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TESTING
CNAS L5313



DEKRA

Test Report

FCC Part15 Subpart C

Product Name : Kasa Cam

Model No. : KC120

FCC ID : TE7KC120

Applicant : TP-Link Technologies Co., Ltd.

Address : Building 24(floors1,3,4,5) and 28(floors1-4) Central
Science and Technology Park, Shennan Rd, Nanshan,
Shenzhen, China

Date of Receipt : Feb. 10, 2017

Test Date : Feb. 10, 2017~ Apr. 25, 2017

Issued Date : July. 14, 2017

Report No. : 1722031R-RF- US-P06V02

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 of the equipment and evaluated measurement uncertainty herein.

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Test Report Certification

Issued Date : July. 14, 2017

Report No. : 1722031R-RF-US-P06V02



Product Name : Kasa Cam
Applicant : TP-Link Technologies Co., Ltd.
Address : Building 24(floors1,3,4,5) and 28(floors1-4) Central Science and Technology Park, Shennan Rd, Nanshan, Shenzhen, China
Manufacturer : TP-Link Technologies Co., Ltd.
Address : Building 24(floors1,3,4,5) and 28(floors1-4) Central Science and Technology Park, Shennan Rd, Nanshan, Shenzhen, China
Model No. : KC120
FCC ID : TE7KC120
EUT Voltage : DC 5V,1A
Test Voltage : AC 120V/60Hz
Brand Name : tp-link
Applicable Standard : FCC CFR Title 47 Part 15 Subpart C
ANSI C63.4:2014; ANSI C63.10:2013;
KDB 558074 D01v03r05
Test Result : Complied
Performed Location : DEKRA Testing and Certification (Suzhou) Co., Ltd.
Corporation - Suzhou EMC Laboratory
No.99 Hongye Rd., Suzhou Industrial Park, Suzhou, 215006, Jiangsu, China
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FCC Registration Number: 800392; IC Lab Code: 4075B

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History of This Test Report

REPORT NO.	VERSION	DESCRIPTION	ISSUED DATE
1722031R-RF-US-P06V02	V1.0	Initial Issued Report	July. 14, 2017

1. General Information

1.1. EUT Description

Product Name	Kasa Cam
Brand Name	tp-link
Model No.	KC120
EUT Voltage	DC 5V,1A
Test Voltage	AC 120V/60Hz
Frequency Range	For 2.4GHz Band 802.11b/g/n(20MHz): 2412~2462MHz 802.11n(40MHz): 2422~2452MHz
Channel Number	For 2.4GHz Band 802.11b/g/n(20MHz): 11 802.11n(40MHz): 7
Type of Modulation	802.11b: DSSS 802.11g: OFDM
Data Rate	802.11g: 6/9/12/18/24/36/48/54 Mbps 802.11b: 1/2/5.5/11 Mbps 802.11n: up to 150 Mbps
Channel Control	Auto

1.2. Channel List:

802.11b/g/n(20MHz) Working Frequency of Each Channel:							
Channel	Frequency	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	N/A	N/A
802.11n(40MHz) Working Frequency of Each Channel:							
Channel	Frequency	Channel	Frequency	Channel	Frequency	Channel	Frequency
03	2422 MHz	04	2427 MHz	05	2432 MHz	06	2437 MHz
07	2442 MHz	08	2447 MHz	09	2452 MHz	N/A	N/A

1.3. Test Channel:

802.11b/g/n(20MHz) Working Frequency of Each Channel:							
Channel	Frequency	Channel	Frequency	Channel	Frequency	Channel	Frequency
01	2412 MHz	06	2437MHz	11	2462 MHz	N/A	N/A
802.11n(40MHz) Working Frequency of Each Channel:							
Channel	Frequency	Channel	Frequency	Channel	Frequency	Channel	Frequency
03	2422 MHz	06	2437 MHz	09	2452 MHz	N/A	N/A

1.4. Antenna information

Antenna manufacturer	N/A					
Antenna Delivery	☒	1*TX+1*RX	☐	2*TX+2*RX	☐	3*TX+3*RX
Antenna technology	☒	SISO				
	☐	MIMO	☐	Basic		
			☐	Sectorized antenna systems		
			☐	Cross-polarized antennas		
			☐	Unequal antenna gains, with equal transmit powers		
			☐	Spatial Multiplexing		
			☐	CDD		
			☐	Beam-forming		
Antenna Type	☐	External	☐	Dipole		
	☒	Internal	☒	PIFA		
			☐	PCB		
			☐	Ceramic Chip Antenna		
			☐	Metal plate type F antenna		
			☐	Cross-polarize Antenna		
Antenna Gain #0	4.42dBi					

1.5. Mode of Operation

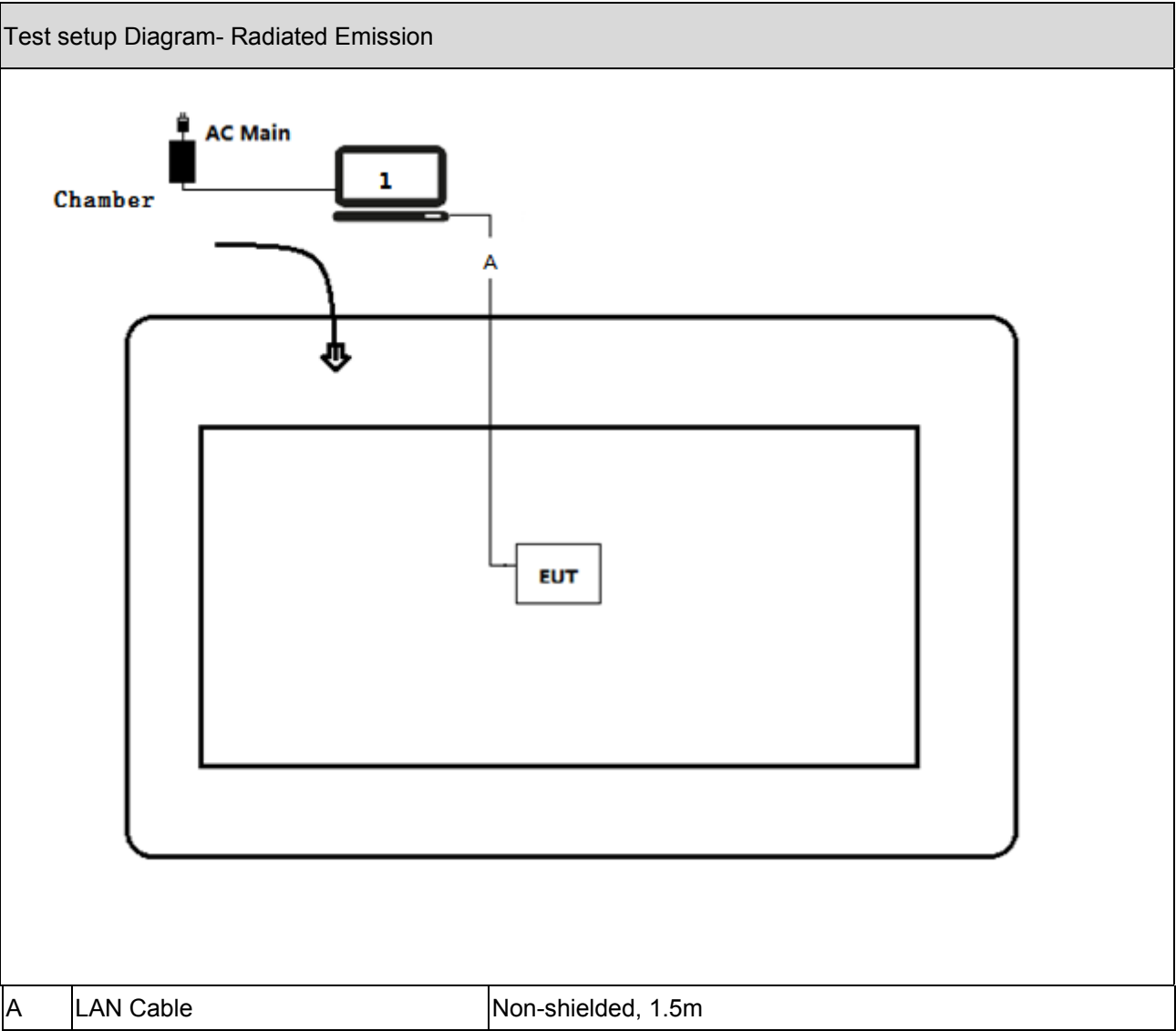
Test Modes List
Mode 1: Transmit by 802.11b
Mode 2: Transmit by 802.11g
Mode 3: Transmit by 802.11n(20MHz)
Mode 4: Transmit by 802.11n(40MHz)

1.6. Tested System Details

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

No.	Product	Manufacturer	Model No.	Serial No.	Power Cord
1	Notebook	Lenovo	Think pad x220	SUA0600195	Non-shielded
A	LAN cable	N/A	N/A	N/A	Non-shielded, 1.5m

1.7. Configuration of Tested System



2. Technical Test

2.1. Summary of Test Result

For FCC Rule:

Performed Test Item	Normative References	Worst case mode	Limit	Result
AC Power Line Conducted Emission	FCC CFR Title 47 Part 15 Subpart C: 2015 Section 15.207	Mode 1	FCC 15.207	N/A
Emissions in restricted frequency bands	FCC CFR Title 47 Part 15 Subpart C: 2015 Section 15.209	Mode 1	FCC 15.209	PASS
Emissions in non-restricted frequency bands	FCC CFR Title 47 Part 15 Subpart C: 2015 Section 15.247(d)	Mode 1	$\geq 30\text{dBc}$	PASS
Radiated Emission Band Edge	FCC CFR Title 47 Part 15 Subpart C: 2015 15.247(d)	Mode 1	FCC 15.209	PASS
Occupied Bandwidth	FCC CFR Title 47 Part 15 Subpart C: 2015 Section 15.247(a)(2)	Mode 1	$\geq 500\text{kHz}$	PASS
Fundamental emission output power	FCC CFR Title 47 Part 15 Subpart C: 2015 Section 15.247(b)(3)	Mode 1	$\leq 30\text{dBm}$	PASS
Power Spectral Density	FCC CFR Title 47 Part 15 Subpart C: 2015 Section 15.247(e)	Mode 1	$\leq 8\text{dBm}/3\text{kHz}$	PASS
Antenna Requirement	FCC CFR Title 47 Part 15 Subpart C: 2015 Section 15.203	N/A	FCC 15.203	PASS

2.2. Power setting parameter

Test Software	QA	
Modulation Mode	Test Frequency	Ant 0
802.11b	2412	20
	2417	20
	2437	20
	2457	20
	2462	21
802.11g	2412	19
	2417	20
	2437	28
	2457	20
	2462	18
802.11n(20MHz)	2412	18
	2417	20
	2437	28
	2457	20
	2462	16
802.11n(40MHz)	2422	10
	2427	13
	2437	17
	2447	0D
	2452	0A

2.3. Power vs Data Rate

MCS Index for 802.11n	Spatial Streams	Data Rate (Mbps)						
		802.11b	802.11g		20MHz Bandwidth		40MHz Bandwidth	
					800ns GI	400ns GI	800ns GI	400ns GI
0	1	1	6	---	6.5	7.2	13.5	15.0
1	1	2	9	---	13.0	14.4	27.0	30.0
2	1	5.5	12	---	19.5	21.7	40.5	45.0
3	1	11	18	---	26.0	28.9	54.0	60.0
4	1	---	24	---	39.0	43.3	81.0	90.0
5	1	---	36	---	52.0	57.8	108.0	120.0
6	1	---	48	---	58.5	65.0	121.5	135.0
7	1	---	54	---	65.0	72.2	135.0	150.0

Note 1 : The blue form is the maximum power data rate

2.4. Test Environment

Items	Required (IEC 68-1)	Actual
Temperature (°C)	15-35	21
Humidity (%RH)	25-75	50
Barometric pressure (mbar)	860-1060	950-1000

2.5. Measurement Uncertainty

Test Items	Uncertainty
AC Power Line Conducted Emission	$\pm 2.02\text{dB}$
Radiated Emission	Below 1GHz $\pm 3.8\text{ dB}$
	Above 1GHz $\pm 3.9\text{ dB}$
RF Antenna Port Conducted Emission	$\pm 1.27\text{dB}$
Radiated Emission Band Edge	$\pm 3.9\text{dB}$
Occupied Bandwidth	$\pm 1\text{kHz}$
Power Spectral Density	$\pm 1.27\text{dB}$

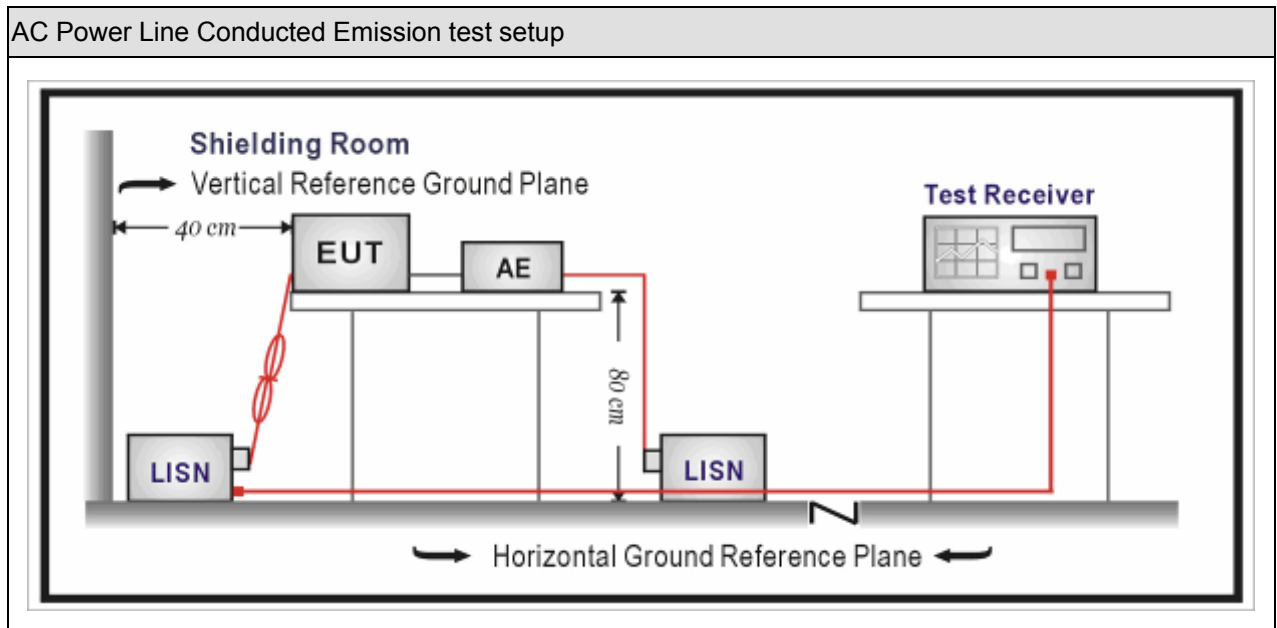
3. AC Power Line Conducted Emission

3.1. Test Equipment

AC Power Line Conducted Emission / TR-1					
Instrument	Manufacturer	Type No.	Serial No.	Cal. Date	Cal. Due Date
EMI Test Receiver	R&S	ESCI	100906	2017.03.05	2018.03.04
Two-Line V-Network	R&S	ENV 216	101189	2016.07.16	2017.07.15
Two-Line V-Network	R&S	ENV 216	101044	2016.09.16	2017.09.15
50ohm Coaxial Switch	Anritsu	MP59B	6200464462	N/A	N/A
50ohm Termination	SHX	TF2	07081402	2016.09.16	2017.09.15
Temperature/Humidity Meter	Zhichen	ZC1-2	TR1-TH	2017.01.04	2018.01.03

Note: All equipments are calibrated with traceable calibrations. Each calibration is traceable to the national or international standards.

3.2. Test Setup



3.3. Limit

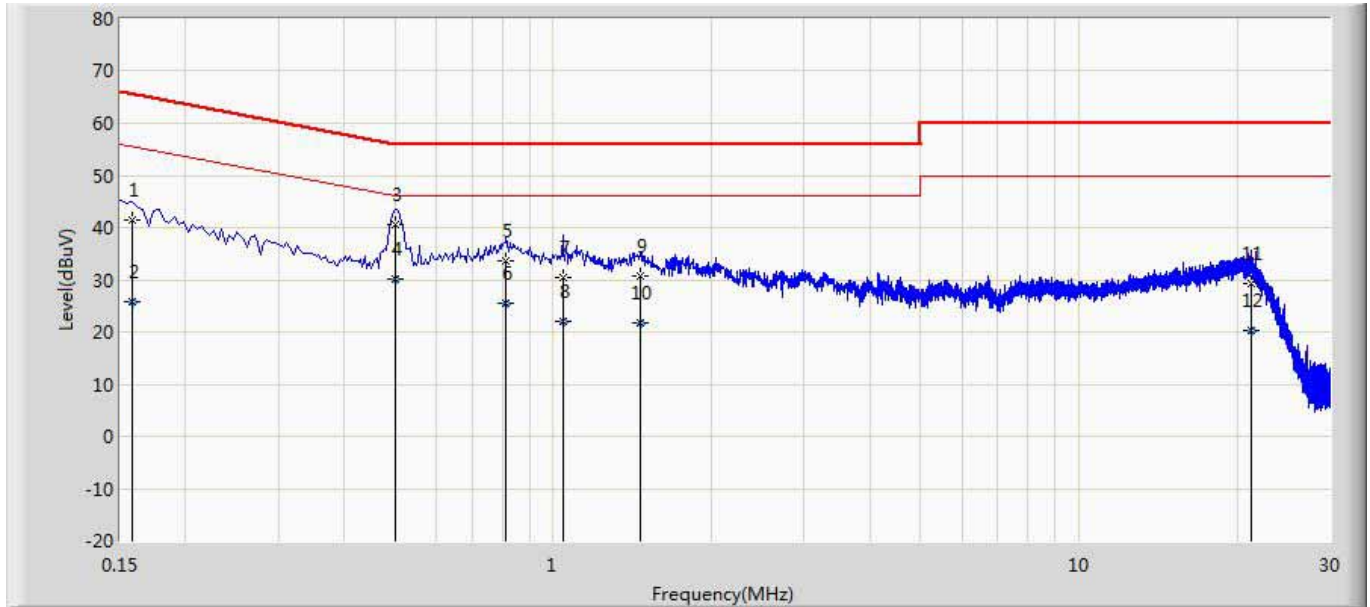
Frequency of Emission (MHz)	Conducted Limit	
	Quasi-peak (dB μ V)	Average (dB μ V)
0.15-0.5	66 to 56	56 to 46
0.5-5	56	46
5-30	60	50
Note 1: The lower limit shall apply at the transition frequencies.		
Note 2: The limit decreases linearly with the logarithm of the frequency in the range 0.15 MHz to 0.5 MHz.		

3.4. Test Procedure

Test Method			
	References Rule	Chapter	Item
☒	ANSI C63.10-2013	6.2	Standard test method for ac power-line conducted emissions from unlicensed wireless devices
☒	ANSI C63.4-2014	7	AC power-line conducted emission measurements

3.5. Test Result

Site: TR1	Time: 2017/02/23
Limit: FCC_Part15.107_CE_AC Power_ClassB	Margin: 0
Probe: ENV216-L1	Polarity: Line
EUT: Kasa Cam	Power: AC 120V/60Hz
Note: Mode 1	



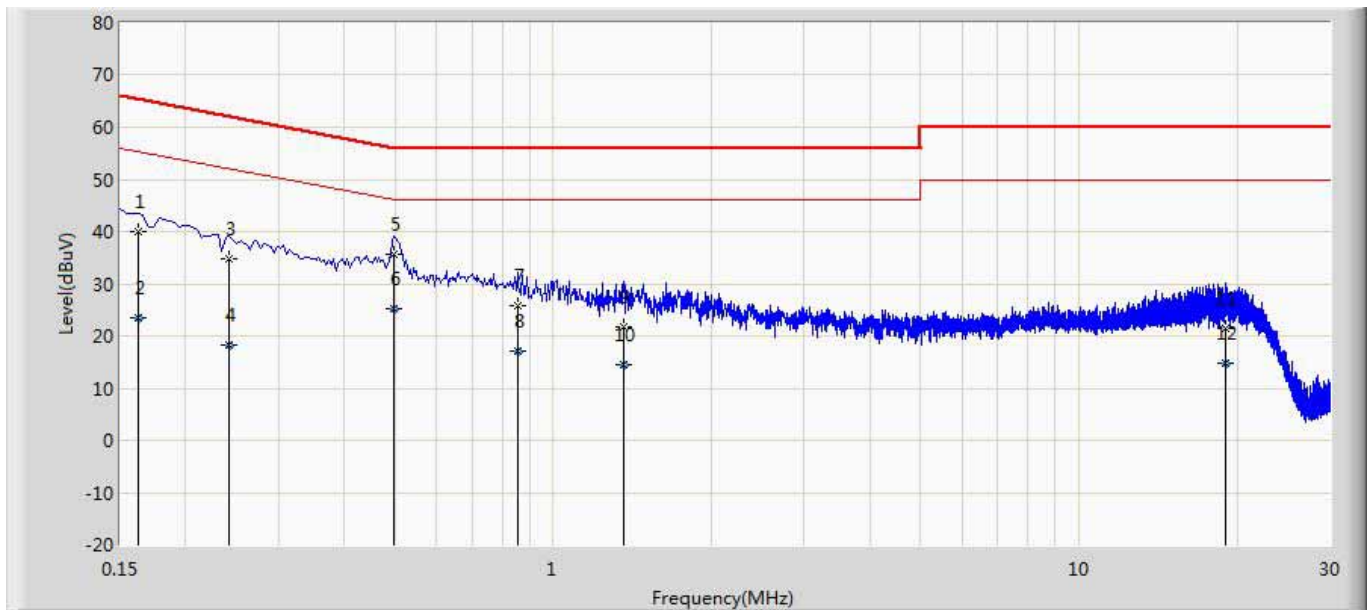
No	Mark	Frequency (MHz)	Measure Level (dBuV)	Reading Level (dBuV)	Over Limit (dB)	Limit (dBuV)	Probe (dB)	Cable (dB)	Amp (dB)	Type
1		0.158	41.538	31.807	-24.030	65.568	9.671	0.060	0.000	QP
2		0.158	25.854	16.123	-29.714	55.568	9.671	0.060	0.000	AV
3	*	0.502	40.462	30.762	-15.538	56.000	9.630	0.070	0.000	QP
4		0.502	30.250	20.550	-15.750	46.000	9.630	0.070	0.000	AV
5		0.814	33.685	23.995	-22.315	56.000	9.620	0.070	0.000	QP
6		0.814	25.409	15.719	-20.591	46.000	9.620	0.070	0.000	AV
7		1.042	30.564	20.854	-25.436	56.000	9.630	0.080	0.000	QP
8		1.042	21.943	12.233	-24.057	46.000	9.630	0.080	0.000	AV
9		1.462	30.802	21.082	-25.198	56.000	9.630	0.090	0.000	QP
10		1.462	21.689	11.969	-24.311	46.000	9.630	0.090	0.000	AV
11		21.214	29.222	19.042	-30.778	60.000	9.680	0.500	0.000	QP
12		21.214	20.377	10.197	-29.623	50.000	9.680	0.500	0.000	AV

Note:

1. " * ", means this data is the worst emission level.

2. Measurement Level = Reading Level + Factor(Probe+Cable-Amp).

Site: TR1	Time: 2017/02/23
Limit: FCC_Part15.107_CE_AC Power_ClassB	Margin: 0
Probe: ENV216-N	Polarity: Neutral
EUT: Kasa Cam	Power: AC 120V/60Hz
Note: Mode 1	



No	Mark	Frequency (MHz)	Measure Level (dBuV)	Reading Level (dBuV)	Over Limit (dB)	Limit (dBuV)	Probe (dB)	Cable (dB)	Amp (dB)	Type
1		0.162	40.062	30.333	-25.299	65.361	9.669	0.060	0.000	QP
2		0.162	23.582	13.853	-31.779	55.361	9.669	0.060	0.000	AV
3		0.242	34.735	25.015	-27.292	62.027	9.660	0.060	0.000	QP
4		0.242	18.153	8.433	-33.874	52.027	9.660	0.060	0.000	AV
5	*	0.498	35.639	25.939	-20.394	56.033	9.630	0.070	0.000	QP
6		0.498	25.272	15.572	-20.761	46.033	9.630	0.070	0.000	AV
7		0.854	25.795	16.087	-30.205	56.000	9.638	0.070	0.000	QP
8		0.854	17.133	7.425	-28.867	46.000	9.638	0.070	0.000	AV
9		1.358	21.730	12.015	-34.270	56.000	9.630	0.085	0.000	QP
10		1.358	14.421	4.706	-31.579	46.000	9.630	0.085	0.000	AV
11		18.954	21.384	11.094	-38.616	60.000	9.840	0.450	0.000	QP
12		18.954	14.846	4.556	-35.154	50.000	9.840	0.450	0.000	AV

Note:

1. " * ", means this data is the worst emission level.
2. Measurement Level = Reading Level + Factor(Probe+Cable-Amp).

4. Emissions in restricted frequency bands

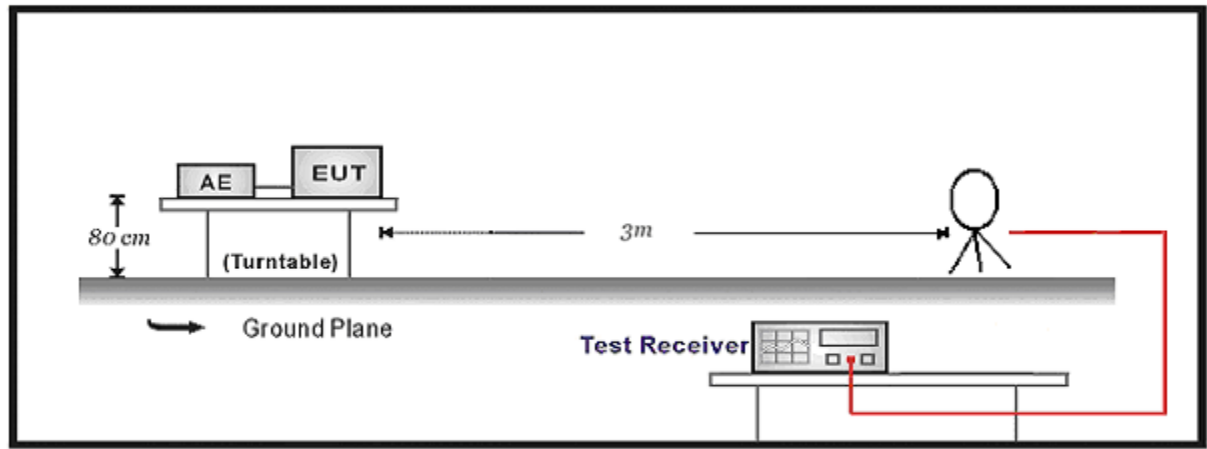
4.1. Test Equipment

Radiated Emission(Below 1GHz) / AC-2					
Instrument	Manufacturer	Type No.	Serial No.	Cal. Date	Cal. Due Date
EMI Test Receiver	R&S	ESCI	100573	2016.03.29	2017.03.28
Loop Antenna	R&S	HFH2-Z2	833799/003	2016.11.16	2017.11.15
Bilog Antenna	Teseq GmbH	CBL6112D	27611	2016.10.16	2017.10.15
Coaxial Cable	Huber+Suhner	SUCOFLEX 106	AC2-C	2016.03.02	2017.03.01
Temperature/Humidity Meter	Zhichen	ZC1-2	AC2-TH	2017.01.04	2018.01.03
Note: All equipments are calibrated with traceable calibrations. Each calibration is traceable to the national or international standards.					

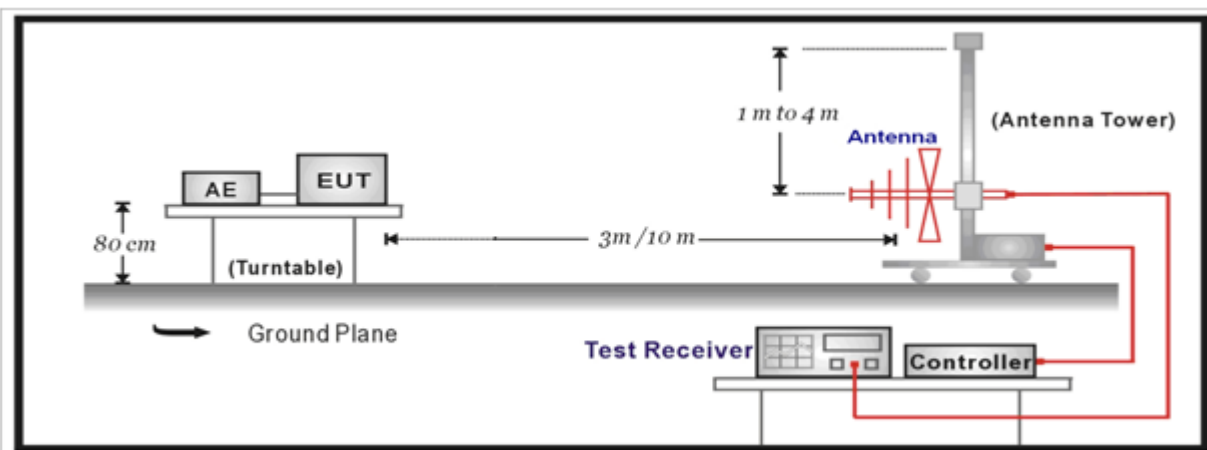
Radiated Emission(Above 1GHz) / AC-5					
Instrument	Manufacturer	Type No.	Serial No.	Cal. Date	Cal. Due Date
Spectrum Analyzer	Agilent	E4446A	MY45300103	2017.01.03	2018.01.02
Preamplifier	Miteq	NSP1800-25	1364185	2016.05.06	2017.05.05
Preamplifier	DEKRA Testing and Certification (Suzhou) Co., Ltd.	AP-040G	CHM-0906001	2016.05.06	2017.05.05
DRG Horn	ETS-Lindgren	3117	00123988	2016.01.22	2017.01.21
Broad-Band Horn Antenna	Schwarzbeck	BBHA9170	294	2016.11.25	2017.11.24
Coaxial Cable	Huber+Suhner	SUCOFLEX 106	AC5-C1	2016.03.02	2017.03.01
Coaxial Cable	Huber+Suhner	SUCOFLEX 106	AC5-C2	2016.03.02	2017.03.01
Coaxial Cable	Huber+Suhner	SUCOFLEX 102	AC5-C3	2016.03.02	2017.03.01
EMI Receiver	Agilent	N9038A	MY51210196	2016.06.10	2017.06.09
Temperature/Humidity Meter	Zhichen	ZC1-2	AC5-TH	2017.01.04	2018.01.03
Note: All equipments are calibrated with traceable calibrations. Each calibration is traceable to the national or international standards.					

4.2. Test Setup

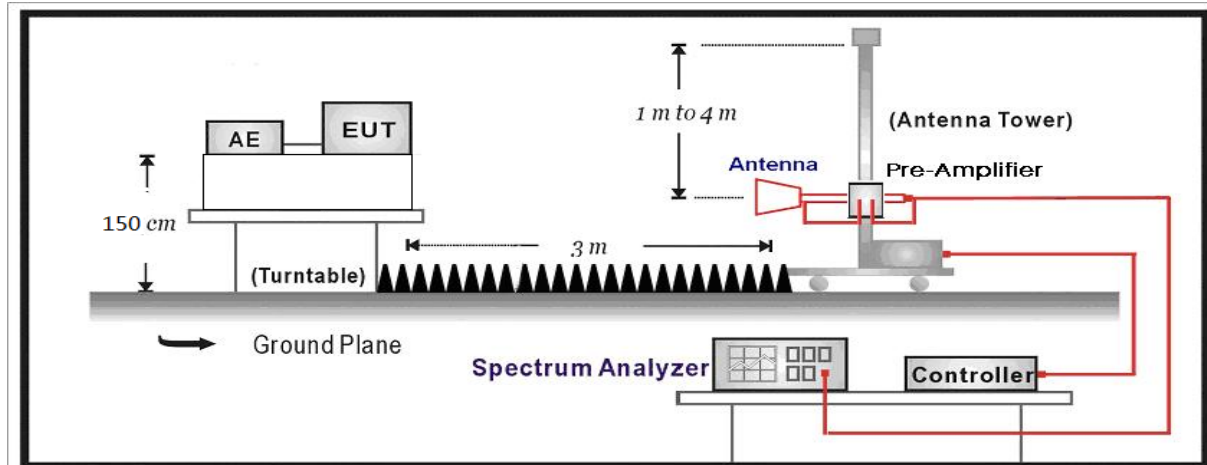
Below 30MHz Test Setup:



30MHz-1GHz Test Setup:



Above 1GHz Test Setup:



4.3. Limit

For FCC:

Restricted Bands of operation			
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
8.81425 – 8.81475	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	
13.36 – 13.41			

Restricted Band Emissions Limit			
Frequency (MHz)	Field strength (μ V/m)	Field strength (dB μ V/m)	Measurement distance (m)
0.009 - 0.49	2400/F(kHz)	48.5 – 13.8	300 _(Note 1)
0.49 - 1.705	24000/F(kHz)	33.8 - 23	30 _(Note 1)
1.705 - 30	30	29.5	30 _(Note 1)
30 - 88	100	40	3 _(Note 2)
88 - 216	150	43.5	3 _(Note 2)
216 - 960	200	46	3 _(Note 2)
Above 960	500	54	3 _(Note 2)

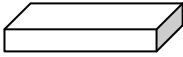
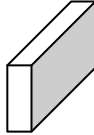
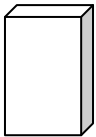
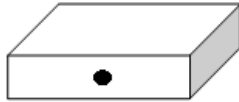
Note 1: At frequencies below 30 MHz, measurements may be performed at a distance closer than that specified in the regulations; however, an attempt should be made to avoid making measurements in the near field. Pending the development of an appropriate measurement procedure for measurements performed below 30 MHz, when performing measurements at a closer distance than specified, the results shall be extrapolated to the specified distance by either making measurements at a minimum of two distances on at least one radial to determine the proper extrapolation factor or by using the square of an inverse linear distance extrapolation factor (40 dB/decade).

Note 2: At frequencies at or above 30 MHz, measurements may be performed at a distance other than what is specified provided: measurements are not made in the near field except where it can be shown that near field measurements are appropriate due to the characteristics of the device; and it can be demonstrated that the signal levels needed to be measured at the distance employed can be detected by the measurement equipment. Measurements shall not be performed at a distance greater than 30 meters unless it can be further demonstrated that measurements at a distance of 30 meters or less are impractical. When performing measurements at a distance other than that specified, the results shall be extrapolated to the specified distance using an extrapolation factor of 20 dB/decade (inverse linear-distance for field strength measurements; inverse-linear-distance-squared for power density measurements).

4.4. Test Procedure

Test Method				
	References Rule		Chapter	Description
☐	ANSI C63.10		11.11	Emissions in non-restricted frequency bands
	☐	ANSI C63.10	11.11.2	Reference level measurement
	☐	ANSI C63.10	11.11.3	Emission level measurement
☒	ANSI C63.10		11.12	Emissions in restricted frequency bands
	☒	ANSI C63.10	11.12.1	Radiated emission measurements
	☒	ANSI C63.10	11.12.2.7	Radiated spurious emission test
	☒	ANSI C63.10	6.4	Radiated emissions from unlicensed wireless devices below 30 MHz
		ANSI C63.10	6.5	Radiated emissions from unlicensed wireless devices in the frequency range of 30 MHz to 1000 MHz
		ANSI C63.10	6.6	Radiated emissions from unlicensed wireless devices above 1 GHz
	☐	ANSI C63.10	11.12.2.3	Quasi-peak measurement procedure
		ANSI C63.10	11.12.2.4	Peak power measurement procedure
		ANSI C63.10	11.12.2.5	Average power measurement procedures
	☐	ANSI C63.10	11.12.2.5.1	Trace averaging with continuous EUT transmission at full power
		ANSI C63.10	11.12.2.5.2	Trace averaging across ON and OFF times of the EUT transmissions followed by duty cycle correction
		☒	ANSI C63.10	11.12.2.5.3 Reduced VBW averaging across ON and OFF times of the EUT transmissions with max hold

4.5. EUT test Axis definition

Item	Emissions in restricted frequency bands			
Device Category	☒	Fixed position use		
	☐	Mobile position use		
Test mode	Mode 1~4			
Test method	☒	Radiated		
		X Axis	Y Axis	Z Axis
				
		Worst Axis ☐	Worst Axis ☐	Worst Axis ☒
	☐	Conducted		
	☐	Chain 1		
				
	☐	Chain 1	Chain 2	
				
	☐	Chain 1	Chain 2	Chain 3
				

4.6. Test Result

Product Name	:	Kasa Cam	Power	:	AC 120V/60Hz
Test Mode	:	Mode 1	Test Site	:	AC-5
Test Date	:	2017.03.31			

Chain	CH	Antenna Polarity	Frequency (MHz)	Reading Level (dB μ V)	Factor (dB)	Measured Level (dB μ V/m)	Limit (dB μ V/m)	Over Limit (dB)	Detector
Ant 0	1	H	4824.000	42.930	6.011	48.941	54	-5.059	AV
		H	4825.000	49.713	6.005	55.718	74	-18.282	PK
		H	7230.500	36.725	10.216	46.941	54(note3)	-7.059	PK
		H	9648.000	32.598	12.356	44.953	54(note3)	-9.047	PK
		V	4825.000	47.336	6.005	53.341	54(note3)	-0.659	PK
		V	7230.500	47.351	10.216	57.567	74	-16.433	PK
		V	7234.000	43.560	10.224	53.784	54	-0.216	AV
		V	9648.000	32.683	12.356	45.038	54(note3)	-8.962	PK
	6	H	4873.000	47.650	6.335	53.986	54	-0.014	AV
		H	4876.000	52.073	6.390	58.463	74	-15.537	PK
		H	7315.500	43.631	10.138	53.769	54(note3)	-0.231	PK
		H	9748.000	35.319	12.353	47.672	54(note3)	-6.328	PK
		V	4876.000	46.600	6.390	52.990	54(note3)	-1.010	PK
		V	7315.000	43.320	10.118	53.438	54	-0.562	AV
		V	7315.500	45.836	10.138	55.974	74	-18.026	PK
		V	9748.000	33.056	12.353	45.409	54(note3)	-8.591	PK
	11	H	4927.000	43.258	6.347	49.605	54(note3)	-4.395	PK
		H	7383.500	36.878	9.912	46.791	54(note3)	-7.209	PK
		H	9748.000	31.621	12.353	43.974	54(note3)	-10.026	PK
		V	4927.000	43.972	6.347	50.319	54(note3)	-3.681	PK
		V	7383.500	43.642	9.912	53.554	54(note3)	-0.446	PK
		V	9848.000	30.303	12.853	43.156	54(note3)	-10.844	PK

Note: 1. Measure Level = Reading Level + Factor.

Note: 2. The test frequency range, 9kHz~30MHz, 18GHz~25GHz, both of the worst case are at least 6dB below the limits, therefore no data appear in the report.

Note: 3. This limit applies for using average detector, if the test result on peak is lower than average limit, then average measurement needn't be performed.

Note: 4. The RBW setting, see Clause 6.6.

Product Name	:	Kasa Cam	Power	:	AC 120V/60Hz
Test Mode	:	Mode 2	Test Site	:	AC-5
Test Date	:	2017.03.31			

Chain	CH	Antenna Polarity	Frequency (MHz)	Reading Level (dB μ V)	Factor (dB)	Measured Level (dB μ V/m)	Limit (dB μ V/m)	Over Limit (dB)	Detector
Ant 0	1	H	4825.000	42.630	6.005	48.635	54(note3)	-5.365	PK
		H	7236.000	34.183	10.228	44.412	54(note3)	-9.588	PK
		H	9648.000	30.919	12.356	43.274	54(note3)	-10.726	PK
		V	4825.000	44.533	6.005	50.538	54(note3)	-3.462	PK
		V	7230.500	43.054	10.216	53.270	54(note3)	-0.73	PK
		V	9648.000	33.338	12.356	45.693	54(note3)	-8.307	PK
	6	H	4871.000	43.490	6.300	49.790	54	-4.21	AV
		H	4876.000	54.863	6.390	61.253	74	-12.747	PK
		H	7307.000	46.880	9.794	56.674	74	-17.326	PK
		H	7313.000	33.660	10.037	43.697	54	-10.303	AV
		H	9748.000	32.606	12.353	44.959	54(note3)	-9.041	PK
		V	4873.000	42.270	6.335	48.606	54	-5.394	AV
		V	4876.000	51.298	6.390	57.688	74	-16.312	PK
		V	7307.000	54.731	9.794	64.525	74	-9.475	PK
		V	7313.000	43.120	10.037	53.157	54	-0.843	AV
		V	9748.000	32.874	12.353	45.227	54(note3)	-8.773	PK
	11	H	4918.500	43.442	6.439	49.882	54(note3)	-4.118	PK
		H	7386.000	34.556	9.833	44.389	54(note3)	-9.611	PK
		H	9848.000	31.801	12.853	44.654	54(note3)	-9.346	PK
		V	4927.000	44.519	6.347	50.866	54(note3)	-3.134	PK
		V	7375.000	41.281	10.183	51.464	54(note3)	-2.536	PK
		V	9848.000	30.492	12.853	43.345	54(note3)	-10.655	PK

Note: 1. Measure Level = Reading Level + Factor.

Note: 2. The test frequency range, 9kHz~30MHz, 18GHz~25GHz, both of the worst case are at least 6dB below the limits, therefore no data appear in the report.

Note: 3. This limit applies for using average detector, if the test result on peak is lower than average limit, then average measurement needn't be performed.

Note: 4. The RBW setting, see Clause 6.6.

Product Name	:	Kasa Cam	Power	:	AC 120V/60Hz
Test Mode	:	Mode 3	Test Site	:	AC-5
Test Date	:	2017.03.31			

Chain	CH	Antenna Polarity	Frequency (MHz)	Reading Level (dB μ V)	Factor (dB)	Measured Level (dB μ V/m)	Limit (dB μ V/m)	Over Limit (dB)	Detector
Ant 0	1	H	4824.000	38.960	6.011	44.971	54	-9.029	AV
		H	4825.000	50.252	6.005	56.257	74	-17.743	PK
		H	7236.000	36.421	10.228	46.650	54(note3)	-7.35	PK
		H	9648.000	32.196	12.356	44.551	54(note3)	-9.449	PK
		V	4825.000	48.561	6.005	54.566	74	-19.434	PK
		V	4826.000	39.230	6.020	45.250	54	-8.75	AV
		V	7230.500	46.959	10.216	57.175	74	-16.825	PK
		V	7233.000	39.320	10.222	49.542	54	-4.458	AV
		V	9648.000	32.395	12.356	44.750	54(note3)	-9.25	PK
	6	H	4872.000	43.980	6.317	50.298	54	-3.702	AV
		H	4876.000	54.608	6.390	60.998	74	-13.002	PK
		H	7313.000	38.330	10.037	48.367	54	-5.633	AV
		H	7315.500	44.658	10.138	54.796	74	-19.204	PK
		H	9748.000	32.604	12.353	44.957	54(note3)	-9.043	PK
		V	4875.000	40.330	6.372	46.702	54	-7.298	AV
		V	4876.000	54.243	6.390	60.633	74	-13.367	PK
		V	7314.000	43.170	10.078	53.247	54	-0.753	AV
		V	7315.500	56.043	10.138	66.181	74	-7.819	PK
		V	9748.000	34.146	12.353	46.499	54(note3)	-7.501	PK
	11	H	4927.000	43.113	6.347	49.460	54(note3)	-4.54	PK
		H	7386.000	34.137	9.833	43.970	54(note3)	-10.03	PK
		H	9848.000	30.975	12.853	43.828	54(note3)	-10.172	PK
		V	4927.000	42.144	6.347	48.491	54(note3)	-5.509	PK
		V	7383.500	41.672	9.912	51.584	54(note3)	-2.416	PK
		V	9848.000	30.567	12.853	43.420	54(note3)	-10.58	PK

Note: 1. Measure Level = Reading Level + Factor.

Note: 2. The test frequency range, 9kHz~30MHz, 18GHz~25GHz, both of the worst case are at least 6dB below the limits, therefore no data appear in the report.

Note: 3. This limit applies for using average detector, if the test result on peak is lower than average limit, then average measurement needn't be performed.

Note: 4. The RBW setting, see Clause 6.6.

Product Name	:	Kasa Cam	Power	:	AC 120V/60Hz
Test Mode	:	Mode 4	Test Site	:	AC-5
Test Date	:	2017.03.31			

Chain	CH	Antenna Polarity	Frequency (MHz)	Reading Level (dB μ V)	Factor (dB)	Measured Level (dB μ V/m)	Limit (dB μ V/m)	Over Limit (dB)	Detector
Ant 0	3	H	4842.000	43.646	6.262	49.908	54(note3)	-4.092	PK
		H	7266.000	34.235	10.006	44.242	54(note3)	-9.758	PK
		H	9688.000	32.117	13.120	45.237	54(note3)	-8.763	PK
		V	4842.000	41.396	6.262	47.658	54(note3)	-6.342	PK
		V	7273.000	37.343	9.727	47.070	54(note3)	-6.93	PK
		V	9688.000	32.671	13.120	45.791	54(note3)	-8.209	PK
	6	H	4867.500	44.458	6.238	50.695	54(note3)	-3.305	PK
		H	7311.000	34.055	9.956	44.011	54(note3)	-9.989	PK
		H	9748.000	32.535	12.353	44.888	54(note3)	-9.112	PK
		V	4876.000	44.752	6.390	51.142	54(note3)	-2.858	PK
		V	7311.000	34.455	9.956	44.411	54(note3)	-9.589	PK
		V	9748.000	32.819	12.353	45.172	54(note3)	-8.828	PK
	9	H	4901.500	39.697	6.379	46.077	54(note3)	-7.923	PK
		H	7356.000	34.620	10.376	44.996	54(note3)	-9.004	PK
		H	9808.000	31.678	12.101	43.779	54(note3)	-10.221	PK
		V	4995.000	40.530	6.807	47.337	54(note3)	-6.663	PK
		V	7356.000	33.878	10.376	44.254	54(note3)	-9.746	PK
		V	9808.000	31.543	12.101	43.644	54(note3)	-10.356	PK

Note: 1. Measure Level = Reading Level + Factor.

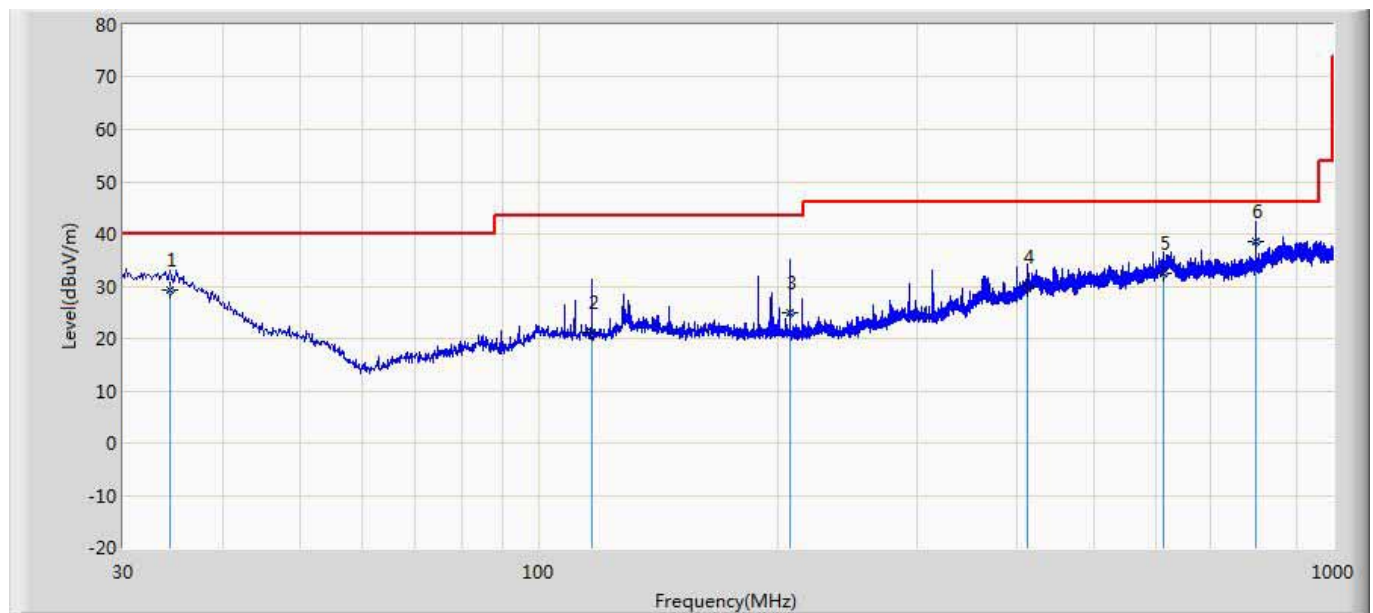
Note: 2. The test frequency range, 9kHz~30MHz, 18GHz~25GHz, both of the worst case are at least 6dB below the limits, therefore no data appear in the report.

Note: 3. This limit applies for using average detector, if the test result on peak is lower than average limit, then average measurement needn't be performed.

Note: 4. The RBW setting, see Clause 6.6.

The worst case of Radiated Emission below 1GHz:

Site: AC2	Time: 2017/02/23
Limit: FCC_Part15.109_RE(3m)_ClassB	Margin: 0
Probe: AC2_(30-1G)	Polarity: Horizontal
EUT: Kasa Cam	Power: AC 120V/60Hz
Note: Mode 1	

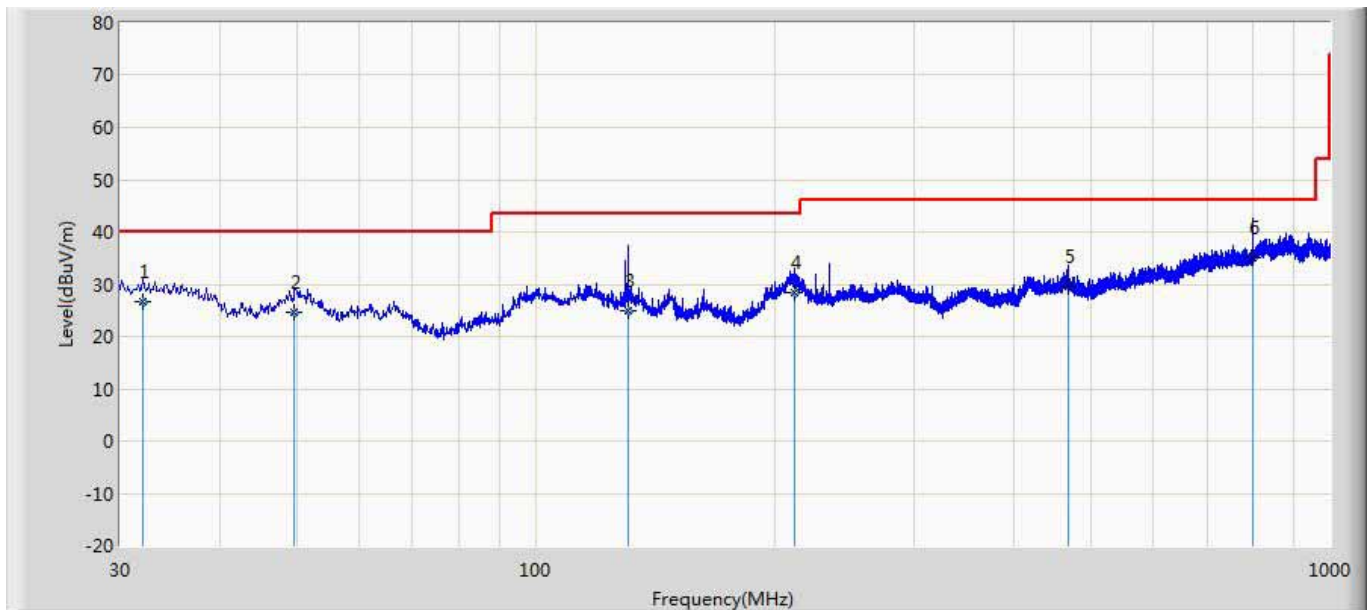


No	Mark	Frequency (MHz)	Measure Level (dBuV/m)	Reading Level (dBuV)	Over Limit (dB)	Limit (dBuV/m)	Probe (dB/m)	Cable (dB)	Amp (dB)	Ant Pos (cm)	Table Pos (deg)	Type
1		34.365	29.152	35.409	-10.848	40.000	16.268	0.635	23.160	100	9	QP
2		116.815	21.289	30.866	-22.211	43.500	12.373	1.165	23.115	200	147	QP
3		207.510	24.966	37.331	-18.534	43.500	9.275	1.560	23.200	100	137	QP
4		412.786	29.880	34.354	-16.120	46.000	16.256	2.240	22.970	100	266	QP
5		610.909	32.335	33.327	-13.665	46.000	19.000	2.709	22.701	100	212	QP
6	*	800.032	38.626	37.836	-7.374	46.000	20.000	3.110	22.320	100	360	QP

Note:

1. " * ", means this data is the worst emission level.
2. Measurement Level = Reading Level + Factor(Probe+Cable-Amp).

Site: AC2	Time: 2017/02/23
Limit: FCC_Part15.109_RE(3m)_ClassB	Margin: 0
Probe: AC2_(30-1G)	Polarity: Vertical
EUT: Kasa Cam	Power: AC 120V/60Hz
Note: Mode 1	



No	Mark	Frequency (MHz)	Measure Level (dBuV/m)	Reading Level (dBuV)	Over Limit (dB)	Limit (dBuV/m)	Probe (dB/m)	Cable (dB)	Amp (dB)	Ant Pos (cm)	Table Pos (deg)	Type
1		32.064	26.716	31.613	-13.284	40.000	17.603	0.621	23.121	100	145	QP
2		49.764	24.698	38.667	-15.302	40.000	8.326	0.774	23.069	100	234	QP
3		130.927	24.875	34.878	-18.625	43.500	11.826	1.240	23.070	100	88	QP
4		211.754	28.396	40.818	-15.104	43.500	9.218	1.574	23.214	100	122	QP
5		469.046	29.488	32.593	-16.512	46.000	17.305	2.360	22.770	100	110	QP
6	*	800.059	35.128	34.337	-10.872	46.000	20.001	3.110	22.320	100	77	QP

Note:

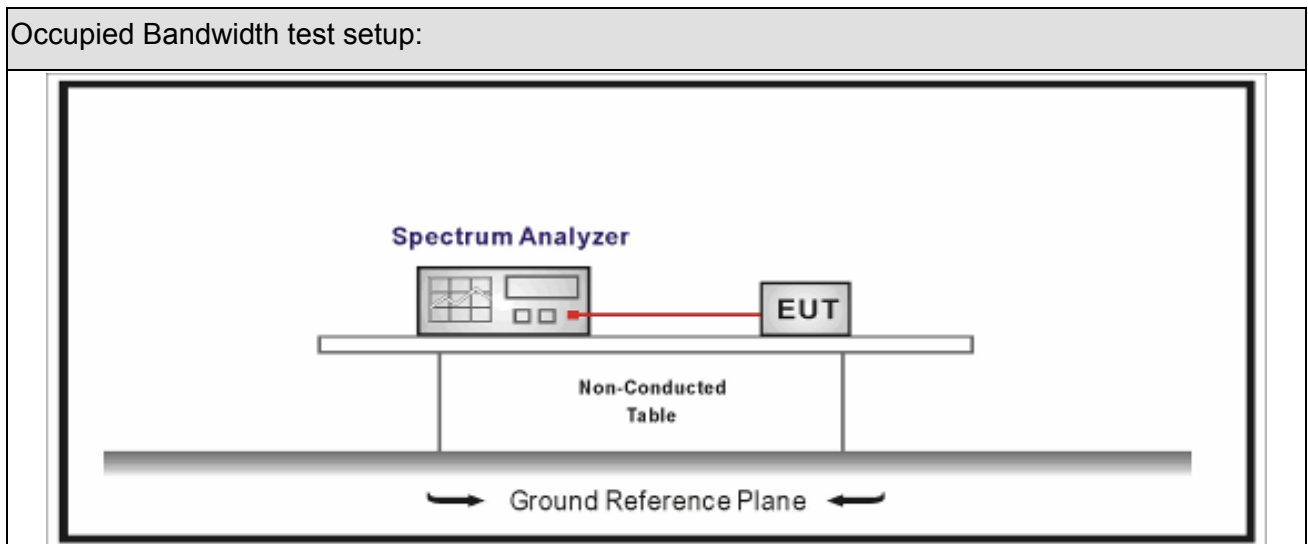
1. " * ", means this data is the worst emission level.
2. Measurement Level = Reading Level + Factor(Probe+Cable-Amp).

5. Emissions in non-restricted frequency bands

5.1. Test Equipment

Occupied Bandwidth / TR-8					
Instrument	Manufacturer	Type No.	Serial No.	Cal. Date	Cal. Due Date
Spectrum Analyzer	Agilent	N9010A	MY48030494	2017.02.04	2018.02.03
EXA Spectrum Analyzer	Keysight	N9010A	MY55370495	2017.04.09	2018.04.08
MXA Signal Analyzer	Keysight	N9020A	MY56060147	2017.04.09	2018.04.08
Temperature/Humidity Meter	zhichen	ZC1-2	TR8-TH	2017.04.10	2018.04.09
Note: All equipments are calibrated with traceable calibrations. Each calibration is traceable to the national or international standards.					

5.2. Test Setup



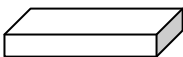
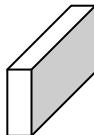
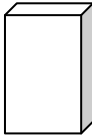
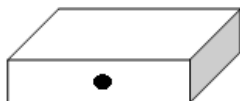
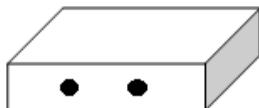
5.3. Limit

Un-Restricted Band Emissions Limit	
RF Output power (Detection methods)	Limit(dB)
RF Output power(Average detector)	30c(Note1)
RF Output power(PK detector)	20c(Note2)
Note 1: If maximum conducted (average) output power was used to demonstrate compliance as described in 9.2, then the peak power in any 100 kHz bandwidth outside of the authorized frequency band shall be attenuated by at least 30 dB relative to the maximum in-band peak PSD level in 100 kHz (i.e., 30 dBc). Note 2: If the maximum peak conducted output power procedure was used, then the peak output power measured in any 100 kHz bandwidth outside of the authorized frequency band shall be attenuated by at least 20 dB relative to the maximum in-band peak PSD level in 100 kHz (i.e., 20 dBc).	

5.4. Test Procedure

Test Method					
	References Rule		Chapter	Description	
☒	ANSI C63.10		11.11	Emissions in non-restricted frequency bands	
	☒	ANSI C63.10	11.11.2	Reference level measurement	
	☒	ANSI C63.10	11.11.3	Emission level measurement	
☐	ANSI C63.10		11.12	Emissions in restricted frequency bands	
	☐	ANSI C63.10	11.12.1	Radiated emission measurements	
	☐	ANSI C63.10	11.12.2.7	Radiated spurious emission test	
☐	ANSI C63.10		6.4	Radiated emissions from unlicensed wireless devices below 30 MHz	
☐	ANSI C63.10		6.5	Radiated emissions from unlicensed wireless devices in the frequency range of 30 MHz to 1000 MHz	
☒	ANSI C63.10		6.6	Radiated emissions from unlicensed wireless devices above 1 GHz	
	☒	ANSI C63.10		11.12.2	Antenna-port conducted measurements
		☐	ANSI C63.10	11.12.2.3	Quasi-peak measurement procedure
		☐	ANSI C63.10	11.12.2.4	Peak power measurement procedure
		☒	ANSI C63.10	11.12.2.5	Average power measurement procedures
		☐	ANSI C63.10	11.12.2.5.1	Trace averaging with continuous EUT transmission at full power
		☐	ANSI C63.10	11.12.2.5.2	Trace averaging across ON and OFF times of the EUT transmissions followed by duty cycle correction
		☐	ANSI C63.10	11.12.2.5.3	Reduced VBW averaging across ON and OFF times of the EUT transmissions with max hold

5.5. EUT test Axis definition

Item	Emissions in non-restricted frequency bands			
Device Category	☒	Fixed position use		
	☐	Mobile position use		
Test mode	Mode 1 ~ Mode 4			
Test method	☐	Radiated		
		X Axis	Y Axis	Z Axis
				
		Worst Axis ☐	Worst Axis ☐	Worst Axis ☐
	☒	Conducted		
	☒	Chain 0		
				
	☐	Chain 0	Chain 1	
				
	☐	Chain 0	Chain 1	Chain 2
				

5.6. Test Result

Product Name	:	Kasa Cam	Power	:	AC 120V/60Hz
Test Mode	:	Mode1~4	Test Site	:	TR8
Test Date	:	2017.03.31			

Antenna #0

Mode	Channel	Test Frequency (MHz)	In-Band PSD[a] (dBm/100kHz)	Frequency (MHz)	Out-Band PSD[b] (dBm/100kHz)	[a]-[b] (dB)	Limit (dB)	Result
1	01	2412	10.839	2400	-26.446	37.285	>30	Pass
1	11	2462	10.839	2500	-51.848	62.687	>30	Pass
2	01	2412	14.347	2400	-24.290	38.637	>30	Pass
2	11	2462	14.347	2500	-52.267	66.614	>30	Pass
3	01	2412	12.620	2400	-27.073	39.693	>30	Pass
3	11	2462	12.620	2500	-53.703	66.323	>30	Pass
4	03	2422	2.370	2395.8	-30.767	33.137	>30	Pass
4	09	2452	2.370	2500	-29.577	31.947	>30	Pass

Note 1: The worst case of Emissions in non-restricted frequency bands as below:

2: As the radiated emission was performed, so conducted emission was only tested for the nearest emission of fundamental frequency.

Mode 4 CH09(2452MHz)



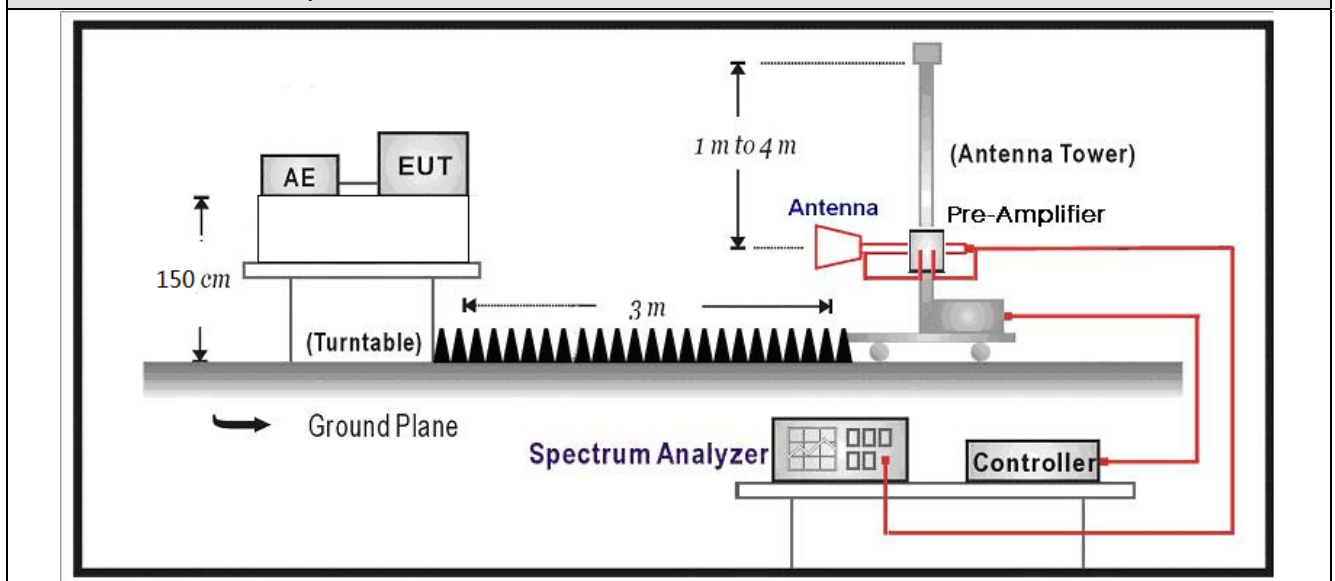
6. Radiated Emission Band Edge

6.1. Test Equipment

Radiated Emission(Above 1GHz) / AC-5					
Instrument	Manufacturer	Type No.	Serial No.	Cal. Date	Cal. Due Date
EMI Receiver	Agilent	N9038A	MY51210196	2016.07.16	2017.07.15
Pre-Amplifier	Miteq	NSP1800-25	1364185	2017.05.03	2018.05.02
DRG Horn Antenna	ETS-Lindgren	3117	00167055	2016.07.12	2017.07.11
Broad-Band Horn Antenna	Schwarzbeck	BBHA9170	294	2016.09.18	2017.09.17
Coaxial Cable	Huber+Suhner	SUCOFLEX 106	AC5-C1	2017.02.28	2018.02.27
Coaxial Cable	Huber+Suhner	SUCOFLEX 106	AC5-C2	2017.02.28	2018.02.27
Temperature/Humidity Meter	Zhichen	ZC1-2	AC5-TH	2017.01.05	2018.01.04
Note: All equipments are calibrated with traceable calibrations. Each calibration is traceable to the national or international standards.					

6.2. Test Setup

Above 1GHz Test Setup:



6.3. Limit

Band edge Limit

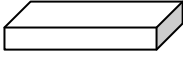
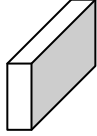
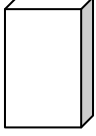
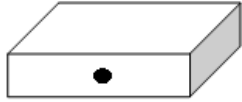
Frequency bands (MHz)	Detector	Limit (dB μ V/m)	RBW (MHz)	Distance (m)
2310-2390	PK	74	1	3
2483.5-2500	AV	54	1	3

Note: The field strength of emissions appearing within these frequency bands shall not exceed the limits.

6.4. Test Procedure

Test Method						
	References Rule			Chapter	Description	
☒	ANSI C63.10			6.10	Band-edge testing	
	☒	ANSI C63.10		6.10.5	Restricted-band band-edge measurements	
	☐	ANSI C63.10		6.10.6	Marker-delta method	
☒	ANSI C63.10			11.12	Emissions in restricted frequency bands	
	☒	ANSI C63.10		11.12.1	Radiated emission measurements	
	☒	ANSI C63.10		11.12.2.7	Radiated spurious emission test	
☐	ANSI C63.10			6.4	Radiated emissions from unlicensed wireless devices below 30 MHz	
☐	ANSI C63.10			6.5	Radiated emissions from unlicensed wireless devices in the frequency range of 30 MHz to 1000 MHz	
☒	ANSI C63.10			6.6	Radiated emissions from unlicensed wireless devices above 1 GHz	
		☐	ANSI C63.10	11.12.2.3	Quasi-peak measurement procedure	
		☒	ANSI C63.10	11.12.2.4	Peak power measurement procedure	
		☒	ANSI C63.10	11.12.2.5	Average power measurement procedures	
			☐	ANSI C63.10	11.12.2.5.1	Trace averaging with continuous EUT transmission at full power
			☐	ANSI C63.10	11.12.2.5.2	Trace averaging across ON and OFF times of the EUT transmissions followed by duty cycle correction
			☒	ANSI C63.10	11.12.2.5.3	Reduced VBW averaging across ON and OFF times of the EUT transmissions with max hold

6.5. EUT test definition

Item	Emissions in non-restricted frequency bands			
Device Category	☒	Fixed position use		
	☐	Mobile position use		
Test mode	Mode 1~4			
Test method	☒	Radiated		
		X Axis	Y Axis	Z Axis
				
		Worst Axis ☐	Worst Axis ☐	Worst Axis ☒
	☐	Conducted		
	☐	Chain 1		
				
	☐	Chain 1	Chain 2	
				
	☐	Chain 1	Chain 2	Chain 3
				

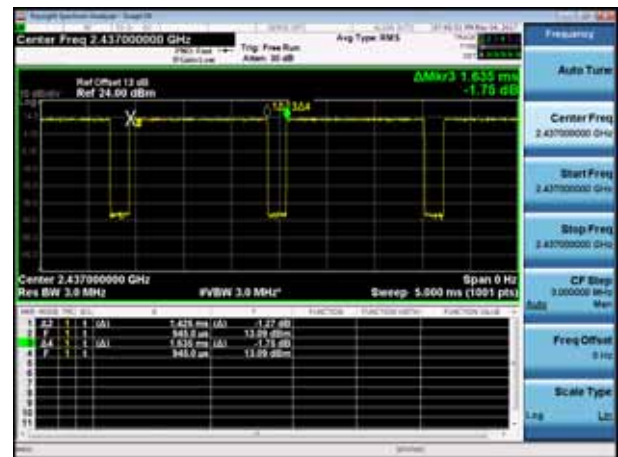
6.6. Duty Cycle

Test Mode	Tx On (ms)	Tx Off (ms)	VBW	Tx On + Tx Off (ms)	Duty Cycle
802.11b	8.650	0.225	120Hz	8.875	97.46%
802.11g	1.425	0.210	750Hz	1.635	87.16%
802.11n(20MHz)	1.340	0.220	750Hz	1.560	85.90%
802.11n(40MHz)	0.663	0.207	1.6KHz	0.870	76.21%

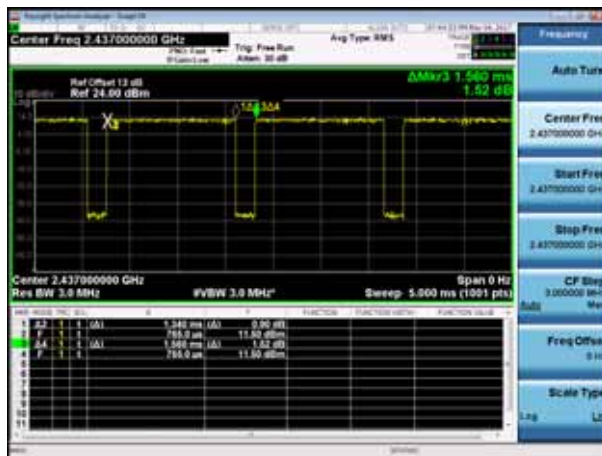
802.11b



802.11g



802.11n(20MHz)

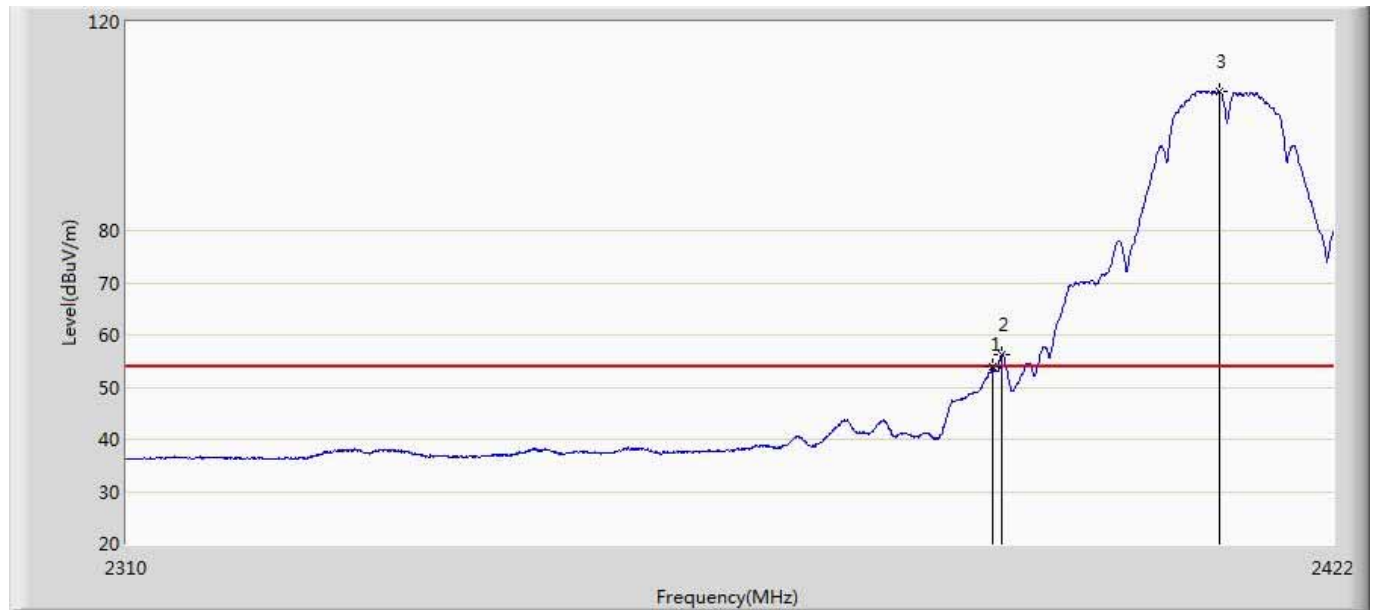


802.11n(40MHz)



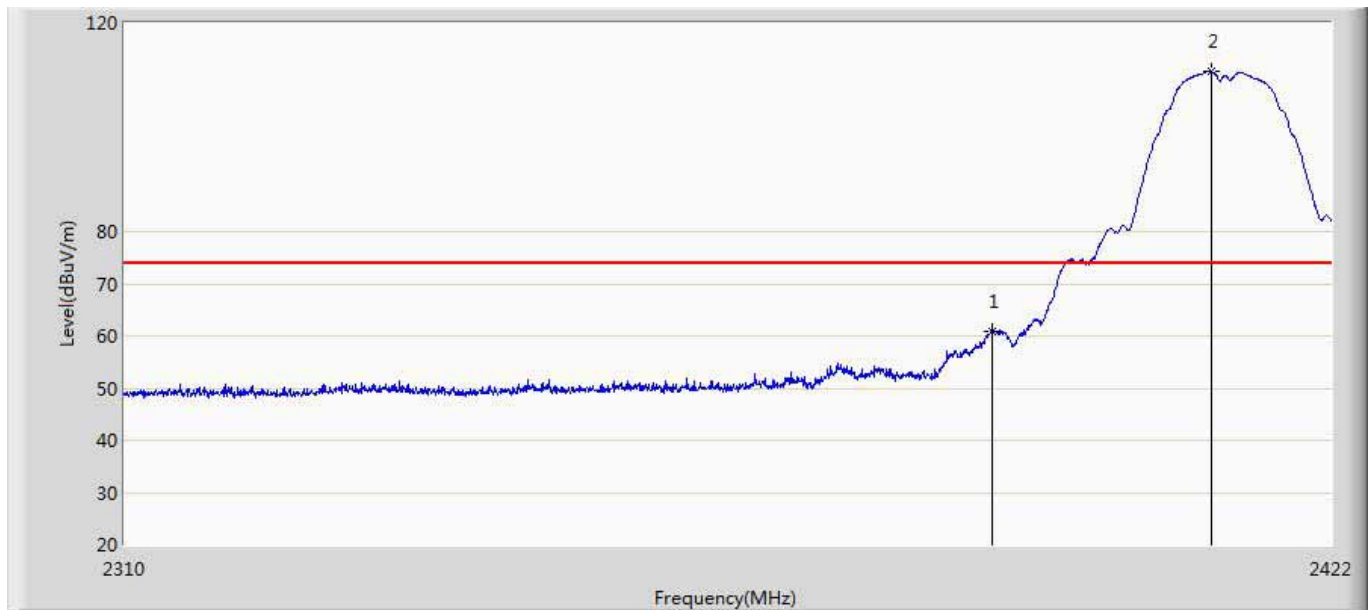
6.7. Test Result

Site: AC5	Time: 2017/03/04 - 20:11
Limit: FCC_Part15.209_RE(3m)	Margin: 0
Probe: Horn_3117_00167055(1-18GHz)	Polarity: Horizontal
EUT: Kasa Cam	Power: AC 120V/60Hz
Note: Mode1:Transmit at 2412 by 11b	



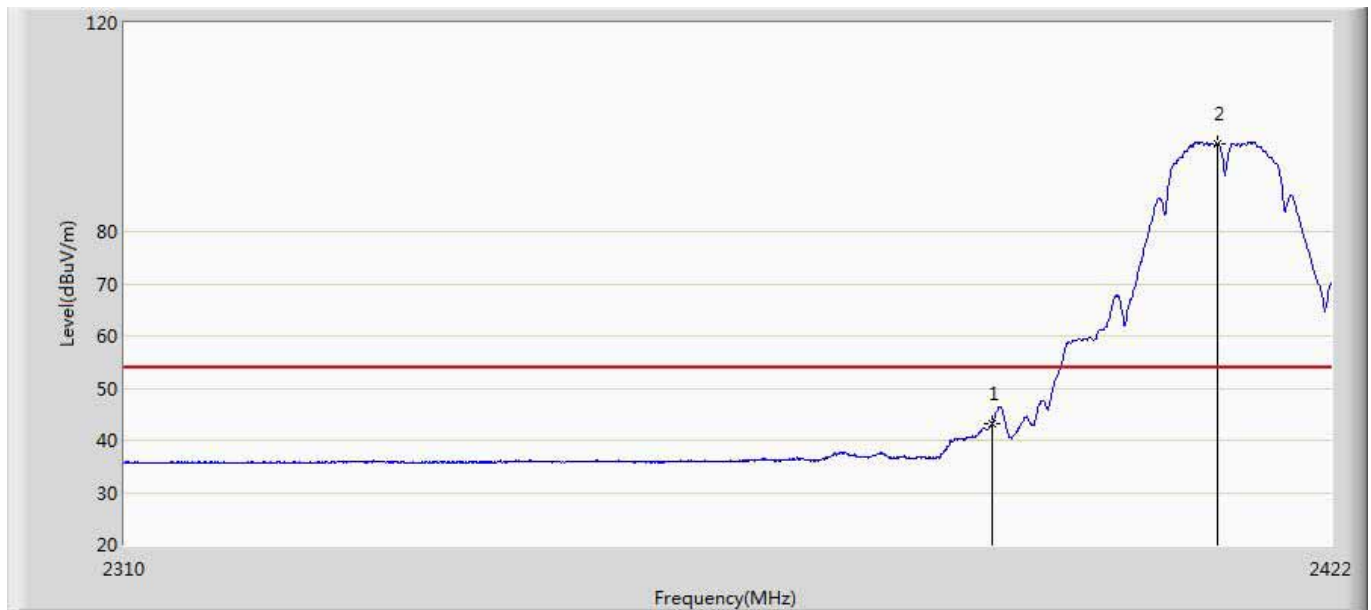
No	Mark	Frequency (MHz)	Measure Level (dBuV/m)	Reading Level (dBuV)	Over Limit (dB)	Limit (dBuV/m)	Factor (dB)	Type
1		2390.000	53.055	16.726	-0.945	54.000	36.329	AV
2		2390.752	56.109	19.779	2.109	54.000	36.330	AV
3	*	2411.192	106.579	70.249	52.579	54.000	36.330	AV

Site: AC5	Time: 2017/03/04 - 20:33
Limit: FCC_Part15.209_RE(3m)	Margin: 0
Probe: Horn_3117_00167055(1-18GHz)	Polarity: Horizontal
EUT: Kasa Cam	Power: AC 120V/60Hz
Note: Mode1:Transmit at 2412 by 11b	



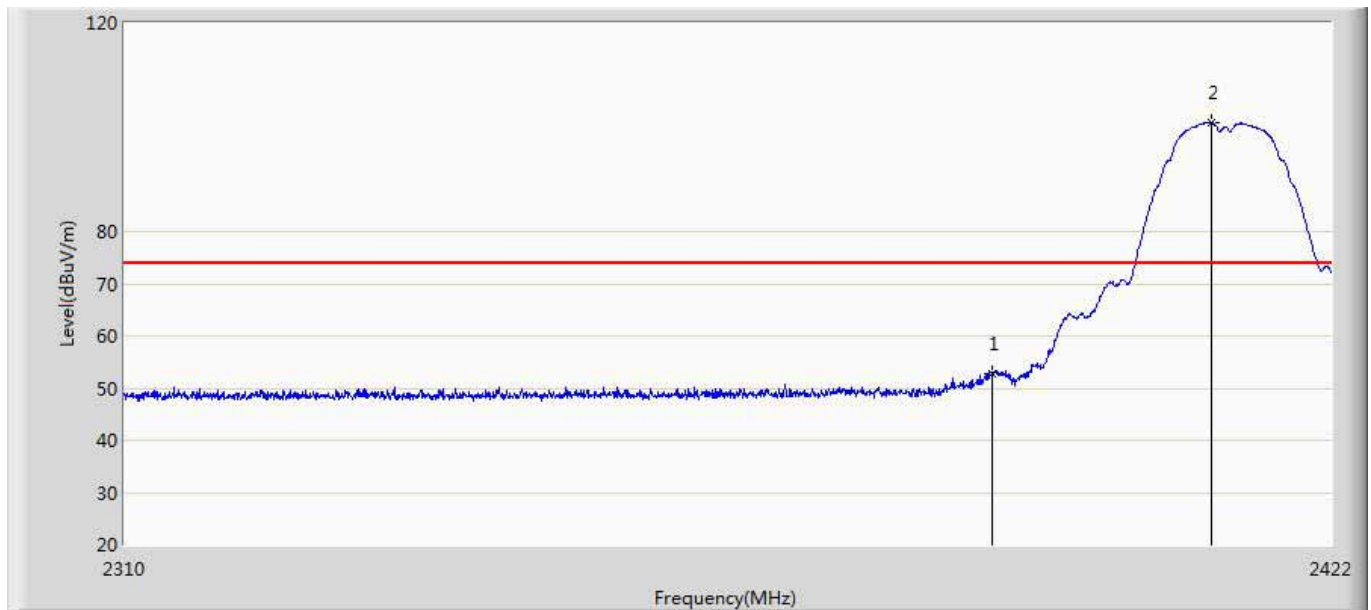
No	Mark	Frequency (MHz)	Measure Level (dBuV/m)	Reading Level (dBuV)	Over Limit (dB)	Limit (dBuV/m)	Factor (dB)	Type
1		2390.000	60.957	24.627	-13.043	74.000	36.329	PK
2	*	2410.632	110.615	74.288	36.615	74.000	36.327	PK

Site: AC5	Time: 2017/03/04 - 20:37
Limit: FCC_Part15.209_RE(3m)	Margin: 0
Probe: Horn_3117_00167055(1-18GHz)	Polarity: Vertical
EUT: Kasa Cam	Power: AC 120V/60Hz
Note: Mode1:Transmit at 2412 by 11b	



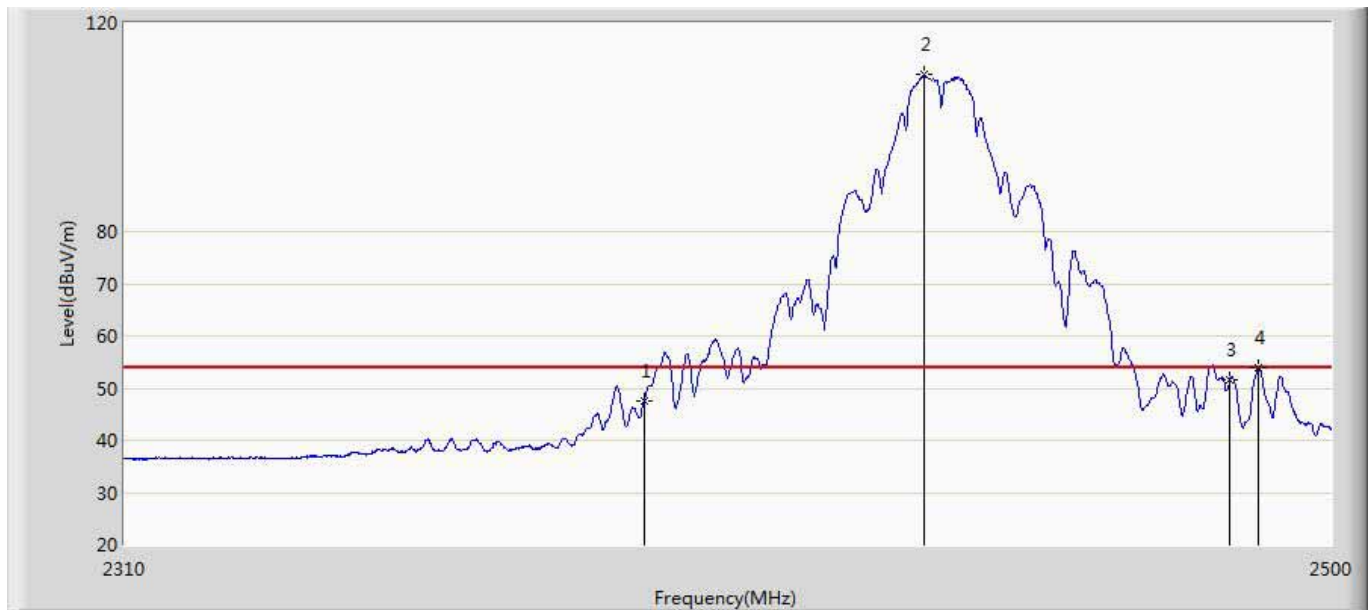
No	Mark	Frequency (MHz)	Measure Level (dBuV/m)	Reading Level (dBuV)	Over Limit (dB)	Limit (dBuV/m)	Factor (dB)	Type
1		2390.000	43.236	6.906	-10.764	54.000	36.329	AV
2	*	2411.248	96.866	60.535	42.866	54.000	36.331	AV

Site: AC5	Time: 2017/03/04 - 20:39
Limit: FCC_Part15.209_RE(3m)	Margin: 0
Probe: Horn_3117_00167055(1-18GHz)	Polarity: Vertical
EUT: Kasa Cam	Power: AC 120V/60Hz
Note: Mode1:Transmit at 2412 by 11b	



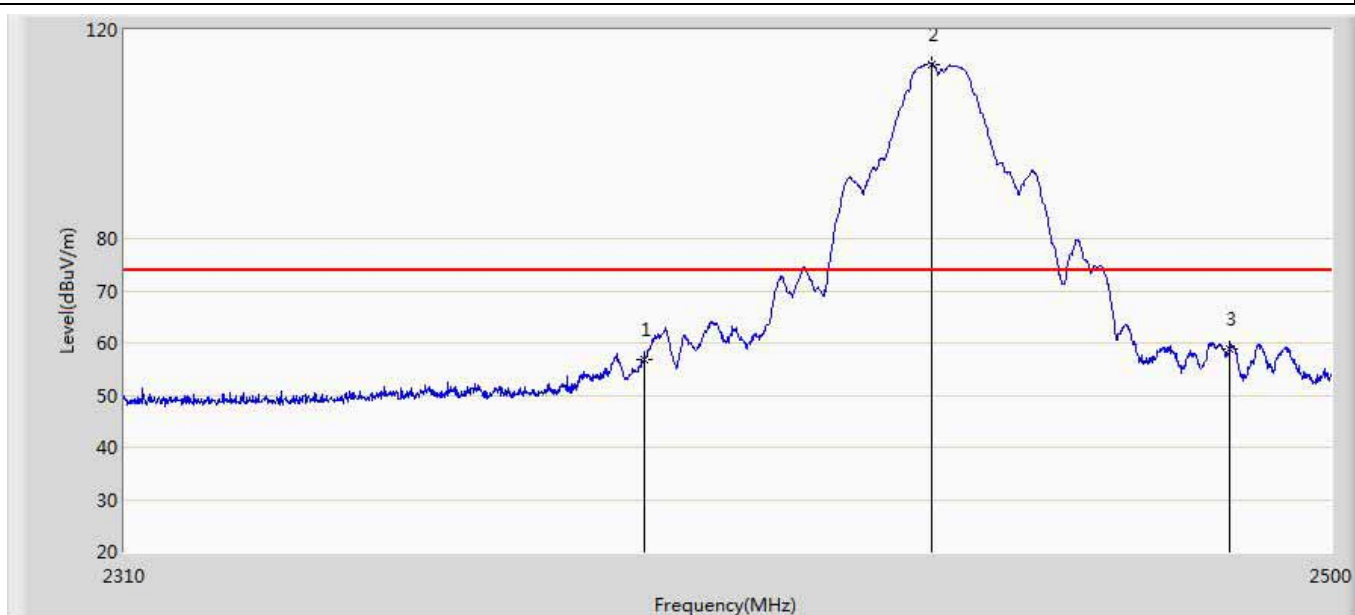
No	Mark	Frequency (MHz)	Measure Level (dBuV/m)	Reading Level (dBuV)	Over Limit (dB)	Limit (dBuV/m)	Factor (dB)	Type
1		2390.000	52.660	16.330	-21.340	74.000	36.329	PK
2	*	2410.632	100.909	64.582	26.909	74.000	36.327	PK

Site: AC5	Time: 2017/03/04 - 20:43
Limit: FCC_Part15.209_RE(3m)	Margin: 0
Probe: Horn_3117_00167055(1-18GHz)	Polarity: Horizontal
EUT: Kasa Cam	Power: AC 120V/60Hz
Note: Mode1:Transmit at 2437 by 11b	



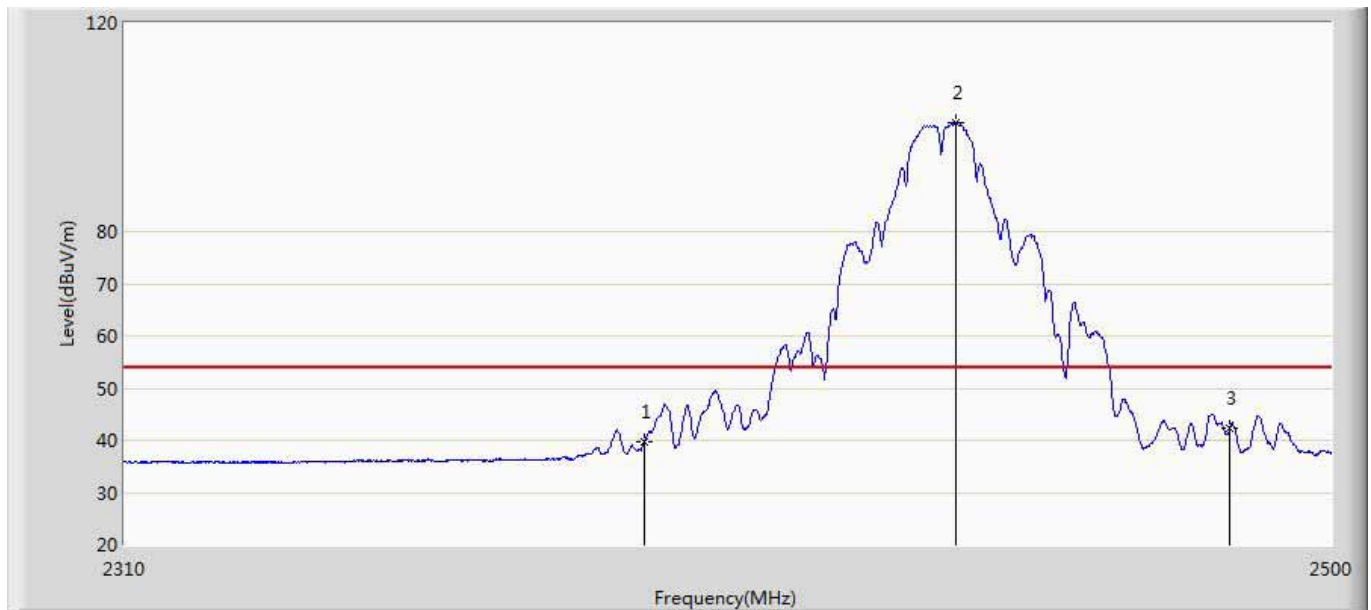
No	Mark	Frequency (MHz)	Measure Level (dBuV/m)	Reading Level (dBuV)	Over Limit (dB)	Limit (dBuV/m)	Factor (dB)	Type
1		2390.000	47.456	11.126	-6.544	54.000	36.329	AV
2	*	2434.260	110.045	73.560	56.045	54.000	36.485	AV
3		2483.500	51.471	15.004	-2.529	54.000	36.467	AV
4		2488.125	53.870	17.334	-0.130	54.000	36.536	AV

Site: AC5	Time: 2017/03/04 - 20:53
Limit: FCC_Part15.209_RE(3m)	Margin: 0
Probe: Horn_3117_00167055(1-18GHz)	Polarity: Horizontal
EUT: Kasa Cam	Power: AC 120V/60Hz
Note: Mode1:Transmit at 2437 by 11b	



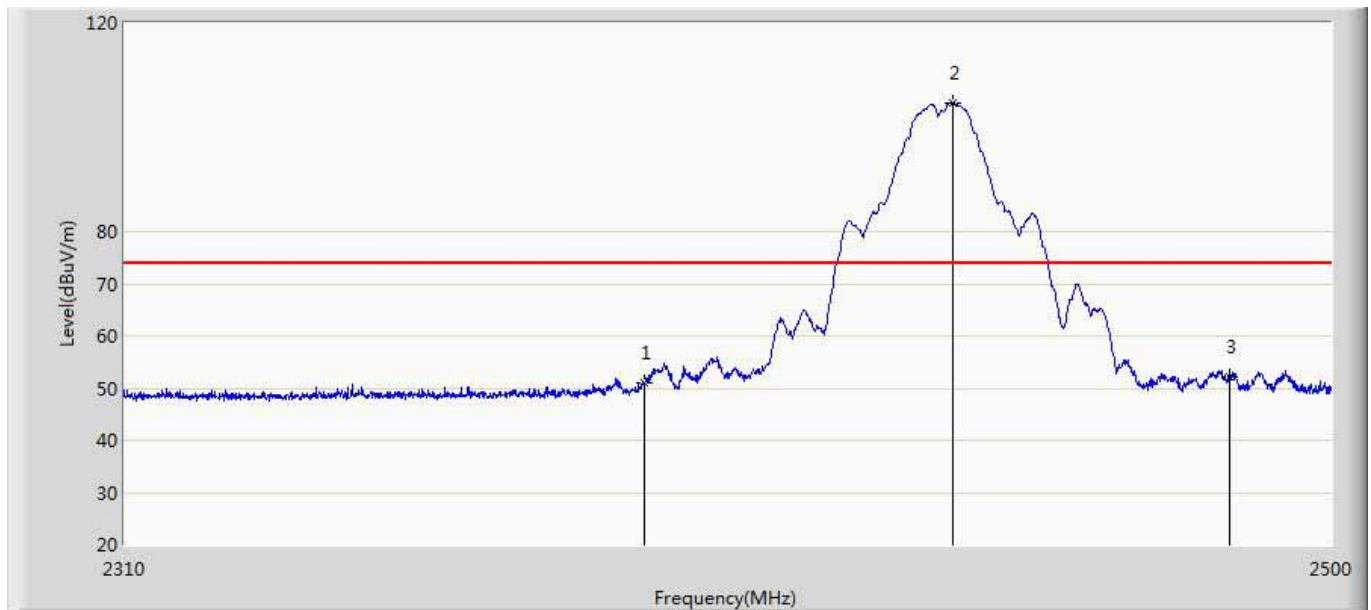
No	Mark	Frequency (MHz)	Measure Level (dBuV/m)	Reading Level (dBuV)	Over Limit (dB)	Limit (dBuV/m)	Factor (dB)	Type
1		2390.000	56.788	20.458	-17.212	74.000	36.329	PK
2	*	2435.495	113.461	76.998	39.461	74.000	36.463	PK
3		2483.500	58.802	22.335	-15.198	74.000	36.467	PK

Site: AC5	Time: 2017/03/04 - 20:55
Limit: FCC_Part15.209_RE(3m)	Margin: 0
Probe: Horn_3117_00167055(1-18GHz)	Polarity: Vertical
EUT: Kasa Cam	Power: AC 120V/60Hz
Note: Mode1:Transmit at 2437 by 11b	



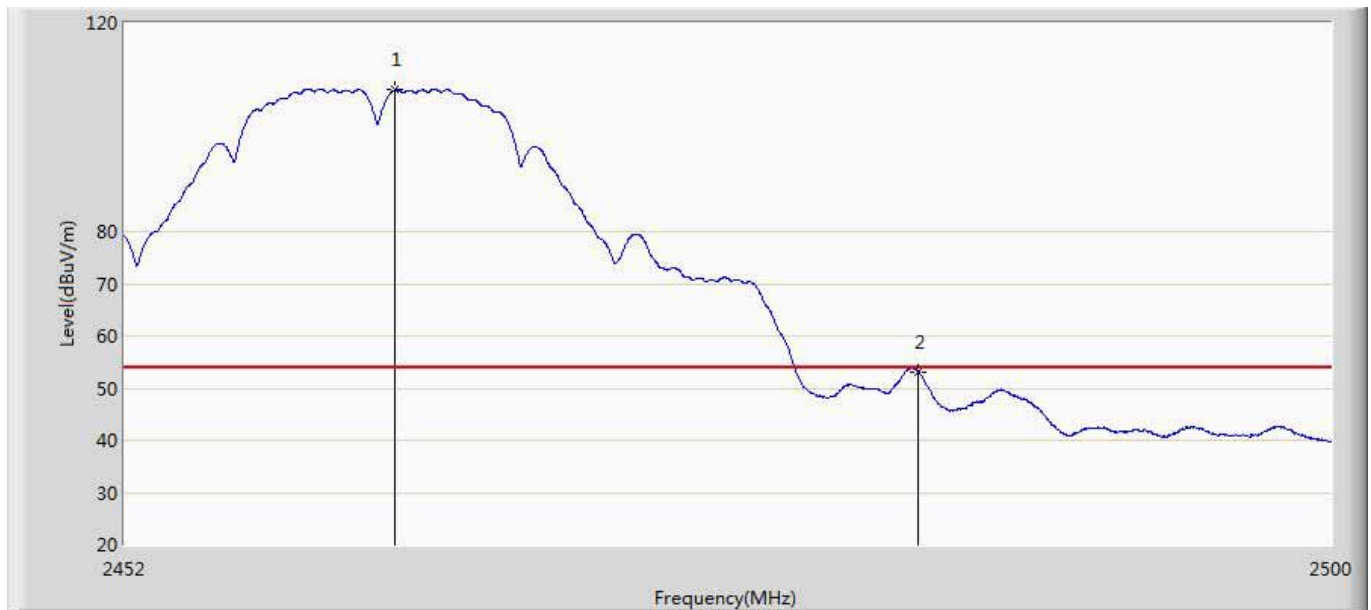
No	Mark	Frequency (MHz)	Measure Level (dBuV/m)	Reading Level (dBuV)	Over Limit (dB)	Limit (dBuV/m)	Factor (dB)	Type
1		2390.000	39.799	3.469	-14.201	54.000	36.329	AV
2	*	2439.390	100.794	64.401	46.794	54.000	36.393	AV
3		2483.500	42.319	5.852	-11.681	54.000	36.467	AV

Site: AC5	Time: 2017/03/04 - 20:57
Limit: FCC_Part15.209_RE(3m)	Margin: 0
Probe: Horn_3117_00167055(1-18GHz)	Polarity: Vertical
EUT: Kasa Cam	Power: AC 120V/60Hz
Note: Mode1:Transmit at 2437 by 11b	



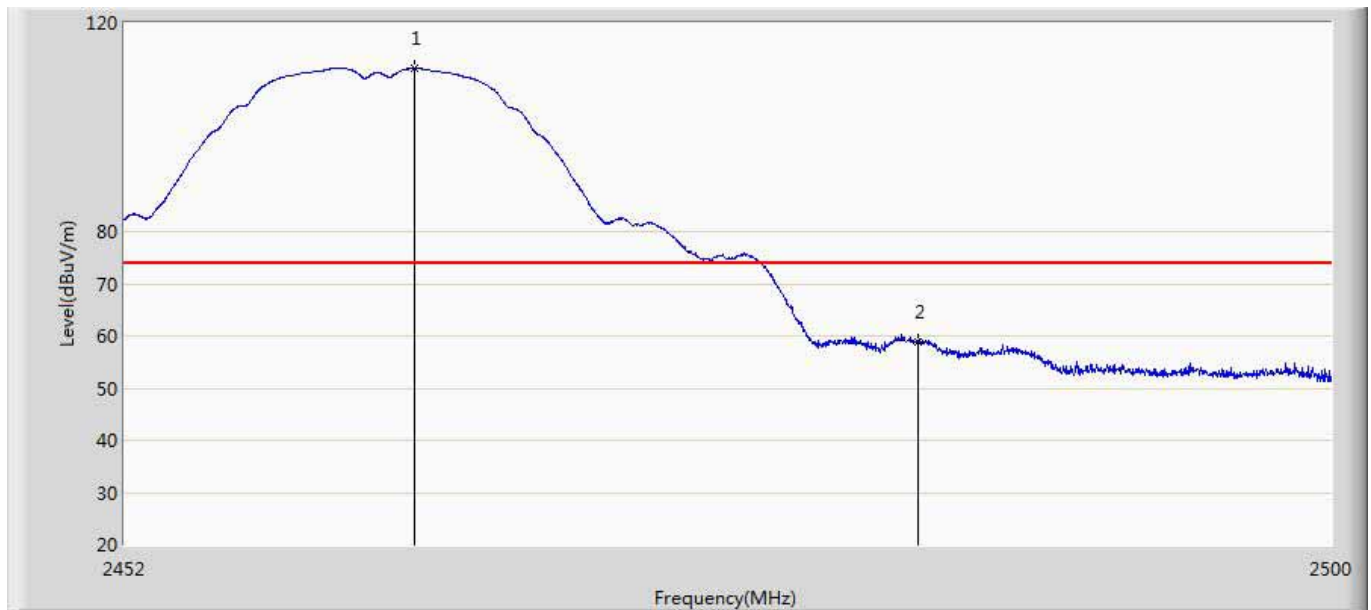
No	Mark	Frequency (MHz)	Measure Level (dBuV/m)	Reading Level (dBuV)	Over Limit (dB)	Limit (dBuV/m)	Factor (dB)	Type
1		2390.000	50.888	14.558	-23.112	74.000	36.329	PK
2	*	2438.820	104.657	68.253	30.657	74.000	36.404	PK
3		2483.500	52.092	15.625	-21.908	74.000	36.467	PK

Site: AC5	Time: 2017/03/04 - 21:00
Limit: FCC_Part15.209_RE(3m)	Margin: 0
Probe: Horn_3117_00167055(1-18GHz)	Polarity: Horizontal
EUT: Kasa Cam	Power: AC 120V/60Hz
Note: Mode1:Transmit at 2462 by 11b	



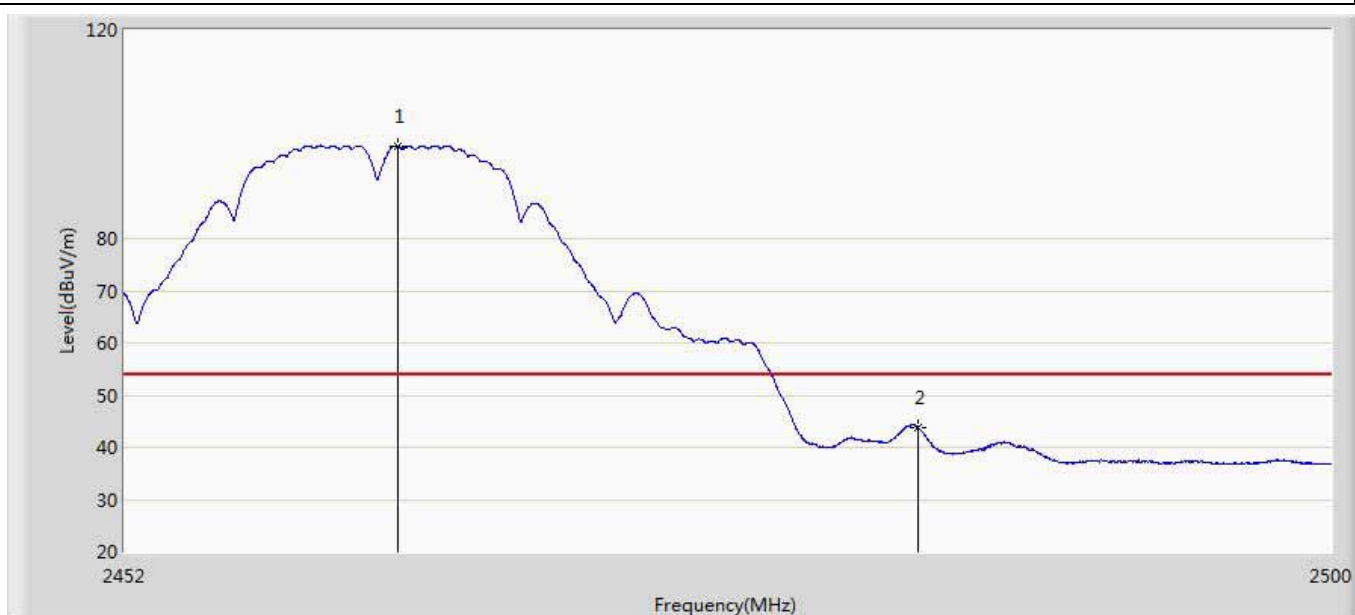
No	Mark	Frequency (MHz)	Measure Level (dBuV/m)	Reading Level (dBuV)	Over Limit (dB)	Limit (dBuV/m)	Factor (dB)	Type
1	*	2462.704	107.133	70.513	53.133	54.000	36.620	AV
2		2483.500	53.130	16.663	-0.870	54.000	36.467	AV

Site: AC5	Time: 2017/03/04 - 21:07
Limit: FCC_Part15.209_RE(3m)	Margin: 0
Probe: Horn_3117_00167055(1-18GHz)	Polarity: Horizontal
EUT: Kasa Cam	Power: AC 120V/60Hz
Note: Mode1:Transmit at 2462 by 11b	



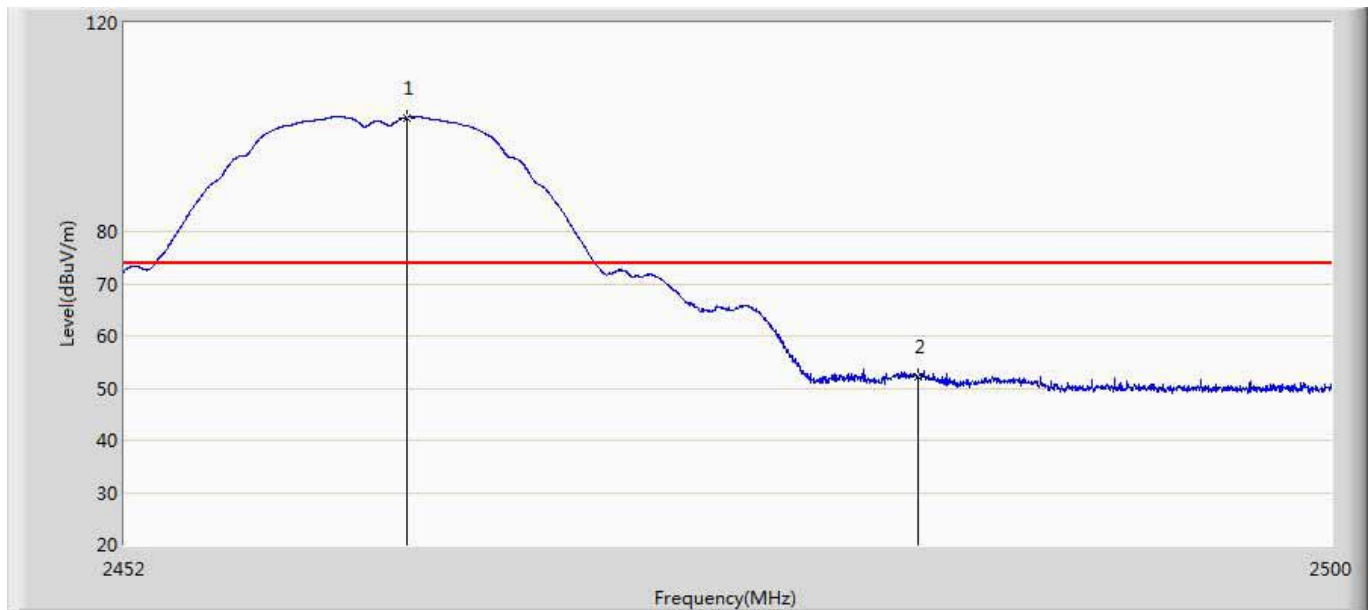
No	Mark	Frequency (MHz)	Measure Level (dBuV/m)	Reading Level (dBuV)	Over Limit (dB)	Limit (dBuV/m)	Factor (dB)	Type
1	*	2463.448	111.194	74.585	37.194	74.000	36.610	PK
2		2483.500	58.916	22.449	-15.084	74.000	36.467	PK

Site: AC5	Time: 2017/03/04 - 21:09
Limit: FCC_Part15.209_RE(3m)	Margin: 0
Probe: Horn_3117_00167055(1-18GHz)	Polarity: Vertical
EUT: Kasa Cam	Power: AC 120V/60Hz
Note: Mode1:Transmit at 2462 by 11b	



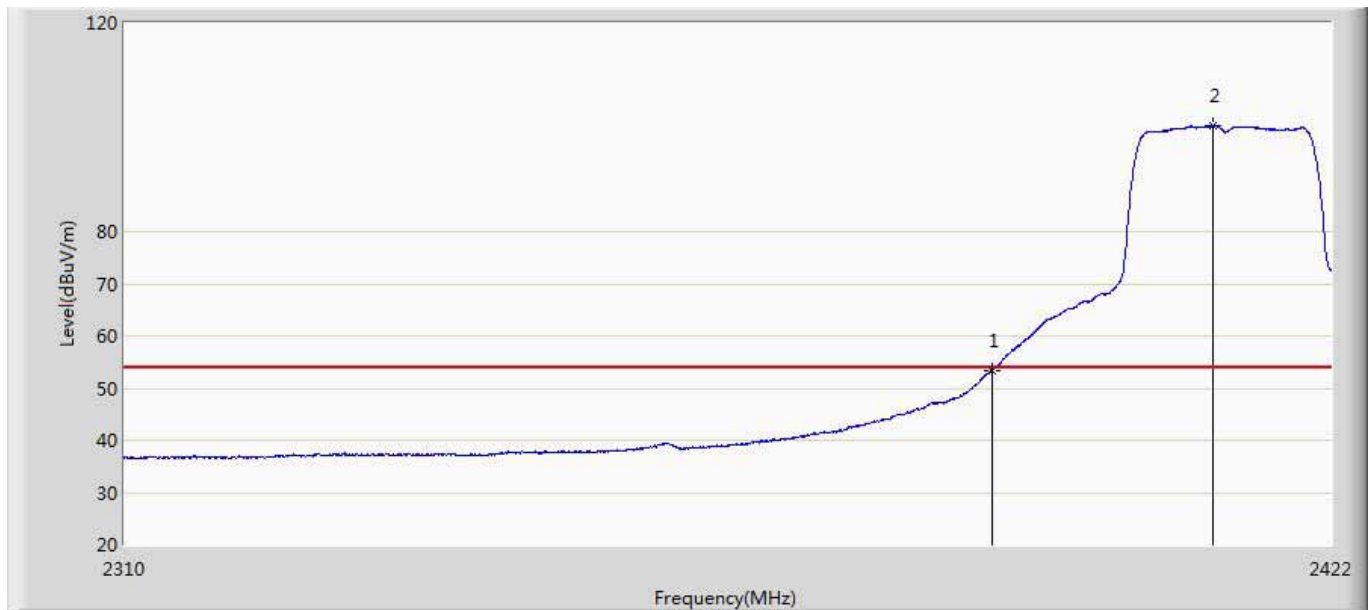
No	Mark	Frequency (MHz)	Measure Level (dBuV/m)	Reading Level (dBuV)	Over Limit (dB)	Limit (dBuV/m)	Factor (dB)	Type
1	*	2462.776	97.758	61.139	43.758	54.000	36.619	AV
2		2483.500	43.666	7.199	-10.334	54.000	36.467	AV

Site: AC5	Time: 2017/03/04 - 21:12
Limit: FCC_Part15.209_RE(3m)	Margin: 0
Probe: Horn_3117_00167055(1-18GHz)	Polarity: Vertical
EUT: Kasa Cam	Power: AC 120V/60Hz
Note: Mode1:Transmit at 2462 by 11b	



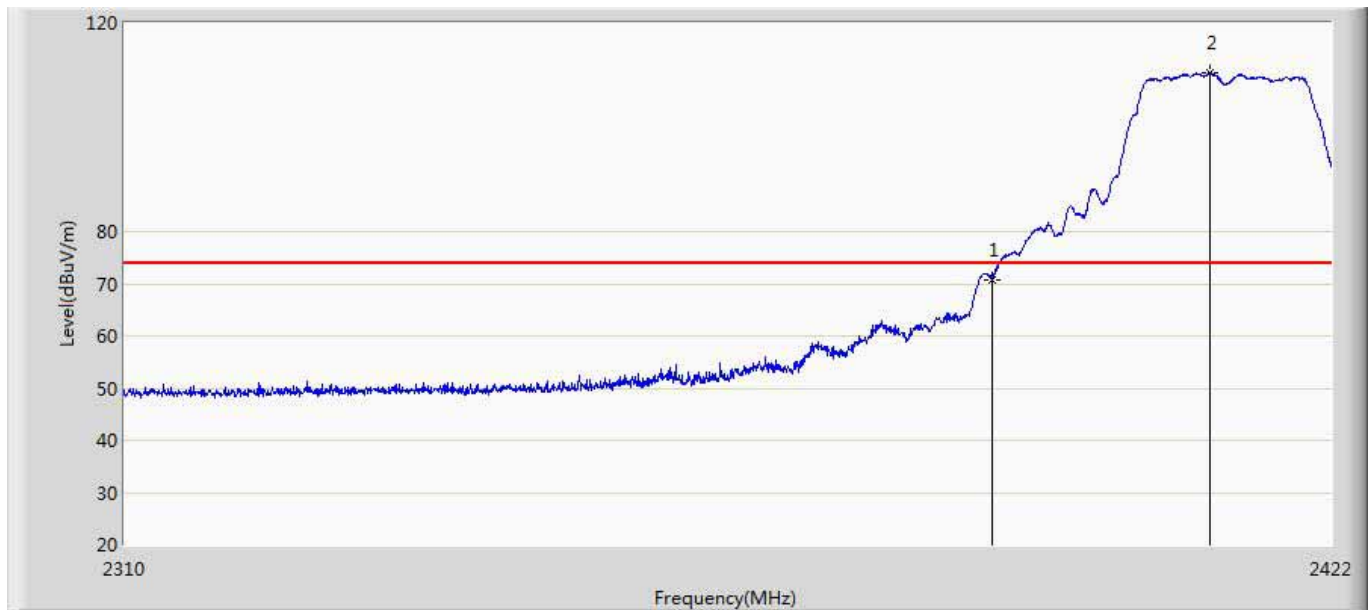
No	Mark	Frequency (MHz)	Measure Level (dBuV/m)	Reading Level (dBuV)	Over Limit (dB)	Limit (dBuV/m)	Factor (dB)	Type
1	*	2463.136	101.834	65.220	27.834	74.000	36.613	PK
2		2483.500	52.309	15.842	-21.691	74.000	36.467	PK

Site: AC5	Time: 2017/03/04 - 21:15
Limit: FCC_Part15.209_RE(3m)	Margin: 0
Probe: Horn_3117_00167055(1-18GHz)	Polarity: Horizontal
EUT: Kasa Cam	Power: AC 120V/60Hz
Note: Mode2:Transmit at 2412 by 11g	



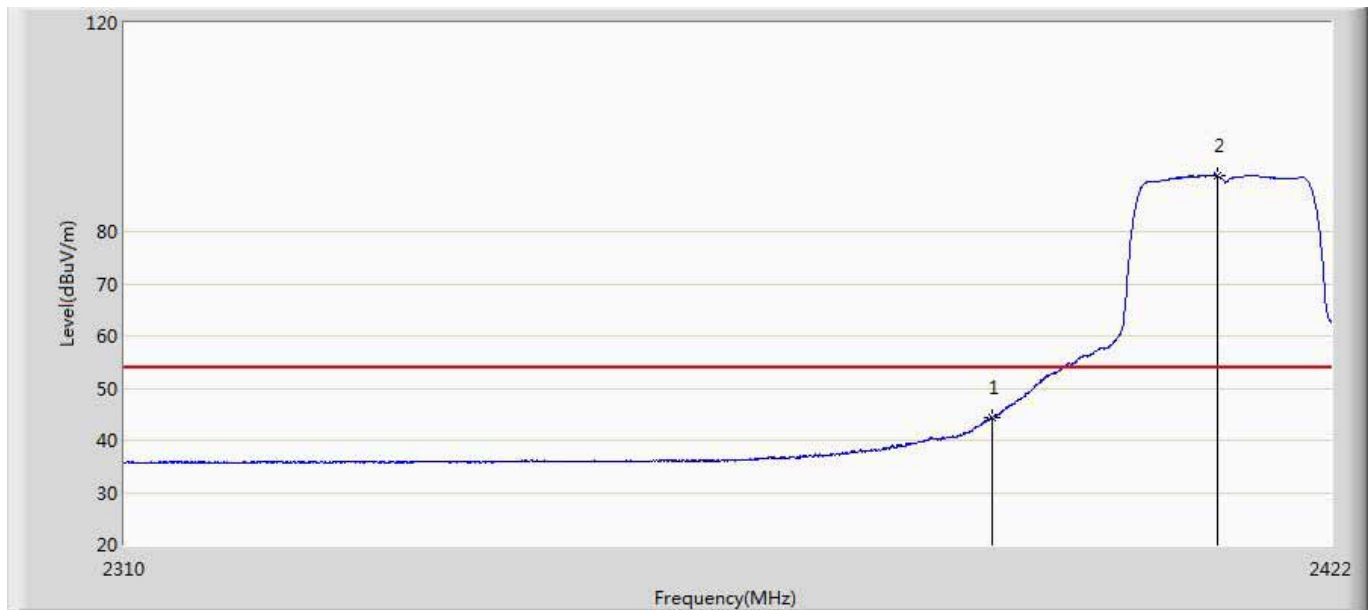
No	Mark	Frequency (MHz)	Measure Level (dBuV/m)	Reading Level (dBuV)	Over Limit (dB)	Limit (dBuV/m)	Factor (dB)	Type
1		2390.000	53.424	17.094	-0.576	54.000	36.329	AV
2	*	2410.856	100.299	63.972	46.299	54.000	36.327	AV

Site: AC5	Time: 2017/03/04 - 21:25
Limit: FCC_Part15.209_RE(3m)	Margin: 0
Probe: Horn_3117_00167055(1-18GHz)	Polarity: Horizontal
EUT: Kasa Cam	Power: AC 120V/60Hz
Note: Mode2:Transmit at 2412 by 11g	



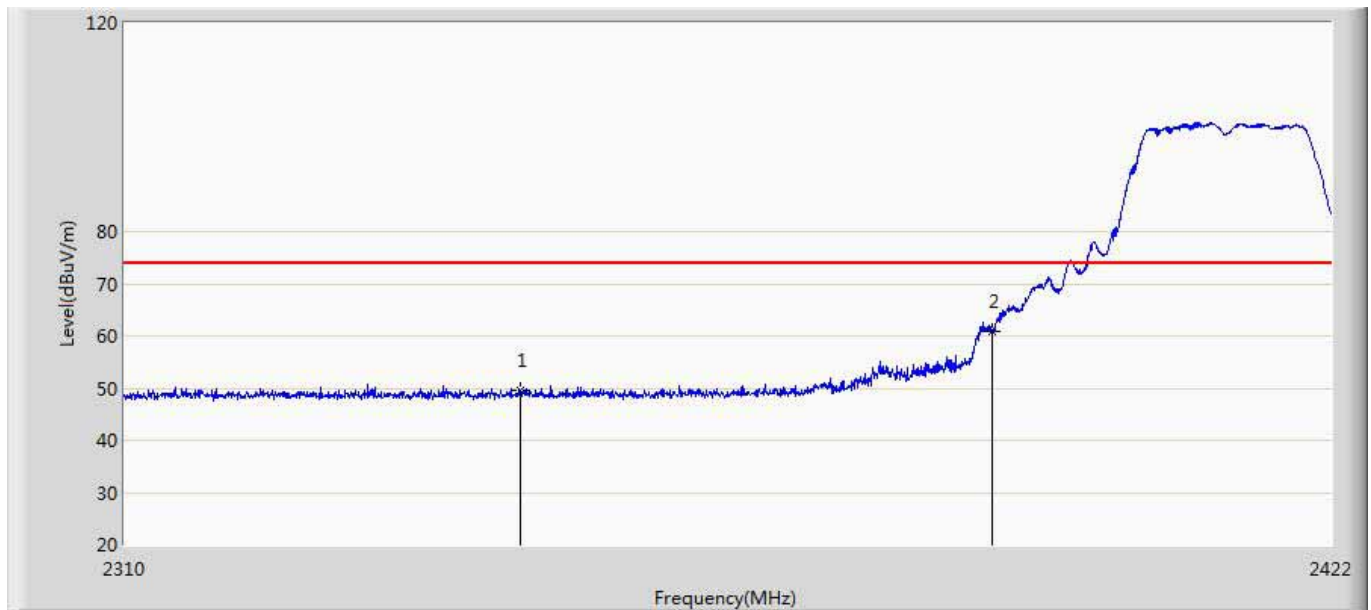
No	Mark	Frequency (MHz)	Measure Level (dBuV/m)	Reading Level (dBuV)	Over Limit (dB)	Limit (dBuV/m)	Factor (dB)	Type
1		2390.000	70.847	34.517	-3.153	74.000	36.329	PK
2	*	2410.576	110.315	73.988	36.315	74.000	36.328	PK

Site: AC5	Time: 2017/03/04 - 21:27
Limit: FCC_Part15.209_RE(3m)	Margin: 0
Probe: Horn_3117_00167055(1-18GHz)	Polarity: Vertical
EUT: Kasa Cam	Power: AC 120V/60Hz
Note: Mode2:Transmit at 2412 by 11g	



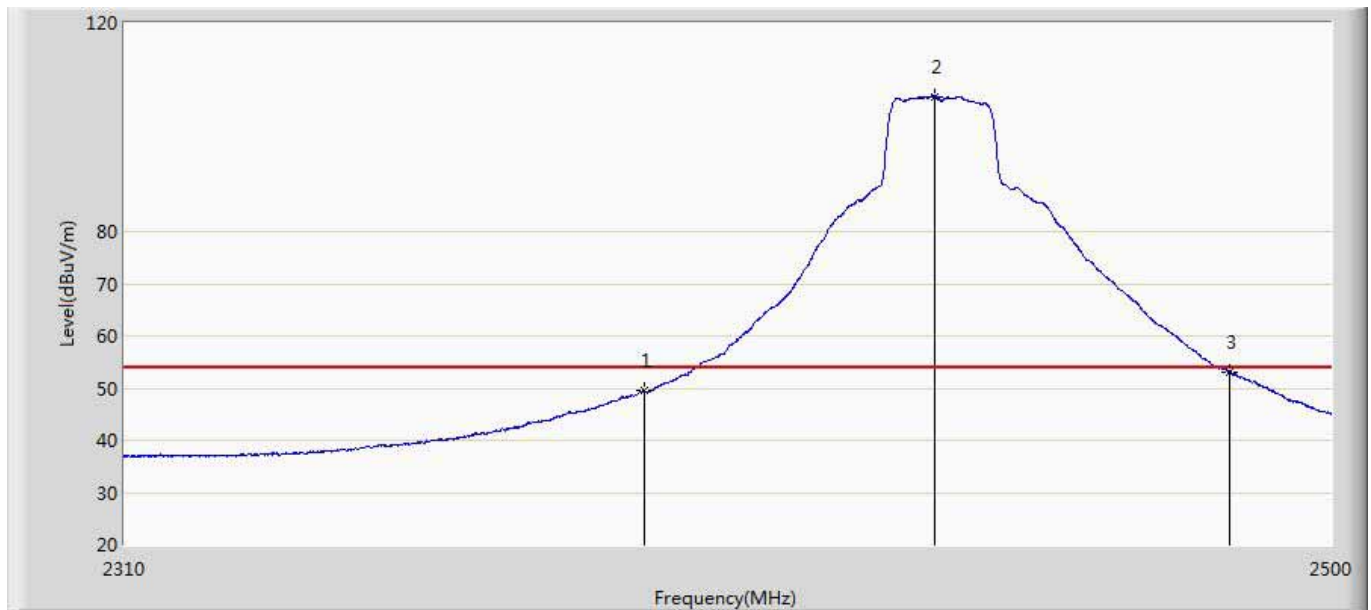
No	Mark	Frequency (MHz)	Measure Level (dBuV/m)	Reading Level (dBuV)	Over Limit (dB)	Limit (dBuV/m)	Factor (dB)	Type
1		2390.000	44.370	8.040	-9.630	54.000	36.329	AV
2	*	2411.192	90.726	54.396	36.726	54.000	36.330	AV

Site: AC5	Time: 2017/03/04 - 21:30
Limit: FCC_Part15.209_RE(3m)	Margin: 0
Probe: Horn_3117_00167055(1-18GHz)	Polarity: Vertical
EUT: Kasa Cam	Power: AC 120V/60Hz
Note: Mode2:Transmit at 2412 by 11g	



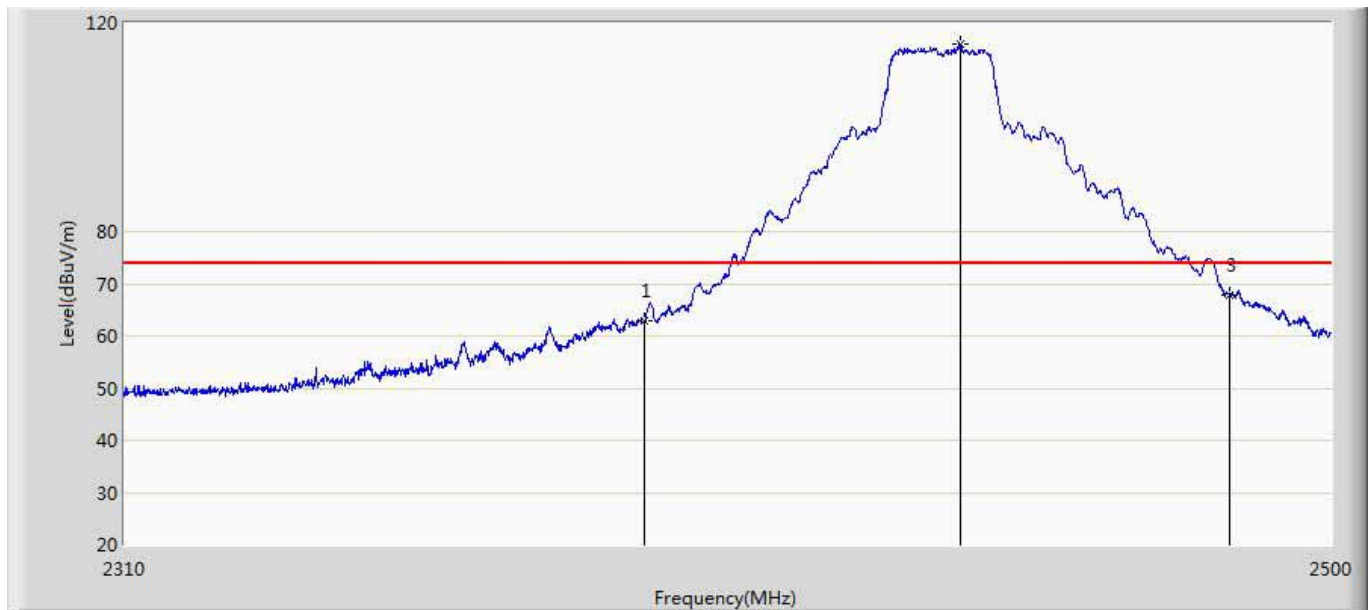
No	Mark	Frequency (MHz)	Measure Level (dBuV/m)	Reading Level (dBuV)	Over Limit (dB)	Limit (dBuV/m)	Factor (dB)	Type
1		2346.176	49.665	13.430	-24.335	74.000	36.236	PK
2	*	2390.000	60.761	24.431	-13.239	74.000	36.329	PK

Site: AC5	Time: 2017/03/04 - 21:33
Limit: FCC_Part15.209_RE(3m)	Margin: 0
Probe: Horn_3117_00167055(1-18GHz)	Polarity: Horizontal
EUT: Kasa Cam	Power: AC 120V/60Hz
Note: Mode2:Transmit at 2437 by 11g	



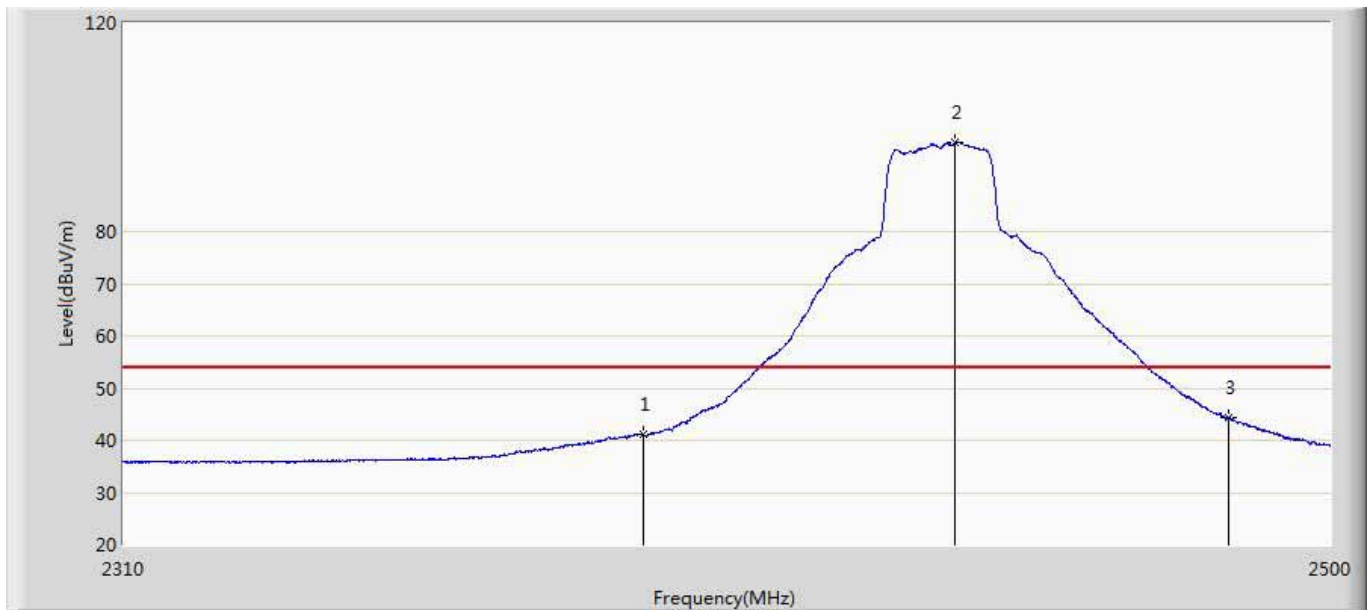
No	Mark	Frequency (MHz)	Measure Level (dBuV/m)	Reading Level (dBuV)	Over Limit (dB)	Limit (dBuV/m)	Factor (dB)	Type
1		2390.000	49.489	13.159	-4.511	54.000	36.329	AV
2	*	2436.065	105.874	69.421	51.874	54.000	36.452	AV
3		2483.500	53.166	16.699	-0.834	54.000	36.467	AV

Site: AC5	Time: 2017/03/04 - 21:44
Limit: FCC_Part15.209_RE(3m)	Margin: 0
Probe: Horn_3117_00167055(1-18GHz)	Polarity: Horizontal
EUT: Kasa Cam	Power: AC 120V/60Hz
Note: Mode2:Transmit at 2437 by 11g	



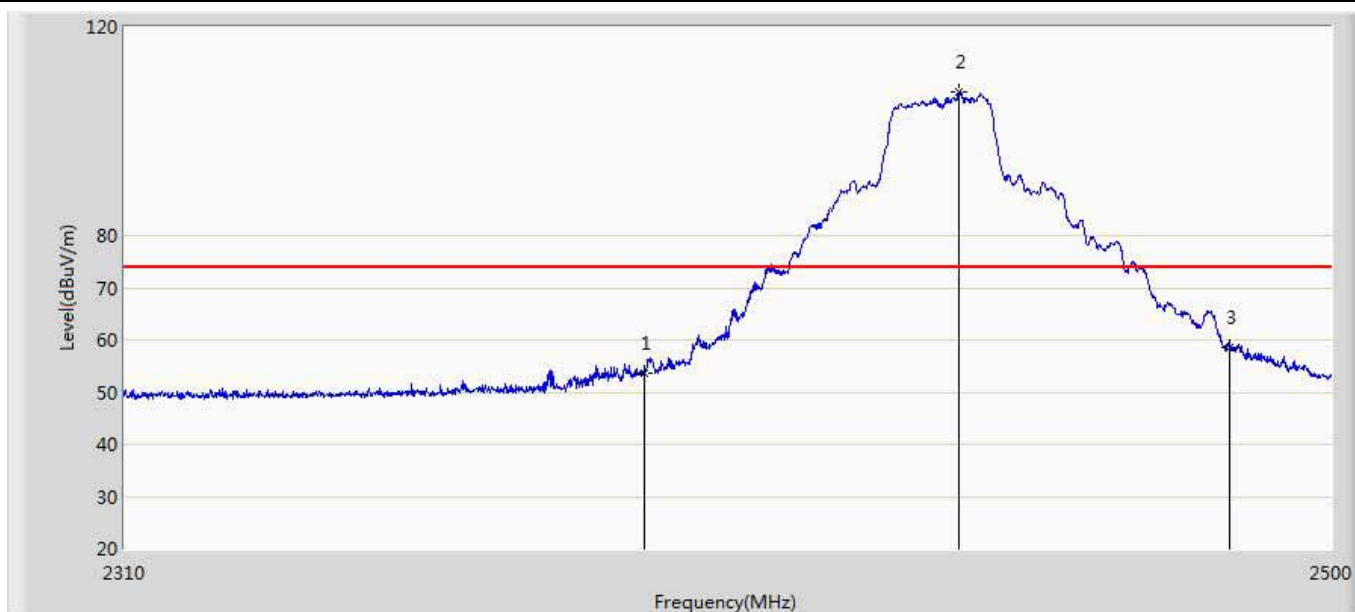
No	Mark	Frequency (MHz)	Measure Level (dBuV/m)	Reading Level (dBuV)	Over Limit (dB)	Limit (dBuV/m)	Factor (dB)	Type
1		2390.000	62.815	26.485	-11.185	74.000	36.329	PK
2	*	2440.055	115.862	79.481	41.862	74.000	36.381	PK
3		2483.500	67.730	31.263	-6.270	74.000	36.467	PK

Site: AC5	Time: 2017/03/04 - 21:47
Limit: FCC_Part15.209_RE(3m)	Margin: 0
Probe: Horn_3117_00167055(1-18GHz)	Polarity: Vertical
EUT: Kasa Cam	Power: AC 120V/60Hz
Note: Mode2:Transmit at 2437 by 11g	



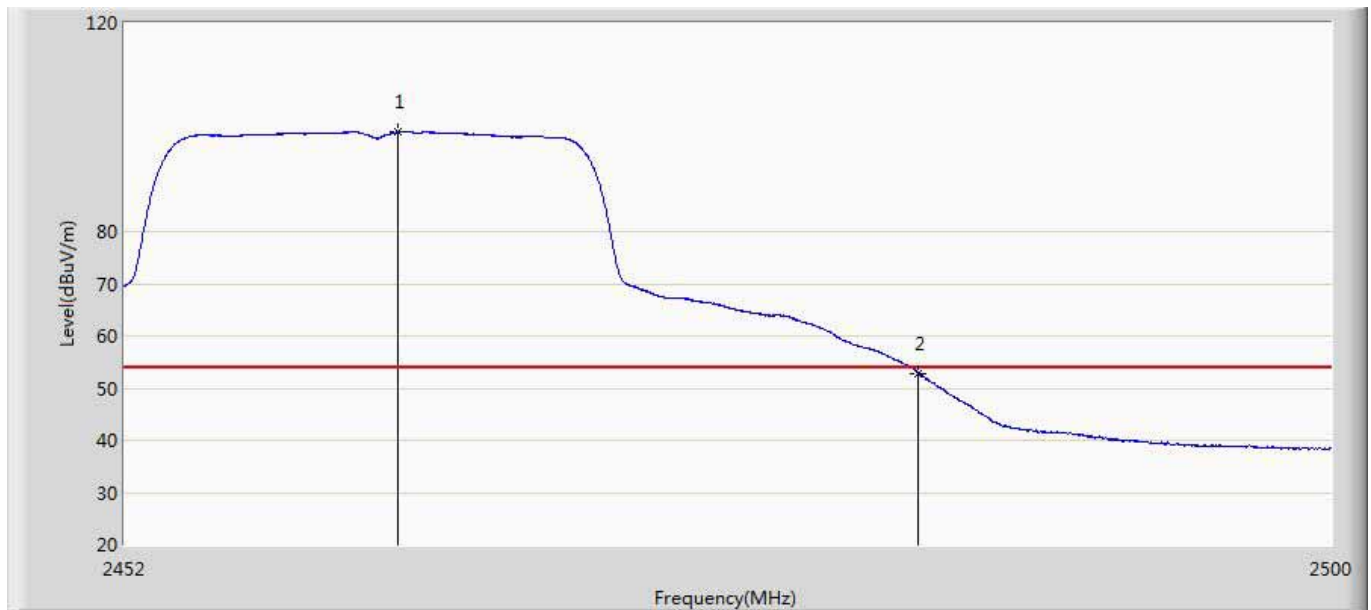
No	Mark	Frequency (MHz)	Measure Level (dBuV/m)	Reading Level (dBuV)	Over Limit (dB)	Limit (dBuV/m)	Factor (dB)	Type
1		2390.000	41.130	4.800	-12.870	54.000	36.329	AV
2	*	2439.390	96.973	60.580	42.973	54.000	36.393	AV
3		2483.500	44.307	7.840	-9.693	54.000	36.467	AV

Site: AC5	Time: 2017/03/04 - 21:49
Limit: FCC_Part15.209_RE(3m)	Margin: 0
Probe: Horn_3117_00167055(1-18GHz)	Polarity: Vertical
EUT: Kasa Cam	Power: AC 120V/60Hz
Note: Mode2:Transmit at 2437 by 11g	



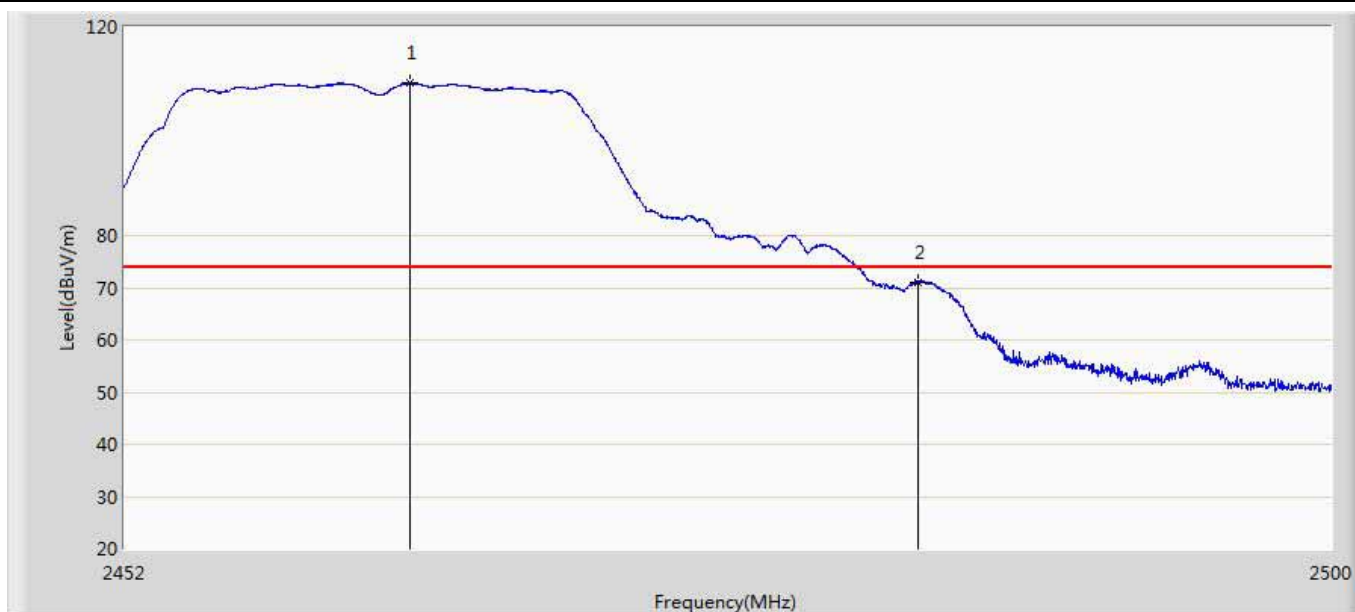
No	Mark	Frequency (MHz)	Measure Level (dBuV/m)	Reading Level (dBuV)	Over Limit (dB)	Limit (dBuV/m)	Factor (dB)	Type
1		2390.000	53.675	17.345	-20.325	74.000	36.329	PK
2	*	2439.865	107.652	71.267	33.652	74.000	36.385	PK
3		2483.500	58.525	22.058	-15.475	74.000	36.467	PK

Site: AC5	Time: 2017/03/04 - 22:08
Limit: FCC_Part15.209_RE(3m)	Margin: 0
Probe: Horn_3117_00167055(1-18GHz)	Polarity: Horizontal
EUT: Kasa Cam	Power: AC 120V/60Hz
Note: Mode2:Transmit at 2462 by 11g	



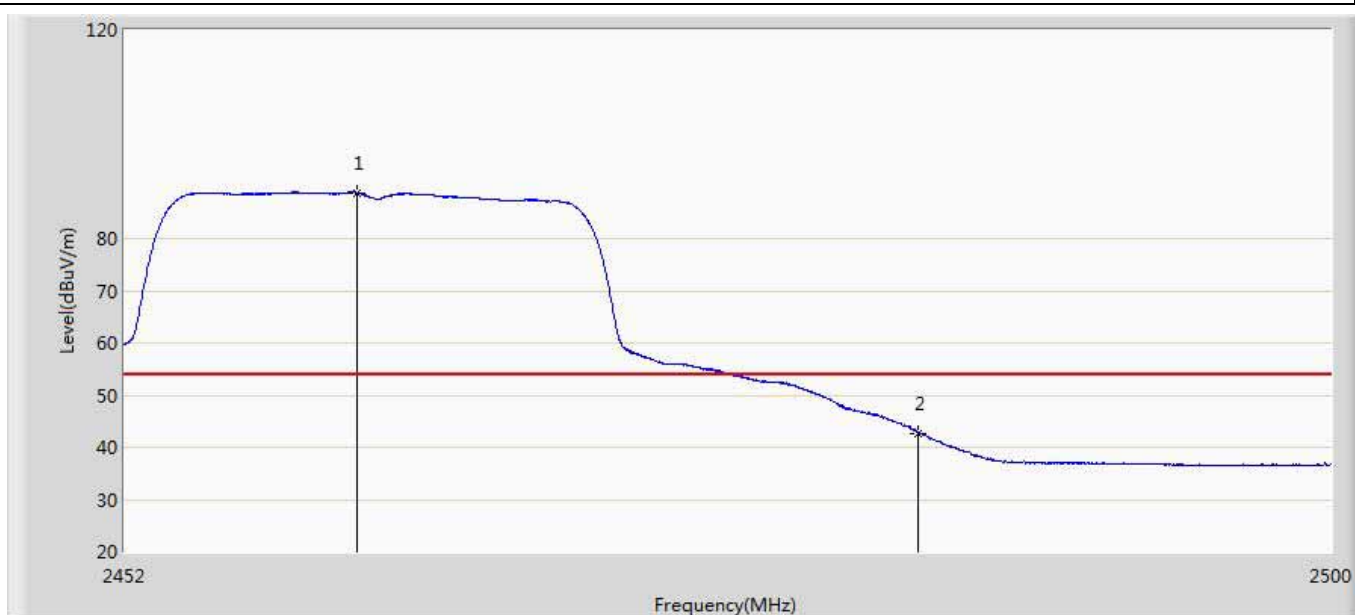
No	Mark	Frequency (MHz)	Measure Level (dBuV/m)	Reading Level (dBuV)	Over Limit (dB)	Limit (dBuV/m)	Factor (dB)	Type
1	*	2462.800	99.082	62.464	45.082	54.000	36.618	AV
2		2483.500	53.082	16.615	-0.918	54.000	36.467	AV

Site: AC5	Time: 2017/03/04 - 22:16
Limit: FCC_Part15.209_RE(3m)	Margin: 0
Probe: Horn_3117_00167055(1-18GHz)	Polarity: Horizontal
EUT: Kasa Cam	Power: AC 120V/60Hz
Note: Mode2:Transmit at 2462 by 11g	



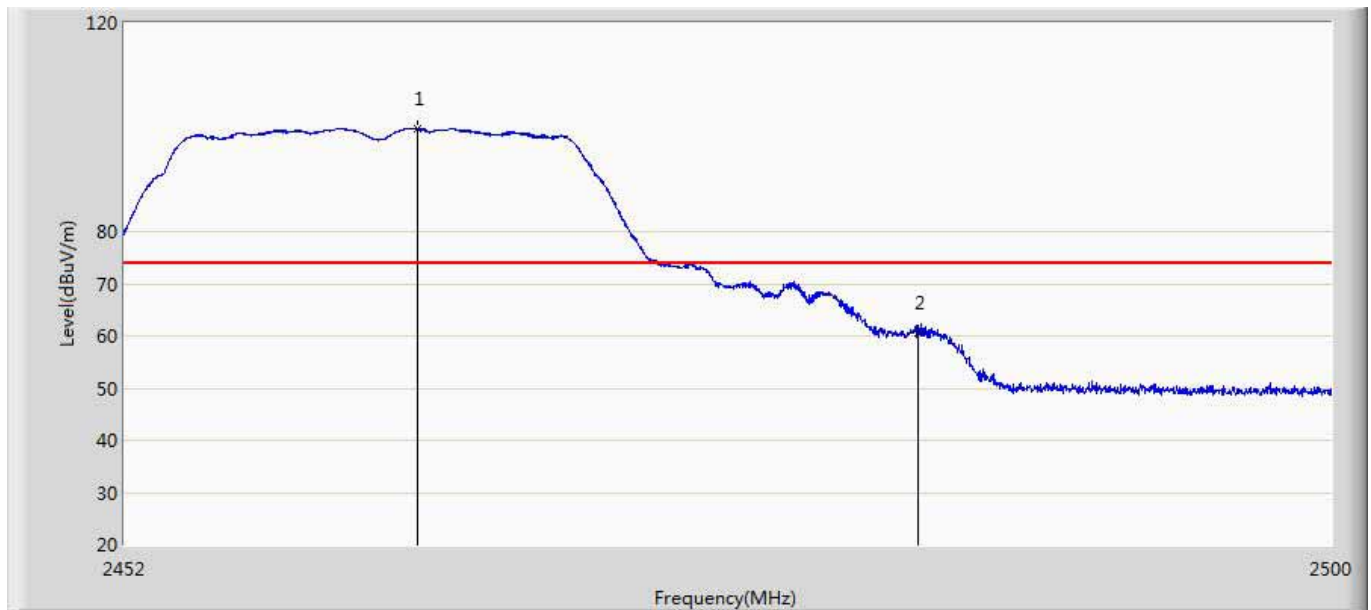
No	Mark	Frequency (MHz)	Measure Level (dBuV/m)	Reading Level (dBuV)	Over Limit (dB)	Limit (dBuV/m)	Factor (dB)	Type
1	*	2463.304	109.207	72.596	35.207	74.000	36.612	PK
2		2483.500	71.080	34.613	-2.920	74.000	36.467	PK

Site: AC5	Time: 2017/03/04 - 22:32
Limit: FCC_Part15.209_RE(3m)	Margin: 0
Probe: Horn_3117_00167055(1-18GHz)	Polarity: Vertical
EUT: Kasa Cam	Power: AC 120V/60Hz
Note: Mode2:Transmit at 2462 by 11g	



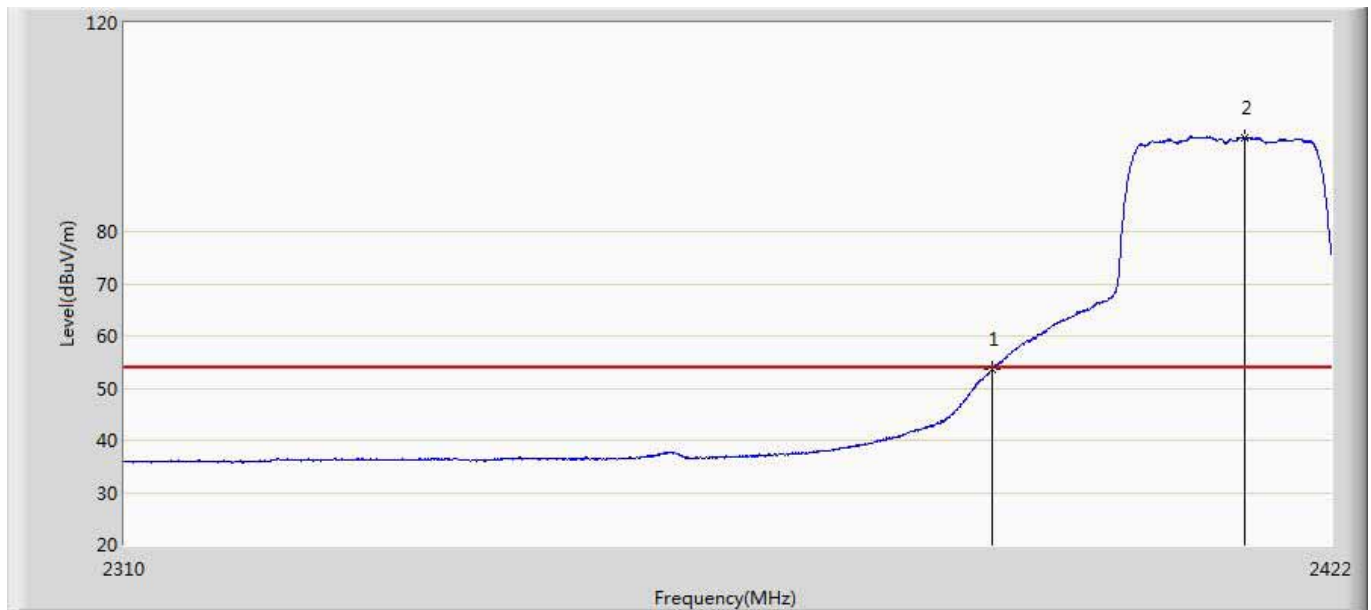
No	Mark	Frequency (MHz)	Measure Level (dBuV/m)	Reading Level (dBuV)	Over Limit (dB)	Limit (dBuV/m)	Factor (dB)	Type
1	*	2461.168	88.818	52.205	34.818	54.000	36.613	AV
2		2483.500	42.727	6.260	-11.273	54.000	36.467	AV

Site: AC5	Time: 2017/03/04 - 22:35
Limit: FCC_Part15.209_RE(3m)	Margin: 0
Probe: Horn_3117_00167055(1-18GHz)	Polarity: Vertical
EUT: Kasa Cam	Power: AC 120V/60Hz
Note: Mode2:Transmit at 2462 by 11g	



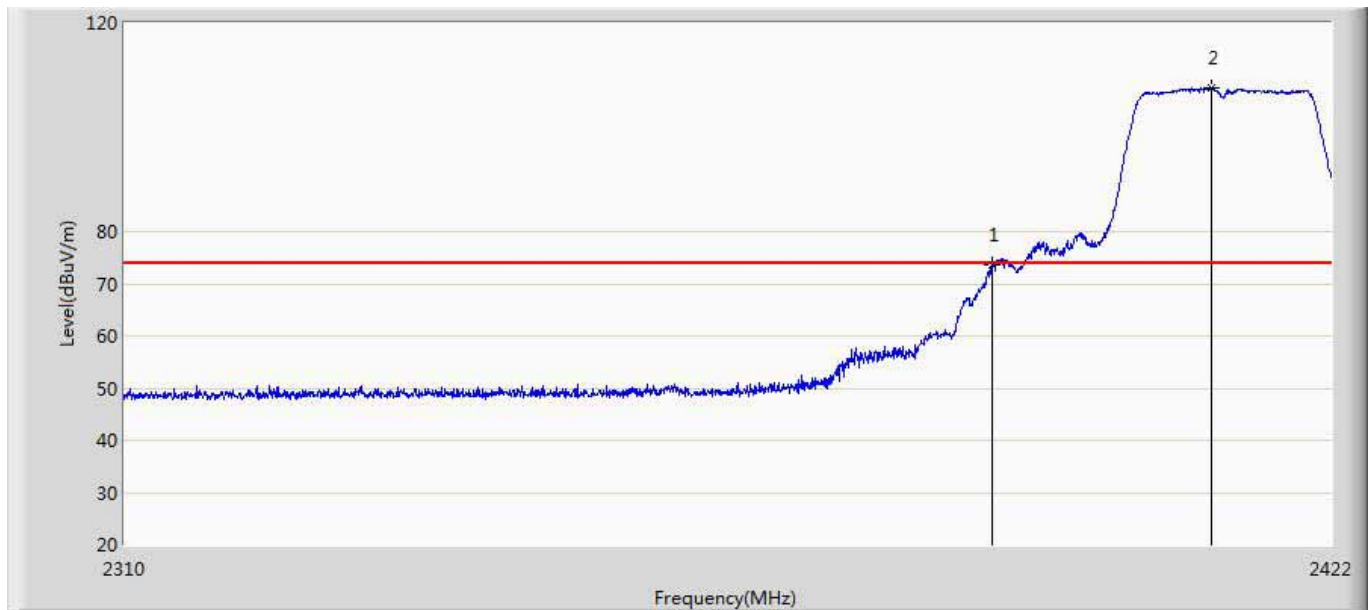
No	Mark	Frequency (MHz)	Measure Level (dBuV/m)	Reading Level (dBuV)	Over Limit (dB)	Limit (dBuV/m)	Factor (dB)	Type
1	*	2463.592	99.666	63.058	25.666	74.000	36.608	PK
2		2483.500	60.621	24.154	-13.379	74.000	36.467	PK

Site: AC5	Time: 2017/03/04 - 22:38
Limit: FCC_Part15.209_RE(3m)	Margin: 0
Probe: Horn_3117_00167055(1-18GHz)	Polarity: Horizontal
EUT: Kasa Cam	Power: AC 120V/60Hz
Note: Mode3:Transmit at 2412 by 11n20	



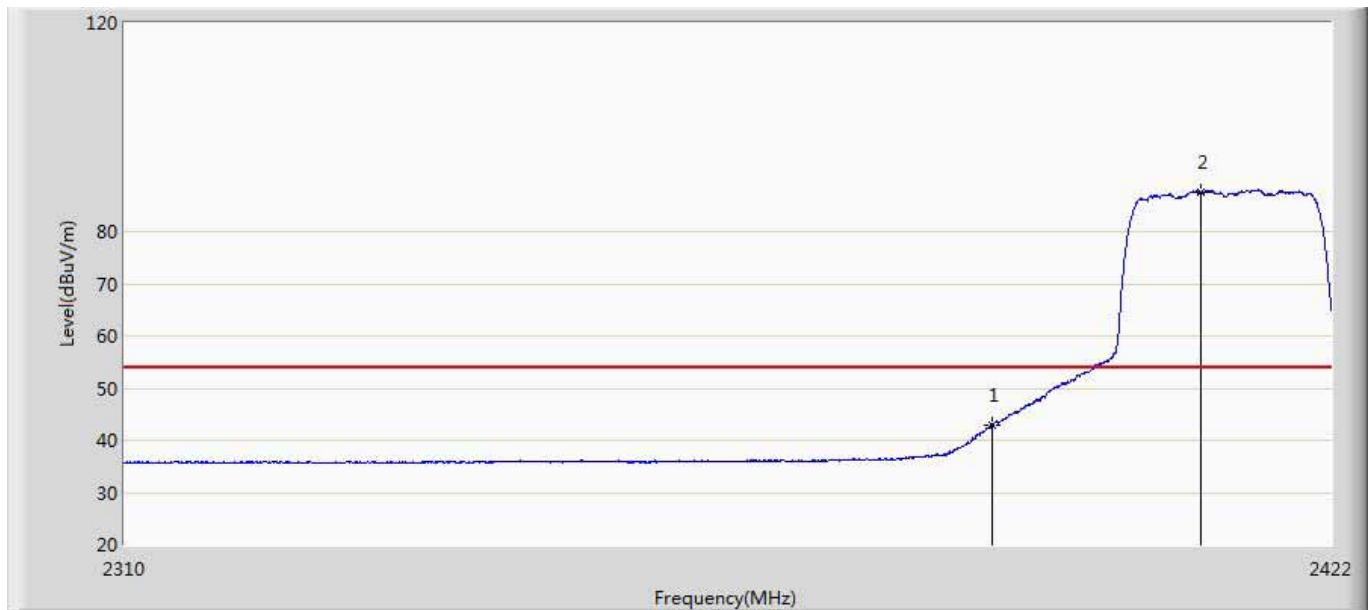
No	Mark	Frequency (MHz)	Measure Level (dBuV/m)	Reading Level (dBuV)	Over Limit (dB)	Limit (dBuV/m)	Factor (dB)	Type
1		2390.000	53.689	17.359	-0.311	54.000	36.329	AV
2	*	2413.880	97.864	61.491	43.864	54.000	36.373	AV

Site: AC5	Time: 2017/03/04 - 22:46
Limit: FCC_Part15.209_RE(3m)	Margin: 0
Probe: Horn_3117_00167055(1-18GHz)	Polarity: Horizontal
EUT: Kasa Cam	Power: AC 120V/60Hz
Note: Mode3:Transmit at 2412 by 11n20	



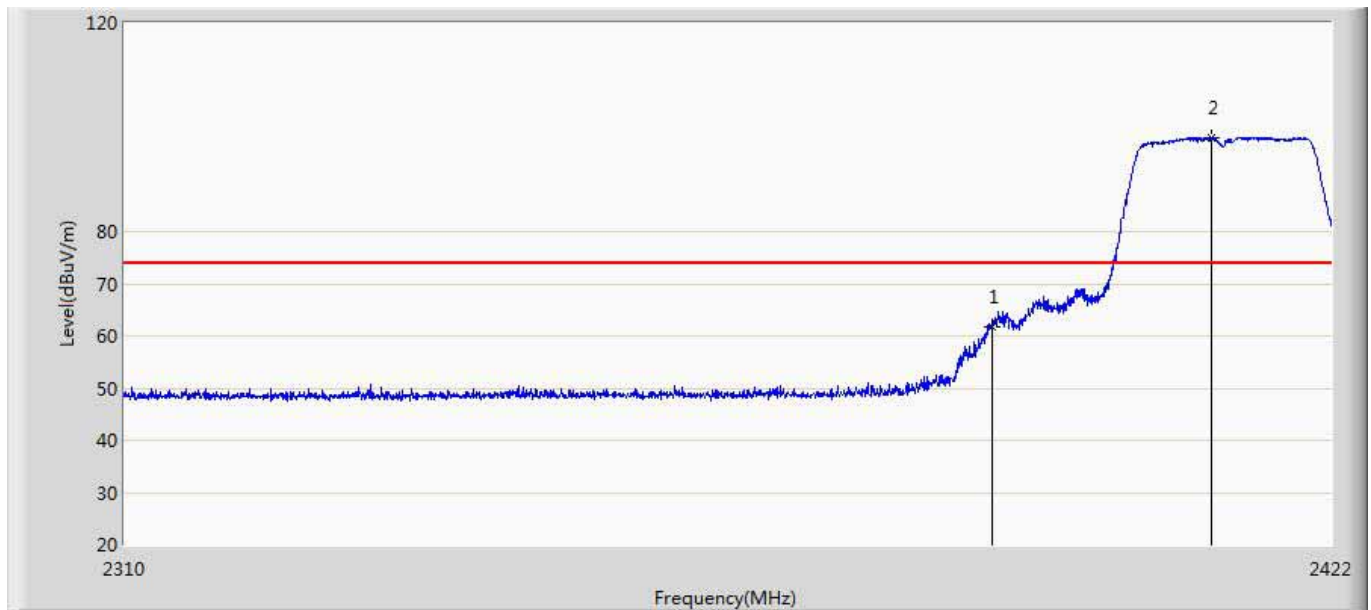
No	Mark	Frequency (MHz)	Measure Level (dBuV/m)	Reading Level (dBuV)	Over Limit (dB)	Limit (dBuV/m)	Factor (dB)	Type
1		2390.000	73.497	37.167	-0.503	74.000	36.329	PK
2	*	2410.632	107.482	71.155	33.482	74.000	36.327	PK

Site: AC5	Time: 2017/03/04 - 22:53
Limit: FCC_Part15.209_RE(3m)	Margin: 0
Probe: Horn_3117_00167055(1-18GHz)	Polarity: Vertical
EUT: Kasa Cam	Power: AC 120V/60Hz
Note: Mode3:Transmit at 2412 by 11n20	



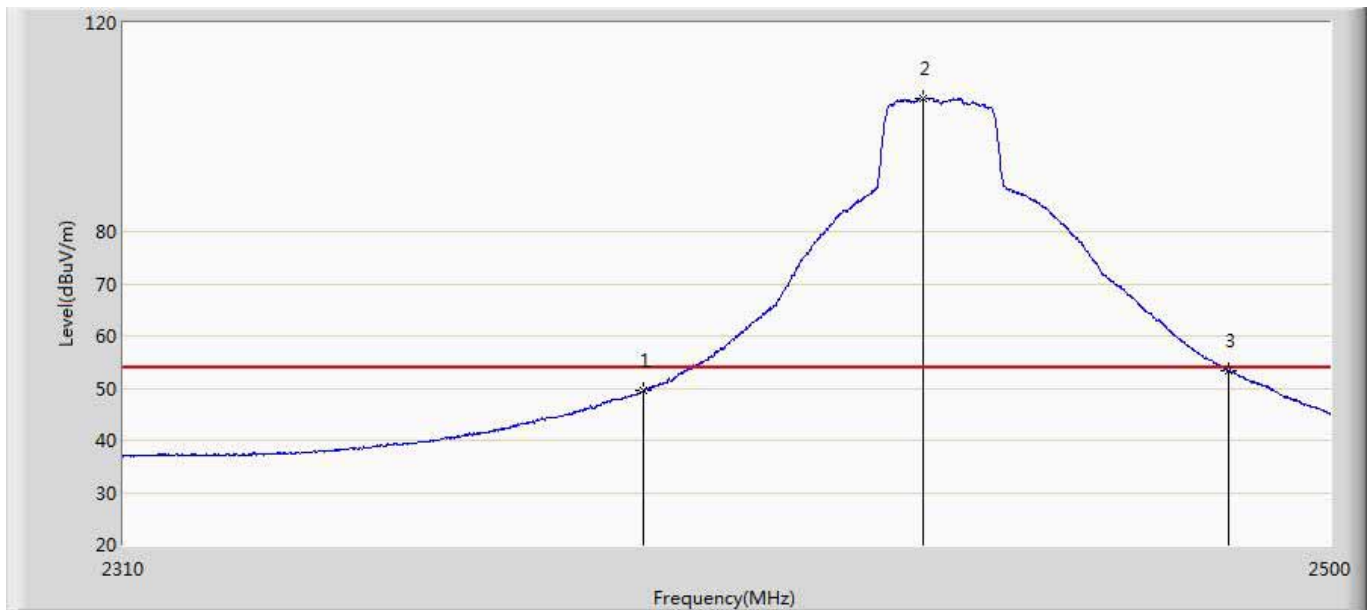
No	Mark	Frequency (MHz)	Measure Level (dBuV/m)	Reading Level (dBuV)	Over Limit (dB)	Limit (dBuV/m)	Factor (dB)	Type
1		2390.000	42.981	6.651	-11.019	54.000	36.329	AV
2	*	2409.680	87.609	51.282	33.609	54.000	36.327	AV

Site: AC5	Time: 2017/03/04 - 22:55
Limit: FCC_Part15.209_RE(3m)	Margin: 0
Probe: Horn_3117_00167055(1-18GHz)	Polarity: Vertical
EUT: Kasa Cam	Power: AC 120V/60Hz
Note: Mode3:Transmit at 2412 by 11n20	



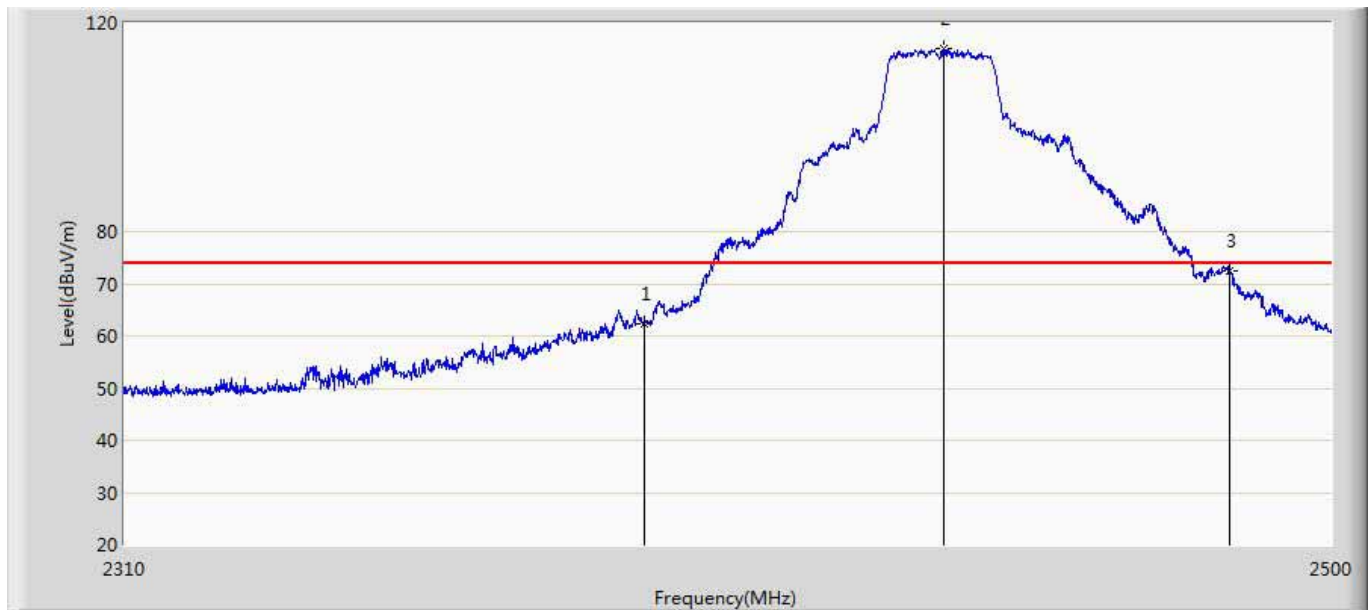
No	Mark	Frequency (MHz)	Measure Level (dBuV/m)	Reading Level (dBuV)	Over Limit (dB)	Limit (dBuV/m)	Factor (dB)	Type
1		2390.000	61.786	25.456	-12.214	74.000	36.329	PK
2	*	2410.688	98.109	61.782	24.109	74.000	36.327	PK

Site: AC5	Time: 2017/03/04 - 22:57
Limit: FCC_Part15.209_RE(3m)	Margin: 0
Probe: Horn_3117_00167055(1-18GHz)	Polarity: Horizontal
EUT: Kasa Cam	Power: AC 120V/60Hz
Note: Mode3:Transmit at 2437 by 11n20	



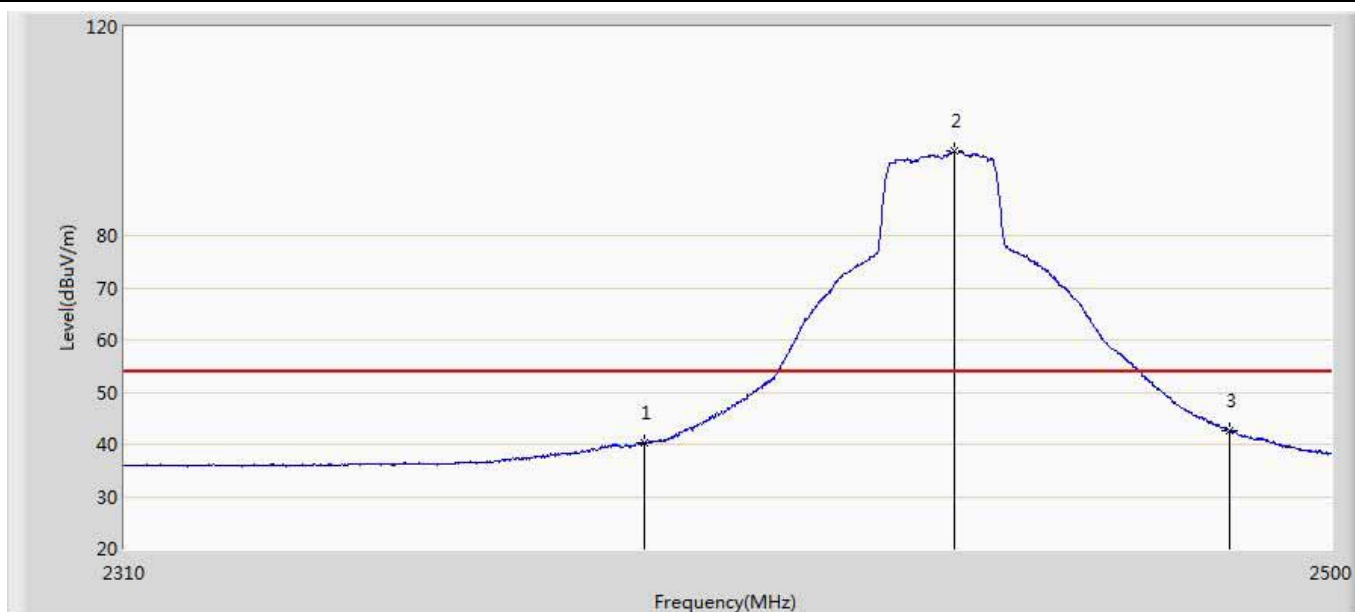
No	Mark	Frequency (MHz)	Measure Level (dBuV/m)	Reading Level (dBuV)	Over Limit (dB)	Limit (dBuV/m)	Factor (dB)	Type
1		2390.000	49.546	13.216	-4.454	54.000	36.329	AV
2	*	2434.260	105.591	69.106	51.591	54.000	36.485	AV
3		2483.500	53.264	16.797	-0.736	54.000	36.467	AV

Site: AC5	Time: 2017/03/04 - 23:08
Limit: FCC_Part15.209_RE(3m)	Margin: 0
Probe: Horn_3117_00167055(1-18GHz)	Polarity: Horizontal
EUT: Kasa Cam	Power: AC 120V/60Hz
Note: Mode3:Transmit at 2437 by 11n20	



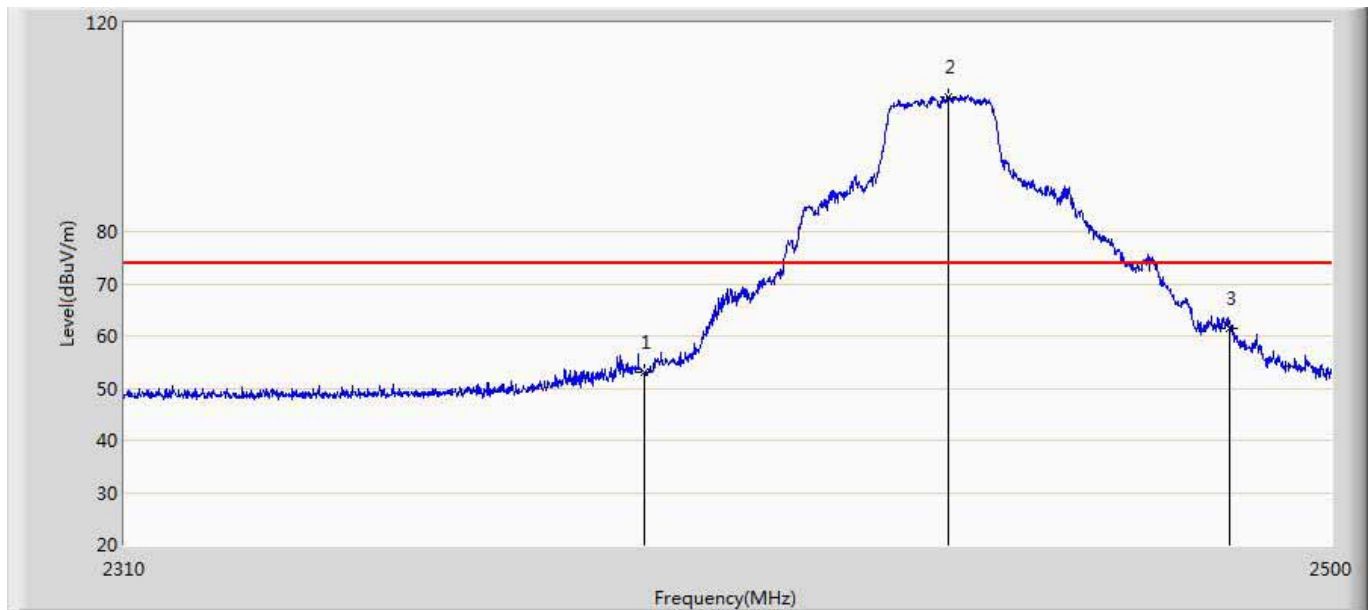
No	Mark	Frequency (MHz)	Measure Level (dBuV/m)	Reading Level (dBuV)	Over Limit (dB)	Limit (dBuV/m)	Factor (dB)	Type
1		2390.000	62.311	25.981	-11.689	74.000	36.329	PK
2	*	2437.490	114.989	78.562	40.989	74.000	36.427	PK
3		2483.500	72.575	36.108	-1.425	74.000	36.467	PK

Site: AC5	Time: 2017/03/04 - 23:13
Limit: FCC_Part15.209_RE(3m)	Margin: 0
Probe: Horn_3117_00167055(1-18GHz)	Polarity: Vertical
EUT: Kasa Cam	Power: AC 120V/60Hz
Note: Mode3:Transmit at 2437 by 11n20	



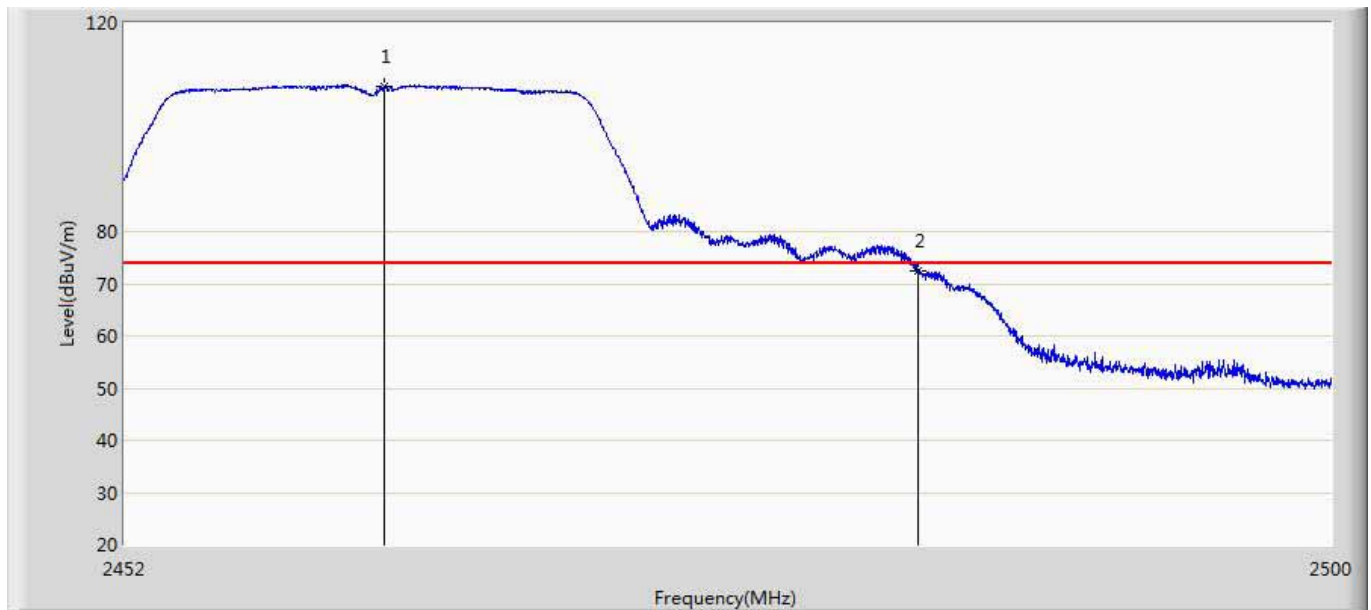
No	Mark	Frequency (MHz)	Measure Level (dBuV/m)	Reading Level (dBuV)	Over Limit (dB)	Limit (dBuV/m)	Factor (dB)	Type
1		2390.000	40.259	3.929	-13.741	54.000	36.329	AV
2	*	2439.105	96.103	59.705	42.103	54.000	36.398	AV
3		2483.500	42.532	6.065	-11.468	54.000	36.467	AV

Site: AC5	Time: 2017/03/04 - 23:16
Limit: FCC_Part15.209_RE(3m)	Margin: 0
Probe: Horn_3117_00167055(1-18GHz)	Polarity: Vertical
EUT: Kasa Cam	Power: AC 120V/60Hz
Note: Mode3:Transmit at 2437 by 11n20	



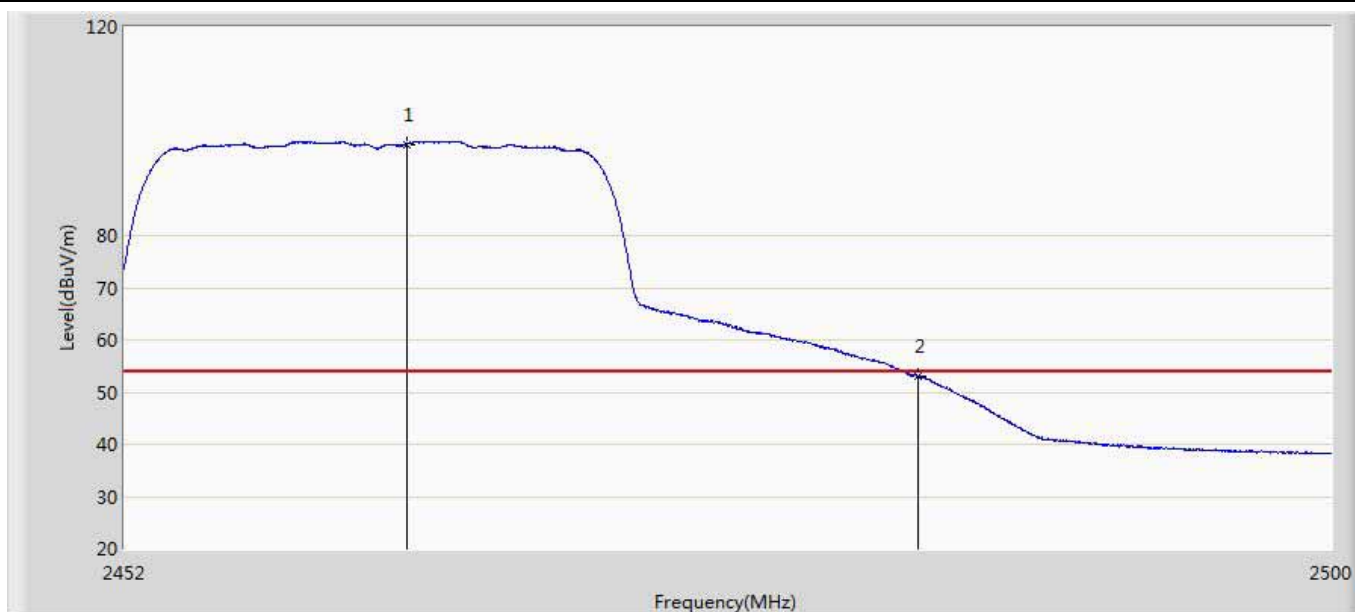
No	Mark	Frequency (MHz)	Measure Level (dBuV/m)	Reading Level (dBuV)	Over Limit (dB)	Limit (dBuV/m)	Factor (dB)	Type
1		2390.000	53.048	16.718	-20.952	74.000	36.329	PK
2	*	2438.155	105.929	69.514	31.929	74.000	36.415	PK
3		2483.500	61.375	24.908	-12.625	74.000	36.467	PK

Site: AC5	Time: 2017/03/04 - 23:19
Limit: FCC_Part15.209_RE(3m)	Margin: 0
Probe: Horn_3117_00167055(1-18GHz)	Polarity: Horizontal
EUT: Kasa Cam	Power: AC 120V/60Hz
Note: Mode3:Transmit at 2462 by 11n20	



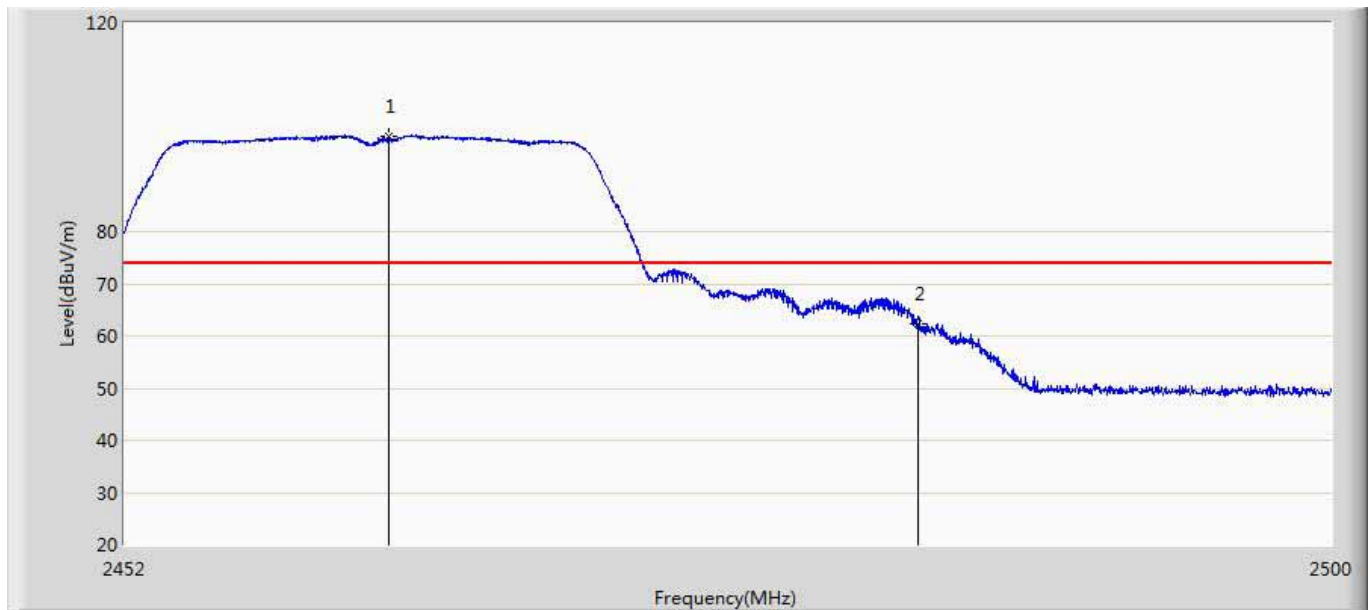
No	Mark	Frequency (MHz)	Measure Level (dBuV/m)	Reading Level (dBuV)	Over Limit (dB)	Limit (dBuV/m)	Factor (dB)	Type
1	*	2462.296	107.763	71.138	33.763	74.000	36.625	PK
2		2483.500	72.566	36.099	-1.434	74.000	36.467	PK

Site: AC5	Time: 2017/03/04 - 23:23
Limit: FCC_Part15.209_RE(3m)	Margin: 0
Probe: Horn_3117_00167055(1-18GHz)	Polarity: Horizontal
EUT: Kasa Cam	Power: AC 120V/60Hz
Note: Mode3:Transmit at 2462 by 11n20	



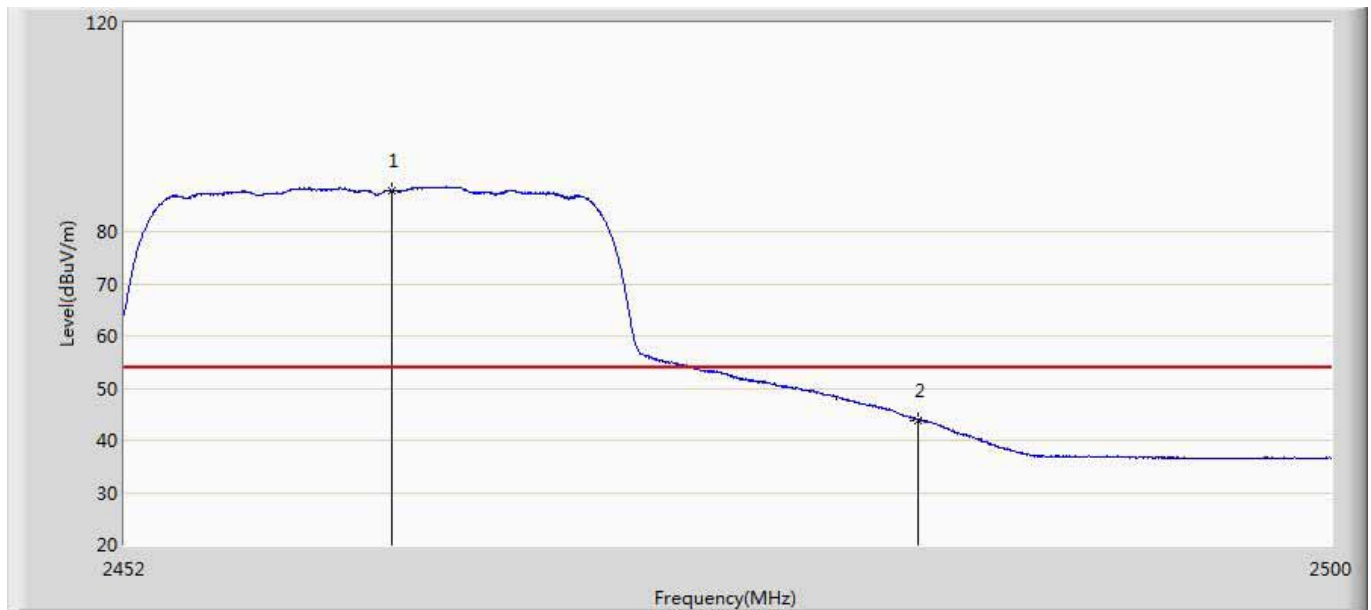
No	Mark	Frequency (MHz)	Measure Level (dBuV/m)	Reading Level (dBuV)	Over Limit (dB)	Limit (dBuV/m)	Factor (dB)	Type
1	*	2463.136	97.498	60.884	43.498	54.000	36.613	AV
2		2483.500	53.062	16.595	-0.938	54.000	36.467	AV

Site: AC5	Time: 2017/03/04 - 23:26
Limit: FCC_Part15.209_RE(3m)	Margin: 0
Probe: Horn_3117_00167055(1-18GHz)	Polarity: Vertical
EUT: Kasa Cam	Power: AC 120V/60Hz
Note: Mode3:Transmit at 2462 by 11n20	



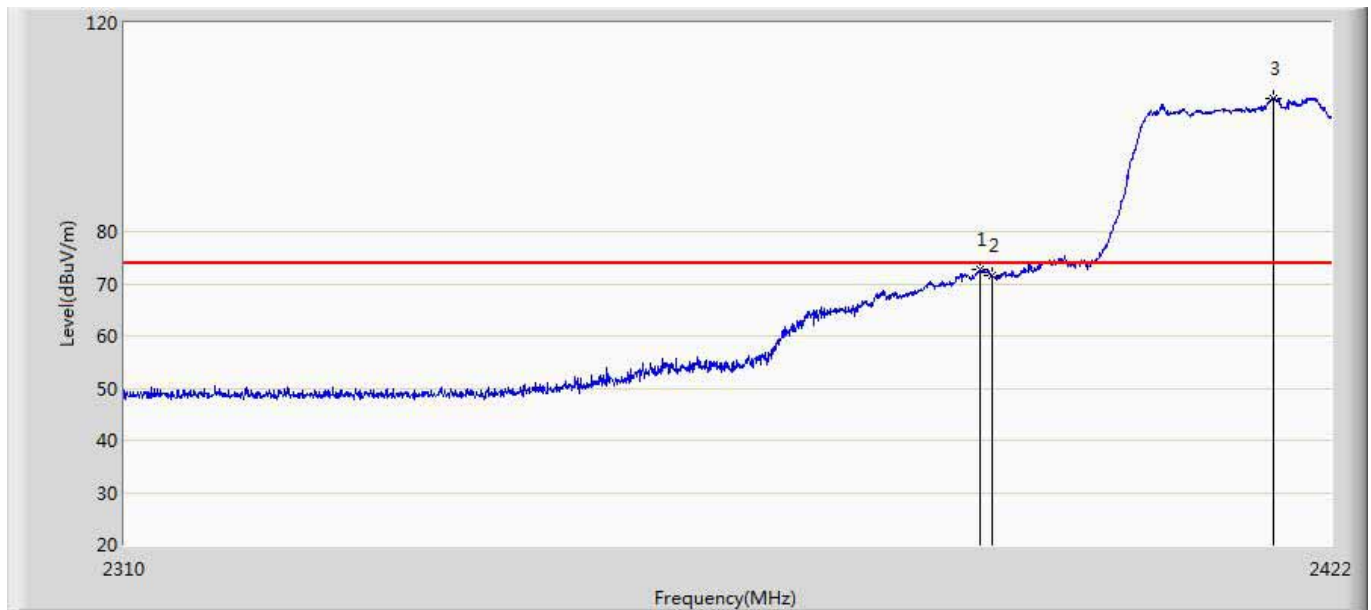
No	Mark	Frequency (MHz)	Measure Level (dBuV/m)	Reading Level (dBuV)	Over Limit (dB)	Limit (dBuV/m)	Factor (dB)	Type
1	*	2462.440	98.167	61.544	24.167	74.000	36.624	PK
2		2483.500	62.447	25.980	-11.553	74.000	36.467	PK

Site: AC5	Time: 2017/03/04 - 23:28
Limit: FCC_Part15.209_RE(3m)	Margin: 0
Probe: Horn_3117_00167055(1-18GHz)	Polarity: Vertical
EUT: Kasa Cam	Power: AC 120V/60Hz
Note: Mode3:Transmit at 2462 by 11n20	



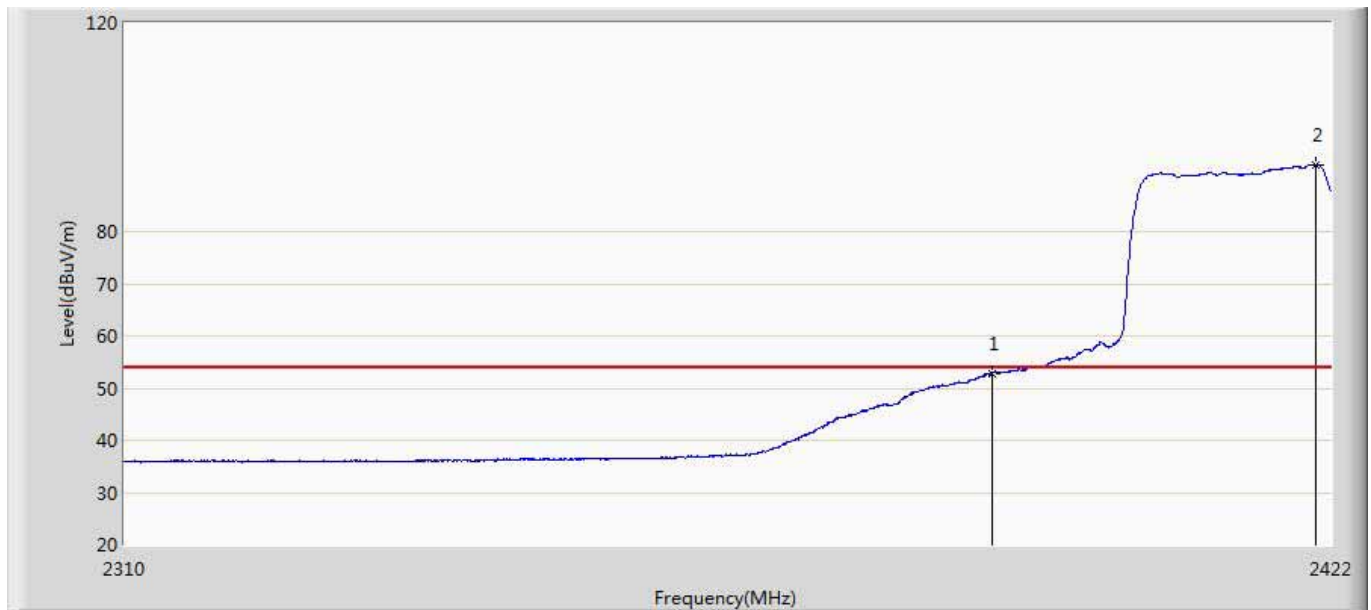
No	Mark	Frequency (MHz)	Measure Level (dBuV/m)	Reading Level (dBuV)	Over Limit (dB)	Limit (dBuV/m)	Factor (dB)	Type
1	*	2462.560	87.891	51.270	33.891	54.000	36.622	AV
2		2483.500	43.896	7.429	-10.104	54.000	36.467	AV

Site: AC5	Time: 2017/03/04 - 23:31
Limit: FCC_Part15.209_RE(3m)	Margin: 0
Probe: Horn_3117_00167055(1-18GHz)	Polarity: Horizontal
EUT: Kasa Cam	Power: AC 120V/60Hz
Note: Mode4:Transmit at 2422 by 11n40	



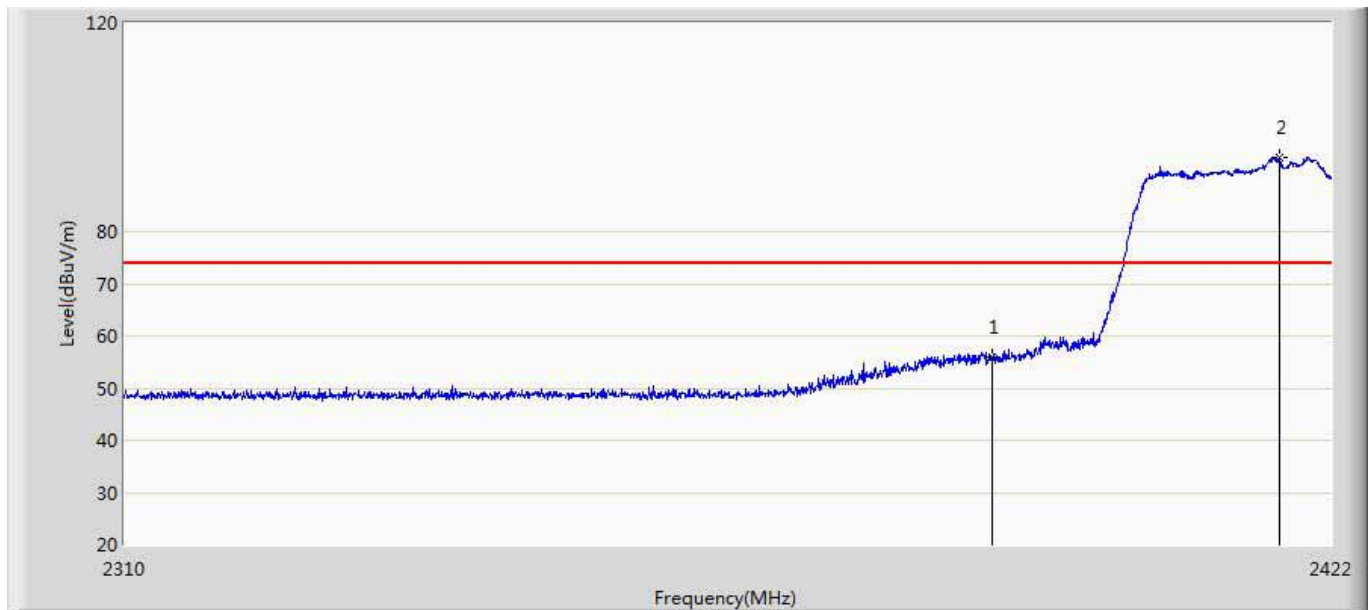
No	Mark	Frequency (MHz)	Measure Level (dBuV/m)	Reading Level (dBuV)	Over Limit (dB)	Limit (dBuV/m)	Factor (dB)	Type
1		2388.904	72.704	36.375	-1.296	74.000	36.330	PK
2		2390.000	71.571	35.241	-2.429	74.000	36.329	PK
3	*	2416.568	105.630	69.215	31.630	74.000	36.416	PK

Site: AC5	Time: 2017/03/04 - 23:40
Limit: FCC_Part15.209_RE(3m)	Margin: 0
Probe: Horn_3117_00167055(1-18GHz)	Polarity: Horizontal
EUT: Kasa Cam	Power: AC 120V/60Hz
Note: Mode4:Transmit at 2422 by 11n40	



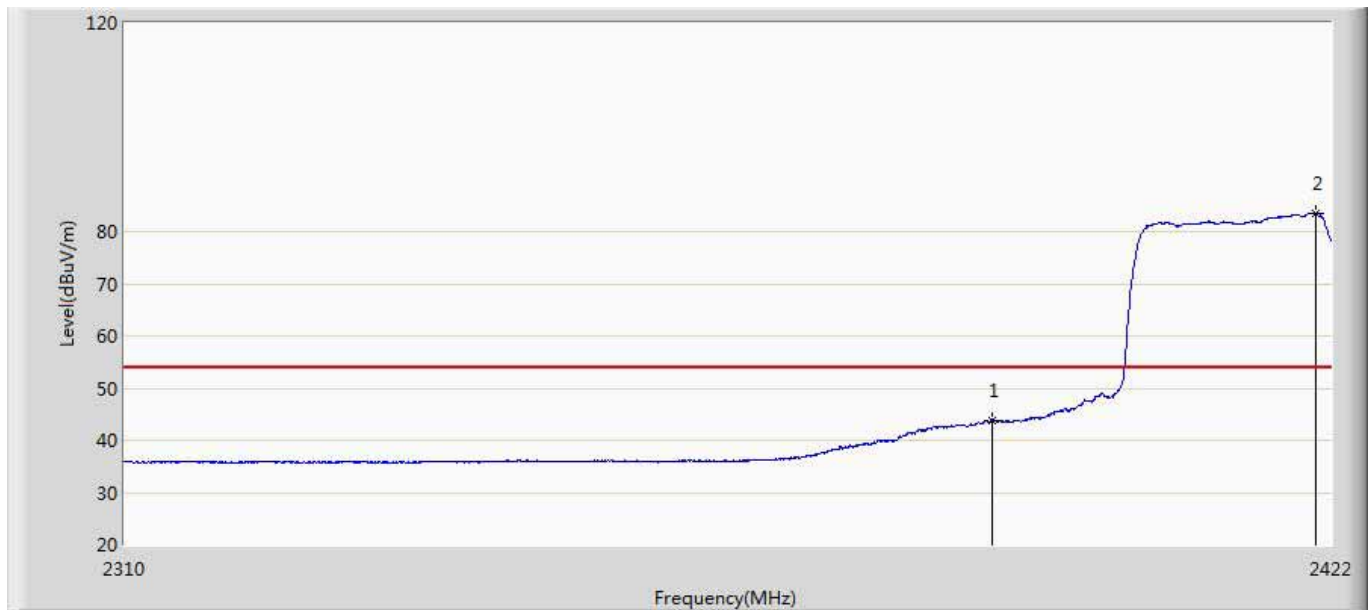
No	Mark	Frequency (MHz)	Measure Level (dBuV/m)	Reading Level (dBuV)	Over Limit (dB)	Limit (dBuV/m)	Factor (dB)	Type
1		2390.000	53.035	16.706	-0.965	54.000	36.329	AV
2	*	2420.544	92.849	56.370	38.849	54.000	36.479	AV

Site: AC5	Time: 2017/03/04 - 23:47
Limit: FCC_Part15.209_RE(3m)	Margin: 0
Probe: Horn_3117_00167055(1-18GHz)	Polarity: Vertical
EUT: Kasa Cam	Power: AC 120V/60Hz
Note: Mode4:Transmit at 2422 by 11n40	



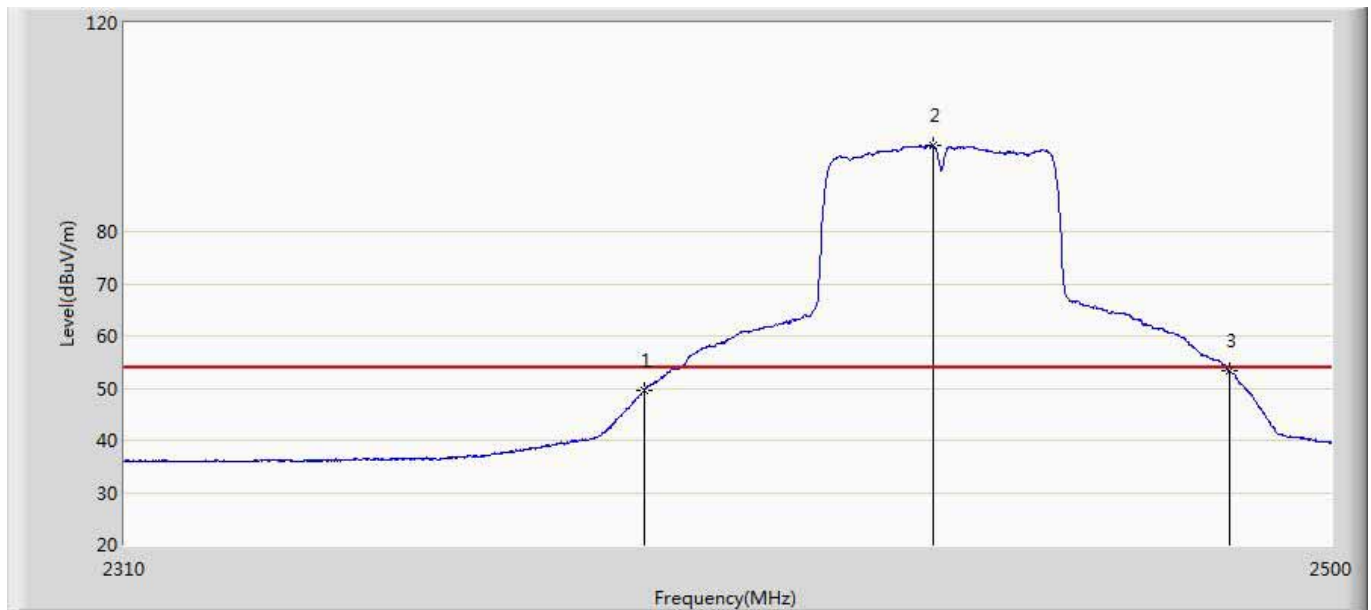
No	Mark	Frequency (MHz)	Measure Level (dBuV/m)	Reading Level (dBuV)	Over Limit (dB)	Limit (dBuV/m)	Factor (dB)	Type
1		2390.000	56.018	19.688	-17.982	74.000	36.329	PK
2	*	2417.072	94.076	57.653	20.076	74.000	36.424	PK

Site: AC5	Time: 2017/03/04 - 23:49
Limit: FCC_Part15.209_RE(3m)	Margin: 0
Probe: Horn_3117_00167055(1-18GHz)	Polarity: Vertical
EUT: Kasa Cam	Power: AC 120V/60Hz
Note: Mode4:Transmit at 2422 by 11n40	



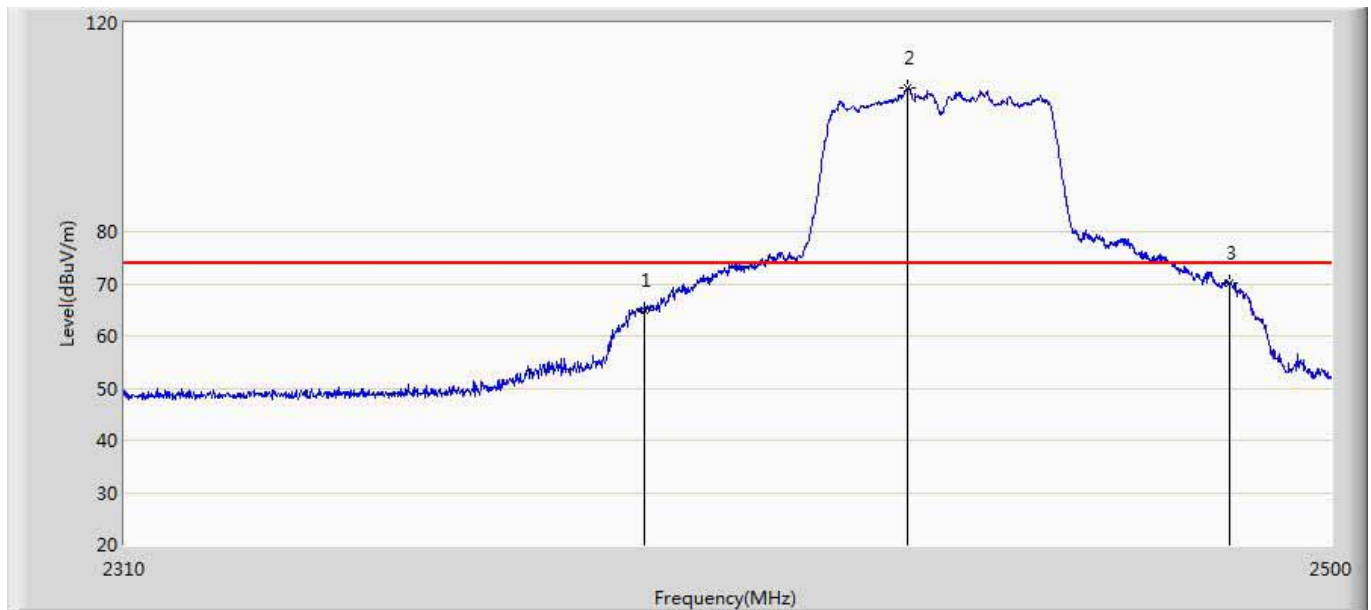
No	Mark	Frequency (MHz)	Measure Level (dBuV/m)	Reading Level (dBuV)	Over Limit (dB)	Limit (dBuV/m)	Factor (dB)	Type
1		2390.000	43.729	7.399	-10.271	54.000	36.329	AV
2	*	2420.544	83.511	47.032	29.511	54.000	36.479	AV

Site: AC5	Time: 2017/03/04 - 23:53
Limit: FCC_Part15.209_RE(3m)	Margin: 0
Probe: Horn_3117_00167055(1-18GHz)	Polarity: Horizontal
EUT: Kasa Cam	Power: AC 120V/60Hz
Note: Mode4:Transmit at 2437 by 11n40	



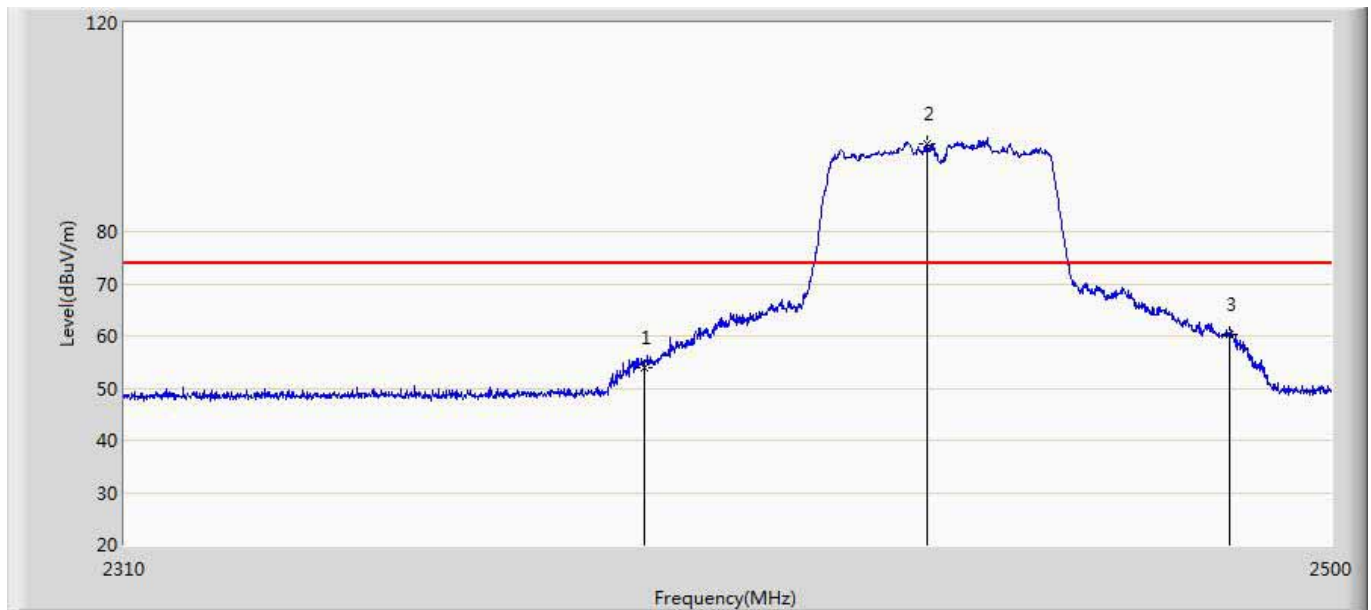
No	Mark	Frequency (MHz)	Measure Level (dBuV/m)	Reading Level (dBuV)	Over Limit (dB)	Limit (dBuV/m)	Factor (dB)	Type
1		2390.000	49.509	13.179	-4.491	54.000	36.329	AV
2	*	2435.780	96.399	59.941	42.399	54.000	36.458	AV
3		2483.500	53.288	16.821	-0.712	54.000	36.467	AV

Site: AC5	Time: 2017/03/05 - 00:12
Limit: FCC_Part15.209_RE(3m)	Margin: 0
Probe: Horn_3117_00167055(1-18GHz)	Polarity: Horizontal
EUT: Kasa Cam	Power: AC 120V/60Hz
Note: Mode4:Transmit at 2437 by 11n40	



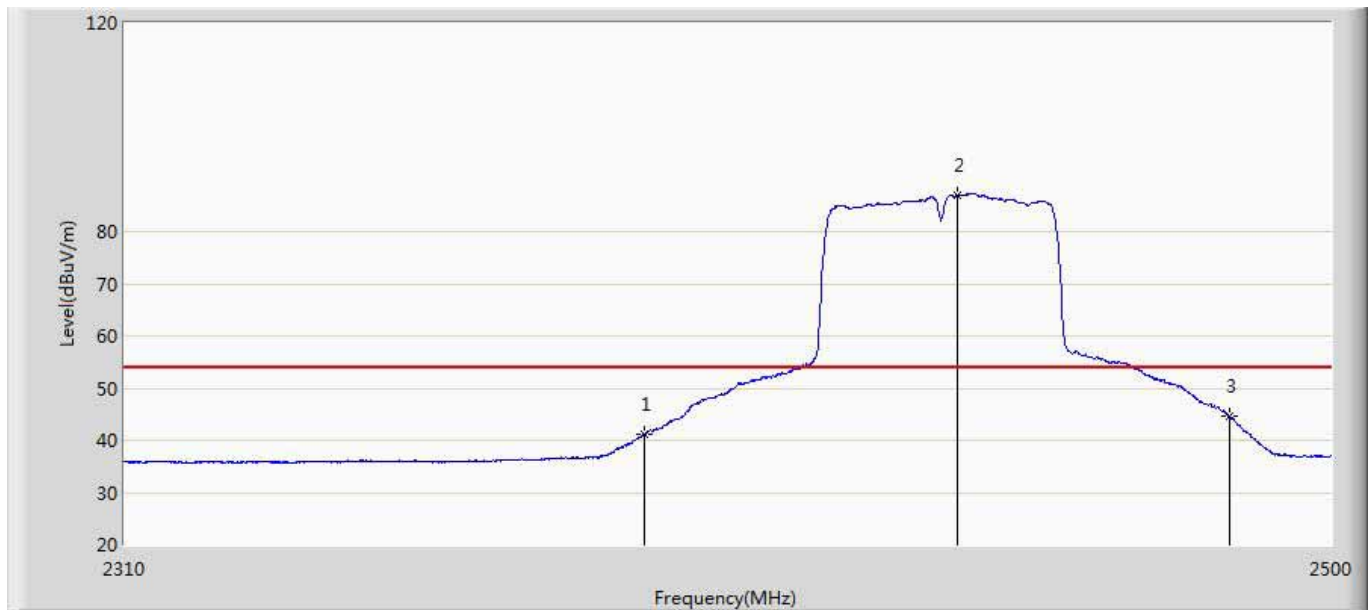
No	Mark	Frequency (MHz)	Measure Level (dBuV/m)	Reading Level (dBuV)	Over Limit (dB)	Limit (dBuV/m)	Factor (dB)	Type
1		2390.000	65.063	28.733	-8.937	74.000	36.329	PK
2	*	2431.505	107.505	70.971	33.505	74.000	36.534	PK
3		2483.500	70.209	33.742	-3.791	74.000	36.467	PK

Site: AC5	Time: 2017/03/05 - 00:14
Limit: FCC_Part15.209_RE(3m)	Margin: 0
Probe: Horn_3117_00167055(1-18GHz)	Polarity: Vertical
EUT: Kasa Cam	Power: AC 120V/60Hz
Note: Mode4:Transmit at 2437 by 11n40	



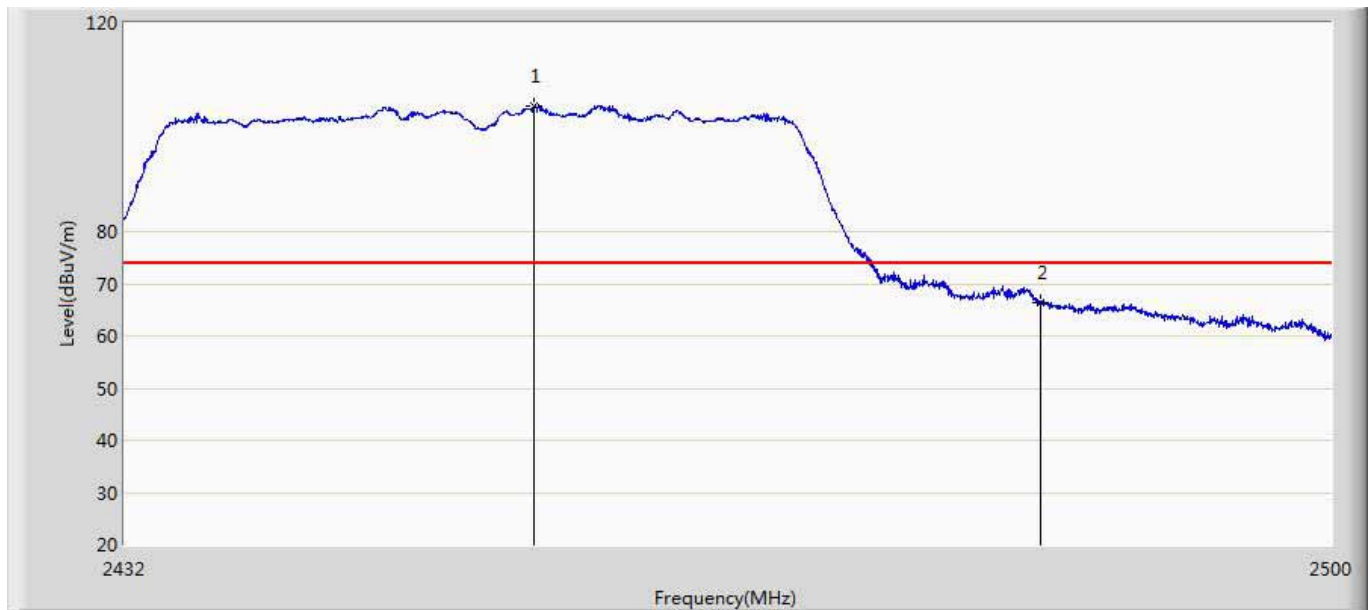
No	Mark	Frequency (MHz)	Measure Level (dBuV/m)	Reading Level (dBuV)	Over Limit (dB)	Limit (dBuV/m)	Factor (dB)	Type
1		2390.000	53.963	17.633	-20.037	74.000	36.329	PK
2	*	2434.735	96.882	60.405	22.882	74.000	36.477	PK
3		2483.500	60.310	23.843	-13.690	74.000	36.467	PK

Site: AC5	Time: 2017/03/05 - 00:16
Limit: FCC_Part15.209_RE(3m)	Margin: 0
Probe: Horn_3117_00167055(1-18GHz)	Polarity: Vertical
EUT: Kasa Cam	Power: AC 120V/60Hz
Note: Mode4:Transmit at 2437 by 11n40	



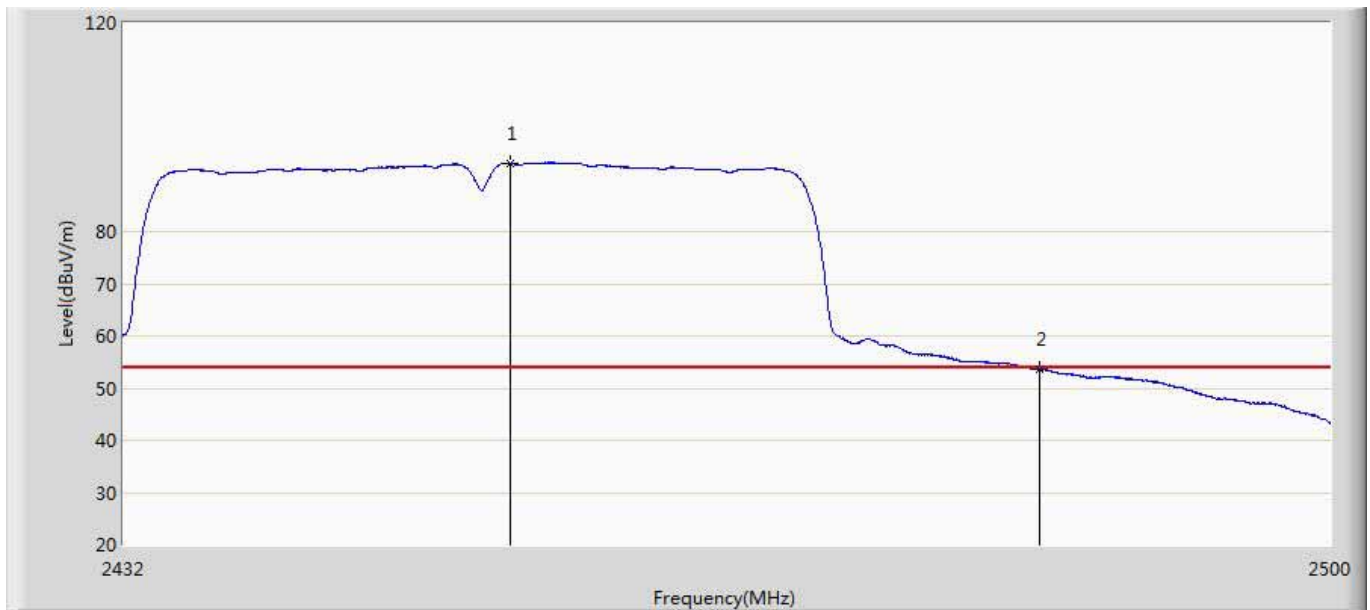
No	Mark	Frequency (MHz)	Measure Level (dBuV/m)	Reading Level (dBuV)	Over Limit (dB)	Limit (dBuV/m)	Factor (dB)	Type
1		2390.000	41.139	4.809	-12.861	54.000	36.329	AV
2	*	2439.485	86.974	50.582	32.974	54.000	36.392	AV
3		2483.500	44.536	8.069	-9.464	54.000	36.467	AV

Site: AC5	Time: 2017/03/05 - 00:20
Limit: FCC_Part15.209_RE(3m)	Margin: 0
Probe: Horn_3117_00167055(1-18GHz)	Polarity: Horizontal
EUT: Kasa Cam	Power: AC 120V/60Hz
Note: Mode4:Transmit at 2452 by 11n40	



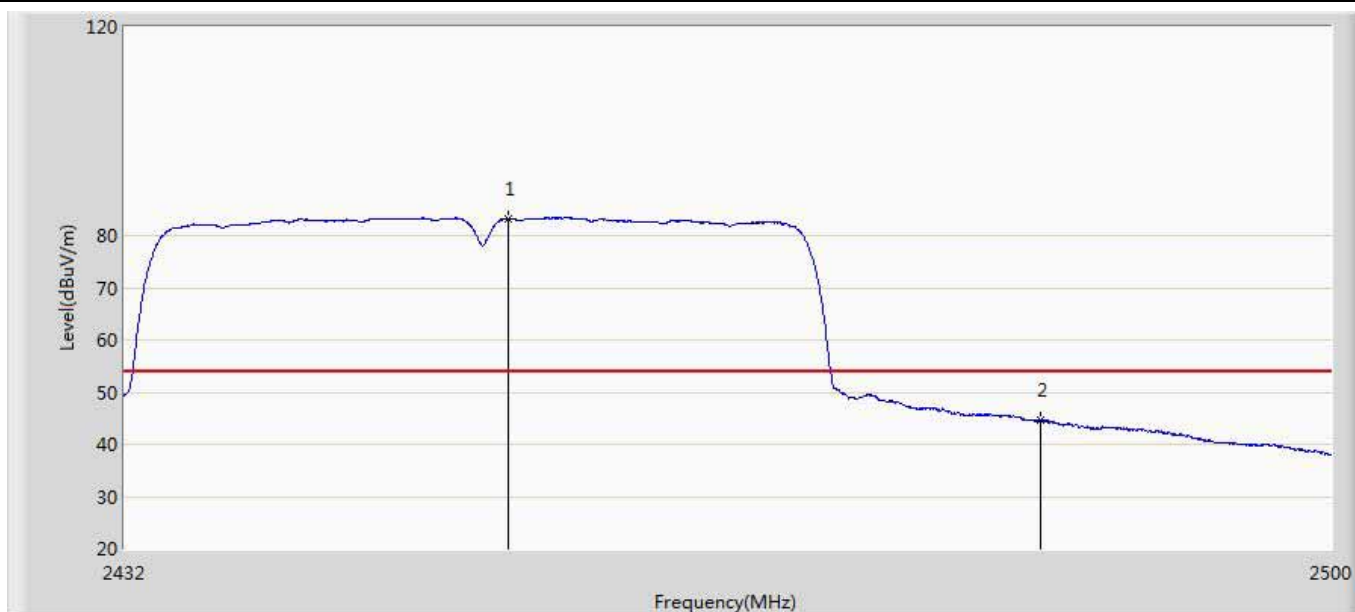
No	Mark	Frequency (MHz)	Measure Level (dBuV/m)	Reading Level (dBuV)	Over Limit (dB)	Limit (dBuV/m)	Factor (dB)	Type
1	*	2454.882	104.015	67.527	30.015	74.000	36.489	PK
2		2483.500	66.258	29.791	-7.742	74.000	36.467	PK

Site: AC5	Time: 2017/03/05 - 00:22
Limit: FCC_Part15.209_RE(3m)	Margin: 0
Probe: Horn_3117_00167055(1-18GHz)	Polarity: Horizontal
EUT: Kasa Cam	Power: AC 120V/60Hz
Note: Mode4:Transmit at 2452 by 11n40	



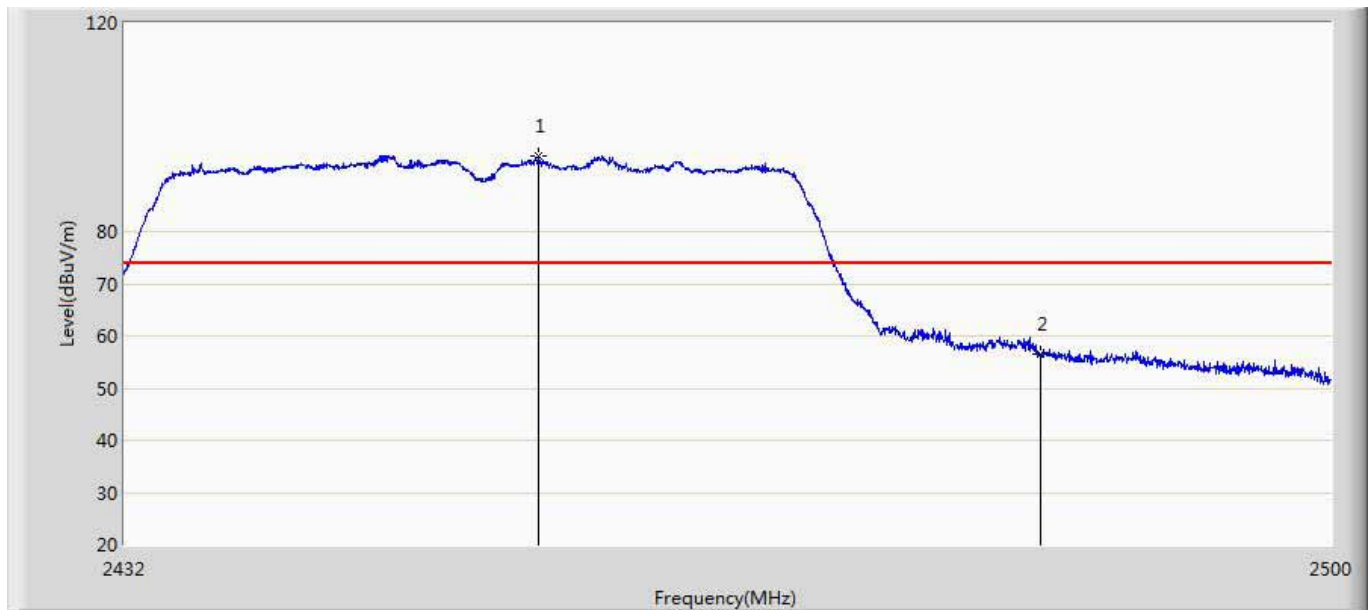
No	Mark	Frequency (MHz)	Measure Level (dBuV/m)	Reading Level (dBuV)	Over Limit (dB)	Limit (dBuV/m)	Factor (dB)	Type
1	*	2453.590	93.064	56.601	39.064	54.000	36.463	AV
2		2483.500	53.540	17.073	-0.460	54.000	36.467	AV

Site: AC5	Time: 2017/03/05 - 00:24
Limit: FCC_Part15.209_RE(3m)	Margin: 0
Probe: Horn_3117_00167055(1-18GHz)	Polarity: Vertical
EUT: Kasa Cam	Power: AC 120V/60Hz
Note: Mode4:Transmit at 2452 by 11n40	



No	Mark	Frequency (MHz)	Measure Level (dBuV/m)	Reading Level (dBuV)	Over Limit (dB)	Limit (dBuV/m)	Factor (dB)	Type
1	*	2453.454	83.229	46.769	29.229	54.000	36.460	AV
2		2483.500	44.667	8.200	-9.333	54.000	36.467	AV

Site: AC5	Time: 2017/03/05 - 00:47
Limit: FCC_Part15.209_RE(3m)	Margin: 0
Probe: Horn_3117_00167055(1-18GHz)	Polarity: Vertical
EUT: Kasa Cam	Power: AC 120V/60Hz
Note: Mode4:Transmit at 2452 by 11n40	



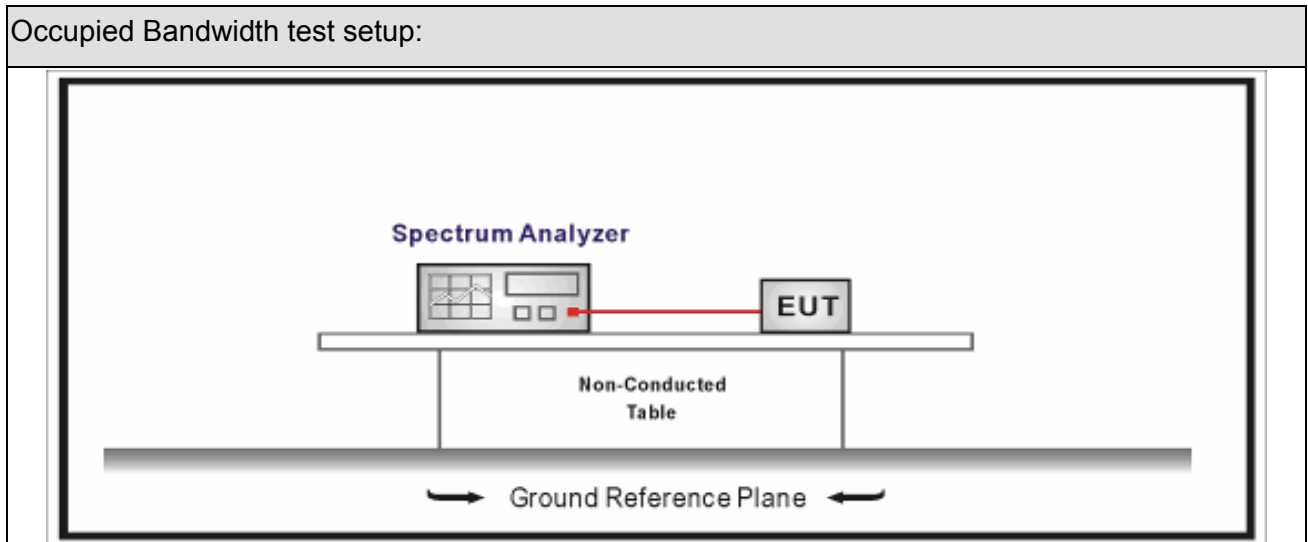
No	Mark	Frequency (MHz)	Measure Level (dBuV/m)	Reading Level (dBuV)	Over Limit (dB)	Limit (dBuV/m)	Factor (dB)	Type
1	*	2455.120	94.385	57.892	20.385	74.000	36.493	PK
2		2483.500	56.525	20.058	-17.475	74.000	36.467	PK

7. Occupied Bandwidth

7.1. Test Equipment

Occupied Bandwidth / TR-8					
Instrument	Manufacturer	Type No.	Serial No.	Cal. Date	Cal. Due Date
Spectrum Analyzer	Agilent	N9010A	MY48030494	2017.02.04	2018.02.03
EXA Spectrum Analyzer	Keysight	N9010A	MY55370495	2017.04.09	2018.04.08
MXA Signal Analyzer	Keysight	N9020A	MY56060147	2017.04.09	2018.04.08
Temperature/Humidity Meter	zhichen	ZC1-2	TR8-TH	2017.04.10	2018.04.09
Note: All equipments are calibrated with traceable calibrations. Each calibration is traceable to the national or international standards.					

7.2. Test Setup



7.3. Limit

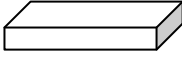
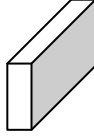
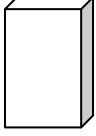
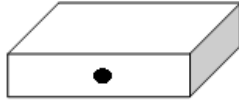
Occupied Bandwidth

Systems using digital modulation techniques operate in the 2400-2483.5 MHz. The minimum 6 dB bandwidth shall be at least 500 kHz

7.4. Test Procedure

Test Method				
	Reference Rule		Chapter	Description
☒	ANSI C63.10		11.8	DTS bandwidth
	☐	ANSI C63.10	11.8.1	Option 1
	☒	ANSI C63.10	11.8.2	Option 2

7.5. EUT test definition

Item	Occupied Bandwidth			
Device Category	☒	Fixed position use		
	☐	Mobile position use		
Test mode	Mode 1~4			
Test method	☐	Radiated		
		X Axis	Y Axis	Z Axis
				
		Worst Axis ☐	Worst Axis ☐	Worst Axis ☐
	☒	Conducted		
	☒	Chain 1		
				
	☐	Chain 1	Chain 2	
				
	☐	Chain 1	Chain 2	Chain 3
				

7.6. Test Result

Product Name	: Kasa Cam	Power	: AC 120V/60Hz
Test Mode	: Mode1~4	Test Site	: TR8
Test Date	: 2017.03.31		

Mode	CH.	Test Freq. (MHz)	99% Occupied Bandwidth (MHz)	6dB Occupied Bandwidth (MHz)	Limit (kHz)	Result
			Ant0	Ant0		
1	01	2412	12.841	10.14	>500	Pass
1	06	2437	12.861	10.13	>500	Pass
1	11	2462	13.026	10.15	>500	Pass
2	01	2412	16.855	16.40	>500	Pass
2	06	2437	22.099	16.45	>500	Pass
2	11	2462	16.800	16.42	>500	Pass
3	01	2412	17.673	17.54	>500	Pass
3	06	2437	23.211	17.62	>500	Pass
3	11	2462	17.633	17.55	>500	Pass
4	03	2422	36.039	36.35	>500	Pass
4	06	2437	36.120	36.30	>500	Pass
4	09	2452	36.062	36.28	>500	Pass

Note : The worst case of Occupied Bandwidth as below:

Mode 1 CH06 (2437MHz) Ant0



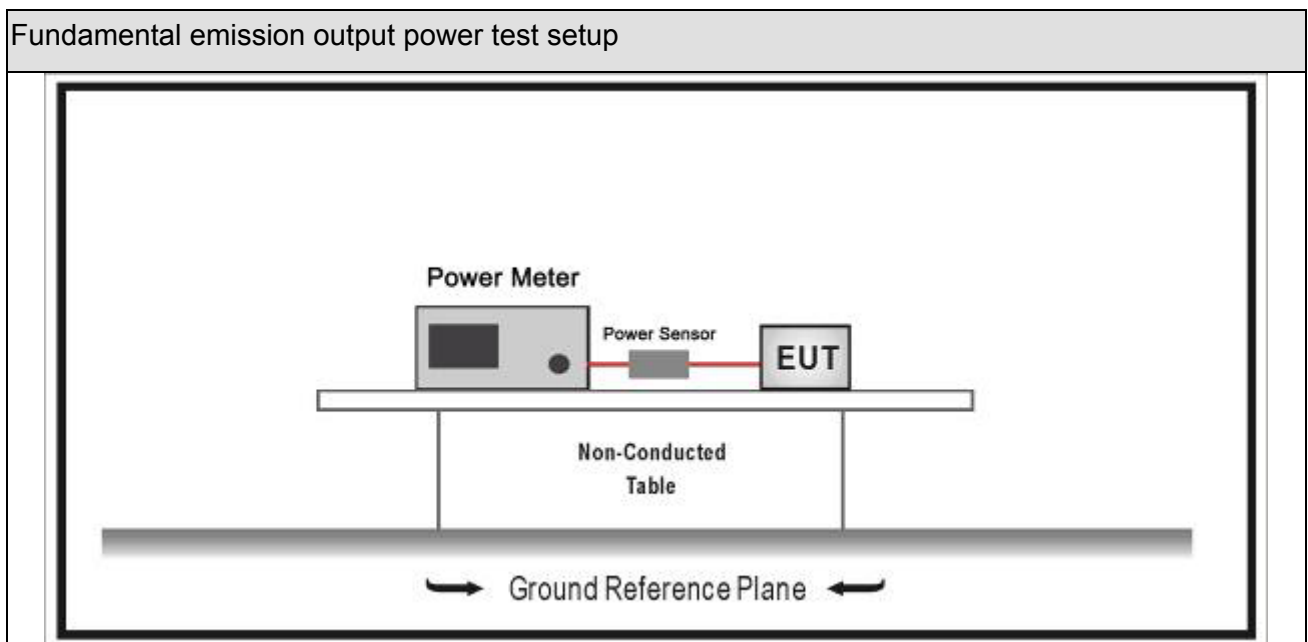
8. Fundamental emission output power

8.1. Test Equipment

Fundamental emission output power/ TR-8					
Instrument	Manufacturer	Type No.	Serial No.	Cal. Date	Cal. Due Date
Spectrum Analyzer	Agilent	E4446A	MY45300103	2017.01.03	2018.01.02
Spectrum Analyzer	Agilent	N9010A	MY48030494	2017.02.04	2018.02.03
Wideband Peak Power Meter	Anritsu	ML2495A	0905006	2016.10.14	2017.10.13
Power Sensor	Anritsu	MA2411B	0846014	2016.10.14	2017.10.13
Temperature/Humidity Meter	zhicheng	ZC1-2	TR8-TH	2017.04.10	2018.04.09

Note: All equipments are calibrated with traceable calibrations. Each calibration is traceable to the national or international standards.

8.2. Test Setup



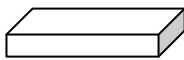
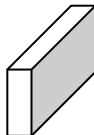
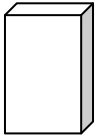
8.3. Limit

Fundamental emission output power Limit		
☒	$G_{TX} < 6\text{dBi}$	$P_{out} \leq 30\text{dBm}$
☐	$G_{TX} > 6\text{dBi}$	
☒	Non-Fix point-point	$P_{out} \leq 30 - (G_{TX} - 6)$
☐	Fix point-point	$P_{out} \leq 30 - [(G_{TX} - 6)]/3$
☐	emits multiple directional beams but does not do emit multiple directional beams simultaneously	$P_{out} \leq 30 - [(G_{TX} - 6)]/3$
☐	operates simultaneously on multiple directional beams using the same or different frequency channels	$P_{out} \leq 30 - [(G_{TX} - 6)]/3 + 8\text{dB}$
☐	single directional beam	$P_{out} \leq 30 - [(G_{TX} - 6)]/3$
Note 1 : G_{TX} directional gain of transmitting antennas.		
Note 2 : P_{out} is maximum peak conducted output power .		

8.4. Test Procedure

Fundamental emission output power Test Method						
	References Rule			Chapter	Description	
☒	ANSI C63.10			11.9	Fundamental emission output power	
	☐	ANSI C63.10		11.9.1	Maximum peak conducted output power	
		☐	ANSI C63.10	11.9.1.1	RBW ≥ DTS bandwidth	
		☐	ANSI C63.10	11.9.1.2	Integrated band power method	
		☐	ANSI C63.10	11.9.1.3	PKPM1 Peak power meter method	
	☒	ANSI C63.10		11.9.2	Maximum conducted (average) output power	
		☐	ANSI C63.10		11.9.2.2	Measurement using a spectrum analyzer (SA)
			☐	ANSI C63.10	11.9.2.2.2	Method AVGSA-1(Duty cycle≥98%)
			☐	ANSI C63.10	11.9.2.2.3	Method AVGSA-1A(Duty cycle≥98%)
			☐	ANSI C63.10	11.9.2.2.4	Method AVGSA-2(Duty cycle≤98%)
			☐	ANSI C63.10	11.9.2.2.5	Method AVGSA-2A(Duty cycle≤98%)
			☐	ANSI C63.10	11.9.2.2.4	Method AVGSA-3
			☐	ANSI C63.10	11.9.2.2.5	Method AVGSA-3A
		☒	ANSI C63.10		11.9.2.3	Measurement using a power meter (PM)
			☐	ANSI C63.10	11.9.2.3.1	Method AVGPM
			☒	ANSI C63.10	11.9.2.3.2	Method AVGPM-G

8.5. EUT test definition

Item	Fundamental emission output power			
Device Category	☒	Fixed position use		
	☐	Mobile position use		
Test mode	Mode 1~4			
Test method	☐	Radiated		
		X Axis	Y Axis	Z Axis
				
		Worst Axis ☐	Worst Axis ☐	Worst Axis ☐
	☒	Conducted		
	☐	Chain 1		
				
	☐	Chain 1	Chain 2	
				
	☐	Chain 1	Chain 2	Chain 3
				

8.6. Test Result

Product Name	:	Kasa Cam	Power	:	AC 120V/60Hz
Test Mode	:	Mode1~4	Test Site	:	TR8
Test Date	:	2017.03.31			

Mode	Channel	Test Frequency (MHz)	Average Power Output (dBm)	Antenna Gain (dBi)	Limit (dBm)	Result
1	01	2412	21.26	4.42	30	Pass
1	02	2417	21.15	4.42	30	Pass
1	06	2437	21.07	4.42	30	Pass
1	10	2457	21.21	4.42	30	Pass
1	11	2462	21.63	4.42	30	Pass
2	01	2412	16.95	4.42	30	Pass
2	02	2417	20.01	4.42	30	Pass
2	06	2437	22.35	4.42	30	Pass
2	10	2457	20.02	4.42	30	Pass
2	11	2462	16.27	4.42	30	Pass
3	01	2412	16.33	4.42	30	Pass
3	02	2417	19.97	4.42	30	Pass
3	06	2437	22.28	4.42	30	Pass
3	10	2457	19.89	4.42	30	Pass
3	11	2462	15.13	4.42	30	Pass

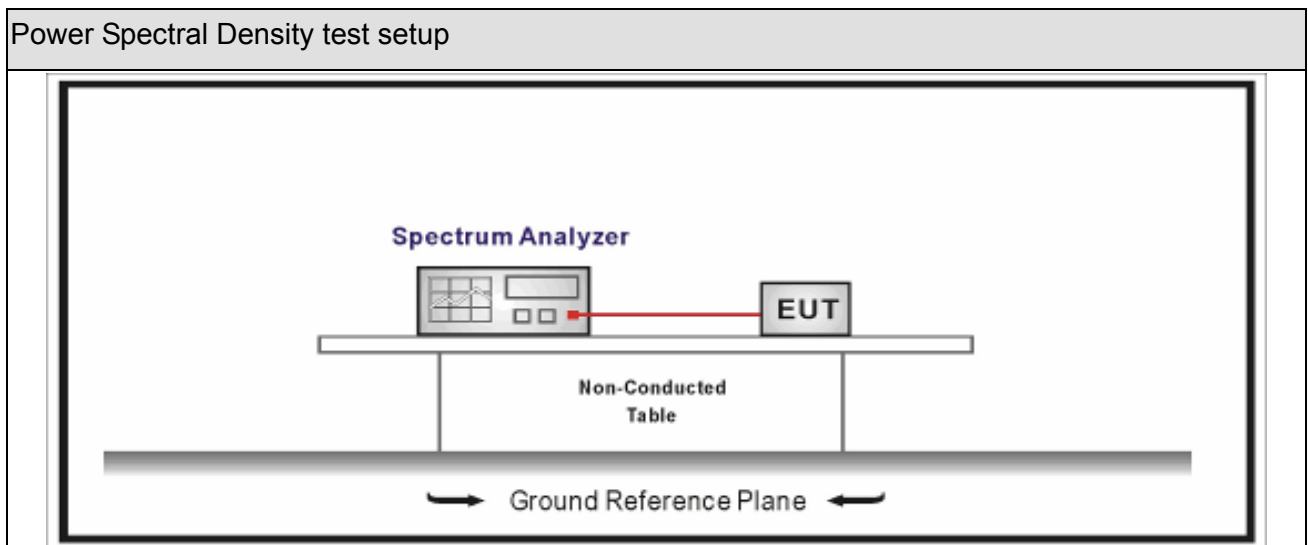
4	03	2422	12.76	4.42	30	Pass
4	04	2427	13.37	4.42	30	Pass
4	06	2437	16.06	4.42	30	Pass
4	08	2447	13.23	4.42	30	Pass
4	09	2452	12.41	4.42	30	Pass

9. Power Spectral Density

9.1. Test Equipment

Power Spectral Density / TR-8					
Instrument	Manufacturer	Type No.	Serial No.	Cal. Date	Cal. Due Date
Spectrum Analyzer	Agilent	N9010A	MY48030494	2017.02.04	2018.02.03
EXA Spectrum Analyzer	Keysight	N9010A	MY55370495	2017.04.09	2018.04.08
MXA Signal Analyzer	Keysight	N9020A	MY56060147	2017.04.09	2018.04.08
Temperature/Humidity Meter	zhichen	ZC1-2	TR8-TH	2017.04.10	2018.04.09
Note: All equipments are calibrated with traceable calibrations. Each calibration is traceable to the national or international standards.					

9.2. Test Setup



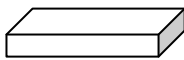
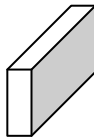
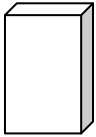
9.3. Limit

Power Spectral Density Limit
Power Spectral Density $\leq 8\text{dBm}/3\text{kHz}$

9.4. Test Procedure

Power Spectral Density Test Method				
	References Rule		Chapter	Description
☒	ANSI C63.10		11.10	Maximum power spectral density level in the fundamental emission
	☒	ANSI C63.10	11.10.2	Method PKPSD (peak PSD)
	☐	ANSI C63.10	11.10.3	Method AVGPSD-1(Duty cycle≥98%)
	☐	ANSI C63.10	11.10.4	Method AVGPSD-1A(Duty cycle≥98%)
	☐	ANSI C63.10	11.10.5	Method AVGPSD-2(Duty cycle<98%)
	☐	ANSI C63.10	11.10.6	Method AVGPSD-2A(Duty cycle<98%)
	☐	ANSI C63.10	11.10.7	Method AVGPSD-3
	☐	ANSI C63.10	11.10.8	Method AVGPSD-3A

9.5. EUT test definition

Item	Power Spectral Density Test Method			
Device Category	☒	Fixed position use		
	☐	Mobile position use		
Test mode	Mode 1~4			
Test method	☐	Radiated		
		X Axis	Y Axis	Z Axis
				
		Worst Axis ☐	Worst Axis ☐	Worst Axis ☐
	☒	Conducted		
	☒	Chain 1		
				
	☐	Chain 1	Chain 2	
				
	☐	Chain 1	Chain 2	Chain 3
				

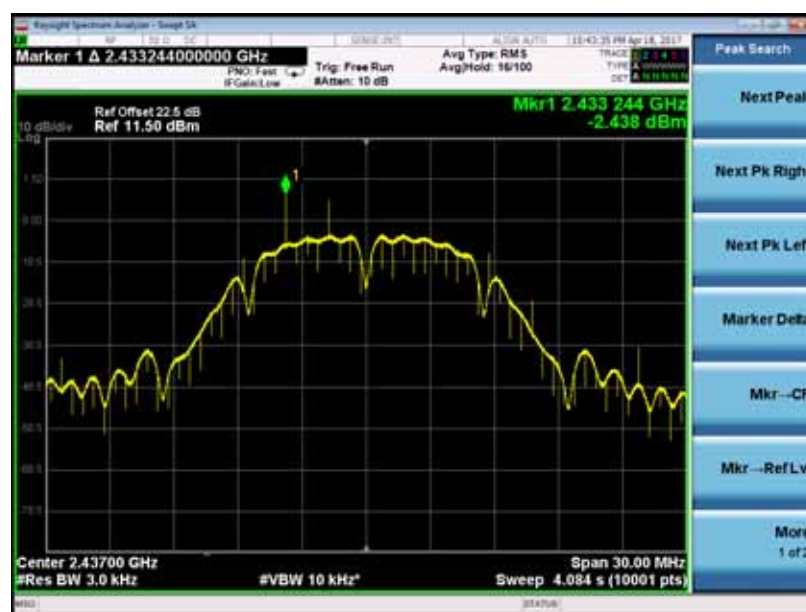
9.6. Test Result

Product Name	: Kasa Cam	Power	: AC 120V/60Hz
Test Mode	: Mode1~4	Test Site	: TR8
Test Date	: 2017.03.31		

Mode	Channel	Test Frequency (MHz)	Measurement PSD (dBm/3kHz)	Total PSD (dBm/3kHz)	Limit (dBm/3kHz)	Result
			Ant0			
1	01	2412	-5.104	-5.104	8.0	Pass
1	06	2437	-2.438	-2.438	8.0	Pass
1	11	2462	-7.831	-7.831	8.0	Pass
2	01	2412	-16.408	-16.408	8.0	Pass
2	06	2437	-10.990	-10.990	8.0	Pass
2	11	2462	-17.492	-17.492	8.0	Pass
3	01	2412	-17.163	-17.163	8.0	Pass
3	06	2437	-11.112	-11.112	8.0	Pass
3	11	2462	-18.274	-18.274	8.0	Pass
4	03	2422	-14.833	-14.833	8.0	Pass
4	06	2437	-18.695	-18.695	8.0	Pass
4	09	2452	-25.040	-25.040	8.0	Pass

Note : The worst case of Occupied Bandwidth as below:

Mode 1 CH06 (2437MHz) Ant0



10. Antenna Requirement

10.1. Limit

Antenna Requirement Limit

An intentional radiator shall be designed to ensure that no antenna other than that furnished by the responsible party shall 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 manufacturer may design the unit so that a broken antenna can be replaced by the user, but the use of a standard antenna jack or electrical connector is prohibited. This requirement does not apply to carrier current devices or to devices operated under the provisions of §15.211, §15.213, §15.217, §15.219, or §15.221. Further, this requirement does not apply to intentional radiators that must be professionally installed, such as perimeter protection systems and some field disturbance sensors, or to other intentional radiators which, in accordance with §15.31(d), must be measured at the installation site. However, the installer shall be responsible for ensuring that the proper antenna is employed so that the limits in this part are not exceeded.

10.2. Antenna Connector Construction

The EUT use permanently attached antennas and comply with FCC 15.203.

_____ The End _____