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DATE: 5 July 2018

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

FCC Radio Test Report

for

OrCam Technologies Ltd.

Equipment under test:

Wearable Camera

MyEye2
(BLE & WiFi Tranceiver)

Tested by: _____
M. Zohar

Approved by: _____
Y. Zucker

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Measurement/Technical Report for

OrCam Technologies Ltd.

Wearable Camera

MyEye2

FCC ID: 2AAWI-MYEYE2

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.

Application for Certification
prepared by:
R. Pinchuck
ITL (Product Testing) Ltd.
1 Bat Sheva St.
Lod 7116002
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Applicant for this device:
(different from "prepared by")
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e-mail: Rami.Ben-Yehuda@orcam.com

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1. General Information

1.1 *Administrative Information*

Manufacturer:	OrCam Technologies Ltd.
Manufacturer's Address:	13 Hartom St., Jerusalem, 91450 Israel Tel: +972-2-591-7805 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. 1 Batsheva St., Lod 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 Manufactory: DELL Model:LA90PM130 p/n: 6C3W2
Mode of operation	1.Transceiver BLE 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 For Wi-Fi g/n: 2412.0-2462.0MHz
Transmit power	For BLE : ~ 0.0dBm For Wi-Fi g/n: ~9.0dBm
Antenna Gain	1.0dBi
Modulation BW	For BLE : 2MHz 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):
±5.19 dB

>6 GHz
Expanded Uncertainty (95% Confidence, K=2):
±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	2rd Harmonic	3th 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	-
	2462.0	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	-
	2462.0	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	-
	2462.0	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	2rd Harmonic	3th 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 (2462MHz).

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*

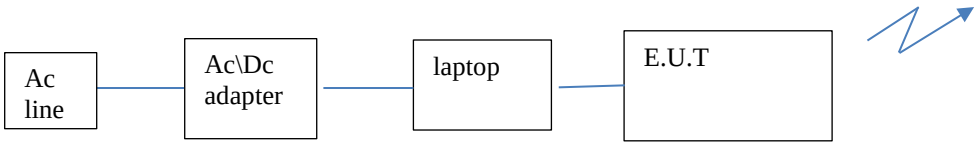


Figure 3. Configuration of Tested System

3. Conducted & Radiated Measurement Test Set-Up Photos

Figure 4. Conducted Emissions AC Line Test

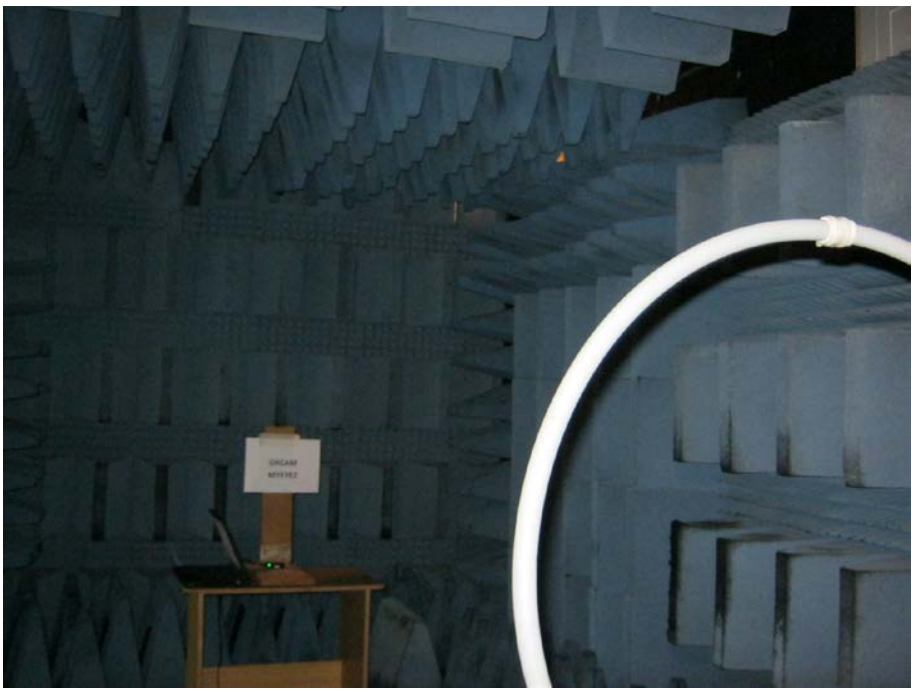


Figure 5. Radiated Emission Test - 0.009-30MHz

Figure 6. Radiated Emission Test - 30-200MHz

Figure 7. Radiated Emission Test - 200-1000MHz

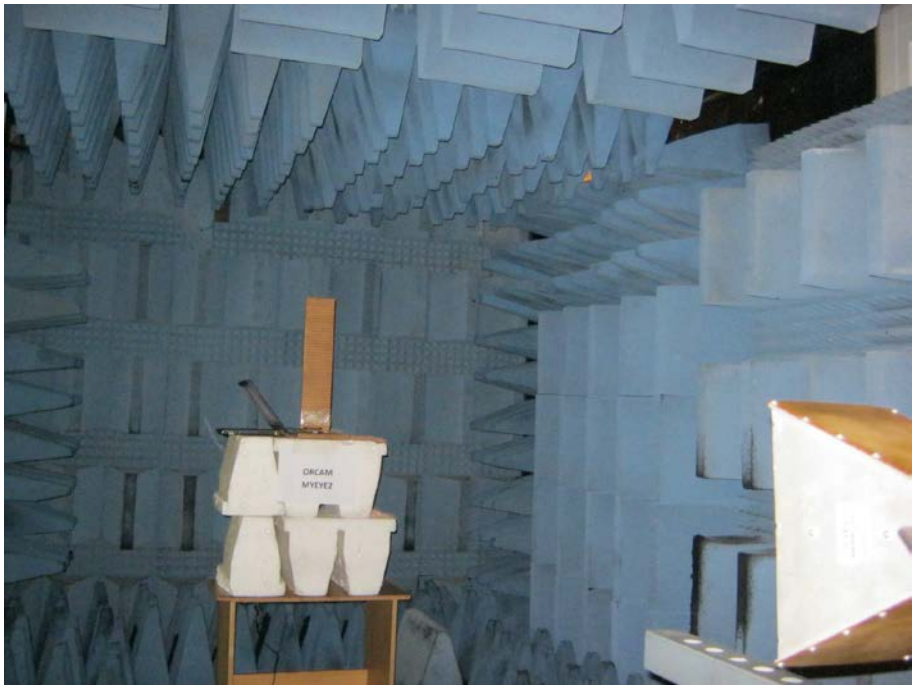


Figure 8. Radiated Emission Test- 1GHz-18GHz

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 µHn 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 (dBµV)**	
	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

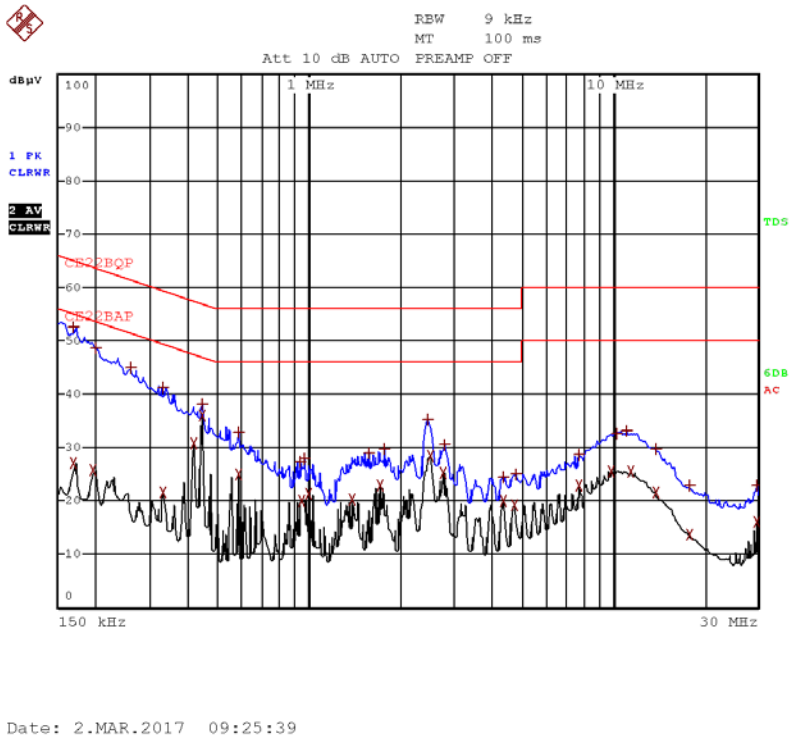


Figure 11. Detectors: Peak, Quasi-peak, Average

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

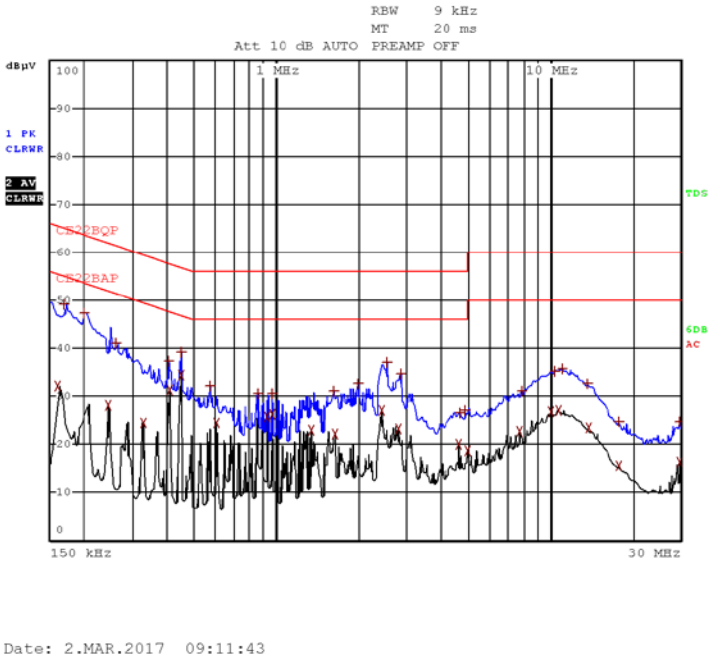


Figure 13 Detectors: Peak, Quasi-peak, Average

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
1	Quasi Peak	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

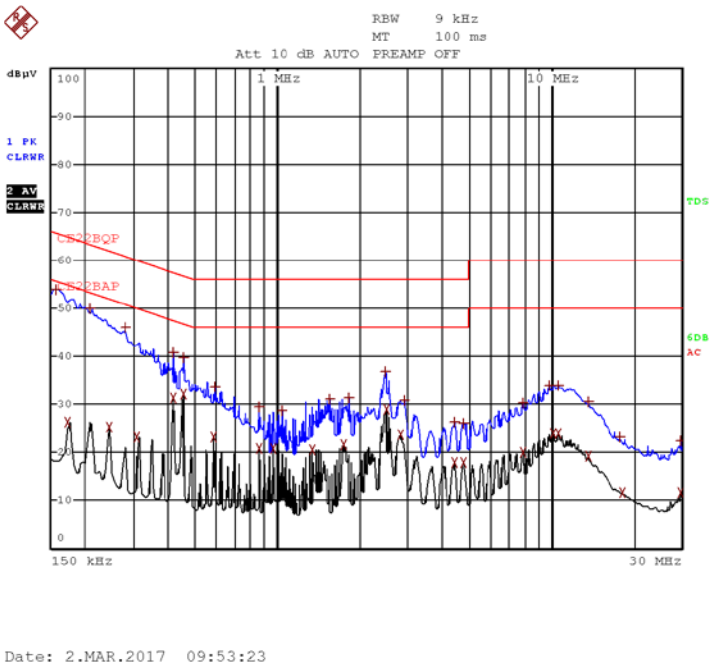


Figure 15. Detectors: Peak, Quasi-peak, Average

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

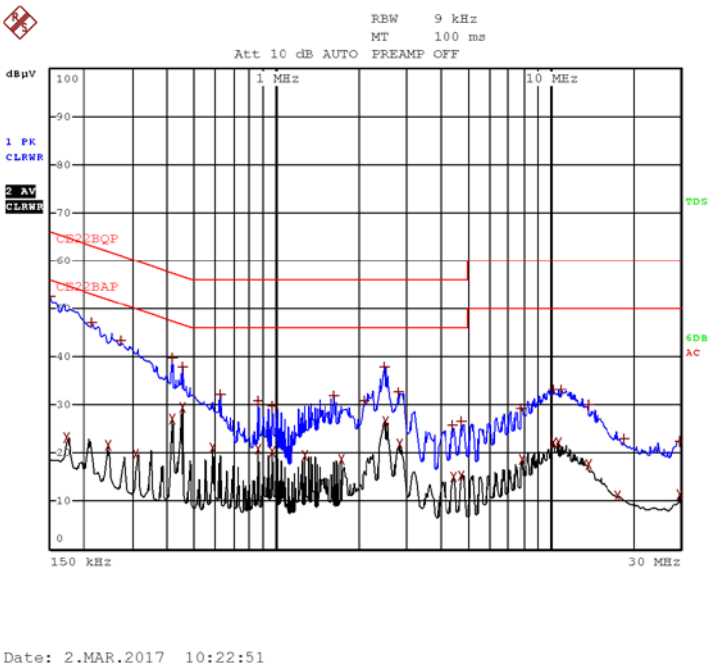


Figure 17 Detectors: Peak, Quasi-peak, Average

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	≥0.5
	2440.0	0.7	≥0.5
	2480.0	0.7	≥0.5
Wi-Fi/g	2412.0	16.4	≥0.5
	2437.0	15.7	≥0.5
	2462.0	16.4	≥0.5
Wi-Fi/n	2412.0	17.4	≥0.5
	2437.0	16.3	≥0.5
	2462.0	17.5	≥0.5

Figure 19 6 dB Minimum Bandwidth

JUDGEMENT: Passed

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

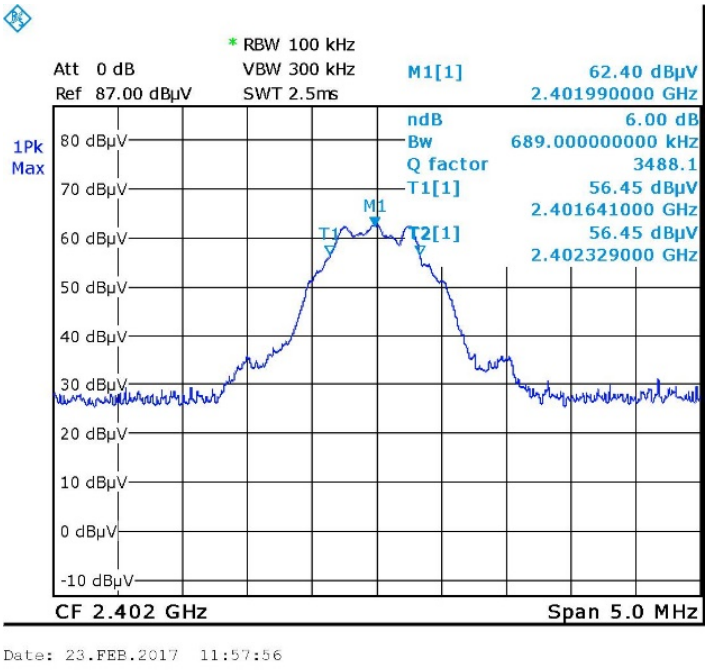


Figure 20. 2402.0MHz - BLE

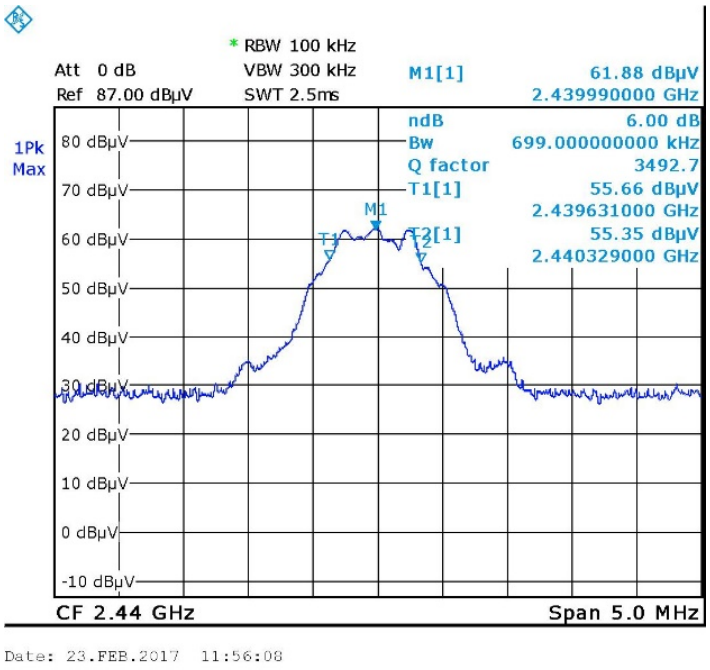


Figure 21. 2440.0MHz - BLE

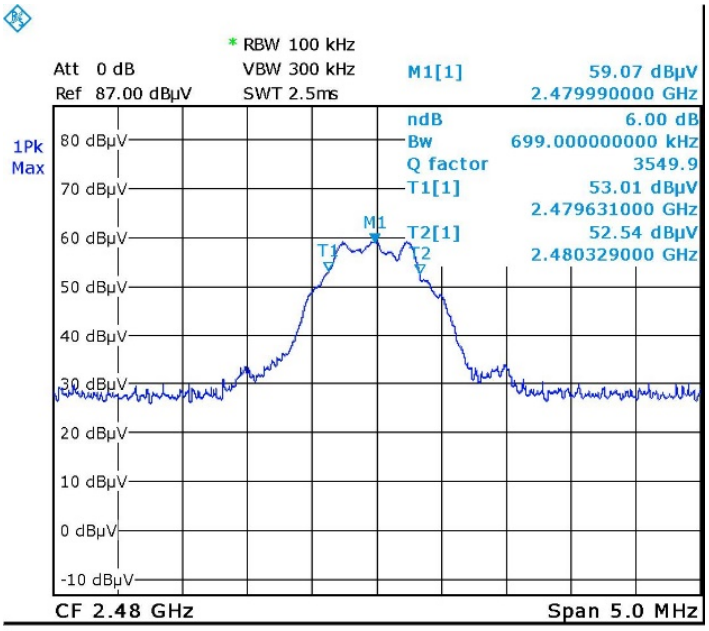


Figure 22. 2480.0MHz - BLE

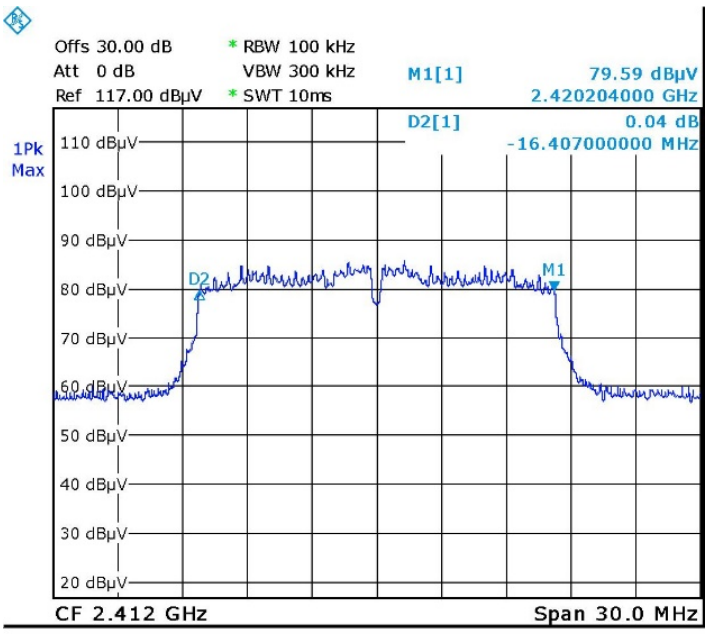


Figure 23. 2412.0MHz - Wi-Fi/g

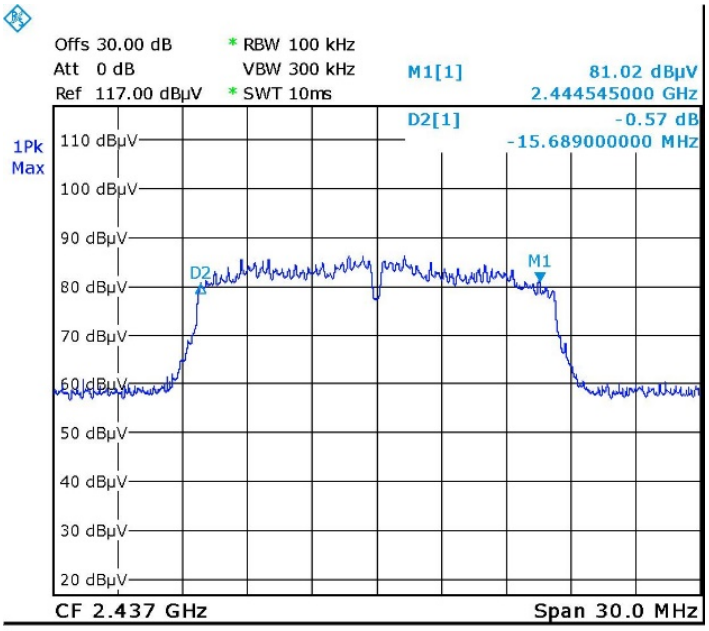


Figure 24. 2437.0MHz - Wi-Fi/g

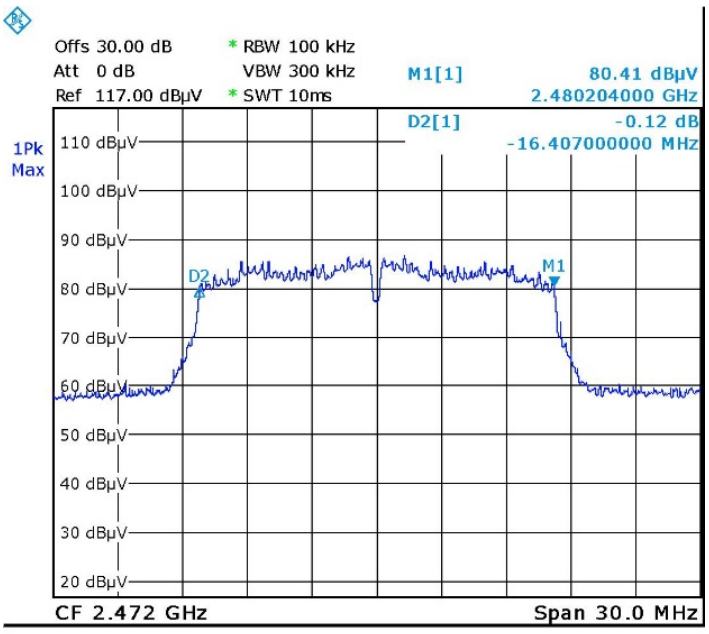


Figure 25. 2462.0MHz - Wi-Fi/g

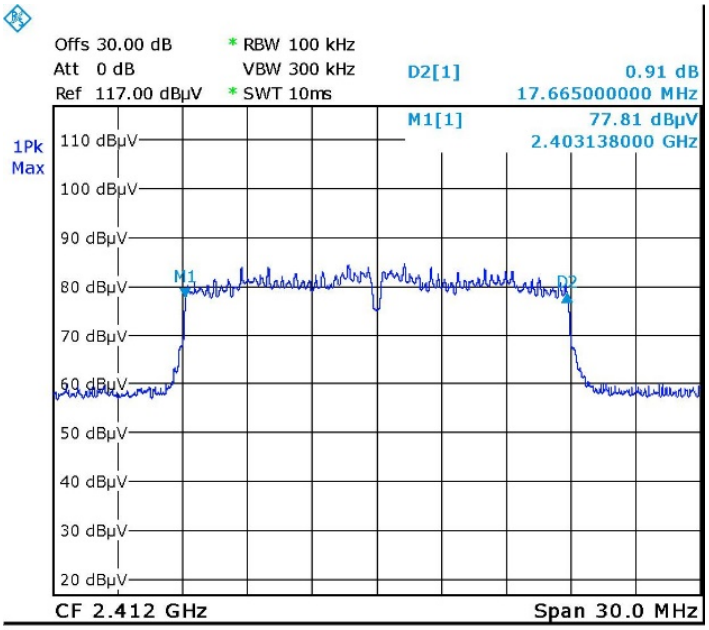


Figure 26 — 2412.0MHz - Wi-Fi/n

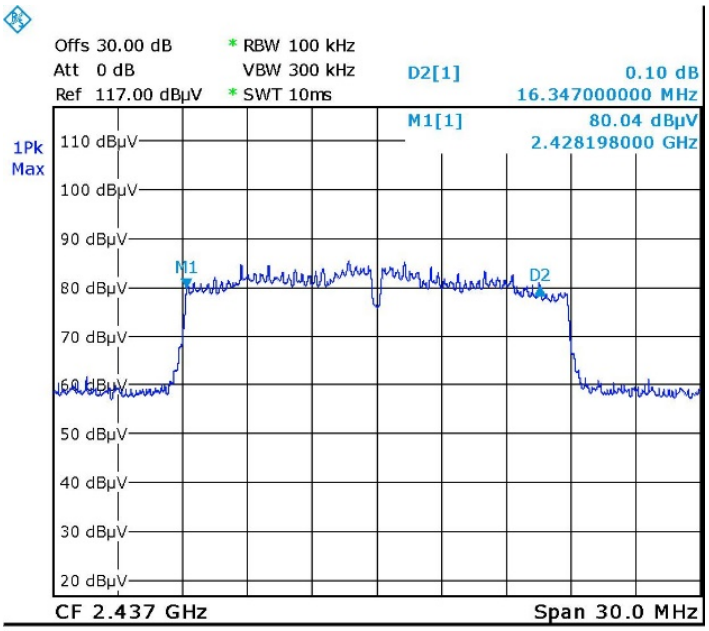


Figure 27 — 2437.0MHz - Wi-Fi/n

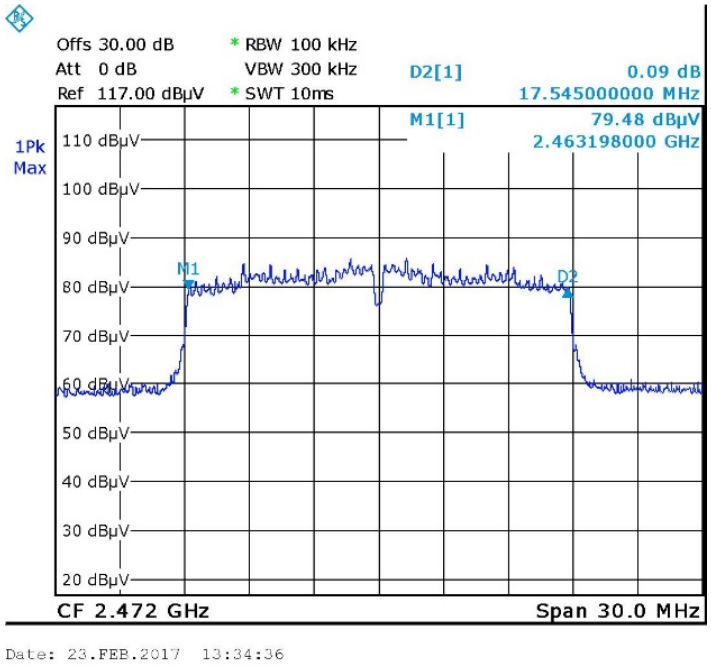


Figure 28 — 2462.0MHz - Wi-Fi/n

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:

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

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.

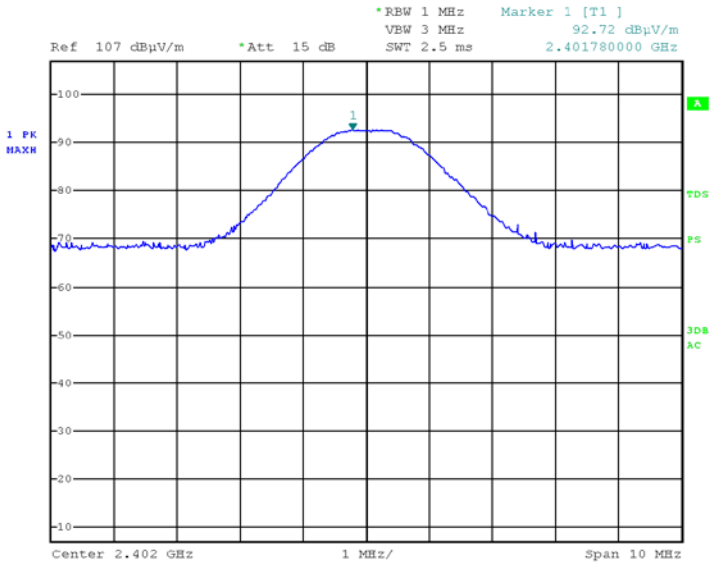
6.4 *Test Results*

Operation Mode	Operation Frequency	Pol.	Field Strength	EIRP	Antenna Gain	Conducted Power	Conducted Power	Limit	Margin
	(MHz)	(V/H)	(dBuV/m)	(dBm)	(dBi)	(dBm)	(mW)	(mW)	(mW)
BLE	2402.0	V	92.7	-2.5	1.0	-3.5	0.4	1000.0	-999.6
		H	93.2	-2.0	1.0	-3.0	0.5	1000.0	-999.5
	2440.0	V	90.4	-4.8	1.0	-5.8	0.3	1000.0	-999.7
		H	93.7	-1.5	1.0	-2.5	0.6	1000.0	-999.4
	2480.0	V	91.6	-3.6	1.0	-4.6	0.3	1000.0	-999.7
		H	91.2	-4.0	1.0	-5.0	0.3	1000.0	-999.7
Wi-Fi/g	2412.0	V	101.0	5.8	1.0	4.8	3.0	1000.0	-997.0
		H	102.3	7.1	1.0	6.1	4.1	1000.0	-995.9
	2437.0	V	100.4	5.2	1.0	4.2	2.6	1000.0	-997.4
		H	104.2	9.0	1.0	8.0	6.3	1000.0	-993.7
	2462.0	V	101.5	6.3	1.0	5.3	3.4	1000.0	-996.6
		H	102.2	7.0	1.0	6.0	4.0	1000.0	-996.0
Wi-Fi/n	2412.0	V	99.6	4.4	1.0	3.4	2.2	1000.0	-997.8
		H	101.4	6.2	1.0	5.2	3.3	1000.0	-996.7
	2437.0	V	99.4	4.2	1.0	3.2	2.1	1000.0	-997.9
		H	103.2	8.0	1.0	7.0	5.0	1000.0	-995.0
	2462.0	V	100.2	5.0	1.0	4.0	2.5	1000.0	-997.5
		H	100.9	5.7	1.0	4.7	3.0	1000.0	-997.0

Figure 30 Maximum Peak Power Output

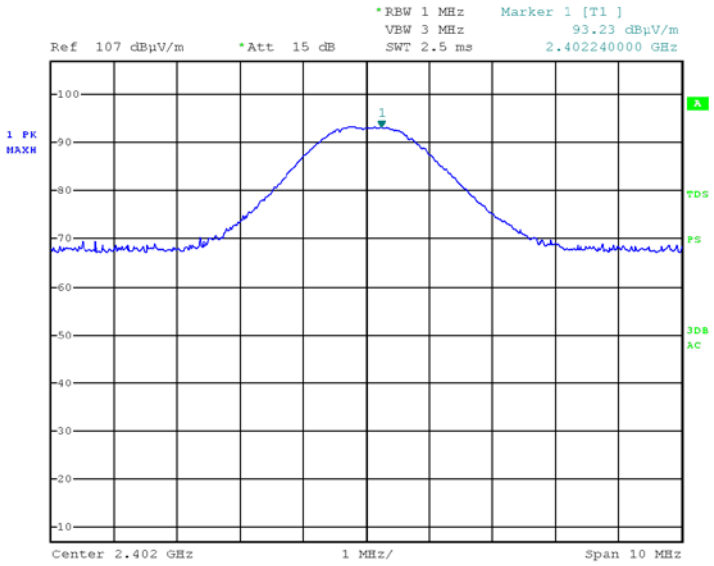
JUDGEMENT: Passed by 993.7mW

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

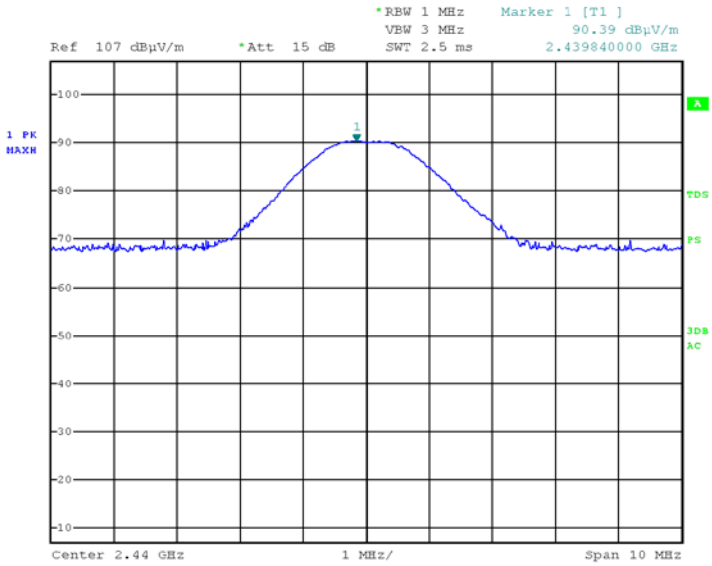


Figure 33 2440.0MHz – Vertical BLE

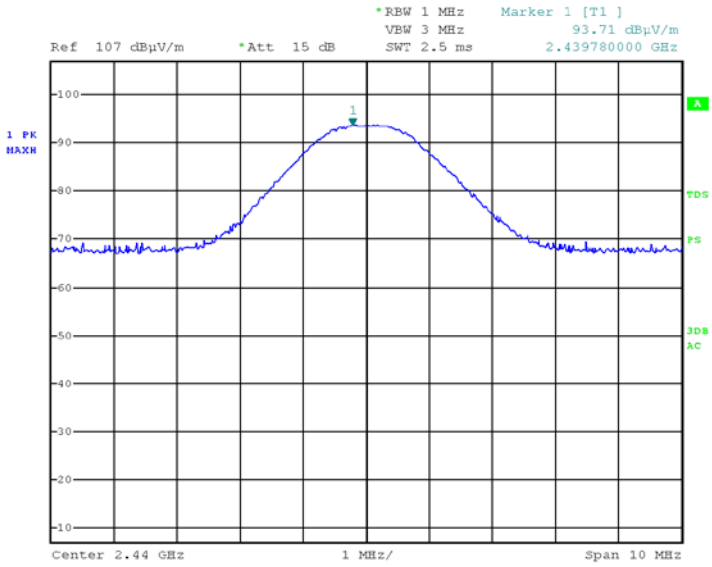


Figure 34 2440.0MHz – Horizontal BLE

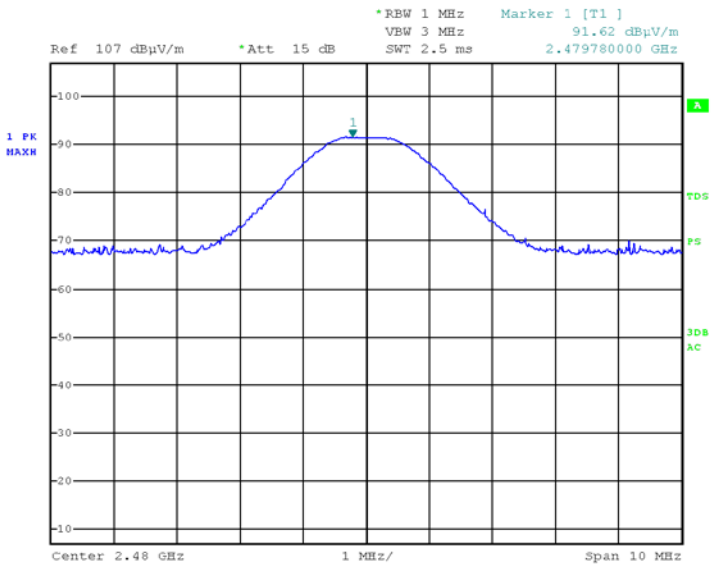


Figure 35 2480.0MHz – Vertical BLE

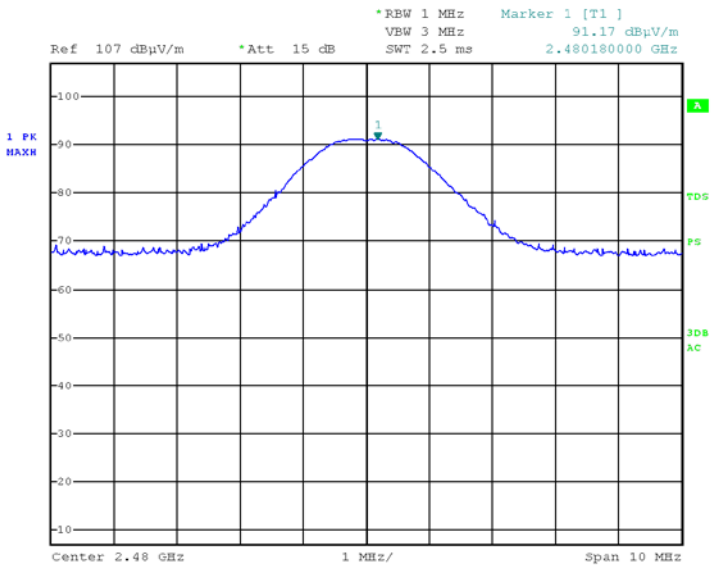
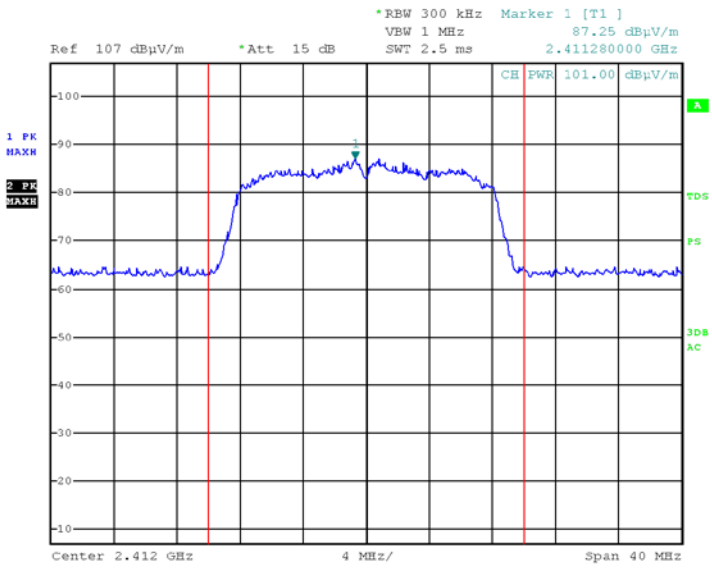
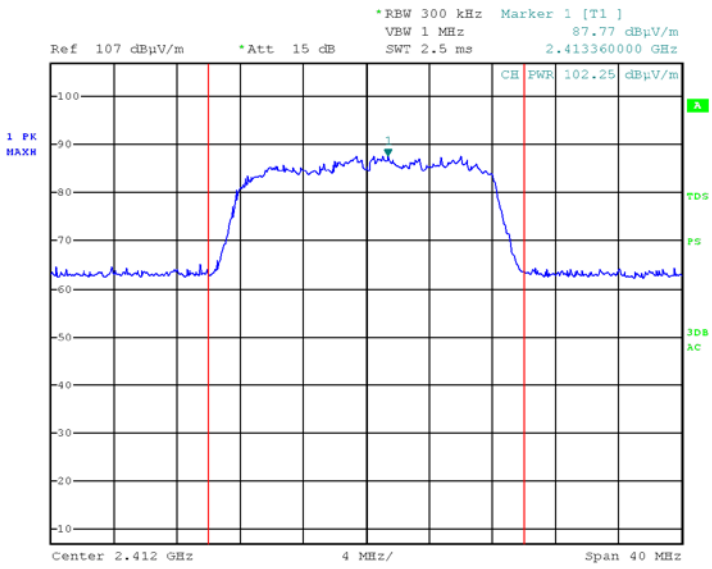


Figure 36 2480.0MHz – Horizontal BLE



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

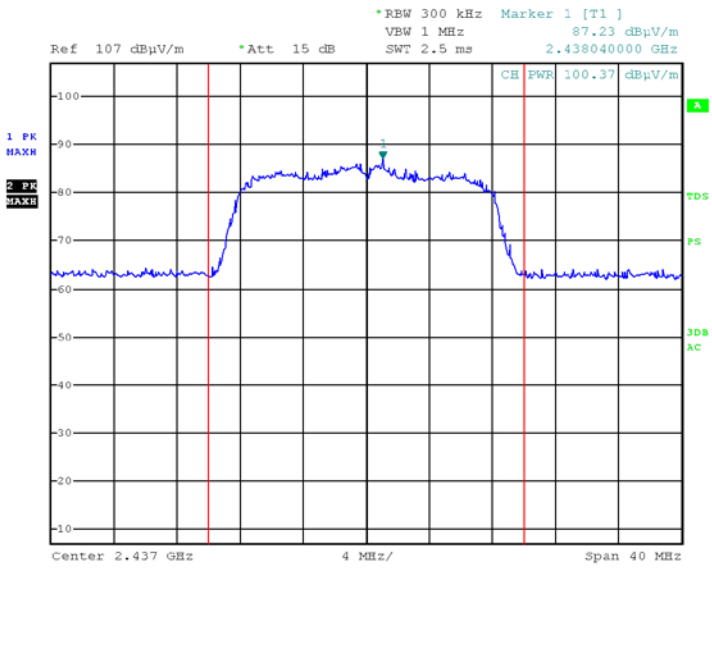


Figure 39 2437.0MHz – Vertical Wi-Fi/g

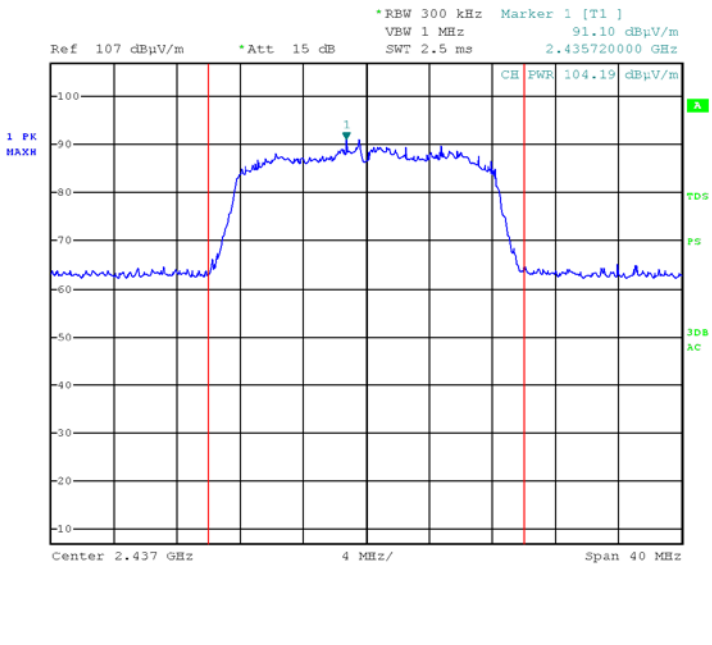


Figure 40 2437.0MHz – Horizontal Wi-Fi/g

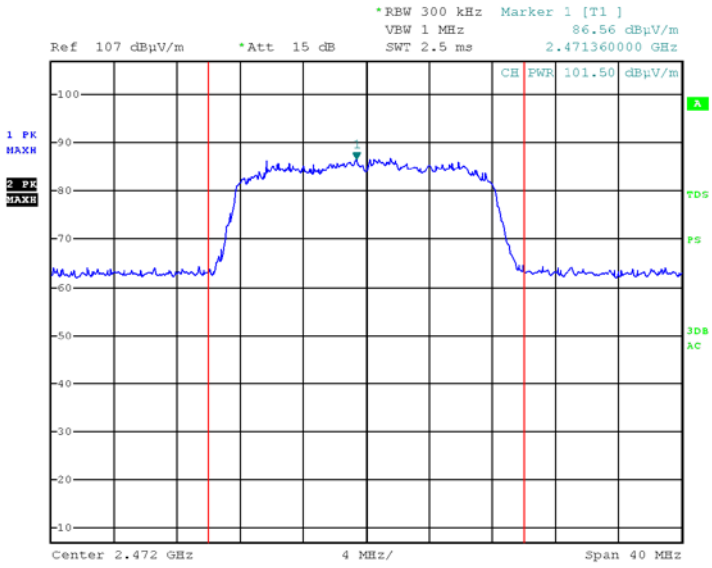


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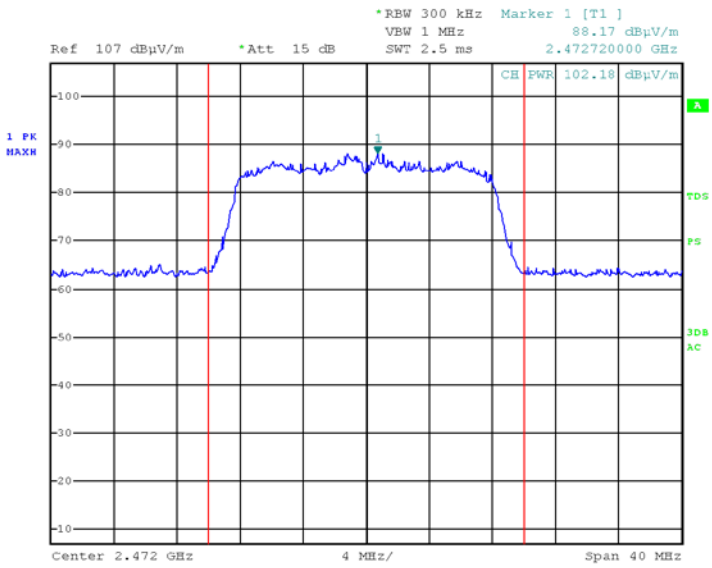
Figure 41 2462.0MHz – Vertical Wi-Fi/g



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

Figure 42 2462.0MHz – Horizontal Wi-Fi/g

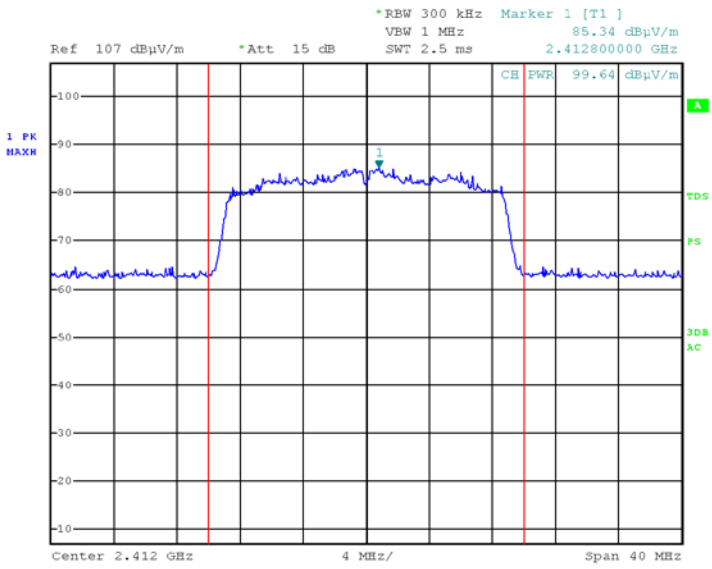


Figure 43 2412.0MHz – Vertical Wi-Fi/n

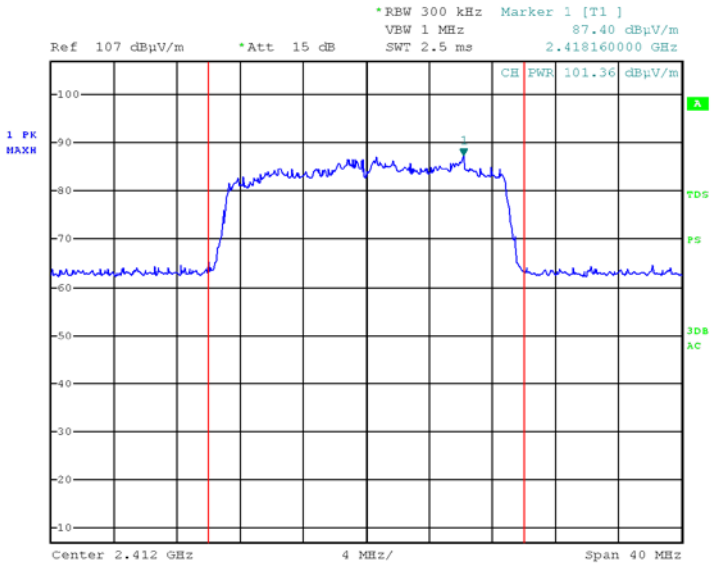


Figure 44 2412.0MHz – Horizontal Wi-Fi/n

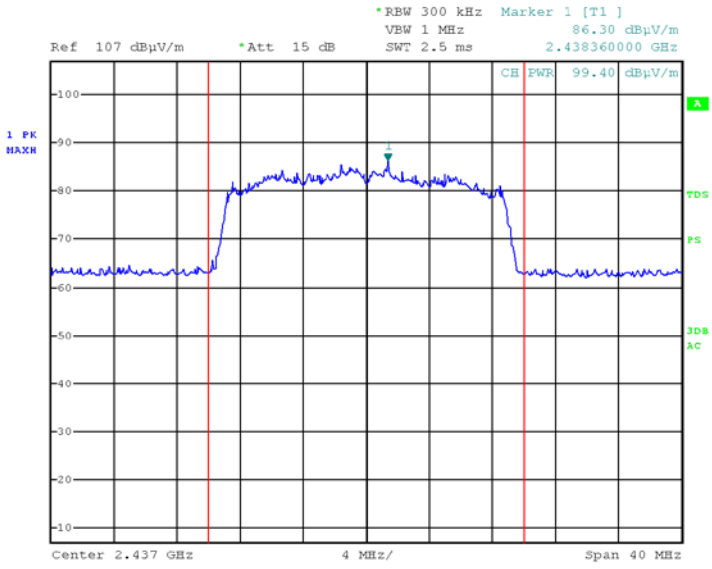


Figure 45 2437.0MHz – Vertical Wi-Fi/n

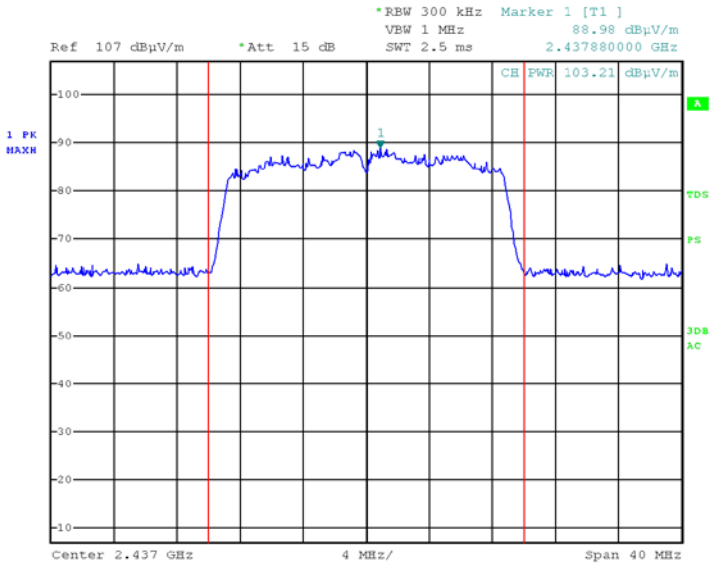


Figure 46 2437.0MHz – Horizontal Wi-Fi/n

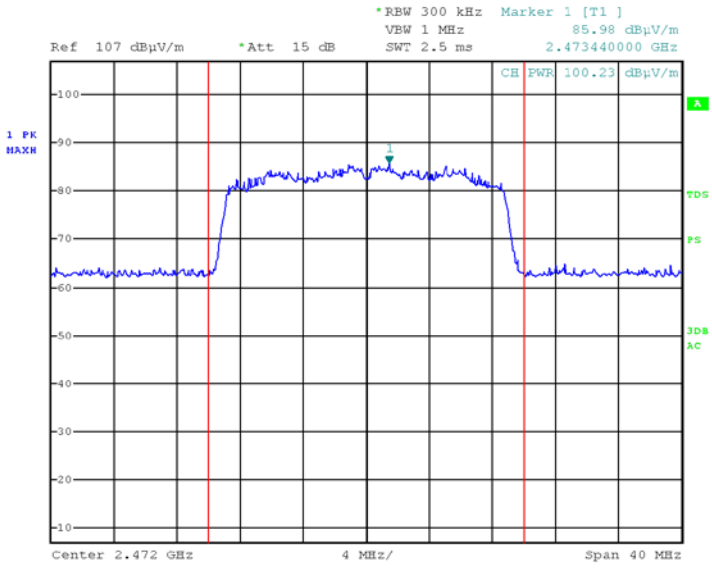


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Figure 47 2462.0MHz – Vertical Wi-Fi/n

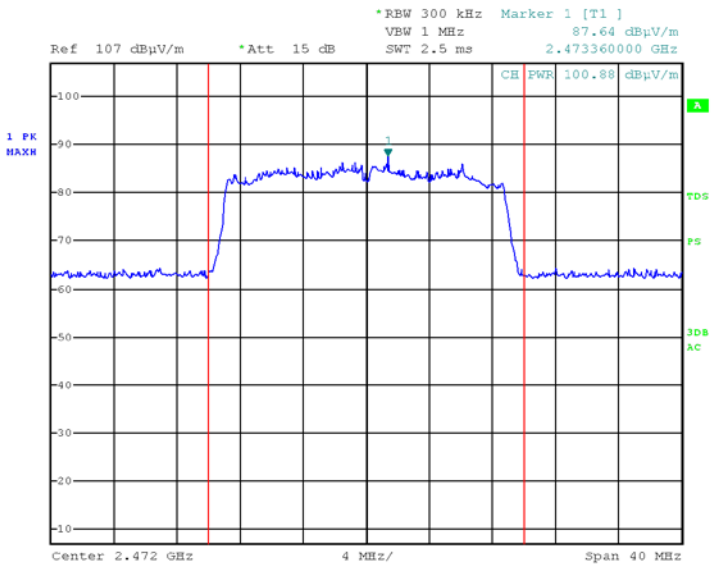

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Figure 48 2462.0MHz – Horizontal Wi-Fi/n

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	Band Edge Frequency	Spectrum Level	Limit	Margin
	(MHz)	(MHz)	(dBuV/m)	(dBuV/m)	(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.*

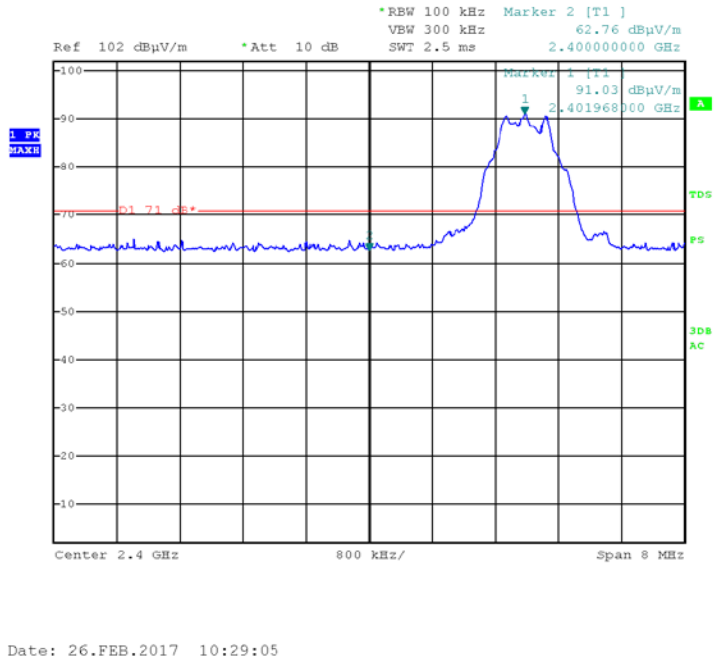

Figure 51 —Lower Band Edge - BLE

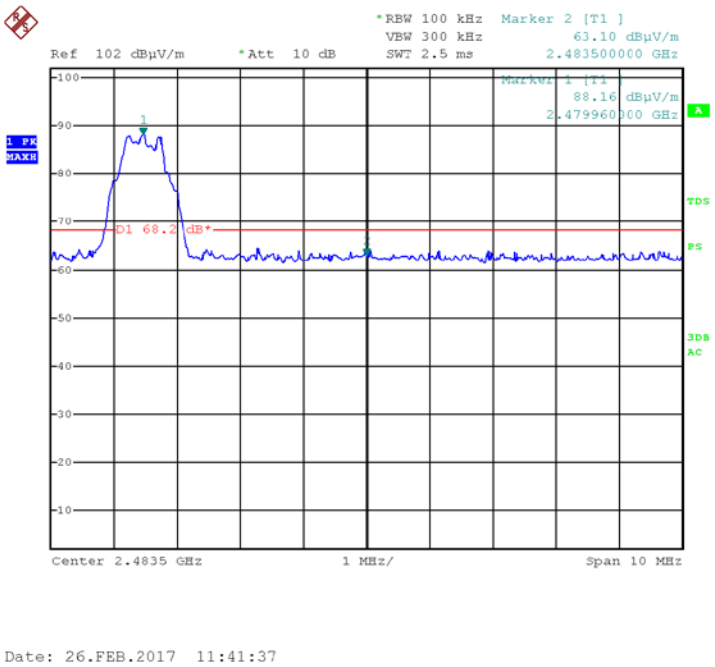

Figure 52 —Upper Band Edge - BLE

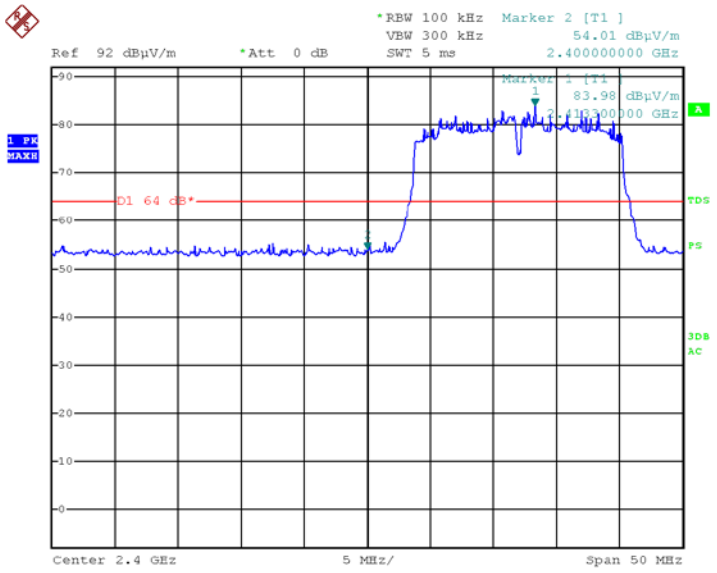

Figure 53 —Lower Band Edge - Wi-Fi/g

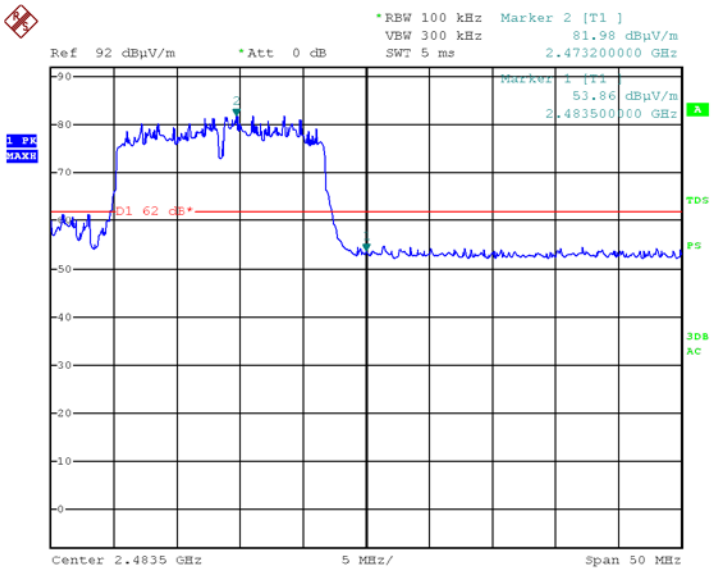

Figure 54 —Upper Band Edge - Wi-Fi/g

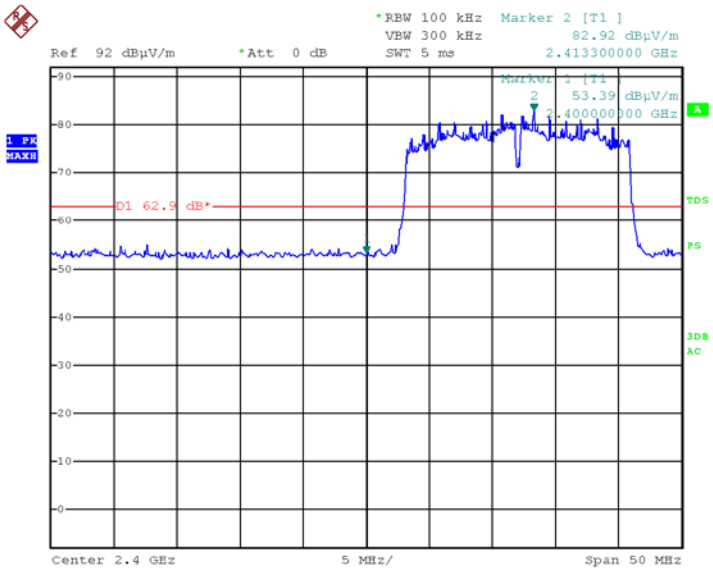

Figure 55 —Lower Band Edge - Wi-Fi/n

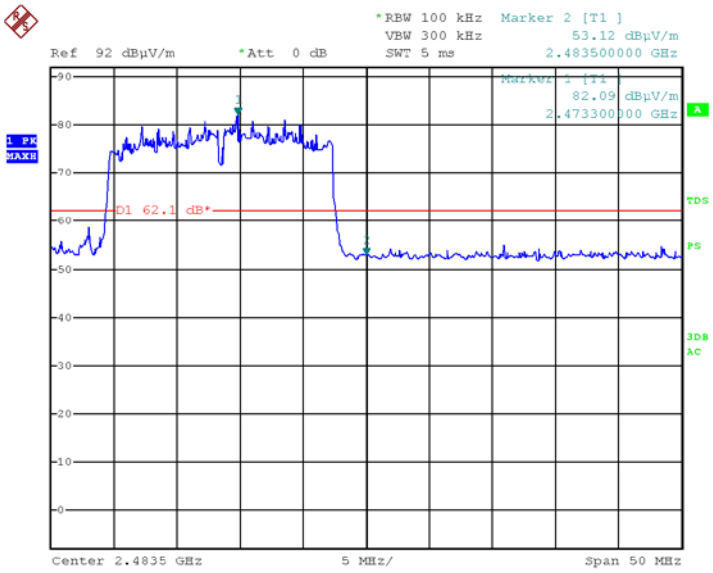

Figure 56 —Upper Band Edge - Wi-Fi/n

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	3536A00120ADI	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 [dBμv/m]
RA:	Receiver Amplitude [dBμv]
AF:	Receiving Antenna Correction Factor [dB/m]
CF:	Cable Attenuation Factor [dB]

Example: FS = 30.7 dBμV (RA) + 14.0 dB (AF) + 0.9 dB (CF) = 45.6 dBμV

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 2462 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
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)	(dBµV/m)	(dBµV/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 Frequency range: 0.009MHz to 25.0 GHz
Test Distance: 3 meters 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)	(dBµV/m)	(dBµV/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
2462.0	4924.0	H	51.1	74.0	-22.9
	4924.0	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 Frequency range: 0.009MHz to 25.0 GHz
Test Distance: 3 meters 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	-
2462.0	4924.0	H	-	54.0	-
	4924.0	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
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)	(dBµV/m)	(dBµV/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
2462.0	4924.0	H	51.0	74.0	-23.0
	4924.0	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 Frequency range: 0.009MHz to 25.0 GHz
Test Distance: 3 meters 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	-
2462.0	4924.0	H	-	54.0	-
	4924.0	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	3536A00120ADI	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:

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

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)	(dBµV/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
	2462.0	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
	2462.0	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.*

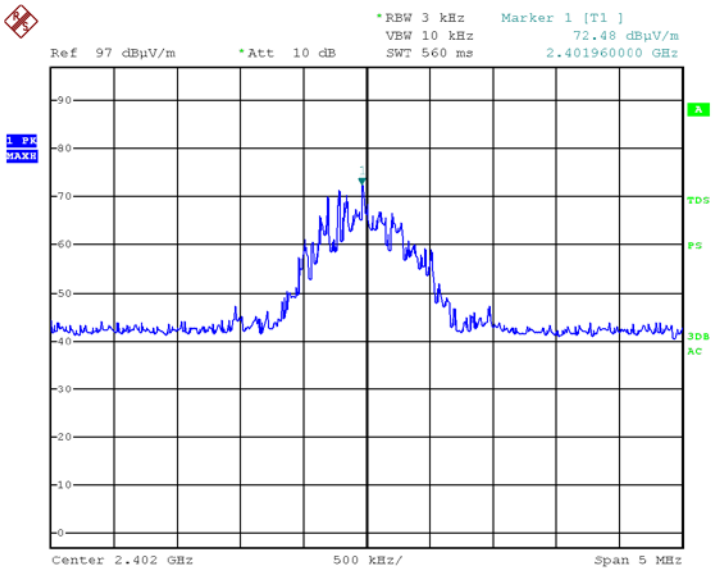

Figure 68 — 2402.0MHz - BLE

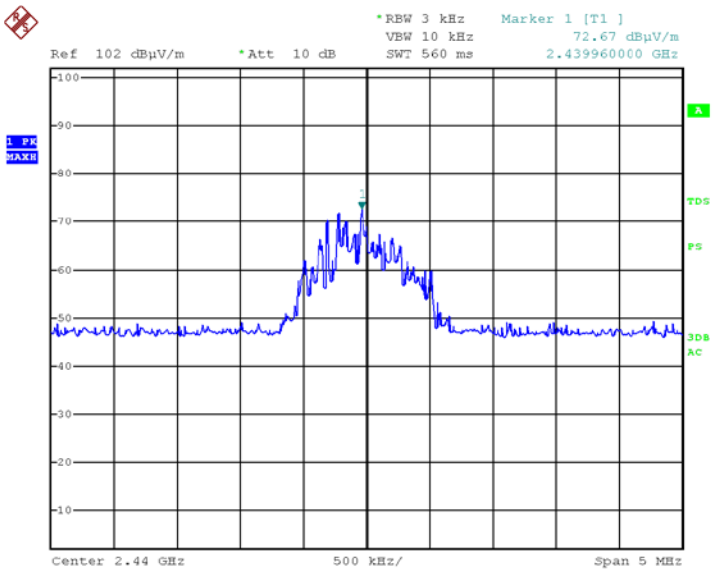

Figure 69 — 2440.0MHz - BLE

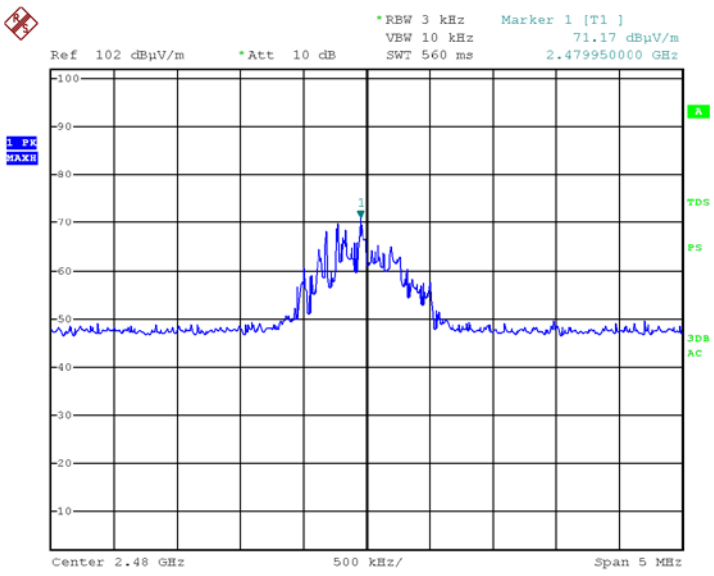

Figure 70 — 2480.0MHz - BLE

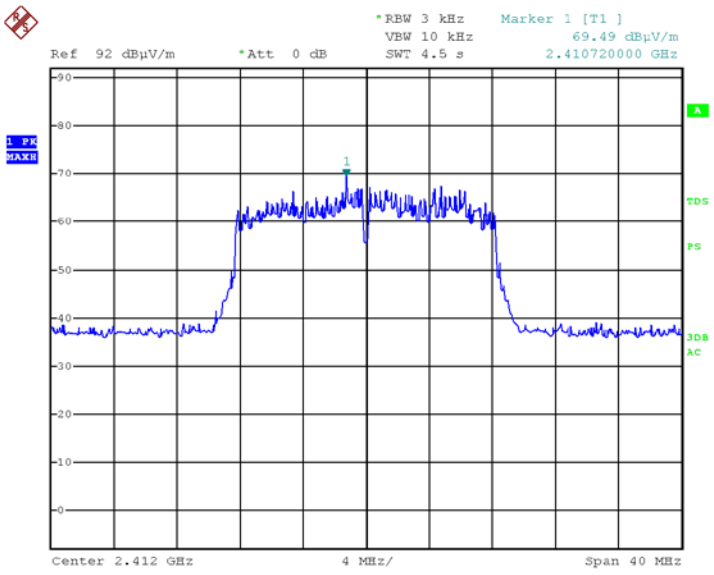

Figure 71 — 2412.0MHz - Wi-Fi/g

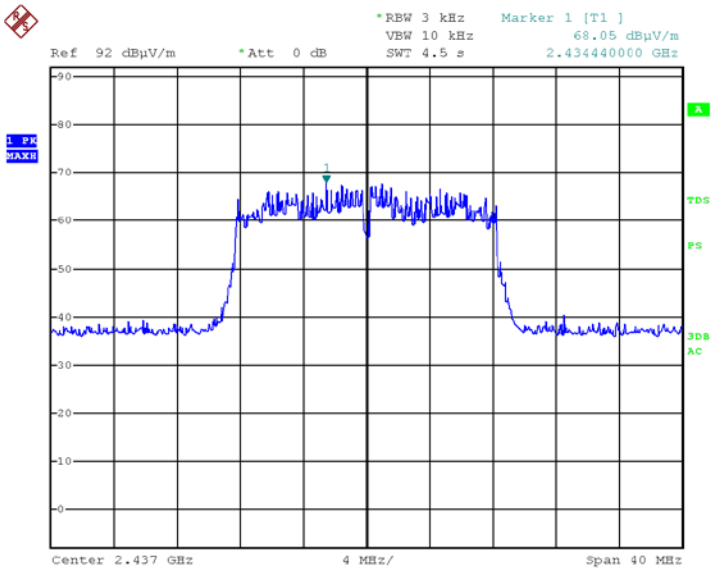

Figure 72 — 2437.0MHz - Wi-Fi/g

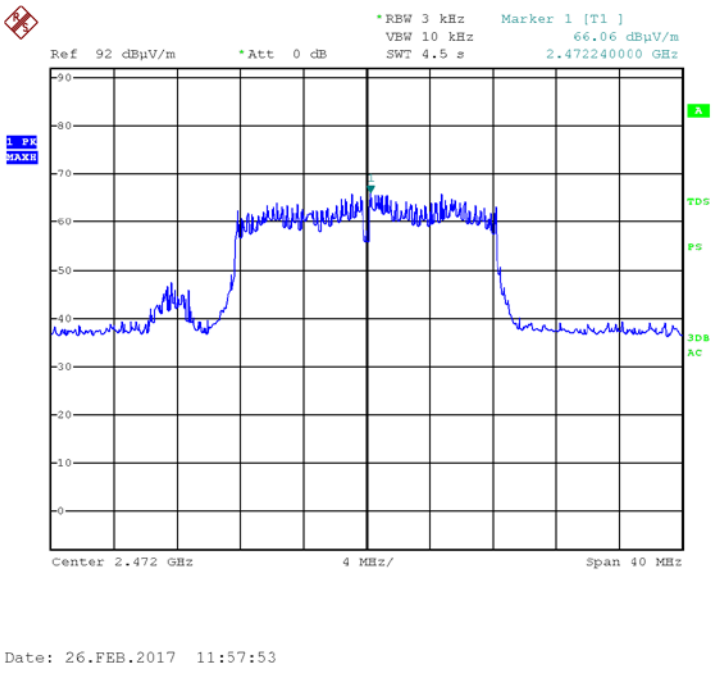

Figure 73 — 2462.0MHz - Wi-Fi/g

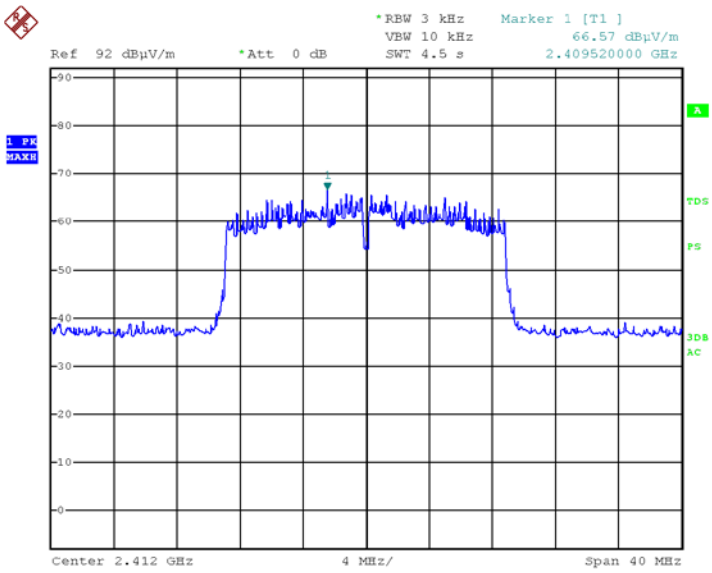

Figure 74 — 2412.0MHz - Wi-Fi/n

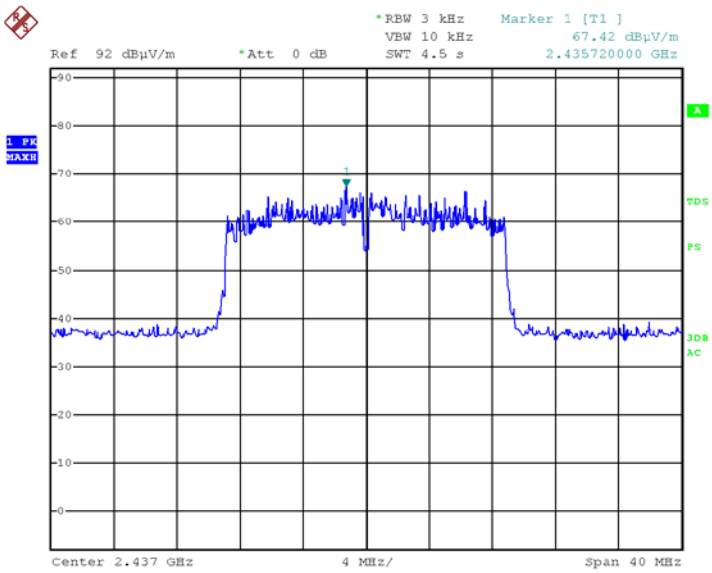

Figure 75 — 2437.0MHz - Wi-Fi/n

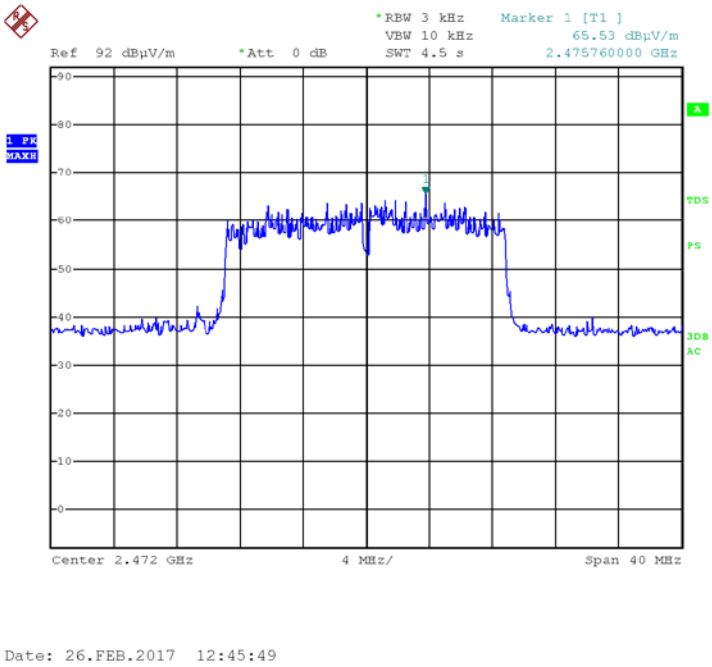

Figure 76 — 2462.0MHz - Wi-Fi/n

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.

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

JOHANSON TECHNOLOGY

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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:

Conducted power output = 8dBm + 1dBi (antenna gain) = 9dBm = 7.9mW

[(max. power of channel, including tune-up tolerance, mW)/(min. test separation distance, mm)] *· [√f(GHz)]

=7.9/5 * 1.55=2.45 this value is less than 3.0 for 1-g SAR and ≤ 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 (MHz)	LOSS (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 [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 [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 1)
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