



Test Report

FCC Part15 Subpart C & RSS-247 Issue 2

Product Name : LED lamp
Model No. : 9290022176
FCC ID : 2AGBW9290022176X
IC : 20812-2176X

Applicant : Signify (China) Investment Co., Ltd.
Address : Building no.9, Lane 888, Tianlin Road, Minhang District,
Shanghai 200233, China

Date of Receipt : Jan. 07, 2019
Test Date : Jan. 07, 2019 ~ Mar. 01, 2019
Issued Date : Mar. 04, 2019
Report No. : 1912044R-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: Mar. 04, 2019
Report No. : 1912044R-RF-US-P06V02



Product Name : LED lamp
 Applicant : Signify (China) Investment Co., Ltd.
 Address : Building no.9, Lane 888, Tianlin Road, Minhang District, Shanghai 200233, China
 Manufacturer : Signify (China) Investment Co., Ltd.
 Address : Building no.9, Lane 888, Tianlin Road, Minhang District, Shanghai 200233, China
 Model No. : 9290022176
 FCC ID : 2AGBW9290022176X
 IC : 20812-2176X
 Brand Name : Philips
 EUT Voltage : 110-130Vac, 50-60 Hz, 7.5W
 Test Voltage : AC120V/60Hz
 Applicable Standard : FCC CFR Title 47 Part 15 Subpart C; ANSI C63.10:2013; KDB 558074 D01v05; RSS-Gen Issue 5 / RSS-247 Issue 2
 Test Result : Complied
 Performed Location : DEKRA Testing & Certification (Suzhou) Co., Ltd. No.99 Hongye Rd., Suzhou Industrial Park, Suzhou, 215006, Jiangsu, China
 TEL: +86-512-6251-5088 / FAX: +86-512-6251-5098
 FCC Designation Number: CN1199; ISED Lab Code: 4075B

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Approved By : Jack Zhang
 (Engineer Supervisor: Jack Zhang)

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History of This Test Report

REPORT NO.	VERSION	DESCRIPTION	ISSUED DATE
1912044R-RF-US-P06V02	V1.0	Initial Issued Report	Mar. 04, 2019

1. General Information

1.1. EUT Description

Product Name	LED lamp					
Model No.	9290022176					
EUT Voltage	110-130Vac, 50-60 Hz, 7.5W					
Test Voltage	AC 120V/60Hz					
Bluetooth Specification	V5.0					
Frequency Range	2402- 2480 MHz					
Channel Number	V5.0: 40					
Channel Separation	V5.0: 2MHz					
Type of Modulation	V5.0: GFSK					
PHYs	<input checked="" type="checkbox"/>	LE 1M	<input checked="" type="checkbox"/>	LE 2M	<input checked="" type="checkbox"/>	LE Coded S=2/8
Data Rate	<input checked="" type="checkbox"/>	1Mbit/s	<input checked="" type="checkbox"/>	2Mbit/s	<input checked="" type="checkbox"/>	500/125 Kbit/s
Antenna Type	Reference to Antenna List					
Peak Antenna Gain	Reference to Antenna List					

Note 1: We have evaluated both modes of LE 1M, LE 2M and LE coded, the power of LE 1M mode is higher than other mode, the test data of both modes is showed in the report with test items power and bandwidth; the test data of worse mode is showed with other test items.

Note 2: LED lamp supports two kinds of Crystal oscillator (murata/ Diodes), there is not any change in RF design, circuitry or construction for this device, including RF parameters (antenna, software, firmware and hardware versions, power, frequency ranges, etc.), so only power, spurious emission and band-edge were tested for different crystal oscillator, the test data of worse mode is showed with other test items.

1.2. Working Frequency of Each Channel:

Bluetooth Working Frequency of Each Channel: (For V5.0)							
Channel	Frequency	Channel	Frequency	Channel	Frequency	Channel	Frequency
00	2402 MHz	01	2404 MHz	02	2406 MHz	03	2408 MHz
04	2410 MHz	05	2412 MHz	06	2414 MHz	07	2416 MHz
08	2418 MHz	09	2420 MHz	10	2422 MHz	11	2424 MHz
12	2426 MHz	13	2428 MHz	14	2430 MHz	15	2432 MHz
16	2434 MHz	17	2436 MHz	18	2438 MHz	19	2440 MHz
20	2442 MHz	21	2444 MHz	22	2446 MHz	23	2448 MHz
24	2450 MHz	25	2452 MHz	26	2454 MHz	27	2456 MHz
28	2458 MHz	29	2460 MHz	30	2462 MHz	31	2464 MHz
32	2466 MHz	33	2468 MHz	34	2470 MHz	35	2472 MHz
36	2474 MHz	37	2476 MHz	38	2478 MHz	39	2480 MHz

1.3. Antenna information

Antenna manufacturer	N/A					
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"/>	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 checked="" type="checkbox"/>	PCB		
			<input type="checkbox"/>	Ceramic Chip Antenna		
			<input type="checkbox"/>	Metal plate type F antenna		
Antenna Gain	4.2dBi					

1.4. Mode of Operation

Test Mode
Mode 1: Transmit-1Mbps(GFSK_LE 1M)
Mode 2: Transmit-2Mbps(GFSK_LE 2M)
Mode 3: Transmit-125Kbps(GFSK_LE Coded)

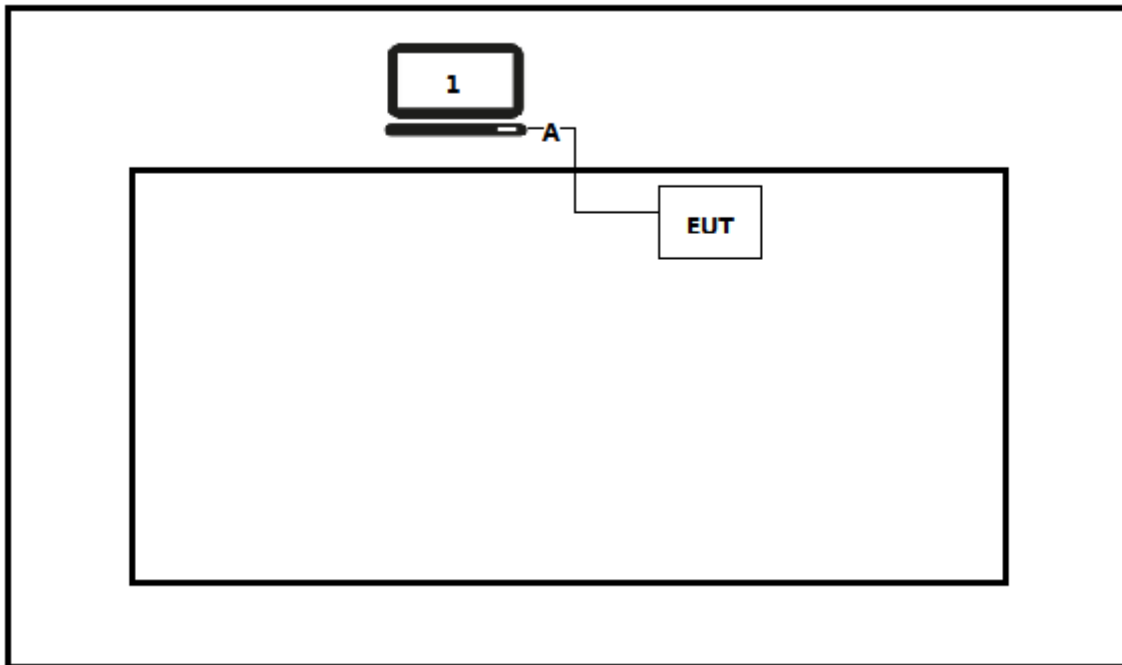
1.5. Tested System Details

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

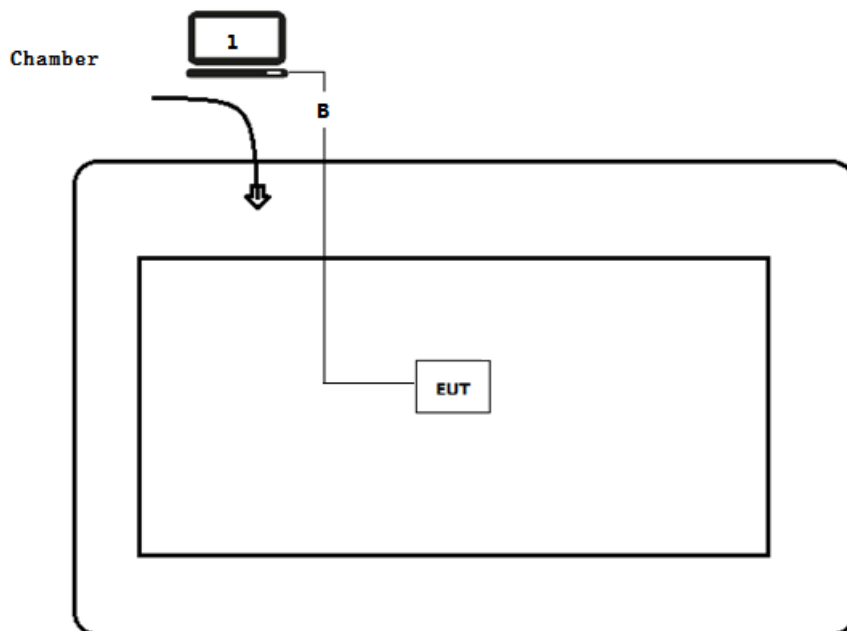
No.	Product	Manufacturer	Model No.	Serial No.	Power Cord
1	Notebook	Think Pad	2526	LV-A3285	Power by adapter
A	USB cable	N/A	N/A	N/A	Shielded,0.5m
B	USB cable	N/A	N/A	N/A	Shielded,10m

1.6. Configuration of Tested System

Test setup Diagram- AC Line Conducted Emission Test



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 RF software [m-center], and set the test mode and channel, then press OK to start to continue transmit.

2. Technical Test

2.1. Summary of Test Result

For FCC

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

For ISED

Performed Test Item	Normative References	Limit	Result
AC Power Line Conducted Emission	RSS-Gen Issue 5 Section 8.8	RSS-Gen	PASS
Emissions in restricted frequency bands	RSS-Gen Issue 5 Section 8.9	RSS-Gen	PASS
Emissions in non-restricted frequency bands	RSS-247 Issue 2 Section A5.5	$\geq 20\text{dBc}$	PASS
Radiated Emission Band Edge	RSS-247 Issue 2 Section A5.5	RSS-247	PASS
Occupied Bandwidth	RSS-Gen Issue 5 Section 6.6 RSS-247 Issue 2 Section A5.2(1)	$\geq 500\text{kHz}$	PASS
Fundamental emission output power	RSS-247 Issue 2 Section A5.4(4)	$\leq 30\text{dBm}$	PASS
Power Spectral Density	RSS-247 Issue 2 Section A5.2(2)	$\leq 8\text{dBm}/3\text{kHz}$	PASS
Antenna Requirement	RSS-Gen Issue 5 Section 8.3	RSS-Gen Issue 5	PASS

2.2. Test Frequency configuration:

Modulation Mode	Channel	Frequency	Channel	Frequency	Channel	Frequency
Mode1~3	00	2402 MHz	19	2440 MHz	39	2480MHz

2.3. 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

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

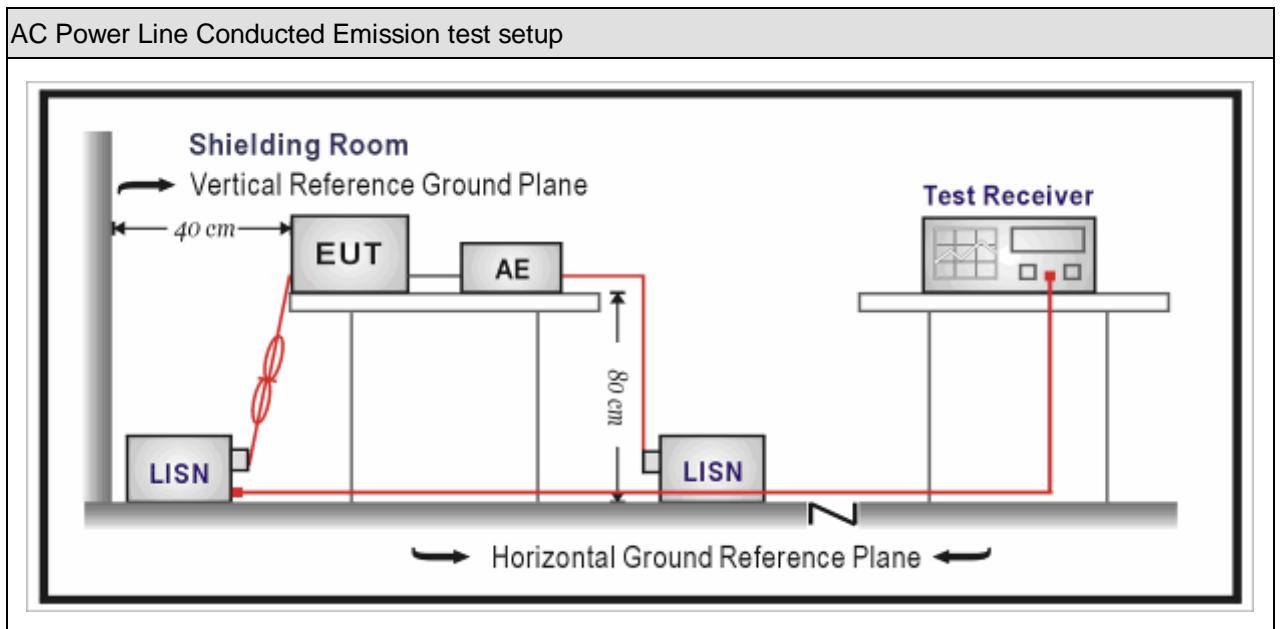
3. AC Power Line Conducted Emission

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	2018.07.16	2019.07.15
Two-Line V-Network	R&S	ENV 216	101044	2018.09.16	2019.09.15
50ohm Coaxial Switch	Anritsu	MP59B	6200464462	N/A	N/A
50ohm Termination	SHX	TF2	07081402	2018.09.16	2019.09.15
Temperature/Humidity Meter	Zhichen	ZC1-2	TR1-TH	2019.01.04	2020.01.03
Quietek EMI V3(test software)	Quietek	N/A	N/A	N/A	N/A

Note: All equipment is 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

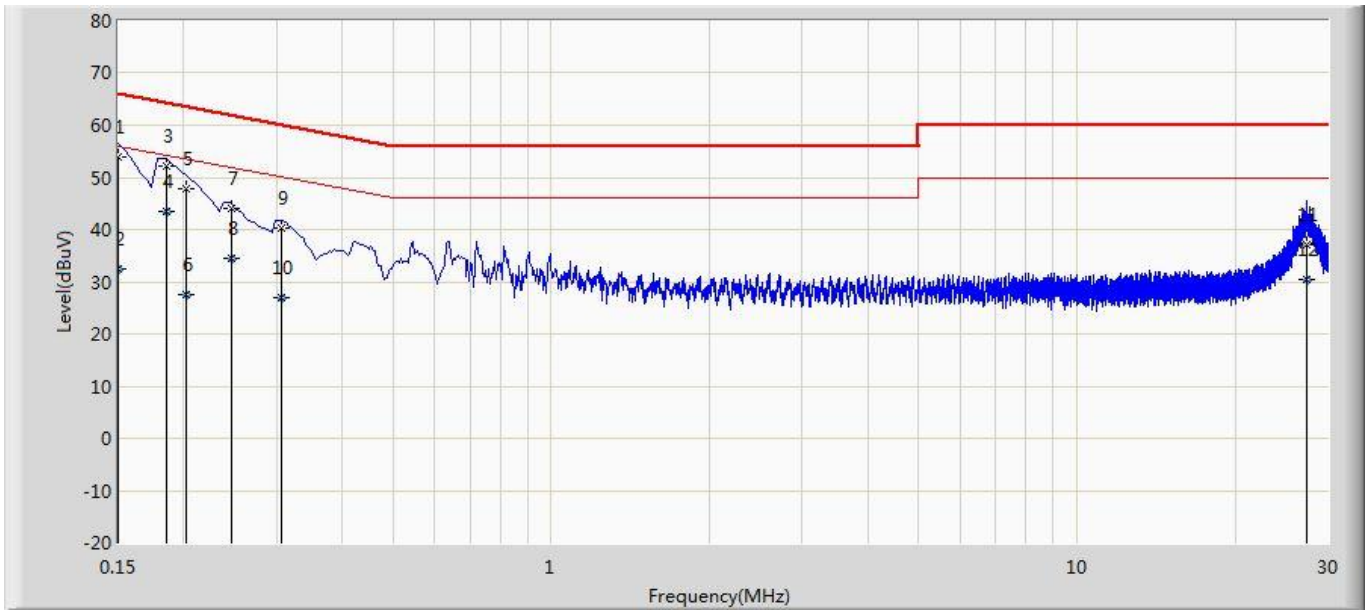
Note 1: The lower limit shall apply at the transition frequencies.
 Note 2: The limit decreases linearly with the logarithm of the frequency in the range 0.15 MHz to 0.5 MHz.

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

3.5. Test Result

Engineer: Allen	
Site: TR1	Time: 2019/02/19
Limit: FCC_Part15.107_CE_AC Power_ClassB	Margin: 0
Probe: ENV216_101190(0.009-30MHz)	Polarity: Line
EUT: LED lamp	Power: AC 120V/60Hz
Note: Mode 1	

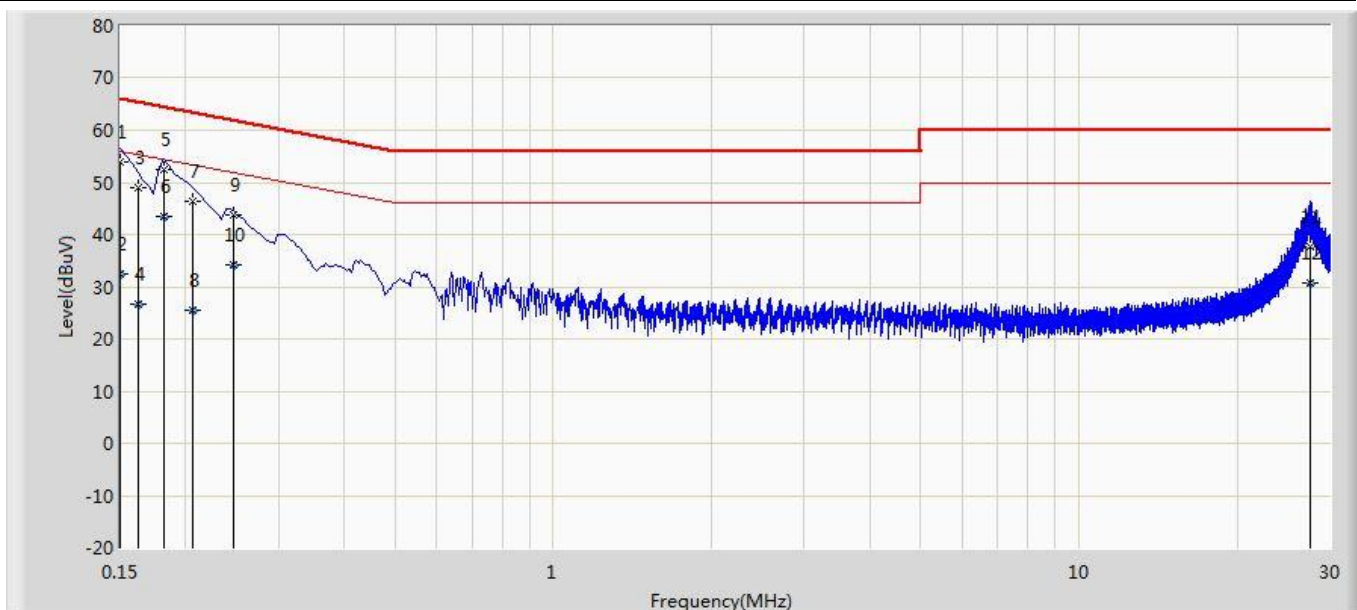


No	Mark	Frequency (MHz)	Measure Level (dBuV)	Reading Level (dBuV)	Over Limit (dB)	Limit (dBuV)	Probe (dB)	Cable (dB)	Amp (dB)	Type
1		0.150	53.959	44.324	-12.041	66.000	9.610	0.025	0.000	QP
2		0.150	32.425	22.790	-23.575	56.000	9.610	0.025	0.000	AV
3		0.186	52.247	42.616	-11.966	64.213	9.603	0.028	0.000	QP
4	*	0.186	43.437	33.807	-10.776	54.213	9.603	0.028	0.000	AV
5		0.202	47.702	38.072	-15.826	63.528	9.601	0.029	0.000	QP
6		0.202	27.570	17.940	-25.958	53.528	9.601	0.029	0.000	AV
7		0.246	44.169	34.538	-17.722	61.891	9.600	0.031	0.000	QP
8		0.246	34.448	24.817	-17.443	51.891	9.600	0.031	0.000	AV
9		0.306	40.224	30.590	-19.854	60.078	9.600	0.034	0.000	QP
10		0.306	26.818	17.184	-23.260	50.078	9.600	0.034	0.000	AV
11		27.310	37.057	26.289	-22.943	60.000	10.429	0.339	0.000	QP
12		27.310	30.296	19.529	-19.704	50.000	10.429	0.339	0.000	AV

Note:

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

Engineer: Allen	
Site: TR1	Time: 2019/02/19
Limit: FCC_Part15.107_CE_AC Power_ClassB	Margin: 0
Probe: ENV216_101190(0.009-30MHz)	Polarity: Neutral
EUT: LED lamp	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		0.150	53.908	44.289	-12.092	66.000	9.594	0.025	0.000	QP
2		0.150	32.400	22.781	-23.600	56.000	9.594	0.025	0.000	AV
3		0.162	48.874	39.255	-16.487	65.361	9.593	0.026	0.000	QP
4		0.162	26.712	17.093	-28.649	55.361	9.593	0.026	0.000	AV
5		0.182	52.459	42.834	-11.935	64.394	9.597	0.028	0.000	QP
6	*	0.182	43.389	33.764	-11.005	54.394	9.597	0.028	0.000	AV
7		0.206	46.466	36.838	-16.900	63.365	9.599	0.029	0.000	QP
8		0.206	25.635	16.008	-27.730	53.365	9.599	0.029	0.000	AV
9		0.246	43.818	34.189	-18.073	61.891	9.598	0.031	0.000	QP
10		0.246	34.067	24.439	-17.824	51.891	9.598	0.031	0.000	AV
11		27.526	37.647	26.676	-22.353	60.000	10.630	0.341	0.000	QP
12		27.526	30.823	19.852	-19.177	50.000	10.630	0.341	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

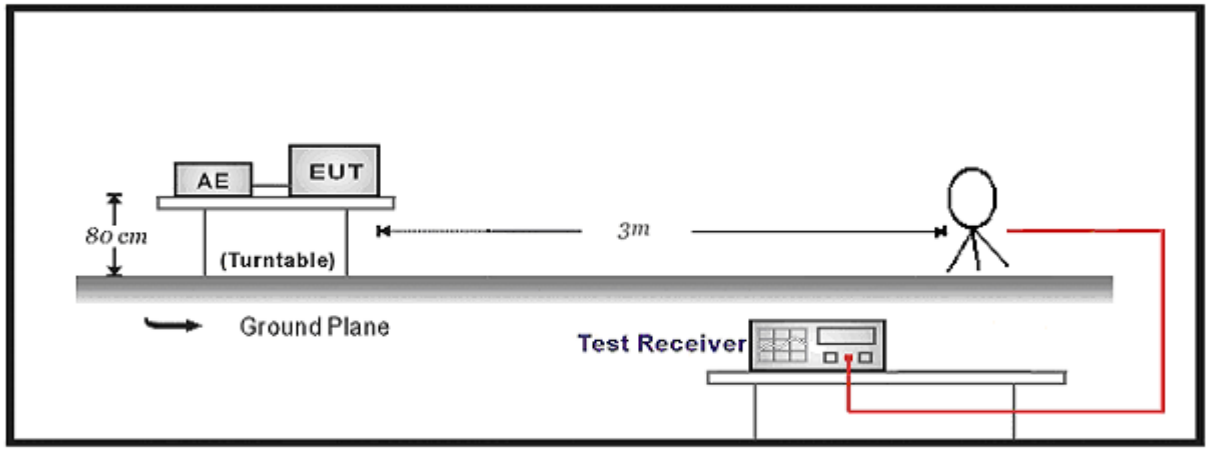
4.1. Test Equipment

Radiated Emission(Below 1GHz) / AC-2					
Instrument	Manufacturer	Type No.	Serial No.	Cal. Date	Cal. Due Date
EMI Test Receiver	R&S	ESCI	100573	2018.03.29	2019.03.28
Loop Antenna	R&S	HFH2-Z2	833799/003	2018.11.16	2019.11.15
Bilog Antenna	Teseq GmbH	CBL6112D	27611	2018.10.16	2019.10.15
Coaxial Cable	Huber+Suhner	SUCOFLEX 106	AC2-C	2018.03.02	2019.03.01
Temperature/Humidity Meter	Zhichen	ZC1-2	AC2-TH	2019.01.03	2020.01.02
Quietek EMI V3(test software)	Quietek	N/A	N/A	N/A	N/A
Note: All equipment is calibrated with traceable calibrations. Each calibration is traceable to the national or international standards.					

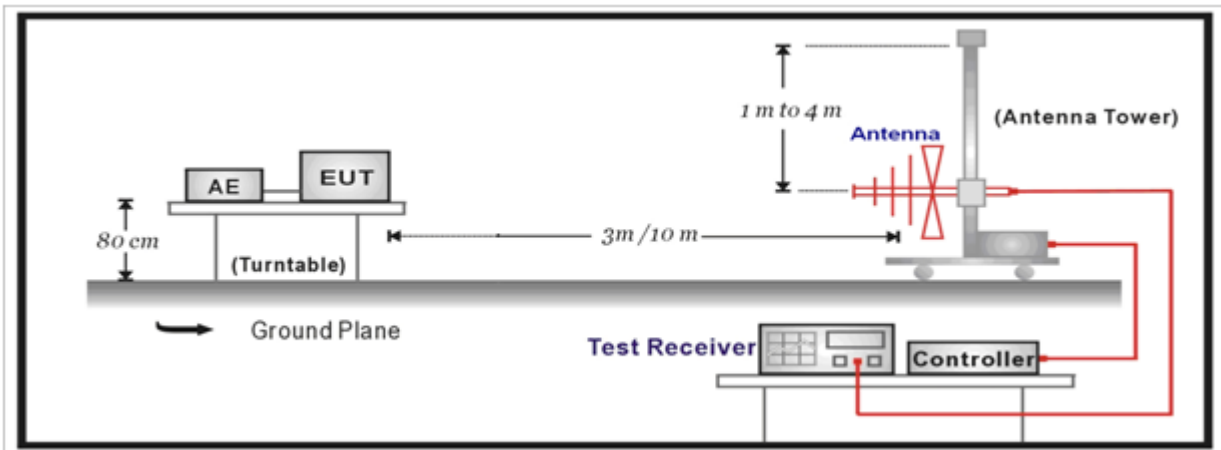
Radiated Emission(Above 1GHz) / AC-5					
Instrument	Manufacturer	Type No.	Serial No.	Cal. Date	Cal. Due Date
Spectrum Analyzer	Agilent	E4446A	MY45300103	2019.01.04	2020.01.03
Preamplifier	Miteq	NSP1800-25	1364185	2018.05.06	2019.05.05
Preamplifier	Quietek	AP-040G	CHM-0906001	2018.05.06	2019.05.05
DRG Horn	ETS-Lindgren	3117	00123988	2019.01.22	2020.01.21
Broad-Band Horn Antenna	Schwarzbeck	BBHA9170	294	2018.11.25	2019.11.24
Coaxial Cable	Huber+Suhner	SUCOFLEX 106	AC5-C1	2018.03.02	2019.03.01
Coaxial Cable	Huber+Suhner	SUCOFLEX 106	AC5-C2	2018.03.02	2019.03.01
Coaxial Cable	Huber+Suhner	SUCOFLEX 102	AC5-C3	2018.03.02	2019.03.01
EMI Receiver	Agilent	N9038A	MY51210196	2018.06.10	2019.06.09
Temperature/Humidity Meter	Zhichen	ZC1-2	AC5-TH	2019.01.04	2020.01.03
Quietek EMI V3(test software)	Quietek	N/A	N/A	N/A	N/A
Note: All equipment is calibrated with traceable calibrations. Each calibration is traceable to the national or international standards.					

4.2. Test Setup

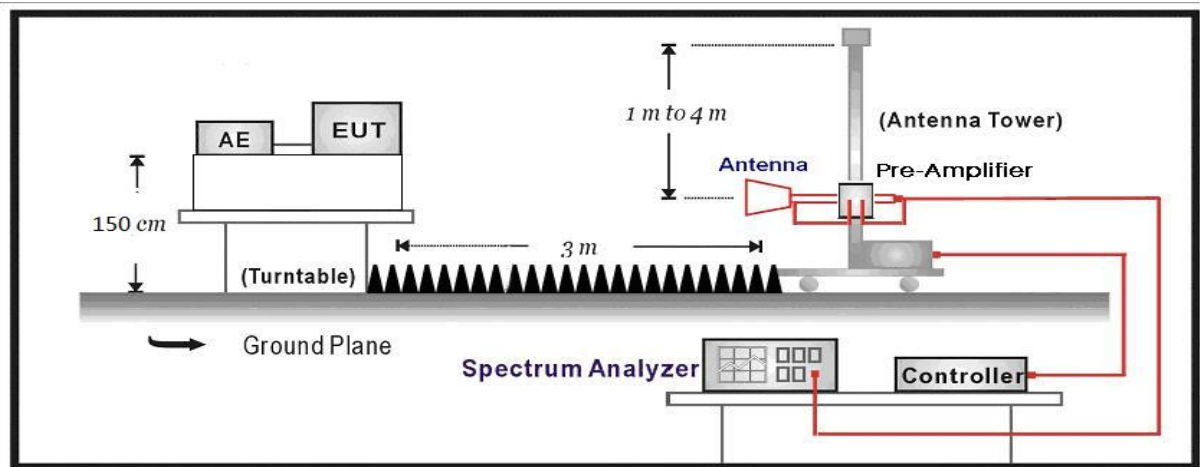
Below 30MHz Test Setup:



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			

For ISED:

Restricted Bands of operation			
Frequency (MHz)	Frequency (MHz)	Frequency (MHz)	Frequency (GHz)
0.090-0.110	13.36-13.41	1645.5-1646.5	9.0-9.2
2.1735-2.1905	16.42-16.423	1660-1710	9.3-9.5
3.020-3.026	16.69475-16.69525	1718.8-1722.2	10.6-12.7
4.125-4.128	16.80425-16.80475	2200-2300	13.25-13.4
4.17725-4.17775	25.5-25.67	2310-2390	14.47-14.5
4.20725-4.20775	37.5-38.25	2655-2900	15.35-16.2
5.677-5.683	73-74.6	3260-3267	17.7-21.4
6.215-6.218	74.8-75.2	3332-3339	22.01-23.12
6.26775-6.26825	108-138	3345.8-3358	23.6-24.0
6.31175-6.31225	156.52475-156.52525	3500-4400	31.2-31.8
8.291-8.294	156.7-156.9	4500-5150	36.43-36.5
8.362-8.366	240-285	5350-5460	Above 38.6
8.37625-8.38675	322-335.4	7250-7750	
8.41425-8.41475	399.9-410	8025-8500	
12.29-12.293	608-614		
12.51975-12.52025	960-1427		
12.57675-12.57725	1435-1626.5		

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)

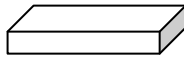
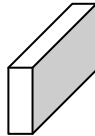
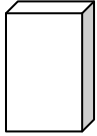



Note 1: At frequencies below 30 MHz, measurements may be performed at a distance closer than that specified in the regulations; however, an attempt should be made to avoid making measurements in the near field. Pending the development of an appropriate measurement procedure for measurements performed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

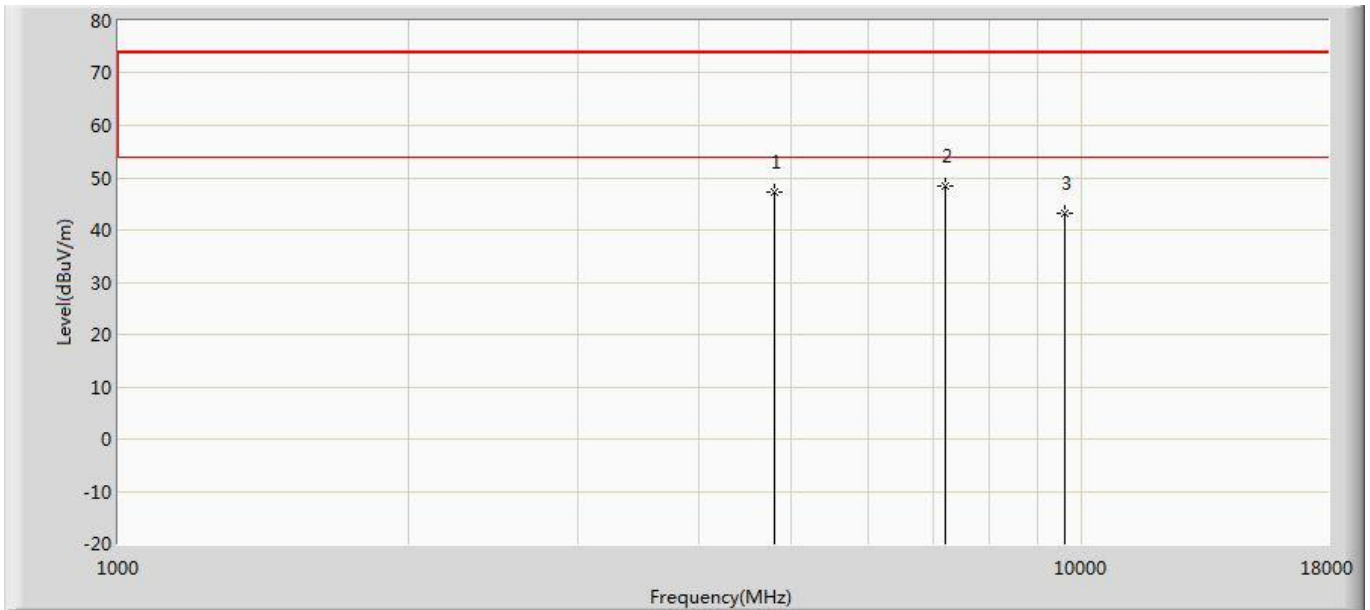
Test Method			
	References Rule	Chapter	Description
<input type="checkbox"/>	ANSI C63.10	11.11	Emissions in non-restricted frequency bands
	<input type="checkbox"/> ANSI C63.10	11.11.2	Reference level measurement
	<input type="checkbox"/> ANSI C63.10	11.11.3	Emission level measurement
<input checked="" 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 1~3			
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 1		
				
	<input type="checkbox"/>	Chain 1	Chain 2	
				
	<input type="checkbox"/>	Chain 1	Chain 2	Chain 3
				

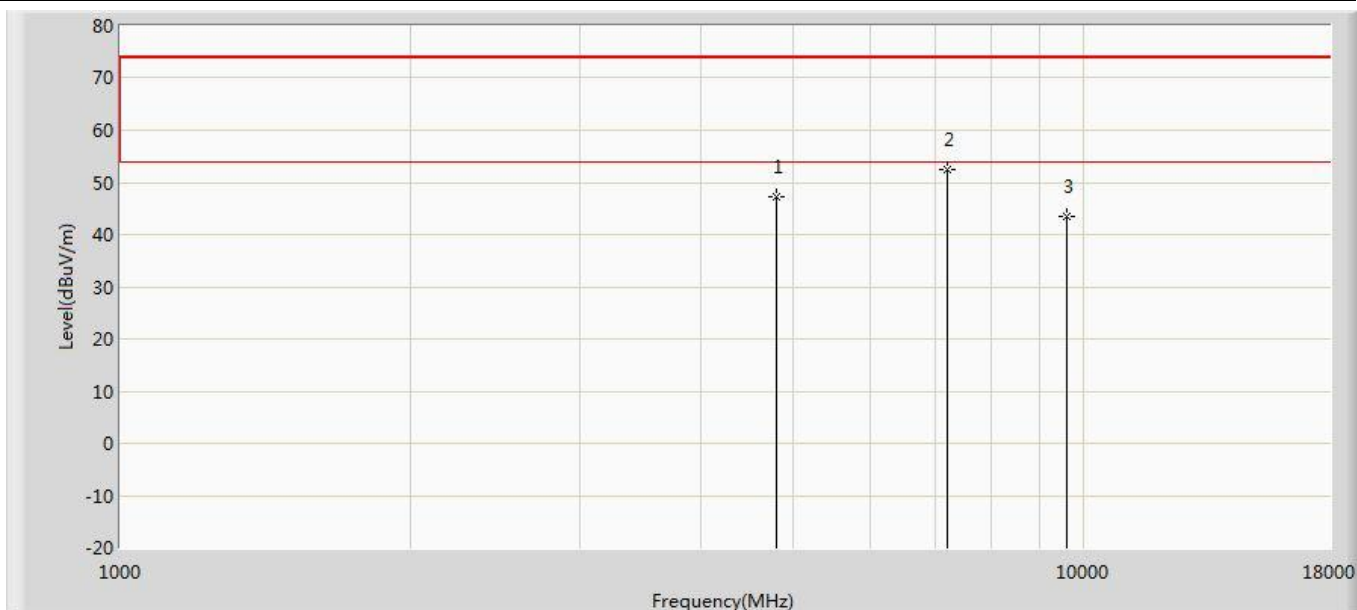
4.6. Test Result

Engineer: Tommie	
Site: AC5	Time: 2019/01/31 - 19:53
Limit: FCC_Part15.209_RE(3m)	Margin: 0
Probe: Horn_3117_00167055(1-18GHz)	Polarity: Horizontal
EUT: LED lamp-murata	Power: AC 120V/60Hz
Note: Mode 1:Transmit at 2402MHz by BLE	



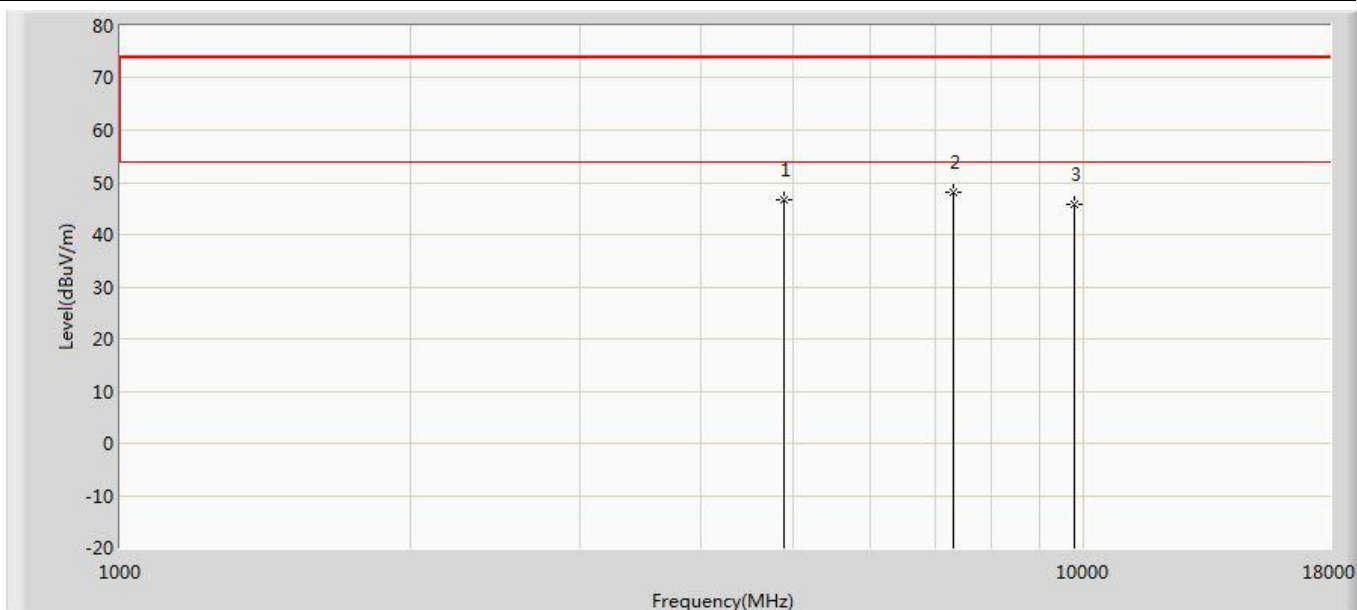
No	Mark	Frequency (MHz)	Measure Level (dBuV/m)	Reading Level (dBuV)	Over Limit (dB)	Limit (dBuV/m)	Factor (dB)	Type
1		4799.500	47.198	48.834	-26.802	74.000	-1.636	PK
2	*	7205.000	48.304	46.368	-25.696	74.000	1.936	PK
3		9608.000	43.333	38.434	-30.667	74.000	4.899	PK

Engineer: Tommie	
Site: AC5	Time: 2019/01/31 - 19:53
Limit: FCC_Part15.209_RE(3m)	Margin: 0
Probe: Horn_3117_00167055(1-18GHz)	Polarity: Vertical
EUT: LED lamp-murata	Power: AC 120V/60Hz
Note: Mode 1:Transmit at 2402MHz by BLE	



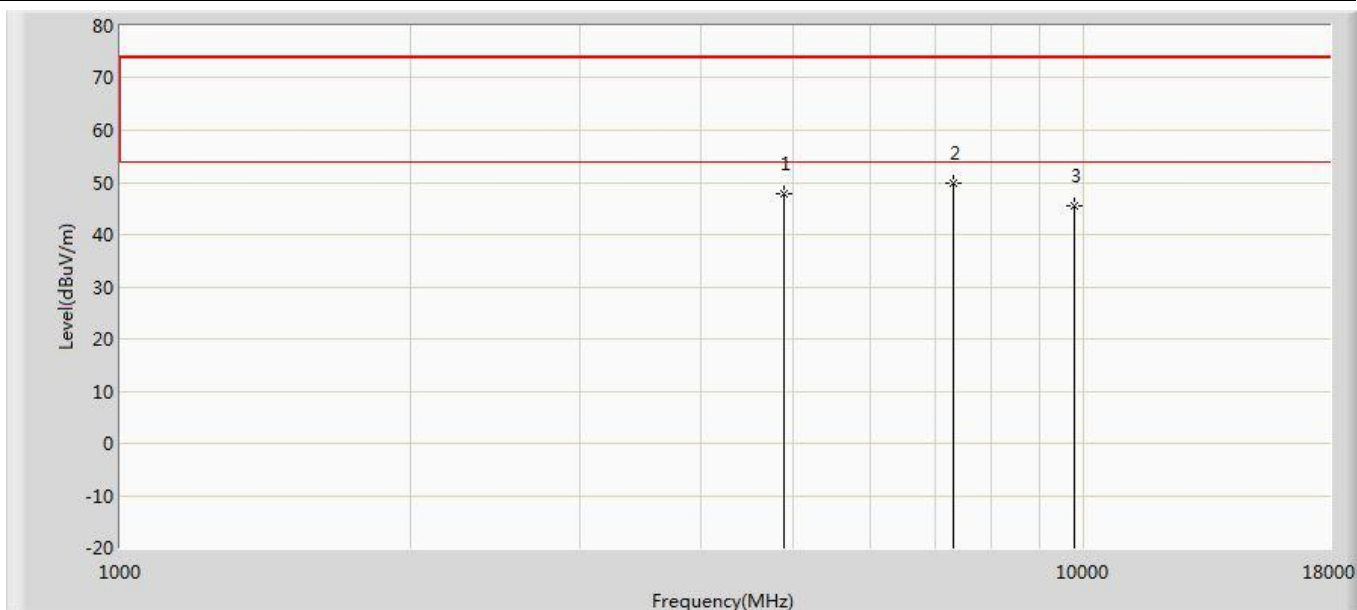
No	Mark	Frequency (MHz)	Measure Level (dBuV/m)	Reading Level (dBuV)	Over Limit (dB)	Limit (dBuV/m)	Factor (dB)	Type
1		4799.500	47.200	48.836	-26.800	74.000	-1.636	PK
2	*	7205.000	52.598	50.662	-21.402	74.000	1.936	PK
3		9608.000	43.364	38.465	-30.636	74.000	4.899	PK

Engineer: Tommie	
Site: AC5	Time: 2019/01/31 - 19:53
Limit: FCC_Part15.209_RE(3m)	Margin: 0
Probe: Horn_3117_00167055(1-18GHz)	Polarity: Horizontal
EUT: LED lamp-murata	Power: AC 120V/60Hz
Note: Mode 1:Transmit at 2440MHz by BLE	



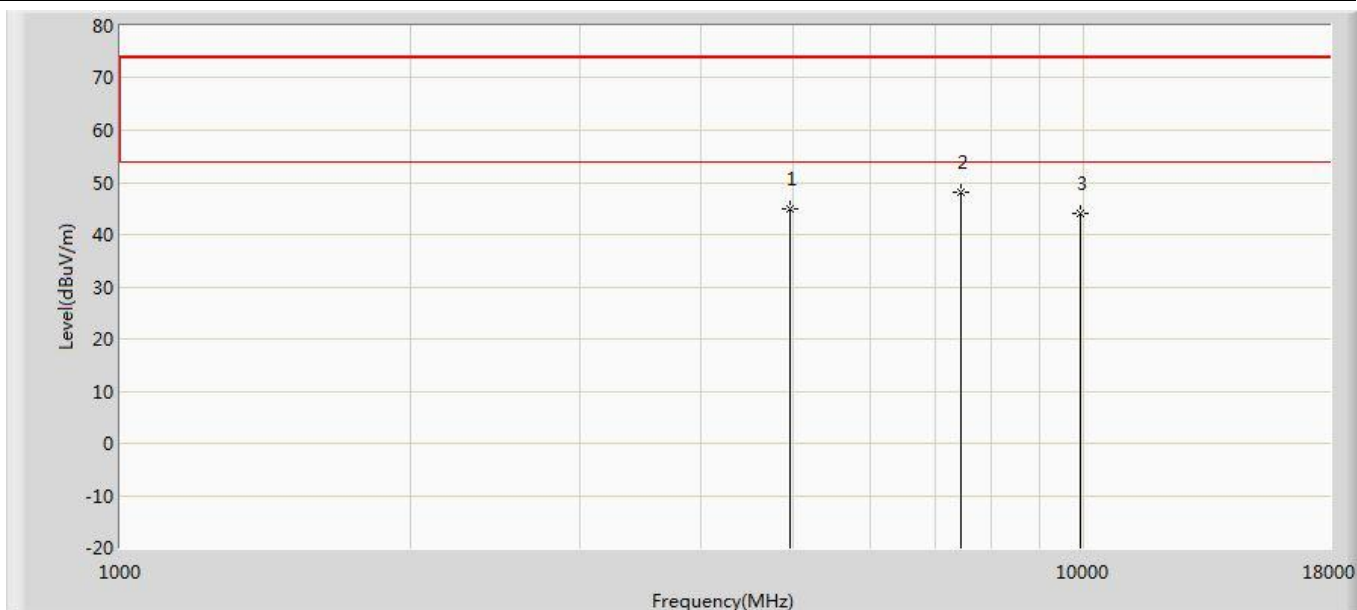
No	Mark	Frequency (MHz)	Measure Level (dBuV/m)	Reading Level (dBuV)	Over Limit (dB)	Limit (dBuV/m)	Factor (dB)	Type
1		4884.500	46.613	47.971	-27.387	74.000	-1.358	PK
2	*	7315.500	48.067	46.222	-25.933	74.000	1.845	PK
3		9764.000	45.736	39.736	-28.264	74.000	6.001	PK

Engineer: Tommie	
Site: AC5	Time: 2019/01/31 - 19:53
Limit: FCC_Part15.209_RE(3m)	Margin: 0
Probe: Horn_3117_00167055(1-18GHz)	Polarity: Vertical
EUT: LED lamp-murata	Power: AC 120V/60Hz
Note: Mode 1:Transmit at 2440MHz by BLE	



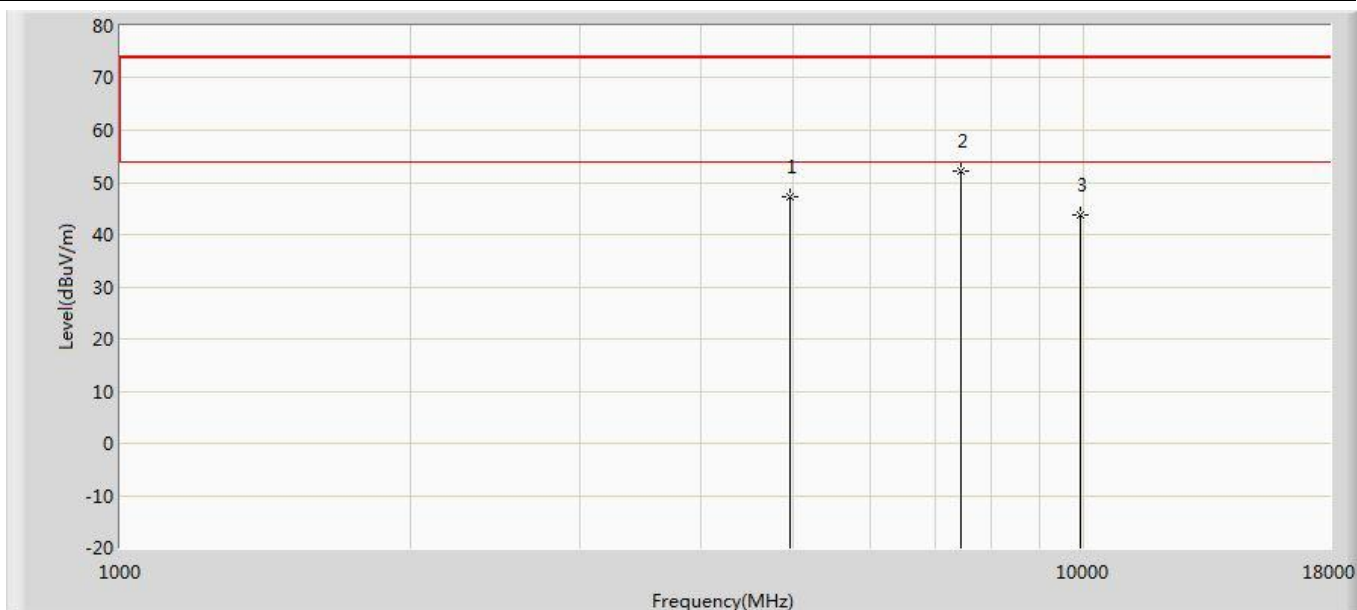
No	Mark	Frequency (MHz)	Measure Level (dBuV/m)	Reading Level (dBuV)	Over Limit (dB)	Limit (dBuV/m)	Factor (dB)	Type
1		4876.000	47.904	49.123	-26.096	74.000	-1.219	PK
2	*	7315.500	49.806	47.961	-24.194	74.000	1.845	PK
3		9764.000	45.606	39.606	-28.394	74.000	6.001	PK

Engineer: Tommie	
Site: AC5	Time: 2019/01/31 - 19:54
Limit: FCC_Part15.209_RE(3m)	Margin: 0
Probe: Horn_3117_00167055(1-18GHz)	Polarity: Horizontal
EUT: LED lamp-murata	Power: AC 120V/60Hz
Note: Mode 1:Transmit at 2480MHz by BLE	



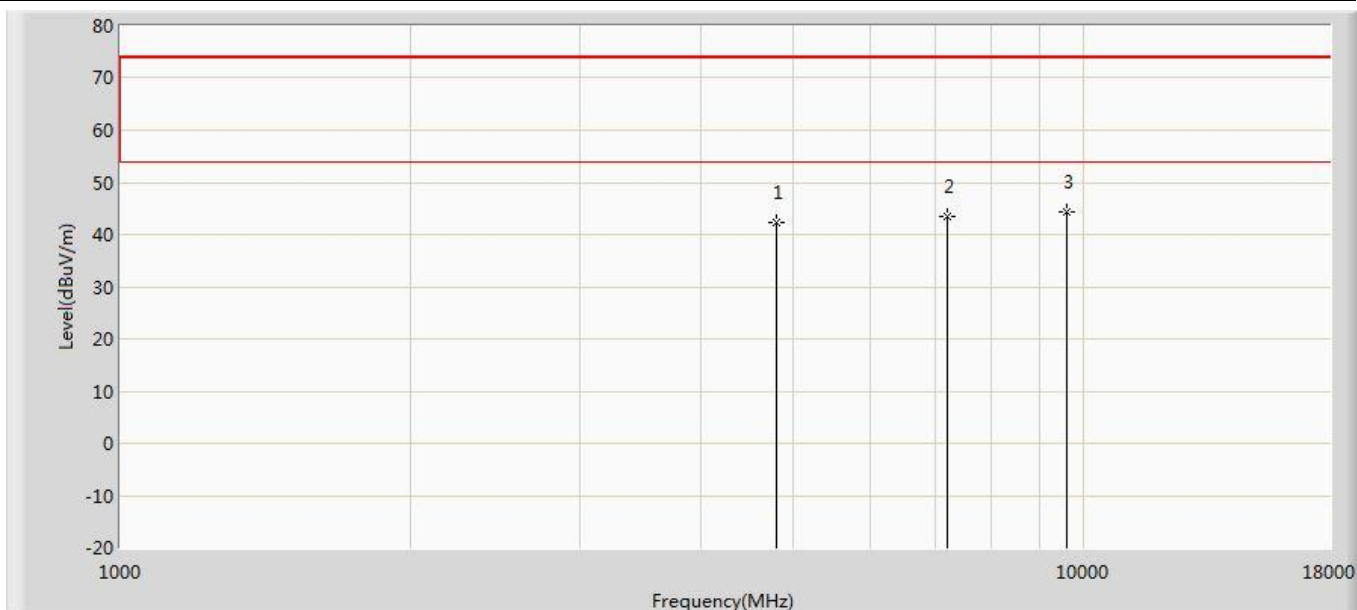
No	Mark	Frequency (MHz)	Measure Level (dBuV/m)	Reading Level (dBuV)	Over Limit (dB)	Limit (dBuV/m)	Factor (dB)	Type
1		4961.000	44.942	46.098	-29.058	74.000	-1.156	PK
2	*	7443.000	48.011	45.522	-25.989	74.000	2.489	PK
3		9920.000	43.917	38.663	-30.083	74.000	5.253	PK

Engineer: Tommie	
Site: AC5	Time: 2019/01/31 - 19:54
Limit: FCC_Part15.209_RE(3m)	Margin: 0
Probe: Horn_3117_00167055(1-18GHz)	Polarity: Vertical
EUT: LED lamp-murata	Power: AC 120V/60Hz
Note: Mode 1:Transmit at 2480MHz by BLE	



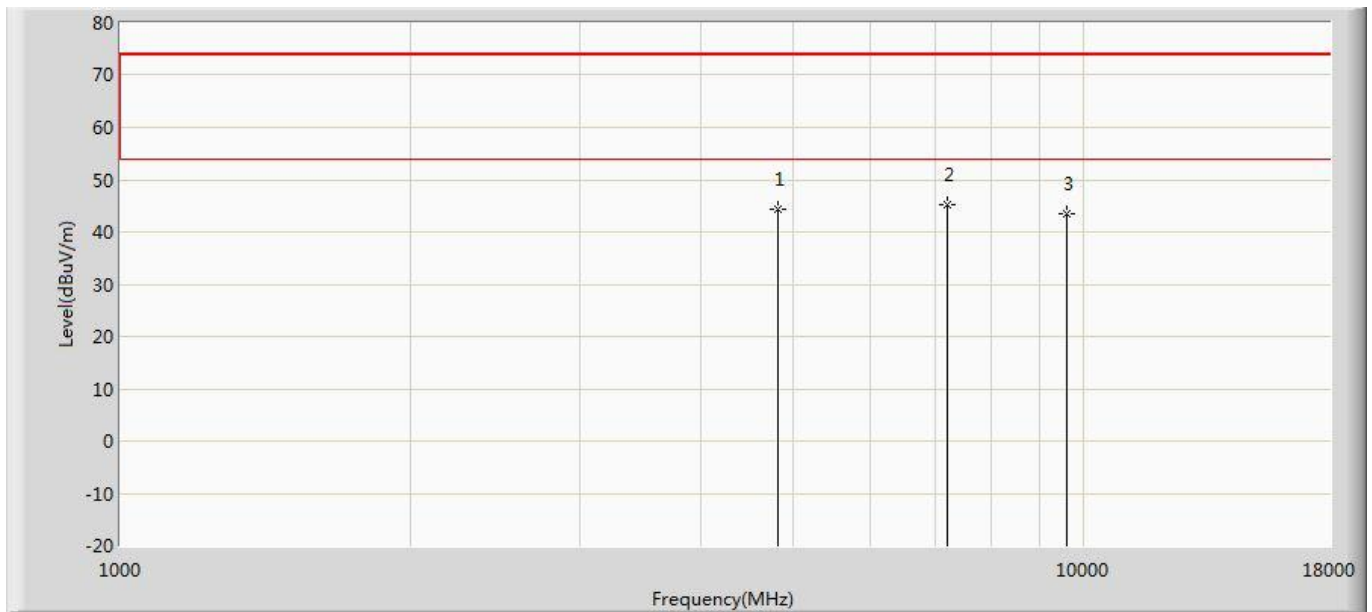
No	Mark	Frequency (MHz)	Measure Level (dBuV/m)	Reading Level (dBuV)	Over Limit (dB)	Limit (dBuV/m)	Factor (dB)	Type
1		4961.000	47.107	48.263	-26.893	74.000	-1.156	PK
2	*	7443.000	52.056	49.567	-21.944	74.000	2.489	PK
3		9920.000	43.906	38.652	-30.094	74.000	5.253	PK

Engineer: Tommie	
Site: AC5	Time: 2019/02/28 - 19:52
Limit: FCC_Part15.209_RE(3m)	Margin: 0
Probe: Horn_3117_00167055(1-18GHz)	Polarity: Horizontal
EUT: LED lamp-Diodes	Power: AC 120V/60Hz
Note: Mode 1:TRansmit at 2402MHz by BLE	



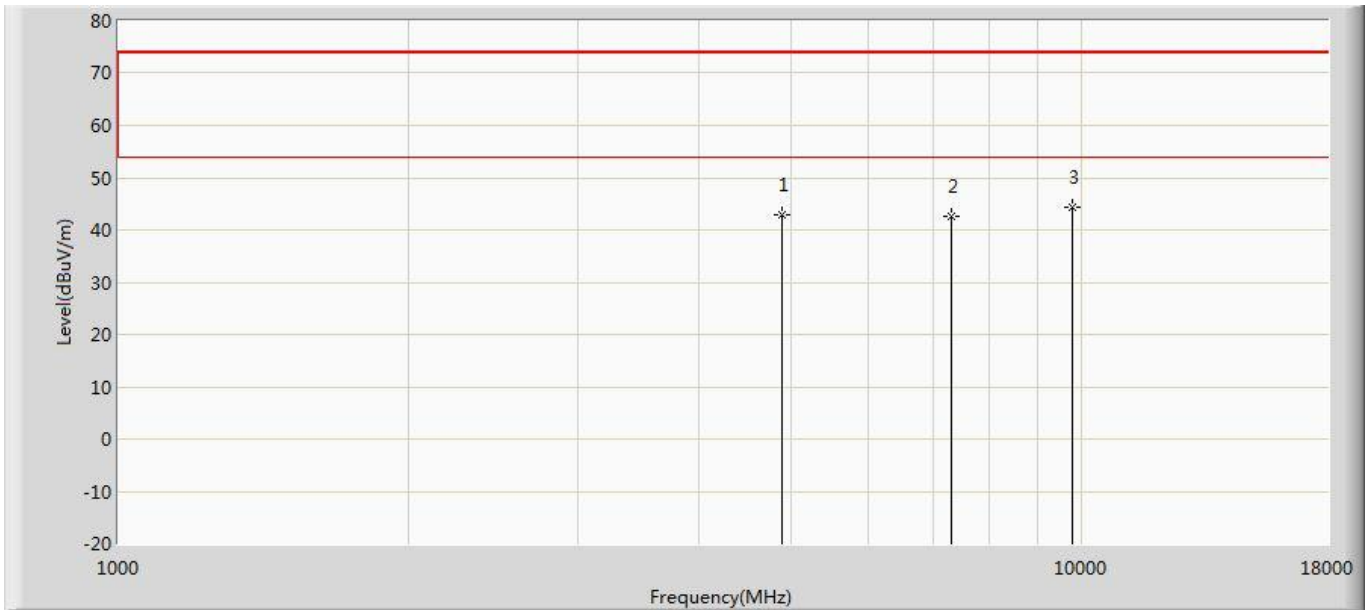
No	Mark	Frequency (MHz)	Measure Level (dBuV/m)	Reading Level (dBuV)	Over Limit (dB)	Limit (dBuV/m)	Factor (dB)	Type
1		4804.000	42.307	44.030	-31.693	74.000	-1.723	PK
2		7206.000	43.385	41.466	-30.615	74.000	1.919	PK
3	*	9608.000	44.236	39.337	-29.764	74.000	4.899	PK

Profile: 1912044R	Page No.: 16
Engineer: Tommie	
Site: AC5	Time: 2019/02/28 - 19:52
Limit: FCC_Part15.209_RE(3m)	Margin: 0
Probe: Horn_3117_00167055(1-18GHz)	Polarity: Vertical
EUT: LED lamp-Diodes	Power: AC 120V/60Hz
Note: Mode 1:TRansmit at 2402MHz by BLE	



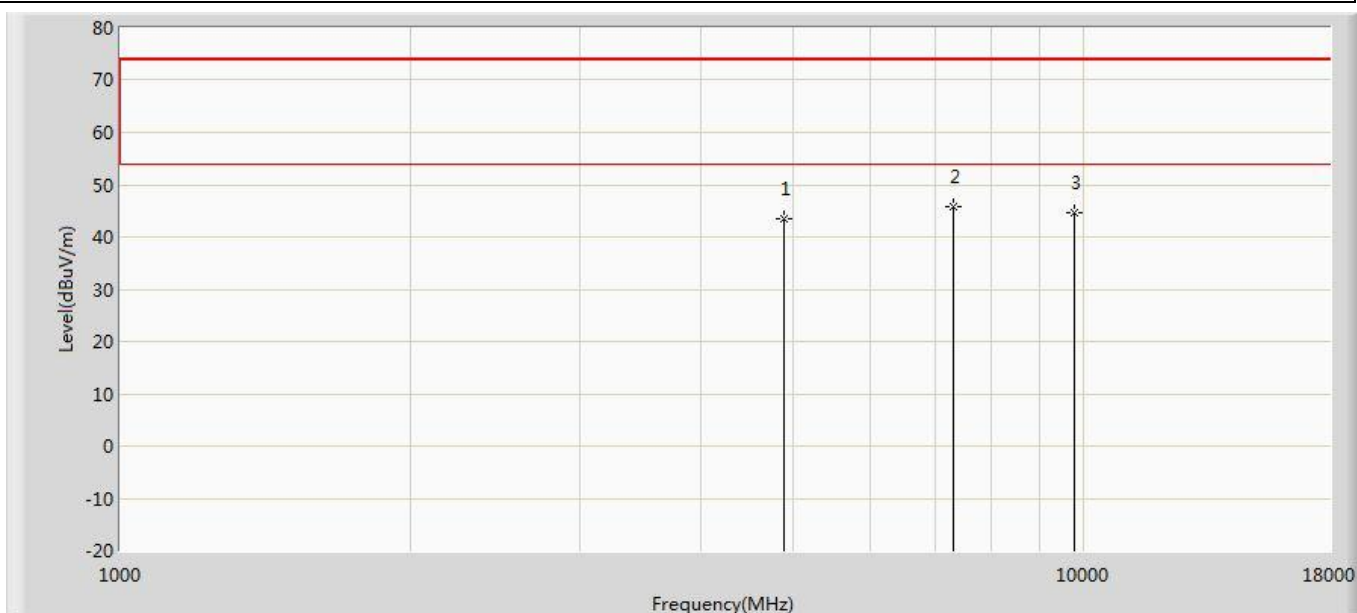
No	Mark	Frequency (MHz)	Measure Level (dBuV/m)	Reading Level (dBuV)	Over Limit (dB)	Limit (dBuV/m)	Factor (dB)	Type
1		4808.000	44.436	46.237	-29.564	74.000	-1.801	PK
2	*	7205.000	45.360	43.424	-28.640	74.000	1.936	PK
3		9608.000	43.552	38.653	-30.448	74.000	4.899	PK

Profile: 1912044R	Page No.: 17
Engineer: Tommie	
Site: AC5	Time: 2019/02/28 - 19:52
Limit: FCC_Part15.209_RE(3m)	Margin: 0
Probe: Horn_3117_00167055(1-18GHz)	Polarity: Horizontal
EUT: LED lamp-Diodes	Power: AC 120V/60Hz
Note: Mode 1:TRansmit at 2441MHz by BLE	



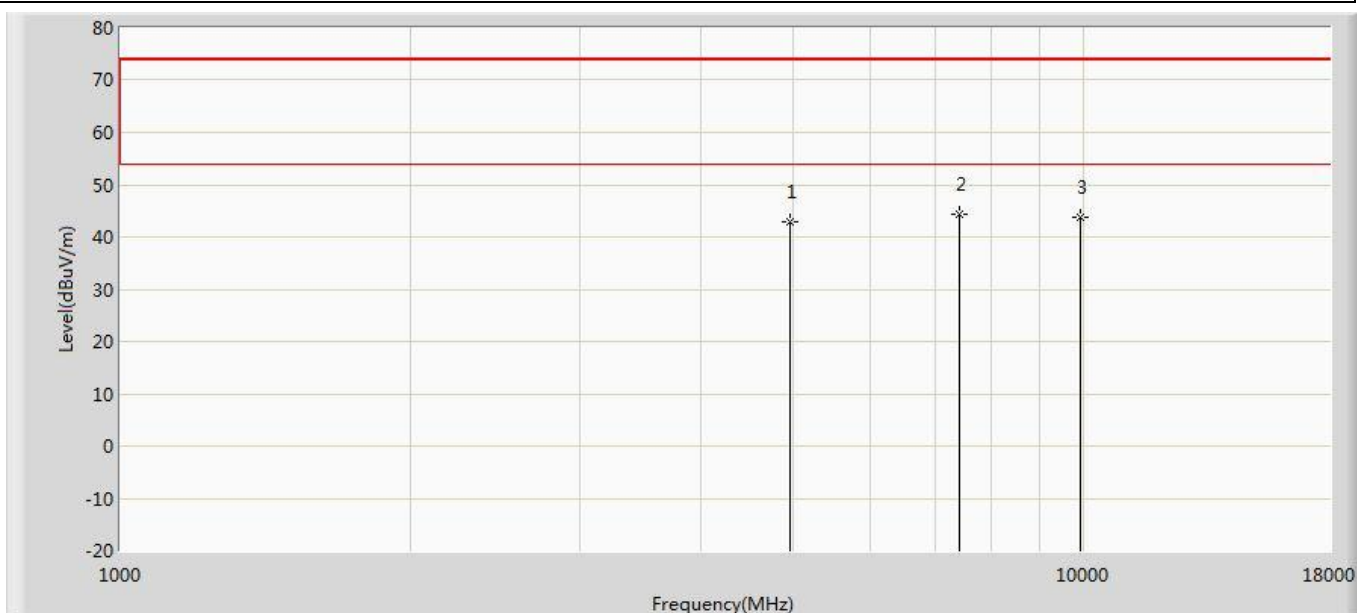
No	Mark	Frequency (MHz)	Measure Level (dBuV/m)	Reading Level (dBuV)	Over Limit (dB)	Limit (dBuV/m)	Factor (dB)	Type
1		4884.500	42.982	44.340	-31.018	74.000	-1.358	PK
2		7323.000	42.533	40.625	-31.467	74.000	1.909	PK
3	*	9764.000	44.248	38.248	-29.752	74.000	6.001	PK

Profile: 1912044R	Page No.: 18
Engineer: Tommie	
Site: AC5	Time: 2019/02/28 - 19:52
Limit: FCC_Part15.209_RE(3m)	Margin: 0
Probe: Horn_3117_00167055(1-18GHz)	Polarity: Vertical
EUT: LED lamp-Diodes	Power: AC 120V/60Hz
Note: Mode 1:TRansmit at 2441MHz by BLE	



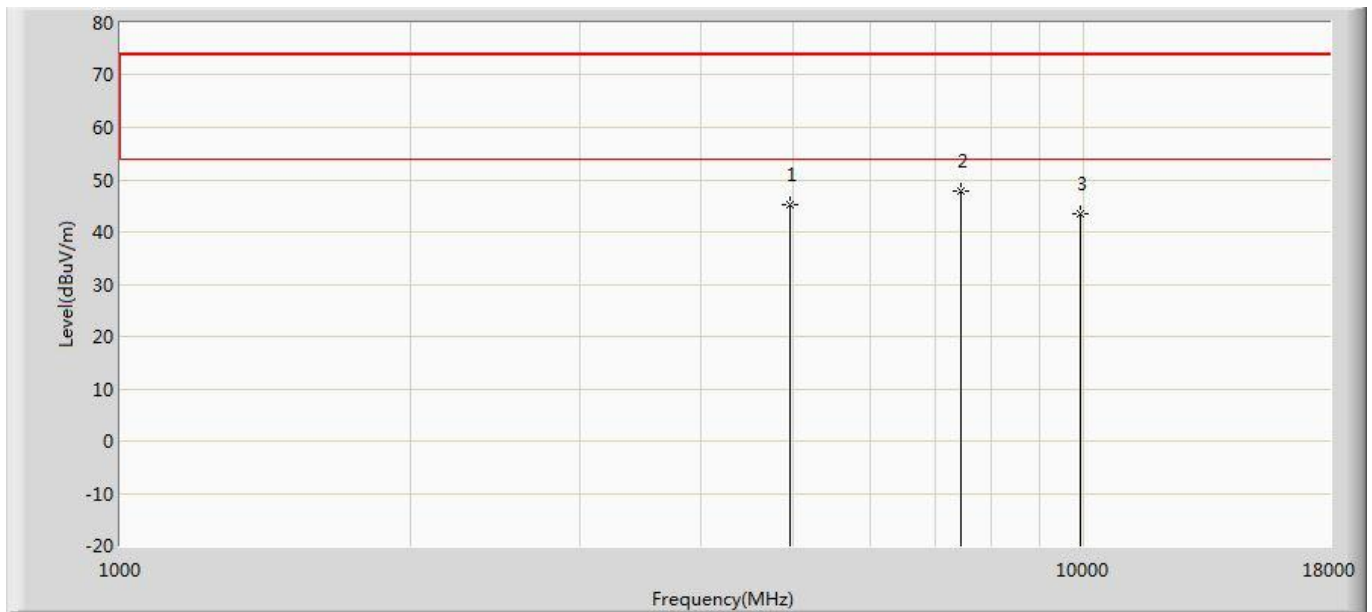
No	Mark	Frequency (MHz)	Measure Level (dBuV/m)	Reading Level (dBuV)	Over Limit (dB)	Limit (dBuV/m)	Factor (dB)	Type
1		4884.500	43.449	44.807	-30.551	74.000	-1.358	PK
2	*	7324.000	45.666	43.749	-28.334	74.000	1.917	PK
3		9764.000	44.540	38.540	-29.460	74.000	6.001	PK

Profile: 1912044R	Page No.: 19
Engineer: Tommie	
Site: AC5	Time: 2019/02/28 - 19:52
Limit: FCC_Part15.209_RE(3m)	Margin: 0
Probe: Horn_3117_00167055(1-18GHz)	Polarity: Horizontal
EUT: LED lamp-Diodes	Power: AC 120V/60Hz
Note: Mode 1:TRansmit at 2480MHz by BLE	



No	Mark	Frequency (MHz)	Measure Level (dBuV/m)	Reading Level (dBuV)	Over Limit (dB)	Limit (dBuV/m)	Factor (dB)	Type
1		4960.000	42.844	43.992	-31.156	74.000	-1.148	PK
2	*	7440.000	44.296	41.870	-29.704	74.000	2.426	PK
3		9920.000	43.741	38.487	-30.259	74.000	5.253	PK

Profile: 1912044R	Page No.: 20
Engineer: Tommie	
Site: AC5	Time: 2019/02/28 - 19:52
Limit: FCC_Part15.209_RE(3m)	Margin: 0
Probe: Horn_3117_00167055(1-18GHz)	Polarity: Vertical
EUT: LED lamp-Diodes	Power: AC 120V/60Hz
Note: Mode 1:TRansmit at 2480MHz by BLE	



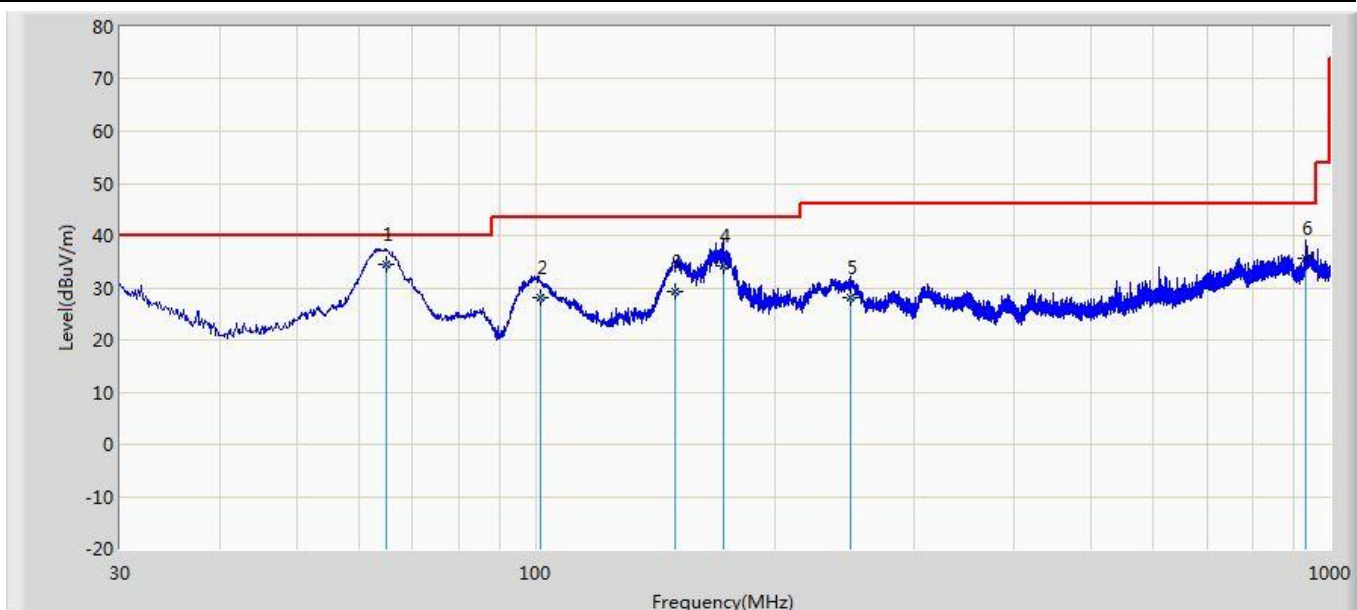
No	Mark	Frequency (MHz)	Measure Level (dBuV/m)	Reading Level (dBuV)	Over Limit (dB)	Limit (dBuV/m)	Factor (dB)	Type
1		4961.000	45.124	46.280	-28.876	74.000	-1.156	PK
2	*	7443.000	47.777	45.288	-26.223	74.000	2.489	PK
3		9920.000	43.524	38.270	-30.476	74.000	5.253	PK

Note:

1. Measured Level = Reading Level + Factor.
2. The test frequency range, 9kHz~30MHz, 18GHz~26GHz, both of the worst case are at least 20dB below the limits, therefore no data appear in the report.
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.
4. As the radiated emission was performed, so conducted emission was not tested.

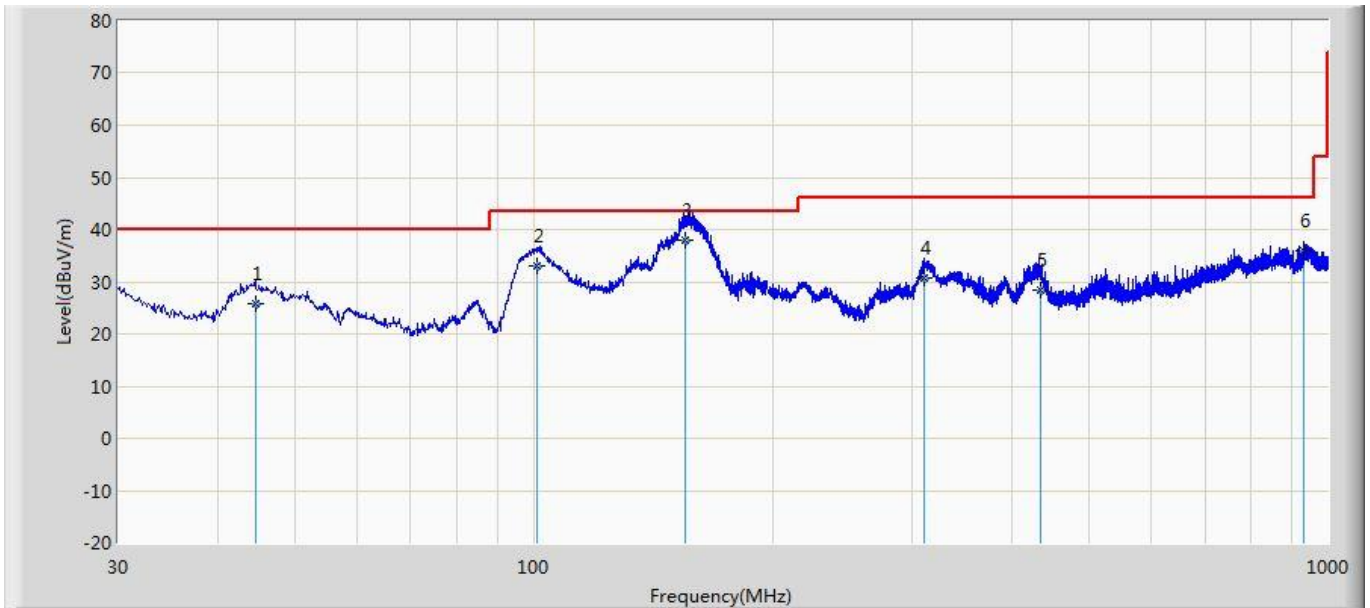
The worst case of Radiated Emission below 1GHz:

Engineer:Allen	
Site: AC3	Time: 2019/02/19
Limit: FCC_Part15.109_RE(3m)_ClassB	Margin: 0
Probe: AC3_3m (30-1000MHz)	Polarity: Horizontal
EUT: LED lamp	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	*	64.888	34.420	18.560	-5.580	40.000	9.183	6.677	0.000	100	60	QP
2		101.340	28.210	6.100	-15.290	43.500	15.249	6.861	0.000	100	212	QP
3		149.670	29.196	10.500	-14.304	43.500	11.614	7.081	0.000	100	322	QP
4		172.100	34.263	16.400	-9.237	43.500	10.689	7.174	0.000	100	300	QP
5		249.316	28.126	4.700	-17.874	46.000	15.976	7.451	0.000	200	350	QP
6		930.501	35.766	2.100	-10.234	46.000	24.504	9.162	0.000	100	200	QP

Engineer: Allen	
Site: AC3	Time: 2019/02/19
Limit: FCC_Part15.109_RE(3m)_ClassB	Margin: 0
Probe: AC3_3m (30-1000MHz)	Polarity: Vertical
EUT: LED lamp	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		44.627	25.695	8.100	-14.305	40.000	11.038	6.557	0.000	100	200	QP
2		100.829	32.919	10.800	-10.581	43.500	15.263	6.856	0.000	100	102	QP
3	*	154.900	37.988	19.300	-5.512	43.500	11.588	7.100	0.000	104	300	QP
4		310.100	30.622	5.200	-15.378	46.000	17.774	7.648	0.000	100	56	QP
5		433.936	28.356	3.400	-17.644	46.000	16.963	7.993	0.000	100	90	QP
6		930.554	35.973	2.300	-10.027	46.000	24.510	9.163	0.000	100	56	QP

Note:

1. Measured Level = Reading Level + Factor.
2. The test frequency range, 9kHz~30MHz, 18GHz~26GHz, both of the worst case are at least 20dB below the limits, therefore no data appear in the report.
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.
4. As the radiated emission was performed, so conducted emission was not tested.

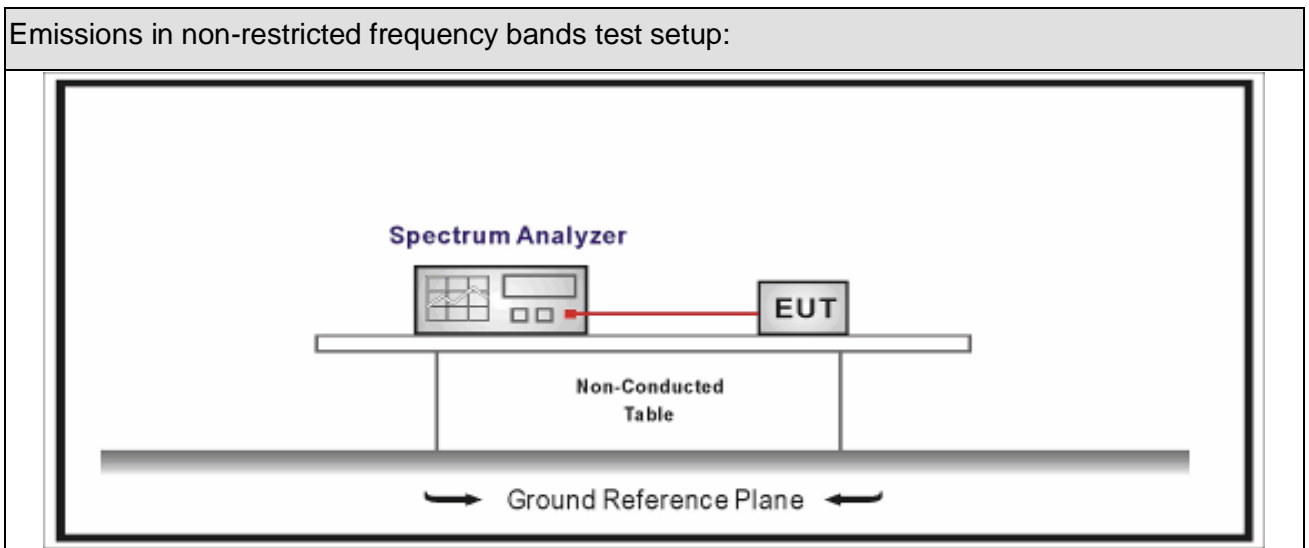
5. Emissions in non-restricted frequency bands

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	2019.02.04	2020.02.03
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 is calibrated with traceable calibrations. Each calibration is traceable to the national or international standards.

5.2. Test Setup



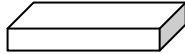
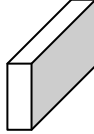
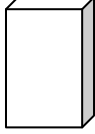



5.3. Limit

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

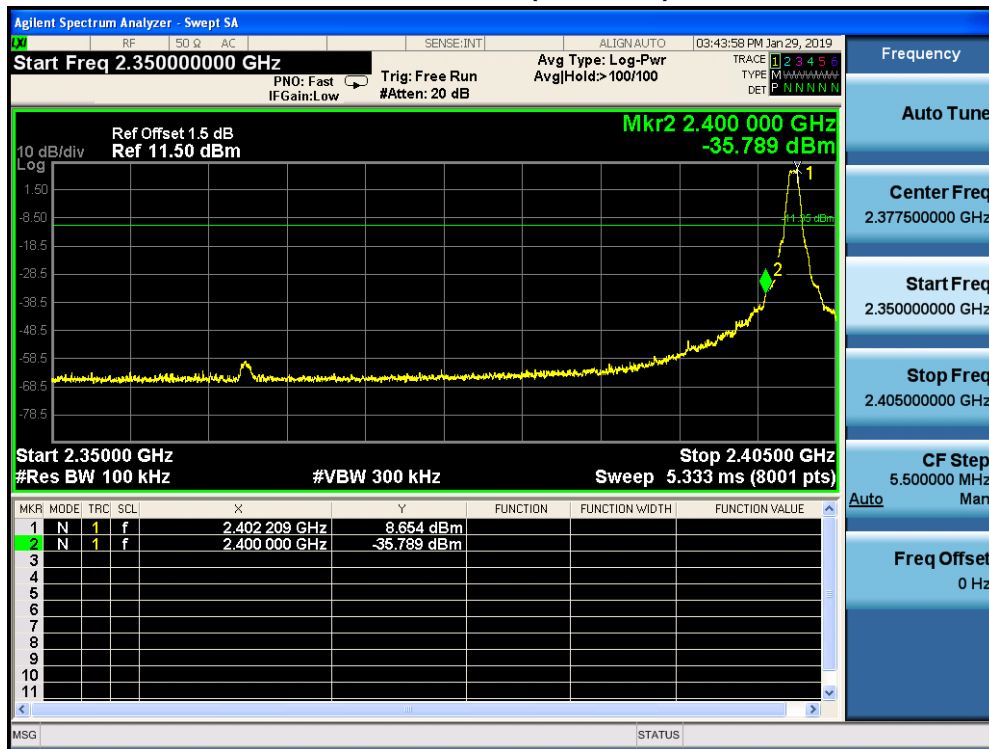
Item	Emissions in non-restricted frequency bands			
Device Category	<input type="checkbox"/>	Fixed point-to-point		
	<input type="checkbox"/>	Emit multiple directional beams, simultaneously or sequentially		
	<input checked="" type="checkbox"/>	Other cases		
Test mode	Mode 1			
Test method	<input type="checkbox"/>	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 1		
				
	<input type="checkbox"/>	Chain 1	Chain 2	
				
	<input type="checkbox"/>	Chain 1	Chain 2	Chain 3
				

5.6. Test Result

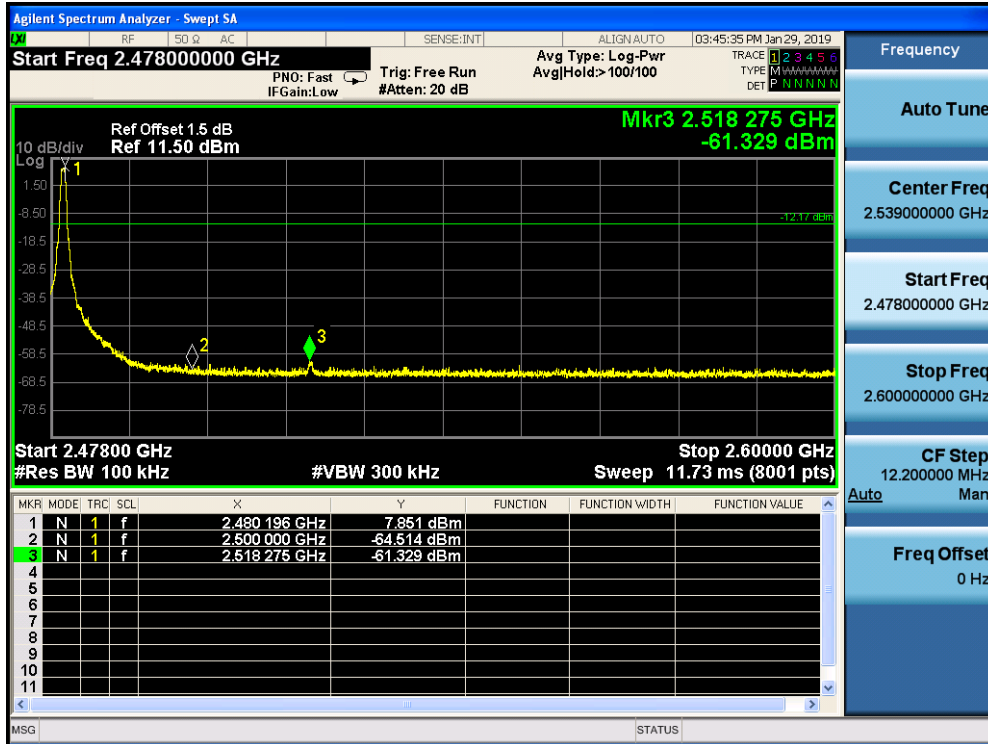
Product Name	: LED lamp	Test Voltage	: AC 120V/60Hz
Test Mode	: Mode 1	Test Site	: TR-8
Test Date	: 2019.01.29	Test Engineer	: Simon

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	00	2402	8.654	2400.00	-35.789	44.443	>20	Pass
1	39	2480	7.851	2500.00	-61.329	69.180	>20	Pass

Mode 1 CH00 (2402MHz)



Mode 1 CH39 (2480MHz)

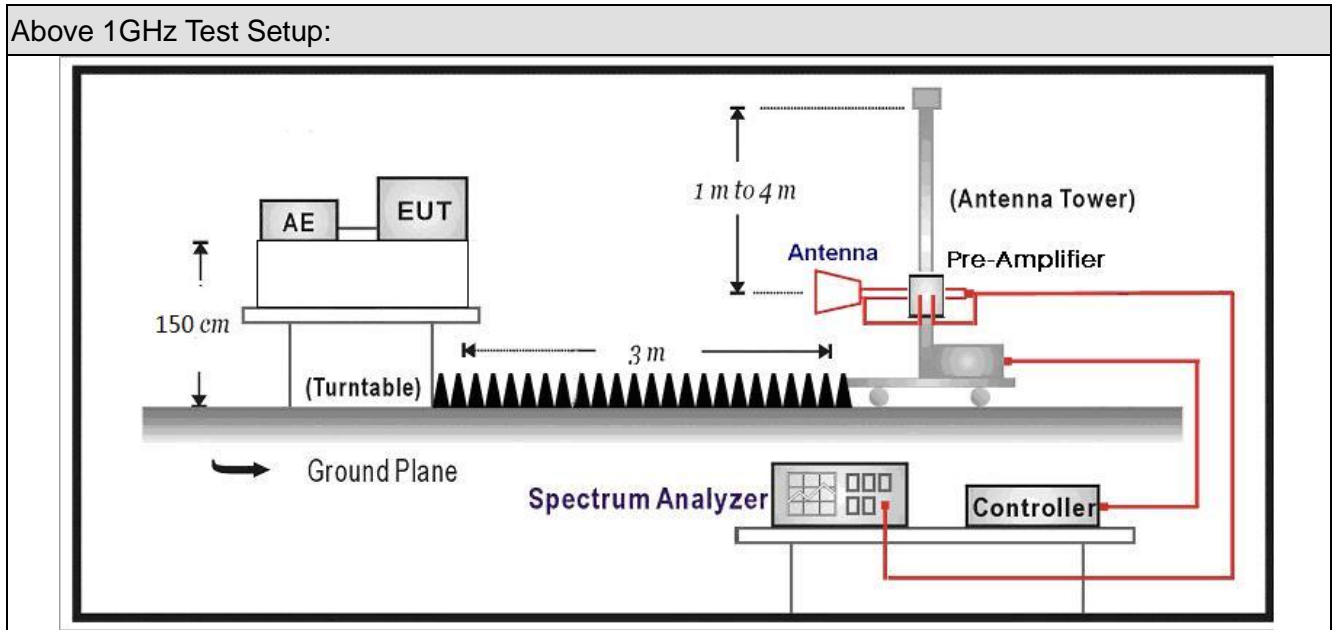


6. Radiated Emission Band Edge

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	2018.07.16	2019.07.15
Pre-Amplifier	Miteq	NSP1800-25	1364185	2018.05.03	2019.05.02
DRG Horn Antenna	ETS-Lindgren	3117	00167055	2018.07.12	2019.07.11
Broad-Band Horn Antenna	Schwarzbeck	BBHA9170	294	2018.09.18	2019.09.17
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	2019.01.05	2020.01.04

6.2. Test Setup



6.3. Limit

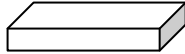
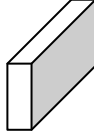
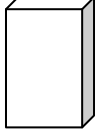


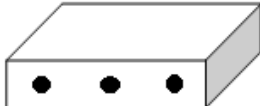
Band edge Limit				
Frequency bands (MHz)	Detector	Limit (dB μ V/m)	RBW (MHz)	Distance (m)
2310-2390	PK	74	1	3
2483.5-2500	AV	54	1	3

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

6.4. Test Procedure

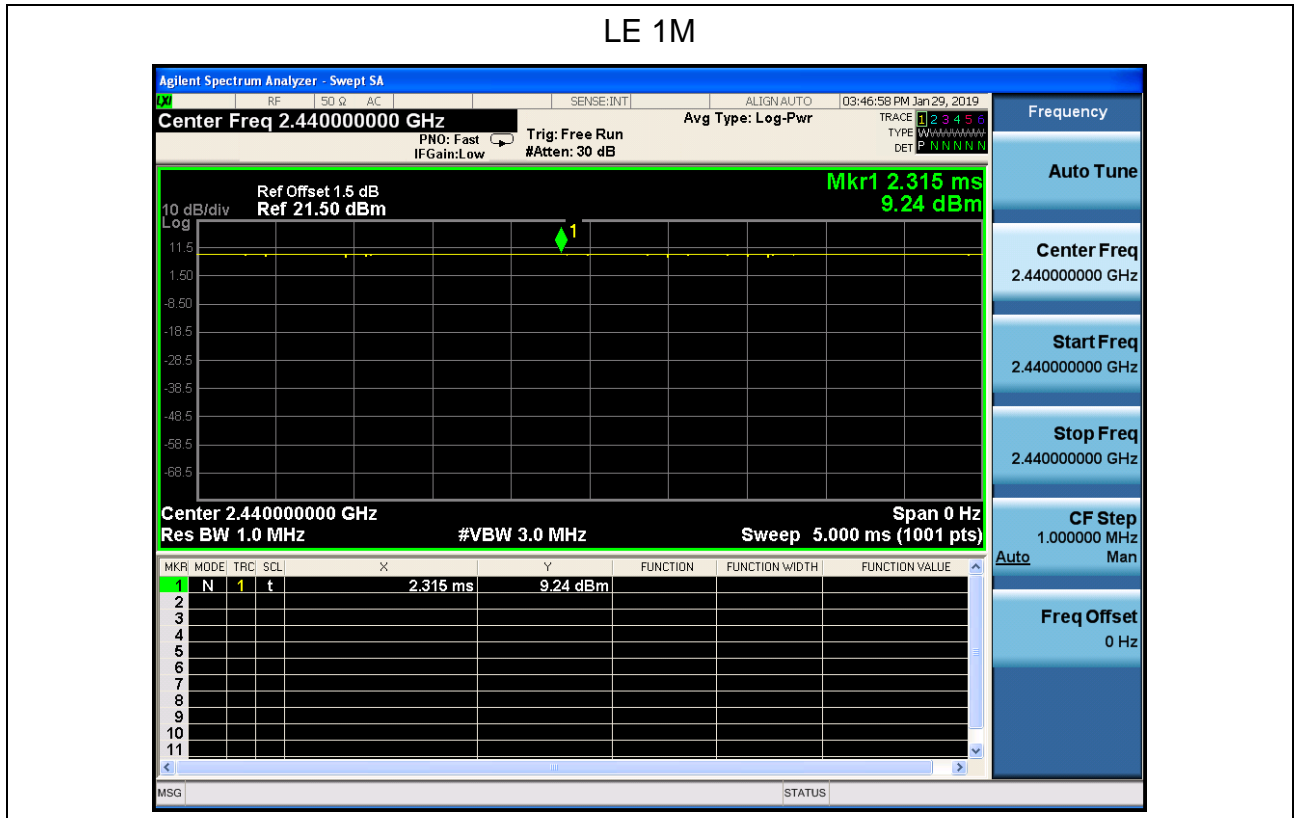
Test Method			
	References Rule	Chapter	Description
<input checked="" type="checkbox"/>	ANSI C63.10	6.10	Band-edge testing
	<input checked="" type="checkbox"/> ANSI C63.10	6.10.5	Restricted-band band-edge measurements
	<input type="checkbox"/> ANSI C63.10	6.10.6	Marker-delta method
<input checked="" 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 1~3			
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 1		
				
	<input type="checkbox"/>	Chain 1	Chain 2	
				
	<input type="checkbox"/>	Chain 1	Chain 2	Chain 3
				

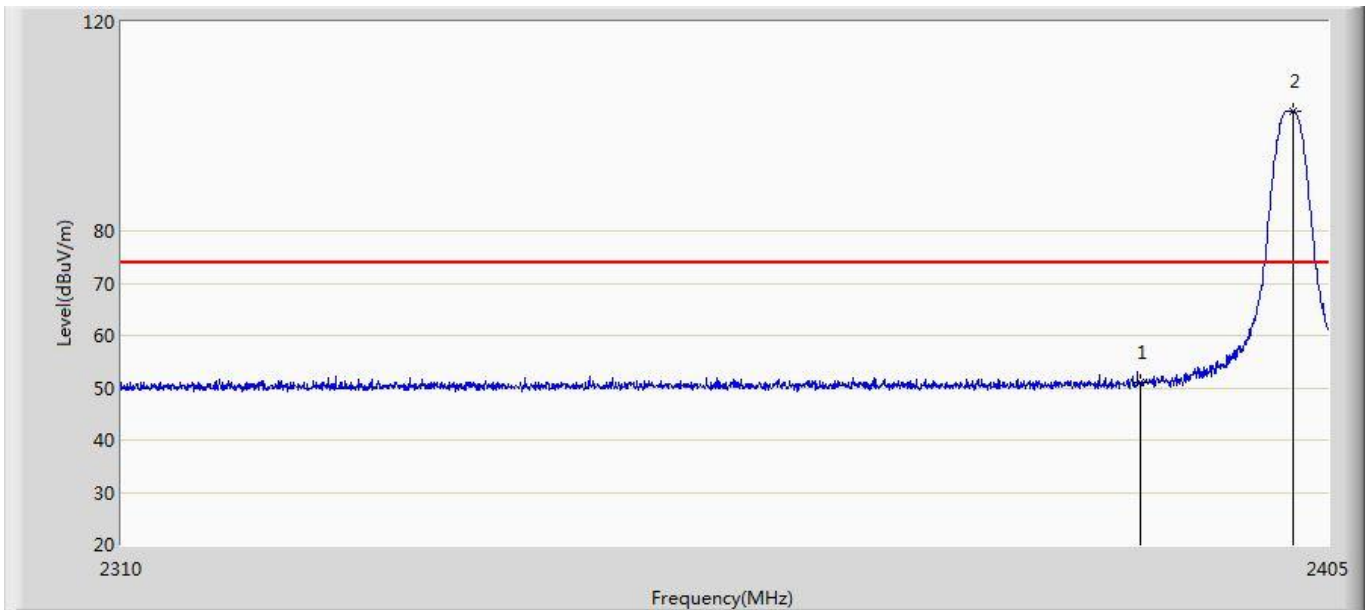
6.6. Duty Cycle

Test Mode	Tx On (ms)	Tx Off (ms)	Reduced VBW (Hz)	Tx On + Tx Off (ms)	Duty Cycle
LE 1M	N/A	N/A	10	N/A	100%



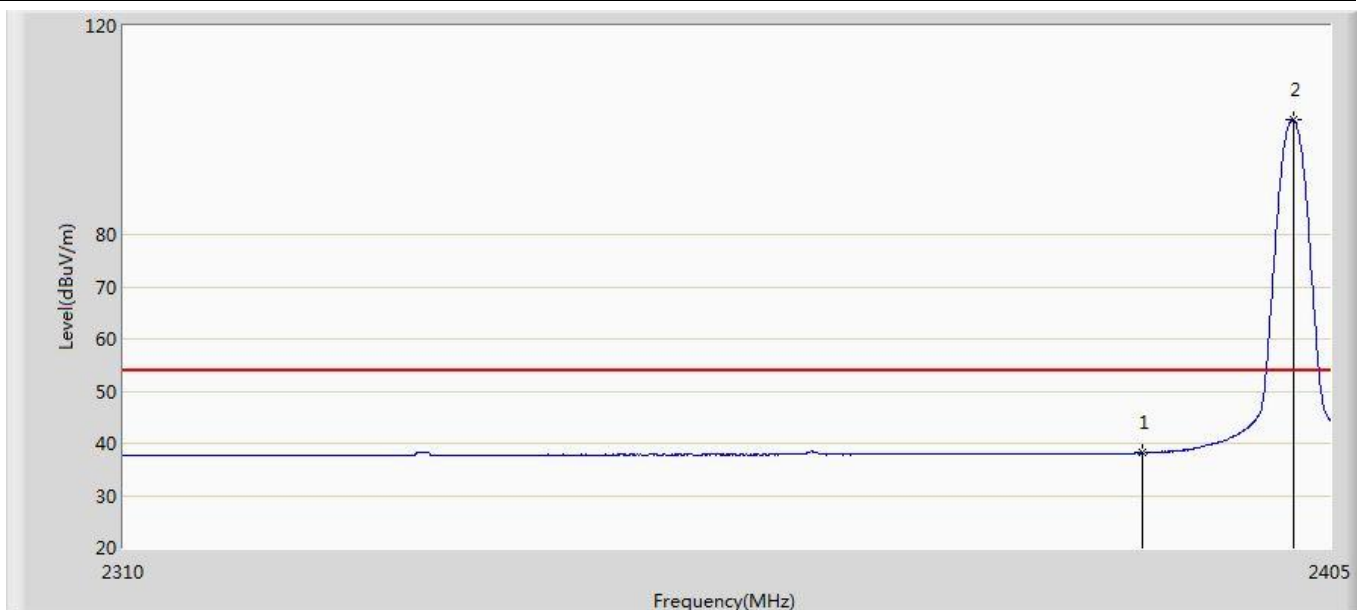
6.7. Test Result

Engineer: Tommie	
Site: AC5	Time: 2019/01/31 - 18:54
Limit: FCC_Part15.209_RE(3m)	Margin: 0
Probe: Horn_3117_00167055(1-18GHz)	Polarity: Horizontal
EUT: LED lamp-murata	Power: AC 120V/60Hz
Note: Mode 1:Transmit at 2402MHz by BLE	



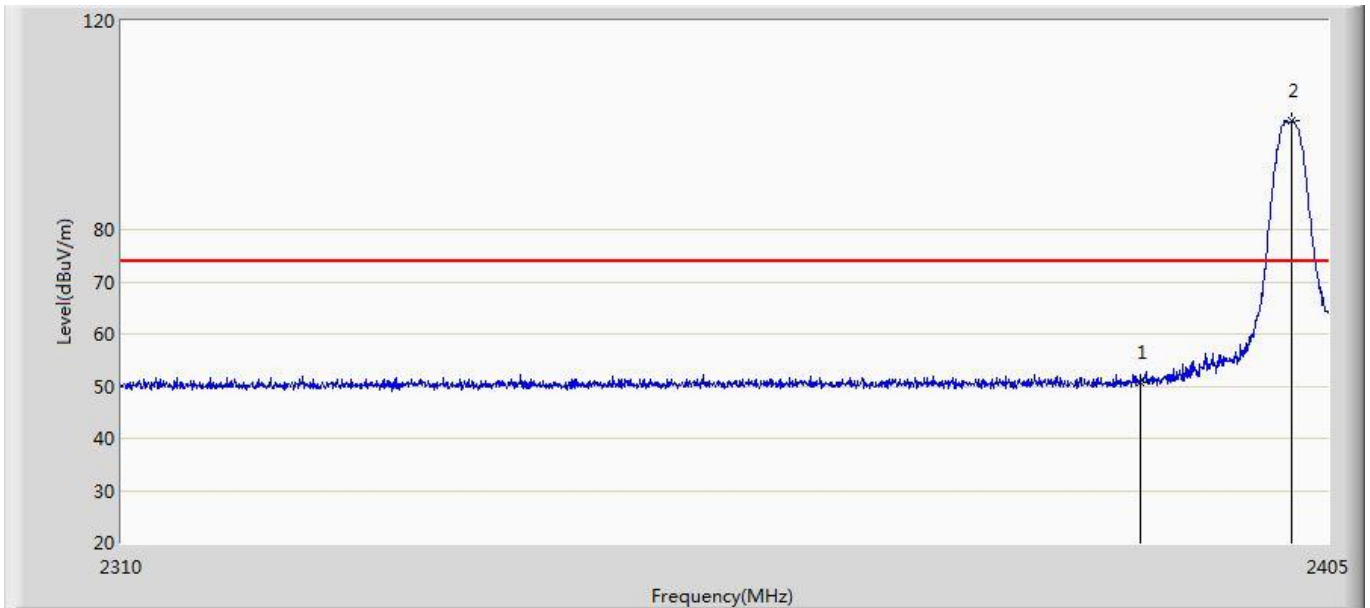
No	Mark	Frequency (MHz)	Measure Level (dBuV/m)	Reading Level (dBuV)	Over Limit (dB)	Limit (dBuV/m)	Factor (dB)	Type
1		2390.000	50.895	15.213	-23.105	74.000	35.682	PK
2	*	2402.198	102.913	67.200	28.913	74.000	35.714	PK

Engineer: Tommie	
Site: AC5	Time: 2019/01/31 - 18:58
Limit: FCC_Part15.209_RE(3m)	Margin: 0
Probe: Horn_3117_00167055(1-18GHz)	Polarity: Horizontal
EUT: LED lamp-murata	Power: AC 120V/60Hz
Note: Mode 1:Transmit at 2402MHz by BLE	



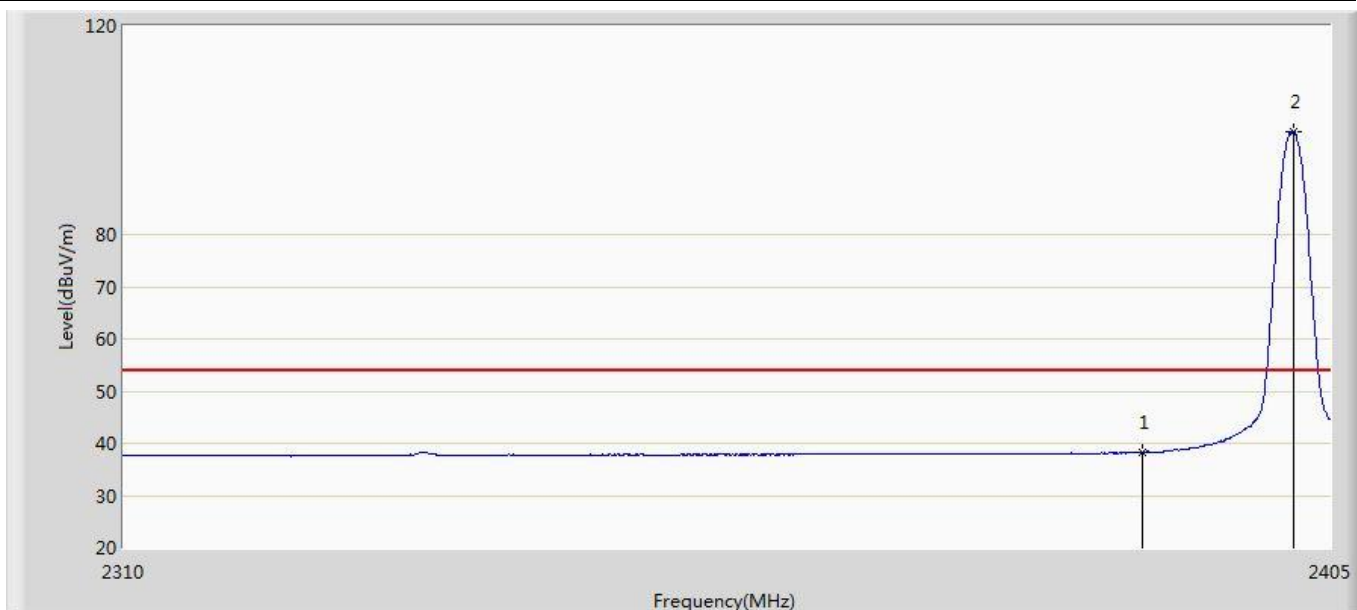
No	Mark	Frequency (MHz)	Measure Level (dBuV/m)	Reading Level (dBuV)	Over Limit (dB)	Limit (dBuV/m)	Factor (dB)	Type
1		2390.000	38.125	2.443	-15.875	54.000	35.682	AV
2	*	2402.055	102.072	66.359	48.072	54.000	35.712	AV

Engineer: Tommie	
Site: AC5	Time: 2019/01/31 - 19:00
Limit: FCC_Part15.209_RE(3m)	Margin: 0
Probe: Horn_3117_00167055(1-18GHz)	Polarity: Vertical
EUT: LED lamp-murata	Power: AC 120V/60Hz
Note: Mode 1:Transmit at 2402MHz by BLE	



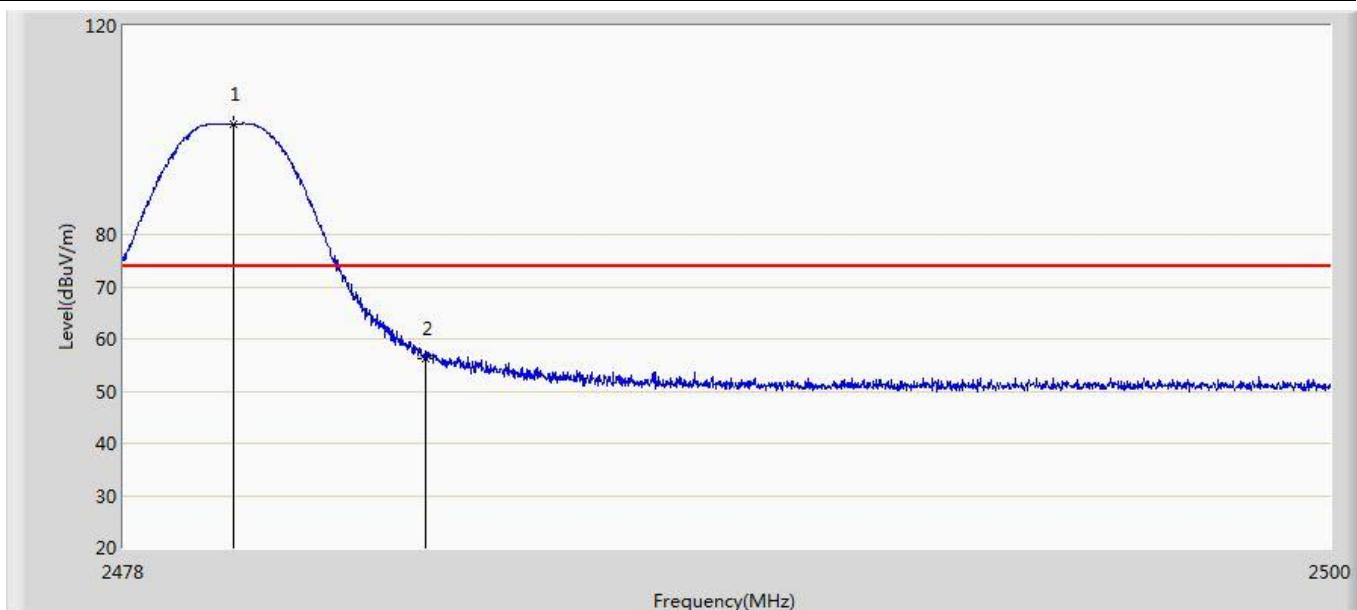
No	Mark	Frequency (MHz)	Measure Level (dBuV/m)	Reading Level (dBuV)	Over Limit (dB)	Limit (dBuV/m)	Factor (dB)	Type
1		2390.000	50.749	15.067	-23.251	74.000	35.682	PK
2	*	2402.055	100.806	65.093	26.806	74.000	35.712	PK

Engineer: Tommie	
Site: AC5	Time: 2019/01/31 - 19:01
Limit: FCC_Part15.209_RE(3m)	Margin: 0
Probe: Horn_3117_00167055(1-18GHz)	Polarity: Vertical
EUT: LED lamp-murata	Power: AC 120V/60Hz
Note: Mode 1:Transmit at 2402MHz by BLE	



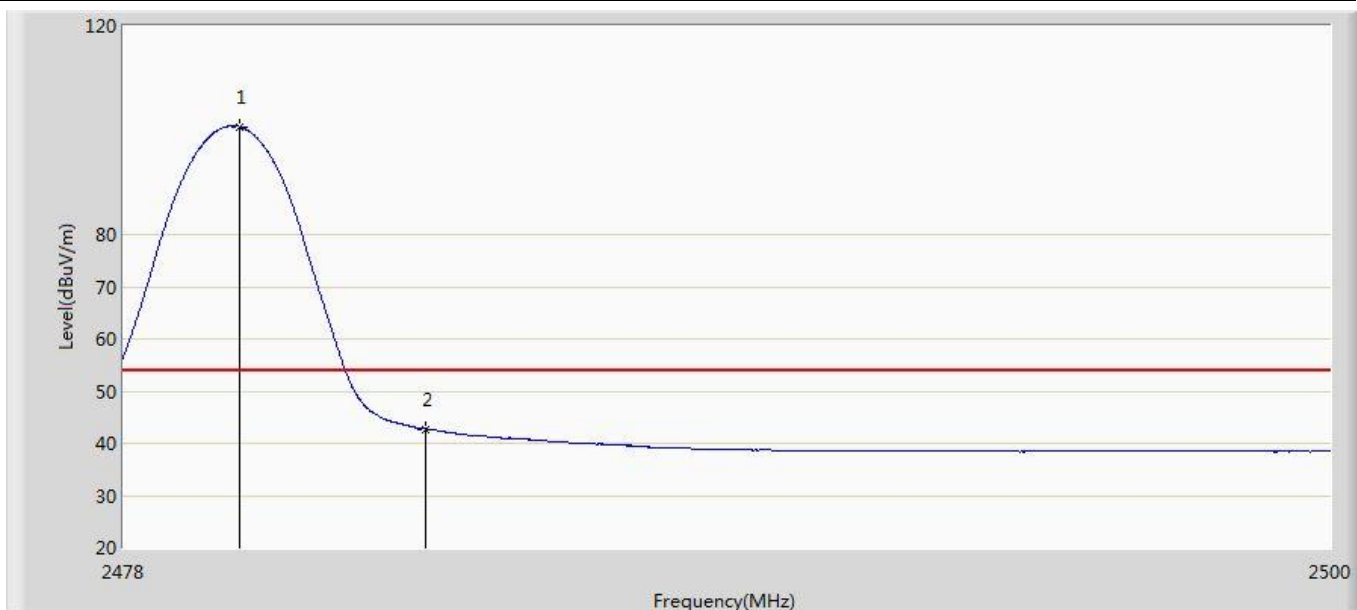
No	Mark	Frequency (MHz)	Measure Level (dBuV/m)	Reading Level (dBuV)	Over Limit (dB)	Limit (dBuV/m)	Factor (dB)	Type
1		2390.000	38.264	2.582	-15.736	54.000	35.682	AV
2	*	2402.055	99.816	64.103	45.816	54.000	35.712	AV

Engineer: Tommie	
Site: AC5	Time: 2019/01/31 - 19:02
Limit: FCC_Part15.209_RE(3m)	Margin: 0
Probe: Horn_3117_00167055(1-18GHz)	Polarity: Horizontal
EUT: LED lamp-murata	Power: AC 120V/60Hz
Note: Mode 1:Transmit at 2480MHz by BLE	



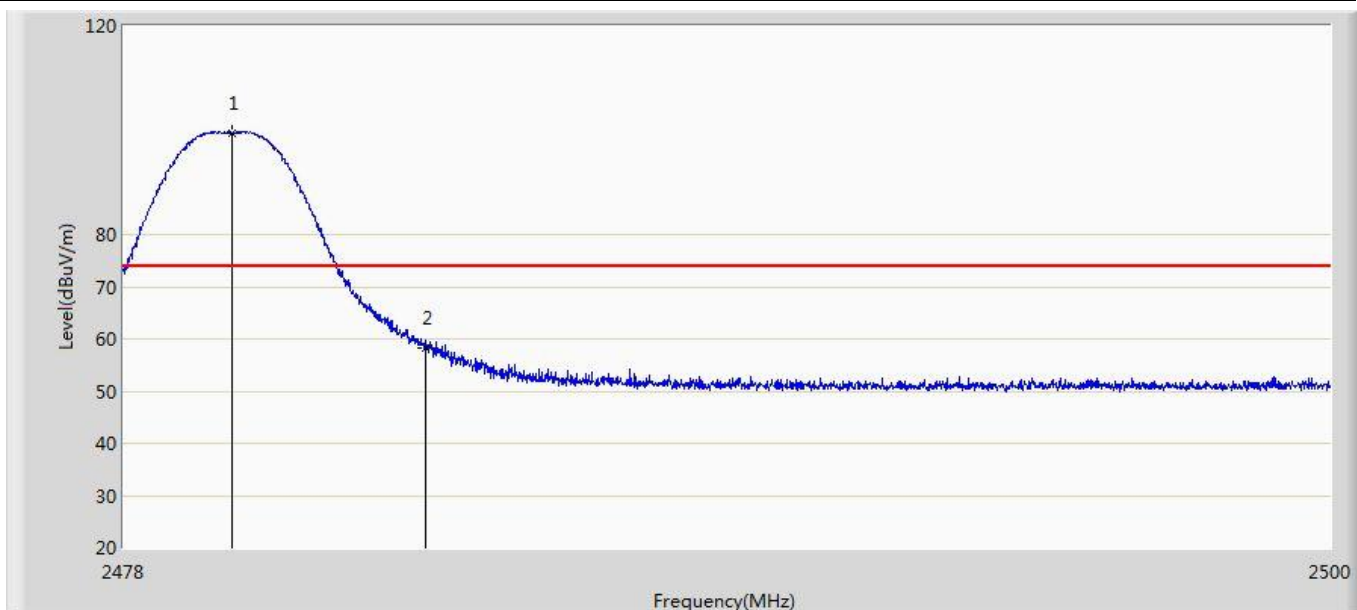
No	Mark	Frequency (MHz)	Measure Level (dBuV/m)	Reading Level (dBuV)	Over Limit (dB)	Limit (dBuV/m)	Factor (dB)	Type
1	*	2480.013	101.267	65.401	27.267	74.000	35.866	PK
2		2483.500	56.298	20.406	-17.702	74.000	35.891	PK

Engineer: Tommie	
Site: AC5	Time: 2019/01/31 - 19:04
Limit: FCC_Part15.209_RE(3m)	Margin: 0
Probe: Horn_3117_00167055(1-18GHz)	Polarity: Horizontal
EUT: LED lamp-murata	Power: AC 120V/60Hz
Note: Mode 1:Transmit at 2480MHz by BLE	



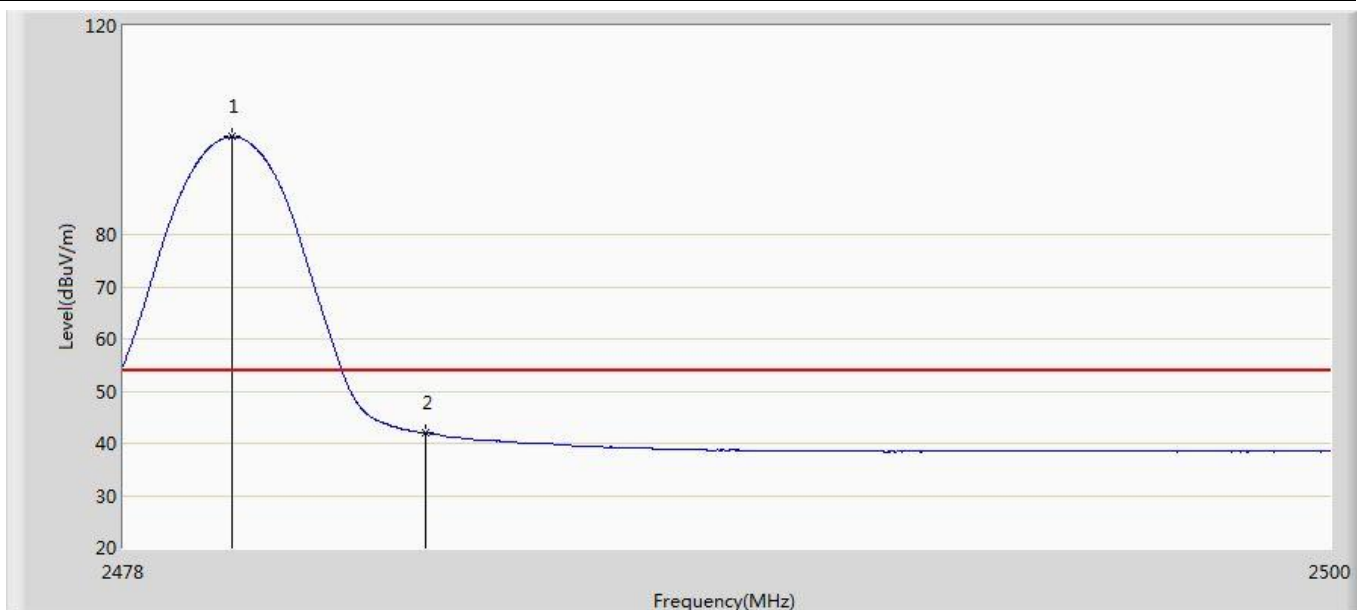
No	Mark	Frequency (MHz)	Measure Level (dBuV/m)	Reading Level (dBuV)	Over Limit (dB)	Limit (dBuV/m)	Factor (dB)	Type
1	*	2480.112	100.675	64.808	46.675	54.000	35.867	AV
2		2483.500	42.730	6.838	-11.270	54.000	35.891	AV

Engineer: Tommie	
Site: AC5	Time: 2019/01/31 - 19:05
Limit: FCC_Part15.209_RE(3m)	Margin: 0
Probe: Horn_3117_00167055(1-18GHz)	Polarity: Vertical
EUT: LED lamp-murata	Power: AC 120V/60Hz
Note: Mode 1:Transmit at 2480MHz by BLE	



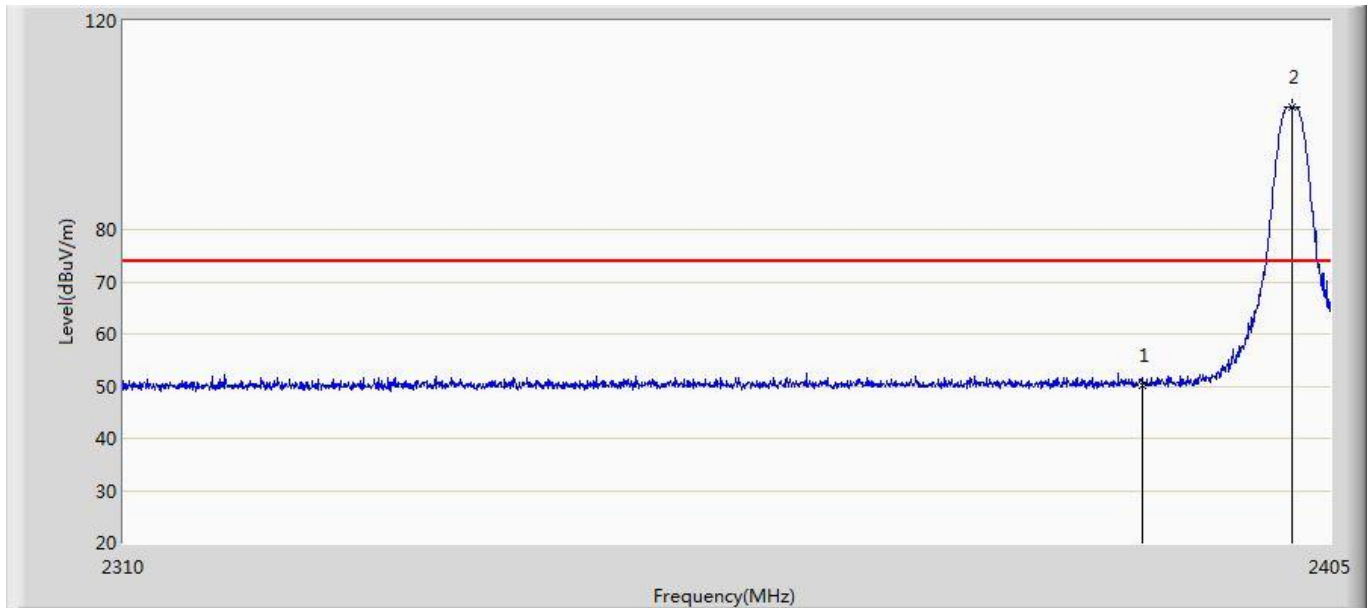
No	Mark	Frequency (MHz)	Measure Level (dBuV/m)	Reading Level (dBuV)	Over Limit (dB)	Limit (dBuV/m)	Factor (dB)	Type
1	*	2479.980	99.533	63.667	25.533	74.000	35.866	PK
2		2483.500	58.257	22.365	-15.743	74.000	35.891	PK

Engineer: Tommie	
Site: AC5	Time: 2019/01/31 - 19:06
Limit: FCC_Part15.209_RE(3m)	Margin: 0
Probe: Horn_3117_00167055(1-18GHz)	Polarity: Vertical
EUT: LED lamp-murata	Power: AC 120V/60Hz
Note: Mode 1:Transmit at 2480MHz by BLE	



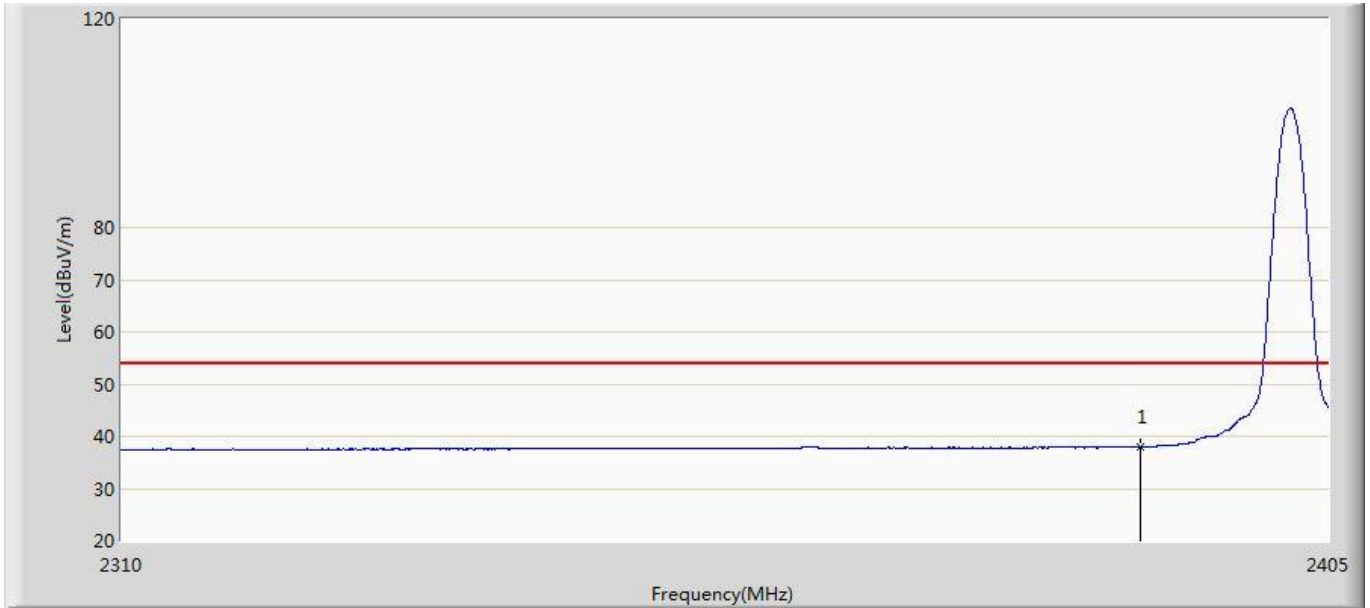
No	Mark	Frequency (MHz)	Measure Level (dBuV/m)	Reading Level (dBuV)	Over Limit (dB)	Limit (dBuV/m)	Factor (dB)	Type
1	*	2479.980	98.703	62.837	44.703	54.000	35.866	AV
2		2483.500	41.887	5.995	-12.113	54.000	35.891	AV

Engineer: Tommie	
Site: AC5	Time: 2019/03/01 - 18:53
Limit: FCC_Part15.209_RE(3m)	Margin: 0
Probe: Horn_3117_00167055(1-18GHz)	Polarity: Horizontal
EUT: LED lamp-Diodes	Power: AC 120V/60Hz
Note: Mode 1:TRansmit at 2402MHz by BLE	



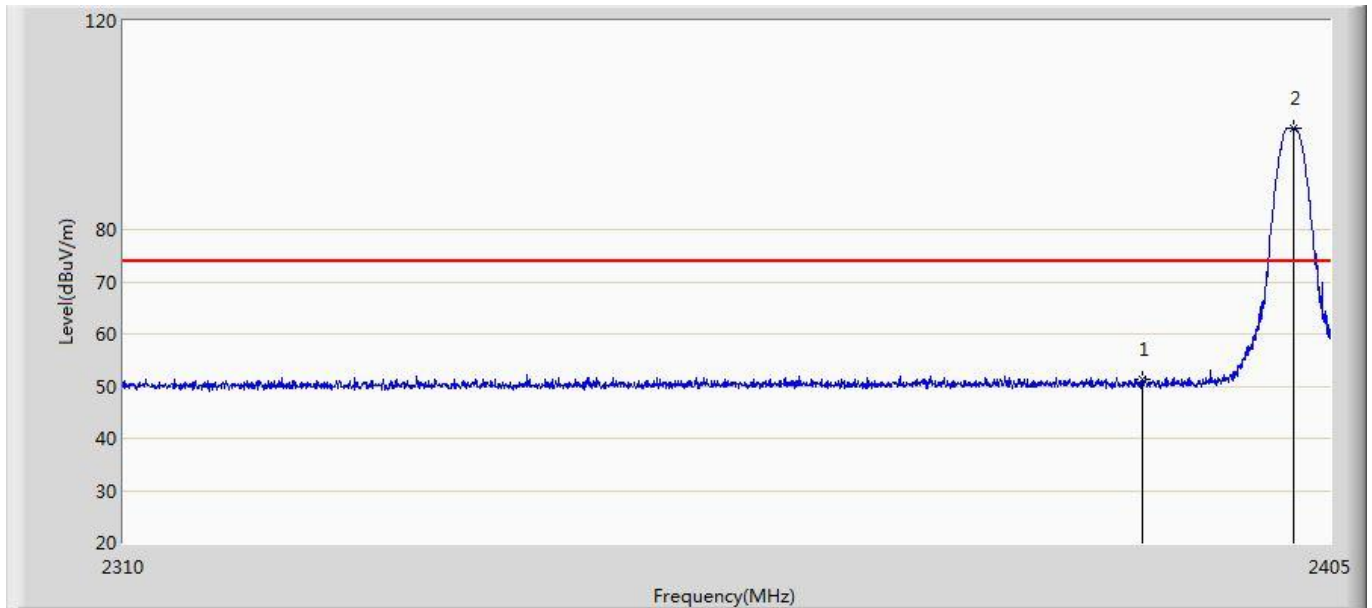
No	Mark	Frequency (MHz)	Measure Level (dBuV/m)	Reading Level (dBuV)	Over Limit (dB)	Limit (dBuV/m)	Factor (dB)	Type
1		2390.000	50.199	14.517	-23.801	74.000	35.682	PK
2	*	2401.913	103.440	67.728	29.440	74.000	35.712	PK

Engineer: Tommie	
Site: AC5	Time: 2019/03/01 - 18:54
Limit: FCC_Part15.209_RE(3m)	Margin: 0
Probe: Horn_3117_00167055(1-18GHz)	Polarity: Horizontal
EUT: LED lamp-Diodes	Power: AC 120V/60Hz
Note: Mode 1:TRansmit at 2402MHz by BLE	



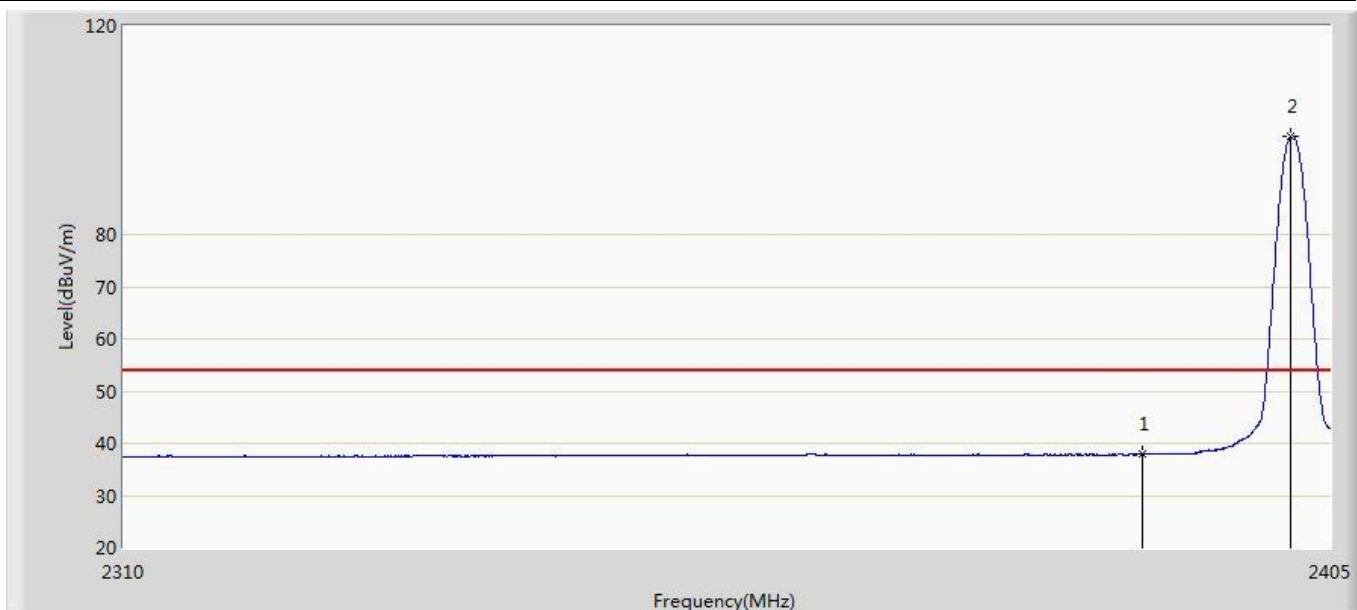
No	Mark	Frequency (MHz)	Measure Level (dBuV/m)	Reading Level (dBuV)	Over Limit (dB)	Limit (dBuV/m)	Factor (dB)	Type
1	*	2390.000	38.001	2.319	-15.999	54.000	35.682	AV

Engineer: Tommie	
Site: AC5	Time: 2019/03/01 - 18:56
Limit: FCC_Part15.209_RE(3m)	Margin: 0
Probe: Horn_3117_00167055(1-18GHz)	Polarity: Vertical
EUT: LED lamp-Diodes	Power: AC 120V/60Hz
Note: Mode 1:TRansmit at 2402MHz by BLE	



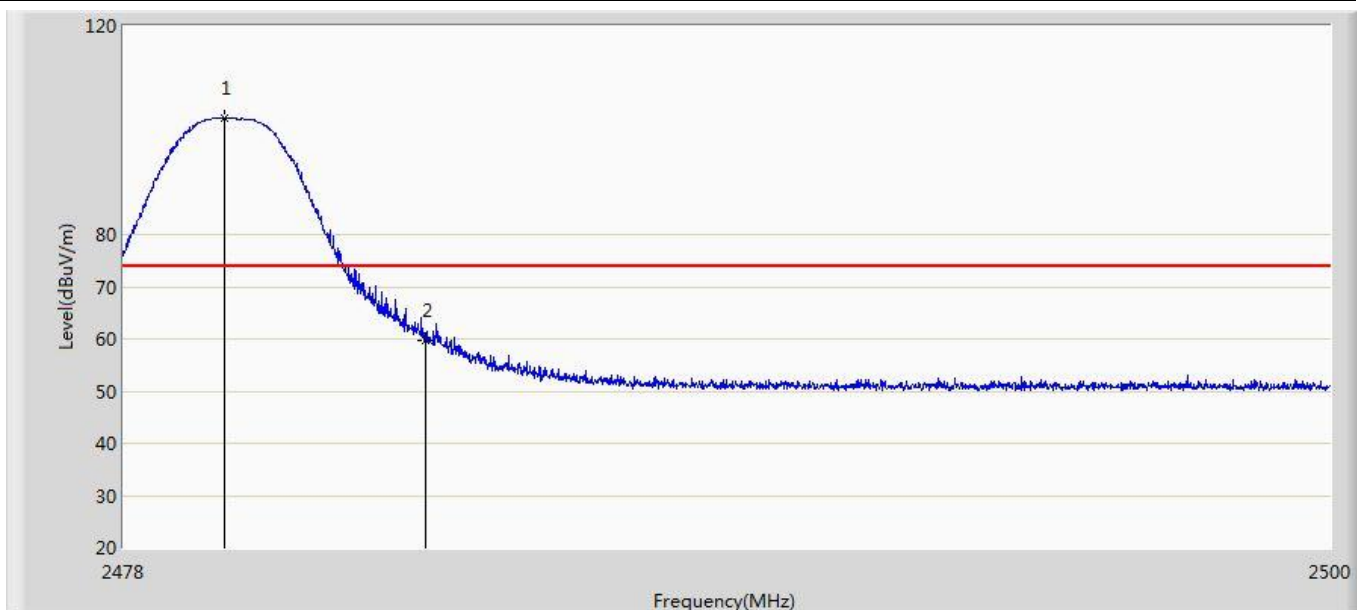
No	Mark	Frequency (MHz)	Measure Level (dBuV/m)	Reading Level (dBuV)	Over Limit (dB)	Limit (dBuV/m)	Factor (dB)	Type
1		2390.000	51.213	15.531	-22.787	74.000	35.682	PK
2	*	2402.055	99.424	63.711	25.424	74.000	35.712	PK

Engineer: Tommie	
Site: AC5	Time: 2019/03/01 - 18:57
Limit: FCC_Part15.209_RE(3m)	Margin: 0
Probe: Horn_3117_00167055(1-18GHz)	Polarity: Vertical
EUT: LED lamp-Diodes	Power: AC 120V/60Hz
Note: Mode 1:TRansmit at 2402MHz by BLE	



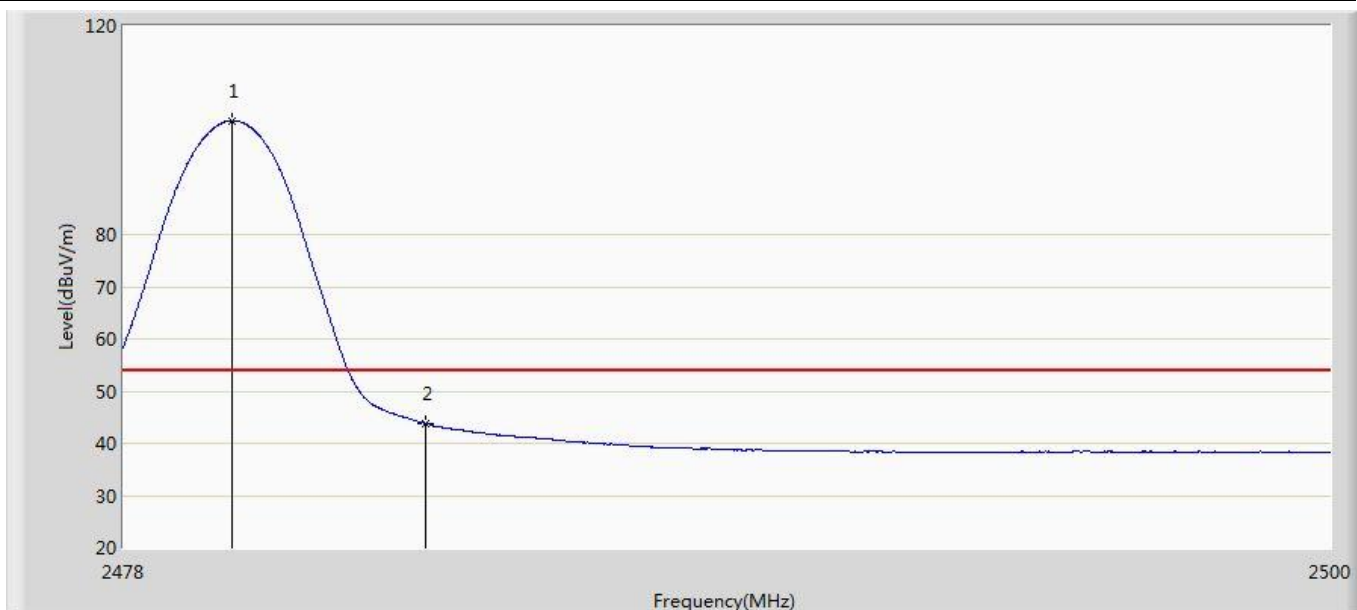
No	Mark	Frequency (MHz)	Measure Level (dBuV/m)	Reading Level (dBuV)	Over Limit (dB)	Limit (dBuV/m)	Factor (dB)	Type
1		2390.000	37.868	2.186	-16.132	54.000	35.682	AV
2	*	2401.817	98.830	63.118	44.830	54.000	35.712	AV

Engineer: Tommie	
Site: AC5	Time: 2019/03/01 - 18:59
Limit: FCC_Part15.209_RE(3m)	Margin: 0
Probe: Horn_3117_00167055(1-18GHz)	Polarity: Horizontal
EUT: LED lamp-Diodes	Power: AC 120V/60Hz
Note: Mode 1:TRansmit at 2480MHz by BLE	



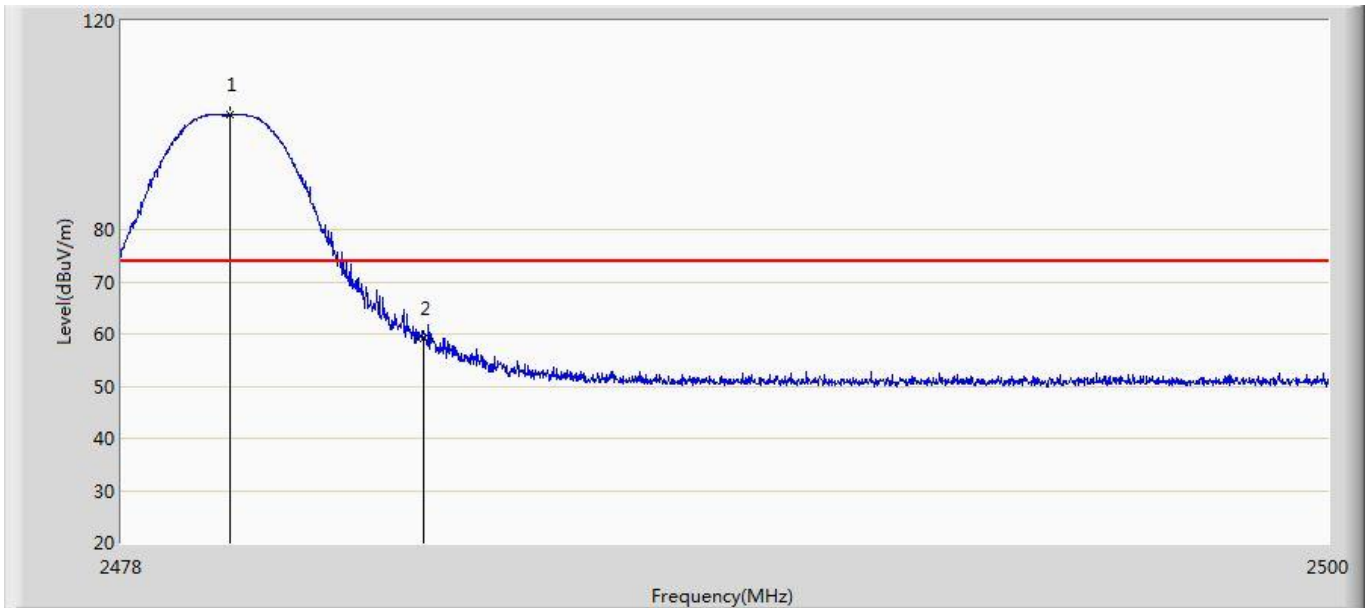
No	Mark	Frequency (MHz)	Measure Level (dBuV/m)	Reading Level (dBuV)	Over Limit (dB)	Limit (dBuV/m)	Factor (dB)	Type
1	*	2479.837	102.306	66.441	28.306	74.000	35.865	PK
2		2483.500	59.828	23.936	-14.172	74.000	35.891	PK

Engineer: Tommie	
Site: AC5	Time: 2019/03/01 - 19:01
Limit: FCC_Part15.209_RE(3m)	Margin: 0
Probe: Horn_3117_00167055(1-18GHz)	Polarity: Horizontal
EUT: LED lamp-Diodes	Power: AC 120V/60Hz
Note: Mode 1:TRansmit at 2480MHz by BLE	



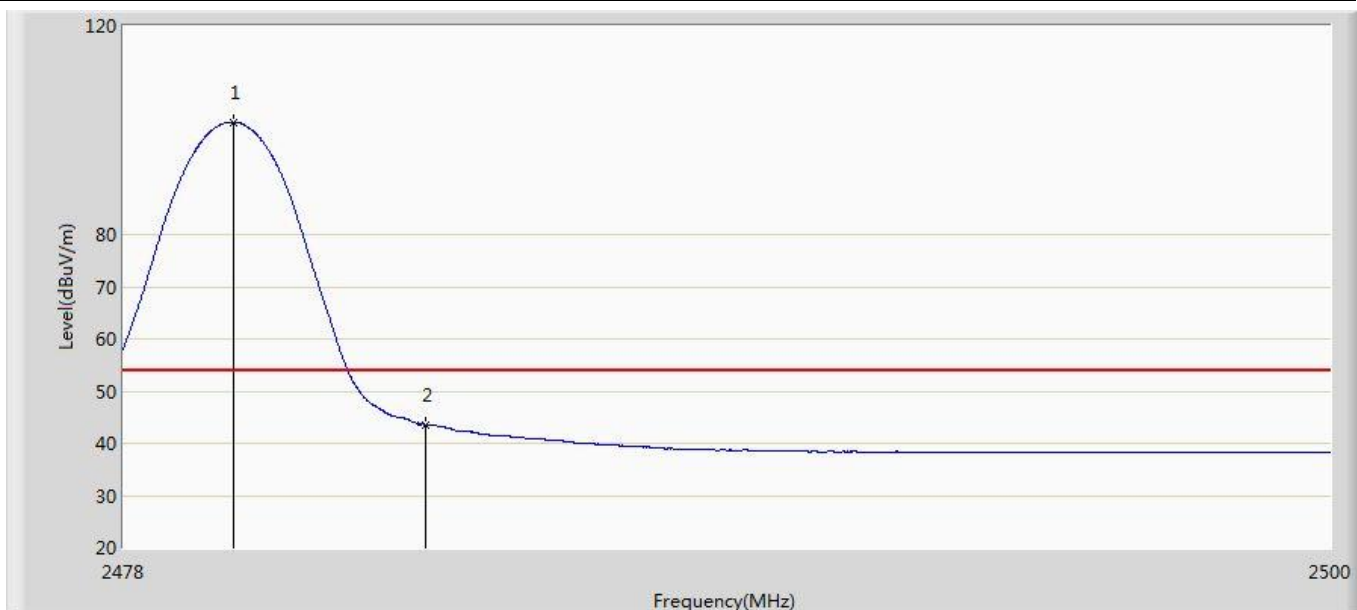
No	Mark	Frequency (MHz)	Measure Level (dBuV/m)	Reading Level (dBuV)	Over Limit (dB)	Limit (dBuV/m)	Factor (dB)	Type
1	*	2479.980	101.833	65.967	47.833	54.000	35.866	AV
2		2483.500	43.854	7.962	-10.146	54.000	35.891	AV

Engineer: Tommie	
Site: AC5	Time: 2019/03/01 - 19:02
Limit: FCC_Part15.209_RE(3m)	Margin: 0
Probe: Horn_3117_00167055(1-18GHz)	Polarity: Vertical
EUT: LED lamp-Diodes	Power: AC 120V/60Hz
Note: Mode 1:TRansmit at 2480MHz by BLE	



No	Mark	Frequency (MHz)	Measure Level (dBuV/m)	Reading Level (dBuV)	Over Limit (dB)	Limit (dBuV/m)	Factor (dB)	Type
1	*	2479.980	101.903	66.037	27.903	74.000	35.866	PK
2		2483.500	59.014	23.122	-14.986	74.000	35.891	PK

Engineer: Tommie	
Site: AC5	Time: 2019/03/01 - 19:04
Limit: FCC_Part15.209_RE(3m)	Margin: 0
Probe: Horn_3117_00167055(1-18GHz)	Polarity: Vertical
EUT: LED lamp-Diodes	Power: AC 120V/60Hz
Note: Mode 1:TRansmit at 2480MHz by BLE	



No	Mark	Frequency (MHz)	Measure Level (dBuV/m)	Reading Level (dBuV)	Over Limit (dB)	Limit (dBuV/m)	Factor (dB)	Type
1	*	2480.013	101.568	65.702	47.568	54.000	35.866	AV
2		2483.500	43.551	7.659	-10.449	54.000	35.891	AV

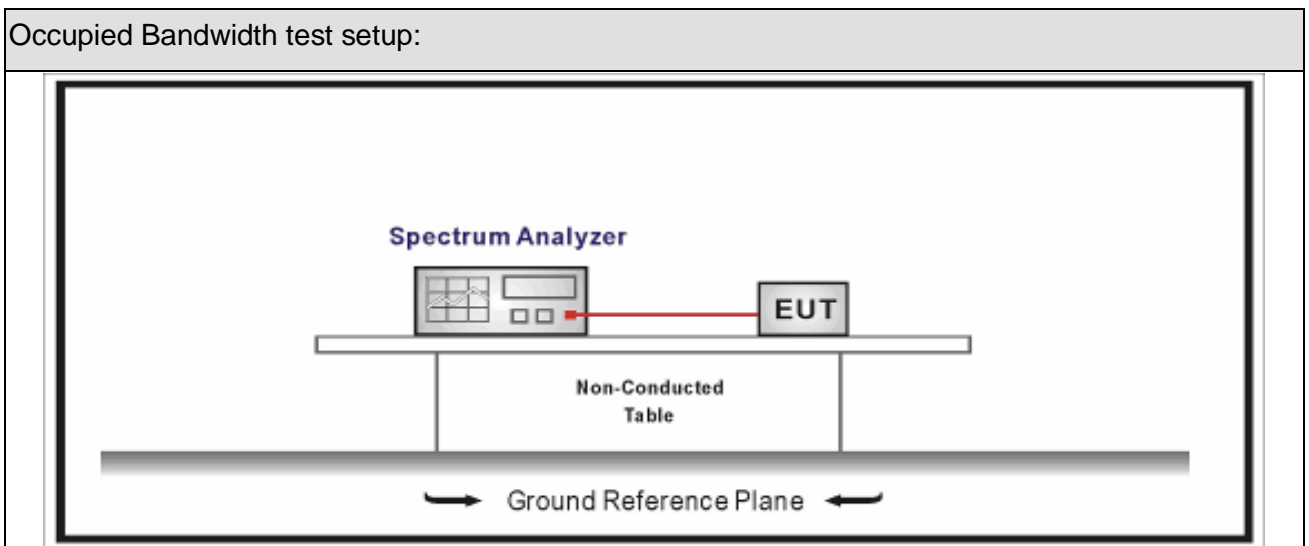
7. Occupied Bandwidth

7.1. Test Equipment

Occupied Bandwidth / TR-8					
Instrument	Manufacturer	Type No.	Serial No.	Cal. Date	Cal. Due Date
Spectrum Analyzer	Agilent	N9010A	MY48030494	2019.02.04	2020.02.03
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 is calibrated with traceable calibrations. Each calibration is traceable to the national or international standards.

7.2. Test Setup



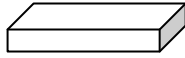
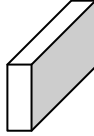
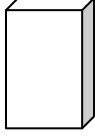
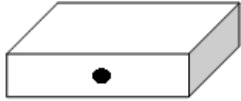
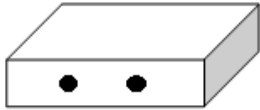

7.3. Limit

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 1~3			
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 1		
				
	<input type="checkbox"/>	Chain 1	Chain 2	
				
	<input type="checkbox"/>	Chain 1	Chain 2	Chain 3
				

7.6. Test Result

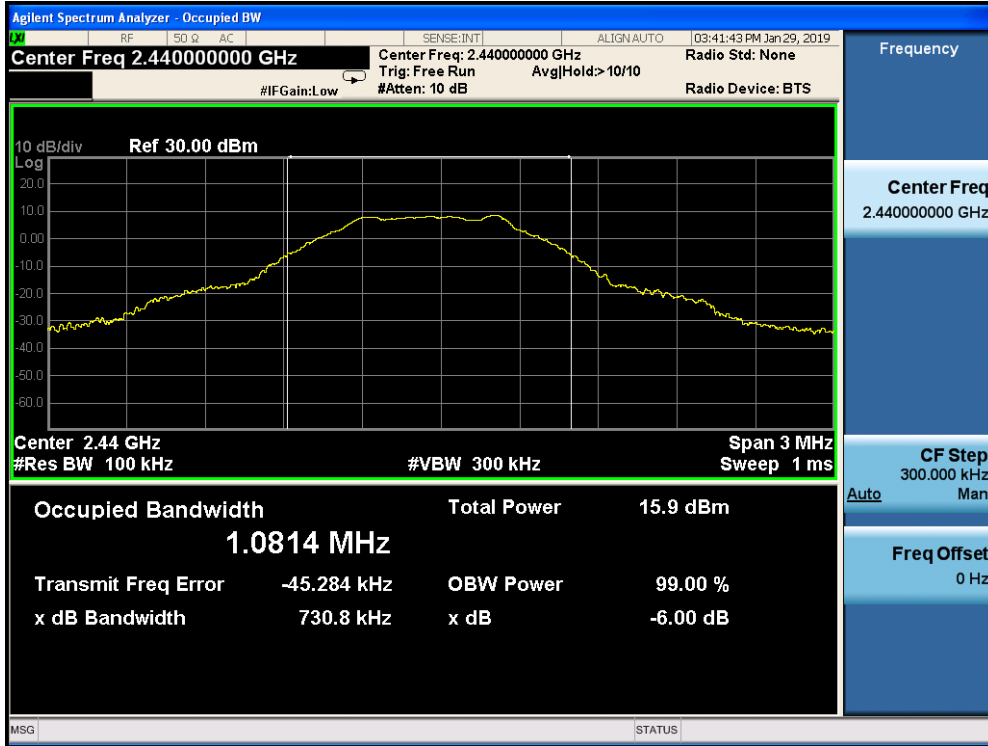
Product Name	: LED lamp	Test Voltage	: AC 120V/60Hz
Test Mode	: Mode 1	Test Site	: TR-8
Test Date	: 2019.01.29	Test Engineer	: Simon

Mode	CH.	Test Freq. (MHz)	99% Occupied Bandwidth (kHz)	6dB Occupied Bandwidth (kHz)	Limit (kHz)	Result
1	00	2402	1086	726.3	>500	Pass
1	19	2440	1081.4	730.8	>500	Pass
1	39	2480	1081.3	720.9	>500	Pass

Mode 1 CH00 (2402MHz)



Mode 1 CH19 (2440MHz)



Mode 1 CH39 (2480MHz)



Product Name	: LED lamp	Test Voltage	: AC 120V/60Hz
Test Mode	: Mode 2	Test Site	: TR-8
Test Date	: 2019.02.19	Test Engineer	: Simon

Mode	CH.	Test Freq. (MHz)	99% Occupied Bandwidth (kHz)	6dB Occupied Bandwidth (kHz)	Limit (kHz)	Result
2	00	2402	2126.7	1393	>500	Pass
2	19	2440	2118.2	1395	>500	Pass
2	39	2480	2142.7	1391	>500	Pass

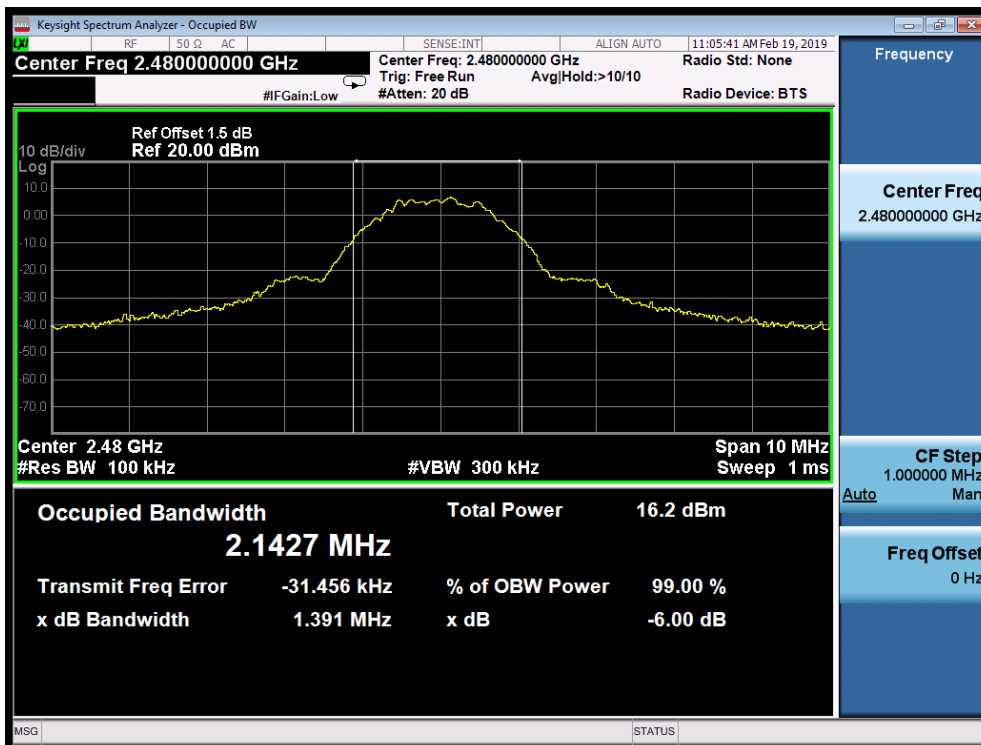
Mode 2 CH00 (2402MHz)



Mode 2 CH19 (2440MHz)



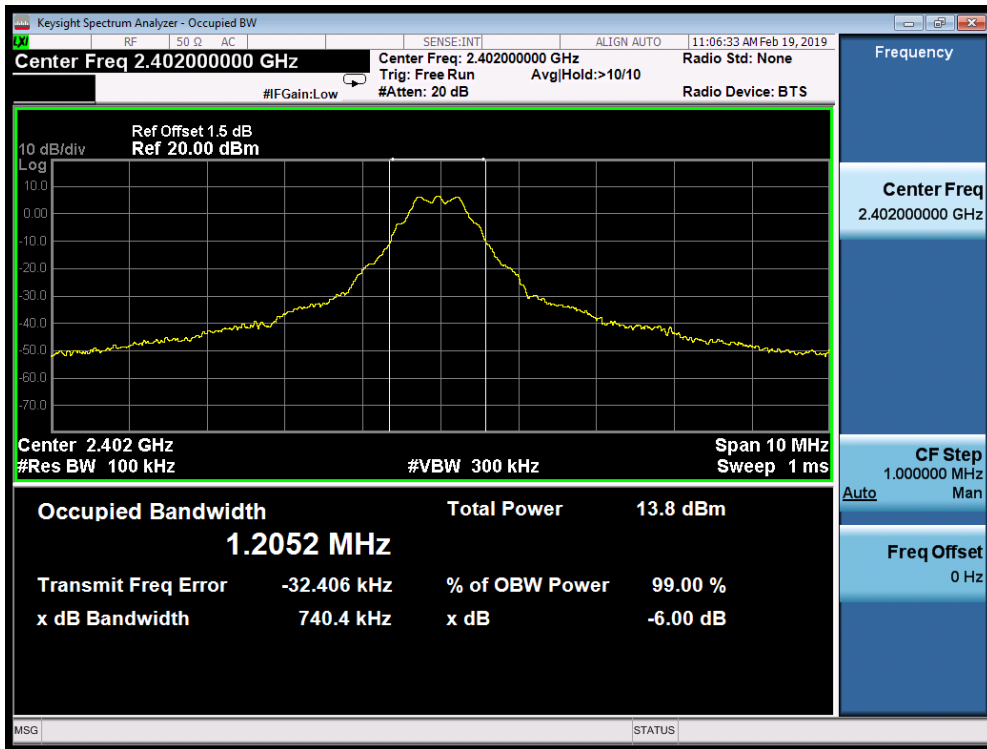
Mode 2 CH39 (2480MHz)



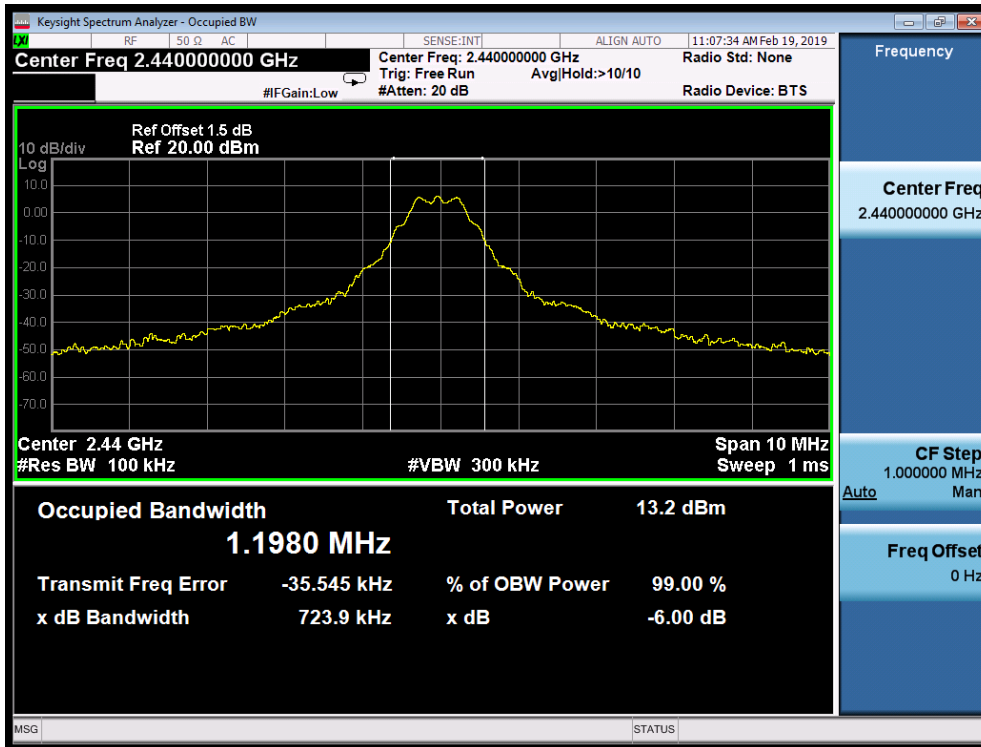
Product Name	: LED lamp	Test Voltage	: AC 120V/60Hz
Test Mode	: Mode 3	Test Site	: TR-8
Test Date	: 2019.02.19	Test Engineer	: Simon

Mode	CH.	Test Freq. (MHz)	99% Occupied Bandwidth (kHz)	6dB Occupied Bandwidth (kHz)	Limit (kHz)	Result
2	00	2402	1205.2	740.4	>500	Pass
2	19	2440	1198	723.9	>500	Pass
2	39	2480	1218.6	722.9	>500	Pass

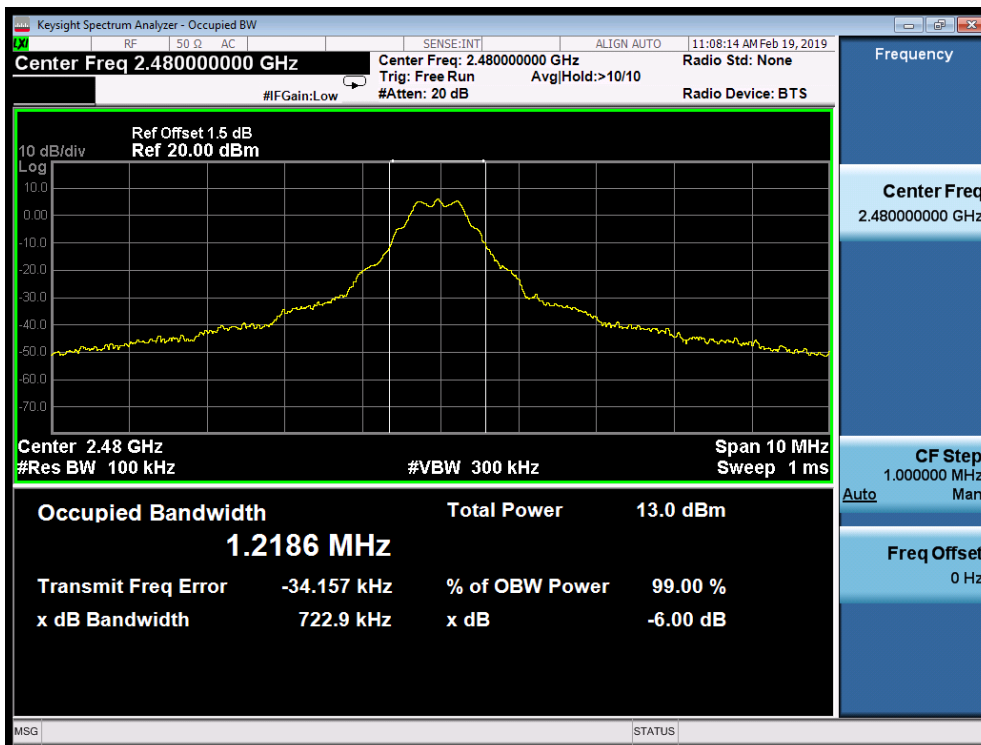
Mode 3 CH00 (2402MHz)



Mode 3 CH19 (2440MHz)



Mode 3 CH39 (2480MHz)



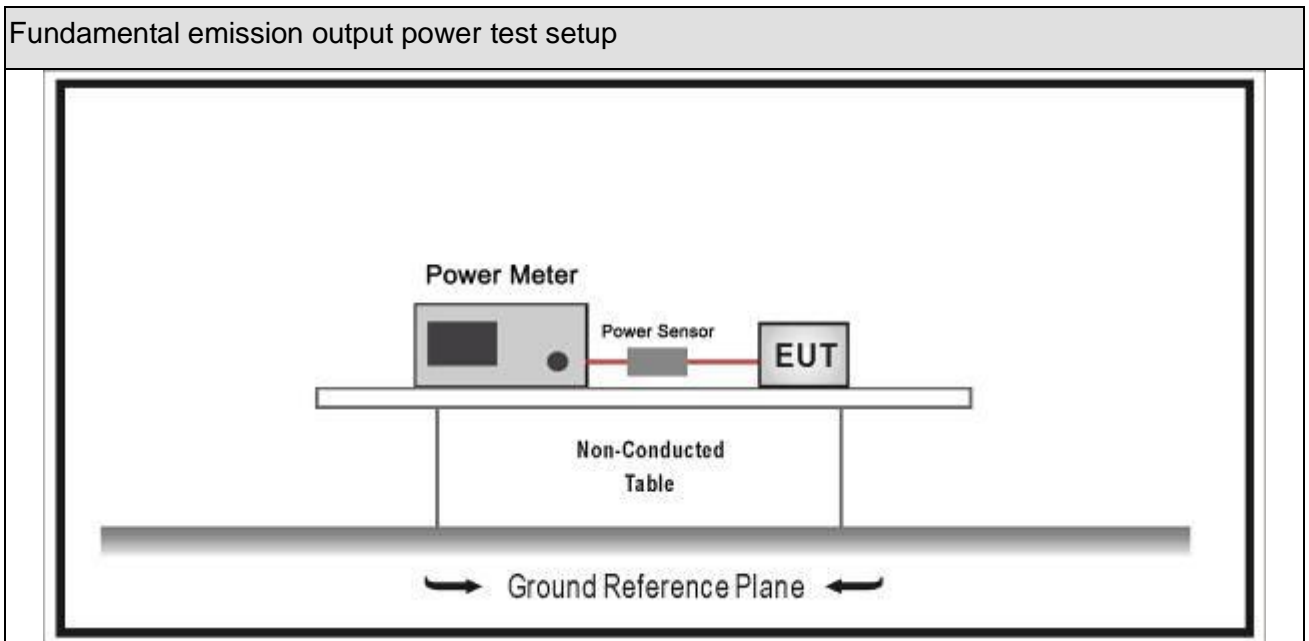
8. Fundamental emission output power

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	2019.01.04	2020.01.03
Spectrum Analyzer	Agilent	N9010A	MY48030494	2019.01.04	2020.01.03
Wideband Peak Power Meter	Anritsu	ML2495A	0905006	2018.10.14	2019.10.13
Power Sensor	Anritsu	MA2411B	0846014	2018.10.14	2019.10.13
Temperature/Humidity Meter	zhicheng	ZC1-2	TR8-TH	2018.04.10	2019.04.09

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

8.2. Test Setup



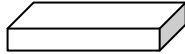
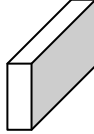
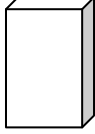



8.3. Limit

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 \geq 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 \geq 98%)	
	<input type="checkbox"/>	ANSI C63.10	11.9.2.2.3	Method AVGSA-1A(Duty cycle \geq 98%)	
	<input type="checkbox"/>	ANSI C63.10	11.9.2.2.4	Method AVGSA-2(Duty cycle \leq 98%)	
	<input type="checkbox"/>	ANSI C63.10	11.9.2.2.5	Method AVGSA-2A(Duty cycle \leq 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 1~3			
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 1		
				
	<input type="checkbox"/>	Chain 1	Chain 2	
				
	<input type="checkbox"/>	Chain 1	Chain 2	Chain 3
				

8.6. Test Result

Product Name	: LED lamp (muruta)	Test Voltage	: AC 120V/60Hz
Test Mode	: Mode 1	Test Site	: TR-8
Test Date	: 2019.01.30	Test Engineer	: Simon

Mode	Channel	Test Frequency (MHz)	Measurement Power Output (dBm)	Limit (dBm)	Result
1	00	2402	11.51	30	Pass
1	19	2440	11.61	30	Pass
1	39	2480	10.61	30	Pass

Product Name	: LED lamp (muruta)	Test Voltage	: AC 120V/60Hz
Test Mode	: Mode 2	Test Site	: TR-8
Test Date	: 2019.01.30	Test Engineer	: Simon

Mode	Channel	Test Frequency (MHz)	Measurement Power Output (dBm)	Limit (dBm)	Result
2	00	2402	12.38	30	Pass
2	19	2440	12.49	30	Pass
2	39	2480	11.51	30	Pass

Product Name	: LED lamp (muruta)	Test Voltage	: AC 120V/60Hz
Test Mode	: Mode 3	Test Site	: TR-8
Test Date	: 2019.01.30	Test Engineer	: Simon

Mode	Channel	Test Frequency (MHz)	Measurement Power Output (dBm)	Limit (dBm)	Result
3	00	2402	11.38	30	Pass
3	19	2440	11.54	30	Pass
3	39	2480	10.54	30	Pass

Product Name	: LED lamp (Diodes)	Test Voltage	: AC 120V/60Hz
Test Mode	: Mode 1	Test Site	: TR-8
Test Date	: 2019.01.30	Test Engineer	: Simon

Mode	Channel	Test Frequency (MHz)	Measurement Power Output (dBm)	Limit (dBm)	Result
1	0	2402	11.22	30	Pass
1	19	2440	10.88	30	Pass
1	39	2480	10.28	30	Pass

Product Name	: LED lamp (Diodes)	Test Voltage	: AC 120V/60Hz
Test Mode	: Mode 2	Test Site	: TR-8
Test Date	: 2019.01.30	Test Engineer	: Simon

Mode	Channel	Test Frequency (MHz)	Measurement Power Output (dBm)	Limit (dBm)	Result
2	0	2402	11.66	30	Pass
2	19	2440	11.38	30	Pass
2	39	2480	10.78	30	Pass



Product Name	: LED lamp (Diodes)	Test Voltage	: AC 120V/60Hz
Test Mode	: Mode 3	Test Site	: TR-8
Test Date	: 2019.01.30	Test Engineer	: Simon

Mode	Channel	Test Frequency (MHz)	Measurement Power Output (dBm)	Limit (dBm)	Result
3	0	2402	10.96	30	Pass
3	19	2440	10.65	30	Pass
3	39	2480	10.05	30	Pass

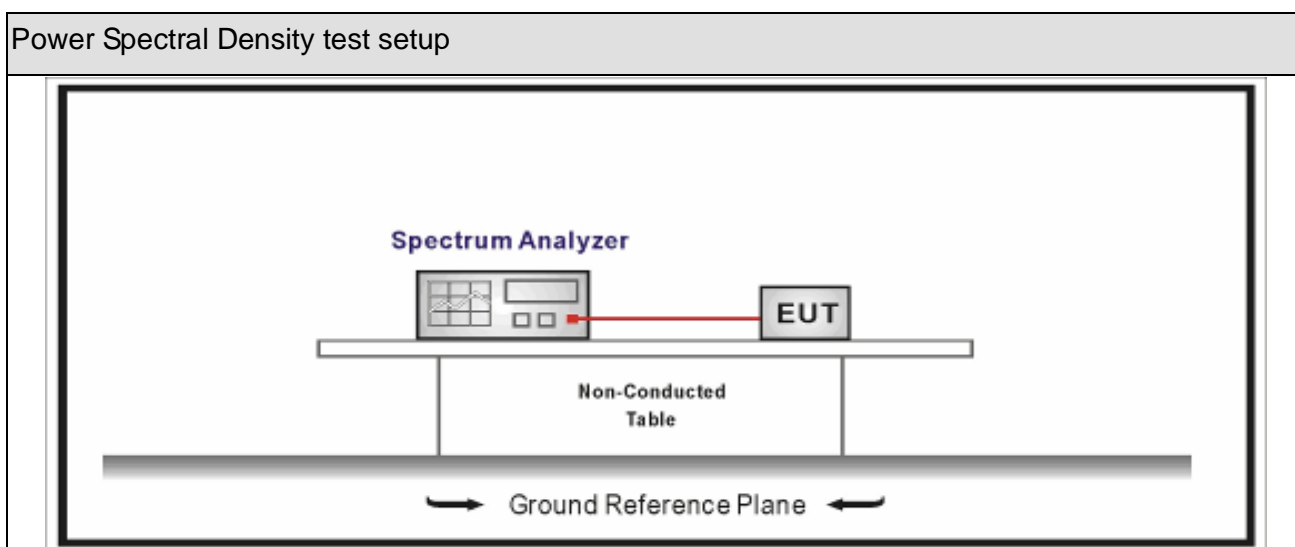
9. Power Spectral Density

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	2019.02.04	2020.02.03
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 is calibrated with traceable calibrations. Each calibration is traceable to the national or international standards.

9.2. Test Setup



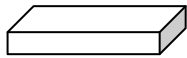
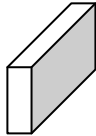
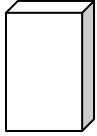
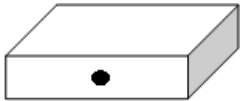
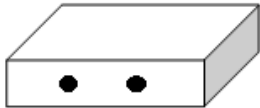
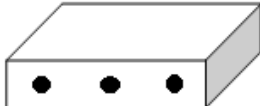
9.3. Limit

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

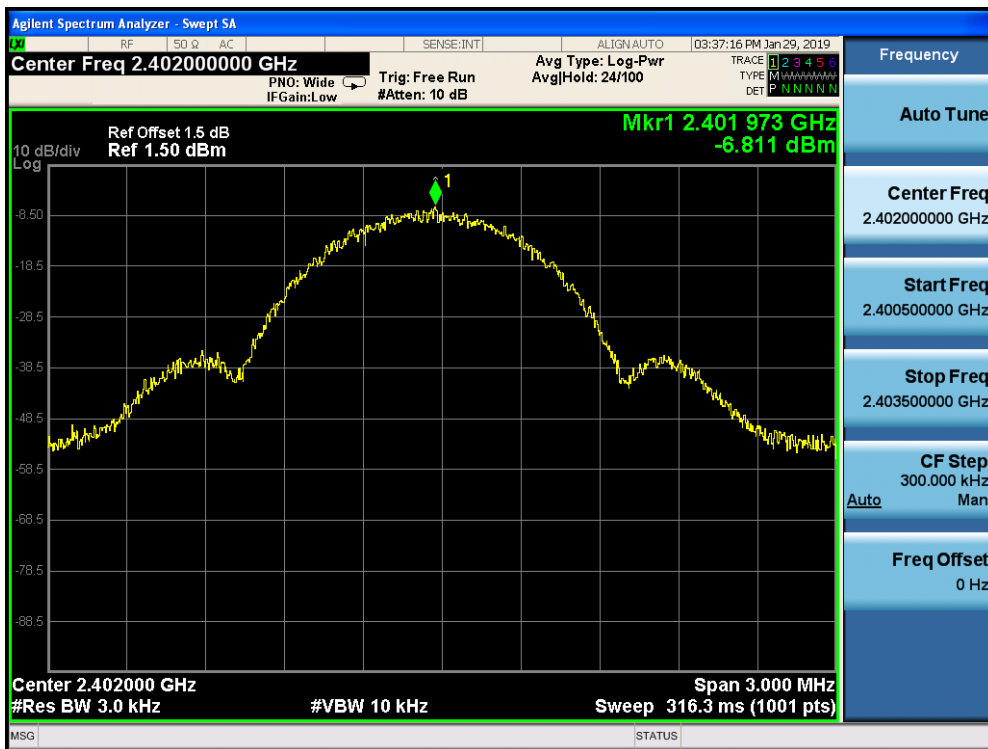
Item	Power Spectral Density Test Method			
Device Category	<input type="checkbox"/>	Fixed point-to-point		
	<input type="checkbox"/>	Emit multiple directional beams, simultaneously or sequentially		
	<input checked="" type="checkbox"/>	Other cases		
Test mode	Mode 1			
Test method	<input type="checkbox"/>	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 1		
				
	<input type="checkbox"/>	Chain 1	Chain 2	
				
	<input type="checkbox"/>	Chain 1	Chain 2	Chain 3
				

9.6. Test Result

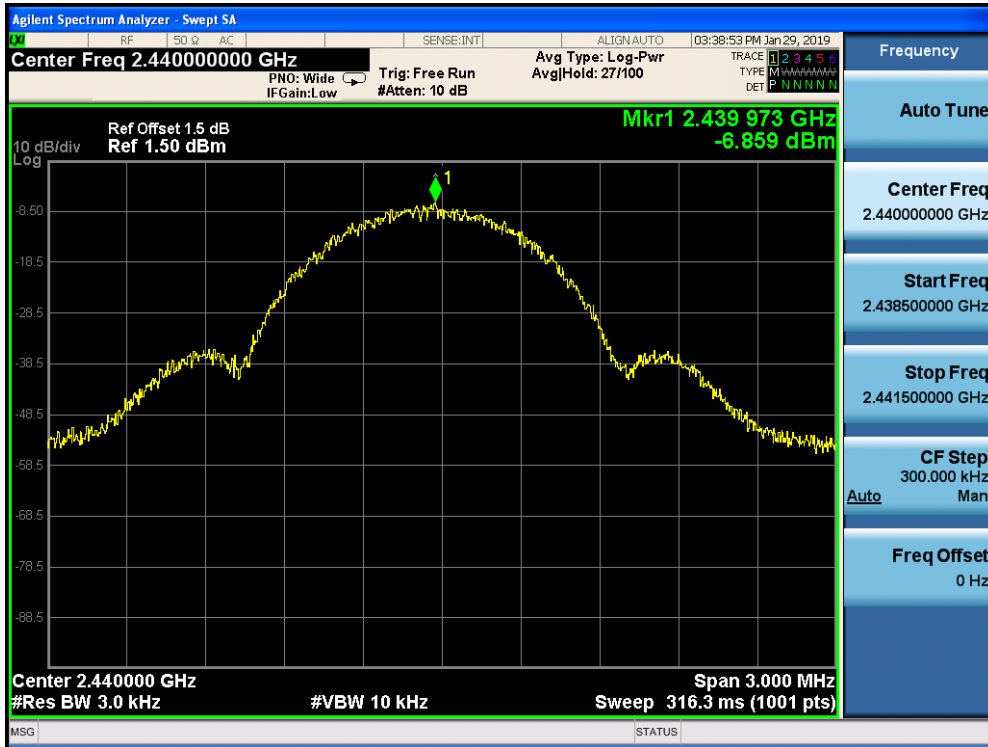
Product Name	: LED lamp	Test Voltage	: AC 120V/60Hz
Test Mode	: Mode 1	Test Site	: TR-8
Test Date	: 2019.01.30	Test Engineer	: Simon

Mode	Channel	Test Frequency (MHz)	Measurement PSD (dBm/3kHz)	Total PSD (dBm/3kHz)	Limit (dBm/3kHz)	Result
1	00	2402	-6.811	-6.811	8	Pass
1	19	2440	-6.859	-6.859	8	Pass
1	39	2480	-7.735	-7.735	8	Pass

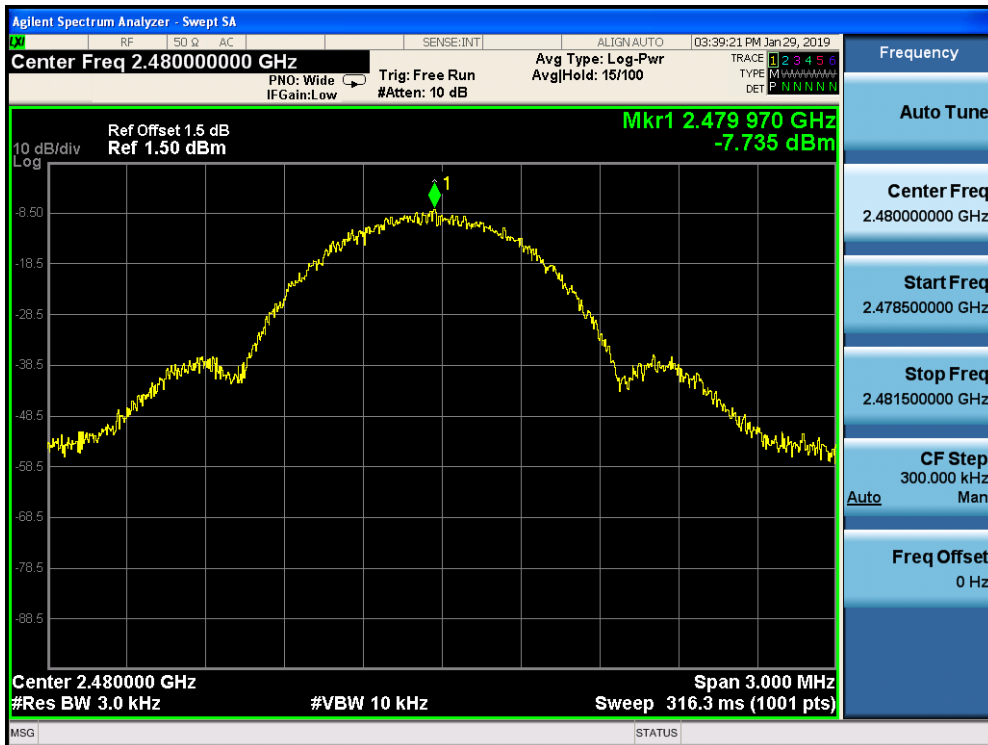
Mode 1 CH00(2402MHz)



Mode 1 CH19(2440MHz)



Mode 1 CH39(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 _____