



Test Report

FCC Part15 Subpart C

Product Name : IP surveillance camera (Wi-Fi & mobile)
Model No. : EN-CNUC-001b
FCC ID : 2AQEO-1001

Applicant : Eagle Eye Networks B.V.

Address : Hogehilweg 19, 1101 CB Amsterdam, The Netherlands

Date of Receipt : Feb. 03, 2018

Test Date : Feb. 03, 2018~ Jun. 06, 2018

Issued Date : Jul. 04, 2018

Report No. : 1822021R-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 : Jul. 04, 2018
Report No. : 1822021R-RF-US-P06V02



Product Name : IP surveillance camera (Wi-Fi & mobile)
 Applicant : Eagle Eye Networks B.V.
 Address : Hogehilweg 19, 1101 CB Amsterdam, The Netherlands
 Manufacturer : Eagle Eye Networks B.V.
 Address : Hogehilweg 19, 1101 CB Amsterdam, The Netherlands
 Model No. : EN-CNUC-001b
 FCC ID : 2AQEO-1001
 EUT Voltage : 100-240Vac 0.3A max 50/60Hz
 Test Voltage : AC 120V/60Hz
 Brand Name : Eagle Eye NuboCam
 Applicable Standard : FCC CFR Title 47 Part 15 Subpart C: 2017
 ANSI C63.4:2014; ANSI C63.10:2013;
 KDB 558074 D01v03r05
 Test Result : Complied
 Performed Location : DEKRA Testing & Certification (Suzhou) Co., Ltd.
 No.99 Hongye Rd., Suzhou Industrial Park, Suzhou, 215006,
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 FCC Designation Number: CN1155

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History of This Test Report

REPORT NO.	VERSION	DESCRIPTION	ISSUED DATE
1822021R-RF-US-P06V02	V1.0	Initial Issued Report	Jul. 04, 2018

1. General Information

1.1. EUT Description

Product Name	IP surveillance camera (Wi-Fi & mobile)
Brand Name	Eagle Eye NuboCam
Model No.	EN-CNUC-001b
EUT Voltage	100-240Vac 0.3A max 50/60Hz
Frequency Range	2400 ~ 2483.5 MHz
Channel Number	16
Type of Modulation	O-QPSK
Data Rate	250kbps
Antenna Type	Reference to Antenna List
Peak Antenna Gain	Reference to Antenna List

1.2. Working Frequency of Each Channel:

Zigbee Working Frequency of Each Channel:							
Channel	Frequency	Channel	Frequency	Channel	Frequency	Channel	Frequency
11	2405 MHz	12	2410 MHz	13	2415 MHz	14	2420 MHz
15	2425 MHz	16	2430 MHz	17	2435 MHz	18	2440 MHz
19	2445 MHz	20	2450 MHz	21	2455 MHz	22	2460 MHz
23	2465 MHz	24	2470 MHz	25	2475 MHz	26	2480 MHz

1.3. Antenna information

Antenna Delivery	<input checked="" type="checkbox"/>	1*TX+1*RX	<input type="checkbox"/>	2*TX+2*RX	<input type="checkbox"/>	3*TX+3*RX
Antenna technology	<input checked="" type="checkbox"/>	SISO				
	<input type="checkbox"/>	MIMO	<input type="checkbox"/>	Basic		
			<input type="checkbox"/>	Sectorized antenna systems		
			<input type="checkbox"/>	Cross-polarized antennas		
			<input type="checkbox"/>	Unequal antenna gains, with equal transmit powers		
			<input type="checkbox"/>	Spatial Multiplexing		
			<input type="checkbox"/>	CDD		
<input type="checkbox"/>	Beam-forming					
Antenna Type	<input type="checkbox"/>	External	<input type="checkbox"/>	Dipole		
	<input checked="" type="checkbox"/>	Internal	<input type="checkbox"/>	PIFA		
			<input type="checkbox"/>	PCB		
			<input checked="" type="checkbox"/>	Ceramic Chip Antenna		
			<input type="checkbox"/>	Metal plate type F antenna		
			<input type="checkbox"/>	Cross-polarize Antenna		
Antenna Gain	-1.3dBi					

1.4. Mode of Operation

Test Modes List
Mode 1: Transmit by Zigbee

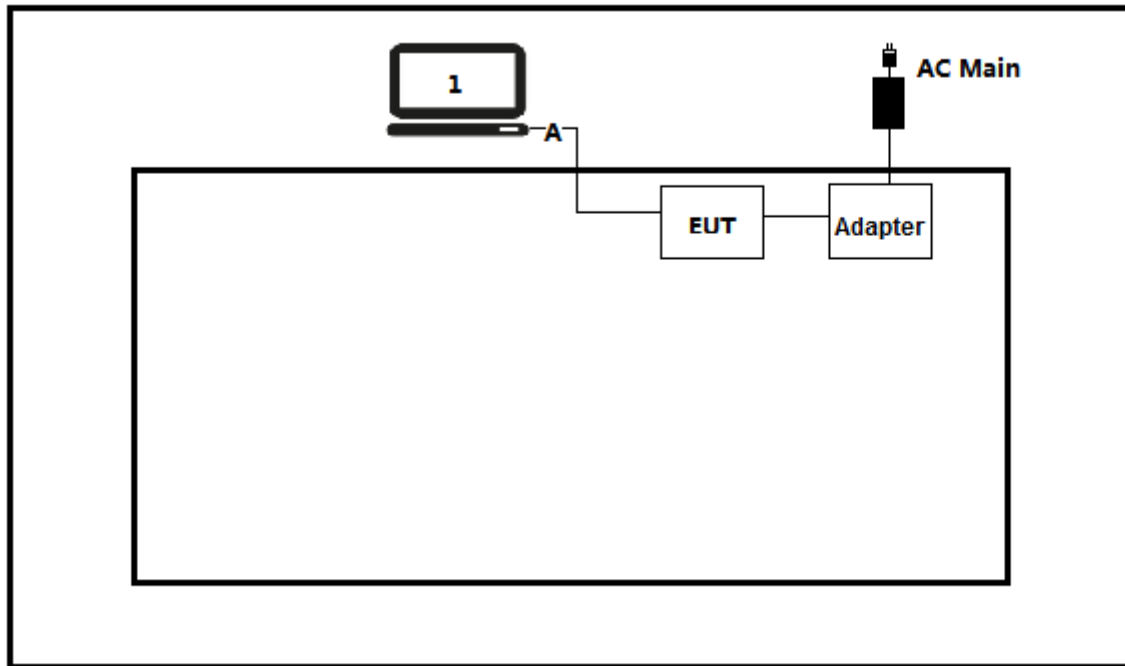
1.5. Tested System Details

The types for all equipment, 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	Think Pad	2526	LV-A3285	Power by adapter

1.6. Configuration of Tested System

Test setup Diagram- Radiated Emission



1.7. EUT Exercise Software

1	Setup the EUT and simulators as shown on above.
2	Turn on the power of all equipment.
3	Run the software, and set the test mode and channel, then press OK to start continue receive.

2. Technical Test

2.1. Summary of Test Result

Performed Test Item	Normative References	Limit	Result
AC Power Line Conducted Emission	FCC CFR Title 47 Part 15 Subpart C: 2015 Section 15.207	FCC 15.207	PASS
Emissions in restricted frequency bands	FCC CFR Title 47 Part 15 Subpart C: 2015 Section 15.209	FCC 15.209	PASS
Emissions in non-restricted frequency bands	FCC CFR Title 47 Part 15 Subpart C: 2015 Section 15.247(d)	$\geq 20\text{dBc}$	PASS
Radiated Emission Band Edge	FCC CFR Title 47 Part 15 Subpart C: 2015 15.247(d)	FCC 15.209	PASS
Occupied Bandwidth	FCC CFR Title 47 Part 15 Subpart C: 2015 Section 15.247(a)(2)	$\geq 500\text{kHz}$	PASS
Fundamental emission output power	FCC CFR Title 47 Part 15 Subpart C: 2015 Section 15.247(b)(3)	$\leq 30\text{dBm}$	PASS
Power Spectral Density	FCC CFR Title 47 Part 15 Subpart C: 2015 Section 15.247(e)	$\leq 8\text{dBm}/3\text{kHz}$	PASS
Antenna Requirement	FCC CFR Title 47 Part 15 Subpart C: 2015 Section 15.203	FCC 15.203	PASS

2.2. 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

2.3. 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	$\pm 1.27\text{dB}$

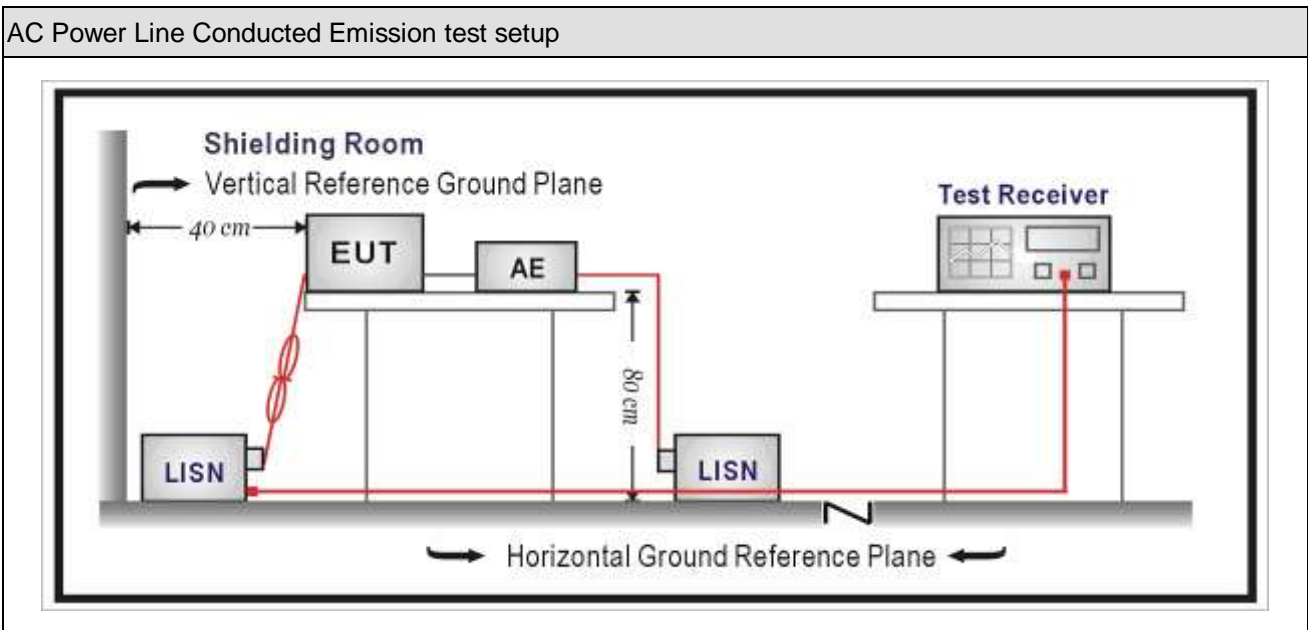
3. AC Power Line Conducted Emission

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	2018.03.05	2019.03.04
Two-Line V-Network	R&S	ENV 216	101189	2017.07.16	2018.07.15
Two-Line V-Network	R&S	ENV 216	101044	2017.09.16	2018.09.15
50ohm Coaxial Switch	Anritsu	MP59B	6200464462	N/A	N/A
50ohm Termination	SHX	TF2	07081402	2017.09.16	2018.09.15
Temperature/Humidity Meter	Zhichen	ZC1-2	TR1-TH	2018.01.04	2019.01.03

Note: All equipment 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

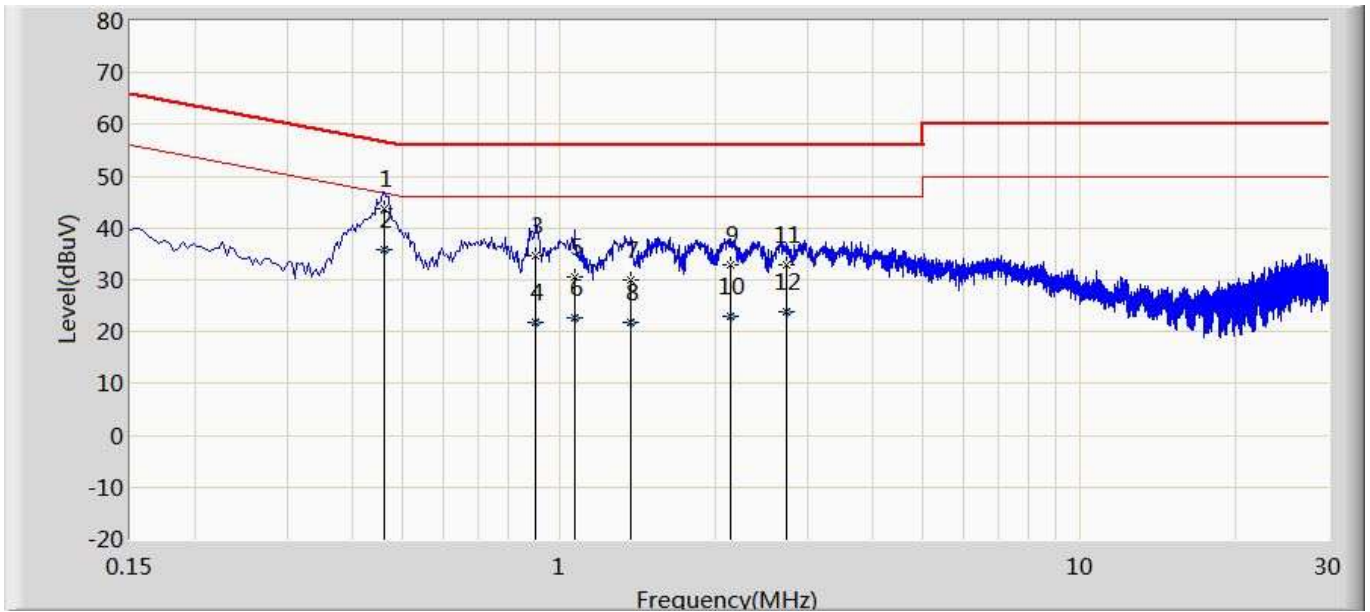
Note 1: The lower limit shall apply at the transition frequencies.
 Note 2: The limit decreases linearly with the logarithm of the frequency in the range 0.15 MHz to 0.5 MHz.

3.4. Test Procedure

Test Method			
	References Rule	Chapter	Item
<input checked="" type="checkbox"/>	ANSI C63.10-2013	6.2	Standard test method for ac power-line conducted emissions from unlicensed wireless devices
<input checked="" type="checkbox"/>	ANSI C63.4-2014	7	AC power-line conducted emission measurements

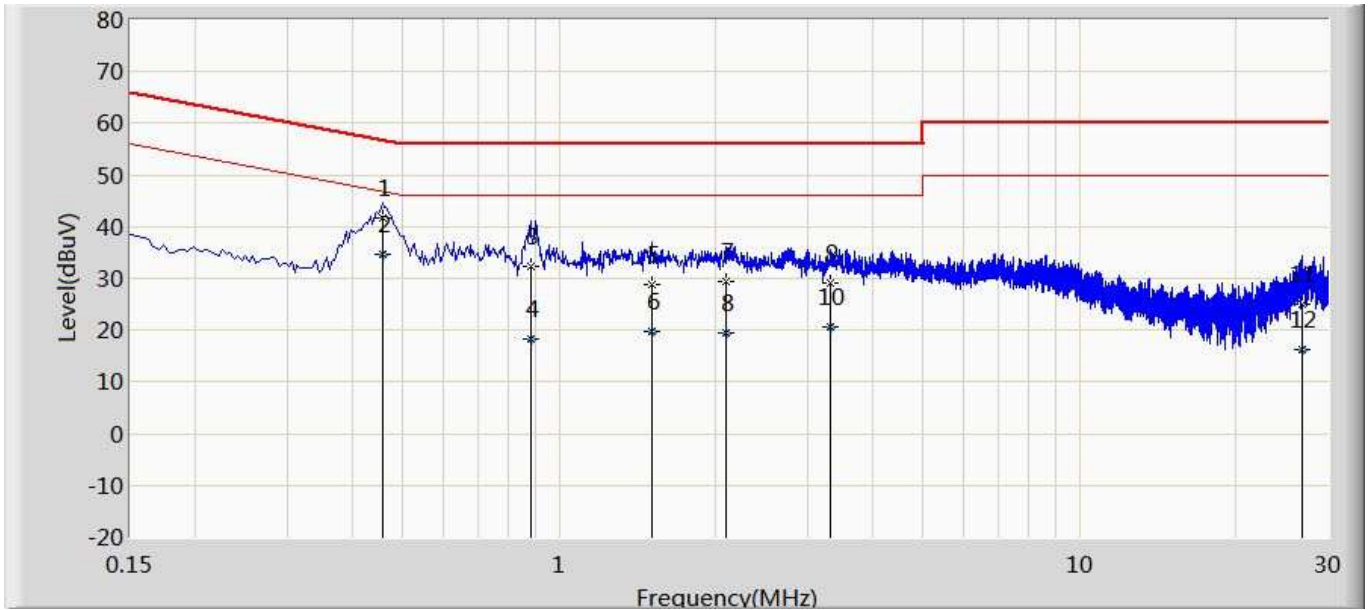
3.5. Test Result

Engineer: Simon	
Site: TR1	Time: 2018/02/09
Limit: FCC_Part15.207_CE_AC Power_ClassB	Margin: 0
Probe: ENV216_101190(0.009-30MHz)	Polarity: Line
EUT: IP surveillance camera (Wi-Fi & mobile)	Power: AC 120V/60Hz
Note: Mode 1:Transmit at channel 2402MHz by Zigbee	



No	Mark	Frequency (MHz)	Measure Level (dBuV)	Reading Level (dBuV)	Over Limit (dB)	Limit (dBuV)	Probe (dB)	Cable (dB)	Amp (dB)	Type
1		0.462	43.766	34.125	-12.891	56.657	9.600	0.041	0.000	QP
2	*	0.462	35.734	26.093	-10.923	46.657	9.600	0.041	0.000	AV
3		0.902	34.577	24.914	-21.423	56.000	9.607	0.056	0.000	QP
4		0.902	21.830	12.167	-24.170	46.000	9.607	0.056	0.000	AV
5		1.070	30.714	21.042	-25.286	56.000	9.610	0.062	0.000	QP
6		1.070	22.632	12.960	-23.368	46.000	9.610	0.062	0.000	AV
7		1.374	30.002	20.322	-25.998	56.000	9.610	0.070	0.000	QP
8		1.374	21.809	12.129	-24.191	46.000	9.610	0.070	0.000	AV
9		2.130	32.990	23.288	-23.010	56.000	9.612	0.090	0.000	QP
10		2.130	22.990	13.288	-23.010	46.000	9.612	0.090	0.000	AV
11		2.730	32.982	23.257	-23.018	56.000	9.622	0.103	0.000	QP
12		2.730	23.792	14.067	-22.208	46.000	9.622	0.103	0.000	AV

Engineer: Simon	
Site: TR1	Time: 2018/02/09
Limit: FCC_Part15.207_CE_AC Power_ClassB	Margin: 0
Probe: ENV216_101190(0.009-30MHz)	Polarity: Neutral
EUT: IP surveillance camera (Wi-Fi & mobile)	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		0.458	41.625	31.993	-15.103	56.729	9.591	0.041	0.000	QP
2	*	0.458	34.717	25.085	-12.012	46.729	9.591	0.041	0.000	AV
3		0.882	32.221	22.576	-23.779	56.000	9.590	0.055	0.000	QP
4		0.882	18.180	8.534	-27.820	46.000	9.590	0.055	0.000	AV
5		1.510	28.734	19.059	-27.266	56.000	9.600	0.075	0.000	QP
6		1.510	19.696	10.021	-26.304	46.000	9.600	0.075	0.000	AV
7		2.090	29.271	19.572	-26.729	56.000	9.611	0.089	0.000	QP
8		2.090	19.416	9.716	-26.584	46.000	9.611	0.089	0.000	AV
9		3.314	29.230	19.488	-26.770	56.000	9.627	0.115	0.000	QP
10		3.314	20.560	10.818	-25.440	46.000	9.627	0.115	0.000	AV
11		26.858	24.895	13.920	-35.105	60.000	10.638	0.337	0.000	QP
12		26.858	16.166	5.191	-33.834	50.000	10.638	0.337	0.000	AV

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	2018.03.29	2019.03.28
Loop Antenna	R&S	HFH2-Z2	833799/003	2017.11.16	2018.11.15
Bilog Antenna	Teseq GmbH	CBL6112D	27611	2017.10.16	2018.10.15
Coaxial Cable	Huber+Suhner	SUCOFLEX 106	AC2-C	2018.03.02	2019.03.01
Temperature/Humidity Meter	Zhichen	ZC1-2	AC2-TH	2018.01.03	2019.01.02

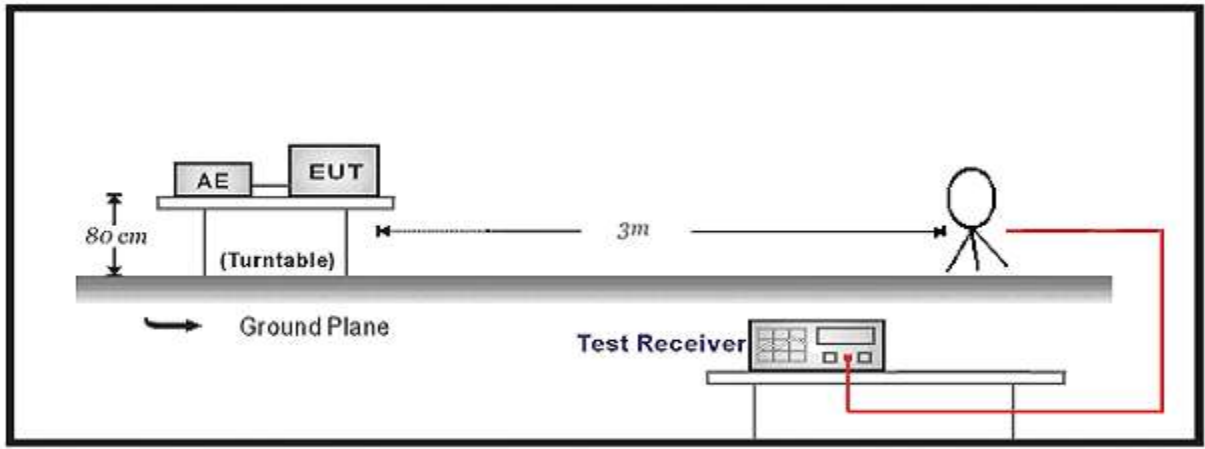
Note: All equipment are calibrated with traceable calibrations. Each calibration is traceable to the national or international standards.

Radiated Emission(Above 1GHz) / AC-5					
Instrument	Manufacturer	Type No.	Serial No.	Cal. Date	Cal. Due Date
Spectrum Analyzer	Agilent	E4446A	MY45300103	2018.01.04	2019.01.03
Preamplifier	Miteq	NSP1800-25	1364185	2018.05.06	2019.05.05
Preamplifier	QuieTek	AP-040G	CHM-0906001	2018.05.06	2019.05.05
DRG Horn	ETS-Lindgren	3117	00123988	2018.01.22	2019.01.21
Broad-Band Horn Antenna	Schwarzbeck	BBHA9170	294	2017.11.25	2018.11.24
Coaxial Cable	Huber+Suhner	SUCOFLEX 106	AC5-C1	2017.03.02	2019.03.01
Coaxial Cable	Huber+Suhner	SUCOFLEX 106	AC5-C2	2017.03.02	2019.03.01
Coaxial Cable	Huber+Suhner	SUCOFLEX 102	AC5-C3	2017.03.02	2019.03.01
EMI Receiver	Agilent	N9038A	MY51210196	2018.06.10	2019.06.09
Temperature/Humidity Meter	Zhichen	ZC1-2	AC5-TH	2018.01.04	2019.01.03

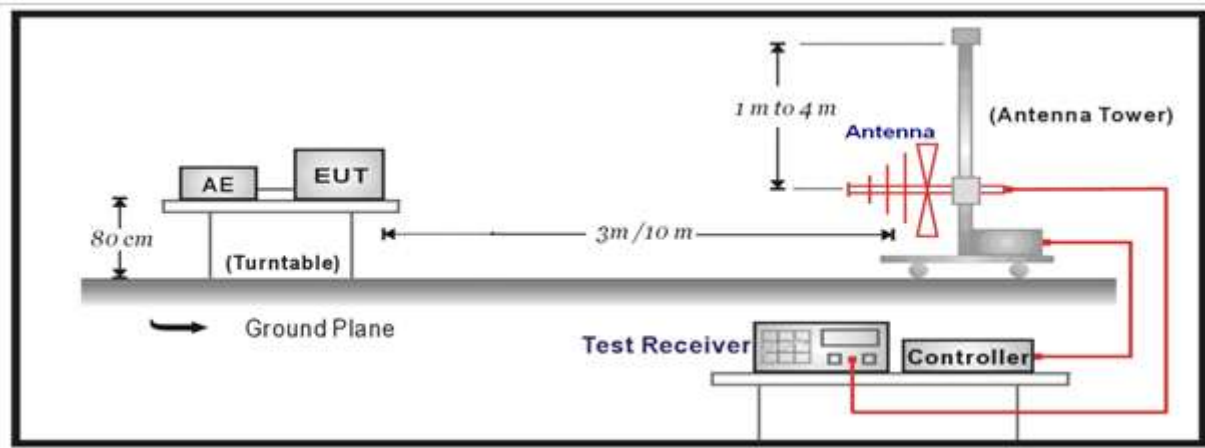
Note: All equipment are calibrated with traceable calibrations. Each calibration is traceable to the national or international standards.

4.2. Test Setup

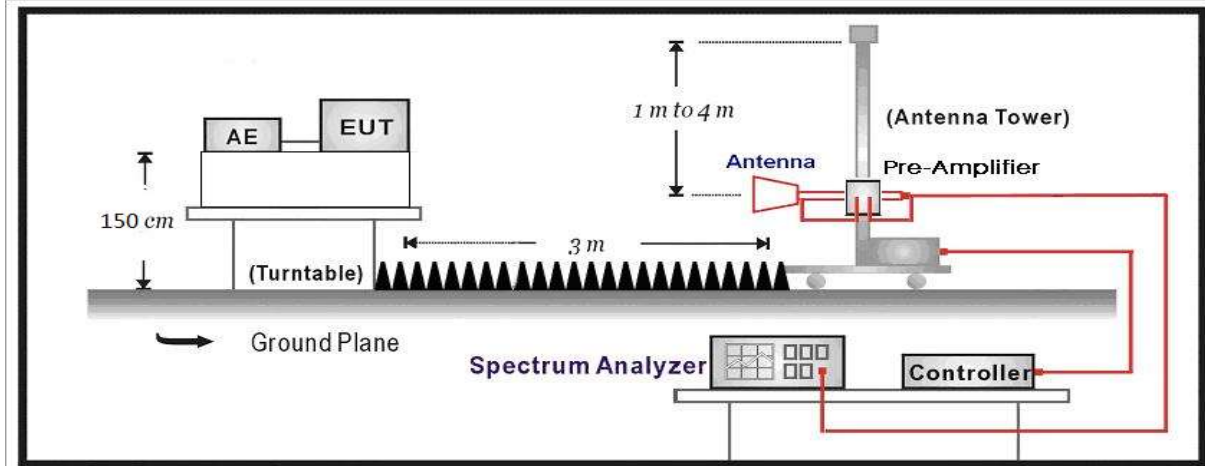
Below 30MHz Test Setup:



30MHz-1GHz Test Setup:



Above 1GHz Test Setup:



4.3. Limit

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)

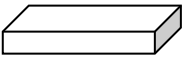
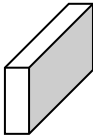
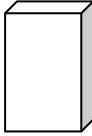

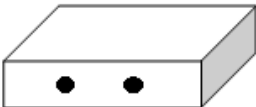

Note 1: At frequencies below 30 MHz, measurements may be performed at a distance closer than that specified in the regulations; however, an attempt should be made to avoid making measurements in the near field. Pending the development of an appropriate measurement procedure for measurements performed 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

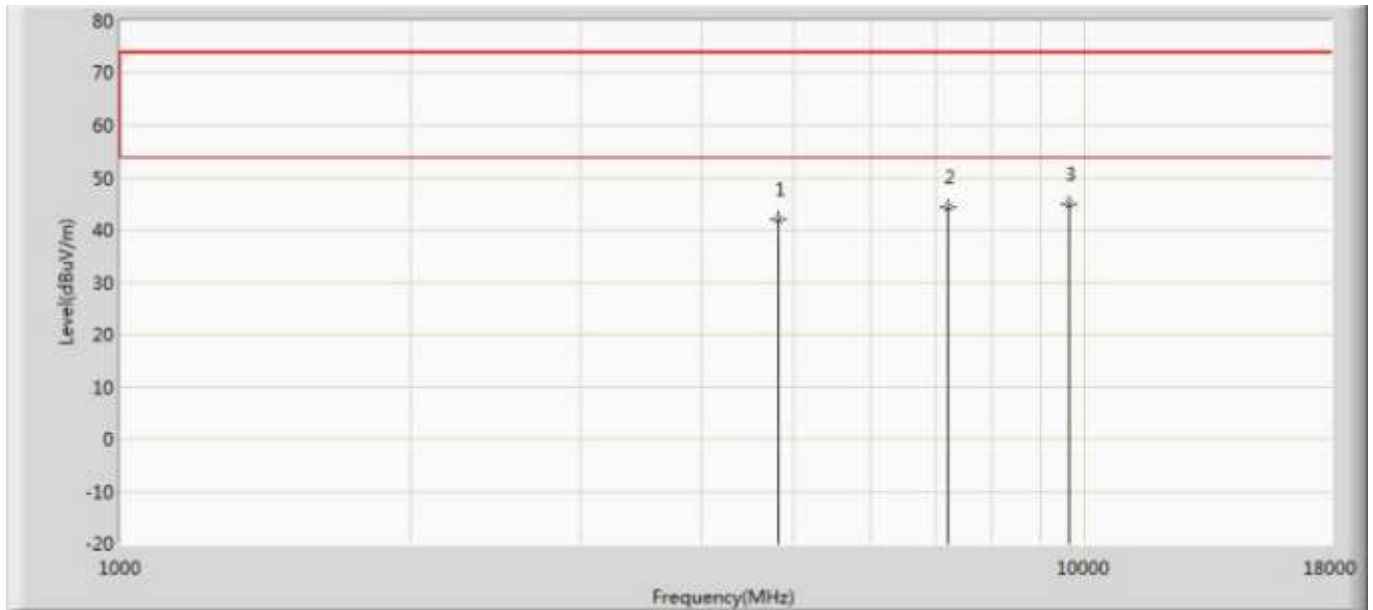
Test Method			
	References Rule	Chapter	Description
<input type="checkbox"/>	ANSI C63.10	11.11	Emissions in non-restricted frequency bands
	<input type="checkbox"/> ANSI C63.10	11.11.2	Reference level measurement
	<input type="checkbox"/> ANSI C63.10	11.11.3	Emission level measurement
<input checked="" type="checkbox"/>	ANSI C63.10	11.12	Emissions in restricted frequency bands
	<input checked="" type="checkbox"/> ANSI C63.10	11.12.1	Radiated emission measurements
	<input checked="" type="checkbox"/> ANSI C63.10	11.12.2.7	Radiated spurious emission test
	<input checked="" type="checkbox"/> ANSI C63.10	6.4	Radiated emissions from unlicensed wireless devices below 30 MHz
	<input checked="" type="checkbox"/> ANSI C63.10	6.5	Radiated emissions from unlicensed wireless devices in the frequency range of 30 MHz to 1000 MHz
	<input checked="" type="checkbox"/> ANSI C63.10	6.6	Radiated emissions from unlicensed wireless devices above 1 GHz
	<input type="checkbox"/> ANSI C63.10	11.12.2.3	Quasi-peak measurement procedure
	<input checked="" type="checkbox"/> ANSI C63.10	11.12.2.4	Peak power measurement procedure
	<input checked="" type="checkbox"/> ANSI C63.10	11.12.2.5	Average power measurement procedures
	<input type="checkbox"/> ANSI C63.10	11.12.2.5.1	Trace averaging with continuous EUT transmission at full power
	<input type="checkbox"/> ANSI C63.10	11.12.2.5.2	Trace averaging across ON and OFF times of the EUT transmissions followed by duty cycle correction
	<input checked="" type="checkbox"/> 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	<input type="checkbox"/>	Fixed point-to-point		
	<input type="checkbox"/>	Emit multiple directional beams, simultaneously or sequentially		
	<input checked="" type="checkbox"/>	Other cases		
Test mode	Mode 1			
Test method	<input checked="" type="checkbox"/>	Radiated		
		X Axis	Y Axis	Z Axis
				
		Worst Axis <input checked="" type="checkbox"/>	Worst Axis <input type="checkbox"/>	Worst Axis <input type="checkbox"/>
	<input type="checkbox"/>	Conducted		
	<input type="checkbox"/>	Chain 0		
				
	<input type="checkbox"/>	Chain 0	Chain 1	
				
	<input type="checkbox"/>	Chain 0	Chain 1	Chain 2
				

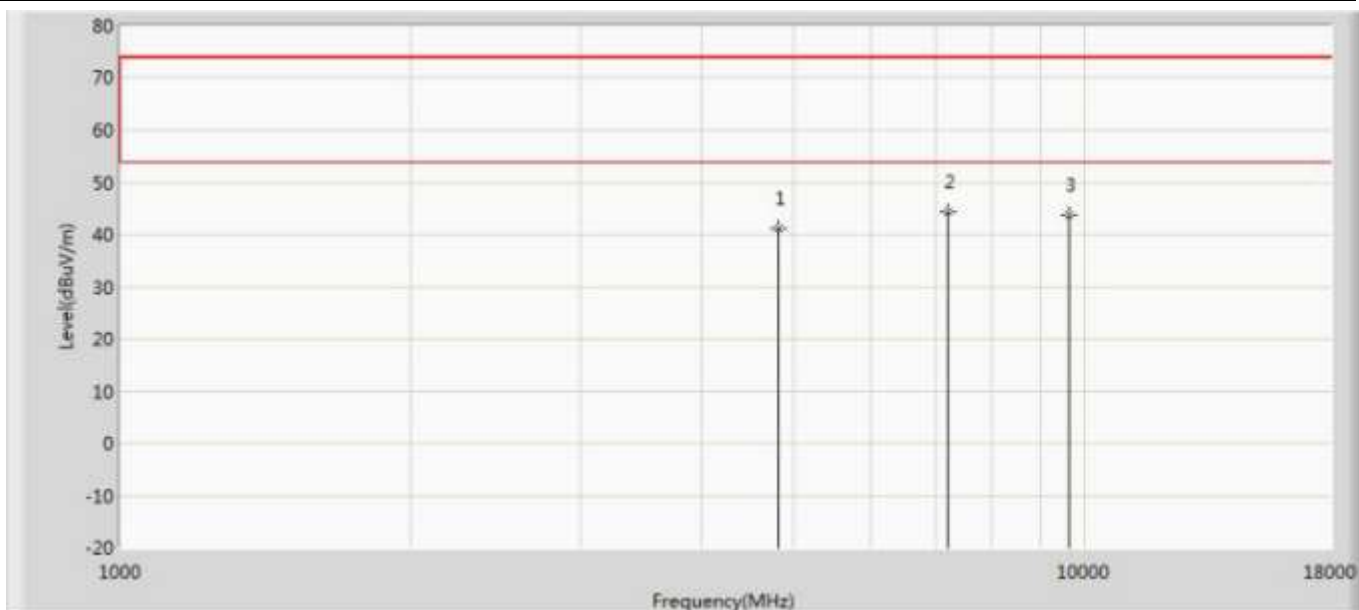
4.6. Test Result

Engineer: Tommie	
Site: AC5	Time: 2018/05/20 - 21:19
Limit: FCC_Part15.209_RE(3m)	Margin: 0
Probe: Horn_3117_00167055(1-18GHz)	Polarity: Horizontal
EUT: IP surveillance camera (Wi-Fi & mobile)	Power: AC 120V/60Hz
Note: Mode 1:Transmit at 2405MHz by Zigbee	



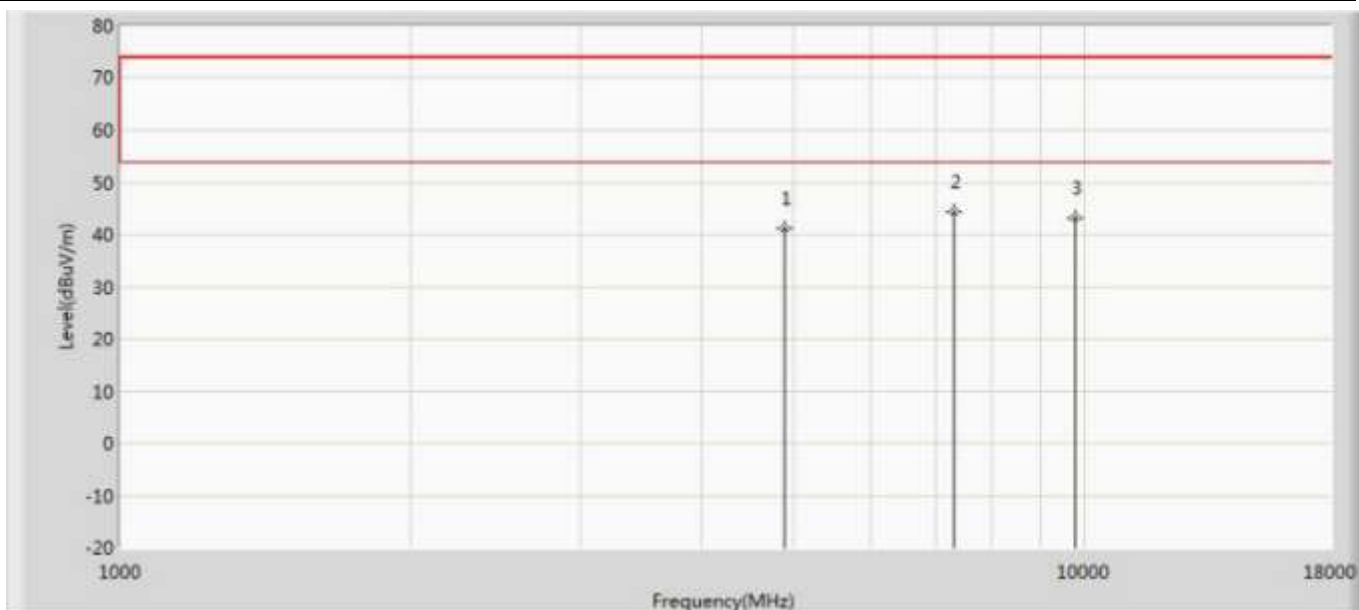
No	Mark	Frequency (MHz)	Measure Level (dBuV/m)	Reading Level (dBuV)	Over Limit (dB)	Limit (dBuV/m)	Factor (dB)	Type
1		4810.000	42.023	42.538	-31.977	74.000	-0.515	PK
2		7215.000	44.279	40.522	-29.721	74.000	3.757	PK
3	*	9620.000	44.945	38.556	-29.055	74.000	6.389	PK

Engineer: Tommie	
Site: AC5	Time: 2018/05/20 - 21:19
Limit: FCC_Part15.209_RE(3m)	Margin: 0
Probe: Horn_3117_00167055(1-18GHz)	Polarity: Vertical
EUT: IP surveillance camera (Wi-Fi & mobile)	Power: AC 120V/60Hz
Note: Mode 1:Transmit at 2405MHz by Zigbee	



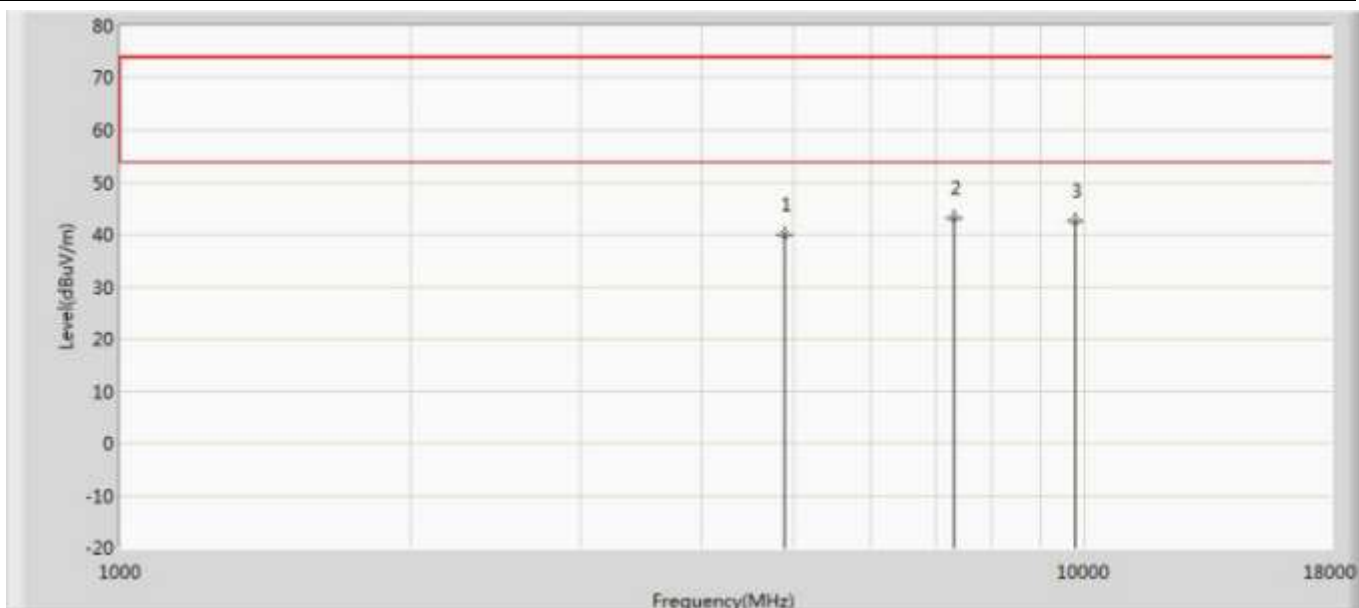
No	Mark	Frequency (MHz)	Measure Level (dBuV/m)	Reading Level (dBuV)	Over Limit (dB)	Limit (dBuV/m)	Factor (dB)	Type
1		4810.000	41.197	41.712	-32.803	74.000	-0.515	PK
2	*	7215.000	44.234	40.477	-29.766	74.000	3.757	PK
3		9620.000	43.711	37.322	-30.289	74.000	6.389	PK

Engineer: Tommie	
Site: AC5	Time: 2018/05/20 - 21:19
Limit: FCC_Part15.209_RE(3m)	Margin: 0
Probe: Horn_3117_00167055(1-18GHz)	Polarity: Horizontal
EUT: IP surveillance camera (Wi-Fi & mobile)	Power: AC 120V/60Hz
Note: Mode 1:Transmit at 2440MHz by Zigbee	



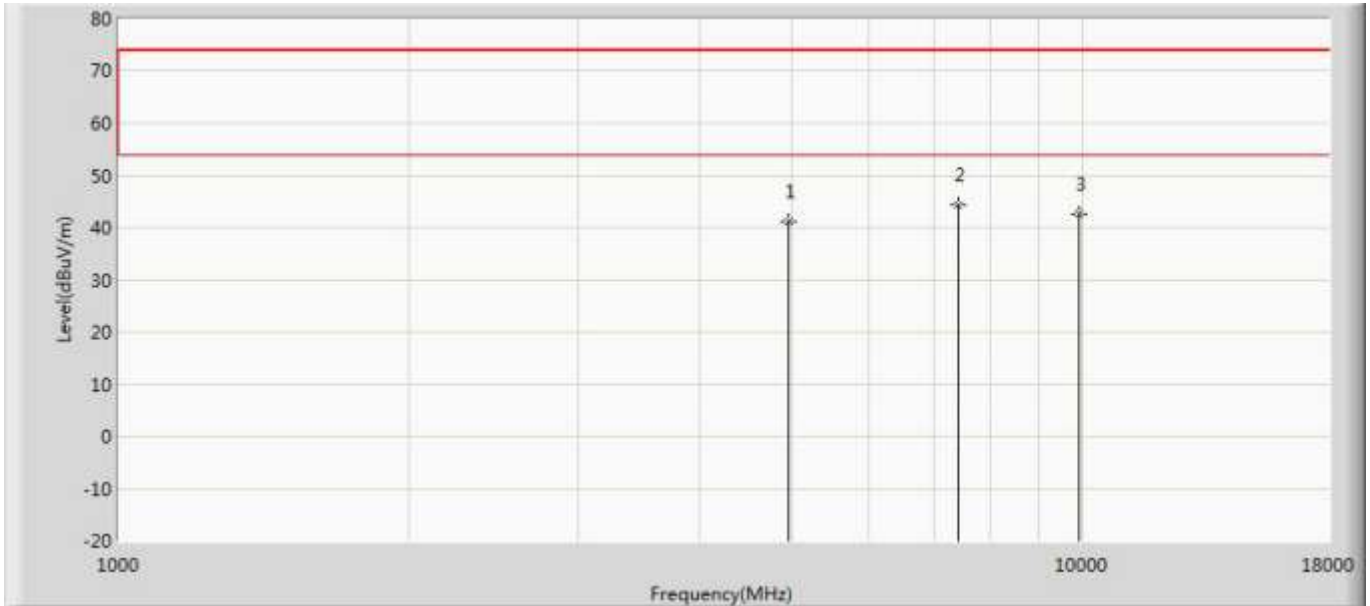
No	Mark	Frequency (MHz)	Measure Level (dBuV/m)	Reading Level (dBuV)	Over Limit (dB)	Limit (dBuV/m)	Factor (dB)	Type
1		4880.000	41.034	41.513	-32.966	74.000	-0.478	PK
2	*	7320.000	44.287	40.373	-29.713	74.000	3.914	PK
3		9760.000	43.253	38.477	-30.747	74.000	4.776	PK

Engineer: Tommie	
Site: AC5	Time: 2018/05/20 - 21:19
Limit: FCC_Part15.209_RE(3m)	Margin: 0
Probe: Horn_3117_00167055(1-18GHz)	Polarity: Vertical
EUT: IP surveillance camera (Wi-Fi & mobile)	Power: AC 120V/60Hz
Note: Mode 1:Transmit at 2440MHz by Zigbee	



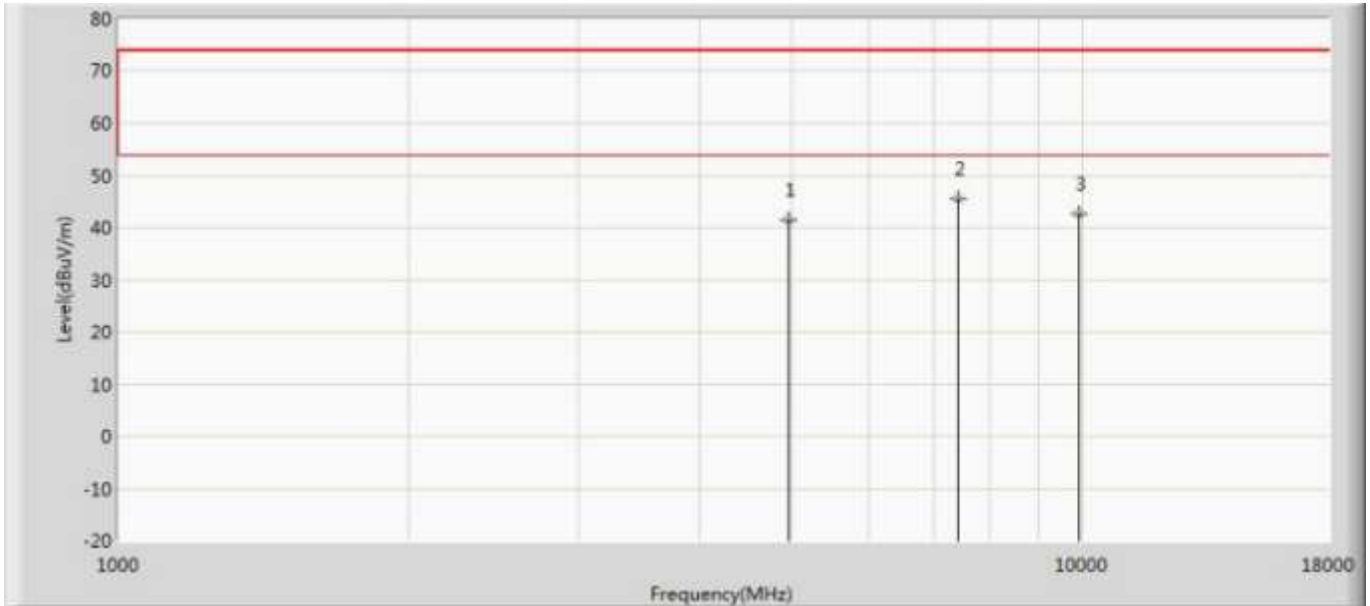
No	Mark	Frequency (MHz)	Measure Level (dBuV/m)	Reading Level (dBuV)	Over Limit (dB)	Limit (dBuV/m)	Factor (dB)	Type
1		4880.000	39.884	40.363	-34.116	74.000	-0.478	PK
2	*	7320.000	43.071	39.157	-30.929	74.000	3.914	PK
3		9760.000	42.486	37.710	-31.514	74.000	4.776	PK

Engineer: Tommie	
Site: AC5	Time: 2018/05/20 - 21:20
Limit: FCC_Part15.209_RE(3m)	Margin: 0
Probe: Horn_3117_00167055(1-18GHz)	Polarity: Horizontal
EUT: IP surveillance camera (Wi-Fi & mobile)	Power: AC 120V/60Hz
Note: Mode 1:Transmit at 2480MHz by Zigbee	



No	Mark	Frequency (MHz)	Measure Level (dBuV/m)	Reading Level (dBuV)	Over Limit (dB)	Limit (dBuV/m)	Factor (dB)	Type
1		4960.000	41.113	41.990	-32.887	74.000	-0.877	PK
2	*	7440.000	44.332	40.693	-29.668	74.000	3.638	PK
3		9920.000	42.706	36.740	-31.294	74.000	5.966	PK

Engineer: Tommie	
Site: AC5	Time: 2018/05/20 - 21:20
Limit: FCC_Part15.209_RE(3m)	Margin: 0
Probe: Horn_3117_00167055(1-18GHz)	Polarity: Vertical
EUT: IP surveillance camera (Wi-Fi & mobile)	Power: AC 120V/60Hz
Note: Mode 1:Transmit at 2480MHz by Zigbee	



No	Mark	Frequency (MHz)	Measure Level (dBuV/m)	Reading Level (dBuV)	Over Limit (dB)	Limit (dBuV/m)	Factor (dB)	Type
1		4960.000	41.407	42.284	-32.593	74.000	-0.877	PK
2	*	7440.000	45.371	41.732	-28.629	74.000	3.638	PK
3		9920.000	42.692	36.726	-31.308	74.000	5.966	PK

Radiated Emission above 18GHz:

Note: The peak value of Radiated Emission above 18GHz is negligible, so this test item is not shown in the report.

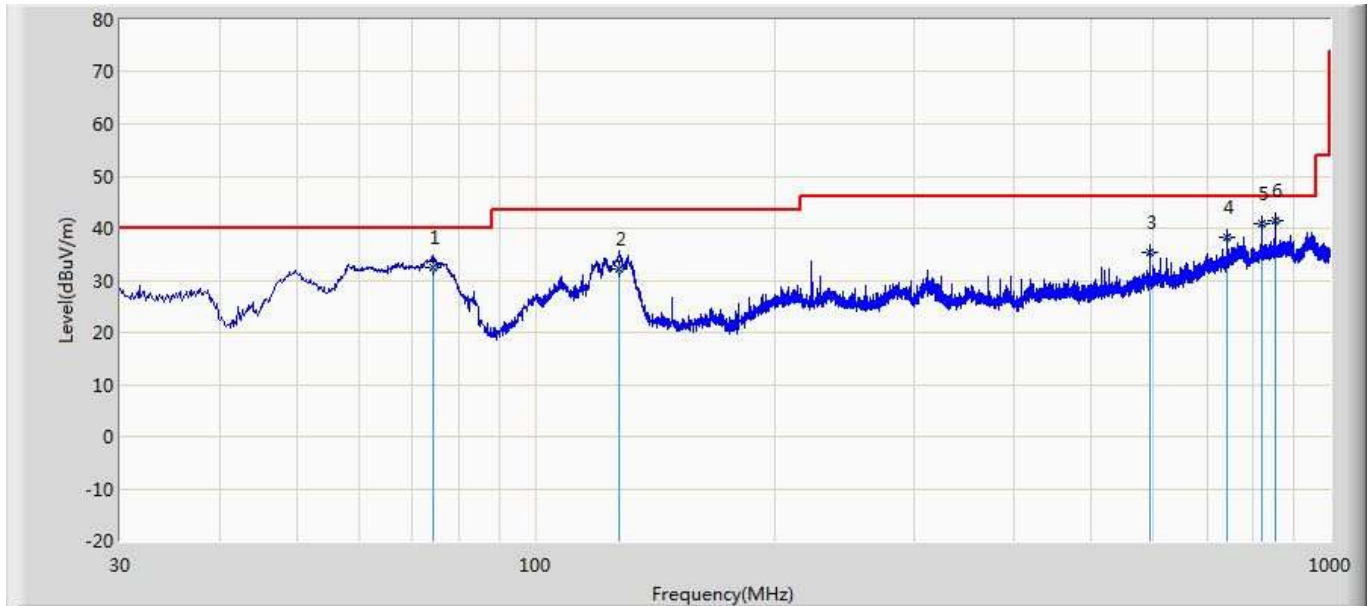
The worst case of Radiated Emission below 1GHz:

Engineer: Simon	
Site: AC3	Time: 2018/02/11
Limit: FCC_Part15.209_RE(3m)_ClassB	Margin: 0
Probe: AC3_3m (30-1000MHz)	Polarity: Horizontal
EUT: IP surveillance camera (Wi-Fi & mobile)	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		396.054	35.500	10.400	-10.500	46.000	17.206	7.893	0.000	200	55	QP
2		408.421	36.126	10.600	-9.874	46.000	17.595	7.930	0.000	200	158	QP
3		456.073	35.513	8.500	-10.487	46.000	18.961	8.052	0.000	300	264	QP
4		516.091	35.227	8.400	-10.773	46.000	18.622	8.205	0.000	100	310	QP
5		594.055	38.443	10.200	-7.557	46.000	19.827	8.417	0.000	200	80	QP
6	*	891.117	40.873	9.500	-5.127	46.000	22.293	9.080	0.000	300	211	QP

Engineer: Simon	
Site: AC3	Time: 2018/02/11
Limit: FCC_Part15.209_RE(3m)_ClassB	Margin: 0
Probe: AC3_3m (30-1000MHz)	Polarity: Vertical
EUT: IP surveillance camera (Wi-Fi & mobile)	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		74.256	32.378	18.100	-7.622	40.000	7.553	6.725	0.000	100	40	QP
2		127.606	32.304	11.100	-11.196	43.500	14.225	6.979	0.000	100	62	QP
3		594.055	35.388	8.300	-10.612	46.000	18.672	8.417	0.000	200	144	QP
4		742.586	38.261	7.700	-7.739	46.000	21.806	8.754	0.000	300	230	QP
5		819.580	40.944	8.700	-5.056	46.000	23.318	8.926	0.000	200	294	QP
6	*	854.015	41.391	8.600	-4.609	46.000	23.789	9.002	0.000	200	112	QP

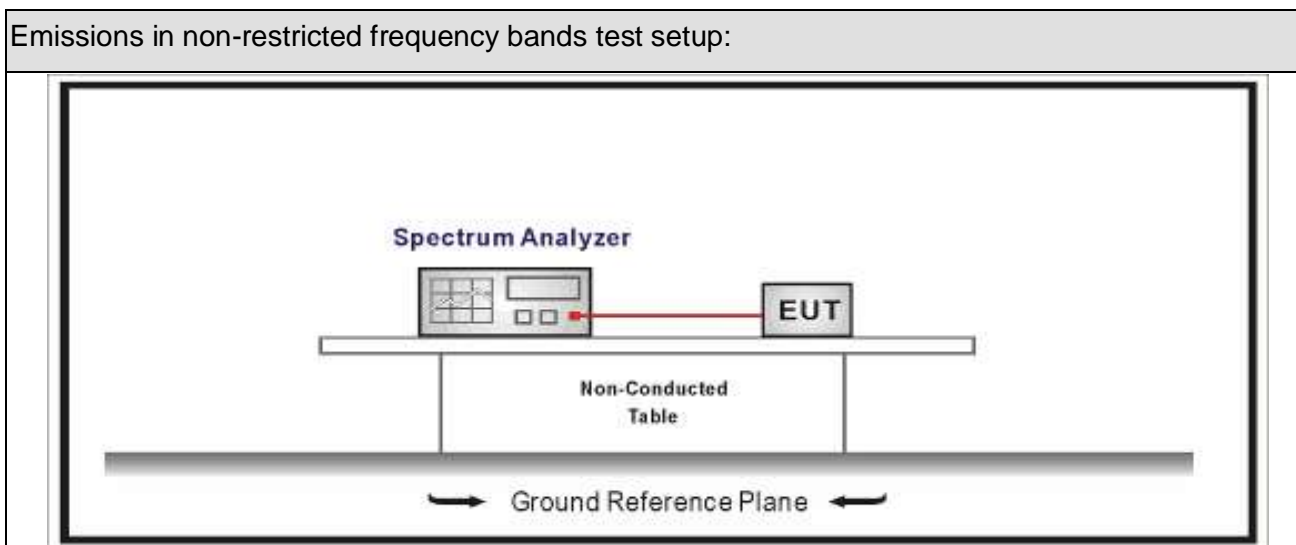
5. Emissions in non-restricted frequency bands

5.1. Test Equipment

Emissions in non-restricted frequency bands / TR-8					
Instrument	Manufacturer	Type No.	Serial No.	Cal. Date	Cal. Due Date
Spectrum Analyzer	Agilent	N9010A	MY48030494	2018.02.04	2019.02.03
EXA Spectrum Analyzer	Keysight	N9010A	MY55370495	2018.04.09	2019.04.08
MXA Signal Analyzer	Keysight	N9020A	MY56060147	2018.04.09	2019.04.08
Temperature/Humidity Meter	zhichen	ZC1-2	TR8-TH	2018.04.10	2019.04.09

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

5.2. Test Setup



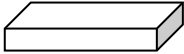
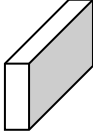
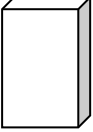

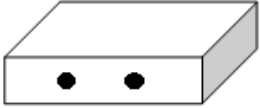

5.3. Limit

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)
<p>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).</p> <p>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).</p>	

5.4. Test Procedure

Test Method			
	References Rule	Chapter	Description
<input checked="" type="checkbox"/>	ANSI C63.10	11.11	Emissions in non-restricted frequency bands
	<input checked="" type="checkbox"/> ANSI C63.10	11.11.2	Reference level measurement
	<input checked="" type="checkbox"/> ANSI C63.10	11.11.3	Emission level measurement
<input type="checkbox"/>	ANSI C63.10	11.12	Emissions in restricted frequency bands
	<input type="checkbox"/> ANSI C63.10	11.12.1	Radiated emission measurements
	<input type="checkbox"/> ANSI C63.10	11.12.2.7	Radiated spurious emission test
<input type="checkbox"/>	ANSI C63.10	6.4	Radiated emissions from unlicensed wireless devices below 30 MHz
<input type="checkbox"/>	ANSI C63.10	6.5	Radiated emissions from unlicensed wireless devices in the frequency range of 30 MHz to 1000 MHz
<input type="checkbox"/>	ANSI C63.10	6.6	Radiated emissions from unlicensed wireless devices above 1 GHz
	<input checked="" type="checkbox"/> ANSI C63.10	11.12.2	Antenna-port conducted measurements
	<input type="checkbox"/> ANSI C63.10	11.12.2.3	Quasi-peak measurement procedure
	<input checked="" type="checkbox"/> ANSI C63.10	11.12.2.4	Peak power measurement procedure
	<input type="checkbox"/> ANSI C63.10	11.12.2.5	Average power measurement procedures
	<input type="checkbox"/> ANSI C63.10	11.12.2.5.1	Trace averaging with continuous EUT transmission at full power
	<input type="checkbox"/> ANSI C63.10	11.12.2.5.2	Trace averaging across ON and OFF times of the EUT transmissions followed by duty cycle correction
	<input type="checkbox"/> 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	<input type="checkbox"/>	Fixed point-to-point		
	<input type="checkbox"/>	Emit multiple directional beams, simultaneously or sequentially		
	<input checked="" type="checkbox"/>	Other cases		
Test mode	Mode 1			
Test method	<input type="checkbox"/>	Radiated		
		X Axis	Y Axis	Z Axis
				
		Worst Axis <input type="checkbox"/>	Worst Axis <input type="checkbox"/>	Worst Axis <input type="checkbox"/>
	<input checked="" type="checkbox"/>	Conducted		
	<input checked="" type="checkbox"/>	Chain 0		
				
	<input type="checkbox"/>	Chain 0	Chain 1	
				
	<input type="checkbox"/>	Chain 0	Chain 1	Chain 2
				

5.6. Test Result

Product Name	: IP surveillance camera (Wi-Fi & mobile)	Power	: AC 120V/60Hz
Test Mode	: Mode 1	Test Site	: TR-8
Test Date	: 2018.05.20	Test engineer	: Tommie

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	11	2405	-5.713	2400.00	-63.645	57.932	>20	Pass
1	26	2480	-5.264	2500.00	-77.908	72.644	>20	Pass

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

Mode 1 CH11 (2405MHz)

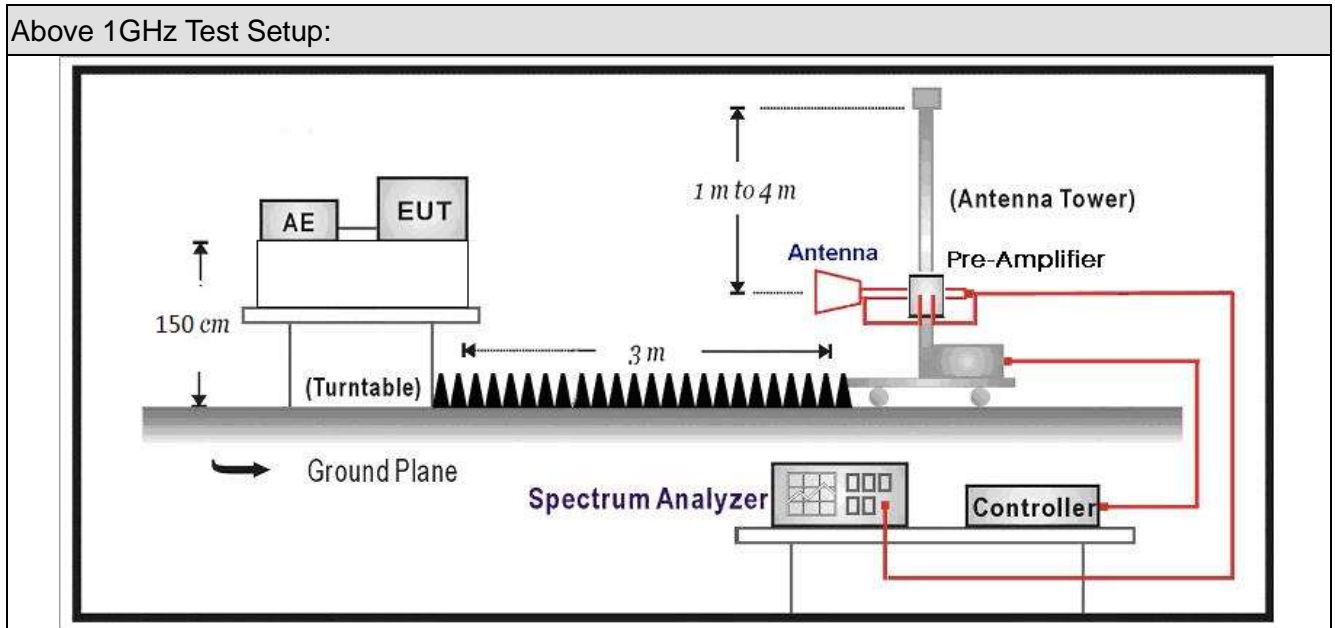


6. Radiated Emission Band Edge

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	2017.07.16	2018.07.15
Pre-Amplifier	Miteq	NSP1800-25	1364185	2018.05.03	2019.05.02
DRG Horn Antenna	ETS-Lindgren	3117	00167055	2017.07.12	2018.07.11
Broad-Band Horn Antenna	Schwarzbeck	BBHA9170	294	2017.09.18	2018.09.17
Coaxial Cable	Huber+Suhner	SUCOFLEX 106	AC5-C1	2018.02.28	2019.02.27
Coaxial Cable	Huber+Suhner	SUCOFLEX 106	AC5-C2	2018.02.28	2019.02.27
Temperature/Humidity Meter	Zhichen	ZC1-2	AC5-TH	2018.01.05	2019.01.04

6.2. Test Setup



6.3. Limit

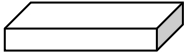
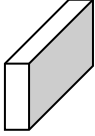
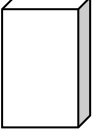



Band edge Limit				
Frequency bands (MHz)	Detector	Limit (dB μ V/m)	RBW (MHz)	Distance (m)
2310-2390	PK	74	1	3
2483.5-2500	AV	54	1	3

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

6.4. Test Procedure

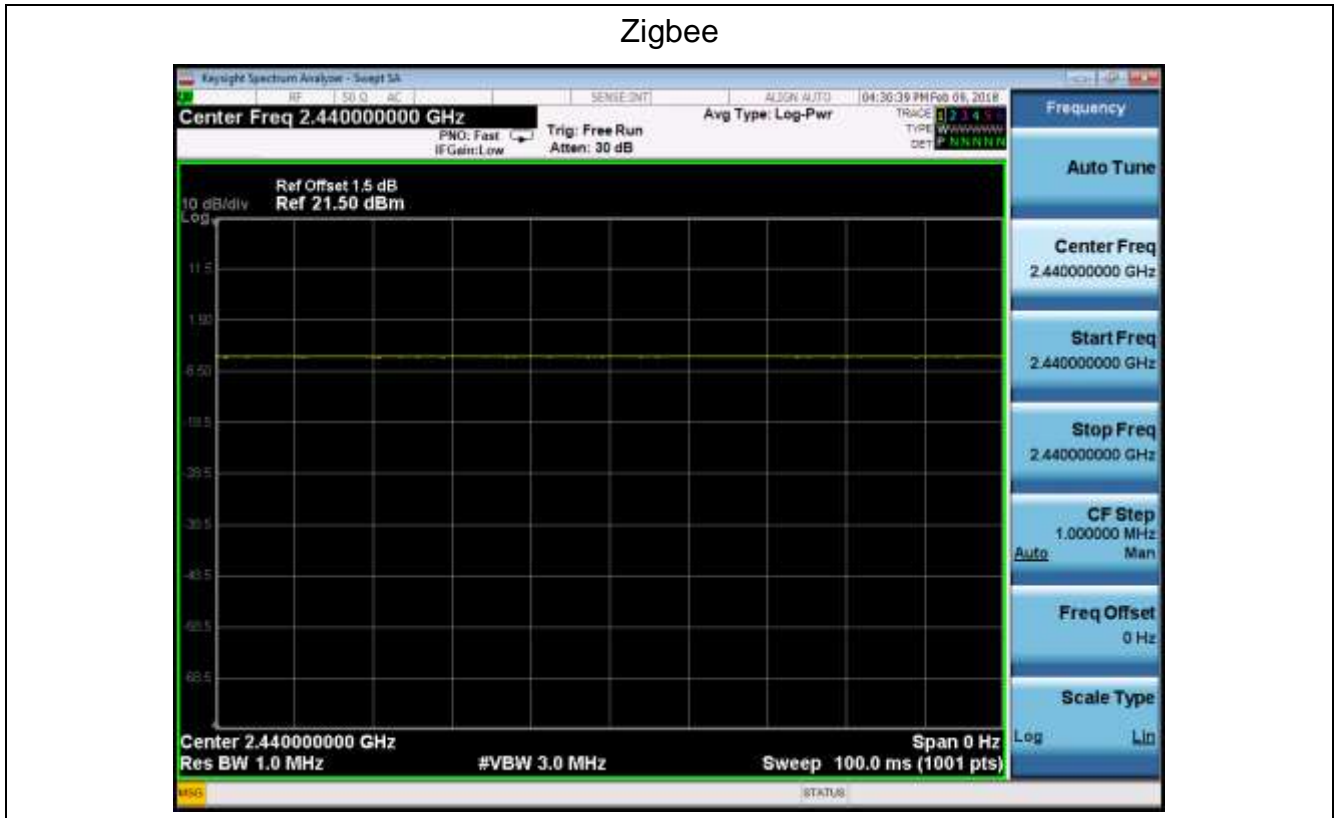
Test Method					
	References	Rule	Chapter	Description	
<input checked="" type="checkbox"/>		ANSI C63.10	6.10	Band-edge testing	
	<input checked="" type="checkbox"/>	ANSI C63.10	6.10.5	Restricted-band band-edge measurements	
	<input type="checkbox"/>	ANSI C63.10	6.10.6	Marker-delta method	
<input checked="" type="checkbox"/>		ANSI C63.10	11.12	Emissions in restricted frequency bands	
	<input checked="" type="checkbox"/>	ANSI C63.10	11.12.1	Radiated emission measurements	
	<input checked="" type="checkbox"/>	ANSI C63.10	11.12.2.7	Radiated spurious emission test	
<input type="checkbox"/>		ANSI C63.10	6.4	Radiated emissions from unlicensed wireless devices below 30 MHz	
<input type="checkbox"/>		ANSI C63.10	6.5	Radiated emissions from unlicensed wireless devices in the frequency range of 30 MHz to 1000 MHz	
<input checked="" type="checkbox"/>		ANSI C63.10	6.6	Radiated emissions from unlicensed wireless devices above 1 GHz	
	<input type="checkbox"/>	ANSI C63.10	11.12.2.3	Quasi-peak measurement procedure	
	<input checked="" type="checkbox"/>	ANSI C63.10	11.12.2.4	Peak power measurement procedure	
	<input checked="" type="checkbox"/>	ANSI C63.10	11.12.2.5	Average power measurement procedures	
		<input type="checkbox"/>	ANSI C63.10	11.12.2.5.1	Trace averaging with continuous EUT transmission at full power
		<input type="checkbox"/>	ANSI C63.10	11.12.2.5.2	Trace averaging across ON and OFF times of the EUT transmissions followed by duty cycle correction
		<input checked="" type="checkbox"/>	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	Radiated Emission Band Edge			
Device Category	<input type="checkbox"/>	Fixed point-to-point		
	<input type="checkbox"/>	Emit multiple directional beams, simultaneously or sequentially		
	<input checked="" type="checkbox"/>	Other cases		
Test mode	Mode 1			
Test method	<input checked="" type="checkbox"/>	Radiated		
		X Axis	Y Axis	Z Axis
				
		Worst Axis <input checked="" type="checkbox"/>	Worst Axis <input type="checkbox"/>	Worst Axis <input type="checkbox"/>
	<input type="checkbox"/>	Conducted		
	<input type="checkbox"/>	Chain 0		
				
	<input type="checkbox"/>	Chain 0	Chain 1	
				
	<input type="checkbox"/>	Chain 0	Chain 1	Chain 2
				

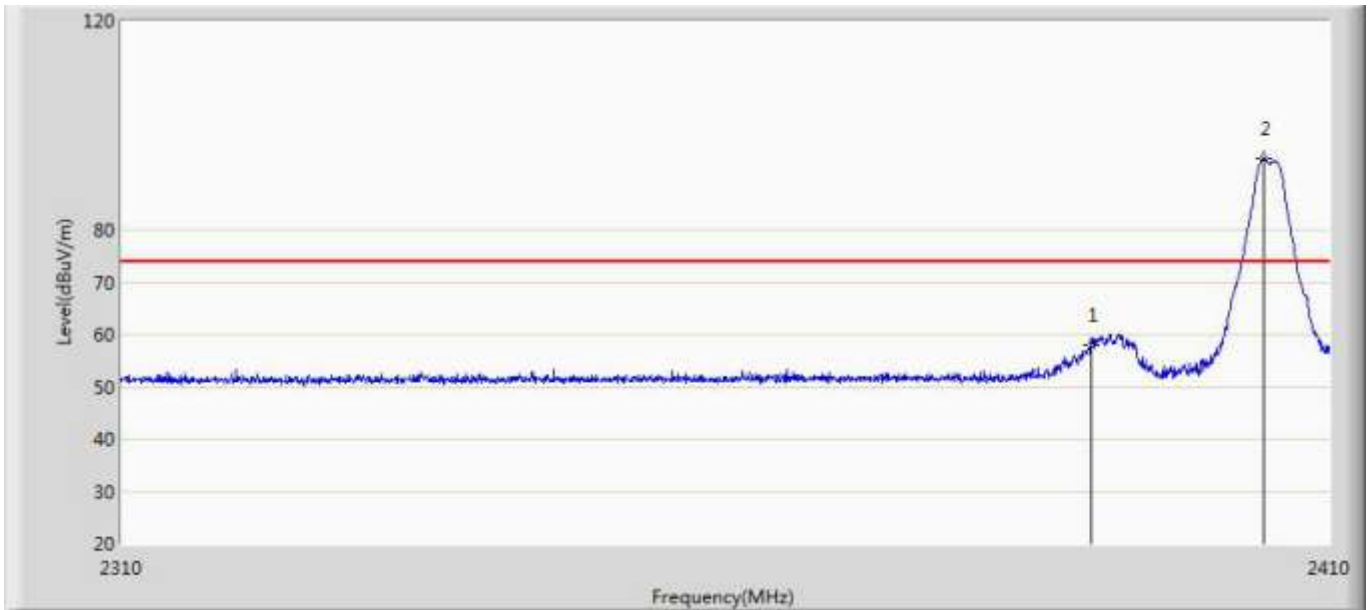
6.6. Duty Cycle

Test Mode	Tx On (ms)	Tx Off (ms)	Reduced VBW (kHz)	Tx On + Tx Off (ms)	Duty Cycle
Zigbee	-	-	10Hz	-	100%



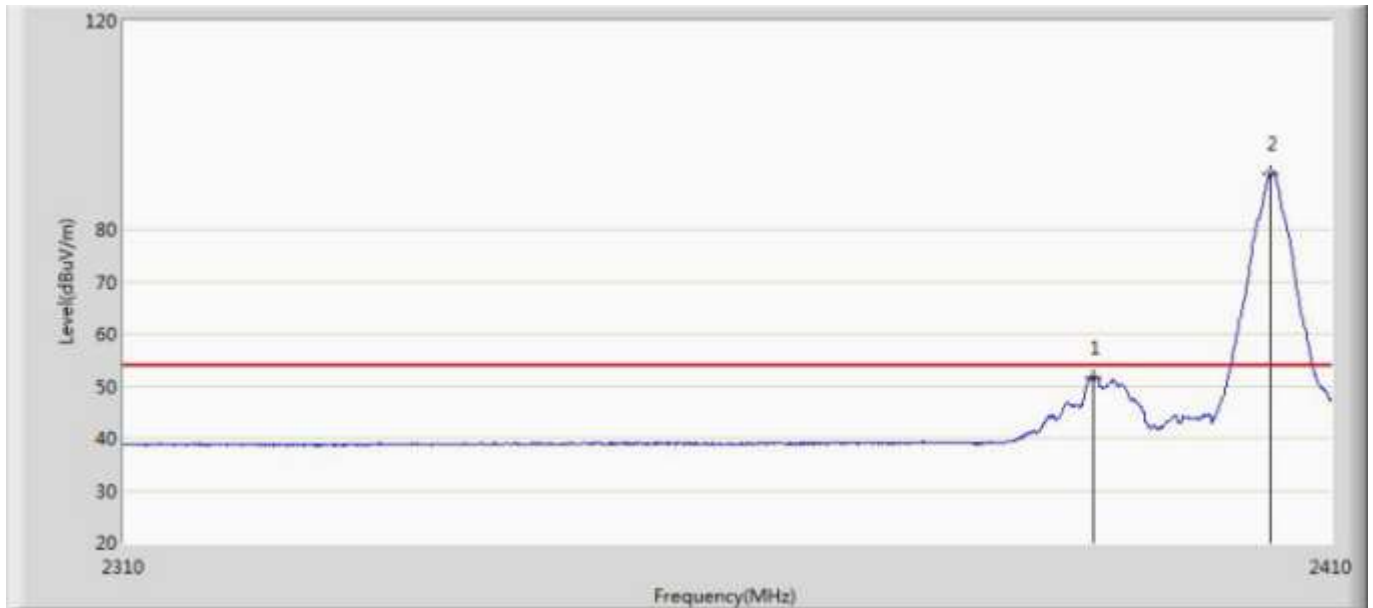
6.7 Test Result

Engineer: Tommie	
Site: AC5	Time: 2018/05/20 - 14:43
Limit: FCC_Part15.209_RE(3m)	Margin: 0
Probe: Horn_3117_00167055(1-18GHz)	Polarity: Horizontal
EUT: IP surveillance camera (Wi-Fi & mobile)	Power: AC 120V/60Hz
Note: Mode 1:Transmit at 2405MHz by Zigbee	



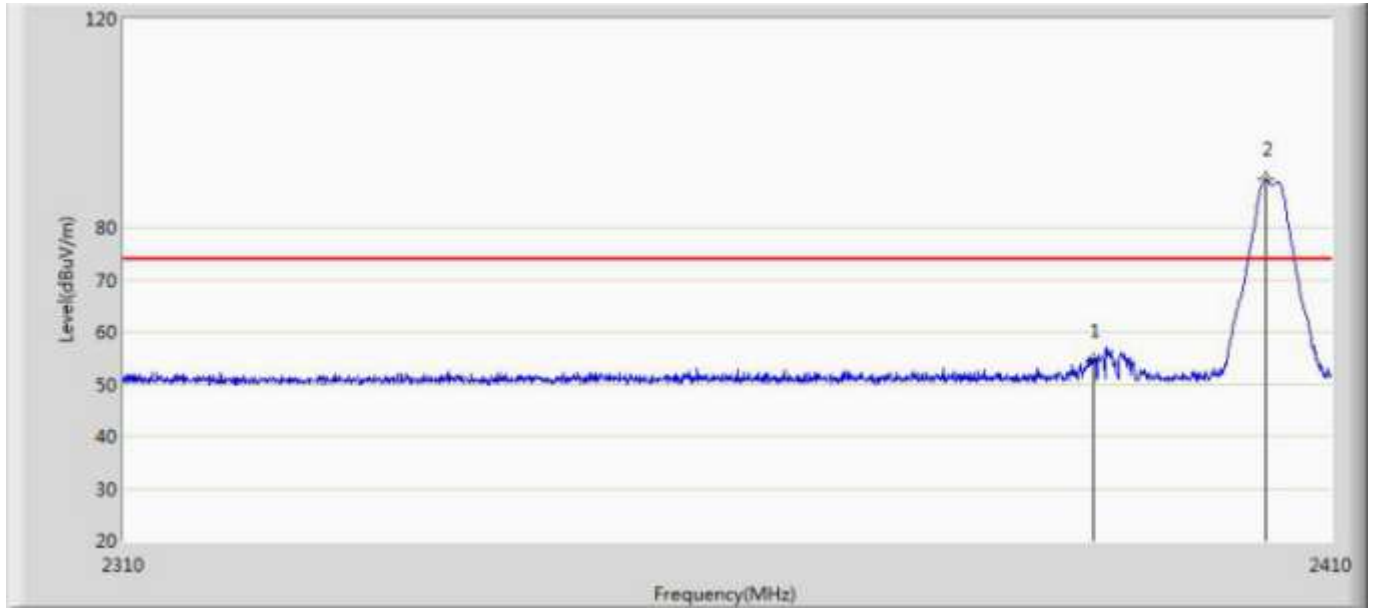
No	Mark	Frequency (MHz)	Measure Level (dBuV/m)	Reading Level (dBuV)	Over Limit (dB)	Limit (dBuV/m)	Factor (dB)	Type
1		2390.000	57.861	21.531	-16.139	74.000	36.329	PK
2	*	2404.500	93.654	57.326	19.654	74.000	36.328	PK

Engineer: Tommie	
Site: AC5	Time: 2018/05/20 - 14:48
Limit: FCC_Part15.209_RE(3m)	Margin: 0
Probe: Horn_3117_00167055(1-18GHz)	Polarity: Horizontal
EUT: IP surveillance camera (Wi-Fi & mobile)	Power: AC 120V/60Hz
Note: Mode 1:Transmit at 2405MHz by Zigbee	



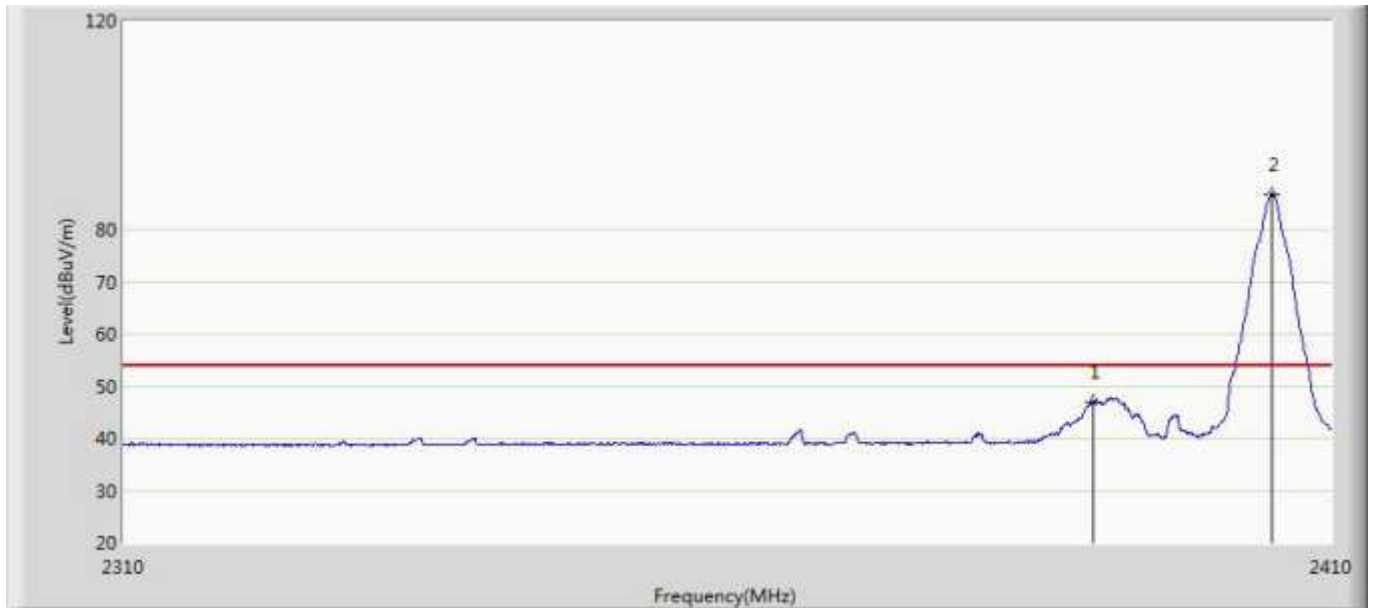
No	Mark	Frequency (MHz)	Measure Level (dBuV/m)	Reading Level (dBuV)	Over Limit (dB)	Limit (dBuV/m)	Factor (dB)	Type
1		2390.000	51.715	15.385	-2.285	54.000	36.329	AV
2	*	2404.900	90.868	54.540	36.868	54.000	36.328	AV

Engineer: Tommie	
Site: AC5	Time: 2018/05/20 - 14:51
Limit: FCC_Part15.209_RE(3m)	Margin: 0
Probe: Horn_3117_00167055(1-18GHz)	Polarity: Vertical
EUT: IP surveillance camera (Wi-Fi & mobile)	Power: AC 120V/60Hz
Note: Mode 1:Transmit at 2405MHz by Zigbee	



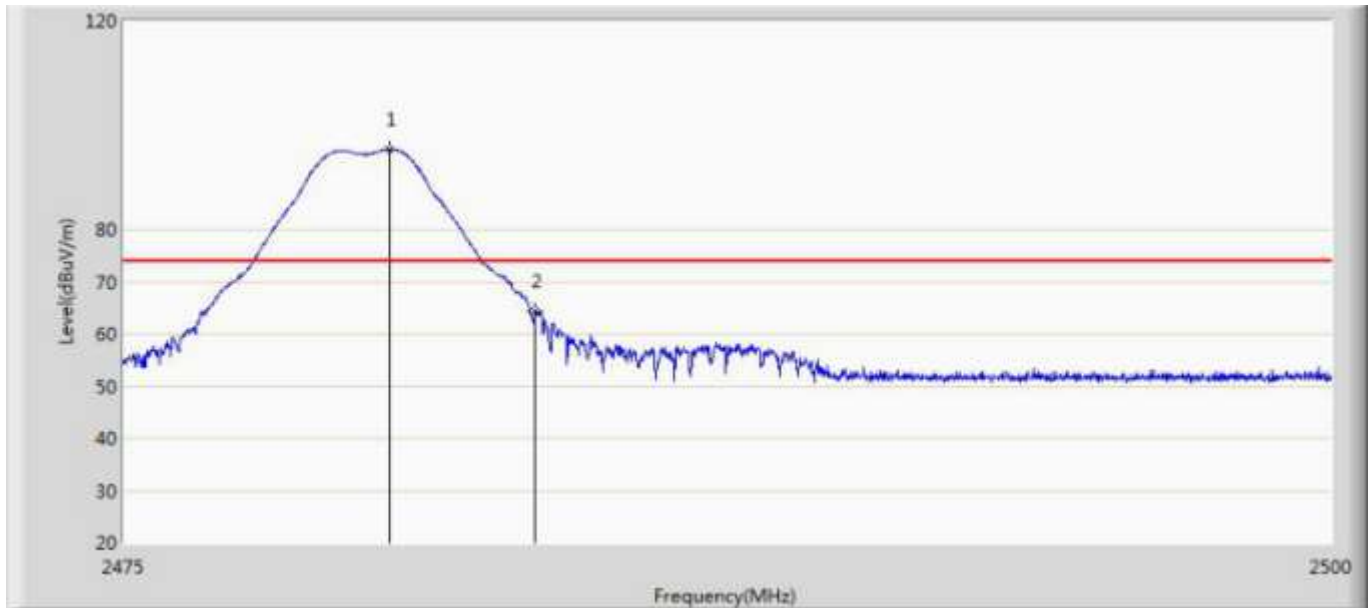
No	Mark	Frequency (MHz)	Measure Level (dBuV/m)	Reading Level (dBuV)	Over Limit (dB)	Limit (dBuV/m)	Factor (dB)	Type
1		2390.000	54.503	18.173	-19.497	74.000	36.329	PK
2	*	2404.500	89.143	52.815	15.143	74.000	36.328	PK

Engineer: Tommie	
Site: AC5	Time: 2018/05/20 - 14:53
Limit: FCC_Part15.209_RE(3m)	Margin: 0
Probe: Horn_3117_00167055(1-18GHz)	Polarity: Vertical
EUT: IP surveillance camera (Wi-Fi & mobile)	Power: AC 120V/60Hz
Note: Mode 1:Transmit at 2405MHz by Zigbee	



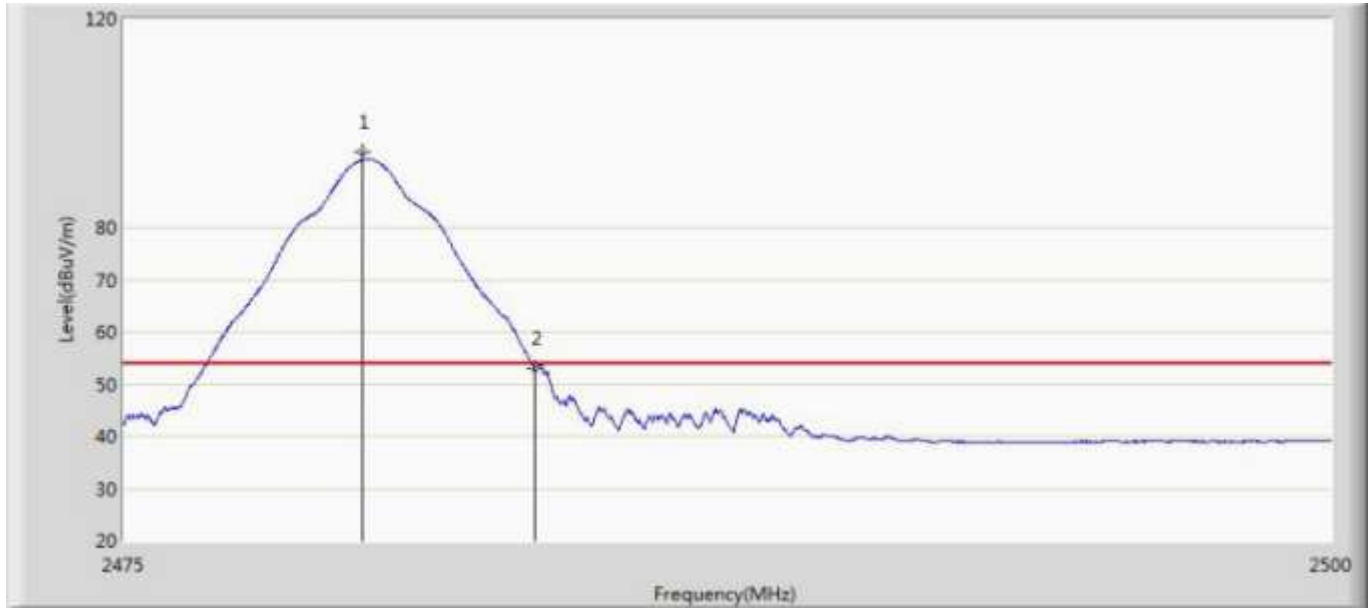
No	Mark	Frequency (MHz)	Measure Level (dBuV/m)	Reading Level (dBuV)	Over Limit (dB)	Limit (dBuV/m)	Factor (dB)	Type
1		2390.000	47.023	10.693	-6.977	54.000	36.329	AV
2	*	2404.950	86.734	50.406	32.734	54.000	36.328	AV

Engineer: Tommie	
Site: AC5	Time: 2018/05/20 - 14:57
Limit: FCC_Part15.209_RE(3m)	Margin: 0
Probe: Horn_3117_00167055(1-18GHz)	Polarity: Horizontal
EUT: IP surveillance camera (Wi-Fi & mobile)	Power: AC 120V/60Hz
Note: Mode 1:Transmit at 2480MHz by Zigbee	



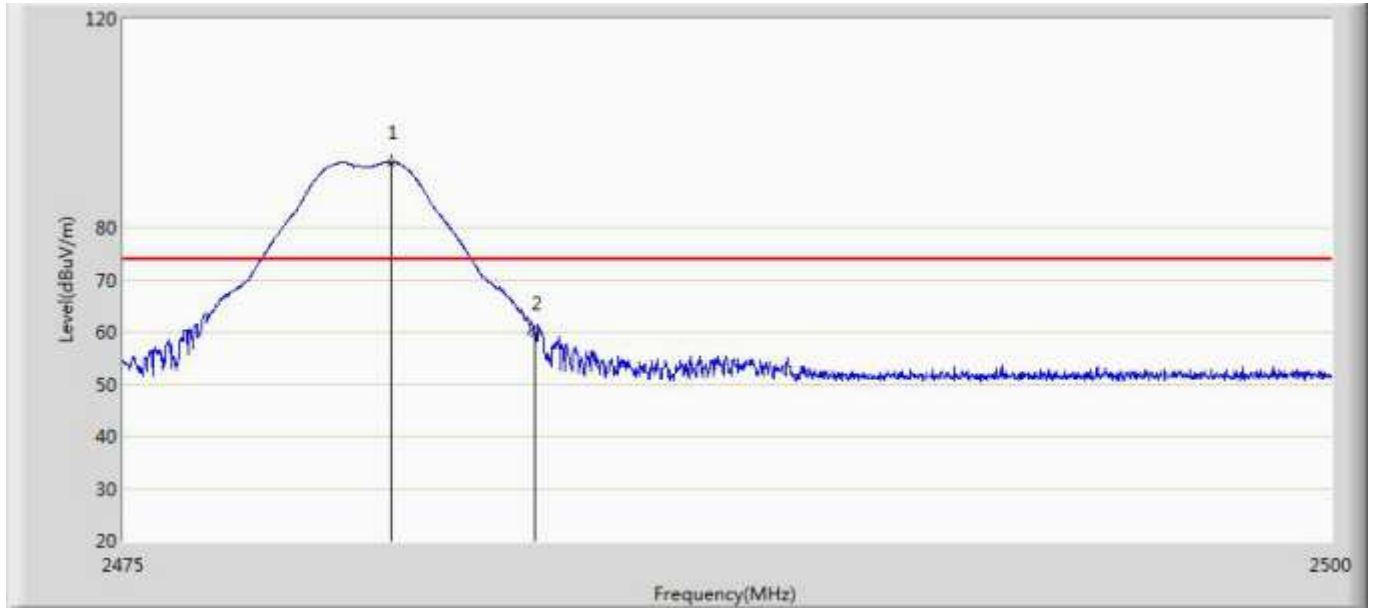
No	Mark	Frequency (MHz)	Measure Level (dBuV/m)	Reading Level (dBuV)	Over Limit (dB)	Limit (dBuV/m)	Factor (dB)	Type
1	*	2480.488	95.442	59.020	21.442	74.000	36.422	PK
2		2483.500	64.249	27.782	-9.751	74.000	36.467	PK

Engineer: Tommie	
Site: AC5	Time: 2018/05/20 - 15:01
Limit: FCC_Part15.209_RE(3m)	Margin: 0
Probe: Horn_3117_00167055(1-18GHz)	Polarity: Horizontal
EUT: IP surveillance camera (Wi-Fi & mobile)	Power: AC 120V/60Hz
Note: Mode 1:Transmit at 2480MHz by Zigbee	



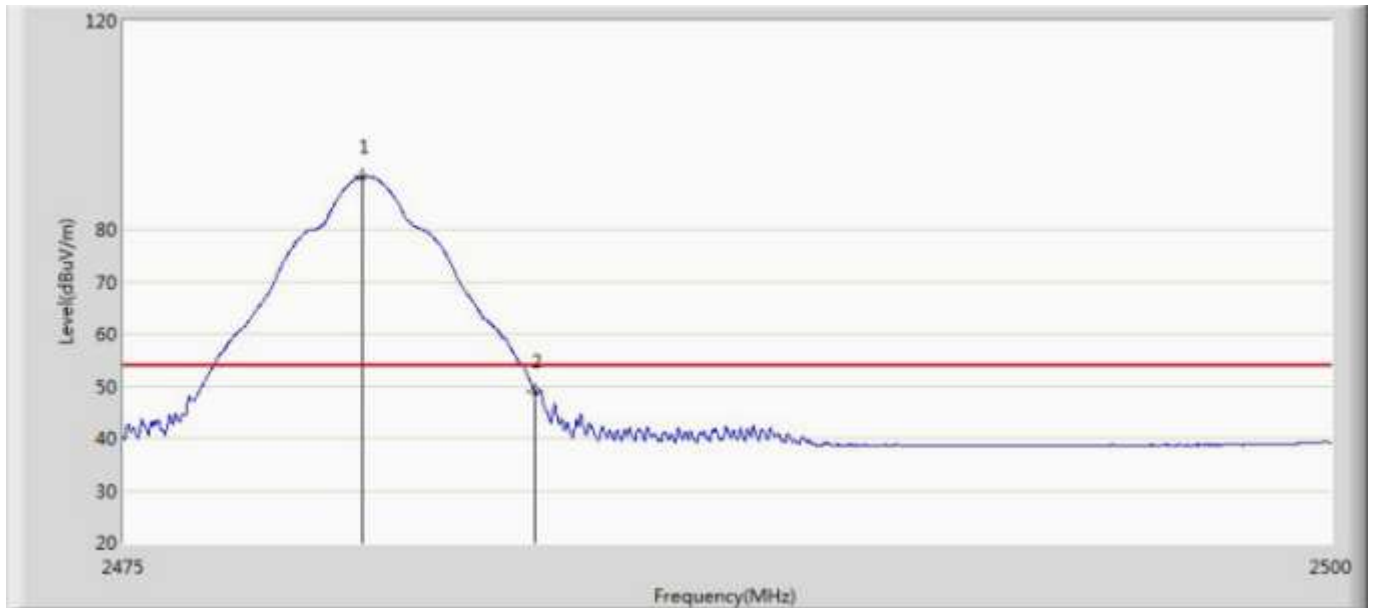
No	Mark	Frequency (MHz)	Measure Level (dBuV/m)	Reading Level (dBuV)	Over Limit (dB)	Limit (dBuV/m)	Factor (dB)	Type
1	*	2479.937	94.562	58.148	40.562	54.000	36.414	AV
2		2483.500	53.115	16.648	-0.885	54.000	36.467	AV

Engineer: Tommie	
Site: AC5	Time: 2018/05/20 - 15:07
Limit: FCC_Part15.209_RE(3m)	Margin: 0
Probe: Horn_3117_00167055(1-18GHz)	Polarity: Vertical
EUT: IP surveillance camera (Wi-Fi & mobile)	Power: AC 120V/60Hz
Note: Mode 1:Transmit at 2480MHz by Zigbee	



No	Mark	Frequency (MHz)	Measure Level (dBuV/m)	Reading Level (dBuV)	Over Limit (dB)	Limit (dBuV/m)	Factor (dB)	Type
1	*	2480.525	92.529	56.106	18.529	74.000	36.423	PK
2		2483.500	59.702	23.235	-14.298	74.000	36.467	PK

Engineer: Tommie	
Site: AC5	Time: 2018/05/20 - 15:11
Limit: FCC_Part15.209_RE(3m)	Margin: 0
Probe: Horn_3117_00167055(1-18GHz)	Polarity: Vertical
EUT: IP surveillance camera (Wi-Fi & mobile)	Power: AC 120V/60Hz
Note: Mode 1:Transmit at 2480MHz by Zigbee	



No	Mark	Frequency (MHz)	Measure Level (dBuV/m)	Reading Level (dBuV)	Over Limit (dB)	Limit (dBuV/m)	Factor (dB)	Type
1	*	2479.937	90.162	53.748	36.162	54.000	36.414	AV
2		2483.500	49.058	12.591	-4.942	54.000	36.467	AV

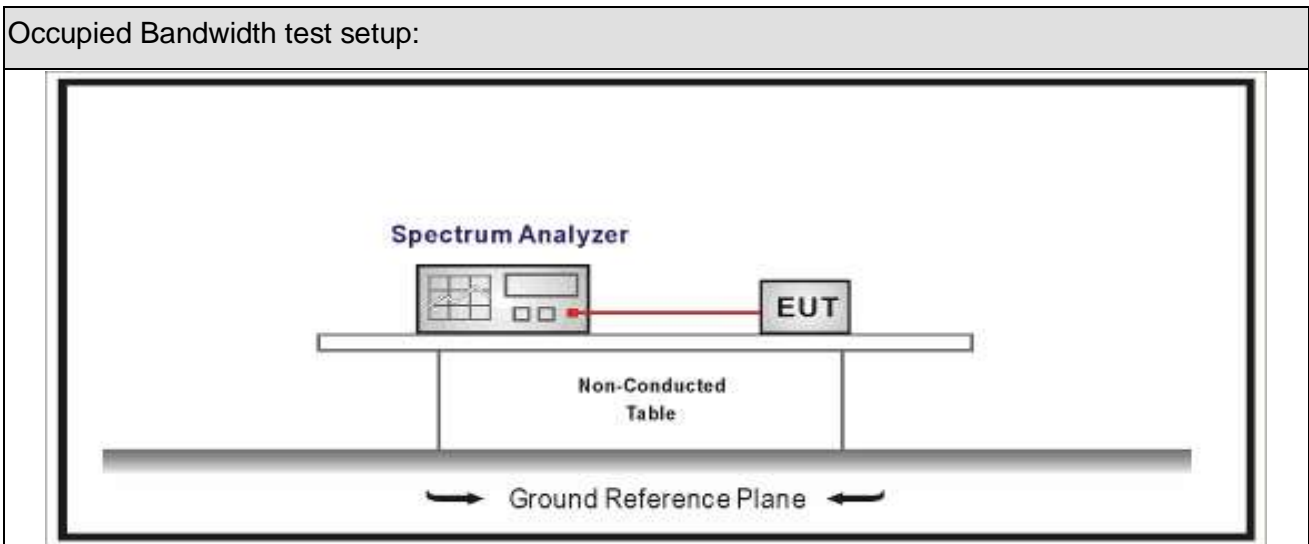
7. Occupied Bandwidth

7.1. Test Equipment

Occupied Bandwidth / TR-8					
Instrument	Manufacturer	Type No.	Serial No.	Cal. Date	Cal. Due Date
Spectrum Analyzer	Agilent	N9010A	MY48030494	2018.02.04	2019.02.03
EXA Spectrum Analyzer	Keysight	N9010A	MY55370495	2018.04.09	2019.04.08
MXA Signal Analyzer	Keysight	N9020A	MY56060147	2018.04.09	2019.04.08
Temperature/Humidity Meter	zhichen	ZC1-2	TR8-TH	2018.04.10	2019.04.09

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

7.2. Test Setup



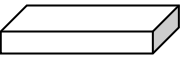
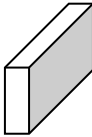
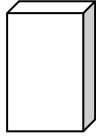
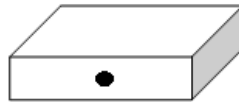

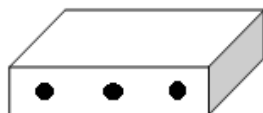
7.3. Limit

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
<input checked="" type="checkbox"/>	ANSI C63.10	11.8	DTS bandwidth
<input type="checkbox"/>	ANSI C63.10	11.8.1	Option 1
<input checked="" type="checkbox"/>	ANSI C63.10	11.8.2	Option 2

7.5. EUT test definition

Item	Occupied Bandwidth			
Device Category	<input type="checkbox"/>	Fixed point-to-point		
	<input type="checkbox"/>	Emit multiple directional beams, simultaneously or sequentially		
	<input checked="" type="checkbox"/>	Other cases		
Test mode	Mode 1			
Test method	<input type="checkbox"/>	Radiated		
		X Axis	Y Axis	Z Axis
				
		Worst Axis <input type="checkbox"/>	Worst Axis <input type="checkbox"/>	Worst Axis <input type="checkbox"/>
	<input checked="" type="checkbox"/>	Conducted		
	<input checked="" type="checkbox"/>	Chain 0		
				
	<input type="checkbox"/>	Chain 0	Chain 1	
				
	<input type="checkbox"/>	Chain 0	Chain 1	Chain 2
				

7.6. Test Result

Product Name	: IP surveillance camera (Wi-Fi & mobile)	Power	: AC 120V/60Hz
Test Mode	: Mode 1	Test Site	: TR-8
Test Date	: 2018.05.20	Test engineer	: Tommie

Mode	CH.	Test Freq. (MHz)	99% Occupied Bandwidth (kHz)	6dB Occupied Bandwidth (kHz)	Limit (kHz)	Result
1	11	2405	2696.3	1626	>500	Pass
1	18	2440	2681.9	1624	>500	Pass
1	26	2480	2644.9	1619	>500	Pass

Note : The worst case of Occupied Bandwidth as below:

Mode 1 CH26 (2480MHz)



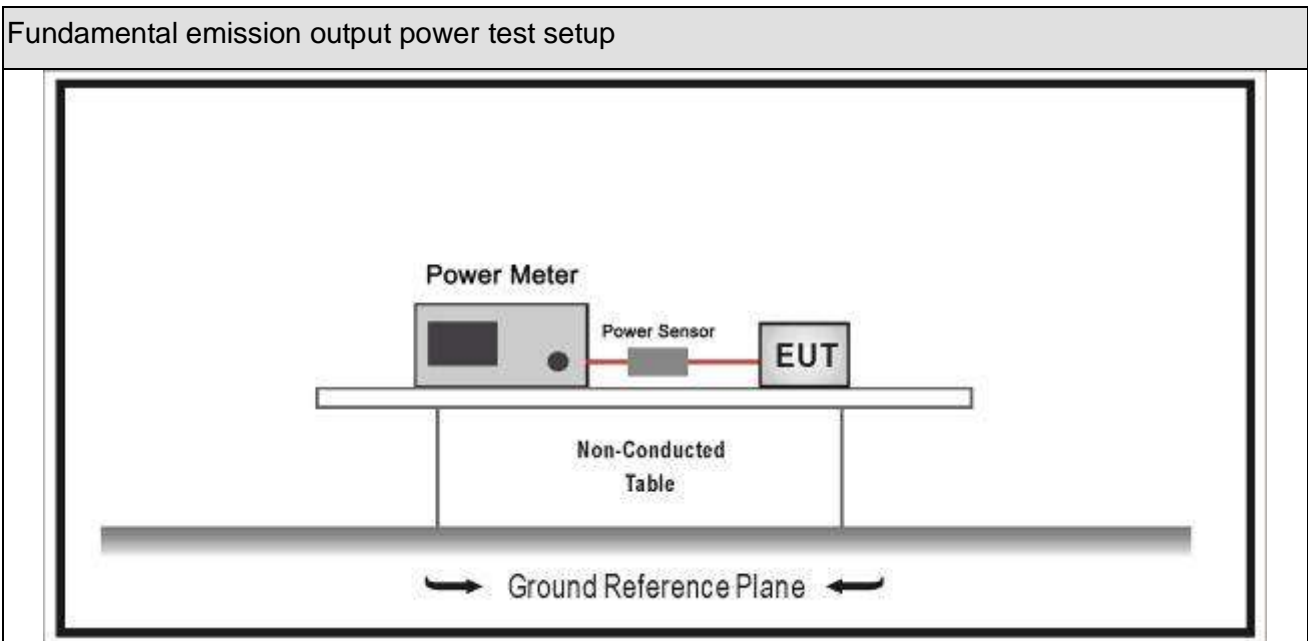
8. Fundamental emission output power

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	2018.01.04	2019.01.03
Spectrum Analyzer	Agilent	N9010A	MY48030494	2018.01.04	2019.01.03
Wideband Peak Power Meter	Anritsu	ML2495A	0905006	2017.10.14	2018.10.13
Power Sensor	Anritsu	MA2411B	0846014	2017.10.14	2018.10.13
Temperature/Humidity Meter	zhicheng	ZC1-2	TR8-TH	2018.04.10	2019.04.09

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

8.2. Test Setup



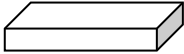
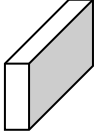
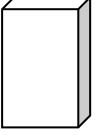



8.3. Limit

Fundamental emission output power Limit		
<input checked="" type="checkbox"/>	$G_{TX} < 6\text{dBi}$	$P_{out} \leq 30\text{dBm}$
<input type="checkbox"/>	$G_{TX} > 6\text{dBi}$	
<input type="checkbox"/>	Non-Fix point-point	$P_{out} \leq 30 - (G_{TX} - 6)$
<input type="checkbox"/>	Fix point-point	$P_{out} \leq 30 - [(G_{TX} - 6)]/3$
<input type="checkbox"/>	Point-to-multipoint	$P_{out} \leq 30 - (G_{TX} - 6)$
<input type="checkbox"/>	Overlap Beams	$P_{out} \leq 30 - [(G_{TX} - 6)]/3$
<input type="checkbox"/>	Aggregate power transmitted simultaneously on all beams	$P_{out} \leq 30 - [(G_{TX} - 6)]/3$
<input type="checkbox"/>	single directional beam	$P_{out} \leq 30 - [(G_{TX} - 6)]/3 + 8\text{dB}$
<p>Note 1 : G_{TX} directional gain of transmitting antennas.</p> <p>Note 2 : P_{out} is maximum peak conducted output power .</p>		

8.4. Test Procedure

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

8.5. EUT test definition

Item	Fundamental emission output power			
Device Category	<input type="checkbox"/>	Fixed point-to-point		
	<input type="checkbox"/>	Emit multiple directional beams, simultaneously or sequentially		
	<input checked="" type="checkbox"/>	Other cases		
Test mode	Mode 1			
Test method	<input type="checkbox"/>	Radiated		
		X Axis	Y Axis	Z Axis
				
		Worst Axis <input type="checkbox"/>	Worst Axis <input type="checkbox"/>	Worst Axis <input type="checkbox"/>
	<input checked="" type="checkbox"/>	Conducted		
	<input checked="" type="checkbox"/>	Chain 0		
				
	<input type="checkbox"/>	Chain 0	Chain 1	
				
	<input type="checkbox"/>	Chain 0	Chain 1	Chain 2
				

8.6. Test Result

Product Name	:	IP surveillance camera (Wi-Fi & mobile)	Power	:	AC 120V/60Hz
Test Mode	:	Mode 1	Test Site	:	TR-8
Test Date	:	2018.06.07	Test engineer	:	Tommie

Mode	Channel	Test Frequency (MHz)	Measurement Power Output (dBm)	Limit (dBm)	Result
1	11	2405	3.02	30	Pass
1	18	2440	1.47	30	Pass
1	26	2480	5.28	30	Pass

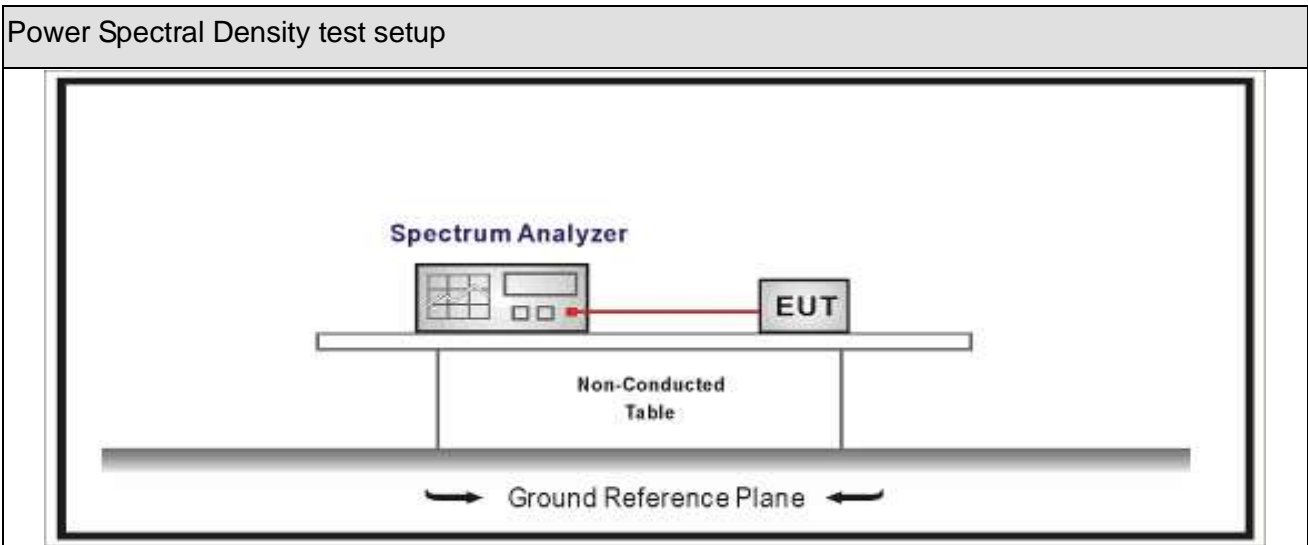
9. Power Spectral Density

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	2018.02.04	2019.02.03
EXA Spectrum Analyzer	Keysight	N9010A	MY55370495	2018.04.09	2019.04.08
MXA Signal Analyzer	Keysight	N9020A	MY56060147	2018.04.09	2019.04.08
Temperature/Humidity Meter	zhichen	ZC1-2	TR8-TH	2018.04.10	2019.04.09

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

9.2. Test Setup



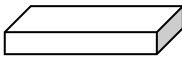
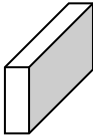
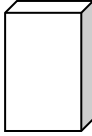
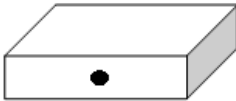
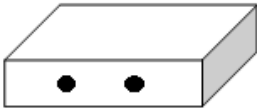
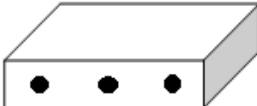
9.3. Limit

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
<input checked="" type="checkbox"/>	ANSI C63.10	11.10	Maximum power spectral density level in the fundamental emission
<input checked="" type="checkbox"/>	ANSI C63.10	11.10.2	Method PKPSD (peak PSD)
<input type="checkbox"/>	ANSI C63.10	11.10.3	Method AVGPSD-1(Duty cycle \geq 98%)
<input type="checkbox"/>	ANSI C63.10	11.10.4	Method AVGPSD-1A(Duty cycle \geq 98%)
<input type="checkbox"/>	ANSI C63.10	11.10.5	Method AVGPSD-2(Duty cycle <98%)
<input type="checkbox"/>	ANSI C63.10	11.10.6	Method AVGPSD-2A(Duty cycle <98%)
<input type="checkbox"/>	ANSI C63.10	11.10.7	Method AVGPSD-3
<input type="checkbox"/>	ANSI C63.10	11.10.8	Method AVGPSD-3A

9.5. EUT test definition

Item	Power Spectral Density Test Method			
Device Category	<input type="checkbox"/>	Fixed point-to-point		
	<input type="checkbox"/>	Emit multiple directional beams, simultaneously or sequentially		
	<input checked="" type="checkbox"/>	Other cases		
Test mode	Mode 1			
Test method	<input type="checkbox"/>	Radiated		
		X Axis	Y Axis	Z Axis
				
		Worst Axis <input type="checkbox"/>	Worst Axis <input type="checkbox"/>	Worst Axis <input type="checkbox"/>
	<input checked="" type="checkbox"/>	Conducted		
	<input checked="" type="checkbox"/>	Chain 0		
				
	<input type="checkbox"/>	Chain 0	Chain 1	
				
	<input type="checkbox"/>	Chain 0	Chain 1	Chain 2
				

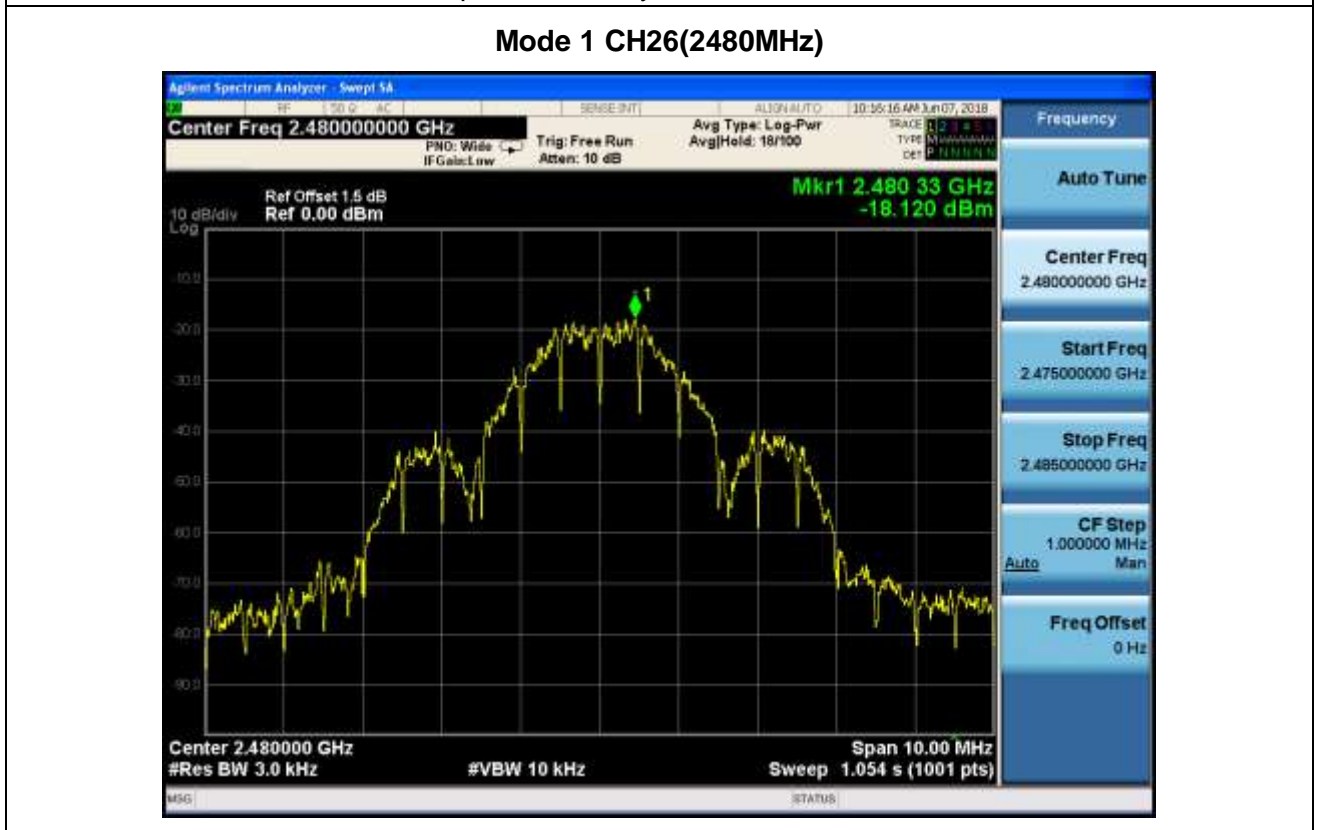
9.6. Test Result

Product Name	: IP surveillance camera (Wi-Fi & mobile)	Power	: AC 120V/60Hz
Test Mode	: Mode 1	Test Site	: TR-8
Test Date	: 2018.06.07	Test engineer	: Tommie

Mode	Channel	Test Frequency (MHz)	Measurement PSD (dBm/3kHz)	Total PSD (dBm/3kHz)	Limit (dBm/3kHz)	Result
1	11	2405	-19.434	-19.434	8	Pass
1	18	2440	-21.834	-21.834	8	Pass
1	26	2480	-18.120	-18.120	8	Pass

Note : The worst case of Power Spectral Density as below:

Mode 1 CH26(2480MHz)



10. Antenna Requirement

10.1. Limit

Antenna Requirement Limit
<p>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.</p>

10.2. Antenna Connector Construction

Antenna Connector Construction	
<input checked="" type="checkbox"/>	The use of a permanently attached antenna
<input type="checkbox"/>	The antenna use of a unique coupling to the intentional radiator
<input type="checkbox"/>	The use of a nonstandard antenna jack or electrical connector
Please refer to the attached document "Internal Photograph" to show the antenna connector.	

_____ The End _____