

FCC Test Report

Product Name	VUZE camera
Model No	HETVZ-1
FCC ID.	2AKDRHE1VZ

Applicant	Humaneyes Technologies Ltd.
Address	Communication Center, Neve Ilan D.N. Harey Jerusalem , 9085000

Date of Receipt	Jan. 05, 2017
Issue Date	Feb. 17, 2017
Report No.	1710175R-RFUSP26V00
Report Version	V1.0



The test results relate only to the samples tested.

The test results shown in the test report are traceable to the national/international standard through the calibration report of the equipment and evaluated measurement uncertainty herein.

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Test Report

Issue Date: Feb. 17, 2017

Report No.: 1710175R-RFUSP26V00



Product Name	VUZE camera
Applicant	Humaneyes Technologies Ltd.
Address	Communication Center, Neve Ilan D.N. Harey Jerusalem , 9085000
Manufacturer	ABILITY ENTERPRISE CO., LTD.
Model No.	HETVZ-1
FCC ID.	2AKDRHE1VZ
EUT Rated Voltage	AC 100-240V, 50/60Hz or DC 3.8V By Battery
EUT Test Voltage	AC 120V/60Hz
Trade Name	U
Applicable Standard	FCC CFR Title 47 Part 15 Subpart C: 2016 ANSI C63.4: 2014, ANSI C63.10: 2013 KDB 558074 D01 DTS Meas Guidance v03r05
Test Result	Complied

Documented By :



(Senior Adm. Specialist / Joanne Lin)

Tested By :



(Engineer / Tom Chiu)

Approved By :



(Director / Vincent Lin)

TABLE OF CONTENTS

Description	Page
1. GENERAL INFORMATION	5
1.1. EUT Description.....	5
1.2. Operational Description	7
1.3. Tested System Details.....	8
1.4. Configuration of Tested System	8
1.5. EUT Exercise Software	8
1.6. Test Facility	9
1.7. List of Test Equipment	10
2. Conducted Emission.....	11
2.1. Test Setup	11
2.2. Limits	12
2.3. Test Procedure	12
2.4. Uncertainty	12
2.5. Test Result of Conducted Emission.....	13
3. Peak Power Output	15
3.1. Test Setup	15
3.2. Limits	15
3.3. Test Procedure	15
3.4. Uncertainty	15
3.5. Test Result of Peak Power Output.....	16
4. Radiated Emission.....	19
4.1. Test Setup	19
4.2. Limits	20
4.3. Test Procedure	21
4.4. Uncertainty	21
4.5. Test Result of Radiated Emission.....	22
5. RF antenna conducted test.....	34
5.1. Test Setup	34
5.2. Limits	34
5.3. Test Procedure	34
5.4. Uncertainty	34
5.5. Test Result of RF antenna conducted test.....	35
6. Band Edge	38
6.1. Test Setup	38
6.2. Limits	38
6.3. Test Procedure	38
6.4. Uncertainty	38
6.5. Test Result of Band Edge	39
7. 6dB Bandwidth	51
7.1. Test Setup	51
7.2. Limits	51

7.3.	Test Procedure	51
7.4.	Uncertainty	51
7.5.	Test Result of 6dB Bandwidth.....	52
8.	Power Density	58
8.1.	Test Setup	58
8.2.	Limits	58
8.3.	Test Procedure	58
8.4.	Uncertainty	58
8.5.	Test Result of Power Density	59
9.	EMI Reduction Method During Compliance Testing	65
Attachment 1: EUT Test Photographs		
Attachment 2: EUT Detailed Photographs		

1. GENERAL INFORMATION

1.1. EUT Description

Product Name	VUZE camera
Trade Name	U
Model No.	HETVZ-1
FCC ID.	2AKDRHE1VZ
Frequency Range	802.11b/g/n-20BW: 2412-2462MHz
Number of Channels	802.11b/g/n-20MHz: 11
Data Speed	802.11b: 1-11Mbps, 802.11g: 6-54Mbps, 802.11n: 6.5-65Mbps
Type of Modulation	802.11b:DSSS (DBPSK, DQPSK, CCK) 802.11g/n:OFDM (BPSK, QPSK, 16QAM, 64QAM)
Antenna Type	PIFA Antenna
Antenna Gain	Refer to the table “Antenna List”
Channel Control	Auto
USB Cable	Shielded, 0.8m
Power Adapter	MFR: U, M/N: KSA29B0500200D5 Input: AC 100-240V, 50/60Hz, 0.5A Output: DC 5V, 2A
Contain Module	Broadcom / BCM43340

Antenna List

No.	Manufacturer	Part No.	Antenna Type	Peak Gain
1	LYNwave	PHE2010W	PIFA Antenna	-2.92dBi for 2.4 GHz

Note: The antenna of EUT conforms to FCC 15.203.

802.11b/g/n-20MHz Center Frequency of Each Channel:

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

Note:

1. The EUT is a VUZE camera with a built-in 2.4GHz WLAN transceiver.
2. Regarding to the operation frequency, the lowest, middle and highest frequency are selected to perform the test.
3. Lowest and highest data rates are tested in each mode. Only worst case is shown in the report. (802.11b is 1Mbps 、802.11g is 6Mbps 、802.11n(20M-BW) is 6.5Mbps.
4. These tests are conducted on a sample for the purpose of demonstrating compliance of 802.11b/g/n transmitter with Part 15 Subpart C Paragraph 15.247 of spread spectrum devices.
5. The radiation measurements are performed in X, Y, Z axis positioning. Only the worst case is shown in the report.

Test Mode:	Mode 1: Transmit (802.11b 1Mbps)
	Mode 2: Transmit (802.11g 6Mbps)
	Mode 3: Transmit (802.11n MCS0 6.5Mbps 20M-BW)

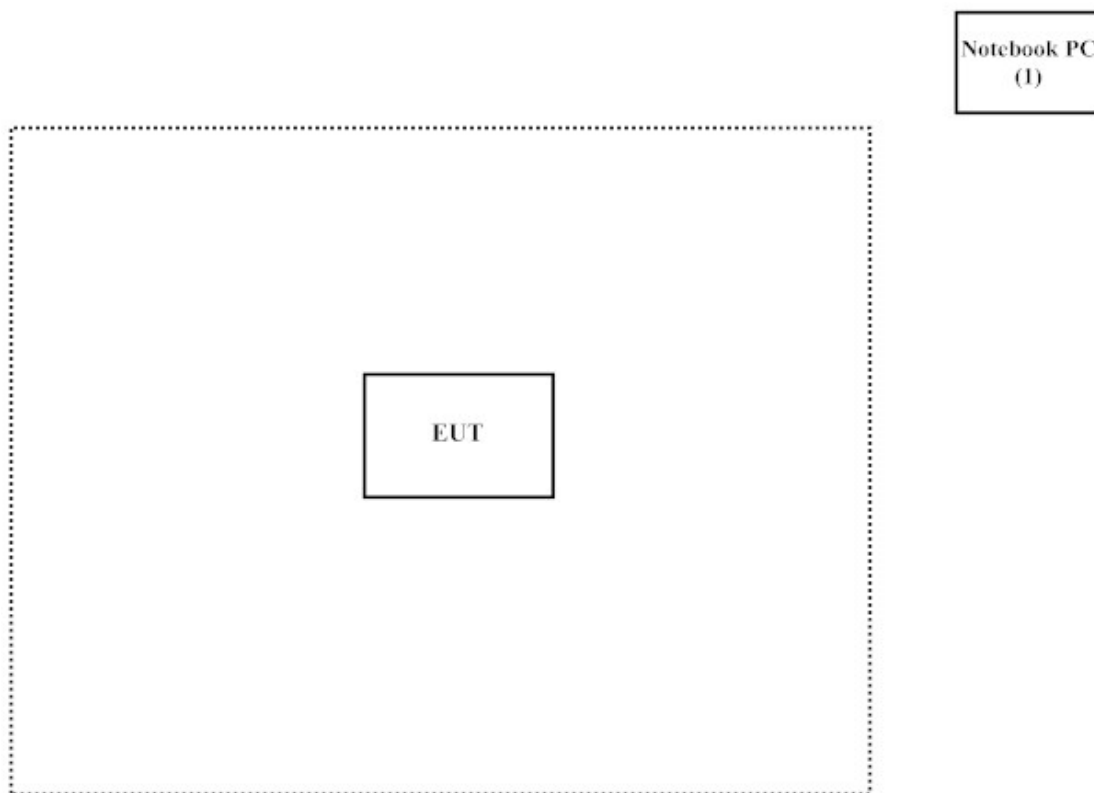
1.3. Tested System Details

The types for all equipment, plus descriptions of all cables used in the tested system (including inserted cards) are:

Product	Manufacturer	Model No.	Serial No.	Power Cord
1 Notebook PC	DELL	Latitude E5440	B6TYTZ1	Non-Shielded, 0.8m

Signal Cable Type	Signal cable Description
N/A	

1.4. Configuration of Tested System



1.5. EUT Exercise Software

1. Setup the EUT as shown in Section 1.4.
2. Execute software "Hevu Mobile Emulator" on the Notebook.
3. Configure the test mode, the test channel, and the data rate.
4. Press "OK" to start the continuous Transmit.
5. Verify that the EUT works properly.

1.6. Test Facility

Ambient conditions in the laboratory:

Items	Required (IEC 68-1)	Actual
Temperature (°C)	15-35	20-35
Humidity (%RH)	25-75	50-65
Barometric pressure (mbar)	860-1060	950-1000

The related certificate for our laboratories about the test site and management system can be downloaded from DEKRA Testing and Certification Co., Ltd. Web Site:

<http://www.dekra.com.tw/english/about/certificates.aspx?bval=5>

The address and introduction of DEKRA Testing and Certification Co., Ltd. laboratories can be founded in our Web site: http://www.dekra.com.tw/index_en.aspx

Site Description: Accredited by TAF
Accredited Number: 3023

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E-Mail : info.tw@dekra.com

FCC Accreditation Number: TW1014

1.7. List of Test Equipment

For Conducted measurements / CB3 / SR8

	Equipment	Manufacturer	Model No.	Serial No.	Cali. Data	Due. Data
	Temperature Chamber	WIT GROUP	TH-1S-B	EQ-201-00146	2016/11/28	2017/11/27
X	Spectrum Analyzer	Agilent	N9010A	MY48030495	2016/7/22	2017/7/21
X	Power Meter	Anritsu	ML2495A	6K00003357	2016/6/23	2017/6/22
X	Pulse power sensor	Anritsu	MA2411B	0846193	2016/6/23	2017/6/22
X	EMI Test Receiver	R&S	ESCS 30	100369	2016/10/13	2017/10/12
X	LISN	R&S	ESH3-Z5	836679/017	2017/1/7	2018/1/6
X	LISN	R&S	ENV216	100097	2017/1/7	2018/1/6
X	Coaxial Cable	QTK(Arnist)	RG 400	LC018-RG	2016/6/25	2017/6/24

For Radiated measurements / Site3 / CB8

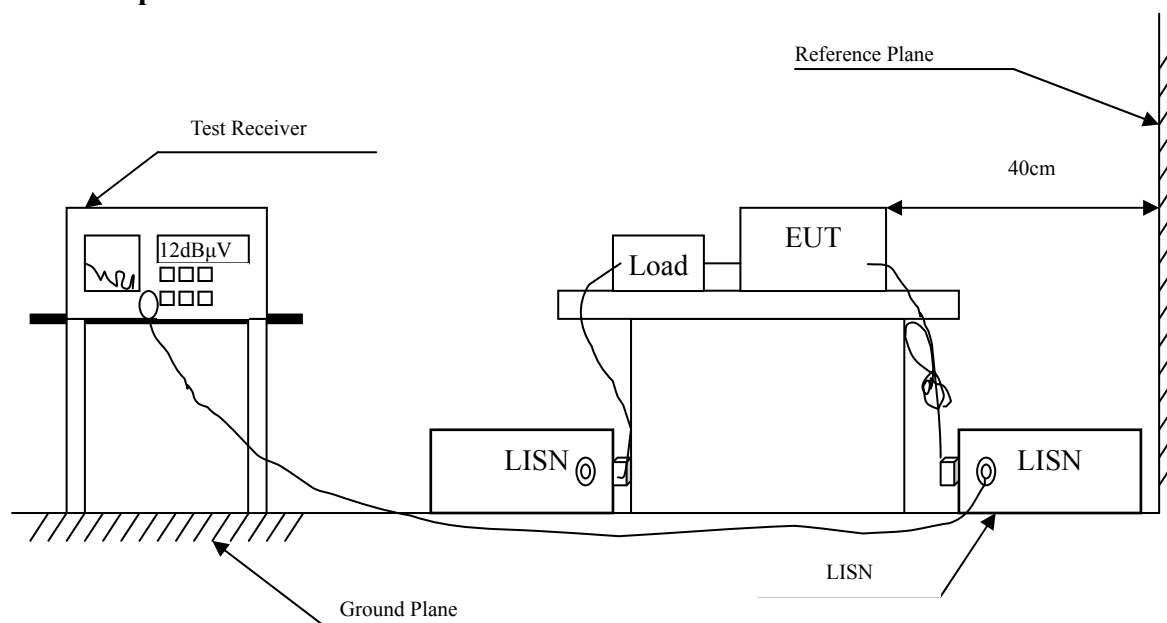
	Equipment	Manufacturer	Model No.	Serial No.	Cali. Data	Due. Data
X	Spectrum Analyzer	R&S	FSP40	100170	2017/1/5	2018/1/4
	Loop Antenna	Teseq	HLA6121	37133	2016/3/18	2017/3/17
X	Bi-Log Antenna	Schaffner Chase	CBL6112B	2707	2016/6/11	2017/6/10
X	Horn Antenna	ETS-Lindgren	3117	00135205	2016/4/6	2017/4/5
	Horn Antenna	Schwarzbeck	BBHA9170	9170430	2017/1/11	2018/1/10
X	Pre-Amplifier	QTK	AP/0100A	CHM/0901069	2016/6/23	2017/6/22
X	Pre-Amplifier	EMCI	EMC012630SE	980210	2017/1/26	2018/1/24
	Pre-Amplifier	NARDA WE	DBL-1840N506	013	2016/9/30	2017/9/29
X	Filter	MicroTRON	BRM50701	019	2016/11/2	2017/11/1
	Filter	Microwave Circuits	N0257881	36681	2016/12/7	2017/12/6
X	EMI Test Receiver	R&S	ESR26	101385	2016/9/29	2017/9/28
X	Coaxial Cable	QTK(Arnist)	SUCOFLEX 106	L1606-015C	2016/6/23	2017/6/22
X	EMI Test Receiver	R&S	ESCS 30	838251/001	2016/7/21	2017/7/20
X	Coaxial Cable	QTK(Arnist)	RG 214	LC003-RG	2016/6/16	2017/6/15
X	Coaxial signal switch	Anritsu	MP59B	6201415889	2016/6/16	2017/6/15

Note:

1. All equipments are calibrated every one year.
2. The test instruments marked with "X" are used to measure the final test results.
3. Test Software version :QuieTek EMI 2.0 V2.1.113.

2. Conducted Emission

2.1. Test Setup



2.2. Limits

FCC Part 15 Subpart C Paragraph 15.207 (dBμV) Limit		
Frequency MHz	Limits	
	QP	AVG
0.15 - 0.50	66-56	56-46
0.50-5.0	56	46
5.0 - 30	60	50

2.3. Test Procedure

The EUT and simulators are connected to the main power through a line impedance stabilization network (L.I.S.N.). This provides a 50 ohm /50uH coupling impedance for the measuring equipment. The peripheral devices are also connected to the main power through a LISN that provides a 50ohm /50uH coupling impedance with 50ohm termination. (Please refers to the block diagram of the test setup and photographs.)

Both sides of A.C. line are checked for maximum conducted interference. In order to find the maximum emission, the relative positions of equipment and all of the interface cables must be changed according to ANSI C63.4: 2014 on conducted measurement.

Conducted emissions were investigated over the frequency range from 0.15MHz to 30MHz using a receiver bandwidth of 9kHz.

2.4. Uncertainty

± 2.26 dB

2.5. Test Result of Conducted Emission

Product : VUZE camera
 Test Item : Conducted Emission Test
 Power Line : Line 1
 Test Date : 2017/01/14
 Test Mode : Mode 3: Transmit (802.11n MCS0 6.5Mbps 20M-BW) (2437MHz)

Frequency MHz	Correct Factor dB	Reading Level dB μ V	Measurement Level dB μ V	Margin dB	Limit dB μ V
Line 1					
Quasi-Peak					
0.166	9.683	35.350	45.033	-20.510	65.543
0.619	9.689	25.770	35.459	-20.541	56.000
1.384	9.714	24.930	34.644	-21.356	56.000
2.646	9.754	23.720	33.474	-22.526	56.000
4.162	9.778	21.420	31.198	-24.802	56.000
16.795	9.969	19.290	29.259	-30.741	60.000
Average					
0.166	9.683	22.540	32.223	-23.320	55.543
0.619	9.689	19.750	29.439	-16.561	46.000
1.384	9.714	14.770	24.484	-21.516	46.000
2.646	9.754	14.430	24.184	-21.816	46.000
4.162	9.778	12.640	22.418	-23.582	46.000
16.795	9.969	13.450	23.419	-26.581	50.000

Note:

1. All Reading Levels are Quasi-Peak and average value.
2. “” means the worst emission level.
3. Measurement Level = Reading Level + Correct Factor

Product : VUZE camera
 Test Item : Conducted Emission Test
 Power Line : Line 2
 Test Date : 2017/01/13
 Test Mode : Mode 3: Transmit (802.11n MCS0 6.5Mbps 20M-BW) (2437MHz)

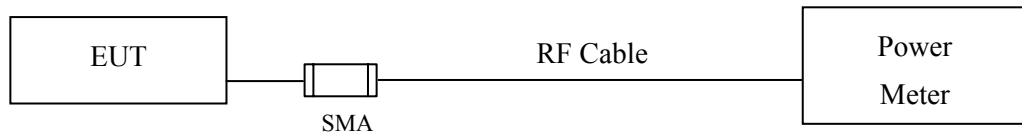
Frequency	Correct	Reading	Measurement	Margin	Limit
	Factor	Level	Level		
MHz	dB	dB μ V	dB μ V	dB	dB μ V
Line 2					
Quasi-Peak					
0.158	9.665	32.840	42.505	-23.266	65.771
0.283	9.659	21.000	30.659	-31.541	62.200
0.986	9.691	20.620	30.311	-25.689	56.000
2.373	9.731	19.620	29.351	-26.649	56.000
4.334	9.769	16.120	25.889	-30.111	56.000
19.416	10.123	17.020	27.143	-32.857	60.000
Average					
0.158	9.665	19.360	29.025	-26.746	55.771
0.283	9.659	11.460	21.119	-31.081	52.200
0.986	9.691	14.050	23.741	-22.259	46.000
2.373	9.731	12.810	22.541	-23.459	46.000
4.334	9.769	9.140	18.909	-27.091	46.000
19.416	10.123	10.400	20.523	-29.477	50.000

Note:

1. All Reading Levels are Quasi-Peak and average value.
2. “ ” means the worst emission level.
3. Measurement Level = Reading Level + Correct Factor

3. Peak Power Output

3.1. Test Setup



3.2. Limits

The maximum peak power shall be less 1 Watt.

3.3. Test Procedure

The EUT was tested according to DTS test procedure of KDB 558074 for compliance to FCC 47CFR 15.247 requirements. The maximum peak conducted output power using KDB 558074 D01 DTS Meas Guidance v03r04 section 9.1.2 PKPM1 Peak power meter method.

3.4. Uncertainty

± 1.19 dB

3.5. Test Result of Peak Power Output

Product : VUZE camera
 Test Item : Peak Power Output Data
 Test Site : No.3 OATS
 Test Date : 2017/01/19
 Test Mode : Mode 1: Transmit (802.11b 1Mbps)

Channel No	Frequency (MHz)	Average Power For different Data Rate (Mbps)				Peak Power	Required Limit	Result
		1	2	5.5	11	1		
		Measurement Level (dBm)						
01	2412	7.25	--	--	--	11.36	<30dBm	Pass
06	2437	7.14	7.08	7.01	6.94	11.25	<30dBm	Pass
11	2462	7.29	--	--	--	11.37	<30dBm	Pass

Note: Peak Power Output Value = Reading value on power meter + cable loss

Product : VUZE camera
 Test Item : Peak Power Output Data
 Test Site : No.3 OATS
 Test Date : 2017/01/19
 Test Mode : Mode 2: Transmit (802.11g 6Mbps)

Channel No	Frequency (MHz)	Average Power For different Data Rate (Mbps)								Peak Power	Required Limit	Result
		6	9	12	18	24	36	48	54			
		Measurement Level (dBm)										
01	2412	6.61	--	--	--	--	--	--	--	18.65	<30dBm	Pass
06	2437	6.69	6.61	6.54	6.48	6.42	6.38	6.31	6.27	18.81	<30dBm	Pass
11	2462	6.98	--	--	--	--	--	--	--	18.92	<30dBm	Pass

Note: Peak Power Output Value = Reading value on power meter + cable loss

Product : VUZE camera
 Test Item : Peak Power Output Data
 Test Site : No.3 OATS
 Test Date : 2017/01/19
 Test Mode : Mode 3: Transmit (802.11n MCS0 6.5Mbps 20M-BW)

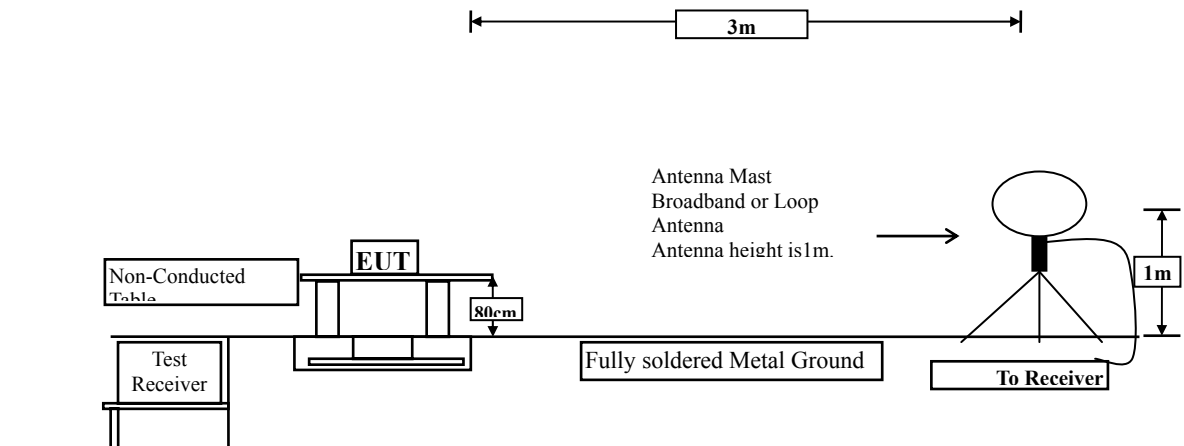
Channel No	Frequency (MHz)	Average Power For different Data Rate (Mbps)								Peak Power	Required Limit	Result
		6.5	13	19.5	26	39	52	58.5	65			
		Measurement Level (dBm)										
01	2412	6.59	--	--	--	--	--	--	--	18.02	<30dBm	Pass
06	2437	6.64	6.57	6.52	6.48	6.43	6.4	6.37	6.32	18.43	<30dBm	Pass
11	2462	6.97	--	--	--	--	--	--	--	18.87	<30dBm	Pass

Note: Peak Power Output Value = Reading value on power meter + cable loss

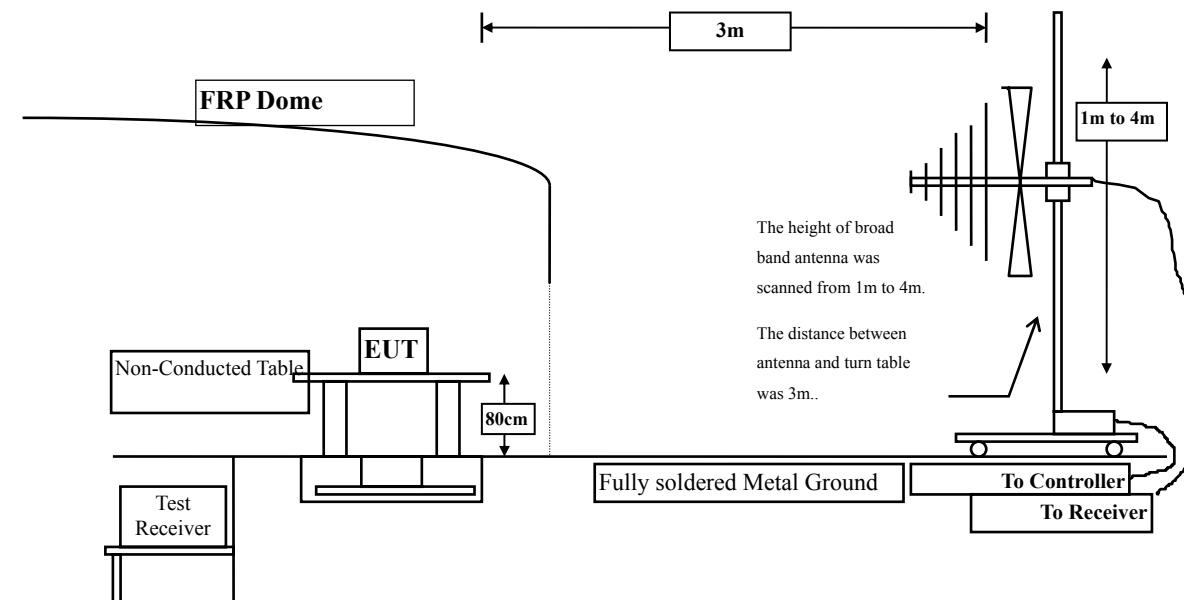
4. Radiated Emission

4.1. Test Setup

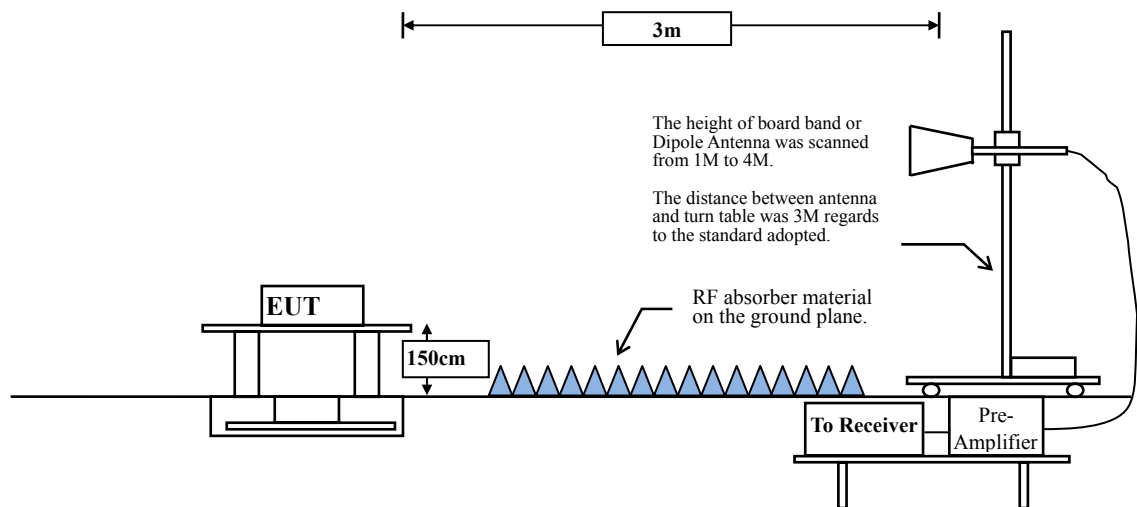
Radiated Emission Under 30MHz



Radiated Emission Below 1GHz



Radiated Emission Above 1GHz



4.2. Limits

Emissions radiated outside of the specified frequency bands, except for harmonics, shall be attenuated by at least 20dB below the level of the fundamental or to the general radiated emission limits in paragraph 15.209, whichever is the lesser attenuation.

FCC Part 15 Subpart C Paragraph 15.209(a) Limits		
Frequency MHz	Field strength (microvolts/meter)	Measurement distance (meter)
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

Remarks: E field strength (dBμV/m) = 20 log E field strength (uV/m)

4.3. Test Procedure

The EUT was setup according to ANSI C63.10: 2013 and tested according to DTS test procedure of KDB558074 for compliance to FCC 47CFR 15.247 requirements.

Measuring the frequency range below 1GHz, the EUT is placed on a turn table which is 0.8 meter above ground, when measuring the frequency range above 1GHz, the EUT is placed on a turn table which is 1.5 meter above ground.

The turn table is rotated 360 degrees to determine the position of the maximum emission level.

The EUT was positioned such that the distance from antenna to the EUT was 3 meters.

The antenna is scanned between 1 meter and 4 meters to find out the maximum emission level. This is repeated for both horizontal and vertical polarization of the antenna. In order to find the maximum emission, all of the interface cables were manipulated according to ANSI C63.10: 2013 on radiated measurement.

The resolution bandwidth below 30MHz setting on the field strength meter is 9kHz and 30MHz~1GHz is 120kHz and above 1GHz is 1MHz.

Radiated emission measurements below 30MHz are made using Loop Antenna and 30MHz~1GHz are made using broadband Bilog antenna and above 1GHz are made using Horn Antennas.

The measurement is divided into the Preliminary Measurement and the Final Measurement.

The suspected frequencies are searched for in Preliminary Measurement with the measurement antenna kept pointed at the source of the emission both in azimuth and elevation, with the polarization of the antenna oriented for maximum response. The antenna is pointed at an angle towards the source of the emission, and the EUT is rotated in both height and polarization to maximize the measured emission. The emission is kept within the illumination area of the 3 dB bandwidth of the antenna.

The worst radiated emission is measured in the Open Area Test Site on the Final Measurement.

The measurement frequency range from 9kHz - 10th Harmonic of fundamental was investigated.

4.4. Uncertainty

± 4.08 dB above 1GHz

± 4.22 dB below 1GHz

4.5. Test Result of Radiated Emission

Product : VUZE camera
 Test Item : Harmonic Radiated Emission Data
 Test Site : No.3 OATS
 Test Date : 2017/01/13
 Test Mode : Mode 1: Transmit (802.11b 1Mbps) (2412MHz)

Frequency	Correct	Reading	Measurement	Margin	Limit
MHz	Factor	Level	Level		
	dB	dBμV	dBμV/m	dB	dBμV/m

Horizontal

Peak Detector:

4824.000	2.428	40.040	42.469	-31.531	74.000
7236.000	9.177	37.888	47.065	-26.935	74.000
9648.000	10.019	37.783	47.803	-26.197	74.000

Average Detector:

--

Vertical

Peak Detector:

4824.000	2.836	39.796	42.633	-31.367	74.000
7236.000	9.676	37.491	47.167	-26.833	74.000
9648.000	10.556	37.541	48.098	-25.902	74.000

Average Detector:

--

Note:

1. All Readings below 1GHz are Quasi-Peak, above 1GHz are performed with peak and/or average measurements as necessary.
2. Peak measurements: RBW = 1MHz, VBW = 3 MHz, Sweep: Auto.
3. Average measurements: RBW = 1MHz, VBW = 10 Hz, Sweep: Auto.
4. Measurement Level = Reading Level + Correct Factor.
5. Correct Factor = Antenna factor + Cable loss – Amplifier gain.
6. The average measurement was not performed when the peak measured data under the limit of average detection.
7. The emission levels of other frequencies are very lower than the limit and not show in test report.

Product : VUZE camera
 Test Item : Harmonic Radiated Emission Data
 Test Site : No.3 OATS
 Test Date : 2017/01/13
 Test Mode : Mode 1: Transmit (802.11b 1Mbps) (2437 MHz)

Frequency	Correct	Reading	Measurement	Margin	Limit
MHz	Factor	Level	Level		
	dB	dB μ V	dB μ V/m	dB	dB μ V/m
Horizontal					
Peak Detector:					
4874.000	2.076	39.817	41.894	-32.106	74.000
7311.000	9.512	37.664	47.176	-26.824	74.000
9748.000	9.630	37.310	46.940	-27.060	74.000
Average Detector:					
--					
Vertical					
Peak Detector:					
4874.000	2.532	37.739	40.271	-33.729	74.000
7311.000	10.089	37.938	48.027	-25.973	74.000
9748.000	10.266	37.224	47.491	-26.509	74.000
Average Detector:					
--					

Note:

1. All Readings below 1GHz are Quasi-Peak, above 1GHz are performed with peak and/or average measurements as necessary.
2. Peak measurements: RBW = 1MHz, VBW = 3 MHz, Sweep: Auto.
3. Average measurements: RBW = 1MHz, VBW = 10 Hz, Sweep: Auto.
4. Measurement Level = Reading Level + Correct Factor.
5. Correct Factor = Antenna factor + Cable loss – Amplifier gain.
6. The average measurement was not performed when the peak measured data under the limit of average detection.
7. The emission levels of other frequencies are very lower than the limit and not show in test report.

Product : VUZE camera
 Test Item : Harmonic Radiated Emission Data
 Test Site : No.3 OATS
 Test Date : 2017/01/13
 Test Mode : Mode 1: Transmit (802.11b 1Mbps) (2462 MHz)

Frequency MHz	Correct Factor dB	Reading Level dB μ V	Measurement Level dB μ V/m	Margin dB	Limit dB μ V/m
Horizontal					
Peak Detector:					
4924.000	2.191	39.450	41.641	-32.359	74.000
7386.000	10.373	37.390	47.764	-26.236	74.000
9848.000	9.964	37.555	47.519	-26.481	74.000
Average Detector:					
--					
Vertical					
Peak Detector:					
4924.000	2.805	39.753	42.558	-31.442	74.000
7386.000	11.180	37.782	48.962	-25.038	74.000
9848.000	10.801	37.782	48.583	-25.417	74.000
Average Detector:					
--					

Note:

1. All Readings below 1GHz are Quasi-Peak, above 1GHz are performed with peak and/or average measurements as necessary.
2. Peak measurements: RBW = 1MHz, VBW = 3 MHz, Sweep: Auto.
3. Average measurements: RBW = 1MHz, VBW = 10 Hz, Sweep: Auto.
4. Measurement Level = Reading Level + Correct Factor.
5. Correct Factor = Antenna factor + Cable loss – Amplifier gain.
6. The average measurement was not performed when the peak measured data under the limit of average detection.
7. The emission levels of other frequencies are very lower than the limit and not show in test report.

Product : VUZE camera
 Test Item : Harmonic Radiated Emission Data
 Test Site : No.3 OATS
 Test Date : 2017/01/13
 Test Mode : Mode 2: Transmit (802.11g 6Mbps) (2412MHz)

Frequency	Correct	Reading	Measurement	Margin	Limit
MHz	Factor	Level	Level		
	dB	dB μ V	dB μ V/m	dB	dB μ V/m
Horizontal					
Peak Detector:					
4824.000	2.428	39.862	42.291	-31.709	74.000
7236.000	9.177	37.955	47.132	-26.868	74.000
9648.000	10.019	37.498	47.518	-26.482	74.000
Average Detector:					
--					
Vertical					
Peak Detector:					
4824.000	2.836	39.676	42.513	-31.487	74.000
7236.000	9.676	38.024	47.700	-26.300	74.000
9648.000	10.556	38.088	48.645	-25.355	74.000
Average Detector:					
--					

Note:

1. All Readings below 1GHz are Quasi-Peak, above 1GHz are performed with peak and/or average measurements as necessary.
2. Peak measurements: RBW = 1MHz, VBW = 3 MHz, Sweep: Auto.
3. Average measurements: RBW = 1MHz, VBW = 10 Hz, Sweep: Auto.
4. Measurement Level = Reading Level + Correct Factor.
5. Correct Factor = Antenna factor + Cable loss – Amplifier gain.
6. The average measurement was not performed when the peak measured data under the limit of average detection.
7. The emission levels of other frequencies are very lower than the limit and not show in test report.

Product : VUZE camera
 Test Item : Harmonic Radiated Emission Data
 Test Site : No.3 OATS
 Test Date : 2017/01/13
 Test Mode : Mode 2: Transmit (802.11g 6Mbps) (2437 MHz)

Frequency MHz	Correct Factor dB	Reading Level dB μ V	Measurement Level dB μ V/m	Margin dB	Limit dB μ V/m
Horizontal					
Peak Detector:					
4874.000	2.076	39.336	41.413	-32.587	74.000
7311.000	9.512	36.865	46.377	-27.623	74.000
9748.000	9.630	36.642	46.272	-27.728	74.000
Average Detector:					
--					
Vertical					
Peak Detector:					
4874.000	2.532	39.584	42.116	-31.884	74.000
7311.000	10.089	37.325	47.414	-26.586	74.000
9748.000	10.266	36.557	46.824	-27.176	74.000
Average Detector:					
--					

Note:

1. All Readings below 1GHz are Quasi-Peak, above 1GHz are performed with peak and/or average measurements as necessary.
2. Peak measurements: RBW = 1MHz, VBW = 3 MHz, Sweep: Auto.
3. Average measurements: RBW = 1MHz, VBW = 10 Hz, Sweep: Auto.
4. Measurement Level = Reading Level + Correct Factor.
5. Correct Factor = Antenna factor + Cable loss – Amplifier gain.
6. The average measurement was not performed when the peak measured data under the limit of average detection.
7. The emission levels of other frequencies are very lower than the limit and not show in test report.

Product : VUZE camera
 Test Item : Harmonic Radiated Emission Data
 Test Site : No.3 OATS
 Test Date : 2017/01/13
 Test Mode : Mode 2: Transmit (802.11g 6Mbps) (2462 MHz)

Frequency MHz	Correct Factor dB	Reading Level dB μ V	Measurement Level dB μ V/m	Margin dB	Limit dB μ V/m
Horizontal					
Peak Detector:					
4924.000	2.191	39.190	41.381	-32.619	74.000
7386.000	10.373	36.557	46.931	-27.069	74.000
9848.000	9.964	37.258	47.222	-26.778	74.000
Average Detector:					
--					
Vertical					
Peak Detector:					
4924.000	2.805	39.293	42.098	-31.902	74.000
7386.000	11.180	36.650	47.830	-26.170	74.000
9848.000	10.801	36.814	47.615	-26.385	74.000
Average Detector:					
--					

Note:

1. All Readings below 1GHz are Quasi-Peak, above 1GHz are performed with peak and/or average measurements as necessary.
2. Peak measurements: RBW = 1MHz, VBW = 3 MHz, Sweep: Auto.
3. Average measurements: RBW = 1MHz, VBW = 10 Hz, Sweep: Auto.
4. Measurement Level = Reading Level + Correct Factor.
5. Correct Factor = Antenna factor + Cable loss – Amplifier gain.
6. The average measurement was not performed when the peak measured data under the limit of average detection.
7. The emission levels of other frequencies are very lower than the limit and not show in test report.

Product : VUZE camera
 Test Item : Harmonic Radiated Emission Data
 Test Site : No.3 OATS
 Test Date : 2017/01/14
 Test Mode : Mode 3: Transmit (802.11n MCS0 6.5Mbps 20M-BW)(2412MHz)

Frequency	Correct	Reading	Measurement	Margin	Limit
	Factor	Level	Level		
MHz	dB	dB μ V	dB μ V/m	dB	dB μ V/m
Horizontal					
Peak Detector:					
4824.000	2.428	39.236	41.665	-32.335	74.000
7236.000	9.177	36.938	46.115	-27.885	74.000
9648.000	10.019	36.711	46.731	-27.269	74.000
Average Detector:					
--					
Vertical					
Peak Detector:					
4824.000	2.836	39.225	42.062	-31.938	74.000
7236.000	9.676	37.449	47.125	-26.875	74.000
9648.000	10.556	37.075	47.632	-26.368	74.000
Average Detector:					
--					

Note:

1. All Readings below 1GHz are Quasi-Peak, above 1GHz are performed with peak and/or average measurements as necessary.
2. Peak measurements: RBW = 1MHz, VBW = 3 MHz, Sweep: Auto.
3. Average measurements: RBW = 1MHz, VBW = 10 Hz, Sweep: Auto.
4. Measurement Level = Reading Level + Correct Factor.
5. Correct Factor = Antenna factor + Cable loss – Amplifier gain.
6. The average measurement was not performed when the peak measured data under the limit of average detection.
7. The emission levels of other frequencies are very lower than the limit and not show in test report.

Product : VUZE camera
 Test Item : Harmonic Radiated Emission Data
 Test Site : No.3 OATS
 Test Date : 2017/01/14
 Test Mode : Mode 3: Transmit (802.11n MCS0 6.5Mbps 20M-BW) (2437 MHz)

Frequency	Correct	Reading	Measurement	Margin	Limit
MHz	Factor	Level	Level		
	dB	dB μ V	dB μ V/m	dB	dB μ V/m

Horizontal**Peak Detector:**

4874.000	2.076	39.803	41.880	-32.120	74.000
7311.000	9.512	37.778	47.290	-26.710	74.000
9748.000	9.630	36.415	46.045	-27.955	74.000

Average Detector:

--

Vertical**Peak Detector:**

4874.000	2.532	39.302	41.834	-32.166	74.000
7311.000	10.089	37.007	47.096	-26.904	74.000
9748.000	10.266	36.442	46.709	-27.291	74.000

Average Detector:

--

Note:

1. All Readings below 1GHz are Quasi-Peak, above 1GHz are performed with peak and/or average measurements as necessary.
2. Peak measurements: RBW = 1MHz, VBW = 3 MHz, Sweep: Auto.
3. Average measurements: RBW = 1MHz, VBW = 10 Hz, Sweep: Auto.
4. Measurement Level = Reading Level + Correct Factor.
5. Correct Factor = Antenna factor + Cable loss – Amplifier gain.
6. The average measurement was not performed when the peak measured data under the limit of average detection.
7. The emission levels of other frequencies are very lower than the limit and not show in test report.

Product : VUZE camera
 Test Item : Harmonic Radiated Emission Data
 Test Site : No.3 OATS
 Test Date : 2017/01/14
 Test Mode : Mode 3: Transmit (802.11n MCS0 6.5Mbps 20M-BW) (2462 MHz)

Frequency MHz	Correct Factor dB	Reading Level dB μ V	Measurement Level dB μ V/m	Margin dB	Limit dB μ V/m
Horizontal					
Peak Detector:					
4924.000	2.191	39.667	41.858	-32.142	74.000
7386.000	10.373	36.541	46.915	-27.085	74.000
9848.000	9.964	37.390	47.354	-26.646	74.000
Average Detector:					
--					
Vertical					
Peak Detector:					
4924.000	2.805	39.086	41.891	-32.109	74.000
7386.000	11.180	36.726	47.906	-26.094	74.000
9848.000	10.801	38.039	48.840	-25.160	74.000
Average Detector:					
--					

Note:

1. All Readings below 1GHz are Quasi-Peak, above 1GHz are performed with peak and/or average measurements as necessary.
2. Peak measurements: RBW = 1MHz, VBW = 3 MHz, Sweep: Auto.
3. Average measurements: RBW = 1MHz, VBW = 10 Hz, Sweep: Auto.
4. Measurement Level = Reading Level + Correct Factor.
5. Correct Factor = Antenna factor + Cable loss – Amplifier gain.
6. The average measurement was not performed when the peak measured data under the limit of average detection.
7. The emission levels of other frequencies are very lower than the limit and not show in test report.

Product : VUZE camera
 Test Item : General Radiated Emission Data
 Test Site : No.3 OATS
 Test Date : 2017/01/14
 Test Mode : Mode 1: Transmit (802.11b 1Mbps)(2437 MHz)

Frequency	Correct	Reading	Measurement	Margin	Limit
MHz	Factor	Level	Level		
	dB	dB μ V	dB μ V/m	dB	dB μ V/m
Horizontal					
193.930	-10.284	44.866	34.582	-8.918	43.500
369.500	0.787	39.941	40.728	-5.272	46.000
527.610	3.093	38.743	41.836	-4.164	46.000
600.360	3.472	40.896	44.368	-1.632	46.000
828.310	7.374	30.739	38.113	-7.887	46.000
984.480	8.098	29.699	37.797	-16.203	54.000
Vertical					
157.070	-5.195	37.562	32.367	-11.133	43.500
369.500	-0.423	33.846	33.423	-12.577	46.000
527.610	1.153	31.656	32.809	-13.191	46.000
600.360	1.302	35.783	37.085	-8.915	46.000
686.690	2.277	29.553	31.830	-14.170	46.000
842.860	2.378	30.903	33.281	-12.719	46.000

Note:

1. All Readings below 1GHz are Quasi-Peak, above 1GHz are performed with peak and/or average measurements as necessary.
2. Peak measurements: RBW = 1MHz, VBW = 3 MHz, Sweep: Auto.
3. Average measurements: RBW = 1MHz, VBW = 10 Hz, Sweep: Auto.
4. Measurement Level = Reading Level + Correct Factor.
5. Correct Factor = Antenna factor + Cable loss – Amplifier gain.
6. The average measurement was not performed when the peak measured data under the limit of average detection.
7. The emission levels of other frequencies are very lower than the limit and not show in test report.
8. No emission found between lowest internal used/generated frequency to 30MHz.

Product : VUZE camera
 Test Item : General Radiated Emission Data
 Test Site : No.3 OATS
 Test Date : 2017/01/14
 Test Mode : Mode 2: Transmit (802.11g 6Mbps)(2437 MHz)

Frequency	Correct	Reading	Measurement	Margin	Limit
	Factor	Level	Level		
MHz	dB	dB μ V	dB μ V/m	dB	dB μ V/m
Horizontal					
193.930	-10.284	44.662	34.378	-9.122	43.500
369.500	0.787	40.207	40.994	-5.006	46.000
491.720	1.521	39.144	40.665	-5.335	46.000
600.360	3.472	39.747	43.219	-2.781	46.000
828.310	7.374	31.468	38.842	-7.158	46.000
984.480	8.098	30.600	38.698	-15.302	54.000
Vertical					
99.840	-6.063	43.830	37.767	-5.733	43.500
364.650	0.321	32.320	32.641	-13.359	46.000
528.580	1.164	32.413	33.577	-12.423	46.000
600.360	1.302	35.045	36.347	-9.653	46.000
756.530	2.683	26.194	28.877	-17.123	46.000
842.860	2.378	31.160	33.538	-12.462	46.000

Note:

1. All Readings below 1GHz are Quasi-Peak, above 1GHz are performed with peak and/or average measurements as necessary.
2. Peak measurements: RBW = 1MHz, VBW = 3 MHz, Sweep: Auto.
3. Average measurements: RBW = 1MHz, VBW = 10 Hz, Sweep: Auto.
4. Measurement Level = Reading Level + Correct Factor.
5. Correct Factor = Antenna factor + Cable loss – Amplifier gain.
6. The average measurement was not performed when the peak measured data under the limit of average detection.
7. The emission levels of other frequencies are very lower than the limit and not show in test report.
8. No emission found between lowest internal used/generated frequency to 30MHz.

Product : VUZE camera
 Test Item : General Radiated Emission Data
 Test Site : No.3 OATS
 Test Date : 2017/01/14
 Test Mode : Mode 3: Transmit (802.11n MCS0 6.5Mbps 20M-BW)(2437 MHz)

Frequency MHz	Correct Factor dB	Reading Level dB μ V	Measurement Level dB μ V/m	Margin dB	Limit dB μ V/m
Horizontal					
192.960	-10.095	44.121	34.026	-9.474	43.500
370.470	0.839	39.438	40.277	-5.723	46.000
491.720	1.521	39.329	40.850	-5.150	46.000
612.000	3.403	39.785	43.187	-2.813	46.000
828.310	7.374	30.974	38.348	-7.652	46.000
984.480	8.098	30.890	38.988	-15.012	54.000
Vertical					
117.300	-3.740	37.684	33.944	-9.556	43.500
238.550	-6.323	32.608	26.285	-19.715	46.000
370.470	-0.431	33.824	33.393	-12.607	46.000
520.820	1.078	26.317	27.394	-18.606	46.000
687.660	2.292	27.107	29.399	-16.601	46.000
833.160	1.716	33.040	34.756	-11.244	46.000

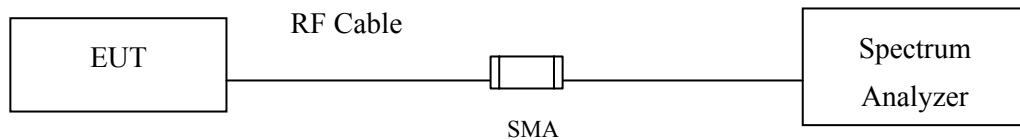
Note:

1. All Readings below 1GHz are Quasi-Peak, above 1GHz are performed with peak and/or average measurements as necessary.
2. Peak measurements: RBW = 1MHz, VBW = 3 MHz, Sweep: Auto.
3. Average measurements: RBW = 1MHz, VBW = 10 Hz, Sweep: Auto.
4. Measurement Level = Reading Level + Correct Factor.
5. Correct Factor = Antenna factor + Cable loss – Amplifier gain.
6. The average measurement was not performed when the peak measured data under the limit of average detection.
7. The emission levels of other frequencies are very lower than the limit and not show in test report.
8. No emission found between lowest internal used/generated frequency to 30MHz.

5. RF antenna conducted test

5.1. Test Setup

RF antenna Conducted Measurement:



5.2. Limits

In any 100 kHz bandwidth outside the frequency band in which the spread spectrum intentional radiator is operating, the radio frequency power that is produced by the intentional radiator shall be at least 20 dB below that in the 100 kHz bandwidth within the band that contains the highest level of the desired power, based on either an RF conducted or a radiated measurement. Attenuation below the general limits specified in Section 15.209(a) is not required. In addition, radiated emissions which fall in the restricted bands, as defined in Section 15.205(a), must also comply with the radiated emission limits specified in Section 15.209(a) (see Section 15.205(c)).

5.3. Test Procedure

The EUT was tested according to DTS test procedure of KDB558074 for compliance to FCC 47CFR 15.247 requirements.

Set RBW = 100 kHz, Set VBW > RBW, scan up through 10th harmonic.

5.4. Uncertainty

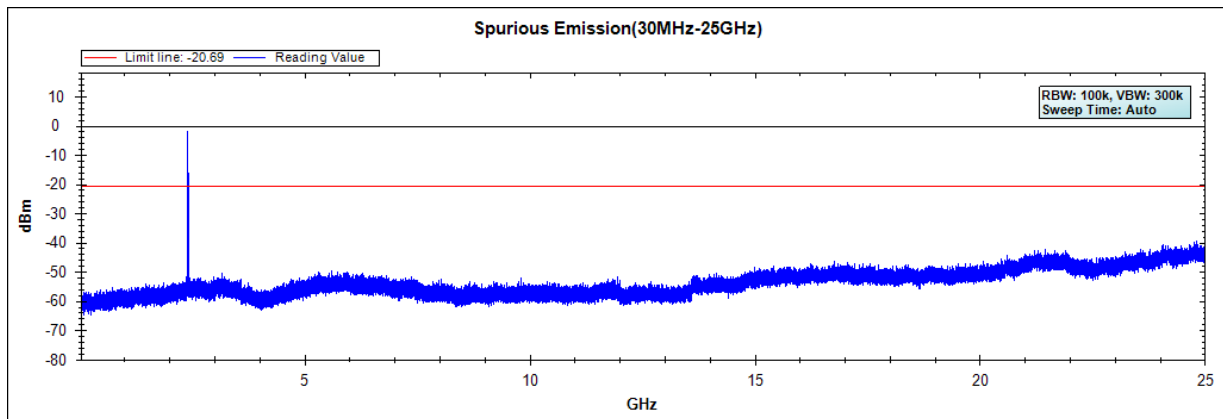
The measurement uncertainty

Conducted is defined as $\pm 1.20\text{dB}$

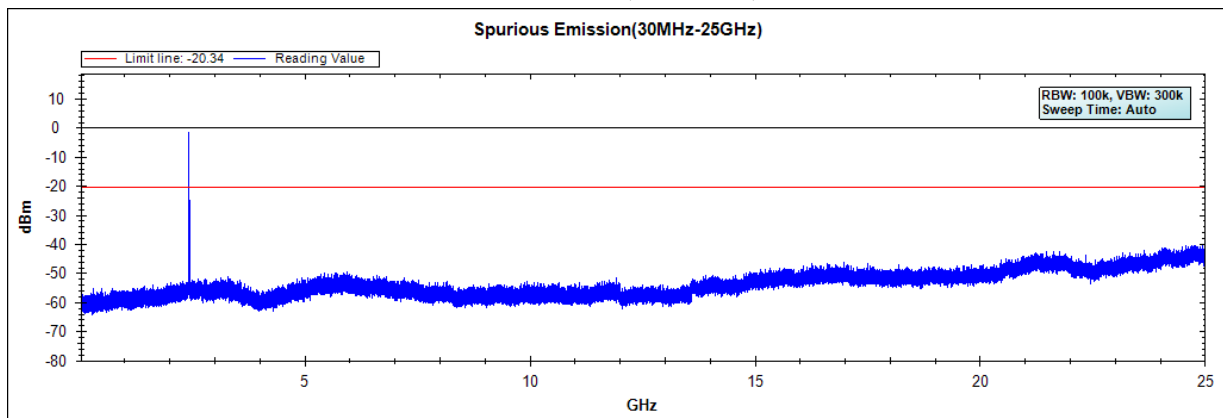
5.5. Test Result of RF antenna conducted test

Product : VUZE camera
Test Item : RF antenna conducted test
Test Site : No.3 OATS
Test Date : 2017/02/15
Test Mode : Mode 1: Transmit (802.11b 1Mbps)

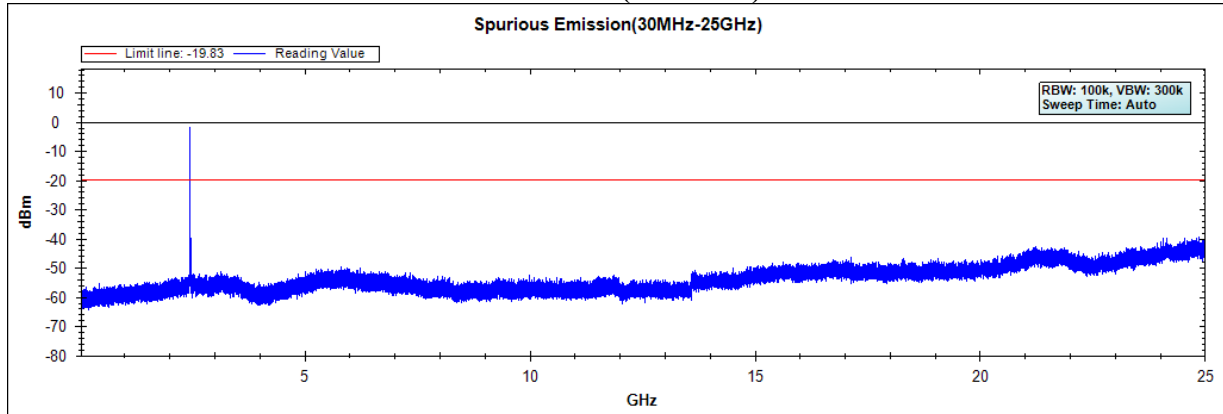
Channel 01 (2412MHz)



Channel 06 (2437MHz)



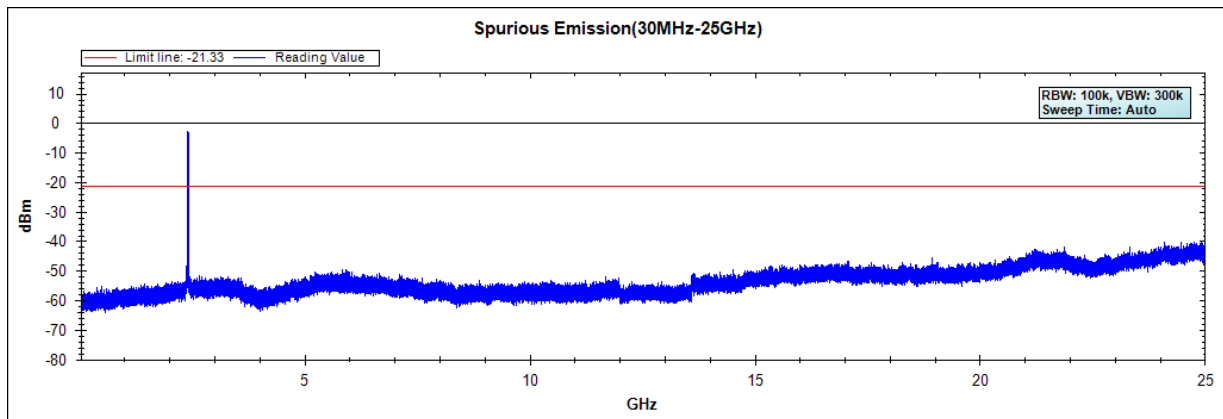
Channel 11 (2462MHz)



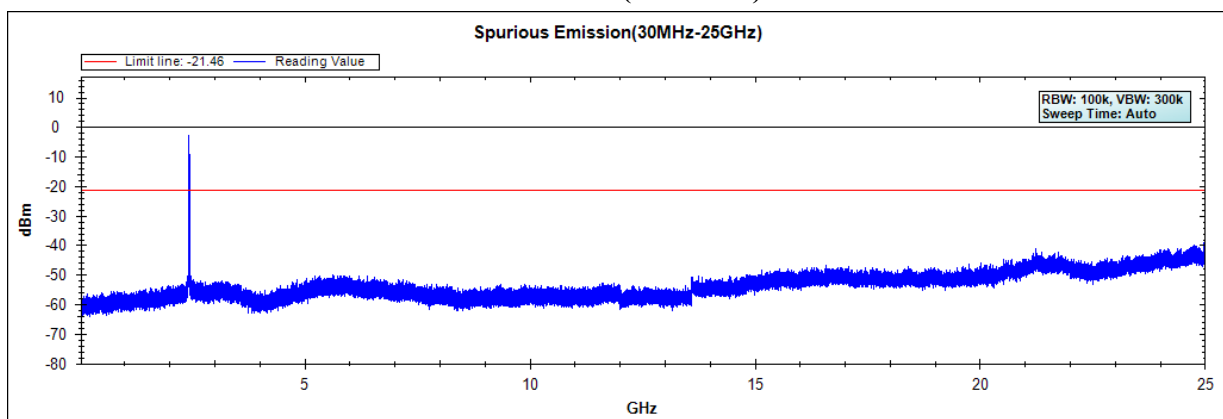
Note: The above test pattern is synthesized by multiple of the frequency range.

Product : VUZE camera
Test Item : RF Antenna Conducted Spurious
Test Site : No.3 OATS
Test Date : 2017/02/15
Test Mode : Mode 2: Transmit (802.11g 6Mbps)

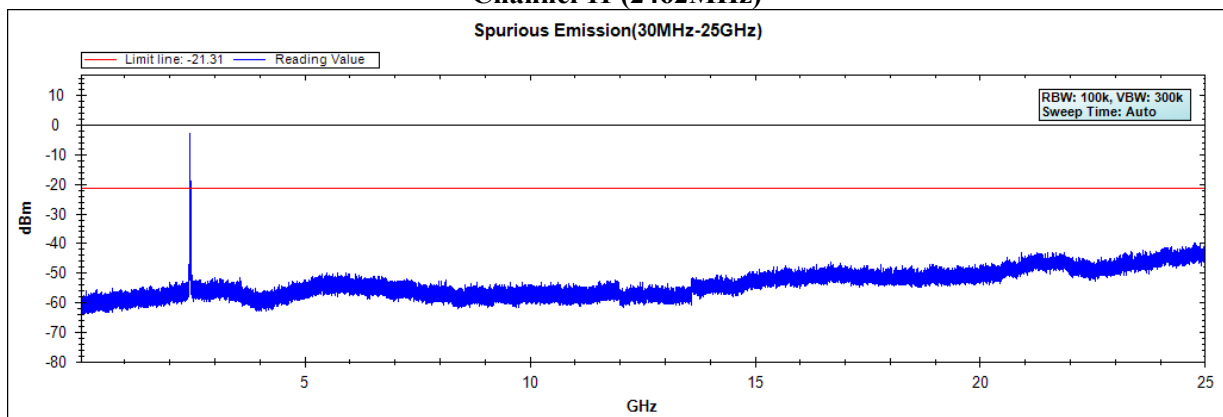
Channel 01 (2412MHz)



Channel 06 (2437MHz)



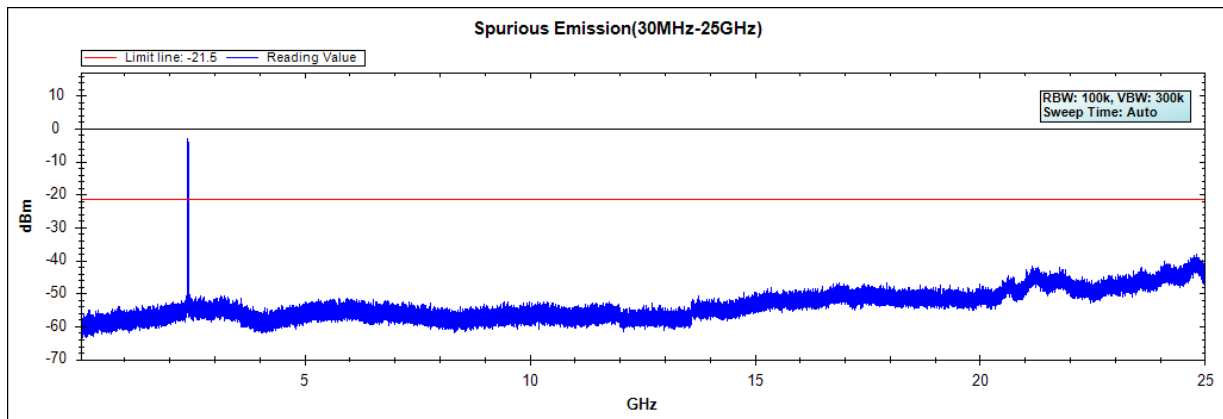
Channel 11 (2462MHz)



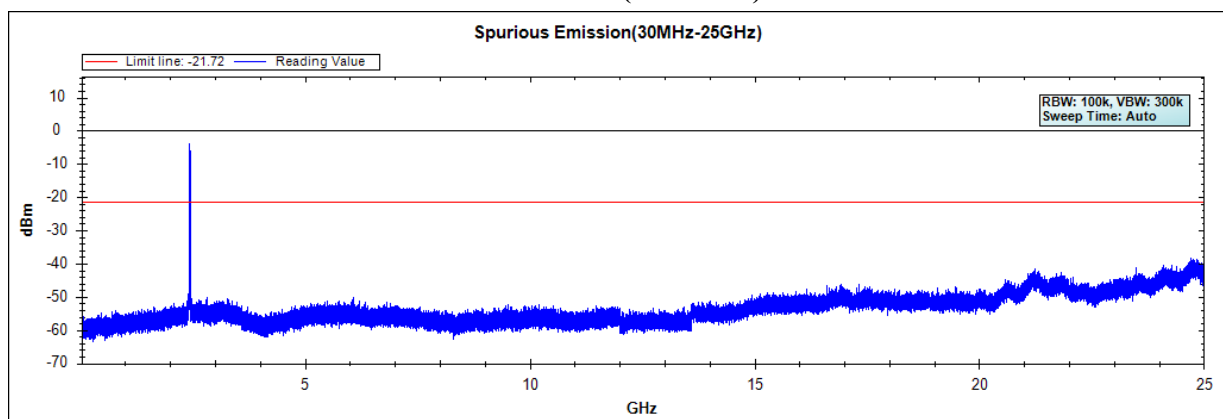
Note: The above test pattern is synthesized by multiple of the frequency range.

Product : VUZE camera
Test Item : RF Antenna Conducted Spurious
Test Site : No.3 OATS
Test Date : 2017/01/18
Test Mode : Mode 3: Transmit (802.11n MCS0 6.5Mbps 20M-BW)

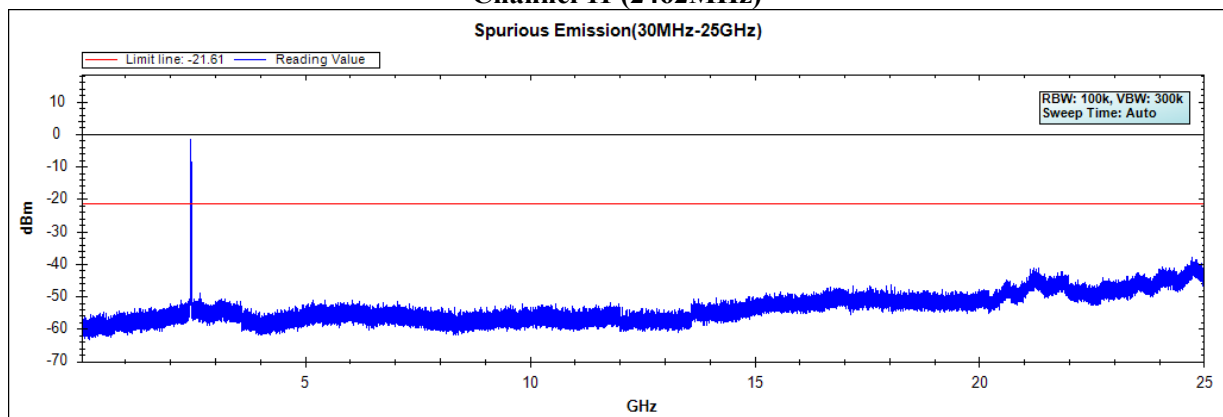
Channel 01 (2412MHz)



Channel 06 (2437MHz)



Channel 11 (2462MHz)

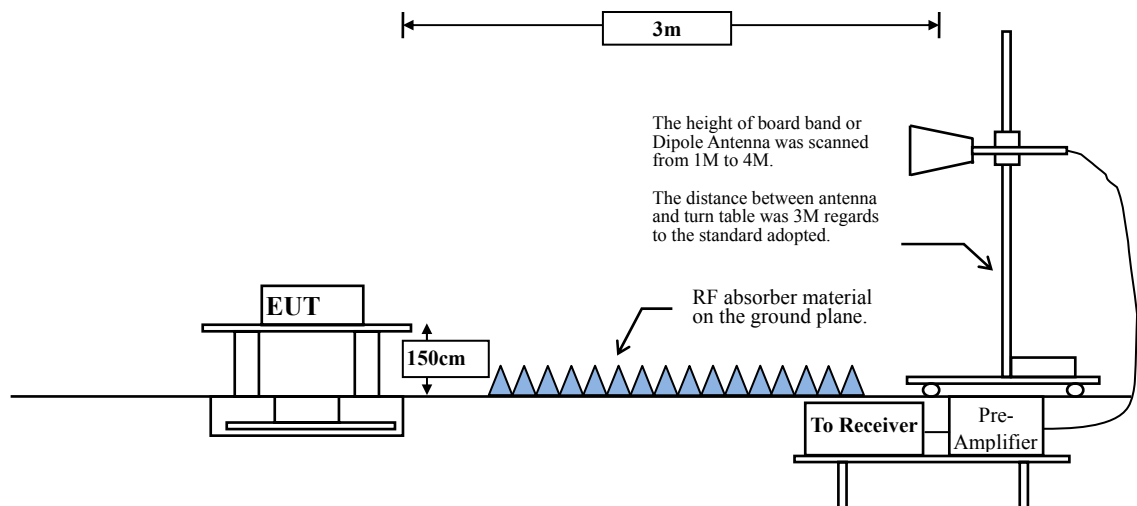


Note: The above test pattern is synthesized by multiple of the frequency range.

6. Band Edge

6.1. Test Setup

RF Radiated Measurement:



6.2. Limits

Emissions radiated outside of the specified frequency bands, except for harmonics, shall be attenuated by at least 20dB below the level of the fundamental or to the general radiated emission limits in paragraph 15.209, whichever is the lesser attenuation.

6.3. Test Procedure

The EUT was setup according to ANSI C63.10, 2013 and tested according to DTS test procedure of KDB558074 for compliance to FCC 47CFR 15.247 requirements.

The EUT is placed on a turn table which is 1.5 meter above ground. The turn table is rotated 360 degrees to determine the position of the maximum emission level. The EUT was positioned such that the distance from antenna to the EUT was 3 meters.

The antenna is scanned from 1 meter to 4 meters to find out the maximum emission level. This is repeated for both horizontal and vertical polarization of the antenna. In order to find the maximum emission, all of the interface cables were manipulated according to ANSI C63.10:2013 on radiated measurement.

6.4. Uncertainty

± 4.08 dB above 1GHz

± 4.22 dB below 1GHz

6.5. Test Result of Band Edge

Product : VUZE camera
 Test Item : Band Edge Data
 Test Site : No.3 OATS
 Test Date : 2017/02/16
 Test Mode : Mode 1: Transmit (802.11b 1Mbps) (2412MHz)

RF Radiated Measurement (Horizontal):

Channel No.	Frequency (MHz)	Correct Factor (dB)	Reading Level (dB μ V)	Emission Level (dB μ V/m)	Peak Limit (dB μ V/m)	Average Limit (dB μ V/m)	Result
01 (Peak)	2379.400	-2.734	48.113	45.379	74.00	54.00	Pass
01 (Peak)	2390.000	-2.687	45.710	43.023	74.00	54.00	Pass
01 (Peak)	2400.000	-2.660	50.444	47.784	74.00	54.00	Pass
01 (Peak)	2413.000	-2.642	91.533	88.890	--	--	--
01 (Average)	2390.000	-2.687	34.681	31.994	74.00	54.00	Pass
01 (Average)	2400.000	-2.660	39.453	36.793	74.00	54.00	Pass
01 (Average)	2411.200	-2.643	82.992	80.349	--	--	--

Figure Channel 01: Horizontal (Peak)

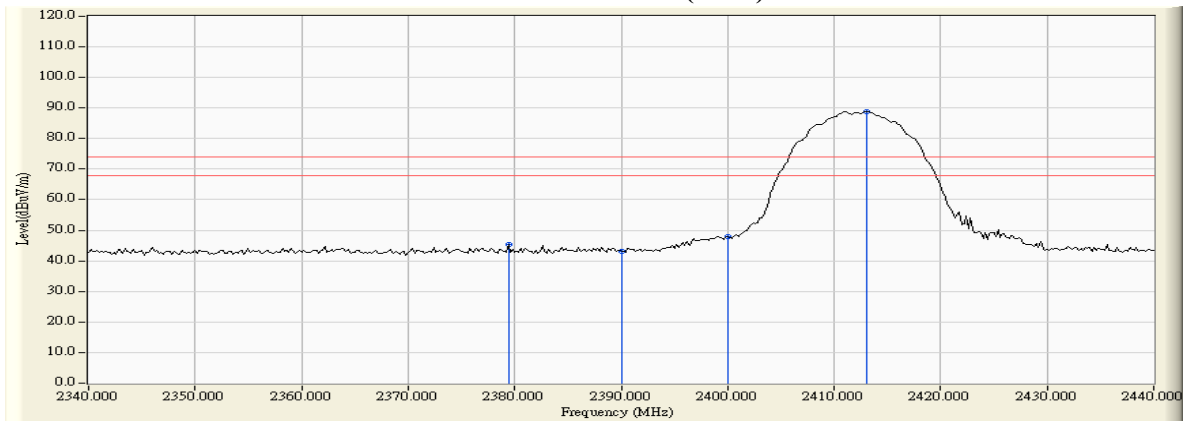
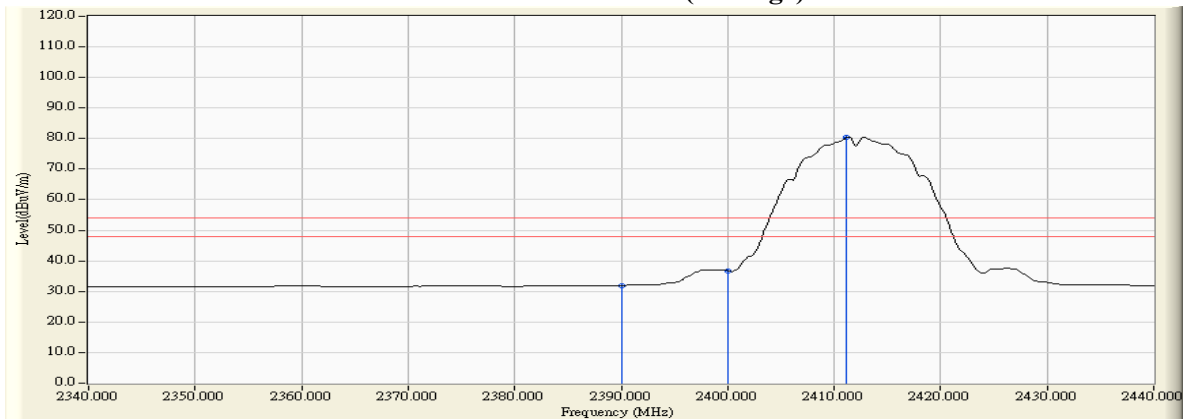


Figure Channel 01: Horizontal (Average)

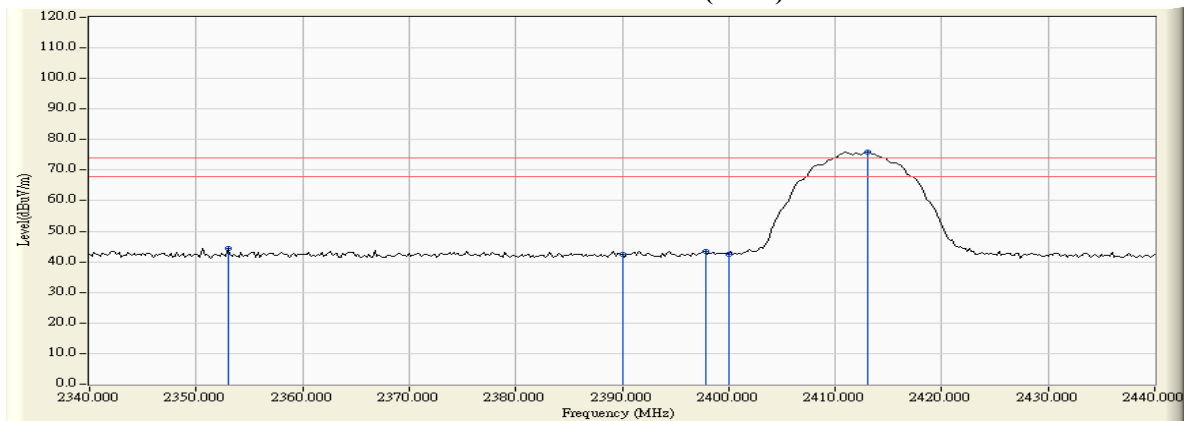
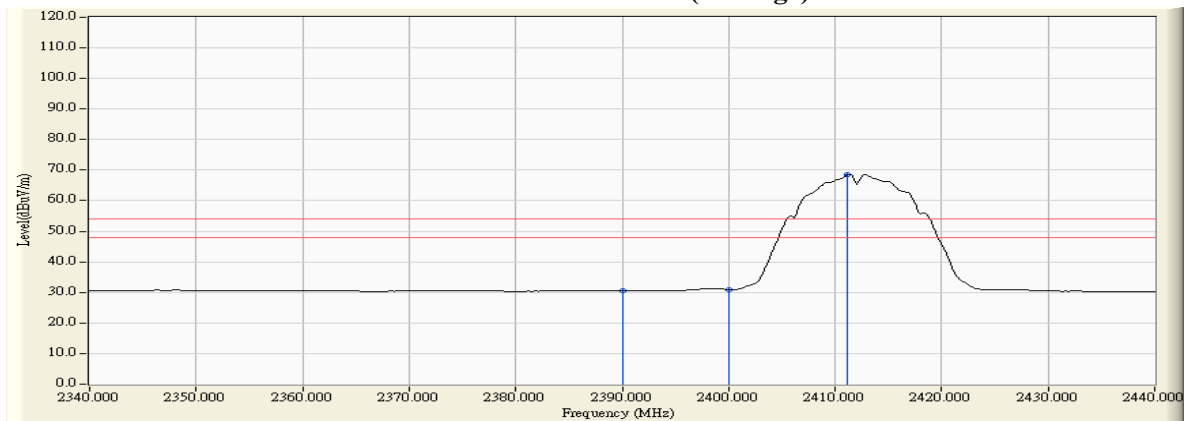


- Note:1. All readings above 1GHz are performed with peak and/or average measurements as necessary.
 2. Peak measurements: RBW = 1MHz, VBW = 3 MHz, Sweep: Auto.
 3. Average measurements: RBW = 1MHz, VBW = 10 Hz, Sweep: Auto.
 4. “ * ”, means this data is the worst emission level.
 5. Measurement Level = Reading Level + Correct Factor.
 6. The average measurement was not performed when the peak measured data under the limit of average detection.

Product : VUZE camera
 Test Item : Band Edge Data
 Test Site : No.3 OATS
 Test Date : 2017/02/16
 Test Mode : Mode 1: Transmit (802.11b 1Mbps) (2412MHz)

RF Radiated Measurement (VERTICAL):

Channel No.	Frequency (MHz)	Correct Factor (dB)	Reading Level (dBμV)	Emission Level (dBμV/m)	Peak Limit (dBμV/m)	Average Limit (dBμV/m)	Result
01 (Peak)	2353.000	-4.009	48.407	44.398	74.00	54.00	Pass
01 (Peak)	2390.000	-4.159	46.759	42.600	74.00	54.00	Pass
01 (Peak)	2397.800	-4.171	47.634	43.463	74.00	54.00	Pass
01 (Peak)	2400.000	-4.171	46.783	42.612	74.00	54.00	Pass
01 (Peak)	2413.000	-4.163	80.073	75.909	--	--	--
01 (Average)	2390.000	-4.159	34.676	30.517	74.00	54.00	Pass
01 (Average)	2400.000	-4.171	35.098	30.927	74.00	54.00	Pass
01 (Average)	2411.200	-4.168	72.592	68.424	--	--	--

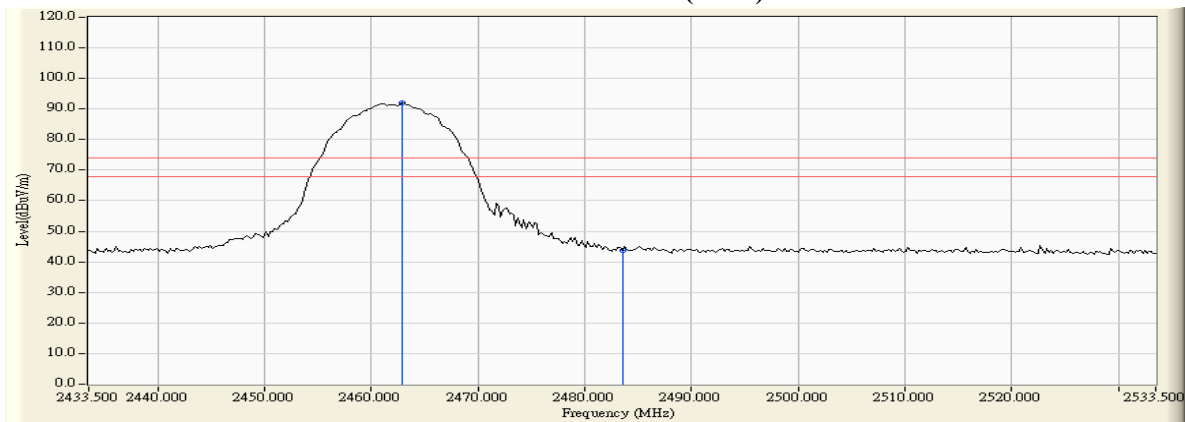
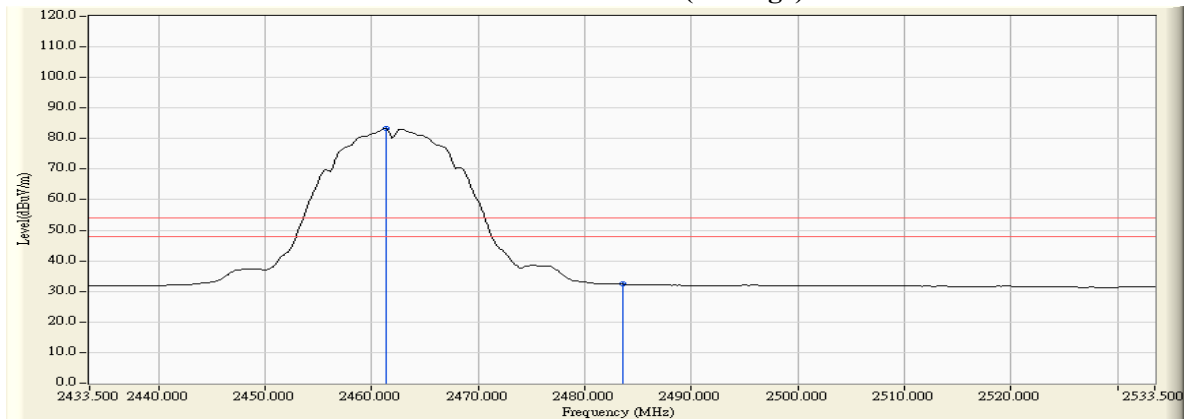
Figure Channel 01: VERTICAL (Peak)**Figure Channel 01: VERTICAL (Average)**

- Note:1. All readings above 1GHz are performed with peak and/or average measurements as necessary.
 2. Peak measurements: RBW = 1MHz, VBW = 3 MHz, Sweep: Auto.
 3. Average measurements: RBW = 1MHz, VBW = 10 Hz, Sweep: Auto.
 4. “ * ”, means this data is the worst emission level.
 5. Measurement Level = Reading Level + Correct Factor.
 6. The average measurement was not performed when the peak measured data under the limit of average detection.

Product : VUZE camera
 Test Item : Band Edge Data
 Test Site : No.3 OATS
 Test Date : 2017/02/16
 Test Mode : Mode 1: Transmit (802.11b 1Mbps) (2462MHz)

RF Radiated Measurement (Horizontal):

Channel No.	Frequency (MHz)	Correct Factor (dB)	Reading Level (dBμV)	Emission Level (dBμV/m)	Peak Limit (dBμV/m)	Average Limit (dBμV/m)	Result
11 (Peak)	2462.900	-2.622	94.511	91.889	--	--	--
11 (Peak)	2483.500	-2.601	46.369	43.767	74.00	54.00	Pass
11 (Average)	2461.300	-2.624	85.874	83.251	--	--	--
11 (Average)	2483.500	-2.601	34.945	32.343	74.00	54.00	Pass

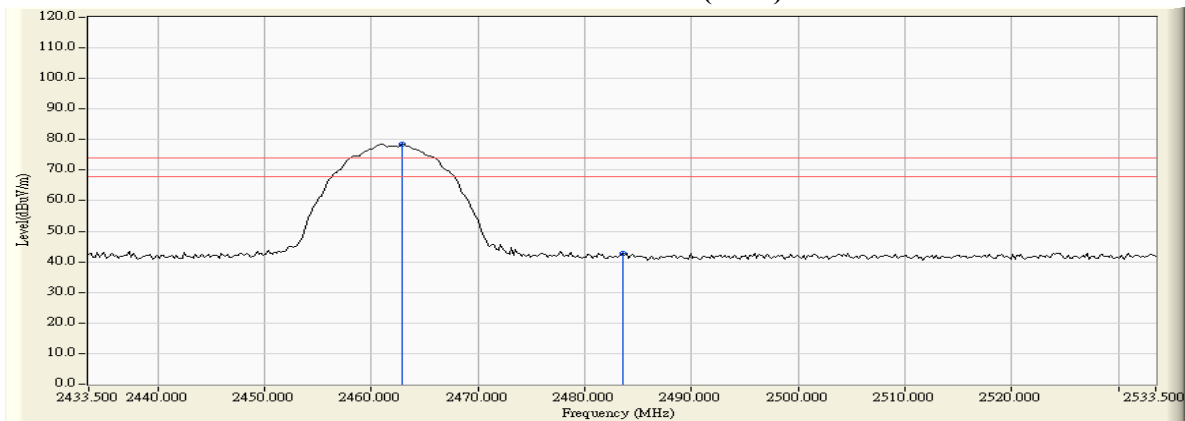
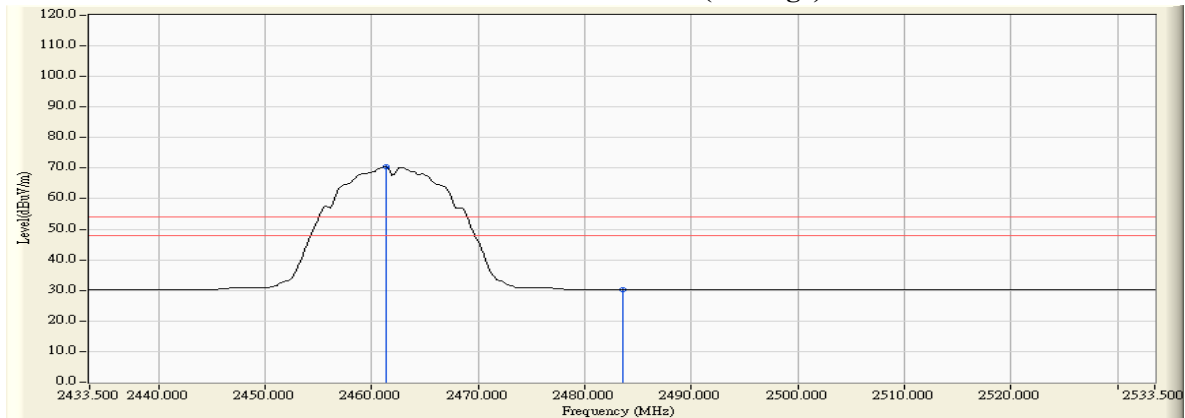
Figure Channel 11: Horizontal (Peak)

Figure Channel 11: Horizontal (Average)


- Note: 1. All readings above 1GHz are performed with peak and/or average measurements as necessary.
 2. Peak measurements: RBW = 1MHz, VBW = 3 MHz, Sweep: Auto.
 3. Average measurements: RBW = 1MHz, VBW = 10 Hz, Sweep: Auto.
 4. “ * ”, means this data is the worst emission level.
 5. Measurement Level = Reading Level + Correct Factor.
 6. The average measurement was not performed when the peak measured data under the limit of average detection.

Product : VUZE camera
 Test Item : Band Edge Data
 Test Site : No.3 OATS
 Test Date : 2017/02/16
 Test Mode : Mode 1: Transmit (802.11b 1Mbps) (2462MHz)

RF Radiated Measurement (VERTICAL):

Channel No.	Frequency (MHz)	Correct Factor (dB)	Reading Level (dBμV)	Emission Level (dBμV/m)	Peak Limit (dBμV/m)	Average Limit (dBμV/m)	Result
11 (Peak)	2462.900	-4.032	82.425	78.393	--	--	--
11 (Peak)	2483.500	-3.966	46.698	42.731	74.00	54.00	Pass
11 (Average)	2461.300	-4.037	74.549	70.512	--	--	--
11 (Average)	2483.500	-3.966	34.256	30.289	74.00	54.00	Pass

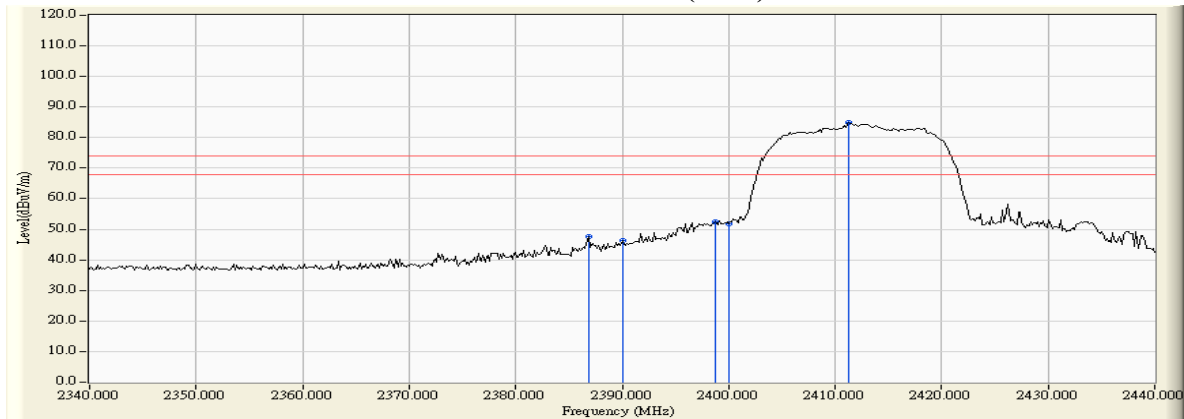
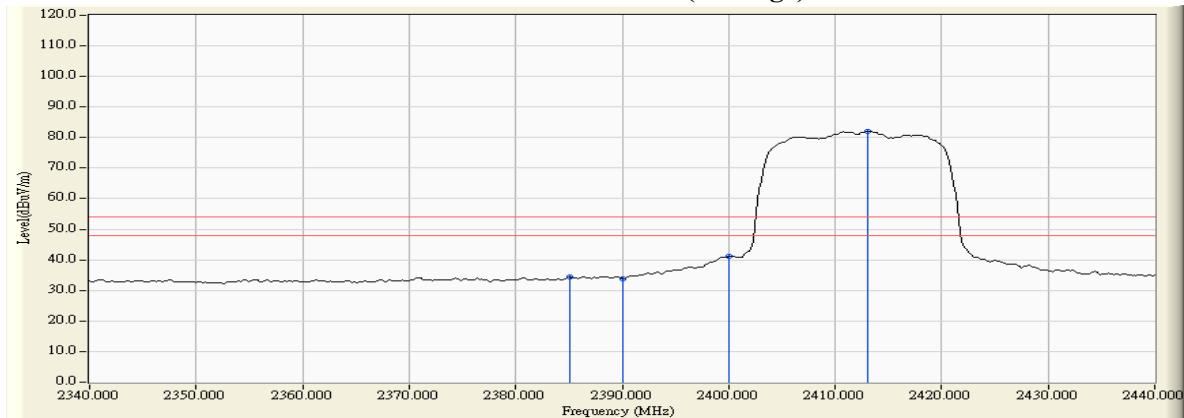
Figure Channel 11: VERTICAL (Peak)

Figure Channel 11: VERTICAL (Average)


- Note: 1. All readings above 1GHz are performed with peak and/or average measurements as necessary.
 2. Peak measurements: RBW = 1MHz, VBW = 3 MHz, Sweep: Auto.
 3. Average measurements: RBW = 1MHz, VBW = 10 Hz, Sweep: Auto.
 4. “ * ”, means this data is the worst emission level.
 5. Measurement Level = Reading Level + Correct Factor.
 6. The average measurement was not performed when the peak measured data under the limit of average detection.

Product : VUZE camera
 Test Item : Band Edge Data
 Test Site : No.3 OATS
 Test Date : 2017/02/16
 Test Mode : Mode 2: Transmit (802.11g 6Mbps) (2412MHz)

RF Radiated Measurement (Horizontal):

Channel No.	Frequency (MHz)	Correct Factor (dB)	Reading Level (dB μ V)	Emission Level (dB μ V/m)	Peak Limit (dB μ V/m)	Average Limit (dB μ V/m)	Result
01 (Peak)	2386.812	-2.701	50.157	47.456	74.00	54.00	Pass
01 (Peak)	2390.000	-2.687	48.886	46.199	74.00	54.00	Pass
01 (Peak)	2398.696	-2.663	54.966	52.304	74.00	54.00	Pass
01 (Peak)	2400.000	-2.660	54.439	51.779	74.00	54.00	Pass
01 (Peak)	2411.304	-2.643	87.477	84.834	--	--	--
01 (Average)	2385.072	-2.709	37.023	34.314	74.00	54.00	Pass
01 (Average)	2390.000	-2.687	36.467	33.780	74.00	54.00	Pass
01 (Average)	2400.000	-2.660	43.817	41.157	74.00	54.00	Pass
01 (Average)	2413.043	-2.642	84.678	82.035	--	--	--

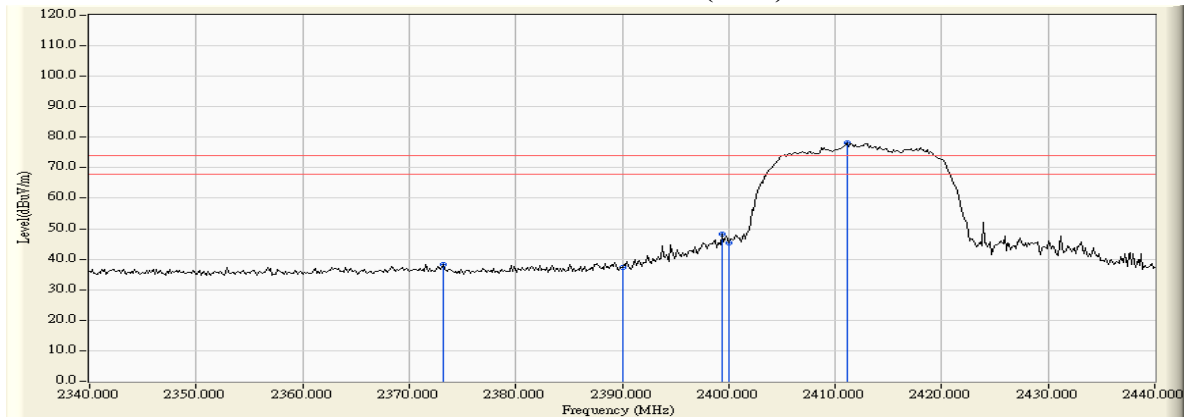
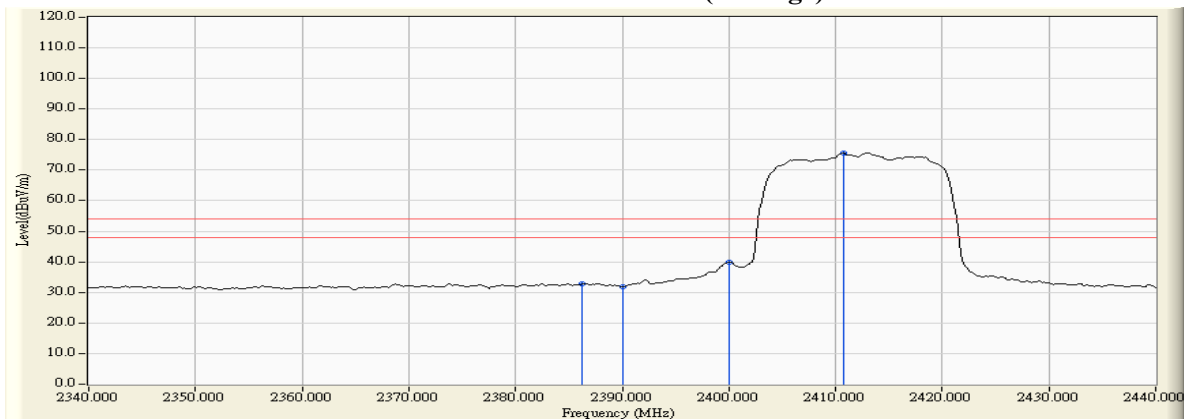
Figure Channel 01: Horizontal (Peak)**Figure Channel 01: Horizontal (Average)**

- Note:1. All readings above 1GHz are performed with peak and/or average measurements as necessary.
 2. Peak measurements: RBW = 1MHz, VBW = 3 MHz, Sweep: Auto.
 3. Average measurements: RBW = 1MHz, VBW = 10 Hz, Sweep: Auto.
 4. “ * ”, means this data is the worst emission level.
 5. Measurement Level = Reading Level + Correct Factor.
 6. The average measurement was not performed when the peak measured data under the limit of average detection.

Product : VUZE camera
 Test Item : Band Edge Data
 Test Site : No.3 OATS
 Test Date : 2017/01/13
 Test Mode : Mode 2: Transmit (802.11g 6Mbps) (2412MHz)

RF Radiated Measurement (VERTICAL):

Channel No.	Frequency (MHz)	Correct Factor (dB)	Reading Level (dBμV)	Emission Level (dBμV/m)	Peak Limit (dBμV/m)	Average Limit (dBμV/m)	Result
01 (Peak)	2373.188	-4.101	42.410	38.308	74.00	54.00	Pass
01 (Peak)	2390.000	-4.159	41.494	37.335	74.00	54.00	Pass
01 (Peak)	2399.420	-4.171	52.424	48.253	74.00	54.00	Pass
01 (Peak)	2400.000	-4.171	49.637	45.466	74.00	54.00	Pass
01 (Peak)	2411.159	-4.168	82.368	78.200	--	--	--
01 (Average)	2386.232	-4.146	36.939	32.793	74.00	54.00	Pass
01 (Average)	2390.000	-4.159	35.977	31.818	74.00	54.00	Pass
01 (Average)	2400.000	-4.171	44.090	39.919	74.00	54.00	Pass
01 (Average)	2410.725	-4.169	79.776	75.607	--	--	--

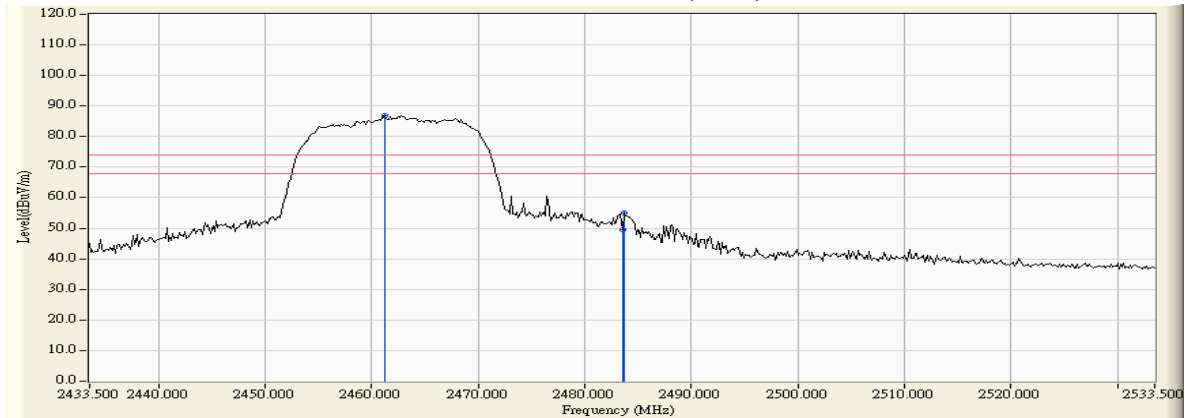
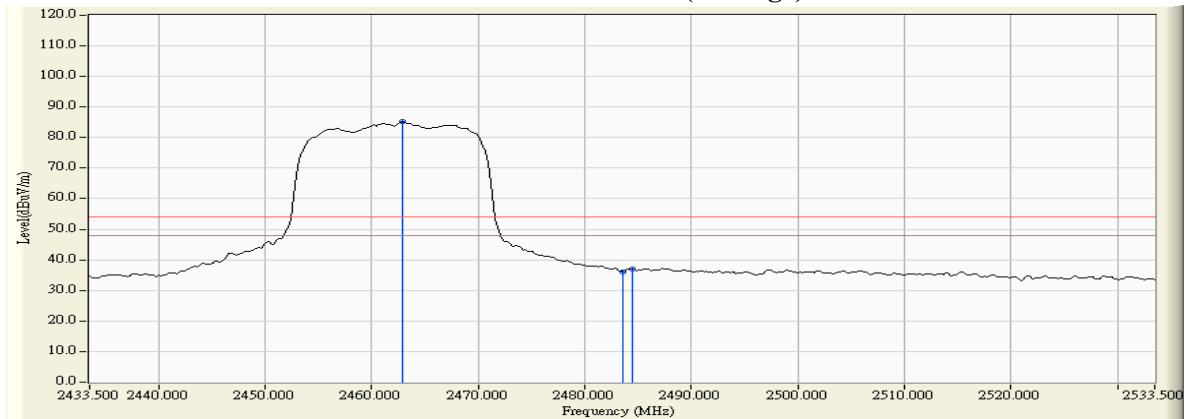
Figure Channel 01: VERTICAL (Peak)**Figure Channel 01: VERTICAL (Average)**

- Note:1. All readings above 1GHz are performed with peak and/or average measurements as necessary.
 2. Peak measurements: RBW = 1MHz, VBW = 3 MHz, Sweep: Auto.
 3. Average measurements: RBW = 1MHz, VBW = 10 Hz, Sweep: Auto.
 4. “ * ”, means this data is the worst emission level.
 5. Measurement Level = Reading Level + Correct Factor.
 6. The average measurement was not performed when the peak measured data under the limit of average detection.

Product : VUZE camera
 Test Item : Band Edge Data
 Test Site : No.3 OATS
 Test Date : 2017/02/16
 Test Mode : Mode 2: Transmit (802.11g 6Mbps) (2462MHz)

RF Radiated Measurement (Horizontal):

Channel No.	Frequency (MHz)	Correct Factor (dB)	Reading Level (dB μ V)	Emission Level (dB μ V/m)	Peak Limit (dB μ V/m)	Average Limit (dB μ V/m)	Result
11 (Peak)	2461.181	-2.623	89.631	87.008	--	--	--
11 (Peak)	2483.500	-2.601	52.194	49.592	74.00	54.00	Pass
11 (Peak)	2483.645	-2.601	57.706	55.104	74.00	54.00	Pass
11 (Average)	2462.920	-2.622	87.751	85.129	--	--	--
11 (Average)	2483.500	-2.601	38.685	36.083	74.00	54.00	Pass
11 (Average)	2484.514	-2.601	39.451	36.850	74.00	54.00	Pass

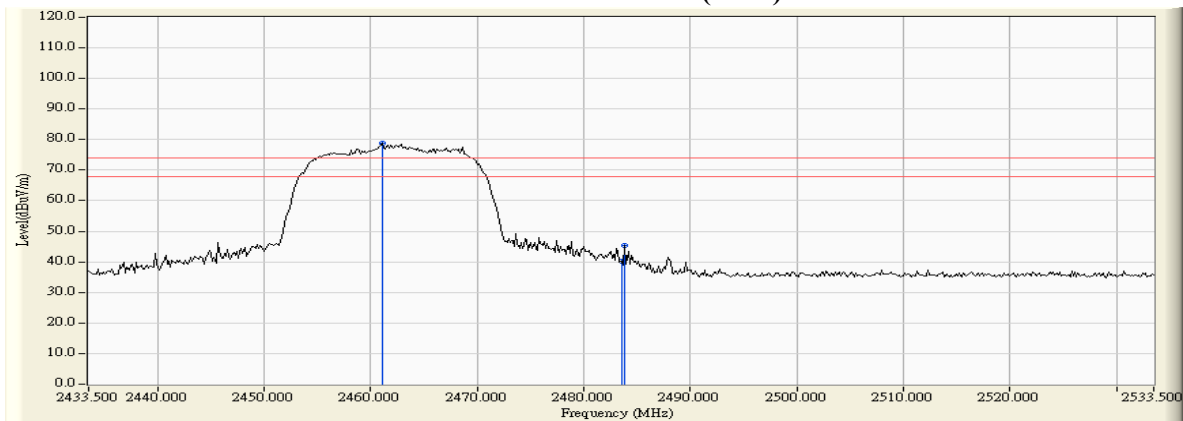
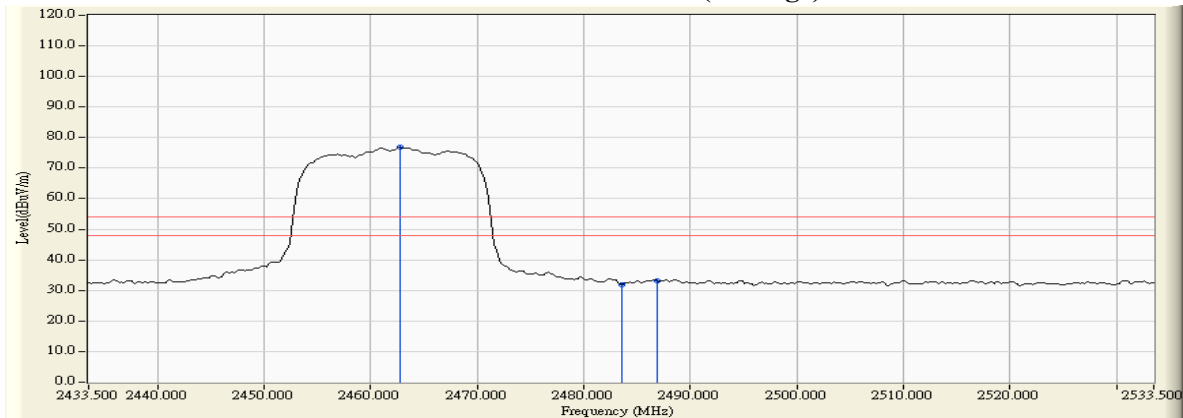
Figure Channel 11: Horizontal (Peak)**Figure Channel 11: Horizontal (Average)**

- Note:1. All readings above 1GHz are performed with peak and/or average measurements as necessary.
 2. Peak measurements: RBW = 1MHz, VBW = 3 MHz, Sweep: Auto.
 3. Average measurements: RBW = 1MHz, VBW = 10 Hz, Sweep: Auto.
 4. “ * ”, means this data is the worst emission level.
 5. Measurement Level = Reading Level + Correct Factor.
 6. The average measurement was not performed when the peak measured data under the limit of average detection.

Product : VUZE camera
 Test Item : Band Edge Data
 Test Site : No.3 OATS
 Test Date : 2017/01/13
 Test Mode : Mode 2: Transmit (802.11g 6Mbps) (2462MHz)

RF Radiated Measurement (VERTICAL):

Channel No.	Frequency (MHz)	Correct Factor (dB)	Reading Level (dBμV)	Emission Level (dBμV/m)	Peak Limit (dBμV/m)	Average Limit (dBμV/m)	Result
11 (Peak)	2461.036	-4.037	82.832	78.794	--	--	--
11 (Peak)	2483.500	-3.966	44.279	40.312	74.00	54.00	Pass
11 (Peak)	2483.790	-3.966	49.347	45.381	74.00	54.00	Pass
11 (Average)	2462.775	-4.032	80.889	76.857	--	--	--
11 (Average)	2483.500	-3.966	35.873	31.906	74.00	54.00	Pass
11 (Average)	2486.833	-3.957	37.253	33.297	74.00	54.00	Pass

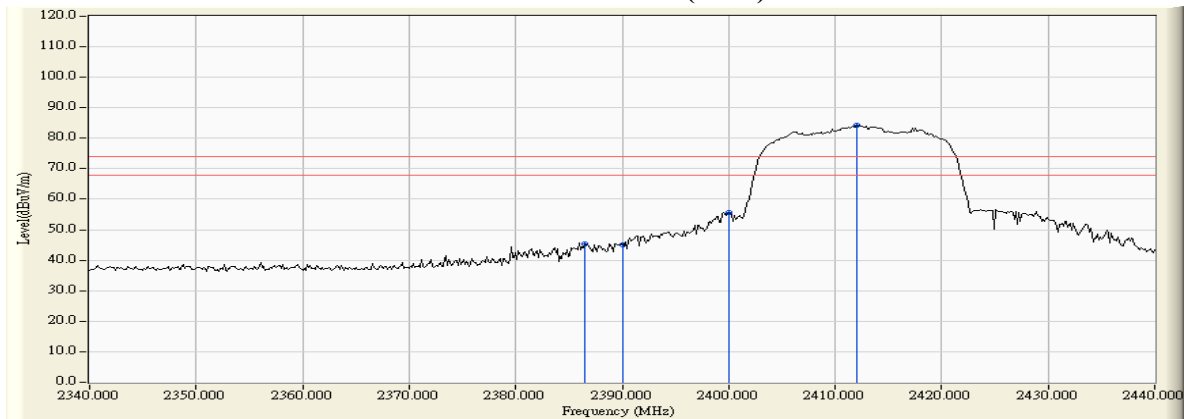
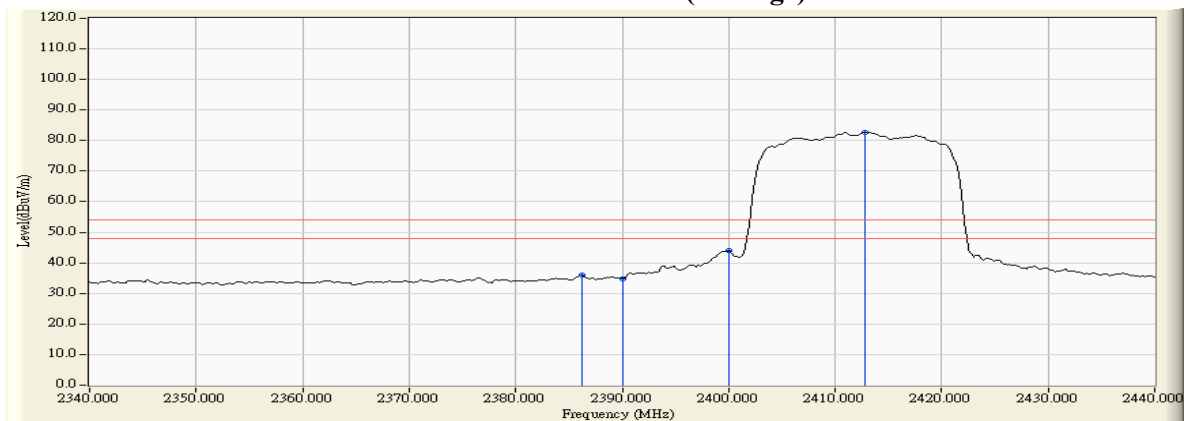
Figure Channel 11:**VERTICAL (Peak)****Figure Channel 11:****VERTICAL (Average)**

- Note: 1. All readings above 1GHz are performed with peak and/or average measurements as necessary.
 2. Peak measurements: RBW = 1MHz, VBW = 3 MHz, Sweep: Auto.
 3. Average measurements: RBW = 1MHz, VBW = 10 Hz, Sweep: Auto.
 4. “ * ”, means this data is the worst emission level.
 5. Measurement Level = Reading Level + Correct Factor.
 6. The average measurement was not performed when the peak measured data under the limit of average detection.

Product : VUZE camera
 Test Item : Band Edge Data
 Test Site : No.3 OATS
 Test Date : 2017/02/16
 Test Mode : Mode 3: Transmit (802.11n MCS0 6.5Mbps 20M-BW) (2412MHz)

RF Radiated Measurement (Horizontal):

Channel No.	Frequency (MHz)	Correct Factor (dB)	Reading Level (dB μ V)	Emission Level (dB μ V/m)	Peak Limit (dB μ V/m)	Average Limit (dB μ V/m)	Result
01 (Peak)	2386.522	-2.703	48.112	45.410	74.00	54.00	Pass
01 (Peak)	2390.000	-2.687	47.845	45.158	74.00	54.00	Pass
01 (Peak)	2400.000	-2.660	58.258	55.598	74.00	54.00	Pass
01 (Peak)	2412.029	-2.644	86.850	84.207	--	--	--
01 (Average)	2386.232	-2.704	38.619	35.915	74.00	54.00	Pass
01 (Average)	2390.000	-2.687	37.350	34.663	74.00	54.00	Pass
01 (Average)	2400.000	-2.660	46.602	43.942	74.00	54.00	Pass
01 (Average)	2412.754	-2.642	85.223	82.580	--	--	--

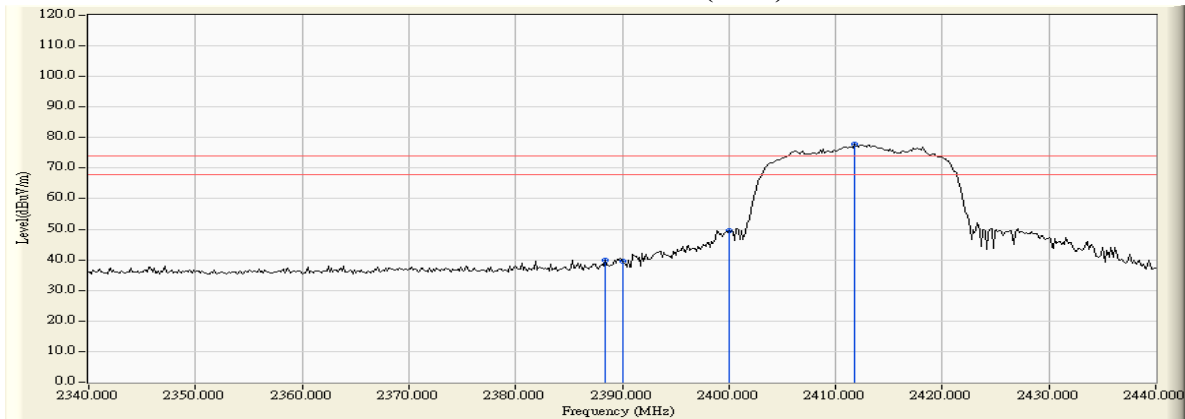
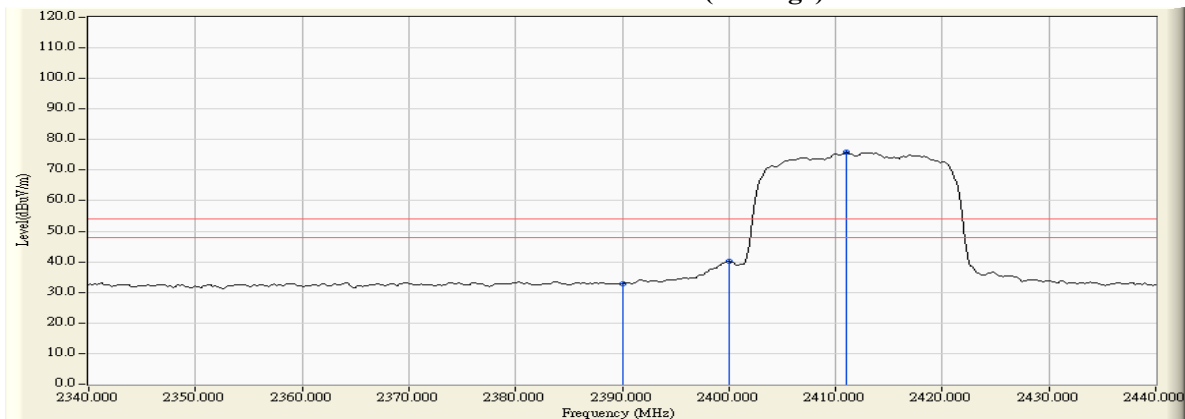
Figure Channel 01: Horizontal (Peak)

Figure Channel 01: Horizontal (Average)


- Note: 1. All readings above 1GHz are performed with peak and/or average measurements as necessary.
 2. Peak measurements: RBW = 1MHz, VBW = 3 MHz, Sweep: Auto.
 3. Average measurements: RBW = 1MHz, VBW = 10 Hz, Sweep: Auto.
 4. “ * ”, means this data is the worst emission level.
 5. Measurement Level = Reading Level + Correct Factor.
 6. The average measurement was not performed when the peak measured data under the limit of average detection.

Product : VUZE camera
 Test Item : Band Edge Data
 Test Site : No.3 OATS
 Test Date : 2017/02/16
 Test Mode : Mode 3: Transmit (802.11n MCS0 6.5Mbps 20M-BW) (2412MHz)

RF Radiated Measurement (VERTICAL):

Channel No.	Frequency (MHz)	Correct Factor (dB)	Reading Level (dB μ V)	Emission Level (dB μ V/m)	Peak Limit (dB μ V/m)	Average Limit (dB μ V/m)	Result
01 (Peak)	2388.406	-4.154	43.997	39.844	74.00	54.00	Pass
01 (Peak)	2390.000	-4.159	43.664	39.505	74.00	54.00	Pass
01 (Peak)	2400.000	-4.171	53.769	49.598	74.00	54.00	Pass
01 (Peak)	2411.739	-4.167	81.872	77.705	--	--	--
01 (Average)	2390.000	-4.159	37.012	32.853	74.00	54.00	Pass
01 (Average)	2400.000	-4.171	44.370	40.199	74.00	54.00	Pass
01 (Average)	2411.014	-4.169	80.140	75.972	--	--	--

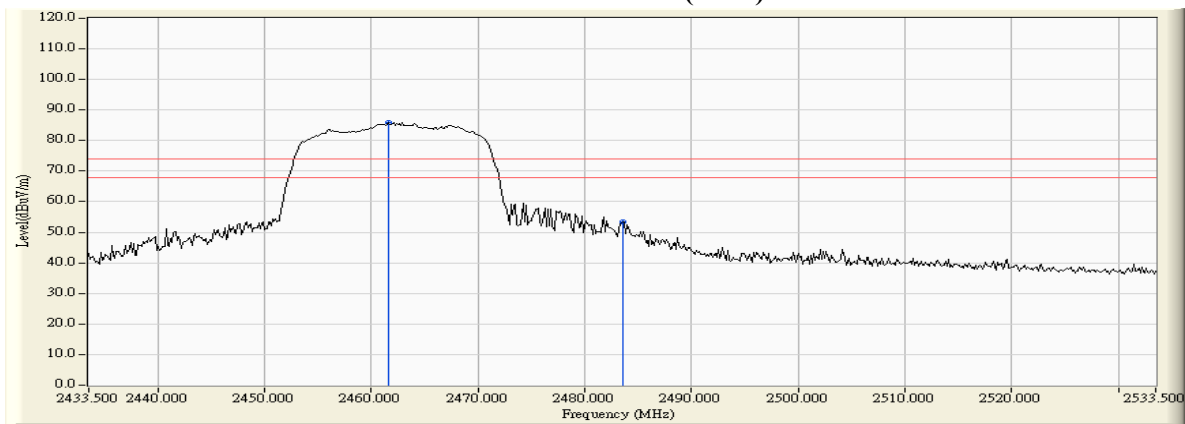
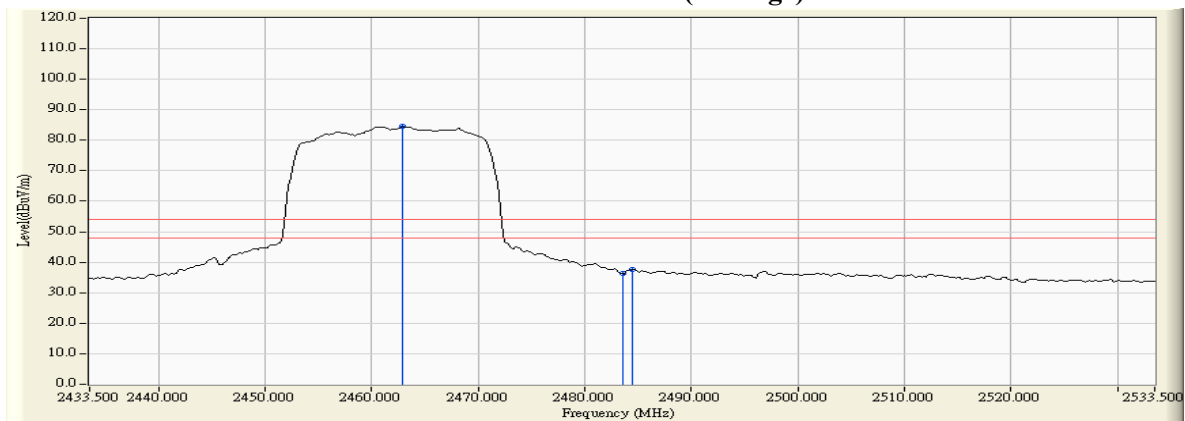
Figure Channel 01:**VERTICAL (Peak)****Figure Channel 01:****VERTICAL (Average)**

- Note: 1. All readings above 1GHz are performed with peak and/or average measurements as necessary.
 2. Peak measurements: RBW = 1MHz, VBW = 3 MHz, Sweep: Auto.
 3. Average measurements: RBW = 1MHz, VBW = 10 Hz, Sweep: Auto.
 4. “ * ”, means this data is the worst emission level.
 5. Measurement Level = Reading Level + Correct Factor.
 6. The average measurement was not performed when the peak measured data under the limit of average detection.

Product : VUZE camera
 Test Item : Band Edge Data
 Test Site : No.3 OATS
 Test Date : 2017/02/16
 Test Mode : Mode 3: Transmit (802.11n MCS0 6.5Mbps 20M-BW) (2462MHz)

RF Radiated Measurement (Horizontal):

Channel No.	Frequency (MHz)	Correct Factor (dB)	Reading Level (dBμV)	Emission Level (dBμV/m)	Peak Limit (dBμV/m)	Average Limit (dBμV/m)	Result
11 (Peak)	2461.616	-2.623	88.552	85.929	--	--	--
11 (Peak)	2483.500	-2.601	55.979	53.377	74.00	54.00	Pass
11 (Average)	2462.920	-2.622	87.073	84.451	--	--	--
11 (Average)	2483.500	-2.601	38.907	36.305	74.00	54.00	Pass
11 (Average)	2484.514	-2.601	40.117	37.516	74.00	54.00	Pass

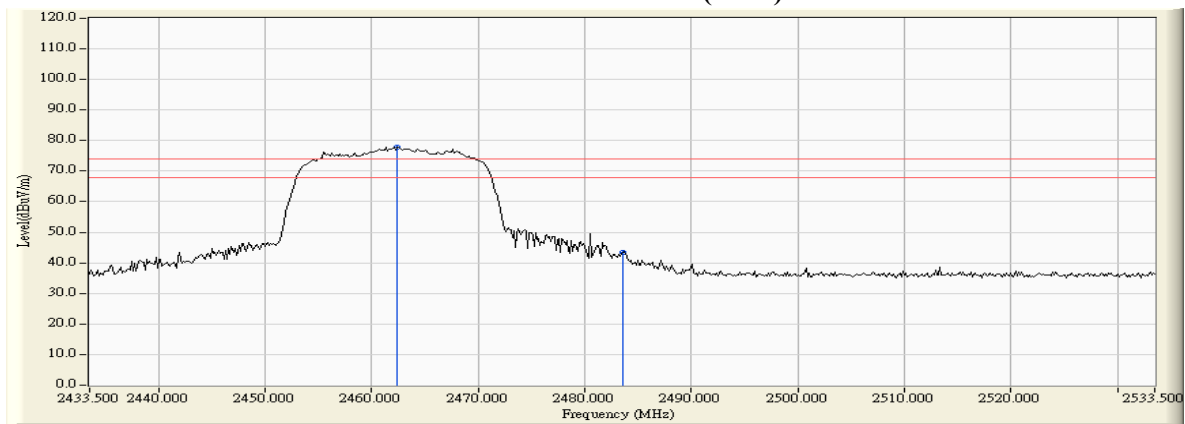
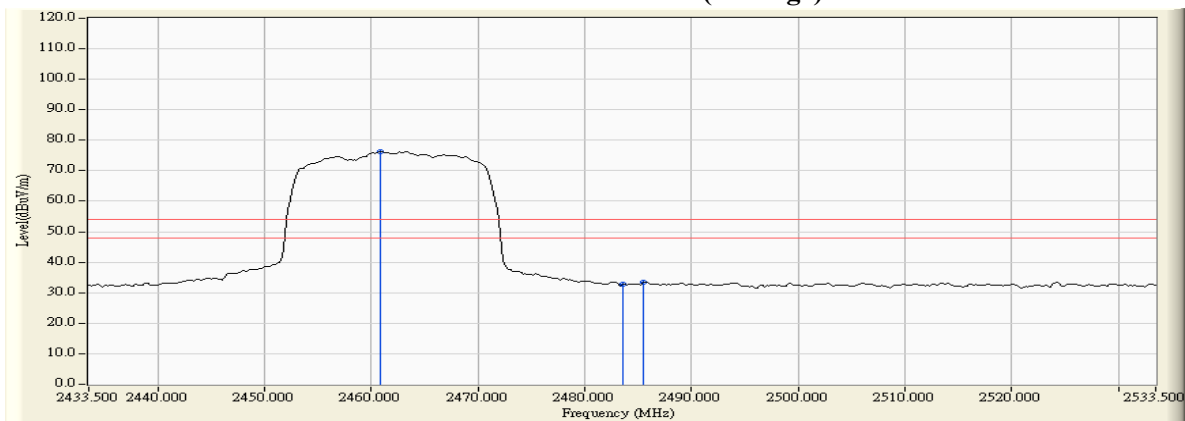
Figure Channel 11: Horizontal (Peak)

Figure Channel 11: Horizontal (Average)


- Note:1. All readings above 1GHz are performed with peak and/or average measurements as necessary.
 2. Peak measurements: RBW = 1MHz, VBW = 3 MHz, Sweep: Auto.
 3. Average measurements: RBW = 1MHz, VBW = 10 Hz, Sweep: Auto.
 4. “ * ”, means this data is the worst emission level.
 5. Measurement Level = Reading Level + Correct Factor.
 6. The average measurement was not performed when the peak measured data under the limit of average detection.

Product : VUZE camera
 Test Item : Band Edge Data
 Test Site : No.3 OATS
 Test Date : 2017/02/16
 Test Mode : Mode 3: Transmit (802.11n MCS0 6.5Mbps 20M-BW) (2462MHz)

RF Radiated Measurement (VERTICAL):

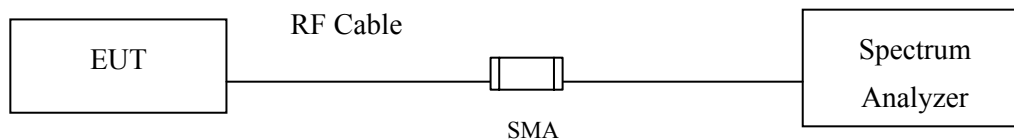
Channel No.	Frequency (MHz)	Correct Factor (dB)	Reading Level (dB μ V)	Emission Level (dB μ V/m)	Peak Limit (dB μ V/m)	Average Limit (dB μ V/m)	Result
11 (Peak)	2462.341	-4.033	82.002	77.968	--	--	--
11 (Peak)	2483.500	-3.966	47.461	43.494	74.00	54.00	Pass
11 (Average)	2460.891	-4.037	80.357	76.319	--	--	--
11 (Average)	2483.500	-3.966	36.713	32.746	74.00	54.00	Pass
11 (Average)	2485.529	-3.961	37.298	33.338	74.00	54.00	Pass

Figure Channel 11: VERTICAL (Peak)

Figure Channel 11: VERTICAL (Average)


- Note: 1. All readings above 1GHz are performed with peak and/or average measurements as necessary.
 2. Peak measurements: RBW = 1MHz, VBW = 3 MHz, Sweep: Auto.
 3. Average measurements: RBW = 1MHz, VBW = 10 Hz, Sweep: Auto.
 4. “ * ”, means this data is the worst emission level.
 5. Measurement Level = Reading Level + Correct Factor.
 6. The average measurement was not performed when the peak measured data under the limit of average detection.

7. 6dB Bandwidth

7.1. Test Setup



7.2. Limits

The minimum bandwidth shall be at least 500 kHz.

7.3. Test Procedure

The EUT was setup according to ANSI C63.4: 2014; tested according to DTS test procedure of Jan KDB558074 for compliance to FCC 47CFR 15.247 requirements.

7.4. Uncertainty

$\pm 283\text{Hz}$

7.5. Test Result of 6dB Bandwidth

Product : VUZE camera
 Test Item : 6dB Bandwidth Data
 Test Site : No.3 OATS
 Test Mode : Mode 1: Transmit (802.11b 1Mbps)

Channel No.	Frequency (MHz)	Measurement Level (kHz)	Required Limit (kHz)	Result
01	2412	8200	>500	Pass
06	2437	8200	>500	Pass
11	2462	8200	>500	Pass

Figure Channel 01:

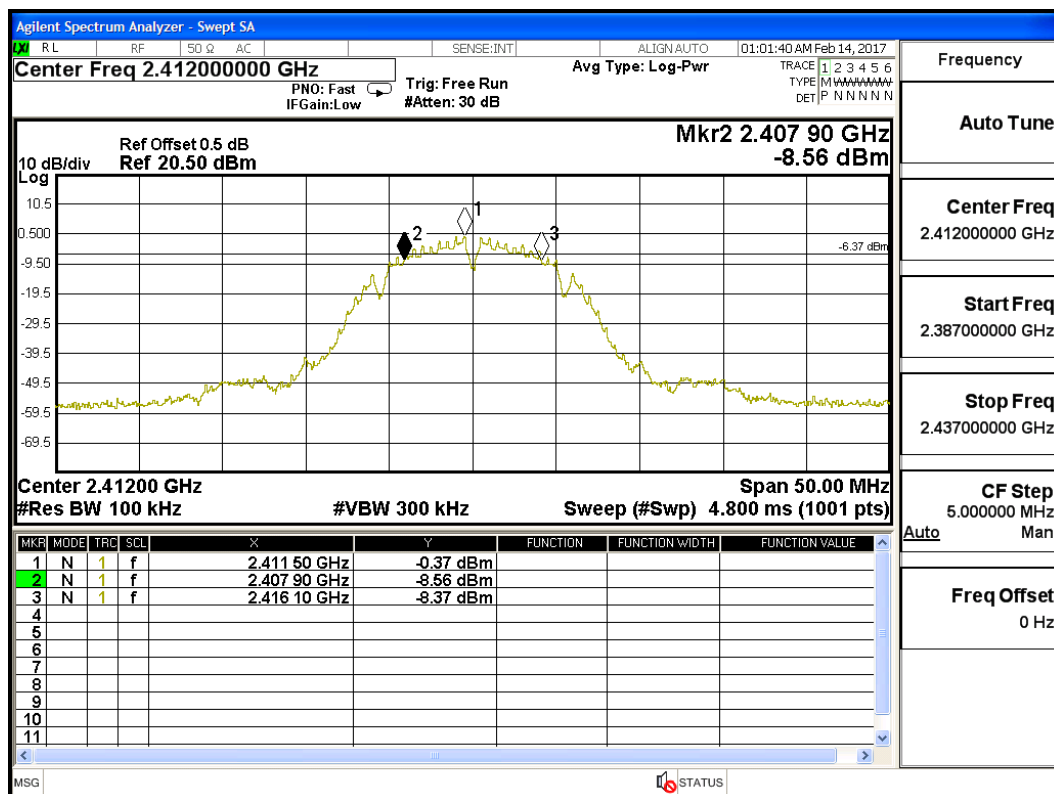


Figure Channel 06:

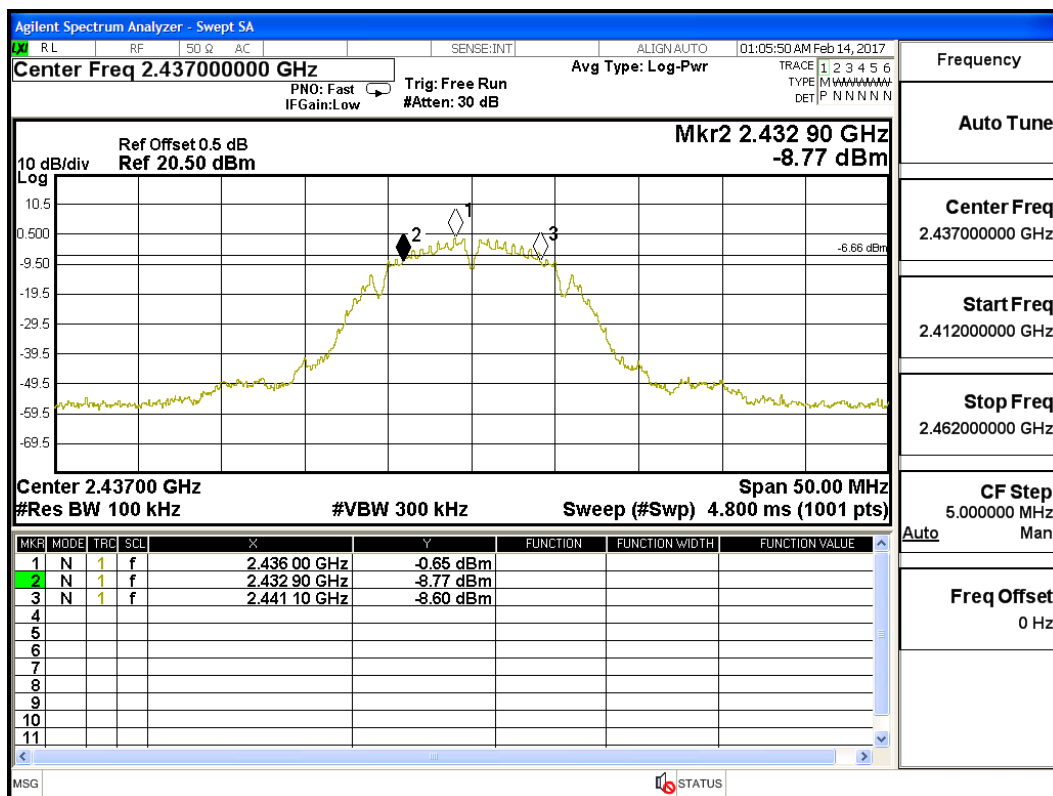
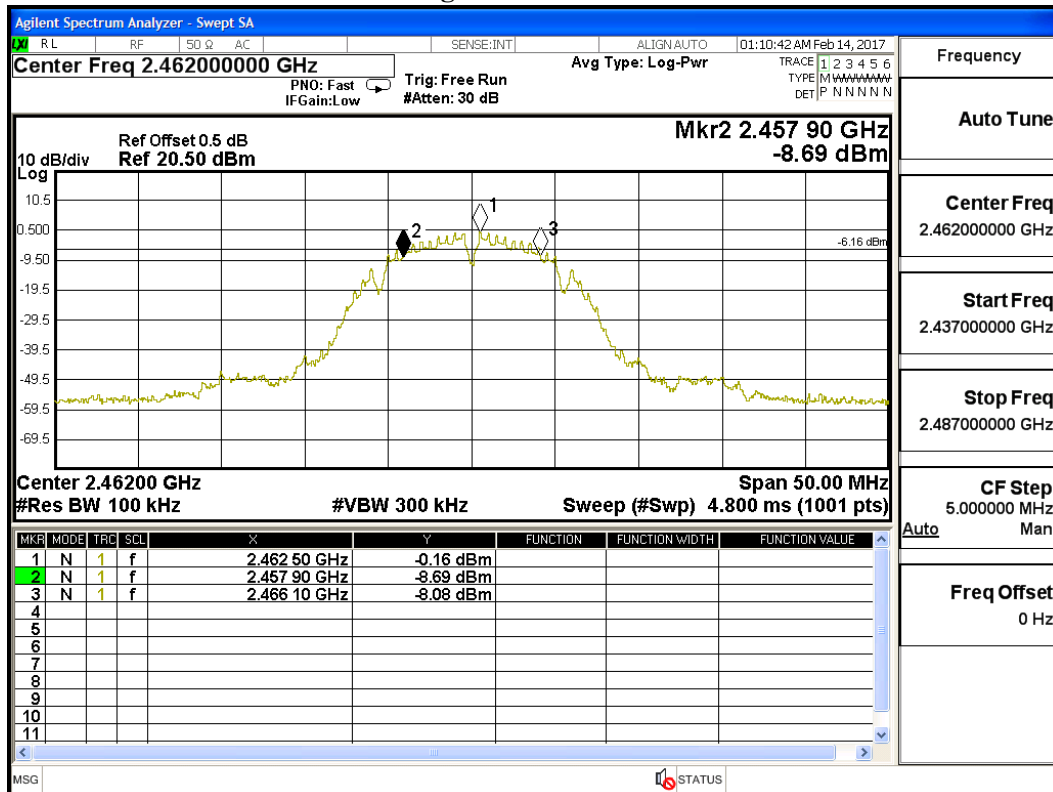


Figure Channel 11:



Product : VUZE camera
 Test Item : 6dB Bandwidth Data
 Test Site : No.3 OATS
 Test Mode : Mode 2: Transmit (802.11g 6Mbps) (2412MHz)

Channel No.	Frequency (MHz)	Measurement Level (kHz)	Required Limit (kHz)	Result
01	2412	15200	>500	Pass
06	2437	15200	>500	Pass
11	2462	15200	>500	Pass

Figure Channel 01:

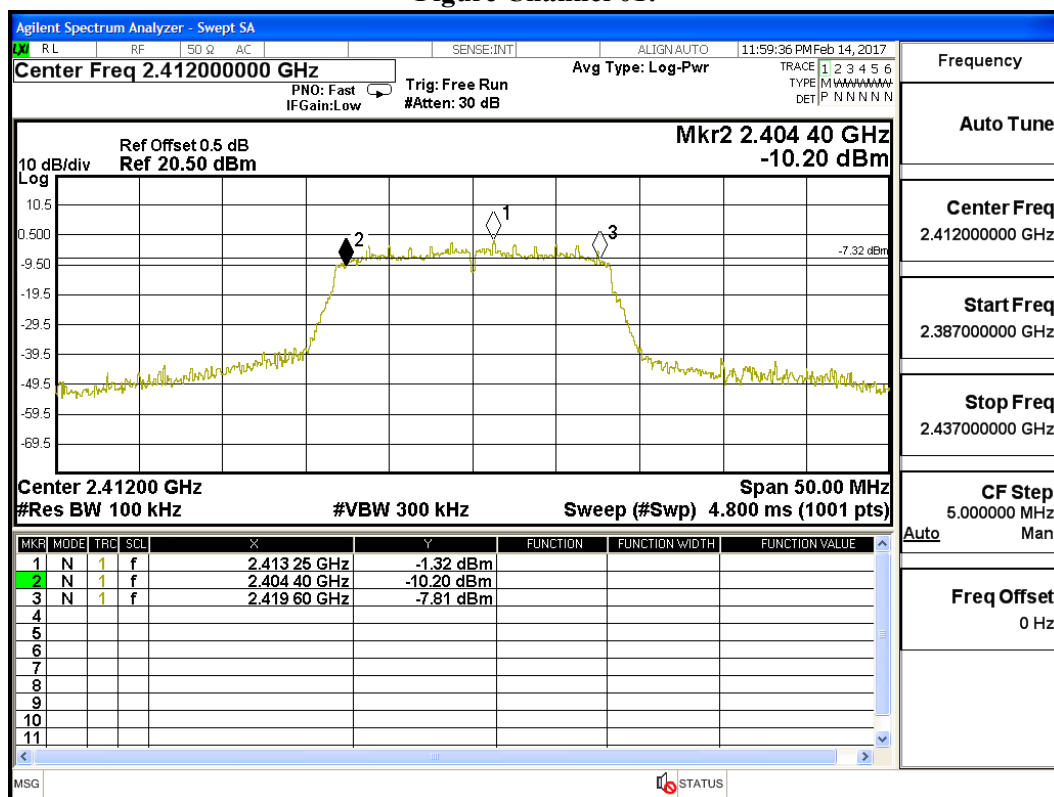


Figure Channel 06:

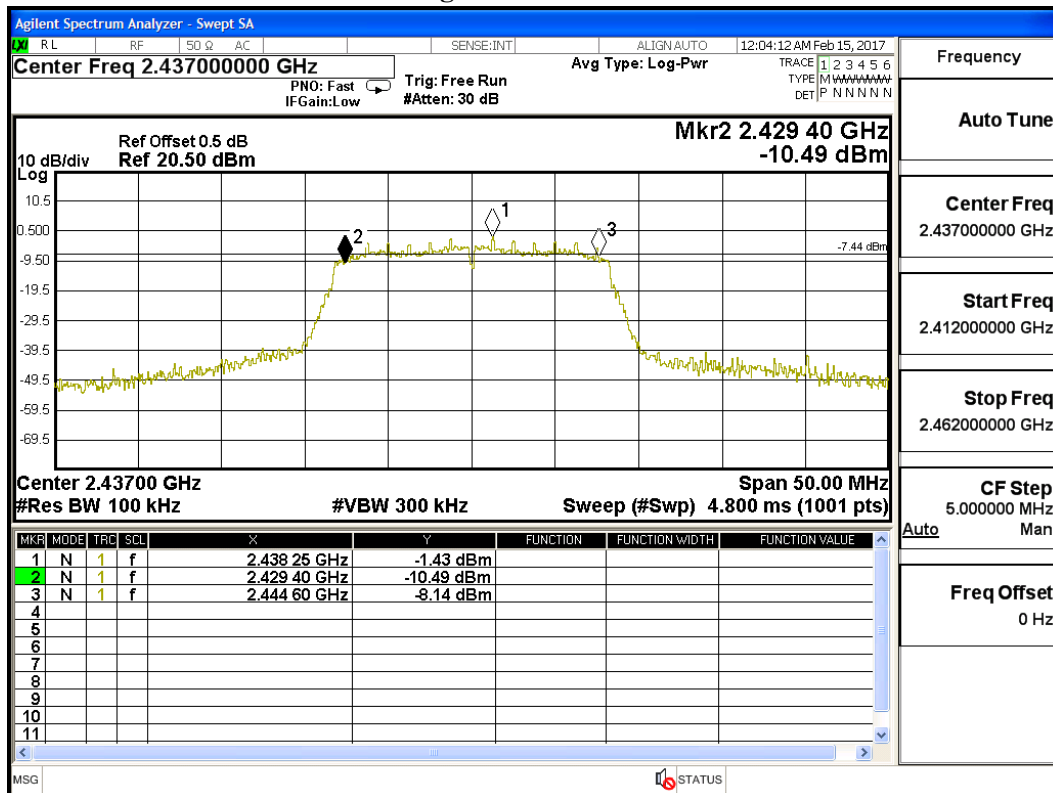
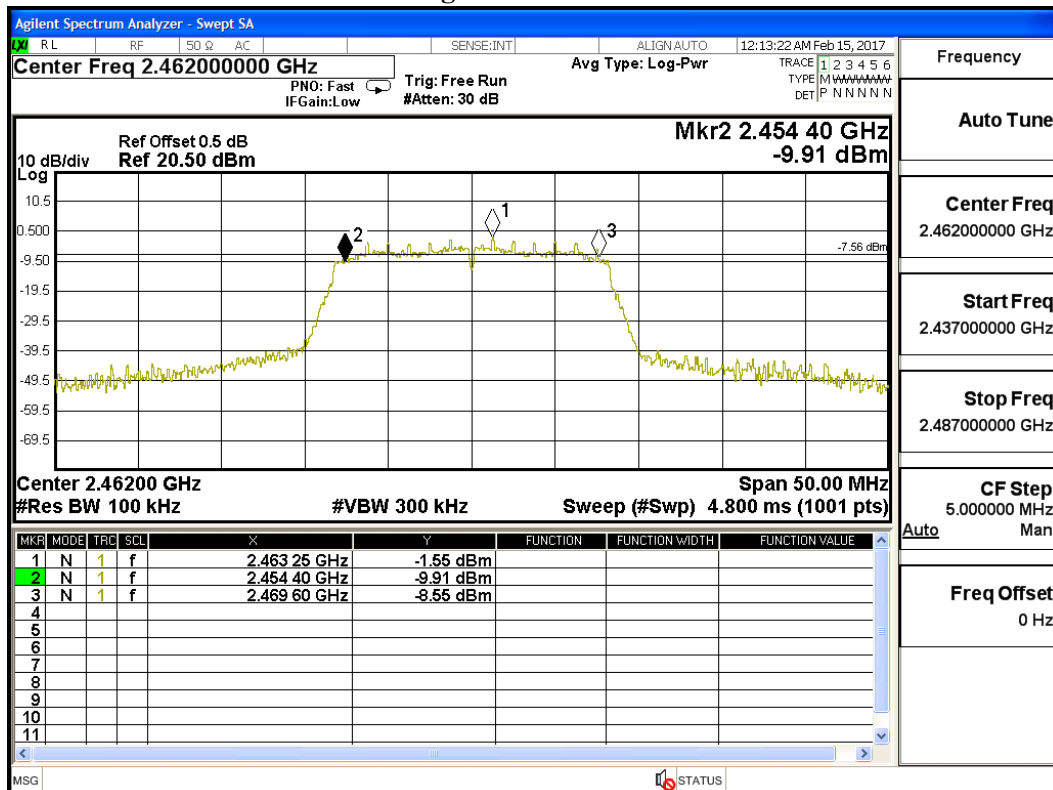


Figure Channel 11:



Product : VUZE camera
 Test Item : 6dB Bandwidth Data
 Test Site : No.3 OATS
 Test Mode : Mode 3: Transmit (802.11n MCS0 6.5Mbps 20M-BW)

Channel No.	Frequency (MHz)	Measurement Level (kHz)	Required Limit (kHz)	Result
01	2412	15200	>500	Pass
06	2437	15200	>500	Pass
11	2462	15200	>500	Pass

Figure Channel 01:

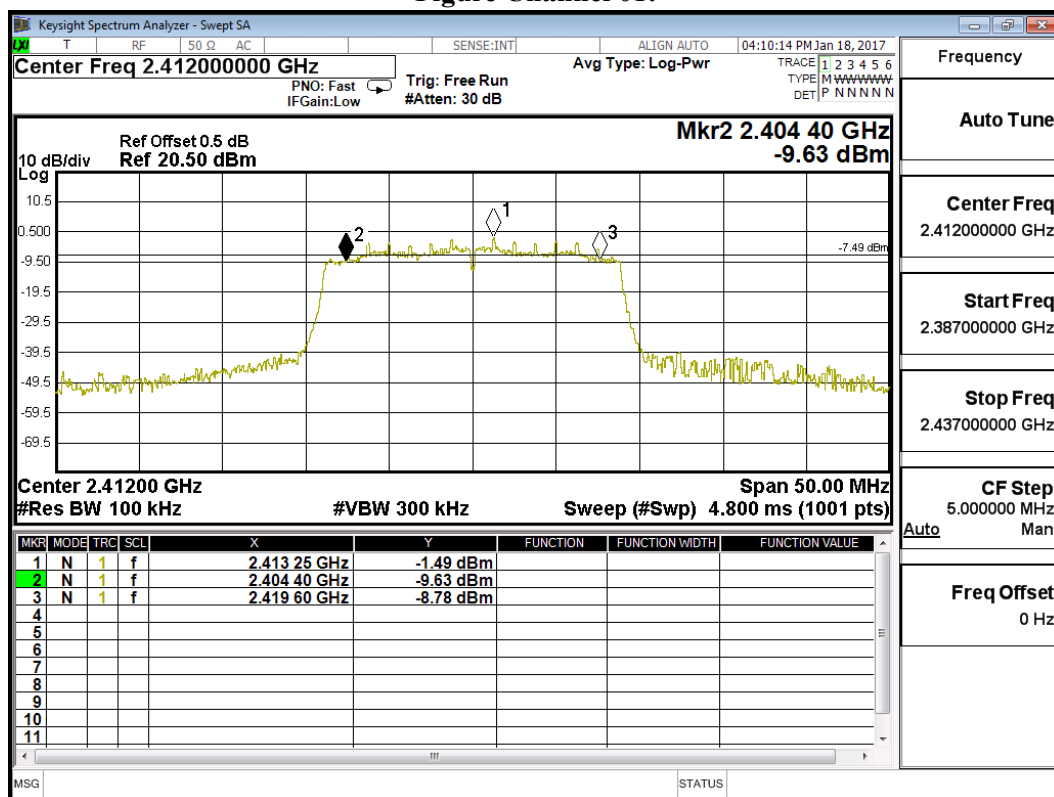


Figure Channel 06:

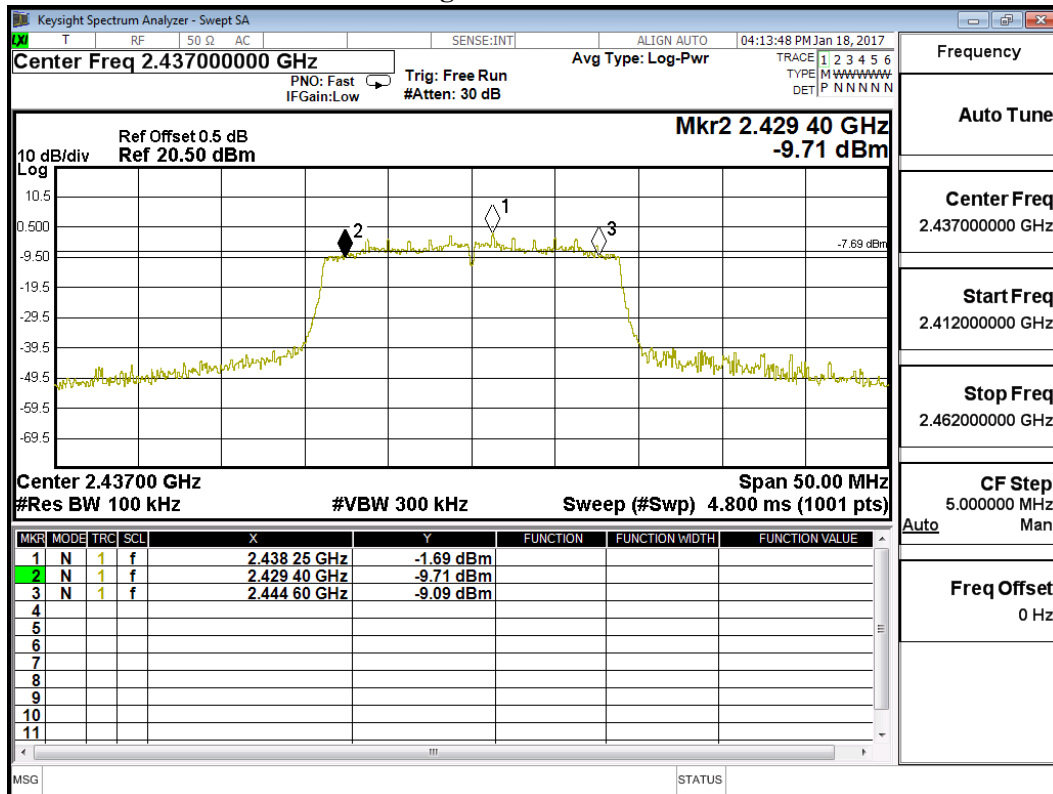
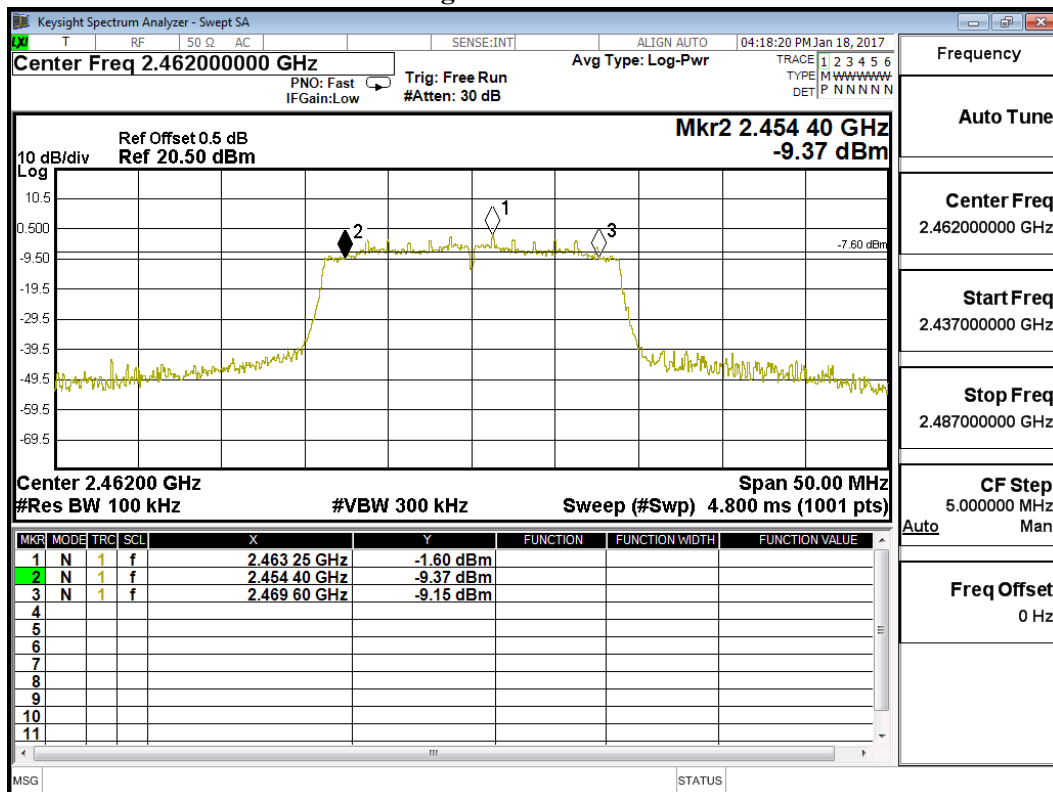
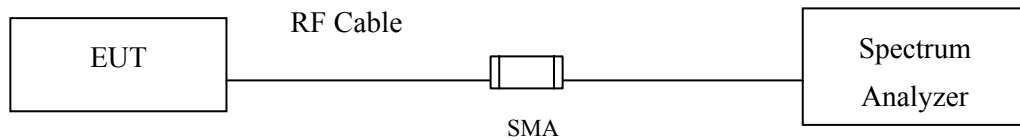


Figure Channel 11:



8. Power Density

8.1. Test Setup



8.2. Limits

The transmitted power density averaged over any 1 second interval shall not be greater +8dBm in any 3kHz bandwidth.

8.3. Test Procedure

The EUT was setup according to ANSI C63.10, 2013; tested according to DTS test procedure of KDB 558074 for compliance to FCC 47CFR 15.247 requirements.

The maximum power spectral density using KDB 558074 section 10.2 PKPSD (peak PSD) method.

8.4. Uncertainty

± 1.20 dB

8.5. Test Result of Power Density

Product : VUZE camera
 Test Item : Power Density Data
 Test Site : No.3 OATS
 Test Mode : Mode 1: Transmit (802.11b 1Mbps)

Channel No.	Frequency (MHz)	Measure Level (dBm)	Limit (dBm)	Result
01	2412	-0.690	≤ 8 dBm	Pass
06	2437	-0.340	≤ 8 dBm	Pass
11	2462	0.170	≤ 8 dBm	Pass

Figure Channel 01:

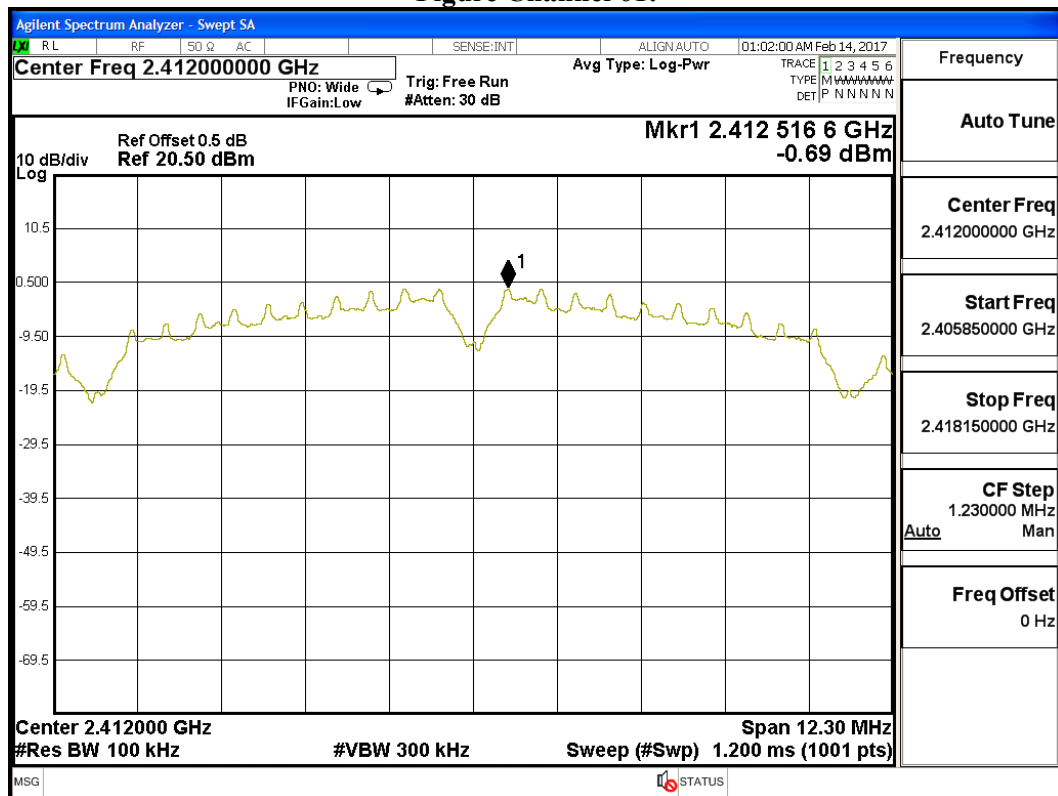


Figure Channel 06:

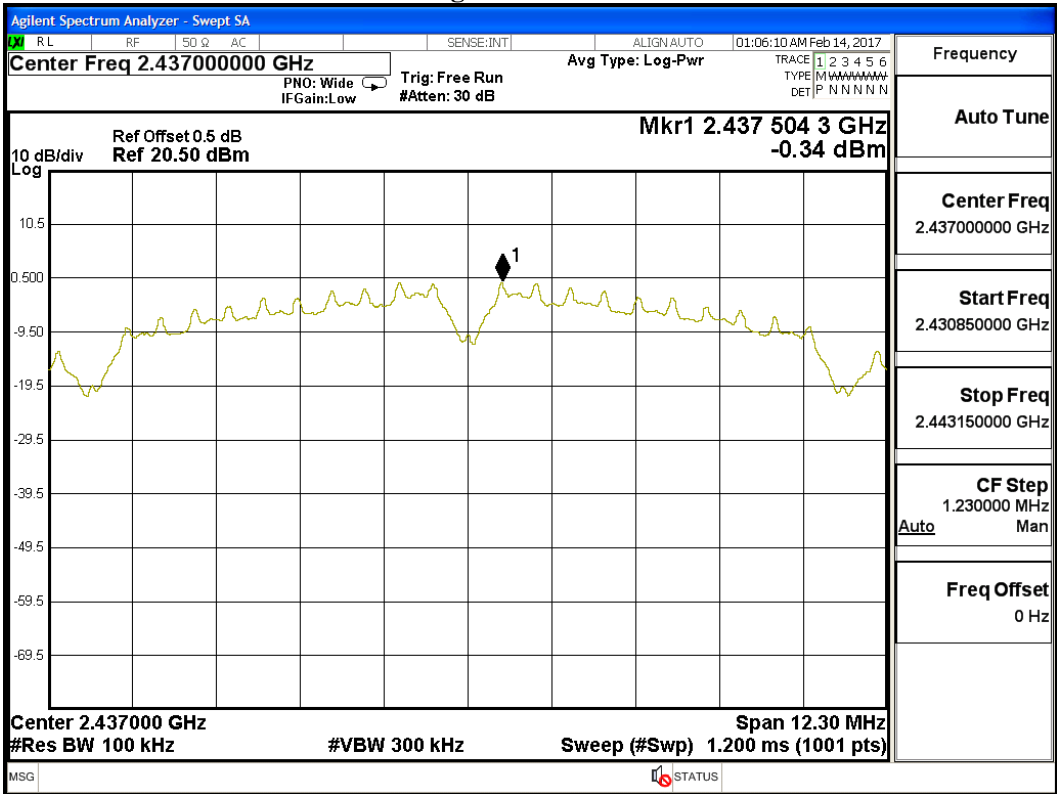
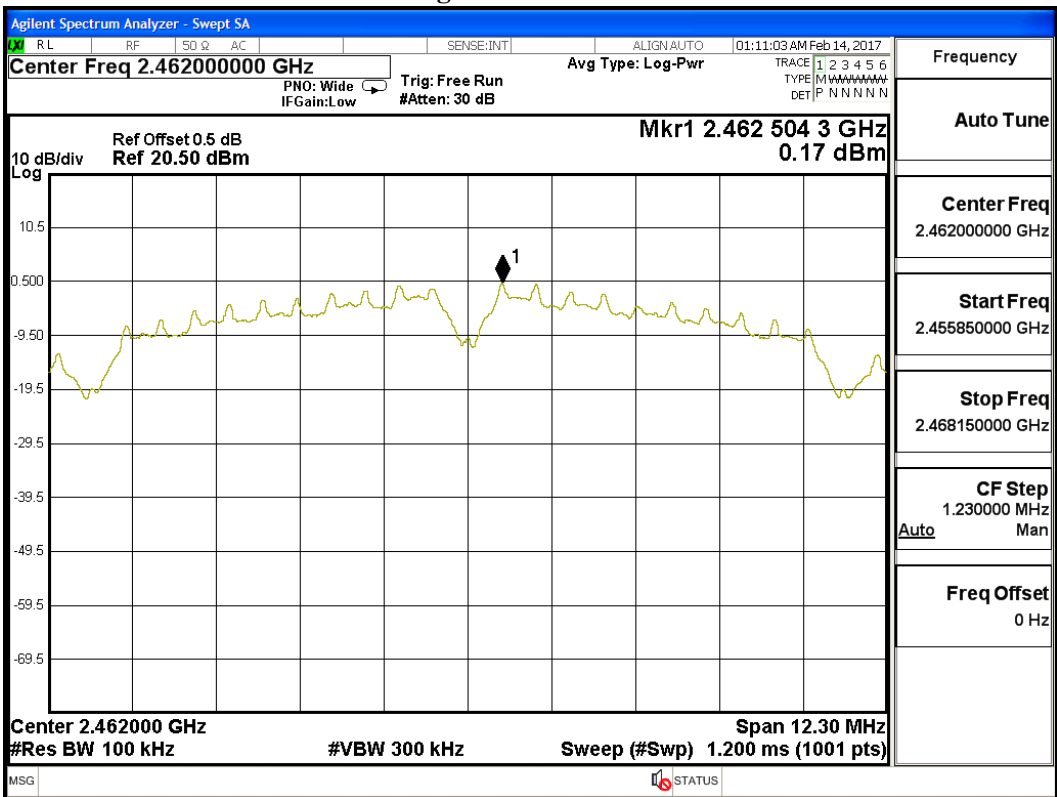


Figure Channel 11:



Product : VUZE camera
 Test Item : Power Density Data
 Test Site : No.3 OATS
 Test Mode : Mode 2: Transmit (802.11g 6Mbps)

Channel No.	Frequency (MHz)	Measure Level (dBm)	Limit (dBm)	Result
01	2412	-1.330	≤ 8 dBm	Pass
06	2437	-1.460	≤ 8 dBm	Pass
11	2462	-1.310	≤ 8 dBm	Pass

Figure Channel 01:

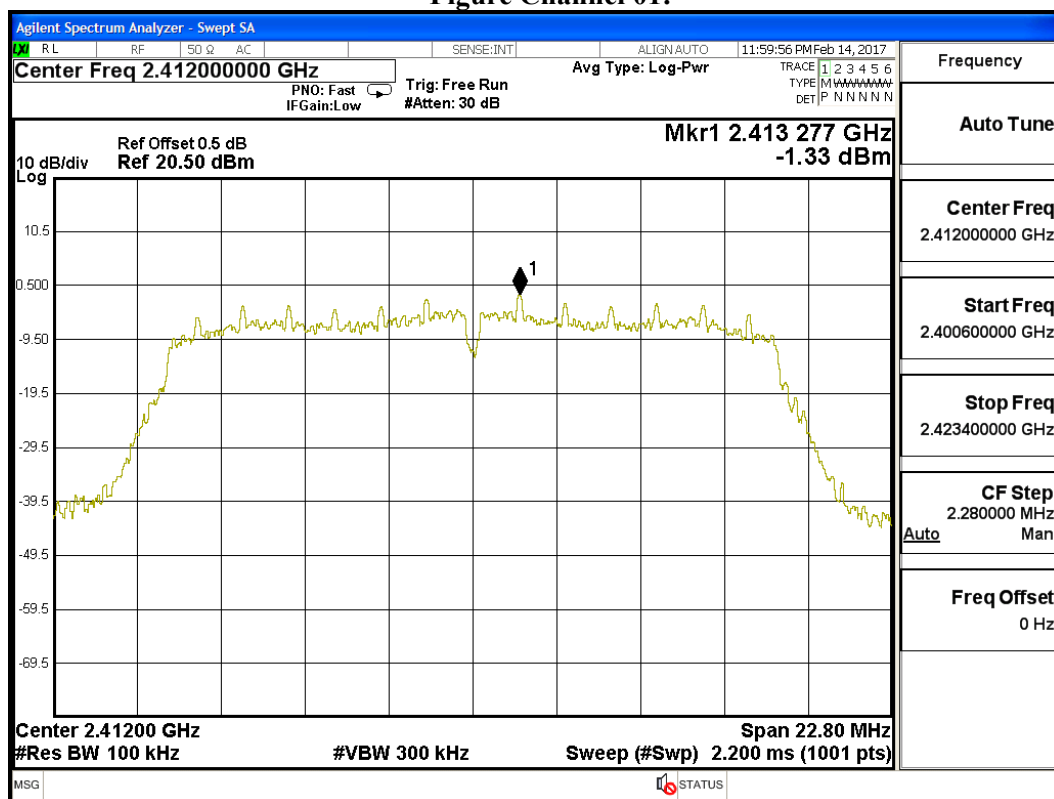


Figure Channel 06:

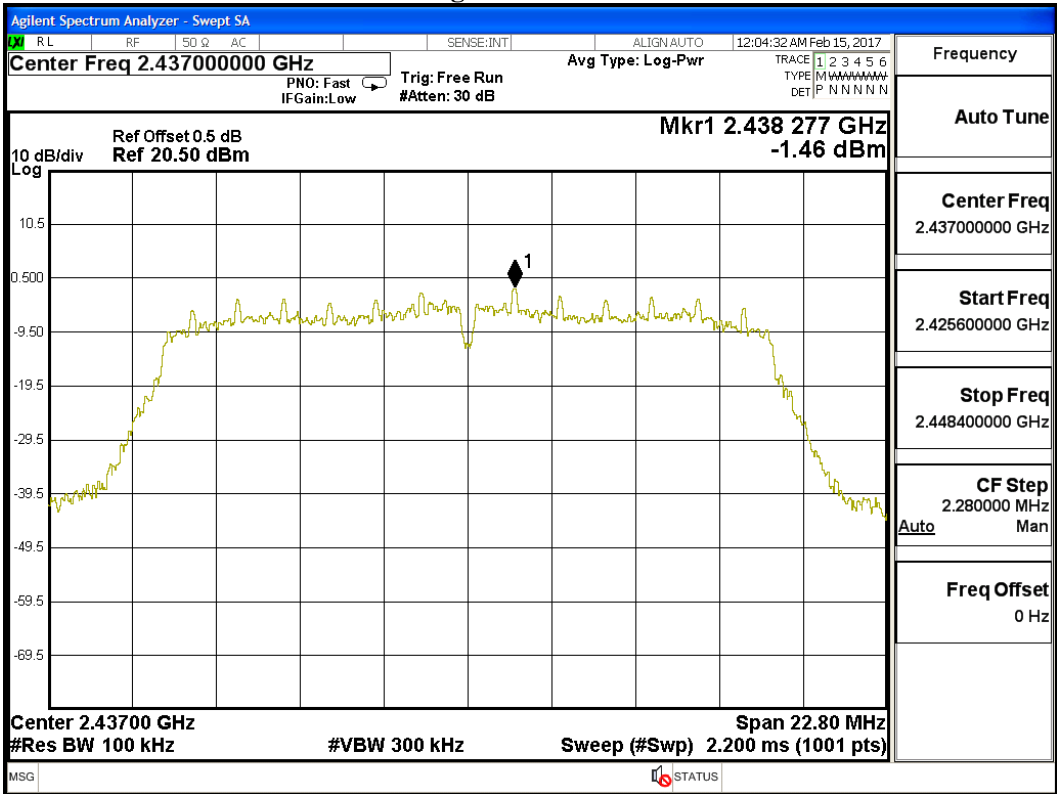
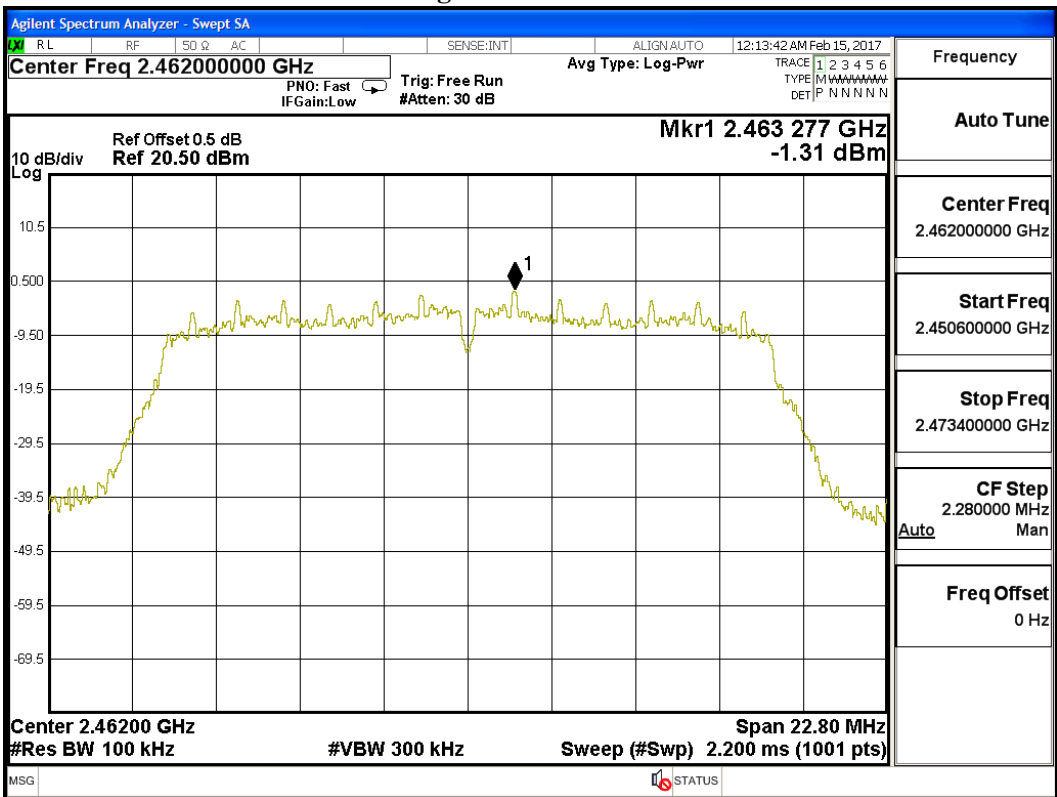


Figure Channel 11:



Product : VUZE camera
 Test Item : Power Density Data
 Test Site : No.3 OATS
 Test Mode : Mode 3: Transmit (802.11n MCS0 6.5Mbps 20M-BW)

Channel No.	Frequency (MHz)	Measure Level (dBm)	Limit (dBm)	Result
01	2412	-1.500	≤ 8 dBm	Pass
06	2437	-1.720	≤ 8 dBm	Pass
11	2462	-1.610	≤ 8 dBm	Pass

Figure Channel 01:

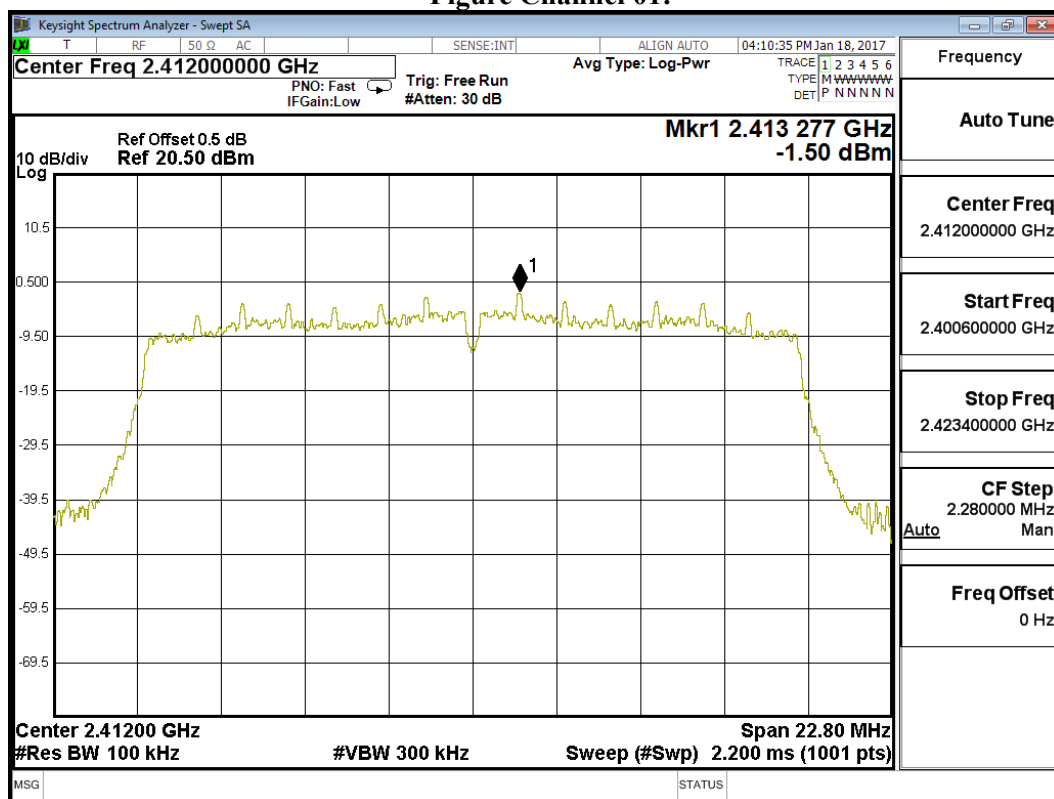


Figure Channel 06:

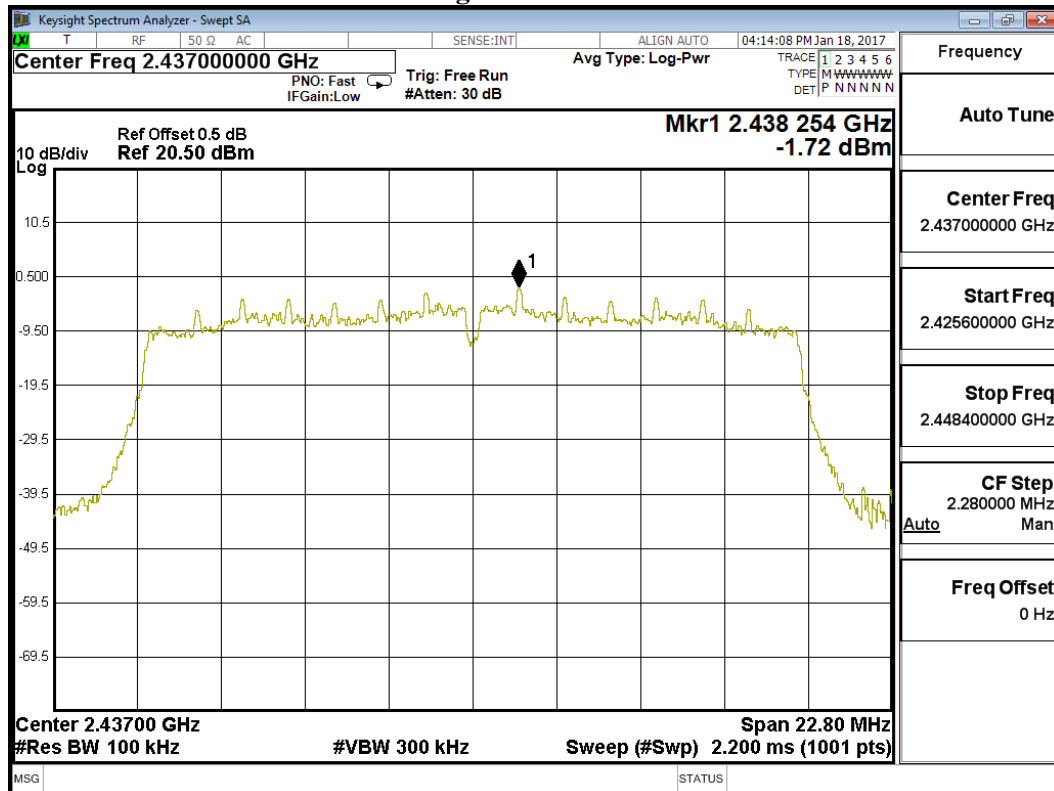
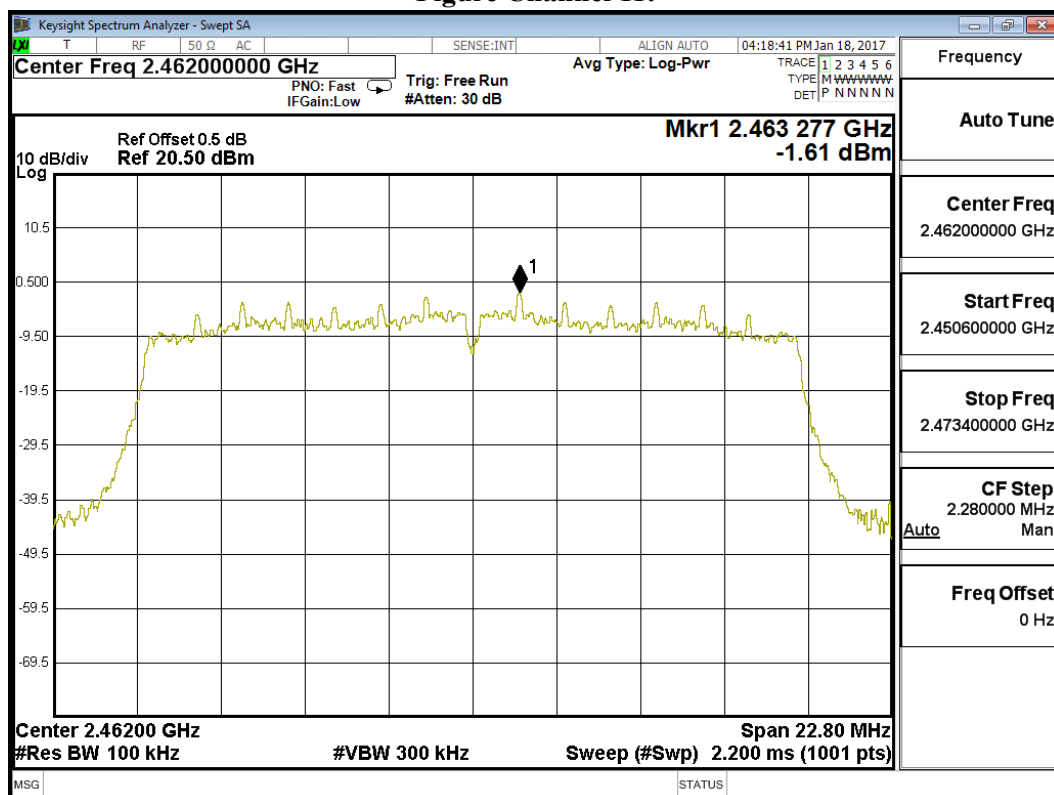


Figure Channel 11:



9. EMI Reduction Method During Compliance Testing

No modification was made during testing.

Attachment 1: EUT Test Photographs

Attachment 2: EUT Detailed Photographs