

MEASUREMENT REPORT

FCC PART 15.247 WLAN 802.11b/g/n

FCC ID: 2ANDLTY-R8816

APPLICANT: Hangzhou Tuya Information Technology Co., Ltd

Application Type: Certification

Product: Smart Camera

Model No.: SC114-WK2

Brand Name: TUYA

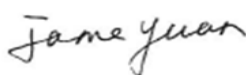
FCC Classification: Digital Transmission System (DTS)

FCC Rule Part(s): Part 15 Subpart C (Section 15.247)

Test Procedure(s): ANSI C63.10-2013

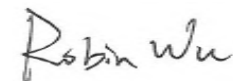
Test Date: May 29 ~ July 02, 2020

Reviewed By:



(Jame Yuan)

Approved By:



(Robin Wu)



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
2005RSU047-U1	Rev. 01	Initial Report	07-21-2020	Valid

CONTENTS

Description	Page
General Information.....	5
1. INTRODUCTION.....	6
1.1. Scope.....	6
1.2. MRT Test Location.....	6
2. PRODUCT INFORMATION.....	7
2.1. Equipment Description.....	7
2.2. Product Specification Subjective to this Report.....	7
2.3. Working Frequencies for this report.....	8
2.4. Test Mode.....	8
2.5. Test Software.....	8
2.6. Duty Cycle.....	9
2.7. EMI Suppression Device(s)/Modifications.....	10
2.8. Labeling Requirements.....	10
3. DESCRIPTION of TEST.....	11
3.1. Evaluation Procedure.....	11
3.2. AC Line Conducted Emissions.....	11
3.3. Radiated Emissions.....	12
4. ANTENNA REQUIREMENTS.....	13
5. TEST EQUIPMENT CALIBRATION DATE.....	14
6. MEASUREMENT UNCERTAINTY.....	16
7. TEST RESULT.....	17
7.1. Summary.....	17
7.2. 6dB Bandwidth Measurement.....	18
7.2.1. Test Limit.....	18
7.2.2. Test Procedure used.....	18
7.2.3. Test Setting.....	18
7.2.4. Test Setup.....	18
7.2.5. Test Result.....	19
7.3. Output Power Measurement.....	23
7.3.1. Test Limit.....	23
7.3.2. Test Procedure Used.....	23
7.3.3. Test Setting.....	23
7.3.4. Test Setup.....	24

7.3.5.	Test Result of Output Power	25
7.4.	Power Spectral Density Measurement.....	26
7.4.1.	Test Limit	26
7.4.2.	Test Procedure Used	26
7.4.3.	Test Setting.....	26
7.4.4.	Test Setup	26
7.4.5.	Test Result.....	27
7.5.	Conducted Band Edge and Out-of-Band Emissions	31
7.5.1.	Test Limit	31
7.5.2.	Test Procedure Used	31
7.5.3.	Test Setting.....	31
7.5.4.	Test Setup	32
7.5.5.	Test Result.....	33
7.6.	Radiated Spurious Emission Measurement	40
7.6.1.	Test Limit	40
7.6.2.	Test Procedure Used	40
7.6.3.	Test Setting.....	40
7.6.4.	Test Setup	42
7.6.5.	Test Result.....	43
7.7.	Radiated Restricted Band Edge Measurement.....	54
7.7.1.	Test Limit	54
7.7.2.	Test Procedure Used	55
7.7.3.	Test Setting.....	55
7.7.4.	Test Setup	56
7.7.5.	Test Result.....	57
7.8.	AC Conducted Emissions Measurement	81
7.8.1.	Test Limit	81
7.8.2.	Test Setup	81
7.8.3.	Test Result.....	82
8.	CONCLUSION	84
	Appendix A - Test Setup Photograph	85
	Appendix B - EUT Photograph.....	86

General Information

Applicant:	Hangzhou Tuya Information Technology Co., Ltd
Applicant Address:	Room701, Building3, More Center, No.87 GuDun Road, Hangzhou, Zhejiang, China
Manufacturer:	Hangzhou Tuya Information Technology Co., Ltd
Manufacturer Address:	Room701, Building3, More Center, No.87 GuDun Road, Hangzhou, Zhejiang, 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 Device Serial No.:	N/A ☐ Production ☒ Pre-Production ☐ Engineering

Test Facility / Accreditations

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

- MRT facility is an FCC registered (MRT Designation No. CN1166) 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:	Smart Camera
Model No.:	SC114-WK2
Brand Name:	TUYA
Wi-Fi Specification:	802.11a/b/g/n/ac
Accessories	
DC Adapter:	Model No.: KA06E-0501000US Input Power: 100 - 240V ~ 50/60Hz, 0.25A Output Power: 5Vdc 1.0A

2.2. Product Specification Subjective to this Report

Frequency Range:	802.11b/g/n-HT20: 2412 ~ 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
Maximum Peak Output Power:	802.11b: 16.96dBm 802.11g: 14.98dBm 802.11n-HT20: 14.98dBm
Antenna Type:	FPC Antenna
Antenna Gain:	3.00dBi

Note: For other features of this EUT, test report will be issued separately.

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

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.

Output power at various data rates:

Test Mode	Bandwidth (MHz)	Channel No.	Frequency (MHz)	Data Rate / MCS	Average Power (dBm)
802.11b	20	6	2437	1Mbps	13.17
				5.5Mbps	13.08
				11Mbps	13.01
802.11g	20	6	2437	6Mbps	5.63
				24Mbps	5.45
				54Mbps	5.26
802.11n	20	6	2437	MCS0	5.75
				MCS3	5.61
				MCS7	5.44

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

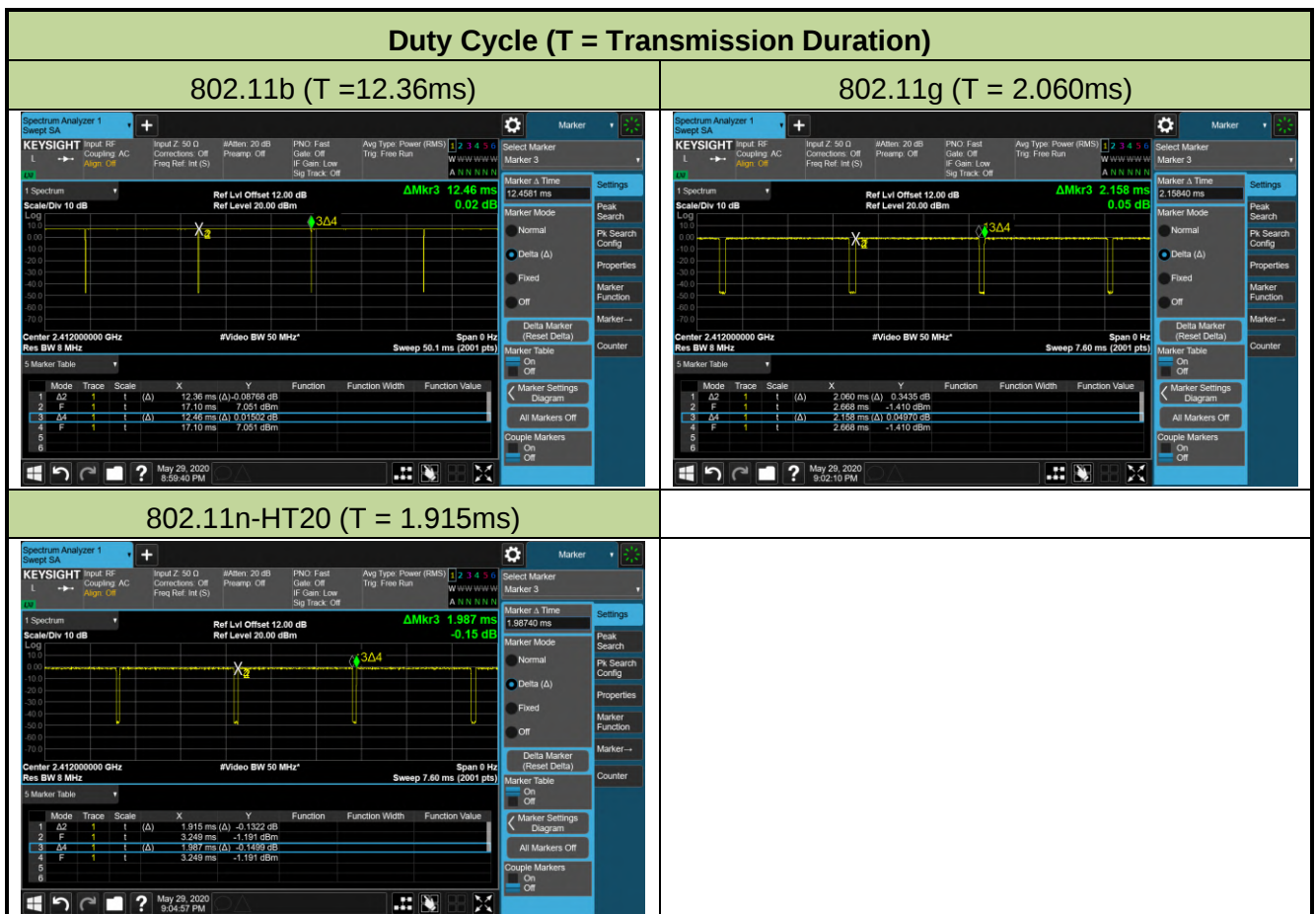
2.5. Test Software

The test utility software used during testing was directive commands provided by manufacture.

2.6. Duty Cycle

2.4GHz WLAN (DTS) operation is possible in 20MHz channel bandwidths. 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	99.20%
802.11g	95.46%
802.11n-HT20	96.38%



2.7. EMI Suppression Device(s)/Modifications

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

2.8. 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 the guidance were used in the measurement of the device.

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, 50 Ω /50 μ H 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 **device** 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 Emission - SR2

Instrument	Manufacturer	Type No.	Asset No.	Cali. Interval	Cali. Due Date
EMI Test Receiver	R&S	ESR3	MRTSUE06185	1 year	2021/01/18
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 Emission - AC1

Instrument	Manufacturer	Type No.	Asset No.	Cali. Interval	Cali. Due Date
EMI Test Receiver	R&S	ESR7	MRTSUE06001	1 year	2021/01/18
PXA Signal Analyzer	Keysight	N9030B	MRTSUE06395	1 year	2020/09/03
Loop Antenna	Schwarzbeck	FMZB 1519	MRTSUE06025	1 year	2020/11/13
Bilog Period Antenna	Schwarzbeck	VULB 9168	MRTSUE06172	1 year	2021/04/03
Horn Antenna	Schwarzbeck	BBHA 9120D	MRTSUE06023	1 year	2020/10/13
Horn Antenna	Schwarzbeck	BBHA9170	MRTSUE06597	1 year	2020/12/17
Microwave System Amplifier	Agilent	83017A	MRTSUE06076	1 year	2020/11/15
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	2021/04/30

Radiated Emission - AC2

Instrument	Manufacturer	Type No.	Asset No.	Cali. Interval	Cali. Due Date
MXE EMI Receiver	Keysight	N9038A	MRTSUE06125	1 year	2020/08/01
Loop Antenna	Schwarzbeck	FMZB 1519	MRTSUE06025	1 year	2020/11/13
Bilog Period Antenna	Schwarzbeck	VULB 9162	MRTSUE06022	1 year	2020/10/13
Broad-Band Horn Antenna	Schwarzbeck	BBHA 9120D	MRTSUE06171	1 year	2020/10/27
Horn Antenna	Schwarzbeck	BBHA9170	MRTSUE06597	1 year	2020/12/17
Broadband Coaxial Preamplifier	Schwarzbeck	BBV 9718	MRTSUE06176	1 year	2020/11/15
Preamplifier	Schwarzbeck	BBV 9721	MRTSUE06121	1 year	2020/06/11
Temperature/Humidity Meter	Minggao	ETH529	MRTSUE06170	1 year	2020/12/15
Anechoic Chamber	RIKEN	Chamber-AC2	MRTSUE06213	1 year	2021/04/30

Conducted Test Equipment - TR3

Instrument	Manufacturer	Type No.	Asset No.	Cali. Interval	Cali. Due Date
EXA Signal Analyzer	Agilent	N9020A	MRTSUE06106	1 year	2021/04/14
EXA Signal Analyzer	Keysight	N9010B	MRTSUE06607	1 year	2021/01/08
Signal Analyzer	R&S	FSV40	MRTSUE06218	1 year	2021/04/14
Power Meter	Agilent	U2021XA	MRTSUE06030	1 year	2020/11/18
USB wideband power sensor	Keysight	U2021XA	MRTSUE06446	1 year	2021/06/11
USB wideband power sensor	Keysight	U2021XA	MRTSUE06447	1 year	2021/06/11
Bluetooth Test Set	Anritsu	MT8852B-042	MRTSUE06389	1 year	2021/06/11
Audio Analyzer	Agilent	U8903B	MRTSUE06143	1 year	2021/06/11
Modulation Analyzer	HP	HP8901A	MRTSUE06098	1 year	2020/10/10
Wideband Radio Communication Tester	R&S	CMW 500	MRTSUE06243	1 year	2020/11/07
DC Power Supply	GWINSTEK	DPS-3303C	MRTSUE06064	N/A	N/A
Temperature & Humidity Chamber	BAOYT	BYH-150CL	MRTSUE06051	1 year	2020/11/07
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 $k = 2$.

Conducted Emission Measurement

The maximum measurement uncertainty is evaluated as:

9kHz~150kHz: 3.74dB

150kHz~30MHz: 3.44dB

Radiated Emission Measurement

The maximum measurement uncertainty is evaluated as:

Horizontal: 30MHz~300MHz: 5.04dB

300MHz~1GHz: 4.95dB

1GHz~18GHz: 6.40dB

Vertical: 30MHz~300MHz: 5.24dB

300MHz~1GHz: 6.03dB

1GHz~18GHz: 6.40dB

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	$\geq 500\text{kHz}$	Conducted	Pass	Section 7.2
15.247(b)(3)	Output Power	$\leq 30.00\text{dBm}$		Pass	Section 7.3
15.247(e)	Power Spectral Density	$< 8\text{dBm} / 3\text{kHz}$		Pass	Section 7.4
15.247(d)	Band Edge / Out-of-Band Emissions	$\leq 20\text{dBc}$ (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	$< \text{FCC } 15.207$ limits	Line Conducted	Pass	Section 7.8

Notes:

- 1) 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.
- 2) 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.

7.2. 6dB Bandwidth Measurement

7.2.1. Test Limit

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

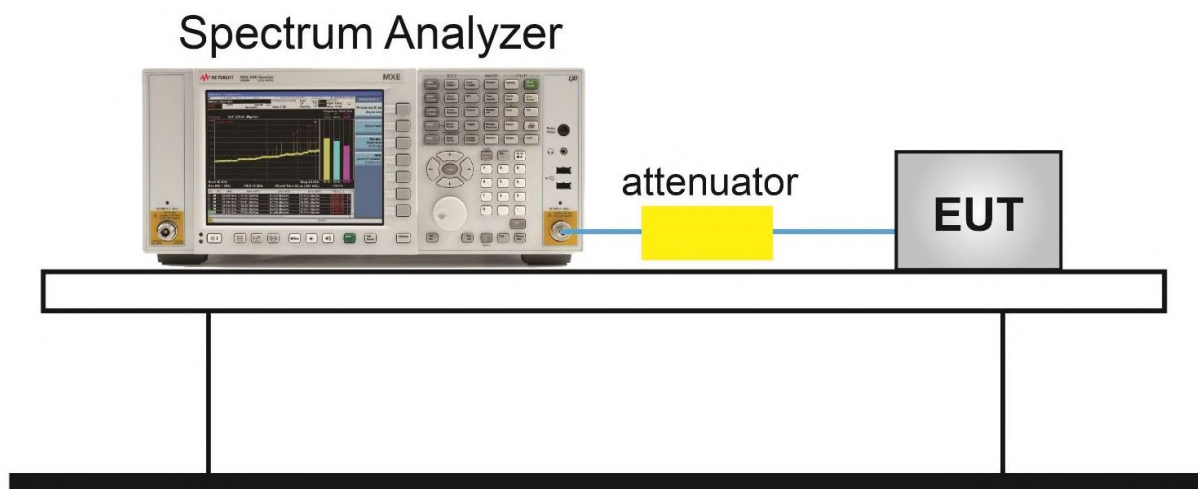
7.2.2. Test Procedure used

ANSI C63.10-2013 Section 11.8

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. $VBW \geq 3 \times RBW$
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



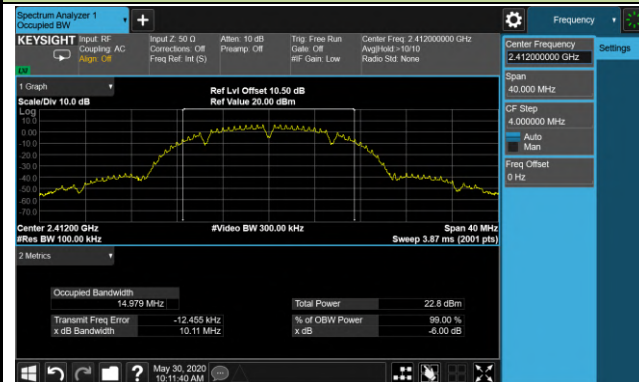
7.2.5. Test Result

Product	Smart Camera	Temperature	27℃
Test Engineer	Dandy Li	Relative Humidity	47%
Test Site	TR3	Test Date	2020/05/30

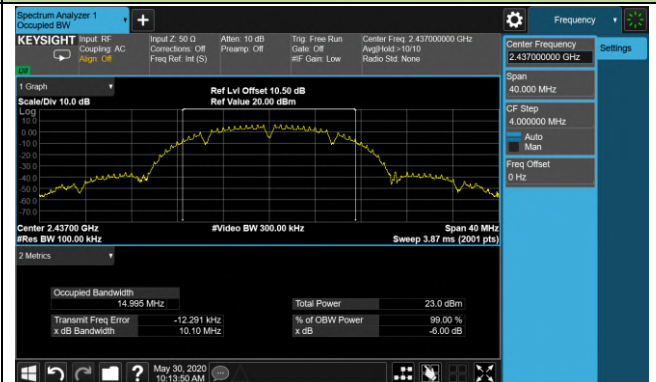
Test Mode	Data Rate / MCS	Channel No.	Frequency (MHz)	6dB Bandwidth (MHz)	Limit (MHz)	Result
802.11b	1Mbps	01	2412	10.11	≥ 0.5	Pass
802.11b	1Mbps	06	2437	10.10	≥ 0.5	Pass
802.11b	1Mbps	11	2462	10.11	≥ 0.5	Pass
802.11g	6Mbps	01	2412	16.34	≥ 0.5	Pass
802.11g	6Mbps	06	2437	16.34	≥ 0.5	Pass
802.11g	6Mbps	11	2462	16.35	≥ 0.5	Pass
802.11n-HT20	MCS0	01	2412	17.32	≥ 0.5	Pass
802.11n-HT20	MCS0	06	2437	17.30	≥ 0.5	Pass
802.11n-HT20	MCS0	11	2462	17.34	≥ 0.5	Pass

802.11b 6dB Bandwidth

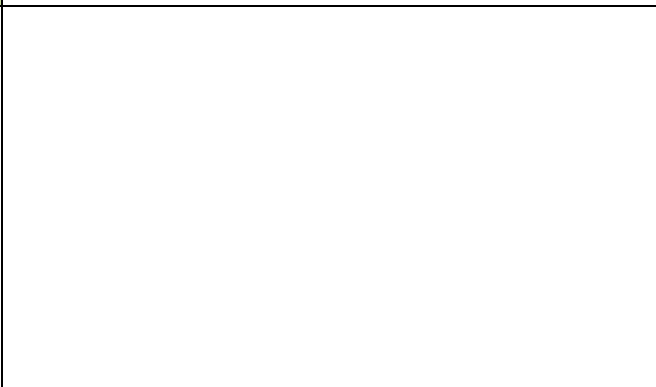
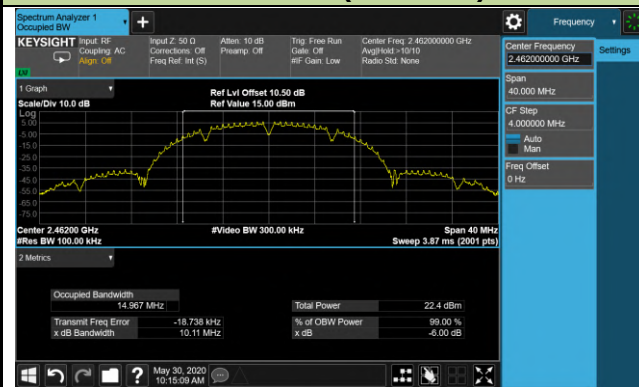
Channel 01 (2412MHz)



Channel 06 (2437MHz)

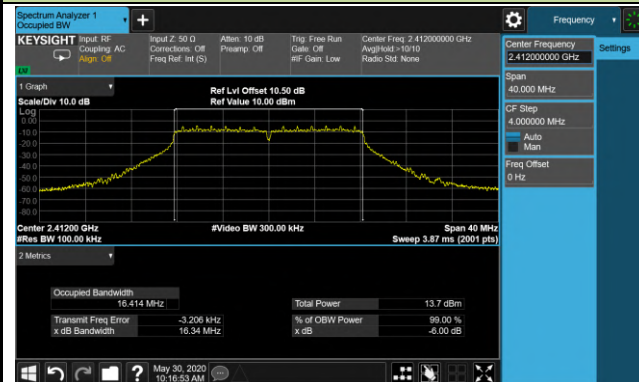


Channel 11 (2462MHz)

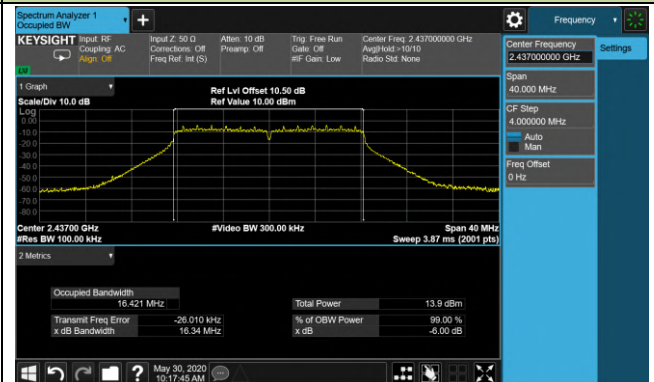


802.11g 6dB Bandwidth

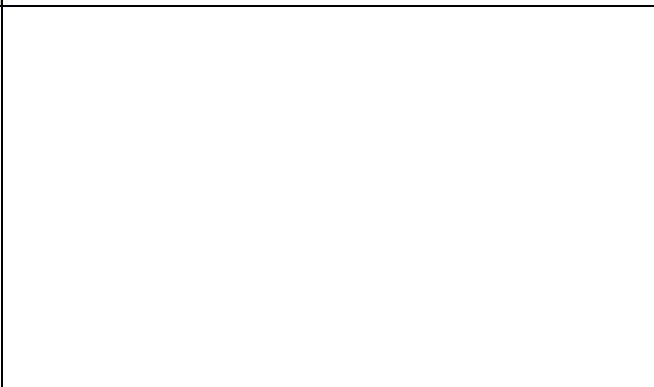
Channel 01 (2412MHz)



Channel 06 (2437MHz)

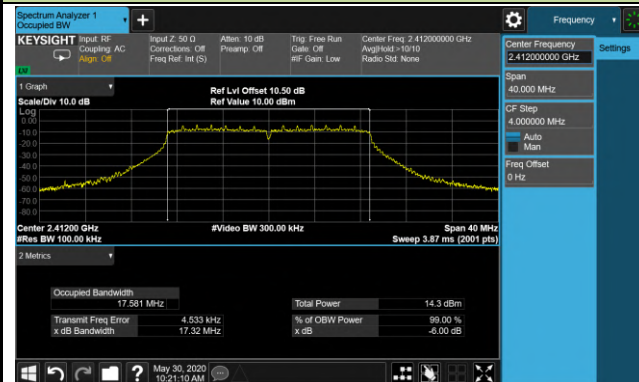


Channel 11 (2462MHz)

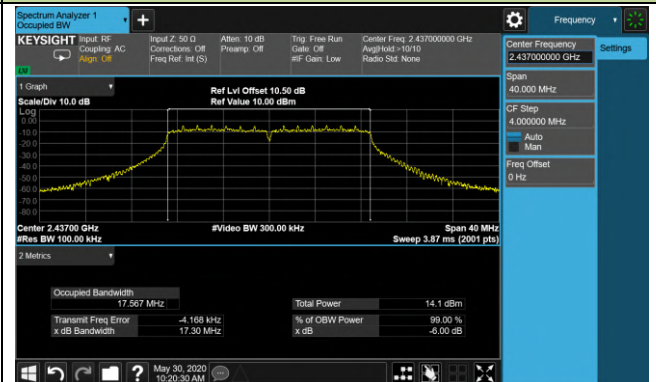


802.11n-HT20 6dB Bandwidth

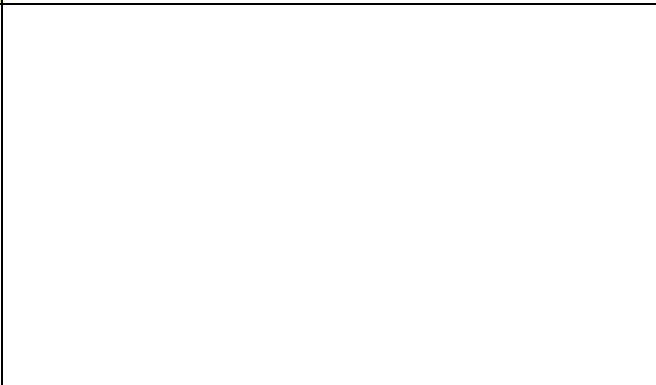
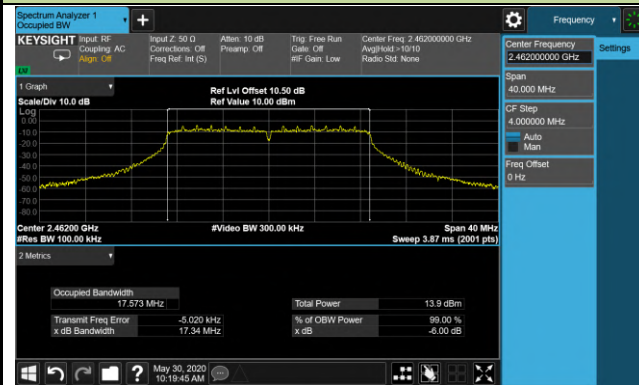
Channel 01 (2412MHz)



Channel 06 (2437MHz)



Channel 11 (2462MHz)



7.3. Output Power Measurement

7.3.1. Test Limit

The maximum out power shall be less 1 Watt (30dBm).

The conducted output power limit specified in paragraph FCC Part 15.247(b) of this section is based on the use of antennas with directional gains that do not exceed 6 dBi. If transmitting antennas of directional gain greater than 6 dBi are used, the conducted output power from the intentional radiator shall be reduced below the stated values in paragraphs FCC Part 15.247(b)(3) of this section, as appropriate, by the amount in dB that the directional gain of the antenna exceeds 6 dBi.

7.3.2. Test Procedure Used

ANSI C63.10-2013 Section 11.9.2.3

7.3.3. Test Setting

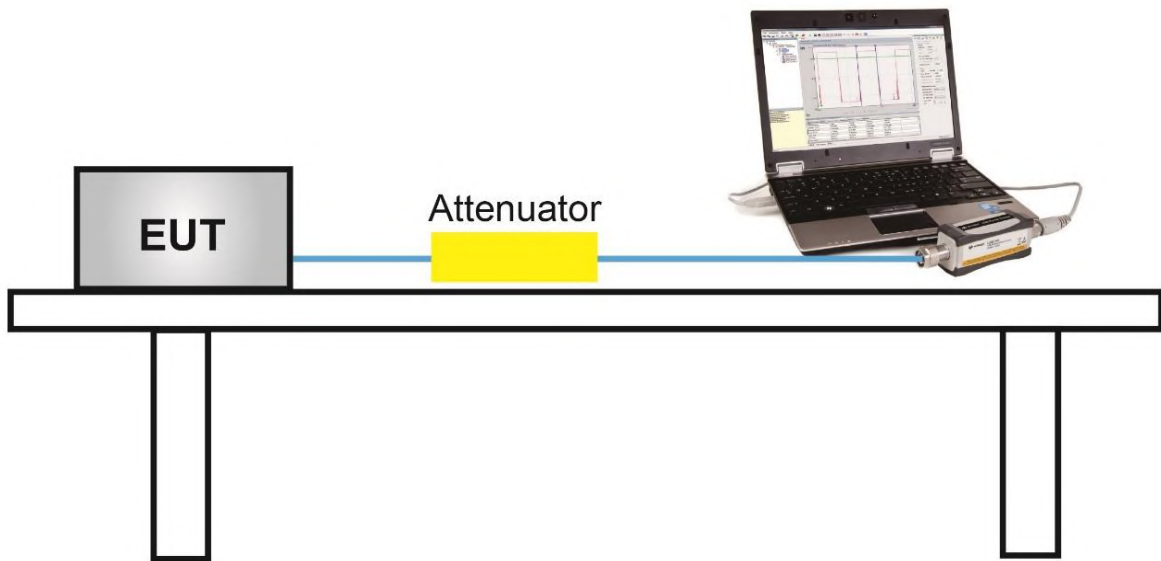
PKPM1 Peak-reading power meter method

The maximum peak conducted output power may be measured using a broadband peak RF power meter. The power meter shall have a video bandwidth that is greater than or equal to the DTS bandwidth and shall utilize a fast-responding diode detector.

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 of Output Power

Product	Smart Camera	Temperature	27℃
Test Engineer	Dandy Li	Relative Humidity	47%
Test Site	TR3	Test Date	2020/06/06

Test Result of Peak Output Power

Test Mode	Data Rate / MCS	Channel No.	Frequency (MHz)	Peak Power (dBm)	Limit (dBm)	Result
11b	1Mbps	01	2412	16.76	≤ 30.00	Pass
11b	1Mbps	06	2437	16.96	≤ 30.00	Pass
11b	1Mbps	11	2462	16.95	≤ 30.00	Pass
11g	6Mbps	01	2412	14.98	≤ 30.00	Pass
11g	6Mbps	06	2437	14.89	≤ 30.00	Pass
11g	6Mbps	11	2462	14.97	≤ 30.00	Pass
11n-HT20	MCS0	01	2412	14.93	≤ 30.00	Pass
11n-HT20	MCS0	06	2437	14.74	≤ 30.00	Pass
11n-HT20	MCS0	11	2462	14.98	≤ 30.00	Pass

Note: Maximum E.I.R.P (dBm) = Maximum Peak Power (dBm) + Antenna Gain (dBi) = 16.96 dBm + 3.0 dBi = 19.96dBm.

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	12.94	≤ 30.00	Pass
11b	1Mbps	06	2437	13.17	≤ 30.00	Pass
11b	1Mbps	11	2462	13.38	≤ 30.00	Pass
11g	6Mbps	01	2412	5.78	≤ 30.00	Pass
11g	6Mbps	06	2437	5.63	≤ 30.00	Pass
11g	6Mbps	11	2462	5.93	≤ 30.00	Pass
11n-HT20	MCS0	01	2412	5.88	≤ 30.00	Pass
11n-HT20	MCS0	06	2437	5.75	≤ 30.00	Pass
11n-HT20	MCS0	11	2462	5.85	≤ 30.00	Pass

Note: Maximum E.I.R.P (dBm) = Maximum Average Power (dBm) + Antenna Gain (dBi) = 13.38 dBm + 3.0 dBi = 16.38dBm.

7.4. Power Spectral Density Measurement

7.4.1. Test Limit

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

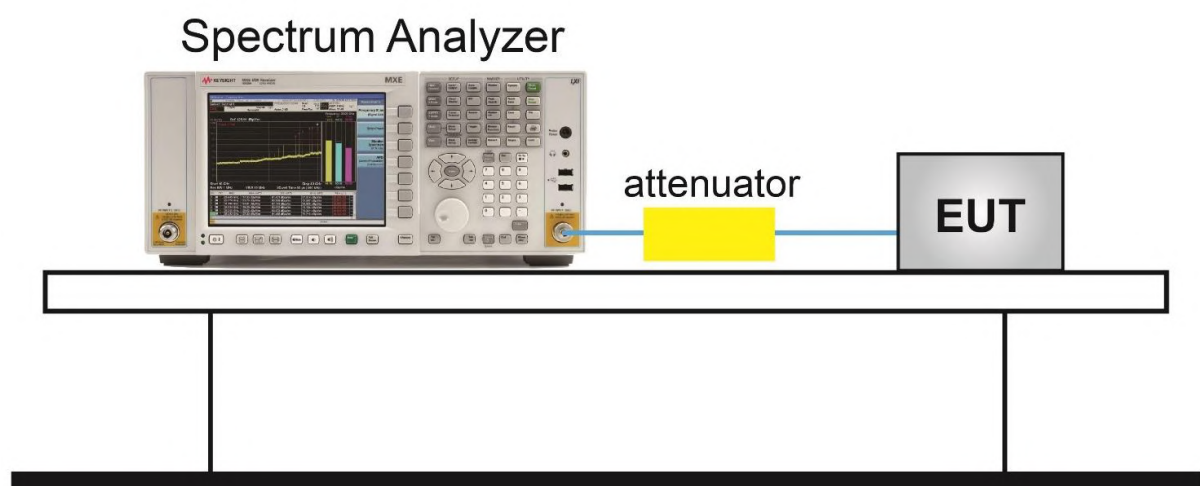
7.4.2. Test Procedure Used

ANSI C63.10-2013 Section 11.10.2

7.4.3. Test Setting

1. Analyzer was set to the center frequency of the DTS channel under investigation
2. Span = 1.5 times the DTS channel bandwidth
3. RBW = 3kHz
4. VBW = 10kHz
5. Detector = peak
6. Sweep time = auto couple
7. Trace mode = max hold
8. Trace was allowed to stabilize

7.4.4. Test Setup



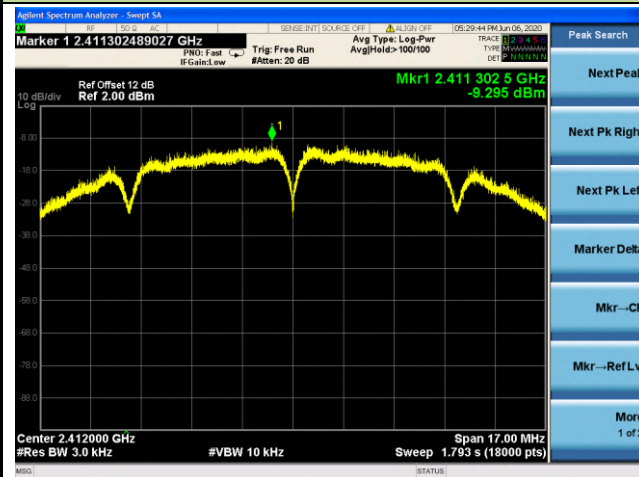
7.4.5. Test Result

Product	Smart Camera	Temperature	27℃
Test Engineer	Dandy Li	Relative Humidity	47%
Test Site	TR3	Test Date	2020/06/06

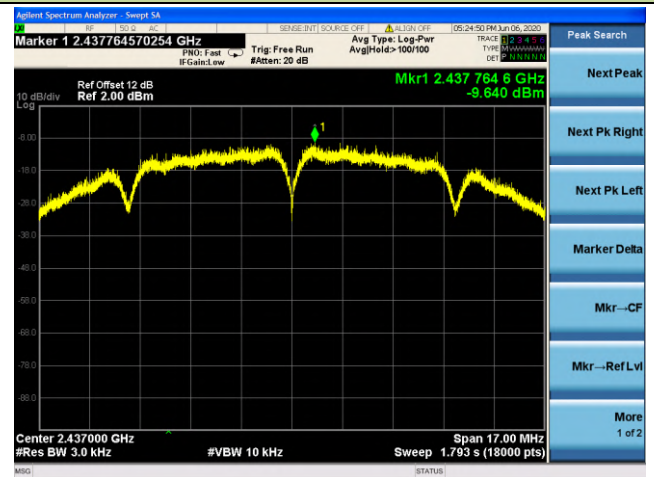
Test Mode	Data Rate / MCS	Channel No.	Frequency (MHz)	PK PSD (dBm / 3kHz)	Limit (dBm / 3kHz)	Result
11b	1Mbps	01	2412	-9.30	≤ 8.00	Pass
11b	1Mbps	06	2437	-9.64	≤ 8.00	Pass
11b	1Mbps	11	2462	-8.75	≤ 8.00	Pass
11g	6Mbps	01	2412	-18.92	≤ 8.00	Pass
11g	6Mbps	06	2437	-18.60	≤ 8.00	Pass
11g	6Mbps	11	2462	-19.43	≤ 8.00	Pass
11n-HT20	MCS0	01	2412	-19.30	≤ 8.00	Pass
11n-HT20	MCS0	06	2437	-19.83	≤ 8.00	Pass
11n-HT20	MCS0	11	2462	-19.10	≤ 8.00	Pass

802.11b PK PSD

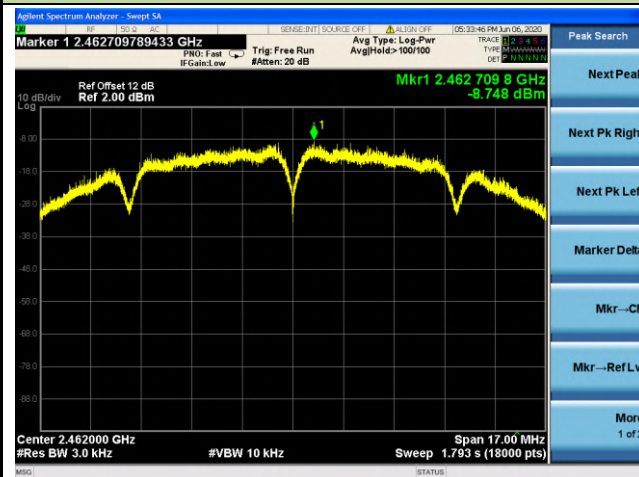
Channel 01 (2412MHz)



Channel 06 (2437MHz)

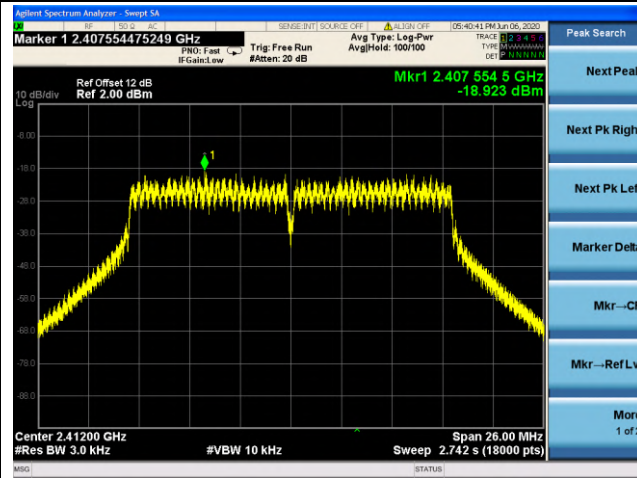


Channel 11 (2462MHz)

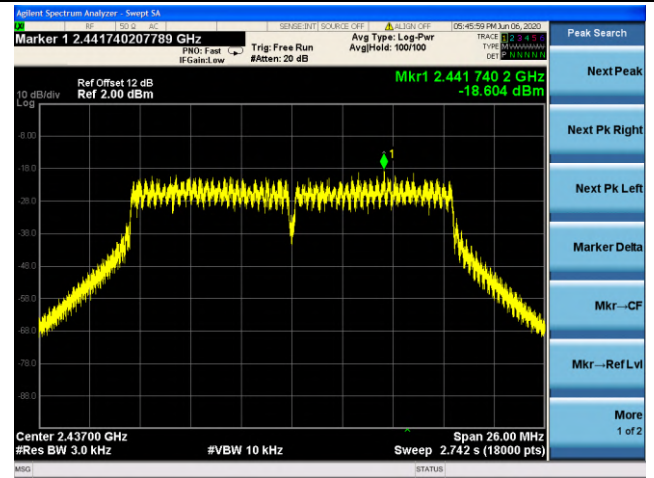


802.11g - PK PSD

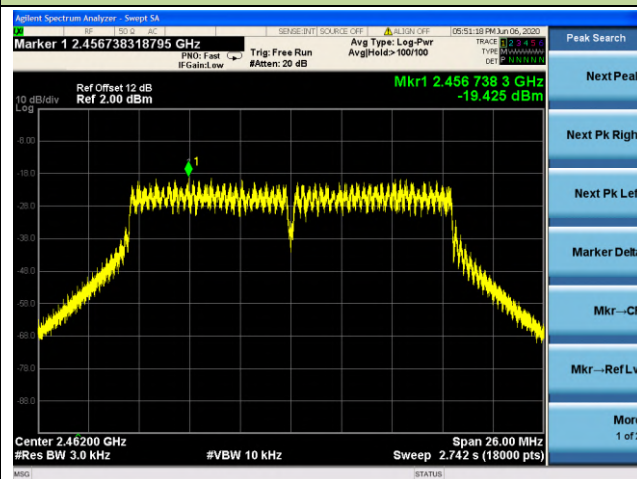
Channel 01 (2412MHz)



Channel 06 (2437MHz)

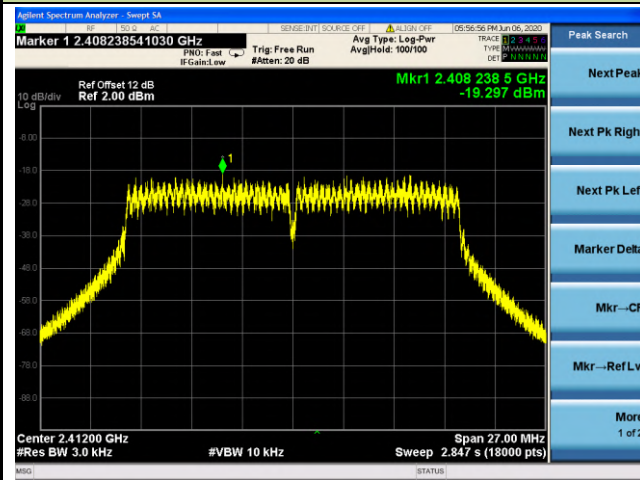


Channel 11 (2462MHz)

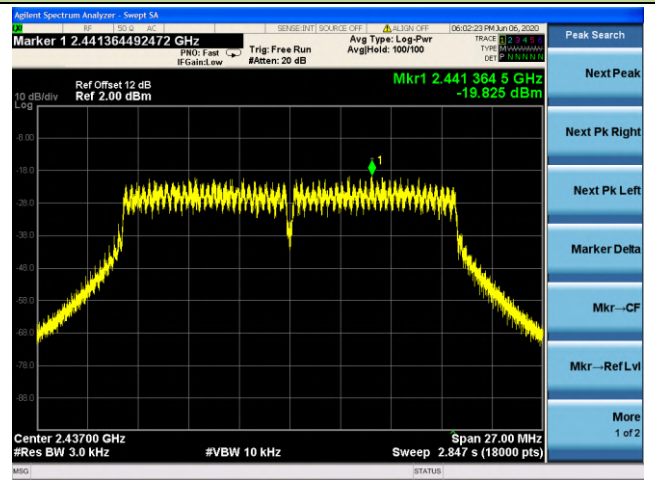


802.11n-HT20 - PK PSD

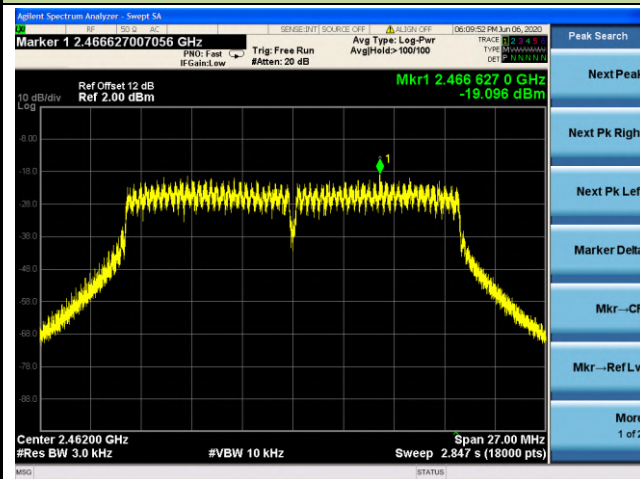
Channel 01 (2412MHz)



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 C63.10-2013 Section 11.11

7.5.3. Test Setting

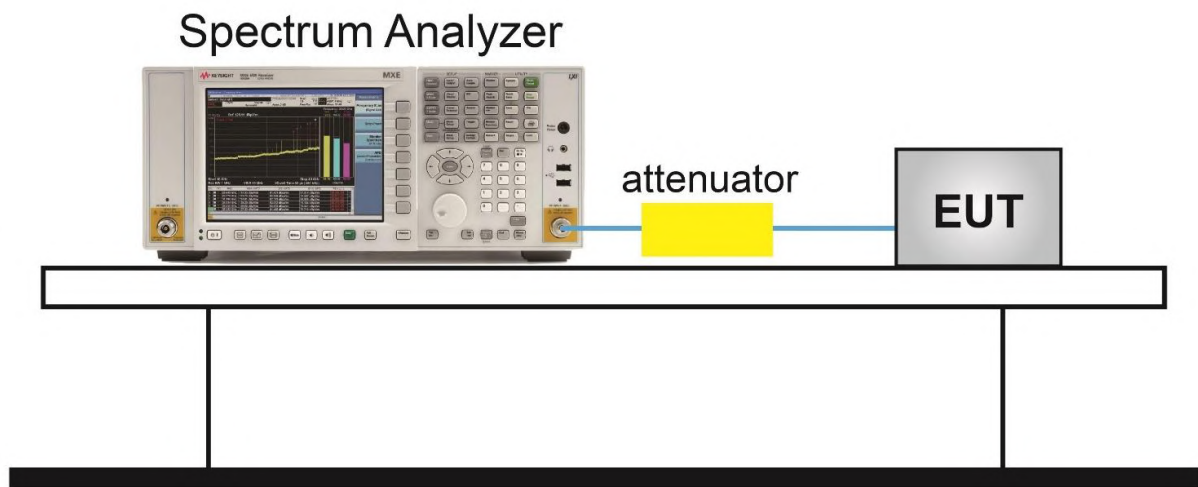
Reference level measurement

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 $\geq 3 \times$ 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

7.5.4. Test Setup



7.5.5.Test Result

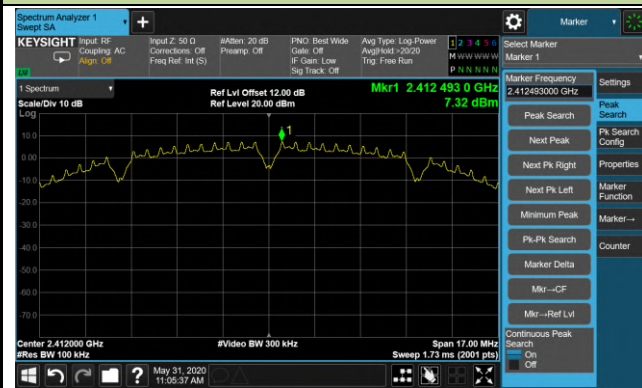
Product	Smart Camera	Temperature	27℃
Test Engineer	Dandy Li	Relative Humidity	47%
Test Site	TR3	Test Date	2020/05/31

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)

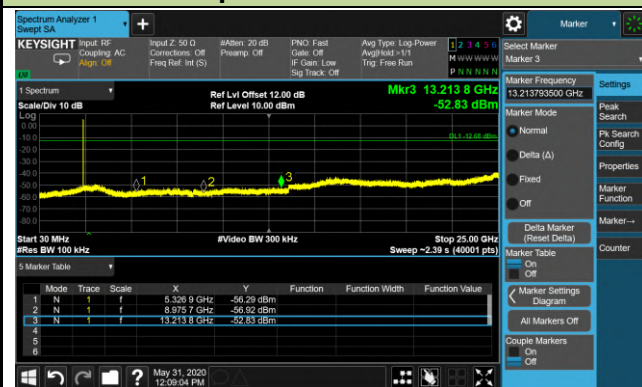
100kHz PSD Reference Level



Low Band Edge



Spurious Emission



Channel 06 (2437MHz)

100kHz PSD Reference Level



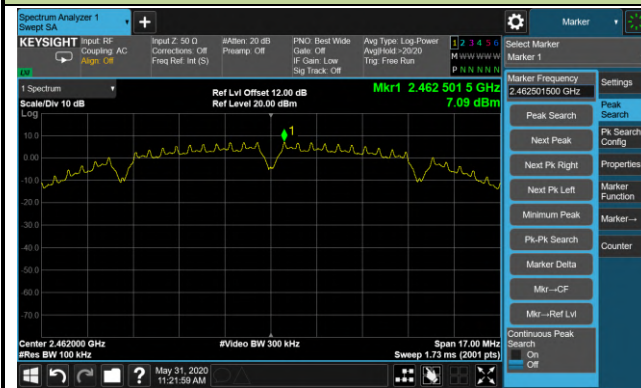
Spurious Emission



802.11b Out-of-Band Emissions

Channel 11 (2462MHz)

100kHz PSD Reference Level



High Band Edge



Spurious Emission



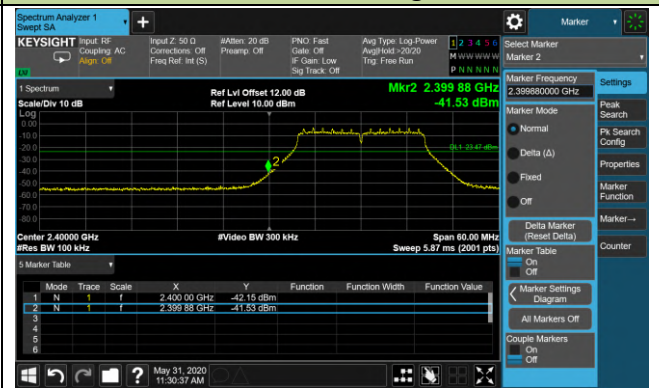
802.11g Out-of-Band Emissions

Channel 01 (2412MHz)

100kHz PSD Reference Level



Low Band Edge

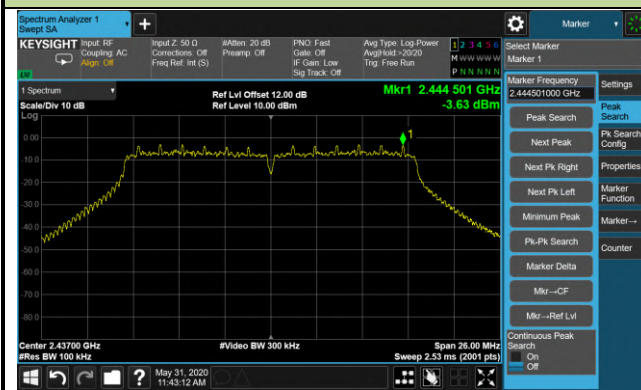


Spurious Emission



Channel 06 (2437MHz)

100kHz PSD Reference Level



Spurious Emission



802.11g Out-of-Band Emissions

Channel 11 (2462MHz)

100kHz PSD Reference Level



High Band Edge



Spurious Emission



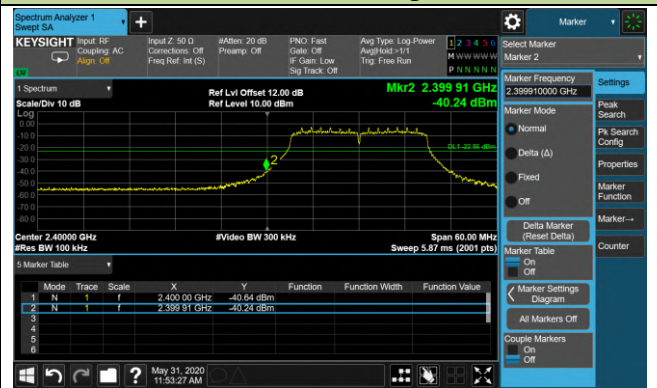
802.11n-HT20 Out-of-Band Emissions

Channel 01 (2412MHz)

100kHz PSD Reference Level



Low Band Edge

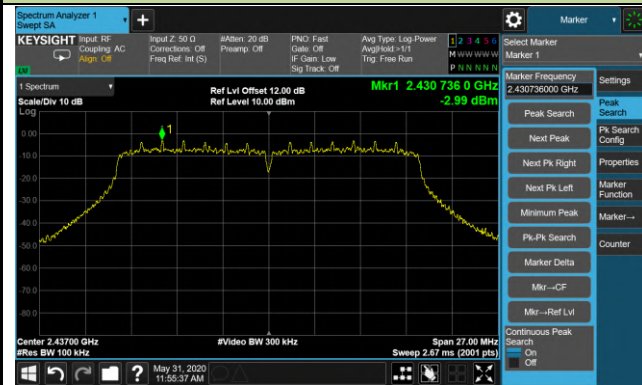


Spurious Emission



Channel 06 (2437MHz)

100kHz PSD Reference Level



Spurious Emission



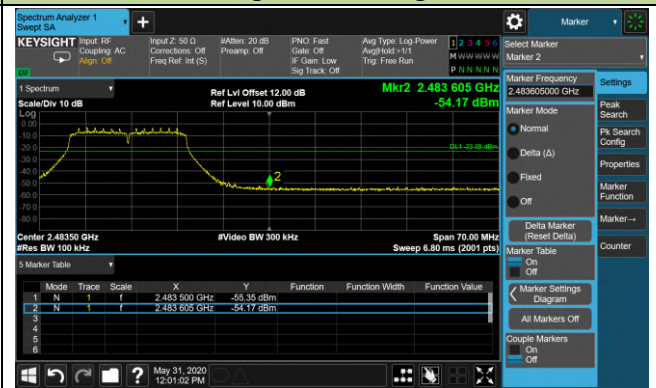
802.11n-HT20 Out-of-Band Emissions

Channel 11 (2462MHz)

100kHz PSD Reference Level



High Band Edge



Spurious Emission



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.

FCC Part 15.209 Limit		
Frequency (MHz)	Field Strength (V/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 C63.10-2013 Section 6.3 (General Requirements)

ANSI C63.10-2013 Section 6.4 (Standard test method below 30MHz)

ANSI C63.10-2013 Section 6.5 (Standard test method above 30MHz to 1GHz)

ANSI C63.10-2013 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
> 1000MHz	1 MHz

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

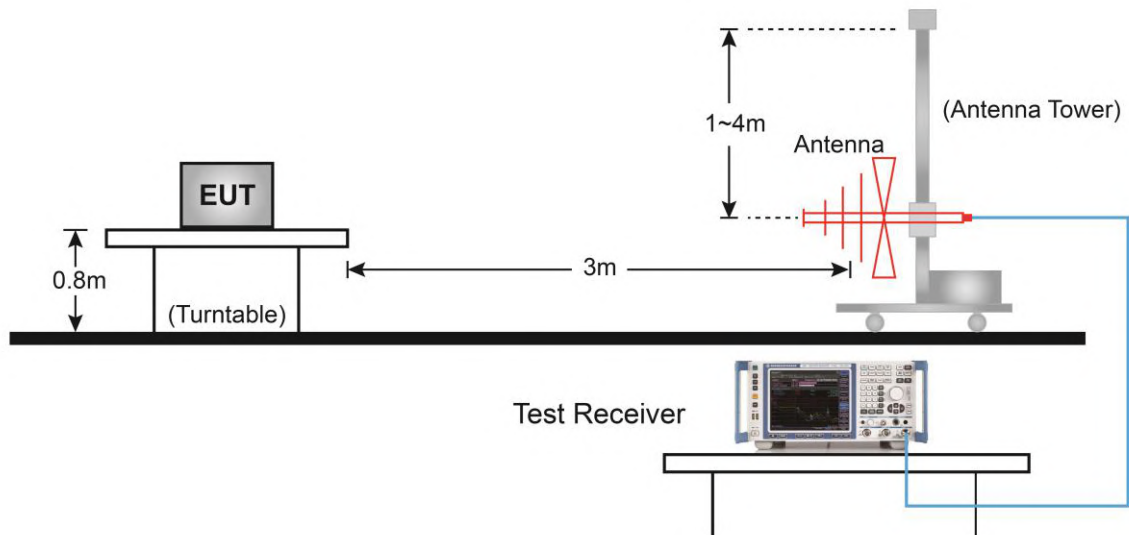
1. Analyzer center frequency was set to the frequency of the radiated spurious emission of interest
2. RBW = 1MHz
3. VBW; If the EUT is configured to transmit with duty cycle $\geq 98\%$, set VBW = 10 Hz.

If the EUT duty cycle is $< 98\%$, set $VBW \geq 1/T$. T is the minimum transmission duration.

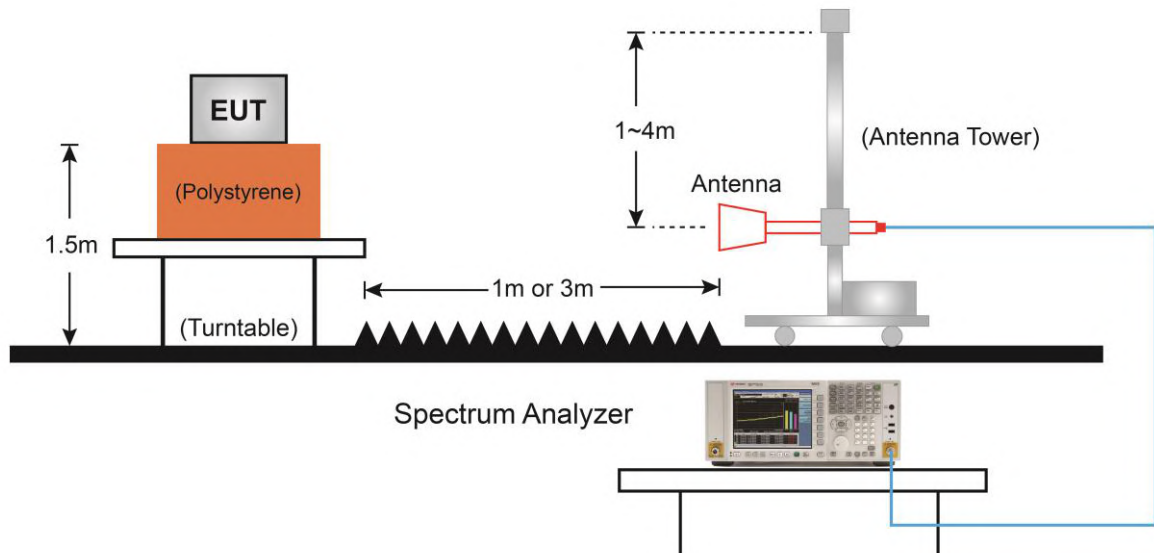
4. Detector = Peak
5. Sweep time = auto
6. Trace mode = max hold
7. Trace was allowed to stabilize

7.6.4. Test Setup

Below 1GHz Test Setup:



Above 1GHz Test Setup:



7.6.5. Test Result

Product	Smart Camera	Test Engineer	Jason Gao
Test Site	AC2	Test Date	2020/05/31
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
	4238.5	38.4	4.1	42.5	74.0	-31.5	Peak	Horizontal
	4825.0	39.3	5.8	45.1	74.0	-28.9	Peak	Horizontal
*	6134.0	36.2	7.1	43.3	74.0	-30.7	Peak	Horizontal
*	6661.0	38.1	8.6	46.7	74.0	-27.3	Peak	Horizontal
	3856.0	38.6	3.0	41.6	74.0	-32.4	Peak	Vertical
	4825.0	39.8	5.8	45.6	74.0	-28.4	Peak	Vertical
*	5921.5	37.5	7.1	44.6	74.0	-29.4	Peak	Vertical
*	6423.0	38.6	8.3	46.9	74.0	-27.1	Peak	Vertical

Note 1: "*" is not in restricted band.

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	Smart Camera	Test Engineer	Jason Gao
Test Site	AC2	Test Date	2020/05/31
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
	3830.5	39.2	3.1	42.3	74.0	-31.7	Peak	Horizontal
	4876.0	40.6	5.5	46.1	74.0	-27.9	Peak	Horizontal
*	6100.0	38.2	7.2	45.4	74.0	-28.6	Peak	Horizontal
*	6737.5	38.0	8.9	46.9	74.0	-27.1	Peak	Horizontal
	3983.5	39.1	3.5	42.6	74.0	-31.4	Peak	Vertical
	4833.5	39.1	5.8	44.9	74.0	-29.1	Peak	Vertical
*	5913.0	37.1	7.1	44.2	74.0	-29.8	Peak	Vertical
*	7077.5	37.5	10.2	47.7	74.0	-26.3	Peak	Vertical

Note 1: "*" is not in restricted band.

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	Smart Camera	Test Engineer	Jason Gao
Test Site	AC2	Test Date	2020/05/31
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
	3771.0	38.5	3.0	41.5	74.0	-32.5	Peak	Horizontal
	4927.0	38.5	6.2	44.7	74.0	-29.3	Peak	Horizontal
*	5887.5	37.4	6.9	44.3	74.0	-29.7	Peak	Horizontal
*	6559.0	36.0	8.5	44.5	74.0	-29.5	Peak	Horizontal
	3822.0	38.7	3.1	41.8	74.0	-32.2	Peak	Vertical
	4816.5	38.4	5.8	44.2	74.0	-29.8	Peak	Vertical
*	5998.0	37.0	7.1	44.1	74.0	-29.9	Peak	Vertical
*	6482.5	37.4	8.1	45.5	74.0	-28.5	Peak	Vertical

Note 1: "*" is not in restricted band.

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	Smart Camera	Test Engineer	Jason Gao
Test Site	AC2	Test Date	2020/05/31
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
	3924.0	38.0	3.3	41.3	74.0	-32.7	Peak	Horizontal
	4808.0	38.2	5.9	44.1	74.0	-29.9	Peak	Horizontal
*	5649.5	37.5	6.2	43.7	74.0	-30.3	Peak	Horizontal
*	6465.5	36.6	8.0	44.6	74.0	-29.4	Peak	Horizontal
	3924.0	38.1	3.3	41.4	74.0	-32.6	Peak	Vertical
	4842.0	37.1	5.9	43.0	74.0	-31.0	Peak	Vertical
*	6185.0	37.2	7.4	44.6	74.0	-29.4	Peak	Vertical
*	7103.0	36.4	10.4	46.8	74.0	-27.2	Peak	Vertical

Note 1: "*" is not in restricted band.

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	Smart Camera	Test Engineer	Jason Gao
Test Site	AC2	Test Date	2020/05/31
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
	4060.0	38.3	3.5	41.8	74.0	-32.2	Peak	Horizontal
	4816.5	37.3	5.8	43.1	74.0	-30.9	Peak	Horizontal
*	5989.5	37.2	7.0	44.2	74.0	-29.8	Peak	Horizontal
*	6499.5	38.5	8.4	46.9	74.0	-27.1	Peak	Horizontal
	3983.5	38.3	3.5	41.8	74.0	-32.2	Peak	Vertical
	4825.0	39.0	5.8	44.8	74.0	-29.2	Peak	Vertical
*	5904.5	37.5	7.1	44.6	74.0	-29.4	Peak	Vertical
*	6499.5	37.7	8.4	46.1	74.0	-27.9	Peak	Vertical

Note 1: "*" is not in restricted band.

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	Smart Camera	Test Engineer	Jason Gao
Test Site	AC2	Test Date	2020/05/31
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
	3618.0	38.6	2.7	41.3	74.0	-32.7	Peak	Horizontal
	4842.0	38.1	5.9	44.0	74.0	-30.0	Peak	Horizontal
*	5998.0	37.1	7.1	44.2	74.0	-29.8	Peak	Horizontal
*	7086.0	37.2	10.3	47.5	74.0	-26.5	Peak	Horizontal
	4060.0	37.9	3.5	41.4	74.0	-32.6	Peak	Vertical
	4816.5	37.1	5.8	42.9	74.0	-31.1	Peak	Vertical
*	6346.5	37.1	8.1	45.2	74.0	-28.8	Peak	Vertical
*	7128.5	36.5	10.5	47.0	74.0	-27.0	Peak	Vertical

Note 1: "*" is not in restricted band.

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	Smart Camera	Test Engineer	Jason Gao
Test Site	AC2	Test Date	2020/05/31
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
	3728.5	38.6	2.6	41.2	74.0	-32.8	Peak	Horizontal
	4850.5	37.6	5.8	43.4	74.0	-30.6	Peak	Horizontal
*	5573.0	36.4	6.7	43.1	74.0	-30.9	Peak	Horizontal
*	6363.5	37.7	8.1	45.8	74.0	-28.2	Peak	Horizontal
	3983.5	37.7	3.5	41.2	74.0	-32.8	Peak	Vertical
	4833.5	38.1	5.8	43.9	74.0	-30.1	Peak	Vertical
*	5989.5	36.9	7.0	43.9	74.0	-30.1	Peak	Vertical
*	7128.5	37.1	10.5	47.6	74.0	-26.4	Peak	Vertical

Note 1: "*" is not in restricted band.

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	Smart Camera	Test Engineer	Jason Gao
Test Site	AC2	Test Date	2020/05/31
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
	3864.5	38.1	3.1	41.2	74.0	-32.8	Peak	Horizontal
	4808.0	37.1	5.9	43.0	74.0	-31.0	Peak	Horizontal
*	6040.5	37.4	6.9	44.3	74.0	-29.7	Peak	Horizontal
*	6729.0	37.5	8.9	46.4	74.0	-27.6	Peak	Horizontal
	4085.5	37.5	3.6	41.1	74.0	-32.9	Peak	Vertical
	4808.0	38.0	5.9	43.9	74.0	-30.1	Peak	Vertical
*	6006.5	38.1	7.0	45.1	74.0	-28.9	Peak	Vertical
*	6499.5	38.0	8.4	46.4	74.0	-27.6	Peak	Vertical

Note 1: "*" is not in restricted band.

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	Smart Camera	Test Engineer	Jason Gao
Test Site	AC2	Test Date	2020/05/31
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
	3703.0	39.5	2.5	42.0	74.0	-32.0	Peak	Horizontal
	4808.0	38.2	5.9	44.1	74.0	-29.9	Peak	Horizontal
*	5760.0	36.8	6.8	43.6	74.0	-30.4	Peak	Horizontal
*	6431.5	38.0	8.3	46.3	74.0	-27.7	Peak	Horizontal
	3966.5	38.1	3.5	41.6	74.0	-32.4	Peak	Vertical
	4816.5	38.9	5.8	44.7	74.0	-29.3	Peak	Vertical
*	5896.0	37.6	7.0	44.6	74.0	-29.4	Peak	Vertical
*	6737.5	36.9	8.9	45.8	74.0	-28.2	Peak	Vertical

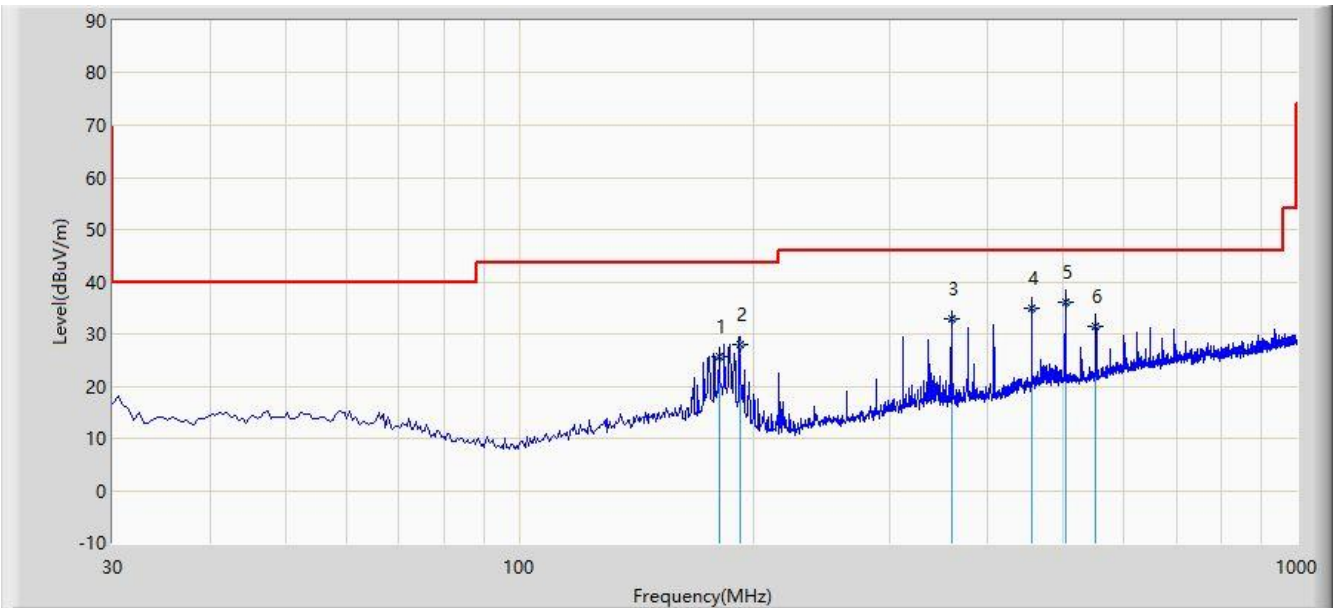
Note 1: "*" is not in restricted band.

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: 2020/07/01
Limit: FCC_Part15.209_RSE(3m)	Engineer: Buter Shi
Probe: AC1_VULB 9168 _30-1000MHz	Polarity: Horizontal
EUT: Smart Camera	Power: AC 120V/60Hz
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			180.680	25.776	12.890	-17.724	43.500	12.886	QP
2			192.020	28.094	16.560	-15.406	43.500	11.534	QP
3			360.120	32.869	16.760	-13.131	46.000	16.109	QP
4			455.790	34.955	15.980	-11.045	46.000	18.975	QP
5		*	503.820	36.018	16.280	-9.982	46.000	19.738	QP
6			551.830	31.565	11.120	-14.435	46.000	20.445	QP

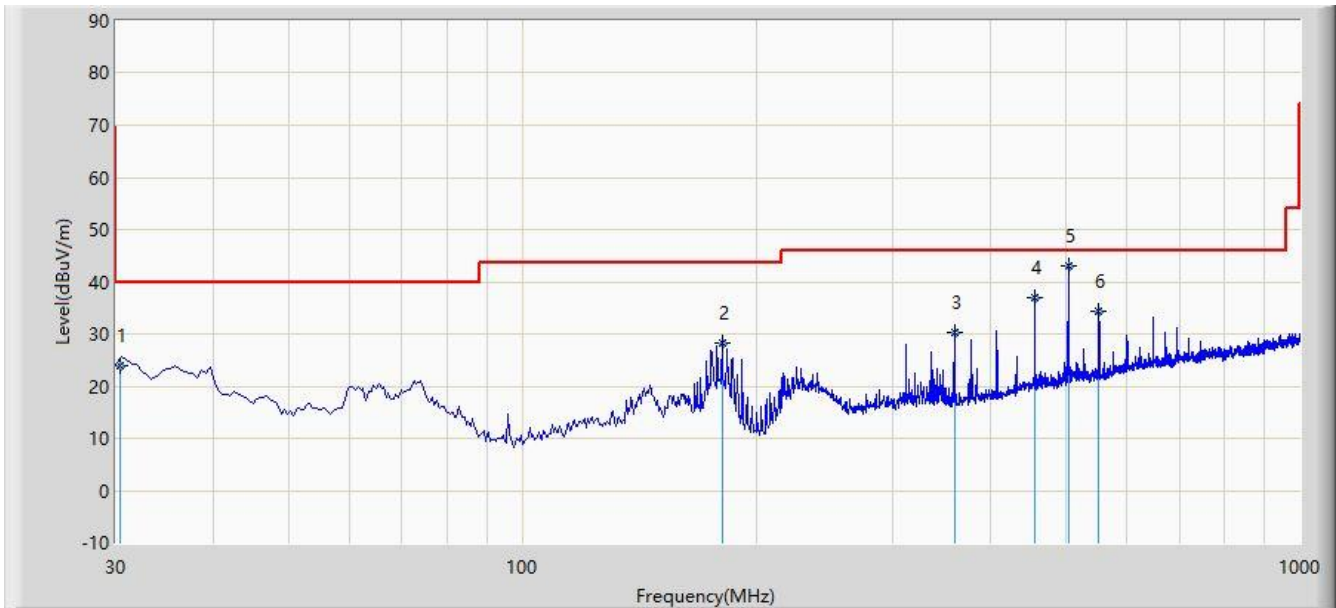
Note 1: Measure Level (dBuV/m) = Reading Level (dBuV) + Factor (dB)

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

Note 2: The amplitude of radiated emissions (frequency range from 9kHz to 30MHz and 18GHz to 25GHz) is that proximity to ambient noise, which also are attenuated more than 20 dB below the permissible value.

Therefore, the data is not presented in the report.

Site: AC1	Time: 2020/07/01
Limit: FCC_Part15.209_RSE(3m)	Engineer: Buter Shi
Probe: AC1_VULB 9168 _30-1000MHz	Polarity: Vertical
EUT: Smart Camera	Power: AC 120V/60Hz
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			30.450	23.773	10.890	-16.227	40.000	12.883	QP
2			180.720	28.365	15.480	-15.135	43.500	12.885	QP
3			359.890	30.431	14.340	-15.569	46.000	16.090	QP
4			455.820	36.956	17.980	-9.044	46.000	18.976	QP
5		*	503.979	43.143	23.400	-2.857	46.000	19.743	QP
6			551.830	34.335	13.890	-11.665	46.000	20.445	QP

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

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

Note 2: The amplitude of radiated emissions (frequency range from 9kHz to 30MHz and 18GHz to 25GHz) is that proximity to ambient noise, which also are attenuated more than 20 dB below the permissible value.

Therefore, the data is not presented in the report.

7.7. Radiated Restricted Band Edge Measurement

7.7.1. Test Limit

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
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.

FCC Part 15.209 Limit		
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 C63.10-2013 Section 6.3 (General Requirements)

ANSI C63.10-2013 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

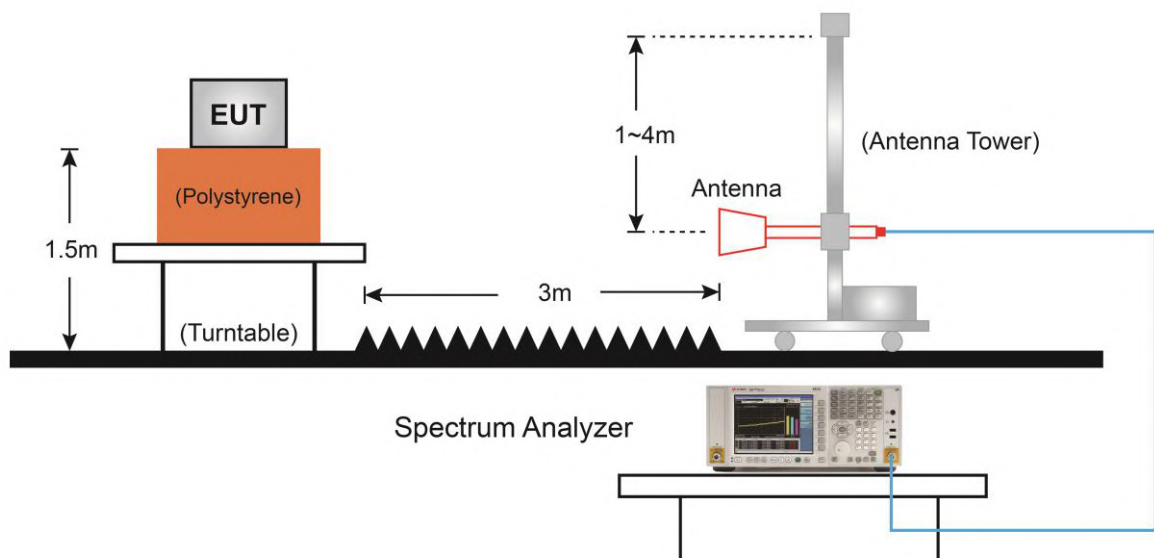
Average Field Strength Measurements

1. Analyzer center frequency was set to the frequency of the radiated spurious emission of interest
2. RBW = 1MHz
3. VBW; If the EUT is configured to transmit with duty cycle $\geq 98\%$, set VBW = 10 Hz.

If the EUT duty cycle is $< 98\%$, set $VBW \geq 1/T$. T is the minimum transmission duration.

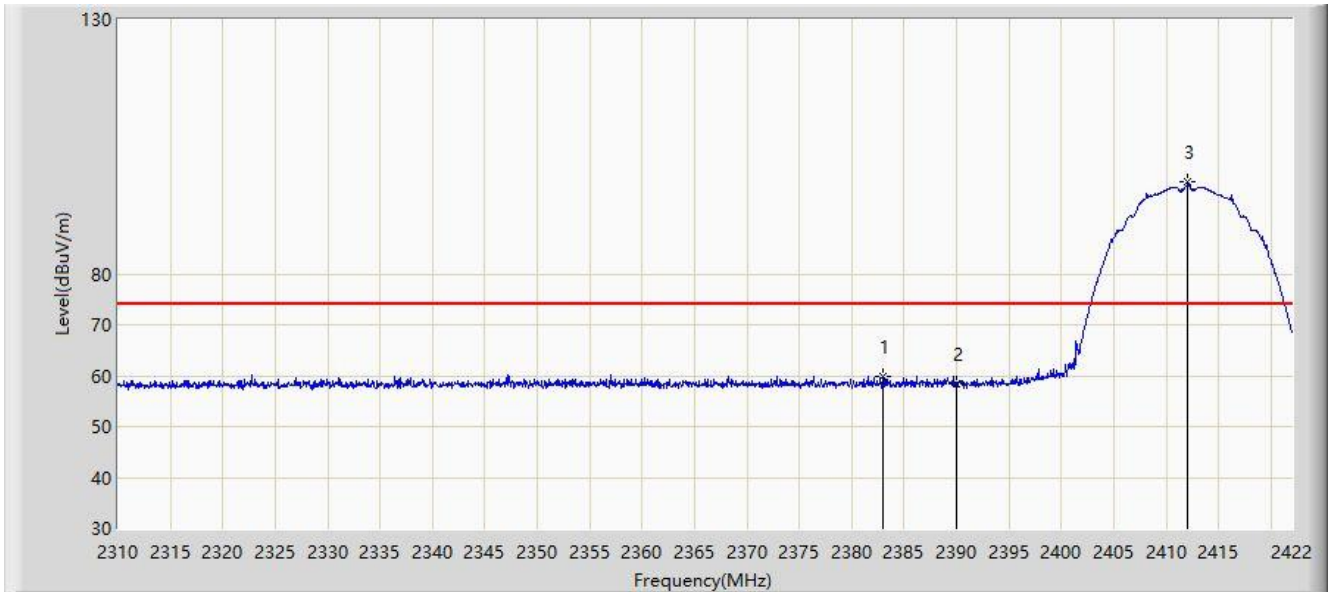
4. Detector = Peak
5. Sweep time = auto
6. Trace mode = max hold
7. Trace was allowed to stabilize

7.7.4.Test Setup



7.7.5.Test Result

Site: AC1	Time: 2020/05/30 - 17:33
Limit: FCC_Part15.209_RE(3m)	Engineer: Buter Shi
Probe: AC1_BBHA9120D_1-18GHz	Polarity: Horizontal
EUT: Smart Camera	Power: AC 120V/60Hz
Test Mode: Transmit by 802.11b at channel 2412MHz	

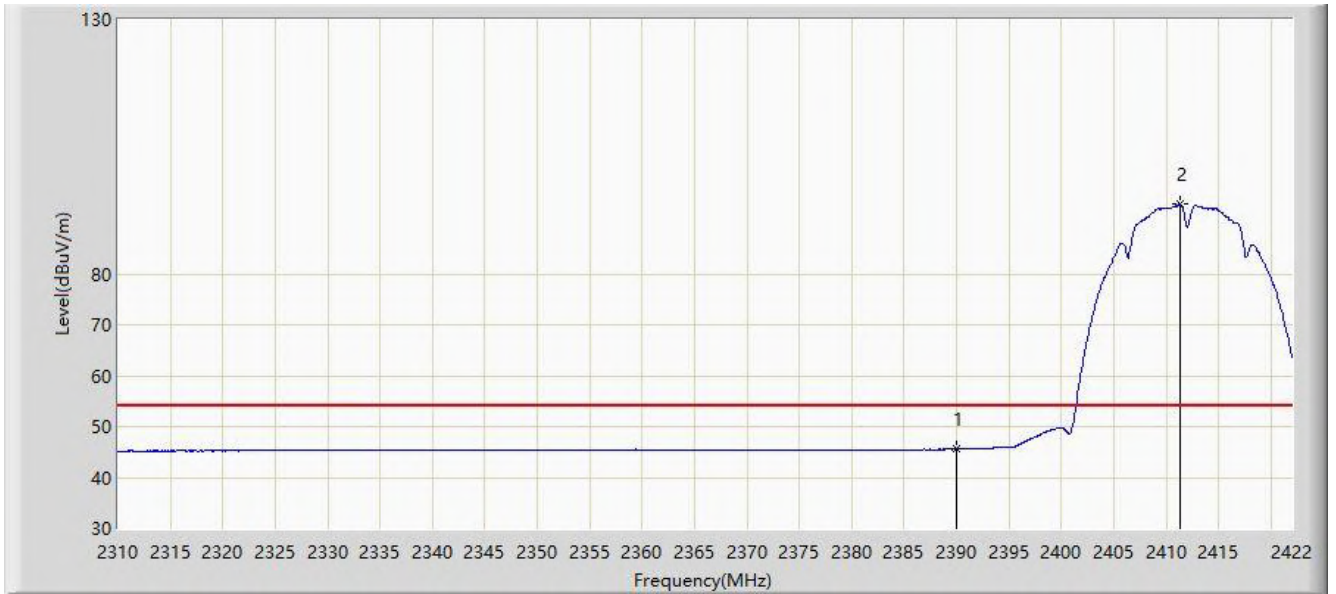


No	Flag	Mark	Frequency (MHz)	Measure Level (dBuV/m)	Reading Level (dBuV)	Margin (dB)	Limit (dBuV/m)	Factor	Type
1			2382.968	59.714	27.035	-14.286	74.000	32.679	PK
2			2390.000	58.343	25.631	-15.657	74.000	32.712	PK
3		*	2412.032	98.063	65.333	N/A	N/A	32.730	PK

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

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

Site: AC1	Time: 2020/05/30 - 17:51
Limit: FCC_Part15.209_RE(3m)	Engineer: Buter Shi
Probe: AC1_BBHA9120D_1-18GHz	Polarity: Horizontal
EUT: Smart Camera	Power: AC 120V/60Hz
Test Mode: Transmit by 802.11b at channel 2412MHz	

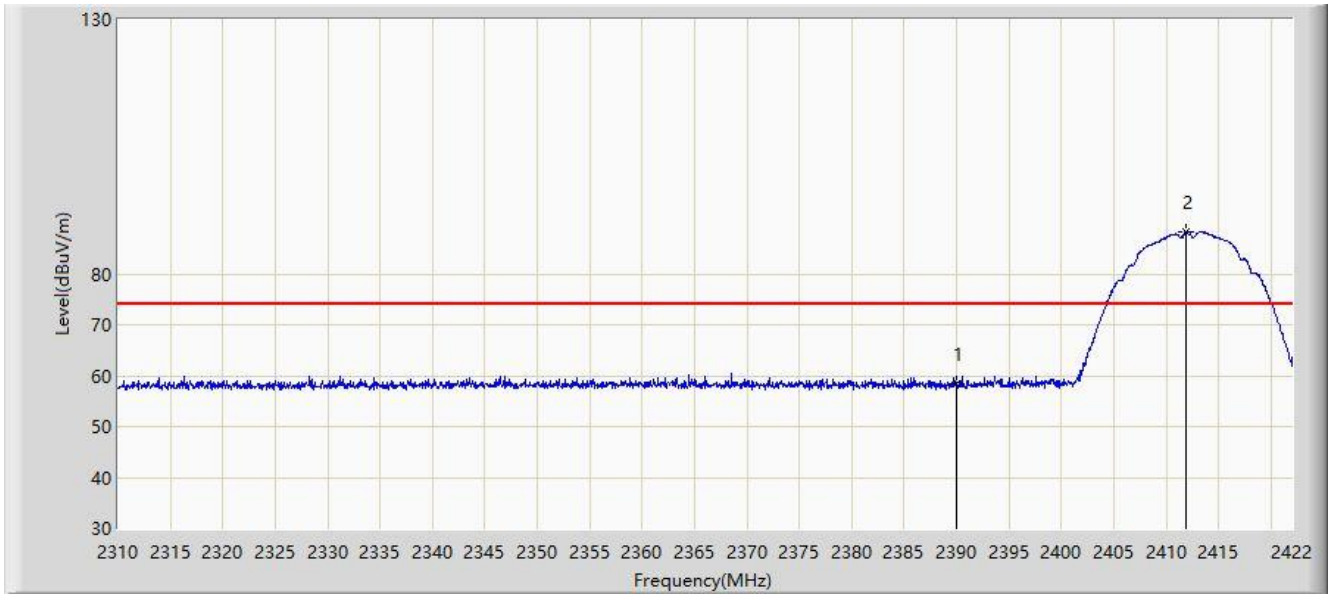


No	Flag	Mark	Frequency (MHz)	Measure Level (dBuV/m)	Reading Level (dBuV)	Margin (dB)	Limit (dBuV/m)	Factor	Type
1			2390.000	45.521	12.809	-8.479	54.000	32.712	AV
2		*	2411.304	93.715	60.984	N/A	N/A	32.731	AV

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

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

Site: AC1	Time: 2020/05/30 - 17:57
Limit: FCC_Part15.209_RE(3m)	Engineer: Buter Shi
Probe: AC1_BBHA9120D_1-18GHz	Polarity: Vertical
EUT: Smart Camera	Power: AC 120V/60Hz
Test Mode: Transmit by 802.11b at channel 2412MHz	

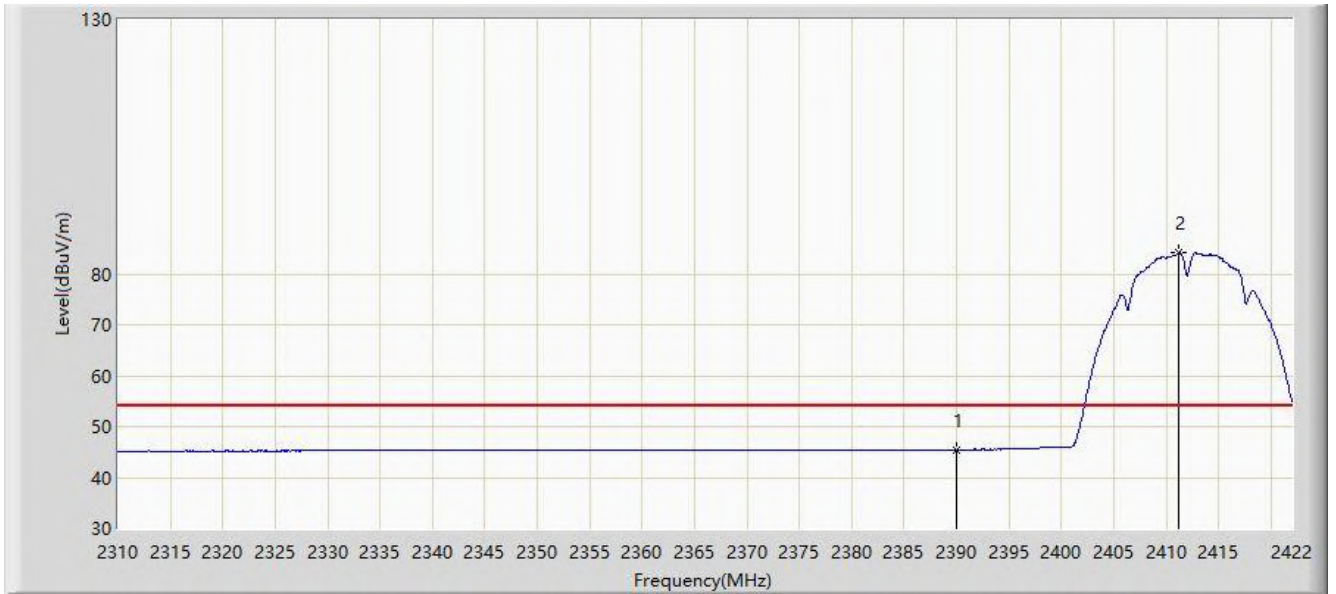


No	Flag	Mark	Frequency (MHz)	Measure Level (dBuV/m)	Reading Level (dBuV)	Margin (dB)	Limit (dBuV/m)	Factor	Type
1			2390.000	58.409	25.697	-15.591	74.000	32.712	PK
2		*	2411.920	88.234	55.504	N/A	N/A	32.730	PK

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

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

Site: AC1	Time: 2020/05/30 - 17:59
Limit: FCC_Part15.209_RE(3m)	Engineer: Buter Shi
Probe: AC1_BBHA9120D_1-18GHz	Polarity: Vertical
EUT: Smart Camera	Power: AC 120V/60Hz
Test Mode: Transmit by 802.11b at channel 2412MHz	

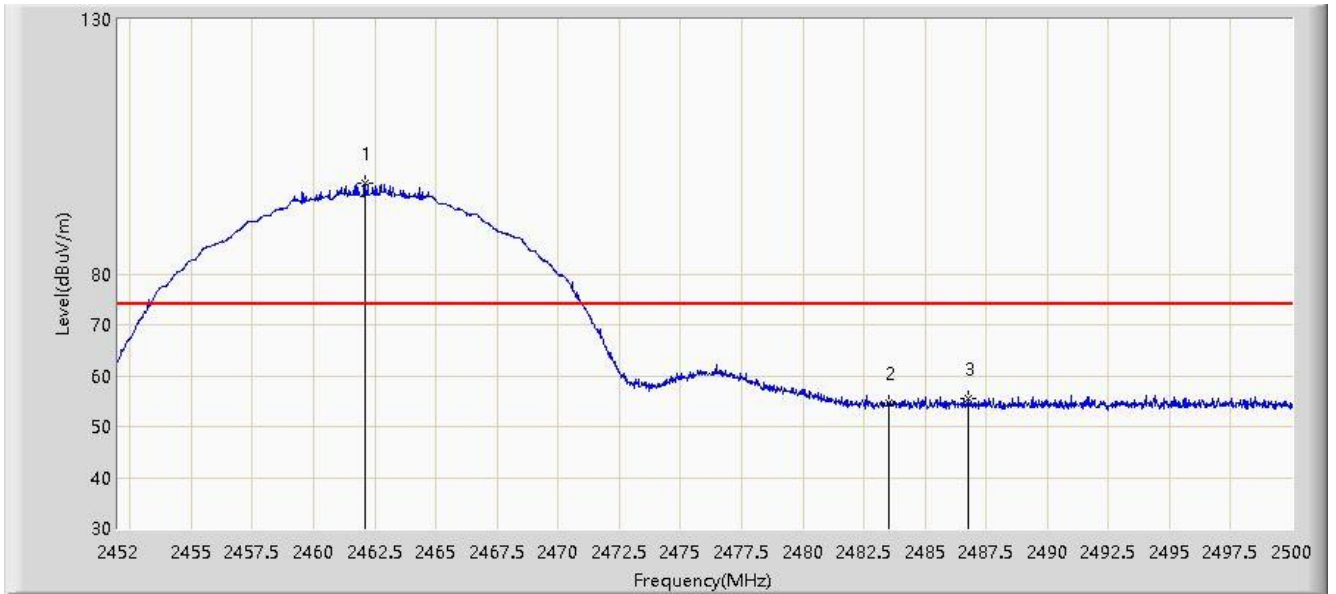


No	Flag	Mark	Frequency (MHz)	Measure Level (dBuV/m)	Reading Level (dBuV)	Margin (dB)	Limit (dBuV/m)	Factor	Type
1			2390.000	45.482	12.770	-8.518	54.000	32.712	AV
2		*	2411.192	84.226	51.495	N/A	N/A	32.731	AV

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

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

Site: AC2	Time: 2020/06/22 - 18:02
Limit: FCC_Part15.209_RE(3m)	Engineer: Hyde Yu
Probe: AC2_BBHA9120D_1-18GHz	Polarity: Horizontal
EUT: Smart Camera	Power: AC 120V/60Hz
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	Type
1		*	2462.080	97.865	68.767	N/A	N/A	29.098	PK
2			2483.500	54.708	25.565	-19.292	74.000	29.143	PK
3			2486.752	55.433	26.285	-18.567	74.000	29.148	PK

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

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

Site: AC2	Time: 2020/06/22 - 18:03
Limit: FCC_Part15.209_RE(3m)	Engineer: Hyde Yu
Probe: AC2_BBHA9120D_1-18GHz	Polarity: Horizontal
EUT: Smart Camera	Power: AC 120V/60Hz
Test Mode: Transmit by 802.11b at channel 2462MHz	

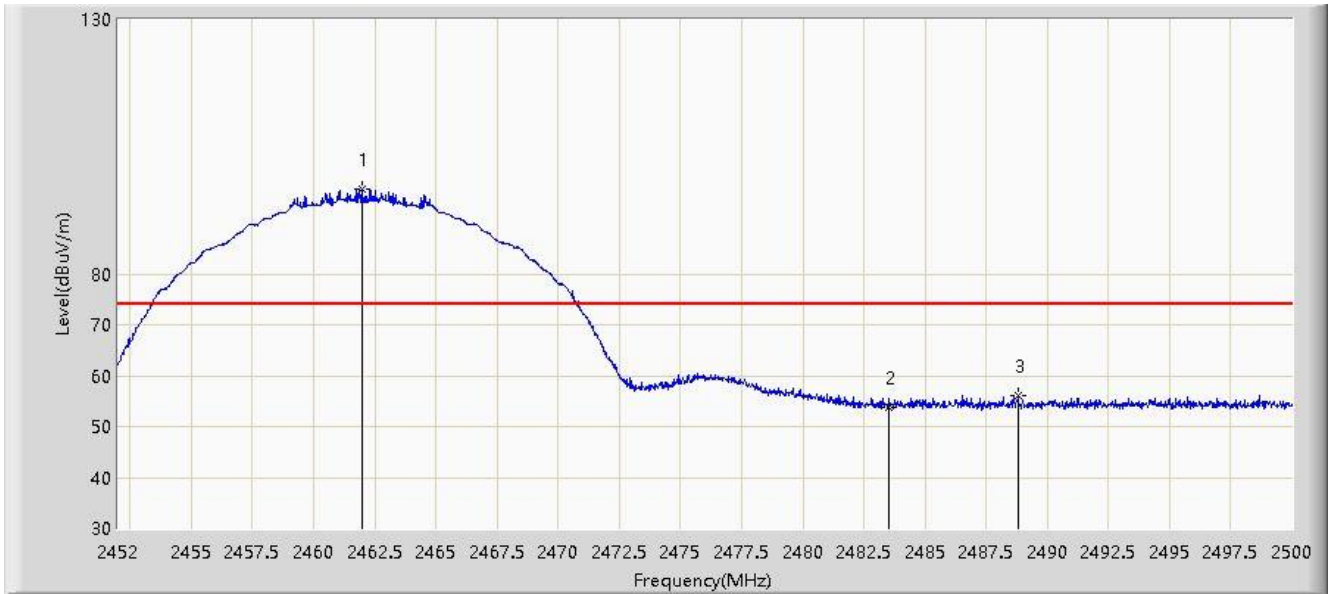


No	Flag	Mark	Frequency (MHz)	Measure Level (dBuV/m)	Reading Level (dBuV)	Margin (dB)	Limit (dBuV/m)	Factor	Type
1		*	2461.144	93.199	64.104	N/A	N/A	29.095	AV
2			2483.500	41.778	12.635	-12.222	54.000	29.143	AV

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

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

Site: AC2	Time: 2020/06/22 - 18:05
Limit: FCC_Part15.209_RE(3m)	Margin: 0
Probe: AC2_BBHA9120D_1-18GHz	Polarity: Vertical
EUT: Smart Camera	Power: AC 120V/60Hz
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	Type
1		*	2461.984	96.671	67.573	N/A	N/A	29.098	PK
2			2483.500	53.795	24.652	-20.205	74.000	29.143	PK
3			2488.816	56.209	27.064	-17.791	74.000	29.145	PK

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

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

Site: AC2	Time: 2020/06/22 - 18:06
Limit: FCC_Part15.209_RE(3m)	Engineer: Hyde Yu
Probe: AC2_BBHA9120D_1-18GHz	Polarity: Vertical
EUT: Smart Camera	Power: AC 120V/60Hz
Test Mode: Transmit by 802.11b at channel 2462MHz	

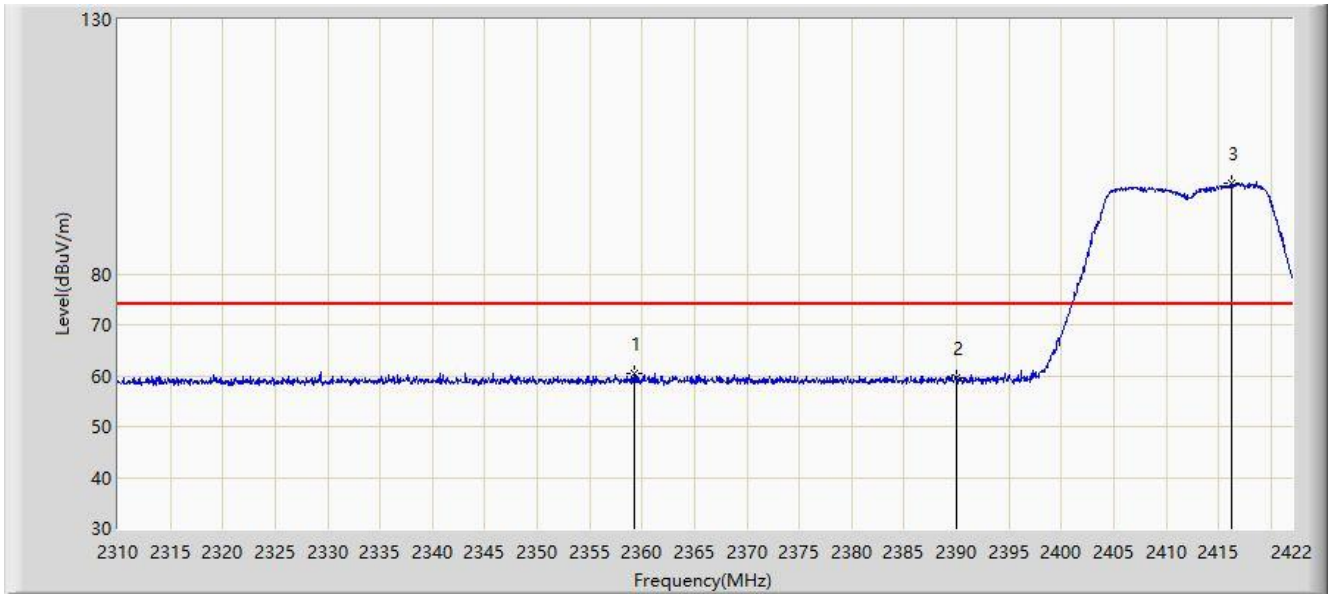


No	Flag	Mark	Frequency (MHz)	Measure Level (dBuV/m)	Reading Level (dBuV)	Margin (dB)	Limit (dBuV/m)	Factor	Type
1		*	2461.168	91.088	61.993	N/A	N/A	29.095	AV
2			2483.500	41.708	12.565	-12.292	54.000	29.143	AV

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

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

Site: AC1	Time: 2020/05/31 - 13:49
Limit: FCC_Part15.209_RE(3m)	Engineer: Buter Shi
Probe: AC1_BBHA9120D_1-18GHz	Polarity: Horizontal
EUT: Smart Camera	Power: AC 120V/60Hz
Test Mode: Transmit by 802.11g at channel 2412MHz	

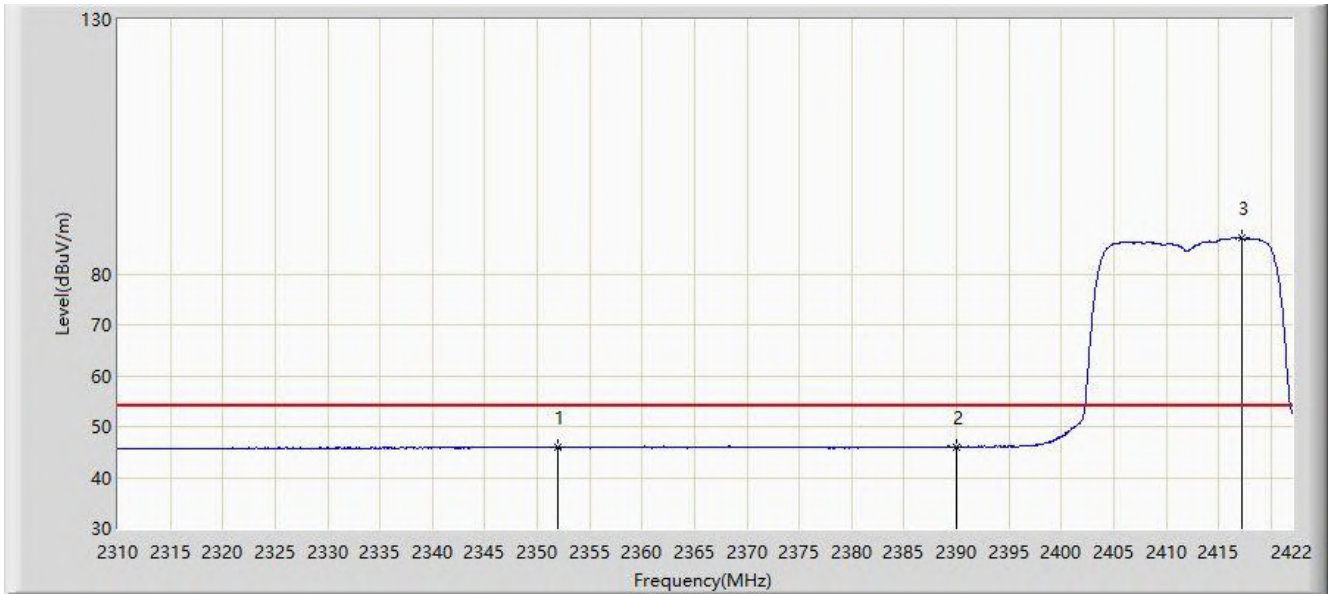


No	Flag	Mark	Frequency (MHz)	Measure Level (dBuV/m)	Reading Level (dBuV)	Margin (dB)	Limit (dBuV/m)	Factor	Type
1			2359.280	60.505	27.740	-13.495	74.000	32.765	PK
2			2390.000	59.570	26.858	-14.430	74.000	32.712	PK
3		*	2416.232	97.934	65.207	N/A	N/A	32.728	PK

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

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

Site: AC1	Time: 2020/05/31 - 14:03
Limit: FCC_Part15.209_RE(3m)	Engineer: Buter Shi
Probe: AC1_BBHA9120D_1-18GHz	Polarity: Horizontal
EUT: Smart Camera	Power: AC 120V/60Hz
Test Mode: Transmit by 802.11g at channel 2412MHz	

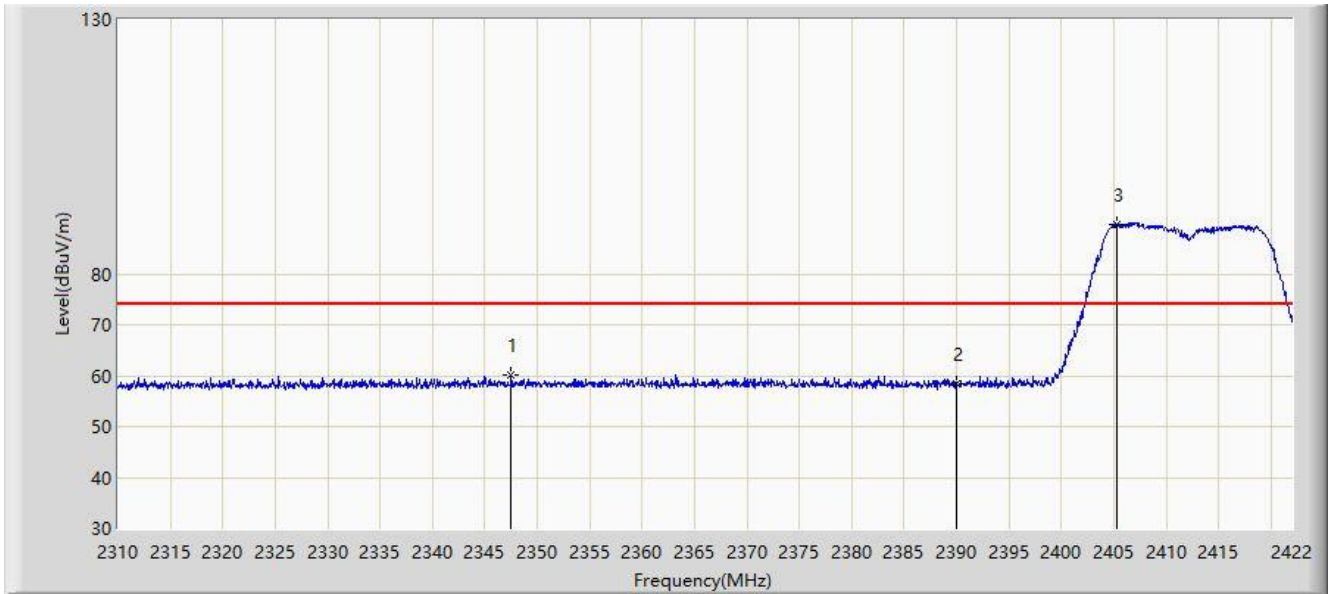


No	Flag	Mark	Frequency (MHz)	Measure Level (dBuV/m)	Reading Level (dBuV)	Margin (dB)	Limit (dBuV/m)	Factor	Type
1			2351.944	46.024	13.242	-7.976	54.000	32.782	AV
2			2390.000	45.949	13.237	-8.051	54.000	32.712	AV
3		*	2417.240	87.010	54.281	N/A	N/A	32.729	AV

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

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

Site: AC1	Time: 2020/05/31 - 14:08
Limit: FCC_Part15.209_RE(3m)	Engineer: Buter Shi
Probe: AC1_BBHA9120D_1-18GHz	Polarity: Vertical
EUT: Smart Camera	Power: AC 120V/60Hz
Test Mode: Transmit by 802.11g at channel 2412MHz	

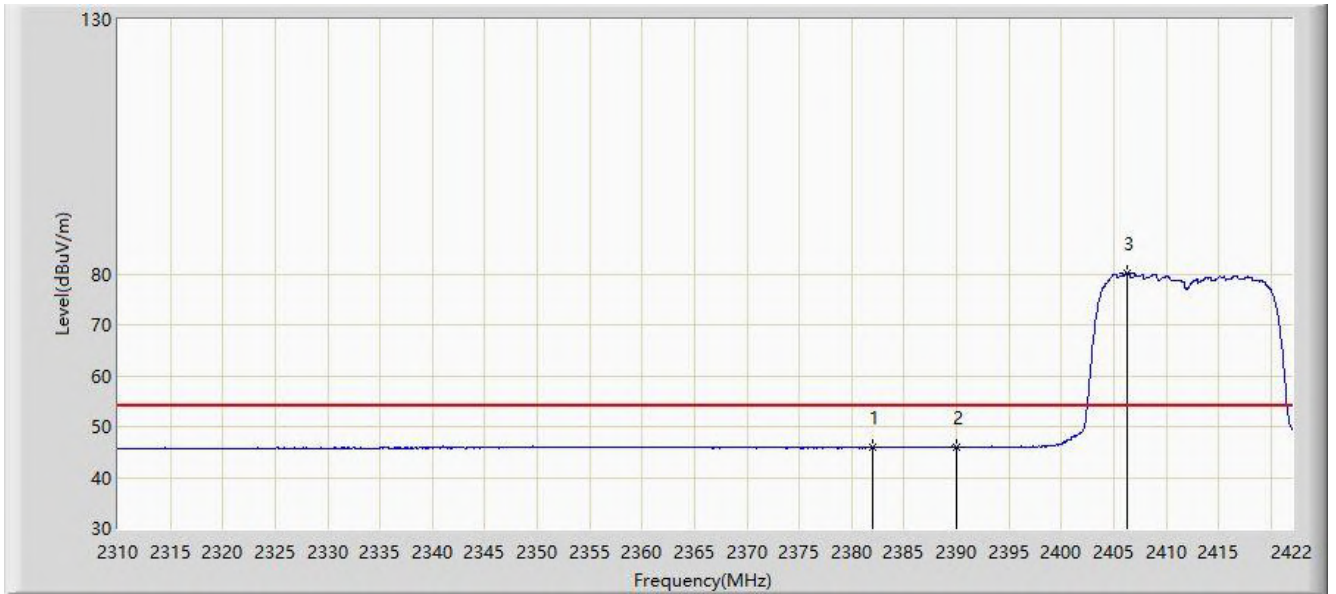


No	Flag	Mark	Frequency (MHz)	Measure Level (dBuV/m)	Reading Level (dBuV)	Margin (dB)	Limit (dBuV/m)	Factor	Type
1			2347.464	60.077	27.285	-13.923	74.000	32.792	PK
2			2390.000	58.331	25.619	-15.669	74.000	32.712	PK
3		*	2405.368	89.816	57.077	N/A	N/A	32.739	PK

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

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

Site: AC1	Time: 2020/05/31 - 14:10
Limit: FCC_Part15.209_RE(3m)	Engineer: Buter Shi
Probe: AC1_BBHA9120D_1-18GHz	Polarity: Vertical
EUT: Smart Camera	Power: AC 120V/60Hz
Test Mode: Transmit by 802.11g at channel 2412MHz	

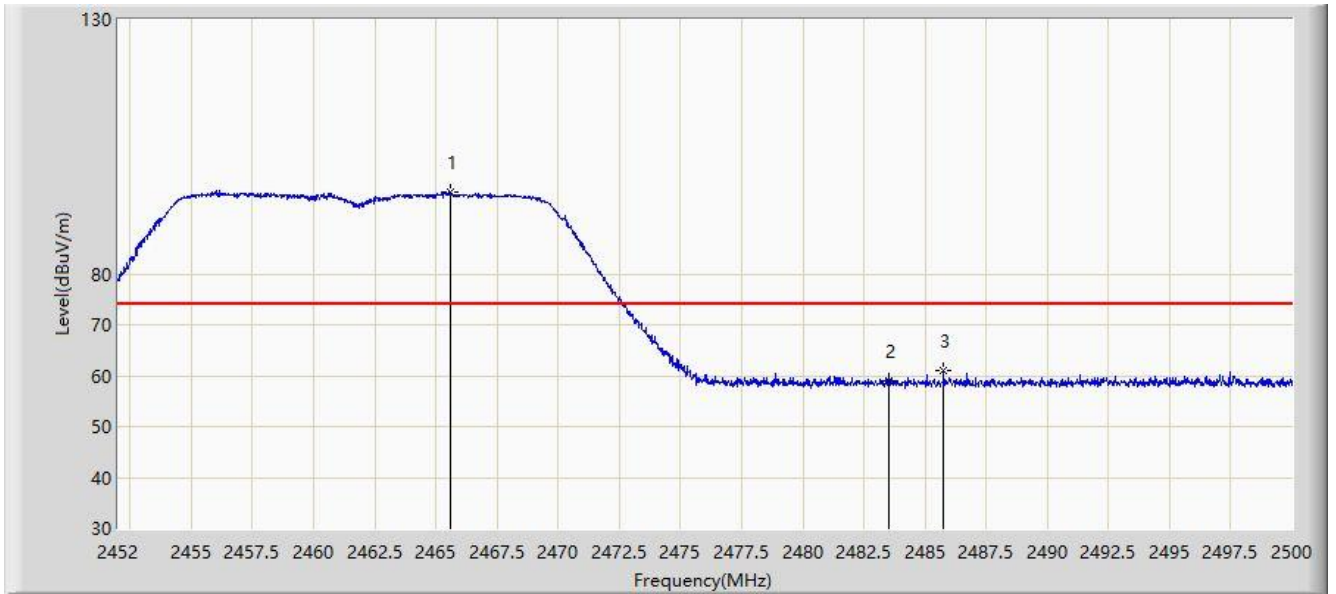


No	Flag	Mark	Frequency (MHz)	Measure Level (dBuV/m)	Reading Level (dBuV)	Margin (dB)	Limit (dBuV/m)	Factor	Type
1			2382.016	46.033	13.358	-7.967	54.000	32.675	AV
2			2390.000	45.911	13.199	-8.089	54.000	32.712	AV
3		*	2406.264	80.166	47.428	N/A	N/A	32.738	AV

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

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

Site: AC1	Time: 2020/05/31 - 14:16
Limit: FCC_Part15.209_RE(3m)	Engineer: Buter Shi
Probe: AC1_BBHA9120D_1-18GHz	Polarity: Horizontal
EUT: Smart Camera	Power: AC 120V/60Hz
Test Mode: Transmit by 802.11g at channel 2462MHz	

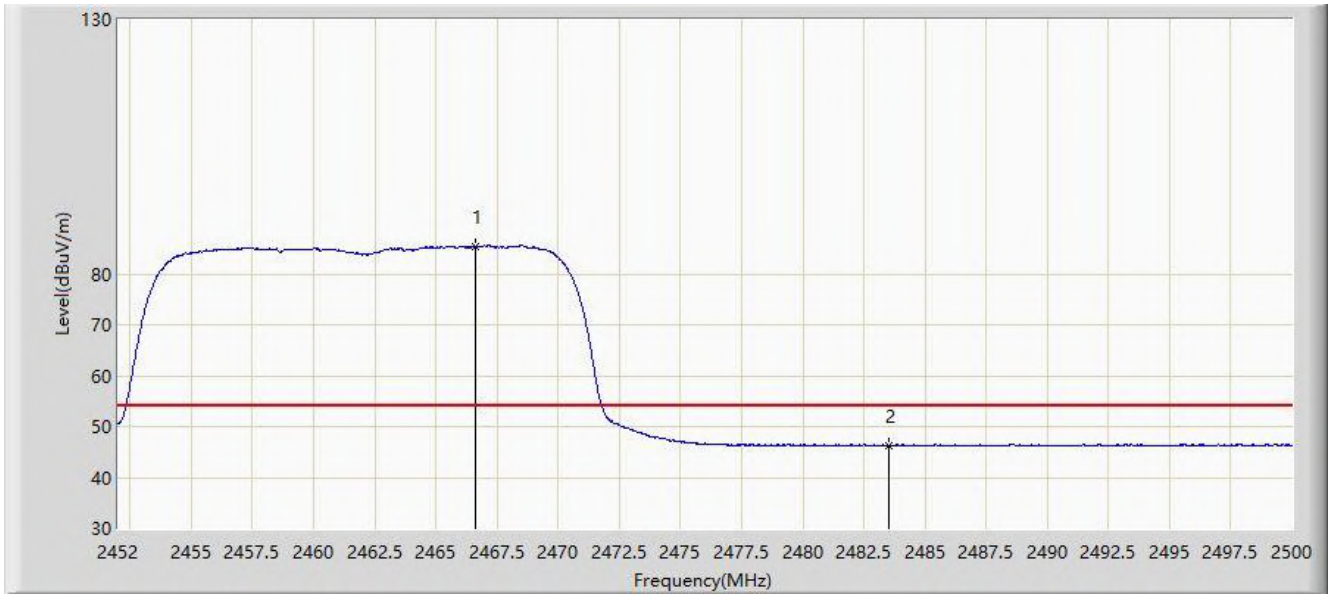


No	Flag	Mark	Frequency (MHz)	Measure Level (dBuV/m)	Reading Level (dBuV)	Margin (dB)	Limit (dBuV/m)	Factor	Type
1		*	2465.608	96.104	63.336	N/A	N/A	32.768	PK
2			2483.500	59.031	26.381	-14.969	74.000	32.651	PK
3			2485.768	60.930	28.299	-13.070	74.000	32.630	PK

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

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

Site: AC1	Time: 2020/05/31 - 14:21
Limit: FCC_Part15.209_RE(3m)	Engineer: Buter Shi
Probe: AC1_BBHA9120D_1-18GHz	Polarity: Horizontal
EUT: Smart Camera	Power: AC 120V/60Hz
Test Mode: Transmit by 802.11g at channel 2462MHz	

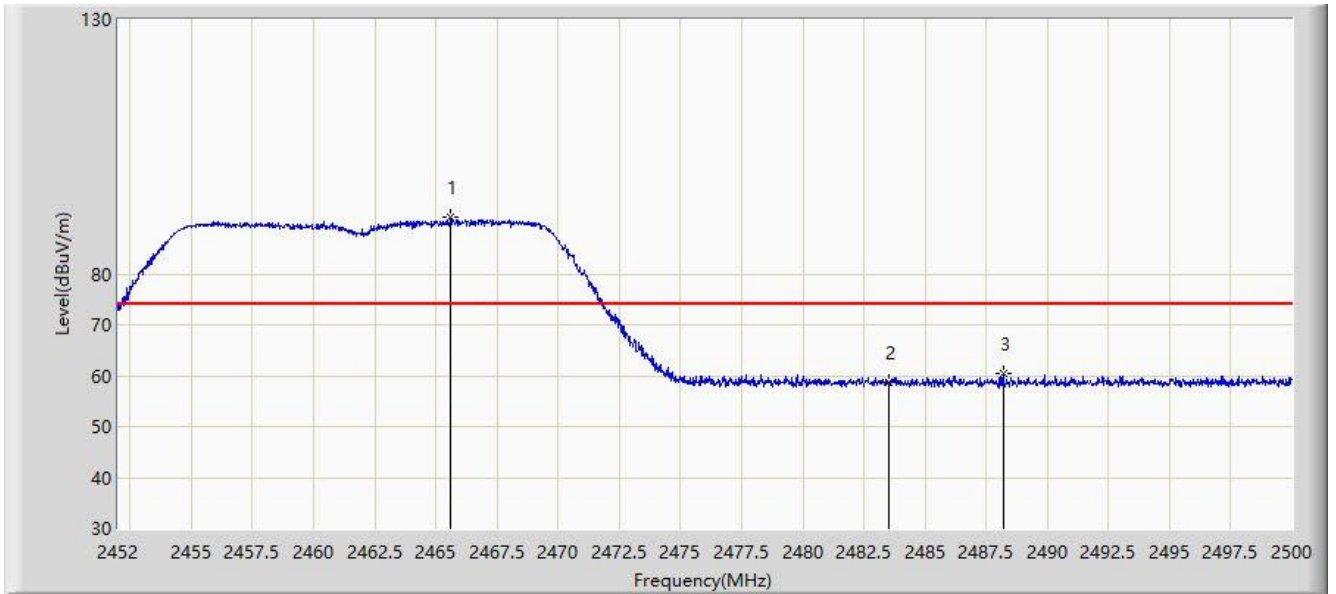


No	Flag	Mark	Frequency (MHz)	Measure Level (dBuV/m)	Reading Level (dBuV)	Margin (dB)	Limit (dBuV/m)	Factor	Type
1		*	2466.592	85.453	52.682	N/A	N/A	32.771	AV
2			2483.500	46.263	13.613	-7.737	54.000	32.651	AV

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

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

Site: AC1	Time: 2020/05/31 - 14:23
Limit: FCC_Part15.209_RE(3m)	Engineer: Buter Shi
Probe: AC1_BBHA9120D_1-18GHz	Polarity: Vertical
EUT: Smart Camera	Power: AC 120V/60Hz
Test Mode: Transmit by 802.11g at channel 2462MHz	

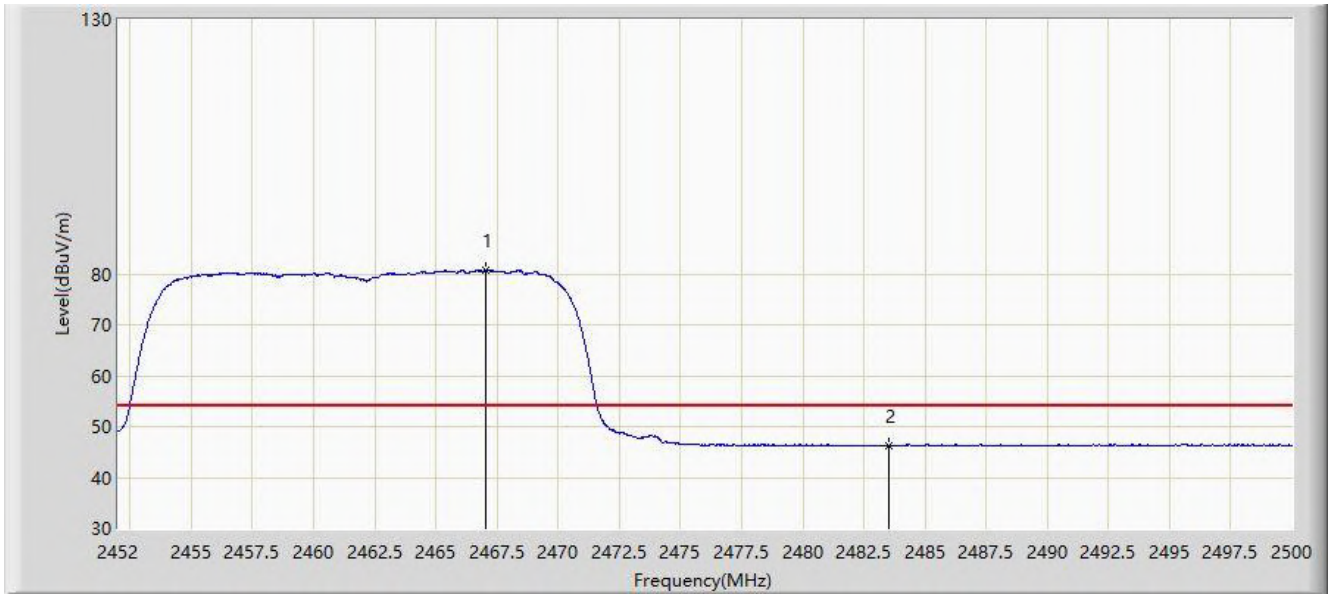


No	Flag	Mark	Frequency (MHz)	Measure Level (dBuV/m)	Reading Level (dBuV)	Margin (dB)	Limit (dBuV/m)	Factor	Type
1		*	2465.608	91.234	58.466	N/A	N/A	32.768	PK
2			2483.500	58.740	26.090	-15.260	74.000	32.651	PK
3			2488.192	60.306	27.691	-13.694	74.000	32.615	PK

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

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

Site: AC1	Time: 2020/05/31 - 14:25
Limit: FCC_Part15.209_RE(3m)	Engineer: Buter Shi
Probe: AC1_BBHA9120D_1-18GHz	Polarity: Vertical
EUT: Smart Camera	Power: AC 120V/60Hz
Test Mode: Transmit by 802.11g at channel 2462MHz	

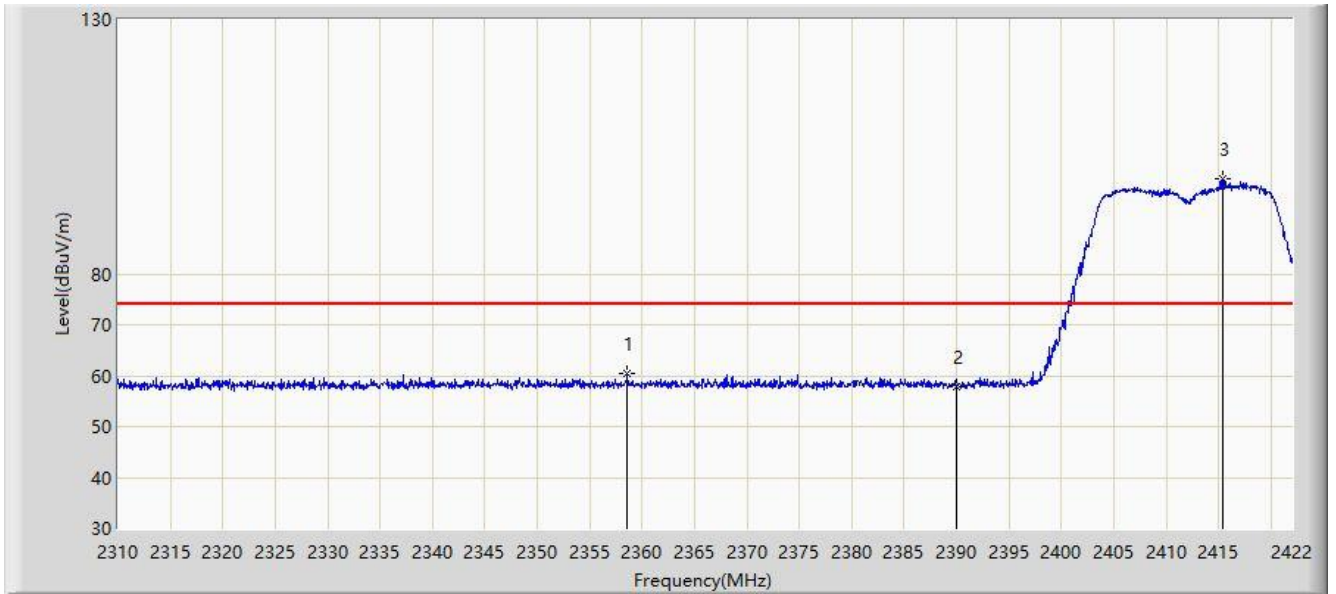


No	Flag	Mark	Frequency (MHz)	Measure Level (dBuV/m)	Reading Level (dBuV)	Margin (dB)	Limit (dBuV/m)	Factor	Type
1		*	2467.048	80.828	48.055	N/A	N/A	32.773	AV
2			2483.500	46.231	13.581	-7.769	54.000	32.651	AV

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

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

Site: AC1	Time: 2020/05/31 - 14:28
Limit: FCC_Part15.209_RE(3m)	Engineer: Buter Shi
Probe: AC1_BBHA9120D_1-18GHz	Polarity: Horizontal
EUT: Smart Camera	Power: AC 120V/60Hz
Test Mode: Transmit by 802.11n-HT20 at channel 2412MHz	

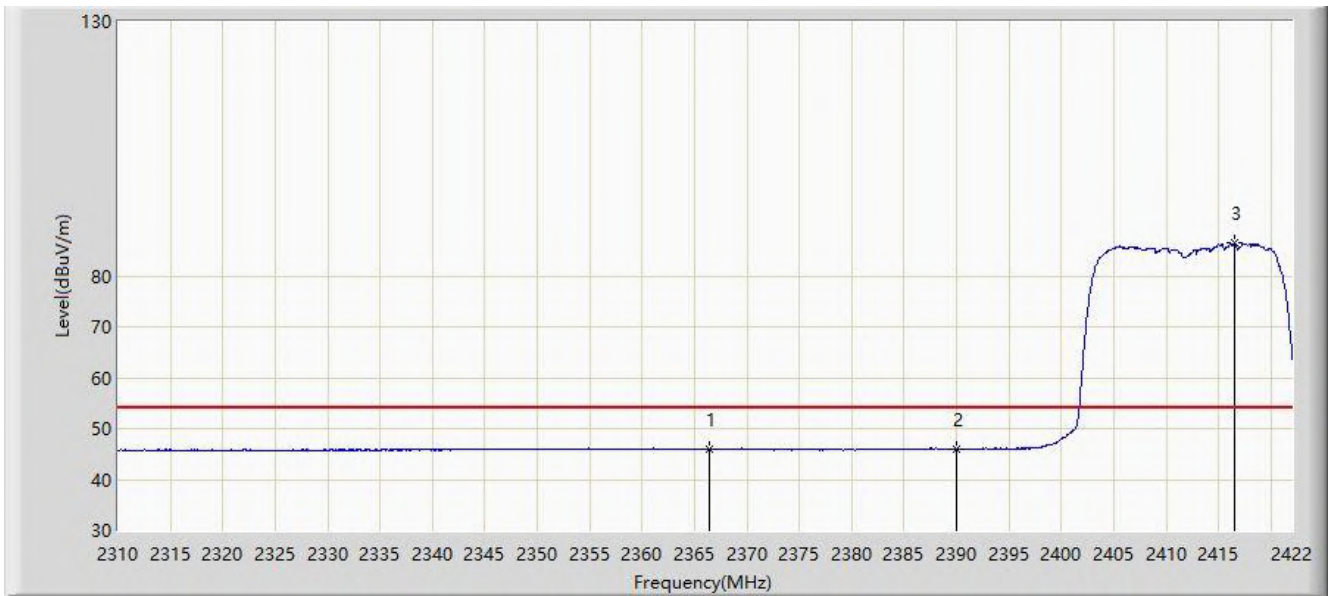


No	Flag	Mark	Frequency (MHz)	Measure Level (dBuV/m)	Reading Level (dBuV)	Margin (dB)	Limit (dBuV/m)	Factor	Type
1			2358.608	60.416	27.650	-13.584	74.000	32.766	PK
2			2390.000	57.897	25.185	-16.103	74.000	32.712	PK
3		*	2415.448	98.744	66.018	N/A	N/A	32.727	PK

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

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

Site: AC1	Time: 2020/05/31 - 14:31
Limit: FCC_Part15.209_RE(3m)	Engineer: Buter Shi
Probe: AC1_BBHA9120D_1-18GHz	Polarity: Horizontal
EUT: Smart Camera	Power: AC 120V/60Hz
Test Mode: Transmit by 802.11n-HT20 at channel 2412MHz	

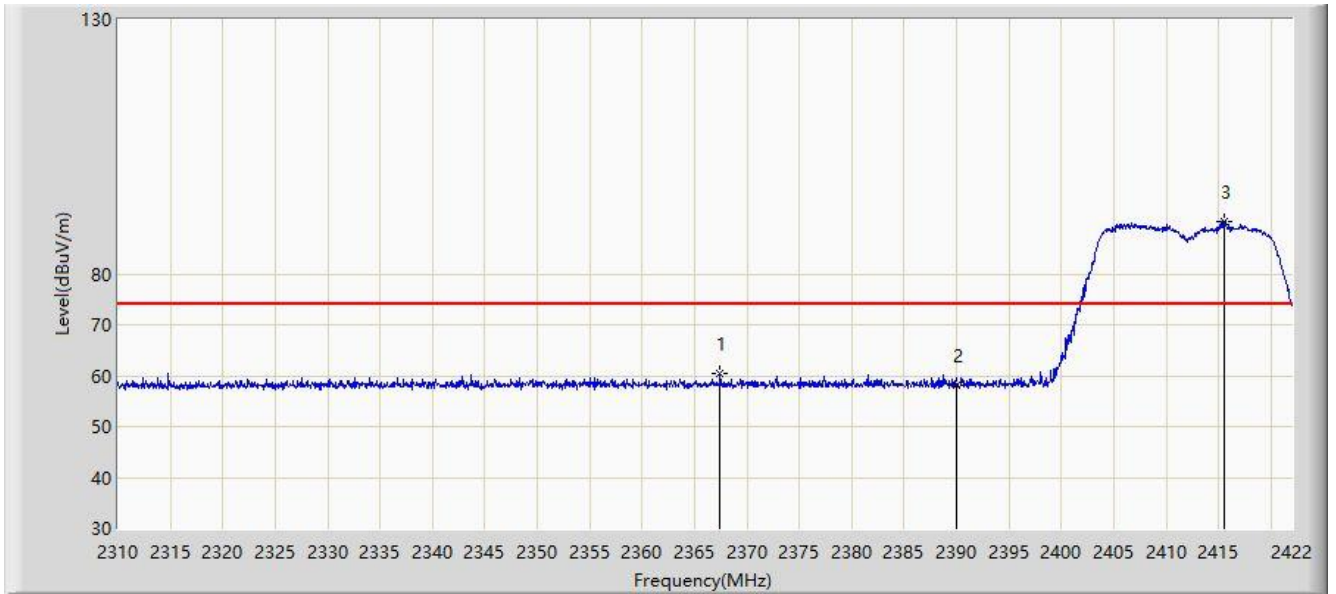


No	Flag	Mark	Frequency (MHz)	Measure Level (dBuV/m)	Reading Level (dBuV)	Margin (dB)	Limit (dBuV/m)	Factor	Type
1			2366.392	46.027	13.293	-7.973	54.000	32.733	AV
2			2390.000	45.987	13.275	-8.013	54.000	32.712	AV
3		*	2416.568	86.390	53.662	N/A	N/A	32.728	AV

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

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

Site: AC1	Time: 2020/05/31 - 14:36
Limit: FCC_Part15.209_RE(3m)	Engineer: Buter Shi
Probe: AC1_BBHA9120D_1-18GHz	Polarity: Vertical
EUT: Smart Camera	Power: AC 120V/60Hz
Test Mode: Transmit by 802.11n-HT20 at channel 2412MHz	

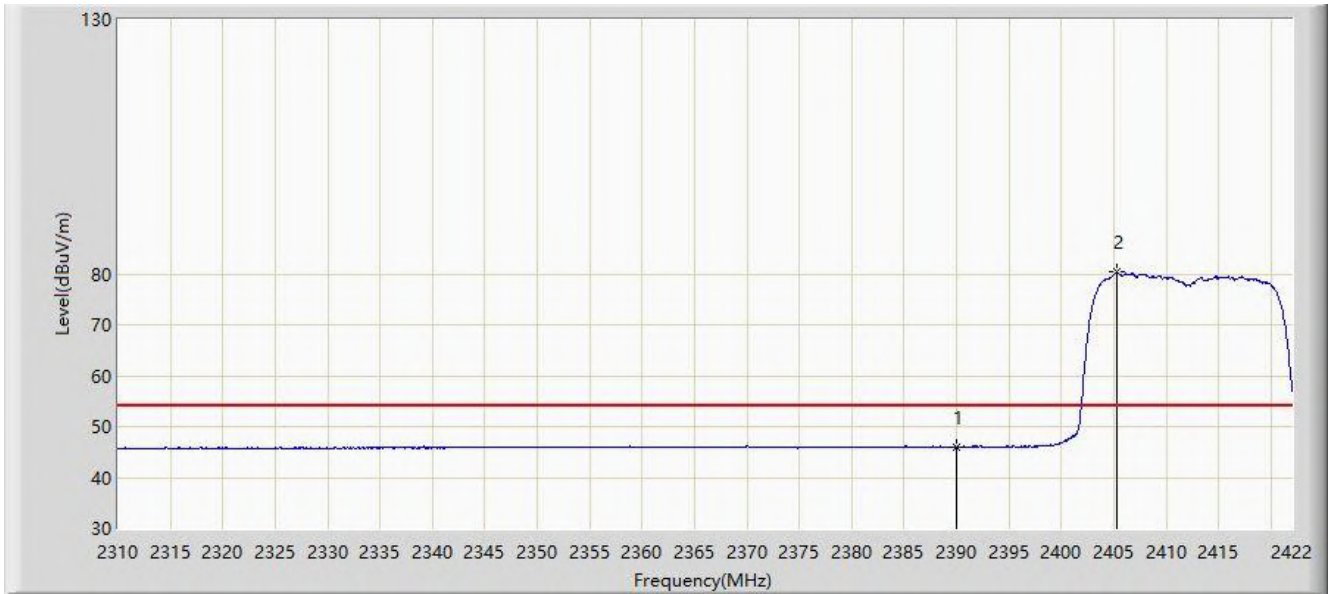


No	Flag	Mark	Frequency (MHz)	Measure Level (dBuV/m)	Reading Level (dBuV)	Margin (dB)	Limit (dBuV/m)	Factor	Type
1			2367.456	60.412	27.684	-13.588	74.000	32.728	PK
2			2390.000	58.185	25.473	-15.815	74.000	32.712	PK
3		*	2415.560	90.405	57.679	N/A	N/A	32.726	PK

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

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

Site: AC1	Time: 2020/05/31 - 14:38
Limit: FCC_Part15.209_RE(3m)	Engineer: Buter Shi
Probe: AC1_BBHA9120D_1-18GHz	Polarity: Vertical
EUT: Smart Camera	Power: AC 120V/60Hz
Test Mode: Transmit by 802.11n-HT20 at channel 2412MHz	

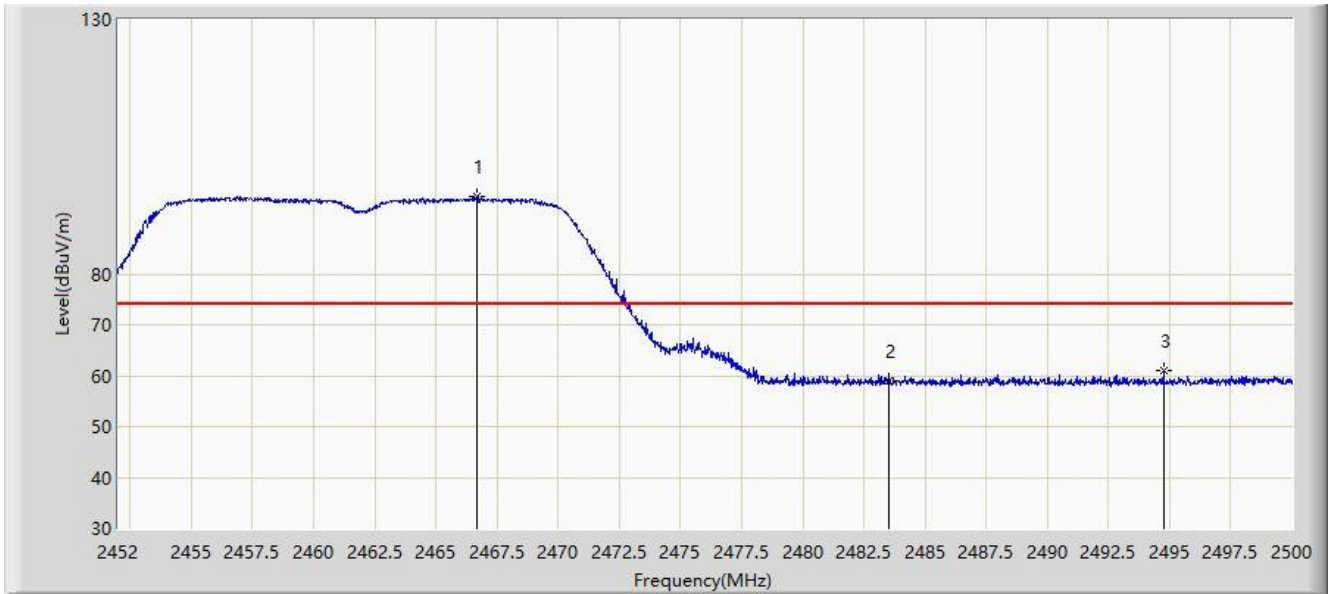


No	Flag	Mark	Frequency (MHz)	Measure Level (dBuV/m)	Reading Level (dBuV)	Margin (dB)	Limit (dBuV/m)	Factor	Type
1			2390.000	45.939	13.227	-8.061	54.000	32.712	AV
2		*	2405.368	80.299	47.560	N/A	N/A	32.739	AV

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

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

Site: AC1	Time: 2020/05/31 - 14:41
Limit: FCC_Part15.209_RE(3m)	Engineer: Buter Shi
Probe: AC1_BBHA9120D_1-18GHz	Polarity: Horizontal
EUT: Smart Camera	Power: AC 120V/60Hz
Test Mode: Transmit by 802.11n-HT20 at channel 2462MHz	

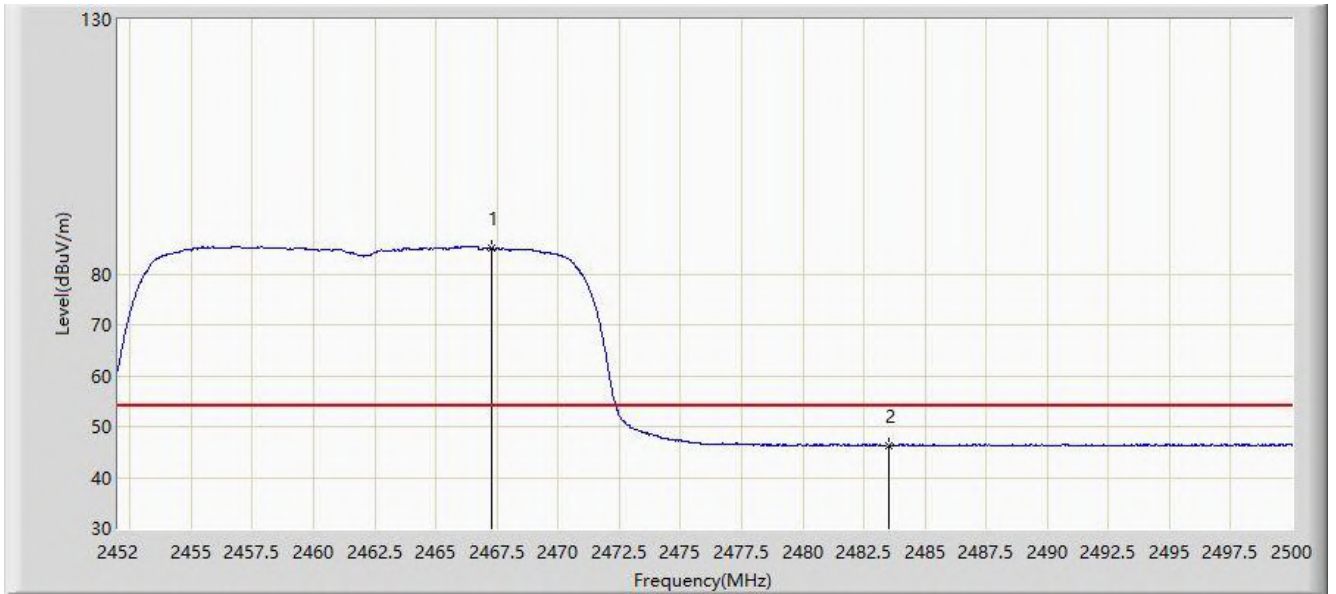


No	Flag	Mark	Frequency (MHz)	Measure Level (dBuV/m)	Reading Level (dBuV)	Margin (dB)	Limit (dBuV/m)	Factor	Type
1		*	2466.688	95.225	62.454	N/A	N/A	32.772	PK
2			2483.500	59.043	26.393	-14.957	74.000	32.651	PK
3			2494.744	60.972	28.354	-13.028	74.000	32.618	PK

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

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

Site: AC1	Time: 2020/05/31 - 14:44
Limit: FCC_Part15.209_RE(3m)	Engineer: Buter Shi
Probe: AC1_BBHA9120D_1-18GHz	Polarity: Horizontal
EUT: Smart Camera	Power: AC 120V/60Hz
Test Mode: Transmit by 802.11n-HT20 at channel 2462MHz	

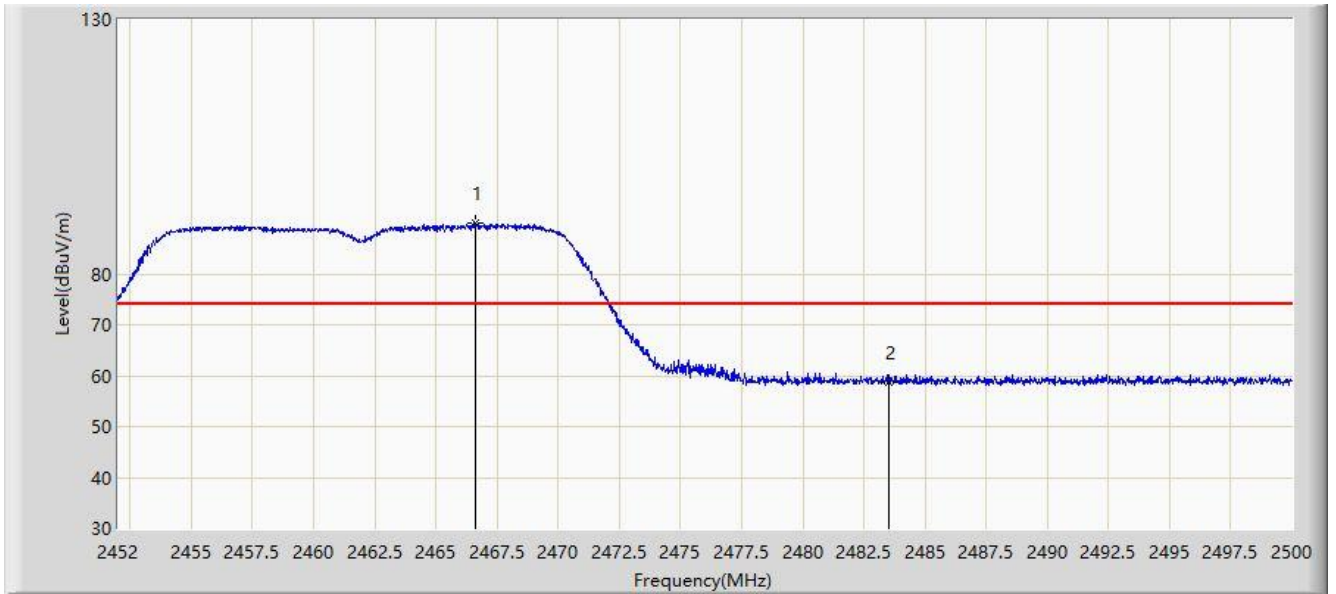


No	Flag	Mark	Frequency (MHz)	Measure Level (dBuV/m)	Reading Level (dBuV)	Margin (dB)	Limit (dBuV/m)	Factor	Type
1		*	2467.288	85.208	52.435	N/A	N/A	32.773	AV
2			2483.500	46.347	13.697	-7.653	54.000	32.651	AV

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

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

Site: AC1	Time: 2020/05/31 - 14:46
Limit: FCC_Part15.209_RE(3m)	Engineer: Buter Shi
Probe: AC1_BBHA9120D_1-18GHz	Polarity: Vertical
EUT: Smart Camera	Power: AC 120V/60Hz
Test Mode: Transmit by 802.11n-HT20 at channel 2462MHz	

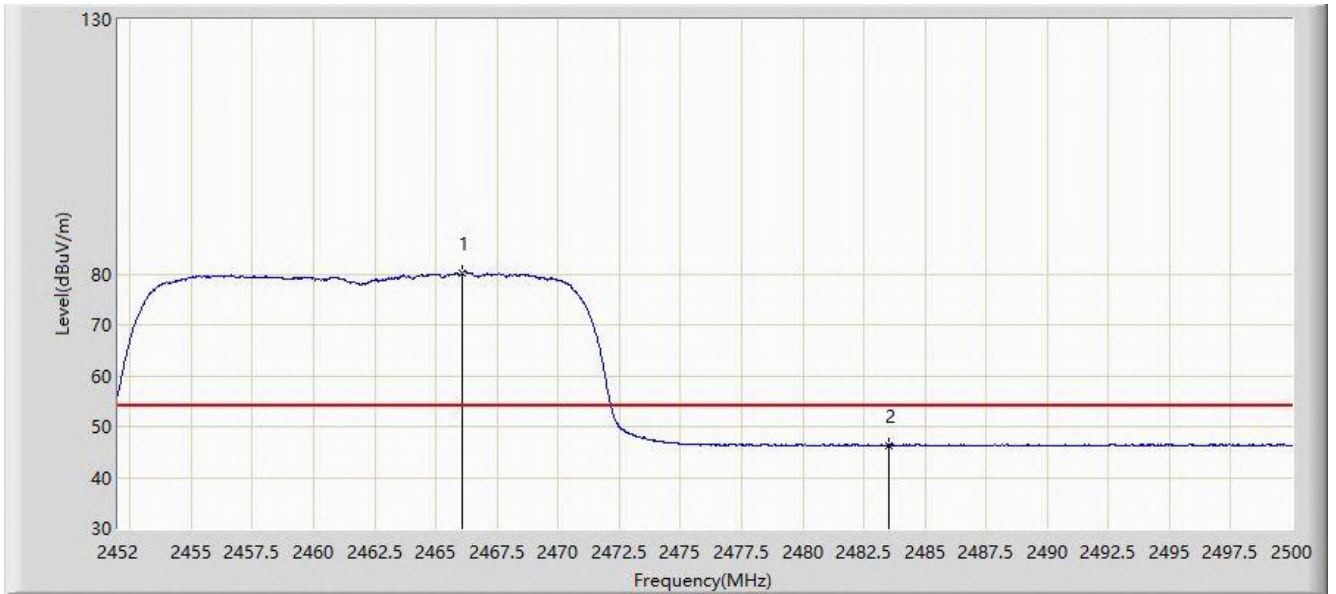


No	Flag	Mark	Frequency (MHz)	Measure Level (dBuV/m)	Reading Level (dBuV)	Margin (dB)	Limit (dBuV/m)	Factor	Type
1		*	2466.640	90.061	57.290	N/A	N/A	32.772	PK
2			2483.500	58.763	26.113	-15.237	74.000	32.651	PK

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

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

Site: AC1	Time: 2020/05/31 - 14:49
Limit: FCC_Part15.209_RE(3m)	Engineer: Buter Shi
Probe: AC1_BBHA9120D_1-18GHz	Polarity: Vertical
EUT: Smart Camera	Power: AC 120V/60Hz
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	Type
1		*	2466.088	80.249	47.479	N/A	N/A	32.769	AV
2			2483.500	46.330	13.680	-7.670	54.000	32.651	AV

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

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

7.8. AC Conducted Emissions Measurement

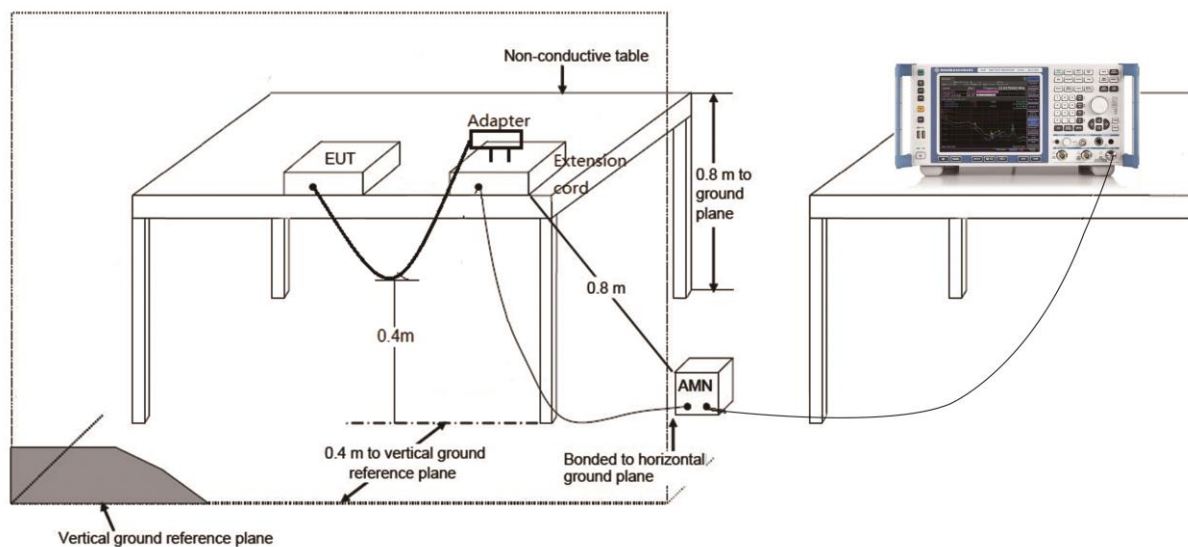
7.8.1. Test Limit

FCC Part 15.207 Limit		
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.

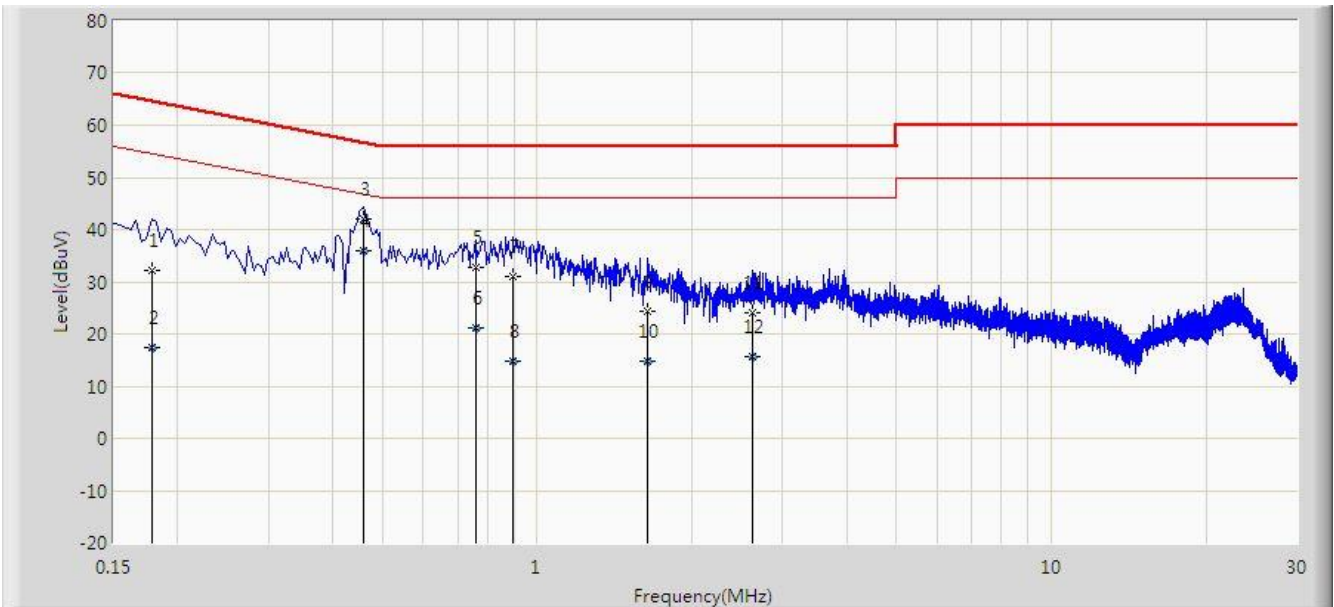
Note 2: The limit decreases linearly with the logarithm of the frequency in the range 0.15MHz to 0.5MHz.

7.8.2. Test Setup



7.8.3.Test Result

Site: SR2	Time: 2020/05/29 - 14:25
Limit: FCC_Part15.207_CE_AC Power	Engineer: Dillon Diao
Probe: ENV216_101683_Filter On	Polarity: Line
EUT: Smart Camera	Power: AC 120V/60Hz
Test Mode: Transmit by 802.11b at Channel 2437MHz	



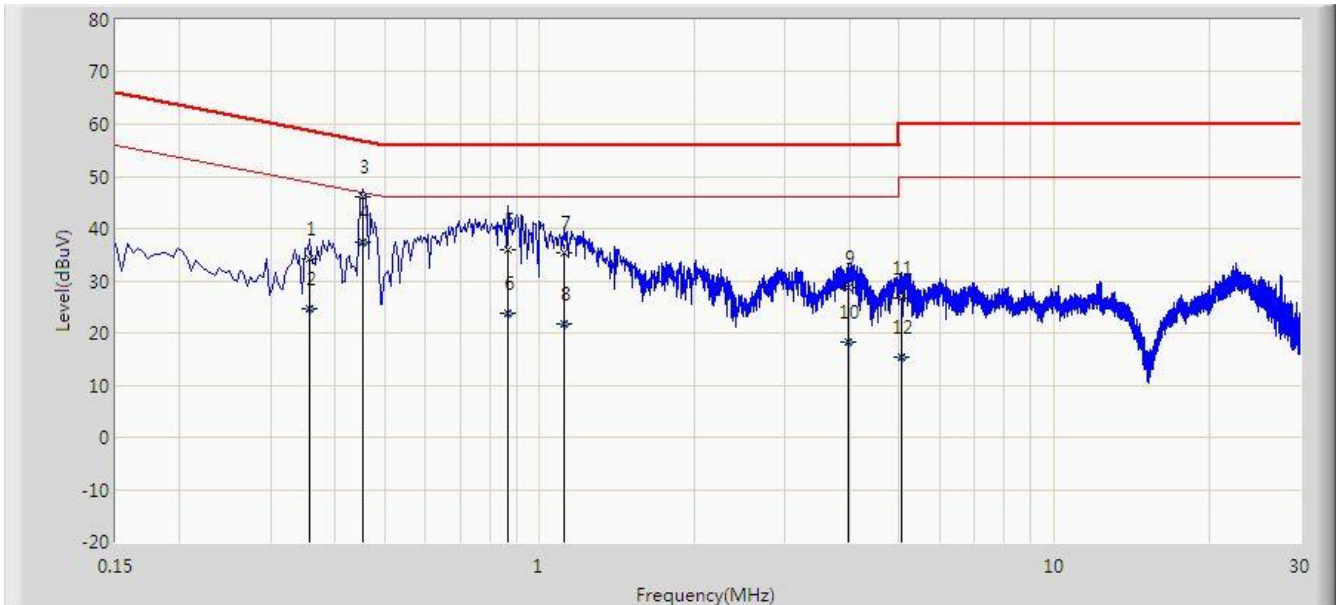
No	Flag	Mark	Frequency (MHz)	Measure Level (dBuV)	Reading Level (dBuV)	Margin (dB)	Limit (dBuV)	Factor (dB)	Type
1			0.178	32.160	22.505	-32.418	64.578	9.655	QP
2			0.178	17.255	7.599	-37.324	54.578	9.655	AV
3			0.458	42.051	32.323	-14.677	56.729	9.728	QP
4		*	0.458	35.973	26.246	-10.755	46.729	9.728	AV
5			0.758	32.750	22.966	-23.250	56.000	9.784	QP
6			0.758	21.263	11.478	-24.737	46.000	9.784	AV
7			0.898	31.090	21.282	-24.910	56.000	9.808	QP
8			0.898	14.677	4.869	-31.323	46.000	9.808	AV
9			1.638	24.381	14.523	-31.619	56.000	9.857	QP
10			1.638	14.811	4.954	-31.189	46.000	9.857	AV
11			2.626	24.023	14.174	-31.977	56.000	9.849	QP
12			2.626	15.722	5.873	-30.278	46.000	9.849	AV

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

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

Note 2: Only exhibited the worst-case test data.

Site: SR2	Time: 2020/05/29 - 14:29
Limit: FCC_Part15.207_CE_AC Power	Engineer: Dillon Diao
Probe: ENV216_101683_Filter On	Polarity: Neutral
EUT: Smart 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			0.358	34.252	24.618	-24.522	58.775	9.635	QP
2			0.358	24.707	15.072	-24.068	48.775	9.635	AV
3			0.454	46.048	36.400	-10.754	56.802	9.647	QP
4		*	0.454	37.360	27.713	-9.441	46.802	9.647	AV
5			0.866	36.075	26.407	-19.925	56.000	9.668	QP
6			0.866	23.697	14.029	-22.303	46.000	9.668	AV
7			1.114	35.308	25.591	-20.692	56.000	9.717	QP
8			1.114	21.816	12.099	-24.184	46.000	9.717	AV
9			3.982	28.780	18.811	-27.220	56.000	9.970	QP
10			3.982	18.177	8.208	-27.823	46.000	9.970	AV
11			5.038	26.722	16.626	-33.278	60.000	10.096	QP
12			5.038	15.380	5.284	-34.620	50.000	10.096	AV

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

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

Note 2: Only exhibited the worst-case test data.

8. CONCLUSION

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

The End

Appendix A - Test Setup Photograph

Refer to “2005RSU047-UT” file.

Appendix B - EUT Photograph

Refer to "2005RSU047-UE" file.