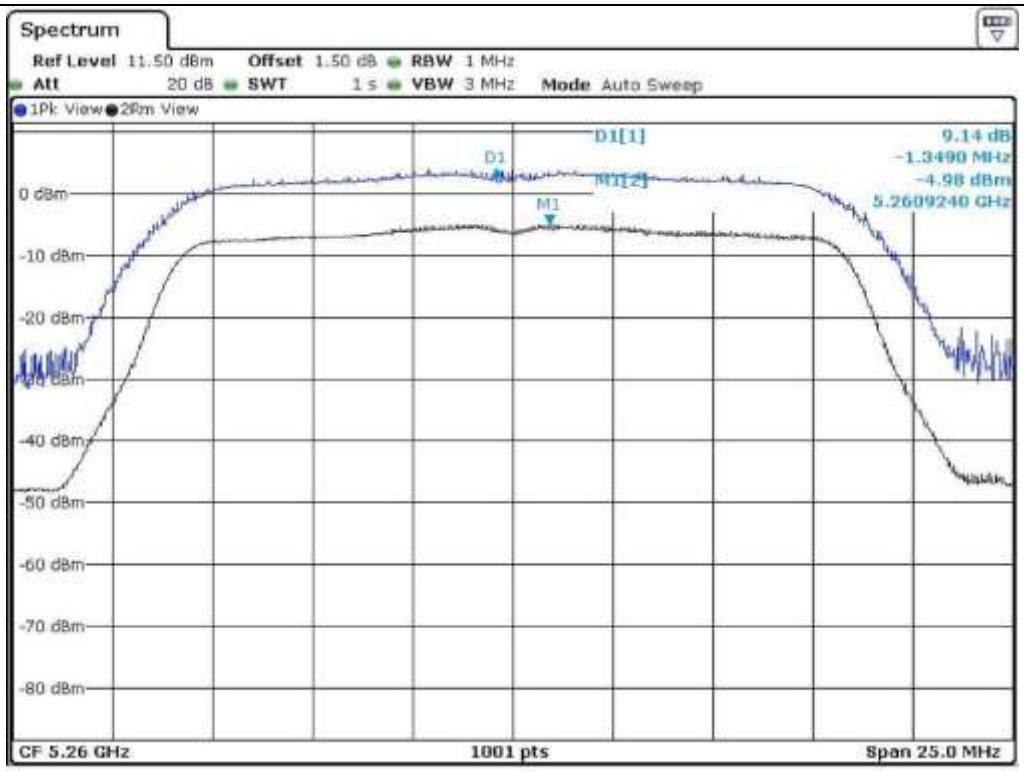
Middle Channel (5 200 MHz)

HEAD OFFICE : 301-14 Daessangnyeong-ri, Chowol-eup, Gwangju-si, Gyeonggi-do 464-862 Korea (TEL: 82-31-799-9500, FAX: 82-31-799-9599)
EMC Testing Div. : 307-51 Daessangnyeong-ri, Chowol-eup, Gwangju-si, Gyeonggi-do 464-862 Korea (TEL: 82-31-765-8289, FAX: 82-31-766-2904)

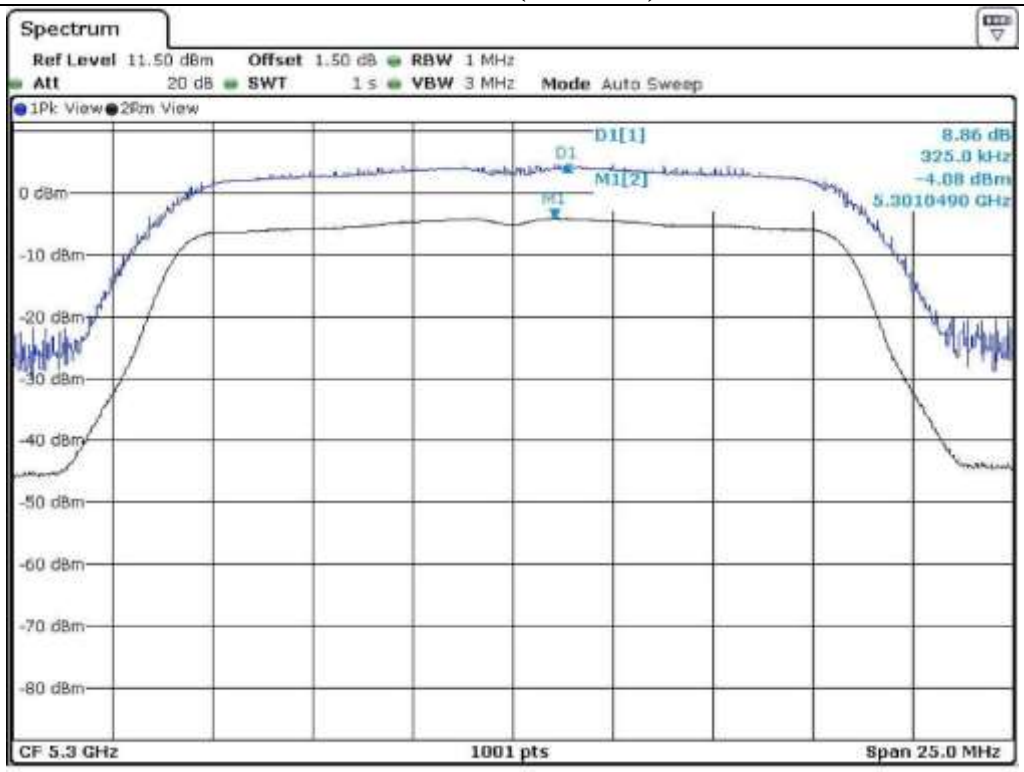


High Channel (5 240 MHz)

HEAD OFFICE : 301-14 Daessangnyeong-ri, Chowol-eup, Gwangju-si, Gyeonggi-do 464-862 Korea (TEL: 82-31-799-9500, FAX: 82-31-799-9599)
EMC Testing Div. : 307-51 Daessangnyeong-ri, Chowol-eup, Gwangju-si, Gyeonggi-do 464-862 Korea (TEL: 82-31-765-8289, FAX: 82-31-766-2904)

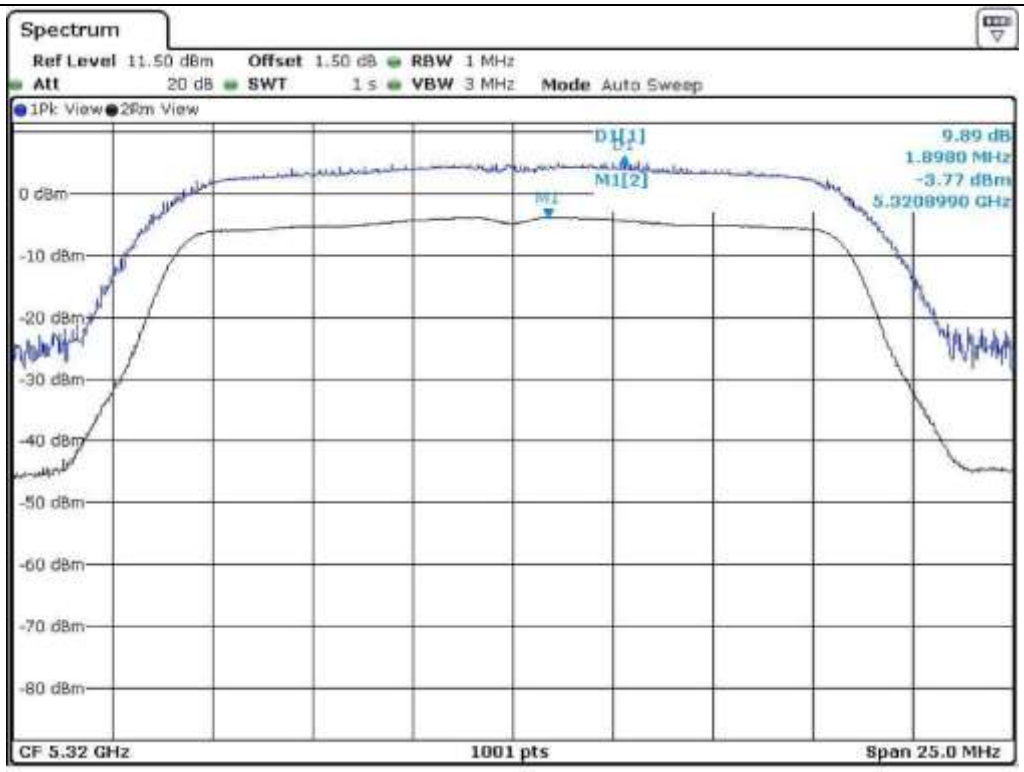


Low Channel (5 260 MHz)



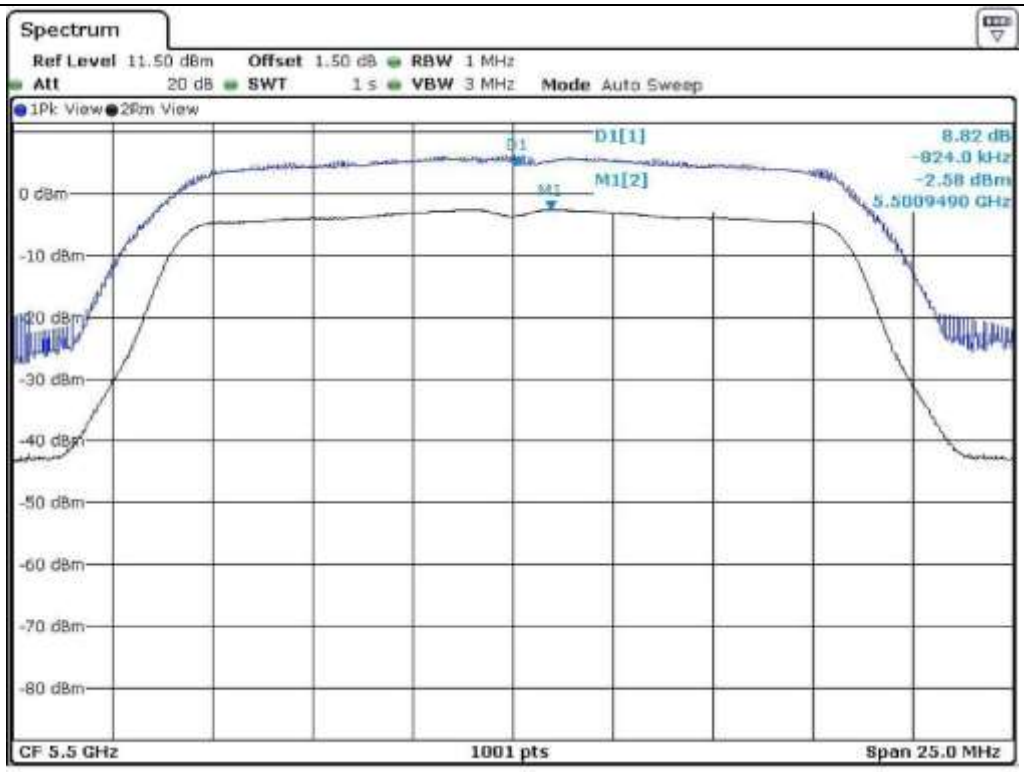
Middle Channel (5 300 MHz)

HEAD OFFICE : 301-14 Daessangnyeong-ri, Chowol-eup, Gwangju-si, Gyeonggi-do 464-862 Korea (TEL: 82-31-799-9500, FAX: 82-31-799-9599)
EMC Testing Div. : 307-51 Daessangnyeong-ri, Chowol-eup, Gwangju-si, Gyeonggi-do 464-862 Korea (TEL: 82-31-765-8289, FAX: 82-31-766-2904)

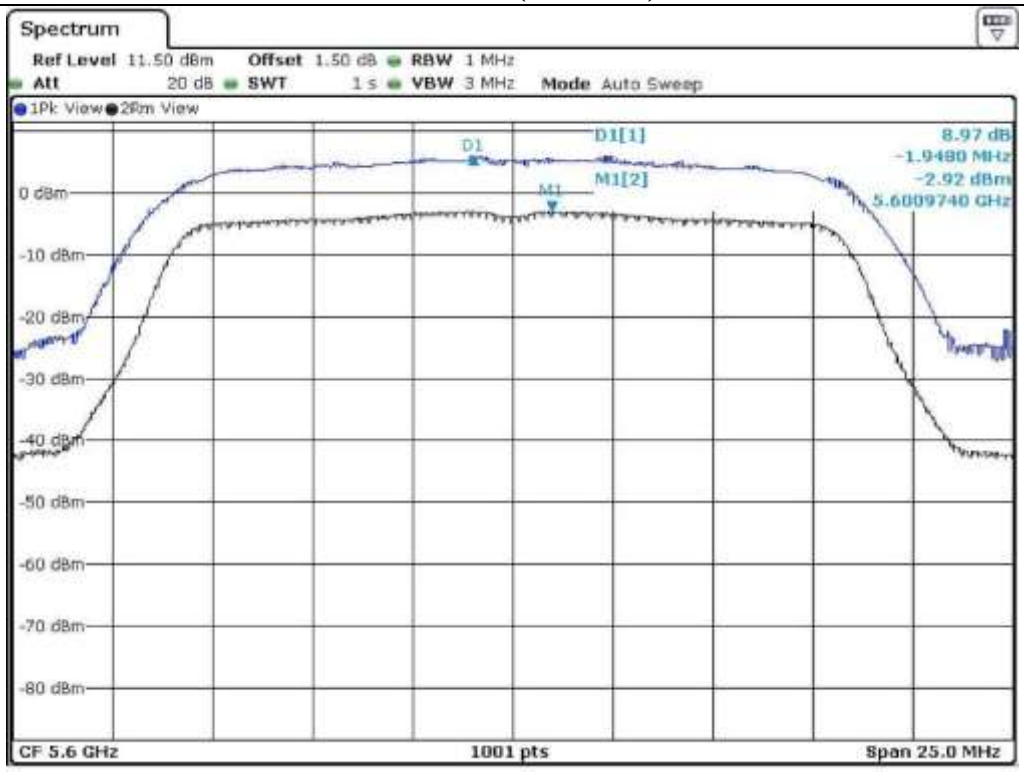


High Channel (5 320 MHz)

HEAD OFFICE : 301-14 Daessangnyeong-ri, Chowol-eup, Gwangju-si, Gyeonggi-do 464-862 Korea (TEL: 82-31-799-9500, FAX: 82-31-799-9599)
EMC Testing Div. : 307-51 Daessangnyeong-ri, Chowol-eup, Gwangju-si, Gyeonggi-do 464-862 Korea (TEL: 82-31-765-8289, FAX: 82-31-766-2904)

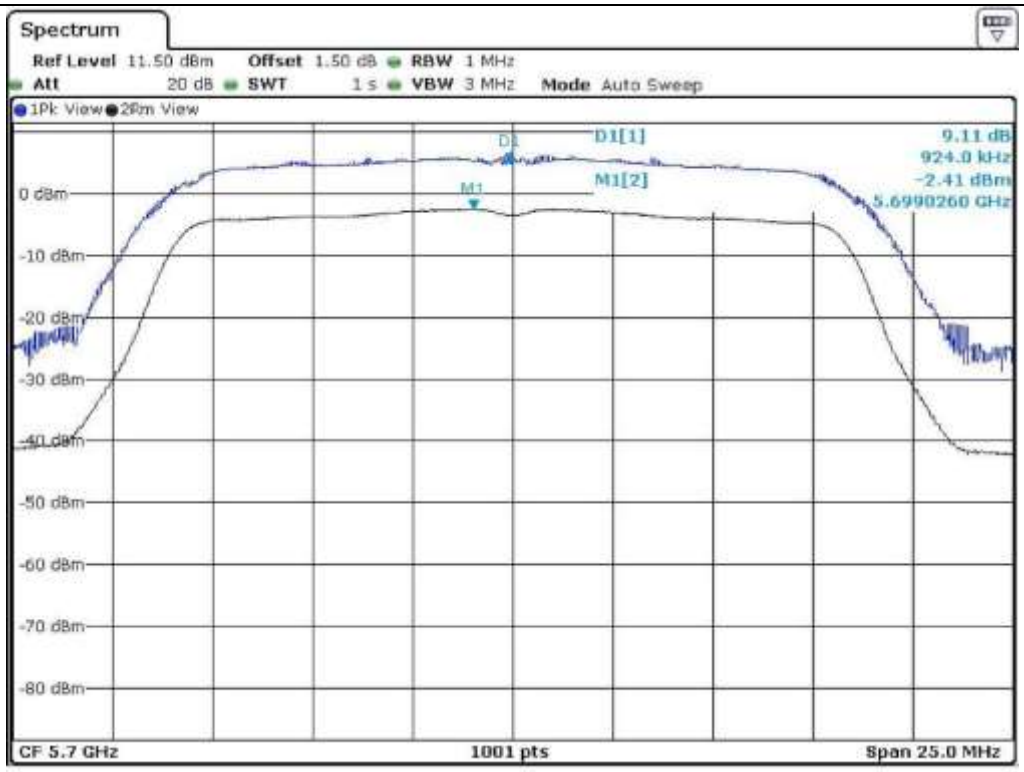


Low Channel (5 500 MHz)



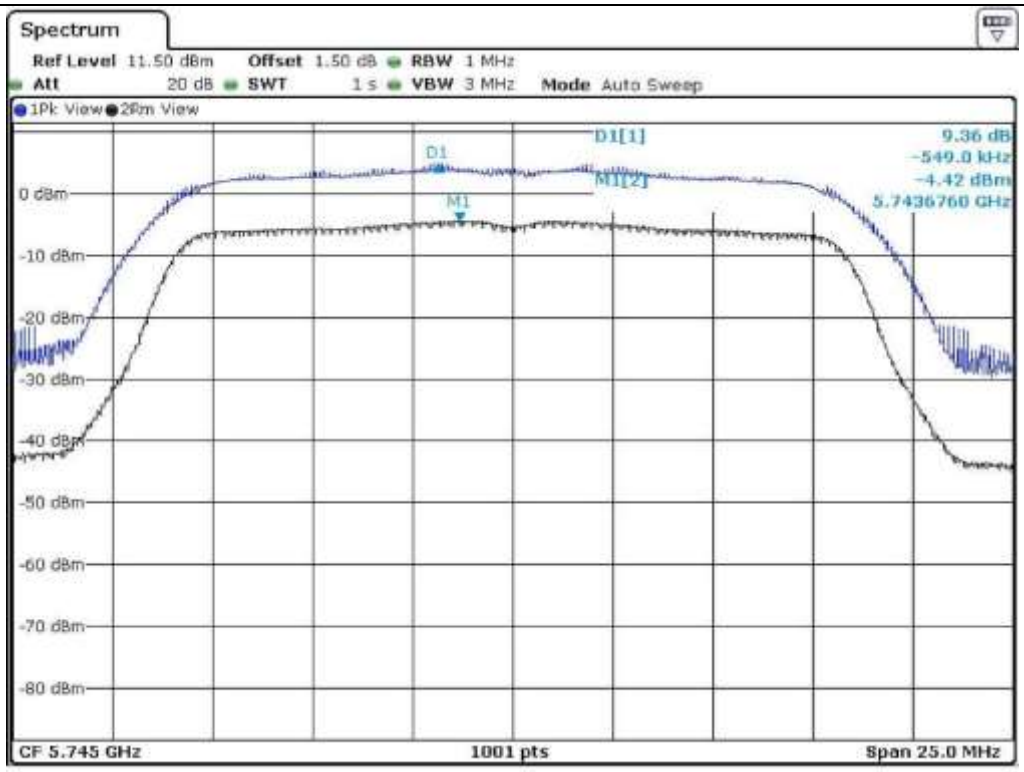
Middle Channel (5 600 MHz)

HEAD OFFICE : 301-14 Daessangnyeong-ri, Chowol-eup, Gwangju-si, Gyeonggi-do 464-862 Korea (TEL: 82-31-799-9500, FAX: 82-31-799-9599)
EMC Testing Div. : 307-51 Daessangnyeong-ri, Chowol-eup, Gwangju-si, Gyeonggi-do 464-862 Korea (TEL: 82-31-765-8289, FAX: 82-31-766-2904)

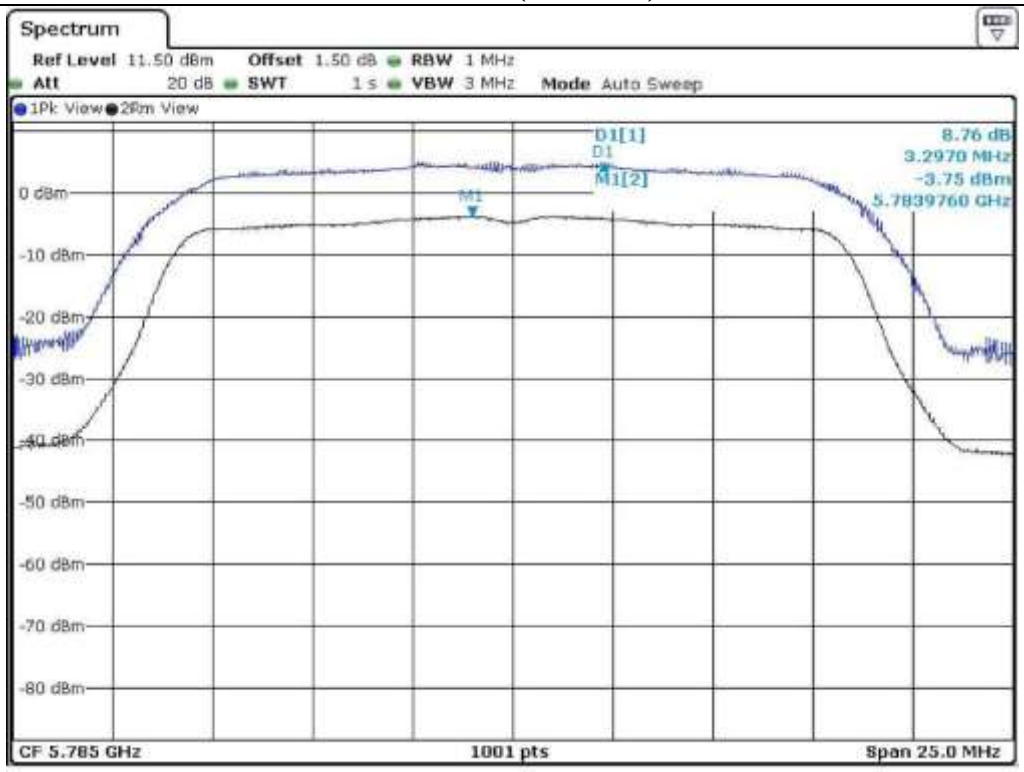


High Channel (5 700 MHz)

HEAD OFFICE : 301-14 Daessangnyeong-ri, Chowol-eup, Gwangju-si, Gyeonggi-do 464-862 Korea (TEL: 82-31-799-9500, FAX: 82-31-799-9599)
EMC Testing Div. : 307-51 Daessangnyeong-ri, Chowol-eup, Gwangju-si, Gyeonggi-do 464-862 Korea (TEL: 82-31-765-8289, FAX: 82-31-766-2904)

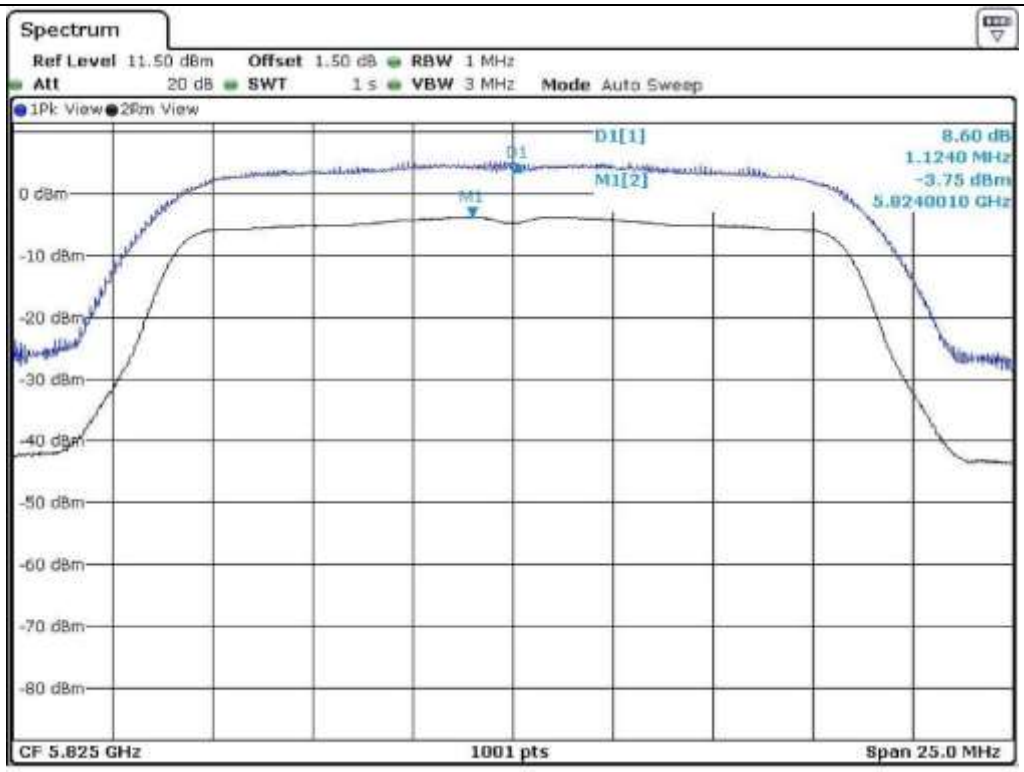


Low Channel (5 745 MHz)



Middle Channel (5 785 MHz)

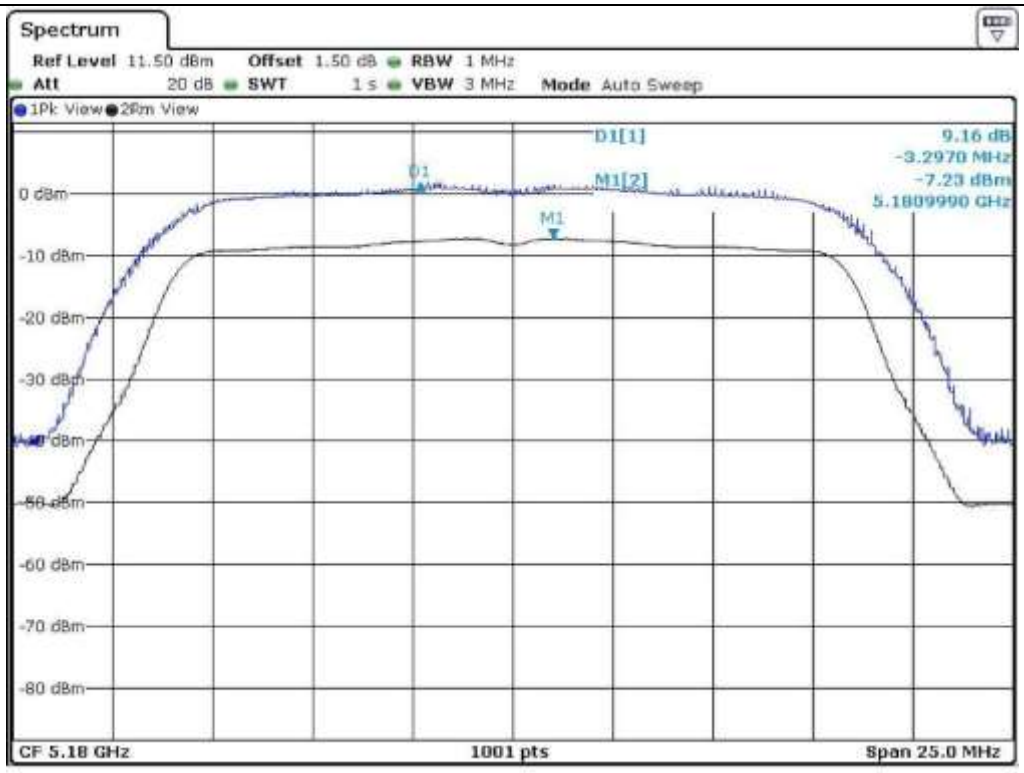
HEAD OFFICE : 301-14 Daessangnyeong-ri, Chowol-eup, Gwangju-si, Gyeonggi-do 464-862 Korea (TEL: 82-31-799-9500, FAX: 82-31-799-9599)
EMC Testing Div. : 307-51 Daessangnyeong-ri, Chowol-eup, Gwangju-si, Gyeonggi-do 464-862 Korea (TEL: 82-31-765-8289, FAX: 82-31-766-2904)



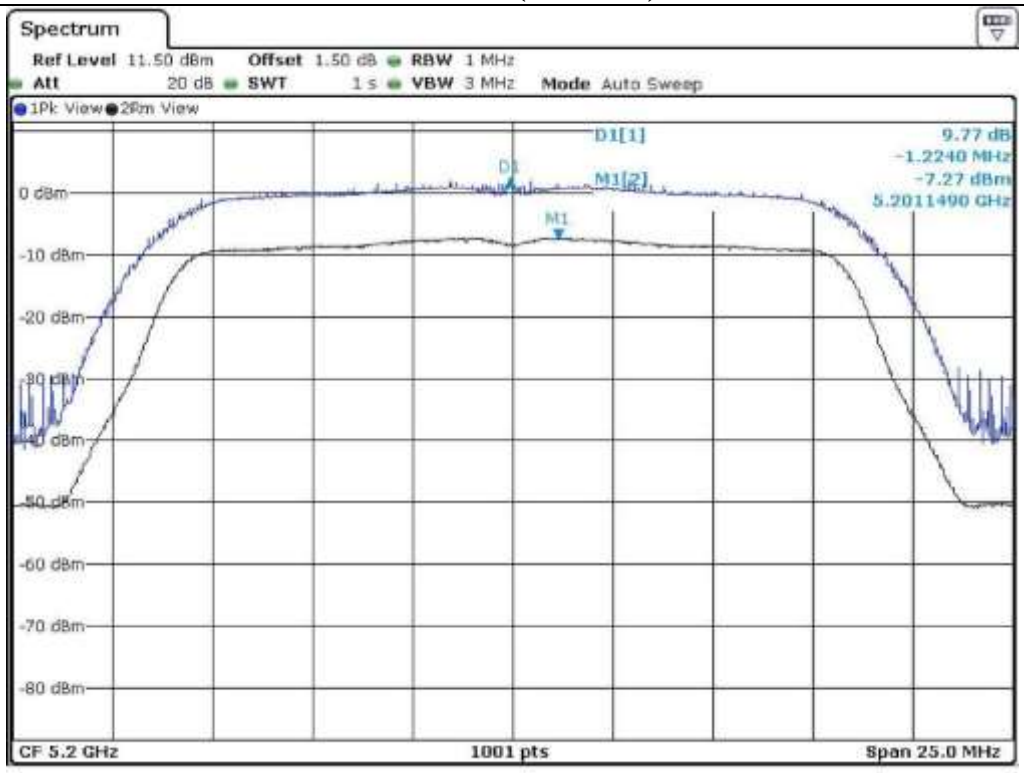
High Channel (5 825 MHz)

HEAD OFFICE : 301-14 Daessangnyeong-ri, Chowol-eup, Gwangju-si, Gyeonggi-do 464-862 Korea (TEL: 82-31-799-9500, FAX: 82-31-799-9599)
EMC Testing Div. : 307-51 Daessangnyeong-ri, Chowol-eup, Gwangju-si, Gyeonggi-do 464-862 Korea (TEL: 82-31-765-8289, FAX: 82-31-766-2904)

10.4.2 Test data for Antenna 1

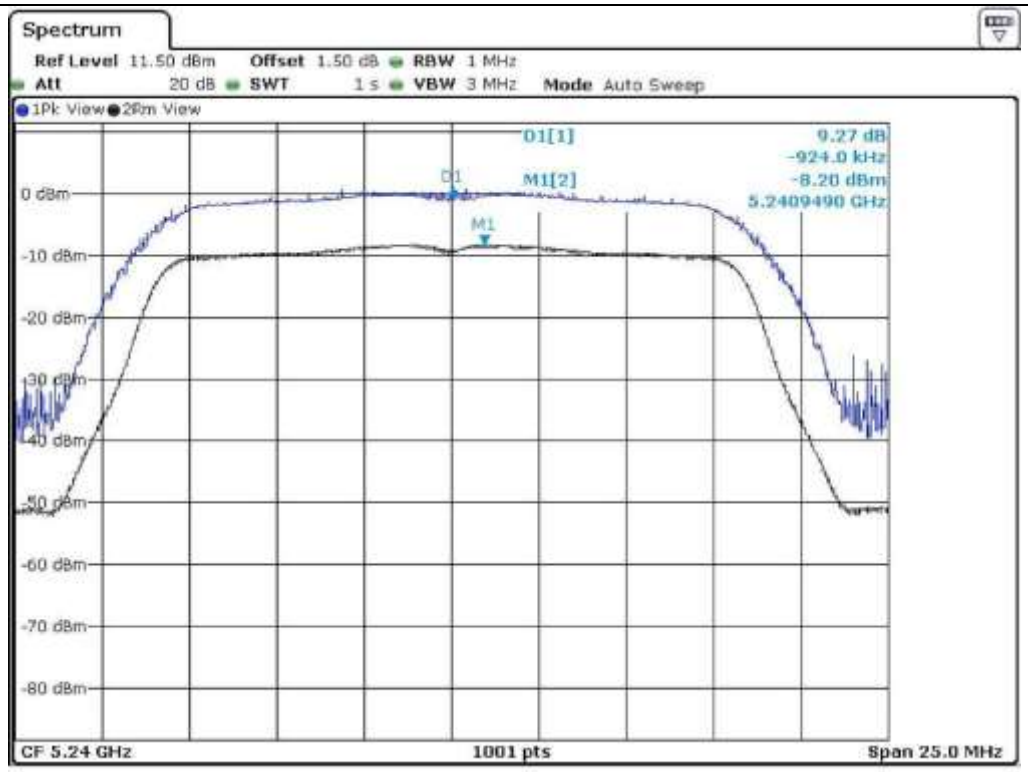


Low Channel (5 180 MHz)



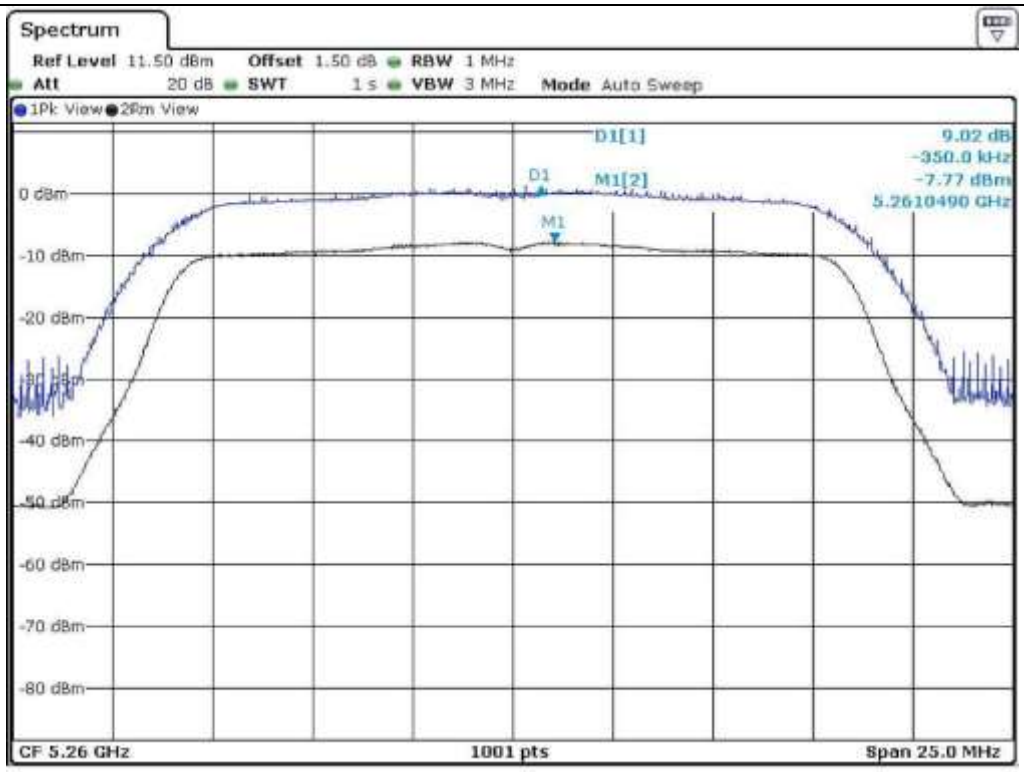
Middle Channel (5 200 MHz)

HEAD OFFICE : 301-14 Daessangnyeong-ri, Chowol-eup, Gwangju-si, Gyeonggi-do 464-862 Korea (TEL: 82-31-799-9500, FAX: 82-31-799-9599)
EMC Testing Div. : 307-51 Daessangnyeong-ri, Chowol-eup, Gwangju-si, Gyeonggi-do 464-862 Korea (TEL: 82-31-765-8289, FAX: 82-31-766-2904)

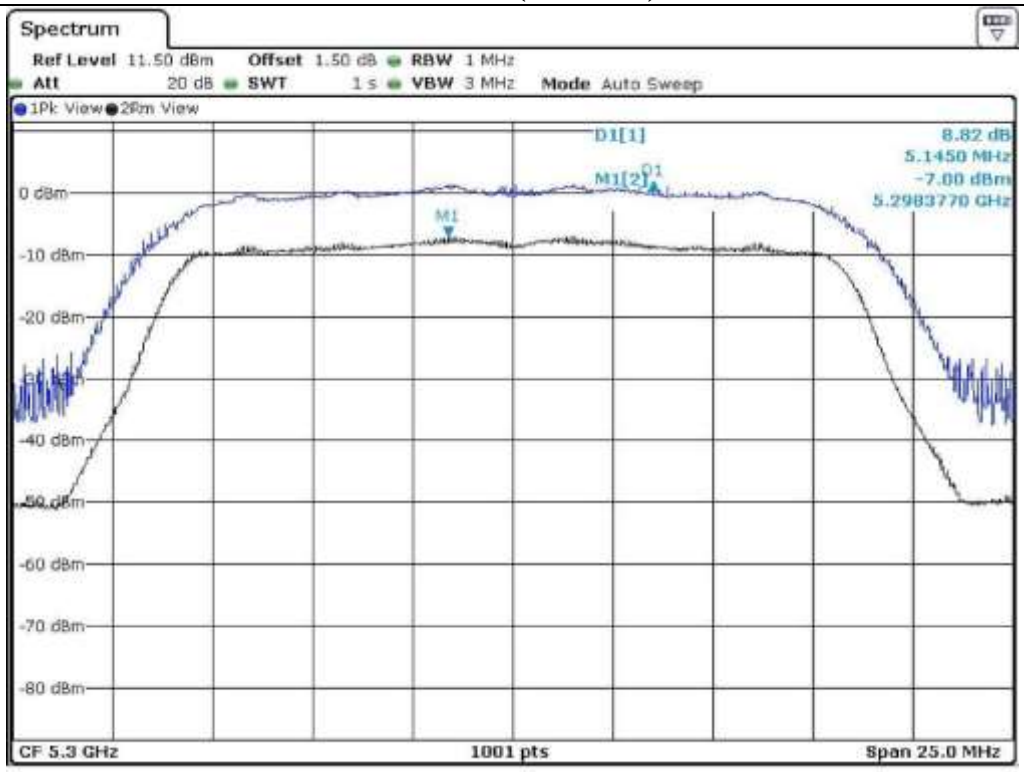


High Channel (5 240 MHz)

HEAD OFFICE : 301-14 Daessangnyeong-ri, Chowol-eup, Gwangju-si, Gyeonggi-do 464-862 Korea (TEL: 82-31-799-9500, FAX: 82-31-799-9599)
EMC Testing Div. : 307-51 Daessangnyeong-ri, Chowol-eup, Gwangju-si, Gyeonggi-do 464-862 Korea (TEL: 82-31-765-8289, FAX: 82-31-766-2904)

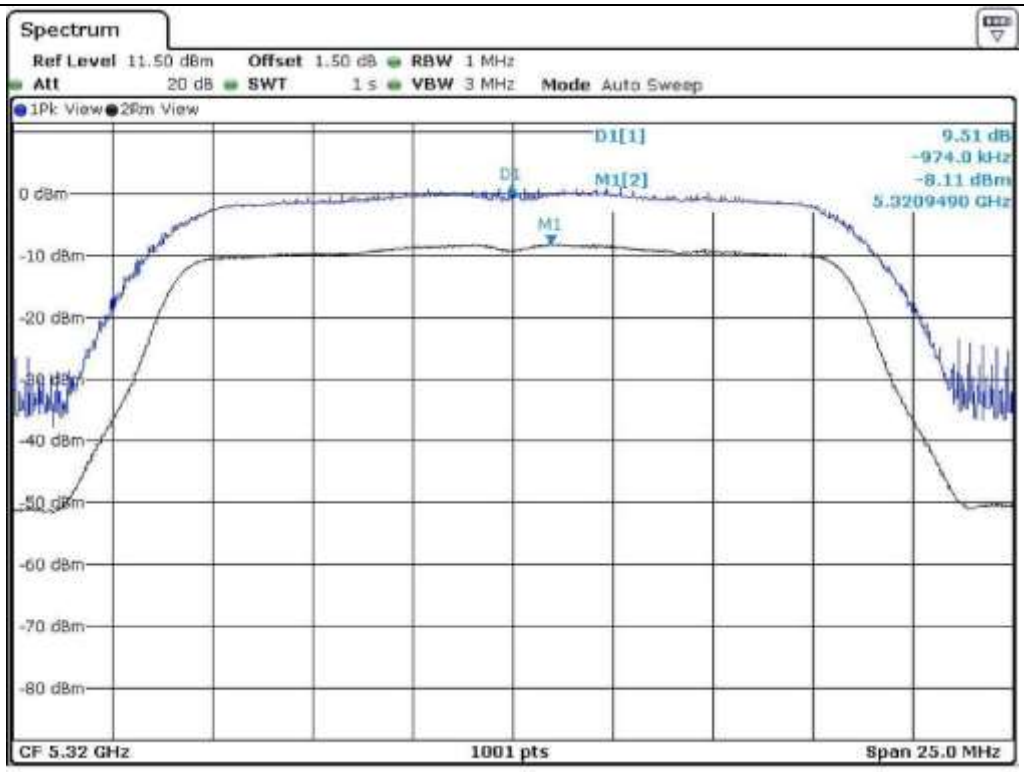


Low Channel (5 260 MHz)



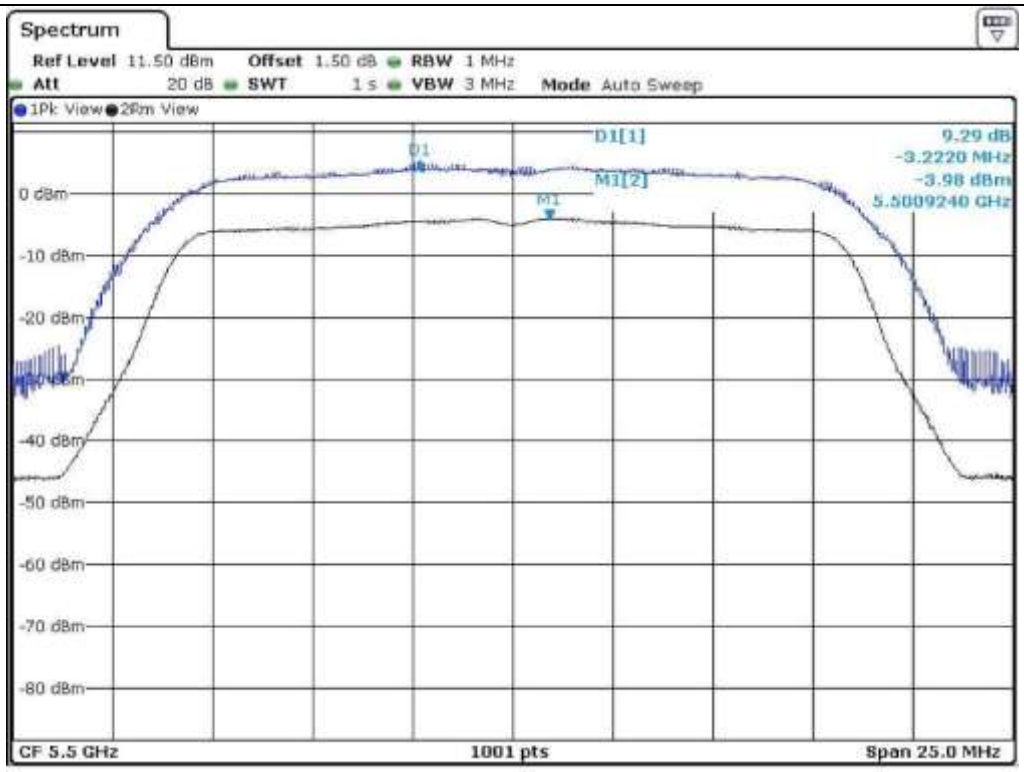
Middle Channel (5 300 MHz)

HEAD OFFICE : 301-14 Daessangnyeong-ri, Chowol-eup, Gwangju-si, Gyeonggi-do 464-862 Korea (TEL: 82-31-799-9500, FAX: 82-31-799-9599)
EMC Testing Div. : 307-51 Daessangnyeong-ri, Chowol-eup, Gwangju-si, Gyeonggi-do 464-862 Korea (TEL: 82-31-765-8289, FAX: 82-31-766-2904)

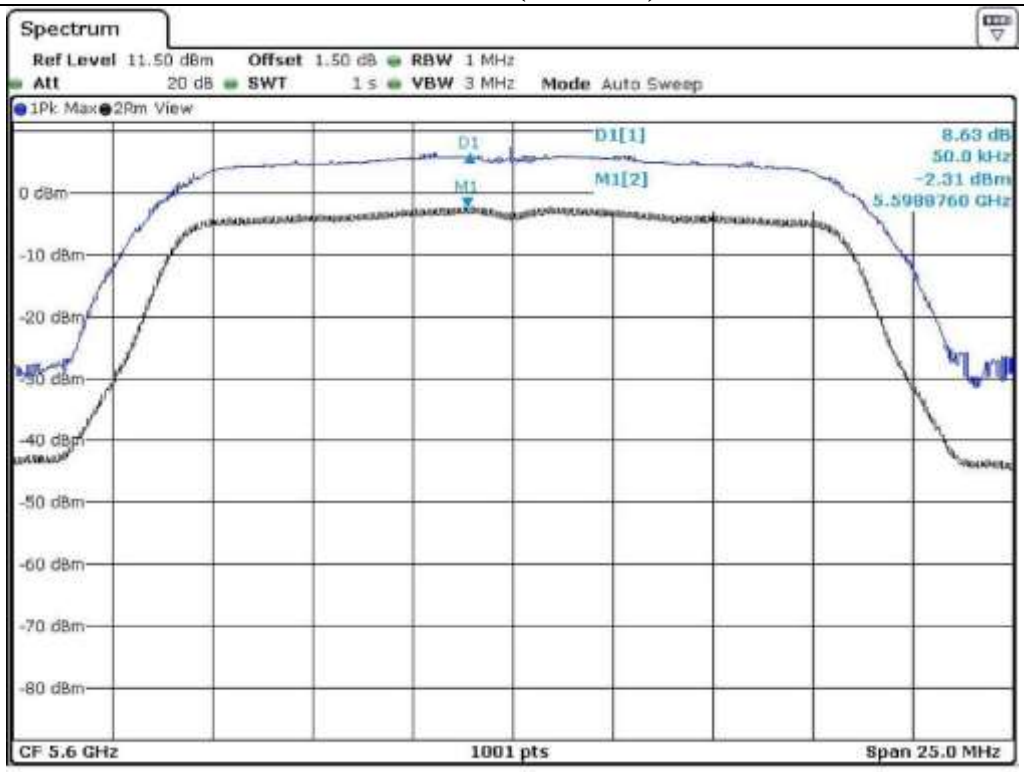


High Channel (5 320 MHz)

HEAD OFFICE : 301-14 Daessangnyeong-ri, Chowol-eup, Gwangju-si, Gyeonggi-do 464-862 Korea (TEL: 82-31-799-9500, FAX: 82-31-799-9599)
EMC Testing Div. : 307-51 Daessangnyeong-ri, Chowol-eup, Gwangju-si, Gyeonggi-do 464-862 Korea (TEL: 82-31-765-8289, FAX: 82-31-766-2904)

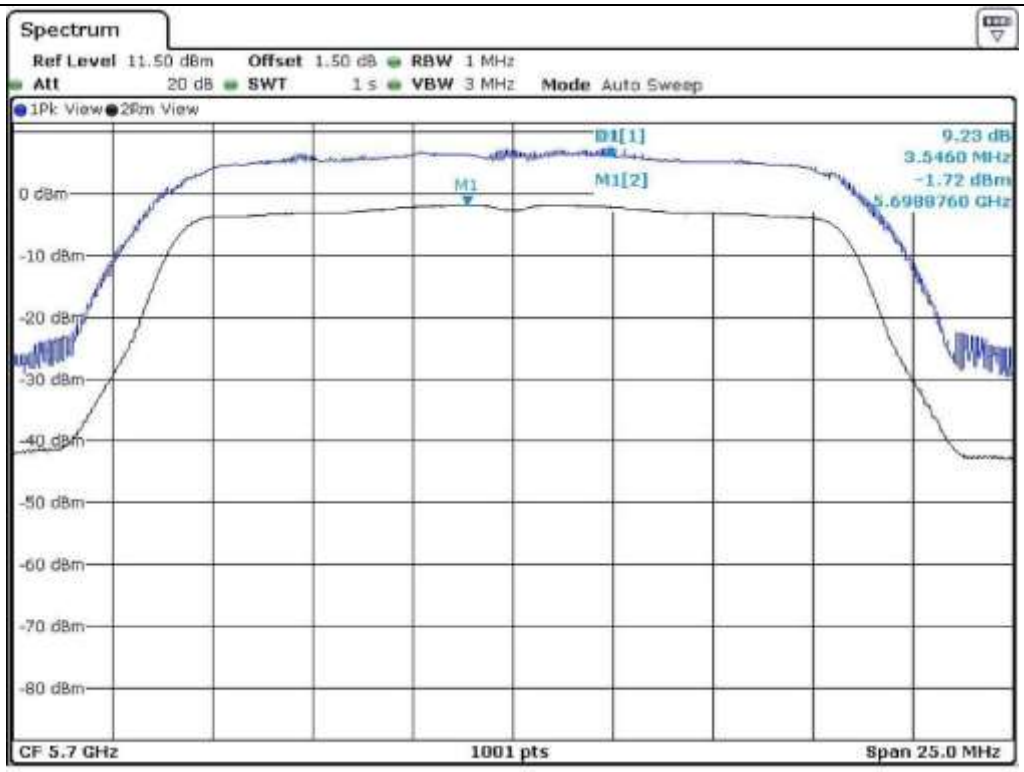


Low Channel (5 500 MHz)



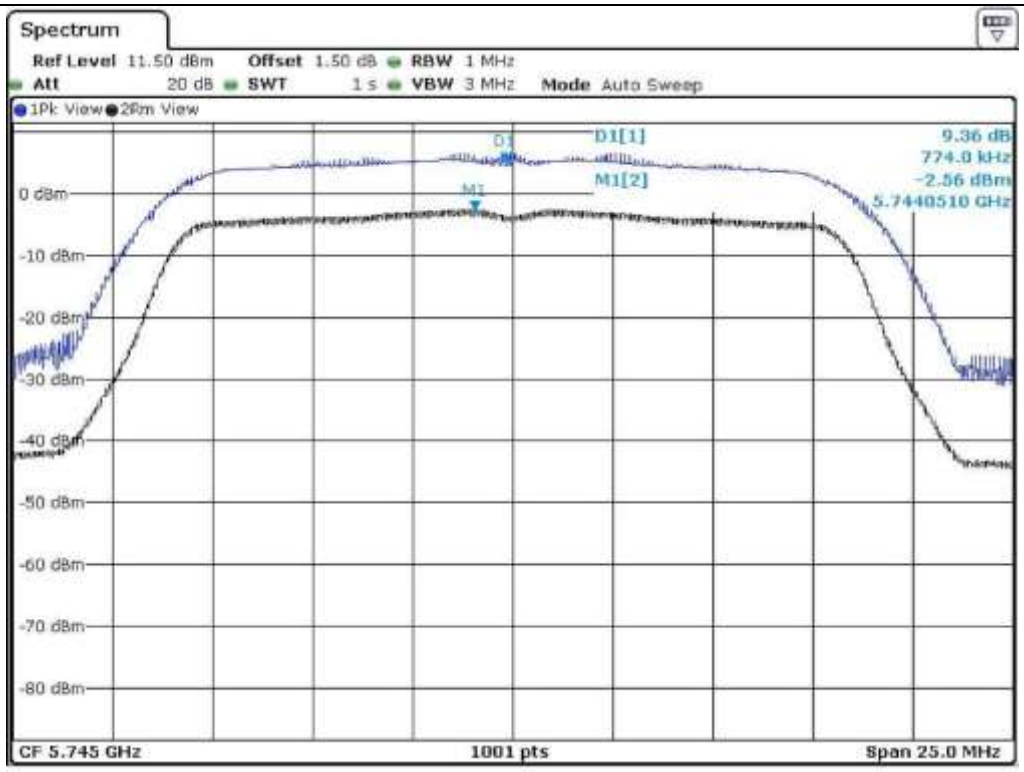
Middle Channel (5 600 MHz)

HEAD OFFICE : 301-14 Daessangnyeong-ri, Chowol-eup, Gwangju-si, Gyeonggi-do 464-862 Korea (TEL: 82-31-799-9500, FAX: 82-31-799-9599)
EMC Testing Div. : 307-51 Daessangnyeong-ri, Chowol-eup, Gwangju-si, Gyeonggi-do 464-862 Korea (TEL: 82-31-765-8289, FAX: 82-31-766-2904)

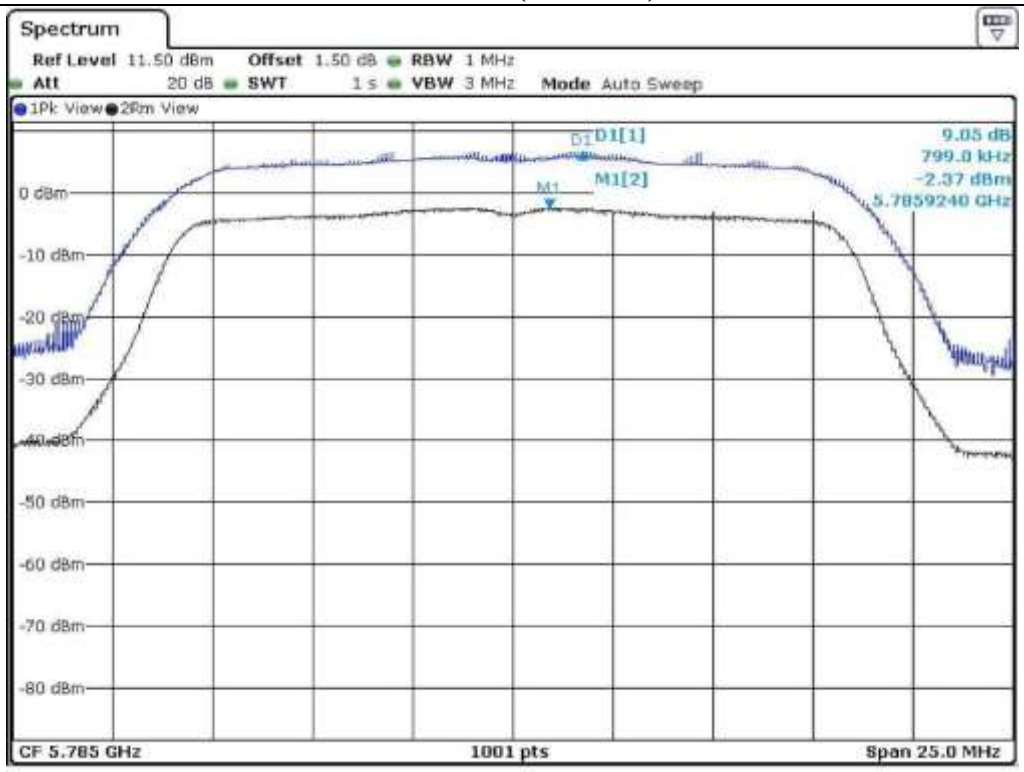


High Channel (5 700 MHz)

HEAD OFFICE : 301-14 Daessangnyeong-ri, Chowol-eup, Gwangju-si, Gyeonggi-do 464-862 Korea (TEL: 82-31-799-9500, FAX: 82-31-799-9599)
EMC Testing Div. : 307-51 Daessangnyeong-ri, Chowol-eup, Gwangju-si, Gyeonggi-do 464-862 Korea (TEL: 82-31-765-8289, FAX: 82-31-766-2904)

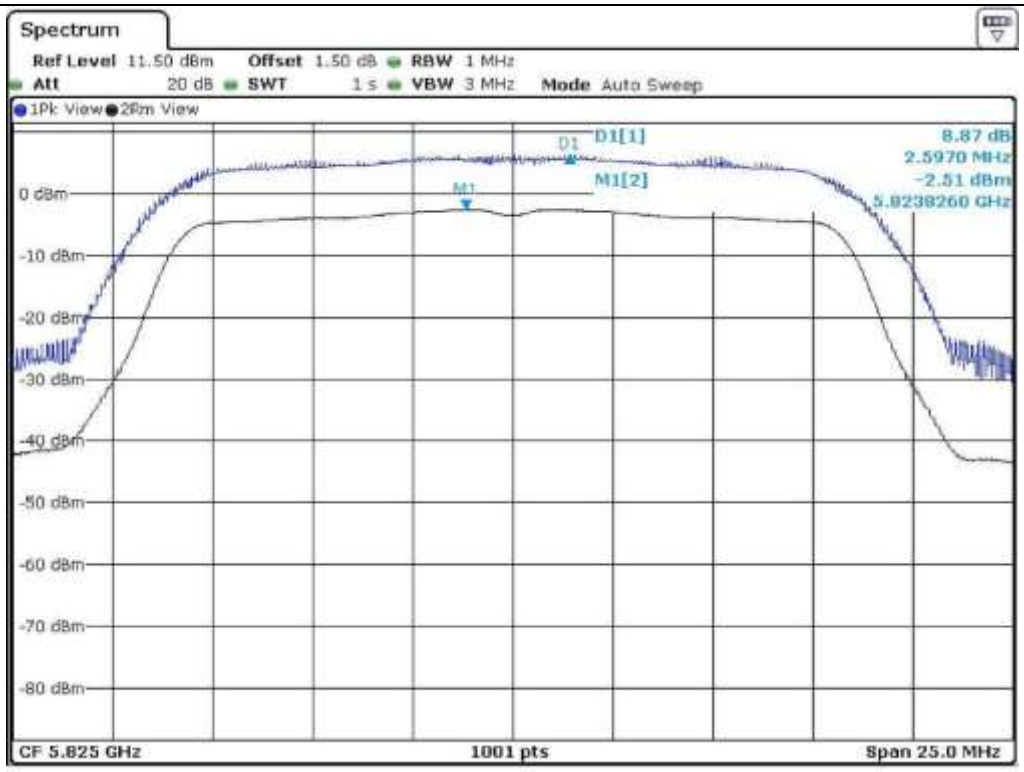


Low Channel (5 745 MHz)



Middle Channel (5 785 MHz)

HEAD OFFICE : 301-14 Daessangnyeong-ri, Chowol-eup, Gwangju-si, Gyeonggi-do 464-862 Korea (TEL: 82-31-799-9500, FAX: 82-31-799-9599)
EMC Testing Div. : 307-51 Daessangnyeong-ri, Chowol-eup, Gwangju-si, Gyeonggi-do 464-862 Korea (TEL: 82-31-765-8289, FAX: 82-31-766-2904)

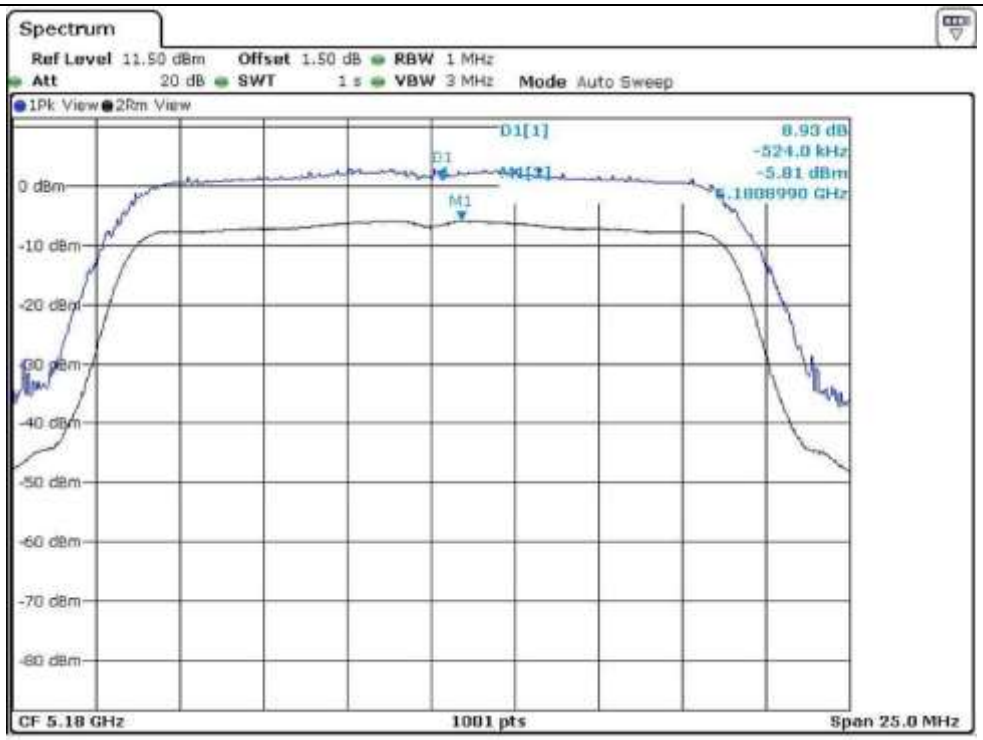


High Channel (5 825 MHz)

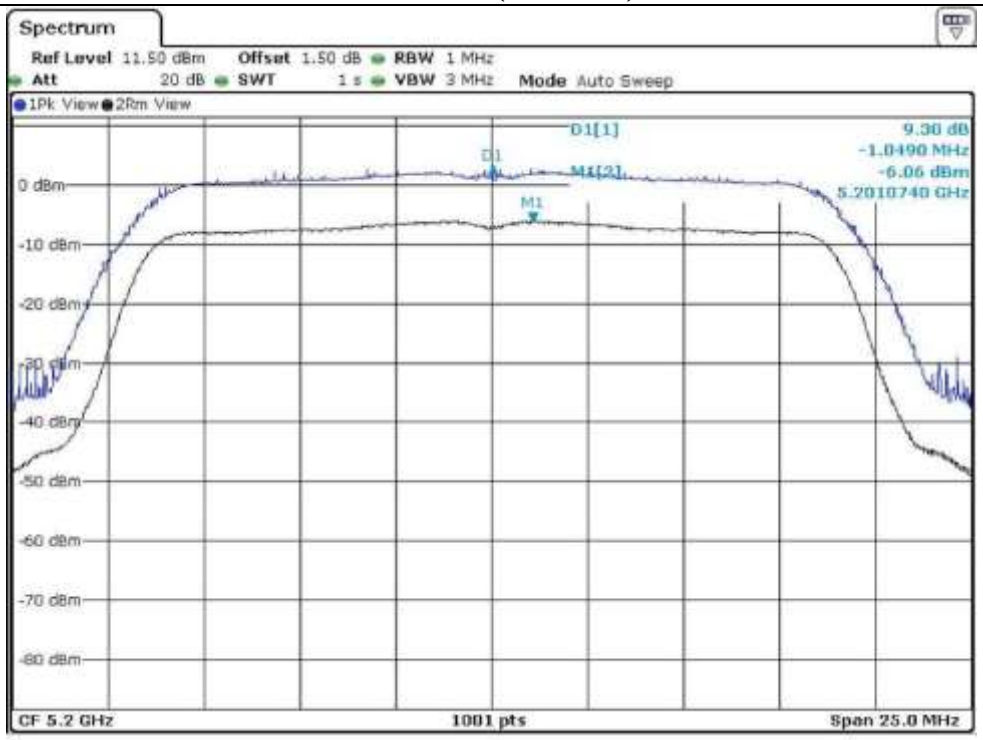
HEAD OFFICE : 301-14 Daessangnyeong-ri, Chowol-eup, Gwangju-si, Gyeonggi-do 464-862 Korea (TEL: 82-31-799-9500, FAX: 82-31-799-9599)
EMC Testing Div. : 307-51 Daessangnyeong-ri, Chowol-eup, Gwangju-si, Gyeonggi-do 464-862 Korea (TEL: 82-31-765-8289, FAX: 82-31-766-2904)

10.5 Test data for 802.11n_HT20 RLAN Mode

10.5.1 Test data for Antenna 0

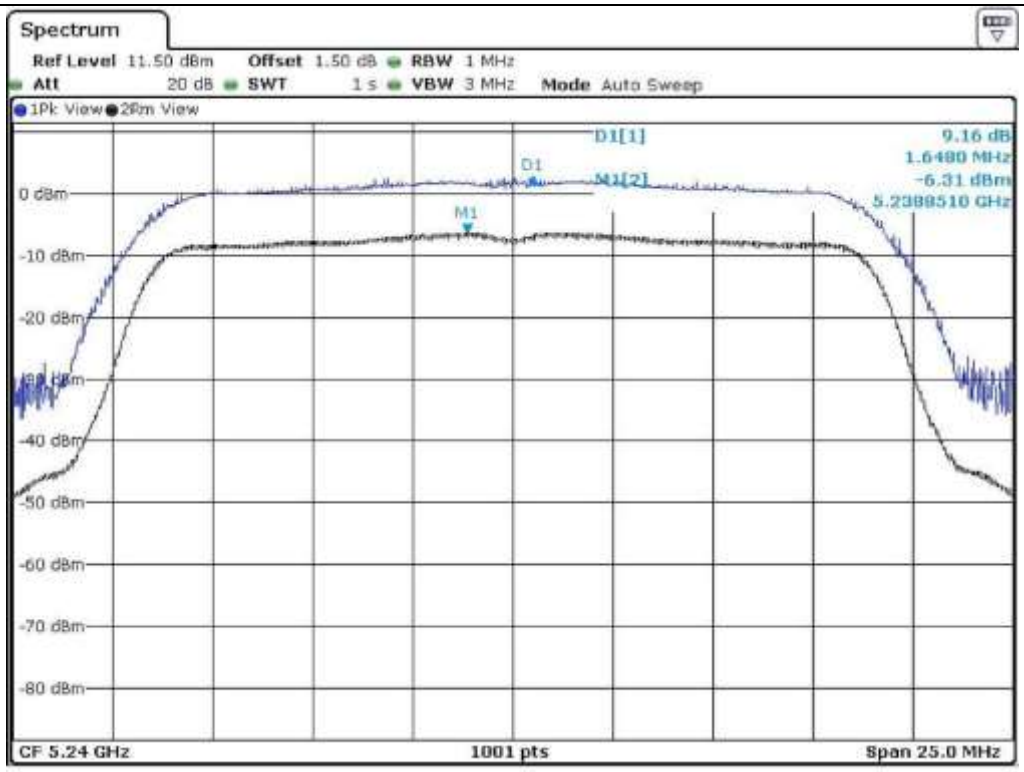


Low Channel (5 180 MHz)



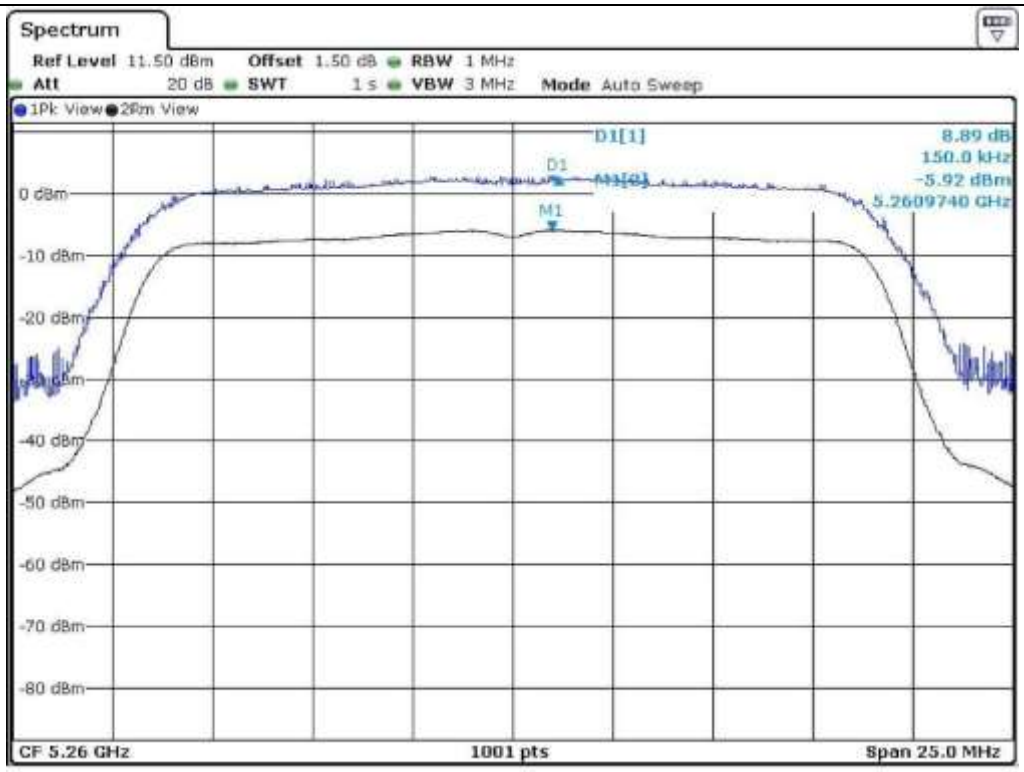
Middle Channel (5 200 MHz)

HEAD OFFICE : 301-14 Daessangnyeong-ri, Chowol-eup, Gwangju-si, Gyeonggi-do 464-862 Korea (TEL: 82-31-799-9500, FAX: 82-31-799-9599)
EMC Testing Div. : 307-51 Daessangnyeong-ri, Chowol-eup, Gwangju-si, Gyeonggi-do 464-862 Korea (TEL: 82-31-765-8289, FAX: 82-31-766-2904)

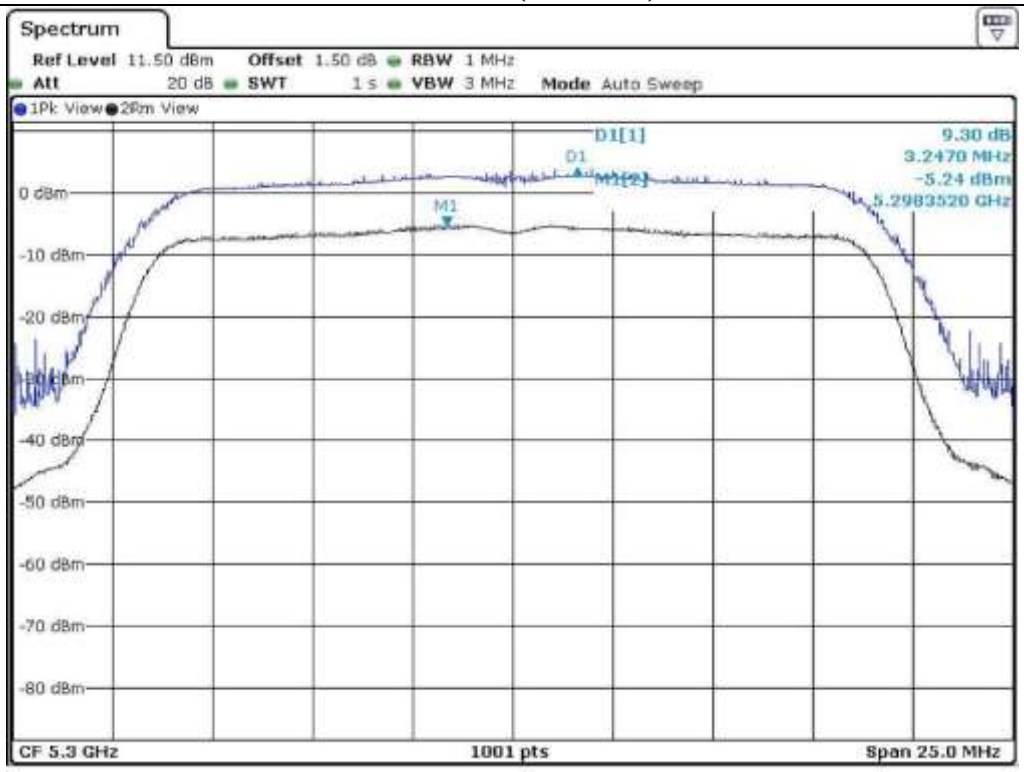


High Channel (5 240 MHz)

HEAD OFFICE : 301-14 Daessangnyeong-ri, Chowol-eup, Gwangju-si, Gyeonggi-do 464-862 Korea (TEL: 82-31-799-9500, FAX: 82-31-799-9599)
EMC Testing Div. : 307-51 Daessangnyeong-ri, Chowol-eup, Gwangju-si, Gyeonggi-do 464-862 Korea (TEL: 82-31-765-8289, FAX: 82-31-766-2904)

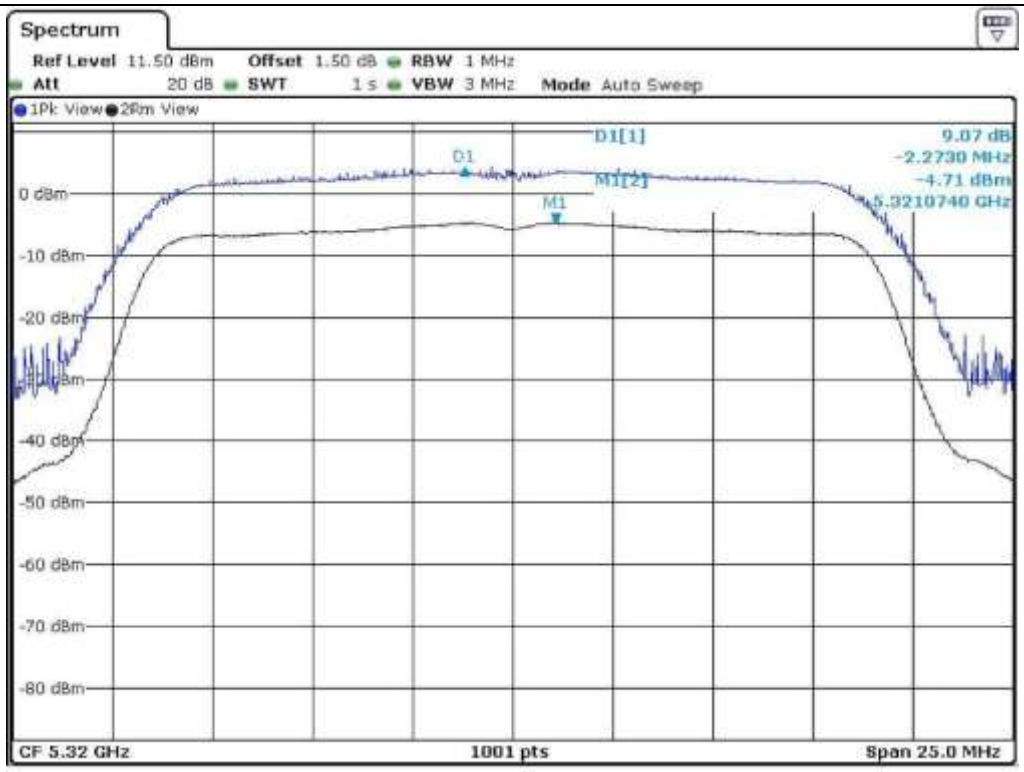


Low Channel (5 260 MHz)



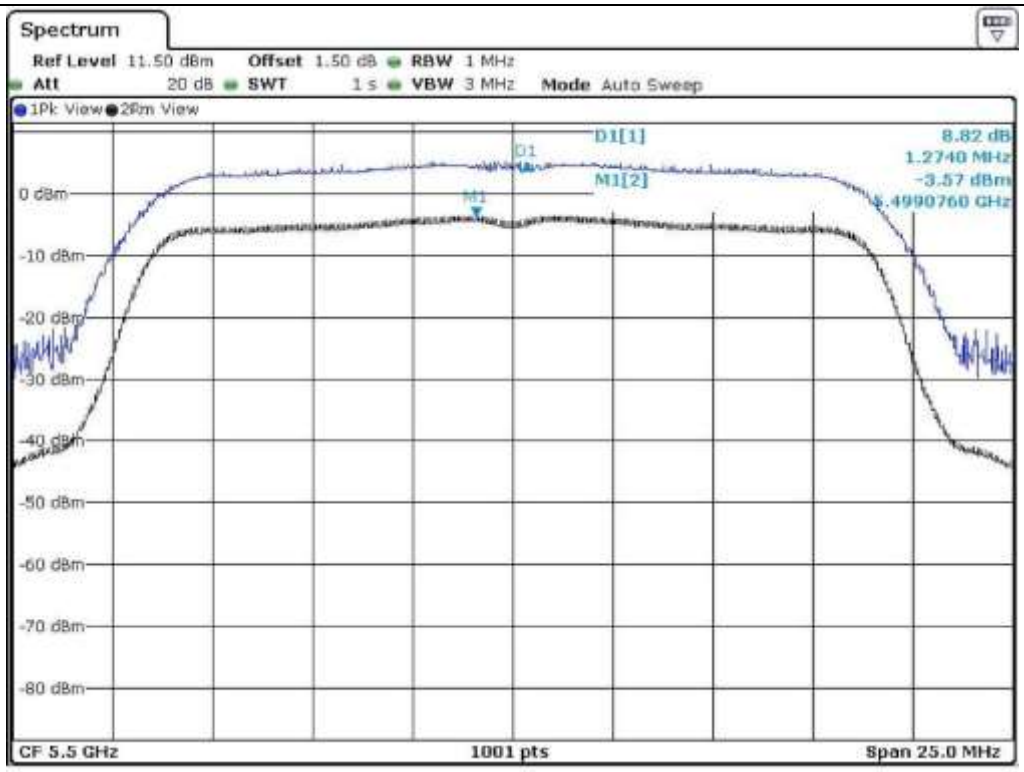
Middle Channel (5 300 MHz)

HEAD OFFICE : 301-14 Daessangnyeong-ri, Chowol-eup, Gwangju-si, Gyeonggi-do 464-862 Korea (TEL: 82-31-799-9500, FAX: 82-31-799-9599)
EMC Testing Div. : 307-51 Daessangnyeong-ri, Chowol-eup, Gwangju-si, Gyeonggi-do 464-862 Korea (TEL: 82-31-765-8289, FAX: 82-31-766-2904)

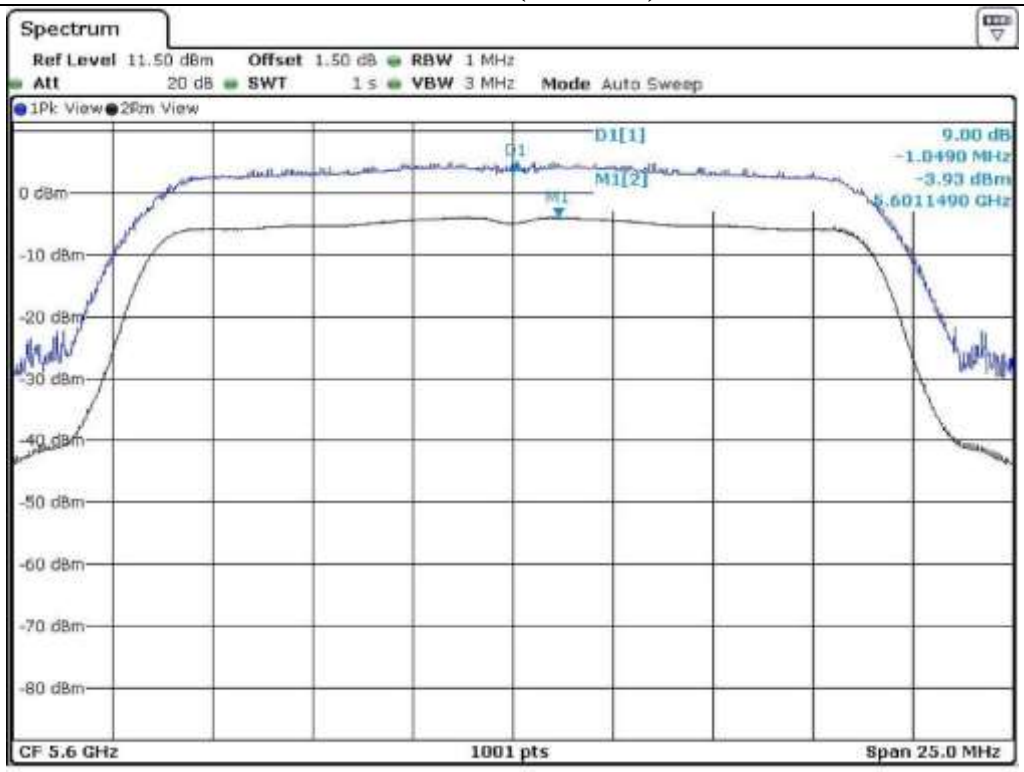


High Channel (5 320 MHz)

HEAD OFFICE : 301-14 Daessangnyeong-ri, Chowol-eup, Gwangju-si, Gyeonggi-do 464-862 Korea (TEL: 82-31-799-9500, FAX: 82-31-799-9599)
EMC Testing Div. : 307-51 Daessangnyeong-ri, Chowol-eup, Gwangju-si, Gyeonggi-do 464-862 Korea (TEL: 82-31-765-8289, FAX: 82-31-766-2904)

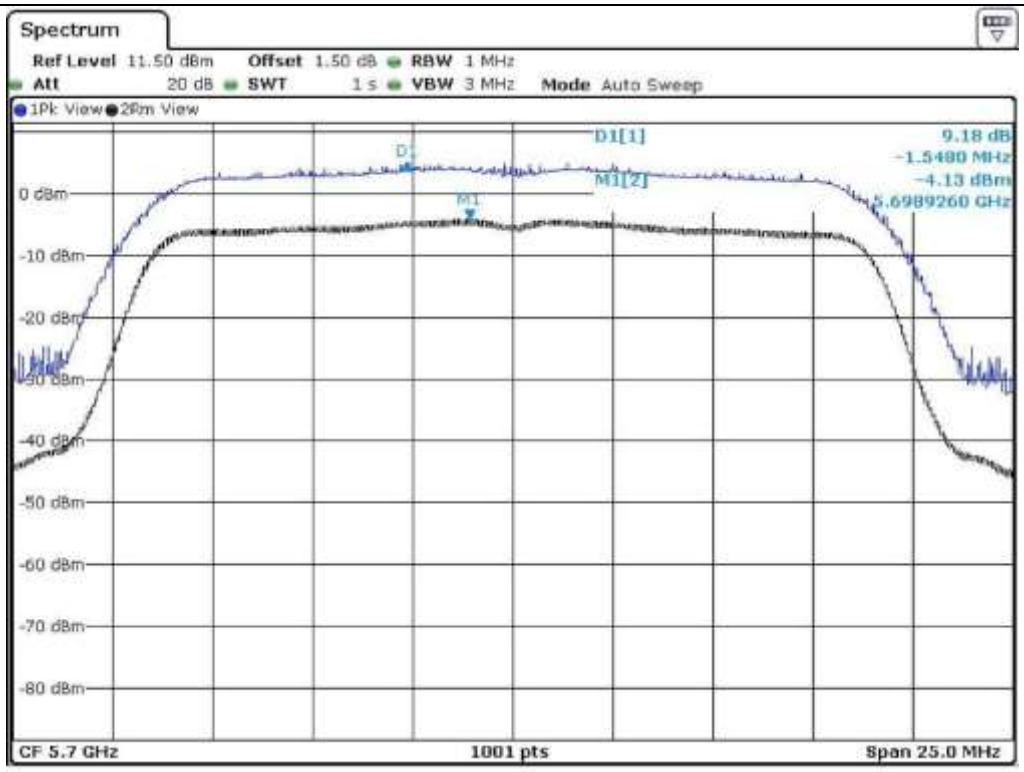


Low Channel (5 500 MHz)



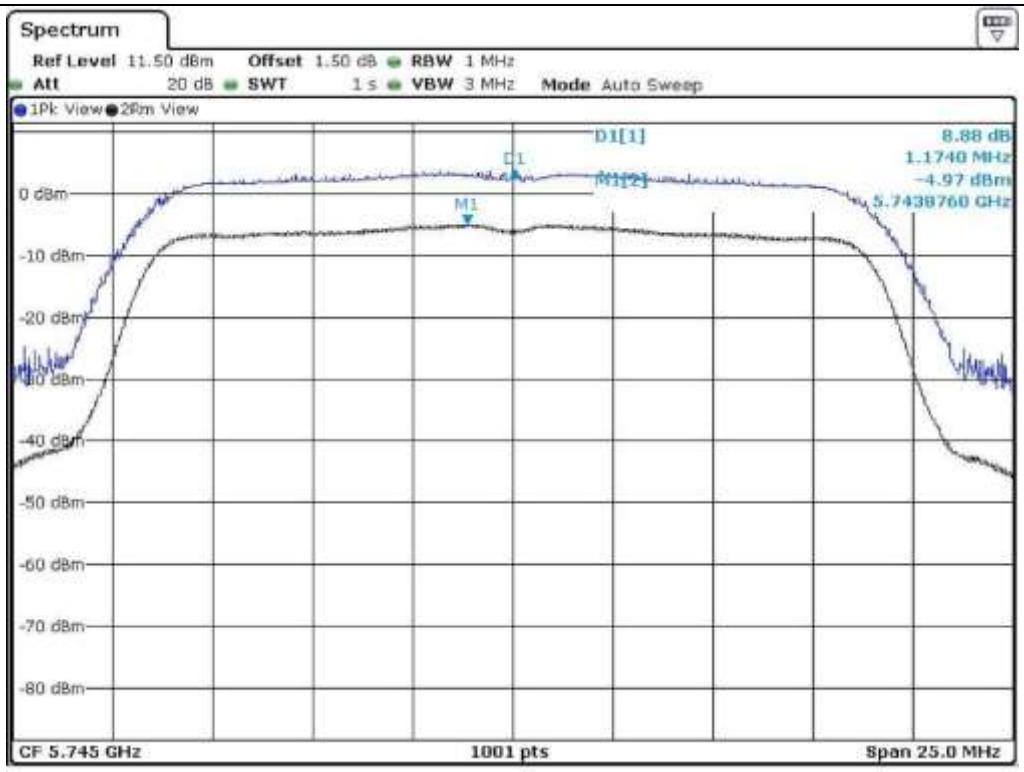
Middle Channel (5 600 MHz)

HEAD OFFICE : 301-14 Daessangnyeong-ri, Chowol-eup, Gwangju-si, Gyeonggi-do 464-862 Korea (TEL: 82-31-799-9500, FAX: 82-31-799-9599)
EMC Testing Div. : 307-51 Daessangnyeong-ri, Chowol-eup, Gwangju-si, Gyeonggi-do 464-862 Korea (TEL: 82-31-765-8289, FAX: 82-31-766-2904)

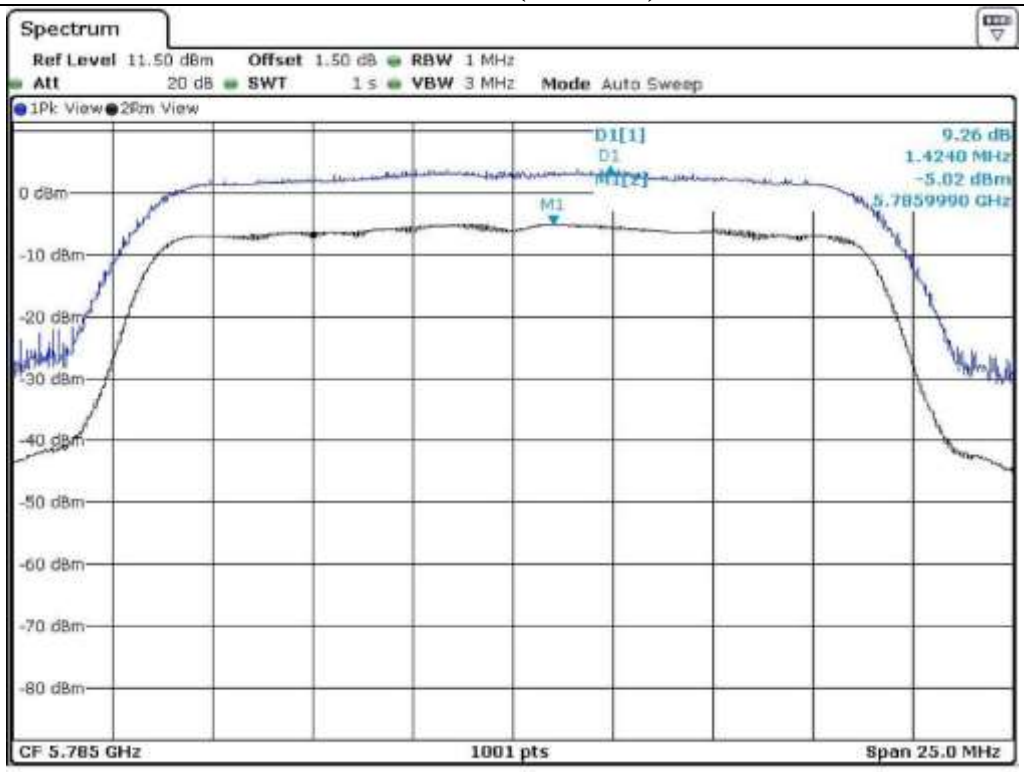


High Channel (5 700 MHz)

HEAD OFFICE : 301-14 Daessangnyeong-ri, Chowol-eup, Gwangju-si, Gyeonggi-do 464-862 Korea (TEL: 82-31-799-9500, FAX: 82-31-799-9599)
EMC Testing Div. : 307-51 Daessangnyeong-ri, Chowol-eup, Gwangju-si, Gyeonggi-do 464-862 Korea (TEL: 82-31-765-8289, FAX: 82-31-766-2904)

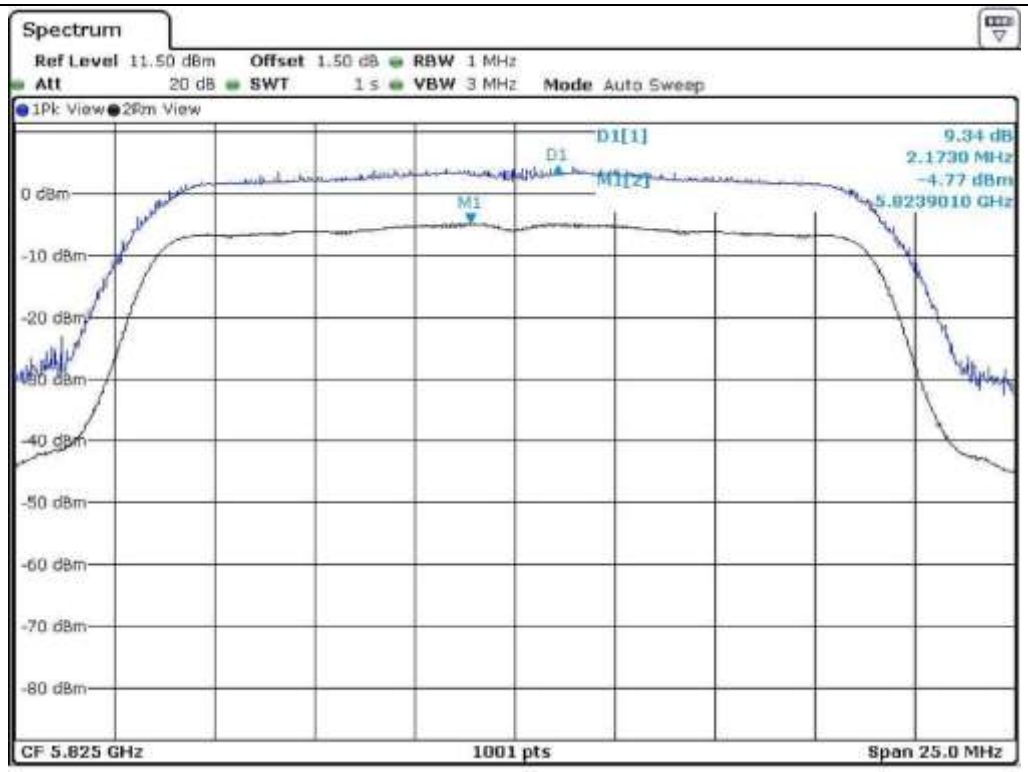


Low Channel (5 745 MHz)



Middle Channel (5 785 MHz)

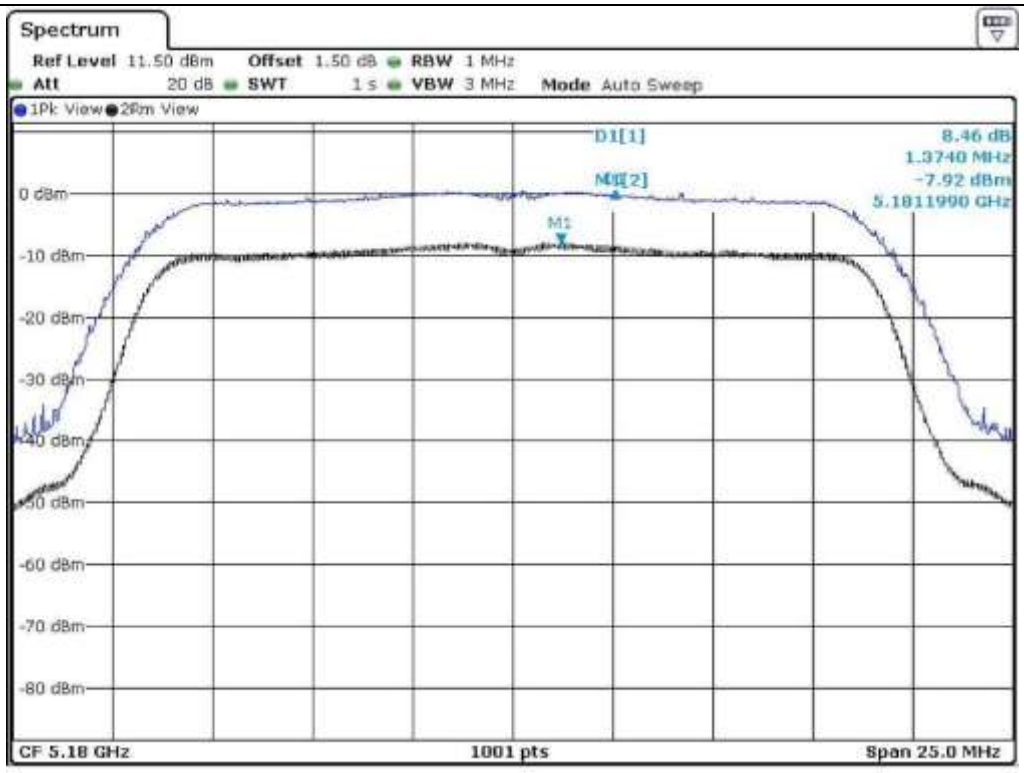
HEAD OFFICE : 301-14 Daessangnyeong-ri, Chowol-eup, Gwangju-si, Gyeonggi-do 464-862 Korea (TEL: 82-31-799-9500, FAX: 82-31-799-9599)
EMC Testing Div. : 307-51 Daessangnyeong-ri, Chowol-eup, Gwangju-si, Gyeonggi-do 464-862 Korea (TEL: 82-31-765-8289, FAX: 82-31-766-2904)



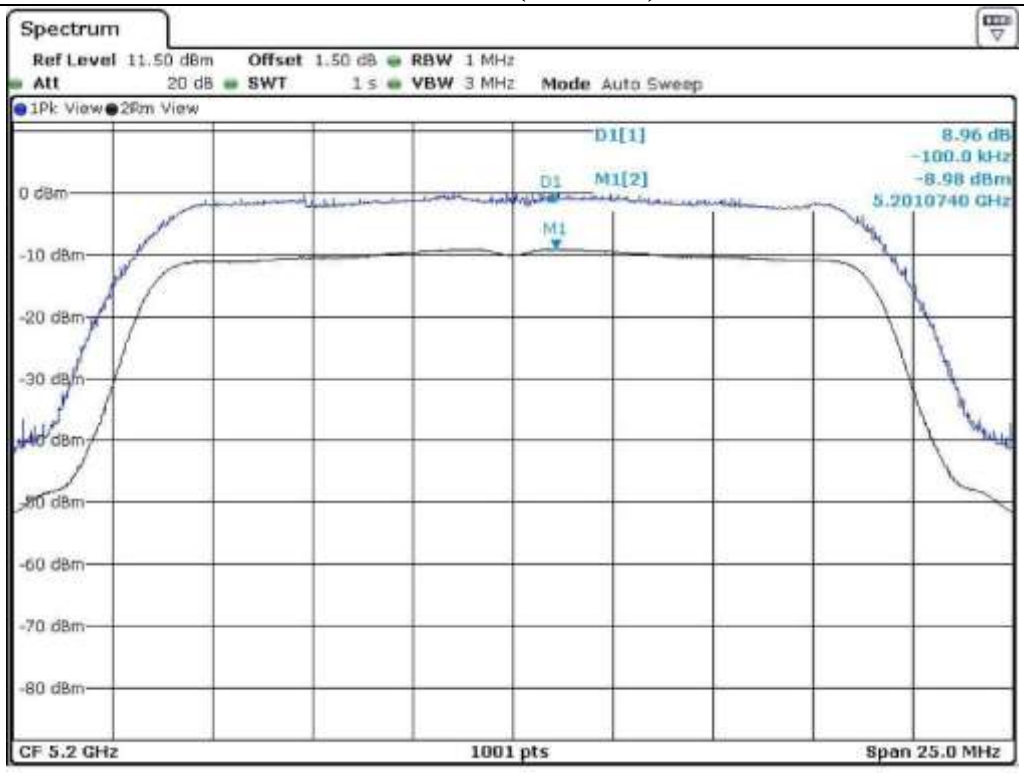
High Channel (5 825 MHz)

HEAD OFFICE : 301-14 Daessangnyeong-ri, Chowol-eup, Gwangju-si, Gyeonggi-do 464-862 Korea (TEL: 82-31-799-9500, FAX: 82-31-799-9599)
EMC Testing Div. : 307-51 Daessangnyeong-ri, Chowol-eup, Gwangju-si, Gyeonggi-do 464-862 Korea (TEL: 82-31-765-8289, FAX: 82-31-766-2904)

10.5.2 Test data for Antenna 1

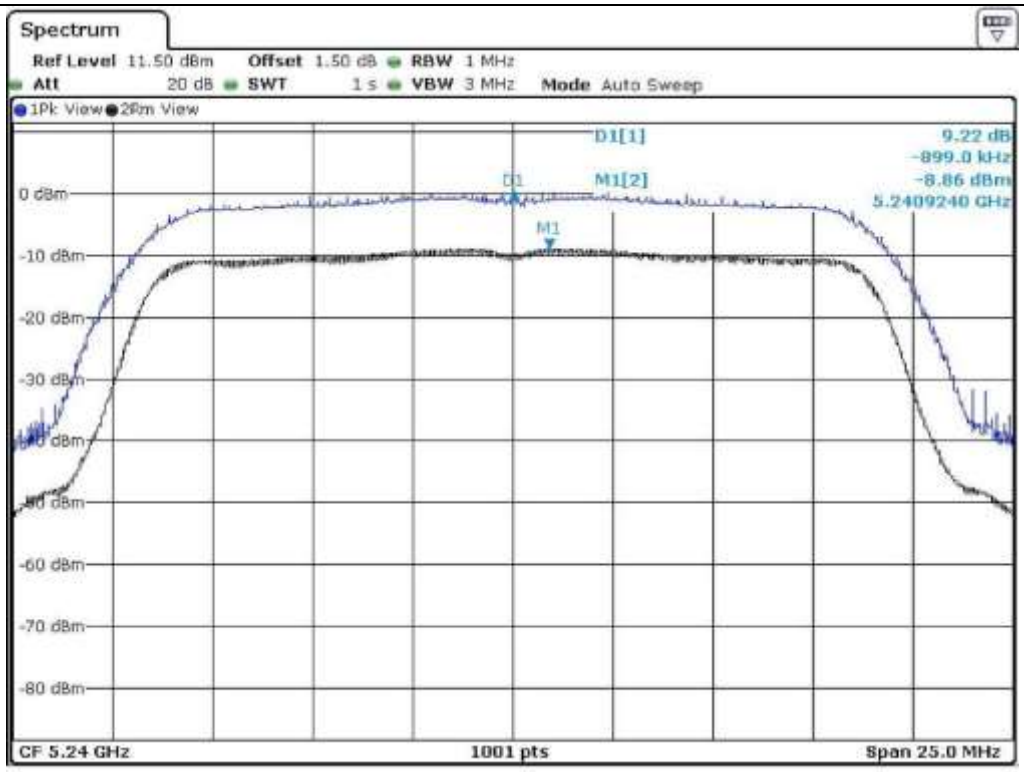


Low Channel (5 180 MHz)



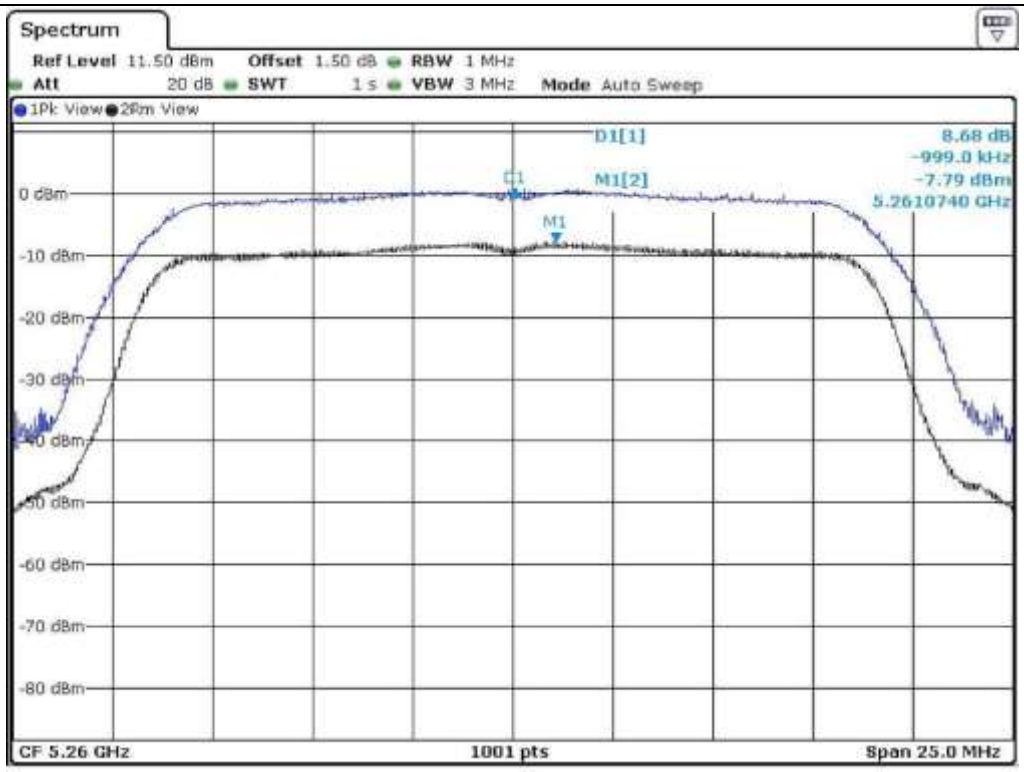
Middle Channel (5 200 MHz)

HEAD OFFICE : 301-14 Daessangnyeong-ri, Chowol-eup, Gwangju-si, Gyeonggi-do 464-862 Korea (TEL: 82-31-799-9500, FAX: 82-31-799-9599)
EMC Testing Div. : 307-51 Daessangnyeong-ri, Chowol-eup, Gwangju-si, Gyeonggi-do 464-862 Korea (TEL: 82-31-765-8289, FAX: 82-31-766-2904)

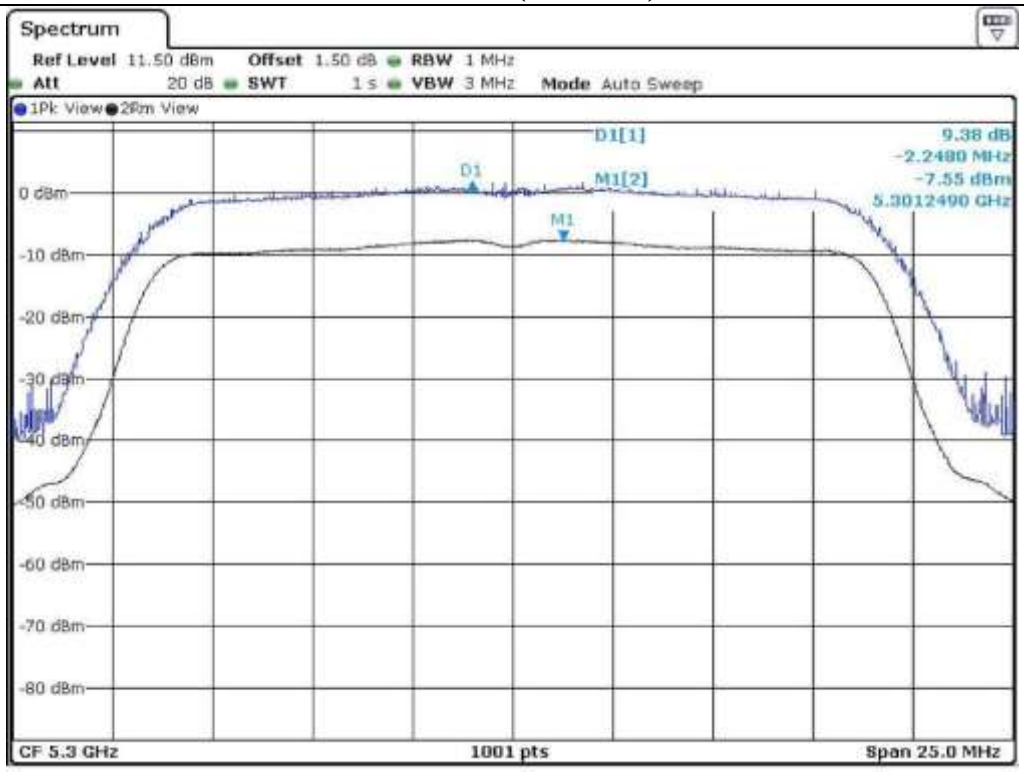


High Channel (5 240 MHz)

HEAD OFFICE : 301-14 Daessangnyeong-ri, Chowol-eup, Gwangju-si, Gyeonggi-do 464-862 Korea (TEL: 82-31-799-9500, FAX: 82-31-799-9599)
EMC Testing Div. : 307-51 Daessangnyeong-ri, Chowol-eup, Gwangju-si, Gyeonggi-do 464-862 Korea (TEL: 82-31-765-8289, FAX: 82-31-766-2904)

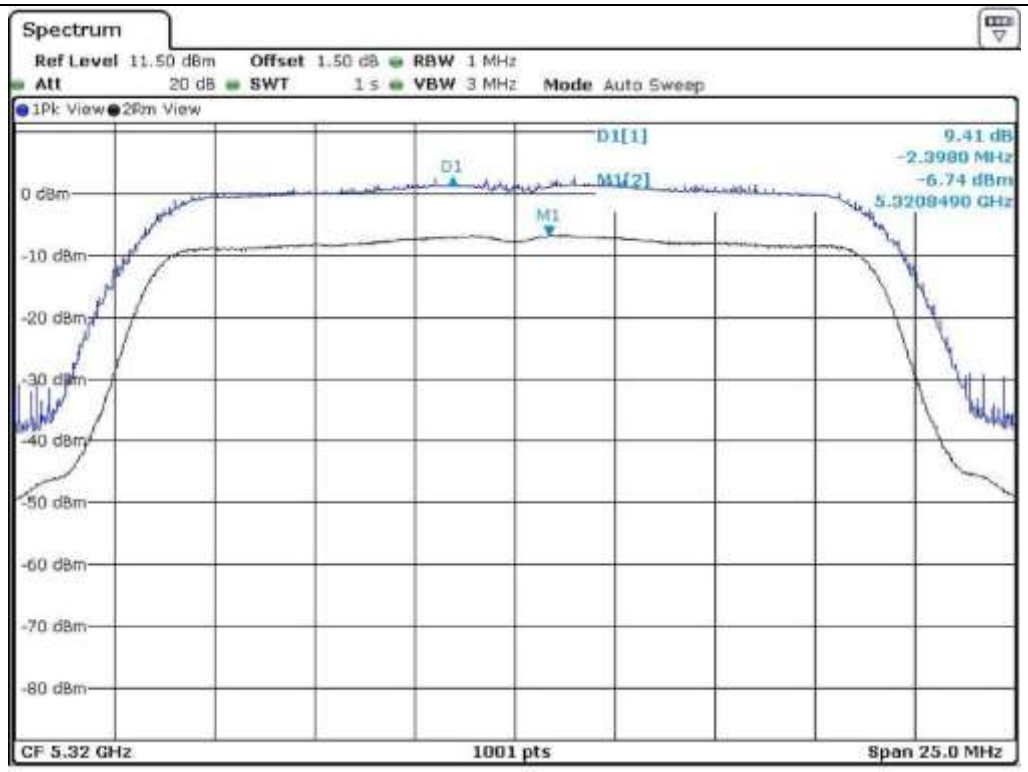


Low Channel (5 260 MHz)



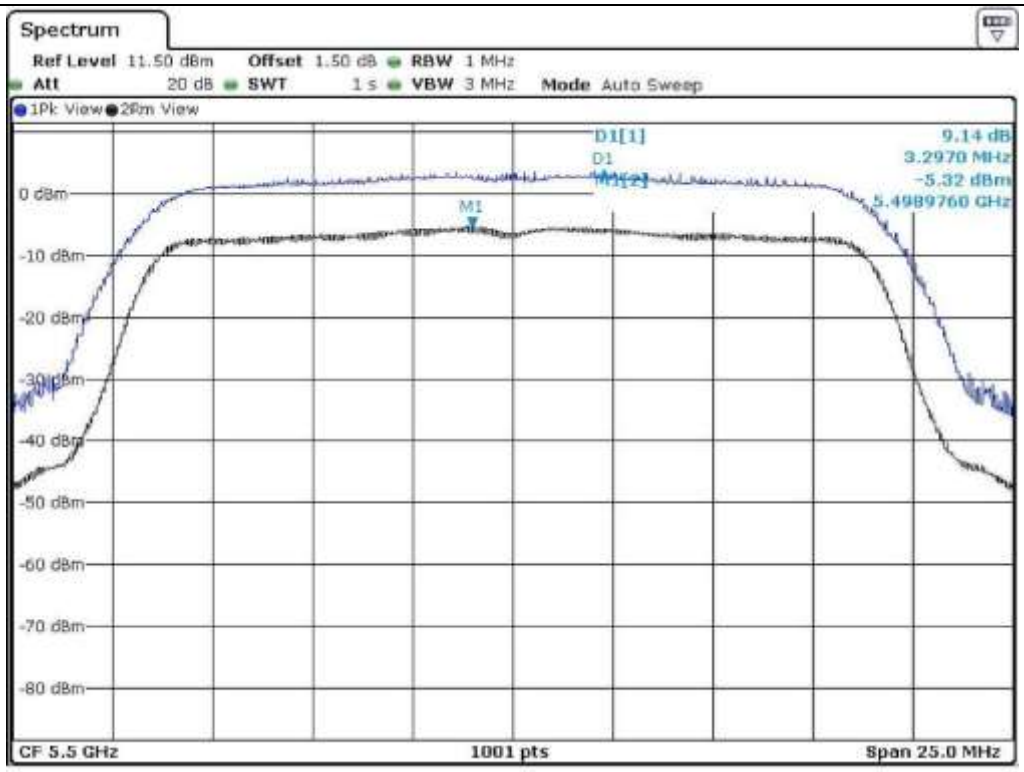
Middle Channel (5 300 MHz)

HEAD OFFICE : 301-14 Daessangnyeong-ri, Chowol-eup, Gwangju-si, Gyeonggi-do 464-862 Korea (TEL: 82-31-799-9500, FAX: 82-31-799-9599)
EMC Testing Div. : 307-51 Daessangnyeong-ri, Chowol-eup, Gwangju-si, Gyeonggi-do 464-862 Korea (TEL: 82-31-765-8289, FAX: 82-31-766-2904)

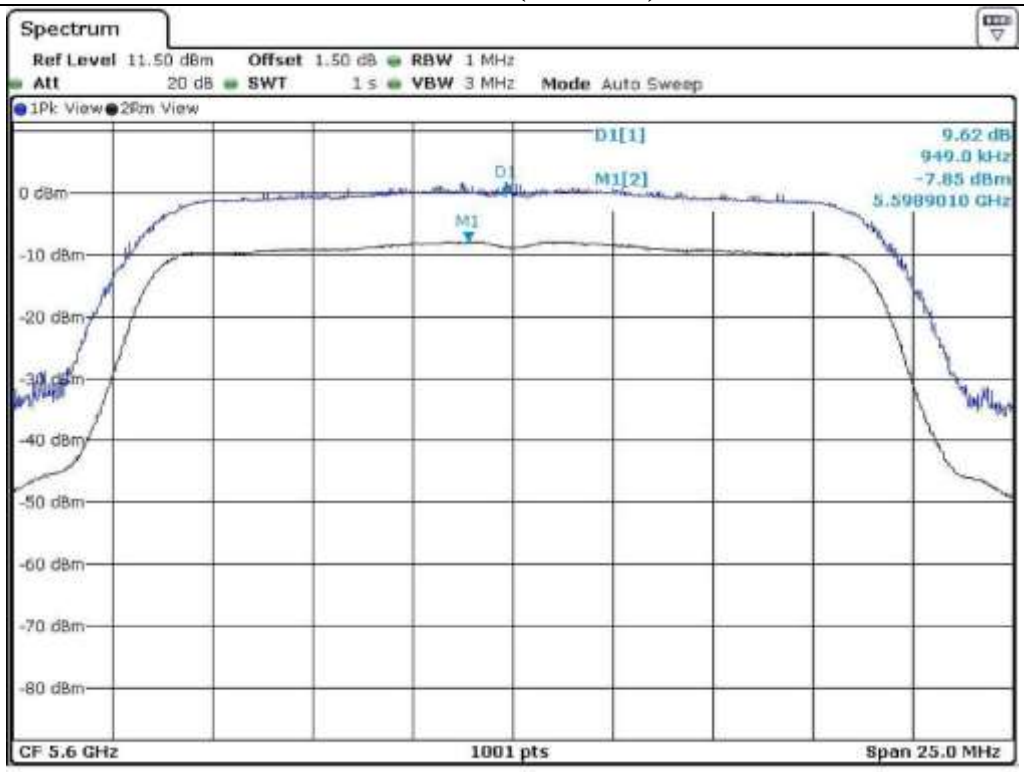


High Channel (5 320 MHz)

HEAD OFFICE : 301-14 Daessangnyeong-ri, Chowol-eup, Gwangju-si, Gyeonggi-do 464-862 Korea (TEL: 82-31-799-9500, FAX: 82-31-799-9599)
EMC Testing Div. : 307-51 Daessangnyeong-ri, Chowol-eup, Gwangju-si, Gyeonggi-do 464-862 Korea (TEL: 82-31-765-8289, FAX: 82-31-766-2904)

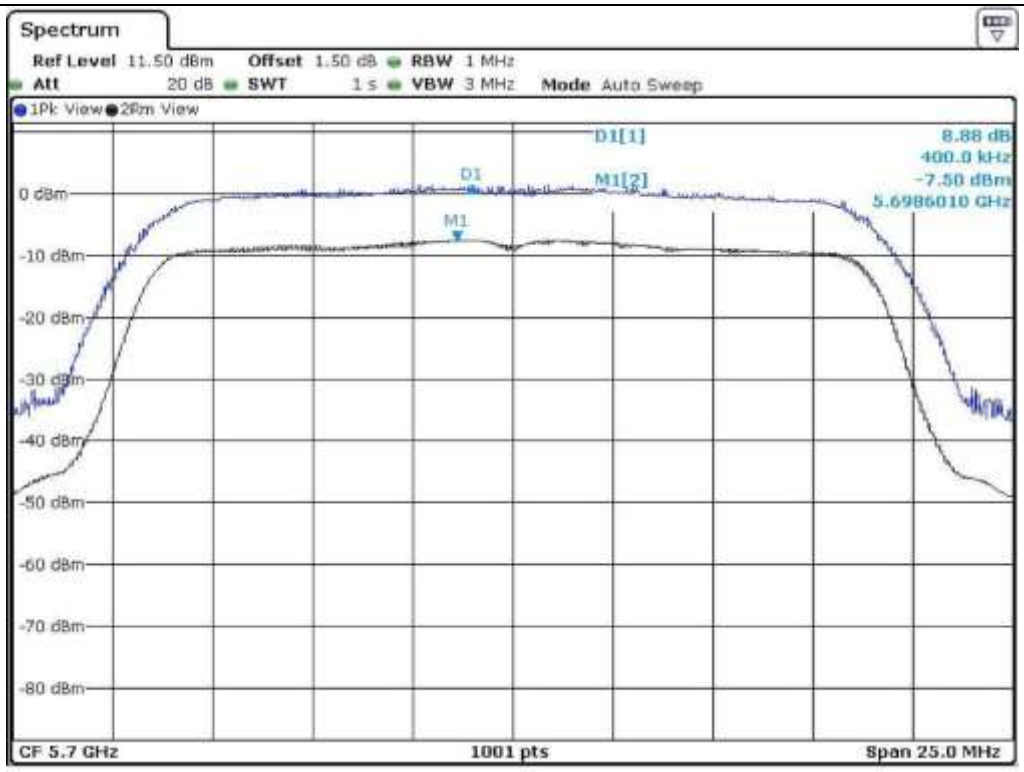


Low Channel (5 500 MHz)



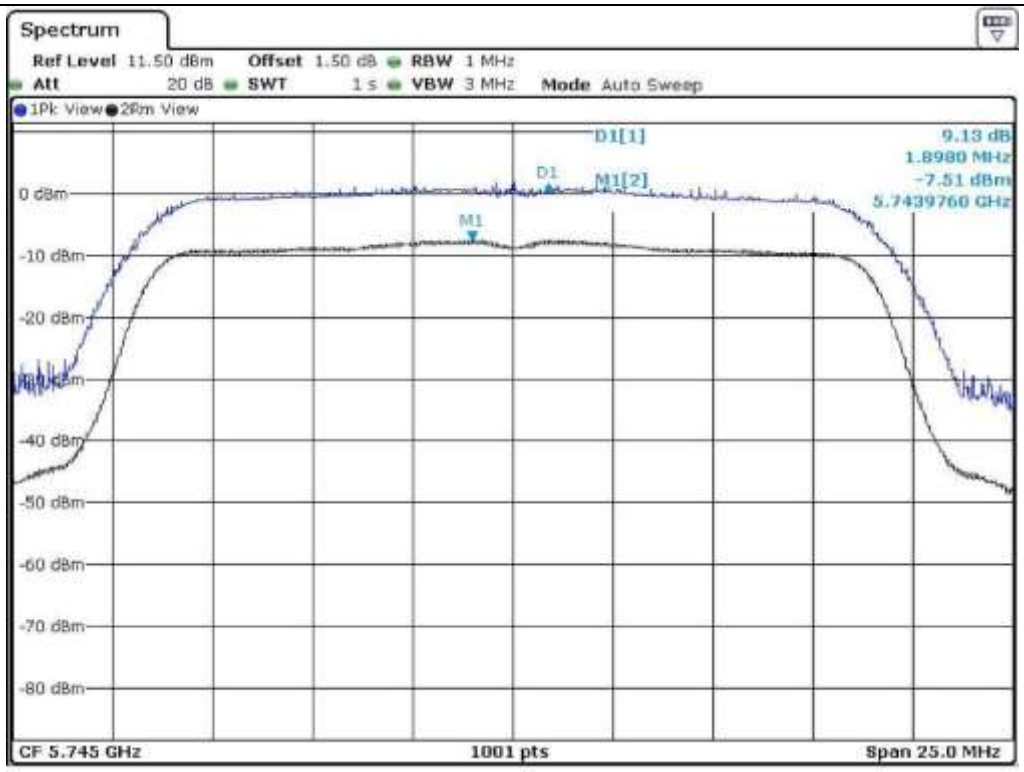
Middle Channel (5 600 MHz)

HEAD OFFICE : 301-14 Daessangnyeong-ri, Chowol-eup, Gwangju-si, Gyeonggi-do 464-862 Korea (TEL: 82-31-799-9500, FAX: 82-31-799-9599)
EMC Testing Div. : 307-51 Daessangnyeong-ri, Chowol-eup, Gwangju-si, Gyeonggi-do 464-862 Korea (TEL: 82-31-765-8289, FAX: 82-31-766-2904)

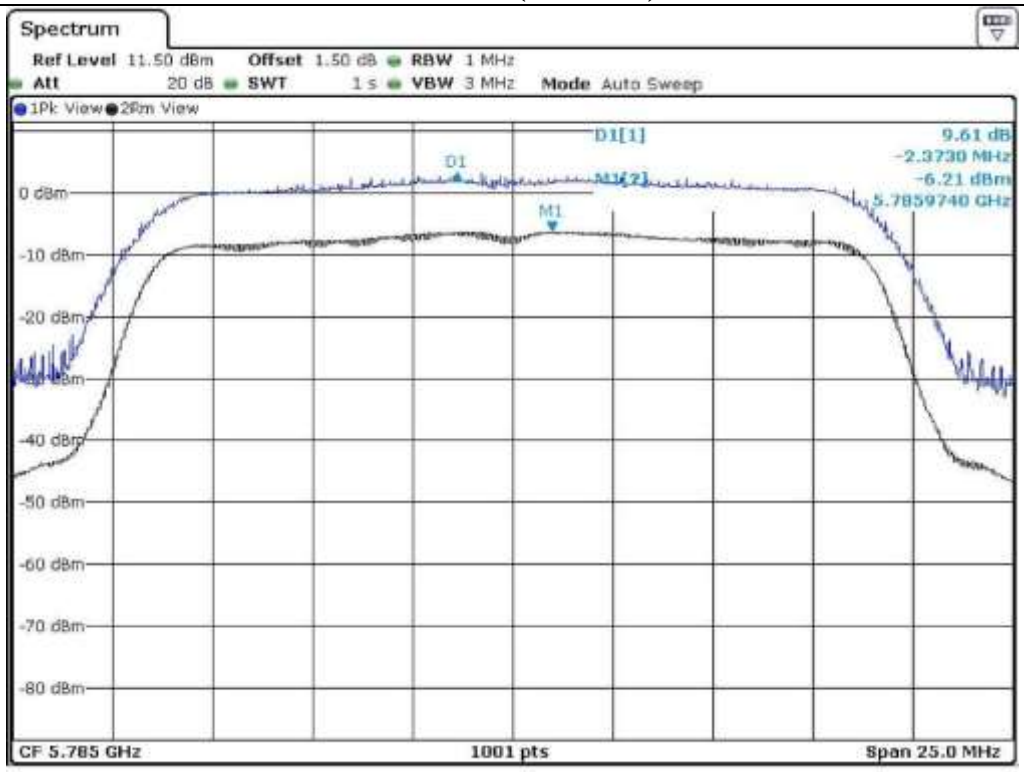


High Channel (5 700 MHz)

HEAD OFFICE : 301-14 Daessangnyeong-ri, Chowol-eup, Gwangju-si, Gyeonggi-do 464-862 Korea (TEL: 82-31-799-9500, FAX: 82-31-799-9599)
EMC Testing Div. : 307-51 Daessangnyeong-ri, Chowol-eup, Gwangju-si, Gyeonggi-do 464-862 Korea (TEL: 82-31-765-8289, FAX: 82-31-766-2904)

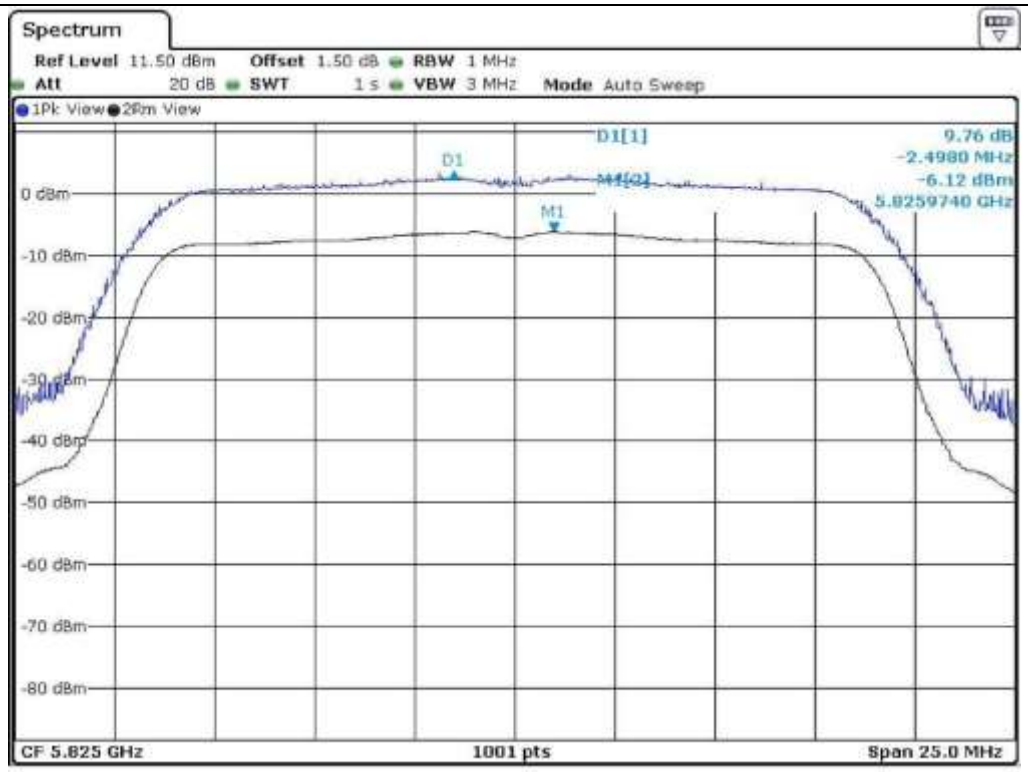


Low Channel (5 745 MHz)



Middle Channel (5 785 MHz)

HEAD OFFICE : 301-14 Daessangnyeong-ri, Chowol-eup, Gwangju-si, Gyeonggi-do 464-862 Korea (TEL: 82-31-799-9500, FAX: 82-31-799-9599)
EMC Testing Div. : 307-51 Daessangnyeong-ri, Chowol-eup, Gwangju-si, Gyeonggi-do 464-862 Korea (TEL: 82-31-765-8289, FAX: 82-31-766-2904)

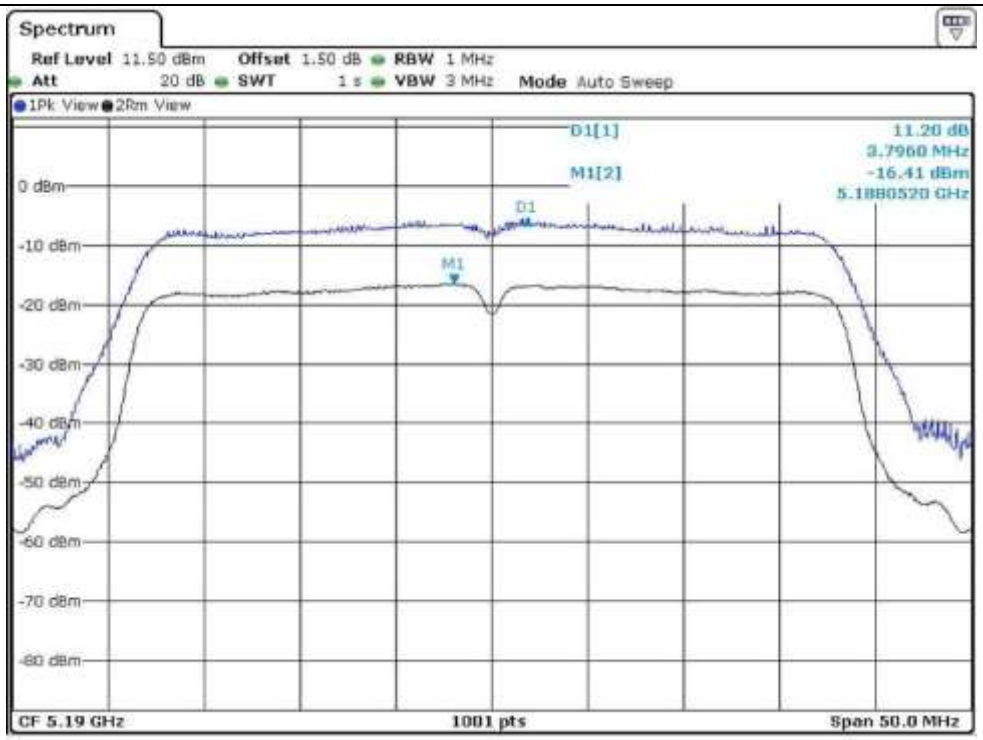


High Channel (5 825 MHz)

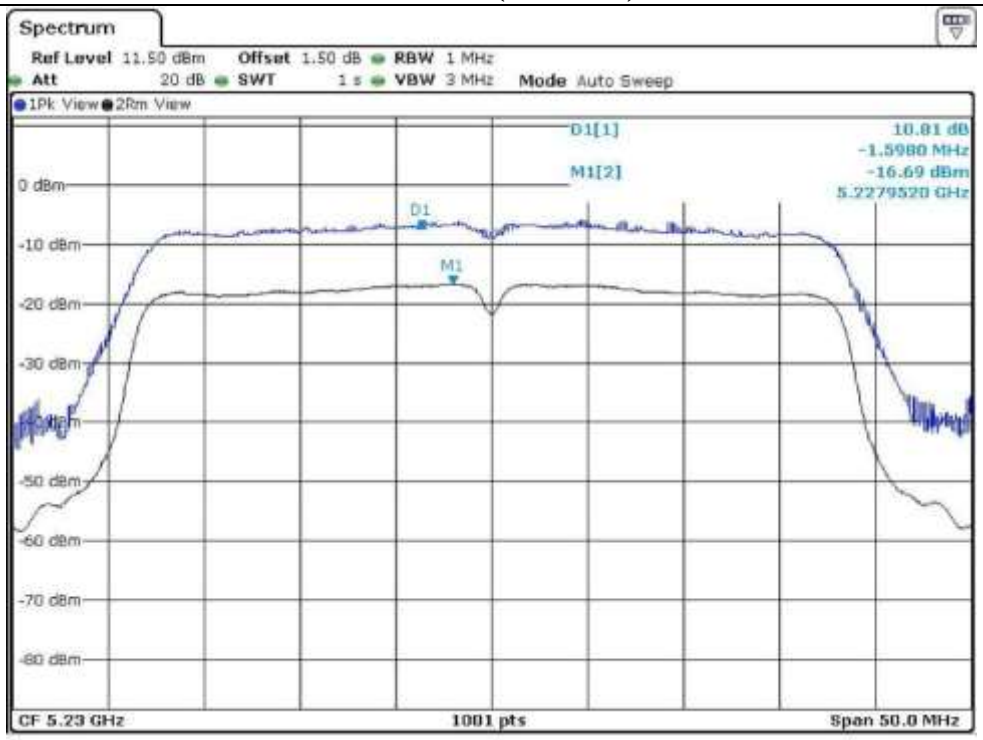
HEAD OFFICE : 301-14 Daessangnyeong-ri, Chowol-eup, Gwangju-si, Gyeonggi-do 464-862 Korea (TEL: 82-31-799-9500, FAX: 82-31-799-9599)
EMC Testing Div. : 307-51 Daessangnyeong-ri, Chowol-eup, Gwangju-si, Gyeonggi-do 464-862 Korea (TEL: 82-31-765-8289, FAX: 82-31-766-2904)

10.6 Test data for 802.11n_HT40 RLAN Mode

10.6.1 Test data for Antenna 0

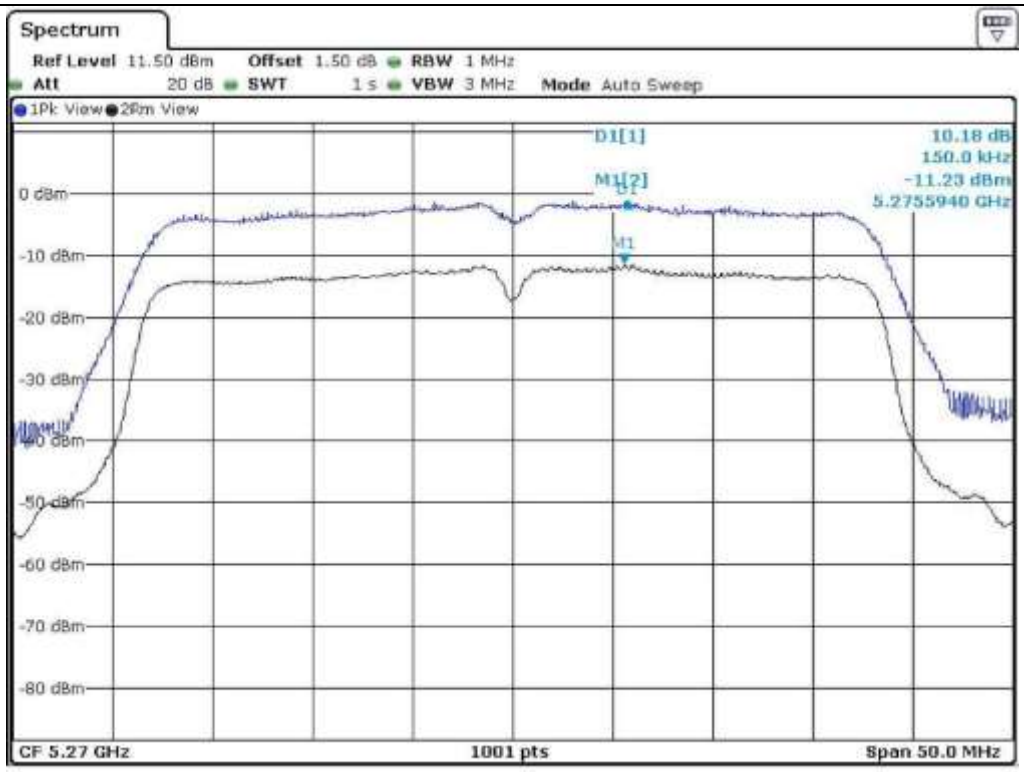


Low Channel (5 190 MHz)

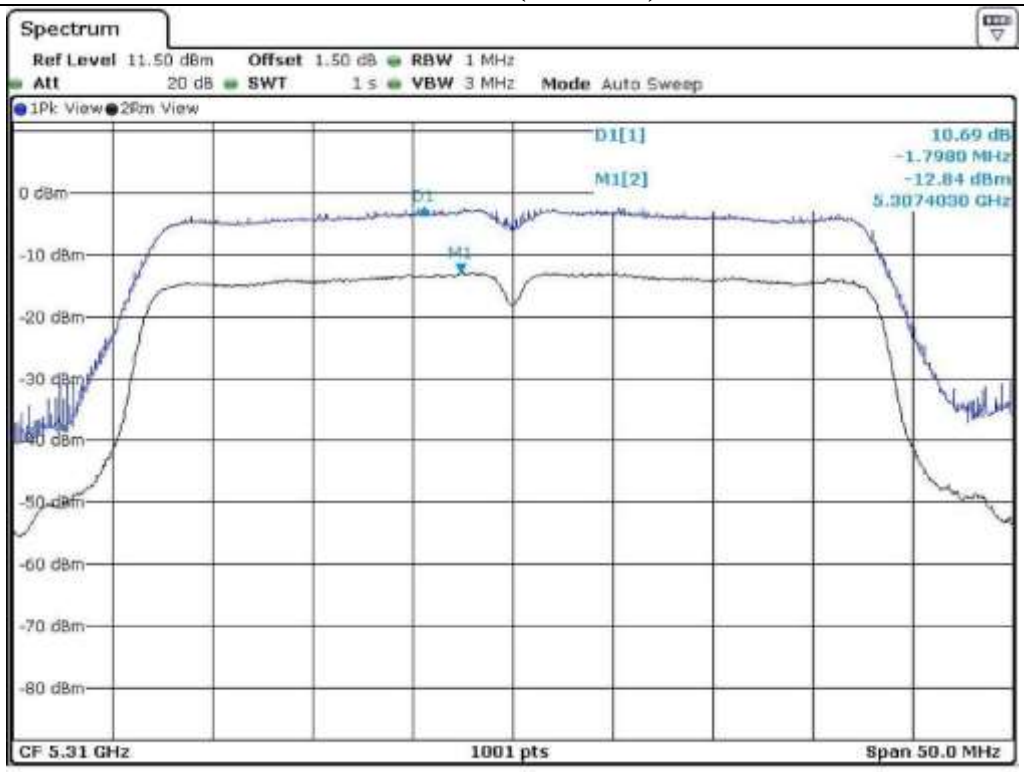


High Channel (5 230 MHz)

HEAD OFFICE : 301-14 Daessangnyeong-ri, Chowol-eup, Gwangju-si, Gyeonggi-do 464-862 Korea (TEL: 82-31-799-9500, FAX: 82-31-799-9599)
EMC Testing Div. : 307-51 Daessangnyeong-ri, Chowol-eup, Gwangju-si, Gyeonggi-do 464-862 Korea (TEL: 82-31-765-8289, FAX: 82-31-766-2904)

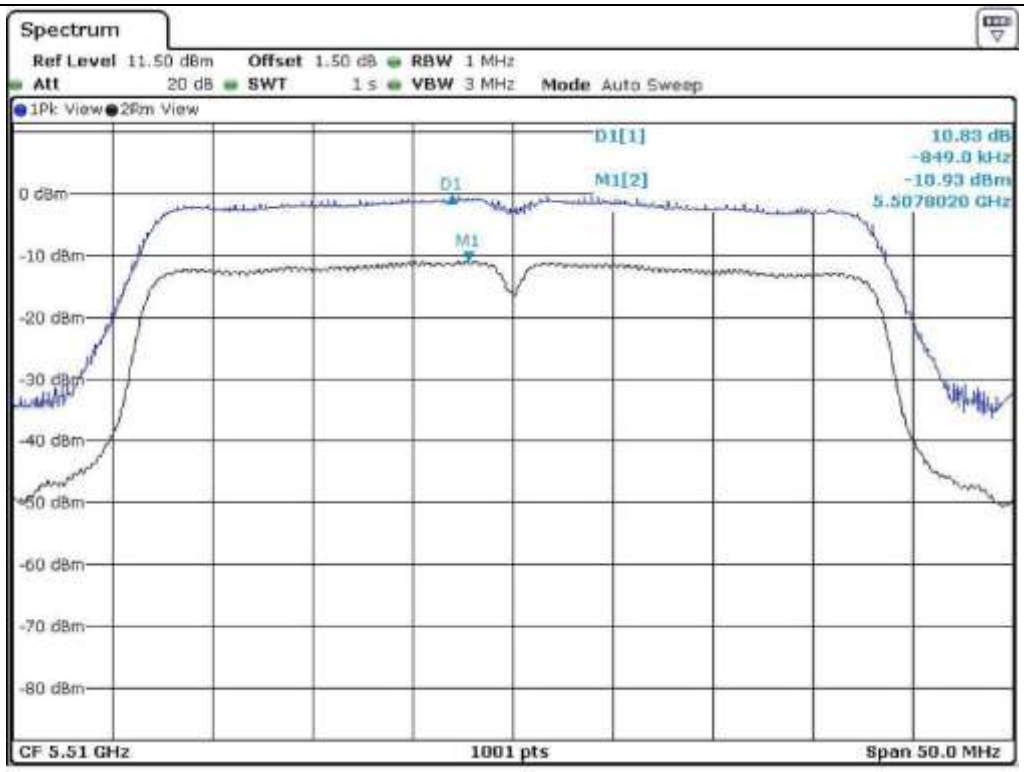


Low Channel (5 270 MHz)

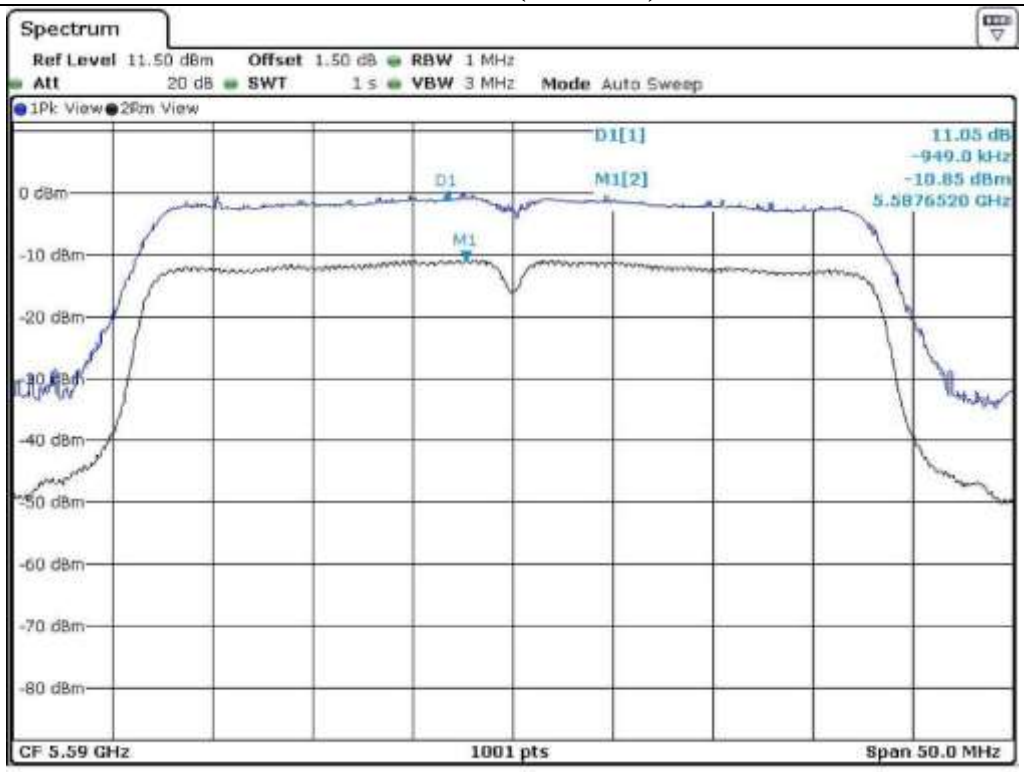


High Channel (5 310 MHz)

HEAD OFFICE : 301-14 Daessangnyeong-ri, Chowol-eup, Gwangju-si, Gyeonggi-do 464-862 Korea (TEL: 82-31-799-9500, FAX: 82-31-799-9599)
EMC Testing Div. : 307-51 Daessangnyeong-ri, Chowol-eup, Gwangju-si, Gyeonggi-do 464-862 Korea (TEL: 82-31-765-8289, FAX: 82-31-766-2904)

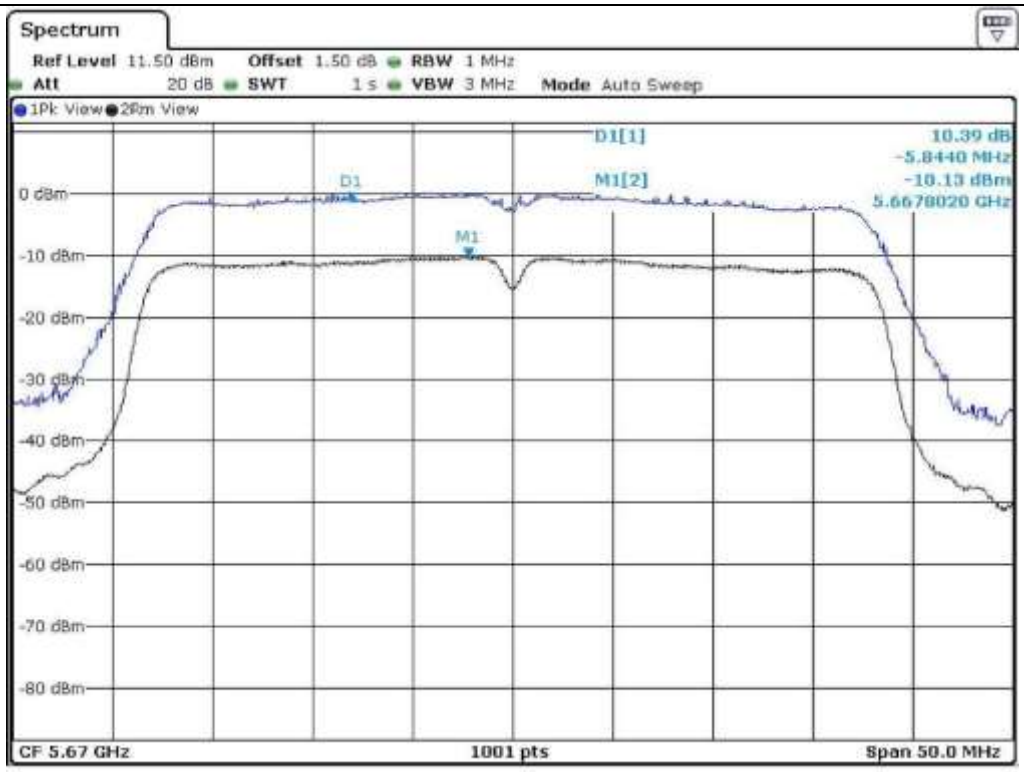


Low Channel (5 510 MHz)



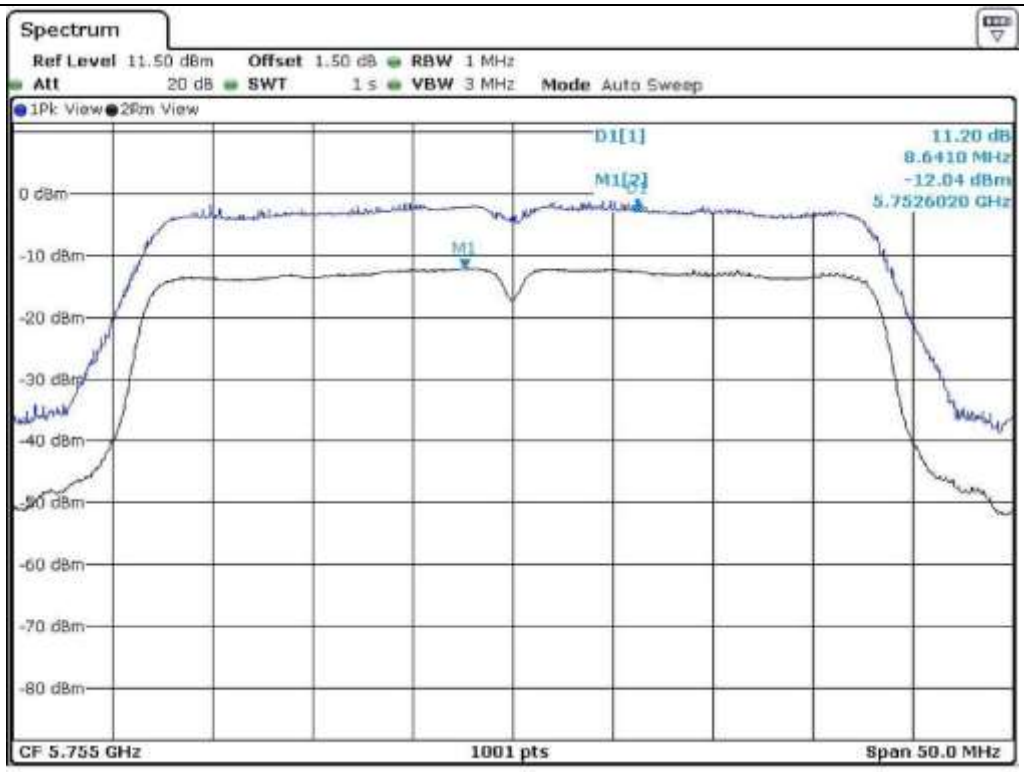
Middle Channel (5 590 MHz)

HEAD OFFICE : 301-14 Daessangnyeong-ri, Chowol-eup, Gwangju-si, Gyeonggi-do 464-862 Korea (TEL: 82-31-799-9500, FAX: 82-31-799-9599)
EMC Testing Div. : 307-51 Daessangnyeong-ri, Chowol-eup, Gwangju-si, Gyeonggi-do 464-862 Korea (TEL: 82-31-765-8289, FAX: 82-31-766-2904)

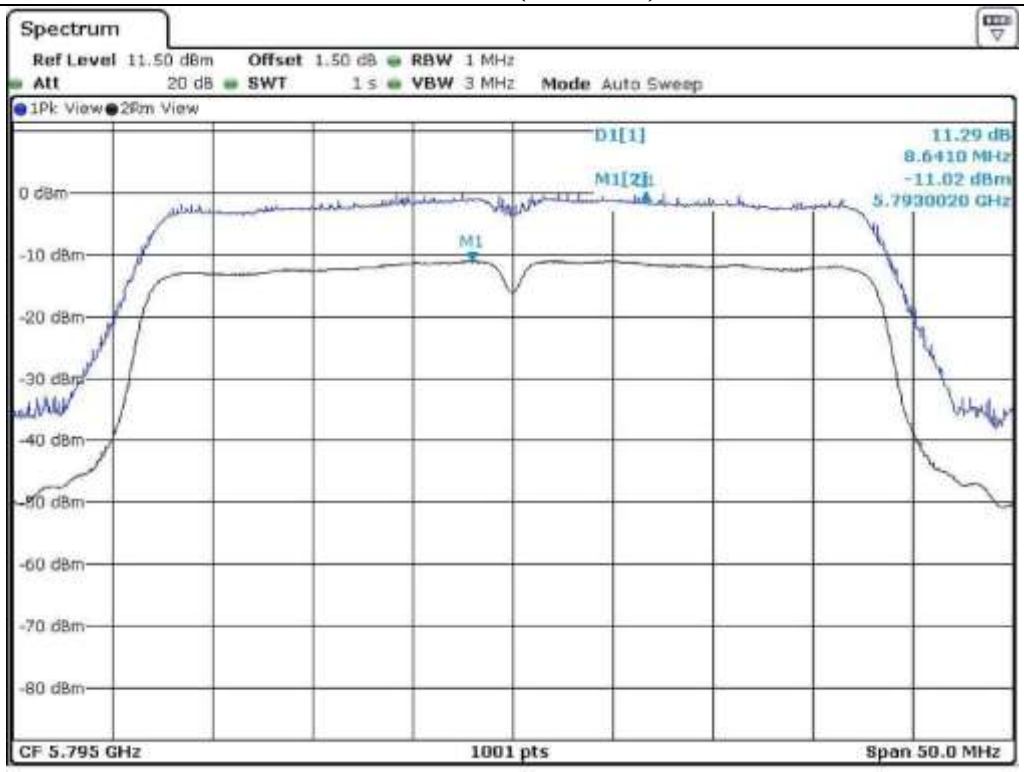


High Channel (5 670 MHz)

HEAD OFFICE : 301-14 Daessangnyeong-ri, Chowol-eup, Gwangju-si, Gyeonggi-do 464-862 Korea (TEL: 82-31-799-9500, FAX: 82-31-799-9599)
EMC Testing Div. : 307-51 Daessangnyeong-ri, Chowol-eup, Gwangju-si, Gyeonggi-do 464-862 Korea (TEL: 82-31-765-8289, FAX: 82-31-766-2904)



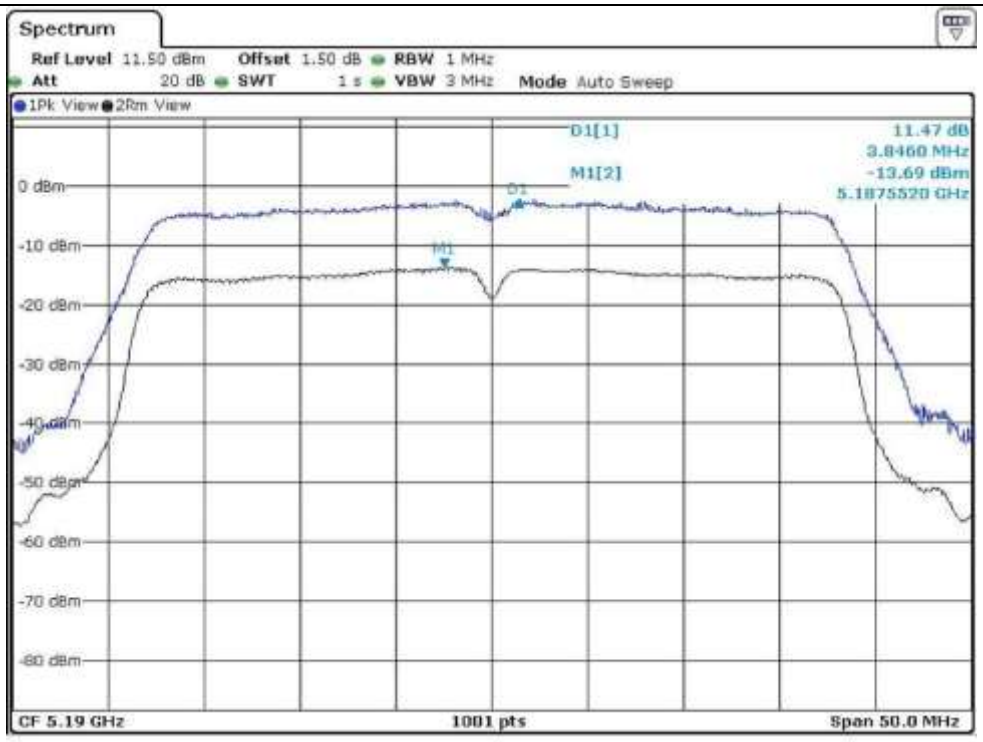
Low Channel (5 755 MHz)



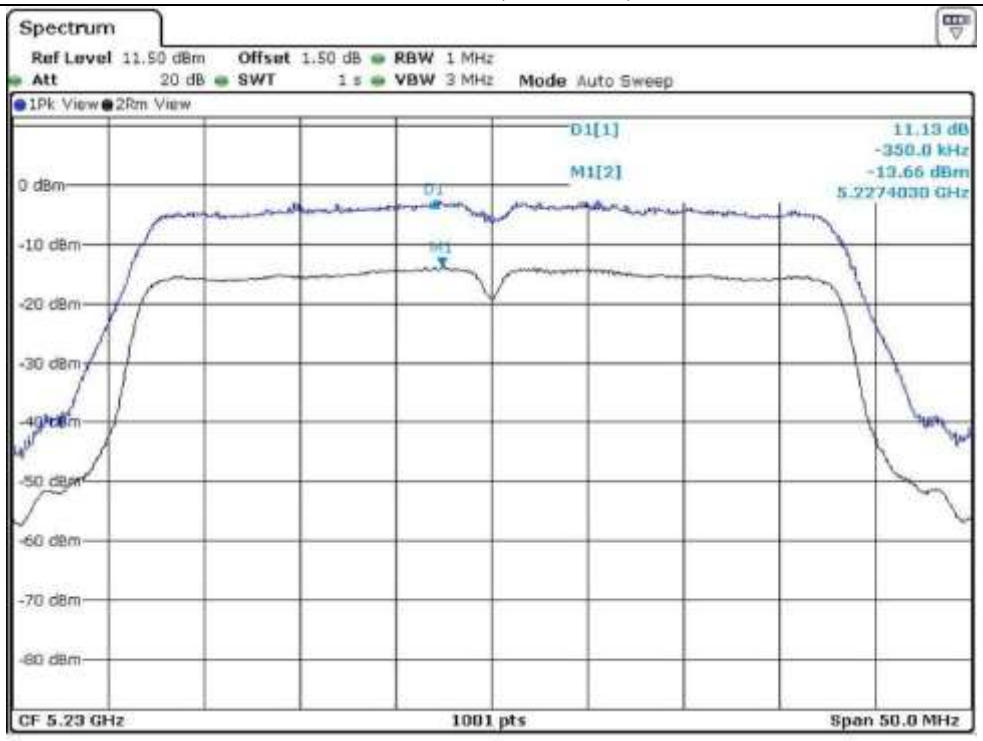
High Channel (5 795 MHz)

HEAD OFFICE : 301-14 Daessangnyeong-ri, Chowol-eup, Gwangju-si, Gyeonggi-do 464-862 Korea (TEL: 82-31-799-9500, FAX: 82-31-799-9599)
EMC Testing Div. : 307-51 Daessangnyeong-ri, Chowol-eup, Gwangju-si, Gyeonggi-do 464-862 Korea (TEL: 82-31-765-8289, FAX: 82-31-766-2904)

10.6.2 Test data for Antenna 1

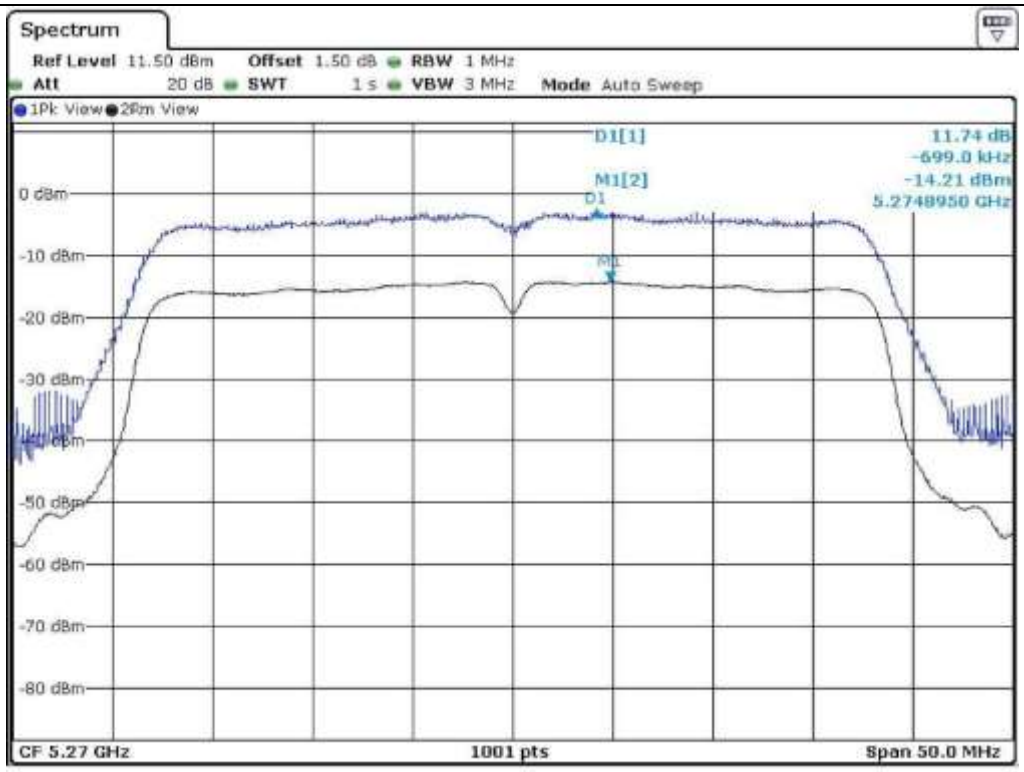


Low Channel (5 190 MHz)

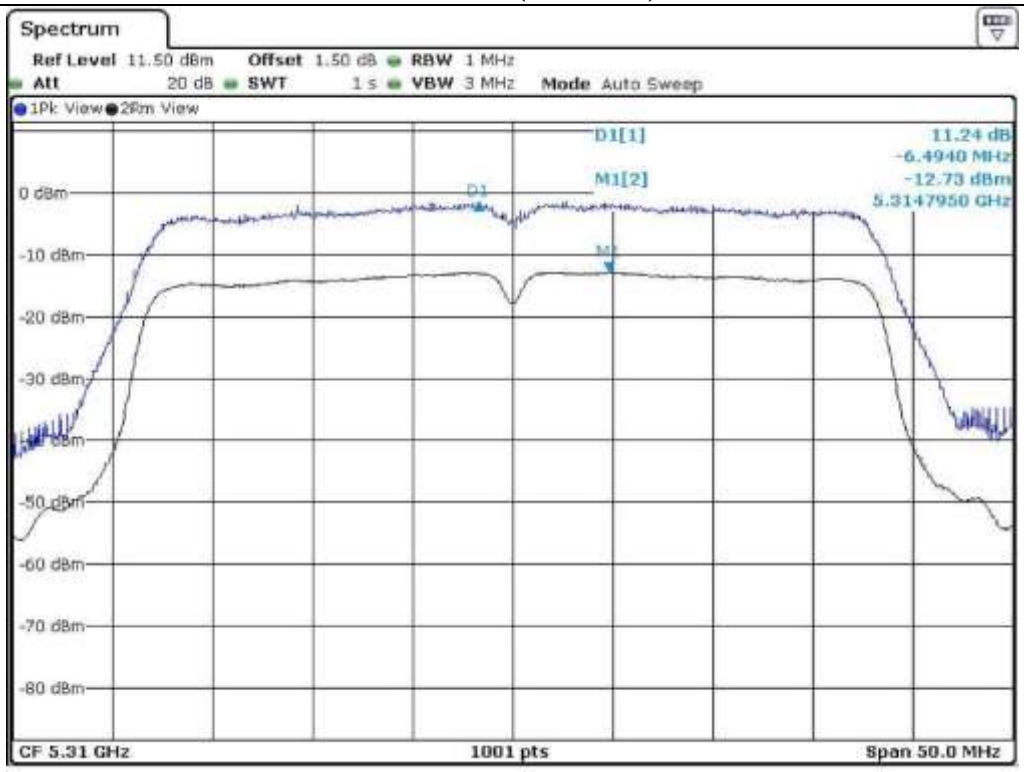


High Channel (5 230 MHz)

HEAD OFFICE : 301-14 Daessangnyeong-ri, Chowol-eup, Gwangju-si, Gyeonggi-do 464-862 Korea (TEL: 82-31-799-9500, FAX: 82-31-799-9599)
EMC Testing Div. : 307-51 Daessangnyeong-ri, Chowol-eup, Gwangju-si, Gyeonggi-do 464-862 Korea (TEL: 82-31-765-8289, FAX: 82-31-766-2904)

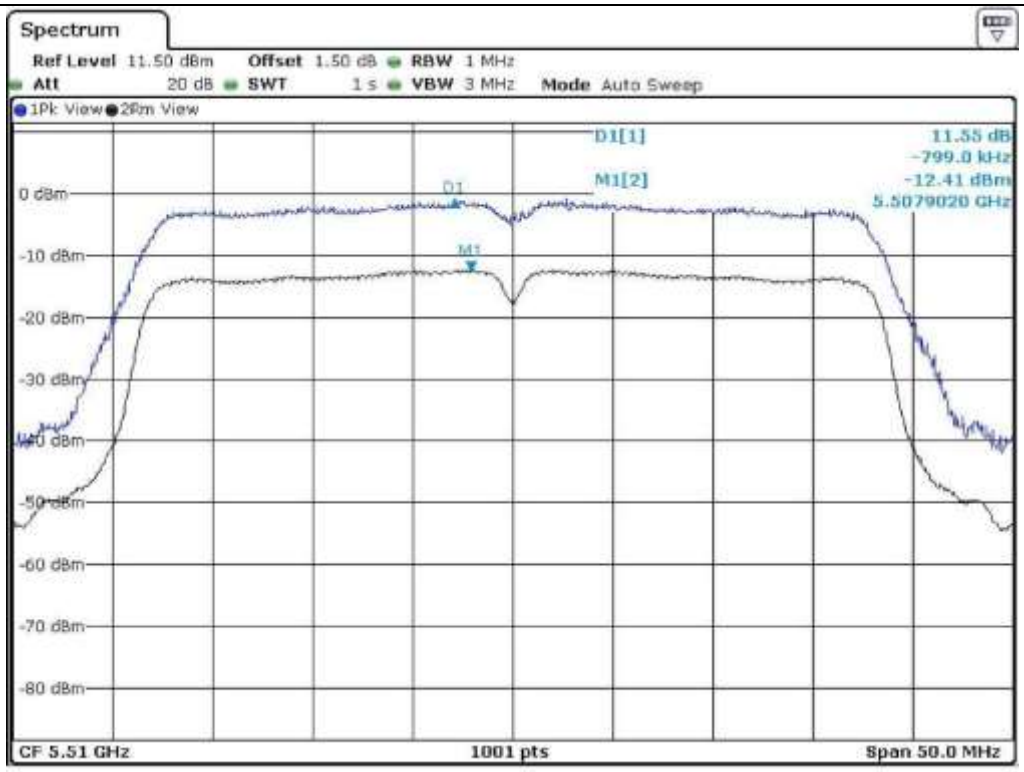


Low Channel (5 270 MHz)

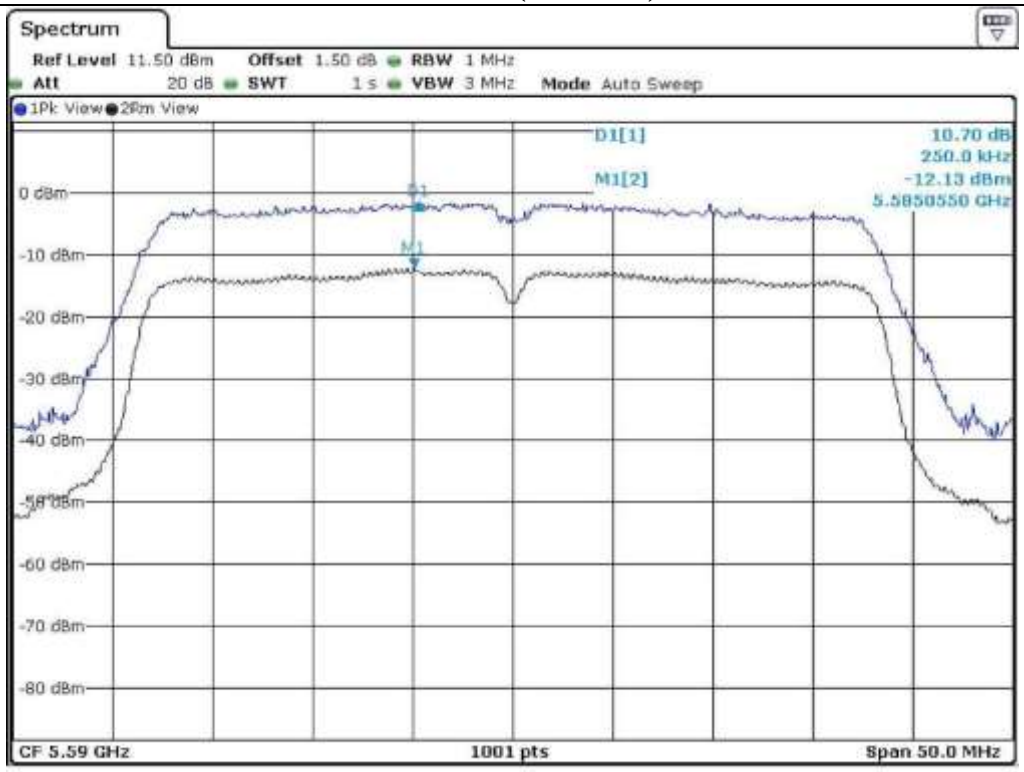


High Channel (5 310 MHz)

HEAD OFFICE : 301-14 Daessangnyeong-ri, Chowol-eup, Gwangju-si, Gyeonggi-do 464-862 Korea (TEL: 82-31-799-9500, FAX: 82-31-799-9599)
EMC Testing Div. : 307-51 Daessangnyeong-ri, Chowol-eup, Gwangju-si, Gyeonggi-do 464-862 Korea (TEL: 82-31-765-8289, FAX: 82-31-766-2904)

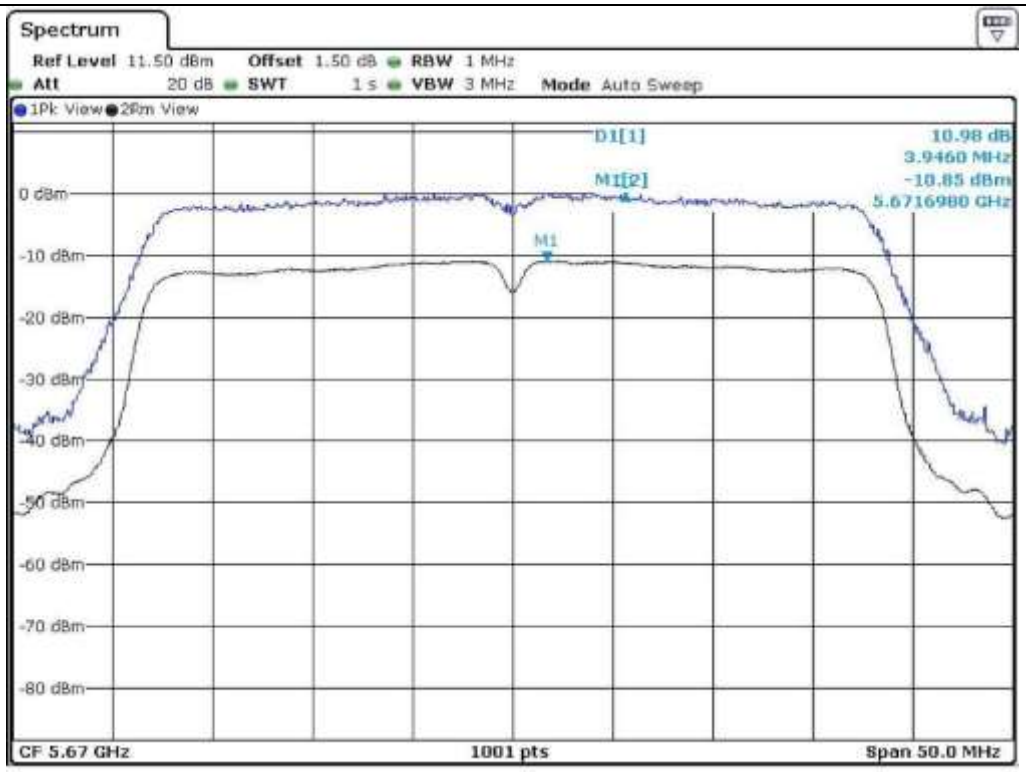


Low Channel (5 510 MHz)



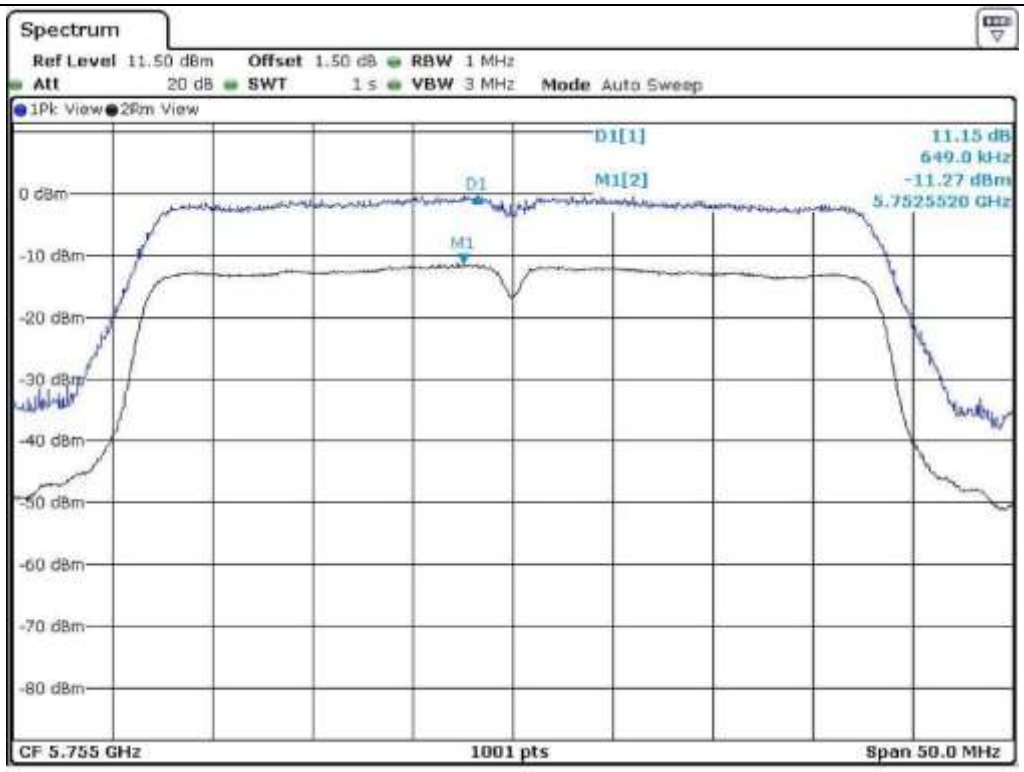
Middle Channel (5 590 MHz)

HEAD OFFICE : 301-14 Daessangnyeong-ri, Chowol-eup, Gwangju-si, Gyeonggi-do 464-862 Korea (TEL: 82-31-799-9500, FAX: 82-31-799-9599)
EMC Testing Div. : 307-51 Daessangnyeong-ri, Chowol-eup, Gwangju-si, Gyeonggi-do 464-862 Korea (TEL: 82-31-765-8289, FAX: 82-31-766-2904)

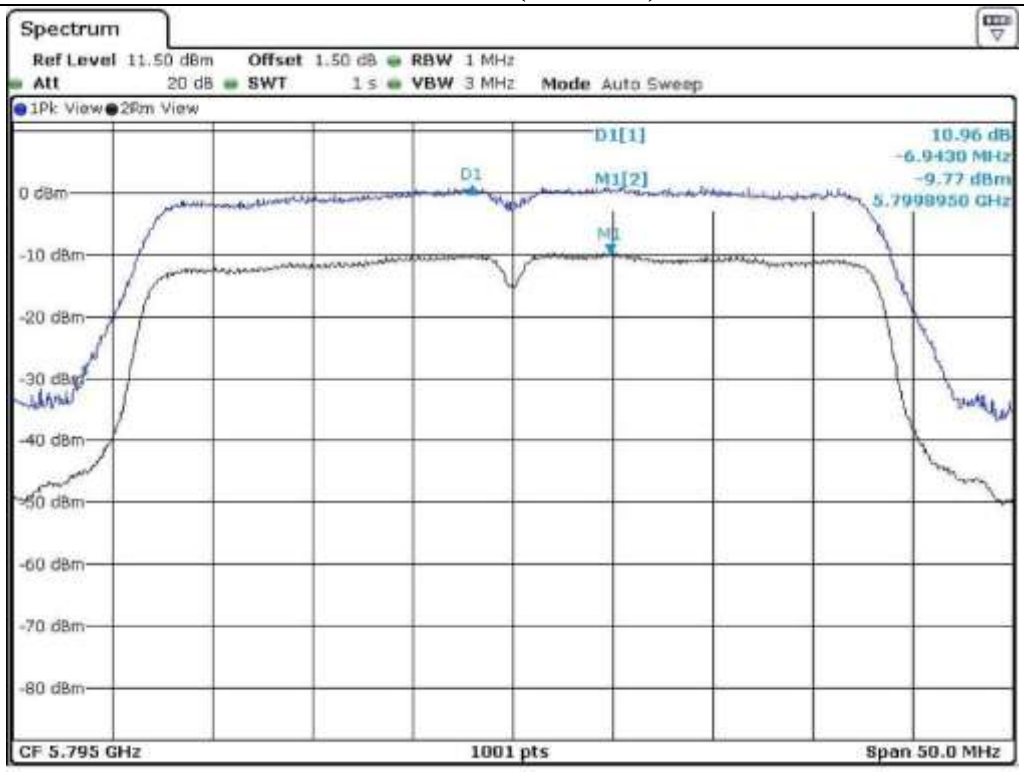


High Channel (5 670 MHz)

HEAD OFFICE : 301-14 Daessangnyeong-ri, Chowol-eup, Gwangju-si, Gyeonggi-do 464-862 Korea (TEL: 82-31-799-9500, FAX: 82-31-799-9599)
EMC Testing Div. : 307-51 Daessangnyeong-ri, Chowol-eup, Gwangju-si, Gyeonggi-do 464-862 Korea (TEL: 82-31-765-8289, FAX: 82-31-766-2904)



Low Channel (5 755 MHz)



High Channel (5 795 MHz)

HEAD OFFICE : 301-14 Daessangnyeong-ri, Chowol-eup, Gwangju-si, Gyeonggi-do 464-862 Korea (TEL: 82-31-799-9500, FAX: 82-31-799-9599)
EMC Testing Div. : 307-51 Daessangnyeong-ri, Chowol-eup, Gwangju-si, Gyeonggi-do 464-862 Korea (TEL: 82-31-765-8289, FAX: 82-31-766-2904)

11. FREQUENCY STABILITY WITH TEMPERATURE VARIATION

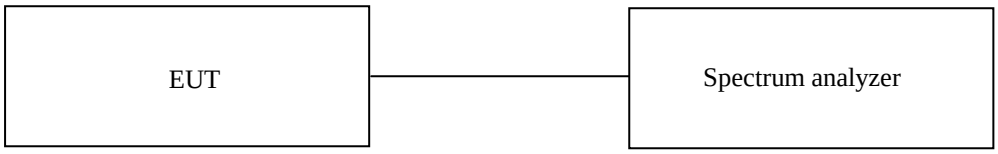
11.1 Operating environment

Temperature : 24 ℃

Relative humidity : 48 % R.H.

11.2 Test set-up

Turn EUT off and set chamber temperature to -30 ℃ 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 0 ℃ to +65 ℃. 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	Jul 30, 2014 (1Y)
■ -	SSE-43CI-A	Samkun Tech	Humidity Chamber	060712	May 15, 2014 (1Y)
■ -	DRP-305DN	DIGITAL Elec.	DC Power supply	4030195	Sep. 03, 2014 (1Y)

All test equipment used is calibrated on a regular basis.

HEAD OFFICE : 301-14 Daessangnyeong-ri, Chowol-eup, Gwangju-si, Gyeonggi-do 464-862 Korea (TEL: 82-31-799-9500, FAX: 82-31-799-9599)
EMC Testing Div. : 307-51 Daessangnyeong-ri, Chowol-eup, Gwangju-si, Gyeonggi-do 464-862 Korea (TEL: 82-31-765-8289, FAX: 82-31-766-2904)

11.4 Test Data for 5 150 MHz ~ 5 250 MHz Band

-. Test Date : March 11, 2015

-. Result : Pass

Temperature (˚C)	Carrier Freq. (Hz)	Measured Freq. (Hz)	Freequency Error (kHz)
0	5 180 000 000	5 179 994 234	-5.766
10		5 179 989 131	-10.869
20		5 179 982 793	-17.207
30		5 179 970 336	-29.664
40		5 179 971 521	-28.479
50		5 179 973 033	-26.967
60		5 179 973 984	-26.016
65		5 179 974 224	-25.776
0	5 200 000 000	5 199 994 264	-5.736
10		5 199 989 167	-10.833
20		5 199 982 837	-17.163
30		5 199 970 370	-29.630
40		5 199 971 559	-28.441
50		5 199 973 078	-26.922
60		5 199 974 025	-25.975
65		5 199 974 256	-25.744
0	5 240 000 000	5 239 994 281	-5.719
10		5 239 989 176	-10.824
20		5 239 982 825	-17.175
30		5 239 970 366	-29.634
40		5 239 971 555	-28.445
50		5 239 973 082	-26.918
60		5 239 974 031	-25.969
65		5 239 974 267	-25.733

Tested by: Tae-Ho, Kim / Senior Engineer

HEAD OFFICE : 301-14 Daessangnyeong-ri, Chowol-eup, Gwangju-si, Gyeonggi-do 464-862 Korea (TEL: 82-31-799-9500, FAX: 82-31-799-9599)
EMC Testing Div. : 307-51 Daessangnyeong-ri, Chowol-eup, Gwangju-si, Gyeonggi-do 464-862 Korea (TEL: 82-31-765-8289, FAX: 82-31-766-2904)

11.5 Test Data for 5 250 MHz ~ 5 350 MHz Band

-. Test Date : March 11, 2015

-. Result : Pass

Temperature (˚C)	Carrier Freq. (Hz)	Measured Freq. (Hz)	Freequency Error (kHz)
0	5 260 000 000	5 259 994 283	-5.717
10		5 259 989 177	-10.823
20		5 259 982 825	-17.175
30		5 259 970 380	-29.620
40		5 259 971 563	-28.437
50		5 259 973 064	-26.936
60		5 259 974 018	-25.982
65		5 259 974 257	-25.743
0	5 300 000 000	5 299 994 280	-5.720
10		5 299 989 179	-10.821
20		5 299 982 825	-17.175
30		5 299 970 385	-29.615
40		5 299 971 569	-28.431
50		5 299 973 077	-26.923
60		5 299 974 015	-25.985
65		5 299 974 266	-25.734
0	5 320 000 000	5 319 994 279	-5.721
10		5 319 989 168	-10.832
20		5 319 982 830	-17.170
30		5 319 970 382	-29.618
40		5 319 971 553	-28.447
50		5 319 973 074	-26.926
60		5 319 974 027	-25.973
65		5 319 974 264	-25.736

Tested by: Tae-Ho, Kim / Senior Engineer

HEAD OFFICE : 301-14 Daessangnyeong-ri, Chowol-eup, Gwangju-si, Gyeonggi-do 464-862 Korea (TEL: 82-31-799-9500, FAX: 82-31-799-9599)
EMC Testing Div. : 307-51 Daessangnyeong-ri, Chowol-eup, Gwangju-si, Gyeonggi-do 464-862 Korea (TEL: 82-31-765-8289, FAX: 82-31-766-2904)

11.6 Test Data for 5 470 MHz ~ 5 725 MHz Band

-. Test Date : March 11, 2015

-. Result : Pass

Temperature (˚C)	Carrier Freq. (Hz)	Measured Freq. (Hz)	Freequency Error (kHz)
0	5 500 000 000	5 499 986 881	-13.119
10		5 499 980 984	-19.016
20		5 499 974 824	-25.176
30		5 499 967 764	-32.236
40		5 499 968 142	-31.858
50		5 499 968 842	-31.158
60		5 499 969 545	-30.455
65		5 499 970 548	-29.452
0	5 600 000 000	5 599 986 929	-13.071
10		5 599 981 019	-18.981
20		5 599 974 869	-25.131
30		5 599 967 813	-32.187
40		5 599 968 189	-31.811
50		5 599 968 872	-31.128
60		5 599 969 591	-30.409
65		5 599 970 579	-29.421
0	5 700 000 000	5 699 986 922	-13.078
10		5 699 981 018	-18.982
20		5 699 974 855	-25.145
30		5 699 967 804	-32.196
40		5 699 968 186	-31.814
50		5 699 968 882	-31.118
60		5 699 969 588	-30.412
65		5 699 970 597	-29.403

Tested by: Tae-Ho, Kim / Senior Engineer

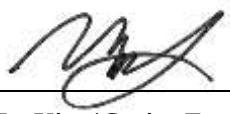
HEAD OFFICE : 301-14 Daessangnyeong-ri, Chowol-eup, Gwangju-si, Gyeonggi-do 464-862 Korea (TEL: 82-31-799-9500, FAX: 82-31-799-9599)
EMC Testing Div. : 307-51 Daessangnyeong-ri, Chowol-eup, Gwangju-si, Gyeonggi-do 464-862 Korea (TEL: 82-31-765-8289, FAX: 82-31-766-2904)

11.7 Test Data for 5 725 MHz ~ 5 850 MHz Band

-. Test Date : March 11, 2015

-. Result : Pass

Temperature (˚C)	Carrier Freq. (Hz)	Measured Freq. (Hz)	Freequency Error (kHz)
0	5 745 000 000	5 744 986 923	-13.077
10		5 744 981 014	-18.986
20		5 744 974 855	-25.145
30		5 744 967 799	-32.201
40		5 744 968 178	-31.822
50		5 744 968 876	-31.124
60		5 744 969 577	-30.423
65		5 744 970 592	-29.408
0	5 785 000 000	5 784 986 925	-13.075
10		5 784 981 025	-18.975
20		5 784 974 868	-25.132
30		5 784 967 797	-32.203
40		5 784 968 172	-31.828
50		5 784 968 883	-31.117
60		5 784 969 592	-30.408
65		5 784 970 582	-29.418
0	5 825 000 000	5 824 986 923	-13.077
10		5 824 981 014	-18.986
20		5 824 974 872	-25.128
30		5 824 967 809	-32.191
40		5 824 968 178	-31.822
50		5 824 968 891	-31.109
60		5 824 969 590	-30.410
65		5 824 970 590	-29.410



Tested by: Tae-Ho, Kim / Senior Engineer

HEAD OFFICE : 301-14 Daessangnyeong-ri, Chowol-eup, Gwangju-si, Gyeonggi-do 464-862 Korea (TEL: 82-31-799-9500, FAX: 82-31-799-9599)
EMC Testing Div. : 307-51 Daessangnyeong-ri, Chowol-eup, Gwangju-si, Gyeonggi-do 464-862 Korea (TEL: 82-31-765-8289, FAX: 82-31-766-2904)

12. FREQUENCY STABILITY WITH VOLTAGE VARIATION

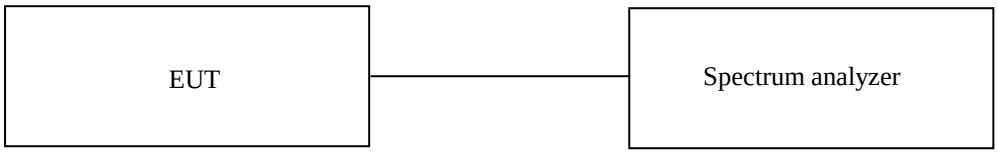
12.1 Operating environment

Temperature : 24 ℃

Relative humidity : 48 % 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	Jul 30, 2014 (1Y)
■ -	DRP-305DN	DIGITAL Elec.	DC Power supply	4030195	Sep. 03, 2014 (1Y)

All test equipment used is calibrated on a regular basis.

HEAD OFFICE : 301-14 Daessangnyeong-ri, Chowol-eup, Gwangju-si, Gyeonggi-do 464-862 Korea (TEL: 82-31-799-9500, FAX: 82-31-799-9599)

EMC Testing Div. : 307-51 Daessangnyeong-ri, Chowol-eup, Gwangju-si, Gyeonggi-do 464-862 Korea (TEL: 82-31-765-8289, FAX: 82-31-766-2904)

12.4 Test Data for 5 150 MHz ~ 5 250 MHz Band

-. Test Date : March 11, 2015

-. Result : Pass

Voltage (Vdc)	Carrier Freq. (Hz)	Measured Freq. (Hz)	Freequency Error (kHz)
5.75	5 180 000 000	5 179 970 318	-29.682
5.00		5 179 970 309	-29.691
4.25		5 179 970 312	-29.688
5.75	5 200 000 000	5 199 970 354	-29.646
5.00		5 199 970 347	-29.653
4.25		5 199 970 346	-29.654
5.75	5 240 000 000	5 239 970 368	-29.632
5.00		5 239 970 355	-29.645
4.25		5 239 970 357	-29.643

Tested by: Tae-Ho, Kim / Senior Engineer

HEAD OFFICE : 301-14 Daessangnyeong-ri, Chowol-eup, Gwangju-si, Gyeonggi-do 464-862 Korea (TEL: 82-31-799-9500, FAX: 82-31-799-9599)
EMC Testing Div. : 307-51 Daessangnyeong-ri, Chowol-eup, Gwangju-si, Gyeonggi-do 464-862 Korea (TEL: 82-31-765-8289, FAX: 82-31-766-2904)

12.5 Test Data for 5 250 MHz ~ 5 350 MHz Band

-. Test Date : March 11, 2015

-. Result : Pass

Voltage (Vdc)	Carrier Freq. (Hz)	Measured Freq. (Hz)	Freequency Error (kHz)
5.75	5 260 000 000	5 259 970 377	-29.623
5.00		5 259 970 366	-29.634
4.25		5 259 970 367	-29.633
5.75	5 300 000 000	5 299 970 347	-29.653
5.00		5 299 970 336	-29.664
4.25		5 299 970 334	-29.666
5.75	5 320 000 000	5 319 970 366	-29.634
5.00		5 319 970 352	-29.648
4.25		5 319 970 358	-29.642

Tested by: Tae-Ho, Kim / Senior Engineer

HEAD OFFICE : 301-14 Daessangnyeong-ri, Chowol-eup, Gwangju-si, Gyeonggi-do 464-862 Korea (TEL: 82-31-799-9500, FAX: 82-31-799-9599)
EMC Testing Div. : 307-51 Daessangnyeong-ri, Chowol-eup, Gwangju-si, Gyeonggi-do 464-862 Korea (TEL: 82-31-765-8289, FAX: 82-31-766-2904)

12.6 Test Data for 5 470 MHz ~ 5 725 MHz Band

-. Test Date : March 11, 2015

-. Result : Pass

Voltage (Vdc)	Carrier Freq. (Hz)	Measured Freq. (Hz)	Freequency Error (kHz)
5.75	5 500 000 000	5 499 967 751	-32.249
5.00		5 499 967 742	-32.258
4.25		5 499 967 737	-32.263
5.75	5 600 000 000	5 599 967 794	-32.206
5.00		5 599 967 788	-32.212
4.25		5 599 967 781	-32.219
5.75	5 700 000 000	5 699 967 748	-32.252
5.00		5 699 967 742	-32.258
4.25		5 699 967 737	-32.263

Tested by: Tae-Ho, Kim / Senior Engineer

HEAD OFFICE : 301-14 Daessangnyeong-ri, Chowol-eup, Gwangju-si, Gyeonggi-do 464-862 Korea (TEL: 82-31-799-9500, FAX: 82-31-799-9599)
EMC Testing Div. : 307-51 Daessangnyeong-ri, Chowol-eup, Gwangju-si, Gyeonggi-do 464-862 Korea (TEL: 82-31-765-8289, FAX: 82-31-766-2904)

12.6 Test Data for 5 725 MHz ~ 5 850 MHz Band

-. Test Date : March 11, 2015

-. Result : Pass

Voltage (Vdc)	Carrier Freq. (Hz)	Measured Freq. (Hz)	Freequency Error (kHz)
5.75	5 745 000 000	5 744 967 777	-32.223
5.00		5 744 967 766	-32.234
4.25		5 744 967 764	-32.236
5.75	5 785 000 000	5 784 967 805	-32.195
5.00		5 784 967 796	-32.204
4.25		5 784 967 794	-32.206
5.75	5 825 000 000	5 824 967 795	-32.205
5.00		5 824 967 788	-32.212
4.25		5 824 967 789	-32.211

Tested by: Tae-Ho, Kim / Senior Engineer

HEAD OFFICE : 301-14 Daessangnyeong-ri, Chowol-eup, Gwangju-si, Gyeonggi-do 464-862 Korea (TEL: 82-31-799-9500, FAX: 82-31-799-9599)
EMC Testing Div. : 307-51 Daessangnyeong-ri, Chowol-eup, Gwangju-si, Gyeonggi-do 464-862 Korea (TEL: 82-31-765-8289, FAX: 82-31-766-2904)

13. RADIATED SPURIOUS EMISSIONS

13.1 Operating environment

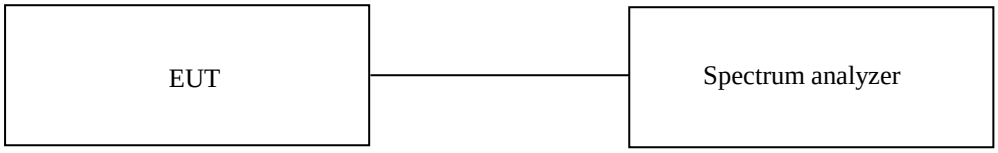
Temperature : 20 ℃

Relative humidity : 45 % R.H.

13.2 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 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	Jul. 30, 2014 (1Y)
■ -	ESCI	Rohde & Schwarz	Test Receiver	101012	Nov. 03, 2014 (1Y)
■ -	310N	Sonoma Instrument	Pre-Amplifier	312544	Apr. 28, 2014 (1Y)
■ -	SCU-18	Rohde & Schwarz	Pre-Amplifier	10041	Nov. 25, 2014 (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	Jul. 10, 2014 (2Y)
■ -	BBHA9120D	Schwarzbeck	Horn Antenna	BBHA9120D294	Sep. 05, 2013 (2Y)
■ -	BBHA9170	Schwarzbeck	Horn Antenna	BBHA9170178	Sep. 05, 2013 (2Y)

All test equipment used is calibrated on a regular basis.

HEAD OFFICE : 301-14 Daessangnyeong-ri, Chowol-eup, Gwangju-si, Gyeonggi-do 464-862 Korea (TEL: 82-31-799-9500, FAX: 82-31-799-9599)
EMC Testing Div. : 307-51 Daessangnyeong-ri, Chowol-eup, Gwangju-si, Gyeonggi-do 464-862 Korea (TEL: 82-31-765-8289, FAX: 82-31-766-2904)

13.4 Test data for 5 150 MHz ~ 5 250 MHz Band

13.4.1 Test data for 802.11a RLAN Mode

13.4.1.1 Test data for 30 MHz ~ 1 000 MHz

Humidity Level : 42.2 % R.H. Temperature: 22.0 ℃

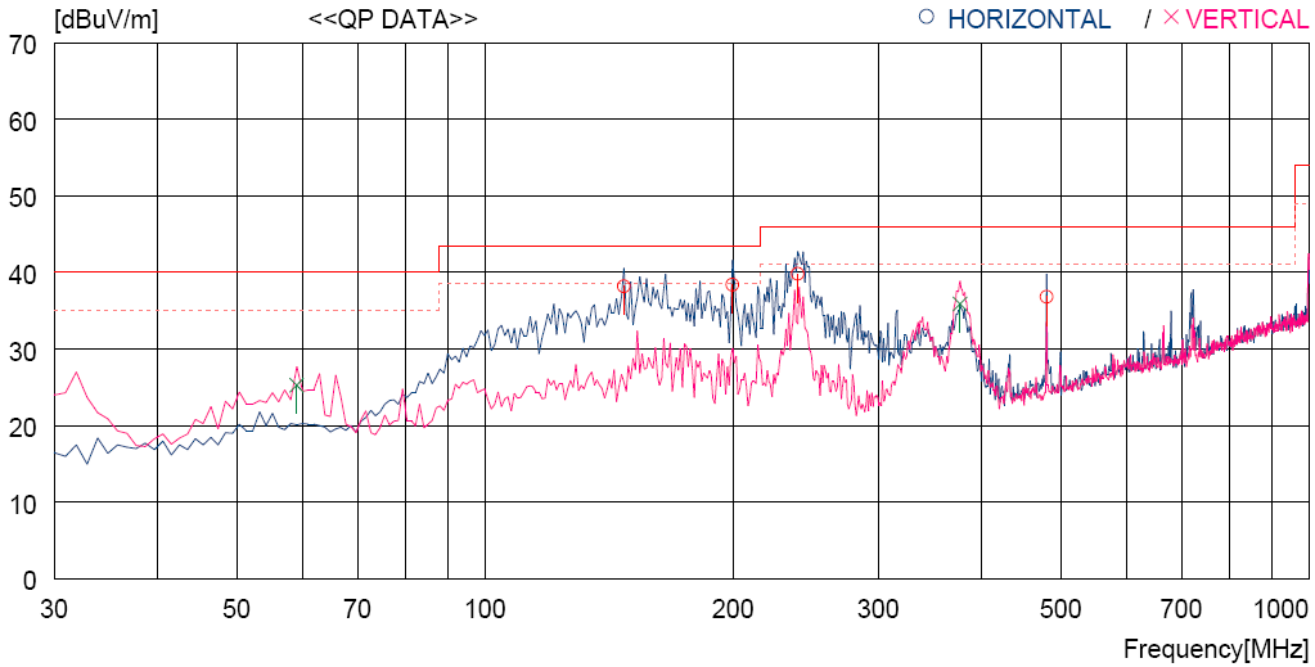
Limits apply to : FCC CFR 47, PART 15, SUBPART C, SECTION 15.247

Result : PASSED

EUT : Wi-Fi module Date: March 11, 2015

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

-.Ant0, Ant1 and Multiple transmit with Low, Middle and High Channels were tested, but the worst data were recorded.



No.	FREQ [MHz]	READING QP [dBuV]	ANT FACTOR [dB]	LOSS [dB]	GAIN [dB]	RESULT [dBuV/m]	LIMIT [dBuV/m]	MARGIN [dB]	ANTENNA [cm]	TABLE [DEG]
----- Horizontal ------										
1	147.370	53.6	9.3	8.4	33.1	38.2	43.5	5.3	200	173
2	199.750	50.3	12.3	8.8	33.0	38.4	43.5	5.1	100	359
3	239.520	50.4	13.3	9.1	33.0	39.8	46.0	6.2	100	359
4	480.081	41.3	18.1	10.5	33.1	36.8	46.0	9.2	100	89
----- Vertical ------										
5	59.100	36.7	14.2	7.5	33.1	25.3	40.0	14.7	100	0
6	377.260	42.6	16.4	9.9	33.0	35.9	46.0	10.1	100	215

HEAD OFFICE : 301-14 Daessangnyeong-ri, Chowol-eup, Gwangju-si, Gyeonggi-do 464-862 Korea (TEL: 82-31-799-9500, FAX: 82-31-799-9599)
EMC Testing Div. : 307-51 Daessangnyeong-ri, Chowol-eup, Gwangju-si, Gyeonggi-do 464-862 Korea (TEL: 82-31-765-8289, FAX: 82-31-766-2904)

13.4.1.2 Test data for Below 30 MHz

-. Test Date : March 11, 2015

-. 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.									

13.4.1.3 Test data for above 1 GHz

-. Test Date : March 11, 2015

-. 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)	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 / Project Engineer

HEAD OFFICE : 301-14 Daessangnyeong-ri, Chowol-eup, Gwangju-si, Gyeonggi-do 464-862 Korea (TEL: 82-31-799-9500, FAX: 82-31-799-9599)
EMC Testing Div. : 307-51 Daessangnyeong-ri, Chowol-eup, Gwangju-si, Gyeonggi-do 464-862 Korea (TEL: 82-31-765-8289, FAX: 82-31-766-2904)

13.4.2 Test data for 802.11n_HT20 RLAN Mode

13.4.2.1 Test data for 30 MHz ~ 1 000 MHz

Humidity Level : 42.2 % R.H. Temperature: 22.0 ℃

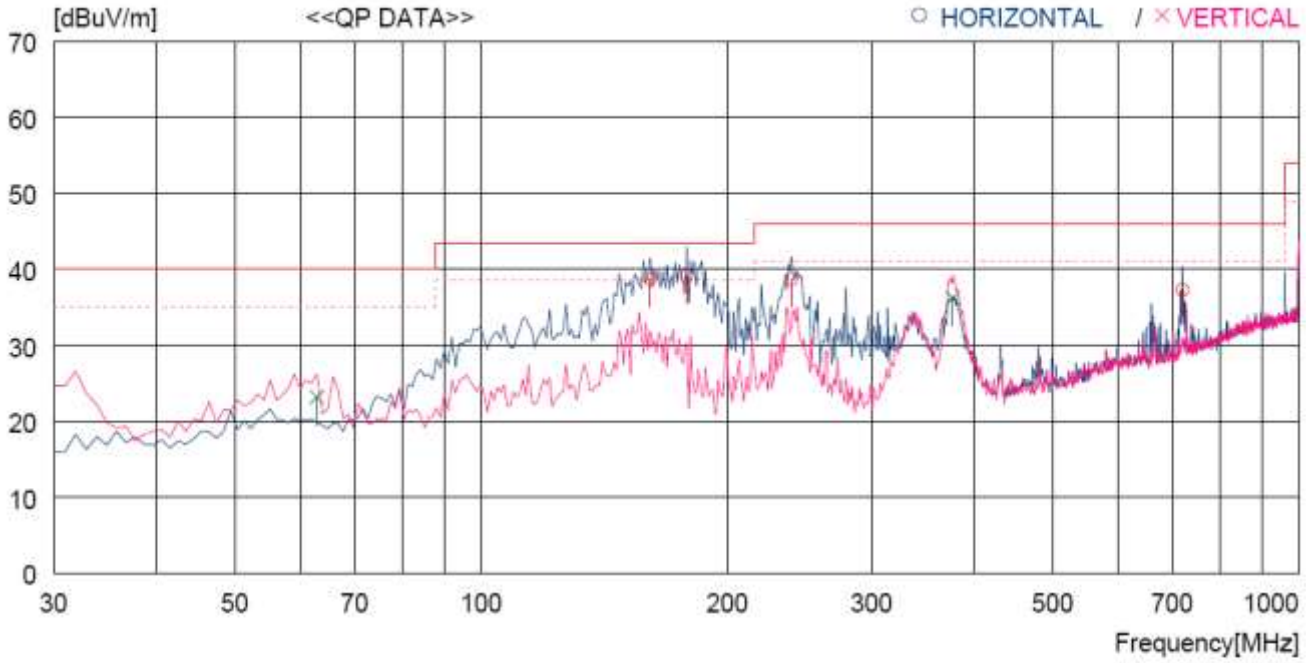
Limits apply to : FCC CFR 47, PART 15, SUBPART C, SECTION 15.247

Result : PASSED

EUT : Wi-Fi module Date: March 11, 2015

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

-.Ant0, Ant1 and Multiple transmit with Low, Middle and High Channels were tested, but the worst data were recorded.



No.	FREQ [MHz]	READING QP [dBuV]	ANT FACTOR [dB]	LOSS [dB]	GAIN [dB]	RESULT [dBuV/m]	LIMIT [dBuV/m]	MARGIN [dB]	ANTENNA [cm]	TABLE [DEG]
----- Horizontal ------										
1	160.950	53.8	9.4	8.5	33.0	38.7	43.5	4.8	200	0
2	178.410	53.7	9.7	8.7	33.0	39.1	43.5	4.4	100	159
3	239.520	49.3	13.3	9.1	33.0	38.7	46.0	7.3	100	359
4	720.634	37.8	21.1	11.7	33.3	37.3	46.0	8.7	100	359
----- Vertical ------										
5	62.980	35.8	12.9	7.6	33.1	23.2	40.0	16.8	100	0
6	377.260	42.9	16.4	9.9	33.0	36.2	46.0	9.8	100	201

HEAD OFFICE : 301-14 Daessangnyeong-ri, Chowol-eup, Gwangju-si, Gyeonggi-do 464-862 Korea (TEL: 82-31-799-9500, FAX: 82-31-799-9599)
EMC Testing Div. : 307-51 Daessangnyeong-ri, Chowol-eup, Gwangju-si, Gyeonggi-do 464-862 Korea (TEL: 82-31-765-8289, FAX: 82-31-766-2904)

13.4.2.1 Test data for Below 30 MHz

-. Test Date : March 11, 2015

-. 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.									

13.4.2.3 Test data for above 1 GHz

-. Test Date : March 11, 2015

-. 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)	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 / Project Engineer

HEAD OFFICE : 301-14 Daessangnyeong-ri, Chowol-eup, Gwangju-si, Gyeonggi-do 464-862 Korea (TEL: 82-31-799-9500, FAX: 82-31-799-9599)
EMC Testing Div. : 307-51 Daessangnyeong-ri, Chowol-eup, Gwangju-si, Gyeonggi-do 464-862 Korea (TEL: 82-31-765-8289, FAX: 82-31-766-2904)

13.4.3 Test data for 802.11n_HT40 RLAN Mode

13.4.3.1 Test data for 30 MHz ~ 1 000 MHz

Humidity Level : 42.2 % R.H. Temperature: 22.0 ℃

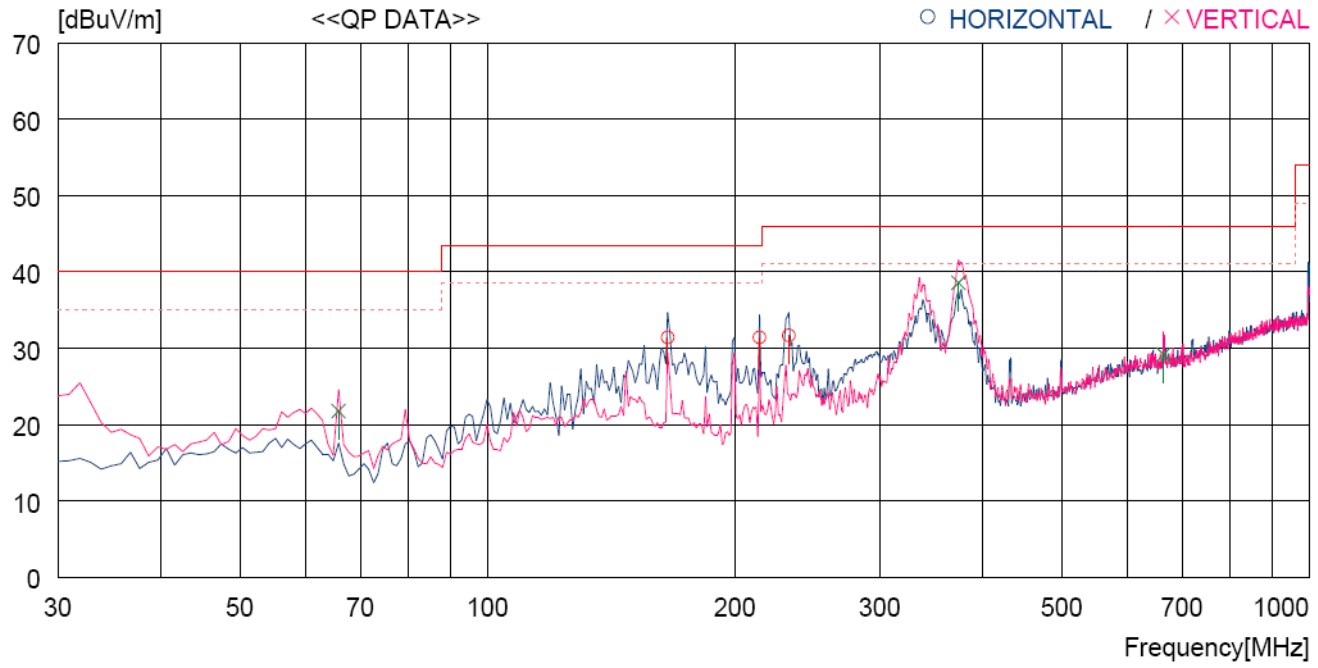
Limits apply to : FCC CFR 47, PART 15, SUBPART C, SECTION 15.247

Result : PASSED

EUT : Wi-Fi module Date: March 11, 2015

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

-.Ant0, Ant1 and Multiple transmit with Low, Middle and High Channels were tested, but the worst data were recorded.



No.	FREQ	READING QP	ANT FACTOR	LOSS	GAIN	RESULT	LIMIT	MARGIN	ANTENNA	TABLE
	[MHz]	[dBuV]	[dB]	[dB]	[dB]	[dBuV/m]	[dBuV/m]	[dB]	[cm]	[DEG]
----- Horizontal ------										
1	165.800	46.3	9.5	8.6	33.0	31.4	43.5	12.1	200	0
2	214.300	42.8	12.7	8.9	33.0	31.4	43.5	12.1	100	215
3	232.730	42.5	13.1	9.1	33.0	31.7	46.0	14.3	100	359
----- Vertical ------										
4	65.890	35.5	11.8	7.6	33.1	21.8	40.0	18.2	100	0
5	374.350	45.4	16.3	9.9	33.0	38.6	46.0	7.4	100	207
6	664.376	30.5	20.6	11.4	33.3	29.2	46.0	16.8	100	0

HEAD OFFICE : 301-14 Daessangnyeong-ri, Chowol-eup, Gwangju-si, Gyeonggi-do 464-862 Korea (TEL: 82-31-799-9500, FAX: 82-31-799-9599)
EMC Testing Div. : 307-51 Daessangnyeong-ri, Chowol-eup, Gwangju-si, Gyeonggi-do 464-862 Korea (TEL: 82-31-765-8289, FAX: 82-31-766-2904)

13.4.3.2 Test data for Below 30 MHz

-. Test Date : March 11, 2015

-. 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.									

13.4.3.3 Test data for above 1 GHz

-. Test Date : March 11, 2015

-. 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)	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 / Project Engineer

HEAD OFFICE : 301-14 Daessangnyeong-ri, Chowol-eup, Gwangju-si, Gyeonggi-do 464-862 Korea (TEL: 82-31-799-9500, FAX: 82-31-799-9599)
EMC Testing Div. : 307-51 Daessangnyeong-ri, Chowol-eup, Gwangju-si, Gyeonggi-do 464-862 Korea (TEL: 82-31-765-8289, FAX: 82-31-766-2904)

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

13.5.1 Test data for 802.11a RLAN Mode

13.5.1.1 Test data for 30 MHz ~ 1 000 MHz

Humidity Level : 42.2 % R.H. Temperature: 22.0 ℃

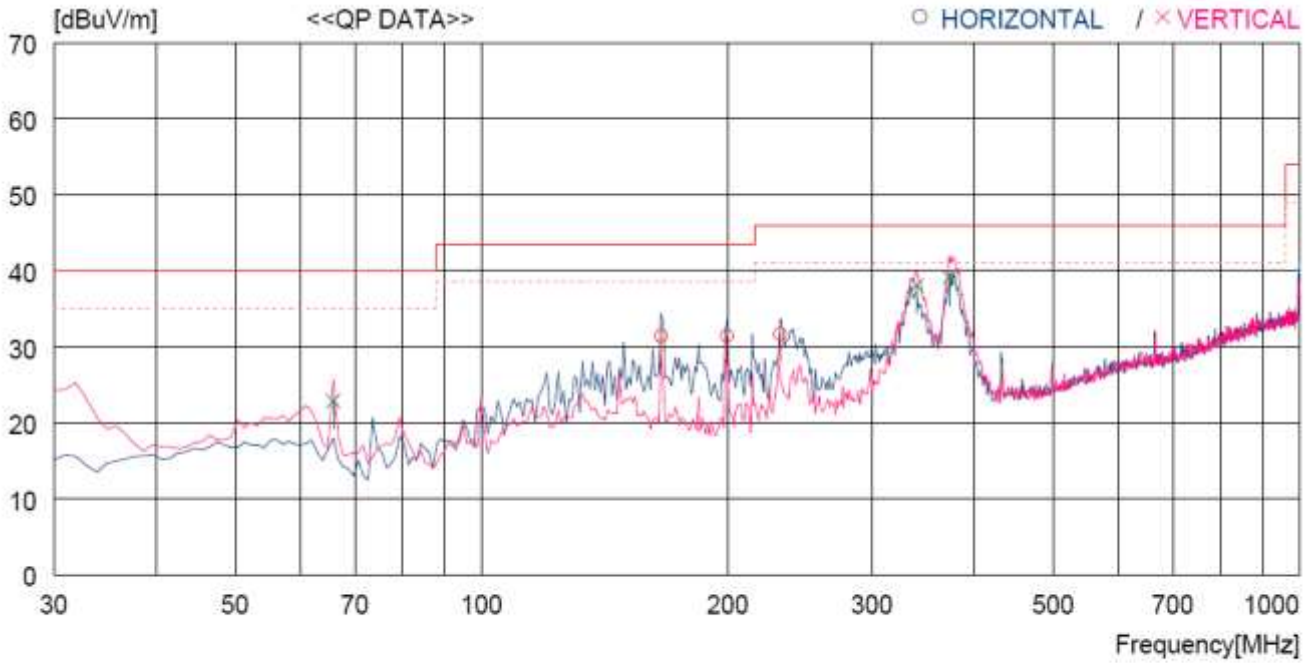
Limits apply to : FCC CFR 47, PART 15, SUBPART C, SECTION 15.247

Result : PASSED

EUT : Wi-Fi module Date: March 11, 2015

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

-.Ant0, Ant1 and Multiple transmit with Low, Middle and High Channels were tested, but the worst data were recorded.



No.	FREQ [MHz]	READING QP [dBuV]	ANT FACTOR [dB]	LOSS [dB]	GAIN [dB]	RESULT [dBuV/m]	LIMIT [dBuV/m]	MARGIN [dB]	ANTENNA [cm]	TABLE [DEG]
----- Horizontal ------										
1	165.800	46.3	9.5	8.6	33.0	31.4	43.5	12.1	200	348
2	199.750	43.3	12.3	8.8	33.0	31.4	43.5	12.1	200	0
3	231.760	42.5	13.1	9.1	33.0	31.7	46.0	14.3	200	0
----- Vertical ------										
4	65.890	36.6	11.8	7.6	33.1	22.9	40.0	17.1	100	0
5	340.400	45.8	15.6	9.7	33.0	38.1	46.0	7.9	100	0
6	373.380	45.9	16.3	9.9	33.0	39.1	46.0	6.9	100	208

HEAD OFFICE : 301-14 Daessangnyeong-ri, Chowol-eup, Gwangju-si, Gyeonggi-do 464-862 Korea (TEL: 82-31-799-9500, FAX: 82-31-799-9599)
EMC Testing Div. : 307-51 Daessangnyeong-ri, Chowol-eup, Gwangju-si, Gyeonggi-do 464-862 Korea (TEL: 82-31-765-8289, FAX: 82-31-766-2904)

13.5.1.2 Test data for Below 30 MHz

-. Test Date : March 11, 2015

-. 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.									

13.5.1.3 Test data for above 1 GHz

-. Test Date : March 11, 2015

-. 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)	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 / Project Engineer

HEAD OFFICE : 301-14 Daessangnyeong-ri, Chowol-eup, Gwangju-si, Gyeonggi-do 464-862 Korea (TEL: 82-31-799-9500, FAX: 82-31-799-9599)
EMC Testing Div. : 307-51 Daessangnyeong-ri, Chowol-eup, Gwangju-si, Gyeonggi-do 464-862 Korea (TEL: 82-31-765-8289, FAX: 82-31-766-2904)

13.5.2 Test data for 802.11n_HT20 RLAN Mode

13.5.2.1 Test data for 30 MHz ~ 1 000 MHz

Humidity Level : 42.2 % R.H. Temperature: 22.0 ℃

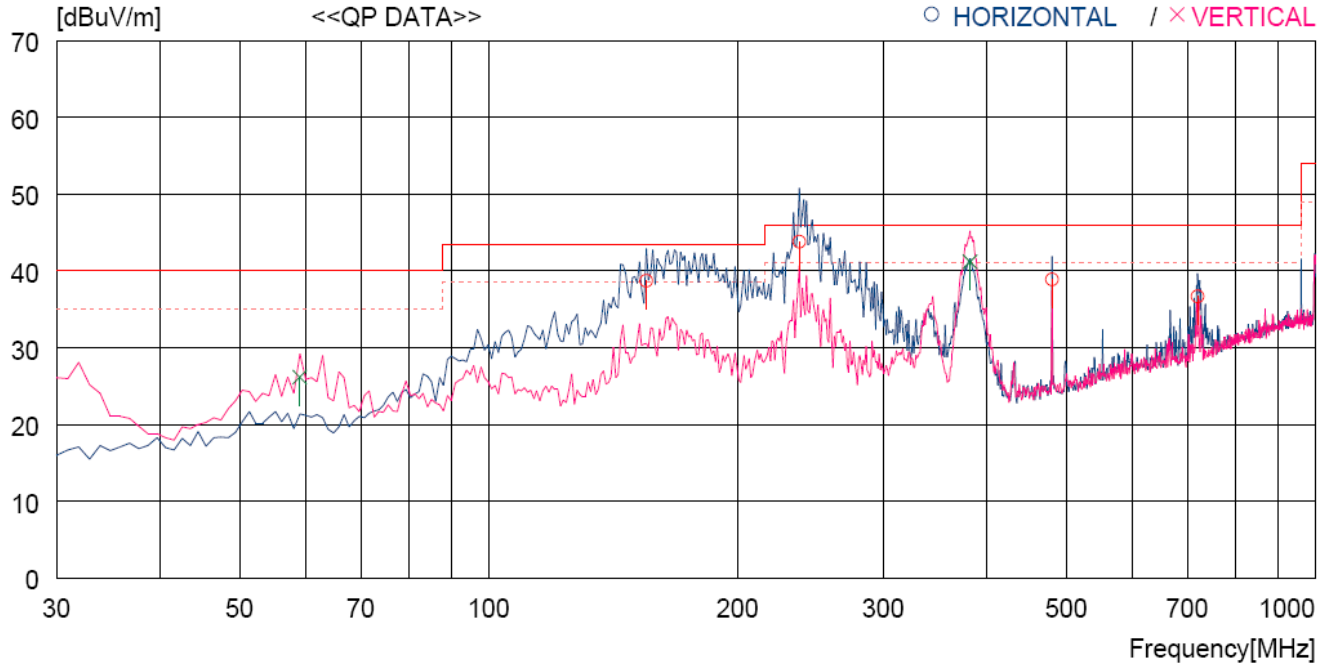
Limits apply to : FCC CFR 47, PART 15, SUBPART C, SECTION 15.247

Result : PASSED

EUT : Wi-Fi module Date: March 11, 2015

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

-.Ant0, Ant1 and Multiple transmit with Low, Middle and High Channels were tested, but the worst data were recorded.



No.	FREQ [MHz]	READING QP [dBuV]	ANT FACTOR [dB]	LOSS [dB]	GAIN [dB]	RESULT [dBuV/m]	LIMIT [dBuV/m]	MARGIN [dB]	ANTENNA [cm]	TABLE [DEG]
----- Horizontal ------										
1	155.130	53.8	9.4	8.5	33.0	38.7	43.5	4.8	200	0
2	237.580	54.5	13.2	9.1	33.0	43.8	46.0	2.2	100	359
3	480.081	43.4	18.1	10.5	33.1	38.9	46.0	7.1	100	359
4	720.634	37.2	21.1	11.7	33.3	36.7	46.0	9.3	100	359
----- Vertical ------										
5	59.100	37.6	14.2	7.5	33.1	26.2	40.0	13.8	100	250
6	382.110	47.8	16.5	9.9	33.0	41.2	46.0	4.8	100	0

HEAD OFFICE : 301-14 Daessangnyeong-ri, Chowol-eup, Gwangju-si, Gyeonggi-do 464-862 Korea (TEL: 82-31-799-9500, FAX: 82-31-799-9599)
EMC Testing Div. : 307-51 Daessangnyeong-ri, Chowol-eup, Gwangju-si, Gyeonggi-do 464-862 Korea (TEL: 82-31-765-8289, FAX: 82-31-766-2904)

13.5.2.2 Test data for Below 30 MHz

-. Test Date : March 11, 2015

-. 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.									

13.5.2.3 Test data for above 1 GHz

-. Test Date : March 11, 2015

-. 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)	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 / Project Engineer

HEAD OFFICE : 301-14 Daessangnyeong-ri, Chowol-eup, Gwangju-si, Gyeonggi-do 464-862 Korea (TEL: 82-31-799-9500, FAX: 82-31-799-9599)
EMC Testing Div. : 307-51 Daessangnyeong-ri, Chowol-eup, Gwangju-si, Gyeonggi-do 464-862 Korea (TEL: 82-31-765-8289, FAX: 82-31-766-2904)

13.5.3 Test data for 802.11n_HT40 RLAN Mode

13.5.3.1 Test data for 30 MHz ~ 1 000 MHz

Humidity Level : 42.2 % R.H. Temperature: 22.0 ℃

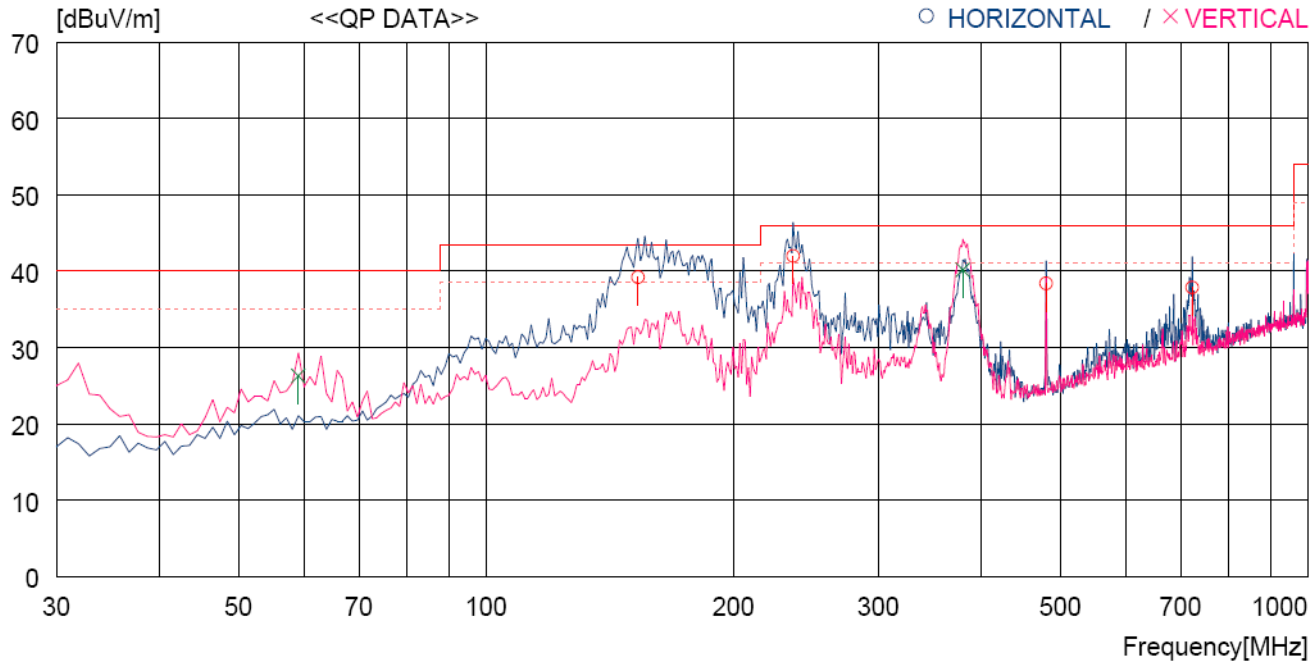
Limits apply to : FCC CFR 47, PART 15, SUBPART C, SECTION 15.247

Result : PASSED

EUT : Wi-Fi module Date: March 11, 2015

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

-.Ant0, Ant1 and Multiple transmit with Low, Middle and High Channels were tested, but the worst data were recorded.



No.	FREQ [MHz]	READING QP [dBuV]	ANT FACTOR [dB]	LOSS [dB]	GAIN [dB]	RESULT [dBuV/m]	LIMIT [dBuV/m]	MARGIN [dB]	ANTENNA [cm]	TABLE [DEG]
----- Horizontal ------										
1	153.190	54.5	9.3	8.4	33.0	39.2	43.5	4.3	200	0
2	236.610	52.7	13.2	9.1	33.0	42.0	46.0	4.0	100	201
3	480.081	42.9	18.1	10.5	33.1	38.4	46.0	7.6	200	271
4	723.544	38.4	21.1	11.7	33.3	37.9	46.0	8.1	100	222
----- Vertical ------										
5	59.100	37.7	14.2	7.5	33.1	26.3	40.0	13.7	100	242
6	380.170	46.8	16.5	9.9	33.0	40.2	46.0	5.8	100	193

HEAD OFFICE : 301-14 Daessangnyeong-ri, Chowol-eup, Gwangju-si, Gyeonggi-do 464-862 Korea (TEL: 82-31-799-9500, FAX: 82-31-799-9599)
EMC Testing Div. : 307-51 Daessangnyeong-ri, Chowol-eup, Gwangju-si, Gyeonggi-do 464-862 Korea (TEL: 82-31-765-8289, FAX: 82-31-766-2904)

13.5.3.2 Test data for Below 30 MHz

-. Test Date : March 11, 2015

-. 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.									

13.5.3.3 Test data for above 1 GHz

-. Test Date : March 11, 2015

-. 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)	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 / Project Engineer

HEAD OFFICE : 301-14 Daessangnyeong-ri, Chowol-eup, Gwangju-si, Gyeonggi-do 464-862 Korea (TEL: 82-31-799-9500, FAX: 82-31-799-9599)
EMC Testing Div. : 307-51 Daessangnyeong-ri, Chowol-eup, Gwangju-si, Gyeonggi-do 464-862 Korea (TEL: 82-31-765-8289, FAX: 82-31-766-2904)

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

13.6.1 Test data for 802.11a RLAN Mode

13.6.1.1 Test data for 30 MHz ~ 1 000 MHz

Humidity Level : 42.2 % R.H. Temperature: 22.0 ℃

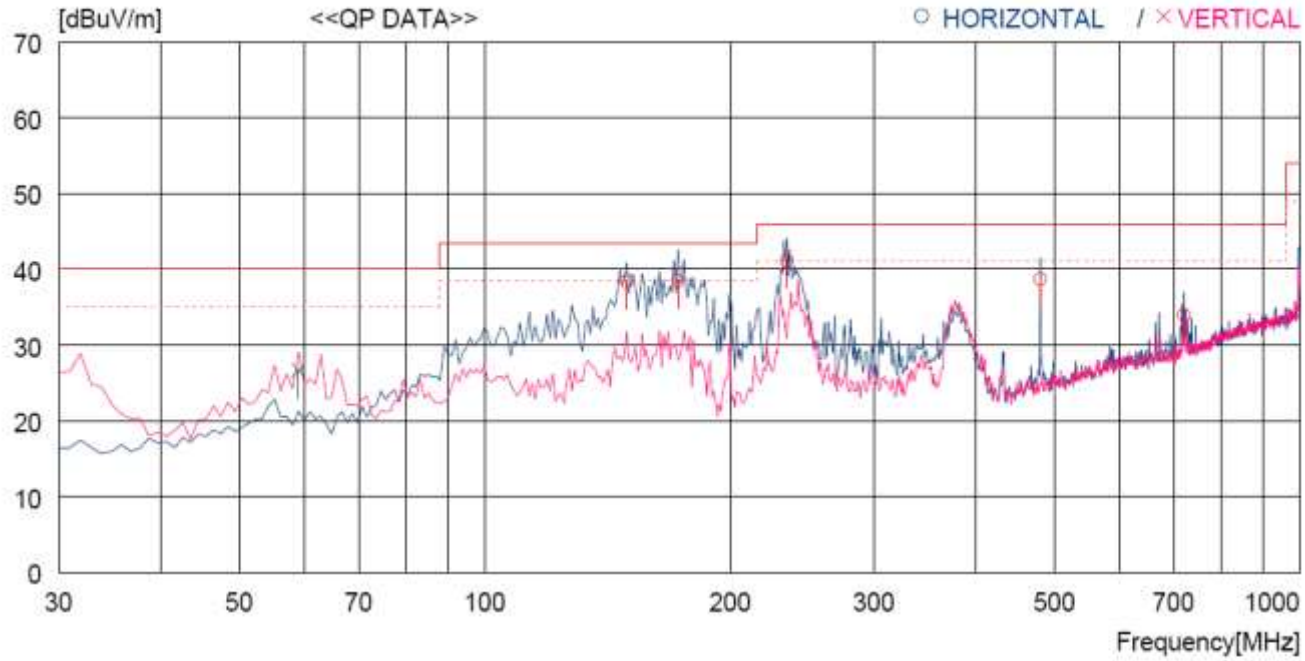
Limits apply to : FCC CFR 47, PART 15, SUBPART C, SECTION 15.247

Result : PASSED

EUT : Wi-Fi module Date: March 11, 2015

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

-.Ant0, Ant1 and Multiple transmit with Low, Middle and High Channels were tested, but the worst data were recorded.



No.	FREQ	READING QP	ANT FACTOR	LOSS	GAIN	RESULT	LIMIT	MARGIN	ANTENNA	TABLE
	[MHz]	[dBuV]	[dB]	[dB]	[dB]	[dBuV/m]	[dBuV/m]	[dB]	[cm]	[DEG]
----- Horizontal ------										
1	149.310	53.8	9.3	8.4	33.1	38.4	43.5	5.1	200	151
2	172.590	53.3	9.6	8.6	33.0	38.5	43.5	5.0	100	167
3	234.670	51.9	13.2	9.1	33.0	41.2	46.0	4.8	100	201
4	480.081	43.2	18.1	10.5	33.1	38.7	46.0	7.3	100	125
5	720.634	34.5	21.1	11.7	33.3	34.0	46.0	12.0	100	359
----- Vertical ------										
6	59.100	38.1	14.2	7.5	33.1	26.7	40.0	13.3	100	0

HEAD OFFICE : 301-14 Daessangnyeong-ri, Chowol-eup, Gwangju-si, Gyeonggi-do 464-862 Korea (TEL: 82-31-799-9500, FAX: 82-31-799-9599)
EMC Testing Div. : 307-51 Daessangnyeong-ri, Chowol-eup, Gwangju-si, Gyeonggi-do 464-862 Korea (TEL: 82-31-765-8289, FAX: 82-31-766-2904)

13.6.1.2 Test data for Below 30 MHz

-. Test Date : March 11, 2015

-. 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.									

13.6.1.3 Test data for above 1 GHz

-. Test Date : March 11, 2015

-. 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)	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 / Project Engineer

HEAD OFFICE : 301-14 Daessangnyeong-ri, Chowol-eup, Gwangju-si, Gyeonggi-do 464-862 Korea (TEL: 82-31-799-9500, FAX: 82-31-799-9599)

EMC Testing Div. : 307-51 Daessangnyeong-ri, Chowol-eup, Gwangju-si, Gyeonggi-do 464-862 Korea (TEL: 82-31-765-8289, FAX: 82-31-766-2904)

13.6.2 Test data for 802.11n_HT20 RLAN Mode

13.6.2.1 Test data for 30 MHz ~ 1 000 MHz

Humidity Level : 42.2 % R.H. Temperature: 22.0 ℃

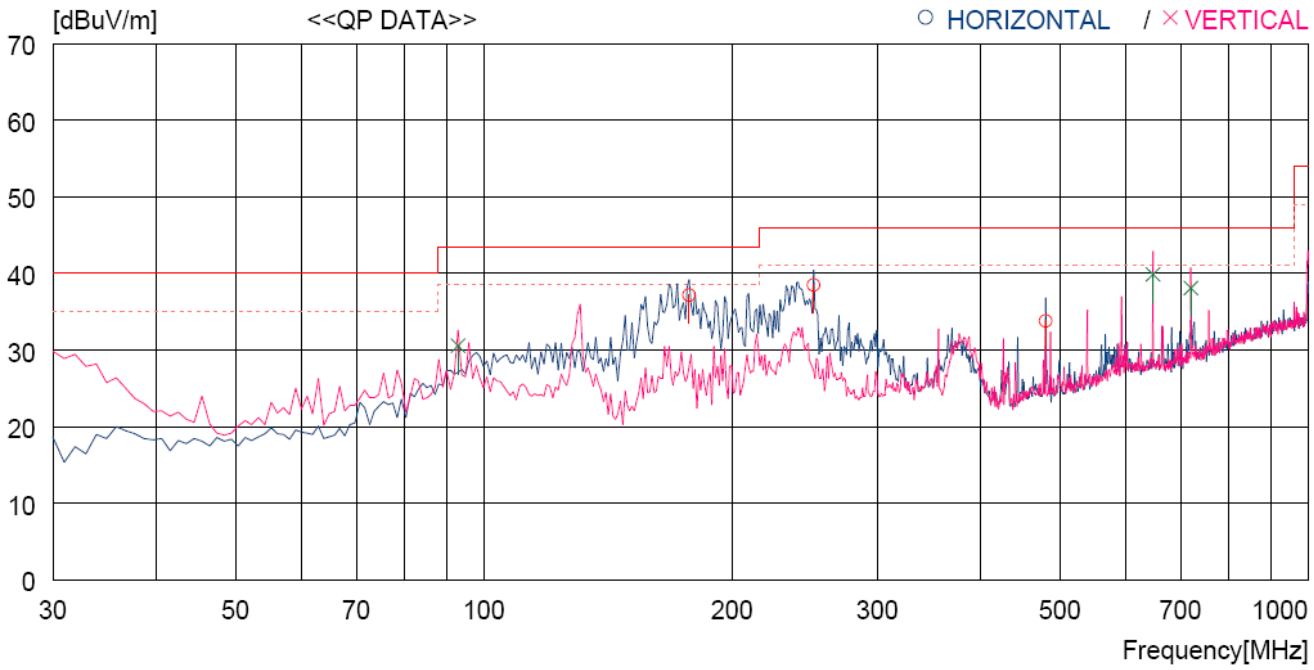
Limits apply to : FCC CFR 47, PART 15, SUBPART C, SECTION 15.247

Result : PASSED

EUT : Wi-Fi module Date: March 11, 2015

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

-.Ant0, Ant1 and Multiple transmit with Low, Middle and High Channels were tested, but the worst data were recorded.



No.	FREQ [MHz]	READING QP [dBuV]	ANT FACTOR [dB]	LOSS [dB]	GAIN [dB]	RESULT [dBuV/m]	LIMIT [dBuV/m]	MARGIN [dB]	ANTENNA [cm]	TABLE [DEG]
----- Horizontal ------										
1	177.440	51.8	9.7	8.7	33.0	37.2	43.5	6.3	200	1
2	251.160	48.7	13.6	9.2	33.0	38.5	46.0	7.5	100	359
3	480.081	38.3	18.1	10.5	33.1	33.8	46.0	12.2	100	237
----- Vertical ------										
4	93.050	43.8	12.0	7.9	33.1	30.6	43.5	12.9	100	0
5	647.887	41.4	20.5	11.3	33.3	39.9	46.0	6.1	100	341
6	720.634	38.6	21.1	11.7	33.3	38.1	46.0	7.9	100	0

HEAD OFFICE : 301-14 Daessangnyeong-ri, Chowol-eup, Gwangju-si, Gyeonggi-do 464-862 Korea (TEL: 82-31-799-9500, FAX: 82-31-799-9599)
EMC Testing Div. : 307-51 Daessangnyeong-ri, Chowol-eup, Gwangju-si, Gyeonggi-do 464-862 Korea (TEL: 82-31-765-8289, FAX: 82-31-766-2904)

13.6.2.2 Test data for Below 30 MHz

-. Test Date : March 11, 2015

-. 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.									

13.6.2.3 Test data for above 1 GHz

-. Test Date : March 11, 2015

-. 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)	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 / Project Engineer

HEAD OFFICE : 301-14 Daessangnyeong-ri, Chowol-eup, Gwangju-si, Gyeonggi-do 464-862 Korea (TEL: 82-31-799-9500, FAX: 82-31-799-9599)
EMC Testing Div. : 307-51 Daessangnyeong-ri, Chowol-eup, Gwangju-si, Gyeonggi-do 464-862 Korea (TEL: 82-31-765-8289, FAX: 82-31-766-2904)

13.6.3 Test data for 802.11n_HT40 RLAN Mode

13.6.3.1 Test data for 30 MHz ~ 1 000 MHz

Humidity Level : 42.2 % R.H. Temperature: 22.0 ℃

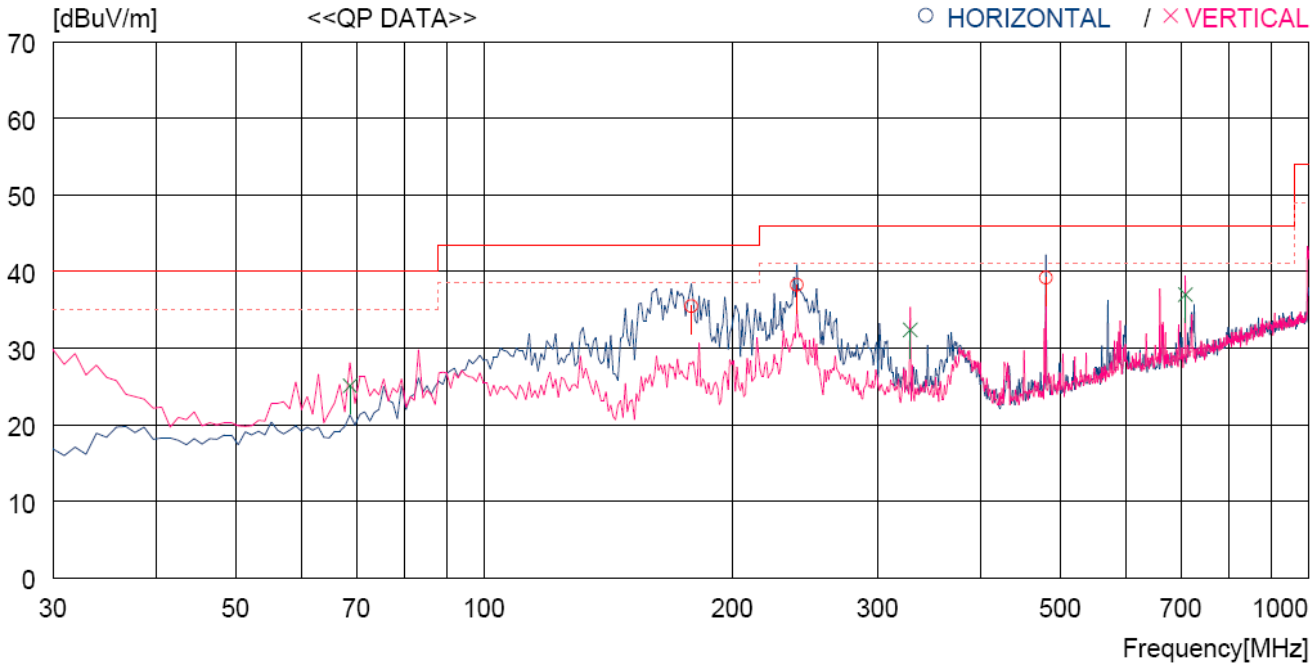
Limits apply to : FCC CFR 47, PART 15, SUBPART C, SECTION 15.247

Result : PASSED

EUT : Wi-Fi module Date: March 11, 2015

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

-.Ant0, Ant1 and Multiple transmit with Low, Middle and High Channels were tested, but the worst data were recorded.



No.	FREQ [MHz]	READING QP [dBuV]	ANT FACTOR [dB]	LOSS [dB]	GAIN [dB]	RESULT [dBuV/m]	LIMIT [dBuV/m]	MARGIN [dB]	ANTENNA [cm]	TABLE [DEG]
----- Horizontal ------										
1	178.410	50.1	9.7	8.7	33.0	35.5	43.5	8.0	100	355
2	239.520	48.9	13.3	9.1	33.0	38.3	46.0	7.7	100	359
3	480.081	43.7	18.1	10.5	33.1	39.2	46.0	6.8	200	0
----- Vertical ------										
4	68.800	39.9	10.7	7.6	33.1	25.1	40.0	14.9	100	358
5	328.760	40.4	15.4	9.6	33.0	32.4	46.0	13.6	100	0
6	708.995	37.8	20.9	11.6	33.3	37.0	46.0	9.0	100	0

HEAD OFFICE : 301-14 Daessangnyeong-ri, Chowol-eup, Gwangju-si, Gyeonggi-do 464-862 Korea (TEL: 82-31-799-9500, FAX: 82-31-799-9599)
EMC Testing Div. : 307-51 Daessangnyeong-ri, Chowol-eup, Gwangju-si, Gyeonggi-do 464-862 Korea (TEL: 82-31-765-8289, FAX: 82-31-766-2904)

13.6.3.2 Test data for Below 30 MHz

-. Test Date : March 11, 2015

-. 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.									

13.6.3.3 Test data for above 1 GHz

-. Test Date : March 11, 2015

-. 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)	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 / Project Engineer

HEAD OFFICE : 301-14 Daessangnyeong-ri, Chowol-eup, Gwangju-si, Gyeonggi-do 464-862 Korea (TEL: 82-31-799-9500, FAX: 82-31-799-9599)
EMC Testing Div. : 307-51 Daessangnyeong-ri, Chowol-eup, Gwangju-si, Gyeonggi-do 464-862 Korea (TEL: 82-31-765-8289, FAX: 82-31-766-2904)

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

13.7.1 Test data for 802.11a RLAN Mode

13.7.1.1 Test data for 30 MHz ~ 1 000 MHz

Humidity Level : 42.2 % R.H. Temperature: 22.0 ℃

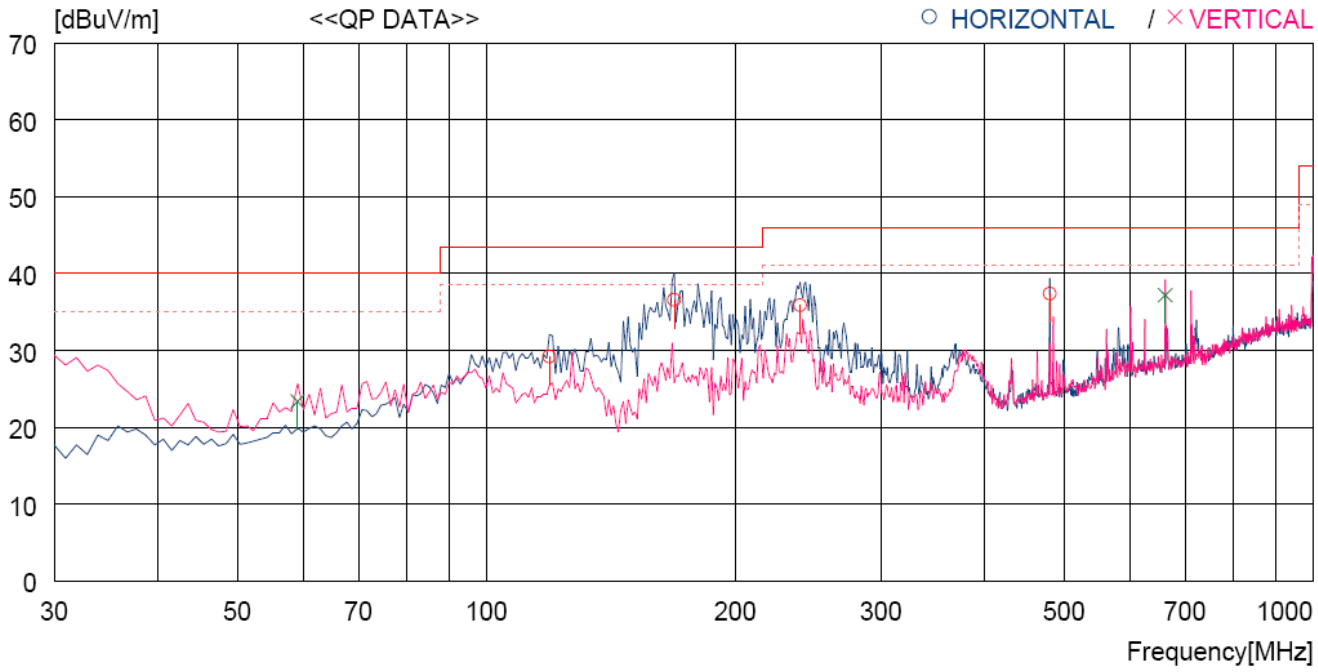
Limits apply to : FCC CFR 47, PART 15, SUBPART C, SECTION 15.247

Result : PASSED

EUT : Wi-Fi module Date: March 11, 2015

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

-.Ant0, Ant1 and Multiple transmit with Low, Middle and High Channels were tested, but the worst data were recorded.



No.	FREQ [MHz]	READING QP [dBuV]	ANT FACTOR [dB]	LOSS [dB]	GAIN [dB]	RESULT [dBuV/m]	LIMIT [dBuV/m]	MARGIN [dB]	ANTENNA [cm]	TABLE [DEG]
----- Horizontal ------										
1	119.240	42.7	11.5	8.1	33.1	29.2	43.5	14.3	200	345
2	168.710	51.4	9.6	8.6	33.0	36.6	43.5	6.9	100	0
3	239.520	46.5	13.3	9.1	33.0	35.9	46.0	10.1	100	0
4	480.081	41.9	18.1	10.5	33.1	37.4	46.0	8.6	200	259
----- Vertical ------										
5	59.100	34.8	14.2	7.5	33.1	23.4	40.0	16.6	100	359
6	662.436	38.5	20.6	11.4	33.3	37.2	46.0	8.8	100	300

HEAD OFFICE : 301-14 Daessangnyeong-ri, Chowol-eup, Gwangju-si, Gyeonggi-do 464-862 Korea (TEL: 82-31-799-9500, FAX: 82-31-799-9599)
EMC Testing Div. : 307-51 Daessangnyeong-ri, Chowol-eup, Gwangju-si, Gyeonggi-do 464-862 Korea (TEL: 82-31-765-8289, FAX: 82-31-766-2904)

13.7.1.2 Test data for Below 30 MHz

-. Test Date : March 11, 2015

-. 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.									

13.7.1.3 Test data for above 1 GHz

-. Test Date : March 11, 2015

-. 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)	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 / Project Engineer

HEAD OFFICE : 301-14 Daessangnyeong-ri, Chowol-eup, Gwangju-si, Gyeonggi-do 464-862 Korea (TEL: 82-31-799-9500, FAX: 82-31-799-9599)
EMC Testing Div. : 307-51 Daessangnyeong-ri, Chowol-eup, Gwangju-si, Gyeonggi-do 464-862 Korea (TEL: 82-31-765-8289, FAX: 82-31-766-2904)

13.7.2 Test data for 802.11n_HT20 RLAN Mode

13.7.2.1 Test data for 30 MHz ~ 1 000 MHz

Humidity Level : 42.2 % R.H. Temperature: 22.0 ℃

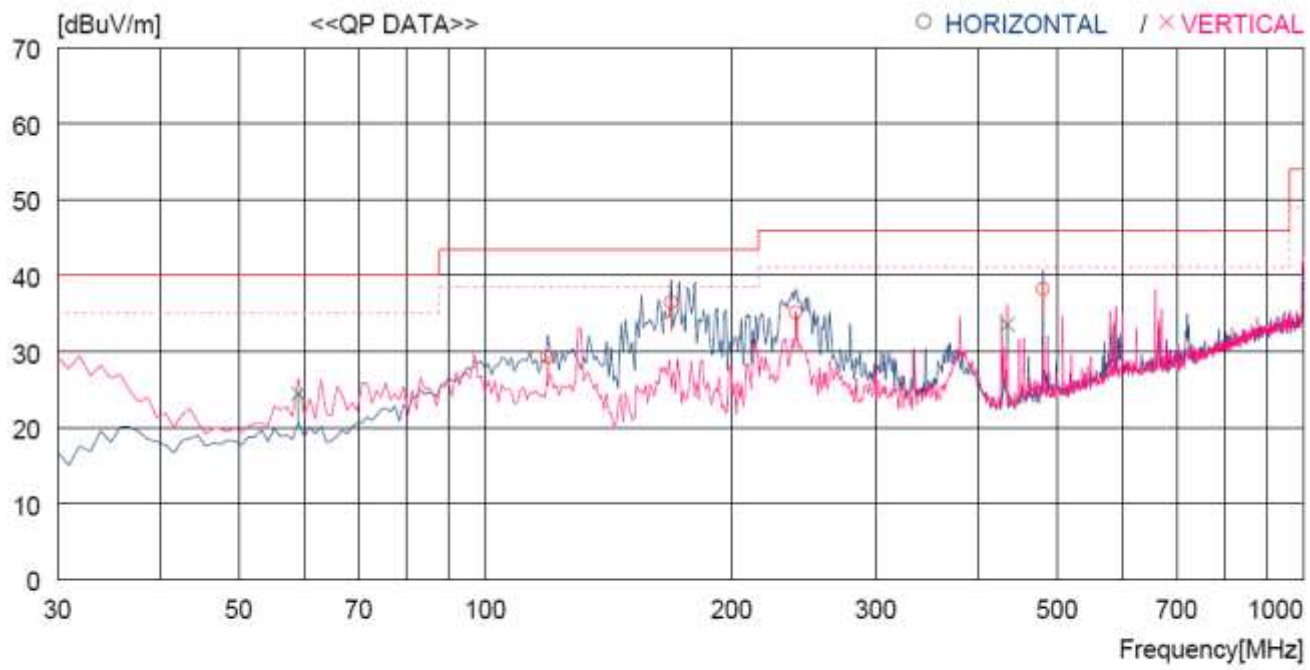
Limits apply to : FCC CFR 47, PART 15, SUBPART C, SECTION 15.247

Result : PASSED

EUT : Wi-Fi module Date: March 11, 2015

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

-.Ant0, Ant1 and Multiple transmit with Low, Middle and High Channels were tested, but the worst data were recorded.



No.	FREQ [MHz]	READING QP [dBuV]	ANT FACTOR [dB]	LOSS [dB]	GAIN [dB]	RESULT [dBuV/m]	LIMIT [dBuV/m]	MARGIN [dB]	ANTENNA [cm]	TABLE [DEG]
----- Horizontal ------										
1	119.240	42.8	11.5	8.1	33.1	29.3	43.5	14.2	300	0
2	168.710	51.3	9.6	8.6	33.0	36.5	43.5	7.0	100	18
3	239.520	45.8	13.3	9.1	33.0	35.2	46.0	10.8	100	0
4	480.081	42.8	18.1	10.5	33.1	38.3	46.0	7.7	200	2
----- Vertical ------										
5	59.100	35.9	14.2	7.5	33.1	24.5	40.0	15.5	100	67
6	434.491	38.9	17.4	10.3	33.0	33.6	46.0	12.4	100	40

HEAD OFFICE : 301-14 Daessangnyeong-ri, Chowol-eup, Gwangju-si, Gyeonggi-do 464-862 Korea (TEL: 82-31-799-9500, FAX: 82-31-799-9599)
EMC Testing Div. : 307-51 Daessangnyeong-ri, Chowol-eup, Gwangju-si, Gyeonggi-do 464-862 Korea (TEL: 82-31-765-8289, FAX: 82-31-766-2904)

13.7.2.2 Test data for Below 30 MHz

-. Test Date : March 11, 2015

-. 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.									

13.7.2.3 Test data for above 1 GHz

-. Test Date : March 11, 2015

-. 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)	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 / Project Engineer

HEAD OFFICE : 301-14 Daessangnyeong-ri, Chowol-eup, Gwangju-si, Gyeonggi-do 464-862 Korea (TEL: 82-31-799-9500, FAX: 82-31-799-9599)
EMC Testing Div. : 307-51 Daessangnyeong-ri, Chowol-eup, Gwangju-si, Gyeonggi-do 464-862 Korea (TEL: 82-31-765-8289, FAX: 82-31-766-2904)

13.7.3 Test data for 802.11n_HT40 RLAN Mode

13.7.3.1 Test data for 30 MHz ~ 1 000 MHz

Humidity Level : 42.2 % R.H. Temperature: 22.0 ℃

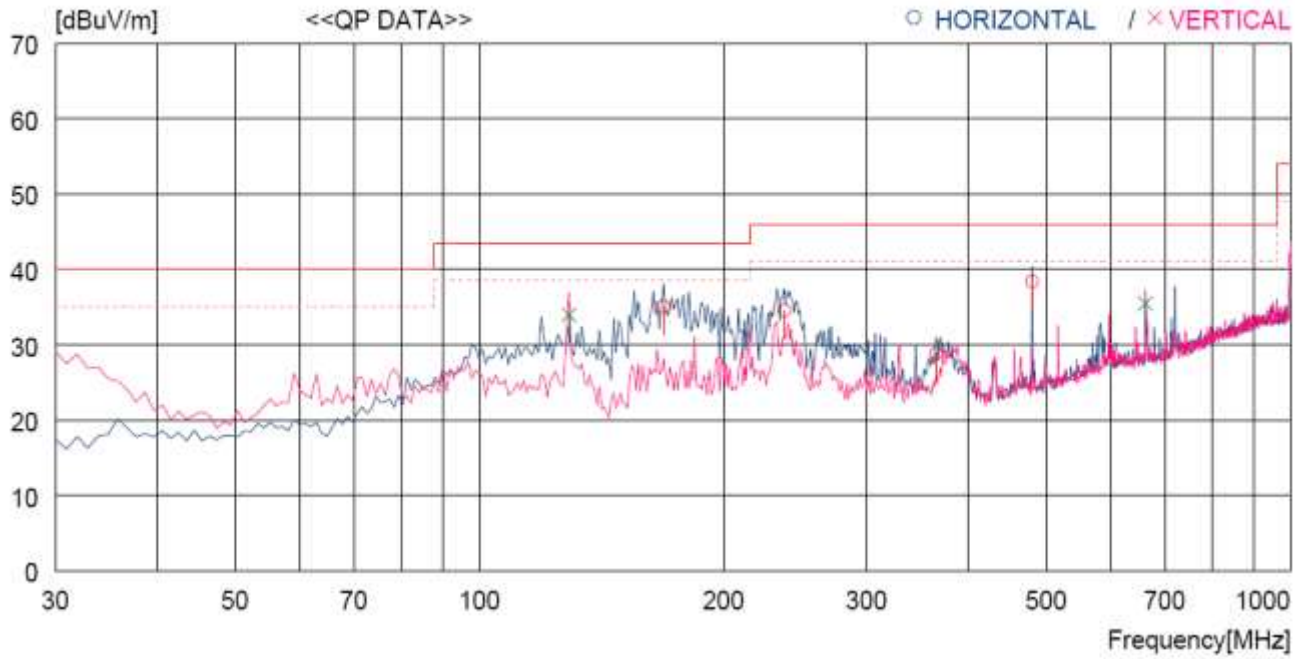
Limits apply to : FCC CFR 47, PART 15, SUBPART C, SECTION 15.247

Result : PASSED

EUT : Wi-Fi module Date: March 11, 2015

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

-.Ant0, Ant1 and Multiple transmit with Low, Middle and High Channels were tested, but the worst data were recorded.



No.	FREQ	READING QP	ANT FACTOR	LOSS	GAIN	RESULT	LIMIT	MARGIN	ANTENNA	TABLE
	[MHz]	[dBuV]	[dB]	[dB]	[dB]	[dBuV/m]	[dBuV/m]	[dB]	[cm]	[DEG]
----- Horizontal ------										
1	168.710	49.9	9.6	8.6	33.0	35.1	43.5	8.4	200	180
2	237.580	45.2	13.2	9.1	33.0	34.5	46.0	11.5	100	0
3	365.620	35.8	16.2	9.8	33.0	28.8	46.0	17.2	100	0
4	480.081	42.9	18.1	10.5	33.1	38.4	46.0	7.6	100	0
----- Vertical ------										
5	128.940	48.5	10.4	8.2	33.1	34.0	43.5	9.5	200	0
6	662.436	36.8	20.6	11.4	33.3	35.5	46.0	10.5	100	359

HEAD OFFICE : 301-14 Daessangnyeong-ri, Chowol-eup, Gwangju-si, Gyeonggi-do 464-862 Korea (TEL: 82-31-799-9500, FAX: 82-31-799-9599)
EMC Testing Div. : 307-51 Daessangnyeong-ri, Chowol-eup, Gwangju-si, Gyeonggi-do 464-862 Korea (TEL: 82-31-765-8289, FAX: 82-31-766-2904)

13.7.3.2 Test data for Below 30 MHz

-. Test Date : March 11, 2015

-. 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.									

13.7.3.3 Test data for above 1 GHz

-. Test Date : March 11, 2015

-. 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)	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 / Project Engineer

HEAD OFFICE : 301-14 Daessangnyeong-ri, Chowol-eup, Gwangju-si, Gyeonggi-do 464-862 Korea (TEL: 82-31-799-9500, FAX: 82-31-799-9599)
EMC Testing Div. : 307-51 Daessangnyeong-ri, Chowol-eup, Gwangju-si, Gyeonggi-do 464-862 Korea (TEL: 82-31-765-8289, FAX: 82-31-766-2904)

15. RADIATED RESTRICTED BAND EDGE MEASUREMENTS

15.1 Operating environment

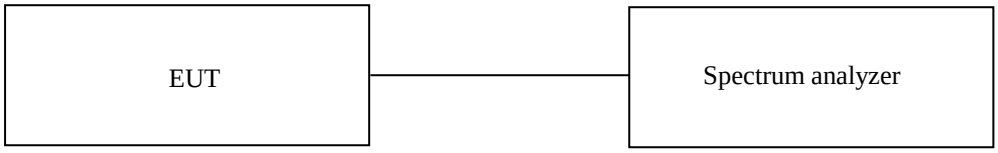
Temperature : 24 ℃

Relative humidity : 48 % R.H.

15.2 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.



15.3 Test equipment used

■ -	FSV40	Rohde & Schwarz	Signal Analyzer	101009	Jul. 30, 2014 (1Y)
■ -	ESCI	Rohde & Schwarz	Test Receiver	101012	Nov. 03, 2014 (1Y)
■ -	310N	Sonoma Instrument	Pre-Amplifier	312544	Apr. 28, 2014 (1Y)
■ -	SCU-18	Rohde & Schwarz	Pre-Amplifier	10041	Nov. 25, 2014 (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	Jul. 10, 2014 (2Y)
■ -	BBHA9120D	Schwarzbeck	Horn Antenna	BBHA9120D294	Sep. 05, 2013 (2Y)
■ -	BBHA9170	Schwarzbeck	Horn Antenna	BBHA9170178	Sep. 05, 2013 (2Y)

All test equipment used is calibrated on a regular basis.

HEAD OFFICE : 301-14 Daessangnyeong-ri, Chowol-eup, Gwangju-si, Gyeonggi-do 464-862 Korea (TEL: 82-31-799-9500, FAX: 82-31-799-9599)
EMC Testing Div. : 307-51 Daessangnyeong-ri, Chowol-eup, Gwangju-si, Gyeonggi-do 464-862 Korea (TEL: 82-31-765-8289, FAX: 82-31-766-2904)

15.4 Test data for Frequency 5 150 band

15.4.1 Test data for 802.11a RLAN Mode

15.4.1.1 Test data for Antenna 0

-. Test Date : March 11, 2015

-. 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	40.61	Peak	H	31.00	11.50	42.20	40.91	74.00	33.09
	29.85	Average	H				30.15	54.00	23.85
	45.03	Peak	V				45.33	74.00	28.67
	33.98	Average	V				34.28	54.00	19.72

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 / Project Engineer

HEAD OFFICE : 301-14 Daessangnyeong-ri, Chowol-eup, Gwangju-si, Gyeonggi-do 464-862 Korea (TEL: 82-31-799-9500, FAX: 82-31-799-9599)
EMC Testing Div. : 307-51 Daessangnyeong-ri, Chowol-eup, Gwangju-si, Gyeonggi-do 464-862 Korea (TEL: 82-31-765-8289, FAX: 82-31-766-2904)

15.4.1.2 Test data for Antenna 1

-. Test Date : March 11, 2015

-. 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	39.69	Peak	H	31.00	11.50	42.20	39.99	74.00	34.01
	29.73	Average	H				30.03	54.00	23.97
	44.44	Peak	V				44.74	74.00	29.26
	35.75	Average	V				36.05	54.00	17.95

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 / Project Engineer

HEAD OFFICE : 301-14 Daessangnyeong-ri, Chowol-eup, Gwangju-si, Gyeonggi-do 464-862 Korea (TEL: 82-31-799-9500, FAX: 82-31-799-9599)
EMC Testing Div. : 307-51 Daessangnyeong-ri, Chowol-eup, Gwangju-si, Gyeonggi-do 464-862 Korea (TEL: 82-31-765-8289, FAX: 82-31-766-2904)

15.4.1.3 Test data for Multiple transmit

-. Test Date : March 11, 2015

-. 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	40.25	Peak	H	31.00	11.50	42.20	40.55	74.00	33.45
	30.18	Average	H				30.48	54.00	23.52
	44.21	Peak	V				44.51	74.00	29.49
	35.00	Average	V				35.30	54.00	18.70

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 / Project Engineer

HEAD OFFICE : 301-14 Daessangnyeong-ri, Chowol-eup, Gwangju-si, Gyeonggi-do 464-862 Korea (TEL: 82-31-799-9500, FAX: 82-31-799-9599)
EMC Testing Div. : 307-51 Daessangnyeong-ri, Chowol-eup, Gwangju-si, Gyeonggi-do 464-862 Korea (TEL: 82-31-765-8289, FAX: 82-31-766-2904)

15.4.2 Test data for 802.11n_HT20 RLAN Mode

15.4.2.1 Test data for Antenna 0

-. Test Date : March 11, 2015

-. 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	40.13	Peak	H	31.00	11.50	42.20	40.43	74.00	33.57
	30.81	Average	H				31.11	54.00	22.89
	45.72	Peak	V				46.02	74.00	27.98
	34.07	Average	V				34.37	54.00	19.63

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 / Project Engineer

HEAD OFFICE : 301-14 Daessangnyeong-ri, Chowol-eup, Gwangju-si, Gyeonggi-do 464-862 Korea (TEL: 82-31-799-9500, FAX: 82-31-799-9599)
EMC Testing Div. : 307-51 Daessangnyeong-ri, Chowol-eup, Gwangju-si, Gyeonggi-do 464-862 Korea (TEL: 82-31-765-8289, FAX: 82-31-766-2904)

15.4.2.2 Test data for Antenna 1

-. Test Date : March 11, 2015

-. 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	39.37	Peak	H	31.00	11.50	42.20	39.67	74.00	34.33
	29.08	Average	H				29.38	54.00	24.62
	44.41	Peak	V				44.71	74.00	29.29
	35.16	Average	V				35.46	54.00	18.54

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 / Project Engineer

HEAD OFFICE : 301-14 Daessangnyeong-ri, Chowol-eup, Gwangju-si, Gyeonggi-do 464-862 Korea (TEL: 82-31-799-9500, FAX: 82-31-799-9599)
EMC Testing Div. : 307-51 Daessangnyeong-ri, Chowol-eup, Gwangju-si, Gyeonggi-do 464-862 Korea (TEL: 82-31-765-8289, FAX: 82-31-766-2904)

15.4.2.3 Test data for Multiple transmit

-. Test Date : March 11, 2015

-. 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	40.27	Peak	H	31.00	11.50	42.20	40.57	74.00	33.43
	30.68	Average	H				30.98	54.00	23.02
	44.16	Peak	V				44.46	74.00	29.54
	34.38	Average	V				34.68	54.00	19.32

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 / Project Engineer

HEAD OFFICE : 301-14 Daessangnyeong-ri, Chowol-eup, Gwangju-si, Gyeonggi-do 464-862 Korea (TEL: 82-31-799-9500, FAX: 82-31-799-9599)
EMC Testing Div. : 307-51 Daessangnyeong-ri, Chowol-eup, Gwangju-si, Gyeonggi-do 464-862 Korea (TEL: 82-31-765-8289, FAX: 82-31-766-2904)

15.4.3 Test data for 802.11n_HT40 RLAN Mode

15.4.3.1 Test data for Antenna 0

-. Test Date : March 11, 2015

-. 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	43.92	Peak	H	31.00	11.50	42.20	44.22	74.00	29.78
	33.13	Average	H				33.43	54.00	20.57
	58.11	Peak	V				58.41	74.00	15.59
	44.87	Average	V				45.17	54.00	8.83

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 / Project Engineer

HEAD OFFICE : 301-14 Daessangnyeong-ri, Chowol-eup, Gwangju-si, Gyeonggi-do 464-862 Korea (TEL: 82-31-799-9500, FAX: 82-31-799-9599)
EMC Testing Div. : 307-51 Daessangnyeong-ri, Chowol-eup, Gwangju-si, Gyeonggi-do 464-862 Korea (TEL: 82-31-765-8289, FAX: 82-31-766-2904)

15.4.3.2 Test data for Antenna 1

-. Test Date : March 11, 2015

-. 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	44.98	Peak	H	31.00	11.50	42.20	45.28	74.00	28.72
	32.77	Average	H				33.07	54.00	20.93
	57.15	Peak	V				57.45	74.00	16.55
	44.87	Average	V				45.17	54.00	8.83

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 / Project Engineer

HEAD OFFICE : 301-14 Daessangnyeong-ri, Chowol-eup, Gwangju-si, Gyeonggi-do 464-862 Korea (TEL: 82-31-799-9500, FAX: 82-31-799-9599)
EMC Testing Div. : 307-51 Daessangnyeong-ri, Chowol-eup, Gwangju-si, Gyeonggi-do 464-862 Korea (TEL: 82-31-765-8289, FAX: 82-31-766-2904)

15.4.3.3 Test data for Multiple transmit

-. Test Date : March 11, 2015

-. 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	44.05	Peak	H	31.00	11.50	42.20	44.35	74.00	29.65
	32.92	Average	H				33.22	54.00	20.78
	56.89	Peak	V				57.19	74.00	16.81
	44.46	Average	V				44.76	54.00	9.24

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 / Project Engineer

HEAD OFFICE : 301-14 Daessangnyeong-ri, Chowol-eup, Gwangju-si, Gyeonggi-do 464-862 Korea (TEL: 82-31-799-9500, FAX: 82-31-799-9599)
EMC Testing Div. : 307-51 Daessangnyeong-ri, Chowol-eup, Gwangju-si, Gyeonggi-do 464-862 Korea (TEL: 82-31-765-8289, FAX: 82-31-766-2904)

15.5 Test data for Frequency 5 250 band

15.5.1 Test data for 802.11a RLAN Mode

15.5.1.1 Test data for Antenna 0

-. Test Date : March 11, 2015

-. 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	40.57	Peak	H	31.30	11.70	42.20	41.37	73.98	32.61
	29.77	Average	H				30.57	53.98	23.41
	40.76	Peak	V				41.56	73.98	32.42
	30.15	Average	V				30.95	53.98	23.03

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 / Project Engineer

HEAD OFFICE : 301-14 Daessangnyeong-ri, Chowol-eup, Gwangju-si, Gyeonggi-do 464-862 Korea (TEL: 82-31-799-9500, FAX: 82-31-799-9599)
EMC Testing Div. : 307-51 Daessangnyeong-ri, Chowol-eup, Gwangju-si, Gyeonggi-do 464-862 Korea (TEL: 82-31-765-8289, FAX: 82-31-766-2904)

15.5.1.2 Test data for Antenna 1

-. Test Date : March 11, 2015

-. 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	39.53	Peak	H	31.30	11.70	42.20	40.33	73.98	33.65
	28.92	Average	H				29.72	53.98	24.26
	40.16	Peak	V				40.96	73.98	33.02
	29.52	Average	V				30.32	53.98	23.66

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 / Project Engineer

HEAD OFFICE : 301-14 Daessangnyeong-ri, Chowol-eup, Gwangju-si, Gyeonggi-do 464-862 Korea (TEL: 82-31-799-9500, FAX: 82-31-799-9599)
EMC Testing Div. : 307-51 Daessangnyeong-ri, Chowol-eup, Gwangju-si, Gyeonggi-do 464-862 Korea (TEL: 82-31-765-8289, FAX: 82-31-766-2904)

15.5.1.3 Test data for Multiple transmit

-. Test Date : March 11, 2015

-. 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	39.03	Peak	H	31.30	11.70	42.20	39.83	73.98	34.15
	29.62	Average	H				30.42	53.98	23.56
	41.11	Peak	V				41.91	73.98	32.07
	29.84	Average	V				30.64	53.98	23.34

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 / Project Engineer

HEAD OFFICE : 301-14 Daessangnyeong-ri, Chowol-eup, Gwangju-si, Gyeonggi-do 464-862 Korea (TEL: 82-31-799-9500, FAX: 82-31-799-9599)
EMC Testing Div. : 307-51 Daessangnyeong-ri, Chowol-eup, Gwangju-si, Gyeonggi-do 464-862 Korea (TEL: 82-31-765-8289, FAX: 82-31-766-2904)

15.5.2 Test data for 802.11n_HT20 RLAN Mode

15.5.2.1 Test data for Antenna 0

-. Test Date : March 11, 2015

-. 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	40.53	Peak	H	31.30	11.70	42.20	41.33	73.98	32.65
	29.19	Average	H				29.99	53.98	23.99
	39.75	Peak	V				40.55	73.98	33.43
	29.87	Average	V				30.67	53.98	23.31

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 / Project Engineer

HEAD OFFICE : 301-14 Daessangnyeong-ri, Chowol-eup, Gwangju-si, Gyeonggi-do 464-862 Korea (TEL: 82-31-799-9500, FAX: 82-31-799-9599)
EMC Testing Div. : 307-51 Daessangnyeong-ri, Chowol-eup, Gwangju-si, Gyeonggi-do 464-862 Korea (TEL: 82-31-765-8289, FAX: 82-31-766-2904)

15.5.2.2 Test data for Antenna 1

-. Test Date : March 11, 2015

-. 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	40.30	Peak	H	31.30	11.70	42.20	41.10	73.98	32.88
	30.43	Average	H				31.23	53.98	22.75
	39.96	Peak	V				40.76	73.98	33.22
	30.03	Average	V				30.83	53.98	23.15

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 / Project Engineer

HEAD OFFICE : 301-14 Daessangnyeong-ri, Chowol-eup, Gwangju-si, Gyeonggi-do 464-862 Korea (TEL: 82-31-799-9500, FAX: 82-31-799-9599)
EMC Testing Div. : 307-51 Daessangnyeong-ri, Chowol-eup, Gwangju-si, Gyeonggi-do 464-862 Korea (TEL: 82-31-765-8289, FAX: 82-31-766-2904)

15.5.2.3 Test data for Multiple transmit

-. Test Date : March 11, 2015

-. 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	39.88	Peak	H	31.30	11.70	42.20	40.68	73.98	33.30
	30.07	Average	H				30.87	53.98	23.11
	39.69	Peak	V				40.49	73.98	33.49
	29.53	Average	V				30.33	53.98	23.65

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 / Project Engineer

HEAD OFFICE : 301-14 Daessangnyeong-ri, Chowol-eup, Gwangju-si, Gyeonggi-do 464-862 Korea (TEL: 82-31-799-9500, FAX: 82-31-799-9599)
EMC Testing Div. : 307-51 Daessangnyeong-ri, Chowol-eup, Gwangju-si, Gyeonggi-do 464-862 Korea (TEL: 82-31-765-8289, FAX: 82-31-766-2904)

15.5.3 Test data for 802.11n_HT40 RLAN Mode

15.5.3.1 Test data for Antenna 0

-. Test Date : March 11, 2015

-. 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	45.89	Peak	H	31.30	11.70	42.20	46.69	73.98	27.29
	31.67	Average	H				32.47	53.98	21.51
	51.13	Peak	V				51.93	73.98	22.05
	35.52	Average	V				36.32	53.98	17.66

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 / Project Engineer

HEAD OFFICE : 301-14 Daessangnyeong-ri, Chowol-eup, Gwangju-si, Gyeonggi-do 464-862 Korea (TEL: 82-31-799-9500, FAX: 82-31-799-9599)
EMC Testing Div. : 307-51 Daessangnyeong-ri, Chowol-eup, Gwangju-si, Gyeonggi-do 464-862 Korea (TEL: 82-31-765-8289, FAX: 82-31-766-2904)

15.5.3.2 Test data for Antenna 1

-. Test Date : March 11, 2015

-. 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	45.18	Peak	H	31.30	11.70	42.20	45.98	73.98	28.00
	30.57	Average	H				31.37	53.98	22.61
	52.43	Peak	V				53.23	73.98	20.75
	35.76	Average	V				36.56	53.98	17.42

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 / Project Engineer

HEAD OFFICE : 301-14 Daessangnyeong-ri, Chowol-eup, Gwangju-si, Gyeonggi-do 464-862 Korea (TEL: 82-31-799-9500, FAX: 82-31-799-9599)
EMC Testing Div. : 307-51 Daessangnyeong-ri, Chowol-eup, Gwangju-si, Gyeonggi-do 464-862 Korea (TEL: 82-31-765-8289, FAX: 82-31-766-2904)

15.5.3.3 Test data for Multiple transmit

-. Test Date : March 11, 2015

-. 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	46.73	Peak	H	31.30	11.70	42.20	47.53	73.98	26.45
	30.72	Average	H				31.52	53.98	22.46
	50.89	Peak	V				51.69	73.98	22.29
	34.97	Average	V				35.77	53.98	18.21

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 / Project Engineer

HEAD OFFICE : 301-14 Daessangnyeong-ri, Chowol-eup, Gwangju-si, Gyeonggi-do 464-862 Korea (TEL: 82-31-799-9500, FAX: 82-31-799-9599)
EMC Testing Div. : 307-51 Daessangnyeong-ri, Chowol-eup, Gwangju-si, Gyeonggi-do 464-862 Korea (TEL: 82-31-765-8289, FAX: 82-31-766-2904)

15.6 Test data for Frequency 5 725 MHz Band

15.6.1 Test data for 802.11a RLAN Mode

15.6.1.1 Test data for Antenna 0

-. Test Date : March 11, 2015

-. 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	45.89	Peak	H	31.90	12.10	42.20	47.69	74.00	26.31
	33.75	Average	H				35.55	54.00	18.45
	48.65	Peak	V				50.45	74.00	23.55
	35.12	Average	V				36.92	54.00	17.08
High Channel									
5 850.00	38.52	Peak	H	32.10	12.20	42.20	40.62	74.00	33.38
	28.82	Average	H				30.92	54.00	23.08
	45.89	Peak	V				47.99	74.00	26.01
	33.05	Average	V				35.15	54.00	18.85

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 / Project Engineer

HEAD OFFICE : 301-14 Daessangnyeong-ri, Chowol-eup, Gwangju-si, Gyeonggi-do 464-862 Korea (TEL: 82-31-799-9500, FAX: 82-31-799-9599)
EMC Testing Div. : 307-51 Daessangnyeong-ri, Chowol-eup, Gwangju-si, Gyeonggi-do 464-862 Korea (TEL: 82-31-765-8289, FAX: 82-31-766-2904)

15.6.1.2 Test data for Antenna 1

-. Test Date : March 11, 2015

-. 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	45.97	Peak	H	31.90	12.10	42.20	47.77	74.00	26.23
	32.57	Average	H				34.37	54.00	19.63
	47.44	Peak	V				49.24	74.00	24.76
	35.40	Average	V				37.20	54.00	16.80
High Channel									
5 850.00	39.99	Peak	H	32.10	12.20	42.20	42.09	74.00	31.91
	29.90	Average	H				32.00	54.00	22.00
	45.97	Peak	V				48.07	74.00	25.93
	34.36	Average	V				36.46	54.00	17.54

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 / Project Engineer

HEAD OFFICE : 301-14 Daessangnyeong-ri, Chowol-eup, Gwangju-si, Gyeonggi-do 464-862 Korea (TEL: 82-31-799-9500, FAX: 82-31-799-9599)
EMC Testing Div. : 307-51 Daessangnyeong-ri, Chowol-eup, Gwangju-si, Gyeonggi-do 464-862 Korea (TEL: 82-31-765-8289, FAX: 82-31-766-2904)

15.6.1.3 Test data for Multiple transmit

-. Test Date : March 11, 2015

-. 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	46.43	Peak	H	31.90	12.10	42.20	48.23	74.00	25.77
	32.85	Average	H				34.65	54.00	19.35
	48.71	Peak	V				50.51	74.00	23.49
	34.58	Average	V				36.38	54.00	17.62
High Channel									
5 850.00	38.73	Peak	H	32.10	12.20	42.20	40.83	74.00	33.17
	29.68	Average	H				31.78	54.00	22.22
	46.43	Peak	V				48.53	74.00	25.47
	34.40	Average	V				36.50	54.00	17.50

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 / Project Engineer

HEAD OFFICE : 301-14 Daessangnyeong-ri, Chowol-eup, Gwangju-si, Gyeonggi-do 464-862 Korea (TEL: 82-31-799-9500, FAX: 82-31-799-9599)
EMC Testing Div. : 307-51 Daessangnyeong-ri, Chowol-eup, Gwangju-si, Gyeonggi-do 464-862 Korea (TEL: 82-31-765-8289, FAX: 82-31-766-2904)

15.6.2 Test data for 802.11n_HT20 RLAN Mode

15.6.2.1 Test data for Antenna 0

-. Test Date : March 11, 2015

-. 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	46.49	Peak	H	31.90	12.10	42.20	48.29	74.00	25.71
	32.95	Average	H				34.75	54.00	19.25
	48.92	Peak	V				50.72	74.00	23.28
	34.14	Average	V				35.94	54.00	18.06
High Channel									
5 850.00	39.90	Peak	H	32.10	12.20	42.20	42.00	74.00	32.00
	29.17	Average	H				31.27	54.00	22.73
	46.49	Peak	V				48.59	74.00	25.41
	33.25	Average	V				35.35	54.00	18.65

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 / Project Engineer

HEAD OFFICE : 301-14 Daessangnyeong-ri, Chowol-eup, Gwangju-si, Gyeonggi-do 464-862 Korea (TEL: 82-31-799-9500, FAX: 82-31-799-9599)
EMC Testing Div. : 307-51 Daessangnyeong-ri, Chowol-eup, Gwangju-si, Gyeonggi-do 464-862 Korea (TEL: 82-31-765-8289, FAX: 82-31-766-2904)

15.6.2.2 Test data for Antenna 1

-. Test Date : March 11, 2015

-. 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	46.08	Peak	H	31.90	12.10	42.20	47.88	74.00	26.12
	32.77	Average	H				34.57	54.00	19.43
	48.24	Peak	V				50.04	74.00	23.96
	35.28	Average	V				37.08	54.00	16.92
High Channel									
5 850.00	38.58	Peak	H	32.10	12.20	42.20	40.68	74.00	33.32
	28.67	Average	H				30.77	54.00	23.23
	46.08	Peak	V				48.18	74.00	25.82
	32.58	Average	V				34.68	54.00	19.32

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 / Project Engineer

HEAD OFFICE : 301-14 Daessangnyeong-ri, Chowol-eup, Gwangju-si, Gyeonggi-do 464-862 Korea (TEL: 82-31-799-9500, FAX: 82-31-799-9599)
EMC Testing Div. : 307-51 Daessangnyeong-ri, Chowol-eup, Gwangju-si, Gyeonggi-do 464-862 Korea (TEL: 82-31-765-8289, FAX: 82-31-766-2904)

15.6.2.3 Test data for Multiple transmit

-. Test Date : March 11, 2015

-. 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	45.59	Peak	H	31.90	12.10	42.20	47.39	74.00	26.61
	34.47	Average	H				36.27	54.00	17.73
	47.84	Peak	V				49.64	74.00	24.36
	34.62	Average	V				36.42	54.00	17.58
High Channel									
5 850.00	40.04	Peak	H	32.10	12.20	42.20	42.14	74.00	31.86
	30.45	Average	H				32.55	54.00	21.45
	45.59	Peak	V				47.69	74.00	26.31
	32.72	Average	V				34.82	54.00	19.18

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 / Project Engineer

HEAD OFFICE : 301-14 Daessangnyeong-ri, Chowol-eup, Gwangju-si, Gyeonggi-do 464-862 Korea (TEL: 82-31-799-9500, FAX: 82-31-799-9599)
EMC Testing Div. : 307-51 Daessangnyeong-ri, Chowol-eup, Gwangju-si, Gyeonggi-do 464-862 Korea (TEL: 82-31-765-8289, FAX: 82-31-766-2904)

15.6.3 Test data for 802.11n_HT40 RLAN Mode

15.6.3.1 Test data for Antenna 0

-. Test Date : March 11, 2015

-. 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	46.19	Peak	H	31.90	12.10	42.20	47.99	74.00	26.01
	32.69	Average	H				34.49	54.00	19.51
	47.68	Peak	V				49.48	74.00	24.52
	35.19	Average	V				36.99	54.00	17.01
High Channel									
5 850.00	39.27	Peak	H	32.10	12.20	42.20	41.37	74.00	32.63
	29.88	Average	H				31.98	54.00	22.02
	46.19	Peak	V				48.29	74.00	25.71
	33.73	Average	V				35.83	54.00	18.17

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 / Project Engineer

HEAD OFFICE : 301-14 Daessangnyeong-ri, Chowol-eup, Gwangju-si, Gyeonggi-do 464-862 Korea (TEL: 82-31-799-9500, FAX: 82-31-799-9599)
EMC Testing Div. : 307-51 Daessangnyeong-ri, Chowol-eup, Gwangju-si, Gyeonggi-do 464-862 Korea (TEL: 82-31-765-8289, FAX: 82-31-766-2904)

15.6.3.2 Test data for Antenna 1

-. Test Date : March 11, 2015

-. 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	45.79	Peak	H	31.90	12.10	42.20	47.59	74.00	26.41
	33.72	Average	H				35.52	54.00	18.48
	47.46	Peak	V				49.26	74.00	24.74
	35.85	Average	V				37.65	54.00	16.35
High Channel									
5 850.00	39.06	Peak	H	32.10	12.20	42.20	41.16	74.00	32.84
	29.05	Average	H				31.15	54.00	22.85
	45.79	Peak	V				47.89	74.00	26.11
	33.56	Average	V				35.66	54.00	18.34

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 / Project Engineer

HEAD OFFICE : 301-14 Daessangnyeong-ri, Chowol-eup, Gwangju-si, Gyeonggi-do 464-862 Korea (TEL: 82-31-799-9500, FAX: 82-31-799-9599)
EMC Testing Div. : 307-51 Daessangnyeong-ri, Chowol-eup, Gwangju-si, Gyeonggi-do 464-862 Korea (TEL: 82-31-765-8289, FAX: 82-31-766-2904)

15.6.3.3 Test data for Multiple transmit

-. Test Date : March 11, 2015

-. 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	46.08	Peak	H	31.90	12.10	42.20	47.88	74.00	26.12
	33.79	Average	H				35.59	54.00	18.41
	47.73	Peak	V				49.53	74.00	24.47
	34.70	Average	V				36.50	54.00	17.50
High Channel									
5 850.00	38.22	Peak	H	32.10	12.20	42.20	40.32	74.00	33.68
	29.86	Average	H				31.96	54.00	22.04
	46.08	Peak	V				48.18	74.00	25.82
	33.19	Average	V				35.29	54.00	18.71

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 / Project Engineer

HEAD OFFICE : 301-14 Daessangnyeong-ri, Chowol-eup, Gwangju-si, Gyeonggi-do 464-862 Korea (TEL: 82-31-799-9500, FAX: 82-31-799-9599)
EMC Testing Div. : 307-51 Daessangnyeong-ri, Chowol-eup, Gwangju-si, Gyeonggi-do 464-862 Korea (TEL: 82-31-765-8289, FAX: 82-31-766-2904)

16. CONDUCTED EMISSION TEST

16.1 Operating environment

Temperature : 27 ℃

Relative humidity : 46 % R.H.

16.2 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.

16.3 Test equipment used

	Model Number	Manufacturer	Description	Serial Number	Last Cal. (Interval)
■ -	ESPI	Rohde & Schwarz	EMI Test Receiver	101278	Nov. 03, 2014 (1Y)
□ -	ESHS10	Rohde & Schwarz	EMI Test Receiver	834467/007	Jul. 15, 2014 (1Y)
□	NSLK8128	Schwarzbeck	AMN	8128-216	Apr. 11, 2014 (1Y)
■ -	NSLK8126	Schwarzbeck	AMN	8126-404	Jul. 11, 2014 (1Y)
□ -	3825/2	EMCO	AMN	9109-1869	Apr. 29, 2014 (1Y)
■ --	3825/2	EMCO	AMN	9109-1867	Apr. 29, 2014 (1Y)

All test equipment used is calibrated on a regular basis.

HEAD OFFICE : 301-14 Daessangnyeong-ri, Chowol-eup, Gwangju-si, Gyeonggi-do 464-862 Korea (TEL: 82-31-799-9500, FAX: 82-31-799-9599)
EMC Testing Div. : 307-51 Daessangnyeong-ri, Chowol-eup, Gwangju-si, Gyeonggi-do 464-862 Korea (TEL: 82-31-765-8289, FAX: 82-31-766-2904)

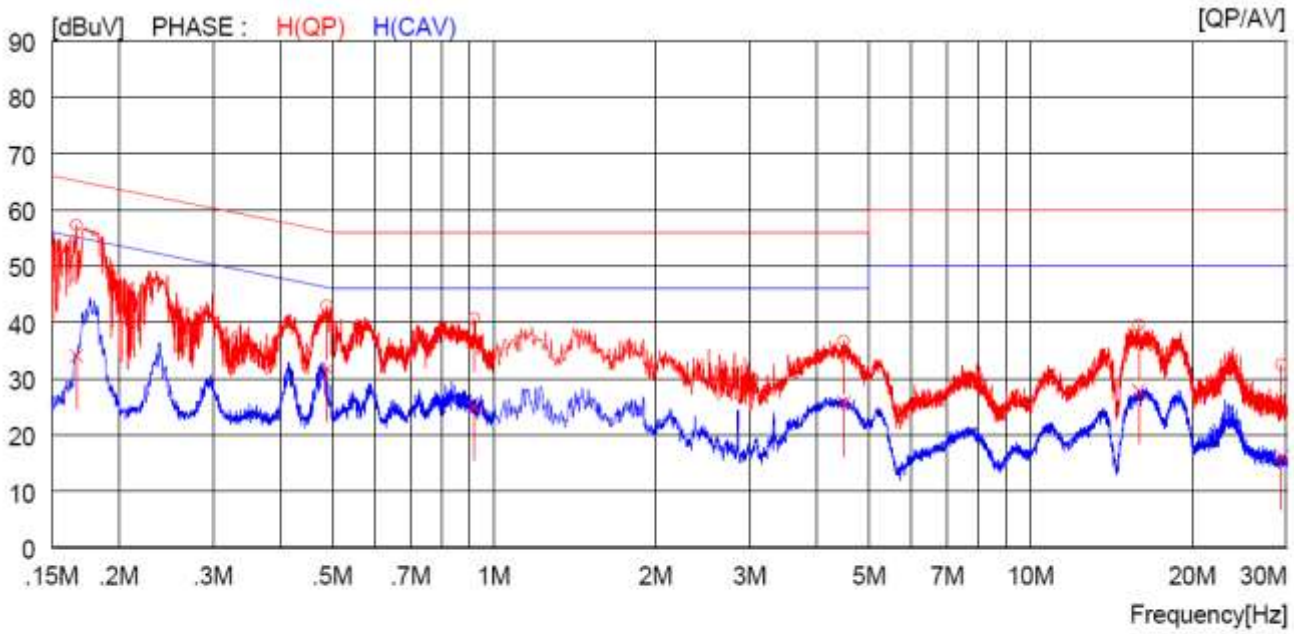
16.4 Test data

-. Test Date : March 11, 2015

-. Resolution bandwidth : 9 kHz

-. Frequency range : 0.15 MHz ~ 30 MHz

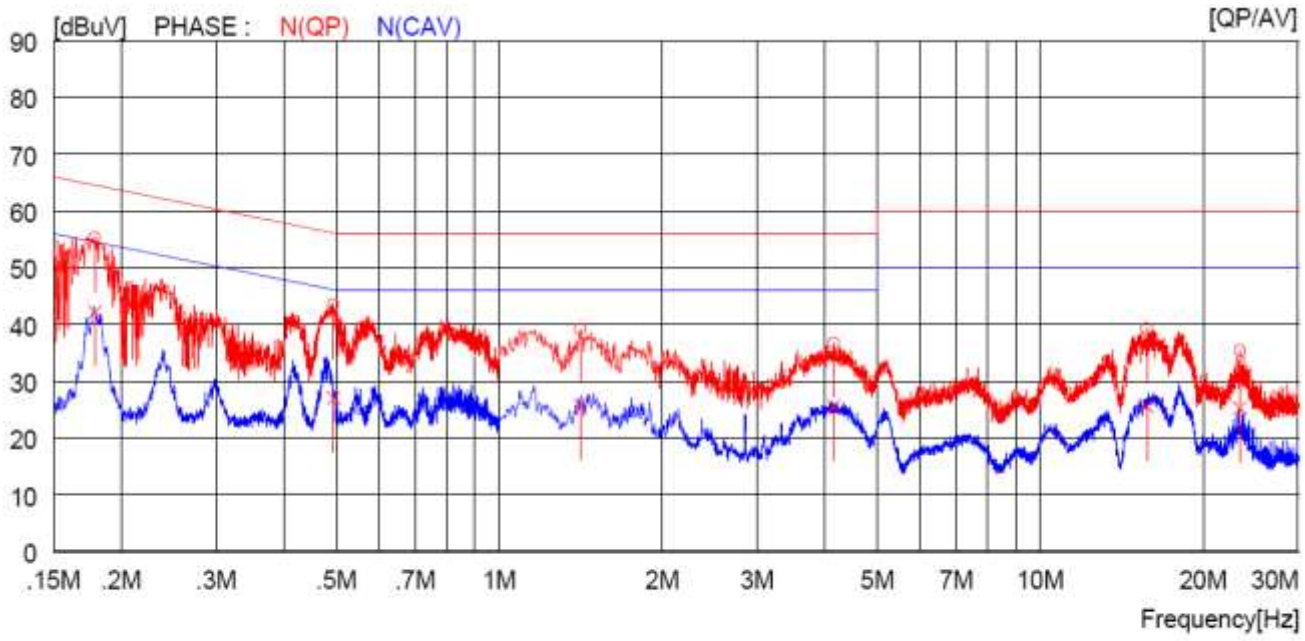
-. Tested Line : HOT LINE



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	0.16700	47.4	----	9.9	57.3	----	65.1	----	7.8	----	H(QP)
2	0.48900	33.1	----	9.9	43.0	----	56.2	----	13.2	----	H(QP)
3	0.91900	30.7	----	10.0	40.7	----	56.0	----	15.3	----	H(QP)
4	4.49600	26.7	----	10.0	36.7	----	56.0	----	19.3	----	H(QP)
5	15.91000	29.0	----	10.5	39.5	----	60.0	----	20.5	----	H(QP)
6	29.35000	21.8	----	10.7	32.5	----	60.0	----	27.5	----	H(QP)
7	0.16700	----	24.1	9.9	----	34.0	----	55.1	----	21.1	H(CAV)
8	0.48900	----	21.9	9.9	----	31.8	----	46.2	----	14.4	H(CAV)
9	0.91900	----	15.0	10.0	----	25.0	----	46.0	----	21.0	H(CAV)
10	4.49600	----	15.8	10.0	----	25.8	----	46.0	----	20.2	H(CAV)
11	15.91000	----	17.4	10.5	----	27.9	----	50.0	----	22.1	H(CAV)
12	29.35000	----	5.5	10.7	----	16.2	----	50.0	----	33.8	H(CAV)

HEAD OFFICE : 301-14 Daessangnyeong-ri, Chowol-eup, Gwangju-si, Gyeonggi-do 464-862 Korea (TEL: 82-31-799-9500, FAX: 82-31-799-9599)
EMC Testing Div. : 307-51 Daessangnyeong-ri, Chowol-eup, Gwangju-si, Gyeonggi-do 464-862 Korea (TEL: 82-31-765-8289, FAX: 82-31-766-2904)

-. 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	0.17900	45.5	----	9.9	55.4	----	64.5	----	9.1	----	N(QP)
2	0.49400	33.6	----	9.9	43.5	----	56.1	----	12.6	----	N(QP)
3	1.41200	29.2	----	10.0	39.2	----	56.0	----	16.8	----	N(QP)
4	4.15600	26.7	----	10.0	36.7	----	56.0	----	19.3	----	N(QP)
5	15.75000	28.8	----	10.5	39.3	----	60.0	----	20.7	----	N(QP)
6	23.40000	24.8	----	10.7	35.5	----	60.0	----	24.5	----	N(QP)
7	0.17900	----	32.3	9.9	----	42.2	----	54.5	----	12.3	N(CAV)
8	0.49400	----	17.2	9.9	----	27.1	----	46.1	----	19.0	N(CAV)
9	1.41200	----	15.7	10.0	----	25.7	----	46.0	----	20.3	N(CAV)
10	4.15600	----	15.6	10.0	----	25.6	----	46.0	----	20.4	N(CAV)
11	15.75000	----	15.1	10.5	----	25.6	----	50.0	----	24.4	N(CAV)
12	23.40000	----	14.6	10.7	----	25.3	----	50.0	----	24.7	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 / Project Engineer

HEAD OFFICE : 301-14 Daessangnyeong-ri, Chowol-eup, Gwangju-si, Gyeonggi-do 464-862 Korea (TEL: 82-31-799-9500, FAX: 82-31-799-9599)
EMC Testing Div. : 307-51 Daessangnyeong-ri, Chowol-eup, Gwangju-si, Gyeonggi-do 464-862 Korea (TEL: 82-31-765-8289, FAX: 82-31-766-2904)

17 DYNAMIC FREQUENCY SELECTION (DFS)

17.1 Operating environment

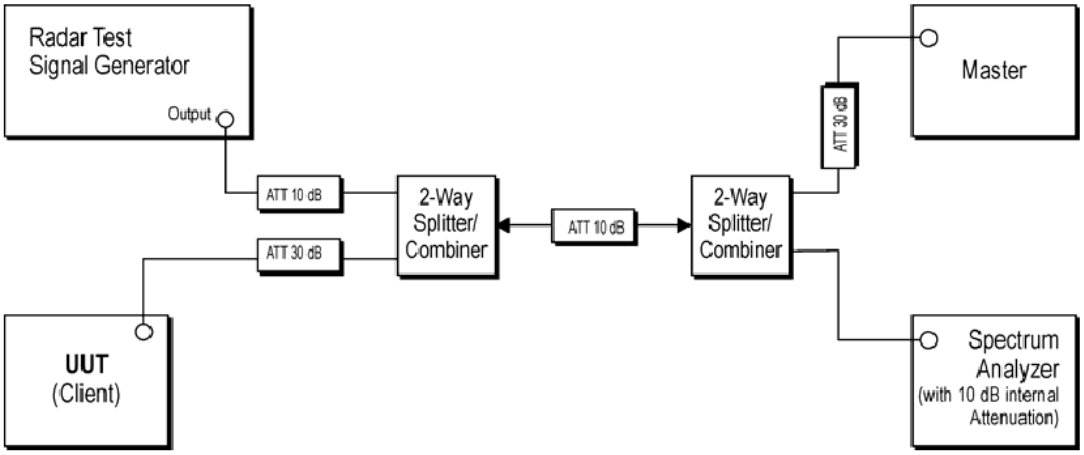
Temperature : 24 ℃

Relative humidity : 45 % R.H.

17.2 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



HEAD OFFICE : 301-14 Daessangnyeong-ri, Chowol-eup, Gwangju-si, Gyeonggi-do 464-862 Korea (TEL: 82-31-799-9500, FAX: 82-31-799-9599)

EMC Testing Div. : 307-51 Daessangnyeong-ri, Chowol-eup, Gwangju-si, Gyeonggi-do 464-862 Korea (TEL: 82-31-765-8289, FAX: 82-31-766-2904)

17.3 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

HEAD OFFICE : 301-14 Daessangnyeong-ri, Chowol-eup, Gwangju-si, Gyeonggi-do 464-862 Korea (TEL: 82-31-799-9500, FAX: 82-31-799-9599)
EMC Testing Div. : 307-51 Daessangnyeong-ri, Chowol-eup, Gwangju-si, Gyeonggi-do 464-862 Korea (TEL: 82-31-765-8289, FAX: 82-31-766-2904)

17.4 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

17.5 Test equipment used

	Model Number	Manufacturer	Description	Serial Number	Last Cal. (Interval)
■ -	FSV40	Rohde & Schwarz	Signal Analyzer	101009	Jul. 30, 2014 (1Y)
■ -	D-05180-2	RLC Electronis Inc.	Combiner	0813	Apr. 29, 2014 (1Y)
■ -	11636B	Hewlett Packard	Combiner	12268	Nov. 08, 2014 (1Y)
■ -	SMJ100A	R/S	Signal Generator	101038	Nov. 08, 2014 (1Y)
■ -	DRP-305DN	DIGITAL Elec.	DC Power supply	4030195	Sep. 03, 2014 (1Y)
■	AIR-AP1252AG-K-K9	CISCO	AP	FGL1439Z0KE	N/A

All test equipment used is calibrated on a regular basis.

HEAD OFFICE : 301-14 Daessangnyeong-ri, Chowol-eup, Gwangju-si, Gyeonggi-do 464-862 Korea (TEL: 82-31-799-9500, FAX: 82-31-799-9599)
EMC Testing Div. : 307-51 Daessangnyeong-ri, Chowol-eup, Gwangju-si, Gyeonggi-do 464-862 Korea (TEL: 82-31-765-8289, FAX: 82-31-766-2904)

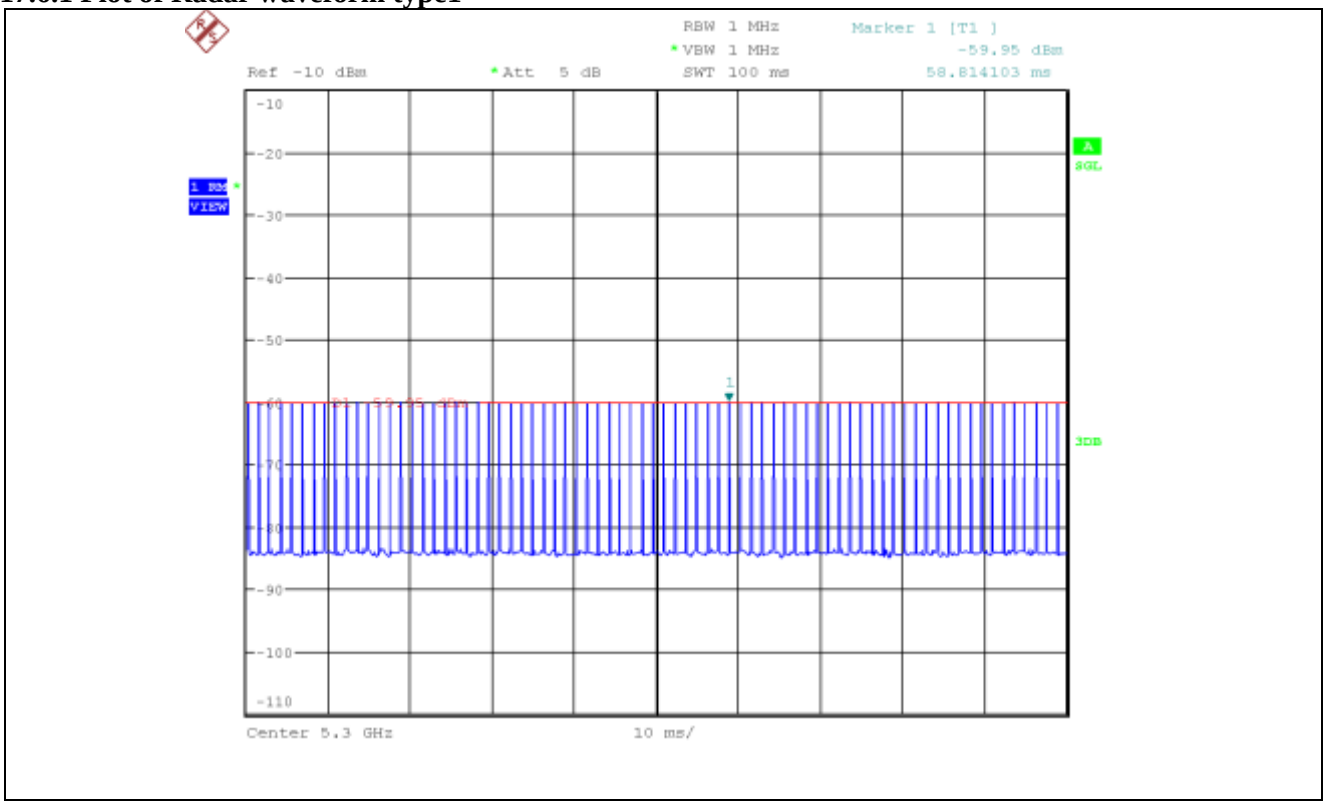
17.6 Test data for 5 250 MHz ~ 5 350 MHz Band

-. Test Date : March 11, 2015

Frequency (MHz)	Channel move time(s)		Channel closing transmission time(ms)	
	Measured	Limit	Measured	Limit
5 300	0.352 6	10	1.101	60

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

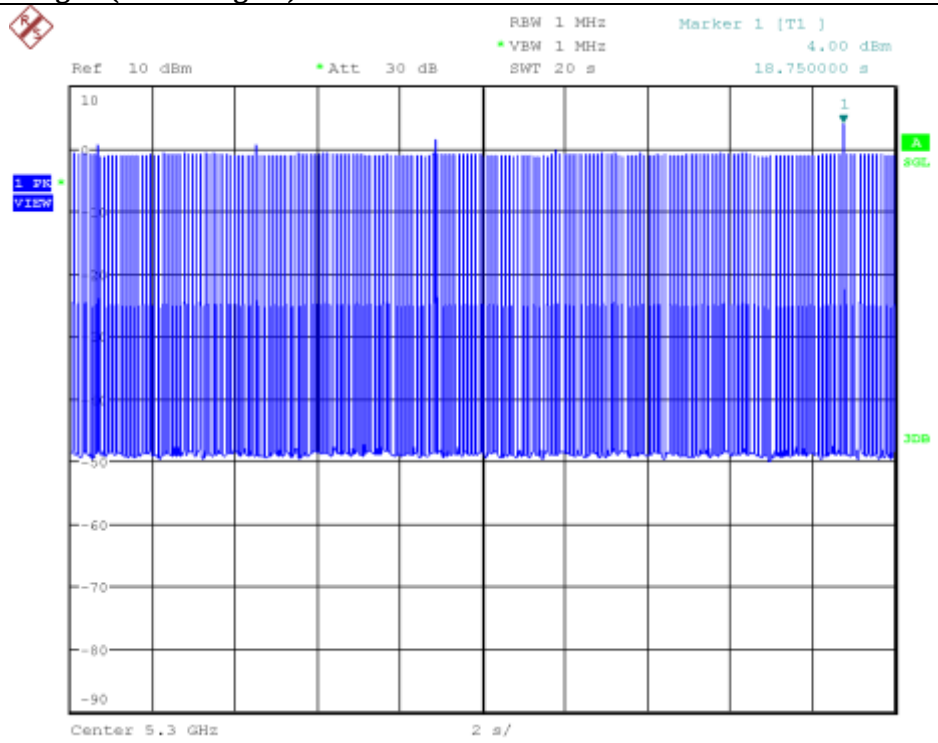
17.6.1 Plot of Radar waveform type1



Note: The calibrated conducted DFS detection threshold level is set to -59.5 dBm (-62+1+1.5=-59.5)

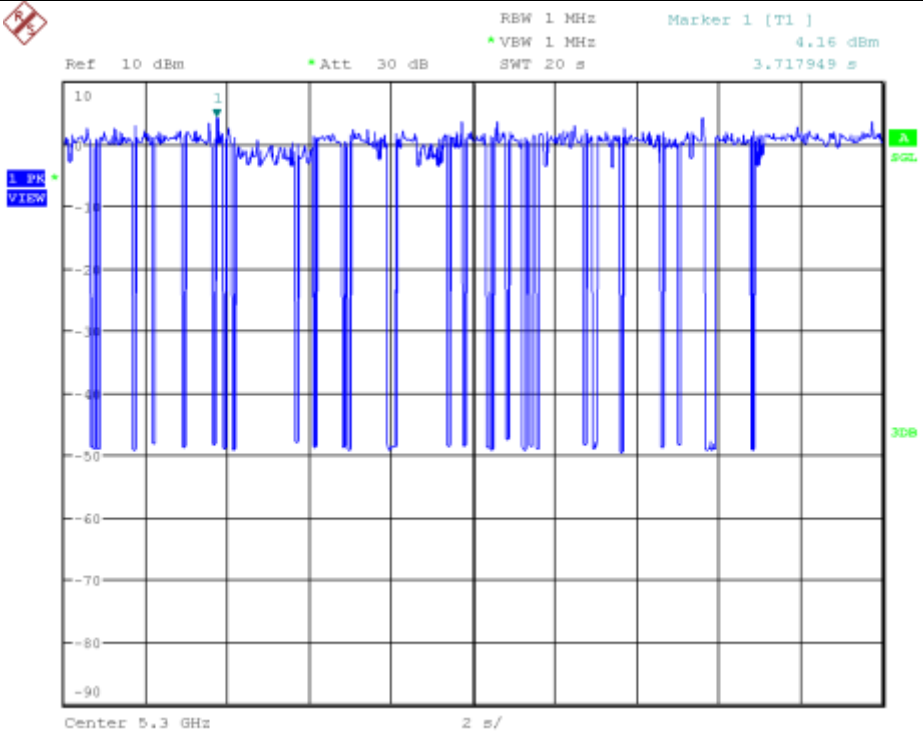
HEAD OFFICE : 301-14 Daessangnyeong-ri, Chowol-eup, Gwangju-si, Gyeonggi-do 464-862 Korea (TEL: 82-31-799-9500, FAX: 82-31-799-9599)
EMC Testing Div. : 307-51 Daessangnyeong-ri, Chowol-eup, Gwangju-si, Gyeonggi-do 464-862 Korea (TEL: 82-31-765-8289, FAX: 82-31-766-2904)

17.6.2 No traffic signal(master signal)



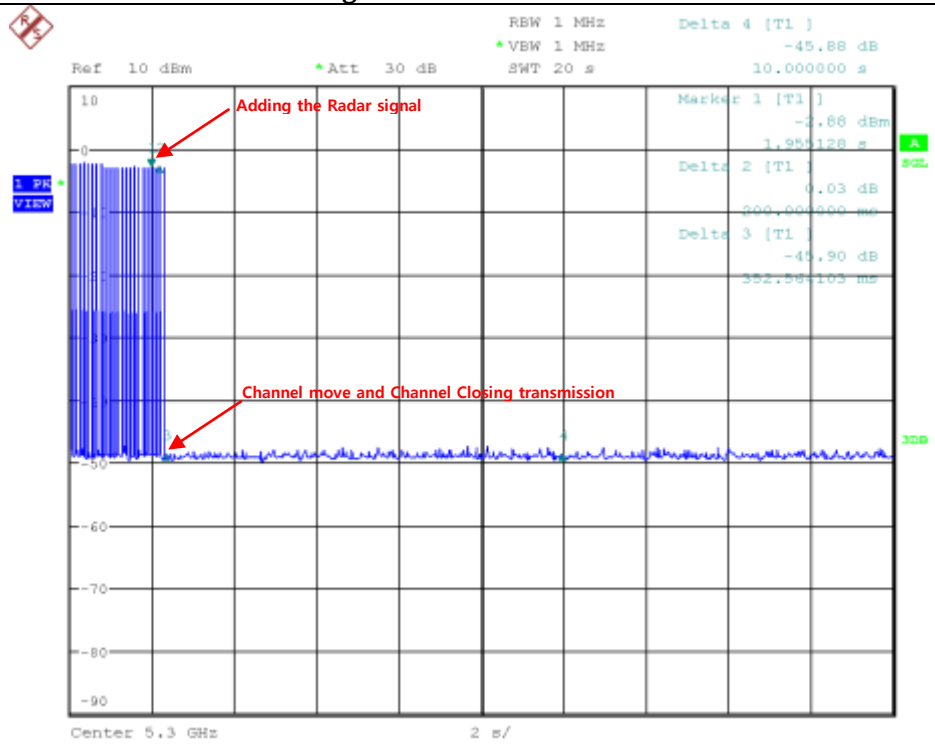
HEAD OFFICE : 301-14 Daessangnyeong-ri, Chowol-eup, Gwangju-si, Gyeonggi-do 464-862 Korea (TEL: 82-31-799-9500, FAX: 82-31-799-9599)
EMC Testing Div. : 307-51 Daessangnyeong-ri, Chowol-eup, Gwangju-si, Gyeonggi-do 464-862 Korea (TEL: 82-31-765-8289, FAX: 82-31-766-2904)

17.6.3 Client(EUT) Data Traiifc Signal



HEAD OFFICE : 301-14 Daessangnyeong-ri, Chowol-eup, Gwangju-si, Gyeonggi-do 464-862 Korea (TEL: 82-31-799-9500, FAX: 82-31-799-9599)
EMC Testing Div. : 307-51 Daessangnyeong-ri, Chowol-eup, Gwangju-si, Gyeonggi-do 464-862 Korea (TEL: 82-31-765-8289, FAX: 82-31-766-2904)

17.6.4 Channel move and Channel Closing transmission time

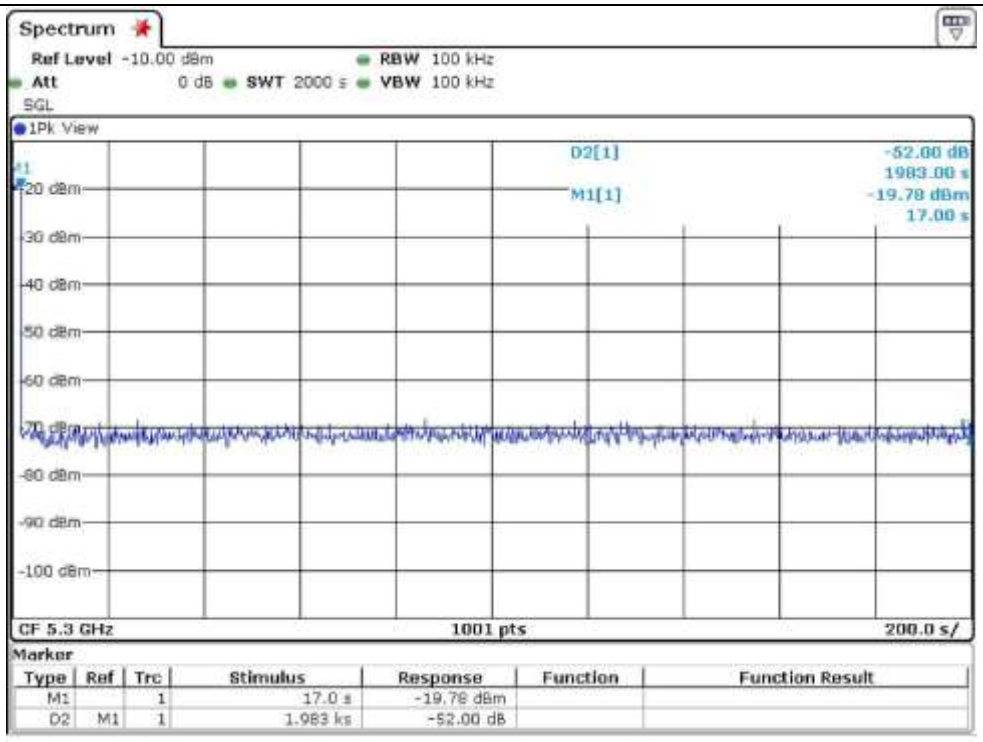


HEAD OFFICE : 301-14 Daessangnyeong-ri, Chowol-eup, Gwangju-si, Gyeonggi-do 464-862 Korea (TEL: 82-31-799-9500, FAX: 82-31-799-9599)
EMC Testing Div. : 307-51 Daessangnyeong-ri, Chowol-eup, Gwangju-si, Gyeonggi-do 464-862 Korea (TEL: 82-31-765-8289, FAX: 82-31-766-2904)

17.6.5 Non occupancy period

Associate test: During the 30 minutes observation time, UUT did not make any transmissions on a channel after a radar signal was detected on that channel by either the Channel Availability Check or the in-Service Monitoring

A

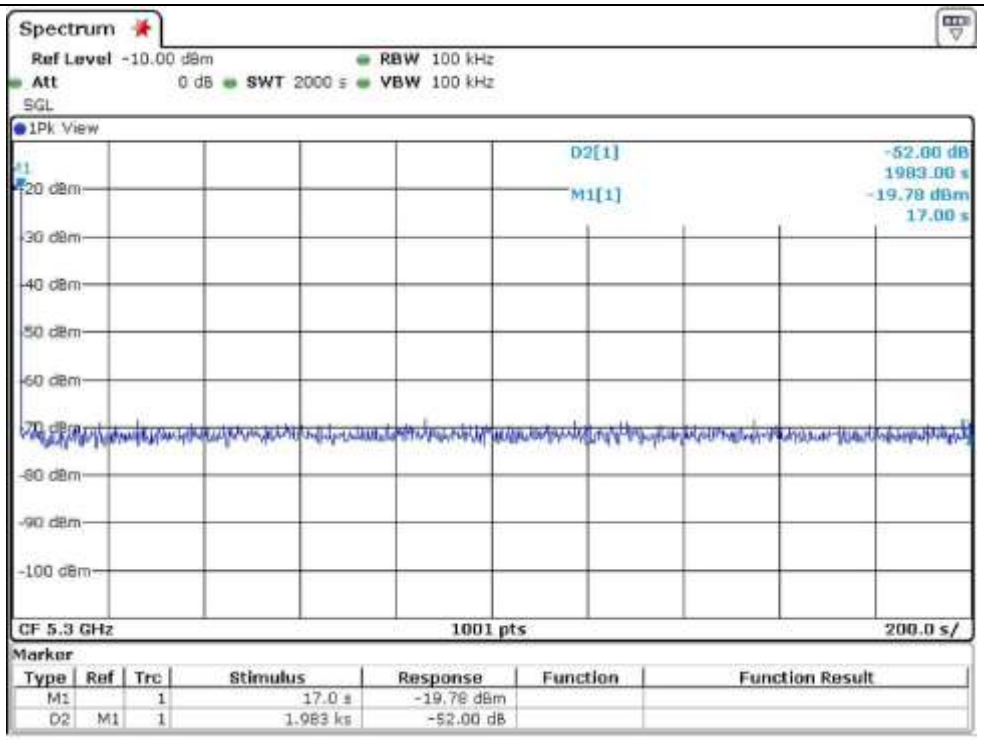


Plot of 30 Minutes period

HEAD OFFICE : 301-14 Daessangnyeong-ri, Chowol-eup, Gwangju-si, Gyeonggi-do 464-862 Korea (TEL: 82-31-799-9500, FAX: 82-31-799-9599)
EMC Testing Div. : 307-51 Daessangnyeong-ri, Chowol-eup, Gwangju-si, Gyeonggi-do 464-862 Korea (TEL: 82-31-765-8289, FAX: 82-31-766-2904)

17.6.6 Non-Associated test

Master was off. During the 30 minutes observation time, The UUT did not make any transmissions in the DFS band after UUT power up



Plot of Non-Associated

17.6.7 Non-Co-Channel Test

The UUT was investigated after radar was detected the channel and mode sure no co-channel operation with radars.

HEAD OFFICE : 301-14 Daessangnyeong-ri, Chowol-eup, Gwangju-si, Gyeonggi-do 464-862 Korea (TEL: 82-31-799-9500, FAX: 82-31-799-9599)
EMC Testing Div. : 307-51 Daessangnyeong-ri, Chowol-eup, Gwangju-si, Gyeonggi-do 464-862 Korea (TEL: 82-31-765-8289, FAX: 82-31-766-2904)

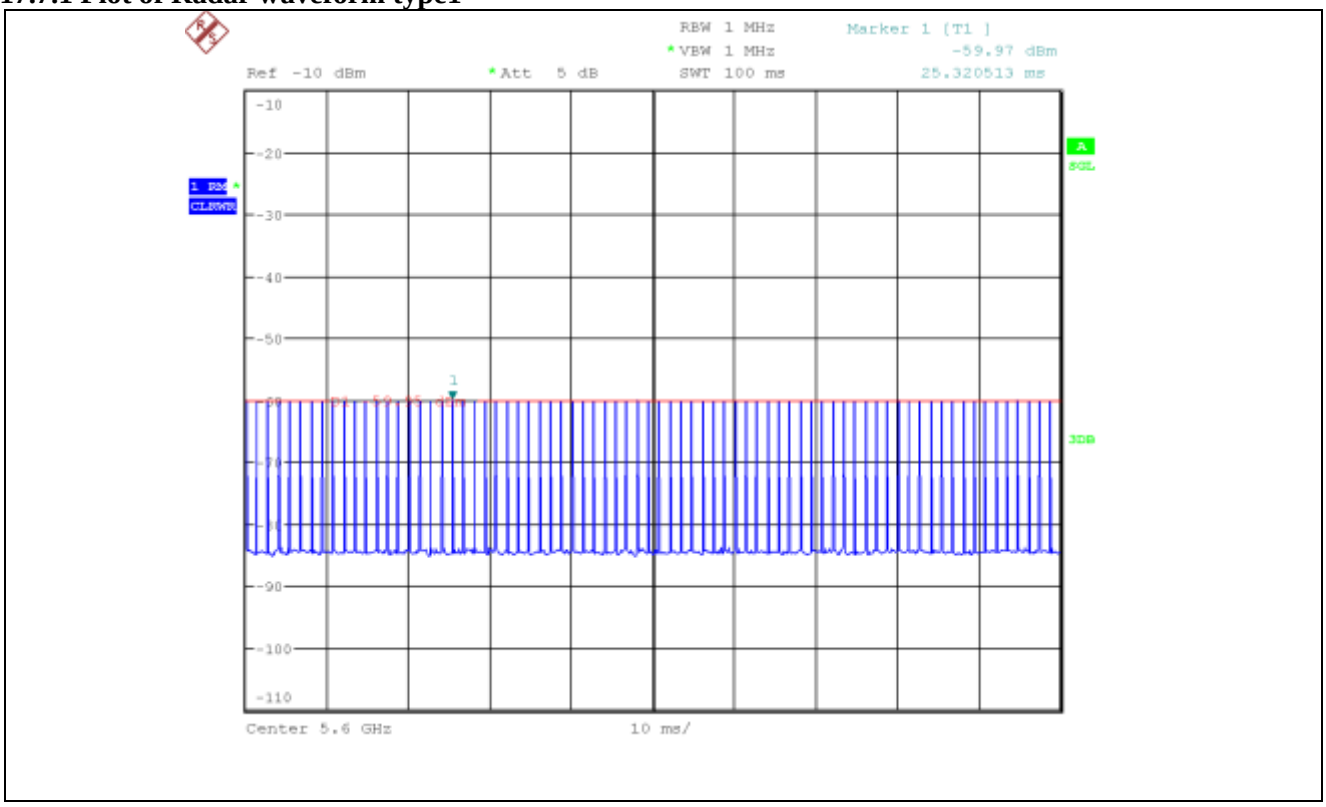
17.7 Test data for 5 470 MHz ~ 5 725 MHz Band

-. Test Date : March 11, 2015

Frequency (MHz)	Channel move time(s)		Channel closing transmission time(ms)	
	Measured	Limit	Measured	Limit
5 600	0.352 6	10	1.101	60

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

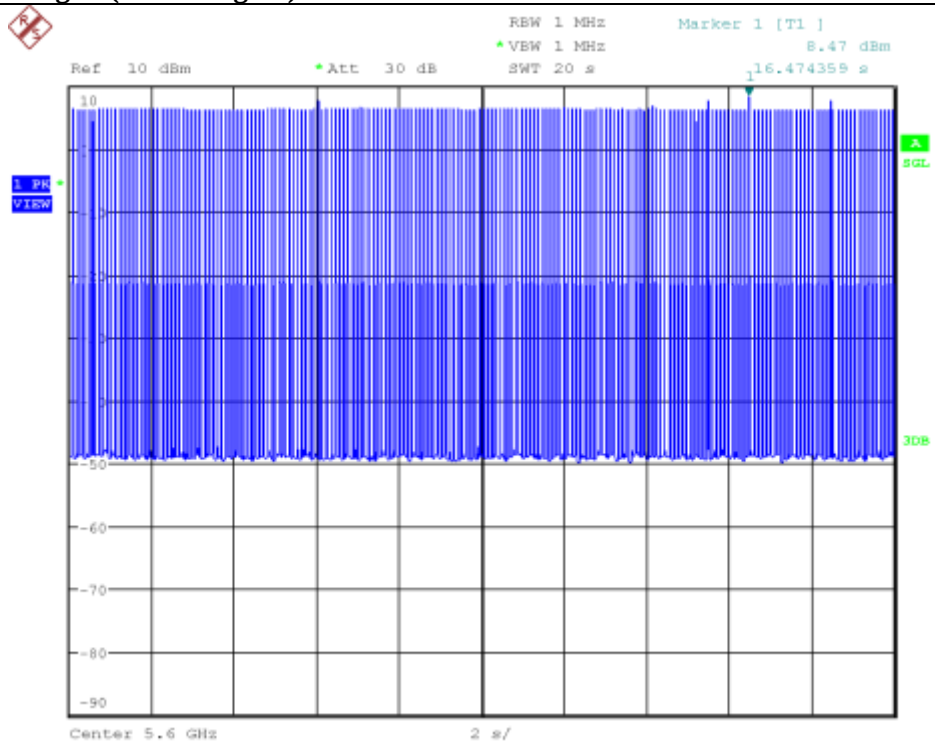
17.7.1 Plot of Radar waveform type1



Note: The calibrated conducted DFS detection threshold level is set to -59.5 dBm (-62+1+1.5=-59.5)

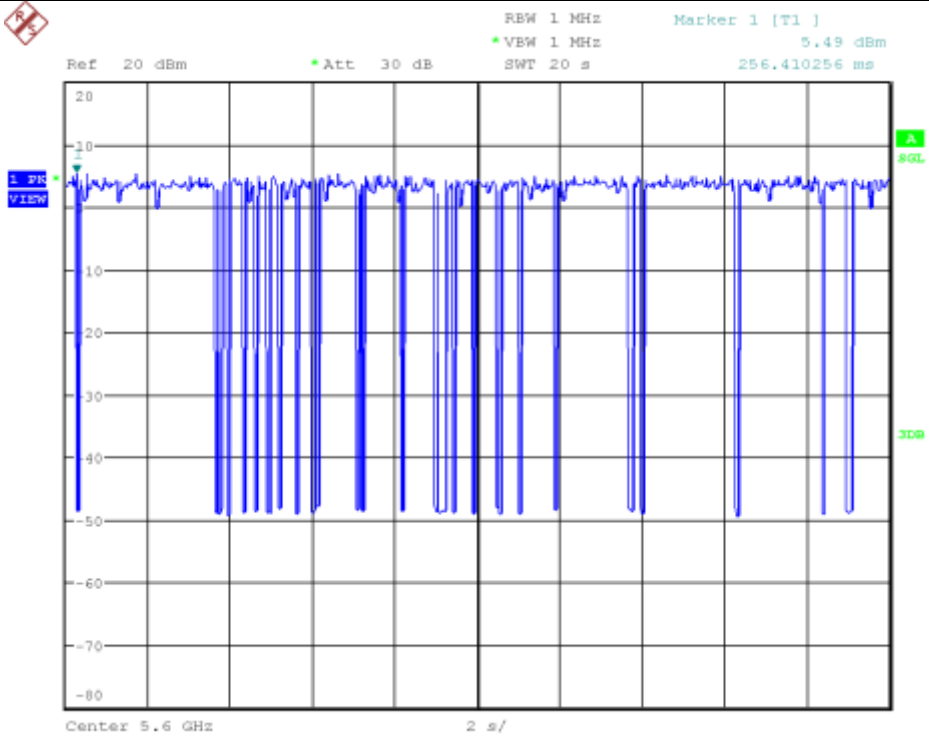
HEAD OFFICE : 301-14 Daessangnyeong-ri, Chowol-eup, Gwangju-si, Gyeonggi-do 464-862 Korea (TEL: 82-31-799-9500, FAX: 82-31-799-9599)
EMC Testing Div. : 307-51 Daessangnyeong-ri, Chowol-eup, Gwangju-si, Gyeonggi-do 464-862 Korea (TEL: 82-31-765-8289, FAX: 82-31-766-2904)

17.7.2 No traffic signal(master signal)



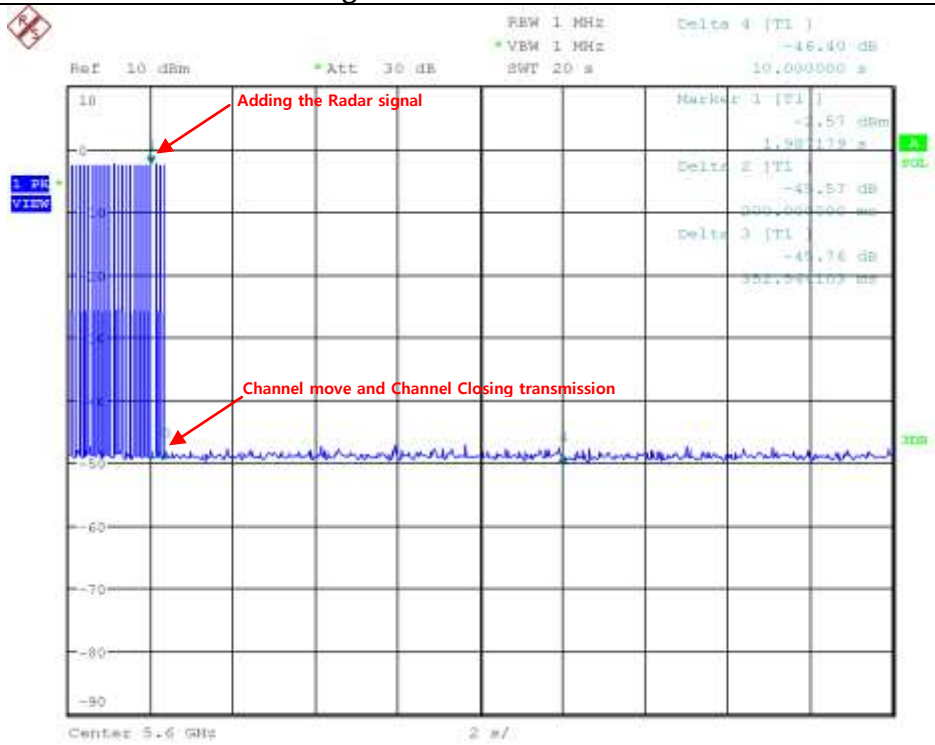
HEAD OFFICE : 301-14 Daessangnyeong-ri, Chowol-eup, Gwangju-si, Gyeonggi-do 464-862 Korea (TEL: 82-31-799-9500, FAX: 82-31-799-9599)
EMC Testing Div. : 307-51 Daessangnyeong-ri, Chowol-eup, Gwangju-si, Gyeonggi-do 464-862 Korea (TEL: 82-31-765-8289, FAX: 82-31-766-2904)

17.7.3 Client(EUT) Data Traiifc Signal



HEAD OFFICE : 301-14 Daessangnyeong-ri, Chowol-eup, Gwangju-si, Gyeonggi-do 464-862 Korea (TEL: 82-31-799-9500, FAX: 82-31-799-9599)
EMC Testing Div. : 307-51 Daessangnyeong-ri, Chowol-eup, Gwangju-si, Gyeonggi-do 464-862 Korea (TEL: 82-31-765-8289, FAX: 82-31-766-2904)

17.7.4 Channel move and Channel Closing transmission time

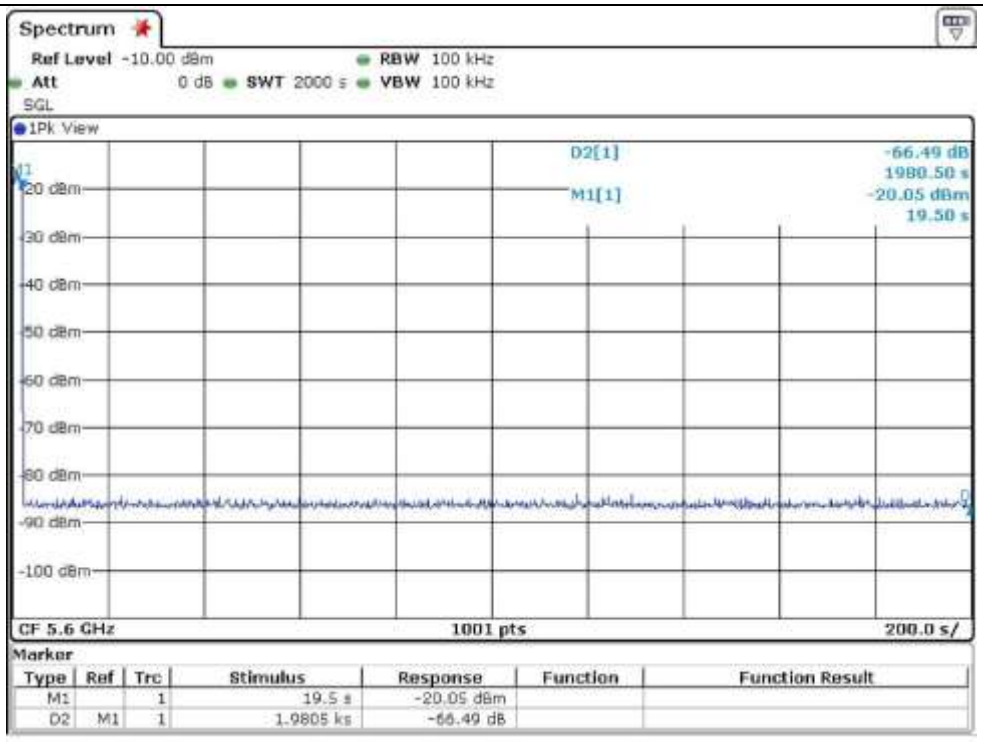


HEAD OFFICE : 301-14 Daessangnyeong-ri, Chowol-eup, Gwangju-si, Gyeonggi-do 464-862 Korea (TEL: 82-31-799-9500, FAX: 82-31-799-9599)
EMC Testing Div. : 307-51 Daessangnyeong-ri, Chowol-eup, Gwangju-si, Gyeonggi-do 464-862 Korea (TEL: 82-31-765-8289, FAX: 82-31-766-2904)

17.7.5 Non occupancy period

Associate test: During the 30 minutes observation time, UUT did not make any transmissions on a channel after a radar signal was detected on that channel by either the Channel Availability Check or the in-Service Monitoring

A

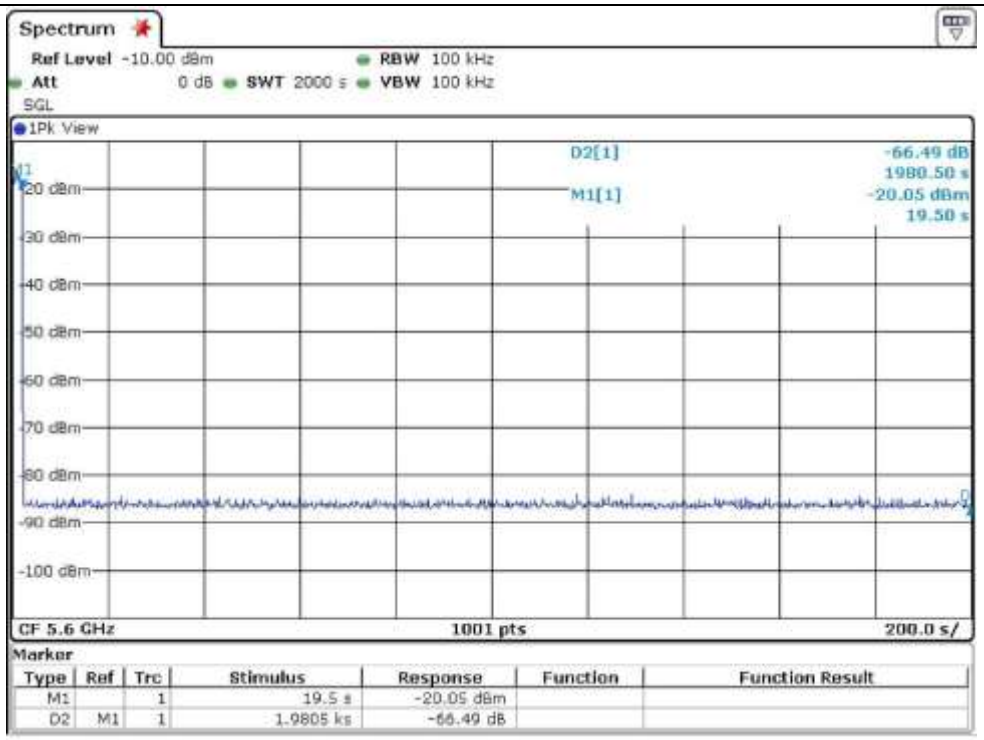


Plot of 30 Minutes period

HEAD OFFICE : 301-14 Daessangnyeong-ri, Chowol-eup, Gwangju-si, Gyeonggi-do 464-862 Korea (TEL: 82-31-799-9500, FAX: 82-31-799-9599)
EMC Testing Div. : 307-51 Daessangnyeong-ri, Chowol-eup, Gwangju-si, Gyeonggi-do 464-862 Korea (TEL: 82-31-765-8289, FAX: 82-31-766-2904)

17.7.6 Non-Associated test

Master was off. During the 30 minutes observation time, The UUT did not make any transmissions in the DFS band after UUT power up



Plot of Non-Associated

17.7.7 Non-Co-Channel Test

The UUT was investigated after radar was detected the channel and mode sure no co-channel operation with radars.

HEAD OFFICE : 301-14 Daessangnyeong-ri, Chowol-eup, Gwangju-si, Gyeonggi-do 464-862 Korea (TEL: 82-31-799-9500, FAX: 82-31-799-9599)
EMC Testing Div. : 307-51 Daessangnyeong-ri, Chowol-eup, Gwangju-si, Gyeonggi-do 464-862 Korea (TEL: 82-31-765-8289, FAX: 82-31-766-2904)