






# TEST REPORT

<p><b>KCTL Inc.</b> 65, Sinwon-ro, Yeongtong-gu, Suwon-si, Gyeonggi-do, 16677, Korea TEL: 82-31-285-0894 FAX: 82-505-299-8311 <a href="http://www.kctl.co.kr">www.kctl.co.kr</a></p>	<p>Report No.: KR18-SRF0121-B Page (1) of (176)</p>	
<p><b>1. Client</b></p> <ul style="list-style-type: none"> <li>◦ Name : Samsung Electronics Co., Ltd.</li> <li>◦ Address : 129, Samsung-ro, Yeongtong-gu, Suwon-si, Gyeonggi-do, 16677, Rep.of Korea</li> <li>◦ Date of Receipt : 2018-09-27</li> </ul> <p><b>2. Use of Report</b> : -</p> <p><b>3. Name of Product and Model</b> : ARTIK-0710 / SIP007AFS00</p> <p><b>4. Manufacturer and Country of Origin</b> : Samsung Electronics Co., Ltd. / Korea</p> <p><b>5. FCC ID</b> : A3LSIP007AFS00</p> <p><b>6. IC ID</b> : 694E-SIP007AFS00</p> <p><b>6. Date of Test</b> : 2018-10-15 to 2018-10-19</p> <p><b>7. Test Standards</b> : FCC Part 15 Subpart C, 15.407 RSS-247 Issue 2, RSS-GEN Issue 5</p> <p><b>8. Test Results</b> : Refer to the test result in the test report</p>		
Affirmation	<p>Tested by </p> <p>Name : Euijung Kim (Signature)</p>	<p>Technical Manager </p> <p>Name : Bongok Ko (Signature)</p>
<p>2018-11-13</p>		
<p><b>KCTL Inc.</b></p>		
<p>As a test result of the sample which was submitted from the client, this report does not guarantee the whole product quality. This test report should not be used and copied without a written agreement by KCTL Inc.</p>		

**REPORT REVISION HISTORY**

Date	Revision	Page No
2018-10-23	Originally issued	-
2018-11-06	Revised notes	24, 45
2018-11-13	Revised average power	9, 10

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**KCTL****1. Client information**

**Applicant:** Samsung Electronics Co., Ltd.  
**Address:** 129, Samsung-ro, Yeongtong-gu, Suwon-si, Gyeonggi-do,  
16677, Rep.of Korea  
**Telephone number:** +82 10 7260 5096  
**Contact person:** Sungjin Kim / sj999.kim@samsung.com

**Manufacturer:** Samsung Electronics Co., Ltd.  
**Address:** 129, Samsung-ro, Yeongtong-gu, Suwon-si, Gyeonggi-do,  
16677, Rep.of Korea

**KCTL**

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## 2. Laboratory information

### Address

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Facsimile Number: +82 505 299 8311

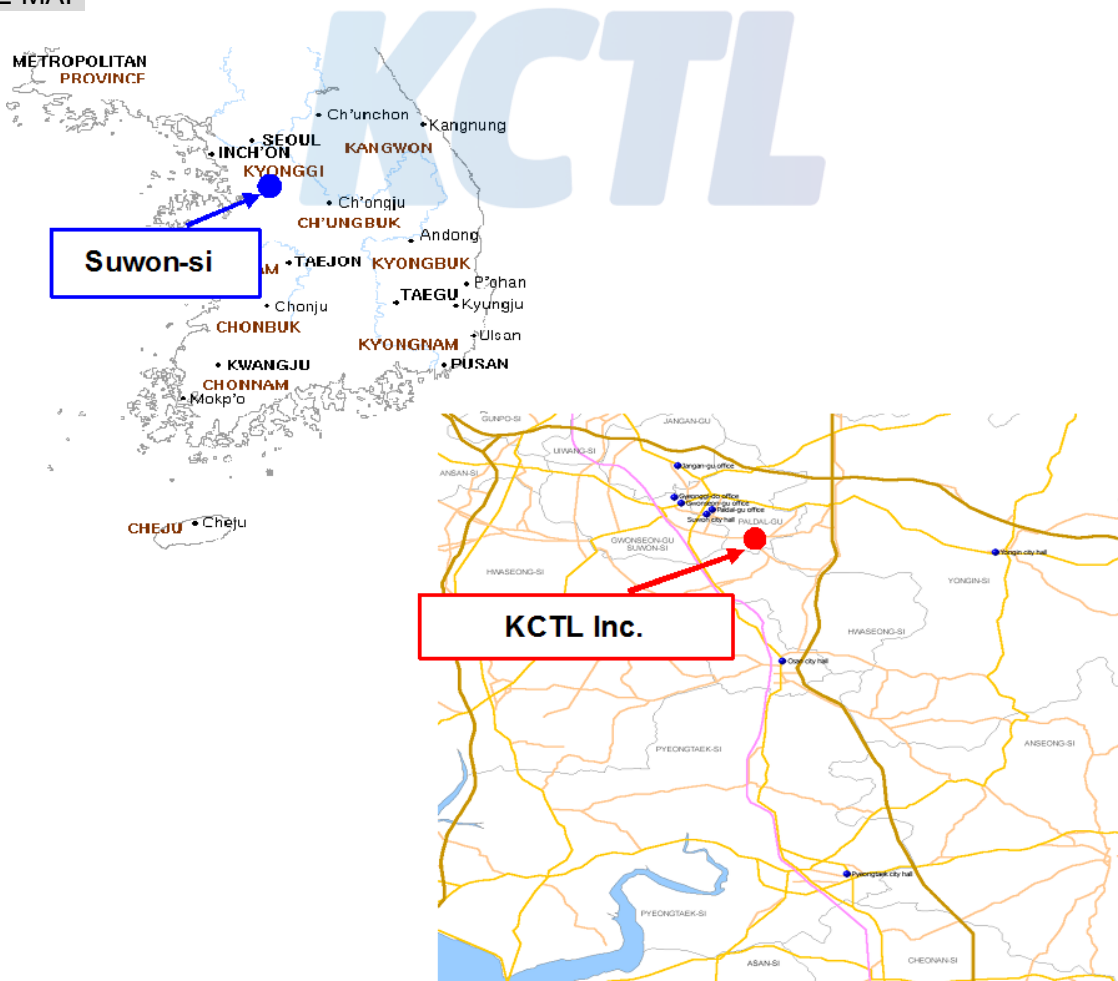
FCC Site Designation No: KR0040, FCC Site Registration No: 687132

VCCI Registration No. : R-3327, G-198, C-3706, T-1849

Industry Canada Registration No. : 8035A

KOLAS NO.: KT231

### **SITE MAP**



**KCTL Inc.**

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### 3. Description of E.U.T.

#### 3.1 Basic description

Applicant	Samsung Electronics Co., Ltd.
Address of Applicant	129, Samsung-ro, Yeongtong-gu, Suwon-si, Gyeonggi-do, 16677, Rep.of Korea
Manufacturer	Samsung Electronics Co., Ltd.
Address of Manufacturer	129, Samsung-ro, Yeongtong-gu, Suwon-si, Gyeonggi-do, 16677, Rep.of Korea
Type of equipment	ARTIK-0710
Basic Model	SIP007AFS00
Serial number	N/A

#### 3.2 General description

Frequency Range	2 402 MHz ~ 2 480 MHz (Bluetooth, Bluetooth Low Energy) 2 402 MHz ~ 2 475 MHz (Zigbee) 2 412 MHz ~ 2 462 MHz (802.11b/g/n_HT20) 5 180 MHz ~ 5 240 MHz (802.11a/n_HT20) 5 190 MHz ~ 5 230 MHz (802.11n_HT40) 5 210 MHz (802.11ac_VHT80) 5 260 MHz ~ 5 320 MHz (802.11a/n_HT20) 5 270 MHz ~ 5 310 MHz (802.11n_HT40) 5 290 MHz (802.11ac_VHT80) 5 500 MHz ~ 5 720 MHz (802.11a/n_HT20) 5 510 MHz ~ 5 710 MHz (802.11n_HT40) 5 530 MHz ~ 5 690 MHz (802.11ac_VHT80) 5 745 MHz ~ 5 825 MHz (802.11a/n_HT20) 5 755 MHz ~ 5 795 MHz (802.11n_HT40) 5 775 MHz (802.11ac_VHT80)
Type of Modulation	Bluetooth: GFSK, $\pi/4$ DQPSK, 8DPSK Bluetooth Low Energy: GFSK Zigbee: DSSS WiFi: DSSS, OFDM

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The number of channels	<p><b>2.4 GHz:</b> 79 ch (Bluetooth) 40 ch (Bluetooth Low Energy) 11 ch (802.11b/g/n_HT20) 15 ch (Zigbee)</p> <p><b>5.0 GHz:</b> U-NII-1: 4 ch (802.11a/n_HT20) 2 ch (802.11n_HT40) 1 ch (802.11ac_VHT80) U-NII-2A: 4 ch (802.11a/n_HT20) 2 ch (802.11n_HT40) 1 ch (802.11ac_VHT80) U-NII-2C: 12 ch (802.11a/n_HT20) 6 ch (802.11n_HT40) 3 ch (802.11ac_VHT80) U-NII-3: 5 ch (802.11a/n_HT20) 2 ch (802.11n_HT40) 1 ch (802.11ac_VHT80)</p>
Type of Antenna	Dipole Antenna, Balance Flex Antenna
Antenna Gain	<p><b>Dipole Antenna</b> 2.4 GHz: 3.8 dBi 5 GHz: 5.5 dBi</p> <p><b>Balance Flex Antenna</b> 2.4 GHz: 3.0 dBi 5 GHz: 4.0 dBi</p>
Power supply	DC 4.2 V
Test SW Version	0710GC0F-41F-01Q0
RF power setting in TEST SW	Referred the measuring instrument from manufacturer

Note : The above EUT information was declared by the manufacturer.

### 3.3 Average output power

#### Method AVGPM (Measurement using an RF average-reading power meter)

- a) As an alternative to spectrum analyzer or EMI receiver measurements, measurements may be performed using a wideband RF power meter with a thermocouple detector or equivalent if all of the conditions listed below are satisfied.
  - 1) The EUT is configured to transmit continuously, or to transmit with a constant duty factor.
  - 2) At all times when the EUT is transmitting, it shall be transmitting at its maximum power control level.
  - 3) The integration period of the power meter exceeds the repetition period of the transmitted signal by at least a factor of five.
- b) If the transmitter does not transmit continuously, measure the duty cycle (x) of the transmitter output signal as described in Section 6.0.
- c) Measure the average power of the transmitter. This measurement is an average over both the on and off periods of the transmitter.
- d) Adjust the measurement in dBm by adding  $10\log(1/x)$ , where x is the duty cycle to the measurement result.



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**- Average output power**

Mode	Frequency Band	Channel	Frequency [MHz]	Average power [dBm]
802.11a	U-NII-1	Lowest	5 180	12.69
		Middle	5 200	12.56
		Highest	5 240	12.48
	U-NII-2A	Lowest	5 260	13.72
		Middle	5 280	13.71
		Highest	5 320	13.20
	U-NII-2C	Lowest	5 500	11.51
		Middle	5 580	12.00
		Highest	5 700	11.47
	U-NII-3	Lowest	5 745	11.24
		Middle	5 785	10.35
		Highest	5 825	9.38
802.11n HT20	U-NII-1	Lowest	5 180	12.25
		Middle	5 200	12.20
		Highest	5 240	12.07
	U-NII-2A	Lowest	5 260	13.41
		Middle	5 280	13.21
		Highest	5 320	12.92
	U-NII-2C	Lowest	5 500	11.00
		Middle	5 580	11.48
		Highest	5 700	11.12
	U-NII-3	Lowest	5 745	10.75
		Middle	5 785	9.80
		Highest	5 825	9.08

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Mode	Frequency Band	Channel	Frequency [MHz]	Average power [dBm]
802.11n HT40	U-NII-1	Lowest	5 190	8.40
		Highest	5 230	8.19
	U-NII-2A	Lowest	5 270	10.90
		Highest	5 310	10.47
	U-NII-2C	Lowest	5 510	8.59
		Middle	5 550	8.81
		Highest	5 670	9.00
	U-NII-3	Lowest	5 755	8.41
Highest		5 795	7.32	
802.11ac VHT80	U-NII-1	Middle	5 210	5.86
	U-NII-2A	Middle	5 290	9.35
	U-NII-2C	Lowest	5 530	6.12
		Highest	5 690	5.98
	U-NII-3	Middle	5 775	5.12

Note<sub>1</sub>) : The above average output power were retested results.

Note<sub>2</sub>) : The worst-case data rates were:

802.11 a mode: 6 Mbps

802.11 n\_HT20 mode: MCS0

802.11 n\_HT40 mode: MCS0

802.11 ac\_VHT80 mode: MCS0

### 3.4 Test frequency

U-NII-1 (5 150 MHz – 5 250 MHz)			
Mode	Lowest frequency	Middle frequency	Highest frequency
802.11a/n_HT20	5 180 MHz	5 200 MHz	5 240 MHz
802.11n_HT40	5 190 MHz	-	5 230 MHz
802.11ac_VHT80	-	5 210 MHz	-
U-NII-2A (5 250 MHz – 5 350 MHz)			
802.11a/n_HT20	5 260 MHz	5 280 MHz	5 320 MHz
802.11n_HT40	5 270 MHz	-	5 310 MHz
802.11ac_VHT80	-	5 290 MHz	-
U-NII-2C (5 470 MHz – 5 725 MHz)			
802.11a/n_HT20	5 500 MHz	5 600 MHz	5 720 MHz
802.11n_HT40	5 510 MHz	5 550 MHz	5 710 MHz
802.11ac_VHT80	5 530 MHz	-	5 690 MHz
U-NII-3 (5 725 MHz – 5 850 MHz)			
802.11a/n_HT20	5 745 MHz	5 785 MHz	5 825 MHz
802.11n_HT40	5 755 MHz	-	5 795 MHz
802.11ac_VHT80	-	5 775 MHz	-

### 3.5 Normal and extreme test conditions

#### - Ambient Conditions

	Temperature [°C]	Relative humidity [%]
Requirement for tests	15 to 35	20 to 75
Ambient Conditions	23	51

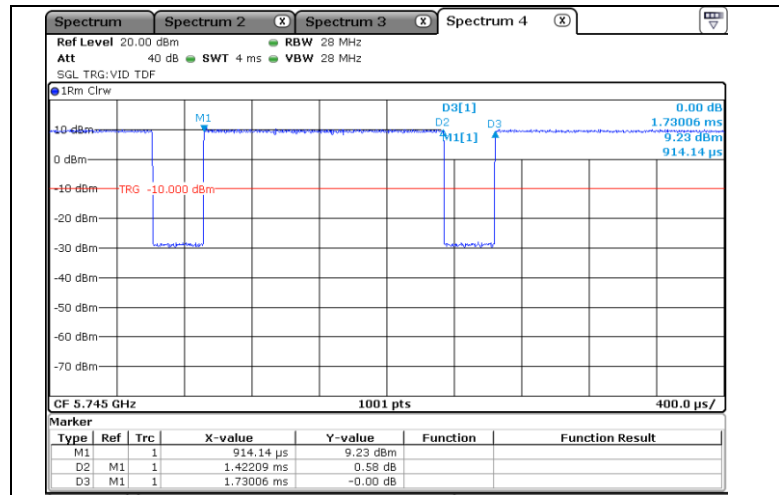
#### -Test Conditions

Test Condition	Temperature [°C]	Voltage [V]
NTNV	23	4.2

Note<sub>1</sub>) : N:Normal T:Temperature V:Voltage

### 3.6 Duty Cycle Correction Factor

- 802.11a



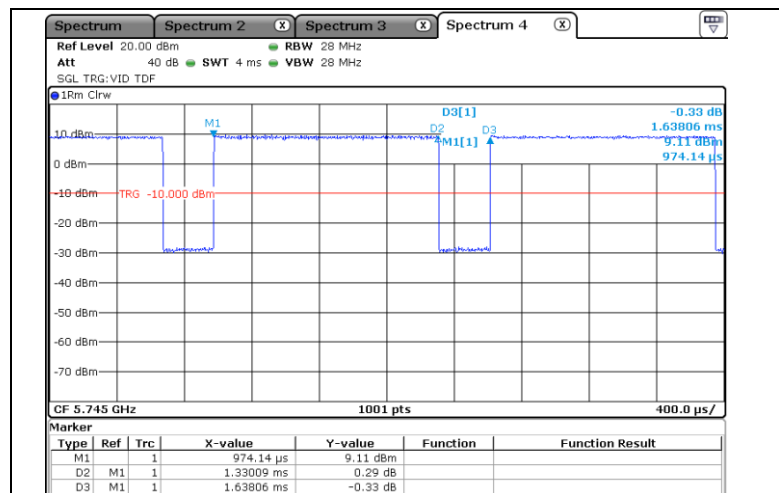
Note<sub>1</sub>) : Period : 1.73 ms, On time : 1.42 ms

Note<sub>2</sub>) : Duty Cycle : 82.20 %

Note<sub>3</sub>) : It is a non-continuous transmission (duty cycle < 98 %)

Note<sub>4</sub>) : Duty Cycle Correction Factor :  $10 \log(1 / x) = 10 \log(1 / (1.42 / 1.73)) = 0.85 \text{ dB}$

- 802.11n HT20



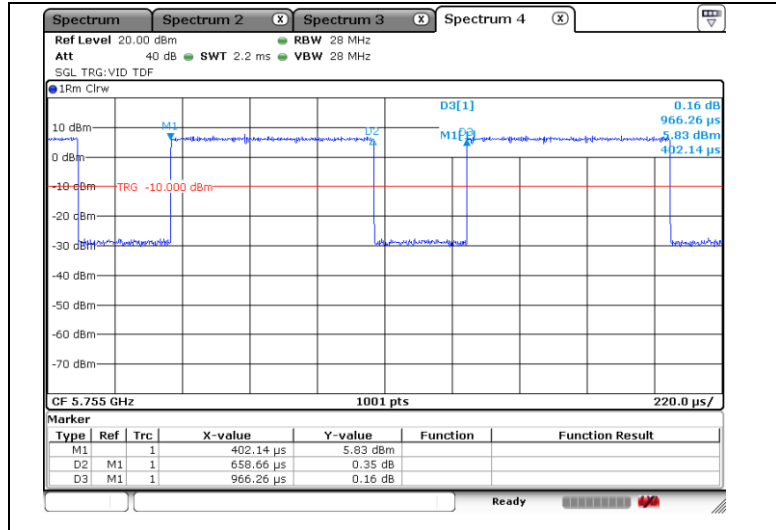
Note<sub>1</sub>) : Period : 1.64 ms, On time : 1.33 ms

Note<sub>2</sub>) : Duty Cycle : 81.20 %

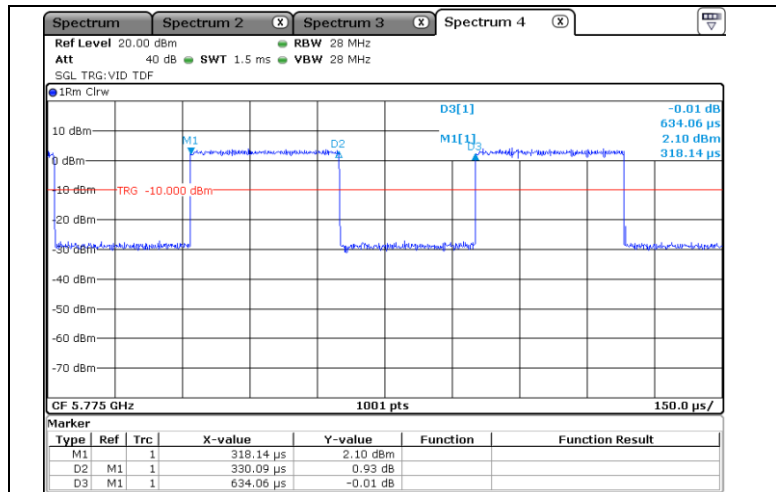
Note<sub>3</sub>) : It is a non-continuous transmission (duty cycle < 98 %)

Note<sub>4</sub>) : Duty Cycle Correction Factor :  $10 \log(1 / x) = 10 \log(1 / (1.33 / 1.64)) = 0.90 \text{ dB}$

- 802.11n HT40

Note<sub>1</sub> : Period : 0.97 ms, On time : 0.66 msNote<sub>2</sub> : Duty Cycle : 68.16 %Note<sub>3</sub> : It is a non-continuous transmission (duty cycle < 98 %)Note<sub>4</sub> : Duty Cycle Correction Factor :  $10 \log(1 / x) = 10 \log(1 / (0.66 / 0.97)) = 1.66 \text{ dB}$ 

- 802.11ac VHT80

Note<sub>1</sub> : Period : 0.63 ms, On time : 0.33 msNote<sub>2</sub> : Duty Cycle : 52.06 %Note<sub>3</sub> : It is a non-continuous transmission (duty cycle < 98 %)Note<sub>4</sub> : Duty Cycle Correction Factor :  $10 \log(1 / x) = 10 \log(1 / (0.33 / 0.63)) = 2.83 \text{ dB}$

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## 4. Summary of test results

### 4.1 Standards & results

FCC Rule Reference	IC Rule Reference	Parameter	Report Section	Test Result
15.203, 15.407(a)(1)(2)(3)	-	Antenna Requirement	5.1	C
15.205(a), 15.209(a), 15.407(b)(1), 15.407(b)(2), 15.407(b)(3)	RSS-247 Issue 2 6.2.1.2, RSS-247 Issue 2 6.2.2.2, RSS-247 Issue 2 6.2.3.2, RSS-247 Issue 2 6.2.4.2, RSS-Gen Issue 5 8.9	Spurious Emission, Band Edge and Restricted bands	5.2	C
Note <sub>1</sub> ) : C = complies, NC = Not complies, NT = Not tested, NA = Not Applicable				

Note: Measurement methods used to test this device are ANSI C63.10:2013  
and KDB789033 D02 v02r01

### 4.2 Measurement Uncertainty

Measurement Item	Expanded Uncertainty $U = kU_c (k = 2)$	
	Radiated Spurious Emissions	9 kHz ~ 30 MHz:
30 MHz ~ 300 MHz:		+4.94 dB, -5.06 dB
		+4.93 dB, -5.05 dB
300 MHz ~ 1 000 MHz:		+4.97 dB, -5.08 dB
		+4.84 dB, -4.96 dB
1 GHz ~ 25 GHz:	+6.03 dB, -6.05 dB	

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## 5. Test results

### 5.1 Antenna Requirement

#### 5.1.1 Regulation

According to §15.203, an intentional radiator shall be designed to ensure that no antenna other than that furnished by the responsible party shall be used with the device. The use of a permanently attached antenna or of an antenna that uses a unique coupling to the intentional radiator shall be considered sufficient to comply with the provisions of this Section. The manufacturer may design the unit so that a broken antenna can be replaced by the user, but the use of a standard antenna jack or electrical connector is prohibited.

And according to §15.407(a)(1)(2)(3), If transmitting antennas of directional gain greater than 6 dBi are used, both the maximum conducted output power and the peak power spectral density shall be reduced by the amount in dB that the directional gain of the antenna exceeds 6 dBi.

#### 5.1.2 Result

- Complied

The transmitter uses a unique coupling to the intentional radiator (two types of external antenna, Dipole antenna or Balance Flex antenna).

## 5.2 Spurious Emission, Band Edge And Restricted Bands

### 5.2.1 Regulation

According to §15.407(b)(1) For transmitters operating in the 5.15–5.25 GHz band: all emissions outside of the 5.15–5.35 GHz band shall not exceed an EIRP of -27 dBm/MHz.

According to §15.407(b) (2) For transmitters operating in the 5.25-5.35 GHzband: All emissions outside of the 5.15-5.35 GHzband shall not exceed an e.i.r.p. of -27 dBm/MHz.

According to §15.407(b) For transmitters operating in the 5.47-5.725 GHzband: All emissions outside of the 5.47-5.725 GHzband shall not exceed an e.i.r.p. of -27 dBm/MHz.

According to §15.407(b) (4) For transmitters operating in the 5.725-5.85 GHz band: All emissions within the frequency range from the band edge to 10 MHz above or below the band edge shall not exceed an e.i.r.p. of -17 dBm/MHz; for frequencies 10 MHz or greater above or below the band edge, emissions shall not exceed an e.i.r.p. of -27 dBm/MHz.

According to §15.407(b)(6) Unwanted emissions below 1 GHz must comply with the general field strength limits set forth in §15.209.

According to §15.209(a), Except as provided elsewhere in this subpart, the emissions from an intentional radiator shall not exceed the field strength levels specified in the following table:

Frequency (MHz)	Field strength (μV/m)	Measurement distance (m)
0.009 - 0.490	2 400/F(kHz)	300
0.490 -1.705	24 000/F(kHz)	30
1.705 - 30	30	30
30 - 88	100	3
88 - 216	150	3
216 - 960	200	3
Above 960	500	3

\*\* The emission limits shown in the above table are based on measurement instrumentation employing a CISPR quasi-peak detector and above 1000 MHz are based on the average value of measured emissions.

According to §15.407(b)(7) The provisions of §15.205 apply to intentional radiators operating under this section. (8) When measuring the emission limits, the nominal carrier frequency shall be adjusted as close to the upper and lower frequency block edges as the design of the equipment permits.



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According to § 15.205(a) and (b), only spurious emissions are permitted in any of the frequency bands listed below:

MHz	MHz	MHz	GHz
0.009 - 0.110	16.42 - 16.423	399.9 - 410	4.5 - 5.15
0.495 - 0.505	16.694 75 - 16.695 25	608 - 614	5.35 - 5.46
2.173 5 - 2.190 5	16.804 25 - 16.804 75	960 - 1 240	7.25 - 7.75
4.125 - 4.128	25.5 - 25.67	1 300 - 1 427	8.025 - 8.5
4.177 25 - 4.177 75	37.5 - 38.25	1 435 - 1 626.5	9.0 - 9.2
4.207 25 - 4.207 75	73 - 74.6	1 645.5 - 1 646.5	9.3 - 9.5
6.215 - 6.218	74.8 - 75.2	1 660 - 1 710	10.6 - 12.7
6.267 75 - 6.268 25	108 - 121.94	1 718.8 - 1 722.2	13.25 - 13.4
6.311 75 - 6.312 25	123 - 138	2 200 - 2 300	14.47 - 14.5
8.291 - 8.294	149.9 - 150.05	2 310 - 2 390	15.35 - 16.2
8.362 - 8.366	156.524 75 - 156.525	2 483.5 - 2 500	17.7 - 21.4
8.376 25 - 8.386 75	25	2 690 - 2 900	22.01 - 23.12
8.414 25 - 8.414 75	156.7 - 156.9	3 260 - 3 267	23.6 - 24.0
12.29 - 12.293	162.012 5 - 167.17	3 332 - 3 339	31.2 - 31.8
12.519 75 - 12.520	167.72 - 173.2	3 345.8 - 3 358	36.43 - 36.5
25	240 - 285	3 600 - 4 400	Above 38.6
12.576 75 - 12.577	322 - 335.4		
25			
13.36 - 13.41			

The field strength of emissions appearing within these frequency bands shall not exceed the limits shown in §15.209. At frequencies equal to or less than 1 000 MHz, compliance with the limits in §15.209 shall be demonstrated using measurement instrumentation employing a CISPR quasi-peak detector. Above 1 000 MHz, compliance with the emission limits in §15.209 shall be demonstrated based on the average value of the measured emissions. The provisions in §15.35 apply to these measurements.

## 5.2.2 Measurement Procedure

These test measurement settings are specified in section G of 789033 D02 General UNII Test Procedures New Rules v02r01.

For all radiated emissions tests, measurements must correspond to the direction of maximum emission level for each measured emission (see ANSI C63.10 for guidance).

### 5.2.2.1 Unwanted Emission Measurement

#### 5.2.2.1.1. Unwanted Emissions in the Restricted Bands

- a) For all measurements, follow the requirements in section II.G.3. "General Requirements for Unwanted Emissions Measurements."
- b) At frequencies below 1 000 MHz, use the procedure described in section II.G.4. "Procedure for Unwanted Emissions Measurements Below 1 000 MHz."
- c) At frequencies above 1 000 MHz, measurements performed using the peak and average measurement procedures described in sections II.G.5. and II.G.6, respectively, must satisfy the respective peak and average limits. If all peak measurements satisfy the average limit, then average measurements are not required.
- d) For conducted measurements above 1 000 MHz, EIRP shall be computed as specified in section II.G.3.b) and then field strength shall be computed as follows (see KDB Publication 412172): (i)  $E[\text{dB}\mu\text{V}/\text{m}] = \text{EIRP}[\text{dBm}] - 20 \log(d[\text{meters}]) + 104.77$ , where  $E$  = field strength and  $d$  = distance at which field strength limit is specified in the rules; (ii)  $E[\text{dB}\mu\text{V}/\text{m}] = \text{EIRP}[\text{dBm}] + 95.2$ , for  $d = 3$  meters.
- e) For conducted measurements below 1 000 MHz, the field strength shall be computed as specified in d), above, and then an additional 4.7 dB shall be added as an upper bound on the field strength that would be observed on a test range with a ground plane for frequencies between 30 MHz and 1 000 MHz, or an additional 6 dB shall be added for frequencies below 30 MHz.

### 5.2.2.1.2. Unwanted Emissions that fall Outside of the Restricted Bands

- a) For all measurements, follow the requirements in section II.G.3. "General Requirements for Unwanted Emissions Measurements."
- b) At frequencies below 1000 MHz, use the procedure described in section II.G.4. "Procedure for Unwanted Emissions Measurements Below 1000 MHz."
- c) At frequencies above 1000 MHz, use the procedure for maximum emissions described in section II.G.5., "Procedure for Unwanted Maximum Unwanted Emissions Measurements Above 1 000 MHz."
- (i) Section 15.407(b)(1-3) specifies the unwanted emissions limit for the U-NII-1 and 2 bands. As specified, emissions above 1000 MHz that are outside of the restricted bands are subject to a peak emission limit of -27 dBm/MHz. However, an out-of-band emission that complies with both the average and peak limits of Section 15.209 is not required to satisfy the -27 dBm/MHz dBm/MHz peak emission limit.
- (ii) Section 15.407(b)(4) specifies the unwanted emissions limit for the U-NII-3 band. A band emissions mask is specified in Section 15.407(b)(4)(i). An alternative to the band emissions mask is specified in Section 15.407(b)(4)(ii). The alternative limits are based on the highest antenna gain specified in the filing. There are also marketing and importation restrictions for the alternative limit.
- d) If radiated measurements are performed, field strength is then converted to EIRP as follows:
- (i)  $EIRP = ((E \times d)^2) / 30$  where:
- E is the field strength in V/m;
  - d is the measurement distance in meters;
  - EIRP is the equivalent isotropically radiated power in watts.
- (ii) Working in dB units, the above equation is equivalent to:  $EIRP[dBm] = E[dB\mu V/m] + 20 \log(d[meters]) - 104.77$
- (iii) Or, if d is 3 meters:  $EIRP[dBm] = E[dB\mu V/m] - 95.2$

### 5.2.2.1.3. Band edge measurements.

Unwanted band-edge emissions may be measured using either of the special band-edge measurement techniques (the marker-delta or integration methods) described in the following paragraphs. Note that the marker-delta method is primarily a radiated measurement technique that requires the 99% occupied bandwidth edge to be within 2 MHz of the authorized band edge, whereas the integration method can be used in either a radiated or conducted measurement without any special requirement with regards to the displacement of the unwanted emission(s) relative to the authorized bandwidth.

#### (i) Marker-Delta Method.

The marker-delta method, as described in ANSI C63.10, can be used to perform measurements of the radiated unwanted emissions level of emissions provided that the 99% occupied bandwidth of the fundamental is within 2 MHz of the authorized band-edge.

#### (ii) Integration Method

For maximum emissions measurements, follow the procedures described in II.G.5., "Procedures for Unwanted Maximum Emissions Measurements above 1000 MHz," except for the following changes:

- Set RBW = 100 kHz
- Set VBW  $\geq 3 \times$  RBW
- Perform a band-power integration across the 1 MHz bandwidth in which the band-edge emission level is to be measured. CAUTION: You must ensure that the spectrum analyzer or EMI receiver is set for peak-detection and max-hold for this measurement.

For average emissions measurements, follow the procedures described in II.G.6., "Procedures for Average Unwanted Emissions Measurements above 1000 MHz," except for the following changes:

- Set RBW = 100 kHz
- Set VBW  $\geq 3 \times$  RBW
- Perform a band-power integration across the 1 MHz bandwidth in which the band-edge emission level is to be measured.

### 5.2.2.2 Spurious Radiated Emissions

1. The preliminary and final radiated measurements were performed to determine the frequency producing the maximum emissions in at a 10m anechoic chamber. The EUT was tested at a distance 3 meters.
2. The EUT was placed on the top of the 0.8-meter height, 1 × 1.5 meter non-metallic table. To find the maximum emission levels, the height of a measuring antenna was changed and the turntable was rotated 360°.
3. The antenna polarization was also changed from vertical to horizontal. The spectrum was scanned from 9 kHz to 30 MHz using the loop antenna, and from 30 to 1 000 MHz using the TRILOG broadband antenna, and from 1 000 MHz to 40 000 MHz using the horn antenna.
4. Each frequency found during preliminary measurements was re-examined and investigated. The test-receiver system was set up to average, peak, and quasi-peak detector function with specified bandwidth.
5. The 0.8m height is measurement for below 1 GHz and 1.5m is for above 1 GHz measurement.

#### Note

1. The resolution bandwidth and video bandwidth of test receiver/spectrum analyzer is 120 kHz for Peak detection (PK) and Quasi-peak detection (QP) at frequency below 1 GHz.
2. The resolution bandwidth and video bandwidth of test receiver/spectrum analyzer is 1 MHz for Peak detection and frequency above 1 GHz.
3. Procedure for Unwanted Maximum Emissions Measurements above 1000 MHz
  - Follow the requirements in II.G.3, "General Requirements for Unwanted Emissions Measurements."
  - Maximum emission levels are measured by setting the analyzer as follows:  
RBW = 1 MHz / VBW ≥ 3 MHz / Detector = Peak / Sweep time = auto / Trace mode = max hold.
4. Procedures for Average Unwanted Emissions Measurements above 1000 MHz
  - a) Follow the requirements in II.G.3. "General Requirements for Unwanted Emission Measurements."
  - b) Average emission levels shall be measured using one of the following two methods.
  - c) Method AD (Average Detection): Primary method
    - i) RBW = 1 MHz
    - ii) VBW ≥ 3 MHz.
    - iii) Detector = power averaging (rms), if span(# of points in sweep) ≤ RBW/2. Satisfying this condition may require increasing the number of points in the sweep or reducing the span. If the condition is not satisfied, the detector mode shall be set to peak.
    - iv) Averaging type = power averaging (rms)  
  
As an alternative, the detector and averaging type may be set for linear voltage averaging. Some instruments require linear display mode in order to use linear voltage averaging. Log or dB averaging shall not be used.
  - v) Sweep time = auto.

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- vi) Perform a trace average of at least 100 traces if the transmission is continuous. If the transmission is not continuous, the number of traces shall be increased by a factor of  $1/x$ , where  $x$  is the duty cycle. For example, with 50% duty cycle, at least 200 traces shall be averaged. (If a specific emission is demonstrated to be continuous—i.e., 100% duty cycle—rather than turning on and off with the transmit cycle, at least 100 traces shall be averaged.)
- vii) If tests are performed with the EUT transmitting at a duty cycle less than 98%, a correction factor shall be added to the measurement results prior to comparing to the emission limit in order to compute the emission level that would have been measured had the test been performed at 100% duty cycle. The correction factor is computed as follows:
- If power averaging (rms) mode was used in II.G.6.c)(iv), the correction factor is  $10 \log (1/x)$ , where  $x$  is the duty cycle. For example, if the transmit duty cycle was 50%, then 3 dB must be added to the measured emission levels.
  - If linear voltage averaging mode was used in II.G.6.c)(iv), the correction factor is  $20 \log (1/x)$ , where  $x$  is the duty cycle. For example, if the transmit duty cycle was 50%, then 6 dB must be added to the measured emission levels.
  - If a specific emission is demonstrated to be continuous (100% duty cycle) rather than turning on and off with the transmit cycle, no duty cycle correction is required for that emission.

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**KCTL****RADIATED EMISSION TEST SITES FOR MEASUREMENTS FROM 9 kHz TO 30 MHz**

According to exploratory test no any obvious emission were detected from 9 kHz to 30 MHz. Although these tests were performed other than open area test site, adequate comparison measurements were confirmed against 30 m open are test site. Therefore sufficient tests were made to demonstrate that the alternative site produces results that correlate with the ones of tests made in an open field based on KDB 414788.

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### 5.2.3.1 Test Result (Dipole Antenna)

**Test Condition:** Refer to the clause 3.6 Normal and extreme test conditions

#### - Complied

1. Measured value of the Field strength of spurious Emissions (Radiated).
2. It tested x,y and z – 3 axis each, mentioned only worst case data at this report.
3. The worst case of this product is the y-axis.
4. The Worst-case rates:  
802.11a mode : 6 Mbps  
802.11n\_HT20/HT40 mode : MCS0  
802.11ac\_VHT80 : MCS0

#### - Below 1 GHz data (worst-case)

##### 802.11a Lowest Channel (5 180 MHz)

Frequency [MHz]	Receiver Bandwidth [kHz]	Pol. [V/H]	Reading [dB(μV)]	Cable Loss [dB]	Amp Gain [dB]	Antenna Factor [dB]	Factor [dB]	Result [dB(μV/m)]	Limit [dB(μV/m)]	Margin [dB]
<b>Quasi-Peak DATA. Emissions below 30 MHz</b>										
10.22	9	V	35.60	3.03	-32.67	18.64	-11.00	24.60	69.50	44.90
24.31	9	V	33.90	4.67	-32.68	18.21	-9.80	24.10	69.50	45.40
<b>Quasi-Peak DATA. Emissions below 1 GHz</b>										
137.55	120	H	32.90	2.54	-25.33	12.49	-10.30	22.60	43.50	20.90
268.14	120	H	35.30	3.64	-24.96	12.42	-8.90	26.40	46.00	19.60
405.51	120	H	43.50	4.60	-24.72	15.82	-4.30	39.20	46.00	6.80
479.23	120	H	37.20	5.02	-24.66	17.44	-2.20	35.00	46.00	11.00

Note1. Factor = Cable loss + Amp gain + Antenna factor  
Result = Reading + Factor



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**- Above 1 GHz data\_U-NII-1****- 802.11a****Lowest Channel (5 180 MHz)**

Frequency [MHz]	Receiver Bandwidth [kHz]	Pol. [V/H]	Reading [dB( $\mu$ V)]	Cable Loss [dB]	Amp Gain [dB]	Antenna Factor [dB]	Factor [dB]	DCCF [dB]	Result dB( $\mu$ V/m)]	Limit dB( $\mu$ V/m)]	Margin [dB]
<b>Peak DATA. Emissions above 1 GHz</b>											
5 147.49 <sup>1)</sup>	1 000	V	49.77	5.56	-32.68	33.12	6.00	-	55.77	74.00	18.23
6 063.95	1 000	H	65.48	6.13	-62.11	34.48	-21.50	-	43.98	68.20	24.22
10 356.81 <sup>2)</sup>	1 000	V	61.75	7.63	-60.07	37.29	-15.15	-	46.60	74.00	27.40
15 542.90 <sup>2)</sup>	1 000	V	66.53	11.26	-60.73	40.07	-9.40	-	57.13	68.20	11.07
24 329.13	1 000	V	41.07	12.80	-43.19	45.10	14.71	-	55.78	68.20	12.42
38 195.31	1 000	V	42.44	16.20	-45.10	45.60	16.70	-	59.13	68.20	9.07
<b>Average DATA. Emissions above 1 GHz</b>											
5 147.49 <sup>1)</sup>	1 000	V	41.55	5.56	-32.68	33.12	6.00	0.85	48.40	54.00	5.60
15 542.90 <sup>2)</sup>	1 000	V	57.58	11.26	-60.72	40.07	-9.39	0.85	49.04	54.00	4.96

Note. Factor = Cable loss + Amp. Gain + Antenna factor

Result = Reading + Factor + DCCF

<sup>1)</sup> Restricted band

<sup>2)</sup> Harmonic

**Middle Channel (5 200 MHz)**

Frequency [MHz]	Receiver Bandwidth [kHz]	Pol. [V/H]	Reading [dB( $\mu$ V)]	Cable Loss [dB]	Amp Gain [dB]	Antenna Factor [dB]	Factor [dB]	DCCF [dB]	Result dB( $\mu$ V/m)]	Limit dB( $\mu$ V/m)]	Margin [dB]
<b>Peak DATA. Emissions above 1 GHz</b>											
3 466.58	1 000	V	69.82	4.44	-61.01	30.96	-25.61	-	44.21	68.20	23.99
6 124.45	1 000	H	64.88	6.16	-62.10	34.56	-21.38	-	43.50	68.20	24.70
10 398.86 <sup>2)</sup>	1 000	V	60.73	7.64	-60.16	37.32	-15.20	-	45.53	74.00	28.47
15 601.72 <sup>2)</sup>	1 000	V	66.69	11.35	-60.75	40.10	-9.30	-	57.39	68.20	10.81
24 450.13	1 000	H	41.39	12.80	-43.39	45.10	14.51	-	55.90	68.20	12.30
38 198.06	1 000	H	42.67	16.20	-45.10	45.60	16.70	-	59.36	68.20	8.84
<b>Average DATA. Emissions above 1 GHz</b>											
15 601.72 <sup>2)</sup>	1 000	V	54.53	11.35	-60.79	40.10	-9.34	0.85	46.04	54.00	7.96

Note. Factor = Cable loss + Amp. Gain + Antenna factor

Result = Reading + Factor + DCCF

<sup>1)</sup> Restricted band

<sup>2)</sup> Harmonic

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**Highest Channel (5 240 MHz)**

Frequency [MHz]	Receiver Bandwidth [kHz]	Pol. [V/H]	Reading [dB( $\mu$ V)]	Cable Loss [dB]	Amp Gain [dB]	Antenna Factor [dB]	Factor [dB]	DCCF [dB]	Result dB( $\mu$ V/m)]	Limit dB( $\mu$ V/m)]	Margin [dB]
<b>Peak DATA. Emissions above 1 GHz</b>											
1 034.19 <sup>1)</sup>	1 000	V	81.27	2.50	-59.85	23.92	-33.43	-	47.84	74.00	26.16
6 192.52	1 000	H	64.49	6.20	-62.06	34.65	-21.21	-	43.28	68.20	24.92
10 480.08 <sup>2)</sup>	1 000	V	60.45	7.68	-60.36	37.38	-15.30	-	45.15	68.20	23.05
15 721.22 <sup>2)</sup>	1 000	V	61.68	11.57	-60.95	40.18	-9.20	-	52.48	74.00	21.52
24 316.06	1 000	H	41.10	12.80	-43.17	45.10	14.73	-	55.83	68.20	12.37
38 120.38	1 000	V	42.06	16.10	-45.13	45.70	16.67	-	58.73	68.20	9.47
<b>Average DATA. Emissions above 1 GHz</b>											
1 034.19 <sup>1)</sup>	1 000	V	71.77	2.50	-59.85	23.92	-33.43	0.85	39.19	54.00	14.81
15 721.22 <sup>2)</sup>	1 000	V	51.94	11.57	-60.96	40.18	-9.21	0.85	43.59	54.00	10.41

Note. Factor = Cable loss + Amp. Gain + Antenna factor

Result = Reading + Factor + DCCF

<sup>1)</sup> Restricted band

<sup>2)</sup> Harmonic

**- 802.11n HT20****Lowest Channel (5 180 MHz)**

Frequency [MHz]	Receiver Bandwidth [kHz]	Pol. [V/H]	Reading [dB( $\mu$ V)]	Cable Loss [dB]	Amp Gain [dB]	Antenna Factor [dB]	Factor [dB]	DCCF [dB]	Result dB( $\mu$ V/m)]	Limit dB( $\mu$ V/m)]	Margin [dB]
<b>Peak DATA. Emissions above 1 GHz</b>											
5 149.99 <sup>1)</sup>	1 000	V	51.93	5.56	-32.69	33.12	5.99	-	57.92	74.00	16.08
6 082.00	1 000	H	64.59	6.14	-62.14	34.51	-21.49	-	43.09	68.20	25.11
10 360.77 <sup>2)</sup>	1 000	V	59.74	7.63	-60.08	37.29	-15.16	-	44.58	68.20	23.62
15 544.05 <sup>2)</sup>	1 000	V	63.94	11.24	-60.70	40.06	-9.40	-	54.54	74.00	19.46
24 149.69	1 000	H	41.41	12.80	-42.89	45.10	15.01	-	56.41	68.20	11.79
38 088.06	1 000	V	41.91	16.10	-45.14	45.70	16.66	-	58.56	68.20	9.64
<b>Average DATA. Emissions above 1 GHz</b>											
5 149.99 <sup>1)</sup>	1 000	V	42.64	5.56	-32.69	33.12	5.99	0.90	49.53	54.00	4.47
15 544.05 <sup>2)</sup>	1 000	V	56.28	11.24	-60.71	40.06	-9.41	0.90	47.78	54.00	6.22

Note. Factor = Cable loss + Amp. Gain + Antenna factor

Result = Reading + Factor + DCCF

<sup>1)</sup> Restricted band

<sup>2)</sup> Harmonic

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**Middle Channel (5 200 MHz)**

Frequency [MHz]	Receiver Bandwidth [kHz]	Pol. [V/H]	Reading [dB( $\mu$ V)]	Cable Loss [dB]	Amp Gain [dB]	Antenna Factor [dB]	Factor [dB]	DCCF [dB]	Result dB( $\mu$ V/m)]	Limit dB( $\mu$ V/m)]	Margin [dB]
<b>Peak DATA. Emissions above 1 GHz</b>											
3 466.75	1 000	V	70.03	4.44	-61.01	30.96	-25.61	-	44.41	68.20	23.79
6 265.73	1 000	H	65.25	6.24	-62.01	34.75	-21.02	-	44.22	68.20	23.98
10 480.44 <sup>2)</sup>	1 000	H	59.19	7.68	-60.36	37.38	-15.30	-	43.89	68.20	24.31
15 600.03 <sup>2)</sup>	1 000	V	64.28	11.36	-60.76	40.10	-9.30	-	54.98	74.00	19.02
24 055.50	1 000	V	40.49	12.80	-42.64	45.00	15.16	-	55.66	68.20	12.54
38 200.13	1 000	H	41.99	16.20	-45.10	45.60	16.70	-	58.69	68.20	9.51
<b>Average DATA. Emissions above 1 GHz</b>											
15 600.03 <sup>2)</sup>	1 000	V	55.42	11.36	-60.79	40.10	-9.33	0.90	46.99	54.00	7.01

Note. Factor = Cable loss + Amp. Gain + Antenna factor

Result = Reading + Factor + DCCF

<sup>1)</sup> Restricted band

<sup>2)</sup> Harmonic

**Highest Channel (5 240 MHz)**

Frequency [MHz]	Receiver Bandwidth [kHz]	Pol. [V/H]	Reading [dB( $\mu$ V)]	Cable Loss [dB]	Amp Gain [dB]	Antenna Factor [dB]	Factor [dB]	DCCF [dB]	Result dB( $\mu$ V/m)]	Limit dB( $\mu$ V/m)]	Margin [dB]
<b>Peak DATA. Emissions above 1 GHz</b>											
1 034.28 <sup>1)</sup>	1 000	V	81.32	2.50	-59.87	23.93	-33.44	-	47.88	74.00	26.12
6 070.83	1 000	H	64.65	6.14	-62.15	34.49	-21.52	-	43.13	68.20	25.07
10 479.36 <sup>2)</sup>	1 000	V	59.65	7.68	-60.36	37.38	-15.30	-	44.36	68.20	23.84
15 718.69 <sup>2)</sup>	1 000	V	59.21	11.57	-60.95	40.18	-9.20	-	50.01	74.00	23.99
24 325.69	1 000	V	41.11	12.80	-43.18	45.10	14.72	-	55.83	68.20	12.37
37 865.31	1 000	V	42.61	16.10	-45.26	45.80	16.64	-	59.24	68.20	8.96
<b>Average DATA. Emissions above 1 GHz</b>											
1 034.28 <sup>1)</sup>	1 000	V	71.36	2.50	-59.87	23.93	-33.44	0.90	38.83	54.00	15.17
15 718.69 <sup>2)</sup>	1 000	V	49.97	11.57	-60.96	40.18	-9.21	0.90	41.67	54.00	12.33

Note. Factor = Cable loss + Amp. Gain + Antenna factor

Result = Reading + Factor + DCCF

<sup>1)</sup> Restricted band

<sup>2)</sup> Harmonic

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**- 802.11n HT40**

**Lowest Channel (5 190 MHz)**

Frequency [MHz]	Receiver Bandwidth [kHz]	Pol. [V/H]	Reading [dB( $\mu$ V)]	Cable Loss [dB]	Amp Gain [dB]	Antenna Factor [dB]	Factor [dB]	DCCF [dB]	Result dB( $\mu$ V/m)]	Limit dB( $\mu$ V/m)]	Margin [dB]
<b>Peak DATA. Emissions above 1 GHz</b>											
5 149.81 <sup>1)</sup>	1 000	V	54.27	5.56	-32.68	33.12	6.00	-	60.27	74.00	13.73
6 104.52	1 000	H	65.26	6.15	-62.13	34.54	-21.44	-	43.83	68.20	24.37
10 380.53 <sup>2)</sup>	1 000	H	60.26	7.64	-60.12	37.30	-15.18	-	45.08	68.20	23.12
17 063.11	1 000	H	57.81	11.91	-60.51	41.53	-7.07	-	50.74	68.20	17.46
24 128.38	1 000	H	41.08	12.80	-42.86	45.10	15.04	-	56.12	68.20	12.08
38 057.81	1 000	V	41.17	16.10	-45.15	45.70	16.65	-	57.82	68.20	10.38
<b>Average DATA. Emissions above 1 GHz</b>											
5 149.81 <sup>1)</sup>	1 000	V	43.31	5.56	-32.68	33.12	6.00	1.66	50.97	54.00	3.03

Note. Factor = Cable loss + Amp. Gain + Antenna factor

Result = Reading + Factor + DCCF

<sup>1)</sup> Restricted band

<sup>2)</sup> Harmonic

**Highest Channel (5 230 MHz)**

Frequency [MHz]	Receiver Bandwidth [kHz]	Pol. [V/H]	Reading [dB( $\mu$ V)]	Cable Loss [dB]	Amp Gain [dB]	Antenna Factor [dB]	Factor [dB]	DCCF [dB]	Result dB( $\mu$ V/m)]	Limit dB( $\mu$ V/m)]	Margin [dB]
<b>Peak DATA. Emissions above 1 GHz</b>											
1 024.23 <sup>1)</sup>	1 000	V	78.46	2.49	-59.81	23.90	-33.42	-	45.04	74.00	28.96
6 167.59	1 000	H	65.22	6.19	-62.08	34.62	-21.27	-	43.94	74.00	30.06
10 461.03 <sup>2)</sup>	1 000	H	59.40	7.67	-60.31	37.37	-15.27	-	44.13	68.20	24.07
17 106.95	1 000	V	57.90	11.92	-60.58	41.53	-7.13	-	50.77	68.20	17.43
24 310.56	1 000	H	42.54	12.80	-43.16	45.10	14.74	-	57.28	68.20	10.92
38 131.38	1 000	V	42.75	16.10	-45.13	45.70	16.67	-	59.43	68.20	8.77
<b>Average DATA. Emissions above 1 GHz</b>											
1 024.23 <sup>1)</sup>	1 000	V	69.68	2.49	-59.81	23.90	-33.42	1.66	37.92	54.00	16.08

Note. Factor = Cable loss + Amp. Gain + Antenna factor

Result = Reading + Factor + DCCF

<sup>1)</sup> Restricted band

<sup>2)</sup> Harmonic

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**- 802.11ac VHT80**

**Middle Channel (5 210 MHz)**

Frequency [MHz]	Receiver Bandwidth [kHz]	Pol. [V/H]	Reading [dB( $\mu$ V)]	Cable Loss [dB]	Amp Gain [dB]	Antenna Factor [dB]	Factor [dB]	DCCF [dB]	Result dB( $\mu$ V/m)]	Limit dB( $\mu$ V/m)]	Margin [dB]
<b>Peak DATA. Emissions above 1 GHz</b>											
1 008.54 <sup>1)</sup>	1 000	V	76.69	2.47	-59.66	23.81	-33.38	-	43.31	74.00	30.69
5 146.13 <sup>1)</sup>	1 000	V	51.24	5.57	-32.72	33.12	5.97	-	57.22	74.00	16.78
10 420.42 <sup>2)</sup>	1 000	H	60.45	7.65	-60.22	37.34	-15.23	-	45.22	68.20	22.98
17 075.69	1 000	V	57.81	11.91	-60.53	41.53	-7.09	-	50.72	68.20	17.48
24 281.69	1 000	V	40.16	12.80	-43.11	45.10	14.79	-	54.95	68.20	13.25
38 160.94	1 000	V	41.34	16.10	-45.12	45.70	16.68	-	58.03	68.20	10.17
<b>Average DATA. Emissions above 1 GHz</b>											
1 008.54 <sup>1)</sup>	1 000	V	65.78	2.47	-59.66	23.81	-33.38	2.83	35.24	54.00	18.76
5 146.13 <sup>1)</sup>	1 000	V	42.05	5.57	-32.72	33.12	5.97	2.83	50.86	54.00	3.14

Note. Factor = Cable loss + Amp. Gain + Antenna factor

Result = Reading + Factor + DCCF

<sup>1)</sup> Restricted band

<sup>2)</sup> Harmonic



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**KCTL****- Above 1 GHz data\_U-NII-2A****- 802.11a****Lowest Channel (5 260 MHz)**

Frequency [MHz]	Receiver Bandwidth [kHz]	Pol. [V/H]	Reading [dB( $\mu$ V)]	Cable Loss [dB]	Amp Gain [dB]	Antenna Factor [dB]	Factor [dB]	DCCF [dB]	Result dB( $\mu$ V/m)]	Limit dB( $\mu$ V/m)]	Margin [dB]
<b>Peak DATA. Emissions above 1 GHz</b>											
1 058.27 <sup>1)</sup>	1 000	V	82.43	2.52	-60.04	24.03	-33.49	-	48.95	74.00	25.05
3 506.97	1 000	V	69.51	4.46	-61.13	31.07	-25.60	-	43.91	68.20	24.29
10 522.13 <sup>2)</sup>	1 000	V	61.35	7.69	-60.42	37.42	-15.31	-	46.04	68.20	22.16
15 781.47 <sup>2)</sup>	1 000	V	60.62	11.67	-61.02	40.21	-9.14	-	51.47	74.00	22.53
24 036.25	1 000	H	41.50	12.80	-42.61	45.00	15.19	-	56.69	68.20	11.51
37 794.50	1 000	H	42.60	16.10	-45.26	45.80	16.64	-	59.24	68.20	8.96
<b>Average DATA. Emissions above 1 GHz</b>											
1 058.27 <sup>1)</sup>	1 000	V	73.29	2.52	-60.04	24.03	-33.49	0.85	40.65	54.00	13.35
15 781.47 <sup>2)</sup>	1 000	V	49.82	11.67	-61.02	40.21	-9.14	0.85	41.53	54.00	12.47

Note. Factor = Cable loss + Amp. Gain + Antenna factor

Result = Reading + Factor + DCCF

<sup>1)</sup> Restricted band

<sup>2)</sup> Harmonic

**Middle Channel (5 280 MHz)**

Frequency [MHz]	Receiver Bandwidth [kHz]	Pol. [V/H]	Reading [dB( $\mu$ V)]	Cable Loss [dB]	Amp Gain [dB]	Antenna Factor [dB]	Factor [dB]	DCCF [dB]	Result dB( $\mu$ V/m)]	Limit dB( $\mu$ V/m)]	Margin [dB]
<b>Peak DATA. Emissions above 1 GHz</b>											
1 075.28 <sup>1)</sup>	1 000	V	82.04	2.54	-60.16	24.10	-33.52	-	48.51	74.00	25.49
6 112.25	1 000	V	64.43	6.16	-62.13	34.55	-21.42	-	43.01	68.20	25.19
10 560.58 <sup>2)</sup>	1 000	H	58.53	7.71	-60.46	37.45	-15.30	-	43.23	68.20	24.97
17 039.03	1 000	H	58.40	11.91	-60.48	41.53	-7.04	-	51.36	74.00	22.64
24 299.56	1 000	V	40.52	12.80	-43.14	45.10	14.76	-	55.28	68.20	12.92
37 335.94	1 000	V	42.70	16.00	-45.44	46.10	16.66	-	59.36	68.20	8.84
<b>Average DATA. Emissions above 1 GHz</b>											
1 075.28 <sup>1)</sup>	1 000	V	73.38	2.54	-60.16	24.10	-33.52	0.85	40.71	54.00	13.29

Note. Factor = Cable loss + Amp. Gain + Antenna factor

Result = Reading + Factor + DCCF

<sup>1)</sup> Restricted band

<sup>2)</sup> Harmonic

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**Highest Channel (5 320 MHz)**

Frequency [MHz]	Receiver Bandwidth [kHz]	Pol. [V/H]	Reading [dB(μV)]	Cable Loss [dB]	Amp Gain [dB]	Antenna Factor [dB]	Factor [dB]	DCCF [dB]	Result dB(μV/m)	Limit dB(μV/m)	Margin [dB]
<b>Peak DATA. Emissions above 1 GHz</b>											
1 114.11 <sup>1)</sup>	1 000	V	82.55	2.58	-60.38	24.26	-33.54	-	49.00	74.00	25.00
5 351.07 <sup>1)</sup>	1 000	V	55.89	5.69	-33.29	33.43	5.83	-	61.71	74.00	12.29
10 638.28 <sup>2)</sup>	1 000	V	60.75	7.74	-60.53	37.51	-15.28	-	45.47	74.00	28.53
17 051.25	1 000	V	58.02	11.91	-60.50	41.53	-7.06	-	50.97	68.20	17.23
24 190.94	1 000	H	40.34	12.80	-42.96	45.10	14.94	-	55.28	68.20	12.92
38 189.81	1 000	V	41.94	16.10	-45.01	45.60	16.69	-	58.63	68.20	9.57
<b>Average DATA. Emissions above 1 GHz</b>											
1 114.11 <sup>1)</sup>	1 000	V	73.55	2.58	-60.38	24.26	-33.54	0.85	40.86	54.00	13.14
5 351.07 <sup>1)</sup>	1 000	V	42.73	5.69	-33.29	33.43	5.83	0.85	49.41	54.00	4.59
10 638.28 <sup>2)</sup>	1 000	V	51.02	7.74	-60.53	37.51	-15.28	0.85	36.59	54.00	17.41

Note. Factor = Cable loss + Amp. Gain + Antenna factor  
Result = Reading + Factor + DCCF

<sup>1)</sup> Restricted band

<sup>2)</sup> Harmonic

**- 802.11n HT20****Lowest Channel (5 260 MHz)**

Frequency [MHz]	Receiver Bandwidth [kHz]	Pol. [V/H]	Reading [dB(μV)]	Cable Loss [dB]	Amp Gain [dB]	Antenna Factor [dB]	Factor [dB]	DCCF [dB]	Result dB(μV/m)	Limit dB(μV/m)	Margin [dB]
<b>Peak DATA. Emissions above 1 GHz</b>											
1 056.55 <sup>1)</sup>	1 000	V	81.42	2.52	-60.04	24.03	-33.49	-	47.93	74.00	26.07
3 506.97	1 000	V	69.74	4.46	-61.13	31.07	-25.60	-	44.14	68.20	24.06
10 520.69 <sup>2)</sup>	1 000	V	59.98	7.69	-60.42	37.42	-15.31	-	44.67	68.20	23.53
17 088.27	1 000	H	58.18	11.91	-60.55	41.53	-7.11	-	51.07	68.20	17.13
24 102.94	1 000	V	40.82	12.80	-42.82	45.10	15.08	-	55.91	68.20	12.29
37 552.50	1 000	H	42.78	16.00	-45.35	46.00	16.65	-	59.43	68.20	8.77
<b>Average DATA. Emissions above 1 GHz</b>											
1 056.55 <sup>1)</sup>	1 000	V	72.58	2.52	-60.04	24.03	-33.49	0.90	40.00	54.00	14.00

Note. Factor = Cable loss + Amp. Gain + Antenna factor  
Result = Reading + Factor + DCCF

<sup>1)</sup> Restricted band

<sup>2)</sup> Harmonic

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**Middle Channel (5 280 MHz)**

Frequency [MHz]	Receiver Bandwidth [kHz]	Pol. [V/H]	Reading [dB(μV)]	Cable Loss [dB]	Amp Gain [dB]	Antenna Factor [dB]	Factor [dB]	DCCF [dB]	Result dB(μV/m)	Limit dB(μV/m)	Margin [dB]
<b>Peak DATA. Emissions above 1 GHz</b>											
1 073.91 <sup>1)</sup>	1 000	V	82.21	2.54	-60.16	24.10	-33.52	-	48.69	74.00	25.31
6 029.23	1 000	H	64.93	6.11	-62.18	34.44	-21.63	-	43.30	68.20	24.90
10 559.14 <sup>2)</sup>	1 000	H	59.55	7.71	-60.46	37.45	-15.30	-	44.25	68.20	23.95
17 077.84	1 000	V	58.76	11.91	-60.53	41.53	-7.09	-	51.67	68.20	16.53
24 072.69	1 000	H	40.76	12.80	-42.77	45.10	15.13	-	55.89	68.20	12.31
37 374.44	1 000	V	41.95	16.00	-45.44	46.10	16.66	-	58.61	68.20	9.59
<b>Average DATA. Emissions above 1 GHz</b>											
1 073.91 <sup>1)</sup>	1 000	V	70.25	2.54	-60.16	24.10	-33.52	0.90	37.64	54.00	16.36

Note. Factor = Cable loss + Amp. Gain + Antenna factor  
Result = Reading + Factor + DCCF

<sup>1)</sup> Restricted band

<sup>2)</sup> Harmonic

**Highest Channel (5 320 MHz)**

Frequency [MHz]	Receiver Bandwidth [kHz]	Pol. [V/H]	Reading [dB(μV)]	Cable Loss [dB]	Amp Gain [dB]	Antenna Factor [dB]	Factor [dB]	DCCF [dB]	Result dB(μV/m)	Limit dB(μV/m)	Margin [dB]
<b>Peak DATA. Emissions above 1 GHz</b>											
1 116.02 <sup>1)</sup>	1 000	V	82.75	2.58	-60.38	24.26	-33.54	-	49.21	74.00	24.79
5 350.49 <sup>1)</sup>	1 000	V	53.95	5.69	-33.30	33.43	5.82	-	59.77	74.00	14.23
10 640.48 <sup>2)</sup>	1 000	H	58.76	7.74	-60.53	37.51	-15.28	-	43.48	74.00	30.52
17 176.67	1 000	V	58.31	11.93	-60.69	41.53	-7.23	-	51.08	68.20	17.12
24 309.19	1 000	H	41.70	12.80	-43.16	45.10	14.74	-	56.45	68.20	11.75
37 881.81	1 000	V	42.38	16.10	-45.26	45.80	16.64	-	59.02	68.20	9.18
<b>Average DATA. Emissions above 1 GHz</b>											
1 116.02 <sup>1)</sup>	1 000	V	73.20	2.58	-60.38	24.26	-33.54	0.90	40.57	54.00	13.43
5 350.49 <sup>1)</sup>	1 000	V	42.41	5.69	-33.30	33.43	5.82	0.90	49.13	54.00	4.87
10 640.48 <sup>2)</sup>	1 000	H	51.22	7.74	-60.53	37.51	-15.28	0.90	36.85	54.00	17.15

Note. Factor = Cable loss + Amp. Gain + Antenna factor  
Result = Reading + Factor + DCCF

<sup>1)</sup> Restricted band

<sup>2)</sup> Harmonic



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**- 802.11n HT40**

**Lowest Channel (5 270 MHz)**

Frequency [MHz]	Receiver Bandwidth [kHz]	Pol. [V/H]	Reading [dB( $\mu$ V)]	Cable Loss [dB]	Amp Gain [dB]	Antenna Factor [dB]	Factor [dB]	DCCF [dB]	Result dB( $\mu$ V/m)]	Limit dB( $\mu$ V/m)]	Margin [dB]
<b>Peak DATA. Emissions above 1 GHz</b>											
1 062.39 <sup>1)</sup>	1 000	V	78.31	2.53	-60.08	24.05	-33.50	-	44.81	74.00	29.19
3 512.98	1 000	V	69.52	4.47	-61.16	31.09	-25.60	-	43.92	68.20	24.28
10 539.38 <sup>2)</sup>	1 000	H	59.37	7.70	-60.44	37.43	-15.31	-	44.06	68.20	24.14
17 065.63	1 000	H	57.64	11.91	-60.52	41.53	-7.08	-	50.56	68.20	17.64
24 325.69	1 000	V	41.47	12.80	-43.18	45.10	14.72	-	56.19	68.20	12.01
38 235.19	1 000	V	41.71	16.20	-45.09	45.60	16.71	-	58.42	68.20	9.78
<b>Average DATA. Emissions above 1 GHz</b>											
1 062.39 <sup>1)</sup>	1 000	V	66.71	2.53	-60.08	24.05	-33.50	1.66	34.88	54.00	19.12

Note. Factor = Cable loss + Amp. Gain + Antenna factor

Result = Reading + Factor + DCCF

<sup>1)</sup> Restricted band

<sup>2)</sup> Harmonic

**Highest Channel (5 310 MHz)**

Frequency [MHz]	Receiver Bandwidth [kHz]	Pol. [V/H]	Reading [dB( $\mu$ V)]	Cable Loss [dB]	Amp Gain [dB]	Antenna Factor [dB]	Factor [dB]	DCCF [dB]	Result dB( $\mu$ V/m)]	Limit dB( $\mu$ V/m)]	Margin [dB]
<b>Peak DATA. Emissions above 1 GHz</b>											
1 103.30 <sup>1)</sup>	1 000	V	77.73	2.57	-60.34	24.21	-33.56	-	44.17	74.00	29.83
5 350.58 <sup>1)</sup>	1 000	V	56.00	5.69	-33.32	33.43	5.80	-	61.80	74.00	12.20
10 616.09 <sup>2)</sup>	1 000	V	58.31	7.73	-60.51	37.50	-15.28	-	43.03	74.00	30.97
17 054.13	1 000	V	57.78	11.91	-60.50	41.53	-7.06	-	50.72	68.20	17.48
24 326.38	1 000	H	40.61	12.80	-43.19	45.10	14.71	-	55.33	68.20	12.87
38 139.63	1 000	V	41.41	16.10	-45.12	45.70	16.68	-	58.08	68.20	10.12
<b>Average DATA. Emissions above 1 GHz</b>											
1 103.30 <sup>1)</sup>	1 000	V	65.73	2.57	-60.34	24.21	-33.56	1.66	33.83	54.00	20.17
5 350.58 <sup>1)</sup>	1 000	V	41.34	5.69	-33.32	33.43	5.80	1.66	48.80	54.00	5.20
10 616.09 <sup>2)</sup>	1 000	V	49.52	7.73	-60.51	37.50	-15.28	1.66	35.90	54.00	18.10

Note. Factor = Cable loss + Amp. Gain + Antenna factor

Result = Reading + Factor + DCCF

<sup>1)</sup> Restricted band

<sup>2)</sup> Harmonic

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**- 802.11ac VHT80****Middle Channel (5 290 MHz)**

Frequency [MHz]	Receiver Bandwidth [kHz]	Pol. [V/H]	Reading [dB( $\mu$ V)]	Cable Loss [dB]	Amp Gain [dB]	Antenna Factor [dB]	Factor [dB]	DCCF [dB]	Result dB( $\mu$ V/m)]	Limit dB( $\mu$ V/m)]	Margin [dB]
<b>Peak DATA. Emissions above 1 GHz</b>											
1 089.36 <sup>1)</sup>	1 000	V	76.58	2.55	-60.25	24.15	-33.55	-	43.03	74.00	30.97
5 354.28 <sup>1)</sup>	1 000	V	51.25	5.69	-33.32	33.43	5.80	-	57.05	74.00	16.95
10 580.70 <sup>2)</sup>	1 000	H	58.41	7.72	-60.47	37.46	-15.29	-	43.11	68.20	25.09
17 048.02	1 000	V	57.17	11.91	-60.49	41.53	-7.05	-	50.12	68.20	18.08
24 263.13	1 000	V	40.89	12.80	-43.08	45.10	14.82	-	55.71	68.20	12.49
38 091.50	1 000	V	41.53	16.10	-45.14	45.70	16.66	-	58.19	68.20	10.01
<b>Average DATA. Emissions above 1 GHz</b>											
1 089.36 <sup>1)</sup>	1 000	V	64.63	2.55	-60.25	24.15	-33.55	2.83	33.92	54.00	20.08
5 354.28 <sup>1)</sup>	1 000	V	41.27	5.69	-33.32	33.43	5.80	2.83	49.90	54.00	4.10

Note. Factor = Cable loss + Amp. Gain + Antenna factor

Result = Reading + Factor + DCCF

<sup>1)</sup> Restricted band

<sup>2)</sup> Harmonic



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### - Above 1 GHz data\_U-NII-2C

#### - 802.11a

#### Lowest Channel (5 500 MHz)

Frequency [MHz]	Receiver Bandwidth [kHz]	Pol. [V/H]	Reading [dB( $\mu$ V)]	Cable Loss [dB]	Amp Gain [dB]	Antenna Factor [dB]	Factor [dB]	DCCF [dB]	Result dB( $\mu$ V/m)]	Limit dB( $\mu$ V/m)]	Margin [dB]
<b>Peak DATA. Emissions above 1 GHz</b>											
1 294.42	1 000	V	80.04	2.75	-60.31	24.98	-32.58	-	47.46	68.20	20.74
5 459.17 <sup>1)</sup>	1 000	V	54.46	5.76	-33.72	33.59	5.63	-	60.09	74.00	13.91
11 001.65 <sup>2)</sup>	1 000	V	59.65	7.89	-60.86	37.80	-15.17	-	44.49	74.00	29.51
17 099.77	1 000	H	58.72	11.91	-60.56	41.53	-7.12	-	51.59	68.20	16.61
24 153.81	1 000	V	40.72	12.80	-42.90	45.10	15.00	-	55.72	68.20	12.48
37 606.81	1 000	H	41.46	16.00	-45.35	46.00	16.65	-	58.10	68.20	10.10
<b>Average DATA. Emissions above 1 GHz</b>											
5 459.17 <sup>1)</sup>	1 000	V	40.07	5.76	-33.72	33.59	5.63	0.85	46.56	54.00	7.44
11 001.65 <sup>2)</sup>	1 000	V	50.65	7.89	-60.86	37.8	-15.17	0.85	36.33	54.00	17.67

Note. Factor = Cable loss + Amp. Gain + Antenna factor

Result = Reading + Factor + DCCF

<sup>1)</sup> Restricted band

<sup>2)</sup> Harmonic

#### Middle Channel (5 580 MHz)

Frequency [MHz]	Receiver Bandwidth [kHz]	Pol. [V/H]	Reading [dB( $\mu$ V)]	Cable Loss [dB]	Amp Gain [dB]	Antenna Factor [dB]	Factor [dB]	DCCF [dB]	Result dB( $\mu$ V/m)]	Limit dB( $\mu$ V/m)]	Margin [dB]
<b>Peak DATA. Emissions above 1 GHz</b>											
1 372.80 <sup>1)</sup>	1 000	V	79.93	2.82	-60.51	25.29	-32.40	-	47.52	74.00	26.48
6 100.22	1 000	H	65.60	6.15	-62.13	34.53	-21.45	-	44.16	74.00	29.84
11 160.38 <sup>2)</sup>	1 000	V	58.01	8.04	-60.58	37.95	-14.59	-	43.42	74.00	30.58
17 048.38	1 000	V	58.31	11.91	-60.49	41.53	-7.05	-	51.25	68.20	16.95
24 122.88	1 000	V	40.75	12.80	-42.85	45.10	15.05	-	55.80	68.20	12.40
38 207.00	1 000	V	41.63	16.20	-45.10	45.60	16.70	-	58.33	68.20	9.87
<b>Average DATA. Emissions above 1 GHz</b>											
1 372.80 <sup>1)</sup>	1 000	V	71.61	2.82	-60.51	25.29	-32.40	0.85	40.06	54.00	13.94
11 160.38 <sup>2)</sup>	1 000	V	49.65	8.04	-60.58	37.95	-14.59	0.85	35.91	54.00	18.09

Note. Factor = Cable loss + Amp. Gain + Antenna factor

Result = Reading + Factor + DCCF

<sup>1)</sup> Restricted band

<sup>2)</sup> Harmonic

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**Highest Channel (5 720 MHz)**

Frequency [MHz]	Receiver Bandwidth [kHz]	Pol. [V/H]	Reading [dB(μV)]	Cable Loss [dB]	Amp Gain [dB]	Antenna Factor [dB]	Factor [dB]	DCCF [dB]	Result dB(μV/m)	Limit dB(μV/m)	Margin [dB]
<b>Peak DATA. Emissions above 1 GHz</b>											
1 514.25	1 000	V	79.99	2.96	-61.10	25.86	-32.28	-	47.71	74.00	26.29
6 261.78 <sup>1)</sup>	1 000	V	64.26	6.23	-62.00	34.74	-21.03	-	43.23	74.00	30.77
11 440.89 <sup>2)</sup>	1 000	V	55.36	8.31	-60.10	38.21	-13.58	-	41.78	74.00	32.22
17 050.17	1 000	H	58.13	11.91	-60.49	41.53	-7.05	-	51.07	68.20	17.13
24 330.50	1 000	V	40.53	12.80	-43.19	45.10	14.71	-	55.24	68.20	12.96
37 952.63	1 000	V	41.59	16.10	-45.17	45.70	16.63	-	58.22	68.20	9.98
<b>Average DATA. Emissions above 1 GHz</b>											
1 514.25 <sup>1)</sup>	1 000	V	71.53	2.96	-61.10	25.86	-32.28	0.85	40.10	54.00	13.90
11 440.89 <sup>2)</sup>	1 000	V	47.53	8.31	-60.10	38.21	-13.58	0.85	34.80	54.00	19.20

Note. Factor = Cable loss + Amp. Gain + Antenna factor

Result = Reading + Factor + DCCF

<sup>1)</sup> Restricted band

<sup>2)</sup> Harmonic

**- 802.11n HT20****Lowest Channel (5 500 MHz)**

Frequency [MHz]	Receiver Bandwidth [kHz]	Pol. [V/H]	Reading [dB(μV)]	Cable Loss [dB]	Amp Gain [dB]	Antenna Factor [dB]	Factor [dB]	DCCF [dB]	Result dB(μV/m)	Limit dB(μV/m)	Margin [dB]
<b>Peak DATA. Emissions above 1 GHz</b>											
1 292.70	1 000	V	78.40	2.75	-60.31	24.97	-32.59	-	45.80	68.20	22.40
5 459.11 <sup>1)</sup>	1 000	V	48.56	5.76	-33.71	33.59	5.64	-	54.20	74.00	19.80
11 003.32 <sup>2)</sup>	1 000	V	59.85	7.89	-60.85	37.80	-15.16	-	44.69	74.00	29.31
17 030.05	1 000	H	58.40	11.90	-60.46	41.53	-7.03	-	51.38	68.20	16.82
24 105.00	1 000	V	40.90	12.80	-42.82	45.10	15.08	-	55.98	68.20	12.22
37 405.38	1 000	V	42.71	16.00	-45.44	46.10	16.66	-	59.37	68.20	8.83
<b>Average DATA. Emissions above 1 GHz</b>											
5 459.11 <sup>1)</sup>	1 000	V	39.79	5.76	-33.71	33.59	5.64	0.90	46.33	54.00	7.67
11 003.32 <sup>2)</sup>	1 000	V	50.51	7.89	-60.85	37.80	-15.16	0.90	36.26	54.00	17.74

Note. Factor = Cable loss + Amp. Gain + Antenna factor

Result = Reading + Factor + DCCF

<sup>1)</sup> Restricted band

<sup>2)</sup> Harmonic

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**KCTL****Middle Channel (5 580 MHz)**

Frequency [MHz]	Receiver Bandwidth [kHz]	Pol. [V/H]	Reading [dB( $\mu$ V)]	Cable Loss [dB]	Amp Gain [dB]	Antenna Factor [dB]	Factor [dB]	DCCF [dB]	Result dB( $\mu$ V/m)]	Limit dB( $\mu$ V/m)]	Margin [dB]
<b>Peak DATA. Emissions above 1 GHz</b>											
1 375.65 <sup>1)</sup>	1 000	V	70.88	2.83	-60.53	25.30	-32.40	-	38.48	74.00	35.52
6 326.23	1 000	H	69.63	6.27	-61.96	34.82	-20.87	-	48.76	68.20	19.44
11 160.07 <sup>2)</sup>	1 000	V	58.25	8.04	-60.58	37.95	-14.59	-	43.65	74.00	30.35
17 070.66	1 000	V	57.76	11.91	-60.52	41.53	-7.08	-	50.68	68.20	17.52
24 083.69	1 000	V	40.50	12.80	-42.78	45.10	15.12	-	55.62	68.20	12.58
37 832.31	1 000	V	41.57	16.10	-45.26	45.80	16.64	-	58.21	68.20	9.99
<b>Average DATA. Emissions above 1 GHz</b>											
1 375.65 <sup>1)</sup>	1 000	V	62.14	2.83	-60.53	25.30	-32.40	0.90	30.64	54.00	23.36
11 160.07 <sup>2)</sup>	1 000	V	50.09	8.04	-60.58	37.95	-14.59	0.90	36.40	54.00	17.60

Note. Factor = Cable loss + Amp. Gain + Antenna factor

Result = Reading + Factor + DCCF

<sup>1)</sup> Restricted band

<sup>2)</sup> Harmonic

**Highest Channel (5 720 MHz)**

Frequency [MHz]	Receiver Bandwidth [kHz]	Pol. [V/H]	Reading [dB( $\mu$ V)]	Cable Loss [dB]	Amp Gain [dB]	Antenna Factor [dB]	Factor [dB]	DCCF [dB]	Result dB( $\mu$ V/m)]	Limit dB( $\mu$ V/m)]	Margin [dB]
<b>Peak DATA. Emissions above 1 GHz</b>											
1 343.90 <sup>1)</sup>	1 000	H	70.99	2.80	-60.44	25.18	-32.46	-	38.54	74.00	35.46
6 333.45	1 000	V	68.93	6.27	-61.95	34.83	-20.85	-	48.08	68.20	20.12
11 441.21 <sup>2)</sup>	1 000	V	55.00	8.31	-60.10	38.21	-13.58	-	41.42	74.00	32.58
17 054.84	1 000	V	58.74	11.91	-60.50	41.53	-7.06	-	51.68	68.20	16.52
24 300.25	1 000	H	40.59	12.80	-43.14	45.10	14.76	-	55.35	68.20	12.85
37 454.88	1 000	V	41.40	16.00	-45.45	46.10	16.65	-	58.05	68.20	10.15
<b>Average DATA. Emissions above 1 GHz</b>											
1 343.90 <sup>1)</sup>	1 000	H	65.15	2.80	-60.44	25.18	-32.46	0.90	33.60	54.00	20.40
11 441.21 <sup>2)</sup>	1 000	V	47.43	8.31	-60.10	38.21	-13.58	0.90	34.75	54.00	19.25

Note. Factor = Cable loss + Amp. Gain + Antenna factor

Result = Reading + Factor + DCCF

<sup>1)</sup> Restricted band

<sup>2)</sup> Harmonic

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**- 802.11n HT40****Lowest Channel (5 510 MHz)**

Frequency [MHz]	Receiver Bandwidth [kHz]	Pol. [V/H]	Reading [dB( $\mu$ V)]	Cable Loss [dB]	Amp Gain [dB]	Antenna Factor [dB]	Factor [dB]	DCCF [dB]	Result dB( $\mu$ V/m)]	Limit dB( $\mu$ V/m)]	Margin [dB]
<b>Peak DATA. Emissions above 1 GHz</b>											
1 343.98 <sup>1)</sup>	1 000	H	70.94	2.80	-60.44	25.18	-32.46	-	38.49	74.00	35.51
5 459.03 <sup>1)</sup>	1 000	V	50.08	5.76	-33.72	33.59	5.63	-	55.71	74.00	18.29
11 021.74 <sup>2)</sup>	1 000	V	58.75	7.91	-60.82	37.82	-15.09	-	43.66	74.00	30.34
17 074.97	1 000	V	58.38	11.91	-60.53	41.53	-7.09	-	51.29	68.20	16.91
24 056.88	1 000	V	40.72	12.80	-42.64	45.00	15.16	-	55.88	68.20	12.32
37 579.31	1 000	V	41.09	16.00	-45.35	46.00	16.65	-	57.73	68.20	10.47
<b>Average DATA. Emissions above 1 GHz</b>											
1 343.98 <sup>1)</sup>	1 000	H	65.19	2.80	-60.44	25.18	-32.46	1.66	34.40	54.00	19.60
5 459.03 <sup>1)</sup>	1 000	V	39.61	5.76	-33.72	33.59	5.63	1.66	46.91	54.00	7.09
11 021.74 <sup>2)</sup>	1 000	V	48.80	7.91	-60.82	37.82	-15.09	1.66	35.37	54.00	18.63

Note. Factor = Cable loss + Amp. Gain + Antenna factor

Result = Reading + Factor + DCCF

<sup>1)</sup> Restricted band

<sup>2)</sup> Harmonic

**Middle Channel (5 550 MHz)**

Frequency [MHz]	Receiver Bandwidth [kHz]	Pol. [V/H]	Reading [dB( $\mu$ V)]	Cable Loss [dB]	Amp Gain [dB]	Antenna Factor [dB]	Factor [dB]	DCCF [dB]	Result dB( $\mu$ V/m)]	Limit dB( $\mu$ V/m)]	Margin [dB]
<b>Peak DATA. Emissions above 1 GHz</b>											
1 343.97 <sup>1)</sup>	1 000	H	69.76	2.80	-60.44	25.18	-32.46	-	37.31	74.00	36.69
6 161.06	1 000	V	70.22	6.18	-62.08	34.61	-21.29	-	48.93	68.20	19.27
11 102.54 <sup>2)</sup>	1 000	H	57.67	7.99	-60.68	37.89	-14.80	-	42.86	74.00	31.14
17 094.02	1 000	V	57.50	11.91	-60.55	41.53	-7.11	-	50.38	68.20	17.82
24 258.31	1 000	V	41.18	12.80	-43.07	45.10	14.83	-	56.00	68.20	12.20
37 297.44	1 000	V	41.55	16.00	-45.54	46.20	16.66	-	58.22	68.20	9.98
<b>Average DATA. Emissions above 1 GHz</b>											
1 343.97 <sup>1)</sup>	1 000	H	65.32	2.80	-60.44	25.18	-32.46	1.66	34.53	54.00	19.47
11 102.54 <sup>2)</sup>	1 000	H	49.98	7.99	-60.68	37.89	-14.80	1.66	36.84	54.00	17.16

Note. Factor = Cable loss + Amp. Gain + Antenna factor

Result = Reading + Factor + DCCF

<sup>1)</sup> Restricted band

<sup>2)</sup> Harmonic

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**Highest Channel (5 710 MHz)**

Frequency [MHz]	Receiver Bandwidth [kHz]	Pol. [V/H]	Reading [dB(μV)]	Cable Loss [dB]	Amp Gain [dB]	Antenna Factor [dB]	Factor [dB]	DCCF [dB]	Result dB(μV/m)	Limit dB(μV/m)	Margin [dB]
<b>Peak DATA. Emissions above 1 GHz</b>											
1 344.00 <sup>1)</sup>	1 000	H	71.16	2.80	-60.43	25.18	-32.45	-	38.70	74.00	35.30
6 108.13	1 000	H	72.24	6.16	-62.13	34.54	-21.43	-	50.81	68.20	17.39
11 415.30 <sup>2)</sup>	1 000	V	57.13	8.29	-60.13	38.19	-13.65	-	43.47	74.00	30.53
17 053.77	1 000	V	57.73	11.91	-60.50	41.53	-7.06	-	50.68	68.20	17.52
24 076.81	1 000	V	41.01	12.80	-42.77	45.10	15.13	-	56.14	68.20	12.06
37 793.13	1 000	V	42.02	16.10	-45.26	45.80	16.64	-	58.66	68.20	9.54
<b>Average DATA. Emissions above 1 GHz</b>											
1 344.00 <sup>1)</sup>	1 000	H	65.48	2.80	-60.43	25.18	-32.45	1.66	34.69	54.00	19.31
11 415.30 <sup>2)</sup>	1 000	V	49.28	8.29	-60.13	38.19	-13.65	1.66	37.29	54.00	16.71

Note. Factor = Cable loss + Amp. Gain + Antenna factor

Result = Reading + Factor + DCCF

<sup>1)</sup> Restricted band

<sup>2)</sup> Harmonic

**- 802.11ac VHT80****Lowest Channel (5 530 MHz)**

Frequency [MHz]	Receiver Bandwidth [kHz]	Pol. [V/H]	Reading [dB(μV)]	Cable Loss [dB]	Amp Gain [dB]	Antenna Factor [dB]	Factor [dB]	DCCF [dB]	Result dB(μV/m)	Limit dB(μV/m)	Margin [dB]
<b>Peak DATA. Emissions above 1 GHz</b>											
1 344.09 <sup>1)</sup>	1 000	H	71.68	2.80	-60.43	25.18	-32.45	-	39.22	74.00	34.78
5 457.41 <sup>1)</sup>	1 000	V	50.29	5.76	-33.72	33.59	5.63	-	55.92	74.00	18.08
11 059.95 <sup>2)</sup>	1 000	V	58.88	7.95	-60.76	37.86	-14.95	-	43.93	74.00	30.07
17 047.66	1 000	H	58.35	11.91	-60.49	41.53	-7.05	-	51.30	68.20	16.90
24 330.50	1 000	H	41.21	12.80	-43.19	45.10	14.71	-	55.92	68.20	12.28
37 892.81	1 000	H	41.66	16.10	-45.26	45.80	16.64	-	58.29	68.20	9.91
<b>Average DATA. Emissions above 1 GHz</b>											
1 344.09 <sup>1)</sup>	1 000	H	65.30	2.80	-60.43	25.18	-32.45	2.83	35.68	54.00	18.32
5 457.41 <sup>1)</sup>	1 000	V	41.02	5.76	-33.72	33.59	5.63	2.83	49.49	54.00	4.51
11 059.95 <sup>2)</sup>	1 000	V	50.10	7.95	-60.76	37.86	-14.95	2.83	37.98	54.00	16.02

Note. Factor = Cable loss + Amp. Gain + Antenna factor

Result = Reading + Factor + DCCF

<sup>1)</sup> Restricted band

<sup>2)</sup> Harmonic

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**Highest Channel (5 690 MHz)**

Frequency [MHz]	Receiver Bandwidth [kHz]	Pol. [V/H]	Reading [dB( $\mu$ V)]	Cable Loss [dB]	Amp Gain [dB]	Antenna Factor [dB]	Factor [dB]	DCCF [dB]	Result dB( $\mu$ V/m)]	Limit dB( $\mu$ V/m)]	Margin [dB]
<b>Peak DATA. Emissions above 1 GHz</b>											
1 344.00 <sup>1)</sup>	1 000	H	70.21	2.80	-60.44	25.18	-32.46	-	37.75	74.00	36.25
6 329.67	1 000	H	71.93	6.27	-61.96	34.83	-20.86	-	51.07	68.20	17.13
11 384.11 <sup>2)</sup>	1 000	V	58.76	8.26	-60.21	38.15	-13.80	-	44.96	74.00	29.04
17 068.14	1 000	H	58.63	11.91	-60.52	41.53	-7.08	-	51.55	68.20	16.65
24 124.25	1 000	V	40.24	12.80	-42.85	45.10	15.05	-	55.29	68.20	12.91
37 808.94	1 000	V	41.41	16.10	-45.26	45.80	16.64	-	58.05	68.20	10.15
<b>Average DATA. Emissions above 1 GHz</b>											
1 344.00 <sup>1)</sup>	1 000	H	65.35	2.80	-60.44	25.18	-32.46	2.83	35.73	54.00	18.27
11 384.11 <sup>2)</sup>	1 000	V	50.08	8.26	-60.21	38.15	-13.80	2.83	39.12	54.00	14.88

Note. Factor = Cable loss + Amp. Gain + Antenna factor  
Result = Reading + Factor + DCCF

<sup>1)</sup> Restricted band

<sup>2)</sup> Harmonic

- Above 1 GHz data\_U-NII-3

- 802.11a

**Lowest Channel (5 745 MHz)**

Frequency [MHz]	Receiver Bandwidth [kHz]	Pol. [V/H]	Reading [dB( $\mu$ V)]	Cable Loss [dB]	Amp Gain [dB]	Antenna Factor [dB]	Factor [dB]	DCCF [dB]	Result dB( $\mu$ V/m)]	Limit dB( $\mu$ V/m)]	Margin [dB]
<b>Peak DATA. Emissions above 1 GHz</b>											
1 540.57 <sup>1)</sup>	1 000	V	79.05	2.98	-61.02	25.95	-32.09	-	46.97	74.00	27.03
5 717.11	1 000	V	60.61	5.92	-32.65	33.98	7.25	-	67.86	109.99	42.13
11 494.75 <sup>2)</sup>	1 000	V	57.38	8.36	-60.01	38.25	-13.40	-	43.98	74.00	30.02
17 045.86	1 000	H	58.49	11.91	-60.49	41.53	-7.05	-	51.44	68.20	16.76
24 041.06	1 000	V	40.15	12.80	-42.61	45.00	15.19	-	55.33	68.20	12.87
38 191.19	1 000	V	42.01	16.10	-45.01	45.60	16.69	-	58.71	68.20	9.49
<b>Average DATA. Emissions above 1 GHz</b>											
1 540.57 <sup>1)</sup>	1 000	V	70.24	2.98	-61.02	25.95	-32.09	0.85	39.01	54.00	14.99
11 494.75 <sup>2)</sup>	1 000	V	47.90	8.36	-60.01	38.25	-13.40	0.85	35.35	54.00	18.65

Note. Factor = Cable loss + Amp. Gain + Antenna factor  
Result = Reading + Factor + DCCF

<sup>1)</sup> Restricted band

<sup>2)</sup> Harmonic



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**Middle Channel (5 785 MHz)**

Frequency [MHz]	Receiver Bandwidth [kHz]	Pol. [V/H]	Reading [dB( $\mu$ V)]	Cable Loss [dB]	Amp Gain [dB]	Antenna Factor [dB]	Factor [dB]	DCCF [dB]	Result dB( $\mu$ V/m)	Limit dB( $\mu$ V/m)	Margin [dB]
<b>Peak DATA. Emissions above 1 GHz</b>											
1 579.22 <sup>1)</sup>	1 000	V	78.17	3.02	-60.86	26.12	-31.72	-	46.45	74.00	27.55
6 188.39	1 000	H	63.74	6.20	-62.06	34.64	-21.22	-	42.52	68.20	25.68
11 569.55 <sup>2)</sup>	1 000	H	58.97	8.44	-60.02	38.32	-13.26	-	45.71	74.00	28.29
17 063.47	1 000	V	58.00	11.91	-60.51	41.53	-7.07	-	50.93	68.20	17.27
24 233.56	1 000	V	41.29	12.80	-43.03	45.10	14.87	-	56.16	68.20	12.04
38 147.88	1 000	H	42.45	16.10	-45.12	45.70	16.68	-	59.13	68.20	9.07
<b>Average DATA. Emissions above 1 GHz</b>											
1 579.22 <sup>1)</sup>	1 000	V	68.61	3.02	-60.86	26.12	-31.72	0.85	37.74	54.00	16.26
11 569.55 <sup>2)</sup>	1 000	H	50.06	8.44	-60.02	38.32	-13.26	0.85	37.65	54.00	16.35

Note. Factor = Cable loss + Amp. Gain + Antenna factor

Result = Reading + Factor + DCCF

<sup>1)</sup> Restricted band

<sup>2)</sup> Harmonic

**Highest Channel (5 825 MHz)**

Frequency [MHz]	Receiver Bandwidth [kHz]	Pol. [V/H]	Reading [dB( $\mu$ V)]	Cable Loss [dB]	Amp Gain [dB]	Antenna Factor [dB]	Factor [dB]	DCCF [dB]	Result dB( $\mu$ V/m)	Limit dB( $\mu$ V/m)	Margin [dB]
<b>Peak DATA. Emissions above 1 GHz</b>											
1 618.23 <sup>1)</sup>	1 000	V	80.19	3.06	-60.74	26.27	-31.41	-	48.78	74.00	25.22
5 857.02	1 000	V	51.20	6.01	-32.65	34.19	7.55	-	58.74	110.24	51.50
11 650.56 <sup>2)</sup>	1 000	V	57.28	8.51	-60.04	38.40	-13.13	-	44.15	74.00	29.85
17 066.70	1 000	H	58.36	11.91	-60.52	41.53	-7.08	-	51.29	68.20	16.91
24 105.00	1 000	V	41.03	12.80	-42.82	45.10	15.08	-	56.11	68.20	12.09
37 814.44	1 000	V	41.78	16.10	-45.26	45.80	16.64	-	58.42	68.20	9.78
<b>Average DATA. Emissions above 1 GHz</b>											
1 618.23 <sup>1)</sup>	1 000	V	71.98	3.06	-60.74	26.27	-31.41	0.85	41.42	54.00	12.58
11 650.56 <sup>2)</sup>	1 000	V	48.37	8.51	-60.04	38.40	-13.13	0.85	36.09	54.00	17.91

Note. Factor = Cable loss + Amp. Gain + Antenna factor

Result = Reading + Factor + DCCF

<sup>1)</sup> Restricted band

<sup>2)</sup> Harmonic

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**KCTL****- 802.11n HT20****Lowest Channel (5 745 MHz)**

Frequency [MHz]	Receiver Bandwidth [kHz]	Pol. [V/H]	Reading [dB( $\mu$ V)]	Cable Loss [dB]	Amp Gain [dB]	Antenna Factor [dB]	Factor [dB]	DCCF [dB]	Result dB( $\mu$ V/m)]	Limit dB( $\mu$ V/m)]	Margin [dB]
<b>Peak DATA. Emissions above 1 GHz</b>											
1 540.57 <sup>1)</sup>	1 000	V	79.05	2.98	-61.02	25.95	-32.09	-	46.97	74.00	27.03
5 715.56	1 000	V	55.69	5.92	-32.64	33.97	7.25	-	62.94	109.56	46.62
11 494.31 <sup>2)</sup>	1 000	V	57.21	8.36	-60.01	38.25	-13.40	-	43.81	74.00	30.19
17 065.27	1 000	V	58.38	11.91	-60.51	41.53	-7.07	-	51.31	68.20	16.89
24 299.56	1 000	H	41.58	12.80	-43.14	45.10	14.76	-	56.34	68.20	11.86
37 375.81	1 000	V	42.33	16.00	-45.44	46.10	16.66	-	58.99	68.20	9.21
<b>Average DATA. Emissions above 1 GHz</b>											
1 540.57 <sup>1)</sup>	1 000	V	70.24	2.98	-61.02	25.95	-32.09	0.90	39.06	54.00	14.94
11 494.31 <sup>2)</sup>	1 000	V	49.02	8.36	-60.01	38.25	-13.40	0.90	36.52	54.00	17.48

Note. Factor = Cable loss + Amp. Gain + Antenna factor

Result = Reading + Factor + DCCF

<sup>1)</sup> Restricted band

<sup>2)</sup> Harmonic

**Middle Channel (5 785 MHz)**

Frequency [MHz]	Receiver Bandwidth [kHz]	Pol. [V/H]	Reading [dB( $\mu$ V)]	Cable Loss [dB]	Amp Gain [dB]	Antenna Factor [dB]	Factor [dB]	DCCF [dB]	Result dB( $\mu$ V/m)]	Limit dB( $\mu$ V/m)]	Margin [dB]
<b>Peak DATA. Emissions above 1 GHz</b>											
1 580.17 <sup>1)</sup>	1 000	V	77.94	3.02	-60.86	26.12	-31.72	-	46.23	74.00	27.77
6 288.59	1 000	H	63.97	6.25	-61.99	34.78	-20.96	-	43.01	68.20	25.19
11 570.88 <sup>2)</sup>	1 000	H	58.78	8.44	-60.02	38.32	-13.26	-	45.53	74.00	28.47
17 048.38	1 000	H	58.21	11.91	-60.49	41.53	-7.05	-	51.16	68.20	17.04
24 285.13	1 000	H	41.91	12.80	-43.12	45.10	14.78	-	56.70	68.20	11.50
37 619.19	1 000	H	41.98	16.00	-45.35	46.00	16.65	-	58.63	68.20	9.57
<b>Average DATA. Emissions above 1 GHz</b>											
1 580.17 <sup>1)</sup>	1 000	V	66.07	3.02	-60.86	26.12	-31.72	0.90	35.26	54.00	18.74
11 570.88 <sup>2)</sup>	1 000	H	50.21	8.44	-60.02	38.32	-13.26	0.90	37.86	54.00	16.14

Note. Factor = Cable loss + Amp. Gain + Antenna factor

Result = Reading + Factor + DCCF

<sup>1)</sup> Restricted band

<sup>2)</sup> Harmonic

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**Highest Channel (5 825 MHz)**

Frequency [MHz]	Receiver Bandwidth [kHz]	Pol. [V/H]	Reading [dB( $\mu$ V)]	Cable Loss [dB]	Amp Gain [dB]	Antenna Factor [dB]	Factor [dB]	DCCF [dB]	Result dB( $\mu$ V/m)]	Limit dB( $\mu$ V/m)]	Margin [dB]
<b>Peak DATA. Emissions above 1 GHz</b>											
1 618.98 <sup>1)</sup>	1 000	V	80.45	3.06	-60.73	26.28	-31.39	-	49.06	74.00	24.94
5 851.00	1 000	V	52.43	6.01	-32.64	34.18	7.55	-	59.97	119.92	59.95
11 647.65 <sup>2)</sup>	1 000	H	57.20	8.51	-60.04	38.40	-13.13	-	44.07	74.00	29.93
17 047.66	1 000	V	57.78	11.91	-60.49	41.53	-7.05	-	50.73	68.20	17.47
24 477.63	1 000	H	41.20	12.80	-43.43	45.10	14.47	-	55.67	68.20	12.53
37 601.31	1 000	V	41.42	16.00	-45.35	46.00	16.65	-	58.06	68.20	10.14
<b>Average DATA. Emissions above 1 GHz</b>											
1 618.98 <sup>1)</sup>	1 000	V	71.18	3.06	-60.73	26.28	-31.39	0.90	40.70	54.00	13.30
11 647.65 <sup>2)</sup>	1 000	H	48.30	8.51	-60.04	38.40	-13.13	0.90	36.07	54.00	17.93

Note. Factor = Cable loss + Amp. Gain + Antenna factor

Result = Reading + Factor + DCCF

<sup>1)</sup> Restricted band

<sup>2)</sup> Harmonic

**- 802.11n HT40****Lowest Channel (5 755 MHz)**

Frequency [MHz]	Receiver Bandwidth [kHz]	Pol. [V/H]	Reading [dB( $\mu$ V)]	Cable Loss [dB]	Amp Gain [dB]	Antenna Factor [dB]	Factor [dB]	DCCF [dB]	Result dB( $\mu$ V/m)]	Limit dB( $\mu$ V/m)]	Margin [dB]
<b>Peak DATA. Emissions above 1 GHz</b>											
1 552.06 <sup>1)</sup>	1 000	V	76.62	3.00	-60.96	26.01	-31.95	-	44.67	74.00	29.33
5 715.91	1 000	V	55.88	5.92	-32.64	33.97	7.25	-	63.13	109.65	46.52
11 512.37 <sup>2)</sup>	1 000	V	57.73	8.38	-60.00	38.27	-13.35	-	44.37	74.00	29.63
17 051.97	1 000	V	57.68	11.91	-60.50	41.53	-7.06	-	50.62	68.20	17.58
24 145.56	1 000	V	42.15	12.80	-42.89	45.10	15.01	-	57.16	68.20	11.04
38 070.19	1 000	V	41.60	16.10	-45.15	45.70	16.65	-	58.25	68.20	9.95
<b>Average DATA. Emissions above 1 GHz</b>											
1 552.06 <sup>1)</sup>	1 000	V	68.22	3.00	-60.96	26.01	-31.95	1.66	37.93	54.00	16.07
11 512.37 <sup>2)</sup>	1 000	V	49.86	8.38	-60.00	38.27	-13.35	1.66	38.17	54.00	15.83

Note. Factor = Cable loss + Amp. Gain + Antenna factor

Result = Reading + Factor + DCCF

<sup>1)</sup> Restricted band

<sup>2)</sup> Harmonic

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**KCTL****Highest Channel (5 795 MHz)**

Frequency [MHz]	Receiver Bandwidth [kHz]	Pol. [V/H]	Reading [dB( $\mu$ V)]	Cable Loss [dB]	Amp Gain [dB]	Antenna Factor [dB]	Factor [dB]	DCCF [dB]	Result dB( $\mu$ V/m)]	Limit dB( $\mu$ V/m)]	Margin [dB]
<b>Peak DATA. Emissions above 1 GHz</b>											
1 588.33 <sup>1)</sup>	1 000	V	76.10	3.03	-60.82	26.15	-31.64	-	44.46	74.00	29.54
5 889.50	1 000	V	49.37	6.03	-32.71	34.23	7.55	-	56.91	94.47	37.56
11 590.19 <sup>2)</sup>	1 000	H	58.44	8.46	-60.03	38.34	-13.23	-	45.22	74.00	28.78
17 059.52	1 000	V	58.71	11.91	-60.51	41.53	-7.07	-	51.64	68.20	16.56
24 014.94	1 000	V	41.17	12.80	-42.57	45.00	15.23	-	56.40	68.20	11.80
37 760.81	1 000	V	42.61	16.10	-45.36	45.90	16.64	-	59.25	68.20	8.95
<b>Average DATA. Emissions above 1 GHz</b>											
1 588.33 <sup>1)</sup>	1 000	V	63.12	3.03	-60.82	26.15	-31.64	1.66	33.14	54.00	20.86
11 590.19 <sup>2)</sup>	1 000	H	50.27	8.46	-60.03	38.34	-13.23	1.66	38.71	54.00	15.29

Note. Factor = Cable loss + Amp. Gain + Antenna factor

Result = Reading + Factor + DCCF

<sup>1)</sup> Restricted band

<sup>2)</sup> Harmonic

**- 802.11ac VHT80****Middle Channel (5 775 MHz)**

Frequency [MHz]	Receiver Bandwidth [kHz]	Pol. [V/H]	Reading [dB( $\mu$ V)]	Cable Loss [dB]	Amp Gain [dB]	Antenna Factor [dB]	Factor [dB]	DCCF [dB]	Result dB( $\mu$ V/m)]	Limit dB( $\mu$ V/m)]	Margin [dB]
<b>Peak DATA. Emissions above 1 GHz</b>											
1 571.83 <sup>1)</sup>	1 000	V	72.81	3.02	-60.89	26.09	-31.78	-	41.03	74.00	32.97
5 710.58	1 000	V	56.54	5.92	-32.66	33.97	7.23	-	63.77	108.16	44.39
5 889.67	1 000	V	49.74	6.03	-32.71	34.23	7.55	-	57.29	94.34	37.05
11 550.04 <sup>2)</sup>	1 000	H	60.10	8.42	-60.02	38.31	-13.29	-	46.81	74.00	27.19
17 065.63	1 000	V	57.84	11.91	-60.52	41.53	-7.08	-	50.77	68.20	17.43
24 306.44	1 000	V	41.48	12.80	-43.15	45.10	14.75	-	56.23	68.20	11.97
37 446.63	1 000	V	42.14	16.00	-45.44	46.10	16.66	-	58.79	68.20	9.41
<b>Average DATA. Emissions above 1 GHz</b>											
1 571.83 <sup>1)</sup>	1 000	V	59.83	3.02	-60.89	26.09	-31.78	2.83	30.88	54.00	23.12
11 550.04 <sup>2)</sup>	1 000	H	50.25	8.42	-60.02	38.31	-13.29	2.83	39.80	54.00	14.20

Note. Factor = Cable loss + Amp. Gain + Antenna factor

Result = Reading + Factor + DCCF

<sup>1)</sup> Restricted band

<sup>2)</sup> Harmonic

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### 5.2.3.2 Test Result (Balance Flex Antenna)

**Test Condition:** Refer to the clause 3.6 Normal and extreme test conditions

- Complied

5. Measured value of the Field strength of spurious Emissions (Radiated).
6. It tested x,y and z – 3 axis each, mentioned only worst case data at this report.
7. The worst case of this product is the y-axis.
8. The Worst-case rates:  
802.11a mode : 6 Mbps  
802.11n\_HT20/HT40 mode : MCS0  
802.11ac\_VHT80 : MCS0

#### - Below 1 GHz data (worst-case)

##### 802.11a Lowest Channel (5 180 MHz)

Frequency [MHz]	Receiver Bandwidth [kHz]	Pol. [V/H]	Reading [dB(μV)]	Cable Loss [dB]	Amp Gain [dB]	Antenna Factor [dB]	Factor [dB]	Result [dB(μV/m)]	Limit [dB(μV/m)]	Margin [dB]
<b>Quasi-Peak DATA. Emissions below 30 MHz</b>										
2.08	9	V	40.30	1.28	-32.71	19.63	-11.80	28.50	69.50	41.00
13.65	9	V	34.20	3.13	-32.67	18.64	-10.90	23.30	69.50	46.20
<b>Quasi-Peak DATA. Emissions below 1 GHz</b>										
137.31	120	H	39.50	2.54	-25.31	12.47	-10.30	29.20	43.50	14.30
267.65	120	H	37.70	3.64	-24.94	12.40	-8.90	28.80	46.00	17.20
302.21	120	H	33.00	3.90	-25.05	13.55	-7.60	25.40	46.00	20.60
425.03	120	H	32.90	4.71	-24.56	16.25	-3.60	29.30	46.00	16.70

Note1. Factor = Cable loss + Amp gain + Antenna factor  
Result = Reading + Factor

Note2. Emission below 30 MHz : No emissions were detected above the noise floor which was at least 20 dB below The specification limits.

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**- Above 1 GHz data\_U-NII-1**

**- 802.11a**

**Lowest Channel (5 180 MHz)**

Frequency [MHz]	Receiver Bandwidth [kHz]	Pol. [V/H]	Reading [dB(μV)]	Cable Loss [dB]	Amp Gain [dB]	Antenna Factor [dB]	Factor [dB]	DCCF [dB]	Result dB(μV/m)	Limit dB(μV/m)	Margin [dB]
<b>Peak DATA. Emissions above 1 GHz</b>											
3 453.34	1 000	H	68.57	4.43	-60.97	30.92	-25.62	-	42.96	68.20	25.24
5 148.83 <sup>1)</sup>	1 000	H	48.73	5.57	-32.72	33.12	5.97	-	54.69	74.00	19.31
10 360.41 <sup>2)</sup>	1 000	H	63.43	7.63	-60.08	37.29	-15.16	-	48.27	74.00	25.73
15 543.24 <sup>2)</sup>	1 000	V	64.60	11.26	-60.72	40.07	-9.39	-	55.20	68.20	13.00
24 113.94	1 000	H	40.73	12.80	-42.80	45.10	15.10	-	55.83	68.20	12.37
36 326.69	1 000	H	42.25	15.80	-47.80	48.30	16.30	-	58.55	68.20	9.65
<b>Average DATA. Emissions above 1 GHz</b>											
5 148.83 <sup>1)</sup>	1 000	H	41.40	5.57	-32.72	33.12	5.97	0.85	48.22	54.00	5.78
15 543.24 <sup>2)</sup>	1 000	V	55.14	11.26	-60.72	40.07	-9.39	0.85	46.60	54.00	7.40

Note. Factor = Cable loss + Amp. Gain + Antenna factor

Result = Reading + Factor + DCCF

<sup>1)</sup> Restricted band

<sup>2)</sup> Harmonic

**Middle Channel (5 200 MHz)**

Frequency [MHz]	Receiver Bandwidth [kHz]	Pol. [V/H]	Reading [dB(μV)]	Cable Loss [dB]	Amp Gain [dB]	Antenna Factor [dB]	Factor [dB]	DCCF [dB]	Result dB(μV/m)	Limit dB(μV/m)	Margin [dB]
<b>Peak DATA. Emissions above 1 GHz</b>											
3 466.58	1 000	H	67.31	4.44	-61.01	30.96	-25.61	-	41.70	68.20	26.50
6 170.52	1 000	V	65.68	6.19	-62.08	34.62	-21.27	-	44.42	68.20	23.78
10 401.38 <sup>2)</sup>	1 000	H	62.22	7.64	-60.16	37.32	-15.20	-	47.01	74.00	26.99
15 600.32 <sup>2)</sup>	1 000	V	63.10	11.35	-60.79	40.10	-9.34	-	53.76	68.20	14.44
26 201.88	1 000	H	40.38	13.70	-43.60	45.60	15.70	-	56.08	68.20	12.12
36 269.63	1 000	V	41.93	15.80	-48.00	48.50	16.30	-	58.23	68.20	9.97
<b>Average DATA. Emissions above 1 GHz</b>											
15 600.32 <sup>2)</sup>	1 000	V	52.60	11.35	-60.79	40.10	-9.34	0.85	44.11	54.00	9.89

Note. Factor = Cable loss + Amp. Gain + Antenna factor

Result = Reading + Factor + DCCF

<sup>1)</sup> Restricted band

<sup>2)</sup> Harmonic

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**Highest Channel (5 240 MHz)**

Frequency [MHz]	Receiver Bandwidth [kHz]	Pol. [V/H]	Reading [dB( $\mu$ V)]	Cable Loss [dB]	Amp Gain [dB]	Antenna Factor [dB]	Factor [dB]	DCCF [dB]	Result dB( $\mu$ V/m)]	Limit dB( $\mu$ V/m)]	Margin [dB]
<b>Peak DATA. Emissions above 1 GHz</b>											
1 033.86 <sup>1)</sup>	1 000	H	79.65	2.50	-59.88	23.94	-33.44	-	46.21	74.00	27.79
3 493.05	1 000	H	67.81	4.46	-61.09	31.03	-25.60	-	42.21	68.20	25.99
10 479.72 <sup>2)</sup>	1 000	V	62.77	7.68	-60.36	37.38	-15.30	-	47.48	74.00	26.52
15 722.78 <sup>2)</sup>	1 000	V	62.80	11.55	-60.94	40.17	-9.22	-	53.58	68.20	14.62
28 062.25	1 000	H	39.60	14.30	-45.70	46.60	15.20	-	54.80	68.20	13.40
36 249.69	1 000	V	41.72	15.80	-48.10	48.60	16.30	-	58.02	68.20	10.18
<b>Average DATA. Emissions above 1 GHz</b>											
1 033.86 <sup>1)</sup>	1 000	H	69.07	2.50	-59.88	23.94	-33.44	0.85	36.48	54.00	17.52
15 722.78 <sup>2)</sup>	1 000	V	52.91	11.55	-60.94	40.17	-9.22	0.85	44.54	54.00	9.46

Note. Factor = Cable loss + Amp. Gain + Antenna factor  
Result = Reading + Factor + DCCF

<sup>1)</sup> Restricted band

<sup>2)</sup> Harmonic

**- 802.11n HT20****Lowest Channel (5 180 MHz)**

Frequency [MHz]	Receiver Bandwidth [kHz]	Pol. [V/H]	Reading [dB( $\mu$ V)]	Cable Loss [dB]	Amp Gain [dB]	Antenna Factor [dB]	Factor [dB]	DCCF [dB]	Result dB( $\mu$ V/m)]	Limit dB( $\mu$ V/m)]	Margin [dB]
<b>Peak DATA. Emissions above 1 GHz</b>											
3 453.17	1 000	H	67.99	4.43	-60.97	30.92	-25.62	-	42.37	68.20	25.83
5 149.85 <sup>1)</sup>	1 000	H	52.72	5.56	-32.69	33.12	5.99	-	58.70	74.00	15.30
10 356.09 <sup>2)</sup>	1 000	V	63.34	7.63	-60.06	37.28	-15.15	-	48.19	74.00	25.81
15 541.78 <sup>2)</sup>	1 000	V	65.08	11.23	-60.70	40.06	-9.41	-	55.67	68.20	12.53
24 267.94	1 000	H	42.22	12.80	-43.10	45.10	14.80	-	57.02	68.20	11.18
36 350.06	1 000	H	42.23	15.90	-47.80	48.30	16.40	-	58.63	68.20	9.57
<b>Average DATA. Emissions above 1 GHz</b>											
5 149.85 <sup>1)</sup>	1 000	H	40.64	5.56	-32.69	33.12	5.99	0.90	47.53	54.00	6.47
15 541.78 <sup>2)</sup>	1 000	V	54.63	11.23	-60.70	40.06	-9.41	0.90	46.12	54.00	7.88

Note. Factor = Cable loss + Amp. Gain + Antenna factor  
Result = Reading + Factor + DCCF

<sup>1)</sup> Restricted band

<sup>2)</sup> Harmonic

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**KCTL****Middle Channel (5 200 MHz)**

Frequency [MHz]	Receiver Bandwidth [kHz]	Pol. [V/H]	Reading [dB( $\mu$ V)]	Cable Loss [dB]	Amp Gain [dB]	Antenna Factor [dB]	Factor [dB]	DCCF [dB]	Result dB( $\mu$ V/m)]	Limit dB( $\mu$ V/m)]	Margin [dB]
<b>Peak DATA. Emissions above 1 GHz</b>											
3 466.75	1 000	H	68.49	4.44	-61.01	30.96	-25.61	-	42.87	68.20	25.33
6 121.88	1 000	V	64.15	6.16	-62.11	34.56	-21.39	-	42.76	68.20	25.44
10 393.83 <sup>2)</sup>	1 000	H	64.24	7.64	-60.16	37.32	-15.20	-	49.04	74.00	24.96
15 601.33 <sup>2)</sup>	1 000	V	63.37	11.35	-60.79	40.10	-9.34	-	54.03	68.20	14.17
24 332.56	1 000	H	40.63	12.80	-43.20	45.10	14.70	-	55.33	68.20	12.87
36 397.50	1 000	H	42.76	15.90	-47.60	48.10	16.40	-	59.16	68.20	9.04
<b>Average DATA. Emissions above 1 GHz</b>											
15 601.33 <sup>2)</sup>	1 000	V	53.57	11.35	-60.79	40.10	-9.34	0.90	45.14	54.00	8.86

Note. Factor = Cable loss + Amp. Gain + Antenna factor

Result = Reading + Factor + DCCF

<sup>1)</sup> Restricted band

<sup>2)</sup> Harmonic

**Highest Channel (5 240 MHz)**

Frequency [MHz]	Receiver Bandwidth [kHz]	Pol. [V/H]	Reading [dB( $\mu$ V)]	Cable Loss [dB]	Amp Gain [dB]	Antenna Factor [dB]	Factor [dB]	DCCF [dB]	Result dB( $\mu$ V/m)]	Limit dB( $\mu$ V/m)]	Margin [dB]
<b>Peak DATA. Emissions above 1 GHz</b>											
1 034.30 <sup>1)</sup>	1 000	V	79.78	2.50	-59.87	23.93	-33.44	-	46.34	74.00	27.66
3 493.05	1 000	H	67.70	4.46	-61.09	31.03	-25.60	-	42.09	68.20	26.11
10 480.08 <sup>2)</sup>	1 000	V	61.22	7.68	-60.36	37.38	-15.30	-	45.92	74.00	28.08
15 720.51 <sup>2)</sup>	1 000	V	61.48	11.58	-60.96	40.18	-9.20	-	52.28	68.20	15.92
24 040.38	1 000	V	40.79	12.80	-42.60	45.00	15.20	-	55.99	68.20	12.21
36 330.81	1 000	V	41.48	15.90	-47.90	48.30	16.30	-	57.78	68.20	10.42
<b>Average DATA. Emissions above 1 GHz</b>											
1 034.30 <sup>1)</sup>	1 000	V	70.92	2.50	-59.87	23.93	-33.44	0.90	38.38	54.00	15.62
15 720.51 <sup>2)</sup>	1 000	V	52.10	11.58	-60.96	40.18	-9.20	0.90	43.80	54.00	10.20

Note. Factor = Cable loss + Amp. Gain + Antenna factor

Result = Reading + Factor + DCCF

<sup>1)</sup> Restricted band

<sup>2)</sup> Harmonic

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**- 802.11n HT40**

**Lowest Channel (5 190 MHz)**

Frequency [MHz]	Receiver Bandwidth [kHz]	Pol. [V/H]	Reading [dB(μV)]	Cable Loss [dB]	Amp Gain [dB]	Antenna Factor [dB]	Factor [dB]	DCCF [dB]	Result dB(μV/m)	Limit dB(μV/m)	Margin [dB]
<b>Peak DATA. Emissions above 1 GHz</b>											
3 458.50	1 000	H	69.62	4.43	-60.99	30.94	-25.62	-	44.00	68.20	24.20
5 148.81 <sup>1)</sup>	1 000	H	51.66	5.56	-32.69	33.12	5.99	-	57.65	74.00	16.35
10 380.53 <sup>2)</sup>	1 000	H	60.50	7.64	-60.12	37.30	-15.18	-	45.32	74.00	28.68
17 038.67	1 000	V	57.57	11.91	-60.48	41.53	-7.04	-	50.53	68.20	17.67
24 117.38	1 000	V	40.69	12.80	-42.80	45.10	15.10	-	55.79	68.20	12.41
36 065.44	1 000	V	42.06	15.80	-48.70	49.10	16.20	-	58.26	68.20	9.94
<b>Average DATA. Emissions above 1 GHz</b>											
5 148.81 <sup>1)</sup>	1 000	H	43.18	5.56	-32.69	33.12	5.99	1.66	50.84	54.00	3.16

Note. Factor = Cable loss + Amp. Gain + Antenna factor

Result = Reading + Factor + DCCF

<sup>1)</sup> Restricted band

<sup>2)</sup> Harmonic

**Highest Channel (5 230 MHz)**

Frequency [MHz]	Receiver Bandwidth [kHz]	Pol. [V/H]	Reading [dB(μV)]	Cable Loss [dB]	Amp Gain [dB]	Antenna Factor [dB]	Factor [dB]	DCCF [dB]	Result dB(μV/m)	Limit dB(μV/m)	Margin [dB]
<b>Peak DATA. Emissions above 1 GHz</b>											
1 023.20 <sup>1)</sup>	1 000	H	77.25	2.49	-59.80	23.89	-33.42	-	43.83	74.00	30.17
3 486.86	1 000	H	67.51	4.45	-61.07	31.01	-25.61	-	41.90	68.20	26.30
10 460.31 <sup>2)</sup>	1 000	H	60.40	7.67	-60.31	37.37	-15.27	-	45.13	74.00	28.87
17 078.56	1 000	V	57.75	11.91	-60.53	41.53	-7.09	-	50.66	68.20	17.54
24 082.31	1 000	H	40.84	12.80	-42.80	45.10	15.10	-	55.94	68.20	12.26
36 377.56	1 000	H	41.93	15.90	-47.70	48.20	16.40	-	58.33	68.20	9.87
<b>Average DATA. Emissions above 1 GHz</b>											
1 023.20 <sup>1)</sup>	1 000	H	65.41	2.49	-59.80	23.89	-33.42	1.66	33.65	54.00	20.35

Note. Factor = Cable loss + Amp. Gain + Antenna factor

Result = Reading + Factor + DCCF

<sup>1)</sup> Restricted band

<sup>2)</sup> Harmonic

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**- 802.11ac VHT80****Middle Channel (5 210 MHz)**

Frequency [MHz]	Receiver Bandwidth [kHz]	Pol. [V/H]	Reading [dB( $\mu$ V)]	Cable Loss [dB]	Amp Gain [dB]	Antenna Factor [dB]	Factor [dB]	DCCF [dB]	Result dB( $\mu$ V/m)]	Limit dB( $\mu$ V/m)]	Margin [dB]
<b>Peak DATA. Emissions above 1 GHz</b>											
1 009.77 <sup>1)</sup>	1 000	H	75.78	2.47	-59.68	23.82	-33.39	-	42.40	74.00	31.60
5 139.88 <sup>1)</sup>	1 000	H	51.08	5.56	-32.68	33.12	6.00	-	57.08	74.00	16.92
10 420.06 <sup>2)</sup>	1 000	V	59.51	7.65	-60.22	37.34	-15.23	-	44.28	74.00	29.72
17 036.52	1 000	H	58.87	11.91	-60.47	41.53	-7.03	-	51.83	68.20	16.37
24 320.19	1 000	H	40.97	12.80	-43.20	45.10	14.70	-	55.67	68.20	12.53
36 210.50	1 000	H	41.96	15.80	-48.20	48.70	16.30	-	58.26	68.20	9.94
<b>Average DATA. Emissions above 1 GHz</b>											
1 009.77 <sup>1)</sup>	1 000	H	64.34	2.47	-59.68	23.82	-33.39	2.83	33.79	54.00	20.21
5 139.88 <sup>1)</sup>	1 000	H	42.09	5.56	-32.68	33.12	6.00	2.83	50.92	54.00	3.08

Note. Factor = Cable loss + Amp. Gain + Antenna factor

Result = Reading + Factor + DCCF

<sup>1)</sup> Restricted band

<sup>2)</sup> Harmonic



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### - Above 1 GHz data\_U-NII-2A

#### - 802.11a

#### Lowest Channel (5 260 MHz)

Frequency [MHz]	Receiver Bandwidth [kHz]	Pol. [V/H]	Reading [dB( $\mu$ V)]	Cable Loss [dB]	Amp Gain [dB]	Antenna Factor [dB]	Factor [dB]	DCCF [dB]	Result [dB( $\mu$ V/m)]	Limit [dB( $\mu$ V/m)]	Margin [dB]
<b>Peak DATA. Emissions above 1 GHz</b>											
1 055.08 <sup>1)</sup>	1 000	H	82.38	2.52	-60.04	24.03	-33.49	-	48.89	74.00	25.11
6 018.75	1 000	V	64.98	6.11	-62.19	34.42	-21.66	-	43.32	68.20	24.88
10 518.89 <sup>2)</sup>	1 000	V	60.93	7.69	-60.42	37.42	-15.31	-	45.61	74.00	28.39
17 064.91	1 000	V	58.14	11.91	-60.51	41.53	-7.07	-	51.07	68.20	17.13
24 073.38	1 000	V	41.81	12.80	-42.80	45.10	15.10	-	56.91	68.20	11.29
36 373.44	1 000	H	41.34	15.90	-47.70	48.20	16.40	-	57.74	68.20	10.46
<b>Average DATA. Emissions above 1 GHz</b>											
1 055.08 <sup>1)</sup>	1 000	H	71.79	2.52	-60.04	24.03	-33.49	0.85	39.15	54.00	14.85

Note. Factor = Cable loss + Amp. Gain + Antenna factor  
Result = Reading + Factor + DCCF

<sup>1)</sup> Restricted band

<sup>2)</sup> Harmonic

#### Middle Channel (5 280 MHz)

Frequency [MHz]	Receiver Bandwidth [kHz]	Pol. [V/H]	Reading [dB( $\mu$ V)]	Cable Loss [dB]	Amp Gain [dB]	Antenna Factor [dB]	Factor [dB]	DCCF [dB]	Result [dB( $\mu$ V/m)]	Limit [dB( $\mu$ V/m)]	Margin [dB]
<b>Peak DATA. Emissions above 1 GHz</b>											
1 076.26 <sup>1)</sup>	1 000	H	80.77	2.54	-60.15	24.09	-33.52	-	47.26	74.00	26.74
6 150.23	1 000	V	64.15	6.18	-62.10	34.60	-21.32	-	42.83	68.20	25.37
10 561.30 <sup>2)</sup>	1 000	H	60.32	7.71	-60.46	37.45	-15.30	-	45.02	74.00	28.98
17 052.33	1 000	V	58.48	11.91	-60.50	41.53	-7.06	-	51.42	68.20	16.78
24 476.25	1 000	H	41.46	12.80	-43.40	45.10	14.50	-	55.96	68.20	12.24
36 357.63	1 000	H	41.38	15.90	-47.70	48.20	16.40	-	57.78	68.20	10.42
<b>Average DATA. Emissions above 1 GHz</b>											
1 076.26 <sup>1)</sup>	1 000	H	71.87	2.54	-60.15	24.09	-33.52	0.85	39.20	54.00	14.80

Note. Factor = Cable loss + Amp. Gain + Antenna factor  
Result = Reading + Factor + DCCF

<sup>1)</sup> Restricted band

<sup>2)</sup> Harmonic

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**Highest Channel (5 320 MHz)**

Frequency [MHz]	Receiver Bandwidth [kHz]	Pol. [V/H]	Reading [dB( $\mu$ V)]	Cable Loss [dB]	Amp Gain [dB]	Antenna Factor [dB]	Factor [dB]	DCCF [dB]	Result dB( $\mu$ V/m)	Limit dB( $\mu$ V/m)	Margin [dB]
<b>Peak DATA. Emissions above 1 GHz</b>											
1 116.70 <sup>1)</sup>	1 000	H	81.28	2.58	-60.39	24.27	-33.54	-	47.75	74.00	26.25
5 352.22 <sup>1)</sup>	1 000	H	53.82	5.69	-33.31	33.43	5.81	-	59.63	74.00	14.37
10 639.24 <sup>2)</sup>	1 000	V	57.77	7.74	-60.53	37.51	-15.28	-	42.49	74.00	31.51
17 058.80	1 000	V	58.53	11.91	-60.51	41.53	-7.07	-	51.46	68.20	16.74
24 133.88	1 000	V	40.54	12.80	-42.90	45.10	15.00	-	55.54	68.20	12.66
36 411.94	1 000	V	41.59	15.90	-47.60	48.10	16.40	-	57.99	68.20	10.21
<b>Average DATA. Emissions above 1 GHz</b>											
1 116.70 <sup>1)</sup>	1 000	H	72.02	2.58	-60.39	24.27	-33.54	0.85	39.33	54.00	14.67
5 352.22 <sup>1)</sup>	1 000	H	43.81	5.69	-33.31	33.43	5.81	0.85	50.47	54.00	3.53
10 639.24 <sup>2)</sup>	1 000	V	50.95	7.74	-60.53	37.51	-15.28	0.85	36.52	54.00	17.48

Note. Factor = Cable loss + Amp. Gain + Antenna factor  
Result = Reading + Factor + DCCF

<sup>1)</sup> Restricted band

<sup>2)</sup> Harmonic

**- 802.11n HT20****Lowest Channel (5 260 MHz)**

Frequency [MHz]	Receiver Bandwidth [kHz]	Pol. [V/H]	Reading [dB( $\mu$ V)]	Cable Loss [dB]	Amp Gain [dB]	Antenna Factor [dB]	Factor [dB]	DCCF [dB]	Result dB( $\mu$ V/m)	Limit dB( $\mu$ V/m)	Margin [dB]
<b>Peak DATA. Emissions above 1 GHz</b>											
1 054.50 <sup>1)</sup>	1 000	H	81.02	2.52	-60.02	24.02	-33.48	-	47.54	74.00	26.46
6 048.31	1 000	V	64.66	6.12	-62.16	34.46	-21.58	-	43.08	68.20	25.12
10 519.97 <sup>2)</sup>	1 000	V	59.80	7.69	-60.42	37.42	-15.31	-	44.48	74.00	29.52
17 087.55	1 000	H	57.64	11.91	-60.55	41.53	-7.11	-	50.53	68.20	17.67
24 295.44	1 000	V	41.39	12.80	-43.10	45.10	14.80	-	56.19	68.20	12.01
36 214.63	1 000	V	40.84	15.80	-48.20	48.70	16.30	-	57.14	68.20	11.06
<b>Average DATA. Emissions above 1 GHz</b>											
1 054.50 <sup>1)</sup>	1 000	H	71.34	2.52	-60.02	24.02	-33.48	0.90	38.76	54.00	15.24

Note. Factor = Cable loss + Amp. Gain + Antenna factor  
Result = Reading + Factor + DCCF

<sup>1)</sup> Restricted band

<sup>2)</sup> Harmonic

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**KCTL****Middle Channel (5 280 MHz)**

Frequency [MHz]	Receiver Bandwidth [kHz]	Pol. [V/H]	Reading [dB( $\mu$ V)]	Cable Loss [dB]	Amp Gain [dB]	Antenna Factor [dB]	Factor [dB]	DCCF [dB]	Result dB( $\mu$ V/m)]	Limit dB( $\mu$ V/m)]	Margin [dB]
<b>Peak DATA. Emissions above 1 GHz</b>											
1 074.49 <sup>1)</sup>	1 000	H	79.74	2.54	-60.16	24.10	-33.52	-	46.22	74.00	27.78
6 178.08	1 000	V	64.47	6.19	-62.07	34.63	-21.25	-	43.22	68.20	24.98
10 560.94 <sup>2)</sup>	1 000	V	59.36	7.71	-60.46	37.45	-15.30	-	44.06	74.00	29.94
17 074.25	1 000	H	58.17	11.91	-60.53	41.53	-7.09	-	51.08	68.20	17.12
24 102.25	1 000	H	41.49	12.80	-42.80	45.10	15.10	-	56.59	68.20	11.61
36 344.56	1 000	H	42.50	15.90	-47.80	48.30	16.40	-	58.90	68.20	9.30
<b>Average DATA. Emissions above 1 GHz</b>											
1 074.49 <sup>1)</sup>	1 000	H	71.29	2.54	-60.16	24.10	-33.52	0.90	38.67	54.00	15.33

Note. Factor = Cable loss + Amp. Gain + Antenna factor  
Result = Reading + Factor + DCCF

<sup>1)</sup> Restricted band

<sup>2)</sup> Harmonic

**Highest Channel (5 320 MHz)**

Frequency [MHz]	Receiver Bandwidth [kHz]	Pol. [V/H]	Reading [dB( $\mu$ V)]	Cable Loss [dB]	Amp Gain [dB]	Antenna Factor [dB]	Factor [dB]	DCCF [dB]	Result dB( $\mu$ V/m)]	Limit dB( $\mu$ V/m)]	Margin [dB]
<b>Peak DATA. Emissions above 1 GHz</b>											
1 114.51 <sup>1)</sup>	1 000	H	81.38	2.58	-60.38	24.26	-33.54	-	47.84	74.00	26.16
5 350.01 <sup>1)</sup>	1 000	H	52.13	5.69	-33.32	33.43	5.80	-	57.93	74.00	16.07
10 640.91 <sup>2)</sup>	1 000	V	59.99	7.74	-60.53	37.51	-15.28	-	44.72	74.00	29.28
17 055.92	1 000	H	58.39	11.91	-60.50	41.53	-7.06	-	51.32	68.20	16.88
24 333.94	1 000	V	42.50	12.80	-43.20	45.10	14.70	-	57.20	68.20	11.00
36 268.94	1 000	H	41.36	15.80	-48.00	48.50	16.30	-	57.66	68.20	10.54
<b>Average DATA. Emissions above 1 GHz</b>											
1 114.51 <sup>1)</sup>	1 000	H	71.86	2.58	-60.38	24.26	-33.54	0.90	39.23	54.00	14.77
5 350.01 <sup>1)</sup>	1 000	H	42.95	5.69	-33.32	33.43	5.80	0.90	49.66	54.00	4.34
10 640.91 <sup>2)</sup>	1 000	V	50.84	7.74	-60.53	37.51	-15.28	0.90	36.47	54.00	17.53

Note. Factor = Cable loss + Amp. Gain + Antenna factor  
Result = Reading + Factor + DCCF

<sup>1)</sup> Restricted band

<sup>2)</sup> Harmonic

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**- 802.11n HT40**

**Lowest Channel (5 270 MHz)**

Frequency [MHz]	Receiver Bandwidth [kHz]	Pol. [V/H]	Reading [dB( $\mu$ V)]	Cable Loss [dB]	Amp Gain [dB]	Antenna Factor [dB]	Factor [dB]	DCCF [dB]	Result dB( $\mu$ V/m)]	Limit dB( $\mu$ V/m)]	Margin [dB]
<b>Peak DATA. Emissions above 1 GHz</b>											
1 064.92 <sup>1)</sup>	1 000	H	77.32	2.53	-60.09	24.06	-33.50	-	43.82	74.00	30.18
6 333.63	1 000	V	64.65	6.27	-61.95	34.83	-20.85	-	43.81	68.20	24.39
10 540.09 <sup>2)</sup>	1 000	V	59.24	7.70	-60.44	37.43	-15.31	-	43.94	74.00	30.06
17 076.77	1 000	V	59.22	11.91	-60.53	41.53	-7.09	-	52.13	68.20	16.07
24 113.25	1 000	V	40.44	12.80	-42.80	45.10	15.10	-	55.54	68.20	12.66
36 362.44	1 000	H	41.31	15.90	-47.70	48.20	16.40	-	57.71	68.20	10.49
<b>Average DATA. Emissions above 1 GHz</b>											
1 064.92 <sup>1)</sup>	1 000	H	67.35	2.53	-60.09	24.06	-33.50	1.66	35.51	54.00	18.49

Note. Factor = Cable loss + Amp. Gain + Antenna factor

Result = Reading + Factor + DCCF

<sup>1)</sup> Restricted band

<sup>2)</sup> Harmonic

**Highest Channel (5 310 MHz)**

Frequency [MHz]	Receiver Bandwidth [kHz]	Pol. [V/H]	Reading [dB( $\mu$ V)]	Cable Loss [dB]	Amp Gain [dB]	Antenna Factor [dB]	Factor [dB]	DCCF [dB]	Result dB( $\mu$ V/m)]	Limit dB( $\mu$ V/m)]	Margin [dB]
<b>Peak DATA. Emissions above 1 GHz</b>											
1 104.44 <sup>1)</sup>	1 000	H	78.61	2.57	-60.34	24.21	-33.56	-	45.04	74.00	28.96
5 350.93 <sup>1)</sup>	1 000	H	50.78	5.69	-33.31	33.43	5.81	-	56.59	74.00	17.41
10 617.18 <sup>2)</sup>	1 000	V	57.92	7.73	-60.51	37.50	-15.28	-	42.63	74.00	31.37
17 046.22	1 000	V	57.91	11.91	-60.49	41.53	-7.05	-	50.86	68.20	17.34
24 048.63	1 000	H	40.80	12.80	-42.60	45.00	15.20	-	56.00	68.20	12.20
36 381.00	1 000	V	42.54	15.90	-47.70	48.20	16.40	-	58.94	68.20	9.26
<b>Average DATA. Emissions above 1 GHz</b>											
1 104.44 <sup>1)</sup>	1 000	H	59.68	2.57	-60.34	24.21	-33.56	1.66	27.78	54.00	26.22
5 350.93 <sup>1)</sup>	1 000	H	42.10	5.69	-33.31	33.43	5.81	1.66	49.58	54.00	4.42
10 617.18 <sup>2)</sup>	1 000	V	48.53	7.73	-60.51	37.50	-15.28	1.66	34.91	54.00	19.09

Note. Factor = Cable loss + Amp. Gain + Antenna factor

Result = Reading + Factor + DCCF

<sup>1)</sup> Restricted band

<sup>2)</sup> Harmonic

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**- 802.11ac VHT80****Middle Channel (5 290 MHz)**

Frequency [MHz]	Receiver Bandwidth [kHz]	Pol. [V/H]	Reading [dB( $\mu$ V)]	Cable Loss [dB]	Amp Gain [dB]	Antenna Factor [dB]	Factor [dB]	DCCF [dB]	Result dB( $\mu$ V/m)]	Limit dB( $\mu$ V/m)]	Margin [dB]
<b>Peak DATA. Emissions above 1 GHz</b>											
1 091.73 <sup>1)</sup>	1 000	H	73.65	2.55	-60.23	24.14	-33.54	-	40.11	74.00	33.89
5 353.73 <sup>1)</sup>	1 000	H	54.82	5.69	-33.32	33.43	5.80	-	60.63	74.00	13.37
10 580.34 <sup>2)</sup>	1 000	V	58.72	7.72	-60.48	37.46	-15.30	-	43.43	74.00	30.57
17 193.20	1 000	V	58.96	11.93	-60.71	41.53	-7.25	-	51.70	68.20	16.50
24 125.63	1 000	H	40.47	12.80	-42.90	45.10	15.00	-	55.47	68.20	12.73
36 203.63	1 000	V	41.97	15.80	-48.20	48.70	16.30	-	58.27	68.20	9.93
<b>Average DATA. Emissions above 1 GHz</b>											
1 091.73 <sup>1)</sup>	1 000	H	62.83	2.55	-60.23	24.14	-33.54	2.83	32.12	54.00	21.88
5 353.73 <sup>1)</sup>	1 000	H	41.26	5.69	-33.32	33.43	5.80	2.83	49.90	54.00	4.10

Note. Factor = Cable loss + Amp. Gain + Antenna factor

Result = Reading + Factor + DCCF

<sup>1)</sup> Restricted band

<sup>2)</sup> Harmonic



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**- Above 1 GHz data\_U-NII-2C**

**- 802.11a**

**Lowest Channel (5 500 MHz)**

Frequency [MHz]	Receiver Bandwidth [kHz]	Pol. [V/H]	Reading [dB( $\mu$ V)]	Cable Loss [dB]	Amp Gain [dB]	Antenna Factor [dB]	Factor [dB]	DCCF [dB]	Result dB( $\mu$ V/m)]	Limit dB( $\mu$ V/m)]	Margin [dB]
<b>Peak DATA. Emissions above 1 GHz</b>											
1 293.73	1 000	H	78.58	2.75	-60.31	24.97	-32.59	-	46.00	68.20	22.20
5 458.68 <sup>1)</sup>	1 000	H	48.73	5.76	-33.71	33.59	5.64	-	54.37	74.00	19.63
11 001.18 <sup>2)</sup>	1 000	H	58.87	7.89	-60.86	37.80	-15.17	-	43.70	74.00	30.30
17 057.72	1 000	V	58.39	11.91	-60.50	41.53	-7.06	-	51.33	68.20	16.87
24 058.94	1 000	H	41.24	12.80	-42.64	45.00	15.16	-	56.40	68.20	11.80
36 350.06	1 000	V	42.66	15.90	-47.85	48.30	16.35	-	59.01	68.20	9.19
<b>Average DATA. Emissions above 1 GHz</b>											
5 458.68 <sup>1)</sup>	1 000	H	40.58	5.76	-33.71	33.59	5.64	0.85	47.07	54.00	6.93
11 001.18 <sup>2)</sup>	1 000	H	50.44	7.89	-60.86	37.80	-15.17	0.85	36.13	54.00	17.87

Note. Factor = Cable loss + Amp. Gain + Antenna factor  
Result = Reading + Factor + DCCF

<sup>1)</sup> Restricted band

<sup>2)</sup> Harmonic

**Middle Channel (5 580 MHz)**

Frequency [MHz]	Receiver Bandwidth [kHz]	Pol. [V/H]	Reading [dB( $\mu$ V)]	Cable Loss [dB]	Amp Gain [dB]	Antenna Factor [dB]	Factor [dB]	DCCF [dB]	Result dB( $\mu$ V/m)]	Limit dB( $\mu$ V/m)]	Margin [dB]
<b>Peak DATA. Emissions above 1 GHz</b>											
1 375.37 <sup>1)</sup>	1 000	H	79.75	2.83	-60.53	25.30	-32.40	-	47.34	74.00	26.66
6 085.27	1 000	H	64.70	6.14	-62.13	34.51	-21.48	-	43.21	68.20	24.99
11 162.36 <sup>2)</sup>	1 000	V	58.29	8.04	-60.58	37.95	-14.59	-	43.70	74.00	30.30
17 060.59	1 000	V	58.19	11.91	-60.51	41.53	-7.07	-	51.12	68.20	17.08
24 109.81	1 000	H	40.78	12.80	-42.83	45.10	15.07	-	55.85	68.20	12.35
37 766.31	1 000	V	42.42	16.10	-45.36	45.90	16.64	-	59.06	68.20	9.14
<b>Average DATA. Emissions above 1 GHz</b>											
1 375.37 <sup>1)</sup>	1 000	H	70.19	2.83	-60.53	25.30	-32.40	0.85	38.64	54.00	15.36
11 162.36 <sup>2)</sup>	1 000	V	49.96	8.04	-60.58	37.95	-14.59	0.85	36.22	54.00	17.78

Note. Factor = Cable loss + Amp. Gain + Antenna factor  
Result = Reading + Factor + DCCF

<sup>1)</sup> Restricted band

<sup>2)</sup> Harmonic



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**Highest Channel (5 720 MHz)**

Frequency [MHz]	Receiver Bandwidth [kHz]	Pol. [V/H]	Reading [dB( $\mu$ V)]	Cable Loss [dB]	Amp Gain [dB]	Antenna Factor [dB]	Factor [dB]	DCCF [dB]	Result dB( $\mu$ V/m)]	Limit dB( $\mu$ V/m)]	Margin [dB]
<b>Peak DATA. Emissions above 1 GHz</b>											
1 514.80 <sup>1)</sup>	1 000	H	78.50	2.96	-61.10	25.86	-32.28	-	46.22	74.00	27.78
6 118.61	1 000	H	64.54	6.16	-62.11	34.55	-21.40	-	43.14	68.20	25.06
11 442.08 <sup>2)</sup>	1 000	V	55.96	8.31	-60.10	38.21	-13.58	-	42.37	74.00	31.63
17 179.19	1 000	V	58.92	11.93	-60.69	41.53	-7.23	-	51.68	68.20	16.52
24 376.56	1 000	V	41.85	12.80	-43.27	45.10	14.63	-	56.48	68.20	11.72
36 899.38	1 000	H	42.77	15.90	-45.97	46.70	16.63	-	59.40	68.20	8.80
<b>Average DATA. Emissions above 1 GHz</b>											
1 514.80 <sup>1)</sup>	1 000	H	70.58	2.96	-61.10	25.86	-32.28	0.85	39.15	54.00	14.85
11 442.08 <sup>2)</sup>	1 000	V	46.71	8.31	-60.10	38.21	-13.58	0.85	33.98	54.00	20.02

Note. Factor = Cable loss + Amp. Gain + Antenna factor

Result = Reading + Factor + DCCF

<sup>1)</sup> Restricted band

<sup>2)</sup> Harmonic

**- 802.11n HT20****Lowest Channel (5 500 MHz)**

Frequency [MHz]	Receiver Bandwidth [kHz]	Pol. [V/H]	Reading [dB( $\mu$ V)]	Cable Loss [dB]	Amp Gain [dB]	Antenna Factor [dB]	Factor [dB]	DCCF [dB]	Result dB( $\mu$ V/m)]	Limit dB( $\mu$ V/m)]	Margin [dB]
<b>Peak DATA. Emissions above 1 GHz</b>											
1 291.84	1 000	H	78.09	2.75	-60.32	24.97	-32.60	-	45.49	68.20	22.71
5 459.70 <sup>1)</sup>	1 000	H	47.82	5.76	-33.71	33.59	5.64	-	53.46	74.00	20.54
10 998.38 <sup>2)</sup>	1 000	V	59.91	7.89	-60.85	37.80	-15.16	-	44.75	74.00	29.25
17 055.20	1 000	V	58.19	11.91	-60.50	41.53	-7.06	-	51.13	68.20	17.07
24 316.06	1 000	H	41.04	12.80	-43.17	45.10	14.73	-	55.77	68.20	12.43
37 755.31	1 000	H	42.27	16.10	-45.36	45.90	16.64	-	58.91	68.20	9.29
<b>Average DATA. Emissions above 1 GHz</b>											
5 459.70 <sup>1)</sup>	1 000	H	40.70	5.76	-33.71	33.59	5.64	0.90	47.24	54.00	6.76
10 998.38 <sup>2)</sup>	1 000	V	51.43	7.89	-60.85	37.80	-15.16	0.90	37.17	54.00	16.83

Note. Factor = Cable loss + Amp. Gain + Antenna factor

Result = Reading + Factor + DCCF

<sup>1)</sup> Restricted band

<sup>2)</sup> Harmonic

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**Middle Channel (5 580 MHz)**

Frequency [MHz]	Receiver Bandwidth [kHz]	Pol. [V/H]	Reading [dB( $\mu$ V)]	Cable Loss [dB]	Amp Gain [dB]	Antenna Factor [dB]	Factor [dB]	DCCF [dB]	Result dB( $\mu$ V/m)]	Limit dB( $\mu$ V/m)]	Margin [dB]
<b>Peak DATA. Emissions above 1 GHz</b>											
1 374.18 <sup>1)</sup>	1 000	H	79.59	2.82	-60.52	25.29	-32.41	-	47.18	74.00	26.82
6 073.41	1 000	V	64.77	6.14	-62.16	34.50	-21.52	-	43.25	68.20	24.95
11 160.60 <sup>2)</sup>	1 000	V	56.76	8.04	-60.58	37.95	-14.59	-	42.17	74.00	31.83
17 064.91	1 000	H	58.21	11.91	-60.51	41.53	-7.07	-	51.14	68.20	17.06
24 091.94	1 000	H	40.70	12.80	-42.80	45.10	15.10	-	55.80	68.20	12.40
37 792.44	1 000	V	41.32	16.10	-45.26	45.80	16.64	-	57.96	68.20	10.24
<b>Average DATA. Emissions above 1 GHz</b>											
1 374.18 <sup>1)</sup>	1 000	H	70.12	2.82	-60.52	25.29	-32.41	0.90	38.62	54.00	15.38
11 160.60 <sup>2)</sup>	1 000	V	49.57	8.04	-60.58	37.95	-14.59	0.90	35.89	54.00	18.11

Note. Factor = Cable loss + Amp. Gain + Antenna factor

Result = Reading + Factor + DCCF

<sup>1)</sup> Restricted band

<sup>2)</sup> Harmonic

**Highest Channel (5 720 MHz)**

Frequency [MHz]	Receiver Bandwidth [kHz]	Pol. [V/H]	Reading [dB( $\mu$ V)]	Cable Loss [dB]	Amp Gain [dB]	Antenna Factor [dB]	Factor [dB]	DCCF [dB]	Result dB( $\mu$ V/m)]	Limit dB( $\mu$ V/m)]	Margin [dB]
<b>Peak DATA. Emissions above 1 GHz</b>											
1 540.91 <sup>1)</sup>	1 000	H	80.24	2.98	-61.00	25.96	-32.06	-	48.18	74.00	25.82
6 074.27	1 000	H	64.75	6.14	-62.15	34.50	-21.51	-	43.23	68.20	24.97
11 442.30 <sup>2)</sup>	1 000	V	55.39	8.31	-60.10	38.21	-13.58	-	41.81	74.00	32.19
17 071.02	1 000	H	57.64	11.91	-60.52	41.53	-7.08	-	50.55	68.20	17.65
24 306.44	1 000	V	42.39	12.80	-43.15	45.10	14.75	-	57.14	68.20	11.06
38 171.94	1 000	H	42.14	16.10	-45.01	45.60	16.69	-	58.82	68.20	9.38
<b>Average DATA. Emissions above 1 GHz</b>											
1 540.91 <sup>1)</sup>	1 000	H	70.05	2.98	-61.00	25.96	-32.06	0.90	38.90	54.00	15.10
11 442.30 <sup>2)</sup>	1 000	V	47.86	8.31	-60.10	38.21	-13.58	0.90	35.18	54.00	18.82

Note. Factor = Cable loss + Amp. Gain + Antenna factor

Result = Reading + Factor + DCCF

<sup>1)</sup> Restricted band

<sup>2)</sup> Harmonic

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**- 802.11n HT40**

**Lowest Channel (5 510 MHz)**

Frequency [MHz]	Receiver Bandwidth [kHz]	Pol. [V/H]	Reading [dB( $\mu$ V)]	Cable Loss [dB]	Amp Gain [dB]	Antenna Factor [dB]	Factor [dB]	DCCF [dB]	Result dB( $\mu$ V/m)]	Limit dB( $\mu$ V/m)]	Margin [dB]
<b>Peak DATA. Emissions above 1 GHz</b>											
1 305.76 <sup>1)</sup>	1 000	H	74.27	2.76	-60.32	25.04	-32.52	-	41.75	74.00	32.25
5 459.80 <sup>1)</sup>	1 000	H	51.48	5.76	-33.71	33.59	5.64	-	57.11	74.00	16.89
11 442.32 <sup>2)</sup>	1 000	H	58.37	7.91	-61.07	37.82	-15.34	-	43.03	74.00	30.97
17 052.69	1 000	V	56.35	11.91	-59.74	41.53	-6.30	-	50.06	68.20	18.14
24 104.31	1 000	V	41.59	12.80	-42.82	45.10	15.08	-	56.67	68.20	11.53
37 725.06	1 000	H	41.95	16.00	-45.26	45.90	16.64	-	58.59	68.20	9.61
<b>Average DATA. Emissions above 1 GHz</b>											
1 305.76 <sup>1)</sup>	1 000	H	65.54	2.76	-60.32	25.04	-32.52	1.66	34.69	54.00	19.31
5 459.80 <sup>1)</sup>	1 000	H	40.90	5.76	-33.71	33.59	5.64	1.66	48.20	54.00	5.80
11 442.32 <sup>2)</sup>	1 000	H	47.89	8.31	-60.10	38.21	-13.58	1.66	35.97	54.00	18.03

Note. Factor = Cable loss + Amp. Gain + Antenna factor

Result = Reading + Factor + DCCF

<sup>1)</sup> Restricted band

<sup>2)</sup> Harmonic

**Middle Channel (5 550 MHz)**

Frequency [MHz]	Receiver Bandwidth [kHz]	Pol. [V/H]	Reading [dB( $\mu$ V)]	Cable Loss [dB]	Amp Gain [dB]	Antenna Factor [dB]	Factor [dB]	DCCF [dB]	Result dB( $\mu$ V/m)]	Limit dB( $\mu$ V/m)]	Margin [dB]
<b>Peak DATA. Emissions above 1 GHz</b>											
1 345.70 <sup>1)</sup>	1 000	H	74.76	2.80	-60.44	25.19	-32.45	-	42.31	74.00	31.69
6 086.30	1 000	V	64.63	6.14	-62.13	34.51	-21.48	-	43.15	68.20	25.05
11 098.90 <sup>2)</sup>	1 000	V	57.44	7.99	-60.69	37.89	-14.81	-	42.63	74.00	31.37
17 053.41	1 000	H	58.58	11.91	-60.50	41.53	-7.06	-	51.52	68.20	16.68
24 031.44	1 000	V	41.44	12.80	-42.60	45.00	15.20	-	56.64	68.20	11.56
36 547.38	1 000	V	41.72	15.90	-47.15	47.70	16.45	-	58.18	68.20	10.02
<b>Average DATA. Emissions above 1 GHz</b>											
1 345.70 <sup>1)</sup>	1 000	H	64.27	2.80	-60.44	25.19	-32.45	1.66	33.48	54.00	20.52
11 098.90 <sup>2)</sup>	1 000	V	50.23	7.99	-60.69	37.89	-14.81	1.66	37.09	54.00	16.91

Note. Factor = Cable loss + Amp. Gain + Antenna factor

Result = Reading + Factor + DCCF

<sup>1)</sup> Restricted band

<sup>2)</sup> Harmonic

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**Highest Channel (5 710 MHz)**

Frequency [MHz]	Receiver Bandwidth [kHz]	Pol. [V/H]	Reading [dB(μV)]	Cable Loss [dB]	Amp Gain [dB]	Antenna Factor [dB]	Factor [dB]	DCCF [dB]	Result dB(μV/m)	Limit dB(μV/m)	Margin [dB]
<b>Peak DATA. Emissions above 1 GHz</b>											
1 505.60 <sup>1)</sup>	1 000	H	76.94	2.96	-61.12	25.84	-32.32	-	44.62	74.00	29.38
6 098.16	1 000	V	64.97	6.15	-62.13	34.53	-21.45	-	43.52	68.20	24.68
11 411.14 <sup>2)</sup>	1 000	V	57.68	8.29	-60.13	38.19	-13.65	-	44.02	74.00	29.98
17 048.73	1 000	V	58.54	11.91	-60.49	41.53	-7.05	-	51.49	68.20	16.71
24 067.19	1 000	H	40.66	12.80	-42.66	45.00	15.14	-	55.80	68.20	12.40
37 830.25	1 000	H	41.97	16.10	-45.26	45.80	16.64	-	58.61	68.20	9.59
<b>Average DATA. Emissions above 1 GHz</b>											
1 505.60 <sup>1)</sup>	1 000	H	66.07	2.96	-61.12	25.84	-32.32	1.66	35.42	54.00	18.58
11 411.14 <sup>2)</sup>	1 000	V	50.25	8.29	-60.13	38.19	-13.65	1.66	38.26	54.00	15.74

Note. Factor = Cable loss + Amp. Gain + Antenna factor

Result = Reading + Factor + DCCF

<sup>1)</sup> Restricted band

<sup>2)</sup> Harmonic

**- 802.11ac VHT80****Lowest Channel (5 530 MHz)**

Frequency [MHz]	Receiver Bandwidth [kHz]	Pol. [V/H]	Reading [dB(μV)]	Cable Loss [dB]	Amp Gain [dB]	Antenna Factor [dB]	Factor [dB]	DCCF [dB]	Result dB(μV/m)	Limit dB(μV/m)	Margin [dB]
<b>Peak DATA. Emissions above 1 GHz</b>											
1 325.01 <sup>1)</sup>	1 000	H	72.49	2.78	-60.39	25.13	-32.48	-	40.01	74.00	33.99
5 456.89 <sup>1)</sup>	1 000	H	48.90	5.76	-33.72	33.59	5.63	-	54.53	74.00	19.47
11 057.92 <sup>2)</sup>	1 000	V	59.44	7.95	-60.76	37.86	-14.95	-	44.49	74.00	29.51
17 548.27	1 000	H	59.31	11.98	-61.10	41.54	-7.58	-	51.72	68.20	16.48
24 142.13	1 000	V	41.26	12.80	-42.88	45.10	15.02	-	56.27	68.20	11.93
37 749.81	1 000	H	42.48	16.00	-45.26	45.90	16.64	-	59.13	68.20	9.07
<b>Average DATA. Emissions above 1 GHz</b>											
1 325.01 <sup>1)</sup>	1 000	H	62.05	2.78	-60.39	25.13	-32.48	2.83	32.41	54.00	21.59
5 456.89 <sup>1)</sup>	1 000	H	41.94	5.76	-33.72	33.59	5.63	2.83	50.40	54.00	3.60
11 057.92 <sup>2)</sup>	1 000	V	50.19	7.95	-60.76	37.86	-14.95	2.83	38.08	54.00	15.92

Note. Factor = Cable loss + Amp. Gain + Antenna factor

Result = Reading + Factor + DCCF

<sup>1)</sup> Restricted band

<sup>2)</sup> Harmonic

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**Highest Channel (5 690 MHz)**

Frequency [MHz]	Receiver Bandwidth [kHz]	Pol. [V/H]	Reading [dB( $\mu$ V)]	Cable Loss [dB]	Amp Gain [dB]	Antenna Factor [dB]	Factor [dB]	DCCF [dB]	Result dB( $\mu$ V/m)	Limit dB( $\mu$ V/m)	Margin [dB]
<b>Peak DATA. Emissions above 1 GHz</b>											
1 491.81 <sup>1)</sup>	1 000	H	72.53	2.93	-61.04	25.72	-32.39	-	40.14	74.00	33.86
6 068.77	1 000	V	64.65	6.14	-62.16	34.49	-21.53	-	43.13	68.20	25.07
11 387.16 <sup>2)</sup>	1 000	H	60.50	8.26	-60.20	38.15	-13.79	-	46.70	74.00	27.30
17 195.72	1 000	V	58.56	11.93	-60.72	41.53	-7.26	-	51.31	68.20	16.89
24 325.69	1 000	V	41.10	12.80	-43.18	45.10	14.72	-	55.82	68.20	12.38
37 872.88	1 000	H	41.62	16.10	-45.26	45.80	16.64	-	58.26	68.20	9.94
<b>Average DATA. Emissions above 1 GHz</b>											
1 491.81 <sup>1)</sup>	1 000	H	62.40	2.93	-61.04	25.72	-32.39	2.83	32.84	54.00	21.16
11 387.16 <sup>2)</sup>	1 000	H	51.09	8.26	-60.20	38.15	-13.79	2.83	40.13	54.00	13.87

Note. Factor = Cable loss + Amp. Gain + Antenna factor  
Result = Reading + Factor + DCCF

<sup>1)</sup> Restricted band

<sup>2)</sup> Harmonic

- Above 1 GHz data\_U-NII-3

- 802.11a

**Lowest Channel (5 745 MHz)**

Frequency [MHz]	Receiver Bandwidth [kHz]	Pol. [V/H]	Reading [dB( $\mu$ V)]	Cable Loss [dB]	Amp Gain [dB]	Antenna Factor [dB]	Factor [dB]	DCCF [dB]	Result dB( $\mu$ V/m)	Limit dB( $\mu$ V/m)	Margin [dB]
<b>Peak DATA. Emissions above 1 GHz</b>											
1 539.69 <sup>1)</sup>	1 000	H	79.89	2.98	-61.00	25.96	-32.06	-	47.83	74.00	26.17
5 724.50	1 000	H	66.07	5.93	-32.64	33.99	7.28	-	73.35	121.06	47.71
11 499.18 <sup>2)</sup>	1 000	V	57.51	8.36	-60.01	38.25	-13.40	-	44.10	74.00	29.90
17 591.39	1 000	H	58.03	11.99	-61.03	41.54	-7.50	-	50.54	68.20	17.66
24 131.13	1 000	V	40.20	12.80	-42.86	45.10	15.04	-	55.23	68.20	12.97
37 771.81	1 000	H	43.28	16.10	-45.36	45.90	16.64	-	59.92	68.20	8.28
<b>Average DATA. Emissions above 1 GHz</b>											
1 539.69 <sup>1)</sup>	1 000	H	68.14	2.98	-61.00	25.96	-32.06	0.85	36.93	54.00	17.07
11 499.18 <sup>2)</sup>	1 000	V	50.05	8.36	-60.01	38.25	-13.40	0.85	37.50	54.00	16.50

Note. Factor = Cable loss + Amp. Gain + Antenna factor  
Result = Reading + Factor + DCCF

<sup>1)</sup> Restricted band

<sup>2)</sup> Harmonic

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**KCTL****Middle Channel (5 785 MHz)**

Frequency [MHz]	Receiver Bandwidth [kHz]	Pol. [V/H]	Reading [dB( $\mu$ V)]	Cable Loss [dB]	Amp Gain [dB]	Antenna Factor [dB]	Factor [dB]	DCCF [dB]	Result dB( $\mu$ V/m)]	Limit dB( $\mu$ V/m)]	Margin [dB]
<b>Peak DATA. Emissions above 1 GHz</b>											
1 582.14 <sup>1)</sup>	1 000	H	77.05	3.03	-60.85	26.13	-31.69	-	45.36	714.00	28.64
6 299.77	1 000	V	63.95	6.25	-61.97	34.79	-20.93	-	43.01	68.20	25.19
11 570.00 <sup>2)</sup>	1 000	V	57.44	8.44	-60.02	38.32	-13.26	-	44.19	74.00	29.81
17 517.00	1 000	H	59.02	11.98	-61.17	41.54	-7.65	-	51.38	68.20	16.82
24 295.44	1 000	H	41.36	12.80	-43.13	45.10	14.77	-	56.13	68.20	12.07
38 554.88	1 000	H	41.12	16.30	-44.99	45.50	16.81	-	57.93	68.20	10.27
<b>Average DATA. Emissions above 1 GHz</b>											
1 582.14 <sup>1)</sup>	1 000	H	65.86	3.03	-60.85	26.13	-31.69	0.85	35.02	54.00	18.98
11 570.00 <sup>2)</sup>	1 000	V	50.16	8.44	-60.02	38.32	-13.26	0.85	37.75	54.00	16.25

Note. Factor = Cable loss + Amp. Gain + Antenna factor

Result = Reading + Factor + DCCF

<sup>1)</sup> Restricted band

<sup>2)</sup> Harmonic

**Highest Channel (5 825 MHz)**

Frequency [MHz]	Receiver Bandwidth [kHz]	Pol. [V/H]	Reading [dB( $\mu$ V)]	Cable Loss [dB]	Amp Gain [dB]	Antenna Factor [dB]	Factor [dB]	DCCF [dB]	Result dB( $\mu$ V/m)]	Limit dB( $\mu$ V/m)]	Margin [dB]
<b>Peak DATA. Emissions above 1 GHz</b>											
1 615.83 <sup>1)</sup>	1 000	H	78.66	3.06	-60.74	26.26	-31.42	-	47.23	74.00	26.77
5 851.86	1 000	H	49.67	6.01	-32.64	34.18	7.55	-	57.22	117.96	60.74
11 641.56 <sup>2)</sup>	1 000	V	56.82	8.51	-60.04	38.40	-13.13	-	43.68	74.00	30.32
17 564.80	1 000	H	59.02	11.98	-61.07	41.54	-7.55	-	51.47	68.20	16.73
24 267.25	1 000	V	41.24	12.80	-43.09	45.10	14.81	-	56.05	68.20	12.15
38 241.38	1 000	H	41.77	16.20	-45.09	45.60	16.71	-	58.48	68.20	9.72
<b>Average DATA. Emissions above 1 GHz</b>											
1 615.83 <sup>1)</sup>	1 000	H	70.43	3.06	-60.74	26.26	-31.42	0.85	39.86	54.00	14.14
11 641.56 <sup>2)</sup>	1 000	V	50.24	8.51	-60.04	38.40	-13.13	0.85	37.96	54.00	16.04

Note. Factor = Cable loss + Amp. Gain + Antenna factor

Result = Reading + Factor + DCCF

<sup>1)</sup> Restricted band

<sup>2)</sup> Harmonic

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**- 802.11n HT20**

**Lowest Channel (5 745 MHz)**

Frequency [MHz]	Receiver Bandwidth [kHz]	Pol. [V/H]	Reading [dB( $\mu$ V)]	Cable Loss [dB]	Amp Gain [dB]	Antenna Factor [dB]	Factor [dB]	DCCF [dB]	Result dB( $\mu$ V/m)]	Limit dB( $\mu$ V/m)]	Margin [dB]
<b>Peak DATA. Emissions above 1 GHz</b>											
1 540.78 <sup>1)</sup>	1 000	H	78.02	2.98	-61.00	25.96	-32.06	-	45.96	74.00	28.04
5 723.98	1 000	H	55.80	5.93	-32.64	33.99	7.28	-	63.08	119.88	56.81
11 498.59 <sup>2)</sup>	1 000	V	54.53	8.36	-60.01	38.25	-13.40	-	41.13	74.00	32.87
17 510.17	1 000	H	58.79	11.98	-61.18	41.54	-7.66	-	51.13	68.20	17.07
24 058.25	1 000	V	41.36	12.80	-42.64	45.00	15.16	-	56.51	68.20	11.69
38 023.44	1 000	H	42.24	16.10	-45.16	45.70	16.64	-	58.88	68.20	9.32
<b>Average DATA. Emissions above 1 GHz</b>											
1 540.78 <sup>1)</sup>	1 000	H	67.51	2.98	-61.00	25.96	-32.06	0.90	36.35	54.00	17.65
11 498.59 <sup>2)</sup>	1 000	V	49.82	8.36	-60.01	38.25	-13.40	0.90	37.32	54.00	16.68

Note. Factor = Cable loss + Amp. Gain + Antenna factor

Result = Reading + Factor + DCCF

<sup>1)</sup> Restricted band

<sup>2)</sup> Harmonic

**Middle Channel (5 785 MHz)**

Frequency [MHz]	Receiver Bandwidth [kHz]	Pol. [V/H]	Reading [dB( $\mu$ V)]	Cable Loss [dB]	Amp Gain [dB]	Antenna Factor [dB]	Factor [dB]	DCCF [dB]	Result dB( $\mu$ V/m)]	Limit dB( $\mu$ V/m)]	Margin [dB]
<b>Peak DATA. Emissions above 1 GHz</b>											
1 579.05 <sup>1)</sup>	1 000	H	76.30	3.02	-60.86	26.12	-31.72	-	44.58	74.00	29.42
6 177.22	1 000	V	64.12	6.19	-62.07	34.63	-21.25	-	42.87	68.20	25.33
11 569.80 <sup>2)</sup>	1 000	H	58.82	8.44	-60.02	38.32	-13.26	-	45.56	74.00	28.44
17 059.52	1 000	H	58.43	11.91	-60.51	41.53	-7.07	-	51.36	68.20	16.84
24 345.63	1 000	H	41.17	12.80	-43.22	45.10	14.68	-	55.85	68.20	12.35
38 187.75	1 000	H	41.21	16.10	-45.01	45.60	16.69	-	57.90	68.20	10.30
<b>Average DATA. Emissions above 1 GHz</b>											
1 579.05 <sup>1)</sup>	1 000	H	67.66	3.02	-60.86	26.12	-31.72	0.90	36.84	54.00	17.16
11 569.80 <sup>2)</sup>	1 000	H	50.24	8.44	-60.02	38.32	-13.26	0.90	37.89	54.00	16.11

Note. Factor = Cable loss + Amp. Gain + Antenna factor

Result = Reading + Factor + DCCF

<sup>1)</sup> Restricted band

<sup>2)</sup> Harmonic

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**Highest Channel (5 825 MHz)**

Frequency [MHz]	Receiver Bandwidth [kHz]	Pol. [V/H]	Reading [dB( $\mu$ V)]	Cable Loss [dB]	Amp Gain [dB]	Antenna Factor [dB]	Factor [dB]	DCCF [dB]	Result dB( $\mu$ V/m)]	Limit dB( $\mu$ V/m)]	Margin [dB]
<b>Peak DATA. Emissions above 1 GHz</b>											
1 619.80 <sup>1)</sup>	1 000	H	79.08	3.06	-60.73	26.28	-31.39	-	47.69	74.00	26.31
5 851.52	1 000	V	48.39	6.01	-32.64	34.18	7.55	-	55.94	118.74	62.80
11 641.35 <sup>2)</sup>	1 000	V	55.27	8.51	-60.04	38.40	-13.13	-	42.14	74.00	31.86
17 635.95	1 000	H	57.91	12.00	-60.95	41.54	-7.41	-	50.50	68.20	17.70
24 291.31	1 000	V	41.56	12.80	-43.13	45.10	14.77	-	56.34	68.20	11.86
38 064.00	1 000	V	41.67	16.10	-45.15	45.70	16.65	-	58.32	68.20	9.88
<b>Average DATA. Emissions above 1 GHz</b>											
1 619.80 <sup>1)</sup>	1 000	H	70.15	3.06	-60.73	26.28	-31.39	0.90	39.66	54.00	14.34
11 641.35 <sup>2)</sup>	1 000	V	50.15	8.51	-60.04	38.40	-13.13	0.90	37.92	54.00	16.08

Note. Factor = Cable loss + Amp. Gain + Antenna factor

Result = Reading + Factor + DCCF

<sup>1)</sup> Restricted band

<sup>2)</sup> Harmonic

**- 802.11n HT40****Lowest Channel (5 755 MHz)**

Frequency [MHz]	Receiver Bandwidth [kHz]	Pol. [V/H]	Reading [dB( $\mu$ V)]	Cable Loss [dB]	Amp Gain [dB]	Antenna Factor [dB]	Factor [dB]	DCCF [dB]	Result dB( $\mu$ V/m)]	Limit dB( $\mu$ V/m)]	Margin [dB]
<b>Peak DATA. Emissions above 1 GHz</b>											
1 549.14 <sup>1)</sup>	1 000	H	76.26	2.99	-60.97	26.00	-31.98	-	44.28	74.00	29.72
5 723.98	1 000	H	56.57	5.93	-32.64	33.99	7.28	-	63.85	119.88	56.04
11 513.55 <sup>2)</sup>	1 000	V	57.12	8.38	-60.00	38.27	-13.35	-	43.77	74.00	30.23
17 044.78	1 000	V	58.81	11.91	-60.49	41.53	-7.05	-	51.76	68.20	16.44
24 033.50	1 000	V	40.16	12.80	-42.60	45.00	15.20	-	55.36	68.20	12.84
38 184.31	1 000	V	41.28	16.10	-45.01	45.60	16.69	-	57.98	68.20	10.22
<b>Average DATA. Emissions above 1 GHz</b>											
1 549.14 <sup>1)</sup>	1 000	H	66.31	2.99	-60.97	26.00	-31.98	1.66	36.00	54.00	18.00
11 513.55 <sup>2)</sup>	1 000	V	50.19	8.38	-60.00	38.27	-13.35	1.66	38.50	54.00	15.50

Note. Factor = Cable loss + Amp. Gain + Antenna factor

Result = Reading + Factor + DCCF

<sup>1)</sup> Restricted band

<sup>2)</sup> Harmonic



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**KCTL****Highest Channel (5 795 MHz)**

Frequency [MHz]	Receiver Bandwidth [kHz]	Pol. [V/H]	Reading [dB( $\mu$ V)]	Cable Loss [dB]	Amp Gain [dB]	Antenna Factor [dB]	Factor [dB]	DCCF [dB]	Result dB( $\mu$ V/m)]	Limit dB( $\mu$ V/m)]	Margin [dB]
<b>Peak DATA. Emissions above 1 GHz</b>											
1 590.03 <sup>1)</sup>	1 000	H	74.47	3.03	-60.83	26.15	-31.65	-	42.82	74.00	31.18
5 852.20	1 000	V	47.80	6.01	-32.64	34.18	7.55	-	55.34	117.18	61.83
11 589.81 <sup>2)</sup>	1 000	V	58.05	8.46	-60.03	38.34	-13.23	-	44.83	74.00	29.17
17 565.52	1 000	H	58.29	11.98	-61.07	41.54	-7.55	-	50.75	68.20	17.45
24 105.00	1 000	H	41.07	12.80	-42.82	45.10	15.08	-	56.15	68.20	12.05
38 076.38	1 000	V	41.31	16.10	-45.14	45.70	16.66	-	57.96	68.20	10.24
<b>Average DATA. Emissions above 1 GHz</b>											
1 590.03 <sup>1)</sup>	1 000	H	64.77	3.03	-60.83	26.15	-31.65	1.66	34.79	54.00	19.21
11 589.81 <sup>2)</sup>	1 000	V	50.46	8.46	-60.03	38.34	-13.23	1.66	38.90	54.00	15.10

Note. Factor = Cable loss + Amp. Gain + Antenna factor

Result = Reading + Factor + DCCF

<sup>1)</sup> Restricted band

<sup>2)</sup> Harmonic

**- 802.11ac VHT80****Middle Channel (5 775 MHz)**

Frequency [MHz]	Receiver Bandwidth [kHz]	Pol. [V/H]	Reading [dB( $\mu$ V)]	Cable Loss [dB]	Amp Gain [dB]	Antenna Factor [dB]	Factor [dB]	DCCF [dB]	Result dB( $\mu$ V/m)]	Limit dB( $\mu$ V/m)]	Margin [dB]
<b>Peak DATA. Emissions above 1 GHz</b>											
1 575.11 <sup>1)</sup>	1 000	H	72.18	3.02	-60.87	26.11	-31.74	-	40.44	74.00	33.56
5 717.45	1 000	H	52.74	5.92	-32.64	33.98	7.26	-	60.00	110.09	50.09
5 887.27	1 000	V	49.30	6.03	-32.71	34.23	7.55	-	56.84	96.12	39.28
11 548.66 <sup>2)</sup>	1 000	H	59.16	8.42	-60.02	38.31	-13.29	-	45.87	74.00	28.13
17 609.00	1 000	H	58.70	11.99	-60.99	41.54	-7.46	-	51.23	68.20	16.97
24 096.75	1 000	H	41.15	12.80	-42.81	45.10	15.09	-	56.25	68.20	11.95
38 143.75	1 000	V	40.82	16.10	-45.12	45.70	16.68	-	57.50	68.20	10.70
<b>Average DATA. Emissions above 1 GHz</b>											
1 575.11 <sup>1)</sup>	1 000	H	61.40	3.02	-60.87	26.11	-31.74	2.83	32.50	54.00	21.50
11 548.66 <sup>2)</sup>	1 000	H	50.36	8.42	-60.02	38.31	-13.29	2.83	39.91	54.00	14.09

Note. Factor = Cable loss + Amp. Gain + Antenna factor

Result = Reading + Factor + DCCF

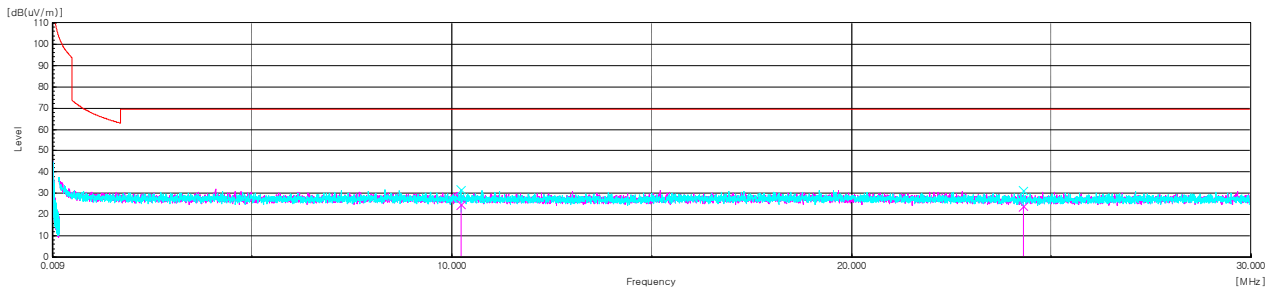
<sup>1)</sup> Restricted band

<sup>2)</sup> Harmonic

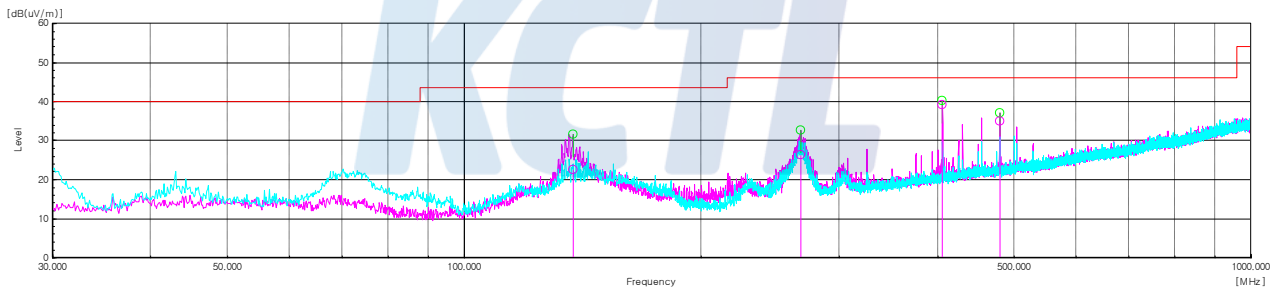
### 5.2.4.1 Test Plot (Dipole Antenna)

Figure 1. Plot of the Spurious Emissions (Radiated)

**- 9 kHz ~ 30 MHz data**



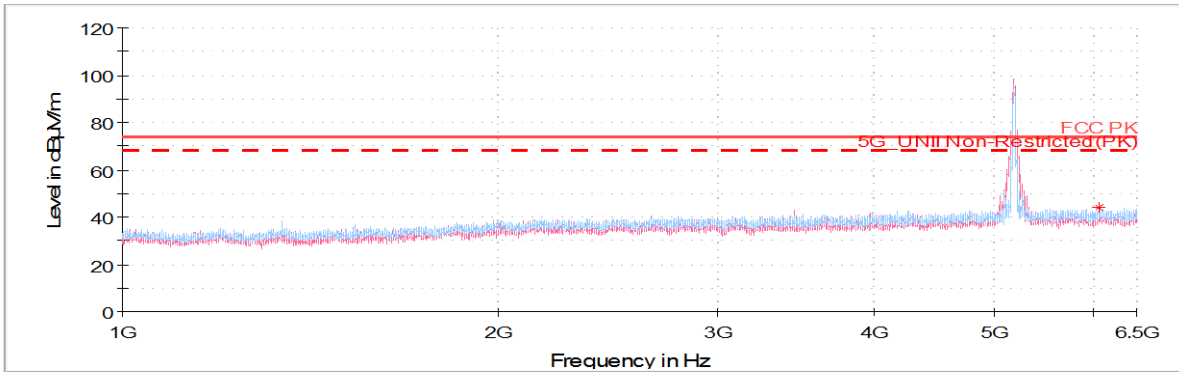
**- 30 MHz ~ 1 GHz data**



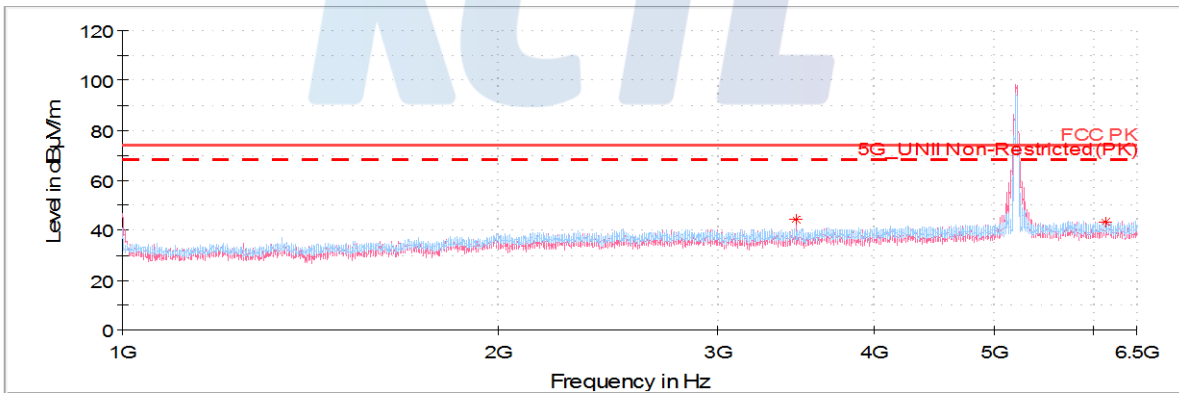
**- 1 GHz ~ 6.5 GHz data\_U-NII-1**

**- 802.11a**

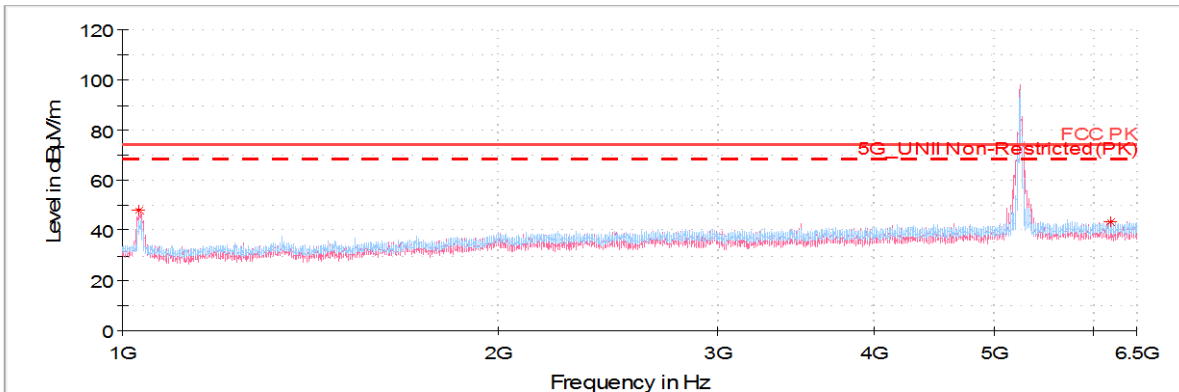
Lowest Channel (5 180 MHz)



Middle Channel (5 200 MHz)

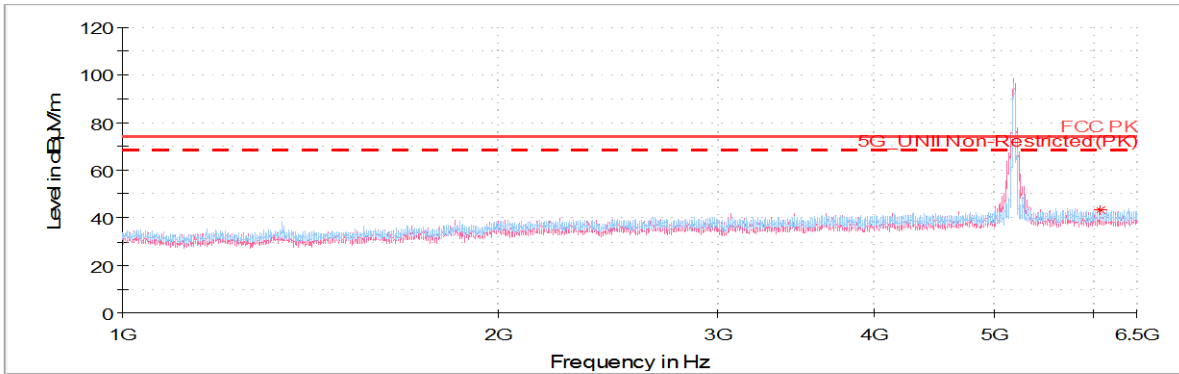


Highest Channel (5 240 MHz)

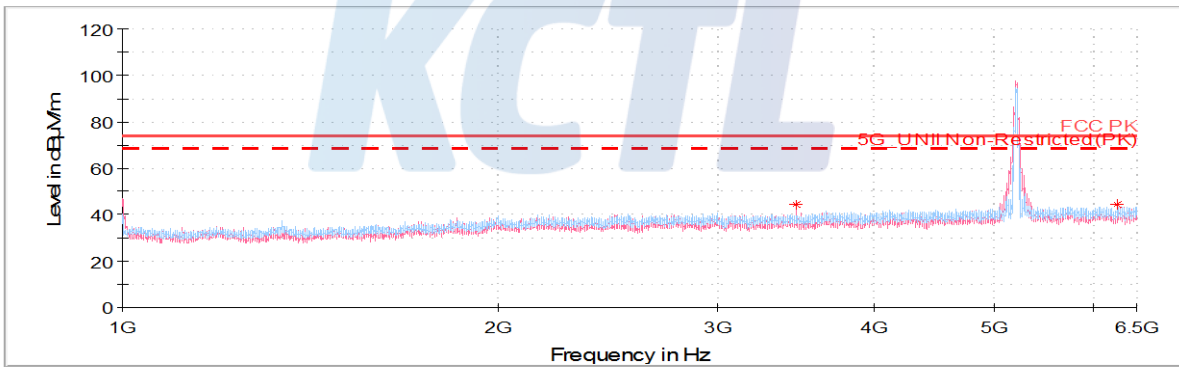


**- 802.11n HT20**

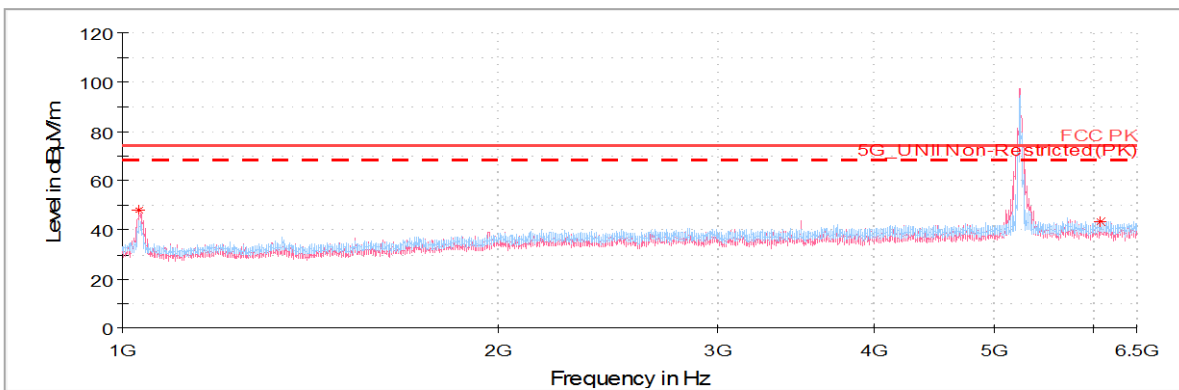
Lowest Channel (5 180 MHz)



Middle Channel (5 200 MHz)

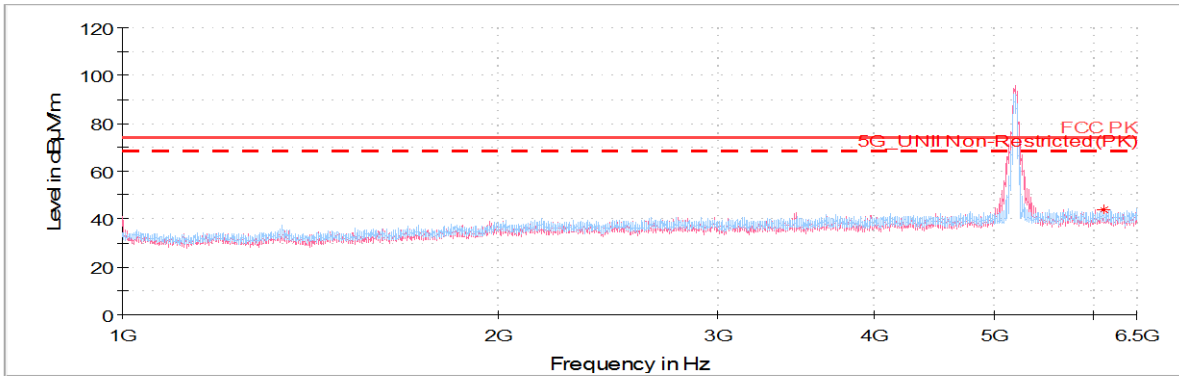


Highest Channel (5 240 MHz)

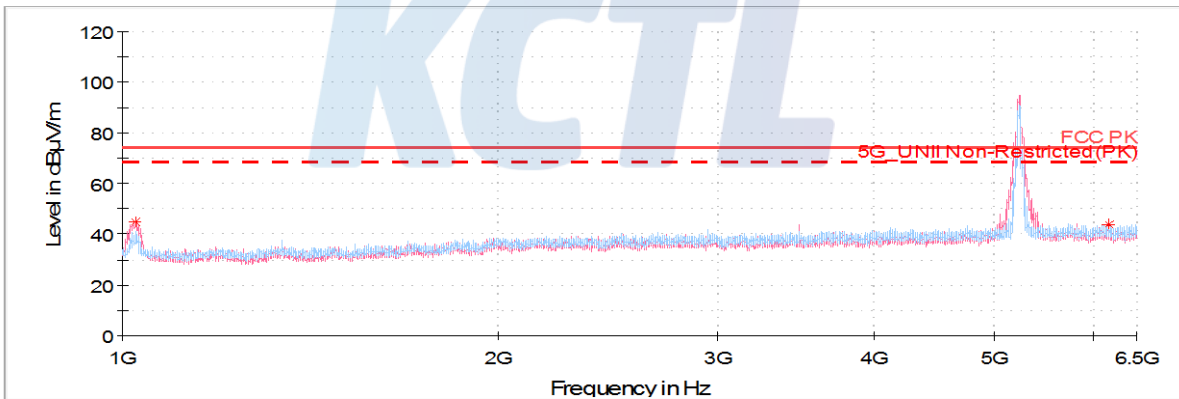


**- 802.11n HT40**

Lowest Channel (5 190 MHz)

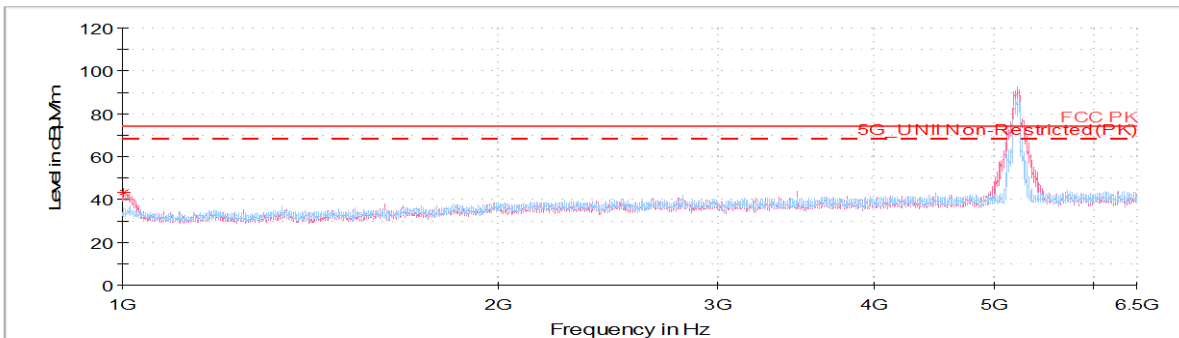


Highest Channel (5 230 MHz)



**- 802.11ac VHT80**

Middle Channel (5 210 MHz)



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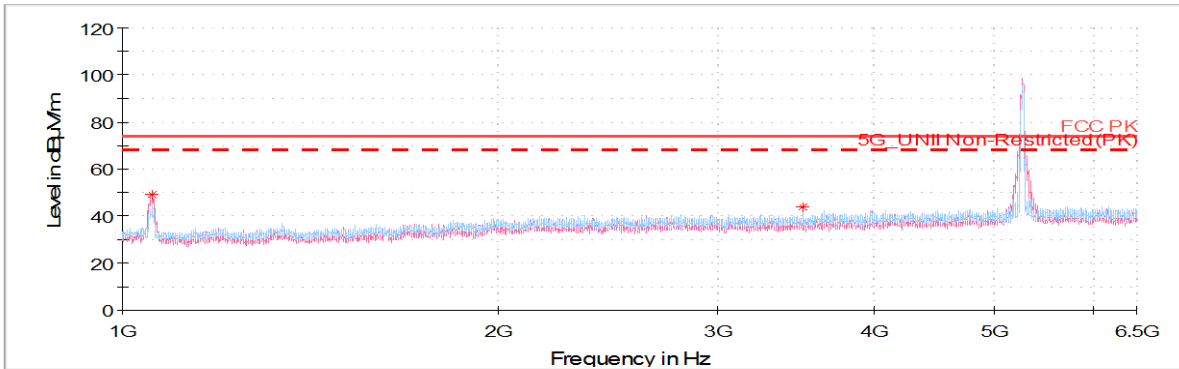
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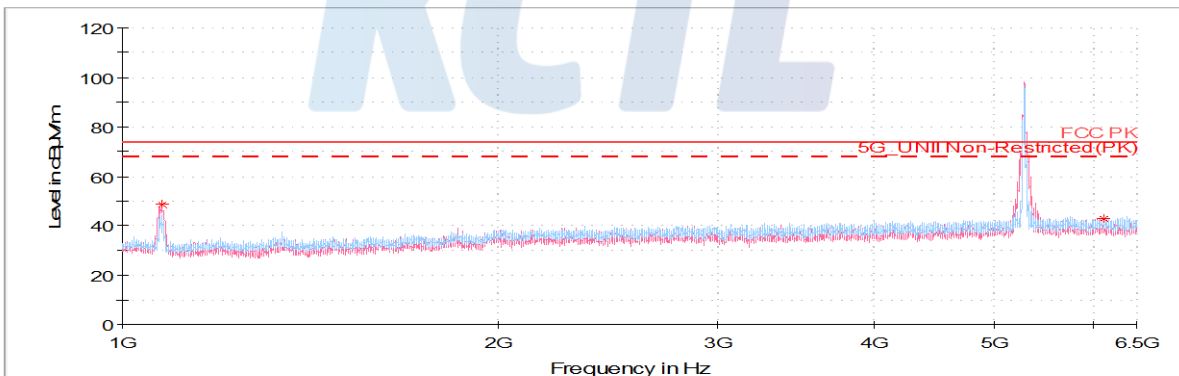
## - 1 GHz ~ 6.5 GHz data\_U-NII-2A

### - 802.11a

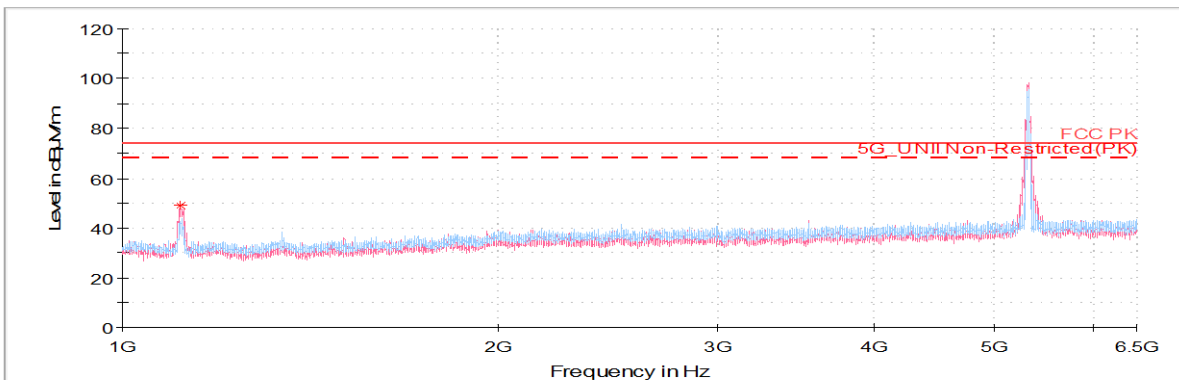
Lowest Channel (5 260 MHz)



Middle Channel (5 280 MHz)

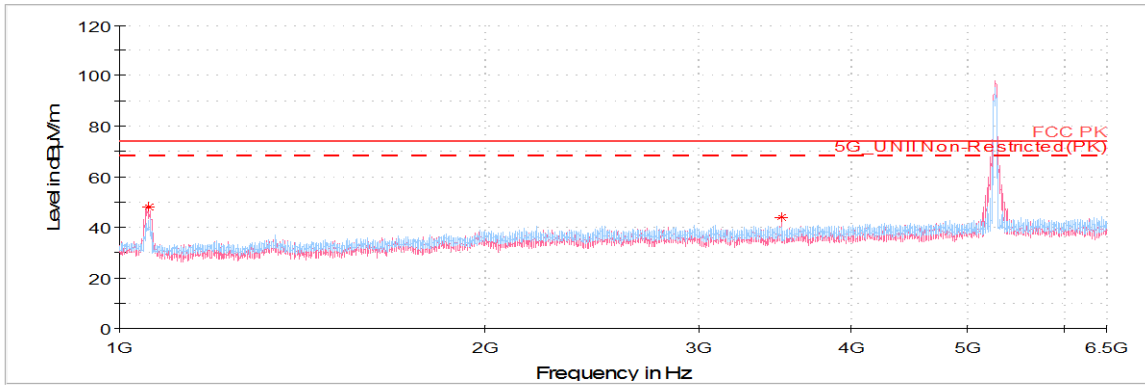


Highest Channel (5 320 MHz)

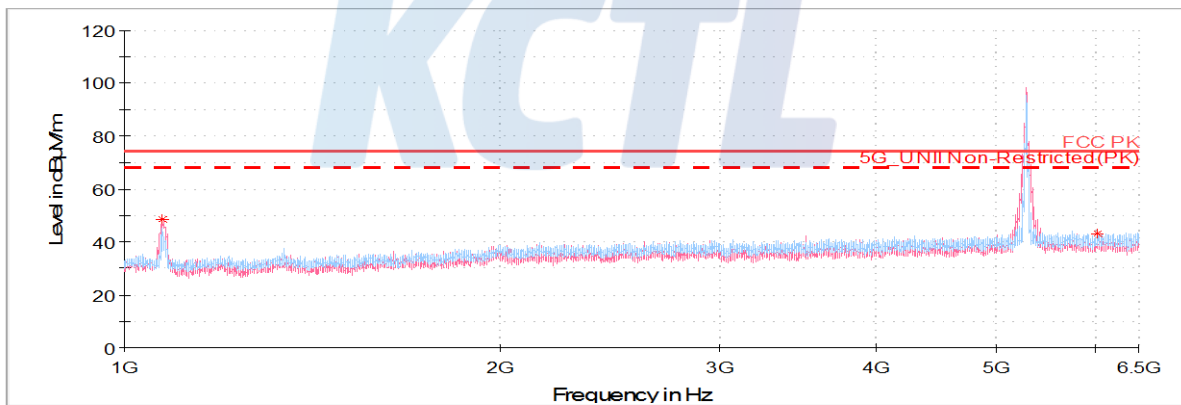


**- 802.11n HT20**

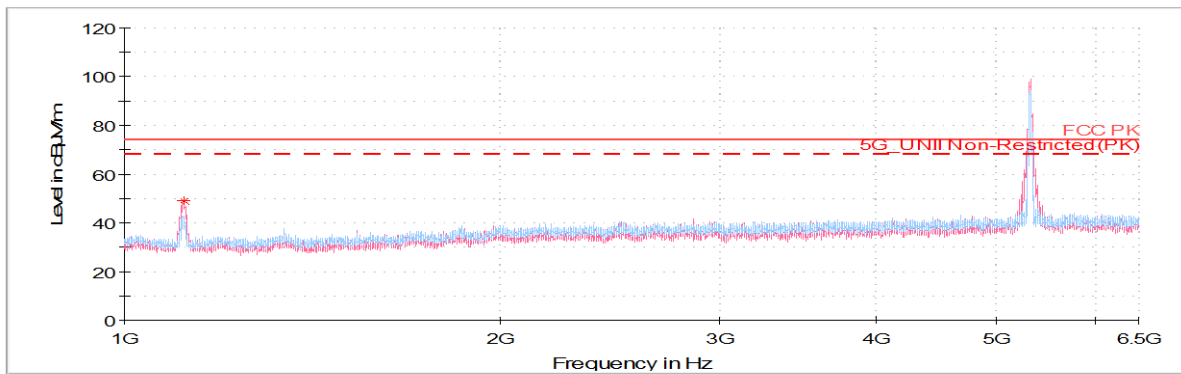
Lowest Channel (5 260 MHz)



Middle Channel (5 280 MHz)

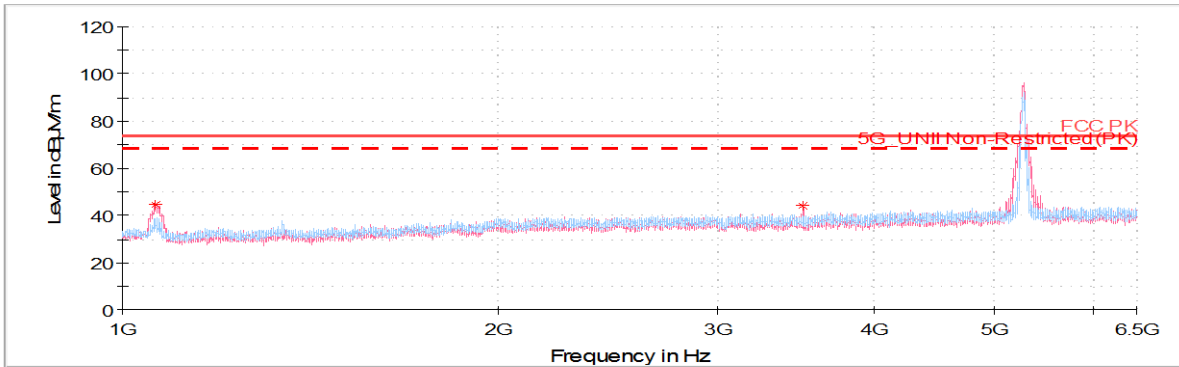


Highest Channel (5 320 MHz)

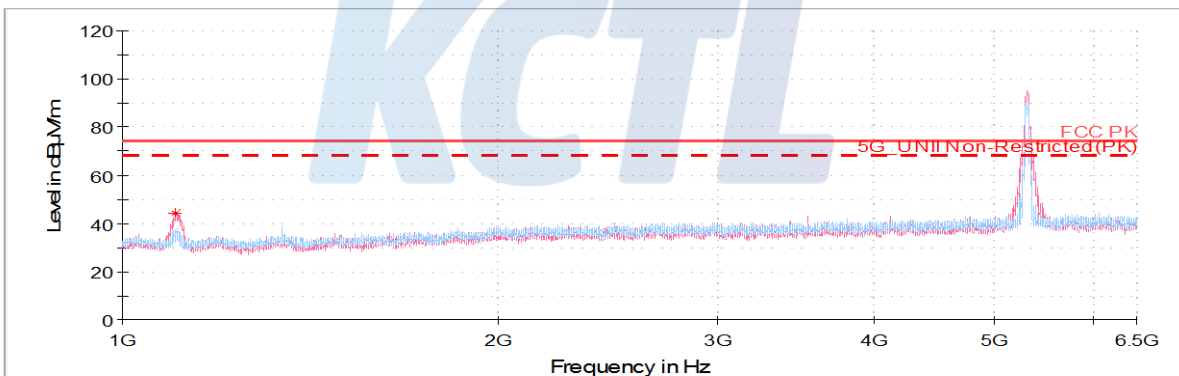


**- 802.11n HT40**

Lowest Channel (5 270 MHz)

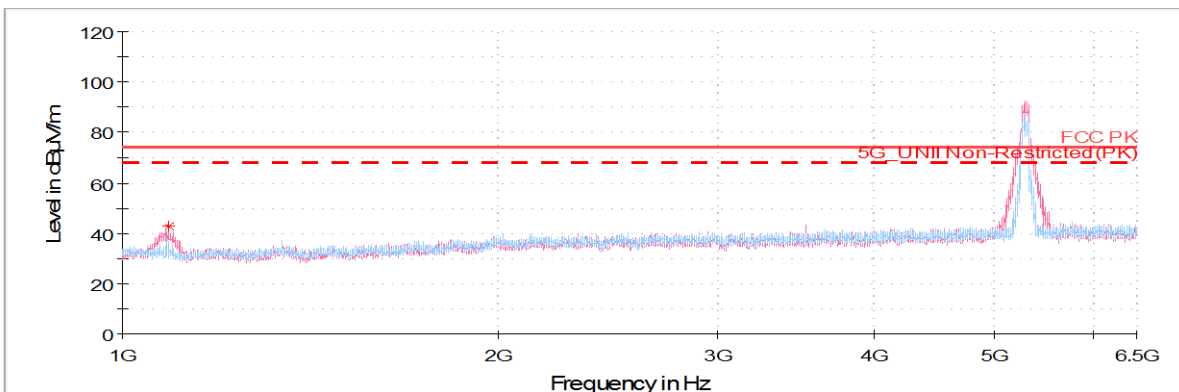


Highest Channel (5 310 MHz)



**- 802.11ac VHT80**

Middle Channel (5 290 MHz)

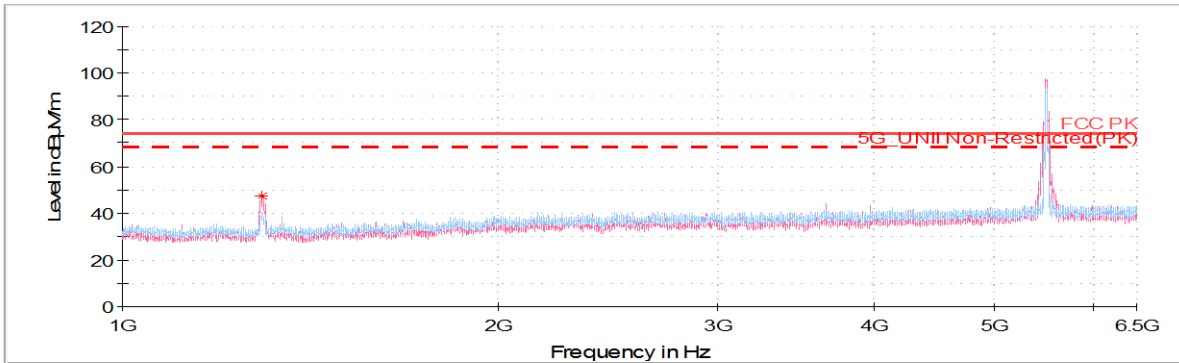




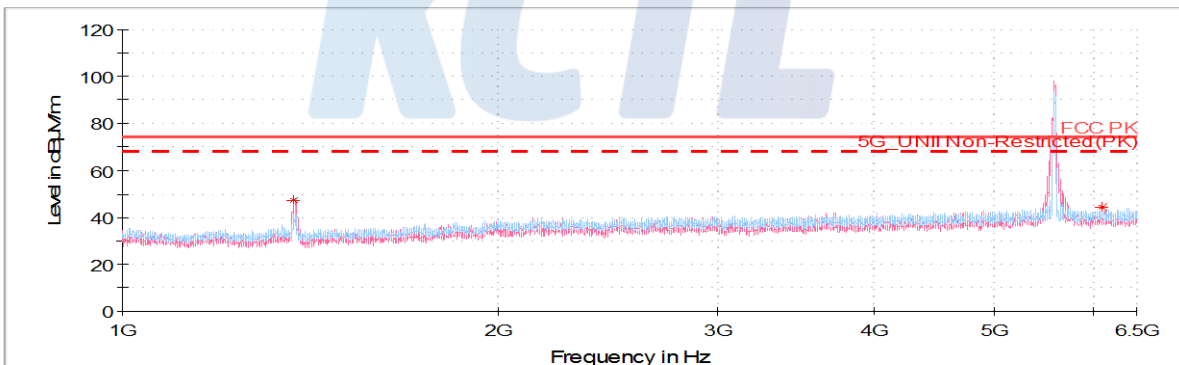
**- 1 GHz ~ 6.5 GHz data\_U-NII-2C**

**- 802.11a**

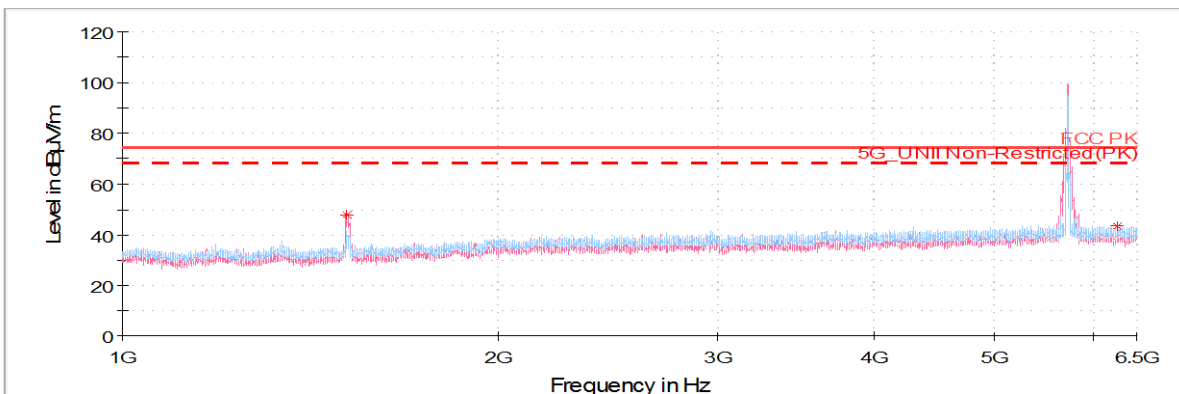
Lowest Channel (5 500 MHz)



Middle Channel (5 580 MHz)

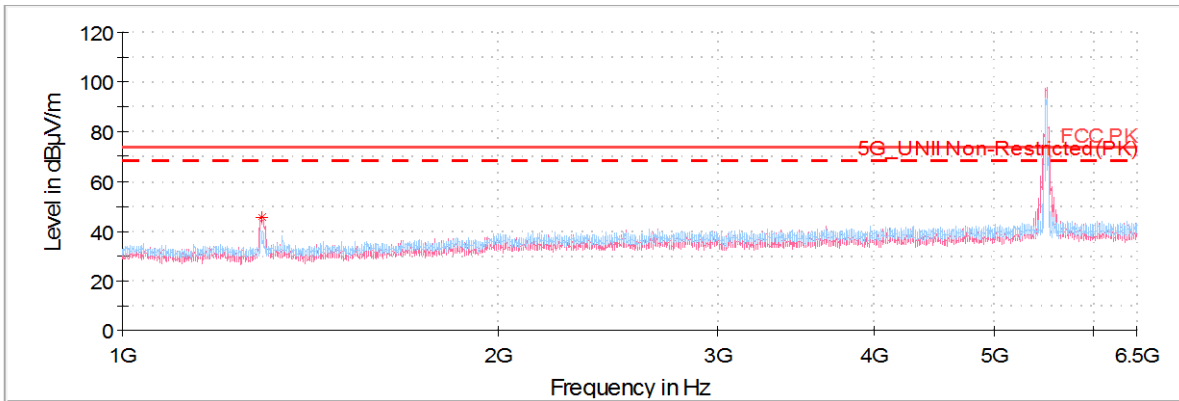


Highest Channel (5 720 MHz)

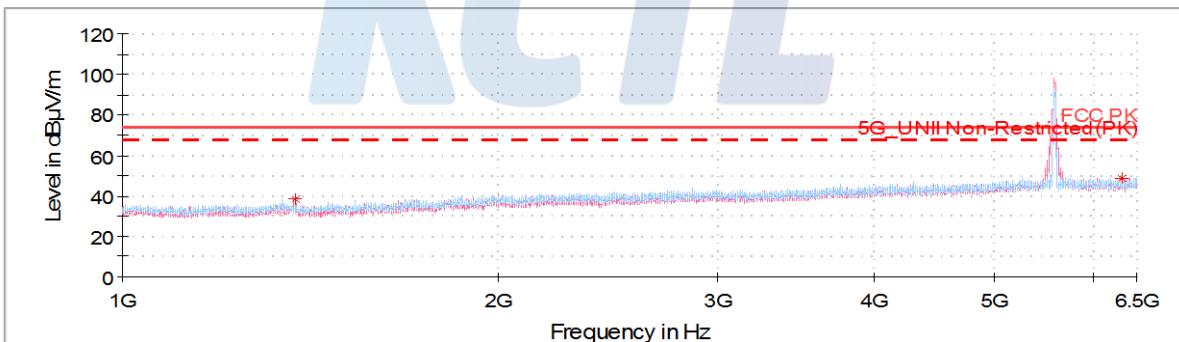


**- 802.11n HT20**

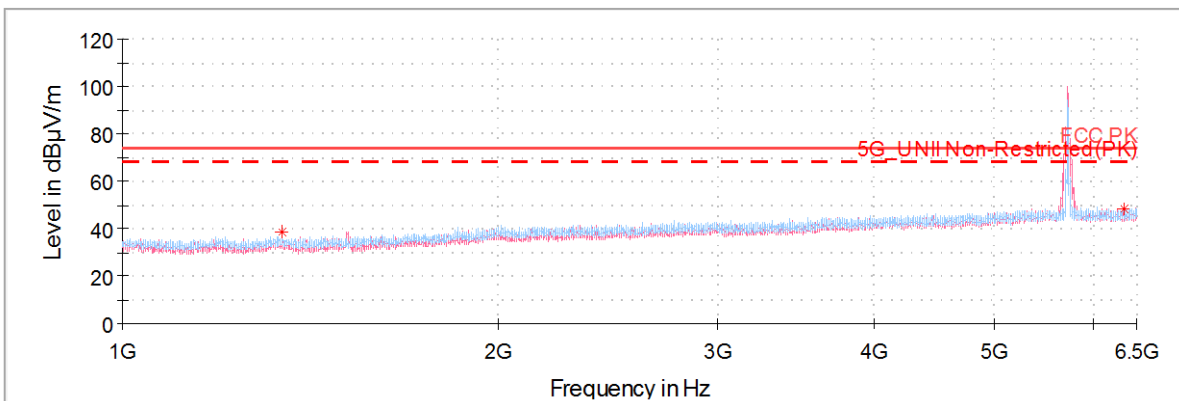
Lowest Channel (5 500 MHz)



Middle Channel (5 580 MHz)

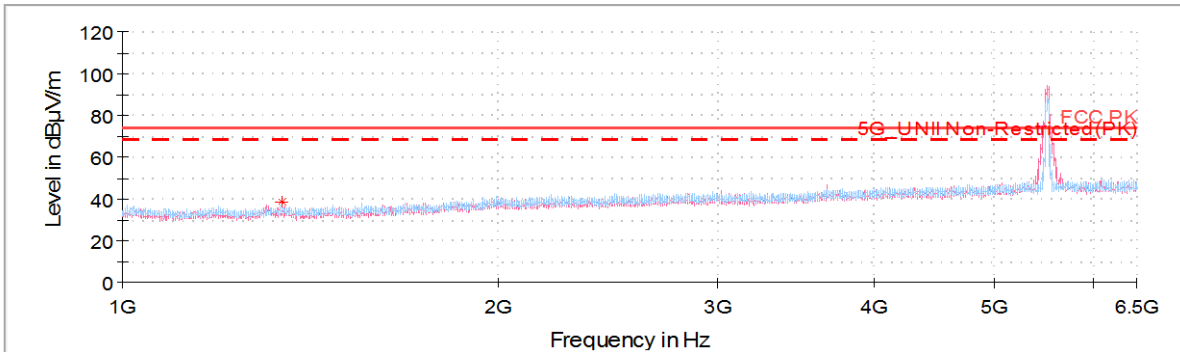


Highest Channel (5 720 MHz)

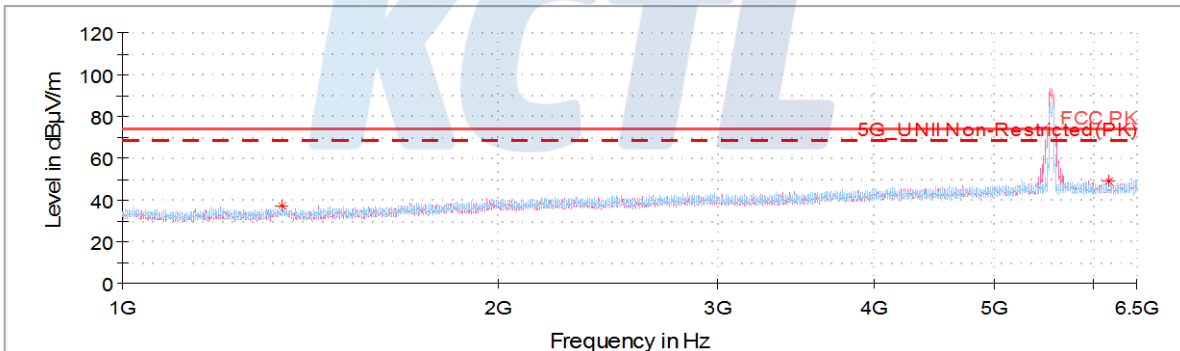


**- 802.11n HT40**

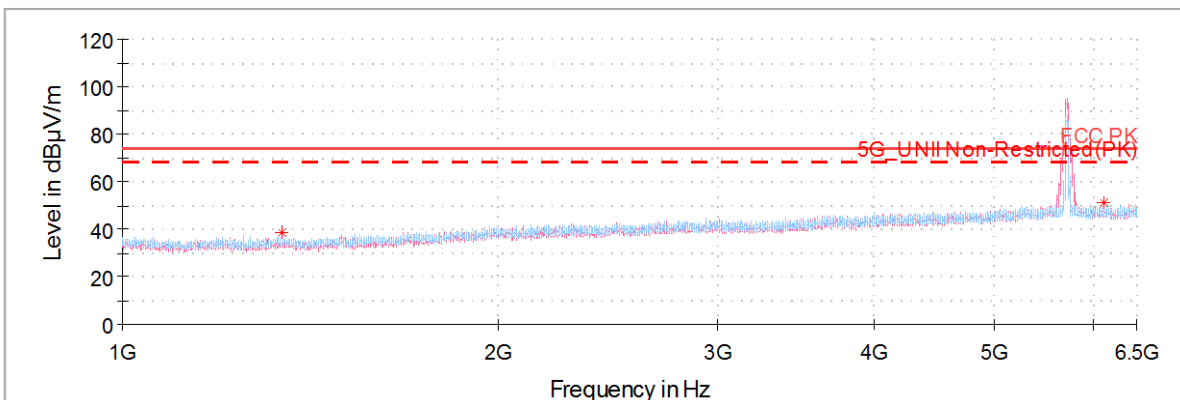
Lowest Channel (5 510 MHz)



Middle Channel (5 550 MHz)

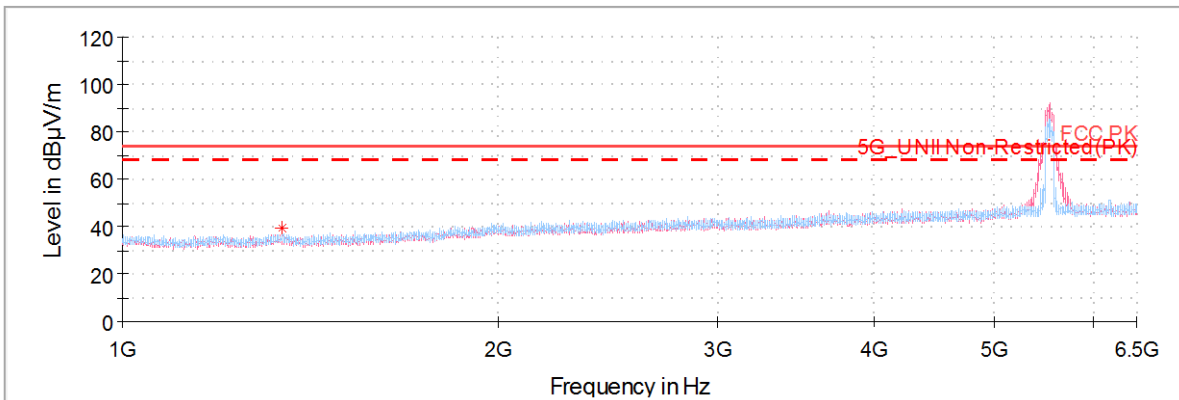


Highest Channel (5 710 MHz)

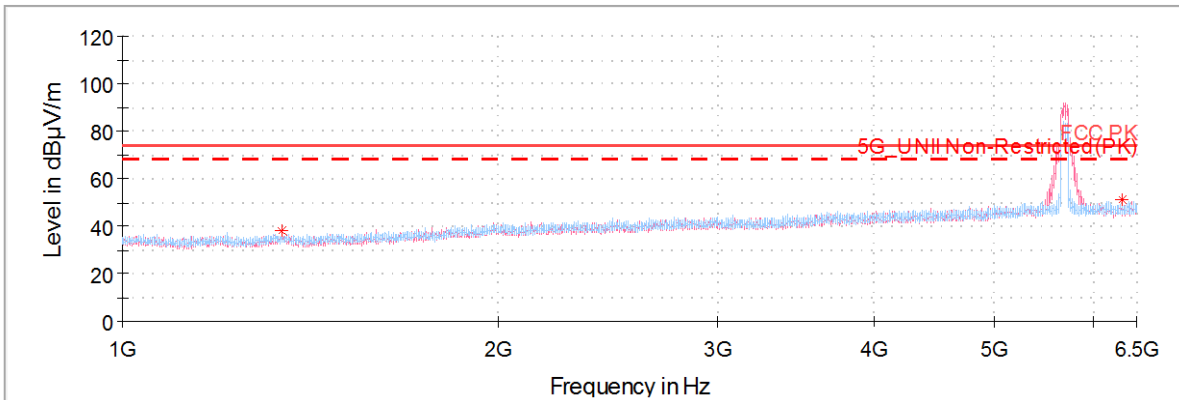


**- 802.11ac VHT80**

Lowest Channel (5 530 MHz)



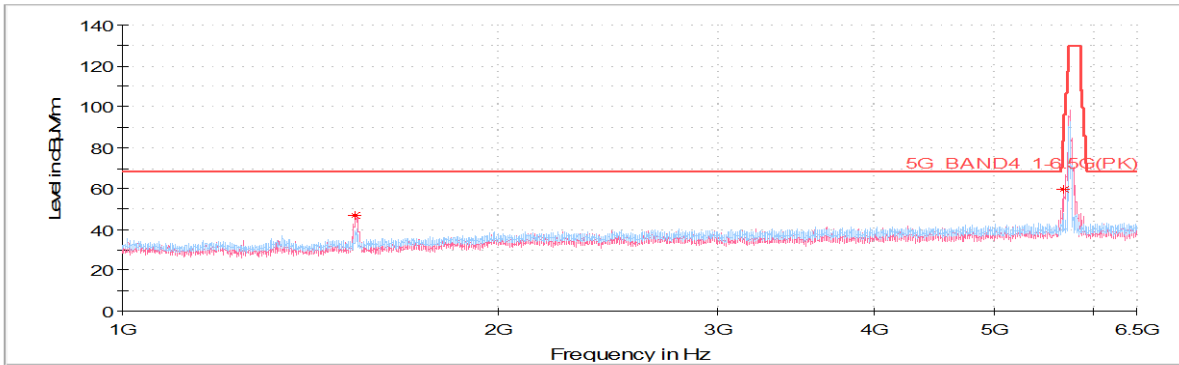
Highest Channel (5 690 MHz)



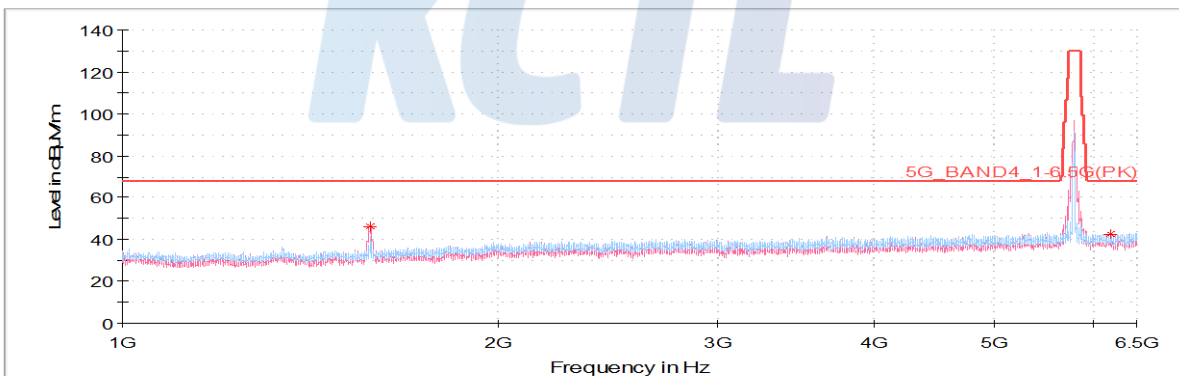
**- 1 GHz ~ 6.5 GHz data\_U-NII-3**

**- 802.11a**

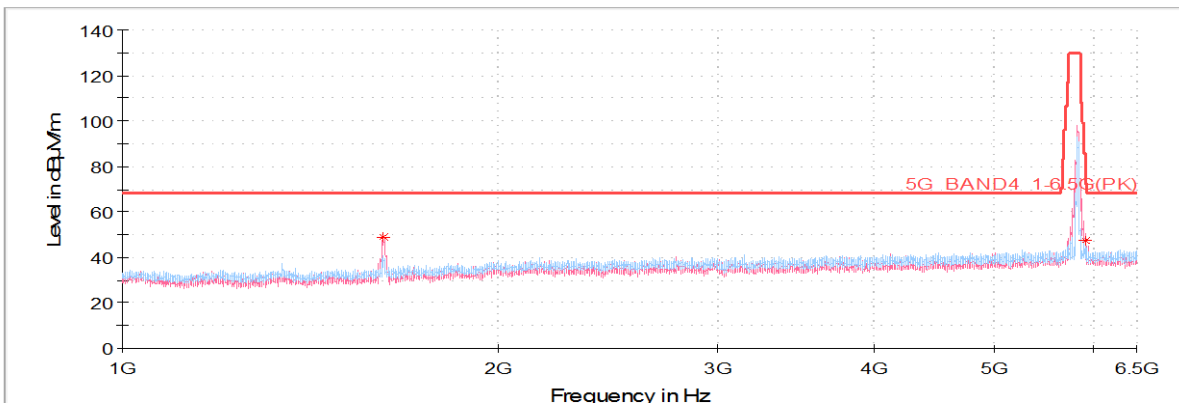
Lowest Channel (5 745 MHz)



Middle Channel (5 785 MHz)

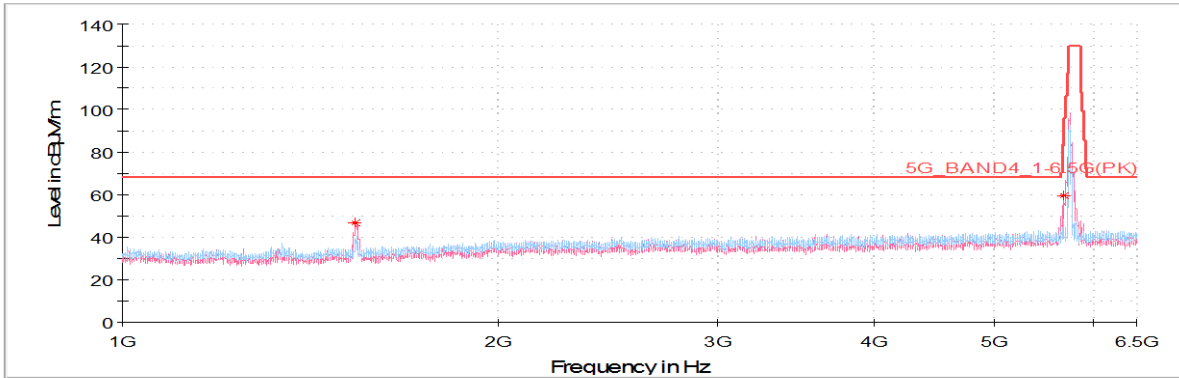


Highest Channel (5 825 MHz)

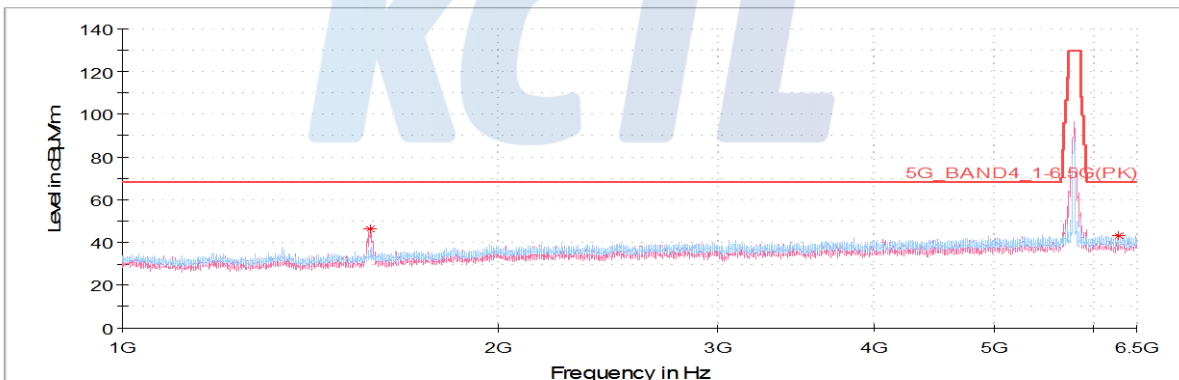


**- 802.11n HT20**

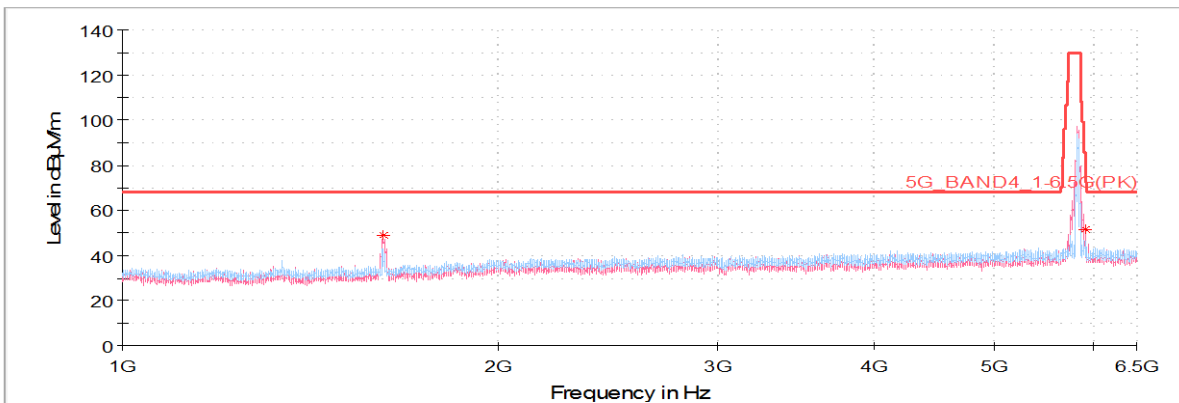
Lowest Channel (5 745 MHz)



Middle Channel (5 785 MHz)

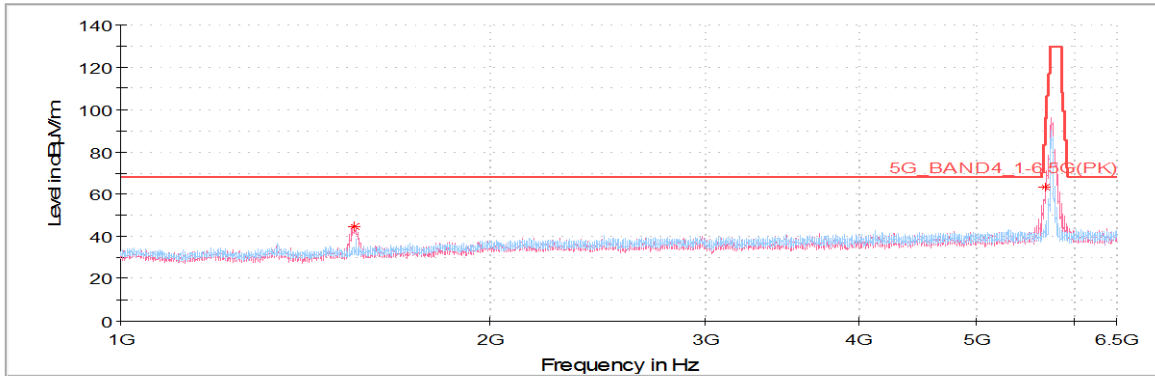


Highest Channel (5 825 MHz)

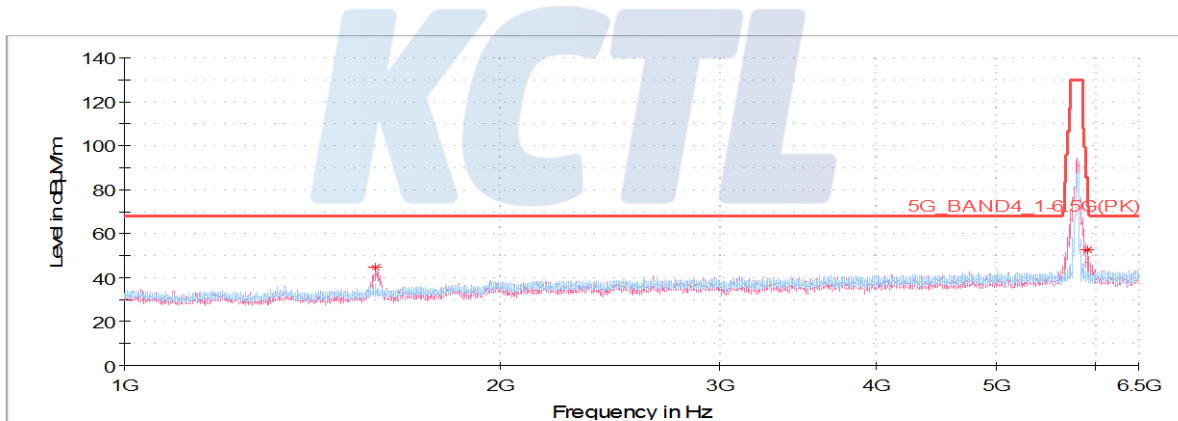


**- 802.11n HT40**

Lowest Channel (5 755 MHz)

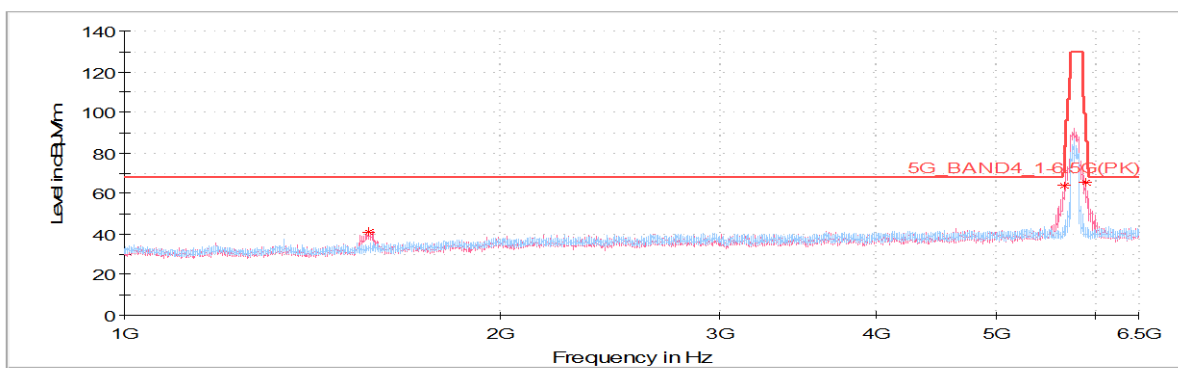


Highest Channel (5 795 MHz)



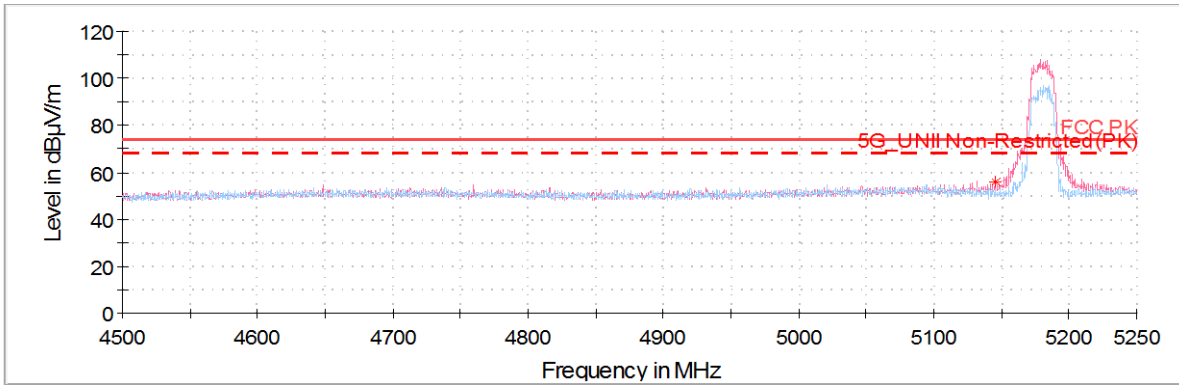
**- 802.11ac VHT80**

Middle Channel (5 775 MHz)

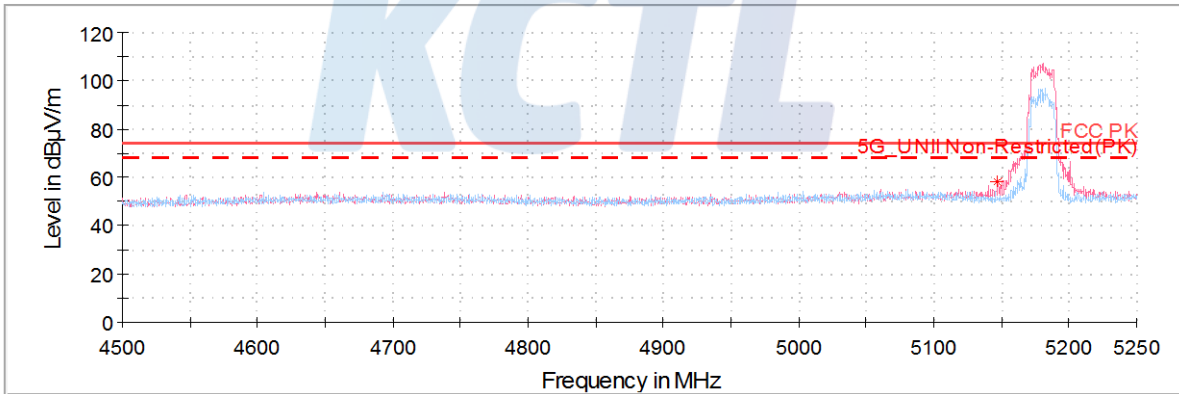


**- Restricted Bandedge data\_U-NII-1(Lowest channel)**

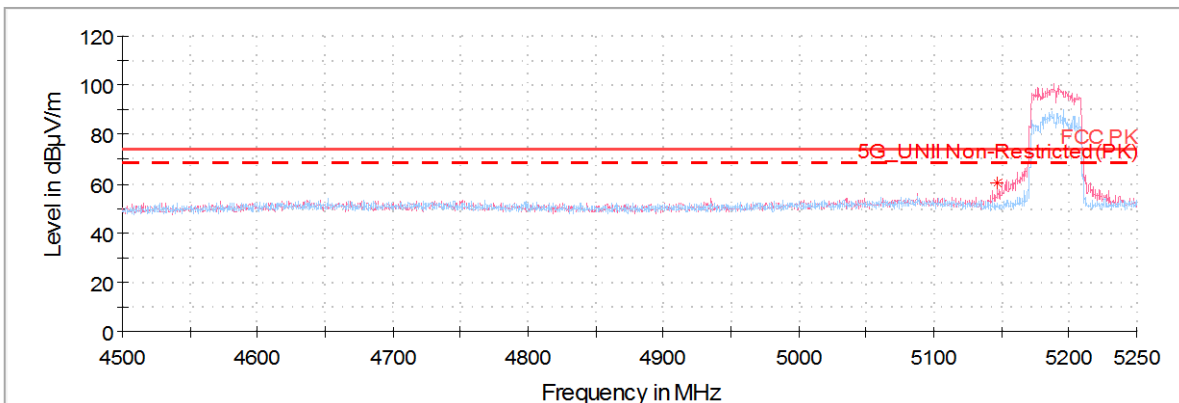
**- 802.11a**



**- 802.11n HT20**



**- 802.11n HT40**





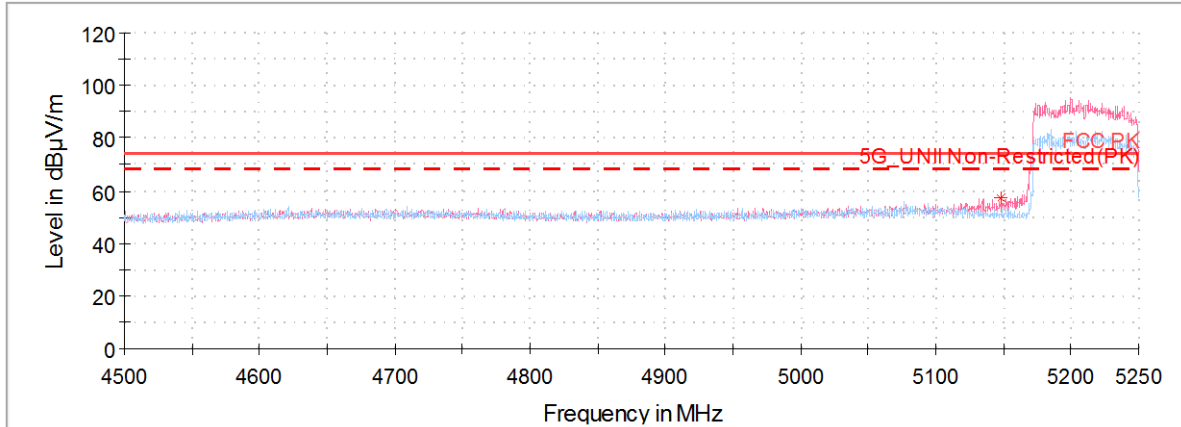
**KCTL Inc.**

65, Sinwon-ro, Yeongtong-gu,  
Suwon-si, Gyeonggi-do, 16677, Korea  
TEL: 82-31-285-0894 FAX: 82-505-299-8311  
[www.kctl.co.kr](http://www.kctl.co.kr)

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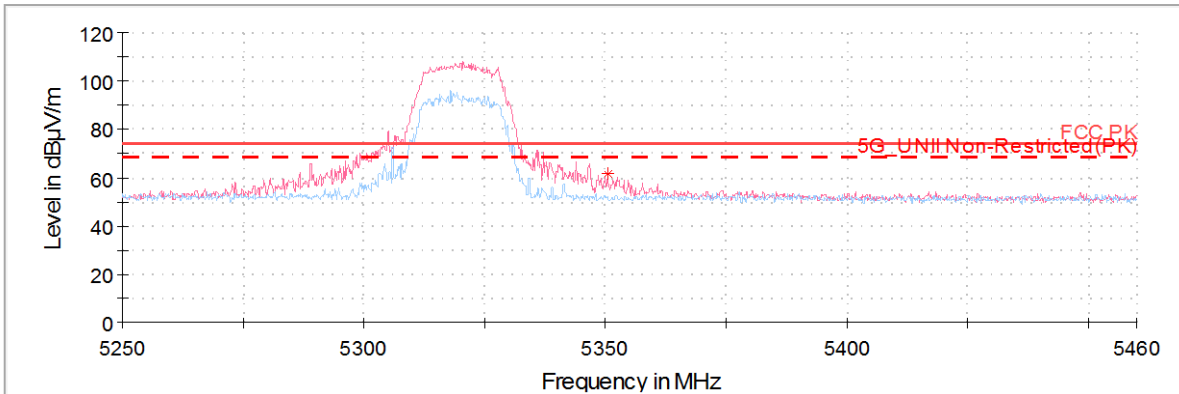


**- 802.11ac VHT80**

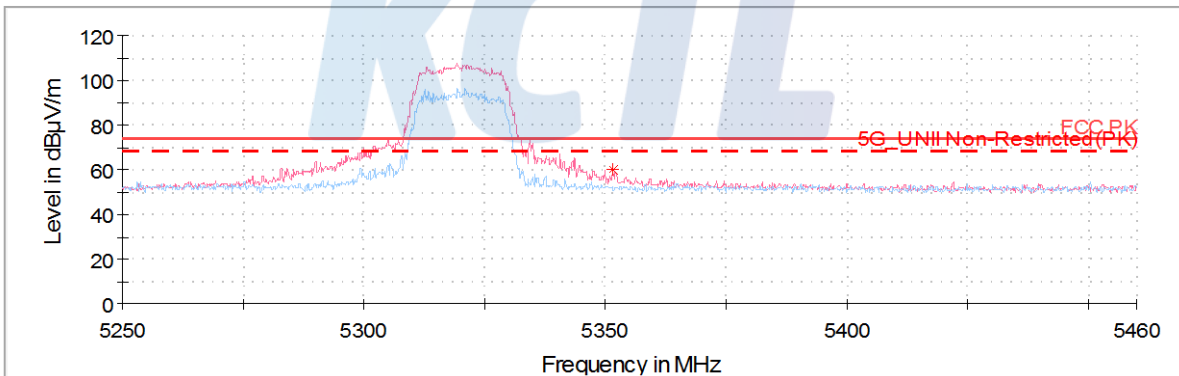


**- Restricted Bandedge data\_U-NII-2A(Highest Channel)**

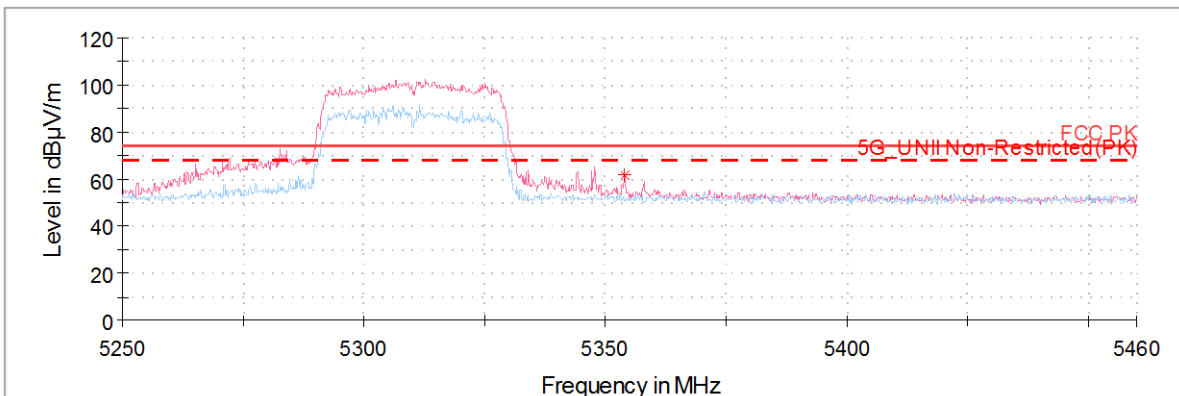
**- 802.11a**



**- 802.11n HT20**



**- 802.11n HT40**



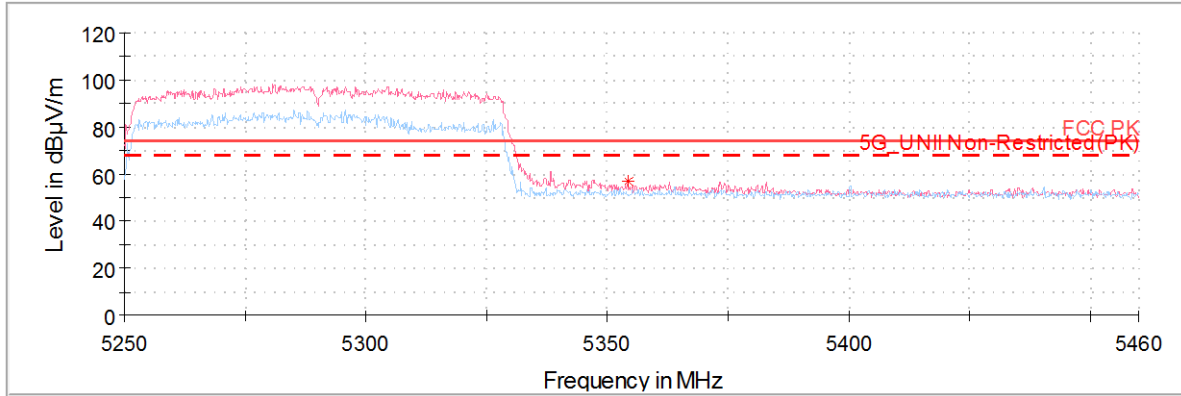
**KCTL Inc.**

65, Sinwon-ro, Yeongtong-gu,  
Suwon-si, Gyeonggi-do, 16677, Korea  
TEL: 82-31-285-0894 FAX: 82-505-299-8311  
[www.kctl.co.kr](http://www.kctl.co.kr)

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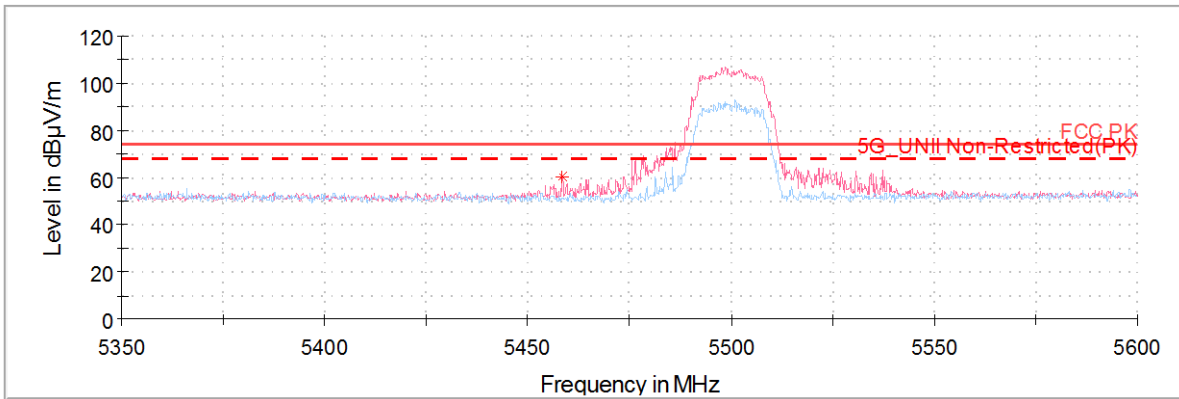


**- 802.11ac VHT80**

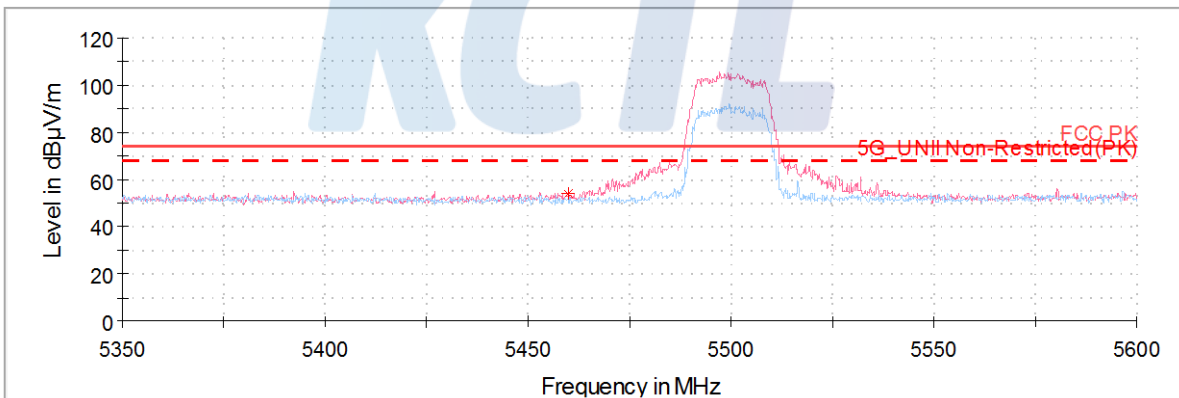


**- Restricted Bandedge data\_U-NII-2C(Lowest channel)**

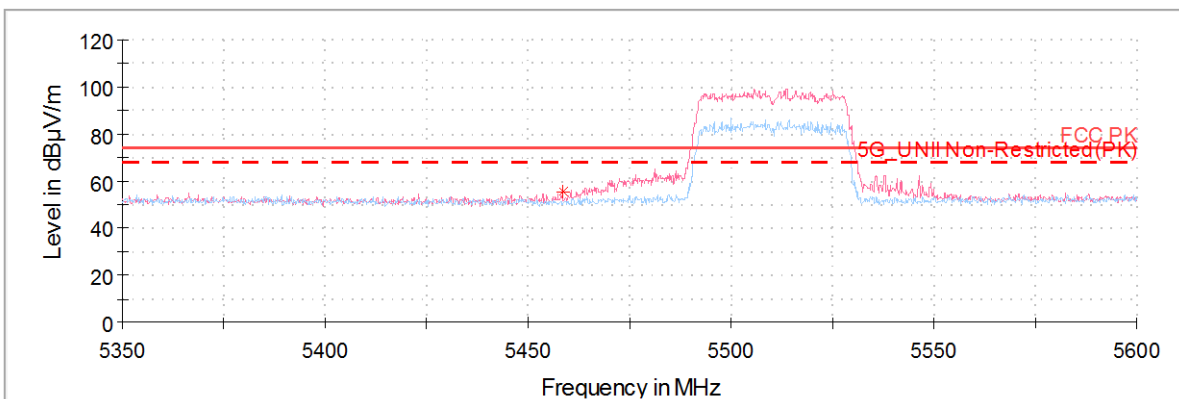
**- 802.11a**



**- 802.11n HT20**



**- 802.11n HT40**



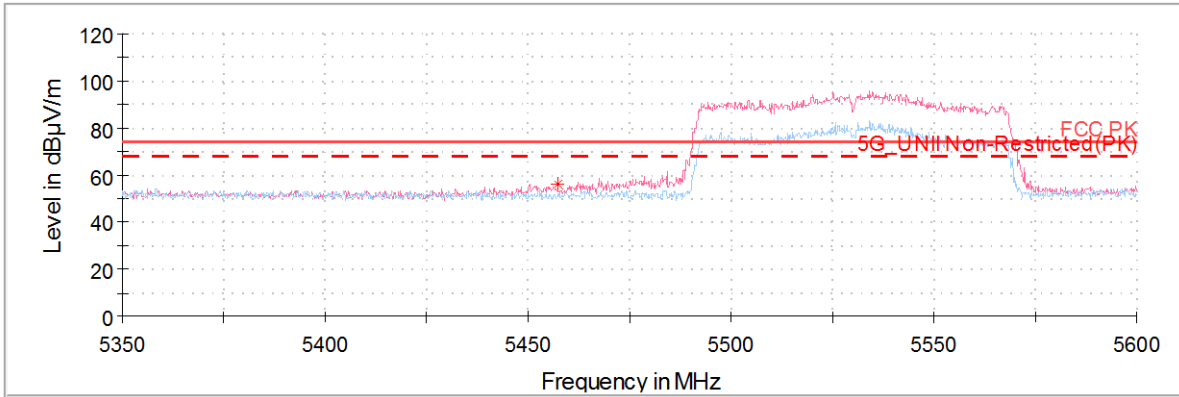
**KCTL Inc.**

65, Sinwon-ro, Yeongtong-gu,  
Suwon-si, Gyeonggi-do, 16677, Korea  
TEL: 82-31-285-0894 FAX: 82-505-299-8311  
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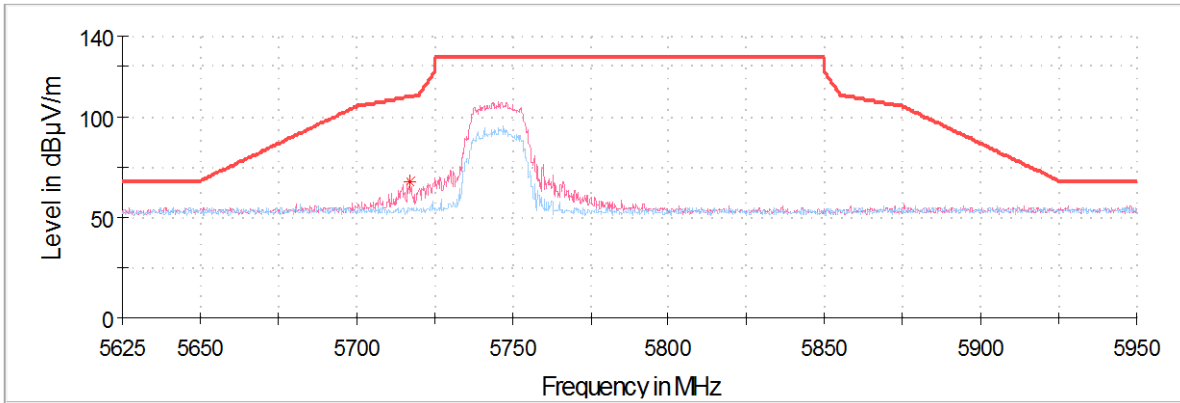


**- 802.11ac VHT80**

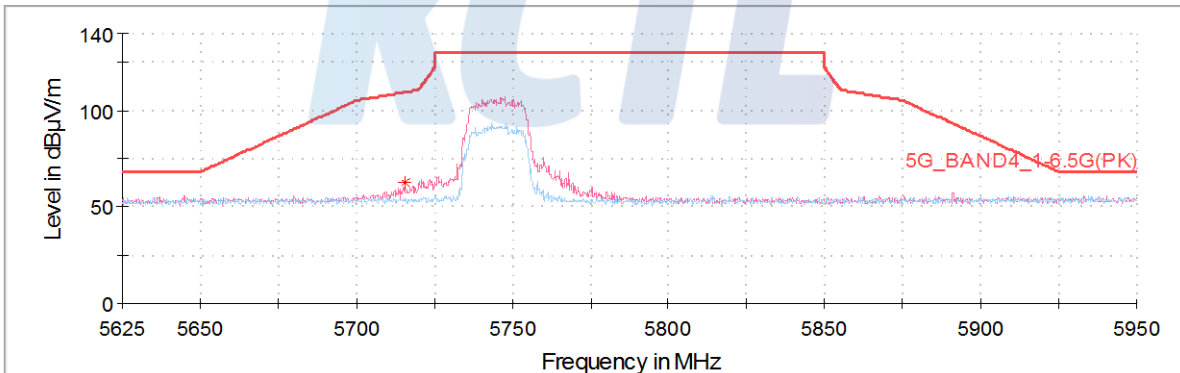


**- Restricted Bandedge data\_U-NII-3(Lowest channel)**

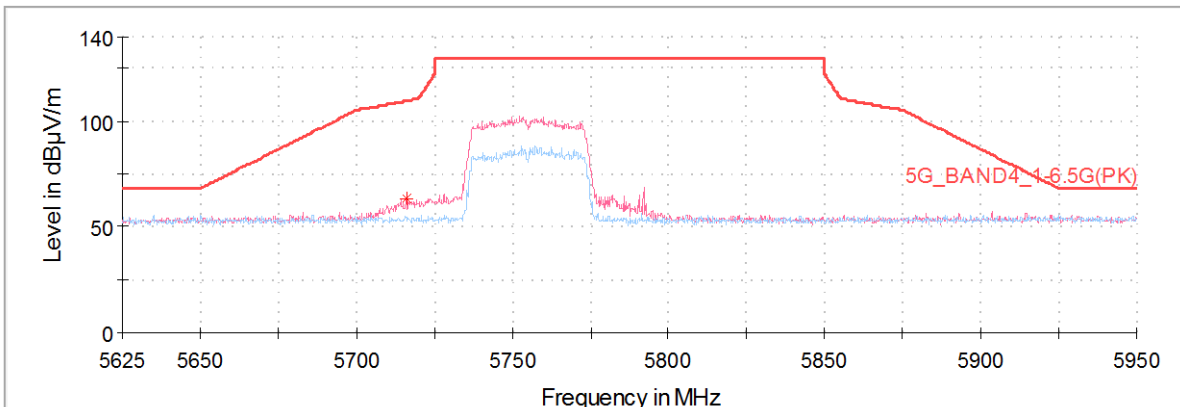
**- 802.11a**



**- 802.11n HT20**



**- 802.11n HT40**



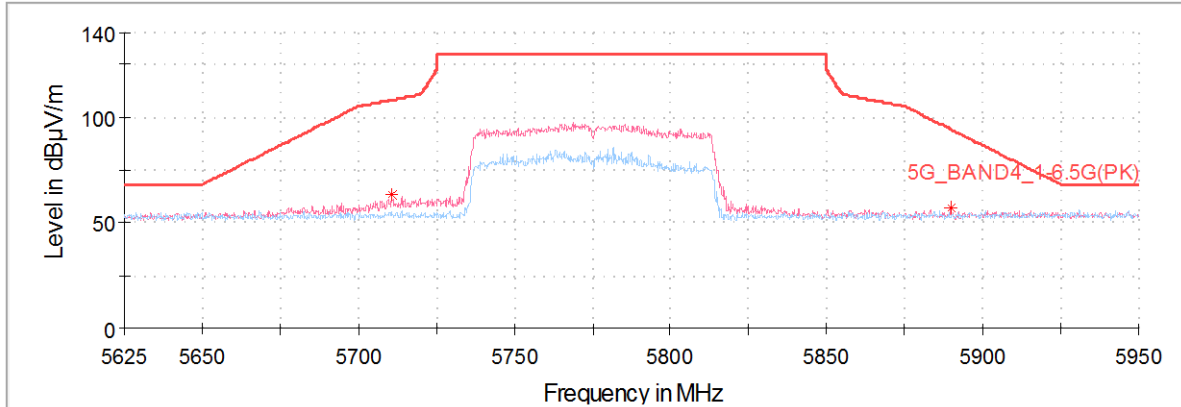
**KCTL Inc.**

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TEL: 82-31-285-0894 FAX: 82-505-299-8311  
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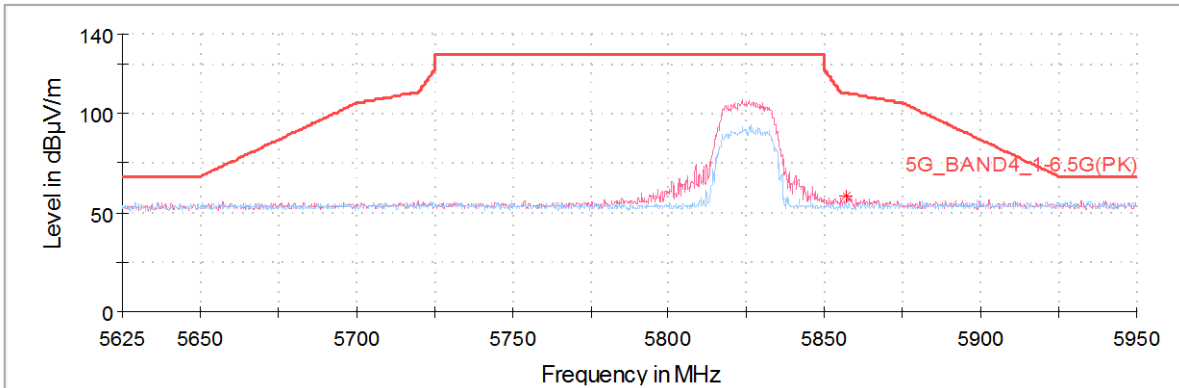


**- 802.11ac VHT80**

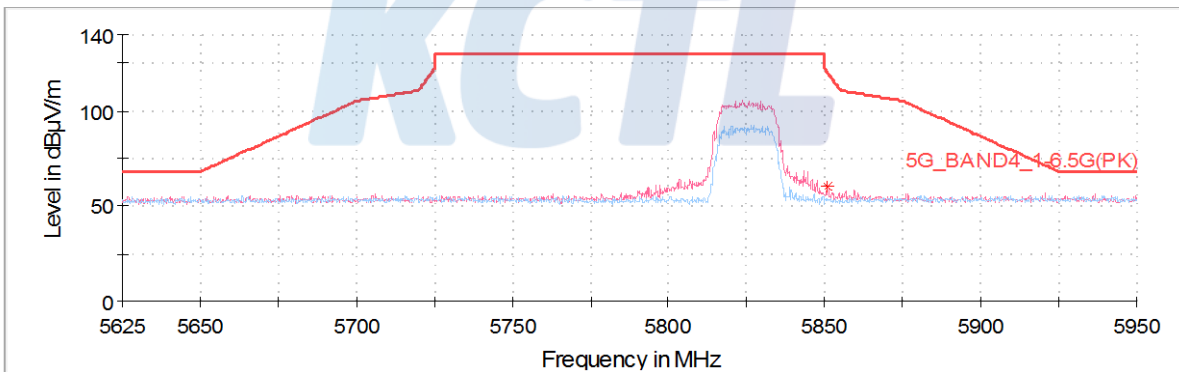


**- Restricted Bandedge data\_U-NII-3(Highest Channel)**

**- 802.11a**



**- 802.11n HT20**



**- 802.11n HT40**

