



Test report No:
2230276R-RF-US-P06V01

FCC & ISED TEST REPORT

Product Name	LED lamp
Trademark	PHILIPS
Model and /or type reference	9290034793
FCC ID	2AGBW9290034793X
IC	20812-34793X
Applicant's name / address	Signify (China) investment Co., Ltd Building No.9, Lane 888, Tianlin Road, Minhang district, 200233 Shanghai, 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 (name / position & signature)	Tim Cao/Project Engineer 
Approved by (name / position & signature)	Jack Zhang/ Supervisor 
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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.

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

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GENERAL CONDITIONS

Test Location	No. 99, Hongye Road, Suzhou Industrial Park Suzhou, 215006, P.R. China
Date(receive sample)	Mar. 11, 2022
Date (start test)	Mar. 16, 2022
Date (finish test)	Mar. 25, 2022

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.
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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
2230276R-RF-US-P06V01	V1.0	Initial issue of report.	2022-05-13

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.
4. The test results presented in this report relate only to the object tested.
5. The test report shall not be reproduced without the written approval of DEKRA Testing and Certification (Suzhou) Co., Ltd.
6. This report will not be used for social proof function in China market.
7. DEKRA declines any responsibility with the following test data provided by customer that may affect the validity of result:
 - Chapter 1.1 General Description of the Item(s);
 - Chapter 1.2 Antenna Informaion;
 - Chapter 1.3 Channel List.

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	2021.04.28	2022.04.27
Two-Line V-Network	R&S	ENV216	101044	2021.03.20	2022.03.19
Two-Line V-Network	R&S	ENV216	101044	2022.03.12	2023.03.11
50ohm Termination	SHX	TF2	7081402	2021.09.04	2022.09.03
50ohm Termination	SHX	TF2	7081403	2021.09.04	2022.09.03
50ohm Coaxial Switch	Anritsu	MP59B	6200464462	N/A	N/A
Temperature/Humidity Meter	RTS	RTS-8S	TR1-TH	2021.07.09	2022.07.08
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	2021.07.11	2022.07.10
EXA Spectrum Analyzer	Keysight	N9010A	MY55370495	2021.08.12	2022.08.11
Coaxial Cable	Woken	A50-SMAMSMAM-1m	20111443	2021.06.10	2022.06.09
Temperature/Humidity Meter	RTS	RTS-8S	RF08	2021.07.09	2022.07.08
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	100176	2021.08.15	2022.08.14
TRILOG Broadband Antenna	SCHWARZBECK	VULB 9168	1231	2021.04.19	2022.04.18
Coaxial Cable	Huber+Suhner	RG 214	AC3-C	2021.03.31	2022.03.30
Temperature/Humidity Meter	RTS	RTS-8S	AC3-TH	2021.11.23	2022.11.22
Dekra test software	Dekra	-	-	-	-

Radiated Emission / AC5(1GHz-40GHz)(Chamber details)

Instrument	Manufacturer	Model No.	Serial No.	Cal. Date	Next Cal. Date
MXA Signal Analyzer	Keysight	N9020B	MY60112218	2022.01.09	2023.01.08
Amplifier	Keleto	LNPA	SK20190225	2021.09.26	2022.09.25
Pre-Amplifier	EMCI	EMC184045SE	980263	2021.05.22	2022.05.21
DRG Horn Antenna	ETS-Lindgren	3117	167055	2021.08.06	2022.08.05
Broad-Band Horn Antenna	Schwarzbeck	BBHA9170	294	2021.04.19	2022.04.18
Coaxial Cable	Huber+Suhner	SUCOFLEX 106	AC5-C2	2021.03.31	2022.03.30
Coaxial Cable	ROSENBERGER	LA1-C011- 2000/3000	AC5-40G	2021.05.22	2022.05.21
Temperature/Humidity Meter	RTS	RTS-8S	AC5-TH	2021.11.23	2022.11.22
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% .

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	± 1.27 dB
Radiated Emission Band Edge	± 3.9 dB
DTS Bandwidth	± 150 Hz
Occupied Bandwidth	± 1 kHz
Power Density	± 1.27 dB

1 GENERAL INFORMATION

1.1 General Description of the Item(s)

Product Name..... :	LED lamp
Model No. :	9290034793
Trademark :	PHILIPS
FCC ID :	2AGBW9290034793X
IC..... :	20812-34793X
Manufacturer..... :	Signify (China) investment Co., Ltd
Manufacturer address :	Building No.9, Lane 888, Tianlin Road, Minhang district, 200233 Shanghai, China

Wireless specification..... :	BLE 5.0					
Operating frequency range(s)	2402~2480MHz					
Type of Modulation..... :	GFSK					
PHYs :	<input checked="" type="checkbox"/>	LE 1M	<input checked="" type="checkbox"/>	LE 2M	<input checked="" type="checkbox"/>	LE Coded S=2/8
Data Rate :	<input checked="" type="checkbox"/>	1Mbit/s	<input checked="" type="checkbox"/>	2Mbit/s	<input checked="" type="checkbox"/>	500/125 Kbit/s
Number of channel..... :	40					

Rated power supply	Voltage and Frequency				
	<input type="checkbox"/>	AC: 220 – 240 V, 50/60 Hz			
	<input checked="" type="checkbox"/>	AC: 110 – 130 V, 50/60 Hz			
	<input type="checkbox"/>	DC:			
	<input type="checkbox"/>	Battery:			
	<input type="checkbox"/>	PoE:			
Mounting position..... :	<input checked="" type="checkbox"/>	Table top equipment			
	<input type="checkbox"/>	Wall/Ceiling mounted equipment			
	<input type="checkbox"/>	Floor standing equipment			
	<input type="checkbox"/>	Hand-held equipment			
	<input type="checkbox"/>	Other:			

1.2 Antenna Information

Antenna model / type number.....:	N/A		
Antenna serial number	N/A		
Antenna Delivery	<input checked="" type="checkbox"/>	1TX + 1RX	
	<input type="checkbox"/>	2TX + 2RX	
	<input type="checkbox"/>	Others:.....	
Antenna technology.....:	<input checked="" type="checkbox"/>	SISO	
	<input type="checkbox"/>	MIMO	<input type="checkbox"/> CDD
			<input type="checkbox"/> Beam-forming
Antenna Type.....:	<input type="checkbox"/>	External	<input type="checkbox"/> Dipole
			<input type="checkbox"/> Sectorized
	<input checked="" type="checkbox"/>	Internal	<input type="checkbox"/> Ceramic Chip
			<input type="checkbox"/> PIFA
			<input type="checkbox"/> PCB
			<input checked="" type="checkbox"/> Metal
			<input type="checkbox"/> Others.....
Antenna Gain	3.0 dBi		

1.3 Channel List

Bluetooth Working Frequency of Each Channel: (For LE)							
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

Note: The General Description of the Item , antenna information and Channel List for the EUT in clause 1 are provided and confirmed by the client.

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.

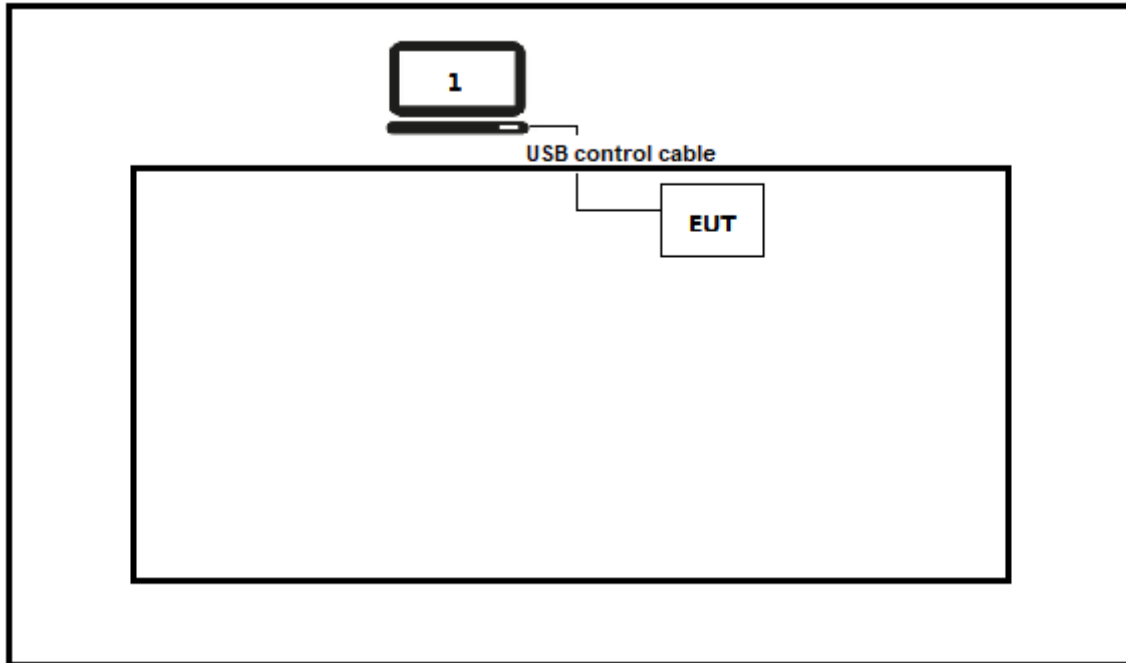
Test Mode For Bluetooth	Mode 1: Transmit by LE_1Mbps
	Mode 2: Transmit by LE_2Mbps
	Mode 3: Transmit by LE_Coded S=8
	Mode 4: Transmit by LE_Coded S=2

2.2 Auxiliary equipment / Test software for the EUT

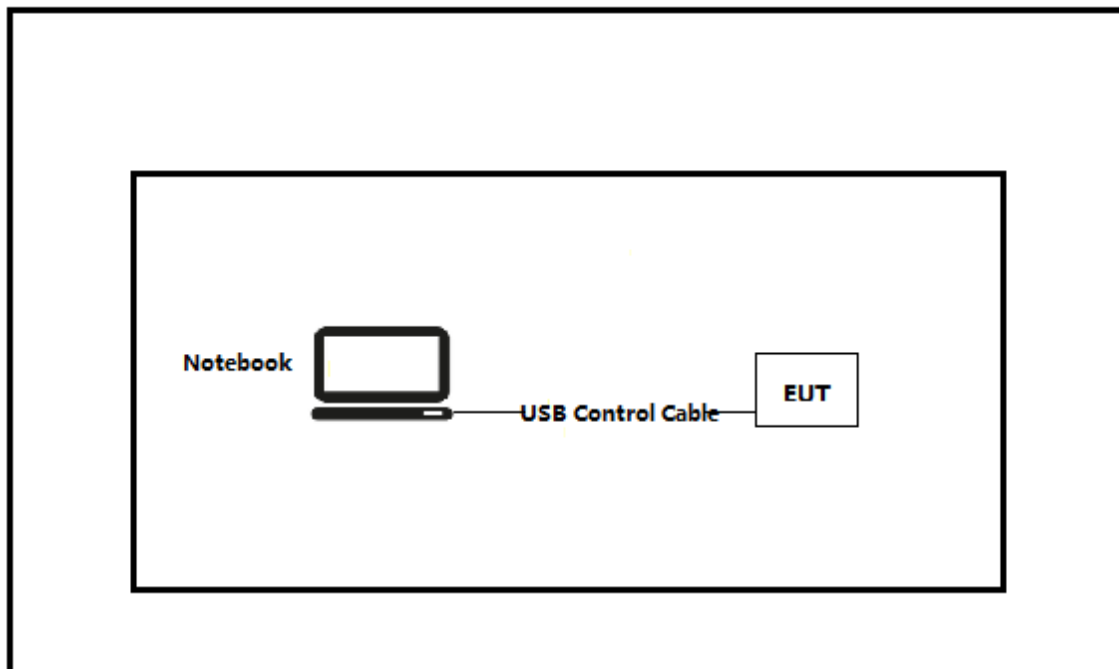
Auxiliary equipment	Type / Version	Manufacturer	Supplied by
Notebook	Think pad x220	Lenovo	Adapter
software	Type / Version	Manufacturer	Supplied by
Approbation Tool	V1.1.5.0	N/A	N/A

2.3 Test Configuration / Block diagram used for tests

Test setup Diagram- AC Line Conducted Emission Test



Test setup Diagram- Conducted test



2.4 Testing process

1	Setup the EUT as shown in Section 2.3.
2	Execute the [Approbation Tool] on the notebook.
3	Configure the test mode, the test channel, and the data rate.
4	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	PASS	---
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	PASS	---
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

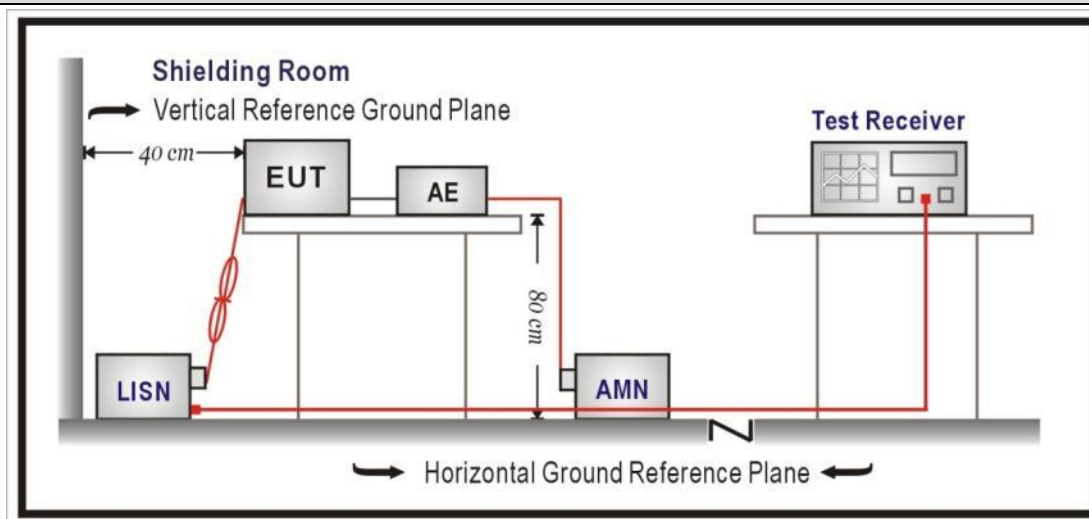
¹⁾ At the transition frequency, the lower limit applies.

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

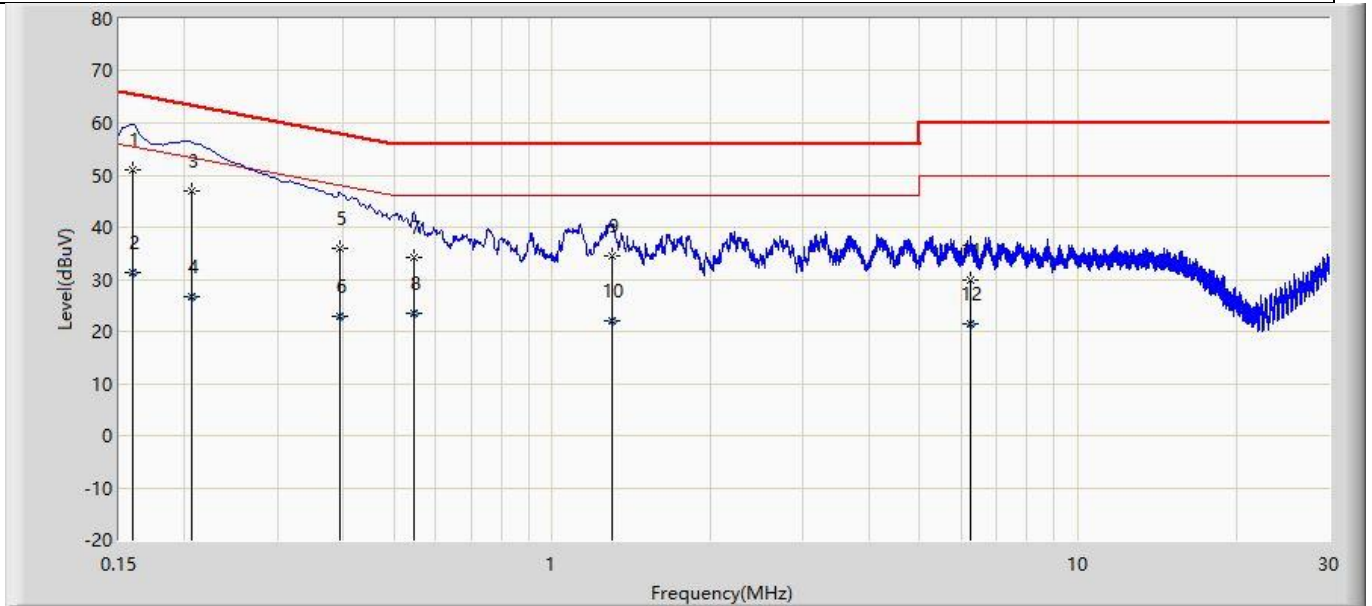


4.1.3 Test Procedure

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

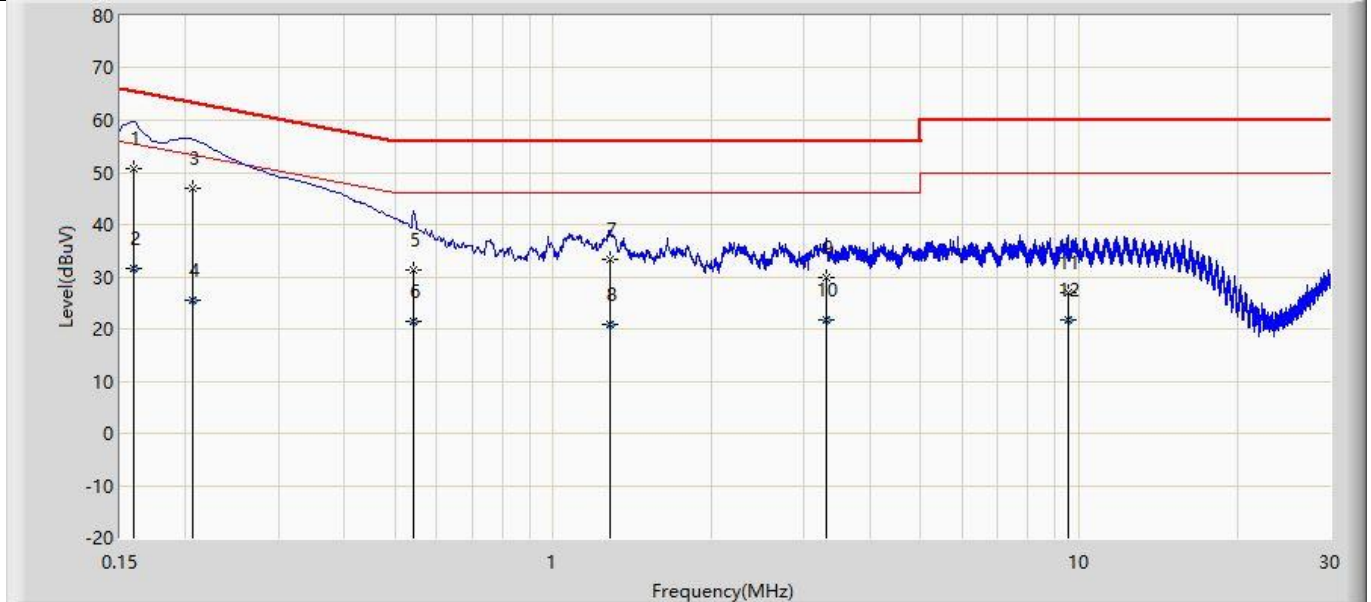
4.1.4 Test Data

Profile: 2230276R	Page No.: 31
Engineer: Yu Liu	
Site: TR1	Time: 2022/03/15 - 22:39
Limit: FCC_Part15.107_CE_AC Power	Margin: 0
Probe: ENV216_101190(0.009-30MHz)	Polarity: Line
EUT: LED Lamp	Power: AC 120V/60Hz
Note: Mode: L-line	



No	Mark	Frequency (MHz)	Measure Level (dBuV)	Reading Level (dBuV)	Over Limit (dB)	Limit (dBuV)	Factor (dB)	Type
1	*	0.159	51.085	41.505	-14.431	65.516	9.580	QP
2		0.159	31.381	21.801	-24.135	55.516	9.580	AV
3		0.206	47.078	37.491	-16.277	63.355	9.587	QP
4		0.206	26.577	16.991	-26.778	53.355	9.587	AV
5		0.395	36.056	26.442	-21.896	57.953	9.614	QP
6		0.395	23.012	13.398	-24.941	47.953	9.614	AV
7		0.546	34.242	24.615	-21.758	56.000	9.627	QP
8		0.546	23.610	13.983	-22.390	46.000	9.627	AV
9		1.302	34.580	24.927	-21.420	56.000	9.653	QP
10		1.302	22.163	12.510	-23.837	46.000	9.653	AV
11		6.250	29.855	19.978	-30.145	60.000	9.876	QP
12		6.250	21.490	11.614	-28.510	50.000	9.876	AV

Profile: 2230276R	Page No.: 32
Engineer: Yu Liu	
Site: TR1	Time: 2022/03/15 - 22:47
Limit: FCC_Part15.107_CE_AC Power	Margin: 0
Probe: ENV216_101190(0.009-30MHz)	Polarity: Neutral
EUT: LED Lamp	Power: AC 120V/60Hz
Note: Mode: N-line	



No	Mark	Frequency (MHz)	Measure Level (dBuV)	Reading Level (dBuV)	Over Limit (dB)	Limit (dBuV)	Factor (dB)	Type
1	*	0.159	50.818	41.238	-14.699	65.518	9.580	QP
2		0.159	31.577	21.997	-23.941	55.518	9.580	AV
3		0.206	47.042	37.455	-16.313	63.355	9.587	QP
4		0.206	25.605	16.018	-27.750	53.355	9.587	AV
5		0.541	31.422	21.797	-24.578	56.000	9.625	QP
6		0.541	21.420	11.795	-24.580	46.000	9.625	AV
7		1.280	33.357	23.703	-22.643	56.000	9.654	QP
8		1.280	20.742	11.088	-25.258	46.000	9.654	AV
9		3.298	29.755	20.015	-26.245	56.000	9.740	QP
10		3.298	21.646	11.906	-24.354	46.000	9.740	AV
11		9.510	27.094	17.096	-32.906	60.000	9.999	QP
12		9.510	21.619	11.620	-28.381	50.000	9.999	AV

Note:

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

4.2 Emissions in restricted frequency bands	VERDICT: PASS
--	----------------------

4.2.1 Limit

Standard	FCC Part 15 Subpart C Paragraph 15.207
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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 Bands of operation for IC

0.090 - 0.110	13.36 - 13.41	960 - 1427	9.0 - 9.2
0.495 - 0.505	16.42 - 16.423	1435 - 1626.5	9.3 - 9.5
2.1735 - 2.1905	16.69475 - 16.69525	1645.5 - 1646.5	10.6 - 12.7
3.020 - 3.026	16.80425 - 16.80475	1660 - 1710	13.25 - 13.4
4.125 - 4.128	25.5 - 25.67	1718.8 - 1722.2	14.47 - 14.5
4.17725 - 4.17775	37.5 - 38.25	2200 - 2300	15.35 - 16.2
4.20725 - 4.20775	73 - 74.6	2310 - 2390	17.7 - 21.4
5.677 - 5.683	74.8 - 75.2	2483.5 - 2500	22.01 - 23.12
6.215 - 6.218	108 - 138	2655 - 2900	23.6 - 24.0
6.26775 - 6.26825	149.9 - 150.05	3260 - 3267	31.2 - 31.8
6.31175 - 6.31225	156.52475 - 156.52525	3332 - 3339	36.43 - 36.5
8.291 - 8.294	156.7 - 156.9	3345.8 - 3358	Above 38.6
8.362 - 8.366	162.0125 - 167.17	3500 - 4400	
8.37625 - 8.38675	167.72 - 173.2	4500 - 5150	
8.81425 - 8.81475	240 - 285	5350 - 5460	
12.29 - 12.293	322 - 335.4	7250 - 7750	
12.51975 - 12.52025	399.9 - 410	8025 - 8500	
12.57675 - 12.57725	608 - 614	--	

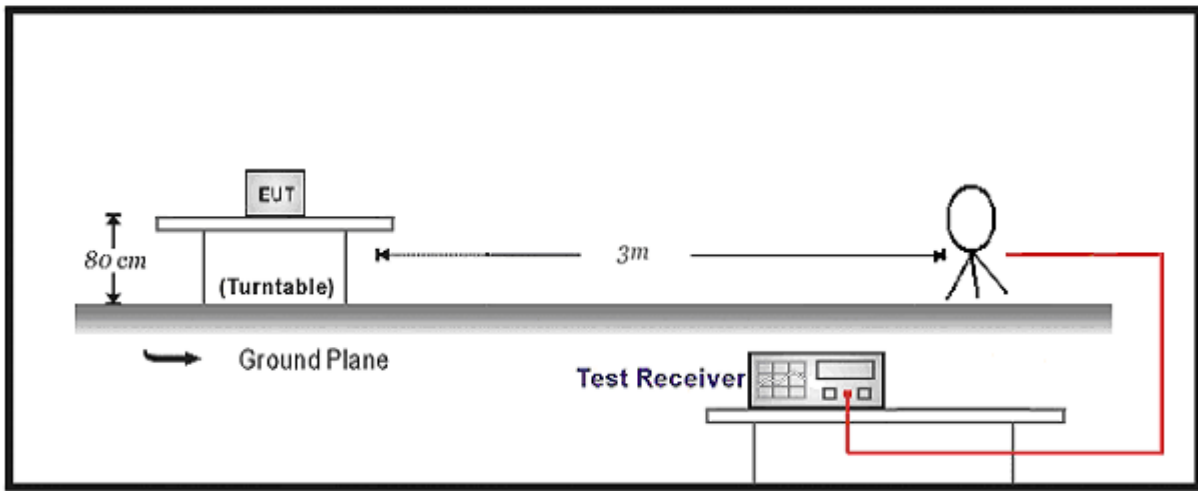
Restricted Band Emissions Limit			
Frequency (MHz)	Field strength ($\mu\text{V/m}$)	Field strength ($\text{dB}\mu\text{V/m}$)	Measurement distance (m)
0.009 - 0.49	2400/F(kHz)	48.5 – 13.8	30 _(Note 1)
0.49 - 1.705	24000/F(kHz)	33.8 - 23	30 _(Note 1)
1.705 - 30	30	29.5	30 _(Note 1)
30 - 88	100	40	3 _(Note 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).

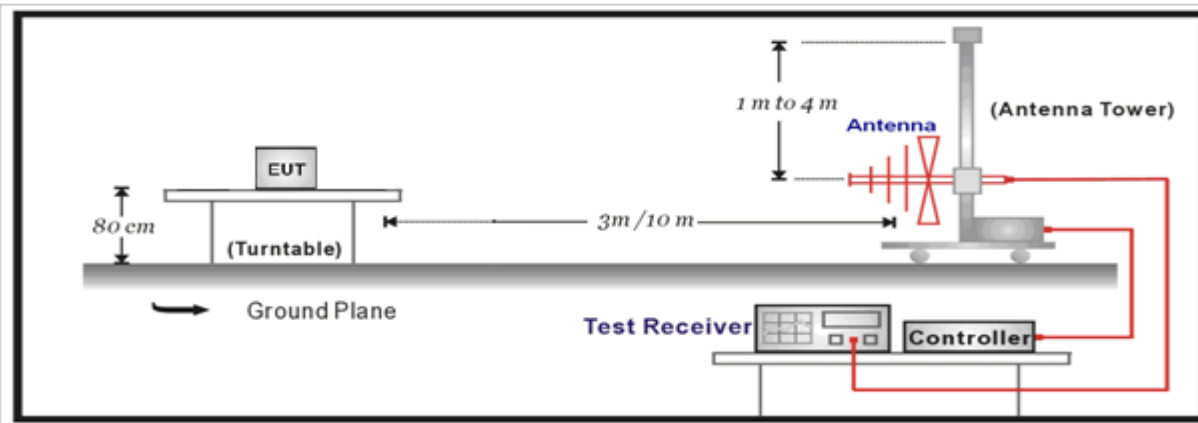
Note 2: At frequencies at or above 30 MHz, measurements may be performed at a distance other than what is specified provided: measurements are not made in the near field except where it can be shown that near field measurements are appropriate due to the characteristics of the device; and it can be demonstrated 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

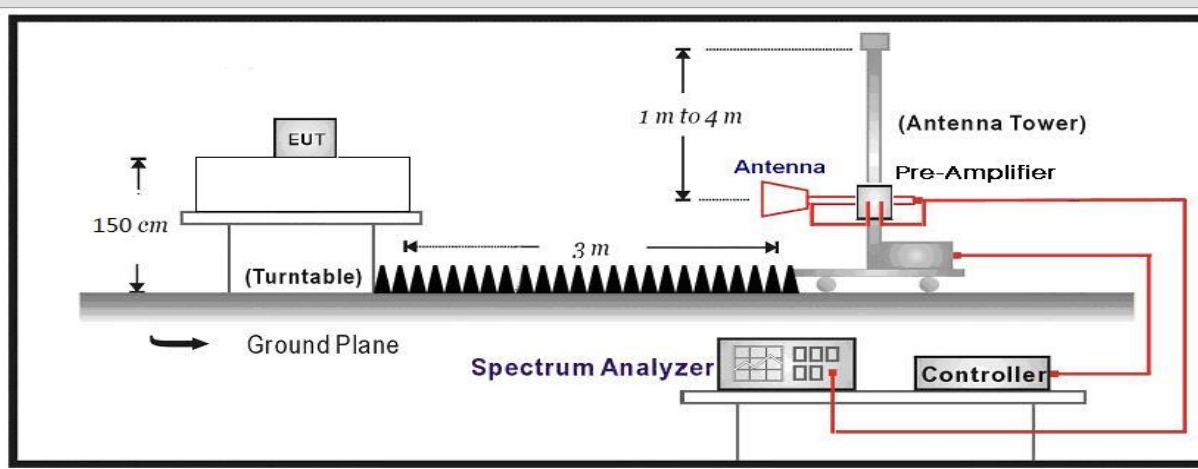
Below 30MHz Test Setup:



30MHz-1GHz Test Setup:



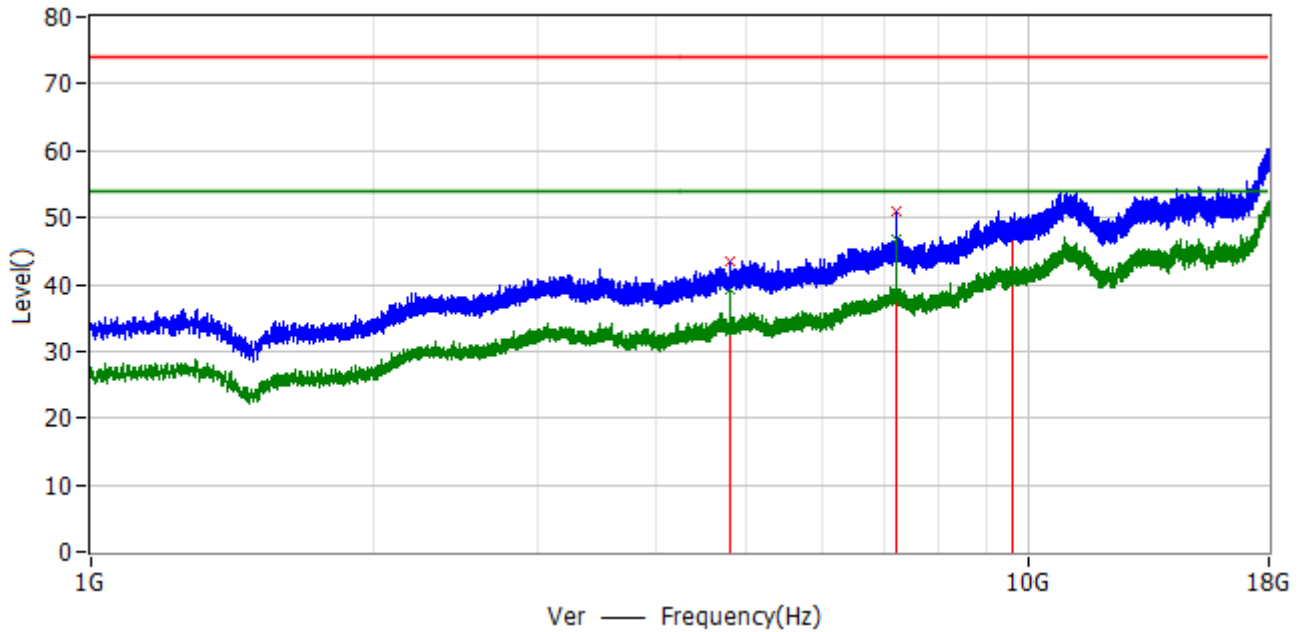
Above 1GHz Test Setup:



4.2.3 Test Procedure			
	References Rule	Chapter	Description
<input checked="" type="checkbox"/>	ANSI C63.10	11.12	Emissions in restricted frequency bands
	<input checked="" type="checkbox"/> ANSI C63.10	11.12.1	Radiated emission measurements
	<input checked="" type="checkbox"/> ANSI C63.10	11.12.2.7	Radiated spurious emission test
	<input checked="" type="checkbox"/> ANSI C63.10	6.4	Radiated emissions from unlicensed wireless devices below 30 MHz
	<input checked="" type="checkbox"/> ANSI C63.10	6.5	Radiated emissions from unlicensed wireless devices in the frequency range of 30 MHz to 1000 MHz
	<input checked="" type="checkbox"/> ANSI C63.10	6.6	Radiated emissions from unlicensed wireless devices above 1 GHz

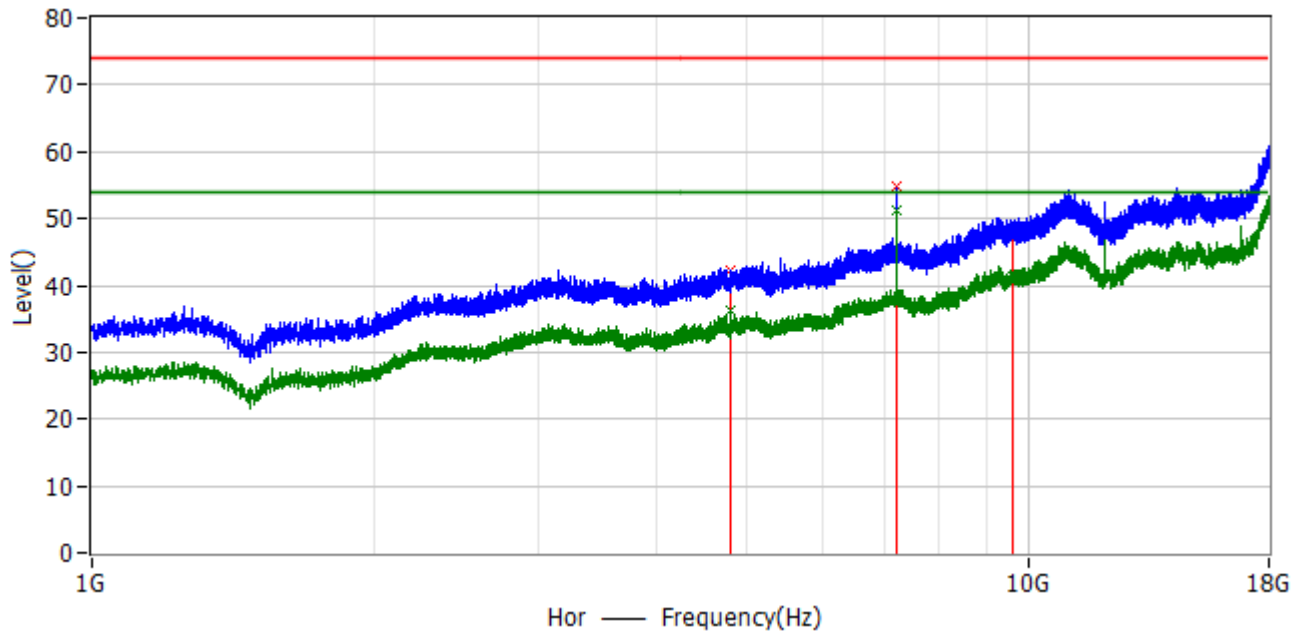
4.2.4 Test Data

Profile: 2230276R	Page No.: 37
Engineer: Tony	
Site: EPINTEK	Time: 2022/03/18 - 21:56
Limit: FCC_Part15.209_RE(3m)	Margin: 0
Probe: Horn_3117_00123988_(1-18GHz)	Polarity: Vertical
EUT: LED Lamp	Power: AC 120V/60Hz
Note: Mode 1:Transmit at 2402MHz by LE_1Mbps	



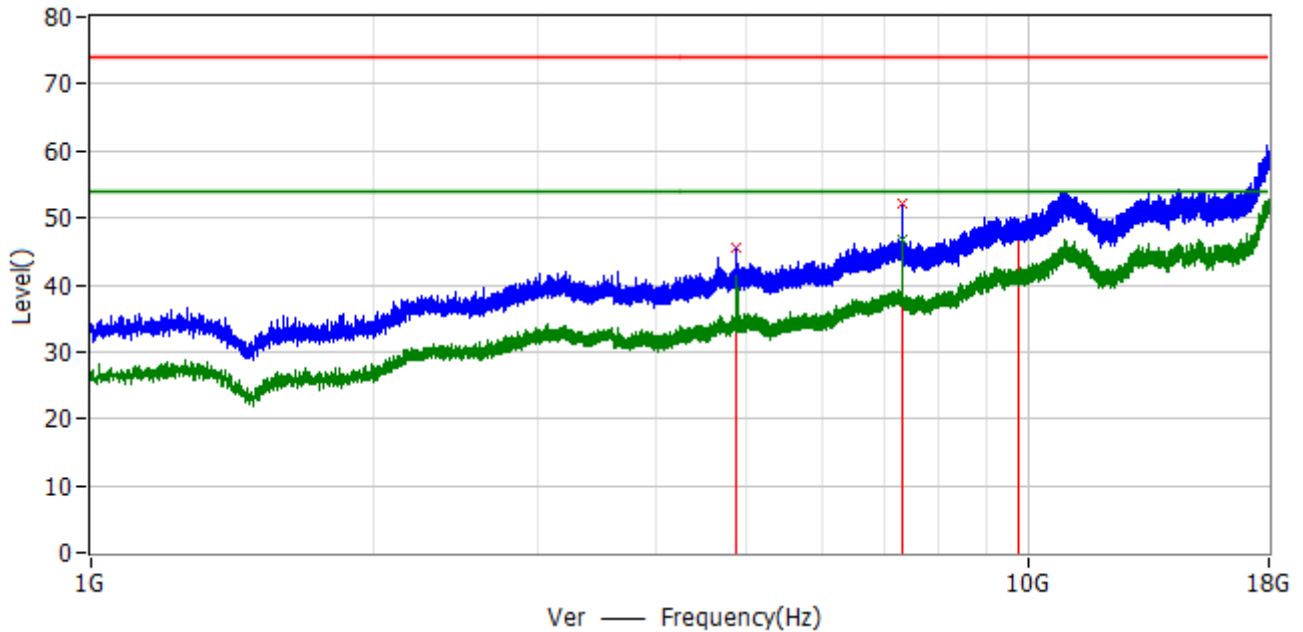
No.	Frequency	Limit (dBuV/m)	Level (dBuV/m)	Delta dB	Factor dB	Detector	Polar
1*	4.804 GHz	74.0	43.4	-30.6	-8.4	PK	Ver
2*	7.206 GHz	74.0	50.8	-23.2	-3.1	PK	Ver
3*	9.608 GHz	74.0	48.0	-26.0	0.3	PK	Ver
4*	4.805 GHz	54.0	39.2	-14.8	-8.4	AV	Ver
5*	7.207 GHz	54.0	46.8	-7.2	-3.1	AV	Ver
6*	9.608 GHz	54.0	41.3	-12.7	0.3	AV	Ver

Profile: 2230276R	Page No.: 38
Engineer: Tony	
Site: EPINTEK	Time: 2022/03/18 - 21:56
Limit: FCC_Part15.209_RE(3m)	Margin: 0
Probe: Horn_3117_00123988_(1-18GHz)	Polarity: Horizontal
EUT: LED Lamp	Power: AC 120V/60Hz
Note: Mode 1: Transmit at 2402MHz by LE_1Mbps	



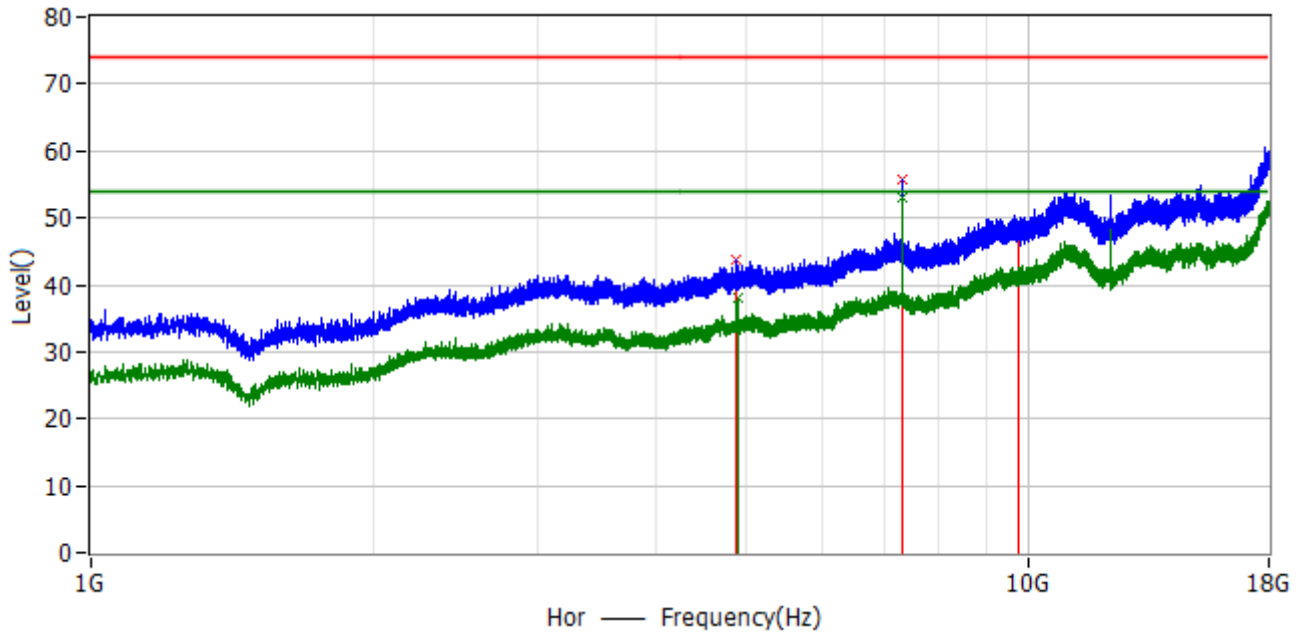
No.	Frequency	Limit (dBuV/m)	Level (dBuV/m)	Delta dB	Factor dB	Detector	Polar
1*	4.805 GHz	74.0	42.3	-31.7	-8.4	PK	Hor
2*	7.207 GHz	74.0	54.7	-19.3	-3.1	PK	Hor
3*	9.608 GHz	74.0	48.3	-25.7	0.3	PK	Hor
4*	4.805 GHz	54.0	36.3	-17.7	-8.4	AV	Hor
5*	7.207 GHz	54.0	51.2	-2.8	-3.1	AV	Hor
6*	9.608 GHz	54.0	41.4	-12.6	0.3	AV	Hor

Profile: 2230276R	Page No.: 39
Engineer: Tony	
Site: EPINTEK	Time: 2022/03/18 - 21:56
Limit: FCC_Part15.209_RE(3m)	Margin: 0
Probe: Horn_3117_00123988_(1-18GHz)	Polarity: Vertical
EUT: LED Lamp	Power: AC 120V/60Hz
Note: Mode 1:Transmit at 2440MHz by LE_1Mbps	



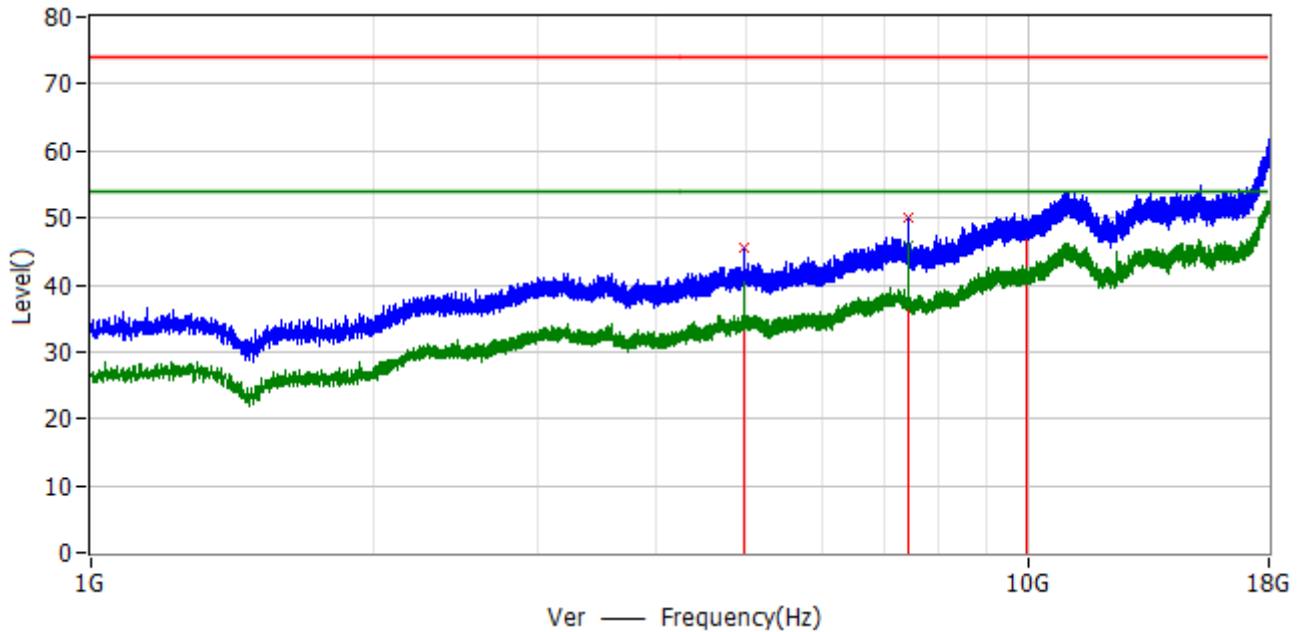
No.	Frequency	Limit (dBuV/m)	Level (dBuV/m)	Delta dB	Factor dB	Detector	Polar
1*	4.879 GHz	74.0	45.6	-28.4	-8.2	PK	Ver
2*	7.319 GHz	74.0	52.0	-22.0	-3.1	PK	Ver
3*	9.760 GHz	74.0	47.8	-26.2	0.7	PK	Ver
4*	4.880 GHz	54.0	41.2	-12.8	-8.2	AV	Ver
5*	7.321 GHz	54.0	46.7	-7.3	-3.1	AV	Ver
6*	9.760 GHz	54.0	40.7	-13.3	0.7	AV	Ver

Profile: 2230276R	Page No.: 40
Engineer: Tony	
Site: EPINTEK	Time: 2022/03/18 - 21:56
Limit: FCC_Part15.209_RE(3m)	Margin: 0
Probe: Horn_3117_00123988_(1-18GHz)	Polarity: Horizontal
EUT: LED Lamp	Power: AC 120V/60Hz
Note: Mode 1:Transmit at 2440MHz by LE_1Mbps	



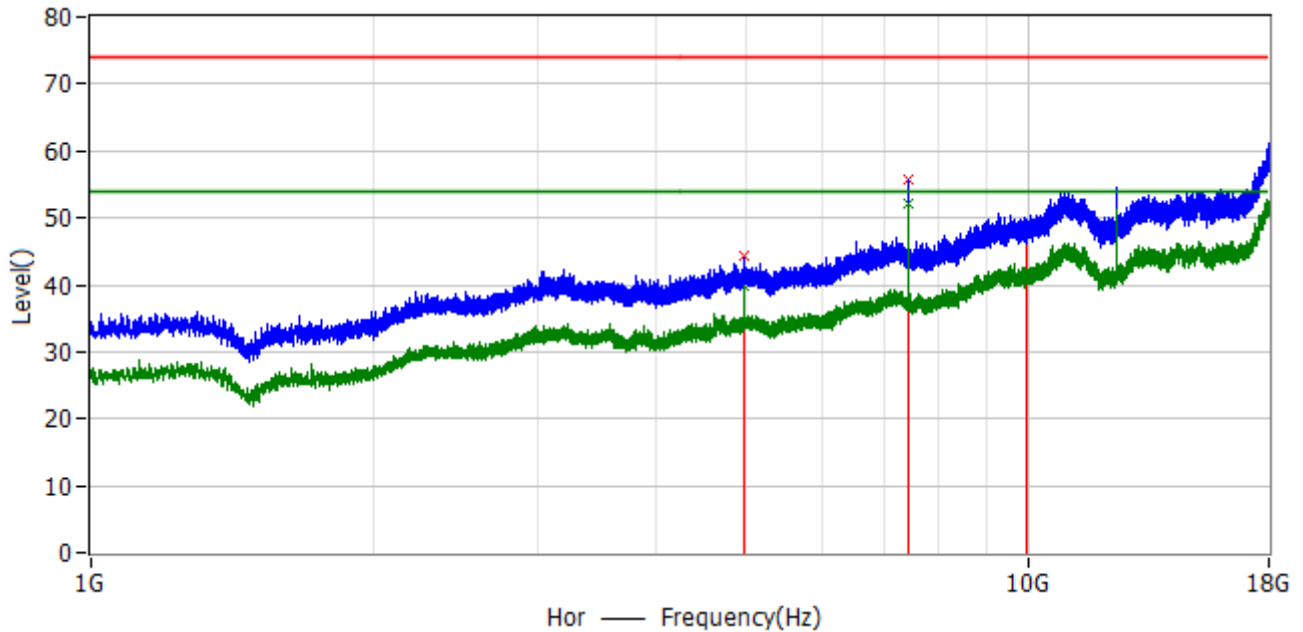
No.	Frequency	Limit (dBuV/m)	Level (dBuV/m)	Delta dB	Factor dB	Detector	Polar
1*	4.880 GHz	74.0	43.6	-30.4	-8.2	PK	Hor
2*	7.319 GHz	74.0	55.6	-18.4	-3.1	PK	Hor
3*	9.760 GHz	74.0	48.0	-26.0	0.7	PK	Hor
4*	4.881 GHz	54.0	38.1	-15.9	-8.2	AV	Hor
5*	7.320 GHz	54.0	52.9	-1.1	-3.1	AV	Hor
6*	9.760 GHz	54.0	41.0	-13.0	0.7	AV	Hor

Profile: 2230276R	Page No.: 41
Engineer: Tony	
Site: EPINTEK	Time: 2022/03/18 - 21:56
Limit: FCC_Part15.209_RE(3m)	Margin: 0
Probe: Horn_3117_00123988_(1-18GHz)	Polarity: Vertical
EUT: LED Lamp	Power: AC 120V/60Hz
Note: Mode 1:Transmit at 2480MHz by LE_1Mbps	



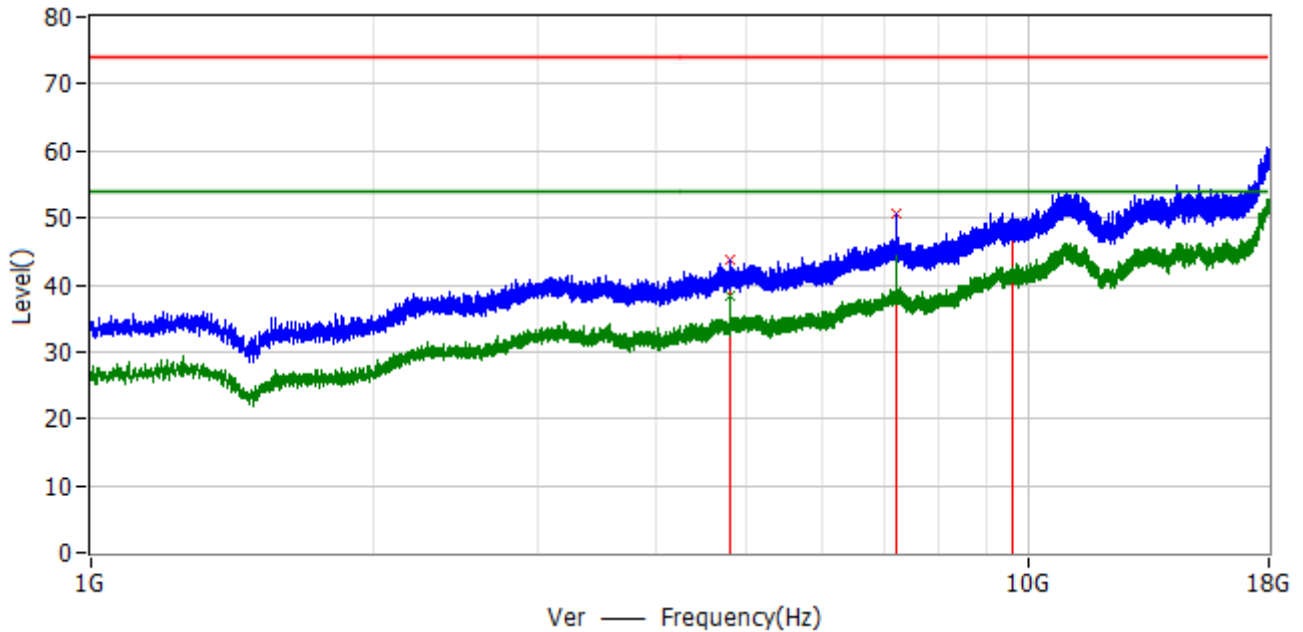
No.	Frequency	Limit (dBuV/m)	Level (dBuV/m)	Delta dB	Factor dB	Detector	Polar
1*	4.960 GHz	74.0	45.6	-28.4	-7.9	PK	Ver
2*	7.440 GHz	74.0	50.1	-23.9	-3.1	PK	Ver
3*	9.920 GHz	74.0	48.3	-25.7	0.8	PK	Ver
4*	4.960 GHz	54.0	40.4	-13.6	-7.9	AV	Ver
5*	7.441 GHz	54.0	45.8	-8.2	-3.1	AV	Ver
6*	9.920 GHz	54.0	41.2	-12.8	0.8	AV	Ver

Profile: 2230276R	Page No.: 42
Engineer: Tony	
Site: EPINTEK	Time: 2022/03/18 - 21:57
Limit: FCC_Part15.209_RE(3m)	Margin: 0
Probe: Horn_3117_00123988_(1-18GHz)	Polarity: Horizontal
EUT: LED Lamp	Power: AC 120V/60Hz
Note: Mode 1:Transmit at 2480MHz by LE_1Mbps	



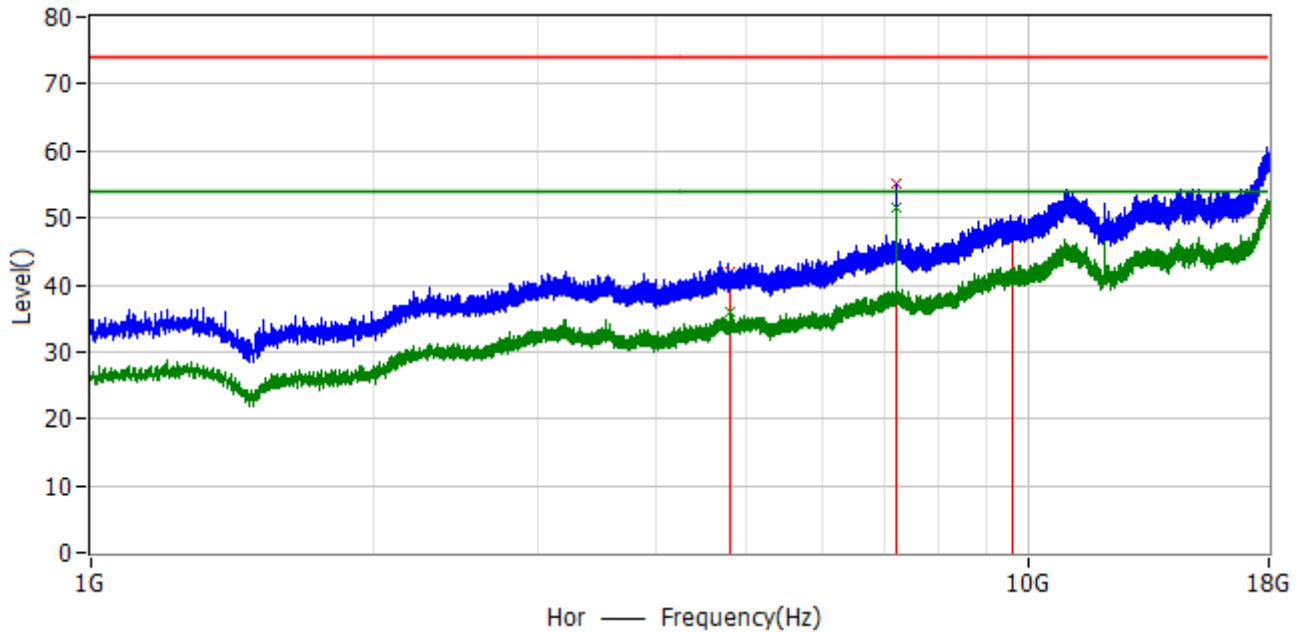
No.	Frequency	Limit (dBuV/m)	Level (dBuV/m)	Delta dB	Factor dB	Detector	Polar
1*	4.960 GHz	74.0	44.2	-29.8	-7.9	PK	Hor
2*	7.439 GHz	74.0	55.8	-18.2	-3.1	PK	Hor
3*	9.920 GHz	74.0	47.5	-26.5	0.8	PK	Hor
4*	4.960 GHz	54.0	39.9	-14.1	-7.9	AV	Hor
5*	7.441 GHz	54.0	52.2	-1.8	-3.1	AV	Hor
6*	9.920 GHz	54.0	41.8	-12.2	0.8	AV	Hor

Profile: 2230276R	Page No.: 43
Engineer: Tony	
Site: EPINTEK	Time: 2022/03/18 - 21:57
Limit: FCC_Part15.209_RE(3m)	Margin: 0
Probe: Horn_3117_00123988_(1-18GHz)	Polarity: Vertical
EUT: LED Lamp	Power: AC 120V/60Hz
Note: Mode 2:Transmit at 2402MHz by LE_2Mbps	



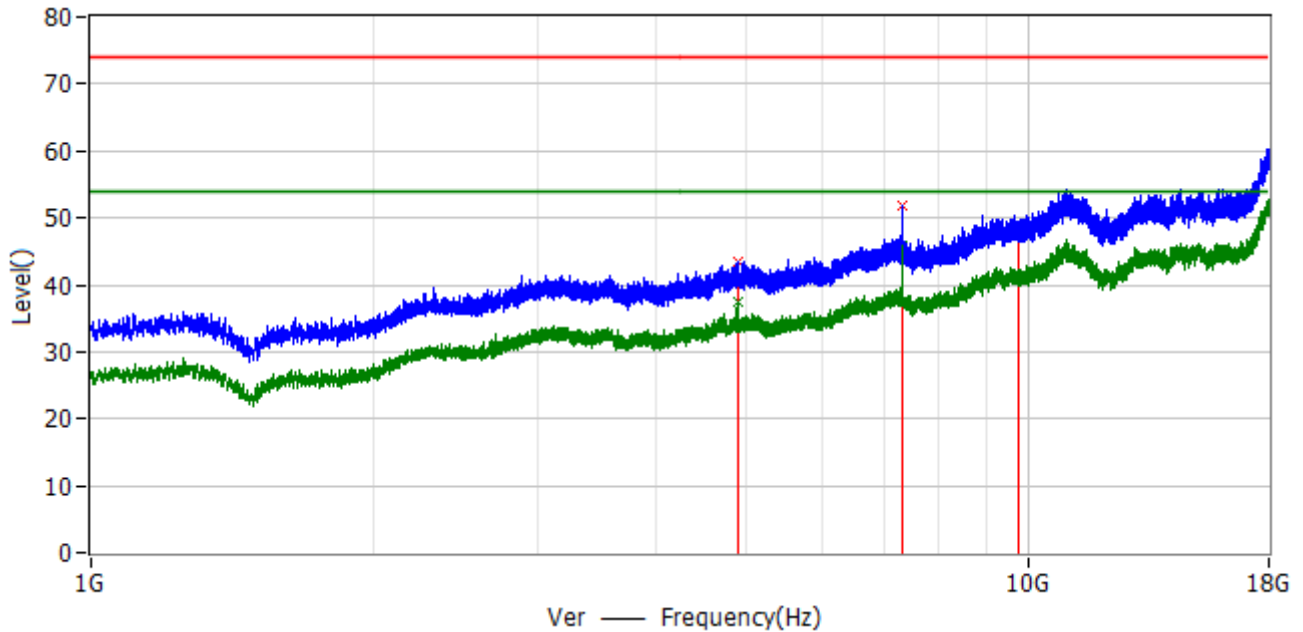
No.	Frequency	Limit (dBuV/m)	Level (dBuV/m)	Delta dB	Factor dB	Detector	Polar
1*	4.805 GHz	74.0	43.7	-30.3	-8.4	PK	Ver
2*	7.208 GHz	74.0	50.5	-23.5	-3.1	PK	Ver
3*	9.608 GHz	74.0	48.8	-25.2	0.3	PK	Ver
4*	4.805 GHz	54.0	38.3	-15.7	-8.4	AV	Ver
5*	7.206 GHz	54.0	44.5	-9.5	-3.1	AV	Ver
6*	9.608 GHz	54.0	41.2	-12.8	0.3	AV	Ver

Profile: 2230276R	Page No.: 44
Engineer: Tony	
Site: EPINTEK	Time: 2022/03/18 - 21:57
Limit: FCC_Part15.209_RE(3m)	Margin: 0
Probe: Horn_3117_00123988_(1-18GHz)	Polarity: Horizontal
EUT: LED Lamp	Power: AC 120V/60Hz
Note: Mode 2:Transmit at 2402MHz by LE_2Mbps	



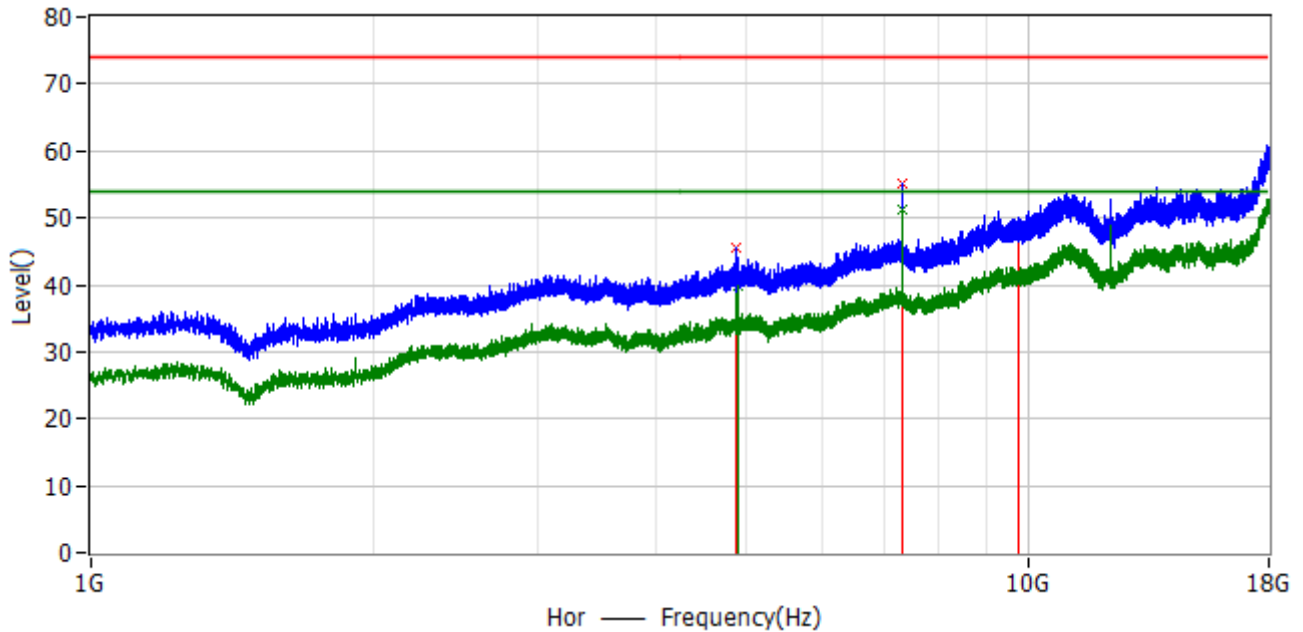
No.	Frequency	Limit (dBuV/m)	Level (dBuV/m)	Delta dB	Factor dB	Detector	Polar
1*	4.803 GHz	74.0	41.9	-32.1	-8.4	PK	Hor
2*	7.207 GHz	74.0	55.1	-18.9	-3.1	PK	Hor
3*	9.608 GHz	74.0	47.6	-26.4	0.3	PK	Hor
4*	4.805 GHz	54.0	36.0	-18.0	-8.4	AV	Hor
5*	7.205 GHz	54.0	51.4	-2.6	-3.1	AV	Hor
6*	9.608 GHz	54.0	41.1	-12.9	0.3	AV	Hor

Profile: 2230276R	Page No.: 45
Engineer: Tony	
Site: EPINTEK	Time: 2022/03/18 - 21:57
Limit: FCC_Part15.209_RE(3m)	Margin: 0
Probe: Horn_3117_00123988_(1-18GHz)	Polarity: Vertical
EUT: LED Lamp	Power: AC 120V/60Hz
Note: Mode 2:Transmit at 2440MHz by LE_2Mbps	



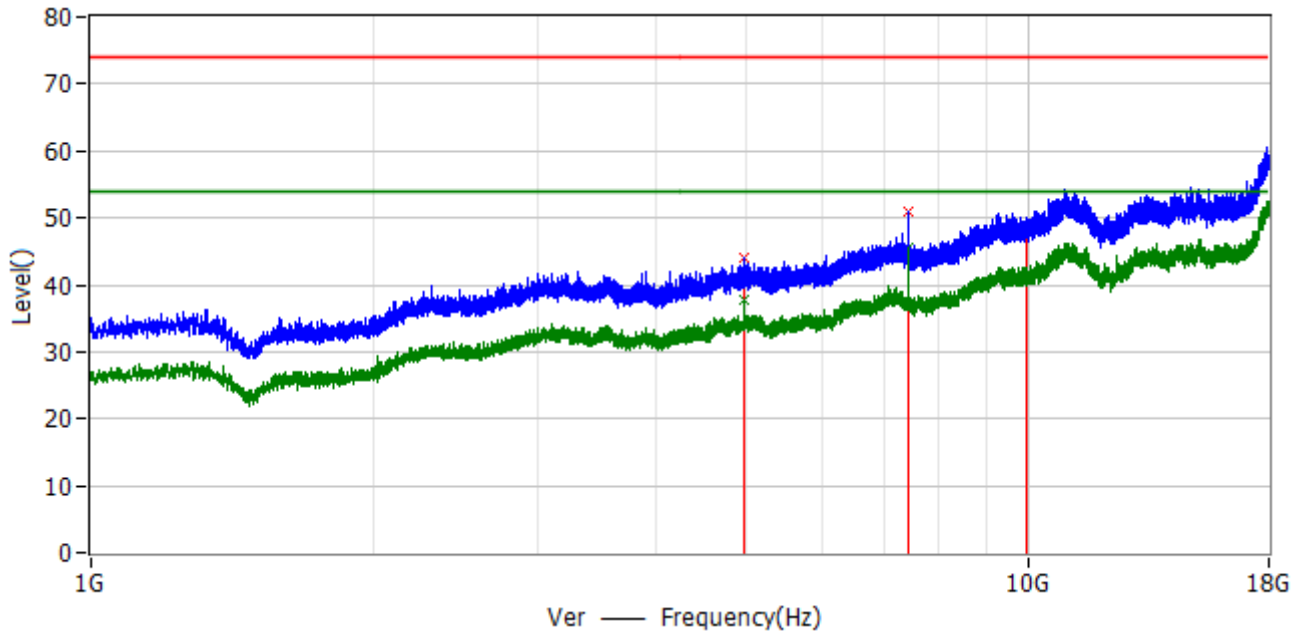
No.	Frequency	Limit (dBuV/m)	Level (dBuV/m)	Delta dB	Factor dB	Detector	Polar
1*	4.881 GHz	74.0	43.5	-30.5	-8.2	PK	Ver
2*	7.322 GHz	74.0	51.8	-22.2	-3.1	PK	Ver
3*	9.760 GHz	74.0	47.8	-26.2	0.7	PK	Ver
4*	4.882 GHz	54.0	37.4	-16.6	-8.2	AV	Ver
5*	7.319 GHz	54.0	45.8	-8.2	-3.1	AV	Ver
6*	9.760 GHz	54.0	41.0	-13.0	0.7	AV	Ver

Profile: 2230276R	Page No.: 46
Engineer: Tony	
Site: EPINTEK	Time: 2022/03/18 - 21:57
Limit: FCC_Part15.209_RE(3m)	Margin: 0
Probe: Horn_3117_00123988_(1-18GHz)	Polarity: Horizontal
EUT: LED Lamp	Power: AC 120V/60Hz
Note: Mode 2:Transmit at 2440MHz by LE_2Mbps	



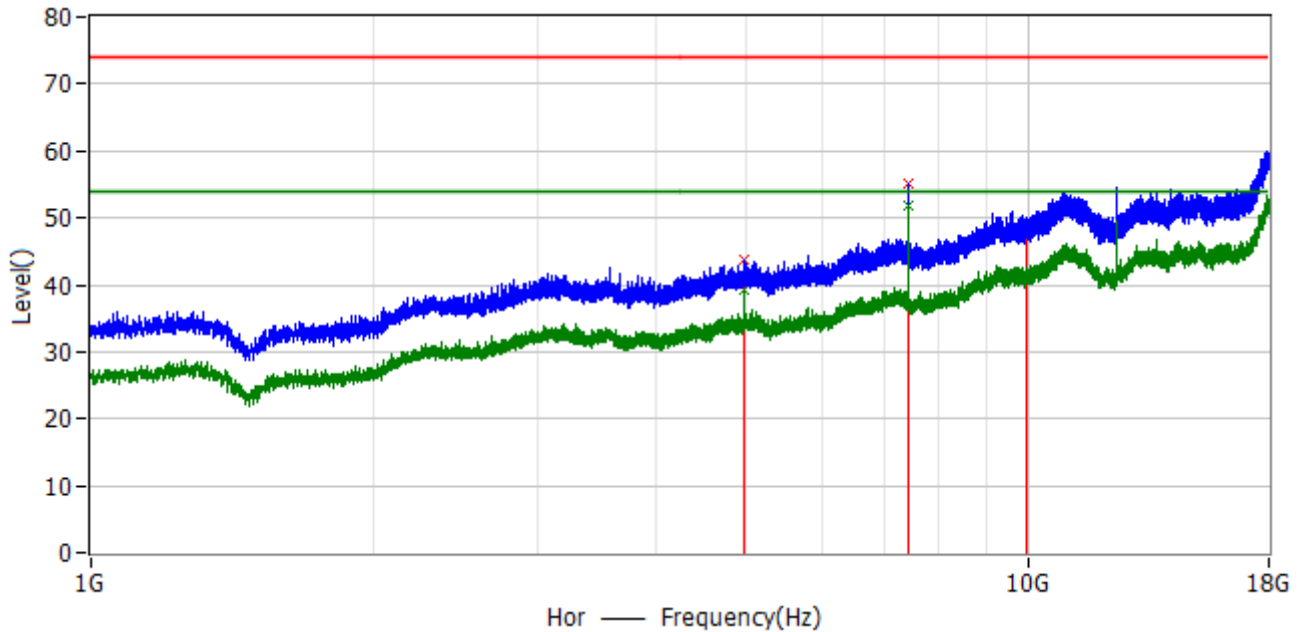
No.	Frequency	Limit (dBuV/m)	Level (dBuV/m)	Delta dB	Factor dB	Detector	Polar
1*	4.879 GHz	74.0	45.4	-28.6	-8.2	PK	Hor
2*	7.321 GHz	74.0	55.2	-18.8	-3.1	PK	Hor
3*	9.760 GHz	74.0	47.5	-26.5	0.7	PK	Hor
4*	4.881 GHz	54.0	39.8	-14.2	-8.2	AV	Hor
5*	7.319 GHz	54.0	51.2	-2.8	-3.1	AV	Hor
6*	9.760 GHz	54.0	41.0	-13.0	0.7	AV	Hor

Profile: 2230276R	Page No.: 47
Engineer: Tony	
Site: EPINTEK	Time: 2022/03/18 - 21:57
Limit: FCC_Part15.209_RE(3m)	Margin: 0
Probe: Horn_3117_00123988_(1-18GHz)	Polarity: Vertical
EUT: LED Lamp	Power: AC 120V/60Hz
Note: Mode 2:Transmit at 2480MHz by LE_2Mbps	



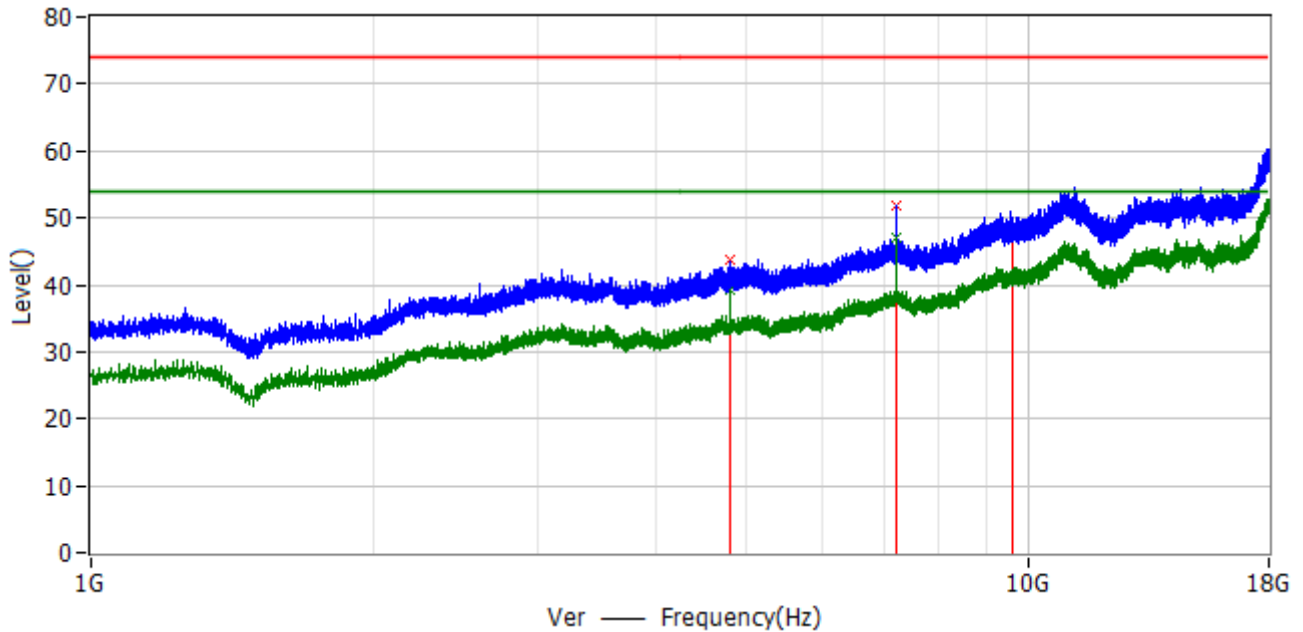
No.	Frequency	Limit (dBuV/m)	Level (dBuV/m)	Delta dB	Factor dB	Detector	Polar
1*	4.960 GHz	74.0	44.0	-30.0	-7.9	PK	Ver
2*	7.441 GHz	74.0	50.9	-23.1	-3.1	PK	Ver
3*	9.920 GHz	74.0	48.1	-25.9	0.8	PK	Ver
4*	4.961 GHz	54.0	37.8	-16.2	-7.9	AV	Ver
5*	7.442 GHz	54.0	45.4	-8.6	-3.1	AV	Ver
6*	9.920 GHz	54.0	41.4	-12.6	0.8	AV	Ver

Profile: 2230276R	Page No.: 48
Engineer: Tony	
Site: EPINTEK	Time: 2022/03/18 - 21:57
Limit: FCC_Part15.209_RE(3m)	Margin: 0
Probe: Horn_3117_00123988_(1-18GHz)	Polarity: Horizontal
EUT: LED Lamp	Power: AC 120V/60Hz
Note: Mode 2:Transmit at 2480MHz by LE_2Mbps	



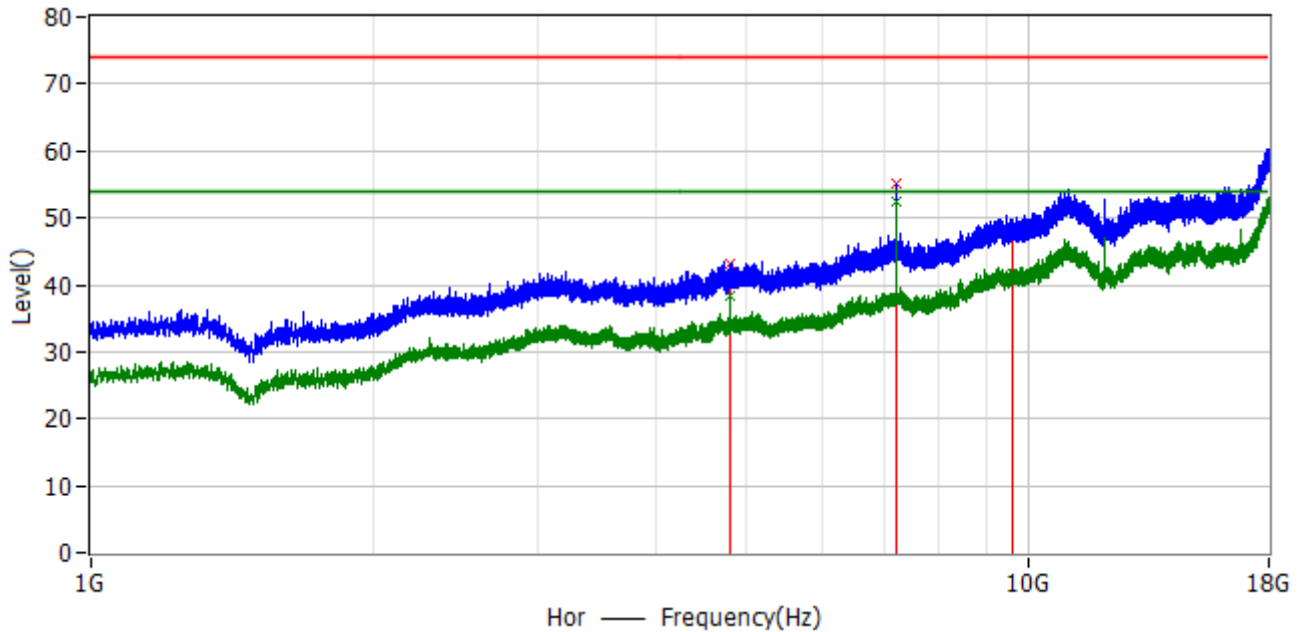
No.	Frequency	Limit (dBuV/m)	Level (dBuV/m)	Delta dB	Factor dB	Detector	Polar
1*	4.957 GHz	74.0	43.8	-30.2	-7.9	PK	Hor
2*	7.441 GHz	74.0	55.1	-18.9	-3.1	PK	Hor
3*	9.920 GHz	74.0	48.2	-25.8	0.8	PK	Hor
4*	4.962 GHz	54.0	39.3	-14.7	-7.9	AV	Hor
5*	7.442 GHz	54.0	51.7	-2.3	-3.1	AV	Hor
6*	9.920 GHz	54.0	40.8	-13.2	0.8	AV	Hor

Profile: 2230276R	Page No.: 49
Engineer: Tony	
Site: EPINTEK	Time: 2022/03/18 - 21:57
Limit: FCC_Part15.209_RE(3m)	Margin: 0
Probe: Horn_3117_00123988_(1-18GHz)	Polarity: Vertical
EUT: LED Lamp	Power: AC 120V/60Hz
Note: Mode 3:Transmit at 2402MHz by Coded S=2	



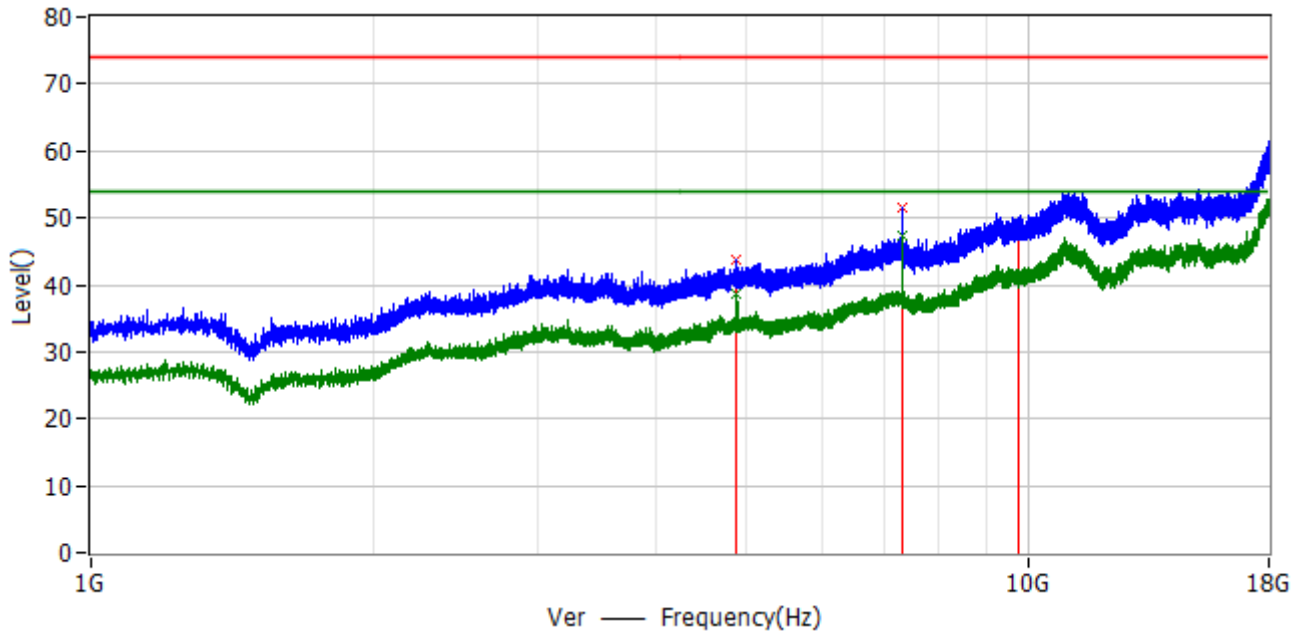
No.	Frequency	Limit (dBuV/m)	Level (dBuV/m)	Delta dB	Factor dB	Detector	Polar
1*	4.803 GHz	74.0	43.6	-30.4	-8.4	PK	Ver
2*	7.207 GHz	74.0	51.7	-22.3	-3.1	PK	Ver
3*	9.608 GHz	74.0	48.6	-25.4	0.3	PK	Ver
4*	4.804 GHz	54.0	39.2	-14.8	-8.4	AV	Ver
5*	7.207 GHz	54.0	47.1	-6.9	-3.1	AV	Ver
6*	9.608 GHz	54.0	41.1	-12.9	0.3	AV	Ver

Profile: 2230276R	Page No.: 50
Engineer: Tony	
Site: EPINTEK	Time: 2022/03/18 - 21:57
Limit: FCC_Part15.209_RE(3m)	Margin: 0
Probe: Horn_3117_00123988_(1-18GHz)	Polarity: Horizontal
EUT: LED Lamp	Power: AC 120V/60Hz
Note: Mode 3:Transmit at 2402MHz by Coded S=2	



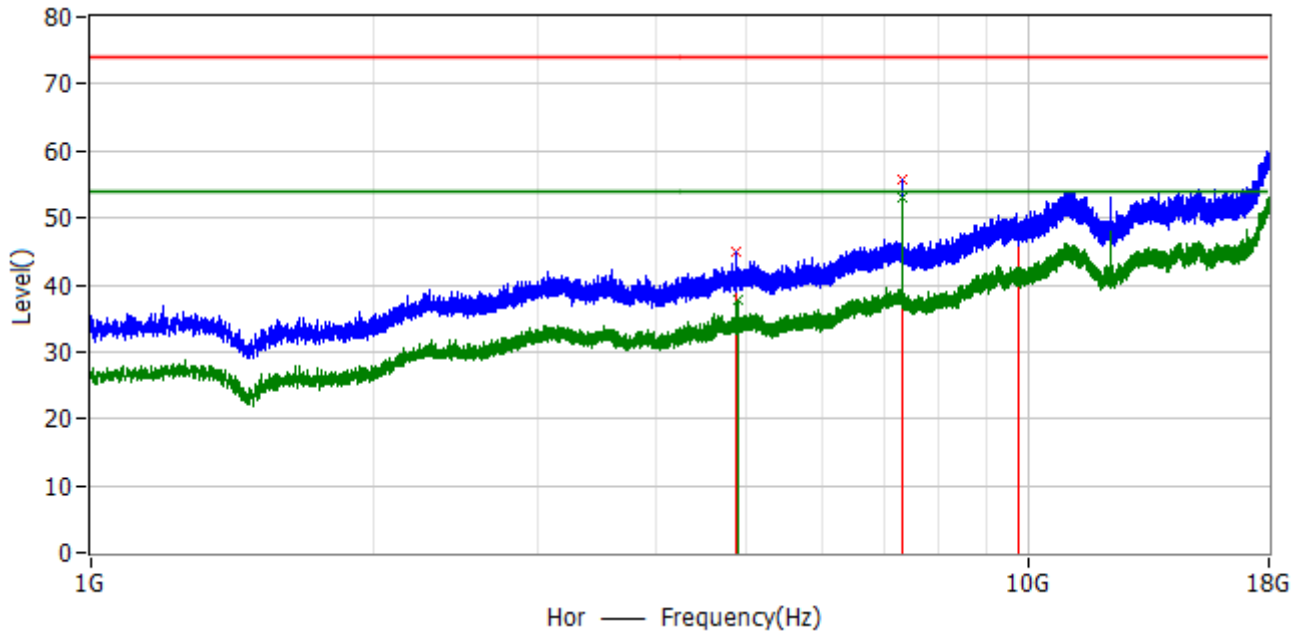
No.	Frequency	Limit (dBuV/m)	Level (dBuV/m)	Delta dB	Factor dB	Detector	Polar
1*	4.805 GHz	74.0	43.2	-30.8	-8.4	PK	Hor
2*	7.207 GHz	74.0	55.2	-18.8	-3.1	PK	Hor
3*	9.608 GHz	74.0	47.8	-26.2	0.3	PK	Hor
4*	4.805 GHz	54.0	38.5	-15.5	-8.4	AV	Hor
5*	7.207 GHz	54.0	52.5	-1.5	-3.1	AV	Hor
6*	9.608 GHz	54.0	41.7	-12.3	0.3	AV	Hor

Profile: 2230276R	Page No.: 51
Engineer: Tony	
Site: EPINTEK	Time: 2022/03/18 - 21:57
Limit: FCC_Part15.209_RE(3m)	Margin: 0
Probe: Horn_3117_00123988_(1-18GHz)	Polarity: Vertical
EUT: LED Lamp	Power: AC 120V/60Hz
Note: Mode 3:Transmit at 2440MHz by Coded S=2	



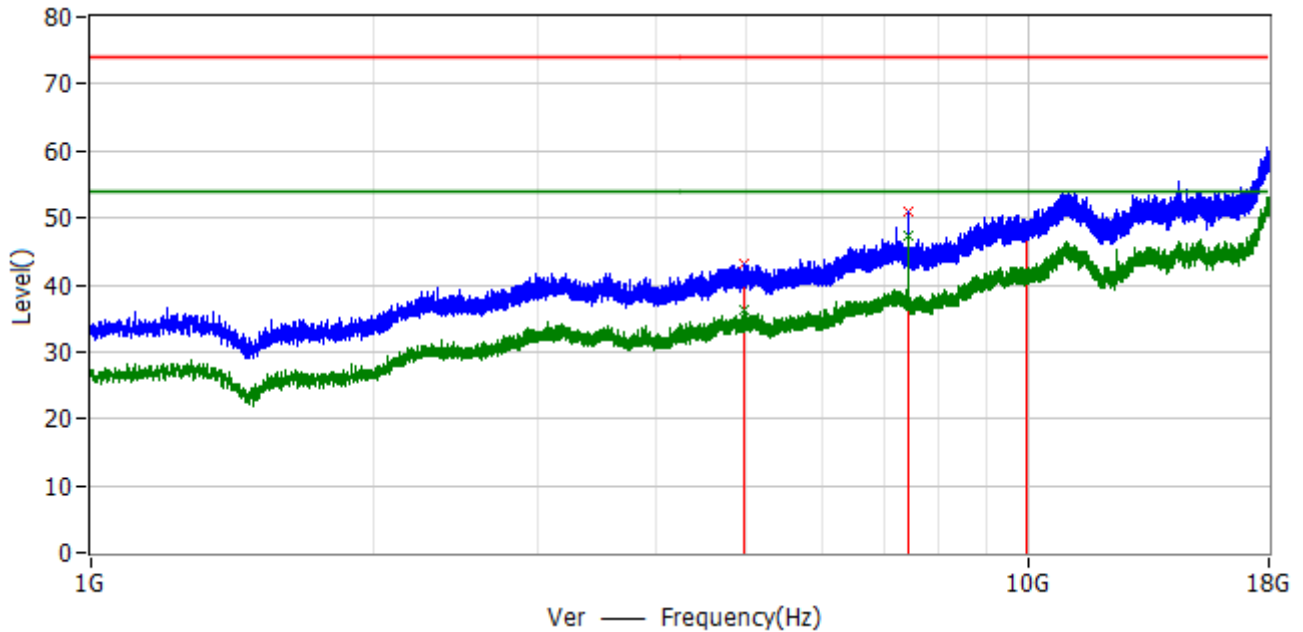
No.	Frequency	Limit (dBuV/m)	Level (dBuV/m)	Delta dB	Factor dB	Detector	Polar
1*	4.880 GHz	74.0	43.7	-30.3	-8.2	PK	Ver
2*	7.321 GHz	74.0	51.5	-22.5	-3.1	PK	Ver
3*	9.760 GHz	74.0	48.7	-25.3	0.7	PK	Ver
4*	4.880 GHz	54.0	38.7	-15.3	-8.2	AV	Ver
5*	7.320 GHz	54.0	47.2	-6.8	-3.1	AV	Ver
6*	9.760 GHz	54.0	41.0	-13.0	0.7	AV	Ver

Profile: 2230276R	Page No.: 52
Engineer: Tony	
Site: EPINTEK	Time: 2022/03/18 - 21:57
Limit: FCC_Part15.209_RE(3m)	Margin: 0
Probe: Horn_3117_00123988_(1-18GHz)	Polarity: Horizontal
EUT: LED Lamp	Power: AC 120V/60Hz
Note: Mode 3:Transmit at 2440MHz by Coded S=2	



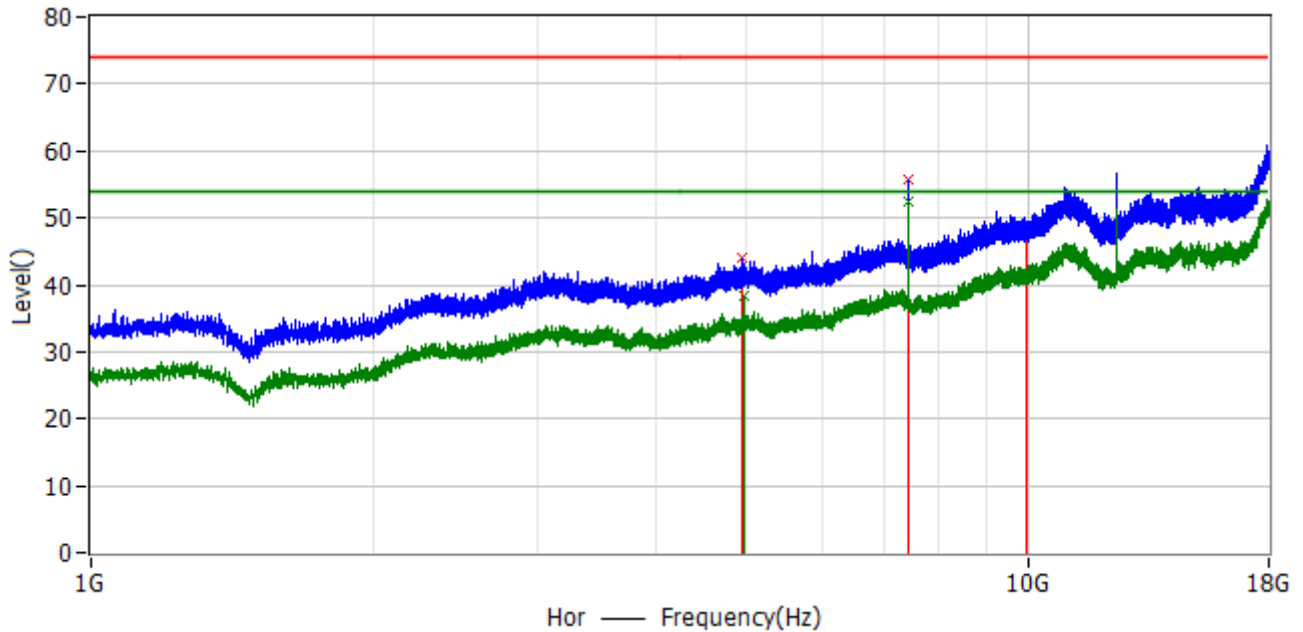
No.	Frequency	Limit (dBuV/m)	Level (dBuV/m)	Delta dB	Factor dB	Detector	Polar
1*	4.879 GHz	74.0	45.0	-29.0	-8.2	PK	Hor
2*	7.319 GHz	74.0	55.8	-18.2	-3.1	PK	Hor
3*	9.760 GHz	74.0	48.7	-25.3	0.7	PK	Hor
4*	4.881 GHz	54.0	37.7	-16.3	-8.2	AV	Hor
5*	7.320 GHz	54.0	53.0	-1.0	-3.1	AV	Hor
6*	9.760 GHz	54.0	41.6	-12.4	0.7	AV	Hor

Profile: 2230276R	Page No.: 53
Engineer: Tony	
Site: EPINTEK	Time: 2022/03/18 - 21:57
Limit: FCC_Part15.209_RE(3m)	Margin: 0
Probe: Horn_3117_00123988_(1-18GHz)	Polarity: Vertical
EUT: LED Lamp	Power: AC 120V/60Hz
Note: Mode 3:Transmit at 2480MHz by Coded S=2	



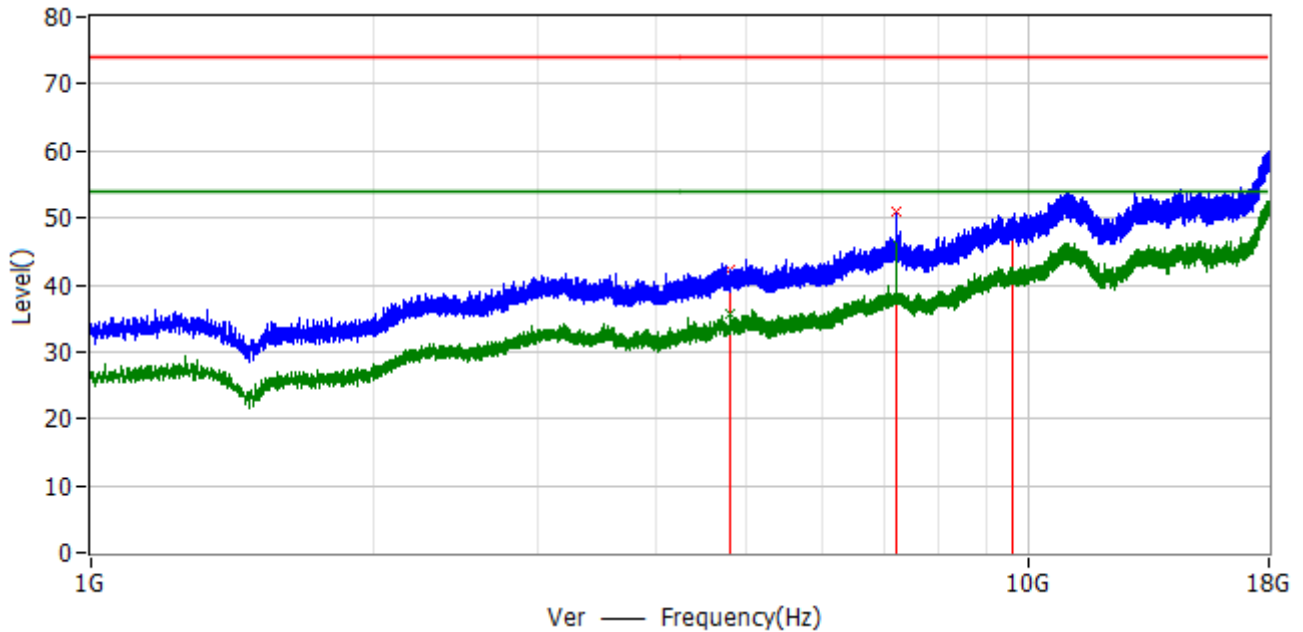
No.	Frequency	Limit (dBuV/m)	Level (dBuV/m)	Delta dB	Factor dB	Detector	Polar
1*	4.960 GHz	74.0	43.0	-31.0	-7.9	PK	Ver
2*	7.441 GHz	74.0	51.0	-23.0	-3.1	PK	Ver
3*	9.920 GHz	74.0	48.6	-25.4	0.8	PK	Ver
4*	4.960 GHz	54.0	36.3	-17.7	-7.9	AV	Ver
5*	7.441 GHz	54.0	47.2	-6.8	-3.1	AV	Ver
6*	9.920 GHz	54.0	41.3	-12.7	0.8	AV	Ver

Profile: 2230276R	Page No.: 54
Engineer: Tony	
Site: EPINTEK	Time: 2022/03/18 - 21:58
Limit: FCC_Part15.209_RE(3m)	Margin: 0
Probe: Horn_3117_00123988_(1-18GHz)	Polarity: Horizontal
EUT: LED Lamp	Power: AC 120V/60Hz
Note: Mode 3:Transmit at 2480MHz by Coded S=2	



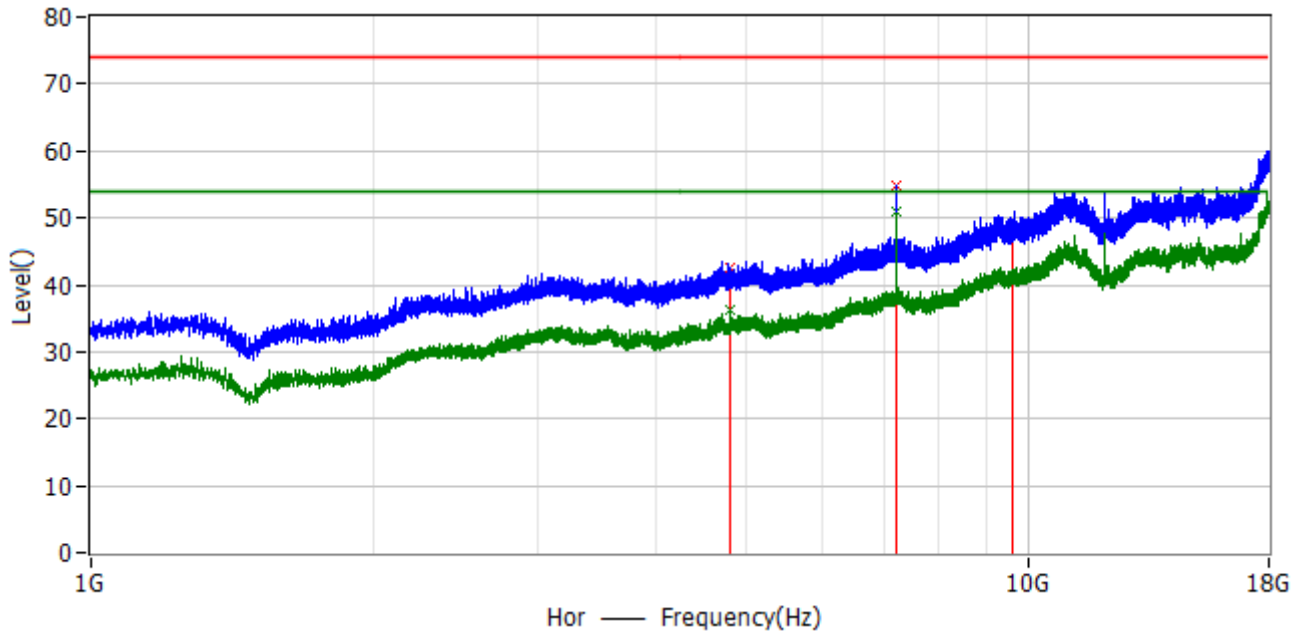
No.	Frequency	Limit (dBuV/m)	Level (dBuV/m)	Delta dB	Factor dB	Detector	Polar
1*	4.945 GHz	74.0	44.1	-29.9	-7.9	PK	Hor
2*	7.439 GHz	74.0	55.8	-18.2	-3.1	PK	Hor
3*	9.920 GHz	74.0	48.6	-25.4	0.8	PK	Hor
4*	4.960 GHz	54.0	38.3	-15.7	-7.9	AV	Hor
5*	7.440 GHz	54.0	52.4	-1.6	-3.1	AV	Hor
6*	9.920 GHz	54.0	41.6	-12.4	0.8	AV	Hor

Profile: 2230276R	Page No.: 55
Engineer: Tony	
Site: EPINTEK	Time: 2022/03/18 - 21:58
Limit: FCC_Part15.209_RE(3m)	Margin: 0
Probe: Horn_3117_00123988_(1-18GHz)	Polarity: Vertical
EUT: LED Lamp	Power: AC 120V/60Hz
Note: Mode 4:Transmit at 2402MHz by Coded S=8	



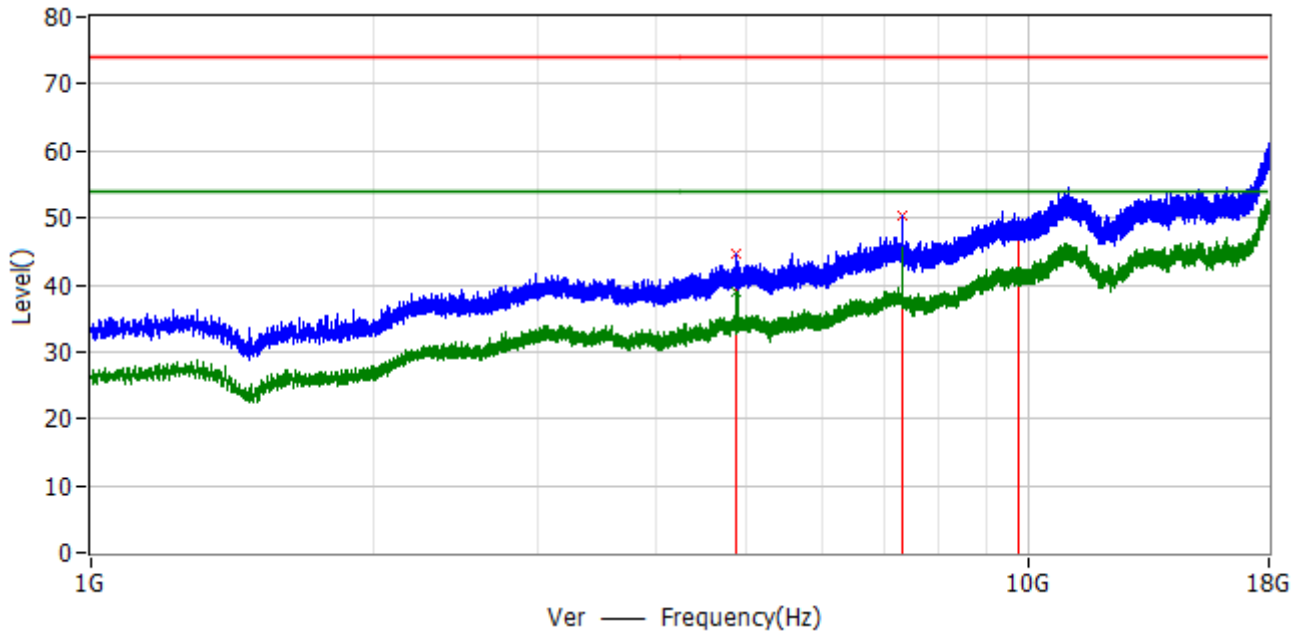
No.	Frequency	Limit (dBuV/m)	Level (dBuV/m)	Delta dB	Factor dB	Detector	Polar
1*	4.807 GHz	74.0	42.2	-31.8	-8.4	PK	Ver
2*	7.207 GHz	74.0	50.8	-23.2	-3.1	PK	Ver
3*	9.608 GHz	74.0	48.7	-25.3	0.3	PK	Ver
4*	4.804 GHz	54.0	35.7	-18.3	-8.4	AV	Ver
5*	7.207 GHz	54.0	46.1	-7.9	-3.1	AV	Ver
6*	9.608 GHz	54.0	40.9	-13.1	0.3	AV	Ver

Profile: 2230276R	Page No.: 56
Engineer: Tony	
Site: EPINTEK	Time: 2022/03/18 - 21:58
Limit: FCC_Part15.209_RE(3m)	Margin: 0
Probe: Horn_3117_00123988_(1-18GHz)	Polarity: Horizontal
EUT: LED Lamp	Power: AC 120V/60Hz
Note: Mode 4:Transmit at 2402MHz by Coded S=8	



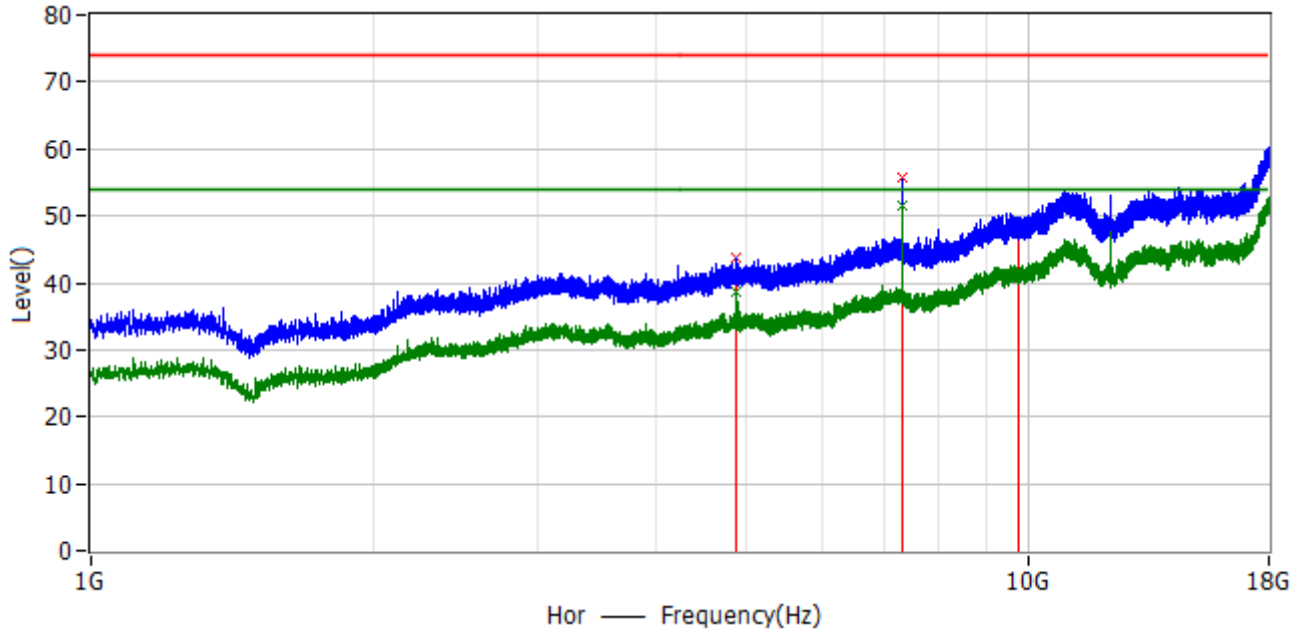
No.	Frequency	Limit (dBuV/m)	Level (dBuV/m)	Delta dB	Factor dB	Detector	Polar
1*	4.806 GHz	74.0	42.5	-31.5	-8.4	PK	Hor
2*	7.207 GHz	74.0	54.7	-19.3	-3.1	PK	Hor
3*	9.608 GHz	74.0	48.1	-25.9	0.3	PK	Hor
4*	4.804 GHz	54.0	36.2	-17.8	-8.4	AV	Hor
5*	7.207 GHz	54.0	50.8	-3.2	-3.1	AV	Hor
6*	9.608 GHz	54.0	41.3	-12.7	0.3	AV	Hor

Profile: 2230276R	Page No.: 57
Engineer: Tony	
Site: EPINTEK	Time: 2022/03/18 - 21:58
Limit: FCC_Part15.209_RE(3m)	Margin: 0
Probe: Horn_3117_00123988_(1-18GHz)	Polarity: Vertical
EUT: LED Lamp	Power: AC 120V/60Hz
Note: Mode 4:Transmit at 2440MHz by Coded S=8	



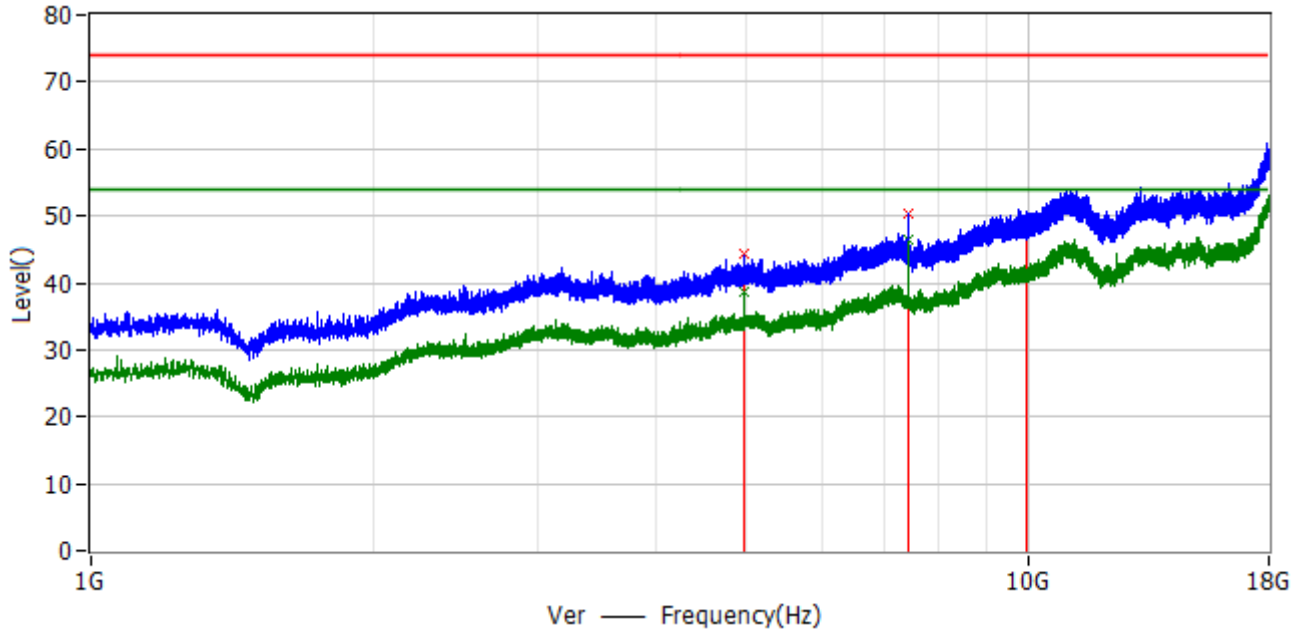
No.	Frequency	Limit (dBuV/m)	Level (dBuV/m)	Delta dB	Factor dB	Detector	Polar
1*	4.880 GHz	74.0	44.7	-29.3	-8.2	PK	Ver
2*	7.319 GHz	74.0	50.4	-23.6	-3.1	PK	Ver
3*	9.760 GHz	74.0	48.7	-25.3	0.7	PK	Ver
4*	4.880 GHz	54.0	39.0	-15.0	-8.2	AV	Ver
5*	7.320 GHz	54.0	45.4	-8.6	-3.1	AV	Ver
6*	9.760 GHz	54.0	40.8	-13.2	0.7	AV	Ver

Profile: 2230276R	Page No.: 58
Engineer: Tony	
Site: EPINTEK	Time: 2022/03/18 - 21:58
Limit: FCC_Part15.209_RE(3m)	Margin: 0
Probe: Horn_3117_00123988_(1-18GHz)	Polarity: Horizontal
EUT: LED Lamp	Power: AC 120V/60Hz
Note: Mode 4:Transmit at 2440MHz by Coded S=8	



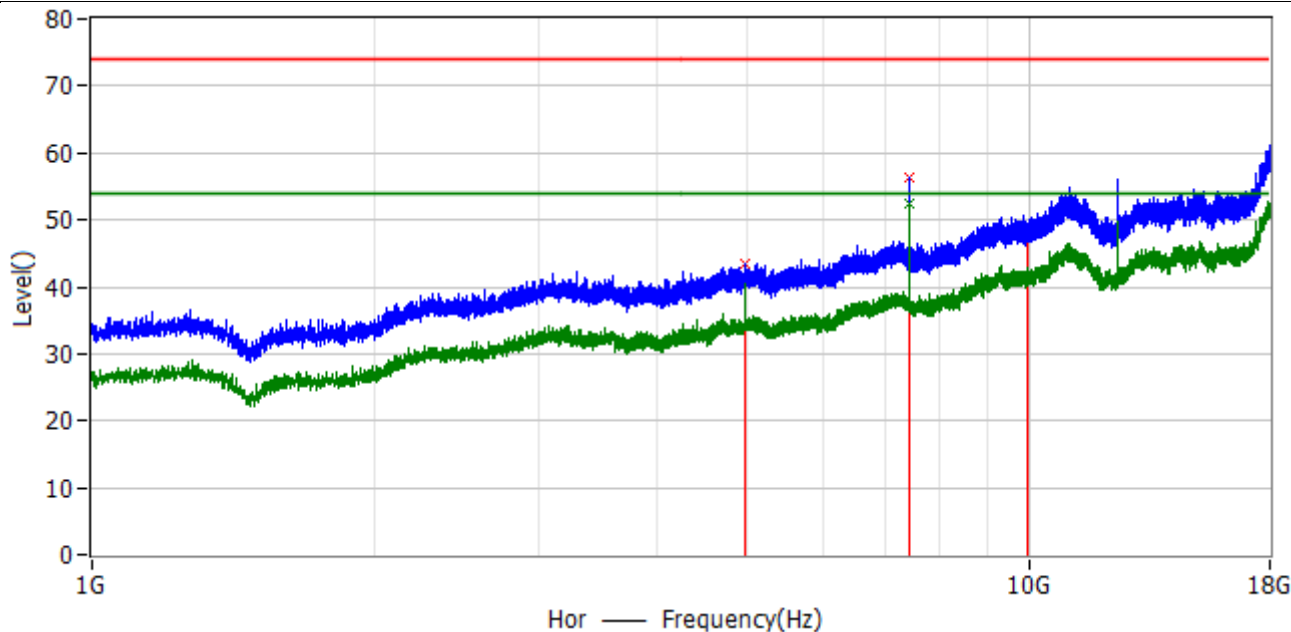
No.	Frequency	Limit (dBuV/m)	Level (dBuV/m)	Delta dB	Factor dB	Detector	Polar
1*	4.879 GHz	74.0	43.8	-30.2	-8.2	PK	Hor
2*	7.321 GHz	74.0	55.6	-18.4	-3.1	PK	Hor
3*	9.760 GHz	74.0	48.4	-25.6	0.7	PK	Hor
4*	4.880 GHz	54.0	38.8	-15.2	-8.2	AV	Hor
5*	7.321 GHz	54.0	51.4	-2.6	-3.1	AV	Hor
6*	9.760 GHz	54.0	41.9	-12.1	0.7	AV	Hor

Profile: 2230276R	Page No.: 59
Engineer: Tony	
Site: EPINTEK	Time: 2022/03/18 - 21:58
Limit: FCC_Part15.209_RE(3m)	Margin: 0
Probe: Horn_3117_00123988_(1-18GHz)	Polarity: Vertical
EUT: LED Lamp	Power: AC 120V/60Hz
Note: Mode 4:Transmit at 2480MHz by Coded S=8	



No.	Frequency	Limit (dBuV/m)	Level (dBuV/m)	Delta dB	Factor dB	Detector	Polar
1*	4.959 GHz	74.0	44.2	-29.8	-7.9	PK	Ver
2*	7.441 GHz	74.0	50.4	-23.6	-3.1	PK	Ver
3*	9.920 GHz	74.0	47.5	-26.5	0.8	PK	Ver
4*	4.960 GHz	54.0	38.7	-15.3	-7.9	AV	Ver
5*	7.441 GHz	54.0	46.3	-7.7	-3.1	AV	Ver
6*	9.920 GHz	54.0	40.9	-13.1	0.8	AV	Ver

Profile: 2230276R	Page No.: 60
Engineer: Tony	
Site: EPINTEK	Time: 2022/03/18 - 21:58
Limit: FCC_Part15.209_RE(3m)	Margin: 0
Probe: Horn_3117_00123988_(1-18GHz)	Polarity: Horizontal
EUT: LED Lamp	Power: AC 120V/60Hz
Note: Mode 4:Transmit at 2480MHz by Coded S=8	



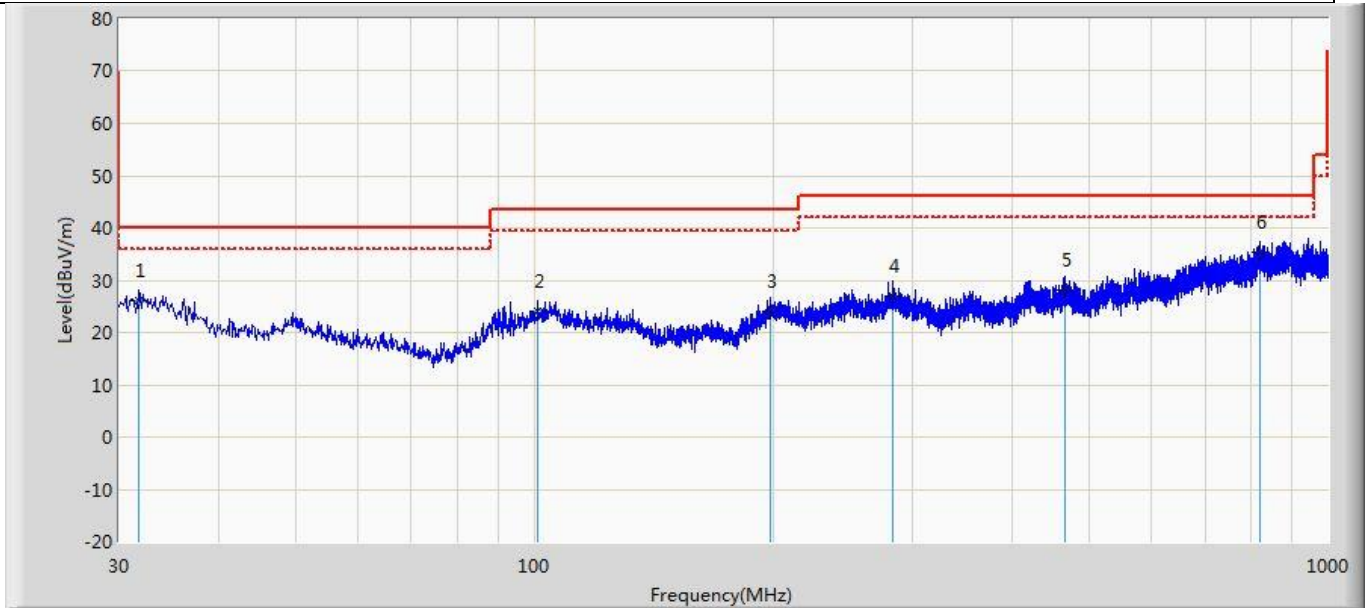
No.	Frequency	Limit (dBuV/m)	Level (dBuV/m)	Delta dB	Factor dB	Detector	Polar
1*	4.960 GHz	74.0	43.5	-30.5	-7.9	PK	Hor
2*	7.439 GHz	74.0	56.2	-17.8	-3.1	PK	Hor
3*	9.920 GHz	74.0	47.9	-26.1	0.8	PK	Hor
4*	4.960 GHz	54.0	40.4	-13.6	-7.9	AV	Hor
5*	7.441 GHz	54.0	52.4	-1.6	-3.1	AV	Hor
6*	9.920 GHz	54.0	41.6	-12.4	0.8	AV	Hor

Note:

1. The test frequency range, 9kHz~30MHz and Above 18GHz worst case are at least 6dB below the limits, therefore no data appear in the report.

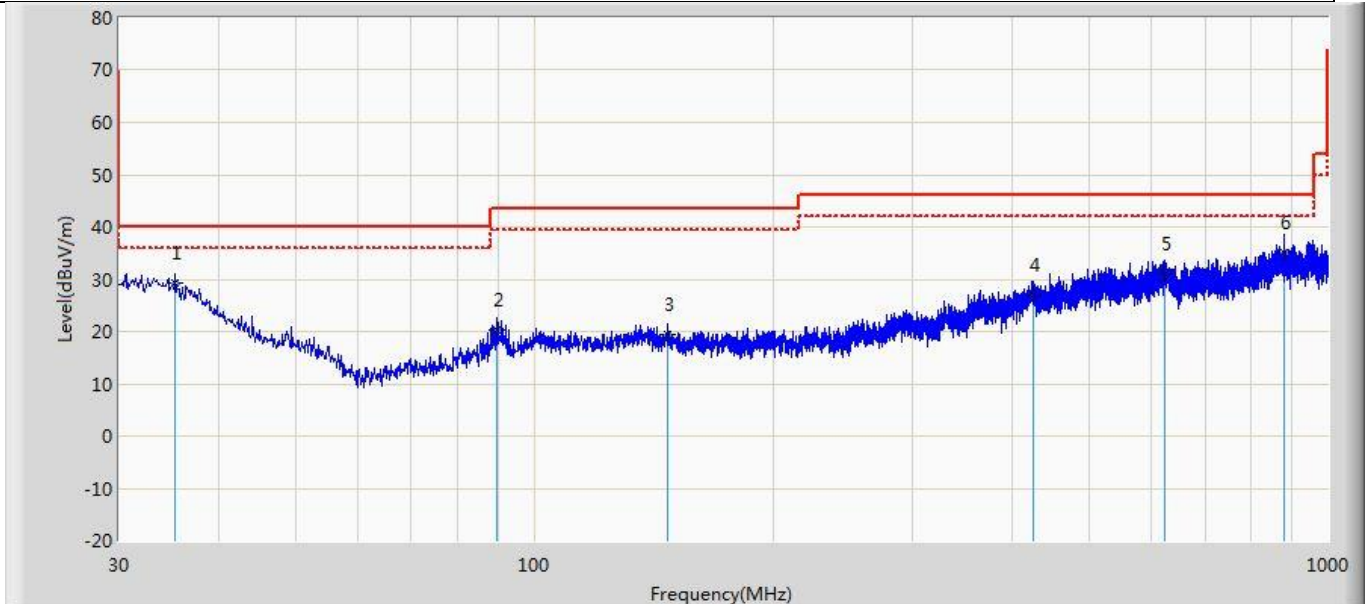
The worst case of Radiated Emission below 1GHz:

Profile: 2230276R	Page No.: 27
Engineer: Carlos. Shen	
Site: AC2	Time: 2022/03/09 - 22:52
Limit: FCC_Part15.209_RE(3m)	Margin: 4
Probe: AC2_3M(30-1000M)	Polarity: Vertical
EUT: LED Lamp	Power: AC 120V/60Hz
Note: Mode 4: Transmit at 2402MHz by Coded S=8	



No	Mark	Frequency (MHz)	Measure Level (dBuV/m)	Reading Level (dBuV)	Over Limit (dB)	Limit (dBuV/m)	Factor (dB)	Type
1		31.819	26.025	2.660	-13.975	40.000	23.366	QP
2		101.052	24.036	2.050	-19.464	43.500	21.986	QP
3		198.295	24.065	1.063	-19.435	43.500	23.002	QP
4		282.927	27.054	2.018	-18.946	46.000	25.037	QP
5		465.651	28.025	1.241	-17.975	46.000	26.784	QP
6	*	820.429	35.369	2.538	-10.631	46.000	32.831	QP

Profile: 2230276R	Page No.: 28
Engineer: Carlos. Shen	
Site: AC2	Time: 2022/03/09 - 22:54
Limit: FCC_Part15.209_RE(3m)	Margin: 4
Probe: AC2_3M(30-1000M)	Polarity: Horizontal
EUT: LED Lamp	Power: AC 120V/60Hz
Note: Mode 4:Transmit at 2402MHz by Coded S=8	



No	Mark	Frequency (MHz)	Measure Level (dBuV/m)	Reading Level (dBuV)	Over Limit (dB)	Limit (dBuV/m)	Factor (dB)	Type
1	*	35.335	29.265	2.643	-10.735	40.000	26.621	QP
2		89.897	20.215	6.653	-23.285	43.500	13.561	QP
3		147.370	19.365	2.457	-24.135	43.500	16.908	QP
4		425.881	27.054	-0.050	-18.946	46.000	27.103	QP
5		624.246	31.024	0.436	-14.976	46.000	30.588	QP
6		879.963	35.025	2.594	-10.975	46.000	32.431	QP

Note:

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

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

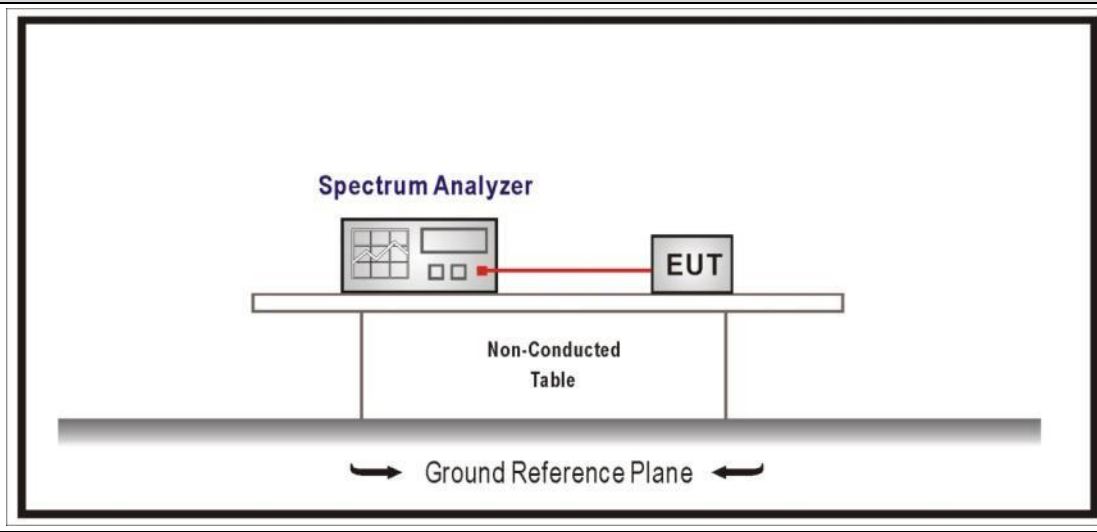
4.3.1 Limit

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

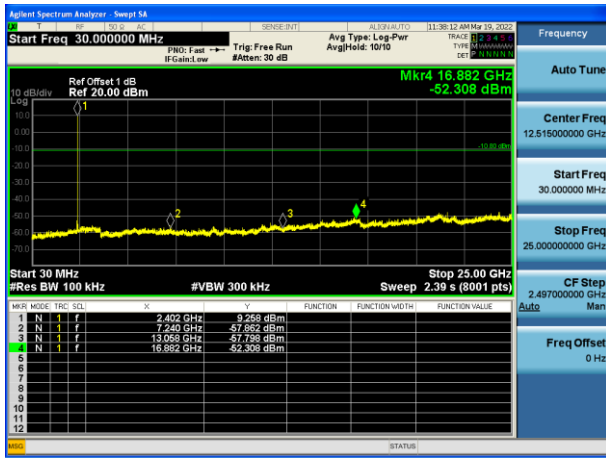


4.3.3 Test Procedure

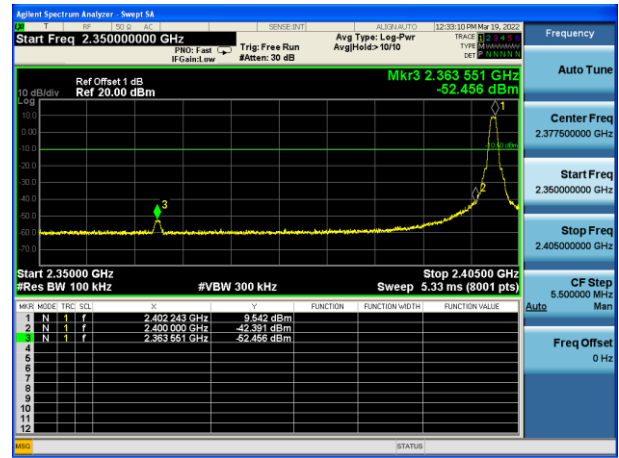
References Rule	Chapter	Description
<input checked="" type="checkbox"/> ANSI C63.10	11.11	Emissions in non-restricted frequency bands
<input checked="" type="checkbox"/> ANSI C63.10	11.11.1	General
<input checked="" type="checkbox"/> ANSI C63.10	11.11.2	Reference level measurement
<input checked="" type="checkbox"/> ANSI C63.10	11.11.3	Emission level measurement

4.3.4 Test Data

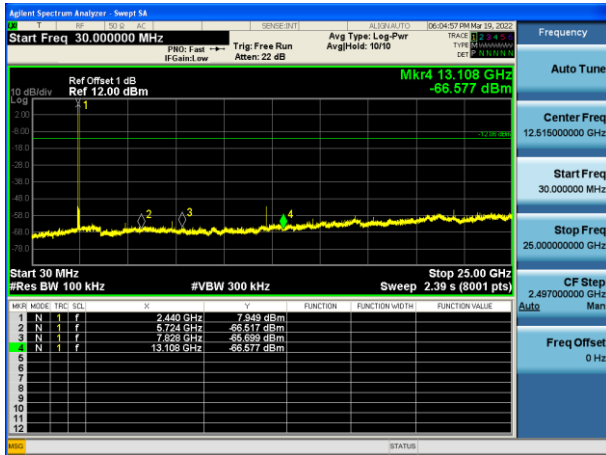
Mode 1 CH00 (2402MHz)



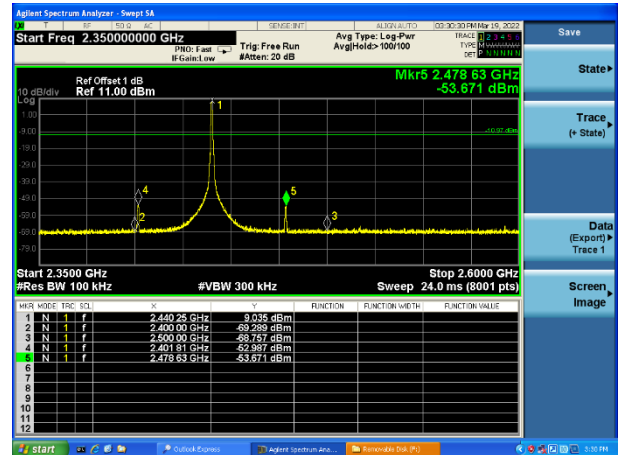
Mode 1 CH00 (2402MHz)



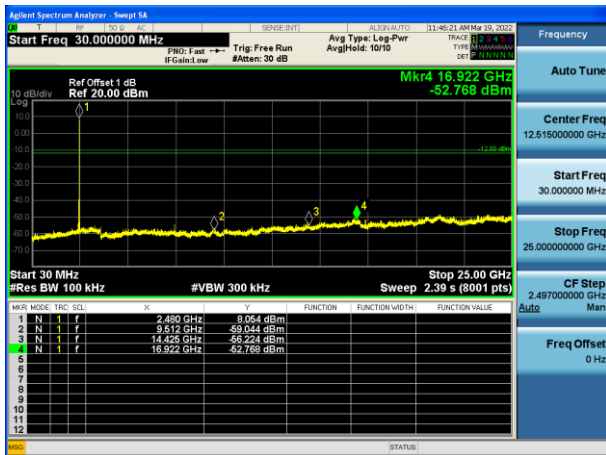
Mode 1 CH19 (2440MHz)



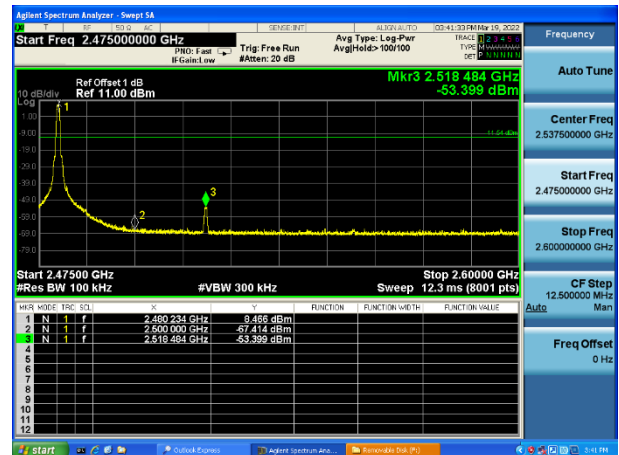
Mode 1 CH19 (2440MHz)



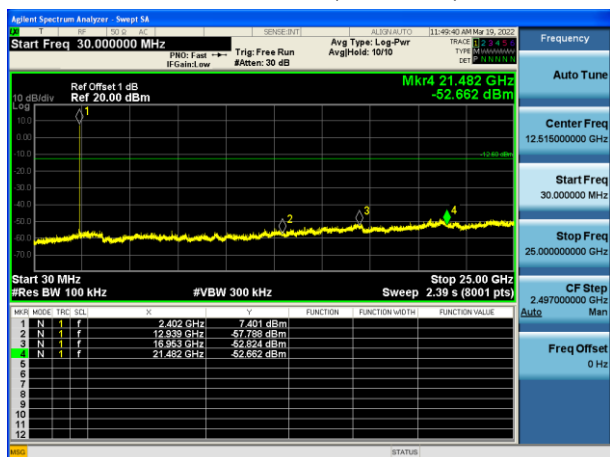
Mode 1 CH39 (2480MHz)



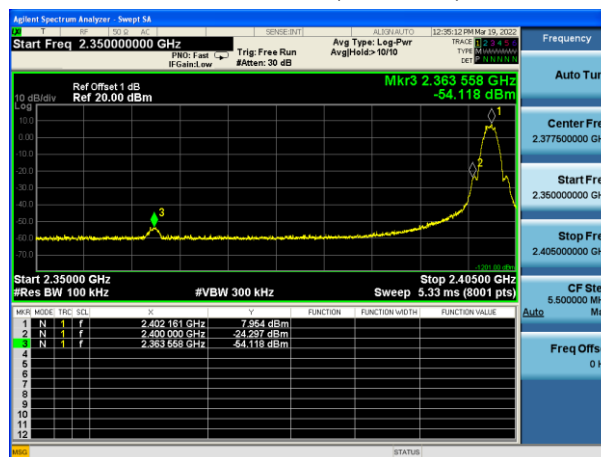
Mode 1 CH39 (2480MHz)



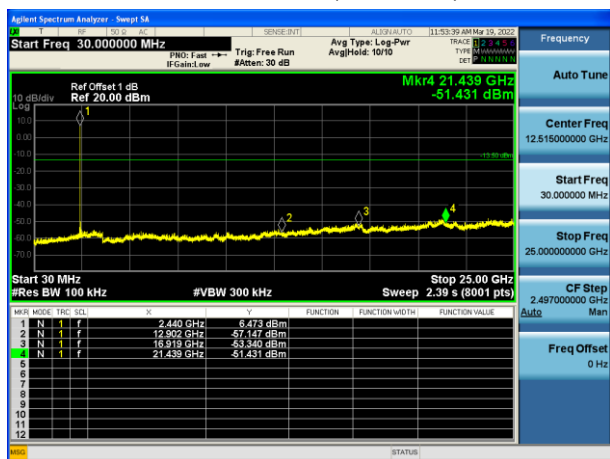
Mode 2 CH00 (2402MHz)



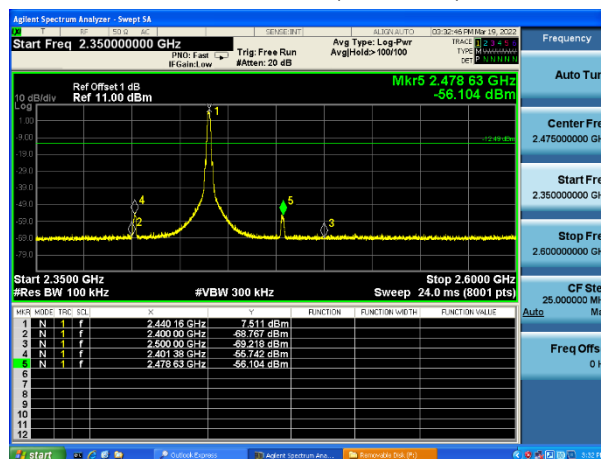
Mode 2 CH00 (2402MHz)



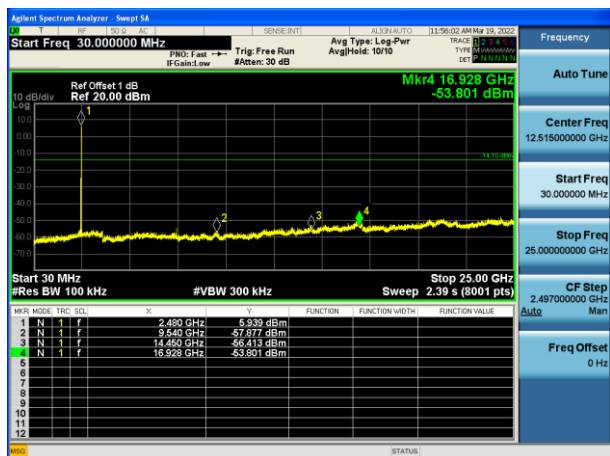
Mode 2 CH19 (2440MHz)



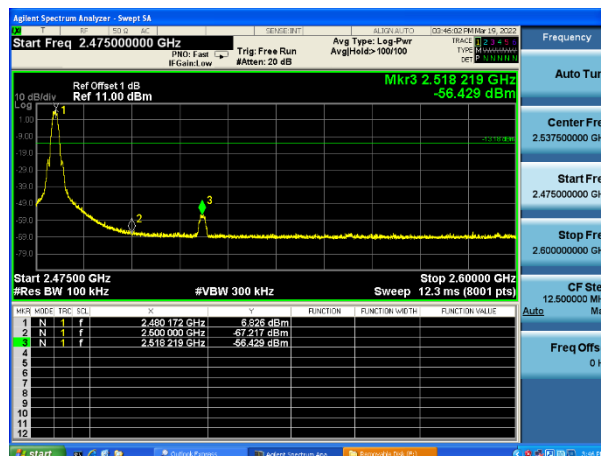
Mode 2 CH19 (2440MHz)



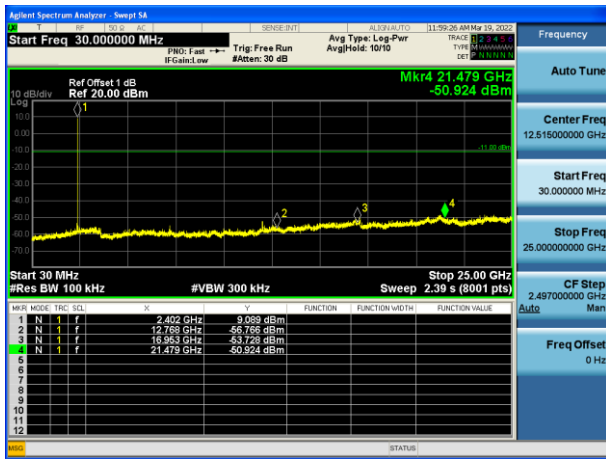
Mode 2 CH39 (2480MHz)



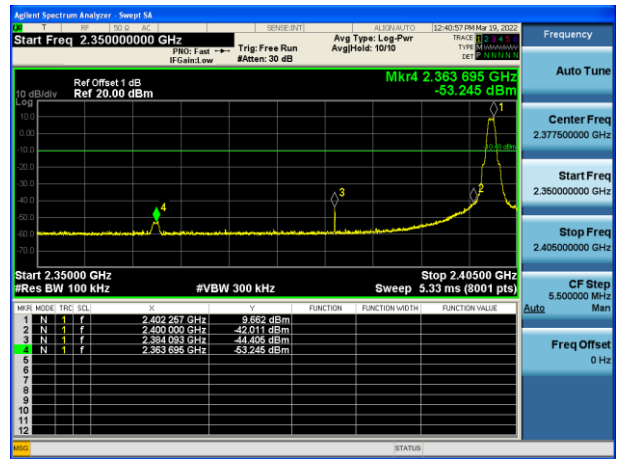
Mode 2 CH39 (2480MHz)



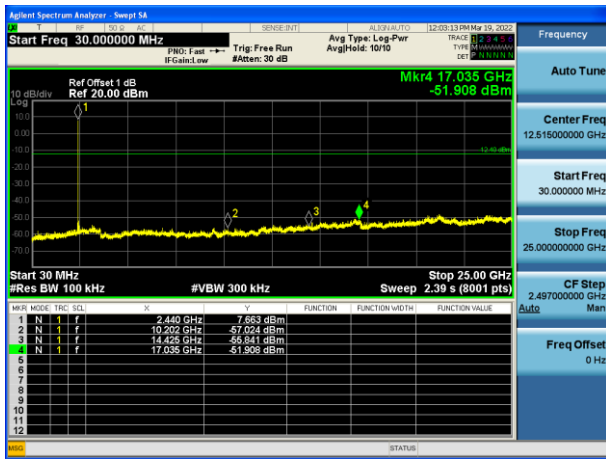
Mode 3 CH00 (2402MHz)



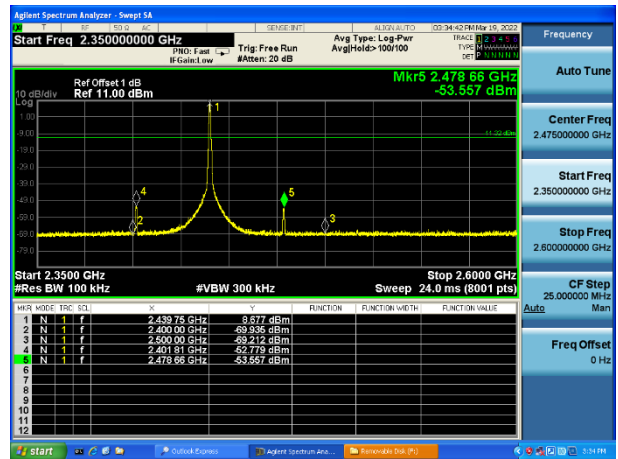
Mode 3 CH00 (2402MHz)



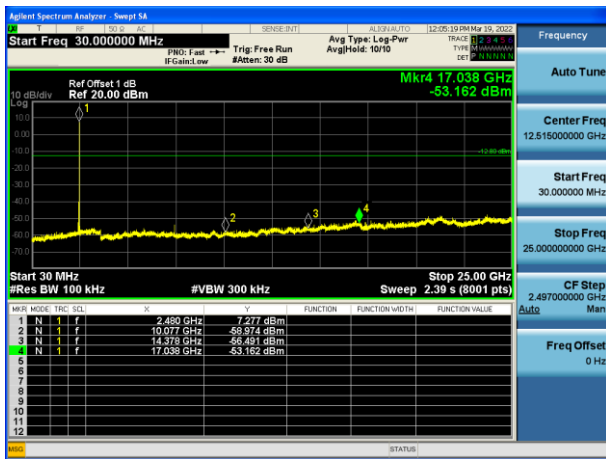
Mode 3 CH19 (2440MHz)



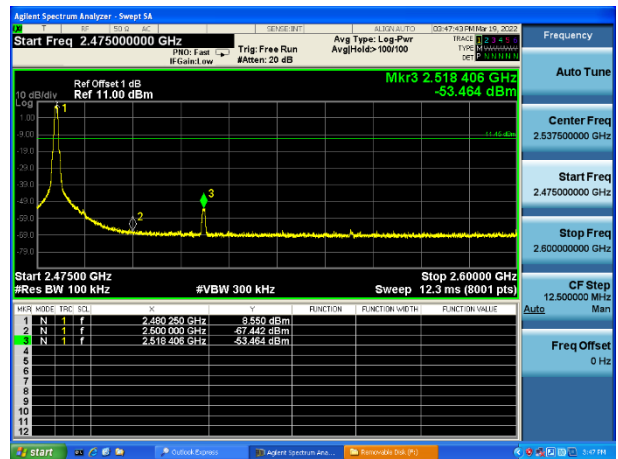
Mode 3 CH19 (2440MHz)



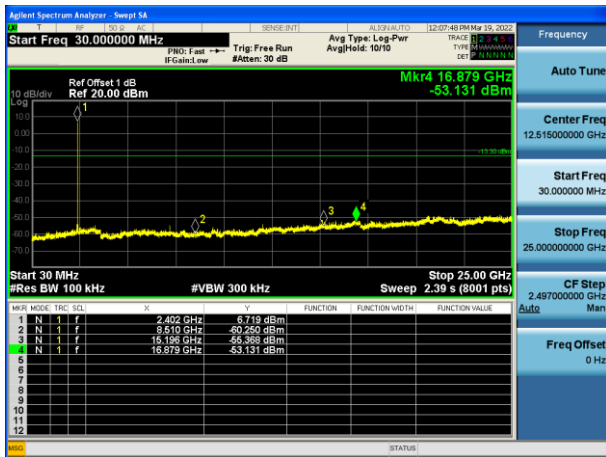
Mode 3 CH39 (2480MHz)



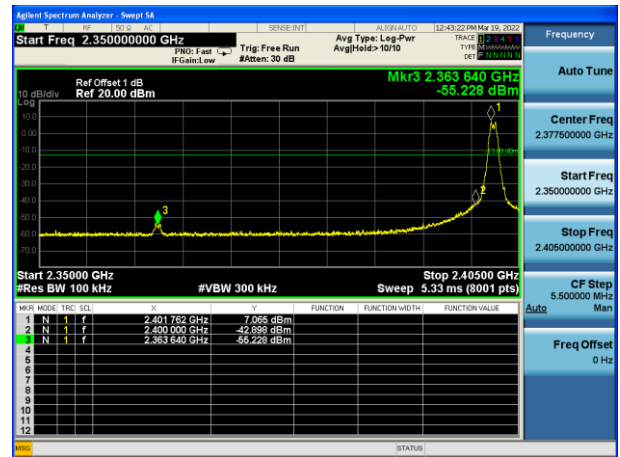
Mode 3 CH39 (2480MHz)



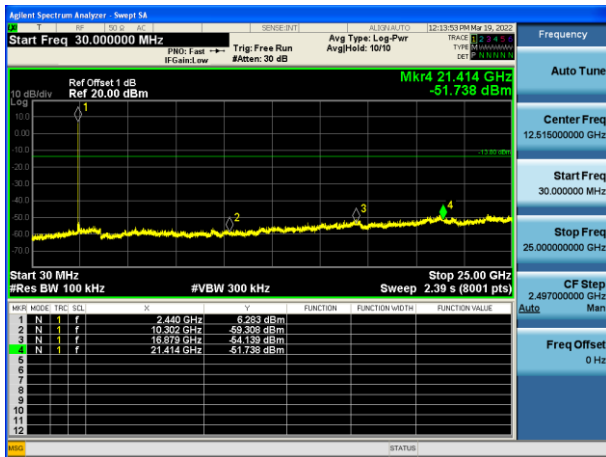
Mode 4 CH00 (2402MHz)



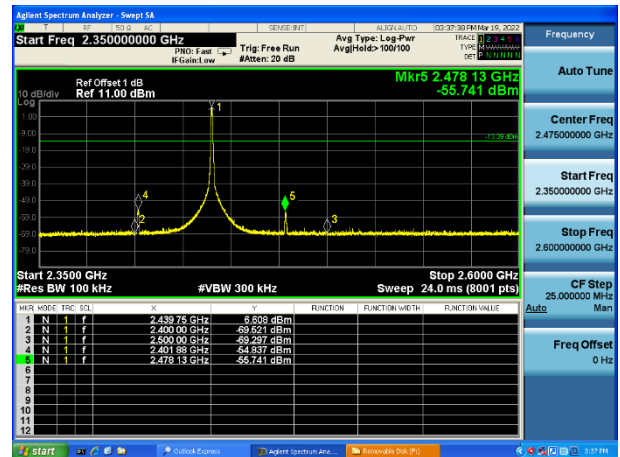
Mode 4 CH00 (2402MHz)



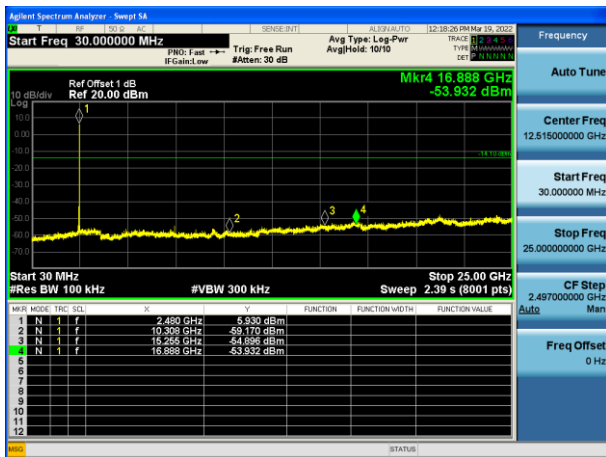
Mode 4 CH19 (2440MHz)



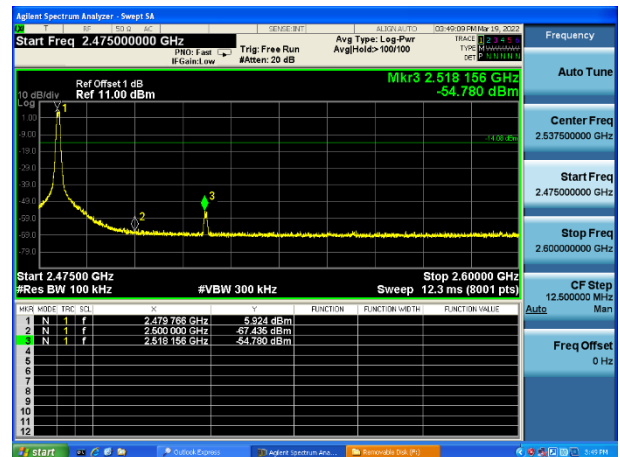
Mode 4 CH19 (2440MHz)



Mode 4 CH39 (2480MHz)

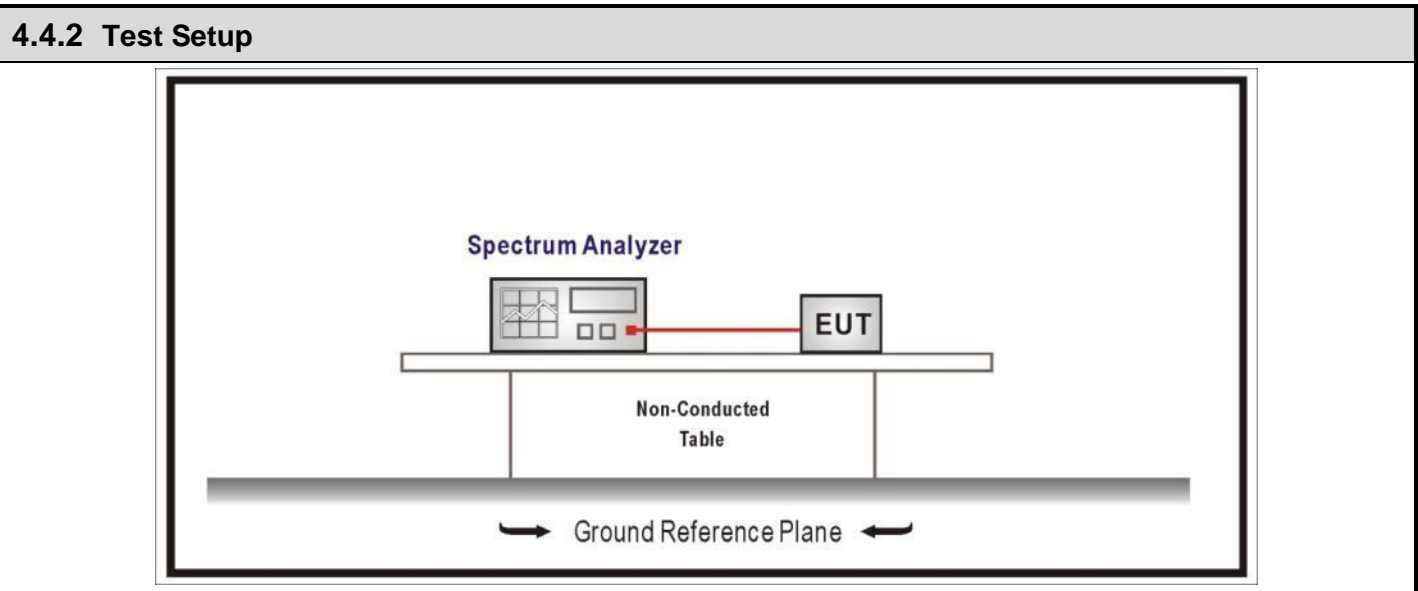


Mode 4 CH39 (2480MHz)



4.4 Duty cycle	VERDICT: PASS
-----------------------	----------------------

4.4.1 Limit
N/A



4.4.3 Test Procedure

References Rule	Chapter	Description
<input checked="" type="checkbox"/> ANSI C63.10	11.6	Duty cycle (D), transmission duration (T), and maximum power control level

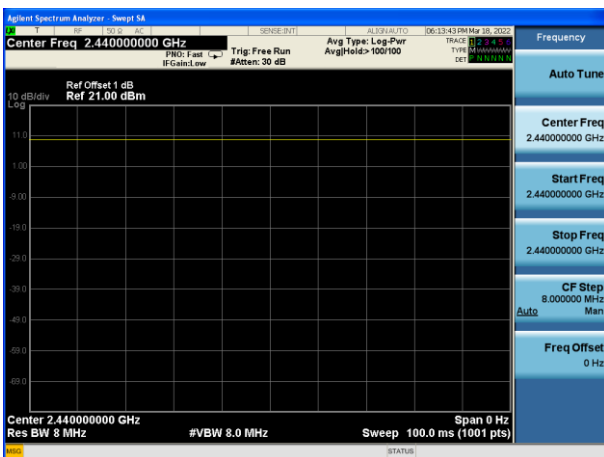
4.4.4 Test Data

Test Mode	Tx On (ms)	Duty Cycle	VBW (kHz)	Detect
Mode 1	--	100%	3000	RMS
Mode 2	--	100%	3000	RMS
Mode 3	--	100%	3000	RMS
Mode 4	--	100%	3000	RMS

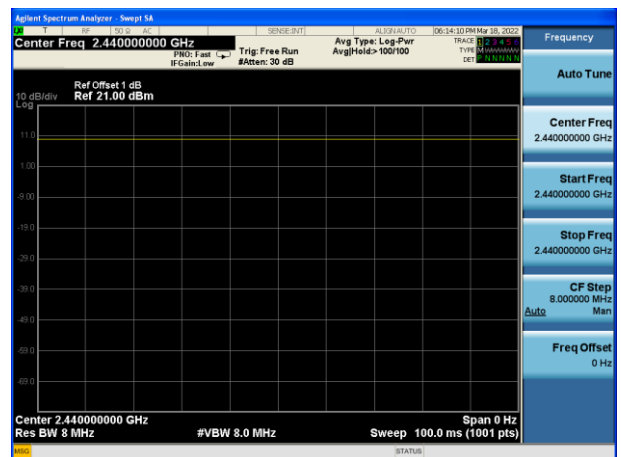
Note 1: T means the minimum transmission duration over which the transmitter is on and is transmitting at its maximum power control Level for the tested mode of operation.

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

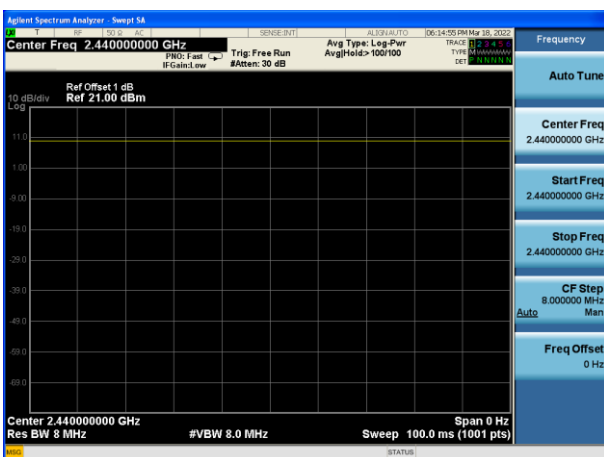
Mode 1 CH19 2440MHz



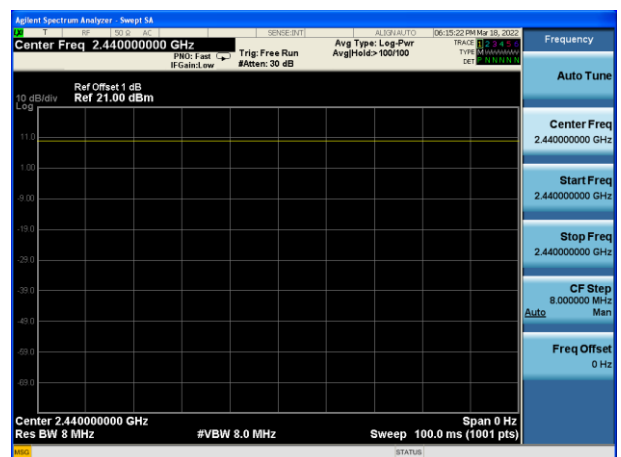
Mode 2 CH19 2440MHz



Mode 3 CH19 2440MHz



Mode 4 CH19 2440MHz



4.5 Radiated Emission Band Edge

VERDICT: PASS

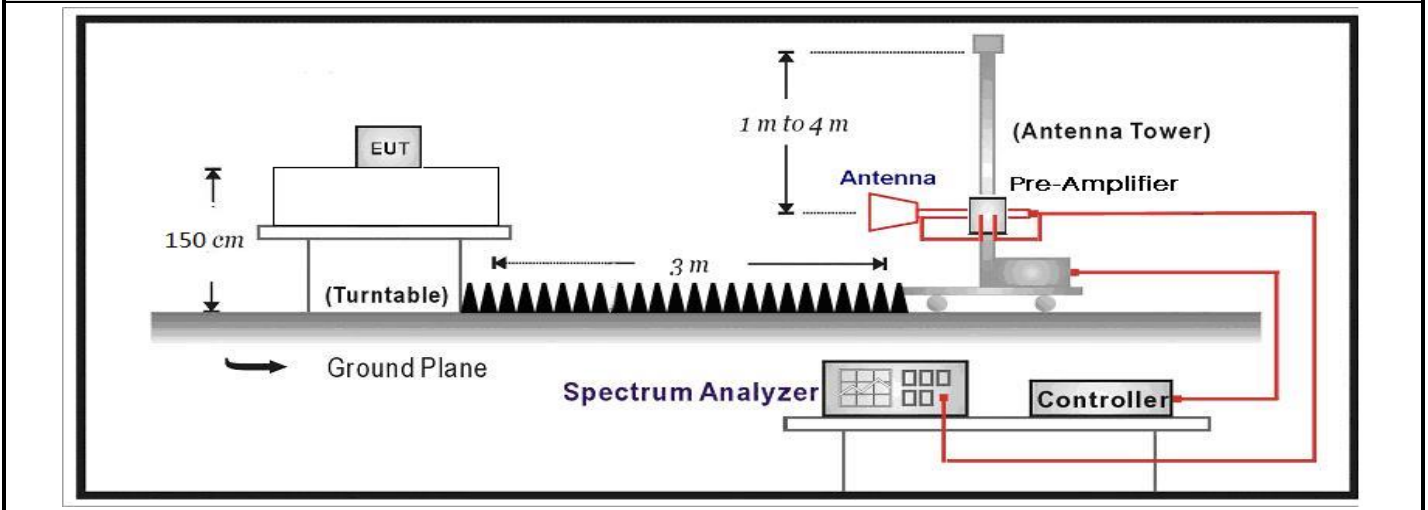
4.5.1 Limit

Standard		FCC Part 15 Subpart C Paragraph 15.247(d) , 15.209		
Frequency bands (MHz)	Detector	Limit (dBµV/m)	RBW (MHz)	Distance (m)
2310-2390	PK	74	1	3
2483.5-2500	AV	54	1	3

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

4.5.2 Test Setup

Above 1GHz Test Setup:

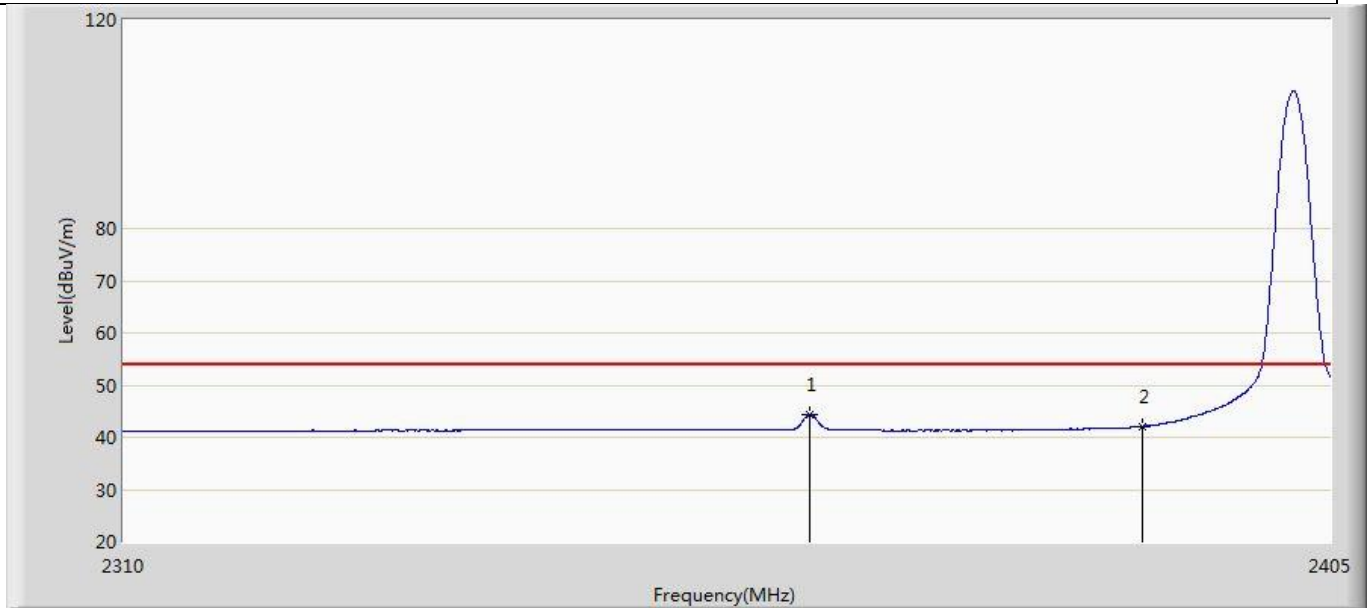


4.5.3 Test Procedure

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

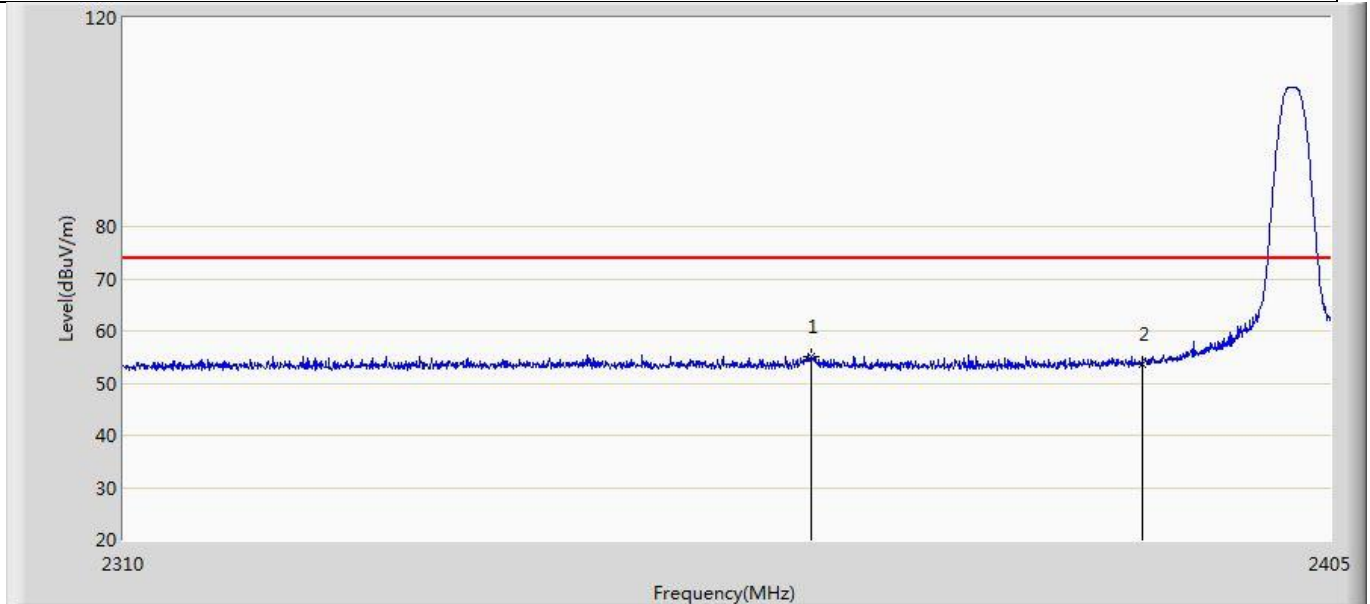
4.5.4 Test Data

Profile: 2230276R	Page No.: 1
Engineer: Carlosshen	
Site: AC5	Time: 2022/03/15 - 20:10
Limit: FCC_Part15.209_RE(3m)	Margin: 0
Probe: Horn_3117_00123988_(1-18GHz)	Polarity: Horizontal
EUT: LED Lamp	Power: AC 120V/60Hz
Note: Mode 1:Transmit at 2402MHz by ble 1M	



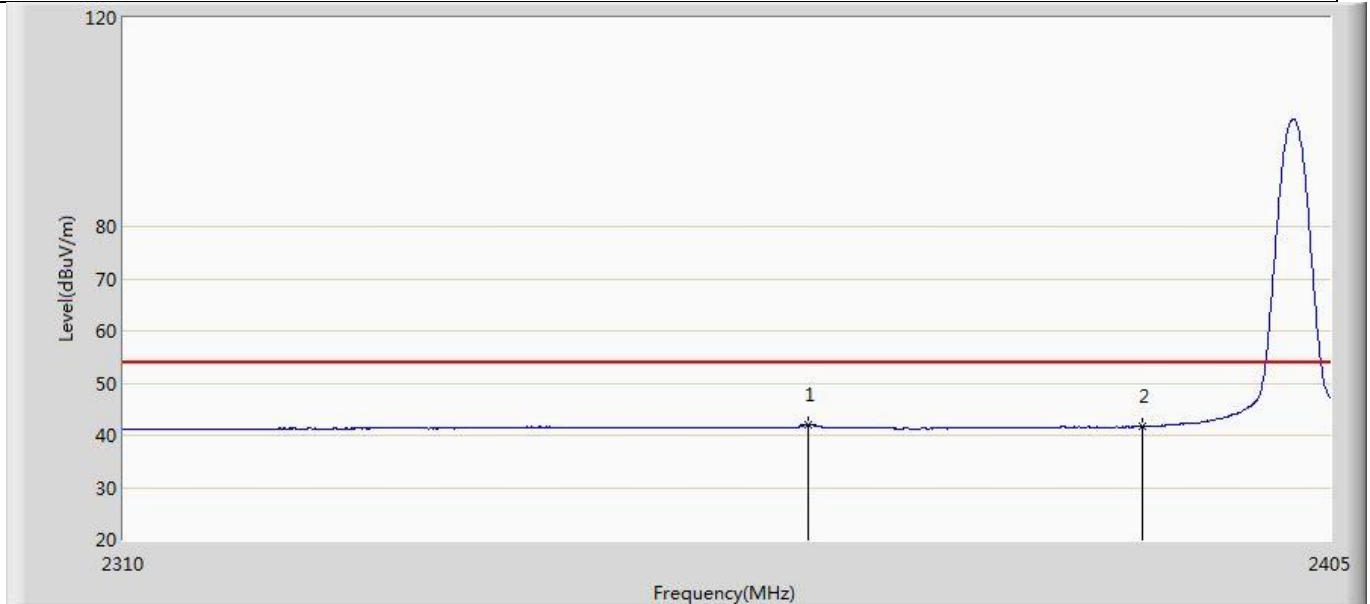
No	Mark	Frequency (MHz)	Measure Level (dBuV/m)	Reading Level (dBuV)	Over Limit (dB)	Limit (dBuV/m)	Factor (dB)	Type
1	*	2363.580	44.409	6.250	-9.591	54.000	38.159	AV
2		2390.000	42.055	3.750	-11.945	54.000	38.305	AV

Profile: 2230276R	Page No.: 2
Engineer: Carlos. Shen	
Site: AC5	Time: 2022/03/15 - 20:14
Limit: FCC_Part15.209_RE(3m)	Margin: 0
Probe: Horn_3117_00123988_(1-18GHz)	Polarity: Horizontal
EUT: LED Lamp	Power: AC 120V/60Hz
Note: Mode 1:Transmit at 2402MHz by LE_1Mbps	



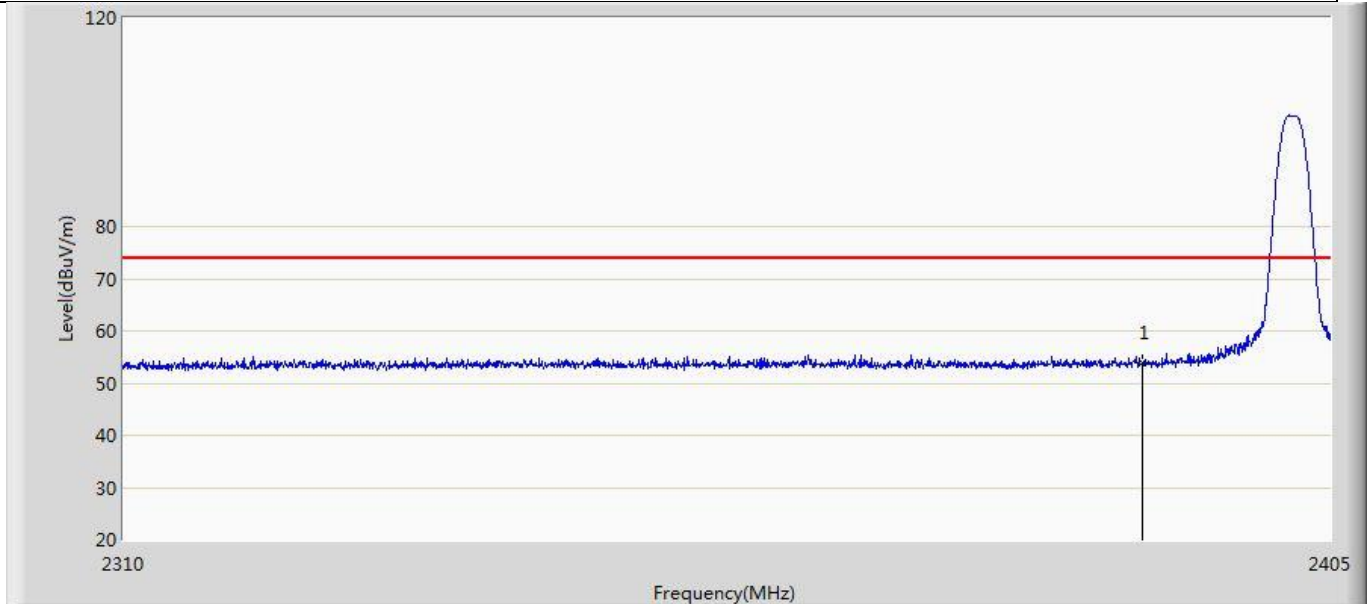
No	Mark	Frequency (MHz)	Measure Level (dBuV/m)	Reading Level (dBuV)	Over Limit (dB)	Limit (dBuV/m)	Factor (dB)	Type
1	*	2363.722	55.115	16.957	-18.885	74.000	38.158	PK
2		2390.000	53.759	15.454	-20.241	74.000	38.305	PK

Profile: 2230276R	Page No.: 3
Engineer: Carlosshen	
Site: AC5	Time: 2022/03/15 - 20:15
Limit: FCC_Part15.209_RE(3m)	Margin: 0
Probe: Horn_3117_00123988_(1-18GHz)	Polarity: Vertical
EUT: LED Lamp	Power: AC 120V/60Hz
Note: Mode 1:Transmit at 2402MHz by ble 1M	



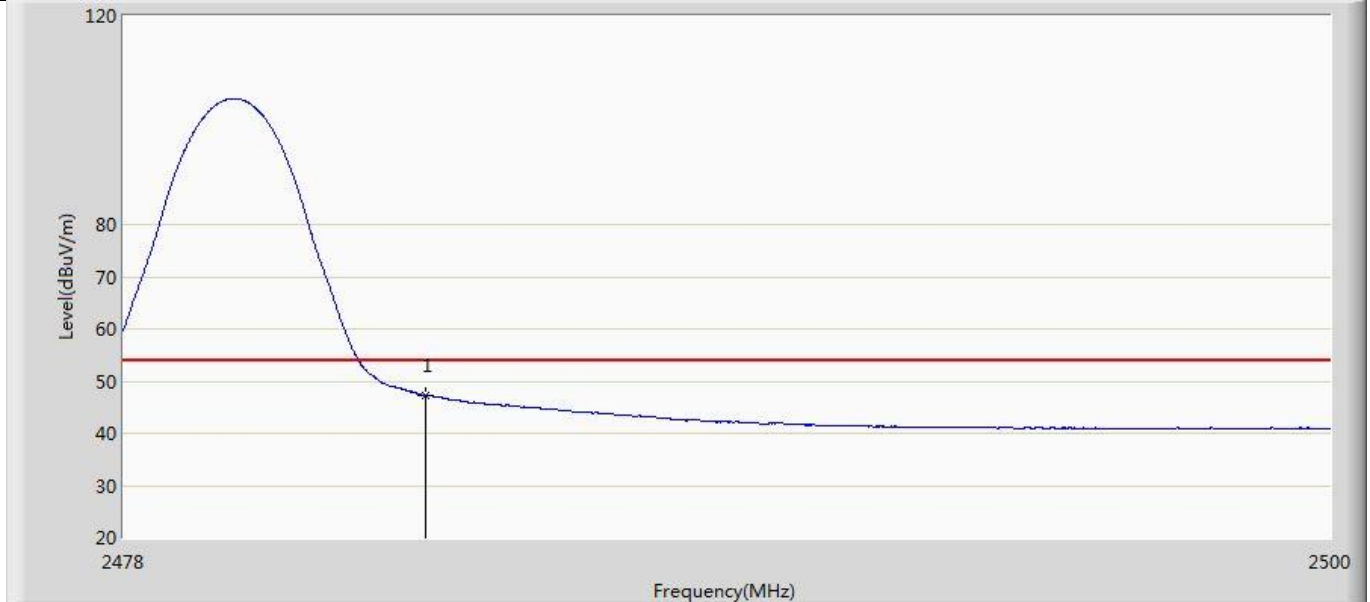
No	Mark	Frequency (MHz)	Measure Level (dBuV/m)	Reading Level (dBuV)	Over Limit (dB)	Limit (dBuV/m)	Factor (dB)	Type
1	*	2363.437	42.104	3.945	-11.896	54.000	38.159	AV
2		2390.000	41.704	3.399	-12.296	54.000	38.305	AV

Profile: 2230276R	Page No.: 4
Engineer: Carlosshen	
Site: AC5	Time: 2022/03/15 - 20:17
Limit: FCC_Part15.209_RE(3m)	Margin: 0
Probe: Horn_3117_00123988_(1-18GHz)	Polarity: Vertical
EUT: LED Lamp	Power: AC 120V/60Hz
Note: Mode 1:Transmit at 2402MHz by ble 1M	



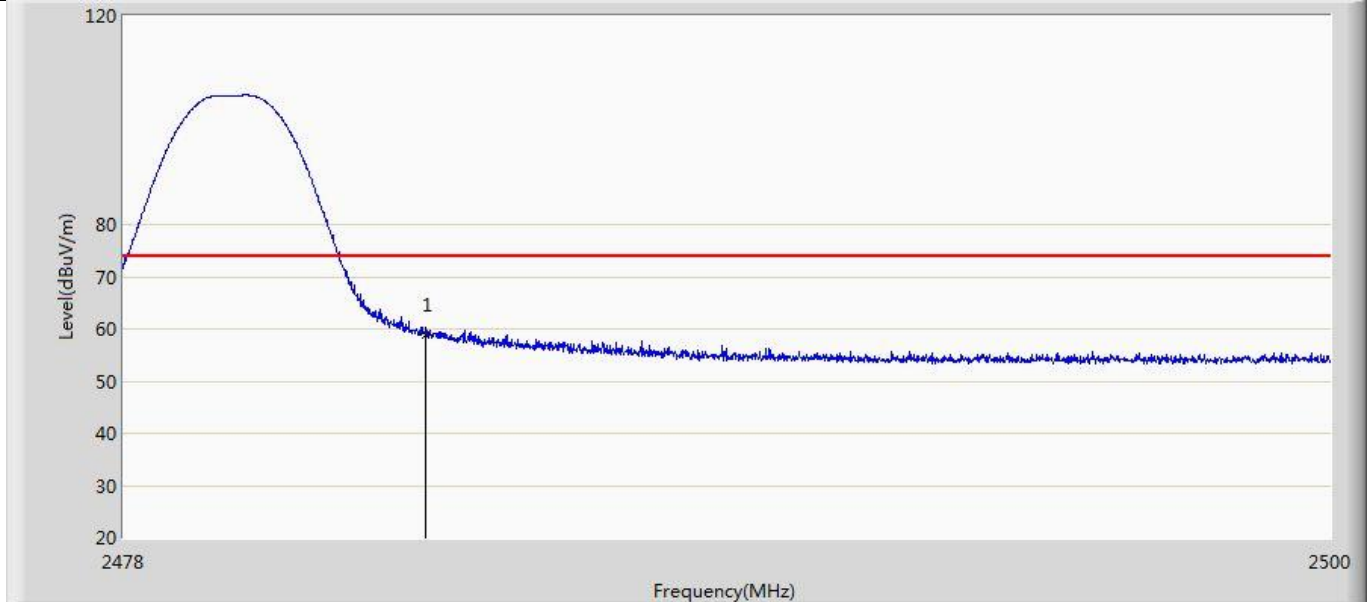
No	Mark	Frequency (MHz)	Measure Level (dBuV/m)	Reading Level (dBuV)	Over Limit (dB)	Limit (dBuV/m)	Factor (dB)	Type
1	*	2390.000	53.873	15.568	-20.127	74.000	38.305	PK

Profile: 2230276R	Page No.: 5
Engineer: Carlosshen	
Site: AC5	Time: 2022/03/15 - 20:19
Limit: FCC_Part15.209_RE(3m)	Margin: 0
Probe: Horn_3117_00123988_(1-18GHz)	Polarity: Horizontal
EUT: LED Lamp	Power: AC 120V/60Hz
Note: Mode 1:Transmit at 2480MHz by ble 1M	



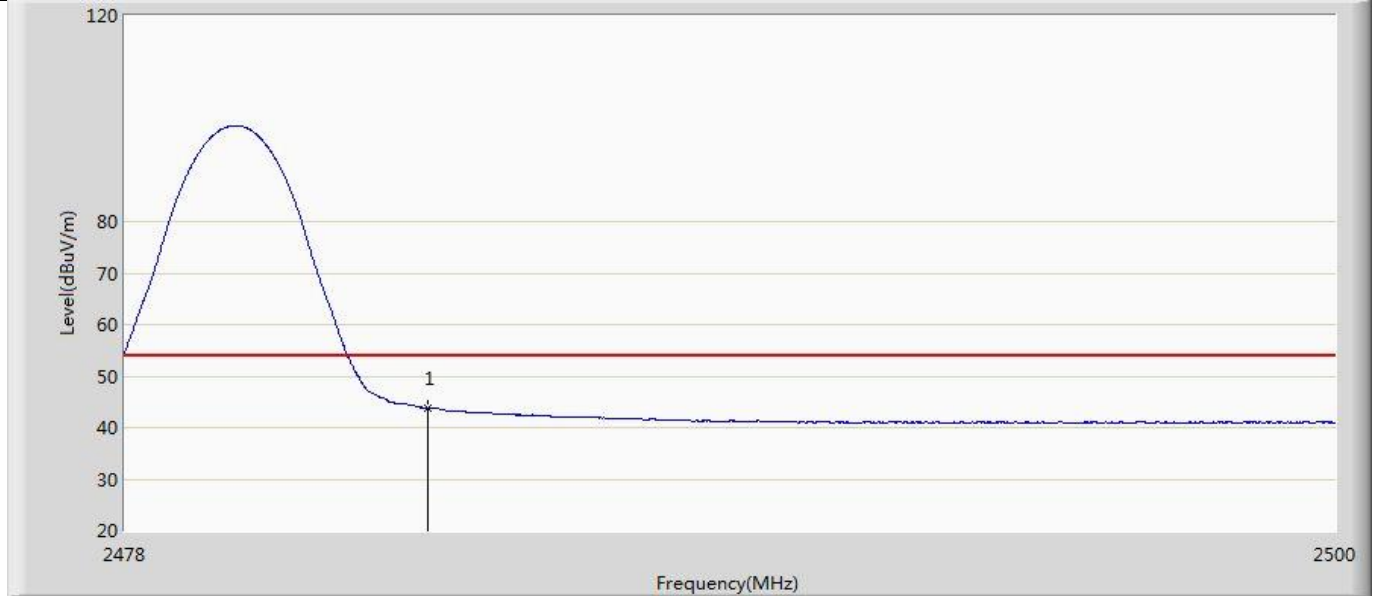
No	Mark	Frequency (MHz)	Measure Level (dBuV/m)	Reading Level (dBuV)	Over Limit (dB)	Limit (dBuV/m)	Factor (dB)	Type
1	*	2483.500	47.361	8.907	-6.639	54.000	38.453	AV

Profile: 2230276R	Page No.: 6
Engineer: Carlosshen	
Site: AC5	Time: 2022/03/15 - 20:23
Limit: FCC_Part15.209_RE(3m)	Margin: 0
Probe: Horn_3117_00123988_(1-18GHz)	Polarity: Horizontal
EUT: LED Lamp	Power: AC 120V/60Hz
Note: Mode 1:Transmit at 2480MHz by ble 1M	



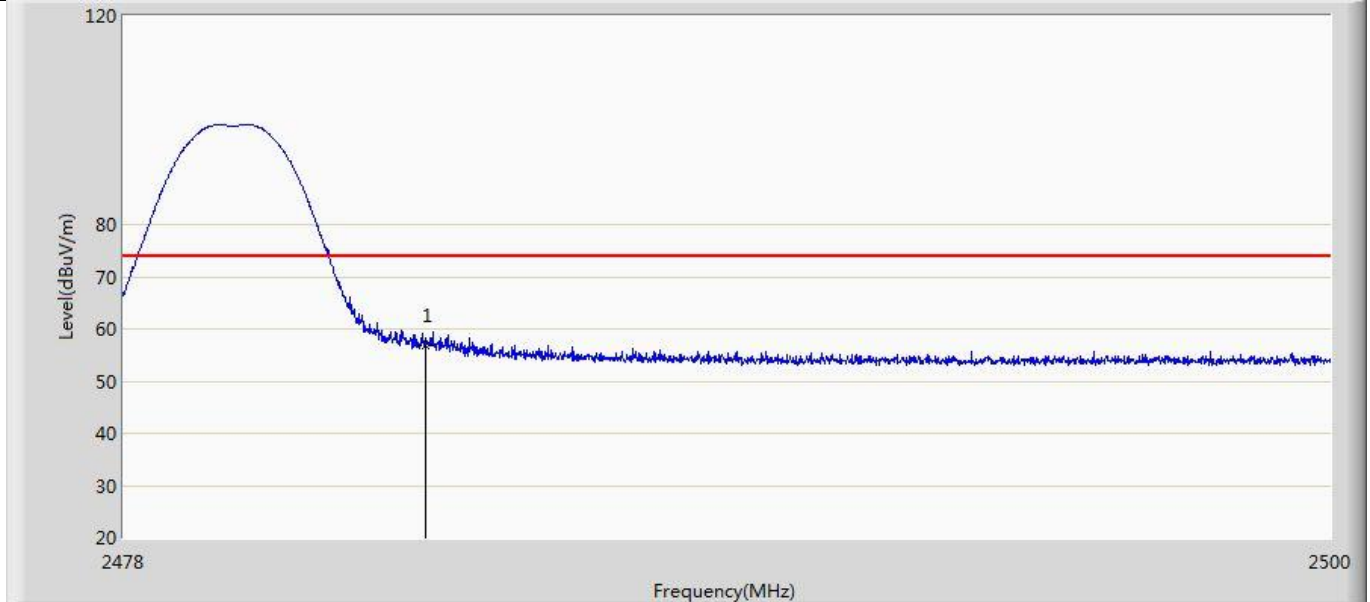
No	Mark	Frequency (MHz)	Measure Level (dBuV/m)	Reading Level (dBuV)	Over Limit (dB)	Limit (dBuV/m)	Factor (dB)	Type
1	*	2483.500	58.699	20.245	-15.301	74.000	38.453	PK

Profile: 2230276R	Page No.: 7
Engineer: Carlosshen	
Site: AC5	Time: 2022/03/15 - 20:25
Limit: FCC_Part15.209_RE(3m)	Margin: 0
Probe: Horn_3117_00123988_(1-18GHz)	Polarity: Vertical
EUT: LED Lamp	Power: AC 120V/60Hz
Note: Mode 1:Transmit at 2480MHz by ble 1M	



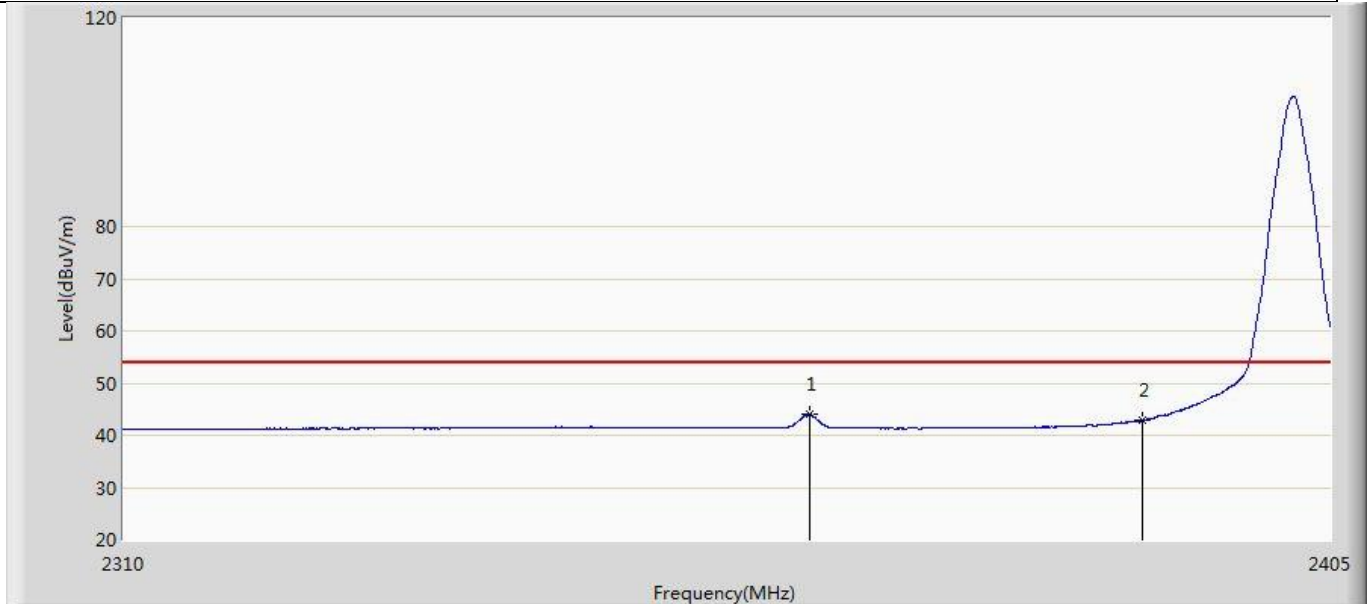
No	Mark	Frequency (MHz)	Measure Level (dBuV/m)	Reading Level (dBuV)	Over Limit (dB)	Limit (dBuV/m)	Factor (dB)	Type
1	*	2483.500	43.794	5.340	-10.206	54.000	38.453	AV

Profile: 2230276R	Page No.: 8
Engineer: Carlosshen	
Site: AC5	Time: 2022/03/15 - 20:26
Limit: FCC_Part15.209_RE(3m)	Margin: 0
Probe: Horn_3117_00123988_(1-18GHz)	Polarity: Vertical
EUT: LED Lamp	Power: AC 120V/60Hz
Note: Mode 1:Transmit at 2480MHz by ble 1M	



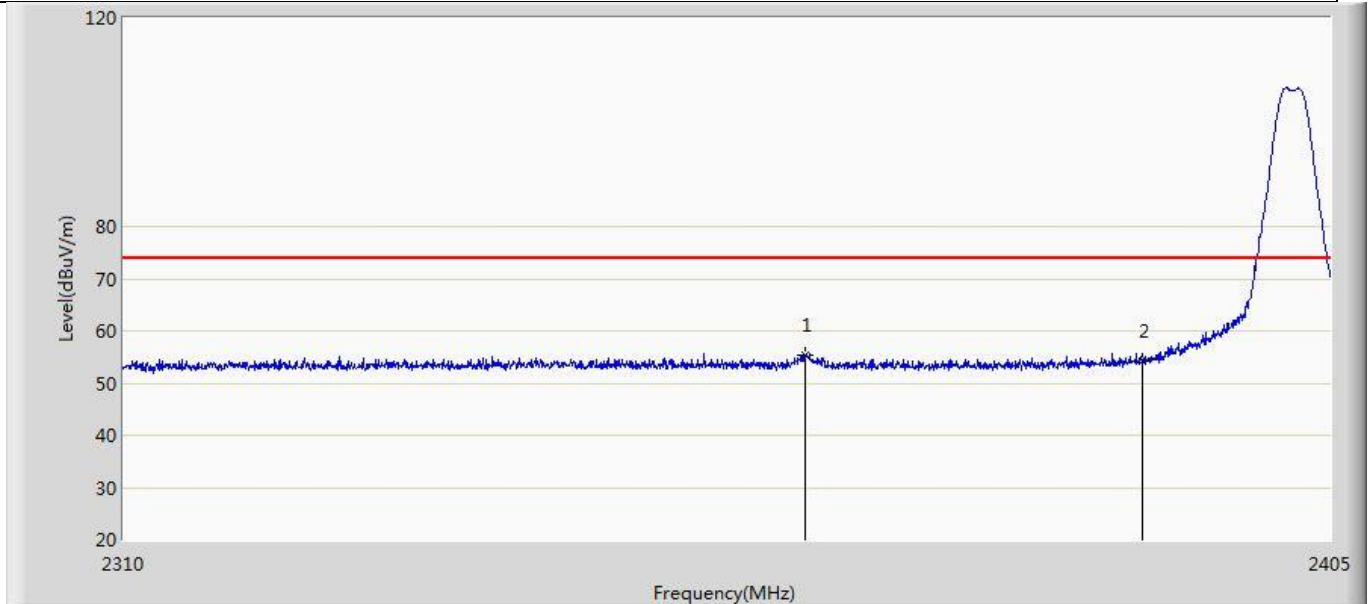
No	Mark	Frequency (MHz)	Measure Level (dBuV/m)	Reading Level (dBuV)	Over Limit (dB)	Limit (dBuV/m)	Factor (dB)	Type
1	*	2483.500	56.725	18.271	-17.275	74.000	38.453	PK

Profile: 2230276R	Page No.: 9
Engineer: Carlosshen	
Site: AC5	Time: 2022/03/15 - 20:28
Limit: FCC_Part15.209_RE(3m)	Margin: 0
Probe: Horn_3117_00123988_(1-18GHz)	Polarity: Horizontal
EUT: LED Lamp	Power: AC 120V/60Hz
Note: Mode 2:Transmit at 2402MHz by ble 2M	



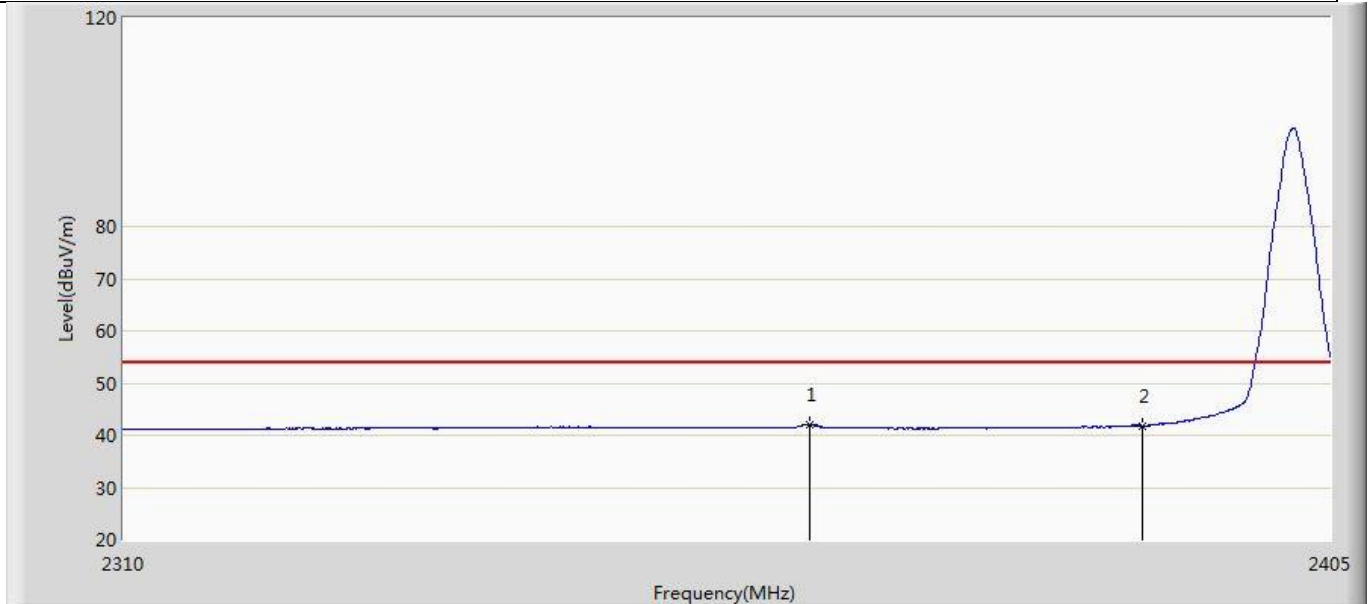
No	Mark	Frequency (MHz)	Measure Level (dBuV/m)	Reading Level (dBuV)	Over Limit (dB)	Limit (dBuV/m)	Factor (dB)	Type
1	*	2363.580	44.026	5.867	-9.974	54.000	38.159	AV
2		2390.000	42.942	4.637	-11.058	54.000	38.305	AV

Profile: 2230276R	Page No.: 10
Engineer: Carlosshen	
Site: AC5	Time: 2022/03/15 - 20:31
Limit: FCC_Part15.209_RE(3m)	Margin: 0
Probe: Horn_3117_00123988_(1-18GHz)	Polarity: Horizontal
EUT: LED Lamp	Power: AC 120V/60Hz
Note: Mode 2:Transmit at 2402MHz by ble 2M	



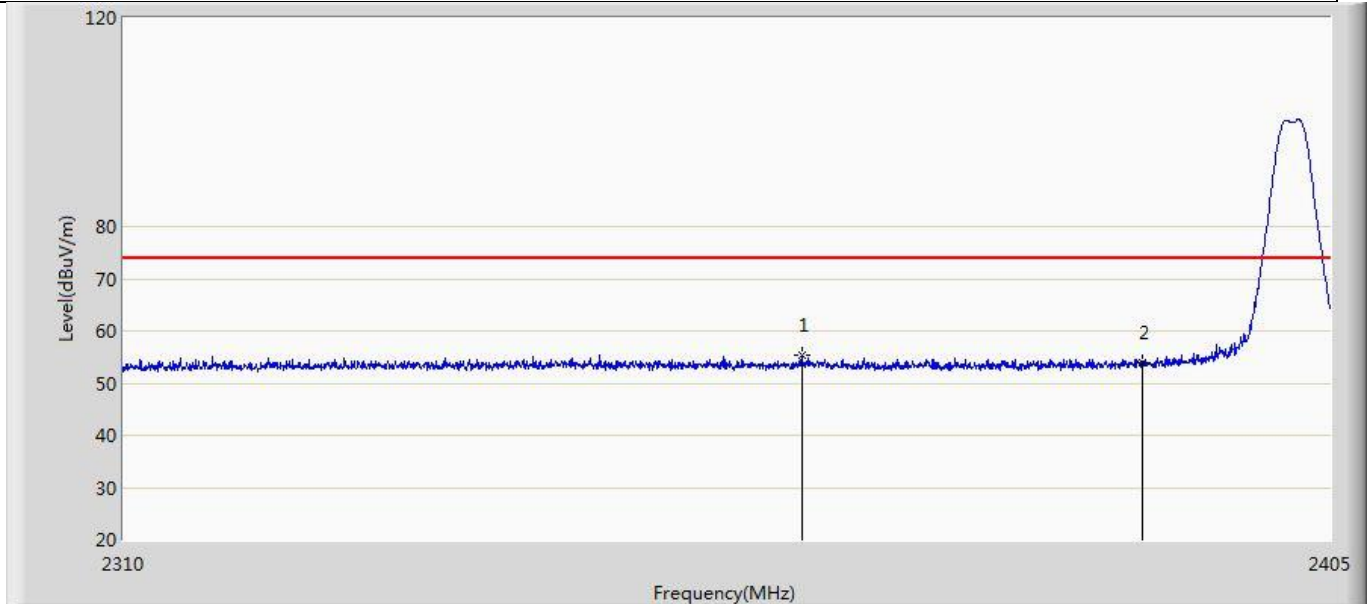
No	Mark	Frequency (MHz)	Measure Level (dBuV/m)	Reading Level (dBuV)	Over Limit (dB)	Limit (dBuV/m)	Factor (dB)	Type
1	*	2363.248	55.438	17.278	-18.562	74.000	38.160	PK
2		2390.000	54.338	16.033	-19.662	74.000	38.305	PK

Profile: 2230276R	Page No.: 11
Engineer: Carlosshen	
Site: AC5	Time: 2022/03/15 - 20:32
Limit: FCC_Part15.209_RE(3m)	Margin: 0
Probe: Horn_3117_00123988_(1-18GHz)	Polarity: Vertical
EUT: LED Lamp	Power: AC 120V/60Hz
Note: Mode 2:Transmit at 2402MHz by ble 2M	



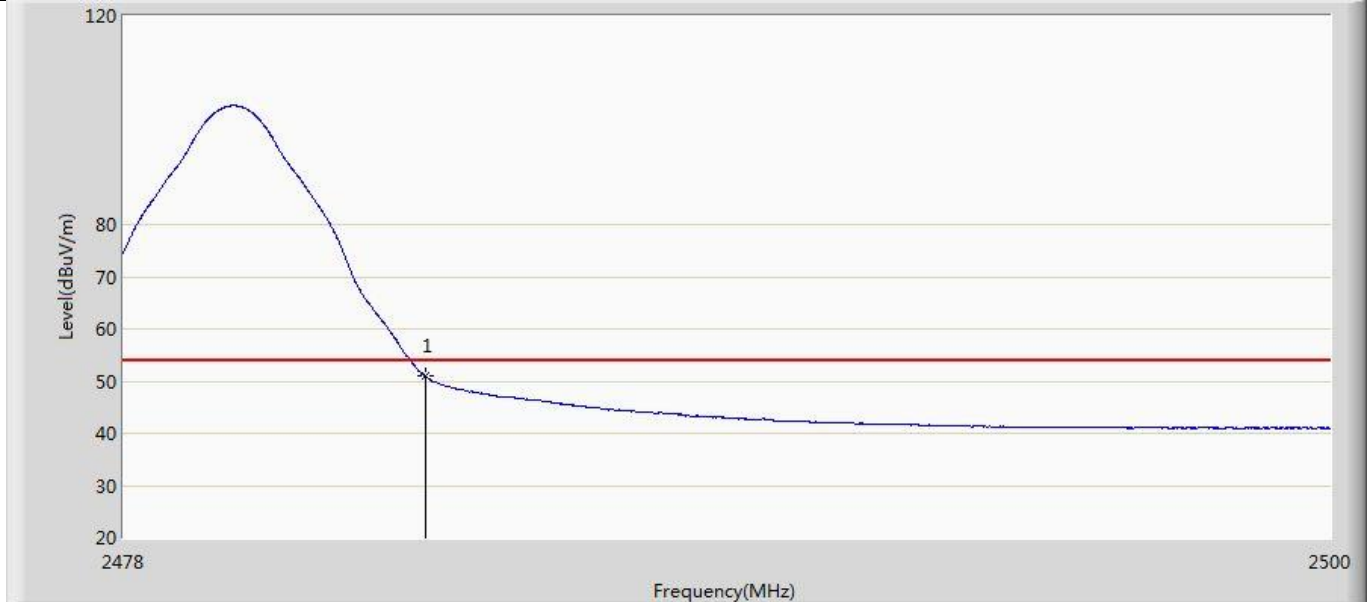
No	Mark	Frequency (MHz)	Measure Level (dBuV/m)	Reading Level (dBuV)	Over Limit (dB)	Limit (dBuV/m)	Factor (dB)	Type
1	*	2363.580	42.003	3.844	-11.997	54.000	38.159	AV
2		2390.000	41.779	3.474	-12.221	54.000	38.305	AV

Profile: 2230276R	Page No.: 12
Engineer: Carlosshen	
Site: AC5	Time: 2022/03/15 - 20:33
Limit: FCC_Part15.209_RE(3m)	Margin: 0
Probe: Horn_3117_00123988_(1-18GHz)	Polarity: Vertical
EUT: LED Lamp	Power: AC 120V/60Hz
Note: Mode 2:Transmit at 2402MHz by ble 2M	



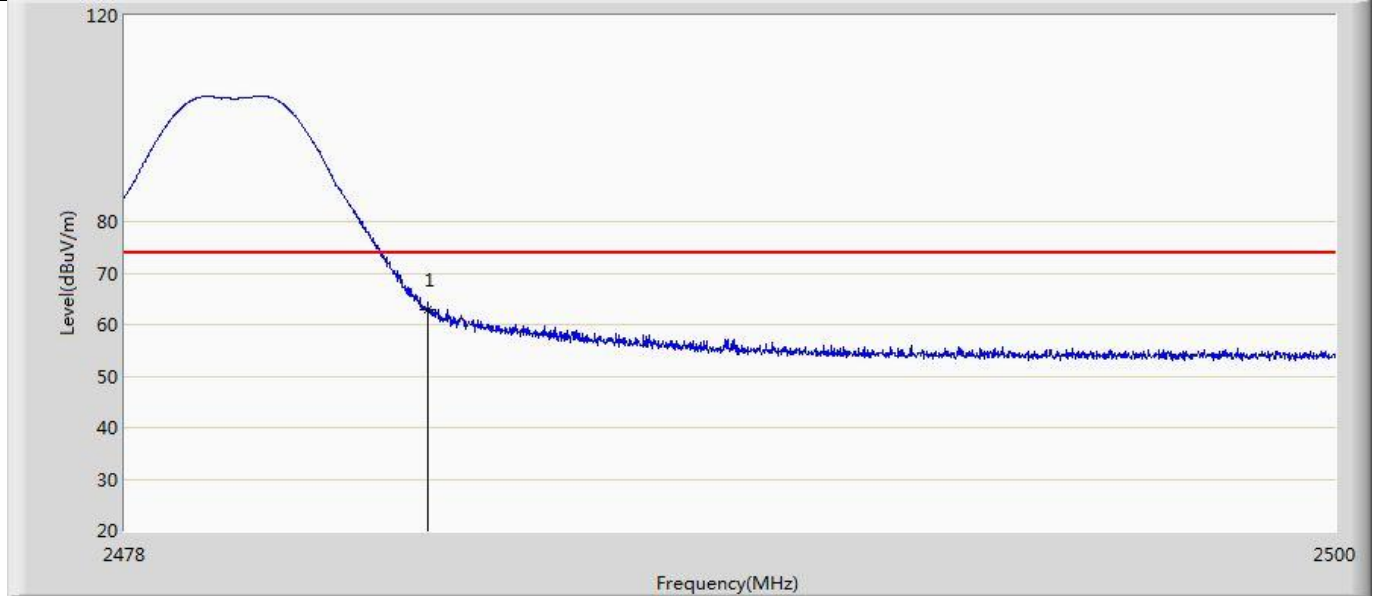
No	Mark	Frequency (MHz)	Measure Level (dBuV/m)	Reading Level (dBuV)	Over Limit (dB)	Limit (dBuV/m)	Factor (dB)	Type
1	*	2362.962	55.253	17.092	-18.747	74.000	38.161	PK
2		2390.000	54.052	15.747	-19.948	74.000	38.305	PK

Profile: 2230276R	Page No.: 13
Engineer: Carlosshen	
Site: AC5	Time: 2022/03/15 - 20:35
Limit: FCC_Part15.209_RE(3m)	Margin: 0
Probe: Horn_3117_00123988_(1-18GHz)	Polarity: Horizontal
EUT: LED Lamp	Power: AC 120V/60Hz
Note: Mode 2:Transmit at 2480MHz by ble 2M	



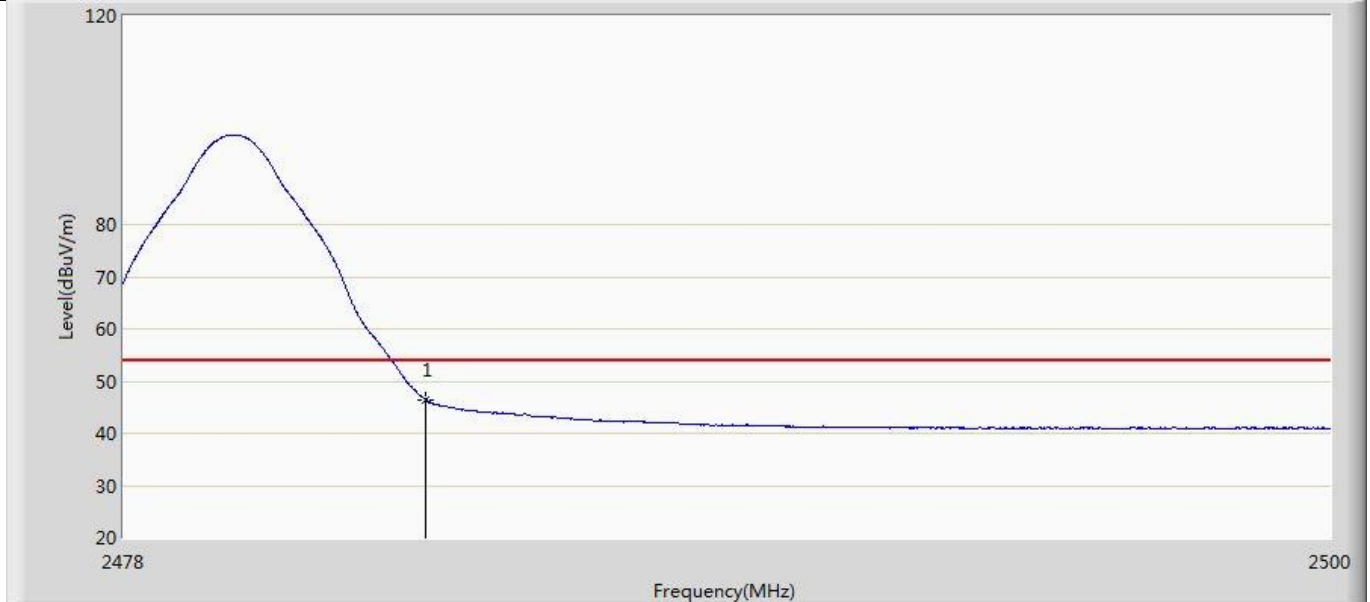
No	Mark	Frequency (MHz)	Measure Level (dBuV/m)	Reading Level (dBuV)	Over Limit (dB)	Limit (dBuV/m)	Factor (dB)	Type
1	*	2483.500	50.896	12.442	-3.104	54.000	38.453	AV

Profile: 2230276R	Page No.: 14
Engineer: Carlosshen	
Site: AC5	Time: 2022/03/15 - 20:37
Limit: FCC_Part15.209_RE(3m)	Margin: 0
Probe: Horn_3117_00123988_(1-18GHz)	Polarity: Horizontal
EUT: LED Lamp	Power: AC 120V/60Hz
Note: Mode 2:Transmit at 2480MHz by ble 2M	



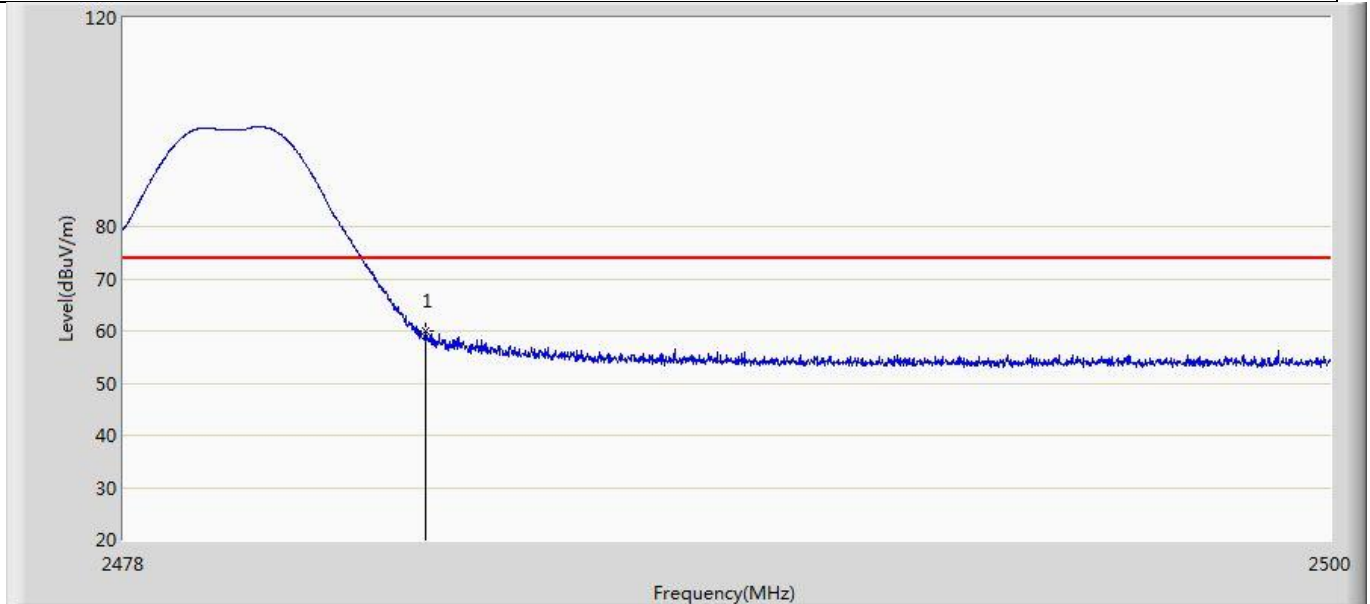
No	Mark	Frequency (MHz)	Measure Level (dBuV/m)	Reading Level (dBuV)	Over Limit (dB)	Limit (dBuV/m)	Factor (dB)	Type
1	*	2483.500	62.900	24.446	-11.100	74.000	38.453	PK

Profile: 2230276R	Page No.: 15
Engineer: Carlosshen	
Site: AC5	Time: 2022/03/15 - 20:38
Limit: FCC_Part15.209_RE(3m)	Margin: 0
Probe: Horn_3117_00123988_(1-18GHz)	Polarity: Vertical
EUT: LED Lamp	Power: AC 120V/60Hz
Note: Mode 2:Transmit at 2480MHz by ble 2M	



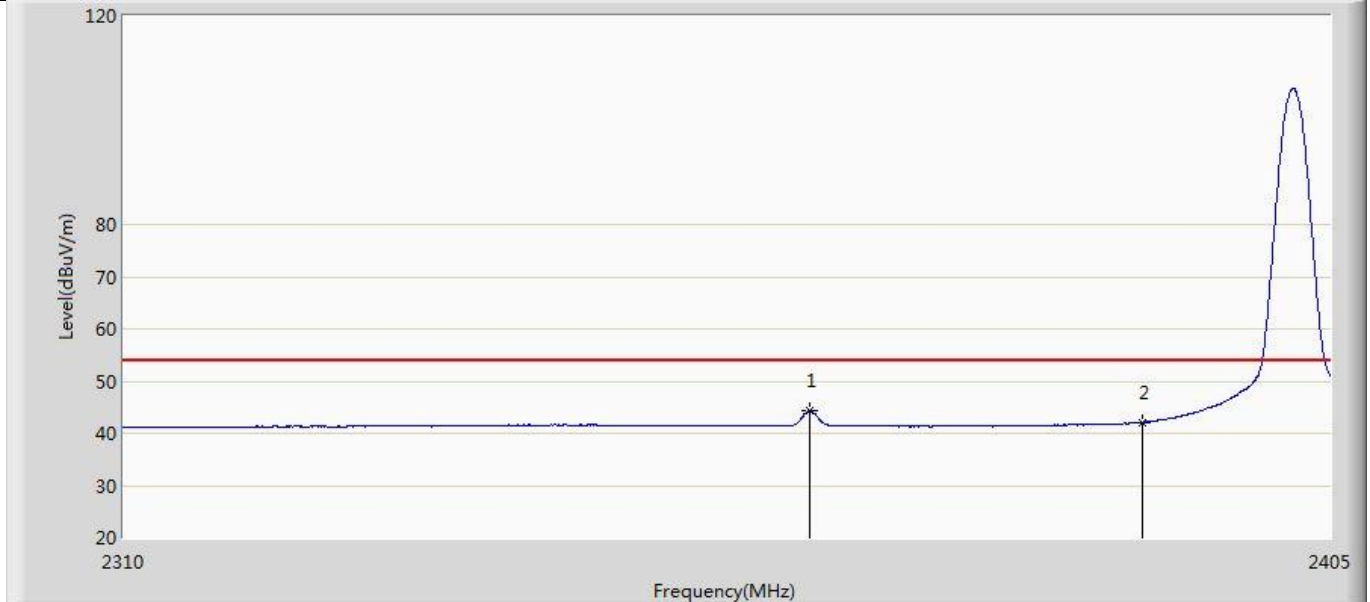
No	Mark	Frequency (MHz)	Measure Level (dBuV/m)	Reading Level (dBuV)	Over Limit (dB)	Limit (dBuV/m)	Factor (dB)	Type
1	*	2483.500	46.477	8.023	-7.523	54.000	38.453	AV

Profile: 2230276R	Page No.: 16
Engineer: Carlosshen	
Site: AC5	Time: 2022/03/15 - 20:39
Limit: FCC_Part15.209_RE(3m)	Margin: 0
Probe: Horn_3117_00123988_(1-18GHz)	Polarity: Vertical
EUT: LED Lamp	Power: AC 120V/60Hz
Note: Mode 2:Transmit at 2480MHz by ble 2M	



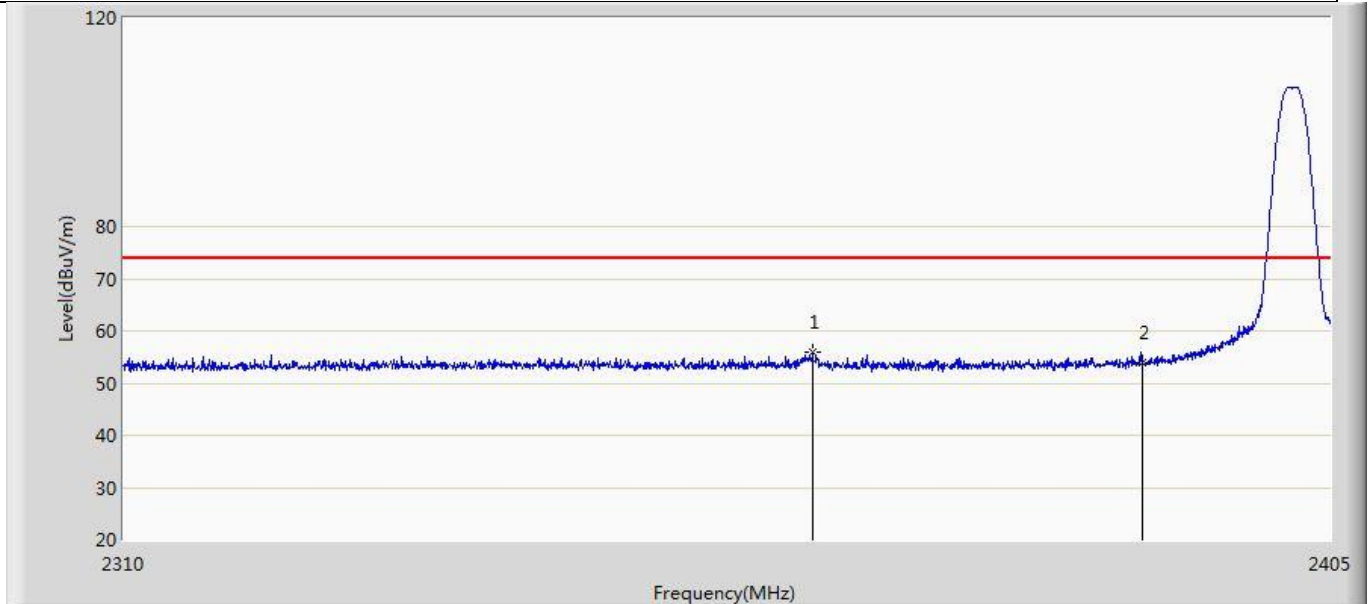
No	Mark	Frequency (MHz)	Measure Level (dBuV/m)	Reading Level (dBuV)	Over Limit (dB)	Limit (dBuV/m)	Factor (dB)	Type
1	*	2483.500	59.874	21.420	-14.126	74.000	38.453	PK

Profile: 2230276R	Page No.: 17
Engineer: Carlosshen	
Site: AC5	Time: 2022/03/15 - 20:40
Limit: FCC_Part15.209_RE(3m)	Margin: 0
Probe: Horn_3117_00123988_(1-18GHz)	Polarity: Horizontal
EUT: LED Lamp	Power: AC 120V/60Hz
Note: Mode 3:Transmit at 2402MHz by coded 2	



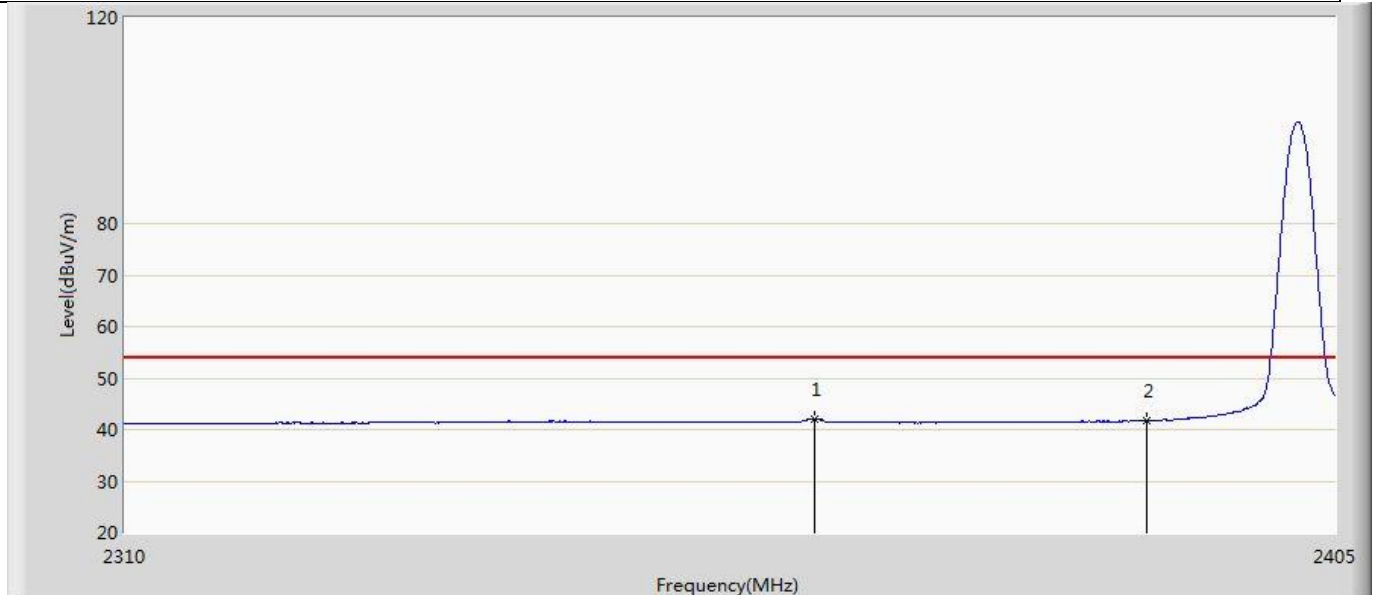
No	Mark	Frequency (MHz)	Measure Level (dBuV/m)	Reading Level (dBuV)	Over Limit (dB)	Limit (dBuV/m)	Factor (dB)	Type
1	*	2363.580	44.358	6.199	-9.642	54.000	38.159	AV
2		2390.000	42.128	3.823	-11.872	54.000	38.305	AV

Profile: 2230276R	Page No.: 18
Engineer: Carlosshen	
Site: AC5	Time: 2022/03/15 - 20:43
Limit: FCC_Part15.209_RE(3m)	Margin: 0
Probe: Horn_3117_00123988_(1-18GHz)	Polarity: Horizontal
EUT: LED Lamp	Power: AC 120V/60Hz
Note: Mode 3:Transmit at 2402MHz by coded 2	



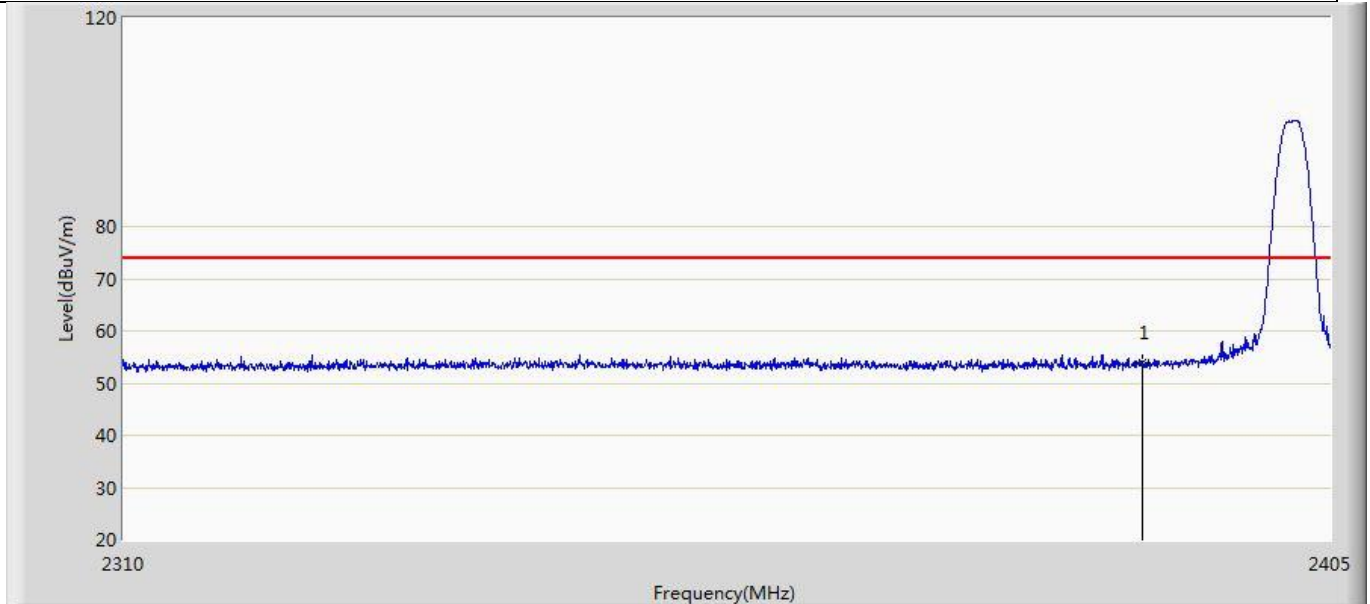
No	Mark	Frequency (MHz)	Measure Level (dBuV/m)	Reading Level (dBuV)	Over Limit (dB)	Limit (dBuV/m)	Factor (dB)	Type
1	*	2363.817	56.058	17.900	-17.942	74.000	38.157	PK
2		2390.000	54.006	15.701	-19.994	74.000	38.305	PK

Profile: 2230276R	Page No.: 19
Engineer: Carlosshen	
Site: AC5	Time: 2022/03/15 - 20:44
Limit: FCC_Part15.209_RE(3m)	Margin: 0
Probe: Horn_3117_00123988_(1-18GHz)	Polarity: Vertical
EUT: LED Lamp	Power: AC 120V/60Hz
Note: Mode 3:Transmit at 2402MHz by coded 2	



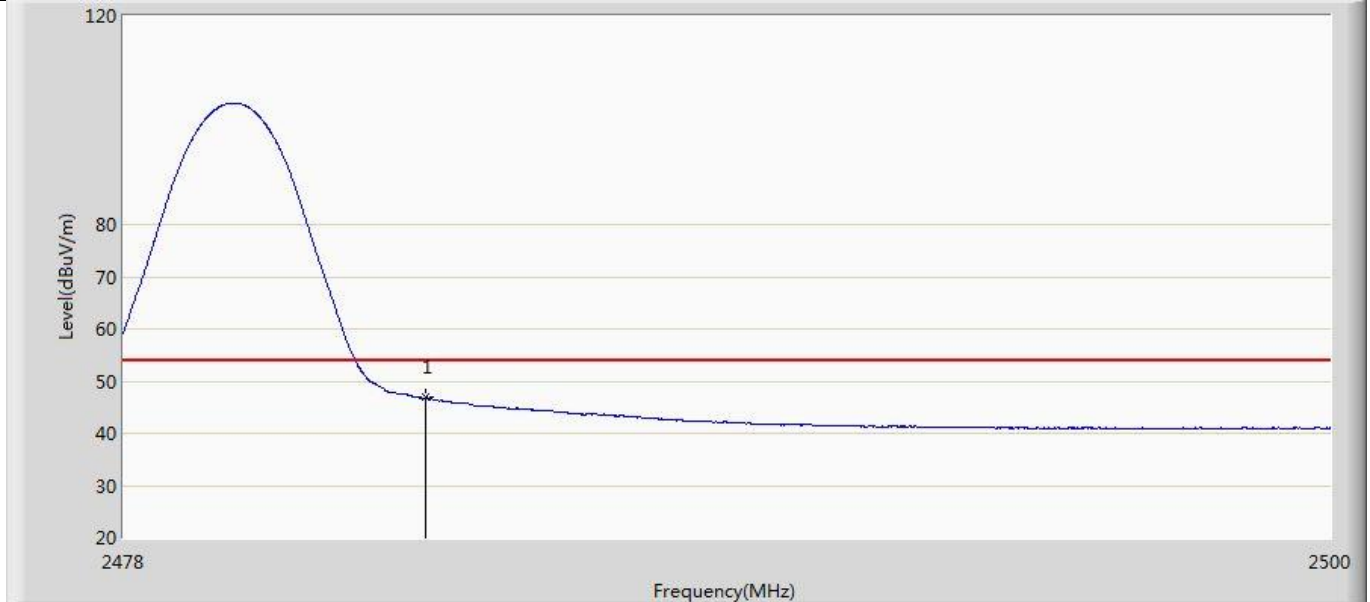
No	Mark	Frequency (MHz)	Measure Level (dBuV/m)	Reading Level (dBuV)	Over Limit (dB)	Limit (dBuV/m)	Factor (dB)	Type
1	*	2363.722	42.045	3.887	-11.955	54.000	38.158	AV
2		2390.000	41.629	3.324	-12.371	54.000	38.305	AV

Profile: 2230276R	Page No.: 20
Engineer: Carlosshen	
Site: AC5	Time: 2022/03/15 - 20:45
Limit: FCC_Part15.209_RE(3m)	Margin: 0
Probe: Horn_3117_00123988_(1-18GHz)	Polarity: Vertical
EUT: LED Lamp	Power: AC 120V/60Hz
Note: Mode 3:Transmit at 2402MHz by coded 2	



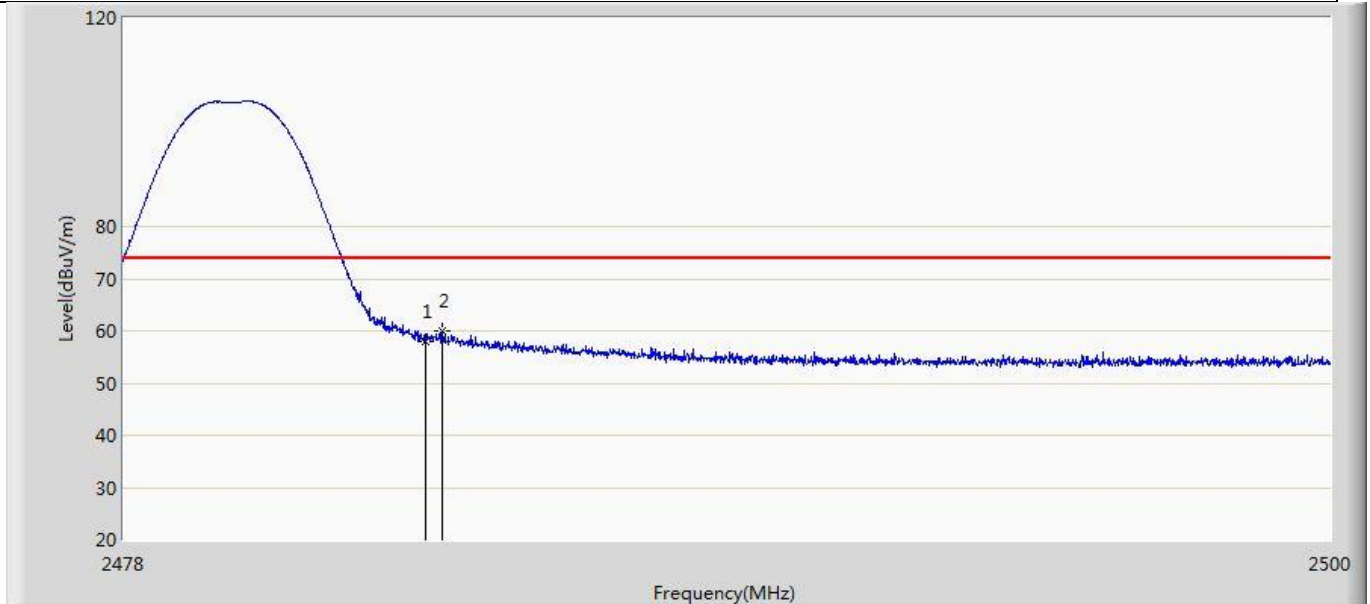
No	Mark	Frequency (MHz)	Measure Level (dBuV/m)	Reading Level (dBuV)	Over Limit (dB)	Limit (dBuV/m)	Factor (dB)	Type
1	*	2390.000	54.049	15.744	-19.951	74.000	38.305	PK

Profile: 2230276R	Page No.: 21
Engineer: Carlosshen	
Site: AC5	Time: 2022/03/15 - 20:47
Limit: FCC_Part15.209_RE(3m)	Margin: 0
Probe: Horn_3117_00123988_(1-18GHz)	Polarity: Horizontal
EUT: LED Lamp	Power: AC 120V/60Hz
Note: Mode 3:Transmit at 2480MHz by coded 2	



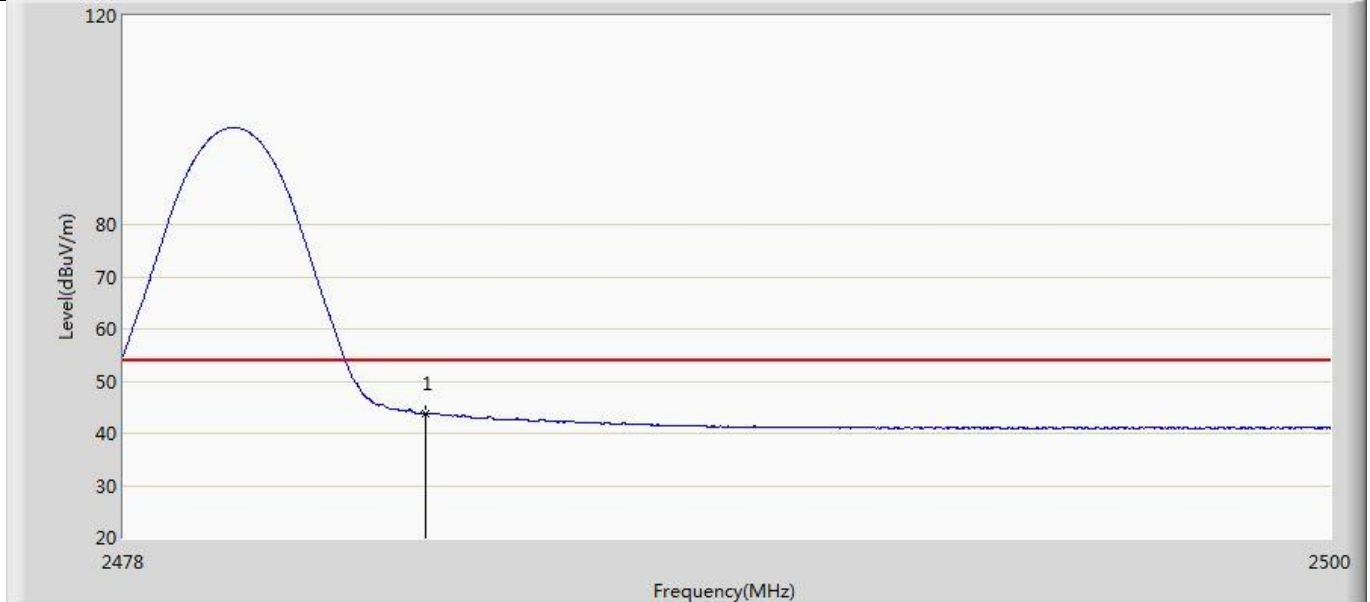
No	Mark	Frequency (MHz)	Measure Level (dBuV/m)	Reading Level (dBuV)	Over Limit (dB)	Limit (dBuV/m)	Factor (dB)	Type
1	*	2483.500	46.831	8.377	-7.169	54.000	38.453	AV

Profile: 2230276R	Page No.: 22
Engineer: Carlosshen	
Site: AC5	Time: 2022/03/15 - 20:50
Limit: FCC_Part15.209_RE(3m)	Margin: 0
Probe: Horn_3117_00123988_(1-18GHz)	Polarity: Horizontal
EUT: LED Lamp	Power: AC 120V/60Hz
Note: Mode 3:Transmit at 2480MHz by coded 2	



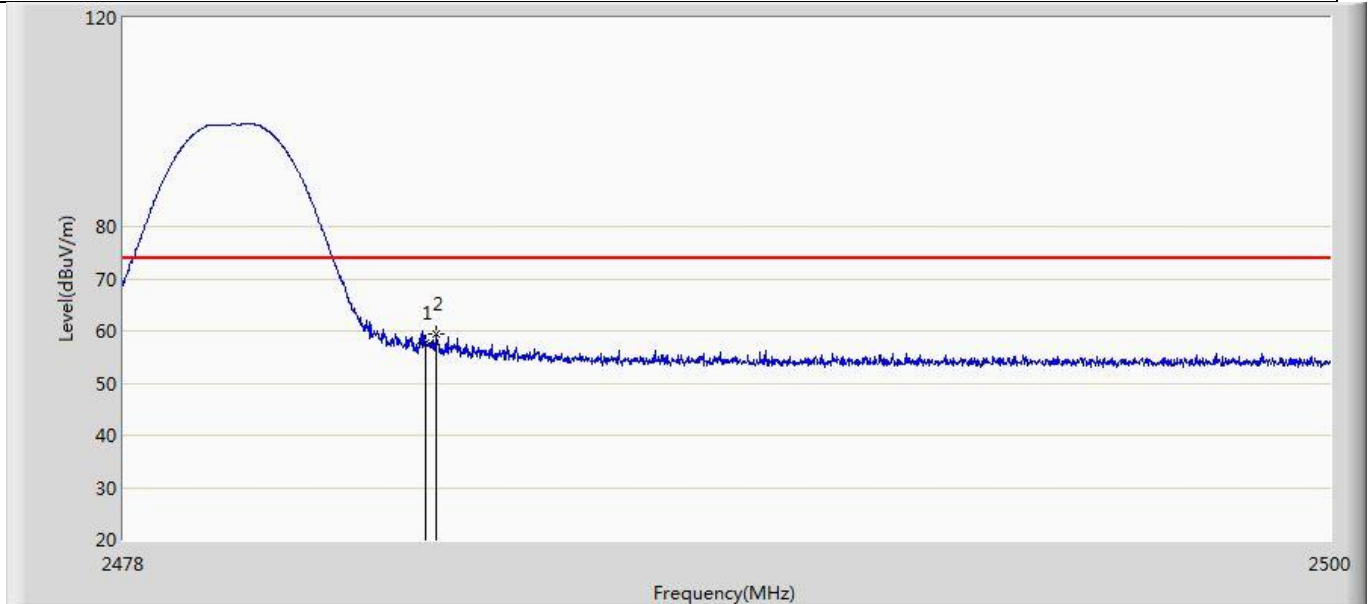
No	Mark	Frequency (MHz)	Measure Level (dBuV/m)	Reading Level (dBuV)	Over Limit (dB)	Limit (dBuV/m)	Factor (dB)	Type
1		2483.500	57.954	19.500	-16.046	74.000	38.453	PK
2	*	2483.797	59.893	21.438	-14.107	74.000	38.455	PK

Profile: 2230276R	Page No.: 23
Engineer: Carlosshen	
Site: AC5	Time: 2022/03/15 - 20:51
Limit: FCC_Part15.209_RE(3m)	Margin: 0
Probe: Horn_3117_00123988_(1-18GHz)	Polarity: Vertical
EUT: LED Lamp	Power: AC 120V/60Hz
Note: Mode 3:Transmit at 2480MHz by coded 2	



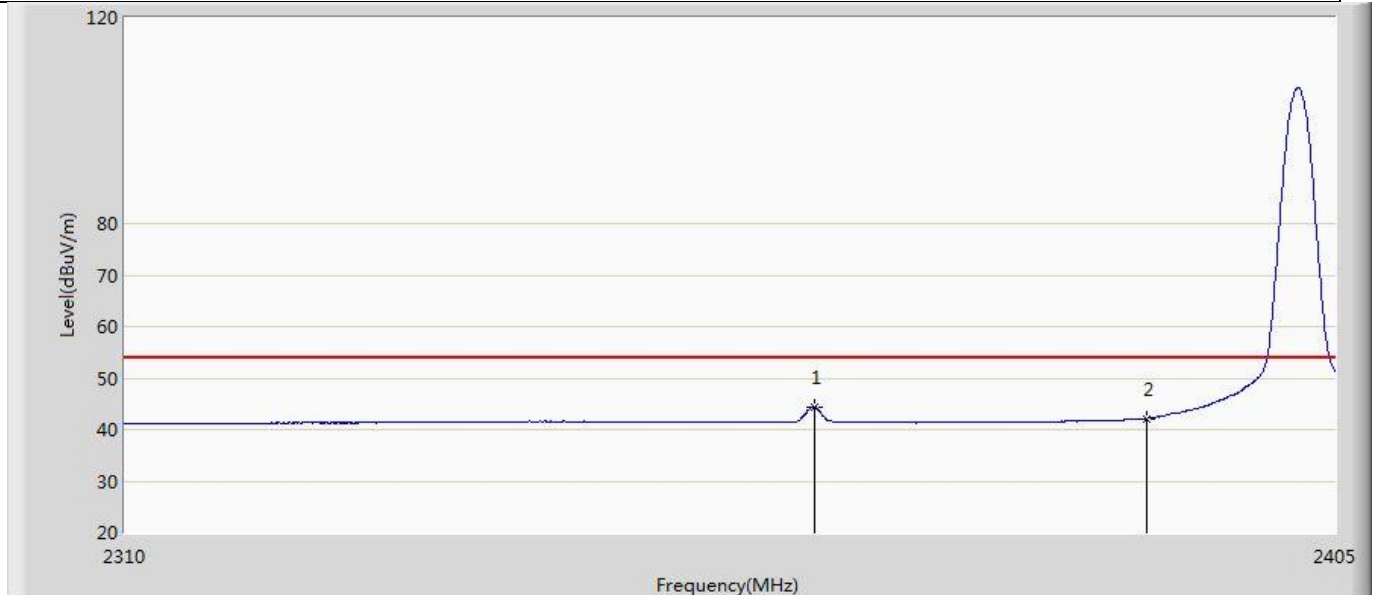
No	Mark	Frequency (MHz)	Measure Level (dBuV/m)	Reading Level (dBuV)	Over Limit (dB)	Limit (dBuV/m)	Factor (dB)	Type
1	*	2483.500	43.821	5.367	-10.179	54.000	38.453	AV

Profile: 2230276R	Page No.: 24
Engineer: Carlosshen	
Site: AC5	Time: 2022/03/15 - 20:52
Limit: FCC_Part15.209_RE(3m)	Margin: 0
Probe: Horn_3117_00123988_(1-18GHz)	Polarity: Vertical
EUT: LED Lamp	Power: AC 120V/60Hz
Note: Mode 3:Transmit at 2480MHz by coded 2	



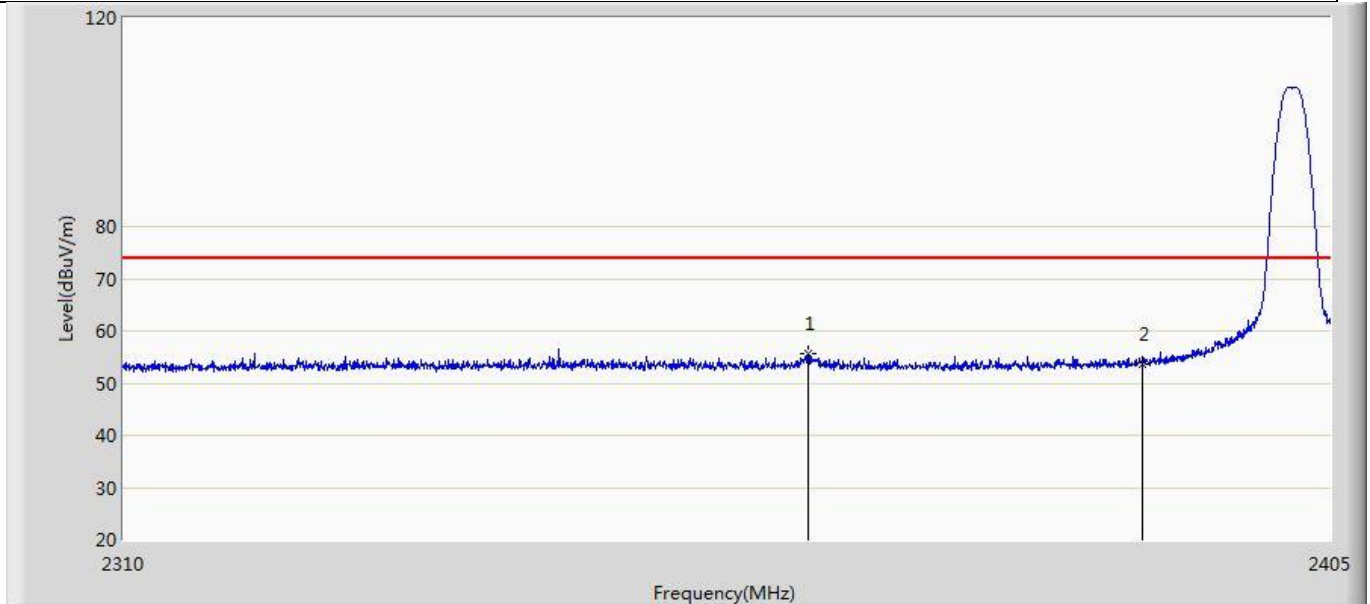
No	Mark	Frequency (MHz)	Measure Level (dBuV/m)	Reading Level (dBuV)	Over Limit (dB)	Limit (dBuV/m)	Factor (dB)	Type
1		2483.500	57.746	19.292	-16.254	74.000	38.453	PK
2	*	2483.698	59.290	20.836	-14.710	74.000	38.455	PK

Profile: 2230276R	Page No.: 25
Engineer: Carlosshen	
Site: AC5	Time: 2022/03/15 - 20:54
Limit: FCC_Part15.209_RE(3m)	Margin: 0
Probe: Horn_3117_00123988_(1-18GHz)	Polarity: Horizontal
EUT: LED Lamp	Power: AC 120V/60Hz
Note: Mode 4:Transmit at 2402MHz by coded 8	



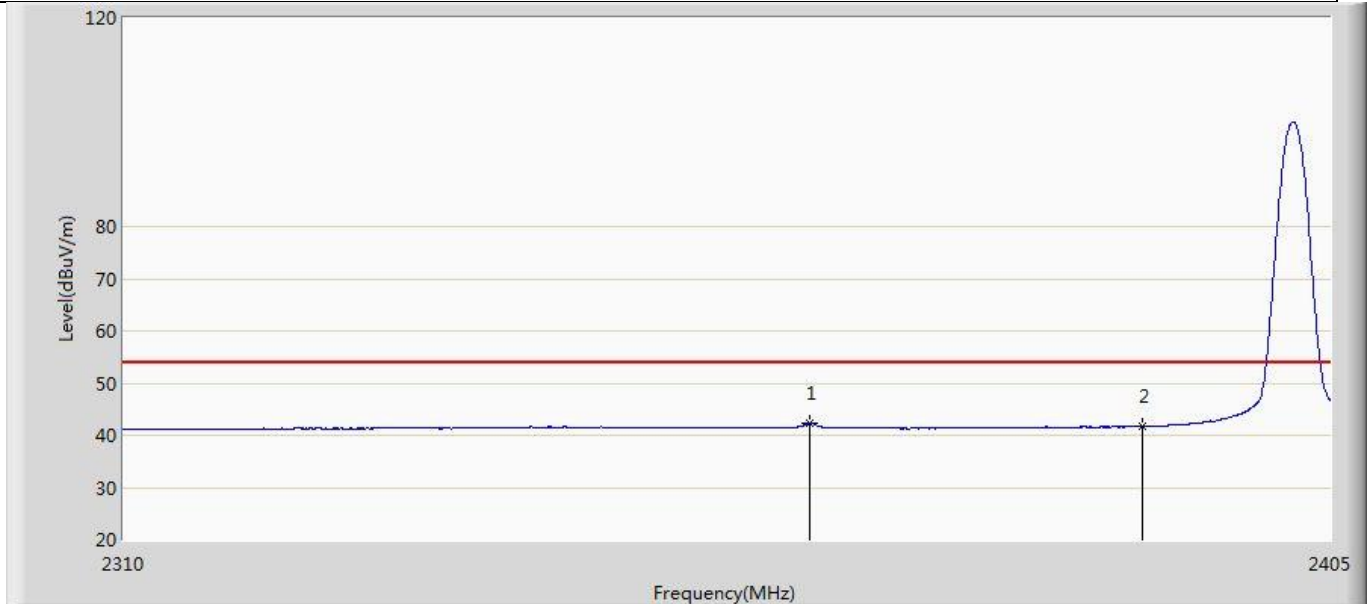
No	Mark	Frequency (MHz)	Measure Level (dBuV/m)	Reading Level (dBuV)	Over Limit (dB)	Limit (dBuV/m)	Factor (dB)	Type
1	*	2363.722	44.386	6.228	-9.614	54.000	38.158	AV
2		2390.000	42.166	3.861	-11.834	54.000	38.305	AV

Profile: 2230276R	Page No.: 26
Engineer: Carlosshen	
Site: AC5	Time: 2022/03/15 - 20:56
Limit: FCC_Part15.209_RE(3m)	Margin: 0
Probe: Horn_3117_00123988_(1-18GHz)	Polarity: Horizontal
EUT: LED Lamp	Power: AC 120V/60Hz
Note: Mode 4:Transmit at 2402MHz by coded 8	



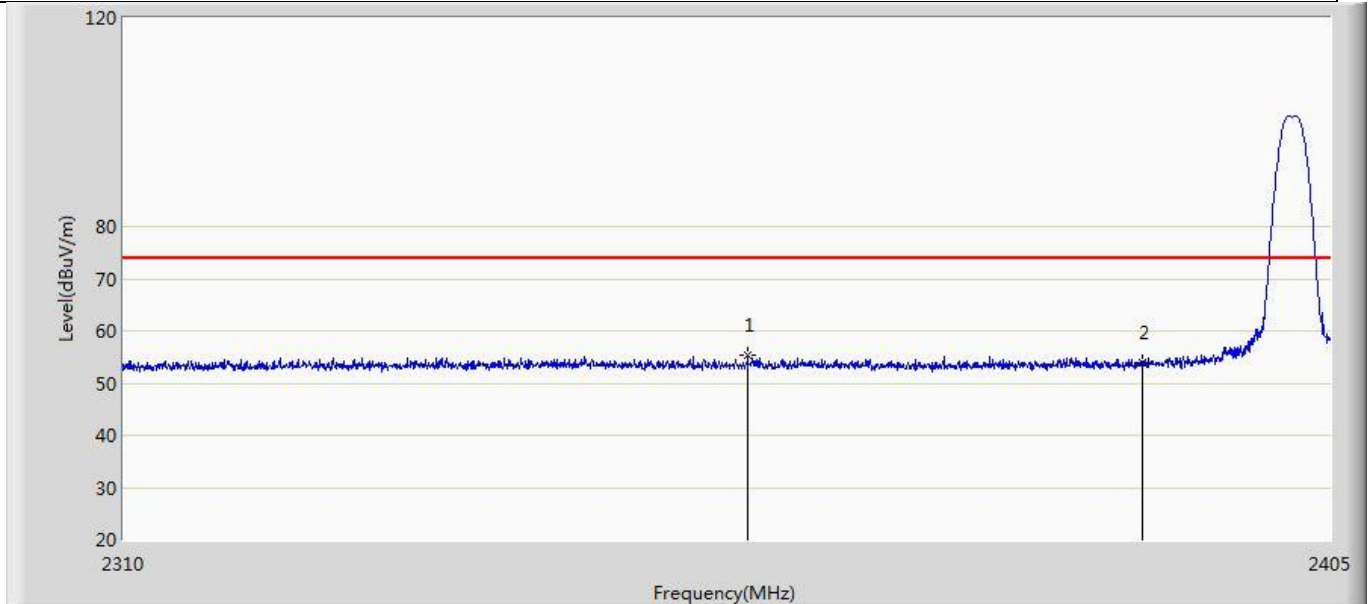
No	Mark	Frequency (MHz)	Measure Level (dBuV/m)	Reading Level (dBuV)	Over Limit (dB)	Limit (dBuV/m)	Factor (dB)	Type
1	*	2363.437	55.747	17.588	-18.253	74.000	38.159	PK
2		2390.000	53.549	15.244	-20.451	74.000	38.305	PK

Profile: 2230276R	Page No.: 27
Engineer: Carlosshen	
Site: AC5	Time: 2022/03/15 - 20:57
Limit: FCC_Part15.209_RE(3m)	Margin: 0
Probe: Horn_3117_00123988_(1-18GHz)	Polarity: Vertical
EUT: LED Lamp	Power: AC 120V/60Hz
Note: Mode 4:Transmit at 2402MHz by coded 8	



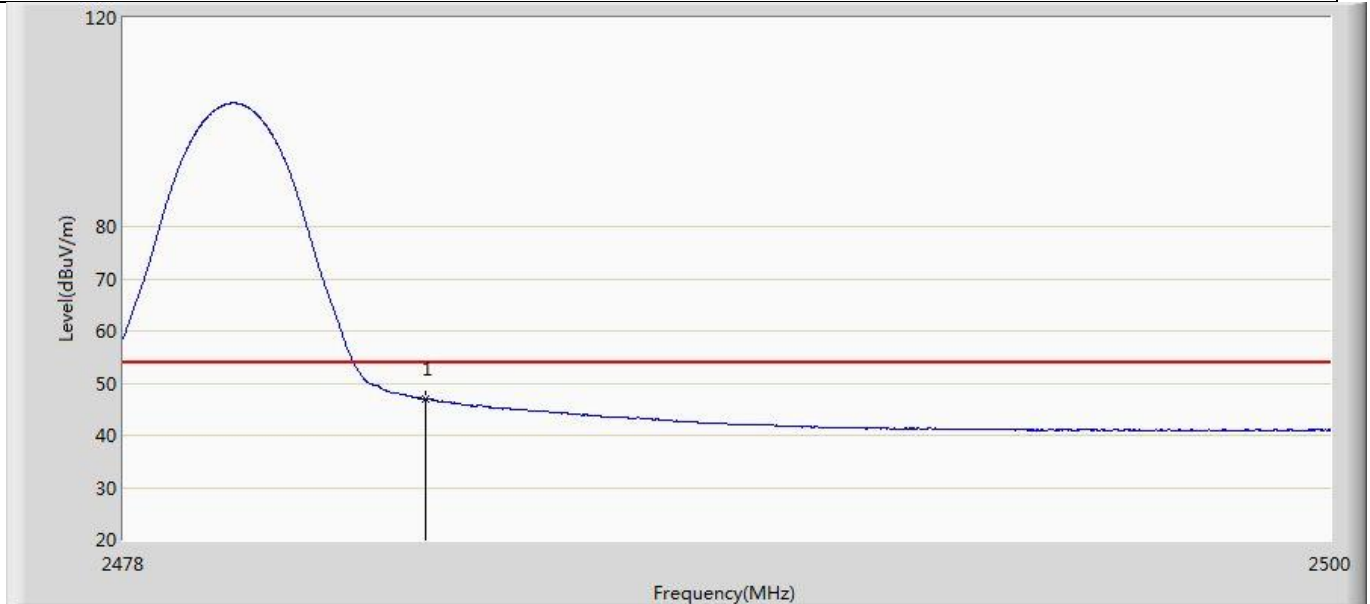
No	Mark	Frequency (MHz)	Measure Level (dBuV/m)	Reading Level (dBuV)	Over Limit (dB)	Limit (dBuV/m)	Factor (dB)	Type
1	*	2363.580	42.304	4.145	-11.696	54.000	38.159	AV
2		2390.000	41.687	3.382	-12.313	54.000	38.305	AV

Profile: 2230276R	Page No.: 28
Engineer: Carlosshen	
Site: AC5	Time: 2022/03/15 - 20:58
Limit: FCC_Part15.209_RE(3m)	Margin: 0
Probe: Horn_3117_00123988_(1-18GHz)	Polarity: Vertical
EUT: LED Lamp	Power: AC 120V/60Hz
Note: Mode 4:Transmit at 2402MHz by coded 8	



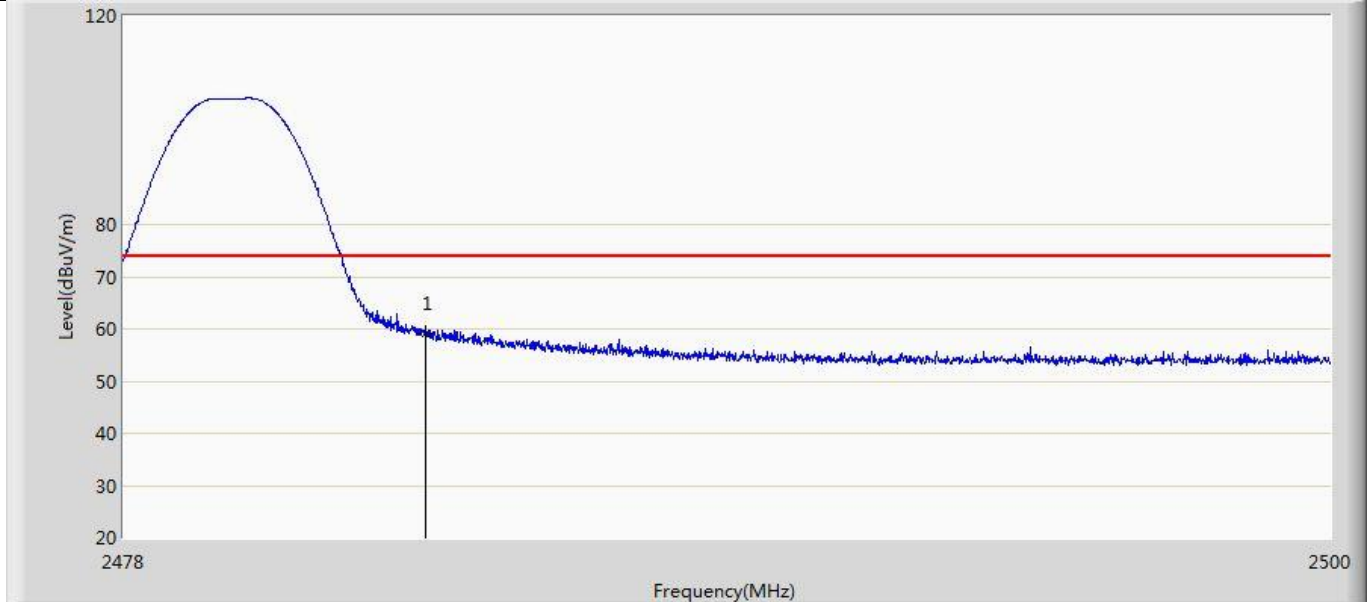
No	Mark	Frequency (MHz)	Measure Level (dBuV/m)	Reading Level (dBuV)	Over Limit (dB)	Limit (dBuV/m)	Factor (dB)	Type
1	*	2358.687	55.309	17.129	-18.691	74.000	38.180	PK
2		2390.000	53.976	15.671	-20.024	74.000	38.305	PK

Profile: 2230276R	Page No.: 29
Engineer: Carlosshen	
Site: AC5	Time: 2022/03/15 - 21:00
Limit: FCC_Part15.209_RE(3m)	Margin: 0
Probe: Horn_3117_00123988_(1-18GHz)	Polarity: Horizontal
EUT: LED Lamp	Power: AC 120V/60Hz
Note: Mode 4:Transmit at 2480MHz by coded 8	



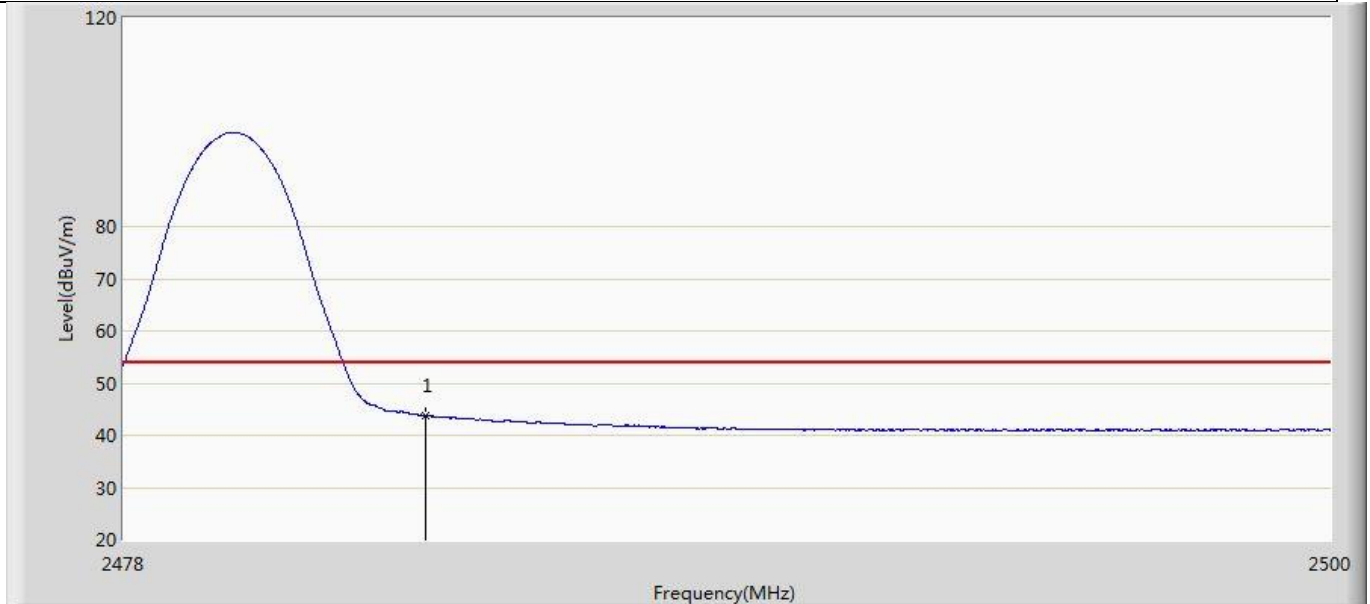
No	Mark	Frequency (MHz)	Measure Level (dBuV/m)	Reading Level (dBuV)	Over Limit (dB)	Limit (dBuV/m)	Factor (dB)	Type
1	*	2483.500	46.941	8.487	-7.059	54.000	38.453	AV

Profile: 2230276R	Page No.: 30
Engineer: Carlosshen	
Site: AC5	Time: 2022/03/15 - 21:03
Limit: FCC_Part15.209_RE(3m)	Margin: 0
Probe: Horn_3117_00123988_(1-18GHz)	Polarity: Horizontal
EUT: LED Lamp	Power: AC 120V/60Hz
Note: Mode 4:Transmit at 2480MHz by coded 8	



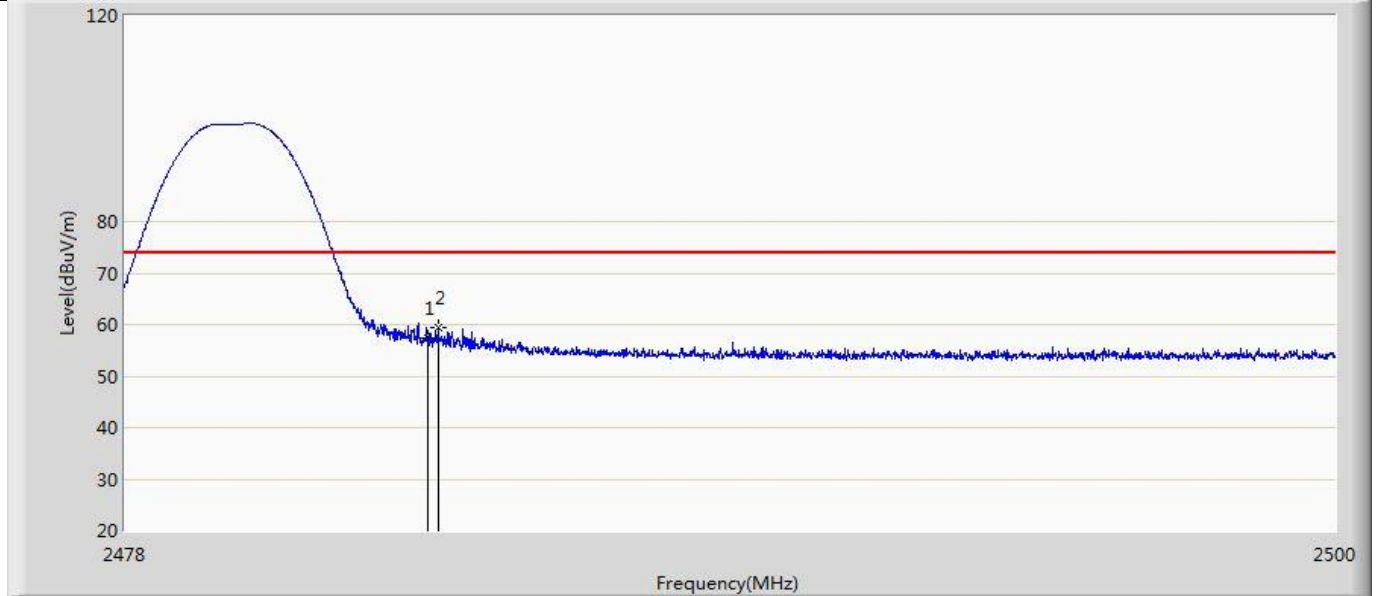
No	Mark	Frequency (MHz)	Measure Level (dBuV/m)	Reading Level (dBuV)	Over Limit (dB)	Limit (dBuV/m)	Factor (dB)	Type
1	*	2483.500	59.038	20.584	-14.962	74.000	38.453	PK

Profile: 2230276R	Page No.: 31
Engineer: Carlosshen	
Site: AC5	Time: 2022/03/15 - 21:04
Limit: FCC_Part15.209_RE(3m)	Margin: 0
Probe: Horn_3117_00123988_(1-18GHz)	Polarity: Vertical
EUT: LED Lamp	Power: AC 120V/60Hz
Note: Mode 4:Transmit at 2480MHz by coded 8	



No	Mark	Frequency (MHz)	Measure Level (dBuV/m)	Reading Level (dBuV)	Over Limit (dB)	Limit (dBuV/m)	Factor (dB)	Type
1	*	2483.500	43.796	5.342	-10.204	54.000	38.453	AV

Profile: 2230276R	Page No.: 32
Engineer: Carlosshen	
Site: AC5	Time: 2022/03/15 - 21:05
Limit: FCC_Part15.209_RE(3m)	Margin: 0
Probe: Horn_3117_00123988_(1-18GHz)	Polarity: Vertical
EUT: LED Lamp	Power: AC 120V/60Hz
Note: Mode 4:Transmit at 2480MHz by coded 8	



No	Mark	Frequency (MHz)	Measure Level (dBuV/m)	Reading Level (dBuV)	Over Limit (dB)	Limit (dBuV/m)	Factor (dB)	Type
1		2483.500	57.461	19.007	-16.539	74.000	38.453	PK
2	*	2483.676	59.375	20.921	-14.625	74.000	38.455	PK

Note:

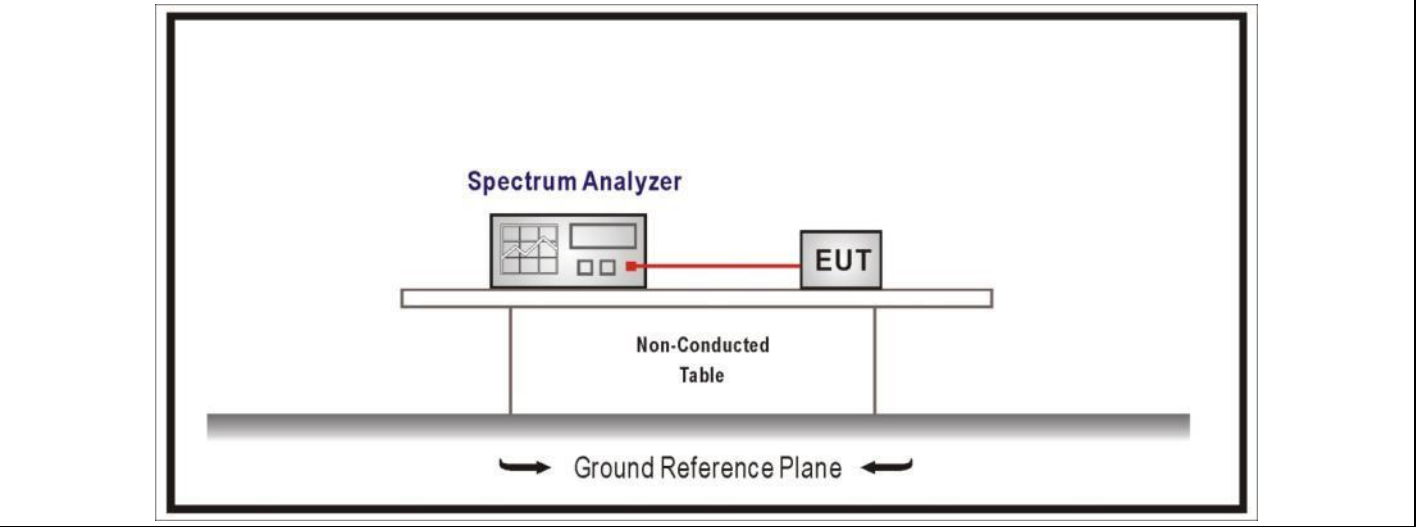
1. Measured Level = Reading Level + Factor.
2. As the radiated emission was performed, so conducted emission was not tested.

4.6 DTS Bandwidth	VERDICT: PASS
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4.6.1 Limit

Standard	FCC Part 15 Subpart C Paragraph 15.247 (a)(2)
Systems using digital modulation techniques operate in the 2400-2483.5 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
<input checked="" type="checkbox"/>	ANSI C63.10	11.8	DTS bandwidth
<input type="checkbox"/>	ANSI C63.10	11.8.1	Option 1
<input checked="" type="checkbox"/>	ANSI C63.10	11.8.2	Option 2

4.6.4 Test Data

Mode	CH.	Test Freq. (MHz)	6dB Occupied Bandwidth (kHz)	Limit (kHz)	Result
1	00	2402	693.2	>500	Pass
	19	2440	692.4	>500	Pass
	39	2480	688.5	>500	Pass
2	00	2402	1351	>500	Pass
	19	2440	1350	>500	Pass
	39	2480	1349	>500	Pass
3	00	2402	781.7	>500	Pass
	19	2440	779.4	>500	Pass
	39	2480	778.9	>500	Pass
4	00	2402	749.0	>500	Pass
	19	2440	746.8	>500	Pass
	39	2480	746.9	>500	Pass

Note : The worst case of Occupied Bandwidth as below:

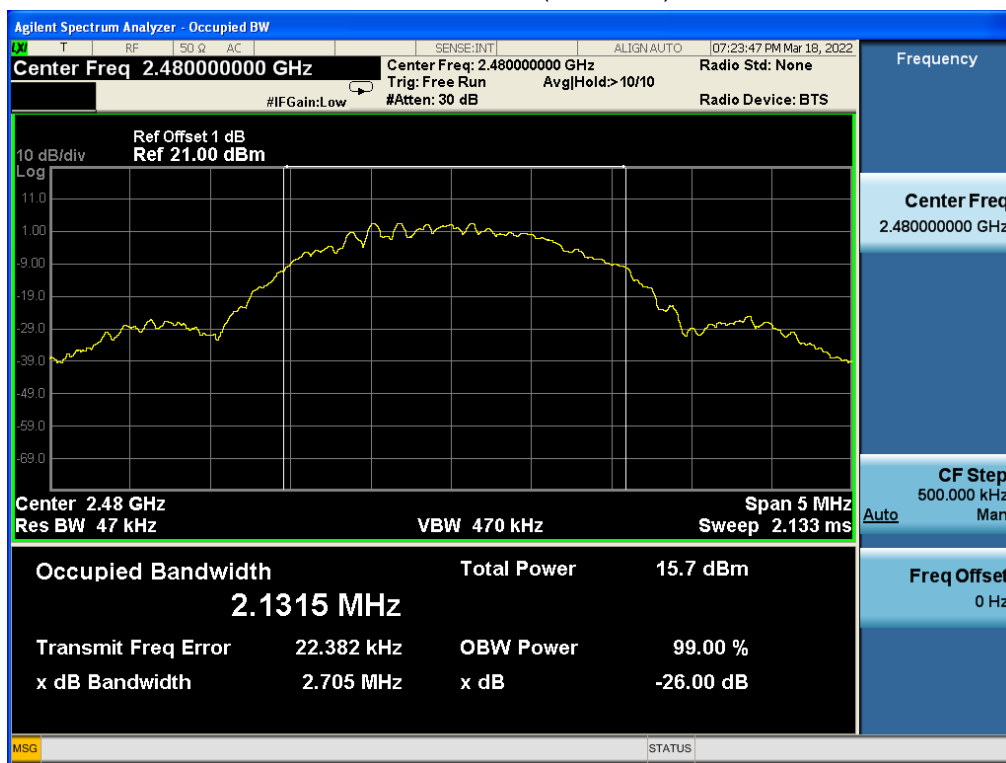
6dB Occupied Bandwidth
Mode 1 / CH39 (2480MHz)



Mode	CH.	Test Freq. (MHz)	99% Occupied Bandwidth (kHz)	Limit	Result
1	00	2402	1045.7	N/A	Pass
	19	2440	1043.1	N/A	Pass
	39	2480	1043.0	N/A	Pass
2	00	2402	2120.5	N/A	Pass
	19	2440	2120.5	N/A	Pass
	39	2480	2131.5	N/A	Pass
3	00	2402	1093.2	N/A	Pass
	19	2440	1091.7	N/A	Pass
	39	2480	1090.7	N/A	Pass
4	00	2402	1127.3	N/A	Pass
	19	2440	1124.9	N/A	Pass
	39	2480	1124.5	N/A	Pass

Note : The worst case of Occupied Bandwidth as below:

99% Occupied Bandwidth
Mode 2 / CH39 (2480MHz)



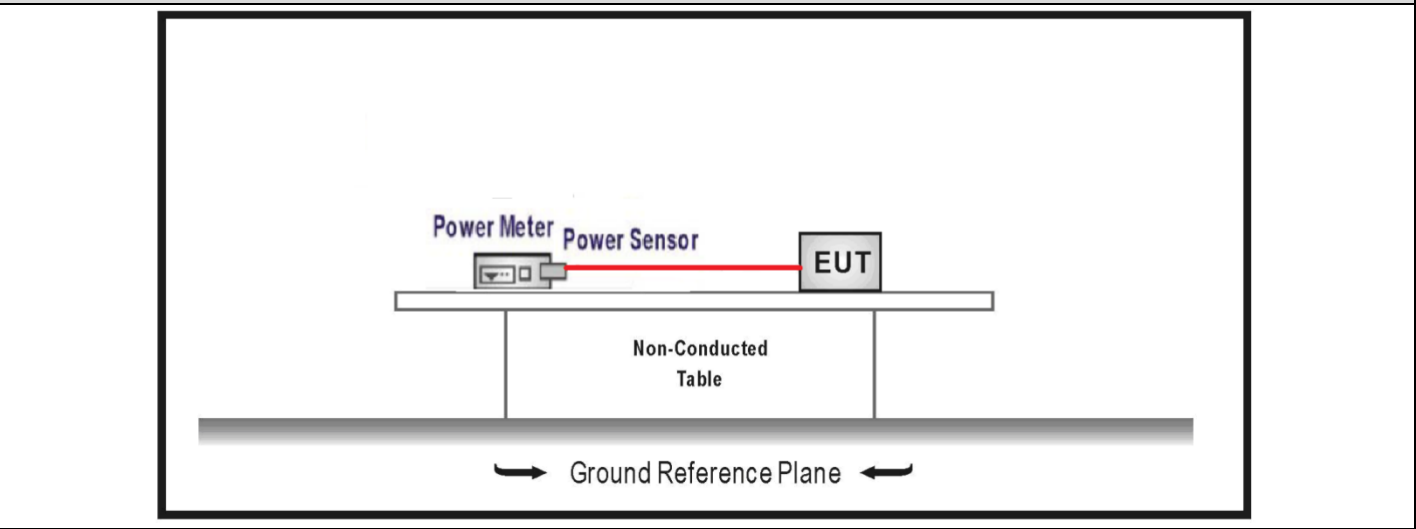
4.7 Fundamental emission output power	VERDICT: PASS
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4.7.1 Limit

Standard	FCC Part 15 Subpart C Paragraph 15.247 (b)(3)	
<input checked="" type="checkbox"/> GTX < 6dBi	Pout ≤ 30dBm	
<input type="checkbox"/> GTX > 6dBi		
<input type="checkbox"/> Non-Fix point-point	Pout ≤ 30 - (GTX - 6)	
<input type="checkbox"/> Fix point-point	Pout ≤ 30 - [(GTX - 6)]/3	
<input type="checkbox"/> Point-to-multipoint	Pout ≤ 30 - (GTX - 6)	
<input type="checkbox"/> Overlap Beams	Pout ≤ 30 - [(GTX - 6)]/3	
<input type="checkbox"/> Aggregate power transmitted simultaneously on all beams	Pout ≤ 30 - [(GTX - 6)]/3	
<input type="checkbox"/> 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
<input checked="" type="checkbox"/>	ANSI C63.10		11.9	Fundamental emission output power
<input checked="" type="checkbox"/>	ANSI C63.10		11.9.1	Maximum peak conducted output power
	<input type="checkbox"/>	ANSI C63.10	11.9.1.1	RBW \geq DTS bandwidth
	<input type="checkbox"/>	ANSI C63.10	11.9.1.2	Integrated band power method
	<input type="checkbox"/>	ANSI C63.10	11.9.1.3	PKPM1 Peak power meter method
<input type="checkbox"/>	ANSI C63.10		11.9.2	Maximum conducted (average) output power
	<input type="checkbox"/>	ANSI C63.10	11.9.2.2	Measurement using a spectrum analyzer (SA)
	<input type="checkbox"/>	ANSI C63.10	11.9.2.2.2	Method AVGSA-1(Duty cycle \geq 98%)
	<input type="checkbox"/>	ANSI C63.10	11.9.2.2.3	Method AVGSA-1A(Duty cycle \geq 98%)
	<input type="checkbox"/>	ANSI C63.10	11.9.2.2.4	Method AVGSA-2(Duty cycle \leq 98%)
	<input type="checkbox"/>	ANSI C63.10	11.9.2.2.5	Method AVGSA-2A(Duty cycle \leq 98%)
	<input type="checkbox"/>	ANSI C63.10	11.9.2.2.4	Method AVGSA-3
	<input type="checkbox"/>	ANSI C63.10	11.9.2.2.5	Method AVGSA-3A
	<input checked="" type="checkbox"/>	ANSI C63.10	11.9.2.3	Measurement using a power meter (PM)
	<input checked="" type="checkbox"/>	ANSI C63.10	11.9.2.3.1	Method AVGPM
	<input type="checkbox"/>	ANSI C63.10	11.9.2.3.2	Method AVGPM-G

4.7.4 Test Data

Mode	Channel	Test Frequency (MHz)	Power Output (dBm)	Limit (dBm)	Result
Mode 1	00	2402	10.87	≤30	Pass
	19	2440	10.37	≤30	Pass
	39	2480	9.87	≤30	Pass
Mode 2	00	2402	10.96	≤30	Pass
	19	2440	10.53	≤30	Pass
	39	2480	9.99	≤30	Pass
Mode 3	00	2402	11.09	≤30	Pass
	19	2440	10.64	≤30	Pass
	39	2480	10.09	≤30	Pass
Mode 4	00	2402	11.09	≤30	Pass
	19	2440	10.64	≤30	Pass
	39	2480	10.18	≤30	Pass

4.8 Power Density

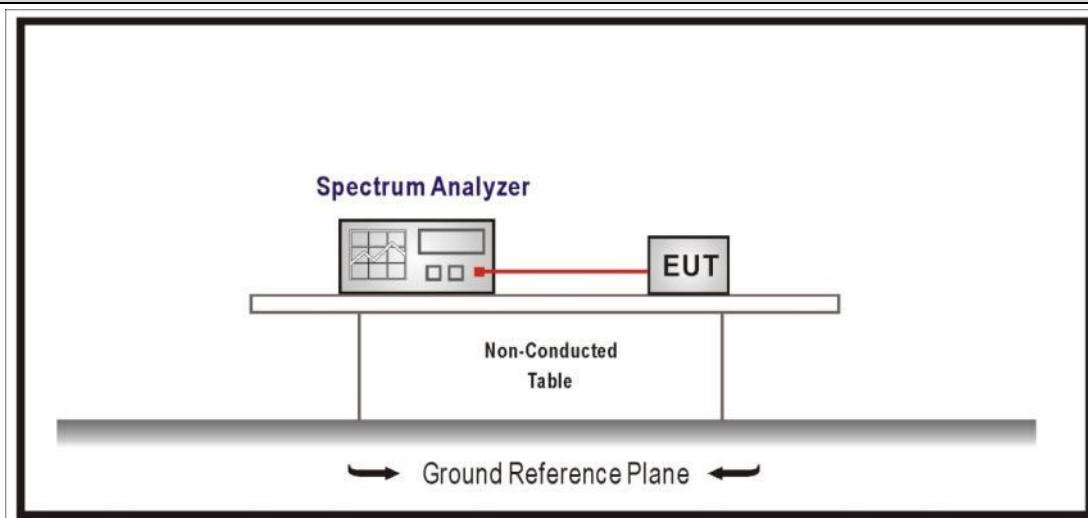
VERDICT: PASS

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

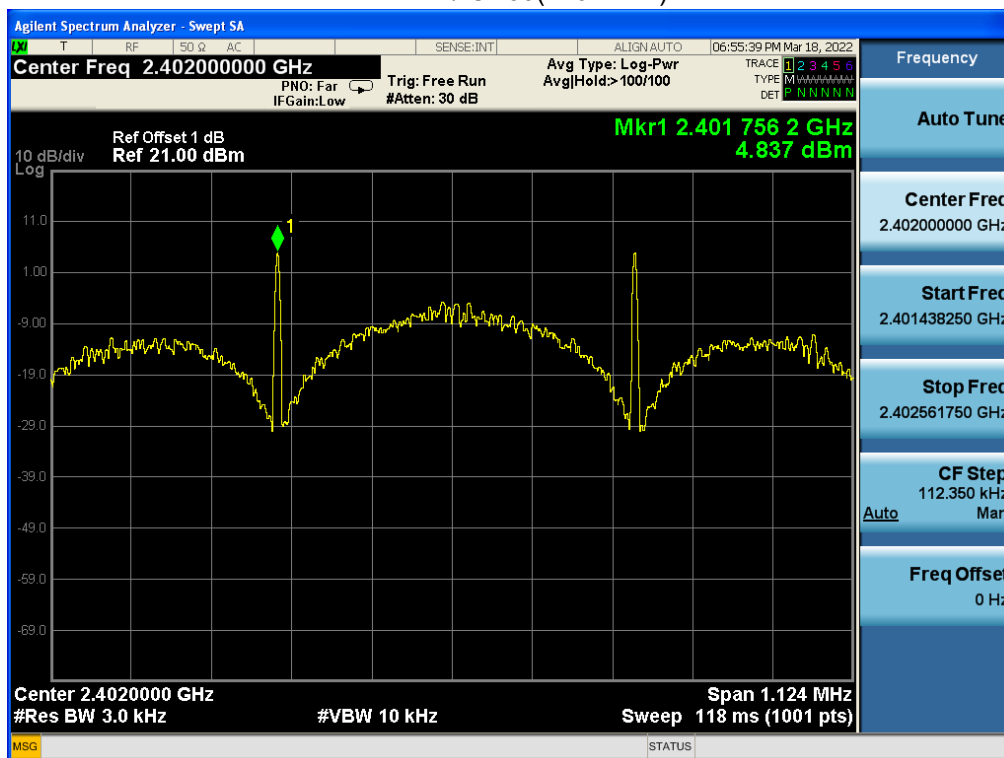
	References Rule	Chapter	Description
<input checked="" type="checkbox"/>	ANSI C63.10	11.10	Maximum power spectral density level in the fundamental emission
	<input checked="" type="checkbox"/> ANSI C63.10	11.10.2	Method PKPSD (peak PSD)
	<input type="checkbox"/> ANSI C63.10	11.10.3	Method AVGPSD-1(Duty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

4.8.4 Test Data

Mode	Channel	Test Frequency (MHz)	Measurement PSD (dBm/3kHz)	Limit (dBm/3kHz)	Result
Mode 1	00	2402	-4.973	≤8	Pass
	19	2440	-5.536	≤8	Pass
	39	2480	-6.016	≤8	Pass
Mode 2	00	2402	-7.434	≤8	Pass
	19	2440	-7.982	≤8	Pass
	39	2480	-8.479	≤8	Pass
Mode 3	00	2402	-7.177	≤8	Pass
	19	2440	-7.693	≤8	Pass
	39	2480	-8.170	≤8	Pass
Mode 4	00	2402	4.837	≤8	Pass
	19	2440	4.282	≤8	Pass
	39	2480	3.791	≤8	Pass

Note : The worst case of PSD as below:

Mode 4 / CH00(2402MHz)



4.9 Antenna Requirement	VERDICT: PASS
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4.9.1 Limit:	
Standard	FCC Part 15 Subpart C Paragraph 15.203
<p>An intentional radiator shall be designed to ensure that no antenna other than that furnished by the responsible party shall be used with the device. The use of a permanently attached antenna or of an antenna that uses a unique coupling to the intentional radiator shall be considered sufficient to comply with the provisions of this section. The manufacturer may design the unit so that a broken antenna can be replaced by the user, but the use of a standard antenna jack or electrical connector is prohibited. This requirement does not apply to carrier current devices or to devices operated under the provisions of §15.211, §15.213, §15.217, §15.219, or §15.221. Further, this requirement does not apply to intentional radiators that must be professionally installed, such as perimeter protection systems and some field disturbance sensors, or to other intentional radiators which, in accordance with §15.31(d), must be measured at the installation site. However, the installer shall be responsible for ensuring that the proper antenna is employed so that the limits in this part are not exceeded.</p>	

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

5 TEST SETUP PHOTO AND EUT PHOTO

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

_____ The End _____

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