MEASUREMENT REPORT

FCC PART 15C WLAN 802.11b/g/n

FCC ID:	2AUSXABEGALS
APPLICANT:	Tocoding Technologies Co., Ltd
Application Type:	Certification
Product:	Abegal Battery Camera
Model No.:	Abegal S
Brand Name:	Abegal
FCC Classification:	Digital Transmission System (DTS)
FCC Rule Part(s):	Part 15 Subpart C (Section 15.247)
Test Procedure(s):	ANSI C63.10-2013, KDB 558074 D01v05r02
Test Date:	September 30 ~ October 11, 2019

Reviewed By: Sunny Sun
(Sunny Sun)

Approved By: Robin Wu
(Robin Wu)

ACCREDITED
TESTING LABORATORY
CERTIFICATE #3628.01

The test results relate only to the samples tested.
This equipment has been shown to be capable of compliance with the applicable technical standards as indicated in the measurement report and was tested in accordance with the measurement procedures specified in ANSI C63.10-2013. Test results reported herein relate only to the item(s) tested.
The test report shall not be reproduced except in full without the written approval of MRT Technology (Suzhou) Co., Ltd.

Revision History

Report No.	Version	Description	Issue Date	Note
1909RSU027-U1	Rev. 01	Initial Report	10-25-2019	Valid

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Description Page

§2.1033 General Information

Applicant:	Tocoding Technologies Co., Ltd
Applicant Address:	No.3103-3105, Xinghe World Building C, Meiban Road , Bantian, Longgang District, Shenzhen, China
Manufacturer:	Tocoding Technologies Co., Ltd
Manufacturer Address:	No.3103-3105, Xinghe World Building C, Meiban Road , Bantian, Longgang District, Shenzhen, China
Test Site:	MRT Technology (Suzhou) Co., Ltd
Test Site Address:	D8 Building, No.2 Tian'edang Rd., Wuzhong Economic Development Zone, Suzhou, China

Test Facility / Accreditations

Measurements were performed at MRT Laboratory located in Tian'edang Rd., Suzhou, China.

- **MRT facility is a FCC registered (MRT Reg. No. 893164) test facility with the site description report on file and has met all the requirements specified in ANSI C63.4-2014.**
- **MRT facility is an IC registered (MRT Reg. No. 11384A-1) test laboratory with the site description on file at Industry Canada.**
- **MRT facility is a VCCI registered (R-20025, G-20034, C-20020, T-20020) test laboratory with the site description on file at VCCI Council.**
- **MRT Lab is accredited to ISO 17025 by the American Association for Laboratory Accreditation (A2LA) under the American Association for Laboratory Accreditation Program (A2LA Cert. No. 3628.01) in EMC, Telecommunications, Radio and SAR testing.**

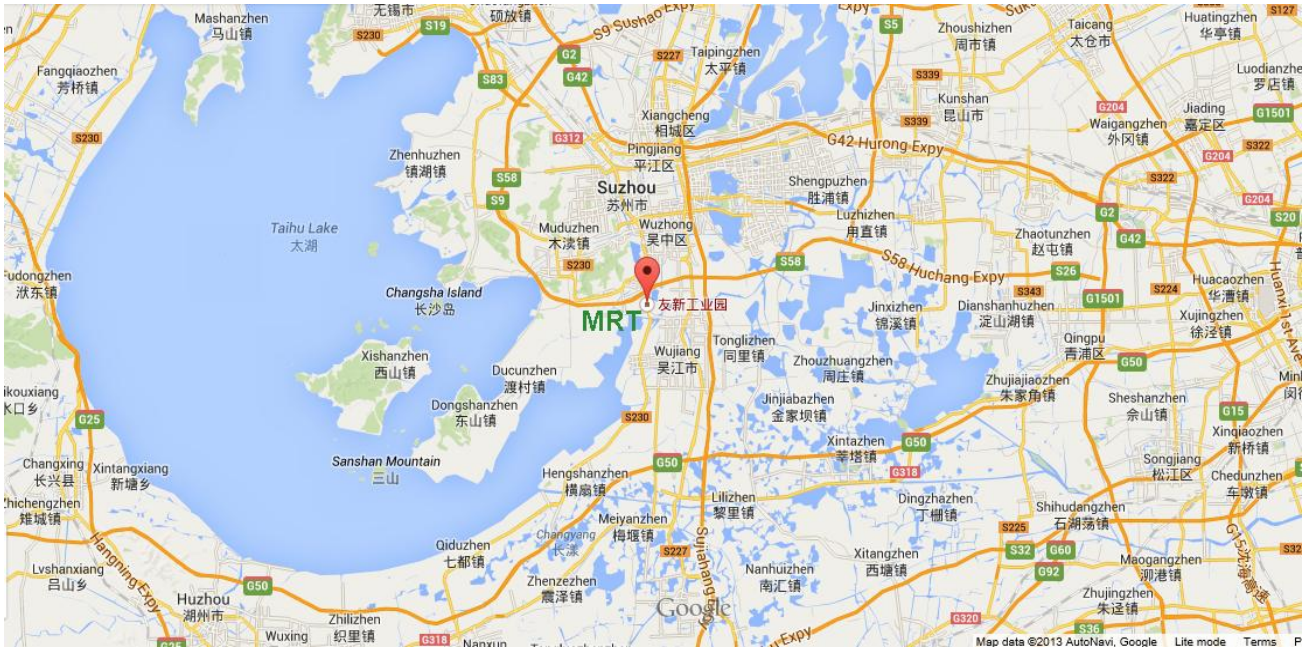
1. INTRODUCTION

1.1. Scope

Measurement and determination of electromagnetic emissions (EMC) of radio frequency devices including intentional and/or unintentional radiators for compliance with the technical rules and regulations of the Federal Communications Commission and the Innovation, Science and Economic Development Canada and Certification and Engineering Bureau.

1.2. MRT Test Location

The map below shows the location of the MRT LABORATORY, its proximity to the Taihu Lake. These measurement tests were conducted at the MRT Technology (Suzhou) Co., Ltd. Facility located at D8 Building, No.2 Tian'edang Rd., Wuzhong Economic Development Zone, Suzhou, China. The measurement facility compliant with the test site requirements specified in ANSI C63.4-2014.



2. PRODUCT INFORMATION

2.1. Equipment Description

Product Name:	Abegal Battery Camera
Model No.:	Abegal S
Brand Name:	Abegal
Wi-Fi Specification:	802.11b/g/n-HT20

2.2. Product Specification Subjective to this Report

Frequency Range:	802.11b/g/n-HT20: 2412MHz ~ 2462MHz
Channel Number:	802.11b/g/n-HT20: 11
Type of Modulation:	802.11b: DSSS 802.11g/n: OFDM
Data Rate:	802.11b: 1/2/5.5/11Mbps 802.11g: 6/9/12/18/24/36/48/54Mbps 802.11n: up to 72.2Mbps
Antenna Type:	PCB Antenna
Antenna Gain:	1.0dBi

2.3. Working Frequencies for this report

802.11b/g/n-HT20

Channel	Frequency	Channel	Frequency	Channel	Frequency
01	2412 MHz	02	2417 MHz	03	2422 MHz
04	2427 MHz	05	2432 MHz	06	2437 MHz
07	2442 MHz	08	2447 MHz	09	2452 MHz
10	2457 MHz	11	2462 MHz	--	--

2.4. Test Mode

Test Mode	Mode 1: Transmit by 802.11b (1Mbps)
	Mode 2: Transmit by 802.11g (6Mbps)
	Mode 3: Transmit by 802.11n-HT20 (MCS0)

2.5. Description of Test Software

The test utility software used during testing was “IPOP.exe”, and the version was “4.1”.

Power parameter values refer to operation description.

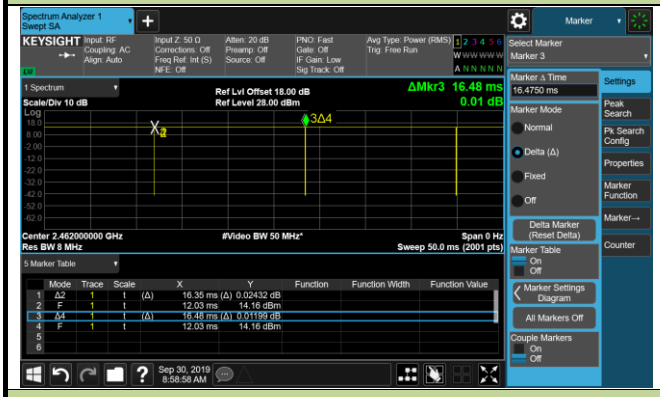
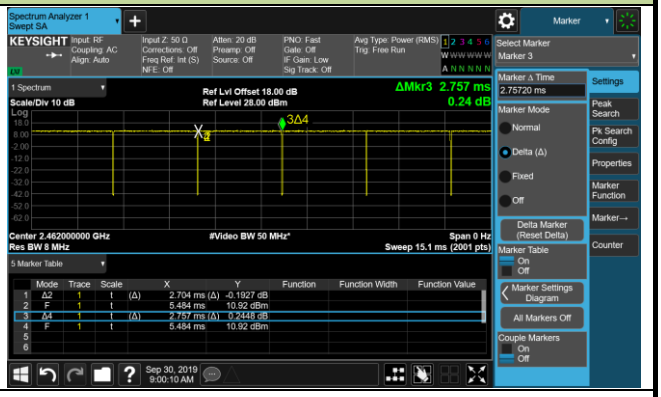
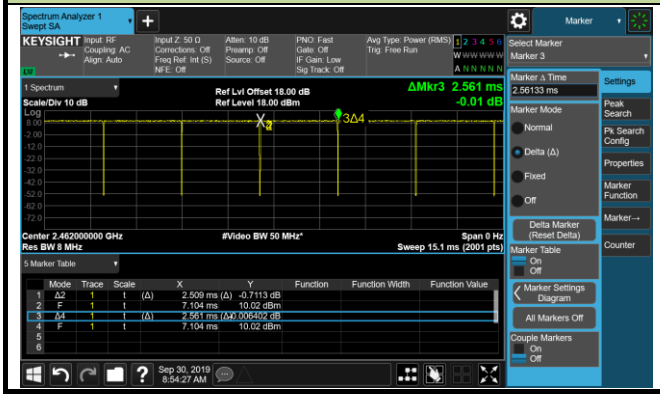
2.6. Device Capabilities

This device contains the following capabilities:

2.4GHz WLAN (DTS).

Note: The maximum achievable duty cycles for all modes were determined based on measurements performed on a spectrum analyzer in zero-span mode with RBW = 8MHz, VBW = 50MHz. The RBW and VBW were both greater than 50/T, where T is the minimum transmission duration, and the number of sweep points across T was greater than 100. The duty cycles are as follows:

Test Mode	Duty Cycle
802.11b	99.21%
802.11g	98.08%
802.11n-HT20	97.97%

Duty Cycle (T = Transmission Duration)	
802.11b (T = 16.35ms)	802.11g (T = 2.704ms)
	
802.11n-HT20 (T = 2.509ms)	
	

2.7. Test Configuration

The unit was tested per the guidance of ANSI C63.10-2013, which is used as the reference of appropriate EUT setup for radiated spurious emissions testing and AC line conducted testing.

2.8. EMI Suppression Device(s)/Modifications

No EMI suppression device(s) were added and/or no modifications were made during testing.

2.9. Labeling Requirements

Per 2.1074 & 15.19; Docket 95-19

The label shall be permanently affixed at a conspicuous location on the device; instruction manual or pamphlet supplied to the user and be readily visible to the purchaser at the time of purchase. However, when the device is so small wherein placement of the label with specified statement is not practical, only the FCC ID must be displayed on the device per Section 15.19(a)(5). Please see attachment for FCC ID label and label location.

3. DESCRIPTION of TEST

3.1. Evaluation Procedure

The measurement procedures described in the American National Standard for Testing Unlicensed Wireless Devices (ANSI C63.10-2013) and were used in the measurement.

Deviation from measurement procedure…….....None

3.2. AC Line Conducted Emissions

The line-conducted facility is located inside an 8'x4'x4' shielded enclosure. A 1m x 2m wooden table 80cm high is placed 40cm away from the vertical wall and 80cm away from the sidewall of the shielded room. Two 10kHz-30MHz, 50Ω/50uH Line-Impedance Stabilization Networks (LISNs) are bonded to the shielded room floor. Power to the LISNs is filtered by external high-current high-insertion loss power line filters. These filters attenuate ambient signal noise from entering the measurement lines. These filters are also bonded to the shielded enclosure.

The EUT is powered from one LISN and the support equipment is powered from the second LISN. All interconnecting cables more than 1 meter were shortened to a 1 meter length by non-inductive bundling (serpentine fashion) and draped over the back edge of the test table. All cables were at least 40cm above the horizontal reference ground-plane. Power cables for support equipment were routed down to the second LISN while ensuring that that cables were not draped over the second LISN.

Sufficient time for the EUT, support equipment, and test equipment was allowed in order for them to warm up to their normal operating condition. The RF output of the LISN was connected to the receiver and exploratory measurements were made to determine the frequencies producing the maximum emission from the EUT. The receiver was scanned from 150kHz to 30MHz. The detector function was set to peak mode for exploratory measurements while the bandwidth of the analyzer was set to 9kHz. The EUT, support equipment, and interconnecting cables were arranged and manipulated to maximize each emission. Each emission was also maximized by varying: power lines, the mode of operation or data exchange speed, or support equipment which determined the worst-case emission. Once the worst-case emissions have been identified, the one EUT cable configuration/arrangement and mode of operation that produced these emissions are used for final measurements on the same test site. The analyzer is set to CISPR quasi-peak and average detectors with a 9kHz resolution bandwidth for final measurements.

An extension cord was used to connect to a single LISN which powered by EUT. The extension cord was calibrated with LISN, the impedance and insertion loss are compliance with the requirements as stated in ANSI C63.10-2013.

3.3. Radiated Emissions

The radiated test facilities consisted of an indoor 3 meter semi-anechoic chamber used for final measurements and exploratory measurements, when necessary. The measurement area is contained within the semi-anechoic chamber which is shielded from any ambient interference. For measurements above 1GHz absorbers are arranged on the floor between the turn table and the antenna mast in such a way so as to maximize the reduction of reflections. For measurements below 1GHz, the absorbers are removed. A MF Model 210SS turntable is used for radiated measurement. It is a continuously rotatable, remote controlled, metallic turntable and 2 meters (6.56 ft.) in diameter. The turn table is flush with the raised floor of the chamber in order to maintain its function as a ground plane. An 80cm high PVC support structure is placed on top of the turntable.
For all measurements, the spectrum was scanned through all EUT azimuths and from 1 to 4 meter receive antenna height using a broadband antenna from 30MHz up to the upper frequency shown in 15.33(b)(1) depending on the highest frequency generated or used in the device or on which the device operates or tunes. For frequencies above 1GHz, linearly polarized double ridge horn antennas were used. For frequencies below 30MHz, a calibrated loop antenna was used. When exploratory measurements were necessary, they were performed at 1 meter test distance inside the semi-anechoic chamber using broadband antennas, broadband amplifiers, and spectrum analyzers to determine the frequencies and modes producing the maximum emissions. Sufficient time for the EUT, support equipment, and test equipment was allowed in order for them to warm up to their normal operating condition. The test set-up for frequencies below 1GHz was placed on top of the 0.8 meter high, 1 x 1.5 meter table; and test set-up for frequencies 1-40GHz was placed on top of the 1.5 meter high, 1 x 1.5 meter table. The EUT, support equipment, and interconnecting cables were arranged and manipulated to maximize each emission. Appropriate precaution was taken to ensure that all emissions from the EUT were maximized and investigated. The system configuration, clock speed, mode of operation or video resolution, if applicable, turntable azimuth, and receive antenna height was noted for each frequency found.
Final measurements were made in the semi-anechoic chamber using calibrated, linearly polarized broadband and horn antennas. The test setup was configured to the setup that produced the worst-case emissions. The spectrum analyzer was set to investigate all frequencies required for testing to compare the highest radiated disturbances with respect to the specified limits. The turntable containing the EUT was rotated through 360 degrees and the height of the receive antenna was varied 1 to 4 meters and stopped at the azimuth and height producing the maximum emission. Each emission was maximized by changing the orientation of the EUT through three orthogonal planes and changing the polarity of the receive antenna, which produced the worst-case emissions. According to 3dB Beam-Width of horn antenna, the horn antenna should be always directed to the EUT when rising height.

4. ANTENNA REQUIREMENTS

Excerpt from §15.203 of the FCC Rules/Regulations:

"An intentional radiator antenna shall be designed to ensure that no antenna other than that furnished by the responsible party can be used with the device. The use of a permanently attached antenna or of an antenna that uses a unique coupling to the intentional radiator shall be considered sufficient to comply with the provisions of this section."

- The antenna of the unit is permanently attached.
- There are no provisions for connection to an external antenna.

Conclusion:

The unit complies with the requirement of §15.203.

5. TEST EQUIPMENT CALIBRATION DATE

Conducted Emissions - SR2

Instrument	Manufacturer	Type No.	Asset No.	Cali. Interval	Cali. Due Date
EMI Test Receiver	R&S	ESR3	MRTSUE06185	1 year	2020/04/15
Two-Line V-Network	R&S	ENV 216	MRTSUE06002	1 year	2020/06/13
Two-Line V-Network	R&S	ENV 216	MRTSUE06003	1 year	2020/06/13
Thermohygrometer	Testo	608-H1	MRTSUE06404	1 year	2020/08/08
Shielding Room	MIX-BEP	Chamber-SR2	MRTSUE06215	N/A	N/A

Radiated Emissions - AC1

Instrument	Manufacturer	Type No.	Asset No.	Cali. Interval	Cali. Due Date
EMI Test Receiver	R&S	ESR7	MRTSUE06001	1 year	2020/08/01
PXA Signal Analyzer	Keysight	9030B	MRTSUE06395	1 year	2020/09/03
Loop Antenna	Schwarzbeck	FMZB 1519	MRTSUE06025	1 year	2019/11/09
Bilog Period Antenna	Schwarzbeck	VULB 9168	MRTSUE06172	1 year	2020/03/31
Broad Band Horn Antenna	Schwarzbeck	BBHA 9120D	MRTSUE06023	1 year	2020/10/13
Broad Band Horn Antenna	Schwarzbeck	BBHA 9170	MRTSUE06024	1 year	2019/12/17
Microwave System Amplifier	Agilent	83017A	MRTSUE06076	1 year	2019/11/16
Preamplifier	Schwarzbeck	BBV 9721	MRTSUE06121	1 year	2020/06/11
Thermohygrometer	Testo	608-H1	MRTSUE06403	1 year	2020/08/08
Anechoic Chamber	TDK	Chamber-AC1	MRTSUE06212	1 year	2020/04/30

Radiated Emission - AC2

Instrument	Manufacturer	Type No.	Asset No.	Cali. Interval	Cali. Due Date
Spectrum Analyzer	Keysight	N9038A	MRTSUE06125	1 year	2020/08/01
Loop Antenna	Schwarzbeck	FMZB 1519	MRTSUE06025	1 year	2019/11/09
Bilog Period Antenna	Schwarzbeck	VULB 9162	MRTSUE06022	1 year	2020/10/13
Horn Antenna	Schwarzbeck	BBHA9120D	MRTSUE06171	1 year	2019/11/09
Broad Band Horn Antenna	Schwarzbeck	BBHA 9170	MRTSUE06024	1 year	2019/12/17
Broadband Coaxial Preamplifier	Schwarzbeck	BBV 9718	MRTSUE06176	1 year	2019/11/16
Preamplifier	Schwarzbeck	BBV 9721	MRTSUE06121	1 year	2020/06/11
Temperature/Humidity Meter	Minggao	ETH529	MRTSUE06170	1 year	2019/12/13
Anechoic Chamber	RIKEN	Chamber-AC2	MRTSUE06213	1 year	2020/04/30

Conducted Test Equipment - TR3

Instrument	Manufacturer	Type No.	Asset No.	Cali. Interval	Cali. Due Date
EXA Signal Analyzer	Agilent	N9020A	MRTSUE06106	1 year	2020/04/15
EXA Signal Analyzer	Keysight	N9010B	MRTSUE06452	1 year	2020/07/11
Signal Analyzer	R&S	FSV40	MRTSUE06218	1 year	2020/04/15
Power Meter	Agilent	U2021XA	MRTSUE06030	1 year	2019/11/16
USB wideband power sensor	Keysight	U2021XA	MRTSUE06446	1 year	2020/06/30
USB wideband power sensor	Keysight	U2021XA	MRTSUE06447	1 year	2020/06/30
Bluetooth Test Set	Anritsu	MT8852B-042	MRTSUE06389	1 year	2020/06/13
Audio Analyzer	Agilent	U8903B	MRTSUE06143	1 year	2020/06/13
Modulation Analyzer	HP	8901A	MRTSUE06098	1 year	2020/10/10
Wideband Radio Communication Tester	R&S	CMW 500	MRTSUE06243	1 year	2019/11/16
DC Power Supply	GWINSTEK	DPS-3303C	MRTSUE06064	N/A	N/A
Temperature & Humidity Chamber	BAOYT	BYH-150CL	MRTSUE06051	1 year	2019/11/16
Thermohygrometer	testo	608-H1	MRTSUE06401	1 year	2020/08/08

Software	Version	Function
EMI Software	V3	EMI Test Software

6. MEASUREMENT UNCERTAINTY

Where relevant, the following test uncertainty levels have been estimated for tests performed on the EUT as specified in CISPR 16-4-2. This uncertainty represents an expanded uncertainty expressed at approximately the 95% confidence level using a coverage factor of k = 2.

AC Conducted Emission Measurement - SR2
Measuring Uncertainty for a Level of Confidence of 95% (U=2Uc(y)): 9kHz~150kHz: 3.84dB 150kHz~30MHz: 3.46dB
Radiated Emission Measurement - AC1
Measuring Uncertainty for a Level of Confidence of 95% (U=2Uc(y)): Horizontal: 30MHz~300MHz: 4.07dB 300MHz~1GHz: 3.63dB 1GHz~18GHz: 4.16dB Vertical: 30MHz~300MHz: 4.18dB 300MHz~1GHz: 3.60dB 1GHz~18GHz: 4.76dB
Radiated Emission Measurement - AC2
Measuring Uncertainty for a Level of Confidence of 95% (U=2Uc(y)): Horizontal: 30MHz~300MHz: 3.75dB 300MHz~1GHz: 3.53dB 1GHz~18GHz: 4.28dB Vertical: 30MHz~300MHz: 3.86dB 300MHz~1GHz: 3.53dB 1GHz~18GHz: 4.33dB

7. TEST RESULT

7.1. Summary

FCC Part Section(s)	Test Description	Test Limit	Test Condition	Test Result	Reference
15.247(a)(2)	6dB Bandwidth	≥ 500kHz	Conducted	Pass	Section 7.2
15.247(b)(3)	Output Power	≤ 1Watt		Pass	Section 7.3
15.247(e)	Power Spectral Density	≤ 8dBm / 3kHz		Pass	Section 7.4
15.247(d)	Band Edge / Out-of-Band Emissions	≥ 20dBc (Peak)		Pass	Section 7.5
15.205 15.209	General Field Strength Limits (Restricted Bands and Radiated Emission Limits)	Emissions in restricted bands must meet the radiated limits detailed in 15.209	Radiated	Pass	Section 7.6&7.7
15.207	AC Conducted Emissions 150kHz - 30MHz	< FCC 15.207 limits	Line Conducted	Pass	Section 7.8

Notes:

1) The analyzer plots shown in this section were all taken with a correction table loaded into the analyzer. The correction table was used to account for the losses of the cables and attenuators used as part of the system to connect the EUT to the analyzer at all frequencies of interest.
2) All modes of operation and data rates were investigated. For radiated emission test, every axis (X, Y, Z) was also verified. The test results shown in the following sections represent the worst-case emissions.

7.2. Occupied Bandwidth Measurement

7.2.1.Test Limit

The minimum 6dB bandwidth shall be at least 500 kHz.

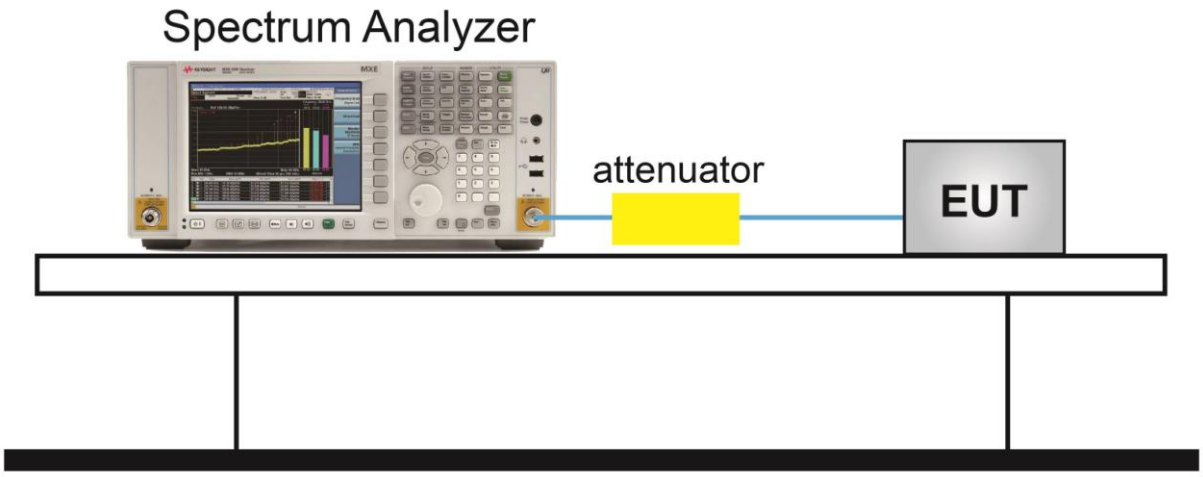
7.2.2.Test Procedure used

ANSI C63.10-2013 - Section 11.8 (6dB bandwidth)

7.2.3.Test Setting

1. The Spectrum's automatic bandwidth measurement capability was used to perform the 6dB bandwidth measurement. The "X" dB bandwidth parameter was set to X = 6. The bandwidth measurement was not influenced by any intermediate power nulls in the fundamental emission.
2. Set RBW = 100 kHz
3. VBW ≥ 3 × RBW
4. Detector = Peak
5. Trace mode = Max hold
6. Sweep = Auto couple
7. Allow the trace was allowed to stabilize

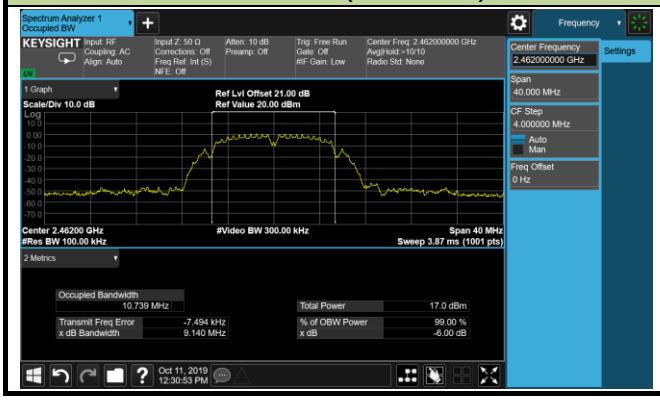
7.2.4.Test Setup

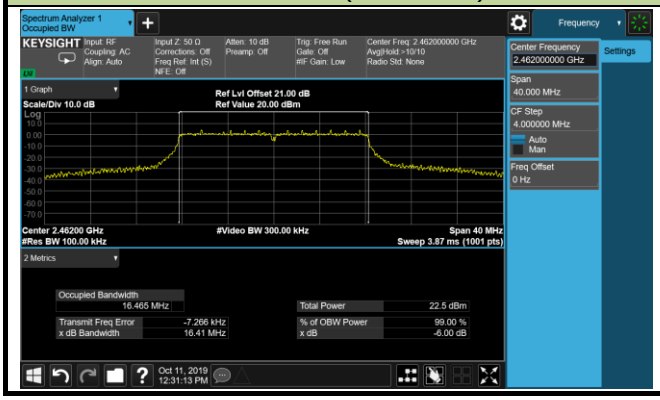


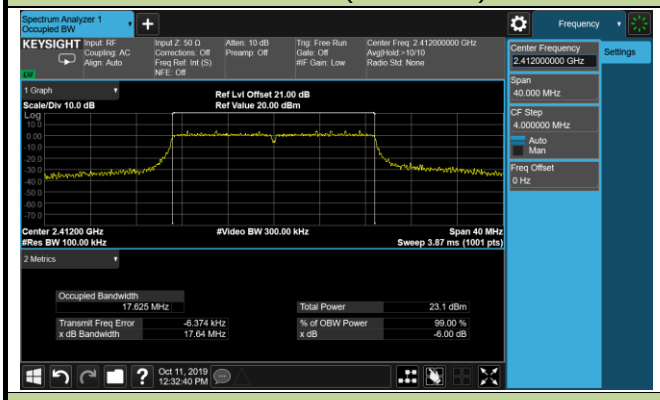
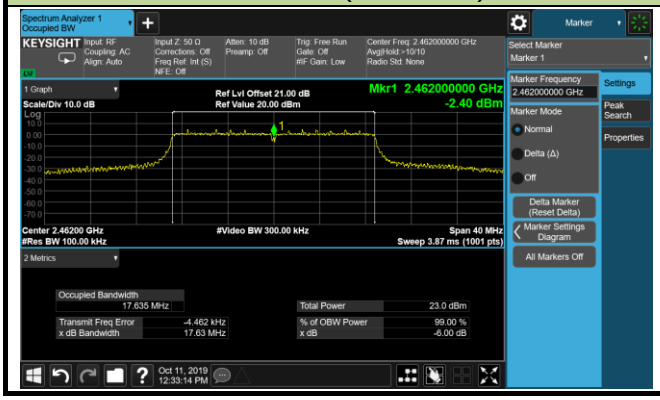
7.2.5.Test Result

Product	Abegal Battery Camera	Temperature	25°C
Test Engineer	Dandy Li	Relative Humidity	52%
Test Site	TR3	Test Date	2019/10/11

Test Mode	Data Rate / MCS	Channel No.	Frequency (MHz)	6dB Bandwidth (MHz)	Limit (MHz)	Result
802.11b	1Mbps	01	2412	9.16	≥ 0.5	Pass
802.11b	1Mbps	06	2437	9.14	≥ 0.5	Pass
802.11b	1Mbps	11	2462	9.14	≥ 0.5	Pass
802.11g	6Mbps	01	2412	16.44	≥ 0.5	Pass
802.11g	6Mbps	06	2437	16.43	≥ 0.5	Pass
802.11g	6Mbps	11	2462	16.41	≥ 0.5	Pass
802.11n-HT20	MCS0	01	2412	17.64	≥ 0.5	Pass
802.11n-HT20	MCS0	06	2437	17.63	≥ 0.5	Pass
802.11n-HT20	MCS0	11	2462	17.63	≥ 0.5	Pass

802.11b 6dB Bandwidth	
Channel 01 (2412MHz)	Channel 06 (2437MHz)
	
Channel 11 (2462MHz)	
	

802.11g 6dB Bandwidth	
Channel 01 (2412MHz)	Channel 06 (2437MHz)
	
Channel 11 (2462MHz)	
	

802.11n-HT20 6dB Bandwidth	
Channel 01 (2412MHz)	Channel 06 (2437MHz)
	
Channel 11 (2462MHz)	
	

7.3. Output Power Measurement

7.3.1.Test Limit

The maximum conducted output power shall not exceed 1 Watt (30dBm).

7.3.2.Test Procedure Used

ANSI C63.10 - Section 11.9.1.3

ANSI C63.10 - Section 11.9.2.3.2

7.3.3.Test Setting

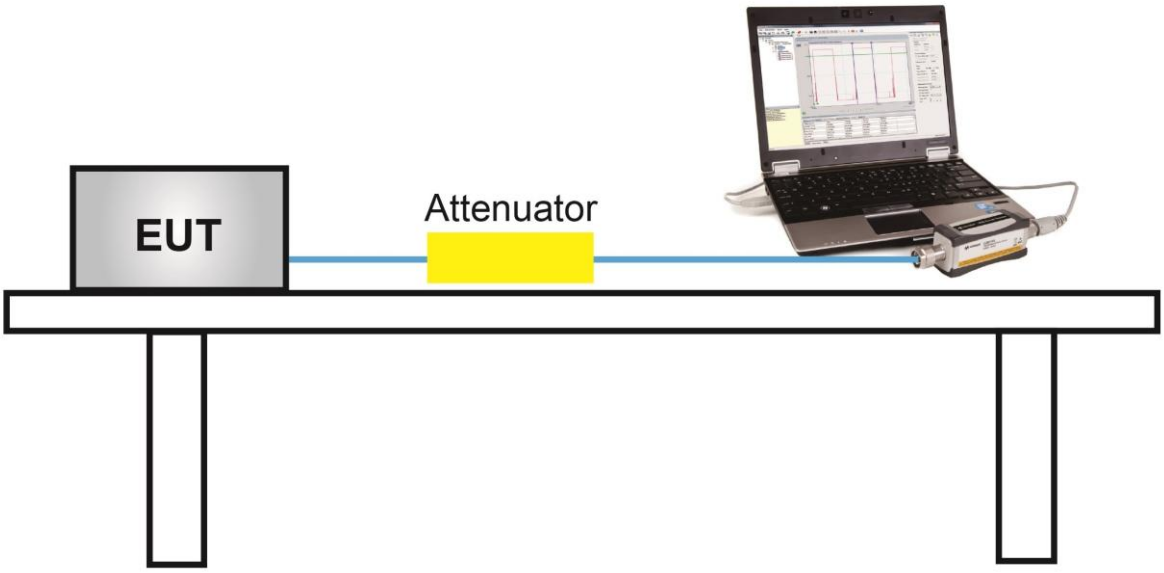
Method PKPM1 (Peak Power Measurement)

Peak power measurements were performed only when the EUT was transmitting at its maximum power control level using a broadband power meter with a pulse sensor. The pulse sensor employs a VBW = 50MHz so this method was only used for signals whose DTS bandwidth was less than or equal to 50MHz.

Method AVGPM-G (Measurement using a gated RF average-reading power meter)

Measurements may be performed using a wideband gated RF power meter provided that the gate parameters are adjusted such that the power is measured only when the EUT is transmitting at its maximum power control level. Since this measurement is made only during the ON time of the transmitter, no duty cycle correction is required.

7.3.4.Test Setup



7.3.5.Test Result

Power output test was verified over all data rates of each mode shown as below, and then choose the maximum power output (gray marker) for final test of each channel.

Test Mode	Bandwidth (MHz)	Channel No.	Frequency (MHz)	Data Rate / MCS	Average Power (dBm)
802.11b	20	6	2437	1Mbps	9.45
				5.5Mbps	9.31
				11Mbps	9.10
802.11g	20	6	2437	6Mbps	15.07
				24Mbps	14.71
				54Mbps	14.52
802.11n	20	6	2437	MCS0	15.58
				MCS3	15.13
				MCS7	14.76

Product	Abegal Battery Camera	Temperature	25°C
Test Engineer	Dandy Li	Relative Humidity	52%
Test Site	TR3	Test Date	2019/09/30

Test Result of Peak Output Power

Test Mode	Data Rate / MCS	Channel No.	Freq. (MHz)	Peak Power (dBm)	Limit (dBm)	Result
11b	1Mbps	01	2412	13.52	≤ 30.00	Pass
11b	1Mbps	06	2437	13.58	≤ 30.00	Pass
11b	1Mbps	11	2462	13.56	≤ 30.00	Pass
11g	6Mbps	01	2412	23.20	≤ 30.00	Pass
11g	6Mbps	06	2437	22.86	≤ 30.00	Pass
11g	6Mbps	11	2462	22.21	≤ 30.00	Pass
11n-HT20	MCS0	01	2412	23.95	≤ 30.00	Pass
11n-HT20	MCS0	06	2437	23.40	≤ 30.00	Pass
11n-HT20	MCS0	11	2462	23.07	≤ 30.00	Pass

Test Result of Average Output Power (Reporting Only)

Test Mode	Data Rate / MCS	Channel No.	Freq. (MHz)	Average Power (dBm)	Limit (dBm)	Result
11b	1Mbps	01	2412	9.42	≤ 30.00	Pass
11b	1Mbps	06	2437	9.45	≤ 30.00	Pass
11b	1Mbps	11	2462	9.23	≤ 30.00	Pass
11g	6Mbps	01	2412	15.01	≤ 30.00	Pass
11g	6Mbps	06	2437	15.07	≤ 30.00	Pass
11g	6Mbps	11	2462	14.88	≤ 30.00	Pass
11n-HT20	MCS0	01	2412	15.56	≤ 30.00	Pass
11n-HT20	MCS0	06	2437	15.58	≤ 30.00	Pass
11n-HT20	MCS0	11	2462	15.34	≤ 30.00	Pass

7.4. Power Spectral Density Measurement

7.4.1.Test Limit

The maximum permissible power spectral density is 8dBm in any 3 kHz band.

The same method of determining the conducted output power shall be used to determine the power spectral density.

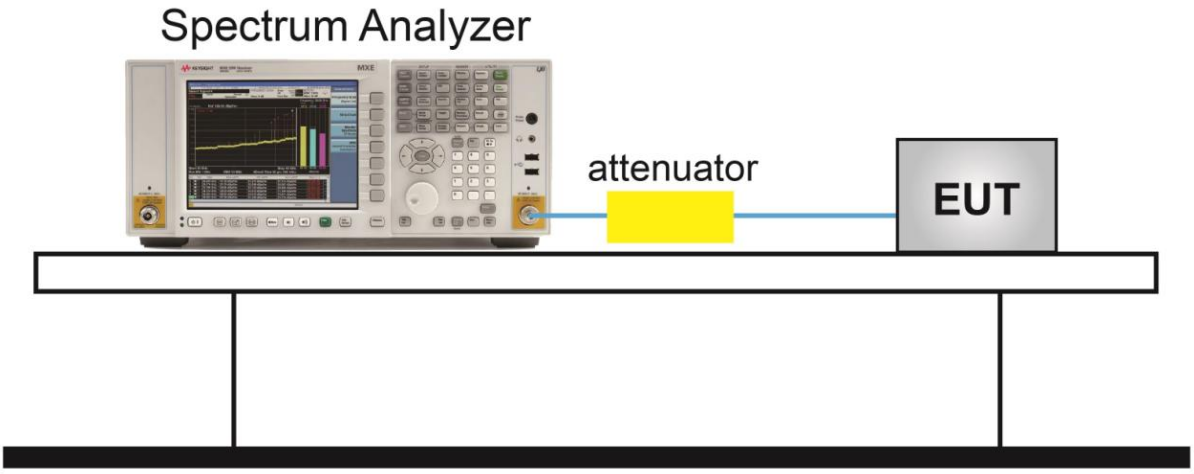
7.4.2.Test Procedure Used

ANSI C63.10 Section 11.10.2

7.4.3.Test Setting

1. Set analyzer center frequency to DTS channel center frequency.
2. Set span to at least 1.5 times the OBW.
3. RBW = 3 kHz.
4. VBW = 10 kHz.
5. Detector = Peak.
6. Sweep time = auto couple.
7. Trace mode = max hold.
8. Allow trace to fully stabilize.
9. Use the peak marker function to determine the maximum amplitude level within the RBW.

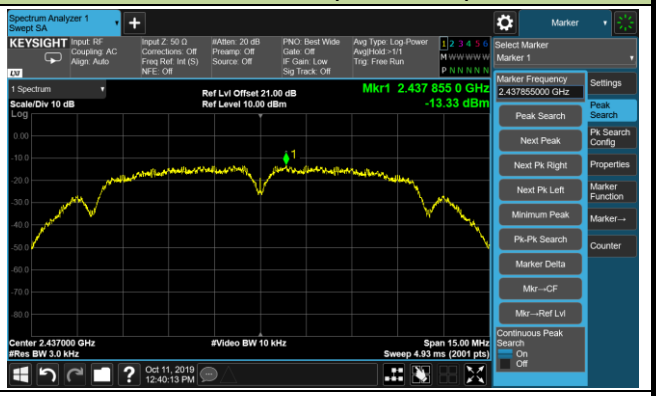
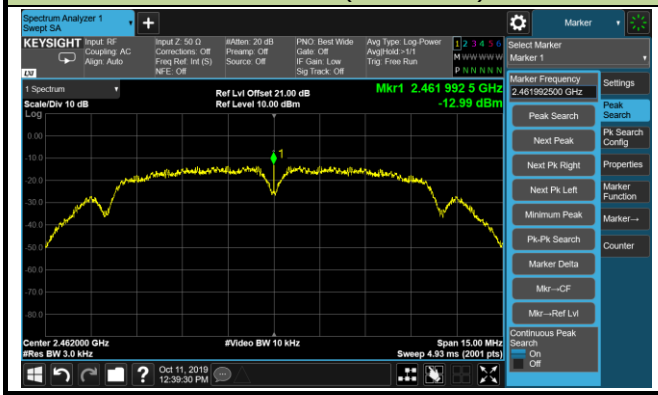
7.4.4.Test Setup

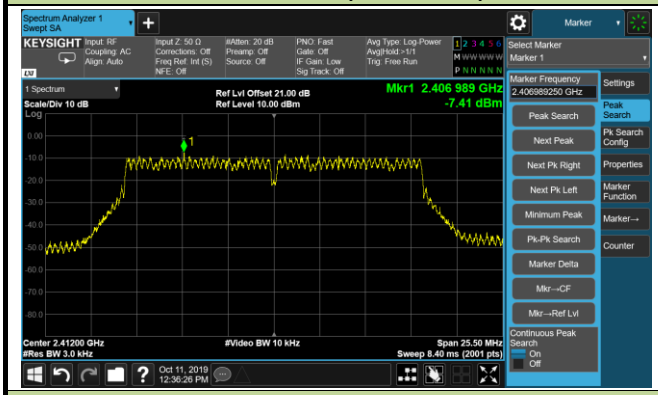
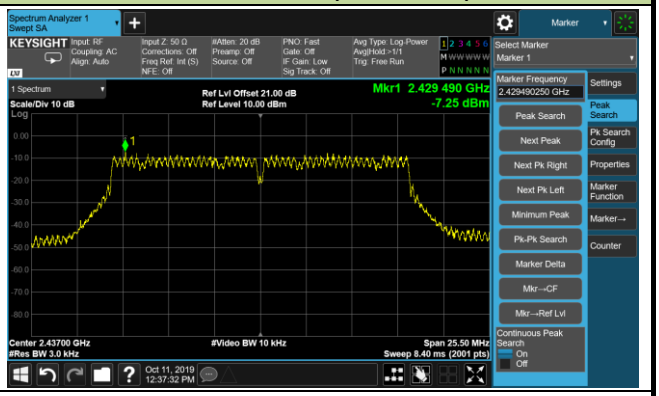
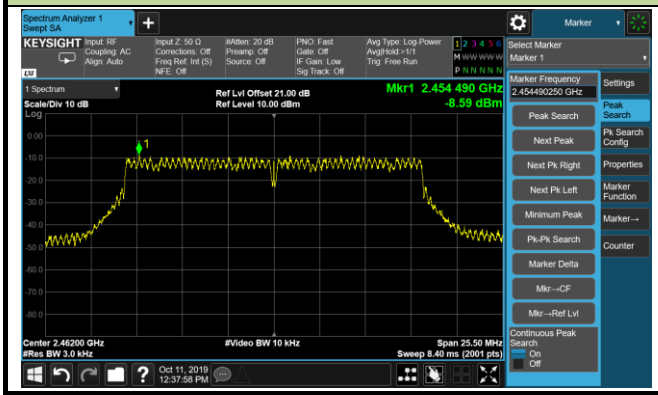


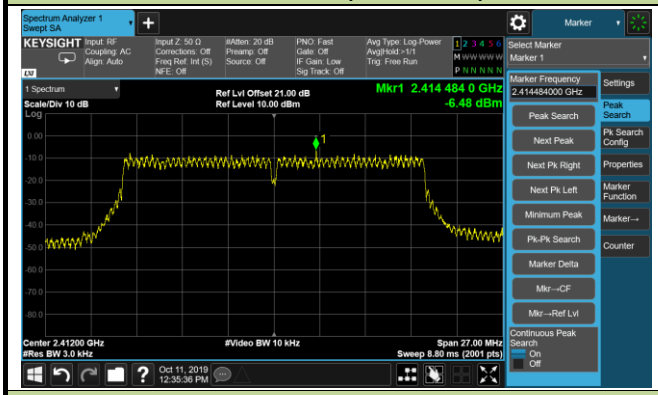
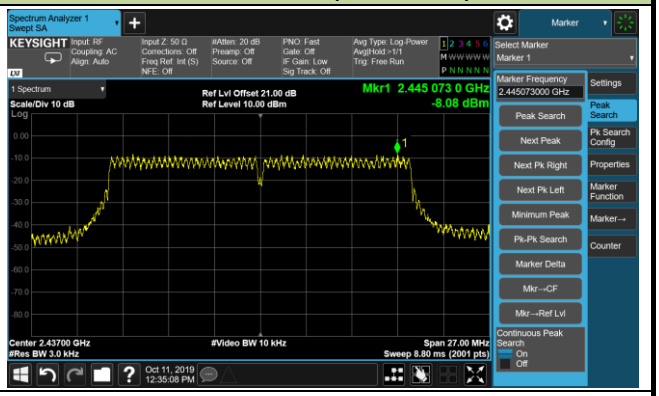
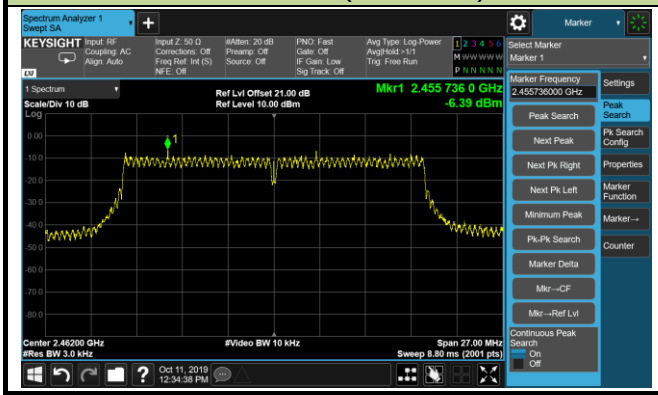
7.4.5.Test Result

Product	Abegal Battery Camera	Temperature	25°C
Test Engineer	Dandy Li	Relative Humidity	52%
Test Site	TR3	Test Date	2019/10/11

Test Mode	Data Rate / MCS	Channel No.	Freq. (MHz)	Peak PSD (dBm/3kHz)	Limit (dBm/3kHz)	Result
802.11b	1Mbps	1	2412	-13.42	≤ 8.00	Pass
802.11b	1Mbps	6	2437	-13.33	≤ 8.00	Pass
802.11b	1Mbps	11	2462	-12.99	≤ 8.00	Pass
802.11g	6Mbps	1	2412	-7.41	≤ 8.00	Pass
802.11g	6Mbps	6	2437	-7.25	≤ 8.00	Pass
802.11g	6Mbps	11	2462	-8.59	≤ 8.00	Pass
802.11n-HT20	MCS0	1	2412	-6.48	≤ 8.00	Pass
802.11n-HT20	MCS0	6	2437	-8.08	≤ 8.00	Pass
802.11n-HT20	MCS0	11	2462	-6.39	≤ 8.00	Pass

802.11b - PK PSD	
Channel 01 (2412MHz)	Channel 06 (2437MHz)
	
Channel 11 (2462MHz)	
	

802.11g - PK PSD	
Channel 01 (2412MHz)	Channel 06 (2437MHz)
	
Channel 11 (2462MHz)	
	

802.11n-HT20 - PK PSD	
Channel 01 (2412MHz)	Channel 06 (2437MHz)
	
Channel 11 (2462MHz)	
	

7.5. Conducted Band Edge and Out-of-Band Emissions

7.5.1.Test Limit

The limit for out-of-band spurious emissions at the band edge is 20dB below the fundamental emission level, as determined from the in-band power measurement of the DTS channel performed in a 100 kHz bandwidth per the PSD procedure.

7.5.2.Test Procedure Used

ANSI C63.10 - Section 11.11

7.5.3.Test Settitng

Reference level measurement

1. Set instrument center frequency to DTS channel center frequency
2. Set the span to ≥ 1.5 times the DTS bandwidth
3. Set the RBW = 100 kHz
4. Set the VBW ≥ 3 x RBW
5. Detector = peak
6. Sweep time = auto couple
7. Trace mode = max hold
8. Allow trace to fully stabilize

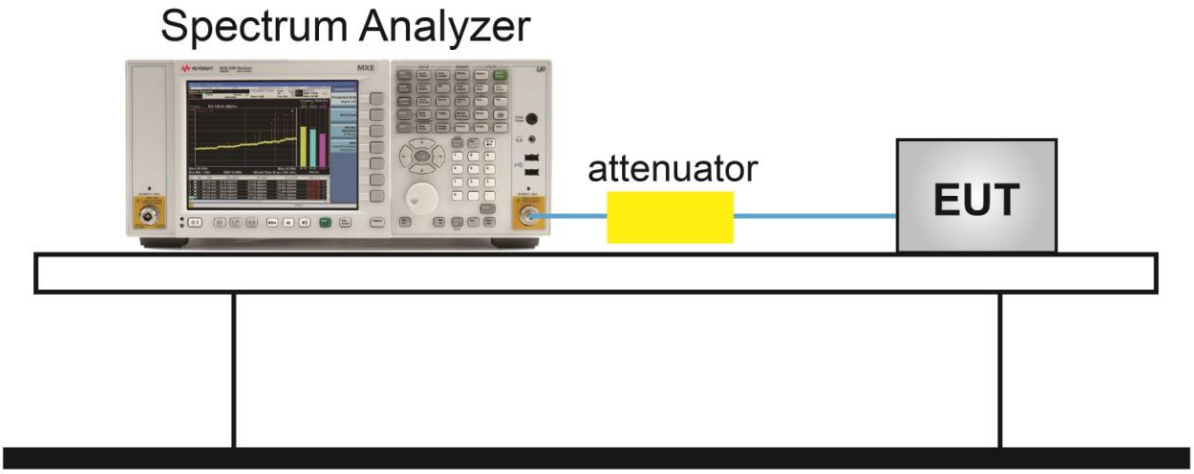
Emission level measurement

1. Set the center frequency and span to encompass frequency range to be measured
2. RBW = 100kHz
3. VBW = 300kHz
4. Detector = Peak
5. Trace mode = max hold
6. Sweep time = auto couple
7. The trace was allowed to stabilize

Test Notes

1. RBW was set to 1.3MHz rather than 100 kHz in order to increase the measurement speed; meanwhile, the VBW was set to 4MHz instead of 300 kHz.
2. The display line shown in the following plots denotes the limit at 30dB below the fundamental emission level measured in a 100 kHz bandwidth. However, since the traces in the following plots are measured with a 1.3 MHz RBW, the display line may not necessarily appear to be 20 dB below the level of the fundamental measured in a 1.3 MHz bandwidth.
3. For plots showing conducted spurious emissions near the limit, the frequencies were investigated with a reduced RBW to ensure that no emissions were present.

7.5.4.Test Setup



7.5.5.Test Result

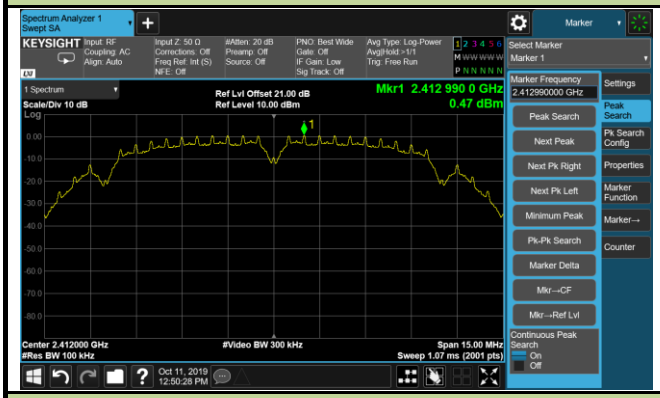
Product	Abegal Battery Camera	Temperature	25°C
Test Engineer	Dandy Li	Relative Humidity	52%
Test Site	TR3	Test Date	2019/10/11

Test Mode	Data Rate / MCS	Channel No.	Frequency (MHz)	Limit	Result
802.11b	1Mbps	01	2412	20dBc	Pass
802.11b	1Mbps	06	2437	20dBc	Pass
802.11b	1Mbps	11	2462	20dBc	Pass
802.11g	6Mbps	01	2412	20dBc	Pass
802.11g	6Mbps	06	2437	20dBc	Pass
802.11g	6Mbps	11	2462	20dBc	Pass
802.11n-HT20	MCS0	01	2412	20dBc	Pass
802.11n-HT20	MCS0	06	2437	20dBc	Pass
802.11n-HT20	MCS0	11	2462	20dBc	Pass

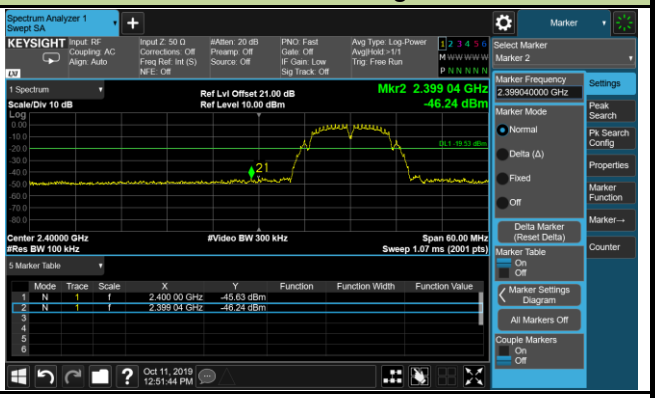
802.11b Out-of-Band Emissions

Channel 01 (2412MHz)

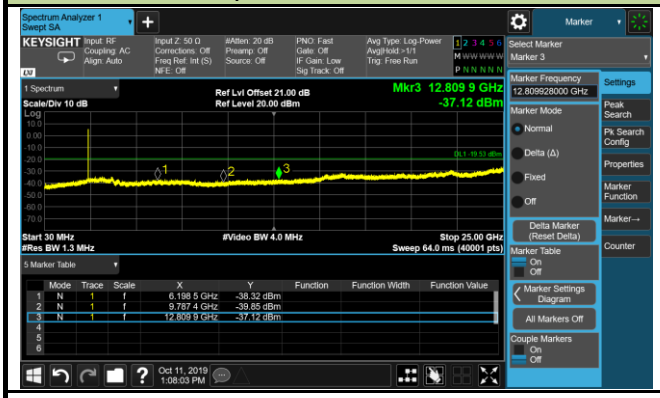
100kHz PSD Reference Level



Low Band Edge



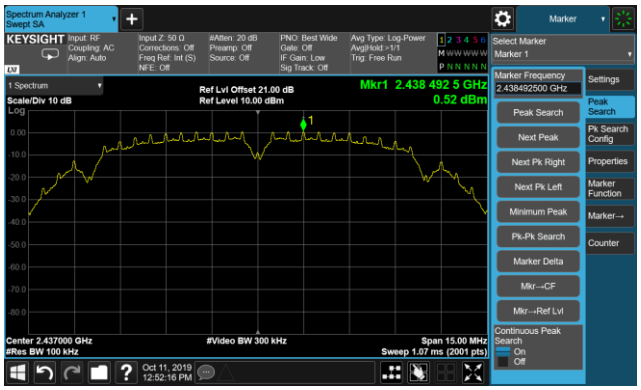
Spurious Emission



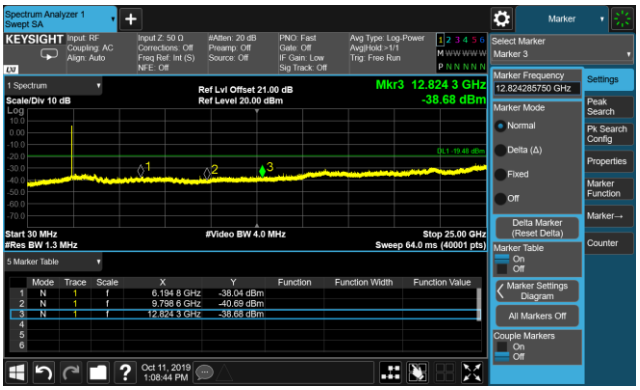
Note: The Value of the Display Line is -19.53dBm.

Channel 06 (2437MHz)

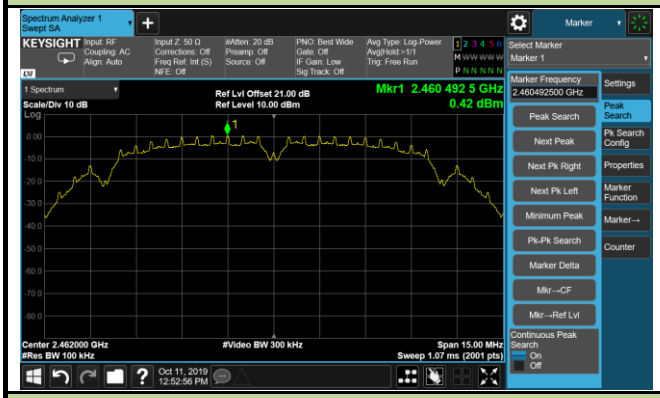
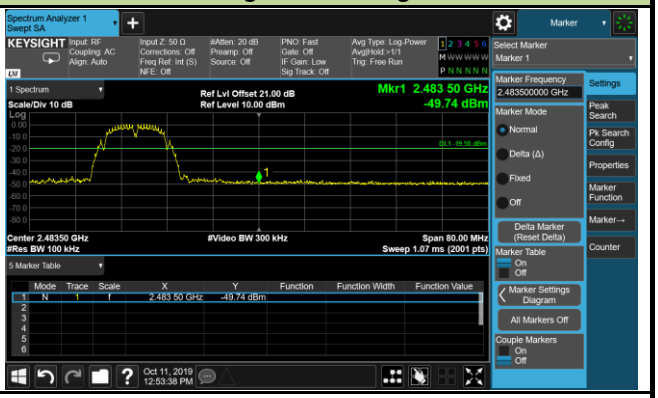
100kHz PSD Reference Level



Spurious Emission



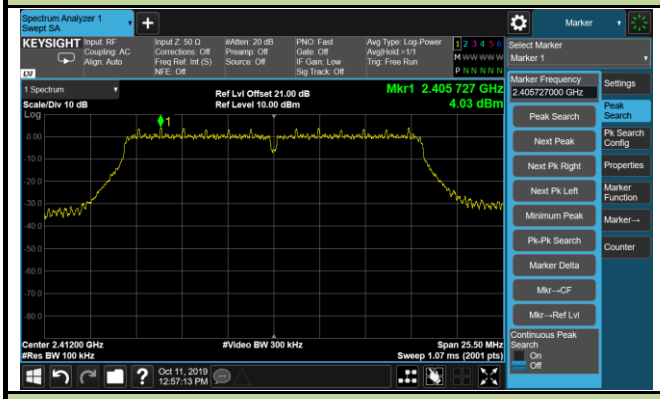
Note: The Value of the Display Line is -19.48dBm.

802.11b Out-of-Band Emissions	
Channel 11 (2462MHz)	
100kHz PSD Reference Level	High Band Edge
	
Spurious Emission	
	
Note: The Value of the Display Line is -19.58dBm.	

802.11g Out-of-Band Emissions

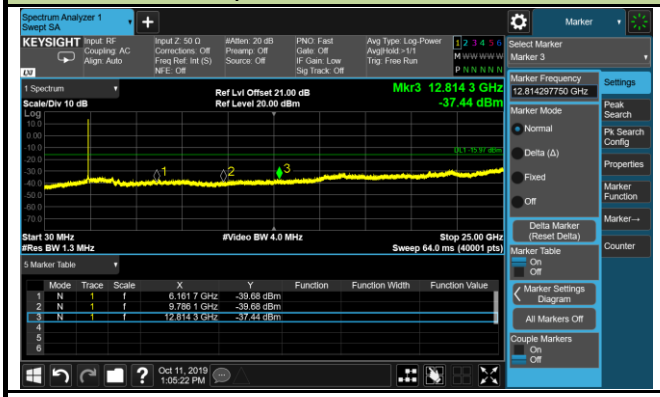
Channel 01 (2412MHz)

100kHz PSD Reference Level



Low Band Edge

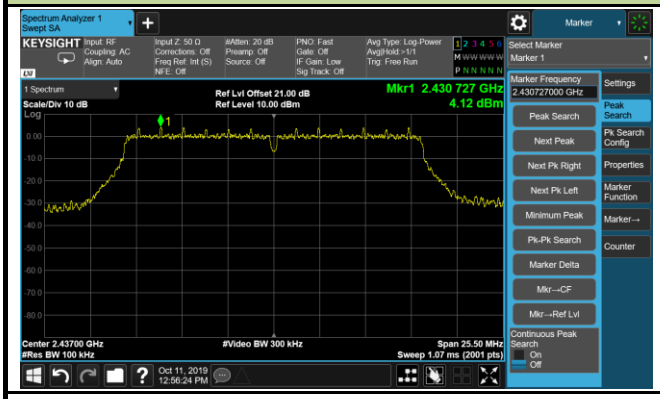
Spurious Emission



Note: The Value of the Display Line is -15.97dBm.

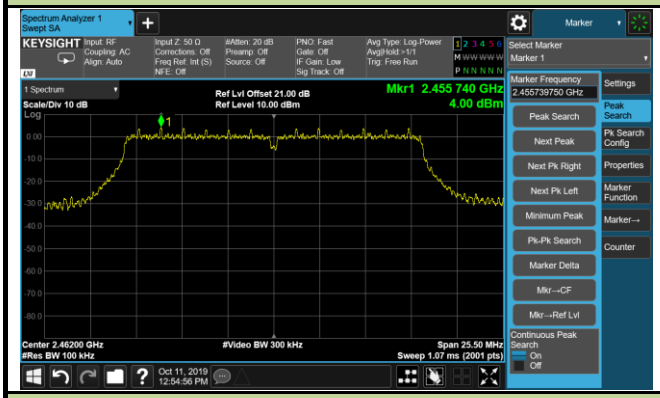
Channel 06 (2437MHz)

100kHz PSD Reference Level



Spurious Emission

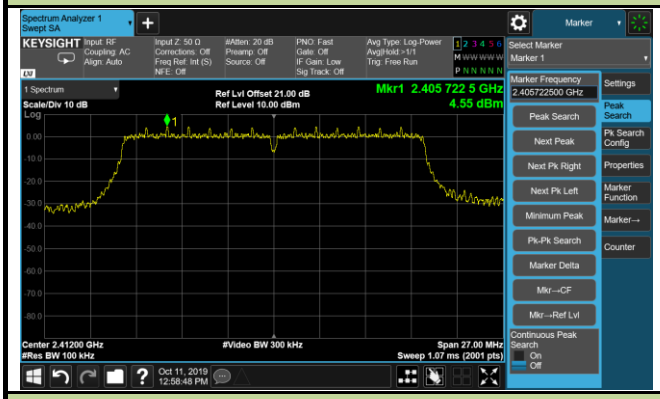
Note: The Value of the Display Line is -15.88dBm

802.11g Out-of-Band Emissions	
Channel 11 (2462MHz)	
100kHz PSD Reference Level	High Band Edge
	
Spurious Emission	
	
Note: The Value of the Display Line is -16.00dBm	

802.11n-HT20 Out-of-Band Emissions

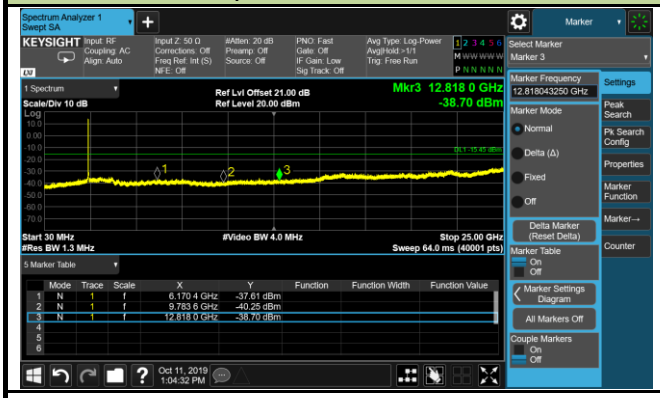
Channel 01 (2412MHz)

100kHz PSD Reference Level



Low Band Edge

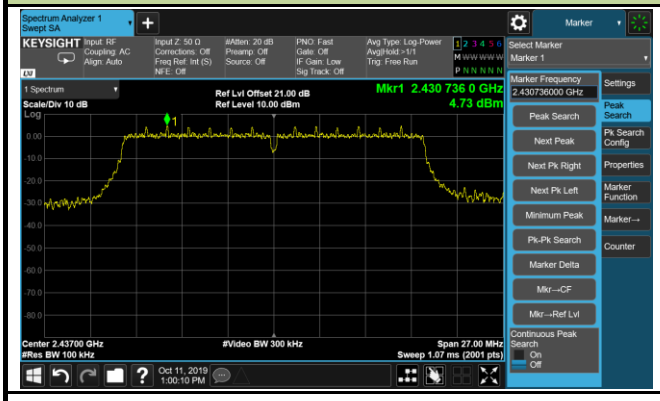
Spurious Emission



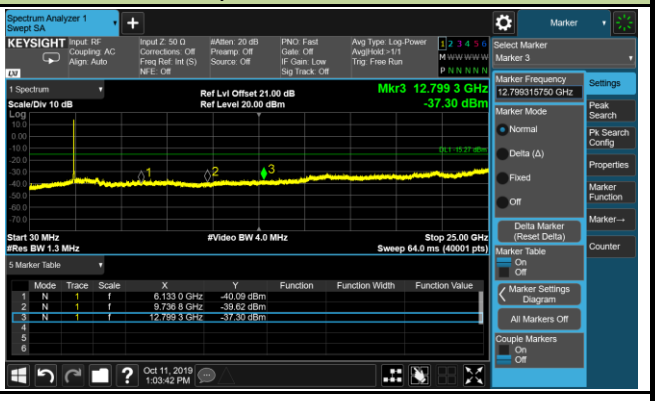
Note: The Value of the Display Line is -15.45dBm

Channel 06 (2437MHz)

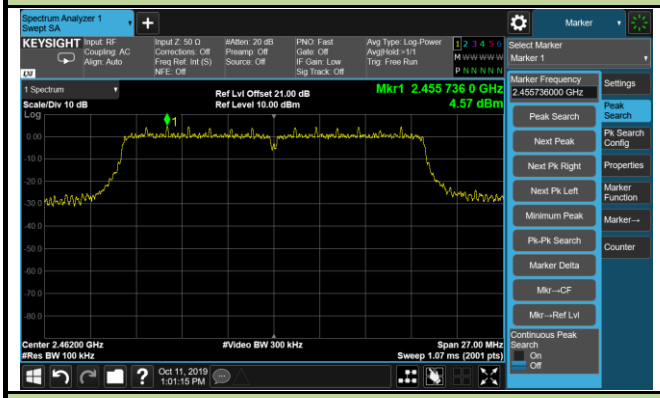
100kHz PSD Reference Level



Spurious Emission



Note: The Value of the Display Line is -15.27dBm

802.11n-HT20 Out-of-Band Emissions	
Channel 11 (2462MHz)	
100kHz PSD Reference Level	High Band Edge
	
Spurious Emission	
	
Note: The Value of the Display Line is -15.43dBm	

7.6. Radiated Spurious Emission Measurement

7.6.1.Test Limit

All out of band emissions appearing in a restricted band as specified in Section 15.205 of the Title 47 CFR must not exceed the limits shown in Table per Section 15.209.

FCC Part 15.209 Limits		
Frequency [MHz]	Field Strength [uV/m]	Measured Distance [Meters]
0.009 - 0.490	2400/F (kHz)	300
0.490 - 1.705	24000/F (kHz)	30
1.705 - 30	30	30
30 - 88	100	3
88 - 216	150	3
216 - 960	200	3
Above 960	500	3

7.6.2.Test Procedure Used

ANSI C63.10 Section 6.3 (General Requirements)

ANSI C63.10 Section 6.4 (Standard test method below 30MHz)

ANSI C63.10 Section 6.5 (Standard test method above 30MHz to 1GHz)

ANSI C63.10 Section 6.6 (Standard test method above 1GHz)

7.6.3.Test Setting

Table 1 - RBW as a function of frequency

Frequency	RBW
9 ~ 150 kHz	200 ~ 300 Hz
0.15 ~ 30 MHz	9 ~ 10 kHz
30 ~ 1000 MHz	100 ~ 120 kHz

Quasi-Peak Measurements below 1GHz

1. Analyzer center frequency was set to the frequency of the radiated spurious emission of interest
2. Span was set greater than 1MHz
3. RBW = as specified in Table 1
4. Detector = CISPR quasi-peak
5. Sweep time = auto couple
6. Trace was allowed to stabilize

Peak Measurements above 1GHz

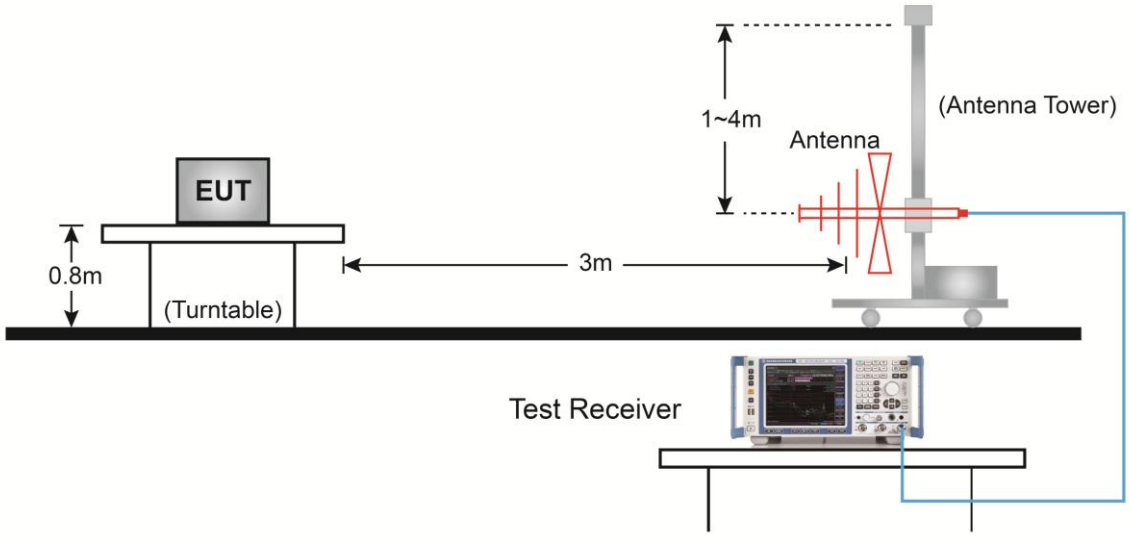
1. Analyzer center frequency was set to the frequency of the radiated spurious emission of interest
2. RBW = 1MHz
3. VBW = 3MHz
4. Detector = peak
5. Sweep time = auto couple
6. Trace mode = max hold
7. Trace was allowed to stabilize

Average Measurements above 1GHz (Method VB)

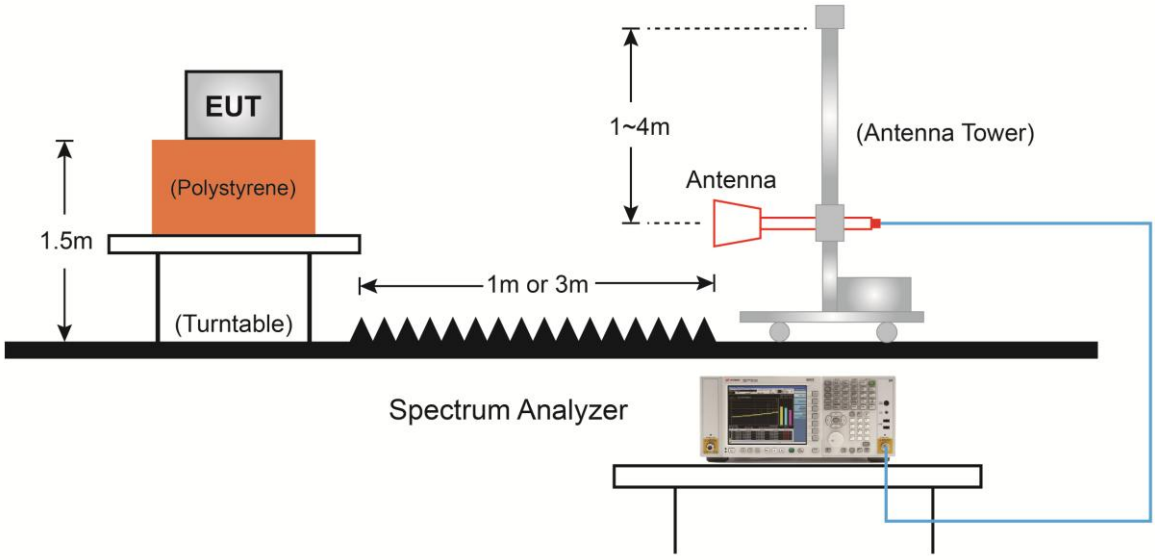
1. Analyzer center frequency was set to the frequency of the radiated spurious emission of interest
2. RBW = 1MHz
3. VBW; If the EUT is configured to transmit with duty cycle ≥ 98%, set VBW = 10 Hz.
   If the EUT duty cycle is < 98%, set VBW ≥ 1/T. T is the minimum transmission duration.
4. Detector = Peak
5. Sweep time = auto
6. Trace mode = max hold
7. Trace was allowed to stabilize

7.6.4.Test Setup

Below 1GHz Test Setup:



Above 1GHz Test Setup:



7.6.5.Test Result

Product	Abegal Battery Camera	Temperature	25°C
Test Engineer	Dandy Li	Relative Humidity	54%
Test Site	AC1	Test Date	2019/10/10
Test Mode	802.11b	Test Channel	01
Remark	1. Average measurement was not performed if peak level lower than average limit. 2. Other frequency was 20dB below limit line within 1-18GHz, there is not show in the report.		

Mark	Frequency (MHz)	Reading Level (dBμV)	Factor (dB)	Measure Level (dBμV/m)	Limit (dBμV/m)	Margin (dB)	Detector	Polarization
	4272.5	40.4	-0.7	39.7	74.0	-34.3	Peak	Horizontal
	4825.0	42.7	1.9	44.6	74.0	-29.4	Peak	Horizontal
*	5734.5	36.6	2.5	39.1	76.0	-36.9	Peak	Horizontal
*	10367.0	36.3	14.5	50.8	76.0	-25.2	Peak	Horizontal
	3992.0	44.1	-1.9	42.2	74.0	-31.8	Peak	Vertical
	4944.0	39.4	1.8	41.2	74.0	-32.8	Peak	Vertical
*	5998.0	40.3	3.8	44.1	76.0	-31.9	Peak	Vertical
*	9942.0	35.3	12.3	47.6	76.0	-28.4	Peak	Vertical

Note 1: “*” is not in restricted band, its limit is 20dBc of the fundamental emission level (96.0dBμV/m) or FCC 15.209 which is higher.

Note 2: Measure Level (dBμV/m) = Reading Level (dBμV) + Factor (dB)

Factor (dB) = Cable Loss (dB) + Antenna Factor (dB/m) - Pre_Amplifier Gain (dB)

Product	Abegal Battery Camera	Temperature	25°C
Test Engineer	Dandy Li	Relative Humidity	54%
Test Site	AC1	Test Date	2019/10/10
Test Mode	802.11b	Test Channel	06
Remark	1. Average measurement was not performed if peak level lower than average limit. 2. Other frequency was 20dB below limit line within 1-18GHz, there is not show in the report.		

Mark	Frequency (MHz)	Reading Level (dBμV)	Factor (dB)	Measure Level (dBμV/m)	Limit (dBμV/m)	Margin (dB)	Detector	Polarization
	4068.5	41.1	-1.2	39.9	74.0	-34.1	Peak	Horizontal
	4876.0	49.9	1.6	51.5	74.0	-22.5	Peak	Horizontal
*	6516.5	38.5	5.7	44.2	75.5	-31.3	Peak	Horizontal
*	9976.0	37.3	12.8	50.1	75.5	-25.4	Peak	Horizontal
	3864.5	40.4	-1.7	38.7	74.0	-35.3	Peak	Vertical
	4876.0	45.3	1.6	46.9	74.0	-27.1	Peak	Vertical
*	6210.5	37.1	4.0	41.1	75.5	-34.4	Peak	Vertical
*	10392.5	37.2	14.4	51.6	75.5	-23.9	Peak	Vertical

Note 1: “*” is not in restricted band, its limit is 20dBc of the fundamental emission level (95.5dBμV/m) or FCC 15.209 which is higher.

Note 2: Measure Level (dBμV/m) = Reading Level (dBμV) + Factor (dB)

Factor (dB) = Cable Loss (dB) + Antenna Factor (dB/m) - Pre_Amplifier Gain (dB)

Product	Abegal Battery Camera	Temperature	25°C
Test Engineer	Dandy Li	Relative Humidity	54%
Test Site	AC1	Test Date	2019/10/10
Test Mode	802.11b	Test Channel	11
Remark	1. Average measurement was not performed if peak level lower than average limit. 2. Other frequency was 20dB below limit line within 1-18GHz, there is not show in the report.		

Mark	Frequency (MHz)	Reading Level (dBμV)	Factor (dB)	Measure Level (dBμV/m)	Limit (dBμV/m)	Margin (dB)	Detector	Polarization
	4374.5	41.0	0.1	41.1	74.0	-32.9	Peak	Horizontal
	4927.0	47.6	1.2	48.8	74.0	-25.2	Peak	Horizontal
*	6508.0	38.4	5.6	44.0	75.1	-31.1	Peak	Horizontal
*	9806.0	37.0	12.2	49.2	75.1	-25.9	Peak	Horizontal
	4000.5	42.6	-1.8	40.8	74.0	-33.2	Peak	Vertical
	4927.0	43.0	1.2	44.2	74.0	-29.8	Peak	Vertical
*	6848.0	37.4	7.2	44.6	75.1	-30.5	Peak	Vertical
*	10146.0	36.8	13.1	49.9	75.1	-25.2	Peak	Vertical

Note 1: “*” is not in restricted band, its limit is 20dBc of the fundamental emission level (95.1dBμV/m) or FCC 15.209 which is higher.

Note 2: Measure Level (dBμV/m) = Reading Level (dBμV) + Factor (dB)

Factor (dB) = Cable Loss (dB) + Antenna Factor (dB/m) - Pre_Amplifier Gain (dB)

Product	Abegal Battery Camera	Temperature	25°C
Test Engineer	Dandy Li	Relative Humidity	54%
Test Site	AC1	Test Date	2019/10/10
Test Mode	802.11g	Test Channel	01
Remark	1. Average measurement was not performed if peak level lower than average limit. 2. Other frequency was 20dB below limit line within 1-18GHz, there is not show in the report.		

Mark	Frequency (MHz)	Reading Level (dBμV)	Factor (dB)	Measure Level (dBμV/m)	Limit (dBμV/m)	Margin (dB)	Detector	Polarization
	4077.0	40.0	-1.0	39.0	74.0	-35.0	Peak	Horizontal
	4816.5	51.9	1.5	53.4	74.0	-20.6	Peak	Horizontal
*	6278.5	37.9	4.2	42.1	84.9	-42.8	Peak	Horizontal
*	10256.5	36.5	13.6	50.1	84.9	-34.8	Peak	Horizontal
	3983.5	43.7	-1.9	41.8	74.0	-32.2	Peak	Vertical
	4833.5	47.1	1.7	48.8	74.0	-25.2	Peak	Vertical
*	6584.5	37.5	6.2	43.7	84.9	-41.2	Peak	Vertical
*	10477.5	37.1	13.8	50.9	84.9	-34.0	Peak	Vertical

Note 1: “*” is not in restricted band, its limit is 20dBc of the fundamental emission level (104.9dBμV/m) or FCC 15.209 which is higher.

Note 2: Measure Level (dBμV/m) = Reading Level (dBμV) + Factor (dB)

Factor (dB) = Cable Loss (dB) + Antenna Factor (dB/m) - Pre_Amplifier Gain (dB)

Product	Abegal Battery Camera	Temperature	25°C
Test Engineer	Dandy Li	Relative Humidity	54%
Test Site	AC1	Test Date	2019/10/10
Test Mode	802.11g	Test Channel	06
Remark	1. Average measurement was not performed if peak level lower than average limit. 2. Other frequency was 20dB below limit line within 1-18GHz, there is not show in the report.		

Mark	Frequency (MHz)	Reading Level (dBμV)	Factor (dB)	Measure Level (dBμV/m)	Limit (dBμV/m)	Margin (dB)	Detector	Polarization
	4034.5	40.4	-1.7	38.7	74.0	-35.3	Peak	Horizontal
	4876.0	59.8	1.6	61.4	74.0	-12.6	Peak	Horizontal
	4876.0	44.7	1.6	46.3	54.0	-7.7	Average	Horizontal
*	6312.5	39.1	4.5	43.6	84.5	-40.9	Peak	Horizontal
*	6848.0	38.0	7.2	45.2	84.5	-39.3	Peak	Horizontal
	4060.0	41.2	-1.3	39.9	74.0	-34.1	Peak	Vertical
	4876.0	52.3	1.6	53.9	74.0	-20.1	Peak	Vertical
*	6117.0	38.4	4.4	42.8	84.5	-41.7	Peak	Vertical
*	7018.0	37.4	8.3	45.7	84.5	-38.8	Peak	Vertical

Note 1: "*" is not in restricted band, its limit is 20dBc of the fundamental emission level (104.5dBμV/m) or FCC 15.209 which is higher.

Note 2: Measure Level (dBμV/m) = Reading Level (dBμV) + Factor (dB)

Factor (dB) = Cable Loss (dB) + Antenna Factor (dB/m) - Pre_Amplifier Gain (dB)

Product	Abegal Battery Camera	Temperature	25°C
Test Engineer	Dandy Li	Relative Humidity	54%
Test Site	AC1	Test Date	2019/10/10
Test Mode	802.11g	Test Channel	11
Remark	1. Average measurement was not performed if peak level lower than average limit. 2. Other frequency was 20dB below limit line within 1-18GHz, there is not show in the report.		

Mark	Frequency (MHz)	Reading Level (dBμV)	Factor (dB)	Measure Level (dBμV/m)	Limit (dBμV/m)	Margin (dB)	Detector	Polarization
	4077.0	41.3	-1.0	40.3	74.0	-33.7	Peak	Horizontal
	4927.0	62.0	1.2	63.2	74.0	-10.8	Peak	Horizontal
	4927.0	45.8	1.2	47.0	54.0	-7.0	Average	Horizontal
*	6899.0	37.6	7.2	44.8	83.9	-39.1	Peak	Horizontal
*	10222.5	38.1	13.2	51.3	83.9	-32.6	Peak	Horizontal
	4026.0	41.2	-1.8	39.4	74.0	-34.6	Peak	Vertical
	4927.0	52.3	1.2	53.5	74.0	-20.5	Peak	Vertical
*	5972.5	36.8	3.7	40.5	83.9	-43.4	Peak	Vertical
*	10384.0	36.1	15.1	51.2	83.9	-32.7	Peak	Vertical

Note 1: "*" is not in restricted band, its limit is 20dBc of the fundamental emission level (103.9dBμV/m) or FCC 15.209 which is higher.

Note 2: Measure Level (dBμV/m) = Reading Level (dBμV) + Factor (dB)

Factor (dB) = Cable Loss (dB) + Antenna Factor (dB/m) - Pre_Amplifier Gain (dB)

Product	Abegal Battery Camera	Temperature	25°C
Test Engineer	Dandy Li	Relative Humidity	54%
Test Site	AC1	Test Date	2019/10/10
Test Mode	802.11n-HT20	Test Channel	01
Remark	1. Average measurement was not performed if peak level lower than average limit. 2. Other frequency was 20dB below limit line within 1-18GHz, there is not show in the report.		

Mark	Frequency (MHz)	Reading Level (dBμV)	Factor (dB)	Measure Level (dBμV/m)	Limit (dBμV/m)	Margin (dB)	Detector	Polarization
	4060.0	40.9	-1.3	39.6	74.0	-34.4	Peak	Horizontal
	4816.5	55.4	1.5	56.9	74.0	-17.1	Peak	Horizontal
	4816.5	42.5	1.5	44.0	54.0	-10.0	Average	Horizontal
*	6465.5	38.7	5.4	44.1	86.1	-42.0	Peak	Horizontal
*	9967.5	36.5	13.0	49.5	86.1	-36.6	Peak	Horizontal
	3992.0	43.6	-1.9	41.7	74.0	-32.3	Peak	Vertical
	4825.0	45.8	1.9	47.7	74.0	-26.3	Peak	Vertical
*	6533.5	38.4	6.0	44.4	86.1	-41.7	Peak	Vertical
*	10163.0	36.9	12.9	49.8	86.1	-36.3	Peak	Vertical

Note 1: "*" is not in restricted band, its limit is 20dBc of the fundamental emission level (106.1dBμV/m) or FCC 15.209 which is higher.

Note 2: Measure Level (dBμV/m) = Reading Level (dBμV) + Factor (dB)

Factor (dB) = Cable Loss (dB) + Antenna Factor (dB/m) - Pre_Amplifier Gain (dB)

Product	Abegal Battery Camera	Temperature	25°C
Test Engineer	Dandy Li	Relative Humidity	54%
Test Site	AC1	Test Date	2019/10/10
Test Mode	802.11n-HT20	Test Channel	06
Remark	1. Average measurement was not performed if peak level lower than average limit. 2. Other frequency was 20dB below limit line within 1-18GHz, there is not show in the report.		

Mark	Frequency (MHz)	Reading Level (dBμV)	Factor (dB)	Measure Level (dBμV/m)	Limit (dBμV/m)	Margin (dB)	Detector	Polarization
	4034.5	40.6	-1.7	38.9	74.0	-35.1	Peak	Horizontal
	4884.5	60.0	1.5	61.5	74.0	-12.5	Peak	Horizontal
	4884.5	48.0	1.5	49.5	54.0	-4.5	Average	Horizontal
*	6091.5	37.8	4.6	42.4	85.3	-42.9	Peak	Horizontal
*	7035.0	38.1	8.1	46.2	85.3	-39.1	Peak	Horizontal
	4374.5	40.9	0.1	41.0	74.0	-33.0	Peak	Vertical
	4867.5	54.6	1.6	56.2	74.0	-17.8	Peak	Vertical
	4873.8	43.7	1.6	45.3	54.0	-8.7	Average	Vertical
*	5632.5	39.1	2.9	42.0	85.3	-43.3	Peak	Vertical
*	6831.0	38.5	7.0	45.5	85.3	-39.8	Peak	Vertical

Note 1: “*” is not in restricted band, its limit is 20dBc of the fundamental emission level (105.3dBμV/m) or FCC 15.209 which is higher.

Note 2: Measure Level (dBμV/m) = Reading Level (dBμV) + Factor (dB)

Factor (dB) = Cable Loss (dB) + Antenna Factor (dB/m) - Pre_Amplifier Gain (dB)

Product	Abegal Battery Camera	Temperature	25°C
Test Engineer	Dandy Li	Relative Humidity	54%
Test Site	AC1	Test Date	2019/10/10
Test Mode:	802.11n-HT20	Test Channel:	11
Remark:	1. Average measurement was not performed if peak level lower than average limit. 2. Other frequency was 20dB below limit line within 1-18GHz, there is not show in the report.		

Mark	Frequency (MHz)	Reading Level (dBμV)	Factor (dB)	Measure Level (dBμV/m)	Limit (dBμV/m)	Margin (dB)	Detector	Polarization
	3983.5	41.3	-1.9	39.4	74.0	-34.6	Peak	Horizontal
	4918.5	59.2	1.4	60.6	74.0	-13.4	Peak	Horizontal
	4918.5	46.6	1.4	48.0	54.0	-6.0	Average	Horizontal
*	6091.5	37.5	4.6	42.1	84.6	-42.5	Peak	Horizontal
*	10316.0	36.8	13.8	50.6	84.6	-34.0	Peak	Horizontal
	3983.5	42.2	-1.9	40.3	74.0	-33.7	Peak	Vertical
	4918.5	51.8	1.4	53.2	74.0	-20.8	Peak	Vertical
*	5989.5	37.9	3.8	41.7	84.6	-42.9	Peak	Vertical
*	6822.5	37.4	6.9	44.3	84.6	-40.3	Peak	Vertical

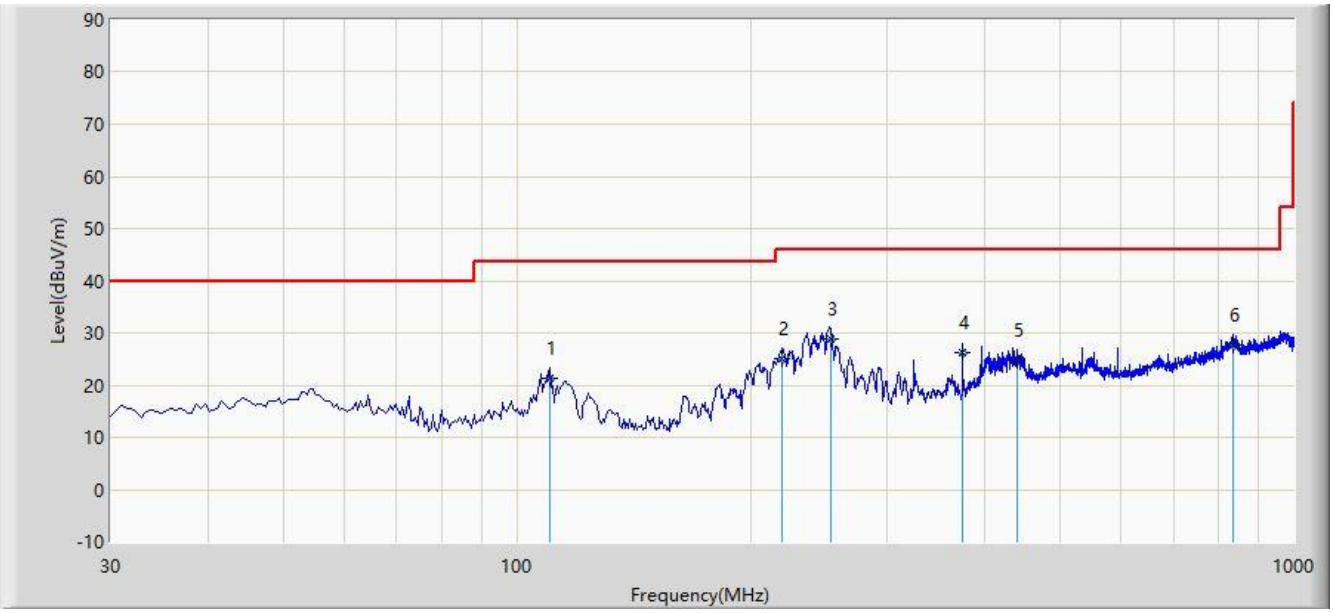
Note 1: "*" is not in restricted band, its limit is 20dBc of the fundamental emission level (104.6dBμV/m) or FCC 15.209 which is higher.

Note 2: Measure Level (dBμV/m) = Reading Level (dBμV) + Factor (dB)

Factor (dB) = Cable Loss (dB) + Antenna Factor (dB/m) - Pre_Amplifier Gain (dB)

The Worst Case of Radiated Emission below 1GHz:

Site: AC1	Time: 2019/10/09 - 23:16
Limit: FCC_Part15.209_RE(3m)	Engineer: Dandy Li
Probe: VULB 9168_20-2000MHz	Polarity: Horizontal
EUT: Abegal Battery Camera	Power: By Battery
Test Mode: Transmit by 802.11b at Channel 2437MHz	



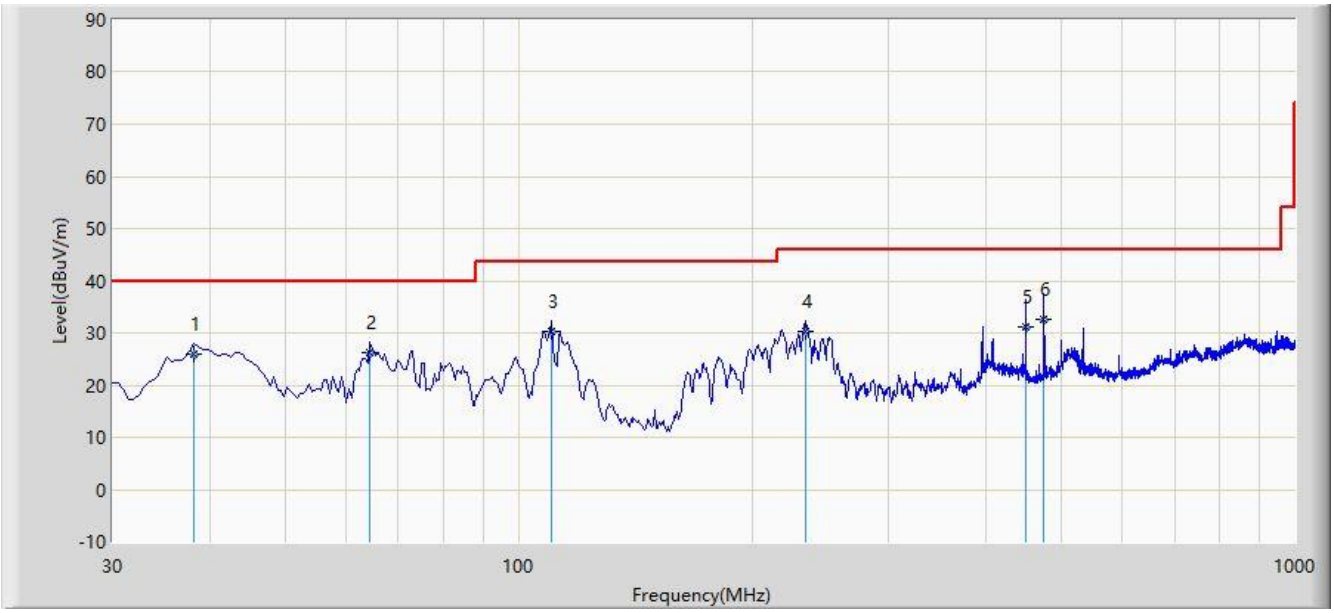
No	Flag	Mark	Frequency (MHz)	Measure Level (dBuV/m)	Reading Level (dBuV)	Margin (dB)	Limit (dBuV/m)	Factor (dB)	Type
1			110.510	21.328	8.639	-22.172	43.500	12.690	QP
2			219.635	25.084	12.637	-20.916	46.000	12.447	QP
3		*	253.585	28.859	15.335	-17.141	46.000	13.524	QP
4			374.835	26.094	10.175	-19.906	46.000	15.919	QP
5			440.310	24.835	7.899	-21.165	46.000	16.936	QP
6			836.070	27.621	4.706	-18.379	46.000	22.915	QP

Note 1: Measure Level (dBμV/m) = Reading Level (dBμV) + Factor (dB)

Factor (dB) = Cable Loss (dB) + Antenna Factor (dB/m)

Note 2: The test trace is same as the ambient noise and the amplitude of the emissions are attenuated more than 20dB below the permissible (the test frequency range: 9kHz ~ 30MHz, 18GHz ~ 25GHz), therefore no data appear in the report.

Site: AC1	Time: 2019/10/09 - 23:18
Limit: FCC_Part15.209_RE(3m)	Engineer: Dandy Li
Probe: VULB 9168_20-2000MHz	Polarity: Vertical
EUT: Abegal Battery Camera	Power: By Battery
Test Mode: Transmit by 802.11b at Channel 2437MHz	



No	Flag	Mark	Frequency (MHz)	Measure Level (dBuV/m)	Reading Level (dBuV)	Margin (dB)	Limit (dBuV/m)	Factor (dB)	Type
1			38.245	25.861	12.405	-14.139	40.000	13.455	QP
2			64.435	26.167	13.541	-13.833	40.000	12.626	QP
3		*	110.510	30.387	17.698	-13.113	43.500	12.690	QP
4			234.670	30.393	17.368	-15.607	46.000	13.025	QP
5			450.010	31.292	14.200	-14.708	46.000	17.092	QP
6			475.230	32.615	15.020	-13.385	46.000	17.595	QP

Note 1: Measure Level (dBμV/m) = Reading Level (dBμV) + Factor (dB)

Factor (dB) = Cable Loss (dB) + Antenna Factor (dB/m)

Note 2: The test trace is same as the ambient noise and the amplitude of the emissions are attenuated more than 20dB below the permissible (the test frequency range: 9kHz ~ 30MHz, 18GHz ~ 25GHz), therefore no data appear in the report.

7.7. Radiated Restricted Band Edge Measurement

7.7.1.Test Limit

For 15.205 requirement:

Radiated emissions which fall in the restricted bands, as defined in Section 15.205(a) of FCC part 15, must also comply with the radiated emission limits specified in Section 15.209(a).

Frequency (MHz)	Frequency (MHz)	Frequency (MHz)	Frequency (GHz)
0.090 - 0.110	16.42 - 16.423	399.9 - 410	4.5 - 5.15
[1] 0.495 - 0.505	16.69475 - 16.69525	608 - 614	5.35 - 5.46
2.1735 - 2.1905	16.80425 - 16.80475	960 - 1240	7.25 - 7.75
4.125 - 4.128	25.5 - 25.67	1300 - 1427	8.025 - 8.5
4.17725 - 4.17775	37.5 - 38.25	1435 - 1626.5	9.0 - 9.2
4.20725 - 4.20775	73 - 74.6	1645.5 - 1646.5	9.3 - 9.5
6.215 - 6.218	74.8 - 75.2	1660 - 1710	10.6 - 12.7
6.26775 - 6.26825	108 - 121.94	1718.8 - 1722.2	13.25 - 13.4
6.31175 - 6.31225	123 - 138	2200 - 2300	14.47 - 14.5
8.291 - 8.294	149.9 - 150.05	2310 - 2390	15.35 - 16.2
8.362 - 8.366	156.52475 - 156.52525	2483.5 - 2500	17.7 - 21.4
8.37625 - 8.38675	156.7 - 156.9	2690 - 2900	22.01 - 23.12
8.41425 - 8.41475	162.0125 - 167.17	3260 - 3267	23.6 - 24.0
12.29 - 12.293	167.72 - 173.2	3332 - 3339	31.2 - 31.8
12.51975 - 12.52025	240 - 285	3345.8 - 3358	36.43 - 36.5
12.57675 - 12.57725	322 - 335.4	3600 - 4400	([2])
13.36 - 13.41	--	--	--

All out of band emissions appearing in a restricted band as specified in Section 15.205 of the Title 47CFR must not exceed the limits shown in Table per Section 15.209.

FCC Part 15.209 Limits		
Frequency [MHz]	Field Strength [uV/m]	Measured Distance [Meters]
0.009 - 0.490	2400/F (kHz)	300
0.490 - 1.705	24000/F (kHz)	30
1.705 - 30	30	30
30 - 88	100	3
88 - 216	150	3
216 - 960	200	3
Above 960	500	3

7.7.2.Test Procedure Used

ANSI C63.10 Section 6.3 (General Requirements)

ANSI C63.10 Section 6.6 (Standard test method above 1GHz)

7.7.3.Test Setting

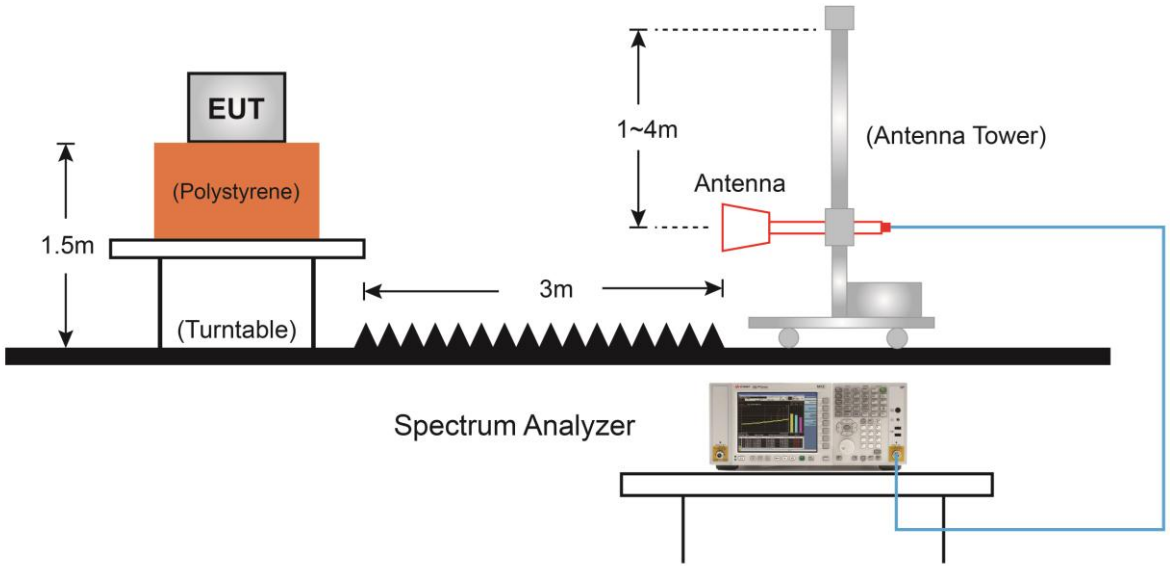
Peak Field Strength Measurements

1. Analyzer center frequency was set to the frequency of the radiated spurious emission of interest
2. RBW = 1MHz
3. VBW = 3MHz
4. Detector = peak
5. Sweep time = auto couple
6. Trace mode = max hold
7. Trace was allowed to stabilize

Average Field Strength Measurements

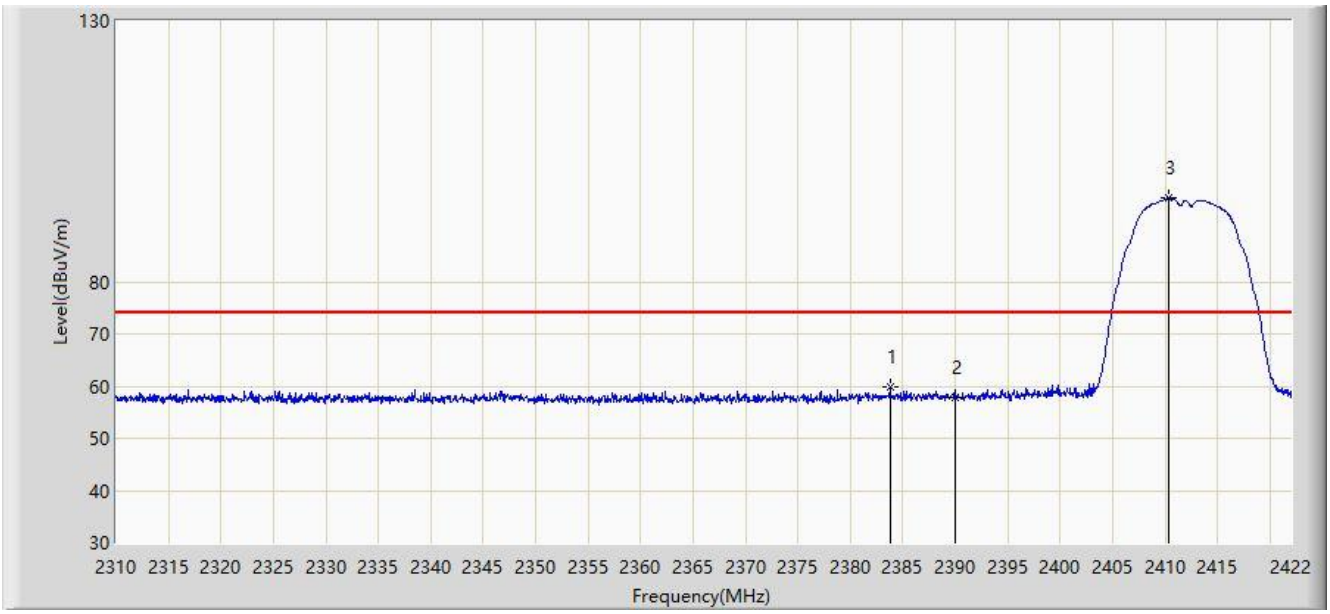
1. Analyzer center frequency was set to the frequency of the radiated spurious emission of interest
2. RBW = 1MHz
3. VBW ≥ 1/T
4. As an alternative, the instrument may be set to linear detector mode. Ensure that video filtering is applied in linear voltage domain (rather than in a log or dB domain). Some instruments require linear display mode in order to accomplish this. Others have a setting for Average-VBW Type, which can be set to “Voltage” regardless of the display mode
5. Detector = Peak
6. Sweep time = auto
7. Trace mode = max hold
8. Allow max hold to run for at least 50 times (1/duty cycle) traces

7.7.4.Test Setup



7.7.5.Test Result

Site: AC1	Time: 2019/10/10 - 11:16
Limit: FCC_Part15.209_RE(3m)	Engineer: Dandy Li
Probe: BBHA9120D_1-18GHz	Polarity: Horizontal
EUT: Abegal Battery Camera	Power: By Battery
Test Mode: Transmit by 802.11b at channel 2412MHz	

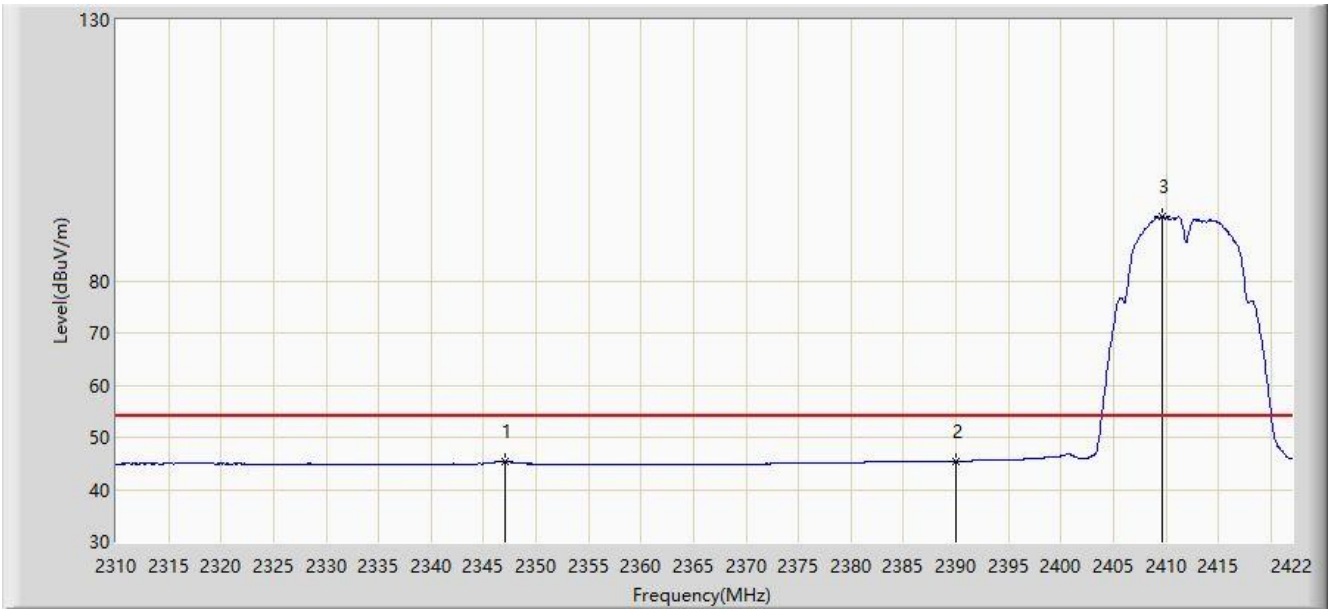


No	Flag	Mark	Frequency (MHz)	Measure Level (dBuV/m)	Reading Level (dBuV)	Margin (dB)	Limit (dBuV/m)	Factor (dB)	Type
1			2383.808	59.736	29.128	-14.264	74.000	30.608	PK
2			2390.000	57.968	27.374	-16.032	74.000	30.594	PK
3		*	2410.352	95.991	65.414	N/A	N/A	30.577	PK

Note: Measure Level (dBμV/m) = Reading Level (dBμV) + Factor (dB)

Factor (dB) = Cable Loss (dB) + Antenna Factor (dB/m)

Site: AC1	Time: 2019/10/10 - 11:19
Limit: FCC_Part15.209_RE(3m)	Engineer: Dandy Li
Probe: BBHA9120D_1-18GHz	Polarity: Horizontal
EUT: Abegal Battery Camera	Power: By Battery
Test Mode: Transmit by 802.11b at channel 2412MHz	

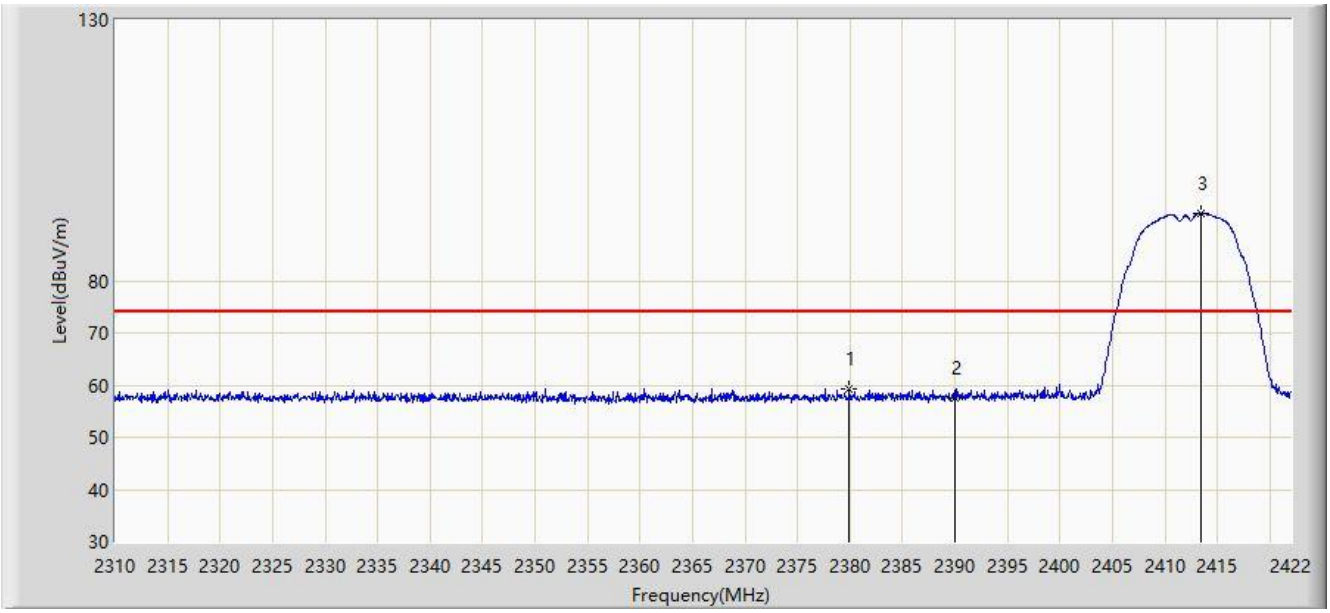


No	Flag	Mark	Frequency (MHz)	Measure Level (dBuV/m)	Reading Level (dBuV)	Margin (dB)	Limit (dBuV/m)	Factor (dB)	Type
1			2347.016	45.470	14.756	-8.530	54.000	30.714	AV
2			2390.000	45.405	14.811	-8.595	54.000	30.594	AV
3		*	2409.680	92.207	61.630	N/A	N/A	30.577	AV

Note: Measure Level (dBμV/m) = Reading Level (dBμV) + Factor (dB)

Factor (dB) = Cable Loss (dB) + Antenna Factor (dB/m)

Site: AC1	Time: 2019/10/10 - 11:19
Limit: FCC_Part15.209_RE(3m)	Engineer: Dandy Li
Probe: BBHA9120D_1-18GHz	Polarity: Vertical
EUT: Abegal Battery Camera	Power: By Battery
Test Mode: Transmit by 802.11b at channel 2412MHz	

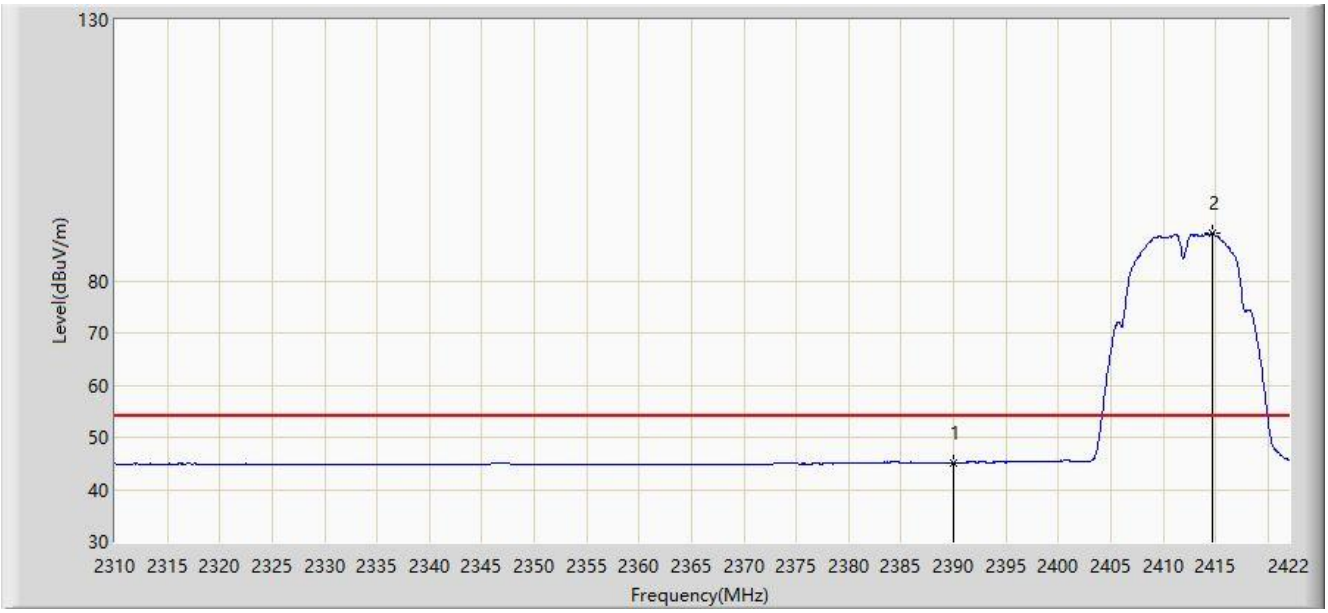


No	Flag	Mark	Frequency (MHz)	Measure Level (dBuV/m)	Reading Level (dBuV)	Margin (dB)	Limit (dBuV/m)	Factor (dB)	Type
1			2379.888	59.367	28.751	-14.633	74.000	30.616	PK
2			2390.000	57.623	27.029	-16.377	74.000	30.594	PK
3		*	2413.488	92.928	62.356	N/A	N/A	30.571	PK

Note: Measure Level (dBμV/m) = Reading Level (dBμV) + Factor (dB)

Factor (dB) = Cable Loss (dB) + Antenna Factor (dB/m)

Site: AC1	Time: 2019/10/10 - 11:20
Limit: FCC_Part15.209_RE(3m)	Engineer: Dandy Li
Probe: BBHA9120D_1-18GHz	Polarity: Vertical
EUT: Abegal Battery Camera	Power: By Battery
Test Mode: Transmit by 802.11b at channel 2412MHz	

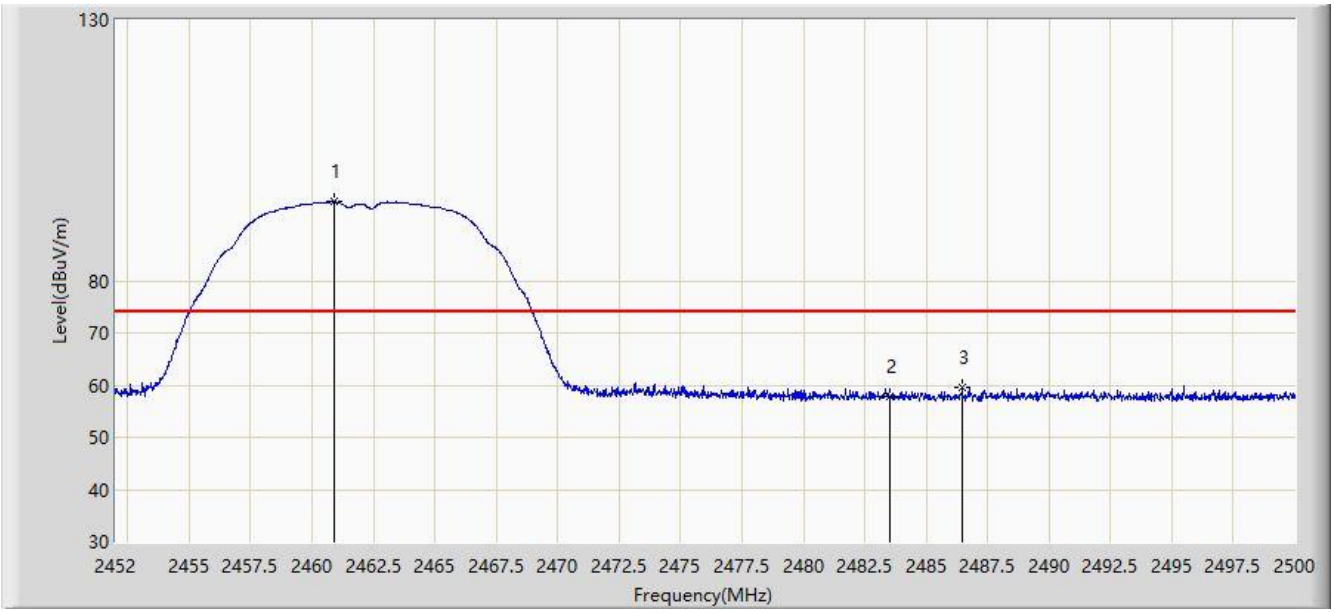


No	Flag	Mark	Frequency (MHz)	Measure Level (dBuV/m)	Reading Level (dBuV)	Margin (dB)	Limit (dBuV/m)	Factor (dB)	Type
1			2390.000	45.155	14.561	-8.845	54.000	30.594	AV
2		*	2414.664	89.054	58.485	N/A	N/A	30.570	AV

Note: Measure Level (dBμV/m) = Reading Level (dBμV) + Factor (dB)

Factor (dB) = Cable Loss (dB) + Antenna Factor (dB/m)

Site: AC1	Time: 2019/10/10 - 11:21
Limit: FCC_Part15.209_RE(3m)	Engineer: Dandy Li
Probe: BBHA9120D_1-18GHz	Polarity: Horizontal
EUT: Abegal Battery Camera	Power: By Battery
Test Mode: Transmit by 802.11b at channel 2462MHz	



No	Flag	Mark	Frequency (MHz)	Measure Level (dBuV/m)	Reading Level (dBuV)	Margin (dB)	Limit (dBuV/m)	Factor (dB)	Type
1		*	2460.880	95.121	64.592	N/A	N/A	30.528	PK
2			2483.500	57.880	27.311	-16.120	74.000	30.569	PK
3			2486.464	59.679	29.097	-14.321	74.000	30.582	PK

Note: Measure Level (dBμV/m) = Reading Level (dBμV) + Factor (dB)

Factor (dB) = Cable Loss (dB) + Antenna Factor (dB/m)

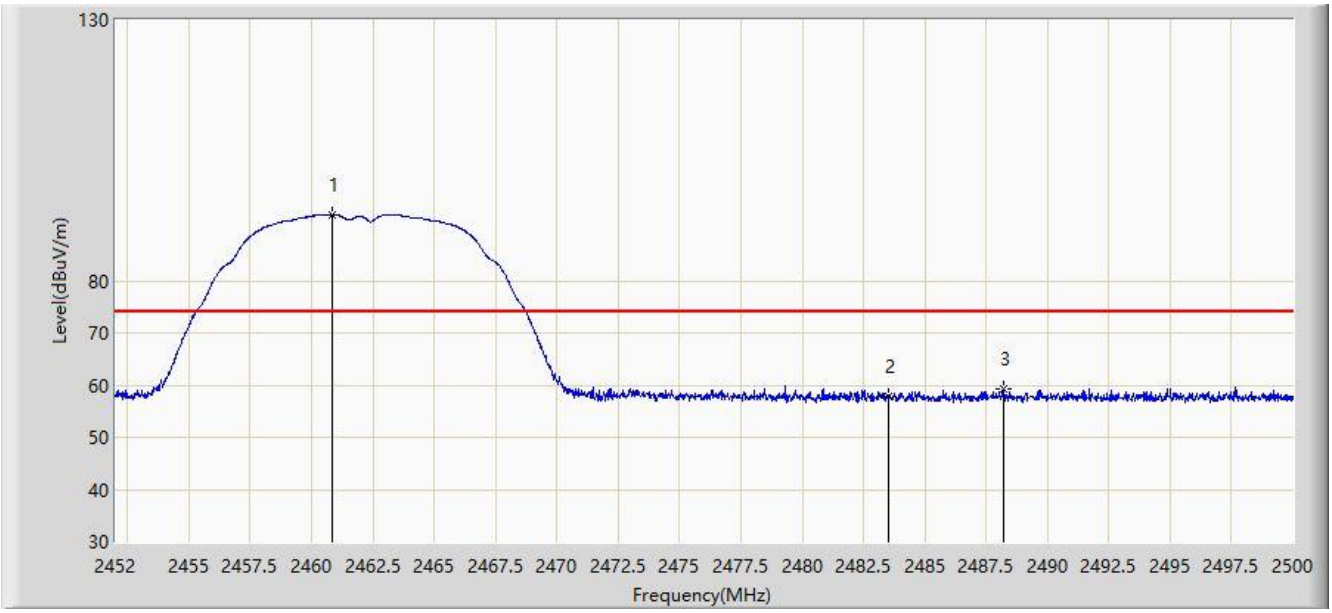
Site: AC1	Time: 2019/10/10 - 11:23
Limit: FCC_Part15.209_RE(3m)	Engineer: Dandy Li
Probe: BBHA9120D_1-18GHz	Polarity: Horizontal
EUT: Abegal Battery Camera	Power: By Battery
Test Mode: Transmit by 802.11b at channel 2462MHz	

No	Flag	Mark	Frequency (MHz)	Measure Level (dBuV/m)	Reading Level (dBuV)	Margin (dB)	Limit (dBuV/m)	Factor (dB)	Type
1		*	2461.192	91.101	60.571	N/A	N/A	30.530	AV
2			2483.500	45.406	14.837	-8.594	54.000	30.569	AV

Note: Measure Level (dBμV/m) = Reading Level (dBμV) + Factor (dB)

Factor (dB) = Cable Loss (dB) + Antenna Factor (dB/m)

Site: AC1	Time: 2019/10/10 - 11:23
Limit: FCC_Part15.209_RE(3m)	Engineer: Dandy Li
Probe: BBHA9120D_1-18GHz	Polarity: Vertical
EUT: Abegal Battery Camera	Power: By Battery
Test Mode: Transmit by 802.11b at channel 2462MHz	



No	Flag	Mark	Frequency (MHz)	Measure Level (dBuV/m)	Reading Level (dBuV)	Margin (dB)	Limit (dBuV/m)	Factor (dB)	Type
1		*	2460.856	92.708	62.179	N/A	N/A	30.528	PK
2			2483.500	57.822	27.253	-16.178	74.000	30.569	PK
3			2488.192	59.348	28.759	-14.652	74.000	30.589	PK

Note: Measure Level (dBμV/m) = Reading Level (dBμV) + Factor (dB)

Factor (dB) = Cable Loss (dB) + Antenna Factor (dB/m)

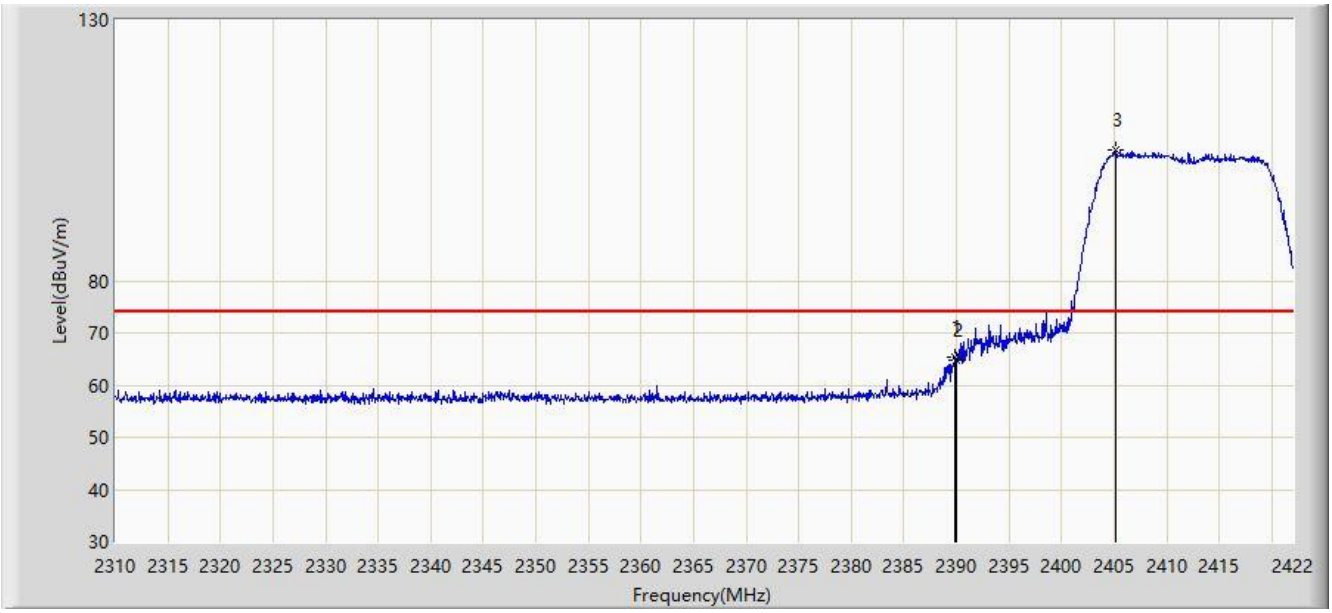
Site: AC1	Time: 2019/10/10 - 11:25
Limit: FCC_Part15.209_RE(3m)	Engineer: Dandy Li
Probe: BBHA9120D_1-18GHz	Polarity: Vertical
EUT: Abegal Battery Camera	Power: By Battery
Test Mode: Transmit by 802.11b at channel 2462MHz	

No	Flag	Mark	Frequency (MHz)	Measure Level (dBuV/m)	Reading Level (dBuV)	Margin (dB)	Limit (dBuV/m)	Factor (dB)	Type
1		*	2461.144	88.982	58.452	N/A	N/A	30.530	AV
2			2483.500	45.264	14.695	-8.736	54.000	30.569	AV

Note: Measure Level (dBμV/m) = Reading Level (dBμV) + Factor (dB)

Factor (dB) = Cable Loss (dB) + Antenna Factor (dB/m)

Site: AC1	Time: 2019/10/10 - 11:26
Limit: FCC_Part15.209_RE(3m)	Engineer: Dandy Li
Probe: BBHA9120D_1-18GHz	Polarity: Horizontal
EUT: Abegal Battery Camera	Power: By Battery
Test Mode: Transmit by 802.11g at channel 2412MHz	

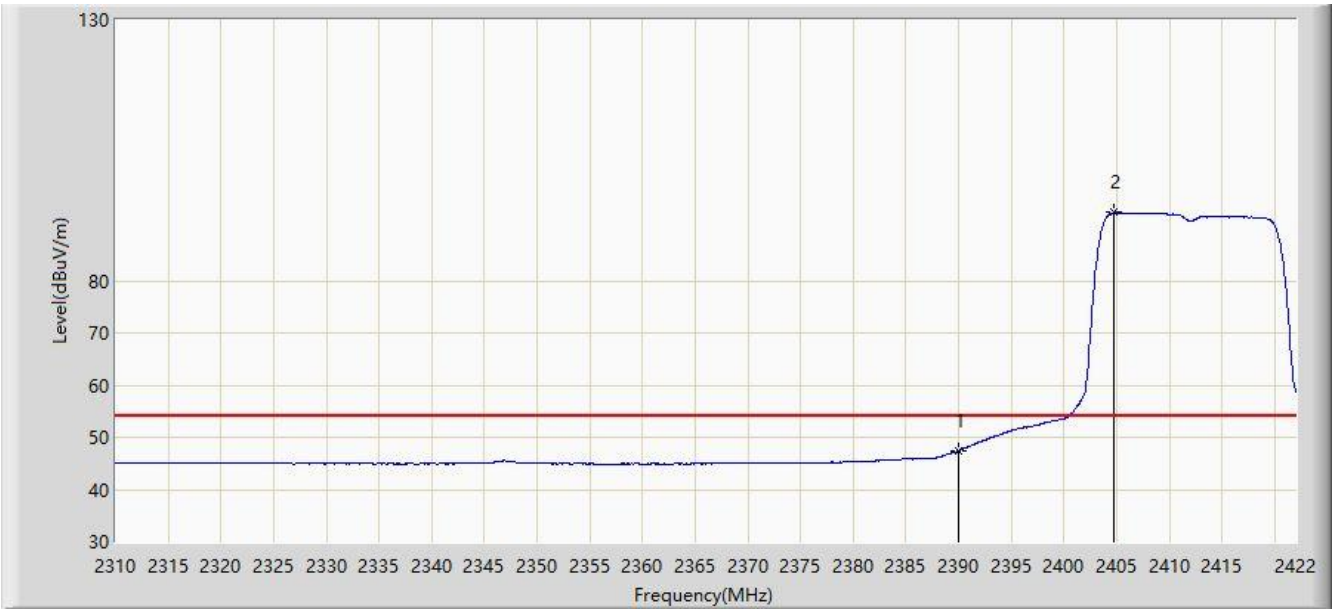


No	Flag	Mark	Frequency (MHz)	Measure Level (dBuV/m)	Reading Level (dBuV)	Margin (dB)	Limit (dBuV/m)	Factor (dB)	Type
1			2389.912	65.370	34.776	-8.630	74.000	30.594	PK
2			2390.000	64.847	34.253	-9.153	74.000	30.594	PK
3		*	2405.200	104.948	74.369	N/A	N/A	30.580	PK

Note: Measure Level (dBμV/m) = Reading Level (dBμV) + Factor (dB)

Factor (dB) = Cable Loss (dB) + Antenna Factor (dB/m)

Site: AC1	Time: 2019/10/10 - 11:27
Limit: FCC_Part15.209_RE(3m)	Engineer: Dandy Li
Probe: BBHA9120D_1-18GHz	Polarity: Horizontal
EUT: Abegal Battery Camera	Power: By Battery
Test Mode: Transmit by 802.11g at channel 2412MHz	

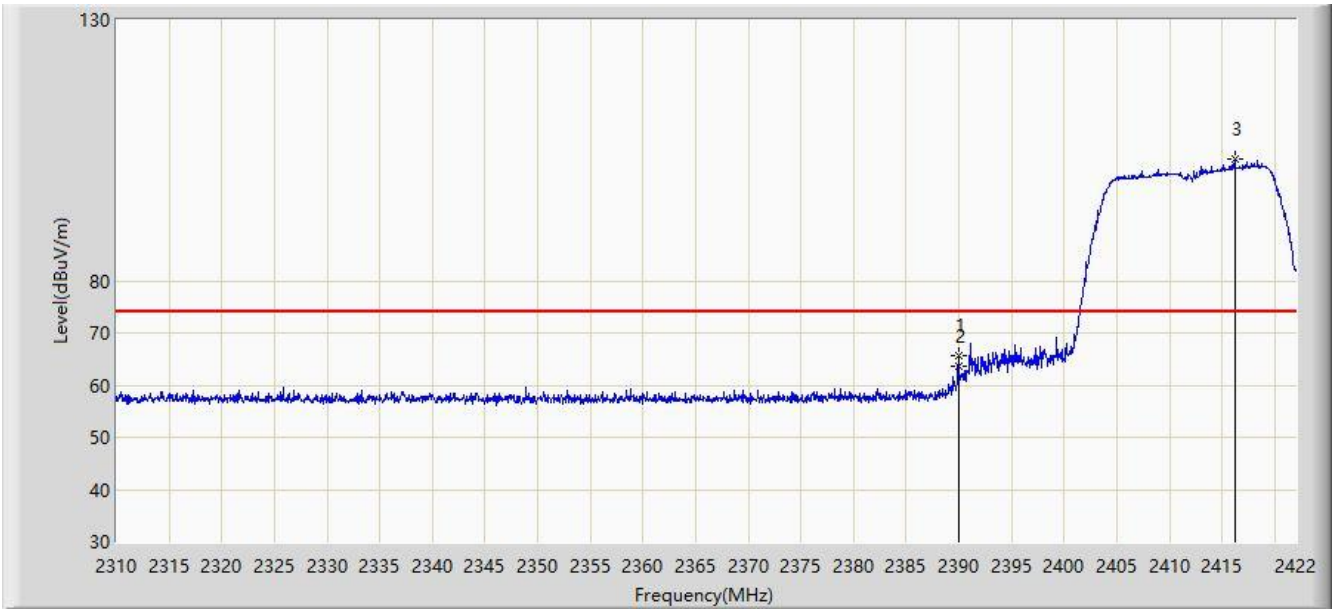


No	Flag	Mark	Frequency (MHz)	Measure Level (dBuV/m)	Reading Level (dBuV)	Margin (dB)	Limit (dBuV/m)	Factor (dB)	Type
1			2390.000	47.436	16.842	-6.564	54.000	30.594	AV
2		*	2404.752	93.083	62.503	N/A	N/A	30.580	AV

Note: Measure Level (dBμV/m) = Reading Level (dBμV) + Factor (dB)

Factor (dB) = Cable Loss (dB) + Antenna Factor (dB/m)

Site: AC1	Time: 2019/10/10 - 11:28
Limit: FCC_Part15.209_RE(3m)	Engineer: Dandy Li
Probe: BBHA9120D_1-18GHz	Polarity: Vertical
EUT: Abegal Battery Camera	Power: By Battery
Test Mode: Transmit by 802.11g at channel 2412MHz	

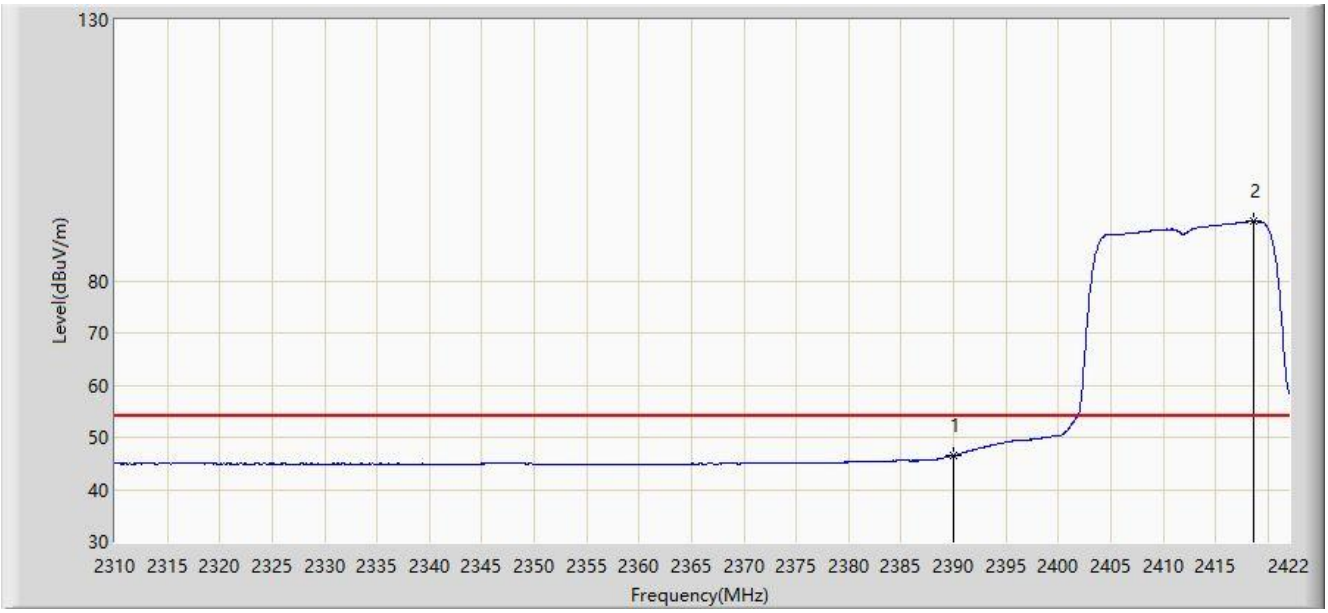


No	Flag	Mark	Frequency (MHz)	Measure Level (dBuV/m)	Reading Level (dBuV)	Margin (dB)	Limit (dBuV/m)	Factor (dB)	Type
1			2389.968	65.585	34.991	-8.415	74.000	30.594	PK
2			2390.000	63.749	33.155	-10.251	74.000	30.594	PK
3		*	2416.176	103.197	72.631	N/A	N/A	30.566	PK

Note: Measure Level (dBμV/m) = Reading Level (dBμV) + Factor (dB)

Factor (dB) = Cable Loss (dB) + Antenna Factor (dB/m)

Site: AC1	Time: 2019/10/10 - 11:29
Limit: FCC_Part15.209_RE(3m)	Engineer: Dandy Li
Probe: BBHA9120D_1-18GHz	Polarity: Vertical
EUT: Abegal Battery Camera	Power: By Battery
Test Mode: Transmit by 802.11g at channel 2412MHz	

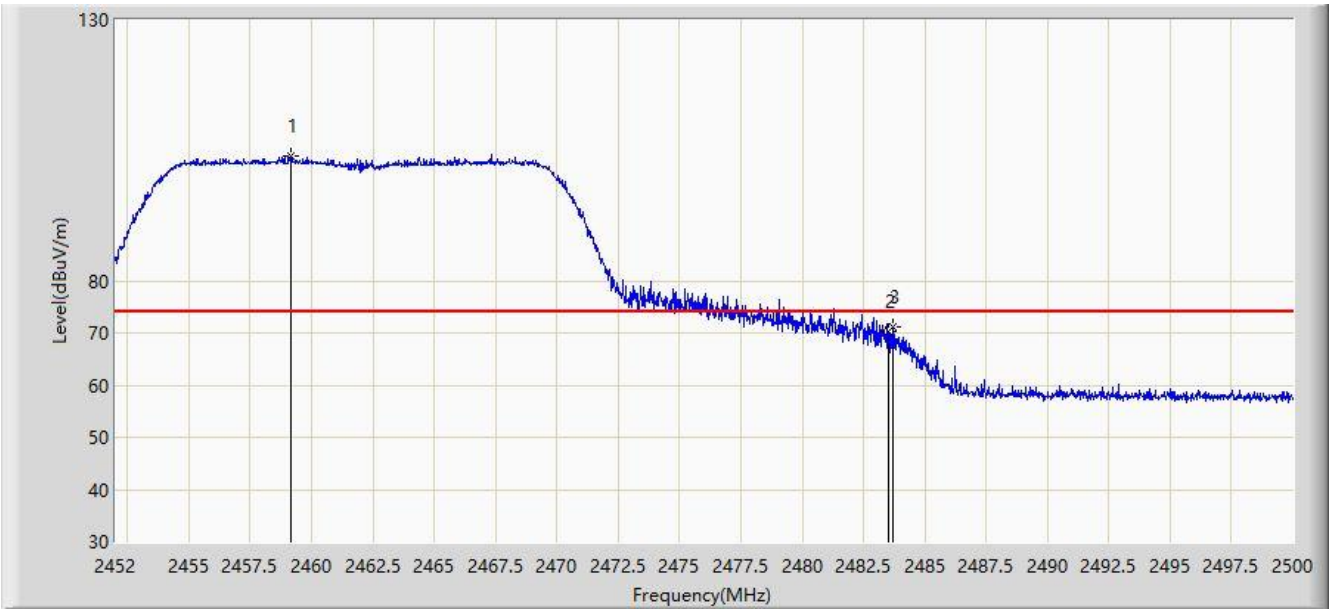


No	Flag	Mark	Frequency (MHz)	Measure Level (dBuV/m)	Reading Level (dBuV)	Margin (dB)	Limit (dBuV/m)	Factor (dB)	Type
1			2390.000	46.507	15.913	-7.493	54.000	30.594	AV
2		*	2418.640	91.366	60.804	N/A	N/A	30.562	AV

Note: Measure Level (dBμV/m) = Reading Level (dBμV) + Factor (dB)

Factor (dB) = Cable Loss (dB) + Antenna Factor (dB/m)

Site: AC1	Time: 2019/10/10 - 11:29
Limit: FCC_Part15.209_RE(3m)	Engineer: Dandy Li
Probe: BBHA9120D_1-18GHz	Polarity: Horizontal
EUT: Abegal Battery Camera	Power: By Battery
Test Mode: Transmit by 802.11g at channel 2462MHz	

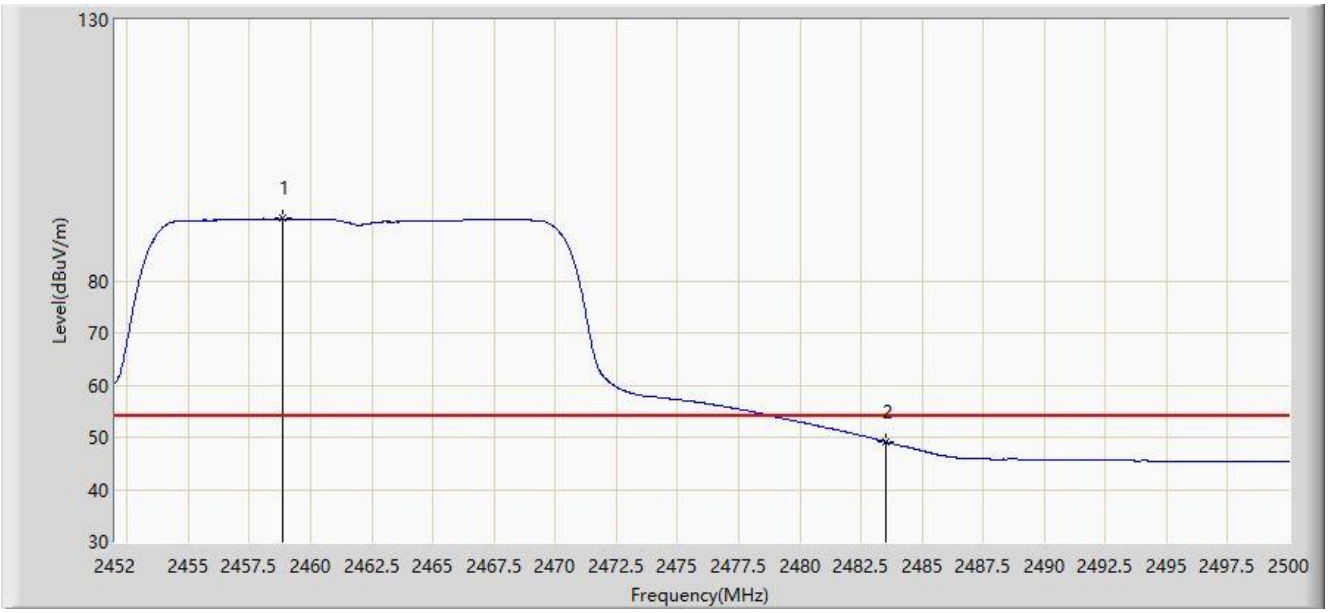


No	Flag	Mark	Frequency (MHz)	Measure Level (dBuV/m)	Reading Level (dBuV)	Margin (dB)	Limit (dBuV/m)	Factor (dB)	Type
1		*	2459.176	103.895	73.372	N/A	N/A	30.524	PK
2			2483.500	70.200	39.631	-3.800	74.000	30.569	PK
3			2483.680	71.082	40.513	-2.918	74.000	30.569	PK

Note: Measure Level (dBμV/m) = Reading Level (dBμV) + Factor (dB)

Factor (dB) = Cable Loss (dB) + Antenna Factor (dB/m)

Site: AC1	Time: 2019/10/10 - 11:30
Limit: FCC_Part15.209_RE(3m)	Engineer: Dandy Li
Probe: BBHA9120D_1-18GHz	Polarity: Horizontal
EUT: Abegal Battery Camera	Power: By Battery
Test Mode: Transmit by 802.11g at channel 2462MHz	

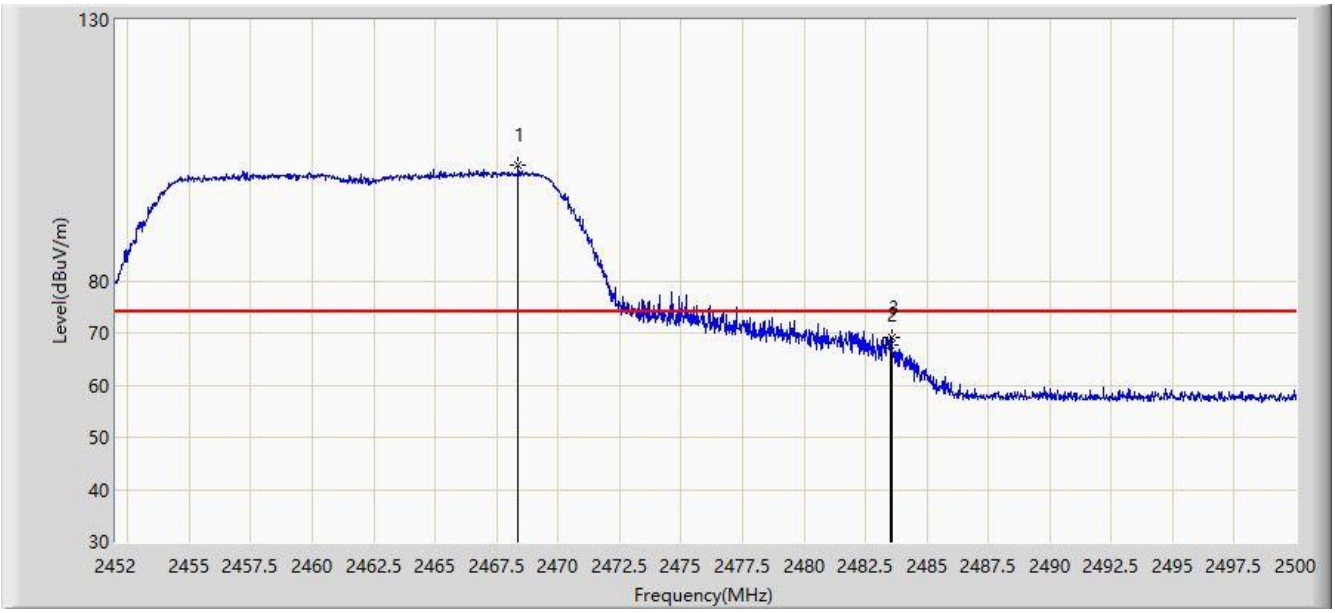


No	Flag	Mark	Frequency (MHz)	Measure Level (dBuV/m)	Reading Level (dBuV)	Margin (dB)	Limit (dBuV/m)	Factor (dB)	Type
1		*	2458.864	91.898	61.376	N/A	N/A	30.523	AV
2			2483.500	49.131	18.562	-4.869	54.000	30.569	AV

Note: Measure Level (dBμV/m) = Reading Level (dBμV) + Factor (dB)

Factor (dB) = Cable Loss (dB) + Antenna Factor (dB/m)

Site: AC1	Time: 2019/10/10 - 11:31
Limit: FCC_Part15.209_RE(3m)	Engineer: Dandy Li
Probe: BBHA9120D_1-18GHz	Polarity: Vertical
EUT: Abegal Battery Camera	Power: By Battery
Test Mode: Transmit by 802.11g at channel 2462MHz	

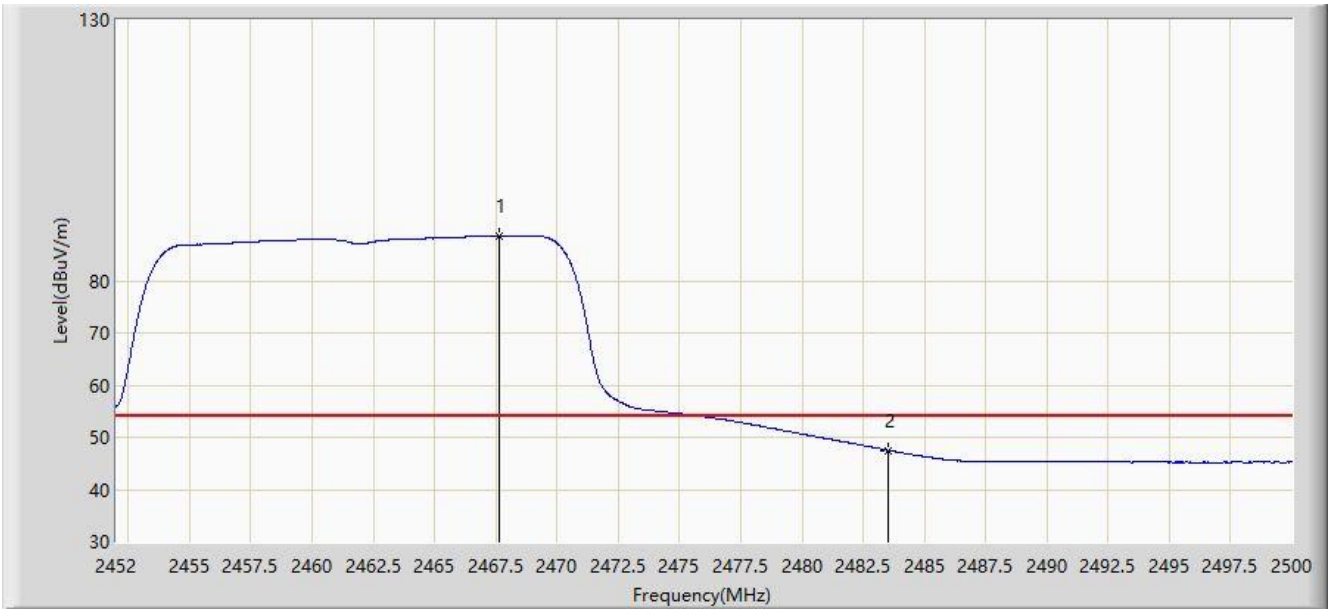


No	Flag	Mark	Frequency (MHz)	Measure Level (dBuV/m)	Reading Level (dBuV)	Margin (dB)	Limit (dBuV/m)	Factor (dB)	Type
1		*	2468.368	102.256	71.719	N/A	N/A	30.537	PK
2			2483.500	67.594	37.025	-6.406	74.000	30.569	PK
3			2483.584	69.233	38.664	-4.767	74.000	30.569	PK

Note: Measure Level (dBμV/m) = Reading Level (dBμV) + Factor (dB)

Factor (dB) = Cable Loss (dB) + Antenna Factor (dB/m)

Site: AC1	Time: 2019/10/10 - 11:32
Limit: FCC_Part15.209_RE(3m)	Engineer: Dandy Li
Probe: BBHA9120D_1-18GHz	Polarity: Vertical
EUT: Abegal Battery Camera	Power: By Battery
Test Mode: Transmit by 802.11g at channel 2462MHz	

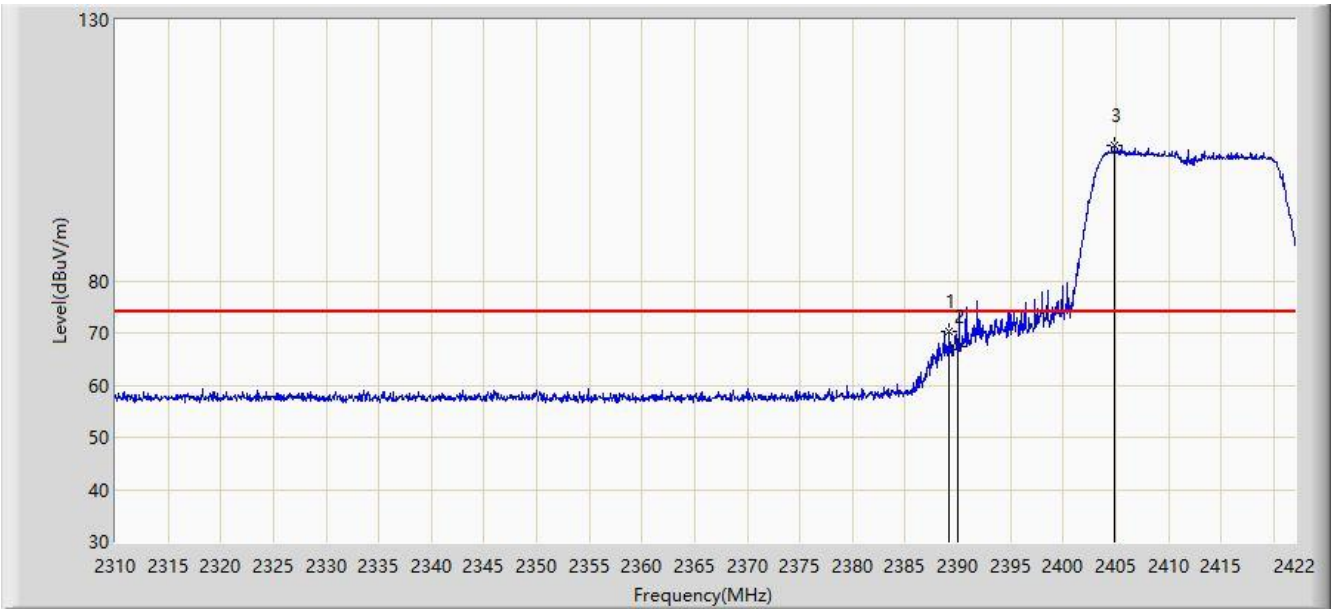


No	Flag	Mark	Frequency (MHz)	Measure Level (dBuV/m)	Reading Level (dBuV)	Margin (dB)	Limit (dBuV/m)	Factor (dB)	Type
1		*	2467.648	88.636	58.099	N/A	N/A	30.537	AV
2			2483.500	47.508	16.939	-6.492	54.000	30.569	AV

Note: Measure Level (dBμV/m) = Reading Level (dBμV) + Factor (dB)

Factor (dB) = Cable Loss (dB) + Antenna Factor (dB/m)

Site: AC1	Time: 2019/10/10 - 11:12
Limit: FCC_Part15.209_RE(3m)	Engineer: Dandy Li
Probe: BBHA9120D_1-18GHz	Polarity: Horizontal
EUT: Abegal Battery Camera	Power: By Battery
Test Mode: Transmit by 802.11n-HT20 at channel 2412MHz	

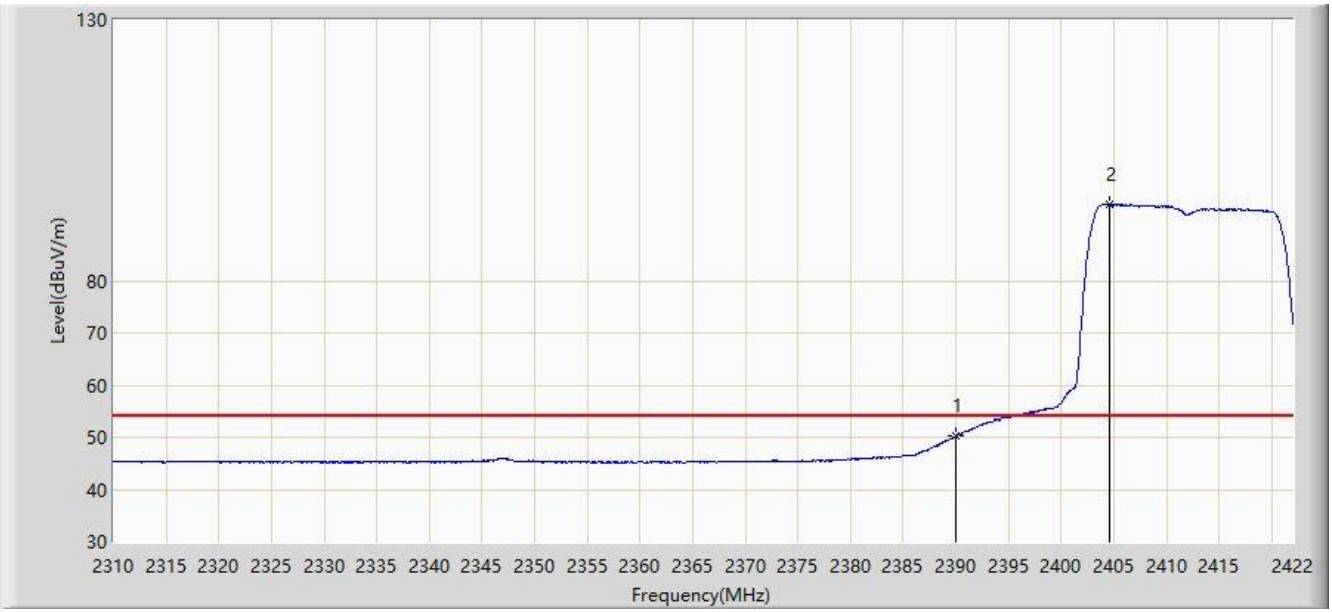


No	Flag	Mark	Frequency (MHz)	Measure Level (dBuV/m)	Reading Level (dBuV)	Margin (dB)	Limit (dBuV/m)	Factor (dB)	Type
1			2389.184	70.376	39.780	-3.624	74.000	30.596	PK
2			2390.000	67.454	36.860	-6.546	74.000	30.594	PK
3		*	2404.864	106.079	75.499	N/A	N/A	30.580	PK

Note: Measure Level (dBμV/m) = Reading Level (dBμV) + Factor (dB)

Factor (dB) = Cable Loss (dB) + Antenna Factor (dB/m)

Site: AC1	Time: 2019/10/10 - 11:14
Limit: FCC_Part15.209_RE(3m)	Engineer: Dandy Li
Probe: BBHA9120D_1-18GHz	Polarity: Horizontal
EUT: Abegal Battery Camera	Power: By Battery
Test Mode: Transmit by 802.11n-HT20 at channel 2412MHz	

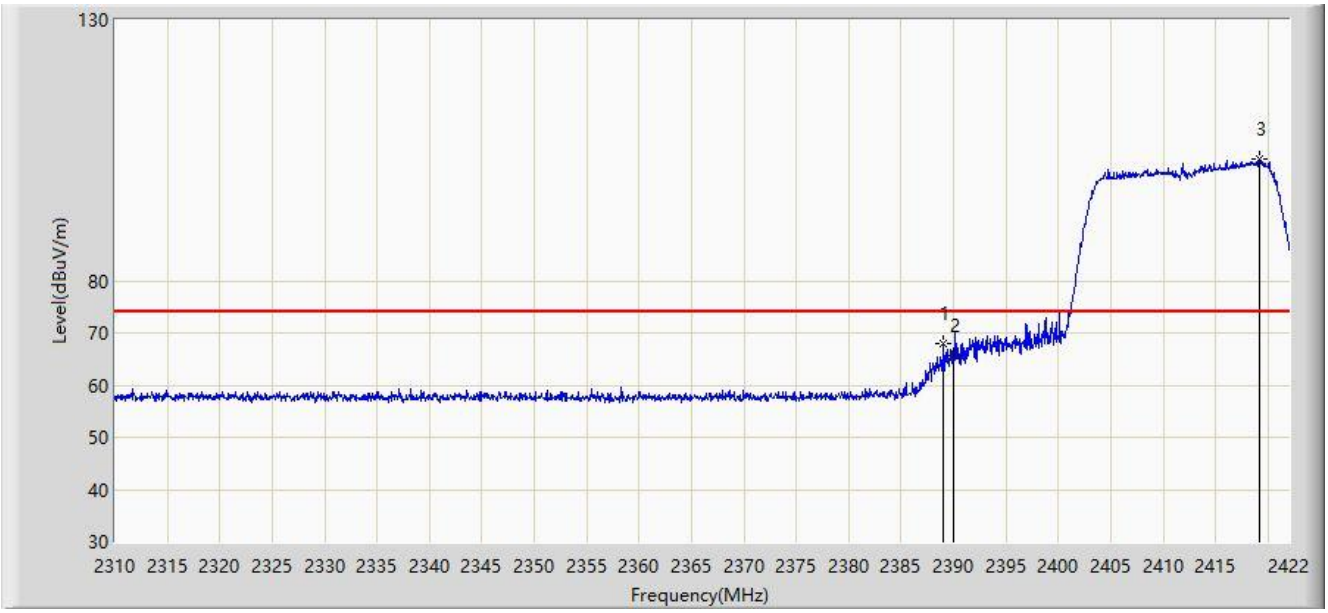


No	Flag	Mark	Frequency (MHz)	Measure Level (dBuV/m)	Reading Level (dBuV)	Margin (dB)	Limit (dBuV/m)	Factor (dB)	Type
1			2390.000	50.172	19.578	-3.828	54.000	30.594	AV
2		*	2404.584	94.623	64.043	N/A	N/A	30.580	AV

Note: Measure Level (dBμV/m) = Reading Level (dBμV) + Factor (dB)

Factor (dB) = Cable Loss (dB) + Antenna Factor (dB/m)

Site: AC1	Time: 2019/10/10 - 11:14
Limit: FCC_Part15.209_RE(3m)	Engineer: Dandy Li
Probe: BBHA9120D_1-18GHz	Polarity: Vertical
EUT: Abegal Battery Camera	Power: By Battery
Test Mode: Transmit by 802.11n-HT20 at channel 2412MHz	

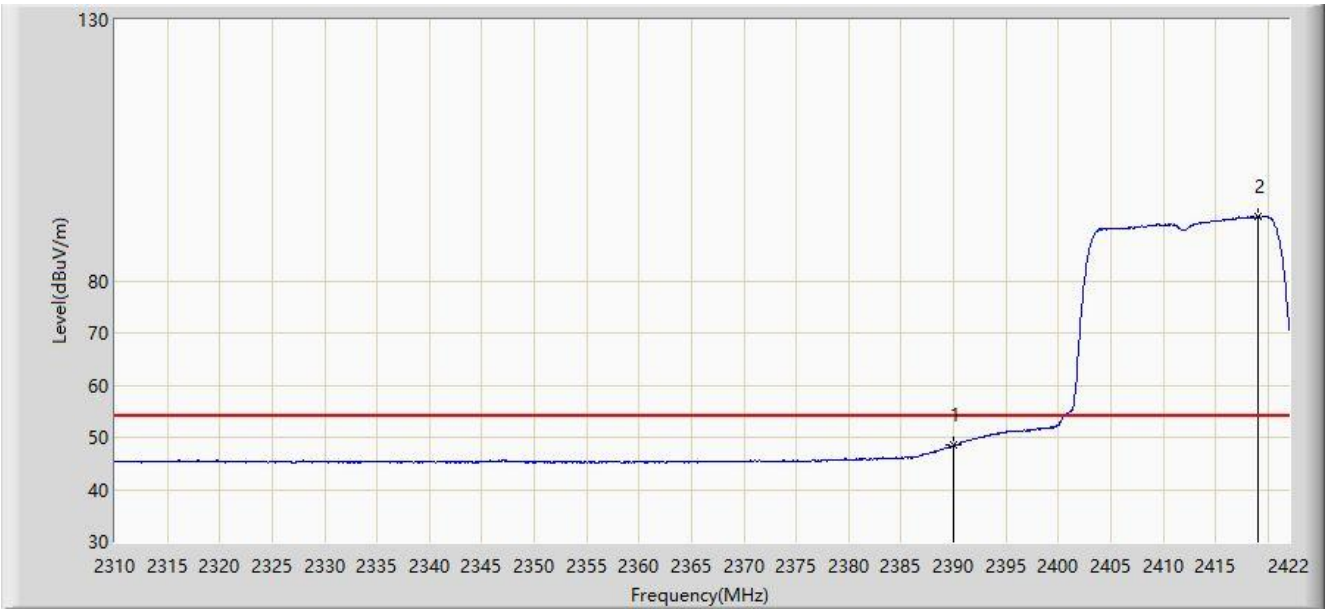


No	Flag	Mark	Frequency (MHz)	Measure Level (dBuV/m)	Reading Level (dBuV)	Margin (dB)	Limit (dBuV/m)	Factor (dB)	Type
1			2389.072	67.923	37.327	-6.077	74.000	30.596	PK
2			2390.000	65.650	35.056	-8.350	74.000	30.594	PK
3		*	2419.256	103.287	72.726	N/A	N/A	30.561	PK

Note: Measure Level (dBμV/m) = Reading Level (dBμV) + Factor (dB)

Factor (dB) = Cable Loss (dB) + Antenna Factor (dB/m)

Site: AC1	Time: 2019/10/10 - 11:15
Limit: FCC_Part15.209_RE(3m)	Engineer: Dandy Li
Probe: BBHA9120D_1-18GHz	Polarity: Vertical
EUT: Abegal Battery Camera	Power: By Battery
Test Mode: Transmit by 802.11n-HT20 at channel 2412MHz	

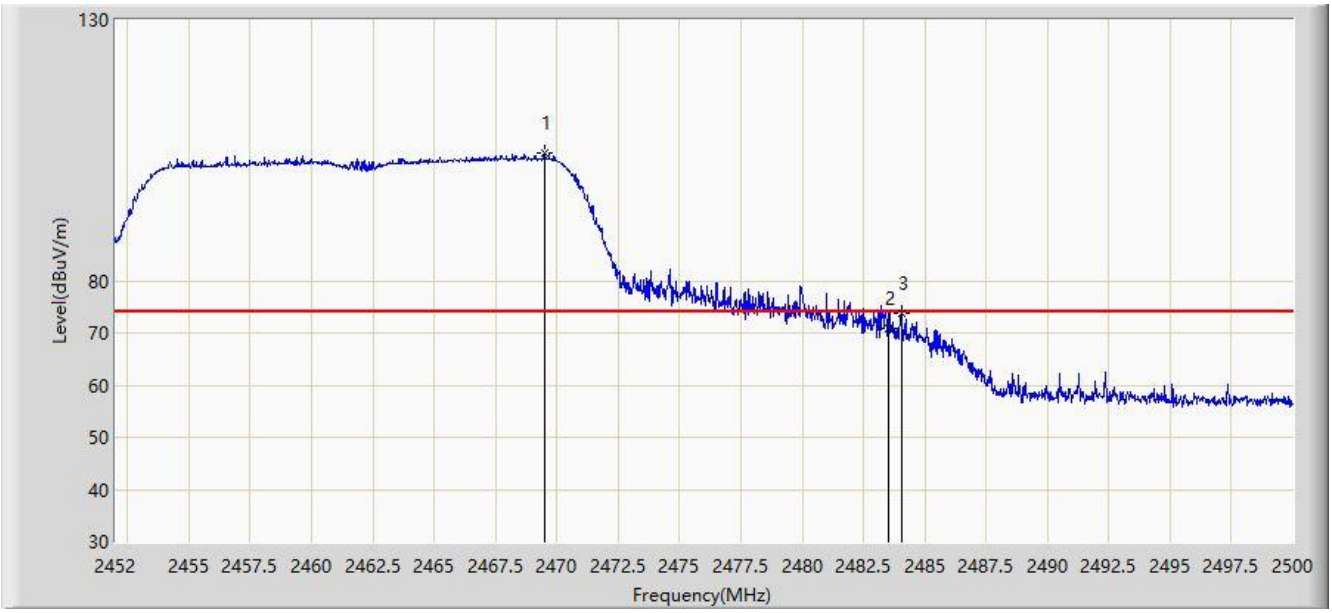


No	Flag	Mark	Frequency (MHz)	Measure Level (dBuV/m)	Reading Level (dBuV)	Margin (dB)	Limit (dBuV/m)	Factor (dB)	Type
1			2390.000	48.434	17.840	-5.566	54.000	30.594	AV
2		*	2419.088	92.285	61.724	N/A	N/A	30.561	AV

Note: Measure Level (dBμV/m) = Reading Level (dBμV) + Factor (dB)

Factor (dB) = Cable Loss (dB) + Antenna Factor (dB/m)

Site: AC1	Time: 2019/10/10 - 11:06
Limit: FCC_Part15.209_RE(3m)	Engineer: Dandy Li
Probe: BBHA9120D_1-18GHz	Polarity: Horizontal
EUT: Abegal Battery Camera	Power: By Battery
Test Mode: Transmit by 802.11n-HT20 at channel 2462MHz	

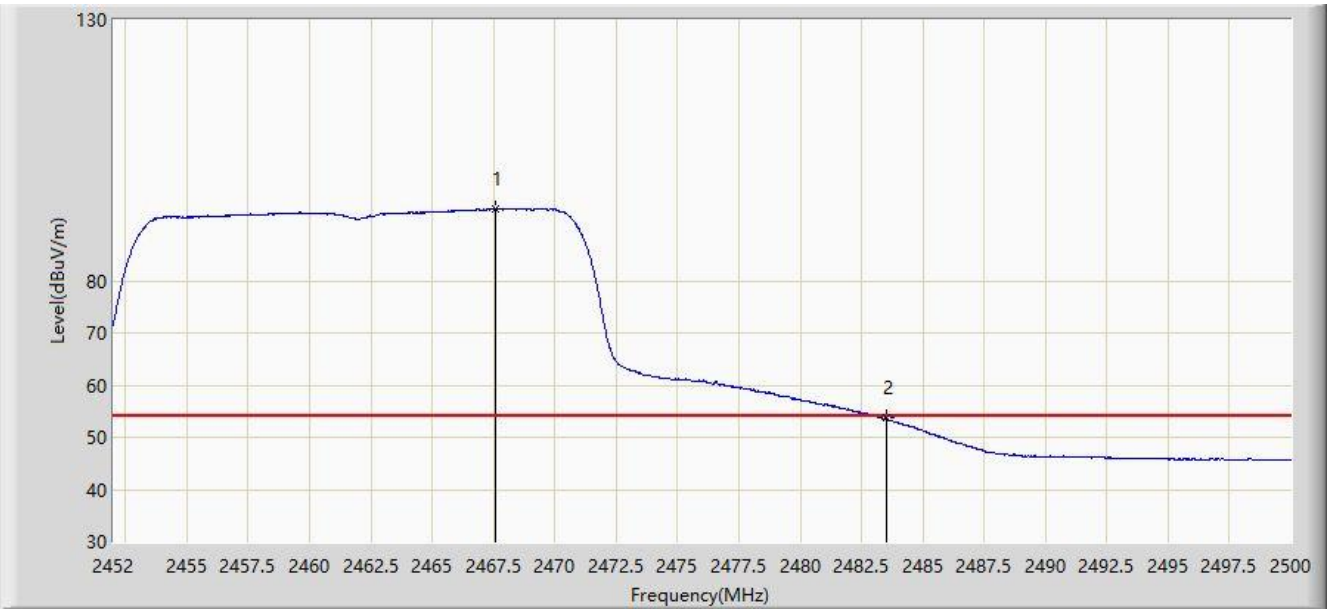


No	Flag	Mark	Frequency (MHz)	Measure Level (dBuV/m)	Reading Level (dBuV)	Margin (dB)	Limit (dBuV/m)	Factor (dB)	Type
1		*	2469.496	104.572	74.033	N/A	N/A	30.538	PK
2			2483.500	70.819	40.250	-3.181	74.000	30.569	PK
3			2484.040	73.793	43.222	-0.207	74.000	30.571	PK

Note: Measure Level (dBμV/m) = Reading Level (dBμV) + Factor (dB)

Factor (dB) = Cable Loss (dB) + Antenna Factor (dB/m)

Site: AC1	Time: 2019/10/10 - 11:09
Limit: FCC_Part15.209_RE(3m)	Engineer: Dandy Li
Probe: BBHA9120D_1-18GHz	Polarity: Horizontal
EUT: Abegal Battery Camera	Power: By Battery
Test Mode: Transmit by 802.11n-HT20 at channel 2462MHz	

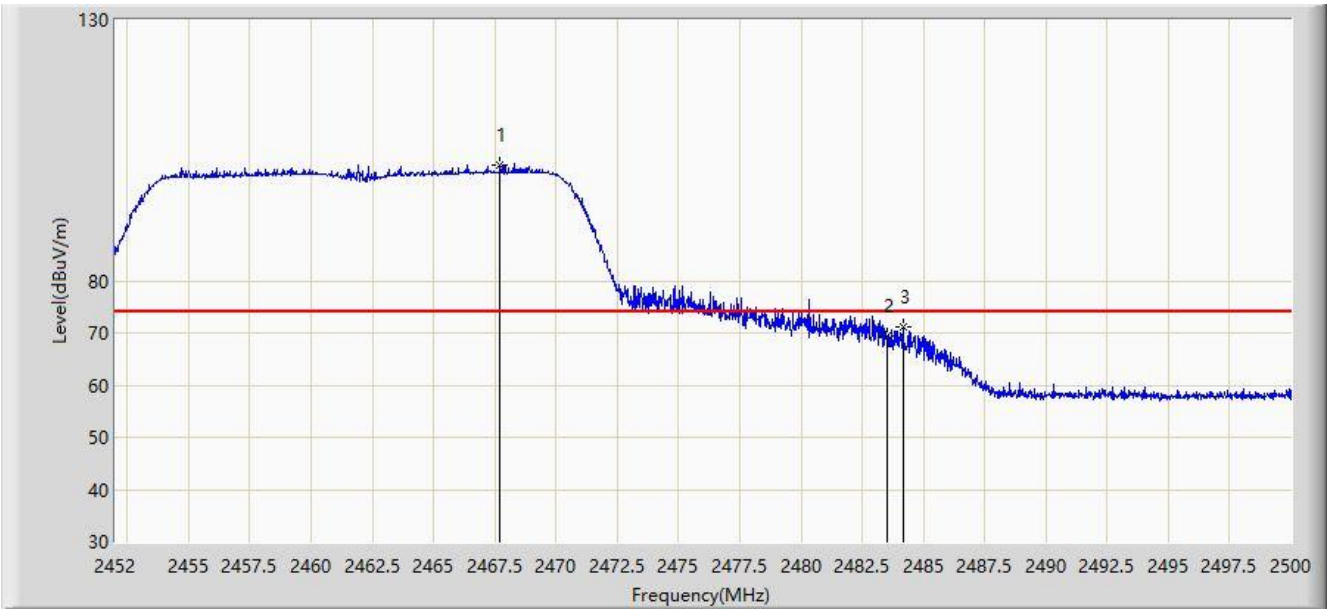


No	Flag	Mark	Frequency (MHz)	Measure Level (dBuV/m)	Reading Level (dBuV)	Margin (dB)	Limit (dBuV/m)	Factor (dB)	Type
1		*	2467.576	93.844	63.307	N/A	N/A	30.537	AV
2			2483.500	53.736	23.167	-0.264	54.000	30.569	AV

Note: Measure Level (dBμV/m) = Reading Level (dBμV) + Factor (dB)

Factor (dB) = Cable Loss (dB) + Antenna Factor (dB/m)

Site: AC1	Time: 2019/10/10 - 11:10
Limit: FCC_Part15.209_RE(3m)	Engineer: Dandy Li
Probe: BBHA9120D_1-18GHz	Polarity: Vertical
EUT: Abegal Battery Camera	Power: By Battery
Test Mode: Transmit by 802.11n-HT20 at channel 2462MHz	

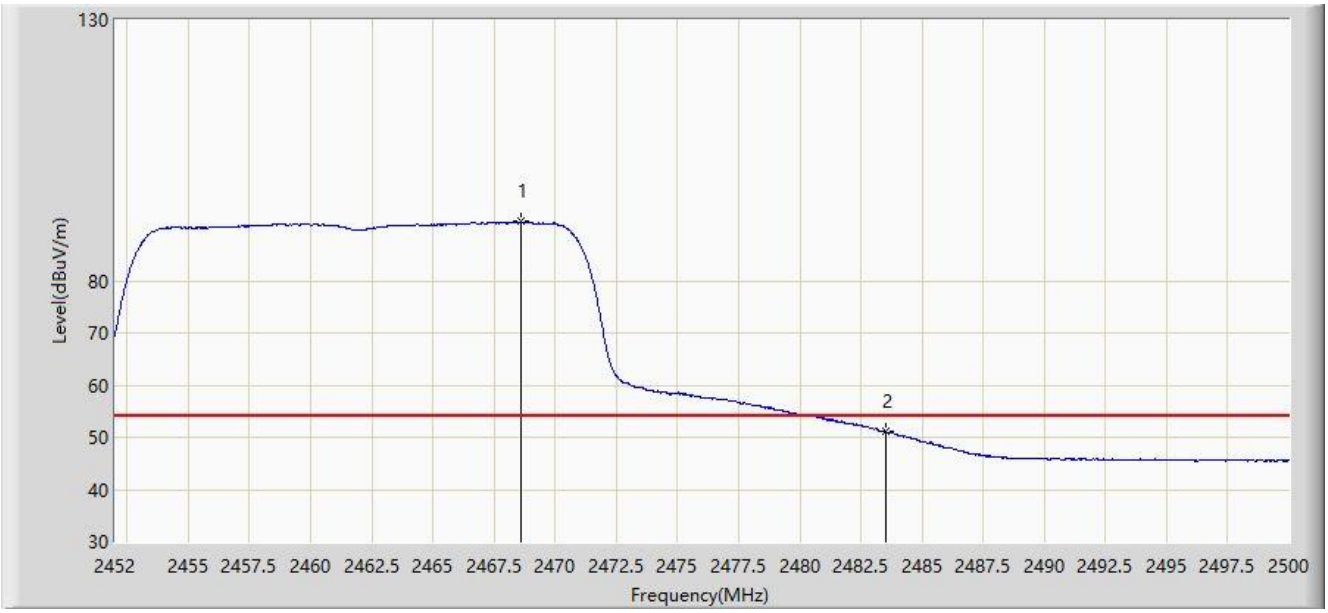


No	Flag	Mark	Frequency (MHz)	Measure Level (dBuV/m)	Reading Level (dBuV)	Margin (dB)	Limit (dBuV/m)	Factor (dB)	Type
1		*	2467.720	102.247	71.710	N/A	N/A	30.537	PK
2			2483.500	69.299	38.730	-4.701	74.000	30.569	PK
3			2484.160	71.264	40.693	-2.736	74.000	30.572	PK

Note: Measure Level (dBμV/m) = Reading Level (dBμV) + Factor (dB)

Factor (dB) = Cable Loss (dB) + Antenna Factor (dB/m)

Site: AC1	Time: 2019/10/10 - 11:11
Limit: FCC_Part15.209_RE(3m)	Engineer: Dandy Li
Probe: BBHA9120D_1-18GHz	Polarity: Vertical
EUT: Abegal Battery Camera	Power: By Battery
Test Mode: Transmit by 802.11n-HT20 at channel 2462MHz	



No	Flag	Mark	Frequency (MHz)	Measure Level (dBuV/m)	Reading Level (dBuV)	Margin (dB)	Limit (dBuV/m)	Factor (dB)	Type
1		*	2468.608	91.344	60.806	N/A	N/A	30.538	AV
2			2483.500	51.082	20.513	-2.918	54.000	30.569	AV

Note: Measure Level (dBμV/m) = Reading Level (dBμV) + Factor (dB)

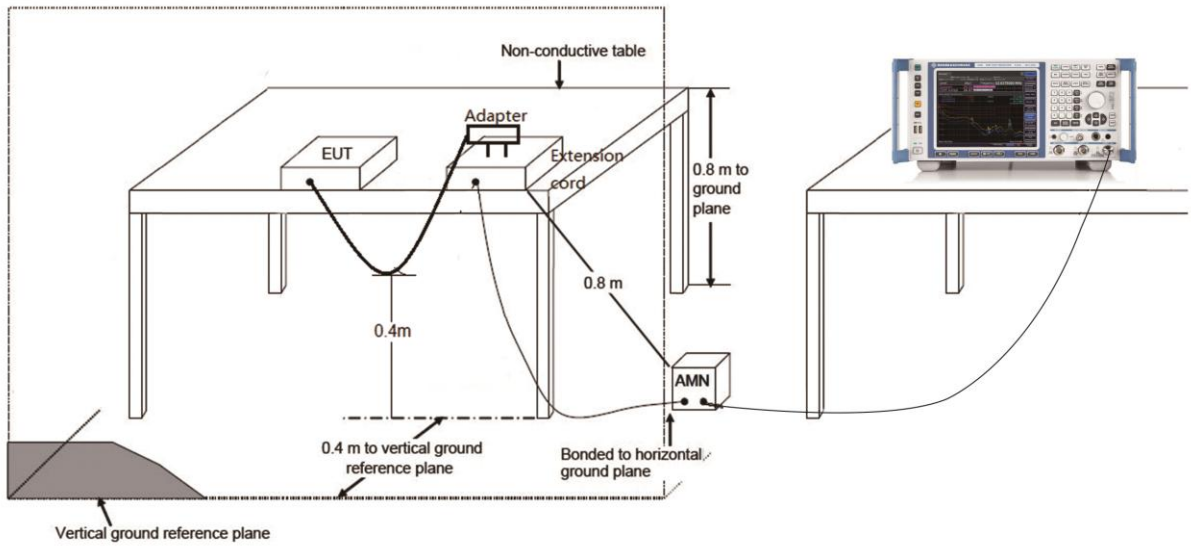
Factor (dB) = Cable Loss (dB) + Antenna Factor (dB/m)

7.8. AC Conducted Emissions Measurement

7.8.1.Test Limit

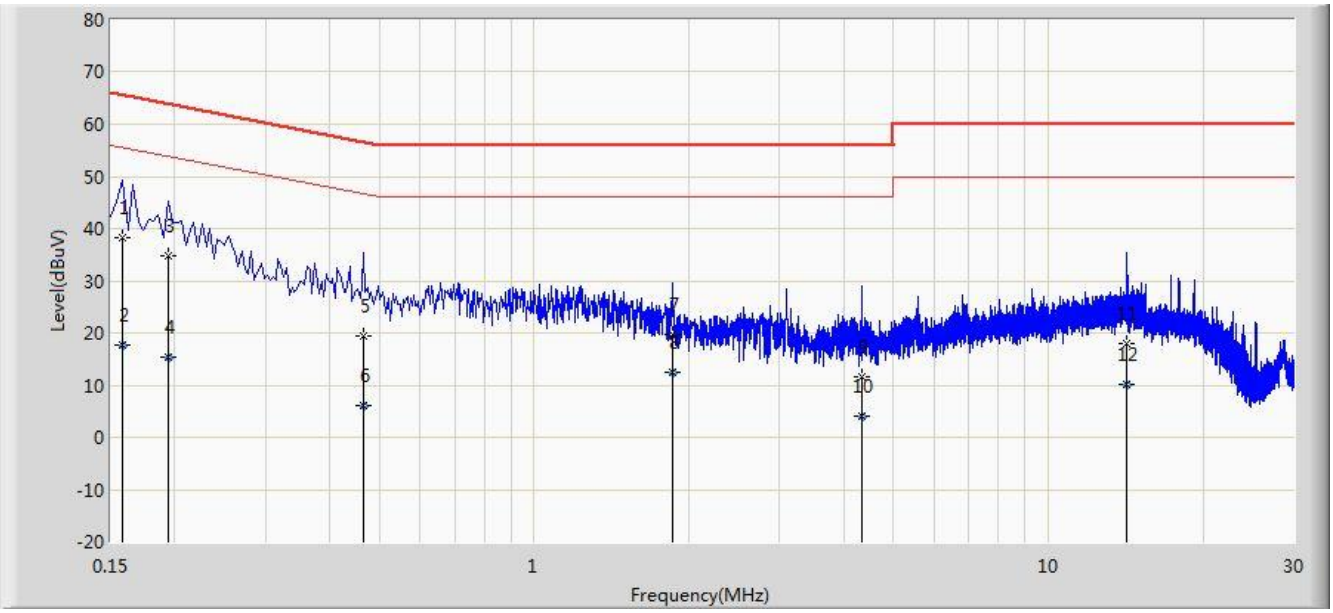
FCC Part 15.207 Limits		
Frequency (MHz)	QP (dBuV)	AV (dBuV)
0.15 - 0.50	66 - 56	56 - 46
0.50 - 5.0	56	46
5.0 - 30	60	50
Note 1: The lower limit shall apply at the transition frequencies. Note 2: The limit decreases linearly with the logarithm of the frequency in the range 0.15MHz to 0.5MHz.		

7.8.2.Test Setup



7.8.3.Test Result

Site: SR2	Time: 2019/09/30 - 13:38
Limit: FCC_Part15.107_CE_AC Power_ClassB	Engineer: Bacon Dong
Probe: ENV216_101683_Filter On	Polarity: Line
EUT: Abegal Battery Camera	Power: AC 120V/60Hz
Test Mode: Transmit by 802.11b at Channel 2437MHz	

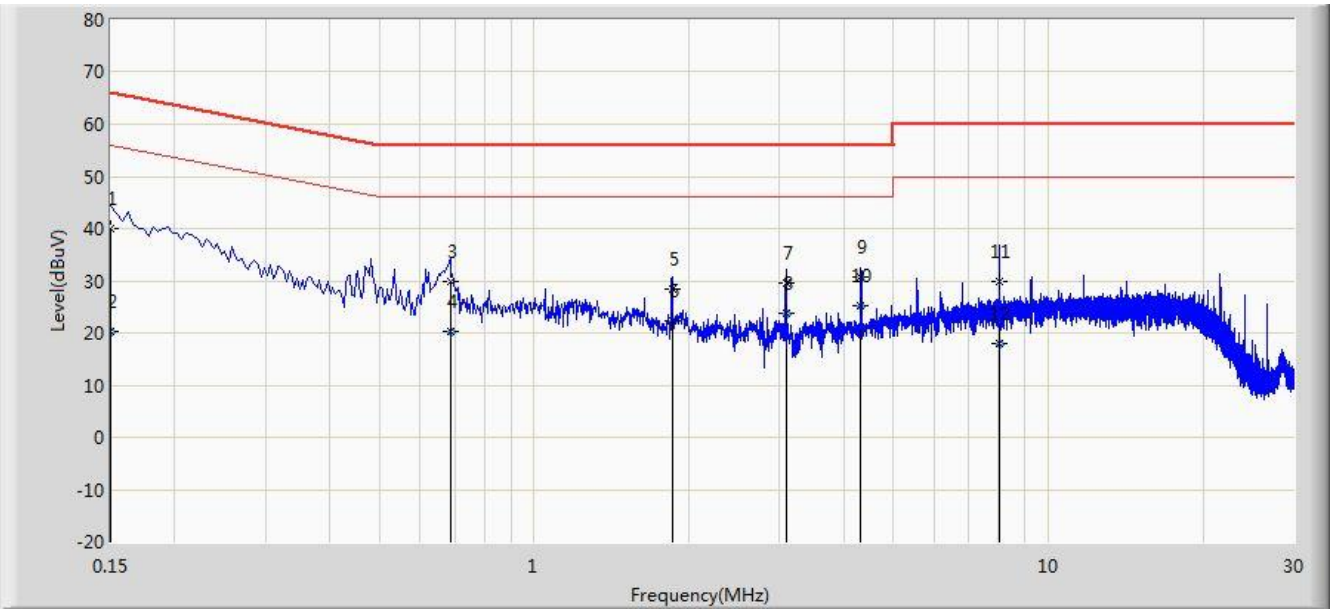


No	Flag	Mark	Frequency (MHz)	Measure Level (dBuV)	Reading Level (dBuV)	Margin (dB)	Limit (dBuV)	Factor (dB)	Type
1		*	0.158	38.311	28.000	-27.258	65.568	10.311	QP
2			0.158	17.812	7.501	-37.756	55.568	10.311	AV
3			0.194	34.775	24.759	-29.088	63.864	10.017	QP
4			0.194	15.430	5.413	-38.434	53.864	10.017	AV
5			0.466	19.281	9.142	-37.304	56.585	10.139	QP
6			0.466	6.047	-4.092	-40.538	46.585	10.139	AV
7			1.858	19.762	9.886	-36.238	56.000	9.875	QP
8			1.858	12.349	2.473	-33.651	46.000	9.875	AV
9			4.334	11.489	1.509	-44.511	56.000	9.980	QP
10			4.334	4.070	-5.910	-41.930	46.000	9.980	AV
11			14.238	18.046	7.975	-41.954	60.000	10.071	QP
12			14.238	10.241	0.171	-39.759	50.000	10.071	AV

Note: Measure Level (dBμV) = Reading Level (dBμV) + Factor (dB)

Factor (dB) = Cable Loss (dB) + LISN Factor (dB)

Site: SR2	Time: 2019/09/30 - 13:43
Limit: FCC_Part15.107_CE_AC Power_ClassB	Engineer: Bacon Dong
Probe: ENV216_101683_Filter On	Polarity: Neutral
EUT: Abegal Battery Camera	Power: AC 120V/60Hz
Test Mode: Transmit by 802.11b at Channel 2437MHz	



No	Flag	Mark	Frequency (MHz)	Measure Level (dBuV)	Reading Level (dBuV)	Margin (dB)	Limit (dBuV)	Factor (dB)	Type
1			0.150	39.942	28.800	-26.058	66.000	11.142	QP
2			0.150	20.266	9.124	-35.734	56.000	11.142	AV
3			0.686	29.933	19.851	-26.067	56.000	10.083	QP
4			0.686	20.240	10.157	-25.760	46.000	10.083	AV
5			1.854	28.425	18.547	-27.575	56.000	9.878	QP
6			1.854	22.425	12.547	-23.575	46.000	9.878	AV
7			3.090	29.464	19.599	-26.536	56.000	9.864	QP
8			3.090	23.699	13.835	-22.301	46.000	9.864	AV
9			4.322	30.793	20.805	-25.207	56.000	9.988	QP
10		*	4.322	25.263	15.275	-20.737	46.000	9.988	AV
11			8.026	29.733	19.546	-30.267	60.000	10.186	QP
12			8.026	17.996	7.809	-32.004	50.000	10.186	AV

Note: Measure Level (dBμV) = Reading Level (dBμV) + Factor (dB)

Factor (dB) = Cable Loss (dB) + LISN Factor (dB)

8. CONCLUSION

The data collected relate only the item(s) tested and show that the unit is compliance with Part 15C of the FCC rules.

The End

Appendix A - Test Setup Photograph

Refer to “1909RSU027-UT” file.

Appendix B - EUT Photograph

Refer to “1909RSU027-UE” file.