

# FCC Test Report

**Equipment** : 802.11ac Tri Band PoE Access Point  
**Brand Name** : LITE-ON, MOJO  
**Model No.** : WP8333V1, C-110  
**FCC ID** : PPQ-WP8333V1  
**Standard** : 47 CFR FCC Part 15.247  
**Operating Band** : 2400 MHz – 2483.5 MHz  
**Applicant** : LITE-ON Technology Corp.  
Bldg. C, 90, Chien 1 Rd., Chung-Ho, New Taipei City,  
23585 Taiwan  
**Manufacturer** : Lite-On Network Communication (Dongguan) Limited  
30#Keji Rd., Yin Hu Industrial Area, Qingxi  
Town, DongGuan City, Guangdong, China

The product sample received on Apr. 17, 2017 and completely tested on Jun. 15, 2017. We, SPORTON, would like to declare that the tested sample has been evaluated in accordance with the procedures given inanes and shown compliance with the applicable technical standards.

The test results in this report apply exclusively to the tested model / sample. Without written approval of SPORTON INTERNATIONAL INC., the test report shall not be reproduced except in full.

  
Cliff Chang  
SPORTON INTERNATIONAL INC.



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## Summary of Test Result

| Conformance Test Specifications |                  |                                                     |                                 |          |
|---------------------------------|------------------|-----------------------------------------------------|---------------------------------|----------|
| Report Clause                   | Ref. Std. Clause | Description                                         | Limit                           | Result   |
| 1.1.2                           | 15.203           | Antenna Requirement                                 | FCC 15.203                      | Complied |
| 3.1                             | 15.207           | AC Power-line Conducted Emissions                   | FCC 15.207                      | Complied |
| 3.2                             | 15.247(a)        | 20dB Bandwidth                                      | 15.247(a)                       | Complied |
| 3.2                             | 15.247(a)        | Carrier Frequency Separation                        | 15.247(a)                       | Complied |
| 3.3                             | 15.247(b)        | Maximum Conducted Output Power                      | 15.247(b)                       | Complied |
| 3.4                             | 15.247(a)        | Number of Hopping Frequencies and Hopping Band edge | 15.247(a)                       | Complied |
| 3.5                             | 15.247(a)        | Time of Occupancy (Dwell Time)                      | 15.247(a)                       | Complied |
| 3.6                             | 15.247(d)        | Emissions in Non-restricted Frequency Bands         | 15.247(d)                       | Complied |
| 3.7                             | 15.247(d)        | Emissions in Restricted Frequency Bands             | Restricted Bands:<br>FCC 15.209 | Complied |



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FCC ID: PPQ-WP8333V1

# 1 General Description

## 1.1 Information

### 1.1.1 RF General Information

| Frequency Range (MHz) | Bluetooth Version | Ch. Frequency (MHz) | Channel Number |
|-----------------------|-------------------|---------------------|----------------|
| 2400-2483.5           | BR / EDR          | 2402-2480           | 0-78 [79]      |

| Band          | Mode          | BWch (MHz) | Nant |
|---------------|---------------|------------|------|
| 2.4-2.4835GHz | BT-BR(1Mbps)  | 1          | 1TX  |
| 2.4-2.4835GHz | BT-EDR(2Mbps) | 1          | 1TX  |
| 2.4-2.4835GHz | BT-EDR(3Mbps) | 1          | 1TX  |

**Note:**

- ♦ Bluetooth BR uses a GFSK (1Mbps).
- ♦ Bluetooth EDR uses a combination of  $\pi/4$ -DQPSK (2Mbps) and 8DPSK (3Mbps).
- ♦ Bluetooth BR/EDR uses as a system using FHSS modulation.
- ♦ BWch is the channel separation
- ♦ Nss-Min is the minimum number of spatial streams.
- ♦ Nant is the number of outputs. e.g., 2(2, 3) means have 2 outputs for port 2 and port 3. 2 means have 2 outputs for port 1 and port 2.

**1.1.2 Antenna Information**

| Ant. | Brand Holder                    | Model Name    | Antenna Type | Connector | Radio |
|------|---------------------------------|---------------|--------------|-----------|-------|
| 1    | Master Wave Technology CO., LTD | 98P7NPIPF000  | PCB Antenna  | I-PEX     | R1    |
| 2    | Master Wave Technology CO., LTD | 98P7NPIPF001  | PCB Antenna  | I-PEX     | R1    |
| 3    | Master Wave Technology CO., LTD | 98P7PUPIPF000 | PCB Antenna  | I-PEX     | R2    |
| 4    | Master Wave Technology CO., LTD | 98P7QUIPF000  | PCB Antenna  | I-PEX     | R2    |
| 5    | Master Wave Technology CO., LTD | 98P7RPIPF000  | PCB Antenna  | I-PEX     | R3    |
| 6    | Master Wave Technology CO., LTD | 98P7RPIPF001  | PCB Antenna  | I-PEX     | R3    |
| 7    | Master Wave Technology CO., LTD | 98P7SMIPF000  | PCB Antenna  | I-PEX     | R4    |

| Ant. | Gain (dBi) |       |       |         |       |         |       |       |       |       |         |
|------|------------|-------|-------|---------|-------|---------|-------|-------|-------|-------|---------|
|      | Radio 1    |       |       | Radio 2 |       | Radio 3 |       |       |       |       | Radio 4 |
|      | 2.4G       | 5G B1 | 5G B4 | 5G B1   | 5G B4 | 2.4G    | 5G B1 | 5G B2 | 5G B3 | 5G B4 | BT      |
| 1    | 6.3        | 4.3   | 5.3   | -       | -     | -       | -     | -     | -     | -     | -       |
| 2    | 6.5        | 4.9   | 6.1   | -       | -     | -       | -     | -     | -     | -     | -       |
| 3    | -          | -     | -     | 5.6     | 5.9   | -       | -     | -     | -     | -     | -       |
| 4    | -          | -     | -     | 5.6     | 4.6   | -       | -     | -     | -     | -     | -       |
| 5    | -          | -     | -     | -       | -     | 6.5     | 4.7   | 4.7   | 5.6   | 6.0   | -       |
| 6    | -          | -     | -     | -       | -     | 6.5     | 4.8   | 5.4   | 5.8   | 5.5   | -       |
| 7    | -          | -     | -     | -       | -     | -       | -     | -     | -     | -     | 2.1     |

Note1: The EUT has seven antennas.

Note2: The EUT contain Radio 3 (2.4G)/(5G) RF module (Model Name: WM862FEMD)

FCC ID: PPQ-WM862FEMD)

**For 2.4GHz function:**

For IEEE 802.11b/g/n/ac mode (2TX/2RX)

**Radio 1**

Ant. 1 (port 1) and Ant. 2 (port 2) could transmit/receive simultaneously.

**Radio 3**

Ant. 5 (port 1) and Ant. 6 (port 2) could transmit/receive simultaneously.

**For 5GHz function:**

For IEEE 802.11a/n/ac mode (2TX/2RX)

**Radio 1 (For B1 and B4)**

Ant. 1 (port 1) and Ant. 2 (port 2) could transmit/receive simultaneously.

**Radio 2 (For B1 and B4)**

Ant. 3 (port 1) and Ant. 4 (port 2) could transmit/receive simultaneously.

**Radio 3 (For B1~B4)**

Ant. 5 (port 1) and Ant. 6 (port 2) could transmit/receive simultaneously.

**For bluetooth function:**

For bluetooth mode (1TX/1RX)

**Radio 4**

Only Ant. 7 (port 1) can be used as transmitting/receiving antenna.

### 1.1.3 Mode Test Duty Cycle

| Mode          | DC    | DCF(dB) |
|---------------|-------|---------|
| BT-BR(1Mbps)  | 0.44  | 3.565   |
| BT-EDR(2Mbps) | 0.436 | 3.605   |
| BT-EDR(3Mbps) | 0.47  | 3.279   |

### 1.1.4 EUT Operational Condition

|                       |                           |
|-----------------------|---------------------------|
| <b>EUT Power Type</b> | From Power Adapter or PoE |
|-----------------------|---------------------------|

### 1.1.5 Table for Multiple Listing

The brand/model names in the following table are all refer to the identical product.

| Brand Name | Model Name | Description                                                                                                |
|------------|------------|------------------------------------------------------------------------------------------------------------|
| LITE-ON    | WP8333V1   | All the models are identical, the difference model name for difference brand served as marketing strategy. |
| MOJO       | C-110      |                                                                                                            |

From the above models, model: WP8333V1 was selected as representative model for the test and its data was recorded in this report.

### 1.1.6 Table for Explanation of Flash

| EUT No. | Brand name | Model name        | Flash   |
|---------|------------|-------------------|---------|
| 1       | winbond    | 25Q256JVFQ        | 32M+32M |
| 2       | MXIC       | MX25L51245GMI-08G | 64M     |

## 1.2 Testing Applied Standards

According to the specifications of the manufacturer, the EUT must comply with the requirements of the following standards:

- ♦ 47 CFR FCC Part 15
- ♦ FCC Public Notice DA 00-705

## 1.3 Testing Location Information

| Testing Location                    |        |                                                                                                                               |
|-------------------------------------|--------|-------------------------------------------------------------------------------------------------------------------------------|
| <input type="checkbox"/>            | HWA YA | ADD : No. 52, Hwa Ya 1st Rd., Kwei-Shan Hsiang, Tao Yuan Hsien, Taiwan, R.O.C.<br>TEL : 886-3-327-3456 FAX : 886-3-318-0055   |
| <input checked="" type="checkbox"/> | JHUBEI | ADD : No.8, Lane 724, Bo-ai St., Jhubei City, HsinChu County 302, Taiwan, R.O.C.<br>TEL : 886-3-656-9065 FAX : 886-3-656-9085 |

| Test Condition      | Test Site No. | Test Engineer           | Test Environment | Test Date                    |
|---------------------|---------------|-------------------------|------------------|------------------------------|
| RF Conducted        | TH01-CB       | Ron Huang & Peter Wu    | 23.1°C / 75%     | May 15, 2017 ~ Jun. 02, 2017 |
| Radiated below 1GHz | 03CH01-CB     | Joy Tseng & Welson Chen | 22°C / 54%       | Jun. 15, 2017                |
| Radiated above 1GHz | 03CH01-CB     | Joy Tseng & Welson Chen | 22°C / 54%       | May 11, 2017 ~ Jun. 15, 2017 |
| AC Conduction       | CO01-CB       | Kane Liu                | 21°C / 60%       | Jun. 03, 2017                |

Test site Designation No. TW0006 with FCC.

Test site registered number IC 4086D with Industry Canada.

## 1.4 Measurement Uncertainty

ISO/IEC 17025 requires that an estimate of the measurement uncertainties associated with the emissions test results be included in the report. The measurement uncertainties given below are based on a 95% confidence level (based on a coverage factor (k=2))

| Test Items                           | Uncertainty            | Remark                   |
|--------------------------------------|------------------------|--------------------------|
| Conducted Emission (150kHz ~ 30MHz)  | 3.2 dB                 | Confidence levels of 95% |
| Radiated Emission (30MHz ~ 1,000MHz) | 3.6 dB                 | Confidence levels of 95% |
| Radiated Emission (1GHz ~ 18GHz)     | 3.7 dB                 | Confidence levels of 95% |
| Radiated Emission (18GHz ~ 40GHz)    | 3.5 dB                 | Confidence levels of 95% |
| Conducted Emission                   | 1.7 dB                 | Confidence levels of 95% |
| Output Power Measurement             | 1.33 dB                | Confidence levels of 95% |
| Bandwidth Measurement                | 9.74 x10 <sup>-8</sup> | Confidence levels of 95% |

## 2 Test Configuration of EUT

### 2.1 Test Channel Mode

| Mode          | Power Setting |
|---------------|---------------|
| BT-BR(1Mbps)  | -             |
| 2402MHz       | 8             |
| 2440MHz       | 8             |
| 2480MHz       | 8             |
| BT-EDR(2Mbps) | -             |
| 2402MHz       | 8             |
| 2440MHz       | 8             |
| 2480MHz       | 8             |
| BT-EDR(3Mbps) | -             |
| 2402MHz       | 8             |
| 2440MHz       | 8             |
| 2480MHz       | 8             |

## 2.2 The Worst Case Measurement Configuration

| The Worst Case Mode for Following Conformance Tests                                                                           |                                                             |
|-------------------------------------------------------------------------------------------------------------------------------|-------------------------------------------------------------|
| <b>Tests Item</b>                                                                                                             | AC power-line conducted emissions                           |
| <b>Condition</b>                                                                                                              | AC power-line conducted measurement for line and neutral    |
| <b>Operating Mode</b>                                                                                                         | Normal Link                                                 |
| 1                                                                                                                             | EUT 1 - R1 (2.4G) + R2 (5G) + R3 (2.4G) + R4 (BT) + Adapter |
| 2                                                                                                                             | EUT 1 - R1 (2.4G) + R2 (5G) + R3 (5G) + R4 (BT) + Adapter   |
| Mode 2 has been evaluated to be the worst case between Mode 1~2, thus measurement for Mode 3 will follow this same test mode. |                                                             |
| 3                                                                                                                             | EUT 1 - R1 (5G) + R2 (5G) + R3 (5G) + R4 (BT) + Adapter     |
| For operating mode 3 is the worst case and it was record in this test report.                                                 |                                                             |

| The Worst Case Mode for Following Conformance Tests |                                                                                                                                                                                                                        |
|-----------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>Tests Item</b>                                   | 20dB Bandwidth<br>Carrier Frequency Separation<br>Maximum Conducted Output Power<br>Number of Hopping Frequencies<br>Hopping Bandedge<br>Time of Occupancy (Dwell Time)<br>Emissions in Non-restricted Frequency Bands |
| <b>Test Condition</b>                               | Conducted measurement at transmit chains                                                                                                                                                                               |

| <b>The Worst Case Mode for Following Conformance Tests</b>                                                                  |                                                                                                                                                                                                                                                     |
|-----------------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>Tests Item</b>                                                                                                           | Emissions in Restricted Frequency Bands                                                                                                                                                                                                             |
| <b>Test Condition</b>                                                                                                       | Radiated measurement<br>If EUT consist of multiple antenna assembly (multiple antenna are used in EUT regardless of spatial multiplexing MIMO configuration), the radiated test should be performed with highest antenna gain of each antenna type. |
| <b>Operating Mode &lt; 1GHz</b>                                                                                             | Normal Link                                                                                                                                                                                                                                         |
| 1                                                                                                                           | EUT 1 in Y axis - R1 (2.4G) + R2 (5G) + R3 (2.4G) + R4 (BT) + Adapter                                                                                                                                                                               |
| 2                                                                                                                           | EUT 1 in Z axis - R1 (2.4G) + R2 (5G) + R3 (2.4G) + R4 (BT) + Adapter                                                                                                                                                                               |
| Mode 1 has been evaluated to be the worst case among Mode 1~2, thus measurement for Mode 3 will follow this same test mode. |                                                                                                                                                                                                                                                     |
| 3                                                                                                                           | EUT 1 in Y axis - R1 (2.4G) + R2 (5G) + R3 (5G) + R4 (BT) + Adapter                                                                                                                                                                                 |
| Mode 1 has been evaluated to be the worst case among Mode 1~3, thus measurement for Mode 4 will follow this same test mode. |                                                                                                                                                                                                                                                     |
| 4                                                                                                                           | EUT 1 in Y axis - R1 (5G) + R2 (5G) + R3 (2.4G) + R4 (BT) + Adapter                                                                                                                                                                                 |
| Mode 1 has been evaluated to be the worst case among Mode 1~4, thus measurement for Mode 5 will follow this same test mode. |                                                                                                                                                                                                                                                     |
| 5                                                                                                                           | EUT 1 in Y axis - R1 (2.4G) + R2 (5G) + R3 (2.4G) + R4 (BT) + PoE                                                                                                                                                                                   |
| Mode 5 has been evaluated to be the worst case among Mode 1~5, thus measurement for Mode 6 will follow this same test mode. |                                                                                                                                                                                                                                                     |
| 6                                                                                                                           | EUT 2 in Y axis - R1 (2.4G) + R2 (5G) + R3 (2.4G) + R4 (BT) + PoE                                                                                                                                                                                   |
| For operating mode 5 is the worst case and it was record in this test report.                                               |                                                                                                                                                                                                                                                     |
| <b>Operating Mode &gt; 1GHz</b>                                                                                             | CTX<br>The EUT was performed at X axis, Y axis and Z axis position for Radiated emission above 1GHz test, and the worst case was found at X axis. So the measurement will follow this same test configuration.                                      |
| 1                                                                                                                           | EUT 2 in X axis - R4 (BT)                                                                                                                                                                                                                           |

| <b>The Worst Case Mode for Following Conformance Tests</b>                    |                                                                    |
|-------------------------------------------------------------------------------|--------------------------------------------------------------------|
| <b>Tests Item</b>                                                             | Simultaneous Transmission Analysis - Radiated Emission Co-location |
| <b>Test Condition</b>                                                         | Radiated measurement                                               |
| <b>Operating Mode</b>                                                         | Normal Link                                                        |
| 1                                                                             | EUT 2 - R1 (2.4G) + R2 (5G) + R3 (2.4G) + R4 (BT)                  |
| 2                                                                             | EUT 2 - R1 (2.4G) + R2 (5G) + R3 (5G) + R4 (BT)                    |
| 3                                                                             | EUT 2 - R1 (5G) + R2 (5G) + R3 (2.4G) + R4 (BT)                    |
| 4                                                                             | EUT 2 - R1 (5G) + R2 (5G) + R3 (5G) + R4 (BT)                      |
| For operating mode 4 is the worst case and it was record in this test report. |                                                                    |
| Refer to Appendix H for Radiated Emission Co-location.                        |                                                                    |

| <b>The Worst Case Mode for Following Conformance Tests</b>                         |                                                                         |
|------------------------------------------------------------------------------------|-------------------------------------------------------------------------|
| <b>Tests Item</b>                                                                  | Simultaneous Transmission Analysis - Co-location RF Exposure Evaluation |
| <b>Operating Mode</b>                                                              |                                                                         |
| 1                                                                                  | EUT 2 - R1 (2.4G) + R2 (5G) + R3 (2.4G) + R4 (BT)                       |
| 2                                                                                  | EUT 2 - R1 (2.4G) + R2 (5G) + R3 (5G) + R4 (BT)                         |
| 3                                                                                  | EUT 2 - R1 (5G) + R2 (5G) + R3 (2.4G) + R4 (BT)                         |
| 4                                                                                  | EUT 2 - R1 (5G) + R2 (5G) + R3 (5G) + R4 (BT)                           |
| Refer to Sporton Test Report No.: FA741722 for Co-location RF Exposure Evaluation. |                                                                         |

Note: The PoE and Adapter were for measurement only, would not be marketed.

The PoE and Adapter information as below:

| <b>Support Unit</b> | <b>Brand</b> | <b>Model Number</b> |
|---------------------|--------------|---------------------|
| PoE                 | Ruckus       | 740-64214-001       |
| Adapter             | APD          | WB-18D12FU          |

## 2.3 EUT Operation during Test

The EUT was programmed to be in continuously transmitting mode.

## 2.4 Accessories

N/A

## 2.5 Support Equipment

**For Test Site No: CO01-CB**

| Support Equipment |               |            |              |              |
|-------------------|---------------|------------|--------------|--------------|
| No.               | Equipment     | Brand Name | Model Name   | FCC ID       |
| 1                 | NB*5          | DELL       | E6430        | DoC          |
| 2                 | Device        | LITE-ON    | WP8333V1     | PPQ-WP8333V1 |
| 3                 | Flash disk3.0 | Transcend  | JetFlash-700 | DoC          |
| 4                 | Adapter       | APD        | WB-18D12FU   | DoC          |

**For Test Site No: 03CH01-CB (below 1GHz)**

| Support Equipment |               |               |               |              |
|-------------------|---------------|---------------|---------------|--------------|
| No.               | Equipment     | Brand Name    | Model Name    | FCC ID       |
| 1                 | NB*5          | DELL          | E4300         | DoC          |
| 2                 | Device        | LITE-ON       | WP8333V1      | PPQ-WP8333V1 |
| 3                 | Flash disk3.0 | Silicon Power | B06           | DoC          |
| 4                 | PoE           | Ruckus        | 740-64214-001 | DoC          |

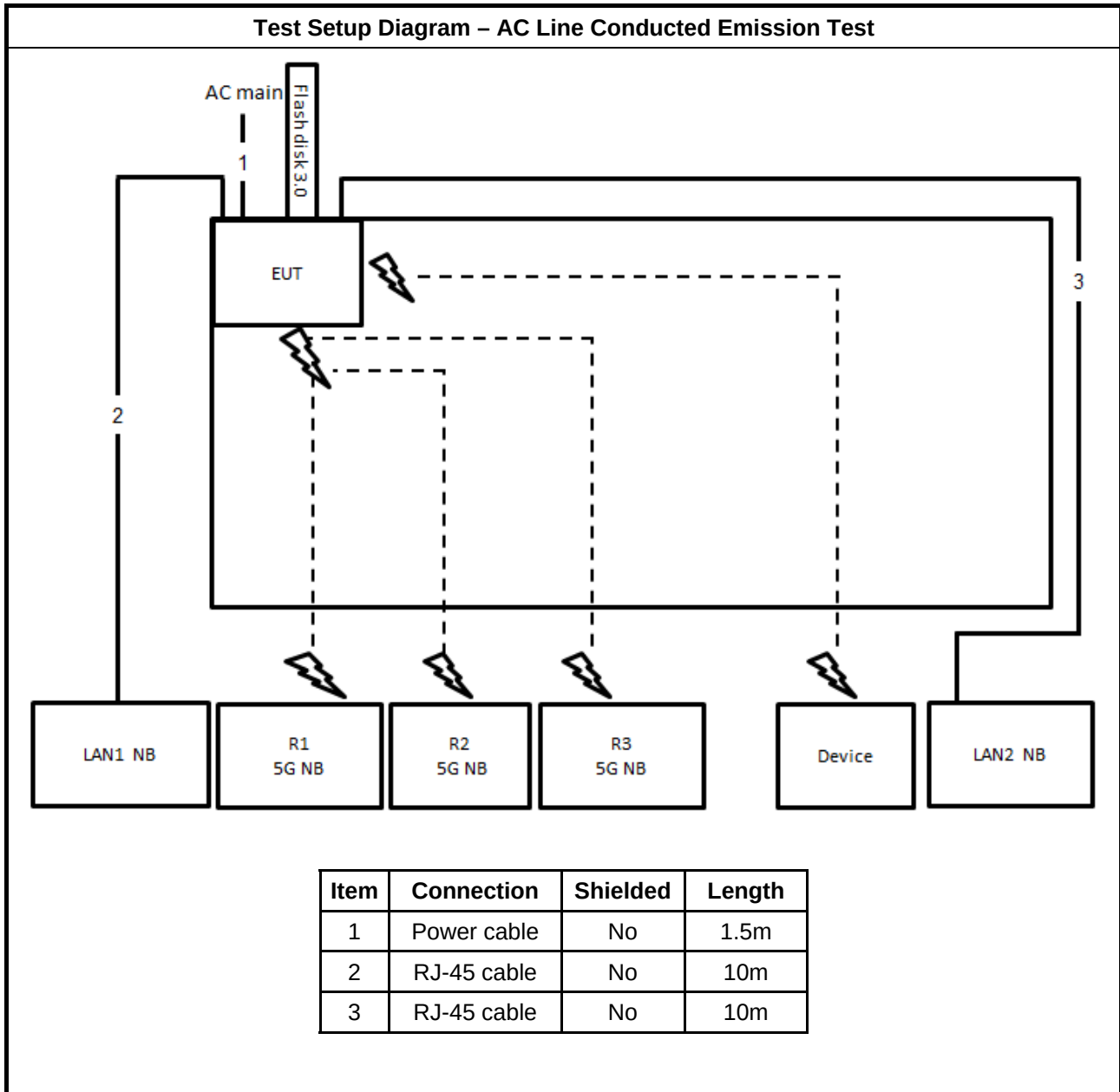
**For Test Site No: 03CH01-CB (above 1GHz)**

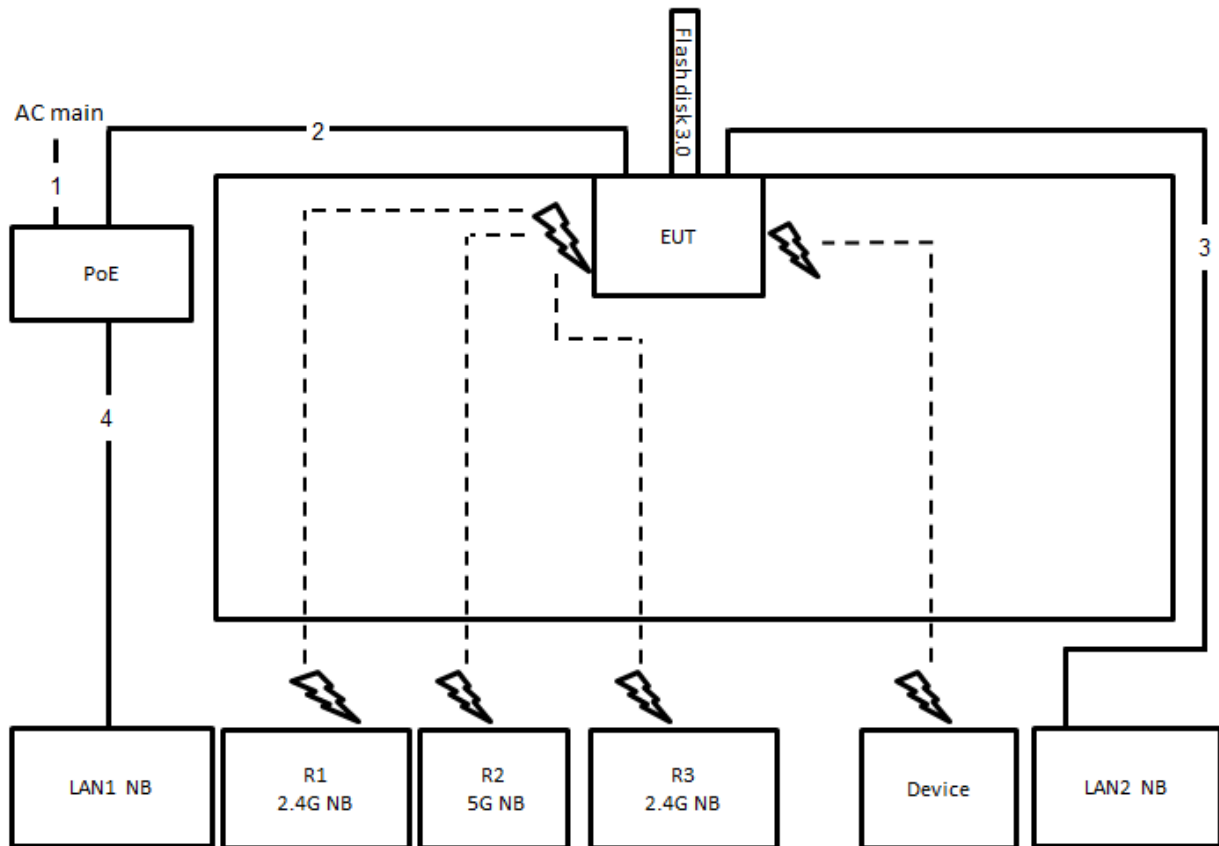
| Support Equipment |           |            |            |        |
|-------------------|-----------|------------|------------|--------|
| No.               | Equipment | Brand Name | Model Name | FCC ID |
| 1                 | NB        | DELL       | E4300      | DoC    |
| 2                 | Adapter   | APD        | WB-18D12FU | DoC    |

**For Test Site No: TH01-CB**

| Support Equipment |           |            |            |        |
|-------------------|-----------|------------|------------|--------|
| No.               | Equipment | Brand Name | Model Name | FCC ID |
| 1                 | NB        | DELL       | E4300      | DoC    |
| 2                 | Adapter   | APD        | WB-18D12FU | DoC    |

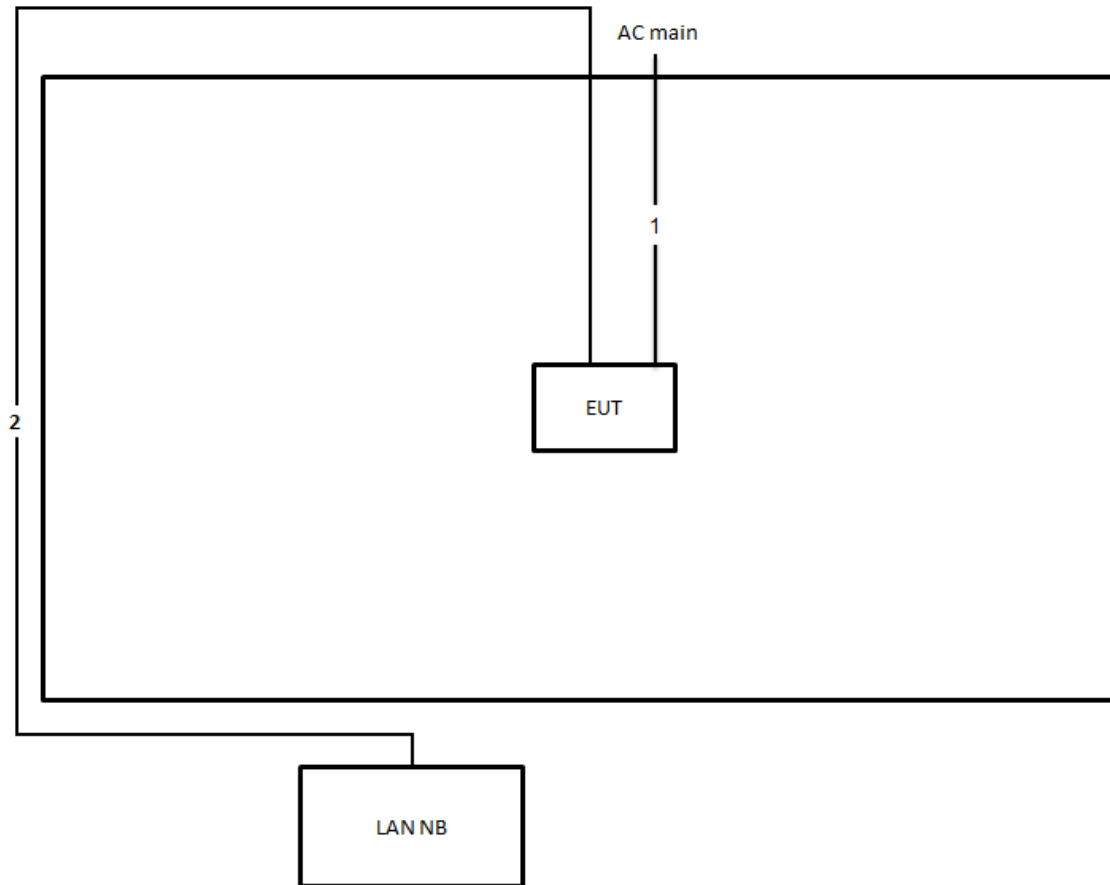
## 2.6 Test Setup Diagram



**Test Setup Diagram - Radiated Test < 1GHz**


| Item | Connection  | Shielded | Length |
|------|-------------|----------|--------|
| 1    | Power cable | No       | 0.7m   |
| 2    | RJ-45 cable | No       | 10m    |
| 3    | RJ-45 cable | No       | 10m    |
| 4    | RJ-45 cable | No       | 1.5m   |

**Test Setup Diagram - Radiated Test > 1GHz**



| Item | Connection  | Shielded | Length |
|------|-------------|----------|--------|
| 1    | Power cable | No       | 1.5m   |
| 2    | RJ-45 cable | No       | 10m    |

### 3 Transmitter Test Result

#### 3.1 AC Power-line Conducted Emissions

##### 3.1.1 AC Power-line Conducted Emissions Limit

| AC Power-line Conducted Emissions Limit |            |           |
|-----------------------------------------|------------|-----------|
| Frequency Emission (MHz)                | Quasi-Peak | Average   |
| 0.15-0.5                                | 66 - 56 *  | 56 - 46 * |
| 0.5-5                                   | 56         | 46        |
| 5-30                                    | 60         | 50        |

Note 1: \* Decreases with the logarithm of the frequency.

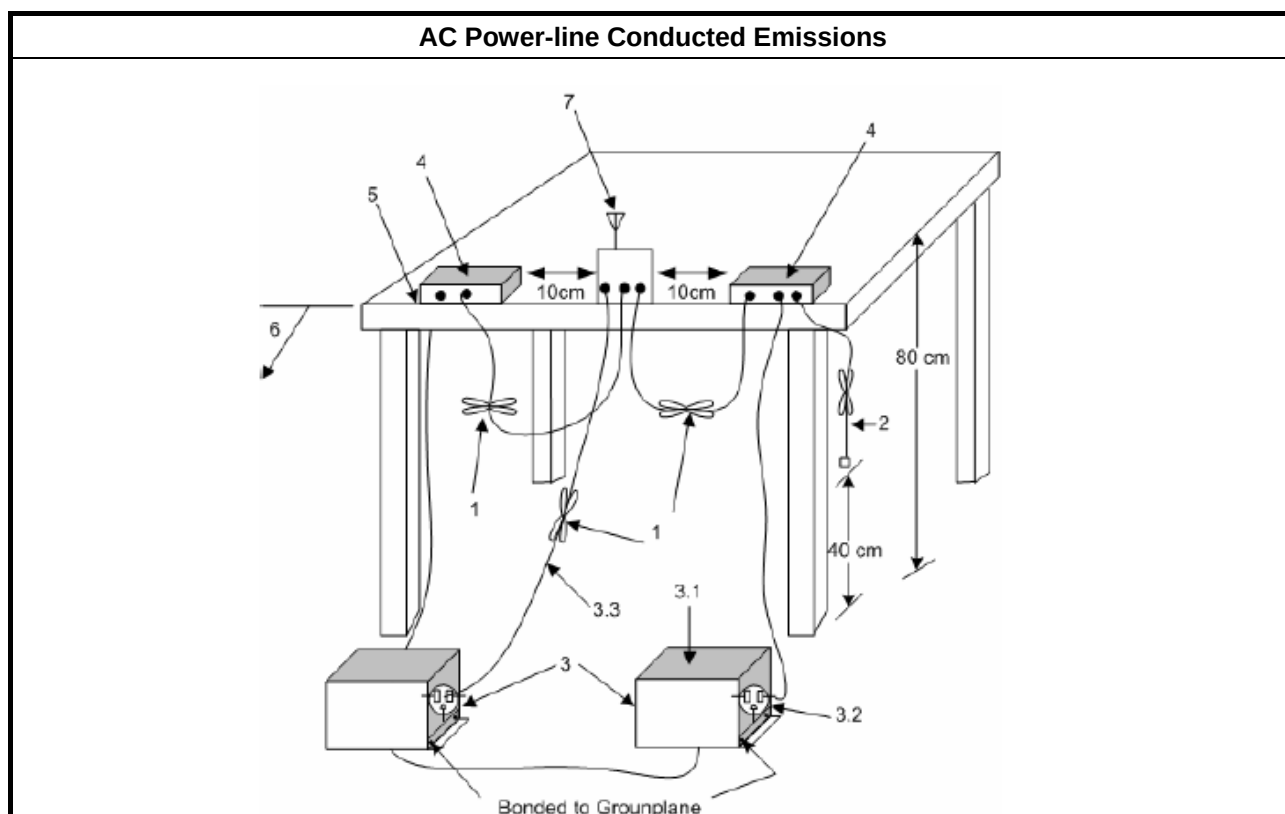
##### 3.1.2 Measuring Instruments

Refer a test equipment and calibration data table in this test report.

##### 3.1.3 Test Procedures

| Test Method                                                                                                                    |
|--------------------------------------------------------------------------------------------------------------------------------|
| <ul style="list-style-type: none"> <li>Refer as ANSI C63.10-2013, clause 6.2 for AC power-line conducted emissions.</li> </ul> |

##### 3.1.4 Test Setup





### **3.1.5 Test Result of AC Power-line Conducted Emissions**

Refer as Appendix A

## 3.2 20dB Bandwidth and Carrier Frequency Separation

### 3.2.1 20dB Bandwidth and Carrier Frequency Separation Limit

| 20dB Bandwidth and Carrier Frequency Separation Limit for Frequency Hopping Systems |                                                                                                      |
|-------------------------------------------------------------------------------------|------------------------------------------------------------------------------------------------------|
| ▪ 902-928 MHz Band:                                                                 |                                                                                                      |
|                                                                                     | ▪ $N \geq 50$ and $ChS \geq \text{MAX}$ (20 dB bandwidth, 25 kHz); 20 dB bandwidth $\leq$ 250 kHz.   |
|                                                                                     | ▪ $50 > N \geq 25$ and $ChS \geq \text{MAX}$ (20 dB bandwidth, 25 kHz); 20 dB bandwidth $>$ 250 kHz. |
| ▪ 2400-2483.5 MHz Band:                                                             |                                                                                                      |
|                                                                                     | ▪ $N \geq 75$ and $ChS \geq \text{MAX}$ (20 dB bandwidth, 25 kHz).                                   |
|                                                                                     | ▪ $75 > N \geq 15$ and $ChS \geq \text{MAX}$ (20 dB bandwidth 2/3, 25 kHz).                          |
| ▪ 5725-5850 MHz Band:                                                               |                                                                                                      |
|                                                                                     | ▪ $N \geq 75$ and $ChS \geq \text{MAX}$ (20 dB bandwidth, 25 kHz); 20 dB bandwidth $\leq$ 1 MHz.     |
| N: Number of Hopping Frequencies; ChS: Hopping Channel Separation                   |                                                                                                      |

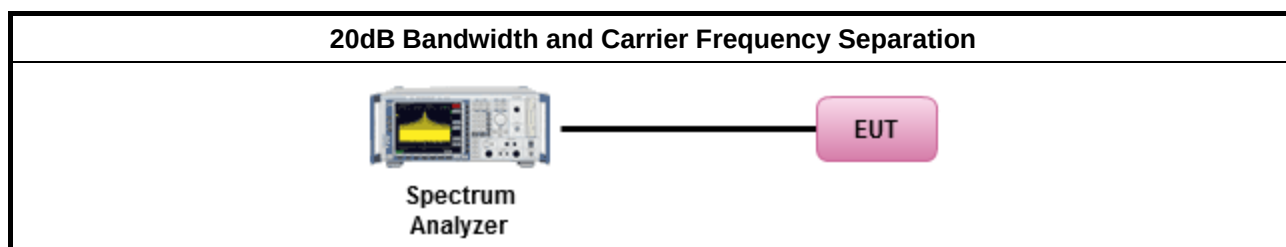
### 3.2.2 Measuring Instruments

Refer a test equipment and calibration data table in this test report.

### 3.2.3 Test Procedures

| Test Method                                                                             |
|-----------------------------------------------------------------------------------------|
| ▪ Refer as ANSI C63.10-2013, clause 6.9.1 for 20 dB bandwidth measurement.              |
| ▪ Refer as ANSI C63.10-2013, clause 7.8.2 for carrier frequency separation measurement. |

### 3.2.4 Test Setup



### 3.2.5 Test Result of 20dB Bandwidth

Refer as Appendix B

### 3.2.6 Test Result of Carrier Frequency Separation

Refer as Appendix B

### 3.3 Maximum Conducted Output Power

#### 3.3.1 Maximum Conducted Output Power Limit

| Maximum Conducted Output Power Limit |                                              |
|--------------------------------------|----------------------------------------------|
| ▪ 902-928 MHz Band:                  |                                              |
|                                      | ▪ $N \geq 50$ ; Power 30dBm; EIRP 36dBm      |
|                                      | ▪ $50 > N \geq 25$ ; Power 24dBm; EIRP 30dBm |
| ▪ 2400-2483.5 MHz Band:              |                                              |
|                                      | ▪ $N \geq 75$ ; Power 30dBm; EIRP 36dBm      |
|                                      | ▪ $75 > N \geq 15$ ; Power 21dBm; EIRP 27dBm |
| ▪ 5725-5850 MHz Band:                |                                              |
|                                      | ▪ $N \geq 75$ ; Power 30dBm; EIRP 36dBm      |
| N: Number of Hopping Frequencies     |                                              |

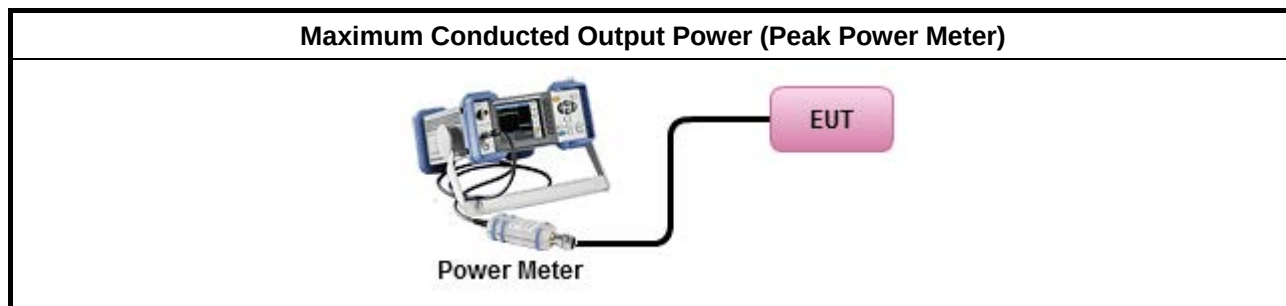
#### 3.3.2 Measuring Instruments

Refer a test equipment and calibration data table in this test report.

#### 3.3.3 Test Procedures

| Test Method                                                             |
|-------------------------------------------------------------------------|
| ▪ Refer as ANSI C63.10-2013, clause 7.8.5 for output power measurement. |

#### 3.3.4 Test Setup



#### 3.3.5 Test Result of Maximum Conducted Output Power

Refer as Appendix C

### 3.4 Number of Hopping Frequencies and Hopping Bandedge

#### 3.4.1 Number of Hopping Frequencies Limit

| Number of Hopping Frequencies Limit                                |                                                                                               |
|--------------------------------------------------------------------|-----------------------------------------------------------------------------------------------|
| ▪ 902-928 MHz Band:                                                |                                                                                               |
|                                                                    | ▪ $N \geq 50$ and $ChS \geq MAX$ (20 dB bandwidth, 25 kHz); 20 dB bandwidth $\leq$ 250 kHz.   |
|                                                                    | ▪ $50 > N \geq 25$ and $ChS \geq MAX$ (20 dB bandwidth, 25 kHz); 20 dB bandwidth $>$ 250 kHz. |
| ▪ 2400-2483.5 MHz Band:                                            |                                                                                               |
|                                                                    | ▪ $N \geq 75$ and $ChS \geq MAX$ (20 dB bandwidth, 25 kHz).                                   |
|                                                                    | ▪ $75 > N \geq 15$ and $ChS \geq MAX$ (20 dB bandwidth 2/3, 25 kHz).                          |
| ▪ 5725-5850 MHz Band:                                              |                                                                                               |
|                                                                    | ▪ $N \geq 75$ and $ChS \geq MAX$ (20 dB bandwidth, 25 kHz); 20 dB bandwidth $\leq$ 1 MHz.     |
| N: Number of Hopping Frequencies; ChS : Hopping Channel Separation |                                                                                               |

#### 3.4.2 Hopping Bandedge Limit

Refer clause 3.6.1 and clause 3.7.1

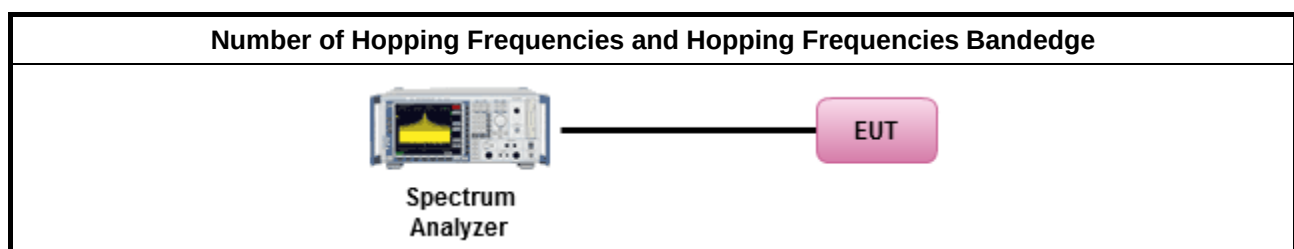
#### 3.4.3 Measuring Instruments

Refer a test equipment and calibration data table in this test report.

#### 3.4.4 Test Procedures

| Test Method                                                                              |
|------------------------------------------------------------------------------------------|
| ▪ Refer as ANSI C63.10-2013, clause 7.8.3 for number of hopping frequencies measurement. |
| ▪ Refer as ANSI C63.10-2013, clause 7.8.6 for hopping frequencies Bandedge measurement.  |

#### 3.4.5 Test Setup



#### 3.4.6 Test Result of Number of Hopping Frequencies

Refer as Appendix D

#### 3.4.7 Test Result of Number of Hopping Frequencies Bandedge

Refer as Appendix D

### 3.5 Time of Occupancy (Dwell Time)

#### 3.5.1 Time of Occupancy (Dwell Time) Limit

| 20dB Bandwidth and Carrier Frequency Separation Limit for Frequency Hopping Systems |                                                    |
|-------------------------------------------------------------------------------------|----------------------------------------------------|
| ▪ 902-928 MHz Band:                                                                 |                                                    |
|                                                                                     | ▪ $N \geq 50$ ; 0.4s in 20s period                 |
|                                                                                     | ▪ $50 > N \geq 25$ ; 0.4s in 10s period            |
| ▪ 2400-2483.5 MHz Band:                                                             |                                                    |
|                                                                                     | ▪ $N \geq 75$ ; 0.4s in $N \times 0.4$ period      |
|                                                                                     | ▪ $75 > N \geq 15$ ; 0.4s in $N \times 0.4$ period |
| ▪ 5725-5850 MHz Band:                                                               |                                                    |
|                                                                                     | ▪ $N \geq 75$ ; 0.4s in 30s period                 |
| N: Number of Hopping Frequencies                                                    |                                                    |

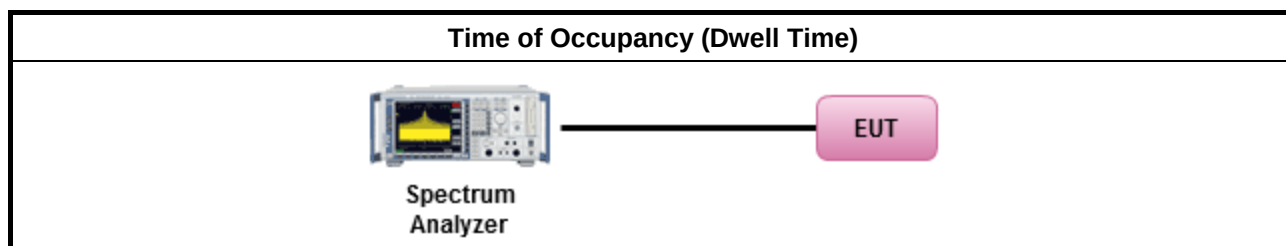
#### 3.5.2 Measuring Instruments

Refer a test equipment and calibration data table in this test report.

#### 3.5.3 Test Procedures

| Test Method                                                                                                                              |                                                                                                                                                                                                                                                                                                                                                  |
|------------------------------------------------------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| ▪ Refer as ANSI C63.10-2013, clause 7.8.4 for dwell time measurement.                                                                    |                                                                                                                                                                                                                                                                                                                                                  |
| ▪ Bluetooth ACL packets can be 1, 3, or 5 time slots. Following as dwell time. Operate DH5 at maximum dwell time and maximum duty cycle. |                                                                                                                                                                                                                                                                                                                                                  |
|                                                                                                                                          | ▪ The DH5 packet can cover up to 5 time slots. Operate DH5 at maximum dwell time and maximum duty cycle. A maximum length packet has duration of 5 time slots. The hopping rate is 1600 hops/second so the maximum dwell time is $5/1600$ seconds, or 3.125ms. DH5 Packet permit maximum $1600 / 79 / 6 = 3.37$ hops per second in each channel. |

#### 3.5.4 Test Setup



#### 3.5.5 Test Result of Time of Occupancy (Dwell Time)

Refer as Appendix E

### 3.6 Emissions in Non-restricted Frequency Bands

#### 3.6.1 Emissions in Non-restricted Frequency Bands Limit

| Un-restricted Band Emissions Limit                                                                                                                                                                                                                                                                                                            |            |
|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------|
| RF output power procedure                                                                                                                                                                                                                                                                                                                     | Limit (dB) |
| Peak output power procedure                                                                                                                                                                                                                                                                                                                   | 20         |
| Note 1: If the peak output power procedure is used to measure the fundamental emission power to demonstrate compliance to requirements, then the peak conducted output power measured within any 100 kHz outside the authorized frequency band shall be attenuated by at least 20 dB relative to the maximum measured in-band peak PSD level. |            |

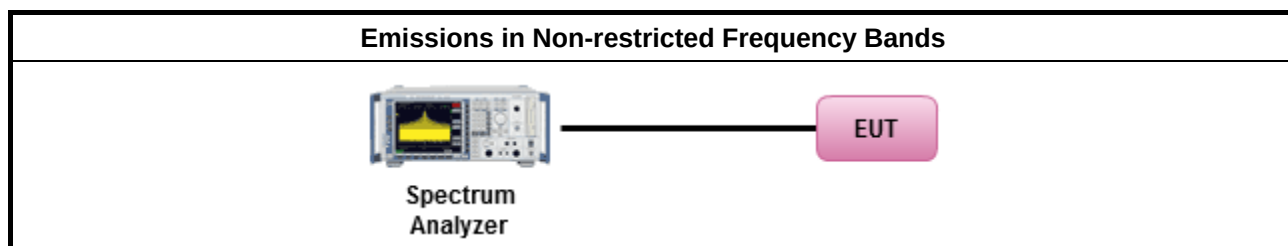
#### 3.6.2 Measuring Instruments

Refer a test equipment and calibration data table in this test report.

#### 3.6.3 Test Procedures

| Test Method                                                                                                                                 |
|---------------------------------------------------------------------------------------------------------------------------------------------|
| <ul style="list-style-type: none"> <li>Refer as ANSI C63.10-2013, clause 7.8.8 for unwanted emissions into non-restricted bands.</li> </ul> |

#### 3.6.4 Test Setup



#### 3.6.5 Test Result of Emissions in Non-restricted Frequency Bands

Refer as Appendix F

### 3.7 Emissions in Restricted Frequency Bands

#### 3.7.1 Emissions in Restricted Frequency Bands Limit

| Restricted Band Emissions Limit |                       |                         |                      |
|---------------------------------|-----------------------|-------------------------|----------------------|
| Frequency Range (MHz)           | Field Strength (uV/m) | Field Strength (dBuV/m) | Measure Distance (m) |
| 0.009~0.490                     | 2400/F(kHz)           | 48.5 - 13.8             | 300                  |
| 0.490~1.705                     | 24000/F(kHz)          | 33.8 - 23               | 30                   |
| 1.705~30.0                      | 30                    | 29                      | 30                   |
| 30~88                           | 100                   | 40                      | 3                    |
| 88~216                          | 150                   | 43.5                    | 3                    |
| 216~960                         | 200                   | 46                      | 3                    |
| Above 960                       | 500                   | 54                      | 3                    |

Note 1: Test distance for frequencies at or above 30 MHz, measurements may be performed at a distance other than the limit distance provided they are not performed in the near field and the emissions to be measured can be detected by the measurement equipment. When performing measurements at a distance other than that specified, the results shall be extrapolated to the specified distance using an extrapolation factor of 20 dB/decade (inverse of linear distance for field-strength measurements, inverse of linear distance-squared for power-density measurements).

Note 2: Test distance for frequencies at below 30 MHz, measurements may be performed at a distance closer than the EUT limit distance; however, an attempt should be made to avoid making measurements in the near field. When performing measurements below 30 MHz at a closer distance than the limit distance, the results shall be extrapolated to the specified distance by either making measurements at a minimum of two or more distances on at least one radial to determine the proper extrapolation factor or by using the square of an inverse linear distance extrapolation factor (40 dB / decade). The test report shall specify the extrapolation method used to determine compliance of the EUT.

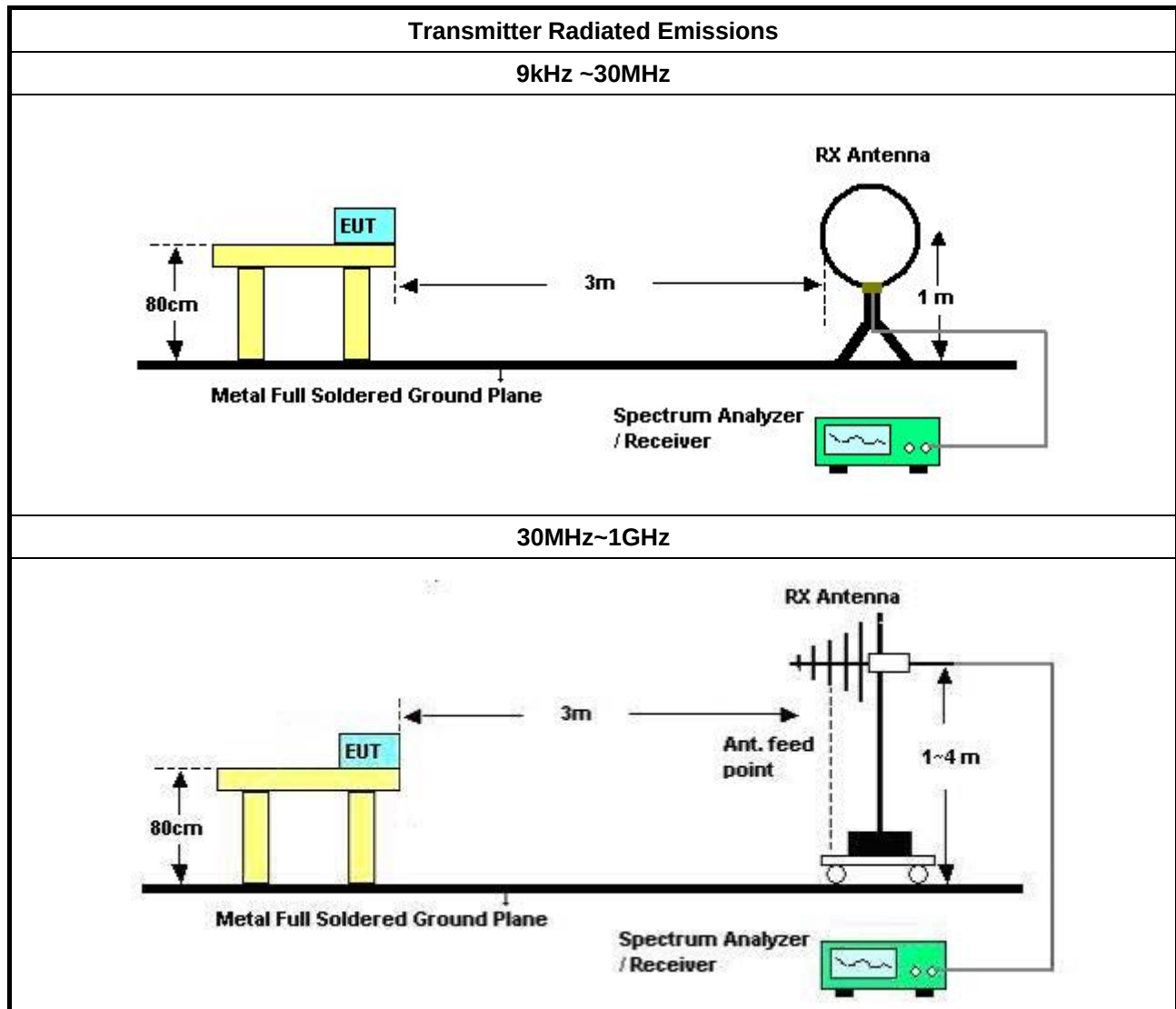
#### 3.7.2 Measuring Instruments

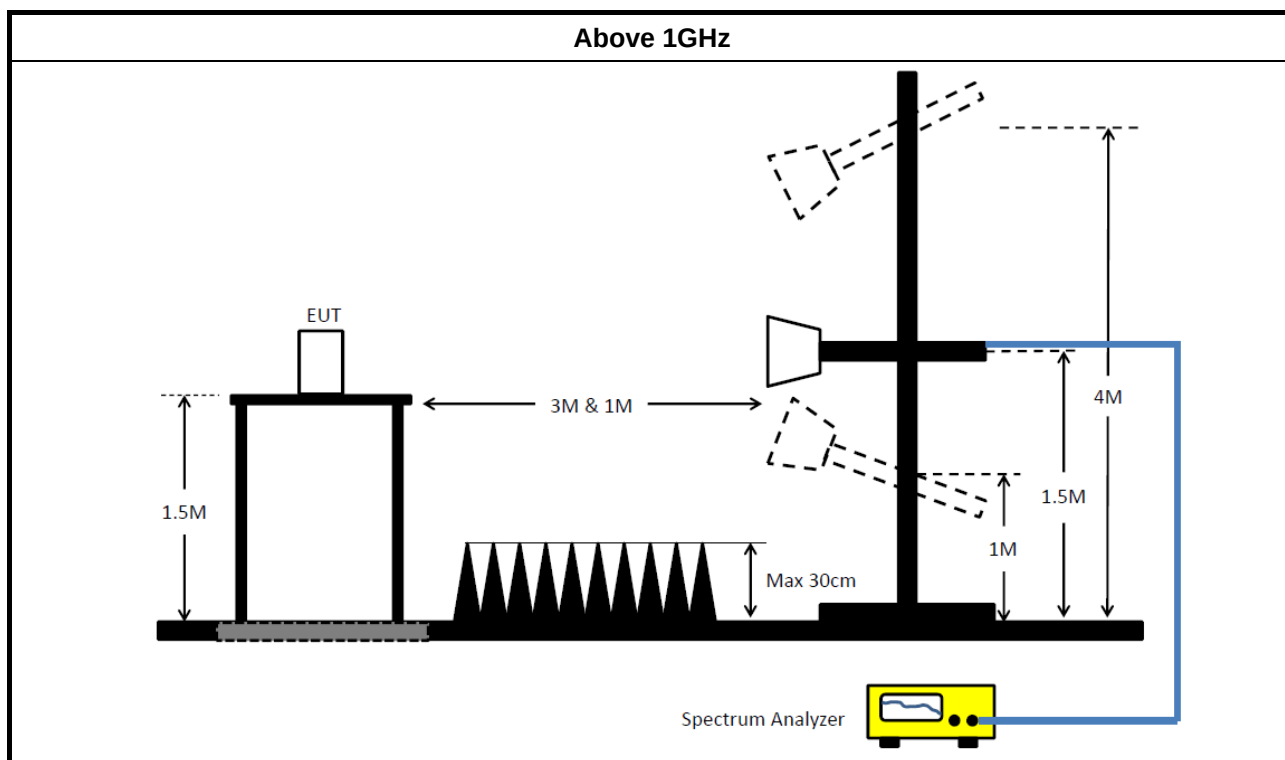
Refer a test equipment and calibration data table in this test report.

#### 3.7.3 Test Procedures

| Test Method |                                                                                                                                                                                                                                                                                 |
|-------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
|             | ▪ The average emission levels shall be measured in [hopping duty factor].                                                                                                                                                                                                       |
|             | ▪ Refer as ANSI C63.10; clause 6.9.2.2 band-edge testing shall be performed at the lowest frequency channel and highest frequency channel within the allowed operating band.                                                                                                    |
|             | ▪ For the transmitter unwanted emissions shall be measured using following options below:                                                                                                                                                                                       |
|             | <ul style="list-style-type: none"> <li>▪ Refer as ANSI C63.10, clause 4.1.4.2.1 QP value.</li> <li>▪ Refer as ANSI C63.10, clause 4.1.4.2.2 measurement procedure peak.</li> <li>▪ Refer as ANSI C63.10, clause 4.1.4.2.4 average value of hopping pulsed emissions.</li> </ul> |

### 3.7.4 Test Setup





### 3.7.5 Transmitter Radiated Unwanted Emissions (Below 30MHz)

All amplitude of spurious emissions that are attenuated by more than 20 dB below the permissible value has no need to be reported.

### 3.7.6 Transmitter Radiated Unwanted Emissions

Refer as Appendix G

## 4 Test Equipment and Calibration Data

| Instrument                        | Manufacturer | Model No.         | Serial No.       | Characteristics | Calibration Date | Remark                |
|-----------------------------------|--------------|-------------------|------------------|-----------------|------------------|-----------------------|
| EMI Receiver                      | Agilent      | N9038A            | My52260123       | 9kHz ~ 8.45GHz  | Jan. 23, 2017    | Conduction (CO01-CB)  |
| LISN                              | F.C.C.       | FCC-LISN-50-16-2  | 04083            | 150kHz ~ 100MHz | Dec. 14, 2016    | Conduction (CO01-CB)  |
| LISN                              | Schwarzbeck  | NSLK 8127         | 8127647          | 9kHz ~ 30MHz    | Dec. 21, 2016    | Conduction (CO01-CB)  |
| COND Cable                        | Woken        | Cable             | 01               | 150kHz ~ 30MHz  | May 23, 2017     | Conduction (CO01-CB)  |
| Software                          | Audix        | E3                | 6.120210n        | -               | N.C.R.           | Conduction (CO01-CB)  |
| BILOG ANTENNA with 6dB Attenuator | TESEQ & EMCI | CBL6112D & N-6-06 | 37880 & AT-N0609 | 20MHz ~ 2GHz    | Aug. 30, 2016    | Radiation (03CH01-CB) |
| Loop Antenna                      | Teseq        | HLA 6120          | 24155            | 9kHz - 30 MHz   | Mar. 16, 2016*   | Radiation (03CH01-CB) |
| Horn Antenna                      | EMCO         | 3115              | 00075790         | 750MHz ~ 18GHz  | Nov. 10, 2016    | Radiation (03CH01-CB) |
| Horn Antenna                      | Schwarzbeck  | BBHA 9170         | BBHA9170252      | 15GHz ~ 40GHz   | Jul. 25, 2016    | Radiation (03CH01-CB) |
| Pre-Amplifier                     | EMCI         | EMC330N           | 980332           | 20MHz ~ 3GHz    | May 02, 2017     | Radiation (03CH01-CB) |
| Pre-Amplifier                     | Agilent      | 8449B             | 3008A02310       | 1GHz ~ 26.5GHz  | Jan. 16, 2017    | Radiation (03CH01-CB) |
| Pre-Amplifier                     | MITEQ        | TTA1840-35-HG     | 1864479          | 18GHz ~ 40GHz   | Jun. 28, 2016    | Radiation (03CH01-CB) |
| Spectrum Analyzer                 | R&S          | FSP40             | 100056           | 9kHz ~ 40GHz    | Nov. 22, 2016    | Radiation (03CH01-CB) |
| EMI Test                          | R&S          | ESCS              | 100355           | 9kHz ~ 2.75GHz  | May 06, 2017     | Radiation (03CH01-CB) |
| RF Cable-low                      | Woken        | Low Cable-16+17   | N/A              | 30 MHz ~ 1 GHz  | Oct. 24, 2016    | Radiation (03CH01-CB) |
| RF Cable-high                     | Woken        | High Cable-16     | N/A              | 1 GHz ~ 18 GHz  | Oct. 24, 2016    | Radiation (03CH01-CB) |
| RF Cable-high                     | Woken        | High Cable-16+17  | N/A              | 1 GHz ~ 18 GHz  | Oct. 24, 2016    | Radiation (03CH01-CB) |
| RF Cable-high                     | Woken        | High Cable-40G#1  | N/A              | 18GHz ~ 40 GHz  | Oct. 24, 2016    | Radiation (03CH01-CB) |
| RF Cable-high                     | Woken        | High Cable-40G#2  | N/A              | 18GHz ~ 40 GHz  | Oct. 24, 2016    | Radiation (03CH01-CB) |
| Test Software                     | Audix        | E3                | 6.2009-I0-7      | N/A             | N/A              | Radiation (03CH01-CB) |



| Instrument        | Manufacturer | Model No. | Serial No.    | Characteristics  | Calibration Date | Remark              |
|-------------------|--------------|-----------|---------------|------------------|------------------|---------------------|
| Spectrum analyzer | R&S          | FSV40     | 100979        | 9kHz~40GHz       | Dec. 26, 2016    | Conducted (TH01-CB) |
| RF Cable-high     | Woken        | RG402     | High Cable-6  | 1 GHz – 26.5 GHz | Oct. 24, 2016    | Conducted (TH01-CB) |
| RF Cable-high     | Woken        | RG402     | High Cable-7  | 1 GHz –26.5 GHz  | Oct. 24, 2016    | Conducted (TH01-CB) |
| RF Cable-high     | Woken        | RG402     | High Cable-8  | 1 GHz –26.5 GHz  | Oct. 24, 2016    | Conducted (TH01-CB) |
| RF Cable-high     | Woken        | RG402     | High Cable-9  | 1 GHz –26.5 GHz  | Oct. 24, 2016    | Conducted (TH01-CB) |
| RF Cable-high     | Woken        | RG402     | High Cable-10 | 1 GHz –26.5 GHz  | Oct. 24, 2016    | Conducted (TH01-CB) |
| Power Sensor      | Agilent      | U2021XA   | MY53410001    | 50MHz~18GHz      | Nov. 22, 2016    | Conducted (TH01-CB) |

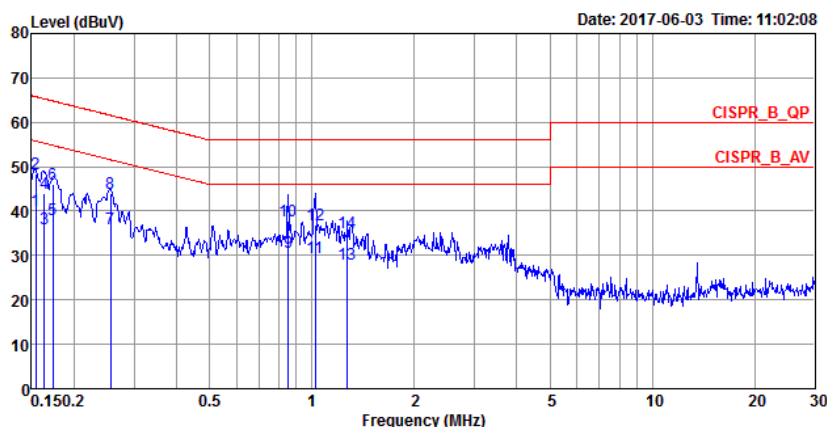
Note: Calibration Interval of instruments listed above is one year.

\*Calibration Interval of instruments listed above is two year.

N.C.R. means Non-Calibration required.

### AC Power-line Conducted Emissions Result

|                    |             |             |         |
|--------------------|-------------|-------------|---------|
| Operating Mode     | 3           | Power Phase | Neutral |
| Operating Function | Normal Link |             |         |



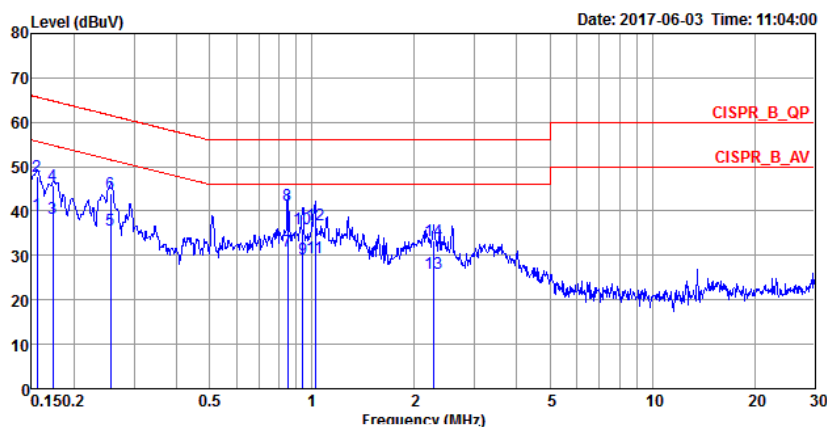
|    | Freq   | Level | Over Limit | Limit Line | Read Level | LISN Factor | Cable Loss | Remark  | Pol/Phase |
|----|--------|-------|------------|------------|------------|-------------|------------|---------|-----------|
|    | MHz    | dBuV  | dB         | dBuV       | dBuV       | dB          | dB         |         |           |
| 1  | 0.1540 | 40.09 | -15.69     | 55.78      | 29.83      | 10.10       | 0.16       | Average | NEUTRAL   |
| 2  | 0.1540 | 48.48 | -17.30     | 65.78      | 38.22      | 10.10       | 0.16       | QP      | NEUTRAL   |
| 3  | 0.1633 | 36.00 | -19.30     | 55.30      | 25.75      | 10.10       | 0.15       | Average | NEUTRAL   |
| 4  | 0.1633 | 44.07 | -21.23     | 65.30      | 33.82      | 10.10       | 0.15       | QP      | NEUTRAL   |
| 5  | 0.1731 | 38.22 | -16.59     | 54.81      | 27.98      | 10.10       | 0.14       | Average | NEUTRAL   |
| 6  | 0.1731 | 45.91 | -18.90     | 64.81      | 35.67      | 10.10       | 0.14       | QP      | NEUTRAL   |
| 7  | 0.2562 | 36.03 | -15.53     | 51.56      | 25.86      | 10.08       | 0.09       | Average | NEUTRAL   |
| 8  | 0.2562 | 44.07 | -17.49     | 61.56      | 33.90      | 10.08       | 0.09       | QP      | NEUTRAL   |
| 9  | 0.8528 | 30.56 | -15.44     | 46.00      | 20.30      | 10.10       | 0.16       | Average | NEUTRAL   |
| 10 | 0.8528 | 37.76 | -18.24     | 56.00      | 27.50      | 10.10       | 0.16       | QP      | NEUTRAL   |
| 11 | 1.0211 | 29.65 | -16.35     | 46.00      | 19.41      | 10.05       | 0.19       | Average | NEUTRAL   |
| 12 | 1.0211 | 36.90 | -19.10     | 56.00      | 26.66      | 10.05       | 0.19       | QP      | NEUTRAL   |
| 13 | 1.2688 | 28.09 | -17.91     | 46.00      | 17.87      | 10.02       | 0.20       | Average | NEUTRAL   |
| 14 | 1.2688 | 35.15 | -20.85     | 56.00      | 24.93      | 10.02       | 0.20       | QP      | NEUTRAL   |

Note 1: ">20dB" means emission levels that exceed the level of 20 dB below the applicable limit.

Note 2: "N/F" means Nothing Found emissions (No emissions were detected.)

### AC Power-line Conducted Emissions Result

|                    |             |             |      |
|--------------------|-------------|-------------|------|
| Operating Mode     | 3           | Power Phase | Line |
| Operating Function | Normal Link |             |      |



|    | Freq   | Level | Over Limit | Limit Line | Read Level | LISN Factor | Cable Loss | Remark  | Pol/Phase |
|----|--------|-------|------------|------------|------------|-------------|------------|---------|-----------|
|    | MHz    | dBuV  | dB         | dBuV       | dBuV       | dB          | dB         |         |           |
| 1  | 0.1557 | 39.40 | -16.29     | 55.69      | 29.24      | 10.00       | 0.16       | Average | LINE      |
| 2  | 0.1557 | 47.93 | -17.76     | 65.69      | 37.77      | 10.00       | 0.16       | QP      | LINE      |
| 3  | 0.1731 | 38.26 | -16.55     | 54.81      | 28.12      | 10.00       | 0.14       | Average | LINE      |
| 4  | 0.1731 | 45.66 | -19.15     | 64.81      | 35.52      | 10.00       | 0.14       | QP      | LINE      |
| 5  | 0.2562 | 35.76 | -15.80     | 51.56      | 25.75      | 9.92        | 0.09       | Average | LINE      |
| 6  | 0.2562 | 44.04 | -17.52     | 61.56      | 34.03      | 9.92        | 0.09       | QP      | LINE      |
| 7  | 0.8483 | 31.00 | -15.00     | 46.00      | 20.88      | 9.96        | 0.16       | Average | LINE      |
| 8  | 0.8483 | 41.37 | -14.63     | 56.00      | 31.25      | 9.96        | 0.16       | QP      | LINE      |
| 9  | 0.9381 | 29.36 | -16.64     | 46.00      | 19.22      | 9.96        | 0.18       | Average | LINE      |
| 10 | 0.9381 | 36.16 | -19.84     | 56.00      | 26.02      | 9.96        | 0.18       | QP      | LINE      |
| 11 | 1.0211 | 29.41 | -16.59     | 46.00      | 19.26      | 9.96        | 0.19       | Average | LINE      |
| 12 | 1.0211 | 36.87 | -19.13     | 56.00      | 26.72      | 9.96        | 0.19       | QP      | LINE      |
| 13 | 2.2726 | 26.07 | -19.93     | 46.00      | 15.92      | 9.96        | 0.19       | Average | LINE      |
| 14 | 2.2726 | 33.42 | -22.58     | 56.00      | 23.27      | 9.96        | 0.19       | QP      | LINE      |

Note 1: ">20dB" means emission levels that exceed the level of 20 dB below the applicable limit.

Note 2: "N/F" means Nothing Found emissions (No emissions were detected.)

**Summary**

| Mode          | Max-N dB<br>(Hz) | Max-OBW<br>(Hz) | ITU-Code | Min-N dB<br>(Hz) | Min-OBW<br>(Hz) |
|---------------|------------------|-----------------|----------|------------------|-----------------|
| BT-BR(1Mbps)  | -                | -               | -        | -                | -               |
| 2.4-2.4835GHz | 921.25k          | 867.066k        | 867kF1D  | 920k             | 865.817k        |
| BT-EDR(2Mbps) | -                | -               | -        | -                | -               |
| 2.4-2.4835GHz | 1.315M           | 1.199M          | 1M20G1D  | 1.315M           | 1.189M          |
| BT-EDR(3Mbps) | -                | -               | -        | -                | -               |
| 2.4-2.4835GHz | 1.275M           | 1.209M          | 1M21G1D  | 1.271M           | 1.183M          |

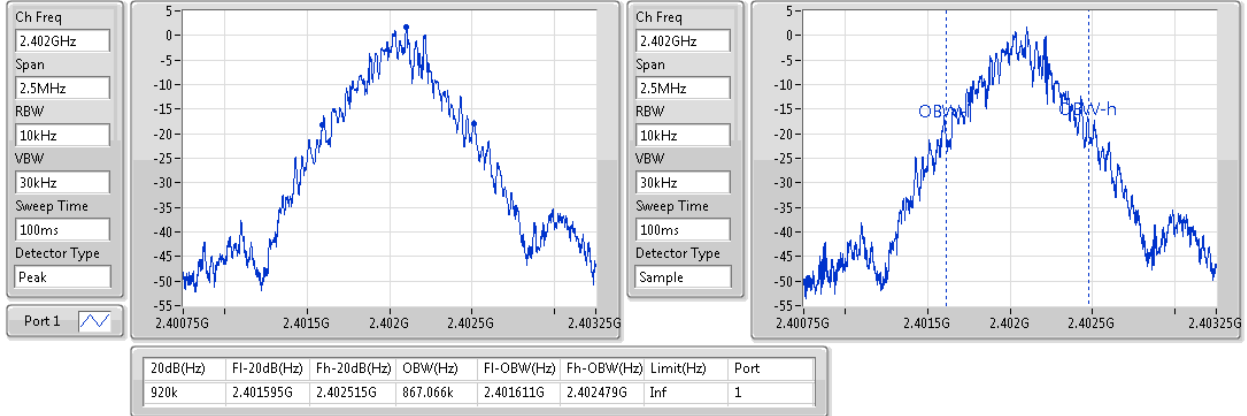
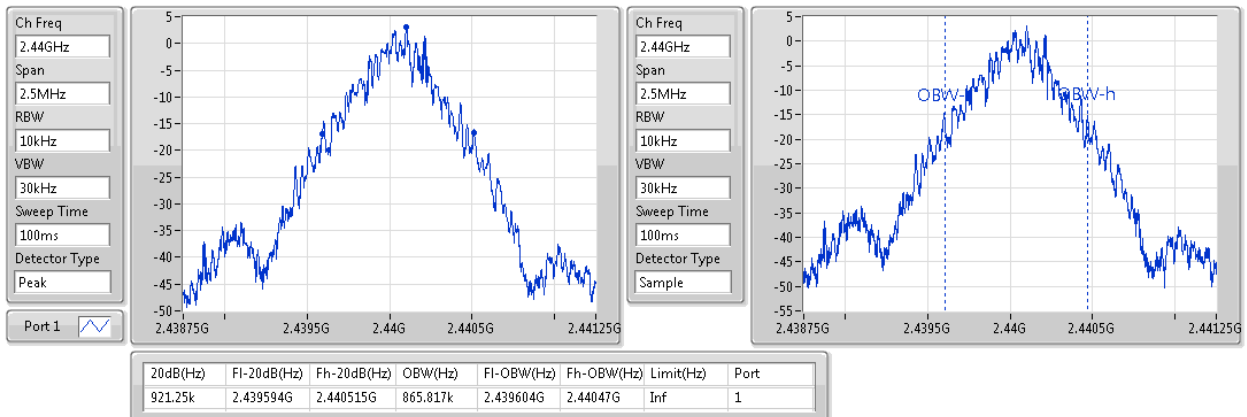
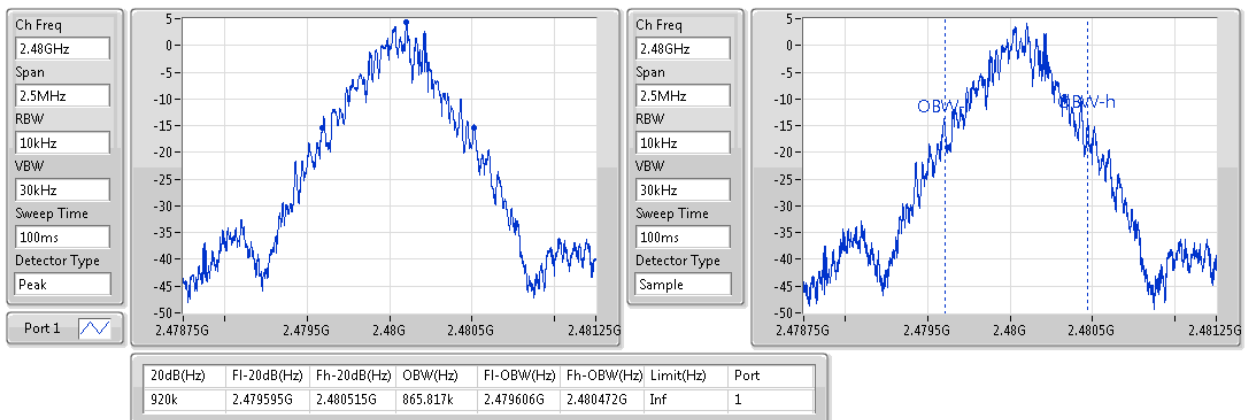
**Max-N dB** = Maximum 20dB down bandwidth; **Max-OBW** = Maximum 99% occupied bandwidth;

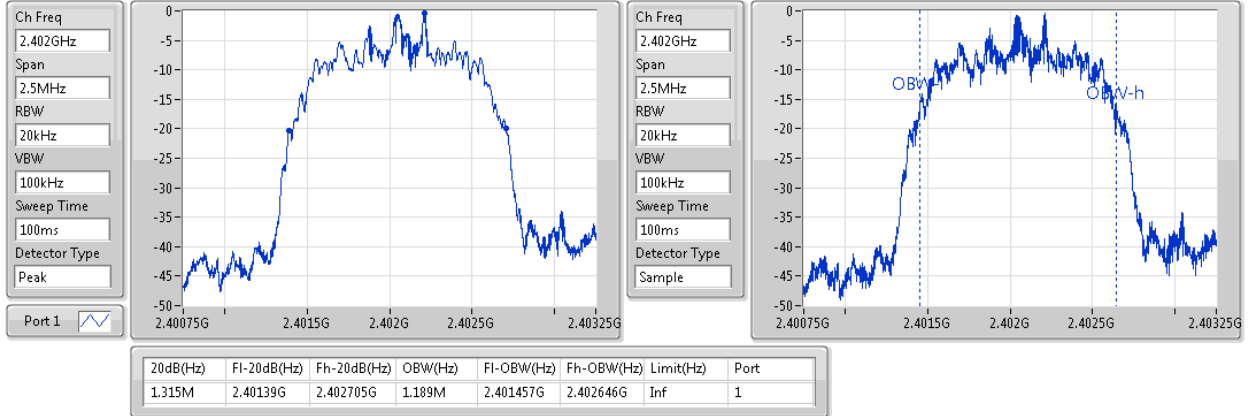
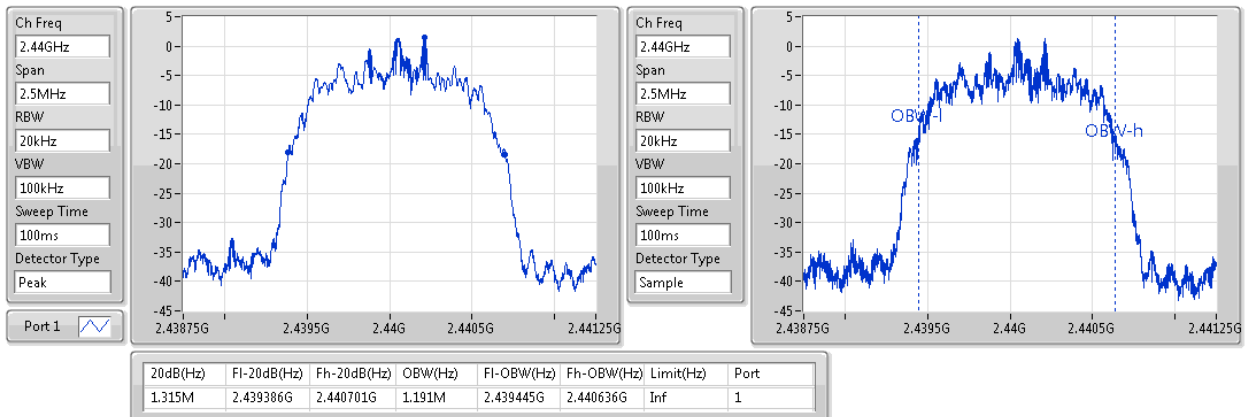
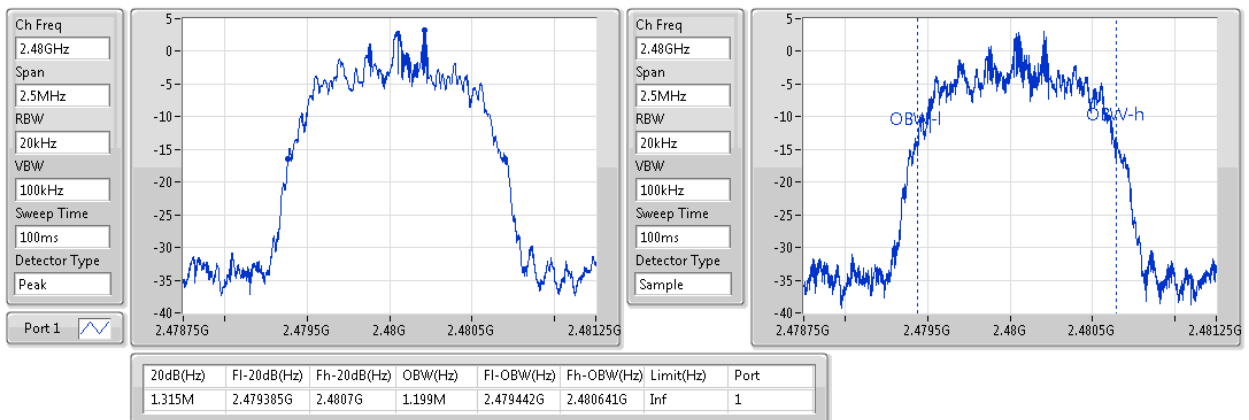
**Min-N dB** = Minimum 20dB down bandwidth; **Min-OBW** = Minimum 99% occupied bandwidth;

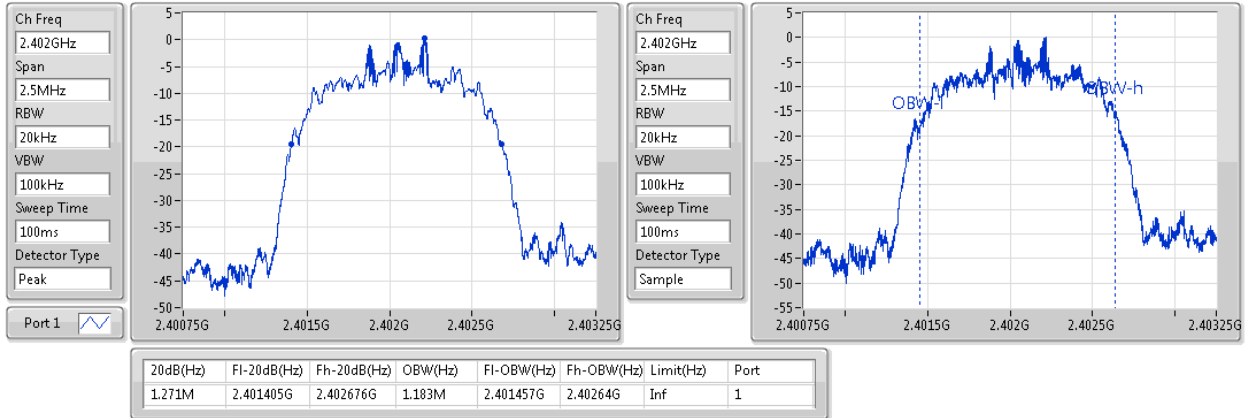
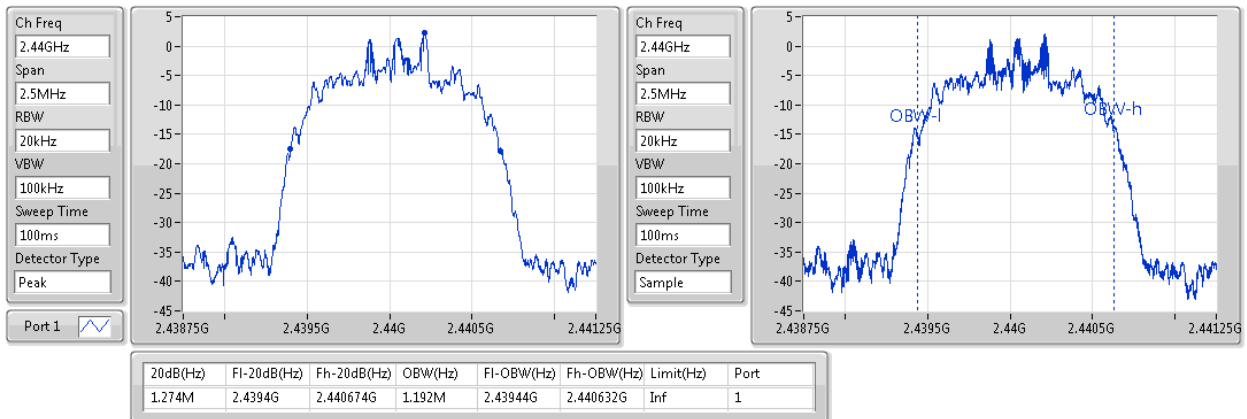
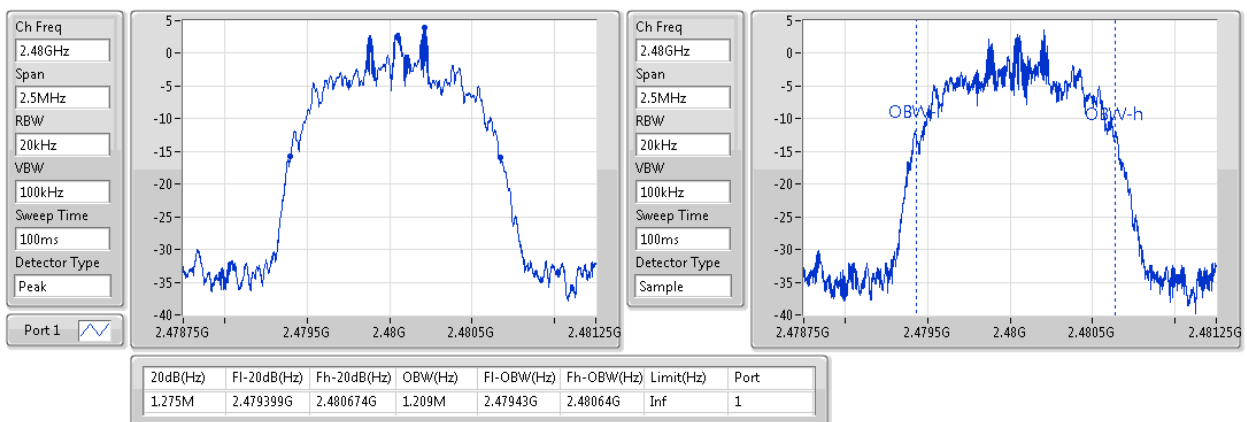
**Result**

| Mode          | Result | Limit<br>(Hz) | Port 1-N dB<br>(Hz) | Port 1-OBW<br>(Hz) |
|---------------|--------|---------------|---------------------|--------------------|
| BT-BR(1Mbps)  | -      | -             | -                   | -                  |
| 2402MHz       | Pass   | Inf           | 920k                | 867.066k           |
| 2440MHz       | Pass   | Inf           | 921.25k             | 865.817k           |
| 2480MHz       | Pass   | Inf           | 920k                | 865.817k           |
| BT-EDR(2Mbps) | -      | -             | -                   | -                  |
| 2402MHz       | Pass   | Inf           | 1.315M              | 1.189M             |
| 2440MHz       | Pass   | Inf           | 1.315M              | 1.191M             |
| 2480MHz       | Pass   | Inf           | 1.315M              | 1.199M             |
| BT-EDR(3Mbps) | -      | -             | -                   | -                  |
| 2402MHz       | Pass   | Inf           | 1.271M              | 1.183M             |
| 2440MHz       | Pass   | Inf           | 1.274M              | 1.192M             |
| 2480MHz       | Pass   | Inf           | 1.275M              | 1.209M             |

**Port X-N dB** = Port X 20dB down bandwidth; **Port X-OBW** = Port X 99% occupied bandwidth;

**BT-BR(1Mbps)**
**EBW**
**2402MHz**

**BT-BR(1Mbps)**
**EBW**
**2440MHz**

**BT-BR(1Mbps)**
**EBW**
**2480MHz**


**BT-EDR(2Mbps)**
**EBW**
**2402MHz**

**BT-EDR(2Mbps)**
**EBW**
**2440MHz**

**BT-EDR(2Mbps)**
**EBW**
**2480MHz**


**BT-EDR(3Mbps)**
**EBW**
**2402MHz**

**BT-EDR(3Mbps)**
**EBW**
**2440MHz**

**BT-EDR(3Mbps)**
**EBW**
**2480MHz**


## Summary

| Mode          | Max-Space<br>(Hz) | Min-Space<br>(Hz) |
|---------------|-------------------|-------------------|
| BT-BR(1Mbps)  | -                 | -                 |
| 2.4-2.4835GHz | 1.002M            | 999k              |
| BT-EDR(2Mbps) | -                 | -                 |
| 2.4-2.4835GHz | 1.0005M           | 999k              |
| BT-EDR(3Mbps) | -                 | -                 |
| 2.4-2.4835GHz | 1.002M            | 999k              |

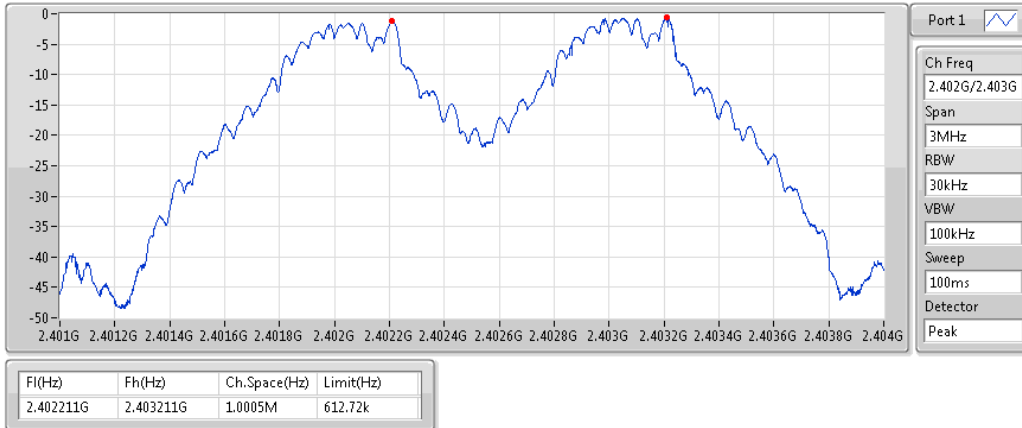
## Result

| Mode          | Result | Fl<br>(Hz) | Fh<br>(Hz) | Ch.Space<br>(Hz) | Limit<br>(Hz) |
|---------------|--------|------------|------------|------------------|---------------|
| BT-BR(1Mbps)  | -      | -          | -          | -                | -             |
| 2402MHz       | Pass   | 2.402211G  | 2.403211G  | 1.0005M          | 612.72k       |
| 2440MHz       | Pass   | 2.440211G  | 2.44121G   | 999k             | 613.5525k     |
| 2480MHz       | Pass   | 2.479211G  | 2.480213G  | 1.002M           | 612.72k       |
| BT-EDR(2Mbps) | -      | -          | -          | -                | -             |
| 2402MHz       | Pass   | 2.40205G   | 2.403049G  | 999k             | 875.79k       |
| 2440MHz       | Pass   | 2.44005G   | 2.441049G  | 999k             | 875.79k       |
| 2480MHz       | Pass   | 2.479049G  | 2.480049G  | 1.0005M          | 875.79k       |
| BT-EDR(3Mbps) | -      | -          | -          | -                | -             |
| 2402MHz       | Pass   | 2.402211G  | 2.40321G   | 999k             | 846.486k      |
| 2440MHz       | Pass   | 2.440208G  | 2.44121G   | 1.002M           | 848.484k      |
| 2480MHz       | Pass   | 2.479209G  | 2.480211G  | 1.002M           | 849.15k       |

## BT-BR(1Mbps)

## Channel Separation

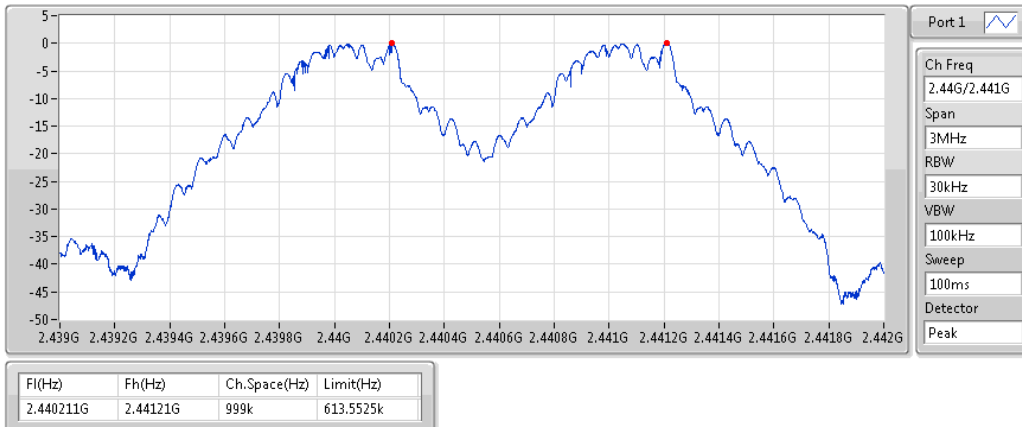
2.402G/2.403GHz



## BT-BR(1Mbps)

## Channel Separation

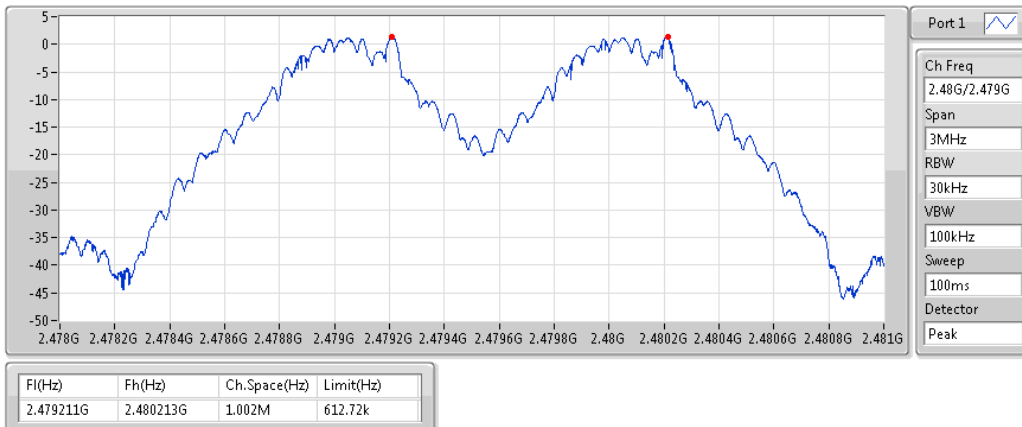
2.44G/2.441GHz



## BT-BR(1Mbps)

## Channel Separation

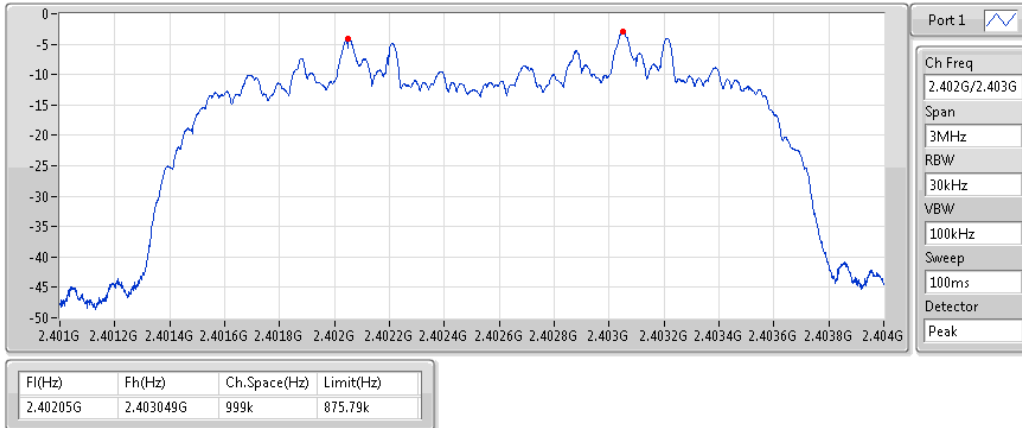
2.48G/2.479GHz



## BT-EDR(2Mbps)

## Channel Separation

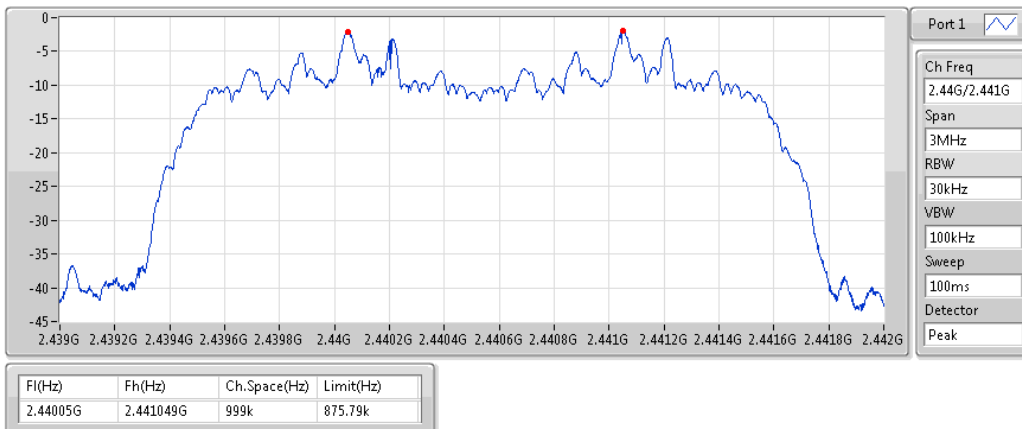
2.402G/2.403GHz



## BT-EDR(2Mbps)

## Channel Separation

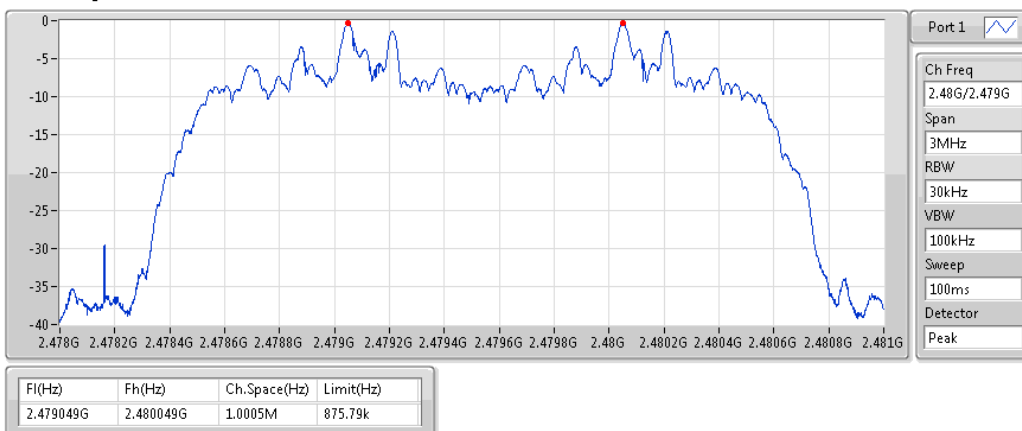
2.44G/2.441GHz



## BT-EDR(2Mbps)

## Channel Separation

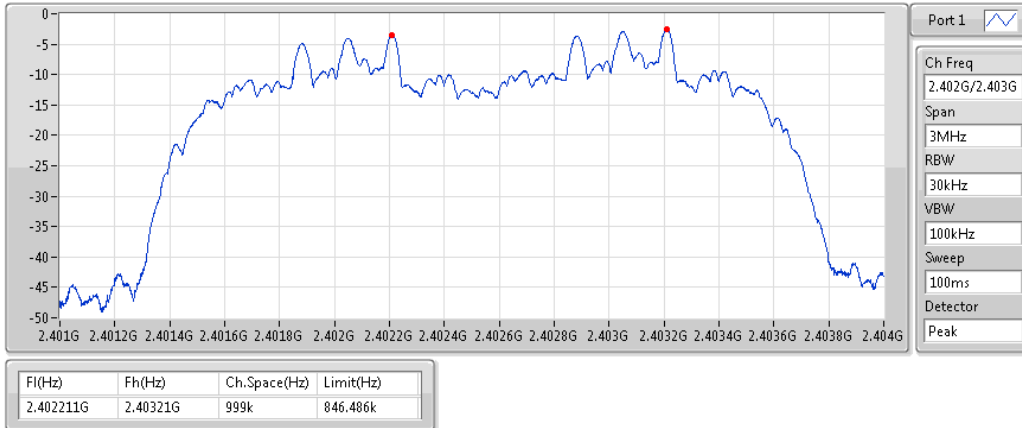
2.48G/2.479GHz



## BT-EDR(3Mbps)

## Channel Separation

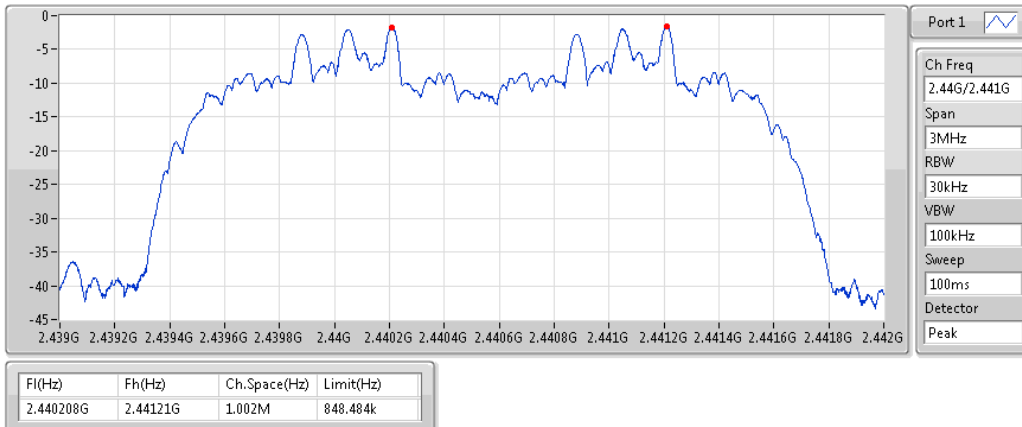
2.402G/2.403GHz



## BT-EDR(3Mbps)

## Channel Separation

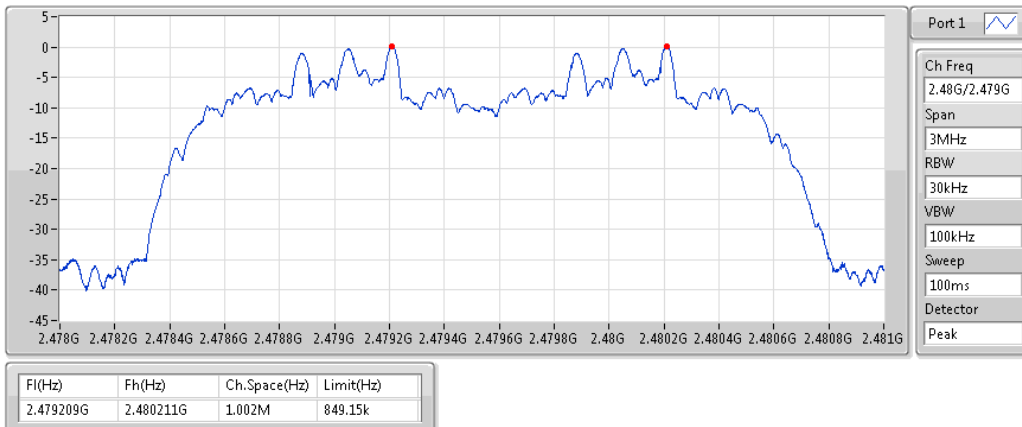
2.44G/2.441GHz



## BT-EDR(3Mbps)

## Channel Separation

2.48G/2.479GHz



**Summary**

| Mode          | Power | Power   |
|---------------|-------|---------|
|               | (dBm) | (W)     |
| BT-BR(1Mbps)  | -     | -       |
| 2.4-2.4835GHz | 9.96  | 0.00991 |
| BT-EDR(2Mbps) | -     | -       |
| 2.4-2.4835GHz | 7.12  | 0.00515 |
| BT-EDR(3Mbps) | -     | -       |
| 2.4-2.4835GHz | 7.12  | 0.00515 |

**Result**

| Mode          | Result | Gain<br>(dBi) | Power<br>(dBm) | Power Limit<br>(dBm) |
|---------------|--------|---------------|----------------|----------------------|
| BT-BR(1Mbps)  | -      | -             | -              | -                    |
| 2402MHz       | Pass   | 2.10          | 7.41           | 21.00                |
| 2440MHz       | Pass   | 2.10          | 8.72           | 21.00                |
| 2480MHz       | Pass   | 2.10          | 9.96           | 21.00                |
| BT-EDR(2Mbps) | -      | -             | -              | -                    |
| 2402MHz       | Pass   | 2.10          | 3.42           | 21.00                |
| 2440MHz       | Pass   | 2.10          | 5.32           | 21.00                |
| 2480MHz       | Pass   | 2.10          | 7.12           | 21.00                |
| BT-EDR(3Mbps) | -      | -             | -              | -                    |
| 2402MHz       | Pass   | 2.10          | 3.41           | 21.00                |
| 2440MHz       | Pass   | 2.10          | 5.33           | 21.00                |
| 2480MHz       | Pass   | 2.10          | 7.12           | 21.00                |

**Summary**

| Mode          | Power<br>(dBm) | Power<br>(W) |
|---------------|----------------|--------------|
| BT-BR(1Mbps)  | -              | -            |
| 2.4-2.4835GHz | 10.11          | 0.01026      |
| BT-EDR(2Mbps) | -              | -            |
| 2.4-2.4835GHz | 9.17           | 0.00826      |
| BT-EDR(3Mbps) | -              | -            |
| 2.4-2.4835GHz | 9.39           | 0.00869      |

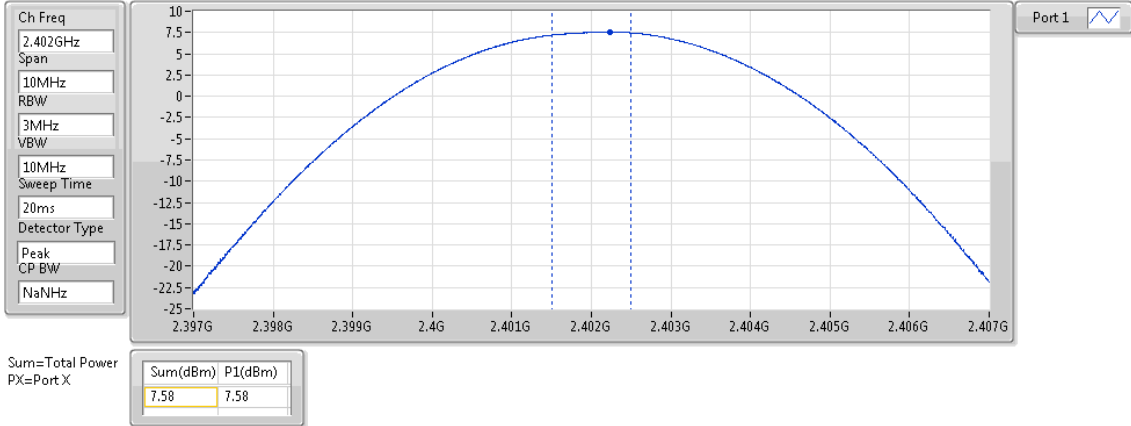
**Result**

| Mode          | Result | Gain<br>(dBi) | Power<br>(dBm) | Power Limit<br>(dBm) |
|---------------|--------|---------------|----------------|----------------------|
| BT-BR(1Mbps)  | -      | -             | -              | -                    |
| 2402MHz       | Pass   | 2.10          | 7.58           | 21.00                |
| 2440MHz       | Pass   | 2.10          | 8.92           | 21.00                |
| 2480MHz       | Pass   | 2.10          | 10.11          | 21.00                |
| BT-EDR(2Mbps) | -      | -             | -              | -                    |
| 2402MHz       | Pass   | 2.10          | 5.85           | 21.00                |
| 2440MHz       | Pass   | 2.10          | 7.64           | 21.00                |
| 2480MHz       | Pass   | 2.10          | 9.17           | 21.00                |
| BT-EDR(3Mbps) | -      | -             | -              | -                    |
| 2402MHz       | Pass   | 2.10          | 6.29           | 21.00                |
| 2440MHz       | Pass   | 2.10          | 7.99           | 21.00                |
| 2480MHz       | Pass   | 2.10          | 9.39           | 21.00                |

## BT-BR(1Mbps)

## PK Power

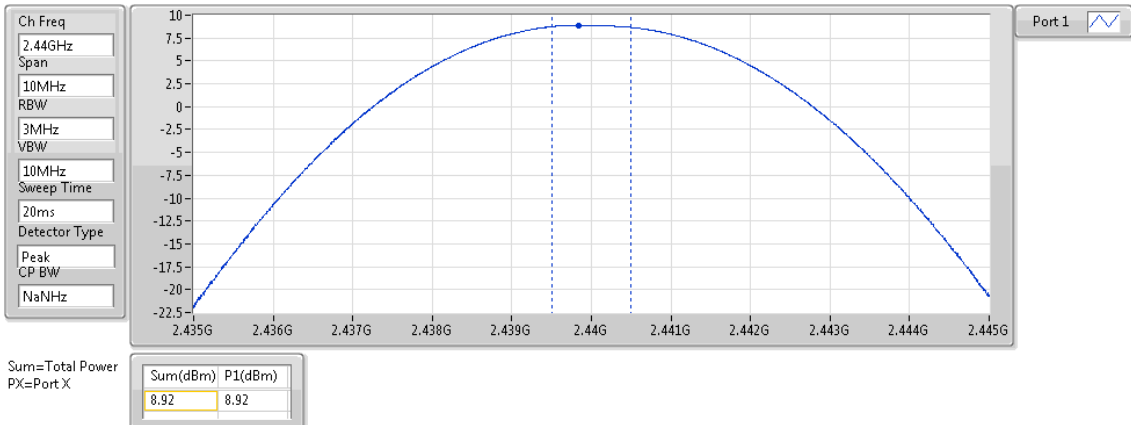
2402MHz



## BT-BR(1Mbps)

## PK Power

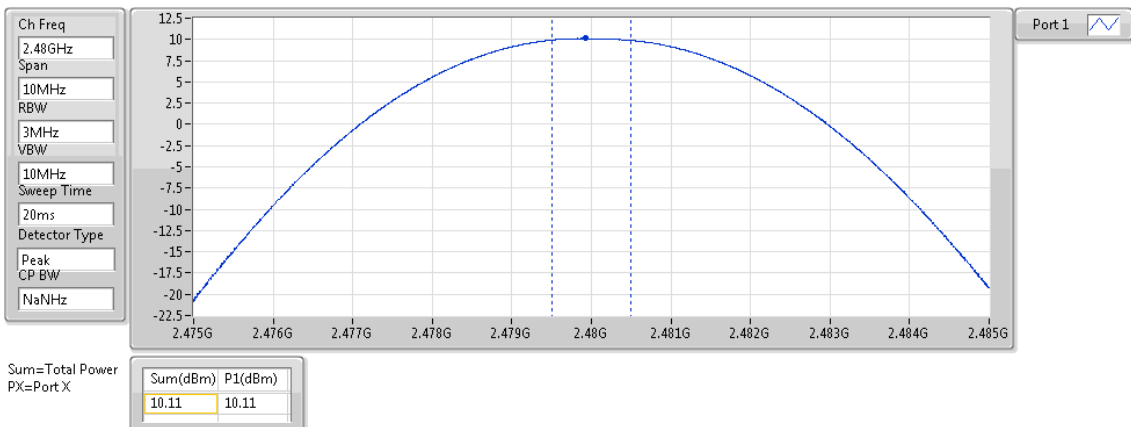
2440MHz



## BT-BR(1Mbps)

## PK Power

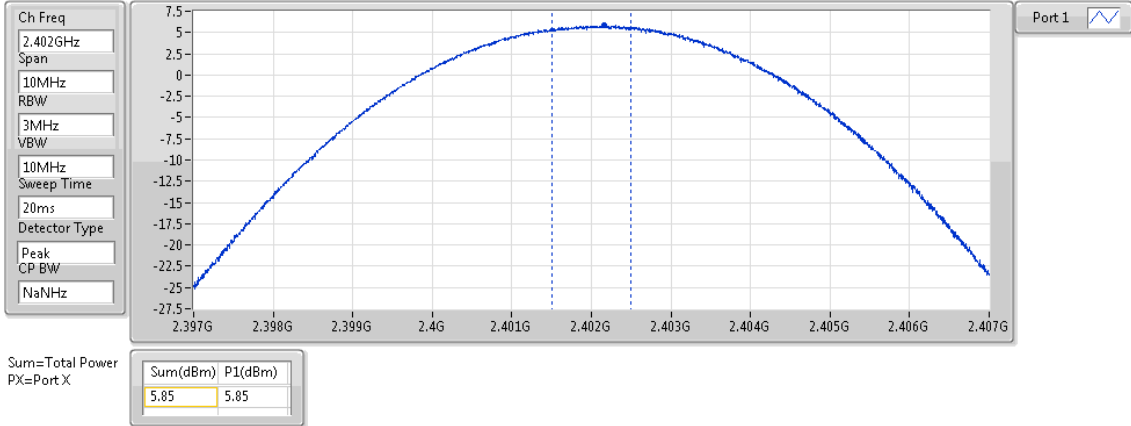
2480MHz



### BT-EDR(2Mbps)

### PK Power

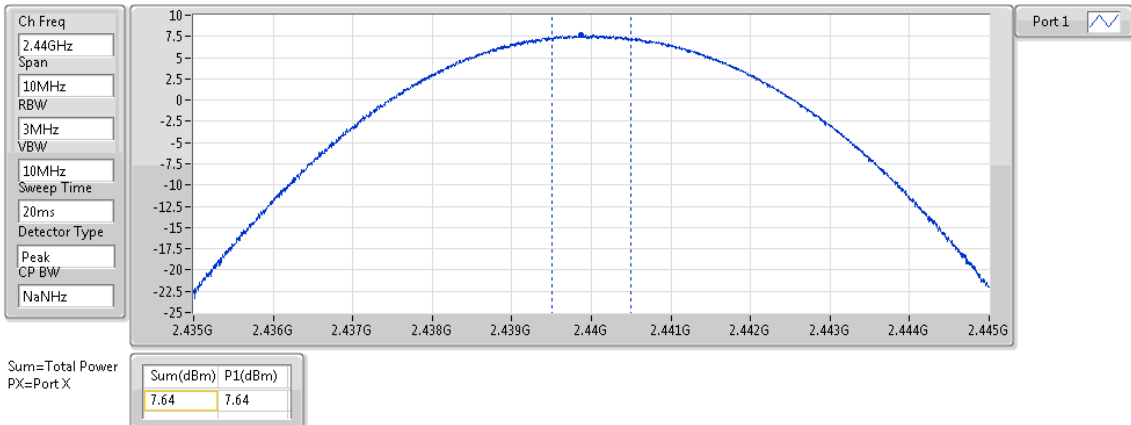
2402MHz



### BT-EDR(2Mbps)

### PK Power

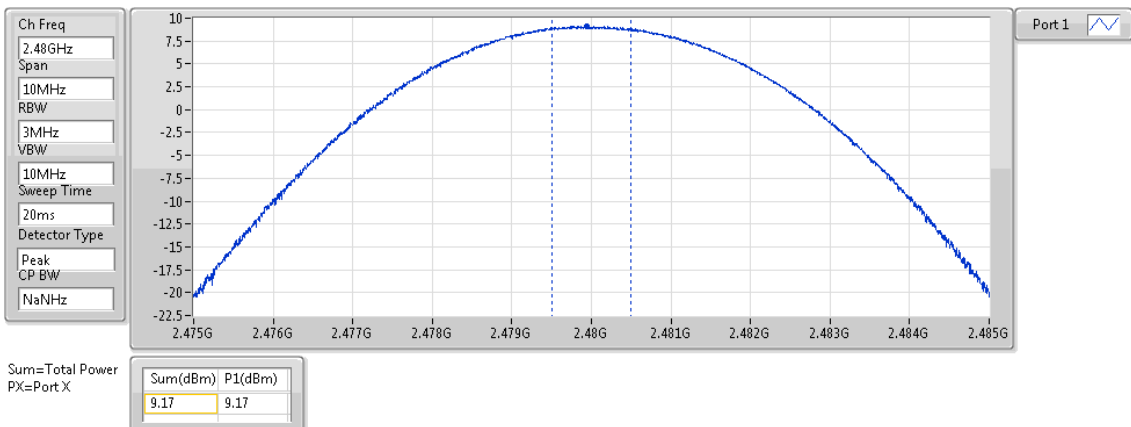
2440MHz



### BT-EDR(2Mbps)

### PK Power

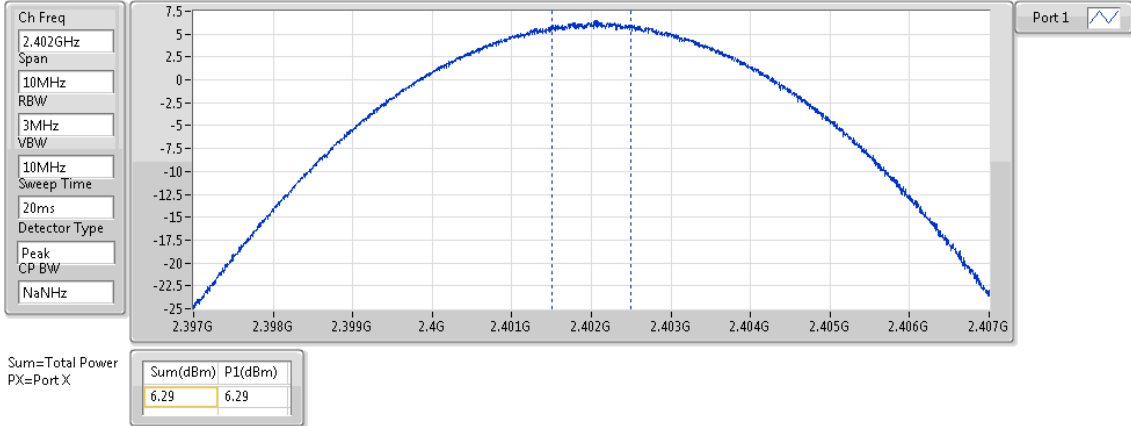
2480MHz



## BT-EDR(3Mbps)

## PK Power

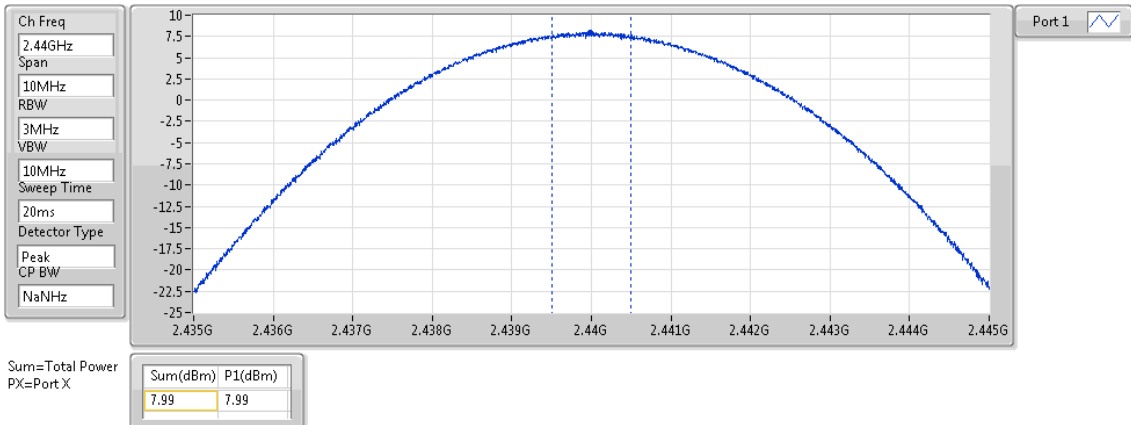
2402MHz



## BT-EDR(3Mbps)

## PK Power

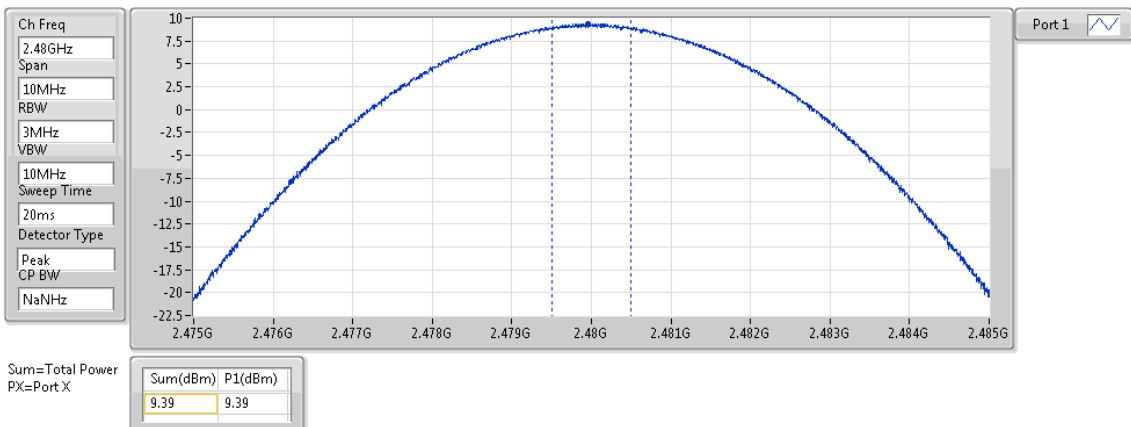
2440MHz



## BT-EDR(3Mbps)

## PK Power

2480MHz



**Summary**

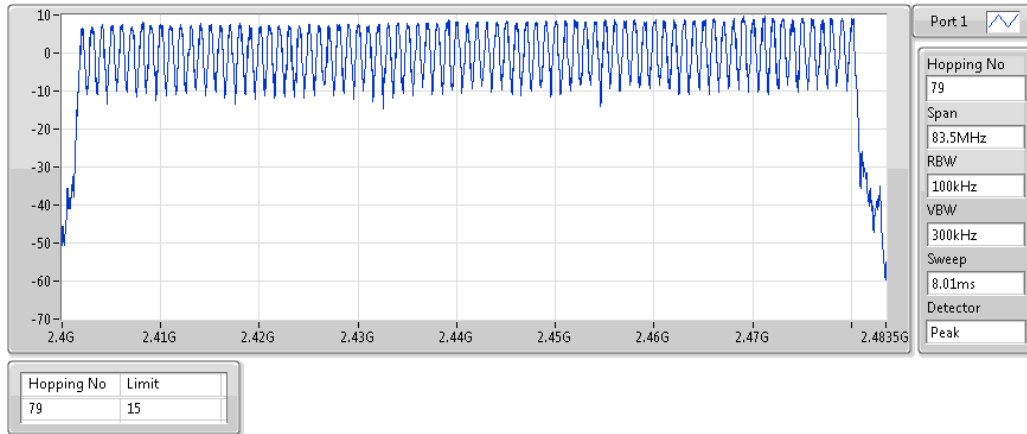
| Mode          | Max-Hop No |
|---------------|------------|
| BT-BR(1Mbps)  | -          |
| 2.4-2.4835GHz | 79         |
| BT-EDR(2Mbps) | -          |
| 2.4-2.4835GHz | 79         |
| BT-EDR(3Mbps) | -          |
| 2.4-2.4835GHz | 79         |

**Result**

| Mode          | Result | Hopping No | Limit |
|---------------|--------|------------|-------|
| BT-BR(1Mbps)  | -      | -          | -     |
| 2440MHz       | Pass   | 79         | 15    |
| BT-EDR(2Mbps) | -      | -          | -     |
| 2440MHz       | Pass   | 79         | 15    |
| BT-EDR(3Mbps) | -      | -          | -     |
| 2440MHz       | Pass   | 79         | 15    |

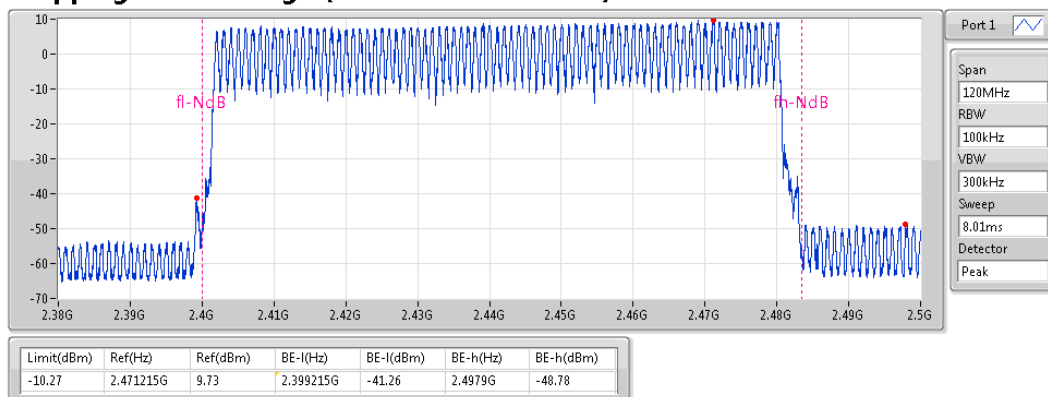
### BT-BR(1Mbps) 2440MHz

### Hopping Ch



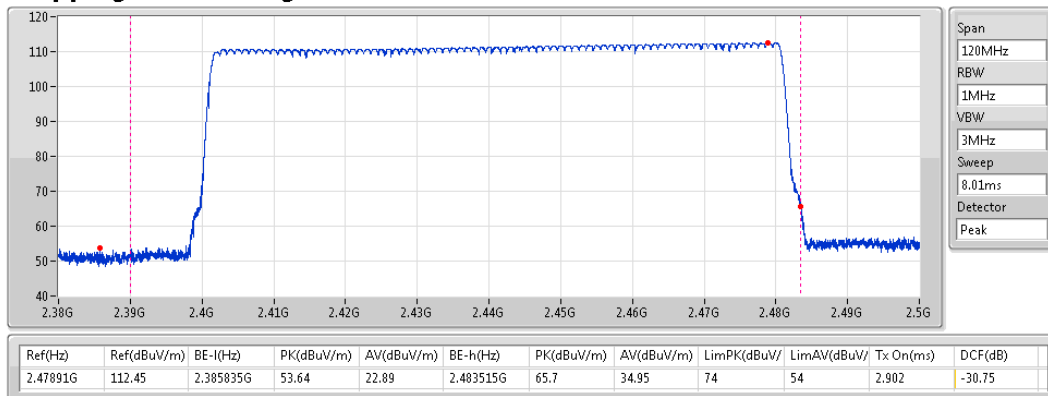
### BT-BR(1Mbps) 2440MHz

### Hopping Ch Bandedge (Non-restricted Band)



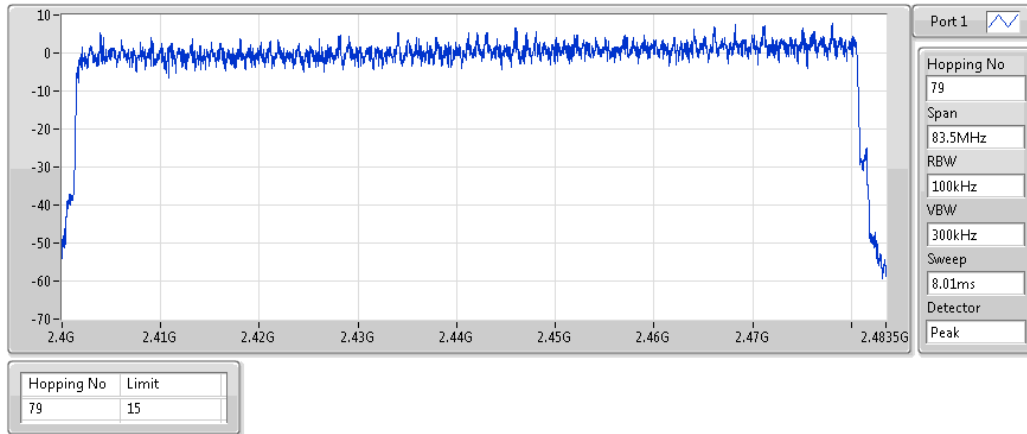
### BT-BR(1Mbps) 2440MHz

### Hopping Ch Bandedge (Restricted Band)



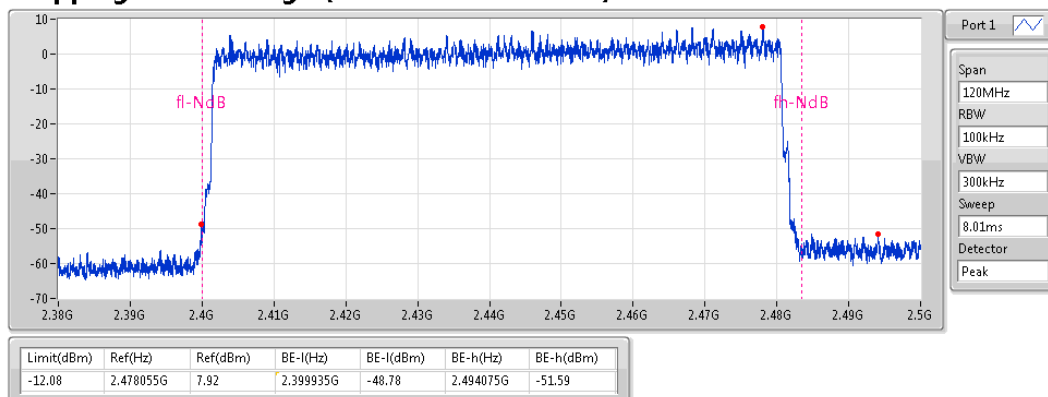
### BT-EDR(2Mbps) 2440MHz

### Hopping Ch



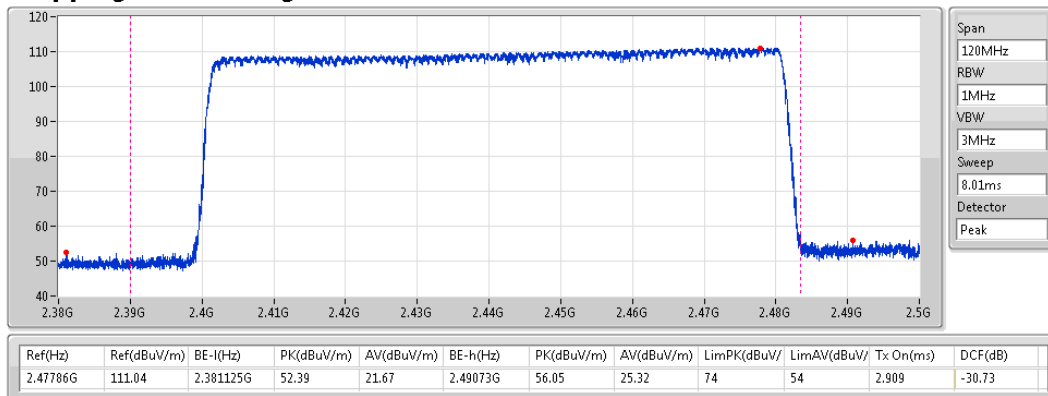
### BT-EDR(2Mbps) 2440MHz

### Hopping Ch Bandedge (Non-restricted Band)



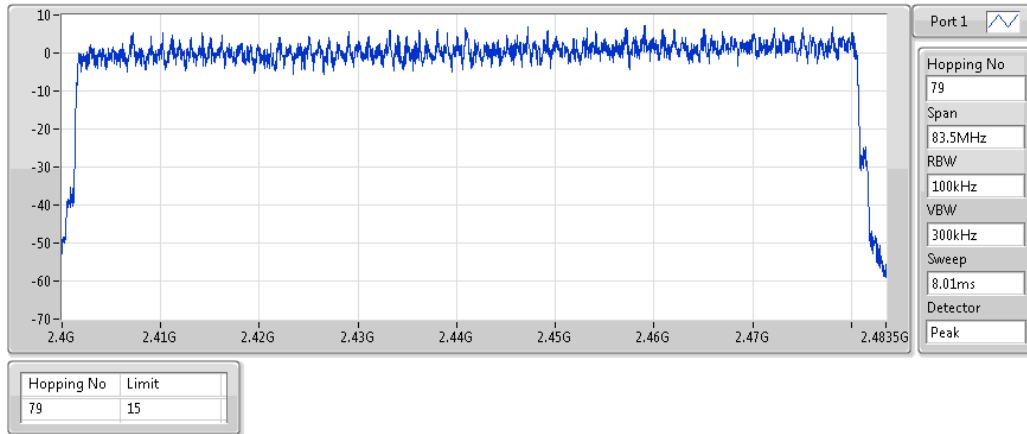
### BT-EDR(2Mbps) 2440MHz

### Hopping Ch Bandedge (Restricted Band)



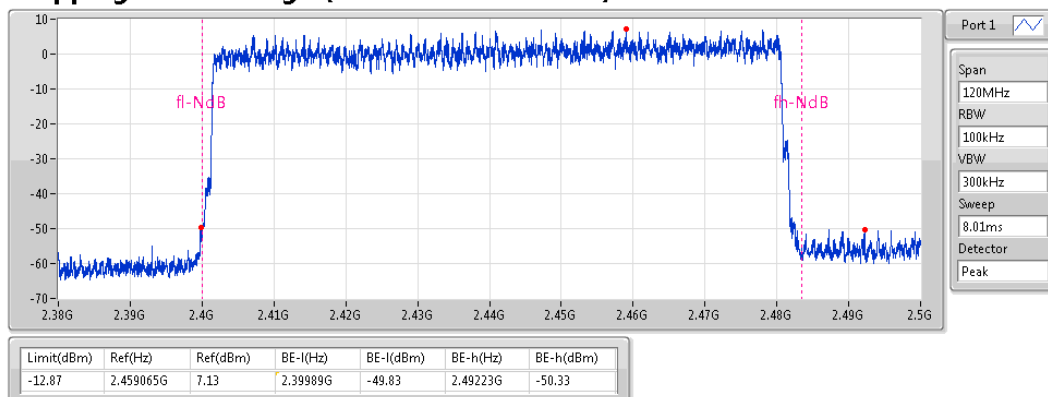
### BT-EDR(3Mbps) 2440MHz

### Hopping Ch



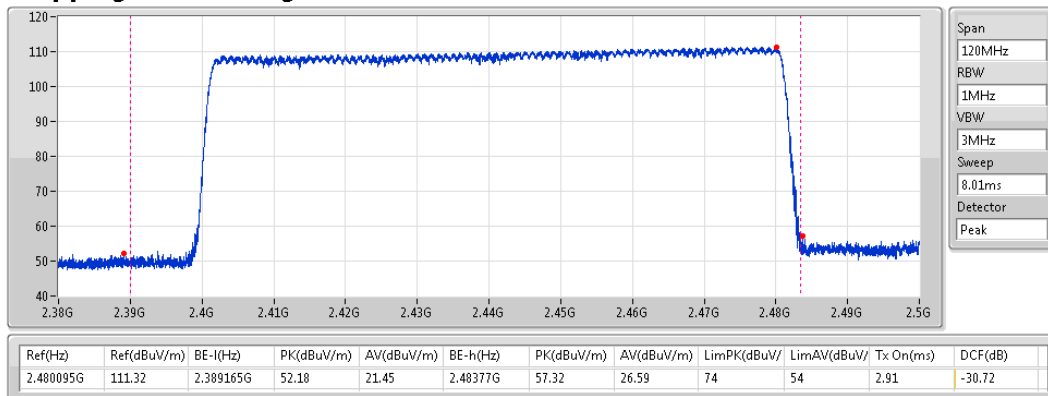
### BT-EDR(3Mbps) 2440MHz

### Hopping Ch Bandedge (Non-restricted Band)



### BT-EDR(3Mbps) 2440MHz

### Hopping Ch Bandedge (Restricted Band)



**Summary**

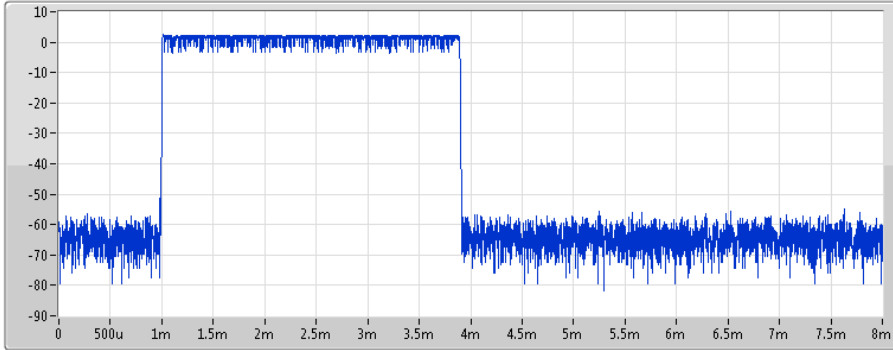
| Mode          | Max-Dwell<br>(s) |
|---------------|------------------|
| BT-BR(1Mbps)  | -                |
| 2.4-2.4835GHz | 309.3532m        |
| BT-EDR(2Mbps) | -                |
| 2.4-2.4835GHz | 310.0994m        |
| BT-EDR(3Mbps) | -                |
| 2.4-2.4835GHz | 310.206m         |

**Result**

| Mode          | Result | Period<br>(s) | Dwell<br>(s) | Limit<br>(s) | Tx On<br>(s) |
|---------------|--------|---------------|--------------|--------------|--------------|
| BT-BR(1Mbps)  | -      | -             | -            | -            | -            |
| 2440MHz       | Pass   | 31.6          | 309.3532m    | 400m         | 2.902m       |
| BT-EDR(2Mbps) | -      | -             | -            | -            | -            |
| 2440MHz       | Pass   | 31.6          | 310.0994m    | 400m         | 2.909m       |
| BT-EDR(3Mbps) | -      | -             | -            | -            | -            |
| 2440MHz       | Pass   | 31.6          | 310.206m     | 400m         | 2.91m        |

## BT-BR(1Mbps)

2440MHz



Dwell

Port 1 

Ch Freq  
2.44GHz

RBW  
300kHz

VBW  
1MHz

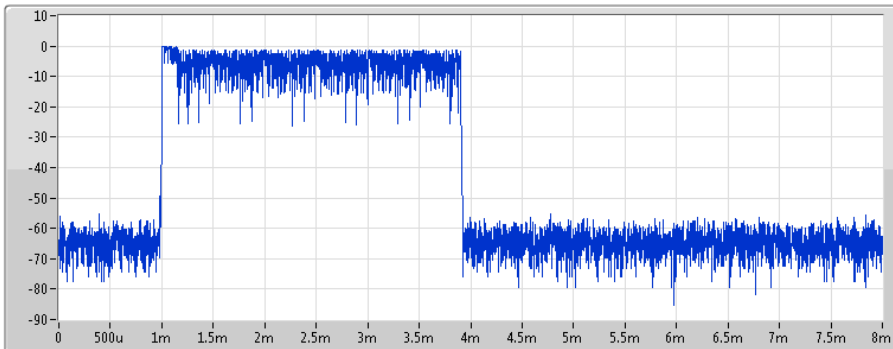
Sweep Time  
8ms

TX Time  
2.902ms

| Period(s) | Dwell(s)  | Limit(s) | Tx On(s) |
|-----------|-----------|----------|----------|
| 31.6      | 309.3532m | 400m     | 2.902m   |

## BT-EDR(2Mbps)

2440MHz



Dwell

Port 1 

Ch Freq  
2.44GHz

RBW  
300kHz

VBW  
1MHz

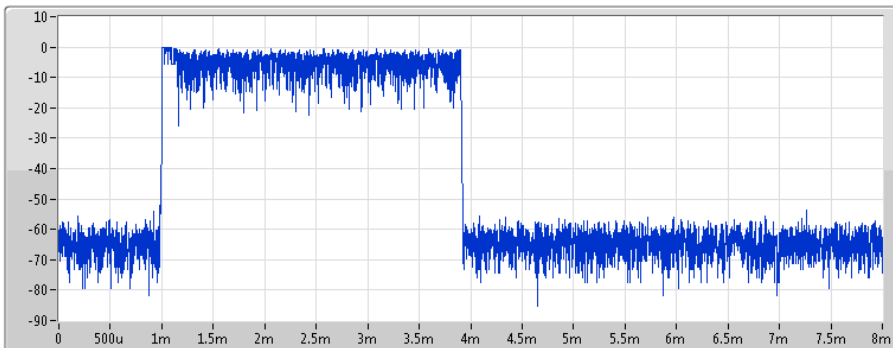
Sweep Time  
8ms

TX Time  
2.909ms

| Period(s) | Dwell(s)  | Limit(s) | Tx On(s) |
|-----------|-----------|----------|----------|
| 31.6      | 310.0994m | 400m     | 2.909m   |

## BT-EDR(3Mbps)

2440MHz



Dwell

Port 1 

Ch Freq  
2.44GHz

RBW  
300kHz

VBW  
1MHz

Sweep Time  
8ms

TX Time  
2.91ms

| Period(s) | Dwell(s) | Limit(s) | Tx On(s) |
|-----------|----------|----------|----------|
| 31.6      | 310.206m | 400m     | 2.91m    |

**Summary**

| Mode          | Result | Ref<br>(Hz) | Ref<br>(dBm) | Limit<br>(dBm) | Freq<br>(Hz) | Level<br>(dBm) | Freq<br>(Hz) | Level<br>(dBm) | Freq<br>(Hz) | Level<br>(dBm) | Freq<br>(Hz) | Level<br>(dBm) | Port |
|---------------|--------|-------------|--------------|----------------|--------------|----------------|--------------|----------------|--------------|----------------|--------------|----------------|------|
| BT-BR(1Mbps)  | -      | -           | -            | -              | -            | -              | -            | -              | -            | -              | -            | -              | -    |
| 2.4-2.4835GHz | Pass   | 2.40167G    | -5.23        | -25.23         | 890.768M     | -61.65         | 2.399188G    | -41.23         | 2.4853G      | -60.60         | 7.205102G    | -48.87         | 1    |

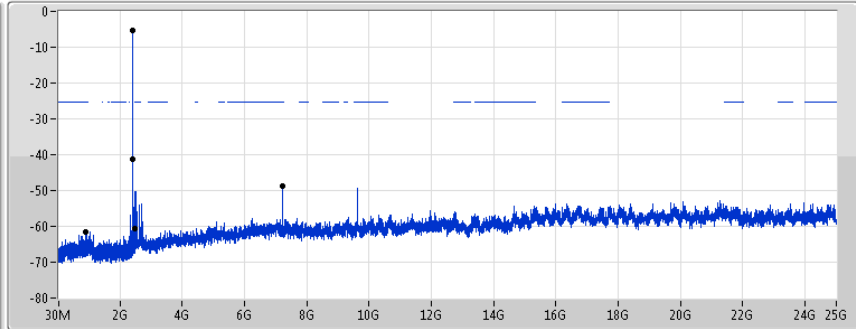
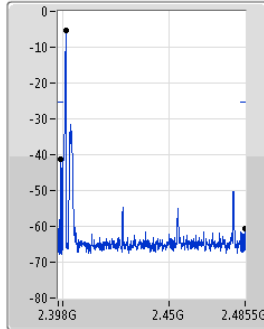
**Result**

| Mode          | Result | Ref<br>(Hz) | Ref<br>(dBm) | Limit<br>(dBm) | Freq<br>(Hz) | Level<br>(dBm) | Freq<br>(Hz) | Level<br>(dBm) | Freq<br>(Hz) | Level<br>(dBm) | Freq<br>(Hz) | Level<br>(dBm) | Port |
|---------------|--------|-------------|--------------|----------------|--------------|----------------|--------------|----------------|--------------|----------------|--------------|----------------|------|
| BT-BR(1Mbps)  | -      | -           | -            | -              | -            | -              | -            | -              | -            | -              | -            | -              | -    |
| 2402MHz       | Pass   | 2.40167G    | -5.23        | -25.23         | 890.768M     | -61.65         | 2.399188G    | -41.23         | 2.4853G      | -60.60         | 7.205102G    | -48.87         | 1    |
| 2480MHz       | Pass   | 2.479993G   | 9.01         | -10.99         | 2.123312G    | -63.08         | 2.39822G     | -61.78         | 2.483556G    | -52.78         | 2.584001G    | -48.82         | 1    |
| BT-EDR(2Mbps) | -      | -           | -            | -              | -            | -              | -            | -              | -            | -              | -            | -              | -    |
| 2402MHz       | Pass   | 2.402338G   | 0.39         | -19.61         | 1.968208G    | -62.15         | 2.399996G    | -46.49         | 2.484024G    | -61.50         | 9.608525G    | -50.81         | 1    |
| 2480MHz       | Pass   | 2.479993G   | 4.63         | -15.37         | 900.24M      | -62.80         | 2.398248G    | -62.39         | 2.483728G    | -55.90         | 9.918099G    | -51.04         | 1    |
| BT-EDR(3Mbps) | -      | -           | -            | -              | -            | -              | -            | -              | -            | -              | -            | -              | -    |
| 2402MHz       | Pass   | 2.401837G   | 0.60         | -19.40         | 880.112M     | -62.55         | 2.399984G    | -47.30         | 2.485232G    | -61.72         | 2.555858G    | -52.94         | 1    |
| 2480MHz       | Pass   | 2.479993G   | 4.35         | -15.65         | 580.56M      | -63.21         | 2.399684G    | -62.23         | 2.483528G    | -55.13         | 2.555858G    | -52.54         | 1    |

### BT-BR(1Mbps)

CSE NdB

2402MHz

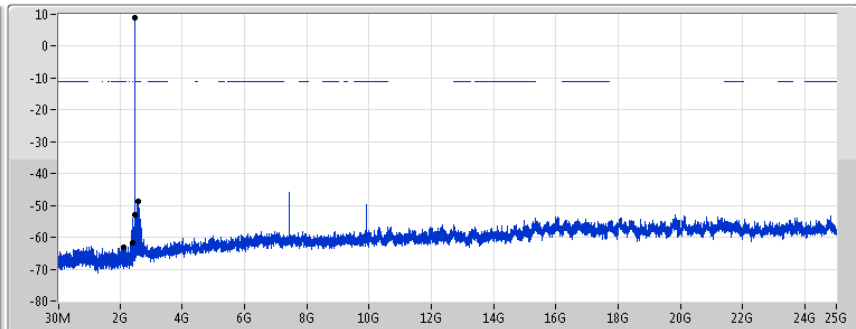
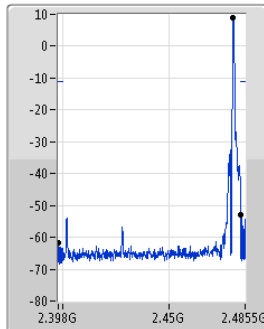


| Ref(Hz)  | Ref(dBm) | Limit(dBm) | Freq(Hz) | Level(dBm) | Freq(Hz)  | Level(dBm) | Freq(Hz) | Level(dBm) | Freq(Hz)  | Level(dBm) | Port |
|----------|----------|------------|----------|------------|-----------|------------|----------|------------|-----------|------------|------|
| 2.40167G | -5.23    | -25.23     | 890.768M | -61.65     | 2.399188G | -41.23     | 2.4853G  | -60.60     | 7.205102G | -48.87     | 1    |

### BT-BR(1Mbps)

CSE NdB

2480MHz

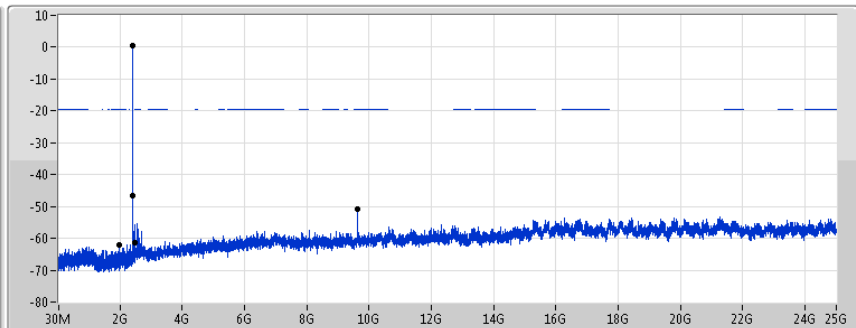
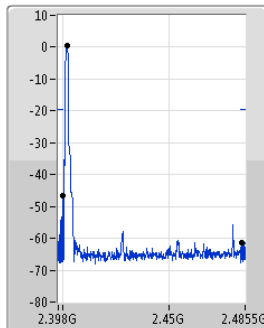


| Ref(Hz)   | Ref(dBm) | Limit(dBm) | Freq(Hz)  | Level(dBm) | Freq(Hz) | Level(dBm) | Freq(Hz)  | Level(dBm) | Freq(Hz)  | Level(dBm) | Port |
|-----------|----------|------------|-----------|------------|----------|------------|-----------|------------|-----------|------------|------|
| 2.479993G | 9.01     | -10.99     | 2.123312G | -63.08     | 2.39822G | -61.78     | 2.483556G | -52.78     | 2.584001G | -48.82     | 1    |

### BT-EDR(2Mbps)

CSE NdB

2402MHz

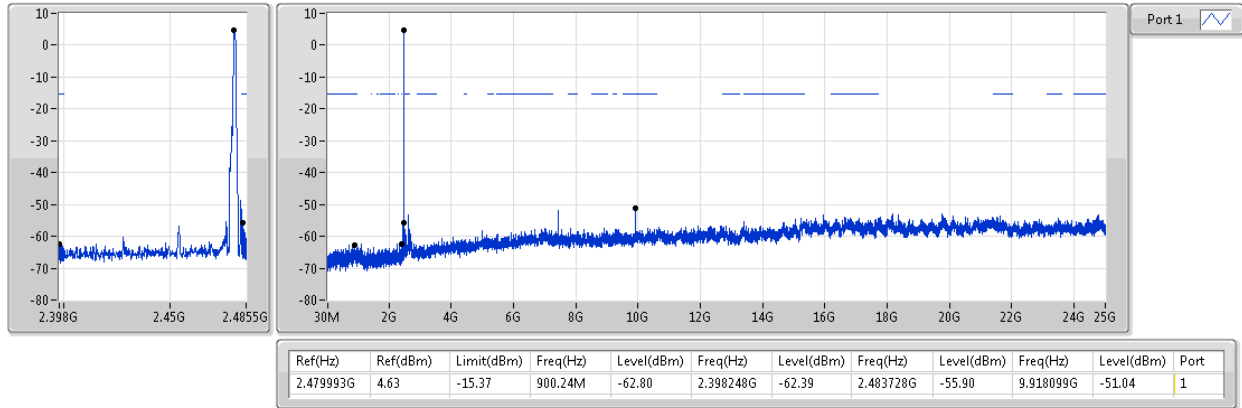


| Ref(Hz)   | Ref(dBm) | Limit(dBm) | Freq(Hz)  | Level(dBm) | Freq(Hz)  | Level(dBm) | Freq(Hz)  | Level(dBm) | Freq(Hz)  | Level(dBm) | Port |
|-----------|----------|------------|-----------|------------|-----------|------------|-----------|------------|-----------|------------|------|
| 2.402338G | 0.39     | -19.61     | 1.968208G | -62.15     | 2.399996G | -46.49     | 2.484024G | -61.50     | 9.608525G | -50.81     | 1    |

## BT-EDR(2Mbps)

CSE NdB

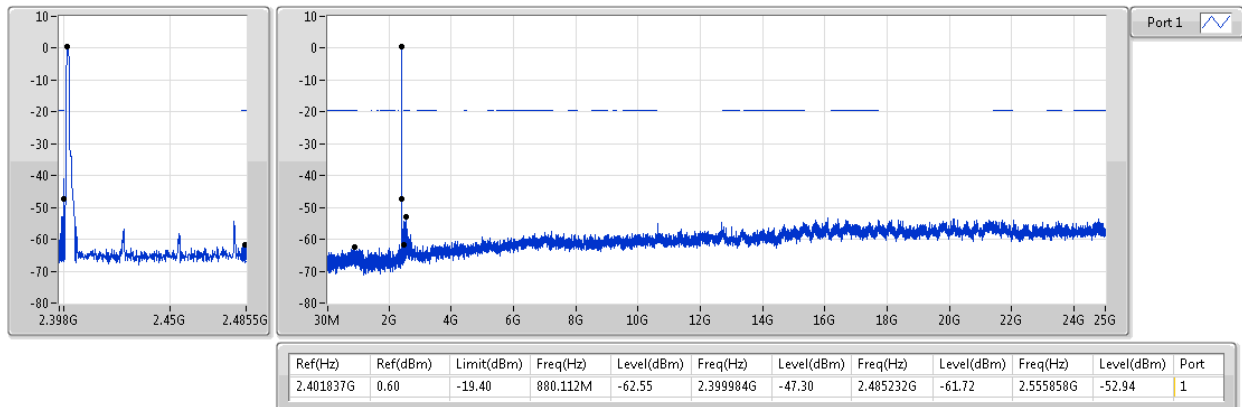
2480MHz



## BT-EDR(3Mbps)

CSE NdB

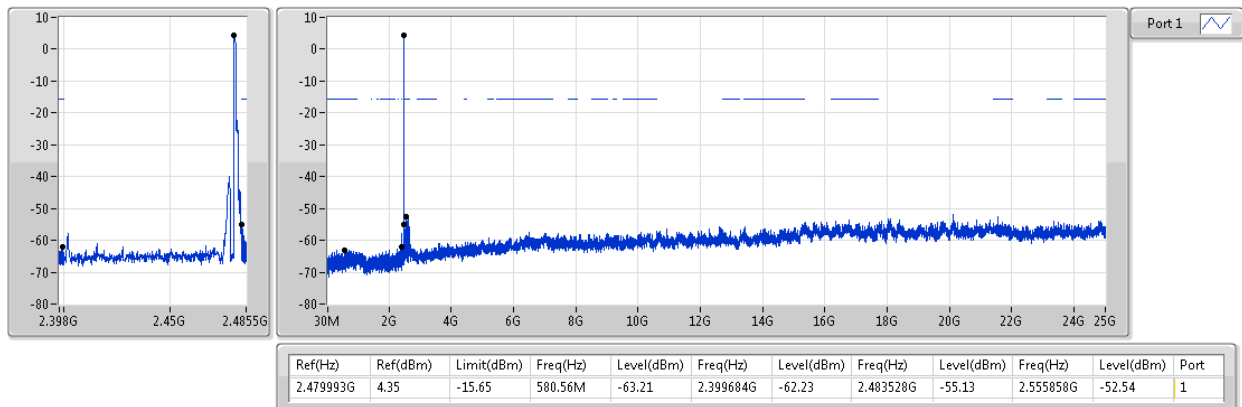
2402MHz

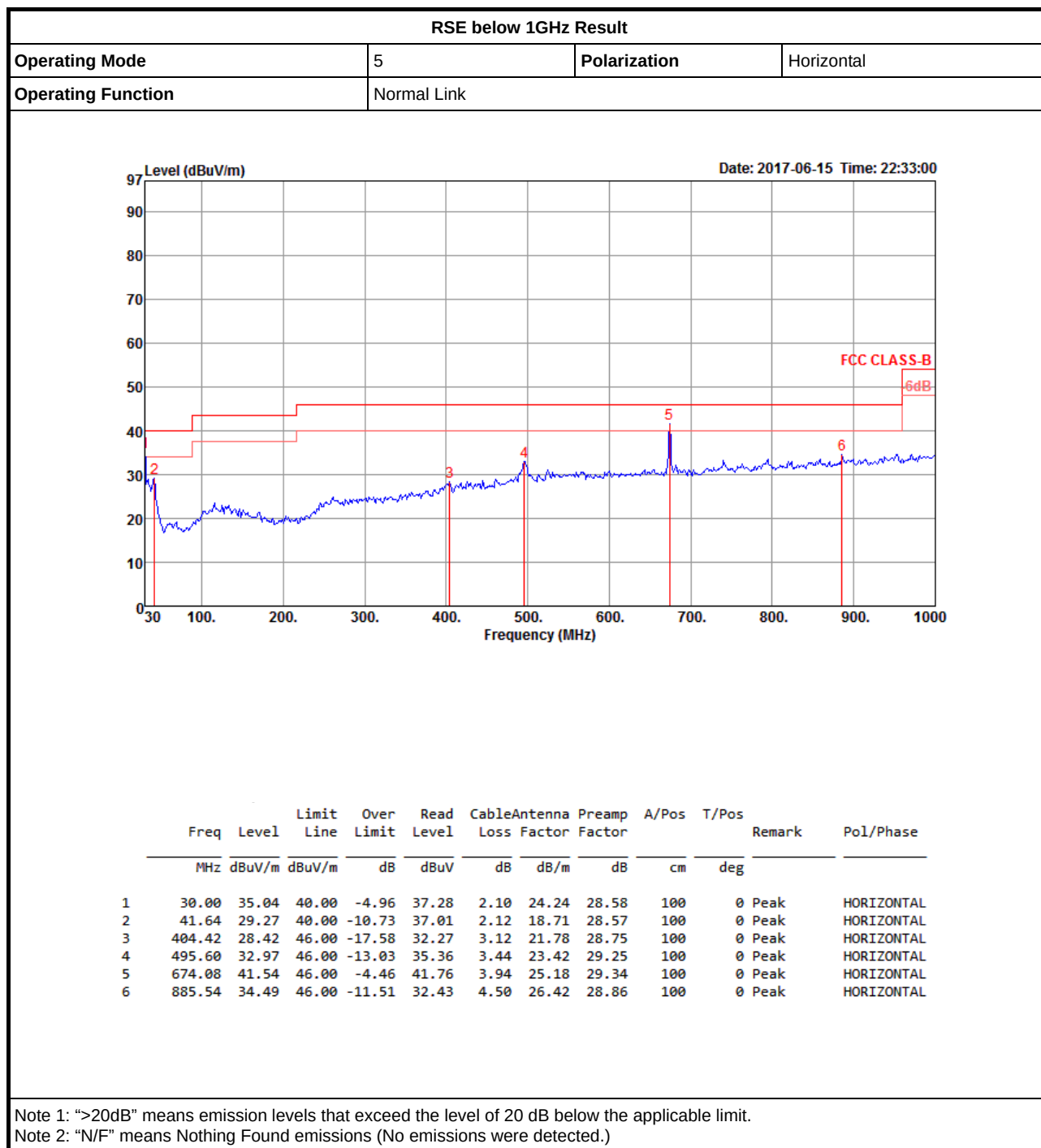


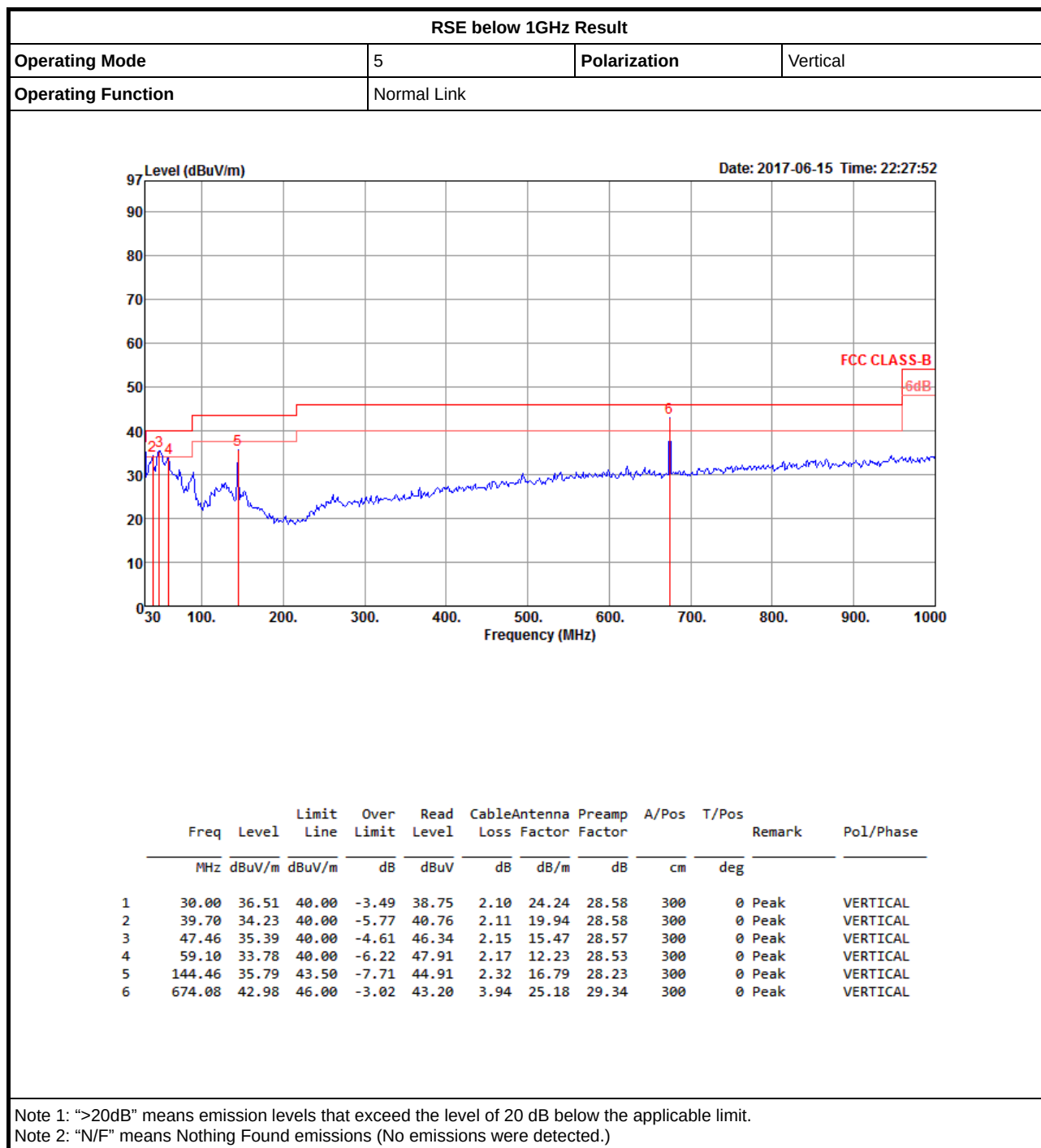
## BT-EDR(3Mbps)

CSE NdB

2480MHz









## RSE TX above 1GHz Result

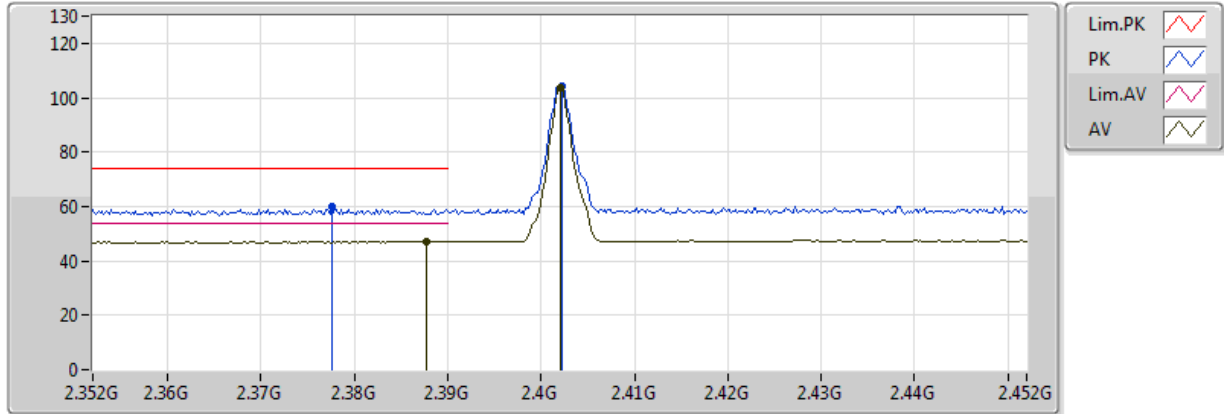
## Appendix G.2

### Summary

| Mode          | Result | Type | Freq<br>(Hz) | Level<br>(dBuV/m) | Limit<br>(dBuV/m) | Margin<br>(dB) | Factor<br>(dB) | Dist<br>(m) | Pol.<br>(H/V) | Azimuth<br>(°) | Height<br>(m) | Comments |
|---------------|--------|------|--------------|-------------------|-------------------|----------------|----------------|-------------|---------------|----------------|---------------|----------|
| BT-BR(1Mbps)  | -      | -    | -            | -                 | -                 | -              | -              | -           | -             | -              | -             | -        |
| 2.4-2.4835GHz | Pass   | AV   | 4.960102G    | 52.13             | 54.00             | -1.87          | 8.41           | 3           | H             | 357            | 1.73          | -        |

## BT-BR(1Mbps)

## 2402MHz\_TX

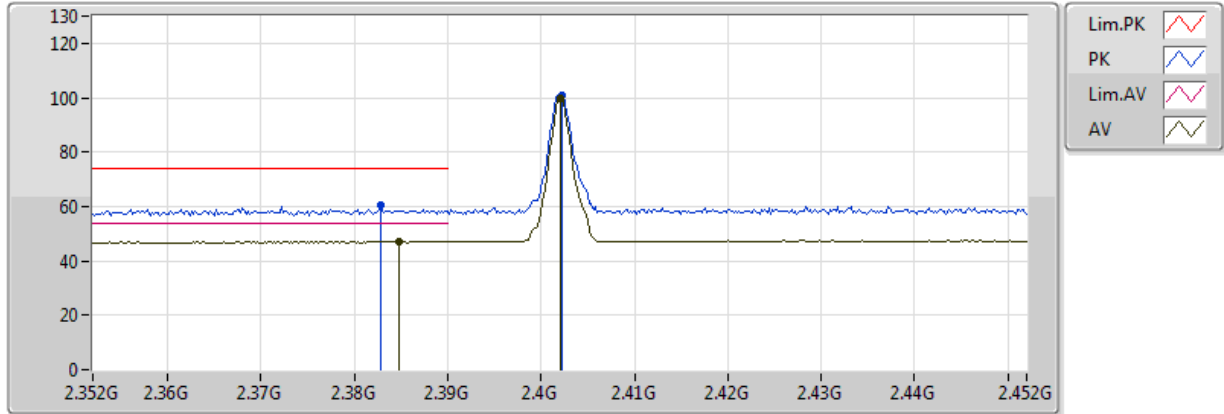


20170511  
EUT X\_1TX  
Setting 8  
02-W-3  
FSU

| Type | Freq(Hz) | Level(dBuV/m) | Limit(dBuV/m) | Margin(dB) | Factor(dB) | Dist(m) | Pol.(H/V) | Azimuth(°) | Height(m) | Comments |
|------|----------|---------------|---------------|------------|------------|---------|-----------|------------|-----------|----------|
| AV   | 2.3878G  | 47.21         | 54.00         | -6.79      | 31.87      | 3       | V         | 32         | 2.55      | -        |
| AV   | 2.402G   | 103.57        | Inf           | -Inf       | 31.91      | 3       | V         | 32         | 2.55      | -        |
| PK   | 2.3776G  | 59.72         | 74.00         | -14.28     | 31.84      | 3       | V         | 32         | 2.55      | -        |
| PK   | 2.4022G  | 104.46        | Inf           | -Inf       | 31.91      | 3       | V         | 32         | 2.55      | -        |

### BT-BR(1Mbps)

### 2402MHz\_TX

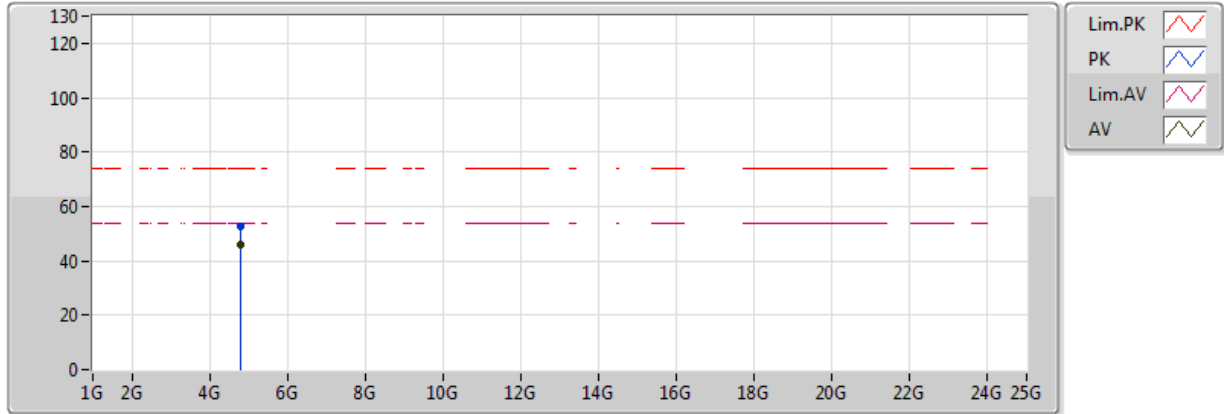


20170511  
EUT X\_1TX  
Setting 8  
02-W-3  
FSU

| Type | Freq(Hz) | Level(dBuV/m) | Limit(dBuV/m) | Margin(dB) | Factor(dB) | Dist(m) | Pol.(H/V) | Azimuth(°) | Height(m) | Comments |
|------|----------|---------------|---------------|------------|------------|---------|-----------|------------|-----------|----------|
| AV   | 2.3848G  | 47.05         | 54.00         | -6.95      | 31.86      | 3       | H         | 22         | 2.09      | -        |
| AV   | 2.402G   | 99.94         | Inf           | -Inf       | 31.91      | 3       | H         | 22         | 2.09      | -        |
| PK   | 2.3828G  | 60.69         | 74.00         | -13.31     | 31.86      | 3       | H         | 22         | 2.09      | -        |
| PK   | 2.4022G  | 100.87        | Inf           | -Inf       | 31.91      | 3       | H         | 22         | 2.09      | -        |

## BT-BR(1Mbps)

## 2402MHz\_TX

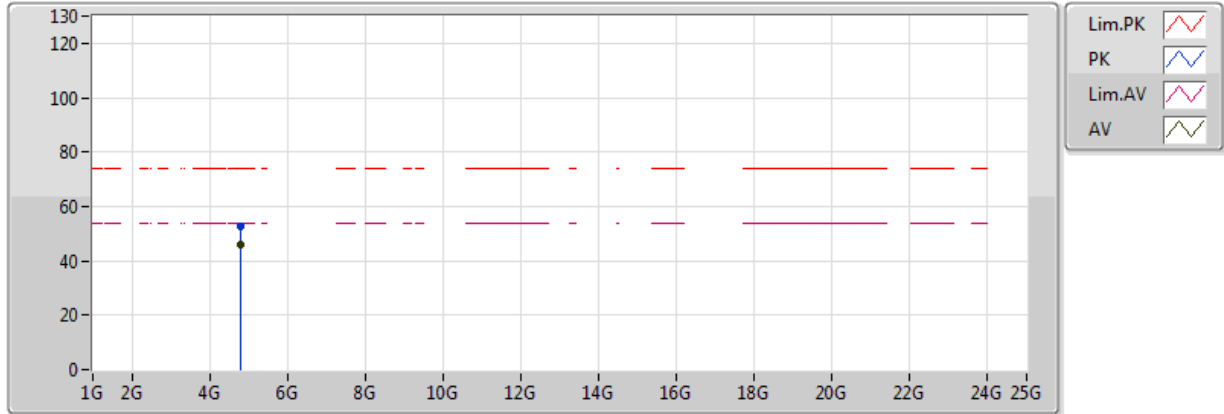


20170511  
EUT X\_1TX  
Setting 8  
02-W-3  
FSU

| Type | Freq(Hz)  | Level(dBuV/m) | Limit(dBuV/m) | Margin(dB) | Factor(dB) | Dist(m) | Pol.(H/V) | Azimuth(°) | Height(m) | Comments |
|------|-----------|---------------|---------------|------------|------------|---------|-----------|------------|-----------|----------|
| AV   | 4.804132G | 46.19         | 54.00         | -7.81      | 7.96       | 3       | V         | 302        | 2.93      | -        |
| PK   | 4.803682G | 52.70         | 74.00         | -21.30     | 7.96       | 3       | V         | 302        | 2.93      | -        |

## BT-BR(1Mbps)

## 2402MHz\_TX

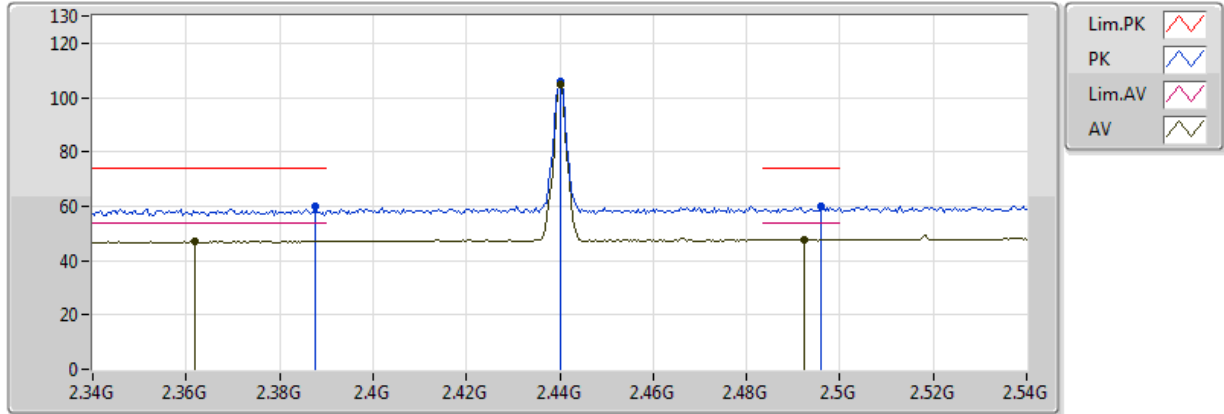


20170511  
EUT X\_1TX  
Setting 8  
02-W-3  
FSU

| Type | Freq(Hz)  | Level(dBuV/m) | Limit(dBuV/m) | Margin(dB) | Factor(dB) | Dist(m) | Pol.(H/V) | Azimuth(°) | Height(m) | Comments |
|------|-----------|---------------|---------------|------------|------------|---------|-----------|------------|-----------|----------|
| AV   | 4.804084G | 45.73         | 54.00         | -8.27      | 7.96       | 3       | H         | 38         | 1.69      | -        |
| PK   | 4.804182G | 52.84         | 74.00         | -21.16     | 7.96       | 3       | H         | 38         | 1.69      | -        |

## BT-BR(1Mbps)

## 2440MHz\_TX

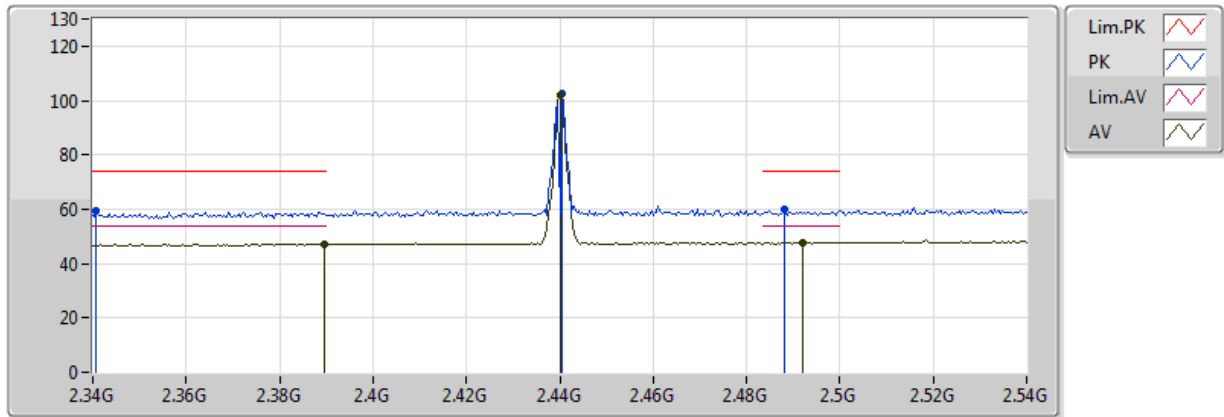


20170511  
EUT X\_1TX  
Setting 8  
02-W-3  
FSU

| Type | Freq(Hz) | Level(dBuV/m) | Limit(dBuV/m) | Margin(dB) | Factor(dB) | Dist(m) | Pol.(H/V) | Azimuth(°) | Height(m) | Comments |
|------|----------|---------------|---------------|------------|------------|---------|-----------|------------|-----------|----------|
| AV   | 2.362G   | 47.18         | 54.00         | -6.82      | 31.80      | 3       | V         | 21         | 2.67      | -        |
| AV   | 2.44G    | 104.81        | Inf           | -Inf       | 32.01      | 3       | V         | 21         | 2.67      | -        |
| AV   | 2.4924G  | 47.84         | 54.00         | -6.16      | 32.15      | 3       | V         | 21         | 2.67      | -        |
| PK   | 2.3876G  | 59.86         | 74.00         | -14.14     | 31.87      | 3       | V         | 21         | 2.67      | -        |
| PK   | 2.44G    | 105.70        | Inf           | -Inf       | 32.01      | 3       | V         | 21         | 2.67      | -        |
| PK   | 2.496G   | 59.72         | 74.00         | -14.28     | 32.16      | 3       | V         | 21         | 2.67      | -        |

## BT-BR(1Mbps)

## 2440MHz\_TX

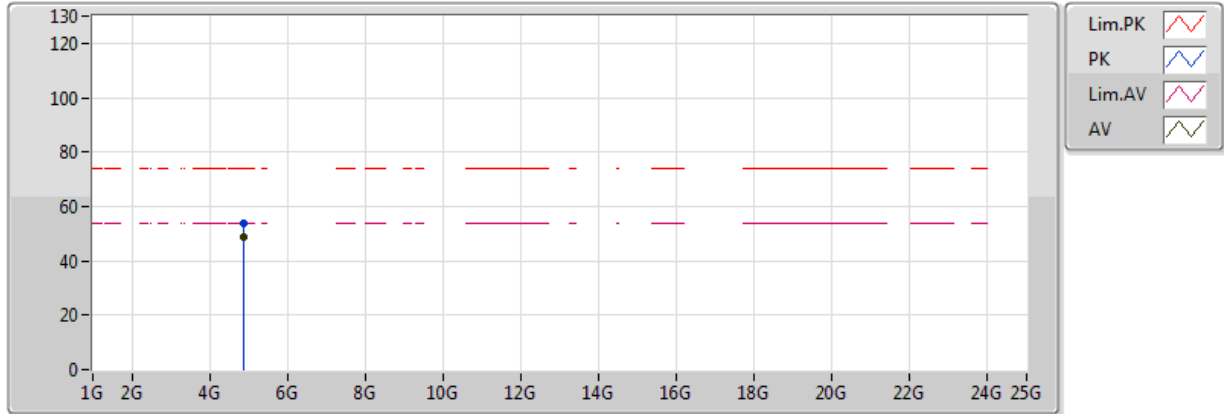


20170511  
EUT X\_1TX  
Setting 8  
02-W-3  
FSU

| Type | Freq(Hz) | Level(dBuV/m) | Limit(dBuV/m) | Margin(dB) | Factor(dB) | Dist(m) | Pol.(H/V) | Azimuth(°) | Height(m) | Comments |
|------|----------|---------------|---------------|------------|------------|---------|-----------|------------|-----------|----------|
| AV   | 2.3896G  | 47.15         | 54.00         | -6.85      | 31.87      | 3       | H         | 20         | 1.09      | -        |
| AV   | 2.44G    | 102.07        | Inf           | -Inf       | 32.01      | 3       | H         | 20         | 1.09      | -        |
| AV   | 2.492G   | 47.68         | 54.00         | -6.32      | 32.15      | 3       | H         | 20         | 1.09      | -        |
| PK   | 2.3408G  | 59.62         | 74.00         | -14.38     | 31.75      | 3       | H         | 20         | 1.09      | -        |
| PK   | 2.4404G  | 102.68        | Inf           | -Inf       | 32.01      | 3       | H         | 20         | 1.09      | -        |
| PK   | 2.488G   | 59.77         | 74.00         | -14.23     | 32.14      | 3       | H         | 20         | 1.09      | -        |

## BT-BR(1Mbps)

## 2440MHz\_TX

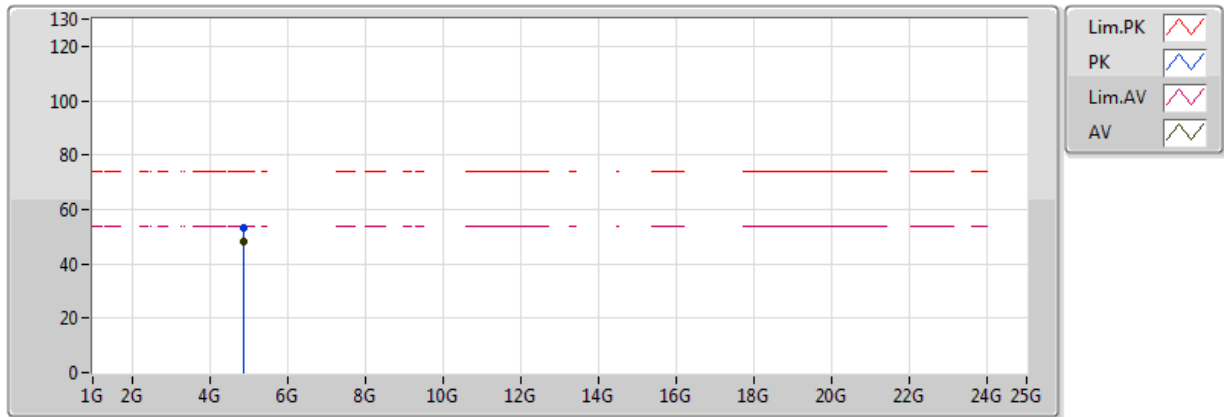


20170511  
EUT X\_1TX  
Setting 8  
02-W-3  
FSU

| Type | Freq(Hz)  | Level(dBuV/m) | Limit(dBuV/m) | Margin(dB) | Factor(dB) | Dist(m) | Pol.(H/V) | Azimuth(°) | Height(m) | Comments |
|------|-----------|---------------|---------------|------------|------------|---------|-----------|------------|-----------|----------|
| AV   | 4.880084G | 48.82         | 54.00         | -5.18      | 8.17       | 3       | V         | 308        | 2.87      | -        |
| PK   | 4.879716G | 53.93         | 74.00         | -20.07     | 8.17       | 3       | V         | 308        | 2.87      | -        |

## BT-BR(1Mbps)

## 2440MHz\_TX

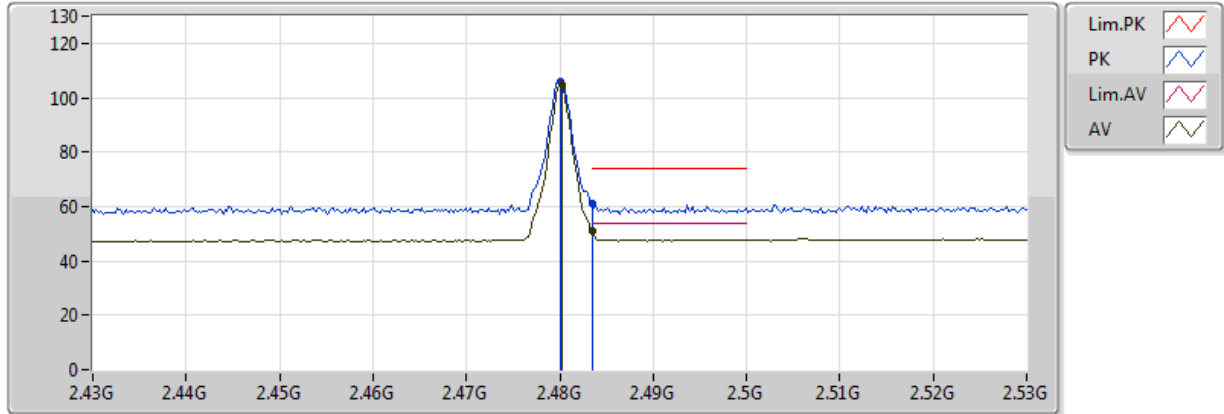


20170511  
EUT X\_1TX  
Setting 8  
02-W-3  
FSU

| Type | Freq(Hz)  | Level(dBuV/m) | Limit(dBuV/m) | Margin(dB) | Factor(dB) | Dist(m) | Pol.(H/V) | Azimuth(°) | Height(m) | Comments |
|------|-----------|---------------|---------------|------------|------------|---------|-----------|------------|-----------|----------|
| AV   | 4.880094G | 48.22         | 54.00         | -5.78      | 8.17       | 3       | H         | 352        | 1.73      | -        |
| PK   | 4.88038G  | 53.46         | 74.00         | -20.54     | 8.17       | 3       | H         | 352        | 1.73      | -        |

## BT-BR(1Mbps)

## 2480MHz\_TX

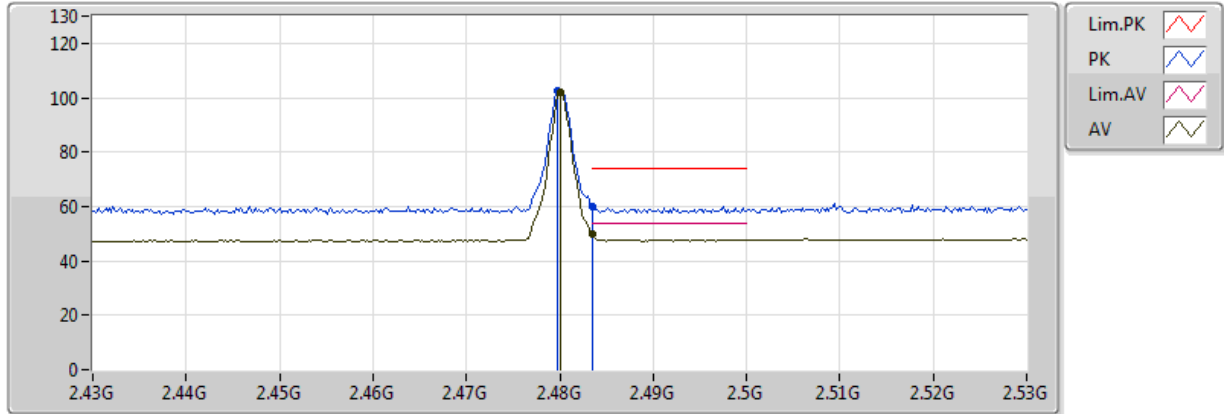


20170511  
EUT X\_1TX  
Setting 8  
02-W-3  
FSU

| Type | Freq(Hz)  | Level(dBuV/m) | Limit(dBuV/m) | Margin(dB) | Factor(dB) | Dist(m) | Pol.(H/V) | Azimuth(°) | Height(m) | Comments |
|------|-----------|---------------|---------------|------------|------------|---------|-----------|------------|-----------|----------|
| AV   | 2.4802G   | 104.76        | Inf           | -Inf       | 32.12      | 3       | V         | 320        | 2.30      | -        |
| AV   | 2.483502G | 51.25         | 54.00         | -2.75      | 32.13      | 3       | V         | 320        | 2.30      | -        |
| PK   | 2.48G     | 105.63        | Inf           | -Inf       | 32.12      | 3       | V         | 320        | 2.30      | -        |
| PK   | 2.483502G | 61.21         | 74.00         | -12.79     | 32.13      | 3       | V         | 320        | 2.30      | -        |

### BT-BR(1Mbps)

### 2480MHz\_TX

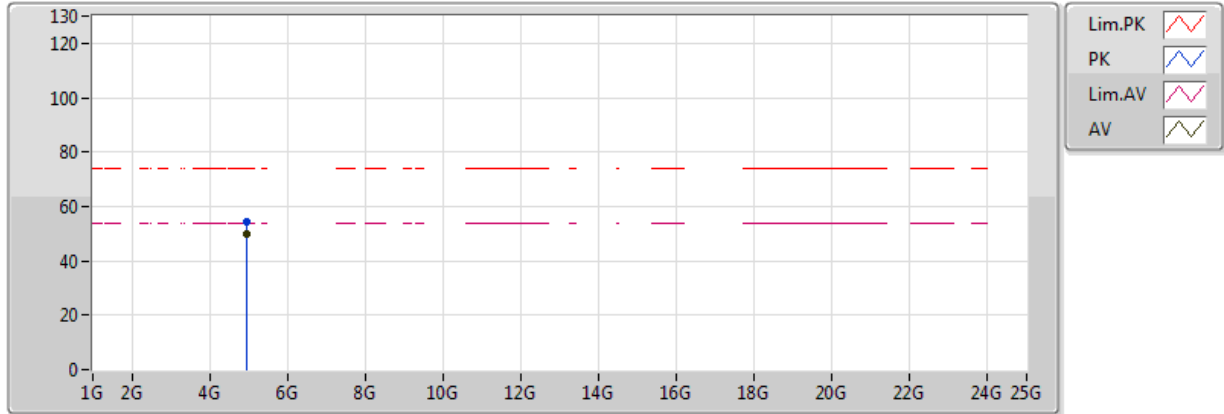


20170511  
EUT X\_1TX  
Setting 8  
02-W-3  
FSU

| Type | Freq(Hz)  | Level(dBuV/m) | Limit(dBuV/m) | Margin(dB) | Factor(dB) | Dist(m) | Pol.(H/V) | Azimuth(°) | Height(m) | Comments |
|------|-----------|---------------|---------------|------------|------------|---------|-----------|------------|-----------|----------|
| AV   | 2.48G     | 101.86        | Inf           | -Inf       | 32.12      | 3       | H         | 25         | 1.10      | -        |
| AV   | 2.483502G | 50.15         | 54.00         | -3.85      | 32.13      | 3       | H         | 25         | 1.10      | -        |
| PK   | 2.4798G   | 102.75        | Inf           | -Inf       | 32.12      | 3       | H         | 25         | 1.10      | -        |
| PK   | 2.483502G | 60.20         | 74.00         | -13.80     | 32.13      | 3       | H         | 25         | 1.10      | -        |

## BT-BR(1Mbps)

## 2480MHz\_TX

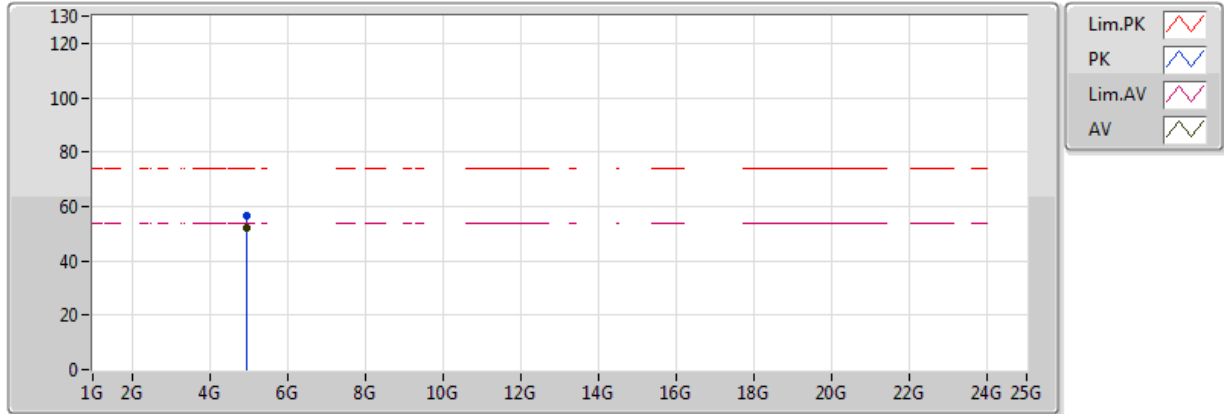


20170511  
EUT X\_1TX  
Setting 8  
02-W-3  
FSU

| Type | Freq(Hz)  | Level(dBuV/m) | Limit(dBuV/m) | Margin(dB) | Factor(dB) | Dist(m) | Pol.(H/V) | Azimuth(°) | Height(m) | Comments |
|------|-----------|---------------|---------------|------------|------------|---------|-----------|------------|-----------|----------|
| AV   | 4.960124G | 49.64         | 54.00         | -4.36      | 8.41       | 3       | V         | 310        | 2.53      | -        |
| PK   | 4.959692G | 54.61         | 74.00         | -19.39     | 8.41       | 3       | V         | 310        | 2.53      | -        |

## BT-BR(1Mbps)

## 2480MHz\_TX

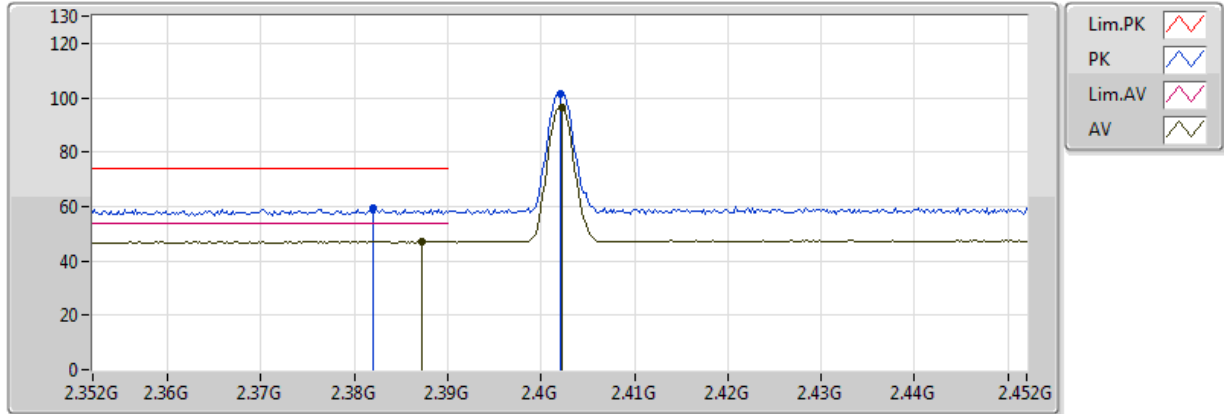


20170511  
EUT X\_1TX  
Setting 8  
02-W-3  
FSU

| Type | Freq(Hz)  | Level(dBuV/m) | Limit(dBuV/m) | Margin(dB) | Factor(dB) | Dist(m) | Pol.(H/V) | Azimuth(°) | Height(m) | Comments |
|------|-----------|---------------|---------------|------------|------------|---------|-----------|------------|-----------|----------|
| AV   | 4.960102G | 52.13         | 54.00         | -1.87      | 8.41       | 3       | H         | 357        | 1.73      | -        |
| PK   | 4.959722G | 56.37         | 74.00         | -17.63     | 8.41       | 3       | H         | 357        | 1.73      | -        |

## BT-EDR(3Mbps)

## 2402MHz\_TX

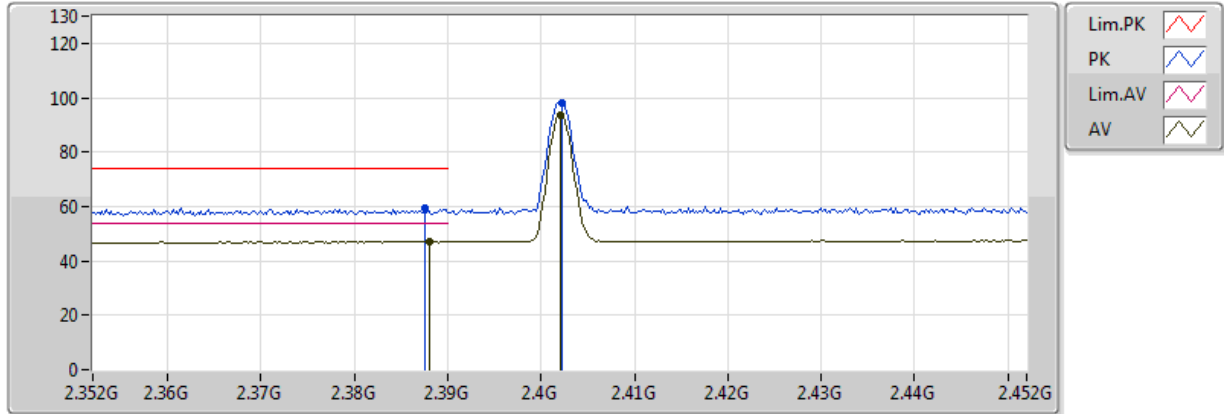


20170511  
EUT X\_1TX  
Setting 8  
02-W-3  
FSU

| Type | Freq(Hz) | Level(dBuV/m) | Limit(dBuV/m) | Margin(dB) | Factor(dB) | Dist(m) | Pol.(H/V) | Azimuth(°) | Height(m) | Comments |
|------|----------|---------------|---------------|------------|------------|---------|-----------|------------|-----------|----------|
| AV   | 2.3872G  | 47.05         | 54.00         | -6.95      | 31.87      | 3       | V         | 19         | 2.16      | -        |
| AV   | 2.4022G  | 96.55         | Inf           | -Inf       | 31.91      | 3       | V         | 19         | 2.16      | -        |
| PK   | 2.382G   | 59.17         | 74.00         | -14.83     | 31.85      | 3       | V         | 19         | 2.16      | -        |
| PK   | 2.402G   | 101.51        | Inf           | -Inf       | 31.91      | 3       | V         | 19         | 2.16      | -        |

## BT-EDR(3Mbps)

## 2402MHz\_TX

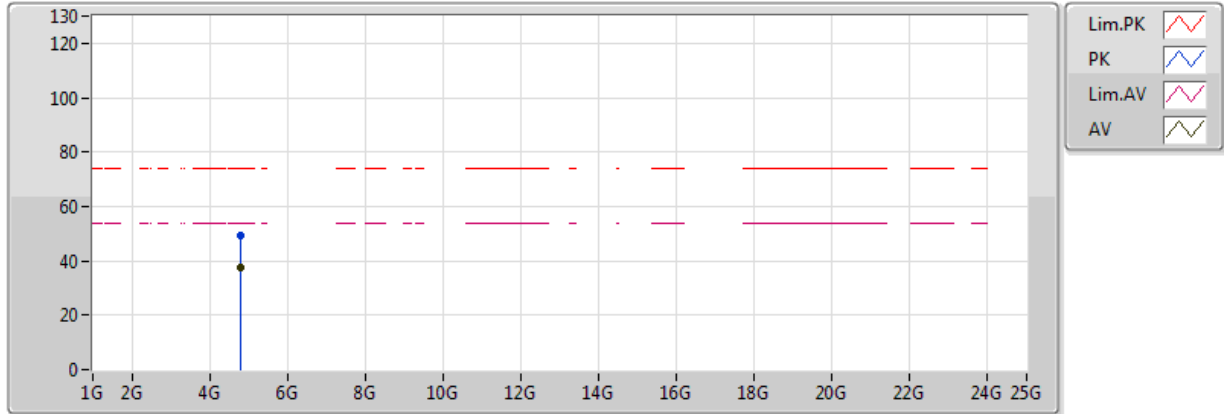


20170511  
EUT X\_1TX  
Setting 8  
02-W-3  
FSU

| Type | Freq(Hz) | Level(dBuV/m) | Limit(dBuV/m) | Margin(dB) | Factor(dB) | Dist(m) | Pol.(H/V) | Azimuth(°) | Height(m) | Comments |
|------|----------|---------------|---------------|------------|------------|---------|-----------|------------|-----------|----------|
| AV   | 2.388G   | 47.15         | 54.00         | -6.85      | 31.87      | 3       | H         | 27         | 2.09      | -        |
| AV   | 2.402G   | 93.84         | Inf           | -Inf       | 31.91      | 3       | H         | 27         | 2.09      | -        |
| PK   | 2.3876G  | 59.44         | 74.00         | -14.56     | 31.87      | 3       | H         | 27         | 2.09      | -        |
| PK   | 2.4022G  | 97.89         | Inf           | -Inf       | 31.91      | 3       | H         | 27         | 2.09      | -        |

## BT-EDR(3Mbps)

## 2402MHz\_TX

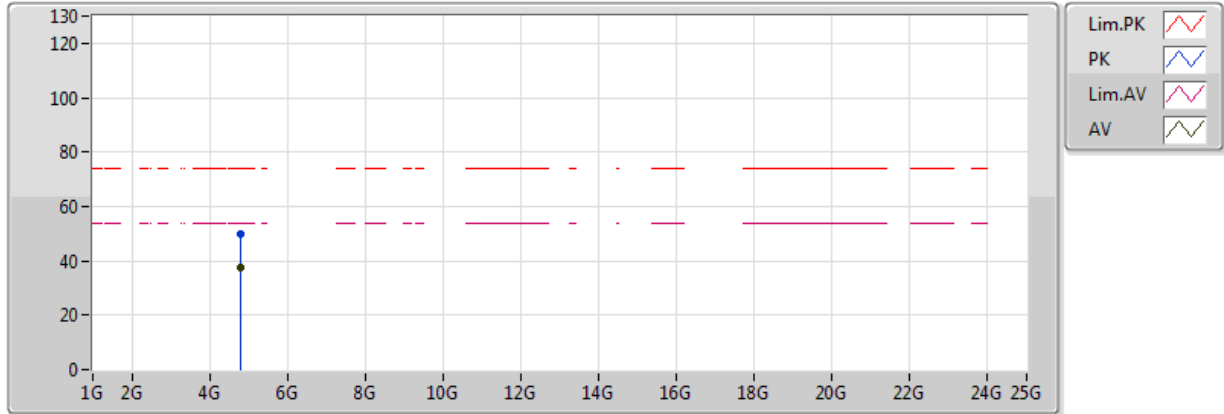


20170511  
EUT X\_1TX  
Setting 8  
02-W-3  
FSU

| Type | Freq(Hz)  | Level(dBuV/m) | Limit(dBuV/m) | Margin(dB) | Factor(dB) | Dist(m) | Pol.(H/V) | Azimuth(°) | Height(m) | Comments |
|------|-----------|---------------|---------------|------------|------------|---------|-----------|------------|-----------|----------|
| AV   | 4.804152G | 37.82         | 54.00         | -16.18     | 7.96       | 3       | V         | 313        | 2.96      | -        |
| PK   | 4.80389G  | 49.58         | 74.00         | -24.42     | 7.96       | 3       | V         | 313        | 2.96      | -        |

## BT-EDR(3Mbps)

## 2402MHz\_TX

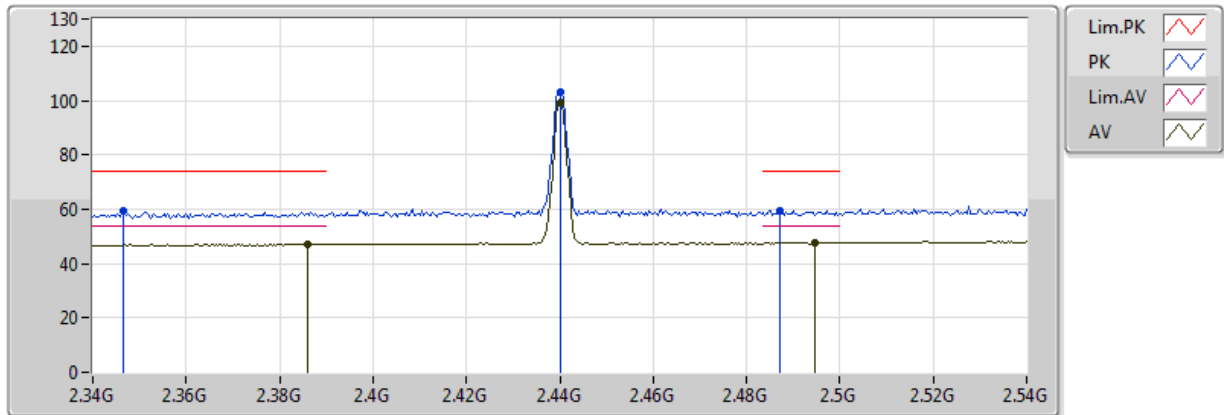


20170511  
EUT X\_1TX  
Setting 8  
02-W-3  
FSU

| Type | Freq(Hz)  | Level(dBuV/m) | Limit(dBuV/m) | Margin(dB) | Factor(dB) | Dist(m) | Pol.(H/V) | Azimuth(°) | Height(m) | Comments |
|------|-----------|---------------|---------------|------------|------------|---------|-----------|------------|-----------|----------|
| AV   | 4.804228G | 37.37         | 54.00         | -16.63     | 7.96       | 3       | H         | 71         | 1.88      | -        |
| PK   | 4.804066G | 49.76         | 74.00         | -24.24     | 7.96       | 3       | H         | 71         | 1.88      | -        |

## BT-EDR(3Mbps)

## 2440MHz\_TX

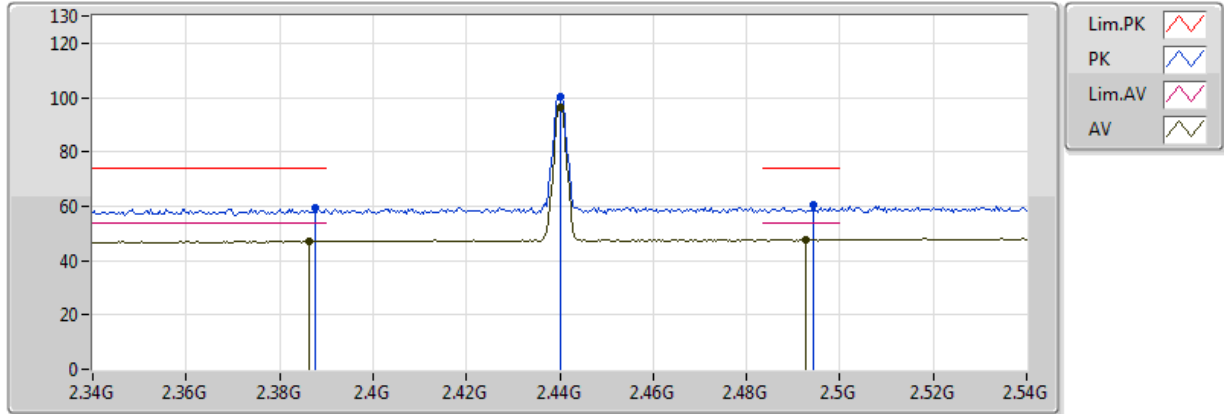


20170511  
EUT X\_1TX  
Setting 8  
02-W-3  
FSU

| Type | Freq(Hz) | Level(dBuV/m) | Limit(dBuV/m) | Margin(dB) | Factor(dB) | Dist(m) | Pol.(H/V) | Azimuth(°) | Height(m) | Comments |
|------|----------|---------------|---------------|------------|------------|---------|-----------|------------|-----------|----------|
| AV   | 2.386G   | 47.13         | 54.00         | -6.87      | 31.86      | 3       | V         | 17         | 2.65      | -        |
| AV   | 2.44G    | 99.06         | Inf           | -Inf       | 32.01      | 3       | V         | 17         | 2.65      | -        |
| AV   | 2.4948G  | 47.65         | 54.00         | -6.35      | 32.16      | 3       | V         | 17         | 2.65      | -        |
| PK   | 2.3464G  | 59.47         | 74.00         | -14.53     | 31.76      | 3       | V         | 17         | 2.65      | -        |
| PK   | 2.44G    | 103.19        | Inf           | -Inf       | 32.01      | 3       | V         | 17         | 2.65      | -        |
| PK   | 2.4872G  | 59.47         | 74.00         | -14.53     | 32.14      | 3       | V         | 17         | 2.65      | -        |

## BT-EDR(3Mbps)

## 2440MHz\_TX

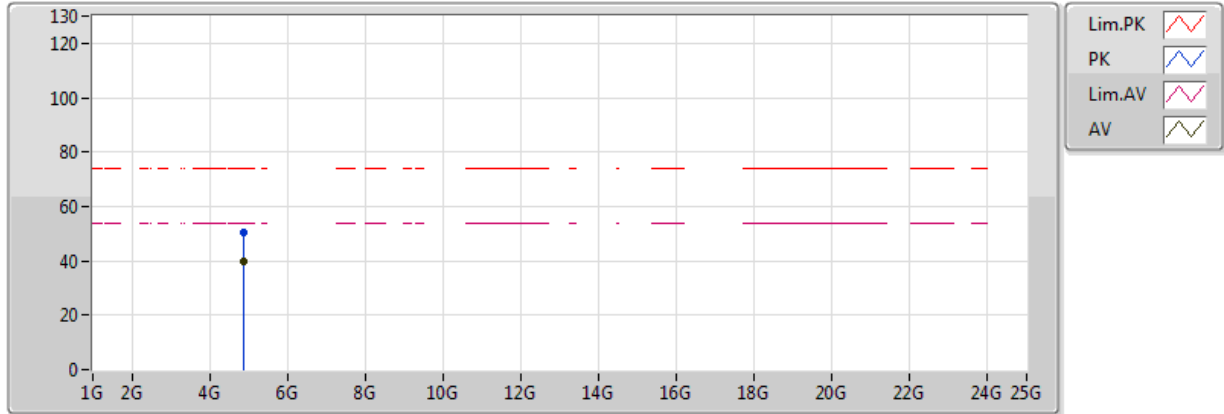


20170511  
EUT X\_1TX  
Setting 8  
02-W-3  
FSU

| Type | Freq(Hz) | Level(dBuV/m) | Limit(dBuV/m) | Margin(dB) | Factor(dB) | Dist(m) | Pol.(H/V) | Azimuth(°) | Height(m) | Comments |
|------|----------|---------------|---------------|------------|------------|---------|-----------|------------|-----------|----------|
| AV   | 2.3864G  | 47.11         | 54.00         | -6.89      | 31.86      | 3       | H         | 24         | 1.07      | -        |
| AV   | 2.44G    | 96.24         | Inf           | -Inf       | 32.01      | 3       | H         | 24         | 1.07      | -        |
| AV   | 2.4928G  | 47.72         | 54.00         | -6.28      | 32.15      | 3       | H         | 24         | 1.07      | -        |
| PK   | 2.3876G  | 59.65         | 74.00         | -14.35     | 31.87      | 3       | H         | 24         | 1.07      | -        |
| PK   | 2.44G    | 100.39        | Inf           | -Inf       | 32.01      | 3       | H         | 24         | 1.07      | -        |
| PK   | 2.4944G  | 60.29         | 74.00         | -13.71     | 32.15      | 3       | H         | 24         | 1.07      | -        |

## BT-EDR(3Mbps)

## 2440MHz\_TX

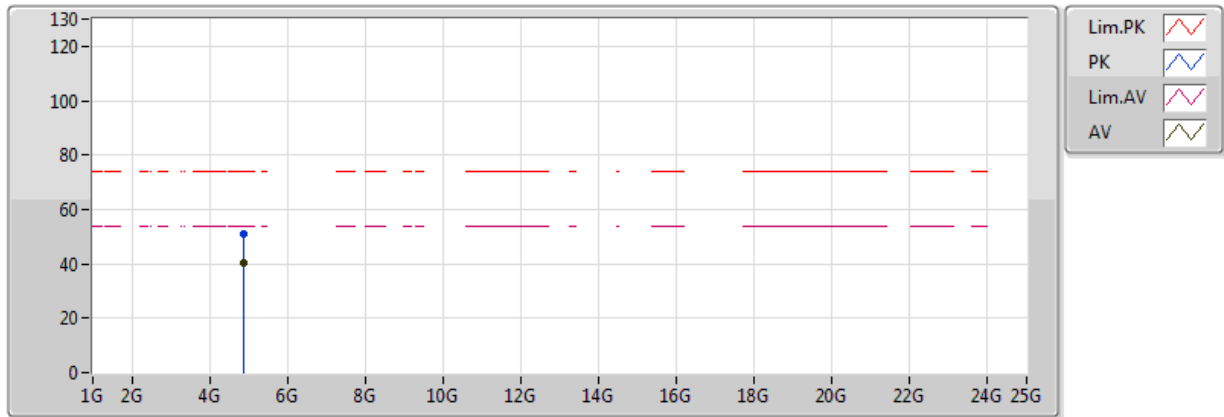


20170511  
EUT X\_1TX  
Setting 8  
02-W-3  
FSU

| Type | Freq(Hz)  | Level(dBuV/m) | Limit(dBuV/m) | Margin(dB) | Factor(dB) | Dist(m) | Pol.(H/V) | Azimuth(°) | Height(m) | Comments |
|------|-----------|---------------|---------------|------------|------------|---------|-----------|------------|-----------|----------|
| AV   | 4.880084G | 39.98         | 54.00         | -14.02     | 8.17       | 3       | V         | 318        | 2.89      | -        |
| PK   | 4.879894G | 50.23         | 74.00         | -23.77     | 8.17       | 3       | V         | 318        | 2.89      | -        |

### BT-EDR(3Mbps)

### 2440MHz\_TX

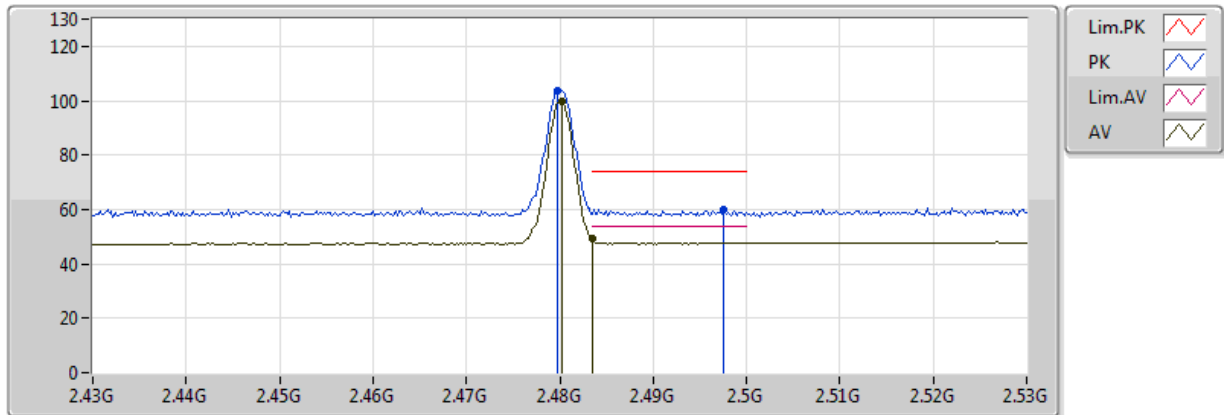


20170511  
EUT X\_1TX  
Setting 8  
02-W-3  
FSU

| Type | Freq(Hz)  | Level(dBuV/m) | Limit(dBuV/m) | Margin(dB) | Factor(dB) | Dist(m) | Pol.(H/V) | Azimuth(°) | Height(m) | Comments |
|------|-----------|---------------|---------------|------------|------------|---------|-----------|------------|-----------|----------|
| AV   | 4.880064G | 40.58         | 54.00         | -13.42     | 8.17       | 3       | H         | 355        | 1.81      | -        |
| PK   | 4.880138G | 50.91         | 74.00         | -23.09     | 8.17       | 3       | H         | 355        | 1.81      | -        |

## BT-EDR(3Mbps)

## 2480MHz\_TX

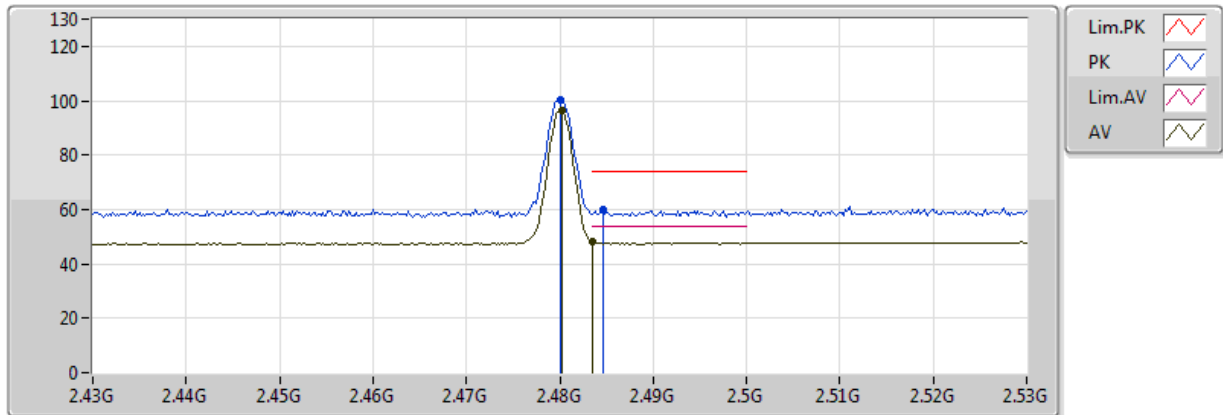


20170511  
EUT X\_1TX  
Setting 8  
02-W-3  
FSU

| Type | Freq(Hz)  | Level(dBuV/m) | Limit(dBuV/m) | Margin(dB) | Factor(dB) | Dist(m) | Pol.(H/V) | Azimuth(°) | Height(m) | Comments |
|------|-----------|---------------|---------------|------------|------------|---------|-----------|------------|-----------|----------|
| AV   | 2.4802G   | 99.72         | Inf           | -Inf       | 32.12      | 3       | V         | 328        | 2.30      | -        |
| AV   | 2.483502G | 49.05         | 54.00         | -4.95      | 32.13      | 3       | V         | 328        | 2.30      | -        |
| PK   | 2.4798G   | 103.87        | Inf           | -Inf       | 32.12      | 3       | V         | 328        | 2.30      | -        |
| PK   | 2.4976G   | 60.11         | 74.00         | -13.89     | 32.16      | 3       | V         | 328        | 2.30      | -        |

## BT-EDR(3Mbps)

## 2480MHz\_TX

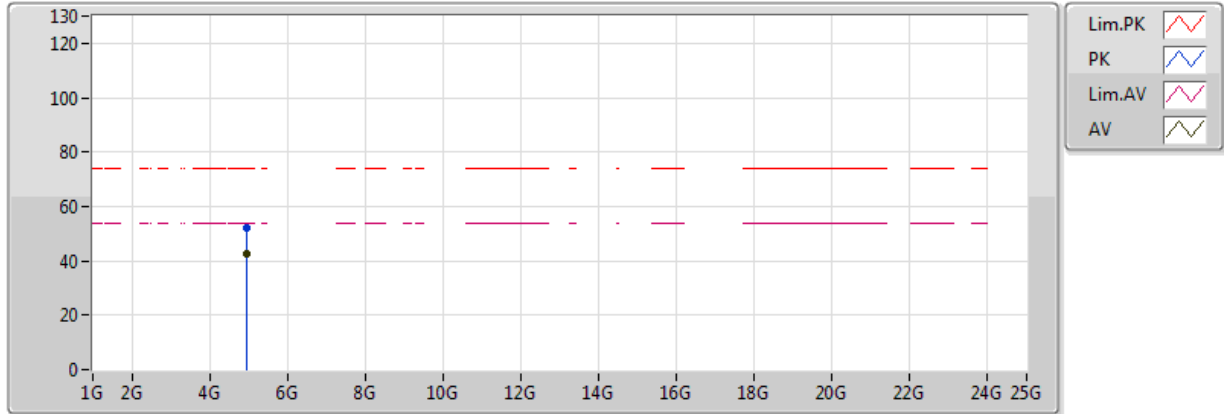


20170511  
EUT X\_1TX  
Setting 8  
02-W-3  
FSU

| Type | Freq(Hz)  | Level(dBuV/m) | Limit(dBuV/m) | Margin(dB) | Factor(dB) | Dist(m) | Pol.(H/V) | Azimuth(°) | Height(m) | Comments |
|------|-----------|---------------|---------------|------------|------------|---------|-----------|------------|-----------|----------|
| AV   | 2.4802G   | 96.29         | Inf           | -Inf       | 32.12      | 3       | H         | 20         | 1.21      | -        |
| AV   | 2.483502G | 48.09         | 54.00         | -5.91      | 32.13      | 3       | H         | 20         | 1.21      | -        |
| PK   | 2.48G     | 100.46        | Inf           | -Inf       | 32.12      | 3       | H         | 20         | 1.21      | -        |
| PK   | 2.4846G   | 59.91         | 74.00         | -14.09     | 32.13      | 3       | H         | 20         | 1.21      | -        |

### BT-EDR(3Mbps)

### 2480MHz\_TX

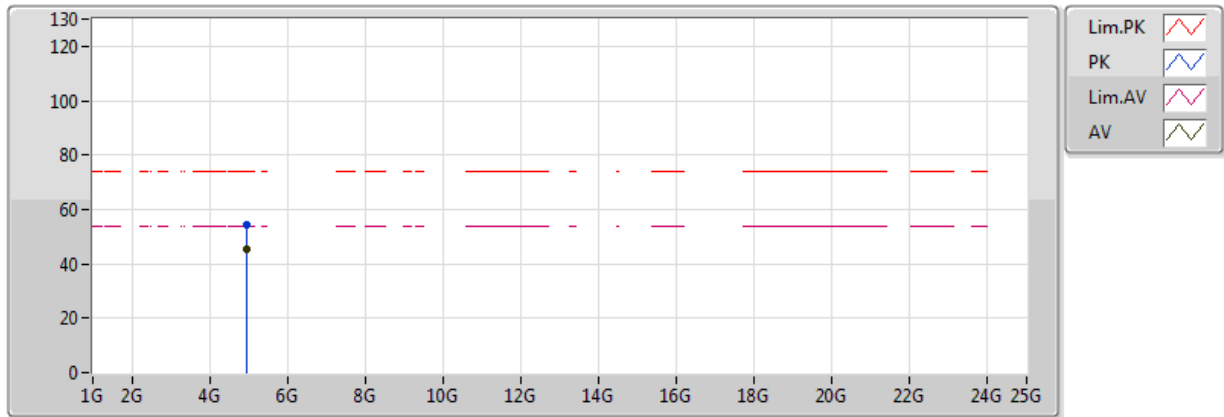


20170511  
EUT X\_1TX  
Setting 8  
02-W-3  
FSU

| Type | Freq(Hz)  | Level(dBuV/m) | Limit(dBuV/m) | Margin(dB) | Factor(dB) | Dist(m) | Pol.(H/V) | Azimuth(°) | Height(m) | Comments |
|------|-----------|---------------|---------------|------------|------------|---------|-----------|------------|-----------|----------|
| AV   | 4.960076G | 42.56         | 54.00         | -11.44     | 8.41       | 3       | V         | 307        | 2.64      | -        |
| PK   | 4.959576G | 52.29         | 74.00         | -21.71     | 8.40       | 3       | V         | 307        | 2.64      | -        |

## BT-EDR(3Mbps)

## 2480MHz\_TX



20170511  
EUT X\_1TX  
Setting 8  
02-W-3  
FSU

| Type | Freq(Hz)  | Level(dBuV/m) | Limit(dBuV/m) | Margin(dB) | Factor(dB) | Dist(m) | Pol.(H/V) | Azimuth(°) | Height(m) | Comments |
|------|-----------|---------------|---------------|------------|------------|---------|-----------|------------|-----------|----------|
| AV   | 4.960116G | 45.24         | 54.00         | -8.76      | 8.41       | 3       | H         | 355        | 1.75      | -        |
| PK   | 4.959736G | 54.33         | 74.00         | -19.67     | 8.41       | 3       | H         | 355        | 1.75      | -        |

