



# **Test Report**

## FCC Part15 Subpart C & RSS-247 Issue 2

Product Name: LED lamp

Model No. : 9290018215

FCC ID : 2AGBW9290018215X

IC : 20812-8215X

Applicant: Signify (China) Investment Co., Ltd.

Address: Building no.9, Lane 888, Tianlin Road,

Minhang District, Shanghai 200233, China

Date of Receipt: Feb. 25, 2019

Test Date : Feb. 25, 2019 ~ Apr. 16, 2019

Issued Date : May. 21, 2019

Report No. : 1922077R-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: May. 21, 2019

Report No.: 1922077R-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. : 9290018215

FCC ID : 2AGBW9290018215X

IC : 20812-8215X

Brand Name : PHILIPS

EUT Voltage : 110-130 Vac, 50-60 Hz, 10W

Test Voltage : AC120V/60Hz

Applicable Standard : FCC CFR Title 47 Part 15 Subpart C;

ANSI C63.10:2013; KDB 558074 D01v05r02;

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,

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FCC Designation Number: CN1199;

ISED CAB identifier: CN0040

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(Engineer Supervisor: Jack Zhang)



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## **History of This Test Report**

REPORT NO.	VERSION	DESCRIPTION	ISSUED DATE
1922077R-RF-US-P06V02	V1.0	Initial Issued Report	May. 21, 2019

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#### 1. General Information

#### 1.1. EUT Description

Product Name	LEC	LED lamp					
Model No.	929	0018215					
EUT Voltage	110	-130 Vac, 5	0-60	) Hz, 10W			
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	$\boxtimes$	LE 1M	$\boxtimes$	LE 2M	$\boxtimes$	LE Coded S=2/8	
Data Rate							
Antenna Type	Reference to Antenna List						
Peak Antenna Gain	Ref	erence to A	nten	na 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	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	$\boxtimes$	1*TX+1*R	1*TX+1*RX				3*TX+3*RX	
Antenna technology	$\boxtimes$	SISO	SISO					
		☐ Basic						
		MIMO		CDD				
				Beam-forming				
Antenna Type		External	ternal 🗌 Dipole					
				PIFA				
		Internal	$\boxtimes$	PCB				
				Ceramic Chip Antenna				
				Stamp	ing Antenna			
				Metal plate type F antenna				
				Monop	oole antenna			
Antenna Gain	-1dB	i						

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#### 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)

Mode 4: Transmit-500Kbps(GFSK\_LE Coded)

#### 1.5. Tested System Details

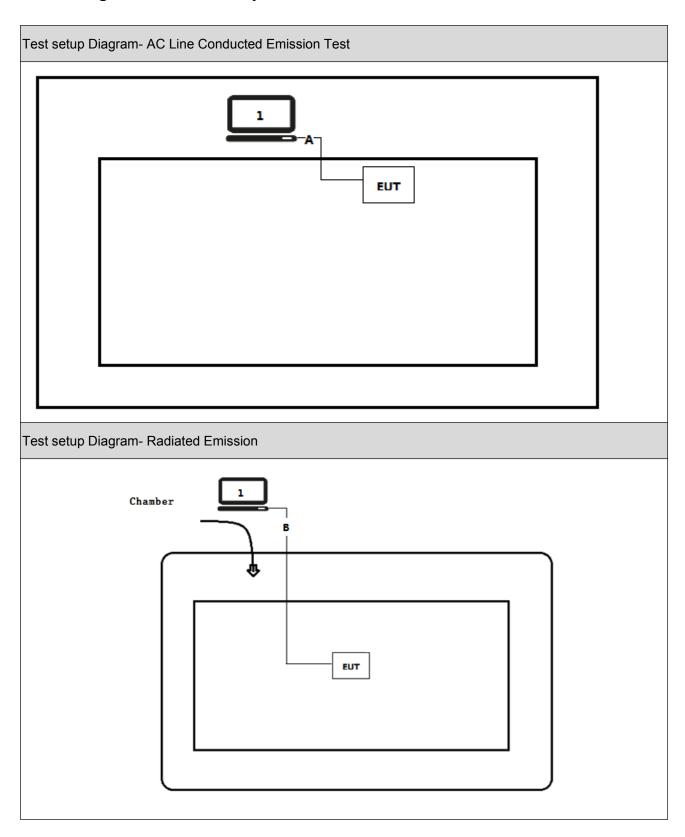
The types for all equipment, plus descriptions of all cables used in the tested system (including inserted cards) are:

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

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## 1.6. Configuration of Tested System





### 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 [HueApprobation Tool], and set the test mode and channel, then press OK to start to continue transmit.

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## 2. Technical Test

## 2.1. Summary of Test Result

### For FCC

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

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#### For ISED

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

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## 2.2. Test Frequency configuration:

<b>Modulation Mode</b>	Channel	Frequency	Channel	Frequency	Channel	Frequency
Mode1~4	00	2402 MHz	19	2440 MHz	39	2480MHz

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### 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	± 2.02dB
Radiated Emission	Below 1GHz ± 3.8 dB
	Above 1GHz ± 3.9 dB
RF Antenna Port Conducted Emission	± 1.27dB
Radiated Emission Band Edge	± 3.9dB
Occupied Bandwidth	± 1kHz
Power Spectral Density	± 1.27dB

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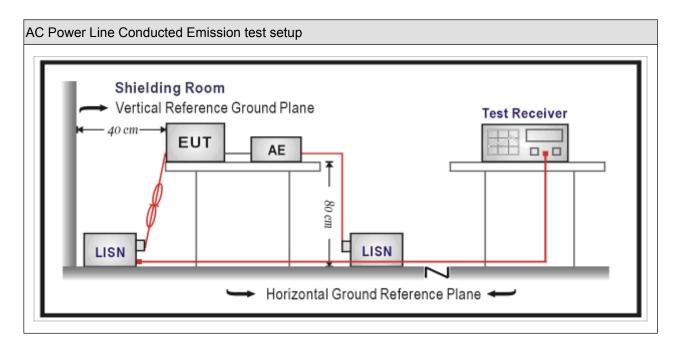
#### 3. AC Power Line Conducted Emission

### 3.1. Test Equipment

AC Power Line Conducted	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	2019.03.05	2020.03.04	
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	Zhichen	ZC1-2	TR1-TH	2019.01.04	2020.01.03	
Meter	Zilichen	201-2	IKI-III	2019.01.04	2020.01.03	
Quietek EMI V3(test	Quietek	N/A	NI/A	NI/A	NI/A	
software)	Quietek	IN/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	Conducted Limit			
(MHz)	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

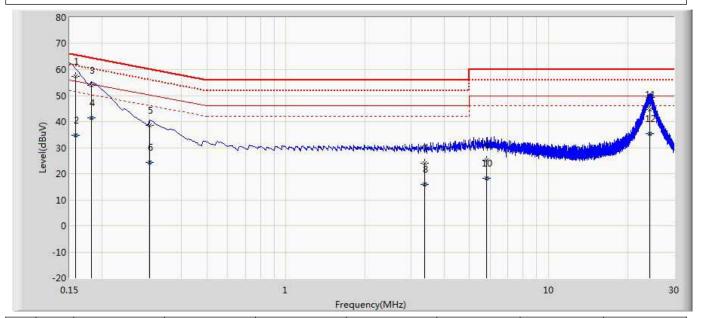
Test Method					
	References Rule	Chapter	Item		
$\boxtimes$	ANSI C63.10-2013	6.2	Standard test method for ac power-line conducted		
			emissions from unlicensed wireless devices		

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#### 3.5. Test Result

Site: TR1	Time: 2019/04/13 - 14:48
Limit: FCC_Part15.207_CE_AC Power	Margin: 4
Probe: ENV216_101190(0.009-30MHz)	Polarity: Line
EUT: LED lamp	Power: AC 120V/60Hz
Note: Mode 1	



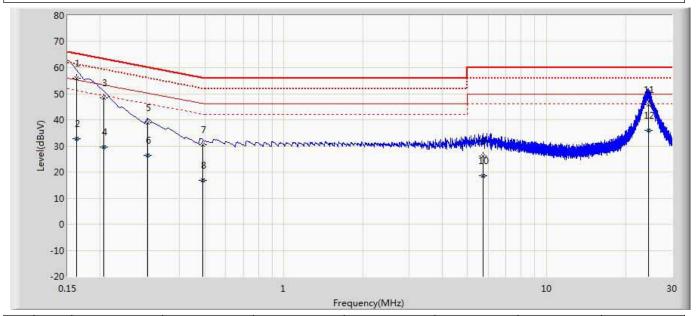
No	Mark	Frequency	Measure Level	Reading Level	Over Limit	Limit	Factor	Туре
		(MHz)	(dBuV)	(dBuV)	(dB)	(dBuV)	(dB)	
1	*	0.158	57.413	47.783	-8.174	65.587	9.630	QP
2		0.158	34.830	25.200	-20.756	55.587	9.630	AV
3		0.182	53.937	44.308	-10.457	64.394	9.629	QP
4		0.182	41.469	31.840	-12.924	54.394	9.629	AV
5		0.302	38.461	28.830	-21.727	60.188	9.631	QP
6		0.302	24.205	14.574	-25.983	50.188	9.631	AV
7		3.378	24.128	14.375	-31.872	56.000	9.753	QP
8		3.378	15.846	6.093	-30.154	46.000	9.753	AV
9		5.794	25.107	15.275	-34.893	60.000	9.833	QP
10		5.794	18.119	8.287	-31.881	50.000	9.833	AV
11		24.326	44.687	33.931	-15.313	60.000	10.756	QP
12		24.326	35.331	24.576	-14.669	50.000	10.756	AV

#### Note:

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



Site: TR1	Time: 2019/04/13 - 11:10
Limit: FCC_Part15.207_CE_AC Power	Margin: 4
Probe: ENV216_101190(0.009-30MHz)	Polarity: Neutral
EUT: LED lamp	Power: AC 120V/60Hz
Note: Mode 1	



No	Mark	Frequency	Measure Level	Reading Level	Over Limit	Limit	Factor	Туре
		(MHz)	(dBuV)	(dBuV)	(dB)	(dBuV)	(dB)	
1	*	0.162	55.969	46.354	-9.411	65.380	9.616	QP
2		0.162	32.656	23.041	-22.724	55.380	9.616	AV
3		0.206	48.366	38.735	-15.000	63.365	9.631	QP
4		0.206	29.637	20.006	-23.728	53.365	9.631	AV
5		0.302	38.803	29.176	-21.384	60.188	9.627	QP
6		0.302	26.272	16.645	-23.916	50.188	9.627	AV
7		0.490	30.301	20.668	-25.867	56.168	9.633	QP
8		0.490	16.815	7.182	-29.353	46.168	9.633	AV
9		5.742	26.048	16.225	-33.952	60.000	9.823	QP
10		5.742	18.461	8.638	-31.539	50.000	9.823	AV
11		24.418	45.747	34.814	-14.253	60.000	10.933	QP
12		24.418	35.905	24.972	-14.095	50.000	10.933	AV

#### Note:

- 1. "  $^{\ast}$  ", 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	2019.03.29	2020.03.28
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	2019.03.02	2020.03.01
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.

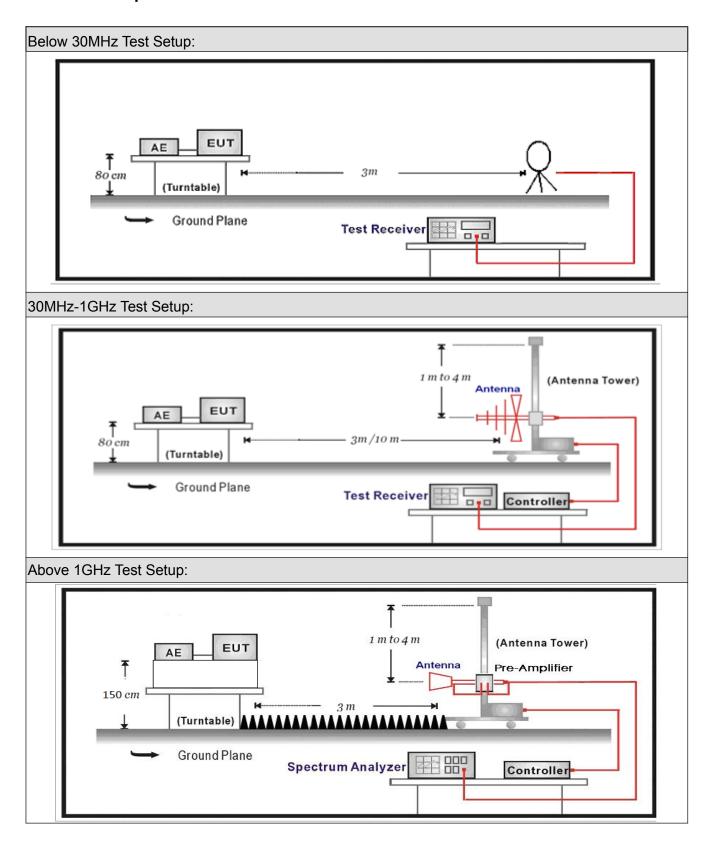
Radiated Emission(Above 1GHz) / AC-5						
Instrument	Manufacturer	Type No.	Serial No.	Cal. Date	Cal. Due Date	
Spectrum Analyzer	Agilent	E4446A	MY45300103	2019.01.04	2020.01.03	
Preamplifier	Miteq	NSP1800-25	1364185	2018.05.06	2019.05.05	
Preamplifier	QuieTek	AP-040G	CHM-0906001	2018.05.06	2019.05.05	
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	
		SUCOFLEX				
Coaxial Cable	Huber+Suhner	106	AC5-C1	2019.03.02	2020.03.01	
		SUCOFLEX				
Coaxial Cable	Huber+Suhner	106	AC5-C2	2019.03.02	2020.03.01	
		SUCOFLEX				
Coaxial Cable	Huber+Suhner	102	AC5-C3	2019.03.02	2020.03.01	
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.

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#### 4.2. Test Setup





## 4.3. Limit

#### For FCC

Restricted Bands of operation						
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						

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#### 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 Emi	ssions Limit		
Frequency (MHz)	Field strength (μV/m)	Field strength (dB µ V/m)	Measurement distance (m)
0.009 - 0.49	2400/F(kHz)	48.5 – 13.8	300 <sub>(Note 1)</sub>
0.49 - 1.705	24000/F(kHz)	33.8 - 23	30 <sub>(Note 1)</sub>
1.705 - 30	30	29.5	30 <sub>(Note 1)</sub>
30 - 88	100	40	3 <sub>(Note 2)</sub>
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	Metho	od				
	Refer	ence	s Rul	е	Chapter	Description
	ANSI	C63.	10		11.11	Emissions in non-restricted frequency bands
		ANSI	C63	.10	11.11.2	Reference level measurement
		ANSI	C63	.10	11.11.3	Emission level measurement
$\boxtimes$	ANSI	C63.	10		11.12	Emissions in restricted frequency bands
		ANSI	C63	.10	11.12.1	Radiated emission measurements
		ANSI	C63	.10	11.12.2.7	Radiated spurious emission test
		$\boxtimes$	ANS	I C63.10	6.4	Radiated emissions from unlicensed wireless
						devices below 30 MHz
		$\boxtimes$	ANS	I C63.10	6.5	Radiated emissions from unlicensed wireless
						devices in the frequency range
						of 30 MHz to 1000 MHz
		$\boxtimes$	ANS	I C63.10	6.6	Radiated emissions from unlicensed wireless
						devices above 1 GHz
			ANS	I C63.10	11.12.2.3	Quasi-peak measurement procedure
		$\boxtimes$	ANS	I C63.10	11.12.2.4	Peak power measurement procedure
		$\boxtimes$	ANS	I C63.10	11.12.2.5	Average power measurement procedures
				ANSI C63.10		Trace averaging with continuous EUT transmission at full power
				ANSI C63 10		Trace averaging across ON and OFF times of the
				ANSI C03. 10		EUT transmissions followed by
						duty cycle correction
			$\bowtie$	ANSI C63 10		Reduced VBW averaging across ON and OFF times
				ANOI 000. IU		of the EUT transmissions
						with max hold
						WIGH HIGA HOIG

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### 4.5. EUT test Axis definition

Item	Emissions in restricted frequency bands			y bands			
		Fixed point-to-point					
Device Category		Emit multiple directional beams, simultaneously or sequentially					
		Other cases					
Test mode	Mode	1~4					
		Radiated					
		X Axis	Y Axis	Z Axis			
		Worst Axis ⊠	Worst Axis	Worst Axis			
		Conducted					
		Chain 1					
Test method	•						
		Chain 1		Chain 2			
			• •				
		Chain 1	Chain 2	Chain 3			
			• • •				

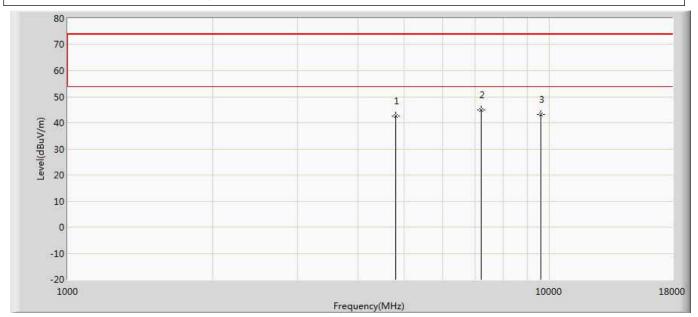
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### 4.6. Test Result

#### Muruta:

Engineer: Simon			
Site: AC5	Time: 2019/04/15 - 11:38		
Limit: FCC_Part15.209_RE(3m)	Margin: 0		
Probe: Horn_3117_00167055(1-18GHz)	Polarity: Vertical		
EUT: LED lamp Power: AC 120V/60Hz			
Note: Mode 1:Transmit at 2402Mhz by BLE			

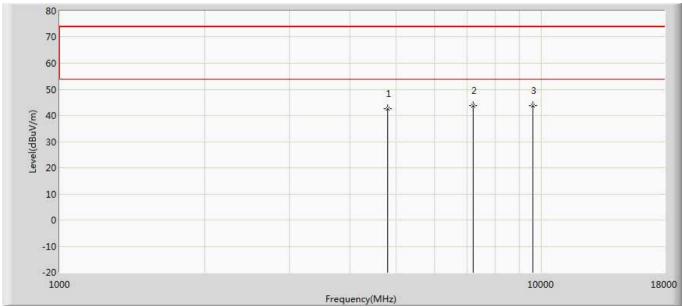


No	Mark	Frequency	Measure Level	Reading Level	Over Limit	Limit	Factor	Туре
		(MHz)	(dBuV/m)	(dBuV)	(dB)	(dBuV/m)	(dB)	
1		4804.000	42.482	40.741	-31.518	74.000	1.741	PK
2	*	7206.000	45.023	39.768	-28.977	74.000	5.255	PK
3		9608.000	43.321	36.452	-30.679	74.000	6.869	PK



Engineer: Simon			
Site: AC5	Time: 2019/04/15 - 11:39		
Limit: FCC_Part15.209_RE(3m)	Margin: 0		
Probe: Horn_3117_00167055(1-18GHz)	Polarity: Horizontal		
EUT: LED lamp Power: AC 120V/60Hz			
Note: Mode 1:Transmit at 2402Mhz by BLF			

Note: Mode 1:Transmit at 2402Mhz by BLE

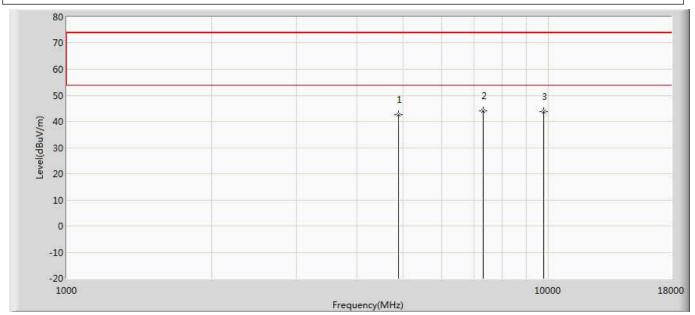


No	Mark	Frequency	Measure Level	Reading Level	Over Limit	Limit	Factor	Туре
		(MHz)	(dBuV/m)	(dBuV)	(dB)	(dBuV/m)	(dB)	
1		4804.000	42.751	41.010	-31.249	74.000	1.741	PK
2	*	7206.000	43.768	38.513	-30.232	74.000	5.255	PK
3		9608.000	43.728	36.859	-30.272	74.000	6.869	PK



Engineer: Simon			
Site: AC5	Time: 2019/04/15 - 11:39		
Limit: FCC_Part15.209_RE(3m)	Margin: 0		
Probe: Horn_3117_00167055(1-18GHz)	Polarity: Vertical		
EUT: LED lamp	Power: AC 120V/60Hz		
Note: Mode 1:Transmit at 2440Mbz by PLE			

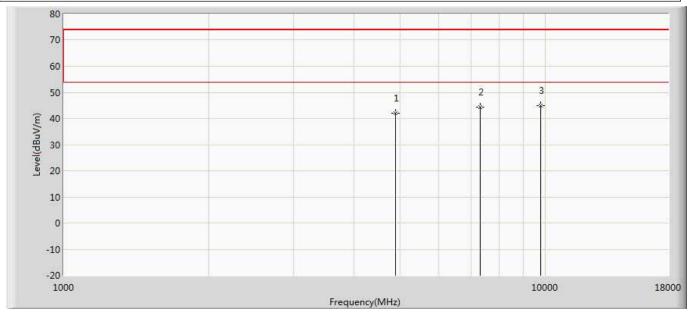
Note: Mode 1:Transmit at 2440Mhz by BLE



No	Mark	Frequency	Measure Level	Reading Level	Over Limit	Limit	Factor	Туре
		(MHz)	(dBuV/m)	(dBuV)	(dB)	(dBuV/m)	(dB)	
1		4880.000	42.484	40.629	-31.516	74.000	1.855	PK
2	*	7320.000	44.189	38.647	-29.811	74.000	5.542	PK
3		9760.000	43.749	36.630	-30.251	74.000	7.120	PK



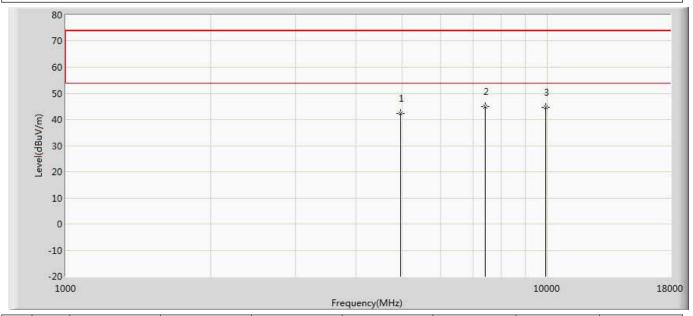
Engineer: Simon			
Site: AC5	Time: 2019/04/15 - 11:39		
Limit: FCC_Part15.209_RE(3m)	Margin: 0		
Probe: Horn_3117_00167055(1-18GHz)	Polarity: Horizontal		
EUT: LED lamp Power: AC 120V/60Hz			
Note: Mode 1:Transmit at 2440Mhz by RLF			



No	Mark	Frequency	Measure Level	Reading Level	Over Limit	Limit	Factor	Туре
		(MHz)	(dBuV/m)	(dBuV)	(dB)	(dBuV/m)	(dB)	
1		4880.000	41.904	40.049	-32.096	74.000	1.855	PK
2		7320.000	44.288	38.746	-29.712	74.000	5.542	PK
3	*	9760.000	44.893	37.774	-29.107	74.000	7.120	PK



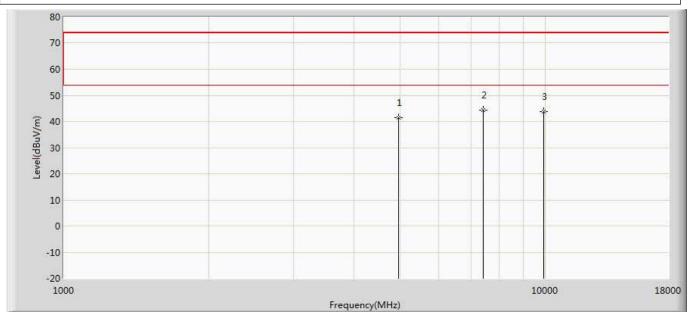
Engineer: Simon			
Site: AC5	Time: 2019/04/15 - 11:39		
Limit: FCC_Part15.209_RE(3m)	Margin: 0		
Probe: Horn_3117_00167055(1-18GHz)	Polarity: Vertical		
EUT: LED lamp Power: AC 120V/60Hz			
Note: Mode 1:Transmit at 2480Mhz by BLF			



No	Mark	Frequency	Measure Level	Reading Level	Over Limit	Limit	Factor	Туре
		(MHz)	(dBuV/m)	(dBuV)	(dB)	(dBuV/m)	(dB)	
1		4960.000	42.249	40.268	-31.751	74.000	1.981	PK
2	*	7440.000	45.002	39.661	-28.998	74.000	5.341	PK
3		9920.000	44.593	37.504	-29.407	74.000	7.088	PK



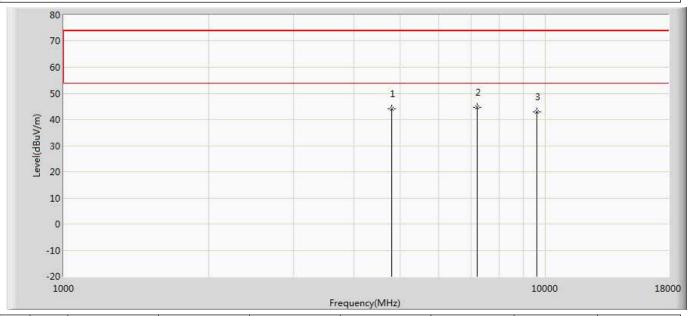
Engineer: Simon				
Site: AC5	Time: 2019/04/15 - 11:39			
Limit: FCC_Part15.209_RE(3m)	Margin: 0			
Probe: Horn_3117_00167055(1-18GHz)	Polarity: Horizontal			
EUT: LED lamp	Power: AC 120V/60Hz			
Note: Mode 1:Transmit at 2480Mhz by BLF				



No	Mark	Frequency	Measure Level	Reading Level	Over Limit	Limit	Factor	Туре
		(MHz)	(dBuV/m)	(dBuV)	(dB)	(dBuV/m)	(dB)	
1		4960.000	41.405	39.424	-32.595	74.000	1.981	PK
2	*	7440.000	44.475	39.134	-29.525	74.000	5.341	PK
3		9920.000	43.707	36.618	-30.293	74.000	7.088	PK



Engineer: Simon				
Site: AC5	Time: 2019/04/15 - 11:39			
Limit: FCC_Part15.209_RE(3m)	Margin: 0			
Probe: Horn_3117_00167055(1-18GHz)	Polarity: Vertical			
EUT: LED lamp	Power: AC 120V/60Hz			
Note: Mode 2:Transmit at 2402Mhz by 2I F				

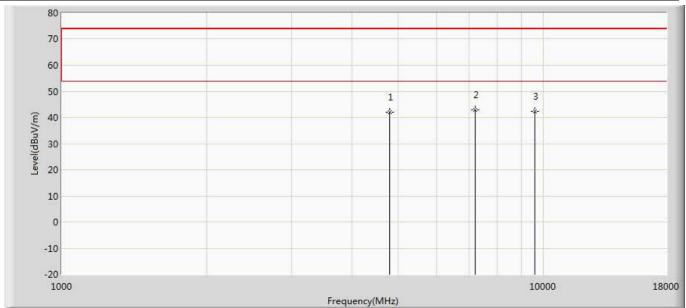


No	Mark	Frequency	Measure Level	Reading Level	Over Limit	Limit	Factor	Туре
		(MHz)	(dBuV/m)	(dBuV)	(dB)	(dBuV/m)	(dB)	
1		4804.000	44.148	42.407	-29.852	74.000	1.741	PK
2	*	7206.000	44.583	39.328	-29.417	74.000	5.255	PK
3		9608.000	42.974	36.105	-31.026	74.000	6.869	PK



Engineer: Simon				
Site: AC5	Time: 2019/04/15 - 11:39			
Limit: FCC_Part15.209_RE(3m)	Margin: 0			
Probe: Horn_3117_00167055(1-18GHz)	Polarity: Horizontal			
EUT: LED lamp	Power: AC 120V/60Hz			
Note: Mode 2:Transmit at 2402Mhz by 2LF				

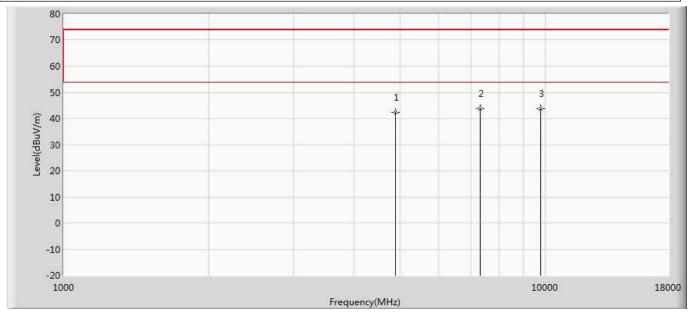
Note: Mode 2: Fransmit at 2402Mhz by 2LE



No	Mark	Frequency	Measure Level	Reading Level	Over Limit	Limit	Factor	Туре
		(MHz)	(dBuV/m)	(dBuV)	(dB)	(dBuV/m)	(dB)	
1		4804.000	42.107	40.366	-31.893	74.000	1.741	PK
2	*	7206.000	42.923	37.668	-31.077	74.000	5.255	PK
3		9608.000	42.420	35.551	-31.580	74.000	6.869	PK



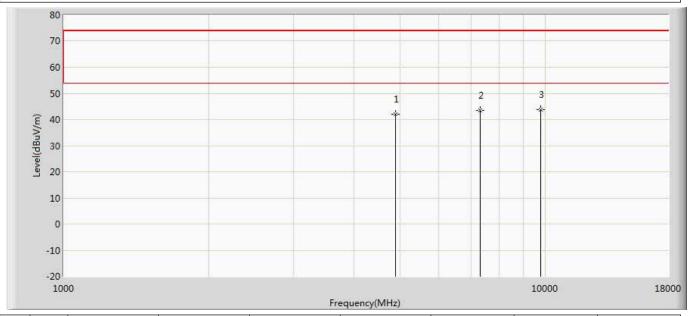
Engineer: Simon				
Site: AC5	Time: 2019/04/15 - 11:39			
Limit: FCC_Part15.209_RE(3m)	Margin: 0			
Probe: Horn_3117_00167055(1-18GHz)	Polarity: Vertical			
EUT: LED lamp	Power: AC 120V/60Hz			
Note: Mode 2:Transmit at 2440Mhz by 2I F				



No	Mark	Frequency	Measure Level	Reading Level	Over Limit	Limit	Factor	Туре
		(MHz)	(dBuV/m)	(dBuV)	(dB)	(dBuV/m)	(dB)	
1		4880.000	42.416	40.561	-31.584	74.000	1.855	PK
2	*	7320.000	43.736	38.194	-30.264	74.000	5.542	PK
3		9760.000	43.631	36.512	-30.369	74.000	7.120	PK



Engineer: Simon				
Site: AC5	Time: 2019/04/15 - 11:39			
Limit: FCC_Part15.209_RE(3m)	Margin: 0			
Probe: Horn_3117_00167055(1-18GHz)	Polarity: Horizontal			
EUT: LED lamp	Power: AC 120V/60Hz			
Note: Mode 2:Transmit at 2440Mhz by 2I F				

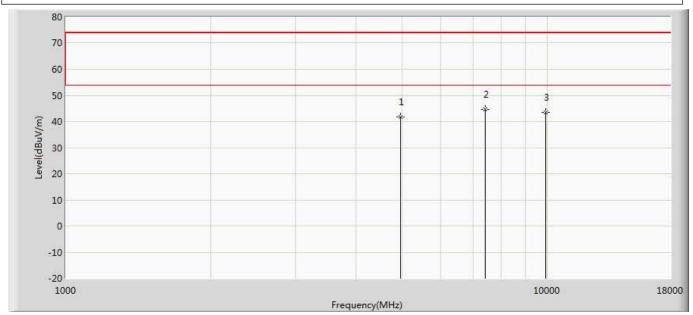


No	Mark	Frequency	Measure Level	Reading Level	Over Limit	Limit	Factor	Туре
		(MHz)	(dBuV/m)	(dBuV)	(dB)	(dBuV/m)	(dB)	
1		4880.000	41.912	40.057	-32.088	74.000	1.855	PK
2		7320.000	43.611	38.069	-30.389	74.000	5.542	PK
3	*	9760.000	43.882	36.763	-30.118	74.000	7.120	PK



Engineer: Simon				
Site: AC5	Time: 2019/04/15 - 11:39			
Limit: FCC_Part15.209_RE(3m)	Margin: 0			
Probe: Horn_3117_00167055(1-18GHz)	Polarity: Vertical			
EUT: LED lamp	Power: AC 120V/60Hz			
Note: Mode 2:Transmit at 2480Mbz by 2LE				

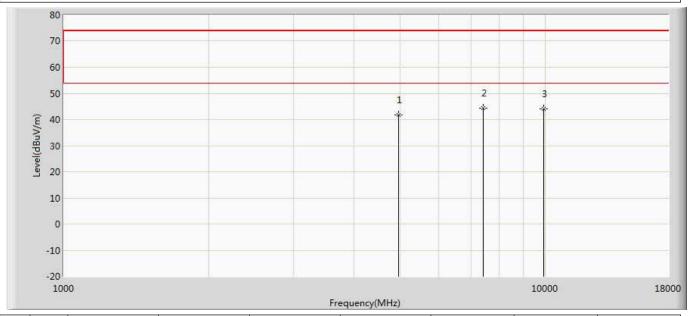
Note: Mode 2:Transmit at 2480Mhz by 2LE



No	Mark	Frequency	Measure Level	Reading Level	Over Limit	Limit	Factor	Туре
		(MHz)	(dBuV/m)	(dBuV)	(dB)	(dBuV/m)	(dB)	
1		4960.000	41.829	39.848	-32.171	74.000	1.981	PK
2	*	7440.000	44.569	39.228	-29.431	74.000	5.341	PK
3		9920.000	43.586	36.497	-30.414	74.000	7.088	PK



Engineer: Simon				
Site: AC5	Time: 2019/04/15 - 11:39			
Limit: FCC_Part15.209_RE(3m)	Margin: 0			
Probe: Horn_3117_00167055(1-18GHz)	Polarity: Horizontal			
EUT: LED lamp	Power: AC 120V/60Hz			
Note: Mode 2:Transmit at 2480Mhz by 2LF	·			

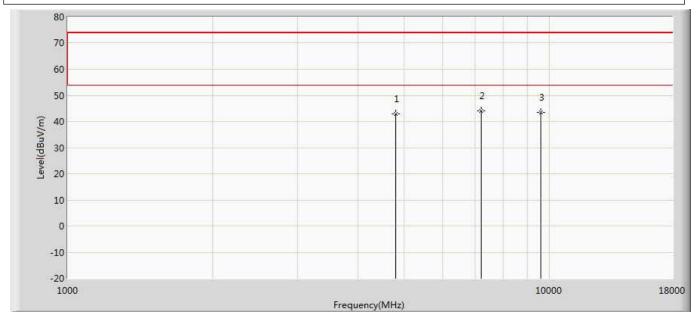


No	Mark	Frequency	Measure Level	Reading Level	Over Limit	Limit	Factor	Туре
		(MHz)	(dBuV/m)	(dBuV)	(dB)	(dBuV/m)	(dB)	
1		4960.000	41.661	39.680	-32.339	74.000	1.981	PK
2	*	7440.000	44.375	39.034	-29.625	74.000	5.341	PK
3		9920.000	44.009	36.920	-29.991	74.000	7.088	PK



Engineer: Simon				
Site: AC5	Time: 2019/04/15 - 11:39			
Limit: FCC_Part15.209_RE(3m)	Margin: 0			
Probe: Horn_3117_00167055(1-18GHz)	Polarity: Vertical			
EUT: LED lamp	Power: AC 120V/60Hz			
Note: Made 2:Transmit at 2402Mb= by Coded125	·			

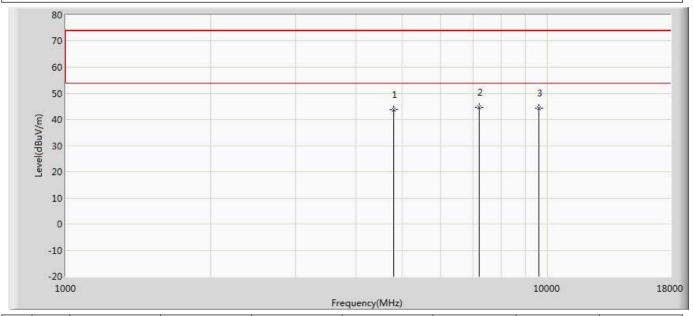
Note: Mode 3:Transmit at 2402Mhz by Coded125



No	Mark	Frequency	Measure Level	Reading Level	Over Limit	Limit	Factor	Туре
		(MHz)	(dBuV/m)	(dBuV)	(dB)	(dBuV/m)	(dB)	
1		4804.000	43.007	41.266	-30.993	74.000	1.741	PK
2	*	7206.000	44.110	38.855	-29.890	74.000	5.255	PK
3		9608.000	43.520	36.651	-30.480	74.000	6.869	PK



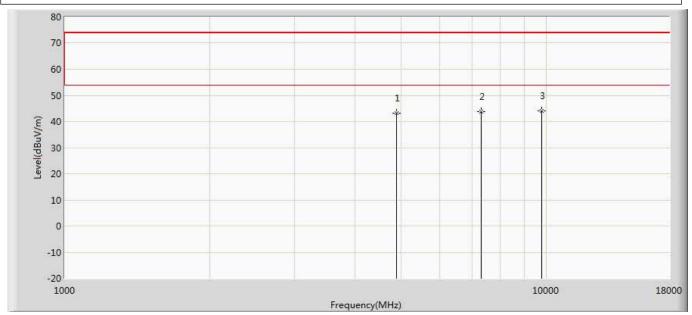
Engineer: Simon				
Site: AC5	Time: 2019/04/15 - 11:40			
Limit: FCC_Part15.209_RE(3m)	Margin: 0			
Probe: Horn_3117_00167055(1-18GHz)	Polarity: Horizontal			
EUT: LED lamp	Power: AC 120V/60Hz			
Note: Mode 3:Transmit at 2402Mhz by Coded125				



No	Mark	Frequency	Measure Level	Reading Level	Over Limit	Limit	Factor	Туре
		(MHz)	(dBuV/m)	(dBuV)	(dB)	(dBuV/m)	(dB)	
1		4804.000	43.639	41.898	-30.361	74.000	1.741	PK
2	*	7206.000	44.705	39.450	-29.295	74.000	5.255	PK
3		9608.000	44.237	37.368	-29.763	74.000	6.869	PK



Engineer: Simon				
Site: AC5	Time: 2019/04/15 - 11:40			
Limit: FCC_Part15.209_RE(3m)	Margin: 0			
Probe: Horn_3117_00167055(1-18GHz)	Polarity: Vertical			
EUT: LED lamp	Power: AC 120V/60Hz			
Note: Mode 3:Transmit at 2440Mhz by Coded125				

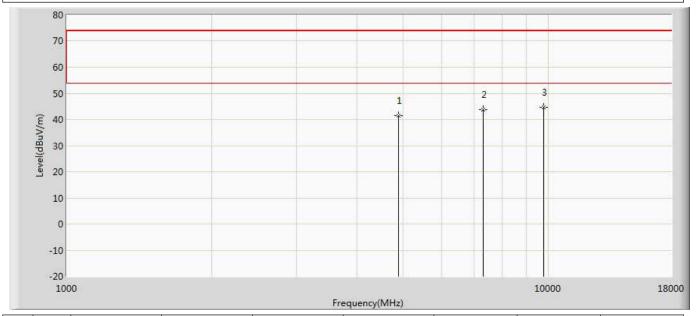


No	Mark	Frequency	Measure Level	Reading Level	Over Limit	Limit	Factor	Туре
		(MHz)	(dBuV/m)	(dBuV)	(dB)	(dBuV/m)	(dB)	
1		4880.000	43.044	41.189	-30.956	74.000	1.855	PK
2		7320.000	43.814	38.272	-30.186	74.000	5.542	PK
3	*	9760.000	44.105	36.986	-29.895	74.000	7.120	PK



Engineer: Simon				
Site: AC5	Time: 2019/04/15 - 11:40			
Limit: FCC_Part15.209_RE(3m)	Margin: 0			
Probe: Horn_3117_00167055(1-18GHz)	Polarity: Horizontal			
EUT: LED lamp	Power: AC 120V/60Hz			
Note: Made 2:Transmit at 2440Mbz by Coded125				

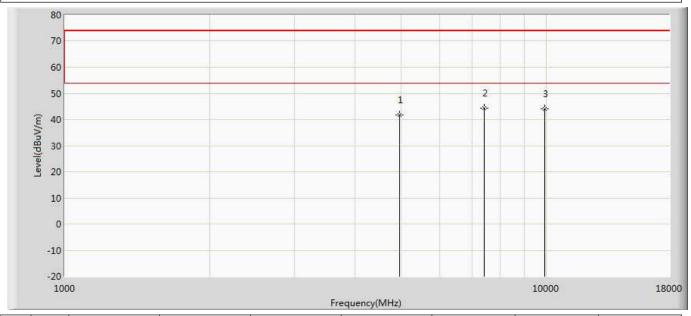
Note: Mode 3:Transmit at 2440Mhz by Coded125



No	Mark	Frequency	Measure Level	Reading Level	Over Limit	Limit	Factor	Туре
		(MHz)	(dBuV/m)	(dBuV)	(dB)	(dBuV/m)	(dB)	
1		4880.000	41.379	39.524	-32.621	74.000	1.855	PK
2		7320.000	43.855	38.313	-30.145	74.000	5.542	PK
3	*	9760.000	44.647	37.528	-29.353	74.000	7.120	PK



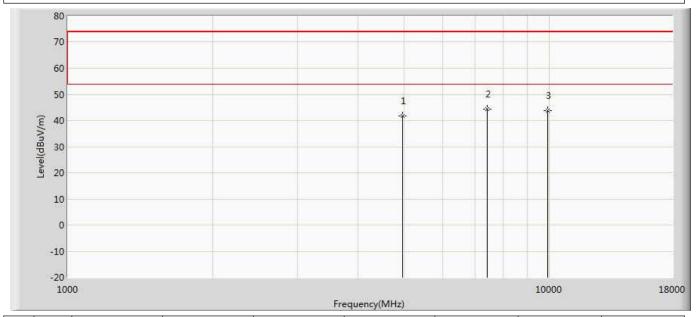
Engineer: Simon				
Site: AC5	Time: 2019/04/15 - 11:40			
Limit: FCC_Part15.209_RE(3m)	Margin: 0			
Probe: Horn_3117_00167055(1-18GHz)	Polarity: Vertical			
EUT: LED lamp	Power: AC 120V/60Hz			
Note: Mode 3:Transmit at 2480Mhz by Coded125				



No	Mark	Frequency	Measure Level	Reading Level	Over Limit	Limit	Factor	Туре
		(MHz)	(dBuV/m)	(dBuV)	(dB)	(dBuV/m)	(dB)	
1		4960.000	41.772	39.791	-32.228	74.000	1.981	PK
2	*	7440.000	44.481	39.140	-29.519	74.000	5.341	PK
3		9920.000	44.112	37.023	-29.888	74.000	7.088	PK



Engineer: Simon				
Site: AC5	Time: 2019/04/15 - 11:40			
Limit: FCC_Part15.209_RE(3m)	Margin: 0			
Probe: Horn_3117_00167055(1-18GHz)	Polarity: Horizontal			
EUT: LED lamp	Power: AC 120V/60Hz			
Note: Mode 3:Transmit at 2480Mhz by Coded125				

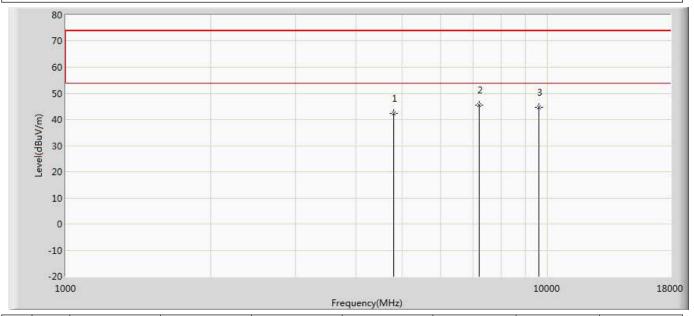


No	Mark	Frequency	Measure Level	Reading Level	Over Limit	Limit	Factor	Туре
		(MHz)	(dBuV/m)	(dBuV)	(dB)	(dBuV/m)	(dB)	
1		4960.000	41.828	39.847	-32.172	74.000	1.981	PK
2	*	7440.000	44.298	38.957	-29.702	74.000	5.341	PK
3		9920.000	43.776	36.687	-30.224	74.000	7.088	PK



Engineer: Simon				
Site: AC5	Time: 2019/04/15 - 11:40			
Limit: FCC_Part15.209_RE(3m)	Margin: 0			
Probe: Horn_3117_00167055(1-18GHz)	Polarity: Vertical			
EUT: LED lamp	Power: AC 120V/60Hz			
Note: Made 4:Transmit at 2402Mb= by Coded500	·			

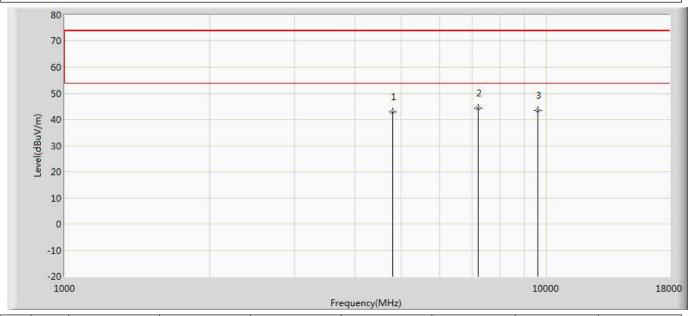
Note: Mode 4:Transmit at 2402Mhz by Coded500



No	Mark	Frequency	Measure Level	Reading Level	Over Limit	Limit	Factor	Туре
		(MHz)	(dBuV/m)	(dBuV)	(dB)	(dBuV/m)	(dB)	
1		4804.000	42.306	40.565	-31.694	74.000	1.741	PK
2	*	7206.000	45.403	40.148	-28.597	74.000	5.255	PK
3		9608.000	44.499	37.630	-29.501	74.000	6.869	PK



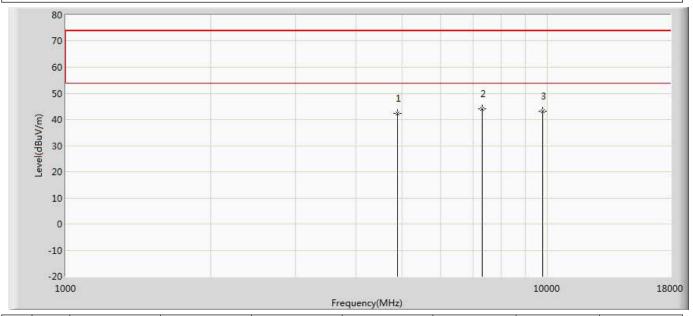
Engineer: Simon				
Site: AC5	Time: 2019/04/15 - 11:40			
Limit: FCC_Part15.209_RE(3m)	Margin: 0			
Probe: Horn_3117_00167055(1-18GHz)	Polarity: Horizontal			
EUT: LED lamp	Power: AC 120V/60Hz			
Note: Mode 4:Transmit at 2402Mhz by Coded500				



No	Mark	Frequency	Measure Level	Reading Level	Over Limit	Limit	Factor	Туре
		(MHz)	(dBuV/m)	(dBuV)	(dB)	(dBuV/m)	(dB)	
1		4804.000	42.991	41.250	-31.009	74.000	1.741	PK
2	*	7206.000	44.435	39.180	-29.565	74.000	5.255	PK
3		9608.000	43.604	36.735	-30.396	74.000	6.869	PK



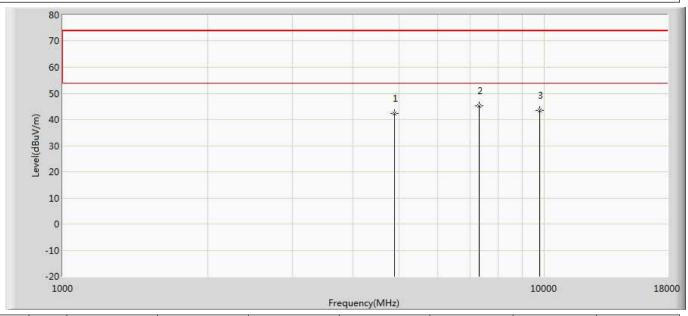
Engineer: Simon				
Site: AC5	Time: 2019/04/15 - 11:40			
Limit: FCC_Part15.209_RE(3m)	Margin: 0			
Probe: Horn_3117_00167055(1-18GHz)	Polarity: Vertical			
EUT: LED lamp	Power: AC 120V/60Hz			
Note: Mode 4:Transmit at 2440Mhz by Coded500				



No	Mark	Frequency	Measure Level	Reading Level	Over Limit	Limit	Factor	Туре
		(MHz)	(dBuV/m)	(dBuV)	(dB)	(dBuV/m)	(dB)	
1		4880.000	42.322	40.467	-31.678	74.000	1.855	PK
2	*	7320.000	44.074	38.532	-29.926	74.000	5.542	PK
3		9760.000	43.139	36.020	-30.861	74.000	7.120	PK



Engineer: Simon				
Site: AC5	Time: 2019/04/15 - 11:40			
Limit: FCC_Part15.209_RE(3m)	Margin: 0			
Probe: Horn_3117_00167055(1-18GHz)	Polarity: Horizontal			
EUT: LED lamp	Power: AC 120V/60Hz			
Note: Mode 4:Transmit at 2440Mhz by Coded500				



No	Mark	Frequency	Measure Level	Reading Level	Over Limit	Limit	Factor	Туре
		(MHz)	(dBuV/m)	(dBuV)	(dB)	(dBuV/m)	(dB)	
1		4880.000	42.274	40.419	-31.726	74.000	1.855	PK
2	*	7320.000	45.201	39.659	-28.799	74.000	5.542	PK
3		9760.000	43.390	36.271	-30.610	74.000	7.120	PK



Engineer: Simon				
Site: AC5	Time: 2019/04/15 - 11:40			
Limit: FCC_Part15.209_RE(3m)	Margin: 0			
Probe: Horn_3117_00167055(1-18GHz)	Polarity: Vertical			
EUT: LED lamp	Power: AC 120V/60Hz			
Note: Made 4:Transmit at 2490Mbz by Coded500				

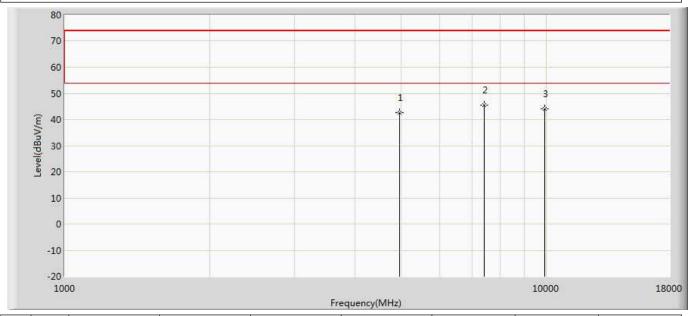
Note: Mode 4:Transmit at 2480Mhz by Coded500



No	Mark	Frequency	Measure Level	Reading Level	Over Limit	Limit	Factor	Туре
		(MHz)	(dBuV/m)	(dBuV)	(dB)	(dBuV/m)	(dB)	
1		4960.000	42.586	40.605	-31.414	74.000	1.981	PK
2		7440.000	44.159	38.818	-29.841	74.000	5.341	PK
3	*	9920.000	44.523	37.434	-29.477	74.000	7.088	PK



Engineer: Simon				
Site: AC5	Time: 2019/04/15 - 11:40			
Limit: FCC_Part15.209_RE(3m)	Margin: 0			
Probe: Horn_3117_00167055(1-18GHz)	Polarity: Horizontal			
EUT: LED lamp	Power: AC 120V/60Hz			
Note: Mode 4:Transmit at 2480Mhz by Coded500				

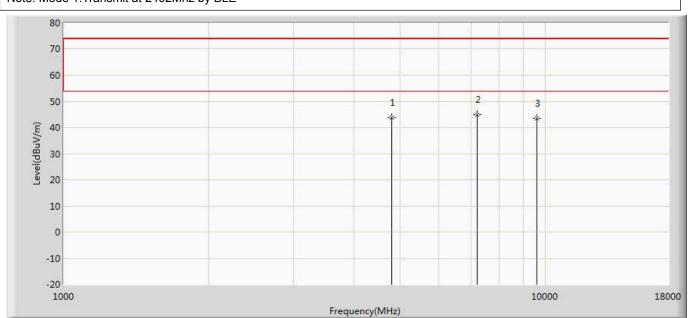


No	Mark	Frequency	Measure Level	Reading Level	Over Limit	Limit	Factor	Туре
		(MHz)	(dBuV/m)	(dBuV)	(dB)	(dBuV/m)	(dB)	
1		4960.000	42.669	40.688	-31.331	74.000	1.981	PK
2	*	7440.000	45.371	40.030	-28.629	74.000	5.341	PK
3		9920.000	44.064	36.975	-29.936	74.000	7.088	PK



## Diodes:

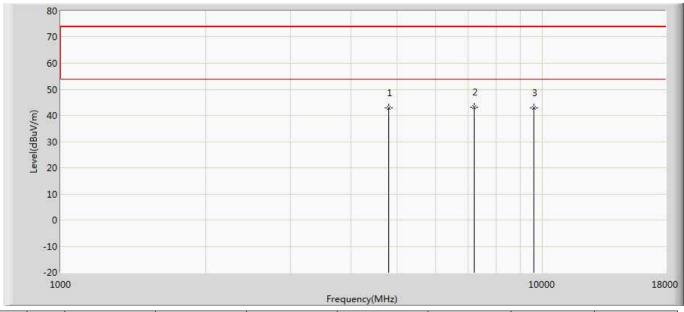
Engineer: Simon				
Site: AC5	Time: 2019/04/12 - 15:58			
Limit: FCC_Part15.209_RE(3m)	Margin: 0			
Probe: Horn_3117_00167055(1-18GHz)	Polarity: Vertical			
EUT: LED lamp	Power: AC 120V/60Hz			
Note: Mode 1:Transmit at 2402Mhz by BLF	·			



No	Mark	Frequency	Measure Level	Reading Level	Over Limit	Limit	Factor	Туре
		(MHz)	(dBuV/m)	(dBuV)	(dB)	(dBuV/m)	(dB)	
1		4804.000	43.904	42.163	-30.096	74.000	1.741	PK
2	*	7206.000	44.817	39.562	-29.183	74.000	5.255	PK
3		9608.000	43.350	36.481	-30.650	74.000	6.869	PK



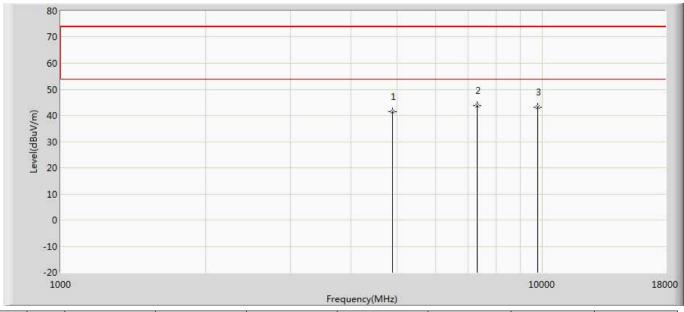
Engineer: Simon				
Site: AC5	Time: 2019/04/12 - 15:58			
Limit: FCC_Part15.209_RE(3m)	Margin: 0			
Probe: Horn_3117_00167055(1-18GHz)	Polarity: Horizontal			
EUT: LED lamp	Power: AC 120V/60Hz			
Note: Mode 1:Transmit at 2402Mhz by BLF				



No	Mark	Frequency	Measure Level	Reading Level	Over Limit	Limit	Factor	Туре
		(MHz)	(dBuV/m)	(dBuV)	(dB)	(dBuV/m)	(dB)	
1		4804.000	42.846	41.105	-31.154	74.000	1.741	PK
2	*	7206.000	43.090	37.835	-30.910	74.000	5.255	PK
3		9608.000	42.899	36.030	-31.101	74.000	6.869	PK



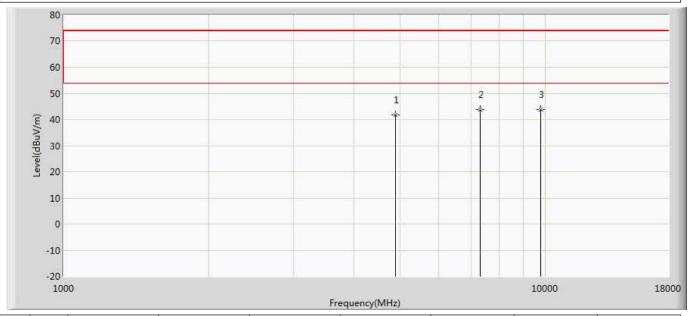
Engineer: Simon				
Site: AC5	Time: 2019/04/12 - 15:58			
Limit: FCC_Part15.209_RE(3m)	Margin: 0			
Probe: Horn_3117_00167055(1-18GHz)	Polarity: Vertical			
EUT: LED lamp	Power: AC 120V/60Hz			
Note: Mode 1:Transmit at 2440Mhz by BLF				



No	Mark	Frequency	Measure Level	Reading Level	Over Limit	Limit	Factor	Туре
		(MHz)	(dBuV/m)	(dBuV)	(dB)	(dBuV/m)	(dB)	
1		4880.000	41.310	39.455	-32.690	74.000	1.855	PK
2	*	7320.000	43.642	38.100	-30.358	74.000	5.542	PK
3		9760.000	43.310	36.191	-30.690	74.000	7.120	PK



Engineer: Simon				
Site: AC5	Time: 2019/04/12 - 15:58			
Limit: FCC_Part15.209_RE(3m)	Margin: 0			
Probe: Horn_3117_00167055(1-18GHz)	Polarity: Horizontal			
EUT: LED lamp	Power: AC 120V/60Hz			
Note: Mode 1:Transmit at 2440Mhz by BLF	·			

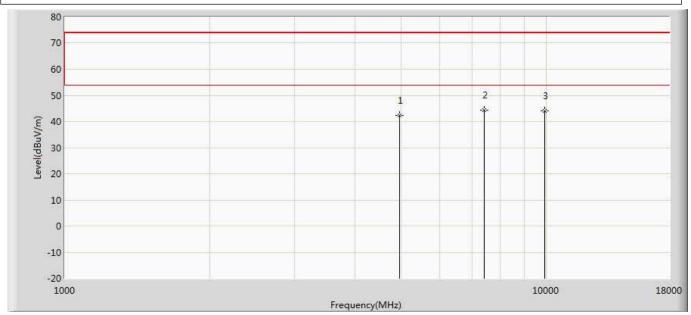


No	Mark	Frequency	Measure Level	Reading Level	Over Limit	Limit	Factor	Туре
		(MHz)	(dBuV/m)	(dBuV)	(dB)	(dBuV/m)	(dB)	
1		4880.000	41.832	39.977	-32.168	74.000	1.855	PK
2	*	7320.000	43.789	38.247	-30.211	74.000	5.542	PK
3		9760.000	43.678	36.559	-30.322	74.000	7.120	PK



Engineer: Simon				
Site: AC5	Time: 2019/04/12 - 15:58			
Limit: FCC_Part15.209_RE(3m)	Margin: 0			
Probe: Horn_3117_00167055(1-18GHz)	Polarity: Vertical			
EUT: LED lamp	Power: AC 120V/60Hz			
Note: Made 1:Transmit at 2480Mbz by PLE				

Note: Mode 1:Transmit at 2480Mhz by BLE



No	Mark	Frequency	Measure Level	Reading Level	Over Limit	Limit	Factor	Туре
		(MHz)	(dBuV/m)	(dBuV)	(dB)	(dBuV/m)	(dB)	
1		4960.000	42.294	40.313	-31.706	74.000	1.981	PK
2	*	7440.000	44.267	38.926	-29.733	74.000	5.341	PK
3		9920.000	44.010	36.921	-29.990	74.000	7.088	PK



Engineer: Simon				
Site: AC5	Time: 2019/04/12 - 15:58			
Limit: FCC_Part15.209_RE(3m)	Margin: 0			
Probe: Horn_3117_00167055(1-18GHz)	Polarity: Horizontal			
EUT: LED lamp	Power: AC 120V/60Hz			
Note: Made 1:Transmit at 2490Mbz by DLE				

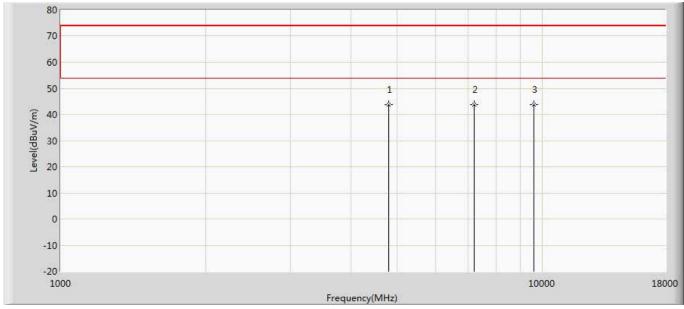
Note: Mode 1:Transmit at 2480Mhz by BLE



No	Mark	Frequency	Measure Level	Reading Level	Over Limit	Limit	Factor	Туре
		(MHz)	(dBuV/m)	(dBuV)	(dB)	(dBuV/m)	(dB)	
1		4960.000	42.607	40.626	-31.393	74.000	1.981	PK
2		7440.000	43.908	38.567	-30.092	74.000	5.341	PK
3	*	9920.000	44.940	37.851	-29.060	74.000	7.088	PK



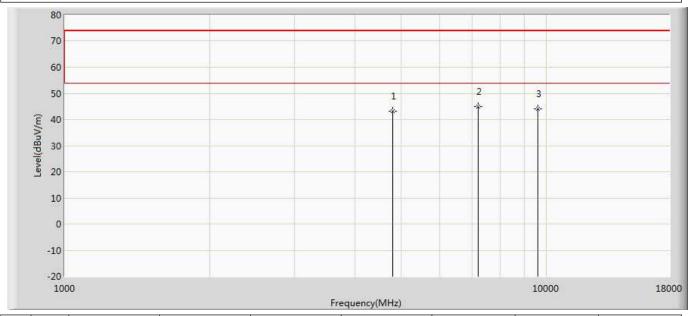
Engineer: Simon				
Site: AC5	Time: 2019/04/12 - 15:58			
Limit: FCC_Part15.209_RE(3m)	Margin: 0			
Probe: Horn_3117_00167055(1-18GHz)	Polarity: Vertical			
EUT: LED lamp	Power: AC 120V/60Hz			
Note: Mode 2:Transmit at 2402Mhz by 2LF	·			



No	Mark	Frequency	Measure Level	Reading Level	Over Limit	Limit	Factor	Туре
		(MHz)	(dBuV/m)	(dBuV)	(dB)	(dBuV/m)	(dB)	
1		4804.000	43.735	41.994	-30.265	74.000	1.741	PK
2		7206.000	43.832	38.577	-30.168	74.000	5.255	PK
3	*	9608.000	43.880	37.011	-30.120	74.000	6.869	PK



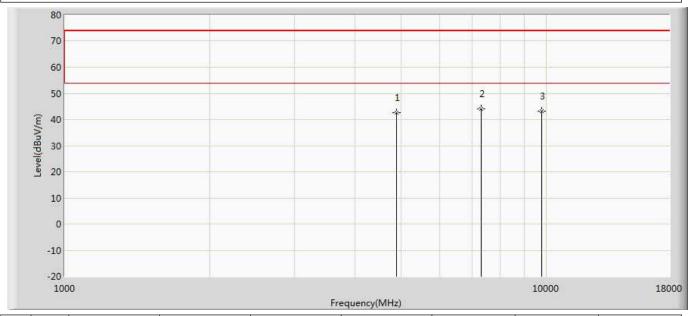
Engineer: Simon				
Site: AC5	Time: 2019/04/12 - 15:58			
Limit: FCC_Part15.209_RE(3m)	Margin: 0			
Probe: Horn_3117_00167055(1-18GHz)	Polarity: Horizontal			
EUT: LED lamp	Power: AC 120V/60Hz			
Note: Mode 2:Transmit at 2402Mhz by 2LF				



No	Mark	Frequency	Measure Level	Reading Level	Over Limit	Limit	Factor	Туре
		(MHz)	(dBuV/m)	(dBuV)	(dB)	(dBuV/m)	(dB)	
1		4804.000	43.264	41.523	-30.736	74.000	1.741	PK
2	*	7206.000	45.017	39.762	-28.983	74.000	5.255	PK
3		9608.000	44.126	37.257	-29.874	74.000	6.869	PK



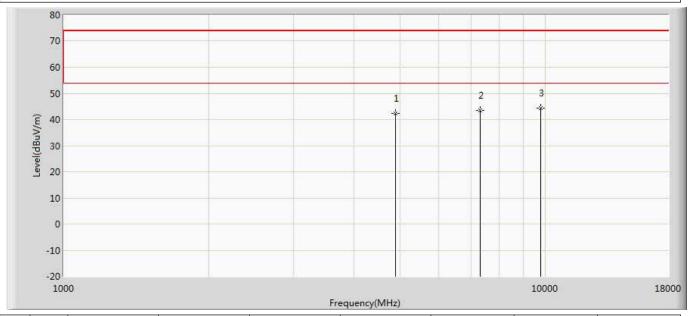
Engineer: Simon				
Site: AC5	Time: 2019/04/12 - 15:58			
Limit: FCC_Part15.209_RE(3m)	Margin: 0			
Probe: Horn_3117_00167055(1-18GHz)	Polarity: Vertical			
EUT: LED lamp	Power: AC 120V/60Hz			
Note: Mode 2:Transmit at 2440Mhz by 2LF	·			



No	Mark	Frequency	Measure Level	Reading Level	Over Limit	Limit	Factor	Туре
		(MHz)	(dBuV/m)	(dBuV)	(dB)	(dBuV/m)	(dB)	
1		4880.000	42.645	40.790	-31.355	74.000	1.855	PK
2	*	7320.000	44.057	38.515	-29.943	74.000	5.542	PK
3		9760.000	43.128	36.009	-30.872	74.000	7.120	PK



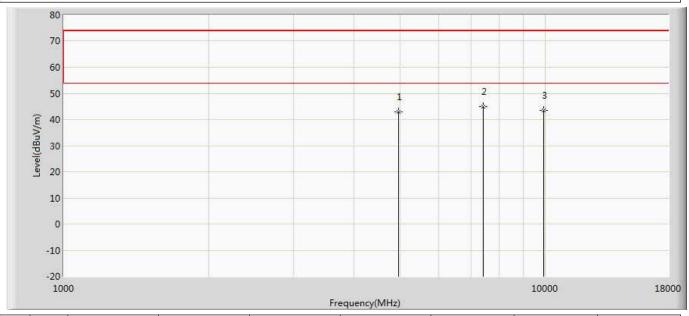
Engineer: Simon				
Site: AC5	Time: 2019/04/12 - 15:59			
Limit: FCC_Part15.209_RE(3m)	Margin: 0			
Probe: Horn_3117_00167055(1-18GHz)	Polarity: Horizontal			
EUT: LED lamp	Power: AC 120V/60Hz			
Note: Mode 2:Transmit at 2440Mhz by 2LE				



No	Mark	Frequency	Measure Level	Reading Level	Over Limit	Limit	Factor	Туре
		(MHz)	(dBuV/m)	(dBuV)	(dB)	(dBuV/m)	(dB)	
1		4880.000	42.406	40.551	-31.594	74.000	1.855	PK
2		7320.000	43.503	37.961	-30.497	74.000	5.542	PK
3	*	9760.000	44.478	37.359	-29.522	74.000	7.120	PK



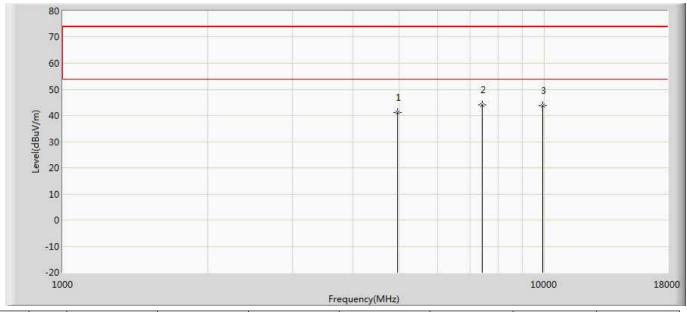
Engineer: Simon				
Site: AC5	Time: 2019/04/12 - 15:59			
Limit: FCC_Part15.209_RE(3m)	Margin: 0			
Probe: Horn_3117_00167055(1-18GHz)	Polarity: Vertical			
EUT: LED lamp	Power: AC 120V/60Hz			
Note: Mode 2:Transmit at 2480Mhz by 2LE				



No	Mark	Frequency	Measure Level	Reading Level	Over Limit	Limit	Factor	Туре
		(MHz)	(dBuV/m)	(dBuV)	(dB)	(dBuV/m)	(dB)	
1		4960.000	43.010	41.029	-30.990	74.000	1.981	PK
2	*	7440.000	44.836	39.495	-29.164	74.000	5.341	PK
3		9920.000	43.408	36.319	-30.592	74.000	7.088	PK



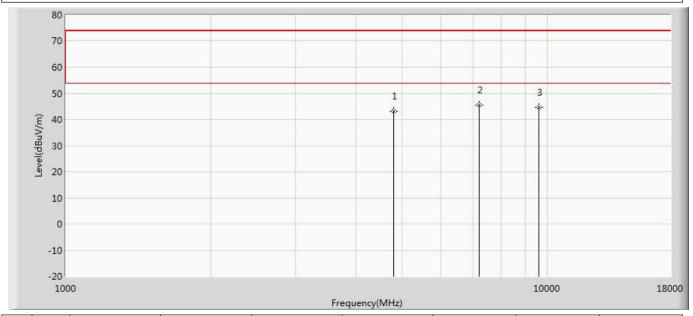
Engineer: Simon				
Site: AC5	Time: 2019/04/12 - 15:59			
Limit: FCC_Part15.209_RE(3m)	Margin: 0			
Probe: Horn_3117_00167055(1-18GHz)	Polarity: Horizontal			
EUT: LED lamp	Power: AC 120V/60Hz			
Note: Mode 2:Transmit at 2480Mhz by 2LF				



No	Mark	Frequency	Measure Level	Reading Level	Over Limit	Limit	Factor	Туре
		(MHz)	(dBuV/m)	(dBuV)	(dB)	(dBuV/m)	(dB)	
1		4960.000	41.076	39.095	-32.924	74.000	1.981	PK
2	*	7440.000	44.031	38.690	-29.969	74.000	5.341	PK
3		9920.000	43.859	36.770	-30.141	74.000	7.088	PK



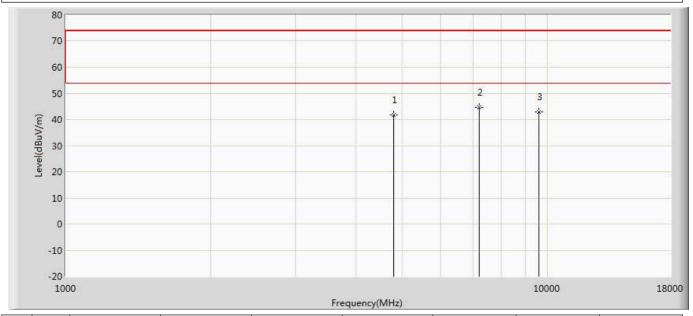
Engineer: Simon				
Site: AC5	Time: 2019/04/12 - 15:59			
Limit: FCC_Part15.209_RE(3m)	Margin: 0			
Probe: Horn_3117_00167055(1-18GHz)	Polarity: Vertical			
EUT: LED lamp	Power: AC 120V/60Hz			
Note: Mode 3:Transmit at 2402Mhz by Coded125				



No	Mark	Frequency	Measure Level	Reading Level	Over Limit	Limit	Factor	Туре
		(MHz)	(dBuV/m)	(dBuV)	(dB)	(dBuV/m)	(dB)	
1		4804.000	43.231	41.490	-30.769	74.000	1.741	PK
2	*	7206.000	45.613	40.358	-28.387	74.000	5.255	PK
3		9608.000	44.602	37.733	-29.398	74.000	6.869	PK



Engineer: Simon				
Site: AC5	Time: 2019/04/12 - 15:59			
Limit: FCC_Part15.209_RE(3m)	Margin: 0			
Probe: Horn_3117_00167055(1-18GHz)	Polarity: Horizontal			
EUT: LED lamp	Power: AC 120V/60Hz			
Note: Mode 3:Transmit at 2402Mhz by Coded125				

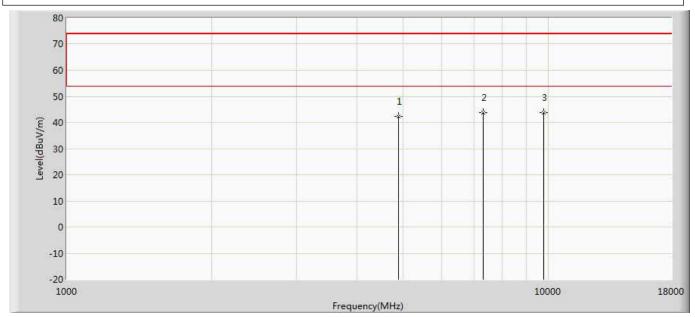


No	Mark	Frequency	Measure Level	Reading Level	Over Limit	Limit	Factor	Туре
		(MHz)	(dBuV/m)	(dBuV)	(dB)	(dBuV/m)	(dB)	
1		4804.000	41.857	40.116	-32.143	74.000	1.741	PK
2	*	7206.000	44.554	39.299	-29.446	74.000	5.255	PK
3		9608.000	42.952	36.083	-31.048	74.000	6.869	PK



Engineer: Simon				
Site: AC5	Time: 2019/04/12 - 15:59			
Limit: FCC_Part15.209_RE(3m)	Margin: 0			
Probe: Horn_3117_00167055(1-18GHz)	Polarity: Vertical			
EUT: LED lamp	Power: AC 120V/60Hz			
Note: Made 2:Transmit at 2440Mbz by Coded125				

Note: Mode 3:Transmit at 2440Mhz by Coded125

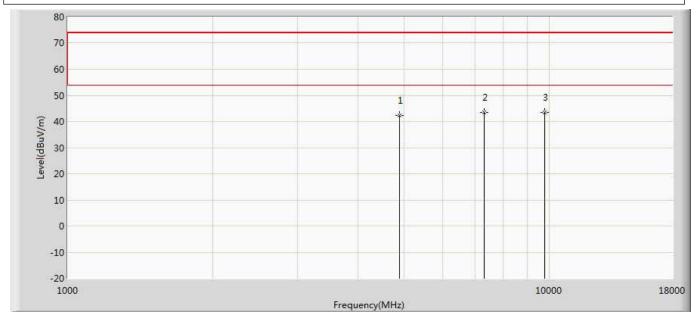


No	Mark	Frequency	Measure Level	Reading Level	Over Limit	Limit	Factor	Туре
		(MHz)	(dBuV/m)	(dBuV)	(dB)	(dBuV/m)	(dB)	
1		4880.000	42.457	40.602	-31.543	74.000	1.855	PK
2	*	7320.000	43.854	38.312	-30.146	74.000	5.542	PK
3		9760.000	43.670	36.551	-30.330	74.000	7.120	PK



Engineer: Simon				
Site: AC5	Time: 2019/04/12 - 15:59			
Limit: FCC_Part15.209_RE(3m)	Margin: 0			
Probe: Horn_3117_00167055(1-18GHz)	Polarity: Horizontal			
EUT: LED lamp	Power: AC 120V/60Hz			
Note: Made 2:Transmit at 2440Mhz by Coded125				

Note: Mode 3:Transmit at 2440Mhz by Coded125

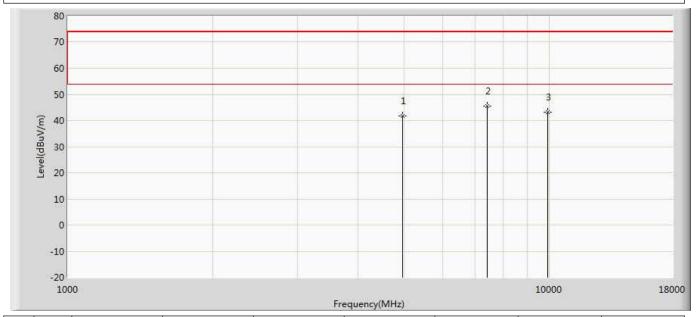


No	Mark	Frequency	Measure Level	Reading Level	Over Limit	Limit	Factor	Туре
		(MHz)	(dBuV/m)	(dBuV)	(dB)	(dBuV/m)	(dB)	
1		4880.000	42.460	40.605	-31.540	74.000	1.855	PK
2		7320.000	43.361	37.819	-30.639	74.000	5.542	PK
3	*	9760.000	43.468	36.349	-30.532	74.000	7.120	PK



Engineer: Simon				
Site: AC5	Time: 2019/04/12 - 15:59			
Limit: FCC_Part15.209_RE(3m)	Margin: 0			
Probe: Horn_3117_00167055(1-18GHz)	Polarity: Vertical			
EUT: LED lamp	Power: AC 120V/60Hz			
Note: Made 2:Transmit at 2490Mbz by Coded125				

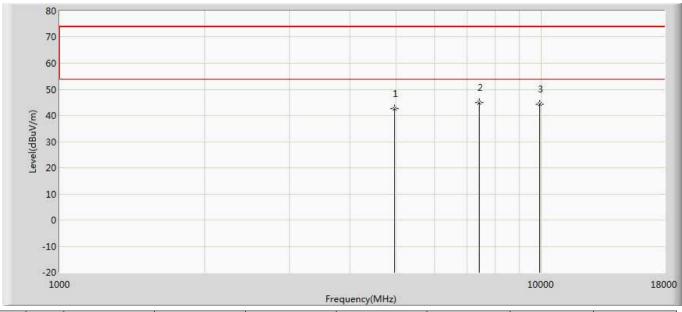
Note: Mode 3:Transmit at 2480Mhz by Coded125



No	Mark	Frequency	Measure Level	Reading Level	Over Limit	Limit	Factor	Туре
		(MHz)	(dBuV/m)	(dBuV)	(dB)	(dBuV/m)	(dB)	
1		4960.000	41.849	39.868	-32.151	74.000	1.981	PK
2	*	7440.000	45.504	40.163	-28.496	74.000	5.341	PK
3		9920.000	43.279	36.190	-30.721	74.000	7.088	PK



Engineer: Simon				
Site: AC5	Time: 2019/04/12 - 15:59			
Limit: FCC_Part15.209_RE(3m)	Margin: 0			
Probe: Horn_3117_00167055(1-18GHz)	Polarity: Horizontal			
EUT: LED lamp	Power: AC 120V/60Hz			
Note: Mode 3:Transmit at 2480Mhz by Coded125				

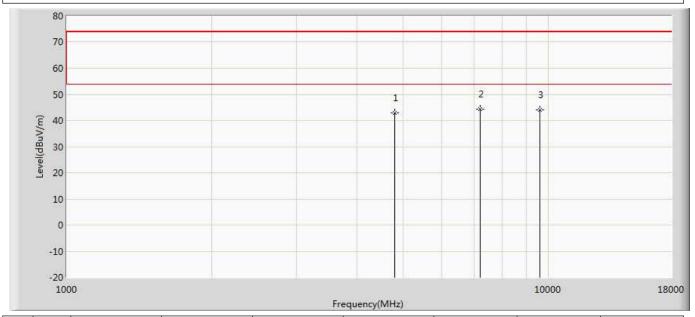


No	Mark	Frequency	Measure Level	Reading Level	Over Limit	Limit	Factor	Туре
		(MHz)	(dBuV/m)	(dBuV)	(dB)	(dBuV/m)	(dB)	
1		4960.000	42.691	40.710	-31.309	74.000	1.981	PK
2	*	7440.000	44.790	39.449	-29.210	74.000	5.341	PK
3		9920.000	44.208	37.119	-29.792	74.000	7.088	PK



Engineer: Simon				
Site: AC5	Time: 2019/04/12 - 15:59			
Limit: FCC_Part15.209_RE(3m)	Margin: 0			
Probe: Horn_3117_00167055(1-18GHz)	Polarity: Vertical			
EUT: LED lamp	Power: AC 120V/60Hz			
Note: Mode 4:Transmit at 2402Mbz by Coded500				

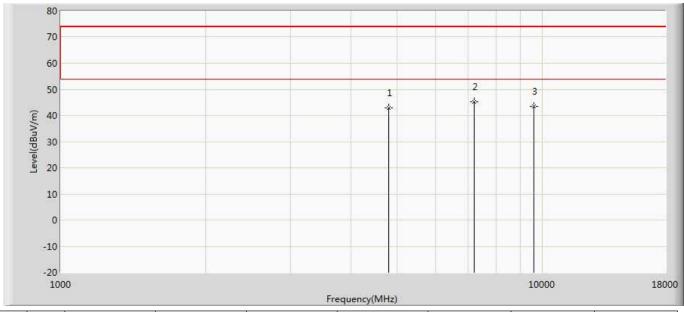
Note: Mode 4:Transmit at 2402Mhz by Coded500



No	Mark	Frequency	Measure Level	Reading Level	Over Limit	Limit	Factor	Туре
		(MHz)	(dBuV/m)	(dBuV)	(dB)	(dBuV/m)	(dB)	
1		4804.000	42.805	41.064	-31.195	74.000	1.741	PK
2	*	7206.000	44.409	39.154	-29.591	74.000	5.255	PK
3		9608.000	44.028	37.159	-29.972	74.000	6.869	PK



Engineer: Simon				
Site: AC5	Time: 2019/04/12 - 15:59			
Limit: FCC_Part15.209_RE(3m)	Margin: 0			
Probe: Horn_3117_00167055(1-18GHz)	Polarity: Horizontal			
EUT: LED lamp	Power: AC 120V/60Hz			
Note: Mode 4:Transmit at 2402Mhz by Coded500				

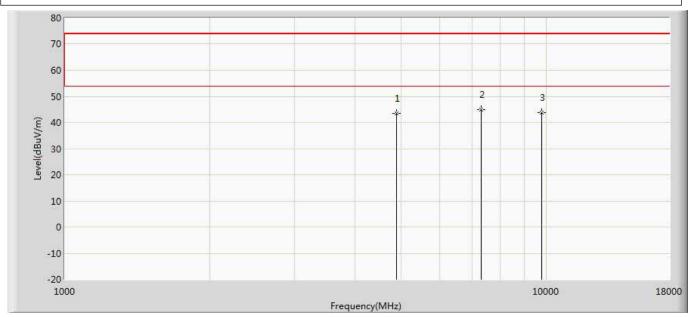


No	Mark	Frequency	Measure Level	Reading Level	Over Limit	Limit	Factor	Туре
		(MHz)	(dBuV/m)	(dBuV)	(dB)	(dBuV/m)	(dB)	
1		4804.000	42.905	41.164	-31.095	74.000	1.741	PK
2	*	7206.000	45.138	39.883	-28.862	74.000	5.255	PK
3		9608.000	43.423	36.554	-30.577	74.000	6.869	PK



Engineer: Simon				
Site: AC5	Time: 2019/04/12 - 16:00			
Limit: FCC_Part15.209_RE(3m)	Margin: 0			
Probe: Horn_3117_00167055(1-18GHz)	Polarity: Vertical			
EUT: LED lamp	Power: AC 120V/60Hz			
Notes Made A Transport at 0.440 Mbs by Oad a JE00				

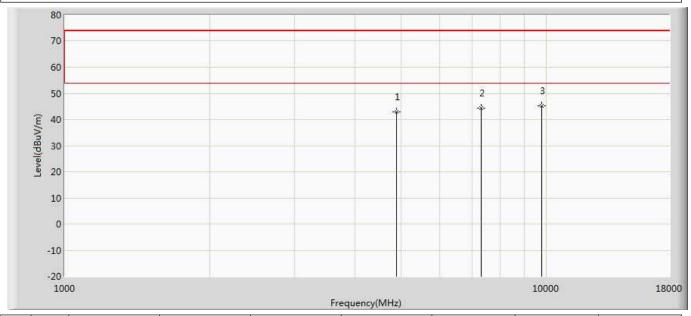
Note: Mode 4:Transmit at 2440Mhz by Coded500



No	Mark	Frequency	Measure Level	Reading Level	Over Limit	Limit	Factor	Туре
		(MHz)	(dBuV/m)	(dBuV)	(dB)	(dBuV/m)	(dB)	
1		4880.000	43.394	41.539	-30.606	74.000	1.855	PK
2	*	7320.000	44.946	39.404	-29.054	74.000	5.542	PK
3		9760.000	43.683	36.564	-30.317	74.000	7.120	PK



Engineer: Simon				
Site: AC5	Time: 2019/04/12 - 16:00			
Limit: FCC_Part15.209_RE(3m)	Margin: 0			
Probe: Horn_3117_00167055(1-18GHz)	Polarity: Horizontal			
EUT: LED lamp	Power: AC 120V/60Hz			
Note: Mode 4:Transmit at 2440Mhz by Coded500				

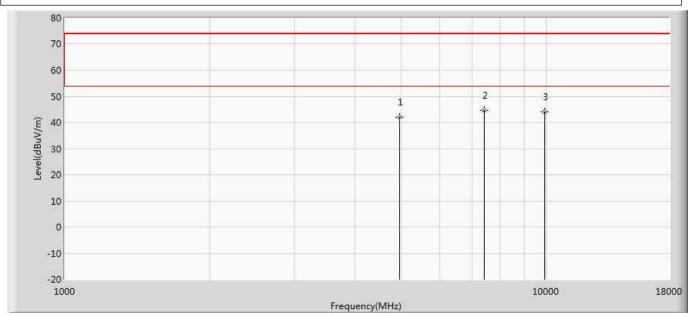


No	Mark	Frequency	Measure Level	Reading Level	Over Limit	Limit	Factor	Туре
		(MHz)	(dBuV/m)	(dBuV)	(dB)	(dBuV/m)	(dB)	
1		4880.000	42.932	41.077	-31.068	74.000	1.855	PK
2		7320.000	44.355	38.813	-29.645	74.000	5.542	PK
3	*	9760.000	45.101	37.982	-28.899	74.000	7.120	PK



Engineer: Simon				
Site: AC5	Time: 2019/04/12 - 16:00			
Limit: FCC_Part15.209_RE(3m)	Margin: 0			
Probe: Horn_3117_00167055(1-18GHz)	Polarity: Vertical			
EUT: LED lamp	Power: AC 120V/60Hz			
Note: Made 4:Transmit at 2490Mbz by Coded500				

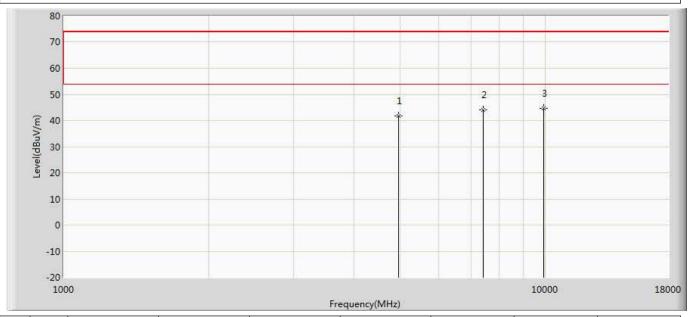
Note: Mode 4:Transmit at 2480Mhz by Coded500



No	Mark	Frequency	Measure Level	Reading Level	Over Limit	Limit	Factor	Туре
		(MHz)	(dBuV/m)	(dBuV)	(dB)	(dBuV/m)	(dB)	
1		4960.000	41.956	39.975	-32.044	74.000	1.981	PK
2	*	7440.000	44.708	39.367	-29.292	74.000	5.341	PK
3		9920.000	44.056	36.967	-29.944	74.000	7.088	PK



Engineer: Simon	
Site: AC5	Time: 2019/04/12 - 16:00
Limit: FCC_Part15.209_RE(3m)	Margin: 0
Probe: Horn_3117_00167055(1-18GHz)	Polarity: Horizontal
EUT: LED lamp	Power: AC 120V/60Hz
Note: Mode 4:Transmit at 2480Mhz by Coded500	



No	Mark	Frequency	Frequency Measure Level		Reading Level Over Limit		Factor	Туре
		(MHz)	(MHz) (dBuV/m) (dBuV)		(dB)	(dBuV/m)	(dB)	
1		4960.000	41.612	39.631	-32.388	74.000	1.981	PK
2		7440.000	44.134	38.793	-29.866	74.000	5.341	PK
3	*	9920.000	44.721	37.632	-29.279	74.000	7.088	PK

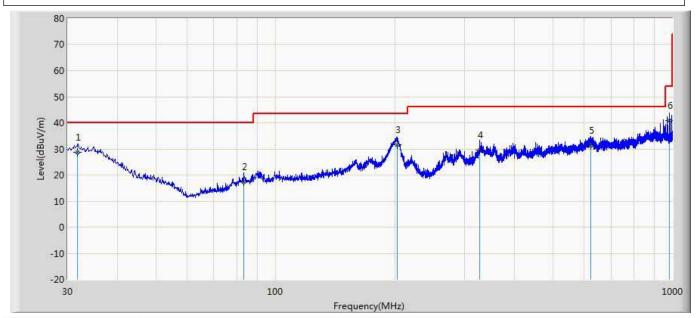
#### Note:

- 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.
- 5. We have evaluated each mode, shown in the report is BLE mode which is worst data.



### The worst case of Radiated Emission below 1GHz:

Site: AC2	Time: 2019/04/03 - 15:23
Limit: FCC_Part15.209_RE(3m)	Margin: 0
Probe: AC2_3M(30-1000M)	Polarity: Horizontal
EUT: LED lamp	Power: AC 120V/60Hz
Note: Mode 1	



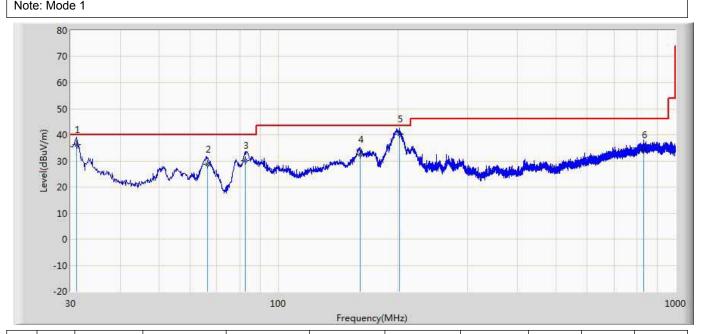
No	Mark	Frequency	Measure Level	Reading Level	Over Limit	Limit	Factor	Ant Pos	Table	Туре
		(MHz)	(dBuV/m)	(dBuV)	(dB)	(dBuV/m)	(dB)	(cm)	Pos	
									(deg)	
1	*	31.819	28.661	1.255	-11.339	40.000	27.406	134	44	QP
2		83.350	17.502	3.440	-22.498	40.000	14.062	125	227	QP
3		202.417	31.702	13.902	-11.798	43.500	17.800	178	330	QP
4		327.305	29.602	7.295	-16.398	46.000	22.306	197	233	QP
5		623.883	31.294	0.554	-14.706	46.000	30.740	122	297	QP
6		981.812	40.906	8.914	-13.094	54.000	31.992	200	52	QP

### Note:

- 1. All Readings below 1GHz are Quasi-Peak, above are performed with peak and/or average measurements as necessary.
- 2. " \* ", means this data is the worst emission level.
- 3. Measurement Level = Reading Level + Factor(Probe+Cable-Amp).



Site: AC2	Time: 2019/04/03 - 21:15		
Limit: FCC_Part15.209_RE(3m)	Margin: 0		
Probe: AC2_3M(30-1000M)	Polarity: Vertical		
EUT: LED lamp	Power: AC 120V/60Hz		
Note: Mode 1			



No	Mark	Frequency	Measure Level	Reading Level	Over Limit	Limit	Factor	Ant Pos	Table	Туре
		(MHz)	(dBuV/m)	(dBuV)	(dB)	(dBuV/m)	(dB)	(cm)	Pos	
									(deg)	
1		31.091	36.311	12.339	-3.689	40.000	23.971	190	13	QP
2		66.375	28.553	12.766	-11.447	40.000	15.787	154	290	QP
3		82.501	30.143	14.491	-9.857	40.000	15.652	121	334	QP
4		160.586	32.427	13.557	-11.073	43.500	18.869	180	122	QP
5	*	201.932	40.373	16.770	-3.127	43.500	23.603	112	243	QP
6		833.524	34.197	1.207	-11.803	46.000	32.990	188	23	QP

### Note:

- 1. All Readings below 1GHz are Quasi-Peak, above are performed with peak and/or average measurements as necessary.
- 2. " \* ", means this data is the worst emission level.
- 3. Measurement Level = Reading Level + Factor(Probe+Cable-Amp).



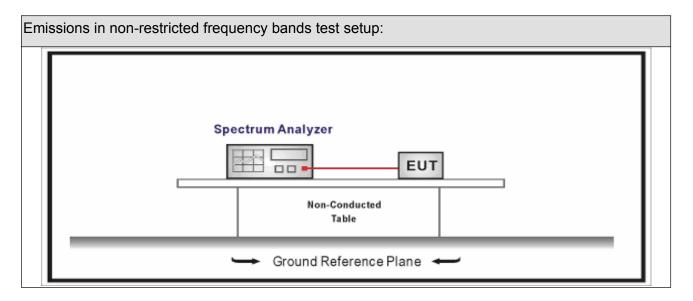
## 5. Emissions in non-restricted frequency bands

## 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	2019.04.09	2020.04.08					
MXA Signal Anlyzer	Keysight	N9020A	MY56060147	2019.04.09	2020.04.08					
Temperature/Humidity Meter	zhichen	ZC1-2	TR8-TH	2019.04.10	2020.04.09					

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)								

Note 1: If maximum conducted (average) output power was used to demonstrate compliance as described in 9.2, then the peak power in any 100 kHz bandwidth outside of the authorized frequency band shall be attenuated by at least 30 dB relative to the maximum in-band peak PSD level in 100 kHz (i.e., 30 dBc).

Note 2: If the maximum peak conducted output power procedure was used, then the peak output power measured in any 100 kHz bandwidth outside of the authorized frequency band shall be attenuated by at least 20 dB relative to the maximum in-band peak PSD level in 100 kHz (i.e., 20 dBc).

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## 5.4. Test Procedure

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

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## 5.5. EUT test Axis definition

Item		Emissions in non-restricted frequency bands					
		Fixed point-to-point					
Device Category		Emit multiple directional beams, simultaneously or sequentially					
		Other cases					
Test mode	Mode	1~4					
		Radiated					
		X Axis	Y Axis	Z Axis			
		Worst Axis	Worst Axis	Worst Axis			
	$\boxtimes$	□ Conducted					
_ , , ,	$\boxtimes$		Chain 1				
Test method			•				
		Chain 1		Chain 2			
			• •				
		Chain 1	Chain 2	Chain 3			
			• • •				

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### 5.6. Test Result

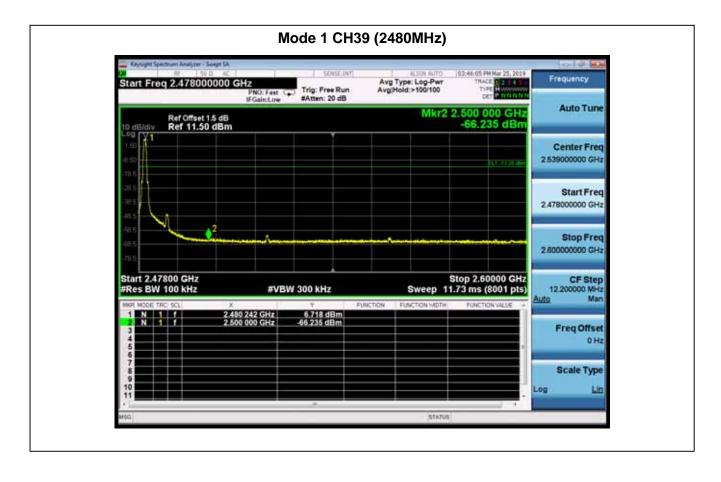
Product Name	:	LED lamp	Test Voltage	:	AC 120V/60Hz
Test Mode	:	Mode 1	Test Site	:	TR-8
Test Date	:	2019.03.25	Test Engineer	:	Simon

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	7.659	2400.00	-45.863	53.522	>20	Pass
1	39	2480	6.718	2500.00	-66.235	72.953	>20	Pass

Note: We have evaluated each mode, shown in the report is BLE mode which is the worst data.

# Mode 1 CH00 (2402MHz) Avg Type: Log-Pwr Avg|Hold:>100/100 PNO: Fast Trig: Free Run #FGain:Low #Atten: 20 dB Auto Tune Mkr3 2.394 998 GHz -45.863 dBm Ref Offset 1.5 dB Ref 11.50 dBm Center Freq 2.377500000 GHz Start Freq 2.350000000 GHz Stop Freq 2.405000000 GHz CF Step 5.500000 MHz Man Stop 2.40500 GHz Sweep 5.333 ms (8001 pts) Start 2.35000 GHz #Res BW 100 kHz #VBW 300 kHz Freq Offset Scale Type







# 6. Radiated Emission Band Edge

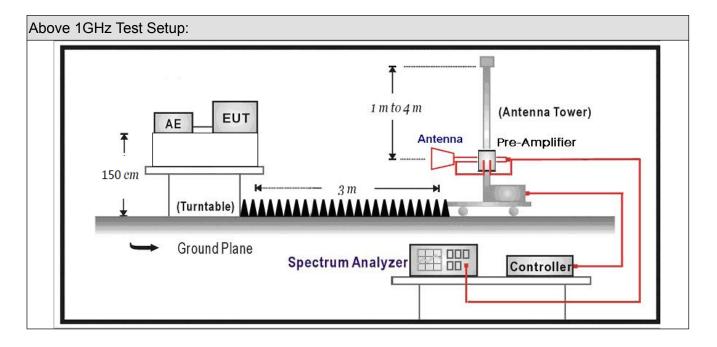
# 6.1. Test Equipment

Radiated Emission(Abov	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	Schwarzbeck	BBHA9170	294			
Antenna	Scriwarzbeck	DDI IA9 I 7 U	294	2018.09.18	2019.09.17	
		SUCOFLEX		2019.02.28	2020.02.27	
Coaxial Cable	Huber+Suhner	106	AC5-C1	2019.02.20	2020.02.21	
		SUCOFLEX	2019.02.28 202		2020.02.27	
Coaxial Cable	Huber+Suhner	106	AC5-C2	2019.02.20	2020.02.27	
Temperature/Humidity						
Meter	Zhichen	ZC1-2	AC5-TH	2019.01.05	2020.01.04	

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

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## 6.5. EUT test definition

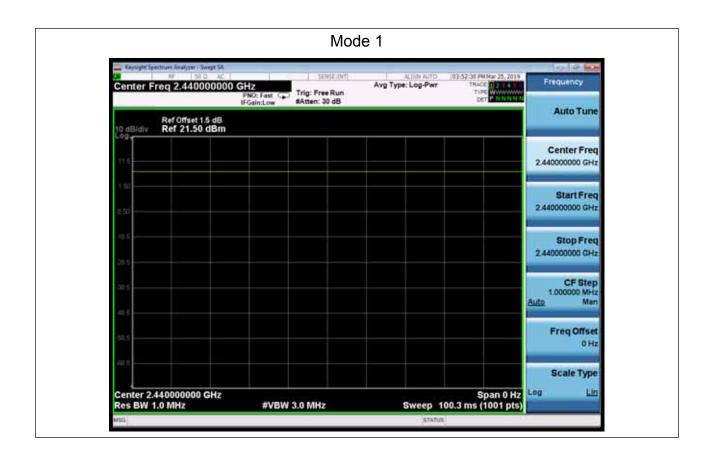
Item		Radiated	d Emission Band E	dge			
		Fixed point-to-point					
Device Category		☐ Emit multiple directional beams, simultaneously or					
Device dategory		sequentially					
		Other cases					
Test mode	Mode	1~4					
		Radiated					
		X Axis	Y Axis	Z Axis			
		Worst Axis ⊠	Worst Axis	Worst Axis			
		Conducted					
		☐ Chain 1					
Test method			•				
		Chain 1		Chain 2			
			• •				
		Chain 1	Chain 2	Chain 3			
			• • •				

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## 6.6. Duty Cycle

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

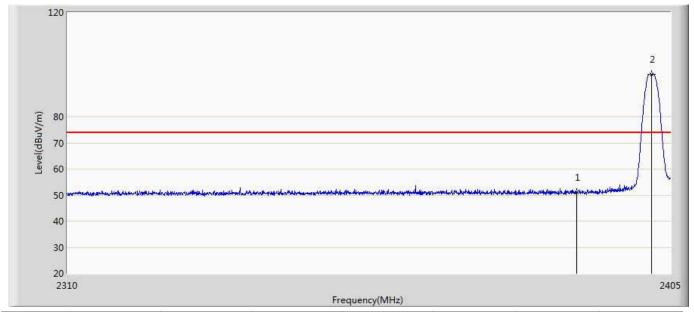




## 6.7. Test Result

### Muruta:

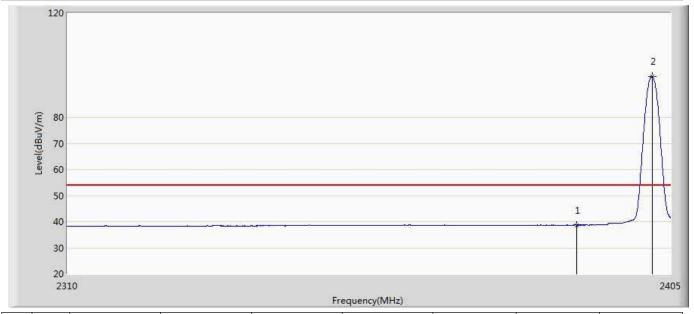
Profile: 1922077R	Page No.: 1		
Engineer: Simon			
Site: AC5	Time: 2019/03/08 - 15:56		
Limit: FCC_Part15.209_RE(3m)	Margin: 0		
Probe: Horn_3117_00167055(1-18GHz)	Polarity: Vertical		
EUT: LED lamp	Power: AC 120V/60Hz		
Note: Mode1:Transmit at 2402Mhz by BLE			



No	Mark	Frequency	Measure Level	Reading Level	Over Limit	Limit	Factor	Туре
		(MHz)	(dBuV/m)	(dBuV)	(dB)	(dBuV/m)	(dB)	
1		2390.000	50.898	15.216	-23.102	74.000	35.682	PK
2	*	2401.913	96.332	60.620	22.332	74.000	35.712	PK



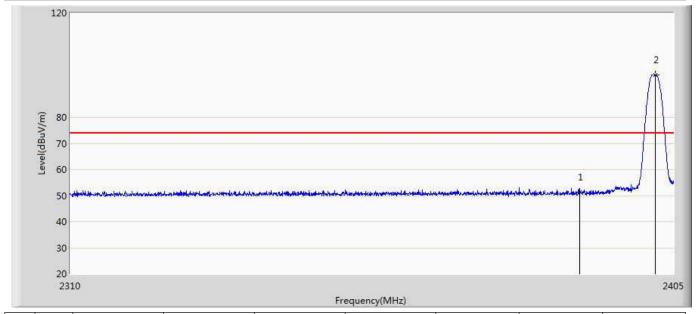
Profile: 1922077R	Page No.: 2
Engineer: Simon	
Site: AC5	Time: 2019/04/10 - 19:01
Limit: FCC_Part15.209_RE(3m)	Margin: 0
Probe: Horn_3117_00167055(1-18GHz)	Polarity: Vertical
EUT: LED lamp	Power: AC 120V/60Hz
Note: Mode1:Transmit at 2402Mhz by BLE	



No	Mark	Frequency	Measure Level	Reading Level	Over Limit	Limit	Factor	Туре
		(MHz)	(dBuV/m)	(dBuV)	(dB)	(dBuV/m)	(dB)	
1		2390.000	38.657	2.975	-15.343	54.000	35.682	AV
2	*	2402.055	95.755	60.042	41.755	54.000	35.712	AV



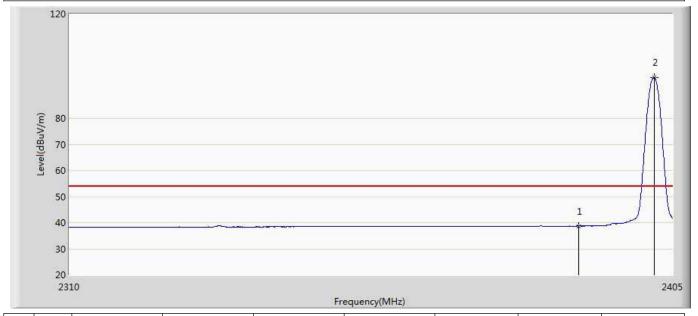
Profile: 1922077R	Page No.: 3		
Engineer: Simon			
Site: AC5	Time: 2019/04/10 - 19:03		
Limit: FCC_Part15.209_RE(3m)	Margin: 0		
Probe: Horn_3117_00167055(1-18GHz)	Polarity: Horizontal		
EUT: LED lamp	Power: AC 120V/60Hz		
Note: Mode1:Transmit at 2402Mhz by BLE			



No	Mark	Frequency	Measure Level	Reading Level	Over Limit	Limit	Factor	Туре
		(MHz)	(dBuV/m)	(dBuV)	(dB)	(dBuV/m)	(dB)	
1		2390.000	51.194	15.512	-22.806	74.000	35.682	PK
2	*	2402.103	96.244	60.531	22.244	74.000	35.713	PK



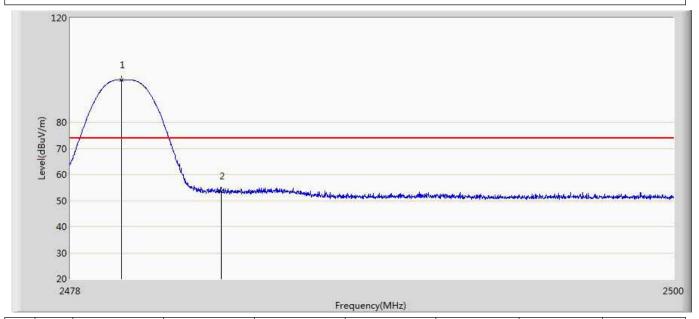
Profile: 1922077R	Page No.: 4		
Engineer: Simon			
Site: AC5	Time: 2019/04/10 - 19:05		
Limit: FCC_Part15.209_RE(3m)	Margin: 0		
Probe: Horn_3117_00167055(1-18GHz)	Polarity: Horizontal		
EUT: LED lamp	Power: AC 120V/60Hz		
Note: Mode1:Transmit at 2402Mhz by BLE			



No	Mark	Frequency	Measure Level	Reading Level	Over Limit	Limit	Factor	Туре
		(MHz)	(dBuV/m)	(dBuV)	(dB)	(dBuV/m)	(dB)	
1		2390.000	38.679	2.997	-15.321	54.000	35.682	AV
2	*	2402.055	95.679	59.966	41.679	54.000	35.712	AV



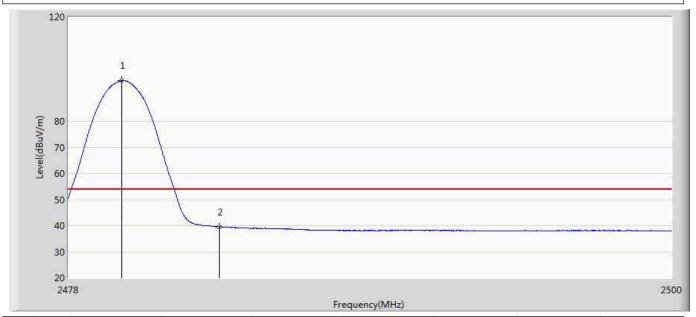
Profile: 1922077R	Page No.: 5		
Engineer: Simon			
Site: AC5	Time: 2019/04/10 - 19:07		
Limit: FCC_Part15.209_RE(3m)	Margin: 0		
Probe: Horn_3117_00167055(1-18GHz)	Polarity: Vertical		
EUT: LED lamp	Power: AC 120V/60Hz		
Note: Mode1:Transmit at 2480Mhz by BLF			



No	Mark	Frequency	Measure Level	Reading Level	Over Limit	Limit	Factor	Туре
		(MHz)	(dBuV/m)	(dBuV)	(dB)	(dBuV/m)	(dB)	
1	*	2479.870	96.265	60.400	22.265	74.000	35.865	PK
2		2483.500	53.541	17.649	-20.459	74.000	35.891	PK



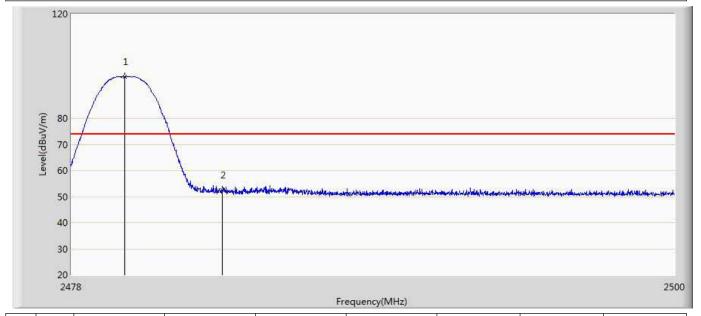
Profile: 1922077R	Page No.: 6		
Engineer: Simon			
Site: AC5	Time: 2019/04/10 - 19:10		
Limit: FCC_Part15.209_RE(3m)	Margin: 0		
Probe: Horn_3117_00167055(1-18GHz)	Polarity: Vertical		
EUT: LED lamp	Power: AC 120V/60Hz		
Note: Mode1:Transmit at 2480Mhz by BLE			



No	Mark	Frequency	Measure Level	Reading Level	Over Limit	Limit	Factor	Туре
		(MHz)	(dBuV/m)	(dBuV)	(dB)	(dBuV/m)	(dB)	
1	*	2479.947	95.545	59.679	41.545	54.000	35.866	AV
2		2483.500	39.538	3.646	-14.462	54.000	35.891	AV



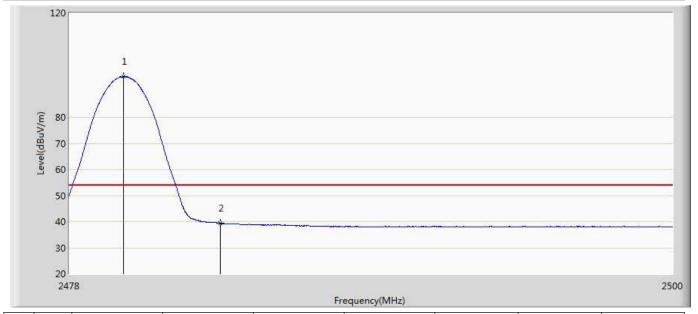
Profile: 1922077R	Page No.: 7		
Engineer: Simon			
Site: AC5	Time: 2019/04/10 - 19:12		
Limit: FCC_Part15.209_RE(3m)	Margin: 0		
Probe: Horn_3117_00167055(1-18GHz)	Polarity: Horizontal		
EUT: LED lamp	Power: AC 120V/60Hz		
Note: Mode1:Transmit at 2480Mhz by BLE			



No	Mark	Frequency	Measure Level	Reading Level	Over Limit	Limit	Factor	Туре
		(MHz)	(dBuV/m)	(dBuV)	(dB)	(dBuV/m)	(dB)	
1	*	2479.947	95.941	60.075	21.941	74.000	35.866	PK
2		2483.500	52.542	16.650	-21.458	74.000	35.891	PK



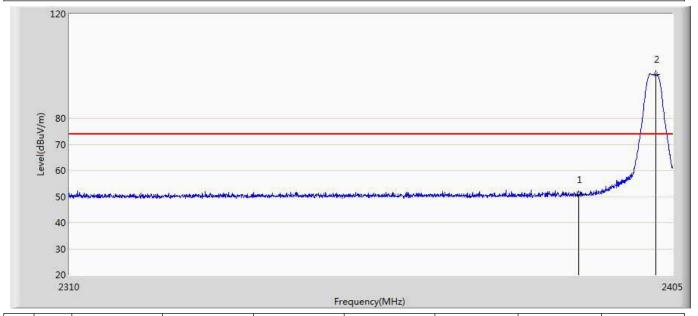
Profile: 1922077R	Page No.: 8		
Engineer: Simon			
Site: AC5	Time: 2019/04/10 - 19:14		
Limit: FCC_Part15.209_RE(3m)	Margin: 0		
Probe: Horn_3117_00167055(1-18GHz)	Polarity: Horizontal		
EUT: LED lamp	Power: AC 120V/60Hz		
Note: Mode1:Transmit at 2480Mhz by BLE			



No	Mark	Frequency	Measure Level	Reading Level	Over Limit	Limit	Factor	Туре
		(MHz)	(dBuV/m)	(dBuV)	(dB)	(dBuV/m)	(dB)	
1	*	2479.980	95.523	59.657	41.523	54.000	35.866	AV
2		2483.500	39.372	3.480	-14.628	54.000	35.891	AV



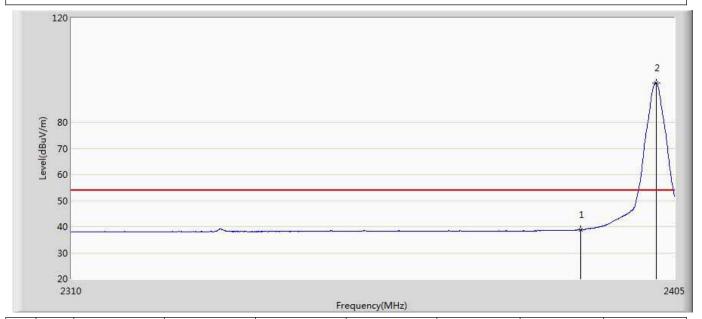
Profile: 1922077R	Page No.: 9		
Engineer: Simon			
Site: AC5	Time: 2019/04/11 - 10:44		
Limit: FCC_Part15.209_RE(3m)	Margin: 0		
Probe: Horn_3117_00167055(1-18GHz)	Polarity: Vertical		
EUT: LED lamp	Power: AC 120V/60Hz		
Note: Mode 2:Transmit at 2402Mhz by 2LE			



No	Mark	Frequency	Measure Level	Reading Level	Over Limit	Limit	Factor	Туре
		(MHz)	(dBuV/m)	(dBuV)	(dB)	(dBuV/m)	(dB)	
1		2390.000	50.665	14.983	-23.335	74.000	35.682	PK
2	*	2402.340	96.874	61.160	22.874	74.000	35.714	PK



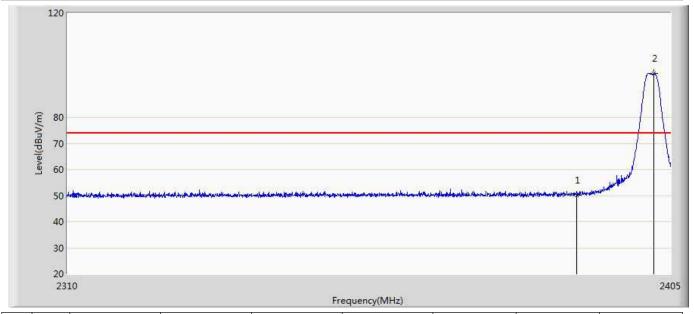
Profile: 1922077R	Page No.: 10		
Engineer: Simon			
Site: AC5	Time: 2019/04/11 - 10:46		
Limit: FCC_Part15.209_RE(3m)	Margin: 0		
Probe: Horn_3117_00167055(1-18GHz)	Polarity: Vertical		
EUT: LED lamp	Power: AC 120V/60Hz		
Note: Mode 2:Transmit at 2402Mhz by 2LE			



No	Mark	Frequency	Measure Level	Reading Level	Over Limit	Limit	Factor	Туре
		(MHz)	(dBuV/m)	(dBuV)	(dB)	(dBuV/m)	(dB)	
1		2390.000	38.733	3.051	-15.267	54.000	35.682	AV
2	*	2402.055	95.213	59.500	41.213	54.000	35.712	AV



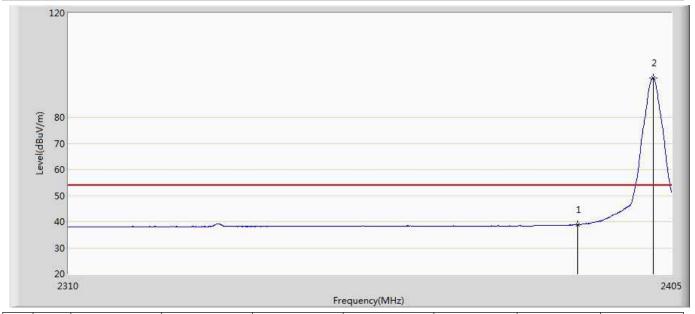
Profile: 1922077R	Page No.: 11		
Engineer: Simon			
Site: AC5	Time: 2019/04/11 - 10:52		
Limit: FCC_Part15.209_RE(3m)	Margin: 0		
Probe: Horn_3117_00167055(1-18GHz)	Polarity: Horizontal		
EUT: LED lamp	Power: AC 120V/60Hz		
Note: Mode 2:Transmit at 2402Mhz by 2LE			



No	Mark	Frequency	Measure Level	Reading Level	Over Limit	Limit	Factor	Туре
		(MHz)	(dBuV/m)	(dBuV)	(dB)	(dBuV/m)	(dB)	
1		2390.000	50.086	14.404	-23.914	74.000	35.682	PK
2	*	2402.387	96.680	60.966	22.680	74.000	35.714	PK



Profile: 1922077R	Page No.: 12		
Engineer: Simon			
Site: AC5	Time: 2019/04/11 - 10:54		
Limit: FCC_Part15.209_RE(3m)	Margin: 0		
Probe: Horn_3117_00167055(1-18GHz)	Polarity: Horizontal		
EUT: LED lamp	Power: AC 120V/60Hz		
Note: Mode 2:Transmit at 2402Mhz by 2LE			



No	Mark	Frequency	Measure Level	Reading Level	Over Limit	Limit	Factor	Туре
		(MHz)	(dBuV/m)	(dBuV)	(dB)	(dBuV/m)	(dB)	
1		2390.000	38.744	3.062	-15.256	54.000	35.682	AV
2	*	2402.055	95.076	59.363	41.076	54.000	35.712	AV

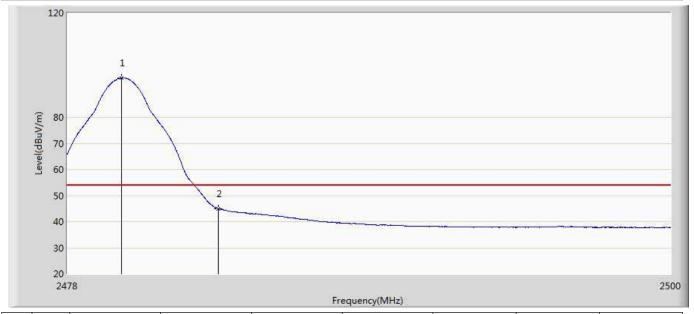


Profile: 1922077R	Page No.: 13		
Engineer: Simon			
Site: AC5	Time: 2019/04/11 - 11:05		
Limit: FCC_Part15.209_RE(3m)	Margin: 0		
Probe: Horn_3117_00167055(1-18GHz)	Polarity: Vertical		
EUT: LED lamp	Power: AC 120V/60Hz		
Note: Mode 2:Transmit at 2480Mhz by 2LE			

No	Mark	Frequency	Measure Level	Reading Level	Over Limit	Limit	Factor	Туре
		(MHz)	(dBuV/m)	(dBuV)	(dB)	(dBuV/m)	(dB)	
1	*	2480.376	96.607	60.738	22.607	74.000	35.869	PK
2		2483.500	55.848	19.956	-18.152	74.000	35.891	PK



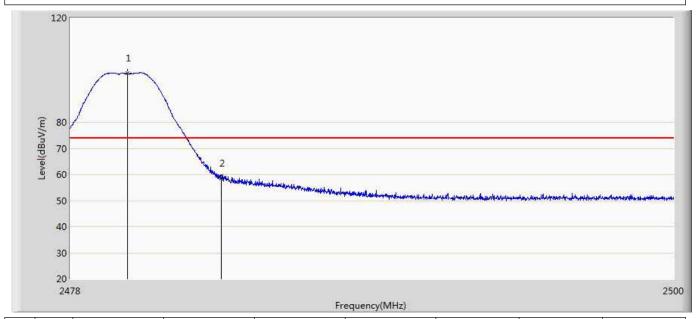
Profile: 1922077R	Page No.: 14		
Engineer: Simon			
Site: AC5	Time: 2019/04/11 - 11:07		
Limit: FCC_Part15.209_RE(3m)	Margin: 0		
Probe: Horn_3117_00167055(1-18GHz)	Polarity: Vertical		
EUT: LED lamp	Power: AC 120V/60Hz		
Note: Mode 2:Transmit at 2480Mhz by 2LE			



No	Mark	Frequency	Measure Level	Reading Level	Over Limit	Limit	Factor	Туре
		(MHz)	(dBuV/m)	(dBuV)	(dB)	(dBuV/m)	(dB)	
1	*	2479.980	95.124	59.258	41.124	54.000	35.866	AV
2		2483.500	45.017	9.125	-8.983	54.000	35.891	AV



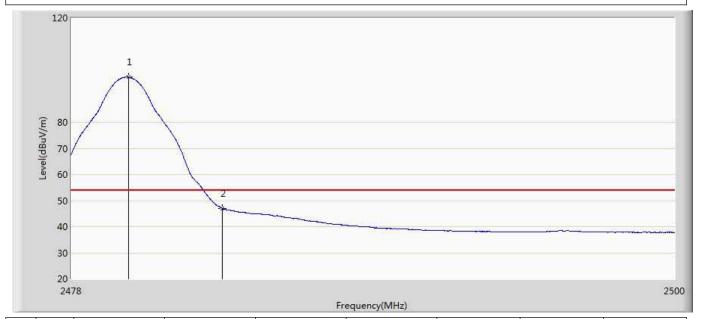
Profile: 1922077R	Page No.: 15		
Engineer: Simon			
Site: AC5	Time: 2019/04/11 - 11:08		
Limit: FCC_Part15.209_RE(3m)	Margin: 0		
Probe: Horn_3117_00167055(1-18GHz)	Polarity: Horizontal		
EUT: LED lamp	Power: AC 120V/60Hz		
Note: Mode 2:Transmit at 2480Mhz by 2LE			



No	Mark	Frequency	Measure Level	Reading Level	Over Limit	Limit	Factor	Туре
		(MHz)	(dBuV/m)	(dBuV)	(dB)	(dBuV/m)	(dB)	
1	*	2480.079	98.738	62.871	24.738	74.000	35.867	PK
2		2483.500	58.563	22.671	-15.437	74.000	35.891	PK



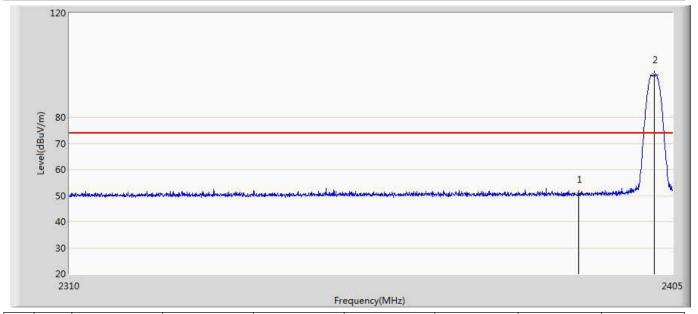
Profile: 1922077R	Page No.: 16			
Engineer: Simon				
Site: AC5	Time: 2019/04/11 - 11:10			
Limit: FCC_Part15.209_RE(3m)	Margin: 0			
Probe: Horn_3117_00167055(1-18GHz)	Polarity: Horizontal			
EUT: LED lamp	Power: AC 120V/60Hz			
Note: Mode 2:Transmit at 2480Mhz by 2LF				



No	Mark	Frequency	Measure Level	Reading Level	Over Limit	Limit	Factor	Туре
		(MHz)	(dBuV/m)	(dBuV)	(dB)	(dBuV/m)	(dB)	
1	*	2480.079	97.274	61.407	43.274	54.000	35.867	AV
2		2483.500	47.019	11.127	-6.981	54.000	35.891	AV



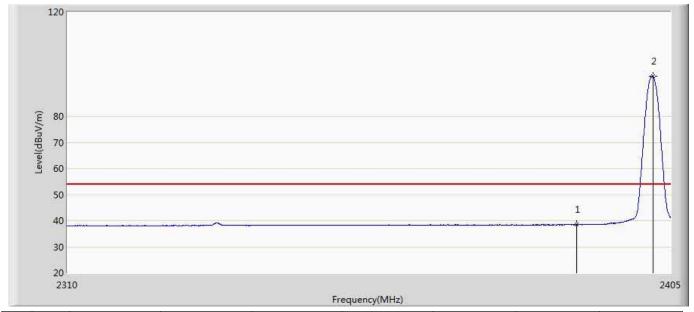
Profile: 1922077R	Page No.: 17		
Engineer: Simon			
Site: AC5	Time: 2019/04/11 - 11:12		
Limit: FCC_Part15.209_RE(3m)	Margin: 0		
Probe: Horn_3117_00167055(1-18GHz)	Polarity: Vertical		
EUT: LED lamp	Power: AC 120V/60Hz		
Note: Mode 3:Transmit at 2402Mhz by Coded125			



No	Mark	Frequency	Measure Level	Reading Level	Over Limit	Limit	Factor	Туре
		(MHz)	(dBuV/m)	(dBuV)	(dB)	(dBuV/m)	(dB)	
1		2390.000	50.546	14.864	-23.454	74.000	35.682	PK
2	*	2402.103	96.256	60.543	22.256	74.000	35.713	PK



Profile: 1922077R	Page No.: 18			
Engineer: Simon				
Site: AC5	Time: 2019/04/11 - 11:15			
Limit: FCC_Part15.209_RE(3m)	Margin: 0			
Probe: Horn_3117_00167055(1-18GHz)	Polarity: Vertical			
EUT: LED lamp	Power: AC 120V/60Hz			
Note: Mode 3:Transmit at 2402Mhz by Coded125				



No	Mark	Frequency	Measure Level	Reading Level	Over Limit	Limit	Factor	Туре
		(MHz)	(dBuV/m)	(dBuV)	(dB)	(dBuV/m)	(dB)	
1		2390.000	38.483	2.801	-15.517	54.000	35.682	AV
2	*	2402.198	95.342	59.629	41.342	54.000	35.714	AV



Profile: 1922077R	Page No.: 19			
Engineer: Simon				
Site: AC5	Time: 2019/04/11 - 11:17			
Limit: FCC_Part15.209_RE(3m)	Margin: 0			
Probe: Horn_3117_00167055(1-18GHz)	Polarity: Horizontal			
EUT: LED lamp	Power: AC 120V/60Hz			
Note: Mode 3:Transmit at 2402Mhz by Coded125				

Frequency(MHz)

No	Mark	Frequency	Measure Level	Reading Level	Over Limit	Limit	Factor	Туре
		(MHz)	(dBuV/m)	(dBuV)	(dB)	(dBuV/m)	(dB)	
1		2390.000	50.863	15.181	-23.137	74.000	35.682	PK
2	*	2402.198	100.785	65.072	26.785	74.000	35.714	PK



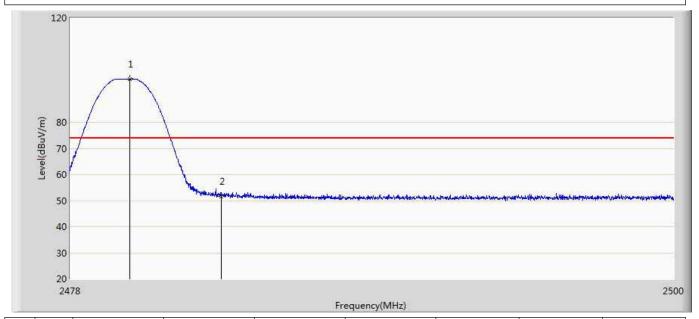
Profile: 1922077R	Page No.: 20		
Engineer: Simon			
Site: AC5	Time: 2019/04/11 - 11:19		
Limit: FCC_Part15.209_RE(3m)	Margin: 0		
Probe: Horn_3117_00167055(1-18GHz)	Polarity: Horizontal		
EUT: LED lamp	Power: AC 120V/60Hz		
Note: Mode 3:Transmit at 2402Mhz by Coded125			

(E 80 Frequency(MHz)

No	Mark	Frequency	Measure Level	Reading Level	Over Limit	Limit	Factor	Туре
		(MHz)	(dBuV/m)	(dBuV)	(dB)	(dBuV/m)	(dB)	
1		2390.000	38.540	2.858	-15.460	54.000	35.682	AV
2	*	2402.055	100.355	64.642	46.355	54.000	35.712	AV



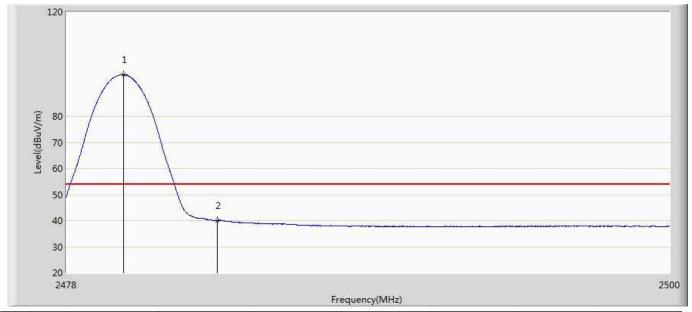
Profile: 1922077R	Page No.: 21		
Engineer: Simon			
Site: AC5	Time: 2019/04/11 - 11:21		
Limit: FCC_Part15.209_RE(3m)	Margin: 0		
Probe: Horn_3117_00167055(1-18GHz)	Polarity: Vertical		
EUT: LED lamp	Power: AC 120V/60Hz		
Note: Mode 3:Transmit at 2480Mhz by Coded125			



No	Mark	Frequency	Measure Level	Reading Level	Over Limit	Limit	Factor	Туре
		(MHz)	(dBuV/m)	(dBuV)	(dB)	(dBuV/m)	(dB)	
1	*	2480.178	96.566	60.698	22.566	74.000	35.867	PK
2		2483.500	51.633	15.741	-22.367	74.000	35.891	PK



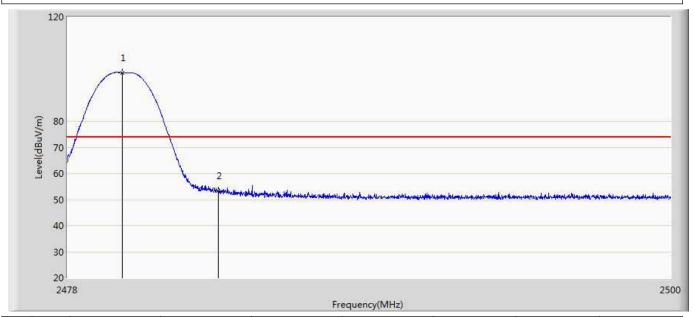
Profile: 1922077R	Page No.: 22		
Engineer: Simon			
Site: AC5	Time: 2019/04/11 - 11:24		
Limit: FCC_Part15.209_RE(3m)	Margin: 0		
Probe: Horn_3117_00167055(1-18GHz)	Polarity: Vertical		
EUT: LED lamp	Power: AC 120V/60Hz		
Note: Mode 3:Transmit at 2480Mhz by Coded125			



No	Mark	Frequency	Measure Level	Reading Level	Over Limit	Limit	Factor	Туре
		(MHz)	(dBuV/m)	(dBuV)	(dB)	(dBuV/m)	(dB)	
1	*	2480.079	95.945	60.078	41.945	54.000	35.867	AV
2		2483.500	40.048	4.156	-13.952	54.000	35.891	AV



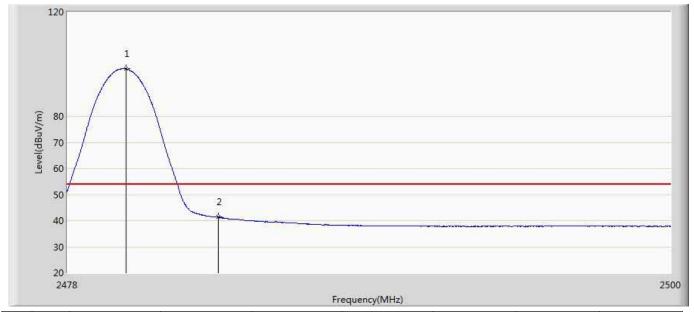
Profile: 1922077R	Page No.: 23			
Engineer: Simon				
Site: AC5	Time: 2019/04/11 - 11:25			
Limit: FCC_Part15.209_RE(3m)	Margin: 0			
Probe: Horn_3117_00167055(1-18GHz)	Polarity: Horizontal			
EUT: LED lamp	Power: AC 120V/60Hz			
Note: Mode 3:Transmit at 2480Mhz by Coded125				



No	Mark	Frequency	Measure Level	Reading Level	Over Limit	Limit	Factor	Туре
		(MHz)	(dBuV/m)	(dBuV)	(dB)	(dBuV/m)	(dB)	
1	*	2480.013	98.574	62.708	24.574	74.000	35.866	PK
2		2483.500	53.250	17.358	-20.750	74.000	35.891	PK



Profile: 1922077R	Page No.: 24		
Engineer: Simon			
Site: AC5	Time: 2019/04/11 - 11:27		
Limit: FCC_Part15.209_RE(3m)	Margin: 0		
Probe: Horn_3117_00167055(1-18GHz)	Polarity: Horizontal		
EUT: LED lamp	Power: AC 120V/60Hz		
Note: Mode 3:Transmit at 2480Mhz by Coded125	·		



No	Mark	Frequency	Measure Level	Reading Level	Over Limit	Limit	Factor	Туре
		(MHz)	(dBuV/m)	(dBuV)	(dB)	(dBuV/m)	(dB)	
1	*	2480.145	98.164	62.297	44.164	54.000	35.867	AV
2		2483.500	41.409	5.517	-12.591	54.000	35.891	AV

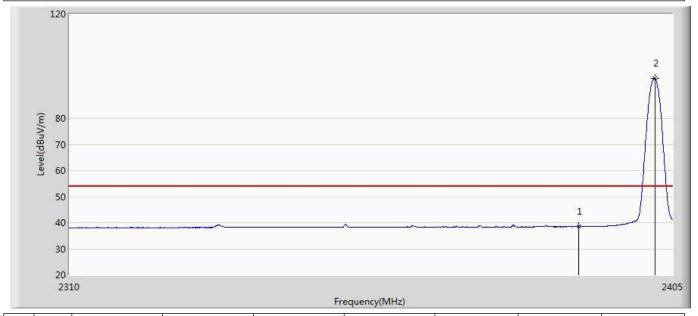


Profile: 1922077R	Page No.: 25		
Engineer: Simon			
Site: AC5	Time: 2019/04/11 - 11:29		
Limit: FCC_Part15.209_RE(3m)	Margin: 0		
Probe: Horn_3117_00167055(1-18GHz)	Polarity: Vertical		
EUT: LED lamp	Power: AC 120V/60Hz		
Note: Mode 4:Transmit at 2402Mhz by Coded500			

No	Mark	Frequency	Measure Level	Reading Level	Over Limit	Limit	Factor	Туре
		(MHz)	(dBuV/m)	(dBuV)	(dB)	(dBuV/m)	(dB)	
1		2390.000	50.835	15.153	-23.165	74.000	35.682	PK
2	*	2402.055	96.261	60.548	22.261	74.000	35.712	PK



Profile: 1922077R	Page No.: 26		
Engineer: Simon			
Site: AC5	Time: 2019/04/11 - 11:32		
Limit: FCC_Part15.209_RE(3m)	Margin: 0		
Probe: Horn_3117_00167055(1-18GHz)	Polarity: Vertical		
EUT: LED lamp	Power: AC 120V/60Hz		
Note: Mode 4:Transmit at 2402Mhz by Coded500			



No	Mark	Frequency	Measure Level	Reading Level	Over Limit	Limit	Factor	Туре
		(MHz)	(dBuV/m)	(dBuV)	(dB)	(dBuV/m)	(dB)	
1		2390.000	38.598	2.916	-15.402	54.000	35.682	AV
2	*	2402.198	95.313	59.600	41.313	54.000	35.714	AV



Profile: 1922077R	Page No.: 27		
Engineer: Simon			
Site: AC5	Time: 2019/04/11 - 11:34		
Limit: FCC_Part15.209_RE(3m)	Margin: 0		
Probe: Horn_3117_00167055(1-18GHz)	Polarity: Horizontal		
EUT: LED lamp	Power: AC 120V/60Hz		
Note: Mode 4:Transmit at 2402Mhz by Coded500			

No	Mark	Frequency	Measure Level	Reading Level	Over Limit	Limit	Factor	Туре
		(MHz)	(dBuV/m)	(dBuV)	(dB)	(dBuV/m)	(dB)	
1		2390.000	50.544	14.862	-23.456	74.000	35.682	PK
2	*	2401.913	100.625	64.913	26.625	74.000	35.712	PK



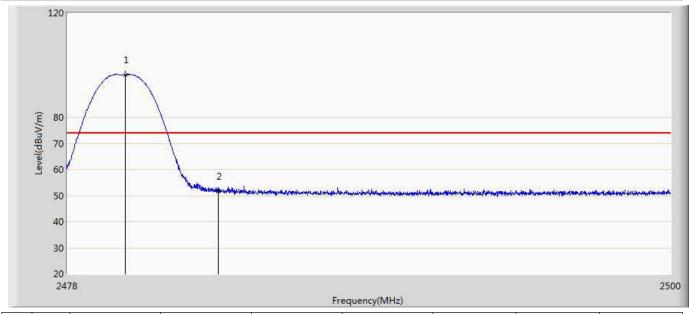
Profile: 1922077R	Page No.: 28		
Engineer: Simon			
Site: AC5	Time: 2019/04/11 - 11:37		
Limit: FCC_Part15.209_RE(3m)	Margin: 0		
Probe: Horn_3117_00167055(1-18GHz)	Polarity: Horizontal		
EUT: LED lamp	Power: AC 120V/60Hz		
Note: Mode 4:Transmit at 2402Mhz by Coded500			

120 (E) 80 70 40 30 20 2310 Frequency(MHz)

No	Mark	Frequency	Measure Level	Reading Level	Over Limit	Limit	Factor	Туре
		(MHz)	(dBuV/m)	(dBuV)	(dB)	(dBuV/m)	(dB)	
1		2390.000	38.501	2.819	-15.499	54.000	35.682	AV
2	*	2402.198	99.880	64.167	45.880	54.000	35.714	AV



Profile: 1922077R	Page No.: 29		
Engineer: Simon			
Site: AC5	Time: 2019/04/11 - 11:39		
Limit: FCC_Part15.209_RE(3m)	Margin: 0		
Probe: Horn_3117_00167055(1-18GHz)	Polarity: Vertical		
EUT: LED lamp	Power: AC 120V/60Hz		
Note: Mode 4:Transmit at 2480Mhz by Coded500			



No	Mark	Frequency	Measure Level	Reading Level	Over Limit	Limit	Factor	Туре
		(MHz)	(dBuV/m)	(dBuV)	(dB)	(dBuV/m)	(dB)	
1	*	2480.112	96.341	60.474	22.341	74.000	35.867	PK
2		2483.500	51.570	15.678	-22.430	74.000	35.891	PK

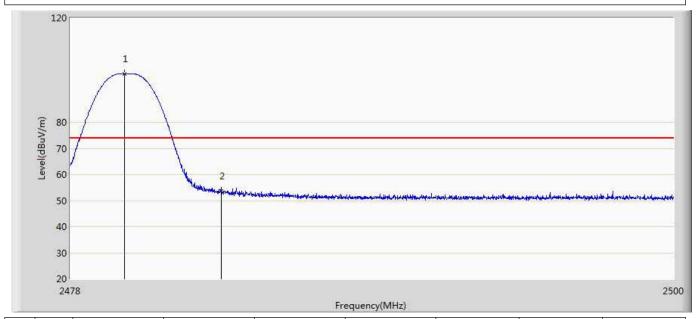


Profile: 1922077R	Page No.: 30			
Engineer: Simon				
Site: AC5	Time: 2019/04/11 - 11:42			
Limit: FCC_Part15.209_RE(3m)	Margin: 0			
Probe: Horn_3117_00167055(1-18GHz)	Polarity: Vertical			
EUT: LED lamp	Power: AC 120V/60Hz			
Note: Mode 4:Transmit at 2480Mhz by Coded500				

No	Mark	Frequency	Measure Level	Reading Level	Over Limit	Limit	Factor	Туре
		(MHz)	(dBuV/m)	(dBuV)	(dB)	(dBuV/m)	(dB)	
1	*	2480.013	95.709	59.843	41.709	54.000	35.866	AV
2		2483.500	39.956	4.064	-14.044	54.000	35.891	AV



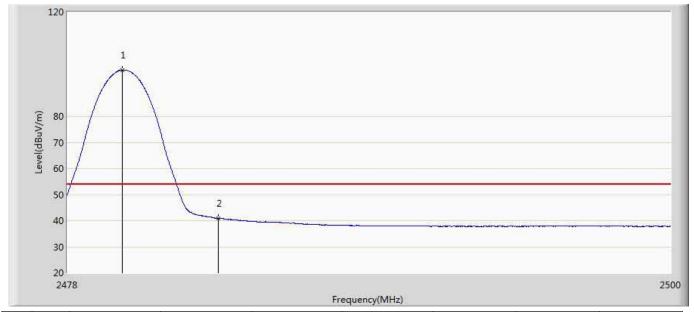
Profile: 1922077R	Page No.: 31			
Engineer: Simon				
Site: AC5	Time: 2019/04/11 - 11:44			
Limit: FCC_Part15.209_RE(3m)	Margin: 0			
Probe: Horn_3117_00167055(1-18GHz)	Polarity: Horizontal			
EUT: LED lamp	Power: AC 120V/60Hz			
Note: Mode 4:Transmit at 2480Mhz by Coded500				



No	Mark	Frequency	Measure Level	Reading Level	Over Limit	Limit	Factor	Туре
		(MHz)	(dBuV/m)	(dBuV)	(dB)	(dBuV/m)	(dB)	
1	*	2479.980	98.478	62.612	24.478	74.000	35.866	PK
2		2483.500	53.520	17.628	-20.480	74.000	35.891	PK



Profile: 1922077R	Page No.: 32		
Engineer: Simon			
Site: AC5	Time: 2019/04/11 - 11:46		
Limit: FCC_Part15.209_RE(3m)	Margin: 0		
Probe: Horn_3117_00167055(1-18GHz)	Polarity: Horizontal		
EUT: LED lamp	Power: AC 120V/60Hz		
Note: Mode 4:Transmit at 2480Mhz by Coded500			

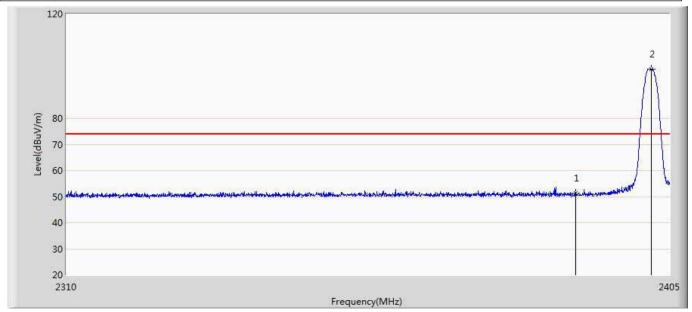


No	Mark	Frequency	Measure Level	Reading Level	Over Limit	Limit	Factor	Туре
		(MHz)	(dBuV/m)	(dBuV)	(dB)	(dBuV/m)	(dB)	
1	*	2480.013	97.810	61.944	43.810	54.000	35.866	AV
2		2483.500	40.994	5.102	-13.006	54.000	35.891	AV



## Diodes:

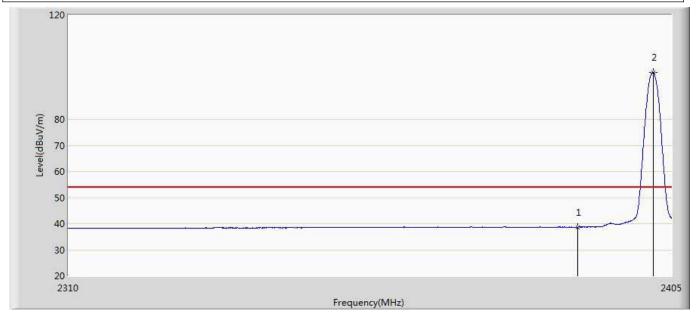
Profile: 1922077R	Page No.: 1
Engineer: Simon	
Site: AC5	Time: 2019/03/08 - 15:56
Limit: FCC_Part15.209_RE(3m)	Margin: 0
Probe: Horn_3117_00167055(1-18GHz)	Polarity: Vertical
EUT: LED lamp	Power: AC 120V/60Hz
Note: Mode1:Transmit at 2402Mhz by BLE	



No	Mark	Frequency	Measure Level	Reading Level	Over Limit	Limit	Factor	Туре
		(MHz)	(dBuV/m)	(dBuV)	(dB)	(dBuV/m)	(dB)	
1		2390.000	51.304	15.622	-22.696	74.000	35.682	PK
2	*	2402.055	98.789	63.076	24.789	74.000	35.712	PK



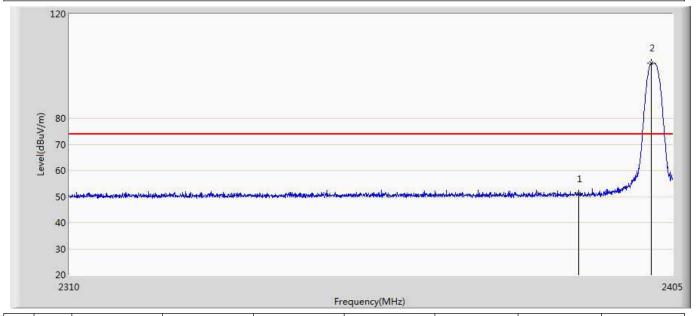
Profile: 1922077R	Page No.: 2
Engineer: Simon	
Site: AC5	Time: 2019/04/10 - 19:29
Limit: FCC_Part15.209_RE(3m)	Margin: 0
Probe: Horn_3117_00167055(1-18GHz)	Polarity: Vertical
EUT: LED lamp	Power: AC 120V/60Hz
Note: Mode1:Transmit at 2402Mhz by BLE	



No	Mark	Frequency	Measure Level	Reading Level	Over Limit	Limit	Factor	Туре
		(MHz)	(dBuV/m)	(dBuV)	(dB)	(dBuV/m)	(dB)	
1		2390.000	38.654	2.972	-15.346	54.000	35.682	AV
2	*	2402.055	97.999	62.286	43.999	54.000	35.712	AV



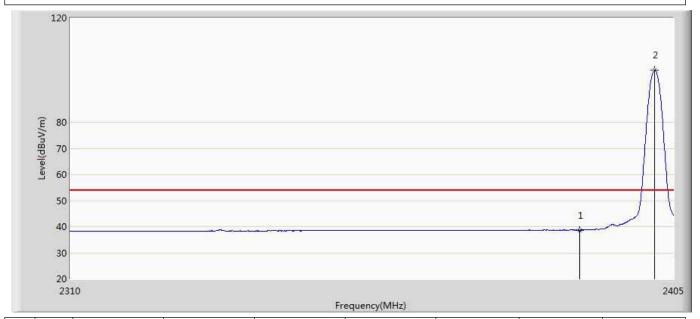
Profile: 1922077R	Page No.: 3		
Engineer: Simon			
Site: AC5	Time: 2019/04/10 - 19:30		
Limit: FCC_Part15.209_RE(3m)	Margin: 0		
Probe: Horn_3117_00167055(1-18GHz)	Polarity: Horizontal		
EUT: LED lamp	Power: AC 120V/60Hz		
Note: Mode1:Transmit at 2402Mhz by BLE			



No	Mark	Frequency	Measure Level	Reading Level	Over Limit	Limit	Factor	Туре
		(MHz)	(dBuV/m)	(dBuV)	(dB)	(dBuV/m)	(dB)	
1		2390.000	50.875	15.193	-23.125	74.000	35.682	PK
2	*	2401.627	101.216	65.504	27.216	74.000	35.712	PK



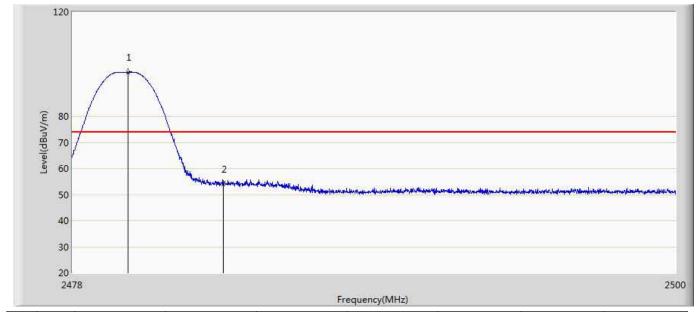
Profile: 1922077R	Page No.: 4
Engineer: Simon	
Site: AC5	Time: 2019/04/10 - 19:32
Limit: FCC_Part15.209_RE(3m)	Margin: 0
Probe: Horn_3117_00167055(1-18GHz)	Polarity: Horizontal
EUT: LED lamp	Power: AC 120V/60Hz
Note: Mode1:Transmit at 2402Mhz by BLE	



No	Mark	Frequency	Measure Level	Reading Level	Over Limit	Limit	Factor	Туре
		(MHz)	(dBuV/m)	(dBuV)	(dB)	(dBuV/m)	(dB)	
1		2390.000	38.666	2.984	-15.334	54.000	35.682	AV
2	*	2401.960	99.971	64.258	45.971	54.000	35.712	AV



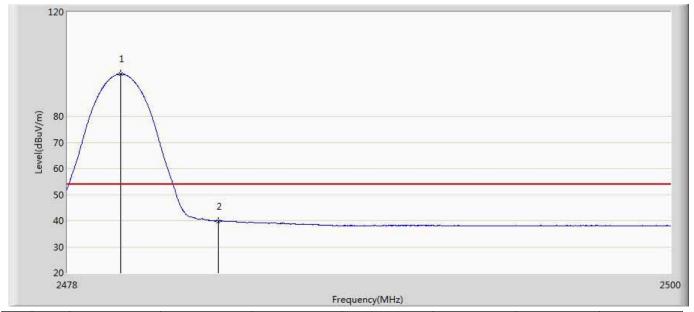
Profile: 1922077R	Page No.: 5		
Engineer: Simon			
Site: AC5	Time: 2019/04/10 - 19:33		
Limit: FCC_Part15.209_RE(3m)	Margin: 0		
Probe: Horn_3117_00167055(1-18GHz)	Polarity: Vertical		
EUT: LED lamp	Power: AC 120V/60Hz		
Note: Mode 1:Transmit at 2480Mhz by BLE			



No	Mark	Frequency	Measure Level	Reading Level	Over Limit	Limit	Factor	Туре
		(MHz)	(dBuV/m)	(dBuV)	(dB)	(dBuV/m)	(dB)	
1	*	2480.024	96.885	61.018	22.885	74.000	35.866	PK
2		2483.500	54.006	18.114	-19.994	74.000	35.891	PK



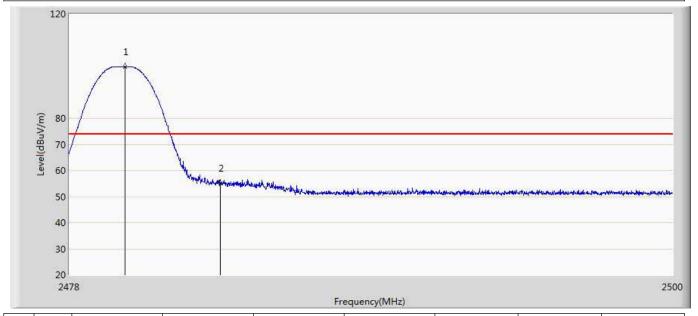
Profile: 1922077R	Page No.: 6		
Engineer: Simon			
Site: AC5	Time: 2019/04/10 - 19:35		
Limit: FCC_Part15.209_RE(3m)	Margin: 0		
Probe: Horn_3117_00167055(1-18GHz)	Polarity: Vertical		
EUT: LED lamp	Power: AC 120V/60Hz		
Note: Mode 1:Transmit at 2480Mhz by BLE			



No	Mark	Frequency	Measure Level	Reading Level	Over Limit	Limit	Factor	Туре
		(MHz)	(dBuV/m)	(dBuV)	(dB)	(dBuV/m)	(dB)	
1	*	2479.947	96.166	60.300	42.166	54.000	35.866	AV
2		2483.500	39.826	3.934	-14.174	54.000	35.891	AV



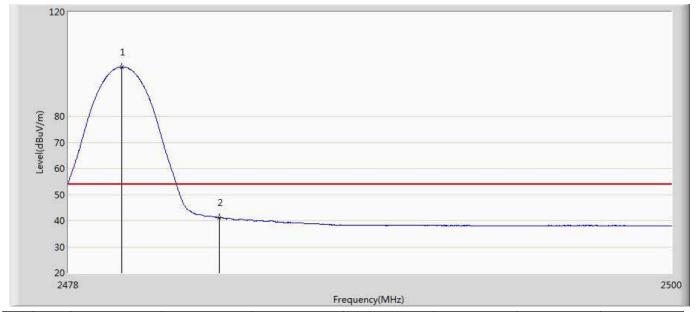
Profile: 1922077R	Page No.: 7		
Engineer: Simon			
Site: AC5	Time: 2019/04/10 - 19:37		
Limit: FCC_Part15.209_RE(3m)	Margin: 0		
Probe: Horn_3117_00167055(1-18GHz)	Polarity: Horizontal		
EUT: LED lamp	Power: AC 120V/60Hz		
Note: Mode 1:Transmit at 2480Mhz by BLE			



No	Mark	Frequency	Measure Level	Reading Level	Over Limit	Limit	Factor	Туре
		(MHz)	(dBuV/m)	(dBuV)	(dB)	(dBuV/m)	(dB)	
1	*	2480.035	99.748	63.881	25.748	74.000	35.866	PK
2		2483.500	55.029	19.137	-18.971	74.000	35.891	PK



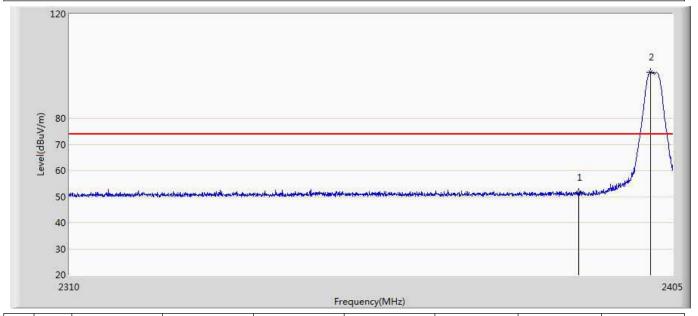
Profile: 1922077R	Page No.: 8
Engineer: Simon	
Site: AC5	Time: 2019/04/10 - 19:39
Limit: FCC_Part15.209_RE(3m)	Margin: 0
Probe: Horn_3117_00167055(1-18GHz)	Polarity: Horizontal
EUT: LED lamp	Power: AC 120V/60Hz
Note: Mode 1:Transmit at 2480Mhz by RLF	·



No	Mark	Frequency	Measure Level	Reading Level	Over Limit	Limit	Factor	Туре
		(MHz)	(dBuV/m)	(dBuV)	(dB)	(dBuV/m)	(dB)	
1	*	2479.947	98.974	63.108	44.974	54.000	35.866	AV
2		2483.500	41.235	5.343	-12.765	54.000	35.891	AV



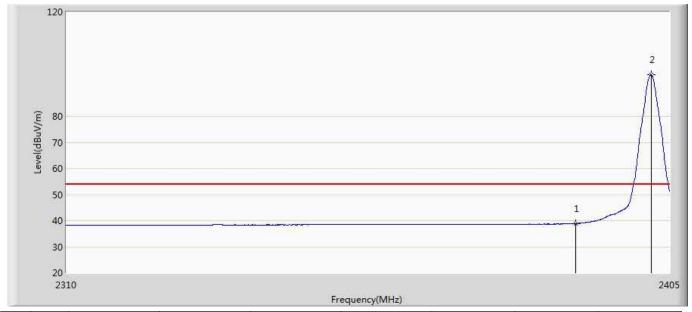
Profile: 1922077R	Page No.: 9
Engineer: Simon	
Site: AC5	Time: 2019/04/10 - 19:44
Limit: FCC_Part15.209_RE(3m)	Margin: 0
Probe: Horn_3117_00167055(1-18GHz)	Polarity: Vertical
EUT: LED lamp	Power: AC 120V/60Hz
Note: Mode 2:Transmit at 2402Mhz by 2LE	



No	Mark	Frequency	Measure Level	Reading Level	Over Limit	Limit	Factor	Туре
		(MHz)	(dBuV/m)	(dBuV)	(dB)	(dBuV/m)	(dB)	
1		2390.000	51.545	15.863	-22.455	74.000	35.682	PK
2	*	2401.485	97.662	61.951	23.662	74.000	35.711	PK



Profile: 1922077R	Page No.: 10		
Engineer: Simon			
Site: AC5	Time: 2019/04/10 - 19:48		
Limit: FCC_Part15.209_RE(3m)	Margin: 0		
Probe: Horn_3117_00167055(1-18GHz)	Polarity: Vertical		
EUT: LED lamp	Power: AC 120V/60Hz		
Note: Mode 2:Transmit at 2402Mhz by 2LE			



No	Mark	Frequency	Measure Level	Reading Level	Over Limit	Limit	Factor	Туре
		(MHz)	(dBuV/m)	(dBuV)	(dB)	(dBuV/m)	(dB)	
1		2390.000	38.928	3.246	-15.072	54.000	35.682	AV
2	*	2402.055	95.837	60.124	41.837	54.000	35.712	AV

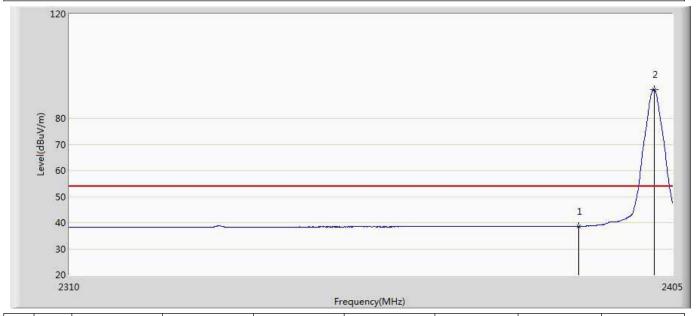


Profile: 1922077R	Page No.: 11
Engineer: Simon	
Site: AC5	Time: 2019/04/11 - 18:37
Limit: FCC_Part15.209_RE(3m)	Margin: 0
Probe: Horn_3117_00167055(1-18GHz)	Polarity: Horizontal
EUT: LED lamp	Power: AC 120V/60Hz
Note: Mode 2:Transmit at 2402Mhz by 2LE	

No	Mark	Frequency	Measure Level	Reading Level	Over Limit	Limit	Factor	Туре
		(MHz)	(dBuV/m)	(dBuV)	(dB)	(dBuV/m)	(dB)	
1		2390.000	50.944	15.262	-23.056	74.000	35.682	PK
2	*	2402.387	92.943	57.229	18.943	74.000	35.714	PK



Profile: 1922077R	Page No.: 12		
Engineer: Simon			
Site: AC5	Time: 2019/04/11 - 18:40		
Limit: FCC_Part15.209_RE(3m)	Margin: 0		
Probe: Horn_3117_00167055(1-18GHz)	Polarity: Horizontal		
EUT: LED lamp	Power: AC 120V/60Hz		
Note: Mode 2:Transmit at 2402Mhz by 2LE			



No	Mark	Frequency	Measure Level	Reading Level	Over Limit	Limit	Factor	Туре
		(MHz)	(dBuV/m)	(dBuV)	(dB)	(dBuV/m)	(dB)	
1		2390.000	38.589	2.907	-15.411	54.000	35.682	AV
2	*	2402.055	91.077	55.364	37.077	54.000	35.712	AV



2500

Profile: 1922077R	Page No.: 13
Engineer: Simon	
Site: AC5	Time: 2019/04/11 - 18:43
Limit: FCC_Part15.209_RE(3m)	Margin: 0
Probe: Horn_3117_00167055(1-18GHz)	Polarity: Vertical
EUT: LED lamp	Power: AC 120V/60Hz
Note: Mode 2:Transmit at 2480Mhz by 2LE	

No	Mark	Frequency	Measure Level	Reading Level	Over Limit	Limit	Factor	Туре
		(MHz)	(dBuV/m)	(dBuV)	(dB)	(dBuV/m)	(dB)	
1	*	2479.529	92.207	56.344	18.207	74.000	35.863	PK
2		2483.500	53.101	17.209	-20.899	74.000	35.891	PK

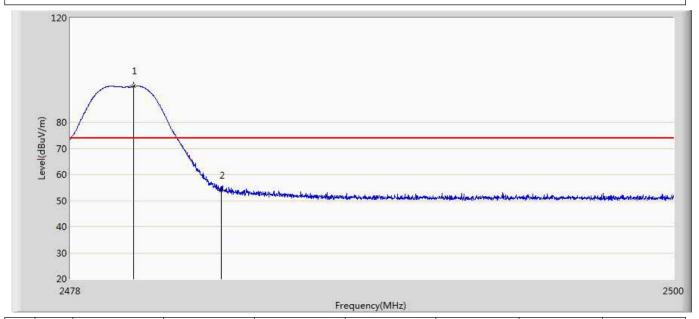


Profile: 1922077R	Page No.: 14		
Engineer: Simon			
Site: AC5	Time: 2019/04/11 - 18:46		
Limit: FCC_Part15.209_RE(3m)	Margin: 0		
Probe: Horn_3117_00167055(1-18GHz)	Polarity: Vertical		
EUT: LED lamp	Power: AC 120V/60Hz		
Note: Mode 2:Transmit at 2480Mhz by 2LE			

No	Mark	Frequency	Measure Level	Reading Level	Over Limit	Limit	Factor	Туре
		(MHz)	(dBuV/m)	(dBuV)	(dB)	(dBuV/m)	(dB)	
1	*	2479.947	90.513	54.647	36.513	54.000	35.866	AV
2		2483.500	41.410	5.518	-12.590	54.000	35.891	AV



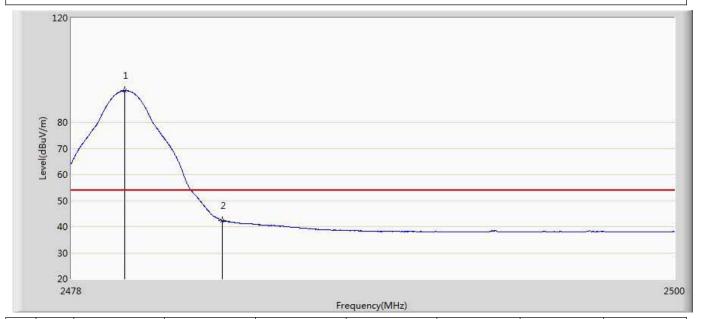
Profile: 1922077R	Page No.: 15		
Engineer: Simon			
Site: AC5	Time: 2019/04/11 - 18:49		
Limit: FCC_Part15.209_RE(3m)	Margin: 0		
Probe: Horn_3117_00167055(1-18GHz)	Polarity: Horizontal		
EUT: LED lamp	Power: AC 120V/60Hz		
Note: Mode 2:Transmit at 2480Mhz by 2LE			



No	Mark	Frequency	Measure Level	Reading Level	Over Limit	Limit	Factor	Туре
		(MHz)	(dBuV/m)	(dBuV)	(dB)	(dBuV/m)	(dB)	
1	*	2480.299	93.769	57.900	19.769	74.000	35.869	PK
2		2483.500	53.821	17.929	-20.179	74.000	35.891	PK



Profile: 1922077R	Page No.: 16		
Engineer: Simon			
Site: AC5	Time: 2019/04/11 - 18:50		
Limit: FCC_Part15.209_RE(3m)	Margin: 0		
Probe: Horn_3117_00167055(1-18GHz)	Polarity: Horizontal		
EUT: LED lamp	Power: AC 120V/60Hz		
Note: Mode 2:Transmit at 2480Mhz by 2LE			



No	Mark	Frequency	Measure Level	Reading Level	Over Limit	Limit	Factor	Туре
		(MHz)	(dBuV/m)	(dBuV)	(dB)	(dBuV/m)	(dB)	
1	*	2479.947	92.073	56.207	38.073	54.000	35.866	AV
2		2483.500	42.354	6.462	-11.646	54.000	35.891	AV

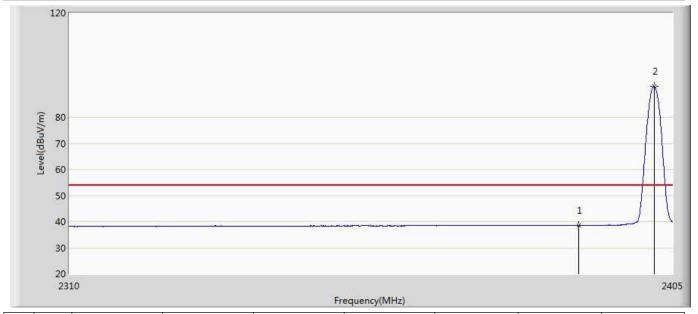


Profile: 1922077R	Page No.: 17			
Engineer: Simon				
Site: AC5	Time: 2019/04/11 - 18:52			
Limit: FCC_Part15.209_RE(3m)	Margin: 0			
Probe: Horn_3117_00167055(1-18GHz)	Polarity: Vertical			
EUT: LED lamp	Power: AC 120V/60Hz			
Note: Mode 3:Transmit at 2402Mhz by Coded125				

No	Mark	Frequency	Measure Level	Reading Level	Over Limit	Limit	Factor	Туре
		(MHz)	(dBuV/m)	(dBuV)	(dB)	(dBuV/m)	(dB)	
1		2390.000	50.782	15.100	-23.218	74.000	35.682	PK
2	*	2401.913	91.909	56.197	17.909	74.000	35.712	PK



Profile: 1922077R	Page No.: 18			
Engineer: Simon				
Site: AC5	Time: 2019/04/11 - 18:54			
Limit: FCC_Part15.209_RE(3m)	Margin: 0			
Probe: Horn_3117_00167055(1-18GHz)	Polarity: Vertical			
EUT: LED lamp	Power: AC 120V/60Hz			
Note: Mode 3:Transmit at 2402Mhz by Coded125				



No	Mark	Frequency	Measure Level	Reading Level	Over Limit	Limit	Factor	Туре
		(MHz)	(dBuV/m)	(dBuV)	(dB)	(dBuV/m)	(dB)	
1		2390.000	38.530	2.848	-15.470	54.000	35.682	AV
2	*	2402.055	91.795	56.082	37.795	54.000	35.712	AV

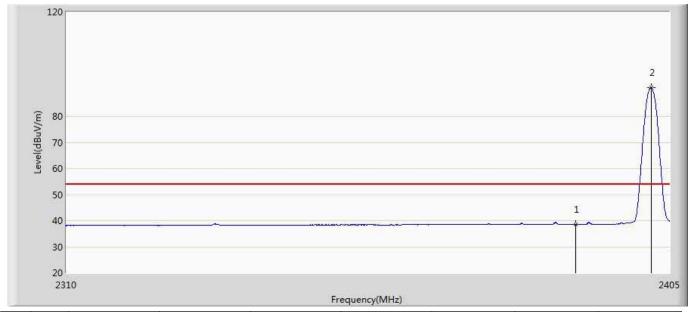


Profile: 1922077R	Page No.: 19			
Engineer: Simon				
Site: AC5	Time: 2019/04/11 - 18:55			
Limit: FCC_Part15.209_RE(3m)	Margin: 0			
Probe: Horn_3117_00167055(1-18GHz)	Polarity: Horizontal			
EUT: LED lamp	Power: AC 120V/60Hz			
Note: Mode 3:Transmit at 2402Mhz by Coded125				

No	Mark	Frequency	Measure Level	Reading Level	Over Limit	Limit	Factor	Туре
		(MHz)	(dBuV/m)	(dBuV)	(dB)	(dBuV/m)	(dB)	
1		2390.000	50.291	14.609	-23.709	74.000	35.682	PK
2	*	2402.055	91.589	55.876	17.589	74.000	35.712	PK



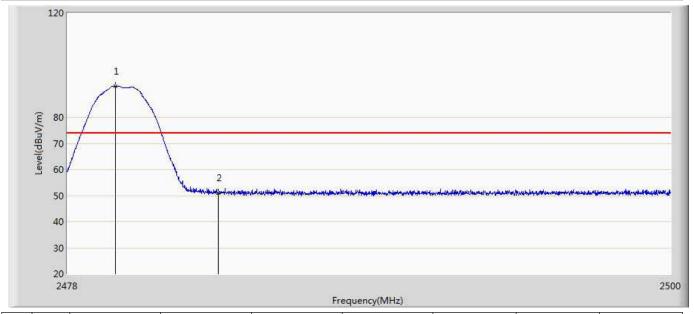
Profile: 1922077R	Page No.: 20			
Engineer: Simon				
Site: AC5	Time: 2019/04/11 - 18:56			
Limit: FCC_Part15.209_RE(3m)	Margin: 0			
Probe: Horn_3117_00167055(1-18GHz)	Polarity: Horizontal			
EUT: LED lamp	Power: AC 120V/60Hz			
Note: Mode 3:Transmit at 2402Mhz by Coded125				



No	Mark	Frequency	Measure Level	Reading Level	Over Limit	Limit	Factor	Туре
		(MHz)	(dBuV/m)	(dBuV)	(dB)	(dBuV/m)	(dB)	
1		2390.000	38.567	2.885	-15.433	54.000	35.682	AV
2	*	2402.055	91.119	55.406	37.119	54.000	35.712	AV



Profile: 1922077R	Page No.: 21		
Engineer: Simon			
Site: AC5	Time: 2019/04/11 - 18:58		
Limit: FCC_Part15.209_RE(3m)	Margin: 0		
Probe: Horn_3117_00167055(1-18GHz)	Polarity: Vertical		
EUT: LED lamp	Power: AC 120V/60Hz		
Note: Mode 3:Transmit at 2480Mhz by Coded125			



No	Mark	Frequency	Measure Level	Reading Level	Over Limit	Limit	Factor	Туре
		(MHz)	(dBuV/m)	(dBuV)	(dB)	(dBuV/m)	(dB)	
1	*	2479.749	91.905	56.040	17.905	74.000	35.865	PK
2		2483.500	50.924	15.032	-23.076	74.000	35.891	PK



Profile: 1922077R	Page No.: 22
Engineer: Simon	·
Site: AC5	Time: 2019/04/11 - 19:00
Limit: FCC_Part15.209_RE(3m)	Margin: 0
Probe: Horn_3117_00167055(1-18GHz)	Polarity: Vertical
EUT: LED lamp	Power: AC 120V/60Hz
Note: Mode 3:Transmit at 2480Mhz by Coded125	·

No	Mark	Frequency	Measure Level	Reading Level	Over Limit	Limit	Factor	Туре
		(MHz)	(dBuV/m)	(dBuV)	(dB)	(dBuV/m)	(dB)	
1	*	2479.947	90.355	54.489	36.355	54.000	35.866	AV
2		2483.500	38.457	2.565	-15.543	54.000	35.891	AV



Profile: 1922077R	Page No.: 23		
Engineer: Simon			
Site: AC5	Time: 2019/04/11 - 19:01		
Limit: FCC_Part15.209_RE(3m)	Margin: 0		
Probe: Horn_3117_00167055(1-18GHz)	Polarity: Horizontal		
EUT: LED lamp	Power: AC 120V/60Hz		
Note: Mode 3:Transmit at 2480Mhz by Coded125			

No	Mark	Frequency	Measure Level	Reading Level	Over Limit	Limit	Factor	Туре
		(MHz)	(dBuV/m)	(dBuV)	(dB)	(dBuV/m)	(dB)	
1	*	2479.870	93.367	57.502	19.367	74.000	35.865	PK
2		2483.500	51.984	16.092	-22.016	74.000	35.891	PK



Profile: 1922077R	Page No.: 24
Engineer: Simon	
Site: AC5	Time: 2019/04/11 - 19:03
Limit: FCC_Part15.209_RE(3m)	Margin: 0
Probe: Horn_3117_00167055(1-18GHz)	Polarity: Horizontal
EUT: LED lamp	Power: AC 120V/60Hz
Note: Mode 3:Transmit at 2480Mhz by Coded125	·

No	Mark	Frequency	Measure Level	Reading Level	Over Limit	Limit	Factor	Туре
		(MHz)	(dBuV/m)	(dBuV)	(dB)	(dBuV/m)	(dB)	
1	*	2480.013	92.899	57.033	38.899	54.000	35.866	AV
2		2483.500	38.815	2.923	-15.185	54.000	35.891	AV



Profile: 1922077R	Page No.: 25			
Engineer: Simon				
Site: AC5	Time: 2019/04/11 - 19:05			
Limit: FCC_Part15.209_RE(3m)	Margin: 0			
Probe: Horn_3117_00167055(1-18GHz)	Polarity: Vertical			
EUT: LED lamp	Power: AC 120V/60Hz			
Note: Mode 4:Transmit at 2402Mhz by Coded500				

Level(dBuV/m) 2310

No	Mark	Frequency	Measure Level	Reading Level	Over Limit	Limit	Factor	Туре
		(MHz)	(dBuV/m)	(dBuV)	(dB)	(dBuV/m)	(dB)	
1		2390.000	50.010	14.328	-23.990	74.000	35.682	PK
2	*	2402.103	92.205	56.492	18.205	74.000	35.713	PK



Profile: 1922077R	Page No.: 26		
Engineer: Simon			
Site: AC5	Time: 2019/04/11 - 19:06		
Limit: FCC_Part15.209_RE(3m)	Margin: 0		
Probe: Horn_3117_00167055(1-18GHz)	Polarity: Vertical		
EUT: LED lamp	Power: AC 120V/60Hz		
Note: Mode 4:Transmit at 2402Mhz by Coded500			

No	Mark	Frequency	Measure Level	Reading Level	Over Limit	Limit	Factor	Туре
		(MHz)	(dBuV/m)	(dBuV)	(dB)	(dBuV/m)	(dB)	
1		2390.000	38.515	2.833	-15.485	54.000	35.682	AV
2	*	2402.055	91.493	55.780	37.493	54.000	35.712	AV

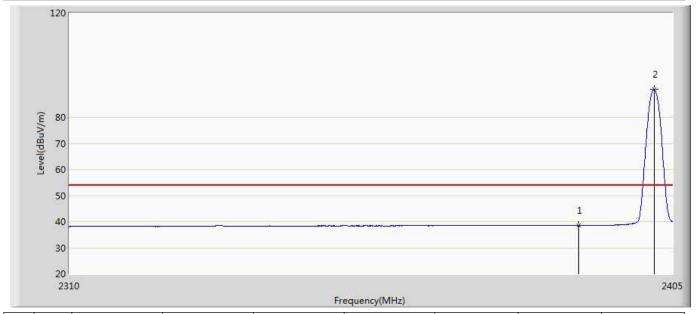


Profile: 1922077R	Page No.: 27		
Engineer: Simon			
Site: AC5	Time: 2019/04/11 - 19:08		
Limit: FCC_Part15.209_RE(3m)	Margin: 0		
Probe: Horn_3117_00167055(1-18GHz)	Polarity: Horizontal		
EUT: LED lamp	Power: AC 120V/60Hz		
Note: Mode 4:Transmit at 2402Mhz by Coded500			

No	Mark	Frequency	Measure Level	Reading Level	Over Limit	Limit	Factor	Туре
		(MHz)	(dBuV/m)	(dBuV)	(dB)	(dBuV/m)	(dB)	
1		2390.000	51.117	15.435	-22.883	74.000	35.682	PK
2	*	2402.245	91.282	55.569	17.282	74.000	35.714	PK



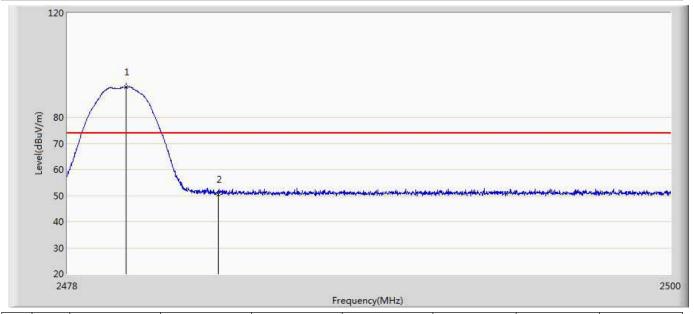
Profile: 1922077R	Page No.: 28		
Engineer: Simon			
Site: AC5	Time: 2019/04/11 - 19:09		
Limit: FCC_Part15.209_RE(3m)	Margin: 0		
Probe: Horn_3117_00167055(1-18GHz)	Polarity: Horizontal		
EUT: LED lamp	Power: AC 120V/60Hz		
Note: Mode 4:Transmit at 2402Mhz by Coded500			



No	Mark	Frequency	Measure Level	Reading Level	Over Limit	Limit	Factor	Туре
		(MHz)	(dBuV/m)	(dBuV)	(dB)	(dBuV/m)	(dB)	
1		2390.000	38.524	2.842	-15.476	54.000	35.682	AV
2	*	2402.055	90.706	54.993	36.706	54.000	35.712	AV



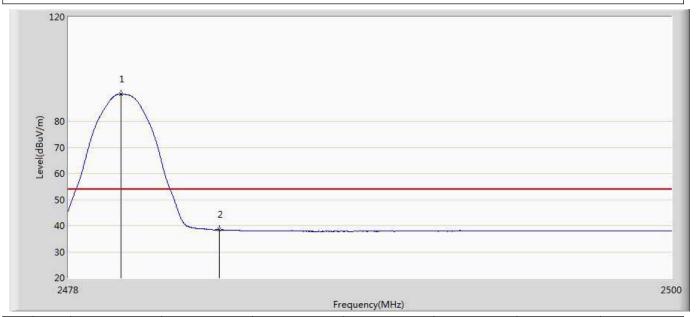
Profile: 1922077R	Page No.: 29		
Engineer: Simon			
Site: AC5	Time: 2019/04/11 - 19:11		
Limit: FCC_Part15.209_RE(3m)	Margin: 0		
Probe: Horn_3117_00167055(1-18GHz)	Polarity: Vertical		
EUT: LED lamp	Power: AC 120V/60Hz		
Note: Mode 4:Transmit at 2480Mhz by Coded500			



No	Mark	Frequency	Measure Level	Reading Level	Over Limit	Limit	Factor	Туре
		(MHz)	(dBuV/m)	(dBuV)	(dB)	(dBuV/m)	(dB)	
1	*	2480.145	91.657	55.790	17.657	74.000	35.867	PK
2		2483.500	50.533	14.641	-23.467	74.000	35.891	PK



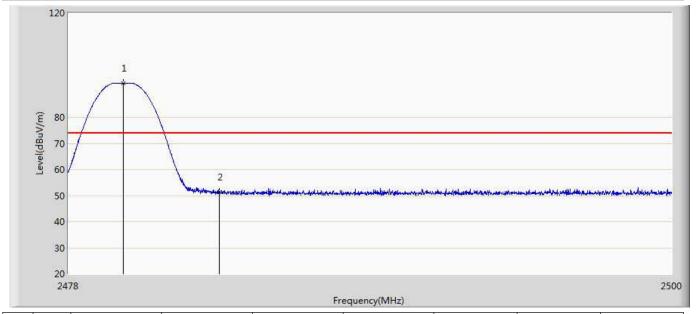
Profile: 1922077R	Page No.: 30			
Engineer: Simon				
Site: AC5	Time: 2019/04/11 - 19:13			
Limit: FCC_Part15.209_RE(3m)	Margin: 0			
Probe: Horn_3117_00167055(1-18GHz)	Polarity: Vertical			
EUT: LED lamp	Power: AC 120V/60Hz			
Note: Mode 4:Transmit at 2480Mhz by Coded500				



No	Mark	Frequency	Measure Level	Reading Level	Over Limit	Limit	Factor	Туре
		(MHz)	(dBuV/m)	(dBuV)	(dB)	(dBuV/m)	(dB)	
1	*	2479.914	90.444	54.578	36.444	54.000	35.866	AV
2		2483.500	38.432	2.540	-15.568	54.000	35.891	AV



Profile: 1922077R	Page No.: 31			
Engineer: Simon				
Site: AC5	Time: 2019/04/11 - 19:14			
Limit: FCC_Part15.209_RE(3m)	Margin: 0			
Probe: Horn_3117_00167055(1-18GHz)	Polarity: Horizontal			
EUT: LED lamp	Power: AC 120V/60Hz			
Note: Mode 4:Transmit at 2480Mhz by Coded500				



No	Mark	Frequency	Measure Level	Reading Level	Over Limit	Limit	Factor	Туре
		(MHz)	(dBuV/m)	(dBuV)	(dB)	(dBuV/m)	(dB)	
1	*	2480.013	93.011	57.145	19.011	74.000	35.866	PK
2		2483.500	51.178	15.286	-22.822	74.000	35.891	PK



Profile: 1922077R	Page No.: 32		
Engineer: Simon			
Site: AC5	Time: 2019/04/11 - 19:16		
Limit: FCC_Part15.209_RE(3m)	Margin: 0		
Probe: Horn_3117_00167055(1-18GHz)	Polarity: Horizontal		
EUT: LED lamp	Power: AC 120V/60Hz		
Note: Mode 4:Transmit at 2480Mhz by Coded500			

No	Mark	Frequency	Measure Level	Reading Level	Over Limit	Limit	Factor	Туре
		(MHz)	(dBuV/m)	(dBuV)	(dB)	(dBuV/m)	(dB)	
1	*	2479.947	92.697	56.831	38.697	54.000	35.866	AV
2		2483.500	38.814	2.922	-15.186	54.000	35.891	AV



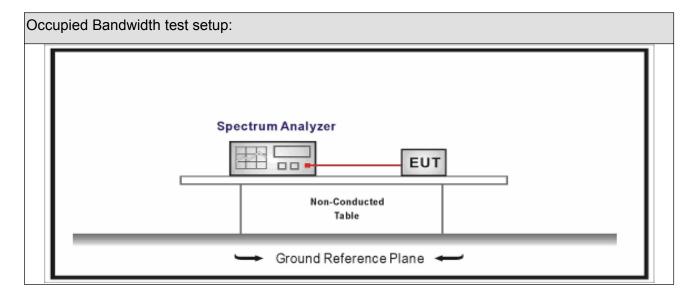
# 7. Occupied Bandwidth

# 7.1. Test Equipment

Occupied Bandwidth / TR-8										
Instrument Manufacturer Type No. Serial No. Cal. Date Cal. Due										
Spectrum Analyzer	Agilent	N9010A	MY48030494	2019.02.04	2020.02.03					
EXA Spectrum Analyzer	Keysight	N9010A	MY55370495	2019.04.09	2020.04.08					
MXA Signal Anlyzer	Keysight	N9020A	MY56060147	2019.04.09	2020.04.08					
Temperature/Humidity Mete	rzhichen	ZC1-2	TR8-TH	2019.04.10	2020.04.09					

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 the2400-2483.5 MHz .The minimum 6 dB bandwidth shall be at least 500 kHz

#### 7.4. Test Procedure

Test	Fest Method										
	Refe	rence Rule	Chapter	Description							
	ANSI	C63.10	11.8	DTS bandwidth							
		ANSI C63.10	11.8.1	Option 1							
	$\boxtimes$	ANSI C63.10	11.8.2	Option 2							

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# 7.5. EUT test definition

Item		Occ	cupied B	andwidth		
		Fixed point-to-poin	t			
Device Category		Emit multiple direct sequentially	tional bea	ams, simulta	aneously or	
	$\boxtimes$	Other cases				
Test mode	Mode	1-4				
		Radiated				
		X Axis	Y	Axis	Z Axis	
		Worst Axis	Worst A	Axis 🗌	Worst Axis	
		Conducted				
	$\boxtimes$		Ch	nain 1		
Test method		•				
		Chain 1			Chain 2	
			•	•		
		Chain 1		nain 2	Chain 3	
			•	• •		

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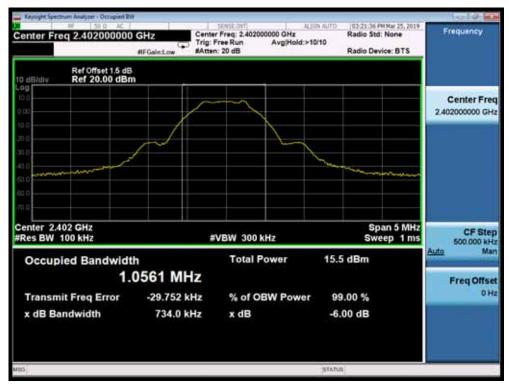


#### 7.6. Test Result

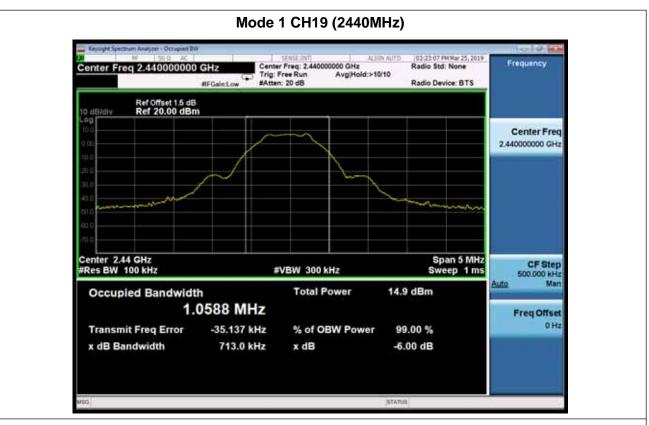
Product Name	:	LED lamp	Test Voltage	:	AC 120V/60Hz
Test Mode	:	Mode 1	Test Site		TR-8
Test Date	:	2019.03.25	Test Engineer	:	Simon

Mode	CH.	Test Freq. (MHz)	99% Occupied Bandwidth (kHz)	6dB Occupied Bandwidth (kHz)	Limit (kHz)	Result
1	00	2402	1056.1	734.0	>500	Pass
1	19	2440	1058.8	713.0	>500	Pass
1	39	2480	1054.0	728.5	>500	Pass

### Mode 1 CH00 (2402MHz)













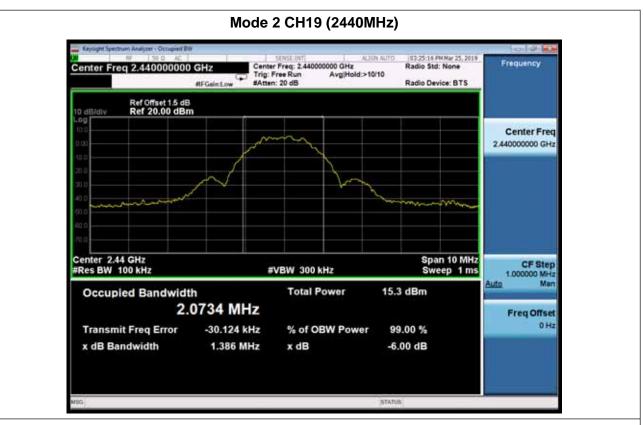
Product Name	:	LED lamp	Test Voltage	:	AC 120V/60Hz
Test Mode	:	Mode 2	Test Site	:	TR-8
Test Date	:	2019.03.25	Test Engineer	:	Simon

Mode	CH.	Test Freq. (MHz)	99% Occupied Bandwidth (kHz)	6dB Occupied Bandwidth (kHz)	Limit (kHz)	Result
2	00	2402	2078.9	1383	>500	Pass
2	19	2440	2073.4	1386	>500	Pass
2	39	2480	2080.7	1380	>500	Pass

#### Mode 2 CH00 (2402MHz)







#### Mode 3 CH39 (2480MHz)

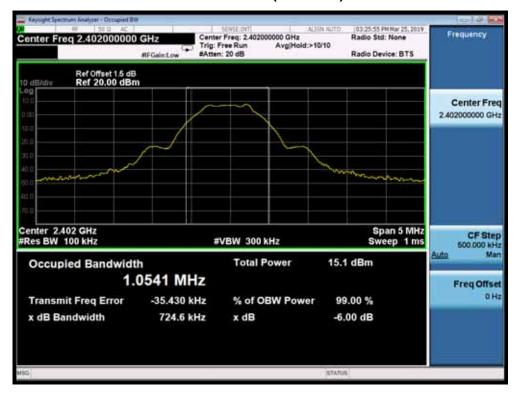




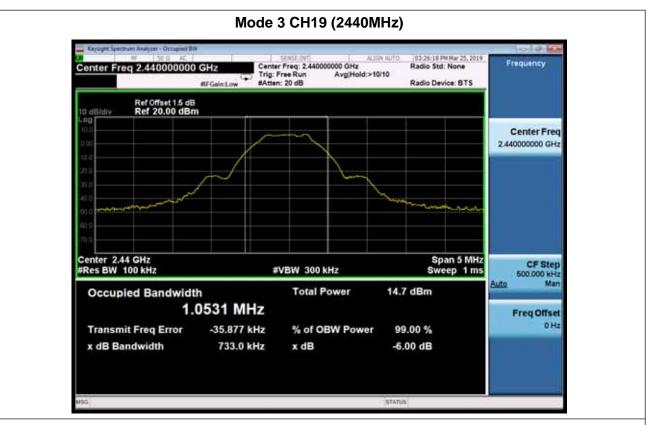
Product Name	• •	LED lamp	Test Voltage	• •	AC 120V/60Hz
Test Mode	:	Mode 3	Test Site	:	TR-8
Test Date	:	2019.03.15	Test Engineer	:	Simon

Mode	CH.	Test Freq. (MHz)	99% Occupied Bandwidth (kHz)	6dB Occupied Bandwidth (kHz)	Limit (kHz)	Result
3	00	2402	1054.1	724.6	>500	Pass
3	19	2440	1053.1	733.0	>500	Pass
3	39	2480	1052.9	720.7	>500	Pass

#### Mode 3 CH00 (2402MHz)













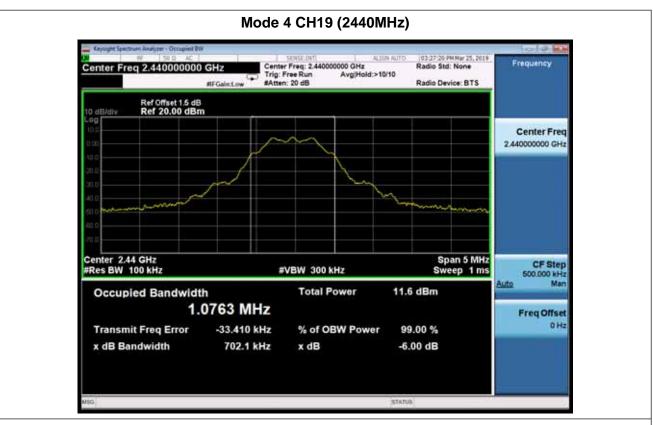
Product Name	•	LED lamp	Test Voltage	:	AC 120V/60Hz
Test Mode	:	Mode 4	Test Site	:	TR-8
Test Date	:	2019.03.25	Test Engineer	:	Simon

Mode	CH.	Test Freq. (MHz)	99% Occupied Bandwidth (kHz)	6dB Occupied Bandwidth (kHz)	Limit (kHz)	Result
3	00	2402	1079.4	713.6	>500	Pass
3	19	2440	1076.3	702.1	>500	Pass
3	39	2480	1071.1	694.5	>500	Pass

#### Mode 4 CH00 (2402MHz)













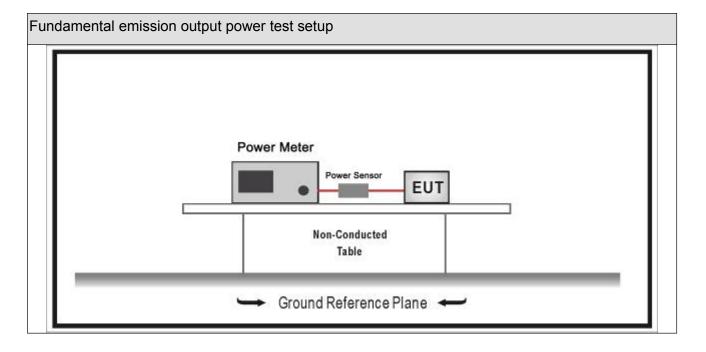
# 8. Fundamental emission output power

# 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	2019.04.10	2020.04.09						

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

#### 8.2. Test Setup



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# 8.3. Limit

Fund	Fundamental emission output power Limit								
	Gтх	< 6dBi		30dBm					
	Gтх	> 6dBi							
		Non-Fix point-point	Pout	30-( GTX -6)					
		Fix point-point	Pout	30-[(Gтx-6)]/3					
		Point-to-multipoint	Pout	30-(G⊤x-6)					
		Overlap Beams	Pout	30-[(GTX-6)]/3					
		Aggregate power transmitted simultaneously on all beams	Pout	30-[(Gтx-6)]/3					
		single directional beam	Pout	30-[(GTX-6)]/3+8dB					
	Note 1 : G⊤x directional gain of transmitting antennas.  Note 2 : Pout is maximum peak conducted output power .								

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# 8.4. Test Procedure

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

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# 8.5. EUT test definition

Item		Fundamental emission output power					
		Fixed point-to-point					
Device Category		Emit multiple direct sequentially	tional be	ams, simulta	aneously or		
		Other cases					
Test mode	Mode	2 1~4					
		Radiated					
		X Axis	Y	'Axis	Z Axis		
		Worst Axis	Worst A	Axis 🗌	Worst Axis		
	□ Conducted     □						
To at we atte a d		Chain 1					
Test method		•					
		Chain 1			Chain 2		
		• •		•			
		Chain 1	CI	Chain 2 Chain 3			
			•	• •			

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# 8.6. Test Result

# Murata:

Product Name	:	LED lamp	Test Voltage	:	AC 120V/60Hz
Test Mode	:	Mode 1-4	Test Site	:	TR-8
Test Date	:	2019.03.11	Test Engineer	:	Simon

Mode	Channel	Test Frequency (MHz)	Measurement Power Output (dBm)	Limit (dBm)	Result
	00	2402	11.07	30	Pass
Mode 1	19	2440	10.66	30	Pass
	39	2480	10.14	30	Pass
	00	2402	10.81	30	Pass
Mode 2	19	2440	10.52	30	Pass
	39	2480	9.89	30	Pass
	00	2402	10.22	30	Pass
Mode 3	19	2440	9.86	30	Pass
	39	2480	9.44	30	Pass
	00	2402	10.17	30	Pass
Mode 4	19	2440	9.72	30	Pass
	39	2480	9.34	30	Pass

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# Diodes:

Product Name	:	LED lamp	Test Voltage	:	AC 120V/60Hz
Test Mode	:	Mode 1-4	Test Site	:	TR-8
Test Date	:	2019.03.11	Test Engineer	:	Simon

Mode	Channel	Test Frequency (MHz)	Measurement Power Output (dBm)	Limit (dBm)	Result
	00	2402	11.73	30	Pass
Mode 1	19	2440	11.46	30	Pass
	39	2480	10.87	30	Pass
	00	2402	11.35	30	Pass
Mode 2	19	2440	11.01	30	Pass
	39	2480	10.59	30	Pass
	00	2402	10.85	30	Pass
Mode 3	19	2440	10.51	30	Pass
	39	2480	10.11	30	Pass
	00	2402	10.75	30	Pass
Mode 4	19	2440	10.35	30	Pass
	39	2480	9.94	30	Pass

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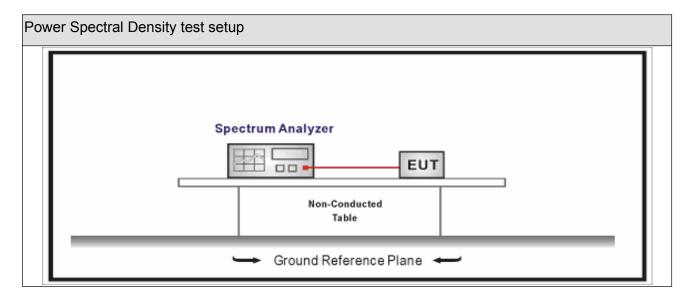
# 9. Power Spectral Density

# 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	2019.04.09	2020.04.08				
MXA Signal Anlyzer	Keysight	N9020A	MY56060147	2019.04.09	2020.04.08				
Temperature/Humidity Meter	zhichen	ZC1-2	TR8-TH	2019.04.10	2020.04.09				

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	8dBm/3kHz						

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# 9.4. Test Procedure

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

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# 9.5. EUT test definition

Item	Power Spectral Density Test Method						
		Fixed point-to-point					
Device Category		Emit multiple directional beams, simultaneously or sequentially					
		Other cases					
Test mode	Mode	: 1~4					
		Radiated					
		X Axis	Y Axis	Z Axis			
		Worst Axis	Worst Axis	Worst Axis			
		□ Conducted     □					
<b>-</b>	$\boxtimes$	☐ Chain 1					
Test method		•					
		Chain 1		Chain 2			
			• •				
		Chain 1	Chain 2	Chain 3			
			• • •				

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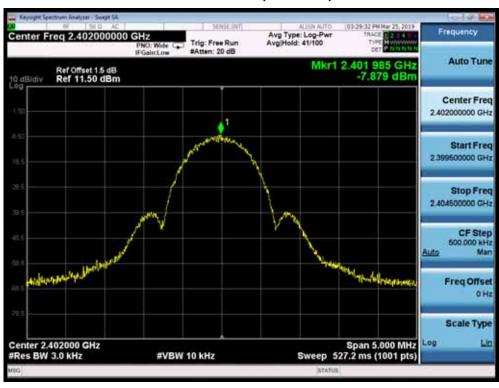
#### 9.6. Test Result

Product Name	• •	LED lamp	Test Voltage	:	AC 120V/60Hz
Test Mode	:	Mode 1	Test Site	:	TR-8
Test Date	:	2019.03.25	Test Engineer	:	Simon

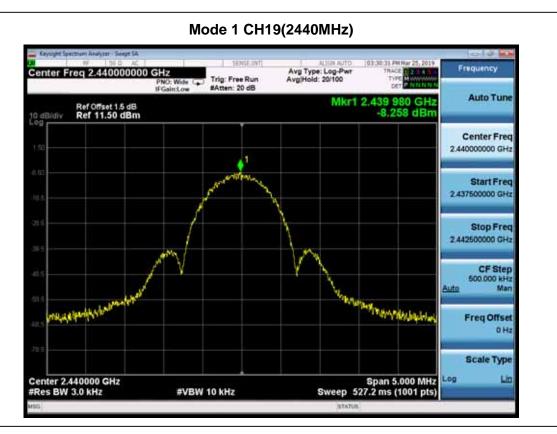
Mode	Channel	Test Frequency (MHz)	Measurement PSD (dBm/3kHz)	Total PSD (dBm/3kHz)	Limit (dBm/3kHz)	Result
1	00	2402	-7.879	-7.879	8	Pass
1	18	2440	-8.258	-8.258	8	Pass
1	39	2480	-8.505	-8.505	8	Pass

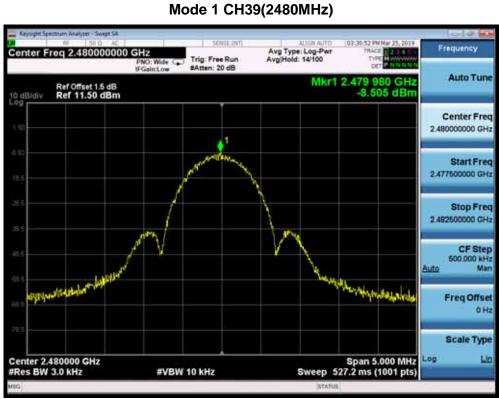
Note: We have evaluated mode, shown in the report is BLE mode which is the worst data.

#### Mode 1 CH00(2402MHz)









Report No: 1922077R-RF-US-P06V02



#### 10. Antenna Requirement

#### 10.1. Limit

#### Antenna Requirement Limit

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

#### 10.2. Antenna Connector Construction

Antenna Connector Construction							
$\boxtimes$	The use of a permanently attached antenna						
	The antenna use of a unique coupling to the intentional radiator						
	The use of a nonstandard antenna jack or electrical connector						
Please refer to the attached document "Internal Photograph" to show the antenna connector.							
	The Find						
	—————— The End —————						

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