



EMC TEST REPORT

(FULL COMPLIANCE)

Report Number: 102965577BOX-017

Project Number: G102965577

Report Issue Date: 06/15/2017

Model(s) Tested: 7100MHB (Wi-Fi)

Model(s) Not Tested but declared equivalent by the

client: 7150MHB

Standards: FCC Part 15 Subpart C: 04/2017

FCC Part 15 Subpart B: 04/2017

RSS 247 Issue 2: 02/2017

RSS 102 Issue 5: 03/2015

ICES 003 Issue 6: 01/2016

Tested by:
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Client:
Philips Lifeline.
111 Lawrence St
Framingham, MA 01702-8156
USA

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1 Introduction and Conclusion

The tests indicated in section 2.0 were performed on the product constructed as described in section 4.0. The remaining test sections are the verbatim text from the actual data sheets used during the investigation. These test sections include the test name, the specified test Method, a list of the actual Test Equipment Used, documentation Photos, Results and raw Data. No additions, deviations, or exclusions have been made from the standard(s) unless specifically noted.

Based on the results of our investigation, we have concluded the product tested **complies** with the requirements of the standard(s) indicated. The results obtained in this test report pertain only to the item(s) tested. Intertek does not make any claims of compliance for samples or variants which were not tested.

2 Test Summary

Section	Test full name	Result
3	Client Information	
4	Description of Equipment Under Test and Variant Models	
5	System Setup and Method	
6	Output Power (CFR47 FCC Part 15 Subpart C (15.247): 04/2017 RSS 247: 02/2017)	Pass
7	Power Spectral Density (CFR47 FCC Part 15 Subpart C (15.247): 04/2017 RSS 247: 02/2017)	Pass
8	Occupied (99%) and 6 dB Bandwidth (CFR47 FCC Part 15 Subpart C (15.247): 04/2017 RSS 247: 02/2017)	Pass
9	Transmitter Spurious Emissions (Band Edge, Out of Band, Digital Device and Receiver) (CFR47 FCC Part 15 Subpart C (15.247): 04/2017 CFR47 FCC Part 15 Subpart B: 04/2017 RSS 247: 02/2017 ICES 003: 01/2016)	Pass
10	AC Mains Conducted Emissions (CFR47 FCC Part 15 Subpart B: 04/2017 ICES 003: 01/2016)	Pass
11	Revision History	

3 Client Information**This EUT was tested at the request of:**

Client: Philips Lifeline
111 Lawrence St
Framingham, MA 01702-8156
USA

Contact: Bill Bekdash
Telephone: +972 9 9603900
Fax: None
Email: bill.bekdash@philips.com

4 Description of Equipment Under Test and Variant Models

Manufacturer: Philips Lifeline
111 Lawrence St
Framingham, MA 01702-8156
USA.

Equipment Under Test			
Description	Manufacturer	Model Number	Serial Number
Medical alert system.	Philips Lifeline	7100MHB	1040000149 (Unit 1)
Medical alert system.	Philips Lifeline	7100MHB	1040000123 (Unit 2)
AC Adapter	Philips Lifeline	MANGO018-7.5B-USA2	(Not Labeled)

Receive Date:	04/20/2017
Received Condition:	Good
Type:	Production

Description of Equipment Under Test (provided by client)
Medical alert system.

Equipment Under Test Power Configuration			
Rated Voltage	Rated Current	Rated Frequency	Number of Phases
Button (Internal Battery)	0.5A	N/A	Single
AC - DC Adapter (100-240VAC)	0.5A	50/60Hz	Single

Operating modes of the EUT:

No.	Descriptions of EUT Exercising
1	Wi-Fi Transmit mode
2	Wi-Fi Receive mode
3	Charging mode

Software used by the EUT:

No.	Descriptions of EUT Exercising
1	X2.0.41619

Radio/Receiver Characteristics	
Frequency Band(s)	2412-2462 MHz
Modulation Type(s)	802.11b (DSSS with CCK) and 802.11g (OFDM)
Data rates	802.11b 1, 2, 5.5, 11 Mbps 802.11g 6, 9, 12, 18, 24, 36, 48, 54 Mbps
Maximum Output Power (Peak) EIRP	28.90 dBm
Maximum Output Power (Average) Conducted	15.54 dBm
Maximum Output Power (Average) EIRP	17.94 dBm
Test Channels	Low Channel – 2412 MHz Mid Channel – 2437 MHz High Channel – 2462 MHz
Occupied Bandwidth	16.48 MHz
Frequency Hopper: Number of Hopping Channels	N/A
Frequency Hopper: Channel Dwell Time	N/A
MIMO Information (# of Transmit and Receive antenna ports)	N/A
Equipment Type	Standalone Host
ETSI LBT/Adaptivity	N/A
ETSI Adaptivity Type	N/A
ETSI Temperature Category (I, II, III)	N/A
ETSI Receiver Category (1, 2, 3)	N/A
Antenna Type and Gain	2.4 dBi

Variant Models:

The following variant models were not tested as part of this evaluation, but have been identified by the manufacturer as being electrically identical models, depopulated models, or with reasonable similarity to the model(s) tested. Intertek does not make any claims of compliance for samples or variants which were not tested.

7150MHB

The models covered are 7100MHB and 7150MHB. The tested model covered in this report is the 7100MHB. It represents the worse-case of the 7100MHB and 7150MHB. According to the manufacturer, the 7150MHB help button is physically identical to the 7100MHB. They both have the exactly same hardware, including cellular, WiFi, Bluetooth modules. The only difference is in the firmware configuration on turning ON/OFF the ISM transceiver.

The 7100MHB is configured to use the ISM transceiver to report alarm and device status via 7000C or 7000L communicator when the 7100MHB user is at home. The 7150MHB is configured NOT to use the ISM transceiver, and report alarm and device status ONLY through the cell network. Note that when the 7100MHB is out of the 7000C or 7000L communicators range, it behaves exactly the same as 7150MHB

5 System Setup and Method

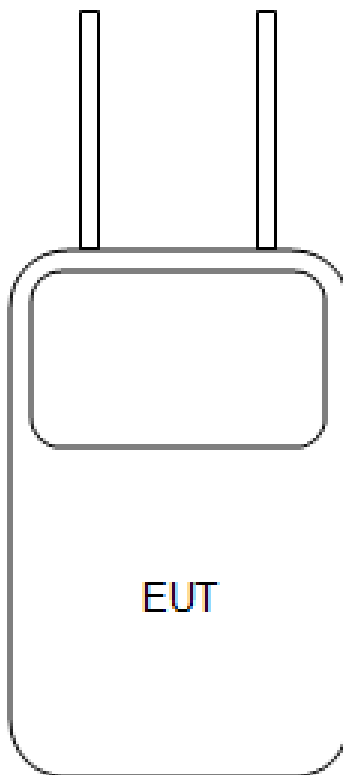
Cables					
ID	Description	Length (m)	Shielding	Ferrites	Termination
--	Adapter to charging cup (fixed)	2	None	None	Charger

Support Equipment			
Description	Manufacturer	Model Number	Serial Number
Laptop	Toshiba	Satellite-C55-B5272	5E247026P

5.1 Method:

Configuration as required by FCC Part 15 Subpart C: 06/2017, FCC Part 15 Subpart B: 06/2017, RSS 247 Issue 2: 02/2017, RSS 102 Issue 5: 03/2015, ICES 003 Issue 6: 01/2016, ANSI C 63.10: 2013 and ANSI C 63.4: 2014

5.2 EUT Block Diagram:



6 Output Power

6.1 Method

Tests are performed in accordance with FCC Part 15 Subpart C (15.247) and RSS 247.

TEST SITE: 10m ALSE

The 10m ALSE is 13m (Length) x 21m (Depth) x 10m (Height) with the effective size in terms of space from the tips of the absorber is 12m (Length) x 20m (Depth) x 8.5m (Height). This chamber achieves broadband performance using a unique arrangement of hybrid and ferrite tile absorber. This chamber has a built in 3m diameter turntable (Embedded type). The metal structure of the table makes electrical connection around the entire circumference of the turntable to the ground plane with a metal brush type connection. The turntable is located on one end of the chamber and the antennas are mounted 3 and 10 meters away at the other end of the chamber on the adjustable an Antenna Mast. The antenna mast is a non-conductive bore sighted type with remote control of antenna height and polarization. The Antenna Mast and the turntable can be remotely controlled through the controller located in the adjacent Control room. A Styrofoam table 80 cm high is used for table-top equipment.

Measurement Uncertainty

Measurement	Frequency Range	Expanded Uncertainty (k=2)	Ucispr
Radiated Emissions, 10m	30-1000 MHz	4.6 dB	6.3 dB
Radiated Emissions, 3m	30-1000 MHz	5.3 dB	6.3 dB
Radiated Emissions, 3m	1-6 GHz	4.5 dB	5.2 dB
Radiated Emissions, 3m	6-15 GHz	5.2 dB	5.5 dB
Radiated Emissions, 3m	15-18 GHz	5.0 dB	5.5 dB
Radiated Emissions, 3m	18-40 GHz	5.0 dB	5.5 dB

As shown in the table above our radiated emissions U_{lab} is less than the corresponding U_{CISPR} reference value in CISPR 16-4-2 Table 1, hence the compliance of the product is only based on the measured value, and no measurement uncertainty correction is required, based on CISPR 22 and CISPR 11 (for 2006 and later revisions) Clause 11.

Sample Calculation

The field strength is calculated by adding the Antenna Factor and Cable Factor, and subtracting the Amplifier Gain (if any) from the measured reading. The basic equation with a sample calculation is as follows:

$$FS = RA + AF + CF - AG$$

Where

- FS = Field Strength in dB μ V/m
- RA = Receiver Amplitude (including preamplifier) in dB μ V
- CF = Cable Attenuation Factor in dB
- AF = Antenna Factor in dB
- AG = Amplifier Gain in dB

In the following table(s), the reading shown on the data table reflects the preamplifier gain. An example for the calculations in the following table is as follows.

Assume a receiver reading of 52.0 dB μ V is obtained. The antenna factor of 7.4 dB and cable factor of 1.6 dB is added. The amplifier gain of 29 dB is subtracted, giving a field strength of 32 dB μ V/m. This value in dB μ V/m was converted to its corresponding level in μ V/m.

RA = 52.0 dB μ V
 AF = 7.4 dB/m
 CF = 1.6 dB
 AG = 29.0 dB
 FS = 32 dB μ V/m

To convert from dB μ V to μ V or mV the following was used:

$$UF = 10^{(NF / 20)} \text{ where } UF = \text{Net Reading in } \mu\text{V}$$

$$NF = \text{Net Reading in dB}\mu\text{V}$$

Example:

$$FS = RA + AF + CF - AG = 52.0 + 7.4 + 1.6 - 29.0 = 32.0$$

$$UF = 10^{(32 \text{ dB}\mu\text{V} / 20)} = 39.8 \mu\text{V/m}$$

Alternately, when C5 Software is used, the "Level" includes all losses and gains and is compared directly in the "Margin" column to the "Limit". "AF" is the Antenna Factor; "PA+CL" are Preamp and Cable Loss. These are already accounted for in the "Level" column.

6.2 Test Equipment Used:

Asset	Description	Manufacturer	Model	Serial	Cal Date	Cal Due
DAV004'	Weather Station	Davis Instruments	7400	PE80529A61 A	05/02/2016	05/02/2017
145128'	EMI Receiver (20 Hz - 40 Ghz)	Rohde & Schwarz	ESIB 40	839283/001	03/15/2017	03/15/2018
ROS005'	ETSI Test System	Rhode & Schwarz	TS8997	N/A	09/15/2016	09/15/2017
ETS002'	1-18GHz DRG Horn Antenna	ETS Lindgren	3117	00143260	05/13/2016	05/13/2017
145-416'	Cables 145-420 145-423 145-424 145-408	Huber + Suhner	3m Track B cables	multiple	07/30/2016	07/30/2017

Software Utilized:

Name	Manufacturer	Version
EMI Boxborough.xlsx	Intertek Boxborough	08/27/2010

6.3 Results:

The sample tested was found to Comply. The limit for maximum peak output power(conducted) is 1 watt (30 dBm) for devices with antenna gain less than 6dBi. Since test was performed in radiated fashion a limit of 36dBm is used.

6.4 Plots/Data:

Output Power Low Channel (2412 MHz) – X axis (802.11b @ 1, 2, 5.5 and 11 Mbps. 802.11g @ 6, 9, 12, 24, 36, 48, 54 Mbps)

Detector Type	Ant. Pol. (V/H)	Frequency MHz	Reading dB(uV)	Antenna Factor dB(1/m)	Cable Loss dB	Pre-amp Factor dB	Distance Factor dB	EIRP Net dBm	EIRP Limit dBm	Margin dB	Bandwidth
4/7/17 - 21C/33%/983mbar, Note: RF Output Power, Low Channel 2412 MHz, 1 Mb/s data rate , power setting = 15, X-axis											
Note: EIRP Obtained by applying the path loss correction for a 3m test distance, E(dBuV/m)@3m - 95.22 = dBm EIRP											
PK	V	2412.000	74.98	32.17	5.12	0.00	0.00	17.05	36.00	-18.95	30/80 MHz
PK	H	2412.000	77.98	32.17	5.12	0.00	0.00	20.05	36.00	-15.95	30/80 MHz
Note: RF Output Power, Low Channel 2412 MHz, 2 Mb/s data rate , power setting = 15, X-axis											
Note: EIRP Obtained by applying the path loss correction for a 3m test distance, E(dBuV/m)@3m - 95.22 = dBm EIRP											
PK	V	2412.000	75.37	32.17	5.12	0.00	0.00	17.44	36.00	-18.56	30/80 MHz
PK	H	2412.000	78.27	32.17	5.12	0.00	0.00	20.34	36.00	-15.66	30/80 MHz
Note: RF Output Power, Low Channel 2412 MHz, 5.5 Mb/s data rate , power setting = 15, X-axis											
Note: EIRP Obtained by applying the path loss correction for a 3m test distance, E(dBuV/m)@3m - 95.22 = dBm EIRP											
PK	V	2412.000	75.36	32.17	5.12	0.00	0.00	17.43	36.00	-18.57	30/80 MHz
PK	H	2412.000	78.43	32.17	5.12	0.00	0.00	20.50	36.00	-15.50	30/80 MHz
Note: RF Output Power, Low Channel 2412 MHz, 11 Mb/s data rate , power setting = 15, X-axis											
Note: EIRP Obtained by applying the path loss correction for a 3m test distance, E(dBuV/m)@3m - 95.22 = dBm EIRP											
PK	V	2412.000	75.39	32.17	5.12	0.00	0.00	17.46	36.00	-18.54	30/80 MHz
PK	H	2412.000	78.49	32.17	5.12	0.00	0.00	20.56	36.00	-15.44	30/80 MHz
Note: RF Output Power, Low Channel 2412 MHz, 6 Mb/s data rate , power setting = 15, X-axis											
Note: EIRP Obtained by applying the path loss correction for a 3m test distance, E(dBuV/m)@3m - 95.22 = dBm EIRP											
PK	V	2412.000	79.75	32.17	5.12	0.00	0.00	21.82	36.00	-14.18	30/80 MHz
PK	H	2412.000	82.20	32.17	5.12	0.00	0.00	24.27	36.00	-11.73	30/80 MHz
Note: RF Output Power, Low Channel 2412 MHz, 9 Mb/s data rate , power setting = 15, X-axis											
Note: EIRP Obtained by applying the path loss correction for a 3m test distance, E(dBuV/m)@3m - 95.22 = dBm EIRP											
PK	V	2412.000	79.39	32.17	5.12	0.00	0.00	21.46	36.00	-14.54	30/80 MHz
PK	H	2412.000	82.97	32.17	5.12	0.00	0.00	25.04	36.00	-10.96	30/80 MHz
Note: RF Output Power, Low Channel 2412 MHz, 12 Mb/s data rate , power setting = 15, X-axis											
Note: EIRP Obtained by applying the path loss correction for a 3m test distance, E(dBuV/m)@3m - 95.22 = dBm EIRP											
PK	V	2412.000	79.87	32.17	5.12	0.00	0.00	21.94	36.00	-14.06	30/80 MHz
PK	H	2412.000	82.49	32.17	5.12	0.00	0.00	24.56	36.00	-11.44	30/80 MHz
Note: RF Output Power, Low Channel 2412 MHz, 18 Mb/s data rate , power setting = 15, X-axis											
Note: EIRP Obtained by applying the path loss correction for a 3m test distance, E(dBuV/m)@3m - 95.22 = dBm EIRP											
PK	V	2412.000	79.77	32.17	5.12	0.00	0.00	21.84	36.00	-14.16	30/80 MHz
PK	H	2412.000	82.79	32.17	5.12	0.00	0.00	24.86	36.00	-11.14	30/80 MHz
Note: RF Output Power, Low Channel 2412 MHz, 24 Mb/s data rate , power setting = 15, X-axis											
Note: EIRP Obtained by applying the path loss correction for a 3m test distance, E(dBuV/m)@3m - 95.22 = dBm EIRP											
PK	V	2412.000	80.30	32.17	5.12	0.00	0.00	22.37	36.00	-13.63	30/80 MHz
PK	H	2412.000	82.58	32.17	5.12	0.00	0.00	24.65	36.00	-11.35	30/80 MHz
Note: RF Output Power, Low Channel 2412 MHz, 36 Mb/s data rate , power setting = 15, X-axis											
Note: EIRP Obtained by applying the path loss correction for a 3m test distance, E(dBuV/m)@3m - 95.22 = dBm EIRP											
PK	V	2412.000	79.60	32.17	5.12	0.00	0.00	21.67	36.00	-14.33	30/80 MHz
PK	H	2412.000	83.10	32.17	5.12	0.00	0.00	25.17	36.00	-10.83	30/80 MHz
Note: RF Output Power, Low Channel 2412 MHz, 48 Mb/s data rate , power setting = 15, X-axis											
Note: EIRP Obtained by applying the path loss correction for a 3m test distance, E(dBuV/m)@3m - 95.22 = dBm EIRP											
PK	V	2412.000	80.43	32.17	5.12	0.00	0.00	22.50	36.00	-13.50	30/80 MHz
PK	H	2412.000	83.47	32.17	5.12	0.00	0.00	25.54	36.00	-10.46	30/80 MHz
Note: RF Output Power, Low Channel 2412 MHz, 54 Mb/s data rate , power setting = 15, X-axis											
Note: EIRP Obtained by applying the path loss correction for a 3m test distance, E(dBuV/m)@3m - 95.22 = dBm EIRP											
PK	V	2412.000	79.77	32.17	5.12	0.00	0.00	21.84	36.00	-14.16	30/80 MHz
PK	H	2412.000	83.09	32.17	5.12	0.00	0.00	25.16	36.00	-10.84	30/80 MHz

Output Power Low Channel (2412 MHz) – Y axis (802.11b @ 1, 2, 5.5 and 11 Mbps. 802.11g @ 6, 9, 12, 24, 36, 48, 54 Mbps)

Detector Type	Ant. Pol. (V/H)	Frequency (MHz)	Reading (dB(uV))	Antenna Factor (dB(1/m))	Cable Loss (dB)	Pre-amp Factor (dB)	Distance Factor (dB)	EIRP Net (dBm)	EIRP Limit (dBm)	Margin (dB)	Bandwidth
4/8/17 - 21C/24%/996mbar, Note: RF Output Power, Low Channel 2412 MHz, 1 Mb/s data rate , power setting = 15, Y-axis											
Note: EIRP Obtained by applying the path loss correction for a 3m test distance, E(dBuV/m)@3m - 95.22 = dBm EIRP											
PK	V	2412.000	77.57	32.17	5.12	0.00	0.00	19.64	36.00	-16.36	30/80 MHz
PK	H	2412.000	76.38	32.17	5.12	0.00	0.00	18.45	36.00	-17.55	30/80 MHz
Note: RF Output Power, Low Channel 2412 MHz, 2 Mb/s data rate , power setting = 15, Y-axis											
Note: EIRP Obtained by applying the path loss correction for a 3m test distance, E(dBuV/m)@3m - 95.22 = dBm EIRP											
PK	V	2412.000	78.08	32.17	5.12	0.00	0.00	20.15	36.00	-15.85	30/80 MHz
PK	H	2412.000	77.07	32.17	5.12	0.00	0.00	19.14	36.00	-16.86	30/80 MHz
Note: RF Output Power, Low Channel 2412 MHz, 5.5 Mb/s data rate , power setting = 15, Y-axis											
Note: EIRP Obtained by applying the path loss correction for a 3m test distance, E(dBuV/m)@3m - 95.22 = dBm EIRP											
PK	V	2412.000	78.07	32.17	5.12	0.00	0.00	20.14	36.00	-15.86	30/80 MHz
PK	H	2412.000	76.96	32.17	5.12	0.00	0.00	19.03	36.00	-16.97	30/80 MHz
Note: RF Output Power, Low Channel 2412 MHz, 11 Mb/s data rate , power setting = 15, Y-axis											
Note: EIRP Obtained by applying the path loss correction for a 3m test distance, E(dBuV/m)@3m - 95.22 = dBm EIRP											
PK	V	2412.000	78.38	32.17	5.12	0.00	0.00	20.45	36.00	-15.55	30/80 MHz
PK	H	2412.000	77.01	32.17	5.12	0.00	0.00	19.08	36.00	-16.92	30/80 MHz
Note: RF Output Power, Low Channel 2412 MHz, 6 Mb/s data rate , power setting = 15, Y-axis											
Note: EIRP Obtained by applying the path loss correction for a 3m test distance, E(dBuV/m)@3m - 95.22 = dBm EIRP											
PK	V	2412.000	82.90	32.17	5.12	0.00	0.00	24.97	36.00	-11.03	30/80 MHz
PK	H	2412.000	81.27	32.17	5.12	0.00	0.00	23.34	36.00	-12.66	30/80 MHz
Note: RF Output Power, Low Channel 2412 MHz, 9 Mb/s data rate , power setting = 15, Y-axis											
Note: EIRP Obtained by applying the path loss correction for a 3m test distance, E(dBuV/m)@3m - 95.22 = dBm EIRP											
PK	V	2412.000	82.90	32.17	5.12	0.00	0.00	24.97	36.00	-11.03	30/80 MHz
PK	H	2412.000	81.08	32.17	5.12	0.00	0.00	23.15	36.00	-12.85	30/80 MHz
Note: RF Output Power, Low Channel 2412 MHz, 12 Mb/s data rate , power setting = 15, Y-axis											
Note: EIRP Obtained by applying the path loss correction for a 3m test distance, E(dBuV/m)@3m - 95.22 = dBm EIRP											
PK	V	2412.000	82.65	32.17	5.12	0.00	0.00	24.72	36.00	-11.28	30/80 MHz
PK	H	2412.000	80.93	32.17	5.12	0.00	0.00	23.00	36.00	-13.00	30/80 MHz
Note: RF Output Power, Low Channel 2412 MHz, 18 Mb/s data rate , power setting = 15, Y-axis											
Note: EIRP Obtained by applying the path loss correction for a 3m test distance, E(dBuV/m)@3m - 95.22 = dBm EIRP											
PK	V	2412.000	82.72	32.17	5.12	0.00	0.00	24.79	36.00	-11.21	30/80 MHz
PK	H	2412.000	80.83	32.17	5.12	0.00	0.00	22.90	36.00	-13.10	30/80 MHz
Note: RF Output Power, Low Channel 2412 MHz, 24 Mb/s data rate , power setting = 15, Y-axis											
Note: EIRP Obtained by applying the path loss correction for a 3m test distance, E(dBuV/m)@3m - 95.22 = dBm EIRP											
PK	V	2412.000	82.81	32.17	5.12	0.00	0.00	24.88	36.00	-11.12	30/80 MHz
PK	H	2412.000	81.00	32.17	5.12	0.00	0.00	23.07	36.00	-12.93	30/80 MHz
Note: RF Output Power, Low Channel 2412 MHz, 36 Mb/s data rate , power setting = 15, Y-axis											
Note: EIRP Obtained by applying the path loss correction for a 3m test distance, E(dBuV/m)@3m - 95.22 = dBm EIRP											
PK	V	2412.000	82.84	32.17	5.12	0.00	0.00	24.91	36.00	-11.09	30/80 MHz
PK	H	2412.000	81.12	32.17	5.12	0.00	0.00	23.19	36.00	-12.81	30/80 MHz
Note: RF Output Power, Low Channel 2412 MHz, 48 Mb/s data rate , power setting = 15, Y-axis											
Note: EIRP Obtained by applying the path loss correction for a 3m test distance, E(dBuV/m)@3m - 95.22 = dBm EIRP											
PK	V	2412.000	83.81	32.17	5.12	0.00	0.00	25.88	36.00	-10.12	30/80 MHz
PK	H	2412.000	81.50	32.17	5.12	0.00	0.00	23.57	36.00	-12.43	30/80 MHz
Note: RF Output Power, Low Channel 2412 MHz, 54 Mb/s data rate , power setting = 15, Y-axis											
Note: EIRP Obtained by applying the path loss correction for a 3m test distance, E(dBuV/m)@3m - 95.22 = dBm EIRP											
PK	V	2412.000	82.91	32.17	5.12	0.00	0.00	24.98	36.00	-11.02	30/80 MHz
PK	H	2412.000	81.09	32.17	5.12	0.00	0.00	23.16	36.00	-12.84	30/80 MHz

Output Power Low Channel (2412 MHz) – Z axis (802.11b @ 1, 2, 5.5 and 11 Mbps. 802.11g @ 6, 9, 12, 24, 36, 48, 54 Mbps)

Detector Type	Ant. Pol. (V/H)	Frequency (MHz)	Reading (dB(uV))	Antenna Factor (dB(1/m))	Cable Loss (dB)	Pre-amp Factor (dB)	Distance Factor (dB)	EIRP Net (dBm)	EIRP Limit (dBm)	Margin (dB)	Bandwidth (MHz)
4/8/17 - 21C/24%/996mbar, Note: RF Output Power, Low Channel 2412 MHz, 1 Mb/s data rate , power setting = 15, Z-axis											
Note: EIRP Obtained by applying the path loss correction for a 3m test distance, E(dBuV/m)@3m - 95.22 = dBm EIRP											
PK	V	2412.000	69.60	32.17	5.12	0.00	0.00	11.67	36.00	-24.33	30/80 MHz
PK	H	2412.000	80.13	32.17	5.12	0.00	0.00	22.20	36.00	-13.80	30/80 MHz
Note: RF Output Power, Low Channel 2412 MHz, 2 Mb/s data rate , power setting = 15, Z-axis											
Note: EIRP Obtained by applying the path loss correction for a 3m test distance, E(dBuV/m)@3m - 95.22 = dBm EIRP											
PK	V	2412.000	70.26	32.17	5.12	0.00	0.00	12.33	36.00	-23.67	30/80 MHz
PK	H	2412.000	80.62	32.17	5.12	0.00	0.00	22.69	36.00	-13.31	30/80 MHz
Note: RF Output Power, Low Channel 2412 MHz, 5.5 Mb/s data rate , power setting = 15, Z-axis											
Note: EIRP Obtained by applying the path loss correction for a 3m test distance, E(dBuV/m)@3m - 95.22 = dBm EIRP											
PK	V	2412.000	70.35	32.17	5.12	0.00	0.00	12.42	36.00	-23.58	30/80 MHz
PK	H	2412.000	80.71	32.17	5.12	0.00	0.00	22.78	36.00	-13.22	30/80 MHz
Note: RF Output Power, Low Channel 2412 MHz, 11 Mb/s data rate , power setting = 15, Z-axis											
Note: EIRP Obtained by applying the path loss correction for a 3m test distance, E(dBuV/m)@3m - 95.22 = dBm EIRP											
PK	V	2412.000	70.44	32.17	5.12	0.00	0.00	12.51	36.00	-23.49	30/80 MHz
PK	H	2412.000	80.85	32.17	5.12	0.00	0.00	22.92	36.00	-13.08	30/80 MHz
Note: RF Output Power, Low Channel 2412 MHz, 6 Mb/s data rate , power setting = 15, Z-axis											
Note: EIRP Obtained by applying the path loss correction for a 3m test distance, E(dBuV/m)@3m - 95.22 = dBm EIRP											
PK	V	2412.000	74.62	32.17	5.12	0.00	0.00	16.69	36.00	-19.31	30/80 MHz
PK	H	2412.000	85.00	32.17	5.12	0.00	0.00	27.07	36.00	-8.93	30/80 MHz
Note: RF Output Power, Low Channel 2412 MHz, 9 Mb/s data rate , power setting = 15, Z-axis											
Note: EIRP Obtained by applying the path loss correction for a 3m test distance, E(dBuV/m)@3m - 95.22 = dBm EIRP											
PK	V	2412.000	74.67	32.17	5.12	0.00	0.00	16.74	36.00	-19.26	30/80 MHz
PK	H	2412.000	84.77	32.17	5.12	0.00	0.00	26.84	36.00	-9.16	30/80 MHz
Note: RF Output Power, Low Channel 2412 MHz, 12 Mb/s data rate , power setting = 15, Z-axis											
Note: EIRP Obtained by applying the path loss correction for a 3m test distance, E(dBuV/m)@3m - 95.22 = dBm EIRP											
PK	V	2412.000	74.70	32.17	5.12	0.00	0.00	16.77	36.00	-19.23	30/80 MHz
PK	H	2412.000	84.96	32.17	5.12	0.00	0.00	27.03	36.00	-8.97	30/80 MHz
Note: RF Output Power, Low Channel 2412 MHz, 18 Mb/s data rate , power setting = 15, Z-axis											
Note: EIRP Obtained by applying the path loss correction for a 3m test distance, E(dBuV/m)@3m - 95.22 = dBm EIRP											
PK	V	2412.000	74.80	32.17	5.12	0.00	0.00	16.87	36.00	-19.13	30/80 MHz
PK	H	2412.000	84.99	32.17	5.12	0.00	0.00	27.06	36.00	-8.94	30/80 MHz
Note: RF Output Power, Low Channel 2412 MHz, 24 Mb/s data rate , power setting = 15, Z-axis											
Note: EIRP Obtained by applying the path loss correction for a 3m test distance, E(dBuV/m)@3m - 95.22 = dBm EIRP											
PK	V	2412.000	74.00	32.17	5.12	0.00	0.00	16.07	36.00	-19.93	30/80 MHz
PK	H	2412.000	84.92	32.17	5.12	0.00	0.00	26.99	36.00	-9.01	30/80 MHz
Note: RF Output Power, Low Channel 2412 MHz, 36 Mb/s data rate , power setting = 15, Z-axis											
Note: EIRP Obtained by applying the path loss correction for a 3m test distance, E(dBuV/m)@3m - 95.22 = dBm EIRP											
PK	V	2412.000	74.77	32.17	5.12	0.00	0.00	16.84	36.00	-19.16	30/80 MHz
PK	H	2412.000	85.15	32.17	5.12	0.00	0.00	27.22	36.00	-8.78	30/80 MHz
Note: RF Output Power, Low Channel 2412 MHz, 48 Mb/s data rate , power setting = 15, Z-axis											
Note: EIRP Obtained by applying the path loss correction for a 3m test distance, E(dBuV/m)@3m - 95.22 = dBm EIRP											
PK	V	2412.000	75.13	32.17	5.12	0.00	0.00	17.20	36.00	-18.80	30/80 MHz
PK	H	2412.000	85.49	32.17	5.12	0.00	0.00	27.56	36.00	-8.44	30/80 MHz
Note: RF Output Power, Low Channel 2412 MHz, 54 Mb/s data rate , power setting = 15, Z-axis											
Note: EIRP Obtained by applying the path loss correction for a 3m test distance, E(dBuV/m)@3m - 95.22 = dBm EIRP											
PK	V	2412.000	74.55	32.17	5.12	0.00	0.00	16.62	36.00	-19.38	30/80 MHz
PK	H	2412.000	85.09	32.17	5.12	0.00	0.00	27.16	36.00	-8.84	30/80 MHz

Output Power Mid Channel (2437 MHz) – X axis (802.11b @ 1, 2, 5.5 and 11 Mbps. 802.11g @ 6, 9, 12, 24, 36, 48, 54 Mbps)

Detector	Ant. Pol.	Frequency MHz	Reading dB(uV)	Antenna Factor dB(1/m)	Cable Loss dB	Pre-amp Factor dB	Distance Factor dB	EIRP Net dBm	EIRP Limit dBm	Margin dB	Bandwidth
4/7/17 - 21C/33%/983mbar, Note: RF Output Power, Mid Channel 2437 MHz, 1 Mb/s data rate , power setting = 15, X-axis											
Note: EIRP Obtained by applying the path loss correction for a 3m test distance, E(dBuV/m)@3m - 95.22 = dBm EIRP											
PK	V	2437.000	73.45	32.22	5.14	0.00	0.00	15.59	36.00	-20.41	30/80 MHz
PK	H	2437.000	79.58	32.22	5.14	0.00	0.00	21.72	36.00	-14.28	30/80 MHz
Note: RF Output Power, Mid Channel 2437 MHz, 2 Mb/s data rate , power setting = 15, X-axis											
Note: EIRP Obtained by applying the path loss correction for a 3m test distance, E(dBuV/m)@3m - 95.22 = dBm EIRP											
PK	V	2437.000	74.90	32.22	5.14	0.00	0.00	17.04	36.00	-18.96	30/80 MHz
PK	H	2437.000	79.79	32.22	5.14	0.00	0.00	21.93	36.00	-14.07	30/80 MHz
Note: RF Output Power, Mid Channel 2437 MHz, 5.5 Mb/s data rate , power setting = 15, X-axis											
Note: EIRP Obtained by applying the path loss correction for a 3m test distance, E(dBuV/m)@3m - 95.22 = dBm EIRP											
PK	V	2437.000	76.12	32.22	5.14	0.00	0.00	18.26	36.00	-17.74	30/80 MHz
PK	H	2437.000	79.76	32.22	5.14	0.00	0.00	21.90	36.00	-14.10	30/80 MHz
Note: RF Output Power, Mid Channel 2437 MHz, 11 Mb/s data rate , power setting = 15, X-axis											
Note: EIRP Obtained by applying the path loss correction for a 3m test distance, E(dBuV/m)@3m - 95.22 = dBm EIRP											
PK	V	2437.000	75.78	32.22	5.14	0.00	0.00	17.92	36.00	-18.08	30/80 MHz
PK	H	2437.000	79.97	32.22	5.14	0.00	0.00	22.11	36.00	-13.89	30/80 MHz
Note: RF Output Power, Mid Channel 2437 MHz, 6 Mb/s data rate , power setting = 15, X-axis											
Note: EIRP Obtained by applying the path loss correction for a 3m test distance, E(dBuV/m)@3m - 95.22 = dBm EIRP											
PK	V	2437.000	79.84	32.22	5.14	0.00	0.00	21.98	36.00	-14.02	30/80 MHz
PK	H	2437.000	83.91	32.22	5.14	0.00	0.00	26.05	36.00	-9.95	30/80 MHz
Note: RF Output Power, Mid Channel 2437 MHz, 9 Mb/s data rate , power setting = 15, X-axis											
Note: EIRP Obtained by applying the path loss correction for a 3m test distance, E(dBuV/m)@3m - 95.22 = dBm EIRP											
PK	V	2437.000	74.59	32.22	5.14	0.00	0.00	16.73	36.00	-19.27	30/80 MHz
PK	H	2437.000	84.33	32.22	5.14	0.00	0.00	26.47	36.00	-9.53	30/80 MHz
Note: RF Output Power, Mid Channel 2437 MHz, 12 Mb/s data rate , power setting = 15, X-axis											
Note: EIRP Obtained by applying the path loss correction for a 3m test distance, E(dBuV/m)@3m - 95.22 = dBm EIRP											
PK	V	2437.000	74.96	32.22	5.14	0.00	0.00	17.10	36.00	-18.90	30/80 MHz
PK	H	2437.000	84.09	32.22	5.14	0.00	0.00	26.23	36.00	-9.77	30/80 MHz
Note: RF Output Power, Mid Channel 2437 MHz, 18 Mb/s data rate , power setting = 15, X-axis											
Note: EIRP Obtained by applying the path loss correction for a 3m test distance, E(dBuV/m)@3m - 95.22 = dBm EIRP											
PK	V	2437.000	71.81	32.22	5.14	0.00	0.00	13.95	36.00	-22.05	30/80 MHz
PK	H	2437.000	84.28	32.22	5.14	0.00	0.00	26.42	36.00	-9.58	30/80 MHz
Note: RF Output Power, Mid Channel 2437 MHz, 24 Mb/s data rate , power setting = 15, X-axis											
Note: EIRP Obtained by applying the path loss correction for a 3m test distance, E(dBuV/m)@3m - 95.22 = dBm EIRP											
PK	V	2437.000	72.30	32.22	5.14	0.00	0.00	14.44	36.00	-21.56	30/80 MHz
PK	H	2437.000	84.15	32.22	5.14	0.00	0.00	26.29	36.00	-9.71	30/80 MHz
Note: RF Output Power, Mid Channel 2437 MHz, 36 Mb/s data rate , power setting = 15, X-axis											
Note: EIRP Obtained by applying the path loss correction for a 3m test distance, E(dBuV/m)@3m - 95.22 = dBm EIRP											
PK	V	2437.000	80.25	32.22	5.14	0.00	0.00	22.39	36.00	-13.61	30/80 MHz
PK	H	2437.000	84.31	32.22	5.14	0.00	0.00	26.45	36.00	-9.55	30/80 MHz
Note: RF Output Power, Mid Channel 2437 MHz, 48 Mb/s data rate , power setting = 15, X-axis											
Note: EIRP Obtained by applying the path loss correction for a 3m test distance, E(dBuV/m)@3m - 95.22 = dBm EIRP											
PK	V	2437.000	80.78	32.22	5.14	0.00	0.00	22.92	36.00	-13.08	30/80 MHz
PK	H	2437.000	84.90	32.22	5.14	0.00	0.00	27.04	36.00	-8.96	30/80 MHz
Note: RF Output Power, Mid Channel 2437 MHz, 54 Mb/s data rate , power setting = 15, X-axis											
Note: EIRP Obtained by applying the path loss correction for a 3m test distance, E(dBuV/m)@3m - 95.22 = dBm EIRP											
PK	V	2437.000	80.34	32.22	5.14	0.00	0.00	22.48	36.00	-13.52	30/80 MHz
PK	H	2437.000	84.63	32.22	5.14	0.00	0.00	26.77	36.00	-9.23	30/80 MHz

Output Power Mid Channel (2437 MHz) – Y axis (802.11b @ 1, 2, 5.5 and 11 Mbps. 802.11g @ 6, 9, 12, 24, 36, 48, 54 Mbps)

Detector Type	Ant. Pol. (V/H)	Frequency (MHz)	Reading (dB(uV))	Antenna Factor (dB(1/m))	Cable Loss (dB)	Pre-amp Factor (dB)	Distance Factor (dB)	EIRP Net (dBm)	EIRP Limit (dBm)	Margin (dB)	Bandwidth
4/7/17 - 21C/33%/983mbar, Note: RF Output Power, Mid Channel 2437 MHz, 1 Mb/s data rate , power setting = 15, Y-axis											
Note: EIRP Obtained by applying the path loss correction for a 3m test distance, E(dBuV/m)@3m - 95.22 = dBm EIRP											
PK	V	2437.000	76.12	32.22	5.14	0.00	0.00	18.26	36.00	-17.74	30/80 MHz
PK	H	2437.000	81.19	32.22	5.14	0.00	0.00	23.33	36.00	-12.67	30/80 MHz
Note: RF Output Power, Mid Channel 2437 MHz, 2 Mb/s data rate , power setting = 15, Y-axis											
Note: EIRP Obtained by applying the path loss correction for a 3m test distance, E(dBuV/m)@3m - 95.22 = dBm EIRP											
PK	V	2437.000	77.27	32.22	5.14	0.00	0.00	19.41	36.00	-16.59	30/80 MHz
PK	H	2437.000	81.12	32.22	5.14	0.00	0.00	23.26	36.00	-12.74	30/80 MHz
Note: RF Output Power, Mid Channel 2437 MHz, 5.5 Mb/s data rate , power setting = 15, Y-axis											
Note: EIRP Obtained by applying the path loss correction for a 3m test distance, E(dBuV/m)@3m - 95.22 = dBm EIRP											
PK	V	2437.000	79.79	32.22	5.14	0.00	0.00	21.93	36.00	-14.07	30/80 MHz
PK	H	2437.000	81.12	32.22	5.14	0.00	0.00	23.26	36.00	-12.74	30/80 MHz
Note: RF Output Power, Mid Channel 2437 MHz, 11 Mb/s data rate , power setting = 15, Y-axis											
Note: EIRP Obtained by applying the path loss correction for a 3m test distance, E(dBuV/m)@3m - 95.22 = dBm EIRP											
PK	V	2437.000	77.27	32.22	5.14	0.00	0.00	19.41	36.00	-16.59	30/80 MHz
PK	H	2437.000	82.34	32.22	5.14	0.00	0.00	24.48	36.00	-11.52	30/80 MHz
Note: RF Output Power, Mid Channel 2437 MHz, 6 Mb/s data rate , power setting = 15, Y-axis											
Note: EIRP Obtained by applying the path loss correction for a 3m test distance, E(dBuV/m)@3m - 95.22 = dBm EIRP											
PK	V	2437.000	82.22	32.22	5.14	0.00	0.00	24.36	36.00	-11.64	30/80 MHz
PK	H	2437.000	86.16	32.22	5.14	0.00	0.00	28.30	36.00	-7.70	30/80 MHz
Note: RF Output Power, Mid Channel 2437 MHz, 9 Mb/s data rate , power setting = 15, Y-axis											
Note: EIRP Obtained by applying the path loss correction for a 3m test distance, E(dBuV/m)@3m - 95.22 = dBm EIRP											
PK	V	2437.000	77.17	32.22	5.14	0.00	0.00	19.31	36.00	-16.69	30/80 MHz
PK	H	2437.000	85.56	32.22	5.14	0.00	0.00	27.70	36.00	-8.30	30/80 MHz
Note: RF Output Power, Mid Channel 2437 MHz, 12 Mb/s data rate , power setting = 15, Y-axis											
Note: EIRP Obtained by applying the path loss correction for a 3m test distance, E(dBuV/m)@3m - 95.22 = dBm EIRP											
PK	V	2437.000	77.27	32.22	5.14	0.00	0.00	19.41	36.00	-16.59	30/80 MHz
PK	H	2437.000	86.16	32.22	5.14	0.00	0.00	28.30	36.00	-7.70	30/80 MHz
Note: RF Output Power, Mid Channel 2437 MHz, 18 Mb/s data rate , power setting = 15, Y-axis											
Note: EIRP Obtained by applying the path loss correction for a 3m test distance, E(dBuV/m)@3m - 95.22 = dBm EIRP											
PK	V	2437.000	74.14	32.22	5.14	0.00	0.00	16.28	36.00	-19.72	30/80 MHz
PK	H	2437.000	86.76	32.22	5.14	0.00	0.00	28.90	36.00	-7.10	30/80 MHz
Note: RF Output Power, Mid Channel 2437 MHz, 24 Mb/s data rate , power setting = 15, Y-axis											
Note: EIRP Obtained by applying the path loss correction for a 3m test distance, E(dBuV/m)@3m - 95.22 = dBm EIRP											
PK	V	2437.000	75.34	32.22	5.14	0.00	0.00	17.48	36.00	-18.52	30/80 MHz
PK	H	2437.000	86.12	32.22	5.14	0.00	0.00	28.26	36.00	-7.74	30/80 MHz
Note: RF Output Power, Mid Channel 2437 MHz, 36 Mb/s data rate , power setting = 15, Y-axis											
Note: EIRP Obtained by applying the path loss correction for a 3m test distance, E(dBuV/m)@3m - 95.22 = dBm EIRP											
PK	V	2437.000	82.19	32.22	5.14	0.00	0.00	24.33	36.00	-11.67	30/80 MHz
PK	H	2437.000	86.67	32.22	5.14	0.00	0.00	28.81	36.00	-7.19	30/80 MHz
Note: RF Output Power, Mid Channel 2437 MHz, 48 Mb/s data rate , power setting = 15, Y-axis											
Note: EIRP Obtained by applying the path loss correction for a 3m test distance, E(dBuV/m)@3m - 95.22 = dBm EIRP											
PK	V	2437.000	79.98	32.22	5.14	0.00	0.00	22.12	36.00	-13.88	30/80 MHz
PK	H	2437.000	85.14	32.22	5.14	0.00	0.00	27.28	36.00	-8.72	30/80 MHz
Note: RF Output Power, Mid Channel 2437 MHz, 54 Mb/s data rate , power setting = 15, Y-axis											
Note: EIRP Obtained by applying the path loss correction for a 3m test distance, E(dBuV/m)@3m - 95.22 = dBm EIRP											
PK	V	2437.000	81.12	32.22	5.14	0.00	0.00	23.26	36.00	-12.74	30/80 MHz
PK	H	2437.000	85.89	32.22	5.14	0.00	0.00	28.03	36.00	-7.97	30/80 MHz

Output Power Mid Channel (2437 MHz) – Z axis (802.11b @ 1, 2, 5.5 and 11 Mbps. 802.11g @ 6, 9, 12, 24, 36, 48, 54 Mbps)

Detector Type	Ant. Pol. (V/H)	Frequency (MHz)	Reading (dB(uV))	Antenna Factor (dB(1/m))	Cable Loss (dB)	Pre-amp Factor (dB)	Distance Factor (dB)	EIRP Net (dBm)	EIRP Limit (dBm)	Margin (dB)	Bandwidth
Note: RF Output Power, Mid Channel 2437 MHz, 1 Mb/s data rate , power setting = 15, Z-axis											
Note: EIRP Obtained by applying the path loss correction for a 3m test distance, E(dBuV/m)@3m - 95.22 = dBm EIRP											
PK	V	2437.000	77.18	32.22	5.14	0.00	0.00	19.32	36.00	-16.68	30/80 MHz
PK	H	2437.000	71.12	32.22	5.14	0.00	0.00	13.26	36.00	-22.74	30/80 MHz
Note: RF Output Power, Mid Channel 2437 MHz, 2 Mb/s data rate , power setting = 15, Z-axis											
Note: EIRP Obtained by applying the path loss correction for a 3m test distance, E(dBuV/m)@3m - 95.22 = dBm EIRP											
PK	V	2437.000	77.27	32.22	5.14	0.00	0.00	19.41	36.00	-16.59	30/80 MHz
PK	H	2437.000	71.12	32.22	5.14	0.00	0.00	13.26	36.00	-22.74	30/80 MHz
Note: RF Output Power, Mid Channel 2437 MHz, 5.5 Mb/s data rate , power setting = 15, Z-axis											
Note: EIRP Obtained by applying the path loss correction for a 3m test distance, E(dBuV/m)@3m - 95.22 = dBm EIRP											
PK	V	2437.000	75.65	32.22	5.14	0.00	0.00	17.79	36.00	-18.21	30/80 MHz
PK	H	2437.000	75.54	32.22	5.14	0.00	0.00	17.68	36.00	-18.32	30/80 MHz
Note: RF Output Power, Mid Channel 2437 MHz, 11 Mb/s data rate , power setting = 15, Z-axis											
Note: EIRP Obtained by applying the path loss correction for a 3m test distance, E(dBuV/m)@3m - 95.22 = dBm EIRP											
PK	V	2437.000	76.22	32.22	5.14	0.00	0.00	18.36	36.00	-17.64	30/80 MHz
PK	H	2437.000	72.12	32.22	5.14	0.00	0.00	14.26	36.00	-21.74	30/80 MHz
Note: RF Output Power, Mid Channel 2437 MHz, 6 Mb/s data rate , power setting = 15, Z-axis											
Note: EIRP Obtained by applying the path loss correction for a 3m test distance, E(dBuV/m)@3m - 95.22 = dBm EIRP											
PK	V	2437.000	80.29	32.22	5.14	0.00	0.00	22.43	36.00	-13.57	30/80 MHz
PK	H	2437.000	77.27	32.22	5.14	0.00	0.00	19.41	36.00	-16.59	30/80 MHz
Note: RF Output Power, Mid Channel 2437 MHz, 9 Mb/s data rate , power setting = 15, Z-axis											
Note: EIRP Obtained by applying the path loss correction for a 3m test distance, E(dBuV/m)@3m - 95.22 = dBm EIRP											
PK	V	2437.000	81.19	32.22	5.14	0.00	0.00	23.33	36.00	-12.67	30/80 MHz
PK	H	2437.000	72.56	32.22	5.14	0.00	0.00	14.70	36.00	-21.30	30/80 MHz
Note: RF Output Power, Mid Channel 2437 MHz, 12 Mb/s data rate , power setting = 15, Z-axis											
Note: EIRP Obtained by applying the path loss correction for a 3m test distance, E(dBuV/m)@3m - 95.22 = dBm EIRP											
PK	V	2437.000	81.39	32.22	5.14	0.00	0.00	23.53	36.00	-12.47	30/80 MHz
PK	H	2437.000	72.22	32.22	5.14	0.00	0.00	14.36	36.00	-21.64	30/80 MHz
Note: RF Output Power, Mid Channel 2437 MHz, 18 Mb/s data rate , power setting = 15, Z-axis											
Note: EIRP Obtained by applying the path loss correction for a 3m test distance, E(dBuV/m)@3m - 95.22 = dBm EIRP											
PK	V	2437.000	80.27	32.22	5.14	0.00	0.00	22.41	36.00	-13.59	30/80 MHz
PK	H	2437.000	69.89	32.22	5.14	0.00	0.00	12.03	36.00	-23.97	30/80 MHz
Note: RF Output Power, Mid Channel 2437 MHz, 24 Mb/s data rate , power setting = 15, Z-axis											
Note: EIRP Obtained by applying the path loss correction for a 3m test distance, E(dBuV/m)@3m - 95.22 = dBm EIRP											
PK	V	2437.000	81.12	32.22	5.14	0.00	0.00	23.26	36.00	-12.74	30/80 MHz
PK	H	2437.000	70.18	32.22	5.14	0.00	0.00	12.32	36.00	-23.68	30/80 MHz
Note: RF Output Power, Mid Channel 2437 MHz, 36 Mb/s data rate , power setting = 15, Z-axis											
Note: EIRP Obtained by applying the path loss correction for a 3m test distance, E(dBuV/m)@3m - 95.22 = dBm EIRP											
PK	V	2437.000	81.12	32.22	5.14	0.00	0.00	23.26	36.00	-12.74	30/80 MHz
PK	H	2437.000	78.86	32.22	5.14	0.00	0.00	21.00	36.00	-15.00	30/80 MHz
Note: RF Output Power, Mid Channel 2437 MHz, 48 Mb/s data rate , power setting = 15, Z-axis											
Note: EIRP Obtained by applying the path loss correction for a 3m test distance, E(dBuV/m)@3m - 95.22 = dBm EIRP											
PK	V	2437.000	82.28	32.22	5.14	0.00	0.00	24.42	36.00	-11.58	30/80 MHz
PK	H	2437.000	78.86	32.22	5.14	0.00	0.00	21.00	36.00	-15.00	30/80 MHz
Note: RF Output Power, Mid Channel 2437 MHz, 54 Mb/s data rate , power setting = 15, Z-axis											
Note: EIRP Obtained by applying the path loss correction for a 3m test distance, E(dBuV/m)@3m - 95.22 = dBm EIRP											
PK	V	2437.000	81.52	32.22	5.14	0.00	0.00	23.66	36.00	-12.34	30/80 MHz
PK	H	2437.000	78.68	32.22	5.14	0.00	0.00	20.82	36.00	-15.18	30/80 MHz

Output Power High Channel (2462 MHz) – X axis (802.11b @ 1, 2, 5.5 and 11 Mbps. 802.11g @ 6, 9, 12, 24, 36, 48, 54 Mbps)

Detector	Ant. Pol.	Frequency	Reading	Antenna Factor	Cable Loss	Pre-amp Factor	Distance Factor	EIRP Net	EIRP Limit	Margin	Bandwidth
Type	(V/H)	MHz	dB(uV)	dB(1/m)	dB	dB	dB	dBm	dBm	dB	
Note: RF Output Power, High Channel 2462 MHz, 1 Mb/s data rate , power setting = 15, X-axis											
Note: EIRP Obtained by applying the path loss correction for a 3m test distance, E(dBuV/m)@3m - 95.22 = dBm EIRP											
PK	V	2462.000	68.87	32.26	5.16	0.00	0.00	11.08	36.00	-24.92	30/80 MHz
PK	H	2462.000	78.56	32.26	5.16	0.00	0.00	20.77	36.00	-15.23	30/80 MHz
Note: RF Output Power, High Channel 2462 MHz, 2 Mb/s data rate , power setting = 15, X-axis											
Note: EIRP Obtained by applying the path loss correction for a 3m test distance, E(dBuV/m)@3m - 95.22 = dBm EIRP											
PK	V	2462.000	68.10	32.26	5.16	0.00	0.00	10.31	36.00	-25.69	30/80 MHz
PK	H	2462.000	78.46	32.26	5.16	0.00	0.00	20.67	36.00	-15.33	30/80 MHz
Note: RF Output Power, High Channel 2462 MHz, 5.5 Mb/s data rate , power setting = 15, X-axis											
Note: EIRP Obtained by applying the path loss correction for a 3m test distance, E(dBuV/m)@3m - 95.22 = dBm EIRP											
PK	V	2462.000	69.91	32.26	5.16	0.00	0.00	12.12	36.00	-23.88	30/80 MHz
PK	H	2462.000	78.64	32.26	5.16	0.00	0.00	20.85	36.00	-15.15	30/80 MHz
Note: RF Output Power, High Channel 2462 MHz, 11 Mb/s data rate , power setting = 15, X-axis											
Note: EIRP Obtained by applying the path loss correction for a 3m test distance, E(dBuV/m)@3m - 95.22 = dBm EIRP											
PK	V	2462.000	70.40	32.26	5.16	0.00	0.00	12.61	36.00	-23.39	30/80 MHz
PK	H	2462.000	83.69	32.26	5.16	0.00	0.00	25.66	36.00	-10.34	30/80 MHz
Note: RF Output Power, High Channel 2462 MHz, 6 Mb/s data rate , power setting = 15, X-axis											
Note: EIRP Obtained by applying the path loss correction for a 3m test distance, E(dBuV/m)@3m - 95.22 = dBm EIRP											
PK	V	2462.000	70.85	32.26	5.16	0.00	0.00	13.06	36.00	-22.94	30/80 MHz
PK	H	2462.000	83.76	32.26	5.16	0.00	0.00	25.97	36.00	-10.03	30/80 MHz
Note: RF Output Power, High Channel 2462 MHz, 9 Mb/s data rate , power setting = 15, X-axis											
Note: EIRP Obtained by applying the path loss correction for a 3m test distance, E(dBuV/m)@3m - 95.22 = dBm EIRP											
PK	V	2462.000	77.37	32.26	5.16	0.00	0.00	19.58	36.00	-16.42	30/80 MHz
PK	H	2462.000	83.45	32.26	5.16	0.00	0.00	25.66	36.00	-10.34	30/80 MHz
Note: RF Output Power, High Channel 2462 MHz, 12 Mb/s data rate , power setting = 15, X-axis											
Note: EIRP Obtained by applying the path loss correction for a 3m test distance, E(dBuV/m)@3m - 95.22 = dBm EIRP											
PK	V	2462.000	77.28	32.26	5.16	0.00	0.00	19.49	36.00	-16.51	30/80 MHz
PK	H	2462.000	83.24	32.26	5.16	0.00	0.00	25.45	36.00	-10.55	30/80 MHz
Note: RF Output Power, High Channel 2462 MHz, 18 Mb/s data rate , power setting = 15, X-axis											
Note: EIRP Obtained by applying the path loss correction for a 3m test distance, E(dBuV/m)@3m - 95.22 = dBm EIRP											
PK	V	2462.000	77.22	32.26	5.16	0.00	0.00	19.43	36.00	-16.57	30/80 MHz
PK	H	2462.000	83.46	32.26	5.16	0.00	0.00	25.67	36.00	-10.33	30/80 MHz
Note: RF Output Power, High Channel 2462 MHz, 24 Mb/s data rate , power setting = 15, X-axis											
Note: EIRP Obtained by applying the path loss correction for a 3m test distance, E(dBuV/m)@3m - 95.22 = dBm EIRP											
PK	V	2462.000	78.69	32.26	5.16	0.00	0.00	20.90	36.00	-15.10	30/80 MHz
PK	H	2462.000	83.10	32.26	5.16	0.00	0.00	25.31	36.00	-10.69	30/80 MHz
Note: RF Output Power, High Channel 2462 MHz, 36 Mb/s data rate , power setting = 15, X-axis											
Note: EIRP Obtained by applying the path loss correction for a 3m test distance, E(dBuV/m)@3m - 95.22 = dBm EIRP											
PK	V	2462.000	77.03	32.26	5.16	0.00	0.00	19.24	36.00	-16.76	30/80 MHz
PK	H	2462.000	83.63	32.26	5.16	0.00	0.00	25.84	36.00	-10.16	30/80 MHz
Note: RF Output Power, High Channel 2462 MHz, 48 Mb/s data rate , power setting = 15, X-axis											
Note: EIRP Obtained by applying the path loss correction for a 3m test distance, E(dBuV/m)@3m - 95.22 = dBm EIRP											
PK	V	2462.000	78.52	32.26	5.16	0.00	0.00	20.73	36.00	-15.27	30/80 MHz
PK	H	2462.000	83.48	32.26	5.16	0.00	0.00	25.69	36.00	-10.31	30/80 MHz
Note: RF Output Power, High Channel 2462 MHz, 54 Mb/s data rate , power setting = 15, X-axis											
Note: EIRP Obtained by applying the path loss correction for a 3m test distance, E(dBuV/m)@3m - 95.22 = dBm EIRP											
PK	V	2462.000	77.52	32.26	5.16	0.00	0.00	19.73	36.00	-16.27	30/80 MHz
PK	H	2462.000	82.52	32.26	5.16	0.00	0.00	24.73	36.00	-11.27	30/80 MHz

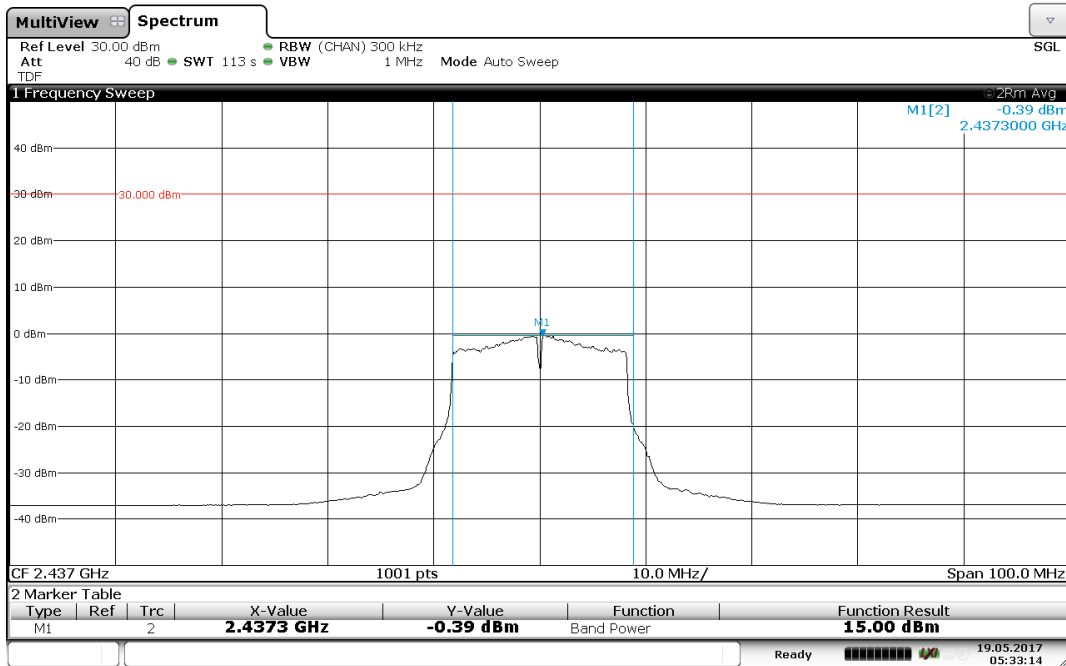
Output Power High Channel (2462 MHz) – Y axis (802.11b @ 1, 2, 5.5 and 11 Mbps. 802.11g @ 6, 9, 12, 24, 36, 48, 54 Mbps)

Detector Type	Ant. Pol. (V/H)	Frequency (MHz)	Reading (dB(uV))	Antenna Factor (dB(1/m))	Cable Loss (dB)	Pre-amp Factor (dB)	Distance Factor (dB)	EIRP Net (dBm)	EIRP Limit (dBm)	Margin (dB)	Bandwidth
Note: RF Output Power, High Channel 2462 MHz, 1 Mb/s data rate , power setting = 15, Y-axis											
Note: EIRP Obtained by applying the path loss correction for a 3m test distance, E(dBuV/m)@3m - 95.22 = dBm EIRP											
PK	V	2462.000	71.17	32.26	5.16	0.00	0.00	13.38	36.00	-22.62	30/80 MHz
PK	H	2462.000	81.12	32.26	5.16	0.00	0.00	23.33	36.00	-12.67	30/80 MHz
Note: RF Output Power, High Channel 2462 MHz, 2 Mb/s data rate , power setting = 15, Y-axis											
Note: EIRP Obtained by applying the path loss correction for a 3m test distance, E(dBuV/m)@3m - 95.22 = dBm EIRP											
PK	V	2462.000	71.09	32.26	5.16	0.00	0.00	13.30	36.00	-22.70	30/80 MHz
PK	H	2462.000	79.98	32.26	5.16	0.00	0.00	22.19	36.00	-13.81	30/80 MHz
Note: RF Output Power, High Channel 2462 MHz, 5.5 Mb/s data rate , power setting = 15, Y-axis											
Note: EIRP Obtained by applying the path loss correction for a 3m test distance, E(dBuV/m)@3m - 95.22 = dBm EIRP											
PK	V	2462.000	71.09	32.26	5.16	0.00	0.00	13.30	36.00	-22.70	30/80 MHz
PK	H	2462.000	80.12	32.26	5.16	0.00	0.00	22.33	36.00	-13.67	30/80 MHz
Note: RF Output Power, High Channel 2462 MHz, 11 Mb/s data rate , power setting = 15, Y-axis											
Note: EIRP Obtained by applying the path loss correction for a 3m test distance, E(dBuV/m)@3m - 95.22 = dBm EIRP											
PK	V	2462.000	73.17	32.26	5.16	0.00	0.00	15.38	36.00	-20.62	30/80 MHz
PK	H	2462.000	85.29	32.26	5.16	0.00	0.00	27.50	36.00	-8.50	30/80 MHz
Note: RF Output Power, High Channel 2462 MHz, 6 Mb/s data rate , power setting = 15, Y-axis											
Note: EIRP Obtained by applying the path loss correction for a 3m test distance, E(dBuV/m)@3m - 95.22 = dBm EIRP											
PK	V	2462.000	75.57	32.26	5.16	0.00	0.00	17.78	36.00	-18.22	30/80 MHz
PK	H	2462.000	86.22	32.26	5.16	0.00	0.00	28.43	36.00	-7.57	30/80 MHz
Note: RF Output Power, High Channel 2462 MHz, 9 Mb/s data rate , power setting = 15, Y-axis											
Note: EIRP Obtained by applying the path loss correction for a 3m test distance, E(dBuV/m)@3m - 95.22 = dBm EIRP											
PK	V	2462.000	79.89	32.26	5.16	0.00	0.00	22.10	36.00	-13.90	30/80 MHz
PK	H	2462.000	86.17	32.26	5.16	0.00	0.00	28.38	36.00	-7.62	30/80 MHz
Note: RF Output Power, High Channel 2462 MHz, 12 Mb/s data rate , power setting = 15, Y-axis											
Note: EIRP Obtained by applying the path loss correction for a 3m test distance, E(dBuV/m)@3m - 95.22 = dBm EIRP											
PK	V	2462.000	79.19	32.26	5.16	0.00	0.00	21.40	36.00	-14.60	30/80 MHz
PK	H	2462.000	86.12	32.26	5.16	0.00	0.00	28.33	36.00	-7.67	30/80 MHz
Note: RF Output Power, High Channel 2462 MHz, 18 Mb/s data rate , power setting = 15, Y-axis											
Note: EIRP Obtained by applying the path loss correction for a 3m test distance, E(dBuV/m)@3m - 95.22 = dBm EIRP											
PK	V	2462.000	79.19	32.26	5.16	0.00	0.00	21.40	36.00	-14.60	30/80 MHz
PK	H	2462.000	86.02	32.26	5.16	0.00	0.00	28.23	36.00	-7.77	30/80 MHz
Note: RF Output Power, High Channel 2462 MHz, 24 Mb/s data rate , power setting = 15, Y-axis											
Note: EIRP Obtained by applying the path loss correction for a 3m test distance, E(dBuV/m)@3m - 95.22 = dBm EIRP											
PK	V	2462.000	80.89	32.26	5.16	0.00	0.00	23.10	36.00	-12.90	30/80 MHz
PK	H	2462.000	86.02	32.26	5.16	0.00	0.00	28.23	36.00	-7.77	30/80 MHz
Note: RF Output Power, High Channel 2462 MHz, 36 Mb/s data rate , power setting = 15, Y-axis											
Note: EIRP Obtained by applying the path loss correction for a 3m test distance, E(dBuV/m)@3m - 95.22 = dBm EIRP											
PK	V	2462.000	79.89	32.26	5.16	0.00	0.00	22.10	36.00	-13.90	30/80 MHz
PK	H	2462.000	86.32	32.26	5.16	0.00	0.00	28.53	36.00	-7.47	30/80 MHz
Note: RF Output Power, High Channel 2462 MHz, 48 Mb/s data rate , power setting = 15, Y-axis											
Note: EIRP Obtained by applying the path loss correction for a 3m test distance, E(dBuV/m)@3m - 95.22 = dBm EIRP											
PK	V	2462.000	80.98	32.26	5.16	0.00	0.00	23.19	36.00	-12.81	30/80 MHz
PK	H	2462.000	86.22	32.26	5.16	0.00	0.00	28.43	36.00	-7.57	30/80 MHz
Note: RF Output Power, High Channel 2462 MHz, 54 Mb/s data rate , power setting = 15, Y-axis											
Note: EIRP Obtained by applying the path loss correction for a 3m test distance, E(dBuV/m)@3m - 95.22 = dBm EIRP											
PK	V	2462.000	79.98	32.26	5.16	0.00	0.00	22.19	36.00	-13.81	30/80 MHz
PK	H	2462.000	85.12	32.26	5.16	0.00	0.00	27.33	36.00	-8.67	30/80 MHz

Output Power High Channel (2462 MHz) – Z axis (802.11b @ 1, 2, 5.5 and 11 Mbps. 802.11g @ 6, 9, 12, 24, 36, 48, 54 Mbps)

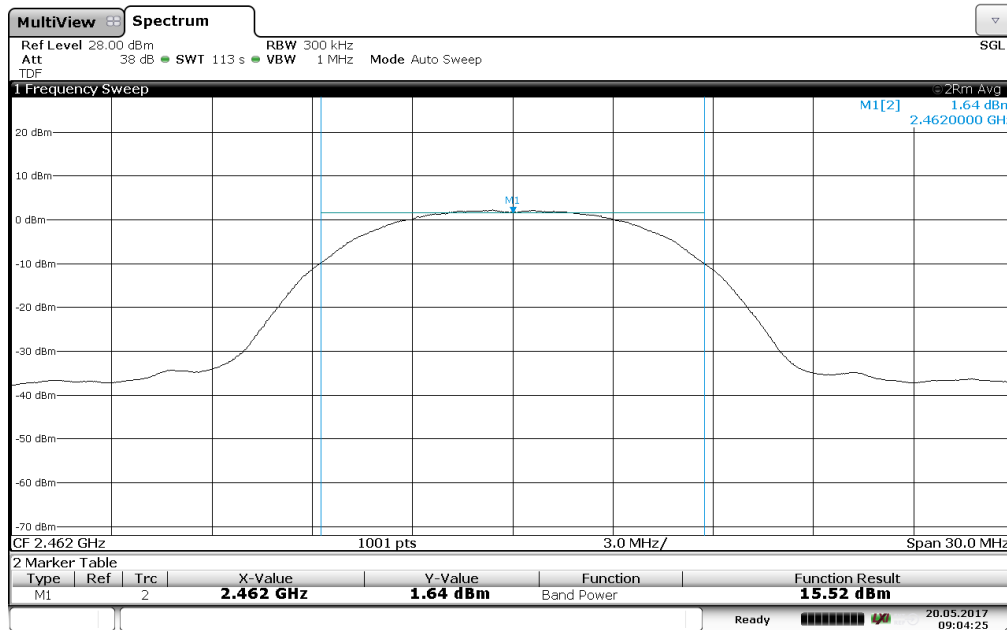
Detector Type	Ant. Pol. (V/H)	Frequency (MHz)	Reading (dB(uV))	Antenna Factor (dB(1/m))	Cable Loss (dB)	Pre-amp Factor (dB)	Distance Factor (dB)	EIRP Net (dBm)	EIRP Limit (dBm)	Margin (dB)	Bandwidth
Note: RF Output Power, High Channel 2462 MHz, 1 Mb/s data rate , power setting = 15, Z-axis											
Note: EIRP Obtained by applying the path loss correction for a 3m test distance, E(dBuV/m)@3m - 95.22 = dBm EIRP											
PK	V	2462.000	75.55	32.26	5.16	0.00	0.00	17.76	36.00	-18.24	30/80 MHz
PK	H	2462.000	66.26	32.26	5.16	0.00	0.00	8.47	36.00	-27.53	30/80 MHz
Note: RF Output Power, High Channel 2462 MHz, 2 Mb/s data rate , power setting = 15, Z-axis											
Note: EIRP Obtained by applying the path loss correction for a 3m test distance, E(dBuV/m)@3m - 95.22 = dBm EIRP											
PK	V	2462.000	75.98	32.26	5.16	0.00	0.00	18.19	36.00	-17.81	30/80 MHz
PK	H	2462.000	66.26	32.26	5.16	0.00	0.00	8.47	36.00	-27.53	30/80 MHz
Note: RF Output Power, High Channel 2462 MHz, 5.5 Mb/s data rate , power setting = 15, Z-axis											
Note: EIRP Obtained by applying the path loss correction for a 3m test distance, E(dBuV/m)@3m - 95.22 = dBm EIRP											
PK	V	2462.000	77.02	32.26	5.16	0.00	0.00	19.23	36.00	-16.77	30/80 MHz
PK	H	2462.000	66.26	32.26	5.16	0.00	0.00	8.47	36.00	-27.53	30/80 MHz
Note: RF Output Power, High Channel 2462 MHz, 11 Mb/s data rate , power setting = 15, Z-axis											
Note: EIRP Obtained by applying the path loss correction for a 3m test distance, E(dBuV/m)@3m - 95.22 = dBm EIRP											
PK	V	2462.000	81.02	32.26	5.16	0.00	0.00	23.23	36.00	-12.77	30/80 MHz
PK	H	2462.000	68.32	32.26	5.16	0.00	0.00	10.53	36.00	-25.47	30/80 MHz
Note: RF Output Power, High Channel 2462 MHz, 6 Mb/s data rate , power setting = 15, Z-axis											
Note: EIRP Obtained by applying the path loss correction for a 3m test distance, E(dBuV/m)@3m - 95.22 = dBm EIRP											
PK	V	2462.000	79.98	32.26	5.16	0.00	0.00	22.19	36.00	-13.81	30/80 MHz
PK	H	2462.000	68.26	32.26	5.16	0.00	0.00	10.47	36.00	-25.53	30/80 MHz
Note: RF Output Power, High Channel 2462 MHz, 9 Mb/s data rate , power setting = 15, Z-axis											
Note: EIRP Obtained by applying the path loss correction for a 3m test distance, E(dBuV/m)@3m - 95.22 = dBm EIRP											
PK	V	2462.000	81.29	32.26	5.16	0.00	0.00	23.50	36.00	-12.50	30/80 MHz
PK	H	2462.000	75.54	32.26	5.16	0.00	0.00	17.75	36.00	-18.25	30/80 MHz
Note: RF Output Power, High Channel 2462 MHz, 12 Mb/s data rate , power setting = 15, Z-axis											
Note: EIRP Obtained by applying the path loss correction for a 3m test distance, E(dBuV/m)@3m - 95.22 = dBm EIRP											
PK	V	2462.000	81.22	32.26	5.16	0.00	0.00	23.43	36.00	-12.57	30/80 MHz
PK	H	2462.000	74.87	32.26	5.16	0.00	0.00	17.08	36.00	-18.92	30/80 MHz
Note: RF Output Power, High Channel 2462 MHz, 18 Mb/s data rate , power setting = 15, Z-axis											
Note: EIRP Obtained by applying the path loss correction for a 3m test distance, E(dBuV/m)@3m - 95.22 = dBm EIRP											
PK	V	2462.000	80.19	32.26	5.16	0.00	0.00	22.40	36.00	-13.60	30/80 MHz
PK	H	2462.000	75.19	32.26	5.16	0.00	0.00	17.40	36.00	-18.60	30/80 MHz
Note: RF Output Power, High Channel 2462 MHz, 24 Mb/s data rate , power setting = 15, Z-axis											
Note: EIRP Obtained by applying the path loss correction for a 3m test distance, E(dBuV/m)@3m - 95.22 = dBm EIRP											
PK	V	2462.000	80.09	32.26	5.16	0.00	0.00	22.30	36.00	-13.70	30/80 MHz
PK	H	2462.000	75.12	32.26	5.16	0.00	0.00	17.33	36.00	-18.67	30/80 MHz
Note: RF Output Power, High Channel 2462 MHz, 36 Mb/s data rate , power setting = 15, Z-axis											
Note: EIRP Obtained by applying the path loss correction for a 3m test distance, E(dBuV/m)@3m - 95.22 = dBm EIRP											
PK	V	2462.000	79.89	32.26	5.16	0.00	0.00	22.10	36.00	-13.90	30/80 MHz
PK	H	2462.000	74.34	32.26	5.16	0.00	0.00	16.55	36.00	-19.45	30/80 MHz
Note: RF Output Power, High Channel 2462 MHz, 48 Mb/s data rate , power setting = 15, Z-axis											
Note: EIRP Obtained by applying the path loss correction for a 3m test distance, E(dBuV/m)@3m - 95.22 = dBm EIRP											
PK	V	2462.000	80.28	32.26	5.16	0.00	0.00	22.49	36.00	-13.51	30/80 MHz
PK	H	2462.000	76.22	32.26	5.16	0.00	0.00	18.43	36.00	-17.57	30/80 MHz
Note: RF Output Power, High Channel 2462 MHz, 54 Mb/s data rate , power setting = 15, Z-axis											
Note: EIRP Obtained by applying the path loss correction for a 3m test distance, E(dBuV/m)@3m - 95.22 = dBm EIRP											
PK	V	2462.000	80.02	32.26	5.16	0.00	0.00	22.23	36.00	-13.77	30/80 MHz
PK	H	2462.000	73.22	32.26	5.16	0.00	0.00	15.43	36.00	-20.57	30/80 MHz

Mid Channel 2437 MHz - Average Power (Conducted) @ 802.11g, 18 Mbps Data rate = 15 dBm



Average power (Conducted) @ 802.11g and worst case data rate (18 Mbps) is 15 dBm.

Average power (EIRP) = 15dBm (Conducted power) + 2.4 dBi (antenna gain) = 17.4 dBm



Average power (Conducted) @ 802.11b and worst case data rate (11 Mbps) is 15.52 dBm.

Average power (EIRP) = 15.52dBm (Conducted power) + 2.4 dBi (antenna gain) = 17.94 dBm

Vathana F. Ven *VFV*
Kouma Sinn *KPS*
Test Personnel: Naga Suryadevara *N.S*
Supervising/Reviewing
Engineer:
(Where Applicable) Kouma Sinn *KPS*
FCC Part 15 Subpart C
(15.247)
Product Standard: RSS 247
Input Voltage: Internal Battery
Pretest Verification w/
Ambient Signals or
BB Source: Yes – Signal generator

Test Date: 04/07/2017
04/08/2017 (1st and 2nd Shift)
Limit Applied: As specified in section 6.3
Ambient Temperature: 21, 21 °C
Relative Humidity: 33, 24%
Atmospheric Pressure: 983, 996 mbars

Deviations, Additions, or Exclusions: None

7 Power Spectral Density

7.1 Method

Tests are performed in accordance with FCC Part 15 Subpart C (15.247) and RSS 247.

TEST SITE: 10m ALSE

The 10m ALSE is 13m (Length) x 21m (Depth) x 10m (Height) with the effective size in terms of space from the tips of the absorber is 12m (Length) x 20m (Depth) x 8.5m (Height). This chamber achieves broadband performance using a unique arrangement of hybrid and ferrite tile absorber. This chamber has a built in 3m diameter turntable (Embedded type). The metal structure of the table makes electrical connection around the entire circumference of the turntable to the ground plane with a metal brush type connection. The turntable is located on one end of the chamber and the antennas are mounted 3 and 10 meters away at the other end of the chamber on the adjustable an Antenna Mast. The antenna mast is a non-conductive bore sighted type with remote control of antenna height and polarization. The Antenna Mast and the turntable can be remotely controlled through the controller located in the adjacent Control room. A Styrofoam table 80 cm high is used for table-top equipment.

Measurement Uncertainty

Measurement	Frequency Range	Expanded Uncertainty (k=2)	Ucisp
Radiated Emissions, 10m	30-1000 MHz	4.6 dB	6.3 dB
Radiated Emissions, 3m	30-1000 MHz	5.3 dB	6.3 dB
Radiated Emissions, 3m	1-6 GHz	4.5 dB	5.2 dB
Radiated Emissions, 3m	6-15 GHz	5.2 dB	5.5 dB
Radiated Emissions, 3m	15-18 GHz	5.0 dB	5.5 dB
Radiated Emissions, 3m	18-40 GHz	5.0 dB	5.5 dB

As shown in the table above our radiated emissions U_{lab} is less than the corresponding U_{CISPR} reference value in CISPR 16-4-2 Table 1, hence the compliance of the product is only based on the measured value, and no measurement uncertainty correction is required, based on CISPR 22 and CISPR 11 (for 2006 and later revisions) Clause 11.

Sample Calculation

The field strength is calculated by adding the Antenna Factor and Cable Factor, and subtracting the Amplifier Gain (if any) from the measured reading. The basic equation with a sample calculation is as follows:

$$FS = RA + AF + CF - AG$$

Where

- FS = Field Strength in dB μ V/m
- RA = Receiver Amplitude (including preamplifier) in dB μ V
- CF = Cable Attenuation Factor in dB
- AF = Antenna Factor in dB
- AG = Amplifier Gain in dB

In the following table(s), the reading shown on the data table reflects the preamplifier gain. An example for the calculations in the following table is as follows.

Assume a receiver reading of 52.0 dB μ V is obtained. The antenna factor of 7.4 dB and cable factor of 1.6 dB is added. The amplifier gain of 29 dB is subtracted, giving a field strength of 32 dB μ V/m. This value in dB μ V/m was converted to its corresponding level in μ V/m.

RA = 52.0 dB μ V
 AF = 7.4 dB/m
 CF = 1.6 dB
 AG = 29.0 dB
 FS = 32 dB μ V/m

To convert from dB μ V to μ V or mV the following was used:

$$UF = 10^{(NF / 20)} \text{ where } UF = \text{Net Reading in } \mu\text{V}$$

$$NF = \text{Net Reading in dB}\mu\text{V}$$

Example:

$$FS = RA + AF + CF - AG = 52.0 + 7.4 + 1.6 - 29.0 = 32.0$$

$$UF = 10^{(32 \text{ dB}\mu\text{V} / 20)} = 39.8 \mu\text{V/m}$$

Alternately, when C5 Software is used, the "Level" includes all losses and gains and is compared directly in the "Margin" column to the "Limit". "AF" is the Antenna Factor; "PA+CL" are Preamp and Cable Loss. These are already accounted for in the "Level" column.

7.2 Test Equipment Used:

Asset	Description	Manufacturer	Model	Serial	Cal Date	Cal Due
DAV004'	Weather Station	Davis Instruments	7400	PE80529A61 A	05/02/2016	05/02/2017
145128'	EMI Receiver (20 Hz - 40 Ghz)	Rohde & Schwarz	ESIB 40	839283/001	03/15/2017	03/15/2018
ROS005	ETSI Test System	Rhode & Schwartz	TS8997	N/A	09/15/2016	09/15/2017
ETS002'	1-18GHz DRG Horn Antenna	ETS Lindgren	3117	00143260	05/13/2016	05/13/2017
145-416'	Cables 145-420 145-423 145-424 145-408	Huber + Suhner	3m Track B cables	multiple	07/30/2016	07/30/2017

Software Utilized:

Name	Manufacturer	Version
EMI Boxborough.xlsx	Intertek Boxborough	08/27/2010

7.3 Results:

The sample tested was found to Comply. The limit for power spectral density is 8dBm.

7.4 Plots/Data:

Low Channel (2412 MHz) – X axis (802.11b @ 1, 2, 5.5 and 11 Mbps. 802.11g @ 6, 9, 12, 24, 36, 48, 54 Mbps)

Detector	Ant. Pol.	Frequency	Reading	Antenna Factor	Cable Loss	Pre-amp Factor	Distance Factor	EIRP Net	EIRP Limit	Margin	Bandwidth
Type	(V/H)	MHz	dB(uV)	dB(1/m)	dB	dB	dB	dBm	dBm	dB	
4/7/17 - 21C/33%/983mbar, Note: Power Spectral Density, Low Channel 2412 MHz, 1 Mb/s data rate , power setting = 15, X-axis											
Note: EIRP Obtained by applying the path loss correction for a 3m test distance, E(dBuV/m)@3m - 95.22 = dBm EIRP											
PK	V	2412.000	49.23	32.17	5.12	0.00	0.00	-8.70	8.00	-16.70	3/30kHz
PK	H	2412.000	51.01	32.17	5.12	0.00	0.00	-6.92	8.00	-14.92	3/30kHz
Note: Power Spectral Density, Low Channel 2412 MHz, 2 Mb/s data rate , power setting = 15, X-axis											
Note: EIRP Obtained by applying the path loss correction for a 3m test distance, E(dBuV/m)@3m - 95.22 = dBm EIRP											
PK	V	2412.000	49.28	32.17	5.12	0.00	0.00	-8.65	8.00	-16.65	3/30kHz
PK	H	2412.000	52.70	32.17	5.12	0.00	0.00	-5.23	8.00	-13.23	3/30kHz
Note: Power Spectral Density, Low Channel 2412 MHz, 5.5 Mb/s data rate , power setting = 15, X-axis											
Note: EIRP Obtained by applying the path loss correction for a 3m test distance, E(dBuV/m)@3m - 95.22 = dBm EIRP											
PK	V	2412.000	50.05	32.17	5.12	0.00	0.00	-7.88	8.00	-15.88	3/30kHz
PK	H	2412.000	52.58	32.17	5.12	0.00	0.00	-5.35	8.00	-13.35	3/30kHz
Note: Power Spectral Density, Low Channel 2412 MHz, 11 Mb/s data rate , power setting = 15, X-axis											
Note: EIRP Obtained by applying the path loss correction for a 3m test distance, E(dBuV/m)@3m - 95.22 = dBm EIRP											
PK	V	2412.000	48.92	32.17	5.12	0.00	0.00	-9.01	8.00	-17.01	3/30kHz
PK	H	2412.000	51.90	32.17	5.12	0.00	0.00	-6.03	8.00	-14.03	3/30kHz
Note: Power Spectral Density, Low Channel 2412 MHz, 6 Mb/s data rate , power setting = 15, X-axis											
Note: EIRP Obtained by applying the path loss correction for a 3m test distance, E(dBuV/m)@3m - 95.22 = dBm EIRP											
PK	V	2412.000	48.03	32.17	5.12	0.00	0.00	-9.90	8.00	-17.90	3/30kHz
PK	H	2412.000	50.76	32.17	5.12	0.00	0.00	-7.17	8.00	-15.17	3/30kHz
Note: Power Spectral Density, Low Channel 2412 MHz, 9 Mb/s data rate , power setting = 15, X-axis											
Note: EIRP Obtained by applying the path loss correction for a 3m test distance, E(dBuV/m)@3m - 95.22 = dBm EIRP											
PK	V	2412.000	47.37	32.17	5.12	0.00	0.00	-10.56	8.00	-18.56	3/30kHz
PK	H	2412.000	50.55	32.17	5.12	0.00	0.00	-7.38	8.00	-15.38	3/30kHz
Note: Power Spectral Density, Low Channel 2412 MHz, 12 Mb/s data rate , power setting = 15, X-axis											
Note: EIRP Obtained by applying the path loss correction for a 3m test distance, E(dBuV/m)@3m - 95.22 = dBm EIRP											
PK	V	2412.000	48.07	32.17	5.12	0.00	0.00	-9.86	8.00	-17.86	3/30kHz
PK	H	2412.000	51.08	32.17	5.12	0.00	0.00	-6.85	8.00	-14.85	3/30kHz
Note: Power Spectral Density, Low Channel 2412 MHz, 18 Mb/s data rate , power setting = 15, X-axis											
Note: EIRP Obtained by applying the path loss correction for a 3m test distance, E(dBuV/m)@3m - 95.22 = dBm EIRP											
PK	V	2412.000	47.52	32.17	5.12	0.00	0.00	-10.41	8.00	-18.41	3/30kHz
PK	H	2412.000	50.35	32.17	5.12	0.00	0.00	-7.58	8.00	-15.58	3/30kHz
Note: Power Spectral Density, Low Channel 2412 MHz, 24 Mb/s data rate , power setting = 15, X-axis											
Note: EIRP Obtained by applying the path loss correction for a 3m test distance, E(dBuV/m)@3m - 95.22 = dBm EIRP											
PK	V	2412.000	46.35	32.17	5.12	0.00	0.00	-11.58	8.00	-19.58	3/30kHz
PK	H	2412.000	49.74	32.17	5.12	0.00	0.00	-8.19	8.00	-16.19	3/30kHz
Note: Power Spectral Density, Low Channel 2412 MHz, 36 Mb/s data rate , power setting = 15, X-axis											
Note: EIRP Obtained by applying the path loss correction for a 3m test distance, E(dBuV/m)@3m - 95.22 = dBm EIRP											
PK	V	2412.000	45.29	32.17	5.12	0.00	0.00	-12.64	8.00	-20.64	3/30kHz
PK	H	2412.000	48.79	32.17	5.12	0.00	0.00	-9.14	8.00	-17.14	3/30kHz
Note: Power Spectral Density, Low Channel 2412 MHz, 48 Mb/s data rate , power setting = 15, X-axis											
Note: EIRP Obtained by applying the path loss correction for a 3m test distance, E(dBuV/m)@3m - 95.22 = dBm EIRP											
PK	V	2412.000	45.49	32.17	5.12	0.00	0.00	-12.44	8.00	-20.44	3/30kHz
PK	H	2412.000	48.98	32.17	5.12	0.00	0.00	-8.95	8.00	-16.95	3/30kHz
Note: Power Spectral Density, Low Channel 2412 MHz, 54 Mb/s data rate , power setting = 15, X-axis											
Note: EIRP Obtained by applying the path loss correction for a 3m test distance, E(dBuV/m)@3m - 95.22 = dBm EIRP											
PK	V	2412.000	44.91	32.17	5.12	0.00	0.00	-13.02	8.00	-21.02	3/30kHz
PK	H	2412.000	48.10	32.17	5.12	0.00	0.00	-9.83	8.00	-17.83	3/30kHz

Low Channel (2412 MHz) – Y axis (802.11b @ 1, 2, 5.5 and 11 Mbps. 802.11g @ 6, 9, 12, 24, 36, 48, 54 Mbps)

Detector	Ant. Pol.	Frequency	Reading	Antenna Factor	Cable Loss	Pre-amp Factor	Distance Factor	EIRP Net	EIRP Limit	Margin	Bandwidth
Type	(V/H)	MHz	dB(uV)	dB(1/m)	dB	dB	dB	dBm	dBm	dB	
4/8/17 - 21C/24%/996mbar, Note: Power Spectral Density, Low Channel 2412 MHz, 1 Mb/s data rate , power setting = 15, Y-axis											
Note: EIRP Obtained by applying the path loss correction for a 3m test distance, E(dBuV/m)@3m - 95.22 = dBm EIRP											
PK	V	2412.000	52.92	32.17	5.12	0.00	0.00	-5.01	8.00	-13.01	3/30kHz
PK	H	2412.000	51.06	32.17	5.12	0.00	0.00	-6.87	8.00	-14.87	3/30kHz
Note: Power Spectral Density, Low Channel 2412 MHz, 2 Mb/s data rate , power setting = 15, Y-axis											
Note: EIRP Obtained by applying the path loss correction for a 3m test distance, E(dBuV/m)@3m - 95.22 = dBm EIRP											
PK	V	2412.000	52.11	32.17	5.12	0.00	0.00	-5.82	8.00	-13.82	3/30kHz
PK	H	2412.000	51.22	32.17	5.12	0.00	0.00	-6.71	8.00	-14.71	3/30kHz
Note: Power Spectral Density, Low Channel 2412 MHz, 5.5 Mb/s data rate , power setting = 15, Y-axis											
Note: EIRP Obtained by applying the path loss correction for a 3m test distance, E(dBuV/m)@3m - 95.22 = dBm EIRP											
PK	V	2412.000	51.46	32.17	5.12	0.00	0.00	-6.47	8.00	-14.47	3/30kHz
PK	H	2412.000	50.33	32.17	5.12	0.00	0.00	-7.60	8.00	-15.60	3/30kHz
Note: Power Spectral Density, Low Channel 2412 MHz, 11 Mb/s data rate , power setting = 15, Y-axis											
Note: EIRP Obtained by applying the path loss correction for a 3m test distance, E(dBuV/m)@3m - 95.22 = dBm EIRP											
PK	V	2412.000	51.54	32.17	5.12	0.00	0.00	-6.39	8.00	-14.39	3/30kHz
PK	H	2412.000	50.72	32.17	5.12	0.00	0.00	-7.21	8.00	-15.21	3/30kHz
Note: Power Spectral Density, Low Channel 2412 MHz, 6 Mb/s data rate , power setting = 15, Y-axis											
Note: EIRP Obtained by applying the path loss correction for a 3m test distance, E(dBuV/m)@3m - 95.22 = dBm EIRP											
PK	V	2412.000	49.95	32.17	5.12	0.00	0.00	-7.98	8.00	-15.98	3/30kHz
PK	H	2412.000	49.25	32.17	5.12	0.00	0.00	-8.68	8.00	-16.68	3/30kHz
Note: Power Spectral Density, Low Channel 2412 MHz, 9 Mb/s data rate , power setting = 15, Y-axis											
Note: EIRP Obtained by applying the path loss correction for a 3m test distance, E(dBuV/m)@3m - 95.22 = dBm EIRP											
PK	V	2412.000	51.23	32.17	5.12	0.00	0.00	-6.70	8.00	-14.70	3/30kHz
PK	H	2412.000	49.02	32.17	5.12	0.00	0.00	-8.91	8.00	-16.91	3/30kHz
Note: Power Spectral Density, Low Channel 2412 MHz, 12 Mb/s data rate , power setting = 15, Y-axis											
Note: EIRP Obtained by applying the path loss correction for a 3m test distance, E(dBuV/m)@3m - 95.22 = dBm EIRP											
PK	V	2412.000	50.67	32.17	5.12	0.00	0.00	-7.26	8.00	-15.26	3/30kHz
PK	H	2412.000	49.27	32.17	5.12	0.00	0.00	-8.66	8.00	-16.66	3/30kHz
Note: Power Spectral Density, Low Channel 2412 MHz, 18 Mb/s data rate , power setting = 15, Y-axis											
Note: EIRP Obtained by applying the path loss correction for a 3m test distance, E(dBuV/m)@3m - 95.22 = dBm EIRP											
PK	V	2412.000	50.49	32.17	5.12	0.00	0.00	-7.44	8.00	-15.44	3/30kHz
PK	H	2412.000	48.65	32.17	5.12	0.00	0.00	-9.28	8.00	-17.28	3/30kHz
Note: Power Spectral Density, Low Channel 2412 MHz, 24 Mb/s data rate , power setting = 15, Y-axis											
Note: EIRP Obtained by applying the path loss correction for a 3m test distance, E(dBuV/m)@3m - 95.22 = dBm EIRP											
PK	V	2412.000	49.07	32.17	5.12	0.00	0.00	-8.86	8.00	-16.86	3/30kHz
PK	H	2412.000	47.85	32.17	5.12	0.00	0.00	-10.08	8.00	-18.08	3/30kHz
Note: Power Spectral Density, Low Channel 2412 MHz, 36 Mb/s data rate , power setting = 15, Y-axis											
Note: EIRP Obtained by applying the path loss correction for a 3m test distance, E(dBuV/m)@3m - 95.22 = dBm EIRP											
PK	V	2412.000	48.31	32.17	5.12	0.00	0.00	-9.62	8.00	-17.62	3/30kHz
PK	H	2412.000	46.43	32.17	5.12	0.00	0.00	-11.50	8.00	-19.50	3/30kHz
Note: Power Spectral Density, Low Channel 2412 MHz, 48 Mb/s data rate , power setting = 15, Y-axis											
Note: EIRP Obtained by applying the path loss correction for a 3m test distance, E(dBuV/m)@3m - 95.22 = dBm EIRP											
PK	V	2412.000	48.82	32.17	5.12	0.00	0.00	-9.11	8.00	-17.11	3/30kHz
PK	H	2412.000	46.73	32.17	5.12	0.00	0.00	-11.20	8.00	-19.20	3/30kHz
Note: Power Spectral Density, Low Channel 2412 MHz, 54 Mb/s data rate , power setting = 15, Y-axis											
Note: EIRP Obtained by applying the path loss correction for a 3m test distance, E(dBuV/m)@3m - 95.22 = dBm EIRP											
PK	V	2412.000	47.98	32.17	5.12	0.00	0.00	-9.95	8.00	-17.95	3/30kHz
PK	H	2412.000	46.44	32.17	5.12	0.00	0.00	-11.49	8.00	-19.49	3/30kHz

Low Channel (2412 MHz) – Z axis (802.11b @ 1, 2, 5.5 and 11 Mbps. 802.11g @ 6, 9, 12, 24, 36, 48, 54 Mbps)

Detector Type	Ant. Pol. (V/H)	Frequency (MHz)	Reading (dB(uV))	Antenna Factor (dB(1/m))	Cable Loss (dB)	Pre-amp Factor (dB)	Distance Factor (dB)	EIRP Net (dBm)	EIRP Limit (dBm)	Margin (dB)	Bandwidth
4/8/17 - 21C/24%/996mbar, Note: Power Spectral Density, Low Channel 2412 MHz, 1 Mb/s data rate , power setting = 15, Z-axis											
Note: EIRP Obtained by applying the path loss correction for a 3m test distance, E(dBuV/m)@3m - 95.22 = dBm EIRP											
PK	V	2412.000	43.52	32.17	5.12	0.00	0.00	-14.41	8.00	-22.41	3/30kHz
PK	H	2412.000	53.78	32.17	5.12	0.00	0.00	-4.15	8.00	-12.15	3/30kHz
Note: Power Spectral Density, Low Channel 2412 MHz, 2 Mb/s data rate , power setting = 15, Z-axis											
Note: EIRP Obtained by applying the path loss correction for a 3m test distance, E(dBuV/m)@3m - 95.22 = dBm EIRP											
PK	V	2412.000	44.03	32.17	5.12	0.00	0.00	-13.90	8.00	-21.90	3/30kHz
PK	H	2412.000	54.14	32.17	5.12	0.00	0.00	-3.79	8.00	-11.79	3/30kHz
Note: Power Spectral Density, Low Channel 2412 MHz, 5.5 Mb/s data rate , power setting = 15, Z-axis											
Note: EIRP Obtained by applying the path loss correction for a 3m test distance, E(dBuV/m)@3m - 95.22 = dBm EIRP											
PK	V	2412.000	43.67	32.17	5.12	0.00	0.00	-14.26	8.00	-22.26	3/30kHz
PK	H	2412.000	53.96	32.17	5.12	0.00	0.00	-3.97	8.00	-11.97	3/30kHz
Note: Power Spectral Density, Low Channel 2412 MHz, 11 Mb/s data rate , power setting = 15, Z-axis											
Note: EIRP Obtained by applying the path loss correction for a 3m test distance, E(dBuV/m)@3m - 95.22 = dBm EIRP											
PK	V	2412.000	43.98	32.17	5.12	0.00	0.00	-13.95	8.00	-21.95	3/30kHz
PK	H	2412.000	54.20	32.17	5.12	0.00	0.00	-3.73	8.00	-11.73	3/30kHz
Note: Power Spectral Density, Low Channel 2412 MHz, 6 Mb/s data rate , power setting = 15, Z-axis											
Note: EIRP Obtained by applying the path loss correction for a 3m test distance, E(dBuV/m)@3m - 95.22 = dBm EIRP											
PK	V	2412.000	42.24	32.17	5.12	0.00	0.00	-15.69	8.00	-23.69	3/30kHz
PK	H	2412.000	52.23	32.17	5.12	0.00	0.00	-5.70	8.00	-13.70	3/30kHz
Note: Power Spectral Density, Low Channel 2412 MHz, 9 Mb/s data rate , power setting = 15, Z-axis											
Note: EIRP Obtained by applying the path loss correction for a 3m test distance, E(dBuV/m)@3m - 95.22 = dBm EIRP											
PK	V	2412.000	42.11	32.17	5.12	0.00	0.00	-15.82	8.00	-23.82	3/30kHz
PK	H	2412.000	52.80	32.17	5.12	0.00	0.00	-5.13	8.00	-13.13	3/30kHz
Note: Power Spectral Density, Low Channel 2412 MHz, 12 Mb/s data rate , power setting = 15, Z-axis											
Note: EIRP Obtained by applying the path loss correction for a 3m test distance, E(dBuV/m)@3m - 95.22 = dBm EIRP											
PK	V	2412.000	42.74	32.17	5.12	0.00	0.00	-15.19	8.00	-23.19	3/30kHz
PK	H	2412.000	52.82	32.17	5.12	0.00	0.00	-5.11	8.00	-13.11	3/30kHz
Note: Power Spectral Density, Low Channel 2412 MHz, 18 Mb/s data rate , power setting = 15, Z-axis											
Note: EIRP Obtained by applying the path loss correction for a 3m test distance, E(dBuV/m)@3m - 95.22 = dBm EIRP											
PK	V	2412.000	42.33	32.17	5.12	0.00	0.00	-15.60	8.00	-23.60	3/30kHz
PK	H	2412.000	52.46	32.17	5.12	0.00	0.00	-5.47	8.00	-13.47	3/30kHz
Note: Power Spectral Density, Low Channel 2412 MHz, 24 Mb/s data rate , power setting = 15, Z-axis											
Note: EIRP Obtained by applying the path loss correction for a 3m test distance, E(dBuV/m)@3m - 95.22 = dBm EIRP											
PK	V	2412.000	41.30	32.17	5.12	0.00	0.00	-16.63	8.00	-24.63	3/30kHz
PK	H	2412.000	51.61	32.17	5.12	0.00	0.00	-6.32	8.00	-14.32	3/30kHz
Note: Power Spectral Density, Low Channel 2412 MHz, 36 Mb/s data rate , power setting = 15, Z-axis											
Note: EIRP Obtained by applying the path loss correction for a 3m test distance, E(dBuV/m)@3m - 95.22 = dBm EIRP											
PK	V	2412.000	39.68	32.17	5.12	0.00	0.00	-18.25	8.00	-26.25	3/30kHz
PK	H	2412.000	50.65	32.17	5.12	0.00	0.00	-7.28	8.00	-15.28	3/30kHz
Note: Power Spectral Density, Low Channel 2412 MHz, 48 Mb/s data rate , power setting = 15, Z-axis											
Note: EIRP Obtained by applying the path loss correction for a 3m test distance, E(dBuV/m)@3m - 95.22 = dBm EIRP											
PK	V	2412.000	40.29	32.17	5.12	0.00	0.00	-17.64	8.00	-25.64	3/30kHz
PK	H	2412.000	50.57	32.17	5.12	0.00	0.00	-7.36	8.00	-15.36	3/30kHz
Note: Power Spectral Density, Low Channel 2412 MHz, 54 Mb/s data rate , power setting = 15, Z-axis											
Note: EIRP Obtained by applying the path loss correction for a 3m test distance, E(dBuV/m)@3m - 95.22 = dBm EIRP											
PK	V	2412.000	40.35	32.17	5.12	0.00	0.00	-17.58	8.00	-25.58	3/30kHz
PK	H	2412.000	50.32	32.17	5.12	0.00	0.00	-7.61	8.00	-15.61	3/30kHz

Mid Channel (2437 MHz) – X axis (802.11b @ 1, 2, 5.5 and 11 Mbps. 802.11g @ 6, 9, 12, 24, 36, 48, 54 Mbps)

Detector	Ant. Pol.	Frequency	Reading	Antenna Factor	Cable Loss	Pre-amp Factor	Distance Factor	EIRP Net	EIRP Limit	Margin	Bandwidth
Type	(V/H)	MHz	dB(uV)	dB(1/m)	dB	dB	dB	dBm	dBm	dB	
Note: Power Spectral Density, Mid Channel 2437 MHz, 1 Mb/s data rate , power setting = 15, X-axis											
Note: EIRP Obtained by applying the path loss correction for a 3m test distance, E(dBuV/m)@3m - 95.22 = dBm EIRP											
PK	V	2437.000	47.13	32.22	5.14	0.00	0.00	-10.73	8.00	-18.73	3/30kHz
PK	H	2437.000	52.90	32.22	5.14	0.00	0.00	-4.96	8.00	-12.96	3/30kHz
Note: Power Spectral Density, Mid Channel 2437 MHz, 2 Mb/s data rate , power setting = 15, X-axis											
Note: EIRP Obtained by applying the path loss correction for a 3m test distance, E(dBuV/m)@3m - 95.22 = dBm EIRP											
PK	V	2437.000	48.67	32.22	5.14	0.00	0.00	-9.19	8.00	-17.19	3/30kHz
PK	H	2437.000	53.67	32.22	5.14	0.00	0.00	-4.19	8.00	-12.19	3/30kHz
Note: Power Spectral Density, Mid Channel 2437 MHz, 5.5 Mb/s data rate , power setting = 15, X-axis											
Note: EIRP Obtained by applying the path loss correction for a 3m test distance, E(dBuV/m)@3m - 95.22 = dBm EIRP											
PK	V	2437.000	58.66	32.22	5.14	0.00	0.00	0.80	8.00	-7.20	3/30kHz
PK	H	2437.000	53.85	32.22	5.14	0.00	0.00	-4.01	8.00	-12.01	3/30kHz
Note: Power Spectral Density, Mid Channel 2437 MHz, 11 Mb/s data rate , power setting = 15, X-axis											
Note: EIRP Obtained by applying the path loss correction for a 3m test distance, E(dBuV/m)@3m - 95.22 = dBm EIRP											
PK	V	2437.000	53.90	32.22	5.14	0.00	0.00	-3.96	8.00	-11.96	3/30kHz
PK	H	2437.000	53.90	32.22	5.14	0.00	0.00	-3.96	8.00	-11.96	3/30kHz
Note: Power Spectral Density, Mid Channel 2437 MHz, 6 Mb/s data rate , power setting = 15, X-axis											
Note: EIRP Obtained by applying the path loss correction for a 3m test distance, E(dBuV/m)@3m - 95.22 = dBm EIRP											
PK	V	2437.000	47.87	32.22	5.14	0.00	0.00	-9.99	8.00	-17.99	3/30kHz
PK	H	2437.000	51.83	32.22	5.14	0.00	0.00	-6.03	8.00	-14.03	3/30kHz
Note: Power Spectral Density, Mid Channel 2437 MHz, 9 Mb/s data rate , power setting = 15, X-axis											
Note: EIRP Obtained by applying the path loss correction for a 3m test distance, E(dBuV/m)@3m - 95.22 = dBm EIRP											
PK	V	2437.000	42.88	32.22	5.14	0.00	0.00	-14.98	8.00	-22.98	3/30kHz
PK	H	2437.000	52.26	32.22	5.14	0.00	0.00	-5.60	8.00	-13.60	3/30kHz
Note: Power Spectral Density, Mid Channel 2437 MHz, 12 Mb/s data rate , power setting = 15, X-axis											
Note: EIRP Obtained by applying the path loss correction for a 3m test distance, E(dBuV/m)@3m - 95.22 = dBm EIRP											
PK	V	2437.000	43.77	32.22	5.14	0.00	0.00	-14.09	8.00	-22.09	3/30kHz
PK	H	2437.000	52.66	32.22	5.14	0.00	0.00	-5.20	8.00	-13.20	3/30kHz
Note: Power Spectral Density, Mid Channel 2437 MHz, 18 Mb/s data rate , power setting = 15, X-axis											
Note: EIRP Obtained by applying the path loss correction for a 3m test distance, E(dBuV/m)@3m - 95.22 = dBm EIRP											
PK	V	2437.000	40.03	32.22	5.14	0.00	0.00	-17.83	8.00	-25.83	3/30kHz
PK	H	2437.000	52.40	32.22	5.14	0.00	0.00	-5.46	8.00	-13.46	3/30kHz
Note: Power Spectral Density, Mid Channel 2437 MHz, 24 Mb/s data rate , power setting = 15, X-axis											
Note: EIRP Obtained by applying the path loss correction for a 3m test distance, E(dBuV/m)@3m - 95.22 = dBm EIRP											
PK	V	2437.000	38.95	32.22	5.14	0.00	0.00	-18.91	8.00	-26.91	3/30kHz
PK	H	2437.000	51.41	32.22	5.14	0.00	0.00	-6.45	8.00	-14.45	3/30kHz
Note: Power Spectral Density, Mid Channel 2437 MHz, 36 Mb/s data rate , power setting = 15, X-axis											
Note: EIRP Obtained by applying the path loss correction for a 3m test distance, E(dBuV/m)@3m - 95.22 = dBm EIRP											
PK	V	2437.000	45.94	32.22	5.14	0.00	0.00	-11.92	8.00	-19.92	3/30kHz
PK	H	2437.000	49.94	32.22	5.14	0.00	0.00	-7.92	8.00	-15.92	3/30kHz
Note: Power Spectral Density, Mid Channel 2437 MHz, 48 Mb/s data rate , power setting = 15, X-axis											
Note: EIRP Obtained by applying the path loss correction for a 3m test distance, E(dBuV/m)@3m - 95.22 = dBm EIRP											
PK	V	2437.000	46.32	32.22	5.14	0.00	0.00	-11.54	8.00	-19.54	3/30kHz
PK	H	2437.000	50.46	32.22	5.14	0.00	0.00	-7.40	8.00	-15.40	3/30kHz
Note: Power Spectral Density, Mid Channel 2437 MHz, 54 Mb/s data rate , power setting = 15, X-axis											
Note: EIRP Obtained by applying the path loss correction for a 3m test distance, E(dBuV/m)@3m - 95.22 = dBm EIRP											
PK	V	2437.000	46.00	32.22	5.14	0.00	0.00	-11.86	8.00	-19.86	3/30kHz
PK	H	2437.000	50.28	32.22	5.14	0.00	0.00	-7.58	8.00	-15.58	3/30kHz

Mid Channel (2437 MHz) – Y axis (802.11b @ 1, 2, 5.5 and 11 Mbps. 802.11g @ 6, 9, 12, 24, 36, 48, 54 Mbps)

Detector Type	Ant. Pol. (V/H)	Frequency (MHz)	Reading (dB(uV))	Antenna Factor (dB(1/m))	Cable Loss (dB)	Pre-amp Factor (dB)	Distance Factor (dB)	EIRP Net (dBm)	EIRP Limit (dBm)	Margin (dB)	Bandwidth
4/7/17 - 21C/33%/983mbar, Note: Power Spectral Density, Mid Channel 2437 MHz, 1 Mb/s data rate , power setting = 15, Y-axis											
Note: EIRP Obtained by applying the path loss correction for a 3m test distance, E(dBuV/m)@3m - 95.22 = dBm EIRP											
PK	V	2437.000	49.12	32.22	5.14	0.00	0.00	-8.74	8.00	-16.74	3/30kHz
PK	H	2437.000	54.45	32.22	5.14	0.00	0.00	-3.41	8.00	-11.41	3/30kHz
Note: Power Spectral Density, Mid Channel 2437 MHz, 2 Mb/s data rate , power setting = 15, Y-axis											
Note: EIRP Obtained by applying the path loss correction for a 3m test distance, E(dBuV/m)@3m - 95.22 = dBm EIRP											
PK	V	2437.000	51.09	32.22	5.14	0.00	0.00	-6.77	8.00	-14.77	3/30kHz
PK	H	2437.000	55.24	32.22	5.14	0.00	0.00	-2.62	8.00	-10.62	3/30kHz
Note: Power Spectral Density, Mid Channel 2437 MHz, 5.5 Mb/s data rate , power setting = 15, Yaxis											
Note: EIRP Obtained by applying the path loss correction for a 3m test distance, E(dBuV/m)@3m - 95.22 = dBm EIRP											
PK	V	2437.000	60.18	32.22	5.14	0.00	0.00	2.32	8.00	-5.68	3/30kHz
PK	H	2437.000	55.66	32.22	5.14	0.00	0.00	-2.20	8.00	-10.20	3/30kHz
Note: Power Spectral Density, Mid Channel 2437 MHz, 11 Mb/s data rate , power setting = 15, Y-axis											
Note: EIRP Obtained by applying the path loss correction for a 3m test distance, E(dBuV/m)@3m - 95.22 = dBm EIRP											
PK	V	2437.000	55.24	32.22	5.14	0.00	0.00	-2.62	8.00	-10.62	3/30kHz
PK	H	2437.000	56.26	32.22	5.14	0.00	0.00	-1.60	8.00	-9.60	3/30kHz
Note: Power Spectral Density, Mid Channel 2437 MHz, 6 Mb/s data rate , power setting = 15, Y-axis											
Note: EIRP Obtained by applying the path loss correction for a 3m test distance, E(dBuV/m)@3m - 95.22 = dBm EIRP											
PK	V	2437.000	49.89	32.22	5.14	0.00	0.00	-7.97	8.00	-15.97	3/30kHz
PK	H	2437.000	54.34	32.22	5.14	0.00	0.00	-3.52	8.00	-11.52	3/30kHz
Note: Power Spectral Density, Mid Channel 2437 MHz, 9 Mb/s data rate , power setting = 15, Y-axis											
Note: EIRP Obtained by applying the path loss correction for a 3m test distance, E(dBuV/m)@3m - 95.22 = dBm EIRP											
PK	V	2437.000	45.15	32.22	5.14	0.00	0.00	-12.71	8.00	-20.71	3/30kHz
PK	H	2437.000	54.23	32.22	5.14	0.00	0.00	-3.63	8.00	-11.63	3/30kHz
Note: Power Spectral Density, Mid Channel 2437 MHz, 12 Mb/s data rate , power setting = 15, Y-axis											
Note: EIRP Obtained by applying the path loss correction for a 3m test distance, E(dBuV/m)@3m - 95.22 = dBm EIRP											
PK	V	2437.000	46.34	32.22	5.14	0.00	0.00	-11.52	8.00	-19.52	3/30kHz
PK	H	2437.000	55.09	32.22	5.14	0.00	0.00	-2.77	8.00	-10.77	3/30kHz
Note: Power Spectral Density, Mid Channel 2437 MHz, 18 Mb/s data rate , power setting = 15, Y-axis											
Note: EIRP Obtained by applying the path loss correction for a 3m test distance, E(dBuV/m)@3m - 95.22 = dBm EIRP											
PK	V	2437.000	43.12	32.22	5.14	0.00	0.00	-14.74	8.00	-22.74	3/30kHz
PK	H	2437.000	55.15	32.22	5.14	0.00	0.00	-2.71	8.00	-10.71	3/30kHz
Note: Power Spectral Density, Mid Channel 2437 MHz, 24 Mb/s data rate , power setting = 15, Y-axis											
Note: EIRP Obtained by applying the path loss correction for a 3m test distance, E(dBuV/m)@3m - 95.22 = dBm EIRP											
PK	V	2437.000	41.19	32.22	5.14	0.00	0.00	-16.67	8.00	-24.67	3/30kHz
PK	H	2437.000	54.24	32.22	5.14	0.00	0.00	-3.62	8.00	-11.62	3/30kHz
Note: Power Spectral Density, Mid Channel 2437 MHz, 36 Mb/s data rate , power setting = 15, Y-axis											
Note: EIRP Obtained by applying the path loss correction for a 3m test distance, E(dBuV/m)@3m - 95.22 = dBm EIRP											
PK	V	2437.000	46.89	32.22	5.14	0.00	0.00	-10.97	8.00	-18.97	3/30kHz
PK	H	2437.000	51.19	32.22	5.14	0.00	0.00	-6.67	8.00	-14.67	3/30kHz
Note: Power Spectral Density, Mid Channel 2437 MHz, 48 Mb/s data rate , power setting = 15, Y-axis											
Note: EIRP Obtained by applying the path loss correction for a 3m test distance, E(dBuV/m)@3m - 95.22 = dBm EIRP											
PK	V	2437.000	48.78	32.22	5.14	0.00	0.00	-9.08	8.00	-17.08	3/30kHz
PK	H	2437.000	52.12	32.22	5.14	0.00	0.00	-5.74	8.00	-13.74	3/30kHz
Note: Power Spectral Density, Mid Channel 2437 MHz, 54 Mb/s data rate , power setting = 15, Y-axis											
Note: EIRP Obtained by applying the path loss correction for a 3m test distance, E(dBuV/m)@3m - 95.22 = dBm EIRP											
PK	V	2437.000	47.22	32.22	5.14	0.00	0.00	-10.64	8.00	-18.64	3/30kHz
PK	H	2437.000	52.12	32.22	5.14	0.00	0.00	-5.74	8.00	-13.74	3/30kHz

Mid Channel (2437 MHz) – Z axis (802.11b @ 1, 2, 5.5 and 11 Mbps. 802.11g @ 6, 9, 12, 24, 36, 48, 54 Mbps)

Detector Type	Ant. Pol. (V/H)	Frequency (MHz)	Reading (dB(uV))	Antenna Factor (dB(1/m))	Cable Loss (dB)	Pre-amp Factor (dB)	Distance Factor (dB)	EIRP Net (dBm)	EIRP Limit (dBm)	Margin (dB)	Bandwidth
Note: Power Spectral Density, Mid Channel 2437 MHz, 1 Mb/s data rate , power setting = 15, Z-axis											
Note: EIRP Obtained by applying the path loss correction for a 3m test distance, E(dBuV/m)@3m - 95.22 = dBm EIRP											
PK	V	2437.000	50.89	32.22	5.14	0.00	0.00	-6.97	8.00	-14.97	3/30kHz
PK	H	2437.000	45.12	32.22	5.14	0.00	0.00	-12.74	8.00	-20.74	3/30kHz
Note: Power Spectral Density, Mid Channel 2437 MHz, 2 Mb/s data rate , power setting = 15, Z-axis											
Note: EIRP Obtained by applying the path loss correction for a 3m test distance, E(dBuV/m)@3m - 95.22 = dBm EIRP											
PK	V	2437.000	50.89	32.22	5.14	0.00	0.00	-6.97	8.00	-14.97	3/30kHz
PK	H	2437.000	46.64	32.22	5.14	0.00	0.00	-11.22	8.00	-19.22	3/30kHz
Note: Power Spectral Density, Mid Channel 2437 MHz, 5.5 Mb/s data rate , power setting = 15, Z-axis											
Note: EIRP Obtained by applying the path loss correction for a 3m test distance, E(dBuV/m)@3m - 95.22 = dBm EIRP											
PK	V	2437.000	50.24	32.22	5.14	0.00	0.00	-7.62	8.00	-15.62	3/30kHz
PK	H	2437.000	57.27	32.22	5.14	0.00	0.00	-0.59	8.00	-8.59	3/30kHz
Note: Power Spectral Density, Mid Channel 2437 MHz, 11 Mb/s data rate , power setting = 15, Z-axis											
Note: EIRP Obtained by applying the path loss correction for a 3m test distance, E(dBuV/m)@3m - 95.22 = dBm EIRP											
PK	V	2437.000	51.22	32.22	5.14	0.00	0.00	-6.64	8.00	-14.64	3/30kHz
PK	H	2437.000	50.24	32.22	5.14	0.00	0.00	-7.62	8.00	-15.62	3/30kHz
Note: Power Spectral Density, Mid Channel 2437 MHz, 6 Mb/s data rate , power setting = 15, Z-axis											
Note: EIRP Obtained by applying the path loss correction for a 3m test distance, E(dBuV/m)@3m - 95.22 = dBm EIRP											
PK	V	2437.000	49.18	32.22	5.14	0.00	0.00	-8.68	8.00	-16.68	3/30kHz
PK	H	2437.000	45.12	32.22	5.14	0.00	0.00	-12.74	8.00	-20.74	3/30kHz
Note: Power Spectral Density, Mid Channel 2437 MHz, 9 Mb/s data rate , power setting = 15, Z-axis											
Note: EIRP Obtained by applying the path loss correction for a 3m test distance, E(dBuV/m)@3m - 95.22 = dBm EIRP											
PK	V	2437.000	50.18	32.22	5.14	0.00	0.00	-7.68	8.00	-15.68	3/30kHz
PK	H	2437.000	40.12	32.22	5.14	0.00	0.00	-17.74	8.00	-25.74	3/30kHz
Note: Power Spectral Density, Mid Channel 2437 MHz, 12 Mb/s data rate , power setting = 15, Z-axis											
Note: EIRP Obtained by applying the path loss correction for a 3m test distance, E(dBuV/m)@3m - 95.22 = dBm EIRP											
PK	V	2437.000	50.18	32.22	5.14	0.00	0.00	-7.68	8.00	-15.68	3/30kHz
PK	H	2437.000	41.22	32.22	5.14	0.00	0.00	-16.64	8.00	-24.64	3/30kHz
Note: Power Spectral Density, Mid Channel 2437 MHz, 18 Mb/s data rate , power setting = 15, Z-axis											
Note: EIRP Obtained by applying the path loss correction for a 3m test distance, E(dBuV/m)@3m - 95.22 = dBm EIRP											
PK	V	2437.000	49.98	32.22	5.14	0.00	0.00	-7.88	8.00	-15.88	3/30kHz
PK	H	2437.000	39.89	32.22	5.14	0.00	0.00	-17.97	8.00	-25.97	3/30kHz
Note: Power Spectral Density, Mid Channel 2437 MHz, 24 Mb/s data rate , power setting = 15, Z-axis											
Note: EIRP Obtained by applying the path loss correction for a 3m test distance, E(dBuV/m)@3m - 95.22 = dBm EIRP											
PK	V	2437.000	48.86	32.22	5.14	0.00	0.00	-9.00	8.00	-17.00	3/30kHz
PK	H	2437.000	37.76	32.22	5.14	0.00	0.00	-20.10	8.00	-28.10	3/30kHz
Note: Power Spectral Density, Mid Channel 2437 MHz, 36 Mb/s data rate , power setting = 15, Z-axis											
Note: EIRP Obtained by applying the path loss correction for a 3m test distance, E(dBuV/m)@3m - 95.22 = dBm EIRP											
PK	V	2437.000	46.68	32.22	5.14	0.00	0.00	-11.18	8.00	-19.18	3/30kHz
PK	H	2437.000	43.12	32.22	5.14	0.00	0.00	-14.74	8.00	-22.74	3/30kHz
Note: Power Spectral Density, Mid Channel 2437 MHz, 48 Mb/s data rate , power setting = 15, Z-axis											
Note: EIRP Obtained by applying the path loss correction for a 3m test distance, E(dBuV/m)@3m - 95.22 = dBm EIRP											
PK	V	2437.000	49.29	32.22	5.14	0.00	0.00	-8.57	8.00	-16.57	3/30kHz
PK	H	2437.000	44.22	32.22	5.14	0.00	0.00	-13.64	8.00	-21.64	3/30kHz
Note: Power Spectral Density, Mid Channel 2437 MHz, 54 Mb/s data rate , power setting = 15, Z-axis											
Note: EIRP Obtained by applying the path loss correction for a 3m test distance, E(dBuV/m)@3m - 95.22 = dBm EIRP											
PK	V	2437.000	48.08	32.22	5.14	0.00	0.00	-9.78	8.00	-17.78	3/30kHz
PK	H	2437.000	43.12	32.22	5.14	0.00	0.00	-14.74	8.00	-22.74	3/30kHz

High Channel (2462 MHz) – X axis (802.11b @ 1, 2, 5.5 and 11 Mbps. 802.11g @ 6, 9, 12, 24, 36, 48, 54 Mbps)

Detector Type	Ant. Pol. (V/H)	Frequency MHz	Reading dB(uV)	Antenna Factor dB(1/m)	Cable Loss dB	Pre-amp Factor dB	Distance Factor dB	EIRP Net dBm	EIRP Limit dBm	Margin dB	Bandwidth
Note: Power Spectral Density, High Channel 2462 MHz, 1 Mb/s data rate , power setting = 15, X-axis											
Note: EIRP Obtained by applying the path loss correction for a 3m test distance, E(dBuV/m)@3m - 95.22 = dBm EIRP											
PK	V	2462.000	46.12	32.26	5.16	0.00	0.00	-11.67	8.00	-19.67	3/30kHz
PK	H	2462.000	52.12	32.26	5.16	0.00	0.00	-5.67	8.00	-13.67	3/30kHz
Note: Power Spectral Density, High Channel 2462 MHz, 2 Mb/s data rate , power setting = 15, X-axis											
Note: EIRP Obtained by applying the path loss correction for a 3m test distance, E(dBuV/m)@3m - 95.22 = dBm EIRP											
PK	V	2462.000	44.21	32.26	5.16	0.00	0.00	-13.58	8.00	-21.58	3/30kHz
PK	H	2462.000	51.90	32.26	5.16	0.00	0.00	-5.89	8.00	-13.89	3/30kHz
Note: Power Spectral Density, High Channel 2462 MHz, 5.5 Mb/s data rate , power setting = 15, X-axis											
Note: EIRP Obtained by applying the path loss correction for a 3m test distance, E(dBuV/m)@3m - 95.22 = dBm EIRP											
PK	V	2462.000	46.57	32.26	5.16	0.00	0.00	-11.22	8.00	-19.22	3/30kHz
PK	H	2462.000	51.48	32.26	5.16	0.00	0.00	-6.31	8.00	-14.31	3/30kHz
Note: Power Spectral Density, High Channel 2462 MHz, 11 Mb/s data rate , power setting = 15, X-axis											
Note: EIRP Obtained by applying the path loss correction for a 3m test distance, E(dBuV/m)@3m - 95.22 = dBm EIRP											
PK	V	2462.000	46.49	32.26	5.16	0.00	0.00	-11.30	8.00	-19.30	3/30kHz
PK	H	2462.000	51.28	32.26	5.16	0.00	0.00	-7.43	8.00	-15.43	3/30kHz
Note: Power Spectral Density, High Channel 2462 MHz, 6 Mb/s data rate , power setting = 15, X-axis											
Note: EIRP Obtained by applying the path loss correction for a 3m test distance, E(dBuV/m)@3m - 95.22 = dBm EIRP											
PK	V	2462.000	45.29	32.26	5.16	0.00	0.00	-12.50	8.00	-20.50	3/30kHz
PK	H	2462.000	50.91	32.26	5.16	0.00	0.00	-6.88	8.00	-14.88	3/30kHz
Note: Power Spectral Density, High Channel 2462 MHz, 9 Mb/s data rate , power setting = 15, X-axis											
Note: EIRP Obtained by applying the path loss correction for a 3m test distance, E(dBuV/m)@3m - 95.22 = dBm EIRP											
PK	V	2462.000	44.93	32.26	5.16	0.00	0.00	-12.86	8.00	-20.86	3/30kHz
PK	H	2462.000	50.36	32.26	5.16	0.00	0.00	-7.43	8.00	-15.43	3/30kHz
Note: Power Spectral Density, High Channel 2462 MHz, 12 Mb/s data rate , power setting = 15, X-axis											
Note: EIRP Obtained by applying the path loss correction for a 3m test distance, E(dBuV/m)@3m - 95.22 = dBm EIRP											
PK	V	2462.000	45.24	32.26	5.16	0.00	0.00	-12.55	8.00	-20.55	3/30kHz
PK	H	2462.000	51.31	32.26	5.16	0.00	0.00	-6.48	8.00	-14.48	3/30kHz
Note: Power Spectral Density, High Channel 2462 MHz, 18 Mb/s data rate , power setting = 15, X-axis											
Note: EIRP Obtained by applying the path loss correction for a 3m test distance, E(dBuV/m)@3m - 95.22 = dBm EIRP											
PK	V	2462.000	45.02	32.26	5.16	0.00	0.00	-12.77	8.00	-20.77	3/30kHz
PK	H	2462.000	51.65	32.26	5.16	0.00	0.00	-6.14	8.00	-14.14	3/30kHz
Note: Power Spectral Density, High Channel 2462 MHz, 24 Mb/s data rate , power setting = 15, X-axis											
Note: EIRP Obtained by applying the path loss correction for a 3m test distance, E(dBuV/m)@3m - 95.22 = dBm EIRP											
PK	V	2462.000	44.33	32.26	5.16	0.00	0.00	-13.46	8.00	-21.46	3/30kHz
PK	H	2462.000	51.62	32.26	5.16	0.00	0.00	-6.17	8.00	-14.17	3/30kHz
Note: Power Spectral Density, High Channel 2462 MHz, 36 Mb/s data rate , power setting = 15, X-axis											
Note: EIRP Obtained by applying the path loss correction for a 3m test distance, E(dBuV/m)@3m - 95.22 = dBm EIRP											
PK	V	2462.000	42.55	32.26	5.16	0.00	0.00	-15.24	8.00	-23.24	3/30kHz
PK	H	2462.000	50.26	32.26	5.16	0.00	0.00	-7.53	8.00	-15.53	3/30kHz
Note: Power Spectral Density, High Channel 2462 MHz, 48 Mb/s data rate , power setting = 15, X-axis											
Note: EIRP Obtained by applying the path loss correction for a 3m test distance, E(dBuV/m)@3m - 95.22 = dBm EIRP											
PK	V	2462.000	43.31	32.26	5.16	0.00	0.00	-14.48	8.00	-22.48	3/30kHz
PK	H	2462.000	48.70	32.26	5.16	0.00	0.00	-9.09	8.00	-17.09	3/30kHz
Note: Power Spectral Density, High Channel 2462 MHz, 54 Mb/s data rate , power setting = 15, X-axis											
Note: EIRP Obtained by applying the path loss correction for a 3m test distance, E(dBuV/m)@3m - 95.22 = dBm EIRP											
PK	V	2462.000	43.38	32.26	5.16	0.00	0.00	-14.41	8.00	-22.41	3/30kHz
PK	H	2462.000	48.59	32.26	5.16	0.00	0.00	-9.20	8.00	-17.20	3/30kHz

High Channel (2462 MHz) – Y axis (802.11b @ 1, 2, 5.5 and 11 Mbps. 802.11g @ 6, 9, 12, 24, 36, 48, 54 Mbps)

Detector Type	Ant. Pol. (V/H)	Frequency MHz	Reading dB(uV)	Antenna Factor dB(1/m)	Cable Loss dB	Pre-amp Factor dB	Distance Factor dB	EIRP Net dBm	EIRP Limit dBm	Margin dB	Bandwidth
Note: Power Spectral Density, High Channel 2462 MHz, 1 Mb/s data rate , power setting = 15, Y-axis											
Note: EIRP Obtained by applying the path loss correction for a 3m test distance, E(dBuV/m)@3m - 95.22 = dBm EIRP											
PK	V	2462.000	47.74	32.26	5.16	0.00	0.00	-10.05	8.00	-18.05	3/30kHz
PK	H	2462.000	55.19	32.26	5.16	0.00	0.00	-2.60	8.00	-10.60	3/30kHz
Note: Power Spectral Density, High Channel 2462 MHz, 2 Mb/s data rate , power setting = 15, Y-axis											
Note: EIRP Obtained by applying the path loss correction for a 3m test distance, E(dBuV/m)@3m - 95.22 = dBm EIRP											
PK	V	2462.000	47.19	32.26	5.16	0.00	0.00	-10.60	8.00	-18.60	3/30kHz
PK	H	2462.000	54.22	32.26	5.16	0.00	0.00	-3.57	8.00	-11.57	3/30kHz
Note: Power Spectral Density, High Channel 2462 MHz, 5.5 Mb/s data rate , power setting = 15, Y-axis											
Note: EIRP Obtained by applying the path loss correction for a 3m test distance, E(dBuV/m)@3m - 95.22 = dBm EIRP											
PK	V	2462.000	49.22	32.26	5.16	0.00	0.00	-8.57	8.00	-16.57	3/30kHz
PK	H	2462.000	53.12	32.26	5.16	0.00	0.00	-4.67	8.00	-12.67	3/30kHz
Note: Power Spectral Density, High Channel 2462 MHz, 11 Mb/s data rate , power setting = 15, Y-axis											
Note: EIRP Obtained by applying the path loss correction for a 3m test distance, E(dBuV/m)@3m - 95.22 = dBm EIRP											
PK	V	2462.000	50.08	32.26	5.16	0.00	0.00	-7.71	8.00	-15.71	3/30kHz
PK	H	2462.000	54.24	32.26	5.16	0.00	0.00	-3.55	8.00	-11.55	3/30kHz
Note: Power Spectral Density, High Channel 2462 MHz, 6 Mb/s data rate , power setting = 15, Y-axis											
Note: EIRP Obtained by applying the path loss correction for a 3m test distance, E(dBuV/m)@3m - 95.22 = dBm EIRP											
PK	V	2462.000	49.98	32.26	5.16	0.00	0.00	-7.81	8.00	-15.81	3/30kHz
PK	H	2462.000	56.22	32.26	5.16	0.00	0.00	-1.57	8.00	-9.57	3/30kHz
Note: Power Spectral Density, High Channel 2462 MHz, 9 Mb/s data rate , power setting = 15, Y-axis											
Note: EIRP Obtained by applying the path loss correction for a 3m test distance, E(dBuV/m)@3m - 95.22 = dBm EIRP											
PK	V	2462.000	47.12	32.26	5.16	0.00	0.00	-10.67	8.00	-18.67	3/30kHz
PK	H	2462.000	53.38	32.26	5.16	0.00	0.00	-4.41	8.00	-12.41	3/30kHz
Note: Power Spectral Density, High Channel 2462 MHz, 12 Mb/s data rate , power setting = 15, Y-axis											
Note: EIRP Obtained by applying the path loss correction for a 3m test distance, E(dBuV/m)@3m - 95.22 = dBm EIRP											
PK	V	2462.000	47.78	32.26	5.16	0.00	0.00	-10.01	8.00	-18.01	3/30kHz
PK	H	2462.000	54.24	32.26	5.16	0.00	0.00	-3.55	8.00	-11.55	3/30kHz
Note: Power Spectral Density, High Channel 2462 MHz, 18 Mb/s data rate , power setting = 15, Y-axis											
Note: EIRP Obtained by applying the path loss correction for a 3m test distance, E(dBuV/m)@3m - 95.22 = dBm EIRP											
PK	V	2462.000	47.27	32.26	5.16	0.00	0.00	-10.52	8.00	-18.52	3/30kHz
PK	H	2462.000	53.22	32.26	5.16	0.00	0.00	-4.57	8.00	-12.57	3/30kHz
Note: Power Spectral Density, High Channel 2462 MHz, 24 Mb/s data rate , power setting = 15, Y-axis											
Note: EIRP Obtained by applying the path loss correction for a 3m test distance, E(dBuV/m)@3m - 95.22 = dBm EIRP											
PK	V	2462.000	46.98	32.26	5.16	0.00	0.00	-10.81	8.00	-18.81	3/30kHz
PK	H	2462.000	53.12	32.26	5.16	0.00	0.00	-4.67	8.00	-12.67	3/30kHz
Note: Power Spectral Density, High Channel 2462 MHz, 36 Mb/s data rate , power setting = 15, Y-axis											
Note: EIRP Obtained by applying the path loss correction for a 3m test distance, E(dBuV/m)@3m - 95.22 = dBm EIRP											
PK	V	2462.000	45.12	32.26	5.16	0.00	0.00	-12.67	8.00	-20.67	3/30kHz
PK	H	2462.000	52.26	32.26	5.16	0.00	0.00	-5.53	8.00	-13.53	3/30kHz
Note: Power Spectral Density, High Channel 2462 MHz, 48 Mb/s data rate , power setting = 15, Y-axis											
Note: EIRP Obtained by applying the path loss correction for a 3m test distance, E(dBuV/m)@3m - 95.22 = dBm EIRP											
PK	V	2462.000	46.12	32.26	5.16	0.00	0.00	-11.67	8.00	-19.67	3/30kHz
PK	H	2462.000	51.12	32.26	5.16	0.00	0.00	-6.67	8.00	-14.67	3/30kHz
Note: Power Spectral Density, High Channel 2462 MHz, 54 Mb/s data rate , power setting = 15, Y-axis											
Note: EIRP Obtained by applying the path loss correction for a 3m test distance, E(dBuV/m)@3m - 95.22 = dBm EIRP											
PK	V	2462.000	46.26	32.26	5.16	0.00	0.00	-11.53	8.00	-19.53	3/30kHz
PK	H	2462.000	51.12	32.26	5.16	0.00	0.00	-6.67	8.00	-14.67	3/30kHz

High Channel (2462 MHz) – Z axis (802.11b @ 1, 2, 5.5 and 11 Mbps. 802.11g @ 6, 9, 12, 24, 36, 48, 54 Mbps)

Detector Type	Ant. Pol. (V/H)	Frequency (MHz)	Reading (dB(uV))	Antenna Factor (dB(1/m))	Cable Loss (dB)	Pre-amp Factor (dB)	Distance Factor (dB)	EIRP Net (dBm)	EIRP Limit (dBm)	Margin (dB)	Bandwidth
Note: Power Spectral Density, High Channel 2462 MHz, 1 Mb/s data rate , power setting = 15, Z-axis											
Note: EIRP Obtained by applying the path loss correction for a 3m test distance, E(dBuV/m)@3m - 95.22 = dBm EIRP											
PK	V	2462.000	50.29	32.26	5.16	0.00	0.00	-7.50	8.00	-15.50	3/30kHz
PK	H	2462.000	44.22	32.26	5.16	0.00	0.00	-13.57	8.00	-21.57	3/30kHz
Note: Power Spectral Density, High Channel 2462 MHz, 2 Mb/s data rate , power setting = 15, Z-axis											
Note: EIRP Obtained by applying the path loss correction for a 3m test distance, E(dBuV/m)@3m - 95.22 = dBm EIRP											
PK	V	2462.000	49.19	32.26	5.16	0.00	0.00	-8.60	8.00	-16.60	3/30kHz
PK	H	2462.000	43.22	32.26	5.16	0.00	0.00	-14.57	8.00	-22.57	3/30kHz
Note: Power Spectral Density, High Channel 2462 MHz, 5.5 Mb/s data rate , power setting = 15, Z-axis											
Note: EIRP Obtained by applying the path loss correction for a 3m test distance, E(dBuV/m)@3m - 95.22 = dBm EIRP											
PK	V	2462.000	49.89	32.26	5.16	0.00	0.00	-7.90	8.00	-15.90	3/30kHz
PK	H	2462.000	45.12	32.26	5.16	0.00	0.00	-12.67	8.00	-20.67	3/30kHz
Note: Power Spectral Density, High Channel 2462 MHz, 11 Mb/s data rate , power setting = 15, Z-axis											
Note: EIRP Obtained by applying the path loss correction for a 3m test distance, E(dBuV/m)@3m - 95.22 = dBm EIRP											
PK	V	2462.000	49.18	32.26	5.16	0.00	0.00	-8.61	8.00	-16.61	3/30kHz
PK	H	2462.000	45.12	32.26	5.16	0.00	0.00	-12.67	8.00	-20.67	3/30kHz
Note: Power Spectral Density, High Channel 2462 MHz, 6 Mb/s data rate , power setting = 15, Z-axis											
Note: EIRP Obtained by applying the path loss correction for a 3m test distance, E(dBuV/m)@3m - 95.22 = dBm EIRP											
PK	V	2462.000	47.19	32.26	5.16	0.00	0.00	-10.60	8.00	-18.60	3/30kHz
PK	H	2462.000	44.12	32.26	5.16	0.00	0.00	-13.67	8.00	-21.67	3/30kHz
Note: Power Spectral Density, High Channel 2462 MHz, 9 Mb/s data rate , power setting = 15, Z-axis											
Note: EIRP Obtained by applying the path loss correction for a 3m test distance, E(dBuV/m)@3m - 95.22 = dBm EIRP											
PK	V	2462.000	48.19	32.26	5.16	0.00	0.00	-9.60	8.00	-17.60	3/30kHz
PK	H	2462.000	43.22	32.26	5.16	0.00	0.00	-14.57	8.00	-22.57	3/30kHz
Note: Power Spectral Density, High Channel 2462 MHz, 12 Mb/s data rate , power setting = 15, Z-axis											
Note: EIRP Obtained by applying the path loss correction for a 3m test distance, E(dBuV/m)@3m - 95.22 = dBm EIRP											
PK	V	2462.000	49.92	32.26	5.16	0.00	0.00	-7.87	8.00	-15.87	3/30kHz
PK	H	2462.000	43.12	32.26	5.16	0.00	0.00	-14.67	8.00	-22.67	3/30kHz
Note: Power Spectral Density, High Channel 2462 MHz, 18 Mb/s data rate , power setting = 15, Z-axis											
Note: EIRP Obtained by applying the path loss correction for a 3m test distance, E(dBuV/m)@3m - 95.22 = dBm EIRP											
PK	V	2462.000	48.67	32.26	5.16	0.00	0.00	-9.12	8.00	-17.12	3/30kHz
PK	H	2462.000	43.22	32.26	5.16	0.00	0.00	-14.57	8.00	-22.57	3/30kHz
Note: Power Spectral Density, High Channel 2462 MHz, 24 Mb/s data rate , power setting = 15, Z-axis											
Note: EIRP Obtained by applying the path loss correction for a 3m test distance, E(dBuV/m)@3m - 95.22 = dBm EIRP											
PK	V	2462.000	49.68	32.26	5.16	0.00	0.00	-8.11	8.00	-16.11	3/30kHz
PK	H	2462.000	41.22	32.26	5.16	0.00	0.00	-16.57	8.00	-24.57	3/30kHz
Note: Power Spectral Density, High Channel 2462 MHz, 36 Mb/s data rate , power setting = 15, Z-axis											
Note: EIRP Obtained by applying the path loss correction for a 3m test distance, E(dBuV/m)@3m - 95.22 = dBm EIRP											
PK	V	2462.000	48.19	32.26	5.16	0.00	0.00	-9.60	8.00	-17.60	3/30kHz
PK	H	2462.000	40.09	32.26	5.16	0.00	0.00	-17.70	8.00	-25.70	3/30kHz
Note: Power Spectral Density, High Channel 2462 MHz, 48 Mb/s data rate , power setting = 15, Z-axis											
Note: EIRP Obtained by applying the path loss correction for a 3m test distance, E(dBuV/m)@3m - 95.22 = dBm EIRP											
PK	V	2462.000	46.12	32.26	5.16	0.00	0.00	-11.67	8.00	-19.67	3/30kHz
PK	H	2462.000	41.22	32.26	5.16	0.00	0.00	-16.57	8.00	-24.57	3/30kHz
Note: Power Spectral Density, High Channel 2462 MHz, 54 Mb/s data rate , power setting = 15, Z-axis											
Note: EIRP Obtained by applying the path loss correction for a 3m test distance, E(dBuV/m)@3m - 95.22 = dBm EIRP											
PK	V	2462.000	47.59	32.26	5.16	0.00	0.00	-10.20	8.00	-18.20	3/30kHz
PK	H	2462.000	41.22	32.26	5.16	0.00	0.00	-16.57	8.00	-24.57	3/30kHz

Vathana F. Ven *VFV*
Kouma Sinn *KPS*
Test Personnel: Naga Suryadevara *N.S*
Supervising/Reviewing
Engineer:
(Where Applicable) Kouma Sinn *KPS*
FCC Part 15 Subpart C
(15.247)
Product Standard: RSS 247
Input Voltage: Internal Battery
Pretest Verification w/
Ambient Signals or
BB Source: Yes – Signal generator

Test Date: 04/07/2017
04/08/2017 (1st and 2nd Shift)
Limit Applied: As specified in section 7.3
Ambient Temperature: 21, 21 °C
Relative Humidity: 33, 24%
Atmospheric Pressure: 983, 996 mbars

Deviations, Additions, or Exclusions: None

8 Occupied and 6dB Bandwidth

8.1 Method

Tests are performed in accordance with FCC Part 15 Subpart C (15.247) and RSS 247.

TEST SITE: 10m ALSE

The 10m ALSE is 13m (Length) x 21m (Depth) x 10m (Height) with the effective size in terms of space from the tips of the absorber is 12m (Length) x 20m (Depth) x 8.5m (Height). This chamber achieves broadband performance using a unique arrangement of hybrid and ferrite tile absorber. This chamber has a built in 3m diameter turntable (Embedded type). The metal structure of the table makes electrical connection around the entire circumference of the turntable to the ground plane with a metal brush type connection. The turntable is located on one end of the chamber and the antennas are mounted 3 and 10 meters away at the other end of the chamber on the adjustable an Antenna Mast. The antenna mast is a non-conductive bore sighted type with remote control of antenna height and polarization. The Antenna Mast and the turntable can be remotely controlled through the controller located in the adjacent Control room. A Styrofoam table 80 cm high is used for table-top equipment.

Measurement Uncertainty

Measurement	Frequency Range	Expanded Uncertainty (k=2)	Ucisp
Radiated Emissions, 10m	30-1000 MHz	4.6 dB	6.3 dB
Radiated Emissions, 3m	30-1000 MHz	5.3 dB	6.3 dB
Radiated Emissions, 3m	1-6 GHz	4.5 dB	5.2 dB
Radiated Emissions, 3m	6-15 GHz	5.2 dB	5.5 dB
Radiated Emissions, 3m	15-18 GHz	5.0 dB	5.5 dB
Radiated Emissions, 3m	18-40 GHz	5.0 dB	5.5 dB

As shown in the table above our radiated emissions U_{lab} is less than the corresponding U_{CISPR} reference value in CISPR 16-4-2 Table 1, hence the compliance of the product is only based on the measured value, and no measurement uncertainty correction is required, based on CISPR 22 and CISPR 11 (for 2006 and later revisions) Clause 11.

Sample Calculation

The field strength is calculated by adding the Antenna Factor and Cable Factor, and subtracting the Amplifier Gain (if any) from the measured reading. The basic equation with a sample calculation is as follows:

$$FS = RA + AF + CF - AG$$

Where

- FS = Field Strength in dB μ V/m
- RA = Receiver Amplitude (including preamplifier) in dB μ V
- CF = Cable Attenuation Factor in dB
- AF = Antenna Factor in dB
- AG = Amplifier Gain in dB

In the following table(s), the reading shown on the data table reflects the preamplifier gain. An example for the calculations in the following table is as follows.

Assume a receiver reading of 52.0 dB μ V is obtained. The antenna factor of 7.4 dB and cable factor of 1.6 dB is added. The amplifier gain of 29 dB is subtracted, giving a field strength of 32 dB μ V/m. This value in dB μ V/m was converted to its corresponding level in μ V/m.

RA = 52.0 dB μ V
 AF = 7.4 dB/m
 CF = 1.6 dB
 AG = 29.0 dB
 FS = 32 dB μ V/m

To convert from dB μ V to μ V or mV the following was used:

$$UF = 10^{(NF / 20)} \text{ where } UF = \text{Net Reading in } \mu\text{V}$$

$$NF = \text{Net Reading in dB}\mu\text{V}$$

Example:

$$FS = RA + AF + CF - AG = 52.0 + 7.4 + 1.6 - 29.0 = 32.0$$

$$UF = 10^{(32 \text{ dB}\mu\text{V} / 20)} = 39.8 \mu\text{V/m}$$

Alternately, when C5 Software is used, the "Level" includes all losses and gains and is compared directly in the "Margin" column to the "Limit". "AF" is the Antenna Factor; "PA+CL" are Preamp and Cable Loss. These are already accounted for in the "Level" column.

8.2 Test Equipment Used:

Asset	Description	Manufacturer	Model	Serial	Cal Date	Cal Due
DAV004'	Weather Station	Davis Instruments	7400	PE80529A61 A	05/02/2016	05/02/2017
145128'	EMI Receiver (20 Hz - 40 Ghz)	Rohde & Schwarz	ESIB 40	839283/001	03/15/2017	03/15/2018
ETS002'	1-18GHz DRG Horn Antenna	ETS Lindgren	3117	00143260	05/13/2016	05/13/2017
ROS005'	ETSI Test System	Rhode & Schwartz	TS8997	N/A	09/15/2016	09/15/2017
145-416'	Cables 145-420 145-423 145-424 145-408	Huber + Suhner	3m Track B cables	multiple	07/30/2016	07/30/2017

Software Utilized:

Name	Manufacturer	Version
None		

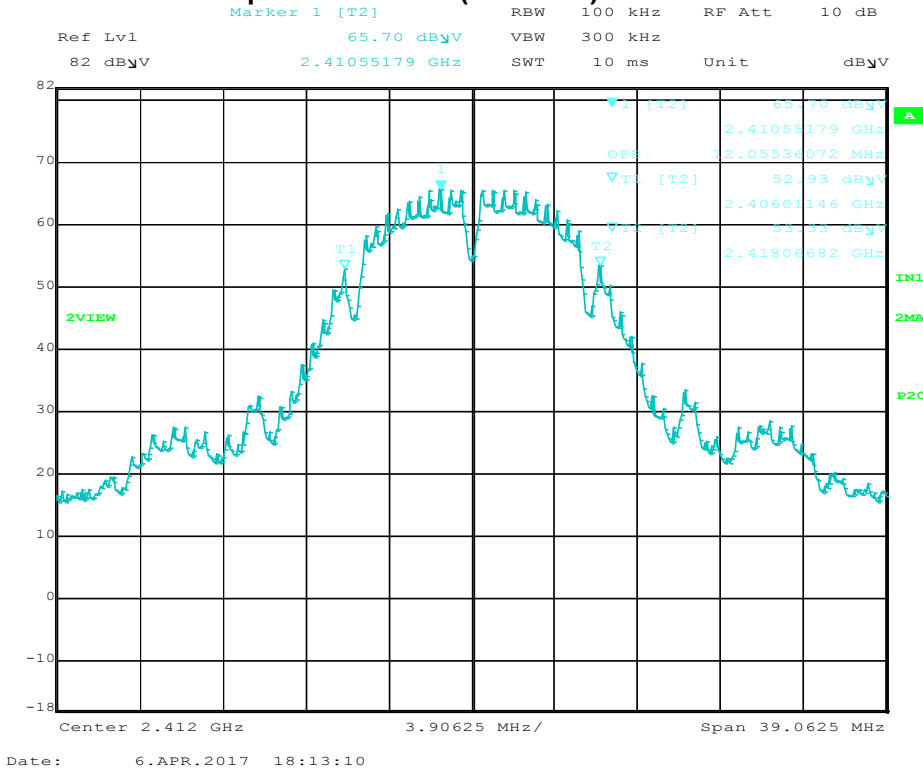
8.3 Results:

The sample tested was found to Comply. DTS devices shall have a minimum 6dB bandwidth of 500 kHz

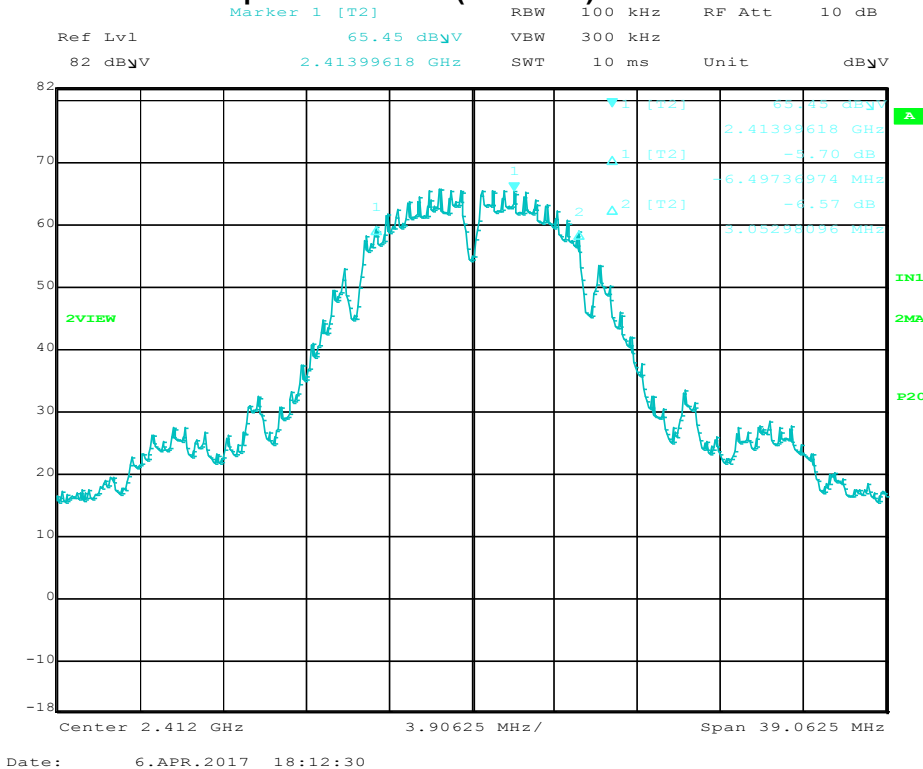
8.4 Plots/Data:

Note: OBW and 6dB testing was performed on the lowest and highest data rates of the 802.11b and 802.11g modulations

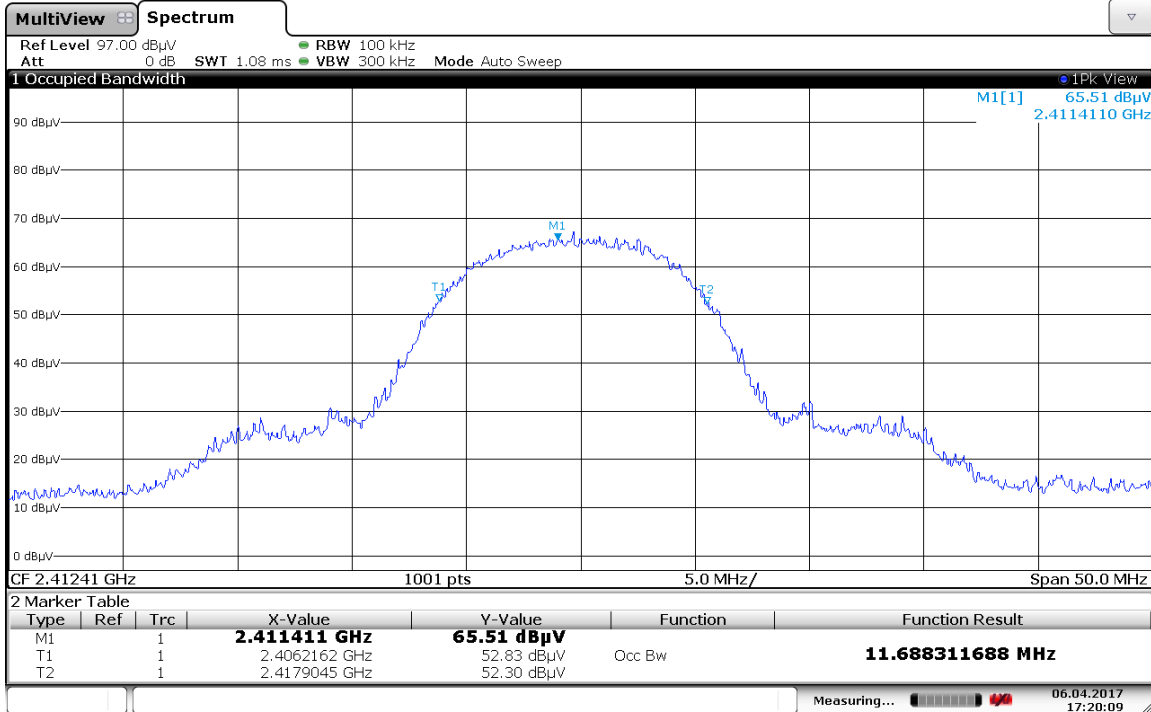
802.11b 1 Mbps Low Channel (2412 MHz) OBW = 12.0053 MHz



802.11b 1 Mbps Low Channel (2412 MHz) 6dB BW = 9.542 MHz

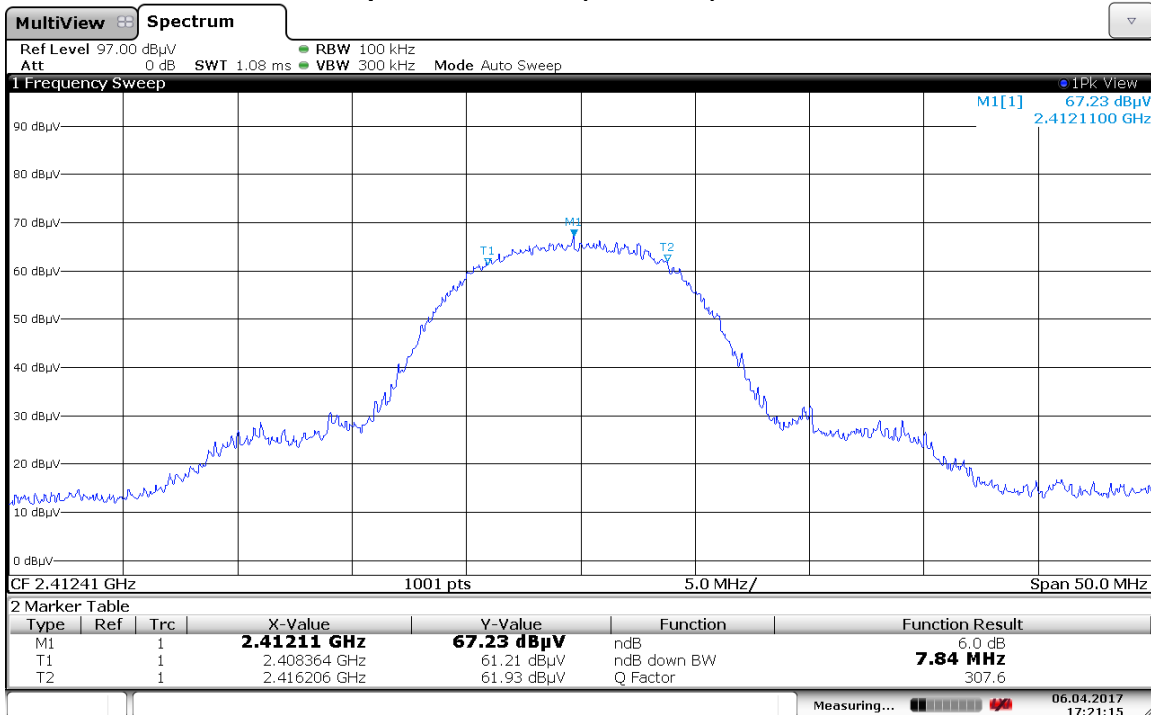


802.11b 11 Mbps Low Channel (2412 MHz) OBW = 11.68 MHz



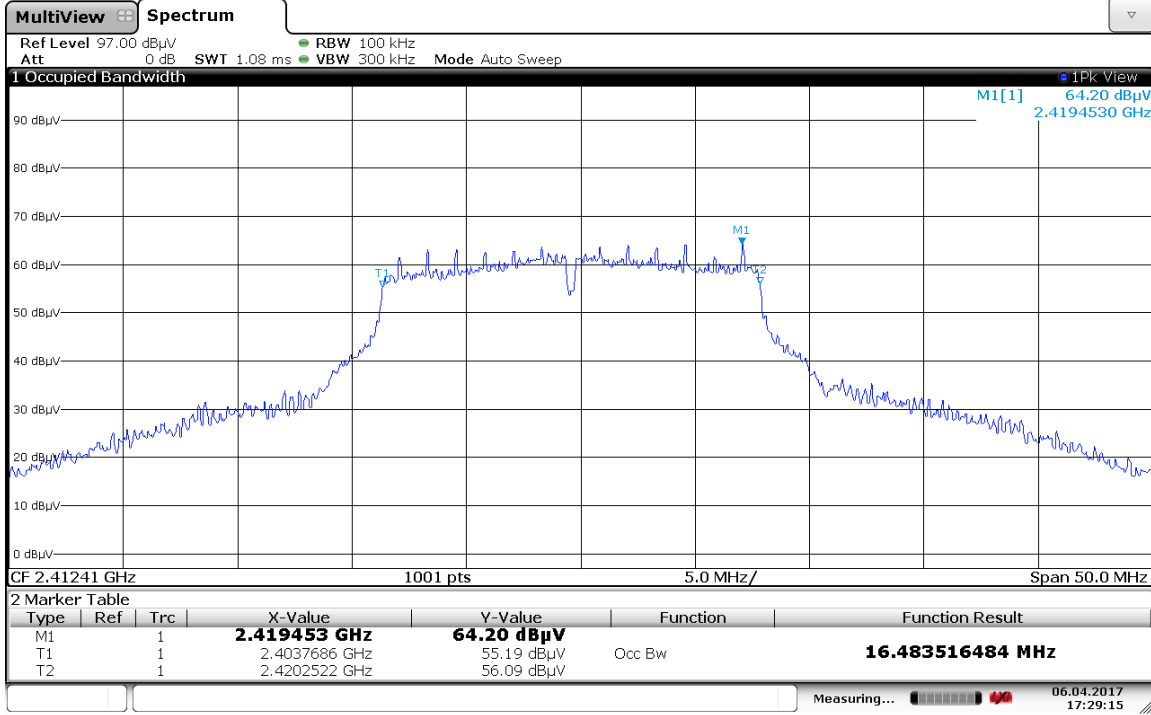
Date: 6.APR.2017 17:20:09

802.11b 11 Mbps Low Channel (2412 MHz) 6dB BW = 7.84 MHz



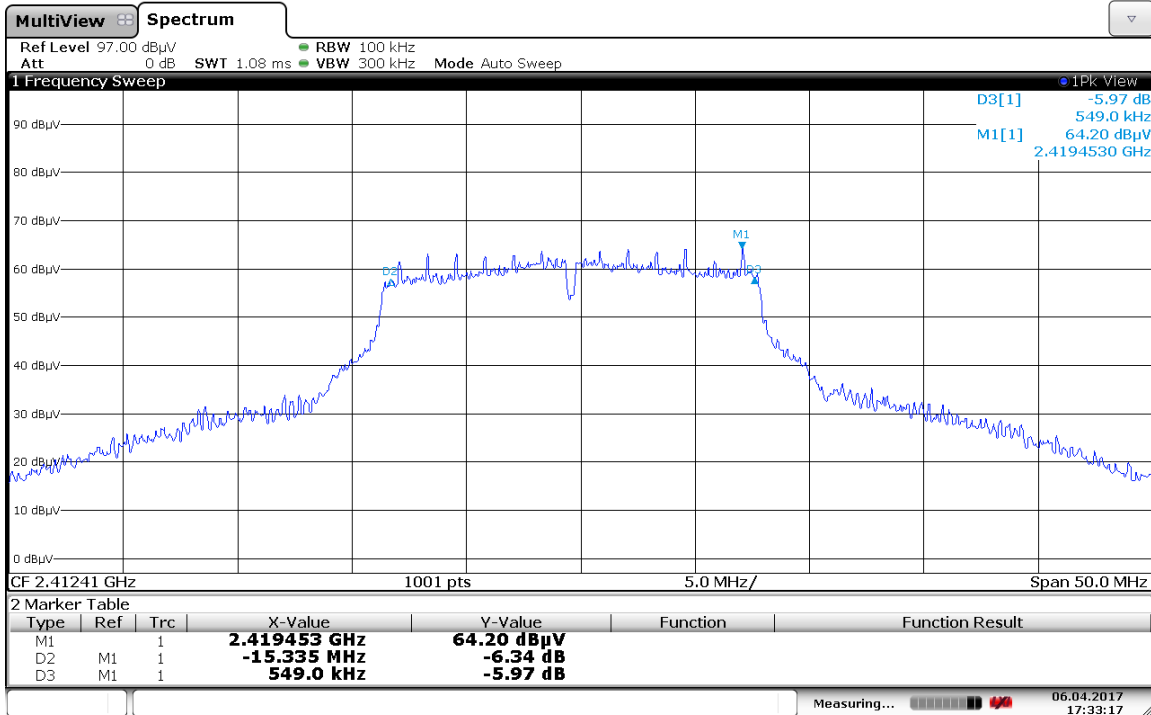
Date: 6.APR.2017 17:21:15

802.11g 6 Mbps Low Channel (2412 MHz) OBW = 16.48 MHz



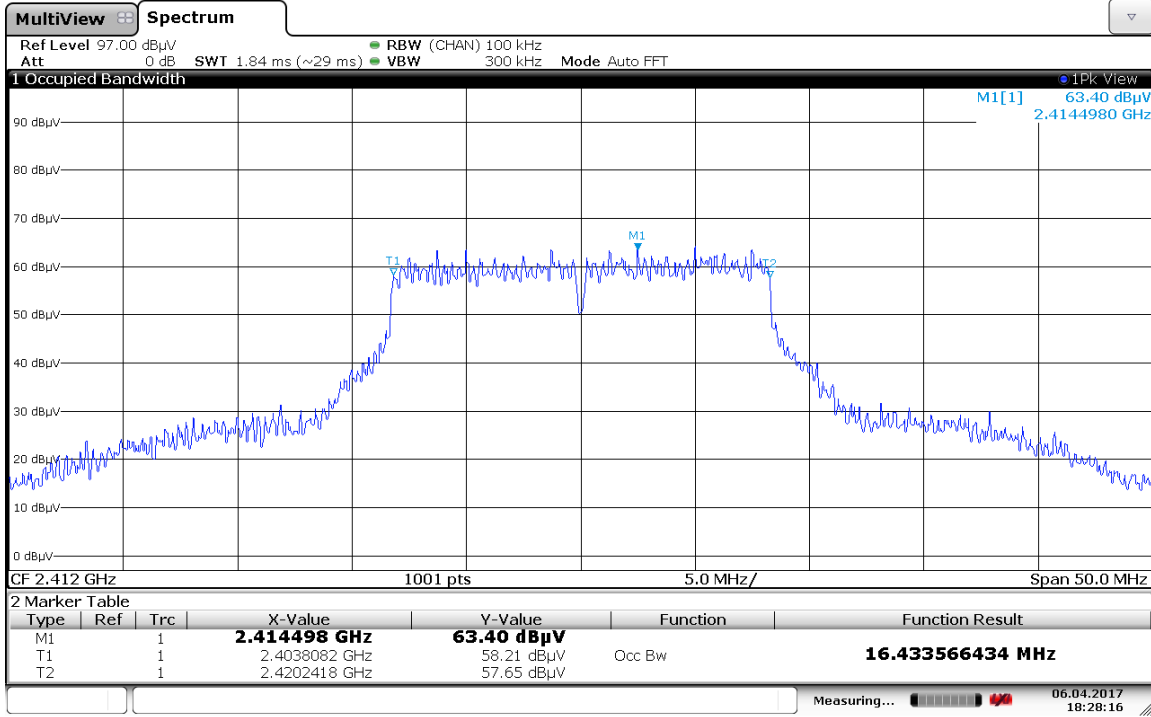
Date: 6.APR.2017 17:29:15

802.11g 6 Mbps Low Channel (2412 MHz) 6dB BW = 12.31 MHz



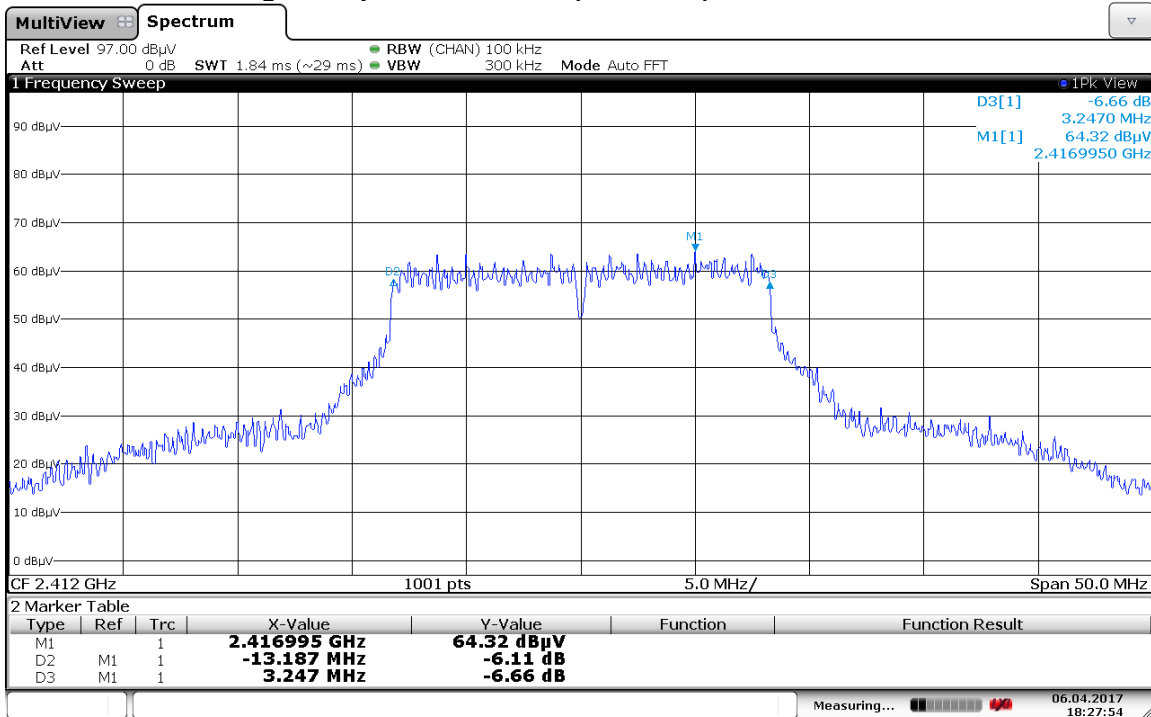
Date: 6.APR.2017 17:33:17

802.11g 54 Mbps Low Channel (2412 MHz) OBW = 16.43 MHz



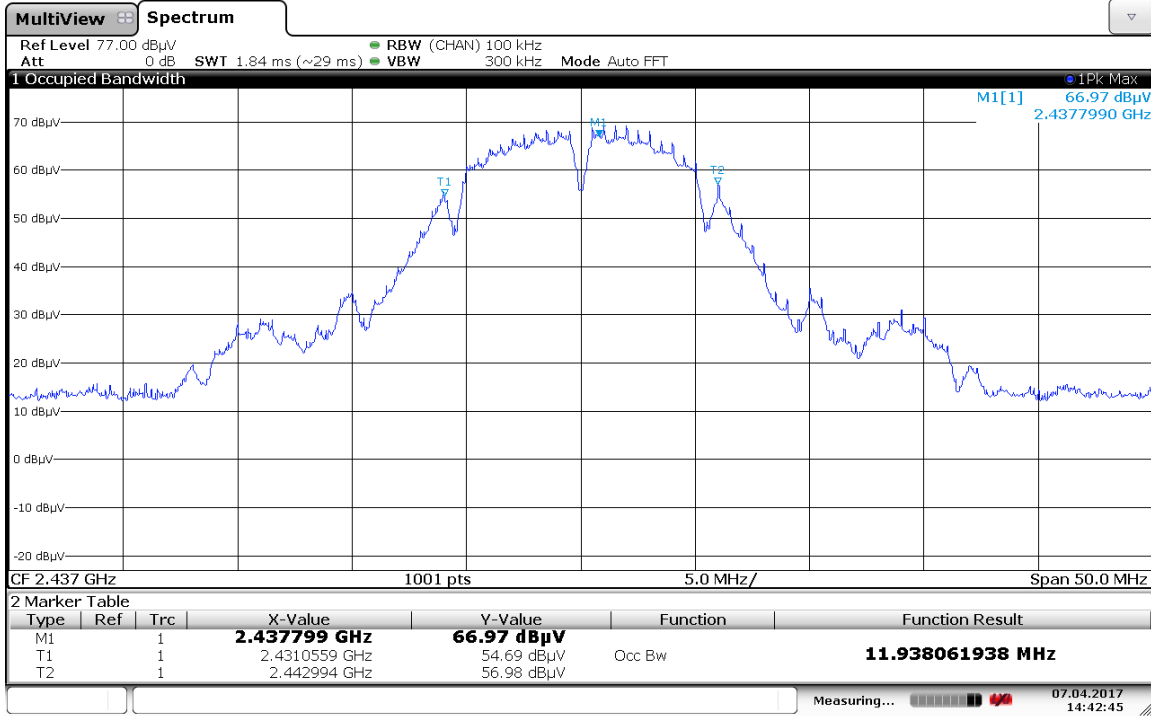
Date: 6 APR. 2017 18:28:16

802.11g 54 Mbps Low Channel (2412 MHz) 6dB BW = 12.77 MHz



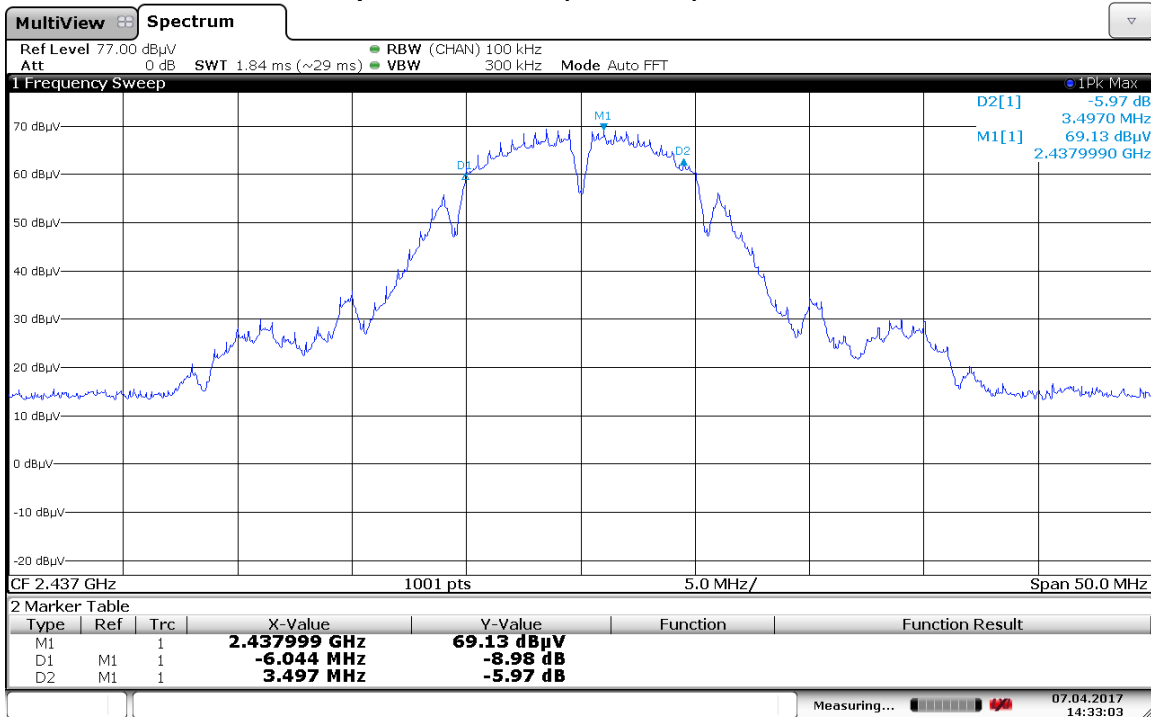
Date: 6 APR. 2017 18:27:54

802.11b 1 Mbps Mid Channel (2437 MHz) OBW = 11.93 MHz



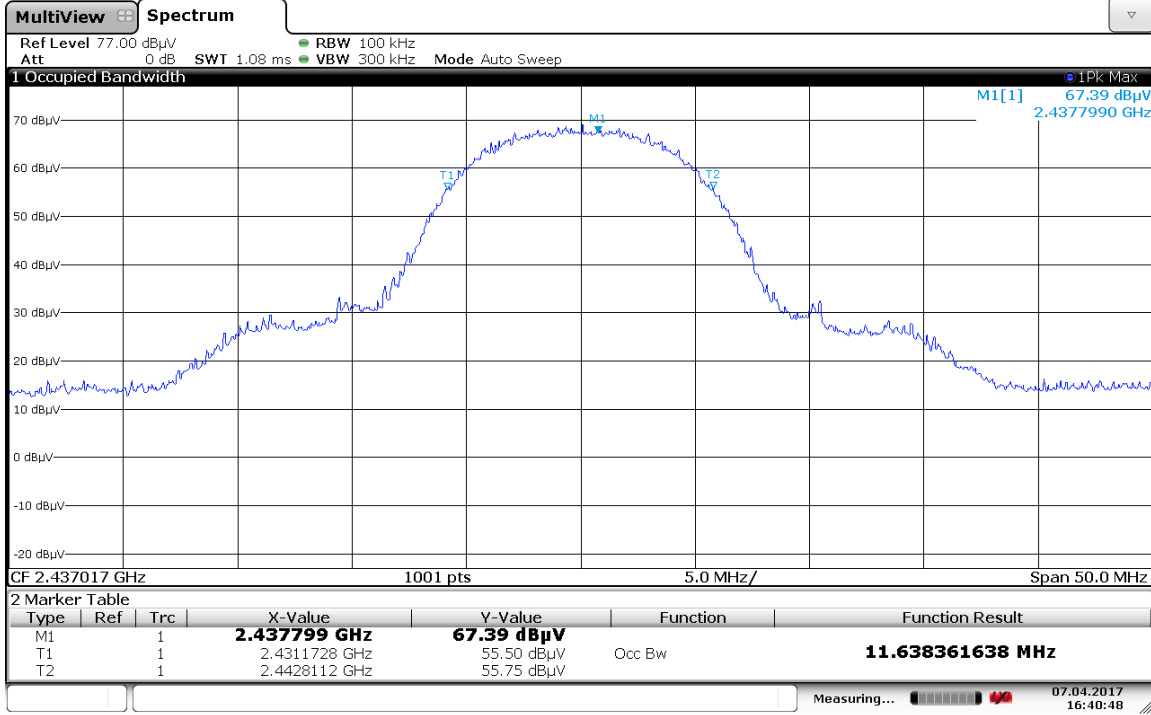
Date: 7 APR 2017 14:42:46

802.11b 1 Mbps Mid Channel (2437 MHz) 6dB BW = 14.95 MHz

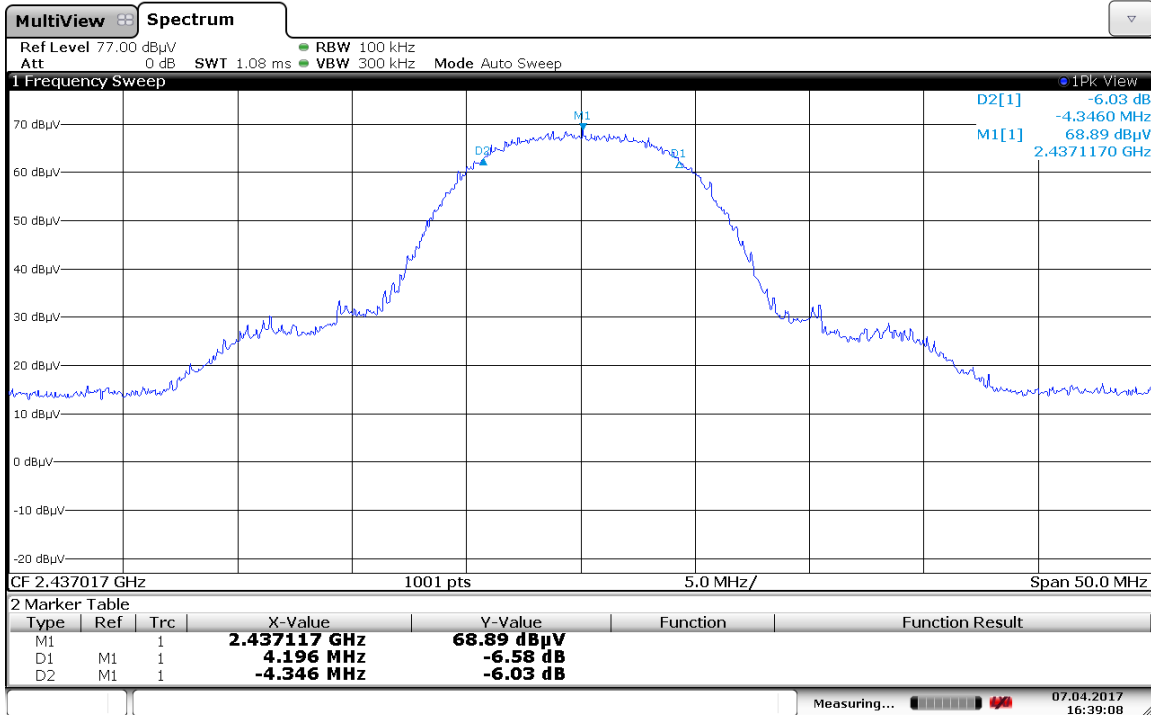


Date: 7 APR 2017 14:33:03

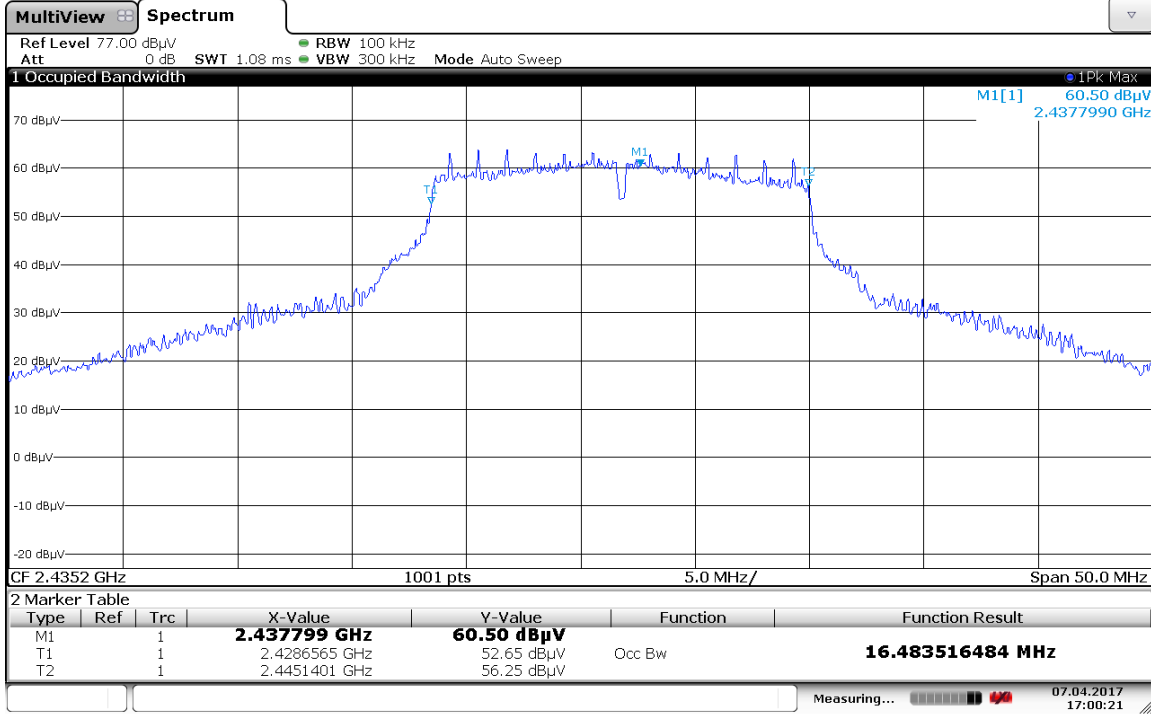
802.11b 11 Mbps Mid Channel (2437 MHz) OBW = 11.63 MHz



802.11b 11 Mbps Mid Channel (2437 MHz) 6dB BW = 12.61 MHz

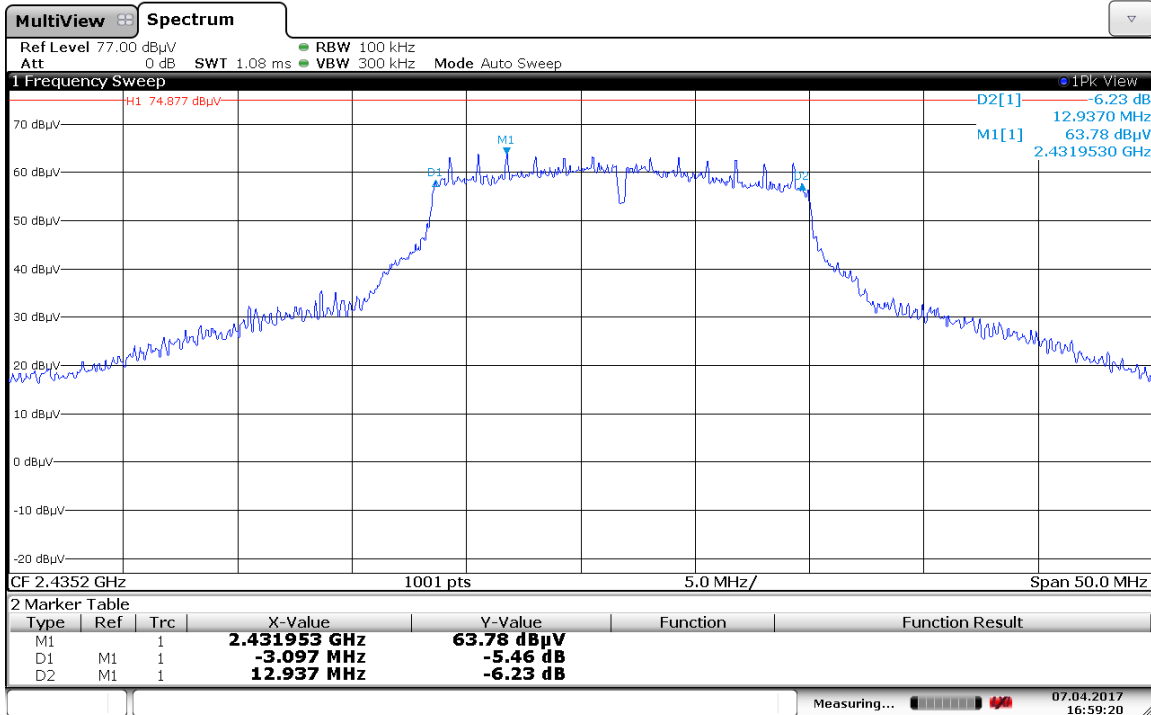


802.11g 6 Mbps Mid Channel (2437 MHz) OBW = 16.48 MHz



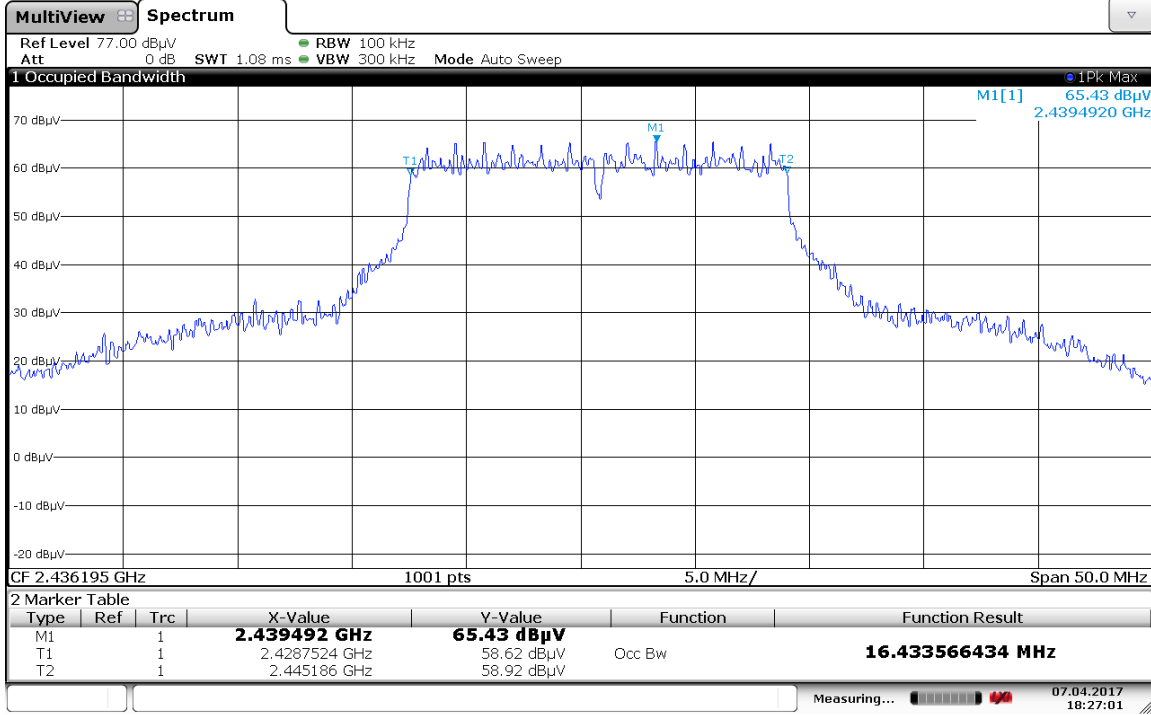
Date: 7 APR. 2017 17:00:21

802.11g 6 Mbps Mid Channel (2437 MHz) 6dB BW = 11.69 MHz



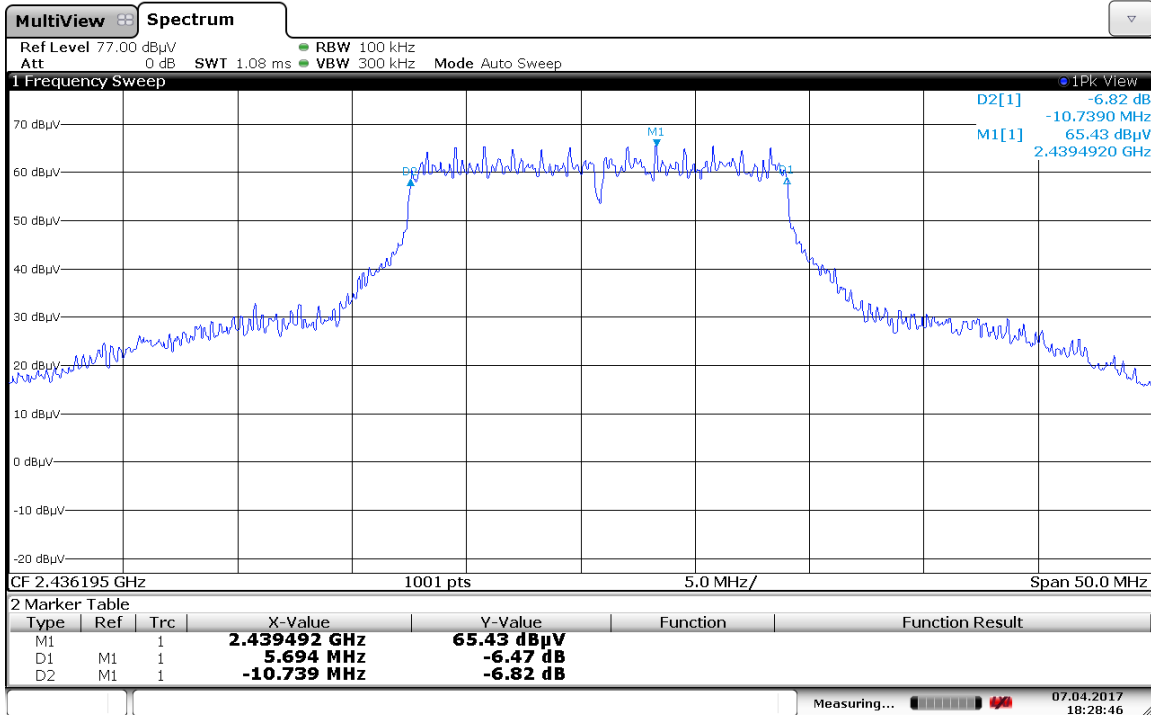
Date: 7 APR. 2017 16:59:20

802.11g 54 Mbps Mid Channel (2437 MHz) OBW = 16.43 MHz



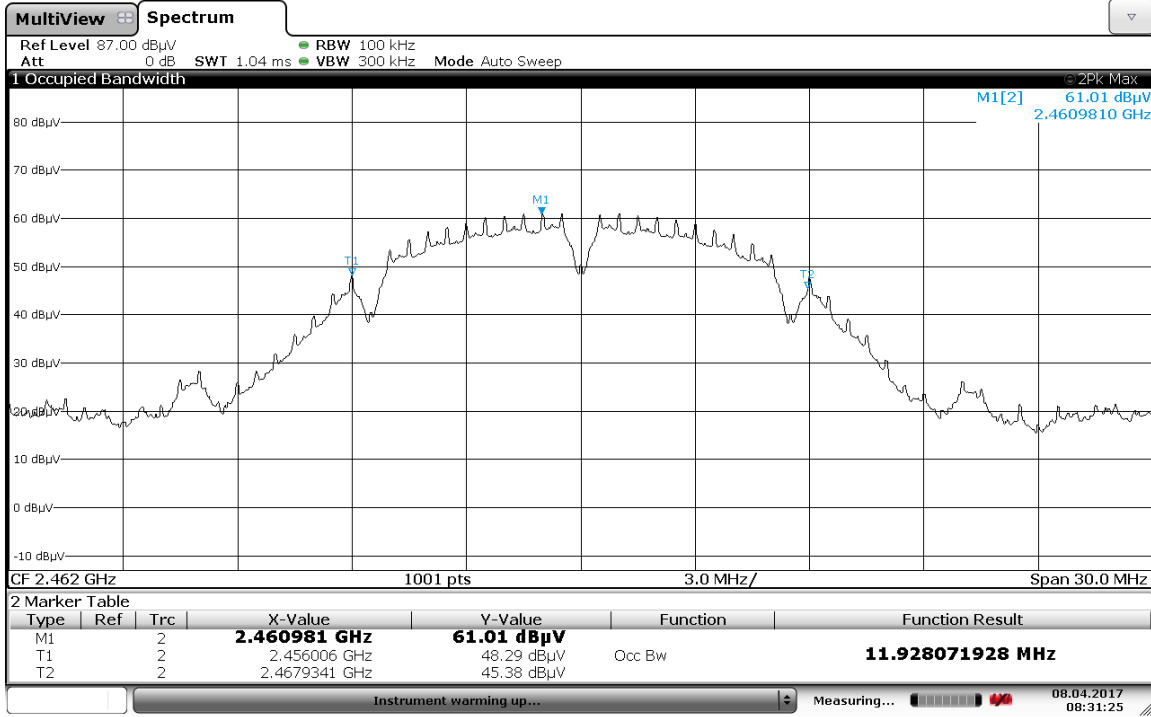
Date: 7 APR 2017 18:27:01

802.11g 54 Mbps Mid Channel (2437 MHz) 6 dB BW = 13.29 MHz



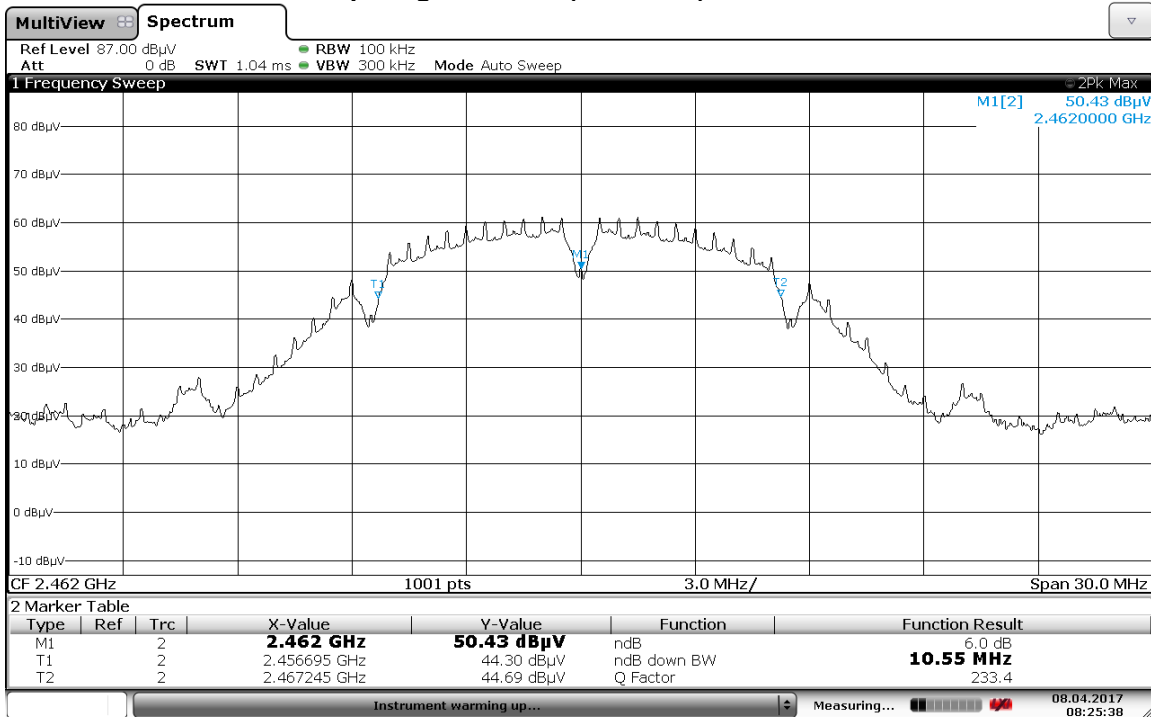
Date: 7 APR 2017 18:28:45

802.11b 1 Mbps High Channel (2462 MHz) OBW = 11.92 MHz



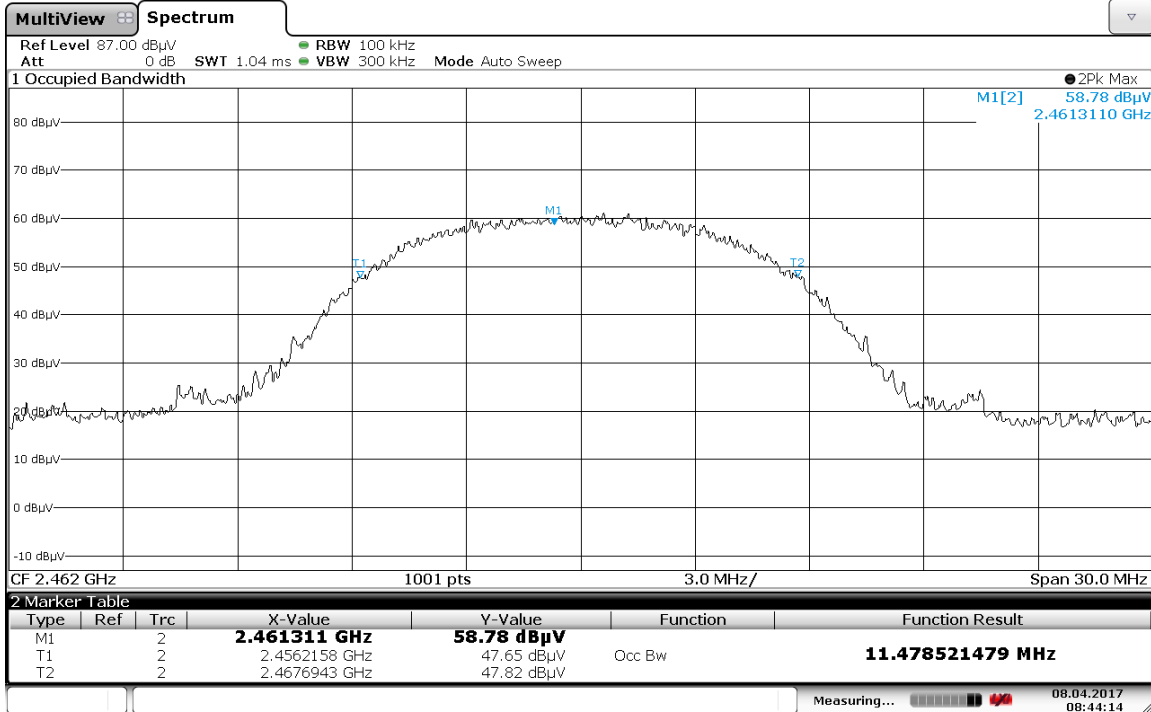
Date: 8.APR.2017 08:31:25

802.11b 1 Mbps High Channel (2462 MHz) 6dB BW = 10.55 MHz



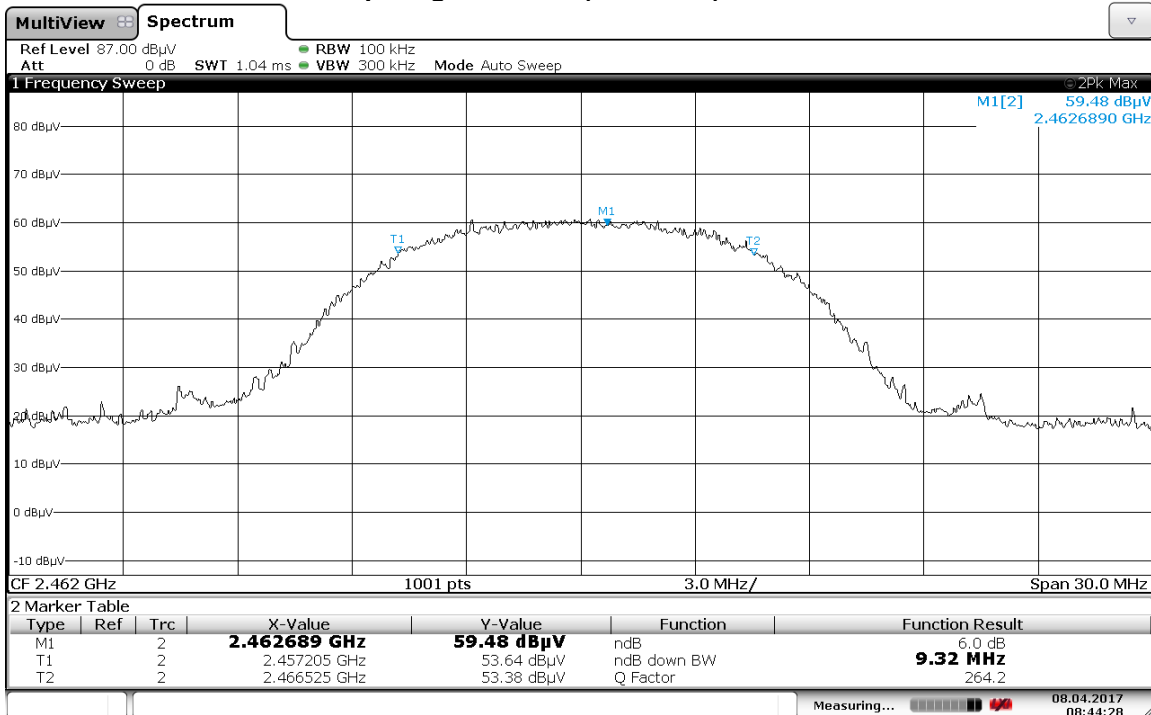
Date: 8.APR.2017 08:25:38

802.11b 11 Mbps High Channel (2462 MHz) OBW = 11.47 MHz



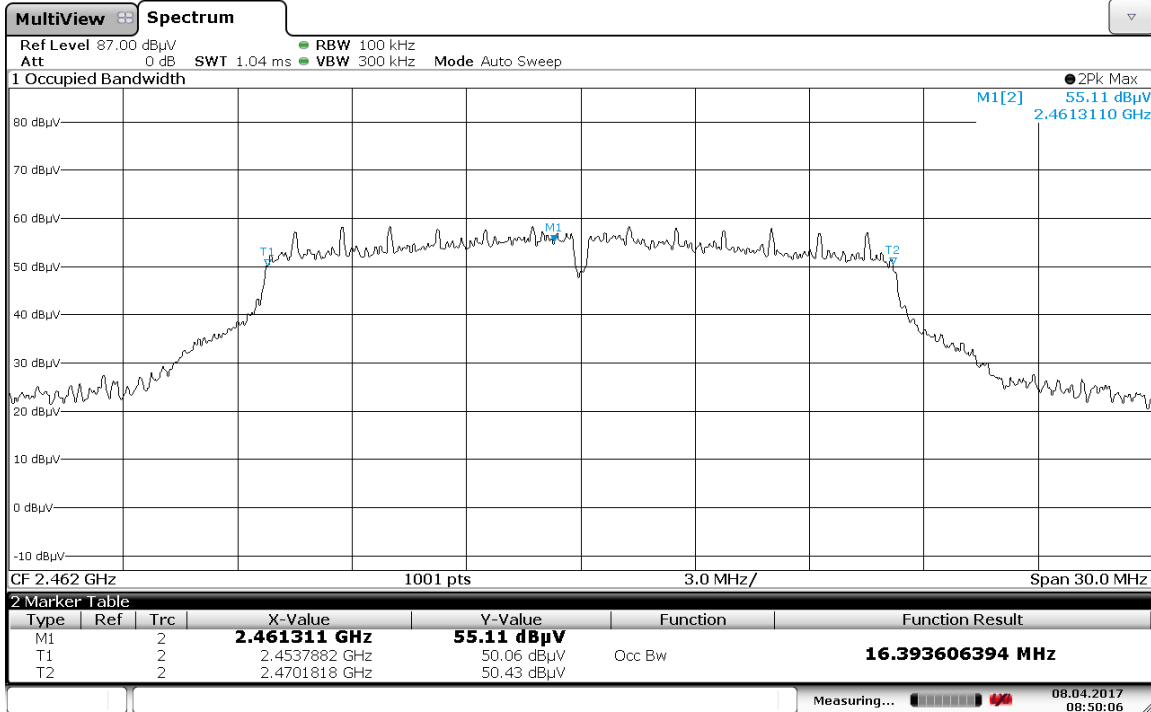
Date: 8.APR.2017 08:44:15

802.11b 11 Mbps High Channel (2462 MHz) 6dB BW = 9.32 MHz



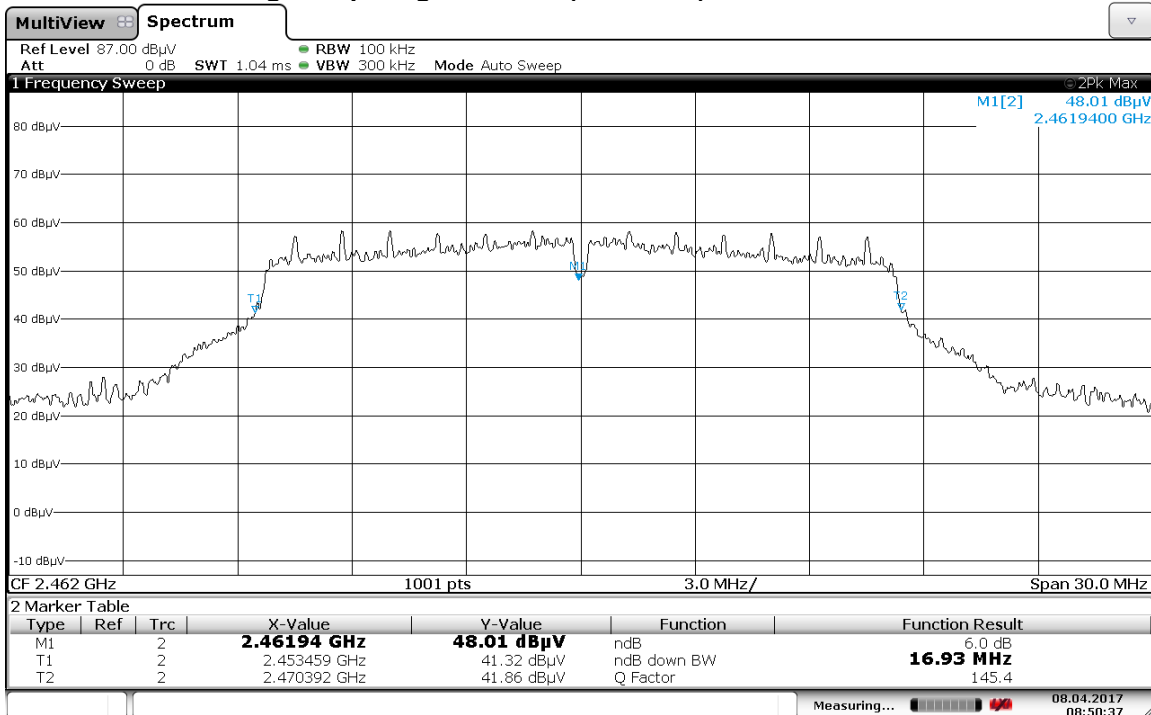
Date: 8.APR.2017 08:44:28

802.11g 6 Mbps High Channel (2462 MHz) OBW = 16.39 MHz



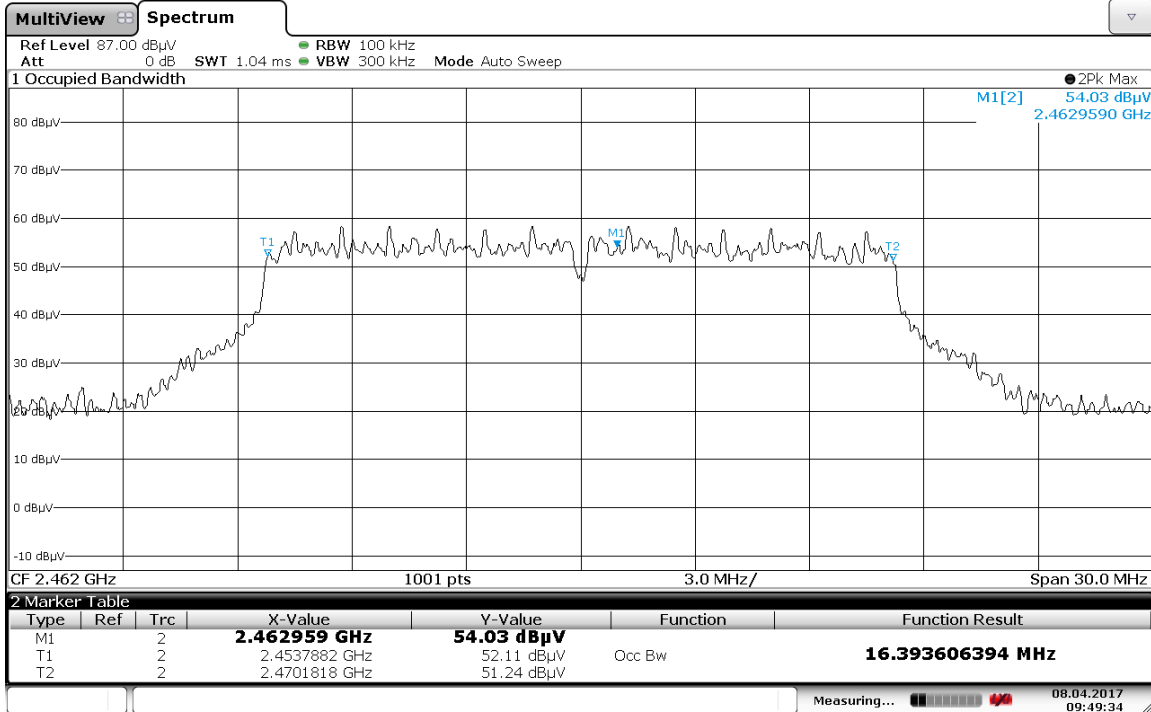
Date: 8.APR.2017 08:50:06

802.11g 6 Mbps High Channel (2462 MHz) 6dB BW = 16.93 MHz



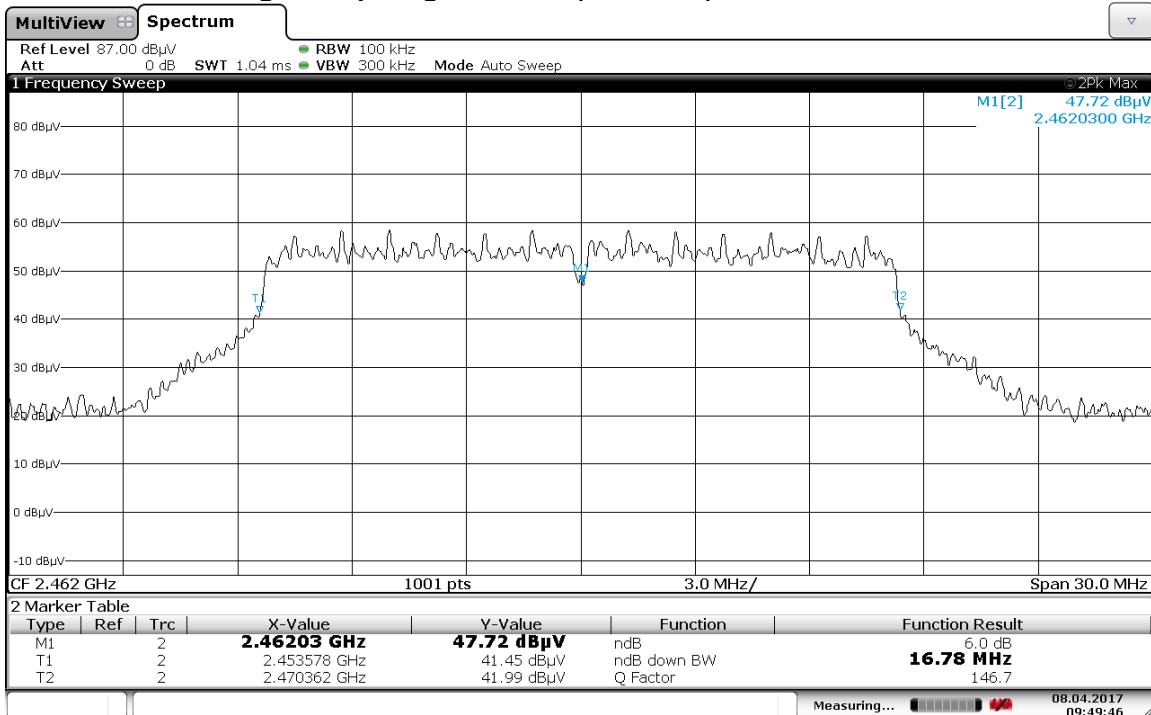
Date: 8.APR.2017 08:50:36

802.11g 54 Mbps High Channel (2462 MHz) OBW = 16.39 MHz



Date: 8.APR.2017 09:49:35

802.11g 54 Mbps High Channel (2462 MHz) 6dB BW = 16.78 MHz



Date: 8.APR.2017 09:49:46

Vathana F. Ven *VFV*
Kouma Sinn *KPS*
Test Personnel: Naga Suryadevara *N.S*
Supervising/Reviewing
Engineer:
(Where Applicable) Kouma Sinn *KPS*
FCC Part 15 Subpart C
(15.247)
Product Standard: RSS 247
Input Voltage: Internal Battery
Pretest Verification w/
Ambient Signals or
BB Source: Yes – Signal generator

Test Date: 04/07/2017
04/08/2017 (1st and 2nd Shift)
Limit Applied: As specified in section 7.3
Ambient Temperature: 21, 21 °C
Relative Humidity: 33, 24%
Atmospheric Pressure: 983, 996 mbars

Deviations, Additions, or Exclusions: None

9 Radiated Emissions (Transmitter Spurious - Out of Band and Band edge Emissions, Digital Device and Receiver)

9.1 Method

Tests are performed in accordance with FCC Part 15 Subpart C (15.247), RSS 247, FCC Part 15 Subpart B and ICES 003.

TEST SITE: 10m ALSE

The 10m ALSE is 13m (Length) x 21m (Depth) x 10m (Height) with the effective size in terms of space from the tips of the absorber is 12m (Length) x 20m (Depth) x 8.5m (Height). This chamber achieves broadband performance using a unique arrangement of hybrid and ferrite tile absorber. This chamber has a built in 3m diameter turntable (Embedded type). The metal structure of the table makes electrical connection around the entire circumference of the turntable to the ground plane with a metal brush type connection. The turntable is located on one end of the chamber and the antennas are mounted 3 and 10 meters away at the other end of the chamber on the adjustable an Antenna Mast. The antenna mast is a non-conductive bore sighted type with remote control of antenna height and polarization. The Antenna Mast and the turntable can be remotely controlled through the controller located in the adjacent Control room. A Styrofoam table 80 cm high is used for table-top equipment.

Measurement Uncertainty

Measurement	Frequency Range	Expanded Uncertainty (k=2)	Ucispr
Radiated Emissions, 10m	30-1000 MHz	4.6 dB	6.3 dB
Radiated Emissions, 3m	30-1000 MHz	5.3 dB	6.3 dB
Radiated Emissions, 3m	1-6 GHz	4.5 dB	5.2 dB
Radiated Emissions, 3m	6-15 GHz	5.2 dB	5.5 dB
Radiated Emissions, 3m	15-18 GHz	5.0 dB	5.5 dB
Radiated Emissions, 3m	18-40 GHz	5.0 dB	5.5 dB

As shown in the table above our radiated emissions U_{lab} is less than the corresponding U_{CISPR} reference value in CISPR 16-4-2 Table 1, hence the compliance of the product is only based on the measured value, and no measurement uncertainty correction is required, based on CISPR 22 and CISPR 11 (for 2006 and later revisions) Clause 11.

Sample Calculation

The field strength is calculated by adding the Antenna Factor and Cable Factor, and subtracting the Amplifier Gain (if any) from the measured reading. The basic equation with a sample calculation is as follows:

$$FS = RA + AF + CF - AG$$

Where

- FS = Field Strength in dB μ V/m
- RA = Receiver Amplitude (including preamplifier) in dB μ V
- CF = Cable Attenuation Factor in dB
- AF = Antenna Factor in dB
- AG = Amplifier Gain in dB

In the following table(s), the reading shown on the data table reflects the preamplifier gain. An example for the calculations in the following table is as follows.

Assume a receiver reading of 52.0 dB μ V is obtained. The antenna factor of 7.4 dB and cable factor of 1.6 dB is added. The amplifier gain of 29 dB is subtracted, giving a field strength of 32 dB μ V/m. This value in dB μ V/m was converted to its corresponding level in μ V/m.

RA = 52.0 dB μ V
 AF = 7.4 dB/m
 CF = 1.6 dB
 AG = 29.0 dB
 FS = 32 dB μ V/m

To convert from dB μ V to μ V or mV the following was used:

$$UF = 10^{(NF / 20)} \text{ where } UF = \text{Net Reading in } \mu\text{V}$$

$$NF = \text{Net Reading in dB}\mu\text{V}$$

Example:

$$FS = RA + AF + CF - AG = 52.0 + 7.4 + 1.6 - 29.0 = 32.0$$

$$UF = 10^{(32 \text{ dB}\mu\text{V} / 20)} = 39.8 \mu\text{V/m}$$

Alternately, when C5 Software is used, the "Level" includes all losses and gains and is compared directly in the "Margin" column to the "Limit". "AF" is the Antenna Factor; "PA+CL" are Preamp and Cable Loss. These are already accounted for in the "Level" column.

9.2 Test Equipment Used:

Asset	Description	Manufacturer	Model	Serial	Cal Date	Cal Due
DAV004'	Weather Station	Davis Instruments	7400	PE80529A61 A	05/02/2016	05/02/2017
145106'	Bilog Antenna (30MHz - 5GHz)	Sunol Sciences	JB5	A111003	05/03/2016	05/03/2017
145-410'	Cables 145-420 145-421 145-422 145-406	Huber + Suhner	10m Track A Cables	multiple	07/30/2016	07/30/2017
PRE10'	30-1000MHz pre-amp	ITS	PRE10	PRE10	12/16/2016	12/16/2017
145128'	EMI Receiver (20 Hz - 40 Ghz)	Rohde & Schwarz	ESIB 40	839283/001	03/15/2017	03/15/2018
ETS002'	1-18GHz DRG Horn Antenna	ETS Lindgren	3117	00143260	05/13/2016	05/13/2017
145014'	Preamplifier (1 GHz to 26.5 GHz)	Hewlett Packard	8449B	3008A00232	05/27/2016	05/27/2017
EMC04'	ANTENNA, RIDGED GUIDE, 18-40 GHZ	EMCO	3116	2090	09/14/2016	09/14/2017
REA004'	3GHz High Pass Filter	Reactel, Inc	7HSX- 3G/18G-S11	06-1	02/17/2017	02/17/2018
PRE9'	100MHz-40GHz Preamp	MITEQ	NSP4000- NFG	1260417	08/23/2016	08/23/2017
CBLHF2012 -2M-1'	2m 9kHz-40GHz Coaxial Cable - SET1	Huber & Suhner	SF102	252675001	02/08/2017	02/08/2018
CBLHF2012 -5M-1'	5m 9kHz-40GHz Coaxial Cable - SET 1	Huber & Suhner	SF102	252676001	02/08/2017	02/08/2018
145-416'	Cables 145-420 145-423 145-424 145-408	Huber + Suhner	3m Track B cables	multiple	07/30/2016	07/30/2017

Software Utilized:

Name	Manufacturer	Version
EMI Boxborough.xlsx	Intertek Boxborough	08/27/2010

9.3 Results:

The sample tested was found to Comply.

9.4 Plots/Data:

30-12500 MHz – Spurious Emissions (Digital Device and Receiver)

30 - 1000 MHz - Battery											
QP	V	37.989	27.12	15.33	1.29	40.72	0.00	3.01	30.00	-26.99	120/300 kHz
QP	H	41.120	27.68	13.32	1.31	40.72	0.00	1.59	30.00	-28.41	120/300 kHz
QP	H	288.120	29.23	13.44	3.09	40.68	0.00	5.07	36.00	-30.93	120/300 kHz
QP	H	299.976	26.19	13.50	3.14	40.69	0.00	2.14	36.00	-33.86	120/300 kHz
QP	V	303.120	24.21	13.76	3.16	40.69	0.00	0.44	36.00	-35.56	120/300 kHz
QP	V	333.190	23.56	14.37	3.33	40.73	0.00	0.53	36.00	-35.47	120/300 kHz
30 - 1000 MHz - Charging											
QP	V	37.989	26.98	15.33	1.29	40.72	0.00	2.87	30.00	-27.13	120/300 kHz
QP	H	41.190	27.59	13.27	1.31	40.72	0.00	1.45	30.00	-28.55	120/300 kHz
QP	H	288.090	28.78	13.44	3.09	40.68	0.00	4.62	36.00	-31.38	120/300 kHz
QP	V	312.120	27.12	14.08	3.21	40.70	0.00	3.71	36.00	-32.29	120/300 kHz
QP	H	326.170	25.23	14.18	3.29	40.73	0.00	1.97	36.00	-34.03	120/300 kHz
QP	V	353.120	24.45	14.72	3.43	40.75	0.00	1.86	36.00	-34.14	120/300 kHz

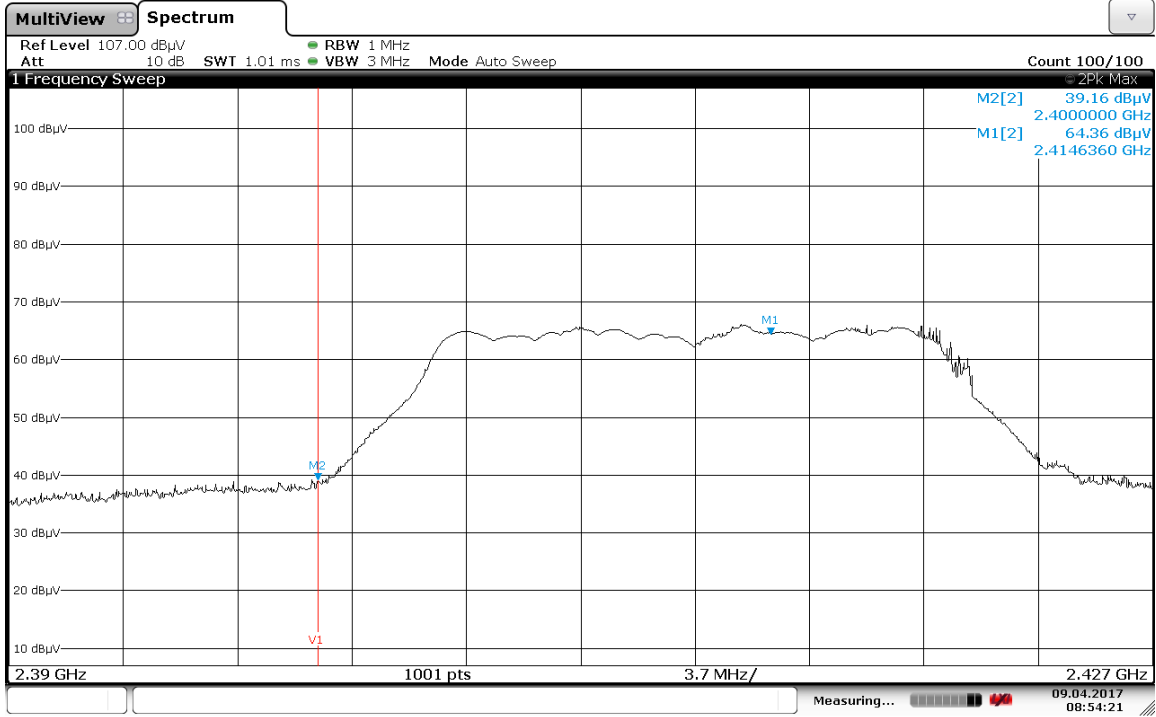
Note: No emissions above noise floor were detected above 1 GHz

30-1000 MHz – Transmitter Spurious Emissions (Tx on Mid Channel – 802.11g 18 Mbps)

30 - 1000 MHz Tx mode - X axis											
QP	V	35.239	27.19	17.14	1.29	40.73	0.00	4.89	30.00	-25.11	120/300 kHz
QP	H	37.989	26.22	15.71	1.29	40.72	0.00	2.49	30.00	-27.51	120/300 kHz
QP	H	292.190	25.97	13.44	3.10	40.68	0.00	1.84	36.00	-34.16	120/300 kHz
QP	V	295.190	28.19	13.60	3.12	40.69	0.00	4.23	36.00	-31.77	120/300 kHz
QP	V	330.230	26.23	14.49	3.31	40.73	0.00	3.30	36.00	-32.70	120/300 kHz
QP	V	468.170	28.19	17.33	3.83	40.69	0.00	8.65	36.00	-27.35	120/300 kHz
30 - 1000 MHz Tx mode - Y axis											
QP	V	35.228	27.79	17.15	1.29	40.73	0.00	5.50	30.00	-24.50	120/300 kHz
QP	H	43.212	30.08	11.77	1.35	40.71	0.00	2.49	30.00	-27.51	120/300 kHz
QP	H	288.190	28.12	13.44	3.09	40.68	0.00	3.96	36.00	-32.04	120/300 kHz
QP	H	293.290	27.76	13.47	3.11	40.68	0.00	3.65	36.00	-32.35	120/300 kHz
QP	H	323.120	25.22	14.20	3.27	40.72	0.00	1.97	36.00	-34.03	120/300 kHz
QP	V	422.380	26.18	16.45	3.68	40.76	0.00	5.55	36.00	-30.45	120/300 kHz
30 - 1000 MHz Tx mode - Z axis											
QP	V	36.018	29.97	16.63	1.29	40.73	0.00	7.16	30.00	-22.84	120/300 kHz
QP	H	37.962	27.71	15.72	1.29	40.72	0.00	3.99	30.00	-26.01	120/300 kHz
QP	H	287.190	25.98	13.46	3.08	40.68	0.00	1.84	36.00	-34.16	120/300 kHz
QP	V	293.120	30.02	13.56	3.11	40.68	0.00	6.01	36.00	-29.99	120/300 kHz
QP	V	329.270	29.27	14.49	3.30	40.73	0.00	6.33	36.00	-29.67	120/300 kHz
QP	V	323.080	29.19	14.36	3.27	40.72	0.00	6.10	36.00	-29.90	120/300 kHz

Note: From 30-1000 MHz testing was done on 802.11g 18 Mbps data rate with device set to Mid channel where worst case output power was measured.

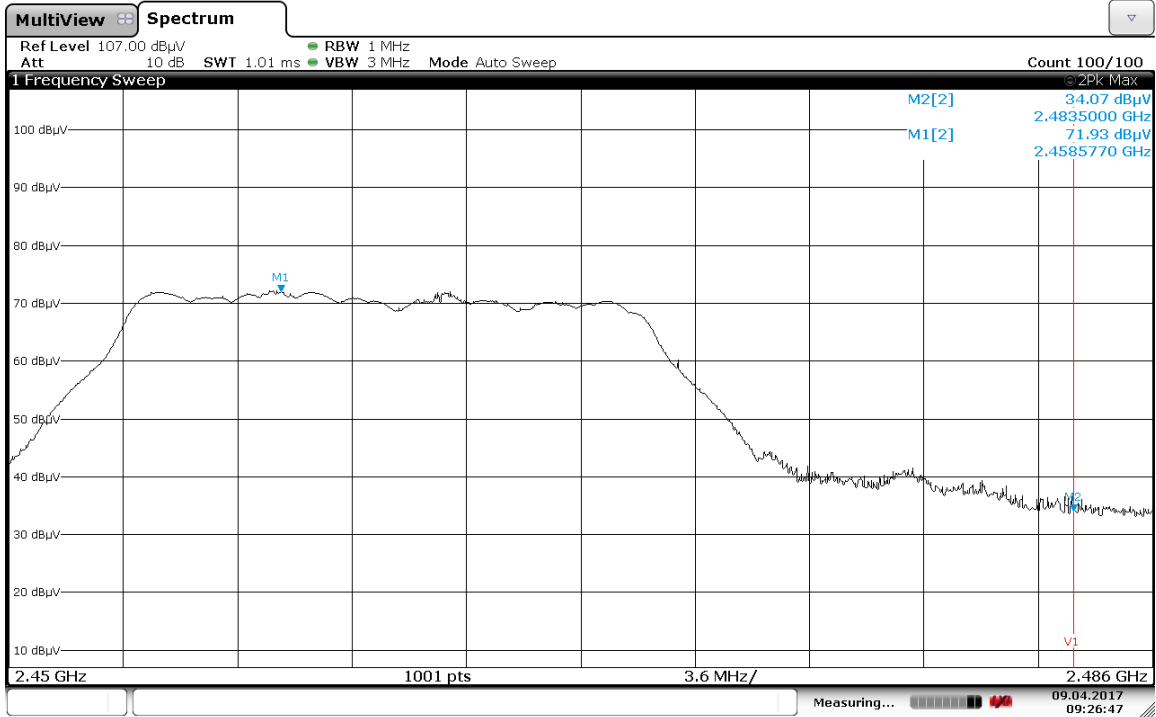
Lower Band edge (802.11g 6 Mbps Tx on Low and High Channels)



Date: 9.APR.2017 08:54:21

Emission at non restricted band edge was 20dB below the fundamental.

Higher Band edge (802.11g 6 Mbps Tx on Low and High Channels)



Date: 9.APR.2017 09:26:47

The emission at restricted band edge meets the general requirements as indicated below

Detector Type	Ant. Pol. (V/H)	Frequency MHz	Reading dB(uV)	Antenna Factor dB(1/m)	Cable Loss dB	Pre-amp Factor dB	Distance Factor dB	Net dB(uV/m)	Limit dB(uV/m)	Margin dB	Bandwidth
PK	H	2483.500	34.07	32.22	5.18	0.00	0.00	71.47	74.00	-2.53	1/3MHz
AVG	H	2483.500	14.76	32.22	5.18	0.00	0.00	52.16	54.00	-1.84	1/3MHz

Note: Band edge was performed on X –axis and no change in emission was detected on Y and Z axis.

Test Personnel: <u>Kouma Sinn <i>KPS</i></u>	Test Date: <u>04/09/2017 (1st and 2nd shift)</u>
Supervising/Reviewing Engineer: <u>Naga Suryadevara <i>N.S</i></u>	
(Where Applicable) <u>N/A</u>	
Product Standard: <u>FCC Part 15 Subpart C (15.247) RSS 247</u>	Limit Applied: <u>FCC 15.209</u>
Input Voltage: <u>Internal Battery 120VAC 60Hz</u>	
Pretest Verification w/ Ambient Signals or BB Source: <u>Yes – Signal generator</u>	Ambient Temperature: <u>21 °C</u>
	Relative Humidity: <u>32 %</u>
	Atmospheric Pressure: <u>1005 mbars</u>

Deviations, Additions, or Exclusions: None

10 AC Mains Conducted Emissions

10.1 Method

Tests are performed in accordance with FCC Part 15 Subpart C, FCC Part 15 Subpart B, RSS 247 and ICES 003.

TEST SITE: EMC Lab

The EMC Lab has one Semi-anechoic Chamber and one Shielded Chamber. AC Mains Power is available at 120, 230, and 277 Single Phase; 208, 400, and 480 3-Phase. Large reference ground-planes are installed in the general lab area to facilitate EMC work not requiring a shielded environment.

Measurement Uncertainty

Measurement	Frequency Range	Expanded Uncertainty (k=2)	Ucispr
AC Line Conducted Emissions	150 kHz - 30 MHz	2.8dB	3.4dB
Telco Port Emissions	150 kHz - 30 MHz	3.2dB	5.0dB

As shown in the table above our conducted emissions U_{lab} is less than the corresponding U_{CISPR} reference value in CISPR 16-4-2 Table 1, hence the compliance of the product is only based on the measured value, and no measurement uncertainty correction is required, based on CISPR 22 and CISPR 11 (for 2006 and later revisions) Clause 11.

Sample Calculations

The following is how net line-conducted readings were determined:

$$NF = RF + LF + CF + AF$$

Where NF = Net Reading in dB μ V

RF = Reading from receiver in dB μ V

LF = LISN or ISN Correction Factor in dB

CF = Cable Correction Factor in dB

AF = Attenuator Loss Factor in dB

To convert from dB μ V to μ V or mV the following was used:

$$UF = 10^{(NF / 20)} \text{ where } UF = \text{Net Reading in } \mu\text{V}$$

NF = Net Reading in dB μ V

Example:

$$NF = RF + LF + CF + AF = 28.5 + 0.2 + 0.4 + 20.0 = 49.1 \text{ dB}\mu\text{V}$$

$$UF = 10^{(49.1 \text{ dB}\mu\text{V} / 20)} = 285.1 \mu\text{V/m}$$

Alternately, when C5 Software is used, the "Level" includes all losses and gains and is compared directly in the "Margin" column to the "Limit". "TF" is the Transducer Factor; in this case LISN or ISN loss.

10.2 Test Equipment Used:

Asset	Description	Manufacturer	Model	Serial	Cal Date	Cal Due
DAV002'	Weather Station	Davis Instruments	7400	PE80519A93	06/01/2016	06/01/2017
ROS002'	9kHz to 3GHz EMI Test Receiver	Rohde & Schwartz	ESCI 1166.5950K0 3	100067	07/29/2016	07/29/2017
DS22'	Attenuator, 20dB	Mini Circuits	20dB, 50 ohm	DS22	09/08/2016	09/08/2017
CBLBNC7'	30 ft 50 ohm coax, BNC - BNC	ITT Pomona	RG 58 C/U	CBLBNC7	01/10/2017	01/10/2018
LISN34'	LISN - CISPR16 Compliant 9kHz-30MHz	Com-Power	LI-215A	191956	06/27/2016	06/27/2017

Software Utilized:

Name	Manufacturer	Version
Compliance 5	Teseq	5.26.46.46

10.3 Results:

The sample tested was found to Comply.

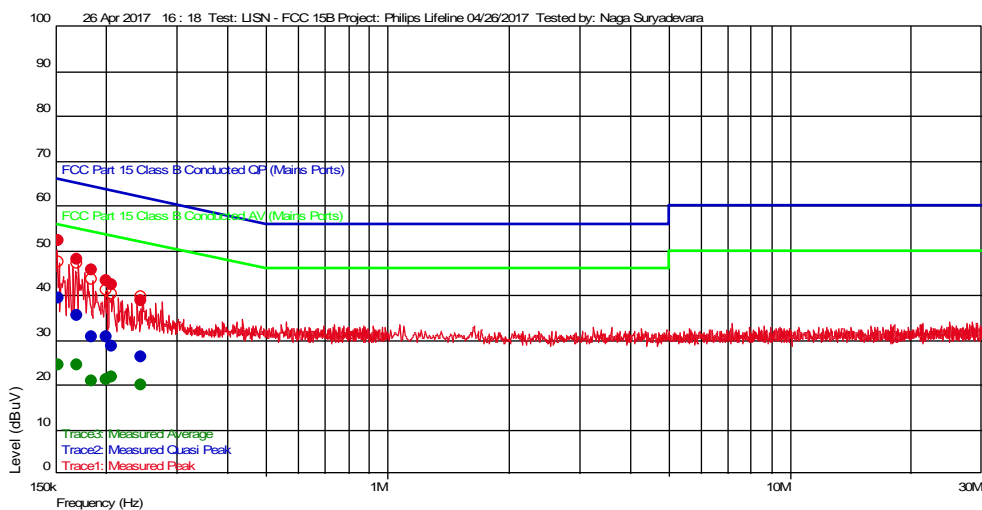
10.4 Plots/Data:

120VAC 60Hz – Charging Mode

Test Information

Test Details	User Entry	Additional Information
Test:	LISN – FCC15 Class B	
Project:	Philips Lifeline 04/26/2017	
Test Notes:	120VAC 60Hz - Charging	
Tested by:	Naga Suryadevara	
Test Started:	26 Apr 2017 16 : 18	

Prescan Emission Graph



- Measured Peak Value
- Measured Quasi Peak Value
- Measured Average Value
- Maximum Value of Mast and Turntable
- Swept Peak Data
- Swept Quasi Peak Data
- Swept Average Data

Emissions Test Data

Trace2: Measured Quasi Peak

Frequency(Hz)	Level(dBuV)	TF	PA+CL	Limit(dBuV)	Margin(dBuV)	RBW(Hz)	Comment	LINE
246.05 k	26.00	1.034	20.621	61.889	-35.89	9 k		N
207.8 k	28.57	1.272	20.620	63.293	-34.72	9 k		N
185.7 k	30.51	1.732	20.620	64.227	-33.72	9 k		L1
201.0 k	30.65	1.314	20.620	63.569	-32.92	9 k		L1
170.4 k	35.34	2.172	20.620	64.941	-29.60	9 k		N
152.55 k	39.36	2.687	20.620	65.860	-26.50	9 k		N

Trace3: Measured Average

Frequency(Hz)	Level(dBuV)	TF	PA+CL	Limit(dBuV)	Margin(dBuV)	RBW(Hz)	Comment	LINE
185.7 k	20.77	1.732	20.620	54.227	-33.45	9 k		L1
201.0 k	21.00	1.314	20.620	53.569	-32.57	9 k		L1
246.05 k	19.72	1.034	20.621	51.889	-32.17	9 k		N
207.8 k	21.50	1.272	20.620	53.293	-31.80	9 k		N
152.55 k	24.27	2.687	20.620	55.860	-31.59	9 k		N
170.4 k	24.30	2.172	20.620	54.941	-30.64	9 k		N

Test Personnel: Naga Suryadevara N:5
Supervising/Reviewing Engineer: _____
(Where Applicable) N/A
Product Standard: FCC Part 15 Subpart B
ICES 003
Input Voltage: 120VAC 60Hz

Pretest Verification w/
Ambient Signals or
BB Source: Yes

Test Date: 04/26/2017

Limit Applied: Class B

Ambient Temperature: 22 °C
Relative Humidity: 38 %
Atmospheric Pressure: 1002 mbars

Deviations, Additions, or Exclusions: None

11 Revision History

Revision Level	Date	Report Number	Prepared By	Reviewed By	Notes
0	06/09/2017	102965577BOX-017	NS	VJV	Original Issue
1	06/15/2017	102965577BOX-017	NS	VJV	Added Average power data