

# FCC Test Report

|              |                   |
|--------------|-------------------|
| Product Name | Portable Computer |
| Model No.    | P109F             |
| FCC ID.      | E2K-P109F         |

|           |  |
|-----------|--|
| Applicant | Dell Inc.                                  |
| Address   | One Dell Way, Round Rock, Texas 78682, USA |

|                 |                      |
|-----------------|----------------------|
| Date of Receipt | Dec. 22, 2020        |
| Issued Date     | Feb. 20, 2021        |
| Report No.      | 20C0808R-E3032110108 |
| Report Version  | V1.0                 |



The test results relate only to the samples tested.

The test results shown in the test report are traceable to the national/international standard through the calibration report of the equipment and evaluated measurement uncertainty herein.

This report must not be used to claim product endorsement by TAF or any agency of the government.

The test report shall not be reproduced without the written approval of DEKRA Testing and Certification Co., Ltd.

Measurement uncertainties evaluated for each testing system and associated connections are given here to provide the system information for reference. Compliance determinations do not take into account measurement uncertainties for each testing system, but are based on the results of the compliance measurement.

# Test Report

Issued Date: Feb. 20, 2021

Report No.: 20C0808R-E3032110108



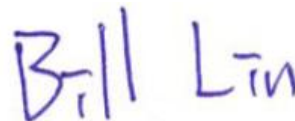
|                     |   |
|---------------------|---|
| Product Name        | Portable Computer   |
| Applicant           | Dell Inc.   |
| Address             | One Dell Way, Round Rock, Texas 78682, USA                                |
| Manufacturer        | Dell Inc.   |
| Model No.           | P109F   |
| FCC ID.             | E2K-P109F   |
| EUT Rated Voltage   | AC 100-240V, 50-60Hz  |
| EUT Test Voltage    | AC 120V/60Hz  |
| Trade Name          | ALIENWARE   |
| Applicable Standard | FCC CFR Title 47 Part 15 Subpart C<br>ANSI C63.4: 2014, ANSI C63.10: 2013 |
| Test Result         | Complied  |

Documented By :



( Senior Adm. Specialist / Joanne Lin )

Tested By :



( Senior Engineer / Bill Lin )

Approved By :



( Director / Vincent Lin )

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## Revision History

| <b>Report No.</b>    | <b>Version</b> | <b>Description</b>       | <b>Issued Date</b> |
|----------------------|----------------|--------------------------|--------------------|
| 20C0808R-E3032110108 | V1.0           | Initial issue of report. | Feb. 20, 2021      |

## 1. GENERAL INFORMATION

### 1.1. EUT Description

|                    |   |
|--------------------|---|
| Product Name       | Portable Computer   |
| Trade Name         | ALIENWARE   |
| Model No.          | P109F   |
| FCC ID.            | E2K-P109F   |
| Frequency Range    | 2402-2480MHz  |
| Channel Number     | 79  |
| Type of Modulation | FHSS: GFSK(1Mbps) / $\pi$ /4DQPSK(2Mbps) / 8DPSK(3Mbps)   |
| Antenna Type       | PIFA Antenna  |
| Channel Control    | Auto  |
| Antenna Gain       | Refer to the table "Antenna List"   |
| Power Cable        | Shielded, 1.8m  |
| Power Adapter      | MFR: DELL, M/N: HA240PM190<br>Input: AC 100-240V~5A, 50-60Hz<br>Output: 19.5V=12.31A, 240.0W<br>Cable Out: Shielded, 1.8m, with two ferrite cores bonded. |

#### Antenna List

| No. | Manufacturer              | Part No.  | Antenna Type | Peak Gain          |
|-----|---------------------------|---|--------------|--------------------|
| 1   | Hong-BO Co., Ltd.         | 260-24363 (DC33002IL0L) (Main)<br>260-24362 (DC33002IL1L) (Aux)       | PIFA Antenna | 2.64dBi for 2.4GHz |
| 2   | Wistron Neweb Corporation | DC33002IK0L (81EABG15.G09) (Main)<br>DC33002IK1L (81EABG15.G10) (Aux) | PIFA Antenna | 0.74dBi for 2.4GHz |

Note:

- (1) The antenna of EUT is conforming to FCC 15.203.
- (2) Only the higher gain antenna was tested and recorded in this report.

Center Frequency of Each Channel:

| Channel     | Frequency | Channel     | Frequency | Channel     | Frequency | Channel     | Frequency |
|-------------|-----------|-------------|-----------|-------------|-----------|-------------|-----------|
| Channel 00: | 2402 MHz  | Channel 20: | 2422 MHz  | Channel 40: | 2442 MHz  | Channel 60: | 2462 MHz  |
| Channel 01: | 2403 MHz  | Channel 21: | 2423 MHz  | Channel 41: | 2443 MHz  | Channel 61: | 2463 MHz  |
| Channel 02: | 2404 MHz  | Channel 22: | 2424 MHz  | Channel 42: | 2444 MHz  | Channel 62: | 2464 MHz  |
| Channel 03: | 2405 MHz  | Channel 23: | 2425 MHz  | Channel 43: | 2445 MHz  | Channel 63: | 2465 MHz  |
| Channel 04: | 2406 MHz  | Channel 24: | 2426 MHz  | Channel 44: | 2446 MHz  | Channel 64: | 2466 MHz  |
| Channel 05: | 2407 MHz  | Channel 25: | 2427 MHz  | Channel 45: | 2447 MHz  | Channel 65: | 2467 MHz  |
| Channel 06: | 2408 MHz  | Channel 26: | 2428 MHz  | Channel 46: | 2448 MHz  | Channel 66: | 2468 MHz  |
| Channel 07: | 2409 MHz  | Channel 27: | 2429 MHz  | Channel 47: | 2449 MHz  | Channel 67: | 2469 MHz  |
| Channel 08: | 2410 MHz  | Channel 28: | 2430 MHz  | Channel 48: | 2450 MHz  | Channel 68: | 2470 MHz  |
| Channel 09: | 2411 MHz  | Channel 29: | 2431 MHz  | Channel 49: | 2451 MHz  | Channel 69: | 2471 MHz  |
| Channel 10: | 2412 MHz  | Channel 30: | 2432 MHz  | Channel 50: | 2452 MHz  | Channel 70: | 2472 MHz  |
| Channel 11: | 2413 MHz  | Channel 31: | 2433 MHz  | Channel 51: | 2453 MHz  | Channel 71: | 2473 MHz  |
| Channel 12: | 2414 MHz  | Channel 32: | 2434 MHz  | Channel 52: | 2454 MHz  | Channel 72: | 2474 MHz  |
| Channel 13: | 2415 MHz  | Channel 33: | 2435 MHz  | Channel 53: | 2455 MHz  | Channel 73: | 2475 MHz  |
| Channel 14: | 2416 MHz  | Channel 34: | 2436 MHz  | Channel 54: | 2456 MHz  | Channel 74: | 2476 MHz  |
| Channel 15: | 2417 MHz  | Channel 35: | 2437 MHz  | Channel 55: | 2457 MHz  | Channel 75: | 2477 MHz  |
| Channel 16: | 2418 MHz  | Channel 36: | 2438 MHz  | Channel 56: | 2458 MHz  | Channel 76: | 2478 MHz  |
| Channel 17: | 2419 MHz  | Channel 37: | 2439 MHz  | Channel 57: | 2459 MHz  | Channel 77: | 2479 MHz  |
| Channel 18: | 2420 MHz  | Channel 38: | 2440 MHz  | Channel 58: | 2460 MHz  | Channel 78: | 2480 MHz  |
| Channel 19: | 2421 MHz  | Channel 39: | 2441 MHz  | Channel 59: | 2461 MHz  |             |           |

Note:

1. The EUT is an Portable Computer with a built-in WLAN (802.11a/b/g/n/ac/ax) with Bluetooth (5.0 and V3.0+HS, V2.1+EDR) transceiver, this report for Bluetooth V3.0+HS, V2.1+EDR.
2. This report is based on the comprehensive requirements of KDB 996369 D02. The end product only evaluates RF power and spurious emissions. The original RF module test report is 181210-03.TR05.
3. BT signal is only transmitted by Main antenna port.
4. These tests were conducted on a sample for the purpose of demonstrating compliance of transmitter with Part 15 Subpart C Paragraph 15.247 for spread spectrum devices.
5. Regarding to the operation frequency, the lowest, middle and highest frequency are selected to perform the test.

|           |  |
|-----------|--|
| Test Mode | Mode 1: Transmit - 1Mbps<br>Mode 2: Transmit - 2Mbps<br>Mode 3: Transmit - 3Mbps |
|-----------|--|

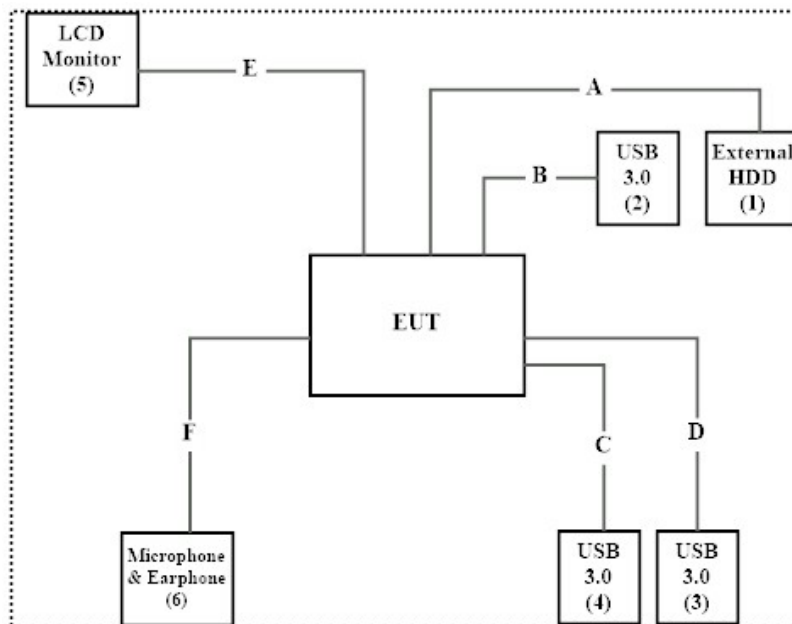
### 1.2. Tested System Details

The types for all equipment, plus descriptions of all cables used in the tested system (including inserted cards) are:

| Product | Manufacturer          | Model No. | Serial No.          | Power Cord |     |
|---------|-----------------------|-----------|---------------------|------------|-----|
| 1       | External HDD          | SanDisk   | SanDisk Extreme 900 | N/A        | N/A |
| 2       | USB 3.0               | Transcend | TS1TSJ25M3          | D468623806 | N/A |
| 3       | USB 3.0               | Transcend | TS1TSJ25M3          | D468623815 | N/A |
| 4       | USB 3.0               | Transcend | TS1TSJ25M3          | D468623807 | N/A |
| 5       | LCD Monitor           | Lenovo    | T24d                | V5CZ4279   | N/A |
| 6       | Microphone & Earphone | Verbatim  | C09024VB            | N/A        | N/A |

| Signal Cable Type | Signal cable Description                          |
|-------------------|---|
| A                 | USB Cable<br>Shielded, 0.5m                       |
| B                 | USB Cable<br>Shielded, 0.4m                       |
| C                 | USB Cable<br>Shielded, 0.4m                       |
| D                 | USB Cable<br>Shielded, 0.4m                       |
| E                 | HDMI Cable<br>Shielded, 1.8m                      |
| F                 | Microphone & Earphone Cable<br>Non-shielded, 2.0m |

### 1.3. Configuration of Tested System



### 1.4. EUT Exercise Software

- (1) Setup the EUT as shown in Section 1.3.
- (2) Execute software “DRTU Ver. 22.3500.0.0-01462” on the EUT.
- (3) Configure the test mode, the test channel, and the data rate.
- (4) Press “OK” to start the continuous Transmit.
- (5) Verify that the EUT works properly.

## 1.5. Test Facility

Ambient conditions in the laboratory:

| Performed Item     | Items            | Required | Actual |
|--------------------|------------------|----------|--------|
| Conducted Emission | Temperature (°C) | 10~40 °C | 22°C   |
|                    | Humidity (%RH)   | 10~90 %  | 44.3%  |
| Radiated Emission  | Temperature (°C) | 10~40 °C | 16.8°C |
|                    | Humidity (%RH)   | 10~90 %  | 60.9%  |
| Conductive         | Temperature (°C) | 10~40 °C | 22°C   |
|                    | Humidity (%RH)   | 10~90 %  | 55%    |

**USA** : **FCC Registration Number: TW0023**

**Canada** : **IC Registration Number: 25880**

Site Description : Accredited by TAF  
Accredited Number: 3023

Test Laboratory : DEKRA Testing and Certification Co., Ltd  
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Website : <http://www.dekra.com.tw>



## 1.6. List of Test Item and Equipment

### For Conduction measurements /ASR1

|   | Equipment          | Manufacturer | Model No. | Serial No. | Cali. Data | Due. Data  |
|---|--------------------|--------------|-----------|------------|------------|------------|
| X | EMI Test Receiver  | R&S          | ESR7      | 101601     | 2020.05.28 | 2021.05.27 |
| X | Two-Line V-Network | R&S          | ENV216    | 101306     | 2020.03.25 | 2021.03.24 |
| X | Two-Line V-Network | R&S          | ENV216    | 101307     | 2020.04.17 | 2021.04.16 |
| X | Coaxial Cable      | DEKRA        | RG400 BNC | RF001      | 2020.05.24 | 2021.05.23 |

Note:

1. All equipments are calibrated every one year.
2. The test instruments marked with "X" are used to measure the final test results.
3. Test Software version : DEKRA Testing System V2.0

### For Conducted measurements /ASR2

|   | Equipment           | Manufacturer | Model No. | Serial No. | Cali. Data | Due. Data  |
|---|---------------------|--------------|-----------|------------|------------|------------|
| X | Spectrum Analyzer   | R&S          | FSV30     | 103466     | 2020.12.28 | 2021.12.27 |
| X | Peak Power Analyzer | KEYSIGHT     | 8900B     | MY51000539 | 2020.05.13 | 2021.05.12 |
| X | Power Sensor        | KEYSIGHT     | N1923A    | MY59240002 | 2020.05.22 | 2021.05.21 |
| X | Power Sensor        | KEYSIGHT     | N1923A    | MY59240003 | 2020.05.22 | 2021.05.21 |

Note:

1. All equipments are calibrated every one year.
2. The test instruments marked with "X" are used to measure the final test results.
3. Test Software version : DEKRA Conduction Test System V9.0.5

### For Radiated measurements /ACB1

|   | Equipment         | Manufacturer  | Model No.    | Serial No. | Cali. Data | Due. Data  |
|---|-------------------|---------------|--------------|------------|------------|------------|
| X | Loop Antenna      | AMETEK        | HLA6121      | 49611      | 2020.03.16 | 2021.03.15 |
| X | Bi-Log Antenna    | SCHWARZBECK   | VULB9168     | 9168-674   | 2020.05.20 | 2021.05.19 |
| X | Horn Antenna      | ETS-Lindgren  | 3117         | 00201259   | 2020.10.23 | 2021.10.22 |
| X | Horn Antenna      | Com-Power     | AH-840       | 101087     | 2020.06.08 | 2021.06.07 |
| X | Pre-Amplifier     | EMCI          | EMC001330    | 980316     | 2020.06.23 | 2021.06.22 |
| X | Pre-Amplifier     | EMCI          | EMC051835SE  | 980313     | 2020.11.25 | 2021.11.24 |
| X | Pre-Amplifier     | EMCI          | EMC05820SE   | 980310     | 2020.06.24 | 2021.06.23 |
| X | Pre-Amplifier     | EMCI          | EMC184045SE  | 980314     | 2020.06.10 | 2021.06.09 |
| X | Filter            | MICRO TRONICS | BRM50702     | G251       | 2020.09.17 | 2021.09.16 |
|   | Filter            | MICRO TRONICS | BRM50716     | G188       | 2020.09.17 | 2021.09.16 |
| X | EMI Test Receiver | R&S           | ESR7         | 101601     | 2020.05.28 | 2021.05.27 |
| X | Spectrum Analyzer | R&S           | FSV40        | 101148     | 2020.03.16 | 2021.03.15 |
| X | Coaxial Cable     | SUHNER        | SUCOFLEX 106 | RF002      | 2020.07.03 | 2021.07.02 |
| X | Mircoflex Cable   | HUBER SUHNER  | SUCOFLEX 102 | MY3381/2   | 2020.06.10 | 2021.06.09 |

Note:

1. All equipments are calibrated every one year.
2. The test instruments marked with "X" are used to measure the final test results.
3. Test Software version : DEKRA Testing System V2.0

## 1.7. Uncertainty

Uncertainties have been calculated according to the DEKRA internal document, and is described in each test chapter of this report.

The reported expanded uncertainties are based on a standard uncertainty multiplied by a coverage factor of  $k=2$ , providing a level of confidence of approximately 95%.

Measurement uncertainties evaluated for each testing system and associated connections are given here to provide the system information for reference. Compliance determinations do not take into account measurement uncertainties for each testing system, but are based on the results of the compliance measurement.

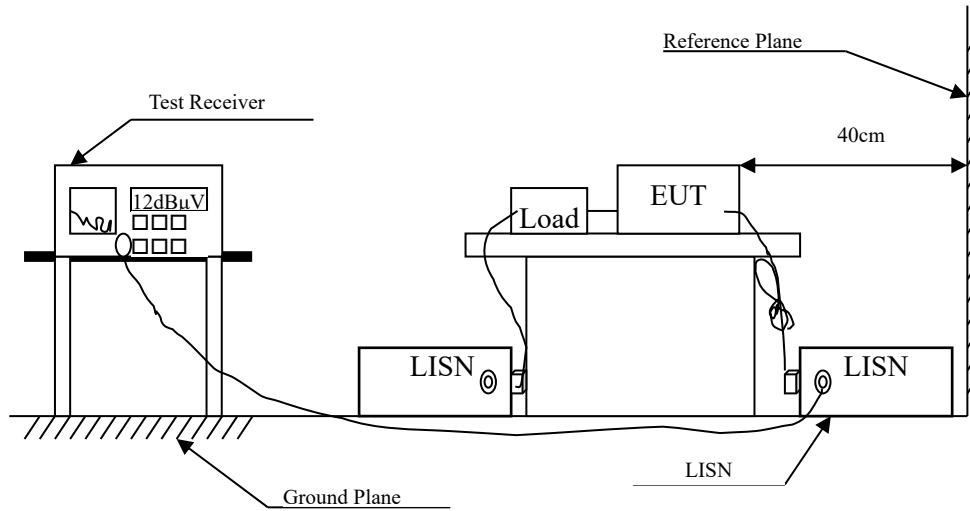
| Test item          | Uncertainty                 |                             |
|--------------------|-----------------------------|-----------------------------|
| Conducted Emission | $\pm 3.42$ dB               |                             |
| Peak Power Output  | $\pm 0.91$ dB               |                             |
| Radiated Emission  | Under 1GHz<br>$\pm 4.06$ dB | Above 1GHz<br>$\pm 3.73$ dB |
| Duty Cycle         | $\pm 2.31$ ms               |                             |

## 1.8. Summary of Test Results

| Description   | Result          |
|---|-----------------|
| Conducted Emission  | Pass            |
| Peak Power Output   | Pass            |
| Radiated Emission   | Pass            |
| RF Antenna Conducted Test   | Refer to Note 1 |
| Band Edge   | Refer to Note 1 |
| Channel Number  | Refer to Note 1 |
| Channel Separation  | Refer to Note 1 |
| Dwell Time  | Refer to Note 1 |
| Occupied Bandwidth  | Refer to Note 1 |
| Duty Cycle  | --              |
| Note 1 :<br>This report is a partial report. The test items above were based on the comprehensive requirements of KDB 996369 D02 in which only RF power, Transmitter unwanted emissions and Receiver spurious emissions were performed. For other test data please refer to original modular report.<br>(Original report no.: 181210-03.TR05, Brand: Intel® Wi-Fi 6 AX200, Model: AX200NGW) |                 |

## 2. Conducted Emission

### 2.1. Test Setup



### 2.2. Limits

| FCC Part 15 Subpart C Paragraph 15.207 (dB $\mu$ V) Limit |        |       |
|---|--------|-------|
| Frequency<br>MHz  | Limits |       |
|   | QP     | AV    |
| 0.15 - 0.50   | 66-56  | 56-46 |
| 0.50-5.0  | 56     | 46    |
| 5.0 - 30  | 60     | 50    |

Remarks: In the above table, the tighter limit applies at the band edges.

### 2.3. Test Procedure

The EUT and Peripherals are connected to the main power through a line impedance stabilization network (L.I.S.N.). This provides a 50 ohm /50uH coupling impedance for the measuring equipment. The peripheral devices are also connected to the main power through a LISN that provides a 50ohm /50uH coupling impedance with 50ohm termination. (Please refer to the block diagram of the test setup and photographs.)

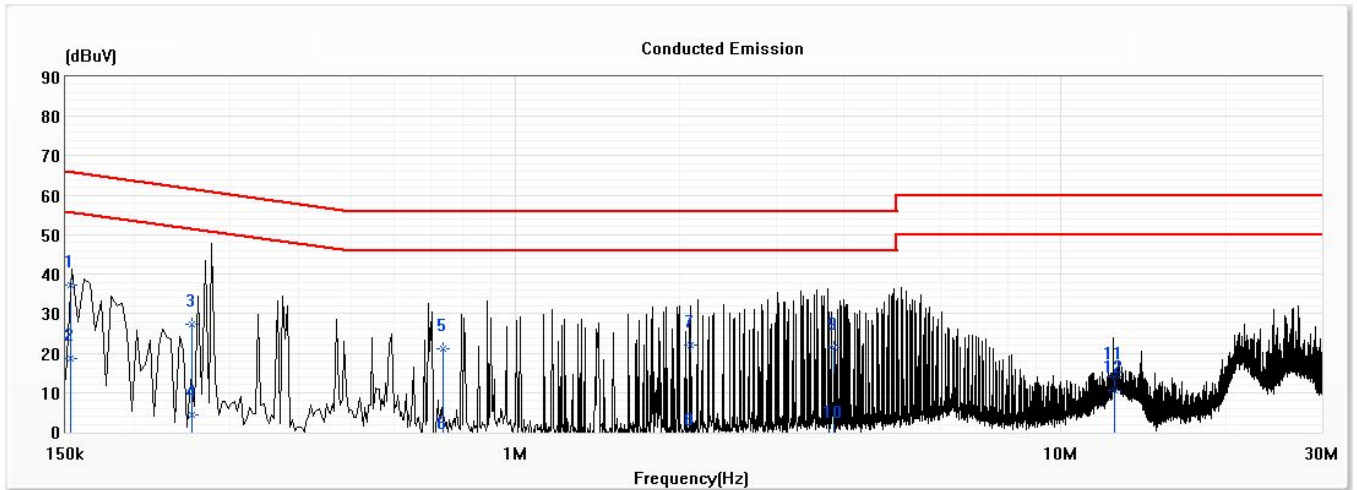
Both sides of A.C. line are checked for maximum conducted interference. In order to find the maximum emission, the relative positions of equipment and all the interface cables must be changed according to ANSI C63.4: 2014 on conducted measurement.

Conducted emissions were investigated over the frequency range from 0.15MHz to 30MHz using a receiver bandwidth of 9kHz.

The EUT setup and the test procedure are according to ANSI C63.4, 2014 to comply with the requirements of FCC 47CFR Subpart C.

## 2.4. Test Result of Conducted Emission

Product : Portable Computer  
 Test Item : Conducted Emission Test  
 Power Line : L 1  
 Test Mode : Mode 3: Transmit - 3Mbps (2440MHz)  
 Test Date : 2021/02/19

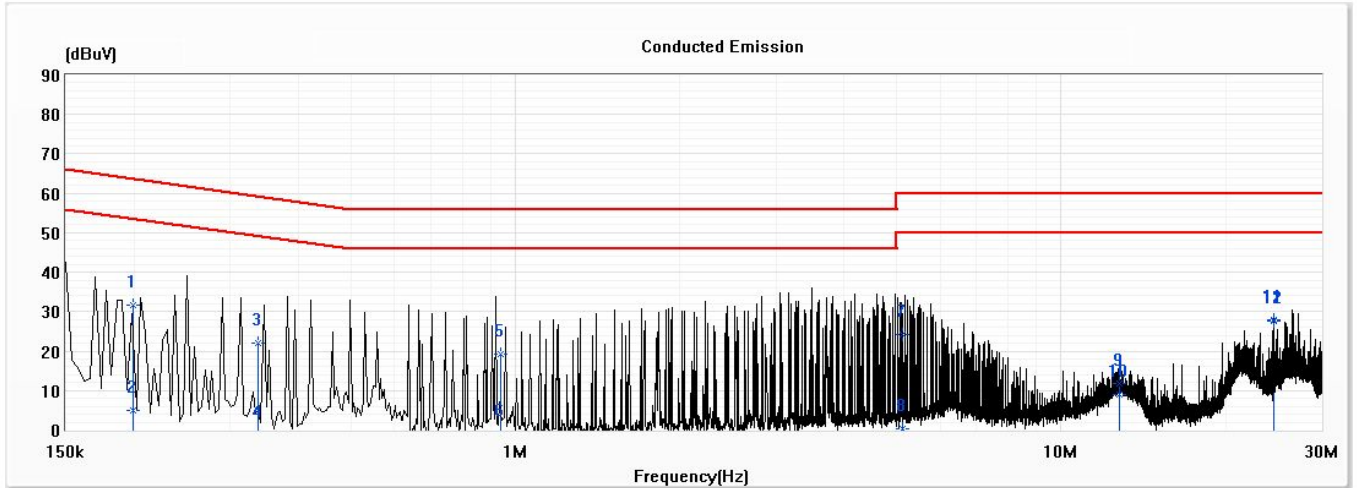


| No | Frequency (MHz) | Emission Level (dBμV) | Limit (dBμV) | Margin (dB) | Reading Level (dBμV) | Correct Factor (dB) | Detector Type |
|----|-----------------|-----------------------|--------------|-------------|----------------------|---------------------|---------------|
| *1 | 0.153           | 37.16                 | 65.83        | -28.67      | 27.50                | 9.66                | QP            |
| 2  | 0.153           | 18.72                 | 55.83        | -37.11      | 9.06                 | 9.66                | AV            |
| 3  | 0.256           | 27.22                 | 61.57        | -34.35      | 17.57                | 9.65                | QP            |
| 4  | 0.256           | 4.37                  | 51.57        | -47.21      | -5.29                | 9.65                | AV            |
| 5  | 0.736           | 21.07                 | 56.00        | -34.93      | 11.39                | 9.68                | QP            |
| 6  | 0.736           | -3.60                 | 46.00        | -49.60      | -13.28               | 9.68                | AV            |
| 7  | 2.094           | 21.97                 | 56.00        | -34.03      | 12.25                | 9.72                | QP            |
| 8  | 2.094           | -2.93                 | 46.00        | -48.93      | -12.65               | 9.72                | AV            |
| 9  | 3.826           | 21.50                 | 56.00        | -34.50      | 11.73                | 9.77                | QP            |
| 10 | 3.826           | -0.97                 | 46.00        | -46.97      | -10.73               | 9.77                | AV            |
| 11 | 12.493          | 14.02                 | 60.00        | -45.98      | 4.11                 | 9.92                | QP            |
| 12 | 12.493          | 10.53                 | 50.00        | -39.47      | 0.61                 | 9.92                | AV            |

Note:

1. All Reading Levels are Quasi-Peak and average value.
2. “ \* “ means the worst emission level.
3. Measurement Level = Reading Level + Correct Factor

Product : Portable Computer  
 Test Item : Conducted Emission Test  
 Power Line : N  
 Test Mode : Mode 3: Transmit - 3Mbps (2440MHz)  
 Test Date : 2021/02/19



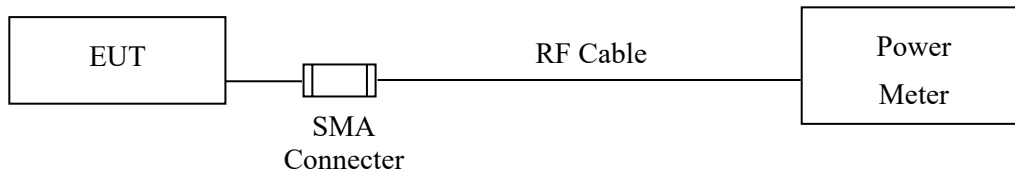
| No  | Frequency (MHz) | Emission Level (dBμV) | Limit (dBμV) | Margin (dB) | Reading Level (dBμV) | Correct Factor (dB) | Detector Type |
|-----|-----------------|-----------------------|--------------|-------------|----------------------|---------------------|---------------|
| 1   | 0.199           | 31.78                 | 63.64        | -31.86      | 22.11                | 9.67                | QP            |
| 2   | 0.199           | 5.01                  | 53.64        | -48.62      | -4.66                | 9.67                | AV            |
| 3   | 0.337           | 21.93                 | 59.28        | -37.35      | 12.26                | 9.67                | QP            |
| 4   | 0.337           | -1.14                 | 49.28        | -50.42      | -10.81               | 9.67                | AV            |
| 5   | 0.942           | 19.27                 | 56.00        | -36.73      | 9.58                 | 9.69                | QP            |
| 6   | 0.942           | -1.06                 | 46.00        | -47.06      | -10.75               | 9.69                | AV            |
| 7   | 5.110           | 24.06                 | 60.00        | -35.94      | 14.24                | 9.81                | QP            |
| 8   | 5.110           | 0.45                  | 50.00        | -49.55      | -9.36                | 9.81                | AV            |
| 9   | 12.791          | 11.76                 | 60.00        | -48.24      | 1.80                 | 9.95                | QP            |
| 10  | 12.791          | 8.98                  | 50.00        | -41.02      | -0.98                | 9.95                | AV            |
| 11  | 24.577          | 27.86                 | 60.00        | -32.14      | 17.78                | 10.08               | QP            |
| *12 | 24.577          | 27.48                 | 50.00        | -22.52      | 17.40                | 10.08               | AV            |

Note:

1. All Reading Levels are Quasi-Peak and average value.
2. “ \* “ means the worst emission level.
3. Measurement Level = Reading Level + Correct Factor

### 3. Peak Power Output

#### 3.1. Test Setup



#### 3.2. Limit

The maximum peak power shall be less 1Watt.

#### 3.3. Test Procedure

Tested according to FHSS test procedure of KDB 558074 section 9 (b for compliance to FCC 47CFR 15.247 requirements.



### 3.4. Test Result of Peak Power Output

Product : Portable Computer  
Test Item : Peak Power Output  
Test Mode : Mode 1: Transmit - 1Mbps  
Test Date : 2021/01/15

| Channel No. | Frequency<br>(MHz) | Measurement<br>(dBm) | Required Limit | Result |
|-------------|--------------------|----------------------|----------------|--------|
| Channel 00  | 2402.00            | 9.95                 | 1 Watt= 30 dBm | Pass   |
| Channel 39  | 2441.00            | 10.16                | 1 Watt= 30 dBm | Pass   |
| Channel 78  | 2480.00            | 10.42                | 1 Watt= 30 dBm | Pass   |

Product : Portable Computer  
Test Item : Peak Power Output  
Test Mode : Mode 2: Transmit - 2Mbps  
Test Date : 2021/01/15

| Channel No. | Frequency<br>(MHz) | Measurement<br>(dBm) | Required Limit | Result |
|-------------|--------------------|----------------------|----------------|--------|
| Channel 00  | 2402.00            | 9.72                 | 1 Watt= 30 dBm | Pass   |
| Channel 39  | 2441.00            | 9.89                 | 1 Watt= 30 dBm | Pass   |
| Channel 78  | 2480.00            | 10.07                | 1 Watt= 30 dBm | Pass   |

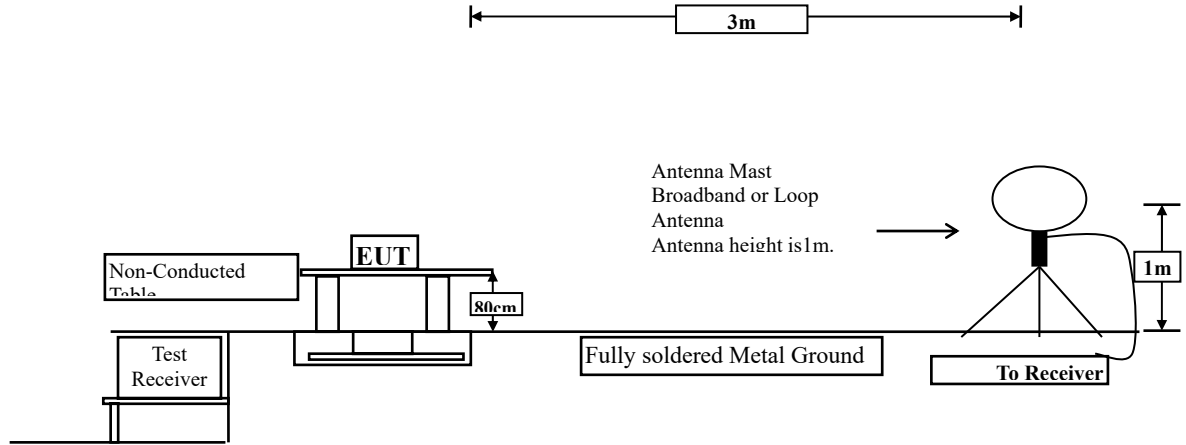
Product : Portable Computer  
Test Item : Peak Power Output  
Test Mode : Mode 3: Transmit - 3Mbps  
Test Date : 2021/01/15

| Channel No. | Frequency<br>(MHz) | Measurement<br>(dBm) | Required Limit | Result |
|-------------|--------------------|----------------------|----------------|--------|
| Channel 00  | 2402.00            | 9.77                 | 1 Watt= 30 dBm | Pass   |
| Channel 39  | 2441.00            | 9.94                 | 1 Watt= 30 dBm | Pass   |
| Channel 78  | 2480.00            | 10.13                | 1 Watt= 30 dBm | Pass   |

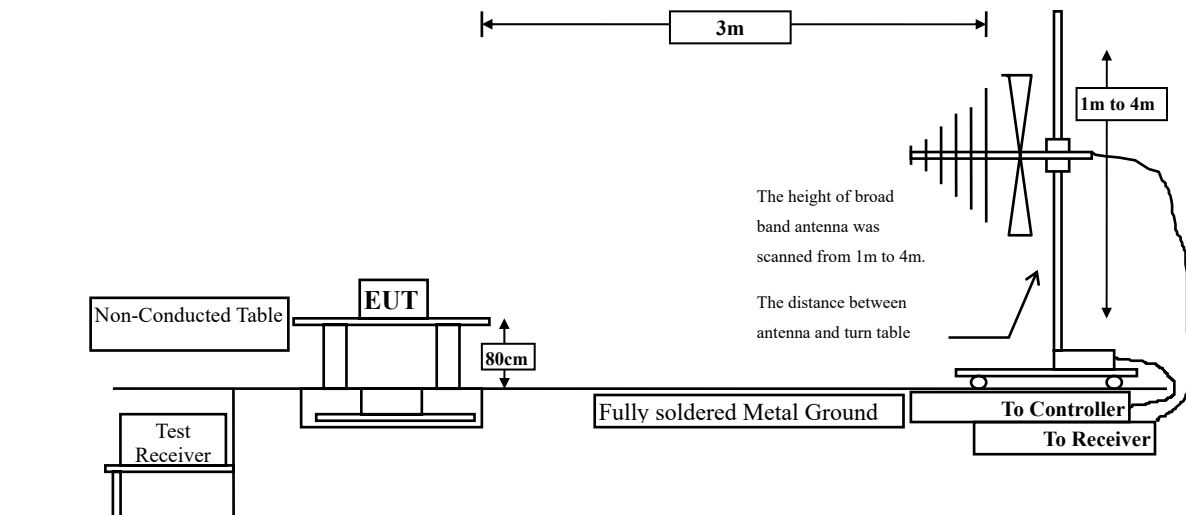
## 4. Radiated Emission

### 4.1. Test Setup

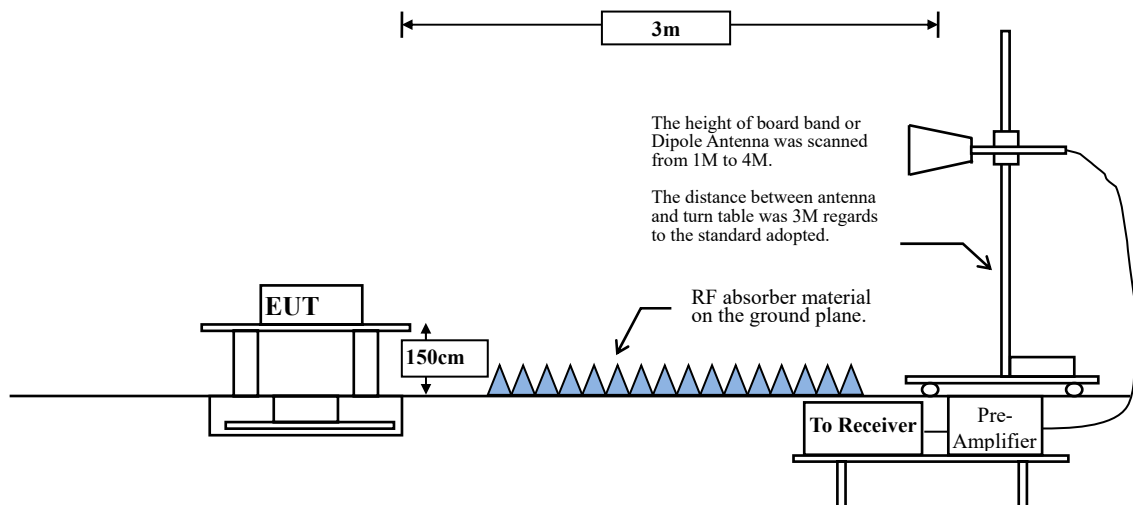
Radiated Emission Under 30MHz



Radiated Emission Below 1GHz



Radiated Emission Above 1GHz



## 4.2. Limits

### ➤ General Radiated Emission Limits

Emissions radiated outside of the specified frequency bands, except for harmonics, shall be attenuated by at least 20dB below the level of the fundamental or to the general radiated emission limits in paragraph 15.209, whichever is the lesser attenuation.

| FCC Part 15 Subpart C Paragraph 15.209 Limits |                                      |                                 |
|---|--------------------------------------|---------------------------------|
| Frequency<br>MHz                              | Field strength<br>(microvolts/meter) | Measurement distance<br>(meter) |
| 0.009-0.490                                   | 2400/F(kHz)                          | 300                             |
| 0.490-1.705                                   | 24000/F(kHz)                         | 30                              |
| 1.705-30                                      | 30                                   | 30                              |
| 30-88   | 100                                  | 3                               |
| 88-216  | 150                                  | 3                               |
| 216-960                                       | 200                                  | 3                               |
| Above 960                                     | 500                                  | 3                               |

- Remarks:
1. RF Voltage (dB $\mu$ V) = 20 log RF Voltage (uV)
  2. In the Above Table, the tighter limit applies at the band edges.
  3. Distance refers to the distance in meters between the measuring instrument antenna and the closed point of any part of the device or system.

### 4.3. Test Procedure

The EUT was setup according to ANSI C63.10, 2013 and tested compliance to FCC 47CFR 15.247 requirements.

Measuring the frequency range below 1GHz, the EUT is placed on a turn table which is 0.8 meter above ground, when measuring the frequency range above 1GHz, the EUT is placed on a turn table which is 1.5 meter above ground.

The turn table is rotated 360 degrees to determine the position of the maximum emission level.

The EUT was positioned such that the distance from antenna to the EUT was 3 meters.

The antenna is scanned between 1 meter and 4 meters to find out the maximum emission level. This is repeated for both horizontal and vertical polarization of the antenna. In order to find the maximum emission, all of the interface cables were manipulated according to ANSI C63.10: 2013 on radiated measurement.

The resolution bandwidth below 30MHz setting on the field strength meter is 9kHz and 30MHz~1GHz is 120kHz and above 1GHz is 1MHz.

Radiated emission measurements below 30MHz are made using Loop Antenna and 30MHz~1GHz are made using broadband Bilog antenna and above 1GHz are made using Horn Antennas.

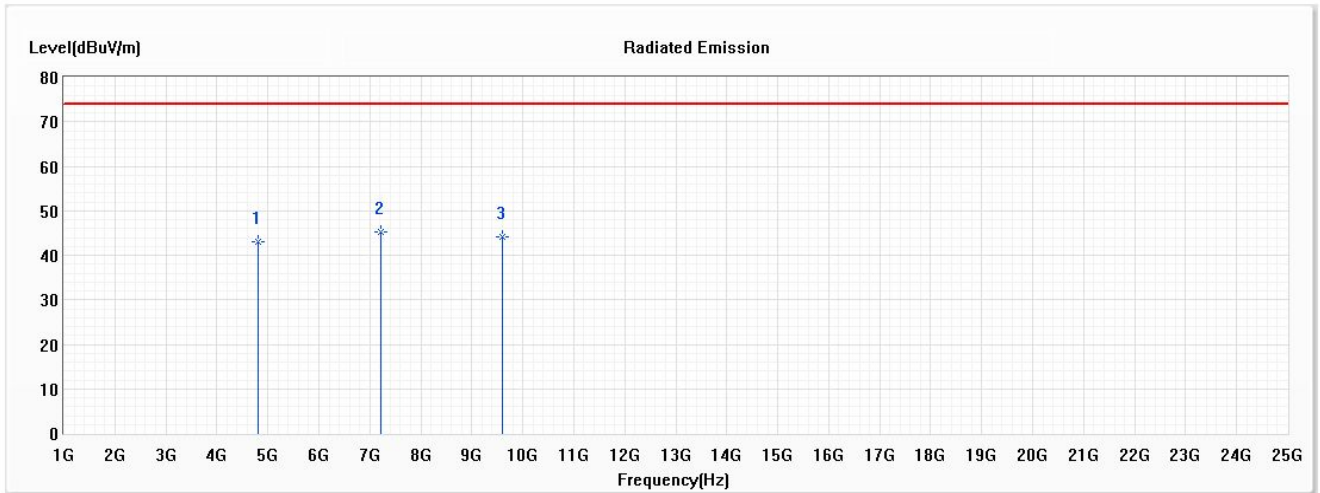
The measurement is divided into the Preliminary Measurement and the Final Measurement.

The suspected frequencies are searched for in Preliminary Measurement with the measurement antenna kept pointed at the source of the emission both in azimuth and elevation, with the polarization of the antenna oriented for maximum response. The antenna is pointed at an angle towards the source of the emission, and the EUT is rotated in both height and polarization to maximize the measured emission. The emission is kept within the illumination area of the 3 dB bandwidth of the antenna. The measurement frequency range from 9kHz - 10th Harmonic of fundamental was investigated.

#### 4.4. Test Result of Radiated Emission

Product : Portable Computer  
 Test Item : Harmonic Radiated Emission  
 Test Mode : Mode 1: Transmit - 1Mbps (2402MHz)  
 Test Date : 2021/01/20

##### Horizontal



| No  | Frequency (MHz) | Emission Level (dBμV/m) | Limit (dBμV/m) | Margin (dB) | Reading Level (dBμV) | Correct Factor (dB) | Detector Type |
|-----|-----------------|-------------------------|----------------|-------------|----------------------|---------------------|---------------|
| 1   | 4804.000        | 42.91                   | 74.00          | -31.09      | 45.11                | -2.20               | PK            |
| * 2 | 7206.000        | 45.26                   | 74.00          | -28.74      | 43.99                | 1.27                | PK            |
| 3   | 9608.000        | 44.11                   | 74.00          | -29.89      | 40.59                | 3.52                | PK            |

Note:

- All Readings below 1GHz are Quasi-Peak, above 1GHz are performed with peak and/or average measurements as necessary.
- Peak measurements: RBW = 1MHz, VBW = 3 MHz, Sweep: Auto.
- Measurement Level = Reading Level + Correct Factor.
- Correct Factor = Antenna factor + Cable loss – Amplifier gain.
- The average measurement was not performed when the peak measured data under the limit of average detection.
- The emission levels of other frequencies are very lower than the limit and not show in test report.

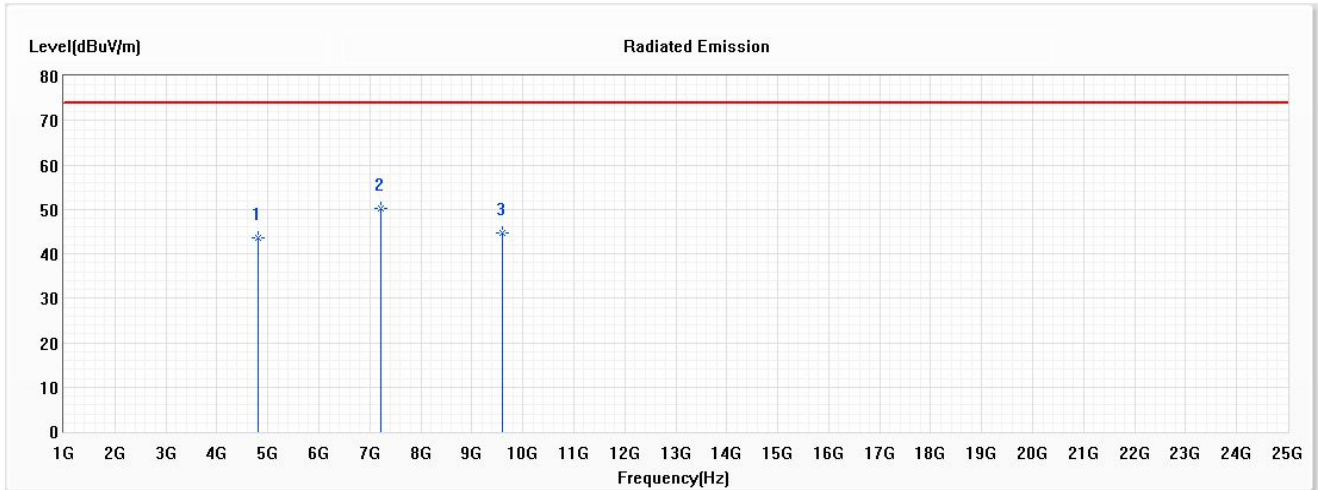
| Frequency                | Peak Measurement | Duty Cycle Factor | Average Measurement | Margin | Peak Limit | Average Limit |
|--------------------------|------------------|-------------------|---------------------|--------|------------|---------------|
| MHz                      | dBμV/m           | dB                | dBμV/m              | dB     | dBμV/m     | dBμV/m        |
| <b>Average Detector:</b> |                  |                   |                     |        |            |               |
| --                       | --               | --                | --                  | --     | 74.000     | 54.000        |

Note:

- AVG Measurement=Peak Measurement + Duty Cycle Correct Factor
- The Duty Cycle is refer to section 4.

Product : Portable Computer  
 Test Item : Harmonic Radiated Emission  
 Test Mode : Mode 1: Transmit - 1Mbps (2402MHz)  
 Test Date : 2021/01/20

**Vertical**



| No  | Frequency (MHz) | Emission Level (dBμV/m) | Limit (dBμV/m) | Margin (dB) | Reading Level (dBμV) | Correct Factor (dB) | Detector Type |
|-----|-----------------|-------------------------|----------------|-------------|----------------------|---------------------|---------------|
| 1   | 4804.000        | 43.49                   | 74.00          | -30.51      | 45.69                | -2.20               | PK            |
| * 2 | 7206.000        | 50.18                   | 74.00          | -23.82      | 48.91                | 1.27                | PK            |
| 3   | 9608.000        | 44.73                   | 74.00          | -29.27      | 41.21                | 3.52                | PK            |

Note:

1. All Readings below 1GHz are Quasi-Peak, above 1GHz are performed with peak and/or average measurements as necessary.
2. Peak measurements: RBW = 1MHz, VBW = 3 MHz, Sweep: Auto.
3. Measurement Level = Reading Level + Correct Factor.
4. Correct Factor = Antenna factor + Cable loss – Amplifier gain.
5. The average measurement was not performed when the peak measured data under the limit of average detection.
6. The emission levels of other frequencies are very lower than the limit and not show in test report.

| Frequency<br>MHz         | Peak<br>Measurement<br>dBμV/m | Duty Cycle<br>Factor<br>dB | Average<br>Measurement<br>dBμV/m | Margin<br>dB | Peak<br>Limit<br>dBμV/m | Average<br>Limit<br>dBμV/m |
|--------------------------|-------------------------------|----------------------------|----------------------------------|--------------|-------------------------|----------------------------|
| <b>Average Detector:</b> |                               |                            |                                  |              |                         |                            |
| --                       | --                            | --                         | --                               | --           | 74.000                  | 54.000                     |

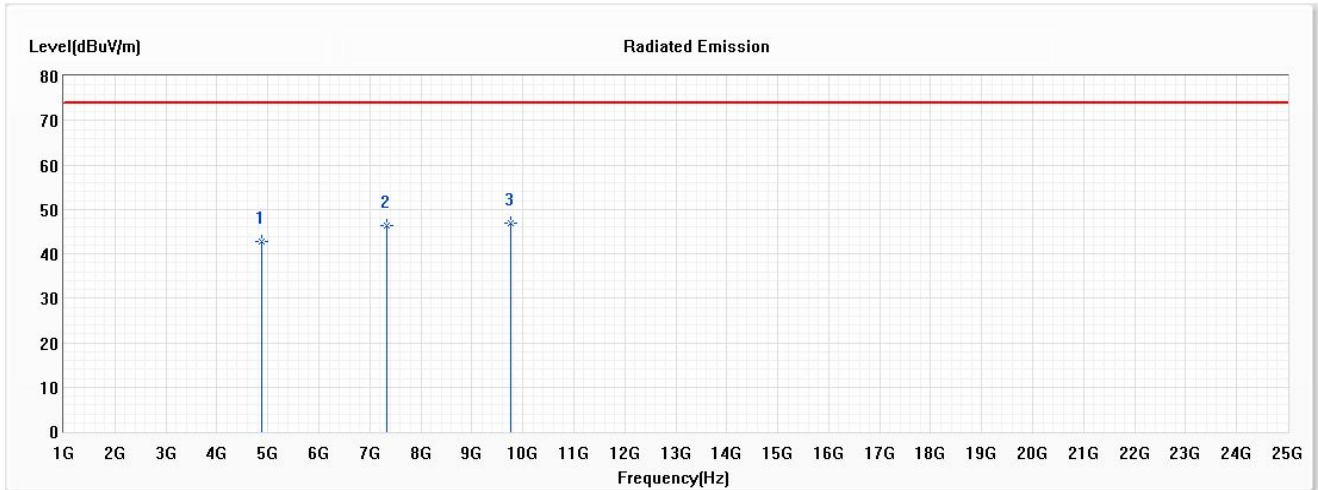
Note:

1. AVG Measurement=Peak Measurement + Duty Cycle Correct Factor
2. The Duty Cycle is refer to section 4.



Product : Portable Computer  
 Test Item : Harmonic Radiated Emission  
 Test Mode : Mode 1: Transmit - 1Mbps (2441MHz)  
 Test Date : 2021/01/20

**Horizontal**



| No  | Frequency (MHz) | Emission Level (dBμV/m) | Limit (dBμV/m) | Margin (dB) | Reading Level (dBμV) | Correct Factor (dB) | Detector Type |
|-----|-----------------|-------------------------|----------------|-------------|----------------------|---------------------|---------------|
| 1   | 4882.000        | 42.72                   | 74.00          | -31.28      | 45.01                | -2.29               | PK            |
| 2   | 7323.000        | 46.35                   | 74.00          | -27.65      | 45.09                | 1.26                | PK            |
| * 3 | 9764.000        | 46.84                   | 74.00          | -27.16      | 43.06                | 3.78                | PK            |

Note:

1. All Readings below 1GHz are Quasi-Peak, above 1GHz are performed with peak and/or average measurements as necessary.
2. Peak measurements: RBW = 1MHz, VBW = 3 MHz, Sweep: Auto.
3. Measurement Level = Reading Level + Correct Factor.
4. Correct Factor = Antenna factor + Cable loss – Amplifier gain.
5. The average measurement was not performed when the peak measured data under the limit of average detection.
6. The emission levels of other frequencies are very lower than the limit and not show in test report.

| Frequency | Peak Measurement | Duty Cycle Factor | Average Measurement | Margin | Peak Limit | Average Limit |
|-----------|------------------|-------------------|---------------------|--------|------------|---------------|
| MHz       | dBμV/m           | dB                | dBμV/m              | dB     | dBμV/m     | dBμV/m        |

**Average Detector:**

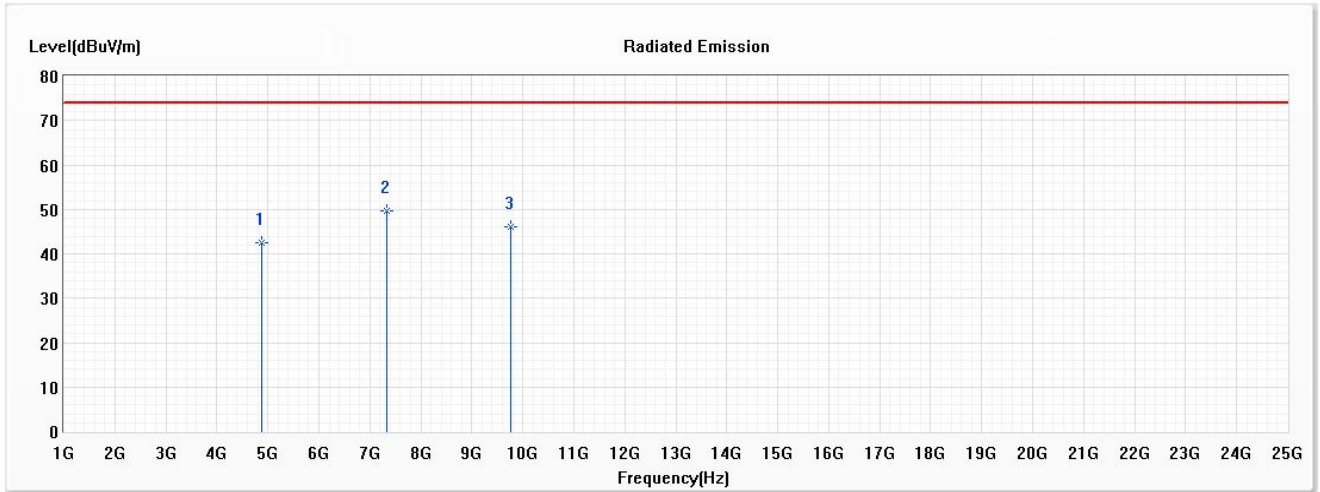
|    |    |    |    |    |        |        |
|----|----|----|----|----|--------|--------|
| -- | -- | -- | -- | -- | 74.000 | 54.000 |
|----|----|----|----|----|--------|--------|

Note:

1. AVG Measurement=Peak Measurement + Duty Cycle Correct Factor
2. The Duty Cycle is refer to section 4.

Product : Portable Computer  
 Test Item : Harmonic Radiated Emission  
 Test Mode : Mode 1: Transmit - 1Mbps (2441MHz)  
 Test Date : 2021/01/20

**Vertical**



| No  | Frequency (MHz) | Emission Level (dBμV/m) | Limit (dBμV/m) | Margin (dB) | Reading Level (dBμV) | Correct Factor (dB) | Detector Type |
|-----|-----------------|-------------------------|----------------|-------------|----------------------|---------------------|---------------|
| 1   | 4882.000        | 42.37                   | 74.00          | -31.63      | 44.66                | -2.29               | PK            |
| * 2 | 7323.000        | 49.65                   | 74.00          | -24.35      | 48.39                | 1.26                | PK            |
| 3   | 9764.000        | 45.98                   | 74.00          | -28.02      | 42.20                | 3.78                | PK            |

Note:

- All Readings below 1GHz are Quasi-Peak, above 1GHz are performed with peak and/or average measurements as necessary.
- Peak measurements: RBW = 1MHz, VBW = 3 MHz, Sweep: Auto.
- Measurement Level = Reading Level + Correct Factor.
- Correct Factor = Antenna factor + Cable loss – Amplifier gain.
- The average measurement was not performed when the peak measured data under the limit of average detection.
- The emission levels of other frequencies are very lower than the limit and not show in test report.

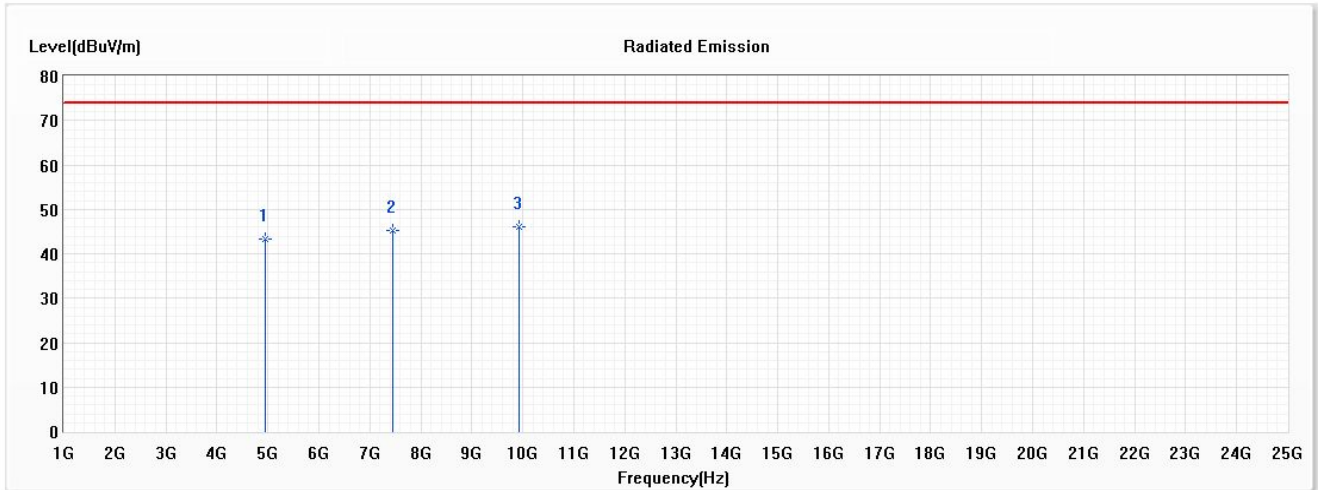
| Frequency<br>MHz         | Peak<br>Measurement<br>dBμV/m | Duty Cycle<br>Factor<br>dB | Average<br>Measurement<br>dBμV/m | Margin<br>dB | Peak<br>Limit<br>dBμV/m | Average<br>Limit<br>dBμV/m |
|--------------------------|-------------------------------|----------------------------|----------------------------------|--------------|-------------------------|----------------------------|
| <b>Average Detector:</b> |                               |                            |                                  |              |                         |                            |
| --                       | --                            | --                         | --                               | --           | 74.000                  | 54.000                     |

Note:

- AVG Measurement=Peak Measurement + Duty Cycle Correct Factor
- The Duty Cycle is refer to section 4.

Product : Portable Computer  
 Test Item : Harmonic Radiated Emission  
 Test Mode : Mode 1: Transmit - 1Mbps (2480MHz)  
 Test Date : 2021/01/20

**Horizontal**



| No  | Frequency (MHz) | Emission Level (dBμV/m) | Limit (dBμV/m) | Margin (dB) | Reading Level (dBμV) | Correct Factor (dB) | Detector Type |
|-----|-----------------|-------------------------|----------------|-------------|----------------------|---------------------|---------------|
| 1   | 4960.000        | 43.24                   | 74.00          | -30.76      | 45.33                | -2.09               | PK            |
| 2   | 7440.000        | 45.22                   | 74.00          | -28.78      | 43.92                | 1.30                | PK            |
| * 3 | 9920.000        | 46.17                   | 74.00          | -27.83      | 42.16                | 4.01                | PK            |

Note:

1. All Readings below 1GHz are Quasi-Peak, above 1GHz are performed with peak and/or average measurements as necessary.
2. Peak measurements: RBW = 1MHz, VBW = 3 MHz, Sweep: Auto.
3. Measurement Level = Reading Level + Correct Factor.
4. Correct Factor = Antenna factor + Cable loss – Amplifier gain.
5. The average measurement was not performed when the peak measured data under the limit of average detection.
6. The emission levels of other frequencies are very lower than the limit and not show in test report.

| Frequency | Peak Measurement | Duty Cycle Factor | Average Measurement | Margin | Peak Limit | Average Limit |
|-----------|------------------|-------------------|---------------------|--------|------------|---------------|
| MHz       | dBμV/m           | dB                | dBμV/m              | dB     | dBμV/m     | dBμV/m        |

**Average Detector:**

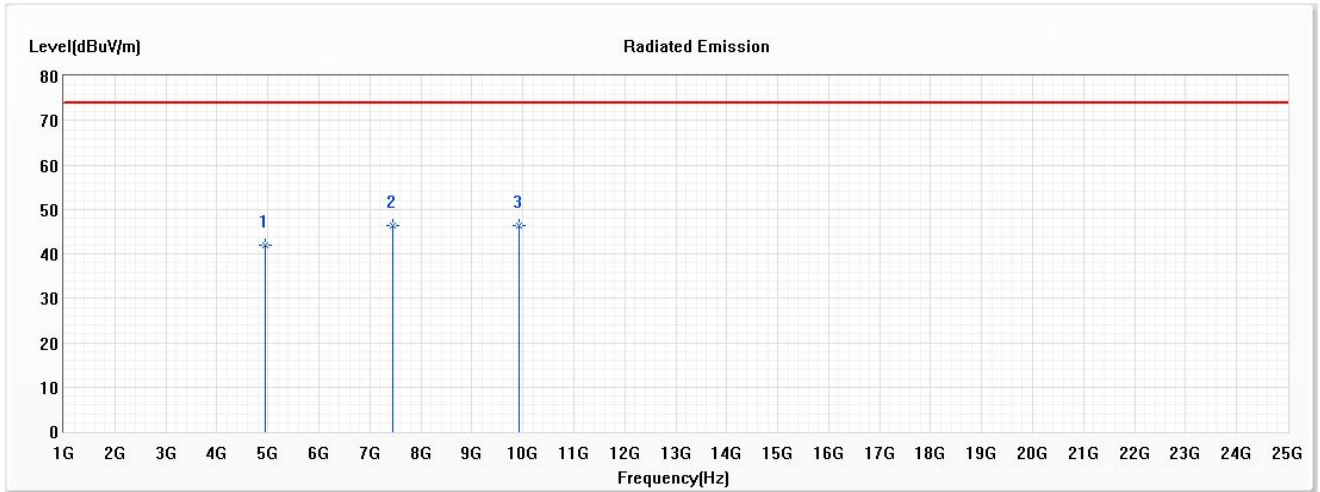
|    |    |    |    |    |        |        |
|----|----|----|----|----|--------|--------|
| -- | -- | -- | -- | -- | 74.000 | 54.000 |
|----|----|----|----|----|--------|--------|

Note:

1. AVG Measurement=Peak Measurement + Duty Cycle Correct Factor
2. The Duty Cycle is refer to section 4.

Product : Portable Computer  
 Test Item : Harmonic Radiated Emission  
 Test Mode : Mode 1: Transmit - 1Mbps (2480MHz)  
 Test Date : 2021/01/22

**Vertical**



| No  | Frequency (MHz) | Emission Level (dBμV/m) | Limit (dBμV/m) | Margin (dB) | Reading Level (dBμV) | Correct Factor (dB) | Detector Type |
|-----|-----------------|-------------------------|----------------|-------------|----------------------|---------------------|---------------|
| 1   | 4960.000        | 42.05                   | 74.00          | -31.95      | 44.14                | -2.09               | PK            |
| 2   | 7440.000        | 46.33                   | 74.00          | -27.67      | 45.03                | 1.30                | PK            |
| * 3 | 9920.000        | 46.38                   | 74.00          | -27.62      | 42.37                | 4.01                | PK            |

Note:

1. All Readings below 1GHz are Quasi-Peak, above 1GHz are performed with peak and/or average measurements as necessary.
2. Peak measurements: RBW = 1MHz, VBW = 3 MHz, Sweep: Auto.
3. Measurement Level = Reading Level + Correct Factor.
4. Correct Factor = Antenna factor + Cable loss – Amplifier gain.
5. The average measurement was not performed when the peak measured data under the limit of average detection.
6. The emission levels of other frequencies are very lower than the limit and not show in test report.

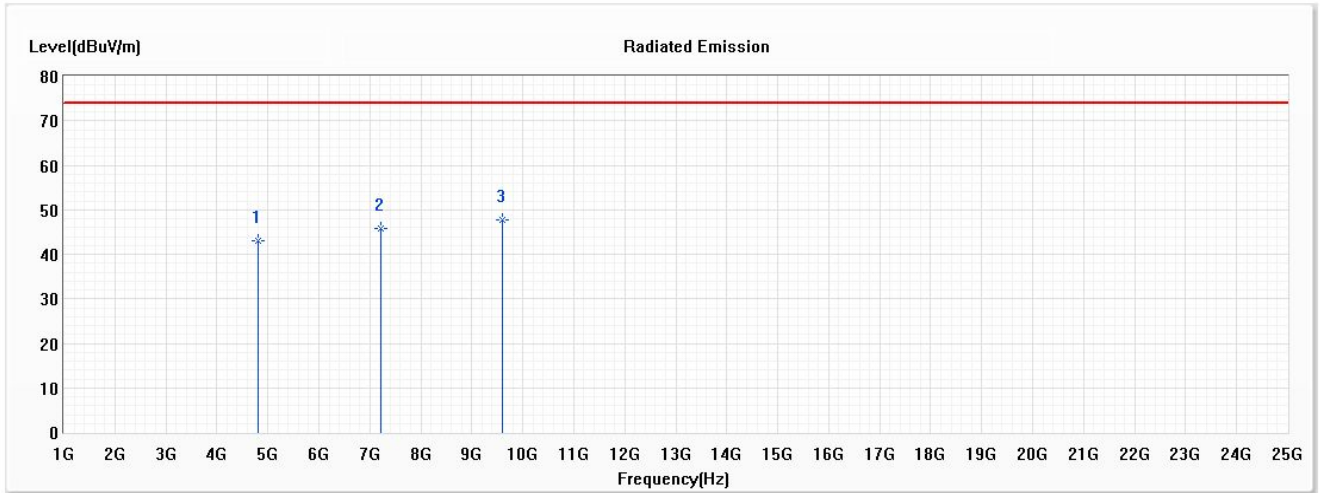
| Frequency                | Peak Measurement | Duty Cycle Factor | Average Measurement | Margin | Peak Limit | Average Limit |
|--------------------------|------------------|-------------------|---------------------|--------|------------|---------------|
| MHz                      | dBμV/m           | dB                | dBμV/m              | dB     | dBμV/m     | dBμV/m        |
| <b>Average Detector:</b> |                  |                   |                     |        |            |               |
| --                       | --               | --                | --                  | --     | 74.000     | 54.000        |

Note:

1. AVG Measurement=Peak Measurement + Duty Cycle Correct Factor
2. The Duty Cycle is refer to section 4.

Product : Portable Computer  
 Test Item : Harmonic Radiated Emission  
 Test Mode : Mode 2: Transmit - 2Mbps (2402MHz)  
 Test Date : 2021/01/22

**Horizontal**



| No  | Frequency (MHz) | Emission Level (dBμV/m) | Limit (dBμV/m) | Margin (dB) | Reading Level (dBμV) | Correct Factor (dB) | Detector Type |
|-----|-----------------|-------------------------|----------------|-------------|----------------------|---------------------|---------------|
| 1   | 4804.000        | 42.91                   | 74.00          | -31.09      | 45.11                | -2.20               | PK            |
| 2   | 7206.000        | 45.88                   | 74.00          | -28.12      | 44.61                | 1.27                | PK            |
| * 3 | 9608.000        | 47.75                   | 74.00          | -26.25      | 44.23                | 3.52                | PK            |

Note:

- All Readings below 1GHz are Quasi-Peak, above 1GHz are performed with peak and/or average measurements as necessary.
- Peak measurements: RBW = 1MHz, VBW = 3 MHz, Sweep: Auto.
- Measurement Level = Reading Level + Correct Factor.
- Correct Factor = Antenna factor + Cable loss – Amplifier gain.
- The average measurement was not performed when the peak measured data under the limit of average detection.
- The emission levels of other frequencies are very lower than the limit and not show in test report.

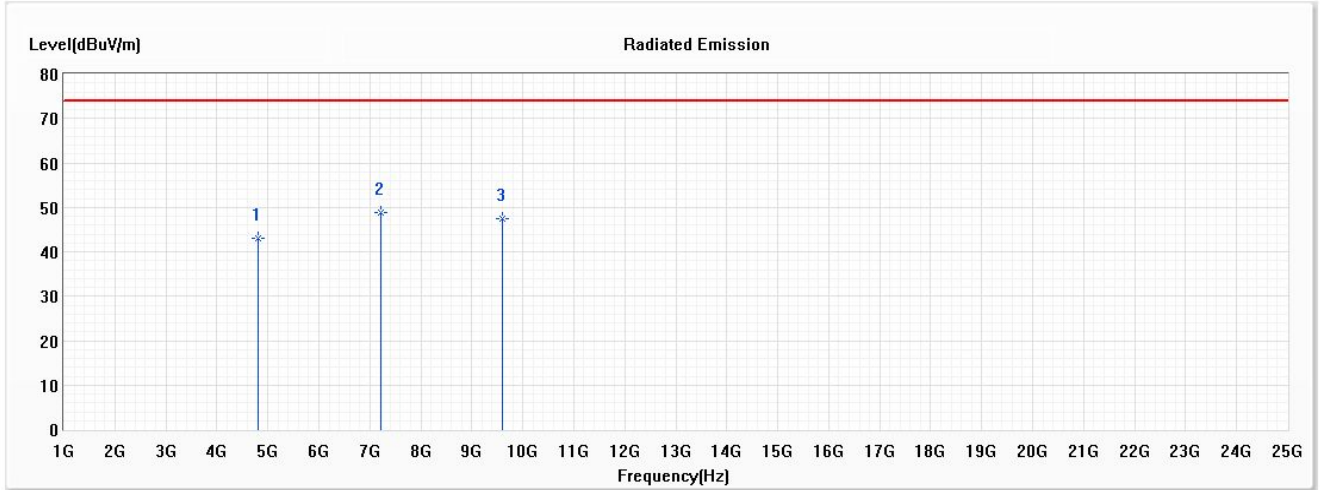
| Frequency                | Peak Measurement | Duty Cycle Factor | Average Measurement | Margin | Peak Limit | Average Limit |
|--------------------------|------------------|-------------------|---------------------|--------|------------|---------------|
| MHz                      | dBμV/m           | dB                | dBμV/m              | dB     | dBμV/m     | dBμV/m        |
| <b>Average Detector:</b> |                  |                   |                     |        |            |               |
| --                       | --               | --                | --                  | --     | 74.000     | 54.000        |

Note:

- AVG Measurement=Peak Measurement + Duty Cycle Correct Factor
- The Duty Cycle is refer to section 4.

Product : Portable Computer  
 Test Item : Harmonic Radiated Emission  
 Test Mode : Mode 2: Transmit - 2Mbps (2402MHz)  
 Test Date : 2021/01/22

**Vertical**



| No  | Frequency (MHz) | Emission Level (dBμV/m) | Limit (dBμV/m) | Margin (dB) | Reading Level (dBμV) | Correct Factor (dB) | Detector Type |
|-----|-----------------|-------------------------|----------------|-------------|----------------------|---------------------|---------------|
| 1   | 4804.000        | 43.15                   | 74.00          | -30.85      | 45.35                | -2.20               | PK            |
| * 2 | 7206.000        | 48.95                   | 74.00          | -25.05      | 47.68                | 1.27                | PK            |
| 3   | 9608.000        | 47.43                   | 74.00          | -26.57      | 43.91                | 3.52                | PK            |

Note:

1. All Readings below 1GHz are Quasi-Peak, above 1GHz are performed with peak and/or average measurements as necessary.
2. Peak measurements: RBW = 1MHz, VBW = 3 MHz, Sweep: Auto.
3. Measurement Level = Reading Level + Correct Factor.
4. Correct Factor = Antenna factor + Cable loss – Amplifier gain.
5. The average measurement was not performed when the peak measured data under the limit of average detection.
6. The emission levels of other frequencies are very lower than the limit and not show in test report.

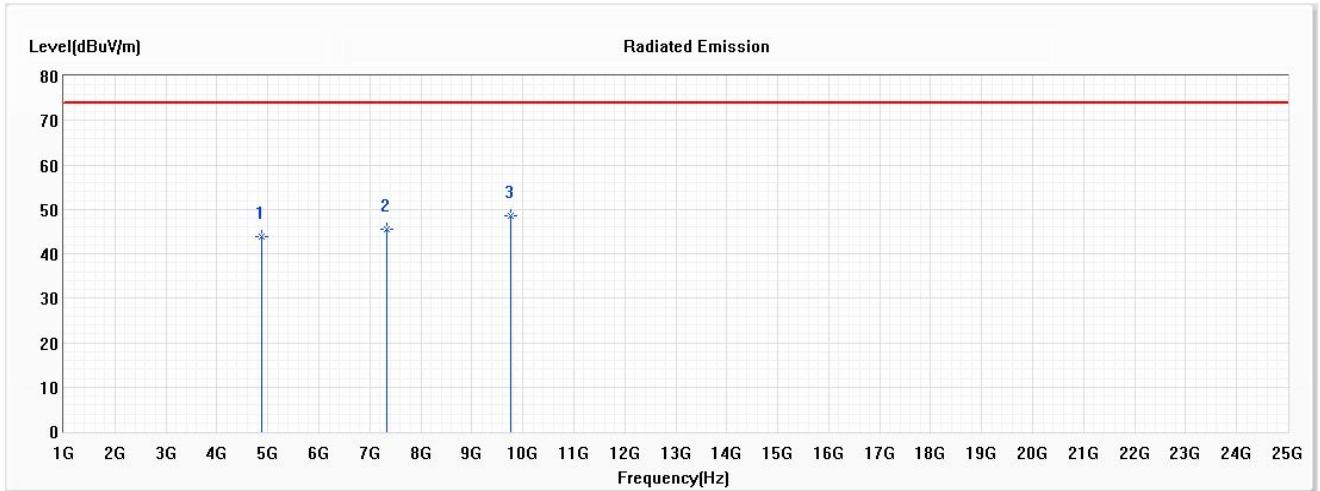
| Frequency<br>MHz         | Peak<br>Measurement<br>dBμV/m | Duty Cycle<br>Factor<br>dB | Average<br>Measurement<br>dBμV/m | Margin<br>dB | Peak<br>Limit<br>dBμV/m | Average<br>Limit<br>dBμV/m |
|--------------------------|-------------------------------|----------------------------|----------------------------------|--------------|-------------------------|----------------------------|
| <b>Average Detector:</b> | --                            | --                         | --                               | --           | 74.000                  | 54.000                     |

Note:

1. AVG Measurement=Peak Measurement + Duty Cycle Correct Factor
2. The Duty Cycle is refer to section 4.

Product : Portable Computer  
 Test Item : Harmonic Radiated Emission  
 Test Mode : Mode 2: Transmit - 2Mbps (2441MHz)  
 Test Date : 2021/01/22

**Horizontal**



| No  | Frequency (MHz) | Emission Level (dBμV/m) | Limit (dBμV/m) | Margin (dB) | Reading Level (dBμV) | Correct Factor (dB) | Detector Type |
|-----|-----------------|-------------------------|----------------|-------------|----------------------|---------------------|---------------|
| 1   | 4882.000        | 43.75                   | 74.00          | -30.25      | 46.04                | -2.29               | PK            |
| 2   | 7323.000        | 45.54                   | 74.00          | -28.46      | 44.28                | 1.26                | PK            |
| * 3 | 9764.000        | 48.62                   | 74.00          | -25.38      | 44.84                | 3.78                | PK            |

Note:

1. All Readings below 1GHz are Quasi-Peak, above 1GHz are performed with peak and/or average measurements as necessary.
2. Peak measurements: RBW = 1MHz, VBW = 3 MHz, Sweep: Auto.
3. Measurement Level = Reading Level + Correct Factor.
4. Correct Factor = Antenna factor + Cable loss – Amplifier gain.
5. The average measurement was not performed when the peak measured data under the limit of average detection.
6. The emission levels of other frequencies are very lower than the limit and not show in test report.

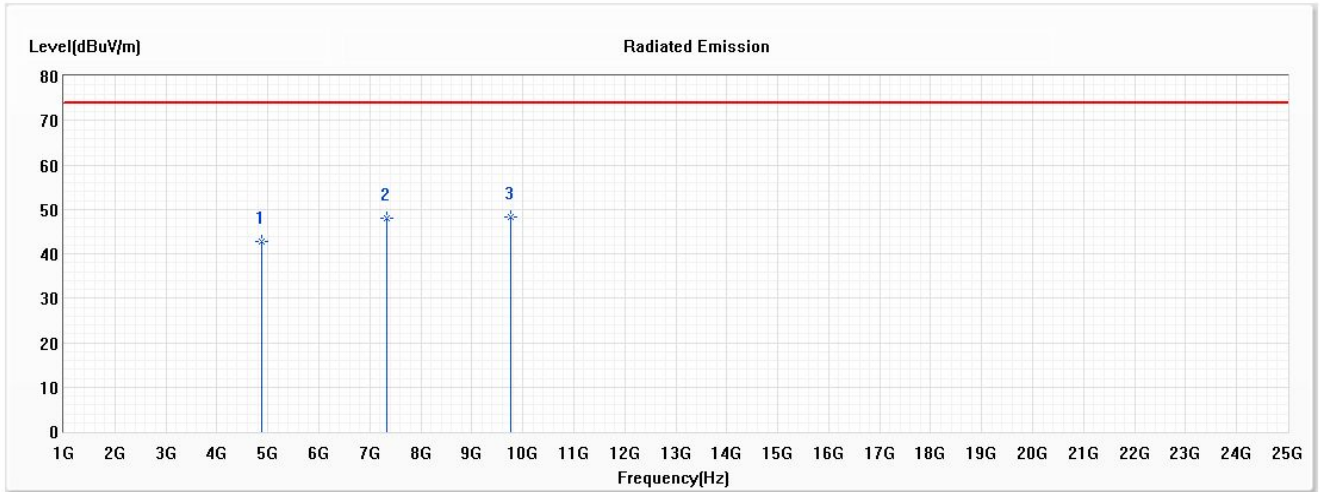
| Frequency<br>MHz         | Peak<br>Measurement<br>dBμV/m | Duty Cycle<br>Factor<br>dB | Average<br>Measurement<br>dBμV/m | Margin<br>dB | Peak<br>Limit<br>dBμV/m | Average<br>Limit<br>dBμV/m |
|--------------------------|-------------------------------|----------------------------|----------------------------------|--------------|-------------------------|----------------------------|
| <b>Average Detector:</b> |                               |                            |                                  |              |                         |                            |
| --                       | --                            | --                         | --                               | --           | 74.000                  | 54.000                     |

Note:

1. AVG Measurement=Peak Measurement + Duty Cycle Correct Factor
2. The Duty Cycle is refer to section 4.

Product : Portable Computer  
 Test Item : Harmonic Radiated Emission  
 Test Mode : Mode 2: Transmit - 2Mbps (2441MHz)  
 Test Date : 2021/01/22

**Vertical**



| No  | Frequency (MHz) | Emission Level (dBμV/m) | Limit (dBμV/m) | Margin (dB) | Reading Level (dBμV) | Correct Factor (dB) | Detector Type |
|-----|-----------------|-------------------------|----------------|-------------|----------------------|---------------------|---------------|
| 1   | 4882.000        | 42.73                   | 74.00          | -31.27      | 45.02                | -2.29               | PK            |
| 2   | 7323.000        | 48.13                   | 74.00          | -25.87      | 46.87                | 1.26                | PK            |
| * 3 | 9764.000        | 48.39                   | 74.00          | -25.61      | 44.61                | 3.78                | PK            |

Note:

- All Readings below 1GHz are Quasi-Peak, above 1GHz are performed with peak and/or average measurements as necessary.
- Peak measurements: RBW = 1MHz, VBW = 3 MHz, Sweep: Auto.
- Measurement Level = Reading Level + Correct Factor.
- Correct Factor = Antenna factor + Cable loss – Amplifier gain.
- The average measurement was not performed when the peak measured data under the limit of average detection.
- The emission levels of other frequencies are very lower than the limit and not show in test report.

| Frequency                | Peak Measurement | Duty Cycle Factor | Average Measurement | Margin | Peak Limit | Average Limit |
|--------------------------|------------------|-------------------|---------------------|--------|------------|---------------|
| MHz                      | dBμV/m           | dB                | dBμV/m              | dB     | dBμV/m     | dBμV/m        |
| <b>Average Detector:</b> |                  |                   |                     |        |            |               |
| --                       | --               | --                | --                  | --     | 74.000     | 54.000        |

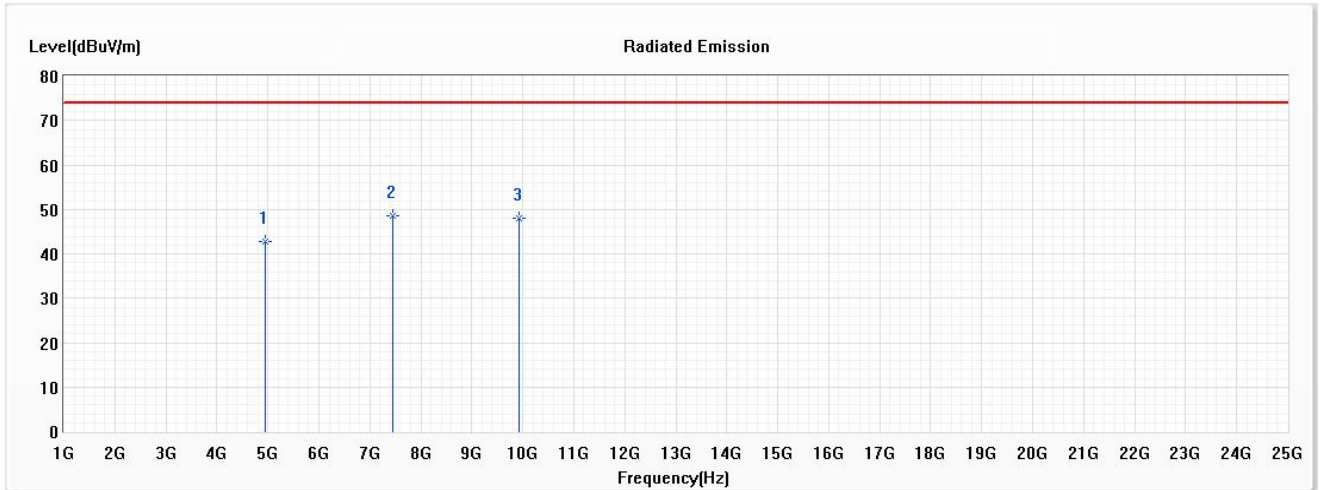
Note:

- AVG Measurement=Peak Measurement + Duty Cycle Correct Factor
- The Duty Cycle is refer to section 4.



Product : Portable Computer  
 Test Item : Harmonic Radiated Emission  
 Test Mode : Mode 2: Transmit - 2Mbps (2480MHz)  
 Test Date : 2021/01/22

**Horizontal**



| No  | Frequency (MHz) | Emission Level (dBμV/m) | Limit (dBμV/m) | Margin (dB) | Reading Level (dBμV) | Correct Factor (dB) | Detector Type |
|-----|-----------------|-------------------------|----------------|-------------|----------------------|---------------------|---------------|
| 1   | 4960.000        | 42.72                   | 74.00          | -31.28      | 44.81                | -2.09               | PK            |
| * 2 | 7440.000        | 48.52                   | 74.00          | -25.48      | 47.22                | 1.30                | PK            |
| 3   | 9920.000        | 47.94                   | 74.00          | -26.06      | 43.93                | 4.01                | PK            |

Note:

1. All Readings below 1GHz are Quasi-Peak, above 1GHz are performed with peak and/or average measurements as necessary.
2. Peak measurements: RBW = 1MHz, VBW = 3 MHz, Sweep: Auto.
3. Measurement Level = Reading Level + Correct Factor.
4. Correct Factor = Antenna factor + Cable loss – Amplifier gain.
5. The average measurement was not performed when the peak measured data under the limit of average detection.
6. The emission levels of other frequencies are very lower than the limit and not show in test report.

| Frequency<br>MHz | Peak<br>Measurement<br>dBμV/m | Duty Cycle<br>Factor<br>dB | Average<br>Measurement<br>dBμV/m | Margin<br>dB | Peak<br>Limit<br>dBμV/m | Average<br>Limit<br>dBμV/m |
|------------------|-------------------------------|----------------------------|----------------------------------|--------------|-------------------------|----------------------------|
|------------------|-------------------------------|----------------------------|----------------------------------|--------------|-------------------------|----------------------------|

**Average Detector:**

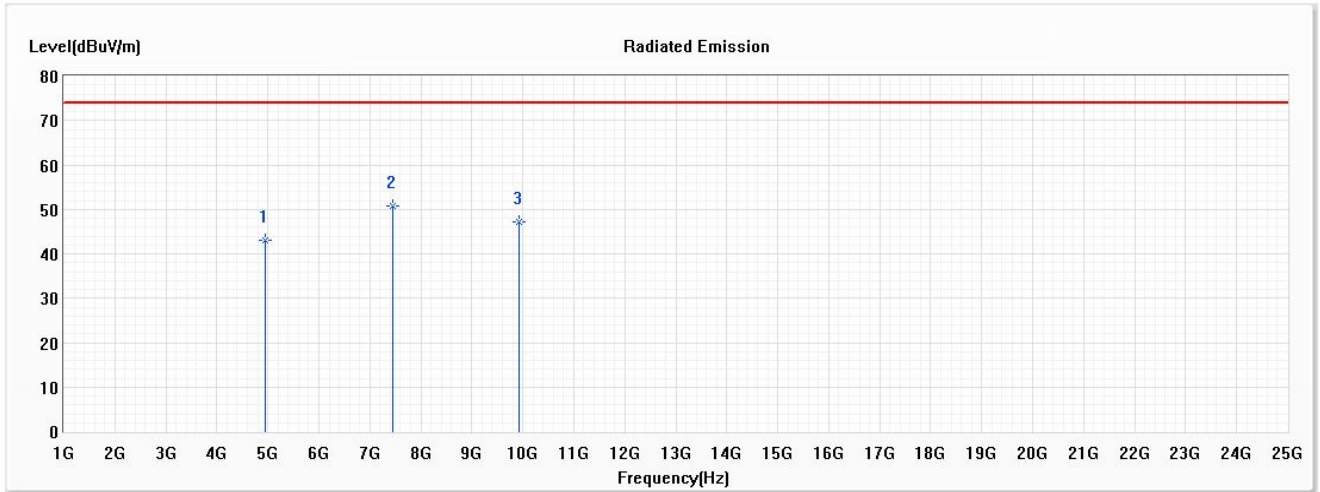
|    |    |    |    |    |        |        |
|----|----|----|----|----|--------|--------|
| -- | -- | -- | -- | -- | 74.000 | 54.000 |
|----|----|----|----|----|--------|--------|

Note:

1. AVG Measurement=Peak Measurement + Duty Cycle Correct Factor
2. The Duty Cycle is refer to section 4.

Product : Portable Computer  
 Test Item : Harmonic Radiated Emission  
 Test Mode : Mode 2: Transmit - 2Mbps (2480MHz)  
 Test Date : 2021/01/20

**Vertical**



| No  | Frequency (MHz) | Emission Level (dBμV/m) | Limit (dBμV/m) | Margin (dB) | Reading Level (dBμV) | Correct Factor (dB) | Detector Type |
|-----|-----------------|-------------------------|----------------|-------------|----------------------|---------------------|---------------|
| 1   | 4960.000        | 43.14                   | 74.00          | -30.86      | 45.23                | -2.09               | PK            |
| * 2 | 7440.000        | 50.87                   | 74.00          | -23.13      | 49.57                | 1.30                | PK            |
| 3   | 9920.000        | 47.04                   | 74.00          | -26.96      | 43.03                | 4.01                | PK            |

Note:

- All Readings below 1GHz are Quasi-Peak, above 1GHz are performed with peak and/or average measurements as necessary.
- Peak measurements: RBW = 1MHz, VBW = 3 MHz, Sweep: Auto.
- Measurement Level = Reading Level + Correct Factor.
- Correct Factor = Antenna factor + Cable loss – Amplifier gain.
- The average measurement was not performed when the peak measured data under the limit of average detection.
- The emission levels of other frequencies are very lower than the limit and not show in test report.

| Frequency | Peak Measurement | Duty Cycle Factor | Average Measurement | Margin | Peak Limit | Average Limit |
|-----------|------------------|-------------------|---------------------|--------|------------|---------------|
| MHz       | dBμV/m           | dB                | dBμV/m              | dB     | dBμV/m     | dBμV/m        |

**Average Detector:**

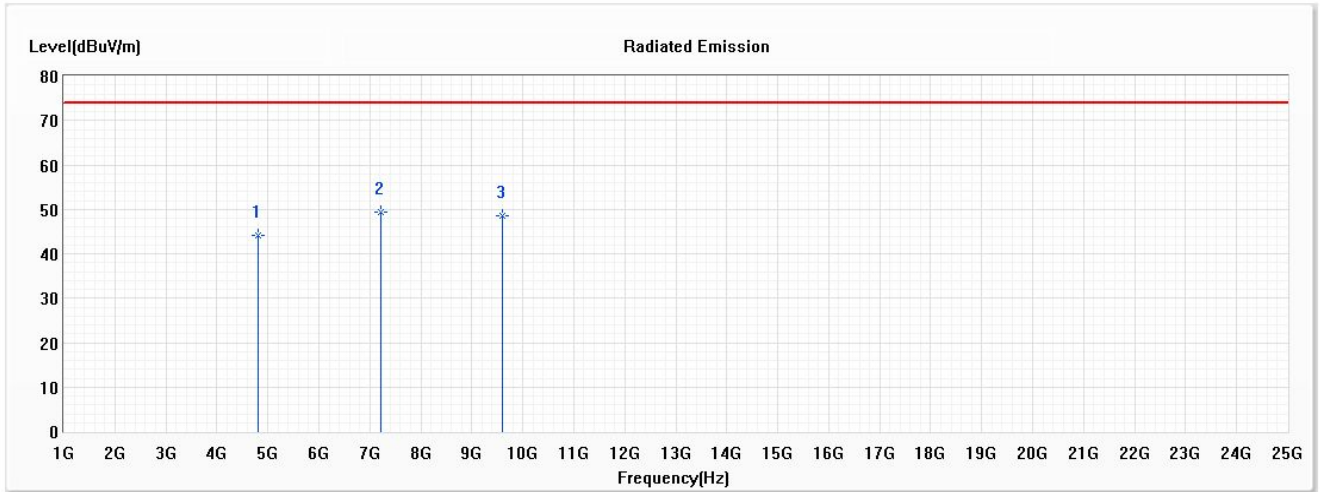
|    |    |    |    |    |        |        |
|----|----|----|----|----|--------|--------|
| -- | -- | -- | -- | -- | 74.000 | 54.000 |
|----|----|----|----|----|--------|--------|

Note:

- AVG Measurement=Peak Measurement + Duty Cycle Correct Factor
- The Duty Cycle is refer to section 4.

Product : Portable Computer  
 Test Item : Harmonic Radiated Emission  
 Test Mode : Mode 3: Transmit - 3Mbps (2402MHz)  
 Test Date : 2021/01/22

**Horizontal**



| No  | Frequency (MHz) | Emission Level (dBμV/m) | Limit (dBμV/m) | Margin (dB) | Reading Level (dBμV) | Correct Factor (dB) | Detector Type |
|-----|-----------------|-------------------------|----------------|-------------|----------------------|---------------------|---------------|
| 1   | 4804.000        | 44.23                   | 74.00          | -29.77      | 46.43                | -2.20               | PK            |
| * 2 | 7206.000        | 49.49                   | 74.00          | -24.51      | 48.22                | 1.27                | PK            |
| 3   | 9608.000        | 48.57                   | 74.00          | -25.43      | 45.05                | 3.52                | PK            |

Note:

1. All Readings below 1GHz are Quasi-Peak, above 1GHz are performed with peak and/or average measurements as necessary.
2. Peak measurements: RBW = 1MHz, VBW = 3 MHz, Sweep: Auto.
3. Measurement Level = Reading Level + Correct Factor.
4. Correct Factor = Antenna factor + Cable loss – Amplifier gain.
5. The average measurement was not performed when the peak measured data under the limit of average detection.
6. The emission levels of other frequencies are very lower than the limit and not show in test report.

| Frequency<br>MHz | Peak<br>Measurement<br>dBμV/m | Duty Cycle<br>Factor<br>dB | Average<br>Measurement<br>dBμV/m | Margin<br>dB | Peak<br>Limit<br>dBμV/m | Average<br>Limit<br>dBμV/m |
|------------------|-------------------------------|----------------------------|----------------------------------|--------------|-------------------------|----------------------------|
|------------------|-------------------------------|----------------------------|----------------------------------|--------------|-------------------------|----------------------------|

**Average Detector:**

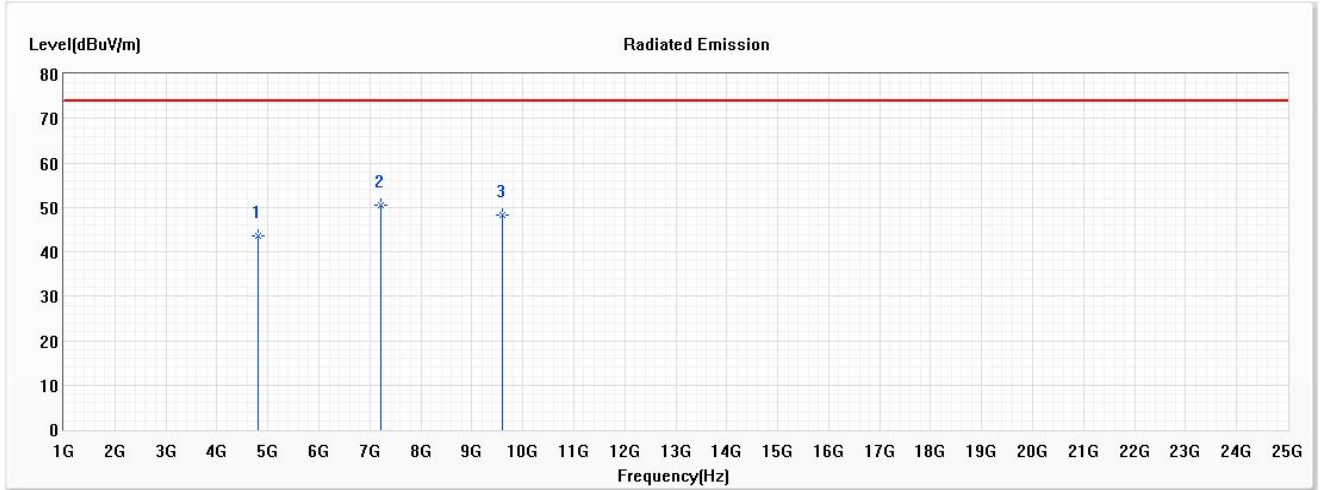
|    |    |    |    |    |        |        |
|----|----|----|----|----|--------|--------|
| -- | -- | -- | -- | -- | 74.000 | 54.000 |
|----|----|----|----|----|--------|--------|

Note:

1. AVG Measurement=Peak Measurement + Duty Cycle Correct Factor
2. The Duty Cycle is refer to section 4.

Product : Portable Computer  
 Test Item : Harmonic Radiated Emission  
 Test Mode : Mode 3: Transmit - 3Mbps (2402MHz)  
 Test Date : 2021/01/22

**Vertical**



| No  | Frequency (MHz) | Emission Level (dBμV/m) | Limit (dBμV/m) | Margin (dB) | Reading Level (dBμV) | Correct Factor (dB) | Detector Type |
|-----|-----------------|-------------------------|----------------|-------------|----------------------|---------------------|---------------|
| 1   | 4804.000        | 43.54                   | 74.00          | -30.46      | 45.74                | -2.20               | PK            |
| * 2 | 7206.000        | 50.39                   | 74.00          | -23.61      | 49.12                | 1.27                | PK            |
| 3   | 9608.000        | 48.25                   | 74.00          | -25.75      | 44.73                | 3.52                | PK            |

**Note:**

1. All Readings below 1GHz are Quasi-Peak, above 1GHz are performed with peak and/or average measurements as necessary.
2. Peak measurements: RBW = 1MHz, VBW = 3 MHz, Sweep: Auto.
3. Measurement Level = Reading Level + Correct Factor.
4. Correct Factor = Antenna factor + Cable loss – Amplifier gain.
5. The average measurement was not performed when the peak measured data under the limit of average detection.
6. The emission levels of other frequencies are very lower than the limit and not show in test report.

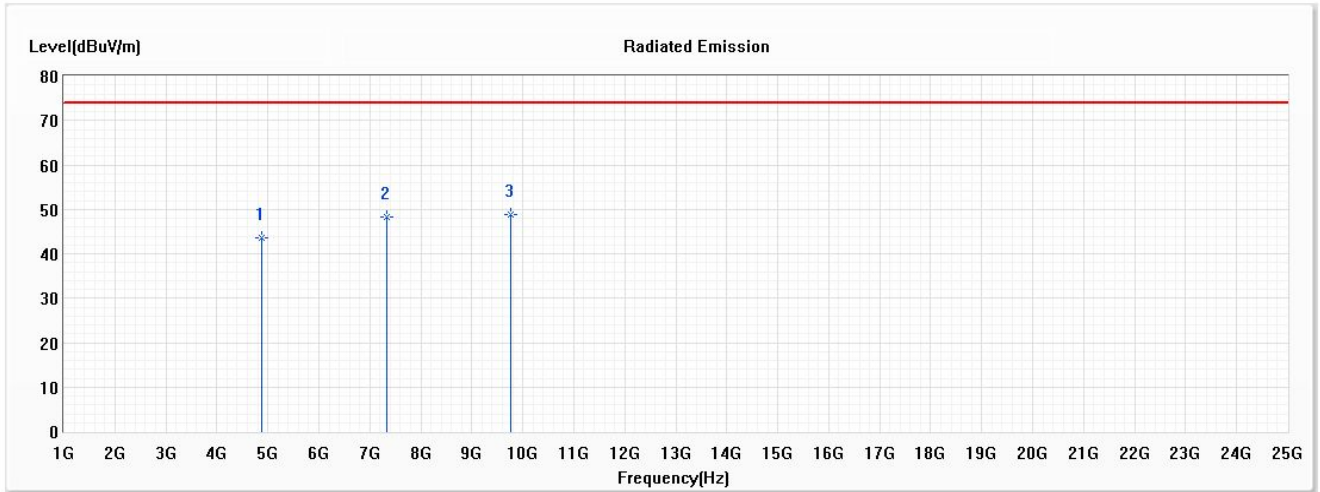
| Frequency<br>MHz         | Peak<br>Measurement<br>dBμV/m | Duty Cycle<br>Factor<br>dB | Average<br>Measurement<br>dBμV/m | Margin<br>dB | Peak<br>Limit<br>dBμV/m | Average<br>Limit<br>dBμV/m |
|--------------------------|-------------------------------|----------------------------|----------------------------------|--------------|-------------------------|----------------------------|
| <b>Average Detector:</b> |                               |                            |                                  |              |                         |                            |
| --                       | --                            | --                         | --                               | --           | 74.000                  | 54.000                     |

**Note:**

1. AVG Measurement=Peak Measurement + Duty Cycle Correct Factor
2. The Duty Cycle is refer to section 4.

Product : Portable Computer  
 Test Item : Harmonic Radiated Emission  
 Test Mode : Mode 3: Transmit - 3Mbps (2441MHz)  
 Test Date : 2021/01/22

**Horizontal**



| No  | Frequency (MHz) | Emission Level (dBμV/m) | Limit (dBμV/m) | Margin (dB) | Reading Level (dBμV) | Correct Factor (dB) | Detector Type |
|-----|-----------------|-------------------------|----------------|-------------|----------------------|---------------------|---------------|
| 1   | 4882.000        | 43.64                   | 74.00          | -30.36      | 45.93                | -2.29               | PK            |
| 2   | 7323.000        | 48.37                   | 74.00          | -25.63      | 47.11                | 1.26                | PK            |
| * 3 | 9764.000        | 48.84                   | 74.00          | -25.16      | 45.06                | 3.78                | PK            |

Note:

1. All Readings below 1GHz are Quasi-Peak, above 1GHz are performed with peak and/or average measurements as necessary.
2. Peak measurements: RBW = 1MHz, VBW = 3 MHz, Sweep: Auto.
3. Measurement Level = Reading Level + Correct Factor.
4. Correct Factor = Antenna factor + Cable loss – Amplifier gain.
5. The average measurement was not performed when the peak measured data under the limit of average detection.
6. The emission levels of other frequencies are very lower than the limit and not show in test report.

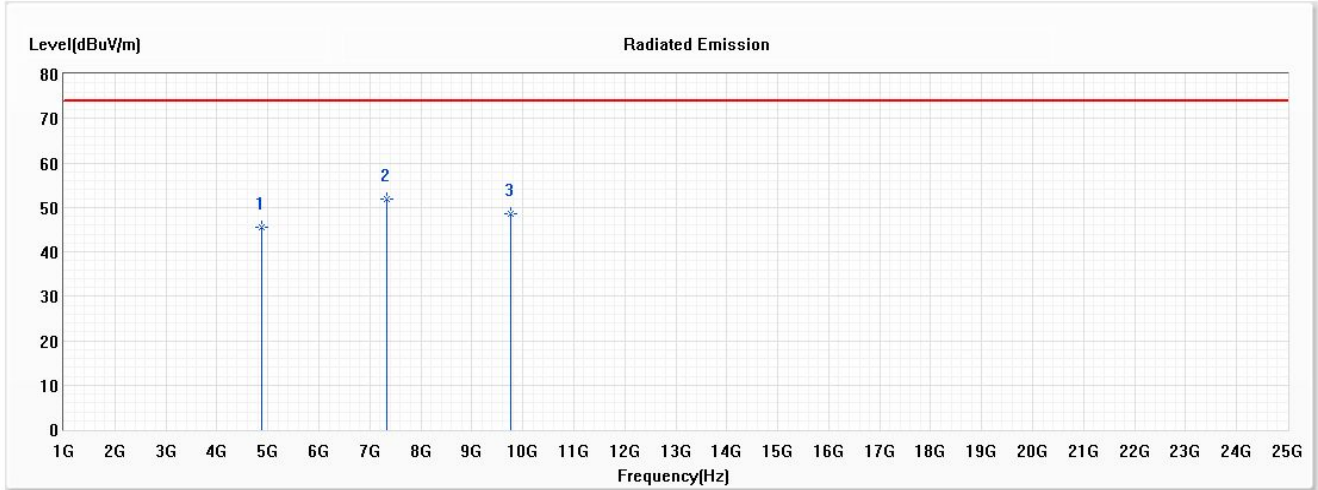
| Frequency<br>MHz         | Peak<br>Measurement<br>dBμV/m | Duty Cycle<br>Factor<br>dB | Average<br>Measurement<br>dBμV/m | Margin<br>dB | Peak<br>Limit<br>dBμV/m | Average<br>Limit<br>dBμV/m |
|--------------------------|-------------------------------|----------------------------|----------------------------------|--------------|-------------------------|----------------------------|
| <b>Average Detector:</b> |                               |                            |                                  |              |                         |                            |
| --                       | --                            | --                         | --                               | --           | 74.000                  | 54.000                     |

Note:

1. AVG Measurement=Peak Measurement + Duty Cycle Correct Factor
2. The Duty Cycle is refer to section 4.

Product : Portable Computer  
 Test Item : Harmonic Radiated Emission  
 Test Mode : Mode 3: Transmit - 3Mbps (2441MHz)  
 Test Date : 2021/01/22

**Vertical**



| No  | Frequency (MHz) | Emission Level (dBμV/m) | Limit (dBμV/m) | Margin (dB) | Reading Level (dBμV) | Correct Factor (dB) | Detector Type |
|-----|-----------------|-------------------------|----------------|-------------|----------------------|---------------------|---------------|
| 1   | 4882.000        | 45.42                   | 74.00          | -28.58      | 47.71                | -2.29               | PK            |
| * 2 | 7323.000        | 51.82                   | 74.00          | -22.18      | 50.56                | 1.26                | PK            |
| 3   | 9764.000        | 48.51                   | 74.00          | -25.49      | 44.73                | 3.78                | PK            |

**Note:**

1. All Readings below 1GHz are Quasi-Peak, above 1GHz are performed with peak and/or average measurements as necessary.
2. Peak measurements: RBW = 1MHz, VBW = 3 MHz, Sweep: Auto.
3. Measurement Level = Reading Level + Correct Factor.
4. Correct Factor = Antenna factor + Cable loss – Amplifier gain.
5. The average measurement was not performed when the peak measured data under the limit of average detection.
6. The emission levels of other frequencies are very lower than the limit and not show in test report.

| Frequency<br>MHz | Peak<br>Measurement<br>dBμV/m | Duty Cycle<br>Factor<br>dB | Average<br>Measurement<br>dBμV/m | Margin<br>dB | Peak<br>Limit<br>dBμV/m | Average<br>Limit<br>dBμV/m |
|------------------|-------------------------------|----------------------------|----------------------------------|--------------|-------------------------|----------------------------|
|------------------|-------------------------------|----------------------------|----------------------------------|--------------|-------------------------|----------------------------|

**Average Detector:**

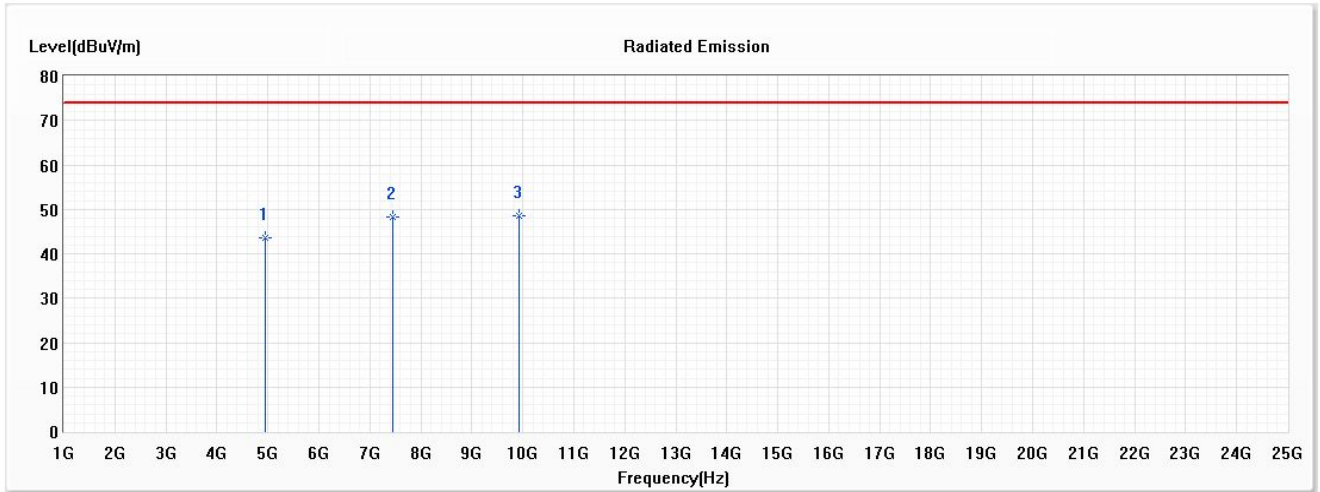
|    |    |    |    |    |        |        |
|----|----|----|----|----|--------|--------|
| -- | -- | -- | -- | -- | 74.000 | 54.000 |
|----|----|----|----|----|--------|--------|

**Note:**

1. AVG Measurement=Peak Measurement + Duty Cycle Correct Factor
2. The Duty Cycle is refer to section 4.

Product : Portable Computer  
 Test Item : Harmonic Radiated Emission  
 Test Mode : Mode 3: Transmit - 3Mbps (2480MHz)  
 Test Date : 2021/01/22

**Horizontal**



| No  | Frequency (MHz) | Emission Level (dBμV/m) | Limit (dBμV/m) | Margin (dB) | Reading Level (dBμV) | Correct Factor (dB) | Detector Type |
|-----|-----------------|-------------------------|----------------|-------------|----------------------|---------------------|---------------|
| 1   | 4960.000        | 43.62                   | 74.00          | -30.38      | 45.71                | -2.09               | PK            |
| 2   | 7440.000        | 48.16                   | 74.00          | -25.84      | 46.86                | 1.30                | PK            |
| * 3 | 9920.000        | 48.68                   | 74.00          | -25.32      | 44.67                | 4.01                | PK            |

Note:

- All Readings below 1GHz are Quasi-Peak, above 1GHz are performed with peak and/or average measurements as necessary.
- Peak measurements: RBW = 1MHz, VBW = 3 MHz, Sweep: Auto.
- Measurement Level = Reading Level + Correct Factor.
- Correct Factor = Antenna factor + Cable loss – Amplifier gain.
- The average measurement was not performed when the peak measured data under the limit of average detection.
- The emission levels of other frequencies are very lower than the limit and not show in test report.

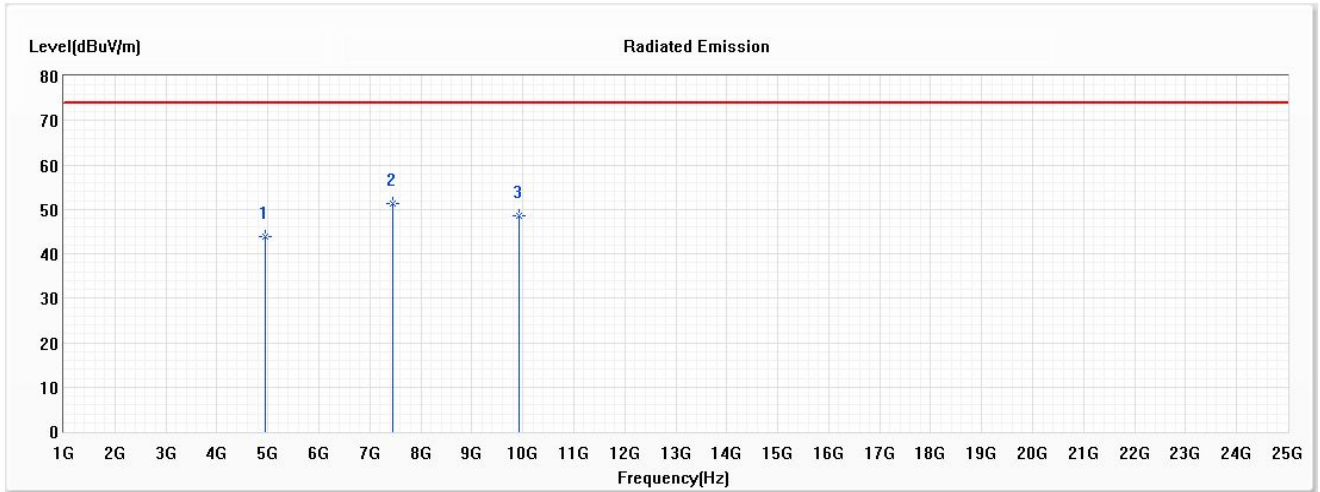
| Frequency<br>MHz         | Peak<br>Measurement<br>dBμV/m | Duty Cycle<br>Factor<br>dB | Average<br>Measurement<br>dBμV/m | Margin<br>dB | Peak<br>Limit<br>dBμV/m | Average<br>Limit<br>dBμV/m |
|--------------------------|-------------------------------|----------------------------|----------------------------------|--------------|-------------------------|----------------------------|
| <b>Average Detector:</b> |                               |                            |                                  |              |                         |                            |
| --                       | --                            | --                         | --                               | --           | 74.000                  | 54.000                     |

Note:

- AVG Measurement=Peak Measurement + Duty Cycle Correct Factor
- The Duty Cycle is refer to section 4.

Product : Portable Computer  
 Test Item : Harmonic Radiated Emission  
 Test Mode : Mode 3: Transmit - 3Mbps (2480MHz)  
 Test Date : 2021/01/22

**Vertical**



| No  | Frequency (MHz) | Emission Level (dBμV/m) | Limit (dBμV/m) | Margin (dB) | Reading Level (dBμV) | Correct Factor (dB) | Detector Type |
|-----|-----------------|-------------------------|----------------|-------------|----------------------|---------------------|---------------|
| 1   | 4960.000        | 43.75                   | 74.00          | -30.25      | 45.84                | -2.09               | PK            |
| * 2 | 7440.000        | 51.42                   | 74.00          | -22.58      | 50.12                | 1.30                | PK            |
| 3   | 9920.000        | 48.64                   | 74.00          | -25.36      | 44.63                | 4.01                | PK            |

**Note:**

1. All Readings below 1GHz are Quasi-Peak, above 1GHz are performed with peak and/or average measurements as necessary.
2. Peak measurements: RBW = 1MHz, VBW = 3 MHz, Sweep: Auto.
3. Measurement Level = Reading Level + Correct Factor.
4. Correct Factor = Antenna factor + Cable loss – Amplifier gain.
5. The average measurement was not performed when the peak measured data under the limit of average detection.
6. The emission levels of other frequencies are very lower than the limit and not show in test report.

| Frequency | Peak Measurement | Duty Cycle Factor | Average Measurement | Margin | Peak Limit | Average Limit |
|-----------|------------------|-------------------|---------------------|--------|------------|---------------|
| MHz       | dBμV/m           | dB                | dBμV/m              | dB     | dBμV/m     | dBμV/m        |

**Average Detector:**

|    |    |    |    |    |        |        |
|----|----|----|----|----|--------|--------|
| -- | -- | -- | -- | -- | 74.000 | 54.000 |
|----|----|----|----|----|--------|--------|

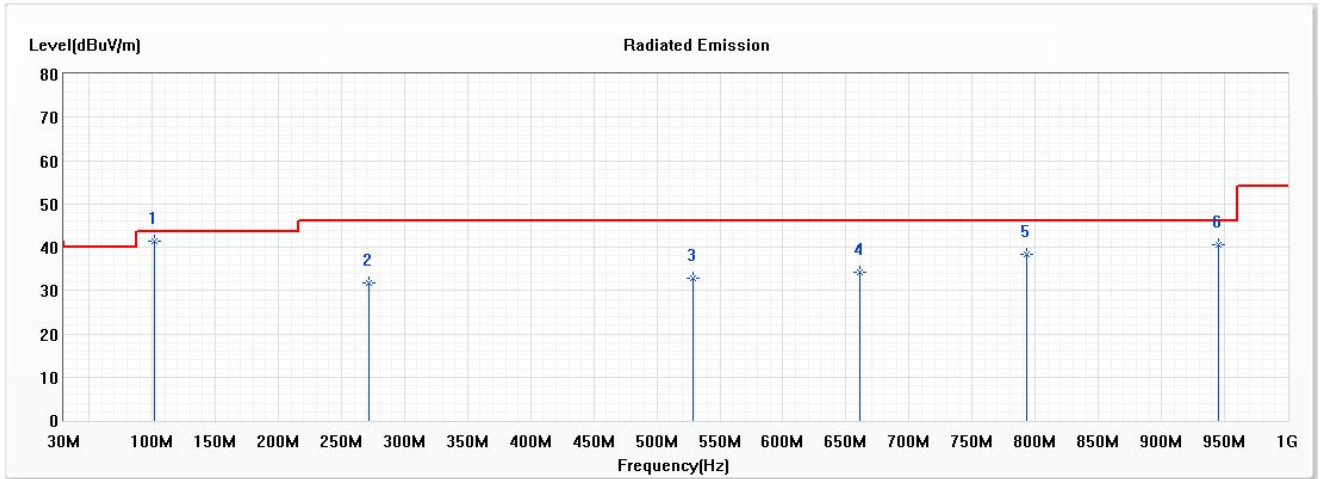
**Note:**

1. AVG Measurement=Peak Measurement + Duty Cycle Correct Factor
2. The Duty Cycle is refer to section 4.



Product : Portable Computer  
 Test Item : General Radiated Emission  
 Test Mode : Mode 1: Transmit - 1Mbps (2441MHz)  
 Test Date : 2021/01/18

**Horizontal**



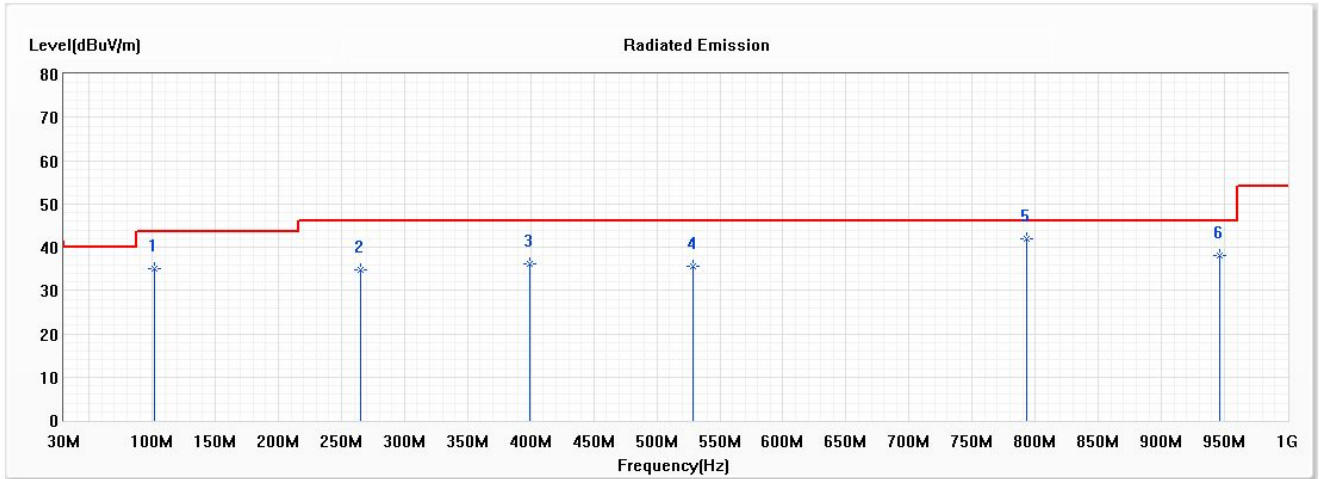
| No  | Frequency (MHz) | Emission Level (dBμV/m) | Limit (dBμV/m) | Margin (dB) | Reading Level (dBμV) | Correct Factor (dB) | Detector Type |
|-----|-----------------|-------------------------|----------------|-------------|----------------------|---------------------|---------------|
| * 1 | 101.696         | 41.32                   | 43.50          | -2.18       | 56.48                | -15.16              | QP            |
| 2   | 271.797         | 31.59                   | 46.00          | -14.41      | 42.24                | -10.65              | QP            |
| 3   | 529.058         | 32.91                   | 46.00          | -13.09      | 37.66                | -4.75               | QP            |
| 4   | 661.203         | 34.26                   | 46.00          | -11.74      | 36.79                | -2.53               | QP            |
| 5   | 793.348         | 38.47                   | 46.00          | -7.53       | 38.89                | -0.42               | QP            |
| 6   | 945.174         | 40.59                   | 46.00          | -5.41       | 39.09                | 1.50                | QP            |

Note:

1. All Readings below 1GHz are Quasi-Peak, above 1GHz are performed with peak and/or average measurements as necessary.
2. Measurement Level = Reading Level + Correct Factor.
3. Correct Factor = Antenna factor + Cable loss – Amplifier gain.
4. The emission levels of other frequencies are very lower than the limit and not show in test report.
5. No emission found between lowest internal used/generated frequency to 30MHz.

Product : Portable Computer  
 Test Item : General Radiated Emission  
 Test Mode : Mode 1: Transmit - 1Mbps (2441MHz)  
 Test Date : 2021/01/18

**Vertical**



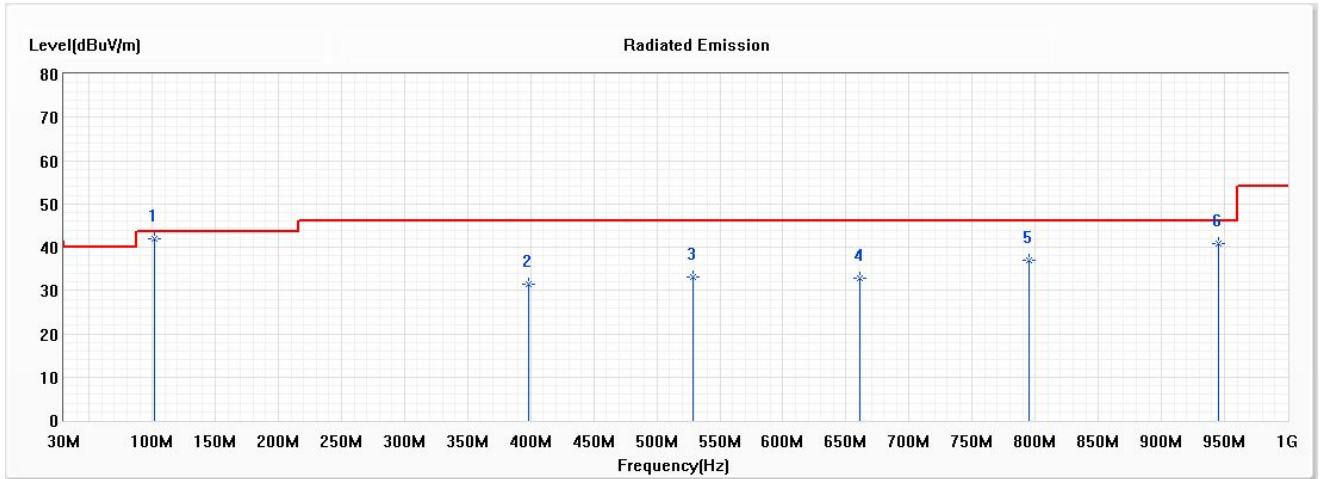
| No  | Frequency (MHz) | Emission Level (dBμV/m) | Limit (dBμV/m) | Margin (dB) | Reading Level (dBμV) | Correct Factor (dB) | Detector Type |
|-----|-----------------|-------------------------|----------------|-------------|----------------------|---------------------|---------------|
| 1   | 101.696         | 35.10                   | 43.50          | -8.40       | 50.26                | -15.16              | QP            |
| 2   | 264.768         | 34.86                   | 46.00          | -11.14      | 45.81                | -10.95              | QP            |
| 3   | 399.725         | 36.17                   | 46.00          | -9.83       | 43.47                | -7.30               | QP            |
| 4   | 529.058         | 35.63                   | 46.00          | -10.37      | 40.38                | -4.75               | QP            |
| * 5 | 793.348         | 41.89                   | 46.00          | -4.11       | 42.31                | -0.42               | QP            |
| 6   | 946.580         | 38.20                   | 46.00          | -7.80       | 36.66                | 1.54                | QP            |

**Note:**

1. All Readings below 1GHz are Quasi-Peak, above 1GHz are performed with peak and/or average measurements as necessary.
2. Measurement Level = Reading Level + Correct Factor.
3. Correct Factor = Antenna factor + Cable loss – Amplifier gain.
4. The emission levels of other frequencies are very lower than the limit and not show in test report.
5. No emission found between lowest internal used/generated frequency to 30MHz.

Product : Portable Computer  
 Test Item : General Radiated Emission  
 Test Mode : Mode 2: Transmit - 2Mbps (2441MHz)  
 Test Date : 2021/01/18

**Horizontal**



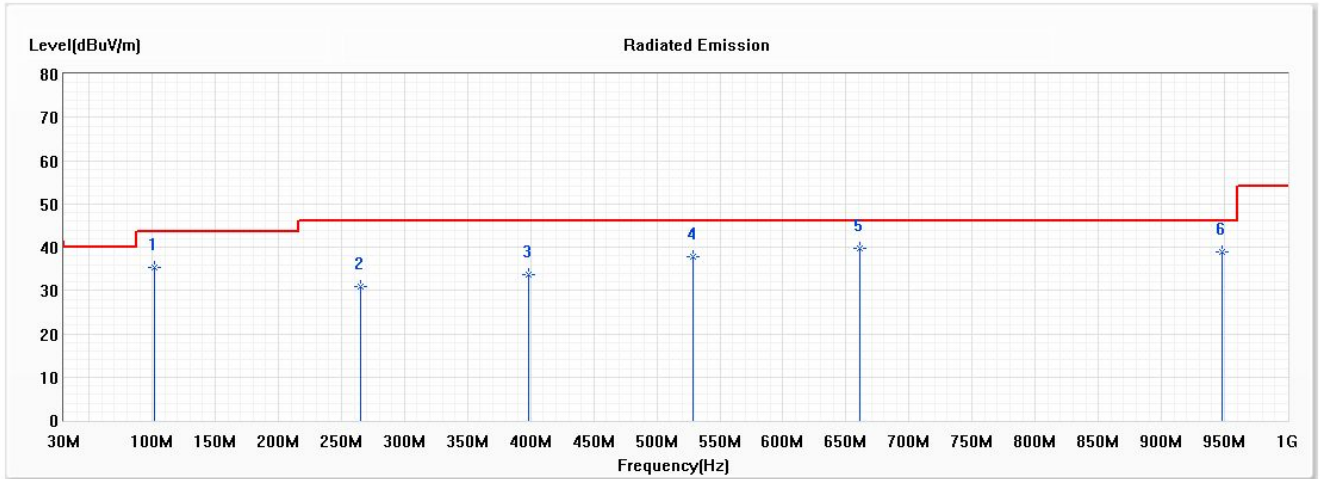
| No  | Frequency (MHz) | Emission Level (dBμV/m) | Limit (dBμV/m) | Margin (dB) | Reading Level (dBμV) | Correct Factor (dB) | Detector Type |
|-----|-----------------|-------------------------|----------------|-------------|----------------------|---------------------|---------------|
| * 1 | 101.696         | 41.87                   | 43.50          | -1.63       | 57.03                | -15.16              | QP            |
| 2   | 398.319         | 31.57                   | 46.00          | -14.43      | 38.89                | -7.32               | QP            |
| 3   | 529.058         | 33.01                   | 46.00          | -12.99      | 37.76                | -4.75               | QP            |
| 4   | 661.203         | 32.82                   | 46.00          | -13.18      | 35.35                | -2.53               | QP            |
| 5   | 794.754         | 36.94                   | 46.00          | -9.06       | 37.33                | -0.39               | QP            |
| 6   | 945.174         | 40.96                   | 46.00          | -5.04       | 39.46                | 1.50                | QP            |

Note:

1. All Readings below 1GHz are Quasi-Peak, above 1GHz are performed with peak and/or average measurements as necessary.
2. Measurement Level = Reading Level + Correct Factor.
3. Correct Factor = Antenna factor + Cable loss – Amplifier gain.
4. The emission levels of other frequencies are very lower than the limit and not show in test report.
5. No emission found between lowest internal used/generated frequency to 30MHz.

Product : Portable Computer  
 Test Item : General Radiated Emission  
 Test Mode : Mode 2: Transmit - 2Mbps (2441MHz)  
 Test Date : 2021/01/18

**Vertical**



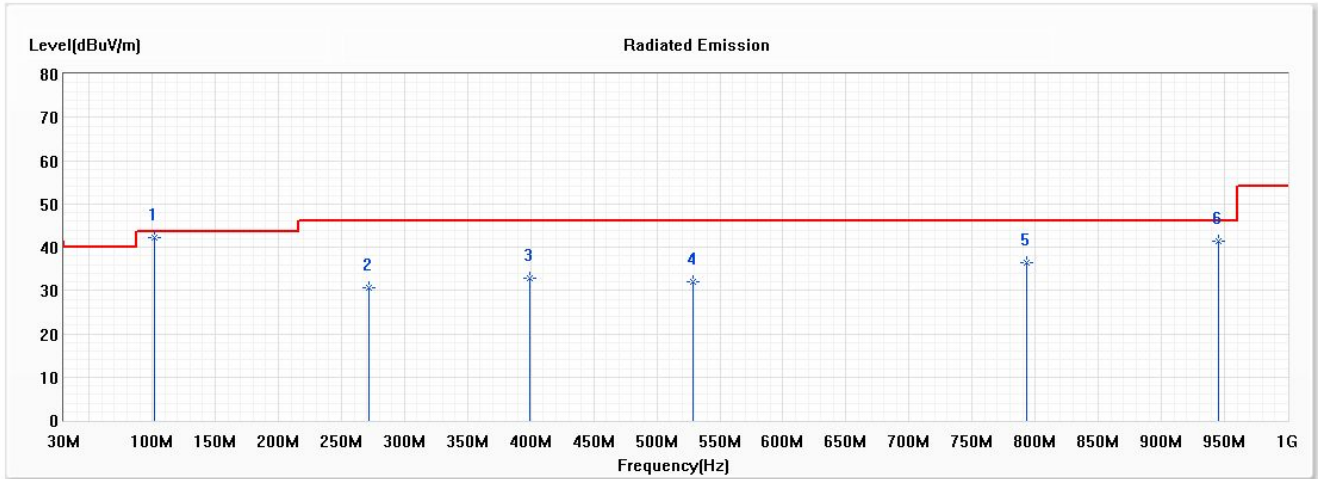
| No  | Frequency (MHz) | Emission Level (dBμV/m) | Limit (dBμV/m) | Margin (dB) | Reading Level (dBμV) | Correct Factor (dB) | Detector Type |
|-----|-----------------|-------------------------|----------------|-------------|----------------------|---------------------|---------------|
| 1   | 101.696         | 35.34                   | 43.50          | -8.16       | 50.50                | -15.16              | QP            |
| 2   | 264.768         | 30.97                   | 46.00          | -15.03      | 41.92                | -10.95              | QP            |
| 3   | 398.319         | 33.76                   | 46.00          | -12.24      | 41.08                | -7.32               | QP            |
| 4   | 529.058         | 37.78                   | 46.00          | -8.22       | 42.53                | -4.75               | QP            |
| * 5 | 661.203         | 39.81                   | 46.00          | -6.19       | 42.34                | -2.53               | QP            |
| 6   | 947.986         | 38.86                   | 46.00          | -7.14       | 37.29                | 1.57                | QP            |

**Note:**

1. All Readings below 1GHz are Quasi-Peak, above 1GHz are performed with peak and/or average measurements as necessary.
2. Measurement Level = Reading Level + Correct Factor.
3. Correct Factor = Antenna factor + Cable loss – Amplifier gain.
4. The emission levels of other frequencies are very lower than the limit and not show in test report.
5. No emission found between lowest internal used/generated frequency to 30MHz.

Product : Portable Computer  
 Test Item : General Radiated Emission  
 Test Mode : Mode 3: Transmit - 3Mbps (2441MHz)  
 Test Date : 2021/01/18

**Horizontal**



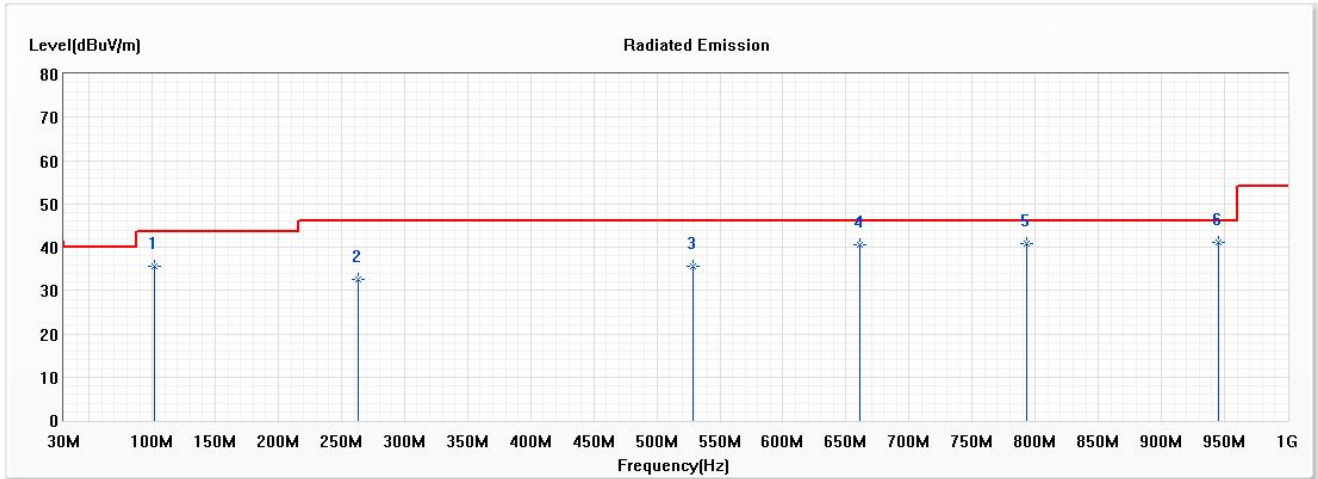
| No  | Frequency (MHz) | Emission Level (dBμV/m) | Limit (dBμV/m) | Margin (dB) | Reading Level (dBμV) | Correct Factor (dB) | Detector Type |
|-----|-----------------|-------------------------|----------------|-------------|----------------------|---------------------|---------------|
| * 1 | 101.696         | 42.21                   | 43.50          | -1.29       | 57.37                | -15.16              | QP            |
| 2   | 271.797         | 30.73                   | 46.00          | -15.27      | 41.38                | -10.65              | QP            |
| 3   | 399.725         | 32.95                   | 46.00          | -13.05      | 40.25                | -7.30               | QP            |
| 4   | 529.058         | 31.92                   | 46.00          | -14.08      | 36.67                | -4.75               | QP            |
| 5   | 793.348         | 36.37                   | 46.00          | -9.63       | 36.79                | -0.42               | QP            |
| 6   | 945.174         | 41.39                   | 46.00          | -4.61       | 39.89                | 1.50                | QP            |

Note:

1. All Readings below 1GHz are Quasi-Peak, above 1GHz are performed with peak and/or average measurements as necessary.
2. Measurement Level = Reading Level + Correct Factor.
3. Correct Factor = Antenna factor + Cable loss – Amplifier gain.
4. The emission levels of other frequencies are very lower than the limit and not show in test report.
5. No emission found between lowest internal used/generated frequency to 30MHz.

Product : Portable Computer  
 Test Item : General Radiated Emission  
 Test Mode : Mode 3: Transmit - 3Mbps (2441MHz)  
 Test Date : 2021/01/18

**Vertical**



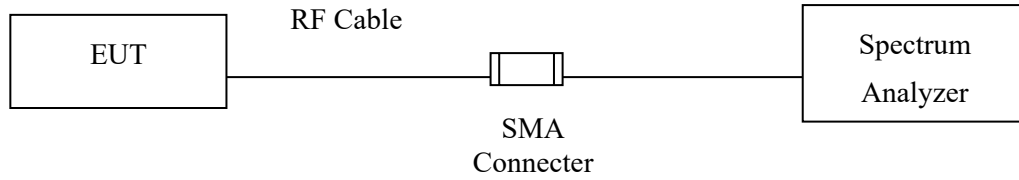
| No  | Frequency (MHz) | Emission Level (dBμV/m) | Limit (dBμV/m) | Margin (dB) | Reading Level (dBμV) | Correct Factor (dB) | Detector Type |
|-----|-----------------|-------------------------|----------------|-------------|----------------------|---------------------|---------------|
| 1   | 101.696         | 35.61                   | 43.50          | -7.89       | 50.77                | -15.16              | QP            |
| 2   | 263.362         | 32.56                   | 46.00          | -13.44      | 43.58                | -11.02              | QP            |
| 3   | 529.058         | 35.66                   | 46.00          | -10.34      | 40.41                | -4.75               | QP            |
| 4   | 661.203         | 40.61                   | 46.00          | -5.39       | 43.14                | -2.53               | QP            |
| 5   | 793.348         | 40.96                   | 46.00          | -5.04       | 41.38                | -0.42               | QP            |
| * 6 | 945.174         | 40.98                   | 46.00          | -5.02       | 39.48                | 1.50                | QP            |

**Note:**

1. All Readings below 1GHz are Quasi-Peak, above 1GHz are performed with peak and/or average measurements as necessary.
2. Measurement Level = Reading Level + Correct Factor.
3. Correct Factor = Antenna factor + Cable loss – Amplifier gain.
4. The emission levels of other frequencies are very lower than the limit and not show in test report.
5. No emission found between lowest internal used/generated frequency to 30MHz.

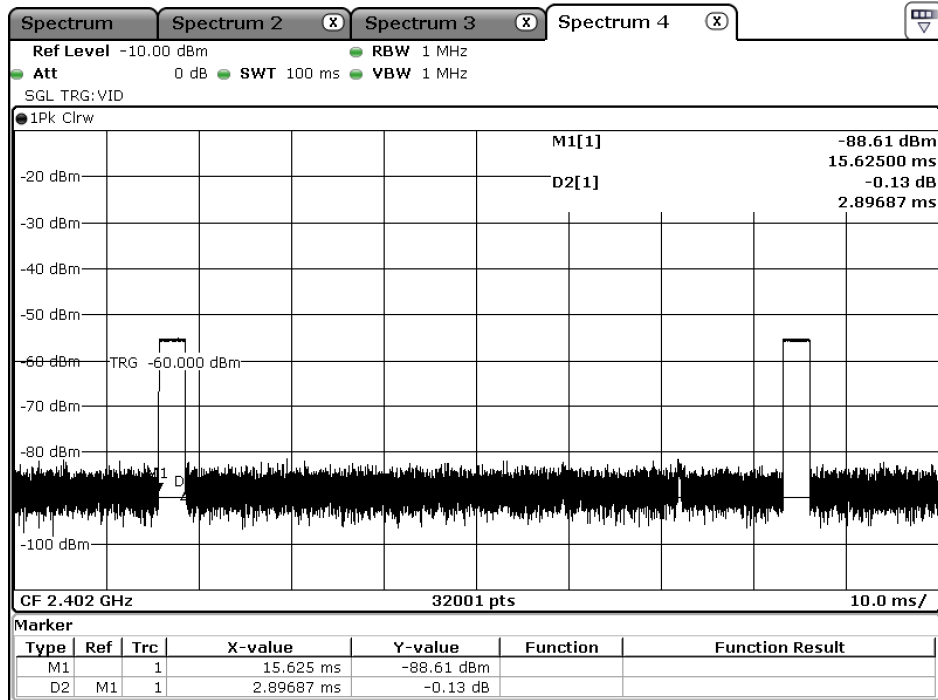
## 5. Duty Cycle

### 5.1. Test Setup



## 5.2. Test Result of Duty Cycle

Product : Portable Computer  
 Test Item : Duty Cycle Data  
 Test Mode : Mode 1: Transmit - 1Mbps



Date: 10.FEB.2021 14:48:40

Time on of 100ms= 2.89ms\*2= 5.78ms

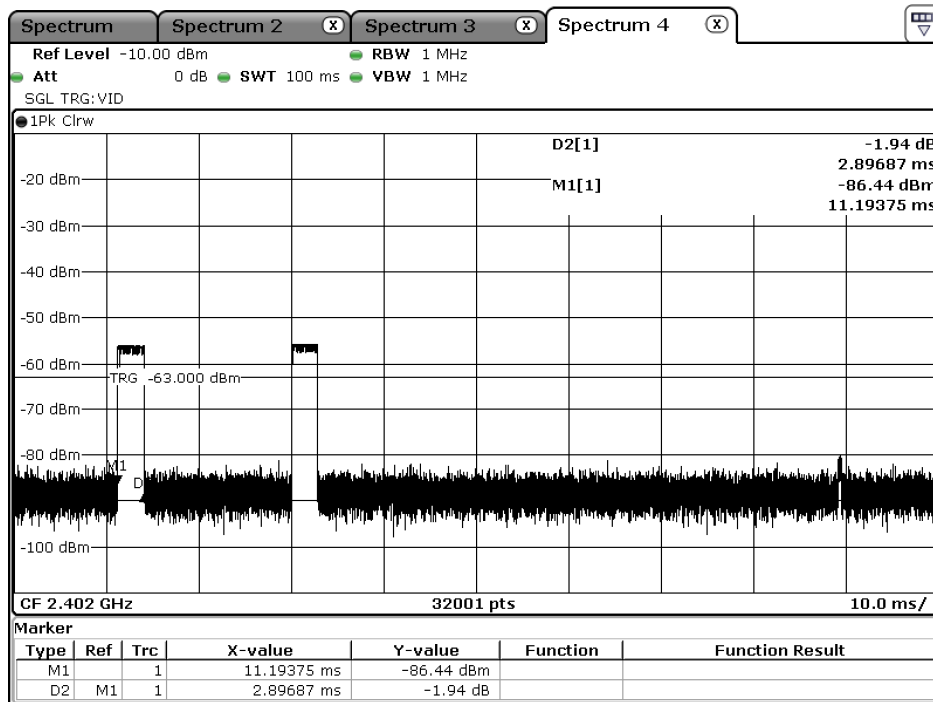
Duty Cycle=5.78ms / 100ms= 0.0578

Duty Cycle correction factor= 20 LOG 0.0578= -24.761 dB

|                                     |                |           |
|-------------------------------------|----------------|-----------|
| <b>Duty Cycle correction factor</b> | <b>-24.761</b> | <b>dB</b> |
|-------------------------------------|----------------|-----------|



Product : Portable Computer  
 Test Item : Duty Cycle Data  
 Test Mode : Mode 2: Transmit - 2Mbps



Date: 10.FEB.2021 14:51:56

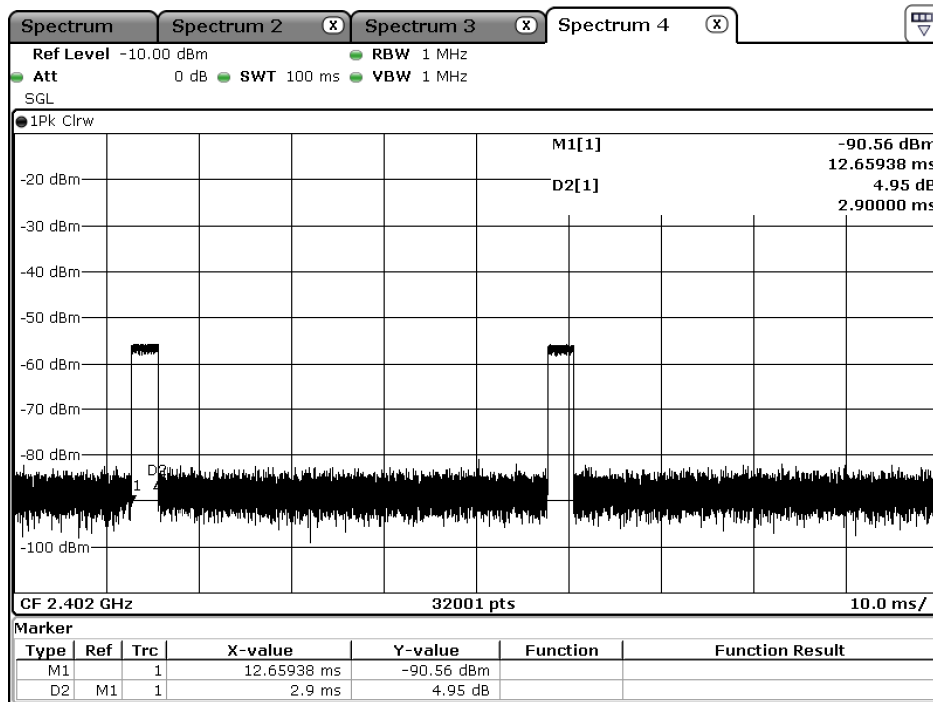
Time on of 100ms= 2.89ms\*2= 5.78ms

Duty Cycle=5.78ms / 100ms= 0.0578

Duty Cycle correction factor= 20 LOG 0.0578= -24.761 dB

|                                     |                |           |
|-------------------------------------|----------------|-----------|
| <b>Duty Cycle correction factor</b> | <b>-24.761</b> | <b>dB</b> |
|-------------------------------------|----------------|-----------|

Product : Portable Computer  
 Test Item : Duty Cycle Data  
 Test Mode : Mode 3: Transmit - 3Mbps



Date: 10.FEB.2021 14:53:26

Time on of 100ms= 2.9ms\*2= 5.8ms

Duty Cycle=5.8ms / 100ms= 0.058

Duty Cycle correction factor= 20 LOG 0.058= -24.731 dB

|                                     |                |           |
|-------------------------------------|----------------|-----------|
| <b>Duty Cycle correction factor</b> | <b>-24.731</b> | <b>dB</b> |
|-------------------------------------|----------------|-----------|

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**6. EMI Reduction Method During Compliance Testing**

No modification was made during testing.