

## Report on the RF Testing of:

KYOCERA Corporation  
Mobile Phone, Model: EB1084  
FCC ID: JOYEB1084

## In accordance with FCC Part15 Subpart C

Prepared for: KYOCERA Corporation  
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## COMMERCIAL-IN-CONFIDENCE

Document Number: JPD-TR-21220-0

### SIGNATURE

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| NAME           | JOB TITLE                  | RESPONSIBLE FOR    | ISSUE DATE |
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| Hiroaki Suzuki | Deputy Manager of RF Group | Approved Signatory |            |

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### EXECUTIVE SUMMARY – Result: Complied

A sample of this product was tested and the result above was confirmed in accordance with FCC Part15 Subpart C.



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## 1 Summary of Test

### 1.1 Modification history of the test report

| Document Number | Modification History | Issue Date              |
|-----------------|----------------------|-------------------------|
| JPD-TR-21220-0  | First Issue          | Refer to the cover page |

### 1.2 Standards

CFR47 FCC Part 15 Subpart C

### 1.3 Test methods

ANSI C63.10-2013  
KDB 558074 D01 15.247 Meas Guidance v05r02

### 1.4 Deviation from standards

None

### 1.5 List of applied test(s) of the EUT

| Test item section             | Test item                                      | Condition | Result | Remark |
|-------------------------------|------------------------------------------------|-----------|--------|--------|
| 15.247(a)(2)                  | DTS Bandwidth / Occupied Bandwidth (99%)       | Conducted | N/A    | *1     |
| 15.247(b)(3)                  | Maximum conducted (average) output power       | Conducted | N/A    | *1     |
| 15.247(d)                     | Band Edge Compliance of RF Conducted Emissions | Conducted | N/A    | *1     |
| 15.247(d)<br>15.205<br>15.209 | Spurious Emissions                             | Conducted | N/A    | *1     |
|                               |                                                | Radiated  | PASS   | -      |
| 15.247(d)<br>15.205<br>15.209 | Restricted Bands of Operation                  | Radiated  | PASS   | -      |
| 15.247(e)                     | Transmitter Power Spectral Density             | Conducted | N/A    | *1     |
| 15.207                        | AC Power Line Conducted Emissions              | Conducted | PASS   | -      |

\*1 Since there is no change in Module from FCC ID: JOYEB1083, only the Radiated test items were performed. Please refer to the test report "JPD-TR-21195-0" of "FCC ID: JOYEB1083".

### 1.6 Test information

None

### 1.7 Test set up

Table-top

### 1.8 Test period

18-October-2021 - 10-November-2021

## 2 Equipment Under Test

All information in this chapter was provided by the applicant.

### 2.1 EUT information

|                            |                                                                                                                                                                                                                               |
|----------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Applicant                  | KYOCERA Corporation<br>Yokohama Office 2-1-1 Kagahara, Tsuzuki-ku Yokohama-shi,<br>Kanagawa, Japan<br>Phone: +81-45-943-6253 Fax: +81-45-943-6314                                                                             |
| Equipment Under Test (EUT) | Mobile Phone                                                                                                                                                                                                                  |
| Model number               | EB1084                                                                                                                                                                                                                        |
| Serial number              | 359178870020360                                                                                                                                                                                                               |
| Trade name                 | Kyocera                                                                                                                                                                                                                       |
| Number of sample(s)        | 1                                                                                                                                                                                                                             |
| EUT condition              | Pre-Production                                                                                                                                                                                                                |
| Power rating               | Battery: DC 3.87 V                                                                                                                                                                                                            |
| Size                       | (W) 69 mm × (D) 153 mm × (H) 10 mm                                                                                                                                                                                            |
| Environment                | Indoor and Outdoor use                                                                                                                                                                                                        |
| Terminal limitation        | -20°C to 60°C                                                                                                                                                                                                                 |
| Hardware Version           | DMT                                                                                                                                                                                                                           |
| Software Version           | 0039.a                                                                                                                                                                                                                        |
| Firmware Version           | Not applicable                                                                                                                                                                                                                |
| RF Specification           |                                                                                                                                                                                                                               |
| Protocol                   | IEEE802.11b, IEEE802.11g, IEEE802.11n (HT20),                                                                                                                                                                                 |
| Frequency range            | IEEE802.11b /11g /11n (HT20): 2412 MHz-2462 MHz                                                                                                                                                                               |
| Number of RF Channels      | 11 Channels                                                                                                                                                                                                                   |
| Modulation type            | IEEE802.11b: DSSS (DBPSK, DQPSK, CCK)<br>IEEE802.11g / 11n (HT20): OFDM (BPSK, QPSK, 16QAM, 64QAM)                                                                                                                            |
| Data rate                  | IEEE802.11b: 1, 2, 5.5, 11Mbps<br>IEEE802.11g: 6, 9, 12, 18, 24, 36, 48, 54Mbps<br>IEEE802.11n (HT20 LGI): 6.5, 13, 19.5, 26, 39, 52, 58.5, 65Mbps<br>IEEE802.11n (HT20 SGI): 7.2, 14.4, 21.7, 28.9, 43.3, 57.8, 65, 72.2Mbps |
| Channel separation         | 5 MHz                                                                                                                                                                                                                         |
| Conducted power            | 32.727 mW (IEEE802.11b)<br>49.340 mW (IEEE802.11g)<br>47.885 mW (IEEE802.11n: HT20)                                                                                                                                           |
| Antenna type               | Internal antenna                                                                                                                                                                                                              |
| Antenna gain               | -3.5 dBi                                                                                                                                                                                                                      |

## 2.2 Modification to the EUT

The table below details modifications made to the EUT during the test project.

| Modification State                            | Description of Modification  | Modification fitted by | Date of Modification |
|-----------------------------------------------|------------------------------|------------------------|----------------------|
| Model: EB1084, Serial Number: 359178870020360 |                              |                        |                      |
| 0                                             | As supplied by the applicant | Not Applicable         | Not Applicable       |

## 2.3 Variation of family model(s)

### 2.3.1 List of family model(s)

Not applicable

### 2.3.2 Reason for selection of EUT

Not applicable

## 2.4 Operating channels and frequencies

| Channel | Frequency [MHz] |
|---------|-----------------|
| 1       | 2412            |
| 2       | 2417            |
| 3       | 2422            |
| 4       | 2427            |
| 5       | 2432            |
| 6       | 2437            |
| 7       | 2442            |
| 8       | 2447            |
| 9       | 2452            |
| 10      | 2457            |
| 11      | 2462            |

## 2.5 Description of test mode

The EUT had been tested under operating condition.  
There are three channels have been tested as following:

| Tested Channel [11b, 11g, 11n(HT20)] | Frequency [MHz] |
|--------------------------------------|-----------------|
| Low                                  | 2412            |
| Middle                               | 2437            |
| High                                 | 2462            |

The pre-test has been conducted to determine the worst-case mode from all possible combinations between available modulations, data rates.

| Tested Channel    | Modulation Type              | Data Rate      |
|-------------------|------------------------------|----------------|
| Low, Middle, High | IEEE802.11b: DSSS            | 1Mbps          |
| Low, Middle, High | IEEE802.11g: OFDM            | 6Mbps          |
| Low, Middle, High | IEEE802.11n (HT20 LGI): OFDM | MCS0 (6.5Mbps) |

The field strength of spurious emissions was measured at each position of all three axis X, Y and Z to compare the level, and the maximum noise.

The worst emission was found in X-axis and the worst case recorded.

Pre-scan has been conducted to determine the worst-case mode from all possible combinations between available modulations, data rates and antenna ports.

## 2.6 Operating flow

### - Tx mode

- i) Test program setup to the DM tool
- ii) Select a Test mode  
[IEEE802.11b, IEEE802.11g, IEEE802.11n (HT20)]  
Operating frequency: Channel Low: 2412MHz, Channel Middle: 2437MHz, Channel High: 2462MHz
- iii) Start test mode

### - Rx mode

- i) Test program setup to the DM tool
- ii) Select a Test mode  
[IEEE802.11b, IEEE802.11g, IEEE802.11n (HT20)]  
Operating frequency: Channel Low: 2412MHz, Channel Middle: 2437MHz, Channel High: 2462MHz
- iii) Start test mode

### 3 Configuration of Equipment

Numbers assigned to equipment on the diagram in “3.3 System configuration” correspond to the list in “3.1 Equipment used” and “3.2 Cable(s) used”.

This test configuration is based on the manufacture’s instruction.

Cabling and setup(s) were taken into consideration and test data was taken under worse case condition.

#### 3.1 Equipment used

| No. | Equipment    | Company | Model No. | Serial No.      | FCC ID/DoC | Comment |
|-----|--------------|---------|-----------|-----------------|------------|---------|
| 1   | Mobile Phone | KYOCERA | EB1084    | 359178870020360 | JOYEB1084  | EUT     |
| 2   | AC Adapter   | KDDI    | 0602PQA   | N/A             | N/A        | *       |

\*:AC power line Conducted Emission Test.

#### 3.2 Cable(s) used

| No. | Equipment                  | Length[m] | Shield | Connector | Comment |
|-----|----------------------------|-----------|--------|-----------|---------|
| a   | USB cable (for AC Adapter) | 1.5       | No     | Plastic   | *       |

\*:AC power line Conducted Emission Test.

#### 3.3 System configuration



## 4 Test Result

### 4.1 Spurious Emissions - Radiated -

#### 4.1.1 Measurement procedure

[FCC 15.247(d), 15.205, 15.209, KDB 558074 D01 v05r02, Section 8.6]

Test was applied by following conditions.

|                           |                                                                                                                                    |
|---------------------------|------------------------------------------------------------------------------------------------------------------------------------|
| Test method               | : ANSI C63.10                                                                                                                      |
| Frequency range           | : 9 kHz to 25 GHz                                                                                                                  |
| Test place                | : 3m Semi-anechoic chamber                                                                                                         |
| EUT was placed on         | : Styrofoam table / (W) 1.0 × (D) 1.0 × (H) 0.8 m (below 1 GHz)<br>Styrofoam table / (W) 0.6 × (D) 0.6 × (H) 1.5 m (above 1 GHz)   |
| Antenna distance          | : 3 m                                                                                                                              |
| Test receiver setting     | Below 1 GHz                                                                                                                        |
| - Detector                | : Average (9 kHz-90 kHz, 110 kHz-490 kHz), Quasi-peak                                                                              |
| - Bandwidth               | : 200 Hz, 120 kHz                                                                                                                  |
| Spectrum analyzer setting | Above 1 GHz                                                                                                                        |
| - Peak                    | : RBW=1 MHz, VBW=3 MHz, Span=0 Hz, Sweep=auto                                                                                      |
| - Average                 | : 11b: RBW=1 MHz, VBW=3 kHz, Span=0 Hz, Sweep=auto<br>11g, 11n: RBW=1 MHz, VBW=1 kHz, Span=0 Hz, Sweep=auto<br>Display mode=Linear |

Average Measurement Setting [VBW]

| mode      | Duty Cycle (%) | Ton [μs] | Toff [μs] | 1/Ton (kHz) | Determined VBW Setting |
|-----------|----------------|----------|-----------|-------------|------------------------|
| 11b       | 93.82          | 942      | 62        | 1.062       | 3kHz                   |
| 11g       | 97.25          | 1344     | 38        | 0.744       | 1kHz                   |
| 11n(HT20) | 97.07          | 1258     | 38        | 0.795       | 1kHz                   |

Although these tests were performed other than open area test site, adequate comparison measurements

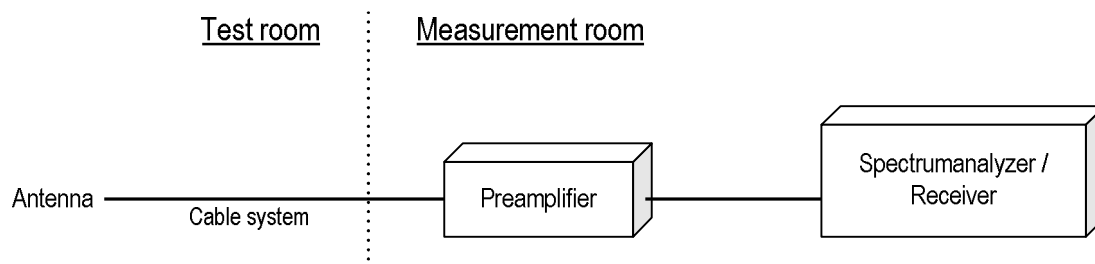
were confirmed against 30 m open area test site.

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 937606.

Radiated emission measurements are performed at 3m distance with the broadband antenna (Loop antenna, Biconical antenna, Log periodic antenna and Double ridged guide antenna). The antenna is positioned both the horizontal and vertical planes of polarization and height is varied 1m to 4m and stopped at height producing the maximum emission. As for the Loop antenna, it is positioned with its plane vertical, and the center of the Loop antenna is 1m above the ground plane.

The EUT is Placed on a turntable, which is 0.8m/1.5m above ground plane. The turntable shall be rotated for 360 degrees to determine the position of maximum emission level. The test results represent the worst cases emission for each emission with manipulating the EUT, support equipment, interconnecting cables and varying the mode of operation. Sufficient time for the EUT, support equipment, and test equipment are allowed in order for them to warm up to their normal operating condition.

- Test configuration



#### 4.1.2 Calculation method

[9 kHz to 150 kHz]

Emission level = Reading + (Ant factor + Cable system loss)

Margin = Limit – Emission level

[150 kHz to 25 GHz]

Emission level = Reading + (Ant factor + Cable system loss - Amp. Gain)

Margin = Limit – Emission level

Example:

Limit @ 4824.0 MHz: 74.0 dBuV/m (Peak Limit)

S.A Reading = 49.5 dBuV Cable system loss = 8.4 dB

Result = 49.5 + 8.4 = 45.1 dBuV/m

Margin = 74.0 - 45.1 = 16.1 dB

#### 4.1.3 Limit

| Frequency<br>[MHz] | Field strength  |               | Distance<br>[m] |
|--------------------|-----------------|---------------|-----------------|
|                    | [uV/m]          | [dBuV/m]      |                 |
| 0.009-0.490        | 2400 / F [kHz]  | 20logE [uV/m] | 300             |
| 0.490-1.705        | 24000 / F [kHz] | 20logE [uV/m] | 30              |
| 1.705-30           | 30              | 29.5          | 30              |
| 30-88              | 100             | 40.0          | 3               |
| 88-216             | 150             | 43.5          | 3               |
| 216-960            | 200             | 46.0          | 3               |
| Above 960          | 500             | 54.0          | 3               |

Note:

1. The lower limit shall apply at the transition frequencies.
2. Emission level [dBuV/m] = 20log Emission [uV/m]
3. As shown in 15.35(b), for frequencies above 1000 MHz, the field strength limits are based on average detector, however, the peak field strength of any emission shall not exceed the maximum permitted average limits, specified above by more than 20 dB under any condition modulation.

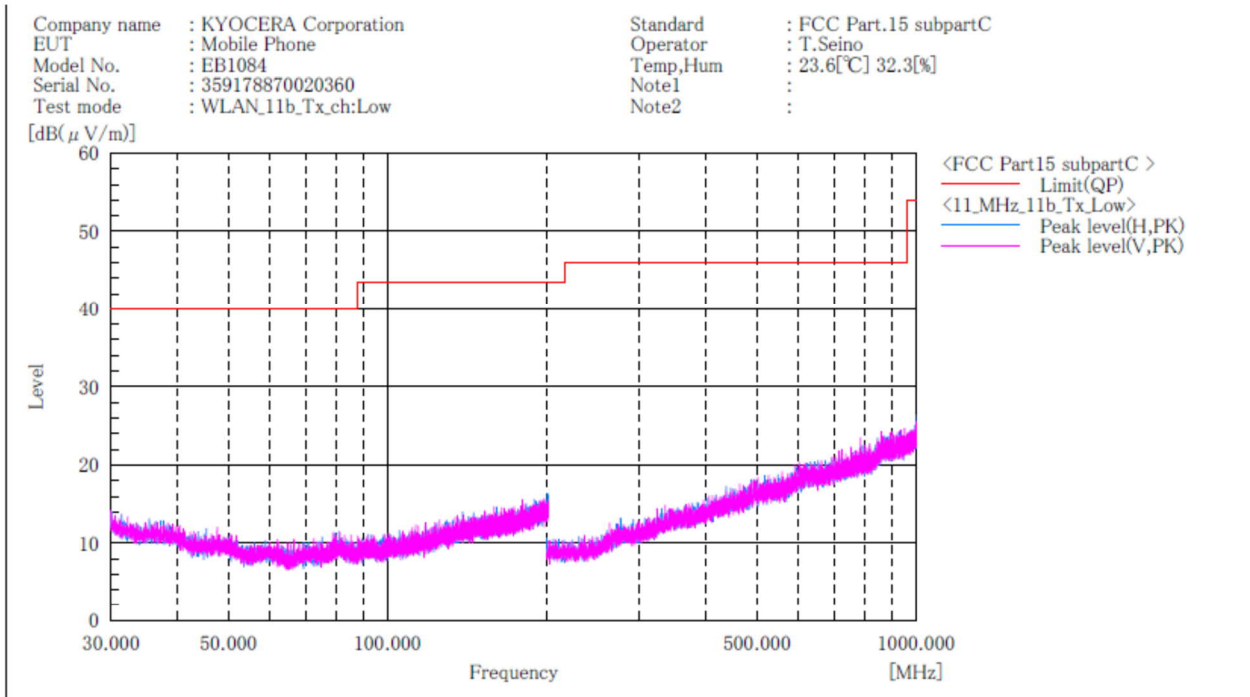
#### 4.1.4 Test data

|             |                            |               |   |                       |
|-------------|----------------------------|---------------|---|-----------------------|
| Date        | : 18-October-2021          | Test engineer | : | <u>Tadahiro Seino</u> |
| Temperature | : 20.9 [°C]                |               |   |                       |
| Humidity    | : 41.6 [%]                 |               |   |                       |
| Test place  | : 3m Semi-anechoic chamber |               |   |                       |
| Date        | : 19-October-2021          | Test engineer | : | <u>Tadahiro Seino</u> |
| Temperature | : 23.1 [°C]                |               |   |                       |
| Humidity    | : 38.7 [%]                 |               |   |                       |
| Test place  | : 3m Semi-anechoic chamber |               |   |                       |
| Date        | : 21-October-2021          | Test engineer | : | <u>Tadahiro Seino</u> |
| Temperature | : 23.6 [°C]                |               |   |                       |
| Humidity    | : 32.3 [%]                 |               |   |                       |
| Test place  | : 3m Semi-anechoic chamber |               |   |                       |
| Date        | : 24-October-2021          | Test engineer | : | <u>Kazunori Saito</u> |
| Temperature | : 21.9 [°C]                |               |   |                       |
| Humidity    | : 33.1 [%]                 |               |   |                       |
| Test place  | : 3m Semi-anechoic chamber |               |   |                       |

#### 4.1.4.1 Transmission mode

[11b]

Channel Low  
BELOW 1GHz



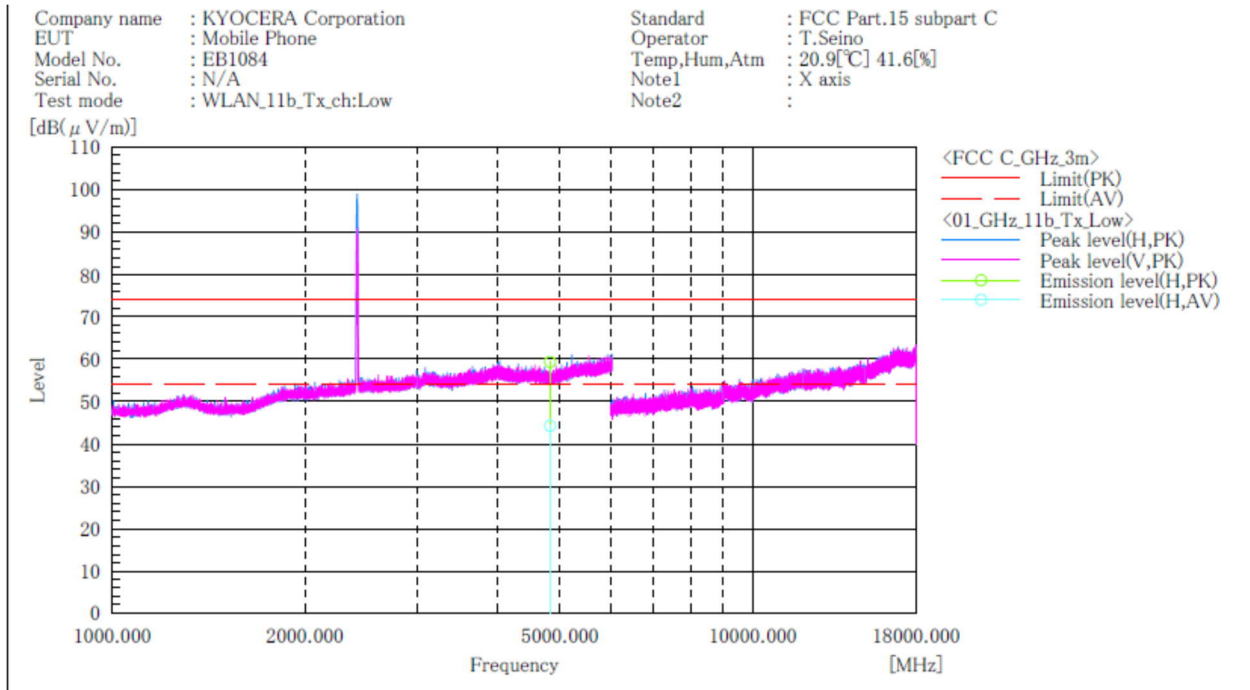
#### Final Result

| No. | Frequency (P) | c.f       | Height | Angle | Remark |
|-----|---------------|-----------|--------|-------|--------|
|     | [MHz]         | [dB(1/m)] | [cm]   | [°]   |        |

#### Note:

1. Emission Level (Margin) = Limit - [Reading + Factor (Antenna + Cable - Amp)]
2. No emission were detected in frequency range 9kHz to 1000MHz at the 3 meters distance.

**[11b]**  
**Channel Low**  
**ABOVE 1GHz**



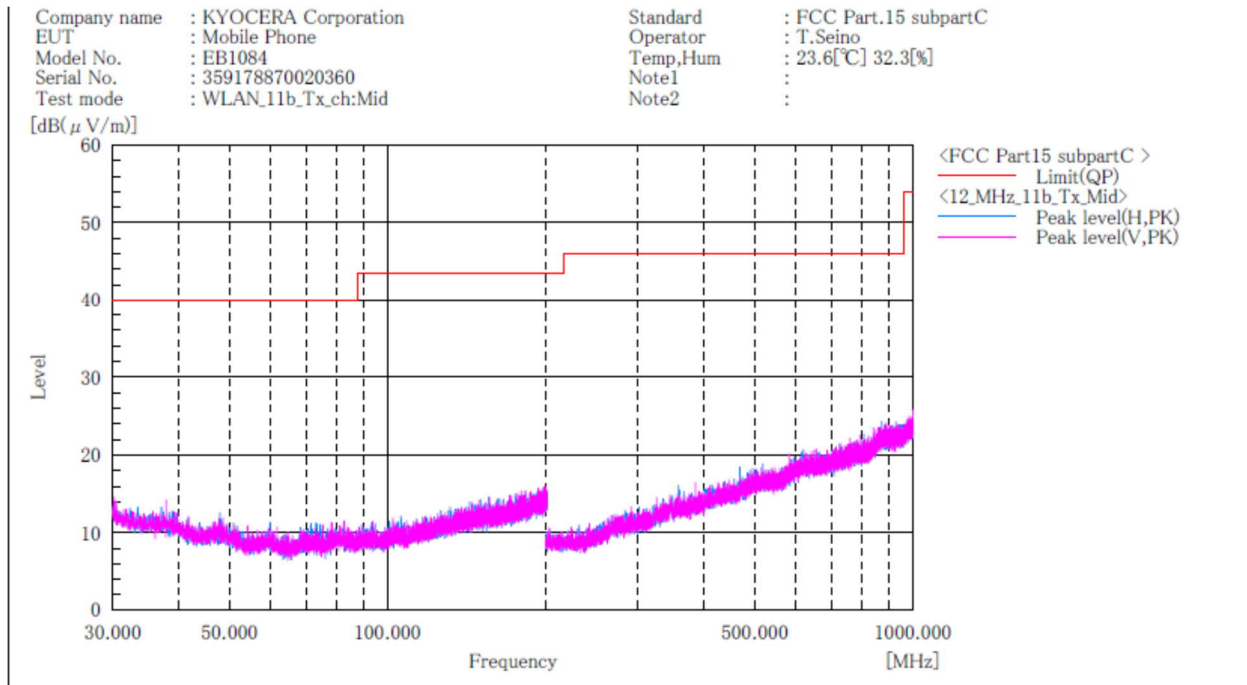
## Final Result

| No. | Frequency | (P) | Reading | Reading | c.f  | Result | Result | Limit | Limit | Margin | Margin | Height | Angle | Remark |
|-----|-----------|-----|---------|---------|------|--------|--------|-------|-------|--------|--------|--------|-------|--------|
|     | [MHz]     |     | PK      | AV      |      | PK     | AV     | PK    | AV    | PK     | AV     | [cm]   | [°]   |        |
| 1   | 4824.000  | H   | 48.7    | 33.7    | 10.6 | 59.3   | 44.3   | 74.0  | 54.0  | 14.7   | 9.7    | 103.0  | 246.0 |        |

## Note:

- Emission Level (Margin) = Limit - [Reading + Factor (Antenna + Cable – Amp)]
- No emission were detected in frequency range 18GHz to 25GHz at the 3 meters distance.

**[11b]**  
**Channel Middle**  
**BELOW 1GHz**



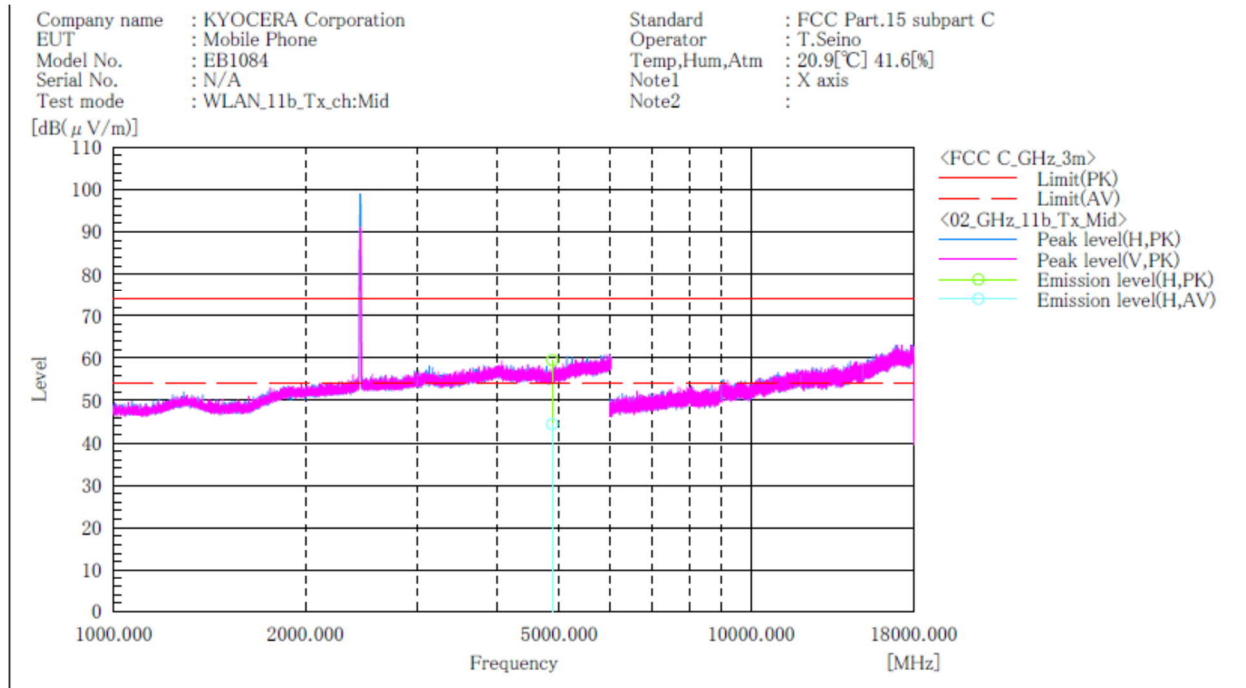
**Final Result**

| No. | Frequency (P) | c.f       | Height | Angle | Remark |
|-----|---------------|-----------|--------|-------|--------|
|     | [MHz]         | [dB(1/m)] | [cm]   | [°]   |        |

**Note:**

1. Emission Level (Margin) = Limit - [Reading + Factor (Antenna + Cable – Amp)]
2. No emission were detected in frequency range 9kHz to 1000MHz at the 3 meters distance.

**[11b]**  
**Channel Middle**  
**ABOVE 1GHz**



## Final Result

| No. | Frequency (P) | Reading PK | Reading AV | c.f       | Result PK  | Result AV  | Limit PK   | Limit AV   | Margin PK | Margin AV | Height | Angle | Remark |
|-----|---------------|------------|------------|-----------|------------|------------|------------|------------|-----------|-----------|--------|-------|--------|
|     | [MHz]         | [dB(μV)]   | [dB(μV)]   | [dB(1/m)] | [dB(μV/m)] | [dB(μV/m)] | [dB(μV/m)] | [dB(μV/m)] | [dB]      | [dB]      | [cm]   | [°]   |        |
| 1   | 4874.000      | H          | 48.8       | 33.7      | 10.7       | 59.5       | 44.4       | 74.0       | 54.0      | 14.5      | 9.6    | 102.0 | 253.0  |

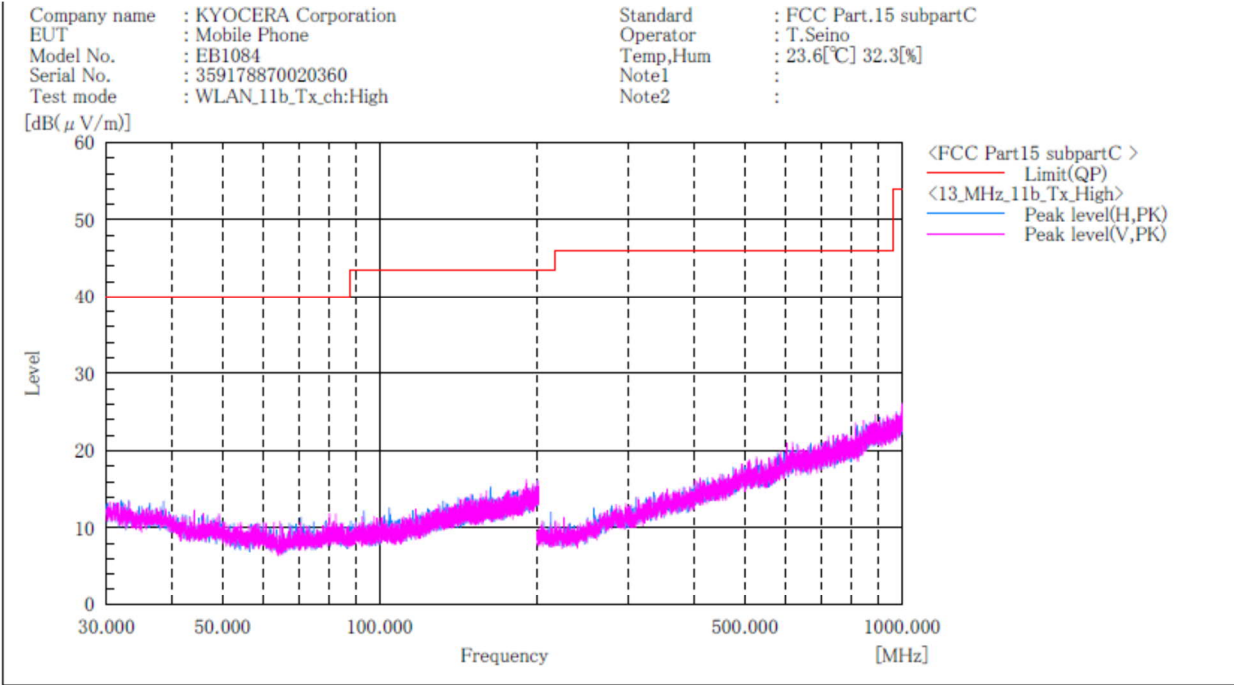
## Note:

1. Emission Level (Margin) = Limit - [Reading + Factor (Antenna + Cable – Amp)]
2. No emission were detected in frequency range 18GHz to 25GHz at the 3 meters distance.



Japan

[11b]  
Channel High  
BELOW 1GHz

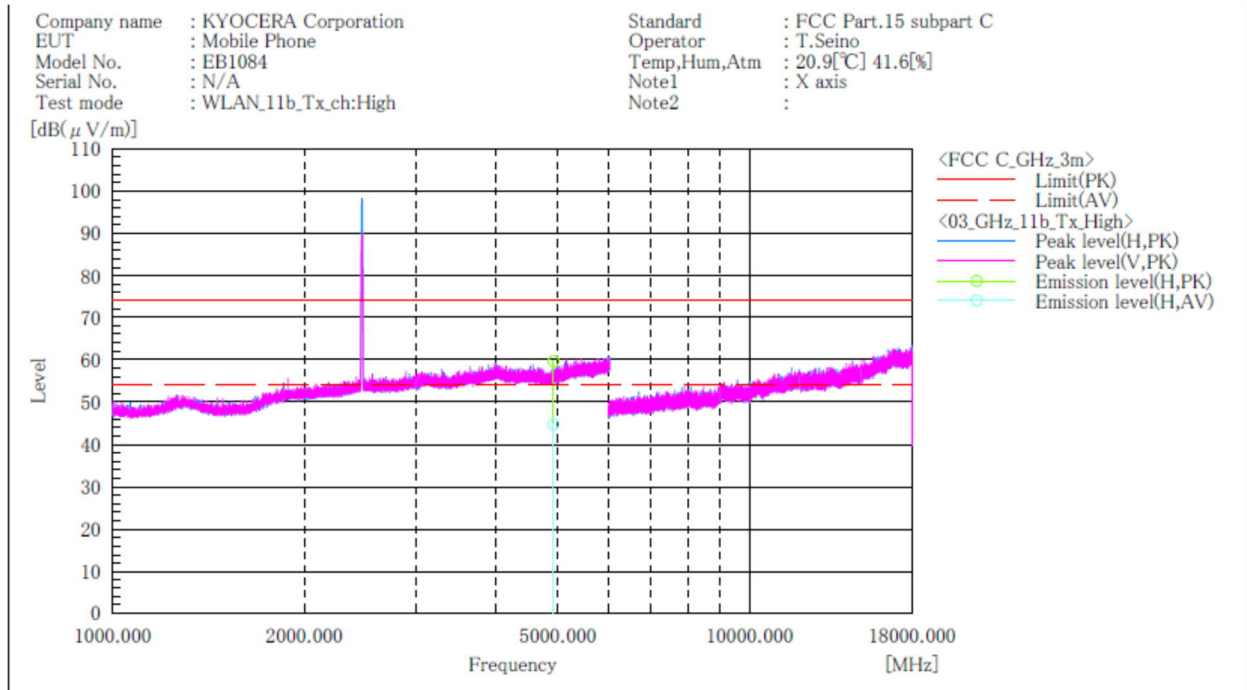


Final Result

| No. | Frequency (P) | c.f       | Height | Angle | Remark |
|-----|---------------|-----------|--------|-------|--------|
|     | [MHz]         | [dB(1/m)] | [cm]   | [°]   |        |

- Note:
- Emission Level (Margin) = Limit - [Reading + Factor (Antenna + Cable – Amp)]
  - No emission were detected in frequency range 9kHz to 1000MHz at the 3 meters distance.

[11b]  
Channel High  
ABOVE 1GHz



## Final Result

| No. | Frequency (P) | Reading PK | Reading AV | c.f       | Result PK  | Result AV  | Limit PK   | Limit AV   | Margin PK | Margin AV | Height | Angle | Remark |
|-----|---------------|------------|------------|-----------|------------|------------|------------|------------|-----------|-----------|--------|-------|--------|
|     | [MHz]         | [dB(μV)]   | [dB(μV)]   | [dB(1/m)] | [dB(μV/m)] | [dB(μV/m)] | [dB(μV/m)] | [dB(μV/m)] | [dB]      | [dB]      | [cm]   | [°]   |        |
| 1   | 4924.000      | 48.9       | 34.1       | 10.7      | 59.6       | 44.8       | 74.0       | 54.0       | 14.4      | 9.2       | 100.0  | 248.0 |        |

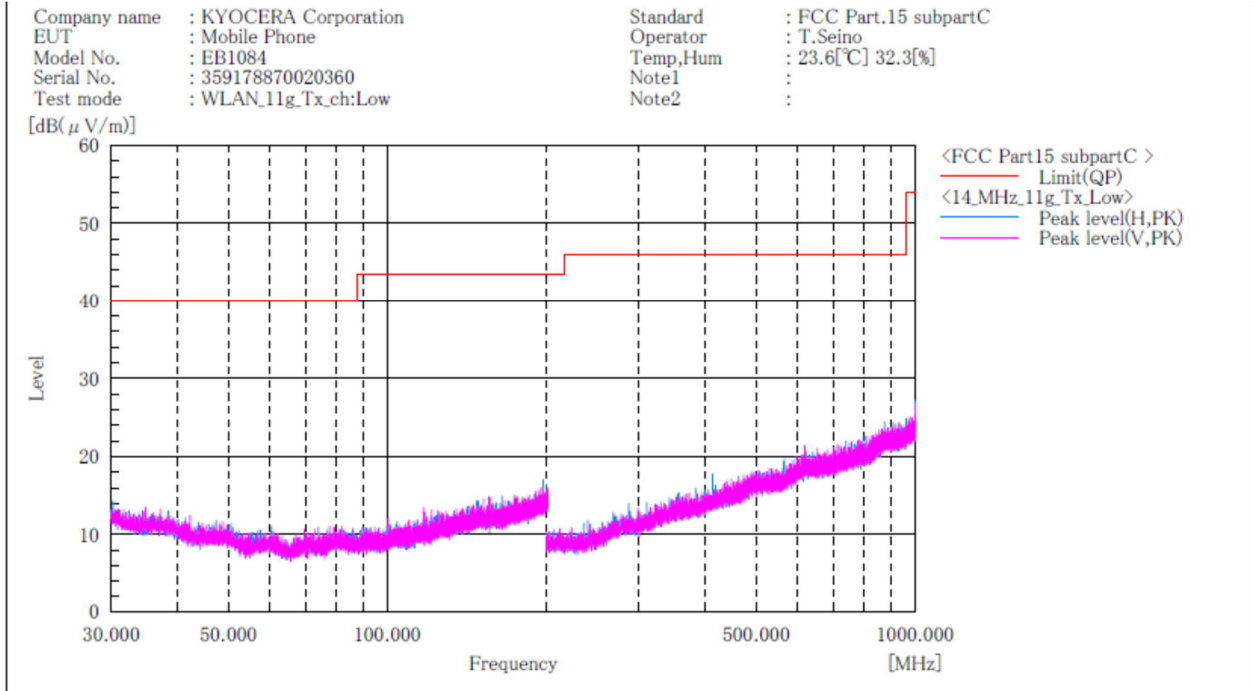
## Note:

- Emission Level (Margin) = Limit - [Reading + Factor (Antenna + Cable - Amp)]
- No emission were detected in frequency range 18GHz to 25GHz at the 3 meters distance.



Japan

**[11g]  
Channel Low  
BELOW 1GHz**

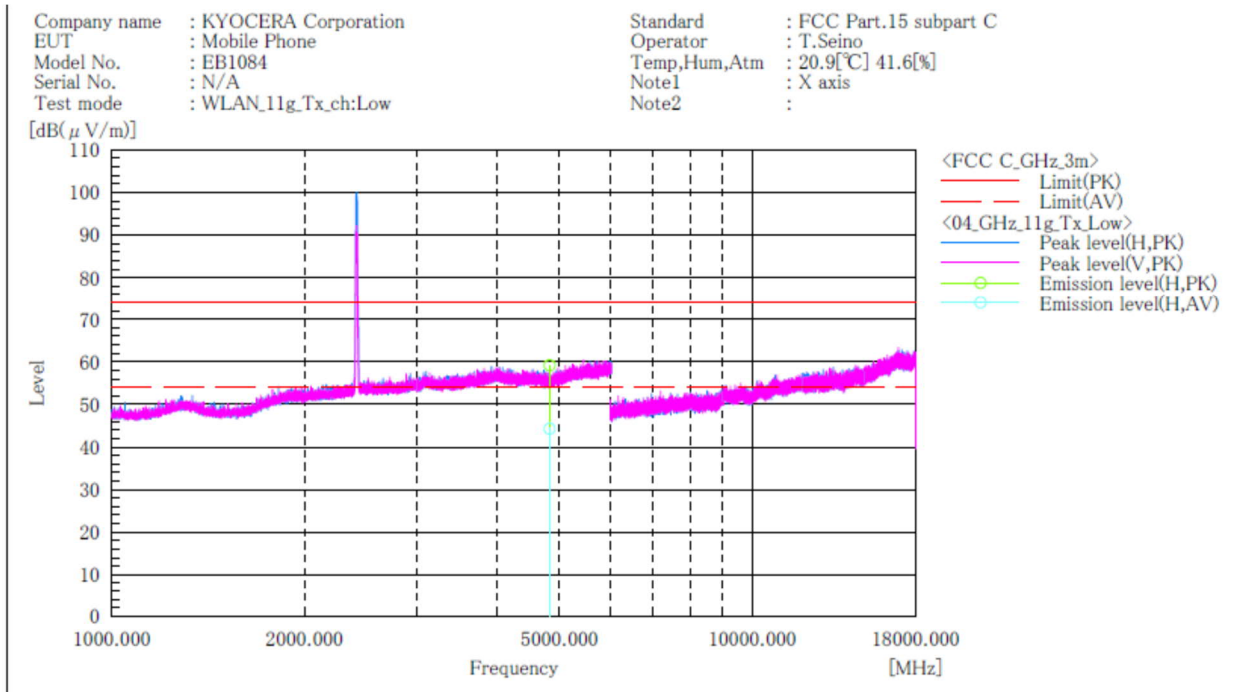


**Final Result**

| No. | Frequency (P) | c.f       | Height | Angle | Remark |
|-----|---------------|-----------|--------|-------|--------|
|     | [MHz]         | [dB(1/m)] | [cm]   | [°]   |        |

- Note:
1. Emission Level (Margin) = Limit - [Reading + Factor (Antenna + Cable – Amp)]
  2. No emission were detected in frequency range 9kHz to 1000MHz at the 3 meters distance.

**[11g]  
Channel Low  
ABOVE 1GHz**

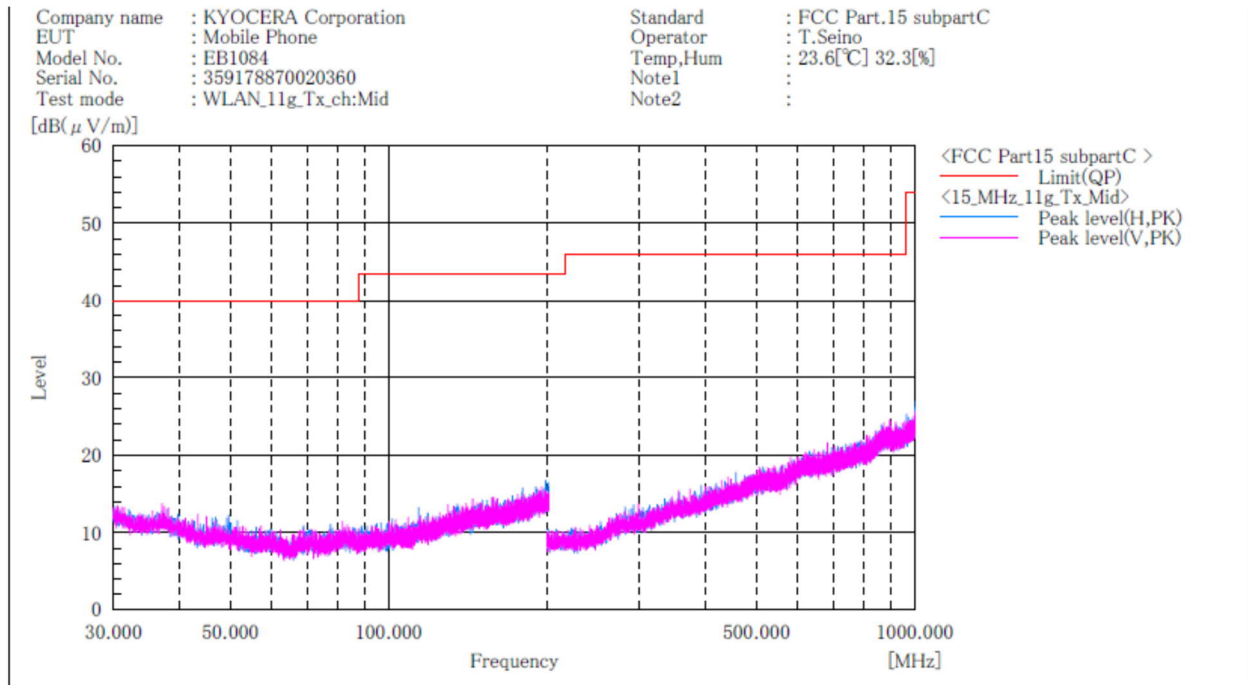


| Final Result |               |               |               |           |              |              |             |             |              |              |        |       |        |
|--------------|---------------|---------------|---------------|-----------|--------------|--------------|-------------|-------------|--------------|--------------|--------|-------|--------|
| No.          | Frequency (P) | Reading<br>PK | Reading<br>AV | c.f       | Result<br>PK | Result<br>AV | Limit<br>PK | Limit<br>AV | Margin<br>PK | Margin<br>AV | Height | Angle | Remark |
|              | [MHz]         | [dB(μV)]      | [dB(μV)]      | [dB(1/m)] | [dB(μV/m)]   | [dB(μV/m)]   | [dB(μV/m)]  | [dB(μV/m)]  | [dB]         | [dB]         | [cm]   | [°]   |        |
| 1            | 4824.000 H    | 48.6          | 33.7          | 10.6      | 59.2         | 44.3         | 74.0        | 54.0        | 14.8         | 9.7          | 100.0  | 246.0 |        |

Note:

1. Emission Level (Margin) = Limit - [Reading + Factor (Antenna + Cable – Amp)]
2. No emission were detected in frequency range 18GHz to 25GHz at the 3 meters distance.

**[11g]**  
**Channel Middle**  
**BELOW 1GHz**



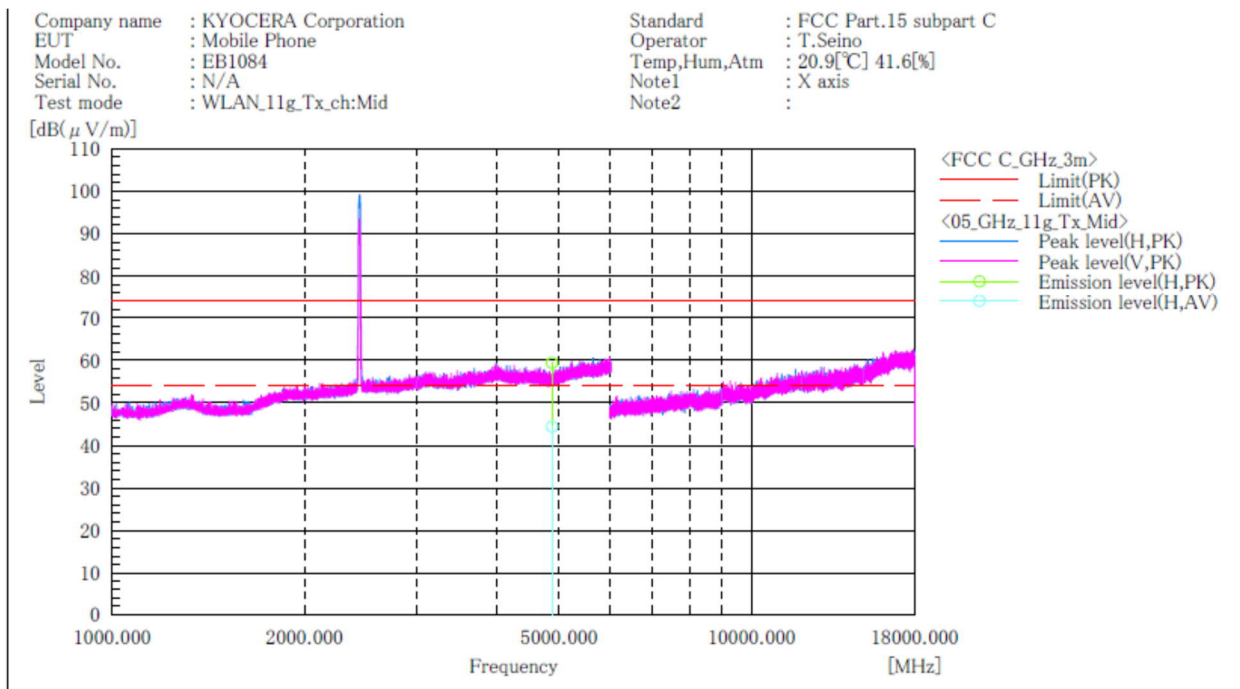
**Final Result**

| No. | Frequency (P) | c.f       | Height | Angle | Remark |
|-----|---------------|-----------|--------|-------|--------|
|     | [MHz]         | [dB(1/m)] | [cm]   | [°]   |        |

**Note:**

1. Emission Level (Margin) = Limit - [Reading + Factor (Antenna + Cable - Amp)]
2. No emission were detected in frequency range 9kHz to 1000MHz at the 3 meters distance.

**[11g]**  
**Channel Middle**  
**ABOVE 1GHz**



## Final Result

| No. | Frequency (P) | Reading PK | Reading AV | c.f       | Result PK  | Result AV  | Limit PK   | Limit AV   | Margin PK | Margin AV | Height | Angle | Remark |
|-----|---------------|------------|------------|-----------|------------|------------|------------|------------|-----------|-----------|--------|-------|--------|
|     | [MHz]         | [dB(μV)]   | [dB(μV)]   | [dB(1/m)] | [dB(μV/m)] | [dB(μV/m)] | [dB(μV/m)] | [dB(μV/m)] | [dB]      | [dB]      | [cm]   | [°]   |        |
| 1   | 4874.000      | H          | 48.7       | 33.7      | 10.7       | 59.4       | 44.4       | 74.0       | 54.0      | 14.6      | 9.6    | 100.0 | 251.0  |

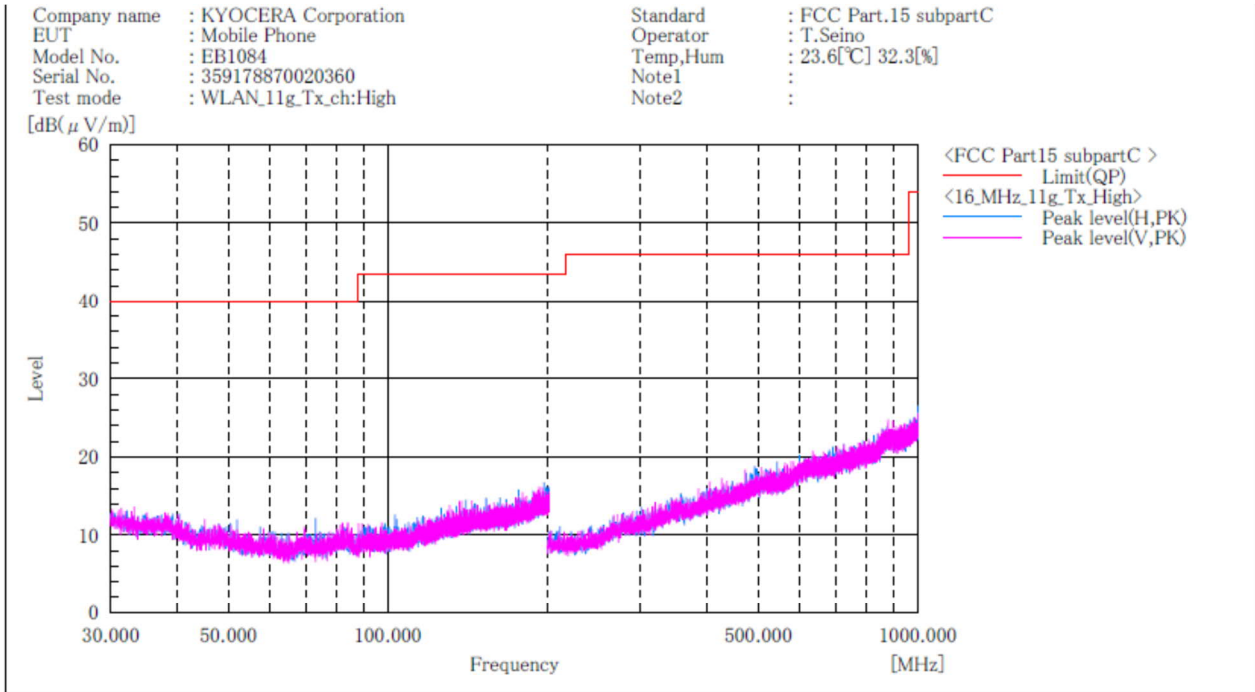
## Note:

1. Emission Level (Margin) = Limit - [Reading + Factor (Antenna + Cable – Amp)]
2. No emission were detected in frequency range 18GHz to 25GHz at the 3 meters distance.



Japan

[11g]  
Channel High  
BELOW 1GHz

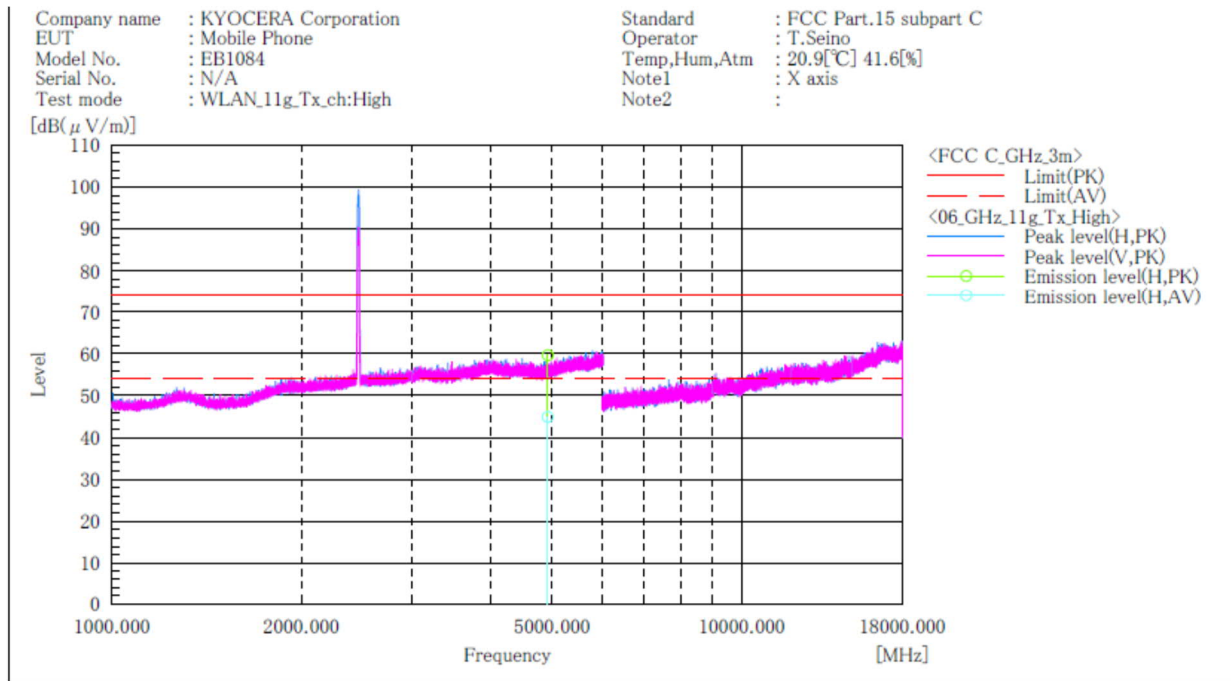


Final Result

| No. | Frequency (P) | c.f       | Height | Angle | Remark |
|-----|---------------|-----------|--------|-------|--------|
|     | [MHz]         | [dB(1/m)] | [cm]   | [°]   |        |

- Note:
1. Emission Level (Margin) = Limit - [Reading + Factor (Antenna + Cable – Amp)]
  2. No emission were detected in frequency range 9kHz to 1000MHz at the 3 meters distance.

**[11g]**  
**Channel High**  
**ABOVE 1GHz**



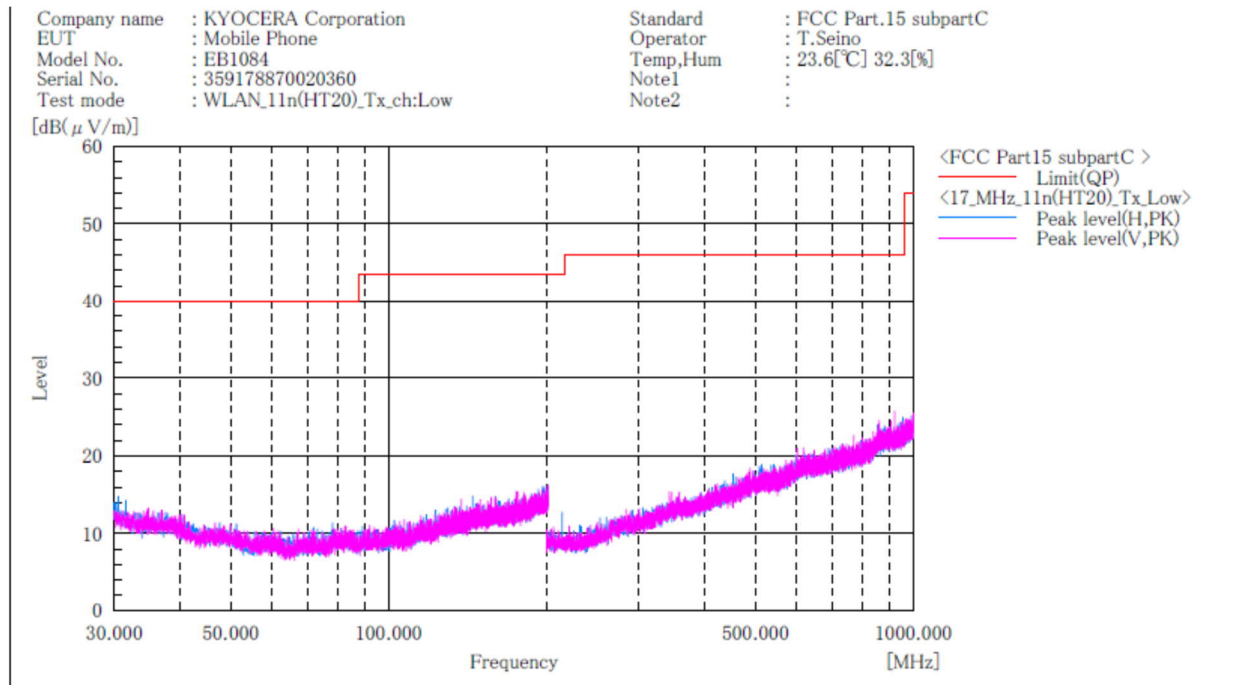
## Final Result

| No. | Frequency [MHz] | (P) | Reading PK [dB(μV)] | Reading AV [dB(μV)] | c.f [dB(1/m)] | Result PK [dB(μV/m)] | Result AV [dB(μV/m)] | Limit PK [dB(μV/m)] | Limit AV [dB(μV/m)] | Margin PK [dB] | Margin AV [dB] | Height [cm] | Angle [°] | Remark |
|-----|-----------------|-----|---------------------|---------------------|---------------|----------------------|----------------------|---------------------|---------------------|----------------|----------------|-------------|-----------|--------|
| 1   | 4924.000        | H   | 48.9                | 34.2                | 10.7          | 59.6                 | 44.9                 | 74.0                | 54.0                | 14.4           | 9.1            | 100.0       | 251.0     |        |

## Note:

- Emission Level (Margin) = Limit - [Reading + Factor (Antenna + Cable – Amp)]
- No emission were detected in frequency range 18GHz to 25GHz at the 3 meters distance.

**[11n(HT20)]**  
**Channel Low**  
**BELOW 1GHz**



**Final Result**

| No. | Frequency (P) | c.f       | Height | Angle | Remark |
|-----|---------------|-----------|--------|-------|--------|
|     | [MHz]         | [dB(1/m)] | [cm]   | [°]   |        |

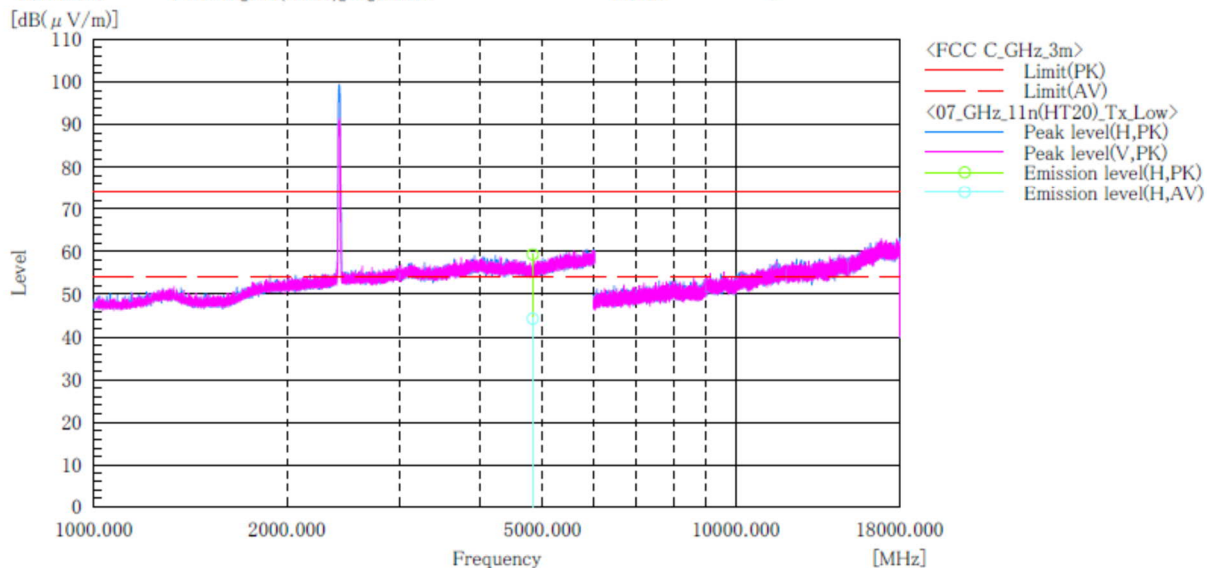
**Note:**

1. Emission Level (Margin) = Limit - [Reading + Factor (Antenna + Cable - Amp)]
2. No emission were detected in frequency range 9kHz to 1000MHz at the 3 meters distance.

**[11n(HT20)]**  
**Channel Low**  
**ABOVE 1GHz**

Company name : KYOCERA Corporation  
 EUT : Mobile Phone  
 Model No. : EB1084  
 Serial No. : N/A  
 Test mode : WLAN\_11n(HT20)\_Tx\_ch:Low

Standard : FCC Part.15 subpart C  
 Operator : T.Seino  
 Temp,Hum,Atm : 20.9[°C] 41.6[%]  
 Note1 : X axis  
 Note2 :



Final Result

| No. | Frequency | (P) | Reading  | Reading  | c. f      | Result     | Result     | Limit      | Limit      | Margin | Margin | Height | Angle | Remark |
|-----|-----------|-----|----------|----------|-----------|------------|------------|------------|------------|--------|--------|--------|-------|--------|
|     | [MHz]     |     | [dB(μV)] | [dB(μV)] | [dB(1/m)] | [dB(μV/m)] | [dB(μV/m)] | [dB(μV/m)] | [dB(μV/m)] | [dB]   | [dB]   | [cm]   | [°]   |        |
| 1   | 4824.000  | H   | 48.7     | 33.7     | 10.6      | 59.3       | 44.3       | 74.0       | 54.0       | 14.7   | 9.7    | 100.0  | 247.0 |        |

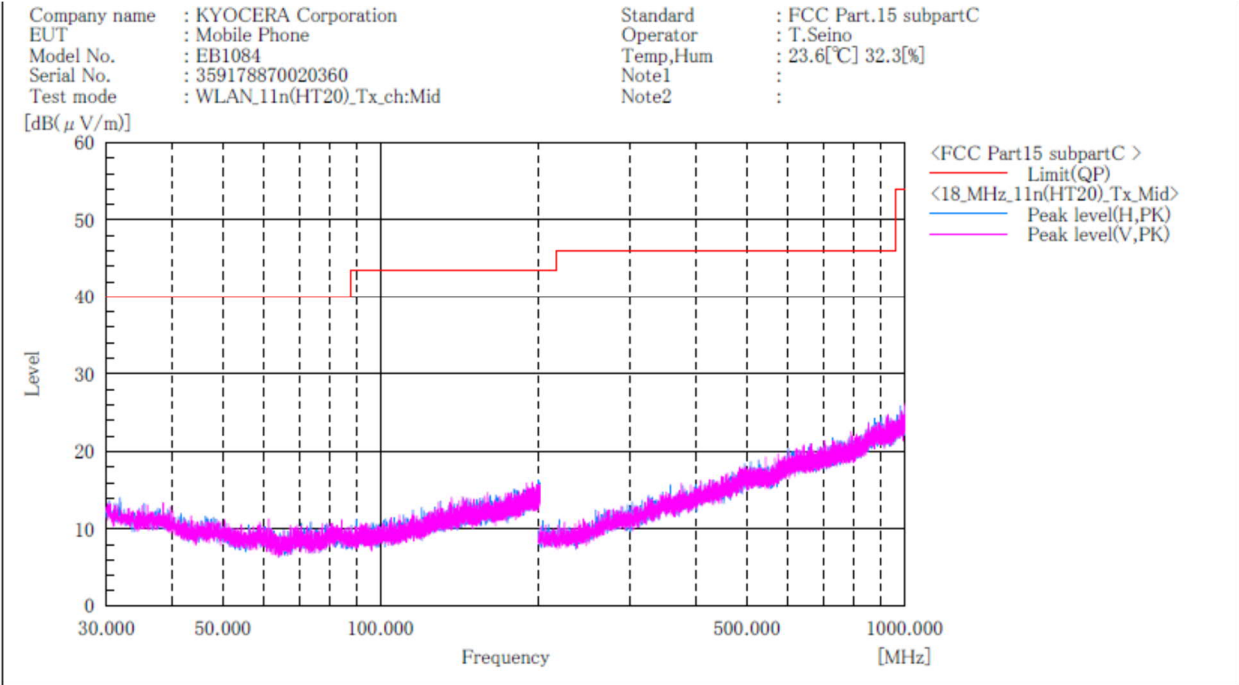
Note:

- Emission Level (Margin) = Limit - [Reading + Factor (Antenna + Cable - Amp)]
- No emission were detected in frequency range 18GHz to 25GHz at the 3 meters distance.



Japan

**[11n(HT20)]**  
**Channel Middle**  
**BELOW 1GHz**

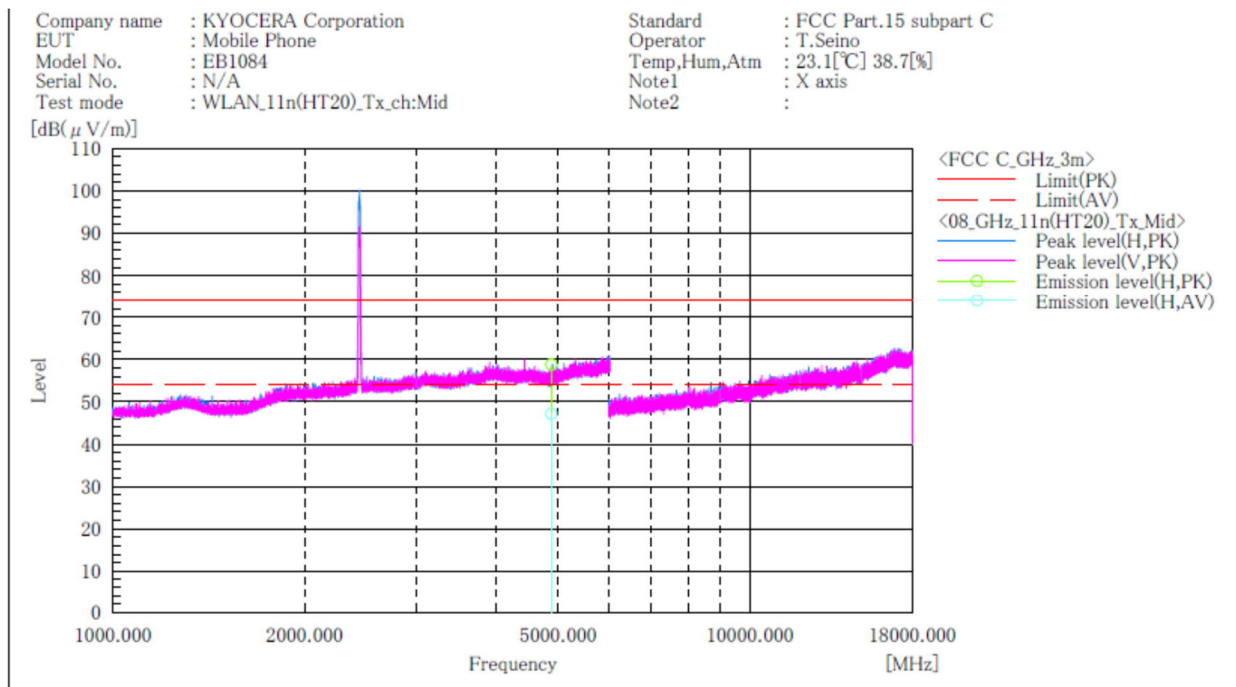


Final Result

| No. | Frequency (P) | c.f       | Height | Angle | Remark |
|-----|---------------|-----------|--------|-------|--------|
|     | [MHz]         | [dB(1/m)] | [cm]   | [°]   |        |

- Note:
1. Emission Level (Margin) = Limit - [Reading + Factor (Antenna + Cable – Amp)]
  2. No emission were detected in frequency range 9kHz to 1000MHz at the 3 meters distance.

**[11n(HT20)]**  
**Channel Middle**  
**ABOVE 1GHz**



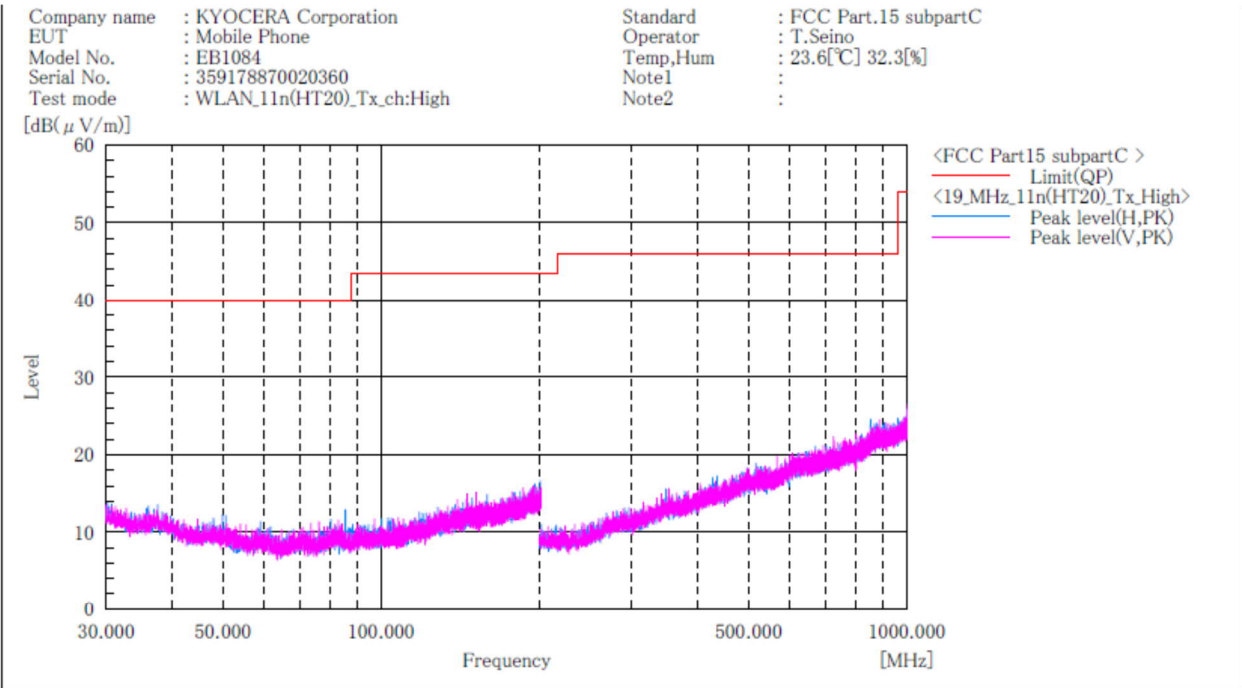
## Final Result

| No. | Frequency [MHz] | (P) | Reading PK [dB(μV)] | Reading AV [dB(μV)] | c.f [dB(1/m)] | Result PK [dB(μV/m)] | Result AV [dB(μV/m)] | Limit PK [dB(μV/m)] | Limit AV [dB(μV/m)] | Margin PK [dB] | Margin AV [dB] | Height [cm] | Angle [°] | Remark |
|-----|-----------------|-----|---------------------|---------------------|---------------|----------------------|----------------------|---------------------|---------------------|----------------|----------------|-------------|-----------|--------|
| 1   | 4874.000        | H   | 48.1                | 36.5                | 10.7          | 58.8                 | 47.2                 | 74.0                | 54.0                | 15.2           | 6.8            | 100.0       | 254.0     |        |

## Note:

- Emission Level (Margin) = Limit - [Reading + Factor (Antenna + Cable - Amp)]
- No emission were detected in frequency range 18GHz to 25GHz at the 3 meters distance.

**[11n(HT20)]**  
**Channel High**  
**BELOW 1GHz**



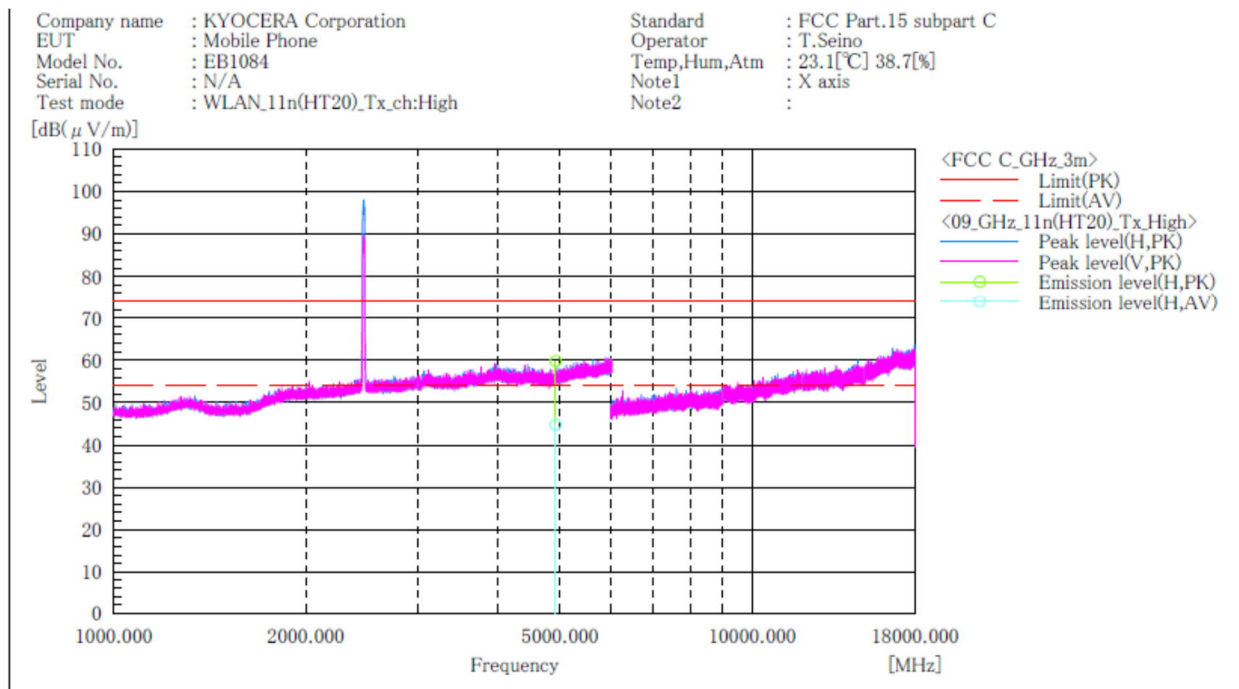
Final Result

| No. | Frequency (P) | c.f       | Height | Angle | Remark |
|-----|---------------|-----------|--------|-------|--------|
|     | [MHz]         | [dB(1/m)] | [cm]   | [°]   |        |

Note:

1. Emission Level (Margin) = Limit - [Reading + Factor (Antenna + Cable – Amp)]
2. No emission were detected in frequency range 9kHz to 1000MHz at the 3 meters distance.

**[11n(HT20)]**  
**Channel High**  
**ABOVE 1GHz**



## Final Result

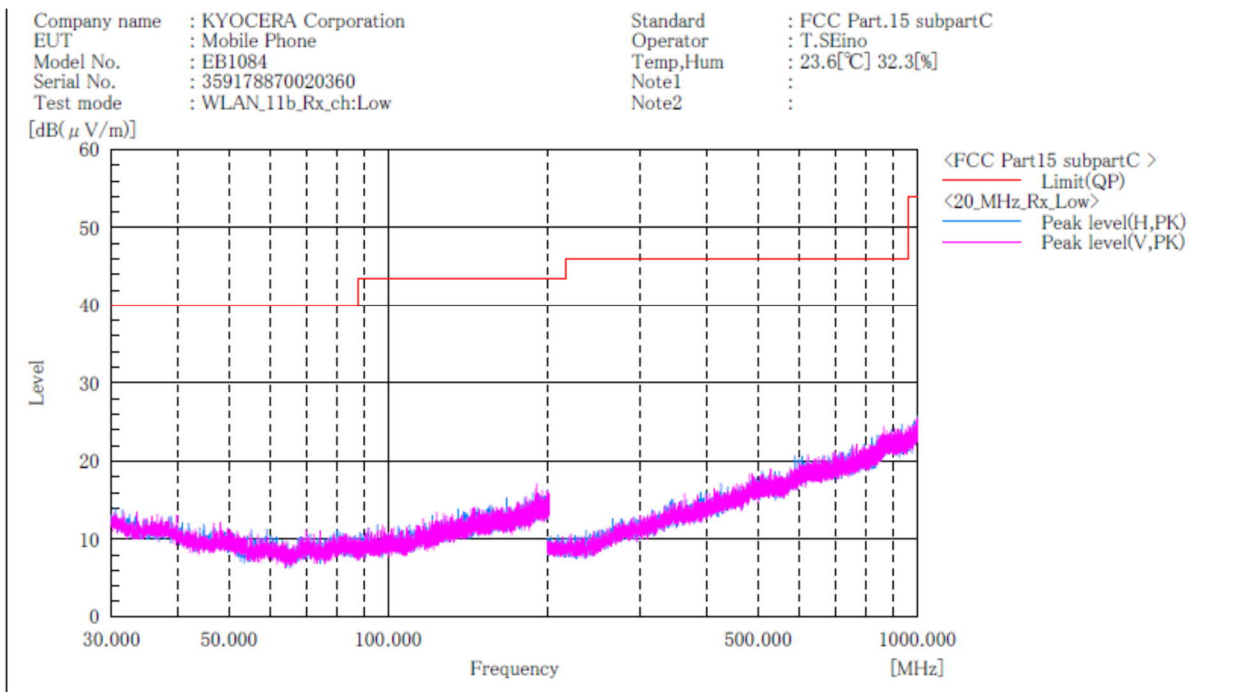
| No. | Frequency (P) | Reading PK | Reading AV | c.f       | Result PK  | Result AV  | Limit PK   | Limit AV   | Margin PK | Margin AV | Height | Angle | Remark |
|-----|---------------|------------|------------|-----------|------------|------------|------------|------------|-----------|-----------|--------|-------|--------|
|     | [MHz]         | [dB(μV)]   | [dB(μV)]   | [dB(1/m)] | [dB(μV/m)] | [dB(μV/m)] | [dB(μV/m)] | [dB(μV/m)] | [dB]      | [dB]      | [cm]   | [°]   |        |
| 1   | 4924.000      | 49.1       | 34.1       | 10.7      | 59.8       | 44.8       | 74.0       | 54.0       | 14.2      | 9.2       | 100.0  | 260.0 |        |

## Note:

- Emission Level (Margin) = Limit - [Reading + Factor (Antenna + Cable - Amp)]
- No emission were detected in frequency range 18GHz to 25GHz at the 3 meters distance.

#### 4.1.4.2 Receive mode

##### Channel Low BELOW 1GHz



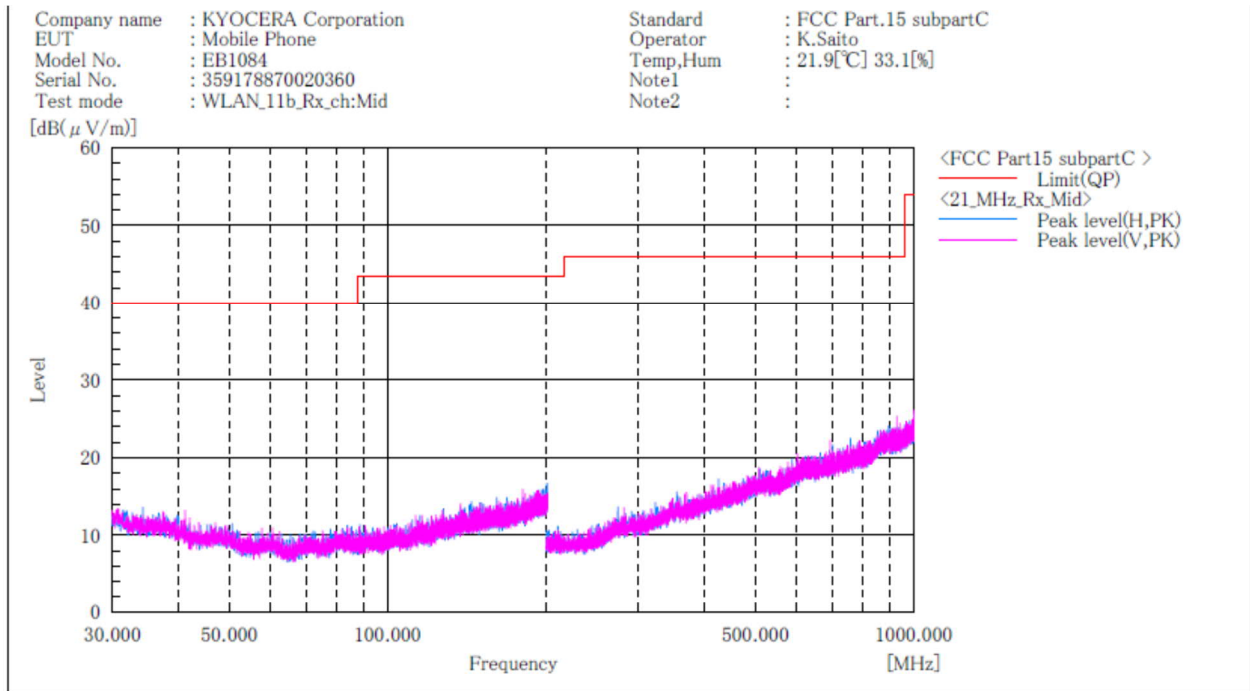
##### Final Result

| No. | Frequency (P) | c.f       | Height | Angle | Remark |
|-----|---------------|-----------|--------|-------|--------|
|     | [MHz]         | [dB(1/m)] | [cm]   | [°]   |        |

##### Note:

1. Emission Level (Margin) = Limit - [Reading + Factor (Antenna + Cable - Amp)]
2. No emission were detected in frequency range 9kHz to 1000MHz and 1GHz to 25GHz at the 3 meters distance.

**Channel Middle**  
**BELOW 1GHz**



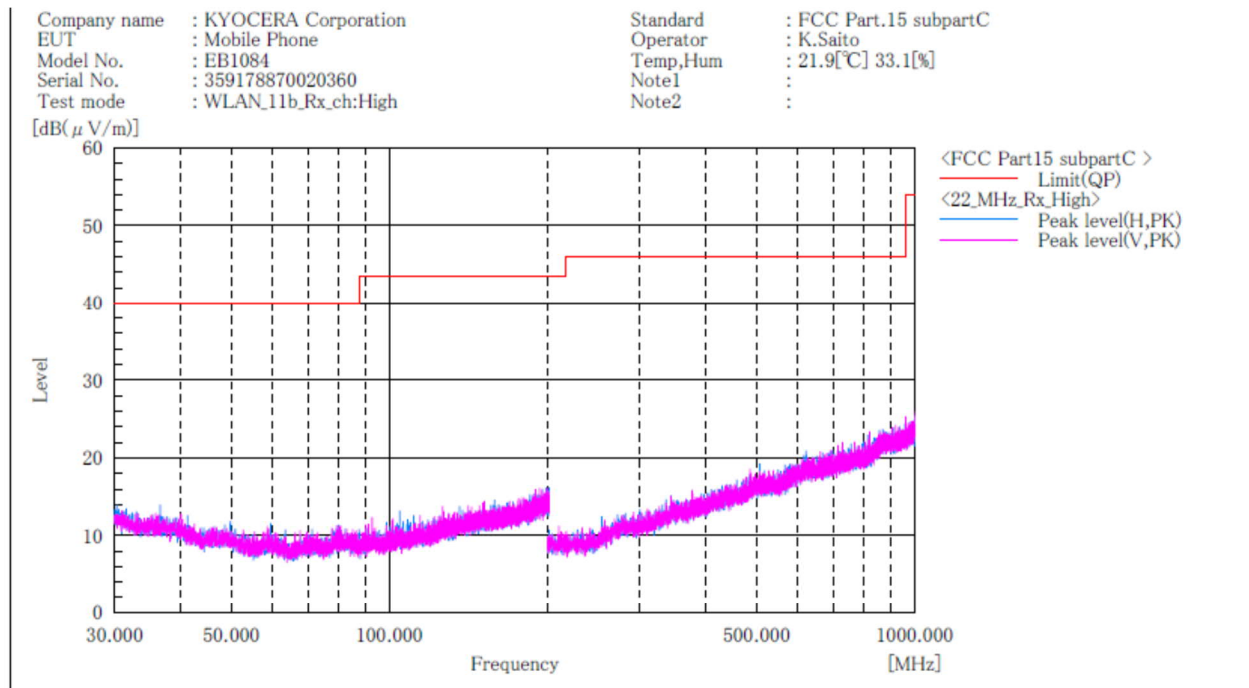
**Final Result**

| No. | Frequency (P) | c.f       | Height | Angle | Remark |
|-----|---------------|-----------|--------|-------|--------|
|     | [MHz]         | [dB(1/m)] | [cm]   | [°]   |        |

**Note:**

1. Emission Level (Margin) = Limit - [Reading + Factor (Antenna + Cable – Amp)]
2. No emission were detected in frequency range 9kHz to 1000MHz and 1GHz to 25GHz at the 3 meters distance.

## Channel High BELOW 1GHz



### Final Result

| No. | Frequency (P) | c.f       | Height | Angle | Remark |
|-----|---------------|-----------|--------|-------|--------|
|     | [MHz]         | [dB(1/m)] | [cm]   | [°]   |        |

### Note:

1. Emission Level (Margin) = Limit - [Reading + Factor (Antenna + Cable – Amp)]
2. No emission were detected in frequency range 9kHz to 1000MHz and 1GHz to 25GHz at the 3 meters distance.

## 4.2 Restricted Band of Operation

### 4.2.1 Measurement procedure

[FCC 15.247(d), 15.205, 15.209, KDB 558074 D01 v05r02, Section 8.6]

Test was applied by following conditions.

|                           |   |                                                                                                                                  |
|---------------------------|---|----------------------------------------------------------------------------------------------------------------------------------|
| Test method               | : | ANSI C63.10                                                                                                                      |
| Test place                | : | 3m Semi-anechoic chamber                                                                                                         |
| EUT was placed on         | : | Styrofoam table / (W) 1.0 × (D) 1.0 × (H) 0.8 m (below 1 GHz)<br>Styrofoam table / (W) 0.6 × (D) 0.6 × (H) 1.5 m (above 1 GHz)   |
| Antenna distance          | : | 3m                                                                                                                               |
| Spectrum analyzer setting | : |                                                                                                                                  |
| - Peak                    | : | RBW=1 MHz, VBW=3 MHz, Span=Arbitrary setting, Sweep=auto                                                                         |
| - Average                 | : | 11b: RBW=1 MHz, VBW=3 kHz, Span=0 Hz, Sweep=auto<br>11g, 11n: RBW=1 MHz, VBW=1 kHz, Span=0 Hz, Sweep=auto<br>Display mode=Linear |

#### Average Measurement Setting [VBW]

| mode      | Duty Cycle (%) | Ton [μs] | Toff [μs] | 1/Ton (kHz) | Determined VBW Setting |
|-----------|----------------|----------|-----------|-------------|------------------------|
| 11b       | 93.82          | 942      | 62        | 1.062       | 3kHz                   |
| 11g       | 97.25          | 1344     | 38        | 0.744       | 1kHz                   |
| 11n(HT20) | 97.07          | 1258     | 38        | 0.795       | 1kHz                   |

Although these tests were performed other than open area test site, adequate comparison measurements

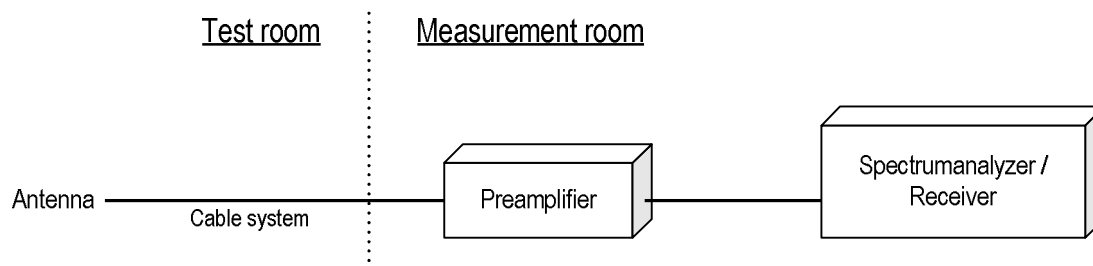
were confirmed against 30 m open area test site.

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 937606.

Radiated emission measurements are performed at 3m distance with the broadband antenna (Double ridged guide antenna). The antenna is positioned both the horizontal and vertical planes of polarization and height is varied 1m to 4m and stopped at height producing the maximum emission.

The EUT is Placed on a turntable, which is 0.8m/1.5m above ground plane. The turntable shall be rotated for 360 degrees to determine the position of maximum emission level. The test results represent the worst case emission for each emission with manipulating the EUT, support equipment, interconnecting cables and varying the mode of operation. Sufficient time for the EUT, support equipment, and test equipment are allowed in order for them to warm up to their normal operating condition.

- Test configuration



#### 4.2.2 Limit

Emission at the boundary of the restricted band provided by 15.205 shall be lower than 15.209 limit.

#### 4.2.3 Measurement Result

##### [IEEE802.11b, IEEE802.11g, IEEE802.11n (HT20)]

| Channel | Frequency [MHz] | Results Chart      | Result |
|---------|-----------------|--------------------|--------|
| Low     | 2412            | See the Trace Data | Pass   |
| High    | 2462            | See the Trace Data | Pass   |

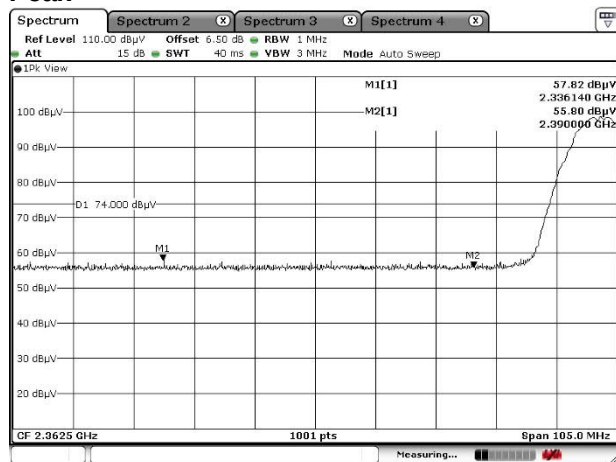
#### 4.2.4 Test data

Date : 10-November-2021  
Temperature : 23.1 [°C]  
Humidity : 39.9 [%]  
Test place : 3m Semi-anechoic chamber

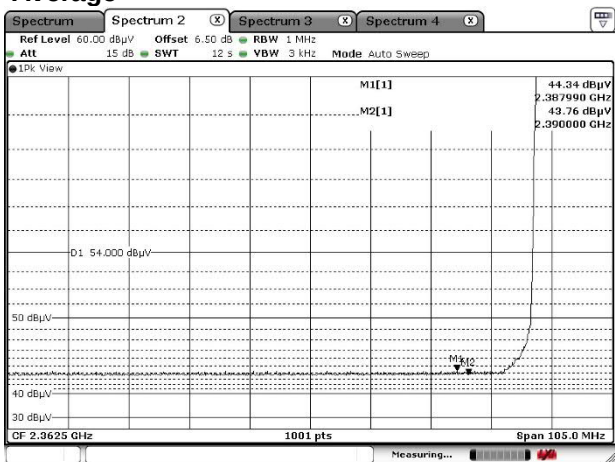
Test engineer : Tadahiro Seino

## [IEEE802.11b]

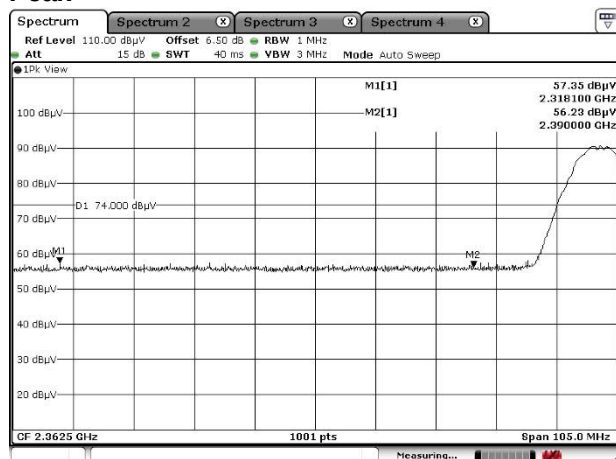
### Channel Low Horizontal Peak



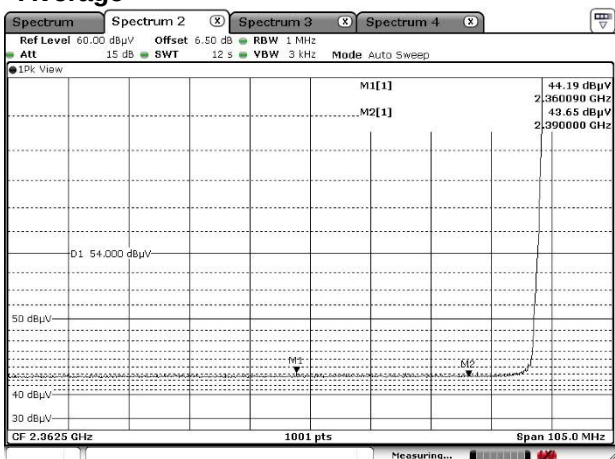
## Average



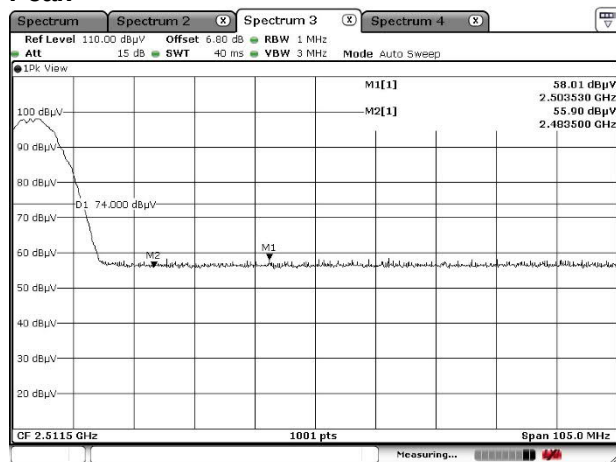
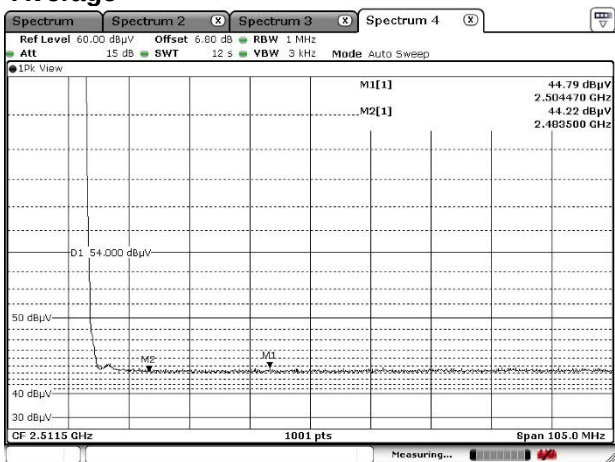
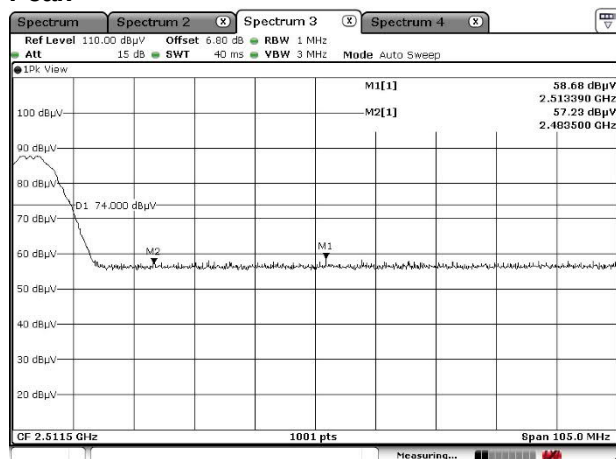
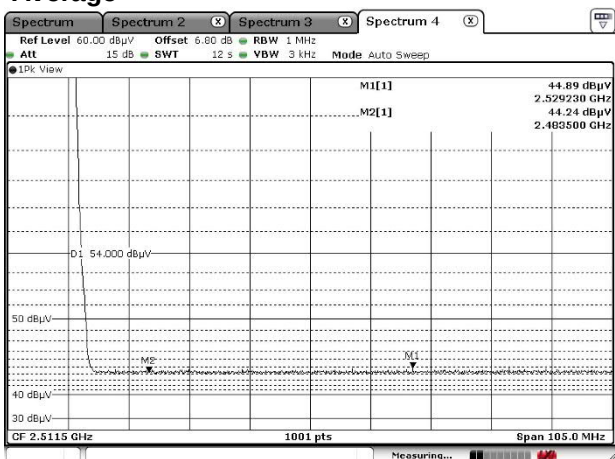
### Vertical Peak



## Average



[IEEE802.11b]

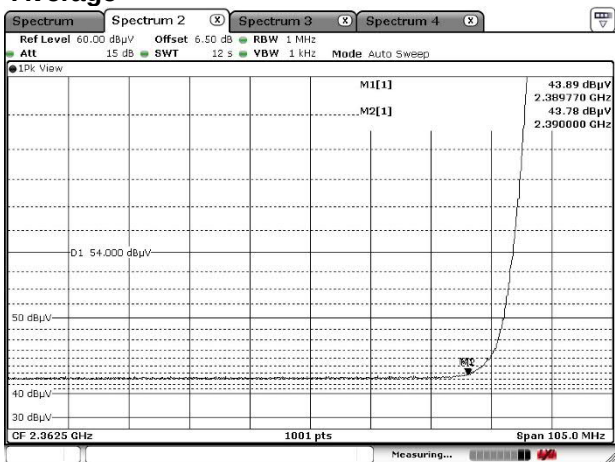
**Channel High  
Horizontal  
Peak****Average****Vertical  
Peak****Average**

[IEEE802.11g]

### Channel Low Horizontal Peak



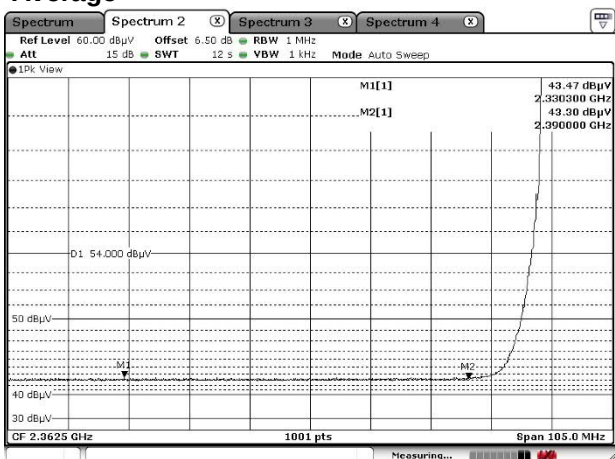
### Average



### Vertical Peak

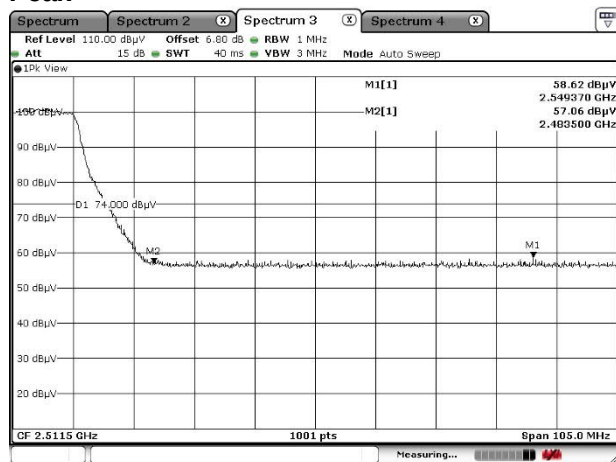


### Average

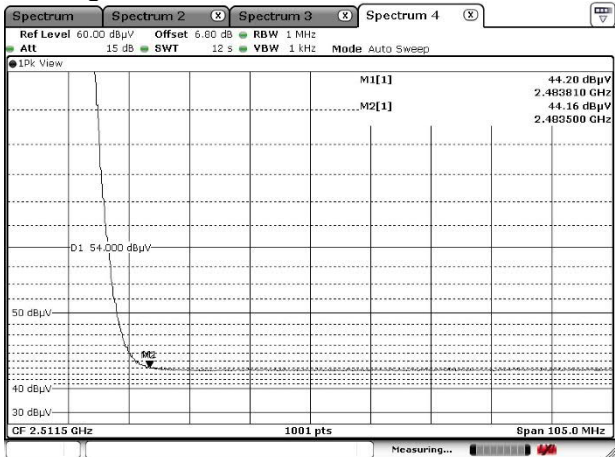


**[IEEE802.11g]**

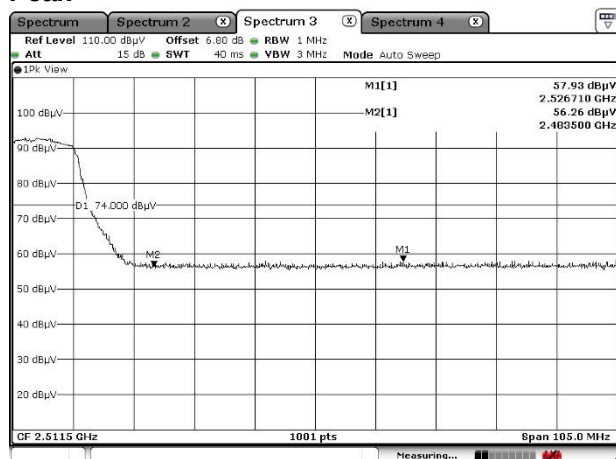
### Channel High Horizontal Peak



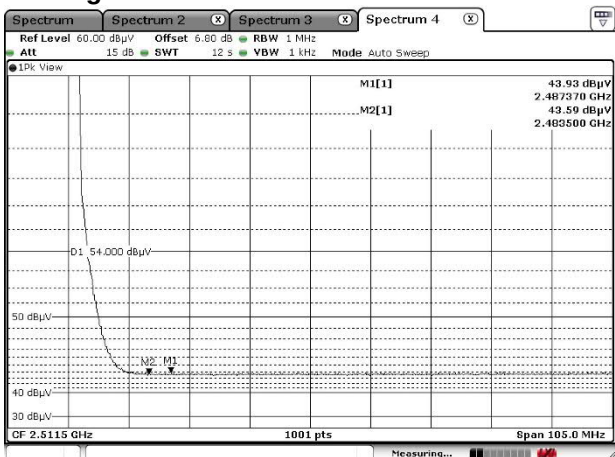
### Average



## Vertical Peak



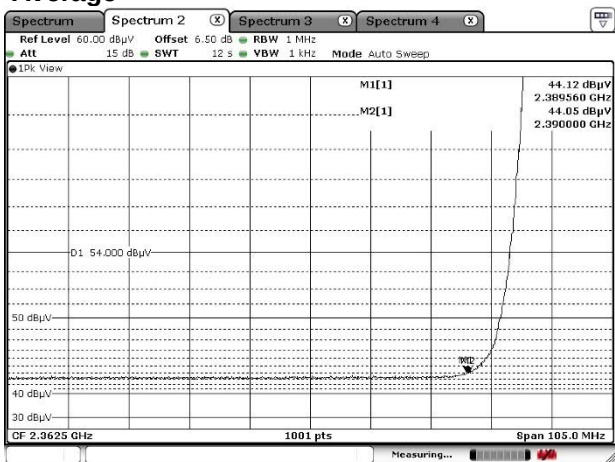
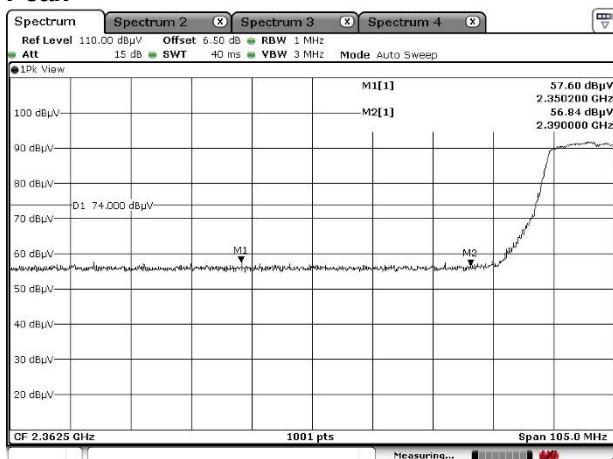
**Average**



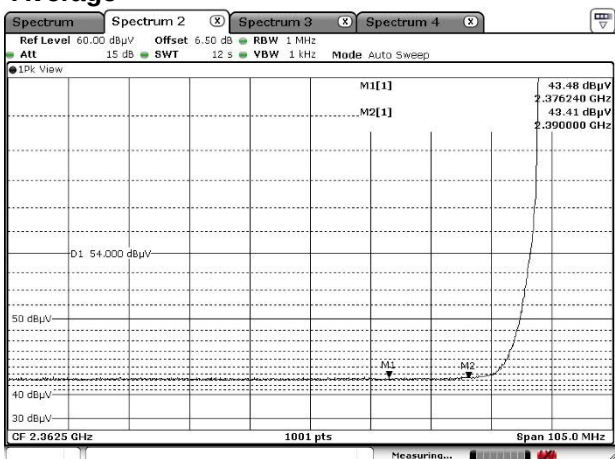
## [IEEE802.11n (HT20)]

Channel Low  
Horizontal  
Peak

## Average

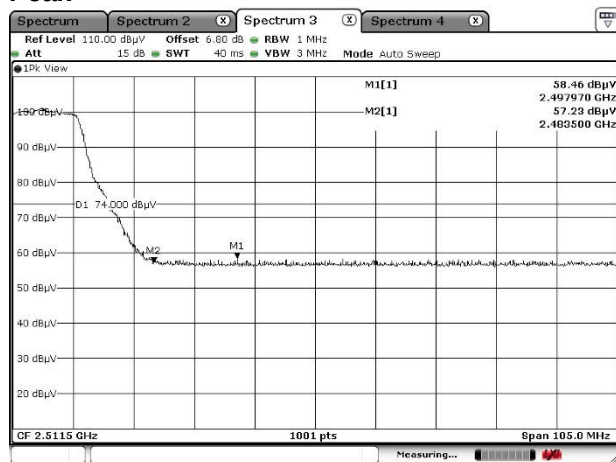
Vertical  
Peak

## Average

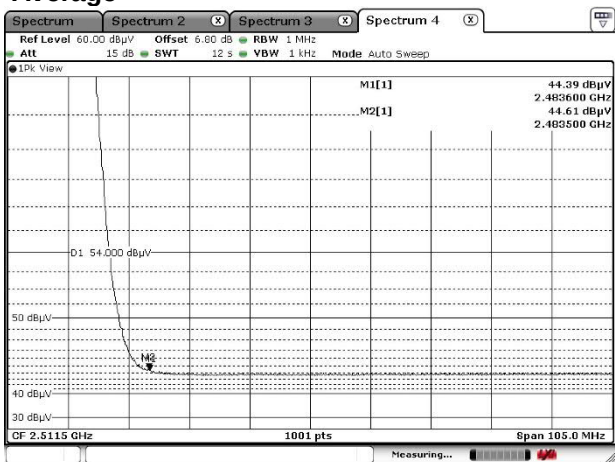


## [IEEE802.11n (HT20)]

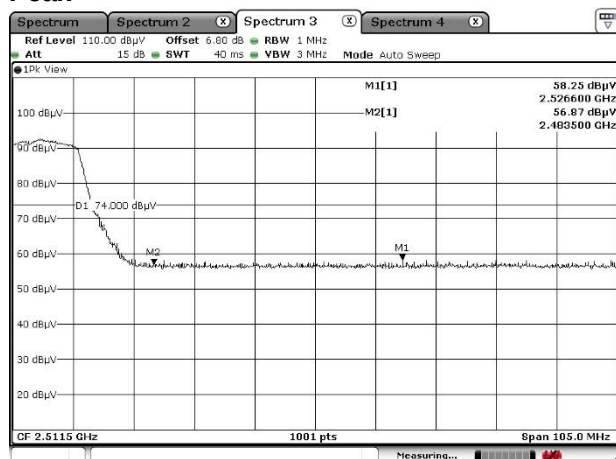
### Channel High Horizontal Peak



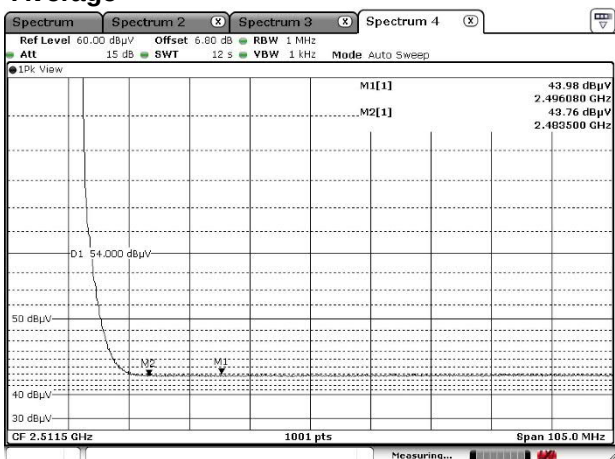
### Average



### Vertical Peak



### Average



### 4.3 AC Power Line Conducted Emissions

#### 4.3.1 Measurement procedure

##### [FCC 15.207]

Test was applied by following conditions.

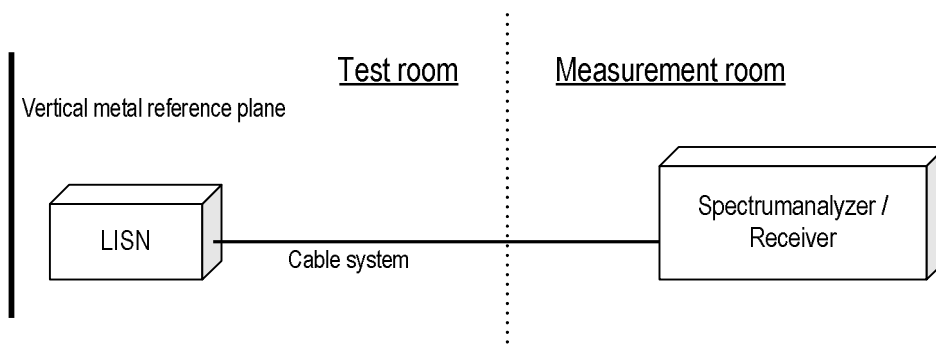
|                                |                                             |
|--------------------------------|---------------------------------------------|
| Test method                    | : ANSI C63.10                               |
| Frequency range                | : 0.15 MHz to 30 MHz                        |
| Test place                     | : 3m Semi-anechoic chamber                  |
| EUT was placed on              | : FRP table / (W) 2.0 × (D) 1.0 × (H) 0.8 m |
| Vertical Metal Reference Plane | : (W) 2.0 × (H) 2.0 m, 0.4 m away from EUT  |
| Test receiver setting          |                                             |
| - Detector                     | : Quasi-peak, Average                       |
| - Bandwidth                    | : 9 kHz                                     |

EUT and peripherals are connected to 50Ω/50 μH Line Impedance Stabilization Network (LISN) which are connected to reference ground plane, and are placed 80cm away from EUT. Excess of AC power cable is bundled in center.

LISN for peripheral is terminated in 50Ω.

EUT operating mode is selected to emit the maximum noise. Overall frequency range is investigated with spectrum analyzer using peak detector. Maximum emission configuration is determined by manipulating the EUT, peripherals, interconnecting cables. Then, emission measurements are performed with test receiver in above setting to each current-carrying conductor of the mains port. Sufficient time for EUT, peripherals and test equipment is provided in order for them to warm up to their normal operating condition. If the average limit is met when using a quasi-peak detector receiver, the EUT shall be deemed to meet both limits.

- Test configuration



#### 4.3.2 Calculation method

Emission level = Reading + (LISN. Factor + Cable system loss)

Margin = Limit – Emission level

Example:

Limit @ 0.403 MHz: 57.8 dBμV(Quasi-peak)  
: 47.8 dBμV(Average)

(Quasi peak) Reading = 22.7 dBμV c.f. = 10.4 dB

Emission level = 22.7 + 10.4 = 33.1 dBμV

Margin = 57.8 – 33.1 = 24.7 dB

(Average) Reading = 6.5 dBμV c.f. = 10.4 dB

Emission level = 6.5 + 10.4 = 16.9 dBμV

Margin = 47.8 – 16.9 = 30.9 dB

#### 4.3.3 Limit

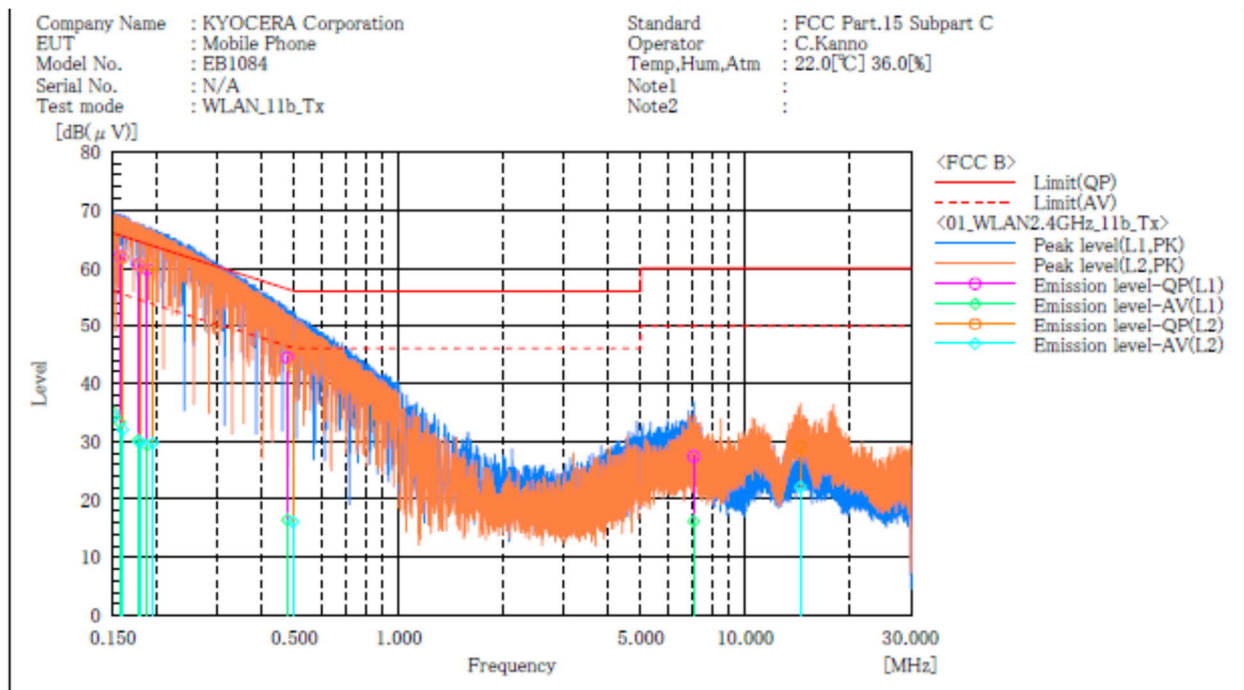
| Frequency<br>[MHz] | Limit     |           |
|--------------------|-----------|-----------|
|                    | QP [dBuV] | AV [dBuV] |
| 0.15-0.5           | 66-56*    | 56-46*    |
| 0.5-5              | 56        | 46        |
| 5-30               | 60        | 50        |

\*: The limit decreases linearly with the logarithm of the frequency in the range 0.15MHz to 0.5MHz.

#### 4.3.4 Test data

Date : 6-November-2021  
 Temperature : 22.0 [°C]  
 Humidity : 36.0 [%]  
 Test place : 3m Semi-anechoic chamber

Test engineer : Chiaki Kanno



#### Final Result

| --- L1 Phase --- |           |            |             |      |           |            |          |          |           |            |
|------------------|-----------|------------|-------------|------|-----------|------------|----------|----------|-----------|------------|
| No.              | Frequency | Reading QP | Reading CAV | c. f | Result QP | Result CAV | Limit QP | Limit AV | Margin QP | Margin CAV |
|                  | [MHz]     | [dB(μV)]   | [dB(μV)]    | [dB] | [dB(μV)]  | [dB(μV)]   | [dB(μV)] | [dB(μV)] | [dB]      | [dB]       |
| 1                | 0.150     | 52.3       | 24.5        | 10.5 | 62.8      | 35.0       | 66.0     | 56.0     | 3.2       | 21.0       |
| 2                | 0.157     | 51.6       | 22.7        | 10.5 | 62.1      | 33.2       | 65.6     | 55.6     | 3.5       | 22.4       |
| 3                | 0.177     | 50.2       | 19.7        | 10.4 | 60.6      | 30.1       | 64.6     | 54.6     | 4.0       | 24.5       |
| 4                | 0.188     | 49.4       | 18.9        | 10.4 | 59.8      | 29.3       | 64.1     | 54.1     | 4.3       | 24.8       |
| 5                | 0.478     | 34.1       | 6.2         | 10.3 | 44.4      | 16.5       | 56.4     | 46.4     | 12.0      | 29.9       |
| 6                | 7.100     | 16.8       | 5.6         | 10.6 | 27.4      | 16.2       | 60.0     | 50.0     | 32.6      | 33.8       |
| --- L2 Phase --- |           |            |             |      |           |            |          |          |           |            |
| No.              | Frequency | Reading QP | Reading CAV | c. f | Result QP | Result CAV | Limit QP | Limit AV | Margin QP | Margin CAV |
|                  | [MHz]     | [dB(μV)]   | [dB(μV)]    | [dB] | [dB(μV)]  | [dB(μV)]   | [dB(μV)] | [dB(μV)] | [dB]      | [dB]       |
| 1                | 0.150     | 52.3       | 23.9        | 10.4 | 62.7      | 34.3       | 66.0     | 56.0     | 3.3       | 21.7       |
| 2                | 0.160     | 51.4       | 21.6        | 10.4 | 61.8      | 32.0       | 65.5     | 55.5     | 3.7       | 23.5       |
| 3                | 0.179     | 50.1       | 19.5        | 10.4 | 60.5      | 29.9       | 64.5     | 54.5     | 4.0       | 24.6       |
| 4                | 0.195     | 50.1       | 19.3        | 10.4 | 60.5      | 29.7       | 63.8     | 53.8     | 3.3       | 24.1       |
| 5                | 0.495     | 32.5       | 5.8         | 10.3 | 42.8      | 16.1       | 56.1     | 46.1     | 13.3      | 30.0       |
| 6                | 14.420    | 18.2       | 11.3        | 10.8 | 29.0      | 22.1       | 60.0     | 50.0     | 31.0      | 27.9       |



Japan

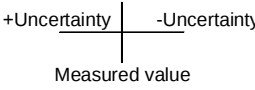
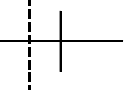
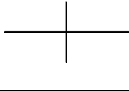
## 5 Antenna requirement

According to FCC section 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 antenna is a special antenna mounted inside of the EUT. Therefore, the EUT complies with the antenna requirement of FCC section 15.203.

## 6 Measurement Uncertainty

Expanded uncertainties stated are calculated with a coverage Factor  $k=2$ .  
Please note that these results are not taken into account when measurement uncertainty considerations contained in ETSI TR 100 028 Parts 1 and 2 determining compliance or non-compliance with test result.

| Test item                                  | Measurement uncertainty |
|--------------------------------------------|-------------------------|
| Conducted emission, AMN (9 kHz – 150 kHz)  | $\pm 3.7$ dB            |
| Conducted emission, AMN (150 kHz – 30 MHz) | $\pm 3.3$ dB            |
| Radiated emission (9kHz – 30 MHz)          | $\pm 3.2$ dB            |
| Radiated emission (30 MHz – 1000 MHz)      | $\pm 5.3$ dB            |
| Radiated emission (1 GHz – 6 GHz)          | $\pm 4.8$ dB            |
| Radiated emission (6 GHz – 18 GHz)         | $\pm 4.5$ dB            |
| Radiated emission (18 GHz – 40 GHz)        | $\pm 6.4$ dB            |
| Radio Frequency                            | $\pm 1.4 \cdot 10^{-8}$ |
| RF power, conducted                        | $\pm 0.8$ dB            |
| Adjacent channel power                     | $\pm 2.4$ dB            |
| Temperature                                | $\pm 0.6$ °C            |
| Humidity                                   | $\pm 1.2$ %             |
| Voltage (DC)                               | $\pm 0.4$ %             |
| Voltage (AC, <10kHz)                       | $\pm 0.2$ %             |

| Judge | Measured value and standard limit value                                                                                                                                                                                                                                                                                                                                                                   |  |
|-------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--|
| PASS  | <div> <div> <div>Standard limit value</div> <div> <div>+Uncertainty</div> <div>-Uncertainty</div> </div> <div>Measured value</div> </div> <div> <p>Case1</p>  <p>Even if it takes uncertainty into consideration, a standard limit value is fulfilled.</p> </div> </div>                                               |  |
|       | <div> <div> <div>Standard limit value</div> <div> <div>+Uncertainty</div> <div>-Uncertainty</div> </div> <div>Measured value</div> </div> <div> <p>Case2</p>  <p>Although measured value is in a standard limit value, a limit value won't be fulfilled if uncertainty is taken into consideration.</p> </div> </div>  |  |
| FAIL  | <div> <div> <div>Standard limit value</div> <div> <div>+Uncertainty</div> <div>-Uncertainty</div> </div> <div>Measured value</div> </div> <div> <p>Case3</p>  <p>Although measured value exceeds a standard limit value, a limit value will be fulfilled if uncertainty is taken into consideration.</p> </div> </div> |  |
|       | <div> <div> <div>Standard limit value</div> <div> <div>+Uncertainty</div> <div>-Uncertainty</div> </div> <div>Measured value</div> </div> <div> <p>Case4</p>  <p>Even if it takes uncertainty into consideration, a standard limit value isn't fulfilled.</p> </div> </div>                                            |  |



Japan

## 7 Laboratory Information

Testing was performed and the report was issued at:

**TÜV SÜD Japan Ltd. Yonezawa Testing Center**

Address: 5-4149-7 Hachimanpara, Yonezawa-shi, Yamagata, 992-1128 Japan

Phone: +81-238-28-2881

**Accreditation and Registration**

A2LA

Certificate #3686.03

VLAC

Accreditation No.: VLAC-013

BSMI

Laboratory Code: SL2-IN-E-6018, SL2-A1-E-6018

Innovation, Science and Economic Development Canada

ISED#: 4224A

VCCI Council

Registration number: A-0166

## Appendix A. Test Equipment

### Radiated emission

| Equipment                   | Company              | Model No.         | Serial No.       | Cal. Due    | Cal. Date   |
|-----------------------------|----------------------|-------------------|------------------|-------------|-------------|
| EMI Receiver                | ROHDE&SCHWARZ        | ESCI              | 100765           | 30-Sep-2022 | 15-Sep-2021 |
| Spectrum analyzer           | Agilent Technologies | E4447A            | MY46180188       | 31-Mar-2022 | 11-Mar-2021 |
| Spectrum analyzer           | Agilent Technologies | E4440A            | US40420937       | 31-Dec-2021 | 11-Dec-2020 |
| Spectrum analyzer           | ROHDE&SCHWARZ        | FSV40             | 101731           | 30-Jun-2022 | 08-Jun-2021 |
| Preamplifier                | SONOMA               | 310               | 372170           | 30-Sep-2022 | 15-Sep-2021 |
| Loop antenna                | ROHDE&SCHWARZ        | HFH2-Z2           | 100515           | 30-Apr-2022 | 27-Apr-2021 |
| Attenuator                  | TOYO Connector       | NA-PJ-6           | N/A(S507)        | 28-Feb-2022 | 03-Feb-2021 |
| Biconical antenna           | Schwarzbeck          | VHBB9124/BBA9106  | 1333             | 31-Dec-2021 | 15-Dec-2020 |
| Log periodic antenna        | Schwarzbeck          | VUSLP9111B        | 345              | 31-Oct-2021 | 19-Oct-2020 |
| Log periodic antenna        | Schwarzbeck          | VUSLP9111B        | 346              | 31-Oct-2022 | 19-Oct-2021 |
| Attenuator                  | TOYO Connector       | NA-PJ-6/6dB       | N/A(S541)        | 30-Sep-2022 | 16-Sep-2021 |
| Attenuator                  | TAMAGAWA.ELEC        | CFA-10/3dB        | N/A(S503)        | 31-Jul-2022 | 20-Jul-2021 |
| Preamplifier                | TSJ                  | MLA-100M18-B02-40 | 1929118          | 31-Dec-2021 | 15-Dec-2020 |
| Attenuator                  | AEROFLEX             | 26A-10            | 081217-08        | 31-Dec-2021 | 14-Dec-2020 |
| Double ridged guide antenna | ETS LINDGREN         | 3117              | 00224193         | 31-Mar-2022 | 30-Mar-2021 |
| Attenuator                  | HUBER+SUHNER         | 6803.17.B         | N/A(2340)        | 31-Dec-2021 | 15-Dec-2020 |
| Double ridged guide antenna | A.H.Systems Inc.     | SAS-574           | 469              | 31-Aug-2022 | 02-Aug-2021 |
| Preamplifier                | TSJ                  | MLA-1840-B03-35   | 1240332          | 31-Aug-2022 | 02-Aug-2021 |
| Band rejection filter       | Micro-Tronics        | BRC50702          | G433             | 30-Sep-2021 | 15-Sep-2021 |
| Microwave cable             | HUBER+SUHNER         | SUCOFLEX104/9m    | MY30037/4        | 31-Dec-2021 | 15-Dec-2020 |
|                             |                      | SUCOFLEX104/1m    | my24610/4        | 31-Dec-2021 | 15-Dec-2020 |
|                             |                      | SUCOFLEX104/8m    | SN MY30033/4     | 31-Dec-2021 | 15-Dec-2020 |
|                             |                      | SUCOFLEX104/1m    | MY32976/4        | 31-Dec-2021 | 15-Dec-2020 |
|                             |                      | SUCOFLEX104/2m    | SN MY28404/4     | 31-Dec-2021 | 15-Dec-2020 |
|                             |                      | SUCOFLEX104/7m    | 41625/6          | 31-Dec-2021 | 15-Dec-2020 |
| PC                          | DELL                 | DIMENSION E521    | 75465BX          | N/A         | N/A         |
| Software                    | TOYO Corporation     | EP5/RE-AJ         | 0611193/V6.0.140 | N/A         | N/A         |
| Absorber                    | RIKEN                | PPF30             | N/A              | N/A         | N/A         |
| 3m Semi an-echoic Chamber   | TOKIN                | N/A               | N/A(9002-NSA)    | 31-May-2022 | 20-May-2021 |
| 3m Semi an-echoic Chamber   | TOKIN                | N/A               | N/A(9002-SVSWR)  | 31-May-2022 | 20-May-2021 |

### Conducted emission at mains port

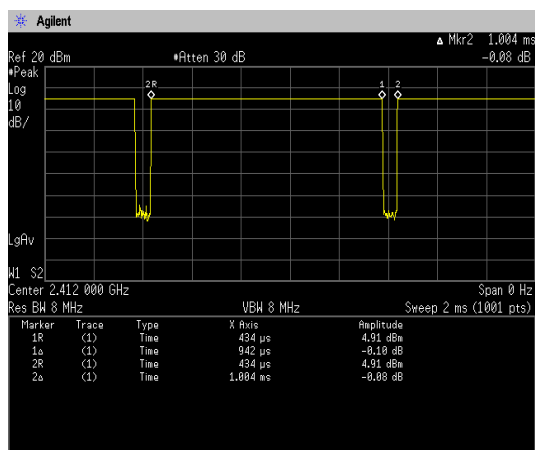
| Equipment                            | Company                         | Model No.   | Serial No.      | Cal. Due    | Cal. Date   |
|--------------------------------------|---------------------------------|-------------|-----------------|-------------|-------------|
| EMI Receiver                         | ROHDE&SCHWARZ                   | ESCI        | 100765          | 30-Sep-2022 | 15-Sep-2021 |
| Attenuator                           | HUBER+SUHNER                    | 6810.01.A   | N/A (S411)      | 31-Dec-2021 | 15-Dec-2020 |
| Line impedance stabilization network | Kyoritsu Electrical Works, Ltd. | TNW-407F2   | 12-17-110-2     | 30-Jun-2022 | 17-Jun-2021 |
| Coaxial cable                        | FUJIKURA                        | 5D-2W/4m    | N/A (S350)      | 31-Dec-2021 | 15-Dec-2020 |
| Coaxial cable                        | FUJIKURA                        | 5D-2W/1m    | N/A (S193)      | 31-Dec-2021 | 15-Dec-2020 |
| Coaxial cable                        | HUBER+SUHNER                    | RG214/U/10m | N/A (S194)      | 31-Dec-2021 | 15-Dec-2020 |
| PC                                   | DELL                            | DIMENSION   | 75465BX         | N/A         | N/A         |
| Software                             | TOYO Corporation                | EP5/CE-AJ   | 0611193/V5.4.11 | N/A         | N/A         |

\*: The calibrations of the above equipment are traceable to NIST or equivalent standards of the reference organizations.

## Appendix B. Duty Cycle

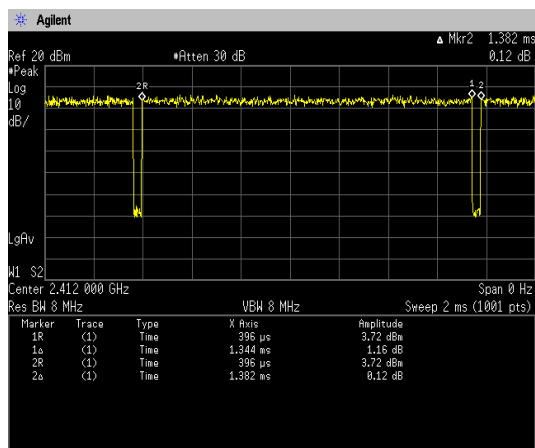
### [Plot & Calculation]

11b



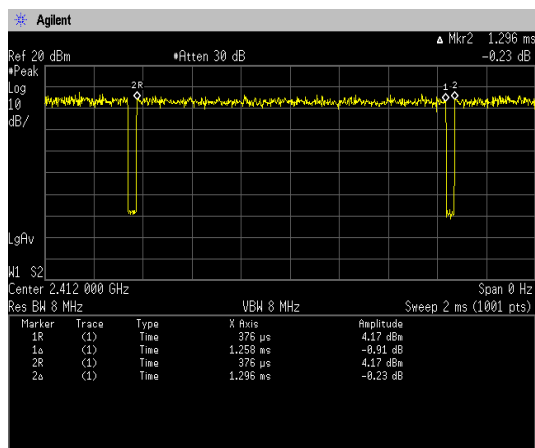
$$\text{Duty Cycle} = \text{Ton} / (\text{Ton} + \text{Toff}) = 942[\mu\text{s}] / (942[\mu\text{s}] + 62[\mu\text{s}]) = 93.82[\%]$$

11g



$$\text{Duty Cycle} = \text{Ton} / (\text{Ton} + \text{Toff}) = 1344[\mu\text{s}] / (1344[\mu\text{s}] + 38[\mu\text{s}]) = 97.25[\%]$$

11n (HT20)



$$\text{Duty Cycle} = \text{Ton} / (\text{Ton} + \text{Toff}) = 1258[\mu\text{s}] / (1258[\mu\text{s}] + 38[\mu\text{s}]) = 97.07[\%]$$