



**DATE: 27 August 2017**

**I.T.L. (PRODUCT TESTING) LTD.**

# **FCC Radio Test Report**

**for**

**OrCam Technologies Ltd.**

**Equipment under test:**

**Wearable Camera**

**MyEye2**

**(BLE & WiFi Transceiver)**

Tested by:

M. Zohar

Approved by:

Y. Zucker

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This report relates only to items tested.



## Measurement/Technical Report for OrCam Technologies Ltd.

Wearable Camera

# MyEye2

## FCC ID: 2AAWI-MYEEYE

This report concerns:                      Original Grant:                      X  
Class I Change:  
Class II Change:

Equipment type:                              Digital Transmission System

Limits used:                                    47CFR15 Section 15.247

Measurement procedure used is KDB 558074 D01 v03r05 and  
ANSI C63.10:2013.

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# 1. General Information

## 1.1 Administrative Information

|                                |                                                                                              |
|--------------------------------|----------------------------------------------------------------------------------------------|
| Manufacturer:                  | OrCam Technologies Ltd.                                                                      |
| Manufacturer's Address:        | 13 Hartom St.,<br>Jerusalem, 91450<br>Israel<br>Tel: +972-2-591-7805<br>Fax: +972-2-586-0121 |
| Manufacturer's Representative: | Ram Ben Yehuda                                                                               |
| Equipment Under Test (E.U.T):  | Wearable Camera                                                                              |
| Equipment Model No.:           | MyEye2                                                                                       |
| Equipment Serial No.:          | 16510011                                                                                     |
| Date of Receipt of E.U.T:      | February 19, 2017                                                                            |
| Start of Test:                 | February 19, 2017                                                                            |
| End of Test:                   | March 9, 2017                                                                                |
| Test Laboratory Location:      | I.T.L (Product Testing) Ltd.<br>1 Batsheva St.,<br>Lod<br>ISRAEL 7120101                     |
| Test Specifications:           | FCC Part 15, Subpart C                                                                       |



## **1.2 List of Accreditations**

The EMC laboratory of I.T.L. is accredited by the following bodies:

1. The American Association for Laboratory Accreditation (A2LA) (U.S.A.), Certificate No. 1152.01.
2. The Federal Communications Commission (FCC) (U.S.A.), FCC Designation No. IL1005.
3. The Israel Ministry of the Environment (Israel), Registration No. 1104/01.
4. Industry Canada (Canada), IC File No.: 46405-4025; Site Nos. IC 4025A-1, IC 4025A-2.

I.T.L. Product Testing Ltd. is accredited by the American Association for Laboratory Accreditation (A2LA) and the results shown in this test report have been determined in accordance with I.T.L.'s terms of accreditation unless stated otherwise in the report.

### 1.3 Product Description

Wearable camera that captures and processes images and transfers the data via radio links.

|                           |                                                                                              |
|---------------------------|----------------------------------------------------------------------------------------------|
| Model name                | MyEye2                                                                                       |
| Working voltage           | Rechargeable battery via AC/DC adapter<br>Manufactory: DELL<br>Model:LA90PM130<br>p/n: 6C3W2 |
| Mode of operation         | 1.Transceiver BLE<br>2. Transceiver Wi-Fi/g/n                                                |
| Modulations               | For Wi-Fi configuration only 64QAM                                                           |
| Assigned Frequency Range  | 2400.0-2483.5MHz                                                                             |
| Operating Frequency Range | For BLE : 2402.0-2480.0MHz<br>For Wi-Fi g/n: 2412.0-2472.0MHz                                |
| Transmit power            | For BLE : ~ 0.0dBm<br>For Wi-Fi g/n: ~14.0dBm                                                |
| Antenna Gain              | 1.0dBi                                                                                       |
| Modulation BW             | For BLE : 2MHz<br>For Wi-Fi g/n: 20MHz                                                       |

### 1.4 Test Methodology

Both conducted and radiated testing was performed according to the procedures in KDB 558074 D01 v03r05 and ANSI C63.10:2013. Radiated testing was performed at an antenna to EUT distance of 3 meters.

### 1.5 Test Facility

Emissions tests were performed at I.T.L.'s testing facility in Lod, Israel. I.T.L.'s EMC Laboratory is accredited by A2LA, certificate No. 1152.01 and its FCC Designation Number is IL1005.

### 1.6 Measurement Uncertainty

#### Conducted Emission

(CISPR 11, EN 55011, CISPR 22, EN 55022, ANSI C63.4)

0.15 – 30 MHz:

Expanded Uncertainty (95% Confidence, K=2):

± 3.44 dB

#### Radiated Emission

Radiated Emission (CISPR 11, EN 55011, CISPR 22, EN 55022, ANSI C63.4)  
for open site:

30-1000MHz:

Expanded Uncertainty (95% Confidence, K=2):

± 4.96 dB



1 GHz to 6 GHz

Expanded Uncertainty (95% Confidence, K=2):

$\pm 5.19$  dB

>6 GHz

Expanded Uncertainty (95% Confidence, K=2):

$\pm 5.51$  dB

## 2. System Test Configuration

### 2.1 Justification

The E.U.T can operate in 2 operation mode options: IEEE 802.15.1 standard (BLE) or IEEE 802.11g/n standard (Wi-Fi/g/n) only with 20MHz CBW and 64QAM modulation).

Exploratory emission testing was performed in 3 orthogonal polarities to determine the “worst case” radiation.

The results are shown in the below tables:

| Orientation | Frequency | Field Strength | 2 <sup>nd</sup> Harmonic | 3 <sup>th</sup> Harmonic | Band Edge |
|-------------|-----------|----------------|--------------------------|--------------------------|-----------|
|             | (MHz)     | (dBuV/m)       | (dBuV/m)                 | (dBuV/m)                 | (dBuV/m)  |
| X axis      | 2412.0    | 97.2           | 56.2                     | 58.3                     | 40.3      |
|             | 2436.0    | 99.8           | 56.8                     | 58.8                     | -         |
|             | 2472.0    | 99.2           | 56.6                     | 58.7                     | 41.3      |
| Y axis      | 2412.0    | 96.9           | 56.2                     | 58.1                     | 40.0      |
|             | 2436.0    | 99.1           | 56.7                     | 58.8                     | -         |
|             | 2472.0    | 98.0           | 56.6                     | 58.6                     | 40.5      |
| Z axis      | 2412.0    | 96.3           | 56.0                     | 58.1                     | 39.8      |
|             | 2436.0    | 95.9           | 56.5                     | 58.7                     | -         |
|             | 2472.0    | 94.0           | 56.7                     | 58.4                     | 37.8      |

**Figure 1. Screening Results WI-FI**

According to above results the worst case for Wi-Fi was the X axis.

| Orientation | Frequency | Field Strength | 2 <sup>nd</sup> Harmonic | 3 <sup>th</sup> Harmonic | Band Edge |
|-------------|-----------|----------------|--------------------------|--------------------------|-----------|
|             | (MHz)     | (dBuV/m)       | (dBuV/m)                 | (dBuV/m)                 | (dBuV/m)  |
| X axis      | 2402.0    | 78.6           | 56.2                     | 58.3                     | 48.9      |
|             | 2440.0    | 78.1           | 56.8                     | 58.8                     | -         |
|             | 2480.0    | 78.4           | 56.6                     | 58.7                     | 48.0      |
| Y axis      | 2402.0    | 78.4           | 56.2                     | 58.1                     | 48.5      |
|             | 2440.0    | 78.0           | 56.7                     | 58.8                     | -         |
|             | 2480.0    | 78.1           | 56.6                     | 58.6                     | 47.8      |
| Z axis      | 2402.0    | 78.0           | 56.0                     | 58.1                     | 48.3      |
|             | 2440.0    | 76.0           | 56.5                     | 58.7                     | -         |
|             | 2480.0    | 75.6           | 56.7                     | 58.4                     | 47.6      |

**Figure 2. Screening Results BLE**

According to above results the worst case for BLE was the X axis.

For BLE - The unit was evaluated while transmitting at the low channel (2402MHz), the mid channel (2440MHz) and the high channel (2480MHz).

For Wi-Fi g/n - The unit was evaluated while transmitting at the low channel (2412MHz), the mid channel (2437MHz) and the high channel (2472MHz).

The evaluation was performed while the E.U.T was connected to a laptop via USB port in charge mode as the “worst case”.

## 2.2 *EUT Exercise Software*

No special exercise software was used.

## 2.3 *Special Accessories*

Laptop: manufacturer: DELL

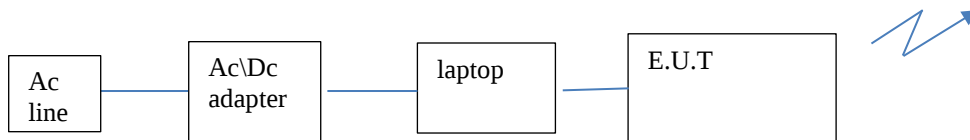
Model: LATITUDE E5440

S/N/n: 6KCCXZ1

## 2.4 *Equipment Modifications*

No modifications were necessary in order to achieve compliance.

## 2.5 *Configuration of Tested System*



**Figure 3. Configuration of Tested System**

### 3. Conducted & Radiated Measurement Test Set-Up Photos



Figure 4. Conducted Emissions AC Line Test



Figure 5. Radiated Emission Test - 0.009-30MHz



**Figure 6. Radiated Emission Test - 30-200MHz**



**Figure 7. Radiated Emission Test - 200-1000MHz**



**Figure 8. Radiated Emission Test- 1GHz-18GHz**



**Figure 9. Radiated Emission Test - 18GHz-26.5GHz**

## 4. Conducted Emission From AC Mains

### 4.1 Test Specification

FCC Part 15, Subpart C, Section 15.207

### 4.2 Test Procedure

(Temperature (20°C)/ Humidity (60%RH))

The E.U.T operation mode and test setup are as described in Section 2 of this report. In order to minimize background noise interference, the conducted emission testing was performed inside a shielded room, with the E.U.T placed on a 0.8 meter high wooden table, 0.4 meter from the room's vertical wall. In the case of a floor-standing E.U.T., it was placed on the horizontal ground plane.

The E.U.T was powered from 115 V AC / 60 Hz via 50 Ohm / 50  $\mu$ Hn Line Impedance Stabilization Network (LISN) on the phase and neutral lines. The LISN's were grounded to the shielded room ground plane (floor), and were kept at least 0.8 meters from the nearest boundary of the E.U.T.

The center of the E.U.T.'s AC cable was folded back and forth, in order to form a bundle less than 0.40 meters and a total cable length of 1 meter.

The effect of varying the position of the cables was investigated to find the configuration that produces maximum emission. The configuration tested is shown in the photograph, *Figure 4. Conducted Emissions AC Line Test*.

The emission voltages at the LISN's outputs were measured using a computerized receiver, complying with CISPR 16 requirements. The specification limits were loaded to the receiver and are displayed on the receiver's spectrum display.

The E.U.T was evaluated in 2 operation modes: BLE / Wi-Fi.

A frequency scan between 0.15 and 30 MHz was performed at 9 kHz I.F. band width, using peak detection.

The spectral components having the highest level on each line were measured using a quasi-peak and average detector.

### 4.3 Test Limit

| Frequency of emission (MHz) | Conducted limit (dB $\mu$ V) |           |
|-----------------------------|------------------------------|-----------|
|                             | Quasi-peak                   | Average   |
| 0.15-0.5                    | 66 to 56*                    | 56 to 46* |
| 0.5-5                       | 56                           | 46        |
| 5-30                        | 60                           | 50        |

\* Decreases with the logarithm of the frequency.

#### **4.4 Test Results for BLE**

JUDGEMENT: Passed by 11.03 dB

The margin between the emission levels and the specification limit is, in the worst case, 11.03 dB for the phase line at 0.442 MHz and 20.79 dB at 0.446 MHz for the neutral line.

The EUT met the F.C.C. Part 15, Subpart C specification requirements.

The details of the highest emissions are given in *Figure 10* to *Figure 13*.

#### **4.5 Test Results for WiFi**

JUDGEMENT: Passed by 17.77 dB

The margin between the emission levels and the specification limit is, in the worst case, 18.35 dB for the phase line at 0.450 MHz and 17.77 dB at 0.450 MHz for the neutral line.

The EUT met the F.C.C. Part 15, Subpart C specification requirements.

The details of the highest emissions are given in *Figure 14* to *Figure 17*.

## Conducted Emission

E.U.T Description: Wearable Camera  
Type: MyEye2  
Serial Number: 16510011

Specification: FCC Part 15, Subpart C  
Lead: Phase  
Detectors: : Peak, Quasi-peak, Average  
Power Operation: AC/DC adapter  
Operation mode: BLE

| EDIT PEAK LIST (Final Measurement Results) |            |           |            |                |
|--------------------------------------------|------------|-----------|------------|----------------|
| Trace1:                                    | CE22BQP    |           |            |                |
| Trace2:                                    | CE22BAP    |           |            |                |
| Trace3:                                    | ---        |           |            |                |
|                                            | TRACE      | FREQUENCY | LEVEL dBμV | DELTA LIMIT dB |
| 1                                          | Quasi Peak | 170 kHz   | 43.43      | -21.52         |
| 2                                          | Average    | 170 kHz   | 24.65      | -30.30         |
| 2                                          | Average    | 198 kHz   | 23.70      | -29.98         |
| 1                                          | Quasi Peak | 202 kHz   | 39.96      | -23.56         |
| 1                                          | Quasi Peak | 258 kHz   | 35.50      | -25.99         |
| 2                                          | Average    | 330 kHz   | 20.90      | -28.54         |
| 1                                          | Quasi Peak | 334 kHz   | 32.11      | -27.23         |
| 2                                          | Average    | 414 kHz   | 31.32      | -16.24         |
| 1                                          | Quasi Peak | 442 kHz   | 37.22      | -19.79         |
| 2                                          | Average    | 442 kHz   | 35.99      | -11.03         |
| 2                                          | Average    | 582 kHz   | 23.01      | -22.98         |
| 1                                          | Quasi Peak | 586 kHz   | 24.01      | -31.98         |
| 1                                          | Quasi Peak | 938 kHz   | 23.45      | -32.54         |
| 2                                          | Average    | 942 kHz   | 18.84      | -27.15         |
| 1                                          | Quasi Peak | 962 kHz   | 21.97      | -34.02         |
| 2                                          | Average    | 994 kHz   | 21.13      | -24.86         |
| 2                                          | Average    | 1.382 MHz | 20.62      | -25.38         |
| 1                                          | Quasi Peak | 1.578 MHz | 22.47      | -33.52         |
| 2                                          | Average    | 1.718 MHz | 22.52      | -23.47         |
| 1                                          | Quasi Peak | 1.774 MHz | 24.16      | -31.83         |

Date: 2.MAR.2017 09:30:46

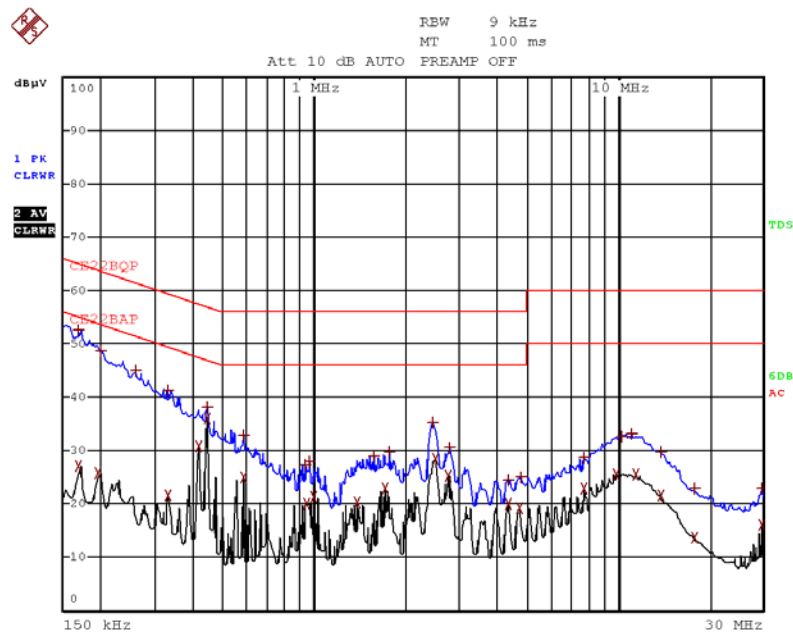
**Figure 10. Detectors: Peak, Quasi-peak, Average**

*Note: QP Delta/Av Delta refers to the test results obtained minus specified requirement; thus a positive number indicates failure, and a negative result indicates that the product passes the test.*

## Conducted Emission

E.U.T Description    Wearable Camera  
Type                    MyEye2  
Serial Number:        16510011

Specification:        FCC Part 15, Subpart C  
Lead:                   Phase  
Detectors:            Peak, Quasi-peak, Average  
Power Operation:    AC/DC adapter  
Operation mode:     BLE



Date: 2.MAR.2017 09:25:39

Figure 11. Detectors: Peak, Quasi-peak, Average

## Conducted Emission

E.U.T Description: Wearable Camera  
Type: MyEye2  
Serial Number: 16510011

Specification: FCC Part 15, Subpart C  
Lead: Neutral  
Detectors: Peak, Quasi-peak, Average  
Power Operation: AC/DC adapter  
Operation mode: BLE

| EDIT PEAK LIST (Final Measurement Results) |           |            |        |          |
|--------------------------------------------|-----------|------------|--------|----------|
| Trace1:                                    | CE22BQP   |            |        |          |
| Trace2:                                    | CE22BAP   |            |        |          |
| Trace3:                                    | ---       |            |        |          |
| TRACE                                      | FREQUENCY | LEVEL dBμV | DELTA  | LIMIT dB |
| 2 Average                                  | 162 kHz   | 26.16      | -29.19 |          |
| 1 Quasi Peak                               | 170 kHz   | 38.99      | -25.96 |          |
| 1 Quasi Peak                               | 202 kHz   | 36.28      | -27.24 |          |
| 2 Average                                  | 242 kHz   | 21.32      | -30.70 |          |
| 1 Quasi Peak                               | 262 kHz   | 32.88      | -28.48 |          |
| 2 Average                                  | 326 kHz   | 22.17      | -27.37 |          |
| 1 Quasi Peak                               | 402 kHz   | 33.71      | -24.10 |          |
| 2 Average                                  | 406 kHz   | 20.32      | -27.40 |          |
| 1 Quasi Peak                               | 446 kHz   | 32.02      | -24.92 |          |
| 2 Average                                  | 446 kHz   | 26.21      | -20.73 |          |
| 1 Quasi Peak                               | 570 kHz   | 23.39      | -32.60 |          |
| 2 Average                                  | 606 kHz   | 16.76      | -29.23 |          |
| 1 Quasi Peak                               | 854 kHz   | 24.68      | -31.31 |          |
| 2 Average                                  | 926 kHz   | 14.04      | -31.95 |          |
| 1 Quasi Peak                               | 966 kHz   | 25.42      | -30.57 |          |
| 2 Average                                  | 966 kHz   | 22.43      | -23.56 |          |
| 2 Average                                  | 1.338 MHz | 17.29      | -28.70 |          |
| 1 Quasi Peak                               | 1.622 MHz | 19.86      | -36.14 |          |
| 2 Average                                  | 1.642 MHz | 14.72      | -31.27 |          |
| 1 Quasi Peak                               | 1.978 MHz | 17.40      | -38.59 |          |

Date: 2.MAR.2017 09:13:37

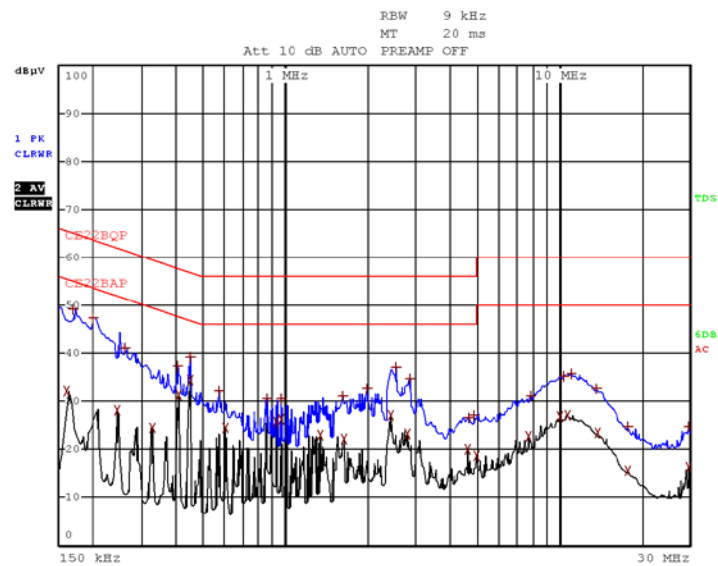
**Figure 12. Detectors: Peak, Quasi-peak, Average**

*Note: QP Delta/Av Delta refers to the test results obtained minus specified requirement; thus a positive number indicates failure, and a negative result indicates that the product passes the test.*

## Conducted Emission

E.U.T Description    Wearable Camera  
Type                    MyEye2  
Serial Number:        16510011

Specification:        FCC Part 15, Subpart C  
Lead:                   Neutral  
Detectors:            Peak, Quasi-peak, Average  
Power Operation:    AC/DC adapter  
Operation mode:     BLE



Date: 2.MAR.2017 09:11:43

**Figure 13 Detectors: Peak, Quasi-peak, Average**

## Conducted Emission

E.U.T Description      Wearable Camera  
Type                      MyEye2  
Serial Number:        16510011

Specification:        FCC Part 15, Subpart C  
Lead:                  Phase  
Detectors: :        Peak, Quasi-peak, Average  
Power Operation:    AC/DC adapter  
Operation mode:     Wi-Fi

| EDIT PEAK LIST (Final Measurement Results) |           |            |                |
|--------------------------------------------|-----------|------------|----------------|
| Trace1:                                    | CE22BQP   |            |                |
| Trace2:                                    | CE22BAP   |            |                |
| Trace3:                                    | ---       |            |                |
| TRACE                                      | FREQUENCY | LEVEL dBμV | DELTA LIMIT dB |
| 1 Quasi Peak                               | 158 kHz   | 45.00      | -20.56         |
| 2 Average                                  | 174 kHz   | 24.12      | -30.64         |
| 1 Quasi Peak                               | 210 kHz   | 40.39      | -22.81         |
| 2 Average                                  | 242 kHz   | 22.11      | -29.91         |
| 1 Quasi Peak                               | 278 kHz   | 35.43      | -25.44         |
| 2 Average                                  | 310 kHz   | 19.67      | -30.29         |
| 1 Quasi Peak                               | 414 kHz   | 35.58      | -21.98         |
| 2 Average                                  | 414 kHz   | 27.59      | -19.96         |
| 1 Quasi Peak                               | 450 kHz   | 36.75      | -20.12         |
| 2 Average                                  | 450 kHz   | 28.52      | -18.35         |
| 2 Average                                  | 586 kHz   | 19.20      | -26.79         |
| 1 Quasi Peak                               | 590 kHz   | 26.09      | -29.90         |
| 2 Average                                  | 862 kHz   | 25.97      | -30.02         |
| 2 Average                                  | 862 kHz   | 17.50      | -28.49         |
| 2 Average                                  | 966 kHz   | 17.18      | -28.81         |
| 1 Quasi Peak                               | 1.034 MHz | 24.70      | -31.29         |
| 2 Average                                  | 1.346 MHz | 17.20      | -28.79         |
| 1 Quasi Peak                               | 1.558 MHz | 20.90      | -35.09         |
| 2 Average                                  | 1.758 MHz | 17.70      | -28.29         |
| 1 Quasi Peak                               | 1.83 MHz  | 25.57      | -30.42         |

Date: 2.MAR.2017 10:03:54

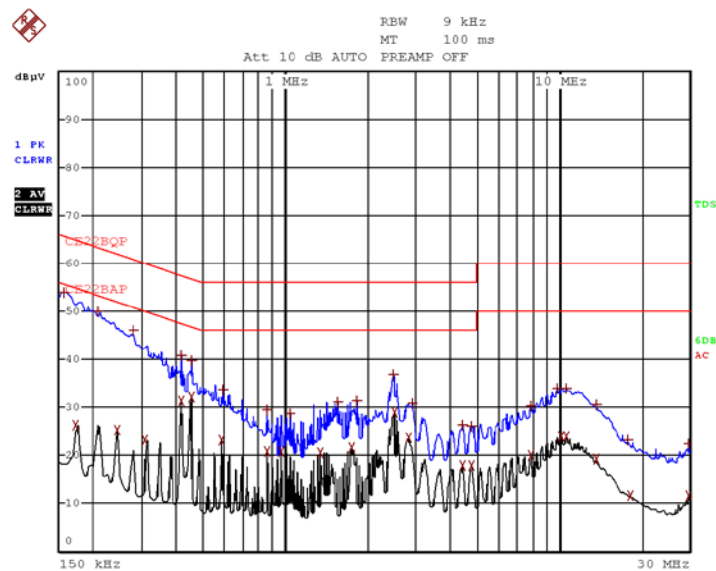
**Figure 14. Detectors: Peak, Quasi-peak, Average**

*Note: QP Delta/Av Delta refers to the test results obtained minus specified requirement; thus a positive number indicates failure, and a negative result indicates that the product passes the test.*

## Conducted Emission

E.U.T Description    Wearable Camera  
Type                    MyEye2  
Serial Number:        16510011

Specification:        FCC Part 15, Subpart C  
Lead:                   Phase  
Detectors:            Peak, Quasi-peak, Average  
Power Operation:    AC/DC adapter  
Operation mode:      Wi-Fi



Date: 2.MAR.2017 09:53:23

**Figure 15. Detectors: Peak, Quasi-peak, Average**

## Conducted Emission

E.U.T Description    Wearable Camera  
Type                    MyEye2  
Serial Number:        16510011

Specification:        FCC Part 15, Subpart C  
Lead:                   Neutral  
Detectors:            Peak, Quasi-peak, Average  
Power Operation:    AC/DC adapter  
Operation mode:      Wi-Fi

| EDIT PEAK LIST (Final Measurement Results) |            |           |            |                |
|--------------------------------------------|------------|-----------|------------|----------------|
| Trace1:                                    | CE22BQP    |           |            |                |
| Trace2:                                    | CE22BAP    |           |            |                |
| Trace3:                                    | ---        |           |            |                |
|                                            | TRACE      | FREQUENCY | LEVEL dBμV | DELTA LIMIT dB |
| 1                                          | Quasi Peak | 150 kHz   | 43.93      | -22.06         |
| 2                                          | Average    | 174 kHz   | 23.43      | -31.33         |
| 1                                          | Quasi Peak | 214 kHz   | 37.85      | -25.19         |
| 2                                          | Average    | 242 kHz   | 21.95      | -30.07         |
| 1                                          | Quasi Peak | 270 kHz   | 34.08      | -27.03         |
| 2                                          | Average    | 310 kHz   | 19.58      | -30.39         |
| 1                                          | Quasi Peak | 414 kHz   | 36.70      | -20.86         |
| 2                                          | Average    | 414 kHz   | 27.52      | -20.04         |
| 1                                          | Quasi Peak | 450 kHz   | 37.38      | -19.49         |
| 2                                          | Average    | 450 kHz   | 29.10      | -17.77         |
| 2                                          | Average    | 586 kHz   | 21.29      | -24.70         |
| 1                                          | Quasi Peak | 622 kHz   | 27.20      | -28.79         |
| 1                                          | Quasi Peak | 862 kHz   | 28.62      | -27.37         |
| 2                                          | Average    | 862 kHz   | 20.65      | -25.34         |
| 1                                          | Quasi Peak | 966 kHz   | 28.08      | -27.91         |
| 2                                          | Average    | 966 kHz   | 20.24      | -25.75         |
| 2                                          | Average    | 1.278 MHz | 19.24      | -26.75         |
| 1                                          | Quasi Peak | 1.626 MHz | 25.78      | -30.21         |
| 2                                          | Average    | 1.726 MHz | 18.37      | -27.62         |
| 1                                          | Quasi Peak | 2.106 MHz | 25.37      | -30.62         |

Date: 2.MAR.2017 10:25:05

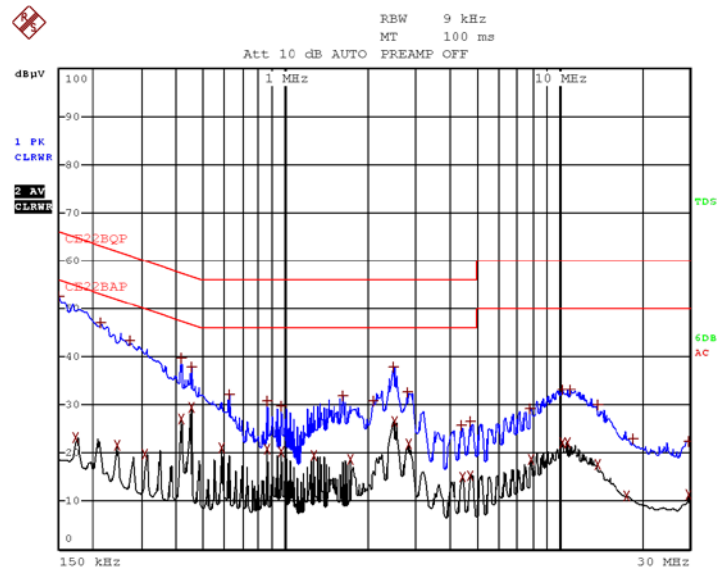
**Figure 16. Detectors: Peak, Quasi-peak, Average**

*Note: QP Delta/Av Delta refers to the test results obtained minus specified requirement; thus a positive number indicates failure, and a negative result indicates that the product passes the test.*

## Conducted Emission

E.U.T Description    Wearable Camera  
Type                    MyEye2  
Serial Number:        16510011

Specification:        FCC Part 15, Subpart C  
Lead:                   Neutral  
Detectors:            Peak, Quasi-peak, Average  
Power Operation:    AC/DC adapter  
Operation mode:     Wi-Fi



Date: 2.MAR.2017 10:22:51

**Figure 17 Detectors: Peak, Quasi-peak, Average**



#### 4.6 *Test Equipment Used; Conducted Emission*

| Instrument        | Manufacturer | Model        | Serial No. | Last Calibration Date | Next Calibration Due |
|-------------------|--------------|--------------|------------|-----------------------|----------------------|
| LISN              | Fischer      | FCC-LISN-25A | 127        | June 23, 2016         | June 23, 2017        |
| Transient Limiter | HP           | 11947A       | 3107A03041 | June 15, 2016         | June 15, 2017        |
| EMI Receiver      | R&S          | ESCI7        | 100724     | February 28, 2017     | February 28, 2018    |

**Figure 18 Test Equipment Used**

## 5. 6 dB Minimum Bandwidth

### 5.1 Test Specification

FCC Part 15, Subpart C, Section 247(a)(2)

### 5.2 Test Procedure

(Temperature (19°C)/ Humidity (45%RH))

The E.U.T operation mode and test set-up are as described in Section 2 of this report.

The E.U.T was tested in the chamber, and placed on a remote-controlled turntable. The E.U.T was placed on a non-metallic table, 1.5 meters above the ground.

The spectrum bandwidth of the E.U.T. at the point of 6 dB below maximum peak power was measured and recorded. The RBW was set to 100 kHz.

### 5.3 Test Limit

Systems using digital modulation techniques may operate in the 902-928 MHz, 2400-2483.5 MHz, and 5725-5850 MHz bands. The minimum 6 dB bandwidth shall be at least 500 kHz.

### 5.4 Test Results

| Operation Mode | Operation Frequency | Reading | Limit      |
|----------------|---------------------|---------|------------|
|                | (MHz)               | (MHz)   | (MHz)      |
| BLE            | 2402.0              | 0.7     | $\geq 0.5$ |
|                | 2440.0              | 0.7     | $\geq 0.5$ |
|                | 2480.0              | 0.7     | $\geq 0.5$ |
| Wi-Fi/g        | 2412.0              | 16.4    | $\geq 0.5$ |
|                | 2437.0              | 15.7    | $\geq 0.5$ |
|                | 2472.0              | 16.4    | $\geq 0.5$ |
| Wi-Fi/n        | 2412.0              | 17.4    | $\geq 0.5$ |
|                | 2437.0              | 16.3    | $\geq 0.5$ |
|                | 2472.0              | 17.5    | $\geq 0.5$ |

Figure 19 6 dB Minimum Bandwidth

JUDGEMENT: Passed

For additional information see *Figure 20 to Figure 28*.

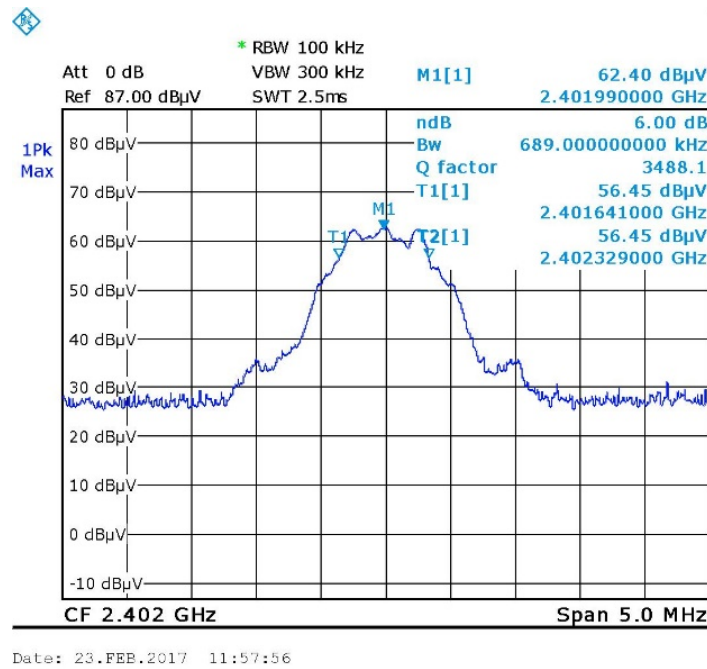


Figure 20. 2402.0MHz - BLE

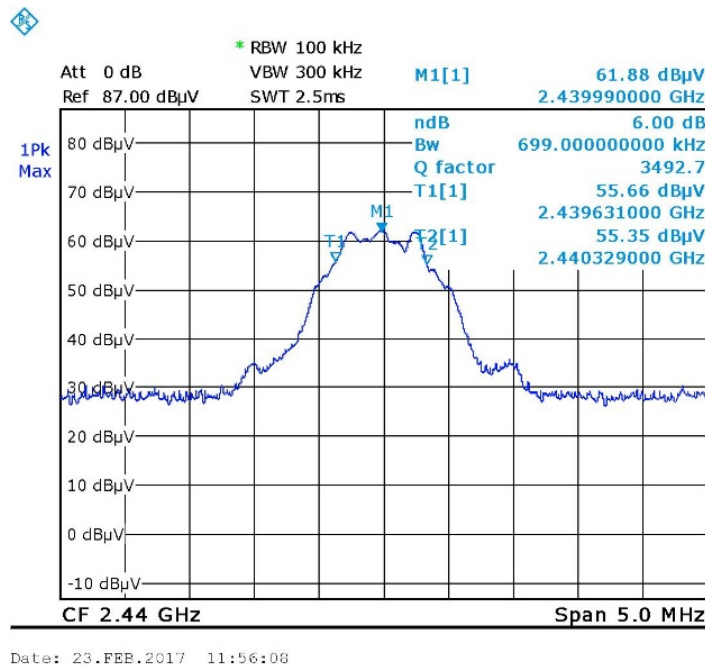


Figure 21. 2440.0MHz - BLE

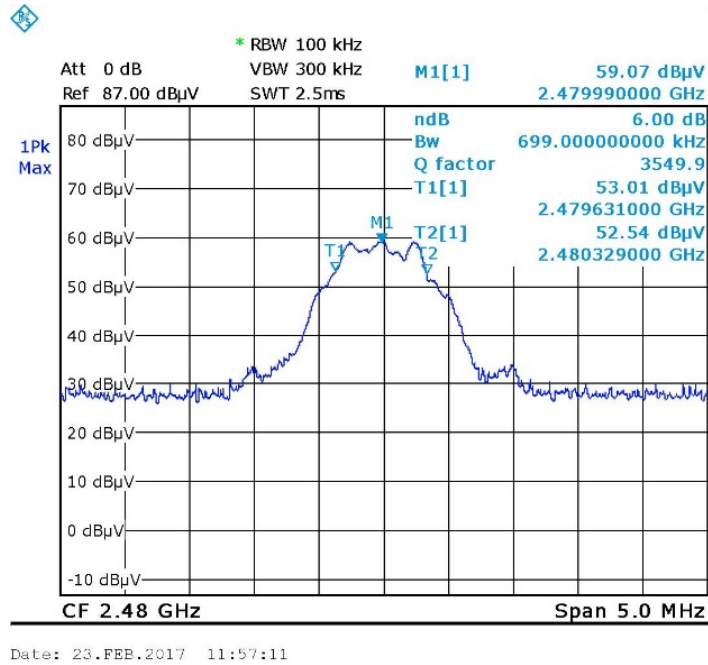


Figure 22. 2480.0MHz - BLE

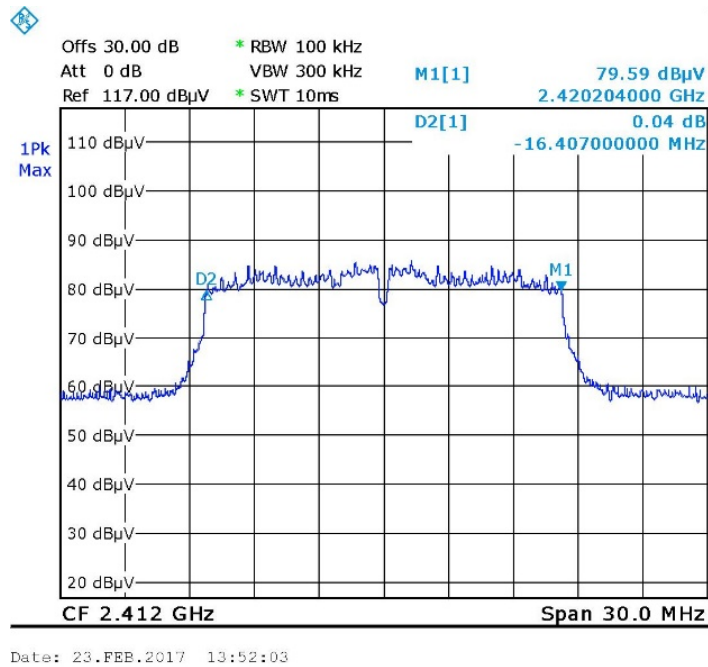


Figure 23. 2412.0MHz - Wi-Fi/g

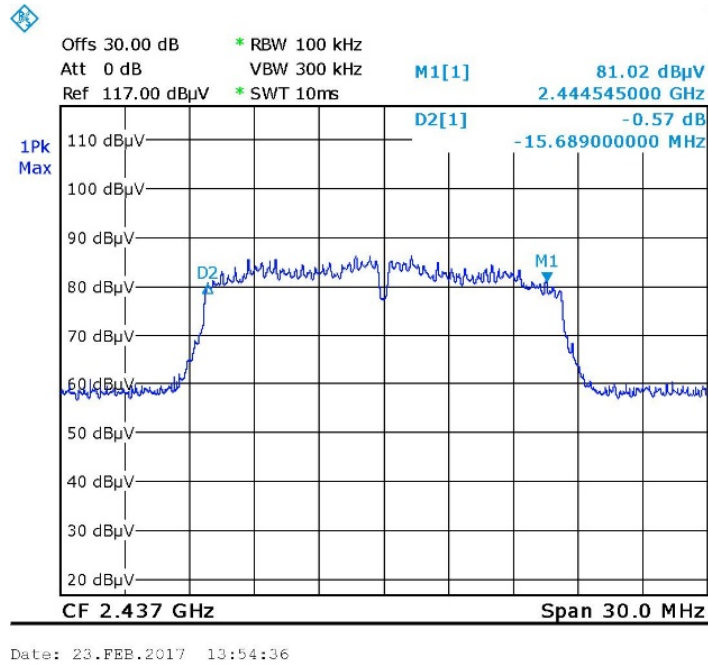


Figure 24. 2437.0MHz - Wi-Fi/g

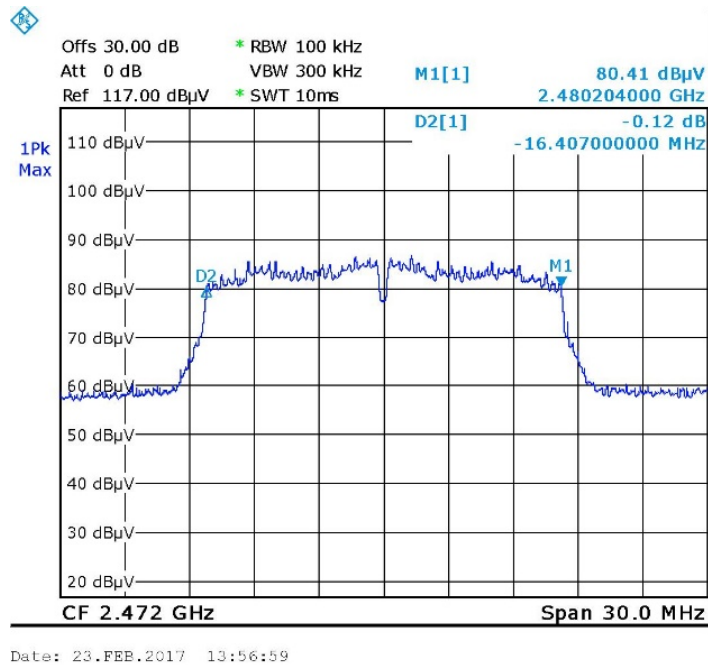
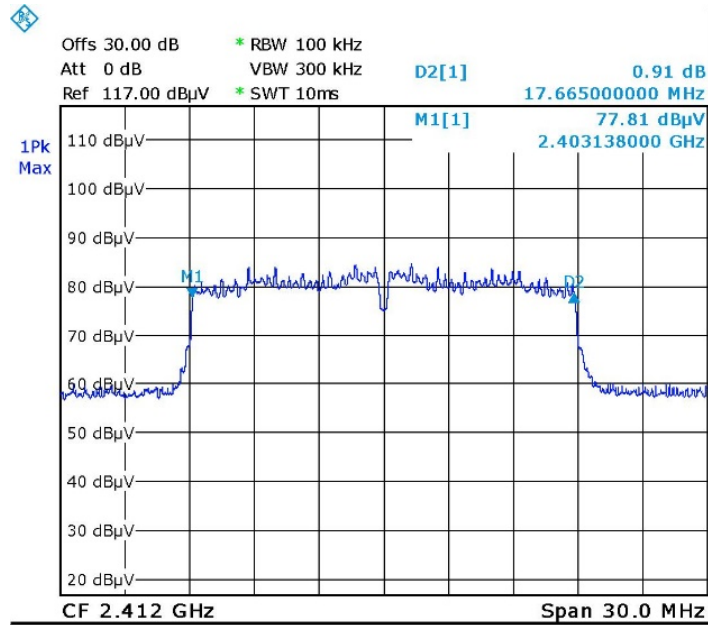
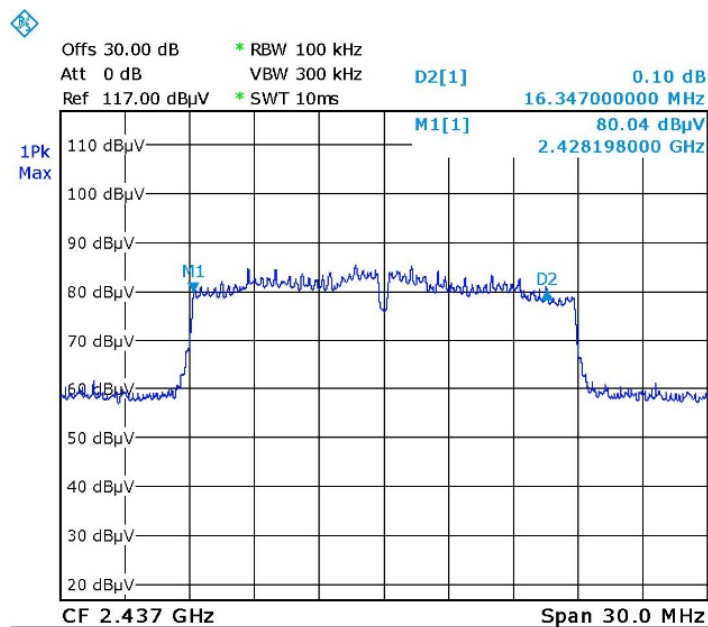


Figure 25. 2472.0MHz - Wi-Fi/g



Date: 23.FEB.2017 13:49:26

Figure 26 — 2412.0MHz - Wi-Fi/n



Date: 23.FEB.2017 13:38:49

Figure 27 — 2437.0MHz - Wi-Fi/n

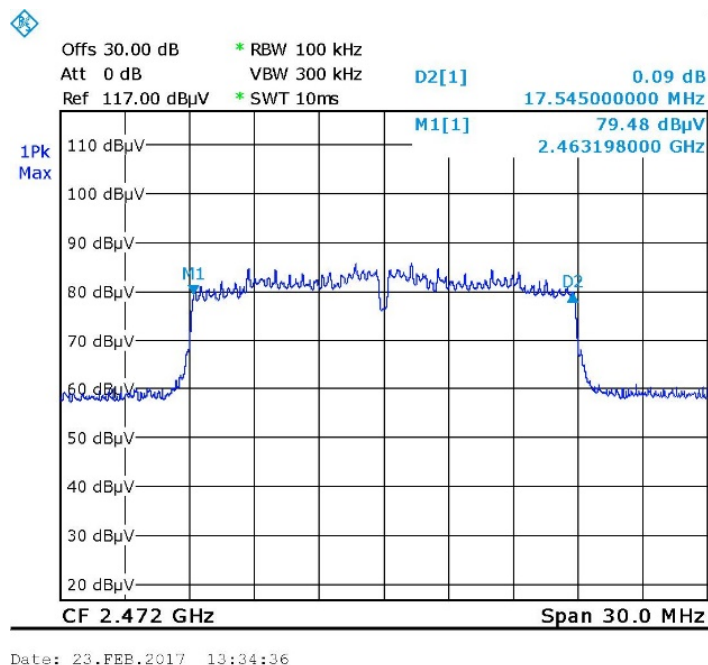


Figure 28 — 2472.0MHz - Wi-Fi/n

## 5.5 Test Equipment Used; 6dB Bandwidth

| Instrument                  | Manufacturer | Model | Serial No. | Last Calibration Date | Next Calibration Due |
|-----------------------------|--------------|-------|------------|-----------------------|----------------------|
| Spectrum Analyzer           | R&S          | FSL6  | 100194     | February 29, 2016     | March 1, 2017        |
| Horn Antenna                | ETS          | 3115  | 29845      | May 19, 2015          | May 19, 2018         |
| Semi Anechoic Civil Chamber | ETS          | S81   | SL 11643   | NCR                   | NCR                  |

Figure 29 Test Equipment Used

## 6. Maximum Transmitted Peak Power Output

### 6.1 Test Specification

FCC, Part 15, Subpart C, Section 247(b)(3)

### 6.2 Test Procedure

(Temperature (19°C)/ Humidity (45%RH))

The E.U.T operation mode and test set-up are as described in Section 2 of this report.

The E.U.T was tested in the chamber, and placed on a remote-controlled turntable. The E.U.T was placed on a non-metallic table, 1.5 meters above the ground. The readings were maximized by the turntable azimuth between 0-360°, and the antenna polarization.

The emissions were measured at a distance of 3 meters.

Radiated output power levels were measured at selected operation frequencies and the results were converted to power level according to the formula as shown below:

$$P = \frac{(E_{V/m} \times d)^2}{(30 \times G)} \quad [W]$$

E - Field Strength (V/m)

d – Distance from transmitter (m)

G – Antenna gain

P – Peak power (W)

### 6.3 Test Limit

The maximum peak conducted output power of the intentional radiator for systems using digital modulation in the 902-928 MHz, 2400-2483.5 MHz, and 5725-5850 MHz bands: 1 Watt.

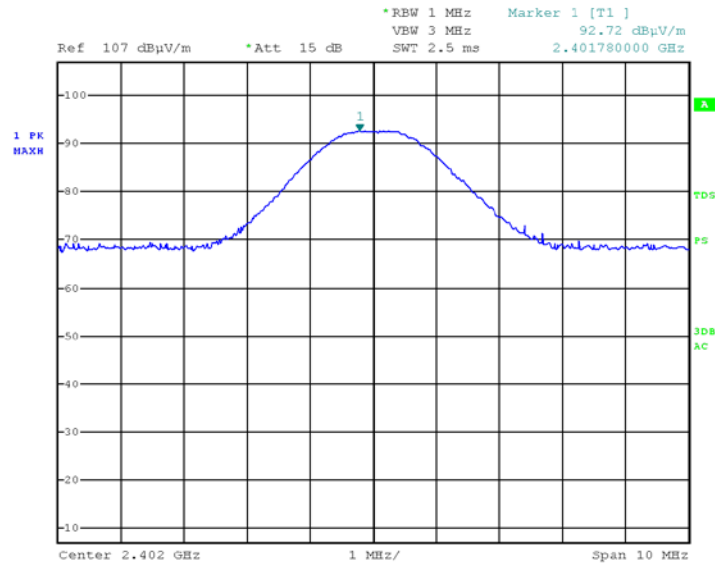
## 6.4 Test Results

| Operation Mode | Operation Frequency (MHz) | Pol. (V/H) | Field Strength (dBuV/m) | Power (dBm) | Power (mW) | Limit (mW) | Margin (mW) |
|----------------|---------------------------|------------|-------------------------|-------------|------------|------------|-------------|
| BLE            | 2402.0                    | V          | 92.7                    | -2.5        | 0.56       | 1000.0     | -999.44     |
|                |                           | H          | 93.2                    | -2.0        | 0.63       | 1000.0     | -999.37     |
|                | 2440.0                    | V          | 90.4                    | -4.8        | 0.33       | 1000.0     | -999.67     |
|                |                           | H          | 93.7                    | -1.5        | 0.71       | 1000.0     | -999.29     |
|                | 2480.0                    | V          | 91.6                    | -3.6        | 0.44       | 1000.0     | -999.56     |
|                |                           | H          | 91.2                    | -4.0        | 0.40       | 1000.0     | -999.6      |
| Wi-Fi/g        | 2412.0                    | V          | 101.0                   | 5.8         | 3.8        | 1000.0     | -996.2      |
|                |                           | H          | 102.3                   | 7.1         | 5.1        | 1000.0     | -994.9      |
|                | 2437.0                    | V          | 100.4                   | 5.2         | 3.3        | 1000.0     | -996.7      |
|                |                           | H          | 104.2                   | 9.0         | 7.9        | 1000.0     | -992.1      |
|                | 2472.0                    | V          | 101.5                   | 6.3         | 4.3        | 1000.0     | -995.7      |
|                |                           | H          | 102.2                   | 7.0         | 5.0        | 1000.0     | -995.0      |
| Wi-Fi/n        | 2412.0                    | V          | 99.6                    | 4.4         | 2.8        | 1000.0     | -997.2      |
|                |                           | H          | 101.4                   | 6.2         | 4.2        | 1000.0     | -995.8      |
|                | 2437.0                    | V          | 99.4                    | 4.2         | 2.6        | 1000.0     | -997.4      |
|                |                           | H          | 103.2                   | 8.0         | 6.3        | 1000.0     | -993.7      |
|                | 2472.0                    | V          | 100.2                   | 5.0         | 3.2        | 1000.0     | -996.8      |
|                |                           | H          | 100.9                   | 5.7         | 3.7        | 1000.0     | -996.3      |

Figure 30 Maximum Peak Power Output

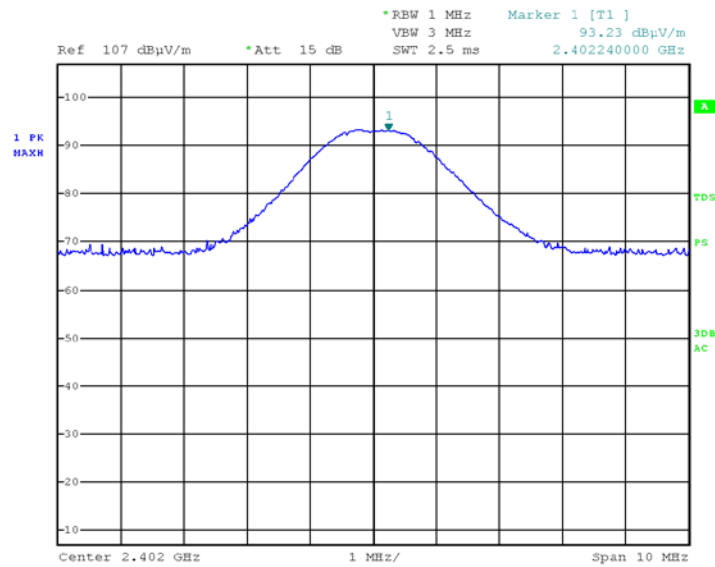
JUDGEMENT: Passed by 992.1mW

For additional information see *Figure 31* to *Figure 48*.



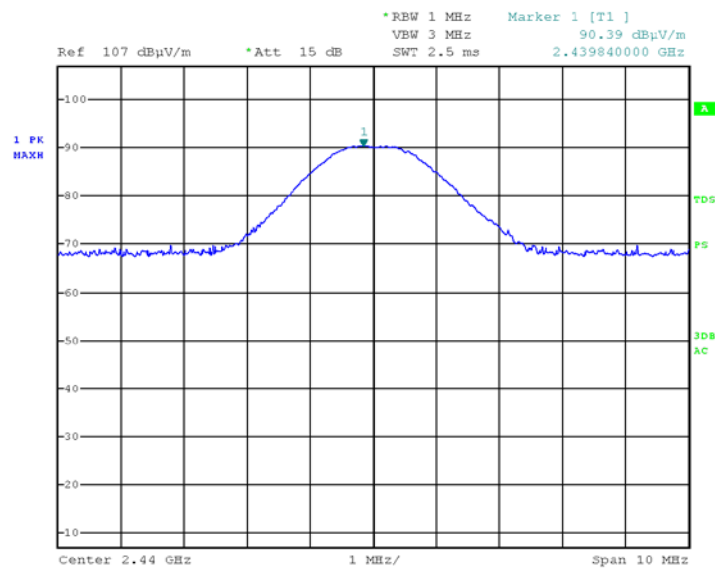
Date: 19.FEB.2017 17:12:52

**Figure 31 2402.0MHz – Vertical BLE**



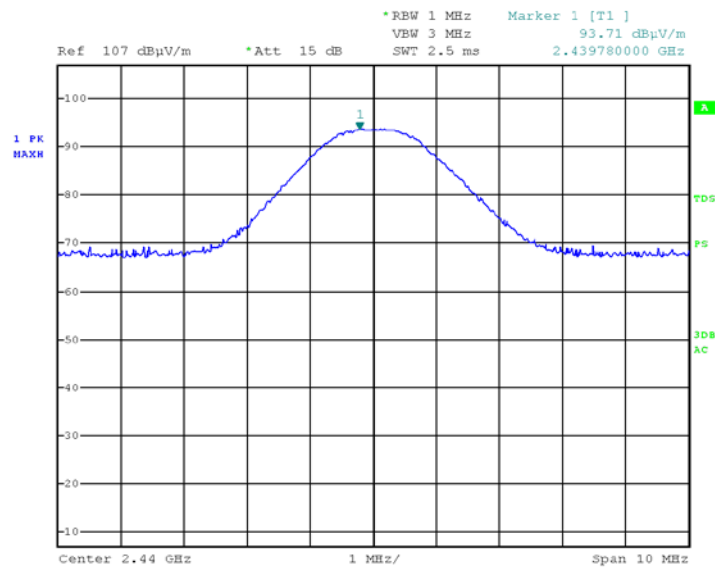
Date: 19.FEB.2017 17:29:55

**Figure 32 2402.0MHz – Horizontal BLE**



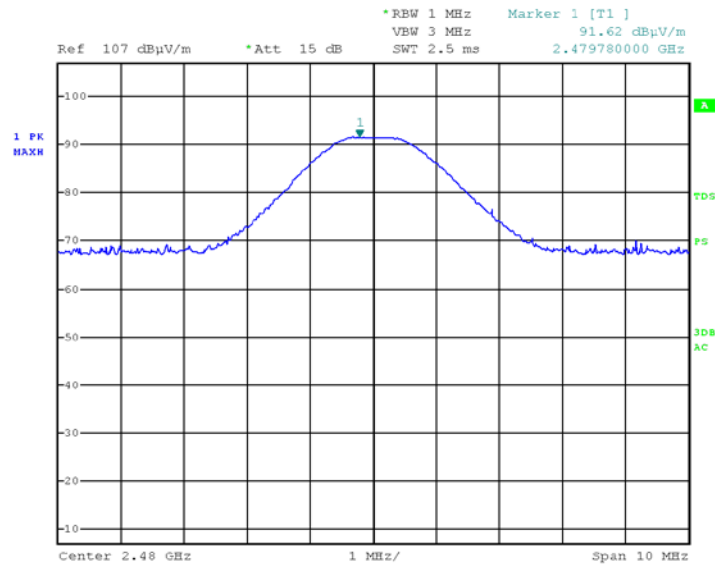
Date: 19.FEB.2017 17:19:16

Figure 33 2440.0MHz – Vertical BLE



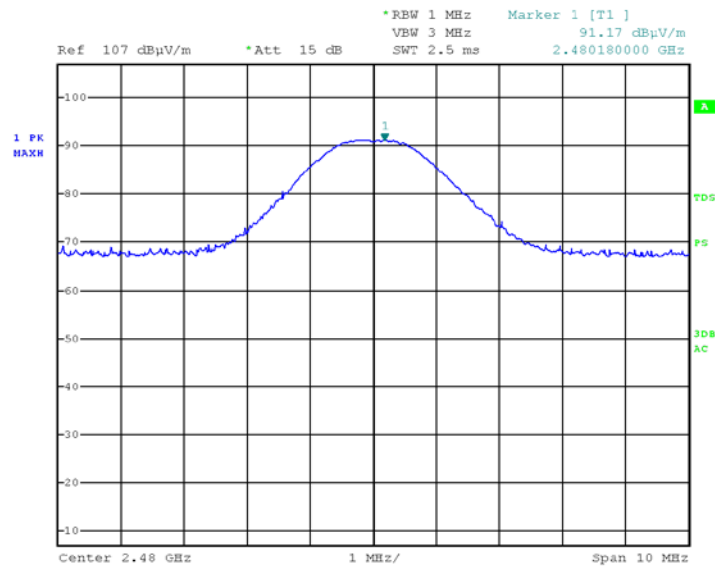
Date: 19.FEB.2017 17:26:44

Figure 34 2440.0MHz – Horizontal BLE



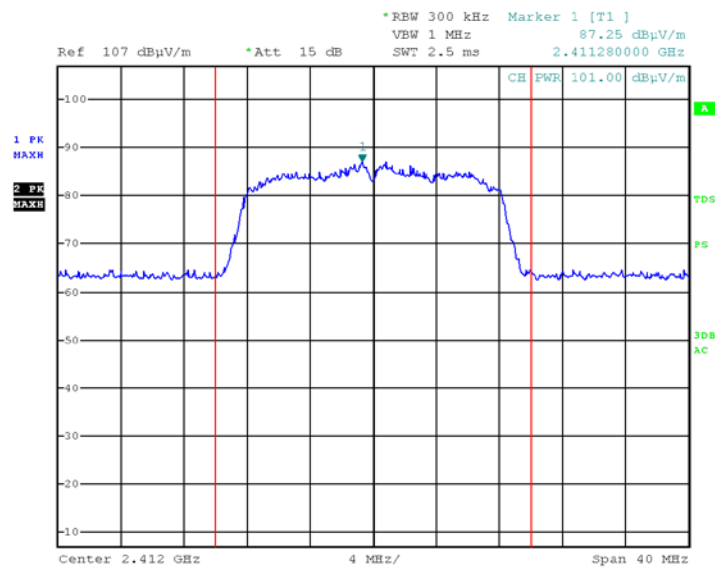
Date: 19.FEB.2017 17:21:58

**Figure 35 2480.0MHz – Vertical BLE**



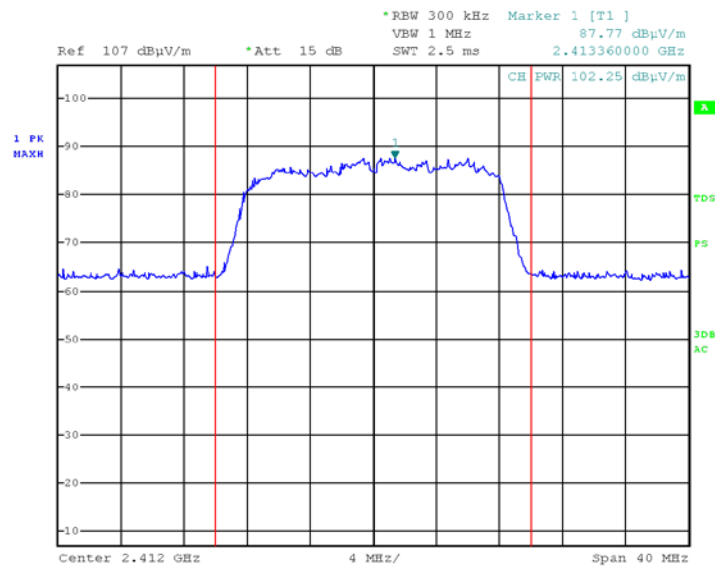
Date: 19.FEB.2017 17:24:25

**Figure 36 2480.0MHz – Horizontal BLE**



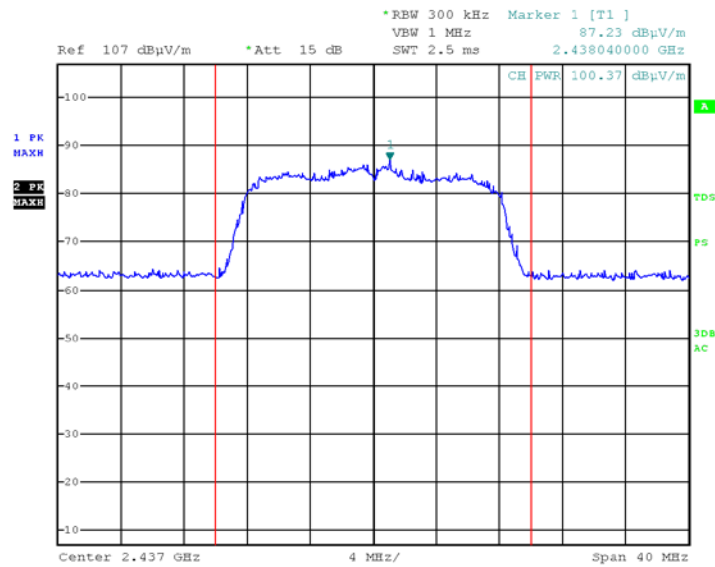
Date: 19.FEB.2017 17:53:33

Figure 37 2412.0MHz – Vertical Wi-Fi/g



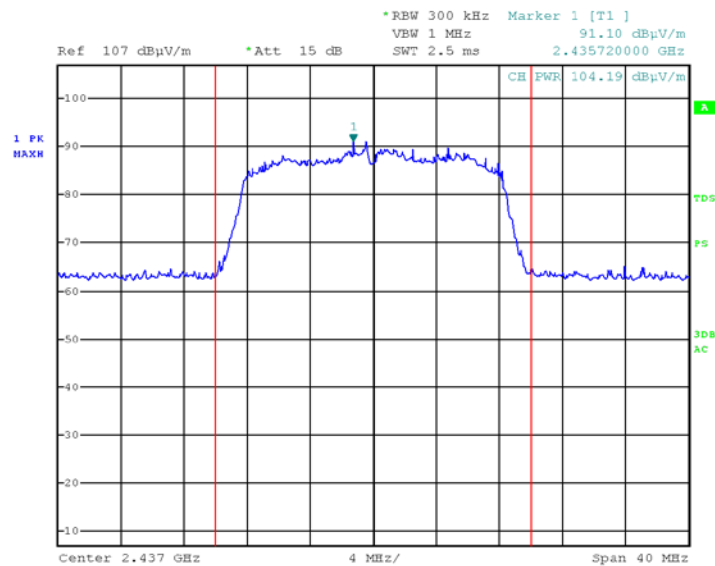
Date: 19.FEB.2017 17:49:04

Figure 38 2412.0MHz – Horizontal Wi-Fi/g



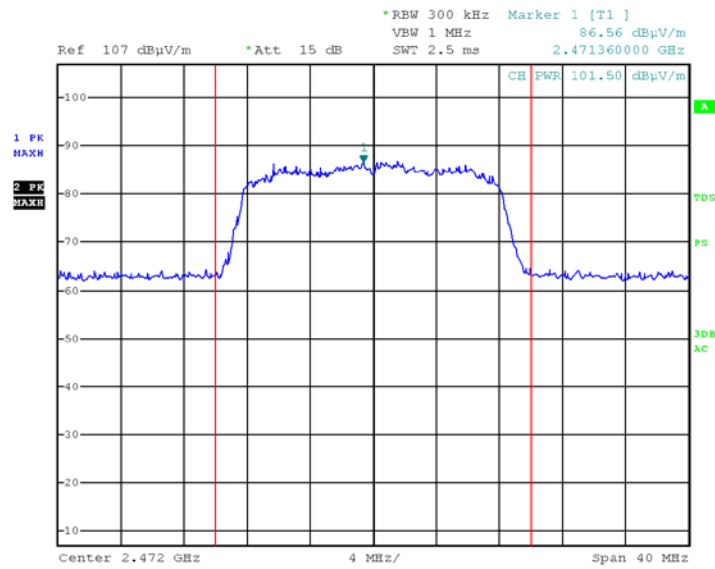
Date: 19.FEB.2017 17:56:09

Figure 39 2437.0MHz – Vertical Wi-Fi/g



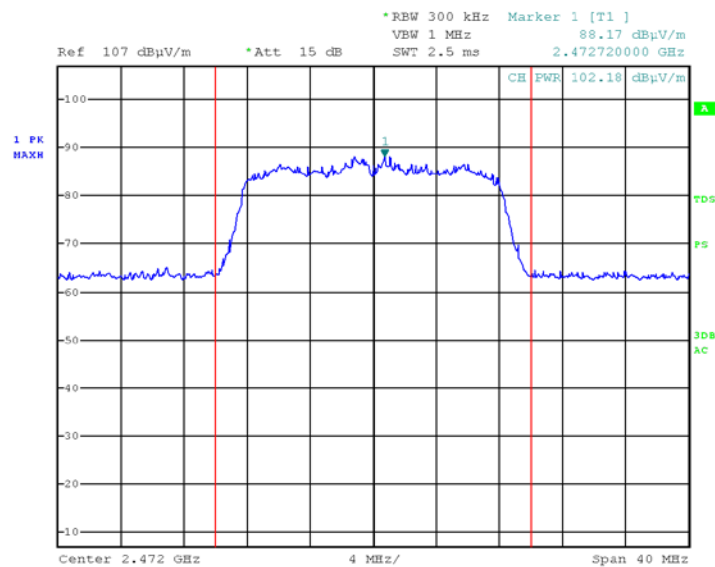
Date: 19.FEB.2017 17:44:23

Figure 40 2437.0MHz – Horizontal Wi-Fi/g



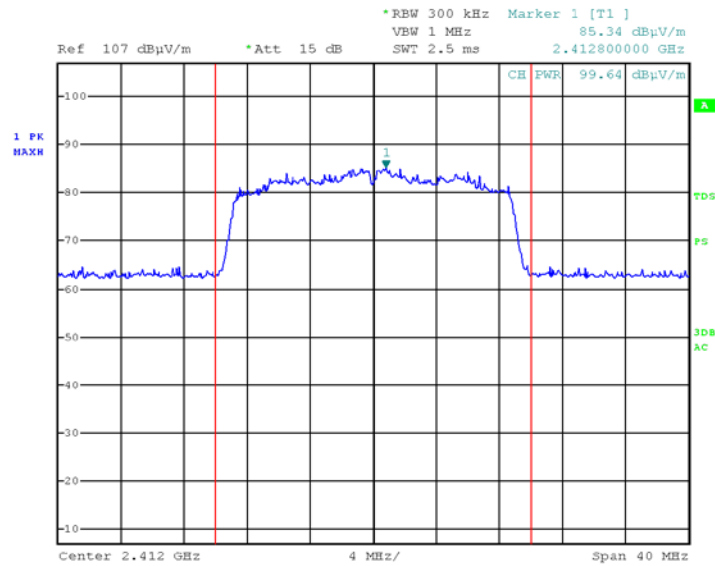
Date: 19.FEB.2017 17:58:39

Figure 41 2472.0MHz – Vertical Wi-Fi/g



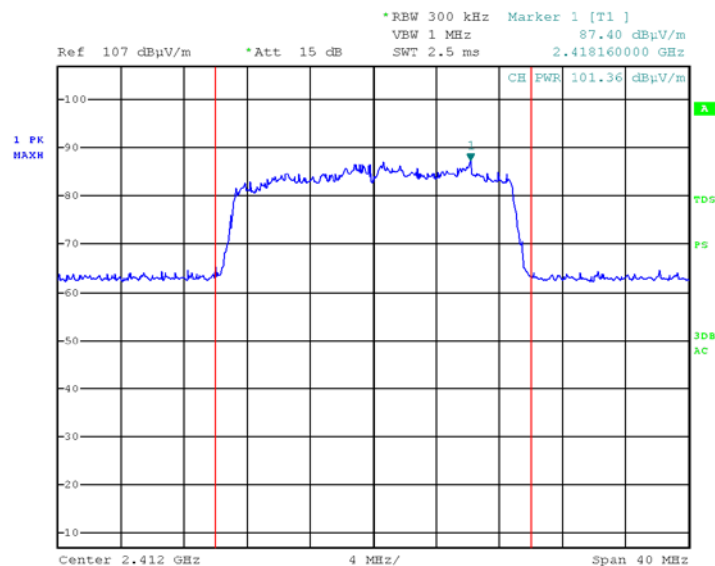
Date: 19.FEB.2017 17:41:40

Figure 42 2472.0MHz – Horizontal Wi-Fi/g



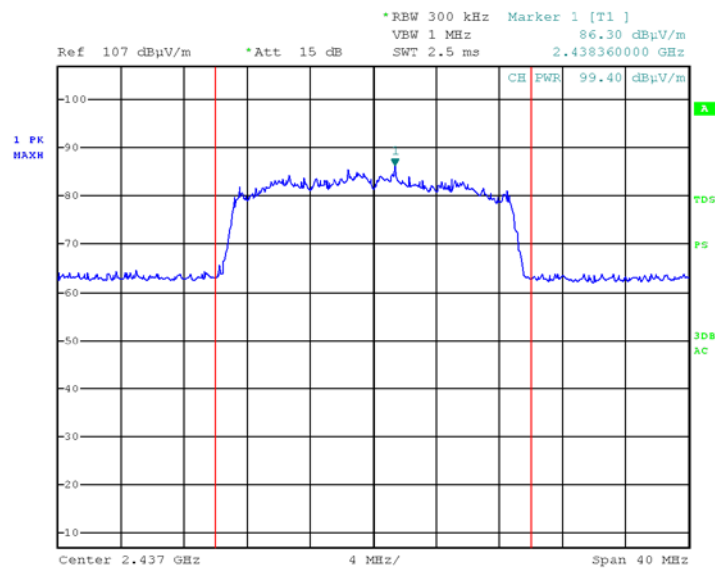
Date: 19.FEB.2017 18:09:23

Figure 43 2412.0MHz – Vertical Wi-Fi/n



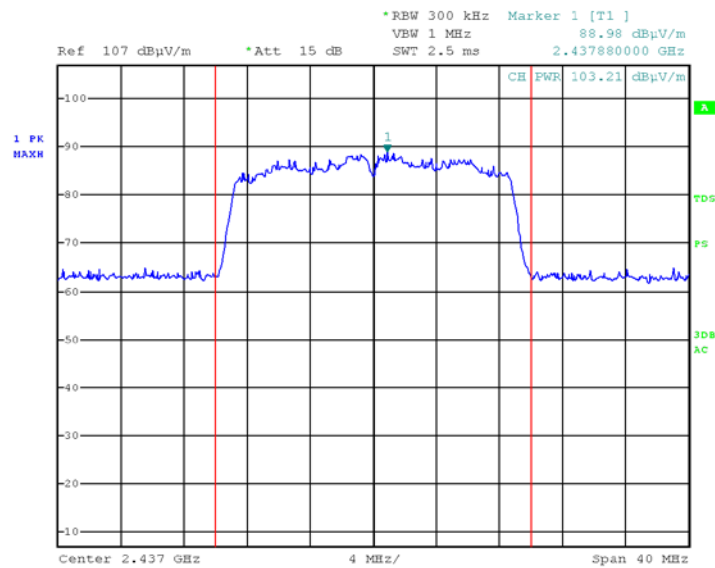
Date: 19.FEB.2017 18:12:07

Figure 44 2412.0MHz – Horizontal Wi-Fi/n



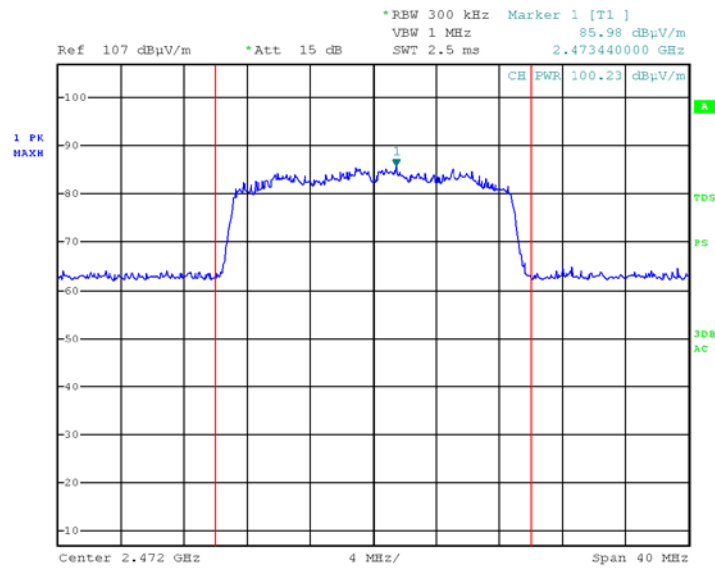
Date: 19.FEB.2017 18:07:10

Figure 45 2437.0MHz – Vertical Wi-Fi/n



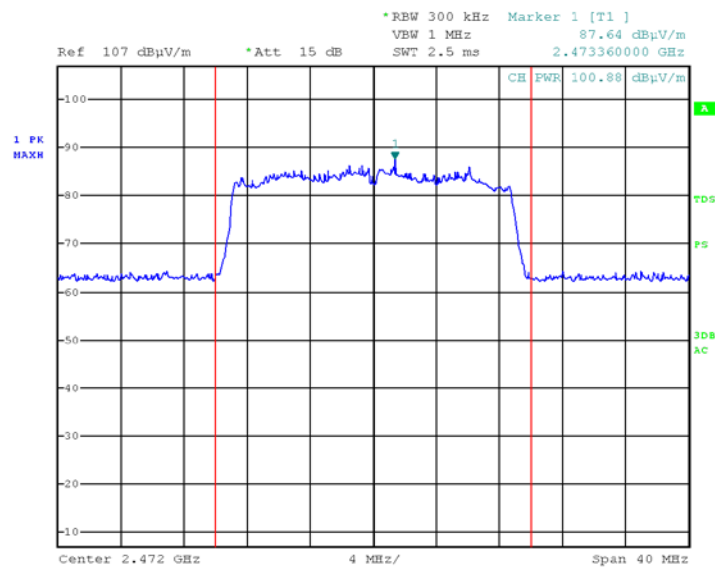
Date: 19.FEB.2017 18:14:26

Figure 46 2437.0MHz – Horizontal Wi-Fi/n



Date: 19.FEB.2017 18:04:42

Figure 47 2472.0MHz – Vertical Wi-Fi/n



Date: 19.FEB.2017 18:16:46

Figure 48 2472.0MHz – Horizontal Wi-Fi/n

## 6.5 Test Equipment Used; Maximum Peak Power Output

| Instrument                  | Manufacturer | Model | Serial No. | Last Calibration Date | Next Calibration Due |
|-----------------------------|--------------|-------|------------|-----------------------|----------------------|
| EMI Receiver                | R&S          | ESCI7 | 100724     | February 29, 2016     | March 1, 2017        |
| Horn Antenna                | ETS          | 3115  | 29845      | May 19, 2015          | May 19, 2018         |
| Semi Anechoic Civil Chamber | ETS          | S81   | SL 11643   | NCR                   | NCR                  |

Figure 49 Test Equipment Used

## 7. Band Edge Spectrum

### 7.1 Test Specification

FCC, Part 15, Subpart C, Section 247(d)

### 7.2 Test Procedure

(Temperature (19°C)/ Humidity (42%RH))

The E.U.T operation mode and test set-up are as described in Section 2 of this report.

The E.U.T was tested in the chamber, and placed on a remote-controlled turntable. The E.U.T was placed on a non-metallic table, 1.5 meters above the ground.

The readings were maximized by the turntable azimuth between 0-360°, and the antenna polarization.

The emissions were measured at a distance of 3 meters.

The RBW was set to 100 kHz.

### 7.3 Test Limit

In any 100 kHz bandwidth outside the frequency band in which the spread spectrum or digitally modulated intentional radiator is operating, the radio frequency power that is produced by the intentional radiator shall be at least 20 dB below that in the 100 kHz bandwidth within the band that contains the highest level of the desired power

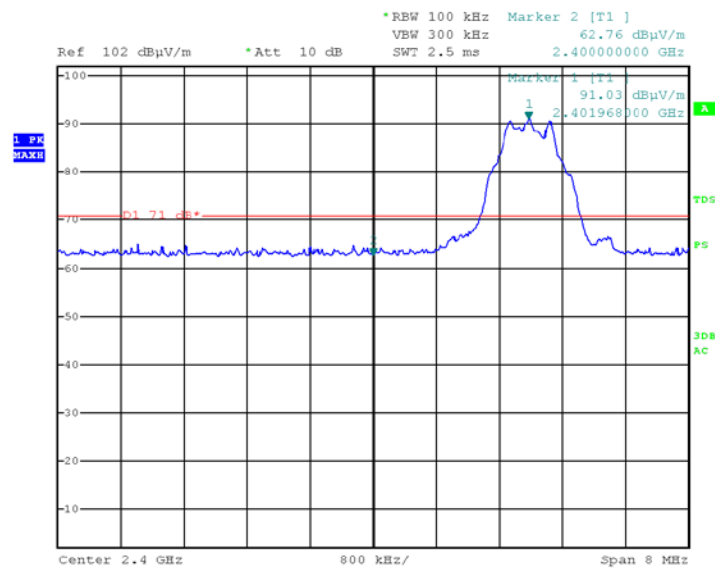
### 7.4 Test Results

| Operation Mode | Operation Frequency<br>(MHz) | Band Edge Frequency<br>(MHz) | Spectrum Level<br>(dBuV/m) | Limit<br>(dBuV/m) | Margin<br>(dB) |
|----------------|------------------------------|------------------------------|----------------------------|-------------------|----------------|
| BLE            | Low                          | 2400.0                       | 62.8                       | 71.0              | -8.2           |
|                | High                         | 2483.5                       | 63.1                       | 68.2              | -5.1           |
| Wi-Fi/g        | Low                          | 2400.0                       | 54.0                       | 64.0              | -10.0          |
|                | High                         | 2483.5                       | 53.9                       | 62.0              | -8.1           |
| Wi-Fi/n        | Low                          | 2400.0                       | 53.4                       | 62.9              | -9.5           |
|                | High                         | 2483.5                       | 53.1                       | 82.1              | -29.0          |

Figure 50 Band Edge Spectrum

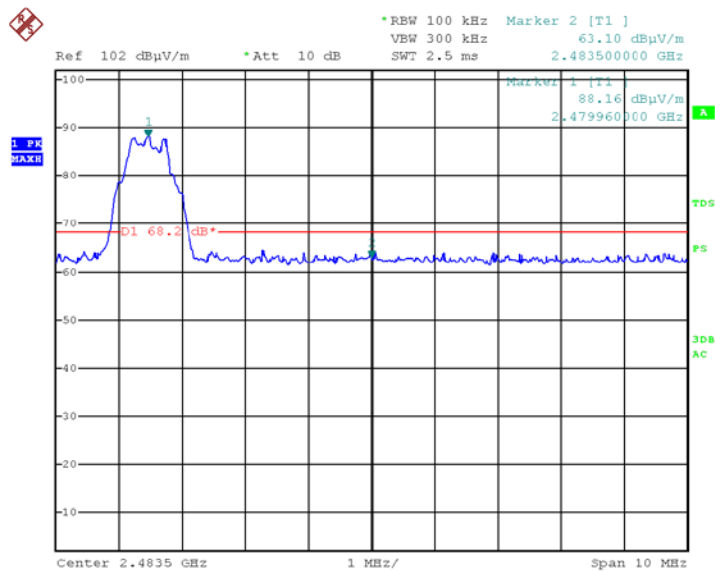
JUDGEMENT: Passed by 5.1 dB

For additional information see *Figure 51* and *Figure 56*.



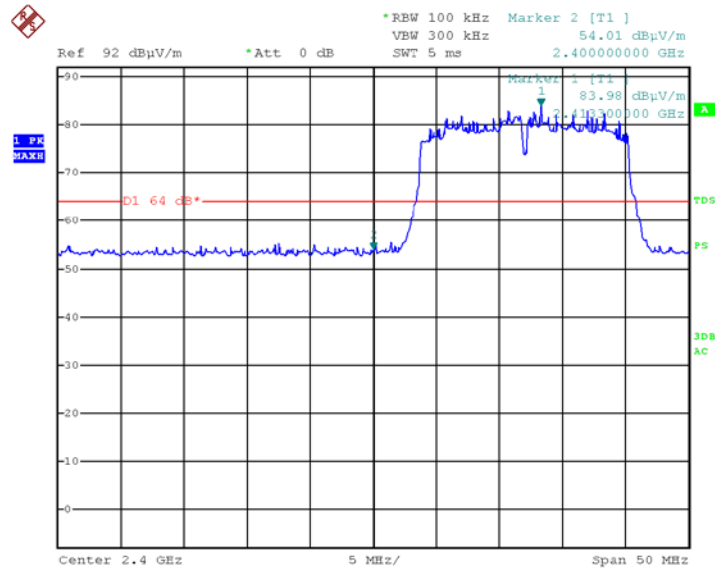
Date: 26.FEB.2017 10:29:05

Figure 51 —Lower Band Edge - BLE



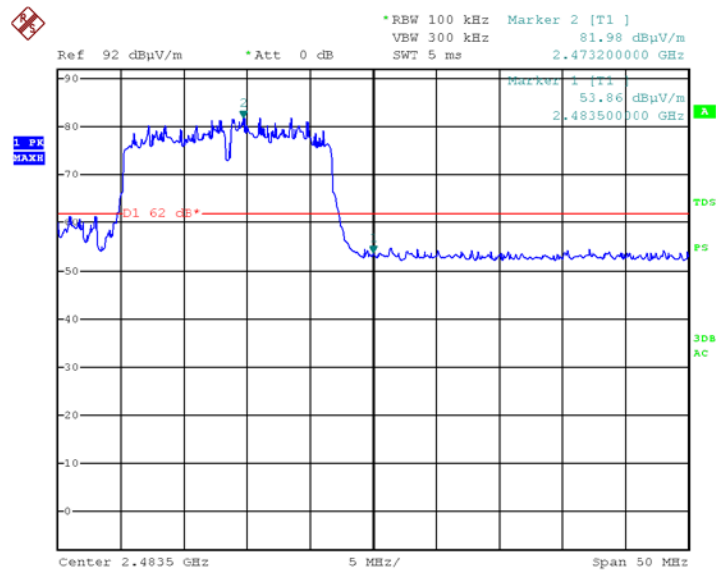
Date: 26.FEB.2017 11:41:37

Figure 52 —Upper Band Edge - BLE



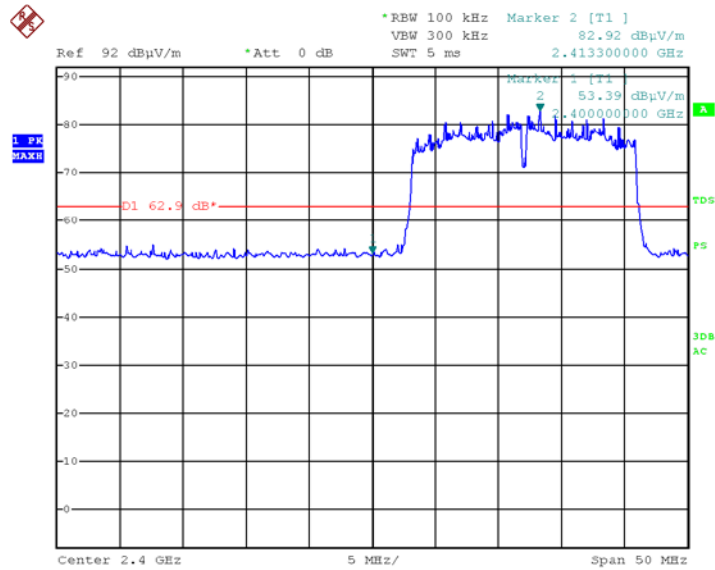
Date: 26.FEB.2017 12:17:36

Figure 53 —Lower Band Edge - Wi-Fi/g



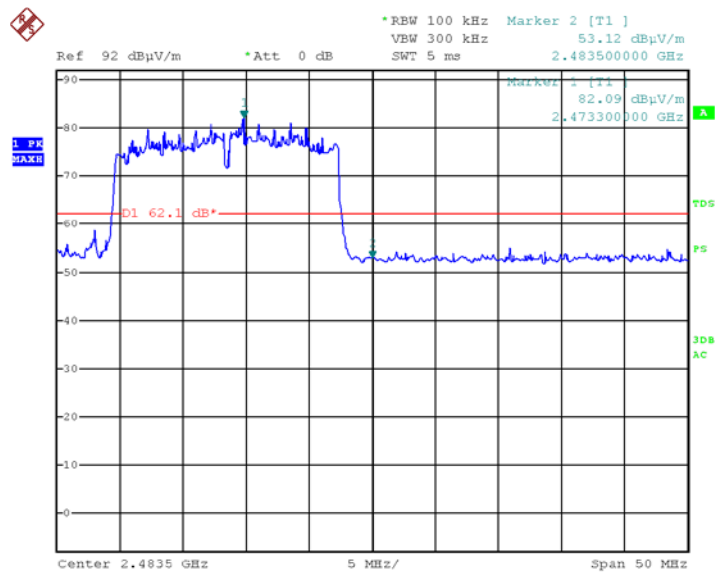
Date: 26.FEB.2017 11:51:18

Figure 54 —Upper Band Edge - Wi-Fi/g



Date: 26.FEB.2017 12:29:45

Figure 55 —Lower Band Edge - Wi-Fi/n



Date: 26.FEB.2017 12:48:31

Figure 56 —Upper Band Edge - Wi-Fi/n



### 7.5 Test Equipment Used; Band Edge Spectrum

| Instrument                  | Manufacturer | Model | Serial No. | Last Calibration Date | Next Calibration Due |
|-----------------------------|--------------|-------|------------|-----------------------|----------------------|
| EMI Receiver                | R&S          | ESCI7 | 100724     | February 29, 2016     | March 1, 2017        |
| Horn Antenna                | ETS          | 3115  | 29845      | May 19, 2015          | May 19, 2018         |
| Semi Anechoic Civil Chamber | ETS          | S81   | SL 11643   | NCR                   | NCR                  |

Figure 57 Test Equipment Used

## 8. Emissions in Non-Restricted Frequency Bands

### 8.1 Test Specification

FCC, Part 15, Subpart C, Section 247(d)

### 8.2 Test Procedure

(Temperature (20°C)/ Humidity (47%RH))

The E.U.T. operation mode and test set-up are as described in Section 2 of this report.

#### **For measurements between 0.009MHz-30MHz:**

The E.U.T was tested inside the shielded room at a distance of 3 meters and the E.U.T was placed on a non-metallic table, 0.8 meters above the ground. The frequency range 0.009MHz-30MHz was scanned. The readings were maximized by the turntable azimuth between 0-360°, and the antenna polarization. The emissions were measured at a distance of 3 meters.

#### **For measurements between 30.0MHz-1.0GHz:**

A preliminary measurement to characterize the E.U.T was performed inside the shielded room at a distance of 3 meters, using peak detection mode and broadband antennas. The preliminary measurements produced a list of the highest emissions. The E.U.T was then transferred to the open site, and placed on a remote-controlled turntable. The E.U.T was placed on a non-metallic table, 0.8 meters above the ground. The frequency range 30.0MHz -1.0GHz was scanned and the list of the highest emissions was verified and updated accordingly.

The readings were maximized by adjusting the antenna height between 1-4 meters, the turntable azimuth between 0-360°, and the antenna polarization.

The emissions were measured at a distance of 3 meters.

#### **For measurements between 1.0GHz-25.0GHz:**

The E.U.T was tested inside the shielded room at a distance of 3 meters and the E.U.T was placed on a non-metallic table, 1.5 meters above the ground. The frequency range 1.0GHz -25.0GHz was scanned. The readings were maximized by the turntable azimuth between 0-360°, and the antenna polarization.

The emissions were measured at a distance of 3 meters.

The E.U.T. was operated in all 3 operation modes: BLE, Wi-Fi/g and Wi-Fi/n.

RBW was set to 100kHz and detector was set to max peak and trace to “max hold”.

### 8.3 Test Limit

In any 100 kHz bandwidth outside the frequency band in which the spread spectrum or digitally modulated intentional radiator is operating, the radio frequency power that is produced by the intentional radiator shall be at least 20dB below that in the 100 kHz bandwidth within the band that contains the highest level of the desired power.

### 8.4 Test Results

JUDGEMENT: Passed

All detected emissions were greater than 20dB below the fundamental level.

The EUT met the requirements of the F.C.C. Part 15, Subpart C, Section 247(d) specification.

## 8.5 Test Instrumentation Used, Emission in Non Restricted Frequency Bands

| Instrument                  | Manufacturer    | Model        | Serial No.     | Last Calibration Date | Next Calibration Due |
|-----------------------------|-----------------|--------------|----------------|-----------------------|----------------------|
| EMI Receiver                | R&S             | ESCI7        | 100724         | February 29, 2016     | March 1, 2017*       |
| Spectrum Analyzer           | HP              | 8592L        | 3826A01204     | March 13, 2016        | March 13, 2017       |
| EMI Receiver                | HP              | 8542E        | 3906A00276     | March 3, 2016         | March 3, 2017**      |
| RF Filter Section           | HP              | 85420E       | 3705A00248     | March 3, 2016         | March 3, 2017**      |
| Spectrum Analyzer           | HP              | 8564E        | 3442A00275     | March 10, 2016        | March 10, 2017       |
| Biconical Antenna           | EMCO            | 3110B        | 9912-3337      | March 24, 2016        | March 24, 2018       |
| Active Loop Antenna         | EMCO            | 6502         | 9506-2950      | September 12, 2016    | September 12, 2017   |
| Log Periodic Antenna        | EMCO            | 3146         | 9505-4081      | April 23, 2016        | April 23, 2017       |
| Horn Antenna                | ETS             | 3115         | 29845          | May 19, 2015          | May 19, 2018         |
| Horn Antenna                | ARA             | SWH-28       | 1007           | March 30, 2014        | March 30, 2017       |
| Low Noise Amplifier         | Narda           | DBS-0411N313 | 13             | August 8, 2016        | August 8, 2017       |
| Low Noise Amplifier         | Sophia Wireless | LNA28-B      | 232            | August 8, 2016        | August 8, 2017       |
| Spectrum Analyzer           | HP              | 8593EM       | 3536A00120A DI | March 10, 2016        | March 10, 2017       |
| Semi Anechoic Civil Chamber | ETS             | S81          | SL 11643       | N/A                   | N/A                  |

\*Current calibration was performed February 28, 2017 with calibration due February 28, 2018. This covers the entire testing period.

\*\*Current calibration was performed March 1, 2017 with calibration due March 2, 2018. This covers the entire testing period.

**Figure 58 Test Equipment Used**

## 8.6 **Field Strength Calculation**

The field strength is calculated directly by the EMI Receiver software, and a "Correction Factors", using the following equation:

$$FS = RA + AF + CF$$

FS: Field Strength [dB $\mu$ v/m]  
 RA: Receiver Amplitude [dB $\mu$ v]  
 AF: Receiving Antenna Correction Factor [dB/m]  
 CF: Cable Attenuation Factor [dB]

Example:  $FS = 30.7 \text{ dB}\mu\text{V (RA)} + 14.0 \text{ dB (AF)} + 0.9 \text{ dB (CF)} = 45.6 \text{ dB}\mu\text{V}$

No external pre-amplifiers are used.

## 9. Emissions in Restricted Frequency Bands

### 9.1 Test Specification

FCC, Part 15, Subpart C, Sections 15.209, 15.205, 15.247(d)

### 9.2 Test Procedure

(Temperature (20°C)/ Humidity (47%RH))

#### **For measurements between 0.009MHz-30MHz:**

The E.U.T was tested inside the shielded room at a distance of 3 meters and the E.U.T was placed on a non-metallic table, 0.8 meters above the ground. The frequency range 0.009MHz-30MHz was scanned. The readings were maximized by the turntable azimuth between 0-360°, and the antenna polarization.

The emissions were measured at a distance of 3 meters.

#### **For measurements between 30.0MHz-1.0GHz:**

A preliminary measurement to characterize the E.U.T was performed inside the shielded room at a distance of 3 meters, using peak detection mode and broadband antennas. The preliminary measurements produced a list of the highest emissions. The E.U.T was then transferred to the open site, and placed on a remote-controlled turntable. The E.U.T was placed on a non-metallic table, 0.8 meters above the ground. The frequency range 30.0MHz -1.0GHz was scanned and the list of the highest emissions was verified and updated accordingly.

The readings were maximized by adjusting the antenna height between 1-4 meters, the turntable azimuth between 0-360°, and the antenna polarization.

The emissions were measured at a distance of 3 meters.

#### **For measurements between 1.0GHz-25.0GHz:**

The E.U.T was tested inside the shielded room at a distance of 3 meters and the E.U.T was placed on a non-metallic table, 1.5 meters above the ground. The frequency range 1.0GHz -25.0GHz was scanned. The readings were maximized by the turntable azimuth between 0-360°, and the antenna polarization.

The emissions were measured at a distance of 3 meters.

The E.U.T. was operated in all 3 operation modes: BLE, Wi-Fi/g and Wi-Fi/n.

The levels of the emissions within the frequency ranges of the restricted bands (Section 15.205 of FCC Part 15) were compared to the limits of the table in Section 15.209 (a), General Requirements.

### 9.3 Test Limit

Radiated emissions which fall in the restricted bands, as defined in §15.205(a), must comply with the radiated emission limits specified in §15.209(a) (see §15.205(c)).

| Frequency (MHz) | Field strength (microvolts/meter) | Measurement distance (meters) | Field strength (dBµV/m) | Field strength* (dBµV/m)@3m |
|-----------------|-----------------------------------|-------------------------------|-------------------------|-----------------------------|
| 0.009-0.490     | 2400/F(kHz)                       | 300                           | 48.5-13.8               | 128.5-73.8                  |
| 0.490-1.705     | 24000/F(kHz)                      | 30                            | 33.8-23.0               | 73.8-63.0                   |
| 1.705-30.0      | 30                                | 30                            | 29.5                    | 69.5                        |
| 30-88           | 100                               | 3                             | 40.0                    | 40.0                        |
| 88-216          | 150                               | 3                             | 43.5                    | 43.5                        |
| 216-960         | 200                               | 3                             | 46.0                    | 46.0                        |
| Above 960       | 500                               | 3                             | 54.0                    | 54.0                        |

\*The emission limits shown in the above table are based on measurements employing a CISPR quasi-peak detector except for the frequency bands 9-90 kHz, 110-490 kHz and above 1000 MHz. Radiated emission limits in these three bands are based on measurements employing an average detector. For average radiated emission measurements above 1000 MHz, there is also a limit corresponding to 20 dB above the indicated values in the table is specified when measuring with peak detector function.

Figure 59 Table of Limits

### 9.4 Test Results for BLE

JUDGEMENT: Passed by 4.9dB

For the operation frequency of 2402 MHz, the margin between the emission level and the specification limit is in the worst case 7.3dB at the frequency of 2390.0 MHz, horizontal polarization.

For the operation frequency of 2440 MHz, the margin between the emission level and the specification limit is in the worst case 22.3dB at the frequency of 4880.0 MHz, vertical polarization.

For the operation frequency of 2480 MHz, the margin between the emission level and the specification limit is in the worst case 4.9dB at the frequency of 2483.5 MHz, vertical polarization.

The EUT met the requirements of the F.C.C. Part 15, Subpart C specification.

The details of the highest emissions are given in *Figure 60* to *Figure 61*.

## 9.5 Test Results for WiFi

JUDGEMENT: Passed by 4.8dB

For the operation frequency of 2412 MHz, the margin between the emission level and the specification limit is in the worst case 5.8dB at the frequency of 2390.0 MHz, horizontal polarization.

For the operation frequency of 2437 MHz, the margin between the emission level and the specification limit is in the worst case 23.5dB at the frequency of 4874.0 MHz, horizontal polarization.

For the operation frequency of 2472 MHz, the margin between the emission level and the specification limit is in the worst case 4.8dB at the frequency of 2483.5 MHz, horizontal polarization.

The EUT met the requirements of the F.C.C. Part 15, Subpart C specification.

The details of the highest emissions are given in *Figure 60* to *Figure 65*.

## Radiated Emission

E.U.T Description   Wearable Camera  
Type                    MyEye2  
Serial Number:       16510011

Specification: FCC, Part 15, Subpart C

Antenna Polarization: Horizontal/Vertical  
Test Distance: 3 meters

Frequency range: 0.009MHz to 25.0 GHz  
Detector: Peak

| Operation Frequency | Freq.  | Polarity | Peak Reading   | Peak Limit     | Peak Margin |
|---------------------|--------|----------|----------------|----------------|-------------|
| (MHz)               | (MHz)  | (H/V)    | (dB $\mu$ V/m) | (dB $\mu$ V/m) | (dB)        |
| 2402.0              | 2390.0 | H        | 59.0           | 74.0           | -15.0       |
|                     | 2390.0 | V        | 59.1           | 74.0           | -14.9       |
|                     | 4804.0 | H        | 50.7           | 74.0           | -23.3       |
|                     | 4804.0 | V        | 51.0           | 74.0           | -23.0       |
| 2440.0              | 4880.0 | H        | 50.8           | 74.0           | -23.2       |
|                     | 4880.0 | V        | 51.7           | 74.0           | -22.3       |
| 2480.0              | 4960.0 | H        | 51.3           | 74.0           | -22.7       |
|                     | 4960.0 | V        | 51.6           | 74.0           | -22.4       |
|                     | 2483.5 | H        | 54.1           | 74.0           | -19.9       |
|                     | 2483.5 | V        | 53.7           | 74.0           | -20.3       |

**Figure 60. Radiated Emission, BLE mode**

Margin refers to the test results obtained minus specified requirement; thus a positive number indicates failure, and a negative result indicates that the product passes the test.

“Peak Amp” includes correction factor.

\* “Correction Factor” = Antenna Factor + Cable Loss- Low Noise Amplifier Gain

## Radiated Emission

E.U.T Description    Wearable Camera  
Type                    MyEye2  
Serial Number:        16510011

Specification: FCC, Part 15, Subpart C

Antenna Polarization: Horizontal/Vertical  
Test Distance: 3 meters

Frequency range: 0.009MHz to 25.0 GHz  
Detector: Average

| Operation Frequency | Freq.  | Polarity | Average Reading | Average Specification | Average Margin |
|---------------------|--------|----------|-----------------|-----------------------|----------------|
| (MHz)               | (MHz)  | (H/V)    | (dBμV/m)        | (dBμV/m)              | (dB)           |
| 2402.0              | 2390.0 | H        | 46.7            | 54.0                  | -7.3           |
|                     | 2390.0 | V        | 46.5            | 54.0                  | -7.5           |
|                     | 4804.0 | H        | -               | 54.0                  | -              |
|                     | 4804.0 | V        | -               | 54.0                  | -              |
| 2440.0              | 4880.0 | H        | -               | 54.0                  | -              |
|                     | 4880.0 | V        | -               | 54.0                  | -              |
| 2480.0              | 4960.0 | H        | -               | 54.0                  | -              |
|                     | 4960.0 | V        | -               | 54.0                  | -              |
|                     | 2483.5 | H        | 49.0            | 54.0                  | -5.0           |
|                     | 2483.5 | V        | 49.1            | 54.0                  | -4.9           |

**Figure 61. Radiated Emission, BLE mode**

**Notes:**

Margin refers to the test results obtained minus specified requirement; thus a positive number indicates failure, and a negative result indicates that the product passes the test.

“Average Amp” includes correction factor.

\*        Correction Factor = Antenna Factor + Cable Loss- Low Noise Amplifier Gain

## Radiated Emission

E.U.T Description    Wearable Camera

Type                      MyEye2

Serial Number:        16510011

Specification: FCC, Part 15, Subpart C

Antenna Polarization: Horizontal/Vertical

Frequency range: 0.009MHz to 25.0 GHz

Test Distance: 3 meters

Detector: Peak

| Operation Frequency | Freq.  | Polarity | Peak Reading   | Peak Limit     | Peak Margin |
|---------------------|--------|----------|----------------|----------------|-------------|
| (MHz)               | (MHz)  | (H/V)    | (dB $\mu$ V/m) | (dB $\mu$ V/m) | (dB)        |
| 2412.0              | 2390.0 | H        | 55.1           | 74.0           | -18.9       |
|                     | 2390.0 | V        | 58.0           | 74.0           | -16.0       |
|                     | 4824.0 | H        | 50.4           | 74.0           | -23.6       |
|                     | 4824.0 | V        | 50.6           | 74.0           | -23.4       |
| 2437.0              | 4874.0 | H        | 50.2           | 74.0           | -23.8       |
|                     | 4874.0 | V        | 50.0           | 74.0           | -24.0       |
| 2472.0              | 4944.0 | H        | 51.1           | 74.0           | -22.9       |
|                     | 4944.0 | V        | 51.5           | 74.0           | -22.5       |
|                     | 2483.5 | H        | 63.2           | 74.0           | -10.8       |
|                     | 2483.5 | V        | 61.2           | 74.0           | -12.8       |

**Figure 62. Radiated Emission, Wi-Fi/g mode**

Margin refers to the test results obtained minus specified requirement; thus a positive number indicates failure, and a negative result indicates that the product passes the test.

“Peak Amp” includes correction factor.

\* “Correction Factor” = Antenna Factor + Cable Loss- Low Noise Amplifier Gain

## Radiated Emission

E.U.T Description    Wearable Camera  
Type                      MyEye2  
Serial Number:        16510011

Specification: FCC, Part 15, Subpart C

Antenna Polarization: Horizontal/Vertical  
Test Distance: 3 meters

Frequency range: 0.009MHz to 25.0 GHz  
Detector: Average

| Operation Frequency | Freq.  | Polarity | Average Reading | Average Limit | Average Margin |
|---------------------|--------|----------|-----------------|---------------|----------------|
| (MHz)               | (MHz)  | (H/V)    | (dBμV/m)        | (dBμV/m)      | (dB)           |
| 2412.0              | 2390.0 | H        | 48.0            | 54.0          | -6.0           |
|                     | 2390.0 | V        | 46.7            | 54.0          | -7.3           |
|                     | 4824.0 | H        | -               | 54.0          | -              |
|                     | 4824.0 | V        | -               | 54.0          | -              |
| 2437.0              | 4874.0 | H        | -               | 54.0          | -              |
|                     | 4874.0 | V        | -               | 54.0          | -              |
| 2472.0              | 4944.0 | H        | -               | 54.0          | -              |
|                     | 4944.0 | V        | -               | 54.0          | -              |
|                     | 2483.5 | H        | 48.2            | 54.0          | -5.8           |
|                     | 2483.5 | V        | 47.7            | 54.0          | -6.3           |

**Figure 63. Radiated Emission, Wi-Fi/g mode**

### Notes:

Margin refers to the test results obtained minus specified requirement; thus a positive number indicates failure, and a negative result indicates that the product passes the test.

“Average Amp” includes correction factor.

\*        Correction Factor = Antenna Factor + Cable Loss- Low Noise Amplifier Gain

## Radiated Emission

E.U.T Description   Wearable Camera  
Type                    MyEye2  
Serial Number:       16510011

Specification: FCC, Part 15, Subpart C

Antenna Polarization: Horizontal/Vertical  
Test Distance: 3 meters

Frequency range: 0.009MHz to 25.0 GHz  
Detector: Peak

| Operation Frequency | Freq.  | Polarity | Peak Reading   | Peak Limit     | Peak Margin |
|---------------------|--------|----------|----------------|----------------|-------------|
| (MHz)               | (MHz)  | (H/V)    | (dB $\mu$ V/m) | (dB $\mu$ V/m) | (dB)        |
| 2412.0              | 2390.0 | H        | 55.9           | 74.0           | -18.1       |
|                     | 2390.0 | V        | 57.8           | 74.0           | -16.2       |
|                     | 4824.0 | H        | 50.3           | 74.0           | -23.7       |
|                     | 4824.0 | V        | 50.3           | 74.0           | -23.7       |
| 2437.0              | 4874.0 | H        | 50.5           | 74.0           | -23.5       |
|                     | 4874.0 | V        | 50.2           | 74.0           | -23.8       |
| 2472.0              | 4944.0 | H        | 51.0           | 74.0           | -23.0       |
|                     | 4944.0 | V        | 51.8           | 74.0           | -22.2       |
|                     | 2483.5 | H        | 62.5           | 74.0           | -11.5       |
|                     | 2483.5 | V        | 61.9           | 74.0           | -12.1       |

**Figure 64. Radiated Emission, Wi-Fi/n mode**

Margin refers to the test results obtained minus specified requirement; thus a positive number indicates failure, and a negative result indicates that the product passes the test.

“Peak Amp” includes correction factor.

\* “Correction Factor” = Antenna Factor + Cable Loss- Low Noise Amplifier Gain

## Radiated Emission

E.U.T Description    Wearable Camera  
Type                    MyEye2  
Serial Number:        16510011

Specification: FCC, Part 15, Subpart C

Antenna Polarization: Horizontal/Vertical  
Test Distance: 3 meters

Frequency range: 0.009MHz to 25.0 GHz  
Detector: Average

| Operation Frequency | Freq.  | Polarity | Average Reading | Average Limit | Average Margin |
|---------------------|--------|----------|-----------------|---------------|----------------|
| (MHz)               | (MHz)  | (H/V)    | (dBμV/m)        | (dBμV/m)      | (dB)           |
| 2412.0              | 2390.0 | H        | 48.2            | 54.0          | -5.8           |
|                     | 2390.0 | V        | 46.2            | 54.0          | -7.8           |
|                     | 4824.0 | H        | -               | 54.0          | -              |
|                     | 4824.0 | V        | -               | 54.0          | -              |
| 2437.0              | 4874.0 | H        | -               | 54.0          | -              |
|                     | 4874.0 | V        | -               | 54.0          | -              |
| 2472.0              | 4944.0 | H        | -               | 54.0          | -              |
|                     | 4944.0 | V        | -               | 54.0          | -              |
|                     | 2483.5 | H        | 49.2            | 54.0          | -4.8           |
|                     | 2483.5 | V        | 48.6            | 54.0          | -5.4           |

**Figure 65. Radiated Emission, Wi-Fi/n mode**

### Notes:

Margin refers to the test results obtained minus specified requirement; thus a positive number indicates failure, and a negative result indicates that the product passes the test.

“Average Amp” includes correction factor.

\*        Correction Factor = Antenna Factor + Cable Loss- Low Noise Amplifier Gain

## 9.6 Test Instrumentation Used; Emissions in Restricted Frequency Bands

| Instrument                  | Manufacturer    | Model        | Serial No.        | Last Calibration Date | Next Calibration Due |
|-----------------------------|-----------------|--------------|-------------------|-----------------------|----------------------|
| EMI Receiver                | R&S             | ESCI7        | 100724            | February 29, 2016     | March 1, 2017*       |
| Spectrum Analyzer           | HP              | 8592L        | 3826A01204        | March 13, 2016        | March 13, 2017       |
| EMI Receiver                | HP              | 8542E        | 3906A00276        | March 3, 2016         | March 3, 2017**      |
| RF Filter Section           | HP              | 85420E       | 3705A00248        | March 3, 2016         | March 3, 2017**      |
| Spectrum Analyzer           | HP              | 8564E        | 3442A00275        | March 10, 2016        | March 10, 2017       |
| Biconical Antenna           | EMCO            | 3110B        | 9912-3337         | March 24, 2016        | March 24, 2018       |
| Active Loop Antenna         | EMCO            | 6502         | 9506-2950         | September 12, 2016    | September 12, 2017   |
| Log Periodic Antenna        | EMCO            | 3146         | 9505-4081         | April 23, 2016        | April 23, 2017       |
| Horn Antenna                | ETS             | 3115         | 29845             | May 19, 2015          | May 19, 2018         |
| Horn Antenna                | ARA             | SWH-28       | 1007              | March 30, 2014        | March 30, 2017       |
| Low Noise Amplifier         | Narda           | DBS-0411N313 | 13                | August 8, 2016        | August 8, 2017       |
| Low Noise Amplifier         | Sophia Wireless | LNA28-B      | 232               | August 8, 2016        | August 8, 2017       |
| Spectrum Analyzer           | HP              | 8593EM       | 3536A00120A<br>DI | March 10, 2016        | March 10, 2017       |
| Semi Anechoic Civil Chamber | ETS             | S81          | SL 11643          | N/A                   | N/A                  |

\*Current calibration was performed February 28, 2017 with calibration due February 28, 2018. This covers the entire testing period.

\*\*Current calibration was performed March 1, 2017 with calibration due March 2, 2018. This covers the entire testing period.

**Figure 66 Test Equipment Used**

## 10. Transmitted Power Density

### 10.1 Test Specification

FCC, Part 15, Subpart C, Section 247(e)

### 10.2 Test Procedure

(Temperature (19°C)/ Humidity (42%RH))

The E.U.T operation mode and test set-up are as described in Section 2 of this report.

The E.U.T was tested in the chamber, and placed on a remote-controlled turntable. The E.U.T was placed on a non-metallic table, 1.5 meters above the ground.

The readings were maximized by the turntable azimuth between 0-360°, and the antenna polarization.

The emissions were measured at a distance of 3 meters.

The spectrum analyzer was set to 3 kHz RBW and VBW to 10 kHz.

Radiated output power levels were measured at selected operation frequencies and the results were converted to power level according to the formula as shown below:

$$P = \frac{(E_{V/m} \times d)^2}{(30 \times G)} \quad [W]$$

E - Field Strength (V/m)

d – Distance from transmitter (m)

G – Antenna gain

P – Peak power (W)

### 10.3 Test Limit

For digitally modulated systems, the power spectral density conducted from the intentional radiator to the antenna shall not be greater than 8 dBm in any 3 kHz band during any time interval of continuous transmission.

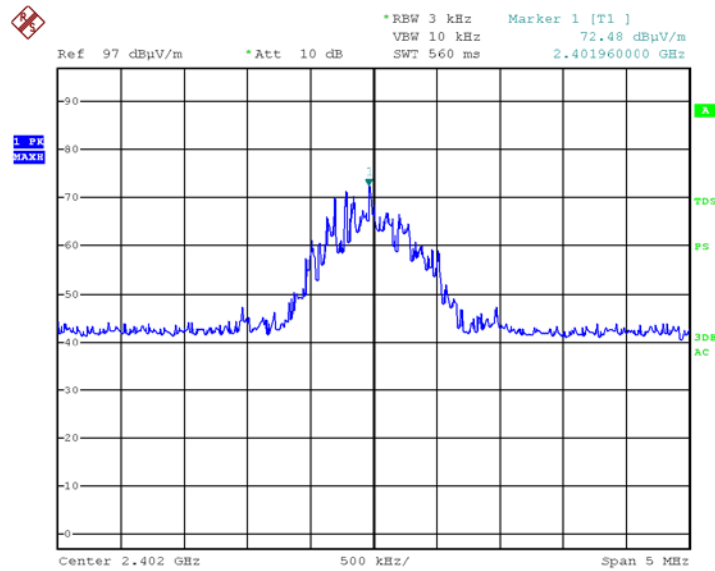
#### 10.4 Test Results

| Operation Mode | Operation Frequency | Reading        | Reading | Limit | Margin |
|----------------|---------------------|----------------|---------|-------|--------|
|                | (MHz)               | (dB $\mu$ V/m) | (dBm)   | (dBm) | (dB)   |
| BLE            | 2402.0              | 72.5           | -22.7   | 8.0   | -30.7  |
|                | 2440.0              | 72.7           | -22.5   | 8.0   | -30.5  |
|                | 2480.0              | 71.2           | -24.0   | 8.0   | -32.0  |
| Wi-Fi/g        | 2412.0              | 69.5           | -25.7   | 8.0   | -33.7  |
|                | 2437.0              | 68.1           | -27.1   | 8.0   | -35.1  |
|                | 2472.0              | 66.1           | -29.1   | 8.0   | -37.1  |
| Wi-Fi/n        | 2412.0              | 66.6           | -28.6   | 8.0   | -36.6  |
|                | 2437.0              | 67.4           | -27.8   | 8.0   | -35.8  |
|                | 2472.0              | 65.5           | -29.7   | 8.0   | -37.7  |

Figure 67 Test Results

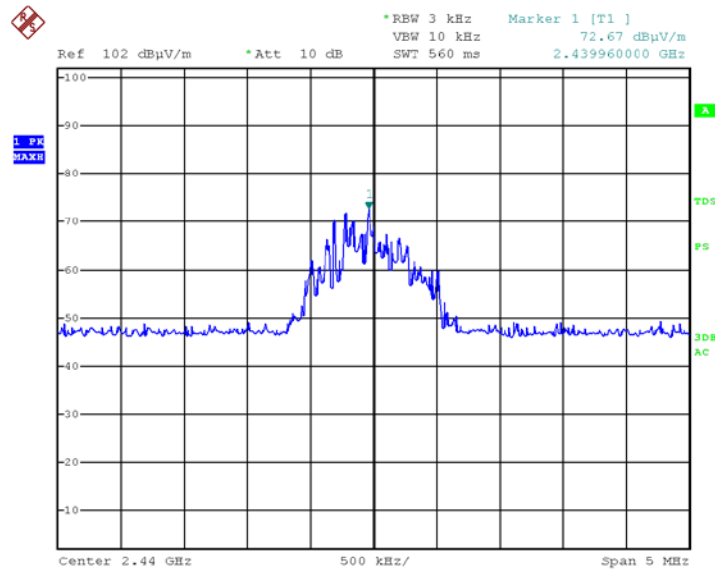
JUDGEMENT: Passed by 30.5dB

For additional information see *Figure 68* to *Figure 76*.



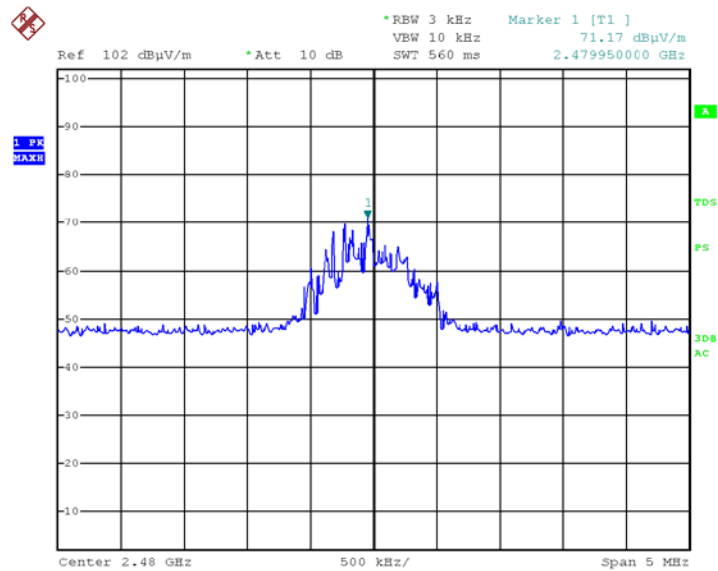
Date: 26.FEB.2017 11:16:18

Figure 68 — 2402.0MHz - BLE



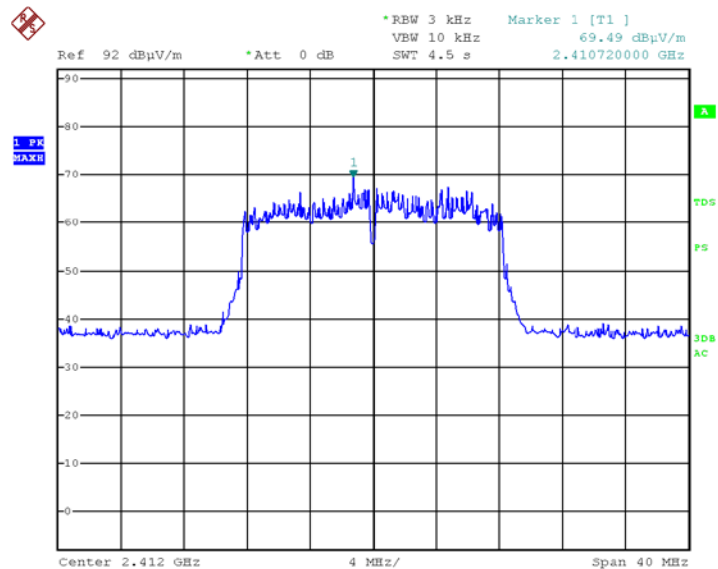
Date: 26.FEB.2017 11:24:07

Figure 69 — 2440.0MHz - BLE



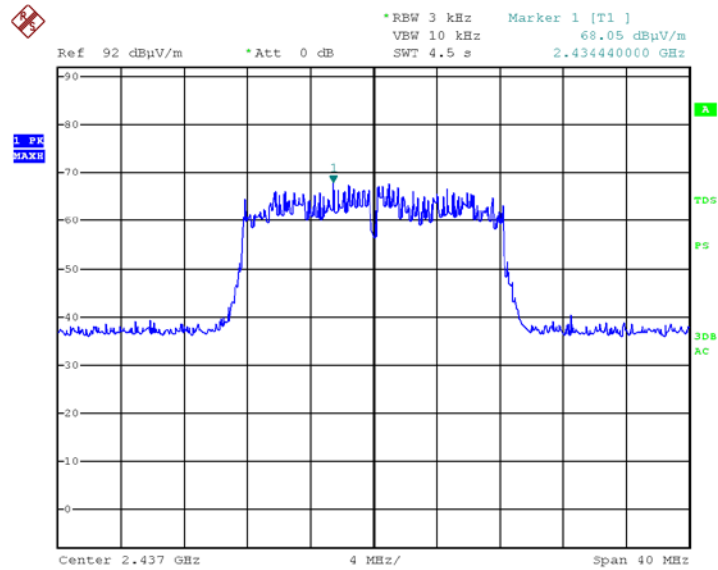
Date: 26.FEB.2017 11:38:57

Figure 70 — 2480.0MHz - BLE



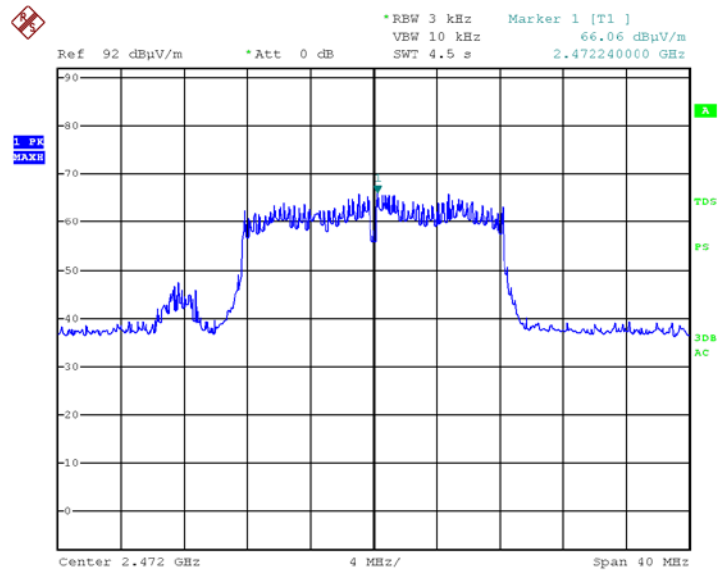
Date: 26.FEB.2017 12:08:14

Figure 71 — 2412.0MHz - Wi-Fi/g



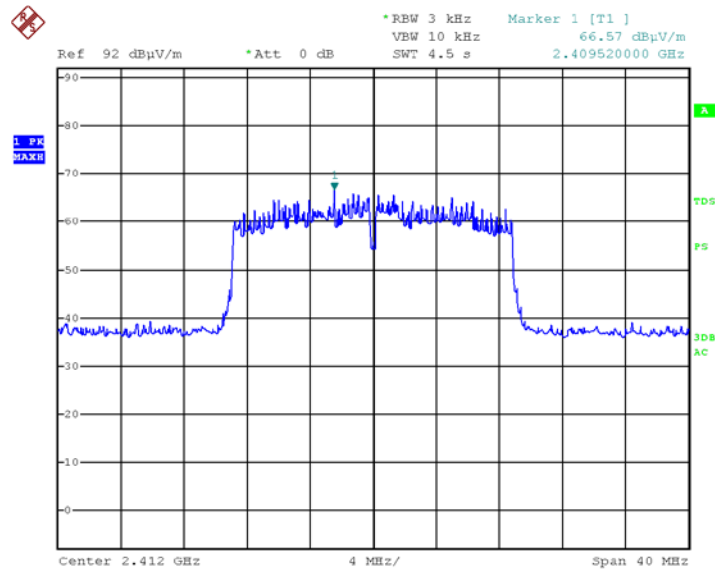
Date: 26.FEB.2017 12:03:11

Figure 72 — 2437.0MHz - Wi-Fi/g



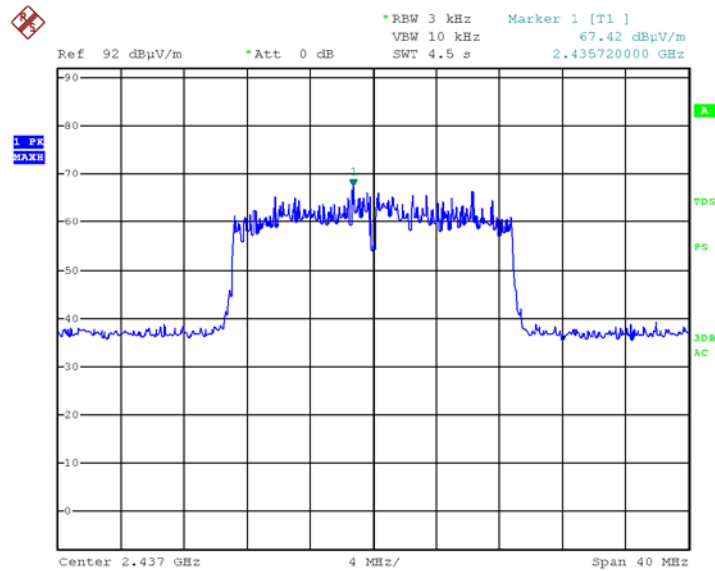
Date: 26.FEB.2017 11:57:53

Figure 73 — 2472.0MHz - Wi-Fi/g



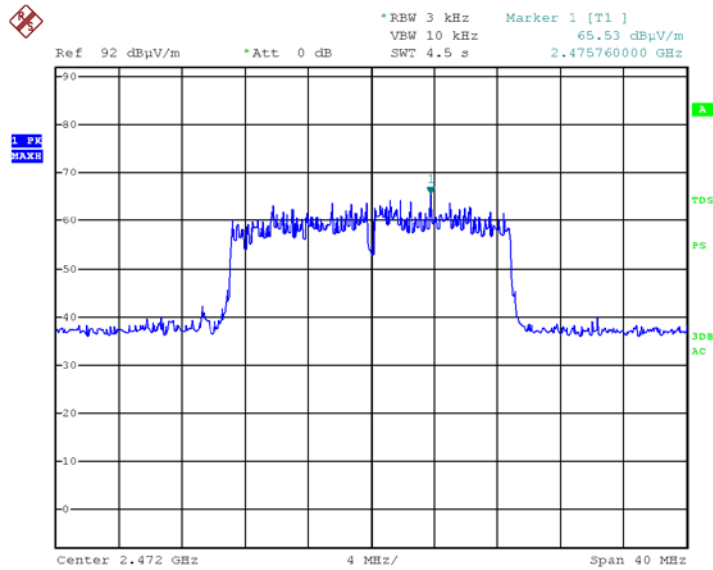
Date: 26.FEB.2017 12:34:32

**Figure 74 — 2412.0MHz - Wi-Fi/n**



Date: 26.FEB.2017 12:39:31

**Figure 75 — 2437.0MHz - Wi-Fi/n**



Date: 26.FEB.2017 12:45:49

Figure 76 — 2472.0MHz - Wi-Fi/n

### 10.5 Test Equipment Used; Transmitted Power Density

| Instrument                  | Manufacturer | Model | Serial No. | Last Calibration Date | Next Calibration Due |
|-----------------------------|--------------|-------|------------|-----------------------|----------------------|
| EMI Receiver                | R&S          | ESCI7 | 100724     | February 29, 2016     | March 1, 2017        |
| Horn Antenna                | ETS          | 3115  | 29845      | May 19, 2015          | May 19, 2018         |
| Semi Anechoic Civil Chamber | ETS          | S81   | SL 11643   | NCR                   | NCR                  |

Figure 77 Test Equipment Used



## 11. Antenna Gain/Information

The antenna gain is 1.0 dBi, integral.

|                                                                 |                          |
|-----------------------------------------------------------------|--------------------------|
| <b>Ultra-Miniature 2.4GHz Chip antenna 0.37mm max Thickness</b> | <b>P/N 2450AT07A0100</b> |
| Detail Specification: 5/8/2012                                  | Page 1 of 4              |



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| General Specifications  |                 |
|-------------------------|-----------------|
| Part Number             | 2450AT07A0100   |
| Frequency (MHz)         | 2400~2500       |
| Peak Gain (dBi typ.)    | 1.0 (XZ-Total)  |
| Average Gain (dBi typ.) | -1.5 (XZ-Total) |
| Return Loss             | 6.5 dB min.     |

## 12. R.F Exposure/Safety

Typical use of the E.U.T. is as a wearable camera.

The typical distance between the E.U.T. and the user is 0.5 cm.

SAR Testing Exclusion Based on Section 4.3.1 and Appendix A of KDB 447498 D01 V06 Requirements

### For FCC

Section 4.3.1 and Appendix A of KDB447498 D01 V06 was used as the guidance as follows:

Peak power output (standard) = 104.2 dBuV/m (Peak) = 9.0dBm=7.9mW.

$$\left[ \frac{(\text{max. power of channel, including tune-up tolerance, mW})}{(\text{min. test separation distance, mm})} \right] \cdot [\sqrt{f(\text{GHz})}]$$

=  $7.9/5 \cdot 1.55 = 2.45$  this value is less than 3.0 for 1-g SAR and  $\leq 7.5$  for 10-g extremity SAR.

The SAR measurement is not necessary.



## 13. APPENDIX A - CORRECTION FACTORS

### 13.1 Correction factors for RF OATS Cable 35m ITL #1784

| Frequency ( MHz) | Cable loss (dB) |
|------------------|-----------------|
| 10.0             | 0.3             |
| 20.0             | 0.2             |
| 50.0             | -0.1            |
| 100.0            | -0.6            |
| 200.0            | -1.2            |
| 500.0            | -2.3            |
| 1000.0           | -3.6            |



**13.2**

***Correction factors for RF OATS Cable  
10m ITL #1794***

| Frequency(MHz) | Cable loss(dB) |
|----------------|----------------|
| 10.0           | -0.3           |
| 20.0           | -0.3           |
| 50.0           | -0.5           |
| 100.0          | -0.7           |
| 200.0          | -1.1           |
| 500.0          | -1.8           |
| 1000.0         | -2.7           |

### 13.3 Correction factor for RF CABLE for Semi Anechoic Chamber

ITL # 1841

| FREQ<br>(MHz) | LOSS<br>(dB) |
|---------------|--------------|
| 1000.0        | 1.5          |
| 2000.0        | 2.1          |
| 3000.0        | 2.7          |
| 4000.0        | 3.1          |
| 5000.0        | 3.5          |
| 6000.0        | 4.1          |
| 7000.0        | 4.6          |
| 8000.0        | 4.9          |
| 9000.0        | 5.7          |
| 10000.0       | 5.7          |
| 11000.0       | 6.1          |
| 12000.0       | 6.1          |
| 13000.0       | 6.2          |
| 14000.0       | 6.7          |
| 15000.0       | 7.4          |
| 16000.0       | 7.5          |
| 17000.0       | 7.9          |
| 18000.0       | 8.1          |
| 19000.0       | 8.8          |
| 20000.0       | 9.1          |

**NOTES:**

1. The cable is manufactured by Commscope
2. The cable type is 0623 WBC-400, serial # G020132 and 10m long



**13.4 Correction factors for biconical antenna – ITL # 1356**

**Model: EMCO 3110B**

**Serial No.:9912-3337**

| Frequency [MHz] | AF<br>[dB/m] |
|-----------------|--------------|
| 30.0            | 14.18        |
| 35.0            | 13.95        |
| 40.0            | 12.84        |
| 45.0            | 11.23        |
| 50.0            | 11.10        |
| 60.0            | 10.39        |
| 70.0            | 9.34         |
| 80.0            | 9.02         |
| 90.0            | 9.31         |
| 100.0           | 8.95         |
| 120.0           | 11.53        |
| 140.0           | 12.20        |
| 160.0           | 12.56        |
| 180.0           | 13.49        |
| 200.0           | 15.27        |



**13.5 Correction factors for log periodic antenna – ITL # 1349**

**Model: EMCO 3146**

**Serial No.:9505-4081**

| Frequency [MHz] | AF<br>[dB/m] |
|-----------------|--------------|
| 200.0           | 11.47        |
| 250.0           | 12.06        |
| 300.0           | 14.77        |
| 400.0           | 15.77        |
| 500.0           | 18.01        |
| 600.0           | 18.84        |
| 700.0           | 20.93        |
| 800.0           | 21.27        |
| 900.0           | 22.44        |
| 1000.0          | 24.10        |



**13.6 Correction factors for Active Loop Antenna**  
**Model 6502 S/N 9506-2950**  
**ITL # 1075:**

| f(MHz) | MAF(dBs/m) | AF(dB/m) |
|--------|------------|----------|
| 0.01   | -33.1      | 18.4     |
| 0.02   | -37.2      | 14.3     |
| 0.03   | -38.2      | 13.3     |
| 0.05   | -39.8      | 11.7     |
| 0.1    | -40.1      | 11.4     |
| 0.2    | -40.3      | 11.2     |
| 0.3    | -40.3      | 11.2     |
| 0.5    | -40.3      | 11.2     |
| 0.7    | -40.3      | 11.2     |
| 1      | -40.1      | 11.4     |
| 2      | -40        | 11.5     |
| 3      | -40        | 11.5     |
| 4      | -40.1      | 11.4     |
| 5      | -40.2      | 11.3     |
| 6      | -40.4      | 11.1     |
| 7      | -40.4      | 11.1     |
| 8      | -40.4      | 11.1     |
| 9      | -40.5      | 11       |
| 10     | -40.5      | 11       |
| 20     | -41.5      | 10       |
| 30     | -43.5      | 8        |

### 13.7 Correction factors for Horn ANTENNA

**Model: 3115**

**Serial number: 6142**

**3 meter range; ITL # 1352**

| f(GHz) | AF(dB/m) | GA(dB) |
|--------|----------|--------|
| 0.75   | 25       | 3      |
| 1G     | 23.5     | 7      |
| 1.5G   | 26       | 8      |
| 2G     | 29       | 7      |
| 2.5G   | 27.5     | 10     |
| 3G     | 30       | 10     |
| 3.5G   | 31.5     | 10     |
| 4G     | 32.5     | 9.5    |
| 4.5G   | 32.5     | 10.5   |
| 5G     | 33       | 10.5   |
| 5.5G   | 35       | 10.5   |
| 6G     | 36.5     | 9.5    |
| 6.5G   | 36.5     | 10     |
| 7G     | 37.5     | 10     |
| 7.5G   | 37.5     | 10     |
| 8G     | 37.5     | 11     |
| 8.5G   | 38       | 11     |
| 9G     | 37.5     | 11.5   |
| 9.5G   | 38       | 11.5   |
| 10G    | 38.5     | 11.5   |
| 10.5G  | 38.5     | 12     |
| 11G    | 38.5     | 12.5   |
| 11.5G  | 38.5     | 13     |
| 12G    | 38       | 13.5   |
| 12.5G  | 38.5     | 13     |
| 13G    | 40       | 12     |
| 13.5G  | 41       | 12     |
| 14G    | 40       | 13     |
| 14.5G  | 39       | 14     |
| 15G    | 38       | 15.5   |
| 15.5G  | 37.5     | 16     |
| 16G    | 37.5     | 16     |
| 16.5G  | 39       | 15     |
| 17G    | 40       | 15     |
| 17.5G  | 42       | 13.5   |
| 18G    | 42.5     | 13     |



**13.8 Correction factors for**

**Horn Antenna**

**Model: SWH-28  
at 1 meter range.**

**ITL #:1353**

| Frequency, MHz | Measured antenna factor, dB/m <sup>1)</sup> |
|----------------|---------------------------------------------|
| 18000          | 33.0                                        |
| 18500          | 32.9                                        |
| 19000          | 33.1                                        |
| 19500          | 33.3                                        |
| 20000          | 33.6                                        |
| 20500          | 33.6                                        |
| 21000          | 33.4                                        |
| 21500          | 33.8                                        |
| 22000          | 33.7                                        |
| 22500          | 33.9                                        |
| 23000          | 34.8                                        |
| 23500          | 34.5                                        |
| 24000          | 34.2                                        |
| 24500          | 34.8                                        |
| 25000          | 34.4                                        |
| 25500          | 35.2                                        |
| 26000          | 35.9                                        |
| 26500          | 36.0                                        |