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Test report No:
1992171R-RF-US-P06V01

FCC & ISED TEST REPORT

Product Name	Hue light strip
Trademark	PHILIPS
FCC ID	2AGBW9290022691X
IC	20812-2691X
Model and /or type reference	9290022691, 9290022692
Applicant´s name / address	Signify (China) Investment Co., Ltd Building no.9, Lane 888, Tianlin Road, Minhang District, Shanghai, 200233, China
Test method requested, standard	FCC CFR Title 47 Part 15 Subpart C Section 15.247 ANSI C63.10: 2013 KD558074 D01 15.247 Meas Guidance v05r02 RSS-Gen Issue 5 / RSS-247 Issue 2
Verdict Summary	IN COMPLIANCE
Documented By	Kitty Li/Project Assistant
Tested by (name / position & signature)	Frank He/ Technical Supervisor
Approved by (name / position & signature)	Jack Zhang/ Supervisor
Date of issue	2019-11-28
Report template No	1992171R-RF-US-P06V01

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COMPETENCES AND GUARANTEES

DEKRA is a testing laboratory competent to carry out the tests described in this report.
In order to assure the traceability to other national and international laboratories, DEKRA has a calibration and maintenance program for its measurement equipment.

DEKRA guarantees the reliability of the data presented in this report, which is the result of the measurements and the tests performed to the item under test on the date and under the conditions stated in the report and it is based on the knowledge and technical facilities available at DEKRA at the time of performance of the test.

DEKRA is liable to the client for the maintenance of the confidentiality of all information related to the item under test and the results of the test.

The results presented in this Test Report apply only to the particular item under test established in this document.

GENERAL CONDITIONS

Test Location	No. 99, Hongye Road, Suzhou Industrial Park Suzhou, 215006, P.R. China
Date(receive sample)	Sep. 25, 2019
Date (start test)	Oct. 08, 2019
Date (finish test)	Nov. 04, 2019

1. This report is only referred to the item that has undergone the test.
2. This report does not constitute or imply on its own an approval of the product by the Certification Bodies or Competent Authorities.
3. This document is only valid if complete; no partial reproduction can be made without previous written permission of DEKRA.
4. This test report cannot be used partially or in full for publicity and/or promotional purposes without previous written permission of DEKRA.

ENVIRONMENTAL CONDITIONS

The climatic conditions during the tests are within the limits specified by the manufacturer for the operation of the EUT and the test equipment. The climatic conditions during the tests were within the following limits:

Ambient temperature	15 °C – 35 °C
Relative Humidity air	30% - 60%

If explicitly required in the basic standard or applied product / product family standard the climatic values are recorded and documented separately in this test report.

POSSIBLE TEST CASE VERDICTS

Test case does not apply to test object	N/A
Test object does meet requirement	P (Pass) / PASS
Test object does not meet requirement	F (Fail) / FAIL
Not measured	N/M

ABBREVIATIONS

For the purposes of the present document, the following abbreviations apply:

EUT : Equipment Under Test
QP : Quasi-Peak
CAV : CISPR Average
AV : Average
CDN : Coupling Decoupling Network
SAC : Semi-Anechoic Chamber
OATS : Open Area Test Site
BW : Bandwidth
AM : Amplitude Modulation
PM : Pulse Modulation
HCP : Horizontal Coupling Plane
VCP : Vertical Coupling Plane
U_N : Nominal voltage
*T*x : Transmitter
*R*x : Receiver
N/A : Not Applicable
N/M : Not Measured

DOCUMENT HISTORY

Report No.	Version	Description	Issued Date
1992171R-RF-US-P06V01	V1.0	Initial issue of report.	2019-11-07
1992171R-RF-US-P06V01	V1.1	Modified Clerical error	2019-11-28

REMARKS AND COMMENTS

1. The equipment under test (EUT) does meet the essential requirements of the stated standard(s)/test(s).
2. These test results on a sample of the device are for the purpose of demonstrating Compliance with Part 15 Subpart C Paragraph 15.247, RSS-Gen Issue 5, RSS-247 Issue 2.
3. The measurement result is considered in conformance with the requirement if it is within the prescribed limit, It is not necessary to account the uncertainty associated with the measurement result, unless the specification, standard or customer have special requirements.
4. The test results presented in this report relate only to the object tested.
5. The test results relate only to the samples tested.
6. The test report shall not be reproduced without the written approval of DEKRA Testing and Certification (Suzhou) Co., Ltd.
7. This report will not be used for social proof function in China market.

USED EQUIPMENT

AC Power Line Conducted Emission / TR1

Instrument	Manufacturer	Model No.	Serial No.	Cal. Date	Next Cal. Date
EMI Test Receiver	R&S	ESCI	100906	2019.04.20	2020.04.19
Two-Line V-Network	R&S	ENV216	101190	2019.05.25	2020.05.24
Two-Line V-Network	R&S	ENV216	101044	2019.05.25	2020.05.24
Current Probe	R&S	EZ-17	100678	2019.03.12	2020.04.11
50ohm Termination	SHX	TF2	07081402	2019.09.02	2020.09.01
50ohm Termination	SHX	TF2	07081403	2019.09.02	2020.09.01
50ohm Coaxial Switch	Anritsu	MP59B	6200464462	N/A	N/A
Temperature/Humidity Meter	RTS	RTS-8S	TR1-TH	2019.08.21	2020.08.20
Coaxial Cable	Suhner	RG 223	TR1-C1	2019.08.25	2020.08.24
Coaxial Cable	Suhner	RG 223	TR1-C2	2019.08.25	2020.08.24
Dekra test software	Dekra	-	-	-	-

Emissions in non-restricted frequency bands/ Occupied Bandwidth/ Fundamental emission output power Power Spectral Density / TR8

Instrument	Manufacturer	Model No.	Serial No.	Cal. Date	Next Cal. Date
Spectrum Analyzer	Agilent	N9010A	MY48030494	2019.09.28	2020.09.27
EXA Spectrum Analyzer	Keysight	N9010A	MY55370495	2019.04.17	2020.04.16
MXA Signal Anlyzer	Keysight	N9020A	MY56060147	2019.08.30	2020.08.29
Wideband Peak Power Meter	Anritsu	ML2495A	0905006	2019.07.14	2020.07.13
Power Sensor	Anritsu	MA2411B	0846014	2019.08.12	2020.08.11
Coaxial Cable	Woken	SFL402	F02-150410-044	2019.01.01	2019.12.31
Dekra test software	Dekra	-	-	-	-

Radiated Emission(30MHz-1GHz) / AC3

Instrument	Manufacturer	Model No.	Serial No.	Cal. Date	Next Cal. Date
EMI Test Receiver	R&S	ESCI	100573	2019.03.03	2020.03.02
Bilog Antenna	Teseq GmbH	CBL6112D	27611	2019.05.25	2020.05.24
Temperature/Humidity Meter	RTS	RTS-8S	AC2-TH	2019.09.02	2020.09.01
Coaxial Cable	Huber+Suhner	RG 214	AC2-C	2019.04.13	2020.04.12
Dekra test software	Dekra	-	-	-	-

Radiated Emission (1GHz-40GHz)/ AC5

Instrument	Manufacturer	Model No.	Serial No.	Cal. Date	Next Cal. Date
Spectrum Analyzer	Agilent	E4446A	MY45300103	2019.05.08	2020.05.07
Preamplifier	Miteq	NSP1800-25	1364185	2019.05.06	2020.05.05
Preamplifier	QuieTek	AP-040G	CHM-0906001	2019.05.06	2020.05.05
DRG Horn	ETS-Lindgren	3117	00123988	2019.01.22	2020.01.21
Temperature/Humidity Meter	Zhichen	ZC1-2	AC5-TH	2019.09.02	2020.09.01
Coaxial Cable	Huber+Suhner	SUCOFLEX 106	AC5-C1	2019.04.13	2020.04.12
Coaxial Cable	Huber+Suhner	SUCOFLEX 106	AC5-C2	2019.04.13	2020.04.12
Coaxial Cable	Huber+Suhner	SUCOFLEX 102	AC5-C3	2019.04.13	2020.04.12
Dekra test software	Dekra	-	-	-	-

UNCERTAINTY

Uncertainties have been calculated according to the DEKRA internal document. The reported expanded uncertainties are based on a standard uncertainty multiplied by a coverage factor of k=2, providing a level of confidence of approximately 95%.The Uncertainties is complice with standard required as below.

Test item	Uncertainty
AC Power Line Conducted Emission	9kHz~150kHz: 2.80dB 150kHz~30MHz: 2.40dB
Peak Power Output	± 1.27 dB
Radiated Emission(30MHz~1GHz)	Horizontal: 30MHz~200MHz: 3.50 dB 300MHz~1GHz: 3.60 dB Vertical: 30MHz~200MHz: 3.60 dB 300MHz~1GHz: 3.50 dB
Radiated Emission(1GHz~26.5GHz)	Horizontal: 1GHz~18GHz: 5.00 dB Vertical: 1GHz~18GHz: 4.80 dB
RF antenna conducted test	± 1.27dB
Radiated Emission Band Edge	± 3.9 dB
DTS Bandwidth	±150Hz
Occupied Bandwidth	±1kHz
Power Density	±1.27dB

1 GENERAL INFORMATION

1.1 General Description of the Item(s)

Product Name ..... :	Hue light strip
Model No. ..... :	9290022691, 9290022692
Trademark ..... :	PHILIPS
Manufacturer ..... :	Signify (China) Investment Co., Ltd.
Manufacturer Address ..... :	Building no.9, Lane 888, Tianlin Road, Minhang District, Shanghai, 200233, China

Wireless specifiction ..... :	Bluetooth 5.0
Operating frequency range(s)	2400~2483.5MHz
Type of Modulation ..... :	GFSK
Number of channel ..... :	40
Operating Temperature Range ..... :	-20℃ ~ 45 ℃

Rated power supply ..... :	Voltage and Frequency	
	☐	AC: 220 – 240 V, 50/60 Hz
	☒	AC: 100 – 240 V, 50/60 Hz
	☐	DC: 15~24Vdc
	☐	Battery: 3.7V
Mounting position ..... :	☒	Table top equipment
	☐	Wall/Ceiling mounted equipment
	☐	Floor standing equipment
	☐	Hand-held equipment
	☐	Other: Wearable equipment

Note1: 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: Hue light strip supports two kinds of Crystal oscillator (Murata/ KDS), 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.
Note 3: Model 9290022691 is the initial 2m light strip with PSU adaptor and model 9290022692 is 1m light strip that can be attached to 2m light strip. The maximum length of this product is 10m.

1.2 Antenna Information

Antenna model / type number ..... :	PIFA antenna			
Antenna serial number ..... :	N/A			
Antenna Delivery ..... :	☒	1TX + 1RX		
	☐	2TX + 2RX		
Antenna technology ..... :	☒	SISO		
	☐	MIMO	☐	CDD
			☐	Beam-forming
Antenna Type ..... :	☐	External	☐	Dipole
			☐	Sectorized
	☒	Internal	☐	PIFA
			☒	PCB
			☐	Ceramic Chip
			☐	Others……..
Antenna Gain ..... :	2.78 dBi			

1.3 Channel List

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

2 DESCRIPTION OF TEST SETUP

2.1 Operating mode(s) used for tests

During the tests the following operating mode(s) has(have) been used.

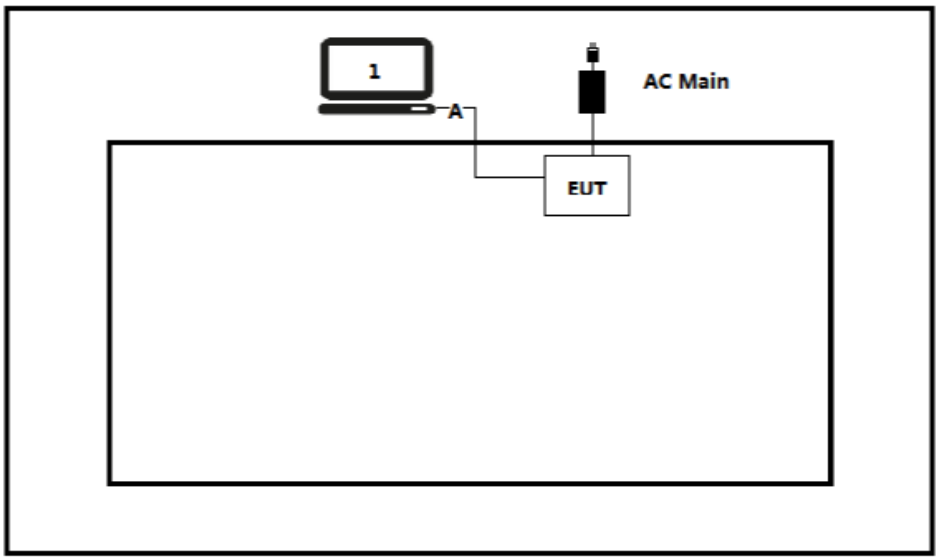
Test Mode For Bluetooth	Mode 1: Transmit by LE_1Mbps(GFSK_LE)
	Mode 2: Transmit by LE_2Mbps(GFSK_LE)
	Mode 3: Transmit by LE_Coded(S=2)(GFSK_LE)
	Mode 4: Transmit by LE_Coded(S=8)(GFSK_LE)

2.2 Auxiliary equipment / Test software for the EUT

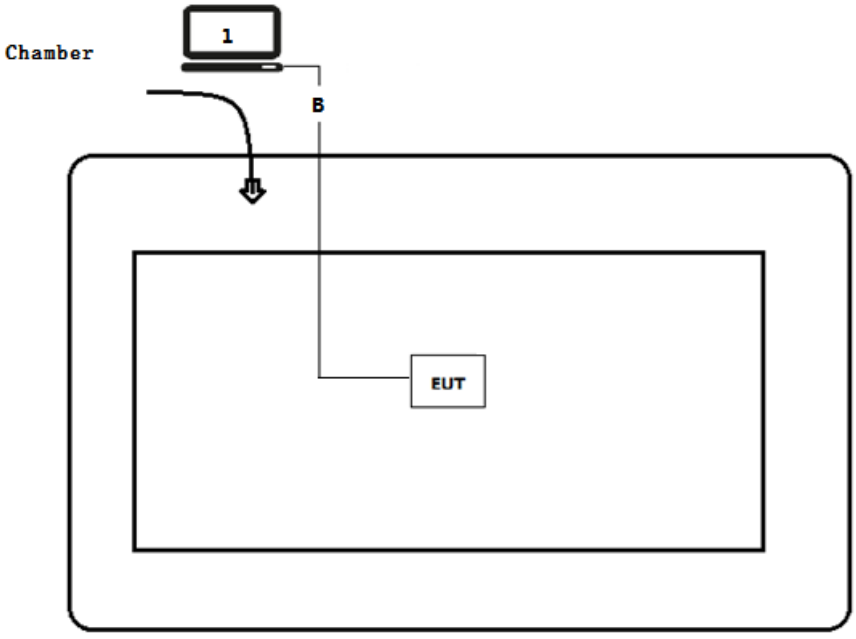
Auxiliary equipment	Type / Version	Manufacturer	Supplied by
Notebook	E470	Lenovo	N/A
software	Type / Version	Manufacturer	Supplied by
HueApprobationTool	1.1.00	Philips	N/A

2.3 Test Configuration / Block diagram used for tests

Test setup Diagram- AC Line Conducted Emission Test



Test setup Diagram- Radiated Emission



2.4 Testing process

1	Setup the EUT as shown in Section 2.4.
2	Execute the HueApprobationTool on the EUT
3	Configure the test mode, the test channel, and the data rate.
4	Press “Start Test” to start the continuous Transmitter.
5	Verify that the EUT works properly.

3 VERDICT SUMMARY SECTION

This chapter presents an overview of standards and results. Refer to the next chapters for details of measured test results and applied test levels.

3.1 Standards

Standard	Year	Description
FCC CFR Title 47 Part 15 Subpart C Section 15.247	2019	Operation within the bands 902–928 MHz, 2400–2483.5 MHz, and 5725–5850 MHz.
ANSI C63.10	2013	American National Standard of Procedures for Compliance Testing of Unlicensed Wireless Devices
KDB 558074 D01 v05r02	2019	Guidance for performing compliance measurements on Digital Transmission System (DTS) operating under section 15.247
RSS-Gen Issue 5 Amendment 1	2019	General Requirements for Compliance of Radio Apparatus
RSS-247 Issue 2	2017	Digital Transmission Systems (DTSs),Frequency Hopping Systems (FHSs) and Licence-Exempt Local Area Network (LE-LAN) Devices

3.2 Deviation(s) from the Standard(s) / Test Specification(s)

The following deviation(s) was / were made from the published requirements of the listed standards: N/A.

(Please define the deviations from the standard(s) if applicable)

3.3 Overview of results

For FCC

Requirement – Test case	Basic standard(s)	Verdict	Remark
AC Power Line Conducted Emission	FCC 15.207	PASS	---
Emissions in restricted frequency bands	FCC 15.247(b)(3)	PASS	---
Duty cycle	ANSI C63.10:2013	N/A	---
Emissions in non-restricted frequency bands	FCC 15.247(d), FCC 15.209	PASS	---
Radiated Emission Band Edge	FCC 15.247(d)	PASS	---
Fundamental emission output power	FCC 15.247(d), FCC 15.209	PASS	---
DTS Bandwidth	FCC 15.247(a)(2)	PASS	---
Power Spectral Density	FCC 15.247(e)	PASS	---
Antenna Requirement	FCC 15.203	PASS	---

For ISED

Requirement – Test case	Basic standard(s)	Verdict	Remark
AC Power Line Conducted Emission	RSS-Gen Issue 5 Section 8.8	PASS	---
Emissions in restricted frequency bands	RSS-Gen Issue 5 Section 8.9	PASS	---
Duty cycle	ANSI C63.10:2013	N/A	---
Emissions in non-restricted frequency bands	RSS-247 Issue 2 Section 5.5	PASS	---
Radiated Emission Band Edge	RSS-Gen Issue 5 Section 8.10	PASS	---
Fundamental emission output power	RSS-247 Issue 2 Section 5.4(d)	PASS	---
DTS Bandwidth	RSS-Gen Issue 5 Section 6.7	PASS	---
Power Spectral Density	RSS-247 Issue 2 Section 5.2(b)	PASS	---
Antenna Requirement	RSS-Gen Issue 5 Section 6.8	PASS	---

3.4 Test Facility

USA	**:**	**FCC Designation Number: CN1199**
CA	**:**	**ISED CAB identifier: CN0040**

4 TEST RESULTS

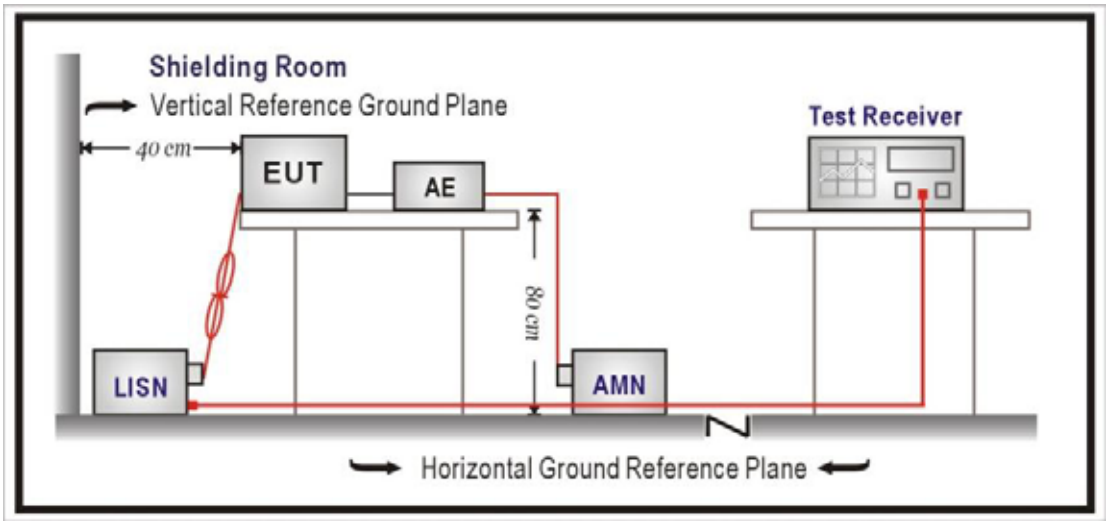
4.1 AC Power Line Conducted Emission	VERDICT: PASS

4.1.1 Limit

Standard	FCC Part 15 Subpart C Paragraph 15.207	
Frequency range [MHz]	Limit: QP [dB(μV)[1)]]	Limit: AV [dB(μV)[1)]]
0,15 - 0,50	66 – 56 [2)]	56 - 46 [2)]
0,50 - 5,0	56	46
5,0 - 30	60	50

[1)] At the transition frequency, the lower limit applies.
[2)] The limit decreases linearly with the logarithm of the frequency.
NOTE 1: The exclusion band for transmitters shall be considered for transmitters operating at frequencies below 30 MHz.
NOTE 2: Where the AC output port is directly connected (or via a circuit breaker) to the AC power input port of the EUT the AC power output port need not to be tested.

4.1.2 Test Setup

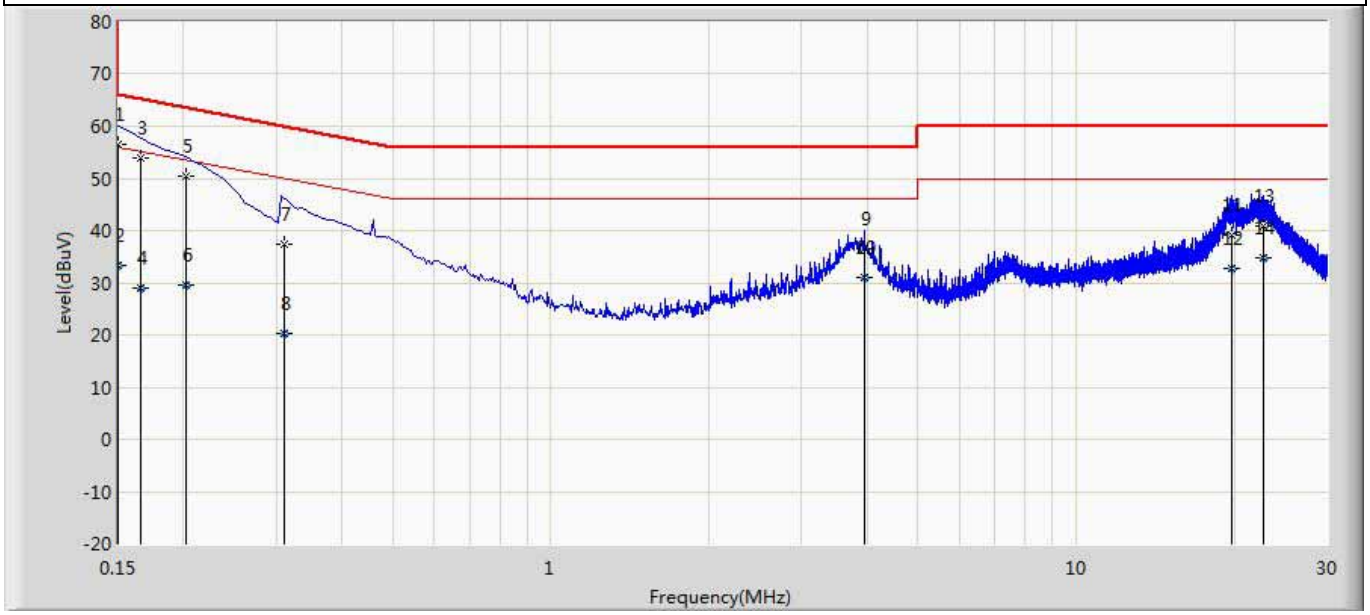


4.1.3 Test Procedure

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

4.1.4 Test Data

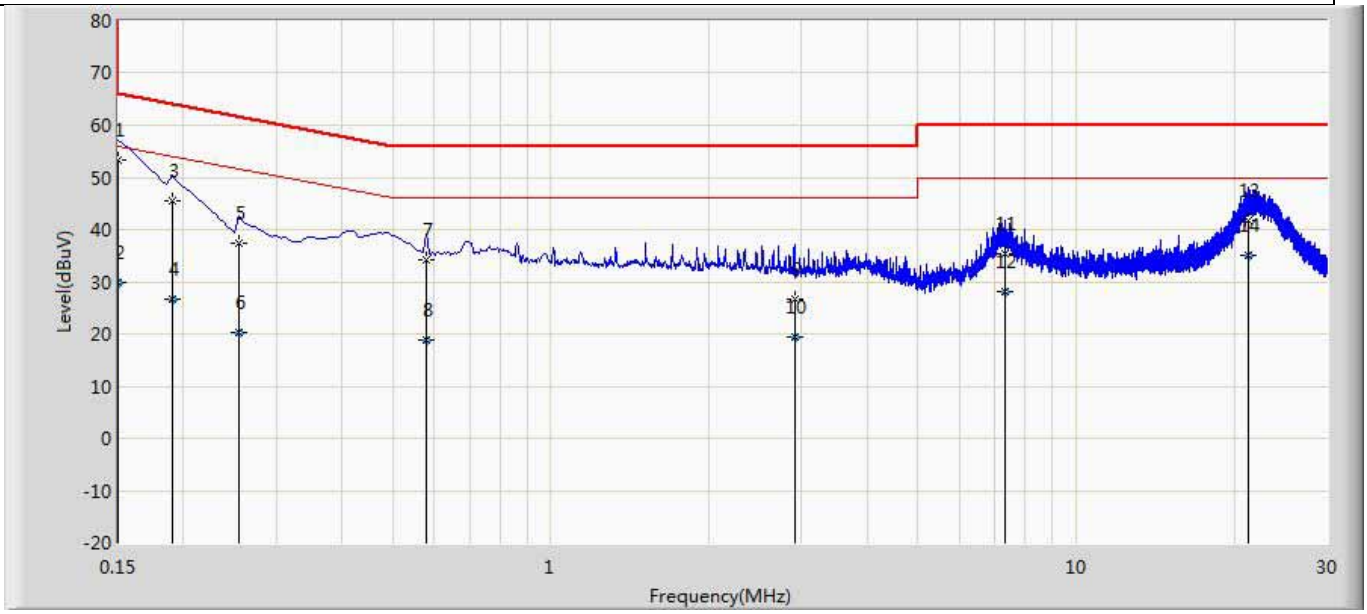
Profile: 1992171R	Page No.: 1
Engineer: Pawn	
Site: TR1	Time: 2019/10/10 - 09:16
Limit: FCC_Part115.207_CE_AC Power_Class B	Margin: 0
Probe: ENV216_101190(0.009-30MHz)	Polarity: Line
EUT: Hue light strip	Power: AC 120V/60Hz
Note: Mode 1	



No	Mark	Frequency (MHz)	Measure Level (dBuV)	Reading Level (dBuV)	Over Limit (dB)	Limit (dBuV)	Probe (dB)	Cable (dB)	Amp (dB)	Type
1	*	0.150	56.379	46.744	-9.621	66.000	9.610	0.025	0.000	QP
2		0.150	33.256	23.621	-22.744	56.000	9.610	0.025	0.000	AV
3		0.166	53.882	44.249	-11.276	65.158	9.607	0.027	0.000	QP
4		0.166	28.909	19.276	-26.249	55.158	9.607	0.027	0.000	AV
5		0.202	50.379	40.749	-13.149	63.528	9.601	0.029	0.000	QP
6		0.202	29.435	19.805	-24.093	53.528	9.601	0.029	0.000	AV
7		0.310	37.524	27.890	-22.446	59.970	9.600	0.034	0.000	QP
8		0.310	20.380	10.746	-29.591	49.970	9.600	0.034	0.000	AV
9		3.958	36.609	26.839	-19.391	56.000	9.643	0.127	0.000	QP
10		3.958	30.941	21.172	-15.059	46.000	9.643	0.127	0.000	AV
11		19.810	39.189	28.771	-20.811	60.000	10.131	0.287	0.000	QP
12		19.810	32.647	22.229	-17.353	50.000	10.131	0.287	0.000	AV
13		22.706	40.796	30.168	-19.204	60.000	10.319	0.309	0.000	QP
14		22.706	34.645	24.018	-15.355	50.000	10.319	0.309	0.000	AV

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).

Profile: 1992171R	Page No.: 2
Engineer: Pawn	
Site: TR1	Time: 2019/10/10 - 09:21
Limit: FCC_Part115.207_CE_AC Power_Class B	Margin: 0
Probe: ENV216_101190(0.009-30MHz)	Polarity: Neutral
EUT: Hue light strip	Power: AC 120V/60Hz
Note: Mode 1	



No	Mark	Frequency (MHz)	Measure Level (dBuV)	Reading Level (dBuV)	Over Limit (dB)	Limit (dBuV)	Probe (dB)	Cable (dB)	Amp (dB)	Type
1	*	0.150	53.277	43.659	-12.723	66.000	9.594	0.025	0.000	QP
2		0.150	29.795	20.176	-26.205	56.000	9.594	0.025	0.000	AV
3		0.190	45.406	35.780	-18.630	64.037	9.598	0.028	0.000	QP
4		0.190	26.597	16.971	-27.440	54.037	9.598	0.028	0.000	AV
5		0.254	37.265	27.636	-24.360	61.625	9.598	0.031	0.000	QP
6		0.254	20.191	10.562	-31.434	51.625	9.598	0.031	0.000	AV
7		0.578	34.327	24.692	-21.673	56.000	9.590	0.045	0.000	QP
8		0.578	18.762	9.126	-27.238	46.000	9.590	0.045	0.000	AV
9		2.906	26.776	17.048	-29.224	56.000	9.622	0.106	0.000	QP
10		2.906	19.538	9.810	-26.462	46.000	9.622	0.106	0.000	AV
11		7.326	35.262	25.379	-24.738	60.000	9.710	0.172	0.000	QP
12		7.326	28.041	18.158	-21.959	50.000	9.710	0.172	0.000	AV
13		21.326	41.659	31.053	-18.341	60.000	10.307	0.298	0.000	QP
14		21.326	35.105	24.499	-14.895	50.000	10.307	0.298	0.000	AV

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).

4.2 Emissions in restricted frequency bands — VERDICT: PASS

4.2.1 Limit

Standard	FCC Part 15 Subpart C Paragraph 15.207		
Restricted Bands of operation			
Frequency (MHz)	Frequency (MHz)	Frequency (MHz)	Frequency (GHz)
0.090 – 0.110	16.42 – 16.423	399.9 – 410	4.5 – 5.15
0.495 – 0.505	16.69475 –16.69525	608 – 614	5.35 – 5.46
2.1735 – 2.1905	16.80425 – 16.80475	960 – 1240	7.25 – 7.75
4.125 – 4.128	25.5 – 25.67	1300 – 1427	8.025 – 8.5
4.17725 – 4.17775	37.5 – 38.25	1435 – 1626.5	9.0 – 9.2
4.20725 – 4.20775	73 – 74.6	1645.5 – 1646.5	9.3 – 9.5
6.215 – 6.218	74.8 – 75.2	1660 – 1710	10.6 – 12.7
6.26775 – 6.26825	108 – 121.94	1718.8 – 1722.2	13.25 – 13.4
6.31175 – 6.31225	123 – 138	2200 – 2300	14.47 – 14.5
8.291 – 8.294	149.9 – 150.05	2310 – 2390	15.35 – 16.2
8.362 – 8.366	156.52475 – 156.52525	2483.5 – 2500	17.7 – 21.4
8.37625 – 8.38675	156.7 – 156.9	2690 – 2900	22.01 – 23.12
8.81425 – 8.81475	162.0125 – 167.17	3260 – 3267	23.6 – 24.0
12.29 – 12.293	167.72 – 173.2	3332 – 3339	31.2 – 31.8
12.51975–12.52025	240 – 285	3345.8 – 3358	36.43 – 36.5
12.57675–12.57725	322 – 335.4	3600 – 4400	
13.36 – 13.41			

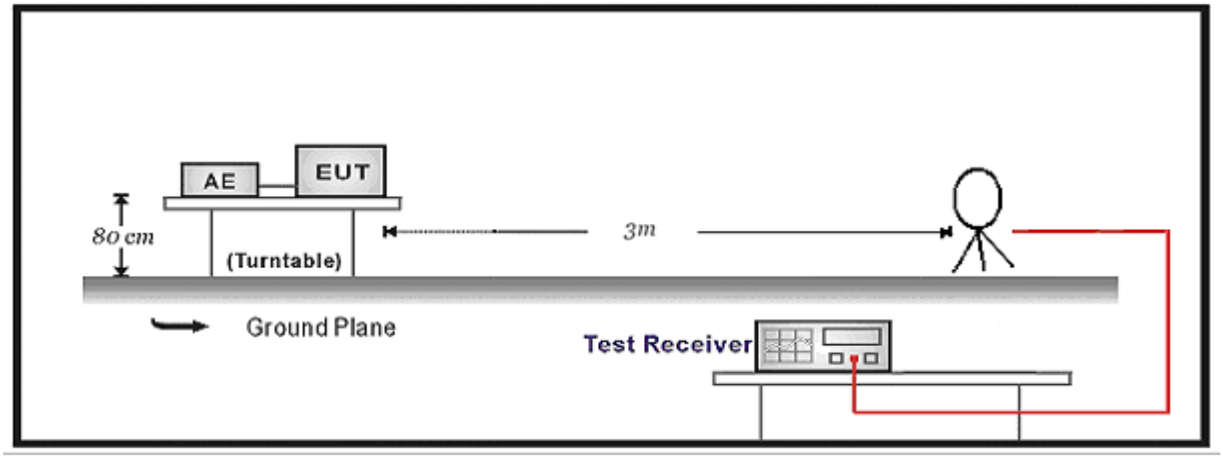
Restricted Band Emissions Limit			
Frequency (MHz)	Field strength (μV/m)	Field strength (dB μV/m)	Measurement distance (m)
0.009 - 0.49	2400/F(kHz)	48.5 – 13.8	300(Note 1)
0.49 - 1.705	24000/F(kHz)	33.8 - 23	30(Note 1)
1.705 - 30	30	29.5	30(Note 1)
30 - 88	100	40	3(Note 2)
88 - 216	150	43.5	3(Note 2)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

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

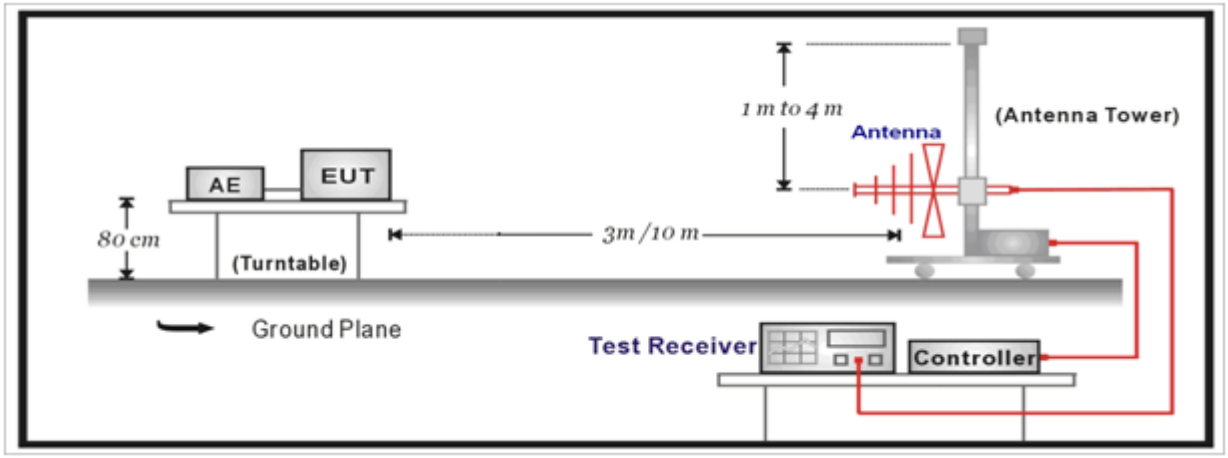
Note 2: At frequencies at or above 30 MHz, measurements may be performed at a distance other than what is specified provided: measurements are not made in the near field except where it can be shown that near field measurements are appropriate due to the characteristics of the device; and it can be demonstrated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

4.2.2 Test Setup

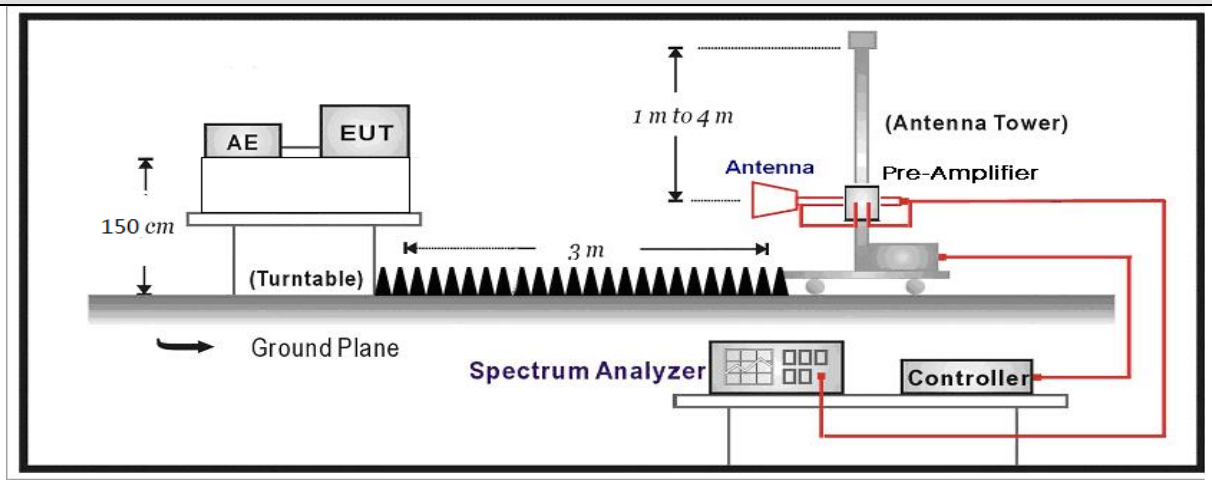
Below 30MHz Test Setup:



30MHz-1GHz Test Setup:



Above 1GHz Test Setup:



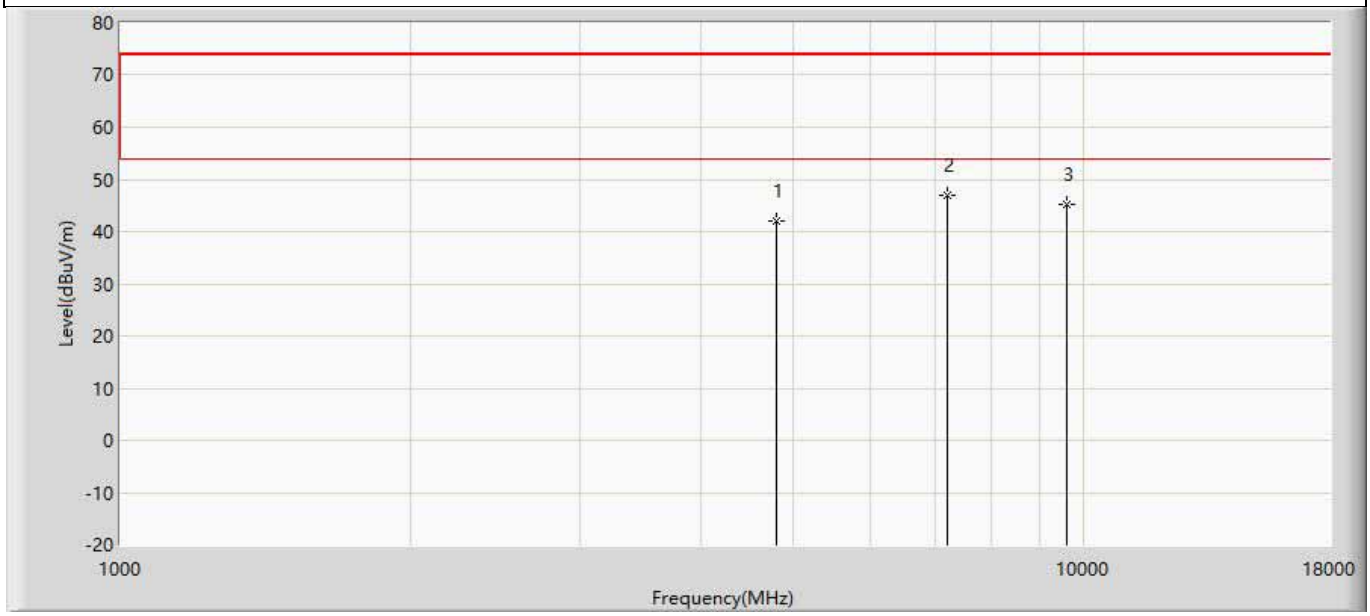
4.2.3 Test Procedure

	References Rule		Chapter	Description
☒	ANSI C63.10		11.12	Emissions in restricted frequency bands
	☒	ANSI C63.10	11.12.1	Radiated emission measurements
	☒	ANSI C63.10	11.12.2.7	Radiated spurious emission test
		☒ ANSI C63.10	6.4	Radiated emissions from unlicensed wireless devices below 30 MHz
		☒ ANSI C63.10	6.5	Radiated emissions from unlicensed wireless devices in the frequency range of 30 MHz to 1000 MHz
		☒ ANSI C63.10	6.6	Radiated emissions from unlicensed wireless devices above 1 GHz

4.2.4 Test Data

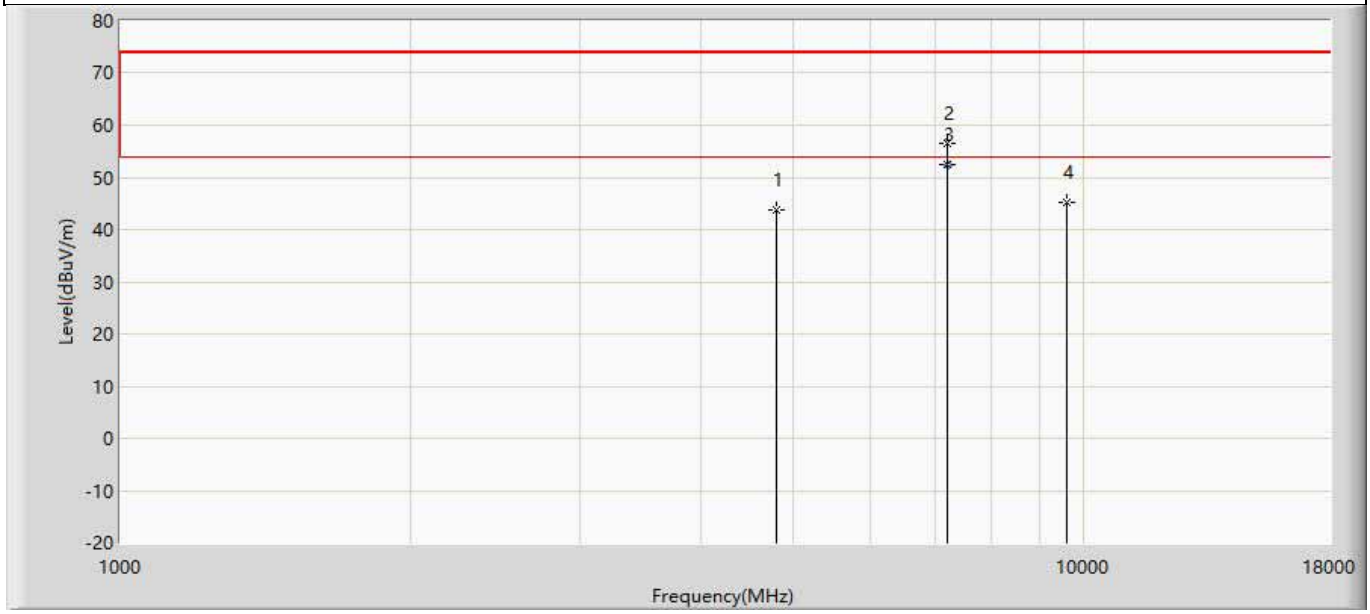
Murata:

Profile: 1992171R	Page No.: 77
Engineer: Pawn	
Site: AC5	Time: 2019/10/11 - 09:37
Limit: FCC_Part15.209_RE(3m)	Margin: 0
Probe: Horn_3117_00167055(1-18GHz)	Polarity: Horizontal
EUT: Hue light strip	Power: AC 120V/60Hz
Note: Mode 1:Transmit at 2402MHz by LE_1Mbps(GFSK_LE)	



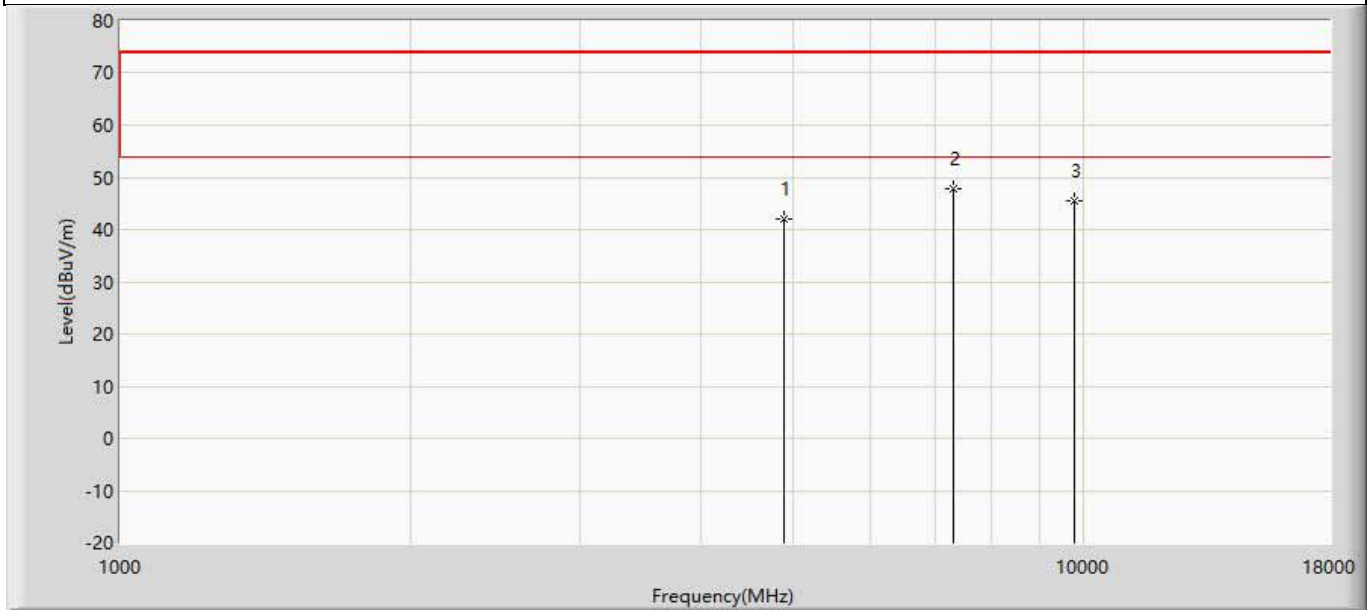
No	Mark	Frequency (MHz)	Measure Level (dBuV/m)	Reading Level (dBuV)	Over Limit (dB)	Limit (dBuV/m)	Factor (dB)	Type
1		4804.000	42.162	37.531	-31.838	74.000	4.631	PK
2	*	7206.000	47.095	39.071	-26.905	74.000	8.024	PK
3		9608.000	45.108	35.791	-28.892	74.000	9.318	PK

Profile: 1992171R	Page No.: 78
Engineer: Pawn	
Site: AC5	Time: 2019/10/11 - 09:37
Limit: FCC_Part15.209_RE(3m)	Margin: 0
Probe: Horn_3117_00167055(1-18GHz)	Polarity: Vertical
EUT: Hue light strip	Power: AC 120V/60Hz
Note: Mode 1:Transmit at 2402MHz by LE_1Mbps(GFSK_LE)	



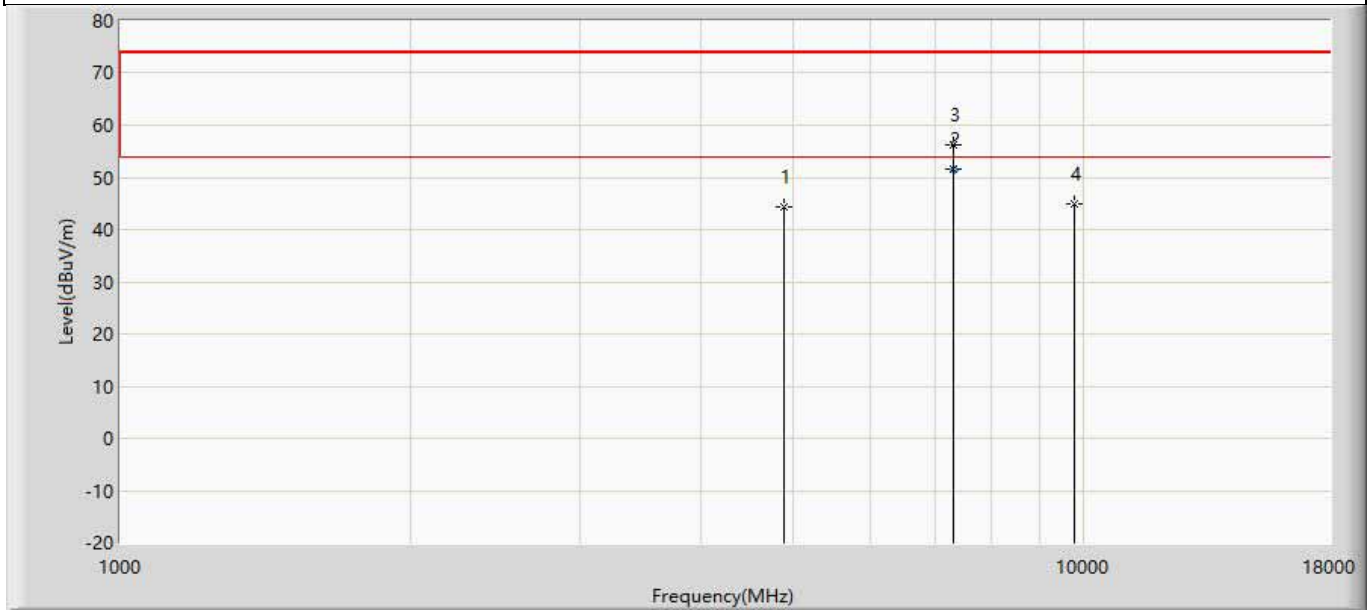
No	Mark	Frequency (MHz)	Measure Level (dBuV/m)	Reading Level (dBuV)	Over Limit (dB)	Limit (dBuV/m)	Factor (dB)	Type
1		4804.000	43.872	39.241	-30.128	74.000	4.631	PK
2		7205.000	56.536	48.513	-17.464	74.000	8.023	PK
3	*	7206.540	52.367	44.343	-1.633	54.000	8.024	AV
4		9608.000	45.204	35.887	-28.796	74.000	9.318	PK

Profile: 1992171R	Page No.: 85
Engineer: Pawn	
Site: AC5	Time: 2019/10/11 - 09:37
Limit: FCC_Part15.209_RE(3m)	Margin: 0
Probe: Horn_3117_00167055(1-18GHz)	Polarity: Horizontal
EUT: Hue light strip	Power: AC 120V/60Hz
Note: Mode 1:Transmit at 2440MHz by LE_1Mbps(GFSK_LE)	



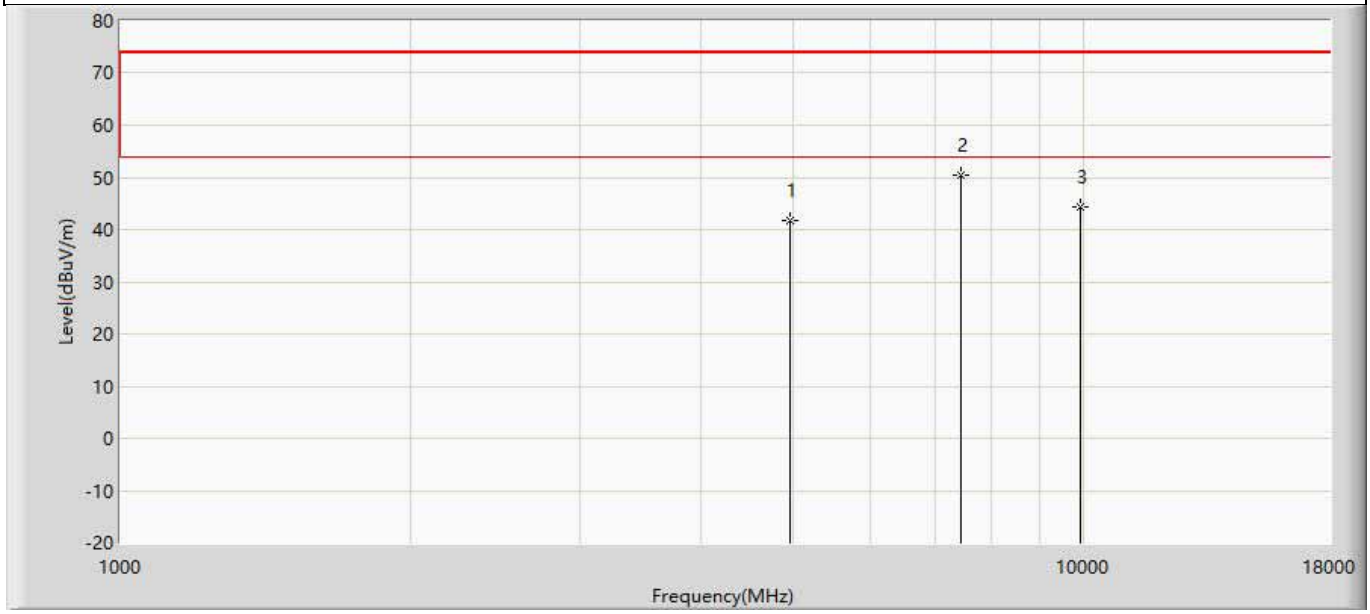
No	Mark	Frequency (MHz)	Measure Level (dBuV/m)	Reading Level (dBuV)	Over Limit (dB)	Limit (dBuV/m)	Factor (dB)	Type
1		4880.000	42.167	37.388	-31.833	74.000	4.778	PK
2	*	7320.000	47.956	39.886	-26.044	74.000	8.071	PK
3		9760.000	45.416	35.512	-28.584	74.000	9.904	PK

Profile: 1992171R	Page No.: 86
Engineer: Pawn	
Site: AC5	Time: 2019/10/11 - 09:38
Limit: FCC_Part15.209_RE(3m)	Margin: 0
Probe: Horn_3117_00167055(1-18GHz)	Polarity: Vertical
EUT: Hue light strip	Power: AC 120V/60Hz
Note: Mode 1:Transmit at 2440MHz by LE_1Mbps(GFSK_LE)	



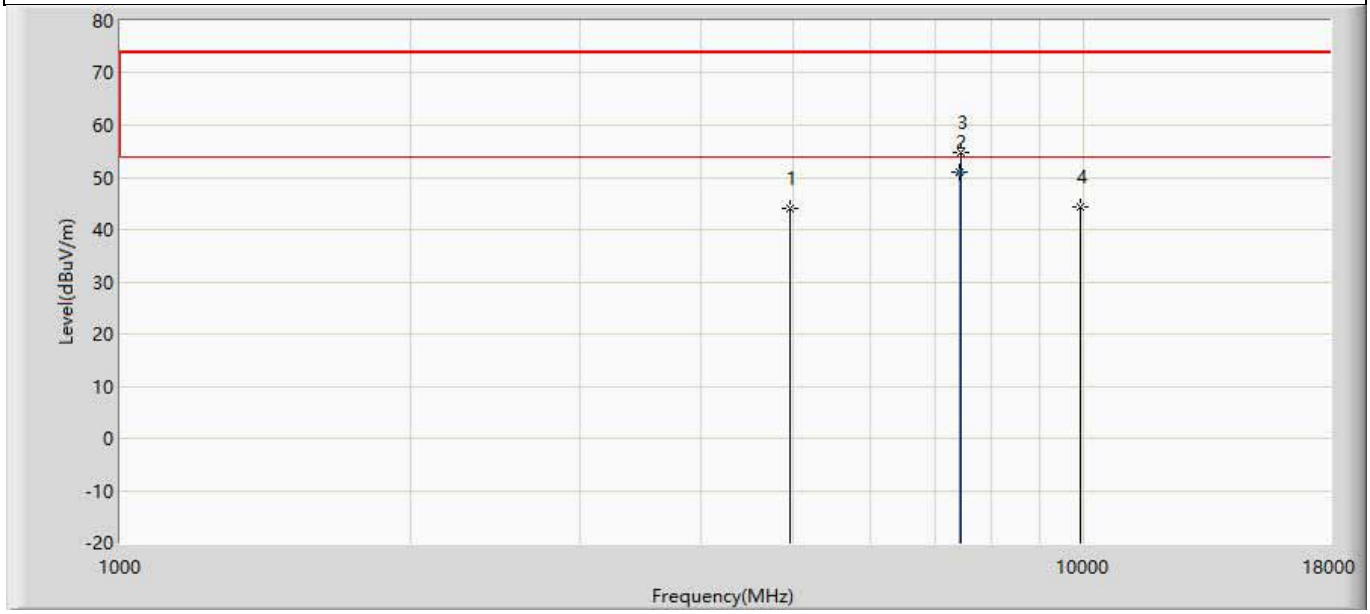
No	Mark	Frequency (MHz)	Measure Level (dBuV/m)	Reading Level (dBuV)	Over Limit (dB)	Limit (dBuV/m)	Factor (dB)	Type
1		4880.000	44.355	39.576	-29.645	74.000	4.778	PK
2	*	7320.530	51.683	43.609	-2.317	54.000	8.074	AV
3		7324.000	56.271	48.166	-17.729	74.000	8.105	PK
4		9760.000	45.047	35.143	-28.953	74.000	9.904	PK

Profile: 1992171R	Page No.: 93
Engineer: Pawn	
Site: AC5	Time: 2019/10/11 - 09:38
Limit: FCC_Part15.209_RE(3m)	Margin: 0
Probe: Horn_3117_00167055(1-18GHz)	Polarity: Horizontal
EUT: Hue light strip	Power: AC 120V/60Hz
Note: Mode 1:Transmit at 2480MHz by LE_1Mbps(GFSK_LE)	



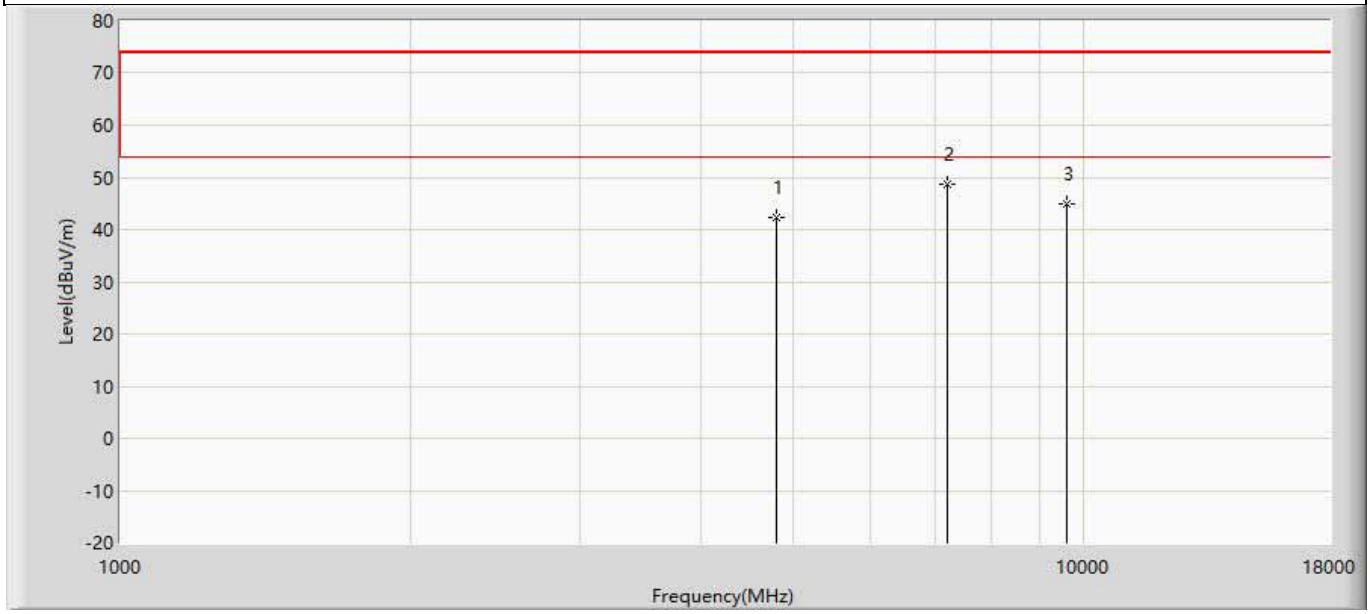
No	Mark	Frequency (MHz)	Measure Level (dBuV/m)	Reading Level (dBuV)	Over Limit (dB)	Limit (dBuV/m)	Factor (dB)	Type
1		4960.000	41.720	36.935	-32.280	74.000	4.784	PK
2	*	7443.000	50.525	42.434	-23.475	74.000	8.090	PK
3		9920.000	44.292	34.397	-29.708	74.000	9.894	PK

Profile: 1992171R	Page No.: 94
Engineer: Pawn	
Site: AC5	Time: 2019/10/11 - 09:38
Limit: FCC_Part15.209_RE(3m)	Margin: 0
Probe: Horn_3117_00167055(1-18GHz)	Polarity: Vertical
EUT: Hue light strip	Power: AC 120V/60Hz
Note: Mode 1:Transmit at 2480MHz by LE_1Mbps(GFSK_LE)	



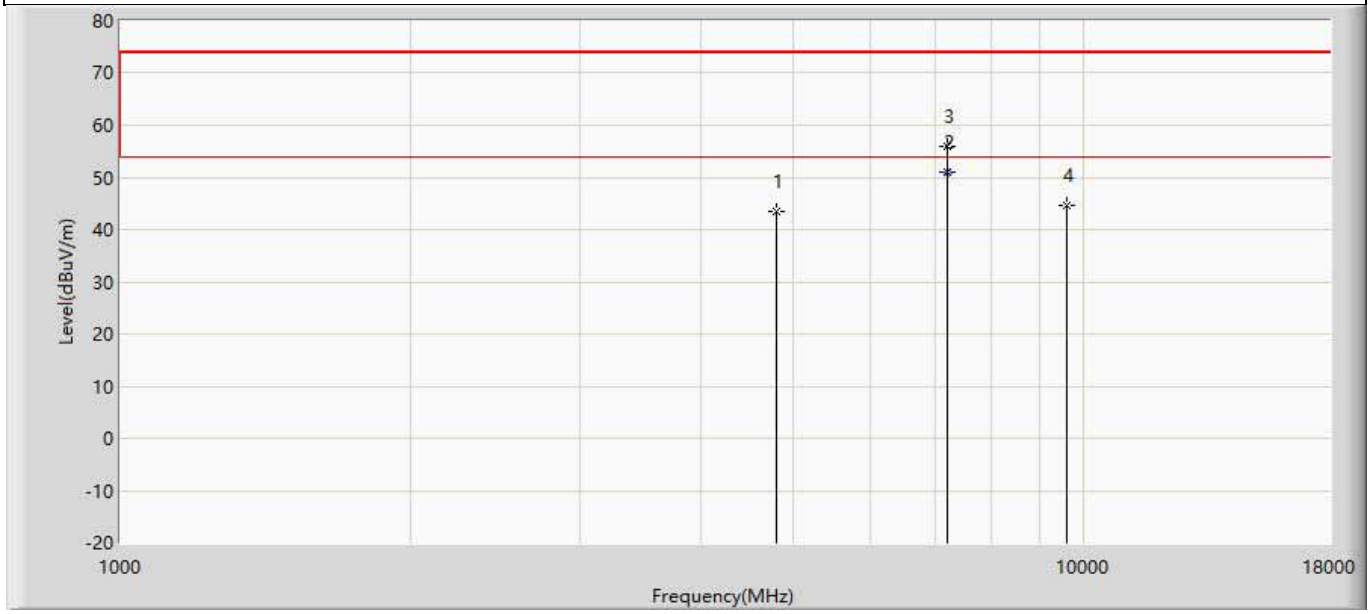
No	Mark	Frequency (MHz)	Measure Level (dBuV/m)	Reading Level (dBuV)	Over Limit (dB)	Limit (dBuV/m)	Factor (dB)	Type
1		4960.000	44.125	39.340	-29.875	74.000	4.784	PK
2	*	7440.400	51.009	42.953	-2.991	54.000	8.056	AV
3		7443.000	54.927	46.836	-19.073	74.000	8.090	PK
4		9920.000	44.451	34.556	-29.549	74.000	9.894	PK

Profile: 1992171R	Page No.: 79
Engineer: Pawn	
Site: AC5	Time: 2019/10/11 - 09:37
Limit: FCC_Part15.209_RE(3m)	Margin: 0
Probe: Horn_3117_00167055(1-18GHz)	Polarity: Horizontal
EUT: Hue light strip	Power: AC 120V/60Hz
Note: Mode 2:Transmit at 2402MHz by LE_2Mbps(GFSK_LE)	



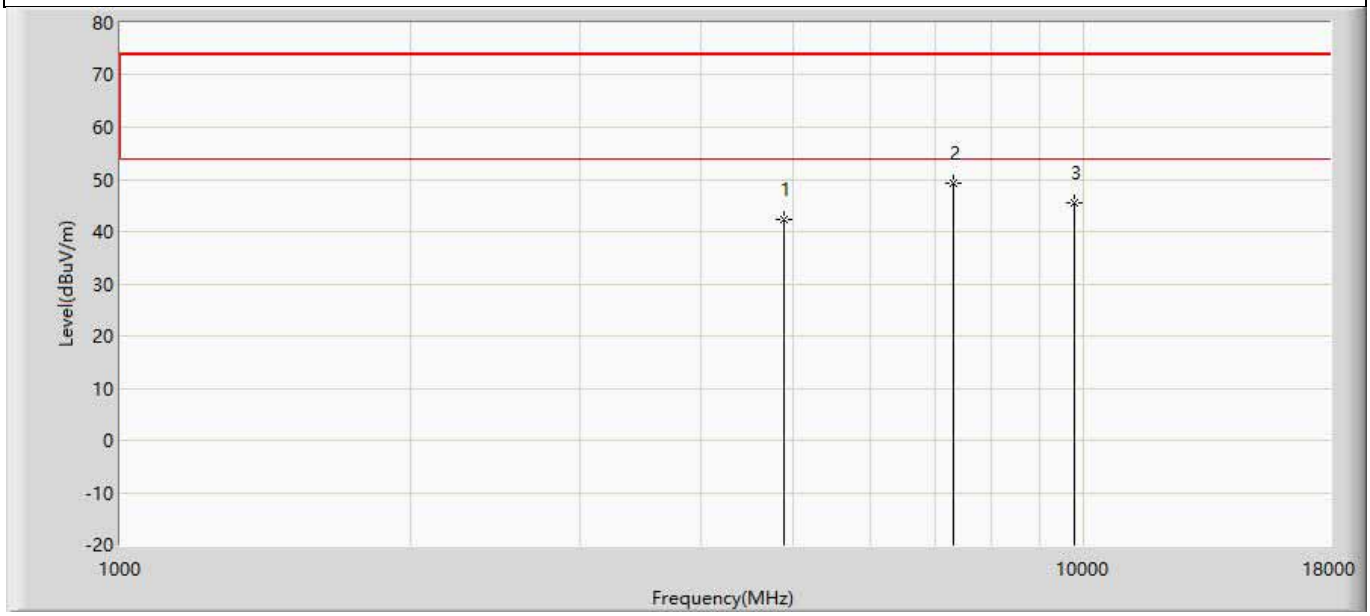
No	Mark	Frequency (MHz)	Measure Level (dBuV/m)	Reading Level (dBuV)	Over Limit (dB)	Limit (dBuV/m)	Factor (dB)	Type
1		4804.000	42.284	37.653	-31.716	74.000	4.631	PK
2	*	7205.000	48.651	40.628	-25.349	74.000	8.023	PK
3		9608.000	44.868	35.551	-29.132	74.000	9.318	PK

Profile: 1992171R	Page No.: 80
Engineer: Pawn	
Site: AC5	Time: 2019/10/11 - 09:37
Limit: FCC_Part15.209_RE(3m)	Margin: 0
Probe: Horn_3117_00167055(1-18GHz)	Polarity: Vertical
EUT: Hue light strip	Power: AC 120V/60Hz
Note: Mode 2:Transmit at 2402MHz by LE_2Mbps(GFSK_LE)	



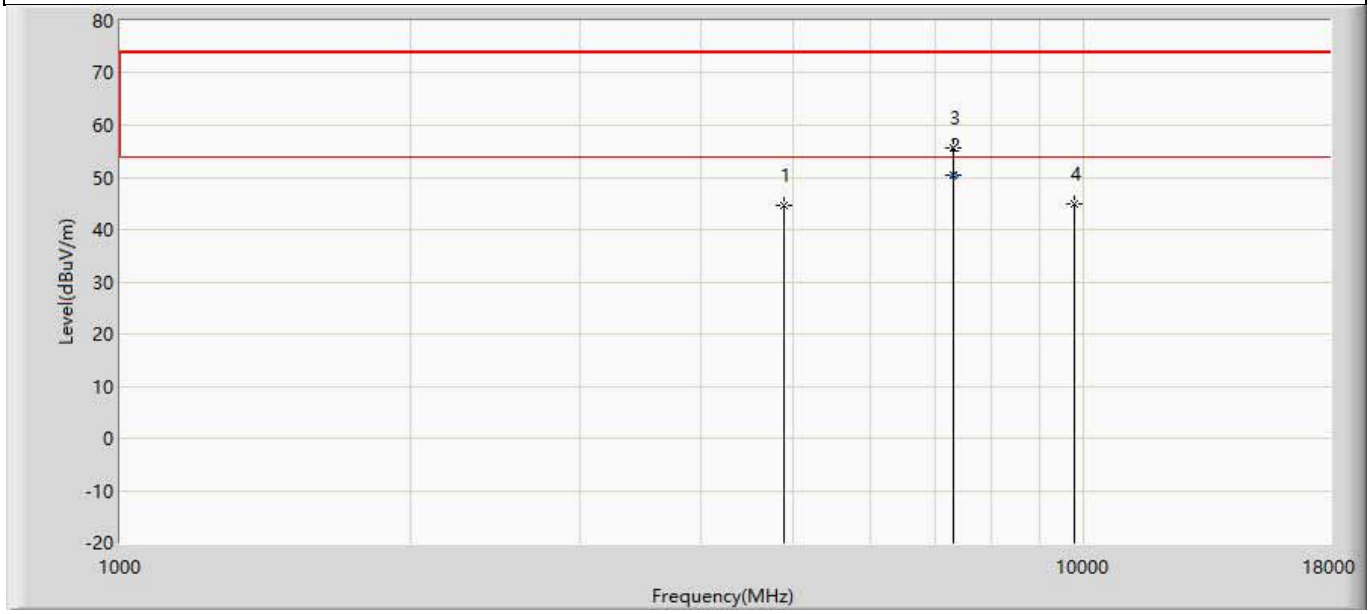
No	Mark	Frequency (MHz)	Measure Level (dBuV/m)	Reading Level (dBuV)	Over Limit (dB)	Limit (dBuV/m)	Factor (dB)	Type
1		4804.000	43.543	38.912	-30.457	74.000	4.631	PK
2	*	7204.630	50.933	42.911	-3.067	54.000	8.022	AV
3		7205.000	56.030	48.007	-17.970	74.000	8.023	PK
4		9608.000	44.659	35.342	-29.341	74.000	9.318	PK

Profile: 1992171R	Page No.: 87
Engineer: Pawn	
Site: AC5	Time: 2019/10/11 - 09:38
Limit: FCC_Part15.209_RE(3m)	Margin: 0
Probe: Horn_3117_00167055(1-18GHz)	Polarity: Horizontal
EUT: Hue light strip	Power: AC 120V/60Hz
Note: Mode 2:Transmit at 2440MHz by LE_2Mbps(GFSK_LE)	



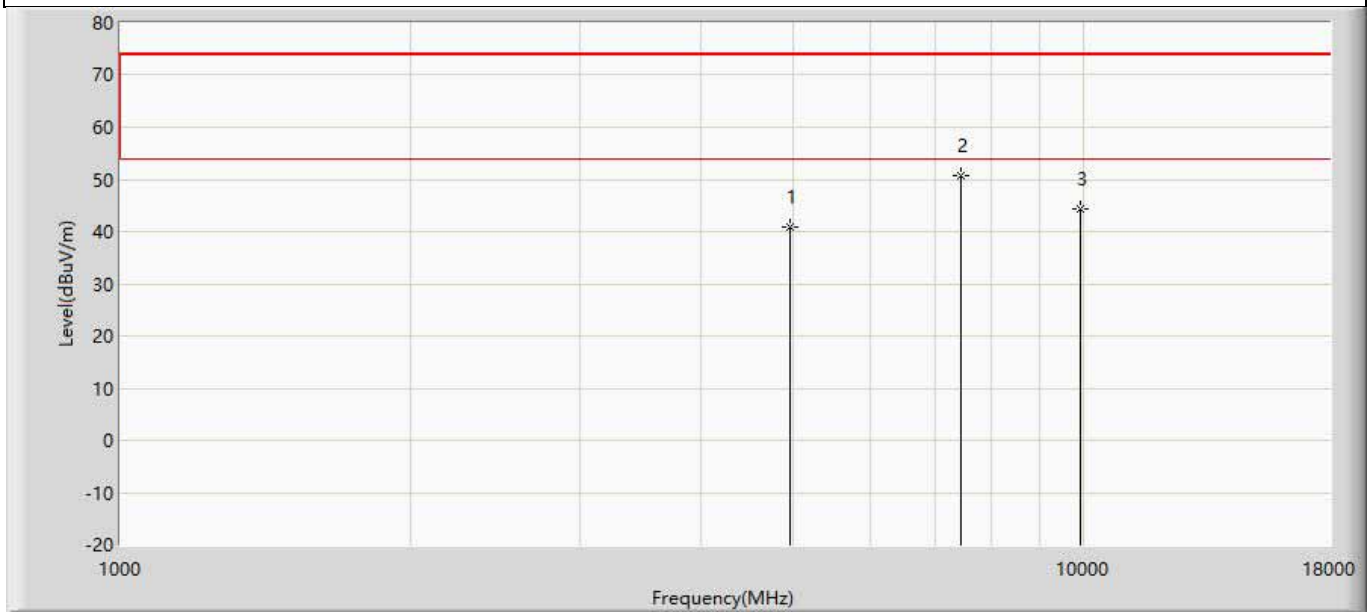
No	Mark	Frequency (MHz)	Measure Level (dBuV/m)	Reading Level (dBuV)	Over Limit (dB)	Limit (dBuV/m)	Factor (dB)	Type
1		4880.000	42.244	37.465	-31.756	74.000	4.778	PK
2	*	7324.000	49.389	41.284	-24.611	74.000	8.105	PK
3		9760.000	45.547	35.643	-28.453	74.000	9.904	PK

Profile: 1992171R	Page No.: 88
Engineer: Pawn	
Site: AC5	Time: 2019/10/11 - 09:38
Limit: FCC_Part15.209_RE(3m)	Margin: 0
Probe: Horn_3117_00167055(1-18GHz)	Polarity: Vertical
EUT: Hue light strip	Power: AC 120V/60Hz
Note: Mode 2:Transmit at 2440MHz by LE_2Mbps(GFSK_LE)	



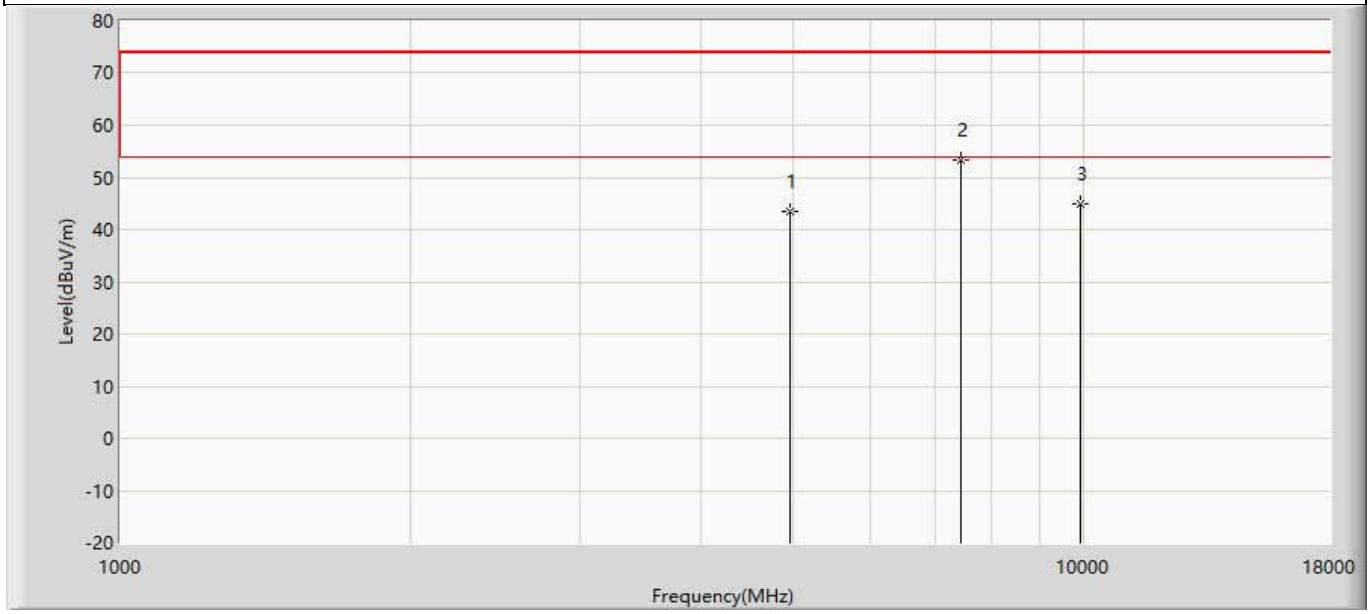
No	Mark	Frequency (MHz)	Measure Level (dBuV/m)	Reading Level (dBuV)	Over Limit (dB)	Limit (dBuV/m)	Factor (dB)	Type
1		4880.000	44.659	39.880	-29.341	74.000	4.778	PK
2	*	7321.210	50.330	42.250	-3.670	54.000	8.080	AV
3		7324.000	55.528	47.423	-18.472	74.000	8.105	PK
4		9760.000	44.873	34.969	-29.127	74.000	9.904	PK

Profile: 1992171R	Page No.: 95
Engineer: Pawn	
Site: AC5	Time: 2019/10/11 - 09:39
Limit: FCC_Part15.209_RE(3m)	Margin: 0
Probe: Horn_3117_00167055(1-18GHz)	Polarity: Horizontal
EUT: Hue light strip	Power: AC 120V/60Hz
Note: Mode 2:Transmit at 2480MHz by LE_2Mbps(GFSK_LE)	



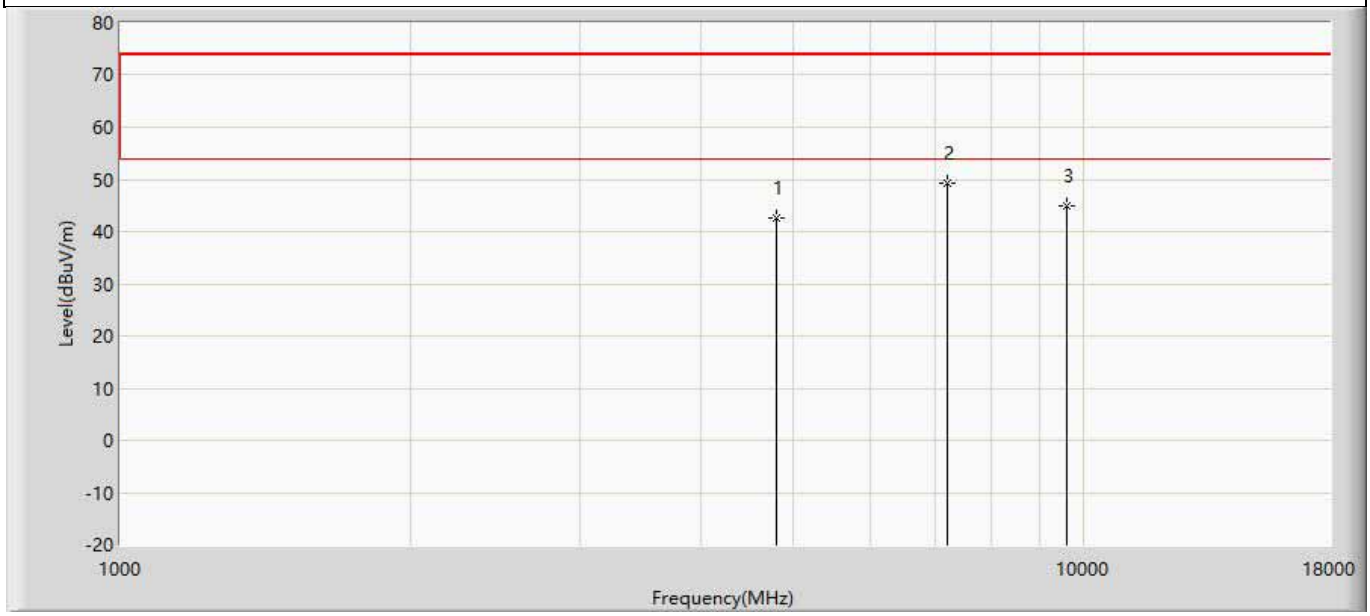
No	Mark	Frequency (MHz)	Measure Level (dBuV/m)	Reading Level (dBuV)	Over Limit (dB)	Limit (dBuV/m)	Factor (dB)	Type
1		4960.000	40.889	36.104	-33.111	74.000	4.784	PK
2	*	7443.000	50.817	42.726	-23.183	74.000	8.090	PK
3		9920.000	44.423	34.528	-29.577	74.000	9.894	PK

Profile: 1992171R	Page No.: 96
Engineer: Pawn	
Site: AC5	Time: 2019/10/11 - 09:39
Limit: FCC_Part15.209_RE(3m)	Margin: 0
Probe: Horn_3117_00167055(1-18GHz)	Polarity: Vertical
EUT: Hue light strip	Power: AC 120V/60Hz
Note: Mode 2:Transmit at 2480MHz by LE_2Mbps(GFSK_LE)	



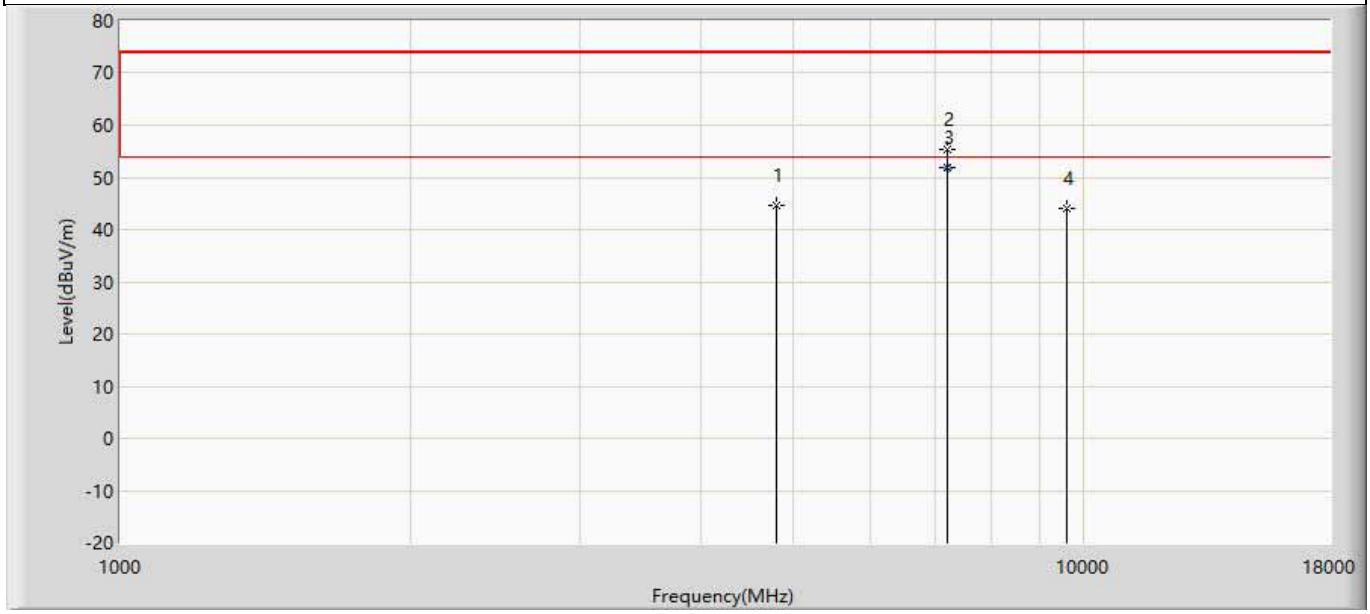
No	Mark	Frequency (MHz)	Measure Level (dBuV/m)	Reading Level (dBuV)	Over Limit (dB)	Limit (dBuV/m)	Factor (dB)	Type
1		4960.000	43.550	38.765	-30.450	74.000	4.784	PK
2	*	7443.000	53.462	45.371	-20.538	74.000	8.090	PK
3		9920.000	45.038	35.143	-28.962	74.000	9.894	PK

Profile: 1992171R	Page No.: 83
Engineer: Pawn	
Site: AC5	Time: 2019/10/11 - 09:37
Limit: FCC_Part15.209_RE(3m)	Margin: 0
Probe: Horn_3117_00167055(1-18GHz)	Polarity: Horizontal
EUT: Hue light strip	Power: AC 120V/60Hz
Note: Mode 3:Transmit at 2402MHz by LE_Coded(S=2)(GFSK_LE)	



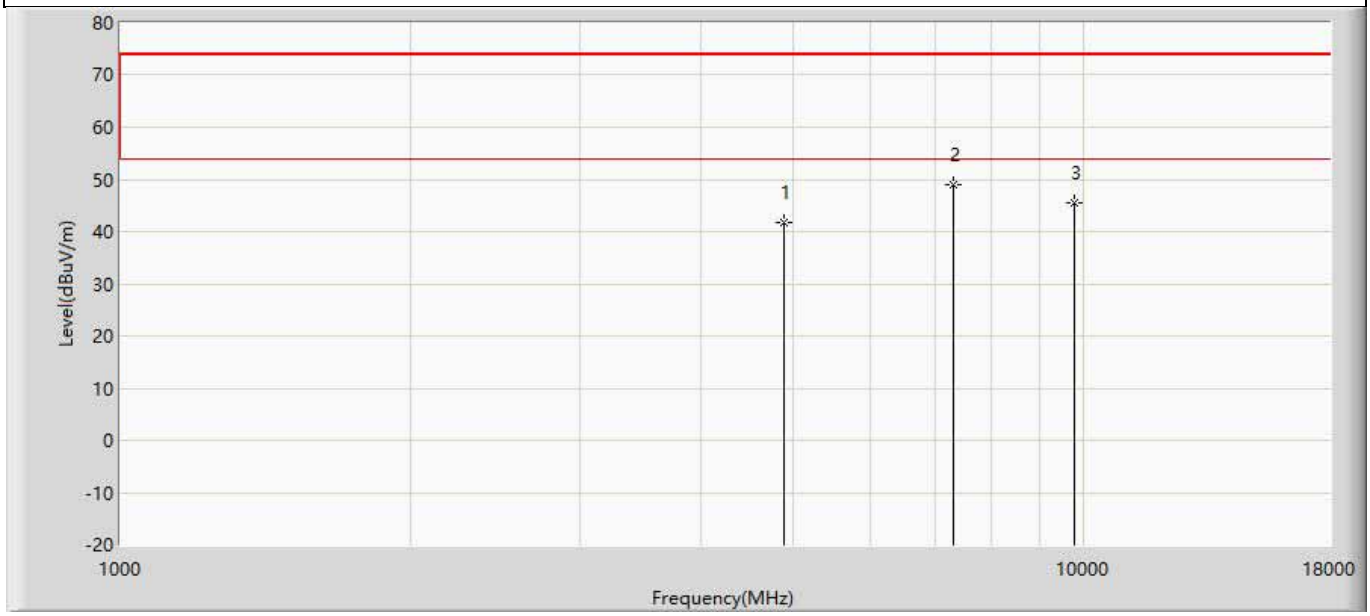
No	Mark	Frequency (MHz)	Measure Level (dBuV/m)	Reading Level (dBuV)	Over Limit (dB)	Limit (dBuV/m)	Factor (dB)	Type
1		4804.000	42.509	37.878	-31.491	74.000	4.631	PK
2	*	7205.000	49.156	41.133	-24.844	74.000	8.023	PK
3		9608.000	45.071	35.754	-28.929	74.000	9.318	PK

Profile: 1992171R	Page No.: 84
Engineer: Pawn	
Site: AC5	Time: 2019/10/11 - 09:37
Limit: FCC_Part15.209_RE(3m)	Margin: 0
Probe: Horn_3117_00167055(1-18GHz)	Polarity: Vertical
EUT: Hue light strip	Power: AC 120V/60Hz
Note: Mode 3:Transmit at 2402MHz by LE_Coded(S=2)(GFSK_LE)	



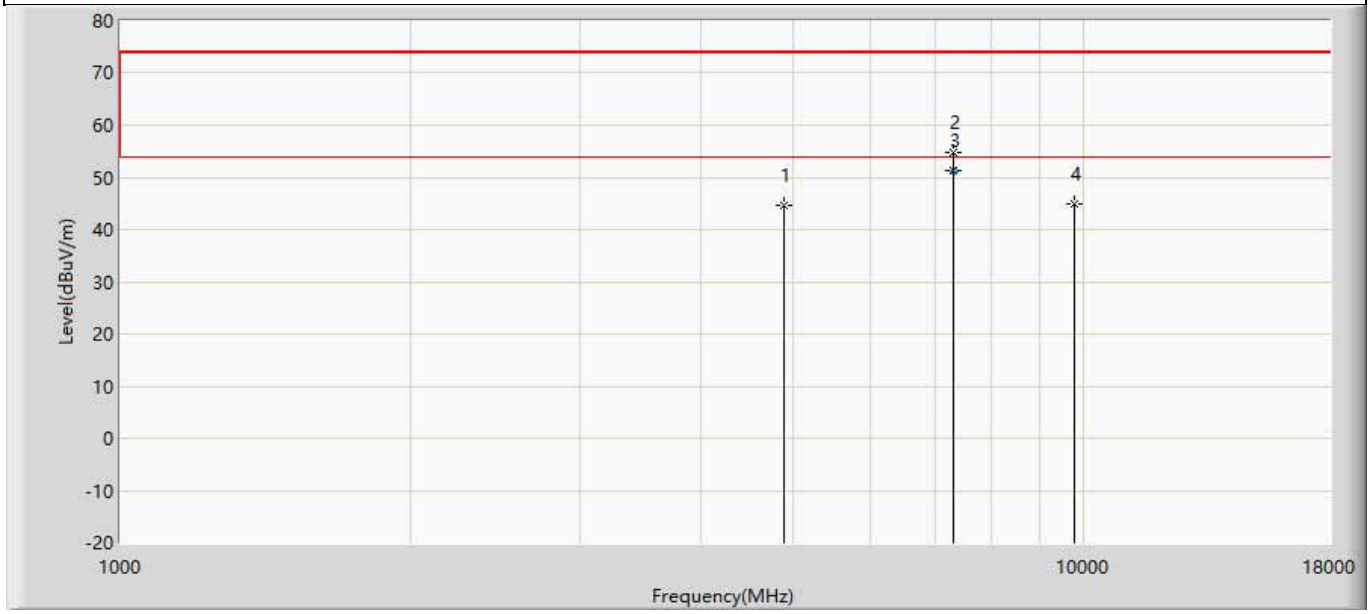
No	Mark	Frequency (MHz)	Measure Level (dBuV/m)	Reading Level (dBuV)	Over Limit (dB)	Limit (dBuV/m)	Factor (dB)	Type
1		4804.000	44.663	40.032	-29.337	74.000	4.631	PK
2		7205.000	55.458	47.435	-18.542	74.000	8.023	PK
3	*	7206.710	51.902	43.878	-2.098	54.000	8.024	AV
4		9608.000	44.040	34.723	-29.960	74.000	9.318	PK

Profile: 1992171R	Page No.: 91
Engineer: Pawn	
Site: AC5	Time: 2019/10/11 - 09:38
Limit: FCC_Part15.209_RE(3m)	Margin: 0
Probe: Horn_3117_00167055(1-18GHz)	Polarity: Horizontal
EUT: Hue light strip	Power: AC 120V/60Hz
Note: Mode 3:Transmit at 2440MHz by LE_Coded(S=2)(GFSK_LE)	



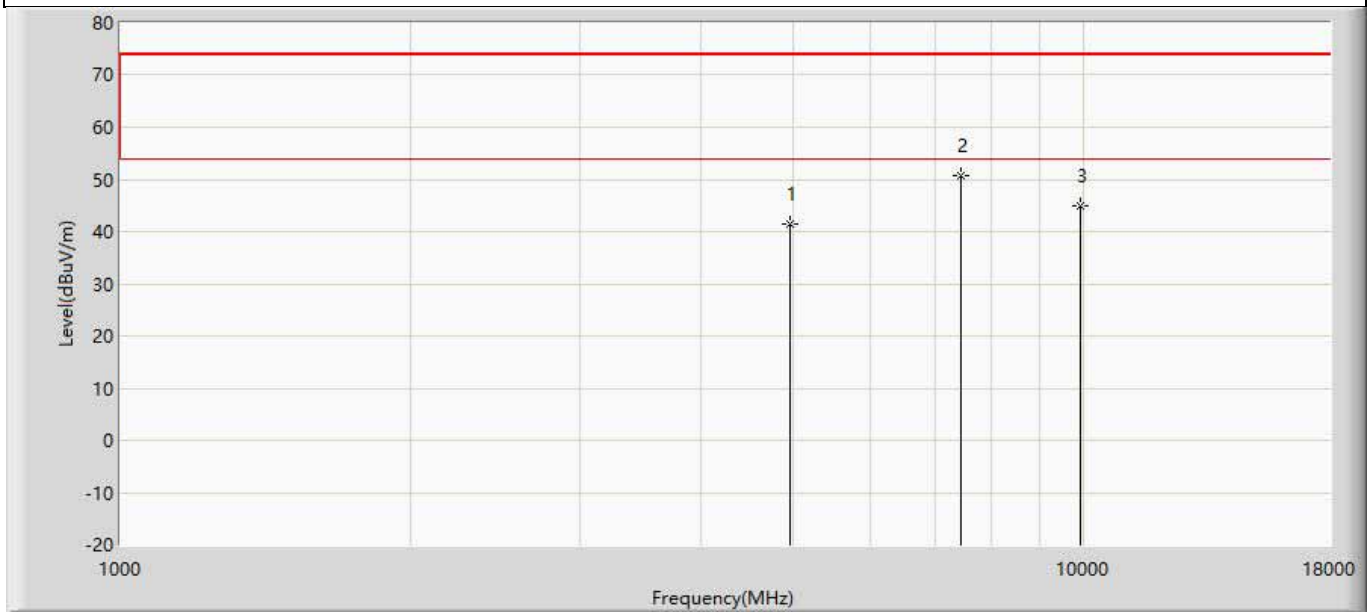
No	Mark	Frequency (MHz)	Measure Level (dBuV/m)	Reading Level (dBuV)	Over Limit (dB)	Limit (dBuV/m)	Factor (dB)	Type
1		4880.000	41.820	37.041	-32.180	74.000	4.778	PK
2	*	7315.500	49.104	41.074	-24.896	74.000	8.031	PK
3		9760.000	45.387	35.483	-28.613	74.000	9.904	PK

Profile: 1992171R	Page No.: 92
Engineer: Pawn	
Site: AC5	Time: 2019/10/11 - 09:38
Limit: FCC_Part15.209_RE(3m)	Margin: 0
Probe: Horn_3117_00167055(1-18GHz)	Polarity: Vertical
EUT: Hue light strip	Power: AC 120V/60Hz
Note: Mode 3:Transmit at 2440MHz by LE_Coded(S=2)(GFSK_LE)	



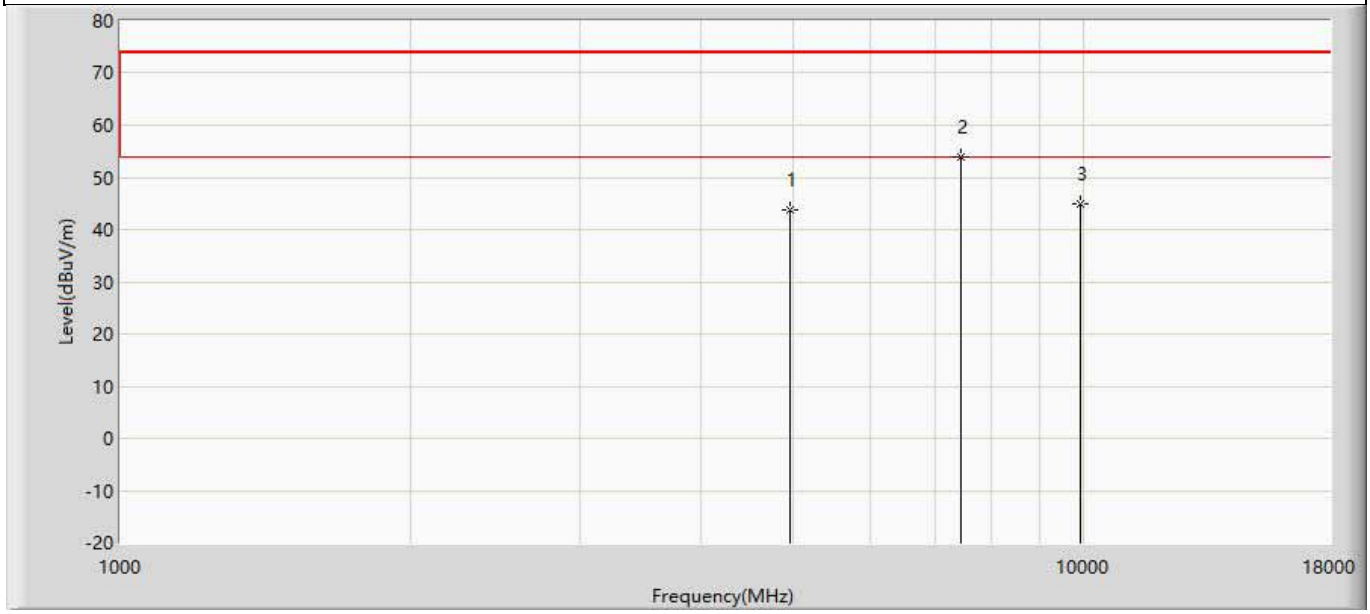
No	Mark	Frequency (MHz)	Measure Level (dBuV/m)	Reading Level (dBuV)	Over Limit (dB)	Limit (dBuV/m)	Factor (dB)	Type
1		4880.000	44.528	39.749	-29.472	74.000	4.778	PK
2		7315.500	54.717	46.687	-19.283	74.000	8.031	PK
3	*	7320.610	51.424	43.349	-2.576	54.000	8.075	AV
4		9760.000	45.056	35.152	-28.944	74.000	9.904	PK

Profile: 1992171R	Page No.: 99
Engineer: Pawn	
Site: AC5	Time: 2019/10/11 - 09:39
Limit: FCC_Part15.209_RE(3m)	Margin: 0
Probe: Horn_3117_00167055(1-18GHz)	Polarity: Horizontal
EUT: Hue light strip	Power: AC 120V/60Hz
Note: Mode 3:Transmit at 2480MHz by LE_Coded(S=2)(GFSK_LE)	



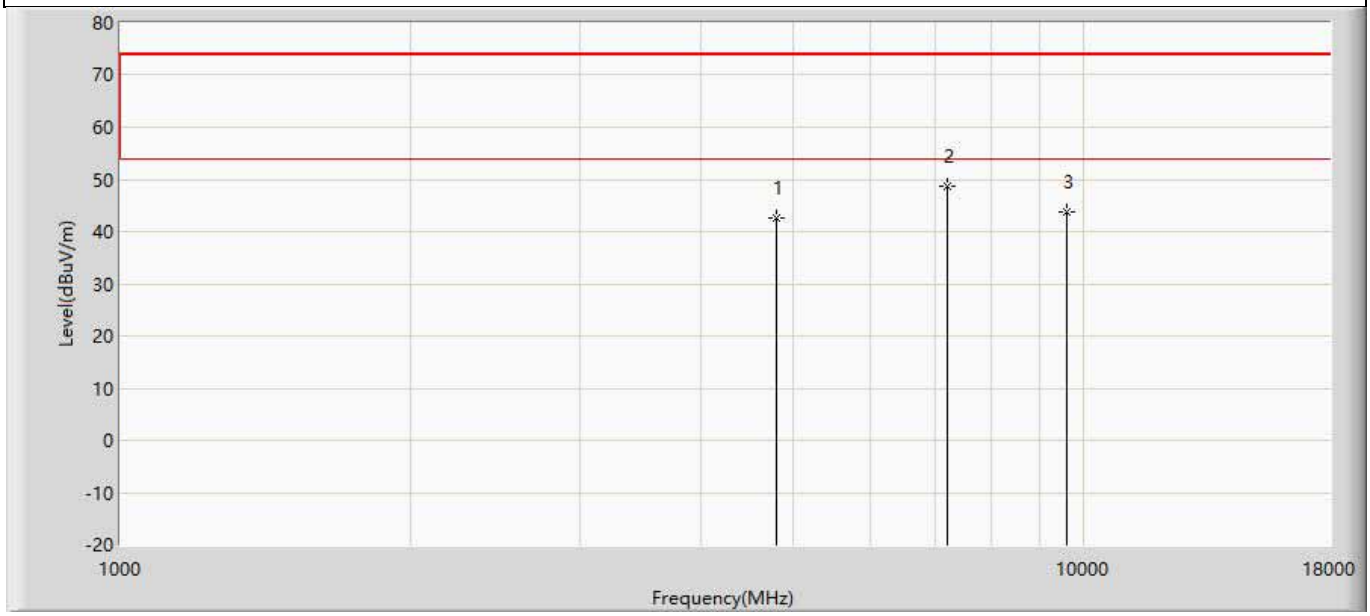
No	Mark	Frequency (MHz)	Measure Level (dBuV/m)	Reading Level (dBuV)	Over Limit (dB)	Limit (dBuV/m)	Factor (dB)	Type
1		4960.000	41.342	36.557	-32.658	74.000	4.784	PK
2	*	7443.000	50.772	42.681	-23.228	74.000	8.090	PK
3		9920.000	45.066	35.171	-28.934	74.000	9.894	PK

Profile: 1992171R	Page No.: 100
Engineer: Pawn	
Site: AC5	Time: 2019/10/11 - 09:39
Limit: FCC_Part15.209_RE(3m)	Margin: 0
Probe: Horn_3117_00167055(1-18GHz)	Polarity: Vertical
EUT: Hue light strip	Power: AC 120V/60Hz
Note: Mode 3:Transmit at 2480MHz by LE_Coded(S=2)(GFSK_LE)	



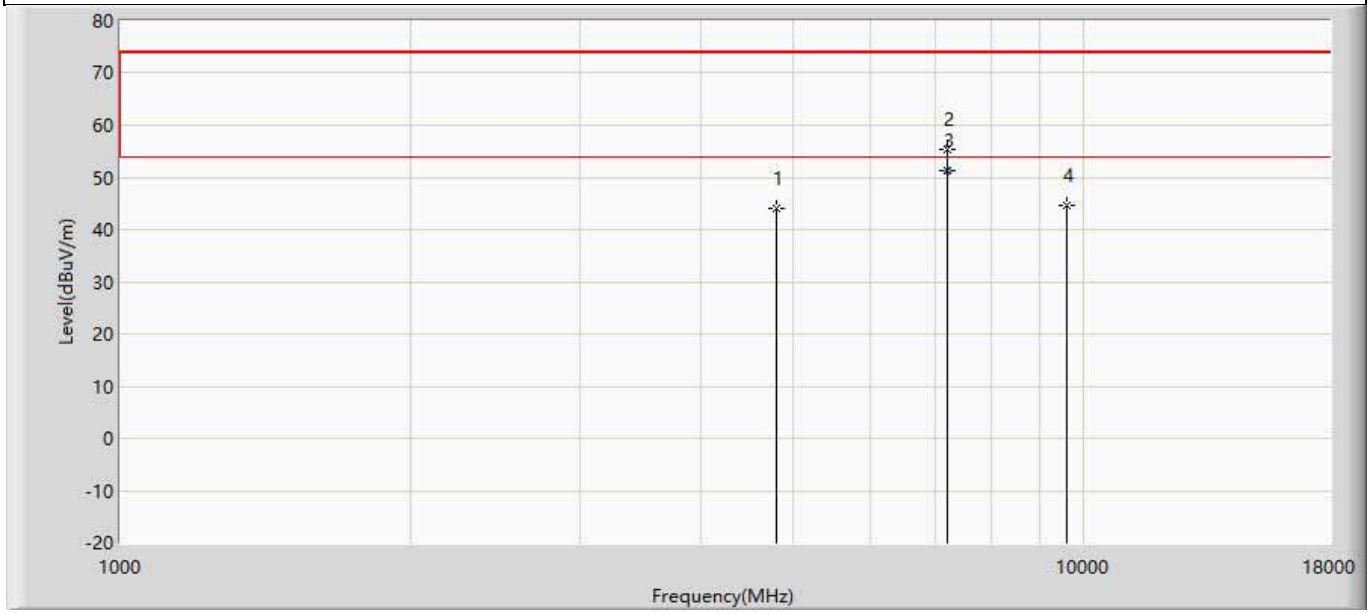
No	Mark	Frequency (MHz)	Measure Level (dBuV/m)	Reading Level (dBuV)	Over Limit (dB)	Limit (dBuV/m)	Factor (dB)	Type
1		4960.000	43.797	39.012	-30.203	74.000	4.784	PK
2	*	7443.000	53.896	45.805	-20.104	74.000	8.090	PK
3		9920.000	44.825	34.930	-29.175	74.000	9.894	PK

Profile: 1992171R	Page No.: 81
Engineer: Pawn	
Site: AC5	Time: 2019/10/11 - 09:37
Limit: FCC_Part15.209_RE(3m)	Margin: 0
Probe: Horn_3117_00167055(1-18GHz)	Polarity: Horizontal
EUT: Hue light strip	Power: AC 120V/60Hz
Note: Mode 4:Transmit at 2402MHz by LE_Coded(S=8)(GFSK_LE)	



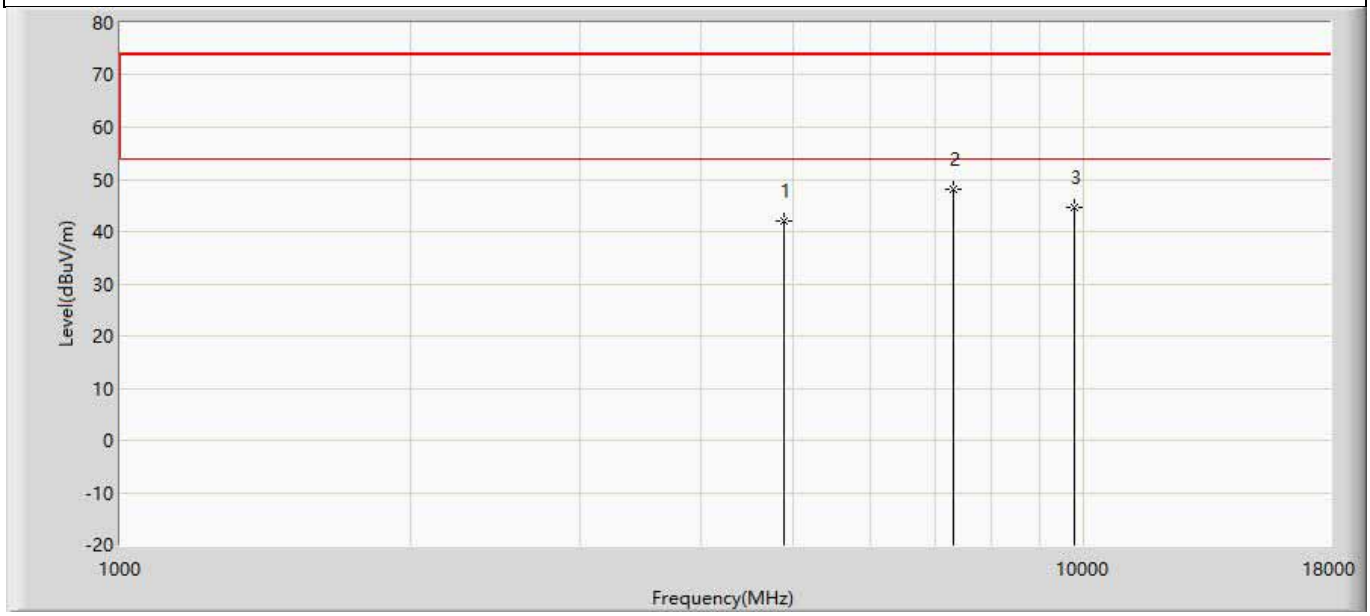
No	Mark	Frequency (MHz)	Measure Level (dBuV/m)	Reading Level (dBuV)	Over Limit (dB)	Limit (dBuV/m)	Factor (dB)	Type
1		4804.000	42.506	37.875	-31.494	74.000	4.631	PK
2	*	7205.000	48.814	40.791	-25.186	74.000	8.023	PK
3		9608.000	43.865	34.548	-30.135	74.000	9.318	PK

Profile: 1992171R	Page No.: 82
Engineer: Pawn	
Site: AC5	Time: 2019/10/11 - 09:37
Limit: FCC_Part15.209_RE(3m)	Margin: 0
Probe: Horn_3117_00167055(1-18GHz)	Polarity: Vertical
EUT: Hue light strip	Power: AC 120V/60Hz
Note: Mode 4:Transmit at 2402MHz by LE_Coded(S=8)(GFSK_LE)	



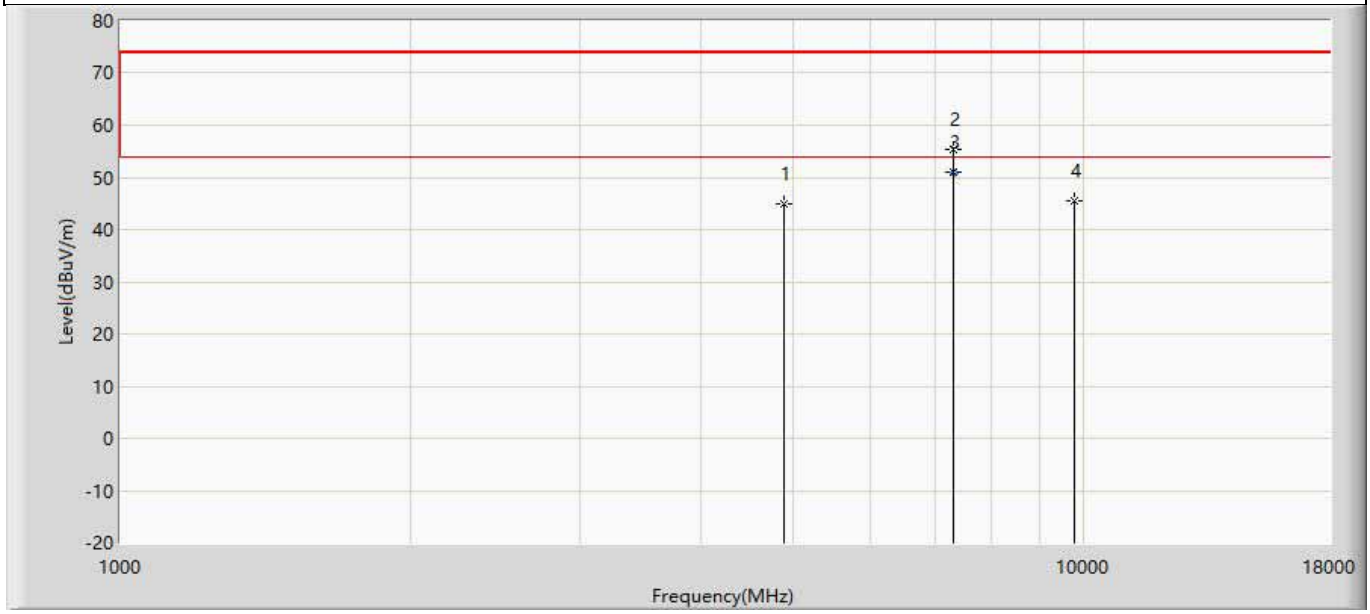
No	Mark	Frequency (MHz)	Measure Level (dBuV/m)	Reading Level (dBuV)	Over Limit (dB)	Limit (dBuV/m)	Factor (dB)	Type
1		4804.000	43.936	39.305	-30.064	74.000	4.631	PK
2		7205.000	55.239	47.216	-18.761	74.000	8.023	PK
3	*	7205.220	51.241	43.218	-2.759	54.000	8.024	AV
4		9608.000	44.520	35.203	-29.480	74.000	9.318	PK

Profile: 1992171R	Page No.: 89
Engineer: Pawn	
Site: AC5	Time: 2019/10/11 - 09:38
Limit: FCC_Part15.209_RE(3m)	Margin: 0
Probe: Horn_3117_00167055(1-18GHz)	Polarity: Horizontal
EUT: Hue light strip	Power: AC 120V/60Hz
Note: Mode 4:Transmit at 2440MHz by LE_Coded(S=8)(GFSK_LE)	



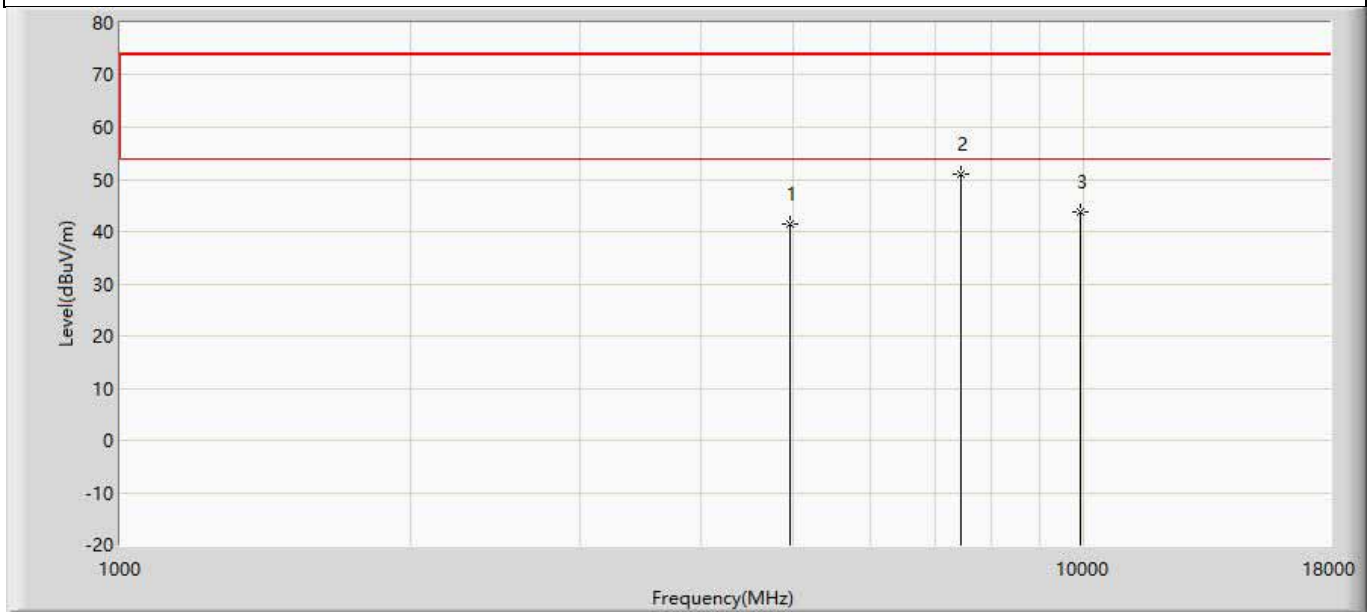
No	Mark	Frequency (MHz)	Measure Level (dBuV/m)	Reading Level (dBuV)	Over Limit (dB)	Limit (dBuV/m)	Factor (dB)	Type
1		4880.000	42.162	37.383	-31.838	74.000	4.778	PK
2	*	7315.500	48.159	40.129	-25.841	74.000	8.031	PK
3		9760.000	44.554	34.650	-29.446	74.000	9.904	PK

Profile: 1992171R	Page No.: 90
Engineer: Pawn	
Site: AC5	Time: 2019/10/11 - 09:38
Limit: FCC_Part15.209_RE(3m)	Margin: 0
Probe: Horn_3117_00167055(1-18GHz)	Polarity: Vertical
EUT: Hue light strip	Power: AC 120V/60Hz
Note: Mode 4:Transmit at 2440MHz by LE_Coded(S=8)(GFSK_LE)	



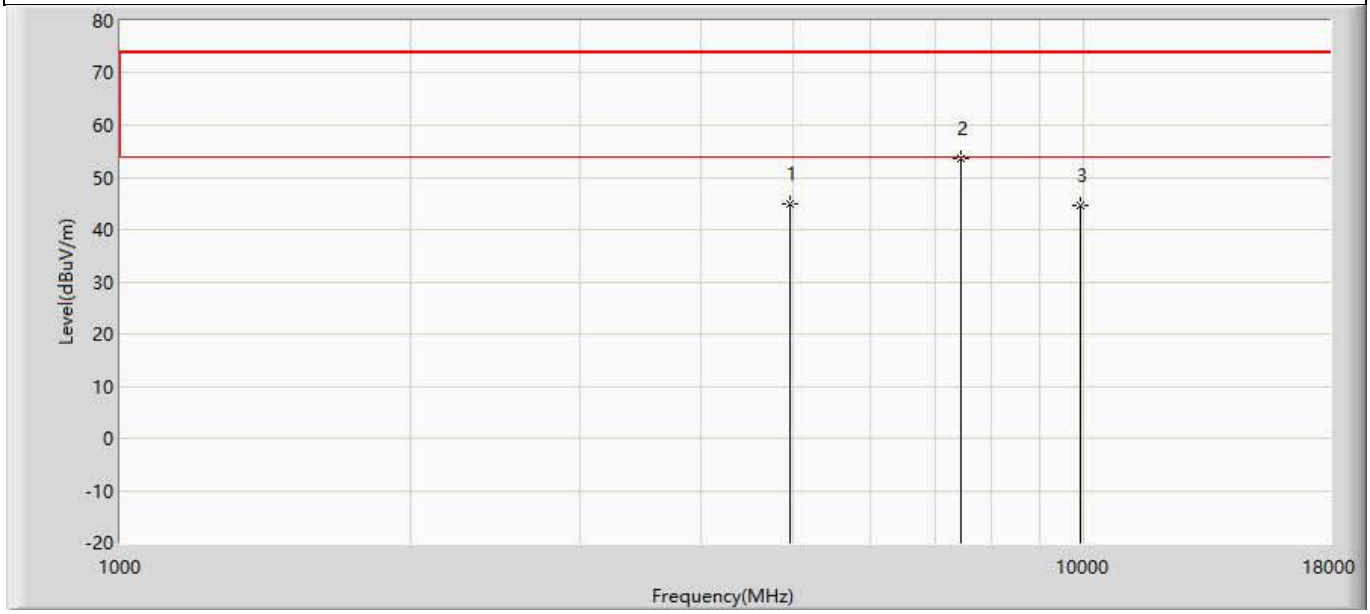
No	Mark	Frequency (MHz)	Measure Level (dBuV/m)	Reading Level (dBuV)	Over Limit (dB)	Limit (dBuV/m)	Factor (dB)	Type
1		4880.000	45.036	40.257	-28.964	74.000	4.778	PK
2		7315.500	55.443	47.413	-18.557	74.000	8.031	PK
3	*	7320.710	51.133	43.057	-2.867	54.000	8.076	AV
4		9760.000	45.404	35.500	-28.596	74.000	9.904	PK

Profile: 1992171R	Page No.: 97
Engineer: Pawn	
Site: AC5	Time: 2019/10/11 - 09:39
Limit: FCC_Part15.209_RE(3m)	Margin: 0
Probe: Horn_3117_00167055(1-18GHz)	Polarity: Horizontal
EUT: Hue light strip	Power: AC 120V/60Hz
Note: Mode 4:Transmit at 2480MHz by LE_Coded(S=8)(GFSK_LE)	



No	Mark	Frequency (MHz)	Measure Level (dBuV/m)	Reading Level (dBuV)	Over Limit (dB)	Limit (dBuV/m)	Factor (dB)	Type
1		4960.000	41.377	36.592	-32.623	74.000	4.784	PK
2	*	7443.000	50.889	42.798	-23.111	74.000	8.090	PK
3		9920.000	43.844	33.949	-30.156	74.000	9.894	PK

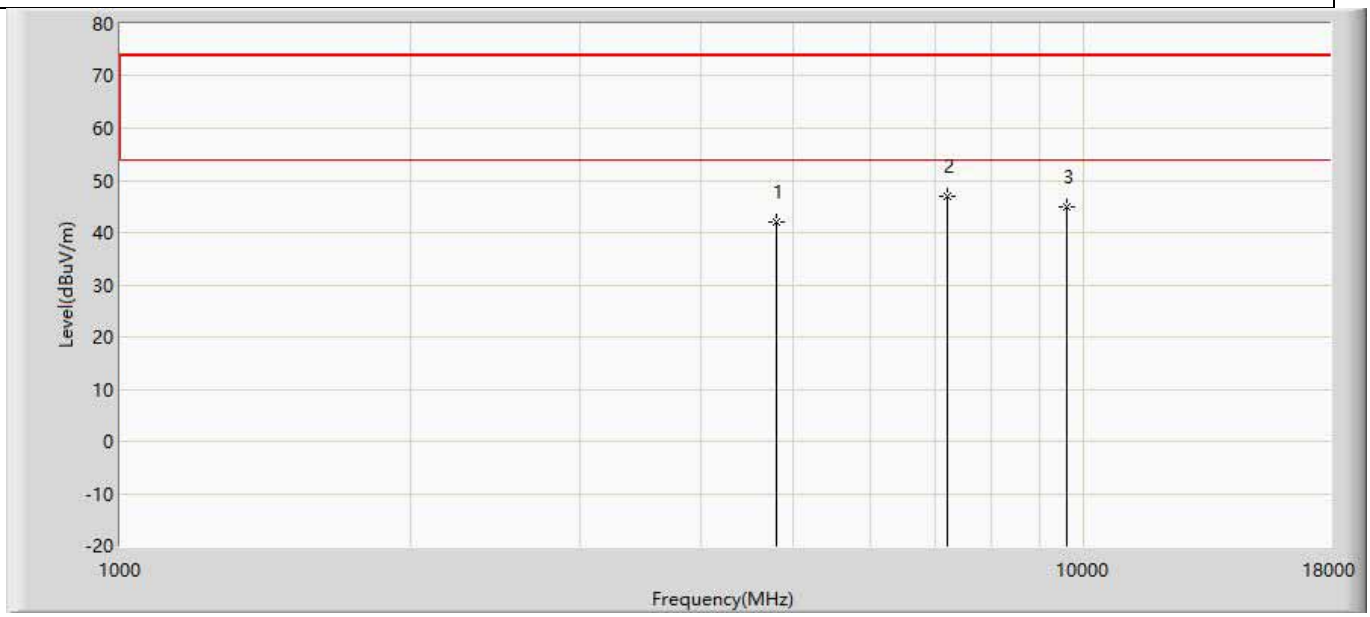
Profile: 1992171R	Page No.: 98
Engineer: Pawn	
Site: AC5	Time: 2019/10/11 - 09:39
Limit: FCC_Part15.209_RE(3m)	Margin: 0
Probe: Horn_3117_00167055(1-18GHz)	Polarity: Vertical
EUT: Hue light strip	Power: AC 120V/60Hz
Note: Mode 4:Transmit at 2480MHz by LE_Coded(S=8)(GFSK_LE)	



No	Mark	Frequency (MHz)	Measure Level (dBuV/m)	Reading Level (dBuV)	Over Limit (dB)	Limit (dBuV/m)	Factor (dB)	Type
1		4960.000	44.847	40.062	-29.153	74.000	4.784	PK
2	*	7443.000	53.726	45.635	-20.274	74.000	8.090	PK
3		9920.000	44.633	34.738	-29.367	74.000	9.894	PK

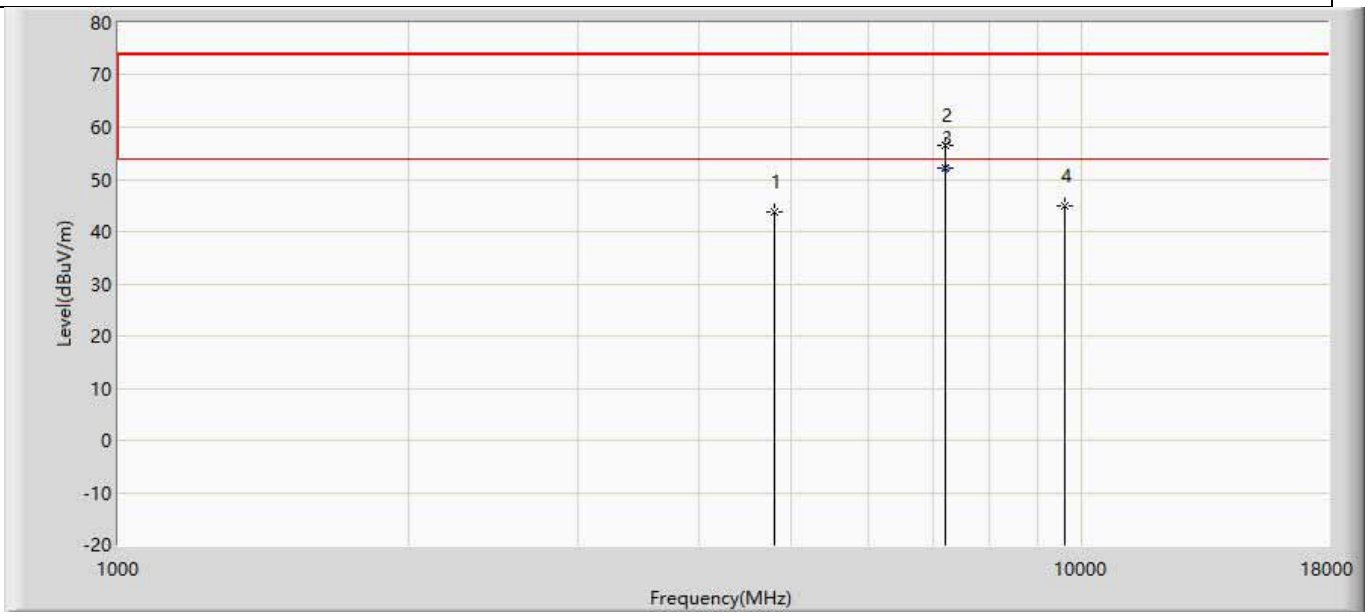
KDS:

Profile: 1992171R	Page No.: 47
Engineer: Pawn	
Site: AC5	Time: 2019/10/11 - 11:02
Limit: FCC_Part15.209_RE(3m)	Margin: 0
Probe: Horn_3117_00167055(1-18GHz)	Polarity: Horizontal
EUT: Hue light strip	Power: AC 120V/60Hz
Note: Mode 1:Transmit at 2402MHz by LE_1Mbps(GFSK_LE)	



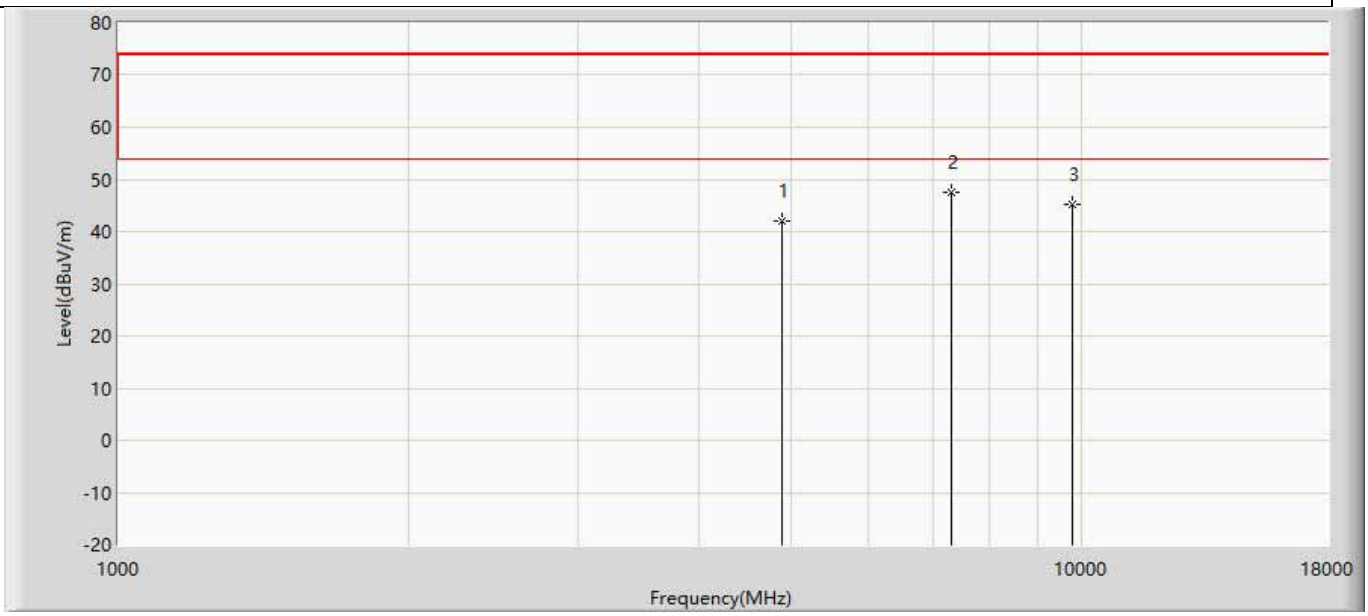
No	Mark	Frequency (MHz)	Measure Level (dBuV/m)	Reading Level (dBuV)	Over Limit (dB)	Limit (dBuV/m)	Factor (dB)	Type
1		4804.000	41.979	37.348	-32.021	74.000	4.631	PK
2	*	7206.000	46.950	38.926	-27.050	74.000	8.024	PK
3		9608.000	44.980	35.663	-29.020	74.000	9.318	PK

Profile: 1992171R	Page No.: 48
Engineer: Pawn	
Site: AC5	Time: 2019/10/11 - 11:02
Limit: FCC_Part15.209_RE(3m)	Margin: 0
Probe: Horn_3117_00167055(1-18GHz)	Polarity: Vertical
EUT: Hue light strip	Power: AC 120V/60Hz
Note: Mode 1:Transmit at 2402MHz by LE_1Mbps(GFSK_LE)	



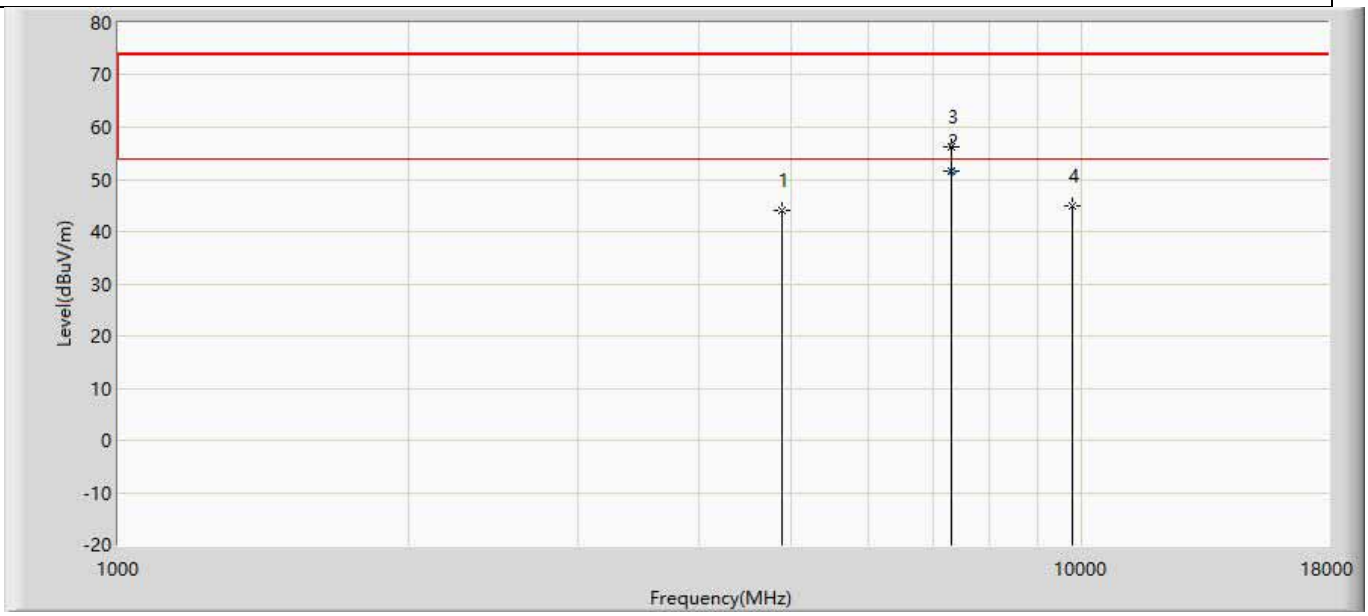
No	Mark	Frequency (MHz)	Measure Level (dBuV/m)	Reading Level (dBuV)	Over Limit (dB)	Limit (dBuV/m)	Factor (dB)	Type
1		4804.000	43.669	39.038	-30.331	74.000	4.631	PK
2		7205.000	56.492	48.469	-17.508	74.000	8.023	PK
3	*	7206.540	52.152	44.128	-1.848	54.000	8.024	AV
4		9608.000	44.965	35.648	-29.035	74.000	9.318	PK

Profile: 1992171R	Page No.: 49
Engineer: Pawn	
Site: AC5	Time: 2019/10/11 - 11:04
Limit: FCC_Part15.209_RE(3m)	Margin: 0
Probe: Horn_3117_00167055(1-18GHz)	Polarity: Horizontal
EUT: Hue light strip	Power: AC 120V/60Hz
Note: Mode 1:Transmit at 2440MHz by LE_1Mbps(GFSK_LE)	



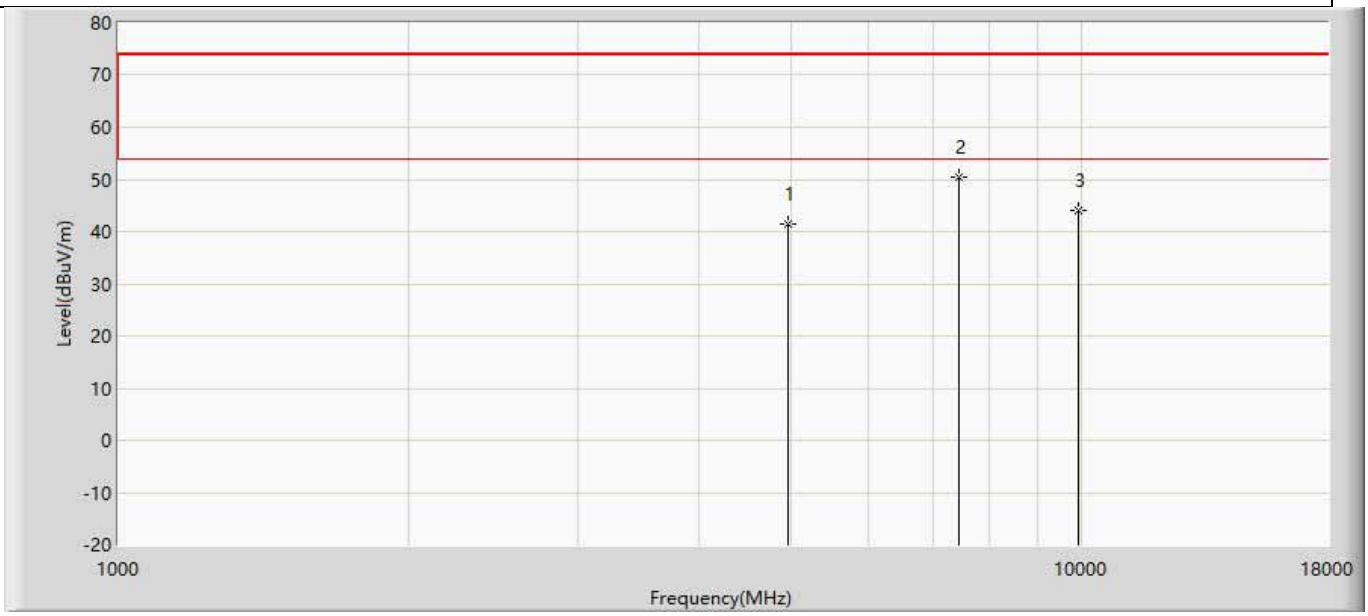
No	Mark	Frequency (MHz)	Measure Level (dBuV/m)	Reading Level (dBuV)	Over Limit (dB)	Limit (dBuV/m)	Factor (dB)	Type
1		4880.000	42.037	37.258	-31.963	74.000	4.778	PK
2	*	7320.000	47.538	39.468	-26.462	74.000	8.071	PK
3		9760.000	45.293	35.389	-28.707	74.000	9.904	PK

Profile: 1992171R	Page No.: 50
Engineer: Pawn	
Site: AC5	Time: 2019/10/11 - 11:05
Limit: FCC_Part15.209_RE(3m)	Margin: 0
Probe: Horn_3117_00167055(1-18GHz)	Polarity: Vertical
EUT: Hue light strip	Power: AC 120V/60Hz
Note: Mode 1:Transmit at 2440MHz by LE_1Mbps(GFSK_LE)	



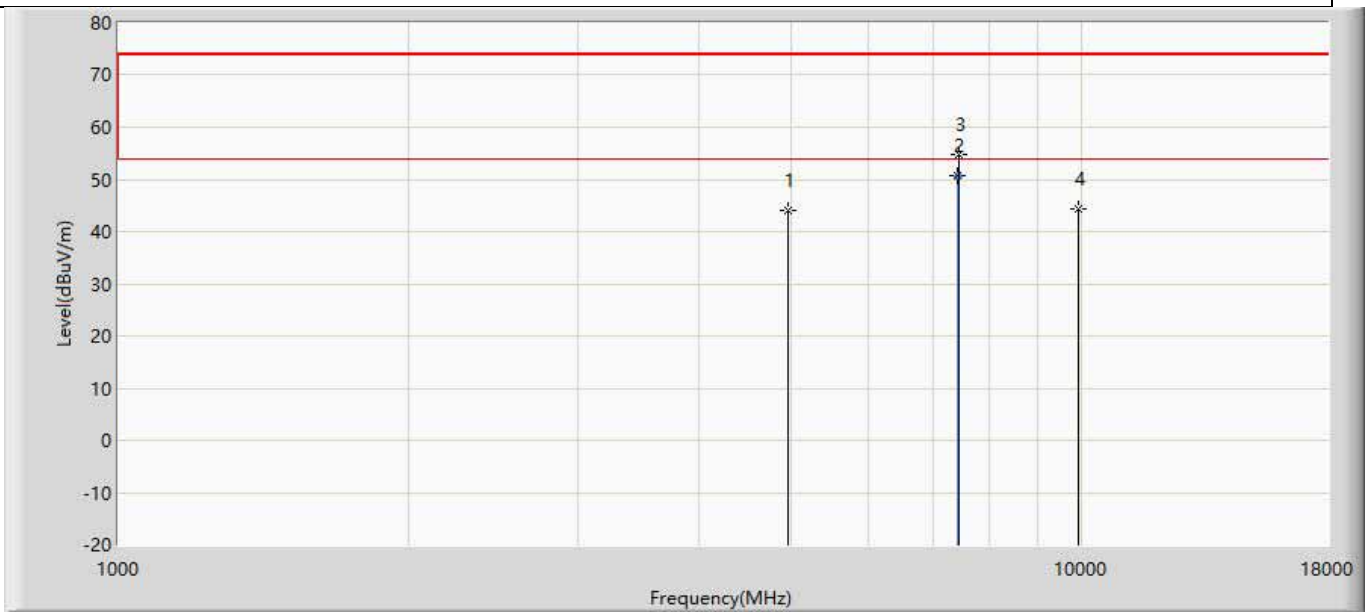
No	Mark	Frequency (MHz)	Measure Level (dBuV/m)	Reading Level (dBuV)	Over Limit (dB)	Limit (dBuV/m)	Factor (dB)	Type
1		4880.000	44.129	39.350	-29.871	74.000	4.778	PK
2	*	7320.480	51.563	43.489	-2.437	54.000	8.073	AV
3		7324.000	56.123	48.018	-17.877	74.000	8.105	PK
4		9760.000	44.942	35.038	-29.058	74.000	9.904	PK

Profile: 1992171R	Page No.: 51
Engineer: Pawn	
Site: AC5	Time: 2019/10/11 - 11:08
Limit: FCC_Part15.209_RE(3m)	Margin: 0
Probe: Horn_3117_00167055(1-18GHz)	Polarity: Horizontal
EUT: Hue light strip	Power: AC 120V/60Hz
Note: Mode 1:Transmit at 2480MHz by LE_1Mbps(GFSK_LE)	



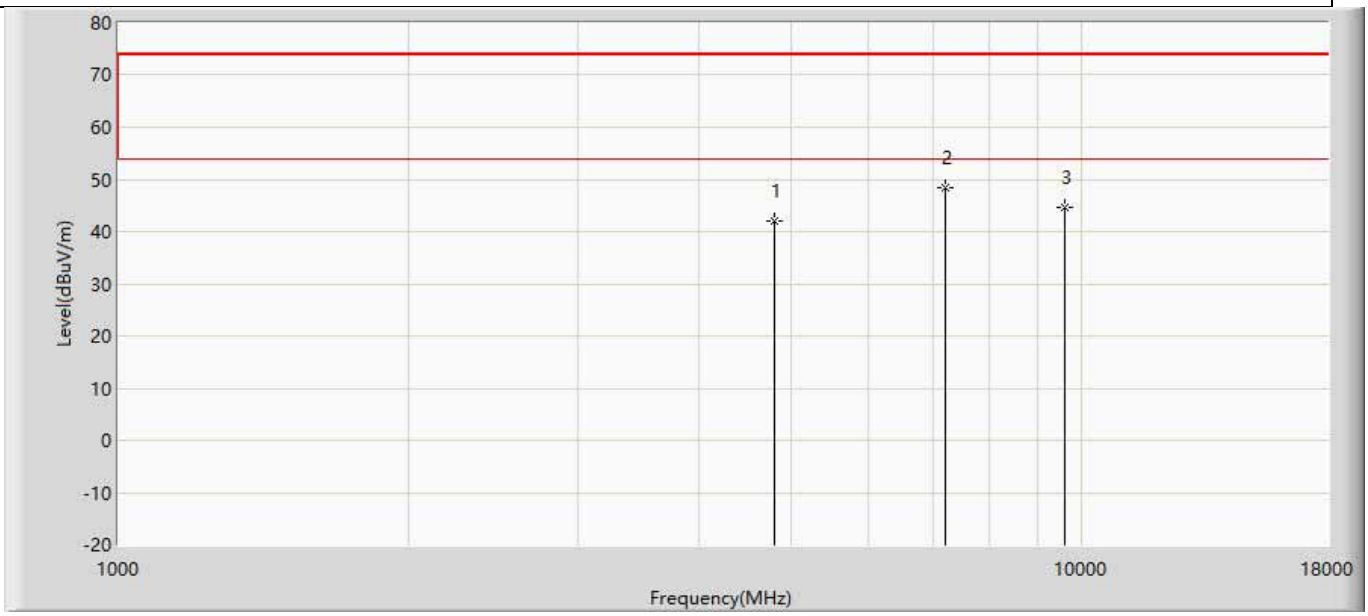
No	Mark	Frequency (MHz)	Measure Level (dBuV/m)	Reading Level (dBuV)	Over Limit (dB)	Limit (dBuV/m)	Factor (dB)	Type
1		4960.000	41.502	36.717	-32.498	74.000	4.784	PK
2	*	7443.000	50.430	42.339	-23.570	74.000	8.090	PK
3		9920.000	44.071	34.176	-29.929	74.000	9.894	PK

Profile: 1992171R	Page No.: 52
Engineer: Pawn	
Site: AC5	Time: 2019/10/11 - 11:09
Limit: FCC_Part15.209_RE(3m)	Margin: 0
Probe: Horn_3117_00167055(1-18GHz)	Polarity: Vertical
EUT: Hue light strip	Power: AC 120V/60Hz
Note: Mode 1:Transmit at 2480MHz by LE_1Mbps(GFSK_LE)	



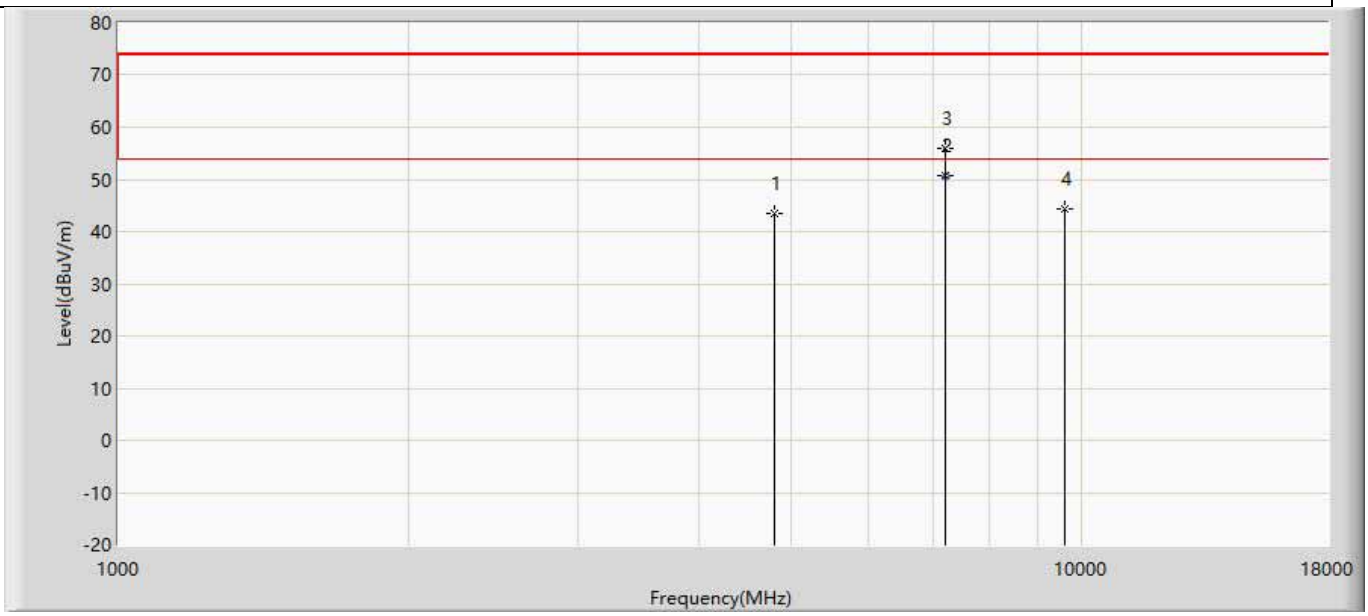
No	Mark	Frequency (MHz)	Measure Level (dBuV/m)	Reading Level (dBuV)	Over Limit (dB)	Limit (dBuV/m)	Factor (dB)	Type
1		4960.000	44.102	39.317	-29.898	74.000	4.784	PK
2	*	7440.100	50.763	42.711	-3.237	54.000	8.052	AV
3		7443.000	54.820	46.729	-19.180	74.000	8.090	PK
4		9920.000	44.286	34.391	-29.714	74.000	9.894	PK

Profile: 1992171R	Page No.: 53
Engineer: Pawn	
Site: AC5	Time: 2019/10/11 - 11:14
Limit: FCC_Part15.209_RE(3m)	Margin: 0
Probe: Horn_3117_00167055(1-18GHz)	Polarity: Horizontal
EUT: Hue light strip	Power: AC 120V/60Hz
Note: Mode 2:Transmit at 2402MHz by LE_2Mbps(GFSK_LE)	



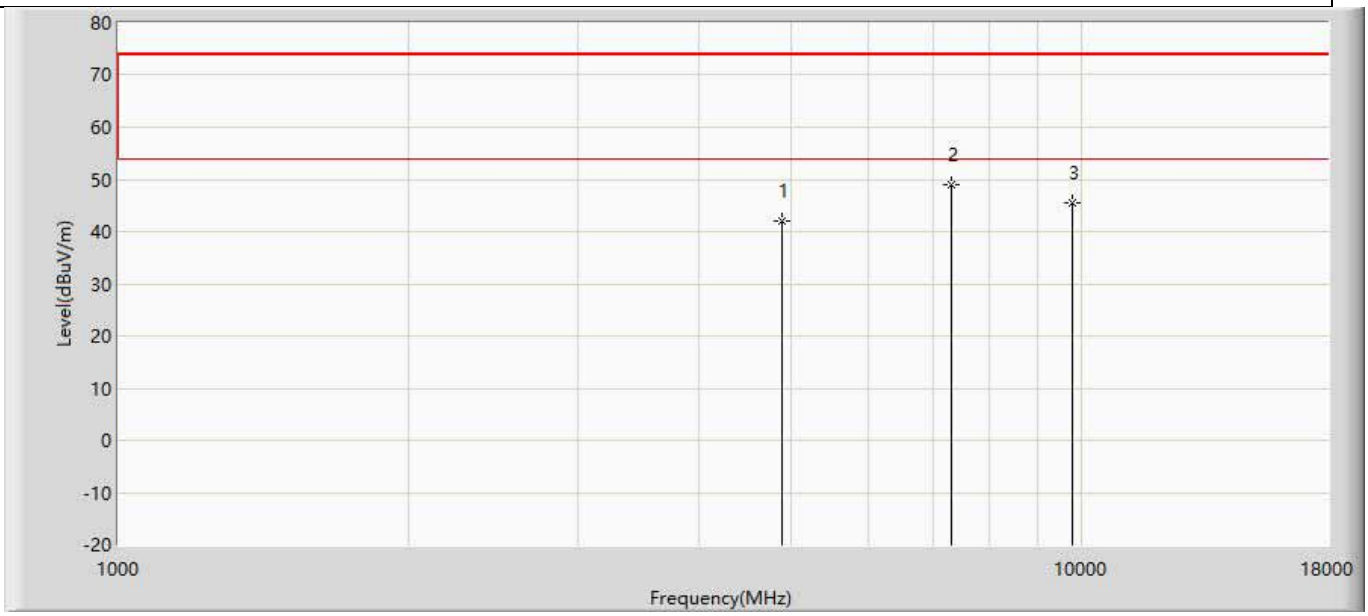
No	Mark	Frequency (MHz)	Measure Level (dBuV/m)	Reading Level (dBuV)	Over Limit (dB)	Limit (dBuV/m)	Factor (dB)	Type
1		4804.000	42.147	37.516	-31.853	74.000	4.631	PK
2	*	7205.000	48.401	40.378	-25.599	74.000	8.023	PK
3		9608.000	44.654	35.337	-29.346	74.000	9.318	PK

Profile: 1992171R	Page No.: 54
Engineer: Pawn	
Site: AC5	Time: 2019/10/11 - 11:17
Limit: FCC_Part15.209_RE(3m)	Margin: 0
Probe: Horn_3117_00167055(1-18GHz)	Polarity: Vertical
EUT: Hue light strip	Power: AC 120V/60Hz
Note: Mode 2:Transmit at 2402MHz by LE_2Mbps(GFSK_LE)	



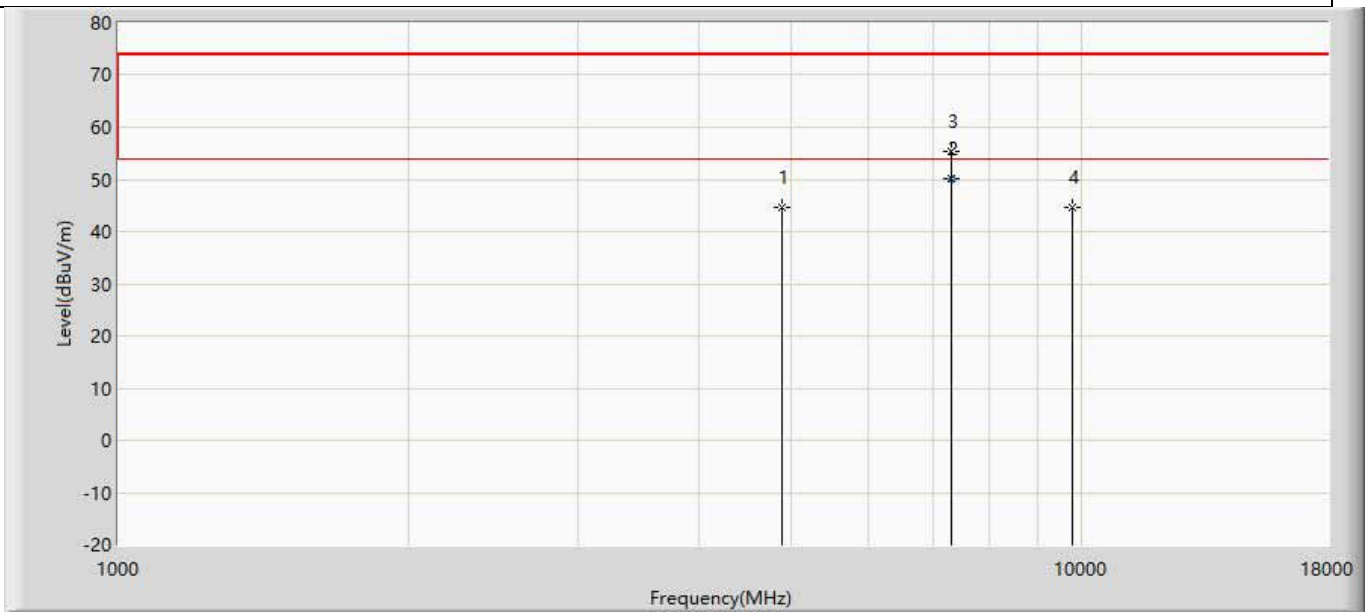
No	Mark	Frequency (MHz)	Measure Level (dBuV/m)	Reading Level (dBuV)	Over Limit (dB)	Limit (dBuV/m)	Factor (dB)	Type
1		4804.000	43.407	38.776	-30.593	74.000	4.631	PK
2	*	7204.000	50.810	42.789	-3.190	54.000	8.021	AV
3		7205.000	55.907	47.884	-18.093	74.000	8.023	PK
4		9608.000	44.436	35.119	-29.564	74.000	9.318	PK

Profile: 1992171R	Page No.: 55
Engineer: Pawn	
Site: AC5	Time: 2019/10/11 - 11:19
Limit: FCC_Part15.209_RE(3m)	Margin: 0
Probe: Horn_3117_00167055(1-18GHz)	Polarity: Horizontal
EUT: Hue light strip	Power: AC 120V/60Hz
Note: Mode 2:Transmit at 2440MHz by LE_2Mbps(GFSK_LE)	



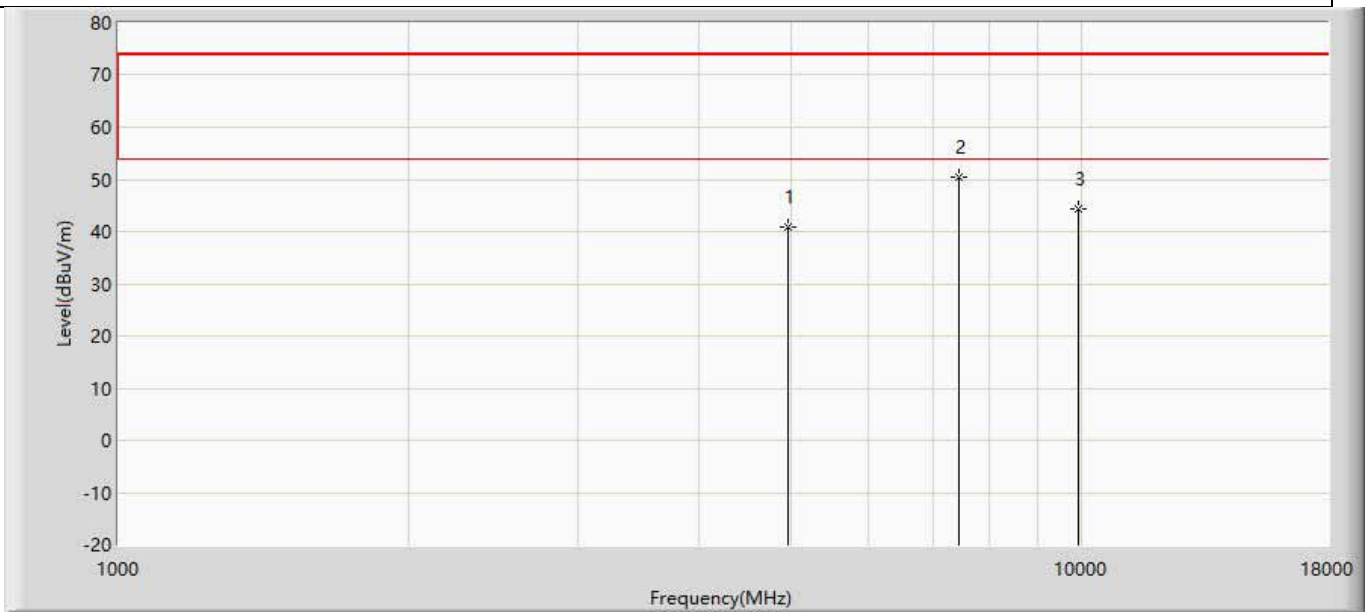
No	Mark	Frequency (MHz)	Measure Level (dBuV/m)	Reading Level (dBuV)	Over Limit (dB)	Limit (dBuV/m)	Factor (dB)	Type
1		4880.000	41.964	37.185	-32.036	74.000	4.778	PK
2	*	7324.000	49.039	40.934	-24.961	74.000	8.105	PK
3		9760.000	45.386	35.482	-28.614	74.000	9.904	PK

Profile: 1992171R	Page No.: 56
Engineer: Pawn	
Site: AC5	Time: 2019/10/11 - 11:20
Limit: FCC_Part15.209_RE(3m)	Margin: 0
Probe: Horn_3117_00167055(1-18GHz)	Polarity: Vertical
EUT: Hue light strip	Power: AC 120V/60Hz
Note: Mode 2:Transmit at 2440MHz by LE_2Mbps(GFSK_LE)	



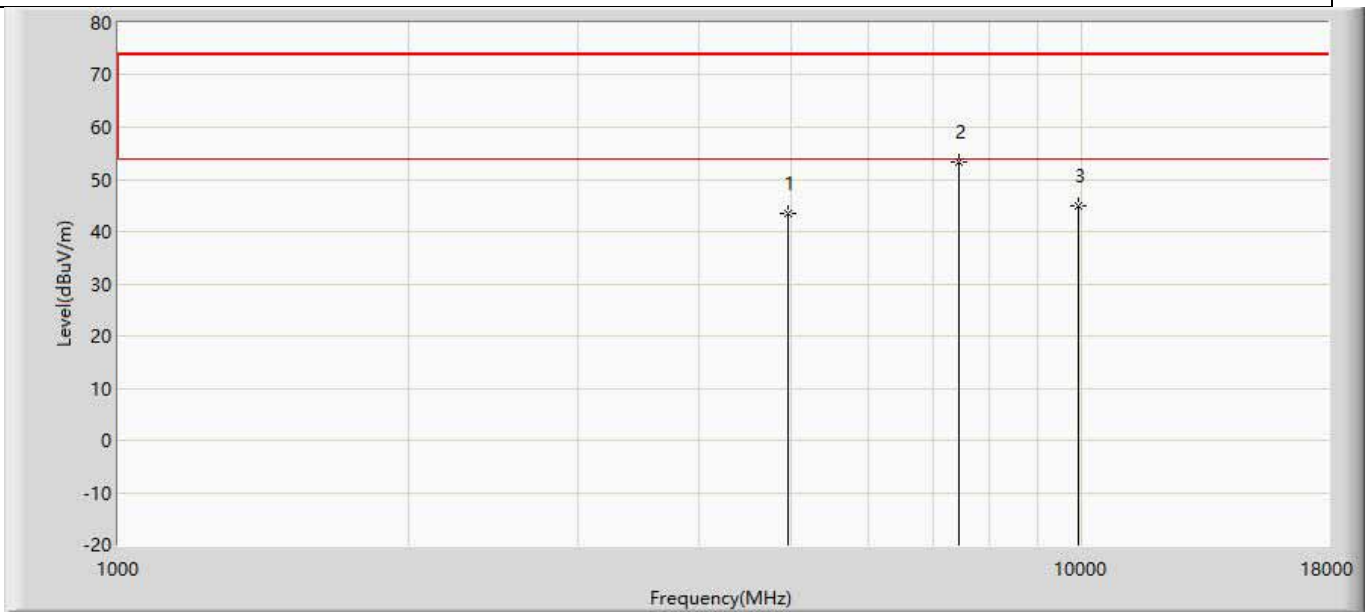
No	Mark	Frequency (MHz)	Measure Level (dBuV/m)	Reading Level (dBuV)	Over Limit (dB)	Limit (dBuV/m)	Factor (dB)	Type
1		4880.000	44.531	39.752	-29.469	74.000	4.778	PK
2	*	7321.180	50.193	42.113	-3.807	54.000	8.080	AV
3		7324.000	55.287	47.182	-18.713	74.000	8.105	PK
4		9760.000	44.663	34.759	-29.337	74.000	9.904	PK

Profile: 1992171R	Page No.: 57
Engineer: Pawn	
Site: AC5	Time: 2019/10/11 - 11:22
Limit: FCC_Part15.209_RE(3m)	Margin: 0
Probe: Horn_3117_00167055(1-18GHz)	Polarity: Horizontal
EUT: Hue light strip	Power: AC 120V/60Hz
Note: Mode 2:Transmit at 2480MHz by LE_2Mbps(GFSK_LE)	



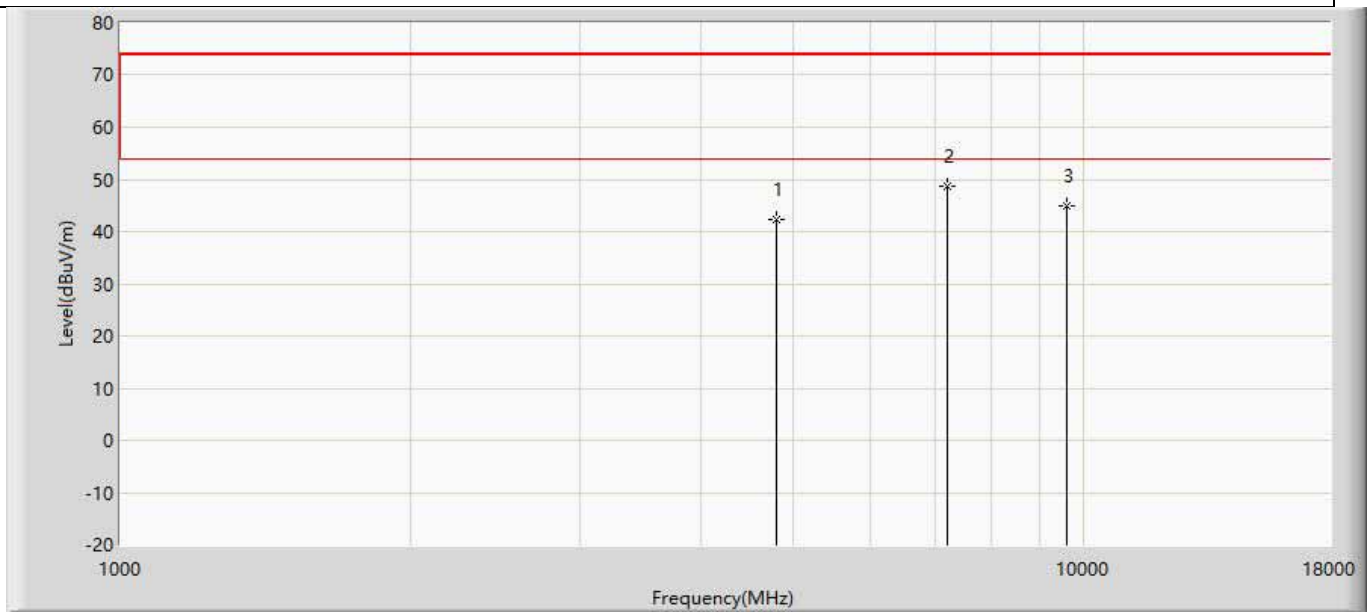
No	Mark	Frequency (MHz)	Measure Level (dBuV/m)	Reading Level (dBuV)	Over Limit (dB)	Limit (dBuV/m)	Factor (dB)	Type
1		4960.000	40.792	36.007	-33.208	74.000	4.784	PK
2	*	7443.000	50.470	42.379	-23.530	74.000	8.090	PK
3		9920.000	44.314	34.419	-29.686	74.000	9.894	PK

Profile: 1992171R	Page No.: 58
Engineer: Pawn	
Site: AC5	Time: 2019/10/11 - 11:26
Limit: FCC_Part15.209_RE(3m)	Margin: 0
Probe: Horn_3117_00167055(1-18GHz)	Polarity: Vertical
EUT: Hue light strip	Power: AC 120V/60Hz
Note: Mode 2:Transmit at 2480MHz by LE_2Mbps(GFSK_LE)	



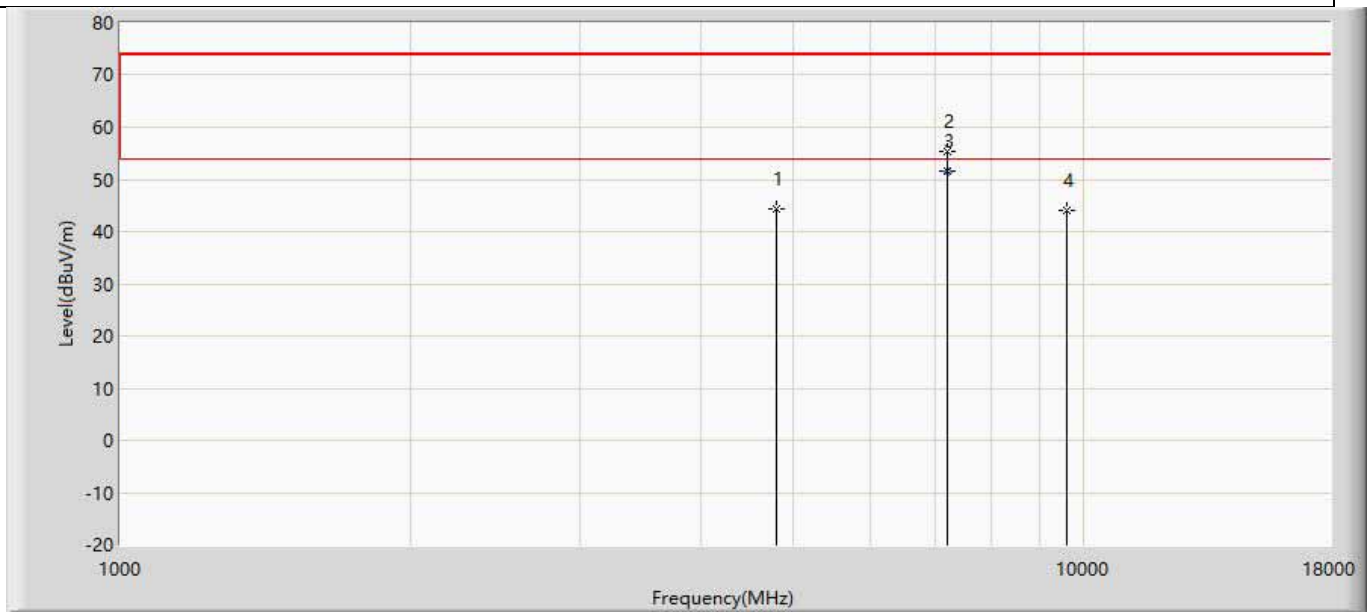
No	Mark	Frequency (MHz)	Measure Level (dBuV/m)	Reading Level (dBuV)	Over Limit (dB)	Limit (dBuV/m)	Factor (dB)	Type
1		4960.000	43.445	38.660	-30.555	74.000	4.784	PK
2	*	7443.000	53.309	45.218	-20.691	74.000	8.090	PK
3		9920.000	44.991	35.096	-29.009	74.000	9.894	PK

Profile: 1992171R	Page No.: 65
Engineer: Pawn	
Site: AC5	Time: 2019/10/11 - 11:35
Limit: FCC_Part15.209_RE(3m)	Margin: 0
Probe: Horn_3117_00167055(1-18GHz)	Polarity: Horizontal
EUT: Hue light strip	Power: AC 120V/60Hz
Note: Mode 3:Transmit at 2402MHz by LE_Coded(S=2)(GFSK_LE)	



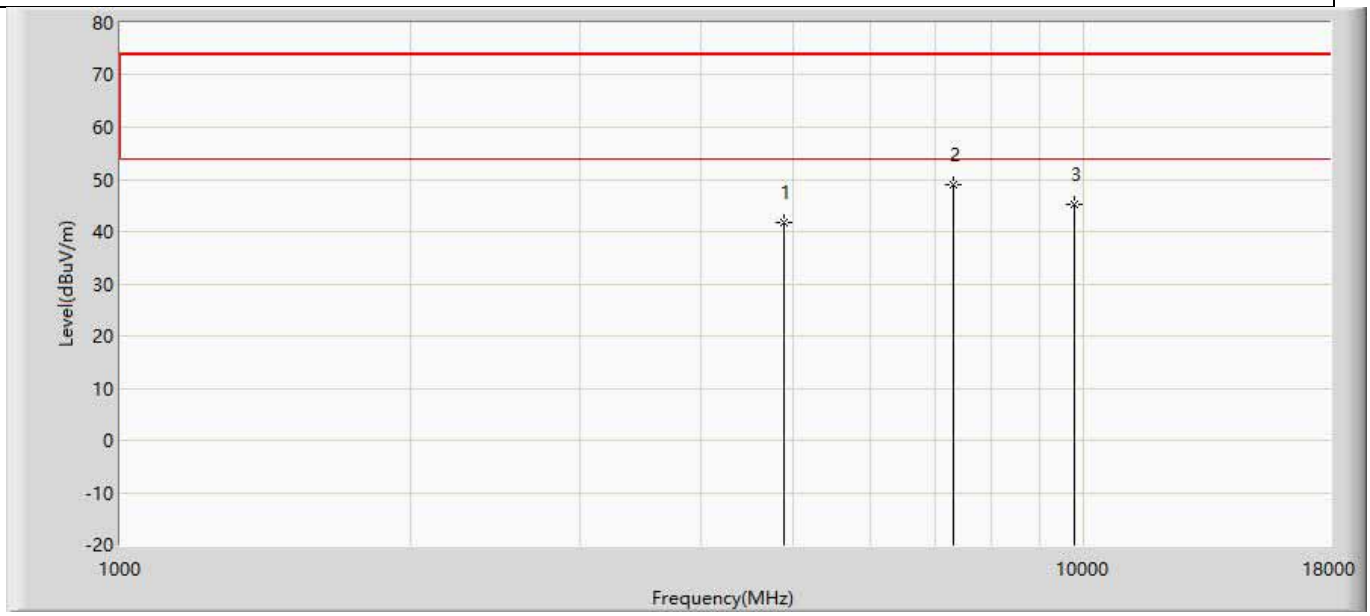
No	Mark	Frequency (MHz)	Measure Level (dBuV/m)	Reading Level (dBuV)	Over Limit (dB)	Limit (dBuV/m)	Factor (dB)	Type
1		4804.000	42.295	37.664	-31.705	74.000	4.631	PK
2	*	7205.000	48.606	40.583	-25.394	74.000	8.023	PK
3		9608.000	44.984	35.667	-29.016	74.000	9.318	PK

Profile: 1992171R	Page No.: 66
Engineer: Pawn	
Site: AC5	Time: 2019/10/11 - 11:35
Limit: FCC_Part15.209_RE(3m)	Margin: 0
Probe: Horn_3117_00167055(1-18GHz)	Polarity: Vertical
EUT: Hue light strip	Power: AC 120V/60Hz
Note: Mode 3:Transmit at 2402MHz by LE_Coded(S=2)(GFSK_LE)	



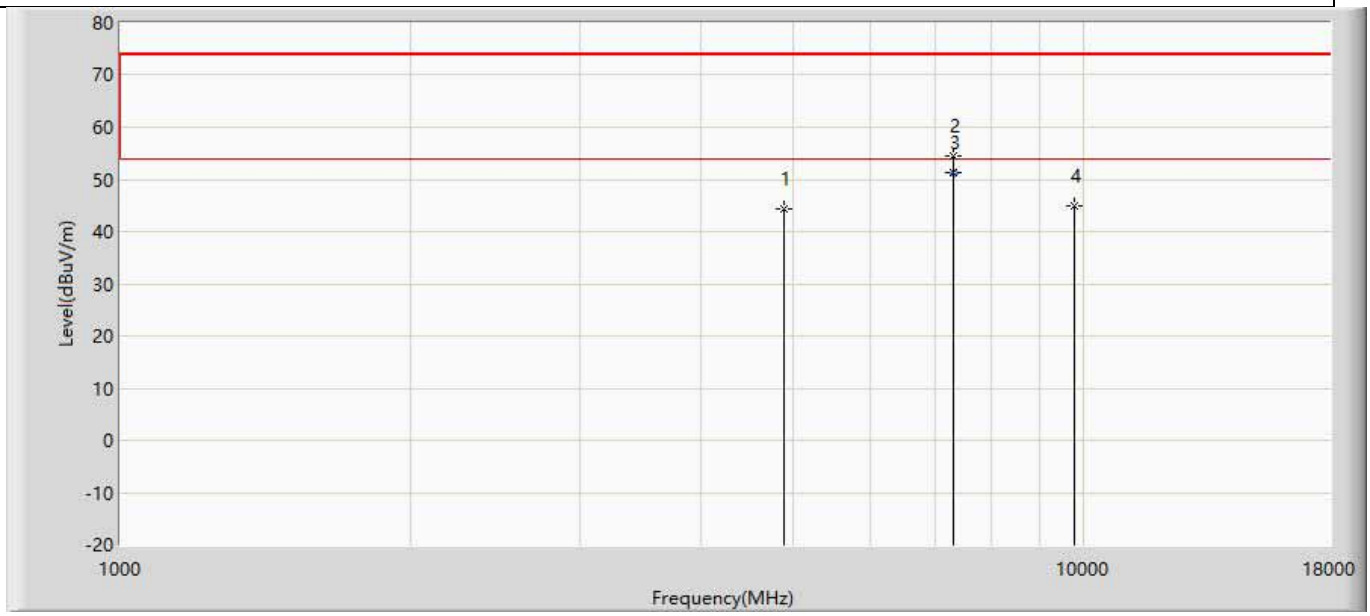
No	Mark	Frequency (MHz)	Measure Level (dBuV/m)	Reading Level (dBuV)	Over Limit (dB)	Limit (dBuV/m)	Factor (dB)	Type
1		4804.000	44.468	39.837	-29.532	74.000	4.631	PK
2		7205.000	55.391	47.368	-18.609	74.000	8.023	PK
3	*	7206.580	51.692	43.668	-2.308	54.000	8.024	AV
4		9608.000	43.948	34.631	-30.052	74.000	9.318	PK

Profile: 1992171R	Page No.: 67
Engineer: Pawn	
Site: AC5	Time: 2019/10/11 - 11:37
Limit: FCC_Part15.209_RE(3m)	Margin: 0
Probe: Horn_3117_00167055(1-18GHz)	Polarity: Horizontal
EUT: Hue light strip	Power: AC 120V/60Hz
Note: Mode 3:Transmit at 2440MHz by LE_Coded(S=2)(GFSK_LE)	



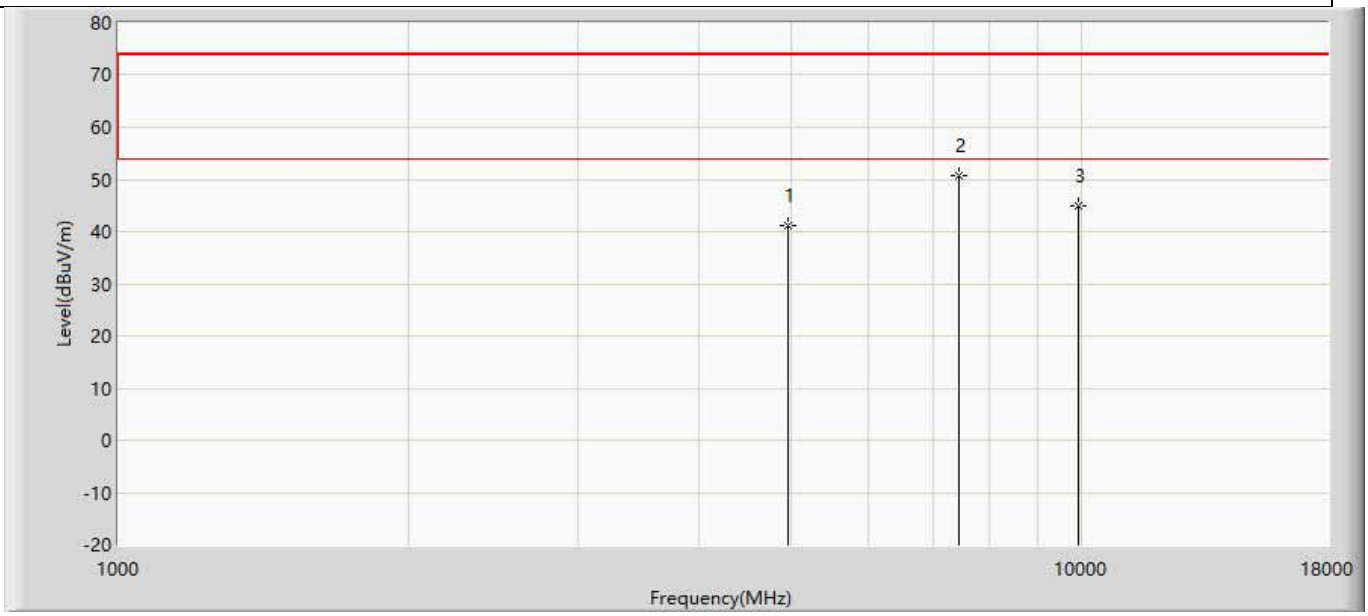
No	Mark	Frequency (MHz)	Measure Level (dBuV/m)	Reading Level (dBuV)	Over Limit (dB)	Limit (dBuV/m)	Factor (dB)	Type
1		4880.000	41.677	36.898	-32.323	74.000	4.778	PK
2	*	7315.500	48.903	40.873	-25.097	74.000	8.031	PK
3		9760.000	45.297	35.393	-28.703	74.000	9.904	PK

Profile: 1992171R	Page No.: 68
Engineer: Pawn	
Site: AC5	Time: 2019/10/11 - 11:39
Limit: FCC_Part15.209_RE(3m)	Margin: 0
Probe: Horn_3117_00167055(1-18GHz)	Polarity: Vertical
EUT: Hue light strip	Power: AC 120V/60Hz
Note: Mode 3:Transmit at 2440MHz by LE_Coded(S=2)(GFSK_LE)	



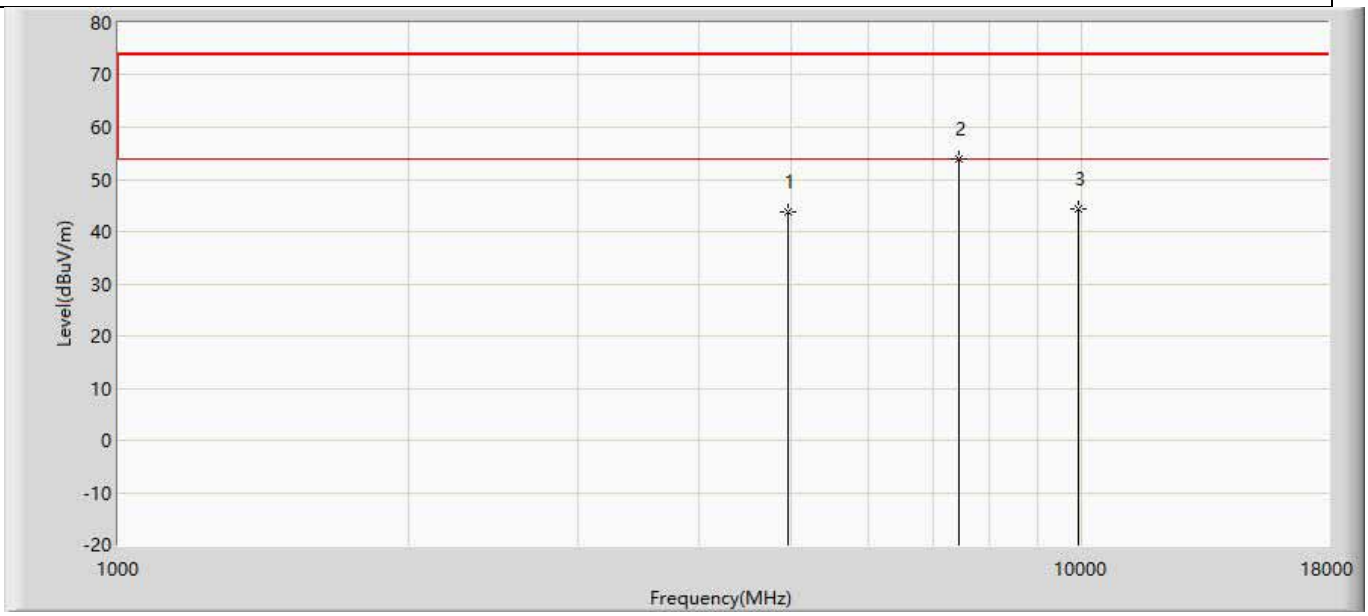
No	Mark	Frequency (MHz)	Measure Level (dBuV/m)	Reading Level (dBuV)	Over Limit (dB)	Limit (dBuV/m)	Factor (dB)	Type
1		4880.000	44.465	39.686	-29.535	74.000	4.778	PK
2		7315.500	54.367	46.337	-19.633	74.000	8.031	PK
3	*	7320.560	51.264	43.189	-2.736	54.000	8.075	AV
4		9760.000	44.960	35.056	-29.040	74.000	9.904	PK

Profile: 1992171R	Page No.: 69
Engineer: Pawn	
Site: AC5	Time: 2019/10/11 - 11:40
Limit: FCC_Part15.209_RE(3m)	Margin: 0
Probe: Horn_3117_00167055(1-18GHz)	Polarity: Horizontal
EUT: Hue light strip	Power: AC 120V/60Hz
Note: Mode 3:Transmit at 2480MHz by LE_Coded(S=2)(GFSK_LE)	



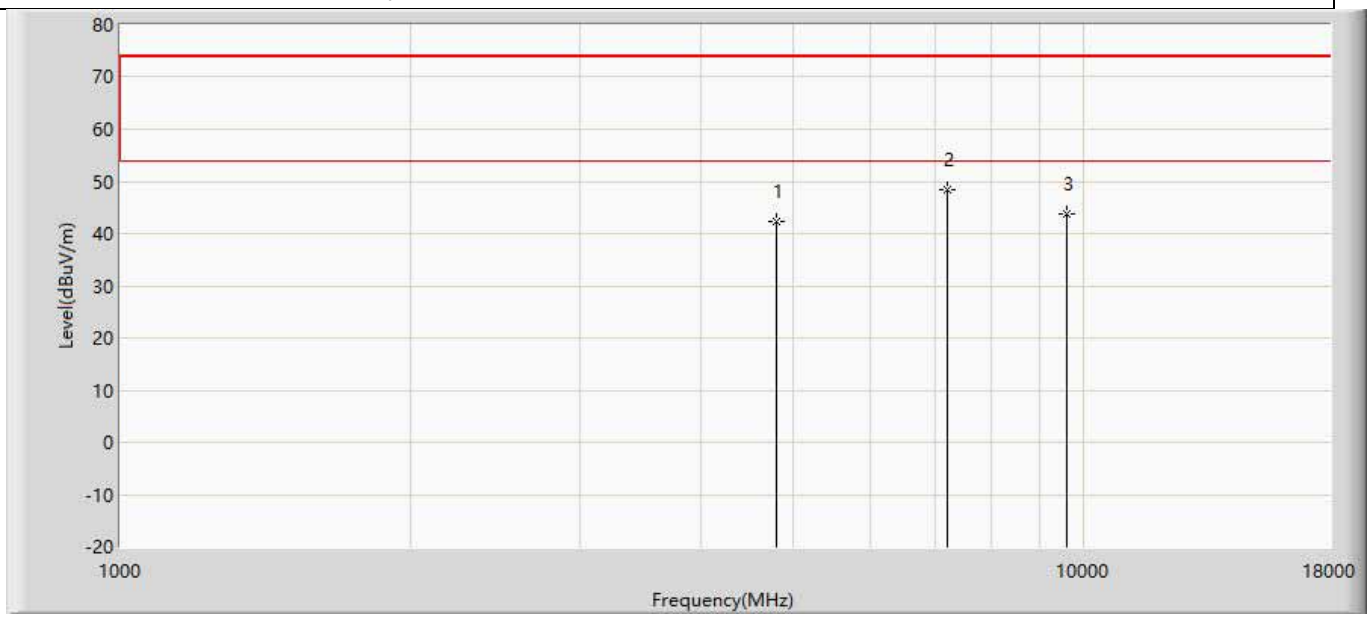
No	Mark	Frequency (MHz)	Measure Level (dBuV/m)	Reading Level (dBuV)	Over Limit (dB)	Limit (dBuV/m)	Factor (dB)	Type
1		4960.000	41.255	36.470	-32.745	74.000	4.784	PK
2	*	7443.000	50.650	42.559	-23.350	74.000	8.090	PK
3		9920.000	44.944	35.049	-29.056	74.000	9.894	PK

Profile: 1992171R	Page No.: 70
Engineer: Pawn	
Site: AC5	Time: 2019/10/11 - 11:41
Limit: FCC_Part15.209_RE(3m)	Margin: 0
Probe: Horn_3117_00167055(1-18GHz)	Polarity: Vertical
EUT: Hue light strip	Power: AC 120V/60Hz
Note: Mode 3:Transmit at 2480MHz by LE_Coded(S=2)(GFSK_LE)	



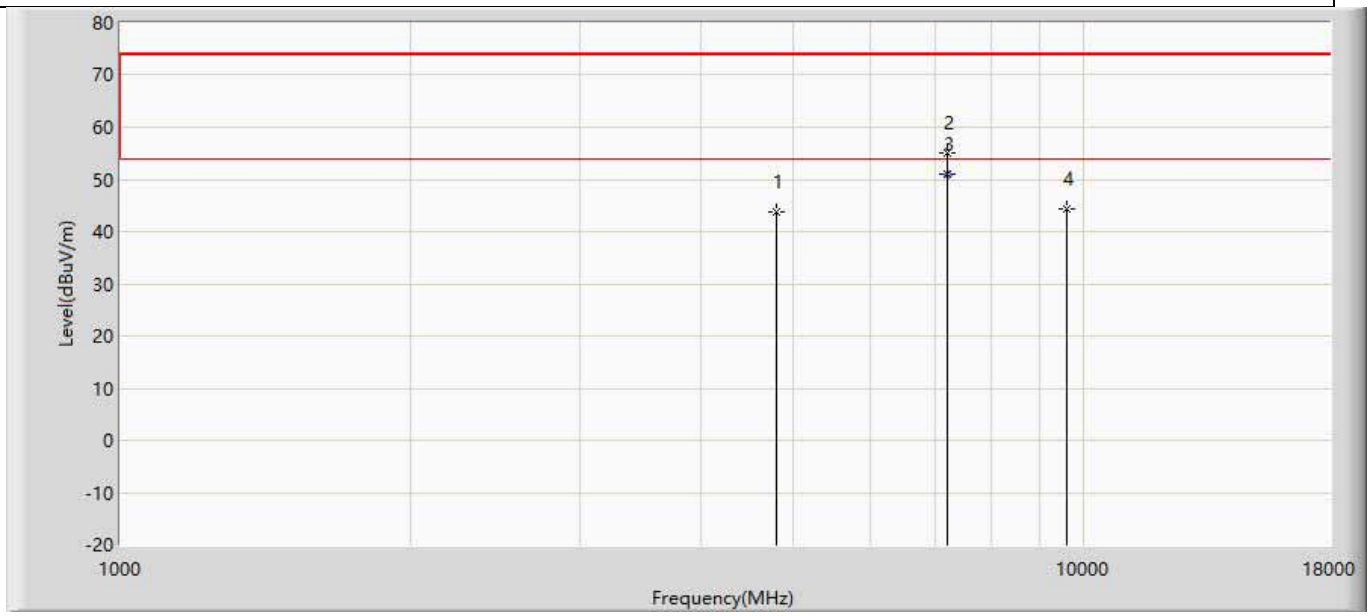
No	Mark	Frequency (MHz)	Measure Level (dBuV/m)	Reading Level (dBuV)	Over Limit (dB)	Limit (dBuV/m)	Factor (dB)	Type
1		4960.000	43.710	38.925	-30.290	74.000	4.784	PK
2	*	7443.000	53.772	45.681	-20.228	74.000	8.090	PK
3		9920.000	44.464	34.569	-29.536	74.000	9.894	PK

Profile: 1992171R	Page No.: 59
Engineer: Pawn	
Site: AC5	Time: 2019/10/11 - 11:29
Limit: FCC_Part15.209_RE(3m)	Margin: 0
Probe: Horn_3117_00167055(1-18GHz)	Polarity: Horizontal
EUT: Hue light strip	Power: AC 120V/60Hz
Note: Mode 4:Transmit at 2402MHz by LE_Coded(S=8)(GFSK_LE)	



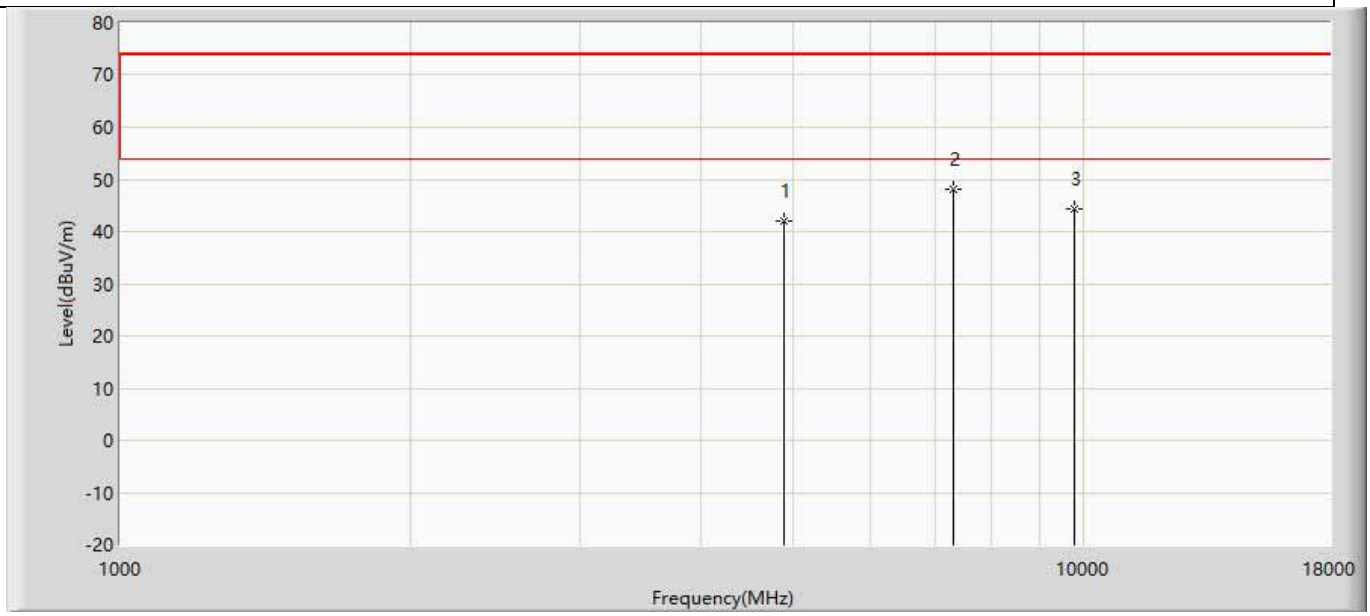
No	Mark	Frequency (MHz)	Measure Level (dBuV/m)	Reading Level (dBuV)	Over Limit (dB)	Limit (dBuV/m)	Factor (dB)	Type
1		4804.000	42.293	37.662	-31.707	74.000	4.631	PK
2	*	7205.000	48.382	40.359	-25.618	74.000	8.023	PK
3		9608.000	43.799	34.482	-30.201	74.000	9.318	PK

Profile: 1992171R	Page No.: 60
Engineer: Pawn	
Site: AC5	Time: 2019/10/11 - 11:30
Limit: FCC_Part15.209_RE(3m)	Margin: 0
Probe: Horn_3117_00167055(1-18GHz)	Polarity: Vertical
EUT: Hue light strip	Power: AC 120V/60Hz
Note: Mode 4:Transmit at 2402MHz by LE_Coded(S=8)(GFSK_LE)	



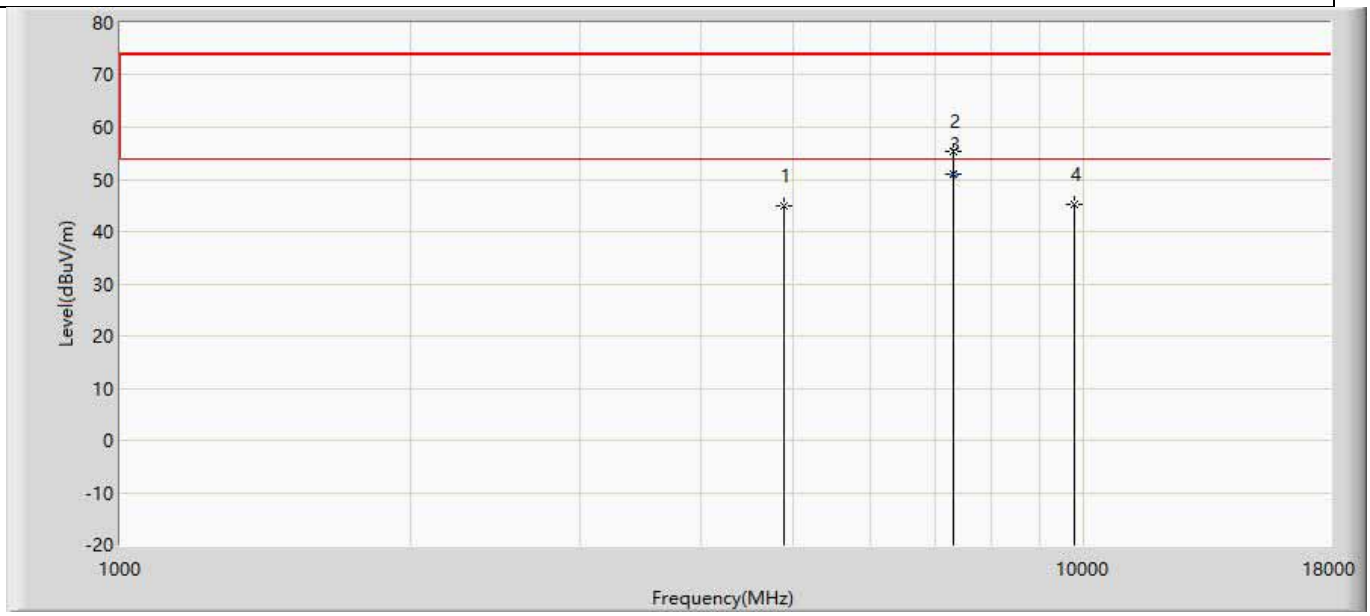
No	Mark	Frequency (MHz)	Measure Level (dBuV/m)	Reading Level (dBuV)	Over Limit (dB)	Limit (dBuV/m)	Factor (dB)	Type
1		4804.000	43.758	39.127	-30.242	74.000	4.631	PK
2		7205.000	55.061	47.038	-18.939	74.000	8.023	PK
3	*	7205.390	51.112	43.089	-2.888	54.000	8.024	AV
4		9608.000	44.409	35.092	-29.591	74.000	9.318	PK

Profile: 1992171R	Page No.: 61
Engineer: Pawn	
Site: AC5	Time: 2019/10/11 - 11:31
Limit: FCC_Part15.209_RE(3m)	Margin: 0
Probe: Horn_3117_00167055(1-18GHz)	Polarity: Horizontal
EUT: Hue light strip	Power: AC 120V/60Hz
Note: Mode 4:Transmit at 2440MHz by LE_Coded(S=8)(GFSK_LE)	



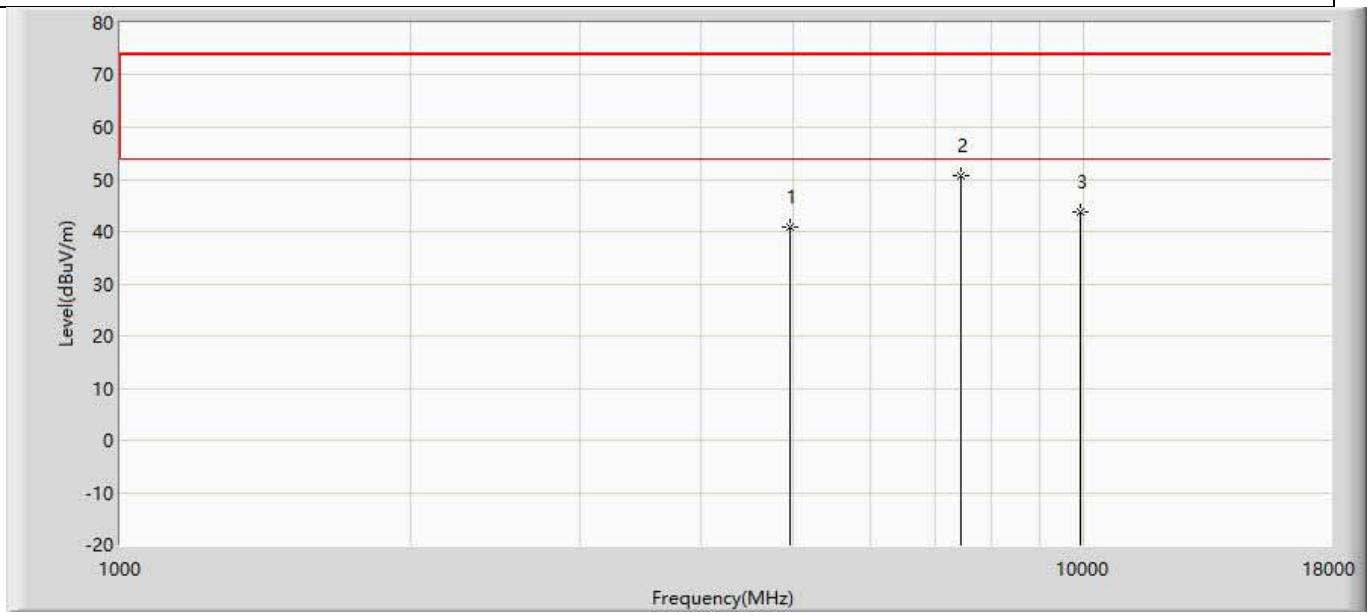
No	Mark	Frequency (MHz)	Measure Level (dBuV/m)	Reading Level (dBuV)	Over Limit (dB)	Limit (dBuV/m)	Factor (dB)	Type
1		4880.000	41.917	37.138	-32.083	74.000	4.778	PK
2	*	7315.500	48.045	40.015	-25.955	74.000	8.031	PK
3		9760.000	44.342	34.438	-29.658	74.000	9.904	PK

Profile: 1992171R	Page No.: 62
Engineer: Pawn	
Site: AC5	Time: 2019/10/11 - 11:32
Limit: FCC_Part15.209_RE(3m)	Margin: 0
Probe: Horn_3117_00167055(1-18GHz)	Polarity: Vertical
EUT: Hue light strip	Power: AC 120V/60Hz
Note: Mode 4:Transmit at 2440MHz by LE_Coded(S=8)(GFSK_LE)	



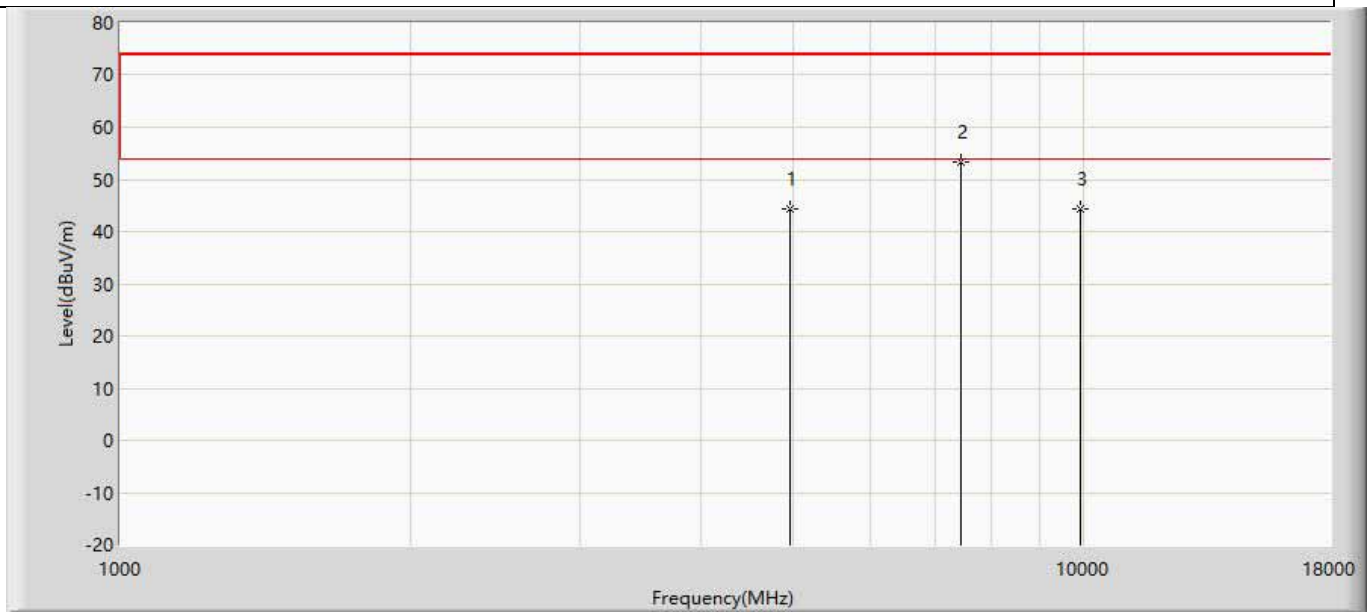
No	Mark	Frequency (MHz)	Measure Level (dBuV/m)	Reading Level (dBuV)	Over Limit (dB)	Limit (dBuV/m)	Factor (dB)	Type
1		4880.000	44.895	40.116	-29.105	74.000	4.778	PK
2		7315.500	55.362	47.332	-18.638	74.000	8.031	PK
3	*	7320.380	50.940	42.867	-3.060	54.000	8.072	AV
4		9760.000	45.333	35.429	-28.667	74.000	9.904	PK

Profile: 1992171R	Page No.: 63
Engineer: Pawn	
Site: AC5	Time: 2019/10/11 - 11:33
Limit: FCC_Part15.209_RE(3m)	Margin: 0
Probe: Horn_3117_00167055(1-18GHz)	Polarity: Horizontal
EUT: Hue light strip	Power: AC 120V/60Hz
Note: Mode 4:Transmit at 2480MHz by LE_Coded(S=8)(GFSK_LE)	



No	Mark	Frequency (MHz)	Measure Level (dBuV/m)	Reading Level (dBuV)	Over Limit (dB)	Limit (dBuV/m)	Factor (dB)	Type
1		4960.000	41.013	36.228	-32.987	74.000	4.784	PK
2	*	7443.000	50.719	42.628	-23.281	74.000	8.090	PK
3		9920.000	43.784	33.889	-30.216	74.000	9.894	PK

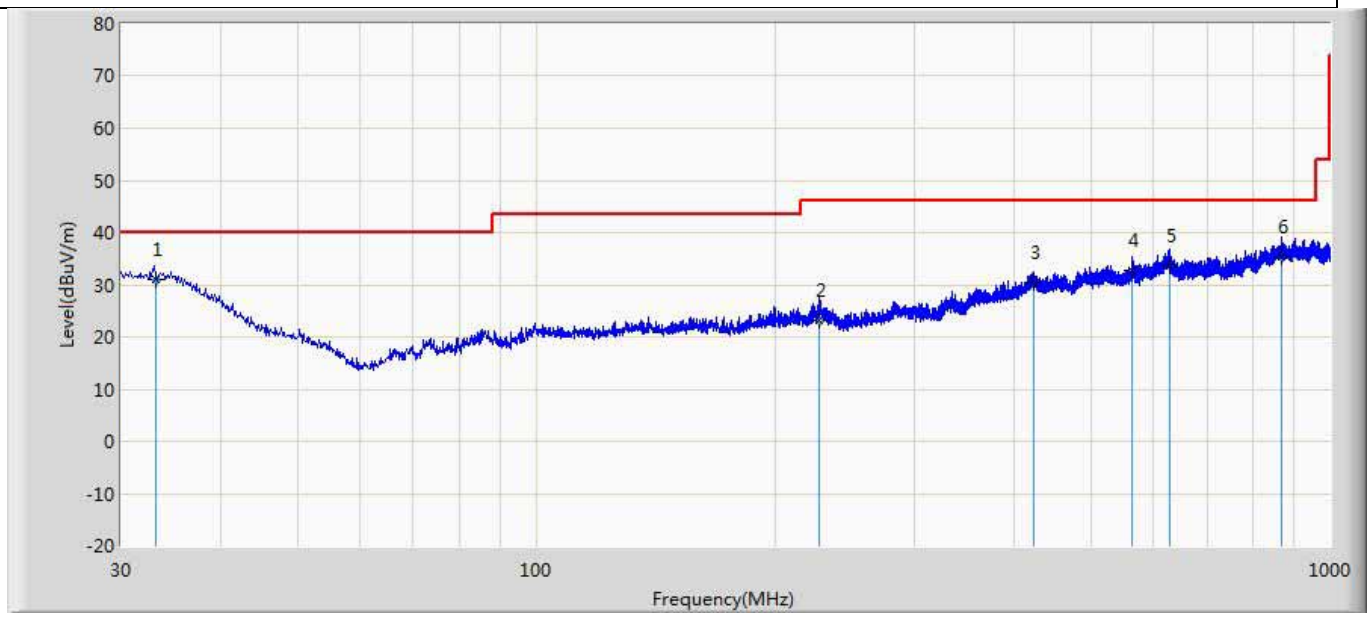
Profile: 1992171R	Page No.: 64
Engineer: Pawn	
Site: AC5	Time: 2019/10/11 - 11:34
Limit: FCC_Part15.209_RE(3m)	Margin: 0
Probe: Horn_3117_00167055(1-18GHz)	Polarity: Vertical
EUT: Hue light strip	Power: AC 120V/60Hz
Note: Mode 4:Transmit at 2480MHz by LE_Coded(S=8)(GFSK_LE)	



No	Mark	Frequency (MHz)	Measure Level (dBuV/m)	Reading Level (dBuV)	Over Limit (dB)	Limit (dBuV/m)	Factor (dB)	Type
1		4960.000	44.466	39.681	-29.534	74.000	4.784	PK
2	*	7443.000	53.427	45.336	-20.573	74.000	8.090	PK
3		9920.000	44.487	34.592	-29.513	74.000	9.894	PK

The worst case of Radiated Emission below 1GHz:

Profile: 1992171R	Page No.: 1
Engineer: Pawn	
Site: AC2	Time: 2019/10/10
Limit: FCC_Part15.209_RE(3m)	Margin: 0
Probe: AC2_3M(30-1000M)	Polarity: Horizontal
EUT: Hue light strip	Power: AC 120V/60Hz
Note: Mode 1	

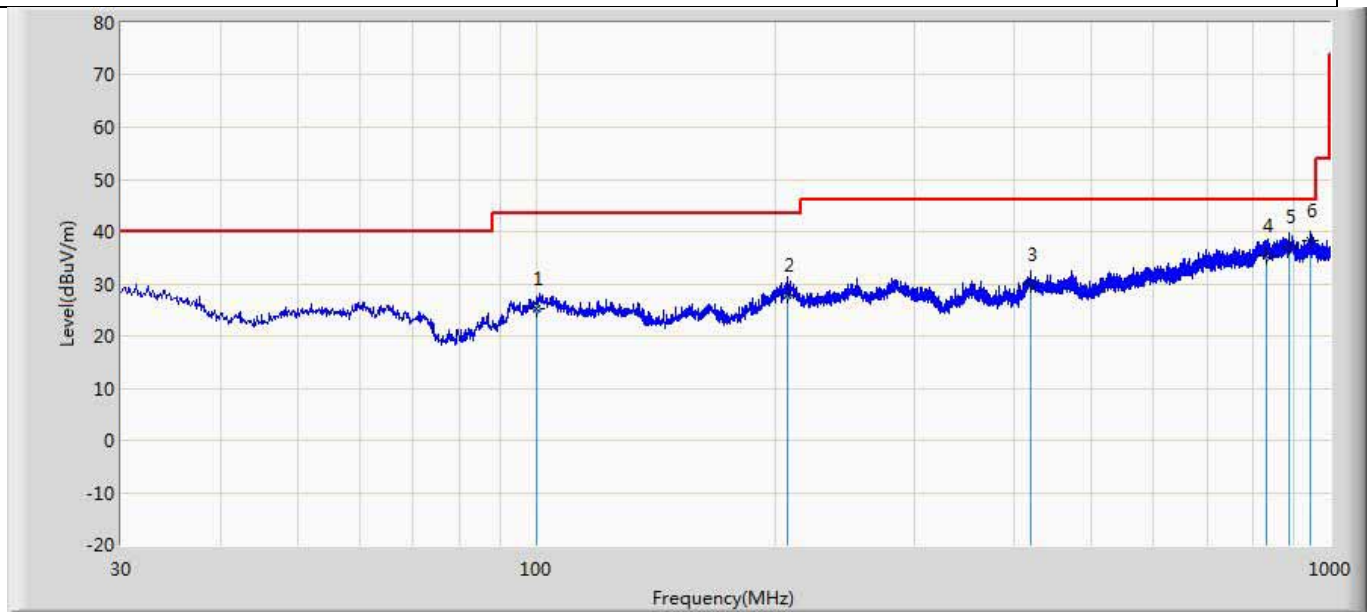


No	Mark	Frequency (MHz)	Measure Level (dBuV/m)	Reading Level (dBuV)	Over Limit (dB)	Limit (dBuV/m)	Probe (dB/m)	Cable (dB)	Amp (dB)	Ant Pos (cm)	Table Pos (deg)	Type
1	*	33.214	30.966	3.600	-9.034	40.000	20.713	6.653	0.000	100	141	QP
2		227.358	23.095	4.900	-22.905	46.000	10.729	7.466	0.000	100	228	QP
3		423.325	30.360	3.100	-15.640	46.000	19.289	7.970	0.000	100	48	QP
4		562.352	32.773	4.100	-13.227	46.000	20.342	8.331	0.000	100	114	QP
5		628.258	33.672	3.200	-12.328	46.000	21.895	8.577	0.000	100	185	QP
6		870.256	35.320	2.300	-10.680	46.000	23.841	9.178	0.000	100	214	QP

Note:

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

Profile: 1992171R	Page No.: 2
Engineer: Pawn	
Site: AC2	Time: 2019/10/10
Limit: FCC_Part15.209_RE(3m)	Margin: 0
Probe: AC2_3M(30-1000M)	Polarity: Vertical
EUT: Hue light strip	Power: AC 120V/60Hz
Note: Mode 1	



No	Mark	Frequency (MHz)	Measure Level (dBuV/m)	Reading Level (dBuV)	Over Limit (dB)	Limit (dBuV/m)	Probe (dB/m)	Cable (dB)	Amp (dB)	Ant Pos (cm)	Table Pos (deg)	Type
1		100.258	25.220	3.200	-18.280	43.500	15.147	6.873	0.000	100	149	QP
2		207.541	27.693	4.200	-15.807	43.500	16.118	7.375	0.000	100	211	QP
3		419.584	29.853	3.100	-16.147	46.000	18.786	7.967	0.000	100	18	QP
4		830.254	35.437	2.600	-10.563	46.000	23.755	9.082	0.000	100	141	QP
5		889.325	37.001	3.600	-8.999	46.000	24.177	9.224	0.000	100	174	QP
6	*	943.251	38.226	4.200	-7.774	46.000	24.690	9.336	0.000	100	188	QP

Note:
1. Measured Level = Reading Level + Factor.
2. The test frequency range, 9kHz~30MHz, 18GHz~26GHz, both of the worst case are at least 20dB below the limits, therefore no data appear in the report.
3. This limit applies for using average detector, if the test result on peak is lower than average limit, then average measurement needn't be performed.
4. As the radiated emission was performed, so conducted emission was not tested.

4.3 Emissions in non-restricted frequency band — VERDICT: PASS

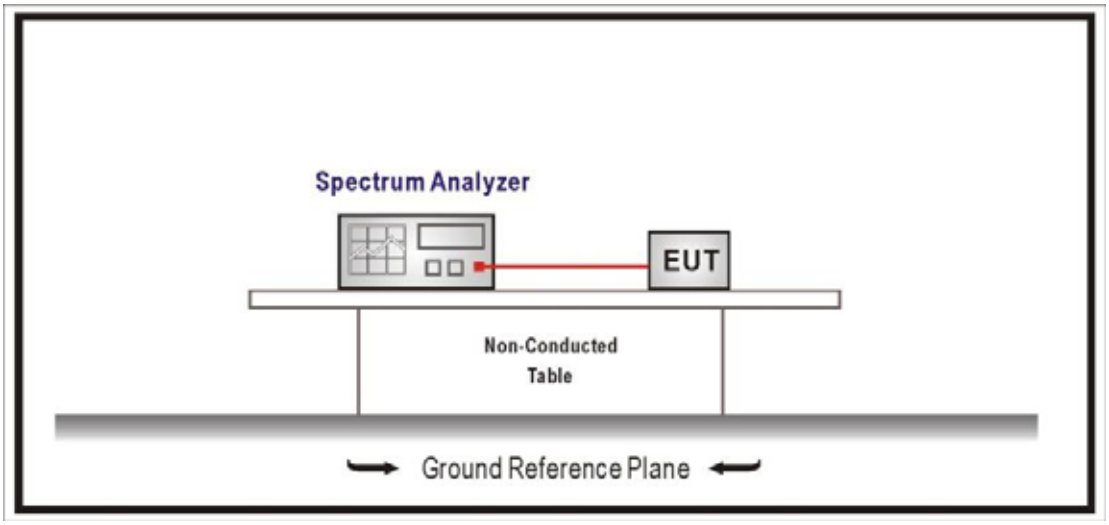
4.3.1 Limit

Standard	FCC Part 15 Subpart C Paragraph 15.247(d)
RF Output power (Detection methods)	Limit(dB)
RF Output power(Average detector)	30dBc(Note1)
RF Output power(PK detector)	20dBc(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).

4.3.2 Test Setup



4.3.3 Test Procedure

References Rule			Chapter	Description
☒	ANSI C63.10		11.11	Emissions in non-restricted frequency bands
	☒	ANSI C63.10	11.11.1	General
	☒	ANSI C63.10	11.11.2	Reference level measurement
	☒	ANSI C63.10	11.11.3	Emission level measurement

4.3.4 Test Data

Mode	Channel	Test Frequency (MHz)	Maximum In-Band PSD[a] (dBm/100kHz)	Frequency (MHz)	Out-Band PSD[b] (dBm/100kHz)	[a]-[b] (dB)	Limit (dB)	Result
1	00	2402	6.046	2400	-45.440	51.49	>20	Pass
	39	2480	5.967	2518.688	-55.574	61.54	>20	Pass
2	00	2402	4.029	2400	-27.552	31.58	>20	Pass
	39	2480	3.933	2517.984	-57.602	61.54	>20	Pass
3	00	2402	5.964	2400	-47.155	53.12	>20	Pass
	39	2480	5.892	2518.672	-55.722	61.61	>20	Pass
4	00	2402	3.256	2400	-46.93	50.19	>20	Pass
	39	2480	3.192	2518.219	-57.110	60.30	>20	Pass

Note：We evaluated all test modes, shown in the report is the worst data.

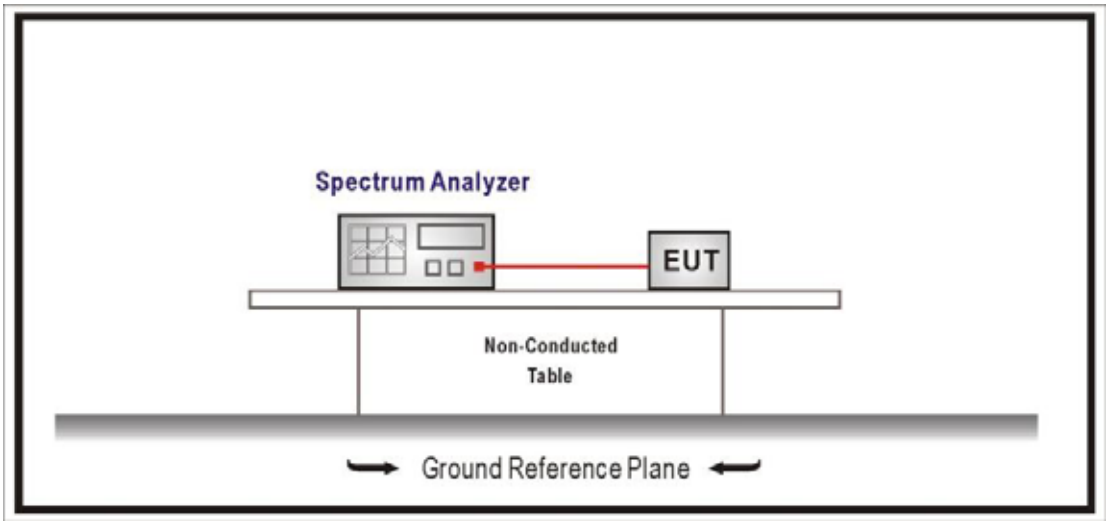
Mode 2 CH00(2402MHz)

4.4 Duty cycle — VERDICT: PASS

4.4.1 Limit

N/A

4.4.2 Test Setup



4.4.3 Test Procedure

References Rule		Chapter	Description
☒	ANSI C63.10	11.6	Duty cycle (D), transmission duration (T), and maximum power control level

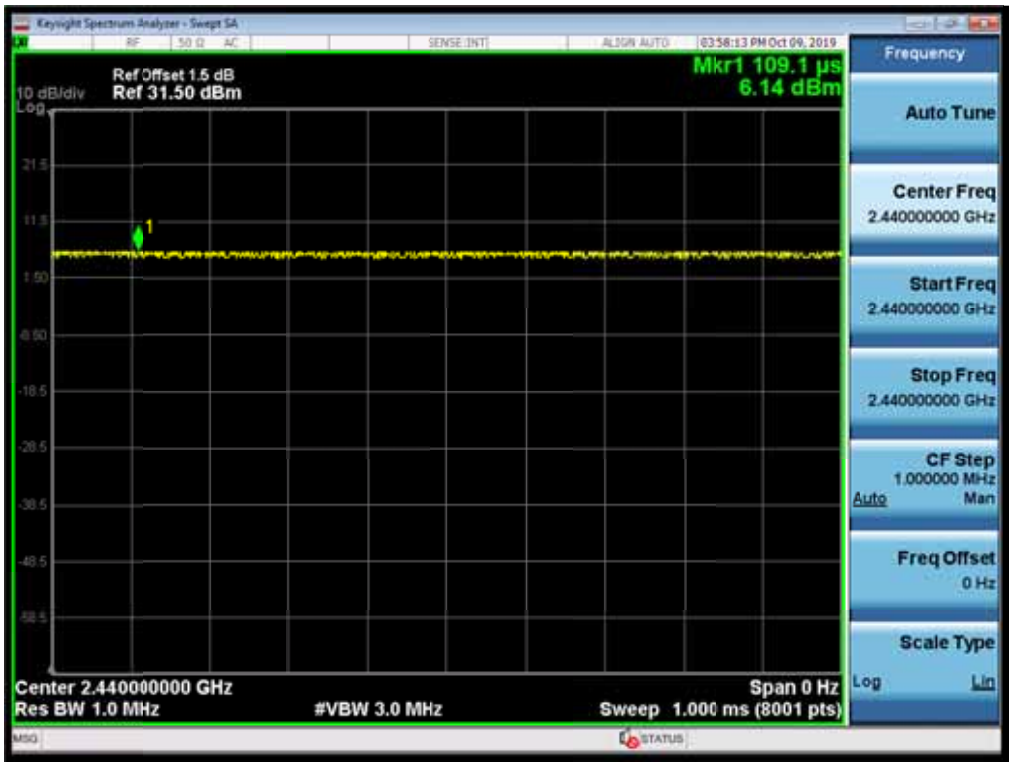
4.4.4 Test Data

Test Mode	Tx On (ms)	Tx Off (ms)	VBW	Tx On + Tx Off (ms)	Duty Cycle
Mode 1	N/A	N/A	10	N/A	100%
Mode 2	N/A	N/A	10	N/A	100%
Mode 3	N/A	N/A	10	N/A	100%
Mode 4	N/A	N/A	10	N/A	100%

Note 1: T means the minimum transmission duration over which the transmitter is on and is transmitting at its maximum power control level for the tested mode of operation.

Note 2: According to KDB 558074, when test for Radiated Emission Band Edge and Radiated Emission, for average detector set: VBW ≥ 1/T will be used.

Mode 1



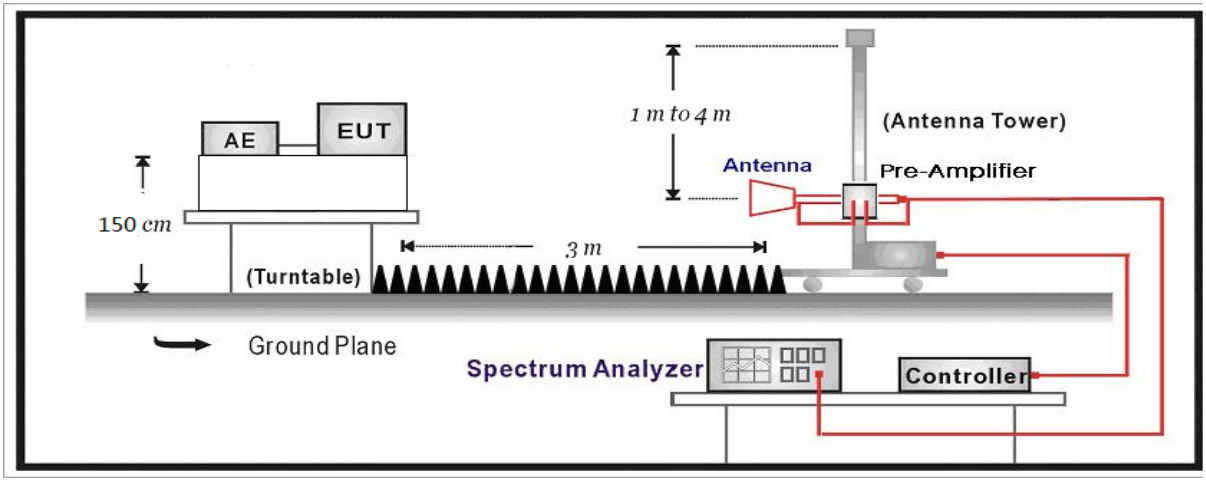
4.5 Radiated Emission Band Edge — VERDICT: PASS

4.5.1 Limit

Standard	FCC Part 15 Subpart C Paragraph 15.247(d) , 15.209			
Frequency bands (MHz)	Detector	Limit (dB μ V/m)	RBW (MHz)	Distance (m)
2310-2390 2483.5-2500	PK	74	1	3
	AV	54	1	3
Note: The field strength of emissions appearing within these frequency bands shall not exceed the limits.				

4.5.2 Test Setup

Above 1GHz Test Setup:



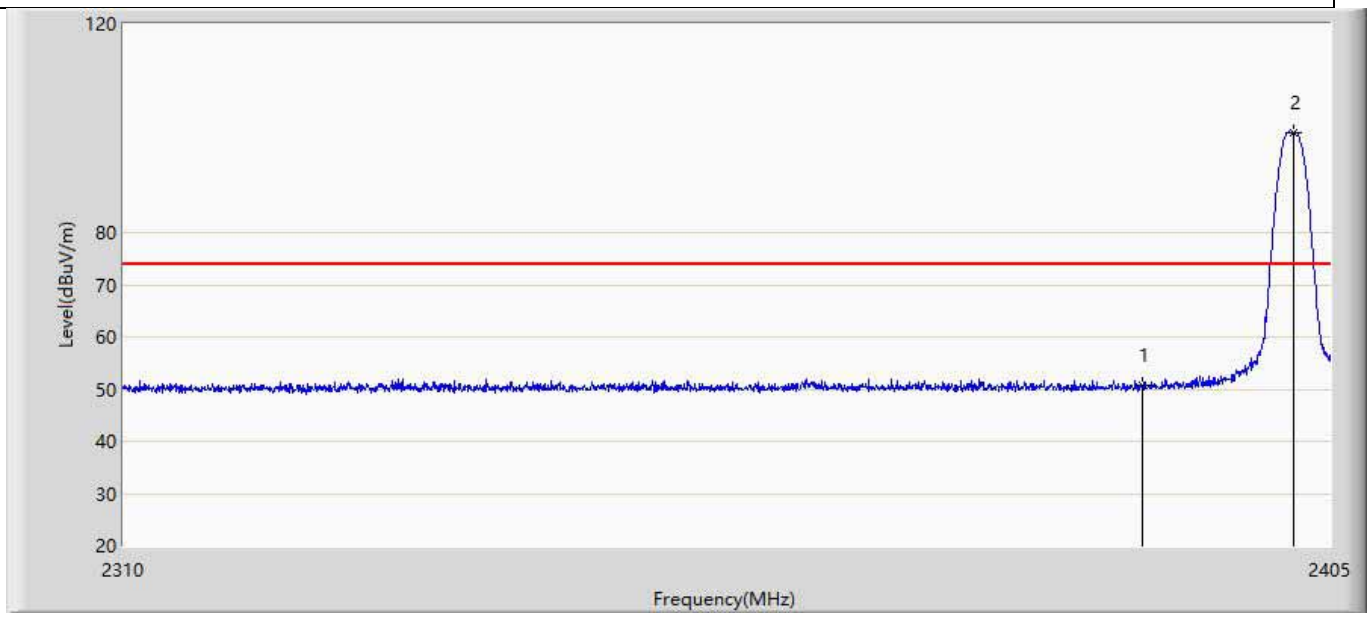
4.5.3 4.5.3 Test Procedure

	References Rule	Chapter	Description
☒	ANSI C63.10	6.10	Band-edge testing
	☒ ANSI C63.10	6.10.5	Restricted-band band-edge measurements
	☐ ANSI C63.10	6.10.6	Marker-delta method
☒	ANSI C63.10	11.12	Emissions in restricted frequency bands
	☒ ANSI C63.10	11.12.1	Radiated emission measurements
	☒ ANSI C63.10	11.12.2.7	Radiated spurious emission test
☐	ANSI C63.10	6.4	Radiated emissions from unlicensed wireless devices below 30 MHz
☐	ANSI C63.10	6.5	Radiated emissions from unlicensed wireless devices in the frequency range of 30 MHz to 1000 MHz
☒	ANSI C63.10	6.6	Radiated emissions from unlicensed wireless devices above 1 GHz

4.5.4 Test Data

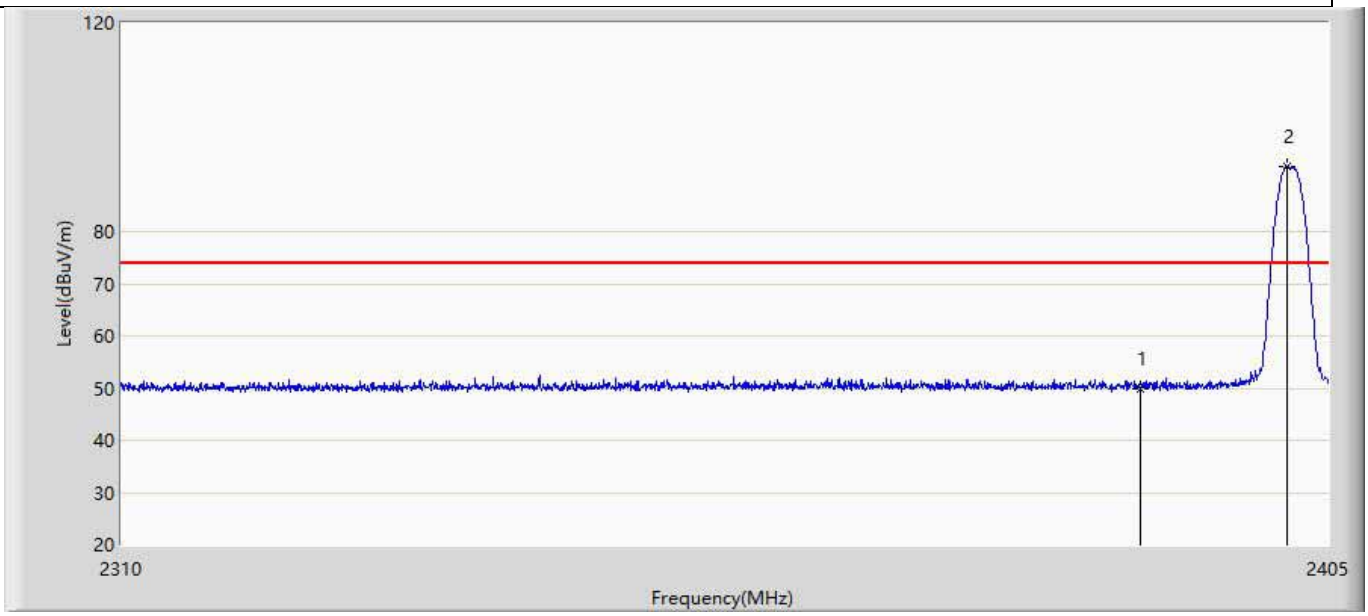
Murata:

Profile: 1992171R	Page No.: 9
Engineer: Pawn	
Site: AC5	Time: 2019/10/10 - 19:18
Limit: FCC_Part15.209_RE(3m)	Margin: 0
Probe: Horn_3117_00167055(1-18GHz)	Polarity: Horizontal
EUT: Hue light strip	Power: AC 120V/60Hz
Note: Mode 1:Transmit at 2402MHz by LE_1Mbps(GFSK_LE)	



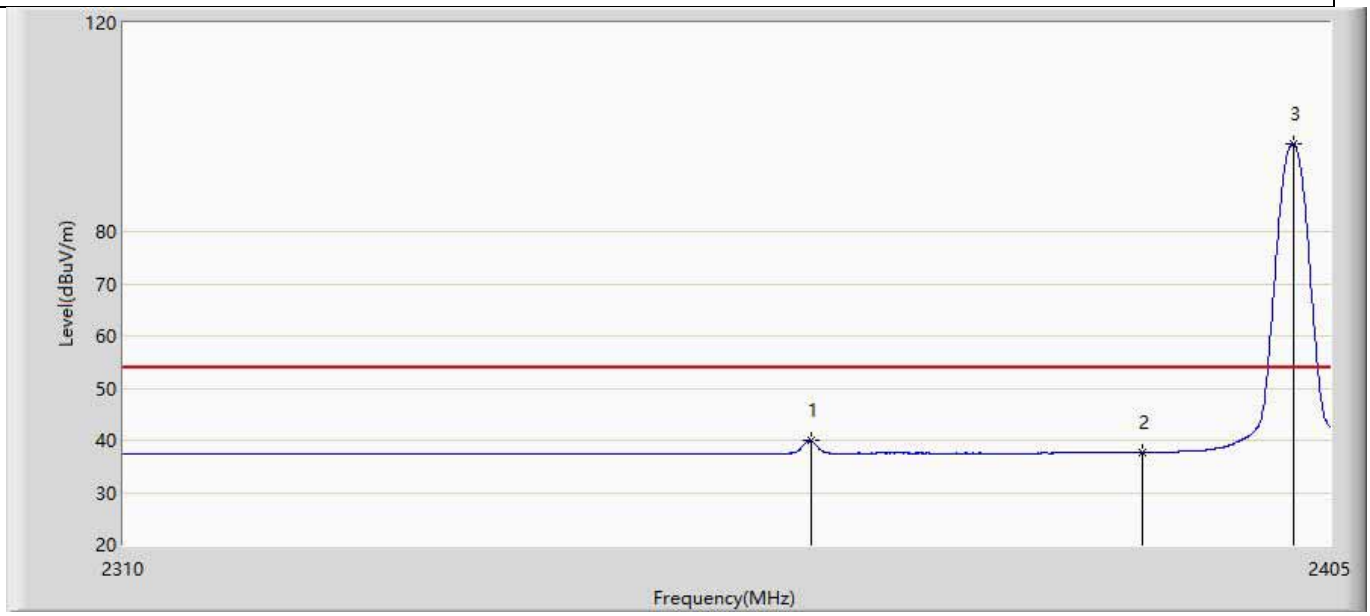
No	Mark	Frequency (MHz)	Measure Level (dBuV/m)	Reading Level (dBuV)	Over Limit (dB)	Limit (dBuV/m)	Factor (dB)	Type
1		2390.000	50.672	15.215	-23.328	74.000	35.458	PK
2	*	2402.055	99.187	63.717	N/A	N/A	35.469	PK

Profile: 1992171R	Page No.: 10
Engineer: Pawn	
Site: AC5	Time: 2019/10/10 - 19:23
Limit: FCC_Part15.209_RE(3m)	Margin: 0
Probe: Horn_3117_00167055(1-18GHz)	Polarity: Vertical
EUT: Hue light strip	Power: AC 120V/60Hz
Note: Mode 1:Transmit at 2402MHz by LE_1Mbps(GFSK_LE)	



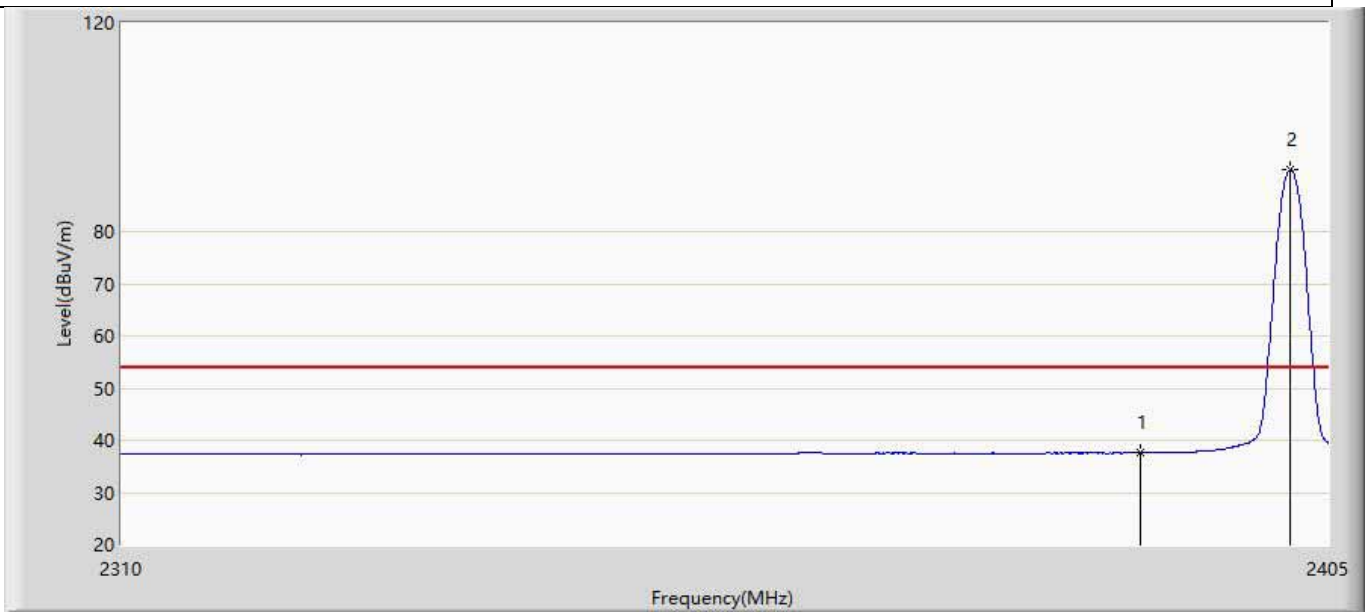
No	Mark	Frequency (MHz)	Measure Level (dBuV/m)	Reading Level (dBuV)	Over Limit (dB)	Limit (dBuV/m)	Factor (dB)	Type
1		2390.000	49.988	14.531	-24.012	74.000	35.458	PK
2	*	2401.770	92.374	56.905	N/A	N/A	35.469	PK

Profile: 1992171R	Page No.: 11
Engineer: Pawn	
Site: AC5	Time: 2019/10/10 - 19:25
Limit: FCC_Part15.209_RE(3m)	Margin: 0
Probe: Horn_3117_00167055(1-18GHz)	Polarity: Horizontal
EUT: Hue light strip	Power: AC 120V/60Hz
Note: Mode 1:Transmit at 2402MHz by LE_1Mbps(GFSK_LE)	



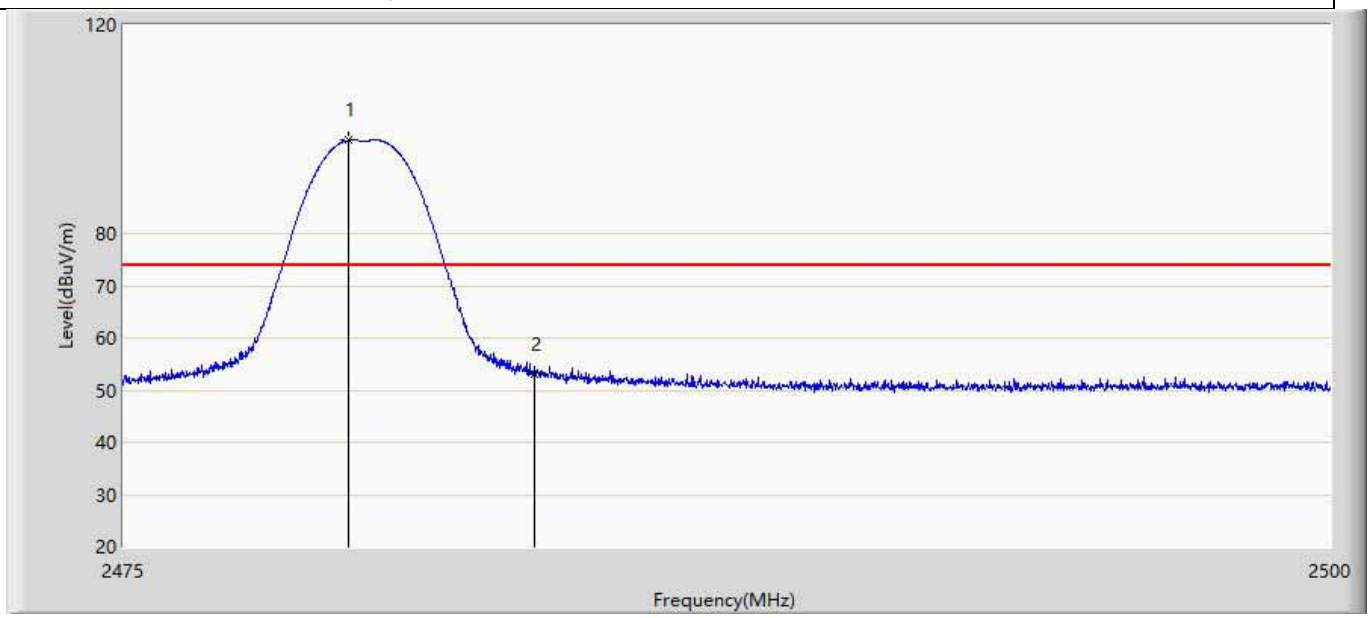
No	Mark	Frequency (MHz)	Measure Level (dBuV/m)	Reading Level (dBuV)	Over Limit (dB)	Limit (dBuV/m)	Factor (dB)	Type
1		2363.722	39.877	4.437	-14.123	54.000	35.440	AV
2		2390.000	37.639	2.182	-16.361	54.000	35.458	AV
3	*	2402.055	96.867	61.397	N/A	N/A	35.469	AV

Profile: 1992171R	Page No.: 12
Engineer: Pawn	
Site: AC5	Time: 2019/10/10 - 19:27
Limit: FCC_Part15.209_RE(3m)	Margin: 0
Probe: Horn_3117_00167055(1-18GHz)	Polarity: Vertical
EUT: Hue light strip	Power: AC 120V/60Hz
Note: Mode 1:Transmit at 2402MHz by LE_1Mbps(GFSK_LE)	



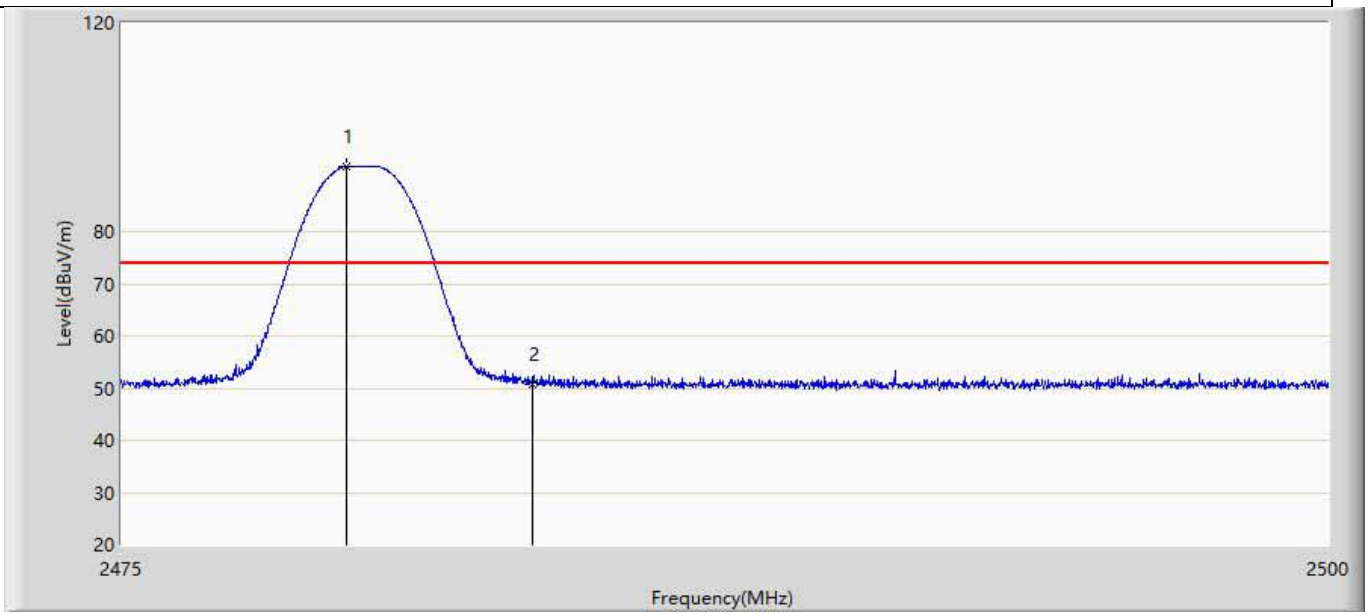
No	Mark	Frequency (MHz)	Measure Level (dBuV/m)	Reading Level (dBuV)	Over Limit (dB)	Limit (dBuV/m)	Factor (dB)	Type
1		2390.000	37.614	2.157	-16.386	54.000	35.458	AV
2	*	2401.913	91.773	56.304	N/A	N/A	35.469	AV

Profile: 1992171R	Page No.: 25
Engineer: Pawn	
Site: AC5	Time: 2019/10/10 - 19:52
Limit: FCC_Part15.209_RE(3m)	Margin: 0
Probe: Horn_3117_00167055(1-18GHz)	Polarity: Horizontal
EUT: Hue light strip	Power: AC 120V/60Hz
Note: Mode 1:Transmit at 2480MHz by LE_1Mbps(GFSK_LE)	



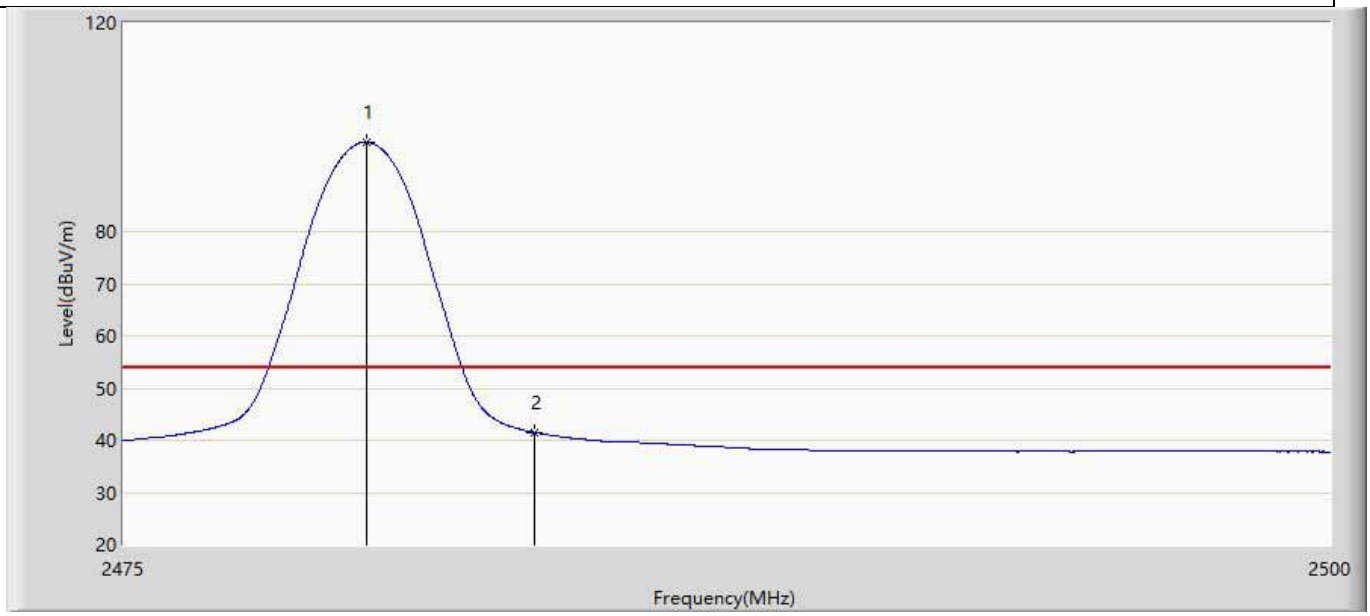
No	Mark	Frequency (MHz)	Measure Level (dBuV/m)	Reading Level (dBuV)	Over Limit (dB)	Limit (dBuV/m)	Factor (dB)	Type
1	*	2479.663	97.863	62.367	N/A	N/A	35.496	PK
2		2483.500	53.134	17.616	-20.866	74.000	35.517	PK

Profile: 1992171R	Page No.: 26
Engineer: Pawn	
Site: AC5	Time: 2019/10/10 - 19:55
Limit: FCC_Part15.209_RE(3m)	Margin: 0
Probe: Horn_3117_00167055(1-18GHz)	Polarity: Vertical
EUT: Hue light strip	Power: AC 120V/60Hz
Note: Mode 1:Transmit at 2480MHz by LE_1Mbps(GFSK_LE)	



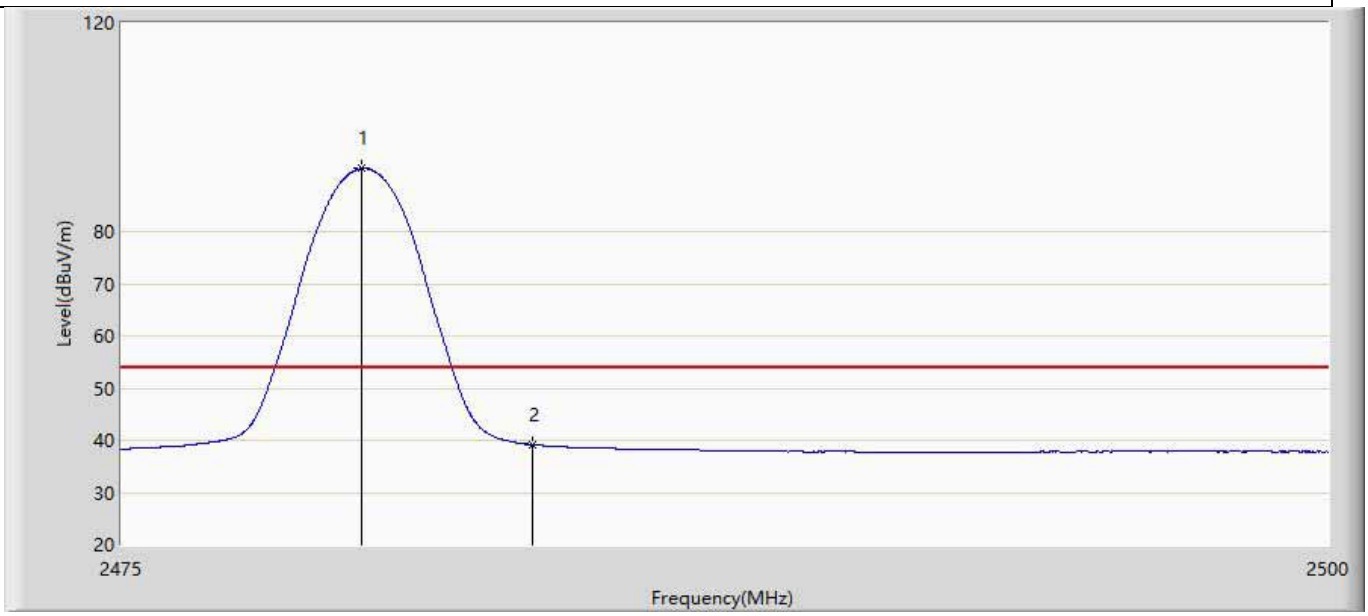
No	Mark	Frequency (MHz)	Measure Level (dBuV/m)	Reading Level (dBuV)	Over Limit (dB)	Limit (dBuV/m)	Factor (dB)	Type
1	*	2479.650	92.529	57.033	N/A	N/A	35.496	PK
2		2483.500	50.685	15.167	-23.315	74.000	35.517	PK

Profile: 1992171R	Page No.: 27
Engineer: Pawn	
Site: AC5	Time: 2019/10/10 - 19:56
Limit: FCC_Part15.209_RE(3m)	Margin: 0
Probe: Horn_3117_00167055(1-18GHz)	Polarity: Horizontal
EUT: Hue light strip	Power: AC 120V/60Hz
Note: Mode 1:Transmit at 2480MHz by LE_1Mbps(GFSK_LE)	



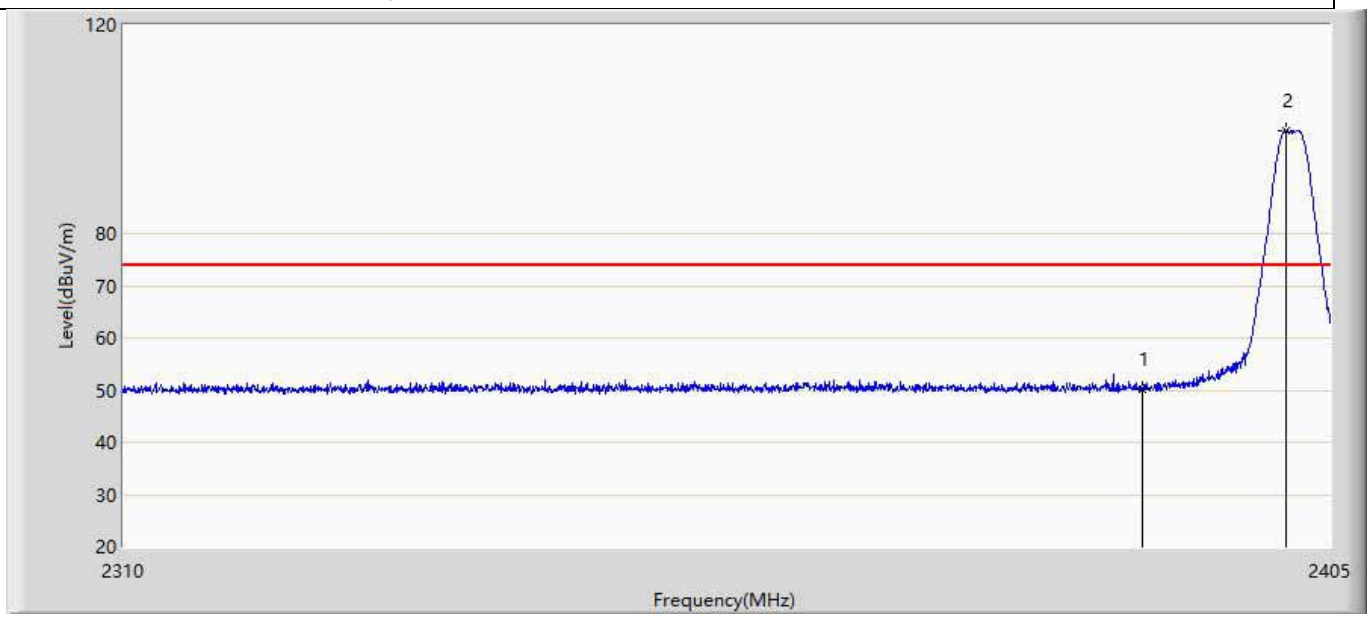
No	Mark	Frequency (MHz)	Measure Level (dBuV/m)	Reading Level (dBuV)	Over Limit (dB)	Limit (dBuV/m)	Factor (dB)	Type
1	*	2480.012	97.103	61.605	N/A	N/A	35.498	AV
2		2483.500	41.491	5.973	-12.509	54.000	35.517	AV

Profile: 1992171R	Page No.: 28
Engineer: Pawn	
Site: AC5	Time: 2019/10/10 - 19:58
Limit: FCC_Part15.209_RE(3m)	Margin: 0
Probe: Horn_3117_00167055(1-18GHz)	Polarity: Vertical
EUT: Hue light strip	Power: AC 120V/60Hz
Note: Mode 1:Transmit at 2480MHz by LE_1Mbps(GFSK_LE)	



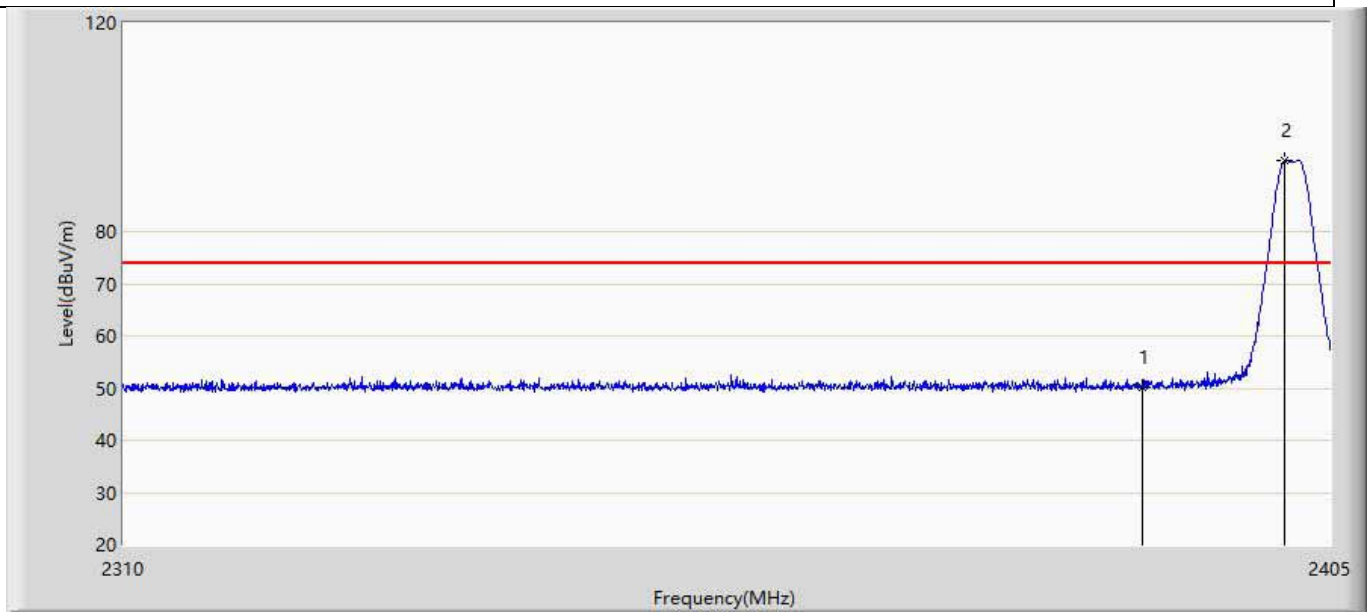
No	Mark	Frequency (MHz)	Measure Level (dBuV/m)	Reading Level (dBuV)	Over Limit (dB)	Limit (dBuV/m)	Factor (dB)	Type
1	*	2479.975	92.081	56.583	N/A	N/A	35.498	AV
2		2483.500	39.171	3.653	-14.829	54.000	35.517	AV

Profile: 1992171R	Page No.: 13
Engineer: Pawn	
Site: AC5	Time: 2019/10/10 - 19:30
Limit: FCC_Part15.209_RE(3m)	Margin: 0
Probe: Horn_3117_00167055(1-18GHz)	Polarity: Horizontal
EUT: Hue light strip	Power: AC 120V/60Hz
Note: Mode 2:Transmit at 2402MHz by LE_2Mbps(GFSK_LE)	



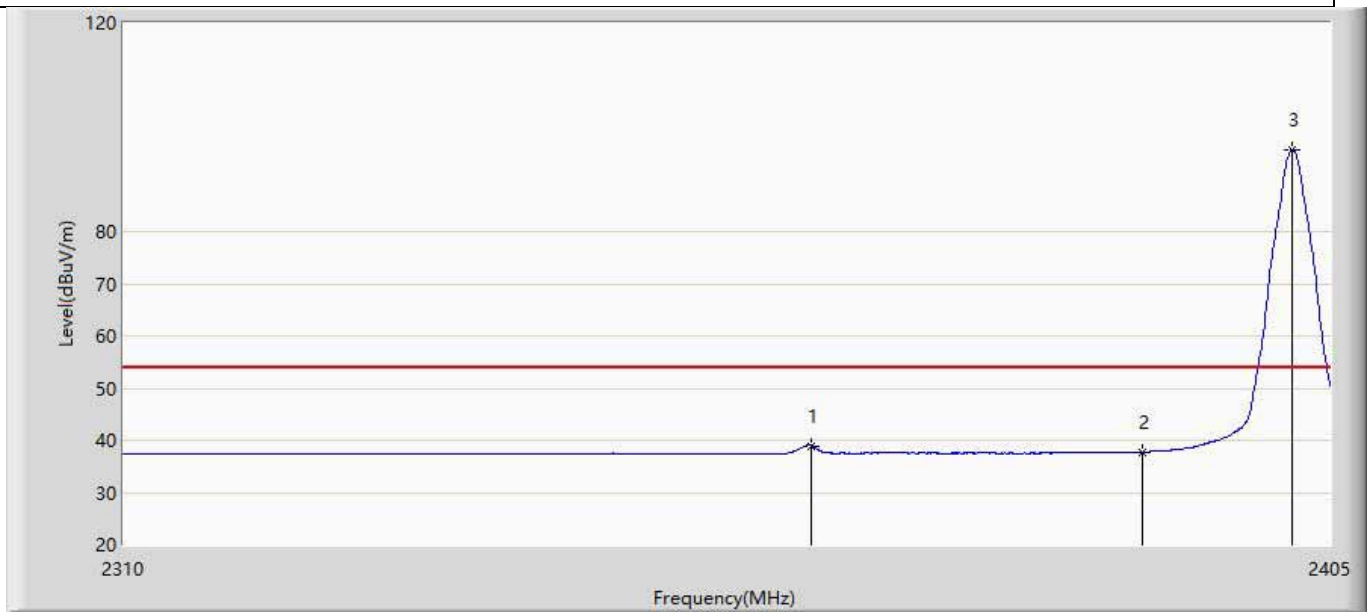
No	Mark	Frequency (MHz)	Measure Level (dBuV/m)	Reading Level (dBuV)	Over Limit (dB)	Limit (dBuV/m)	Factor (dB)	Type
1		2390.000	50.084	14.627	-23.916	74.000	35.458	PK
2	*	2401.485	99.741	64.272	N/A	N/A	35.468	PK

Profile: 1992171R	Page No.: 14
Engineer: Pawn	
Site: AC5	Time: 2019/10/10 - 19:31
Limit: FCC_Part15.209_RE(3m)	Margin: 0
Probe: Horn_3117_00167055(1-18GHz)	Polarity: Vertical
EUT: Hue light strip	Power: AC 120V/60Hz
Note: Mode 2:Transmit at 2402MHz by LE_2Mbps(GFSK_LE)	



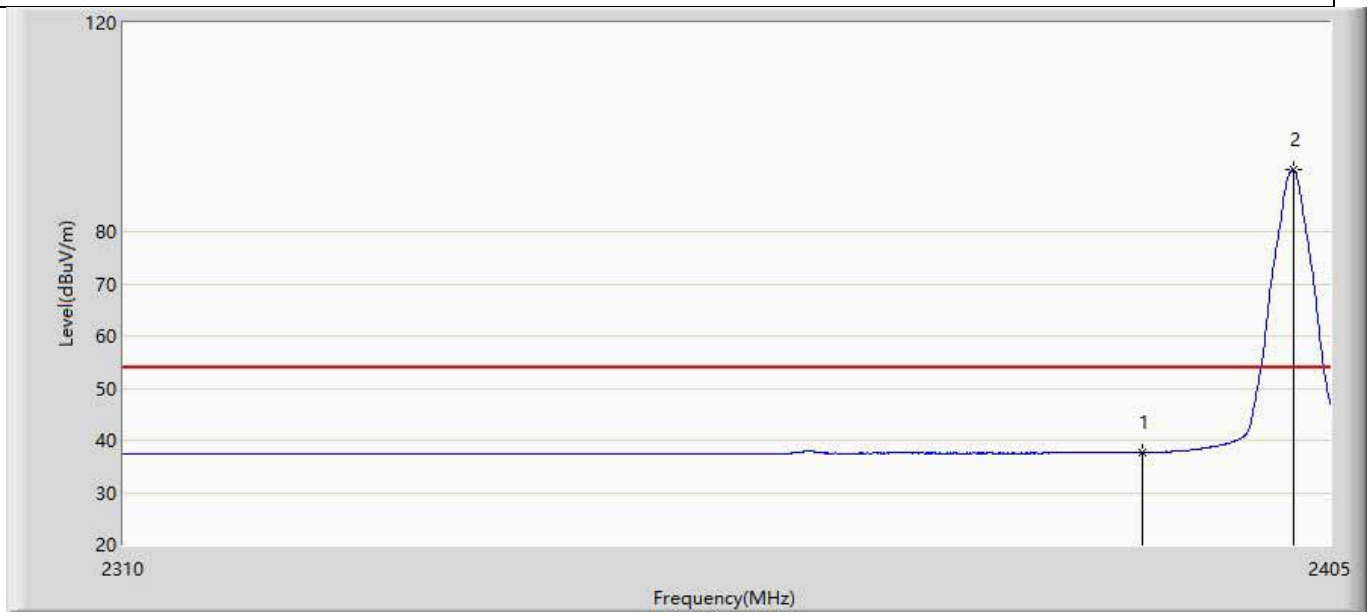
No	Mark	Frequency (MHz)	Measure Level (dBuV/m)	Reading Level (dBuV)	Over Limit (dB)	Limit (dBuV/m)	Factor (dB)	Type
1		2390.000	50.229	14.772	-23.771	74.000	35.458	PK
2	*	2401.343	93.570	58.101	N/A	N/A	35.468	PK

Profile: 1992171R	Page No.: 15
Engineer: Pawn	
Site: AC5	Time: 2019/10/10 - 19:33
Limit: FCC_Part15.209_RE(3m)	Margin: 0
Probe: Horn_3117_00167055(1-18GHz)	Polarity: Horizontal
EUT: Hue light strip	Power: AC 120V/60Hz
Note: Mode 2:Transmit at 2402MHz by LE_2Mbps(GFSK_LE)	



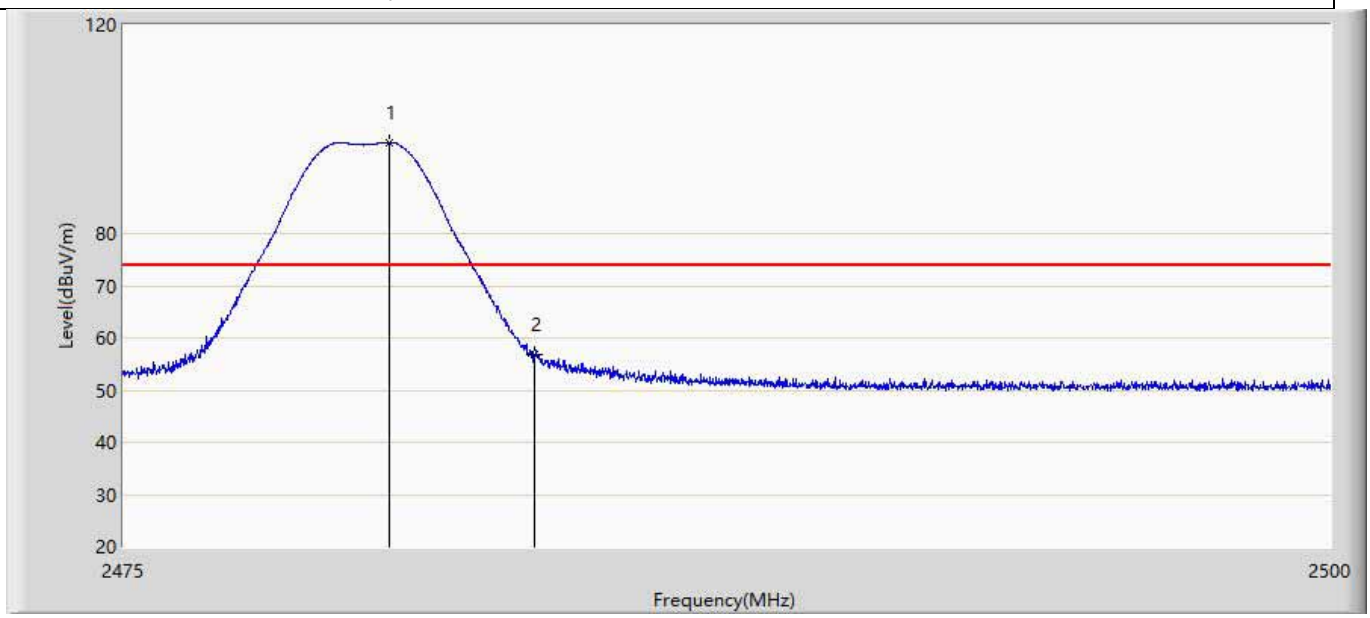
No	Mark	Frequency (MHz)	Measure Level (dBuV/m)	Reading Level (dBuV)	Over Limit (dB)	Limit (dBuV/m)	Factor (dB)	Type
1		2363.722	38.985	3.545	-15.015	54.000	35.440	AV
2		2390.000	37.776	2.319	-16.224	54.000	35.458	AV
3	*	2401.913	95.679	60.210	N/A	N/A	35.469	AV

Profile: 1992171R	Page No.: 16
Engineer: Pawn	
Site: AC5	Time: 2019/10/10 - 19:35
Limit: FCC_Part15.209_RE(3m)	Margin: 0
Probe: Horn_3117_00167055(1-18GHz)	Polarity: Vertical
EUT: Hue light strip	Power: AC 120V/60Hz
Note: Mode 2:Transmit at 2402MHz by LE_2Mbps(GFSK_LE)	



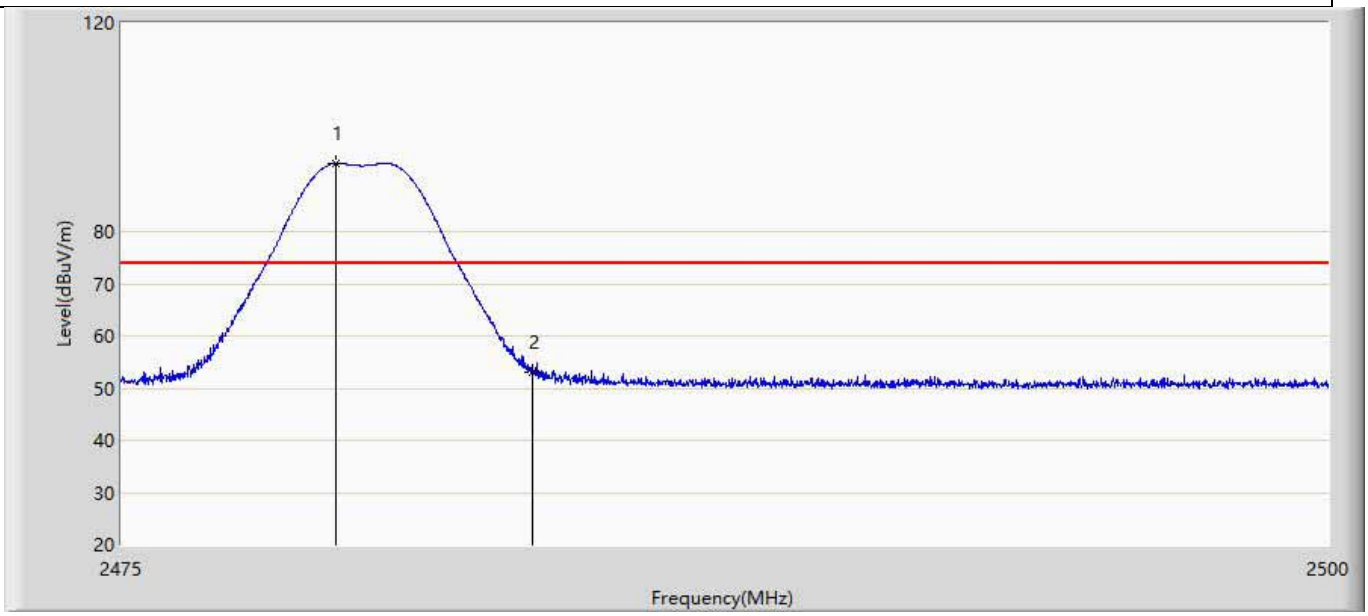
No	Mark	Frequency (MHz)	Measure Level (dBuV/m)	Reading Level (dBuV)	Over Limit (dB)	Limit (dBuV/m)	Factor (dB)	Type
1		2390.000	37.671	2.214	-16.329	54.000	35.458	AV
2	*	2402.055	91.863	56.393	N/A	N/A	35.469	AV

Profile: 1992171R	Page No.: 29
Engineer: Pawn	
Site: AC5	Time: 2019/10/10 - 20:00
Limit: FCC_Part15.209_RE(3m)	Margin: 0
Probe: Horn_3117_00167055(1-18GHz)	Polarity: Horizontal
EUT: Hue light strip	Power: AC 120V/60Hz
Note: Mode 2:Transmit at 2480MHz by LE_2Mbps(GFSK_LE)	



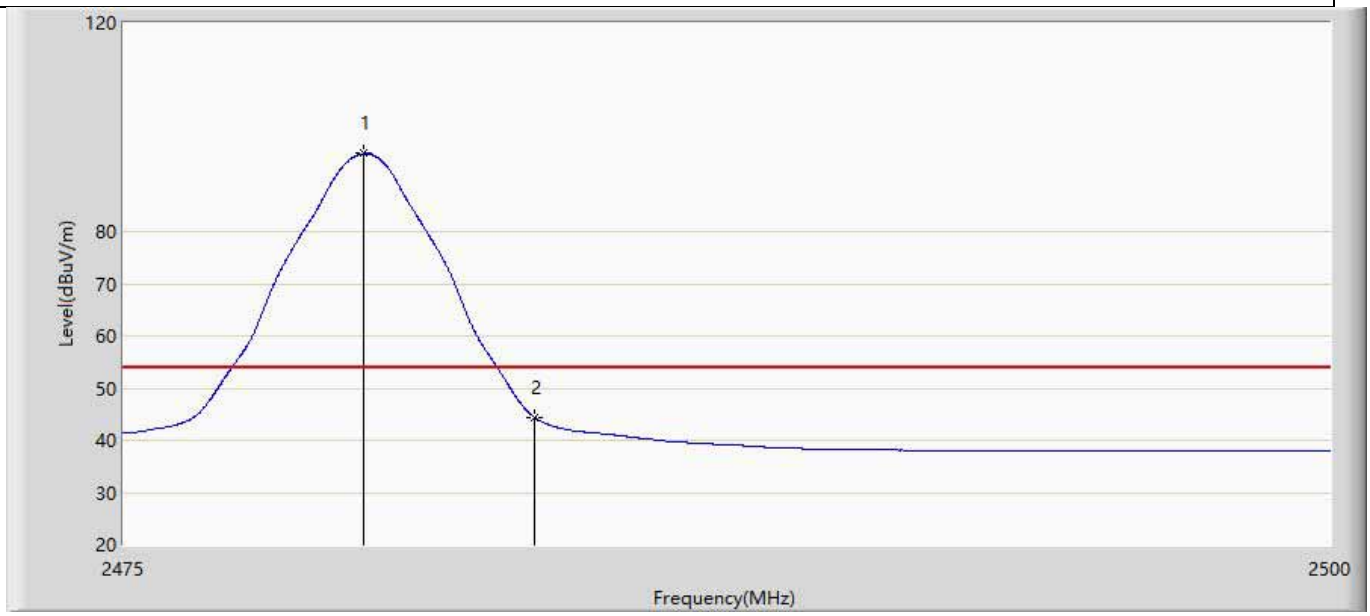
No	Mark	Frequency (MHz)	Measure Level (dBuV/m)	Reading Level (dBuV)	Over Limit (dB)	Limit (dBuV/m)	Factor (dB)	Type
1	*	2480.488	97.508	62.007	N/A	N/A	35.500	PK
2		2483.500	56.830	21.312	-17.170	74.000	35.517	PK

Profile: 1992171R	Page No.: 30
Engineer: Pawn	
Site: AC5	Time: 2019/10/10 - 20:02
Limit: FCC_Part15.209_RE(3m)	Margin: 0
Probe: Horn_3117_00167055(1-18GHz)	Polarity: Vertical
EUT: Hue light strip	Power: AC 120V/60Hz
Note: Mode 2:Transmit at 2480MHz by LE_2Mbps(GFSK_LE)	



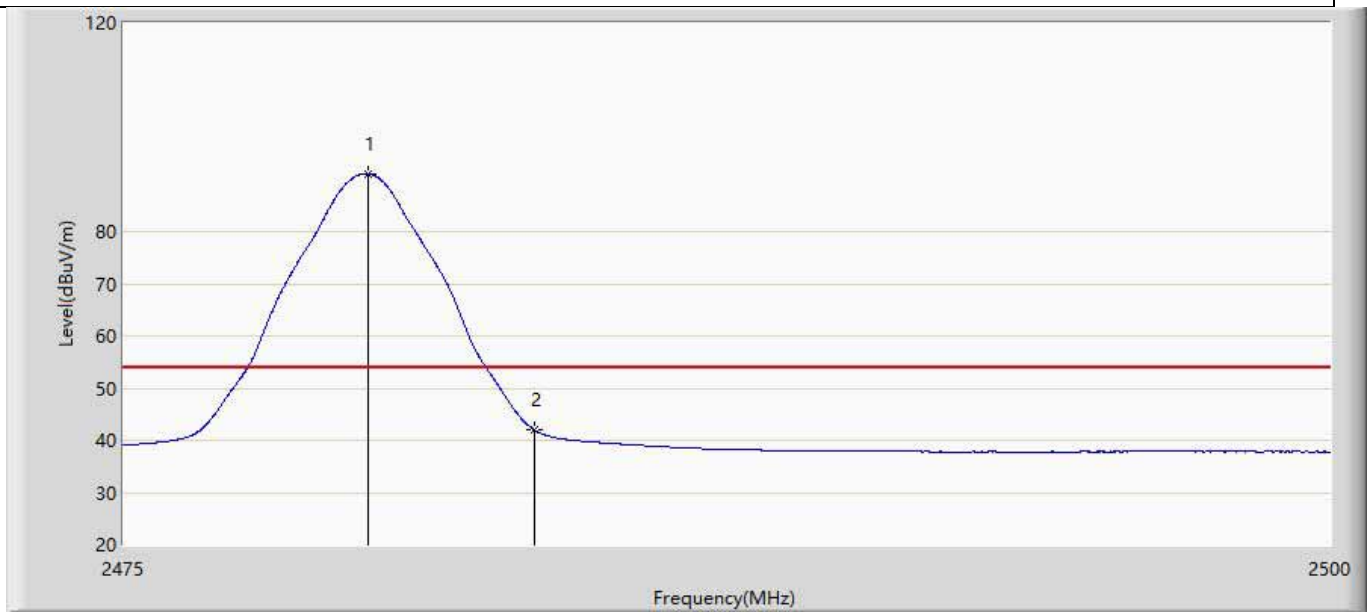
No	Mark	Frequency (MHz)	Measure Level (dBuV/m)	Reading Level (dBuV)	Over Limit (dB)	Limit (dBuV/m)	Factor (dB)	Type
1	*	2479.425	93.103	57.608	N/A	N/A	35.495	PK
2		2483.500	53.072	17.554	-20.928	74.000	35.517	PK

Profile: 1992171R	Page No.: 31
Engineer: Pawn	
Site: AC5	Time: 2019/10/10 - 20:04
Limit: FCC_Part15.209_RE(3m)	Margin: 0
Probe: Horn_3117_00167055(1-18GHz)	Polarity: Horizontal
EUT: Hue light strip	Power: AC 120V/60Hz
Note: Mode 2:Transmit at 2480MHz by LE_2Mbps(GFSK_LE)	



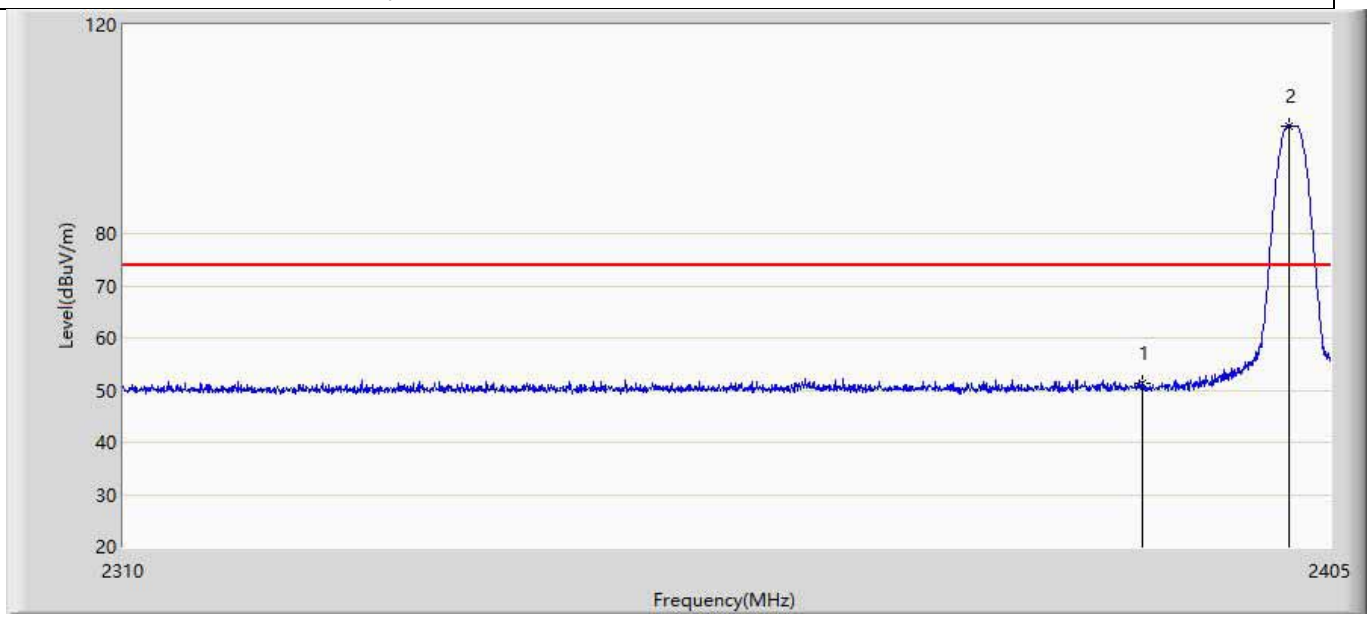
No	Mark	Frequency (MHz)	Measure Level (dBuV/m)	Reading Level (dBuV)	Over Limit (dB)	Limit (dBuV/m)	Factor (dB)	Type
1	*	2479.975	94.938	59.440	N/A	N/A	35.498	AV
2		2483.500	44.349	8.831	-9.651	54.000	35.517	AV

Profile: 1992171R	Page No.: 32
Engineer: Pawn	
Site: AC5	Time: 2019/10/10 - 20:06
Limit: FCC_Part15.209_RE(3m)	Margin: 0
Probe: Horn_3117_00167055(1-18GHz)	Polarity: Vertical
EUT: Hue light strip	Power: AC 120V/60Hz
Note: Mode 2:Transmit at 2480MHz by LE_2Mbps(GFSK_LE)	



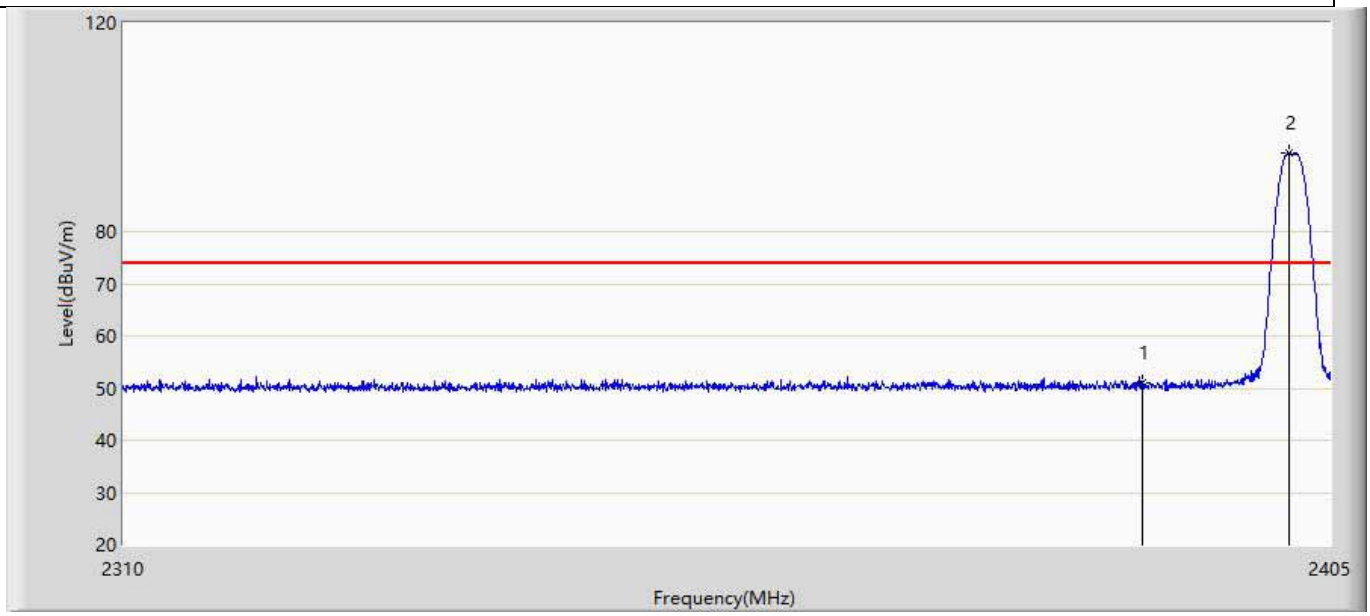
No	Mark	Frequency (MHz)	Measure Level (dBuV/m)	Reading Level (dBuV)	Over Limit (dB)	Limit (dBuV/m)	Factor (dB)	Type
1	*	2480.050	91.061	55.563	N/A	N/A	35.498	AV
2		2483.500	41.940	6.422	-12.060	54.000	35.517	AV

Profile: 1992171R	Page No.: 21
Engineer: Pawn	
Site: AC5	Time: 2019/10/10 - 19:45
Limit: FCC_Part15.209_RE(3m)	Margin: 0
Probe: Horn_3117_00167055(1-18GHz)	Polarity: Horizontal
EUT: Hue light strip	Power: AC 120V/60Hz
Note: Mode 3:Transmit at 2402MHz by LE_Coded(S=2)(GFSK_LE)	



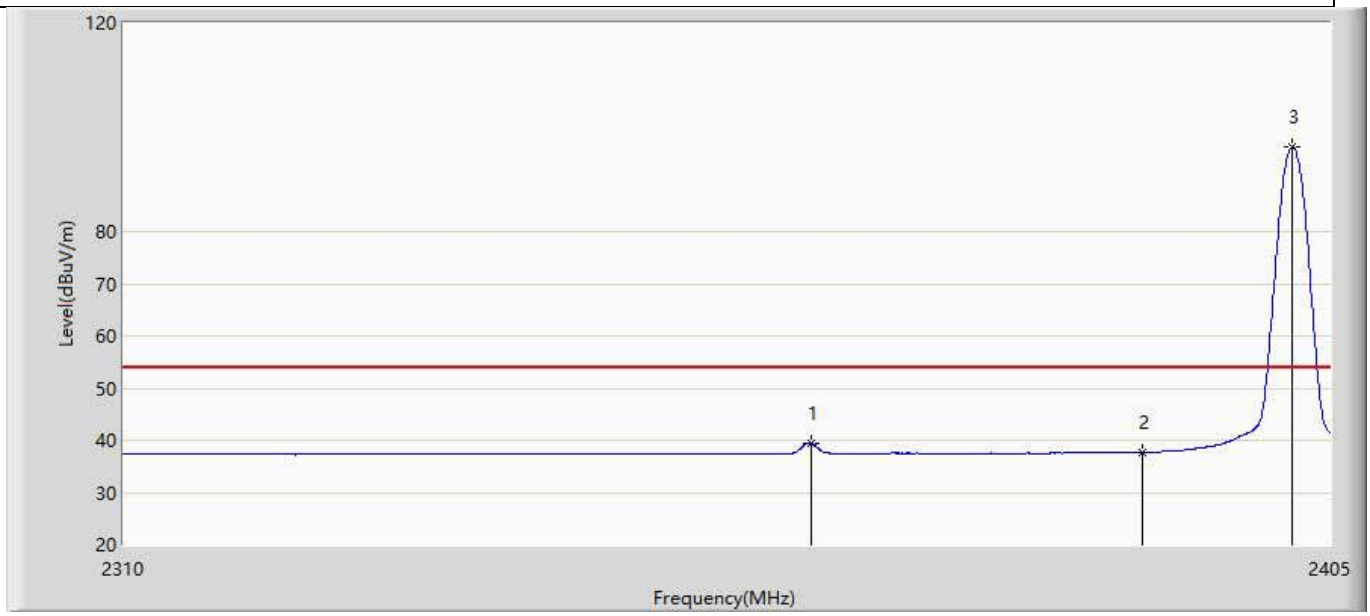
No	Mark	Frequency (MHz)	Measure Level (dBuV/m)	Reading Level (dBuV)	Over Limit (dB)	Limit (dBuV/m)	Factor (dB)	Type
1		2390.000	51.182	15.725	-22.818	74.000	35.458	PK
2	*	2401.770	100.693	65.224	N/A	N/A	35.469	PK

Profile: 1992171R	Page No.: 22
Engineer: Pawn	
Site: AC5	Time: 2019/10/10 - 19:47
Limit: FCC_Part15.209_RE(3m)	Margin: 0
Probe: Horn_3117_00167055(1-18GHz)	Polarity: Vertical
EUT: Hue light strip	Power: AC 120V/60Hz
Note: Mode 3:Transmit at 2402MHz by LE_Coded(S=2)(GFSK_LE)	



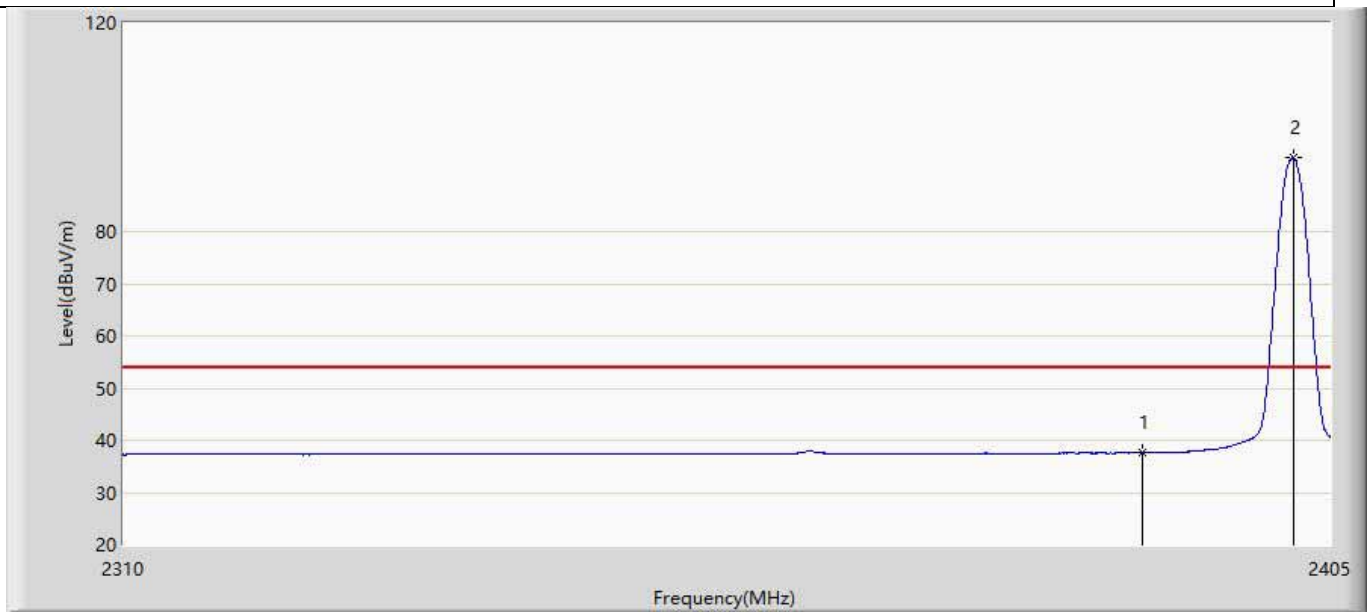
No	Mark	Frequency (MHz)	Measure Level (dBuV/m)	Reading Level (dBuV)	Over Limit (dB)	Limit (dBuV/m)	Factor (dB)	Type
1		2390.000	50.992	15.535	-23.008	74.000	35.458	PK
2	*	2401.770	95.028	59.559	N/A	N/A	35.469	PK

Profile: 1992171R	Page No.: 23
Engineer: Pawn	
Site: AC5	Time: 2019/10/10 - 19:48
Limit: FCC_Part15.209_RE(3m)	Margin: 0
Probe: Horn_3117_00167055(1-18GHz)	Polarity: Horizontal
EUT: Hue light strip	Power: AC 120V/60Hz
Note: Mode 3:Transmit at 2402MHz by LE_Coded(S=2)(GFSK_LE)	



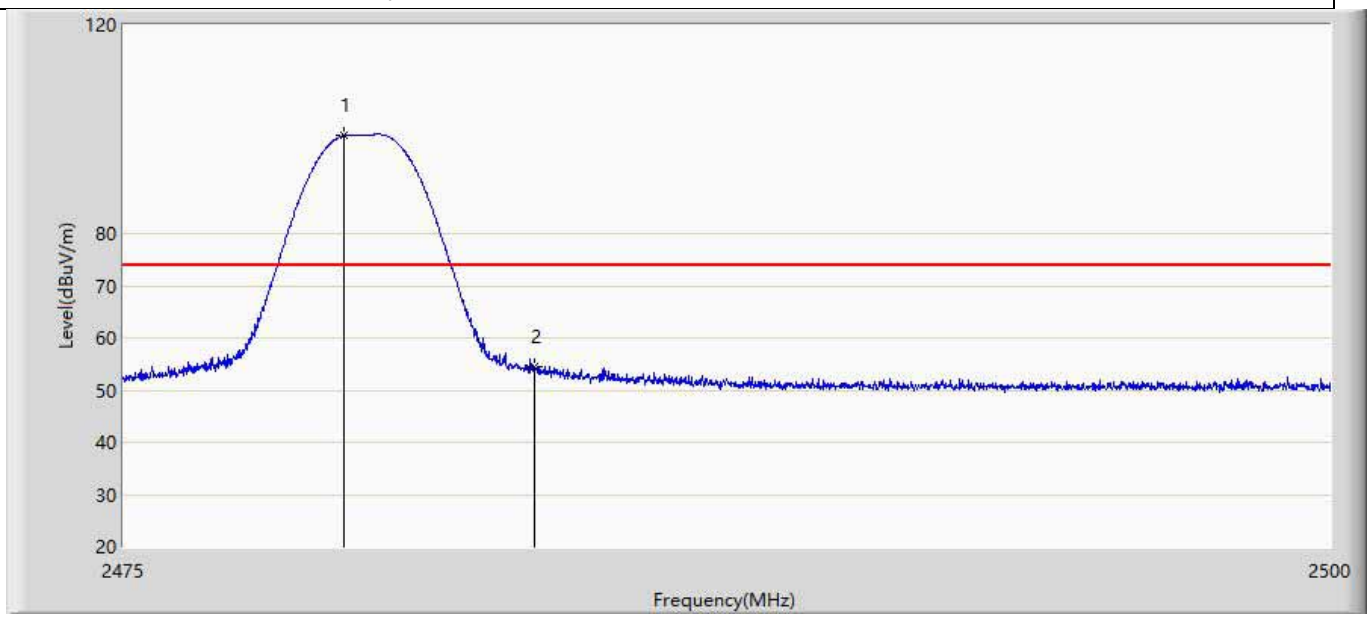
No	Mark	Frequency (MHz)	Measure Level (dBuV/m)	Reading Level (dBuV)	Over Limit (dB)	Limit (dBuV/m)	Factor (dB)	Type
1		2363.722	39.520	4.080	-14.480	54.000	35.440	AV
2		2390.000	37.704	2.247	-16.296	54.000	35.458	AV
3	*	2401.913	96.118	60.649	N/A	N/A	35.469	AV

Profile: 1992171R	Page No.: 24
Engineer: Pawn	
Site: AC5	Time: 2019/10/10 - 19:50
Limit: FCC_Part15.209_RE(3m)	Margin: 0
Probe: Horn_3117_00167055(1-18GHz)	Polarity: Vertical
EUT: Hue light strip	Power: AC 120V/60Hz
Note: Mode 3:Transmit at 2402MHz by LE_Coded(S=2)(GFSK_LE)	



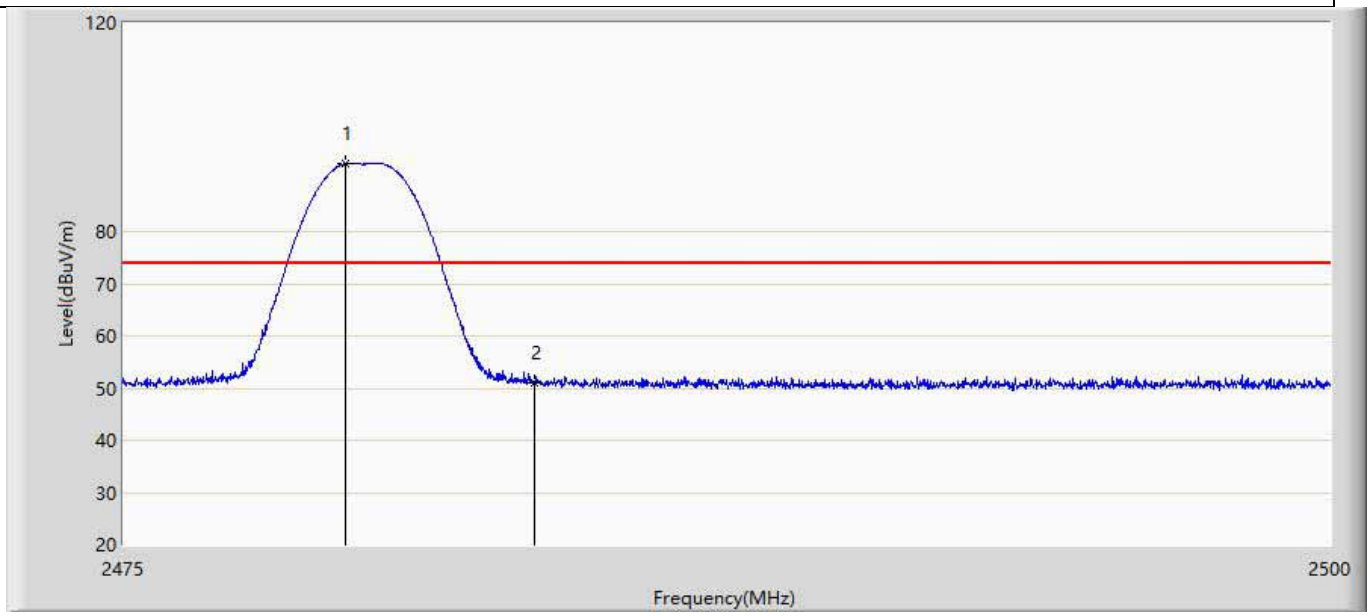
No	Mark	Frequency (MHz)	Measure Level (dBuV/m)	Reading Level (dBuV)	Over Limit (dB)	Limit (dBuV/m)	Factor (dB)	Type
1		2390.000	37.622	2.165	-16.378	54.000	35.458	AV
2	*	2402.055	94.108	58.638	N/A	N/A	35.469	AV

Profile: 1992171R	Page No.: 37
Engineer: Pawn	
Site: AC5	Time: 2019/10/10 - 20:17
Limit: FCC_Part15.209_RE(3m)	Margin: 0
Probe: Horn_3117_00167055(1-18GHz)	Polarity: Horizontal
EUT: Hue light strip	Power: AC 120V/60Hz
Note: Mode 3:Transmit at 2480MHz by LE_Coded(S=2)(GFSK_LE)	



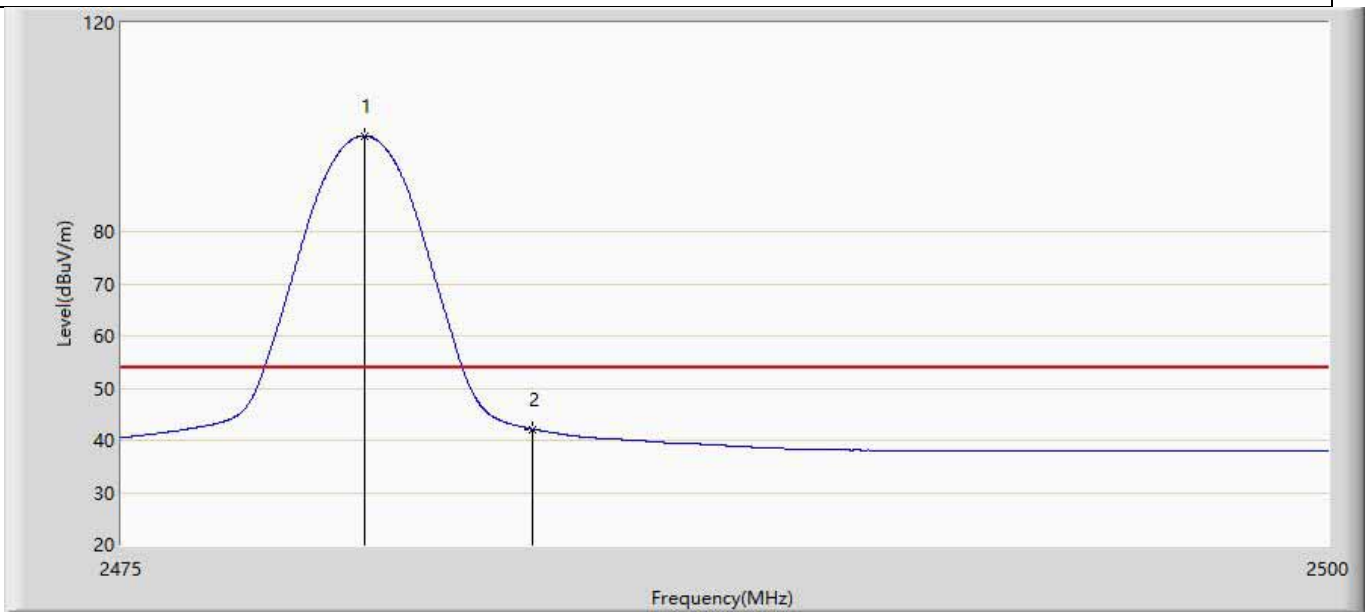
No	Mark	Frequency (MHz)	Measure Level (dBuV/m)	Reading Level (dBuV)	Over Limit (dB)	Limit (dBuV/m)	Factor (dB)	Type
1	*	2479.550	98.808	63.313	N/A	N/A	35.495	PK
2		2483.500	54.384	18.866	-19.616	74.000	35.517	PK

Profile: 1992171R	Page No.: 38
Engineer: Pawn	
Site: AC5	Time: 2019/10/10 - 20:20
Limit: FCC_Part15.209_RE(3m)	Margin: 0
Probe: Horn_3117_00167055(1-18GHz)	Polarity: Vertical
EUT: Hue light strip	Power: AC 120V/60Hz
Note: Mode 3:Transmit at 2480MHz by LE_Coded(S=2)(GFSK_LE)	



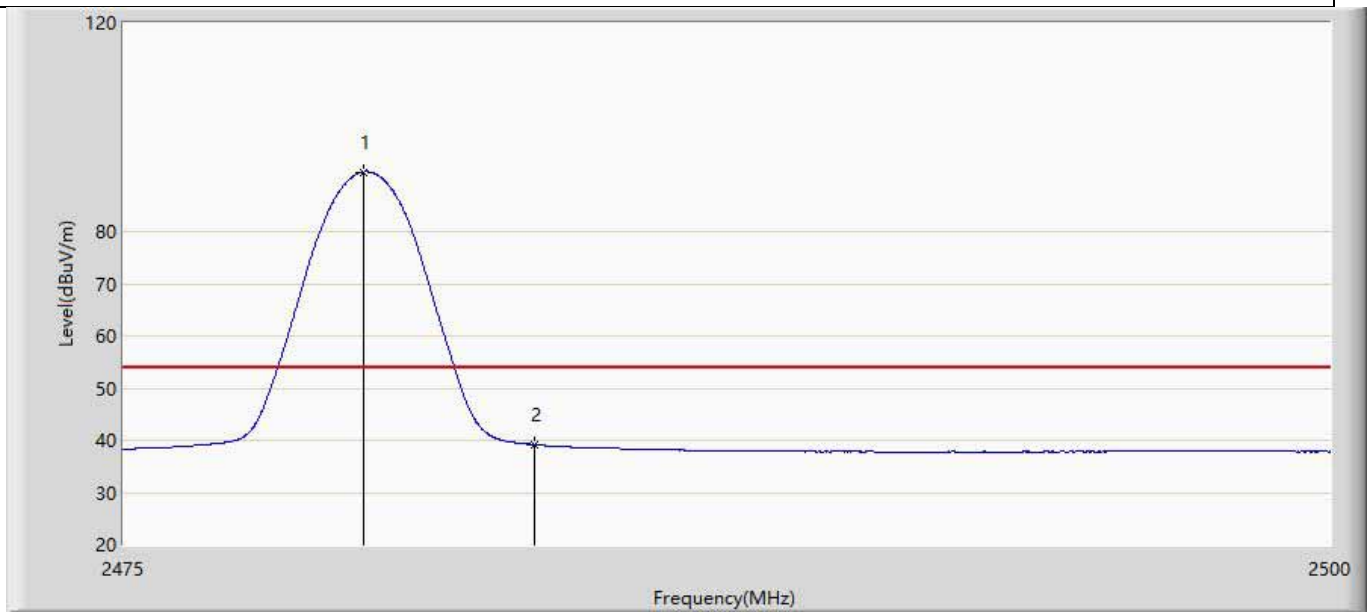
No	Mark	Frequency (MHz)	Measure Level (dBuV/m)	Reading Level (dBuV)	Over Limit (dB)	Limit (dBuV/m)	Factor (dB)	Type
1	*	2479.587	92.951	57.456	N/A	N/A	35.496	PK
2		2483.500	51.088	15.570	-22.912	74.000	35.517	PK

Profile: 1992171R	Page No.: 39
Engineer: Pawn	
Site: AC5	Time: 2019/10/10 - 20:21
Limit: FCC_Part15.209_RE(3m)	Margin: 0
Probe: Horn_3117_00167055(1-18GHz)	Polarity: Horizontal
EUT: Hue light strip	Power: AC 120V/60Hz
Note: Mode 3:Transmit at 2480MHz by LE_Coded(S=2)(GFSK_LE)	



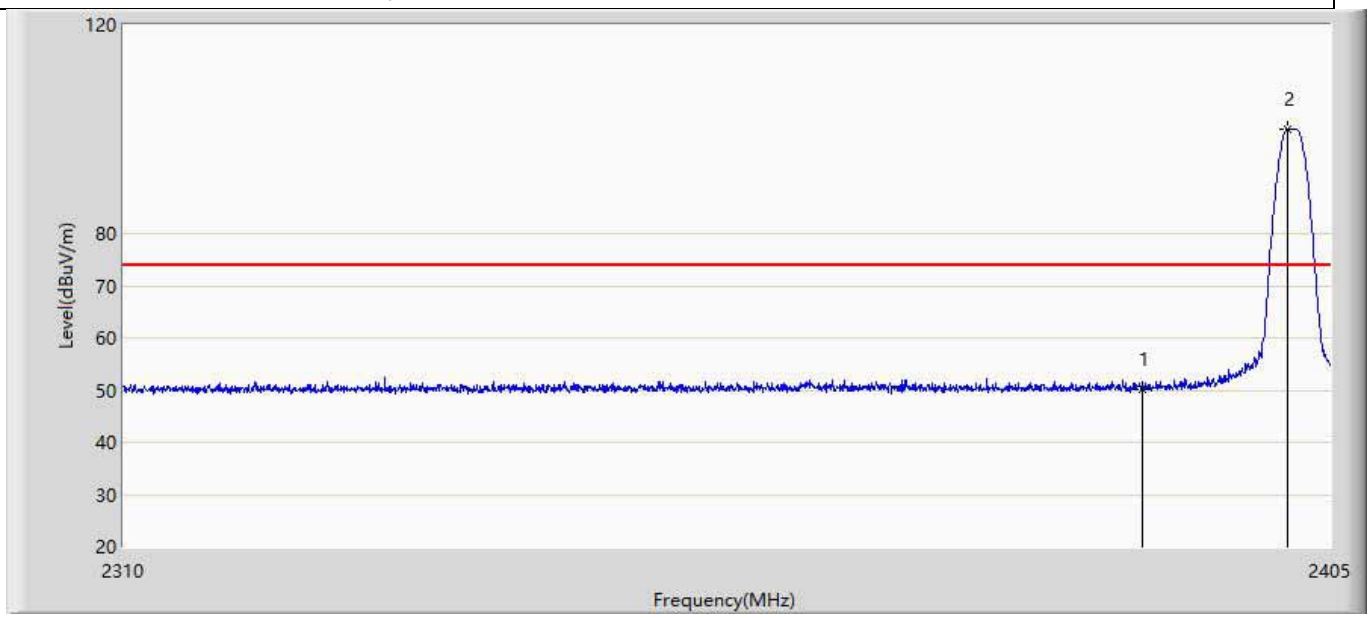
No	Mark	Frequency (MHz)	Measure Level (dBuV/m)	Reading Level (dBuV)	Over Limit (dB)	Limit (dBuV/m)	Factor (dB)	Type
1	*	2480.012	98.348	62.850	N/A	N/A	35.498	AV
2		2483.500	42.096	6.578	-11.904	54.000	35.517	AV

Profile: 1992171R	Page No.: 40
Engineer: Pawn	
Site: AC5	Time: 2019/10/10 - 20:23
Limit: FCC_Part15.209_RE(3m)	Margin: 0
Probe: Horn_3117_00167055(1-18GHz)	Polarity: Vertical
EUT: Hue light strip	Power: AC 120V/60Hz
Note: Mode 3:Transmit at 2480MHz by LE_Coded(S=2)(GFSK_LE)	



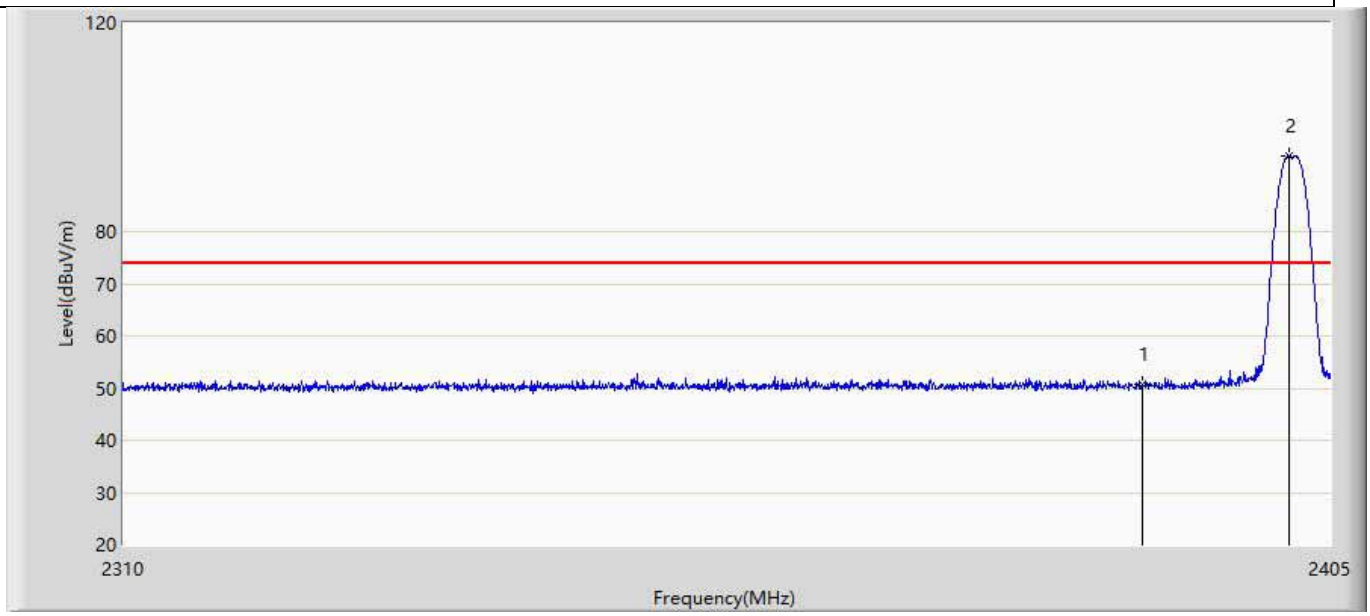
No	Mark	Frequency (MHz)	Measure Level (dBuV/m)	Reading Level (dBuV)	Over Limit (dB)	Limit (dBuV/m)	Factor (dB)	Type
1	*	2479.975	91.444	55.946	N/A	N/A	35.498	AV
2		2483.500	39.165	3.647	-14.835	54.000	35.517	AV

Profile: 1992171R	Page No.: 17
Engineer: Pawn	
Site: AC5	Time: 2019/10/10 - 19:37
Limit: FCC_Part15.209_RE(3m)	Margin: 0
Probe: Horn_3117_00167055(1-18GHz)	Polarity: Horizontal
EUT: Hue light strip	Power: AC 120V/60Hz
Note: Mode 4:Transmit at 2402MHz by LE_Coded(S=8)(GFSK_LE)	



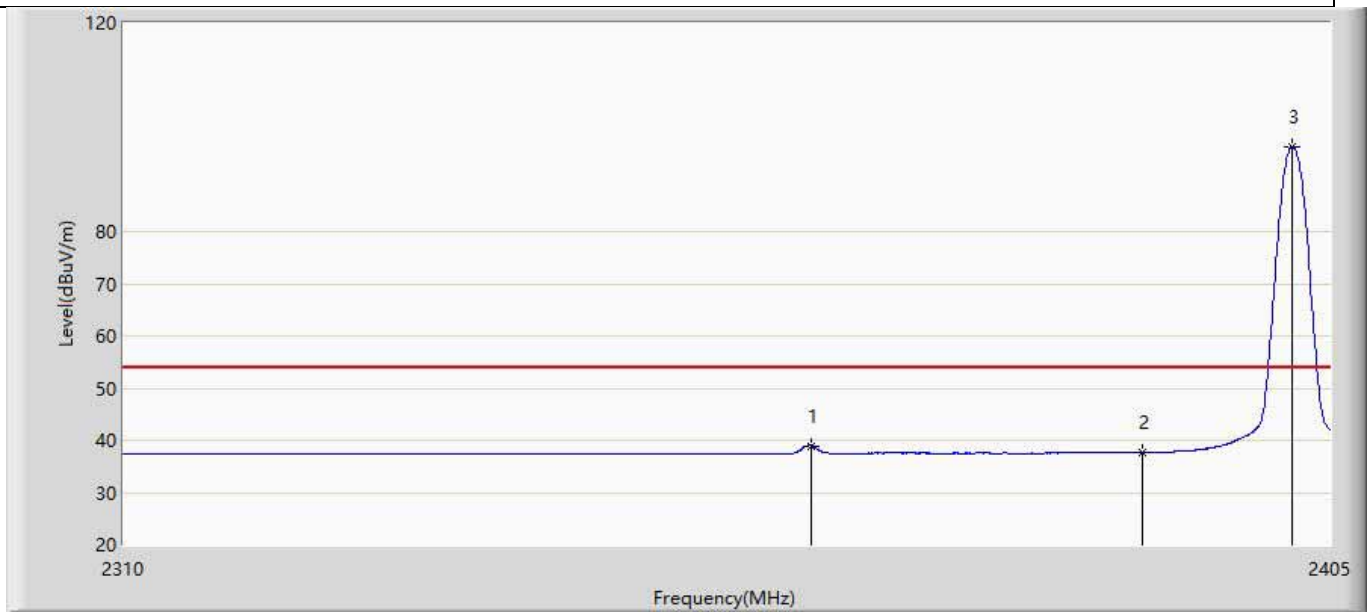
No	Mark	Frequency (MHz)	Measure Level (dBuV/m)	Reading Level (dBuV)	Over Limit (dB)	Limit (dBuV/m)	Factor (dB)	Type
1		2390.000	50.179	14.722	-23.821	74.000	35.458	PK
2	*	2401.580	100.019	64.550	N/A	N/A	35.469	PK

Profile: 1992171R	Page No.: 18
Engineer: Pawn	
Site: AC5	Time: 2019/10/10 - 19:39
Limit: FCC_Part15.209_RE(3m)	Margin: 0
Probe: Horn_3117_00167055(1-18GHz)	Polarity: Vertical
EUT: Hue light strip	Power: AC 120V/60Hz
Note: Mode 4:Transmit at 2402MHz by LE_Coded(S=8)(GFSK_LE)	



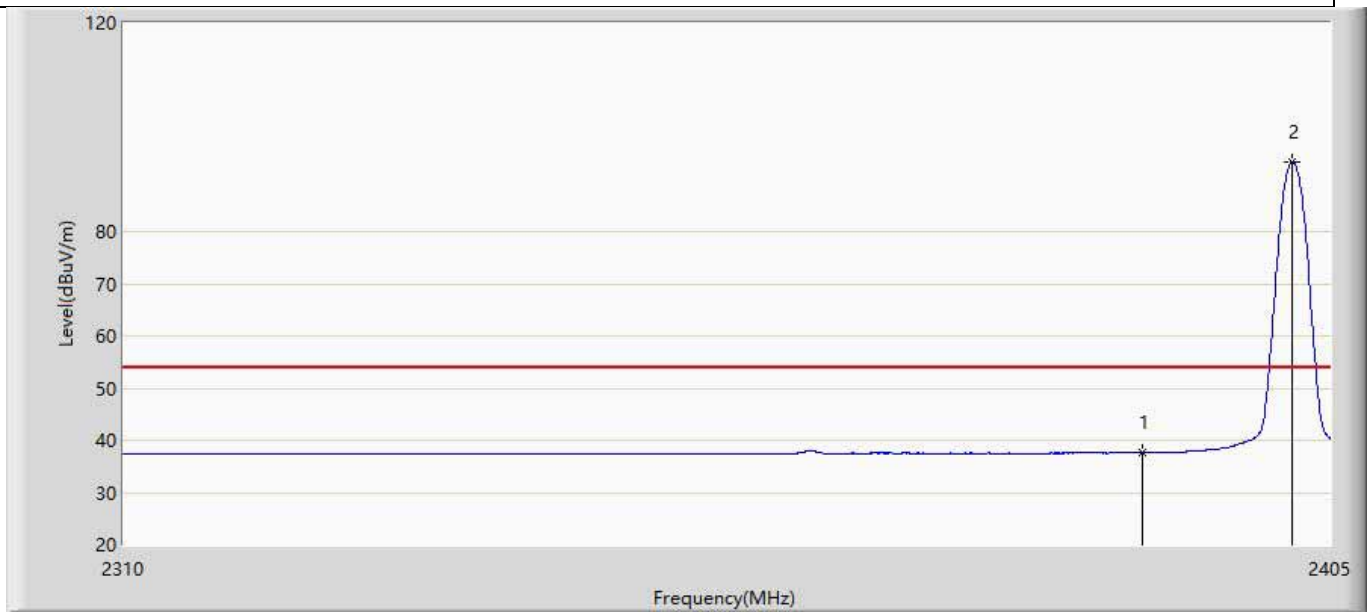
No	Mark	Frequency (MHz)	Measure Level (dBuV/m)	Reading Level (dBuV)	Over Limit (dB)	Limit (dBuV/m)	Factor (dB)	Type
1		2390.000	50.593	15.136	-23.407	74.000	35.458	PK
2	*	2401.770	94.431	58.962	N/A	N/A	35.469	PK

Profile: 1992171R	Page No.: 19
Engineer: Pawn	
Site: AC5	Time: 2019/10/10 - 19:41
Limit: FCC_Part15.209_RE(3m)	Margin: 0
Probe: Horn_3117_00167055(1-18GHz)	Polarity: Horizontal
EUT: Hue light strip	Power: AC 120V/60Hz
Note: Mode 4:Transmit at 2402MHz by LE_Coded(S=8)(GFSK_LE)	



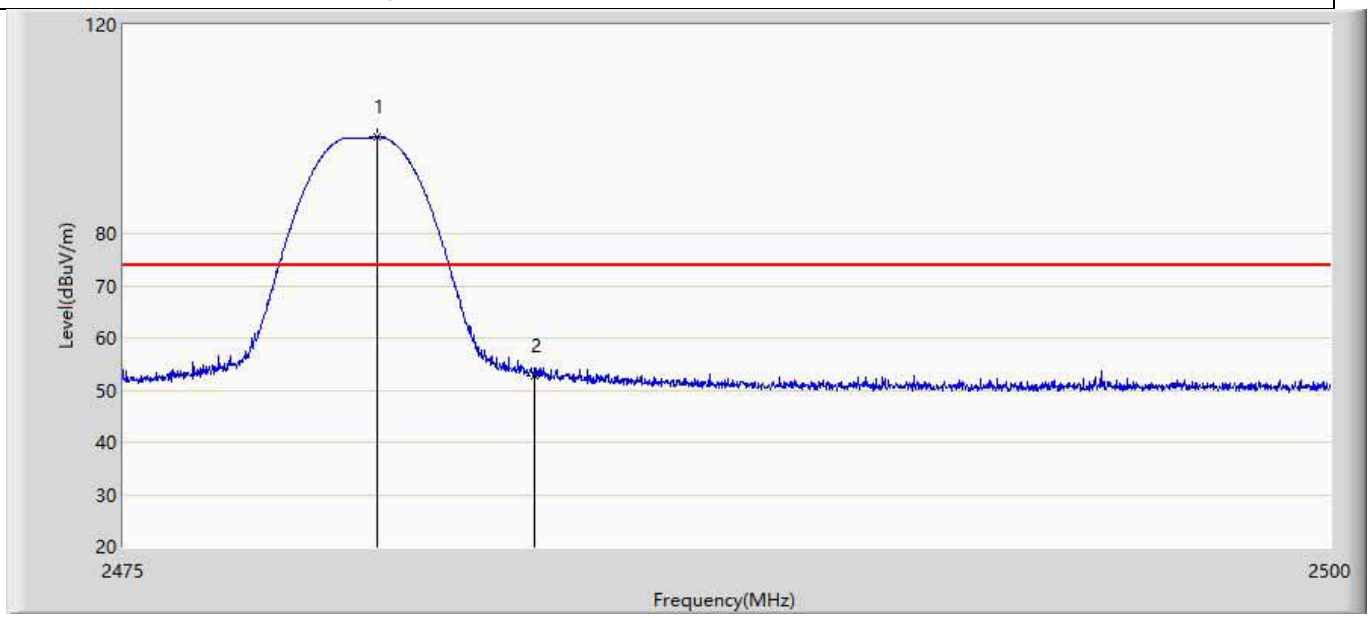
No	Mark	Frequency (MHz)	Measure Level (dBuV/m)	Reading Level (dBuV)	Over Limit (dB)	Limit (dBuV/m)	Factor (dB)	Type
1		2363.722	38.969	3.529	-15.031	54.000	35.440	AV
2		2390.000	37.661	2.204	-16.339	54.000	35.458	AV
3	*	2401.913	96.293	60.824	N/A	N/A	35.469	AV

Profile: 1992171R	Page No.: 20
Engineer: Pawn	
Site: AC5	Time: 2019/10/10 - 19:43
Limit: FCC_Part15.209_RE(3m)	Margin: 0
Probe: Horn_3117_00167055(1-18GHz)	Polarity: Vertical
EUT: Hue light strip	Power: AC 120V/60Hz
Note: Mode 4:Transmit at 2402MHz by code 125k	



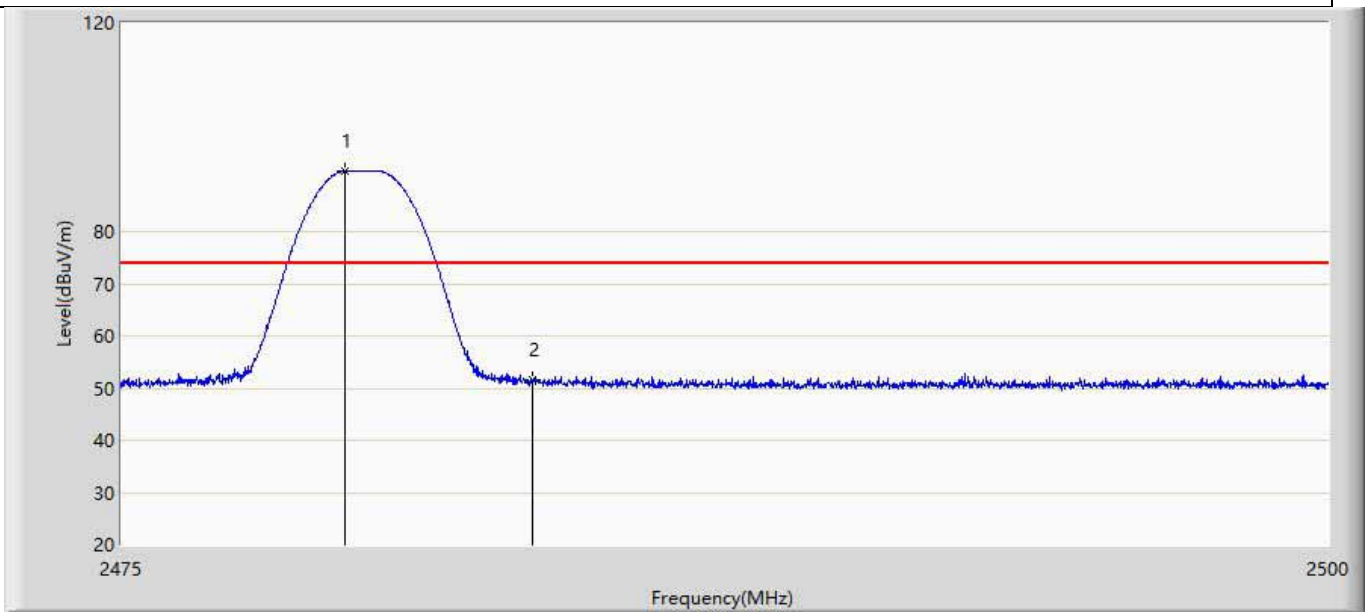
No	Mark	Frequency (MHz)	Measure Level (dBuV/m)	Reading Level (dBuV)	Over Limit (dB)	Limit (dBuV/m)	Factor (dB)	Type
1		2390.000	37.601	2.144	-16.399	54.000	35.458	AV
2	*	2401.913	93.372	57.903	N/A	N/A	35.469	AV

Profile: 1992171R	Page No.: 33
Engineer: Pawn	
Site: AC5	Time: 2019/10/10 - 20:10
Limit: FCC_Part15.209_RE(3m)	Margin: 0
Probe: Horn_3117_00167055(1-18GHz)	Polarity: Horizontal
EUT: Hue light strip	Power: AC 120V/60Hz
Note: Mode 4:Transmit at 2480MHz by LE_Coded(S=8)(GFSK_LE)	



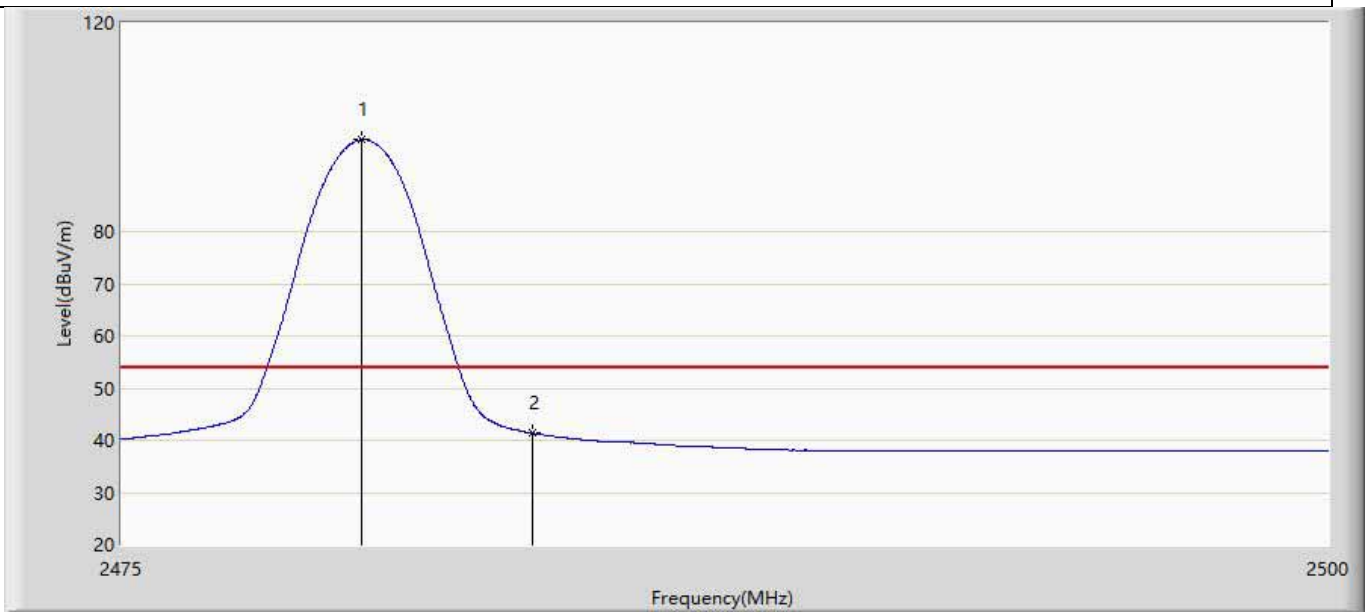
No	Mark	Frequency (MHz)	Measure Level (dBuV/m)	Reading Level (dBuV)	Over Limit (dB)	Limit (dBuV/m)	Factor (dB)	Type
1	*	2480.250	98.418	62.919	N/A	N/A	35.500	PK
2		2483.500	52.645	17.127	-21.355	74.000	35.517	PK

Profile: 1992171R	Page No.: 34
Engineer: Pawn	
Site: AC5	Time: 2019/10/10 - 20:12
Limit: FCC_Part15.209_RE(3m)	Margin: 0
Probe: Horn_3117_00167055(1-18GHz)	Polarity: Vertical
EUT: Hue light strip	Power: AC 120V/60Hz
Note: Mode 4:Transmit at 2480MHz by LE_Coded(S=8)(GFSK_LE)	



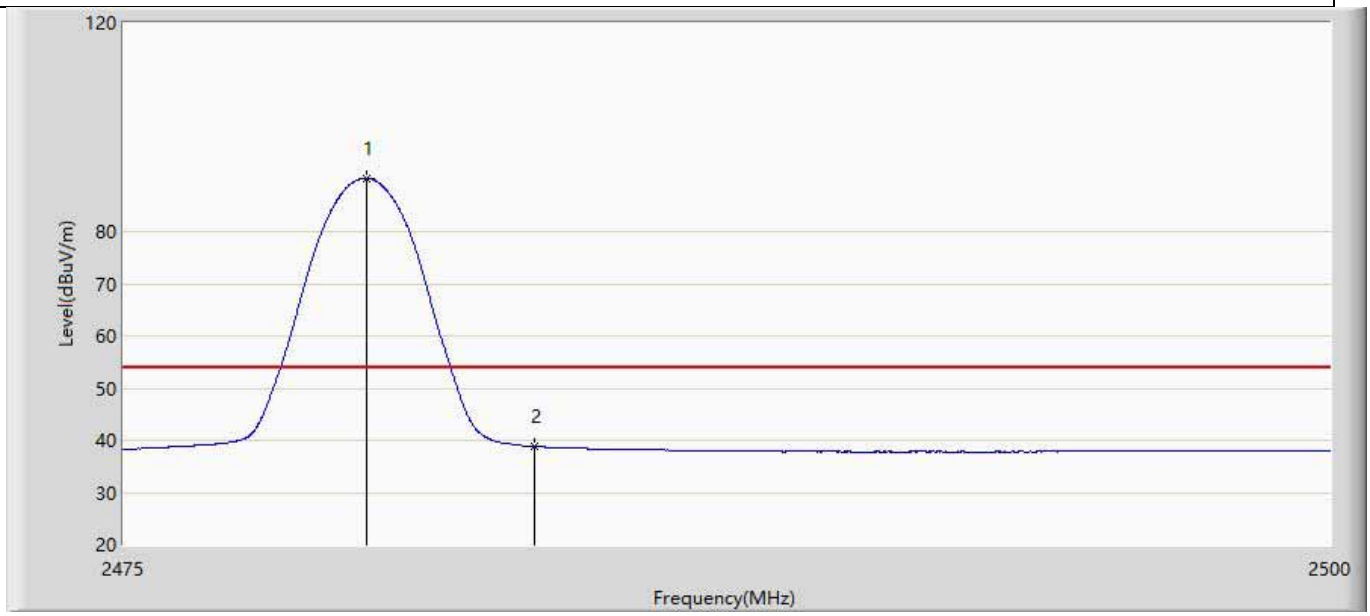
No	Mark	Frequency (MHz)	Measure Level (dBuV/m)	Reading Level (dBuV)	Over Limit (dB)	Limit (dBuV/m)	Factor (dB)	Type
1	*	2479.625	91.674	56.178	N/A	N/A	35.496	PK
2		2483.500	51.470	15.952	-22.530	74.000	35.517	PK

Profile: 1992171R	Page No.: 35
Engineer: Pawn	
Site: AC5	Time: 2019/10/10 - 20:14
Limit: FCC_Part15.209_RE(3m)	Margin: 0
Probe: Horn_3117_00167055(1-18GHz)	Polarity: Horizontal
EUT: Hue light strip	Power: AC 120V/60Hz
Note: Mode 4:Transmit at 2480MHz by LE_Coded(S=8)(GFSK_LE)	



No	Mark	Frequency (MHz)	Measure Level (dBuV/m)	Reading Level (dBuV)	Over Limit (dB)	Limit (dBuV/m)	Factor (dB)	Type
1	*	2479.975	97.593	62.095	N/A	N/A	35.498	AV
2		2483.500	41.382	5.864	-12.618	54.000	35.517	AV

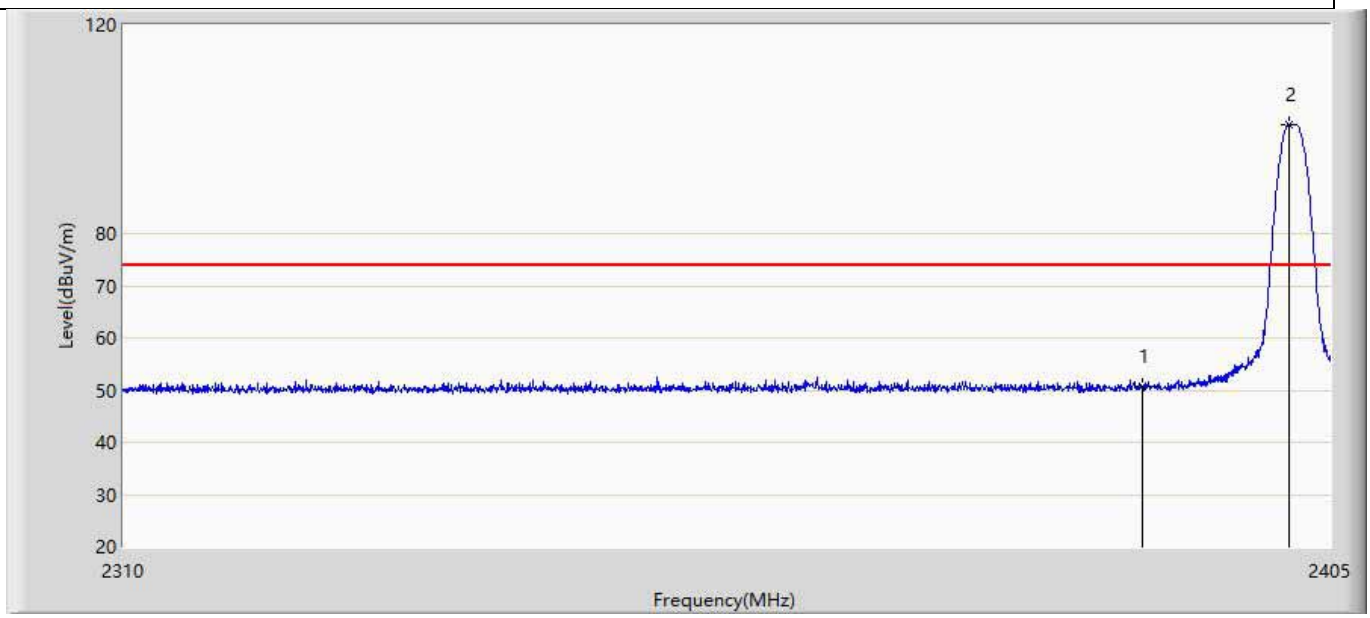
Profile: 1992171R	Page No.: 36
Engineer: Pawn	
Site: AC5	Time: 2019/10/10 - 20:16
Limit: FCC_Part15.209_RE(3m)	Margin: 0
Probe: Horn_3117_00167055(1-18GHz)	Polarity: Vertical
EUT: Hue light strip	Power: AC 120V/60Hz
Note: Mode 4:Transmit at 2480MHz by LE_Coded(S=8)(GFSK_LE)	



No	Mark	Frequency (MHz)	Measure Level (dBuV/m)	Reading Level (dBuV)	Over Limit (dB)	Limit (dBuV/m)	Factor (dB)	Type
1	*	2480.012	90.209	54.711	N/A	N/A	35.498	AV
2		2483.500	38.820	3.302	-15.180	54.000	35.517	AV

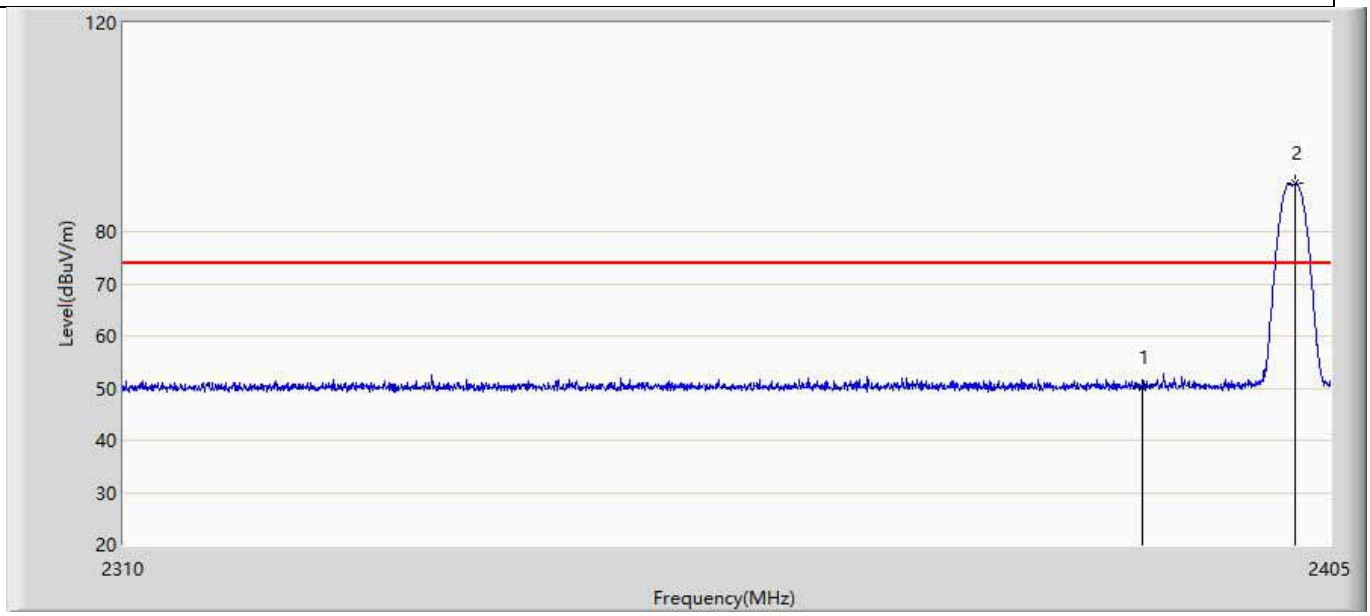
KDS:

Profile: 1992171R	Page No.: 9
Engineer: Pawn	
Site: AC5	Time: 2019/10/10 - 20:44
Limit: FCC_Part15.209_RE(3m)	Margin: 0
Probe: Horn_3117_00167055(1-18GHz)	Polarity: Horizontal
EUT: Hue light strip	Power: AC 120V/60Hz
Note: Mode 1:Transmit at 2402MHz by LE_1Mbps(GFSK_LE)	



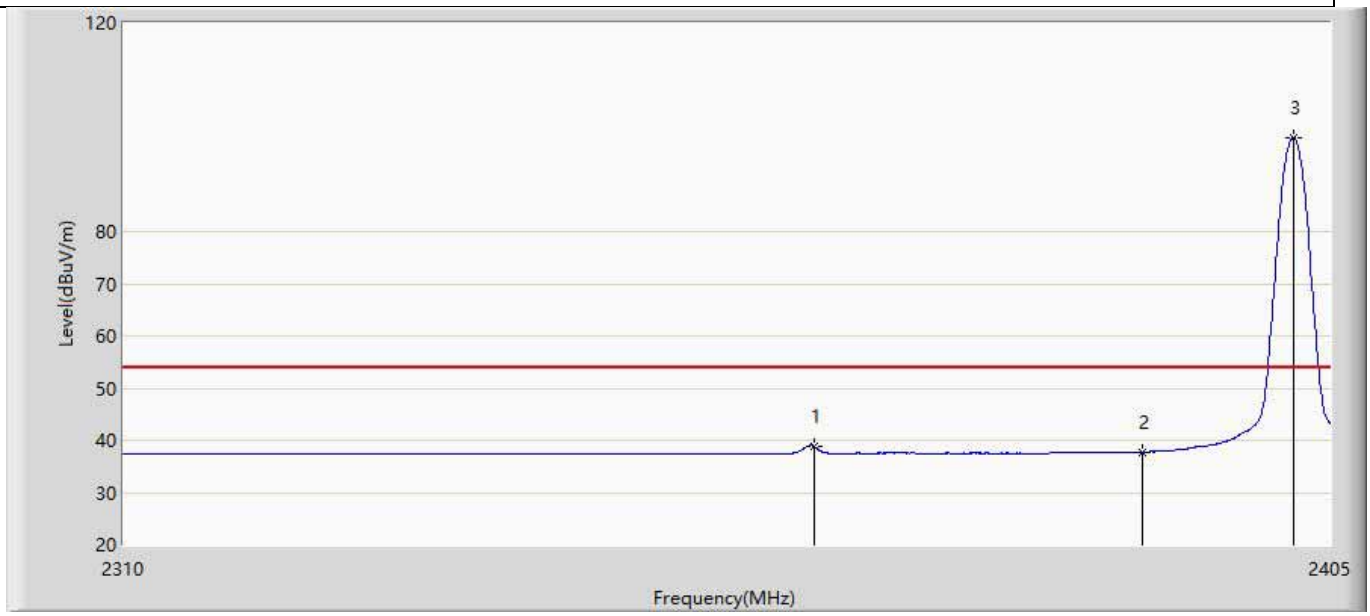
No	Mark	Frequency (MHz)	Measure Level (dBuV/m)	Reading Level (dBuV)	Over Limit (dB)	Limit (dBuV/m)	Factor (dB)	Type
1		2390.000	50.697	15.240	-23.303	74.000	35.458	PK
2	*	2401.770	100.886	65.417	N/A	N/A	35.469	PK

Profile: 1992171R	Page No.: 10
Engineer: Pawn	
Site: AC5	Time: 2019/10/10 - 20:47
Limit: FCC_Part15.209_RE(3m)	Margin: 0
Probe: Horn_3117_00167055(1-18GHz)	Polarity: Vertical
EUT: Hue light strip	Power: AC 120V/60Hz
Note: Mode 1:Transmit at 2402MHz by LE_1Mbps(GFSK_LE)	



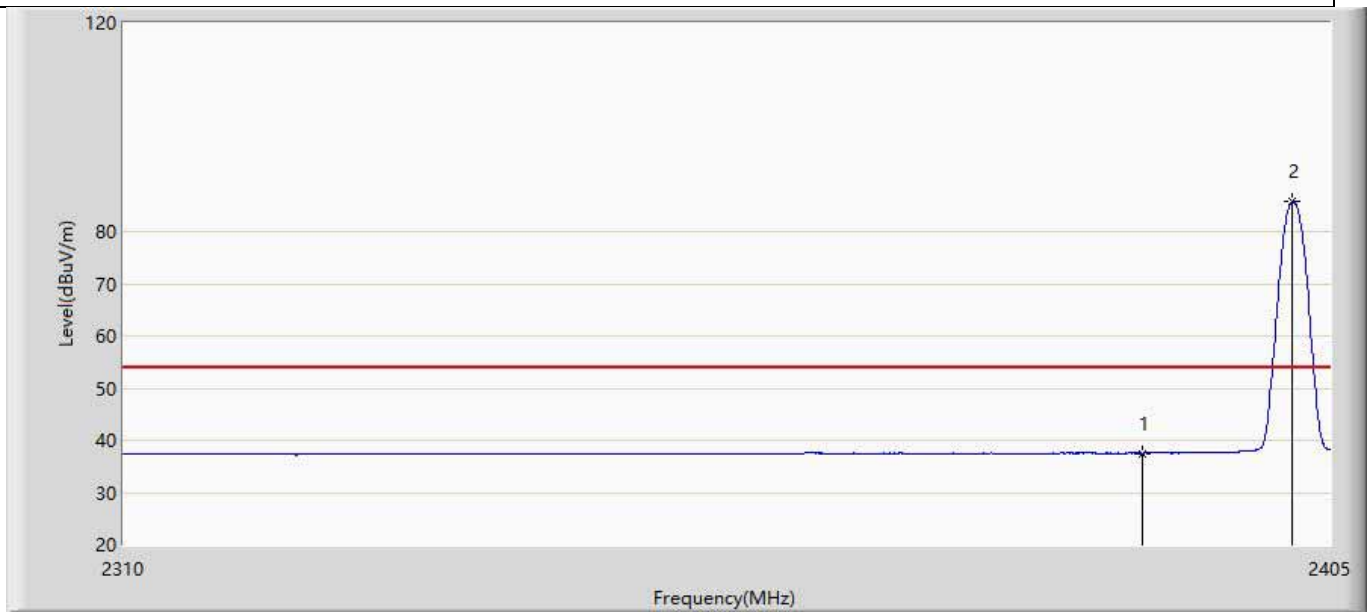
No	Mark	Frequency (MHz)	Measure Level (dBuV/m)	Reading Level (dBuV)	Over Limit (dB)	Limit (dBuV/m)	Factor (dB)	Type
1		2390.000	50.122	14.665	-23.878	74.000	35.458	PK
2	*	2402.198	89.158	53.688	N/A	N/A	35.470	PK

Profile: 1992171R	Page No.: 11
Engineer: Pawn	
Site: AC5	Time: 2019/10/10 - 20:49
Limit: FCC_Part15.209_RE(3m)	Margin: 0
Probe: Horn_3117_00167055(1-18GHz)	Polarity: Horizontal
EUT: Hue light strip	Power: AC 120V/60Hz
Note: Mode 1:Transmit at 2402MHz by LE_1Mbps(GFSK_LE)	



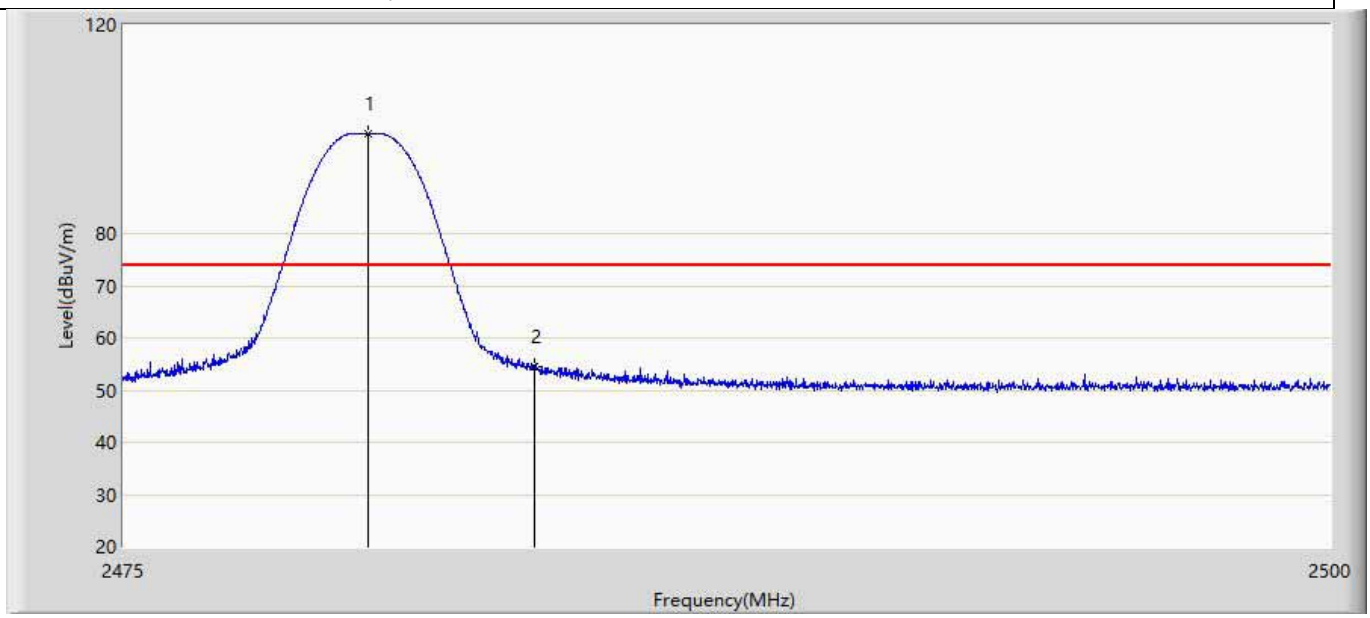
No	Mark	Frequency (MHz)	Measure Level (dBuV/m)	Reading Level (dBuV)	Over Limit (dB)	Limit (dBuV/m)	Factor (dB)	Type
1		2363.913	38.821	3.381	-15.179	54.000	35.440	AV
2		2390.000	37.763	2.306	-16.237	54.000	35.458	AV
3	*	2402.055	97.919	62.449	N/A	N/A	35.469	AV

Profile: 1992171R	Page No.: 12
Engineer: Pawn	
Site: AC5	Time: 2019/10/10 - 20:51
Limit: FCC_Part15.209_RE(3m)	Margin: 0
Probe: Horn_3117_00167055(1-18GHz)	Polarity: Vertical
EUT: Hue light strip	Power: AC 120V/60Hz
Note: Mode 1:Transmit at 2402MHz by LE_1Mbps(GFSK_LE)	



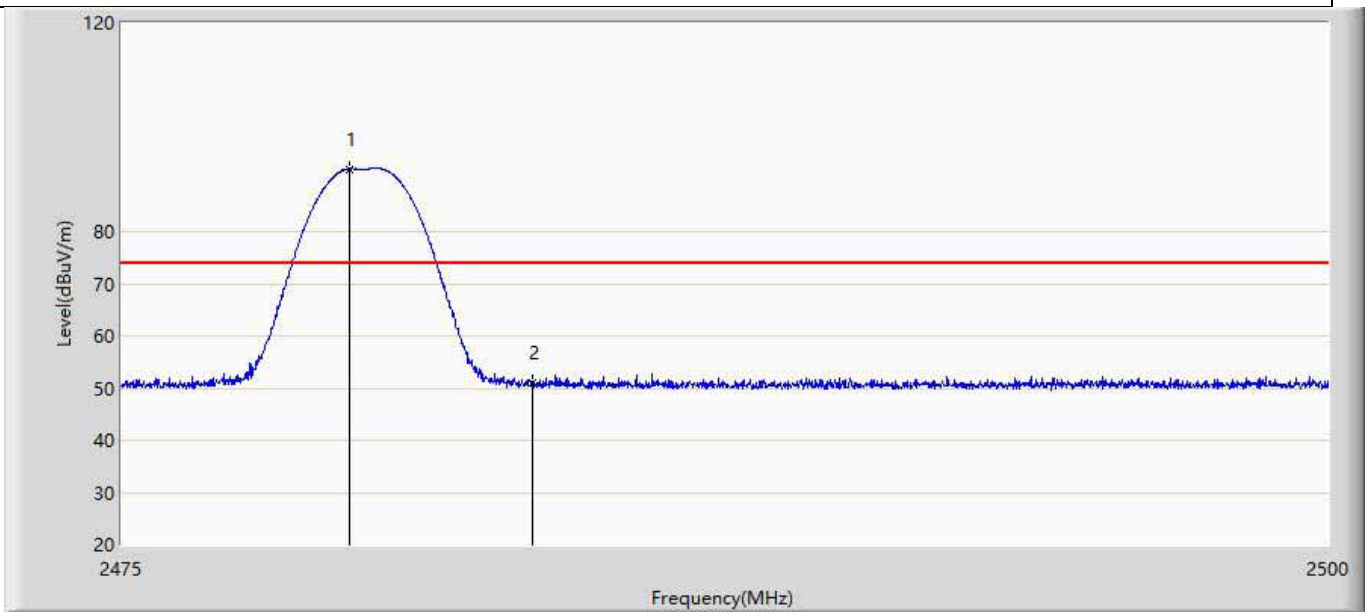
No	Mark	Frequency (MHz)	Measure Level (dBuV/m)	Reading Level (dBuV)	Over Limit (dB)	Limit (dBuV/m)	Factor (dB)	Type
1		2390.000	37.524	2.067	-16.476	54.000	35.458	AV
2	*	2401.913	85.693	50.224	N/A	N/A	35.469	AV

Profile: 1992171R	Page No.: 25
Engineer: Pawn	
Site: AC5	Time: 2019/10/10 - 21:23
Limit: FCC_Part15.209_RE(3m)	Margin: 0
Probe: Horn_3117_00167055(1-18GHz)	Polarity: Horizontal
EUT: Hue light strip	Power: AC 120V/60Hz
Note: Mode 1:Transmit at 2480MHz by LE_1Mbps(GFSK_LE)	



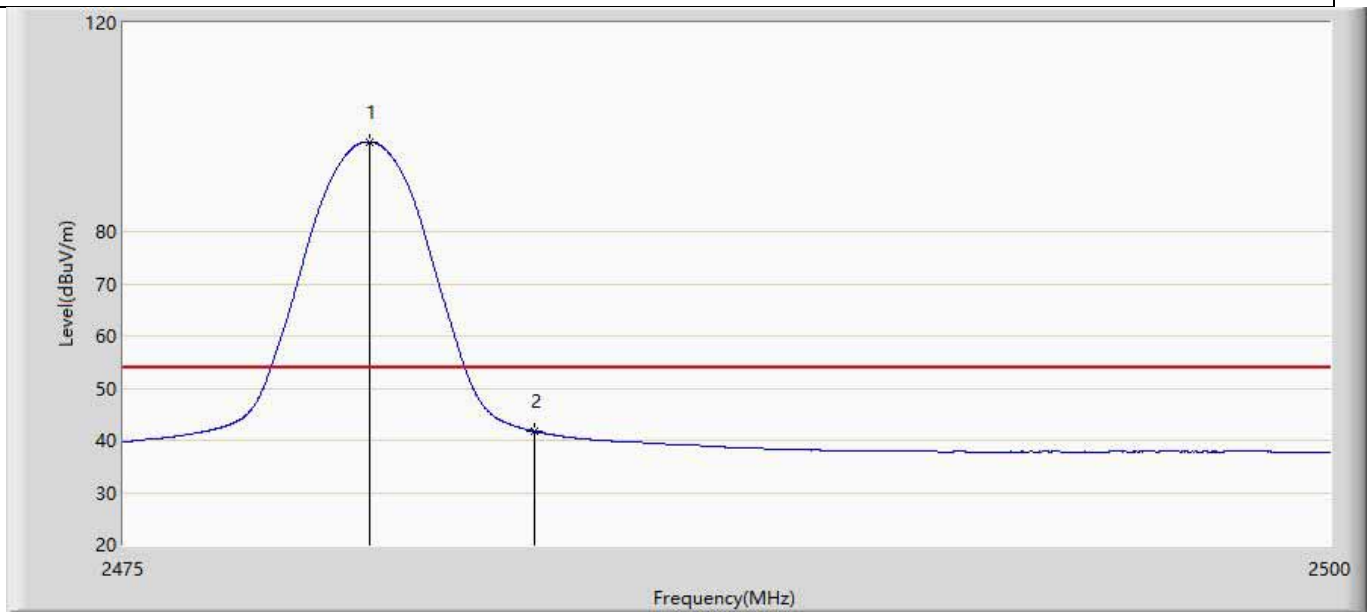
No	Mark	Frequency (MHz)	Measure Level (dBuV/m)	Reading Level (dBuV)	Over Limit (dB)	Limit (dBuV/m)	Factor (dB)	Type
1	*	2480.050	99.040	63.542	N/A	N/A	35.498	PK
2		2483.500	54.461	18.943	-19.539	74.000	35.517	PK

Profile: 1992171R	Page No.: 26
Engineer: Pawn	
Site: AC5	Time: 2019/10/10 - 21:26
Limit: FCC_Part15.209_RE(3m)	Margin: 0
Probe: Horn_3117_00167055(1-18GHz)	Polarity: Vertical
EUT: Hue light strip	Power: AC 120V/60Hz
Note: Mode 1:Transmit at 2480MHz by LE_1Mbps(GFSK_LE)	



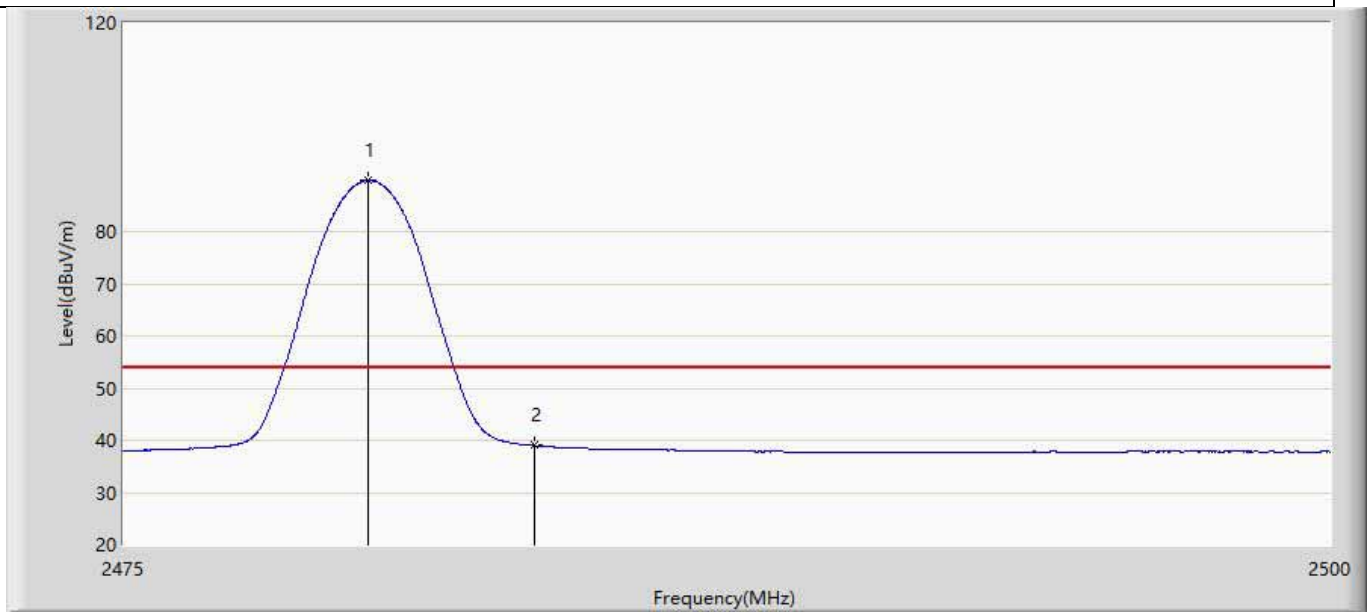
No	Mark	Frequency (MHz)	Measure Level (dBuV/m)	Reading Level (dBuV)	Over Limit (dB)	Limit (dBuV/m)	Factor (dB)	Type
1	*	2479.700	91.979	56.483	N/A	N/A	35.496	PK
2		2483.500	51.056	15.538	-22.944	74.000	35.517	PK

Profile: 1992171R	Page No.: 27
Engineer: Pawn	
Site: AC5	Time: 2019/10/10 - 21:27
Limit: FCC_Part15.209_RE(3m)	Margin: 0
Probe: Horn_3117_00167055(1-18GHz)	Polarity: Horizontal
EUT: Hue light strip	Power: AC 120V/60Hz
Note: Mode 1:Transmit at 2480MHz by LE_1Mbps(GFSK_LE)	



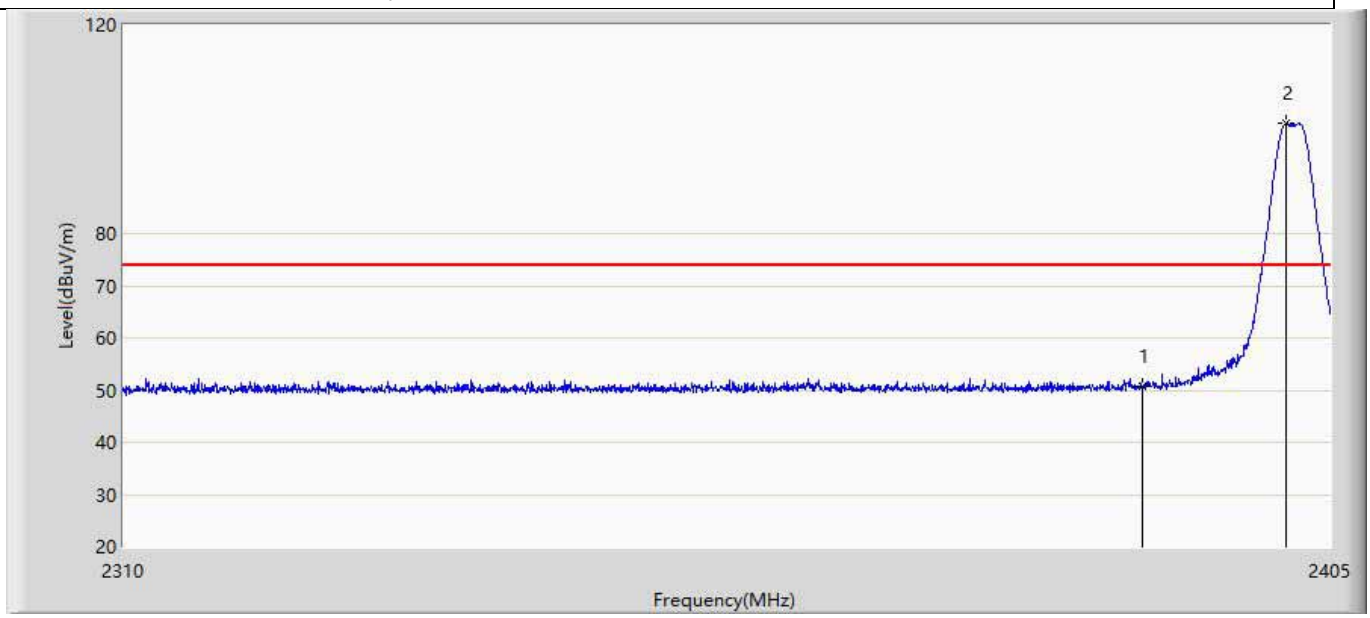
No	Mark	Frequency (MHz)	Measure Level (dBuV/m)	Reading Level (dBuV)	Over Limit (dB)	Limit (dBuV/m)	Factor (dB)	Type
1	*	2480.087	97.224	61.726	N/A	N/A	35.499	AV
2		2483.500	41.727	6.209	-12.273	54.000	35.517	AV

Profile: 1992171R	Page No.: 28
Engineer: Pawn	
Site: AC5	Time: 2019/10/10 - 21:30
Limit: FCC_Part15.209_RE(3m)	Margin: 0
Probe: Horn_3117_00167055(1-18GHz)	Polarity: Vertical
EUT: Hue light strip	Power: AC 120V/60Hz
Note: Mode 1:Transmit at 2480MHz by LE_1Mbps(GFSK_LE)	



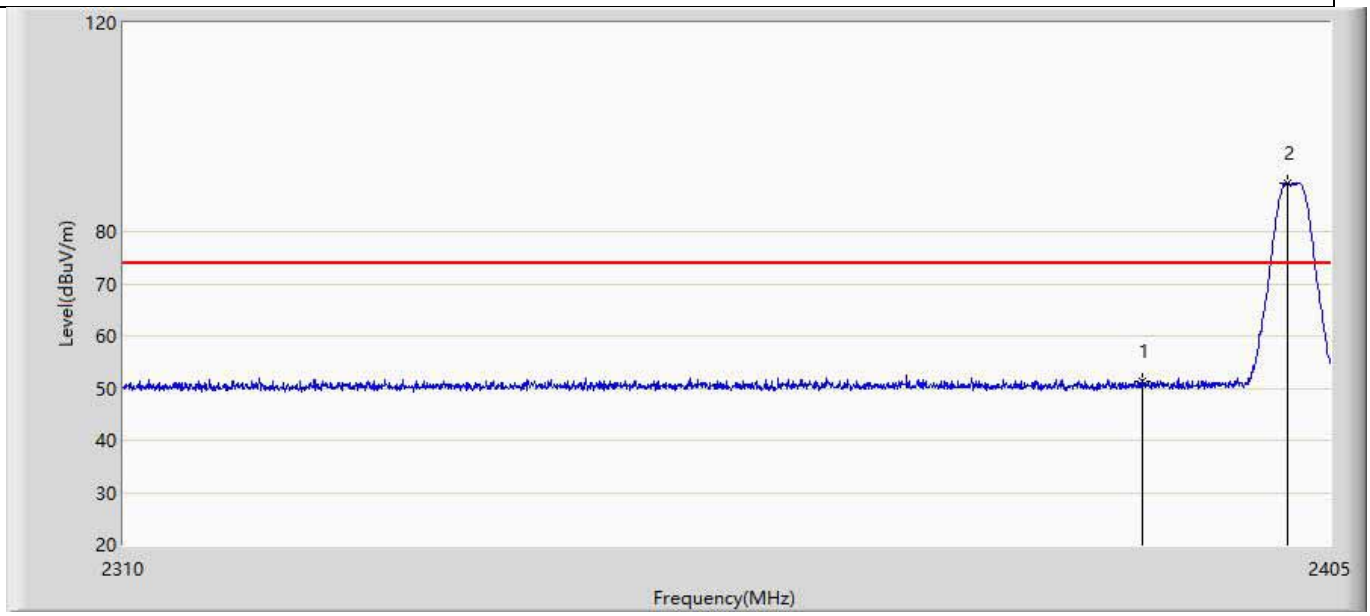
No	Mark	Frequency (MHz)	Measure Level (dBuV/m)	Reading Level (dBuV)	Over Limit (dB)	Limit (dBuV/m)	Factor (dB)	Type
1	*	2480.050	89.785	54.287	N/A	N/A	35.498	AV
2		2483.500	38.990	3.472	-15.010	54.000	35.517	AV

Profile: 1992171R	Page No.: 13
Engineer: Pawn	
Site: AC5	Time: 2019/10/10 - 20:52
Limit: FCC_Part15.209_RE(3m)	Margin: 0
Probe: Horn_3117_00167055(1-18GHz)	Polarity: Horizontal
EUT: Hue light strip	Power: AC 120V/60Hz
Note: Mode 2:Transmit at 2402MHz by LE_2Mbps(GFSK_LE)	



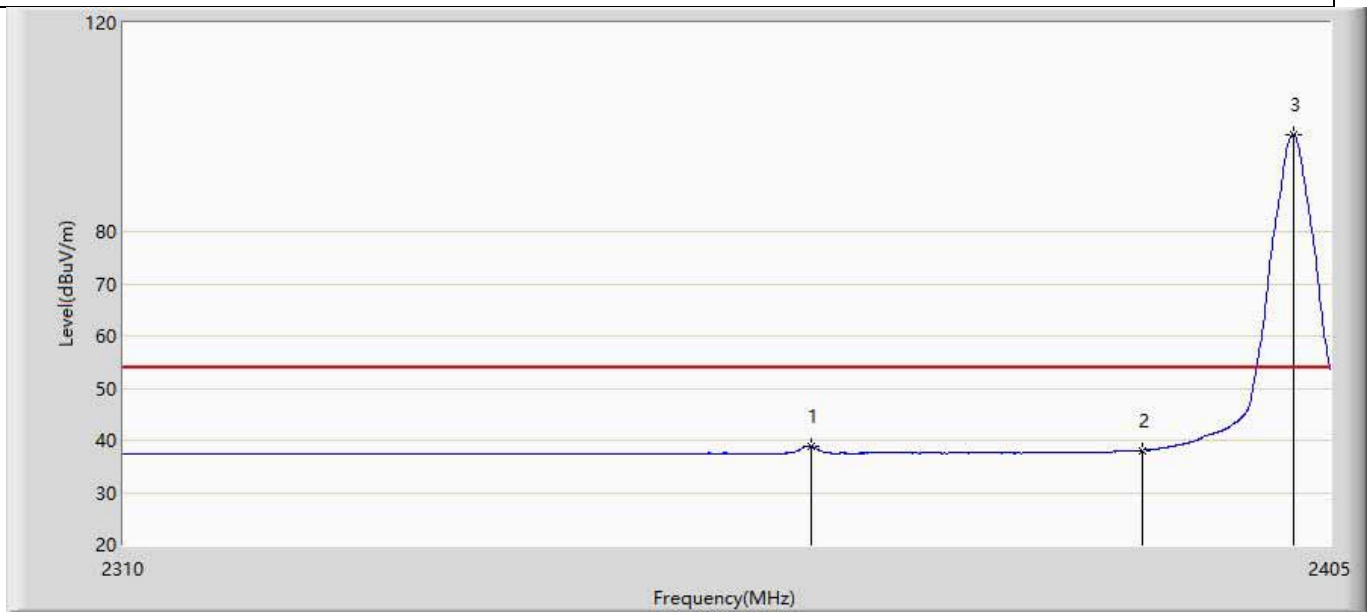
No	Mark	Frequency (MHz)	Measure Level (dBuV/m)	Reading Level (dBuV)	Over Limit (dB)	Limit (dBuV/m)	Factor (dB)	Type
1		2390.000	50.693	15.236	-23.307	74.000	35.458	PK
2	*	2401.485	101.099	65.630	N/A	N/A	35.468	PK

Profile: 1992171R	Page No.: 14
Engineer: Pawn	
Site: AC5	Time: 2019/10/10 - 21:03
Limit: FCC_Part15.209_RE(3m)	Margin: 0
Probe: Horn_3117_00167055(1-18GHz)	Polarity: Vertical
EUT: Hue light strip	Power: AC 120V/60Hz
Note: Mode 2:Transmit at 2402MHz by LE_2Mbps(GFSK_LE)	



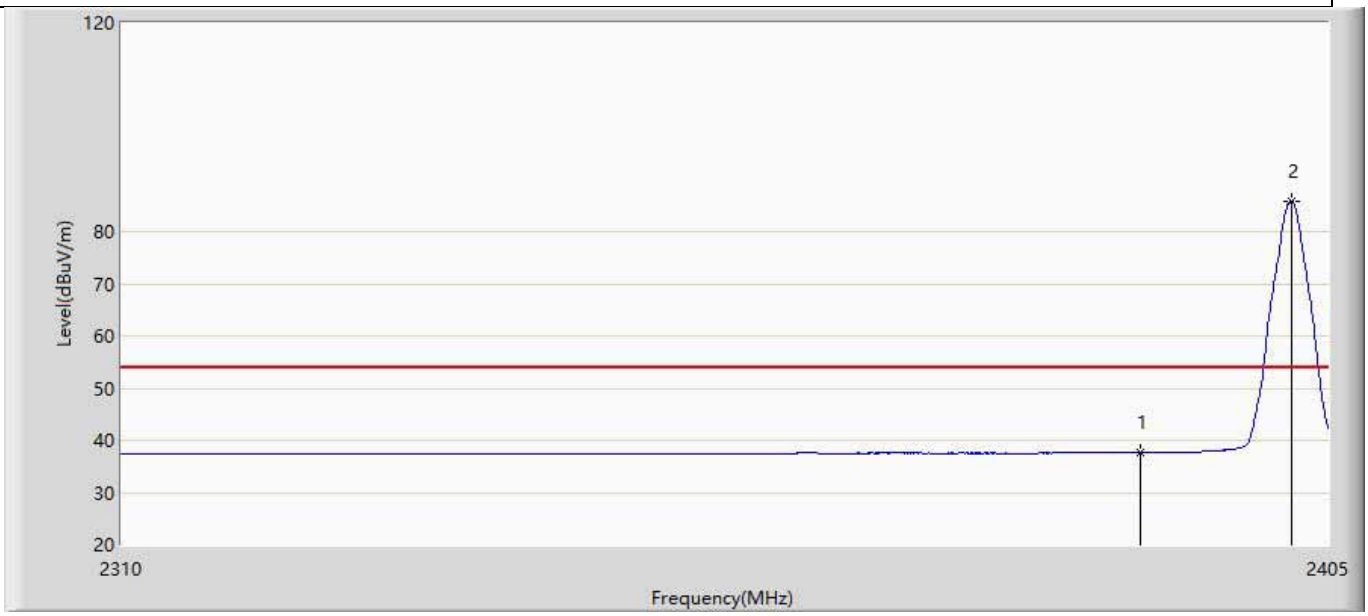
No	Mark	Frequency (MHz)	Measure Level (dBuV/m)	Reading Level (dBuV)	Over Limit (dB)	Limit (dBuV/m)	Factor (dB)	Type
1		2390.000	51.196	15.739	-22.804	74.000	35.458	PK
2	*	2401.627	89.290	53.821	N/A	N/A	35.469	PK

Profile: 1992171R	Page No.: 15
Engineer: Pawn	
Site: AC5	Time: 2019/10/10 - 21:05
Limit: FCC_Part15.209_RE(3m)	Margin: 0
Probe: Horn_3117_00167055(1-18GHz)	Polarity: Horizontal
EUT: Hue light strip	Power: AC 120V/60Hz
Note: Mode 2:Transmit at 2402MHz by LE_2Mbps(GFSK_LE)	



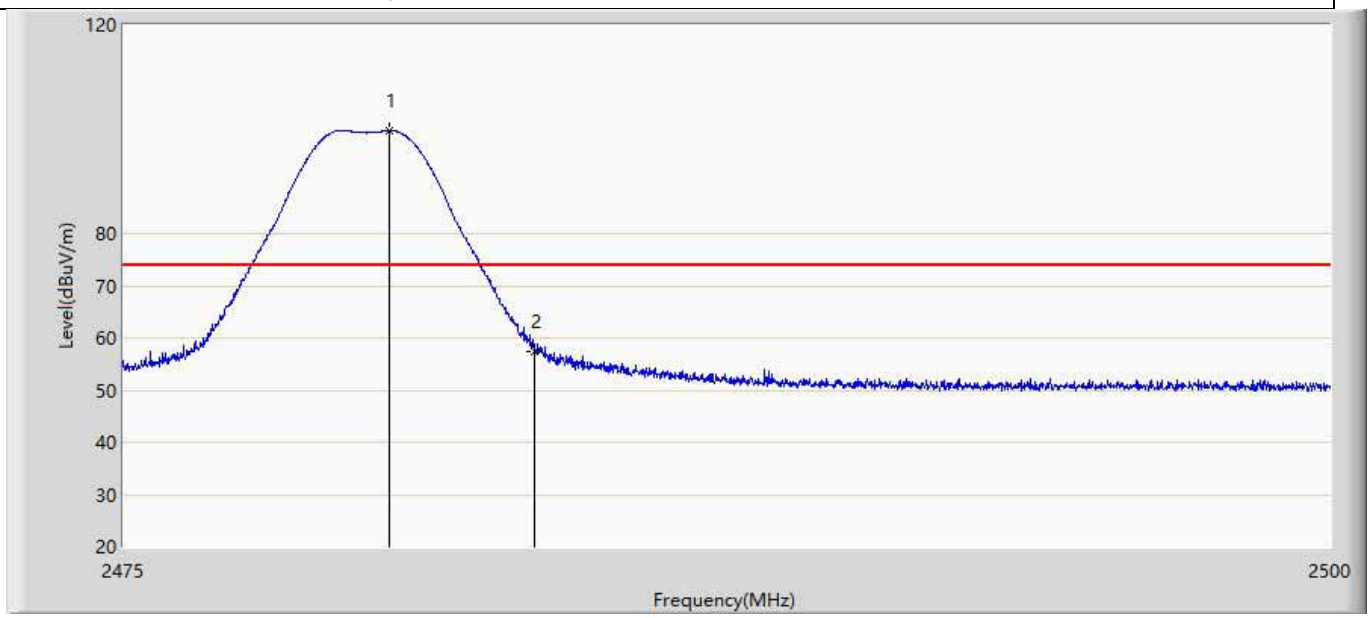
No	Mark	Frequency (MHz)	Measure Level (dBuV/m)	Reading Level (dBuV)	Over Limit (dB)	Limit (dBuV/m)	Factor (dB)	Type
1		2363.722	38.825	3.385	-15.175	54.000	35.440	AV
2		2390.000	38.101	2.644	-15.899	54.000	35.458	AV
3	*	2402.055	98.549	63.079	N/A	N/A	35.469	AV

Profile: 1992171R	Page No.: 16
Engineer: Pawn	
Site: AC5	Time: 2019/10/10 - 21:06
Limit: FCC_Part15.209_RE(3m)	Margin: 0
Probe: Horn_3117_00167055(1-18GHz)	Polarity: Vertical
EUT: Hue light strip	Power: AC 120V/60Hz
Note: Mode 2:Transmit at 2402MHz by LE_2Mbps(GFSK_LE)	



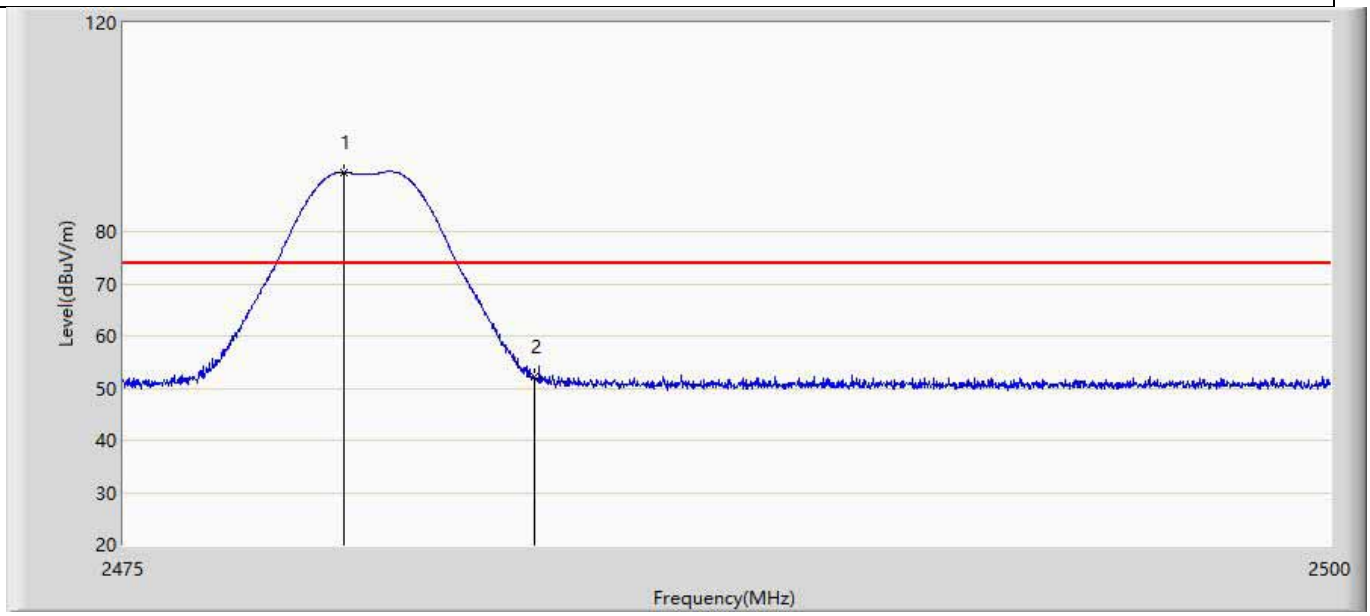
No	Mark	Frequency (MHz)	Measure Level (dBuV/m)	Reading Level (dBuV)	Over Limit (dB)	Limit (dBuV/m)	Factor (dB)	Type
1		2390.000	37.582	2.125	-16.418	54.000	35.458	AV
2	*	2402.055	85.922	50.452	N/A	N/A	35.469	AV

Profile: 1992171R	Page No.: 29
Engineer: Pawn	
Site: AC5	Time: 2019/10/10 - 21:32
Limit: FCC_Part15.209_RE(3m)	Margin: 0
Probe: Horn_3117_00167055(1-18GHz)	Polarity: Horizontal
EUT: Hue light strip	Power: AC 120V/60Hz
Note: Mode 2:Transmit at 2480MHz by LE_2Mbps(GFSK_LE)	



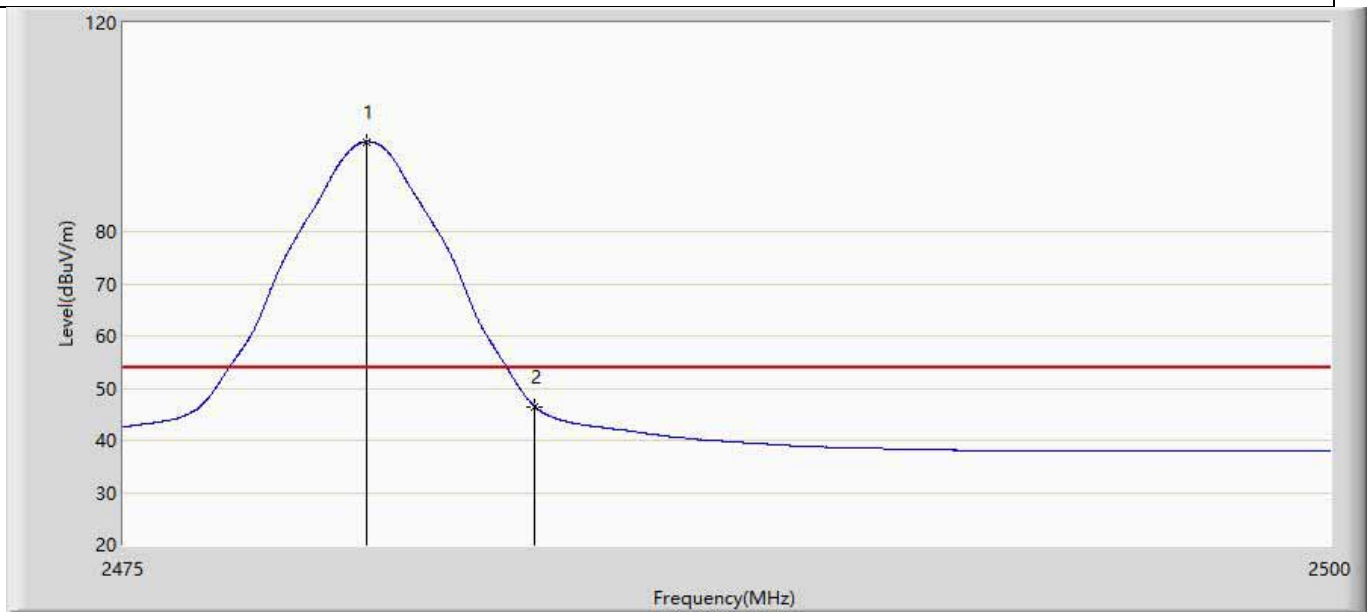
No	Mark	Frequency (MHz)	Measure Level (dBuV/m)	Reading Level (dBuV)	Over Limit (dB)	Limit (dBuV/m)	Factor (dB)	Type
1	*	2480.488	99.731	64.230	N/A	N/A	35.500	PK
2		2483.500	57.426	21.908	-16.574	74.000	35.517	PK

Profile: 1992171R	Page No.: 30
Engineer: Pawn	
Site: AC5	Time: 2019/10/10 - 21:34
Limit: FCC_Part15.209_RE(3m)	Margin: 0
Probe: Horn_3117_00167055(1-18GHz)	Polarity: Vertical
EUT: Hue light strip	Power: AC 120V/60Hz
Note: Mode 2:Transmit at 2480MHz by LE_2Mbps(GFSK_LE)	



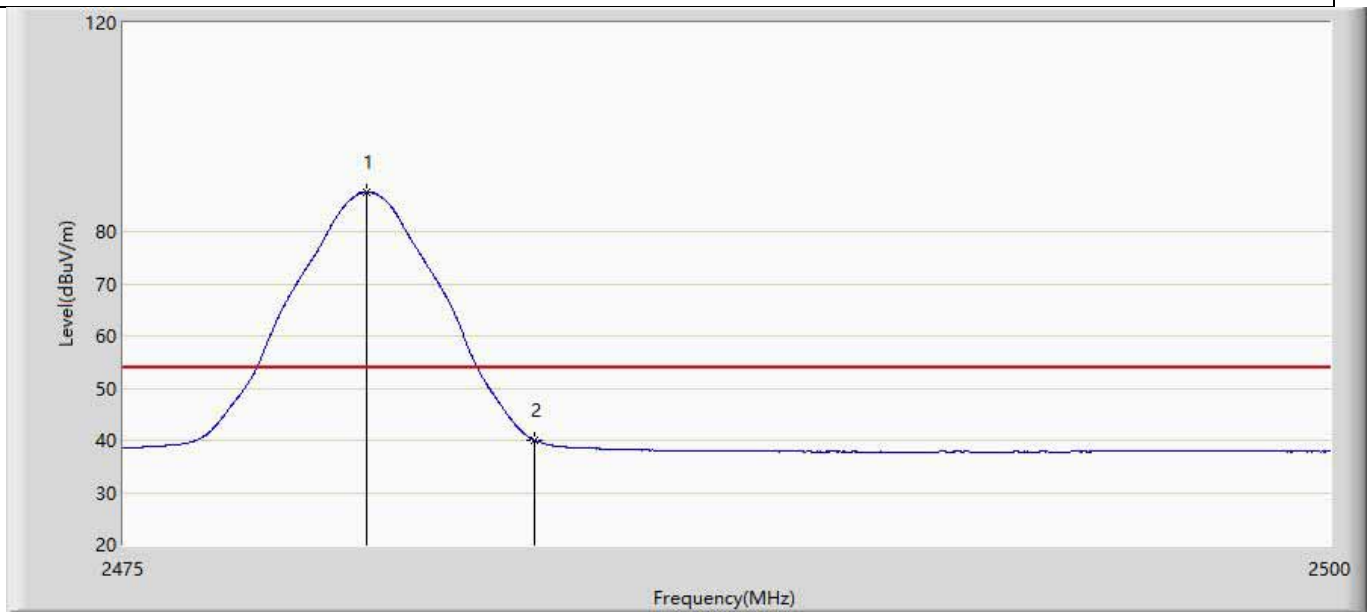
No	Mark	Frequency (MHz)	Measure Level (dBuV/m)	Reading Level (dBuV)	Over Limit (dB)	Limit (dBuV/m)	Factor (dB)	Type
1	*	2479.550	91.373	55.878	N/A	N/A	35.495	PK
2		2483.500	52.149	16.631	-21.851	74.000	35.517	PK

Profile: 1992171R	Page No.: 31
Engineer: Pawn	
Site: AC5	Time: 2019/10/10 - 21:35
Limit: FCC_Part15.209_RE(3m)	Margin: 0
Probe: Horn_3117_00167055(1-18GHz)	Polarity: Horizontal
EUT: Hue light strip	Power: AC 120V/60Hz
Note: Mode 2:Transmit at 2480MHz by LE_2Mbps(GFSK_LE)	



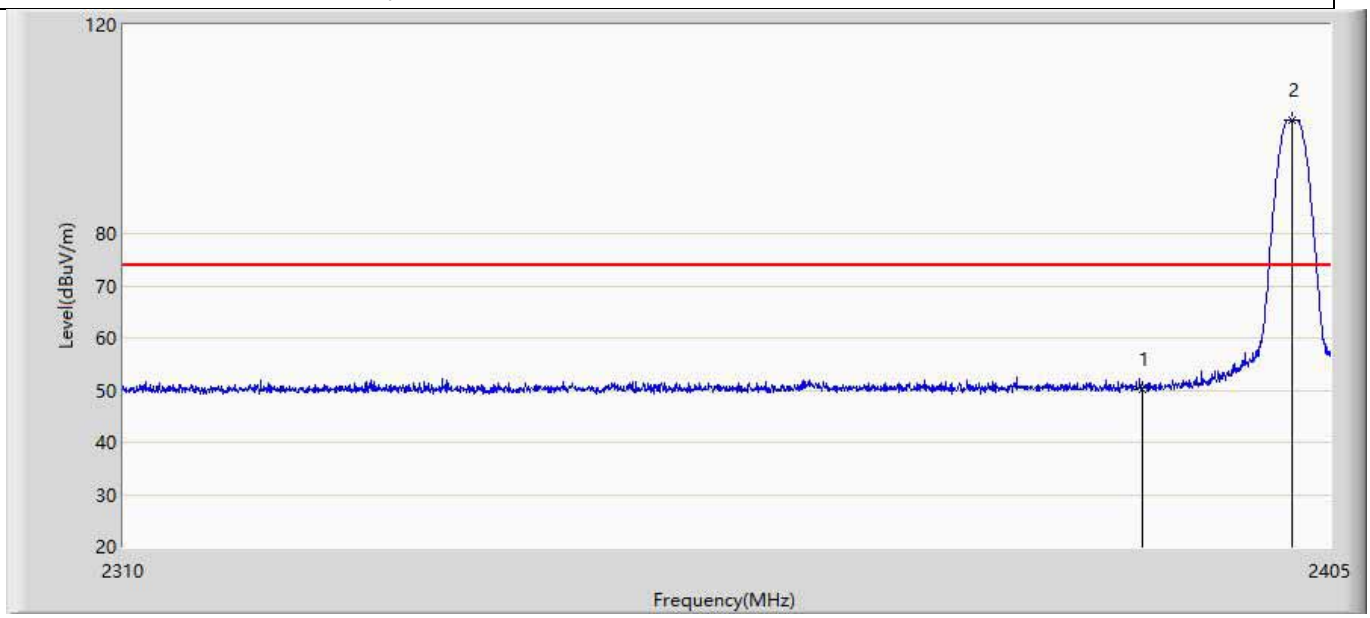
No	Mark	Frequency (MHz)	Measure Level (dBuV/m)	Reading Level (dBuV)	Over Limit (dB)	Limit (dBuV/m)	Factor (dB)	Type
1	*	2480.012	97.235	61.737	N/A	N/A	35.498	AV
2		2483.500	46.514	10.996	-7.486	54.000	35.517	AV

Profile: 1992171R	Page No.: 32
Engineer: Pawn	
Site: AC5	Time: 2019/10/10 - 21:37
Limit: FCC_Part15.209_RE(3m)	Margin: 0
Probe: Horn_3117_00167055(1-18GHz)	Polarity: Vertical
EUT: Hue light strip	Power: AC 120V/60Hz
Note: Mode 2:Transmit at 2480MHz by LE_2Mbps(GFSK_LE)	



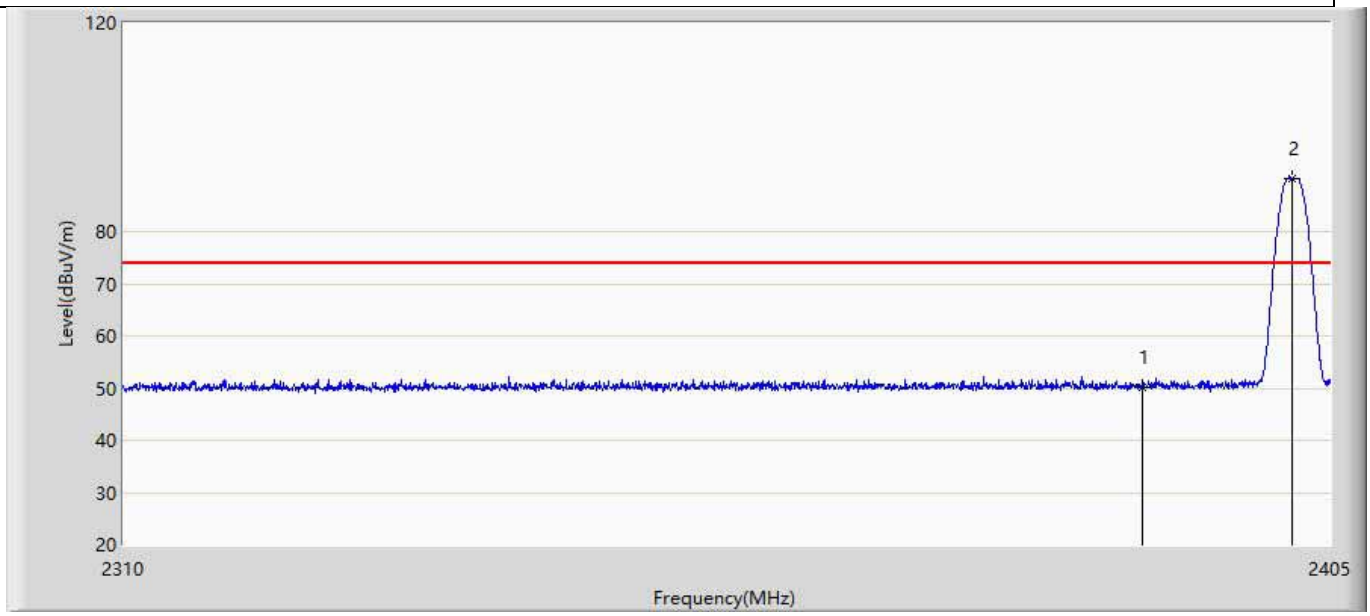
No	Mark	Frequency (MHz)	Measure Level (dBuV/m)	Reading Level (dBuV)	Over Limit (dB)	Limit (dBuV/m)	Factor (dB)	Type
1	*	2480.012	87.518	52.020	N/A	N/A	35.498	AV
2		2483.500	40.017	4.499	-13.983	54.000	35.517	AV

Profile: 1992171R	Page No.: 21
Engineer: Pawn	
Site: AC5	Time: 2019/10/10 - 21:16
Limit: FCC_Part15.209_RE(3m)	Margin: 0
Probe: Horn_3117_00167055(1-18GHz)	Polarity: Horizontal
EUT: Hue light strip	Power: AC 120V/60Hz
Note: Mode 3:Transmit at 2402MHz by LE_Coded(S=2)(GFSK_LE)	



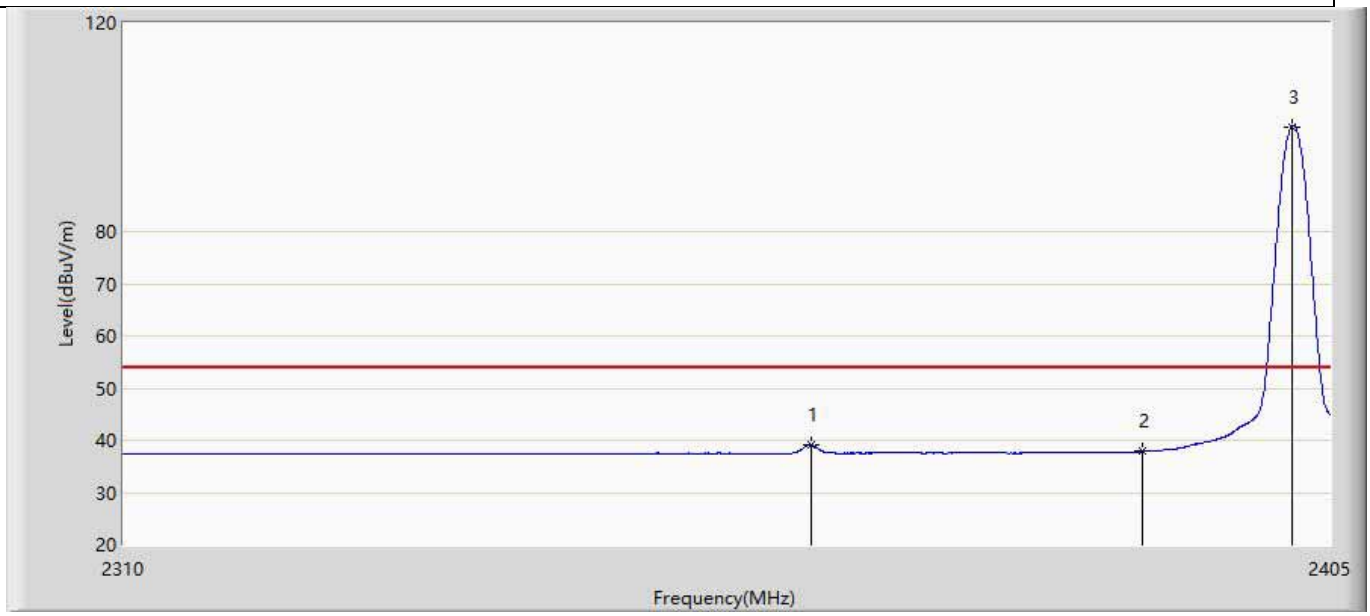
No	Mark	Frequency (MHz)	Measure Level (dBuV/m)	Reading Level (dBuV)	Over Limit (dB)	Limit (dBuV/m)	Factor (dB)	Type
1		2390.000	50.014	14.557	-23.986	74.000	35.458	PK
2	*	2401.913	101.656	66.187	N/A	N/A	35.469	PK

Profile: 1992171R	Page No.: 22
Engineer: Pawn	
Site: AC5	Time: 2019/10/10 - 21:18
Limit: FCC_Part15.209_RE(3m)	Margin: 0
Probe: Horn_3117_00167055(1-18GHz)	Polarity: Vertical
EUT: Hue light strip	Power: AC 120V/60Hz
Note: Mode 3:Transmit at 2402MHz by LE_Coded(S=2)(GFSK_LE)	



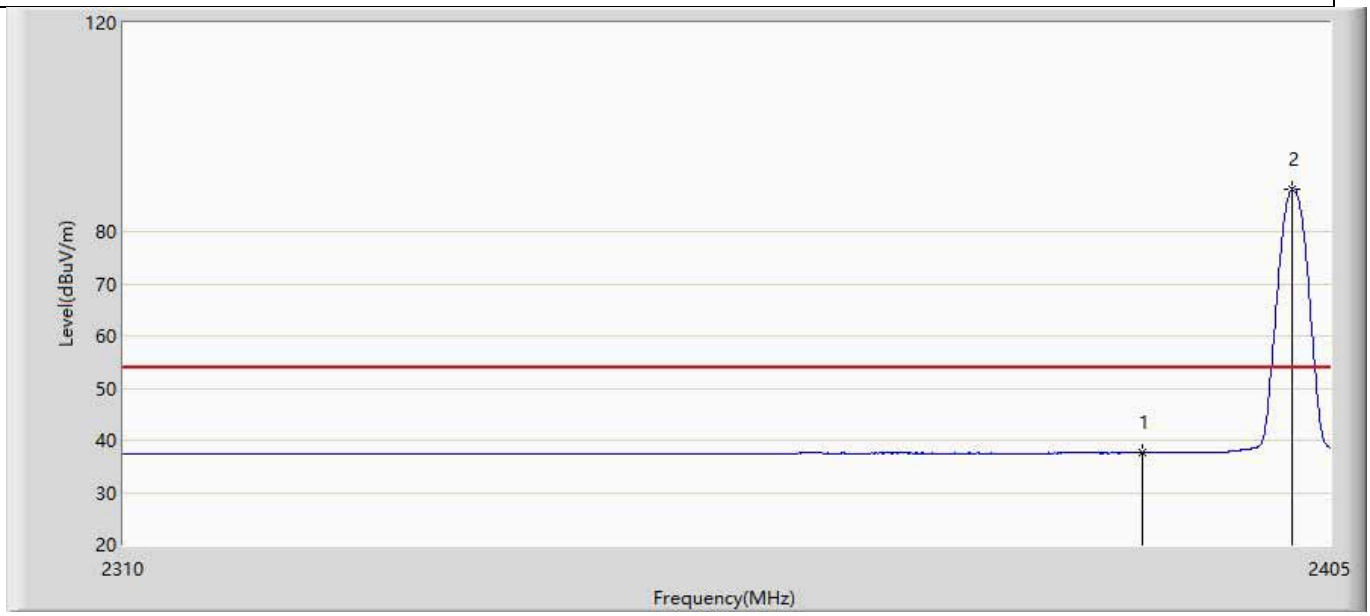
No	Mark	Frequency (MHz)	Measure Level (dBuV/m)	Reading Level (dBuV)	Over Limit (dB)	Limit (dBuV/m)	Factor (dB)	Type
1		2390.000	50.254	14.797	-23.746	74.000	35.458	PK
2	*	2401.913	90.170	54.701	N/A	N/A	35.469	PK

Profile: 1992171R	Page No.: 23
Engineer: Pawn	
Site: AC5	Time: 2019/10/10 - 21:20
Limit: FCC_Part15.209_RE(3m)	Margin: 0
Probe: Horn_3117_00167055(1-18GHz)	Polarity: Horizontal
EUT: Hue light strip	Power: AC 120V/60Hz
Note: Mode 3:Transmit at 2402MHz by LE_Coded(S=2)(GFSK_LE)	



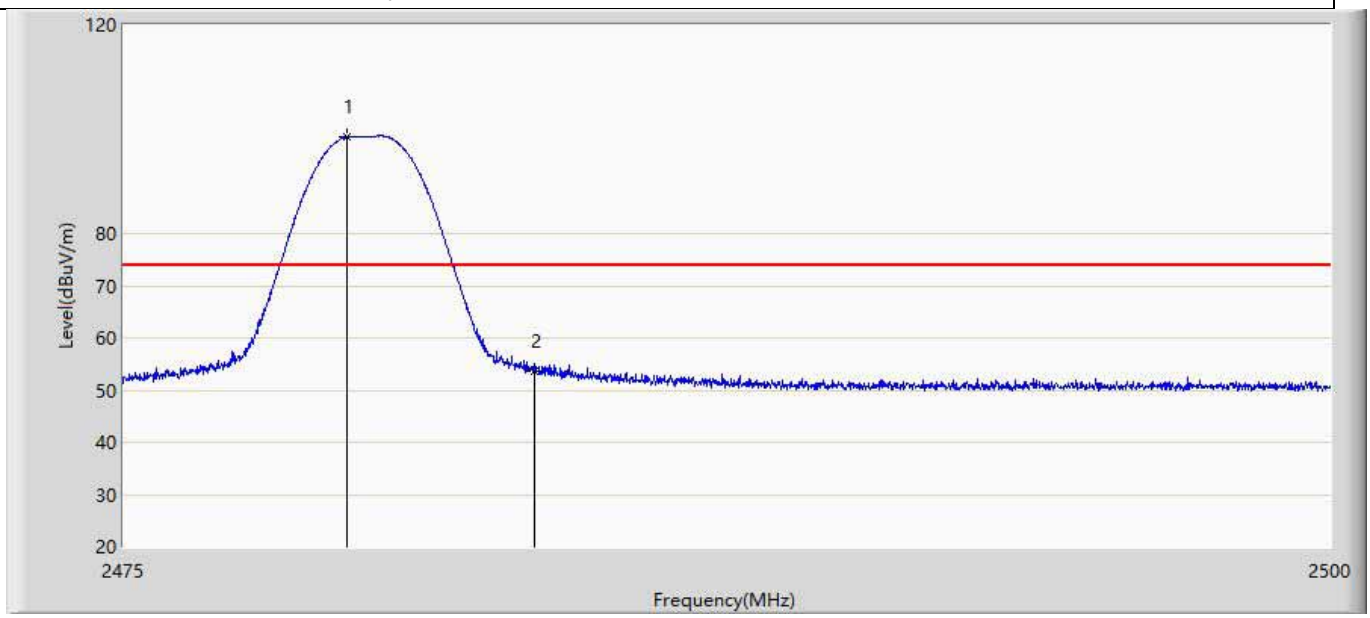
No	Mark	Frequency (MHz)	Measure Level (dBuV/m)	Reading Level (dBuV)	Over Limit (dB)	Limit (dBuV/m)	Factor (dB)	Type
1		2363.722	39.133	3.693	-14.867	54.000	35.440	AV
2		2390.000	37.882	2.425	-16.118	54.000	35.458	AV
3	*	2401.913	100.069	64.600	N/A	N/A	35.469	AV

Profile: 1992171R	Page No.: 24
Engineer: Pawn	
Site: AC5	Time: 2019/10/10 - 21:21
Limit: FCC_Part15.209_RE(3m)	Margin: 0
Probe: Horn_3117_00167055(1-18GHz)	Polarity: Vertical
EUT: Hue light strip	Power: AC 120V/60Hz
Note: Mode 3:Transmit at 2402MHz by LE_Coded(S=2)(GFSK_LE)	



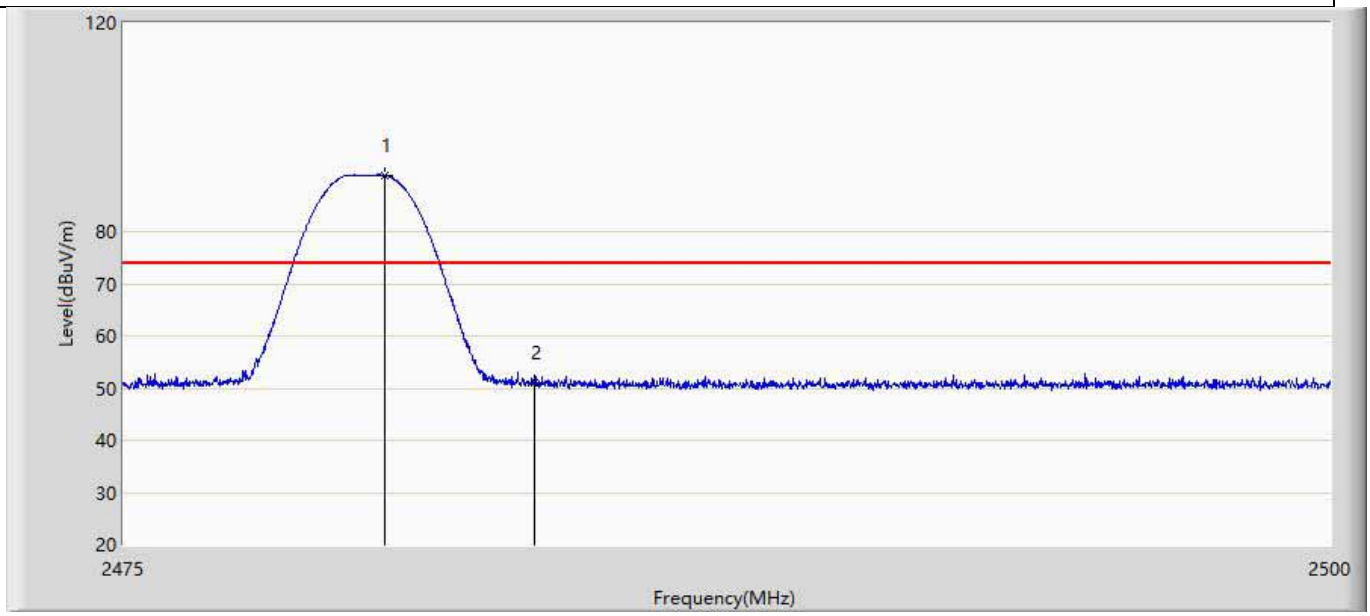
No	Mark	Frequency (MHz)	Measure Level (dBuV/m)	Reading Level (dBuV)	Over Limit (dB)	Limit (dBuV/m)	Factor (dB)	Type
1		2390.000	37.567	2.110	-16.433	54.000	35.458	AV
2	*	2401.960	88.222	52.753	N/A	N/A	35.469	AV

Profile: 1992171R	Page No.: 37
Engineer: Pawn	
Site: AC5	Time: 2019/10/10 - 21:46
Limit: FCC_Part15.209_RE(3m)	Margin: 0
Probe: Horn_3117_00167055(1-18GHz)	Polarity: Horizontal
EUT: Hue light strip	Power: AC 120V/60Hz
Note: Mode 3:Transmit at 2480MHz by LE_Coded(S=2)(GFSK_LE)	



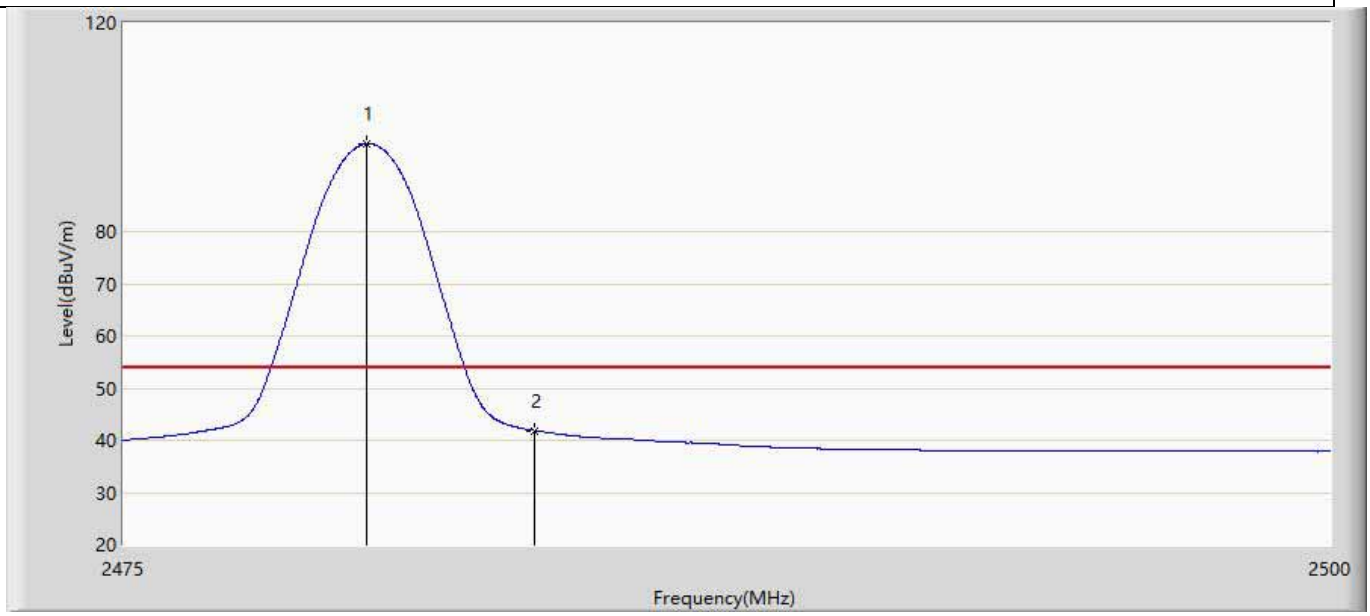
No	Mark	Frequency (MHz)	Measure Level (dBuV/m)	Reading Level (dBuV)	Over Limit (dB)	Limit (dBuV/m)	Factor (dB)	Type
1	*	2479.625	98.578	63.082	N/A	N/A	35.496	PK
2		2483.500	53.634	18.116	-20.366	74.000	35.517	PK

Profile: 1992171R	Page No.: 38
Engineer: Pawn	
Site: AC5	Time: 2019/10/10 - 21:49
Limit: FCC_Part15.209_RE(3m)	Margin: 0
Probe: Horn_3117_00167055(1-18GHz)	Polarity: Vertical
EUT: Hue light strip	Power: AC 120V/60Hz
Note: Mode 3:Transmit at 2480MHz by LE_Coded(S=2)(GFSK_LE)	



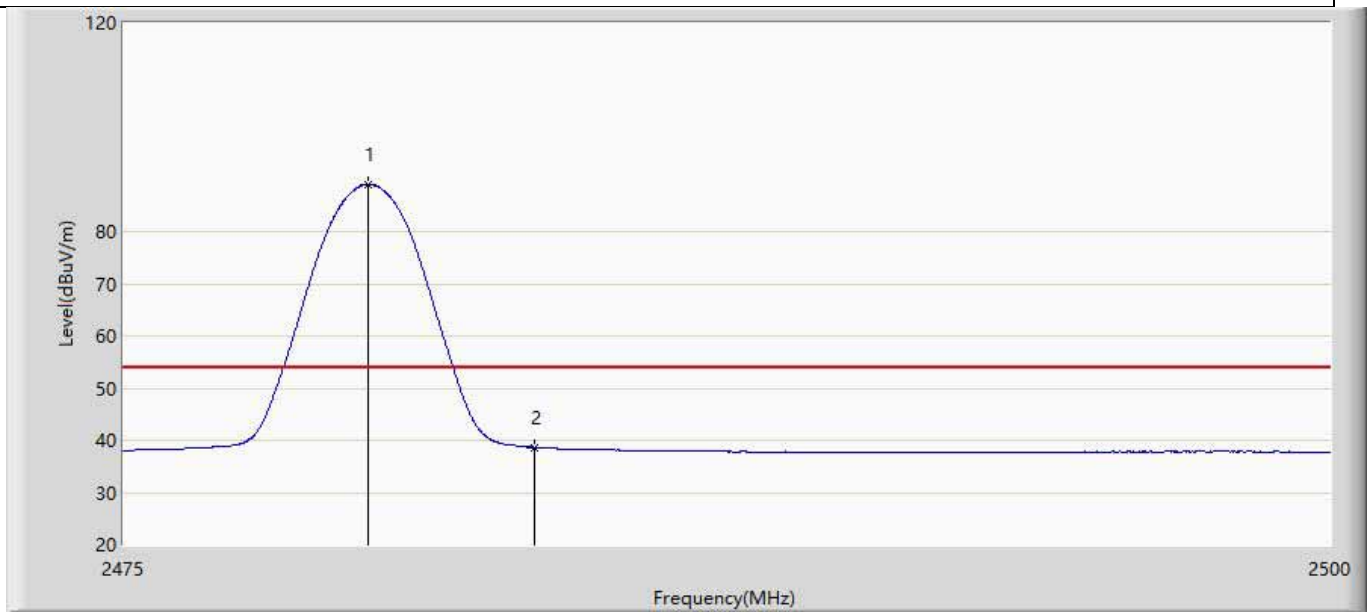
No	Mark	Frequency (MHz)	Measure Level (dBuV/m)	Reading Level (dBuV)	Over Limit (dB)	Limit (dBuV/m)	Factor (dB)	Type
1	*	2480.400	90.817	55.317	N/A	N/A	35.501	PK
2		2483.500	50.895	15.377	-23.105	74.000	35.517	PK

Profile: 1992171R	Page No.: 39
Engineer: Pawn	
Site: AC5	Time: 2019/10/10 - 21:50
Limit: FCC_Part15.209_RE(3m)	Margin: 0
Probe: Horn_3117_00167055(1-18GHz)	Polarity: Horizontal
EUT: Hue light strip	Power: AC 120V/60Hz
Note: Mode 3:Transmit at 2480MHz by LE_Coded(S=2)(GFSK_LE)	



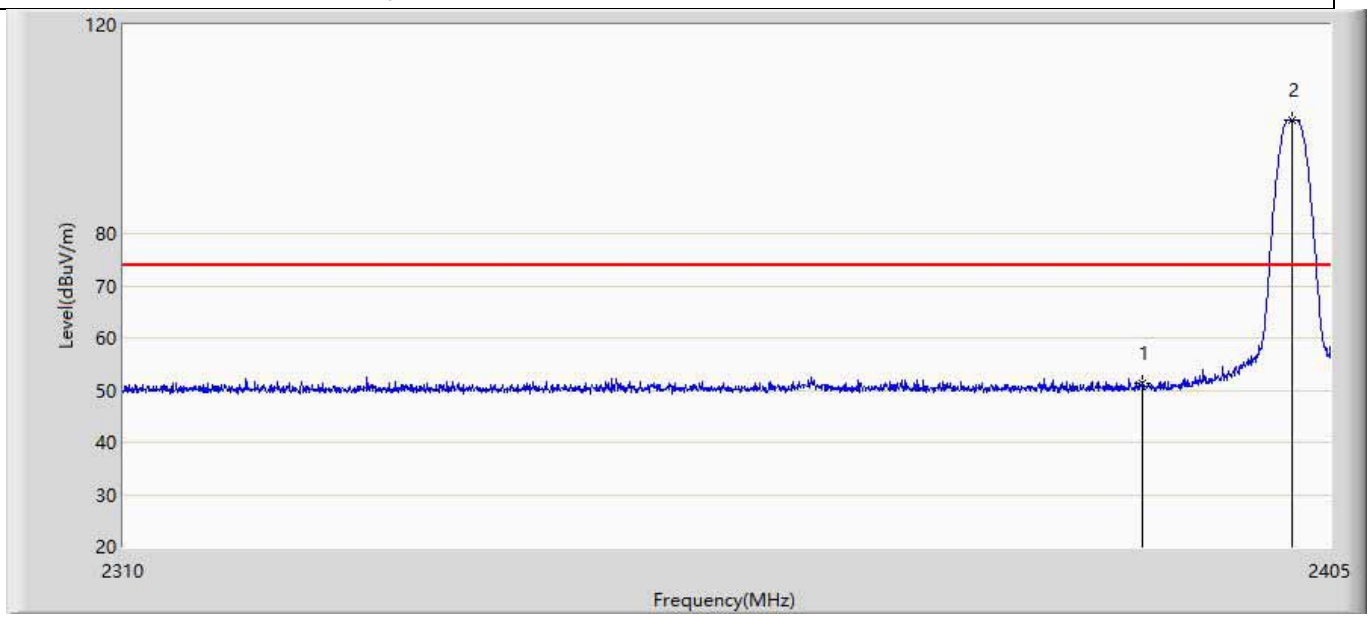
No	Mark	Frequency (MHz)	Measure Level (dBuV/m)	Reading Level (dBuV)	Over Limit (dB)	Limit (dBuV/m)	Factor (dB)	Type
1	*	2480.012	96.788	61.290	N/A	N/A	35.498	AV
2		2483.500	41.864	6.346	-12.136	54.000	35.517	AV

Profile: 1992171R	Page No.: 40
Engineer: Pawn	
Site: AC5	Time: 2019/10/10 - 21:52
Limit: FCC_Part15.209_RE(3m)	Margin: 0
Probe: Horn_3117_00167055(1-18GHz)	Polarity: Vertical
EUT: Hue light strip	Power: AC 120V/60Hz
Note: Mode 3:Transmit at 2480MHz by LE_Coded(S=2)(GFSK_LE)	



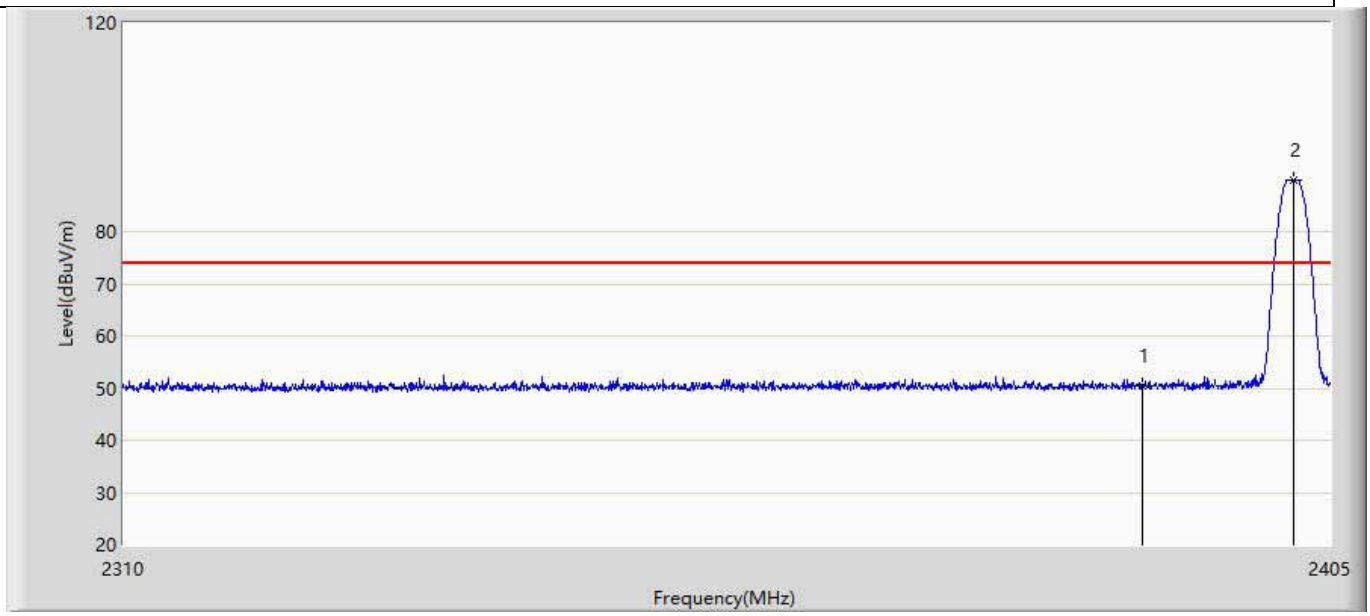
No	Mark	Frequency (MHz)	Measure Level (dBuV/m)	Reading Level (dBuV)	Over Limit (dB)	Limit (dBuV/m)	Factor (dB)	Type
1	*	2480.050	89.003	53.505	N/A	N/A	35.498	AV
2		2483.500	38.633	3.115	-15.367	54.000	35.517	AV

Profile: 1992171R	Page No.: 17
Engineer: Pawn	
Site: AC5	Time: 2019/10/10 - 21:08
Limit: FCC_Part15.209_RE(3m)	Margin: 0
Probe: Horn_3117_00167055(1-18GHz)	Polarity: Horizontal
EUT: Hue light strip	Power: AC 120V/60Hz
Note: Mode 4:Transmit at 2402MHz by LE_Coded(S=8)(GFSK_LE)	



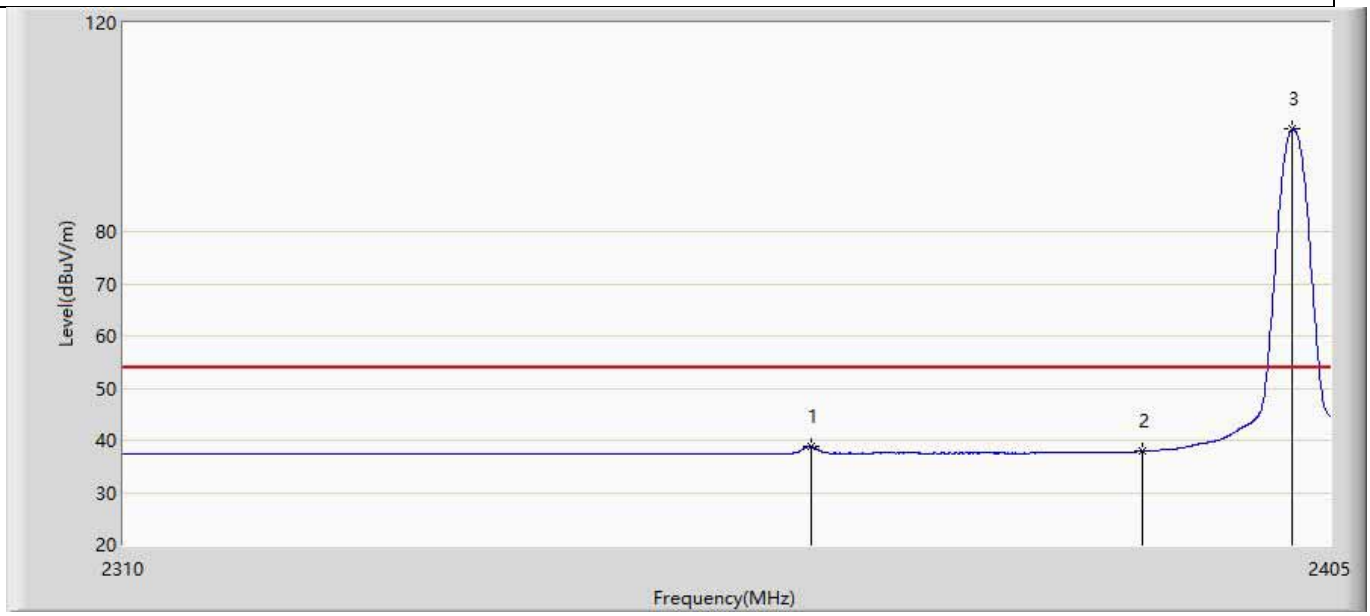
No	Mark	Frequency (MHz)	Measure Level (dBuV/m)	Reading Level (dBuV)	Over Limit (dB)	Limit (dBuV/m)	Factor (dB)	Type
1		2390.000	51.321	15.864	-22.679	74.000	35.458	PK
2	*	2401.913	101.707	66.238	N/A	N/A	35.469	PK

Profile: 1992171R	Page No.: 18
Engineer: Pawn	
Site: AC5	Time: 2019/10/10 - 21:10
Limit: FCC_Part15.209_RE(3m)	Margin: 0
Probe: Horn_3117_00167055(1-18GHz)	Polarity: Vertical
EUT: Hue light strip	Power: AC 120V/60Hz
Note: Mode 4:Transmit at 2402MHz by LE_Coded(S=8)(GFSK_LE)	



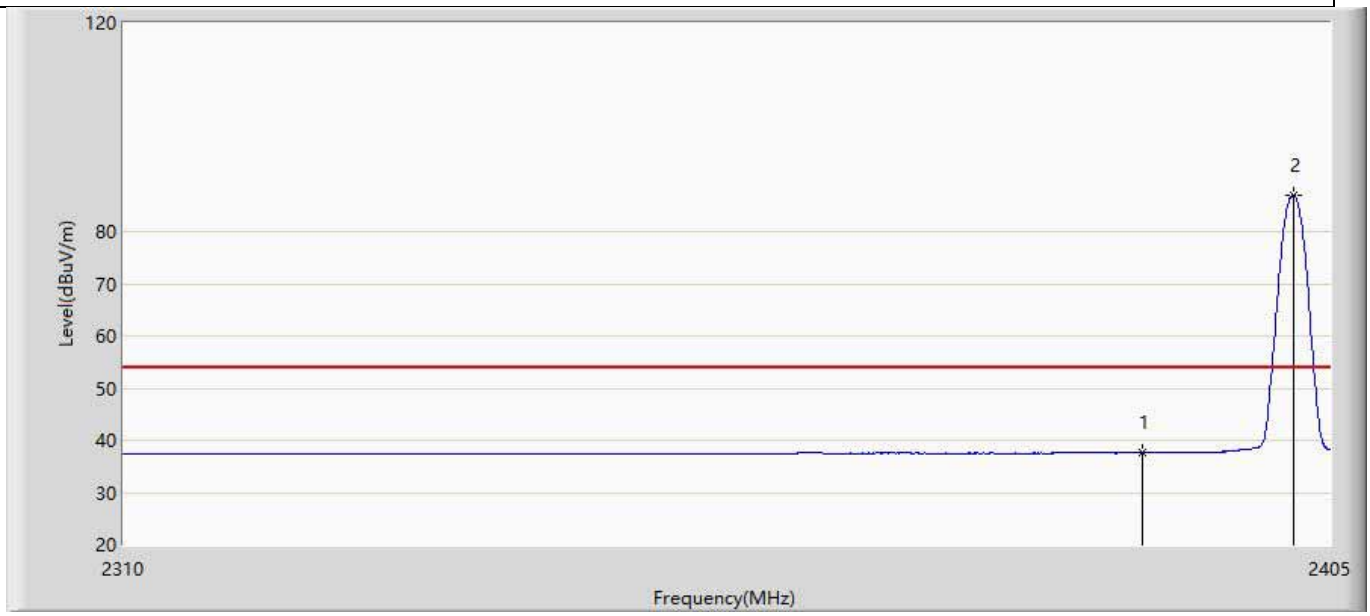
No	Mark	Frequency (MHz)	Measure Level (dBuV/m)	Reading Level (dBuV)	Over Limit (dB)	Limit (dBuV/m)	Factor (dB)	Type
1		2390.000	50.479	15.022	-23.521	74.000	35.458	PK
2	*	2402.055	89.810	54.340	N/A	N/A	35.469	PK

Profile: 1992171R	Page No.: 19
Engineer: Pawn	
Site: AC5	Time: 2019/10/10 - 21:12
Limit: FCC_Part15.209_RE(3m)	Margin: 0
Probe: Horn_3117_00167055(1-18GHz)	Polarity: Horizontal
EUT: Hue light strip	Power: AC 120V/60Hz
Note: Mode 4:Transmit at 2402MHz by LE_Coded(S=8)(GFSK_LE)	



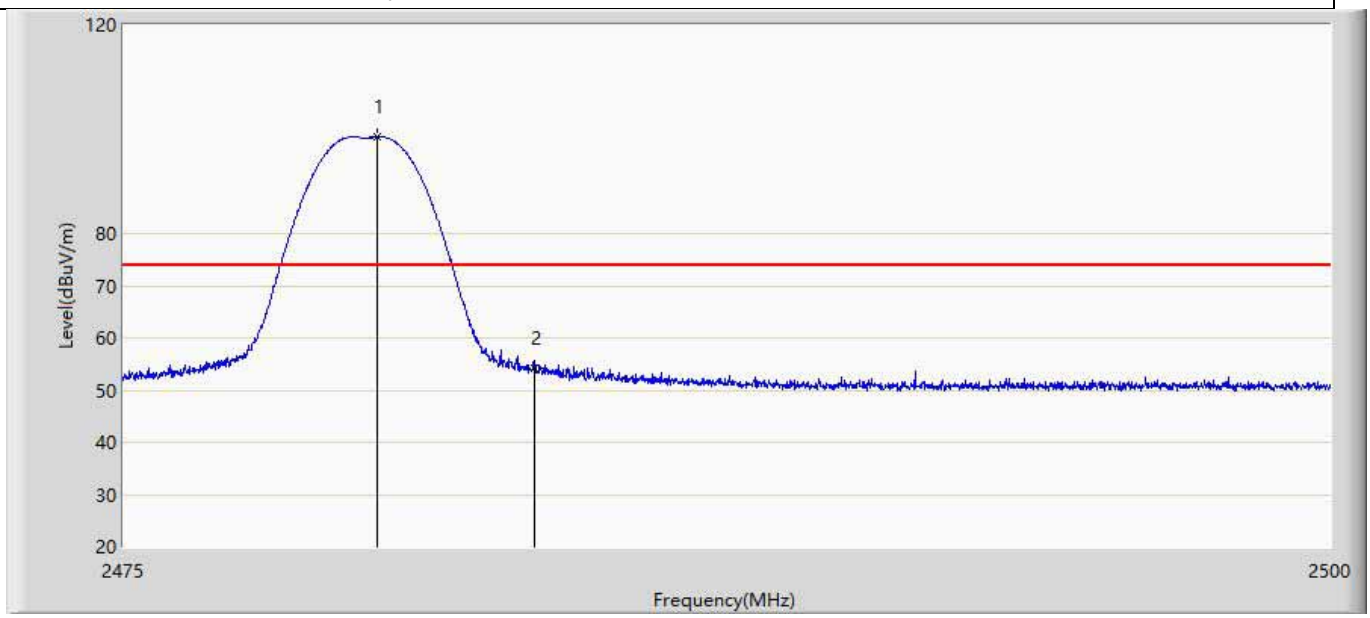
No	Mark	Frequency (MHz)	Measure Level (dBuV/m)	Reading Level (dBuV)	Over Limit (dB)	Limit (dBuV/m)	Factor (dB)	Type
1		2363.722	38.827	3.387	-15.173	54.000	35.440	AV
2		2390.000	37.861	2.404	-16.139	54.000	35.458	AV
3	*	2401.960	99.698	64.229	N/A	N/A	35.469	AV

Profile: 1992171R	Page No.: 20
Engineer: Pawn	
Site: AC5	Time: 2019/10/10 - 21:14
Limit: FCC_Part15.209_RE(3m)	Margin: 0
Probe: Horn_3117_00167055(1-18GHz)	Polarity: Vertical
EUT: Hue light strip	Power: AC 120V/60Hz
Note: Mode 4:Transmit at 2402MHz by LE_Coded(S=8)(GFSK_LE)	



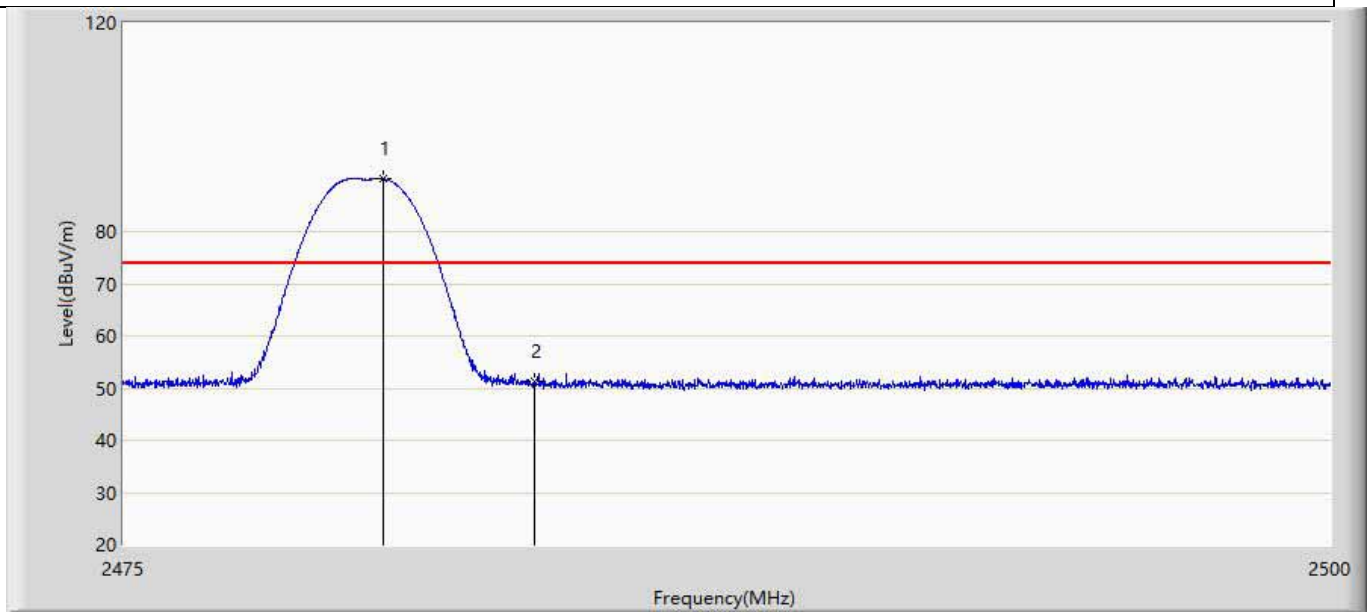
No	Mark	Frequency (MHz)	Measure Level (dBuV/m)	Reading Level (dBuV)	Over Limit (dB)	Limit (dBuV/m)	Factor (dB)	Type
1		2390.000	37.594	2.137	-16.406	54.000	35.458	AV
2	*	2402.055	87.040	51.570	N/A	N/A	35.469	AV

Profile: 1992171R	Page No.: 33
Engineer: Pawn	
Site: AC5	Time: 2019/10/10 - 21:39
Limit: FCC_Part15.209_RE(3m)	Margin: 0
Probe: Horn_3117_00167055(1-18GHz)	Polarity: Horizontal
EUT: Hue light strip	Power: AC 120V/60Hz
Note: Mode 4:Transmit at 2480MHz by LE_Coded(S=8)(GFSK_LE)	



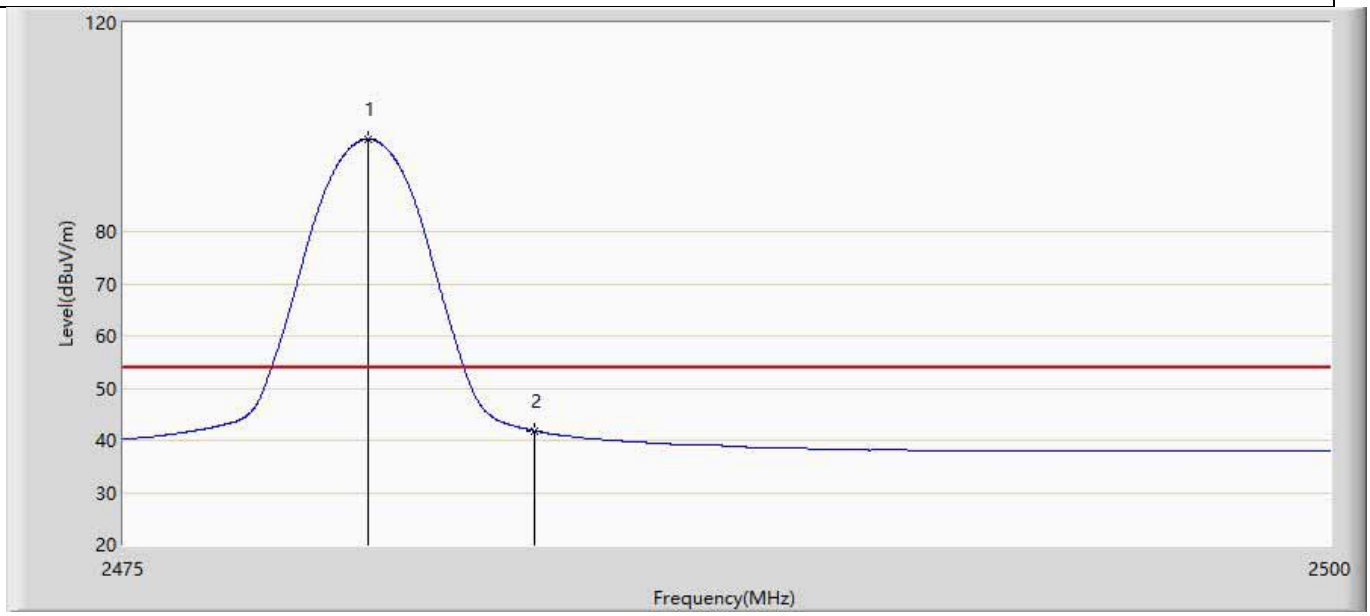
No	Mark	Frequency (MHz)	Measure Level (dBuV/m)	Reading Level (dBuV)	Over Limit (dB)	Limit (dBuV/m)	Factor (dB)	Type
1	*	2480.250	98.483	62.984	N/A	N/A	35.500	PK
2		2483.500	54.192	18.674	-19.808	74.000	35.517	PK

Profile: 1992171R	Page No.: 34
Engineer: Pawn	
Site: AC5	Time: 2019/10/10 - 21:41
Limit: FCC_Part15.209_RE(3m)	Margin: 0
Probe: Horn_3117_00167055(1-18GHz)	Polarity: Vertical
EUT: Hue light strip	Power: AC 120V/60Hz
Note: Mode 4:Transmit at 2480MHz by LE_Coded(S=8)(GFSK_LE)	



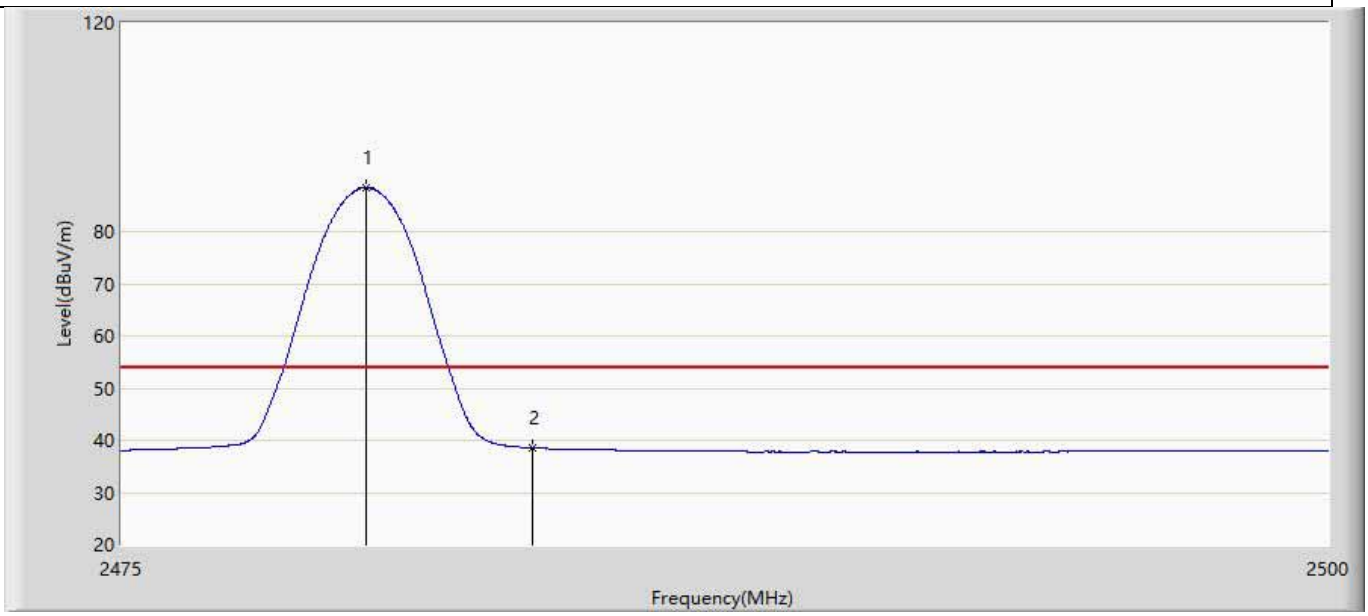
No	Mark	Frequency (MHz)	Measure Level (dBuV/m)	Reading Level (dBuV)	Over Limit (dB)	Limit (dBuV/m)	Factor (dB)	Type
1	*	2480.363	90.069	54.569	N/A	N/A	35.500	PK
2		2483.500	51.441	15.923	-22.559	74.000	35.517	PK

Profile: 1992171R	Page No.: 35
Engineer: Pawn	
Site: AC5	Time: 2019/10/10 - 21:43
Limit: FCC_Part15.209_RE(3m)	Margin: 0
Probe: Horn_3117_00167055(1-18GHz)	Polarity: Horizontal
EUT: Hue light strip	Power: AC 120V/60Hz
Note: Mode 4:Transmit at 2480MHz by LE_Coded(S=8)(GFSK_LE)	



No	Mark	Frequency (MHz)	Measure Level (dBuV/m)	Reading Level (dBuV)	Over Limit (dB)	Limit (dBuV/m)	Factor (dB)	Type
1	*	2480.050	97.668	62.170	N/A	N/A	35.498	AV
2		2483.500	41.806	6.288	-12.194	54.000	35.517	AV

Profile: 1992171R	Page No.: 36
Engineer: Pawn	
Site: AC5	Time: 2019/10/10 - 21:45
Limit: FCC_Part15.209_RE(3m)	Margin: 0
Probe: Horn_3117_00167055(1-18GHz)	Polarity: Vertical
EUT: Hue light strip	Power: AC 120V/60Hz
Note: Mode 4:Transmit at 2480MHz by LE_Coded(S=8)(GFSK_LE)	



No	Mark	Frequency (MHz)	Measure Level (dBuV/m)	Reading Level (dBuV)	Over Limit (dB)	Limit (dBuV/m)	Factor (dB)	Type
1	*	2480.050	88.386	52.888	N/A	N/A	35.498	AV
2		2483.500	38.541	3.023	-15.459	54.000	35.517	AV

Note:
1. Measured Level = Reading Level + Factor.
2. 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.
3. As the radiated emission was performed, so conducted emission was not tested.

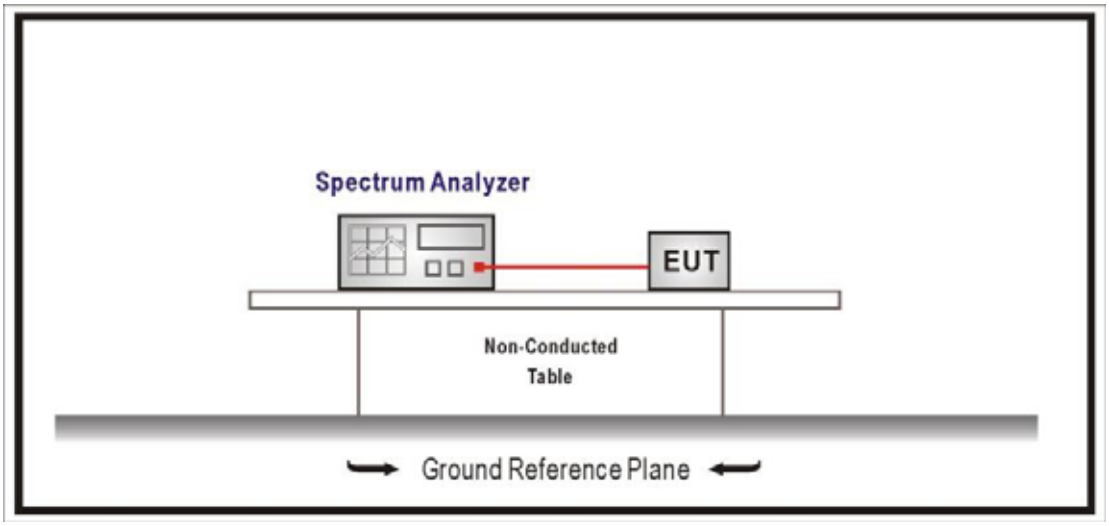
4.6 DTS Bandwidth	VERDICT: PASS

4.6.1 Limit

Standard	FCC Part 15 Subpart C Paragraph 15.247 (a)(2)

Systems using digital modulation techniques operate in the2400-2483.5 MHz .The minimum 6 dB bandwidth shall be at least 500 kHz

4.6.2 Test Setup



4.6.3 Test Procedure

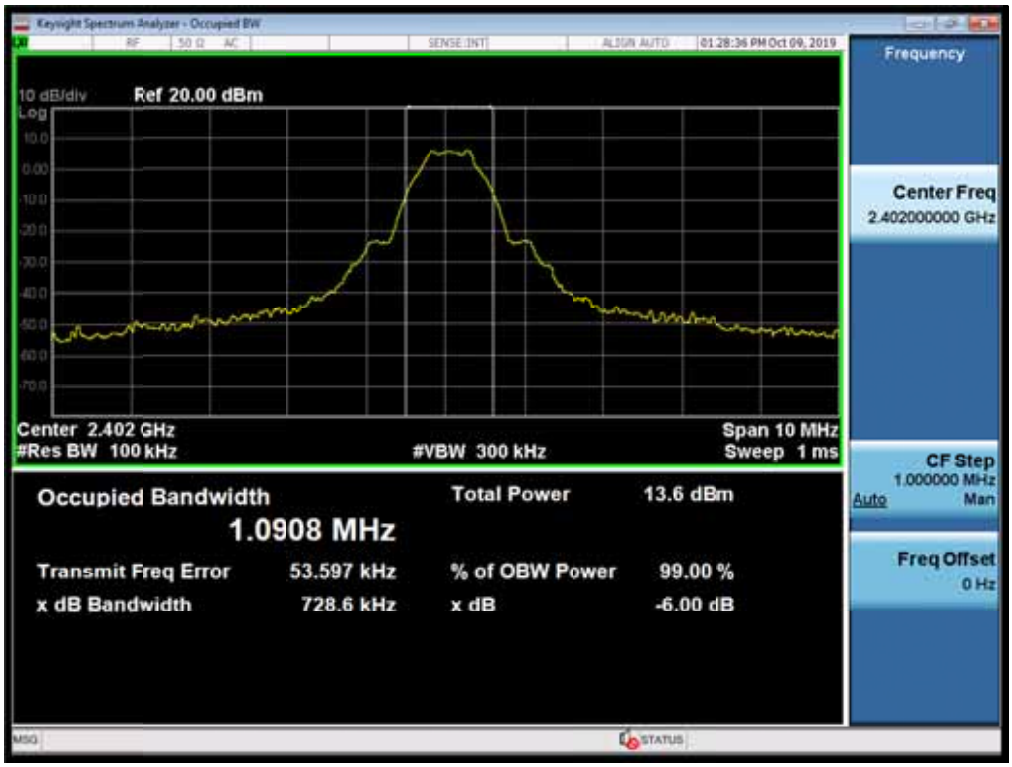
	Reference Rule		Chapter	Description
☒	ANSI C63.10		11.8	DTS bandwidth
	☐	ANSI C63.10	11.8.1	Option 1
	☒	ANSI C63.10	11.8.2	Option 2

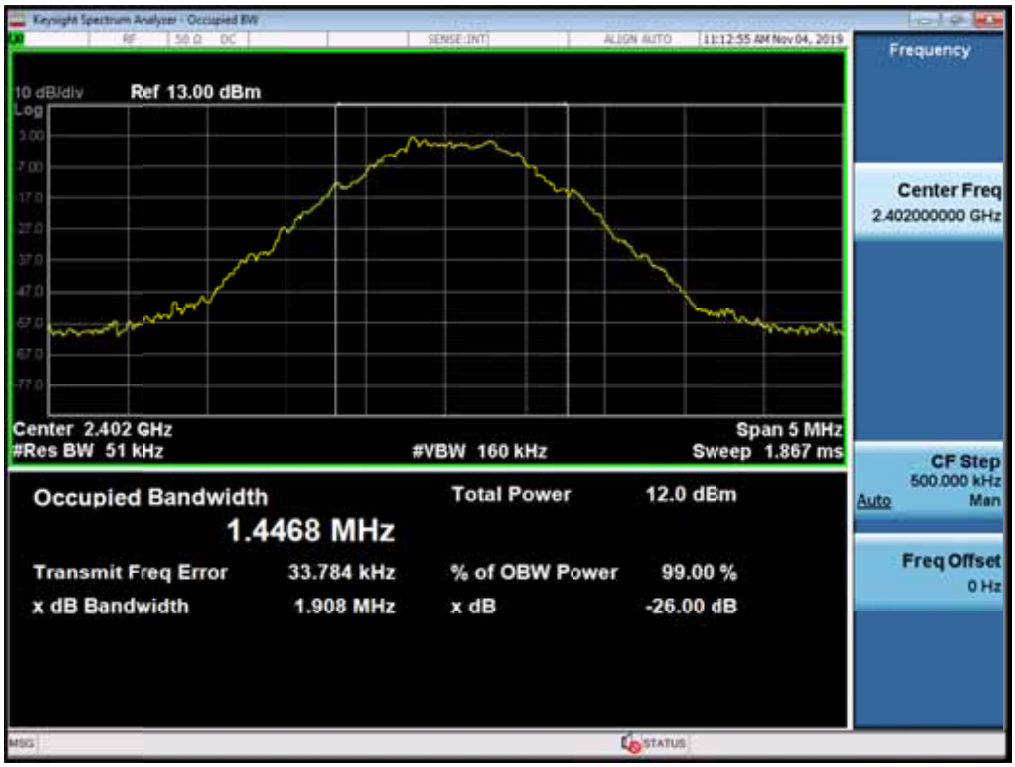
4.6.4 Test Data

Mode	CH.	Test Freq. (MHz)	99% Occupied Bandwidth (MHz)	6dB Occupied Bandwidth (MHz)	Limit (kHz)	Result
1	00	2402	1.4468	0.7286	>500	Pass
	19	2440	1.4418	0.7251	>500	Pass
	39	2480	1.4094	0.7229	>500	Pass
2	00	2402	2.4166	1.394	>500	Pass
	19	2440	2.3713	1.392	>500	Pass
	39	2480	2.3674	1.389	>500	Pass
3	00	2402	1.5990	0.8122	>500	Pass
	19	2440	1.5871	0.8081	>500	Pass
	39	2480	1.5809	0.8009	>500	Pass
4	00	2402	1.5371	0.7602	>500	Pass
	19	2440	1.5349	0.7614	>500	Pass
	39	2480	1.5247	0.7609	>500	Pass

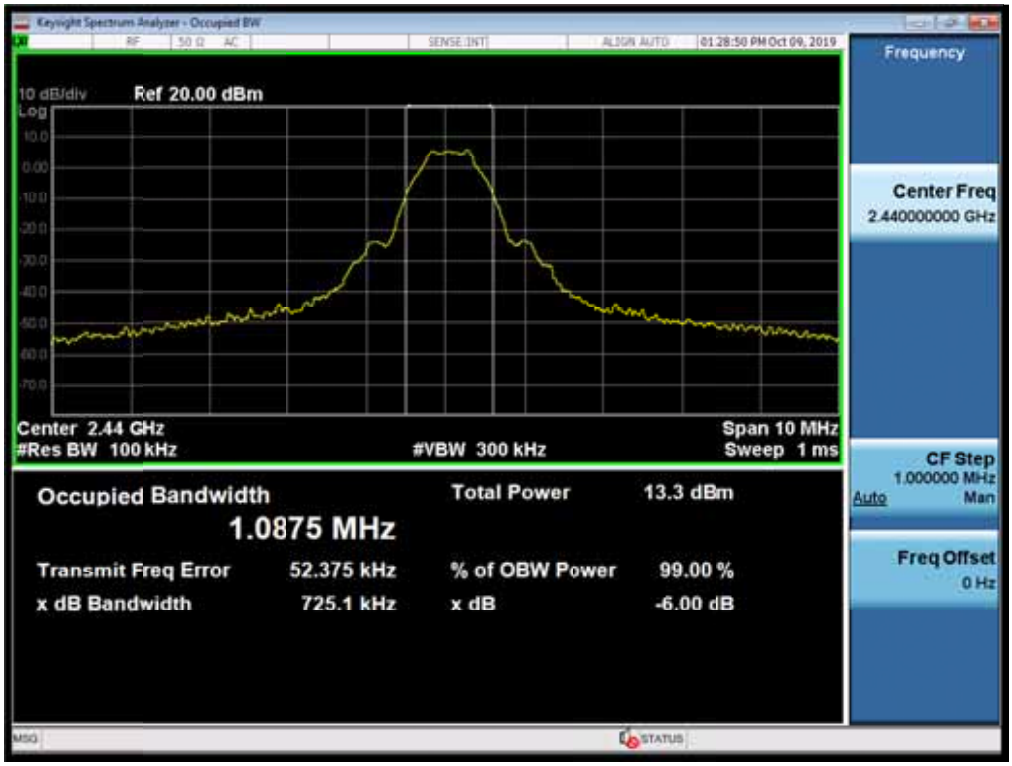
Note : We evaluated all test modes, shown in the report is the worst data.

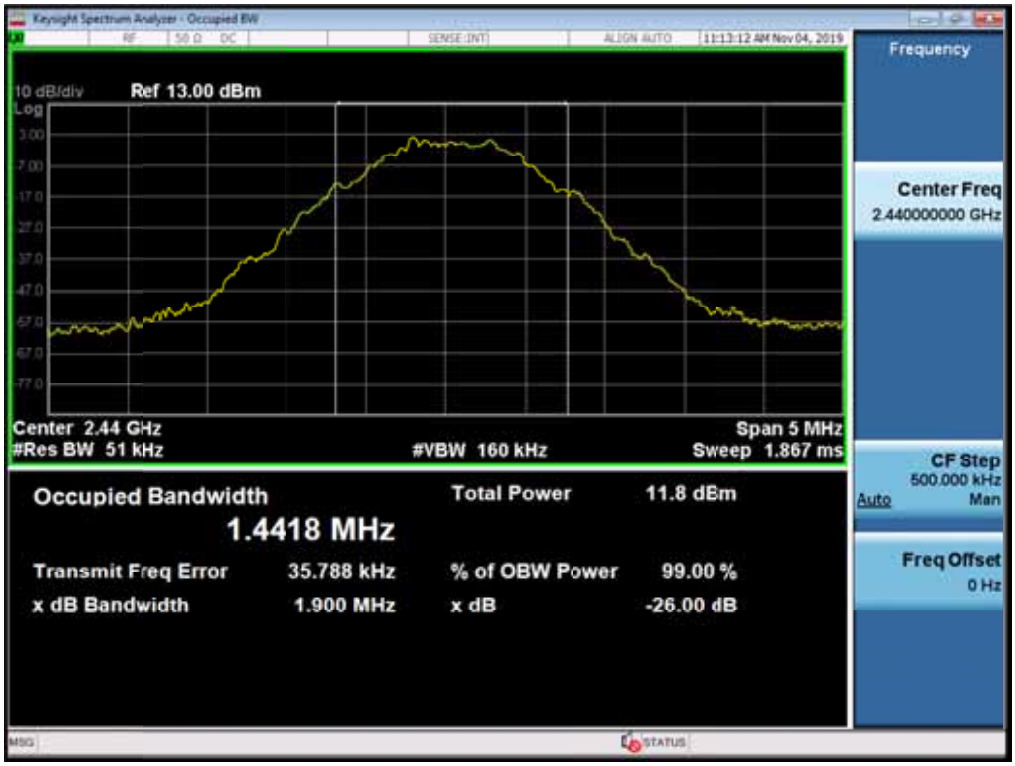
Mode 1 CH00 (2402MHz)



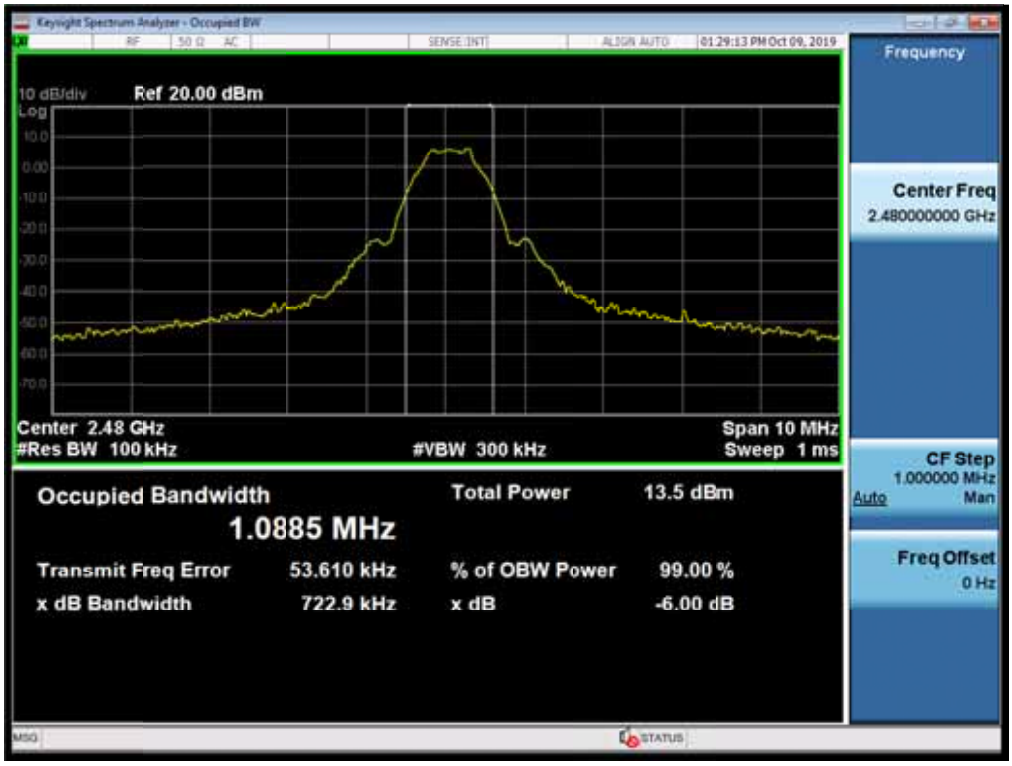


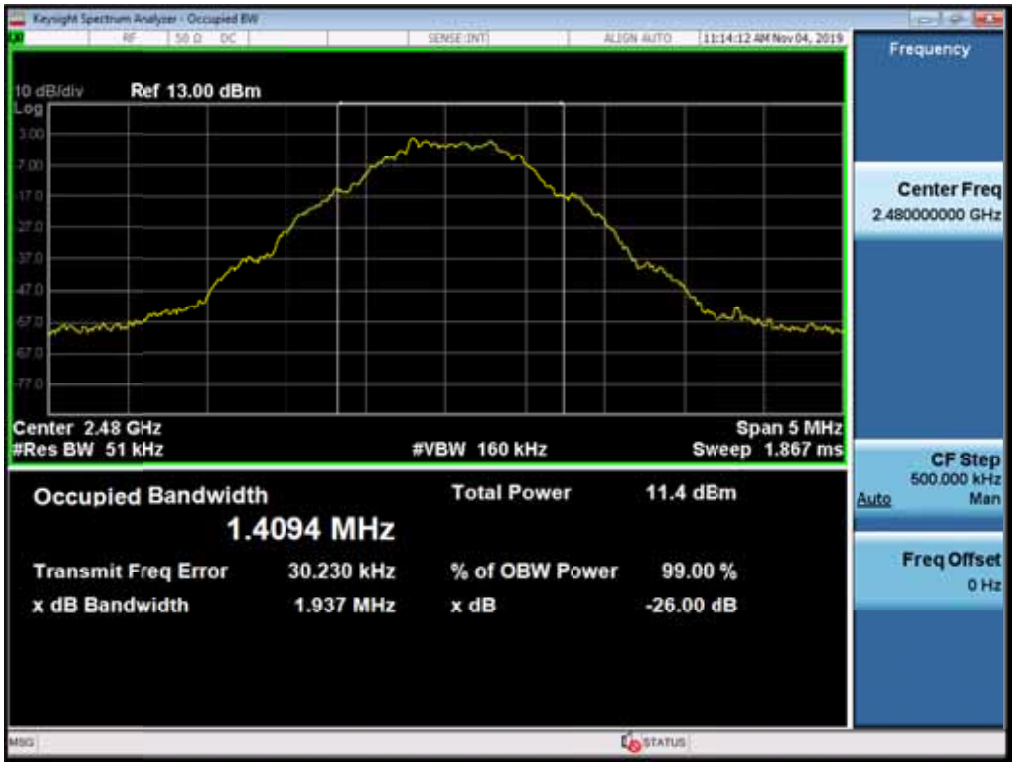
Mode 1 CH19 (2440MHz)





Mode 1 CH39 (2480MHz)





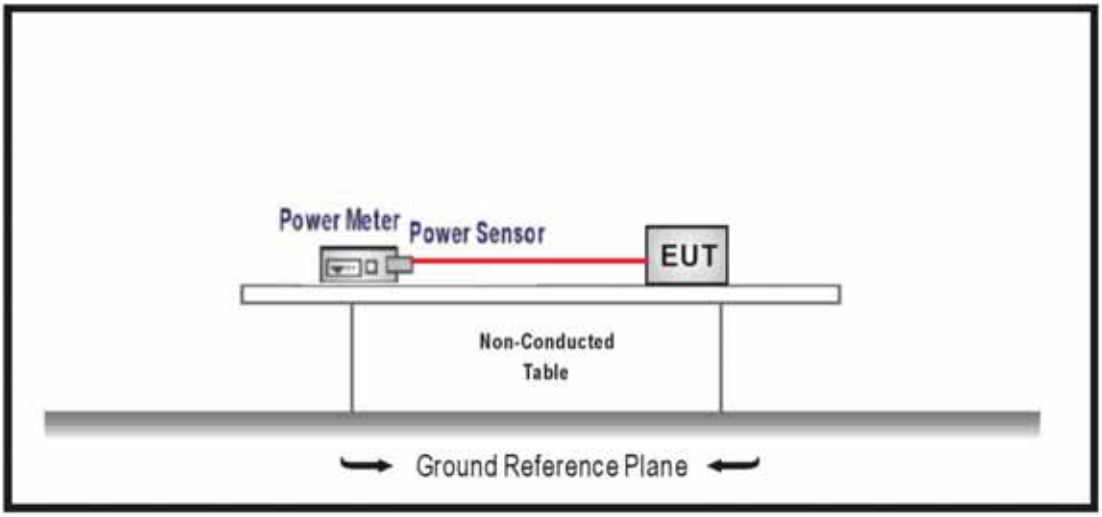
4.7 Fundamental emission output power — VERDICT: PASS

4.7.1 Limit

Standard			FCC Part 15 Subpart C Paragraph 15.247 (b)(3)
☒	GTX ＜6dBi		Pout≤30dBm
☐	GTX ＞6dBi		
	☐	Non-Fix point-point	Pout≤30-(GTX -6)
	☐	Fix point-point	Pout≤30-[(GTX-6)]/3
	☐	Point-to-multipoint	Pout≤30-(GTX-6)
	☐	Overlap Beams	Pout≤30-[(GTX-6)]/3
	☐	Aggregate power transmitted simultaneously on all beams	Pout≤30-[(GTX-6)]/3
	☐	single directional beam	Pout≤30-[(GTX-6)]/3+8dB

Note 1 : GTX directional gain of transmitting antennas.
Note 2 : Pout is maximum peak conducted output power .

4.7.2 Test Setup



4.7.3 Test Procedure

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

4.7.4 Test Data

Murata:

Mode	Channel	Test Frequency (MHz)	Power Output (dBm)	Limit (dBm)	Result
Mode 1	00	2402	8.39	≤30	Pass
	19	2440	8.07	≤30	Pass
	39	2480	8.28	≤30	Pass
Mode 2	00	2402	9.47	≤30	Pass
	19	2440	9.14	≤30	Pass
	39	2480	9.35	≤30	Pass
Mode 3	00	2402	8.62	≤30	Pass
	19	2440	8.30	≤30	Pass
	39	2480	8.51	≤30	Pass
Mode 4	00	2402	8.61	≤30	Pass
	19	2440	8.33	≤30	Pass
	39	2480	8.52	≤30	Pass

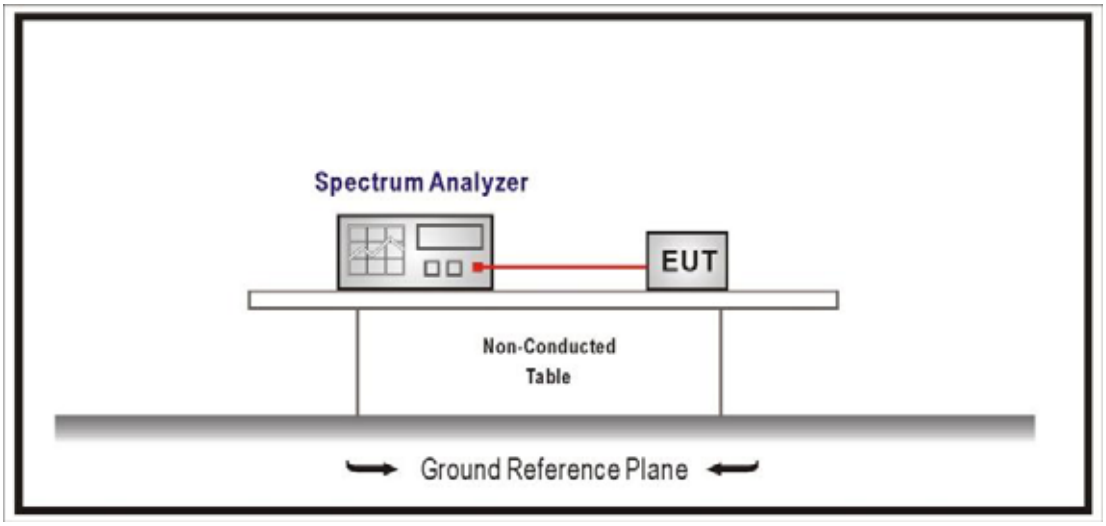
KDS:

Mode	Channel	Test Frequency (MHz)	Power Output (dBm)	Limit (dBm)	Result
Mode 1	00	2402	8.15	≤30	Pass
	19	2440	7.86	≤30	Pass
	39	2480	8.09	≤30	Pass
Mode 2	00	2402	9.18	≤30	Pass
	19	2440	8.83	≤30	Pass
	39	2480	9.01	≤30	Pass
Mode 3	00	2402	8.35	≤30	Pass
	19	2440	8.01	≤30	Pass
	39	2480	8.20	≤30	Pass
Mode 4	00	2402	8.34	≤30	Pass
	19	2440	8.00	≤30	Pass
	39	2480	8.19	≤30	Pass

4.8 Power Density	VERDICT: PASS

4.8.1 Limit:	
Standard	FCC Part 15 Subpart C Paragraph 15.247 (b)(3)
Power Spectral Density≤8dBm/3kHz	

4.8.2 Test Setup



4.8.3 Test Procedure

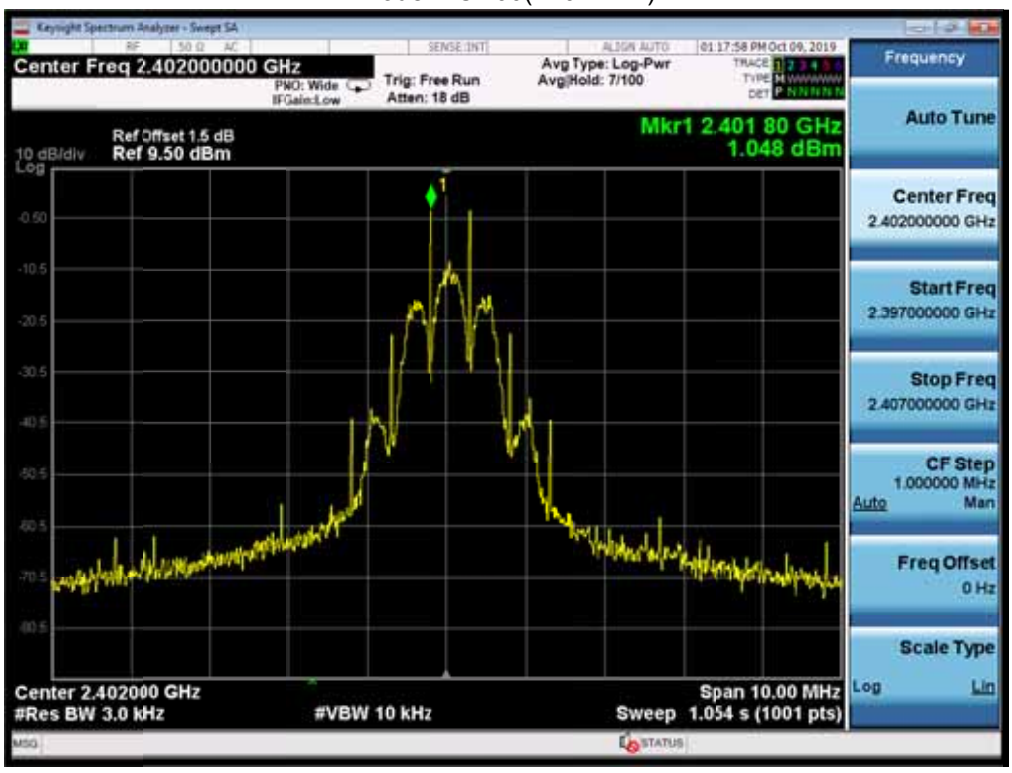
	References Rule		Chapter	Description
☒	ANSI C63.10		11.10	Maximum power spectral density level in the fundamental emission
	☒	ANSI C63.10	11.10.2	Method PKPSD (peak PSD)
	☐	ANSI C63.10	11.10.3	Method AVGPSD-1(Duty cycle≥98%)
	☐	ANSI C63.10	11.10.4	Method AVGPSD-1A(Duty cycle≥98%)
	☐	ANSI C63.10	11.10.5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

4.8.4 Test Data

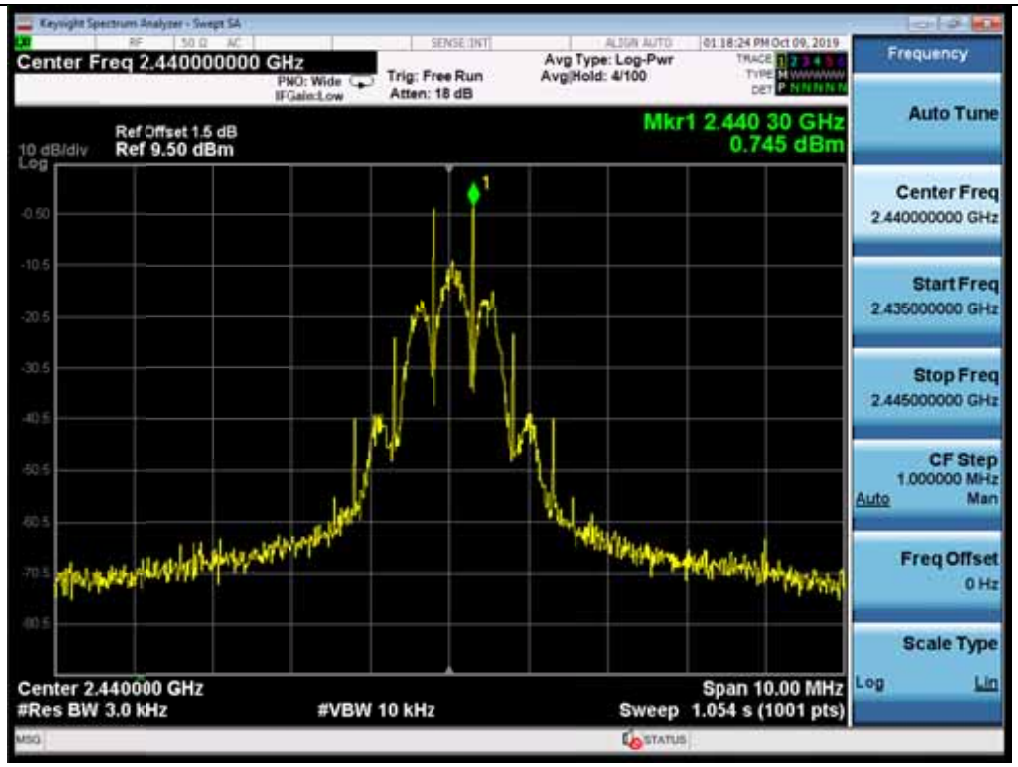
Mode	Channel	Test Frequency (MHz)	Measurement PSD (dBm/3kHz)	Total Measurement PSD (dBm/3kHz)	Limit (dBm/3kHz)	Result
Mode 1	00	2402	-8.921	-8.921	≤8	Pass
	19	2440	-8.986	-8.986	≤8	Pass
	39	2480	-8.708	-8.708	≤8	Pass
Mode 2	00	2402	-11.402	-11.402	≤8	Pass
	19	2440	-11.819	-11.819	≤8	Pass
	39	2480	-11.516	-11.516	≤8	Pass
Mode 3	00	2402	-11.035	-11.035	≤8	Pass
	19	2440	-11.340	-11.340	≤8	Pass
	39	2480	-11.074	-11.074	≤8	Pass
Mode 4	00	2402	1.048	1.048	≤8	Pass
	19	2440	0.745	0.745	≤8	Pass
	39	2480	0.957	0.957	≤8	Pass

Remark: The worst data as below:

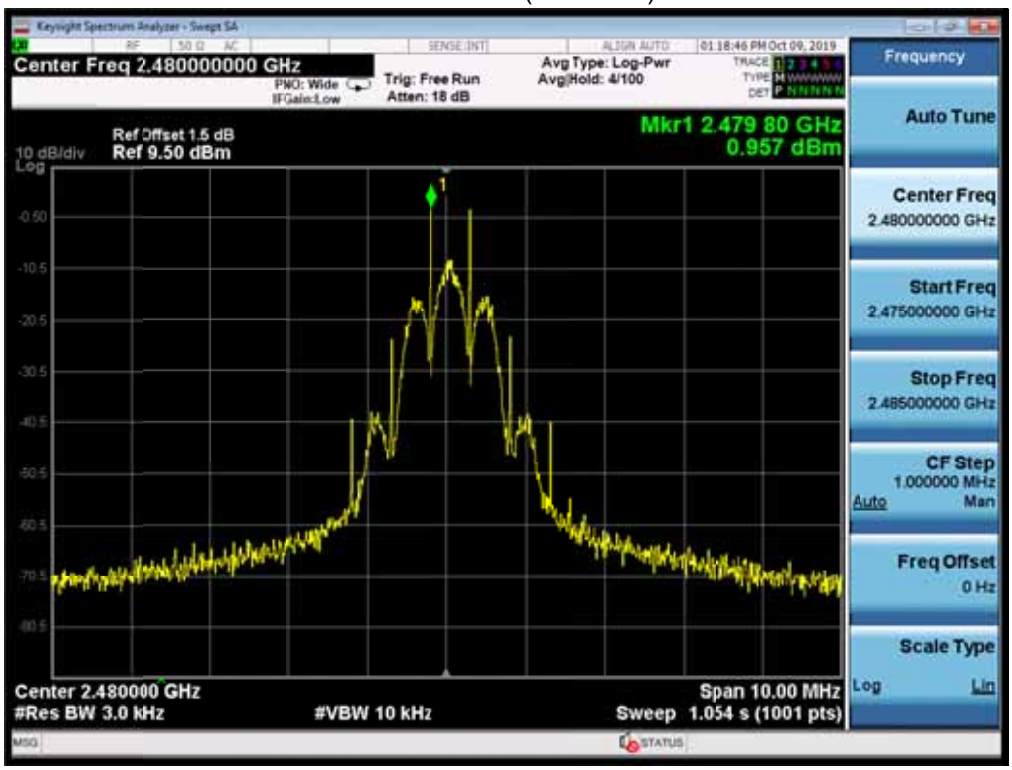
Mode 4 CH00(2402MHz)



Mode 4 CH19(2440MHz)



Mode 4 CH39(2480MHz)



4.9 Antenna Requirement	VERDICT: PASS

4.9.1 Limit:	
Standard	FCC Part 15 Subpart C Paragraph 15.203
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.	

4.9.2 Antenna Connector Construction:	
☒	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.	

4.10 Test setup photo and EUT Photo	VERDICT: PASS

Remark: The test setup photo and EUT Photo please see appendix.

The End