

# FCC Test Report

Equipment : 802.11b/g/n RTL8723BS Combo module  
Brand Name : REALTEK  
Model No. : RTL8723BS  
FCC ID : TX2-RTL8723BS  
Standard : 47 CFR FCC Part 15.247  
Operating Band : 2400 MHz – 2483.5 MHz  
Function : ☒ Point-to-multipoint; ☐ Point-to-point  
Applicant / Manufacturer : Realtek Semiconductor Corp.  
No. 2, Innovation Road II, Hsinchu Science Park,  
Hsinchu 300, Taiwan

This is a partial report for permissive change. The product sample received on Nov. 06, 2017 and completely tested on Nov. 09, 2017. We, SPORTON, would like to declare that the tested sample has been evaluated in accordance with the procedures given in ANSI C63.10-2013 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.

  
Phoenix Chen / Assistant Manager





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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                             | 15.247(b)        | Maximum Conducted Output Power              | 15.247(b)                       | Complied |
| 3.2                             | 15.247(d)        | Emissions in Non-restricted Frequency Bands | 15.247(d)                       | Complied |
| 3.3                             | 15.247(d)        | Emissions in Restricted Frequency Bands     | Restricted Bands:<br>FCC 15.209 | Complied |



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FCC ID: TX2-RTL8723BS

# 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 nominal channel bandwidth.

### 1.1.2 Antenna Information

| Ant. | Port | Brand  | Model Name    | Antenna Type   | Connector    | Gain (dBi) |
|------|------|--------|---------------|----------------|--------------|------------|
| 1    | 1    | MDLINK | MBMC01551682G | Dipole Antenna | Reversed-SMA | 2          |

### 1.1.3 EUT Information

| Operational Condition               |                                                                               |
|-------------------------------------|-------------------------------------------------------------------------------|
| <b>EUT Power Type</b>               | From Host System                                                              |
| Type of EUT                         |                                                                               |
| <input checked="" type="checkbox"/> | Stand-alone                                                                   |
| <input type="checkbox"/>            | Combined (EUT where the radio part is fully integrated within another device) |
|                                     | Combined Equipment - Brand Name / Model No.: ...                              |
| <input type="checkbox"/>            | Plug-in radio (EUT intended for a variety of host systems)                    |
|                                     | Host System - Brand Name / Model No.: ...                                     |
| <input type="checkbox"/>            | Other:                                                                        |

### 1.1.4 Mode Test Duty Cycle

| Mode          | DC    | DCF(dB) | T(s)   | VBW(Hz) $\geq 1/T$ |
|---------------|-------|---------|--------|--------------------|
| BT-BR(1Mbps)  | 0.779 | 1.085   | 2.899m | 1k                 |
| BT-EDR(2Mbps) | 0.789 | 1.029   | 2.905m | 1k                 |
| BT-EDR(3Mbps) | 0.789 | 1.029   | 2.907m | 1k                 |

### 1.1.5 Table for Permissive Change

This product is an extension of original one reported under Sporton project number: FR431858AB

Below is the table for the change of the product with respect to the original one.

| Modifications                                                   | Performance Checking                                                                                                                                                        |
|-----------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| 1. Add dipole antenna<br>2. Update standard to ANSI C63.10-2013 | 1. Maximum Conducted Output Power is evaluated.<br>2. Emissions in Non-restricted Frequency Bands is evaluated.<br>3. Emissions in Restricted Frequency Bands is evaluated. |

## 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
- Public Notice DA 00-705
- ANSI C63.10-2013

## 1.3 Testing Location Information

| Testing Location                           |        |                                                                              |                      |
|--------------------------------------------|--------|------------------------------------------------------------------------------|----------------------|
| <input checked="" type="checkbox"/>        | HWA YA | ADD : No. 52, Huaya 1st Rd., Guishan Dist., Taoyuan City, Taiwan (R.O.C.)    |                      |
|                                            |        | TEL : 886-3-327-3456                                                         | FAX : 886-3-327-0973 |
| Test site Designation No. TW1190 with FCC. |        |                                                                              |                      |
| <input type="checkbox"/>                   | JHUBEI | ADD : No.8, Ln. 724, Bo'ai St., Zhubei City, Hsinchu County, Taiwan (R.O.C.) |                      |
|                                            |        | TEL : 886-3-656-9065                                                         | FAX : 886-3-656-9085 |
| Test site Designation No. TW0006 with FCC. |        |                                                                              |                      |

| Test Condition | Test Site No. | Test Engineer | Test Environment | Test Date   |
|----------------|---------------|---------------|------------------|-------------|
| RF Conducted   | TH06-HY       | Barry         | 24°C / 58%       | 07/Nov/2017 |
| Radiated       | 03CH02-HY     | Andy          | 22.5°C / 59%     | 09/Nov/2017 |

## 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)  | 3.6 dB      | Confidence levels of 95% |
| Radiated Emission (30MHz ~ 1,000MHz) | 2.1 dB      | Confidence levels of 95% |
| Radiated Emission (1GHz ~ 18GHz)     | 2.6 dB      | Confidence levels of 95% |
| Radiated Emission (18GHz ~ 40GHz)    | 2.9 dB      | Confidence levels of 95% |
| Conducted Emission                   | 1.3 dB      | Confidence levels of 95% |

## 2 Test Configuration of EUT

### 2.1 Test Condition

| RF Conducted | Abbreviation | Remark |
|--------------|--------------|--------|
| TnomVnom     | Tnom         | 20°C   |
| -            | Vnom         | 120V   |

### 2.2 Test Channel Mode

| Test Software | Dos |
|---------------|-----|
|---------------|-----|

| Mode          | Power Setting |
|---------------|---------------|
| BT-BR(1Mbps)  | -             |
| 2402MHz       | default       |
| 2441MHz       | default       |
| 2480MHz       | default       |
| BT-EDR(2Mbps) | -             |
| 2402MHz       | default       |
| 2441MHz       | default       |
| 2480MHz       | default       |
| BT-EDR(3Mbps) | -             |
| 2402MHz       | default       |
| 2441MHz       | default       |
| 2480MHz       | default       |

## 2.3 The Worst Case Measurement Configuration

| The Worst Case Mode for Following Conformance Tests |                                                                               |
|-----------------------------------------------------|-------------------------------------------------------------------------------|
| <b>Tests Item</b>                                   | Maximum Conducted Output Power<br>Emissions in Non-restricted Frequency Bands |
| <b>Test Condition</b>                               | Conducted measurement at transmit chains                                      |

| The Worst Case Mode for Following Conformance Tests |                                                                                                                                                                                                                                                     |                                                                                    |                                                                                      |
|-----------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------|
| <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 &gt; 1GHz</b>                     | CTX                                                                                                                                                                                                                                                 |                                                                                    |                                                                                      |
| <b>Orthogonal Planes of EUT</b>                     | <b>X Plane</b>                                                                                                                                                                                                                                      | <b>Y Plane</b>                                                                     | <b>Z Plane</b>                                                                       |
|                                                     |                                                                                                                                                                   |  |  |
| <b>Worst Planes of EUT</b>                          |                                                                                                                                                                                                                                                     | V                                                                                  |                                                                                      |

## 2.4 Support Equipment

| Support Equipment – RF Conducted |                      |            |            |        |
|----------------------------------|----------------------|------------|------------|--------|
| No.                              | Equipment            | Brand Name | Model Name | FCC ID |
| 1                                | Notebook             | DELL       | E5410      | DoC    |
| 2                                | Adapter for Notebook | DELL       | HA65NM130  | DoC    |
| 3                                | Fixture              | -          | -          | -      |

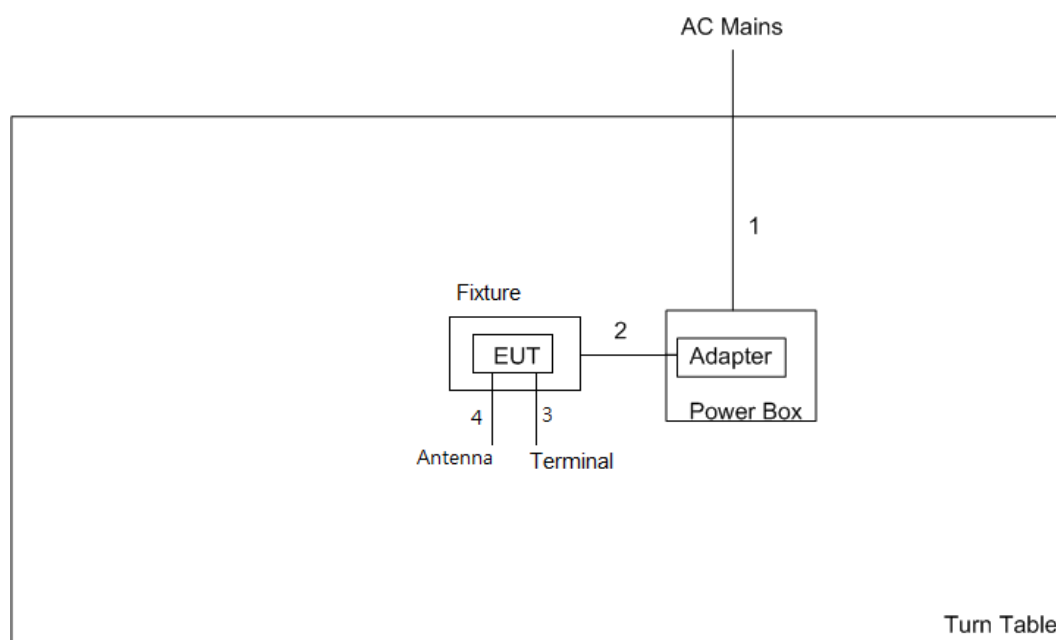
Note: Support equipment No.3 was provided by customer.

| Support Equipment – Radiated Emission |            |            |               |        |
|---------------------------------------|------------|------------|---------------|--------|
| No.                                   | Equipment  | Brand Name | Model Name    | FCC ID |
| 1                                     | Fixture    | -          | -             | -      |
| 2                                     | Antenna    | MDLINK     | MBMC01551682G | -      |
| 3                                     | AC adapter | Phihong    | PSC15R-050    | DoC    |

Note: Support equipment No.1 and 2 was provided by customer.

## 2.5 Test Setup Diagram

Test Setup Diagram - Radiated Test > 1GHz



| Item | Connection    | Shielded | Length |
|------|---------------|----------|--------|
| 1    | AC Power line | No       | 1.8m   |
| 2    | DC Power line | No       | 1.5m   |
| 3    | RF Cable      | No       | 0.15m  |
| 4    | RF Cable      | No       | 0.15m  |

### 3 Transmitter Test Result

#### 3.1 Maximum Conducted Output Power

##### 3.1.1 Maximum Conducted Output Power Limit

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

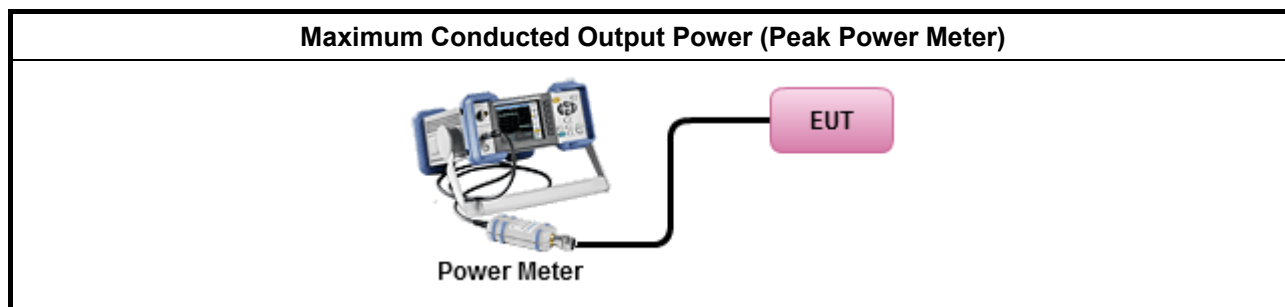
##### 3.1.2 Measuring Instruments

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

##### 3.1.3 Test Procedures

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

##### 3.1.4 Test Setup



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

Refer as Appendix A

## 3.2 Emissions in Non-restricted Frequency Bands

### 3.2.1 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. |            |

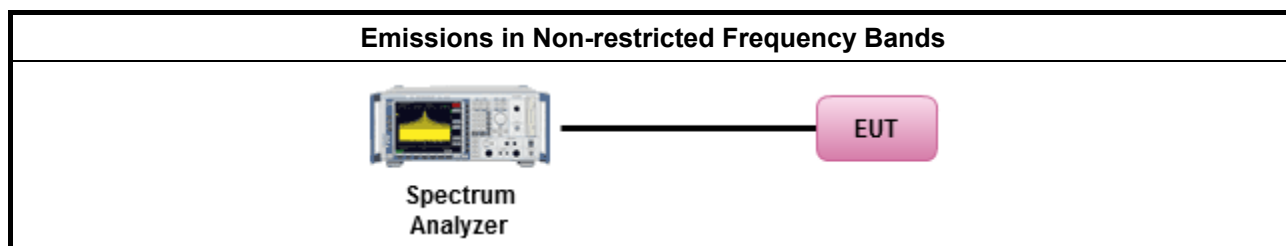
### 3.2.2 Measuring Instruments

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

### 3.2.3 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> |

### 3.2.4 Test Setup



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

Refer as Appendix B

### 3.3 Emissions in Restricted Frequency Bands

#### 3.3.1 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.

Note 3: Using the distance of 1m during the test for above 18 GHz, and the test value to correct for the distance factor at 3m.

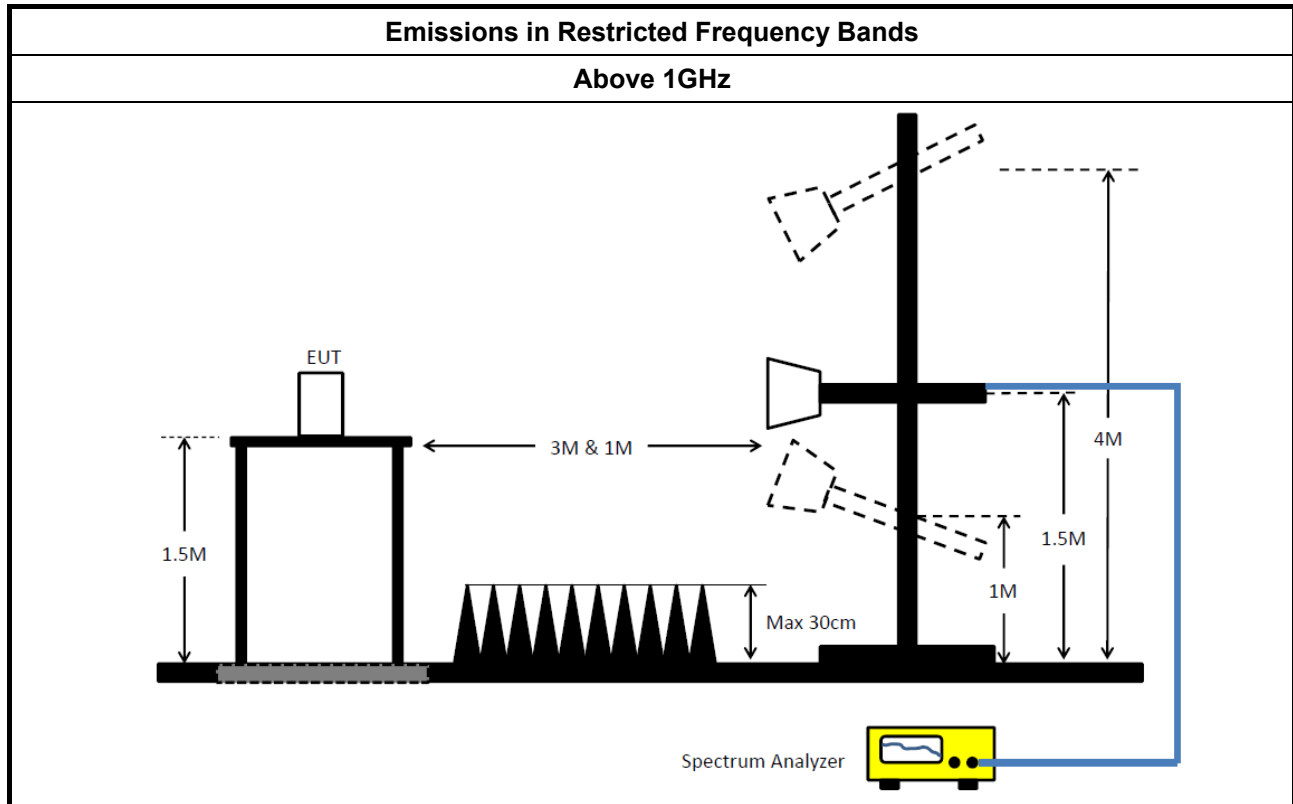
#### 3.3.2 Measuring Instruments

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

#### 3.3.3 Test Procedures

| Test Method                                                                                                                                                                                                                  |                                                                                                                                     |
|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------|
| <ul style="list-style-type: none"> <li>The average emission levels shall be measured in [hopping duty factor].</li> </ul>                                                                                                    |                                                                                                                                     |
| <ul style="list-style-type: none"> <li>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.</li> </ul> |                                                                                                                                     |
| <ul style="list-style-type: none"> <li>For the transmitter unwanted emissions shall be measured using following options below:</li> </ul>                                                                                    |                                                                                                                                     |
|                                                                                                                                                                                                                              | <ul style="list-style-type: none"> <li>Refer as ANSI C63.10, clause 4.1.4.2.1 QP value.</li> </ul>                                  |
|                                                                                                                                                                                                                              | <ul style="list-style-type: none"> <li>Refer as ANSI C63.10, clause 4.1.4.2.2 measurement procedure peak.</li> </ul>                |
|                                                                                                                                                                                                                              | <ul style="list-style-type: none"> <li>Refer as ANSI C63.10, clause 4.1.4.2.4 average value of hopping pulsed emissions.</li> </ul> |

### 3.3.4 Test Setup



### 3.3.5 Test Result of Emissions in Restricted Frequency Bands (Below 30MHz)

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

### 3.3.6 Test Result of Emissions in Restricted Frequency Bands

Refer as Appendix C

## 4 Test Equipment and Calibration Data

### Instrument for Radiated Test

| Instrument        | Manufacturer    | Model No.            | Serial No.      | Spec.        | Calibration Date | Calibration Due Date |
|-------------------|-----------------|----------------------|-----------------|--------------|------------------|----------------------|
| Spectrum Analyzer | R&S             | FSP40                | 100305          | 9kHz ~ 40GHz | 30/Dec/2016      | 29/Dec/2017          |
| 3m Semi Anechoic  | SIDT FRANKONIA  | SAC-3M               | 03CH02-HY       | 1GHz ~ 18GHz | 12/Dec/2016      | 11/Dec/2017          |
| Amplifier         | Ketsight        | 8449B                | 3008A02602      | 1GHz-26.5GHz | 19/Sep/2017      | 18/Sep/2018          |
| Horn Antenna      | SCHWARZBECK     | BBHA9120D            | BBHA9120D 01531 | 1GHz-18GHz   | 11/May/2017      | 10/May/2018          |
| Horn Antenna      | SCHWARZBECK     | BBHA9170             | BBHA9170154     | 18GHz-40GHz  | 06/Feb/2017      | 05/Feb/2018          |
| Amplifier         | MITEQ           | JS44-18004000-3 3-8P | 1840917         | 18GHz-40GHz  | 06/Feb/2017      | 05/Feb/2018          |
| RF Cable-high     | SUHNER          | SUCOFLEX104          | MY34918/4       | 1GHz ~ 40GHz | 26/Jan/2017      | 25/Jan/2018          |
| Bluetooth Tester  | ROHDE & SCHWARZ | CBT                  | 100959          | -            | 02/Mar/2016      | 01/Mar/2018          |

### Instrument for Conducted Test

| Instrument        | Manufacturer    | Model No.    | Serial No. | Spec.           | Calibration Date | Calibration Due Date |
|-------------------|-----------------|--------------|------------|-----------------|------------------|----------------------|
| Spectrum Analyzer | R&S             | FSV 40       | 101013     | 10Hz ~ 40GHz    | 30/Dec/2016      | 29/Dec/2017          |
| Power Sensor      | Anritsu         | MA2411B      | 1027452    | 300MHz ~ 40GHz  | 24/Feb/2017      | 23/Feb/2018          |
| Power Meter       | Anritsu         | ML2495A      | 1124009    | 300MHz ~ 40GHz  | 24/Feb/2017      | 23/Feb/2018          |
| Signal Generator  | R&S             | SMR40        | 100116     | 10MHz ~ 40GHz   | 27/Jul/2017      | 26/Jul/2018          |
| RF Cable-0.2m     | HUBER+SUHNER    | SUCOFLEX_104 | MY677/3    | 30MHz ~ 26.5GHz | 25/Aug/2017      | 24/Aug/2018          |
| RF Cable-0.2m     | HUBER+SUHNER    | SUCOFLEX_104 | MY678/3    | 30MHz ~ 26.5GHz | 25/Aug/2017      | 24/Aug/2018          |
| RF Cable-0.5m     | HUBER+SUHNER    | SUCOFLEX_104 | MY10717/4  | 30MHz ~ 26.5GHz | 25/Aug/2017      | 24/Aug/2018          |
| Bluetooth Tester  | ROHDE & SCHWARZ | CBT          | 101021     | 2.4GHz          | 28/Apr/2017      | 27/Apr/2018          |

**Summary**

| Mode          | Power | Power   |
|---------------|-------|---------|
|               | (dBm) | (W)     |
| 2.4-2.4835GHz | -     | -       |
| BT-BR(1Mbps)  | 4.21  | 0.00264 |
| BT-EDR(2Mbps) | 3.55  | 0.00226 |
| BT-EDR(3Mbps) | 3.49  | 0.00223 |

**Result**

| Mode          | Result | Gain<br>(dBi) | Power<br>(dBm) | Power Limit<br>(dBm) |
|---------------|--------|---------------|----------------|----------------------|
| BT-BR(1Mbps)  | -      | -             | -              | -                    |
| 2402MHz       | Pass   | 2             | 4.08           | 21.00                |
| 2441MHz       | Pass   | 2             | 4.21           | 21.00                |
| 2480MHz       | Pass   | 2             | 3.95           | 21.00                |
| BT-EDR(2Mbps) | -      | -             | -              | -                    |
| 2402MHz       | Pass   | 2             | 3.37           | 21.00                |
| 2441MHz       | Pass   | 2             | 3.55           | 21.00                |
| 2480MHz       | Pass   | 2             | 3.26           | 21.00                |
| BT-EDR(3Mbps) | -      | -             | -              | -                    |
| 2402MHz       | Pass   | 2             | 3.39           | 21.00                |
| 2441MHz       | Pass   | 2             | 3.49           | 21.00                |
| 2480MHz       | Pass   | 2             | 3.24           | 21.00                |

**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 |
|---------------|--------|-------------|--------------|----------------|--------------|----------------|--------------|----------------|--------------|----------------|--------------|----------------|------|
| 2.4-2.4835GHz | -      | -           | -            | -              | -            | -              | -            | -              | -            | -              | -            | -              | -    |
| BT-BR(1Mbps)  | Pass   | 2.402004G   | 7.65         | -22.35         | 2.398G       | -54.63         | 2.39996G     | -39.72         | 2.484492G    | -55.51         | 16.514848G   | -49.61         | 1    |
| BT-EDR(2Mbps) | Pass   | 2.402171G   | 4.45         | -25.55         | 604.24M      | -55.81         | 2.399964G    | -39.92         | 2.485456G    | -56.26         | 17.61243G    | -49.92         | 1    |
| BT-EDR(3Mbps) | Pass   | 2.40167G    | 5.23         | -24.77         | 2.398G       | -54.48         | 2.399972G    | -39.95         | 2.485452G    | -56.18         | 2.561486G    | -46.32         | 1    |

**Result**

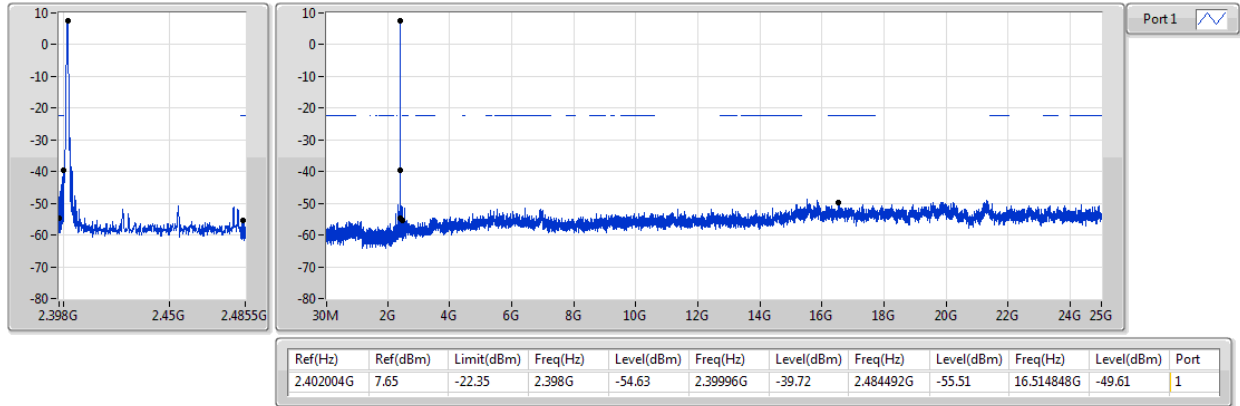
| Mode             | Result | Ref<br>(Hz) | Ref<br>(dBm) | Limit<br>(dBm) | Freq<br>(Hz) | Level<br>(dBm) | Freq<br>(Hz) | Level<br>(dBm) | Freq<br>(Hz) | Level<br>(dBm) | Freq<br>(Hz) | Level<br>(dBm) | Port |
|------------------|--------|-------------|--------------|----------------|--------------|----------------|--------------|----------------|--------------|----------------|--------------|----------------|------|
| BT-BR(1Mbps)     | -      | -           | -            | -              | -            | -              | -            | -              | -            | -              | -            | -              | -    |
| 2402MHz_TnomVnom | Pass   | 2.402004G   | 7.65         | -22.35         | 2.398G       | -54.63         | 2.39996G     | -39.72         | 2.484492G    | -55.51         | 16.514848G   | -49.61         | 1    |
| 2441MHz_TnomVnom | Pass   | 2.441082G   | 7.64         | -22.36         | 813.808M     | -55.46         | 2.399528G    | -56.57         | 2.484304G    | -55.94         | 2.600887G    | -47.67         | 1    |
| 2480MHz_TnomVnom | Pass   | 2.479993G   | 7.39         | -22.61         | 819.728M     | -54.65         | 2.399984G    | -45.66         | 2.483504G    | -45.90         | 15.209007G   | -49.44         | 1    |
| BT-EDR(2Mbps)    | -      | -           | -            | -              | -            | -              | -            | -              | -            | -              | -            | -              | -    |
| 2402MHz_TnomVnom | Pass   | 2.402171G   | 4.45         | -25.55         | 604.24M      | -55.81         | 2.399964G    | -39.92         | 2.485456G    | -56.26         | 17.61243G    | -49.92         | 1    |
| 2441MHz_TnomVnom | Pass   | 2.441249G   | 8.55         | -21.45         | 579.376M     | -54.58         | 2.398952G    | -56.94         | 2.485108G    | -55.11         | 17.215612G   | -49.28         | 1    |
| 2480MHz_TnomVnom | Pass   | 2.48016G    | 5.78         | -24.22         | 897.872M     | -54.99         | 2.399944G    | -49.98         | 2.483544G    | -45.48         | 17.22124G    | -49.40         | 1    |
| BT-EDR(3Mbps)    | -      | -           | -            | -              | -            | -              | -            | -              | -            | -              | -            | -              | -    |
| 2402MHz_TnomVnom | Pass   | 2.40167G    | 5.23         | -24.77         | 2.398G       | -54.48         | 2.399972G    | -39.95         | 2.485452G    | -56.18         | 2.561486G    | -46.32         | 1    |
| 2441MHz_TnomVnom | Pass   | 2.441082G   | 5.36         | -24.64         | 742.768M     | -56.18         | 2.398368G    | -56.55         | 2.483856G    | -55.59         | 23.339556G   | -50.18         | 1    |
| 2480MHz_TnomVnom | Pass   | 2.479993G   | 6.50         | -23.50         | 665.808M     | -55.63         | 2.39994G     | -49.03         | 2.483612G    | -45.16         | 2.637473G    | -49.66         | 1    |

## BT-BR(1Mbps)

CSE NdB

2402MHz

15/11/2017

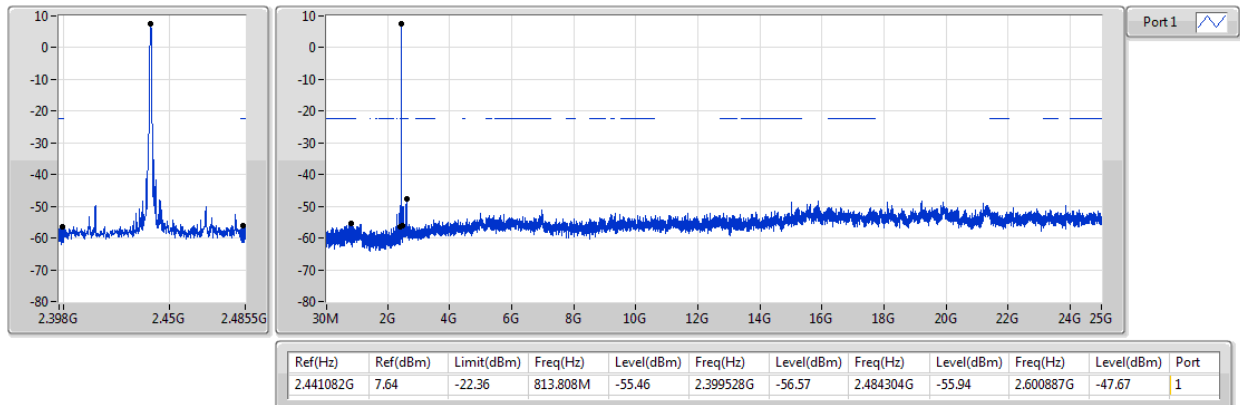


## BT-BR(1Mbps)

CSE NdB

2441MHz

15/11/2017

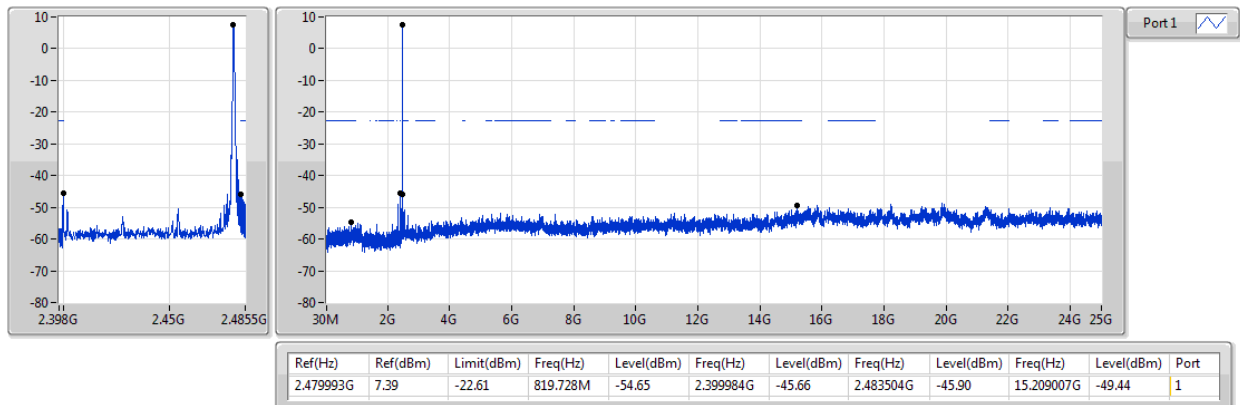


## BT-BR(1Mbps)

CSE NdB

2480MHz

15/11/2017

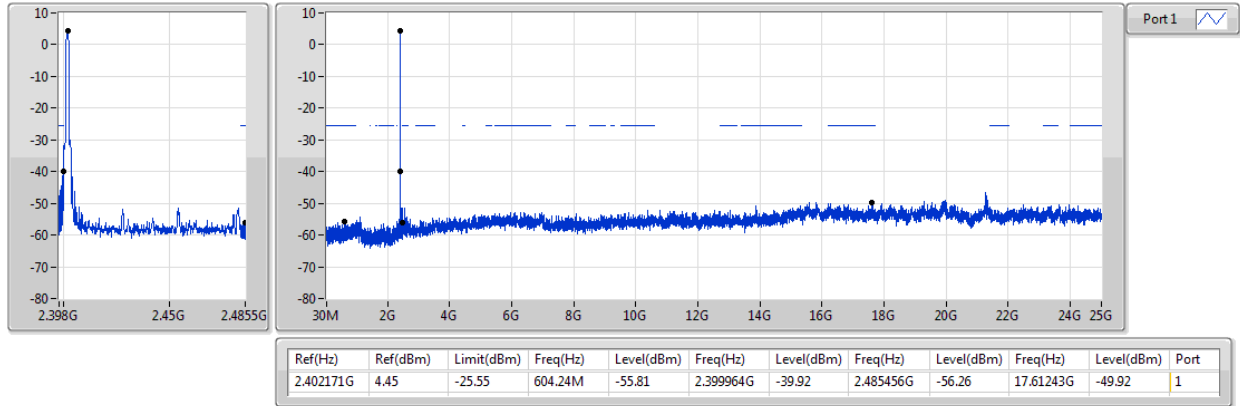


## BT-EDR(2Mbps)

CSE NdB

2402MHz

15/11/2017

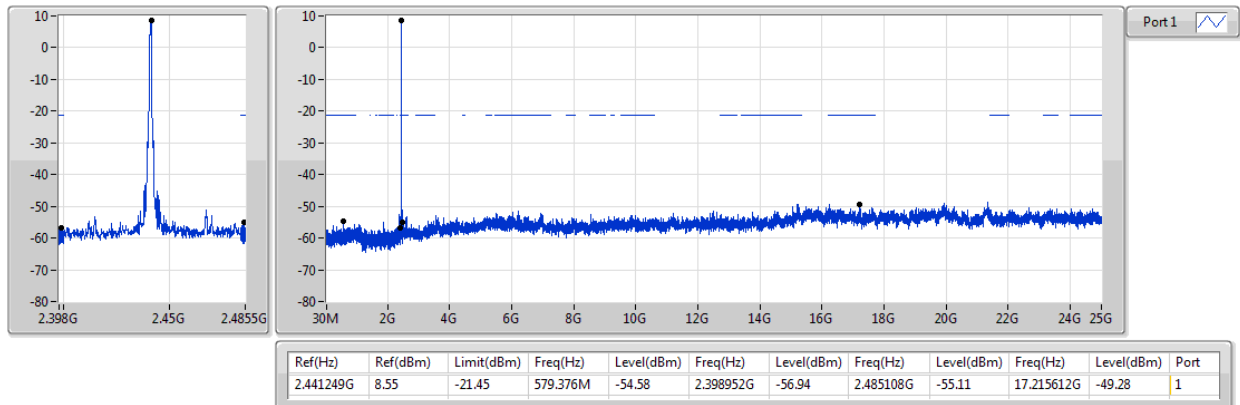


## BT-EDR(2Mbps)

CSE NdB

2441MHz

15/11/2017

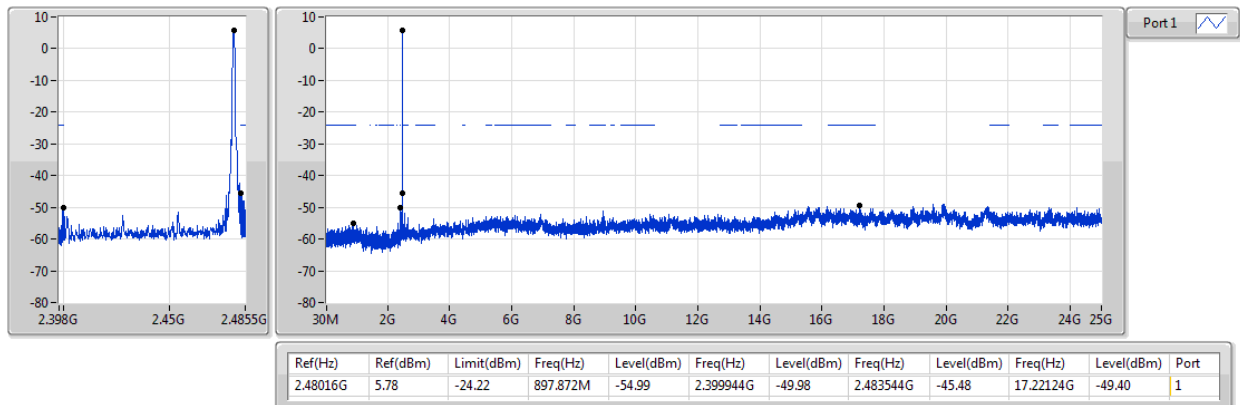


## BT-EDR(2Mbps)

CSE NdB

2480MHz

15/11/2017

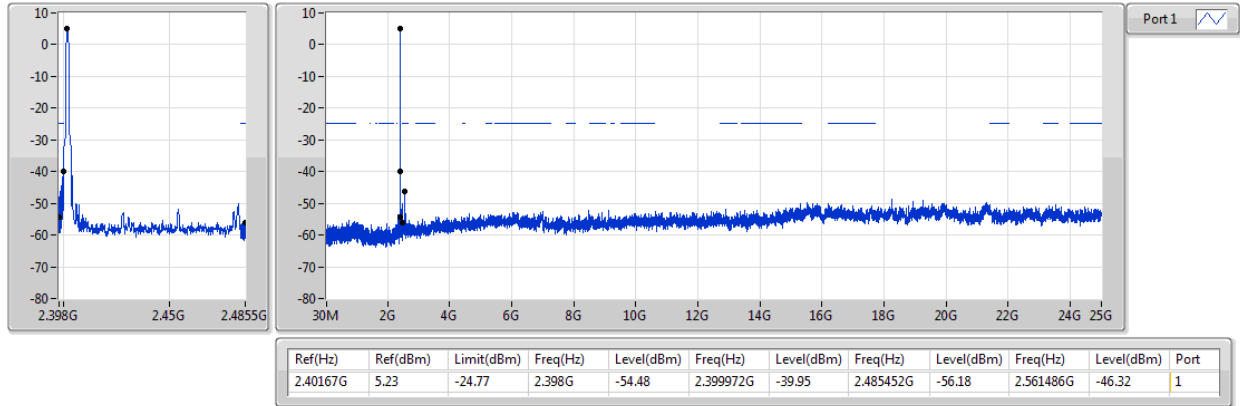


## BT-EDR(3Mbps)

CSE NdB

2402MHz

15/11/2017

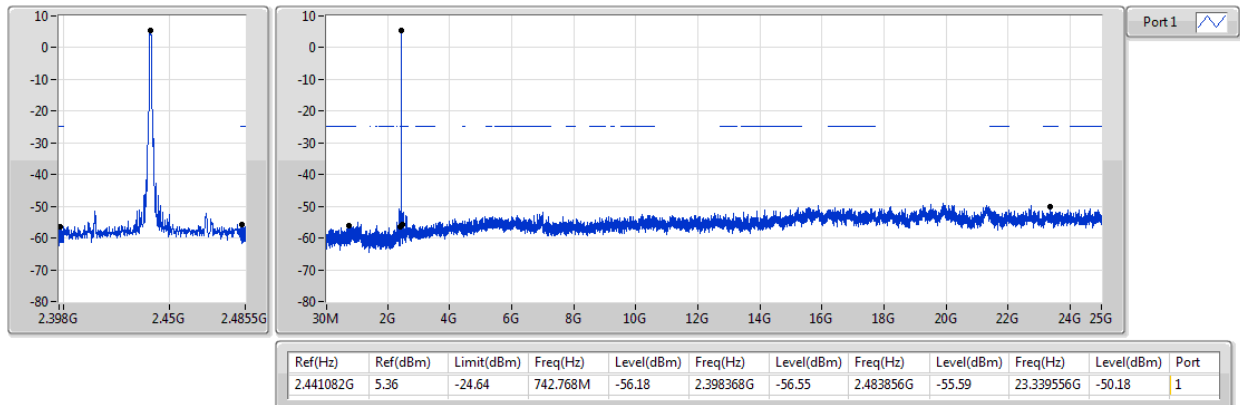


## BT-EDR(3Mbps)

CSE NdB

2441MHz

15/11/2017

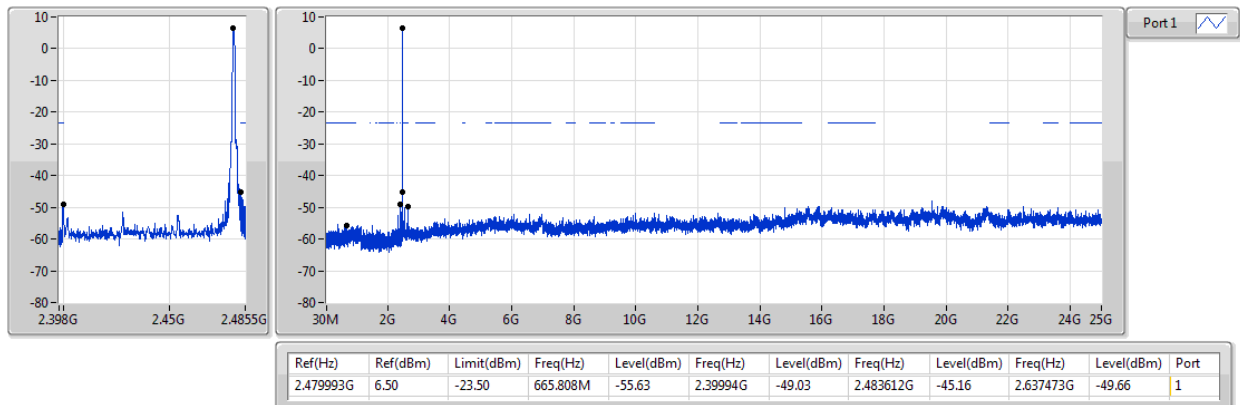


## BT-EDR(3Mbps)

CSE NdB

2480MHz

15/11/2017



**Summary**

| Mode          | Result | Type | Freq<br>(Hz) | Level<br>(dBuV/m) | Limit<br>(dBuV/m) | Margin<br>(dB) | Factor<br>(dB) | Dist<br>(m) | Condition | Azimuth<br>(°) | Height<br>(m) | Comments |
|---------------|--------|------|--------------|-------------------|-------------------|----------------|----------------|-------------|-----------|----------------|---------------|----------|
| 2.4-2.4835GHz | -      | -    | -            | -                 | -                 | -              | -              | -           | -         | -              | -             | -        |
| BT-BR(1Mbps)  | Pass   | AV   | 2.4856G      | 49.37             | 54.00             | -4.63          | 33.10          | 3           | Vertical  | 354            | 2.72          | -        |
| BT-EDR(2Mbps) | Pass   | AV   | 2.5788G      | 49.10             | 54.00             | -4.90          | 33.43          | 3           | Vertical  | 355            | 2.22          | -        |
| BT-EDR(3Mbps) | Pass   | AV   | 2.5214G      | 49.60             | 54.00             | -4.40          | 33.23          | 3           | Vertical  | 352            | 2.66          | -        |

**Result**

| Mode          | Result | Type | Freq<br>(Hz) | Level<br>(dBuV/m) | Limit<br>(dBuV/m) | Margin<br>(dB) | Factor<br>(dB) | Dist<br>(m) | Condition  | Azimuth<br>(°) | Height<br>(m) | Comments |
|---------------|--------|------|--------------|-------------------|-------------------|----------------|----------------|-------------|------------|----------------|---------------|----------|
| BT-BR(1Mbps)  | -      | -    | -            | -                 | -                 | -              | -              | -           | -          | -              | -             | -        |
| 2402MHz       | Pass   | AV   | 2.3944G      | 47.96             | 54.00             | -6.04          | 32.74          | 3           | Horizontal | 174            | 3.51          | -        |
| 2402MHz       | Pass   | AV   | 2.402G       | 90.69             | Inf               | -Inf           | 32.77          | 3           | Horizontal | 174            | 3.51          | -        |
| 2402MHz       | Pass   | AV   | 2.4836G      | 48.77             | 54.00             | -5.23          | 33.09          | 3           | Horizontal | 174            | 3.51          | -        |
| 2402MHz       | Pass   | PK   | 2.3524G      | 58.63             | 74.00             | -15.37         | 32.57          | 3           | Horizontal | 174            | 3.51          | -        |
| 2402MHz       | Pass   | PK   | 2.402G       | 94.37             | Inf               | -Inf           | 32.77          | 3           | Horizontal | 174            | 3.51          | -        |
| 2402MHz       | Pass   | PK   | 2.4996G      | 60.28             | 74.00             | -13.72         | 33.16          | 3           | Horizontal | 174            | 3.51          | -        |
| 2402MHz       | Pass   | AV   | 2.396G       | 47.98             | 54.00             | -6.02          | 32.74          | 3           | Vertical   | 354            | 2.72          | -        |
| 2402MHz       | Pass   | AV   | 2.402G       | 94.23             | Inf               | -Inf           | 32.77          | 3           | Vertical   | 354            | 2.72          | -        |
| 2402MHz       | Pass   | AV   | 2.4856G      | 49.37             | 54.00             | -4.63          | 33.10          | 3           | Vertical   | 354            | 2.72          | -        |
| 2402MHz       | Pass   | PK   | 2.3516G      | 58.69             | 74.00             | -15.31         | 32.57          | 3           | Vertical   | 354            | 2.72          | -        |
| 2402MHz       | Pass   | PK   | 2.4016G      | 97.85             | Inf               | -Inf           | 32.77          | 3           | Vertical   | 354            | 2.72          | -        |
| 2402MHz       | Pass   | PK   | 2.4924G      | 57.55             | 74.00             | -16.45         | 33.13          | 3           | Vertical   | 354            | 2.72          | -        |
| 2441MHz       | Pass   | AV   | 2.3922G      | 48.00             | 54.00             | -6.00          | 32.73          | 3           | Horizontal | 180            | 1.50          | -        |
| 2441MHz       | Pass   | AV   | 2.441G       | 86.50             | Inf               | -Inf           | 32.92          | 3           | Horizontal | 180            | 1.50          | -        |
| 2441MHz       | Pass   | AV   | 2.4998G      | 48.78             | 54.00             | -5.22          | 33.16          | 3           | Horizontal | 180            | 1.50          | -        |
| 2441MHz       | Pass   | PK   | 2.3854G      | 59.16             | 74.00             | -14.84         | 32.70          | 3           | Horizontal | 180            | 1.50          | -        |
| 2441MHz       | Pass   | PK   | 2.441G       | 90.40             | Inf               | -Inf           | 32.92          | 3           | Horizontal | 180            | 1.50          | -        |
| 2441MHz       | Pass   | PK   | 2.5398G      | 59.93             | 74.00             | -14.07         | 33.30          | 3           | Horizontal | 180            | 1.50          | -        |
| 2441MHz       | Pass   | AV   | 2.3974G      | 47.92             | 54.00             | -6.08          | 32.75          | 3           | Vertical   | 354            | 2.68          | -        |
| 2441MHz       | Pass   | AV   | 2.441G       | 94.92             | Inf               | -Inf           | 32.92          | 3           | Vertical   | 354            | 2.68          | -        |
| 2441MHz       | Pass   | AV   | 2.5206G      | 48.94             | 54.00             | -5.06          | 33.23          | 3           | Vertical   | 354            | 2.68          | -        |
| 2441MHz       | Pass   | PK   | 2.3986G      | 59.79             | 74.00             | -14.21         | 32.75          | 3           | Vertical   | 354            | 2.68          | -        |
| 2441MHz       | Pass   | PK   | 2.4406G      | 98.81             | Inf               | -Inf           | 32.92          | 3           | Vertical   | 354            | 2.68          | -        |
| 2441MHz       | Pass   | PK   | 2.5354G      | 59.82             | 74.00             | -14.18         | 33.28          | 3           | Vertical   | 354            | 2.68          | -        |
| 2480MHz       | Pass   | AV   | 2.3912G      | 47.97             | 54.00             | -6.03          | 32.73          | 3           | Horizontal | 179            | 3.65          | -        |
| 2480MHz       | Pass   | AV   | 2.48G        | 86.34             | Inf               | -Inf           | 33.08          | 3           | Horizontal | 179            | 3.65          | -        |
| 2480MHz       | Pass   | AV   | 2.5776G      | 49.11             | 54.00             | -4.89          | 33.42          | 3           | Horizontal | 179            | 3.65          | -        |
| 2480MHz       | Pass   | PK   | 2.3888G      | 58.06             | 74.00             | -15.94         | 32.72          | 3           | Horizontal | 179            | 3.65          | -        |
| 2480MHz       | Pass   | PK   | 2.48G        | 90.22             | Inf               | -Inf           | 33.08          | 3           | Horizontal | 179            | 3.65          | -        |
| 2480MHz       | Pass   | PK   | 2.5672G      | 60.16             | 74.00             | -13.84         | 33.39          | 3           | Horizontal | 179            | 3.65          | -        |
| 2480MHz       | Pass   | AV   | 2.3932G      | 47.93             | 54.00             | -6.07          | 32.73          | 3           | Vertical   | 233            | 2.55          | -        |
| 2480MHz       | Pass   | AV   | 2.48G        | 94.98             | Inf               | -Inf           | 33.08          | 3           | Vertical   | 233            | 2.55          | -        |
| 2480MHz       | Pass   | AV   | 2.5792G      | 49.14             | 54.00             | -4.86          | 33.43          | 3           | Vertical   | 233            | 2.55          | -        |
| 2480MHz       | Pass   | PK   | 2.3988G      | 58.57             | 74.00             | -15.43         | 32.76          | 3           | Vertical   | 233            | 2.55          | -        |
| 2480MHz       | Pass   | PK   | 2.48G        | 98.94             | Inf               | -Inf           | 33.08          | 3           | Vertical   | 233            | 2.55          | -        |
| 2480MHz       | Pass   | PK   | 2.4836G      | 63.35             | 74.00             | -10.65         | 33.09          | 3           | Vertical   | 233            | 2.55          | -        |
| BT-EDR(2Mbps) | -      | -    | -            | -                 | -                 | -              | -              | -           | -          | -              | -             | -        |
| 2402MHz       | Pass   | AV   | 2.3964G      | 47.92             | 54.00             | -6.08          | 32.75          | 3           | Horizontal | 173            | 3.50          | -        |
| 2402MHz       | Pass   | AV   | 2.402G       | 89.98             | Inf               | -Inf           | 32.77          | 3           | Horizontal | 173            | 3.50          | -        |
| 2402MHz       | Pass   | AV   | 2.4992G      | 48.73             | 54.00             | -5.27          | 33.16          | 3           | Horizontal | 173            | 3.50          | -        |
| 2402MHz       | Pass   | PK   | 2.3736G      | 58.54             | 74.00             | -15.46         | 32.66          | 3           | Horizontal | 173            | 3.50          | -        |
| 2402MHz       | Pass   | PK   | 2.402G       | 95.68             | Inf               | -Inf           | 32.77          | 3           | Horizontal | 173            | 3.50          | -        |
| 2402MHz       | Pass   | PK   | 2.4984G      | 59.34             | 74.00             | -14.66         | 33.15          | 3           | Horizontal | 173            | 3.50          | -        |
| 2402MHz       | Pass   | PK   | 2.5008G      | 59.10             | 74.00             | -14.90         | 33.16          | 3           | Horizontal | 173            | 3.50          | -        |
| 2402MHz       | Pass   | AV   | 2.396G       | 48.01             | 54.00             | -5.99          | 32.74          | 3           | Vertical   | 353            | 2.73          | -        |
| 2402MHz       | Pass   | AV   | 2.402G       | 93.35             | Inf               | -Inf           | 32.77          | 3           | Vertical   | 353            | 2.73          | -        |
| 2402MHz       | Pass   | AV   | 2.5012G      | 48.78             | 54.00             | -5.22          | 33.16          | 3           | Vertical   | 353            | 2.73          | -        |

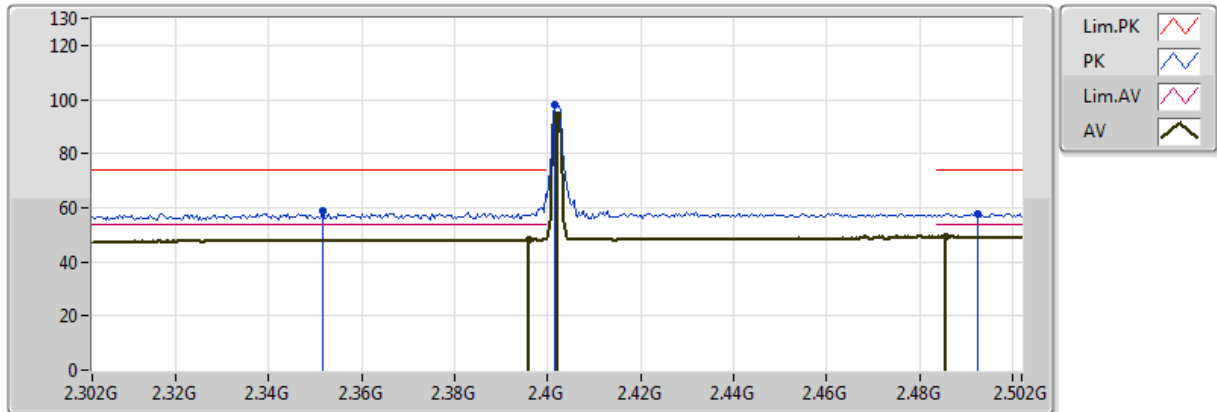
| Mode          | Result | Type | Freq<br>(Hz) | Level<br>(dBuV/m) | Limit<br>(dBuV/m) | Margin<br>(dB) | Factor<br>(dB) | Dist<br>(m) | Condition  | Azimuth<br>(°) | Height<br>(m) | Comments |
|---------------|--------|------|--------------|-------------------|-------------------|----------------|----------------|-------------|------------|----------------|---------------|----------|
| 2402MHz       | Pass   | PK   | 2.3992G      | 61.57             | 74.00             | -12.43         | 32.76          | 3           | Vertical   | 353            | 2.73          | -        |
| 2402MHz       | Pass   | PK   | 2.402G       | 99.11             | Inf               | -Inf           | 32.77          | 3           | Vertical   | 353            | 2.73          | -        |
| 2402MHz       | Pass   | PK   | 2.4852G      | 59.27             | 74.00             | -14.73         | 33.10          | 3           | Vertical   | 353            | 2.73          | -        |
| 2441MHz       | Pass   | AV   | 2.3886G      | 47.97             | 54.00             | -6.03          | 32.72          | 3           | Horizontal | 180            | 1.49          | -        |
| 2441MHz       | Pass   | AV   | 2.441G       | 87.04             | Inf               | -Inf           | 32.92          | 3           | Horizontal | 180            | 1.49          | -        |
| 2441MHz       | Pass   | AV   | 2.539G       | 48.98             | 54.00             | -5.02          | 33.29          | 3           | Horizontal | 180            | 1.49          | -        |
| 2441MHz       | Pass   | PK   | 2.3694G      | 58.88             | 74.00             | -15.12         | 32.64          | 3           | Horizontal | 180            | 1.49          | -        |
| 2441MHz       | Pass   | PK   | 2.441G       | 92.60             | Inf               | -Inf           | 32.92          | 3           | Horizontal | 180            | 1.49          | -        |
| 2441MHz       | Pass   | PK   | 2.5018G      | 59.77             | 74.00             | -14.23         | 33.17          | 3           | Horizontal | 180            | 1.49          | -        |
| 2441MHz       | Pass   | AV   | 2.3982G      | 48.08             | 54.00             | -5.92          | 32.75          | 3           | Vertical   | 352            | 2.67          | -        |
| 2441MHz       | Pass   | AV   | 2.441G       | 95.12             | Inf               | -Inf           | 32.92          | 3           | Vertical   | 352            | 2.67          | -        |
| 2441MHz       | Pass   | AV   | 2.5366G      | 48.96             | 54.00             | -5.04          | 33.28          | 3           | Vertical   | 352            | 2.67          | -        |
| 2441MHz       | Pass   | PK   | 2.3942G      | 58.92             | 74.00             | -15.08         | 32.74          | 3           | Vertical   | 352            | 2.67          | -        |
| 2441MHz       | Pass   | PK   | 2.441G       | 100.92            | Inf               | -Inf           | 32.92          | 3           | Vertical   | 352            | 2.67          | -        |
| 2441MHz       | Pass   | PK   | 2.485G       | 59.61             | 74.00             | -14.39         | 33.10          | 3           | Vertical   | 352            | 2.67          | -        |
| 2480MHz       | Pass   | AV   | 2.3912G      | 47.93             | 54.00             | -6.07          | 32.73          | 3           | Horizontal | 179            | 3.64          | -        |
| 2480MHz       | Pass   | AV   | 2.48G        | 87.04             | Inf               | -Inf           | 33.08          | 3           | Horizontal | 179            | 3.64          | -        |
| 2480MHz       | Pass   | AV   | 2.5772G      | 49.03             | 54.00             | -4.97          | 33.42          | 3           | Horizontal | 179            | 3.64          | -        |
| 2480MHz       | Pass   | PK   | 2.3976G      | 58.83             | 74.00             | -15.17         | 32.75          | 3           | Horizontal | 179            | 3.64          | -        |
| 2480MHz       | Pass   | PK   | 2.48G        | 92.64             | Inf               | -Inf           | 33.08          | 3           | Horizontal | 179            | 3.64          | -        |
| 2480MHz       | Pass   | PK   | 2.534G       | 60.12             | 74.00             | -13.88         | 33.28          | 3           | Horizontal | 179            | 3.64          | -        |
| 2480MHz       | Pass   | AV   | 2.3976G      | 48.00             | 54.00             | -6.00          | 32.75          | 3           | Vertical   | 355            | 2.22          | -        |
| 2480MHz       | Pass   | AV   | 2.48G        | 94.23             | Inf               | -Inf           | 33.08          | 3           | Vertical   | 355            | 2.22          | -        |
| 2480MHz       | Pass   | AV   | 2.5788G      | 49.10             | 54.00             | -4.90          | 33.43          | 3           | Vertical   | 355            | 2.22          | -        |
| 2480MHz       | Pass   | PK   | 2.3888G      | 58.75             | 74.00             | -15.25         | 32.72          | 3           | Vertical   | 355            | 2.22          | -        |
| 2480MHz       | Pass   | PK   | 2.48G        | 99.97             | Inf               | -Inf           | 33.08          | 3           | Vertical   | 355            | 2.22          | -        |
| 2480MHz       | Pass   | PK   | 2.4836G      | 62.64             | 74.00             | -11.36         | 33.09          | 3           | Vertical   | 355            | 2.22          | -        |
| BT-EDR(3Mbps) | -      | -    | -            | -                 | -                 | -              | -              | -           | -          | -              | -             | -        |
| 2402MHz       | Pass   | AV   | 2.3976G      | 48.00             | 54.00             | -6.00          | 32.75          | 3           | Horizontal | 173            | 3.50          | -        |
| 2402MHz       | Pass   | AV   | 2.402G       | 89.30             | Inf               | -Inf           | 32.77          | 3           | Horizontal | 173            | 3.50          | -        |
| 2402MHz       | Pass   | AV   | 2.5008G      | 48.68             | 54.00             | -5.32          | 33.16          | 3           | Horizontal | 173            | 3.50          | -        |
| 2402MHz       | Pass   | PK   | 2.3992G      | 58.95             | 74.00             | -15.05         | 32.76          | 3           | Horizontal | 173            | 3.50          | -        |
| 2402MHz       | Pass   | PK   | 2.402G       | 95.03             | Inf               | -Inf           | 32.77          | 3           | Horizontal | 173            | 3.50          | -        |
| 2402MHz       | Pass   | PK   | 2.4884G      | 59.53             | 74.00             | -14.47         | 33.11          | 3           | Horizontal | 173            | 3.50          | -        |
| 2402MHz       | Pass   | AV   | 2.3996G      | 48.07             | 54.00             | -5.93          | 32.76          | 3           | Vertical   | 273            | 3.54          | -        |
| 2402MHz       | Pass   | AV   | 2.402G       | 88.85             | Inf               | -Inf           | 32.77          | 3           | Vertical   | 273            | 3.54          | -        |
| 2402MHz       | Pass   | AV   | 2.5016G      | 48.74             | 54.00             | -5.26          | 33.17          | 3           | Vertical   | 273            | 3.54          | -        |
| 2402MHz       | Pass   | PK   | 2.3924G      | 59.10             | 74.00             | -14.90         | 32.73          | 3           | Vertical   | 273            | 3.54          | -        |
| 2402MHz       | Pass   | PK   | 2.402G       | 94.66             | Inf               | -Inf           | 32.77          | 3           | Vertical   | 273            | 3.54          | -        |
| 2402MHz       | Pass   | PK   | 2.4864G      | 59.60             | 74.00             | -14.40         | 33.11          | 3           | Vertical   | 273            | 3.54          | -        |
| 2402MHz       | Pass   | AV   | 4.88G        | 36.03             | 54.00             | -17.97         | 4.29           | 3           | Vertical   | 0              | 1.50          | -        |
| 2402MHz       | Pass   | AV   | 4.88G        | 36.16             | 54.00             | -17.84         | 4.29           | 3           | Vertical   | 360            | 1.50          | -        |
| 2402MHz       | Pass   | PK   | 4.88G        | 47.03             | 74.00             | -26.97         | 4.29           | 3           | Vertical   | 0              | 1.50          | -        |
| 2402MHz       | Pass   | PK   | 4.88G        | 46.79             | 74.00             | -27.21         | 4.29           | 3           | Vertical   | 360            | 1.50          | -        |
| 2441MHz       | Pass   | AV   | 2.391G       | 47.91             | 54.00             | -6.09          | 32.72          | 3           | Horizontal | 179            | 1.50          | -        |
| 2441MHz       | Pass   | AV   | 2.441G       | 91.06             | Inf               | -Inf           | 32.92          | 3           | Horizontal | 179            | 1.50          | -        |
| 2441MHz       | Pass   | AV   | 2.521G       | 49.11             | 54.00             | -4.89          | 33.23          | 3           | Horizontal | 179            | 1.50          | -        |
| 2441MHz       | Pass   | PK   | 2.3526G      | 59.23             | 74.00             | -14.77         | 32.58          | 3           | Horizontal | 179            | 1.50          | -        |
| 2441MHz       | Pass   | PK   | 2.441G       | 96.69             | Inf               | -Inf           | 32.92          | 3           | Horizontal | 179            | 1.50          | -        |

| Mode    | Result | Type | Freq<br>(Hz) | Level<br>(dBuV/m) | Limit<br>(dBuV/m) | Margin<br>(dB) | Factor<br>(dB) | Dist<br>(m) | Condition  | Azimuth<br>(°) | Height<br>(m) | Comments |
|---------|--------|------|--------------|-------------------|-------------------|----------------|----------------|-------------|------------|----------------|---------------|----------|
| 2441MHz | Pass   | PK   | 2.4918G      | 59.84             | 74.00             | -14.16         | 33.13          | 3           | Horizontal | 179            | 1.50          | -        |
| 2441MHz | Pass   | AV   | 2.3898G      | 48.04             | 54.00             | -5.96          | 32.72          | 3           | Vertical   | 352            | 2.66          | -        |
| 2441MHz | Pass   | AV   | 2.441G       | 95.55             | Inf               | -Inf           | 32.92          | 3           | Vertical   | 352            | 2.66          | -        |
| 2441MHz | Pass   | AV   | 2.5214G      | 49.60             | 54.00             | -4.40          | 33.23          | 3           | Vertical   | 352            | 2.66          | -        |
| 2441MHz | Pass   | PK   | 2.3742G      | 58.98             | 74.00             | -15.02         | 32.66          | 3           | Vertical   | 352            | 2.66          | -        |
| 2441MHz | Pass   | PK   | 2.441G       | 101.36            | Inf               | -Inf           | 32.92          | 3           | Vertical   | 352            | 2.66          | -        |
| 2441MHz | Pass   | PK   | 2.5362G      | 60.52             | 74.00             | -13.48         | 33.28          | 3           | Vertical   | 352            | 2.66          | -        |
| 2480MHz |        |      |              |                   |                   |                |                |             |            |                |               |          |

## BT-BR(1Mbps)

## 2402MHz\_TX

09/11/2017

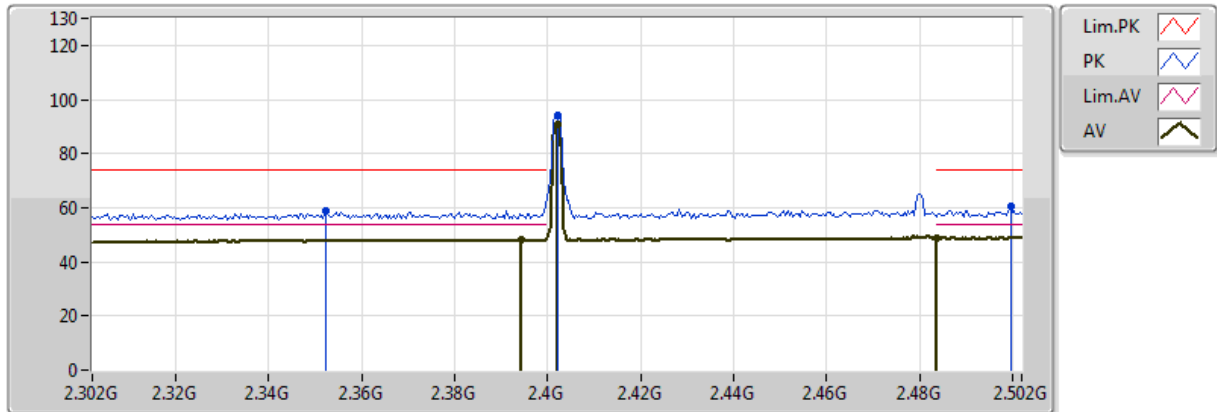


| Type | Freq    | Level    | Limit    | Margin | Factor | Dist | Condition | Azimuth | Height | Comments | Raw    | AF    | CL   | PA   |
|------|---------|----------|----------|--------|--------|------|-----------|---------|--------|----------|--------|-------|------|------|
|      | (Hz)    | (dBuV/m) | (dBuV/m) | (dB)   | (dB)   | (m)  |           | (°)     | (m)    |          | (dBuV) | (dB)  | (dB) | (dB) |
| AV   | 2.396G  | 47.98    | 54.00    | -6.02  | 32.74  | 3    | Vertical  | 354     | 2.72   | -        | 15.24  | 27.01 | 5.74 | -    |
| AV   | 2.402G  | 94.23    | Inf      | -Inf   | 32.77  | 3    | Vertical  | 354     | 2.72   | -        | 61.47  | 27.03 | 5.74 | -    |
| AV   | 2.4856G | 49.37    | 54.00    | -4.63  | 33.10  | 3    | Vertical  | 354     | 2.72   | -        | 16.27  | 27.26 | 5.84 | -    |
| PK   | 2.3516G | 58.69    | 74.00    | -15.31 | 32.57  | 3    | Vertical  | 354     | 2.72   | -        | 26.12  | 26.88 | 5.69 | -    |
| PK   | 2.4016G | 97.85    | Inf      | -Inf   | 32.77  | 3    | Vertical  | 354     | 2.72   | -        | 65.09  | 27.02 | 5.74 | -    |
| PK   | 2.4924G | 57.55    | 74.00    | -16.45 | 33.13  | 3    | Vertical  | 354     | 2.72   | -        | 24.42  | 27.28 | 5.85 | -    |

## BT-BR(1Mbps)

## 2402MHz\_TX

09/11/2017

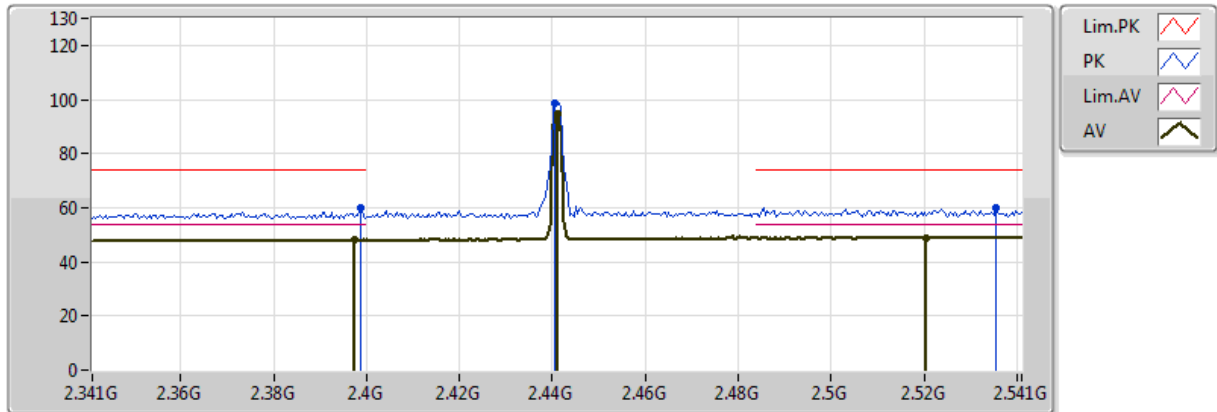


| Type | Freq<br>(Hz) | Level<br>(dBuV/m) | Limit<br>(dBuV/m) | Margin<br>(dB) | Factor<br>(dB) | Dist<br>(m) | Condition  | Azimuth<br>(°) | Height<br>(m) | Comments | Raw<br>(dBuV) | AF<br>(dB) | CL<br>(dB) | PA<br>(dB) |
|------|--------------|-------------------|-------------------|----------------|----------------|-------------|------------|----------------|---------------|----------|---------------|------------|------------|------------|
| AV   | 2.3944G      | 47.96             | 54.00             | -6.04          | 32.74          | 3           | Horizontal | 174            | 3.51          | -        | 15.22         | 27.00      | 5.73       | -          |
| AV   | 2.402G       | 90.69             | Inf               | -Inf           | 32.77          | 3           | Horizontal | 174            | 3.51          | -        | 57.92         | 27.03      | 5.74       | -          |
| AV   | 2.4836G      | 48.77             | 54.00             | -5.23          | 33.09          | 3           | Horizontal | 174            | 3.51          | -        | 15.68         | 27.25      | 5.84       | -          |
| PK   | 2.3524G      | 58.63             | 74.00             | -15.37         | 32.57          | 3           | Horizontal | 174            | 3.51          | -        | 26.06         | 26.89      | 5.69       | -          |
| PK   | 2.402G       | 94.37             | Inf               | -Inf           | 32.77          | 3           | Horizontal | 174            | 3.51          | -        | 61.60         | 27.03      | 5.74       | -          |
| PK   | 2.4996G      | 60.28             | 74.00             | -13.72         | 33.16          | 3           | Horizontal | 174            | 3.51          | -        | 27.12         | 27.30      | 5.86       | -          |

## BT-BR(1Mbps)

## 2441MHz\_TX

09/11/2017

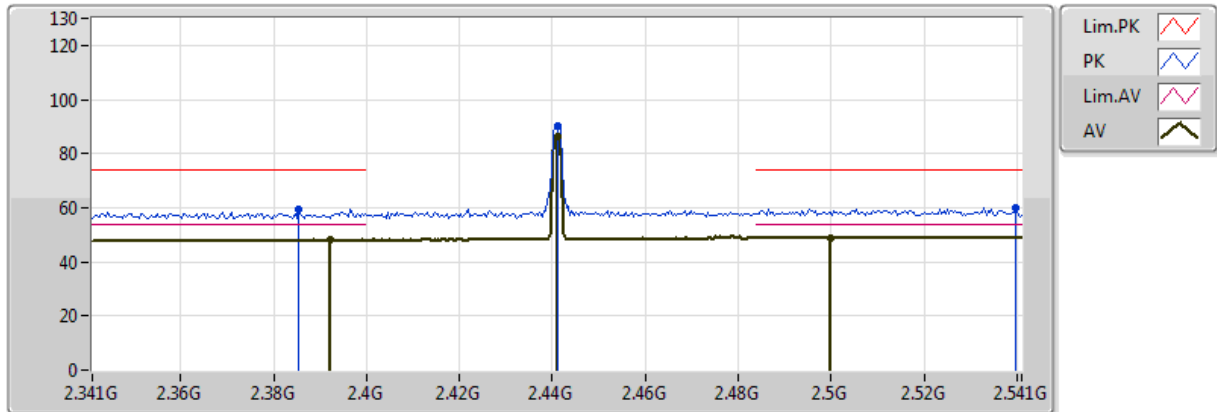


| Type | Freq    | Level    | Limit    | Margin | Factor | Dist | Condition | Azimuth | Height | Comments | Raw    | AF    | CL   | PA   |
|------|---------|----------|----------|--------|--------|------|-----------|---------|--------|----------|--------|-------|------|------|
|      | (Hz)    | (dBuV/m) | (dBuV/m) | (dB)   | (dB)   | (m)  |           | (°)     | (m)    |          | (dBuV) | (dB)  | (dB) | (dB) |
| AV   | 2.3974G | 47.92    | 54.00    | -6.08  | 32.75  | 3    | Vertical  | 354     | 2.68   | -        | 15.17  | 27.01 | 5.74 | -    |
| AV   | 2.441G  | 94.92    | Inf      | -Inf   | 32.92  | 3    | Vertical  | 354     | 2.68   | -        | 62.00  | 27.13 | 5.79 | -    |
| AV   | 2.5206G | 48.94    | 54.00    | -5.06  | 33.23  | 3    | Vertical  | 354     | 2.68   | -        | 15.71  | 27.35 | 5.88 | -    |
| PK   | 2.3986G | 59.79    | 74.00    | -14.21 | 32.75  | 3    | Vertical  | 354     | 2.68   | -        | 27.04  | 27.02 | 5.74 | -    |
| PK   | 2.4406G | 98.81    | Inf      | -Inf   | 32.92  | 3    | Vertical  | 354     | 2.68   | -        | 65.89  | 27.13 | 5.79 | -    |
| PK   | 2.5354G | 59.82    | 74.00    | -14.18 | 33.28  | 3    | Vertical  | 354     | 2.68   | -        | 26.54  | 27.39 | 5.89 | -    |

## BT-BR(1Mbps)

## 2441MHz\_TX

09/11/2017

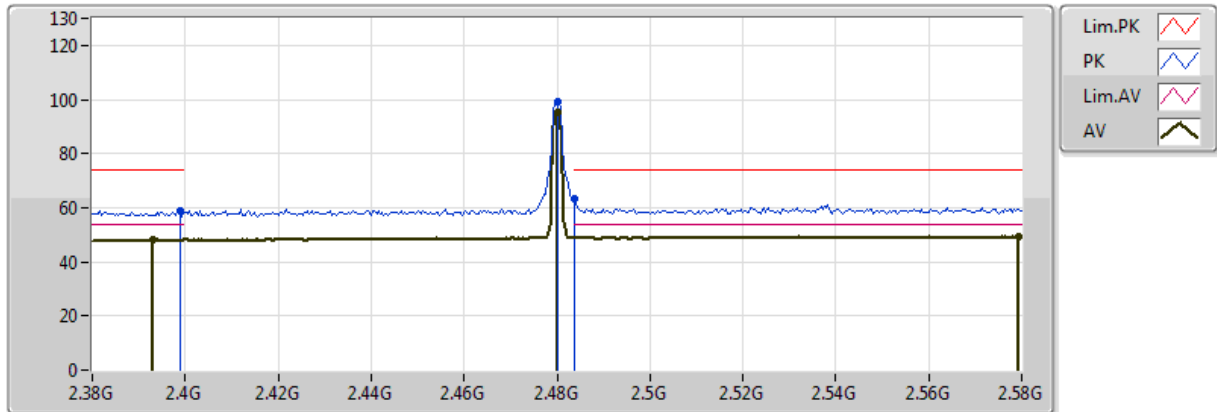


| Type | Freq    | Level    | Limit    | Margin | Factor | Dist | Condition  | Azimuth | Height | Comments | Raw    | AF    | CL   | PA   |
|------|---------|----------|----------|--------|--------|------|------------|---------|--------|----------|--------|-------|------|------|
|      | (Hz)    | (dBuV/m) | (dBuV/m) | (dB)   | (dB)   | (m)  |            | (°)     | (m)    |          | (dBuV) | (dB)  | (dB) | (dB) |
| AV   | 2.3922G | 48.00    | 54.00    | -6.00  | 32.73  | 3    | Horizontal | 180     | 1.50   | -        | 15.27  | 27.00 | 5.73 | -    |
| AV   | 2.441G  | 86.50    | Inf      | -Inf   | 32.92  | 3    | Horizontal | 180     | 1.50   | -        | 53.58  | 27.13 | 5.79 | -    |
| AV   | 2.4998G | 48.78    | 54.00    | -5.22  | 33.16  | 3    | Horizontal | 180     | 1.50   | -        | 15.62  | 27.30 | 5.86 | -    |
| PK   | 2.3854G | 59.16    | 74.00    | -14.84 | 32.70  | 3    | Horizontal | 180     | 1.50   | -        | 26.46  | 26.98 | 5.72 | -    |
| PK   | 2.441G  | 90.40    | Inf      | -Inf   | 32.92  | 3    | Horizontal | 180     | 1.50   | -        | 57.48  | 27.13 | 5.79 | -    |
| PK   | 2.5398G | 59.93    | 74.00    | -14.07 | 33.30  | 3    | Horizontal | 180     | 1.50   | -        | 26.63  | 27.40 | 5.89 | -    |

## BT-BR(1Mbps)

## 2480MHz\_TX

09/11/2017

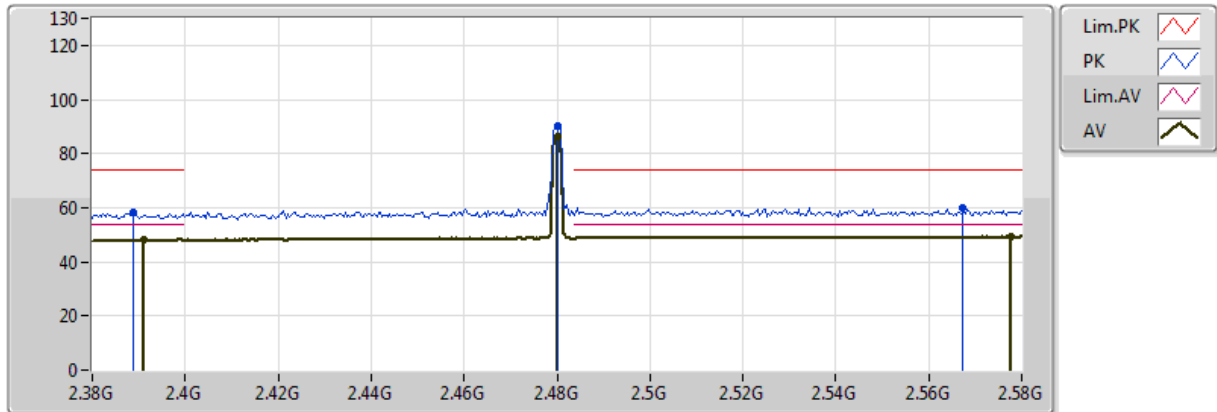


| Type | Freq    | Level    | Limit    | Margin | Factor | Dist | Condition | Azimuth | Height | Comments | Raw    | AF    | CL   | PA   |
|------|---------|----------|----------|--------|--------|------|-----------|---------|--------|----------|--------|-------|------|------|
|      | (Hz)    | (dBuV/m) | (dBuV/m) | (dB)   | (dB)   | (m)  |           | (°)     | (m)    |          | (dBuV) | (dB)  | (dB) | (dB) |
| AV   | 2.3932G | 47.93    | 54.00    | -6.07  | 32.73  | 3    | Vertical  | 233     | 2.55   | -        | 15.20  | 27.00 | 5.73 | -    |
| AV   | 2.48G   | 94.98    | Inf      | -Inf   | 33.08  | 3    | Vertical  | 233     | 2.55   | -        | 61.90  | 27.24 | 5.84 | -    |
| AV   | 2.5792G | 49.14    | 54.00    | -4.86  | 33.43  | 3    | Vertical  | 233     | 2.55   | -        | 15.71  | 27.51 | 5.92 | -    |
| PK   | 2.3988G | 58.57    | 74.00    | -15.43 | 32.76  | 3    | Vertical  | 233     | 2.55   | -        | 25.81  | 27.02 | 5.74 | -    |
| PK   | 2.48G   | 98.94    | Inf      | -Inf   | 33.08  | 3    | Vertical  | 233     | 2.55   | -        | 65.86  | 27.24 | 5.84 | -    |
| PK   | 2.4836G | 63.35    | 74.00    | -10.65 | 33.09  | 3    | Vertical  | 233     | 2.55   | -        | 30.26  | 27.25 | 5.84 | -    |

## BT-BR(1Mbps)

## 2480MHz\_TX

09/11/2017

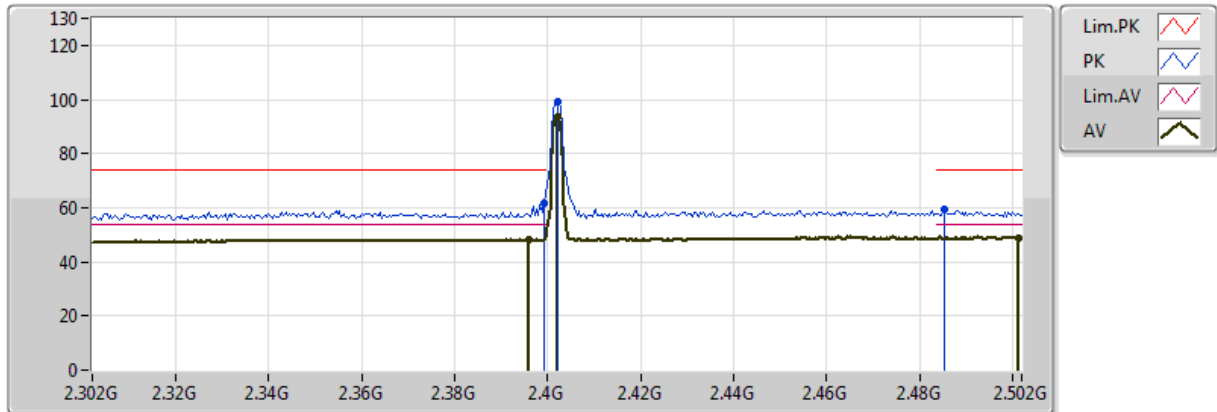


| Type | Freq    | Level    | Limit    | Margin | Factor | Dist | Condition  | Azimuth | Height | Comments | Raw    | AF    | CL   | PA   |
|------|---------|----------|----------|--------|--------|------|------------|---------|--------|----------|--------|-------|------|------|
|      | (Hz)    | (dBuV/m) | (dBuV/m) | (dB)   | (dB)   | (m)  |            | (°)     | (m)    |          | (dBuV) | (dB)  | (dB) | (dB) |
| AV   | 2.3912G | 47.97    | 54.00    | -6.03  | 32.73  | 3    | Horizontal | 179     | 3.65   | -        | 15.24  | 27.00 | 5.73 | -    |
| AV   | 2.48G   | 86.34    | Inf      | -Inf   | 33.08  | 3    | Horizontal | 179     | 3.65   | -        | 53.26  | 27.24 | 5.84 | -    |
| AV   | 2.5776G | 49.11    | 54.00    | -4.89  | 33.42  | 3    | Horizontal | 179     | 3.65   | -        | 15.69  | 27.50 | 5.92 | -    |
| PK   | 2.3888G | 58.06    | 74.00    | -15.94 | 32.72  | 3    | Horizontal | 179     | 3.65   | -        | 25.34  | 26.99 | 5.73 | -    |
| PK   | 2.48G   | 90.22    | Inf      | -Inf   | 33.08  | 3    | Horizontal | 179     | 3.65   | -        | 57.14  | 27.24 | 5.84 | -    |
| PK   | 2.5672G | 60.16    | 74.00    | -13.84 | 33.39  | 3    | Horizontal | 179     | 3.65   | -        | 26.77  | 27.47 | 5.91 | -    |

## BT-EDR(2Mbps)

## 2402MHz\_TX

09/11/2017

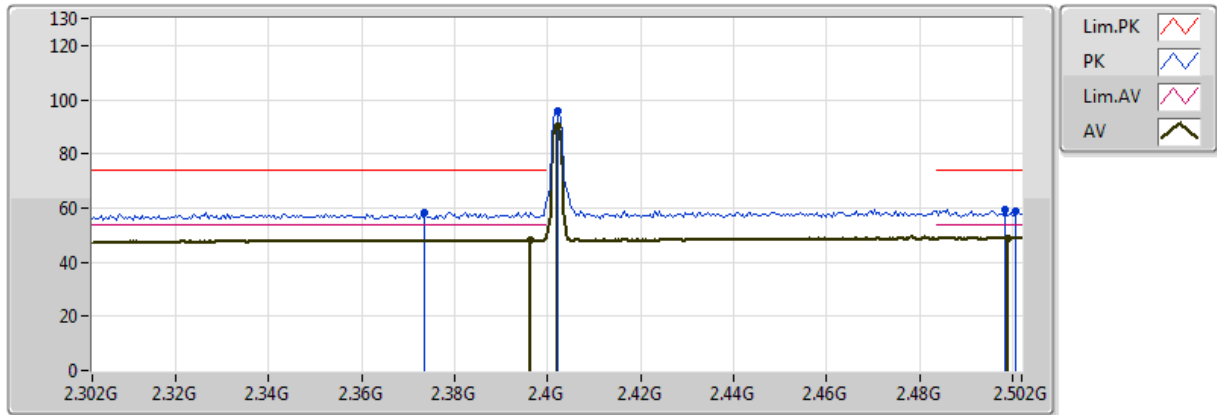


| Type | Freq    | Level    | Limit    | Margin | Factor | Dist | Condition | Azimuth | Height | Comments | Raw    | AF    | CL   | PA   |
|------|---------|----------|----------|--------|--------|------|-----------|---------|--------|----------|--------|-------|------|------|
|      | (Hz)    | (dBuV/m) | (dBuV/m) | (dB)   | (dB)   | (m)  |           | (°)     | (m)    |          | (dBuV) | (dB)  | (dB) | (dB) |
| AV   | 2.396G  | 48.01    | 54.00    | -5.99  | 32.74  | 3    | Vertical  | 353     | 2.73   | -        | 15.27  | 27.01 | 5.74 | -    |
| AV   | 2.402G  | 93.35    | Inf      | -Inf   | 32.77  | 3    | Vertical  | 353     | 2.73   | -        | 60.58  | 27.03 | 5.74 | -    |
| AV   | 2.5012G | 48.78    | 54.00    | -5.22  | 33.16  | 3    | Vertical  | 353     | 2.73   | -        | 15.62  | 27.30 | 5.86 | -    |
| PK   | 2.402G  | 99.11    | Inf      | -Inf   | 32.77  | 3    | Vertical  | 353     | 2.73   | -        | 66.34  | 27.03 | 5.74 | -    |
| PK   | 2.4852G | 59.27    | 74.00    | -14.73 | 33.10  | 3    | Vertical  | 353     | 2.73   | -        | 26.17  | 27.26 | 5.84 | -    |
| PK   | 2.3992G | 61.57    | 74.00    | -12.43 | 32.76  | 3    | Vertical  | 353     | 2.73   | -        | 28.81  | 27.02 | 5.74 | -    |

## BT-EDR(2Mbps)

## 2402MHz\_TX

09/11/2017

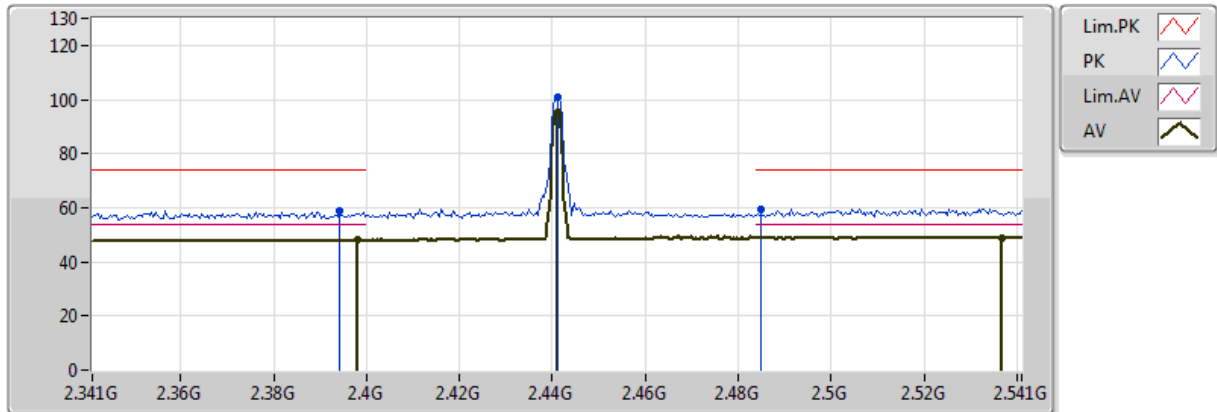


| Type | Freq    | Level    | Limit    | Margin | Factor | Dist | Condition  | Azimuth | Height | Comments | Raw    | AF    | CL   | PA   |
|------|---------|----------|----------|--------|--------|------|------------|---------|--------|----------|--------|-------|------|------|
|      | (Hz)    | (dBuV/m) | (dBuV/m) | (dB)   | (dB)   | (m)  |            | (°)     | (m)    |          | (dBuV) | (dB)  | (dB) | (dB) |
| AV   | 2.3964G | 47.92    | 54.00    | -6.08  | 32.75  | 3    | Horizontal | 173     | 3.50   | -        | 15.17  | 27.01 | 5.74 | -    |
| AV   | 2.402G  | 89.98    | Inf      | -Inf   | 32.77  | 3    | Horizontal | 173     | 3.50   | -        | 57.21  | 27.03 | 5.74 | -    |
| AV   | 2.4992G | 48.73    | 54.00    | -5.27  | 33.16  | 3    | Horizontal | 173     | 3.50   | -        | 15.57  | 27.30 | 5.86 | -    |
| PK   | 2.3736G | 58.54    | 74.00    | -15.46 | 32.66  | 3    | Horizontal | 173     | 3.50   | -        | 25.88  | 26.95 | 5.71 | -    |
| PK   | 2.402G  | 95.68    | Inf      | -Inf   | 32.77  | 3    | Horizontal | 173     | 3.50   | -        | 62.92  | 27.03 | 5.74 | -    |
| PK   | 2.4984G | 59.34    | 74.00    | -14.66 | 33.15  | 3    | Horizontal | 173     | 3.50   | -        | 26.18  | 27.30 | 5.86 | -    |
| PK   | 2.5008G | 59.10    | 74.00    | -14.90 | 33.16  | 3    | Horizontal | 173     | 3.50   | -        | 25.94  | 27.30 | 5.86 | -    |

## BT-EDR(2Mbps)

## 2441MHz\_TX

09/11/2017

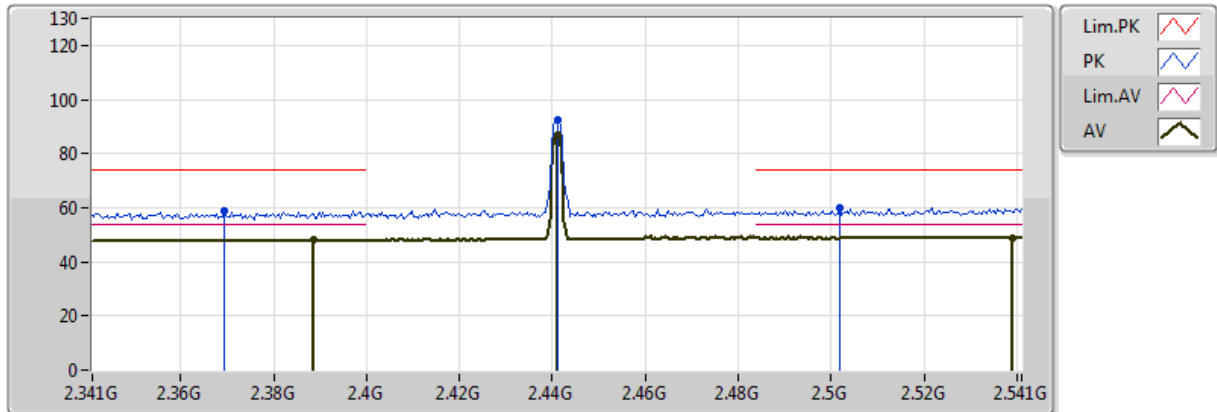


| Type | Freq<br>(Hz) | Level<br>(dBuV/m) | Limit<br>(dBuV/m) | Margin<br>(dB) | Factor<br>(dB) | Dist<br>(m) | Condition | Azimuth<br>(°) | Height<br>(m) | Comments | Raw<br>(dBuV) | AF<br>(dB) | CL<br>(dB) | PA<br>(dB) |
|------|--------------|-------------------|-------------------|----------------|----------------|-------------|-----------|----------------|---------------|----------|---------------|------------|------------|------------|
| AV   | 2.3982G      | 48.08             | 54.00             | -5.92          | 32.75          | 3           | Vertical  | 352            | 2.67          | -        | 15.33         | 27.01      | 5.74       | -          |
| AV   | 2.441G       | 95.12             | Inf               | -Inf           | 32.92          | 3           | Vertical  | 352            | 2.67          | -        | 62.20         | 27.13      | 5.79       | -          |
| AV   | 2.5366G      | 48.96             | 54.00             | -5.04          | 33.28          | 3           | Vertical  | 352            | 2.67          | -        | 15.68         | 27.40      | 5.89       | -          |
| PK   | 2.3942G      | 58.92             | 74.00             | -15.08         | 32.74          | 3           | Vertical  | 352            | 2.67          | -        | 26.18         | 27.00      | 5.73       | -          |
| PK   | 2.441G       | 100.92            | Inf               | -Inf           | 32.92          | 3           | Vertical  | 352            | 2.67          | -        | 68.00         | 27.13      | 5.79       | -          |
| PK   | 2.485G       | 59.61             | 74.00             | -14.39         | 33.10          | 3           | Vertical  | 352            | 2.67          | -        | 26.51         | 27.26      | 5.84       | -          |

## BT-EDR(2Mbps)

## 2441MHz\_TX

09/11/2017

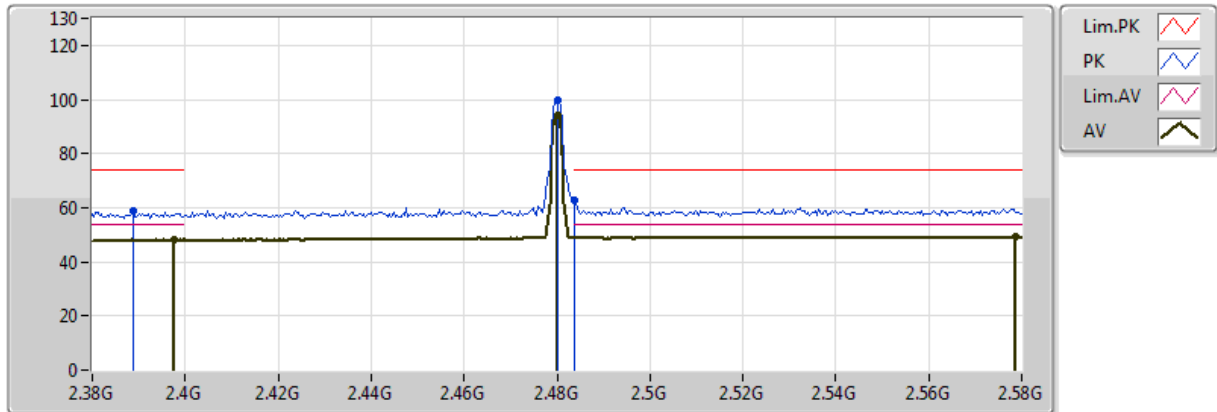


| Type | Freq    | Level    | Limit    | Margin | Factor | Dist | Condition  | Azimuth | Height | Comments | Raw    | AF    | CL   | PA   |
|------|---------|----------|----------|--------|--------|------|------------|---------|--------|----------|--------|-------|------|------|
|      | (Hz)    | (dBuV/m) | (dBuV/m) | (dB)   | (dB)   | (m)  |            | (°)     | (m)    |          | (dBuV) | (dB)  | (dB) | (dB) |
| AV   | 2.3886G | 47.97    | 54.00    | -6.03  | 32.72  | 3    | Horizontal | 180     | 1.49   | -        | 15.25  | 26.99 | 5.73 | -    |
| AV   | 2.441G  | 87.04    | Inf      | -Inf   | 32.92  | 3    | Horizontal | 180     | 1.49   | -        | 54.12  | 27.13 | 5.79 | -    |
| AV   | 2.539G  | 48.98    | 54.00    | -5.02  | 33.29  | 3    | Horizontal | 180     | 1.49   | -        | 15.69  | 27.40 | 5.89 | -    |
| PK   | 2.3694G | 58.88    | 74.00    | -15.12 | 32.64  | 3    | Horizontal | 180     | 1.49   | -        | 26.24  | 26.93 | 5.71 | -    |
| PK   | 2.441G  | 92.60    | Inf      | -Inf   | 32.92  | 3    | Horizontal | 180     | 1.49   | -        | 59.67  | 27.13 | 5.79 | -    |
| PK   | 2.5018G | 59.77    | 74.00    | -14.23 | 33.17  | 3    | Horizontal | 180     | 1.49   | -        | 26.61  | 27.30 | 5.86 | -    |

## BT-EDR(2Mbps)

## 2480MHz\_TX

09/11/2017

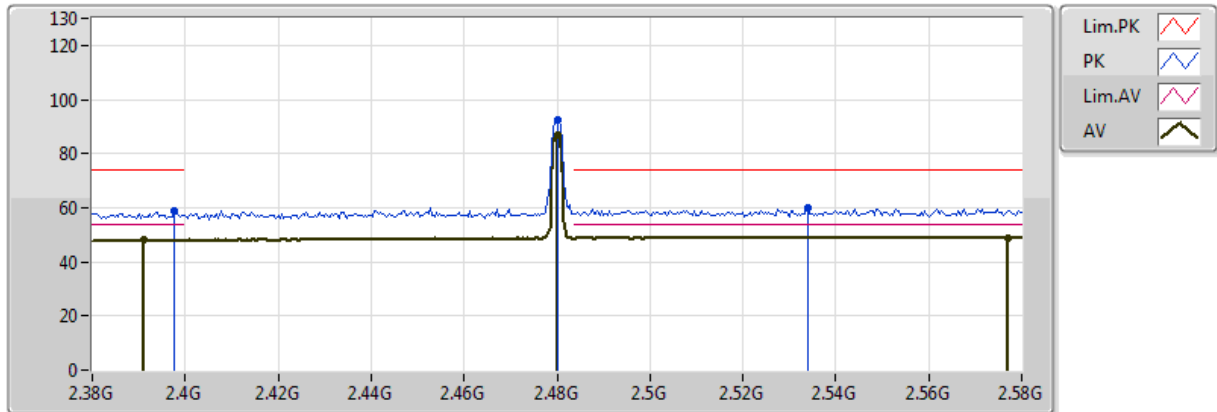


| Type | Freq<br>(Hz) | Level<br>(dBuV/m) | Limit<br>(dBuV/m) | Margin<br>(dB) | Factor<br>(dB) | Dist<br>(m) | Condition | Azimuth<br>(°) | Height<br>(m) | Comments | Raw<br>(dBuV) | AF<br>(dB) | CL<br>(dB) | PA<br>(dB) |
|------|--------------|-------------------|-------------------|----------------|----------------|-------------|-----------|----------------|---------------|----------|---------------|------------|------------|------------|
| AV   | 2.3976G      | 48.00             | 54.00             | -6.00          | 32.75          | 3           | Vertical  | 237            | 2.54          | -        | 15.25         | 27.01      | 5.74       | -          |
| AV   | 2.48G        | 94.23             | Inf               | -Inf           | 33.08          | 3           | Vertical  | 237            | 2.54          | -        | 61.15         | 27.24      | 5.84       | -          |
| AV   | 2.5788G      | 49.10             | 54.00             | -4.90          | 33.43          | 3           | Vertical  | 237            | 2.54          | -        | 15.67         | 27.50      | 5.92       | -          |
| PK   | 2.3888G      | 58.75             | 74.00             | -15.25         | 32.72          | 3           | Vertical  | 237            | 2.54          | -        | 26.03         | 26.99      | 5.73       | -          |
| PK   | 2.48G        | 99.97             | Inf               | -Inf           | 33.08          | 3           | Vertical  | 237            | 2.54          | -        | 66.89         | 27.24      | 5.84       | -          |
| PK   | 2.4836G      | 62.64             | 74.00             | -11.36         | 33.09          | 3           | Vertical  | 237            | 2.54          | -        | 29.54         | 27.25      | 5.84       | -          |

## BT-EDR(2Mbps)

## 2480MHz\_TX

09/11/2017

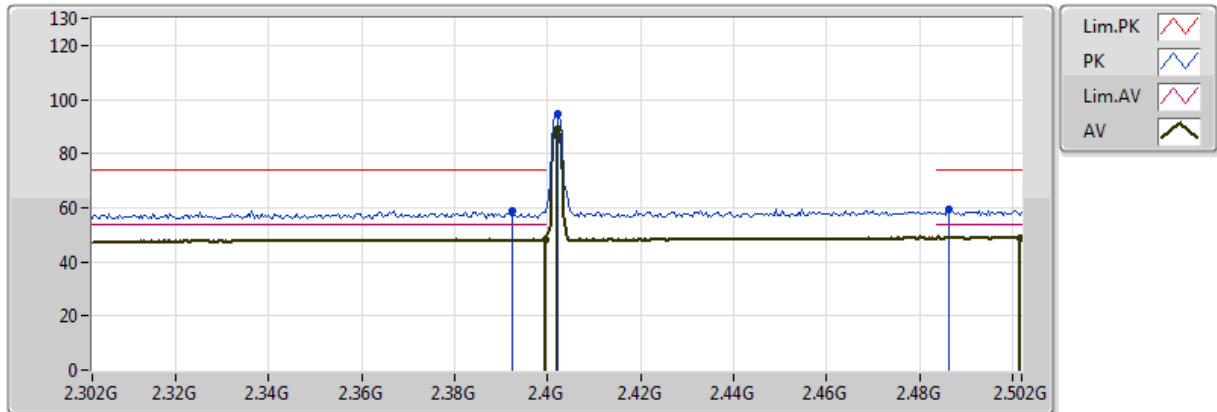


| Type | Freq    | Level    | Limit    | Margin | Factor | Dist | Condition  | Azimuth | Height | Comments | Raw    | AF    | CL   | PA   |
|------|---------|----------|----------|--------|--------|------|------------|---------|--------|----------|--------|-------|------|------|
|      | (Hz)    | (dBuV/m) | (dBuV/m) | (dB)   | (dB)   | (m)  |            | (°)     | (m)    |          | (dBuV) | (dB)  | (dB) | (dB) |
| AV   | 2.3912G | 47.93    | 54.00    | -6.07  | 32.73  | 3    | Horizontal | 179     | 3.64   | -        | 15.20  | 27.00 | 5.73 | -    |
| AV   | 2.48G   | 87.04    | Inf      | -Inf   | 33.08  | 3    | Horizontal | 179     | 3.64   | -        | 53.96  | 27.24 | 5.84 | -    |
| AV   | 2.5772G | 49.03    | 54.00    | -4.97  | 33.42  | 3    | Horizontal | 179     | 3.64   | -        | 15.61  | 27.50 | 5.92 | -    |
| PK   | 2.3976G | 58.83    | 74.00    | -15.17 | 32.75  | 3    | Horizontal | 179     | 3.64   | -        | 26.08  | 27.01 | 5.74 | -    |
| PK   | 2.48G   | 92.64    | Inf      | -Inf   | 33.08  | 3    | Horizontal | 179     | 3.64   | -        | 59.56  | 27.24 | 5.84 | -    |
| PK   | 2.534G  | 60.12    | 74.00    | -13.88 | 33.28  | 3    | Horizontal | 179     | 3.64   | -        | 26.84  | 27.39 | 5.89 | -    |

## BT-EDR(3Mbps)

## 2402MHz\_TX

09/11/2017

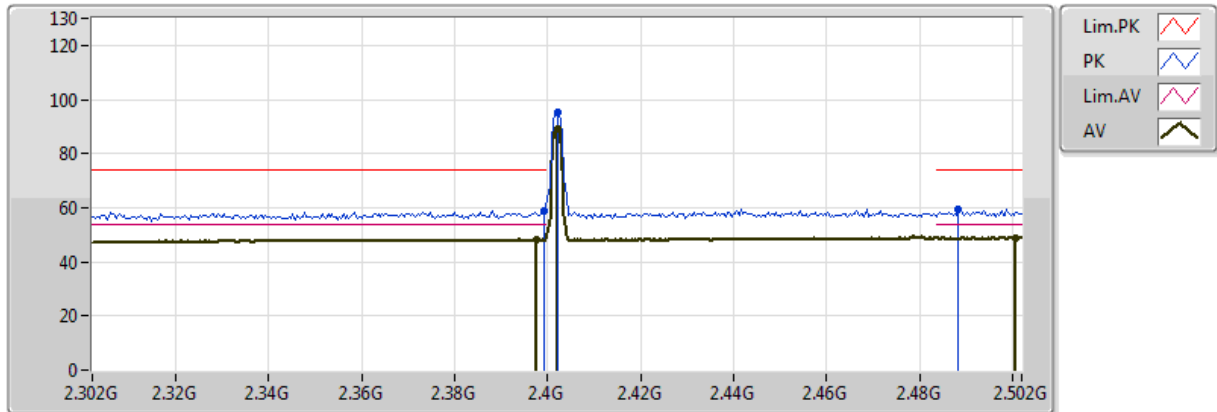


| Type | Freq    | Level    | Limit    | Margin | Factor | Dist | Condition | Azimuth | Height | Comments | Raw    | AF    | CL   | PA   |
|------|---------|----------|----------|--------|--------|------|-----------|---------|--------|----------|--------|-------|------|------|
|      | (Hz)    | (dBuV/m) | (dBuV/m) | (dB)   | (dB)   | (m)  |           | (°)     | (m)    |          | (dBuV) | (dB)  | (dB) | (dB) |
| AV   | 2.3996G | 48.07    | 54.00    | -5.93  | 32.76  | 3    | Vertical  | 273     | 3.54   | -        | 15.31  | 27.02 | 5.74 | -    |
| AV   | 2.402G  | 88.85    | Inf      | -Inf   | 32.77  | 3    | Vertical  | 273     | 3.54   | -        | 56.09  | 27.03 | 5.74 | -    |
| AV   | 2.5016G | 48.74    | 54.00    | -5.26  | 33.17  | 3    | Vertical  | 273     | 3.54   | -        | 15.58  | 27.30 | 5.86 | -    |
| PK   | 2.3924G | 59.10    | 74.00    | -14.90 | 32.73  | 3    | Vertical  | 273     | 3.54   | -        | 26.37  | 27.00 | 5.73 | -    |
| PK   | 2.402G  | 94.66    | Inf      | -Inf   | 32.77  | 3    | Vertical  | 273     | 3.54   | -        | 61.89  | 27.03 | 5.74 | -    |
| PK   | 2.4864G | 59.60    | 74.00    | -14.40 | 33.11  | 3    | Vertical  | 273     | 3.54   | -        | 26.49  | 27.26 | 5.84 | -    |

## BT-EDR(3Mbps)

## 2402MHz\_TX

09/11/2017

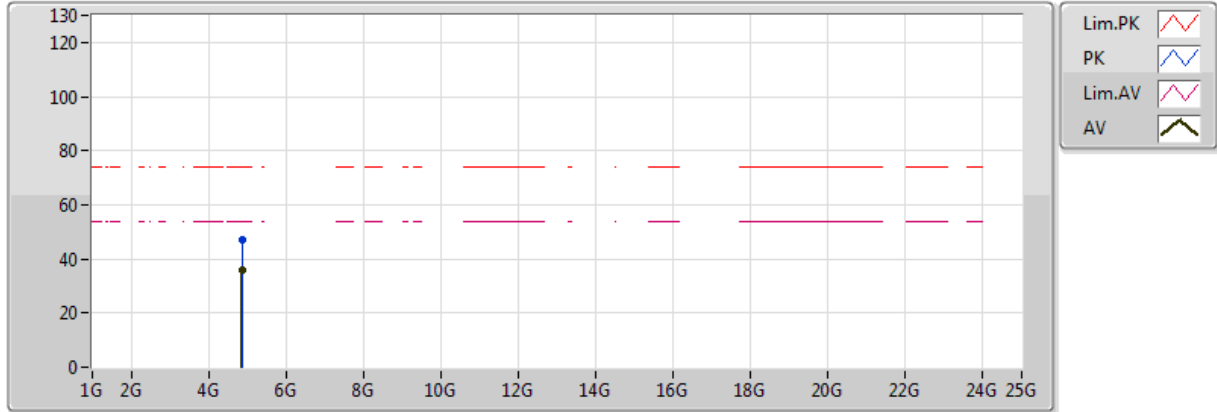


| Type | Freq    | Level    | Limit    | Margin | Factor | Dist | Condition  | Azimuth | Height | Comments | Raw    | AF    | CL   | PA   |
|------|---------|----------|----------|--------|--------|------|------------|---------|--------|----------|--------|-------|------|------|
|      | (Hz)    | (dBuV/m) | (dBuV/m) | (dB)   | (dB)   | (m)  |            | (°)     | (m)    |          | (dBuV) | (dB)  | (dB) | (dB) |
| AV   | 2.3976G | 48.00    | 54.00    | -6.00  | 32.75  | 3    | Horizontal | 173     | 3.50   | -        | 15.25  | 27.01 | 5.74 | -    |
| AV   | 2.402G  | 89.30    | Inf      | -Inf   | 32.77  | 3    | Horizontal | 173     | 3.50   | -        | 56.53  | 27.03 | 5.74 | -    |
| AV   | 2.5008G | 48.68    | 54.00    | -5.32  | 33.16  | 3    | Horizontal | 173     | 3.50   | -        | 15.52  | 27.30 | 5.86 | -    |
| PK   | 2.3992G | 58.95    | 74.00    | -15.05 | 32.76  | 3    | Horizontal | 173     | 3.50   | -        | 26.19  | 27.02 | 5.74 | -    |
| PK   | 2.402G  | 95.03    | Inf      | -Inf   | 32.77  | 3    | Horizontal | 173     | 3.50   | -        | 62.26  | 27.03 | 5.74 | -    |
| PK   | 2.4884G | 59.53    | 74.00    | -14.47 | 33.11  | 3    | Horizontal | 173     | 3.50   | -        | 26.42  | 27.27 | 5.85 | -    |

## BT-EDR(3Mbps)

## 2402MHz\_TX

10/11/2017

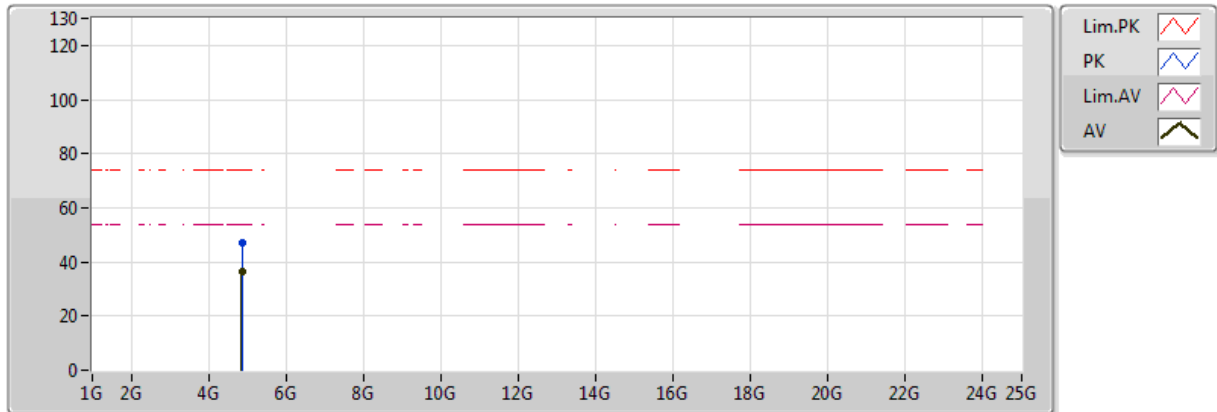


| Type | Freq  | Level    | Limit    | Margin | Factor | Dist | Condition | Azimuth | Height | Comments | Raw    | AF    | CL   | PA    |
|------|-------|----------|----------|--------|--------|------|-----------|---------|--------|----------|--------|-------|------|-------|
|      | (Hz)  | (dBuV/m) | (dBuV/m) | (dB)   | (dB)   | (m)  |           | (°)     | (m)    |          | (dBuV) | (dB)  | (dB) | (dB)  |
| PK   | 4.88G | 47.03    | 74.00    | -26.97 | 4.29   | 3    | Vertical  | 0       | 1.50   | -        | 42.74  | 31.31 | 8.18 | 35.19 |
| AV   | 4.88G | 36.03    | 54.00    | -17.97 | 4.29   | 3    | Vertical  | 0       | 1.50   | -        | 31.75  | 31.31 | 8.18 | 35.19 |

## BT-EDR(3Mbps)

## 2402MHz\_TX

10/11/2017

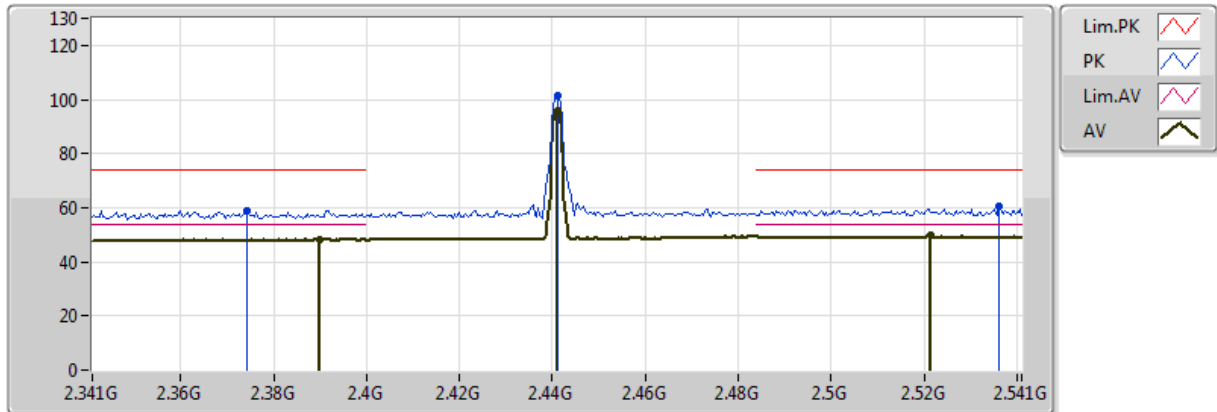


| Type | Freq  | Level    | Limit    | Margin | Factor | Dist | Condition | Azimuth | Height | Comments | Raw    | AF    | CL   | PA    |
|------|-------|----------|----------|--------|--------|------|-----------|---------|--------|----------|--------|-------|------|-------|
|      | (Hz)  | (dBuV/m) | (dBuV/m) | (dB)   | (dB)   | (m)  |           | (°)     | (m)    |          | (dBuV) | (dB)  | (dB) | (dB)  |
| PK   | 4.88G | 46.79    | 74.00    | -27.21 | 4.29   | 3    | Vertical  | 360     | 1.50   | -        | 42.50  | 31.31 | 8.18 | 35.19 |
| AV   | 4.88G | 36.16    | 54.00    | -17.84 | 4.29   | 3    | Vertical  | 360     | 1.50   | -        | 31.87  | 31.31 | 8.18 | 35.19 |

## BT-EDR(3Mbps)

## 2441MHz\_TX

09/11/2017

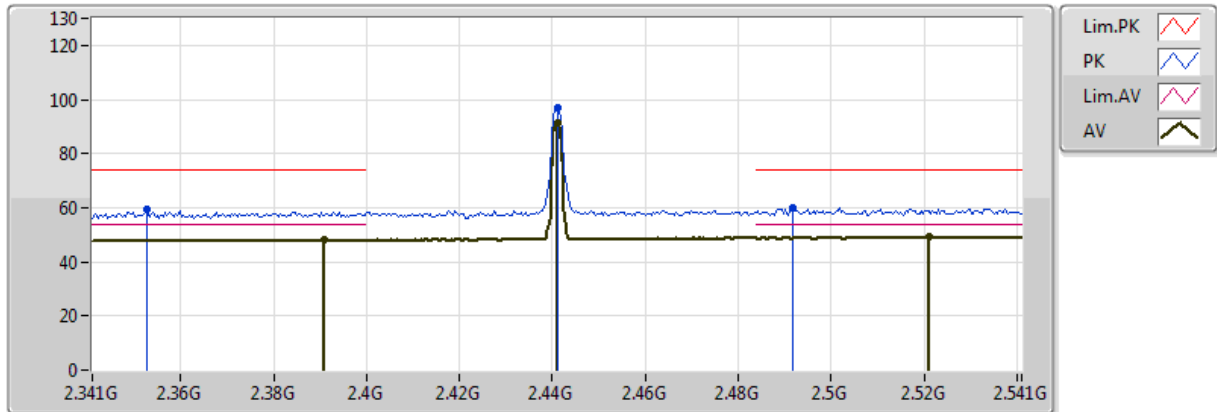


| Type | Freq    | Level    | Limit    | Margin | Factor | Dist | Condition | Azimuth | Height | Comments | Raw    | AF    | CL   | PA   |
|------|---------|----------|----------|--------|--------|------|-----------|---------|--------|----------|--------|-------|------|------|
|      | (Hz)    | (dBuV/m) | (dBuV/m) | (dB)   | (dB)   | (m)  |           | (°)     | (m)    |          | (dBuV) | (dB)  | (dB) | (dB) |
| AV   | 2.3898G | 48.04    | 54.00    | -5.96  | 32.72  | 3    | Vertical  | 352     | 2.66   | -        | 15.32  | 26.99 | 5.73 | -    |
| AV   | 2.441G  | 95.55    | Inf      | -Inf   | 32.92  | 3    | Vertical  | 352     | 2.66   | -        | 62.63  | 27.13 | 5.79 | -    |
| AV   | 2.5214G | 49.60    | 54.00    | -4.40  | 33.23  | 3    | Vertical  | 352     | 2.66   | -        | 16.37  | 27.36 | 5.88 | -    |
| PK   | 2.3742G | 58.98    | 74.00    | -15.02 | 32.66  | 3    | Vertical  | 352     | 2.66   | -        | 26.32  | 26.95 | 5.71 | -    |
| PK   | 2.441G  | 101.36   | Inf      | -Inf   | 32.92  | 3    | Vertical  | 352     | 2.66   | -        | 68.44  | 27.13 | 5.79 | -    |
| PK   | 2.5362G | 60.52    | 74.00    | -13.48 | 33.28  | 3    | Vertical  | 352     | 2.66   | -        | 27.24  | 27.39 | 5.89 | -    |

## BT-EDR(3Mbps)

## 2441MHz\_TX

09/11/2017

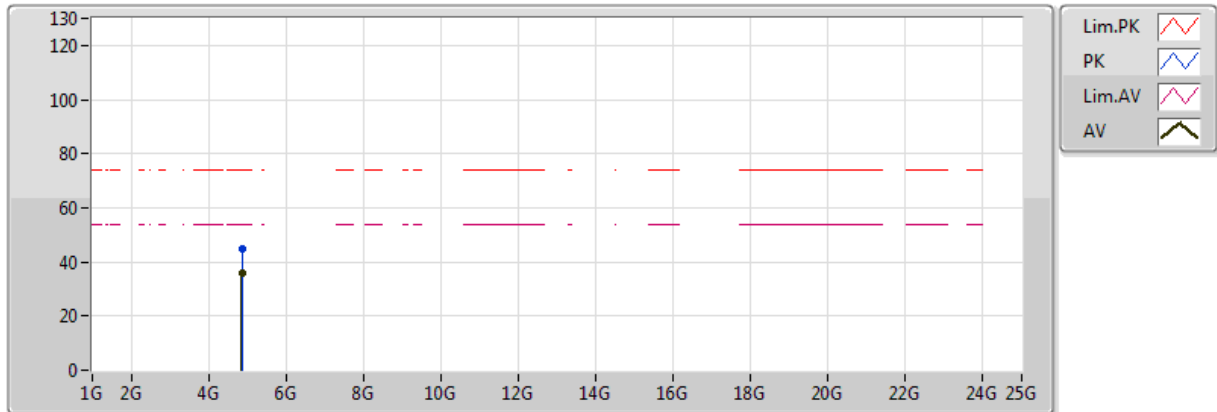


| Type | Freq<br>(Hz) | Level<br>(dBuV/m) | Limit<br>(dBuV/m) | Margin<br>(dB) | Factor<br>(dB) | Dist<br>(m) | Condition  | Azimuth<br>(°) | Height<br>(m) | Comments | Raw<br>(dBuV) | AF<br>(dB) | CL<br>(dB) | PA<br>(dB) |
|------|--------------|-------------------|-------------------|----------------|----------------|-------------|------------|----------------|---------------|----------|---------------|------------|------------|------------|
| AV   | 2.391G       | 47.91             | 54.00             | -6.09          | 32.72          | 3           | Horizontal | 179            | 1.50          | -        | 15.19         | 26.99      | 5.73       | -          |
| AV   | 2.441G       | 91.06             | Inf               | -Inf           | 32.92          | 3           | Horizontal | 179            | 1.50          | -        | 58.13         | 27.13      | 5.79       | -          |
| AV   | 2.521G       | 49.11             | 54.00             | -4.89          | 33.23          | 3           | Horizontal | 179            | 1.50          | -        | 15.88         | 27.35      | 5.88       | -          |
| PK   | 2.3526G      | 59.23             | 74.00             | -14.77         | 32.58          | 3           | Horizontal | 179            | 1.50          | -        | 26.65         | 26.89      | 5.69       | -          |
| PK   | 2.441G       | 96.69             | Inf               | -Inf           | 32.92          | 3           | Horizontal | 179            | 1.50          | -        | 63.76         | 27.13      | 5.79       | -          |
| PK   | 2.4918G      | 59.84             | 74.00             | -14.16         | 33.13          | 3           | Horizontal | 179            | 1.50          | -        | 26.72         | 27.28      | 5.85       | -          |

## BT-EDR(3Mbps)

## 2441MHz\_TX

10/11/2017

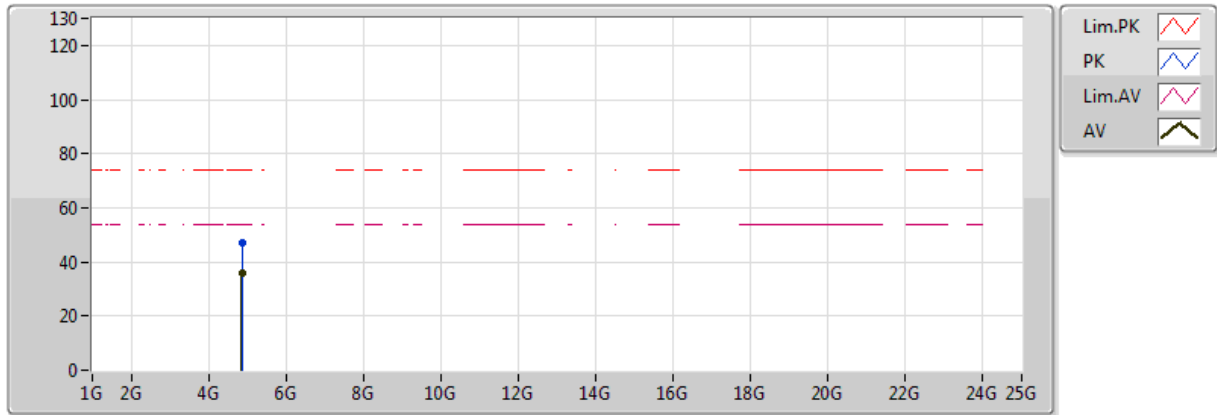


| Type | Freq  | Level    | Limit    | Margin | Factor | Dist | Condition | Azimuth | Height | Comments | Raw    | AF    | CL   | PA    |
|------|-------|----------|----------|--------|--------|------|-----------|---------|--------|----------|--------|-------|------|-------|
|      | (Hz)  | (dBuV/m) | (dBuV/m) | (dB)   | (dB)   | (m)  |           | (°)     | (m)    |          | (dBuV) | (dB)  | (dB) | (dB)  |
| AV   | 4.88G | 35.61    | 54.00    | -18.39 | 4.29   | 3    | Vertical  | 0       | 1.50   | -        | 31.32  | 31.31 | 8.18 | 35.19 |
| PK   | 4.88G | 45.08    | 74.00    | -28.92 | 4.29   | 3    | Vertical  | 0       | 1.50   | -        | 40.79  | 31.31 | 8.18 | 35.19 |

## BT-EDR(3Mbps)

## 2441MHz\_TX

10/11/2017

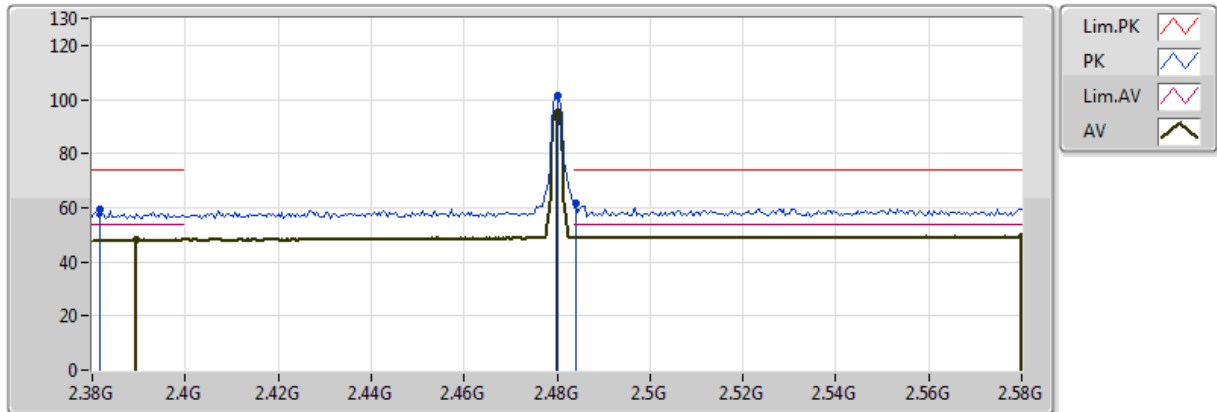


| Type | Freq  | Level    | Limit    | Margin | Factor | Dist | Condition  | Azimuth | Height | Comments | Raw    | AF    | CL   | PA    |
|------|-------|----------|----------|--------|--------|------|------------|---------|--------|----------|--------|-------|------|-------|
|      | (Hz)  | (dBuV/m) | (dBuV/m) | (dB)   | (dB)   | (m)  |            | (°)     | (m)    |          | (dBuV) | (dB)  | (dB) | (dB)  |
| PK   | 4.88G | 47.05    | 74.00    | -26.95 | 4.29   | 3    | Horizontal | 360     | 1.50   | -        | 42.76  | 31.31 | 8.18 | 35.19 |
| AV   | 4.88G | 35.68    | 54.00    | -18.32 | 4.29   | 3    | Horizontal | 360     | 1.50   | -        | 31.39  | 31.31 | 8.18 | 35.19 |

## BT-EDR(3Mbps)

## 2480MHz\_TX

09/11/2017

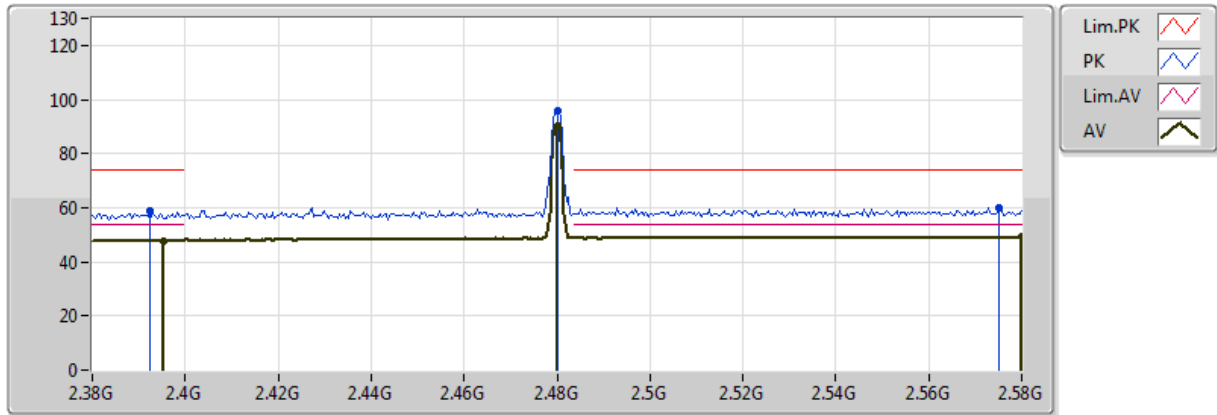


| Type | Freq    | Level    | Limit    | Margin | Factor | Dist | Condition | Azimuth | Height | Comments | Raw    | AF    | CL   | PA   |
|------|---------|----------|----------|--------|--------|------|-----------|---------|--------|----------|--------|-------|------|------|
|      | (Hz)    | (dBuV/m) | (dBuV/m) | (dB)   | (dB)   | (m)  |           | (°)     | (m)    |          | (dBuV) | (dB)  | (dB) | (dB) |
| AV   | 2.3896G | 48.00    | 54.00    | -6.00  | 32.72  | 3    | Vertical  | 234     | 2.55   | -        | 15.28  | 26.99 | 5.73 | -    |
| AV   | 2.48G   | 95.15    | Inf      | -Inf   | 33.08  | 3    | Vertical  | 234     | 2.55   | -        | 62.07  | 27.24 | 5.84 | -    |
| AV   | 2.58G   | 49.11    | 54.00    | -4.89  | 33.43  | 3    | Vertical  | 234     | 2.55   | -        | 15.68  | 27.51 | 5.92 | -    |
| PK   | 2.3816G | 59.20    | 74.00    | -14.80 | 32.69  | 3    | Vertical  | 234     | 2.55   | -        | 26.51  | 26.97 | 5.72 | -    |
| PK   | 2.48G   | 101.29   | Inf      | -Inf   | 33.08  | 3    | Vertical  | 234     | 2.55   | -        | 68.21  | 27.24 | 5.84 | -    |
| PK   | 2.484G  | 61.87    | 74.00    | -12.13 | 33.10  | 3    | Vertical  | 234     | 2.55   | -        | 28.77  | 27.26 | 5.84 | -    |

## BT-EDR(3Mbps)

## 2480MHz\_TX

09/11/2017

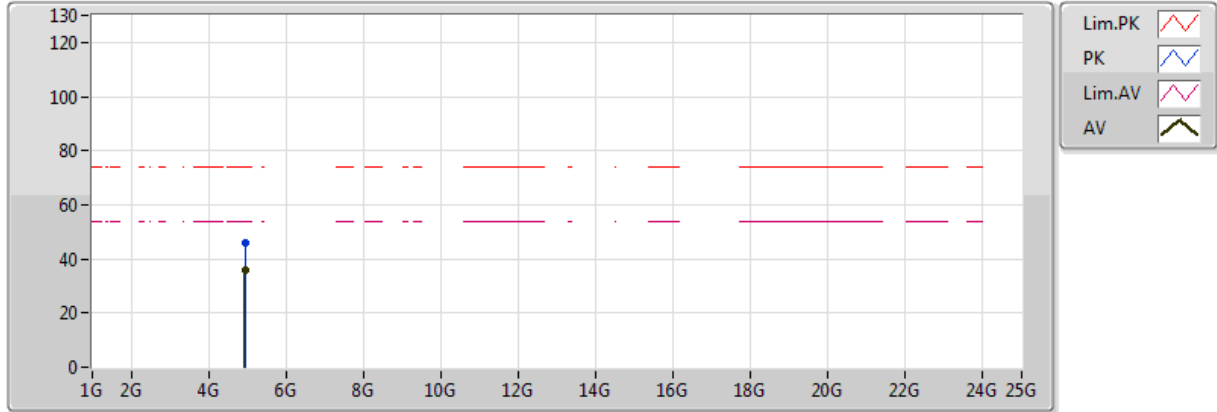


| Type | Freq    | Level    | Limit    | Margin | Factor | Dist | Condition  | Azimuth | Height | Comments | Raw    | AF    | CL   | PA   |
|------|---------|----------|----------|--------|--------|------|------------|---------|--------|----------|--------|-------|------|------|
|      | (Hz)    | (dBuV/m) | (dBuV/m) | (dB)   | (dB)   | (m)  |            | (°)     | (m)    |          | (dBuV) | (dB)  | (dB) | (dB) |
| AV   | 2.3952G | 47.88    | 54.00    | -6.12  | 32.74  | 3    | Horizontal | 179     | 3.65   | -        | 15.14  | 27.01 | 5.73 | -    |
| AV   | 2.48G   | 90.34    | Inf      | -Inf   | 33.08  | 3    | Horizontal | 179     | 3.65   | -        | 57.26  | 27.24 | 5.84 | -    |
| AV   | 2.58G   | 49.17    | 54.00    | -4.83  | 33.43  | 3    | Horizontal | 179     | 3.65   | -        | 15.73  | 27.51 | 5.92 | -    |
| PK   | 2.3924G | 58.57    | 74.00    | -15.43 | 32.73  | 3    | Horizontal | 179     | 3.65   | -        | 25.84  | 27.00 | 5.73 | -    |
| PK   | 2.48G   | 95.85    | Inf      | -Inf   | 33.08  | 3    | Horizontal | 179     | 3.65   | -        | 62.77  | 27.24 | 5.84 | -    |
| PK   | 2.5752G | 59.86    | 74.00    | -14.14 | 33.42  | 3    | Horizontal | 179     | 3.65   | -        | 26.44  | 27.50 | 5.92 | -    |

## BT-EDR(3Mbps)

## 2480MHz\_TX

10/11/2017

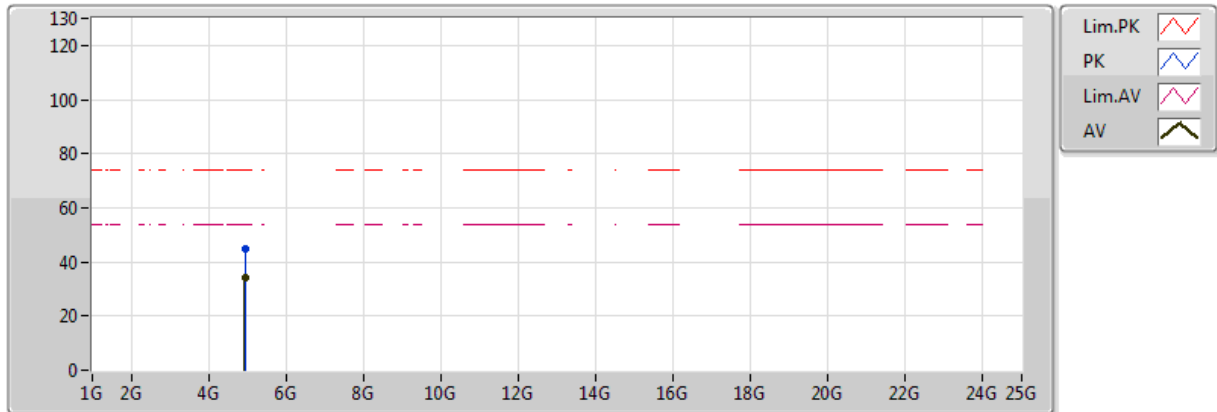


| Type | Freq  | Level    | Limit    | Margin | Factor | Dist | Condition | Azimuth | Height | Comments | Raw    | AF    | CL   | PA    |
|------|-------|----------|----------|--------|--------|------|-----------|---------|--------|----------|--------|-------|------|-------|
|      | (Hz)  | (dBuV/m) | (dBuV/m) | (dB)   | (dB)   | (m)  |           | (°)     | (m)    |          | (dBuV) | (dB)  | (dB) | (dB)  |
| AV   | 4.96G | 35.74    | 54.00    | -18.26 | 4.49   | 3    | Vertical  | 360     | 1.50   | -        | 31.25  | 31.44 | 8.27 | 35.21 |
| PK   | 4.96G | 46.06    | 74.00    | -27.94 | 4.49   | 3    | Vertical  | 360     | 1.50   | -        | 41.57  | 31.44 | 8.27 | 35.21 |

### BT-EDR(3Mbps)

### 2480MHz\_TX

10/11/2017



| Type | Freq  | Level    | Limit    | Margin | Factor | Dist | Condition  | Azimuth | Height | Comments | Raw    | AF    | CL   | PA    |
|------|-------|----------|----------|--------|--------|------|------------|---------|--------|----------|--------|-------|------|-------|
|      | (Hz)  | (dBuV/m) | (dBuV/m) | (dB)   | (dB)   | (m)  |            | (°)     | (m)    |          | (dBuV) | (dB)  | (dB) | (dB)  |
| AV   | 4.96G | 34.08    | 54.00    | -19.92 | 4.49   | 3    | Horizontal | 0       | 1.50   | -        | 29.59  | 31.44 | 8.27 | 35.21 |
| PK   | 4.96G | 44.90    | 74.00    | -29.10 | 4.49   | 3    | Horizontal | 0       | 1.50   | -        | 40.41  | 31.44 | 8.27 | 35.21 |