



Test report No:
2420073R-RF-US-P06V01

FCC & ISED TEST REPORT

Product Name	LED lamp
Trademark	PHILIPS
Model and /or type reference	9290031516A, 9290031517A, 9290031519A, 9290031520A
FCC ID	2AGBW9290031520AX
IC	20812-31520AX
Applicant's name / address	Signify (China) investment Co., Ltd Building no.9, Lane 888, Tianlin Road, Minhang District, Shanghai, China
Test method requested, standard	FCC CFR Title 47 Part 15 Subpart C Section 15.247 ANSI C63.10: 2013 RSS-Gen Issue 5 Amendment 2 / RSS-247 Issue 3
Verdict Summary	IN COMPLIANCE
Documented by (name / position & signature)	Tim Cao/Project Manager <i>Tim Cao</i>
Approved by (name / position & signature)	Jack Zhang/ Manager <i>Jack Zhang</i>
Date of issue	2024-03-06
Report Version	V1.0
Report template No	Template_FCC Part 15C-RF-V1.0

INDEX

	page
General conditions	4
Environmental conditions	4
Possible test case verdicts	5
Abbreviations.....	5
Document History.....	6
Remarks and Comments	6
Used Equipment.....	7
Uncertainty	9
1 General Information	10
1.1 General Description of the Item(s).....	10
1.2 Antenna Information	11
1.3 Channel List.....	12
2 Description of Test Setup.....	13
2.1 Operating mode(s) used for tests	13
2.2 Auxiliary equipment / Test software for the EUT	13
2.3 Test Configuration / Block diagram used for tests.....	14
2.4 Testing process	15
3 Verdict summary section.....	16
3.1 Standards	16
3.2 Deviation(s) from the Standard(s) / Test Specification(s).....	16
3.3 Overview of results	17
3.4 Power setting in test	18
3.5 Test Matrix	18
3.6 Test Facility.....	19
4 Test Results	20
4.1 AC Power Line Conducted Emission.....	20
4.1.1 Limit	20
4.1.2 Test Setup	20
4.1.3 Test Procedure	20
4.2 Emissions in restricted frequency bands	21
4.2.1 Limit	21
4.2.2 Test Setup	23
4.2.3 Test Procedure	24
4.3 Emissions in non-restricted frequency band	25

4.3.1	Limit	25
4.3.2	Test Setup	25
4.3.3	Test Procedure	25
4.4	Duty cycle	26
4.4.1	Limit	26
4.4.2	Test Setup	26
4.4.3	Test Procedure	26
4.5	Radiated Emission Band Edge	27
4.5.1	Limit	27
4.5.2	Test Setup	27
4.5.3	Test Procedure	27
4.6	DTS Bandwidth	28
4.6.1	Limit	28
4.6.2	Test Setup	28
4.6.3	Test Procedure	28
4.7	Fundamental emission output power	29
4.7.1	Limit	29
4.7.2	Test Setup	29
4.7.3	Test Procedure	30
4.8	Power Density	31
4.8.1	Limit:	31
4.8.2	Test Setup	31
4.8.3	Test Procedure	31
4.9	Antenna Requirement	32
4.9.1	Limit:	32
4.9.2	Antenna Connector Construction:	32
5	Test setup photo and EUT Photo	33
Appendix A: AC Power Line Conducted Emission		34
Appendix B: Emissions in restricted frequency bands		36
Appendix C: Duty cycle		62
Appendix D: Emissions in non-restricted frequency bands		67
Appendix E: Radiated Emission Band Edge		132
Appendix F: Fundamental emission output power		164
Appendix G: DTS Bandwidth		165
Appendix H: Power Spectral Density		175

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.

IMPORTANT: No parts of this report may be reproduced or quoted out of context, in any form or by any means, except in full, without the previous written permission of DEKRA.

GENERAL CONDITIONS

Test Location	No. 99, Hongye Road, Suzhou Industrial Park Suzhou, 215006, P.R. China
Date(receive sample)	Jan. 22, 2024
Date (start test)	Jan. 25, 2024
Date (finish test)	Feb. 22, 2024

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
2420073R-RF-US-P06V01	V1.0	Initial issue of report.	2024-03-06

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 FCC 47CFR §15.247, ANSI C63.10: 2013, RSS-Gen Issue 5 Amendment 2 and RSS-247 Issue 3.
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	Firmware Version	Software version
EMI Test Receiver	R&S	ESCI	100906	2023.08.26	2024.08.25	4.42 SP3	N/A
Two-Line V-Network	R&S	ENV216	101044	2023.11.08	2024.11.07	N/A	N/A
Current Probe	R&S	EZ-17	100678	2023.11.02	2024.11.01	N/A	N/A
50ohm Coaxial Switch	Anritsu	MP59B	6200464462	2023.05.14	2024.05.13	N/A	N/A
50ohm Termination	Xinghu	N/A	N/A	2023.02.10	2024.02.09	N/A	N/A
50ohm Termination	Xinghu	N/A	N/A	2024.02.06	2025.02.05	N/A	N/A
Temperature/Humidity Meter	RTS	RTS-8S	TR1-TH	2023.07.06	2024.07.05	N/A	N/A
Coaxial Cable	Suhner	RG 223	TR1-C1	2023.05.14	2024.05.13	N/A	N/A
Dekra test software	Dekra	N/A	N/A	N/A	N/A	N/A	3

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	Firmware Version	Software version
Wireless Connectivity Tester	R&S	CMW 270	102593	2023.05.20	2024.05.19	V 4.0.60	N/A
Coaxial Cable	N/A	N/A	2477	2023.06.08	2024.06.07	N/A	N/A
Coaxial Cable	N/A	N/A	2478	2023.06.08	2024.06.07	N/A	N/A
High and low temperature and fast temperature change test box	ASTUOD	ASTD-FBT-225K	N/A	2023.05.20	2024.05.19	N/A	N/A
Temperature/Humidity Meter	RTS	RTS-8S	RF08	2023.08.25	2024.08.24	N/A	N/A
Test system							
Instrument	Manufacturer	Model No.	Serial No.	Cal.Date	Next Cal. Date	Firmware Version	Software version
MAX Signal Analyzer	Keysight	N9010A	MY48030494	2023.11.08	2024.11.07	A.14.03	N/A
RF Control Unit	Tonscend	JS0806-2	22G8060594	2023.02.14	2024.02.13	N/A	N/A
RF Control Unit	Tonscend	JS0806-2	22G8060594	2024.02.06	2025.02.05	N/A	N/A
MXG-B RF Vector Signal Generator	Keysight	N5182B	MY61252529	2023.05.20	2024.05.19	B.01.96	N/A
Frequency extender for EXG or MXG	Keysight	N5182BX07	MY59362500	2023.05.20	2024.05.19	N/A	N/A
EXG-B MW Analog Signal Generator	Keysight	N5173B	MY61252566	2023.08.26	2024.08.25	B.01.95	N/A
Test Software	Tonscend	TS1120	JS1120-3	N/A	N/A	N/A	V3.0.22

Radiated Emission(30MHz-1GHz) / AC2

Instrument	Manufacturer	Model No.	Serial No.	Cal. Date	Next Cal. Date	Firmware Version	Software version
EMI Test Receiver	R&S	ESCI	100573	2023.09.17	2024.09.16	4.42 SP3	N/A
Loop Antenna	R&S	HFH2-Z2E	101149	2023.04.25	2024.04.24	N/A	N/A
Bilog Antenna	Teseq GmbH	CBL6112D	27611	2023.02.20	2024.02.19	N/A	N/A
Temperature/Humidity Meter	RTS	RTS-8S	AC2-TH	2023.05.19	2024.05.18	N/A	N/A
Coaxial Cable	Huber+Suhner	SUCOFLEX 106	AC2-C	2023.05.21	2024.05.20	N/A	N/A
Dekra test software	Dekra	N/A	N/A	N/A	N/A	N/A	3

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

Instrument	Manufacturer	Model No.	Serial No.	Cal. Date	Next Cal. Date	Firmware Version	Software version
EXA Spectrum Analyzer	Keysight	N9020B	MY60112218	2023.11.08	2024.11.07	A.31.05	N/A
Pre-Amplifier	SKET	LNPA_0118G-45	SK2021090101	2023.05.14	2024.05.13	N/A	N/A
Preamplifier	CHENGYI	EMC184045SE	980263	2023.07.09	2024.07.08	N/A	N/A
DRG Horn	ETS-Lindgren	3117	123988	2023.11.07	2024.11.06	N/A	N/A
Broad-Band Horn Antenna	Schwarzbeck	BBHA9170	294	2023.05.31	2024.05.30	N/A	N/A
Filter Switch Box	MVE	MSW-F196	C070001S	2023.05.21	2024.05.20	N/A	N/A
Temperature/Humidity Meter	RTS	RTS-8S	AC5-TH	2023.05.19	2024.05.18	N/A	N/A
Coaxial Cable	ROSENBERGER	LA1-C011-2000/3000	AC5-40G	2023.03.04	2024.03.03	N/A	N/A
Coaxial Cable	ROSENBERGER	LA1-C011-2000/3000	AC5-40G-2	2023.05.21	2024.05.20	N/A	N/A
Cable	Rosenberger	LA1-C011-1000	0523	2023.05.21	2024.05.20	N/A	N/A
Cable	Rosenberger	LA1-C011-1000	0623	2023.05.21	2024.05.20	N/A	N/A
Dekra test software	Dekra	N/A	N/A	N/A	N/A	N/A	3

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 Horizontal: 18GHz~26.5GHz: 5.10 dB Vertical: 18GHz~26.5GHz: 5.00 dB
RF antenna conducted test	± 1.27 dB
Radiated Emission Band Edge	± 3.9 dB
DTS Bandwidth	± 150 Hz
Occupied Bandwidth	± 150 Hz
Power Density	± 1.27 dB

1 GENERAL INFORMATION

1.1 General Description of the Item(s)

Product Name	LED lamp
Model No.	9290031516A, 9290031517A, 9290031519A, 9290031520A
Trademark	PHILIPS
FCC ID	2AGBW9290031520AX
IC	20812-31520AX
Manufacturer	Signify (China) investment Co., Ltd
Manufacturer Address	Building No.9, Lane 888, Tianlin Road, Minhang district, 200233 Shanghai, China
Model Difference(s)	All models are identical except different model name and size of bulb. The EUT used in test is 9290031516A.

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 Vac, 50/60 Hz		
	<input checked="" type="checkbox"/>	AC: 110 – 130 Vac, 50/60 Hz		
	<input type="checkbox"/>	DC:		
	<input type="checkbox"/>	Battery:		
	<input type="checkbox"/>	PoE:		
Mounting position	<input type="checkbox"/>	Table top equipment		
	<input checked="" 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 type="checkbox"/> Ceramic Chip
	<input checked="" type="checkbox"/>	Internal	<input type="checkbox"/> PIFA
			<input checked="" type="checkbox"/> PCB
			<input type="checkbox"/> Metal
			<input type="checkbox"/> Others.....
Antenna Gain	0.32 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.

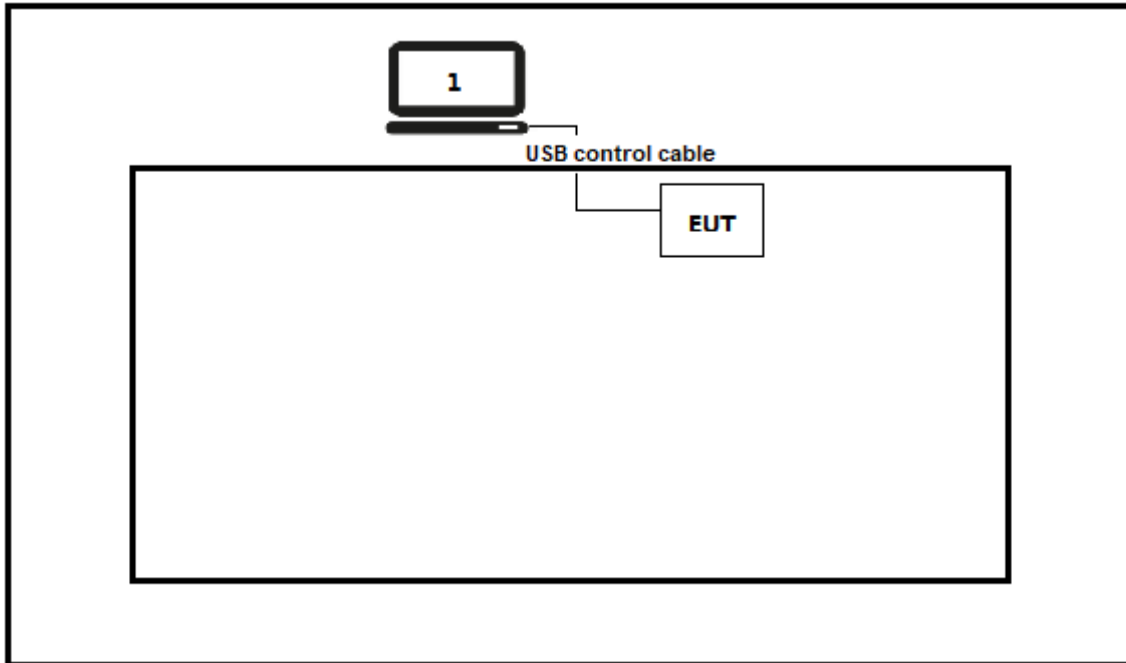
Test Mode For Bluetooth	Mode 1: Transmit by LE_1Mbps
	Mode 2: Transmit by LE_2Mbps
	Mode 3: Transmit by LE_Coded S=2
	Mode 4: Transmit by LE_Coded S=8

2.2 Auxiliary equipment / Test software for the EUT

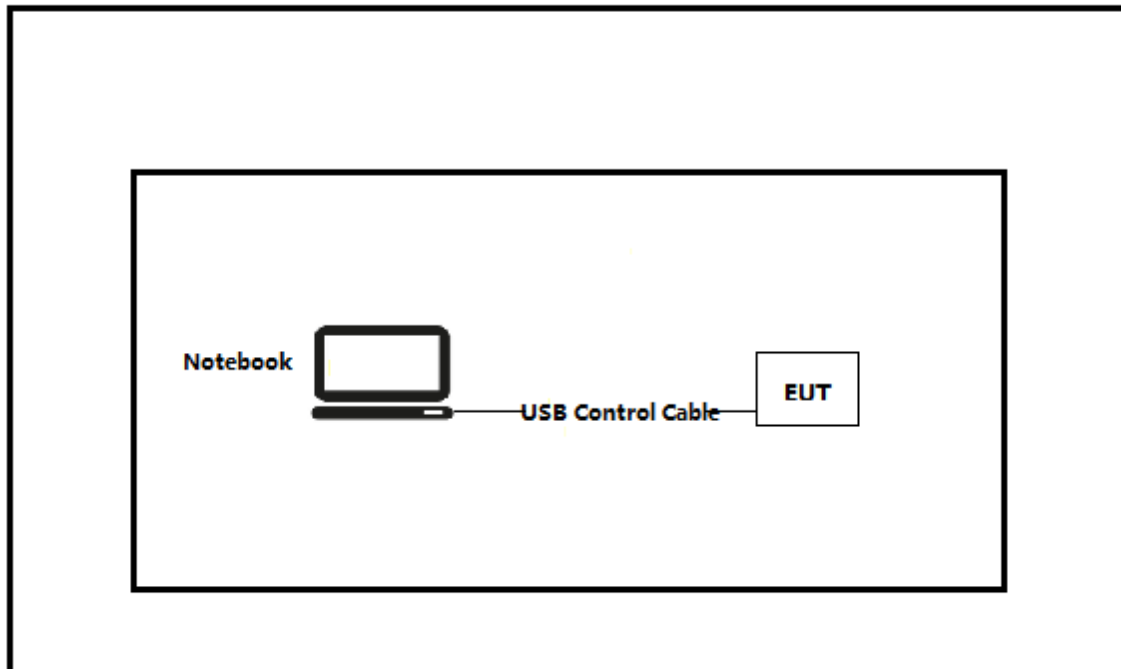
Auxiliary equipment	Type / Version	Manufacturer	Supplied by
Notebook	Think pad x220	Lenovo	Adapter
software	Type / Version	Manufacturer	Supplied by
Approbation Tool	V1.1.5.0	N/A	N/A

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	2024	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 2	2021	General Requirements for Compliance of Radio Apparatus
RSS-247 Issue 3	2023	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	Refer to Appendix A for test data
Emissions in restricted frequency bands	FCC 15.247(b)(3)	PASS	Refer to Appendix B for test data
Duty cycle	ANSI C63.10:2013	PASS	Refer to Appendix C for test data
Emissions in non-restricted frequency bands	FCC 15.247(d), FCC 15.209	PASS	Refer to Appendix D for test data
Radiated Emission Band Edge	FCC 15.247(d)	PASS	Refer to Appendix E for test data
Fundamental emission output power	FCC 15.247(d), FCC 15.209	PASS	Refer to Appendix F for test data
DTS Bandwidth	FCC 15.247(a)(2)	PASS	Refer to Appendix G for test data
Power Spectral Density	FCC 15.247(e)	PASS	Refer to Appendix H for test data
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	Refer to Appendix A for test data
Emissions in restricted frequency bands	RSS-Gen Issue 5 Section 8.9	PASS	Refer to Appendix B for test data
Duty cycle	ANSI C63.10:2013	PASS	Refer to Appendix C for test data
Emissions in non-restricted frequency bands	RSS-247 Issue 3 Section 5.5	PASS	Refer to Appendix D for test data
Radiated Emission Band Edge	RSS-Gen Issue 5 Section 8.10	PASS	Refer to Appendix E for test data
Fundamental emission output power	RSS-247 Issue 3 Section 5.4(d)	PASS	Refer to Appendix F for test data
DTS Bandwidth	RSS-Gen Issue 5 Section 6.7	PASS	Refer to Appendix G for test data
Power Spectral Density	RSS-247 Issue 3 Section 5.2(b)	PASS	Refer to Appendix H for test data
Antenna Requirement	RSS-Gen Issue 5 Section 6.8	PASS	---

3.4 Power setting in test

Mode	Channel	Frequency (MHz)	Power setting
LE_1Mbps	00	2402	8
	19	2440	8
	39	2480	8
LE_2Mbps	00	2402	8
	19	2440	8
	39	2480	8
LE_Coded S=2	00	2402	8
	19	2440	8
	39	2480	8
LE_Coded S=8	00	2402	8
	19	2440	8
	39	2480	8

3.5 Test Matrix

Test item	Model: 9290031516A		
	1(#1)	2(#2)	3()
AC Power Line Conducted Emission	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
Emissions in restricted frequency bands	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
Duty cycle	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Emissions in non-restricted frequency bands	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Radiated Emission Band Edge	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
Fundamental emission output power	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
DTS Bandwidth	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Power Spectral Density	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Antenna Requirement	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>

Note: The only difference between sample #1 and sample #2 is whether to keep the original antenna, sample #1 is a conduction test product that removes the original antenna and is equipped with SMA wires, and sample #2 is a complete product that retains the original antenna.

Note: We have evaluated both lamp chimney, only the worst data was shown in report.

3.6 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

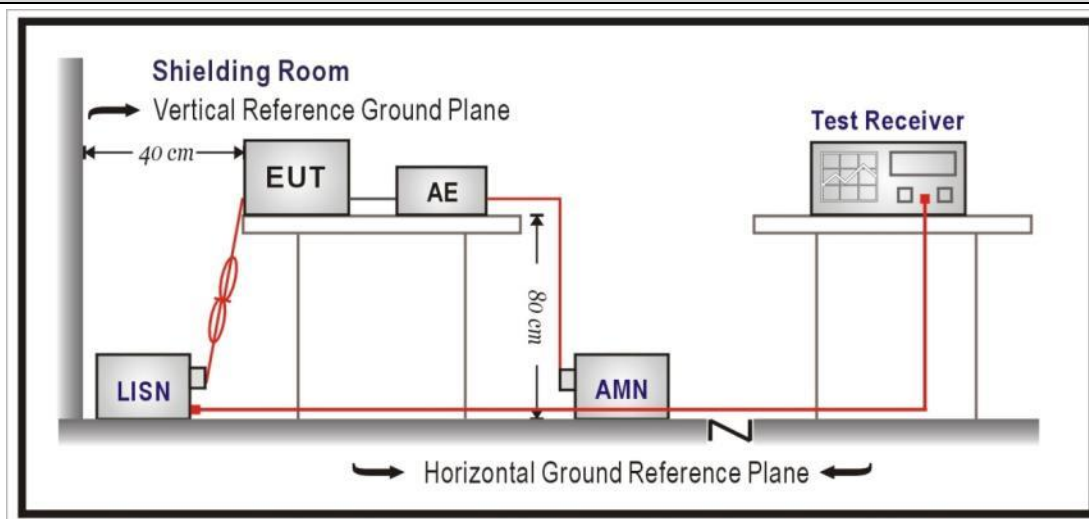
¹⁾ At the transition frequency, the lower limit applies.

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

4.2 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 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	--	

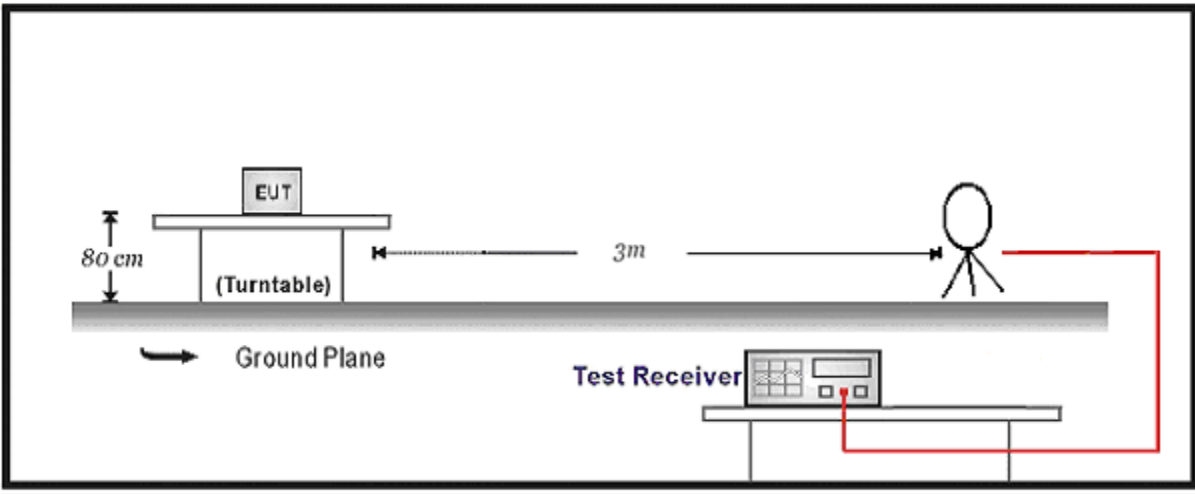
Restricted Band Emissions Limit			
Frequency (MHz)	Field strength ($\mu\text{V/m}$)	Field strength ($\text{dB}\mu\text{V/m}$)	Measurement distance (m)
0.009 - 0.49	2400/F(kHz)	48.5 – 13.8	300 _(Note 1)
0.49 - 1.705	24000/F(kHz)	33.8 - 23	30 _(Note 1)
1.705 - 30	30	29.5	30 _(Note 1)
30 - 88	100	40	3 _(Note 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).

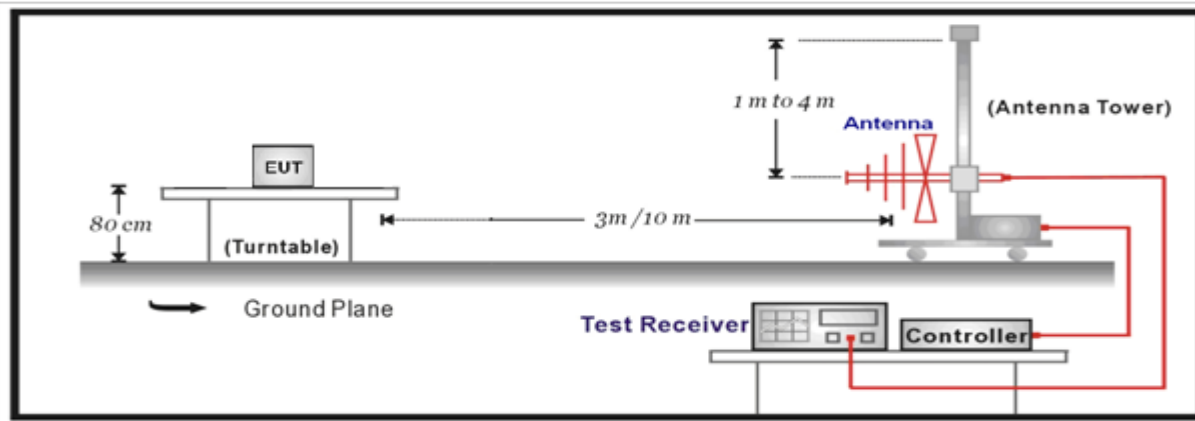
Note 2: At frequencies at or above 30 MHz, measurements may be performed at a distance other than what is specified provided: measurements are not made in the near field except where it can be shown that near field measurements are appropriate due to the characteristics of the device; and it can be demonstrated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

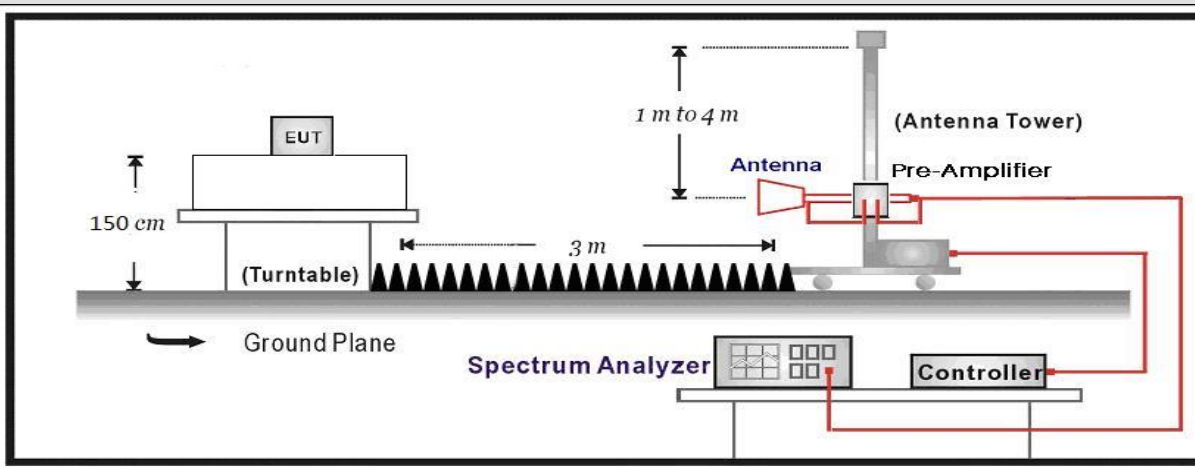
Below 30MHz Test Setup:



30MHz-1GHz Test Setup:



Above 1GHz Test Setup:



4.2.3 Test Procedure			
	References Rule	Chapter	Description
<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

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

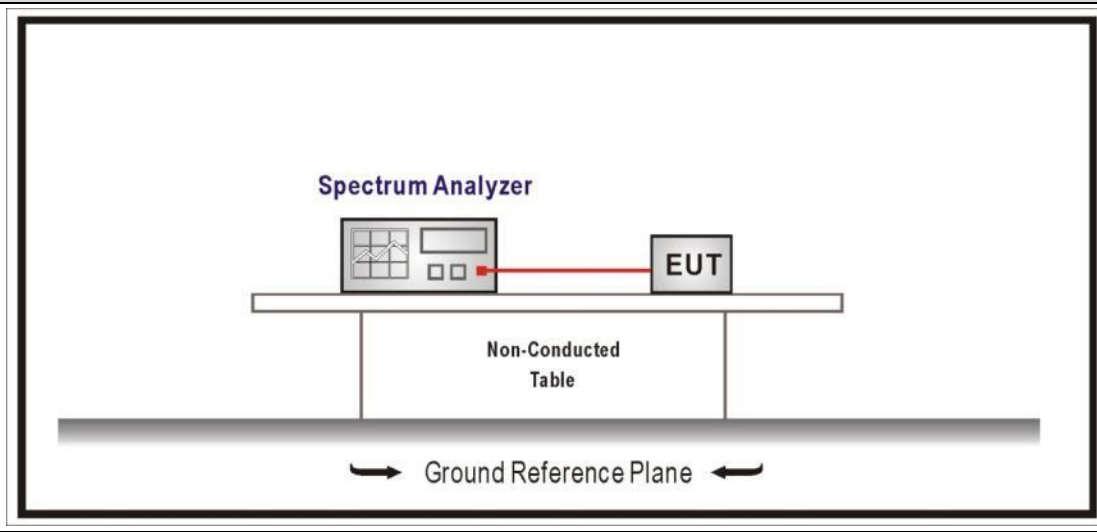
4.3.1 Limit

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



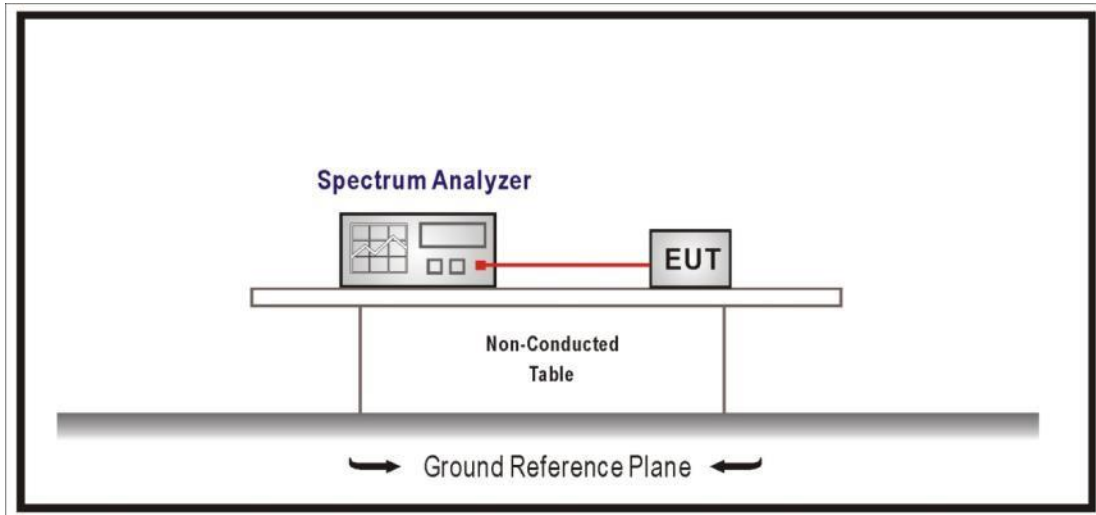
4.3.3 Test Procedure

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

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

4.4.1 Limit
N/A

4.4.2 Test Setup



4.4.3 Test Procedure

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

4.5 Radiated Emission Band Edge	VERDICT: PASS
--	----------------------

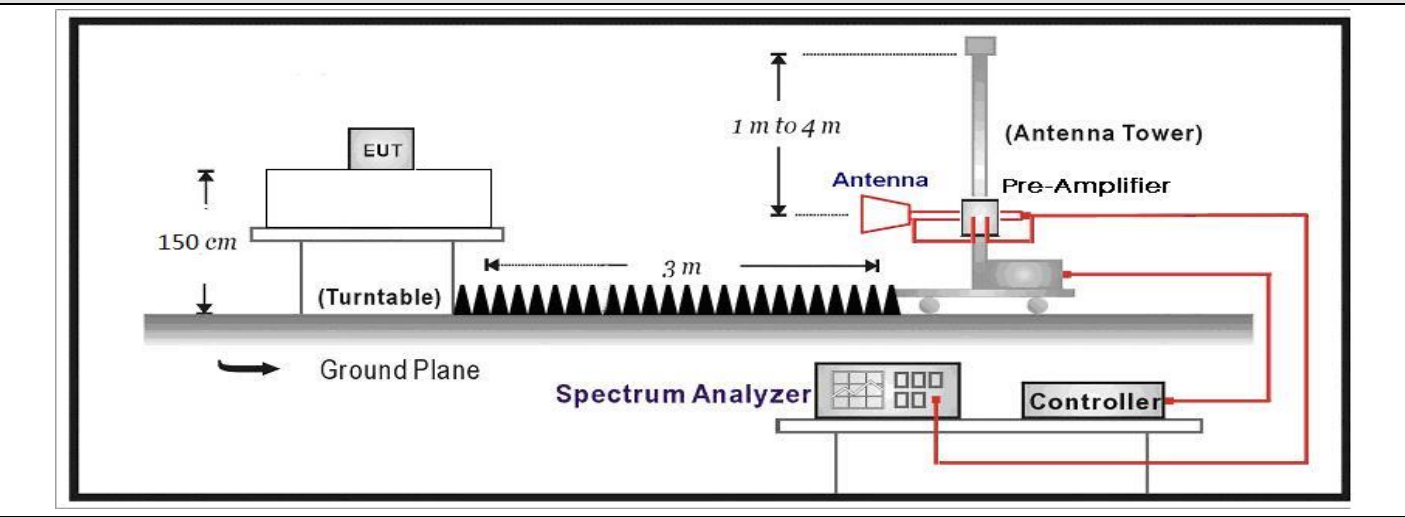
4.5.1 Limit

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:

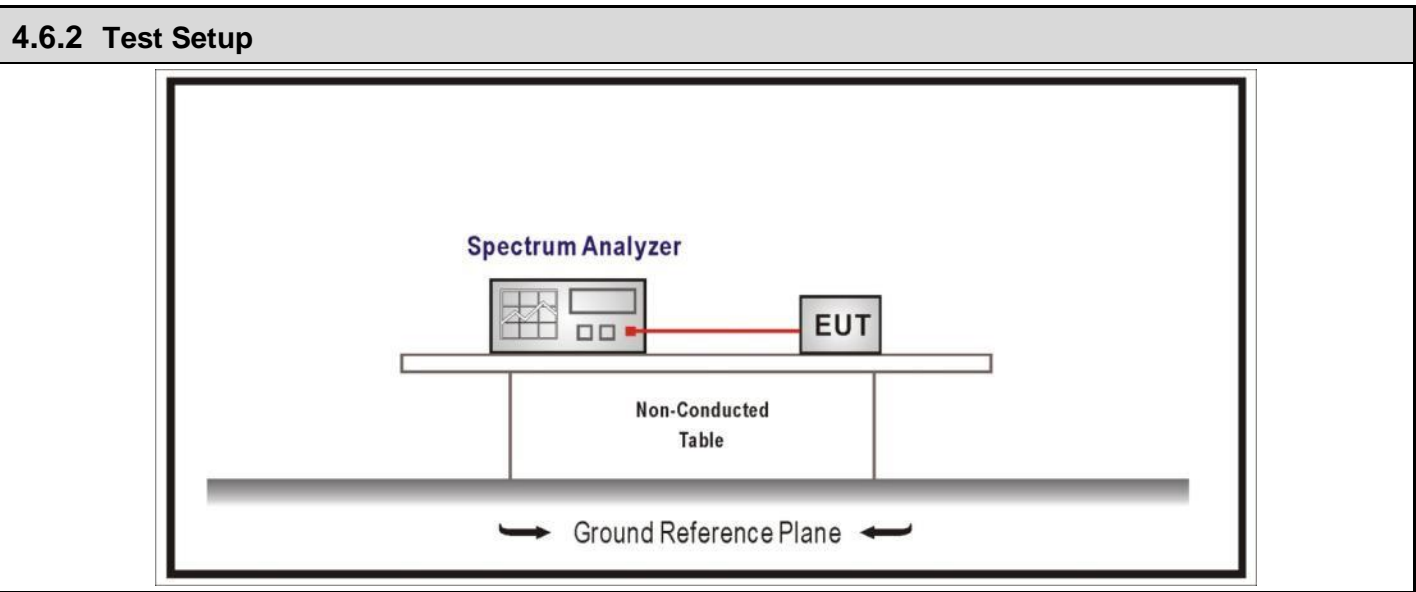


4.5.3 Test Procedure

	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

4.6 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 the 2400-2483.5 MHz. The minimum 6 dB bandwidth shall be at least 500 kHz	



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

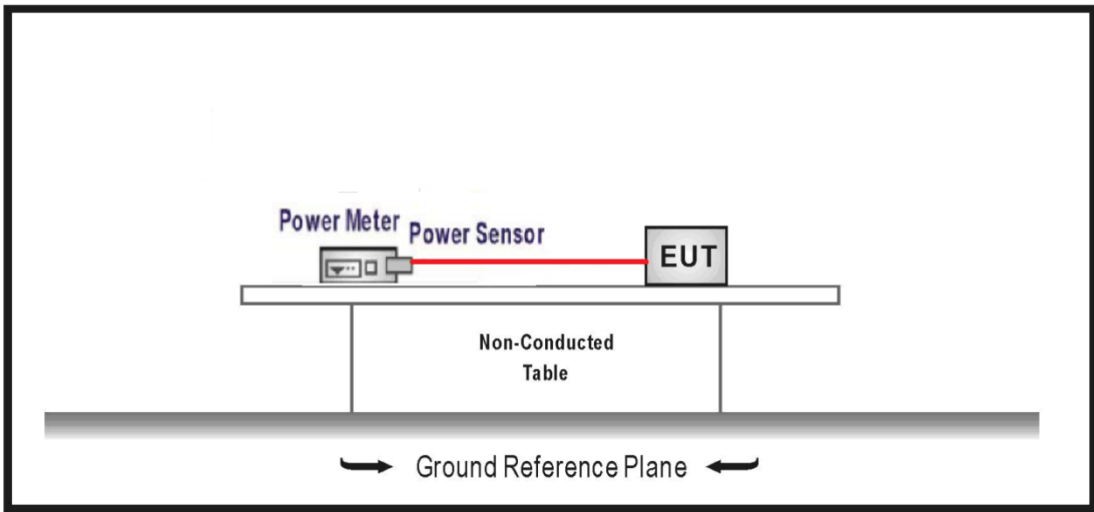
4.7 Fundamental emission output power	VERDICT: PASS
--	----------------------

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

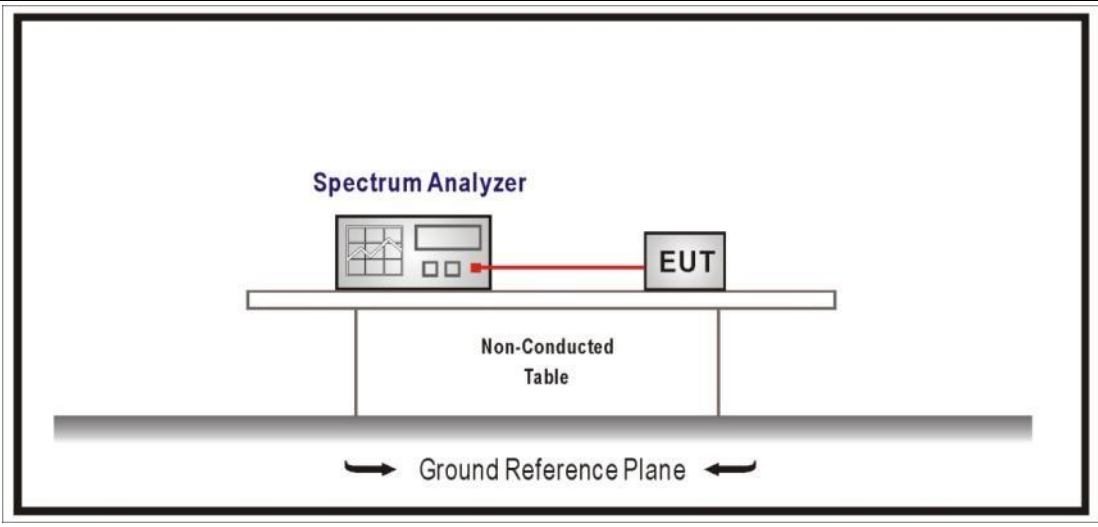


4.7.3 Test Procedure				
	References Rule		Chapter	Description
<input checked="" type="checkbox"/>	ANSI C63.10		11.9	Fundamental emission output power
<input checked="" type="checkbox"/>	ANSI C63.10		11.9.1	Maximum peak conducted output power
	<input type="checkbox"/>	ANSI C63.10	11.9.1.1	RBW \geq DTS 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

4.8 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

4.9 Antenna Requirement	VERDICT: PASS
--------------------------------	----------------------

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>	

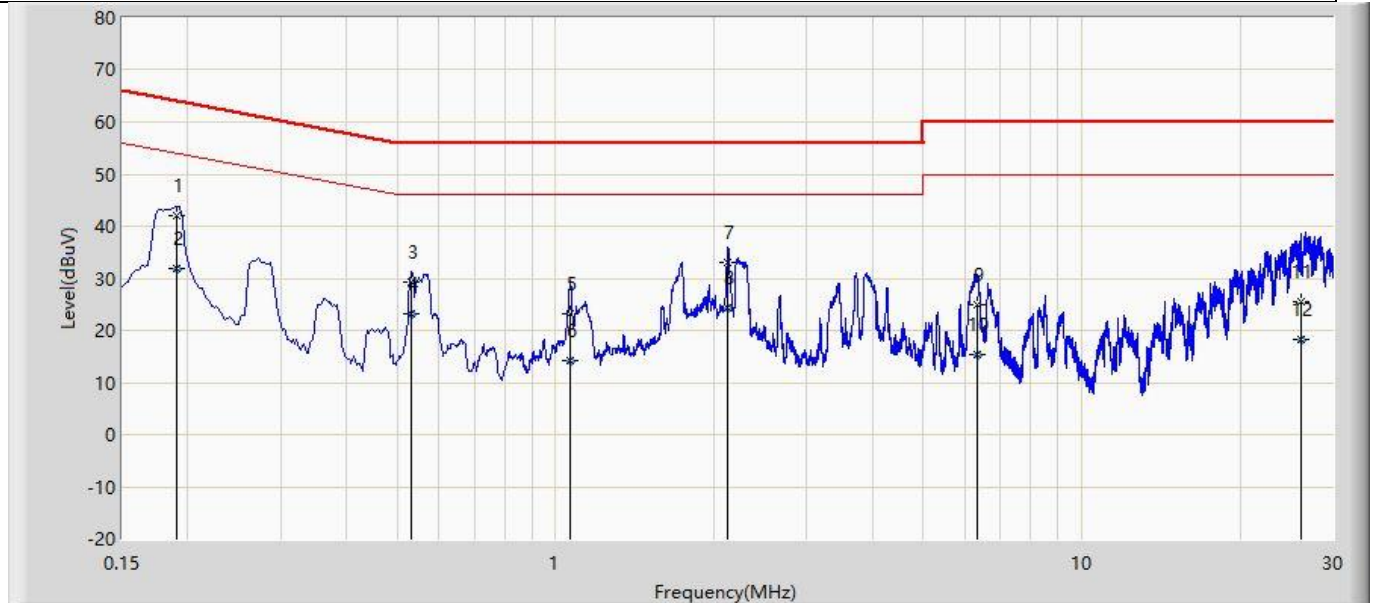
4.9.2 Antenna Connector Construction:	
<input checked="" type="checkbox"/>	The use of a permanently attached antenna
<input type="checkbox"/>	The antenna use of a unique coupling to the intentional radiator
<input type="checkbox"/>	The use of a nonstandard antenna jack or electrical connector
Please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

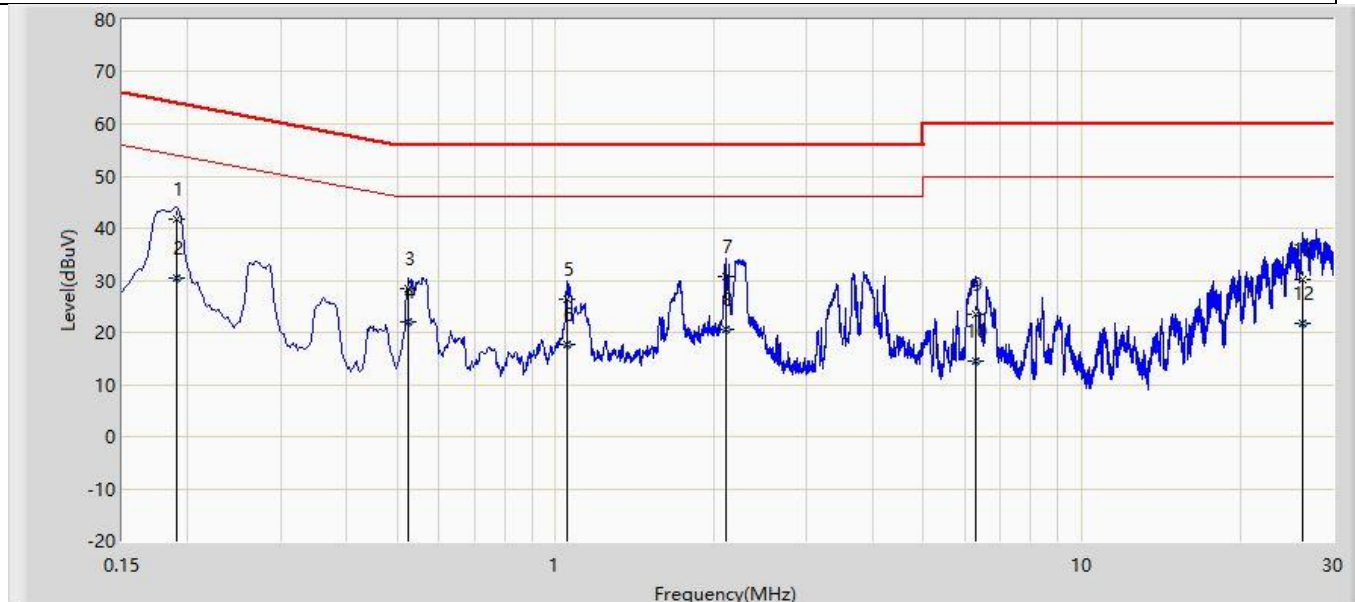
Appendix A: AC Power Line Conducted Emission

Profile: 2420073R	Page No.: 25
Engineer: Pengchengyang	
Site: TR1	Time: 2024/01/17 - 08:58
Limit: FCC_Part 15.207_CE_AC Power	Margin: 0
Probe: ENV216_101189(0.009-30MHz)	Polarity: Line
EUT: LED lamp	Power: 120Vac/60Hz
Note: Mode1: Transmit by LE_1Mbps	



No	Mark	Frequency (MHz)	Measure Level (dBuV)	Reading Level (dBuV)	Over Limit (dB)	Limit (dBuV)	Factor (dB)	Type
1		0.191	42.073	32.450	-21.942	64.015	9.623	QP
2		0.191	31.823	22.200	-22.192	54.015	9.623	AV
3		0.532	29.399	19.761	-26.601	56.000	9.638	QP
4		0.532	23.087	13.449	-22.913	46.000	9.638	AV
5		1.068	23.245	13.573	-32.755	56.000	9.672	QP
6		1.068	14.082	4.411	-31.918	46.000	9.672	AV
7		2.123	32.933	23.235	-23.067	56.000	9.698	QP
8	*	2.123	24.430	14.732	-21.570	46.000	9.698	AV
9		6.344	25.065	15.267	-34.935	60.000	9.798	QP
10		6.344	15.251	5.452	-34.749	50.000	9.798	AV
11		26.025	25.450	15.371	-34.550	60.000	10.079	QP
12		26.025	18.154	8.075	-31.846	50.000	10.079	AV

Profile: 2420073R	Page No.: 26
Engineer: Pengchengyang	
Site: TR1	Time: 2024/01/17 - 08:59
Limit: FCC_Part 15.207_CE_AC Power	Margin: 0
Probe: ENV216_101189(0.009-30MHz)	Polarity: Neutral
EUT: LED lamp	Power: 120Vac/60Hz
Note: Mode1: Transmit by LE_1Mbps	



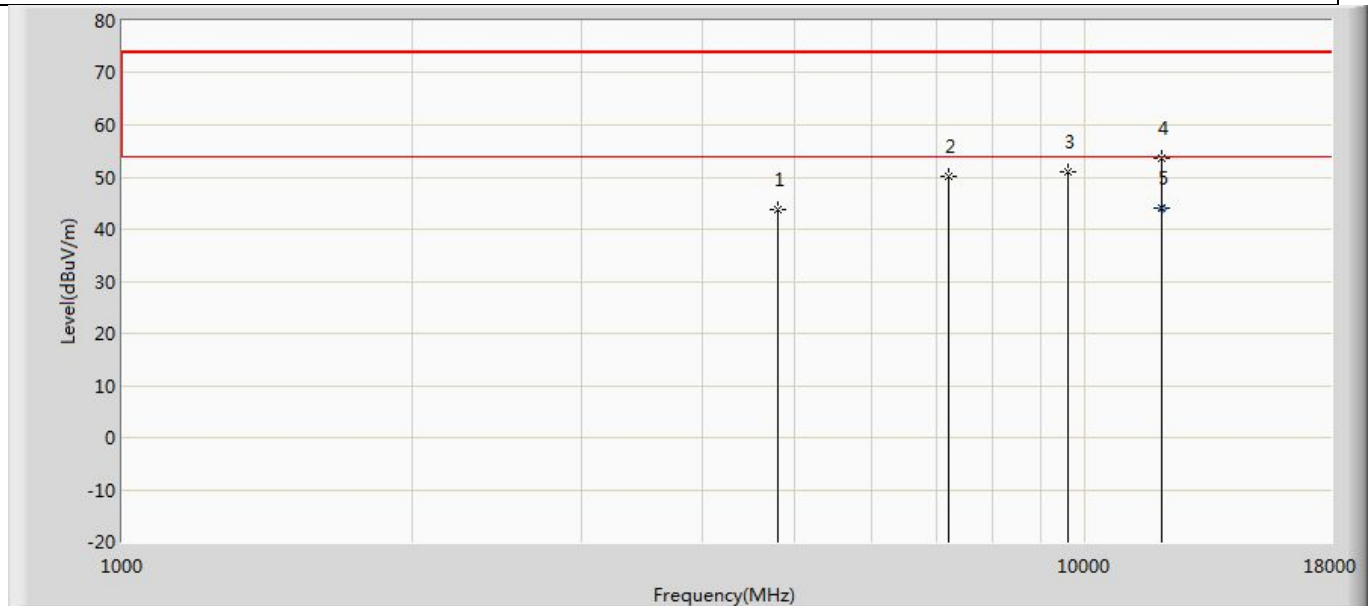
No	Mark	Frequency (MHz)	Measure Level (dBuV)	Reading Level (dBuV)	Over Limit (dB)	Limit (dBuV)	Factor (dB)	Type
1	*	0.191	41.868	32.236	-22.147	64.015	9.632	QP
2		0.191	30.458	20.827	-23.556	54.015	9.632	AV
3		0.526	28.441	18.793	-27.559	56.000	9.648	QP
4		0.526	22.139	12.491	-23.861	46.000	9.648	AV
5		1.054	26.338	16.667	-29.662	56.000	9.671	QP
6		1.054	17.819	8.147	-28.181	46.000	9.671	AV
7		2.107	30.634	20.936	-25.366	56.000	9.699	QP
8		2.107	20.441	10.742	-25.559	46.000	9.699	AV
9		6.295	23.510	13.710	-36.490	60.000	9.800	QP
10		6.295	14.422	4.622	-35.578	50.000	9.800	AV
11		26.230	30.235	20.122	-29.765	60.000	10.113	QP
12		26.230	21.647	11.534	-28.353	50.000	10.113	AV

Note:

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

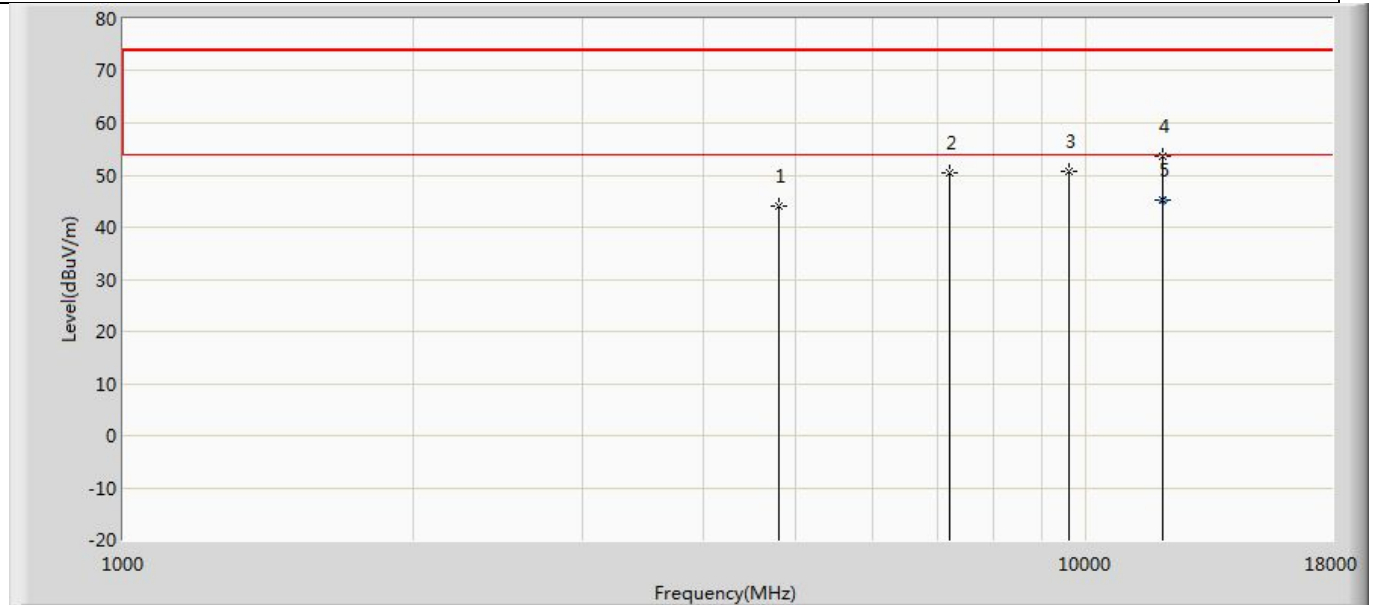
Appendix B: Emissions in restricted frequency bands

Profile: 2420073R	Page No.: 55
Engineer: Pengcheng Yang	
Site: AC5	Time: 2024/01/25 - 11:24
Limit: FCC_Part15.209_RE(3m)	Margin: 0
Probe: Horn_3117_00167055(1-18GHz)	Polarity: Horizontal
EUT: LED lamp	Power: 120Vac/60Hz
Note: Mode 1 : Transmit at 2402MHz by LE_1Mbps	



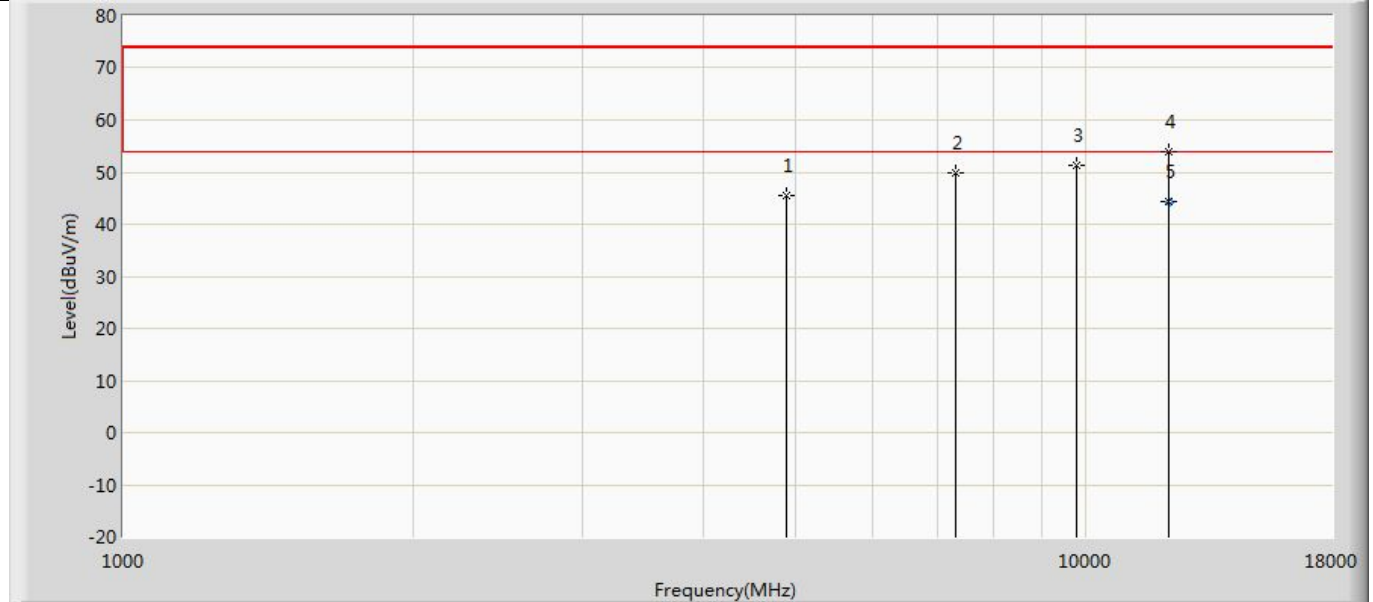
No	Mark	Frequency (MHz)	Measure Level (dBuV/m)	Reading Level (dBuV)	Over Limit (dB)	Limit (dBuV/m)	Factor (dB)	Type
1		4804.000	43.794	55.682	-30.206	74.000	-11.888	PK
2		7205.000	50.124	56.274	-23.876	74.000	-6.150	PK
3		9608.000	51.084	54.307	-22.916	74.000	-3.222	PK
4		12010.000	53.543	53.234	-20.457	74.000	0.309	PK
5	*	12010.760	44.058	43.760	-9.942	54.000	0.299	AV

Profile: 2420073R	Page No.: 56
Engineer: Pengcheng Yang	
Site: AC5	Time: 2024/01/25 - 11:24
Limit: FCC_Part15.209_RE(3m)	Margin: 0
Probe: Horn_3117_00167055(1-18GHz)	Polarity: Vertical
EUT: LED lamp	Power: 120Vac/60Hz
Note: Mode 1 : Transmit at 2402MHz by LE_1Mbps	



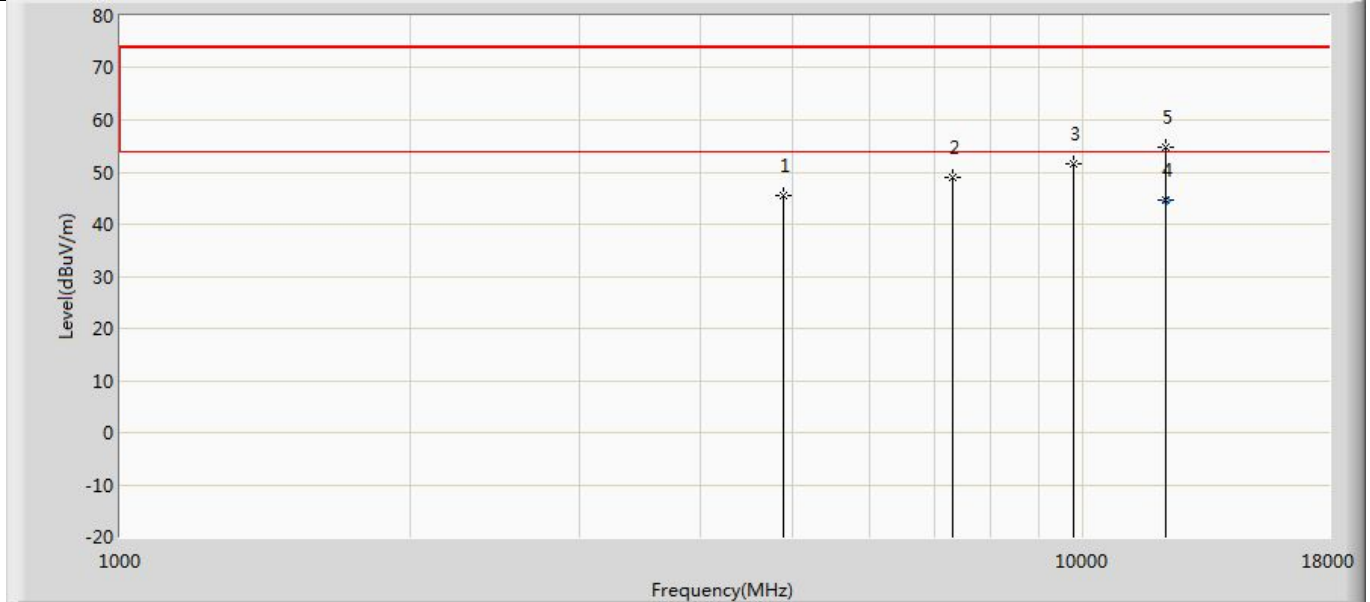
No	Mark	Frequency (MHz)	Measure Level (dBuV/m)	Reading Level (dBuV)	Over Limit (dB)	Limit (dBuV/m)	Factor (dB)	Type
1		4804.000	44.137	56.025	-29.863	74.000	-11.888	PK
2		7205.000	50.575	56.725	-23.425	74.000	-6.150	PK
3		9608.000	50.807	54.030	-23.193	74.000	-3.222	PK
4		12010.000	53.590	53.281	-20.410	74.000	0.309	PK
5	*	12010.720	45.079	44.780	-8.921	54.000	0.299	AV

Profile: 2420073R	Page No.: 57
Engineer: Pengcheng Yang	
Site: AC5	Time: 2024/01/25 - 11:24
Limit: FCC_Part15.209_RE(3m)	Margin: 0
Probe: Horn_3117_00167055(1-18GHz)	Polarity: Horizontal
EUT: LED lamp	Power: 120Vac/60Hz
Note: Mode 1 : Transmit at 2440MHz by LE_1Mbps	



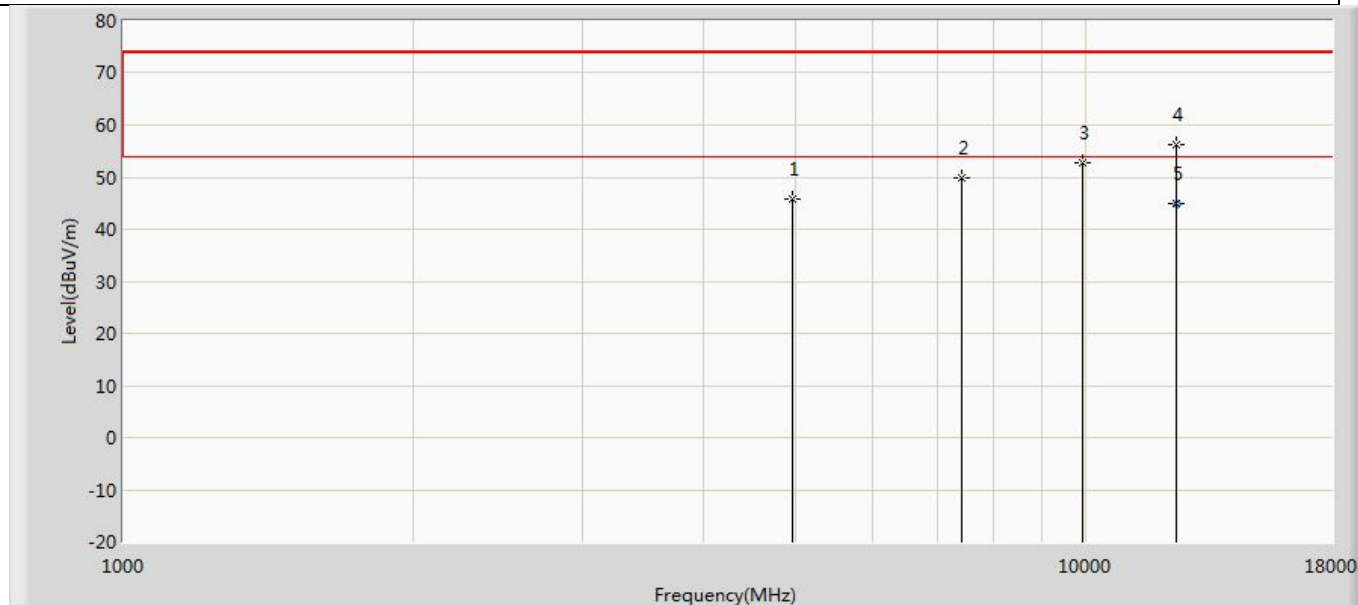
No	Mark	Frequency (MHz)	Measure Level (dBuV/m)	Reading Level (dBuV)	Over Limit (dB)	Limit (dBuV/m)	Factor (dB)	Type
1		4880.000	45.394	55.998	-28.606	74.000	-10.603	PK
2		7324.000	49.940	56.775	-24.060	74.000	-6.835	PK
3		9760.000	51.385	54.258	-22.615	74.000	-2.874	PK
4		12200.000	53.770	52.849	-20.230	74.000	0.921	PK
5	*	12200.840	44.281	43.350	-9.719	54.000	0.931	AV

Profile: 2420073R	Page No.: 58
Engineer: Pengcheng Yang	
Site: AC5	Time: 2024/01/25 - 11:24
Limit: FCC_Part15.209_RE(3m)	Margin: 0
Probe: Horn_3117_00167055(1-18GHz)	Polarity: Vertical
EUT: LED lamp	Power: 120Vac/60Hz
Note: Mode 1 : Transmit at 2440MHz by LE_1Mbps	



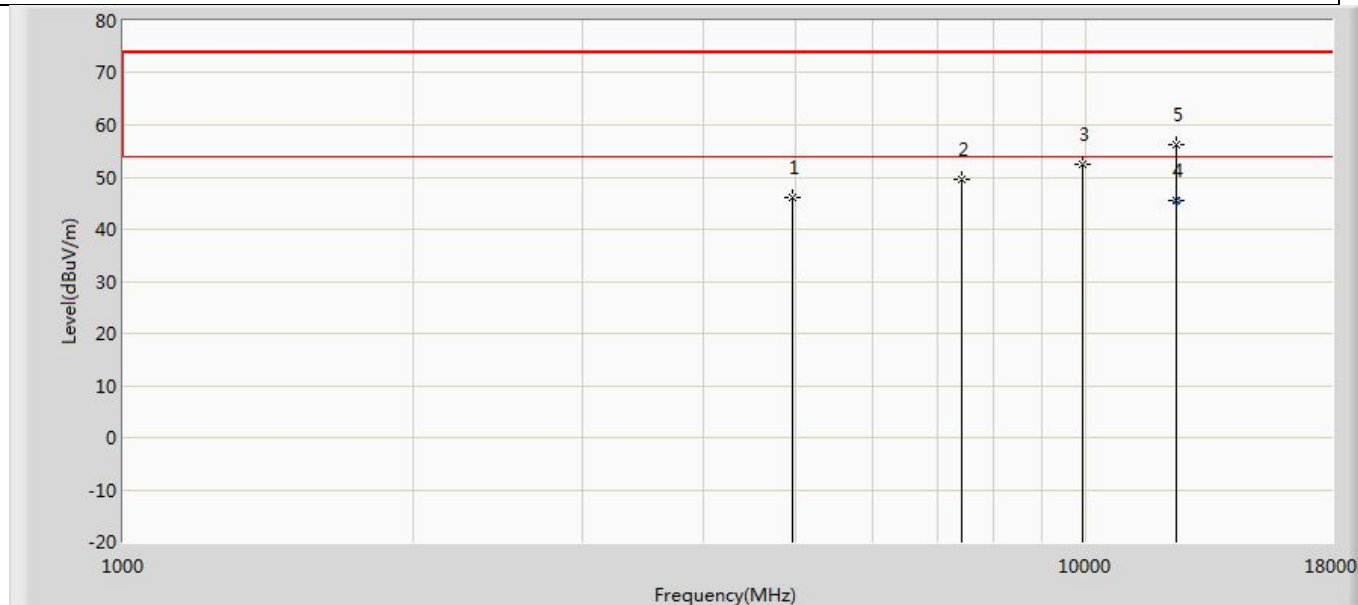
No	Mark	Frequency (MHz)	Measure Level (dBuV/m)	Reading Level (dBuV)	Over Limit (dB)	Limit (dBuV/m)	Factor (dB)	Type
1		4880.000	45.608	56.212	-28.392	74.000	-10.603	PK
2		7320.000	49.037	55.964	-24.963	74.000	-6.927	PK
3		9760.000	51.734	54.607	-22.266	74.000	-2.874	PK
4	*	12198.700	44.645	43.740	-9.355	54.000	0.905	AV
5		12200.000	54.803	53.882	-19.197	74.000	0.921	PK

Profile: 2420073R	Page No.: 59
Engineer: Pengcheng Yang	
Site: AC5	Time: 2024/01/25 - 11:25
Limit: FCC_Part15.209_RE(3m)	Margin: 0
Probe: Horn_3117_00167055(1-18GHz)	Polarity: Horizontal
EUT: LED lamp	Power: 120Vac/60Hz
Note: Mode 1 : Transmit at 2480MHz by LE_1Mbps	



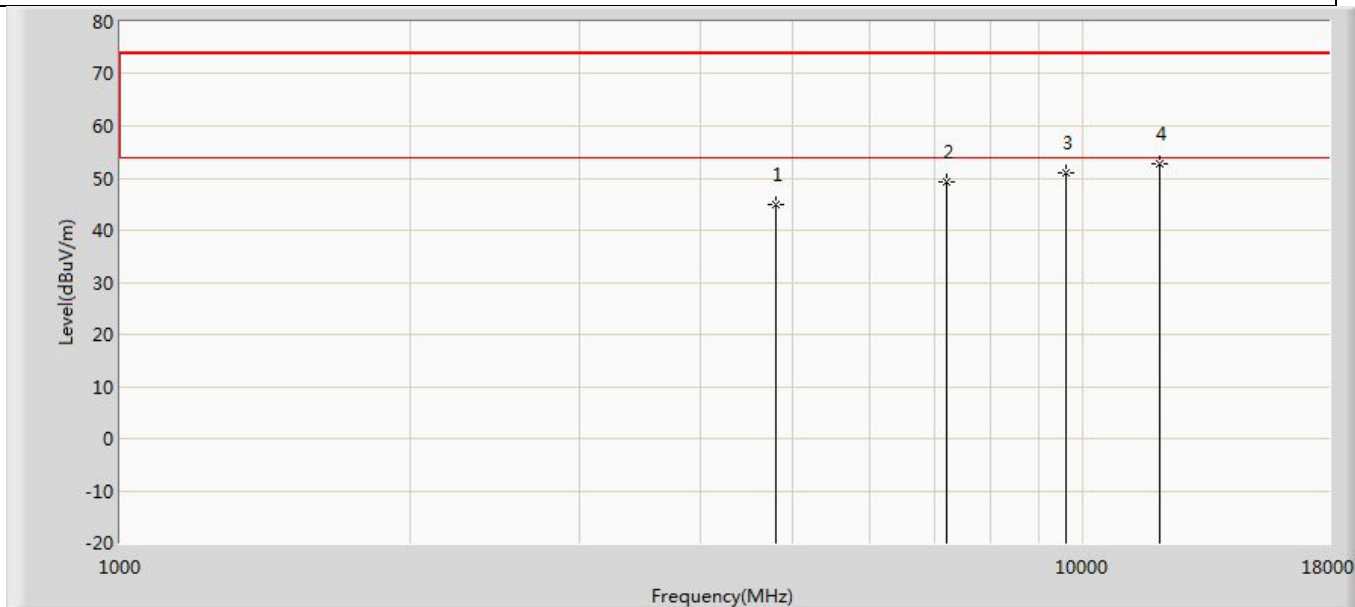
No	Mark	Frequency (MHz)	Measure Level (dBuV/m)	Reading Level (dBuV)	Over Limit (dB)	Limit (dBuV/m)	Factor (dB)	Type
1		4960.000	45.773	56.479	-28.227	74.000	-10.707	PK
2		7440.000	49.768	56.547	-24.232	74.000	-6.779	PK
3		9920.000	52.859	54.681	-21.141	74.000	-1.821	PK
4		12400.000	56.216	53.542	-17.784	74.000	2.674	PK
5	*	12400.540	45.065	42.370	-8.935	54.000	2.695	AV

Profile: 2420073R	Page No.: 60
Engineer: Pengcheng Yang	
Site: AC5	Time: 2024/01/25 - 11:25
Limit: FCC_Part15.209_RE(3m)	Margin: 0
Probe: Horn_3117_00167055(1-18GHz)	Polarity: Vertical
EUT: LED lamp	Power: 120Vac/60Hz
Note: Mode 1 : Transmit at 2480MHz by LE_1Mbps	



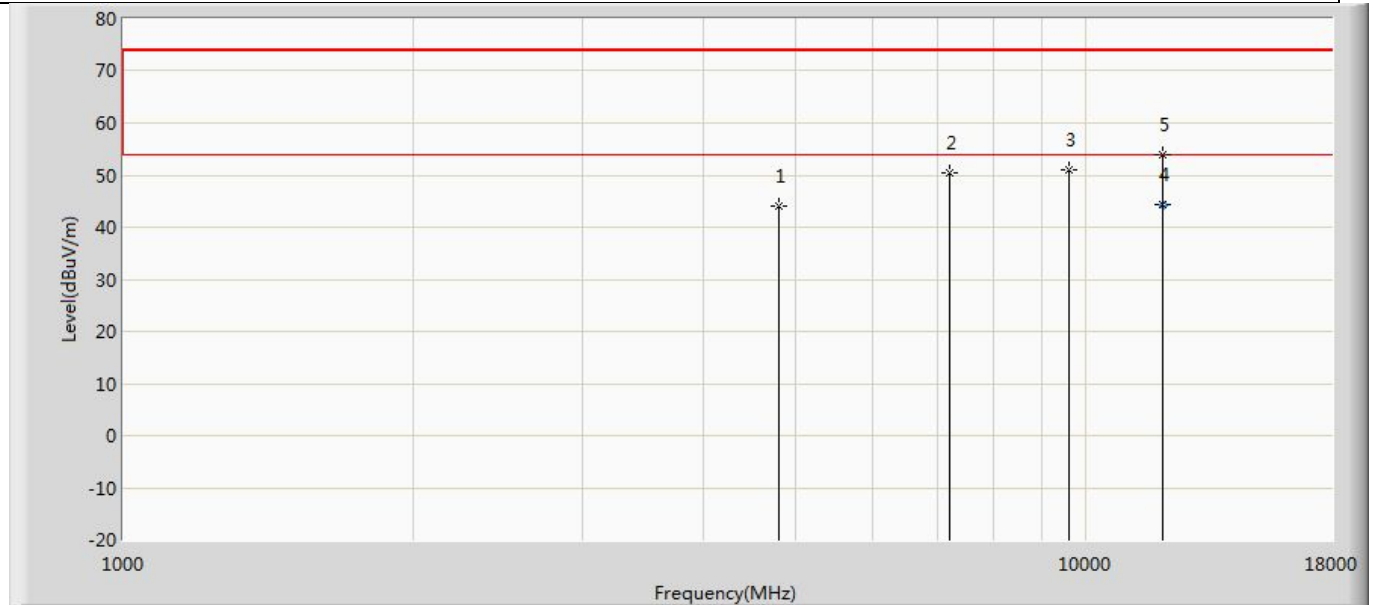
No	Mark	Frequency (MHz)	Measure Level (dBuV/m)	Reading Level (dBuV)	Over Limit (dB)	Limit (dBuV/m)	Factor (dB)	Type
1		4960.000	45.999	56.705	-28.001	74.000	-10.707	PK
2		7440.000	49.594	56.373	-24.406	74.000	-6.779	PK
3		9920.000	52.481	54.303	-21.519	74.000	-1.821	PK
4	*	12400.840	45.647	42.940	-8.353	54.000	2.707	AV
5		12407.000	56.130	53.181	-17.870	74.000	2.949	PK

Profile: 2420073R	Page No.: 91
Engineer: Pengcheng Yang	
Site: AC5	Time: 2024/01/25 - 11:28
Limit: FCC_Part15.209_RE(3m)	Margin: 0
Probe: Horn_3117_00167055(1-18GHz)	Polarity: Horizontal
EUT: LED lamp	Power: 120Vac/60Hz
Note: Mode 2 : Transmit at 2402MHz by LE_2Mbps	



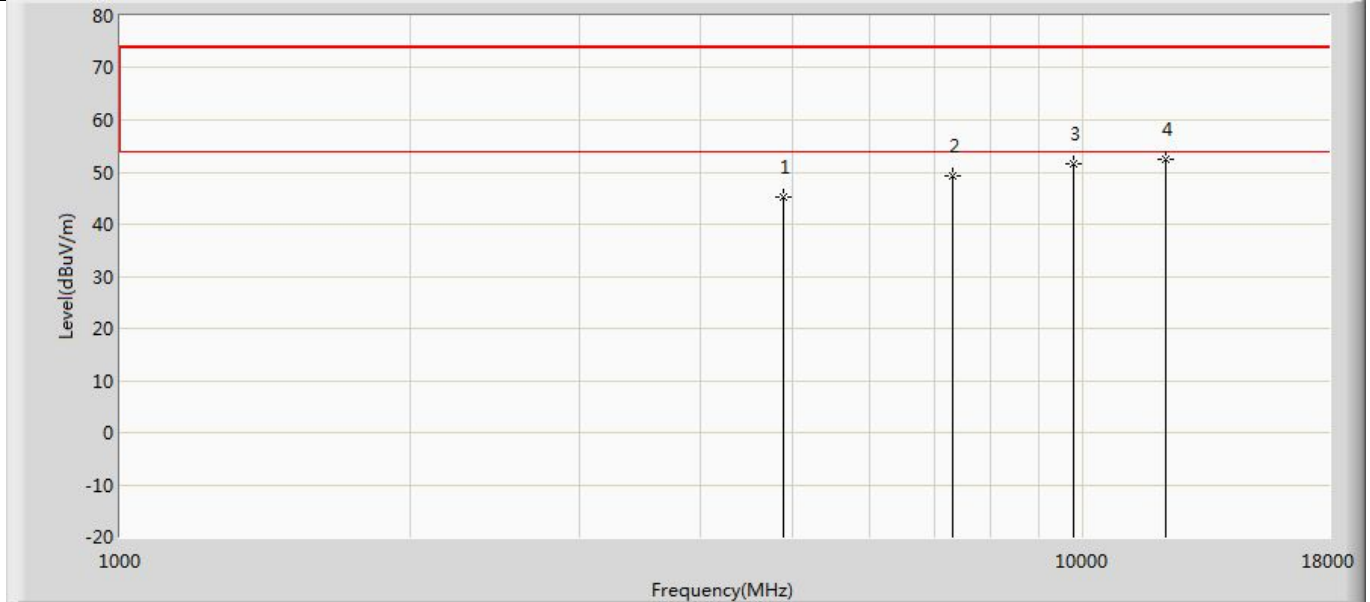
No	Mark	Frequency (MHz)	Measure Level (dBuV/m)	Reading Level (dBuV)	Over Limit (dB)	Limit (dBuV/m)	Factor (dB)	Type
1		4804.000	45.067	56.955	-28.933	74.000	-11.888	PK
2		7206.000	49.295	55.461	-24.705	74.000	-6.166	PK
3		9608.000	50.948	54.171	-23.052	74.000	-3.222	PK
4	*	12010.000	52.687	52.378	-21.313	74.000	0.309	PK

Profile: 2420073R	Page No.: 92
Engineer: Pengcheng Yang	
Site: AC5	Time: 2024/01/25 - 11:28
Limit: FCC_Part15.209_RE(3m)	Margin: 0
Probe: Horn_3117_00167055(1-18GHz)	Polarity: Vertical
EUT: LED lamp	Power: 120Vac/60Hz
Note: Mode 2 : Transmit at 2402MHz by LE_2Mbps	



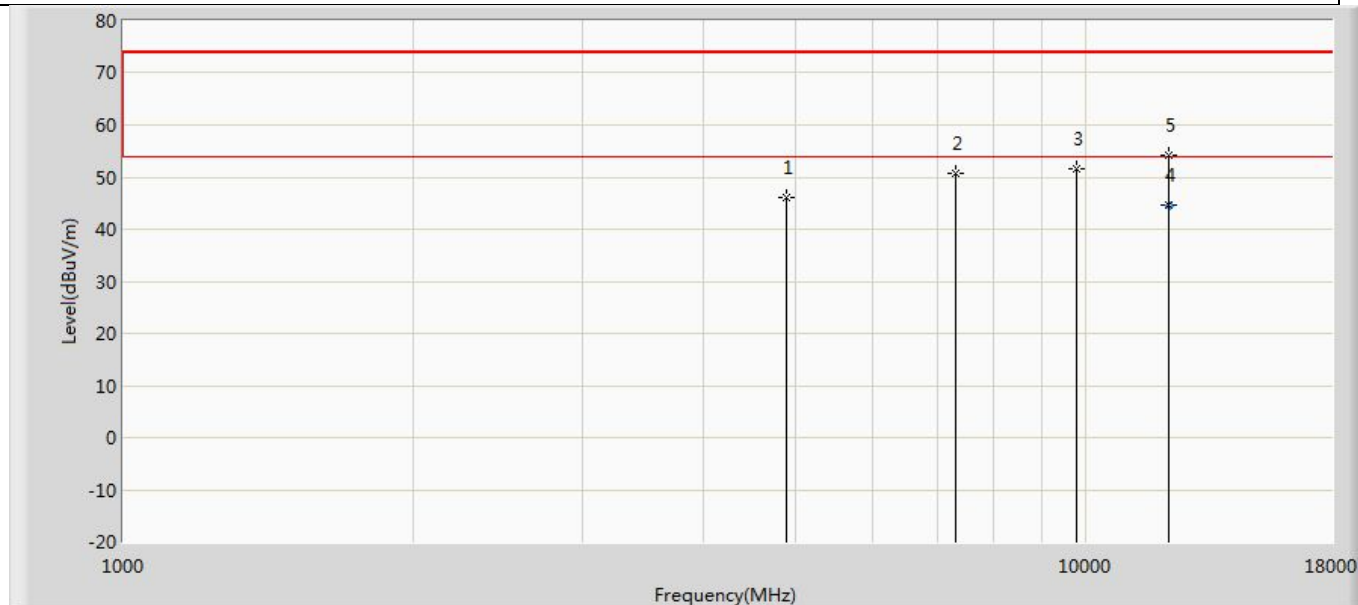
No	Mark	Frequency (MHz)	Measure Level (dBuV/m)	Reading Level (dBuV)	Over Limit (dB)	Limit (dBuV/m)	Factor (dB)	Type
1		4804.000	44.091	55.979	-29.909	74.000	-11.888	PK
2		7206.000	50.448	56.614	-23.552	74.000	-6.166	PK
3		9608.000	51.143	54.366	-22.857	74.000	-3.222	PK
4	*	12007.560	44.452	44.110	-9.548	54.000	0.342	AV
5		12010.000	53.880	53.571	-20.120	74.000	0.309	PK

Profile: 2420073R	Page No.: 93
Engineer: Pengcheng Yang	
Site: AC5	Time: 2024/01/25 - 11:28
Limit: FCC_Part15.209_RE(3m)	Margin: 0
Probe: Horn_3117_00167055(1-18GHz)	Polarity: Horizontal
EUT: LED lamp	Power: 120Vac/60Hz
Note: Mode 2 : Transmit at 2440MHz by LE_2Mbps	



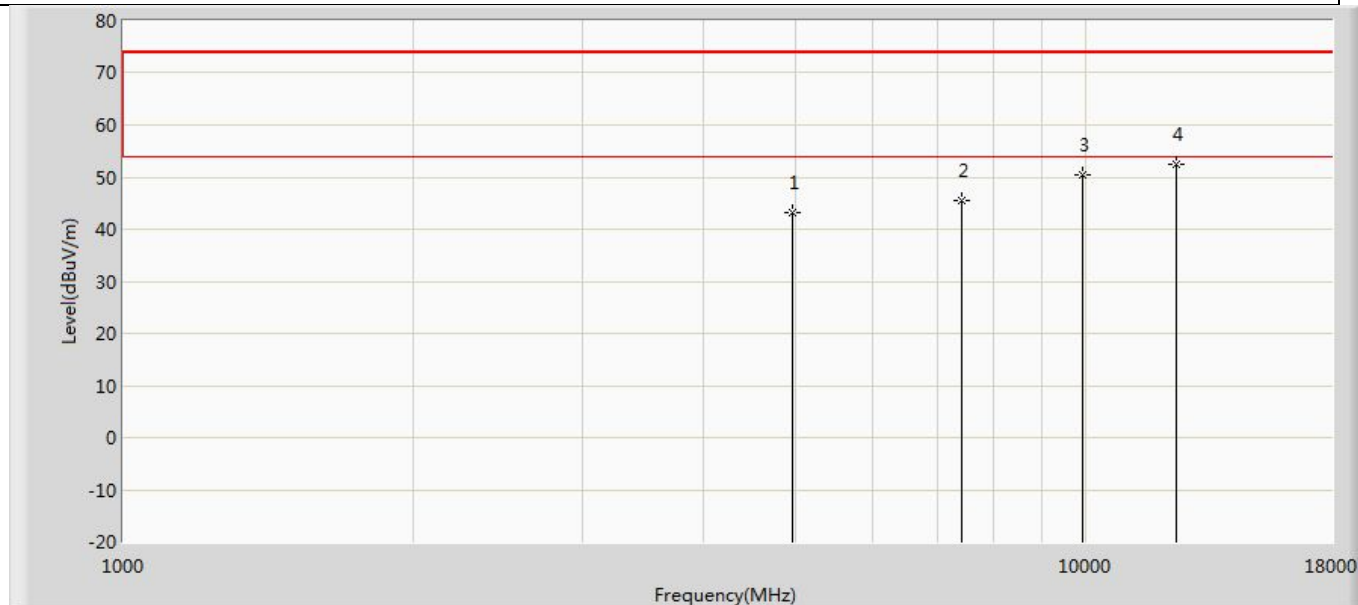
No	Mark	Frequency (MHz)	Measure Level (dBuV/m)	Reading Level (dBuV)	Over Limit (dB)	Limit (dBuV/m)	Factor (dB)	Type
1		4880.000	45.175	55.779	-28.825	74.000	-10.603	PK
2		7320.000	49.356	56.283	-24.644	74.000	-6.927	PK
3		9760.000	51.512	54.385	-22.488	74.000	-2.874	PK
4	*	12200.000	52.386	51.465	-21.614	74.000	0.921	PK

Profile: 2420073R	Page No.: 94
Engineer: Pengcheng Yang	
Site: AC5	Time: 2024/01/25 - 11:28
Limit: FCC_Part15.209_RE(3m)	Margin: 0
Probe: Horn_3117_00167055(1-18GHz)	Polarity: Vertical
EUT: LED lamp	Power: 120Vac/60Hz
Note: Mode 2 : Transmit at 2440MHz by LE_2Mbps	



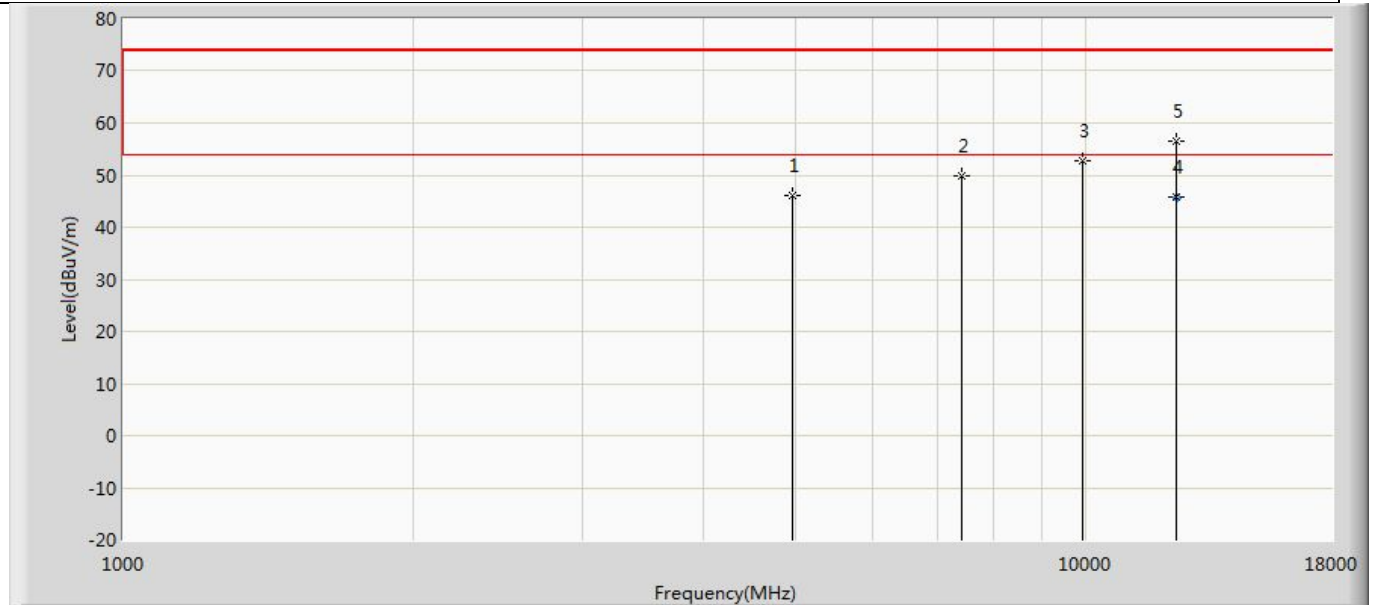
No	Mark	Frequency (MHz)	Measure Level (dBuV/m)	Reading Level (dBuV)	Over Limit (dB)	Limit (dBuV/m)	Factor (dB)	Type
1		4880.000	45.954	56.558	-28.046	74.000	-10.603	PK
2		7324.000	50.722	57.557	-23.278	74.000	-6.835	PK
3		9760.000	51.643	54.516	-22.357	74.000	-2.874	PK
4	*	12197.460	44.610	43.720	-9.390	54.000	0.890	AV
5		12200.000	54.321	53.400	-19.679	74.000	0.921	PK

Profile: 2420073R	Page No.: 95
Engineer: Pengcheng Yang	
Site: AC5	Time: 2024/01/25 - 11:28
Limit: FCC_Part15.209_RE(3m)	Margin: 0
Probe: Horn_3117_00167055(1-18GHz)	Polarity: Horizontal
EUT: LED lamp	Power: 120Vac/60Hz
Note: Mode 2 : Transmit at 2480MHz by LE_2Mbps	



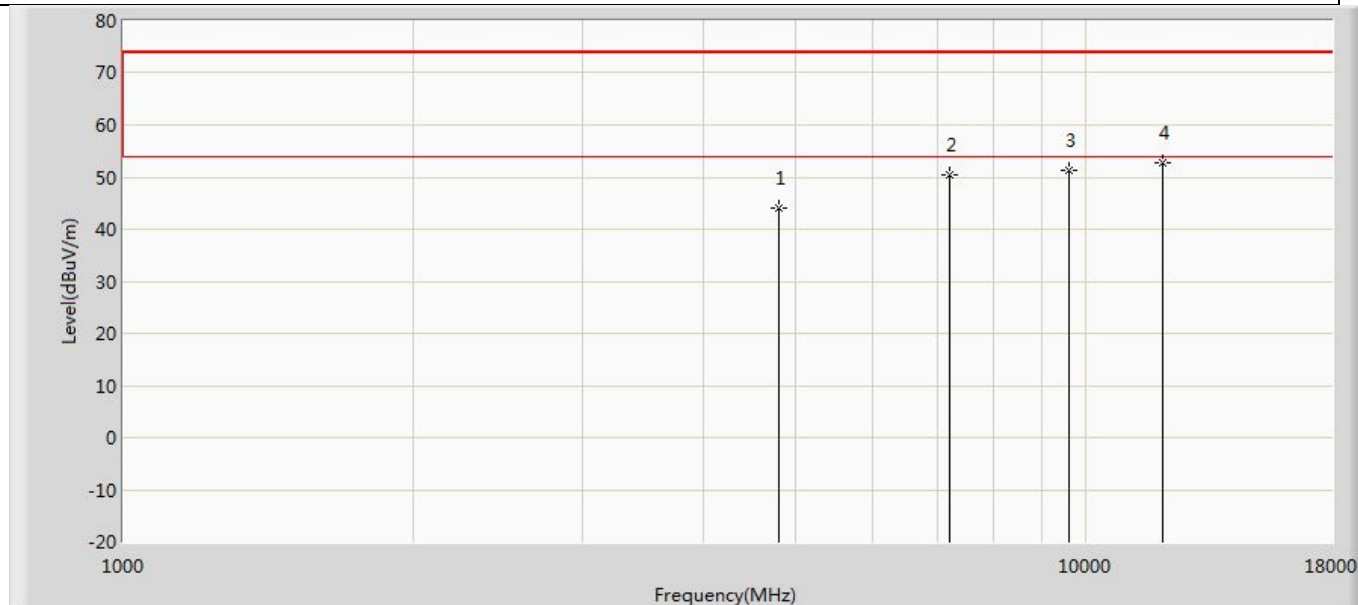
No	Mark	Frequency (MHz)	Measure Level (dBuV/m)	Reading Level (dBuV)	Over Limit (dB)	Limit (dBuV/m)	Factor (dB)	Type
1		4960.000	43.208	53.914	-30.792	74.000	-10.707	PK
2		7440.000	45.648	52.427	-28.352	74.000	-6.779	PK
3		9920.000	50.570	52.392	-23.430	74.000	-1.821	PK
4	*	12400.000	52.454	49.780	-21.546	74.000	2.674	PK

Profile: 2420073R	Page No.: 96
Engineer: Pengcheng Yang	
Site: AC5	Time: 2024/01/25 - 11:28
Limit: FCC_Part15.209_RE(3m)	Margin: 0
Probe: Horn_3117_00167055(1-18GHz)	Polarity: Vertical
EUT: LED lamp	Power: 120Vac/60Hz
Note: Mode 2 : Transmit at 2480MHz by LE_2Mbps	



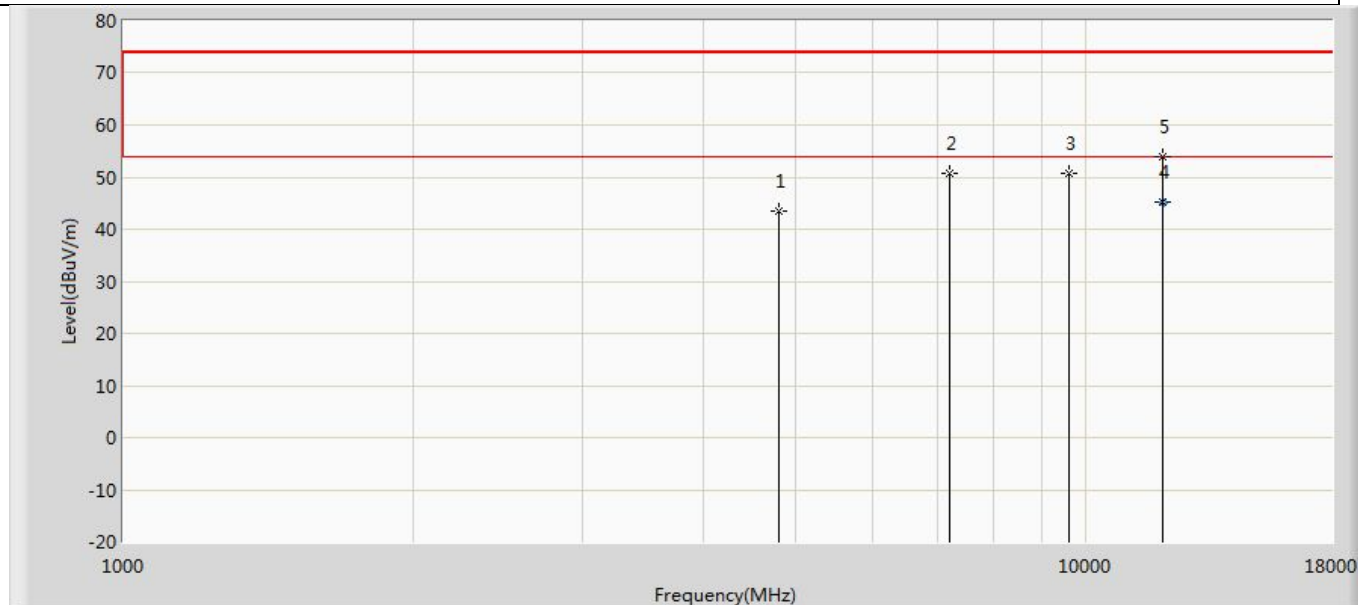
No	Mark	Frequency (MHz)	Measure Level (dBuV/m)	Reading Level (dBuV)	Over Limit (dB)	Limit (dBuV/m)	Factor (dB)	Type
1		4960.000	45.953	56.659	-28.047	74.000	-10.707	PK
2		7440.000	49.816	56.595	-24.184	74.000	-6.779	PK
3		9920.000	52.836	54.658	-21.164	74.000	-1.821	PK
4	*	12401.540	45.684	42.950	-8.316	54.000	2.734	AV
5		12407.000	56.394	53.445	-17.606	74.000	2.949	PK

Profile: 2420073R	Page No.: 13
Engineer: Pengchengyang	
Site: AC5	Time: 2024/02/19 - 10:43
Limit: FCC_Part15.209_RE(3m)	Margin: 0
Probe: Horn_3117_00167055(1-18GHz)	Polarity: Horizontal
EUT: LED lamp	Power: 120Vac/60Hz
Note: Mode 3 : Transmit at 2402MHz by LE_Coded S=8	



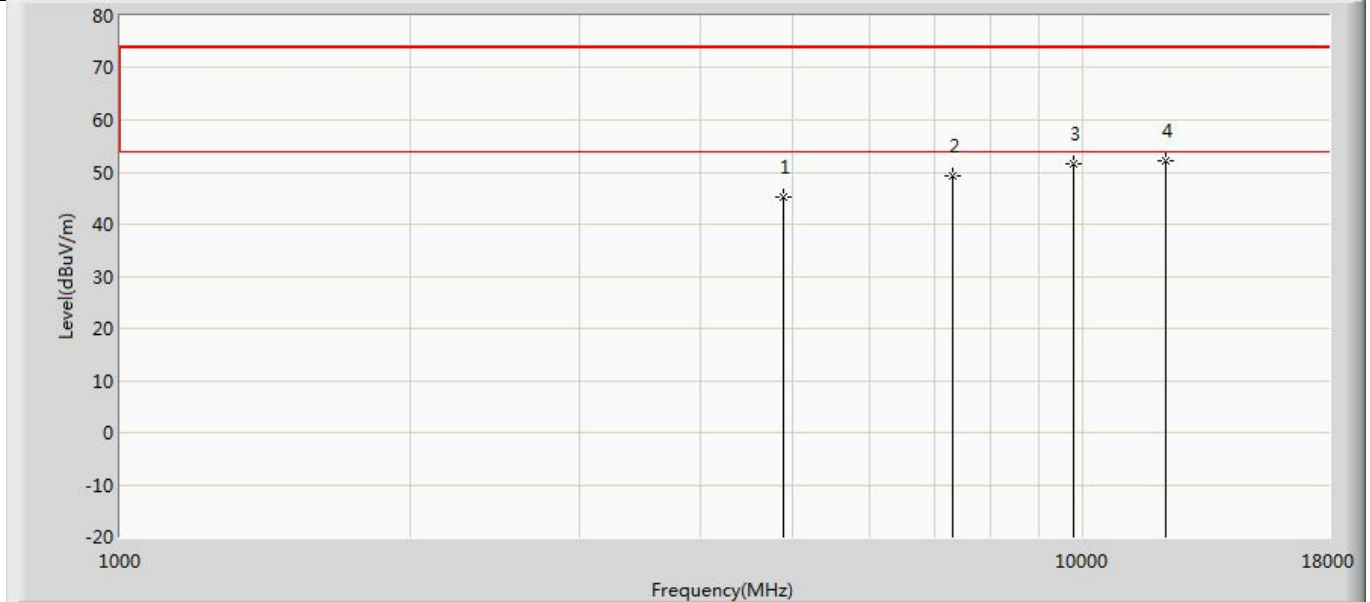
No	Mark	Frequency (MHz)	Measure Level (dBuV/m)	Reading Level (dBuV)	Over Limit (dB)	Limit (dBuV/m)	Factor (dB)	Type
1		4804.000	43.954	55.842	-30.046	74.000	-11.888	PK
2		7206.000	50.549	56.715	-23.451	74.000	-6.166	PK
3		9608.000	51.203	54.426	-22.797	74.000	-3.222	PK
4	*	12010.000	52.804	52.495	-21.196	74.000	0.309	PK

Profile: 2420073R	Page No.: 14
Engineer: Pengchengyang	
Site: AC5	Time: 2024/02/19 - 10:43
Limit: FCC_Part15.209_RE(3m)	Margin: 0
Probe: Horn_3117_00167055(1-18GHz)	Polarity: Vertical
EUT: LED lamp	Power: 120Vac/60Hz
Note: Mode 3 : Transmit at 2402MHz by LE_Coded S=8	



No	Mark	Frequency (MHz)	Measure Level (dBuV/m)	Reading Level (dBuV)	Over Limit (dB)	Limit (dBuV/m)	Factor (dB)	Type
1		4804.000	43.560	55.448	-30.440	74.000	-11.888	PK
2		7206.000	50.610	56.776	-23.390	74.000	-6.166	PK
3		9608.000	50.656	53.879	-23.344	74.000	-3.222	PK
4	*	12008.400	45.081	44.750	-8.919	54.000	0.331	AV
5		12010.000	53.837	53.528	-20.163	74.000	0.309	PK

Profile: 2420073R	Page No.: 15
Engineer: Pengchengyang	
Site: AC5	Time: 2024/02/19 - 10:43
Limit: FCC_Part15.209_RE(3m)	Margin: 0
Probe: Horn_3117_00167055(1-18GHz)	Polarity: Horizontal
EUT: LED lamp	Power: 120Vac/60Hz
Note: Mode 3 : Transmit at 2440MHz by LE_Coded S=8	



No	Mark	Frequency (MHz)	Measure Level (dBuV/m)	Reading Level (dBuV)	Over Limit (dB)	Limit (dBuV/m)	Factor (dB)	Type
1		4880.000	45.250	55.854	-28.750	74.000	-10.603	PK
2		7320.000	49.165	56.092	-24.835	74.000	-6.927	PK
3		9760.000	51.550	54.423	-22.450	74.000	-2.874	PK
4	*	12200.000	52.233	51.312	-21.767	74.000	0.921	PK