

# Appendix for 2.4G WiFi(RSE)

## 1. Appendix H: Radiated Spurious Emission & Spurious in Restricted Band

Note:

1. We tested all modes & antennas, the data presented below is the worst case.
2. The simultaneous transmission has been considered
3. The whole testing range is from “9 KHz to 26.5 GHz (10th harmonics)” is divided into 5 parts according to the test site settings, which are:
  - (Part 1): Test range of “9 KHz to 30 MHz”, RBW =9 kHz, VBW = 30 kHz
  - (Part 2): Test range of “30 GHz to 1 GHz”, RBW = 100 kHz, VBW = 300 kHz.
  - (Part 3): Test range of “1 GHz to 3 GHz”. RBW = 1 MHz, VBW = 3 MHz.
  - (Part 4): Test range of “3 GHz to 18 GHz”, RBW = 1 MHz, VBW = 3 MHz.
  - (Part 5): Test range of “18 GHz to 26.5 GHz”. RBW = 1 MHz, VBW = 3 MHz.

### 1.1. Test Results

#### 1.1.1. 11b20

Test Mode	Antenna Port	Test Channel	Spurious Emissions Result	Spurious Emissions Limit	Verdict
11b20	Ant1	2412	(see Test Graphs)	(see Test Graphs)	PASS
	Ant1	2462	(see Test Graphs)	(see Test Graphs)	PASS

#### 1.1.2. 11g20

Test Mode	Antenna Port	Test Channel	Spurious Emissions Result	Spurious Emissions Limit	Verdict
11g20	Ant1	2412	(see Test Graphs)	(see Test Graphs)	PASS
	Ant1	2417	(see Test Graphs)	(see Test Graphs)	PASS
	Ant1	2422	(see Test Graphs)	(see Test Graphs)	PASS
	Ant1	2427	(see Test Graphs)	(see Test Graphs)	PASS

11g20	Ant1	2447	(see Test Graphs)	(see Test Graphs)	PASS
	Ant1	2452	(see Test Graphs)	(see Test Graphs)	PASS
	Ant1	2457	(see Test Graphs)	(see Test Graphs)	PASS
	Ant1	2462	(see Test Graphs)	(see Test Graphs)	PASS

### 1.1.3. 11n20

Test Mode	Antenna Port	Test Channel	Spurious Emissions Result	Spurious Emissions Limit	Verdict
11n20	Ant1	2412	(see Test Graphs)	(see Test Graphs)	PASS
	Ant1	2417	(see Test Graphs)	(see Test Graphs)	PASS
	Ant1	2422	(see Test Graphs)	(see Test Graphs)	PASS
	Ant1	2427	(see Test Graphs)	(see Test Graphs)	PASS
	Ant1	2447	(see Test Graphs)	(see Test Graphs)	PASS
	Ant1	2452	(see Test Graphs)	(see Test Graphs)	PASS
	Ant1	2457	(see Test Graphs)	(see Test Graphs)	PASS
	Ant1	2462	(see Test Graphs)	(see Test Graphs)	PASS

### 1.1.4. 11n40

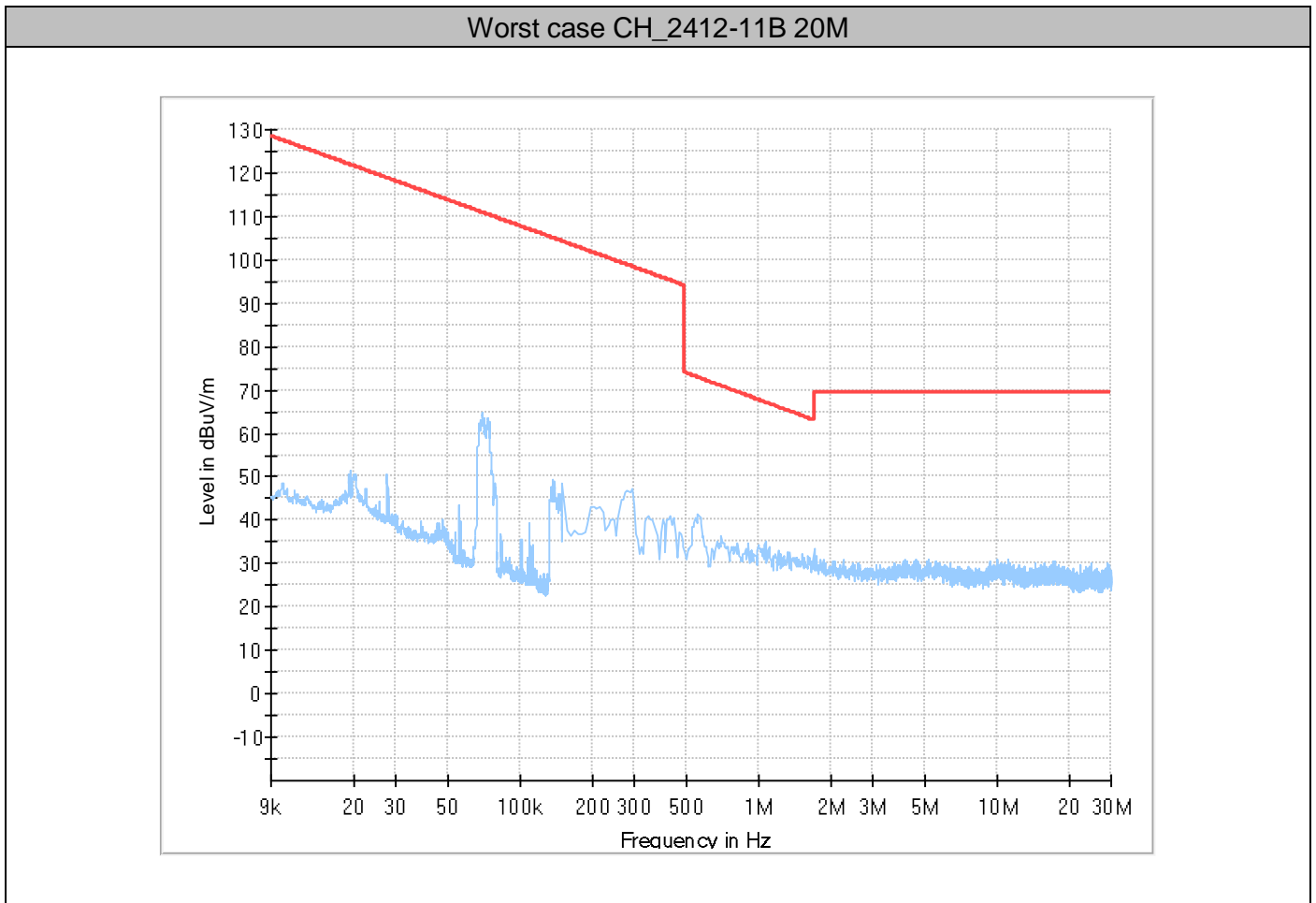
Test Mode	Antenna Port	Test Channel	Spurious Emissions Result	Spurious Emissions Limit	Verdict
11n40	Ant1	2422	(see Test Graphs)	(see Test Graphs)	PASS
	Ant1	2427	(see Test Graphs)	(see Test Graphs)	PASS
	Ant1	2432	(see Test Graphs)	(see Test Graphs)	<b>PASS</b>
	Ant1	2442	(see Test Graphs)	(see Test Graphs)	PASS

11n40	Ant1	2447	(see Test Graphs)	(see Test Graphs)	PASS
	Ant1	2452	(see Test Graphs)	(see Test Graphs)	PASS

## 1.2. Test Graphs

### 1.2.1. Part 1: Testing Range of “9 kHz to 30MHz”

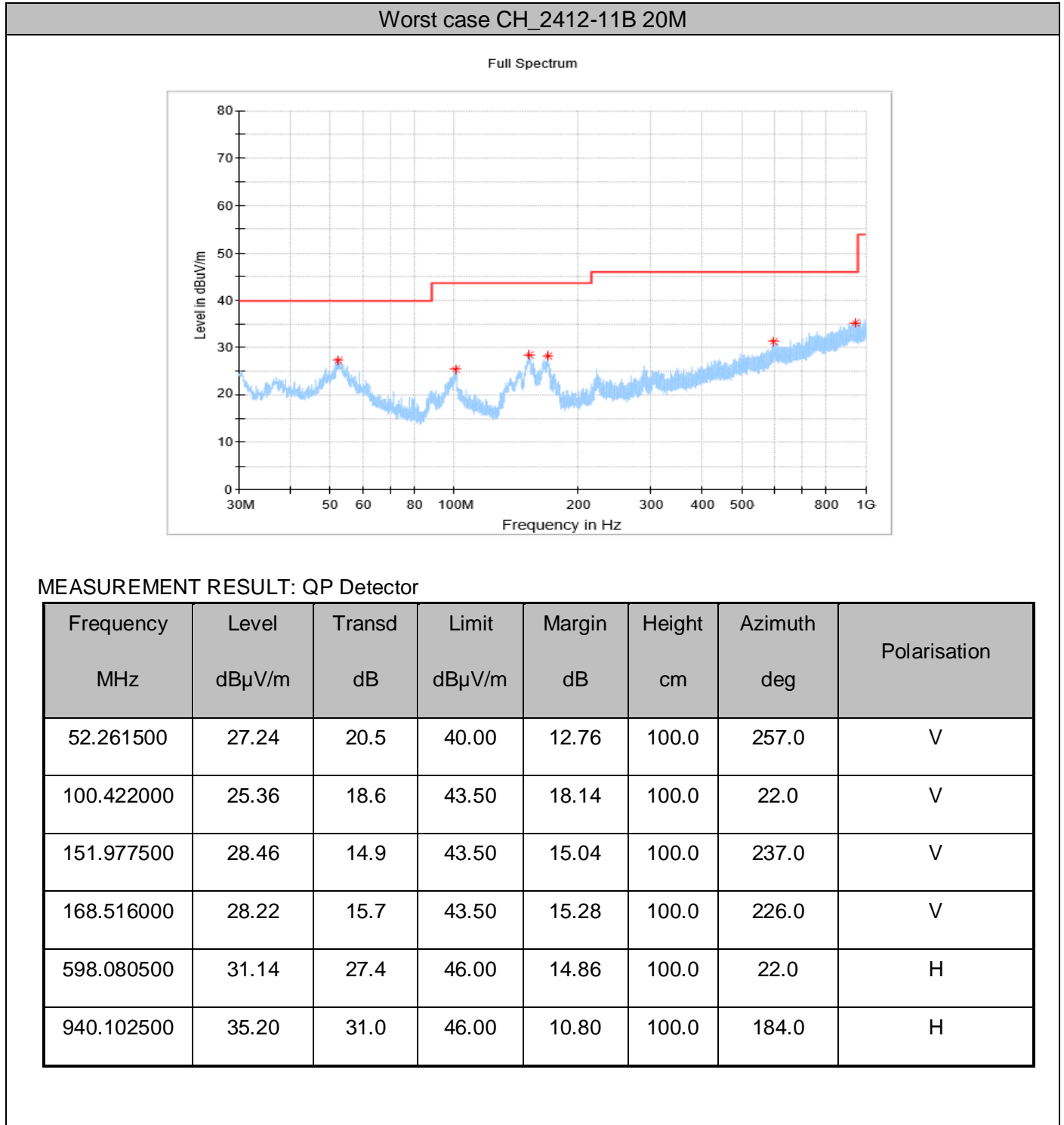
Note 1: The test results and plot for testing range of “9 kHz to 30MHz” showed as below is the WORST case for all Test Modes and Channels. This range will not be presented for each Test Mode and each Channel.



**1.2.2. Part 2: Testing Range of “30 MHz to 1 GHz”**

Note 1: The test results and plot for testing range of “30 MHz to 1 GHz” showed as below is the WORST case for all Test Modes and Channels. This range will not be presented for each Test Mode and each Channel.

Note 2: The emissions in this range are mainly from the Platform Device (Notepad PC and its ancillary components).



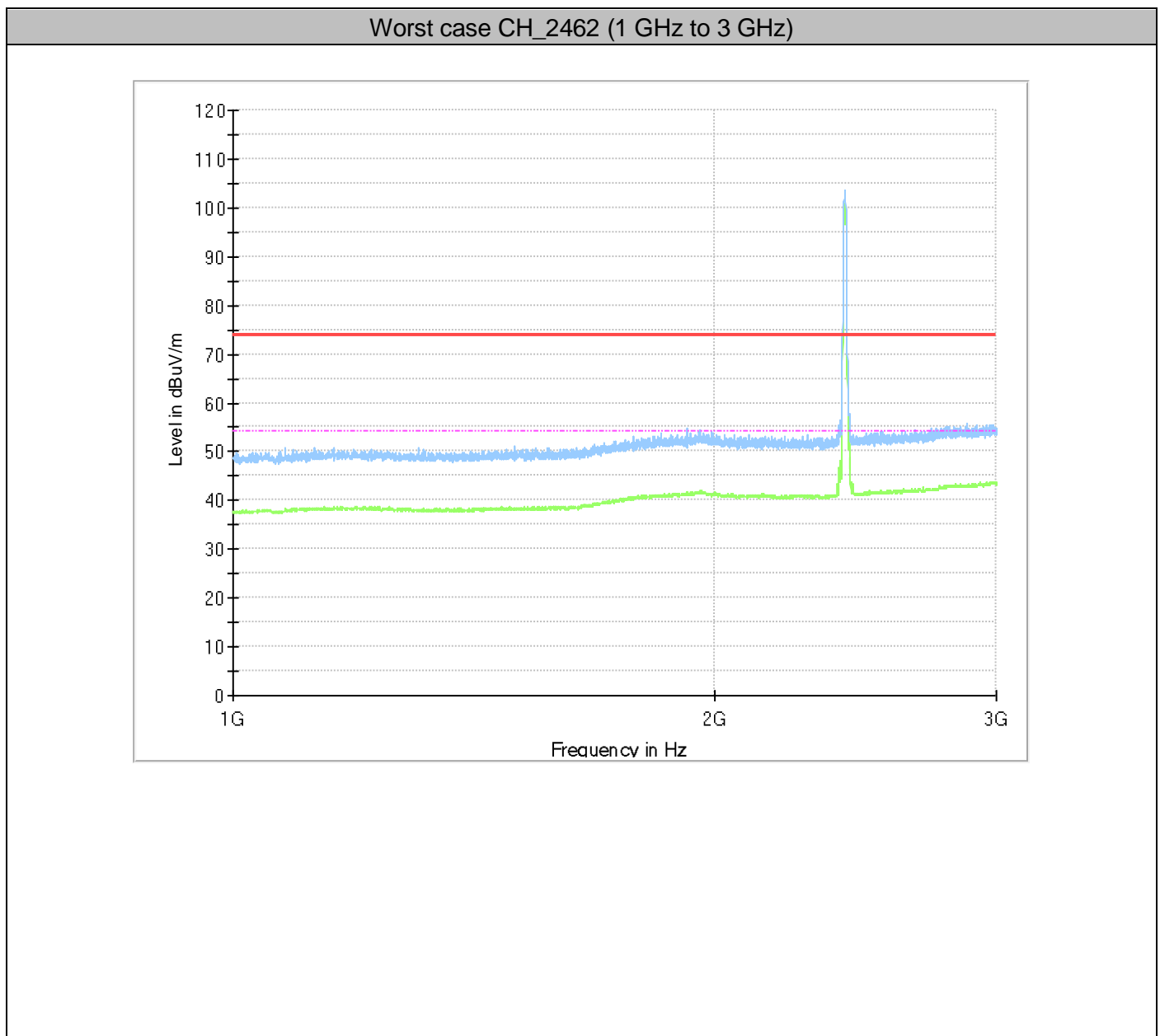
### 1.2.3. Part 3: Testing Range of “1 GHz to 3 GHz”

Note 1: The testing range of “1 GHz to 3 GHz” is for checking radiated emissions located in restricted bands near the EUT operating bands. The test results and plot for testing range of “1 GHz to 3 GHz” showed as below is the WORST case for all Test Modes and Channels. This range will not be presented for each Test Mode and each Channel.

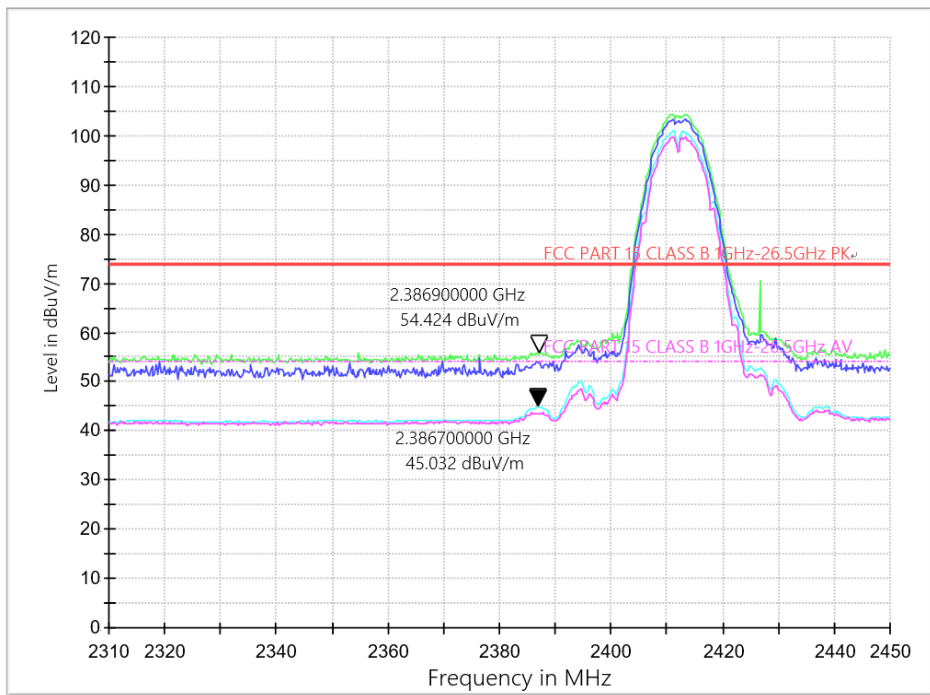
Note 2: Two limits are required in the testing range above 1 GHz, that is Peak limit (74 dB $\mu$ V/m) and Average Limit (54 dB $\mu$ V/m).

Note 3: The peak spike exceeds the limit line is EUT’s operating frequency.

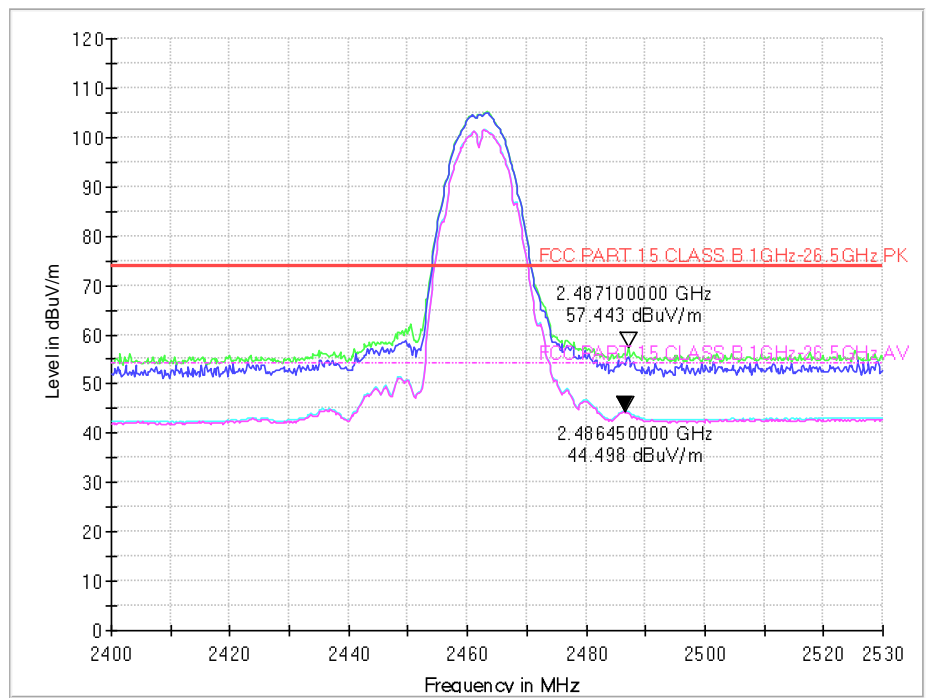
#### 1.2.3.1. 11b20SISO



CH\_2412 (Band Edge)

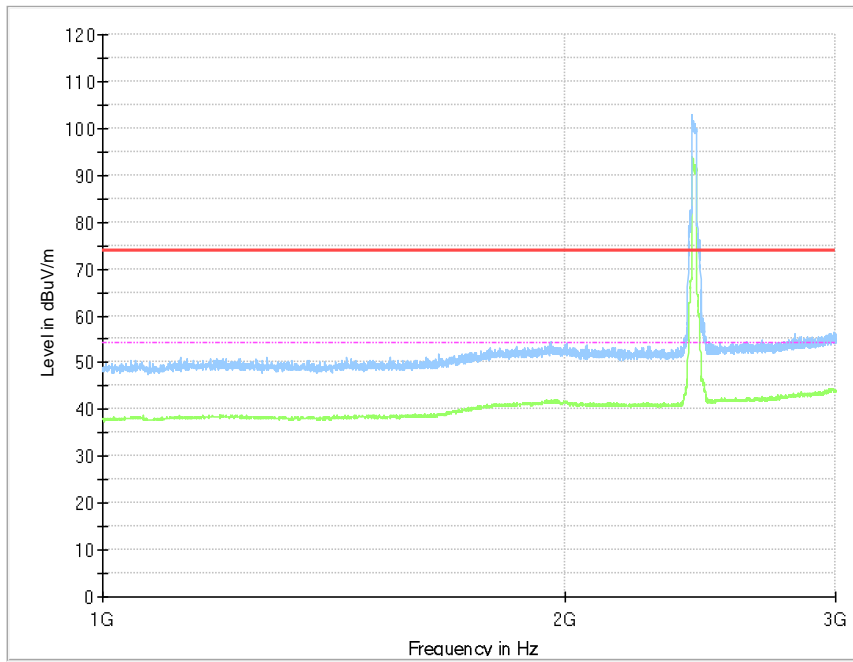


CH\_2462 (Band Edge)

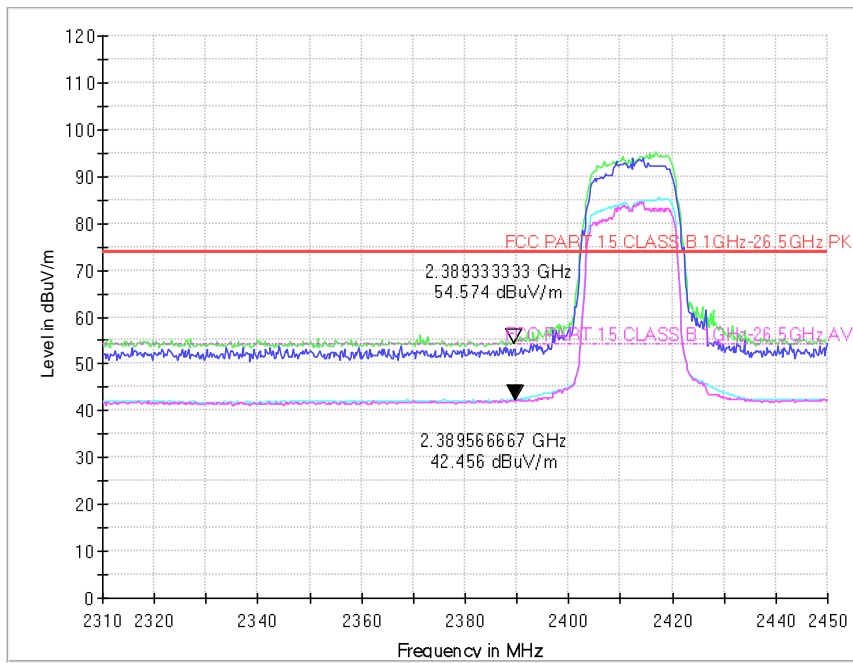


## 1.2.3.2. 11g20SISO

CH\_2427 (1 GHz to 3 GHz)

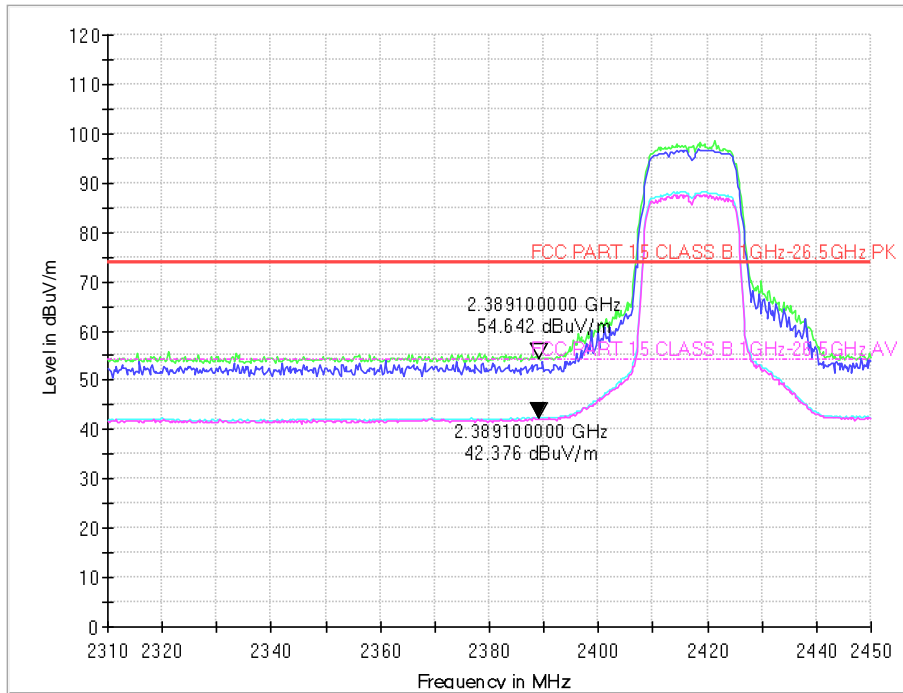


CH\_2412 (Band Edge)

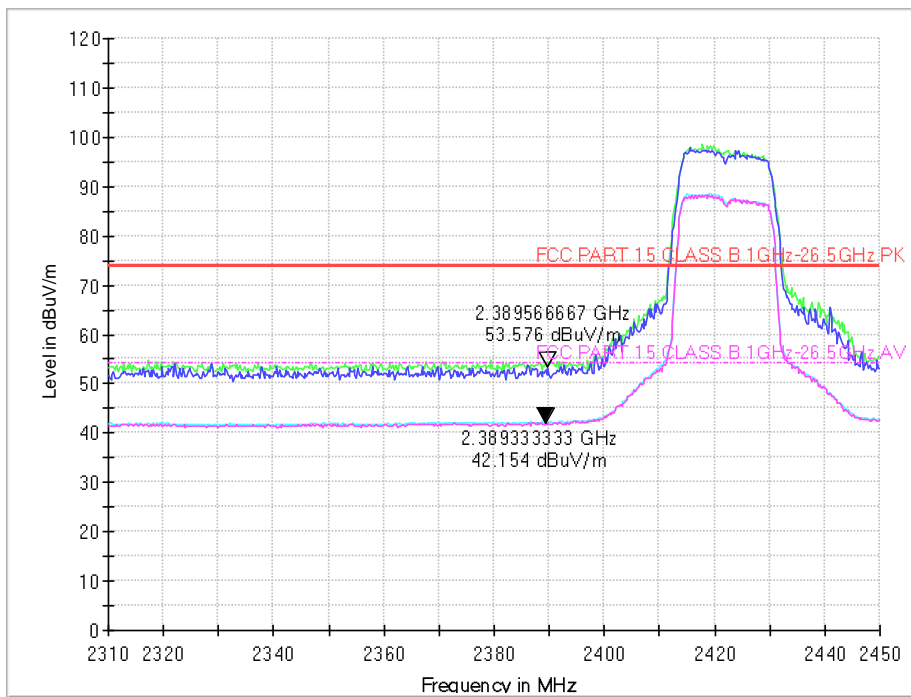




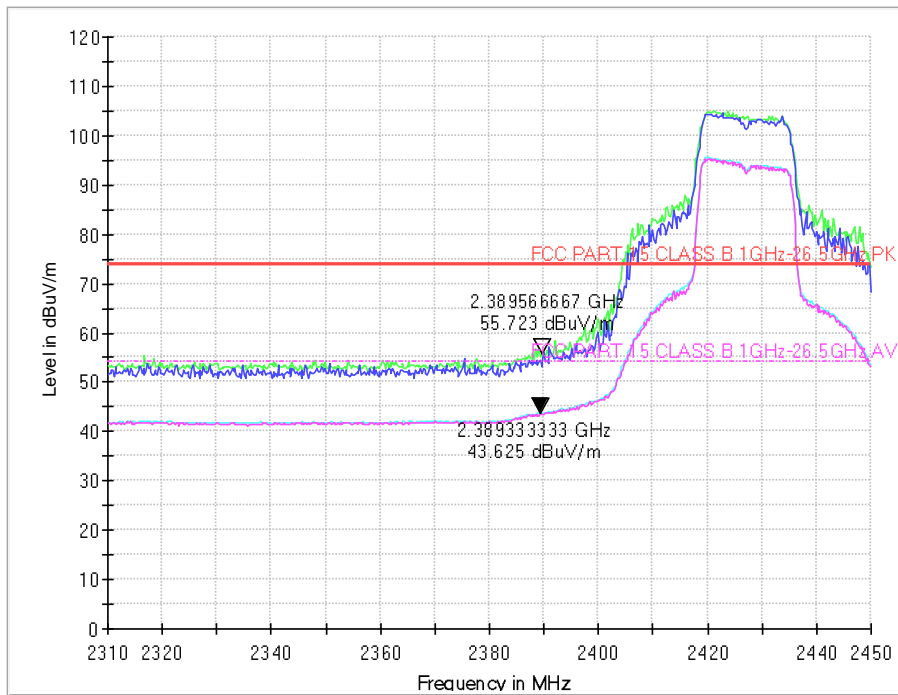
## CH\_2417 (Band Edge)



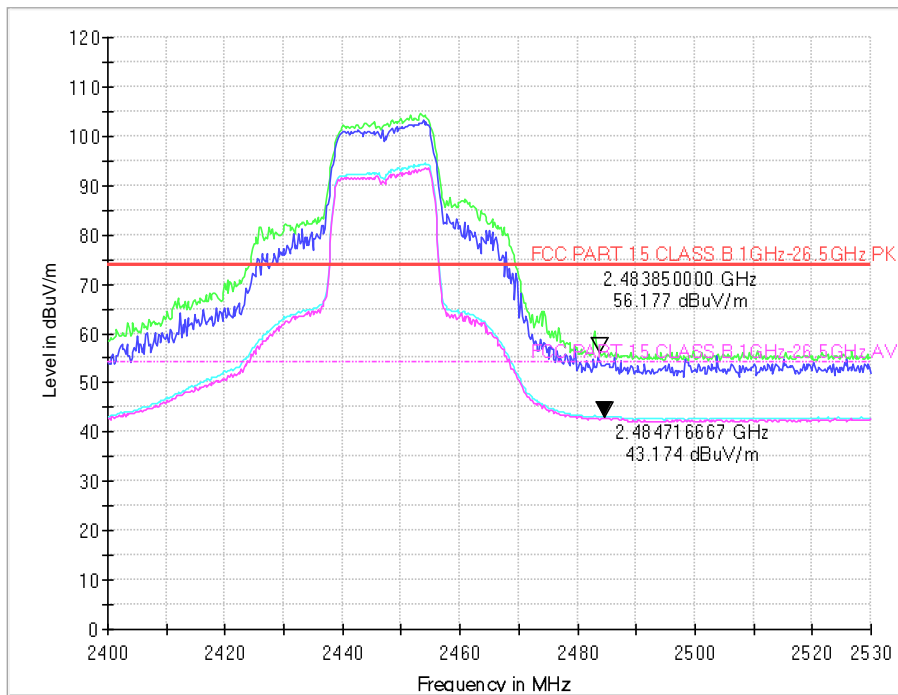
## CH\_2422 (Band Edge)



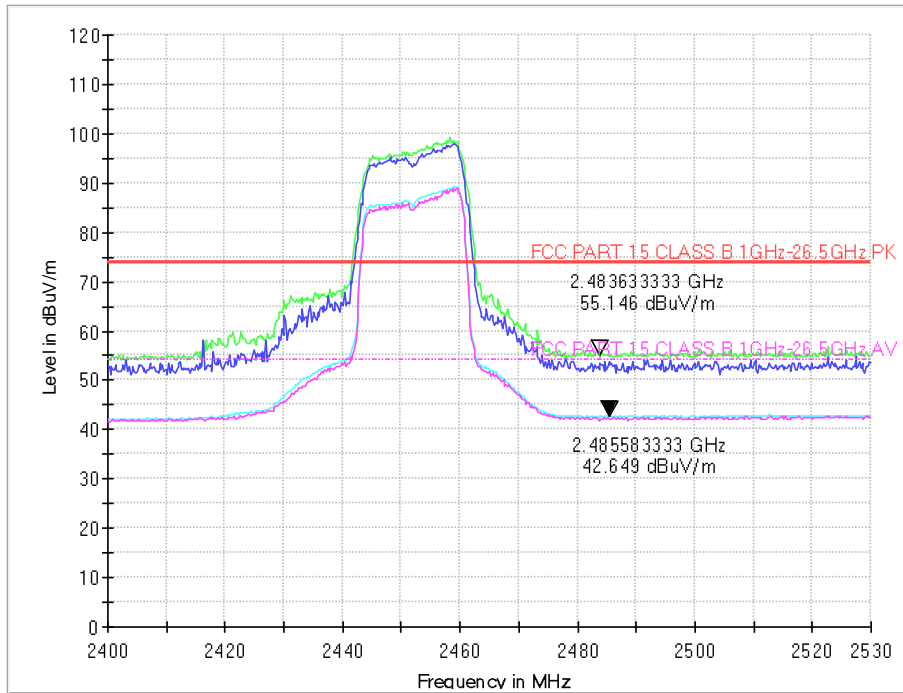
CH\_2427 (Band Edge)



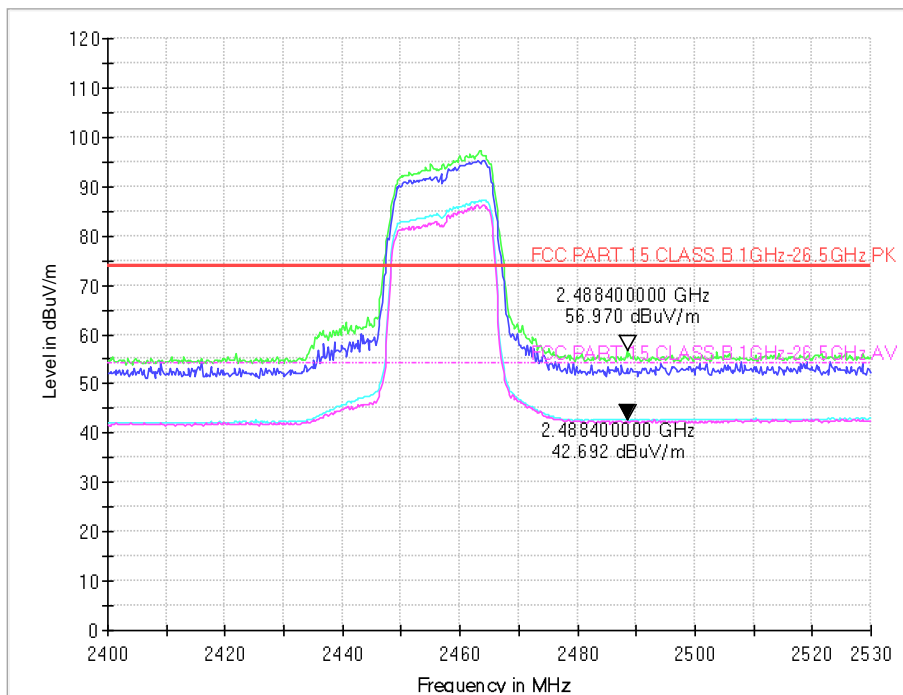
CH\_2447 (Band Edge)



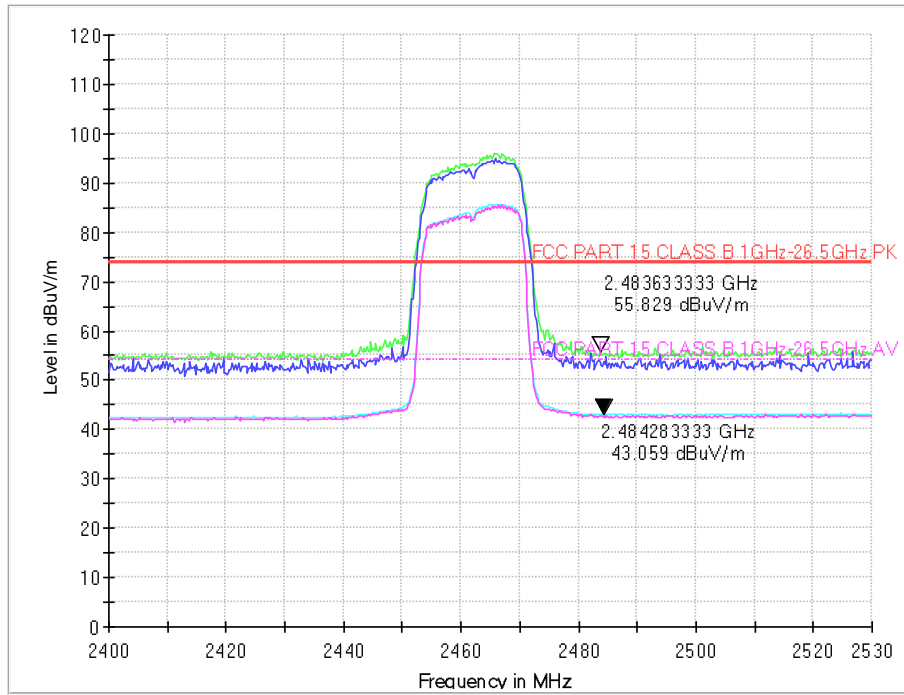
## CH\_2452 (Band Edge)



## CH\_2457 (Band Edge)

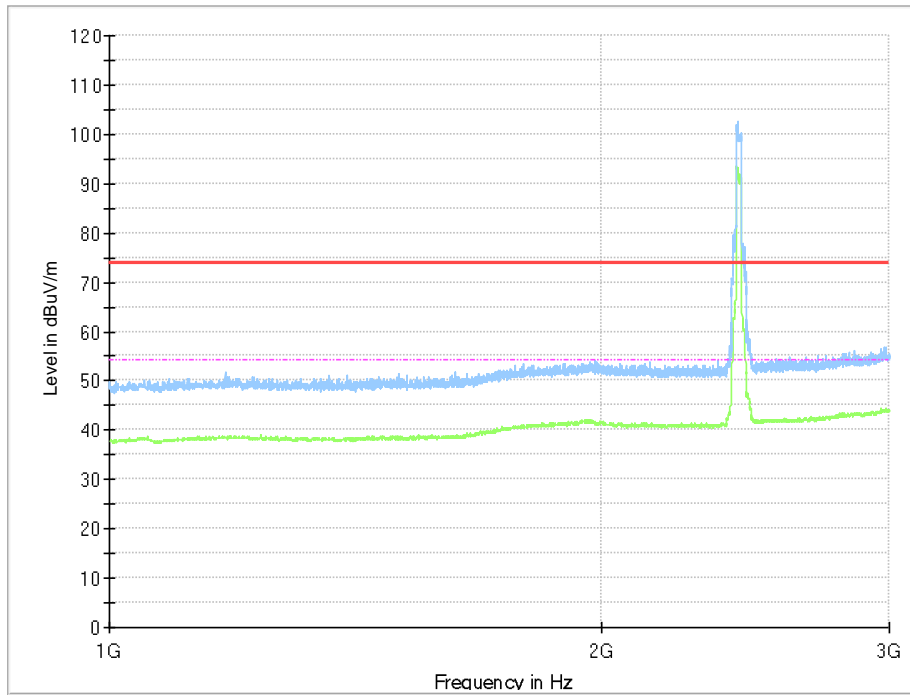


## CH\_2462(Band Edge)

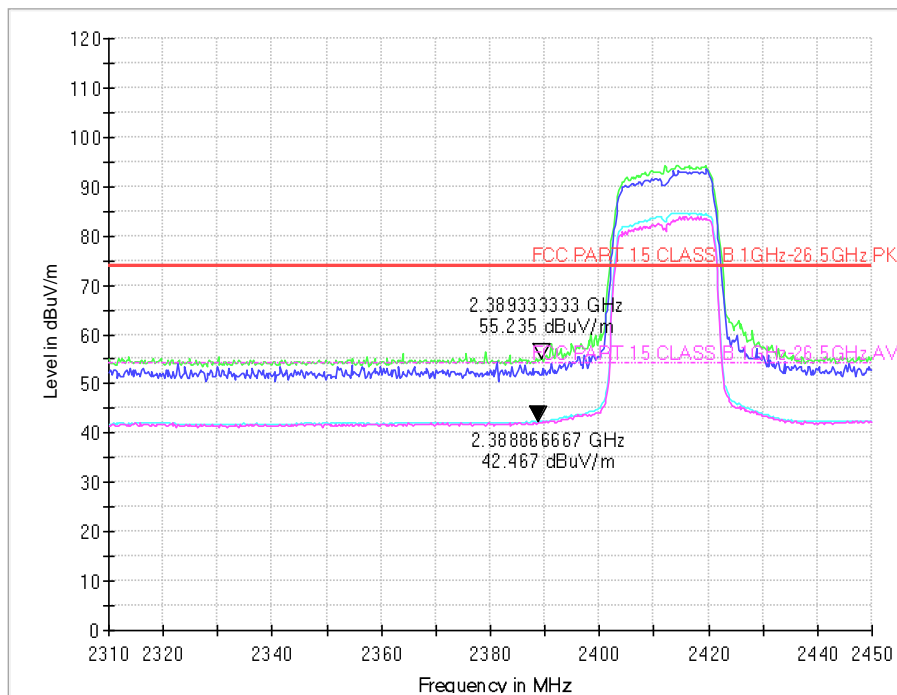


## 1.2.3.3. 11n20SISO

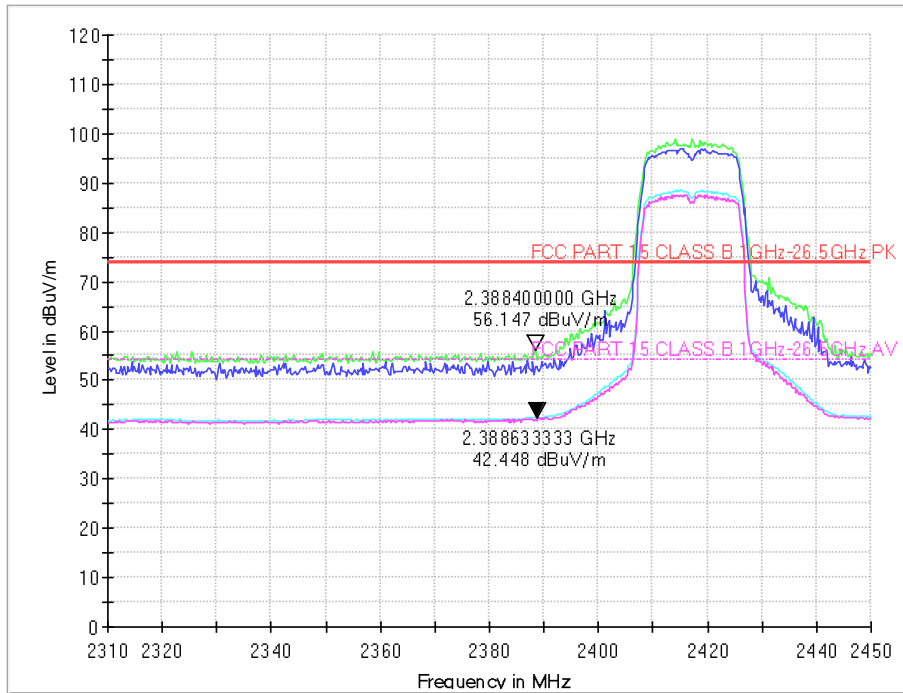
Worst case CH\_2427 (1 GHz to 3 GHz)



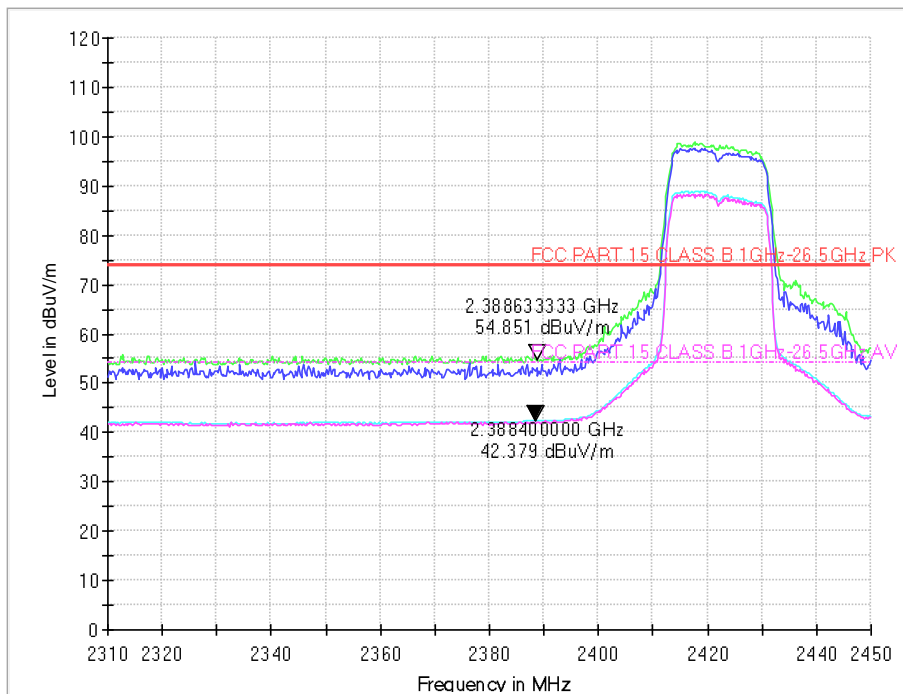
CH\_2412 (Band Edge)



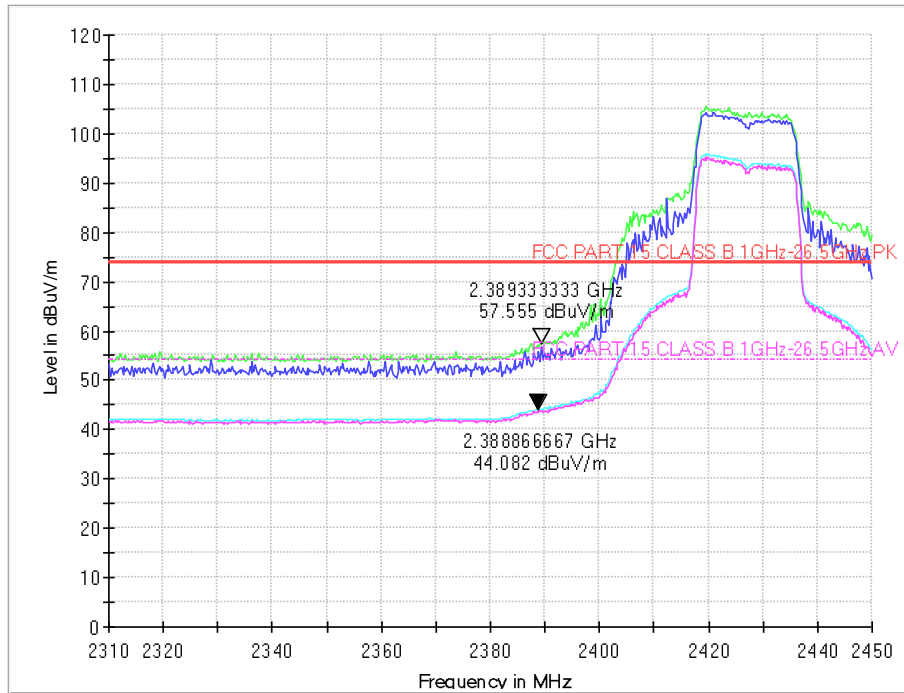
## CH\_2417 (Band Edge)



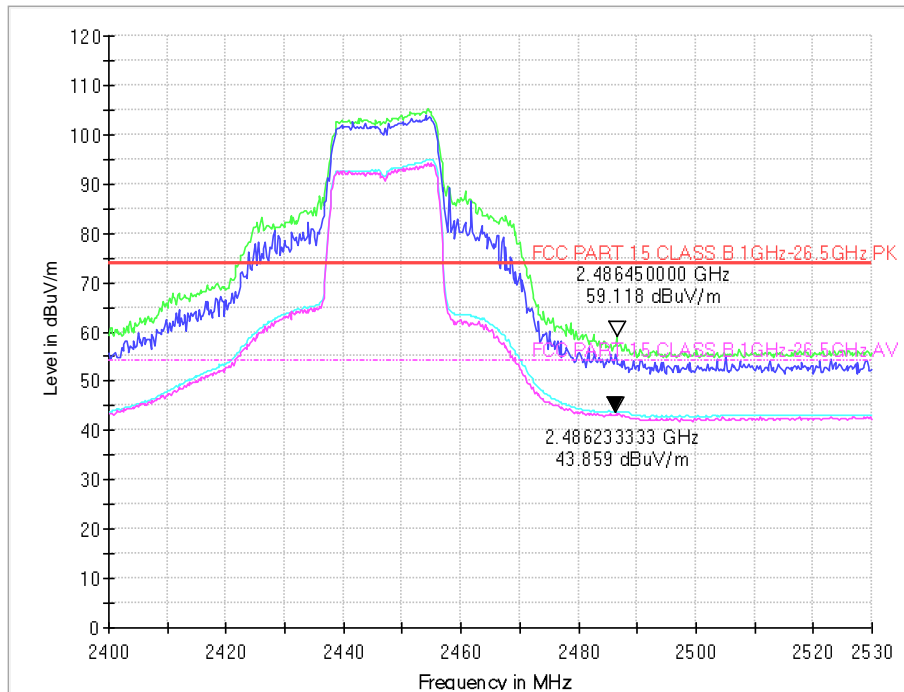
## CH\_2422 (Band Edge)



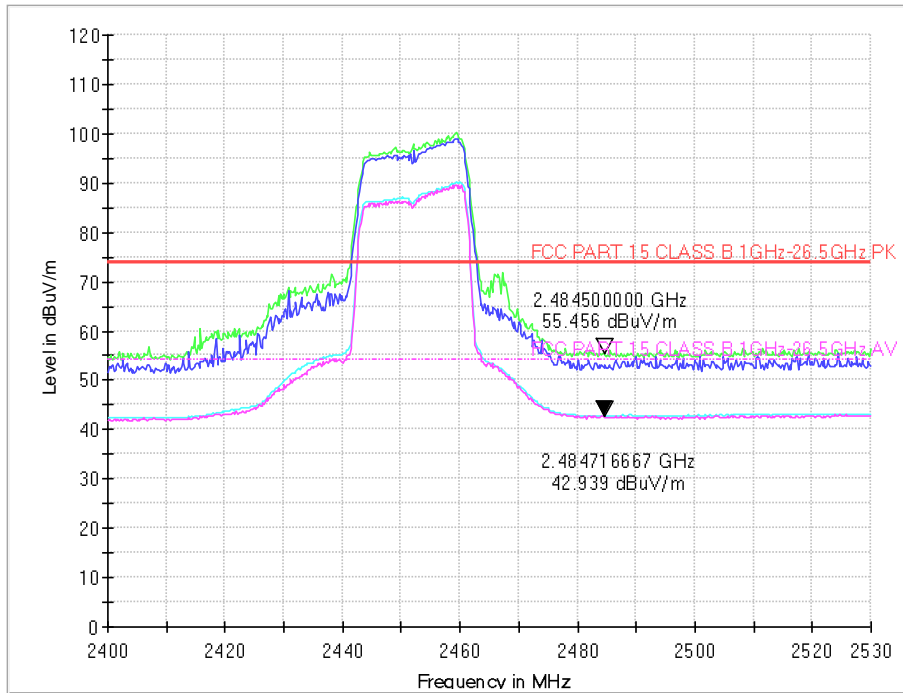
## CH\_2427 (Band Edge)



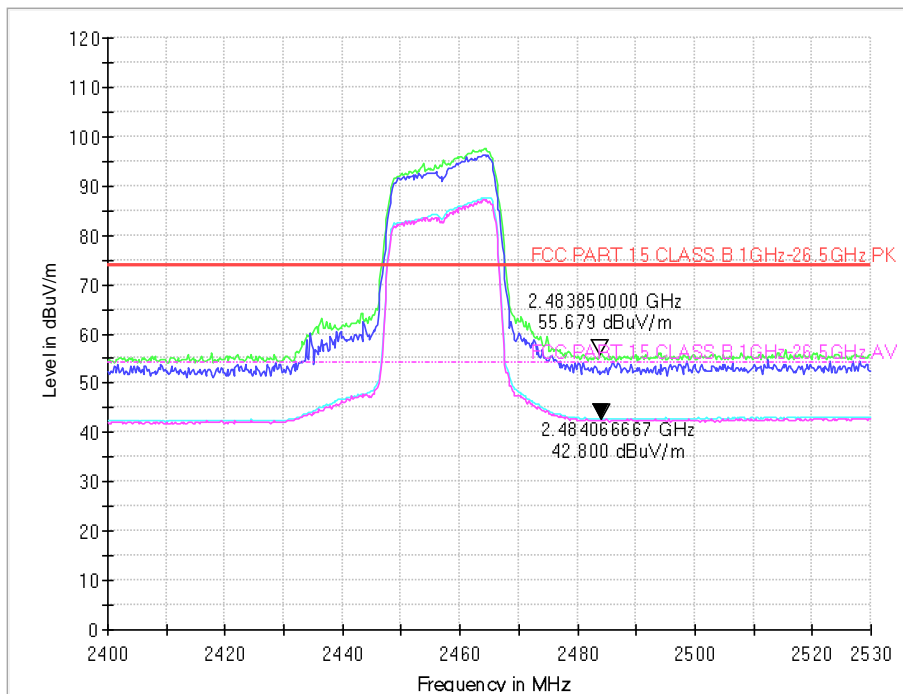
## CH\_2447 (Band Edge)



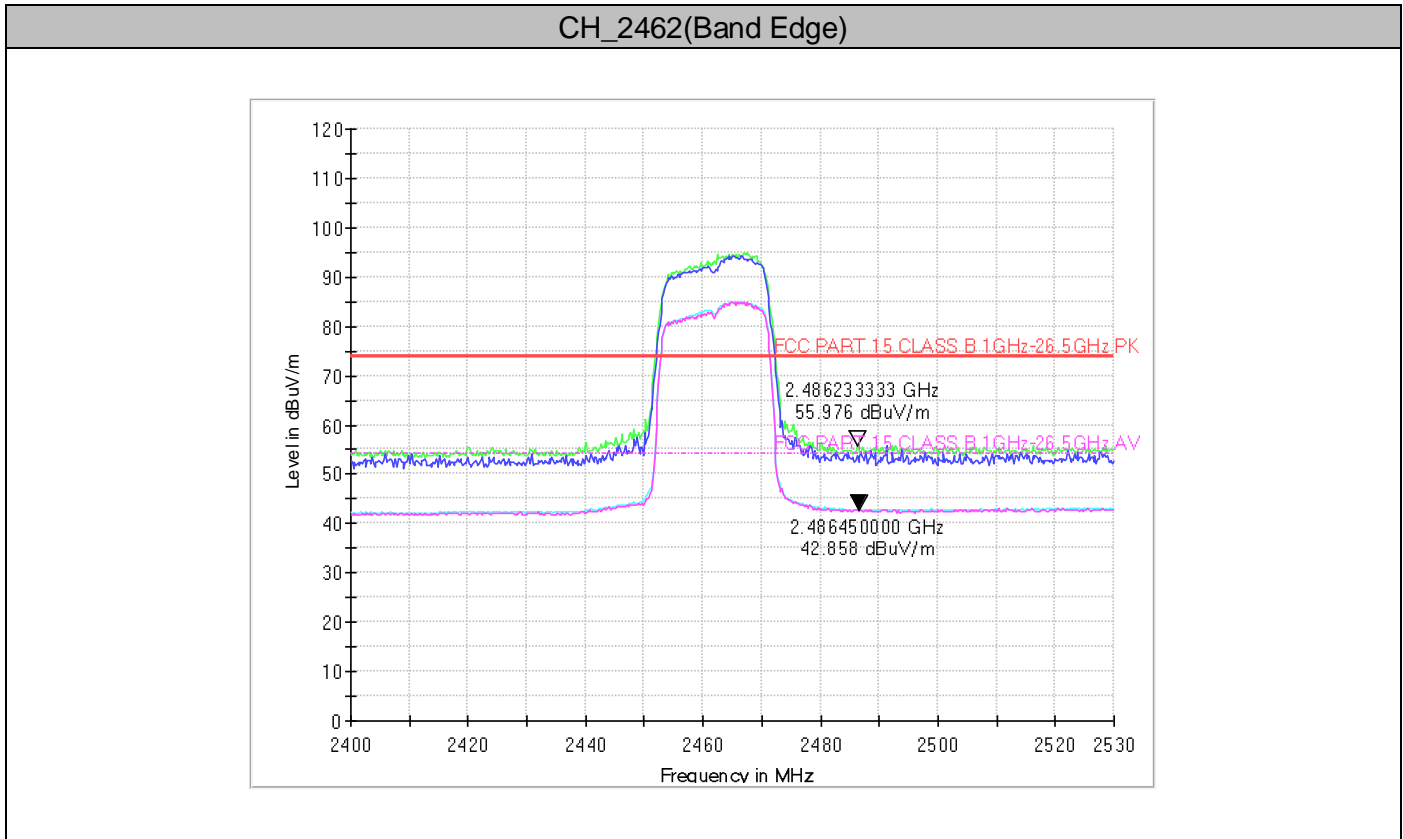
## CH\_2452 (Band Edge)



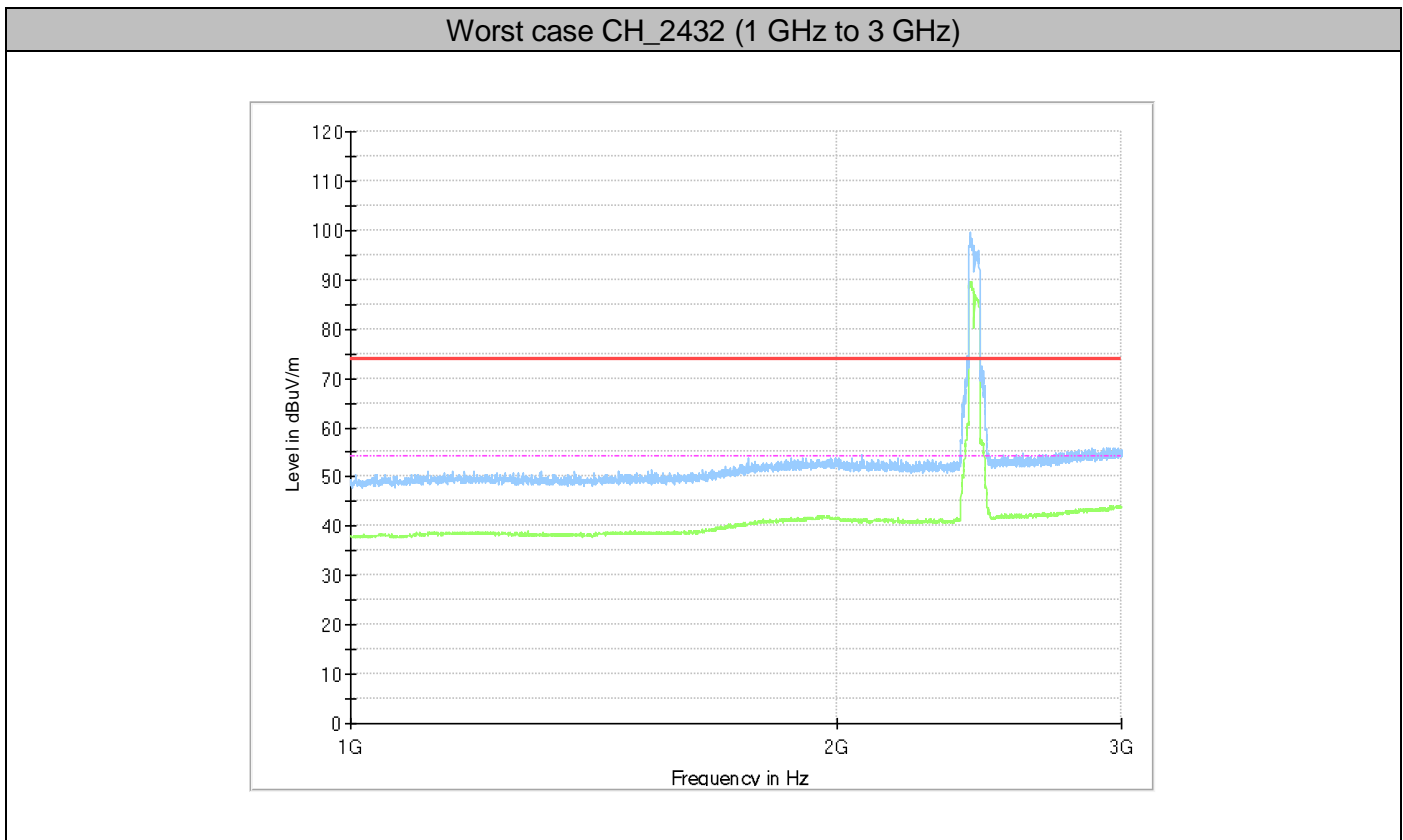
## CH\_2457 (Band Edge)



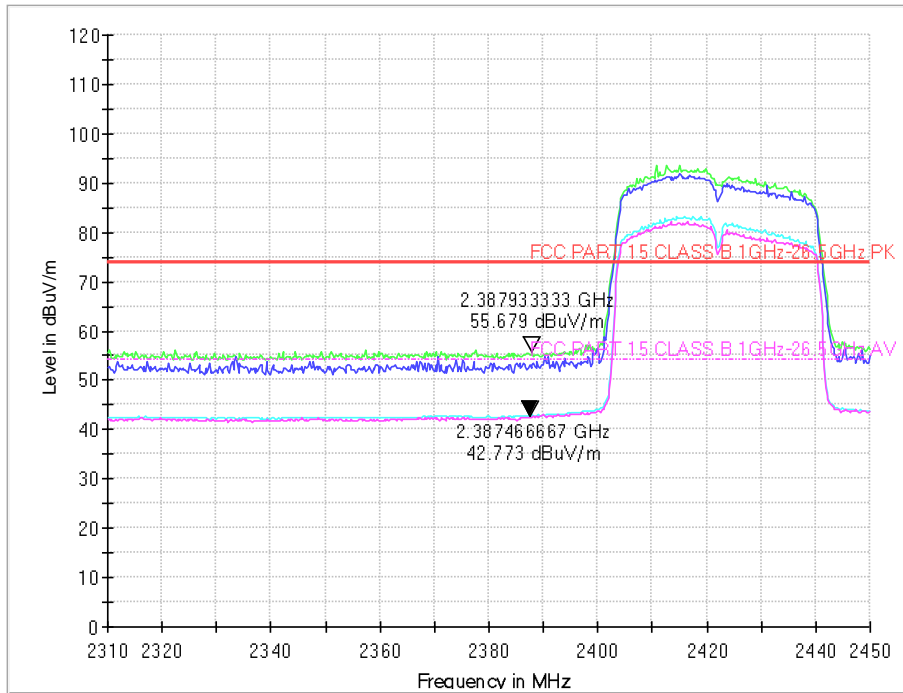




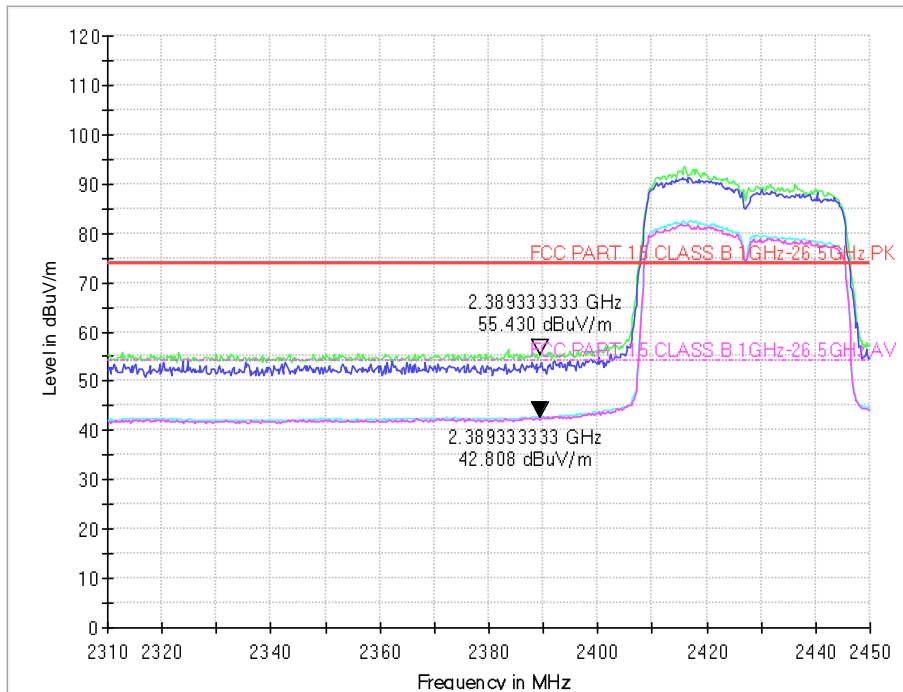
#### 1.2.3.4. 11n40SISO



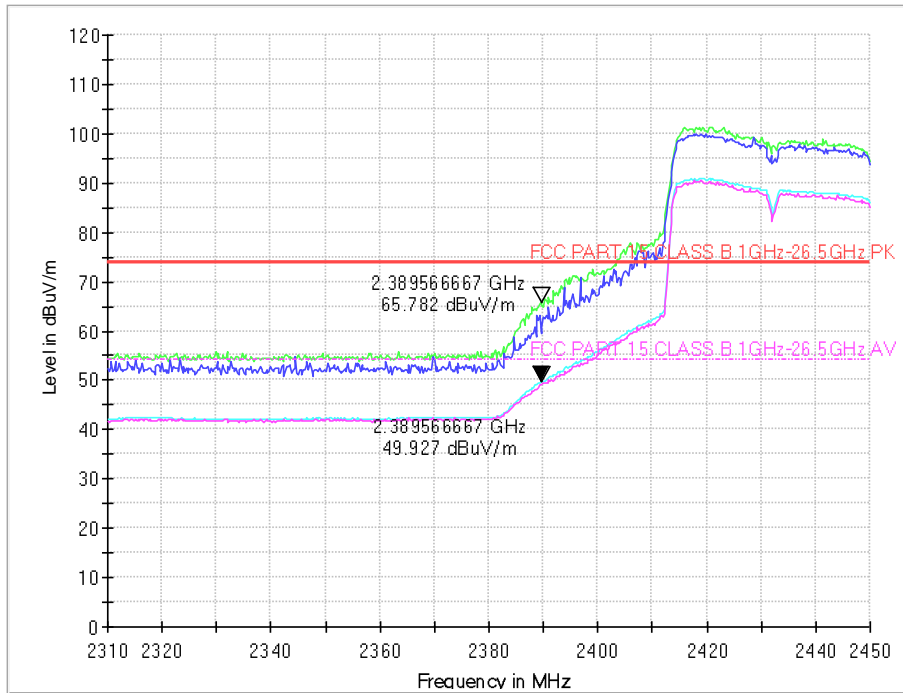
## CH\_2422 (Band Edge)



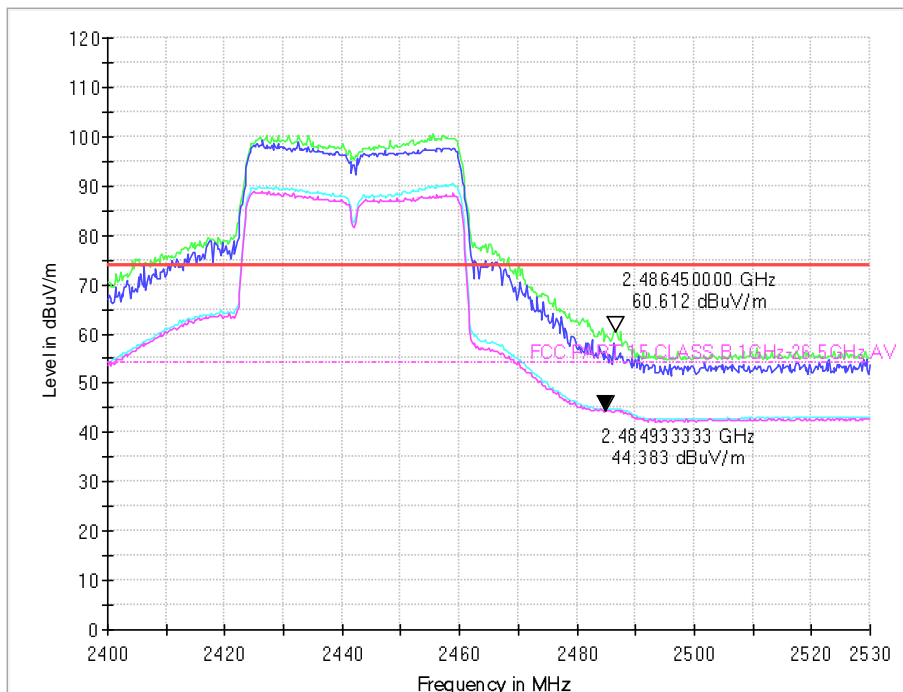
## CH\_2427 (Band Edge)



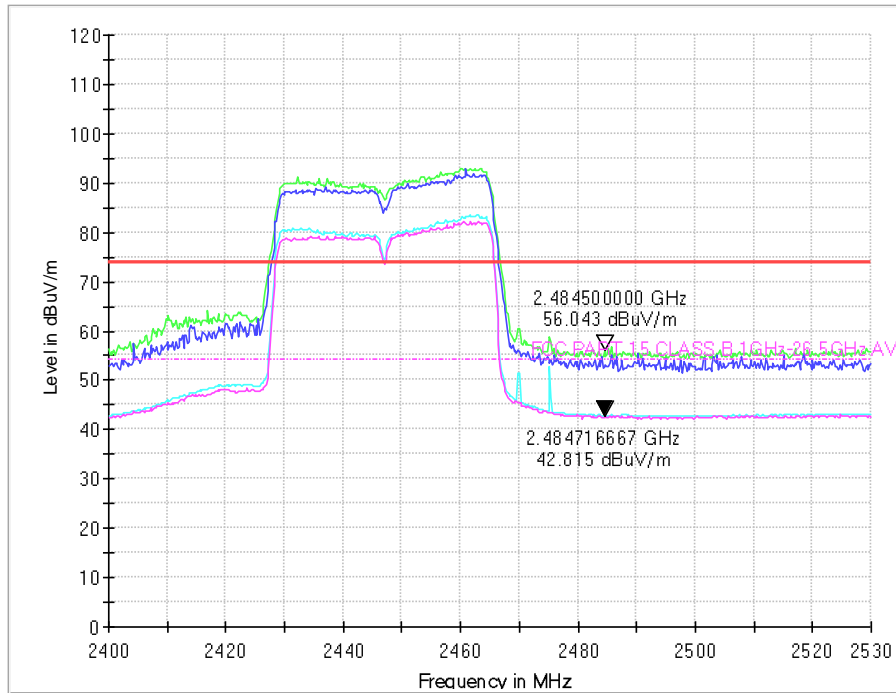
## CH\_2432 (Band Edge)



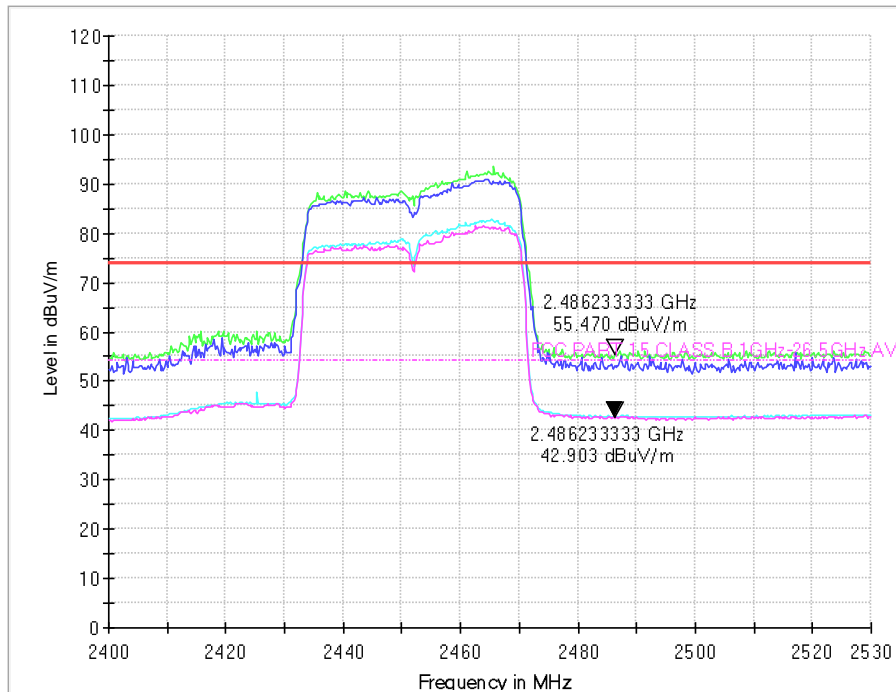
## CH\_2442 (Band Edge)



## CH\_2447 (Band Edge)



## CH\_2452 (Band Edge)

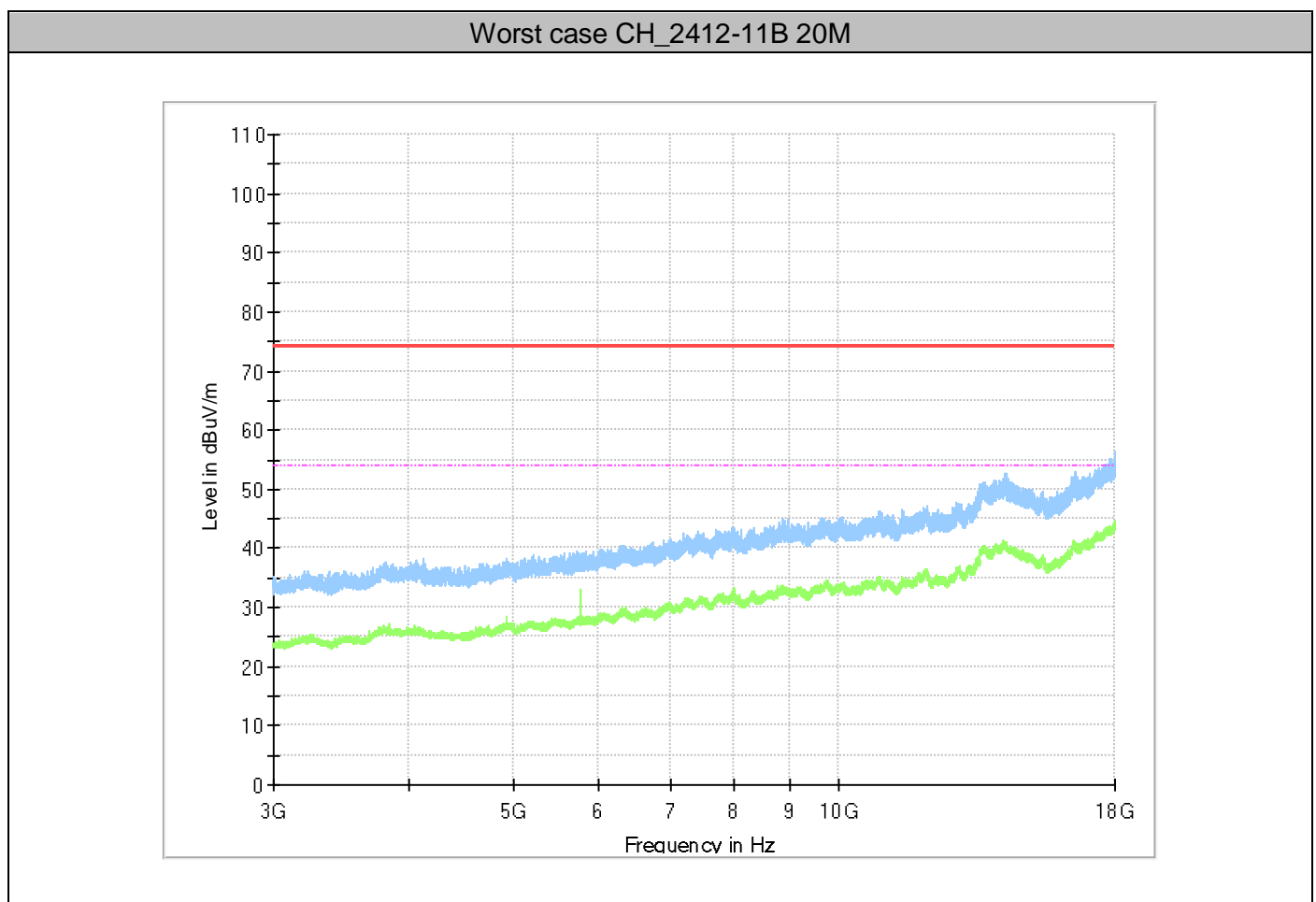


#### 1.2.4. Part 4: Testing Range of “3 GHz to 18 GHz”

Note 1: The test results and plot for testing range of “3 GHz to 18 GHz” showed as below is the worst case for all Test Modes and Channels. This range will not be presented for each Test Mode and each Channel.

Note 2: The testing range of “3 GHz to 18 GHz” is for checking radiated emissions located in restricted bands faraway from the EUT operating bands.

Note 3: Two limits are required in the testing range above 1 GHz, that is Peak limit (74 dB $\mu$ V/m) and Average Limit (54 dB $\mu$ V/m).

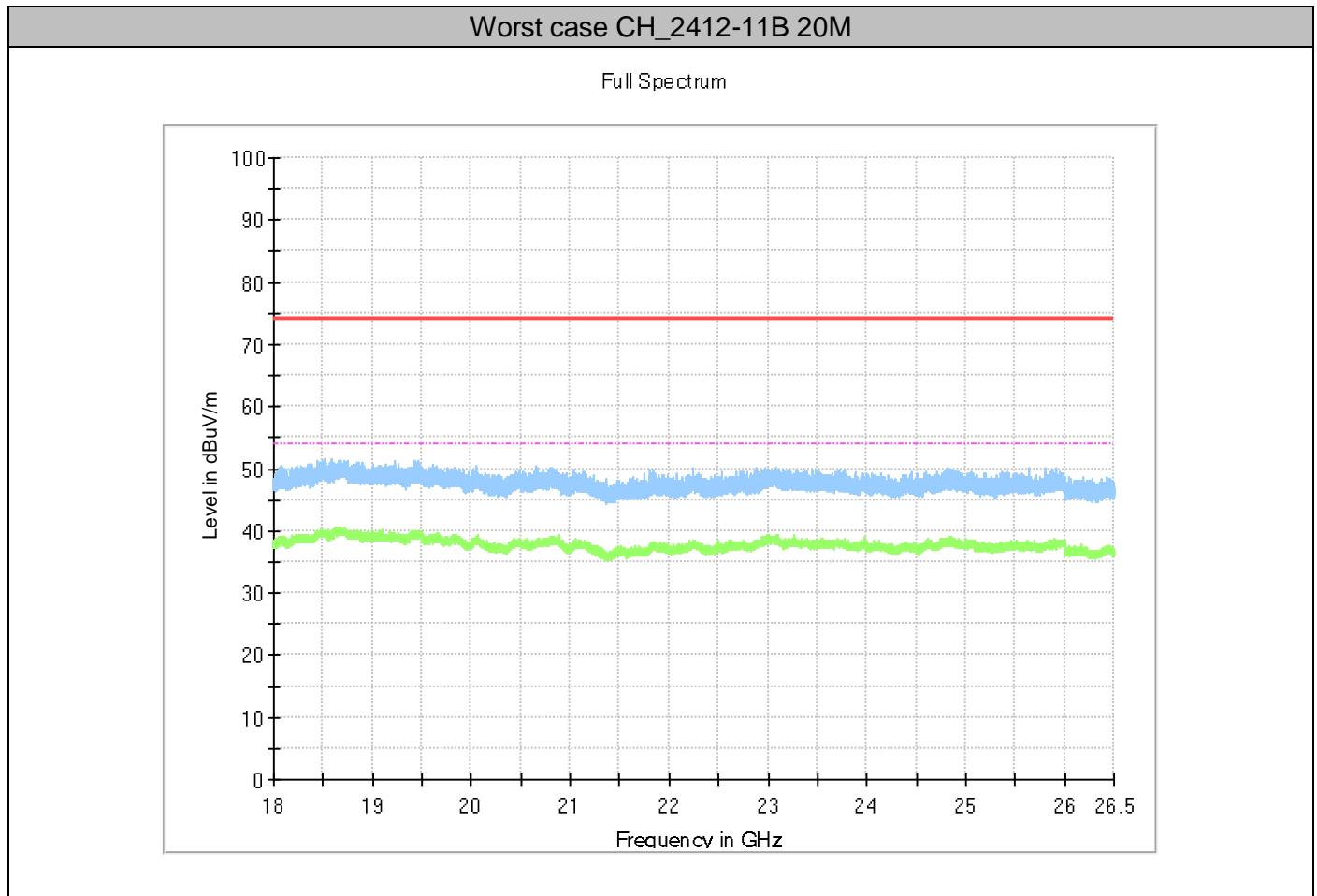


### 1.2.5. Part 5: Testing Range of “18 GHz to 26.5 GHz”

Note 1: The test results and plot for testing range of “18 GHz to 26.5 GHz” showed as below is the WORST case for all Test Modes and Channels. This range will not be presented for each Test Mode and each Channel.

Note 2: The testing range of “18 GHz to 26.5 GHz” is for checking radiated emissions located in restricted bands faraway from the EUT operating bands.

Note 3: Two limits are required in the testing range above 1 GHz, that is Peak limit (74 dB $\mu$ V/m) and Average Limit (54 dB $\mu$ V/m).



## 2. Appendix I: Conducted Emission at Power Port

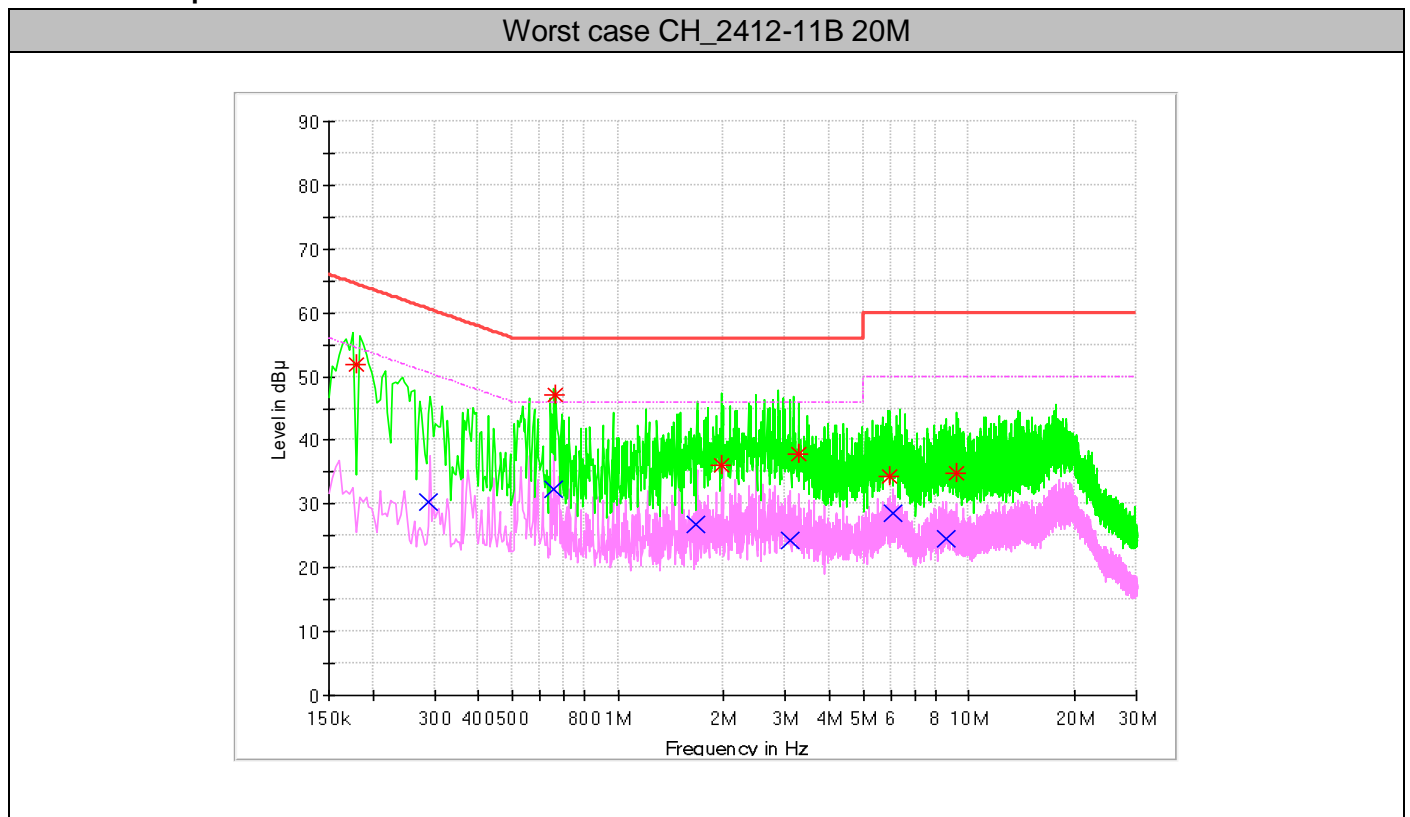
Note 1: The test results and plot for testing range of “150 kHz to 30 MHz” showed as below is the WORST case for all Test Modes and Channels. This range will not be presented for each Test Mode and each Channel.

Note 2 : RBW =9 kHz; VBW = 30 kHz

### 2.1. Test Results

Test Mode	Antenna Port	Test Channel	Maximum Emissions	Limit	Verdict
11b20 SISO	Ant1	2412	(see Test Graphs)	(see Test Graphs)	PASS

2.2. Test Graphs



**MEASUREMENT RESULT: QP Detector**

Frequency (MHz)	Level (dBμV)	Limit (dBμV)	Transd. (dB)	Margin (dB)	Line	PE
0.179854	51.81	64.49	9.6	12.68	N	FLO
0.663201	47.01	56	9.6	8.99	L1	FLO
1.966909	36.18	56	9.6	19.82	L1	FLO
3.259563	37.87	56	9.6	18.13	L1	FLO
5.936198	34.24	60	9.8	25.76	L1	FLO
9.220272	34.92	60	9.9	25.08	L1	FLO

**MEASUREMENT RESULT: AV Detector**

Frequency (MHz)	Level (dBμV)	Limit (dBμV)	Transd. (dB)	Margin (dB)	Line	PE
0.287314	30.43	50.6	9.6	20.17	L1	FLO
0.65844	32.37	46	9.6	13.63	L1	FLO
1.674669	26.78	46	9.6	19.22	L1	FLO
3.084073	24.21	46	9.6	21.79	L1	FLO
6.048512	28.68	50	9.8	21.32	L1	FLO
8.643799	24.45	50	9.9	25.55	L1	FLO



Note:

1,  $Level = Reading\ level\ by\ receiver + Transd\ (correcton\ factor + cable\ loss)$

The reading level is calculated by software which is not shown in the sheet.

2,  $Margin = Limit - Level$

END