



## KSIGN(Guangdong) Testing Co, Ltd.

First Floor West Side, Building C, Zone A, Fuyuan New Factory, Jiujiu Industrial Park, Minzhu Village, Shatou Community, Shajing Street, Bao'an District, Shenzhen City, Guangdong Province, P. R. China  
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# TEST REPORT

Report No..... : KS2003S00020E

FCC ID..... : 2ATQ9-K2

Applicant..... : Dongguan Gorsun Electronics Co.,Ltd

Address..... : No.140 Chashi Road, Tangjiao Village, Chashan Town, Dongguan, China

Manufacturer..... : Dongguan Gorsun Electronics Co.,Ltd

Address..... : No.140 Chashi Road, Tangjiao Village, Chashan Town, Dongguan, China

Product Name..... : Wireless Earphones

Trade Mark..... : N/A

Model/Type reference..... : K2

Listed Model(s)..... : N/A

Standard..... : FCC CFR Title 47 Part 15 Subpart C Section 15.247

Date of Receipt..... : Mar.11, 2020

Date of Test Date..... : Mar.11, 2020-Mar.17, 2020

Date of issue..... : Mar.17, 2020

Test result..... : Pass

Compiled by:

(Printed name+signature)

Emiya Lin

Emiya Lin

Supervised by:

( Printed name+signature)

Kelly Cheng

Kelly Cheng

Approved by:

( Printed name+signature)

Cary Luo

Cary Luo



Testing Laboratory Name..... : KSIGN(Guangdong) Testing Co., Ltd.

Address..... : First Floor West Side, Building C, Zone A, Fuyuan New Factory, Jiujiu Industrial Park, Minzhu Village, Shatou Community, Shajing Street, Bao'an District, Shenzhen City, Guangdong Province, P. R. China

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## 1. TEST SUMMARY

### 1.1. Test Standards

The tests were performed according to following standards:

**FCC Rules Part 15.247:** Operation within the bands of 902-928MHz, 2400-2483.5MHz, and 5725-5850MHz.

**ANSI C63.10-2013:** American National Standard for Testing Unlicensed Wireless Devices.

### 1.2. Report version

| Revised No. | Date of issue | Description |
|-------------|---------------|-------------|
| 01          | Mar.17, 2020  | Original    |
|             |               |             |
|             |               |             |
|             |               |             |

### 1.3. Test Description

| FCC Part 15 Subpart C(15.247)           |                  |        |               |
|-----------------------------------------|------------------|--------|---------------|
| Test Item                               | Standard Section | Result | Test Engineer |
|                                         | FCC              |        |               |
| Antenna Requirement                     | 15.203           | Pass   | Emiya Lin     |
| Conducted Emission                      | 15.207           | Pass   | Emiya Lin     |
| Restricted Bands                        | 15.205           | Pass   | Emiya Lin     |
| Hopping Channel Separation              | 15.247(a)(1)     | Pass   | Emiya Lin     |
| Dwell Time                              | 15.247(a)(1)     | Pass   | Emiya Lin     |
| Peak Output Power                       | 15.247(b)(1)     | Pass   | Emiya Lin     |
| Number of Hopping Frequency             | 15.247(b)(1)     | Pass   | Emiya Lin     |
| Band Edge Emissions                     | 15.247(d)        | Pass   | Emiya Lin     |
| Radiated Spurious Emission              | 15.247(c)&15.209 | Pass   | Emiya Lin     |
| 99% Occupied Bandwidth & 20dB Bandwidth | 15.247(a)        | Pass   | Emiya Lin     |
| Pseudorandom Frequency Hopping Sequence | 15.247 (a)(1)    | Pass   | Emiya Lin     |

Note: The measurement uncertainty is included in the test result.

## 1.4. Test Facility

### Address of the report laboratory

#### **KSIGN(Guangdong) Testing Co., Ltd.**

First Floor West Side, Building C, Zone A, Fuyuan New Factory, Jiujiu Industrial Park, Minzhu Village, Shatou Community, Shajing Street, Bao'an District, Shenzhen City, Guangdong Province, P. R. China

### Laboratory accreditation

The test facility is recognized, certified, or accredited by the following organizations:

#### **A2LA-Lab Cert. No.: 5457.01**

KSIGN(Guangdong) Testing Co., Ltd. EMC Laboratory has been accredited by A2LA for technical competence in the field of electrical testing, and proved to be in compliance with ISO/IEC 17025:2017 General Requirements for the Competence of Testing and Calibration Laboratories and any additional program requirements in the identified field of testing.

#### **IC Registration No.: CN0096**

The 3m alternate test site of KSIGN(Guangdong) Testing Co., Ltd. EMC Laboratory has been registered by Certification and Engineer Bureau of Industry Canada for the performance of with Registration NO.: CN0096

#### **FCC-Registration No.: CN1272**

KSIGN(Guangdong) Testing Co., Ltd. EMC Laboratory has been registered and fully described in a report filed with the (FCC) Federal Communications Commission. The acceptance letter from the FCC is maintained in our files.

## 1.5. Measurement Uncertainty

The data and results referenced in this document are true and accurate. The reader is cautioned that there may be errors within the calibration limits of the equipment and facilities. The measurement uncertainty was calculated for all measurements listed in this test report acc. to TR-100028-01 "Electromagnetic compatibility and Radio spectrum Matters (ERM); Uncertainties in the measurement of mobile radio equipment characteristics; Part 1" and TR-100028-02 "Electromagnetic compatibility and Radio spectrum Matters (ERM); Uncertainties in the measurement of mobile radio equipment characteristics; Part 2" and is documented in the KSIGN(Guangdong) Testing Co., Ltd. system acc. to DIN EN ISO/IEC 17025. Furthermore, component and process variability of devices similar to that tested may result in additional deviation. The manufacturer has the sole responsibility of continued compliance of the device. Below is the best measurement capability for KSIGN(Guangdong) Testing Co., Ltd.

| Test Items                              | Measurement Uncertainty | Notes |
|-----------------------------------------|-------------------------|-------|
| Transmitter power conducted             | 0.42 dB                 | (1)   |
| Transmitter power Radiated              | 2.14 dB                 | (1)   |
| Conducted spurious emissions 9kHz~40GHz | 1.60 dB                 | (1)   |
| Radiated spurious emissions 9kHz~40GHz  | 2.20 dB                 | (1)   |
| Conducted Emissions 9kHz~30MHz          | 3.20 dB                 | (1)   |
| Radiated Emissions 30~1000MHz           | 4.70 dB                 | (1)   |
| Radiated Emissions 1~18GHz              | 5.00 dB                 | (1)   |
| Radiated Emissions 18~40GHz             | 5.54 dB                 | (1)   |
| Occupied Bandwidth                      | 2.80 dB                 | (1)   |

**Note (1):** This uncertainty represents an expanded uncertainty expressed at approximately the 95% confidence level using a coverage factor of  $k=1.96$ .

## 1.6. Environmental conditions

During the measurement the environmental conditions were within the listed ranges:

|                    |             |
|--------------------|-------------|
| Temperature:       | 15~35°C     |
| Relative Humidity: | 30~60 %     |
| Air Pressure:      | 950~1050mba |

## 2. GENERAL INFORMATION

### 2.1. Client Information

|               |                                                                     |
|---------------|---------------------------------------------------------------------|
| Applicant:    | Dongguan Gorsun Electronics Co.,Ltd                                 |
| Address:      | No.140 Chashi Road, Tangjiao Village, Chashan Town, Dongguan, China |
| Manufacturer: | Dongguan Gorsun Electronics Co.,Ltd                                 |
| Address:      | No.140 Chashi Road, Tangjiao Village, Chashan Town, Dongguan, China |

### 2.2. General Description of EUT

|                                |                                   |
|--------------------------------|-----------------------------------|
| Product Name:                  | Wireless Earphones                |
| Marketing Name:                | N/A                               |
| Model/Type reference:          | K2                                |
| Listed Model(s):               | N/A                               |
| Model Difference:              | N/A                               |
| Power Source:                  | DC 5V output from the USB port    |
| Power supply(Battery):         | DC 3.7V 60mAh from Li-ion Battery |
| Hardware version:              | K2_V7                             |
| Software version:              | N/A                               |
| <b>Bluetooth 5.0</b>           |                                   |
| Modulation:                    | GFSK(DH5), $\pi/4$ -DQPSK(2DH5)   |
| Operation frequency:           | 2402MHz~2480MHz                   |
| Max Peak Output Power:         | DH5 : 1.40dBm<br>2DH5 : 2.21dBm   |
| Channel number:                | 79                                |
| Channel separation:            | 1MHz                              |
| Antenna type:                  | PCB Antenna                       |
| Antenna gain:                  | -0.58dBi                          |
| Note: Left earphone was tested |                                   |

## 2.3. Operation state

Operation Frequency List: The EUT has been tested under typical operating condition. The Applicant provides communication tools software to control the EUT for staying in continuous transmitting and receiving mode for testing. BT EDR, 79 channels are provided to the EUT. Channels 00/39/78 were selected for testing.

Operation Frequency List:

| Channel   | Frequency (MHz) |
|-----------|-----------------|
| <b>00</b> | <b>2402</b>     |
| 01        | 2403            |
| ⋮         | ⋮               |
| 38        | 2440            |
| <b>39</b> | <b>2441</b>     |
| 40        | 2442            |
| ⋮         | ⋮               |
| 77        | 2479            |
| <b>78</b> | <b>2480</b>     |

Note: The display in grey were the channel selected for testing.

### Test mode

|                                                                                                                                                                                                                          |
|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| For RF test items:                                                                                                                                                                                                       |
| The engineering test program was provided and enabled to make EUT continuous transmit                                                                                                                                    |
| For AC power line conducted emissions:                                                                                                                                                                                   |
| The EUT was set to connect with the Bluetooth instrument under large package sizes transmission.                                                                                                                         |
| For Radiated spurious emissions test item:                                                                                                                                                                               |
| The engineering test program was provided and enabled to make EUT continuous transmit. The EUT in each of three orthogonal axis emissions had been tested, but only the worst case (X axis) data recorded in the report. |

## 2.4. Measurement Instruments List

| Tonscend JS0806-2 Test system |                                     |              |           |            |              |
|-------------------------------|-------------------------------------|--------------|-----------|------------|--------------|
| Item                          | Test Equipment                      | Manufacturer | Model No. | Serial No. | Cal. Until   |
| 1                             | Spectrum Analyzer                   | R&S          | FSV40-N   | 101798     | Apr.25, 2020 |
| 2                             | Vector Signal Generator             | Agilent      | N5182A    | MY50142520 | Apr.10, 2020 |
| 3                             | Analog Signal Generator             | HP           | 83752A    | 3344A00337 | Apr.10, 2020 |
| 4                             | Power Sensor                        | Agilent      | E9304A    | MY50390009 | Apr.10, 2020 |
| 5                             | Power Sensor                        | Agilent      | E9300A    | MY41498315 | Apr.10, 2020 |
| 6                             | Wideband Radio Communication Tester | R&S          | CMU200    | 115297     | Apr.10, 2020 |
| 7                             | Climate Chamber                     | Angul        | AGNH80L   | 1903042120 | Apr.10, 2020 |
| 8                             | Dual Output DC Power Supply         | Agilent      | E3646A    | MY40009992 | Apr.10, 2020 |
| 9                             | RF Control Unit                     | Tonscend     | JS0806-2  | /          | Apr.10, 2020 |

| Transmitter spurious emissions & Receiver spurious emissions |                                            |                     |              |            |                  |
|--------------------------------------------------------------|--------------------------------------------|---------------------|--------------|------------|------------------|
| Item                                                         | Test Equipment                             | Manufacturer        | Model No.    | Serial No. | Calibrated until |
| 1                                                            | EMI Test Receiver                          | R&S                 | ESR          | 102525     | Apr.10, 2020     |
| 2                                                            | High Pass Filter                           | Chengdu E-Microwave | OHF-3-18-S   | 0E01901038 | Apr.15, 2020     |
| 3                                                            | High Pass Filter                           | Chengdu E-Microwave | OHF-6.5-18-S | 0E01901039 | Apr.15, 2020     |
| 4                                                            | Spectrum Analyzer                          | HP                  | 8593E        | 3831U02087 | Apr.10, 2020     |
| 5                                                            | Ultra-Broadband logarithmic period Antenna | Schwarzbeck         | VULB 9163    | 01230      | Apr.17, 2020     |
| 6                                                            | Loop Antenna                               | Beijin ZHINAN       | ZN30900C     | 18050      | Apr.17, 2020     |
| 7                                                            | Horn Antenna                               | R&S                 | Sep-60       | 69483      | Apr.10, 2020     |
| 8                                                            | Spectrum Analyzer                          | R&S                 | FSV40-N      | 101798     | Apr.25, 2020     |
| 9                                                            | Horn Antenna                               | Schwarzbeck         | BBHA 9120 D  | 2023       | Apr.10, 2020     |
| 10                                                           | Pre-Amplifier                              | Schwarzbeck         | BBV 9745     | 9745#129   | Apr.10, 2020     |
| 11                                                           | Pre-Amplifier                              | EMCI                | EMC051835SE  | 980662     | Apr.17, 2020     |
| 12                                                           | Power Meter                                | Agilent             | E4419B       | GB41293710 | Apr.10, 2020     |

Note:

1)The Cal. Interval was one year.

2)The cable loss has calculated in test result which connection between each test instruments.

## 2.5. Test Software

| Software name                           | Model    | Version       |
|-----------------------------------------|----------|---------------|
| Conducted emission Measurement Software | EZ-EMC   | EMC-Con 3A1.1 |
| Radiated emission Measurement Software  | EZ-EMC   | FA-03A.2.RE   |
| Bluetooth and WIFI Test System          | JS1120-3 | 2.5.77.0418   |

### 3. TEST ITEM AND RESULTS

#### 3.1. Antenna requirement

##### Requirement

**FCC CFR Title 47 Part 15 Subpart C Section 15.203:**

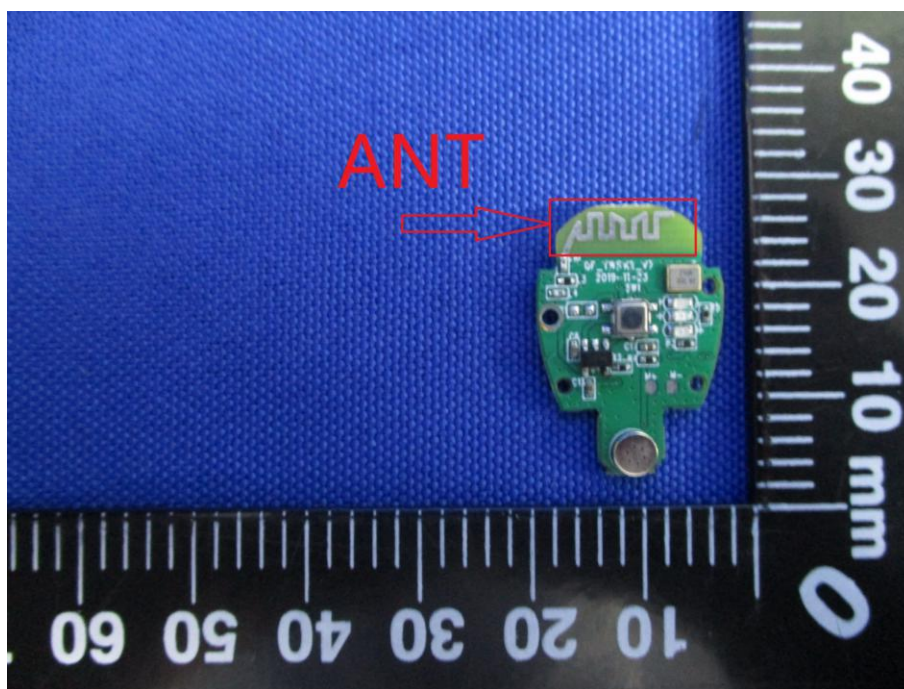
An intentional radiator shall be designed to ensure that no antenna other than that furnished by the responsible party shall be used with the device. The use of a permanently attached antenna or of an antenna that uses a unique coupling to the intentional radiator, the manufacturer may design the unit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

**FCC CFR Title 47 Part 15 Subpart C Section 15.247(c) (1)(i):**

(i) Systems operating in the 2400~2483.5 MHz band that is used exclusively for fixed. Point-to-point operations may employ transmitting antennas with directional gain greater than 6dBi provided the maximum conducted output power of the intentional radiator is reduced by 1 dB for every 3 dB that the directional gain of the antenna exceeds 6dBi.

##### Test Result

The directional gain of the antenna less than 6dBi, please refer to the EUT internal photographs antenna photo.



## 3.2. Conducted Emission

### Limit

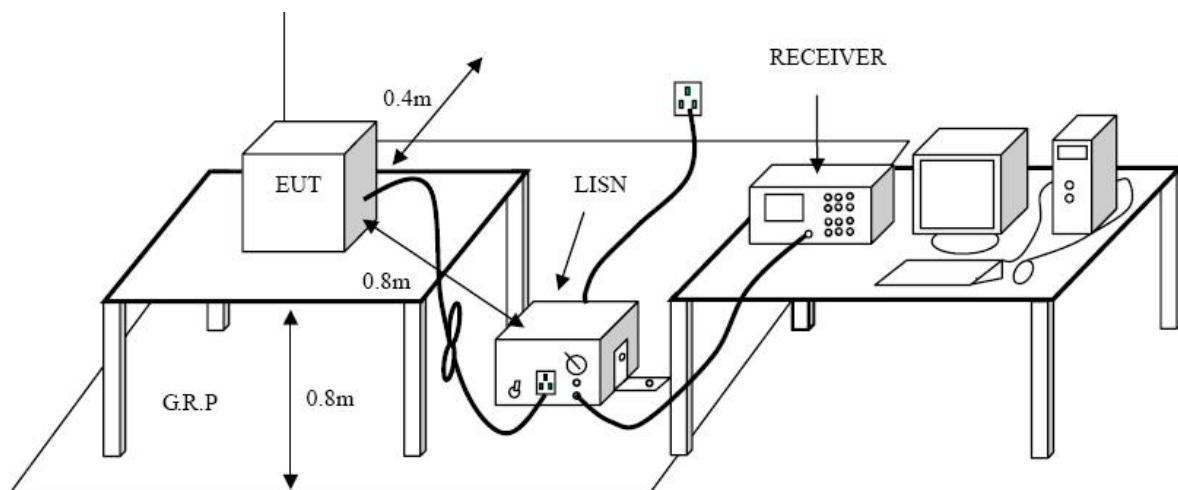
Conducted Emission Test Limit

| Frequency     | Maximum RF Line Voltage (dB $\mu$ V) |               |
|---------------|--------------------------------------|---------------|
|               | Quasi-peak Level                     | Average Level |
| 150kHz~500kHz | 66 ~ 56 *                            | 56 ~ 46 *     |
| 500kHz~5MHz   | 56                                   | 46            |
| 5MHz~30MHz    | 60                                   | 50            |

Notes:

- (1) \*Decreasing linearly with logarithm of the frequency.
- (2) The lower limit shall apply at the transition frequencies.
- (3) The limit decrease in line with the logarithm of the frequency in the range of 0.15 to 0.50MHz.

### Test Configuration



### Test Procedure

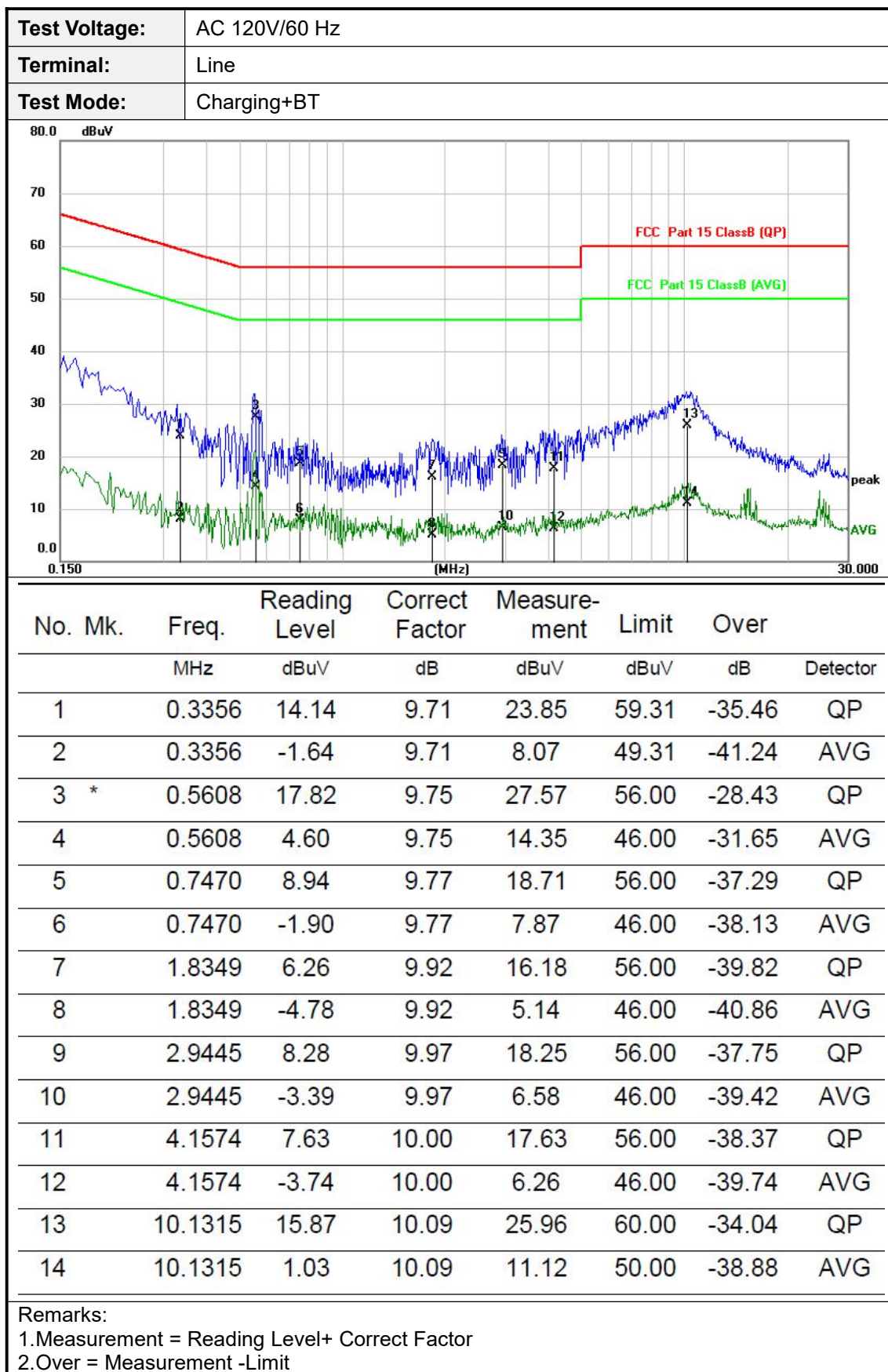
1. The EUT was setup according to ANSI C63.10:2013 requirements.
2. The EUT was placed on a platform of nominal size, 1 m by 1.5 m, raised 80 cm above the conducting ground plane. The vertical conducting plane was located 40 cm to the rear of the EUT. All other surfaces of EUT were at least 80 cm from any other grounded conducting surface.
3. The EUT and simulators are connected to the main power through a line impedances stabilization network (LISN). The LISN provides a 50ohm /50uH coupling impedance for the measuring equipment.  
The peripheral devices are also connected to the main power through a LISN. (Please refer to the block diagram of the test setup and photographs)
4. Each current-carrying conductor of the EUT power cord, except the ground (safety) conductor, was individually connected through a LISN to the input power source.
5. The excess length of the power cord between the EUT and the LISN receptacle were folded back and forth at the center of the lead to form a bundle not exceeding 40 cm in length.
6. Conducted Emissions were investigated over the frequency range from 0.15MHz to 30MHz using a receiver bandwidth of 9 kHz.
7. During the above scans, the emissions were maximized by cable manipulation.

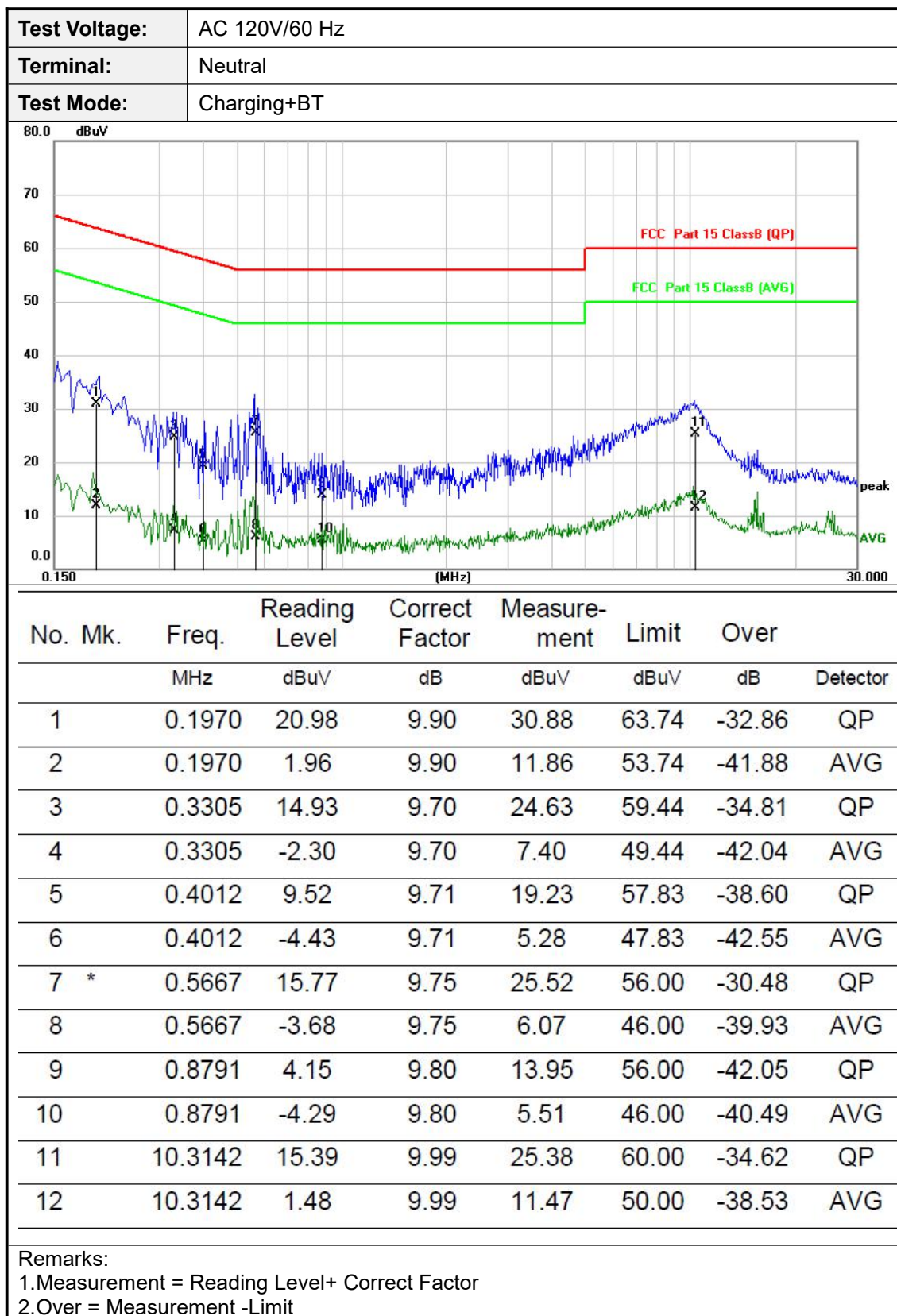
### Test Mode:

Please refer to the clause

### Test Results

Pre-scan DH5, 2DH5 modulation, and found the 2DH5 modulation 2402MHz which it is worse case, so only show the test data for worse case.



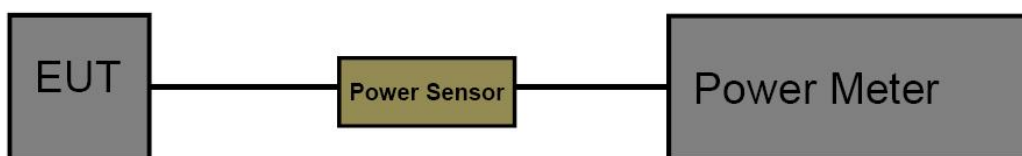


### 3.3. Peak Output Power

#### Limit

| Test Item         | Limit                                                         | Frequency Range(MHz) |
|-------------------|---------------------------------------------------------------|----------------------|
| Peak Output Power | Hopping Channels>75<br>Power<1W(30dBm)<br>Other <125mW(21dBm) | 2400~2483.5          |

#### Test Configuration



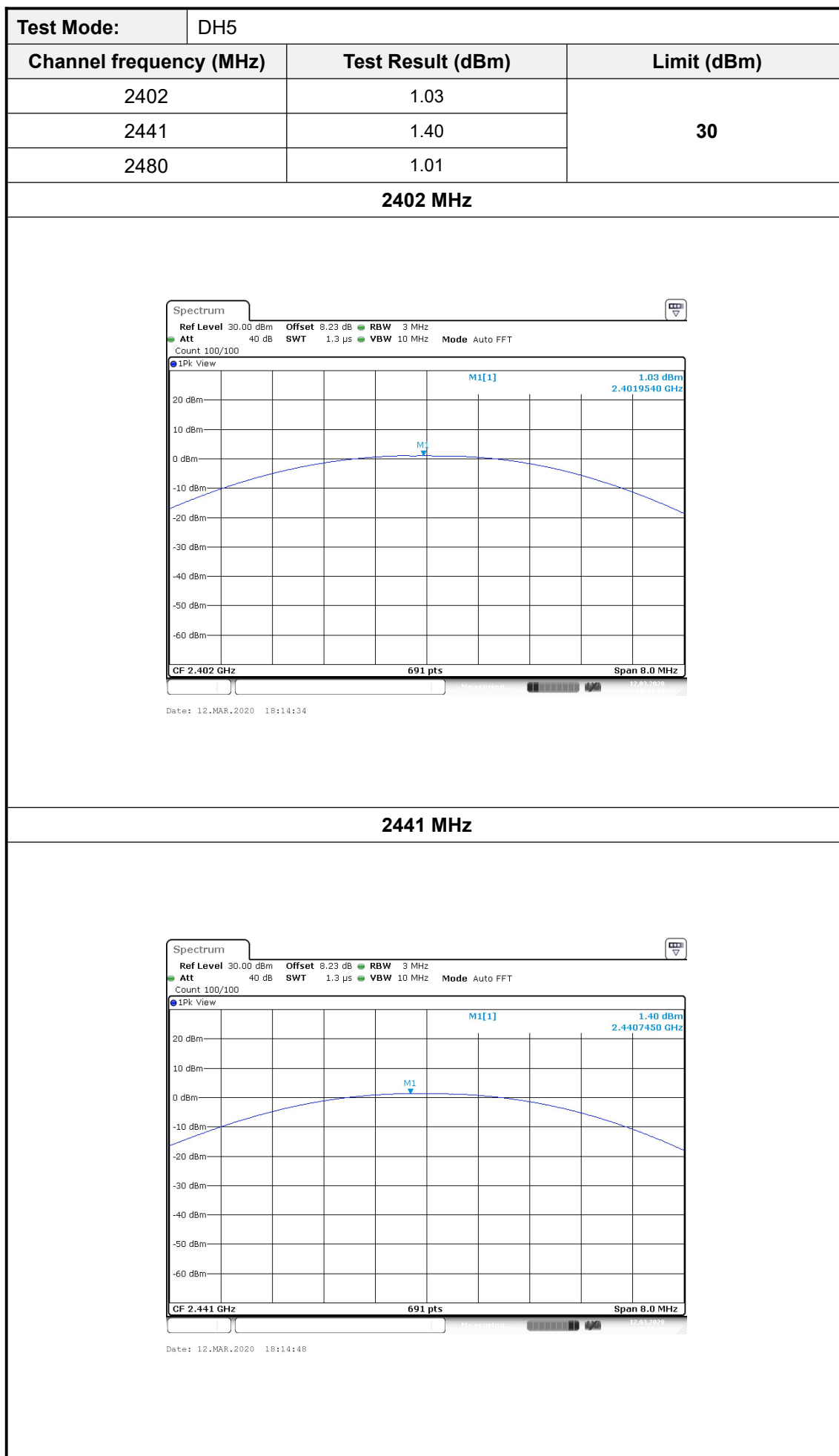
#### Test Procedure

1. The EUT was directly connected to the spectrum analyzer and antenna output port as show in the block diagram above.
2. Spectrum Setting:  
Peak Detector: RBW=1 MHz, VBW=3 MHz for bandwidth less than 1MHz.  
RBW=3 MHz, VBW=10 MHz for bandwidth more than 1MHz.

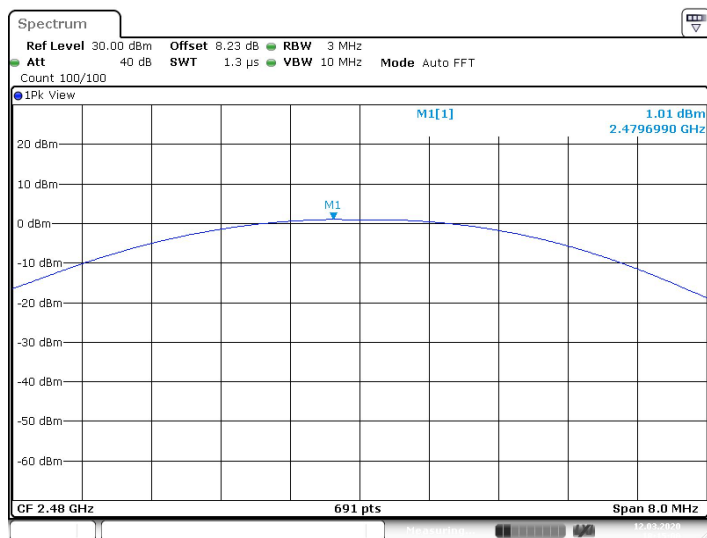
#### Test Mode

Please refer to the clause 2.3

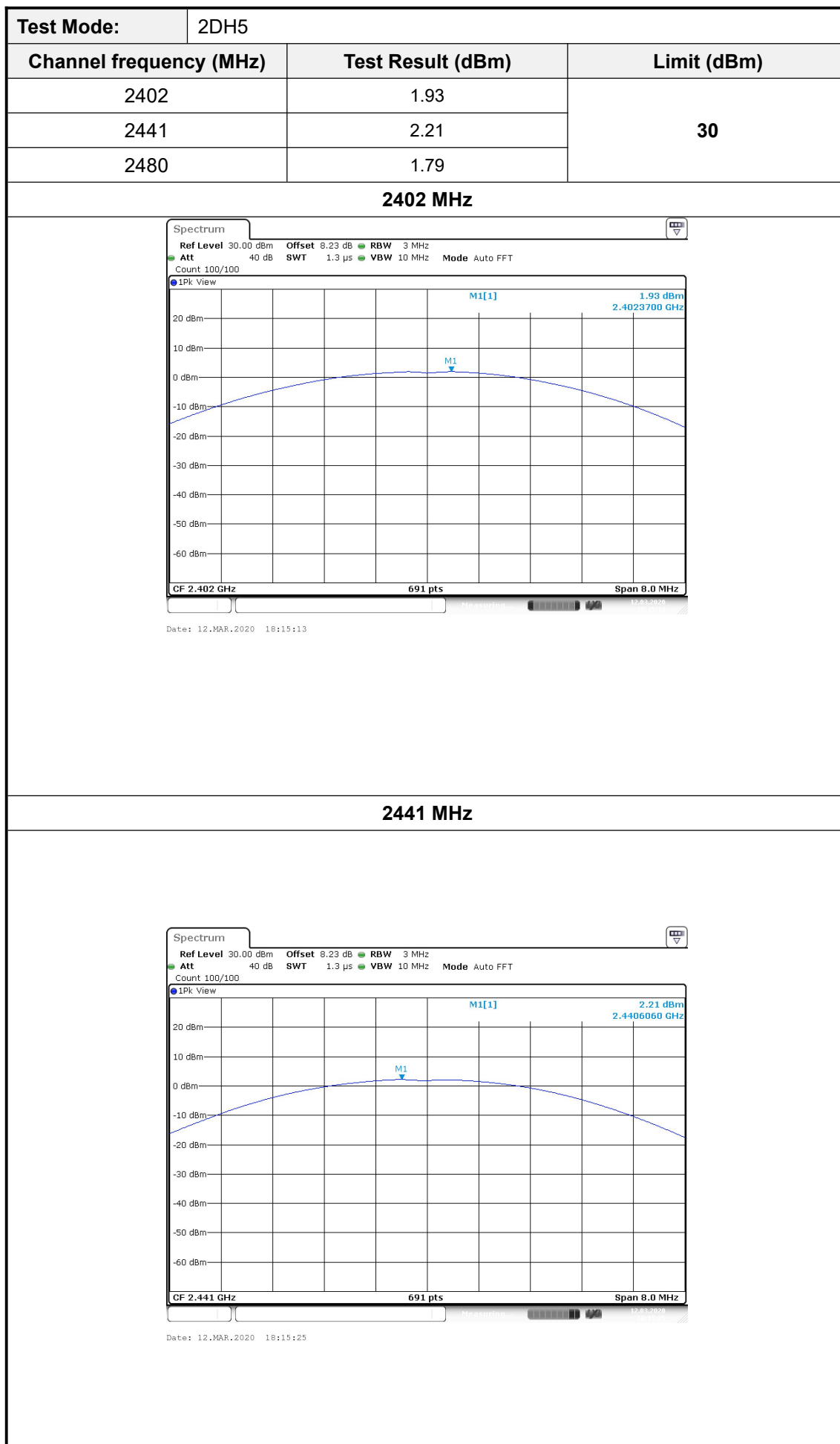
#### Test Result



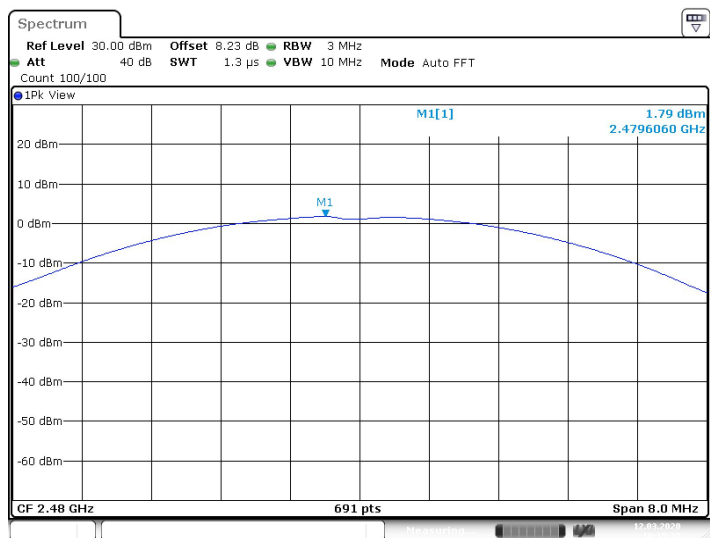
## 2480 MHz



Date: 12.MAR.2020 18:15:00



## 2480 MHz



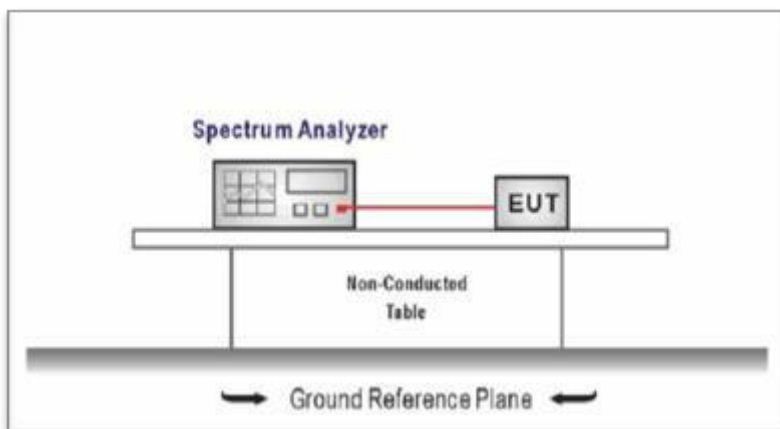
Date: 12.MAR.2020 18:15:36

### 3.4. 99% Occupied Bandwidth & 20dB Bandwidth

#### Limit

| Test Item | Limit                            | Frequency Range(MHz) |
|-----------|----------------------------------|----------------------|
| Bandwidth | $\leq 1$ MHz<br>(20dB bandwidth) | 2400~2483.5          |

#### Test Configuration



#### Test Procedure

- The EUT was directly connected to the spectrum analyzer and antenna output port as show in the block diagram above.
- Spectrum Setting:  
20dB Bandwidth
  - Set RBW = 30 kHz.
  - Set the video bandwidth (VBW)  $\geq 3$  RBW.
  - Detector = Peak.
  - Trace mode = Max hold.
  - Sweep = Auto couple.

99% Occupied Bandwidth

- Set RBW = 20 kHz.
- Set the video bandwidth (VBW) =100 kHz.
- Detector = Peak.
- Trace mode = Max hold.
- Sweep = Auto couple.

NOTE: The EUT was set to continuously transmitting in each mode and low, Middle and high channel for the test.

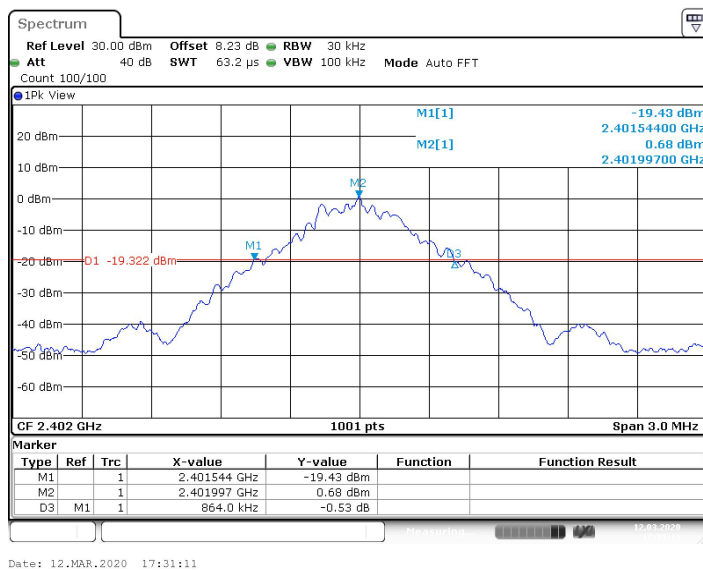
#### Test Mode

Please refer to the clause 2.3.

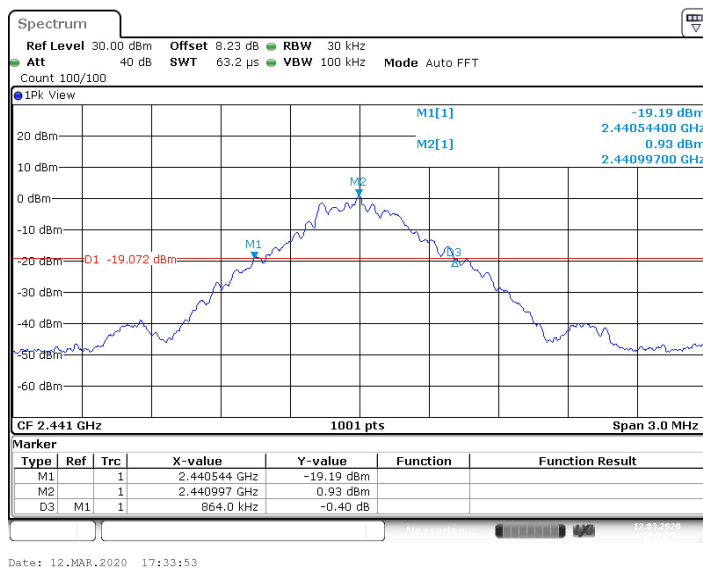
#### Test Results

| Test Mode:              | DH5                  |          |          |         |
|-------------------------|----------------------|----------|----------|---------|
| Channel frequency (MHz) | 20dB Bandwidth [MHz] | FL[MHz]  | FH[MHz]  | Verdict |
| 2402                    | 0.864                | 2401.544 | 2402.408 | PASS    |
| 2441                    | 0.864                | 2440.544 | 2441.408 | PASS    |
| 2480                    | 0.864                | 2479.544 | 2480.408 | PASS    |

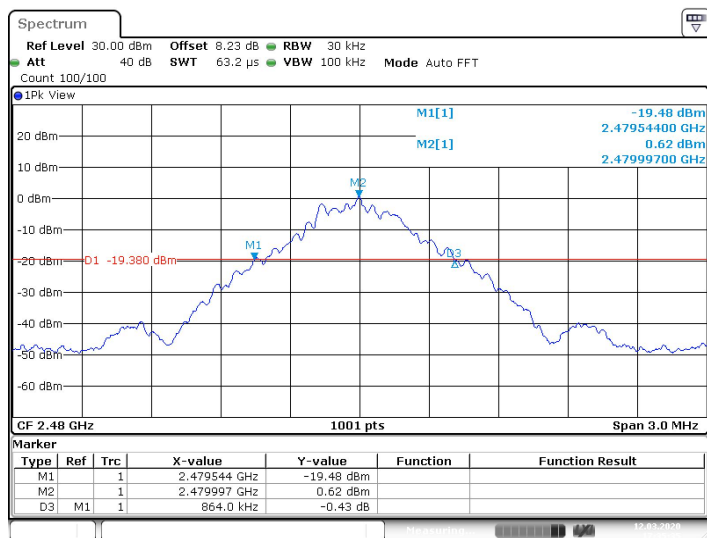
### 2402 MHz



### 2441 MHz

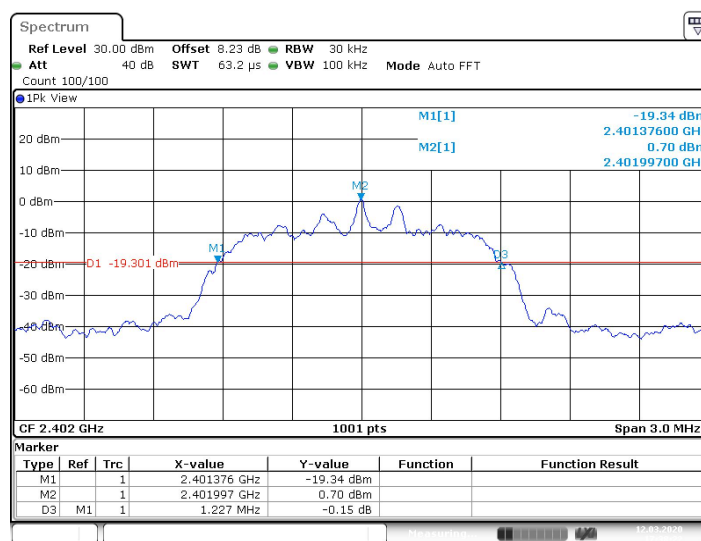


## 2480 MHz

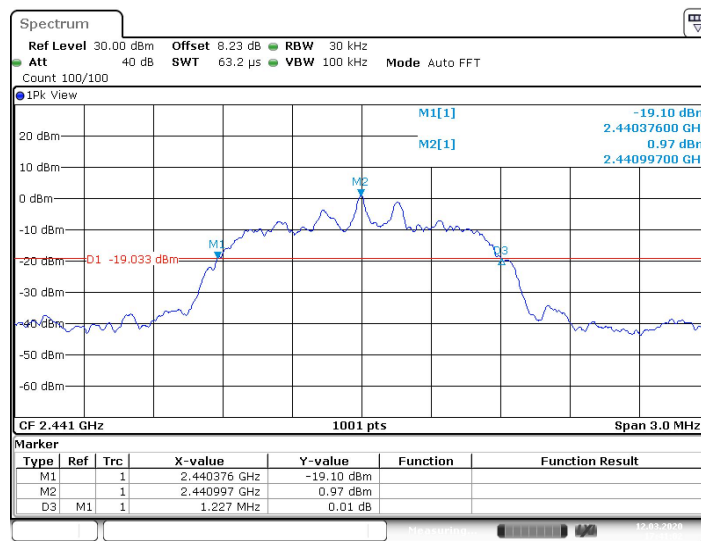


| Test Mode:              | 2DH5                 |          |          |         |
|-------------------------|----------------------|----------|----------|---------|
| Channel frequency (MHz) | 20dB Bandwidth [MHz] | FL[MHz]  | FH[MHz]  | Verdict |
| 2402                    | 1.227                | 2401.376 | 2402.603 | PASS    |
| 2441                    | 1.227                | 2440.376 | 2441.603 | PASS    |
| 2480                    | 1.230                | 2479.373 | 2480.603 | PASS    |

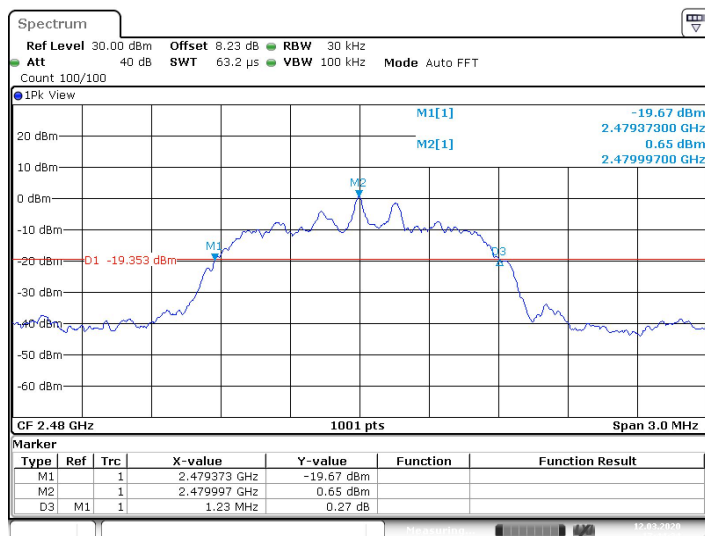
### 2402 MHz



### 2441 MHz



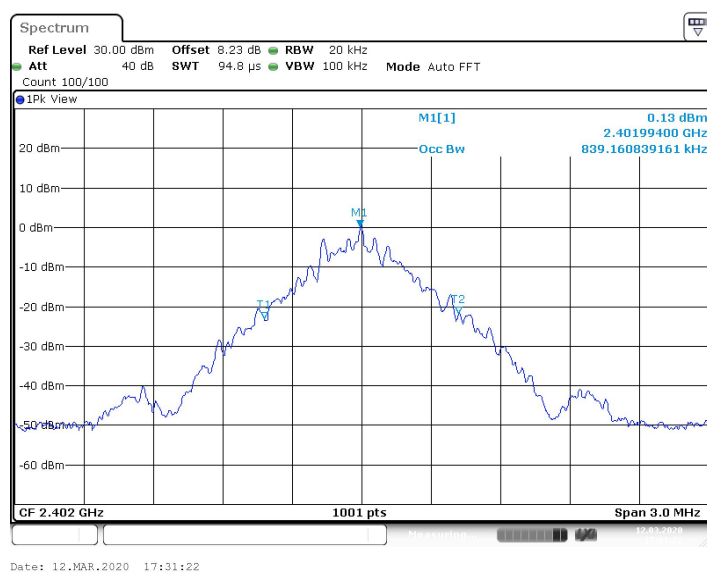
## 2480 MHz



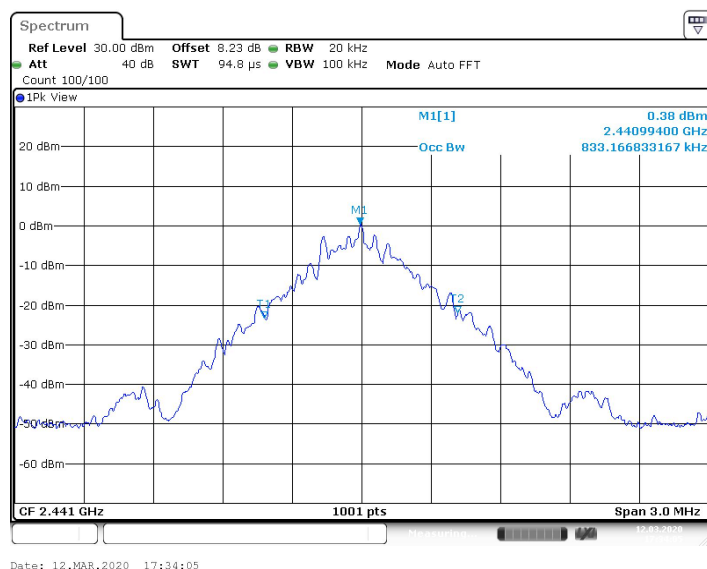
Date: 12.MAR.2020 17:44:34

| Test Mode:              | DH5           |          |          |         |
|-------------------------|---------------|----------|----------|---------|
| Channel frequency (MHz) | 99% OCB [MHz] | FL[MHz]  | FH[MHz]  | Verdict |
| 2402                    | 0.839         | 2401.577 | 2402.417 | PASS    |
| 2441                    | 0.833         | 2440.580 | 2441.414 | PASS    |
| 2480                    | 0.839         | 2479.577 | 2480.417 | PASS    |

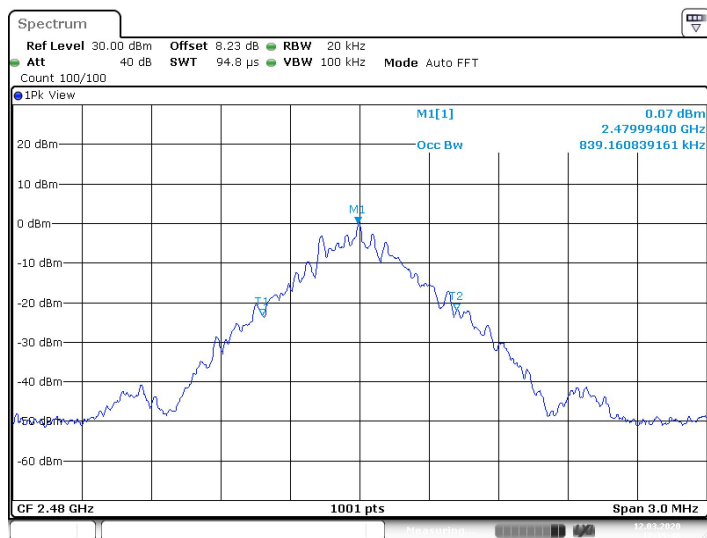
### 2402 MHz



### 2441 MHz

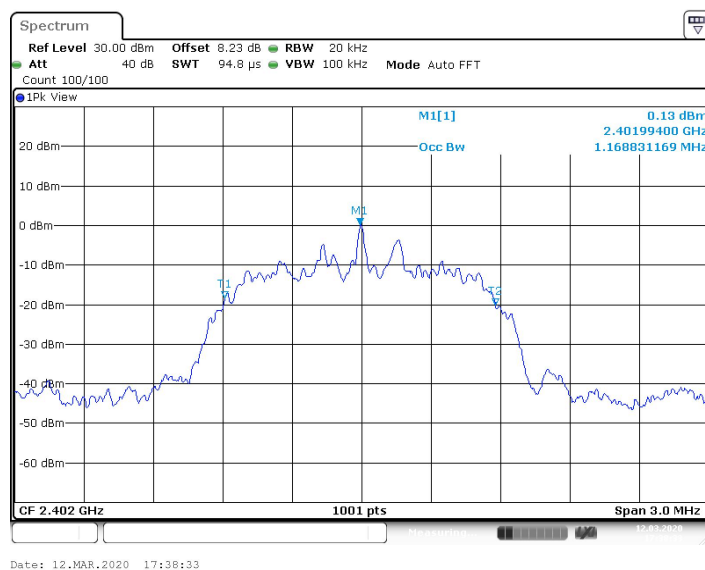


## 2480 MHz

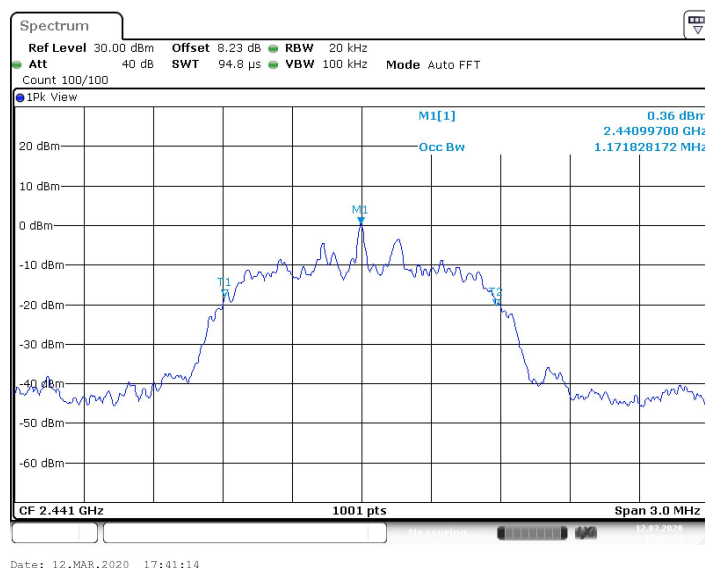


| Test Mode:              | 2DH5          |          |          |         |
|-------------------------|---------------|----------|----------|---------|
| Channel frequency (MHz) | 99% OCB [MHz] | FL[MHz]  | FH[MHz]  | Verdict |
| 2402                    | 1.169         | 2401.410 | 2402.578 | PASS    |
| 2441                    | 1.172         | 2440.410 | 2441.581 | PASS    |
| 2480                    | 1.172         | 2479.410 | 2480.581 | PASS    |

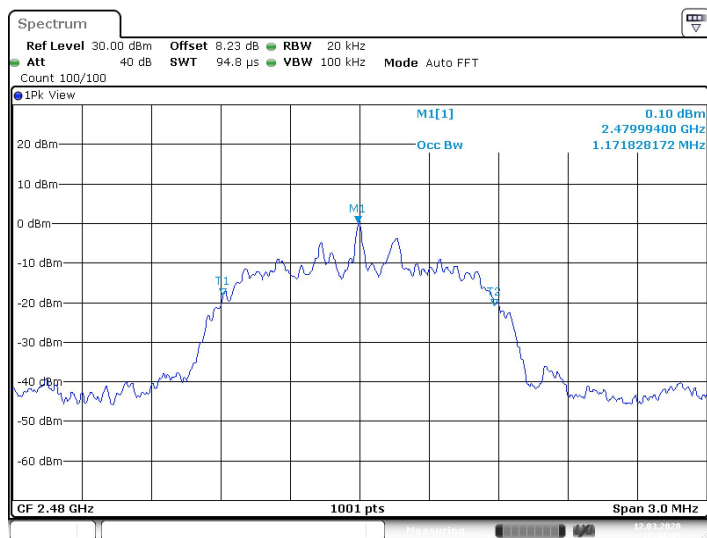
### 2402 MHz



### 2441 MHz



## 2480 MHz



Date: 12.MAR.2020 17:44:46

### 3.5. Carrier Frequencies Separation

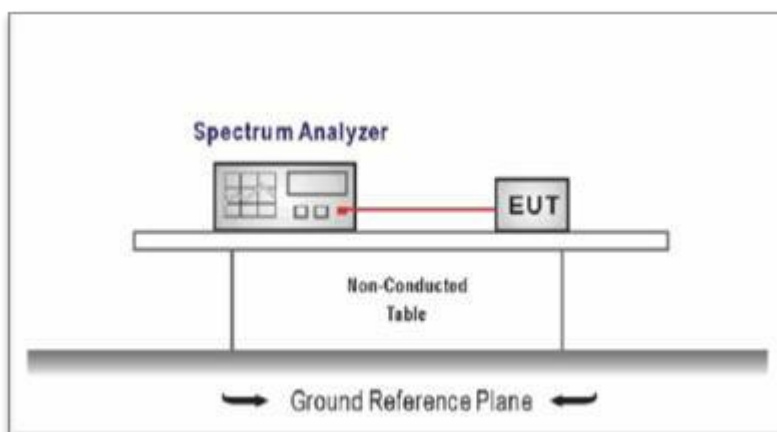
#### LIMIT

FCC CFR Title 47 Part 15 Subpart C Section 15.247 (a)(1):

frequency hopping systems shall have hopping channel carrier frequencies separated by minimum of 25kHz or the  $\frac{2}{3} \times 20\text{dB}$  bandwidth of the hopping channel, whichever is greater.

| Test Item          | Limit                                                            | Frequency Range(MHz) |
|--------------------|------------------------------------------------------------------|----------------------|
| Channel Separation | >25KHz or >two-thirds of the 20 dB bandwidth<br>Which is greater | 2400~2483.5          |

#### Test Configuration



#### Test Procedure

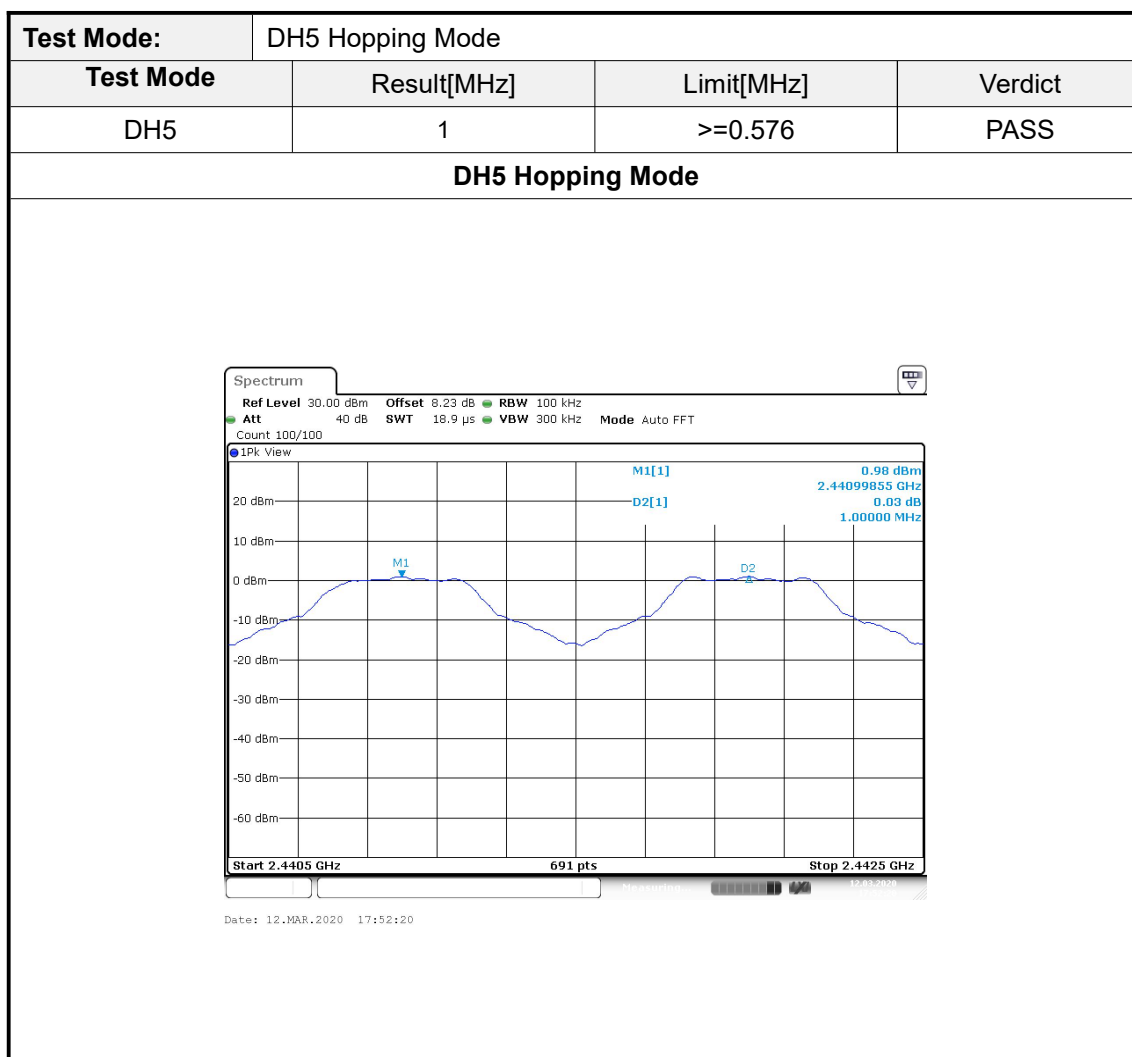
1. The EUT was directly connected to the spectrum analyzer and antenna output port as show in the block diagram above.
2. Spectrum Setting:
  - (1) Set RBW = 100 kHz.
  - (2) Set the video bandwidth (VBW)  $\geq 3$  RBW.
  - (3) Detector = Peak.
  - (4) Trace mode = Max hold.
  - (5) Sweep = Auto couple.

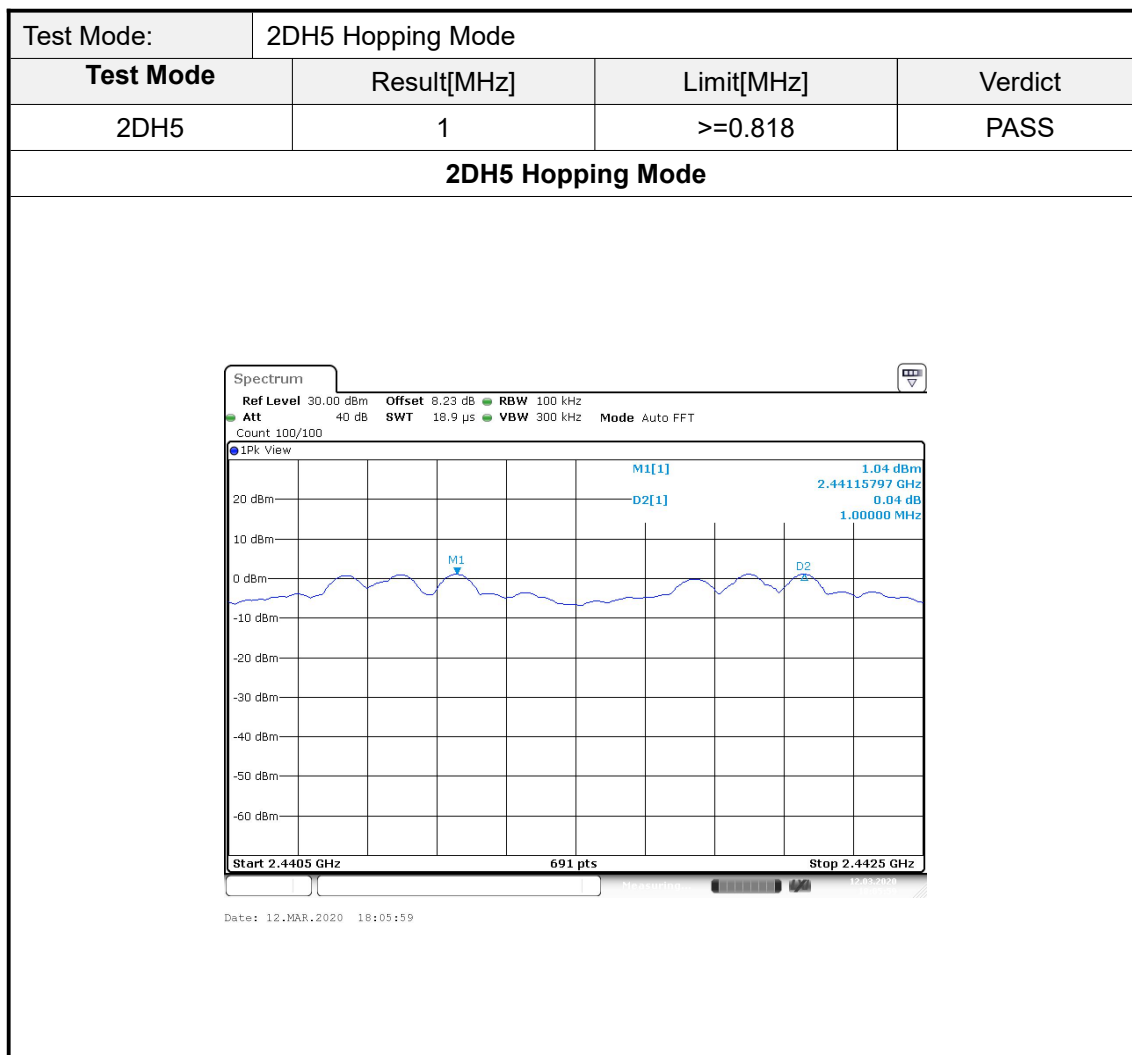
NOTE: The EUT was set to continuously transmitting in each mode and low, middle and high channel for the test, and found the middle channel which is the worse case, so only show the test date for worse case.

#### Test Mode

Please refer to the clause 2.3.

#### Test Results



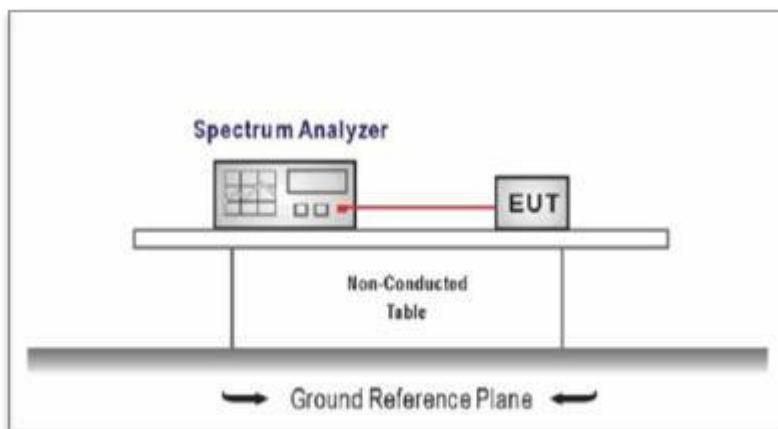


### 3.6. Number of Hopping Channel

#### Limit

| Section | Test Item                 | Limit |
|---------|---------------------------|-------|
| 15.247  | Number of Hopping Channel | >15   |

#### Test Configuration



#### Test Procedure

1. The EUT was directly connected to the spectrum analyzer and antenna output port as show in the block diagram above.
2. Spectrum Setting:
  - (1) Peak Detector: RBW=100 kHz, VBW $\geq$ RBW, Sweep time= Auto.

#### Test Mode

Please refer to the clause 2.3.

#### Test Result

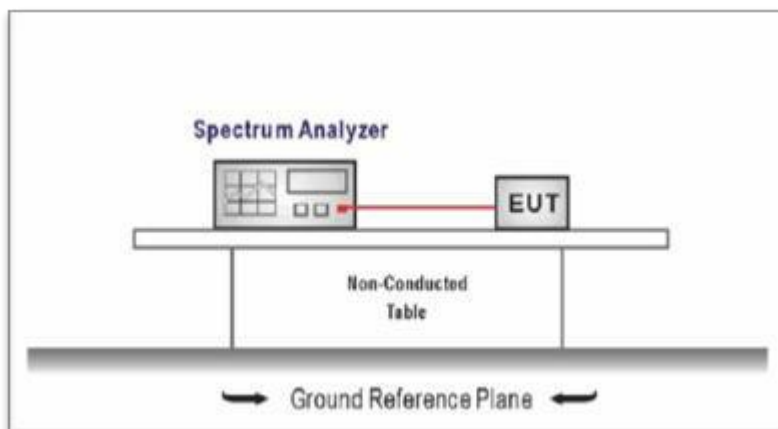


### 3.7. Dwell Time

#### Limit

| Section      | Test Item                 | Limit   |
|--------------|---------------------------|---------|
| 15.247(a)(1) | Average Time of Occupancy | 0.4 sec |

#### Test Configuration



#### Test Procedure

1. The EUT was directly connected to the spectrum analyzer and antenna output port as show in the block diagram above.
2. Spectrum Setting:
  - (1) Spectrum Setting: RBW=1MHz, VBW $\geq$ RBW.
  - (2) Use video trigger with the trigger level set to enable triggering only on full pulses.
  - (3) Sweep Time is more than once pulse time.
  - (4) Set the center frequency on any frequency would be measure and set the frequency span to zero.
  - (5) Measure the maximum time duration of one single pulse.
  - (6) Set the EUT for packet transmitting.

#### Test Mode

Please refer to the clause 2.3

#### Test Result

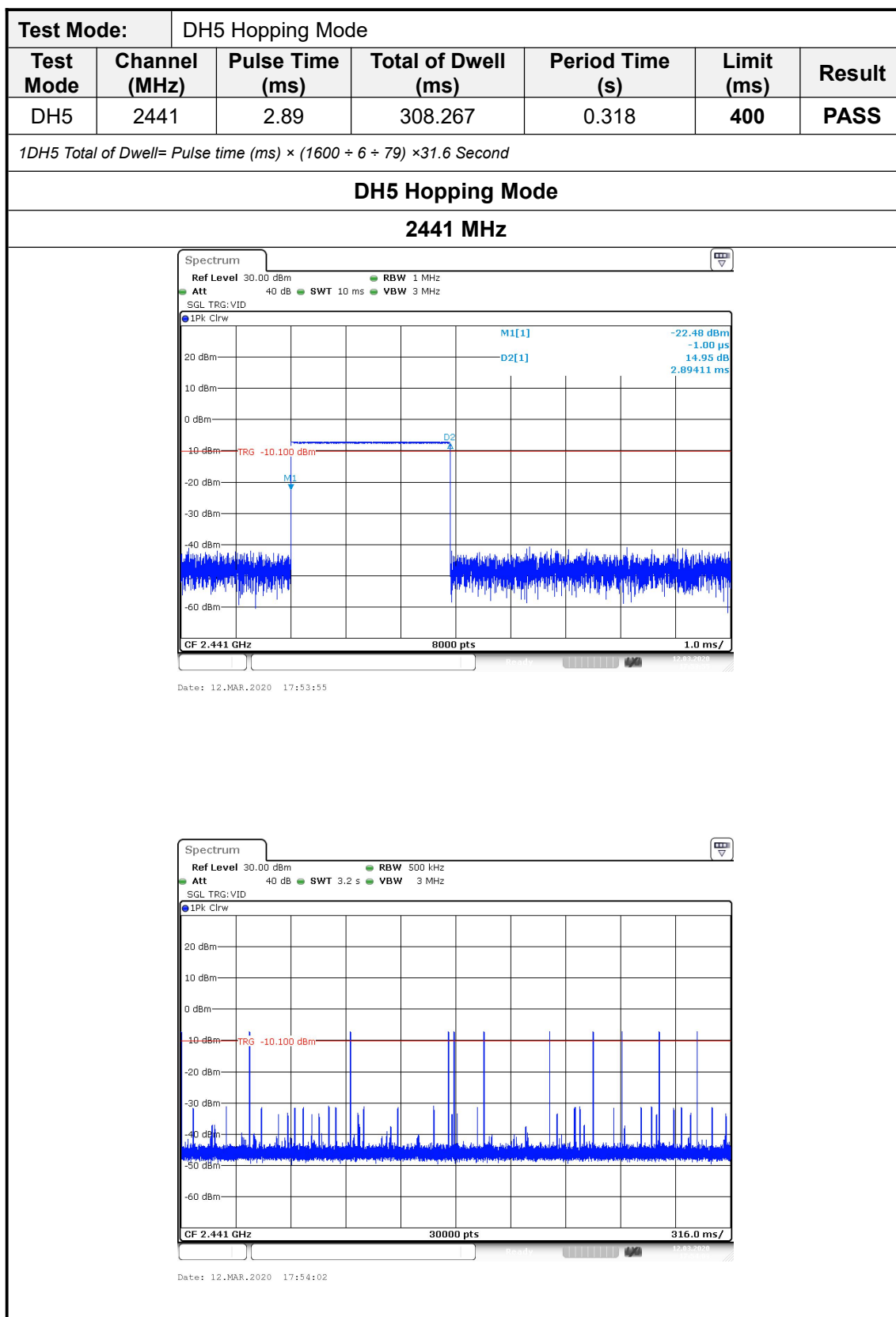
Note:

1.We have tested all mode at high,middle and low channel,and recoreded worst case at middle channel.

2.Dwell time=Pulse time (ms)  $\times$  (1600  $\div$  2  $\div$  79)  $\times$ 31.6 Second for DH1, 2DH1, 3DH1

Dwell time=Pulse time (ms)  $\times$  (1600  $\div$  4  $\div$  79)  $\times$ 31.6 Second for DH3, 2DH3, 3DH3

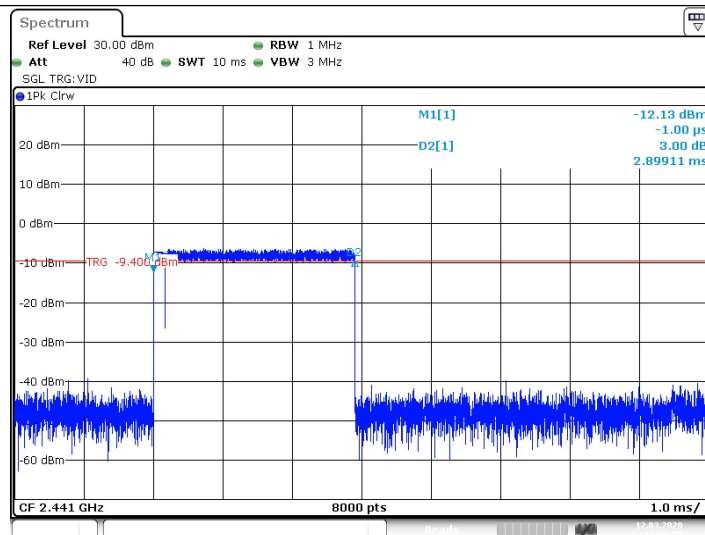
Dwell time=Pulse time (ms)  $\times$  (1600  $\div$  6  $\div$  79)  $\times$ 31.6 Second for DH5, 2DH5, 3DH5



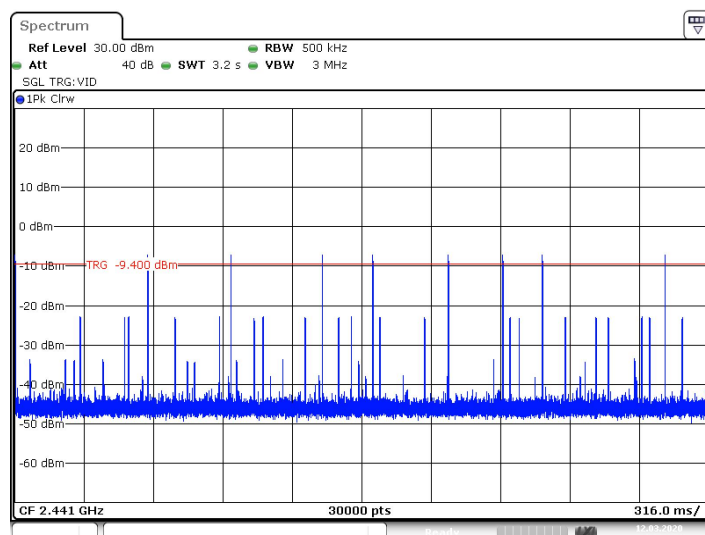
$$2DH5 \text{ Total of Dwell} = \text{Pulse time (ms)} \times (1600 \div 6 \div 79) \times 31.6 \text{ Second}$$

## 2DH5 Hopping Mode

**2441 MHz**



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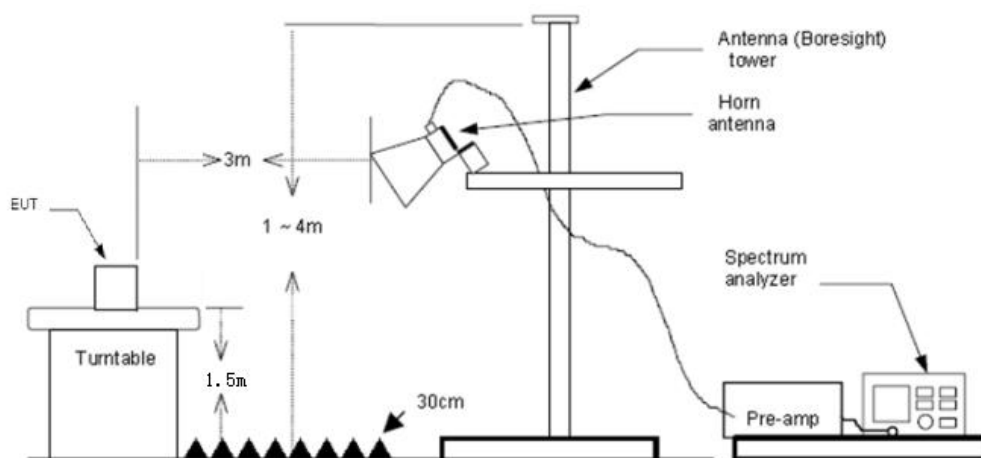
Date: 12 MAR 2020 18:09:04

### 3.8. Band Edge Emissions(Radiated)

#### Limit

| Restricted Frequency Band<br>(MHz)                                                    | (dBuV/m)(at 3m) |         |
|---------------------------------------------------------------------------------------|-----------------|---------|
|                                                                                       | Peak            | Average |
| 2310 ~2390                                                                            | 74              | 54      |
| 2483.5 ~2500                                                                          | 74              | 54      |
| <b>Note: All restriction bands have been tested, only the worst case is reported.</b> |                 |         |

#### Test Configuration



#### Test Procedure

1. The EUT was setup and tested according to ANSI C63.10:2013 requirements.
2. 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.
3. The EUT was positioned such that the distance from antenna to the EUT was 3 meters.
4. The antenna is scanned from 1 meter to 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.
5. The receiver set as follow:  
RBW=1MHz, VBW=3MHz PEAK detector for Peak value.  
RBW=1MHz, VBW=10Hz with Average Detector for Average Value.

#### Test Mode

Please refer to the clause 2.3.

#### Test Results

Note:

1.Measurement = Reading level + Correct Factor

Correct Factor=Antenna Factor + Cable Loss -Preamplifier Factor

2.Pre-scan DH5, 2DH5 modulation, and found the 2DH5 modulation which it is worse case, so only show the test data for worse case.