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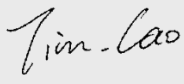
Test report No:
2260325R-RF-US-P06V03

FCC & ISED TEST REPORT

Product Name	WLAN+Bluetooth Module
Trademark	Murata
Model and /or type reference	LBEE5HY2DU
FCC ID	VPYLB2DU
IC	772C-LB2DU
Applicant´s name / address	Murata Manufacturing Co., Ltd. 10-1, Higashikotari 1-chome, Nagaokakyo-shi, Kyoto 617-8555, Japan
Test method requested, standard	FCC CFR Title 47 Part 15 Subpart C Section 15.247 ANSI C63.10: 2013 KDB 558074 D01v05r02 RSS-Gen Issue 5 /RSS-247 Issue 2
Verdict Summary	IN COMPLIANCE
Tested By (name / position & signature)	Tim Cao/ Project Engineer 
Approved by (name / position & signature)	Jack Zhang/ Manager 
Date of issue	2022-07-31
Report Version	V1.0
Report template No	Template_FCC Part 15C-RF-V1.0

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COMPETENCES AND GUARANTEES

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

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

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

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

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GENERAL CONDITIONS

Test Location	No. 99, Hongye Road, Suzhou Industrial Park Suzhou, 215006, P.R. China
Date(receive sample)	Jun. 20, 2022
Date (start test)	Jun. 25, 2022
Date (finish test)	Jul. 20, 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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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
2260325R-RF-US-P06V03	V1.0	Initial issue of report.	2022-07-31

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 Test Data Rate;
   - Chapter 1.4 Channel List;
   - Chapter 1.5 Power Setting.

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	100726	2021.10.30	2022.10.29
Two-Line V-Network	R&S	ENV216	101044	2022.03.12	2023.03.11
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
Temperature/Humidity Meter	RTS	RTS-8S	TR1-TH	2022.07.07	2023.07.06
Coaxial Cable	Suhner	RG 223	TR1-C2	2022.03.21	2023.03.20
Dekra test software	Dekra	-	-	-	-

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

Instrument	Manufacturer	Model No.	Serial No.	Cal. Date	Next Cal. Date
EXA Spectrum Analyzer	Agilent	N9020A	MY49100159	2021.11.17	2022.11.16
MXA Signal Anlyzer	Keysight	N9020A	MY56060147	2021.11.18	2022.11.17
4TX MIMO Power Sensor	Keysight	X8750A	MY59400102	2022.03.16	2023.03.15
Coaxial Cable	Woken	N/A	N/A	2022.01.18	2023.01.17
Temperature/Humidity Meter	RTS	RTS-8S	RF08	2021.07.09	2022.07.08
Temperature/Humidity Meter	RTS	RTS-8S	RF08	2022.07.07	2023.07.06
Tonscend test software	Tonscend				

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
Loop Antenna	R&S	HFH2-Z2	833799/003	2022.04.15	2023.04.14
Bilog Antenna	Teseq GmbH	CBL6112D	27613	2021.08.23	2022.08.22
Coaxial Cable	Huber+Suhner	RG 214	AC3-C	2022.03.30	2023.03.29
Temperature/Humidity Meter	RTS	RTS-8S	AC3-TH	2021.07.09	2022.07.08
Temperature/Humidity Meter	RTS	RTS-8S	AC3-TH	2022.07.07	2023.07.06
Dekra test software	Dekra	-	-	-	-

Radiated Emission(1GHz-40GHz) / AC5

Instrument	Manufacturer	Model No.	Serial No.	Cal. Date	Next Cal. Date
EXA Spectrum Analyzer	Keysight	N9010A	MY55370495	2021.08.12	2022.08.11
Pre-Amplifier	SKET	LNPA_0118G-45	SK2021090101	2021.12.13	2022.12.12
Preamplifier	CHENGYI	EMC184045SE	980263	2022.05.21	2023.05.20
DRG Horn	ETS-Lindgren	3117	00123988	2021.10.22	2022.10.21
Temperature/Humidity Meter	RTS	RTS-8S	AC5-TH	2021.07.09	2022.07.08
Temperature/Humidity Meter	RTS	RTS-8S	AC5-TH	2022.07.07	2023.07.06
Coaxial Cable	Huber+Suhner	SUCOFLEX 106	AC5-C1	2022.03.21	2023.03.20
Coaxial Cable	Huber+Suhner	SUCOFLEX 106	AC5-C2	2022.03.21	2023.03.20
Coaxial Cable	Huber+Suhner	SUCOFLEX 102	AC5-C3	2022.03.21	2023.03.20
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	± 2.92 dB
Peak Power Output	± 1.13 dB
Radiated Emission(30MHz~1GHz)	Horizontal: 30MHz~200MHz: 4.60 dB 200MHz~1GHz: 4.10 dB Vertical: 30MHz~200MHz: 4.80 dB 200MHz~1GHz: 4.10 dB
Radiated Emission(1GHz~40GHz)	Horizontal: 1GHz~18GHz: 5.00 dB Vertical: 1GHz~18GHz: 4.80 dB Horizontal: 18GHz~40GHz: 4.70 dB Vertical: 18GHz~40GHz: 4.60 dB
RF antenna conducted test	± 1.13 dB
Radiated Emission Band Edge	± 5.00 dB
DTS Bandwidth	± 279 Hz
Occupied Bandwidth	± 279 Hz
Power Density	± 1.13 dB

1 GENERAL INFORMATION

1.1 General Description of the Item(s)

Product Name..... :	WLAN+Bluetooth Module
Model No. ..... :	LBEE5HY2DU
FCC ID..... :	VPYLB2DU
IC ..... :	772C-LB2DU
Hardware Version ..... :	1.0
Software Version..... :	1.0
Manufacturer..... :	Murata Manufacturing Co., Ltd.
Manufacturer address ..... :	10-1, Higashikotari 1-chome, Nagaokakyo-shi, Kyoto 617-8555, Japan
Factory ..... :	Murata Manufacturing Co., Ltd.
Address ..... :	10-1, Higashikotari 1-chome, Nagaokakyo-shi, Kyoto 617-8555, Japan

Wireless specifiction..... :	WLAN	
Operating frequency range(s)..... :	2400~2483.5MHz	
Type of modulation..... :	802.11b: DSSS-DBPSK, DQPSK, CCK 802.11g: OFDM-BPSK, QPSK, 16QAM, 64QAM 802.11n: Up to 72.2Mbps	
Number of channel..... :	802.11b/g/n(20MHz) : 11	
Device category ..... :	☐	Fixed point-to-point
	☐	Emit multiple directional beams, simultaneously or sequentially
	☒	Other cases

Rated power supply .....:	Voltage and Frequency	
	☐	AC: 220 – 240 V, 50/60 Hz
	☒	DC:3.2-4.2V
	☐	Adapter: ……
	☐	Battery:……
Mounting position.....:	☐	Table top equipment
	☐	Wall/Ceiling mounted equipment
	☐	Floor standing equipment
	☐	Head-mounted equipment
	☒	Other: Module

1.2 Antenna Information

Antenna model / type number..... :	N/A			
Antenna serial number ..... :	N/A			
Antenna Delivery ..... :	☒	1TX + 1RX		
	☐	2TX + 2RX		
	☐	Others:……		
Antenna technology..... :	☒	SISO		
	☐	MIMO	☐	CDD
			☐	Beam-forming
Antenna Type..... :	☒	External	☐	Dipole
			☐	Sectorized
			☒	PCB
	☐	Internal	☐	FPC
			☐	PCB
			☐	Metal Monopole Antenna
			☐	Ceramic chip
			☐	Others……..
Antenna Gain..... :	0.1dBi			

1.3 Test Data Rate

IEEE 802.11b

Modulation	Data Rate(Mb/s)
DSSS	1
DSSS	2
CCK	5.5
CCK	11

IEEE 802.11g

Modulation	R	Data Rate(Mb/s)
BPSK	1/2	6
BPSK	3/4	9
QPSK	1/2	12
QPSK	3/4	18
16-QAM	1/2	24
16-QAM	3/4	36
64-QAM	2/3	48
64-QAM	3/4	54

IEEE 802.11n

Spatial streames	MCS Index	Modulation	R	Data Rate(Mb/s)	
				20MHz	
				800ns GI	400ns GI
1	0	BPSK	1/2	6.5	7.2
1	1	QPSK	1/2	13.0	14.4
1	2	QPSK	3/4	19.5	21.7
1	3	16-QAM	1/2	26.0	28.9
1	4	16-QAM	3/4	39.0	43.3
1	5	64-QAM	2/3	52.0	57.8
1	6	64-QAM	3/4	58.5	65.0
1	7	64-QAM	5/6	65.0	72.2
Note 1: Support of 400ns GI is optional on transmit and receive.					

Symbol	Explanation
R	Code rate
GI	guard interval

1.4 Channel List

IEEE 802.11b/g & IEEE 802.11n (20MHz)

Working Frequency of Each Channel							
Channel	Frequency	Channel	Frequency	Channel	Frequency	Channel	Frequency
1	2412 MHz	2	2417 MHz	3	2422 MHz	4	2427 MHz
5	2432 MHz	6	2437 MHz	7	2442 MHz	8	2447 MHz
9	2452 MHz	10	2457 MHz	11	2462 MHz	-	-

1.5 Power Setting

Power Setting											
Channel	CH1	CH2	CH3	CH4	CH5	CH6	CH7	CH8	CH9	CH10	CH11
Frequency (MHz)	2412	2417	2422	2427	2432	2437	2442	2447	2452	2457	2462
11b	17dBm	17dBm	17dBm	17dBm	17dBm	17dBm	17dBm	17dBm	17dBm	17dBm	17dBm
11g	16dBm	16dBm	16dBm	16dBm	16dBm	16dBm	16dBm	16dBm	16dBm	16dBm	16dBm
11n-20	14dBm	14dBm	14dBm	14dBm	14dBm	14dBm	14dBm	14dBm	14dBm	14dBm	14dBm

Note: The General Description of the Item, antenna information,Test Data Rate, Channel List and power setting 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	Mode 1: Transmit by 802.11b
	Mode 2: Transmit by 802.11g
	Mode 3: Transmit by 802.11n(20MHz)

Note : For client device, radiated tests was verified over X, Y, Z axis, and shown the worst case Z axis on this report.

2.2 Accessories Information

Accessories Information	Brand/model name	Cable		
		Length used during test [m]	Attached during test	Shielded
USB Cable	N/A	10	☒	☒
USB Cable	N/A	0.5	☒	☒

2.3 Support / Auxiliary equipment / unit / Test software for the EUT

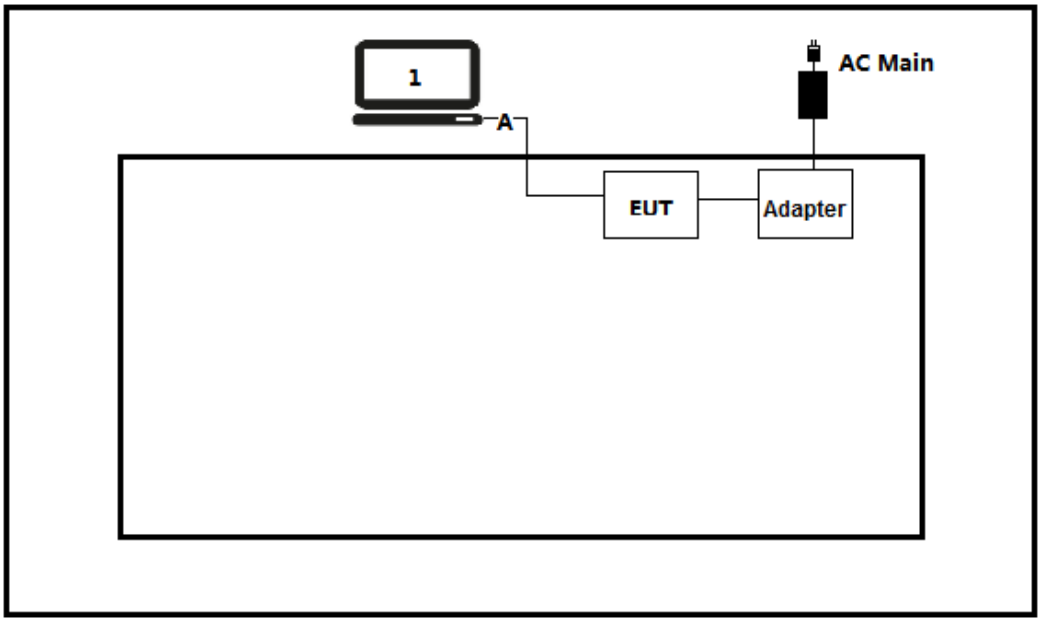
The EUT has been tested with the following auxiliary equipment / unit / software:

Auxiliary equipment	Type / Version	Manufacturer	Supplied by
Notebook	Think pad x220	Lenovo	Adapter
software	Type / Version	Manufacturer	Supplied by
PUTTY	N/A	N/A	N/A

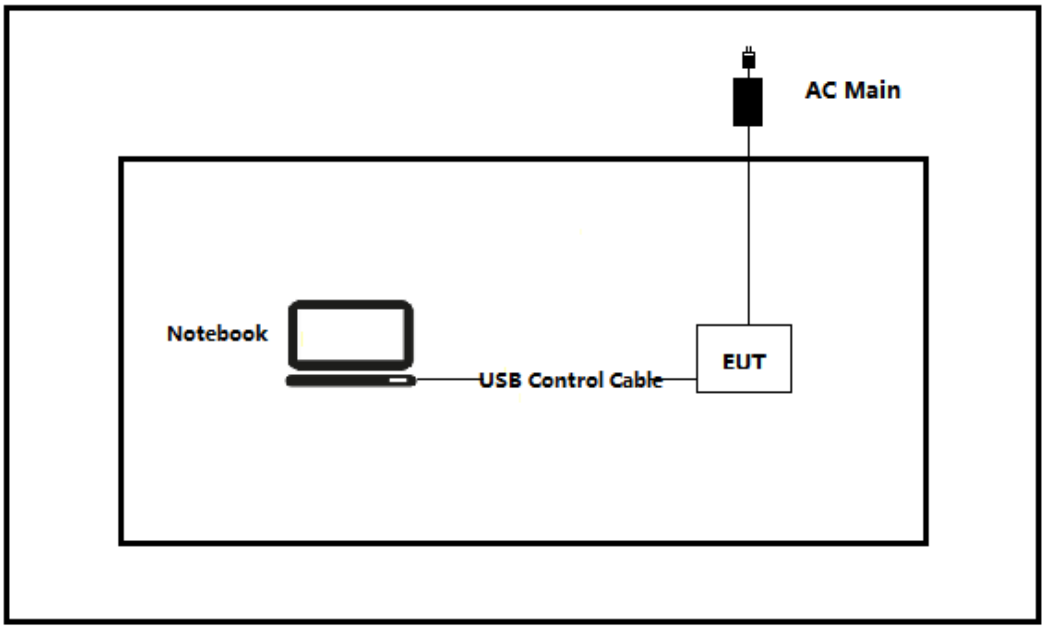
2.4 Test Configuration / Block diagram used for tests

The following test setup / configuration / block diagram has been used during the tests:

Test setup Diagram- AC Line Conducted Emission Test



Test setup Diagram- Radiated Emission



2.5 Testing process

1	Setup the EUT as shown in Section 2.4.
2	Run the software “PUTTY” and enter the corresponding instructions on the notebook computer.
3	Open the serial port and enter the corresponding commands to configure the test mode, test channel, test power and 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	2020	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 D01V05r02	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 forCompliance 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 Overview of results

For FCC

Requirement – Test case	Basic standard(s)	Verdict	Remark
AC Power Line Conducted Emission	FCC 15.207	N/A	---
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	---
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 5Section 8.8	N/A	---
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	---
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	---

3.3 Test Facility

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

4 TEST RESULTS

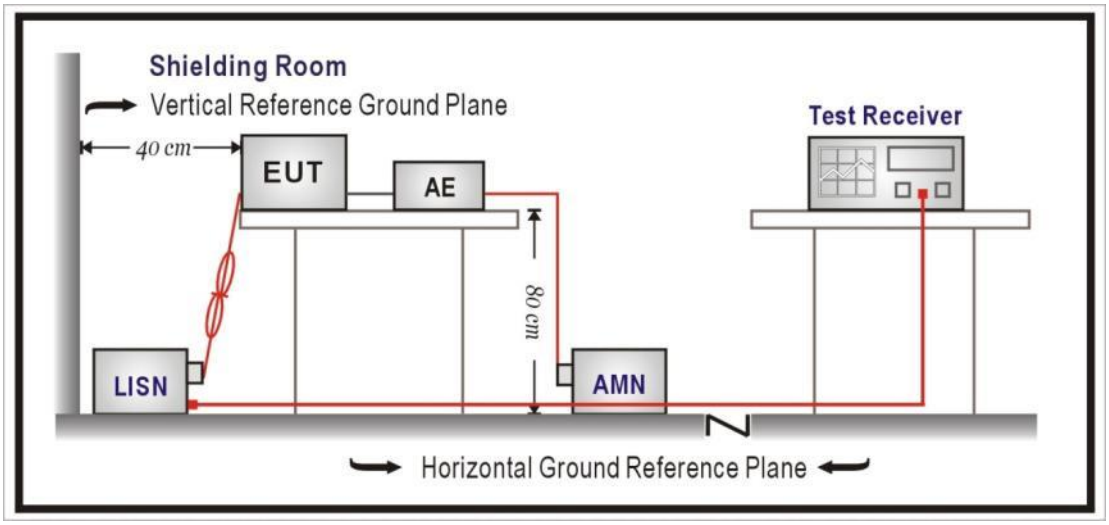
4.1 AC Power Line Conducted Emission	VERDICT: N/A

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.

4.1.2 Test Setup



4.1.3 Test Procedure

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

4.1.4 Test Data

Note：EUT Powered by DC.

4.2 Emissions in restricted frequency bands — VERDICT: PASS

4.2.1 Limit

Standard	FCC Part 15 Subpart C Paragraph 15.205; 15.209

Restricted Bands of operation for FCC

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	Above 38.6
13.36 – 13.41	--	--	--

Restricted Band Emissions Limit

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

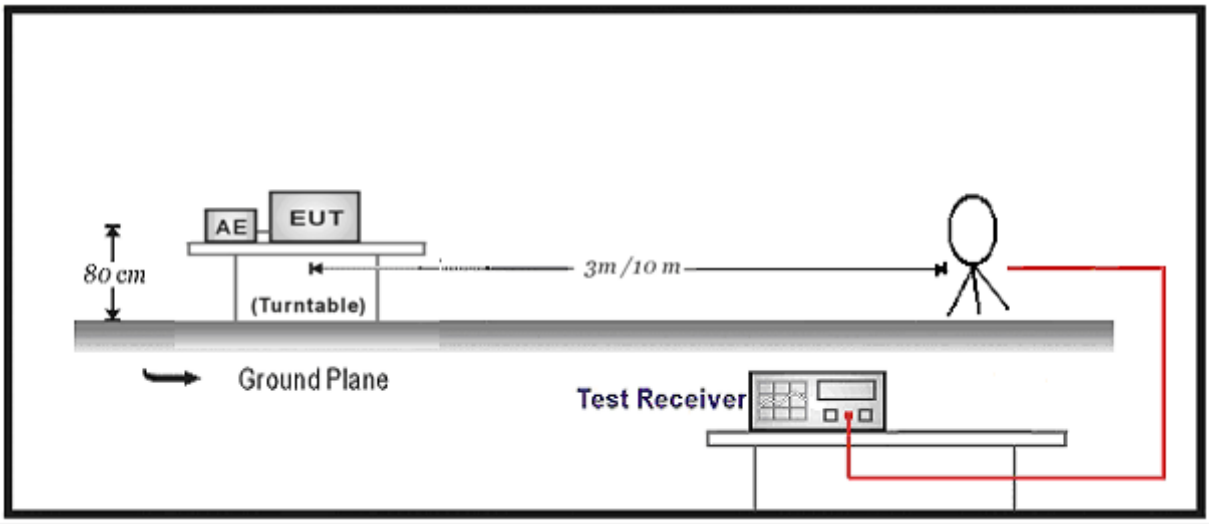
Note 1: At frequencies below 30 MHz, measurements may be performed at a distance closer than that specified in the regulations; however, an attempt should be made to avoid making measurements in the near field. Pending the development of an appropriate measurement procedure for measurements performed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

Note 2: At frequencies at or above 30 MHz, measurements may be performed at a distance other than what is specified provided: measurements are not made in the near field except where it can be shown that near field measurements are appropriate due to the characteristics of the device; and it can be demonstrated that the signal levels needed to be measured at the distance employed can be detected by the measurement equipment. Measurements shall not be performed at a distance greater than 30 meters unless it can be further demonstrated

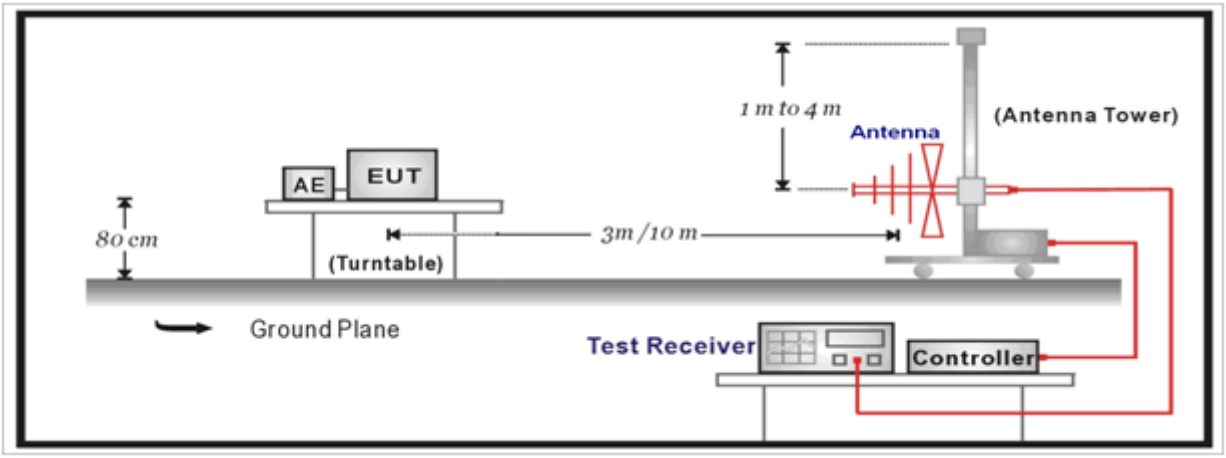
that measurements at a distance of 30 meters or less are impractical. When performing measurements at a distance other than that specified, the results shall be extrapolated to the specified distance using an extrapolation factor of 20 dB/decade (inverse linear-distance for field strength measurements; inverse-linear-distance-squared for power density measurements).

4.2.2 Test Setup

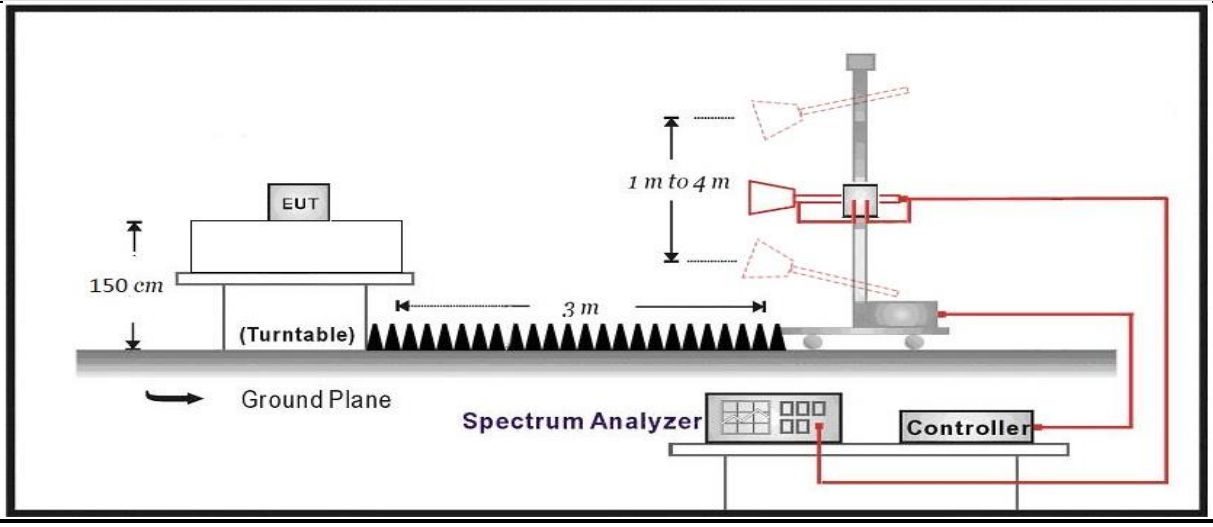
Below 30MHz Test Setup:



30MHz-1GHz Test Setup:



Above 1GHz Test Setup:

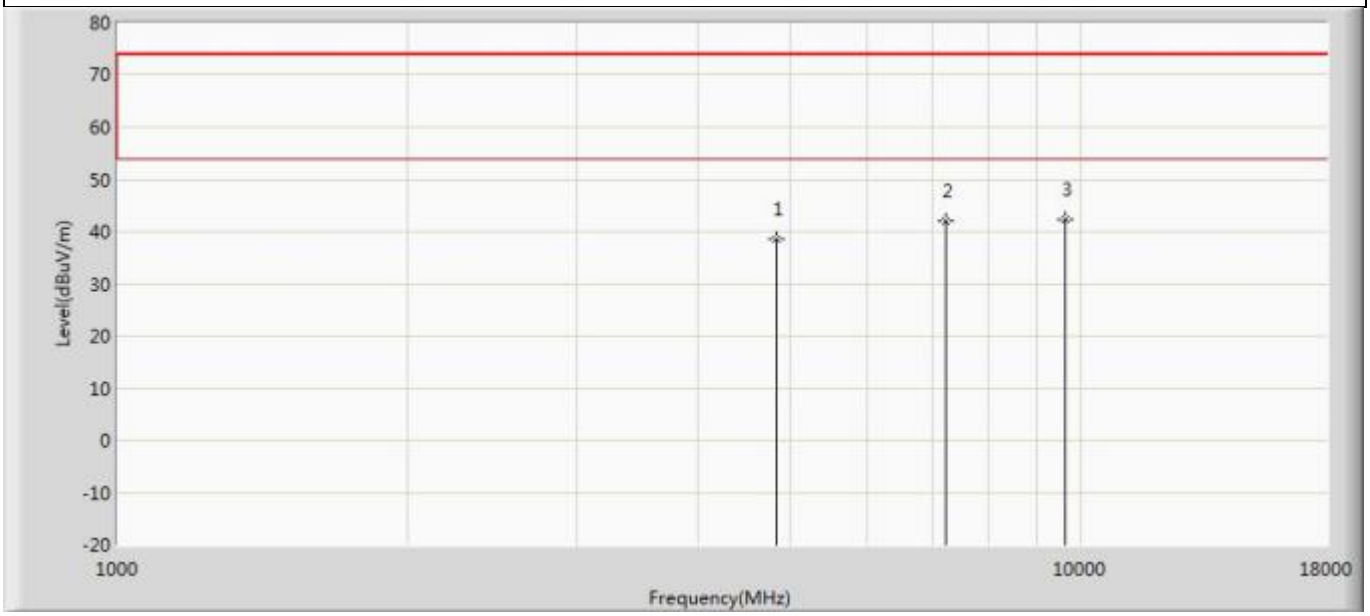


4.2.3 Test Procedure

	References Rule	Chapter	Description
☒	ANSI C63.10	11.12	Emissions in restricted frequency bands
	☒ ANSI C63.10	11.12.1	Radiated emission measurements
	☒ ANSI C63.10	6.3	Radiated spurious emission test
	☒ ANSI C63.10	6.4	Radiated emissions from unlicensed wireless devices below 30 MHz
	☒ ANSI C63.10	6.5	Radiated emissions from unlicensed wireless devices in the frequency range of 30 MHz to 1000 MHz
	☒ ANSI C63.10	6.6	Radiated emissions from unlicensed wireless devices above 1 GHz
	☐ ANSI C63.10	11.12.2	Antenna-port conducted measurements
	☐ ANSI C63.10	11.12.2.3	Quasi-peak measurement procedure
	☐ ANSI C63.10	11.12.2.4	Peak power measurement procedure
	☐ ANSI C63.10	11.12.2.5	Average power measurement procedures
	☐ ANSI C63.10	11.12.2.5.1	Trace averaging with continuous EUT transmission at full power
	☐ ANSI C63.10	11.12.2.5.2	Trace averaging across ON and OFF times of the EUT transmissions followed by duty cycle correction
	☐ ANSI C63.10	11.12.2.5.3	Reduced VBW averaging across ON and OFF times of the EUT transmissions with max hold

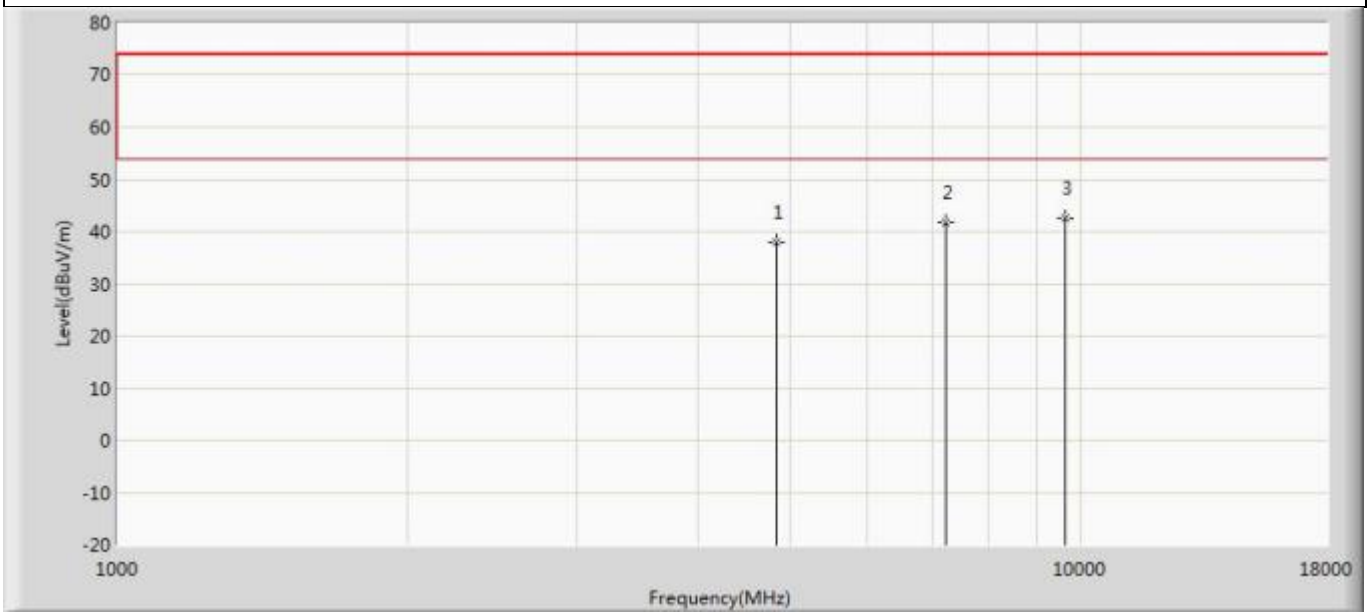
4.2.4 Test Data

Profile: 2260325R	Page No.: 19
Engineer: YuLiu	
Site: AC5	Time: 2022/06/30 - 01:44
Limit: FCC_Part15.209_RE(3m)	Margin: 0
Probe: Horn_3117_00167055(1-18GHz)	Polarity: Horizontal
EUT: LBEE5HY2DU	Power: DC 3.6V
Note: Mode 1:Transmit at 2412MHz by 11b	



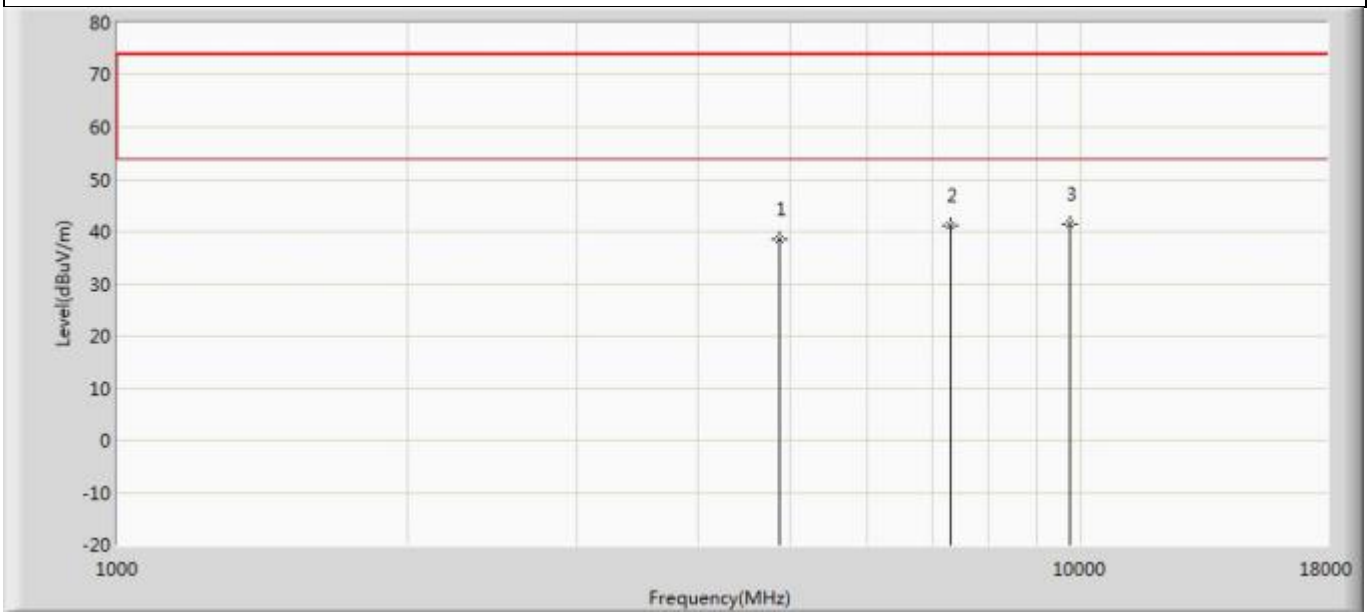
No	Mark	Frequency (MHz)	Measure Level (dBuV/m)	Reading Level (dBuV)	Over Limit (dB)	Limit (dBuV/m)	Factor (dB)	Type
1		4824.000	38.441	49.765	-35.559	74.000	-11.325	PK
2		7236.000	41.896	48.601	-32.104	74.000	-6.705	PK
3	*	9648.000	42.342	48.042	-31.658	74.000	-5.700	PK

Profile: 2260325R	Page No.: 20
Engineer: YuLiu	
Site: AC5	Time: 2022/06/30 - 01:44
Limit: FCC_Part15.209_RE(3m)	Margin: 0
Probe: Horn_3117_00167055(1-18GHz)	Polarity: Vertical
EUT: LBEE5HY2DU	Power: DC 3.6V
Note: Mode 1:Transmit at 2412MHz by 11b	



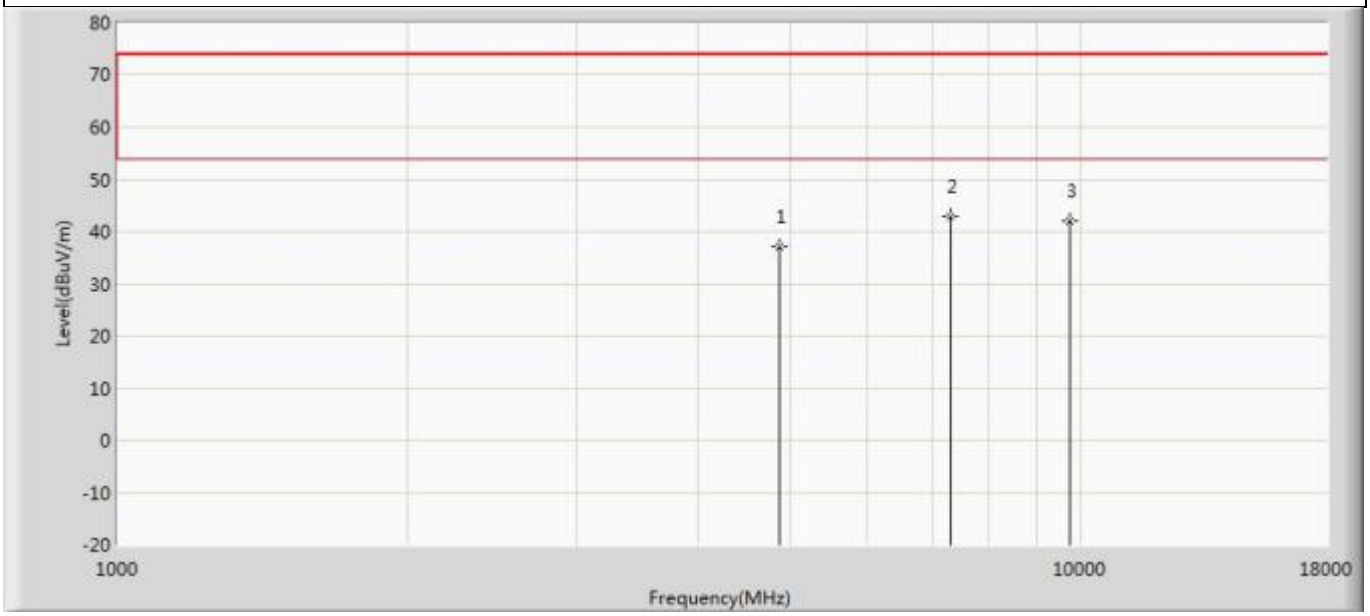
No	Mark	Frequency (MHz)	Measure Level (dBuV/m)	Reading Level (dBuV)	Over Limit (dB)	Limit (dBuV/m)	Factor (dB)	Type
1		4824.000	37.899	49.223	-36.101	74.000	-11.325	PK
2		7236.000	41.599	48.304	-32.401	74.000	-6.705	PK
3	*	9648.000	42.673	48.373	-31.327	74.000	-5.700	PK

Profile: 2260325R	Page No.: 21
Engineer: YuLiu	
Site: AC5	Time: 2022/06/30 - 01:44
Limit: FCC_Part15.209_RE(3m)	Margin: 0
Probe: Horn_3117_00167055(1-18GHz)	Polarity: Horizontal
EUT: LBEE5HY2DU	Power: DC 3.6V
Note: Mode 1:Transmit at 2437MHz by 11b	



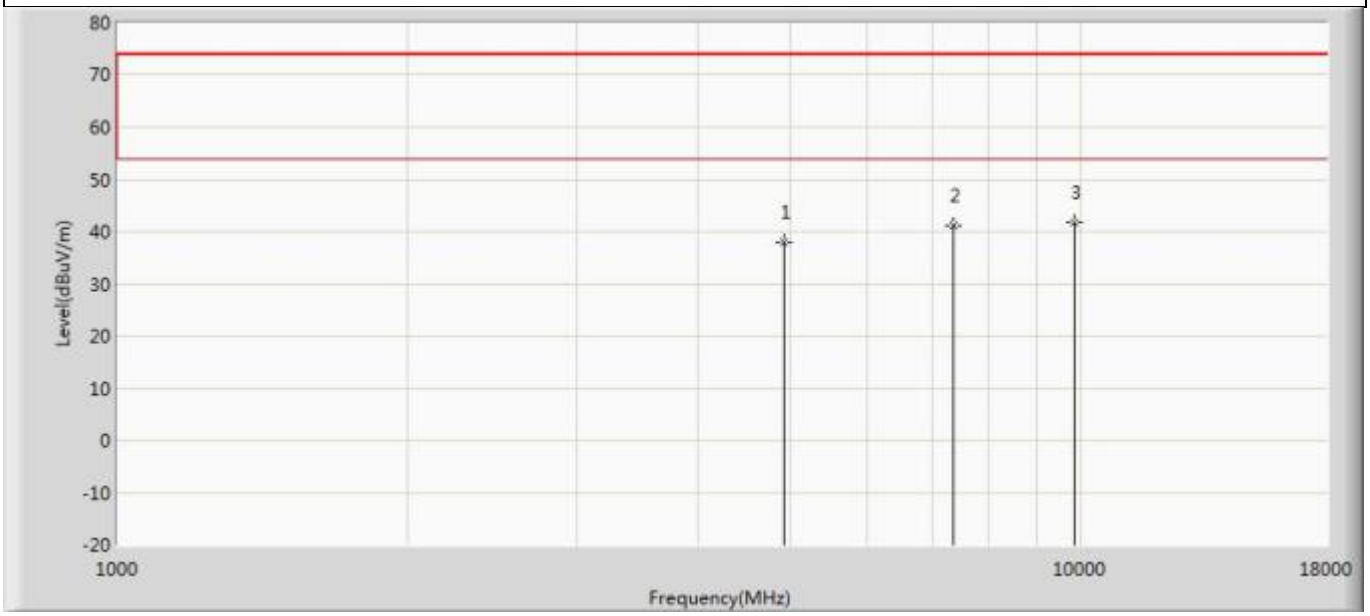
No	Mark	Frequency (MHz)	Measure Level (dBuV/m)	Reading Level (dBuV)	Over Limit (dB)	Limit (dBuV/m)	Factor (dB)	Type
1		4874.000	38.542	49.658	-35.458	74.000	-11.115	PK
2		7311.000	41.088	47.940	-32.912	74.000	-6.852	PK
3	*	9748.000	41.559	46.598	-32.441	74.000	-5.039	PK

Profile: 2260325R	Page No.: 22
Engineer: YuLiu	
Site: AC5	Time: 2022/06/30 - 01:44
Limit: FCC_Part15.209_RE(3m)	Margin: 0
Probe: Horn_3117_00167055(1-18GHz)	Polarity: Vertical
EUT: LBEE5HY2DU	Power: DC 3.6V
Note: Mode 1:Transmit at 2437MHz by 11b	



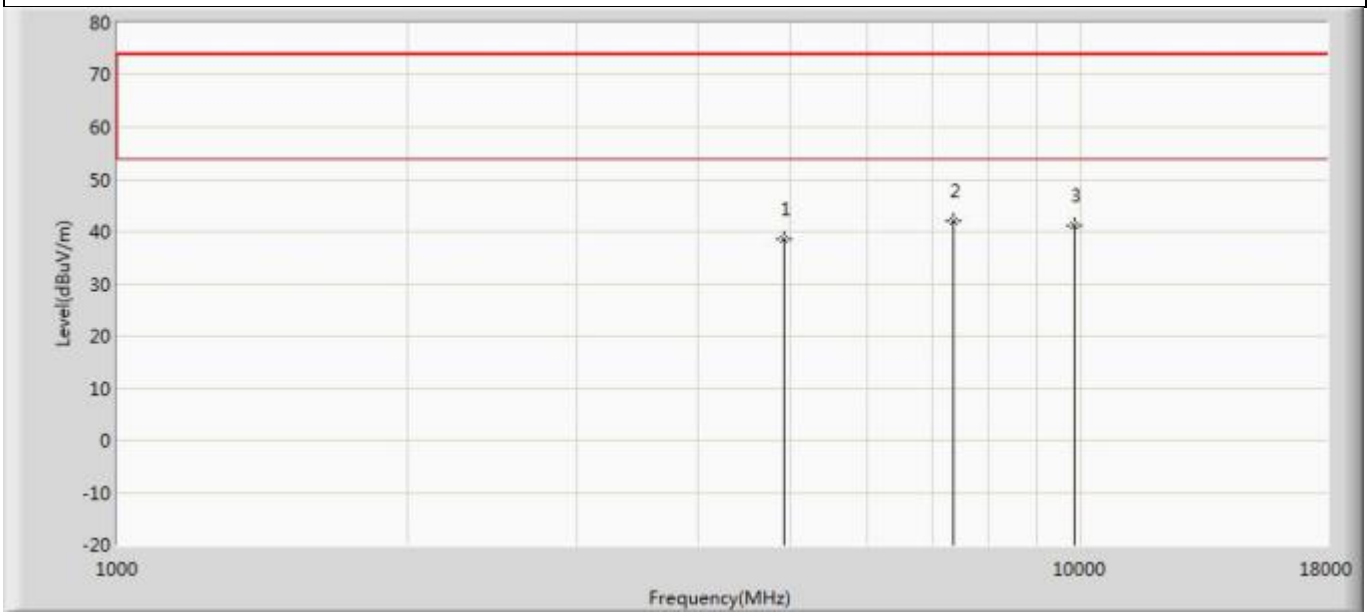
No	Mark	Frequency (MHz)	Measure Level (dBuV/m)	Reading Level (dBuV)	Over Limit (dB)	Limit (dBuV/m)	Factor (dB)	Type
1		4874.000	37.113	48.229	-36.887	74.000	-11.115	PK
2	*	7311.000	42.905	49.757	-31.095	74.000	-6.852	PK
3		9748.000	41.887	46.926	-32.113	74.000	-5.039	PK

Profile: 2260325R	Page No.: 23
Engineer: YuLiu	
Site: AC5	Time: 2022/06/30 - 01:44
Limit: FCC_Part15.209_RE(3m)	Margin: 0
Probe: Horn_3117_00167055(1-18GHz)	Polarity: Horizontal
EUT: LBEE5HY2DU	Power: DC 3.6V
Note: Mode 1:Transmit at 2462MHz by 11b	



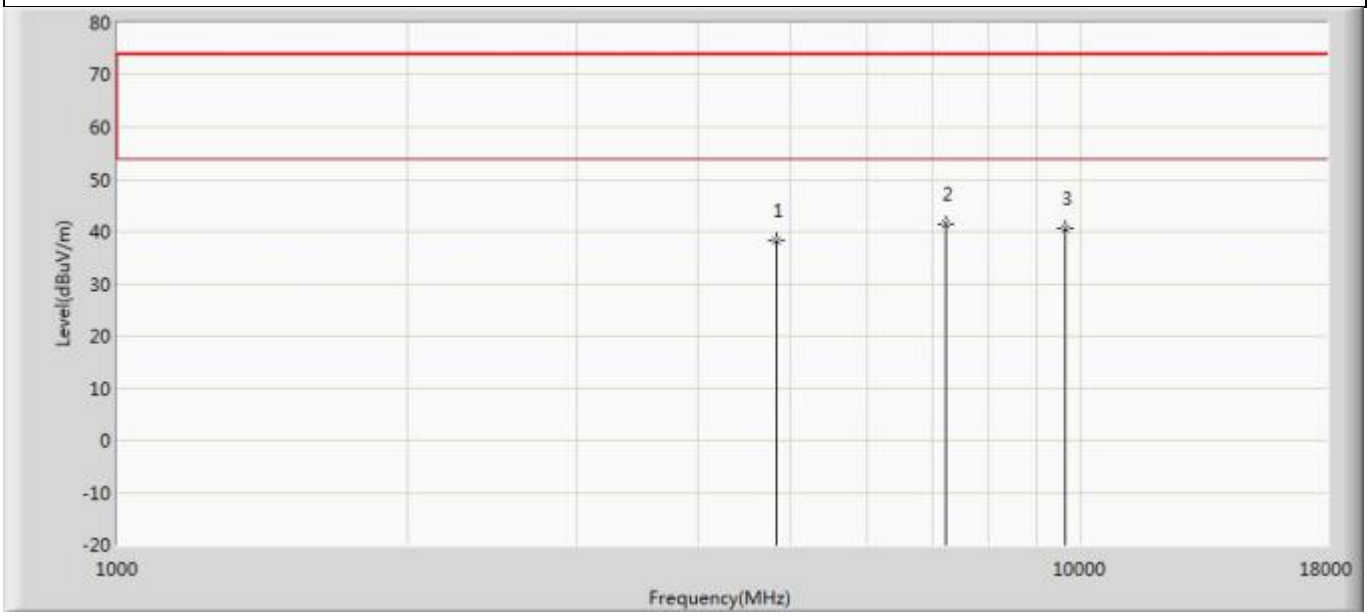
No	Mark	Frequency (MHz)	Measure Level (dBuV/m)	Reading Level (dBuV)	Over Limit (dB)	Limit (dBuV/m)	Factor (dB)	Type
1		4924.000	38.023	49.280	-35.977	74.000	-11.258	PK
2		7386.000	41.195	47.824	-32.805	74.000	-6.630	PK
3	*	9848.000	41.607	46.978	-32.393	74.000	-5.371	PK

Profile: 2260325R	Page No.: 24
Engineer: YuLiu	
Site: AC5	Time: 2022/06/30 - 01:44
Limit: FCC_Part15.209_RE(3m)	Margin: 0
Probe: Horn_3117_00167055(1-18GHz)	Polarity: Vertical
EUT: LBEE5HY2DU	Power: DC 3.6V
Note: Mode 1:Transmit at 2462MHz by 11b	



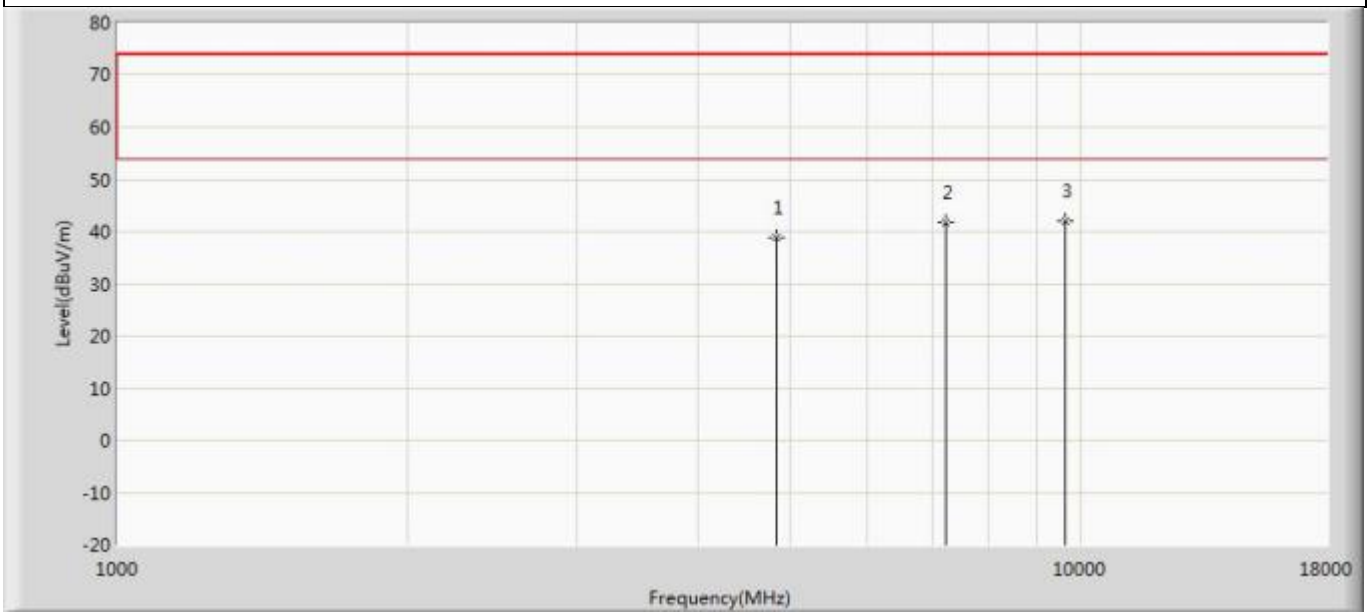
No	Mark	Frequency (MHz)	Measure Level (dBuV/m)	Reading Level (dBuV)	Over Limit (dB)	Limit (dBuV/m)	Factor (dB)	Type
1		4924.000	38.599	49.856	-35.401	74.000	-11.258	PK
2	*	7386.000	41.948	48.577	-32.052	74.000	-6.630	PK
3		9848.000	41.298	46.669	-32.702	74.000	-5.371	PK

Profile: 2260325R	Page No.: 25
Engineer: YuLiu	
Site: AC5	Time: 2022/06/30 - 01:44
Limit: FCC_Part15.209_RE(3m)	Margin: 0
Probe: Horn_3117_00167055(1-18GHz)	Polarity: Horizontal
EUT: LBEE5HY2DU	Power: DC 3.6V
Note: Mode 2:Transmit at 2412MHz by 11g	



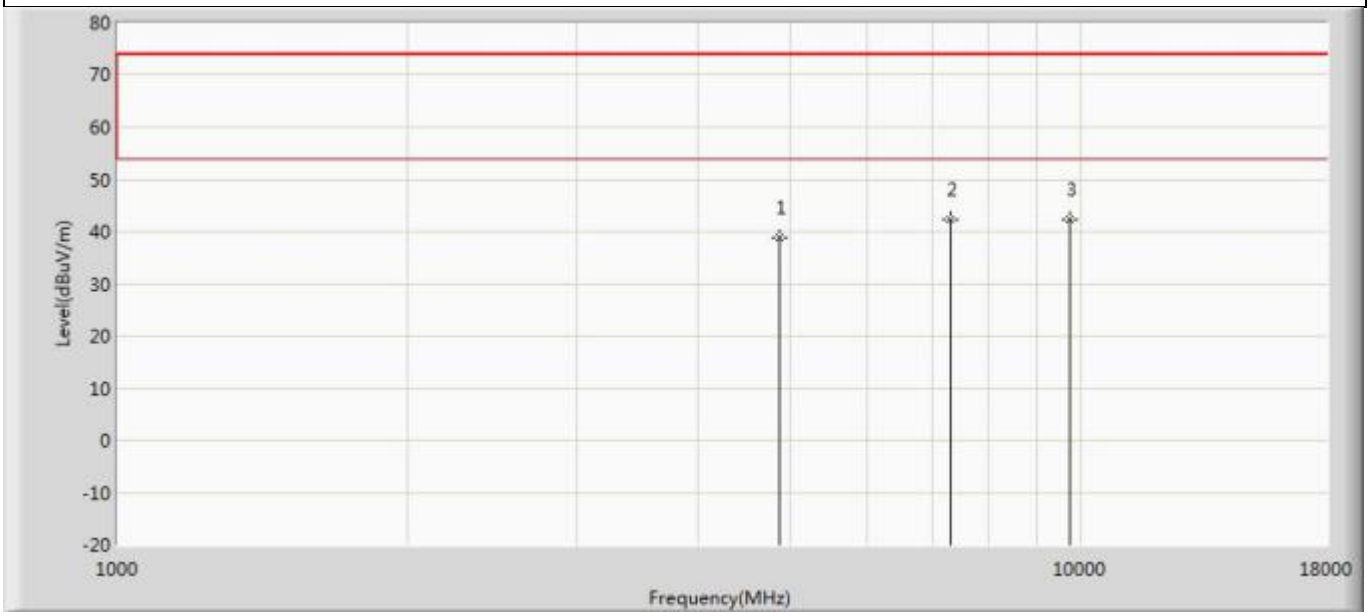
No	Mark	Frequency (MHz)	Measure Level (dBuV/m)	Reading Level (dBuV)	Over Limit (dB)	Limit (dBuV/m)	Factor (dB)	Type
1		4824.000	38.305	49.629	-35.695	74.000	-11.325	PK
2	*	7236.000	41.315	48.020	-32.685	74.000	-6.705	PK
3		9648.000	40.716	46.416	-33.284	74.000	-5.700	PK

Profile: 2260325R	Page No.: 26
Engineer: YuLiu	
Site: AC5	Time: 2022/06/30 - 01:44
Limit: FCC_Part15.209_RE(3m)	Margin: 0
Probe: Horn_3117_00167055(1-18GHz)	Polarity: Vertical
EUT: LBEE5HY2DU	Power: DC 3.6V
Note: Mode 2:Transmit at 2412MHz by 11g	



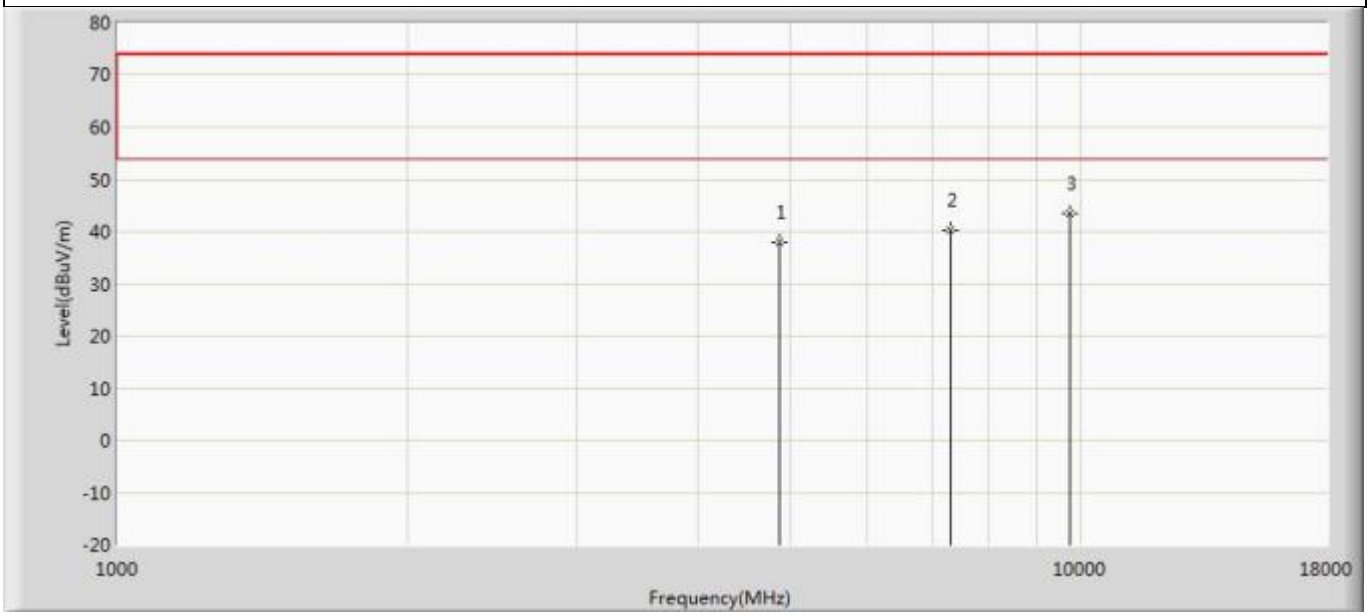
No	Mark	Frequency (MHz)	Measure Level (dBuV/m)	Reading Level (dBuV)	Over Limit (dB)	Limit (dBuV/m)	Factor (dB)	Type
1		4824.000	38.914	50.238	-35.086	74.000	-11.325	PK
2		7236.000	41.602	48.307	-32.398	74.000	-6.705	PK
3	*	9648.000	41.964	47.664	-32.036	74.000	-5.700	PK

Profile: 2260325R	Page No.: 27
Engineer: YuLiu	
Site: AC5	Time: 2022/06/30 - 01:44
Limit: FCC_Part15.209_RE(3m)	Margin: 0
Probe: Horn_3117_00167055(1-18GHz)	Polarity: Horizontal
EUT: LBEE5HY2DU	Power: DC 3.6V
Note: Mode 2:Transmit at 2437MHz by 11g	



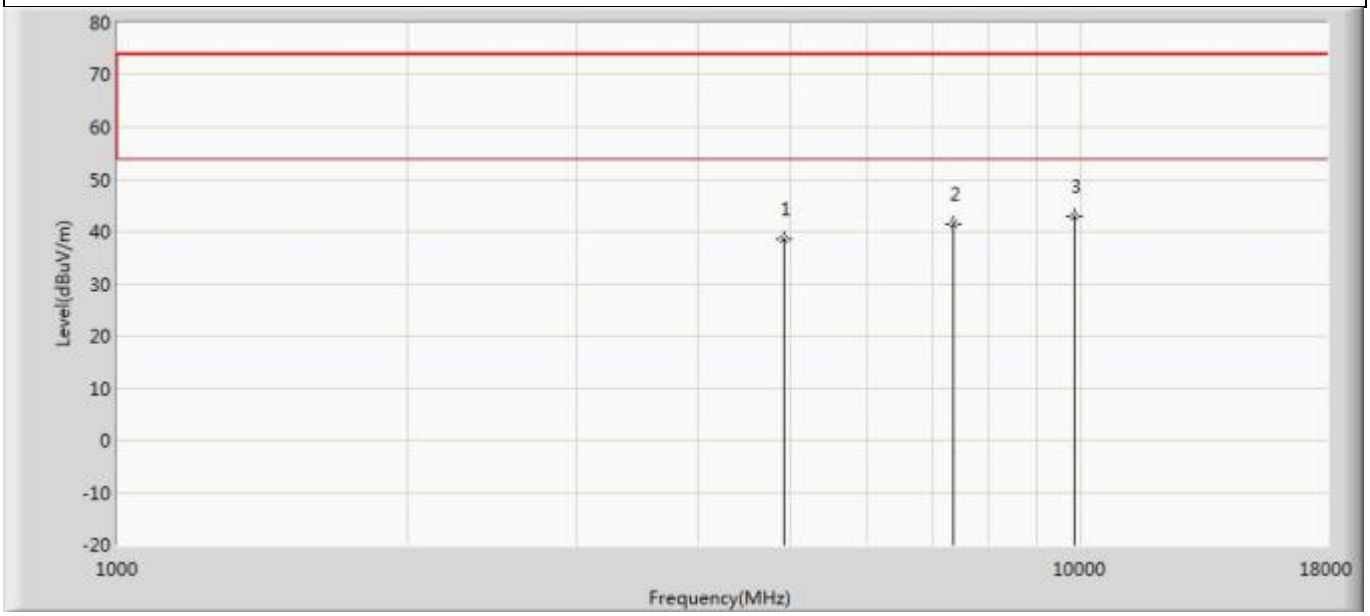
No	Mark	Frequency (MHz)	Measure Level (dBuV/m)	Reading Level (dBuV)	Over Limit (dB)	Limit (dBuV/m)	Factor (dB)	Type
1		4874.000	38.711	49.827	-35.289	74.000	-11.115	PK
2	*	7311.000	42.308	49.160	-31.692	74.000	-6.852	PK
3		9748.000	42.177	47.216	-31.823	74.000	-5.039	PK

Profile: 2260325R	Page No.: 28
Engineer: YuLiu	
Site: AC5	Time: 2022/06/30 - 01:44
Limit: FCC_Part15.209_RE(3m)	Margin: 0
Probe: Horn_3117_00167055(1-18GHz)	Polarity: Vertical
EUT: LBEE5HY2DU	Power: DC 3.6V
Note: Mode 2:Transmit at 2437MHz by 11g	



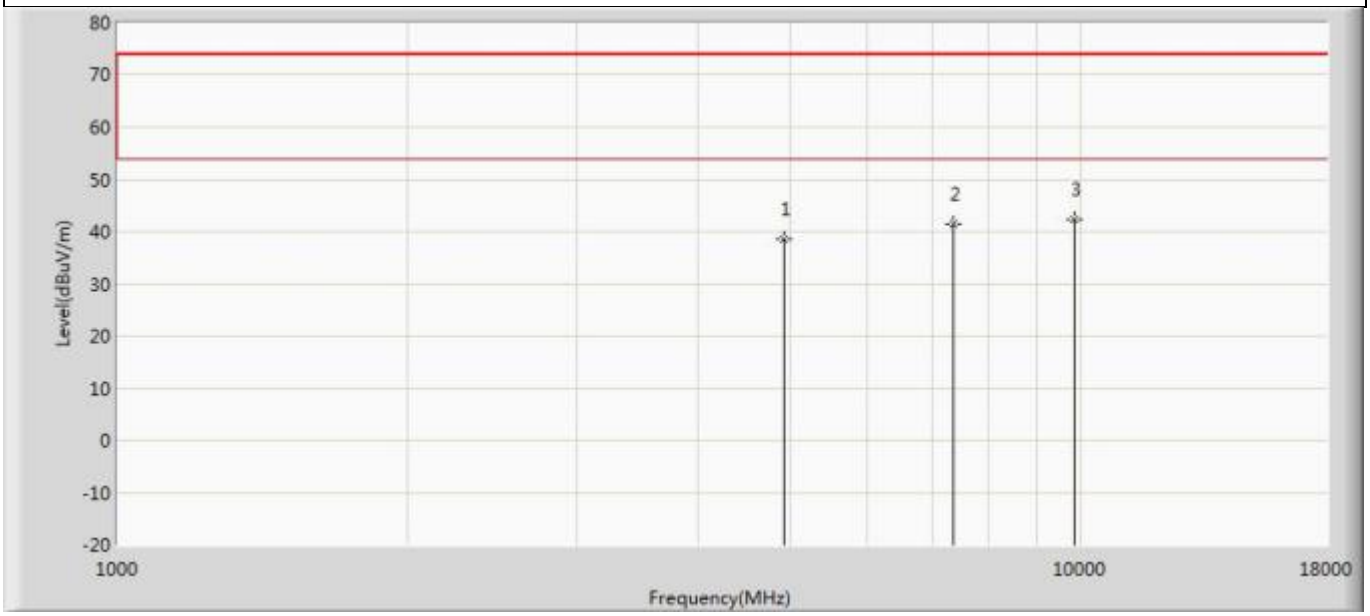
No	Mark	Frequency (MHz)	Measure Level (dBuV/m)	Reading Level (dBuV)	Over Limit (dB)	Limit (dBuV/m)	Factor (dB)	Type
1		4874.000	37.851	48.967	-36.149	74.000	-11.115	PK
2		7311.000	40.331	47.183	-33.669	74.000	-6.852	PK
3	*	9748.000	43.432	48.471	-30.568	74.000	-5.039	PK

Profile: 2260325R	Page No.: 29
Engineer: YuLiu	
Site: AC5	Time: 2022/06/30 - 01:44
Limit: FCC_Part15.209_RE(3m)	Margin: 0
Probe: Horn_3117_00167055(1-18GHz)	Polarity: Horizontal
EUT: LBEE5HY2DU	Power: DC 3.6V
Note: Mode 2:Transmit at 2462MHz by 11g	



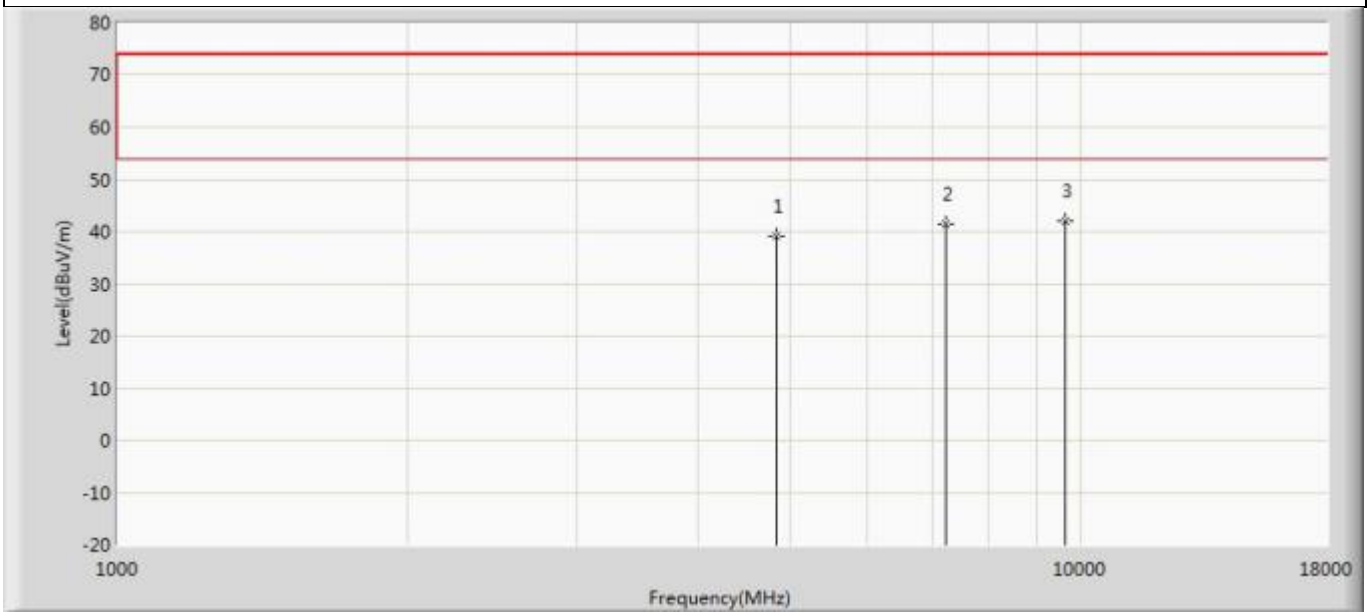
No	Mark	Frequency (MHz)	Measure Level (dBuV/m)	Reading Level (dBuV)	Over Limit (dB)	Limit (dBuV/m)	Factor (dB)	Type
1		4924.000	38.553	49.810	-35.447	74.000	-11.258	PK
2		7386.000	41.501	48.130	-32.499	74.000	-6.630	PK
3	*	9848.000	42.956	48.327	-31.044	74.000	-5.371	PK

Profile: 2260325R	Page No.: 30
Engineer: YuLiu	
Site: AC5	Time: 2022/06/30 - 01:45
Limit: FCC_Part15.209_RE(3m)	Margin: 0
Probe: Horn_3117_00167055(1-18GHz)	Polarity: Vertical
EUT: LBEE5HY2DU	Power: DC 3.6V
Note: Mode 2:Transmit at 2462MHz by 11g	



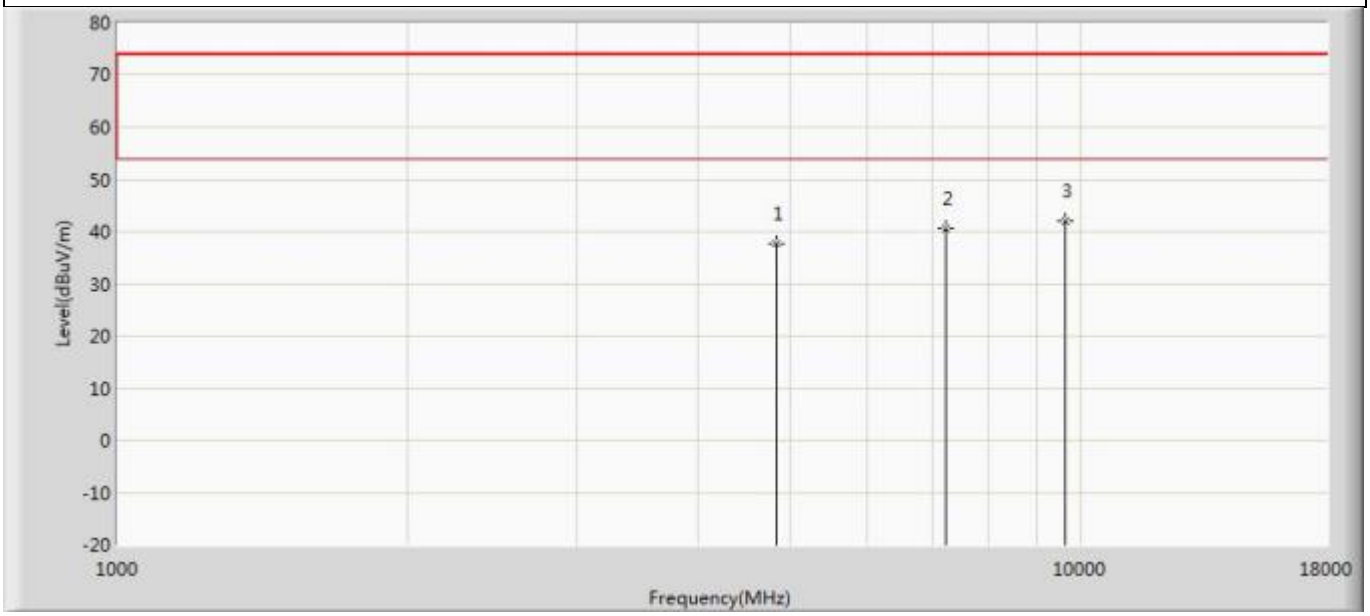
No	Mark	Frequency (MHz)	Measure Level (dBuV/m)	Reading Level (dBuV)	Over Limit (dB)	Limit (dBuV/m)	Factor (dB)	Type
1		4924.000	38.674	49.931	-35.326	74.000	-11.258	PK
2		7386.000	41.448	48.077	-32.552	74.000	-6.630	PK
3	*	9848.000	42.229	47.600	-31.771	74.000	-5.371	PK

Profile: 2260325R	Page No.: 31
Engineer: YuLiu	
Site: AC5	Time: 2022/06/30 - 01:45
Limit: FCC_Part15.209_RE(3m)	Margin: 0
Probe: Horn_3117_00167055(1-18GHz)	Polarity: Horizontal
EUT: LBEE5HY2DU	Power: DC 3.6V
Note: Mode 3:Transmit at 2412MHz by 11n20	



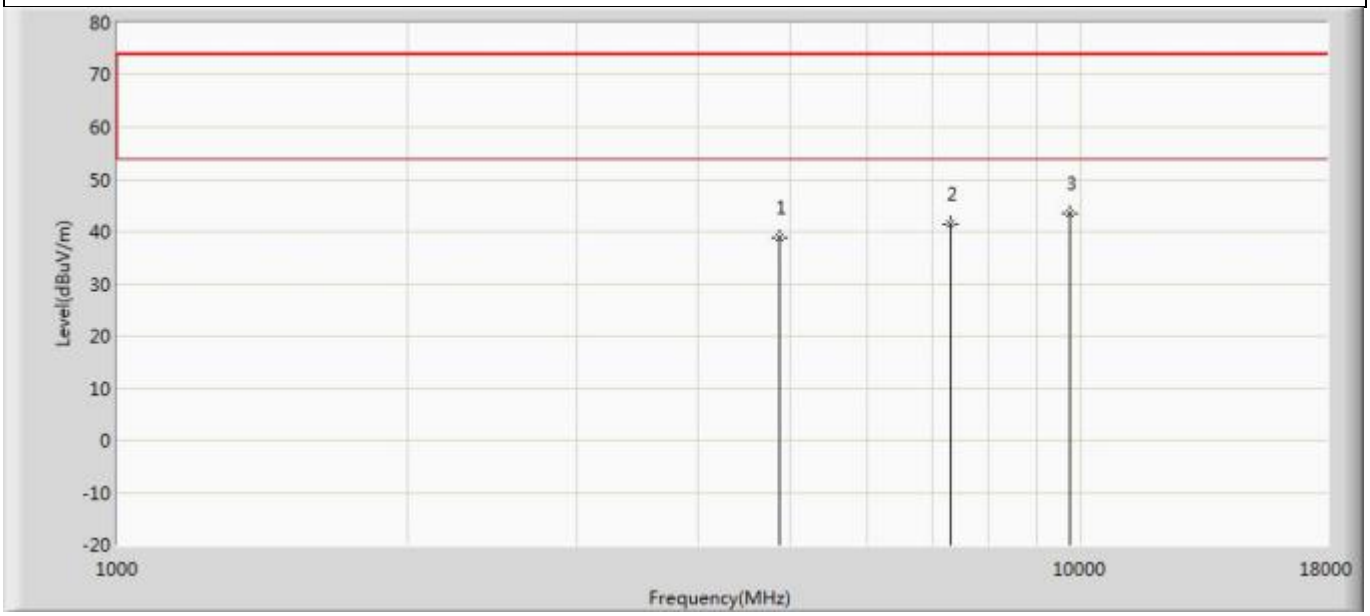
No	Mark	Frequency (MHz)	Measure Level (dBuV/m)	Reading Level (dBuV)	Over Limit (dB)	Limit (dBuV/m)	Factor (dB)	Type
1		4824.000	38.996	50.320	-35.004	74.000	-11.325	PK
2		7236.000	41.534	48.239	-32.466	74.000	-6.705	PK
3	*	9648.000	42.033	47.733	-31.967	74.000	-5.700	PK

Profile: 2260325R	Page No.: 32
Engineer: YuLiu	
Site: AC5	Time: 2022/06/30 - 01:45
Limit: FCC_Part15.209_RE(3m)	Margin: 0
Probe: Horn_3117_00167055(1-18GHz)	Polarity: Vertical
EUT: LBEE5HY2DU	Power: DC 3.6V
Note: Mode 3:Transmit at 2412MHz by 11n20	



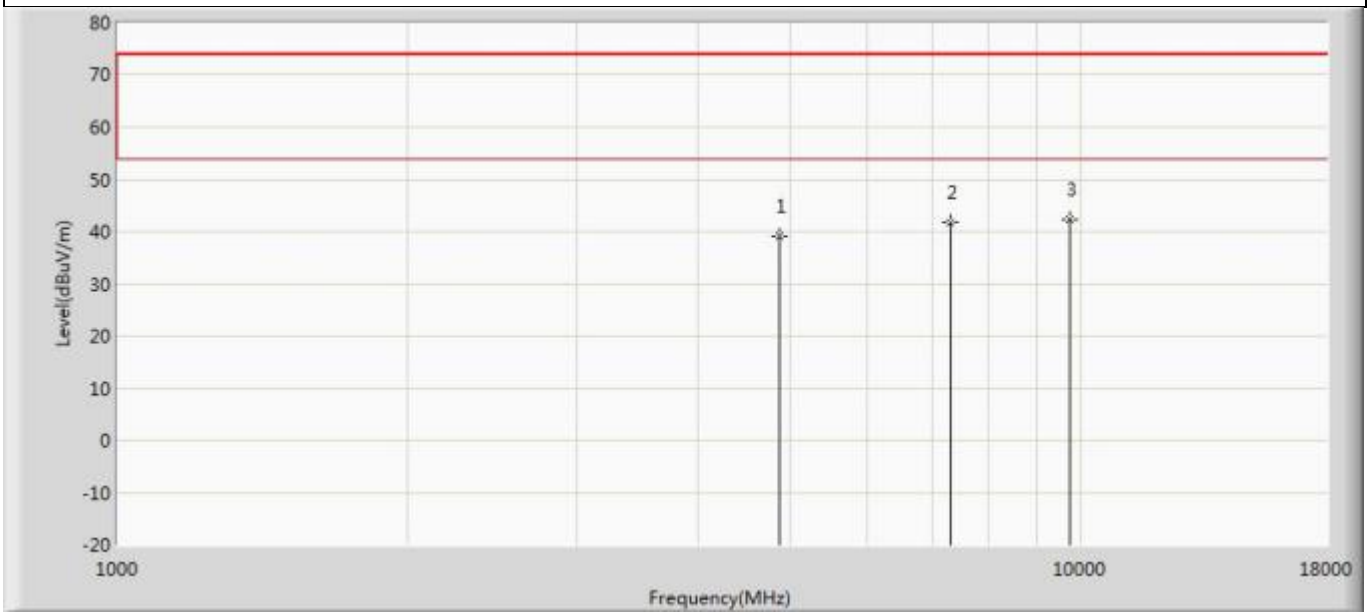
No	Mark	Frequency (MHz)	Measure Level (dBuV/m)	Reading Level (dBuV)	Over Limit (dB)	Limit (dBuV/m)	Factor (dB)	Type
1		4824.000	37.671	48.995	-36.329	74.000	-11.325	PK
2		7236.000	40.609	47.314	-33.391	74.000	-6.705	PK
3	*	9648.000	42.046	47.746	-31.954	74.000	-5.700	PK

Profile: 2260325R	Page No.: 33
Engineer: YuLiu	
Site: AC5	Time: 2022/06/30 - 01:45
Limit: FCC_Part15.209_RE(3m)	Margin: 0
Probe: Horn_3117_00167055(1-18GHz)	Polarity: Horizontal
EUT: LBEE5HY2DU	Power: DC 3.6V
Note: Mode 3:Transmit at 2437MHz by 11n20	



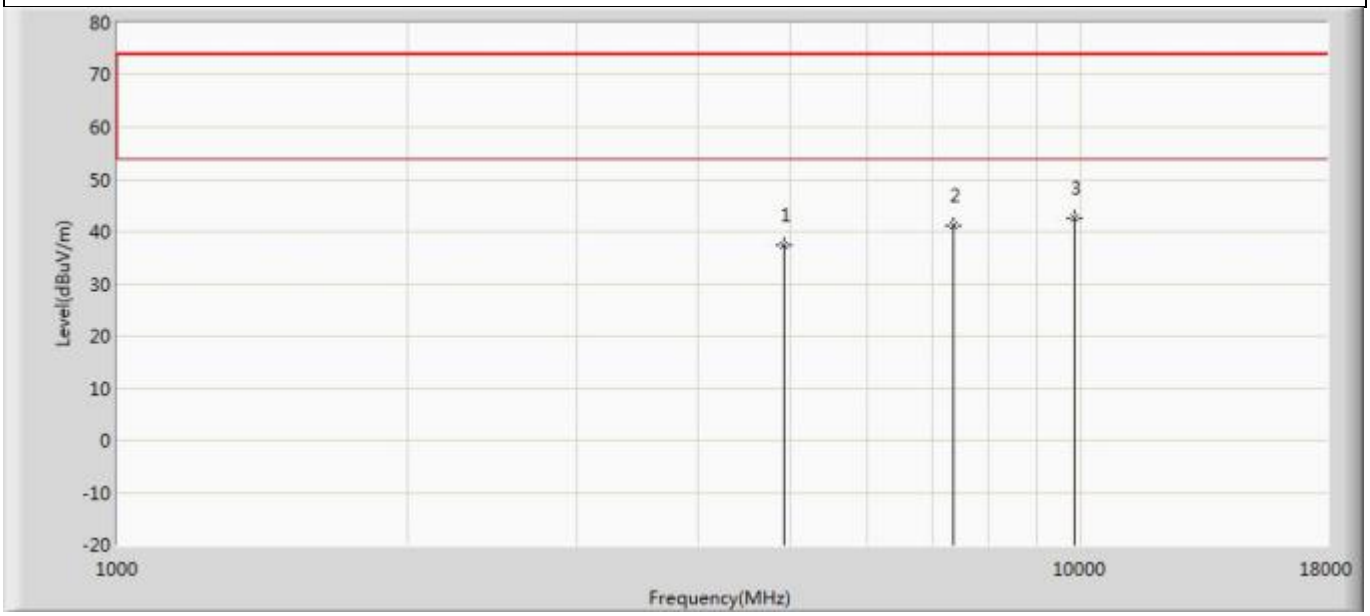
No	Mark	Frequency (MHz)	Measure Level (dBuV/m)	Reading Level (dBuV)	Over Limit (dB)	Limit (dBuV/m)	Factor (dB)	Type
1		4874.000	38.978	50.094	-35.022	74.000	-11.115	PK
2		7311.000	41.530	48.382	-32.470	74.000	-6.852	PK
3	*	9748.000	43.562	48.601	-30.438	74.000	-5.039	PK

Profile: 2260325R	Page No.: 34
Engineer: YuLiu	
Site: AC5	Time: 2022/06/30 - 01:45
Limit: FCC_Part15.209_RE(3m)	Margin: 0
Probe: Horn_3117_00167055(1-18GHz)	Polarity: Vertical
EUT: LBEE5HY2DU	Power: DC 3.6V
Note: Mode 3:Transmit at 2437MHz by 11n20	



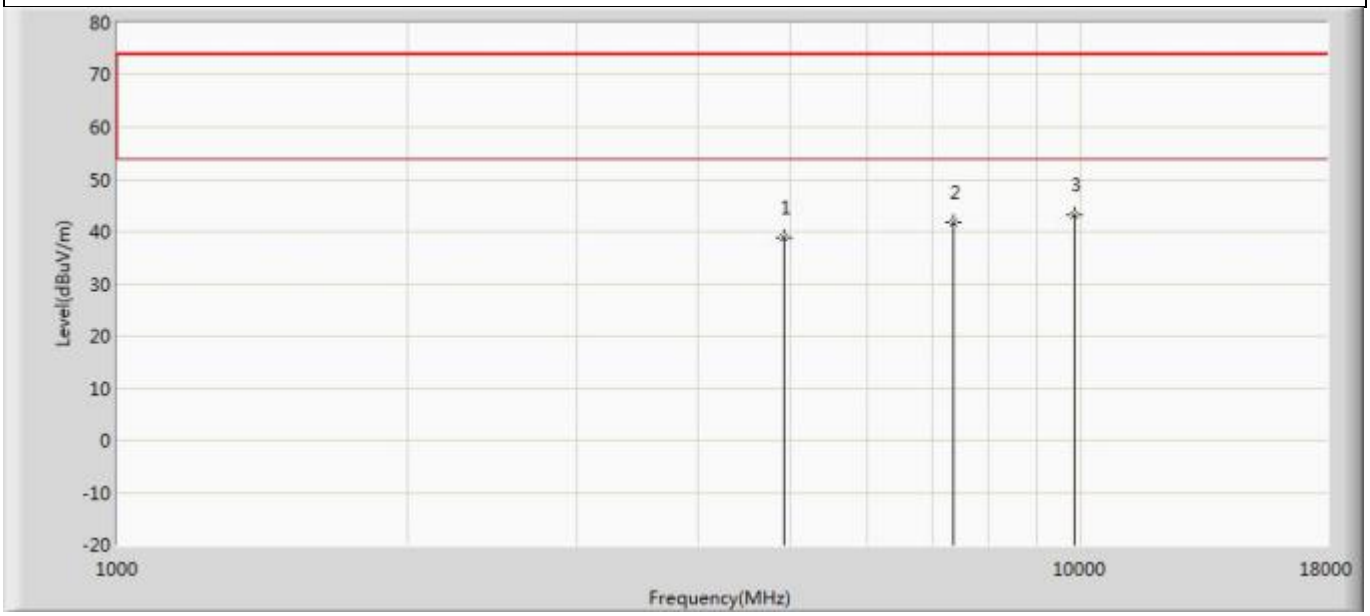
No	Mark	Frequency (MHz)	Measure Level (dBuV/m)	Reading Level (dBuV)	Over Limit (dB)	Limit (dBuV/m)	Factor (dB)	Type
1		4874.000	39.080	50.196	-34.920	74.000	-11.115	PK
2		7311.000	41.649	48.501	-32.351	74.000	-6.852	PK
3	*	9748.000	42.438	47.477	-31.562	74.000	-5.039	PK

Profile: 2260325R	Page No.: 35
Engineer: YuLiu	
Site: AC5	Time: 2022/06/30 - 01:45
Limit: FCC_Part15.209_RE(3m)	Margin: 0
Probe: Horn_3117_00167055(1-18GHz)	Polarity: Horizontal
EUT: LBEE5HY2DU	Power: DC 3.6V
Note: Mode 3:Transmit at 2462MHz by 11n20	



No	Mark	Frequency (MHz)	Measure Level (dBuV/m)	Reading Level (dBuV)	Over Limit (dB)	Limit (dBuV/m)	Factor (dB)	Type
1		4924.000	37.469	48.726	-36.531	74.000	-11.258	PK
2		7386.000	41.118	47.747	-32.882	74.000	-6.630	PK
3	*	9848.000	42.716	48.087	-31.284	74.000	-5.371	PK

Profile: 2260325R	Page No.: 36
Engineer: YuLiu	
Site: AC5	Time: 2022/06/30 - 01:45
Limit: FCC_Part15.209_RE(3m)	Margin: 0
Probe: Horn_3117_00167055(1-18GHz)	Polarity: Vertical
EUT: LBEE5HY2DU	Power: DC 3.6V
Note: Mode 3:Transmit at 2462MHz by 11n20	

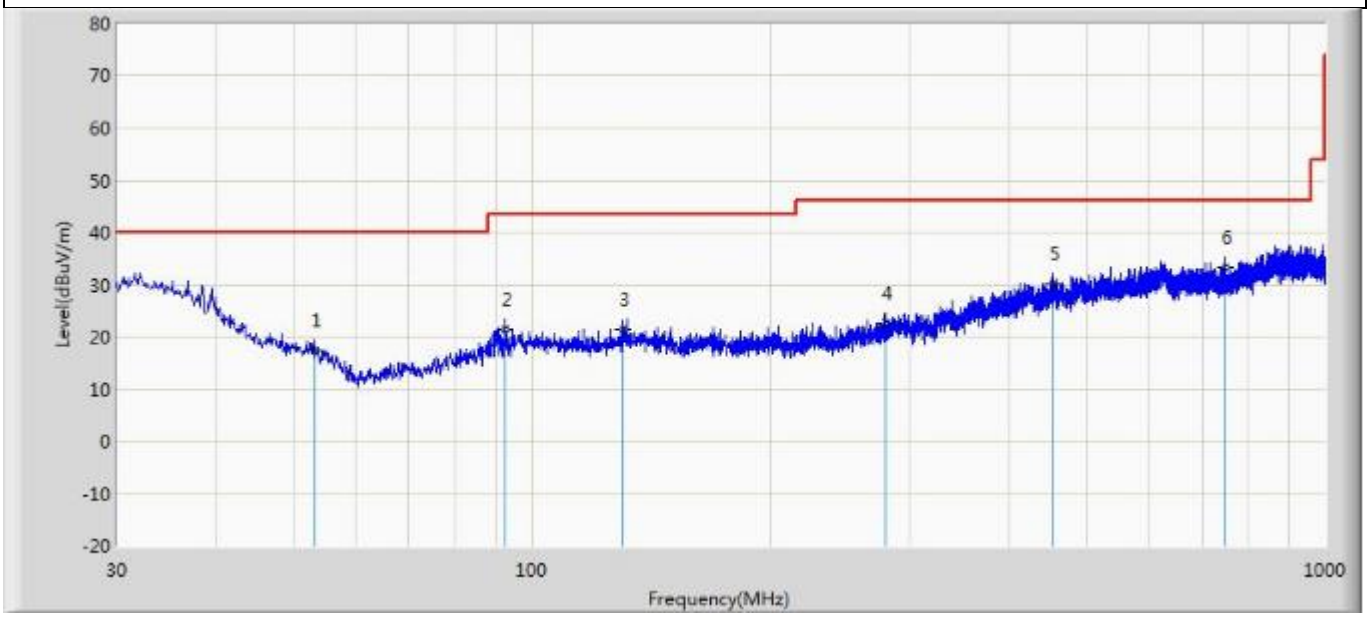


No	Mark	Frequency (MHz)	Measure Level (dBuV/m)	Reading Level (dBuV)	Over Limit (dB)	Limit (dBuV/m)	Factor (dB)	Type
1		4924.000	38.718	49.975	-35.282	74.000	-11.258	PK
2		7386.000	41.605	48.234	-32.395	74.000	-6.630	PK
3	*	9848.000	43.237	48.608	-30.763	74.000	-5.371	PK

Note:
1. Measured Level = Reading Level + Factor.
2. The test frequency range, 9kHz~30MHz, worst case are at least 20dB below the limits, therefore no data appear in the report.
3. This limit applies for both peak and average detector, if the test result on peak is lower than average limit, then average measurement needn't be performed.
4.The points in graph are the highest data in test frequency range.

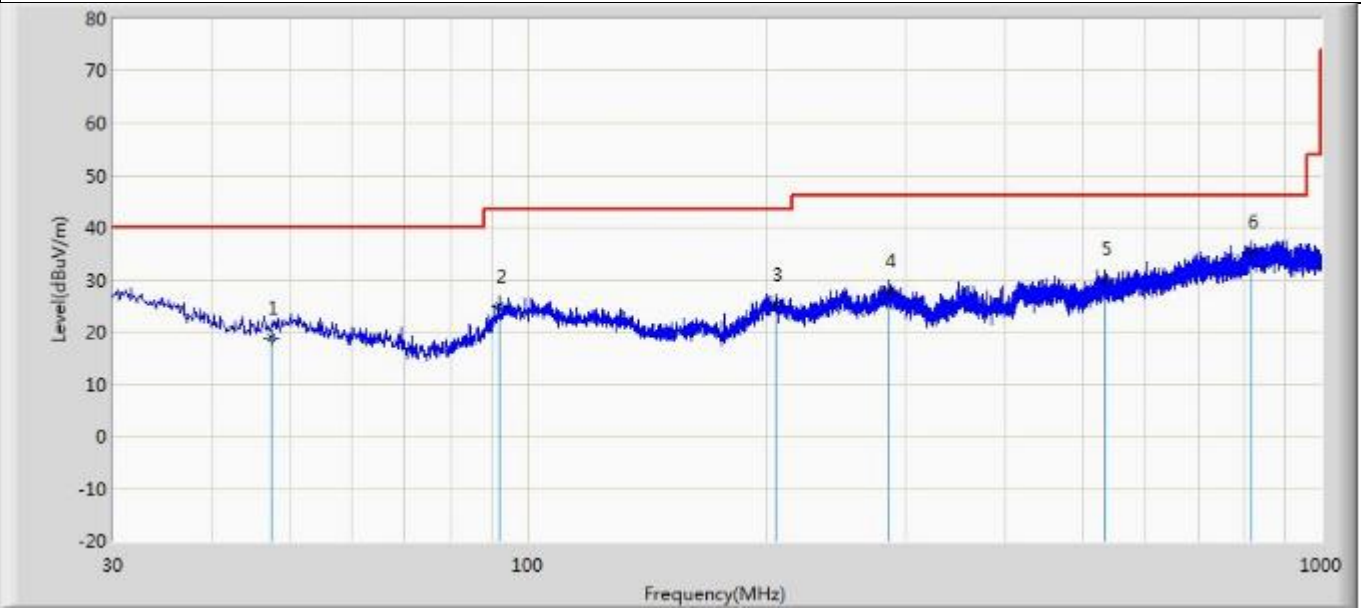
The worst case of Radiated Emission below 1GHz:

Profile:2260325R	Page No.: 63
Engineer: YuLiu	
Site: AC3	Time: 2022/07/04 - 22:35
Limit: FCC_Part15.209_RE(3m)_ClassB	Margin: 0
Probe: AC2_3M(30-1000M)	Polarity: Horizontal
EUT: LBEE5HY2DU	Power: DC 3.6V
Note: Mode 3:Transmit at 2437MHz by 11n（20MHz）	



No	Mark	Frequency (MHz)	Measure Level (dBuV/m)	Reading Level (dBuV)	Over Limit (dB)	Limit (dBuV/m)	Factor (dB)	Type
1		53.159	17.324	2.951	-22.676	40.000	14.373	QP
2		92.565	21.366	7.143	-22.134	43.500	14.223	QP
3		130.516	21.328	3.809	-22.172	43.500	17.519	QP
4		279.775	22.515	2.656	-23.485	46.000	19.859	QP
5		454.375	30.199	2.889	-15.801	46.000	27.310	QP
6	*	749.134	33.233	3.738	-12.767	46.000	29.495	QP

Profile: 2260325R	Page No.: 64
Engineer: YuLiu	
Site: AC3	Time: 2022/07/04 - 22:36
Limit: FCC_Part15.209_RE(3m)_ClassB	Margin: 0
Probe: AC2_3M(30-1000M)	Polarity: Vertical
EUT: LBEE5HY2DU	Power: DC 3.6V
Note: Mode 3:Transmit at 2437MHz by 11n（20MHz）	

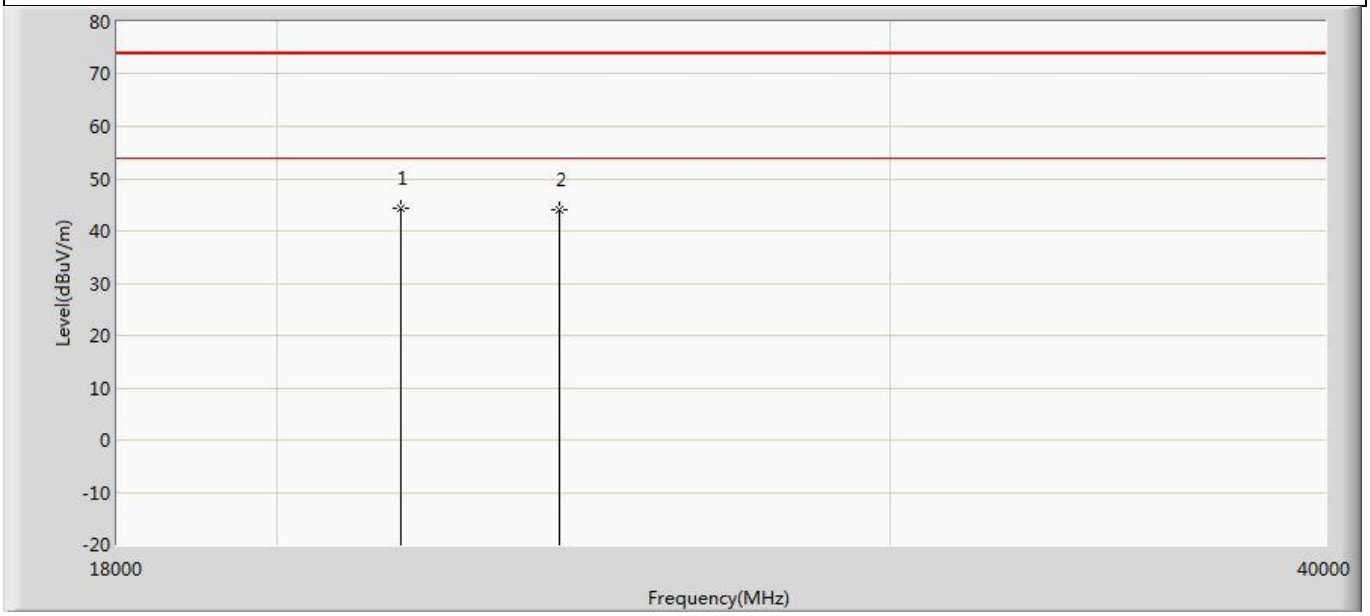


No	Mark	Frequency (MHz)	Measure Level (dBuV/m)	Reading Level (dBuV)	Over Limit (dB)	Limit (dBuV/m)	Factor (dB)	Type
1		47.460	18.897	0.216	-21.103	40.000	18.681	QP
2		91.959	24.956	7.017	-18.544	43.500	17.939	QP
3		205.085	25.122	1.650	-18.378	43.500	23.472	QP
4		285.353	27.880	2.712	-18.120	46.000	25.168	QP
5		534.400	30.026	2.992	-15.974	46.000	27.034	QP
6	*	817.276	35.391	2.457	-10.609	46.000	32.933	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)

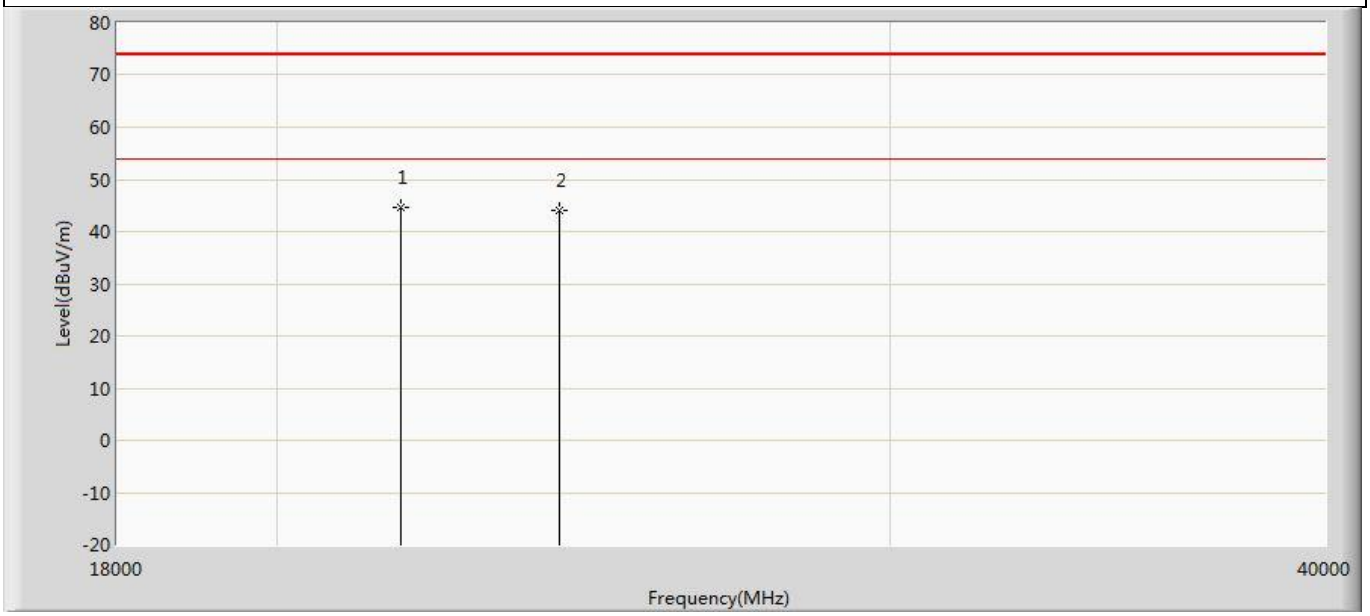
The worst case of Radiated Emission above 18GHz:

Profile: 2260325R	Page No.: 55
Engineer: Yu Liu	
Site: AC5	Time: 2022/07/05 - 14:54
Limit: FCC_Part15.209_RE(3m)	Margin: 0
Probe: BBHA 9170_294(18-40GHz)	Polarity: Horizontal
EUT: LBEE5HY2DU	Power: DC 3.6V
Note: Mode 1:Transmit at 2412MHz by 802.11g	



No	Mark	Frequency (MHz)	Measure Level (dBuV/m)	Reading Level (dBuV)	Over Limit (dB)	Limit (dBuV/m)	Factor (dB)	Type
1	*	21708.000	44.442	45.178	-29.558	74.000	-0.736	PK
2		24120.000	44.098	43.406	-29.902	74.000	0.691	PK

Profile: 2260325R	Page No.: 56
Engineer: Yu Liu	
Site: AC5	Time: 2022/07/05 - 14:54
Limit: FCC_Part15.209_RE(3m)	Margin: 0
Probe: BBHA 9170_294(18-40GHz)	Polarity: Vertical
EUT: LBEE5HY2DU	Power: DC 3.6V
Note: Mode 1:Transmit at 2412MHz by 802.11g	



No	Mark	Frequency (MHz)	Measure Level (dBuV/m)	Reading Level (dBuV)	Over Limit (dB)	Limit (dBuV/m)	Factor (dB)	Type
1	*	21708.000	44.554	45.290	-29.446	74.000	-0.736	PK
2		24120.000	43.919	43.227	-30.081	74.000	0.691	PK

Note:
1. Measured Level = Reading Level + Factor.
2. The test frequency range, 9kHz~30MHz, worst case are at least 20dB below the limits, therefore no data appear in the report.
3. This limit applies for both peak and average detector, if the test result on peak is lower than average limit, then average measurement needn't be performed.
4.The points in graph are the highest data in test frequency range.

4.3 Emissions in non-restricted frequency band	VERDICT: PASS

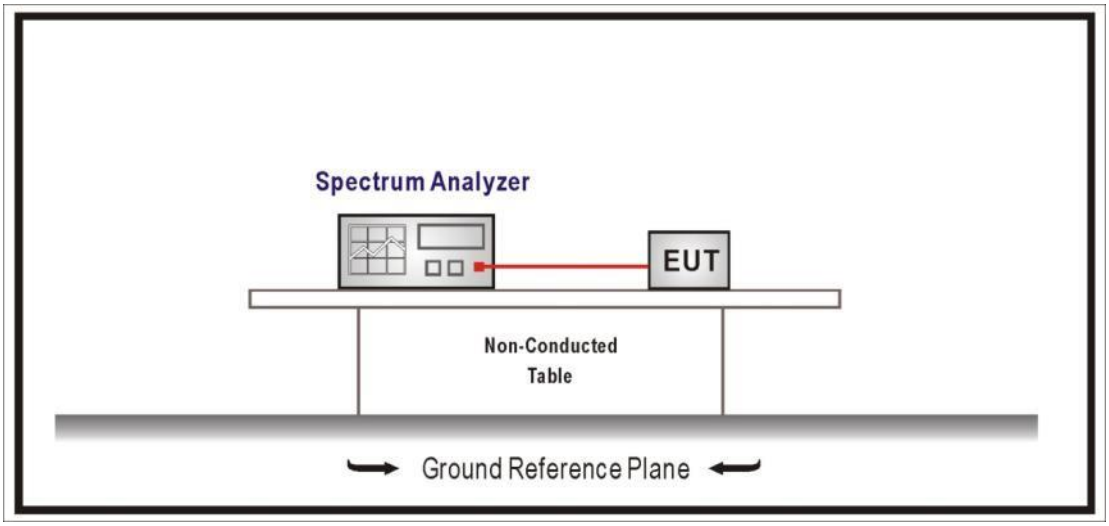
4.3.1 Limit

Standard	FCC Part 15 Subpart C Paragraph 15.247(d)
RF Output power (Detection methods)	Limit(dB)
RF Output power(Average detector)	30dBc(Note1)
RF Output power(PK detector)	20dBc(Note2)

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

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

4.3.2 Test Setup



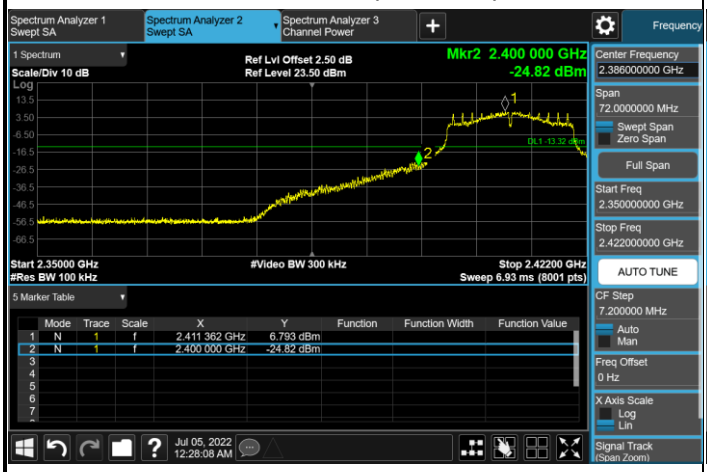
4.3.3 Test Procedure

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

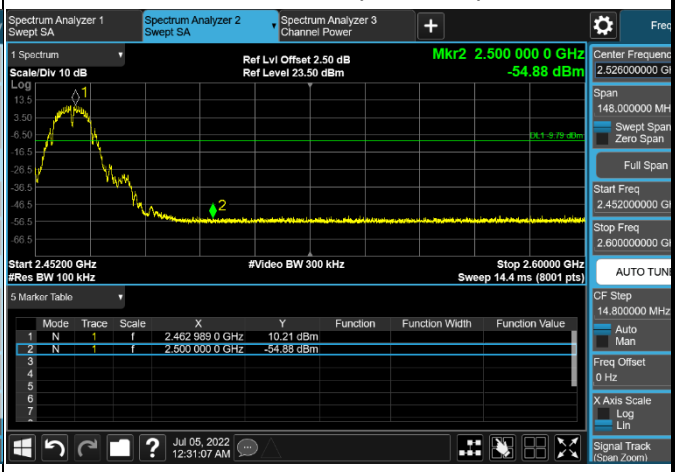
4.3.4 Test Data

Mode	Channel	Test Frequency (MHz)	Maximum In-Band PSD[a] (dBm/100kHz)	Frequency (MHz)	Out-Band PSD[b] (dBm/100kHz)	[a]-[b] (dB)	Limit (dB)	Result
1	1	2412	10.17	2398.47	-29.17	39.34	≥20	Pass
	11	2462	10.21	2500	-54.88	65.09	≥20	Pass
2	1	2412	6.79	2400	-24.82	31.61	≥20	Pass
	11	2462	7.00	2500	-55.19	62.19	≥20	Pass
3	1	2412	4.61	2400	-29.74	34.35	≥20	Pass
	11	2462	5.23	2500	-54.64	59.87	≥20	Pass

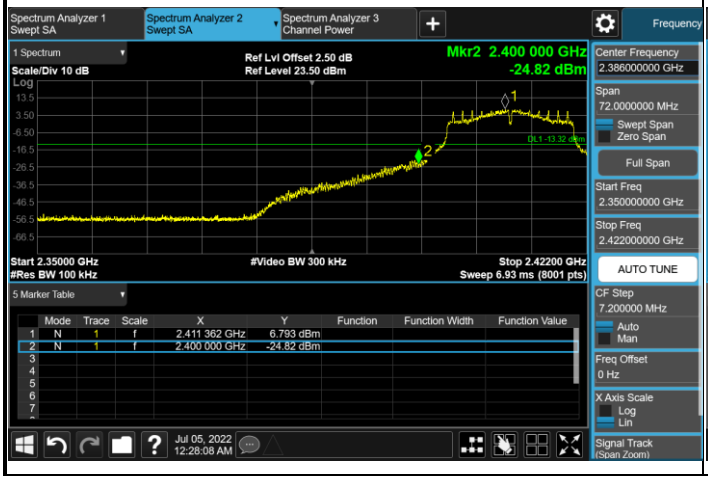
Mode 1 CH01(2412MHz)



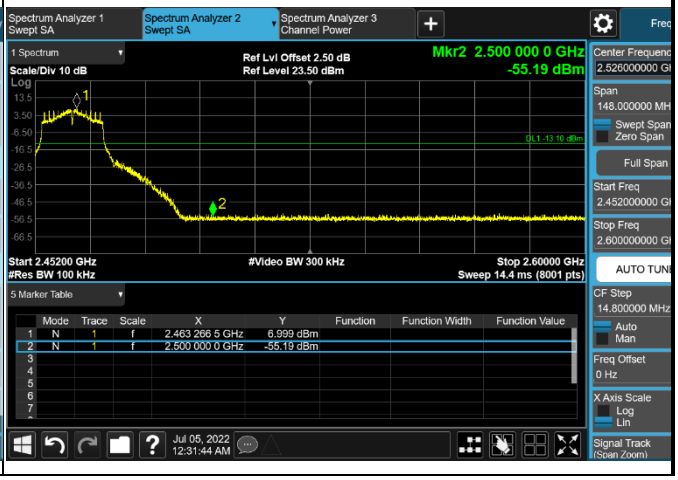
Mode 1 CH11(2462MHz)

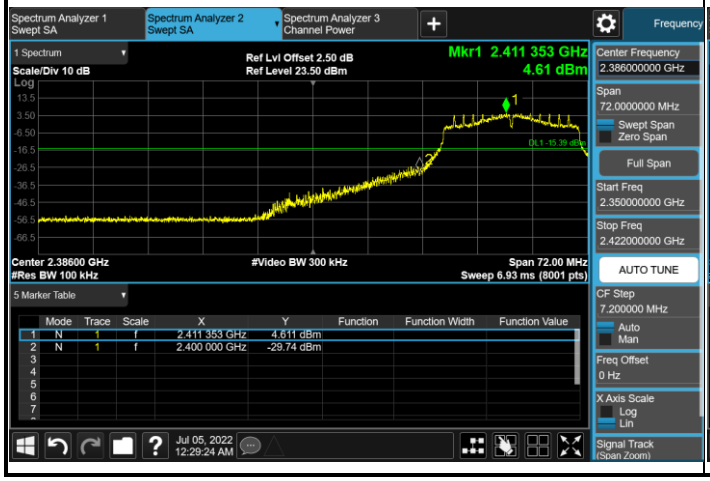
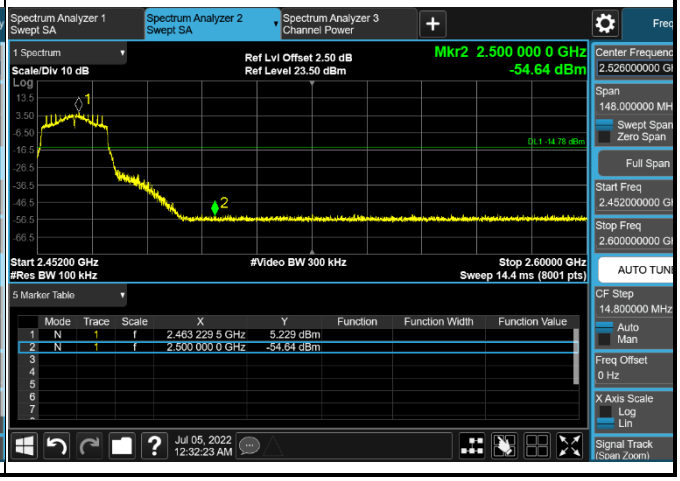


Mode 2 CH01(2412MHz)



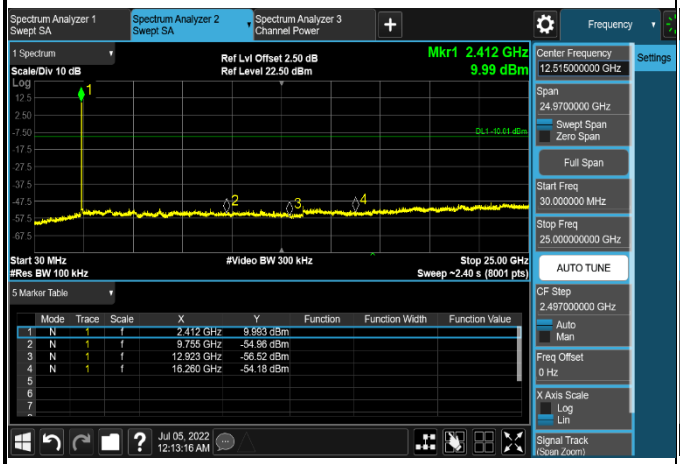
Mode 2 CH11(2462MHz)



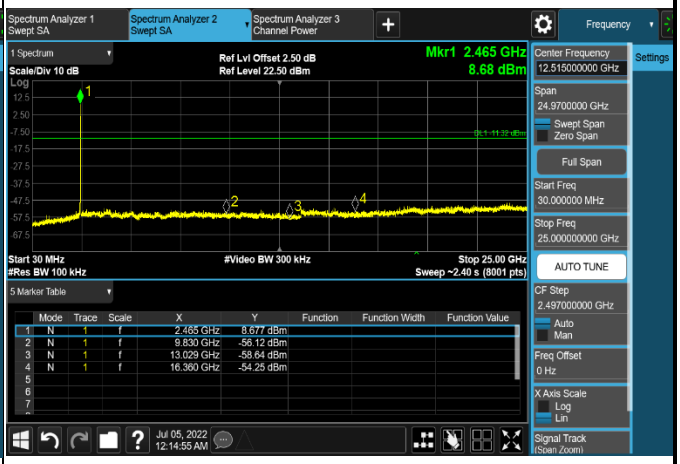
Mode 3 CH01(2412MHz)	Mode 3 CH11(2462MHz)
	

The data of entire corresponding spectrum:

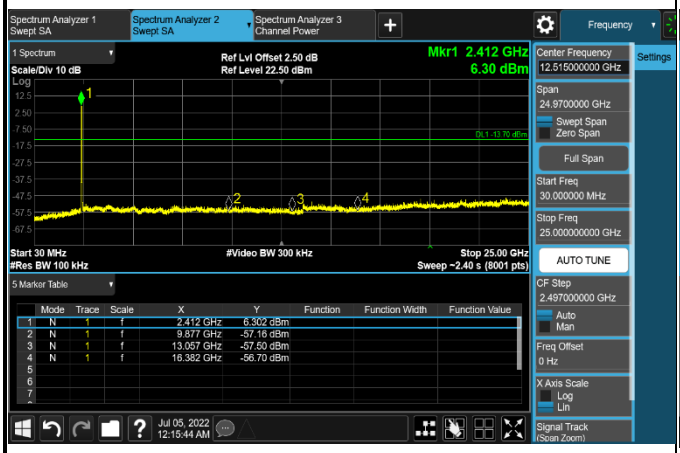
Mode 1 CH01 (2412MHz)



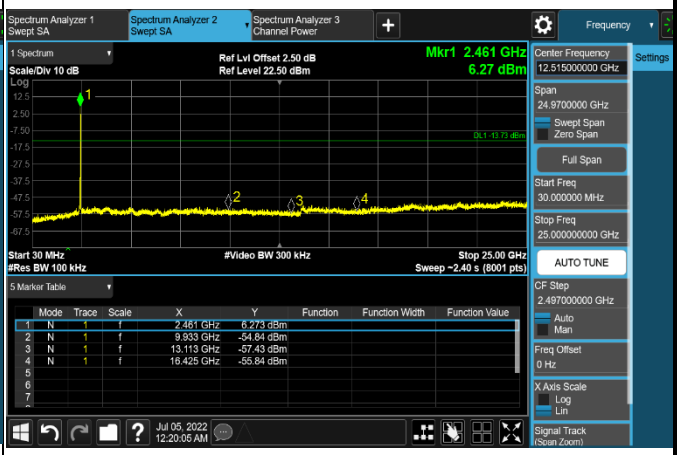
Mode 1 CH11 (2462MHz)



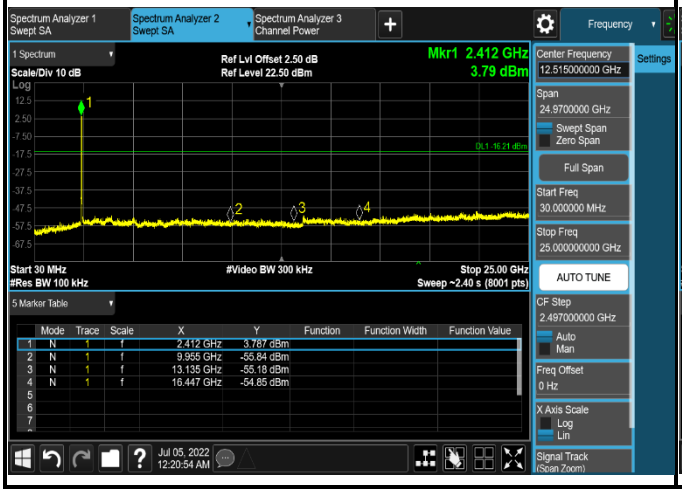
Mode 2 CH01 (2412MHz)



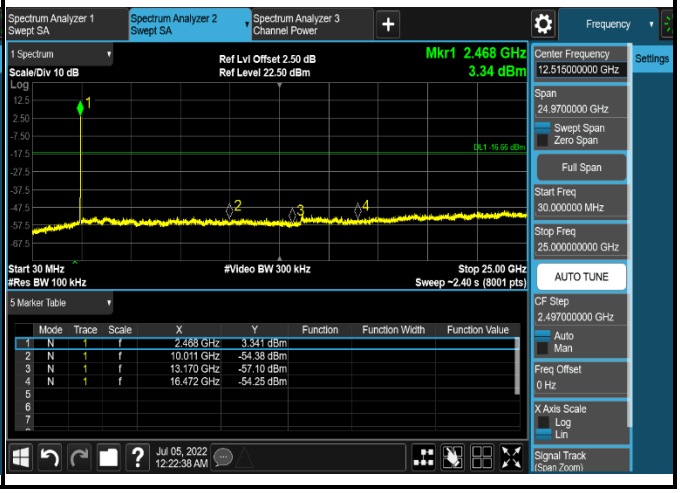
Mode 2 CH11 (2462MHz)



Mode 3 CH01 (2412MHz)



Mode 3 CH11 (2462MHz)

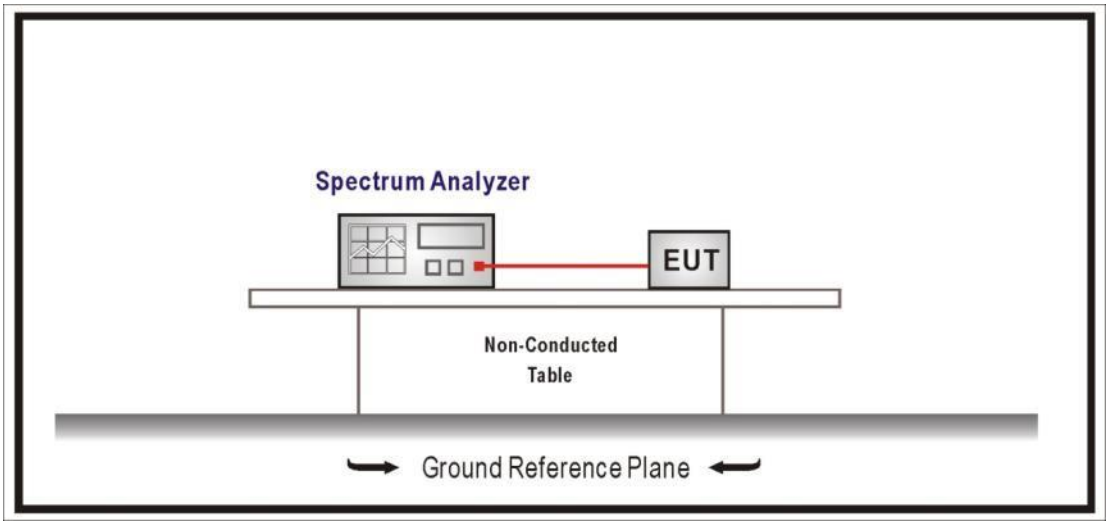


4.4 Duty cycle	VERDICT: PASS

4.4.1 Limit

N/A

4.4.2 Test Setup



4.4.3 Test Procedure

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

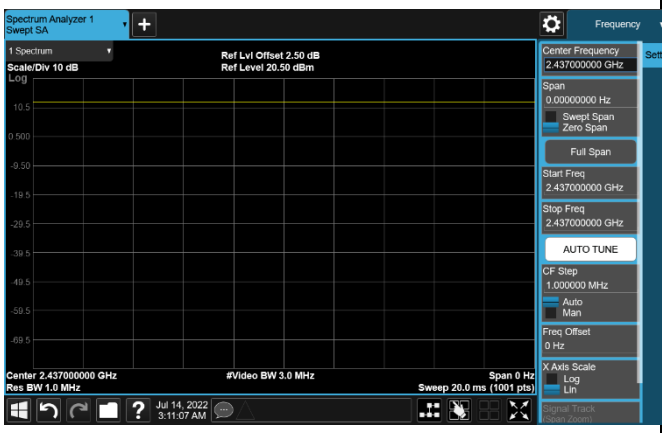
4.4.4 Test Data

Test Mode	Tx On (ms)	VBW (kHz)	Tx On + Tx Off (ms)	Duty Cycle (%)
Mode 1	-	3000	-	100
Mode 2	1.420	0.71	1.452	97.80
Mode 3	1.328	0.76	1.356	97.94

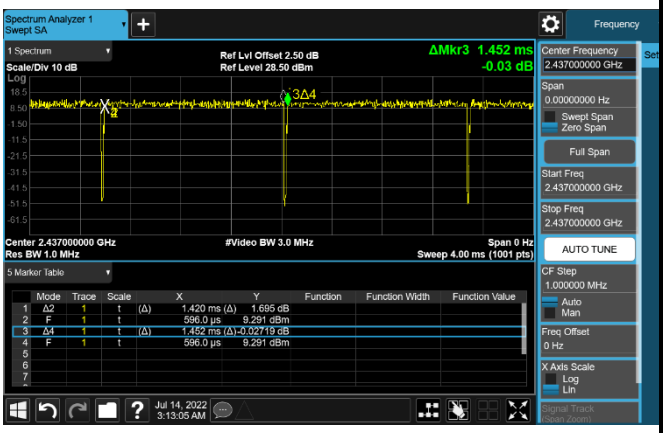
Note 1: T means the minimum transmission duration over which the transmitter is on and is transmitting at its maximum power control level for the tested mode of operation.

Note 2: According to C63.10, if continuous transmission of the EUT (D ⩾ 98%) cannot be achieved and the duty cycle is constant (duty cycle variations are less than ±2%), for Radiated Emission Band Edge and Radiated Emission, for average detector set: VBW ⩾ 3RBW will be used; If continuous transmission of the EUT (D ⩾ 98%) cannot be achieved and the duty cycle is not constant (duty cycle variations exceed ±2%), when test for Radiated Emission Band Edge and Radiated Emission, for average detector set: VBW ⩾ 1/T will be used.

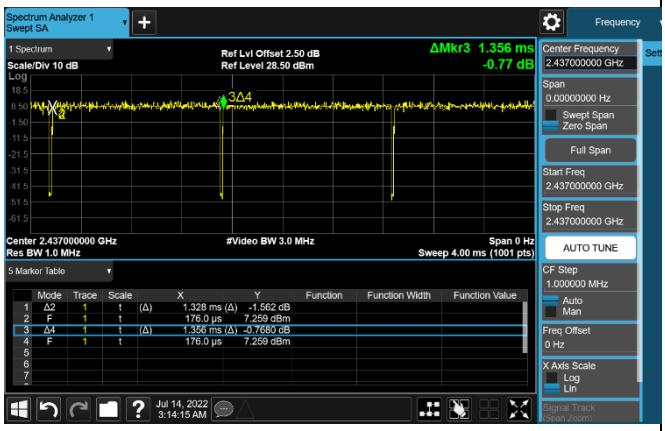
Mode 1 2437MHz



Mode 2 2437MHz



Mode 3 2437MHz



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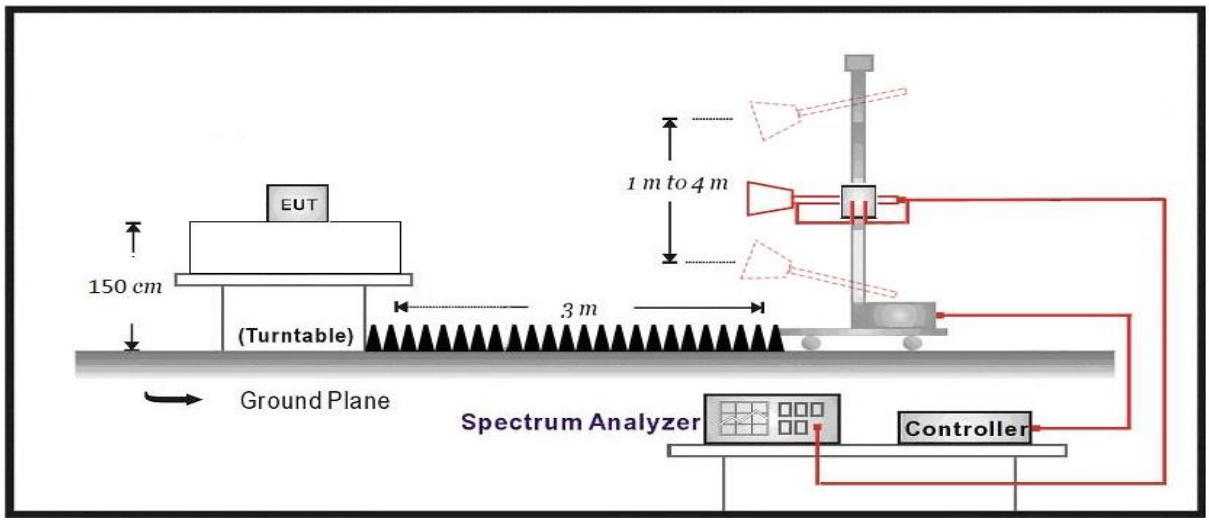
4.5 Radiated Emission Band Edge	VERDICT: PASS

4.5.1 Limit

Standard	FCC Part 15 Subpart C Paragraph 15.247(d) , 15.205, 15.209			
Frequency bands (MHz)	Detector	Limit (dBμV/m)	RBW (MHz)	Distance (m)
2310-2390 2483.5-2500	PK	74	1	3
	AV	54	1	3
Note: The field strength of emissions appearing within these frequency bands shall not exceed the limits.				

4.5.2 Test Setup

Above 1GHz Test Setup:

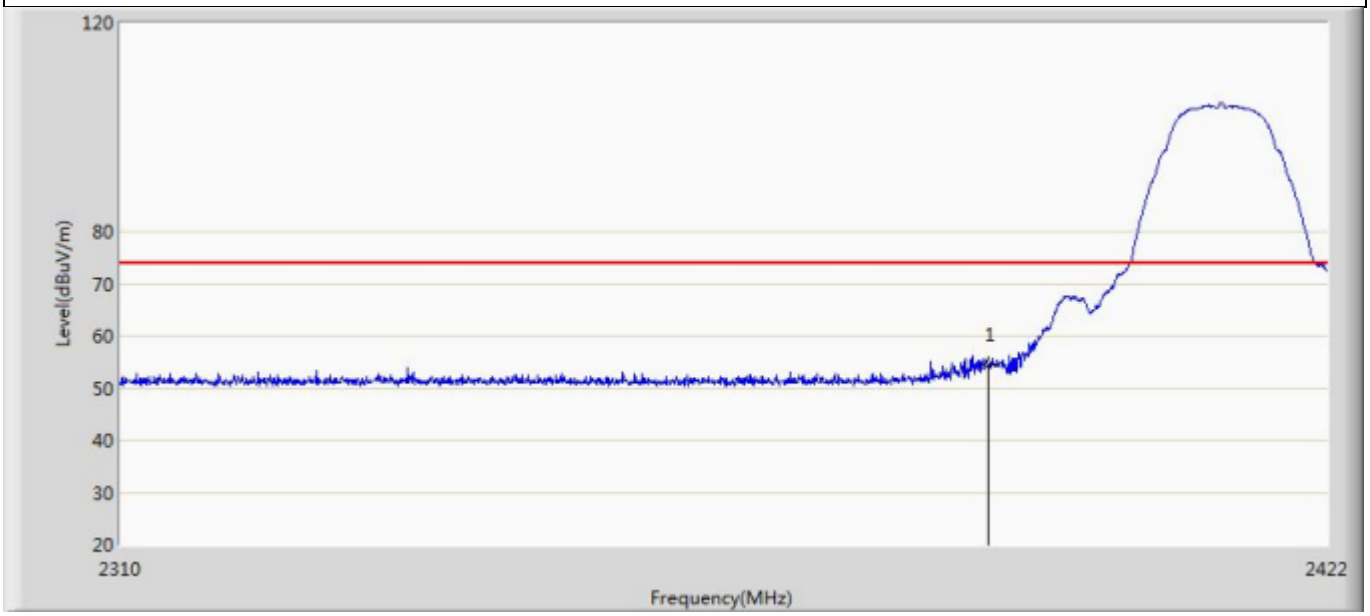


4.5.3 Test Procedure

	References Rule	Chapter	Description
☒	ANSI C63.10	6.10	Band-edge testing
	☒ ANSI C63.10	6.10.5	Restricted-band band-edge measurements
	☐ ANSI C63.10	6.10.6	Marker-delta method
☒	ANSI C63.10	11.12	Emissions in restricted frequency bands
	☒ ANSI C63.10	11.12.1	Radiated emission measurements
	☒ ANSI C63.10	6.3	Radiated spurious emission test
☐	ANSI C63.10	6.4	Radiated emissions from unlicensed wireless devices below 30 MHz
☐	ANSI C63.10	6.5	Radiated emissions from unlicensed wireless devices in the frequency range of 30 MHz to 1000 MHz
☒	ANSI C63.10	6.6	Radiated emissions from unlicensed wireless devices above 1 GHz

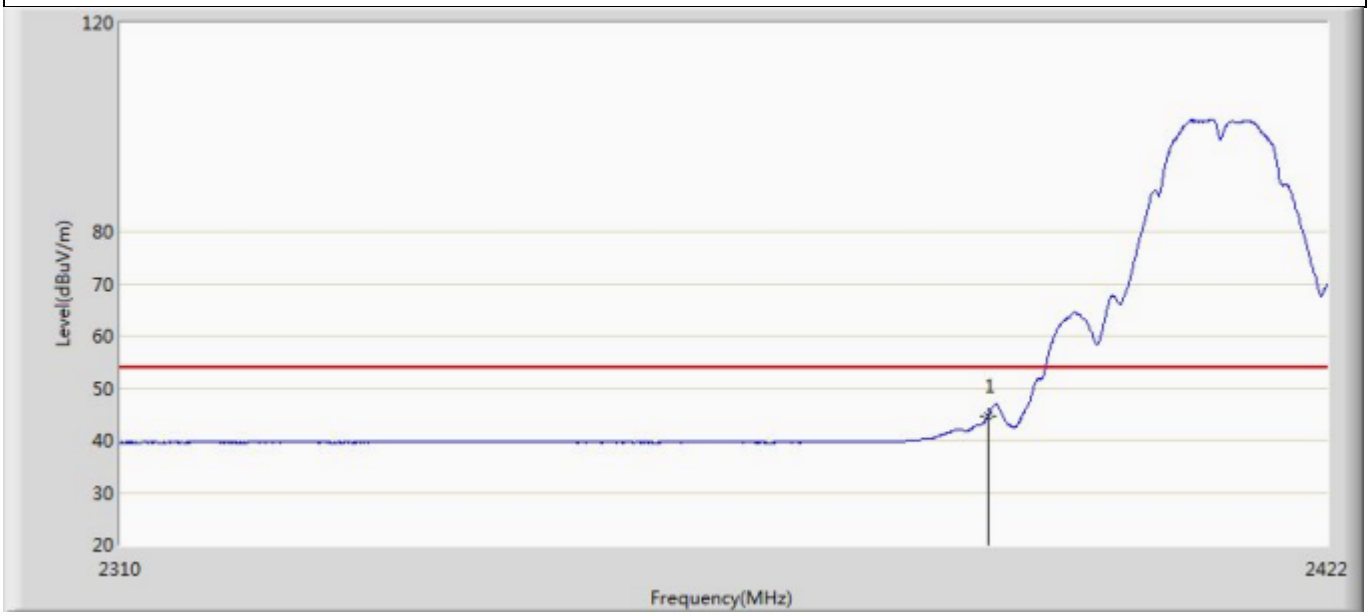
4.5.4 Test Data

Profile: 2260325R	Page No.: 2
Engineer: Carlosshen	
Site: AC5	Time: 2022/06/30 - 07:40
Limit: FCC_Part15.209_RE(3m)	Margin: 0
Probe: Horn_3117_00167055(1-18GHz)	Polarity: Horizontal
EUT:LBEE5HY2DU	Power: DC 3.6V
Note: Mode 1:Transmit at 2412MHz by 11b	



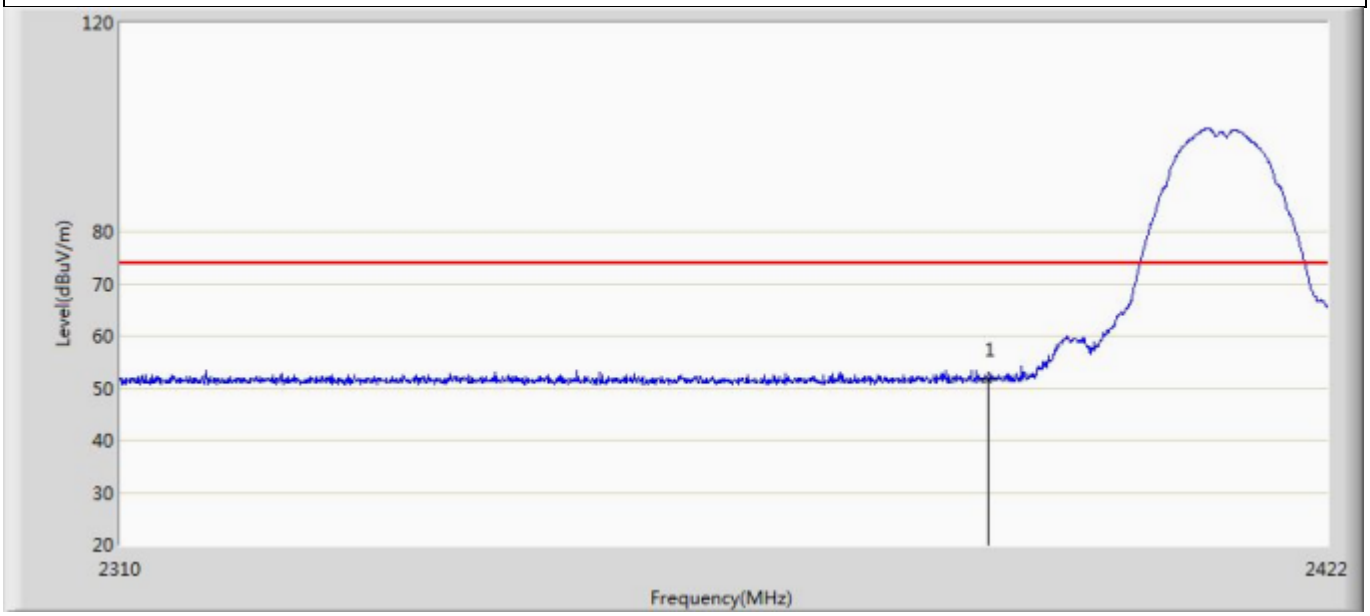
No	Mark	Frequency (MHz)	Measure Level (dBuV/m)	Reading Level (dBuV)	Over Limit (dB)	Limit (dBuV/m)	Factor (dB)	Type
1	*	2390.000	54.420	18.322	-19.580	74.000	36.098	PK

Profile: 2260325R	Page No.: 1
Engineer: Carlosshen	
Site: AC5	Time: 2022/06/30 - 00:39
Limit: FCC_Part15.209_RE(3m)	Margin: 0
Probe: Horn_3117_00167055(1-18GHz)	Polarity: Horizontal
EUT:LBEE5HY2DU	Power: DC 3.6V
Note: Mode 1:Transmit at 2412MHz by 11b	



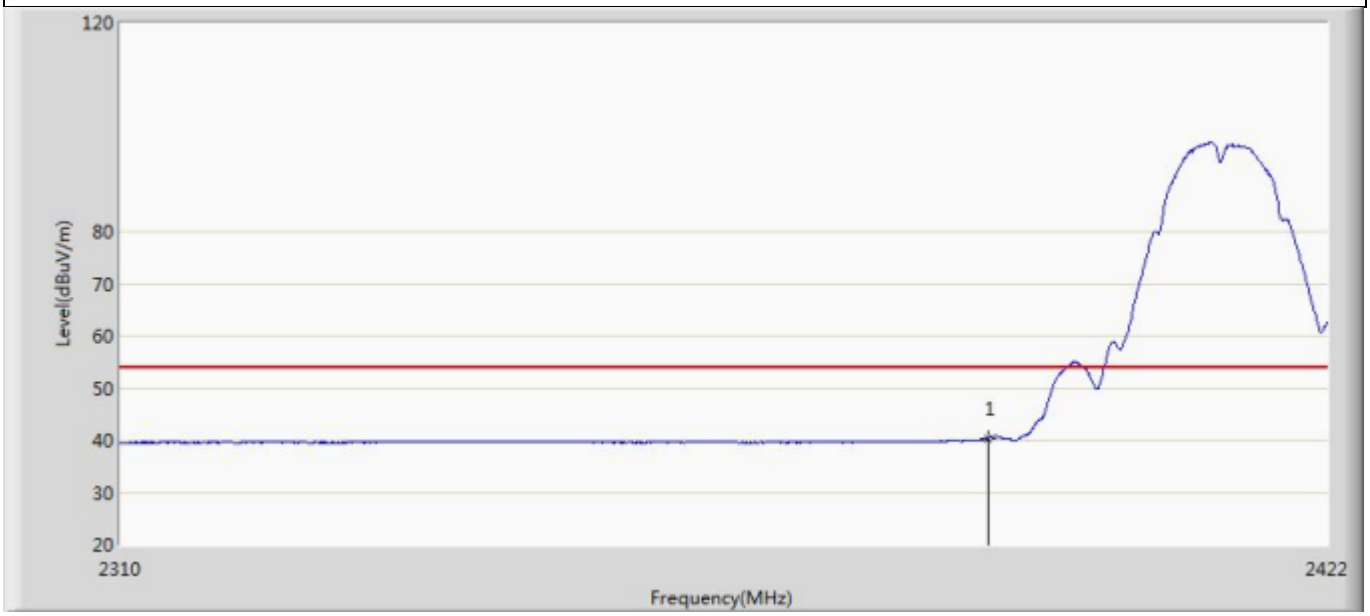
No	Mark	Frequency (MHz)	Measure Level (dBuV/m)	Reading Level (dBuV)	Over Limit (dB)	Limit (dBuV/m)	Factor (dB)	Type
1	*	2390.000	44.523	8.425	-9.477	54.000	36.098	AV

Profile: 2260325R	Page No.: 4
Engineer: Carlosshen	
Site: AC5	Time: 2022/06/30 - 07:42
Limit: FCC_Part15.209_RE(3m)	Margin: 0
Probe: Horn_3117_00167055(1-18GHz)	Polarity: Vertical
EUT:LBEE5HY2DU	Power: DC 3.6V
Note: Mode 1:Transmit at 2412MHz by 11b	



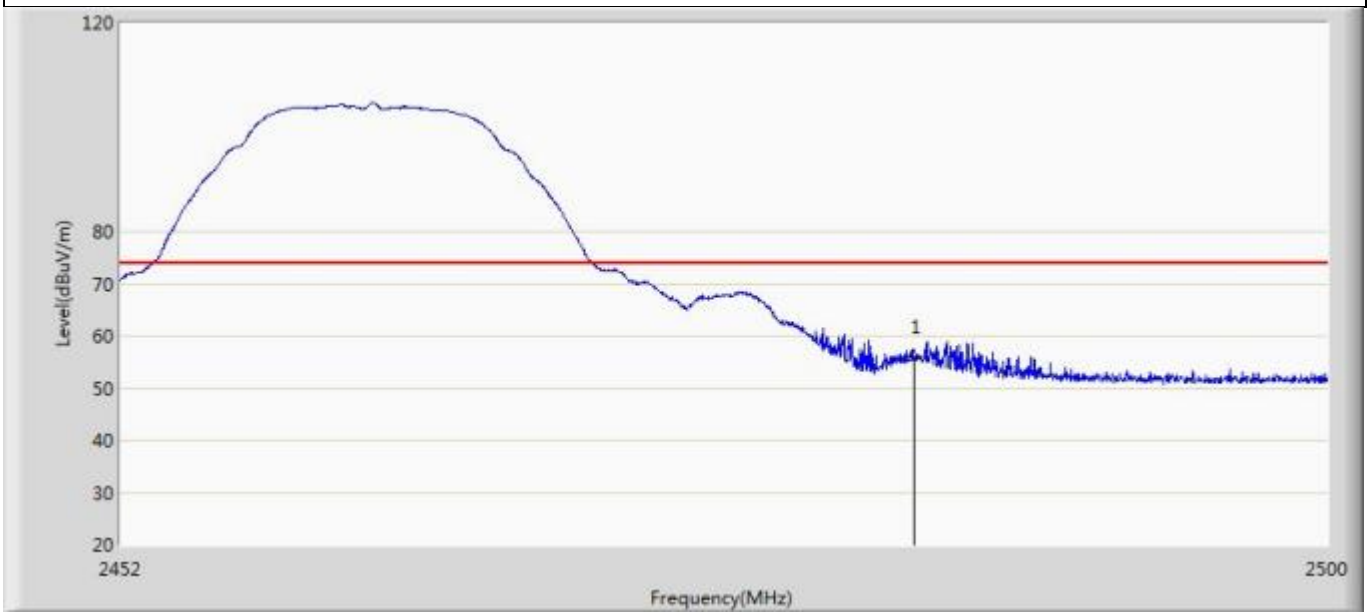
No	Mark	Frequency (MHz)	Measure Level (dBuV/m)	Reading Level (dBuV)	Over Limit (dB)	Limit (dBuV/m)	Factor (dB)	Type
1	*	2390.000	51.700	15.602	-22.300	74.000	36.098	PK

Profile: 2260325R	Page No.: 3
Engineer: Carlosshen	
Site: AC5	Time: 2022/06/30 - 07:41
Limit: FCC_Part15.209_RE(3m)	Margin: 0
Probe: Horn_3117_00167055(1-18GHz)	Polarity: Vertical
EUT:LBEE5HY2DU	Power: DC 3.6V
Note: Mode 1:Transmit at 2412MHz by 11b	



No	Mark	Frequency (MHz)	Measure Level (dBuV/m)	Reading Level (dBuV)	Over Limit (dB)	Limit (dBuV/m)	Factor (dB)	Type
1	*	2390.000	40.420	4.322	-13.580	54.000	36.098	AV

Profile: 2260325R	Page No.: 6
Engineer: Carlosshen	
Site: AC5	Time: 2022/06/30 - 07:49
Limit: FCC_Part15.209_RE(3m)	Margin: 0
Probe: Horn_3117_00167055(1-18GHz)	Polarity: Horizontal
EUT:LBEE5HY2DU	Power: DC 3.6V
Note: Mode 1:Transmit at 2462MHz by 11b	

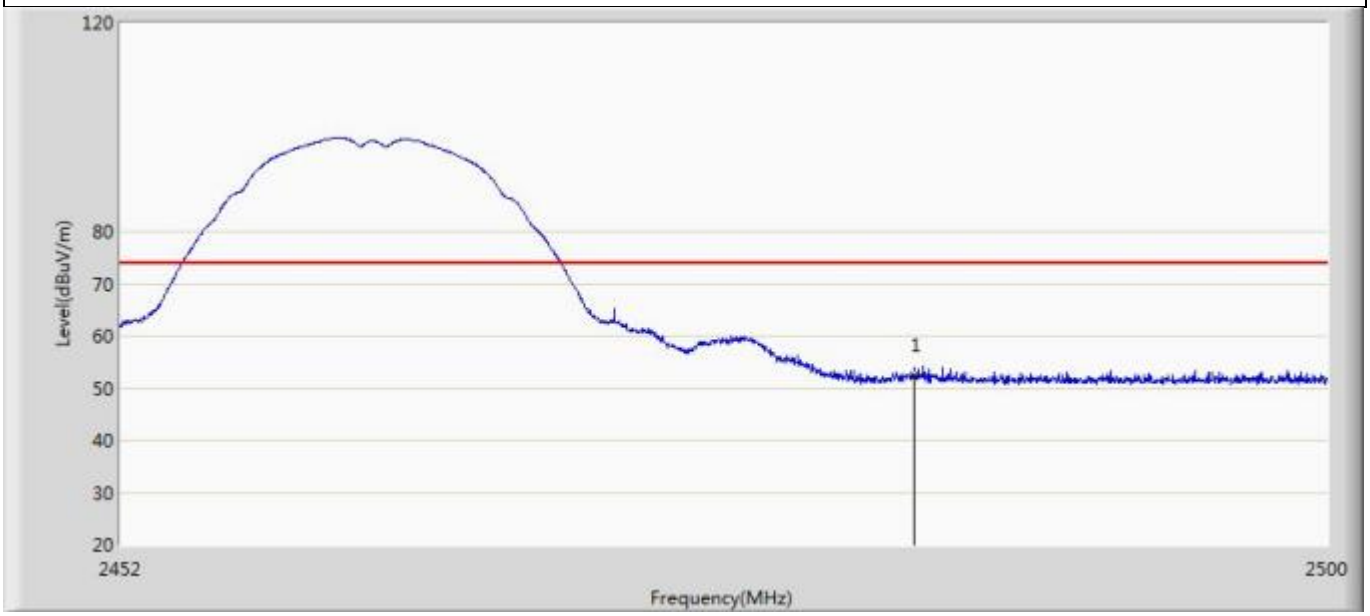


No	Mark	Frequency (MHz)	Measure Level (dBuV/m)	Reading Level (dBuV)	Over Limit (dB)	Limit (dBuV/m)	Factor (dB)	Type
1	*	2483.500	55.973	19.752	-18.027	74.000	36.220	PK

Profile: 2260325R	Page No.: 5
Engineer: Carlosshen	
Site: AC5	Time: 2022/06/30 - 07:44
Limit: FCC_Part15.209_RE(3m)	Margin: 0
Probe: Horn_3117_00167055(1-18GHz)	Polarity: Horizontal
EUT:LBEE5HY2DU	Power: DC 3.6V
Note: Mode 1:Transmit at 2462MHz by 11b	

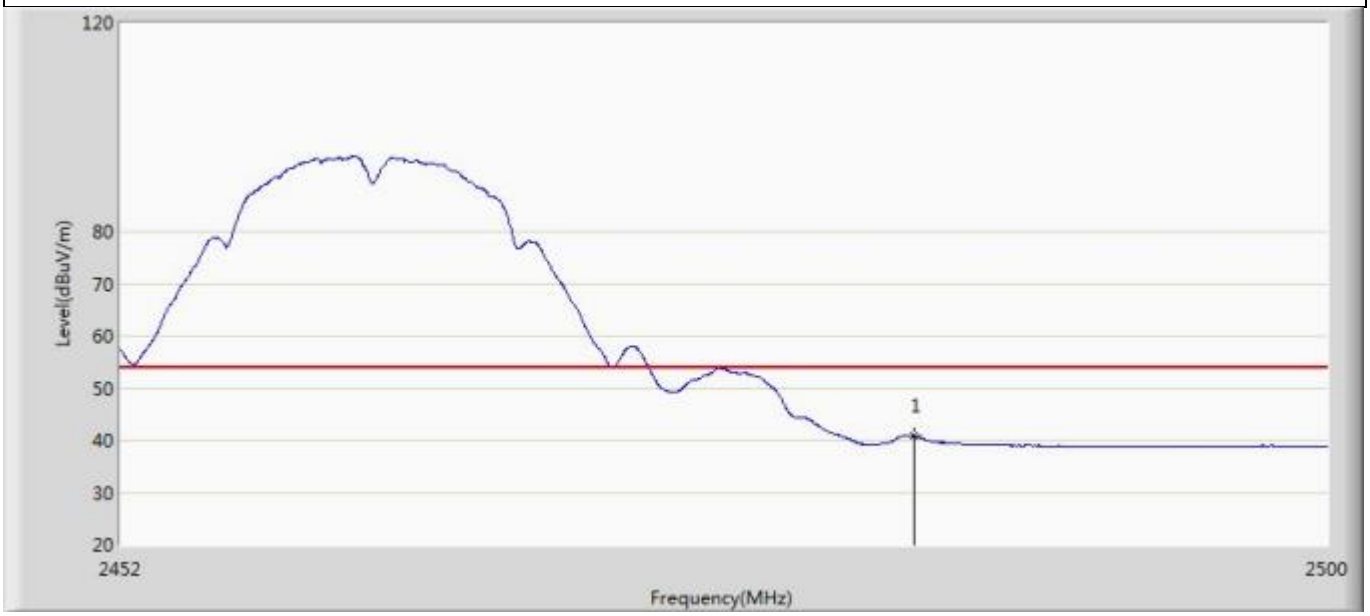
No	Mark	Frequency (MHz)	Measure Level (dBuV/m)	Reading Level (dBuV)	Over Limit (dB)	Limit (dBuV/m)	Factor (dB)	Type
1	*	2483.500	47.406	11.185	-6.594	54.000	36.220	AV

Profile: 2260325R	Page No.: 8
Engineer: Carlosshen	
Site: AC5	Time: 2022/06/30 - 07:53
Limit: FCC_Part15.209_RE(3m)	Margin: 0
Probe: Horn_3117_00167055(1-18GHz)	Polarity: Vertical
EUT:LBEE5HY2DU	Power: DC 3.6V
Note: Mode 1:Transmit at 2462MHz by 11b	



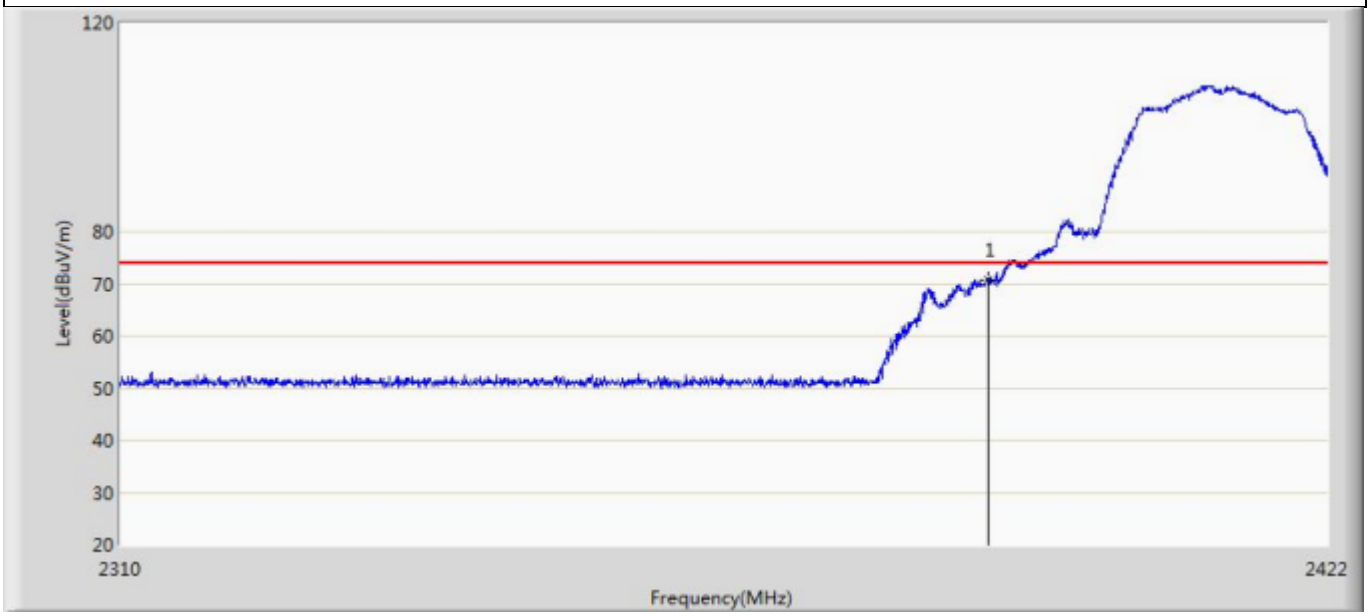
No	Mark	Frequency (MHz)	Measure Level (dBuV/m)	Reading Level (dBuV)	Over Limit (dB)	Limit (dBuV/m)	Factor (dB)	Type
1	*	2483.500	52.545	16.324	-21.455	74.000	36.220	PK

Profile: 2260325R	Page No.: 7
Engineer: Carlosshen	
Site: AC5	Time: 2022/06/30 - 07:52
Limit: FCC_Part15.209_RE(3m)	Margin: 0
Probe: Horn_3117_00167055(1-18GHz)	Polarity: Vertical
EUT:LBEE5HY2DU	Power: DC 3.6V
Note: Mode 1:Transmit at 2462MHz by 11b	



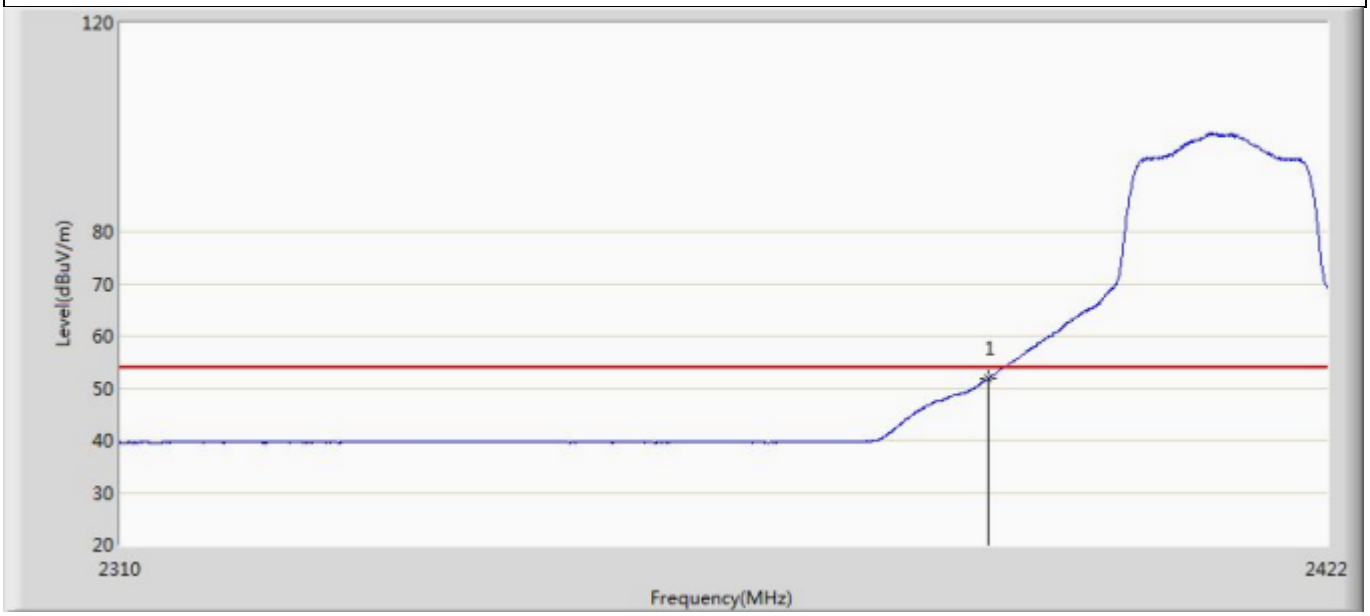
No	Mark	Frequency (MHz)	Measure Level (dBuV/m)	Reading Level (dBuV)	Over Limit (dB)	Limit (dBuV/m)	Factor (dB)	Type
1	*	2483.500	40.766	4.545	-13.234	54.000	36.220	AV

Profile: 2260325R	Page No.: 10
Engineer: Carlosshen	
Site: AC5	Time: 2022/06/30 - 07:57
Limit: FCC_Part15.209_RE(3m)	Margin: 0
Probe: Horn_3117_00167055(1-18GHz)	Polarity: Horizontal
EUT:LBEE5HY2DU	Power: DC 3.6V
Note: Mode 2:Transmit at 2412MHz by 11g	



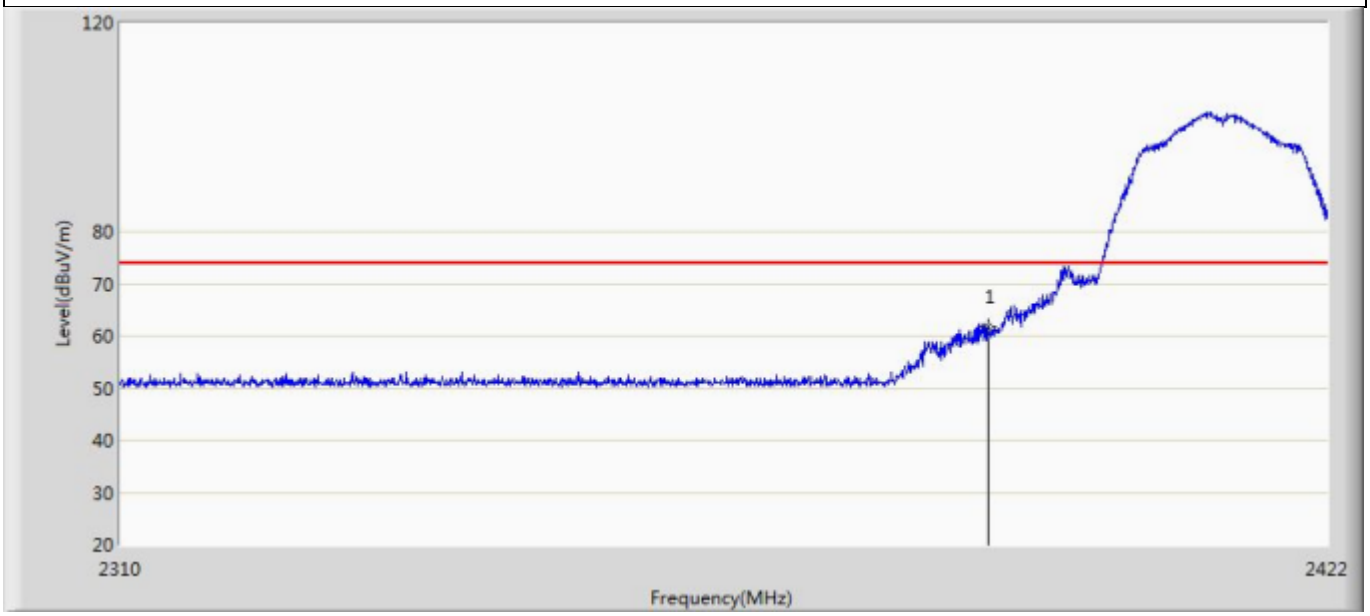
No	Mark	Frequency (MHz)	Measure Level (dBuV/m)	Reading Level (dBuV)	Over Limit (dB)	Limit (dBuV/m)	Factor (dB)	Type
1	*	2390.000	70.663	34.565	-3.337	74.000	36.098	PK

Profile: 2260325R	Page No.: 9
Engineer: Carlosshen	
Site: AC5	Time: 2022/06/30 - 07:55
Limit: FCC_Part15.209_RE(3m)	Margin: 0
Probe: Horn_3117_00167055(1-18GHz)	Polarity: Horizontal
EUT:LBEE5HY2DU	Power: DC 3.6V
Note: Mode 2:Transmit at 2412MHz by 11g	



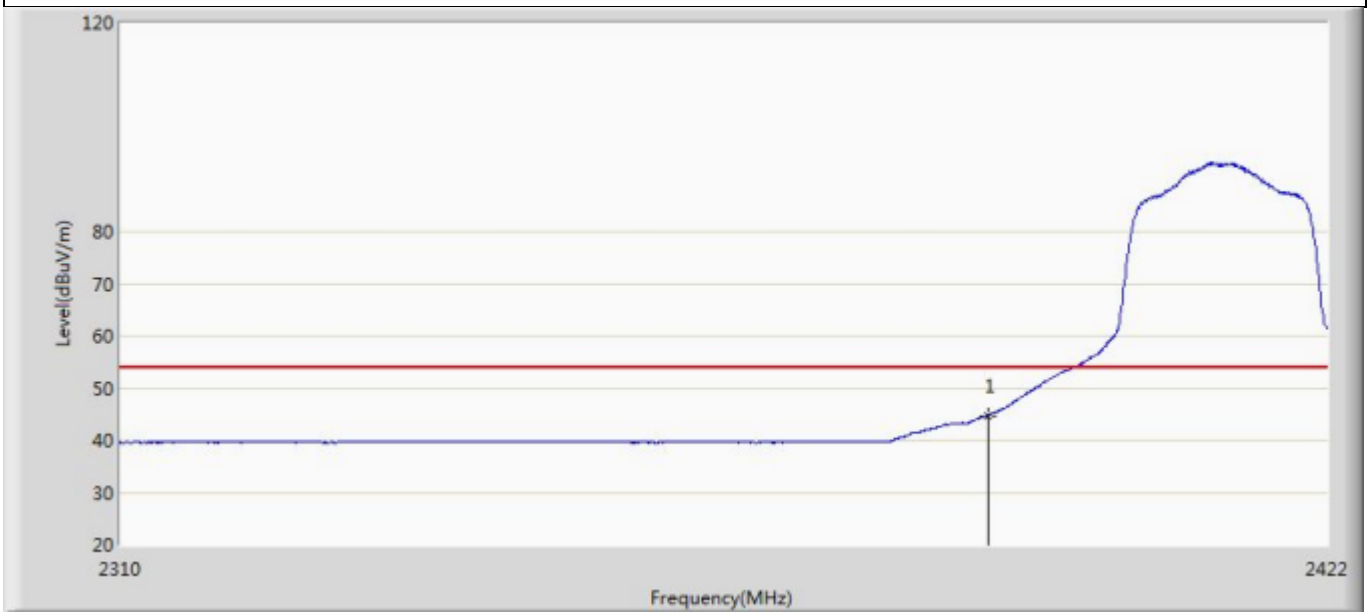
No	Mark	Frequency (MHz)	Measure Level (dBuV/m)	Reading Level (dBuV)	Over Limit (dB)	Limit (dBuV/m)	Factor (dB)	Type
1	*	2390.000	51.766	15.668	-2.234	54.000	36.098	AV

Profile: 2260325R	Page No.: 12
Engineer: Carlosshen	
Site: AC5	Time: 2022/06/30 - 08:00
Limit: FCC_Part15.209_RE(3m)	Margin: 0
Probe: Horn_3117_00167055(1-18GHz)	Polarity: Vertical
EUT:LBEE5HY2DU	Power: DC 3.6V
Note: Mode 2:Transmit at 2412MHz by 11g	



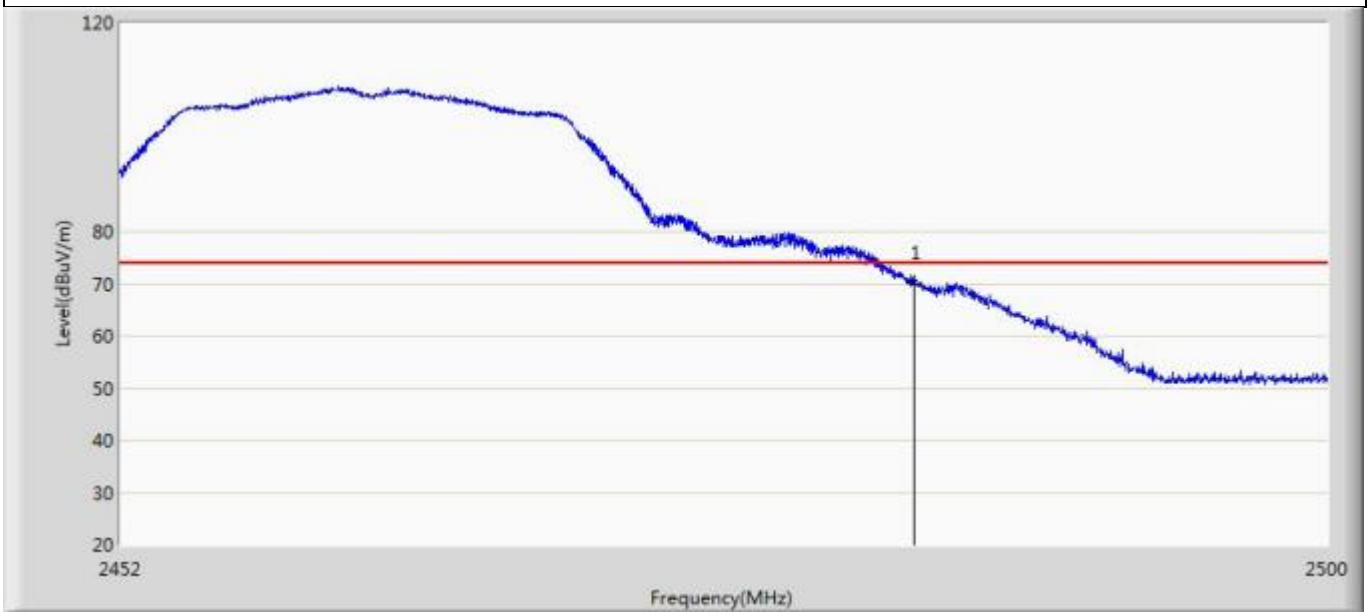
No	Mark	Frequency (MHz)	Measure Level (dBuV/m)	Reading Level (dBuV)	Over Limit (dB)	Limit (dBuV/m)	Factor (dB)	Type
1	*	2390.000	61.608	25.510	-12.392	74.000	36.098	PK

Profile: 2260325R	Page No.: 11
Engineer: Carlosshen	
Site: AC5	Time: 2022/06/30 - 07:58
Limit: FCC_Part15.209_RE(3m)	Margin: 0
Probe: Horn_3117_00167055(1-18GHz)	Polarity: Vertical
EUT:LBEE5HY2DU	Power: DC 3.6V
Note: Mode 2:Transmit at 2412MHz by 11g	



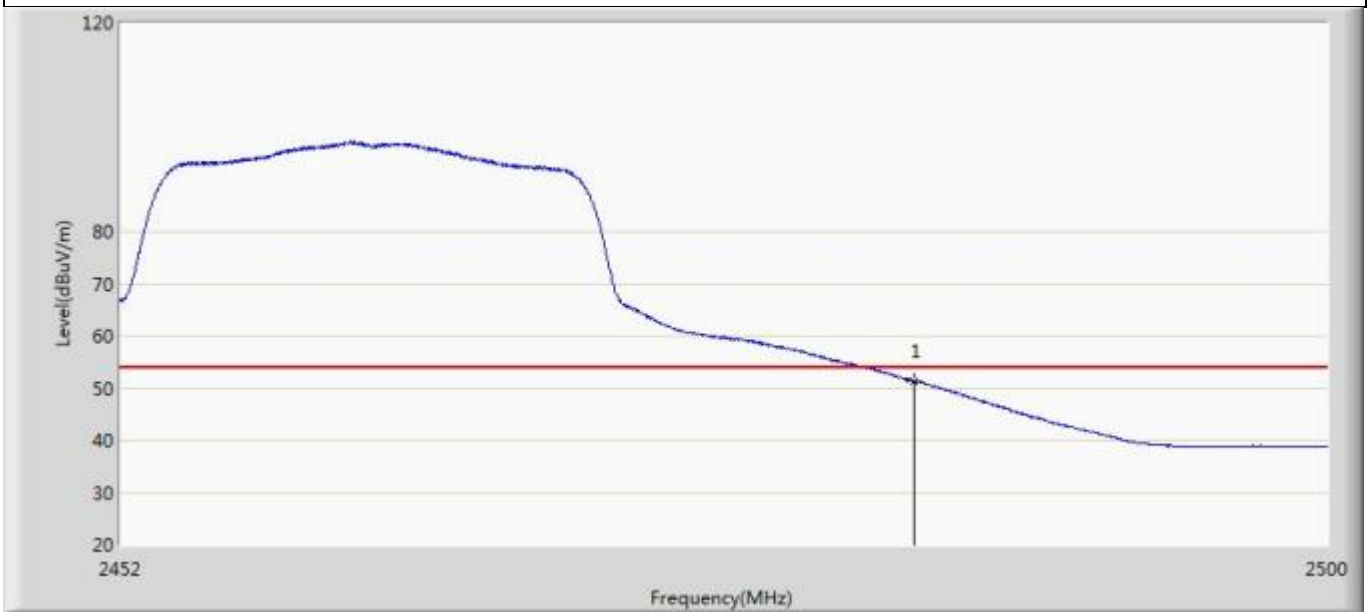
No	Mark	Frequency (MHz)	Measure Level (dBuV/m)	Reading Level (dBuV)	Over Limit (dB)	Limit (dBuV/m)	Factor (dB)	Type
1	*	2390.000	44.733	8.635	-9.267	54.000	36.098	AV

Profile: 2260325R	Page No.: 14
Engineer: Carlosshen	
Site: AC5	Time: 2022/06/30 - 08:03
Limit: FCC_Part15.209_RE(3m)	Margin: 0
Probe: Horn_3117_00167055(1-18GHz)	Polarity: Horizontal
EUT:LBEE5HY2DU	Power: DC 3.6V
Note: Mode 2:Transmit at 2462MHz by 11g	



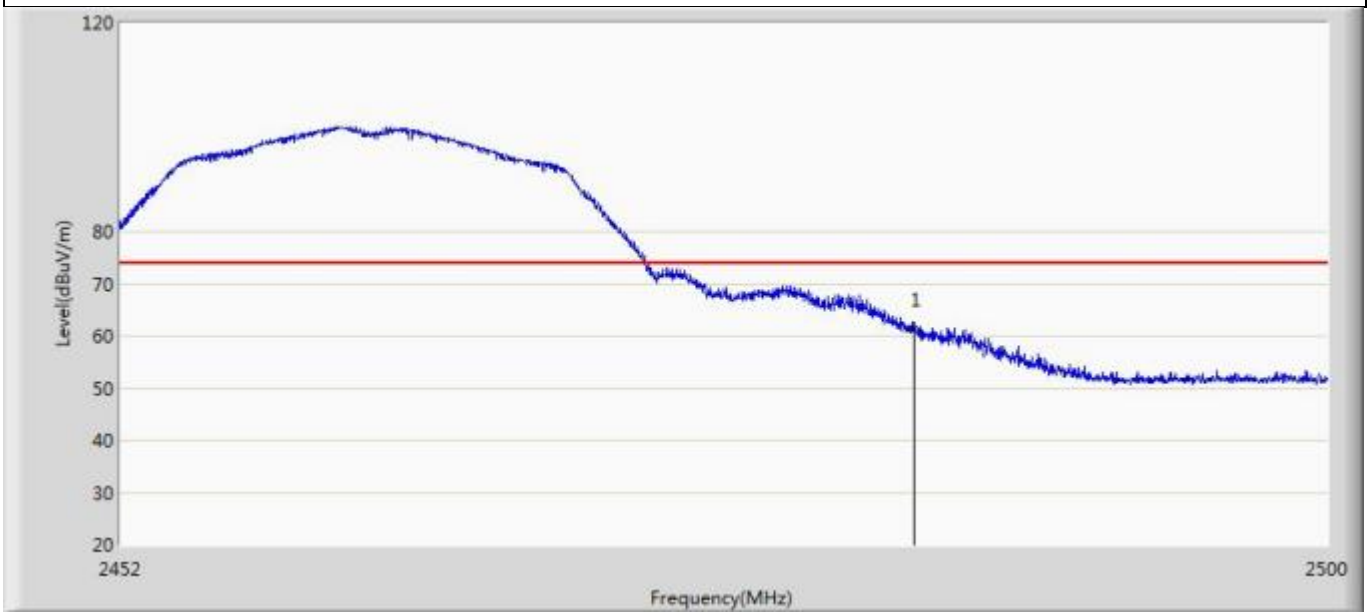
No	Mark	Frequency (MHz)	Measure Level (dBuV/m)	Reading Level (dBuV)	Over Limit (dB)	Limit (dBuV/m)	Factor (dB)	Type
1	*	2483.500	70.151	33.930	-3.849	74.000	36.220	PK

Profile: 2260325R	Page No.: 13
Engineer: Carlosshen	
Site: AC5	Time: 2022/06/30 - 08:02
Limit: FCC_Part15.209_RE(3m)	Margin: 0
Probe: Horn_3117_00167055(1-18GHz)	Polarity: Horizontal
EUT:LBEE5HY2DU	Power: DC 3.6V
Note: Mode 2:Transmit at 2462MHz by 11g	



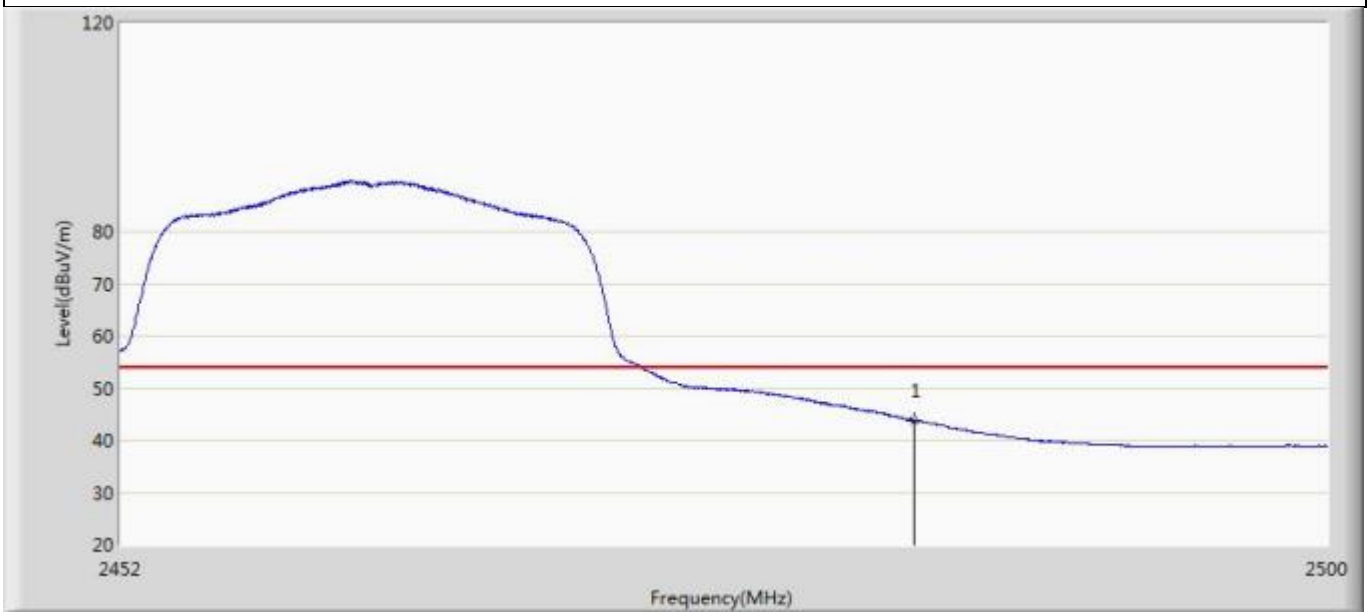
No	Mark	Frequency (MHz)	Measure Level (dBuV/m)	Reading Level (dBuV)	Over Limit (dB)	Limit (dBuV/m)	Factor (dB)	Type
1	*	2483.500	51.380	15.159	-2.620	54.000	36.220	AV

Profile: 2260325R	Page No.: 16
Engineer: Carlosshen	
Site: AC5	Time: 2022/06/30 - 08:06
Limit: FCC_Part15.209_RE(3m)	Margin: 0
Probe: Horn_3117_00167055(1-18GHz)	Polarity: Vertical
EUT:LBEE5HY2DU	Power: DC 3.6V
Note: Mode 2:Transmit at 2462MHz by 11g	



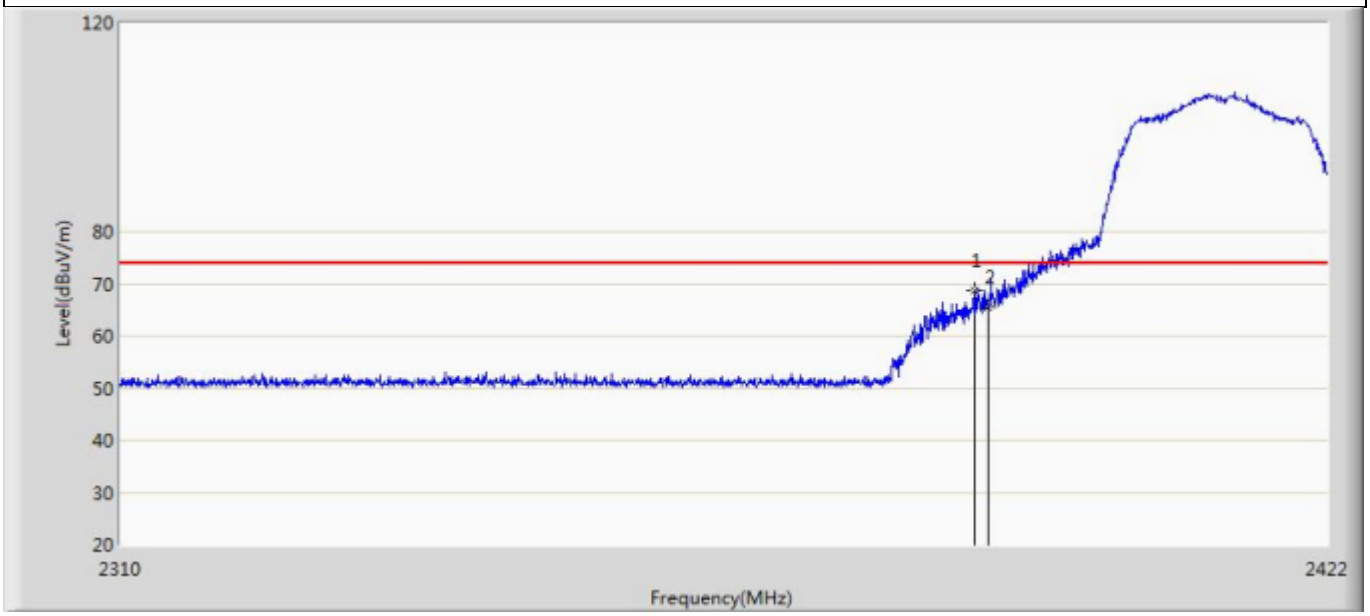
No	Mark	Frequency (MHz)	Measure Level (dBuV/m)	Reading Level (dBuV)	Over Limit (dB)	Limit (dBuV/m)	Factor (dB)	Type
1	*	2483.500	61.189	24.968	-12.811	74.000	36.220	PK

Profile: 2260325R	Page No.: 15
Engineer: Carlosshen	
Site: AC5	Time: 2022/06/30 - 08:05
Limit: FCC_Part15.209_RE(3m)	Margin: 0
Probe: Horn_3117_00167055(1-18GHz)	Polarity: Vertical
EUT:LBEE5HY2DU	Power: DC 3.6V
Note: Mode 2:Transmit at 2462MHz by 11g	



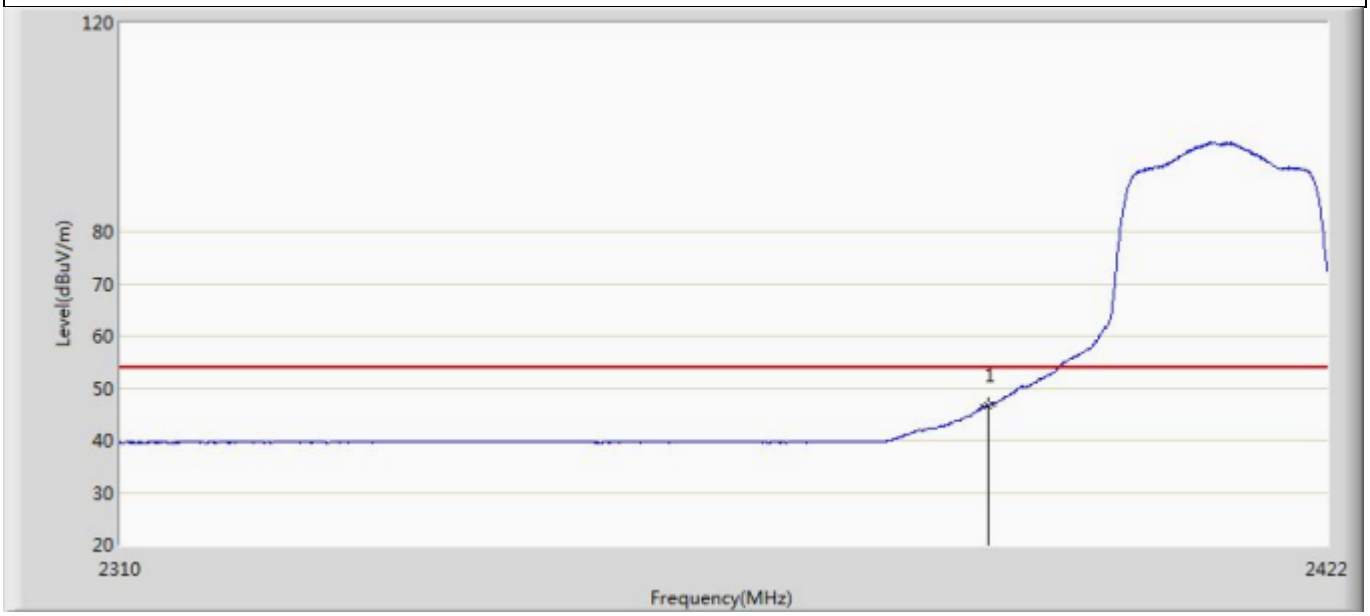
No	Mark	Frequency (MHz)	Measure Level (dBuV/m)	Reading Level (dBuV)	Over Limit (dB)	Limit (dBuV/m)	Factor (dB)	Type
1	*	2483.500	43.839	7.618	-10.161	54.000	36.220	AV

Profile: 2260325R	Page No.: 18
Engineer: Yuliu	
Site: AC5	Time: 2022/06/30 - 08:07
Limit: FCC_Part15.209_RE(3m)	Margin: 0
Probe: Horn_3117_00167055(1-18GHz)	Polarity: Horizontal
EUT: LBEE5HY2DU	Power: DC 3.6V
Note: Mode 3:Transmit at 2412MHz by 11n(20MHz)	



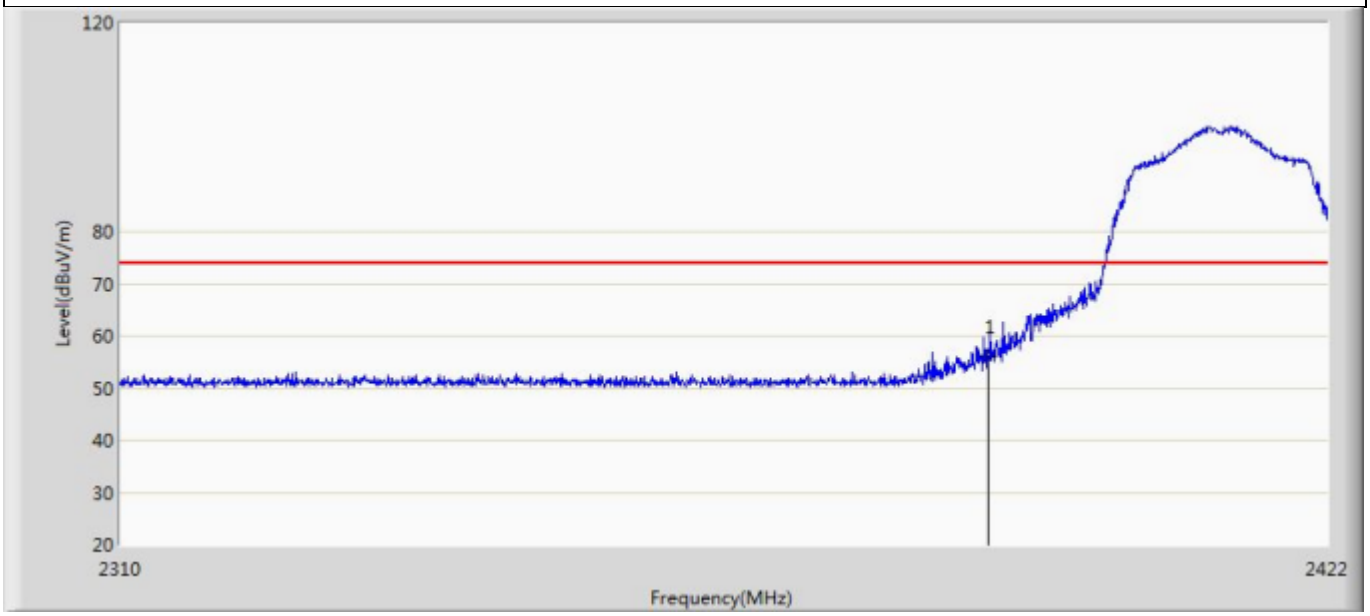
No	Mark	Frequency (MHz)	Measure Level (dBuV/m)	Reading Level (dBuV)	Over Limit (dB)	Limit (dBuV/m)	Factor (dB)	Type
1	*	2388.680	68.633	32.547	-5.367	74.000	36.086	PK
2		2390.000	65.420	29.322	-8.580	74.000	36.098	PK

Profile: 2260325R	Page No.: 17
Engineer: Carlosshen	
Site: AC5	Time: 2022/06/30 - 08:07
Limit: FCC_Part15.209_RE(3m)	Margin: 0
Probe: Horn_3117_00167055(1-18GHz)	Polarity: Horizontal
EUT:LBEE5HY2DU	Power: DC 3.6V
Note: Mode 3:Transmit at 2412MHz by 11n(20MHz)	



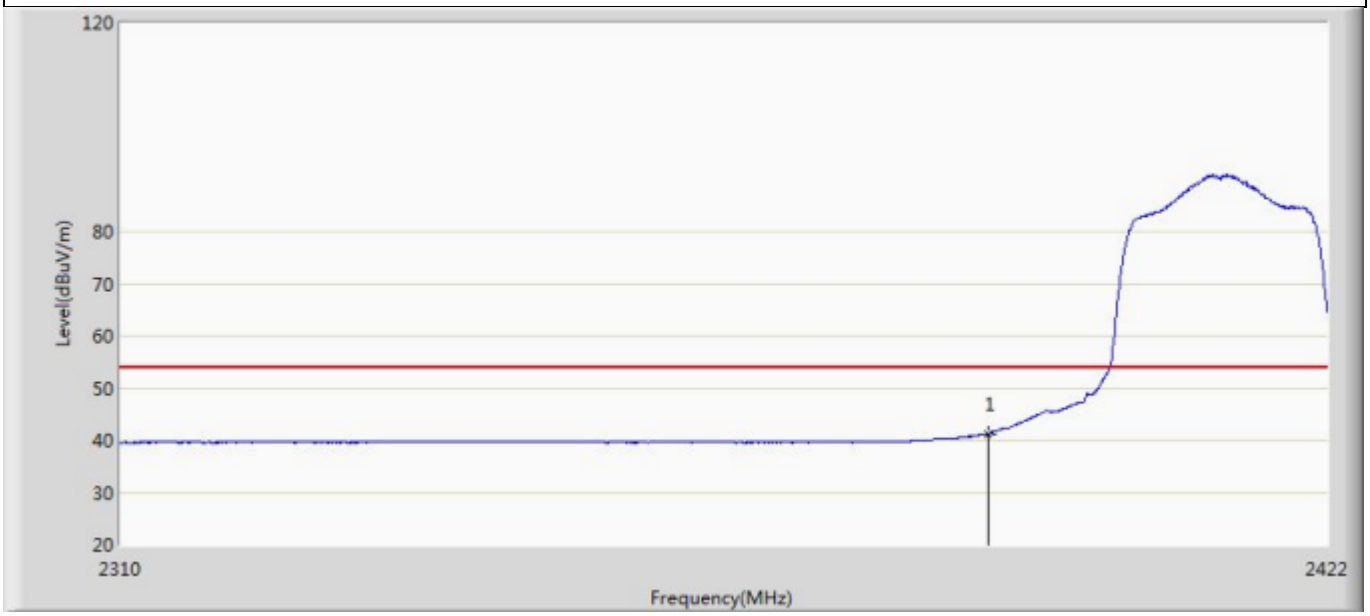
No	Mark	Frequency (MHz)	Measure Level (dBuV/m)	Reading Level (dBuV)	Over Limit (dB)	Limit (dBuV/m)	Factor (dB)	Type
1	*	2390.000	46.598	10.500	-7.402	54.000	36.098	AV

Profile: 2260325R	Page No.: 20
Engineer: Carlosshen	
Site: AC5	Time: 2022/06/30 - 08:12
Limit: FCC_Part15.209_RE(3m)	Margin: 0
Probe: Horn_3117_00167055(1-18GHz)	Polarity: Vertical
EUT:LBEE5HY2DU	Power: DC 3.6V
Note: Mode 3:Transmit at 2412MHz by 11n(20MHz)	



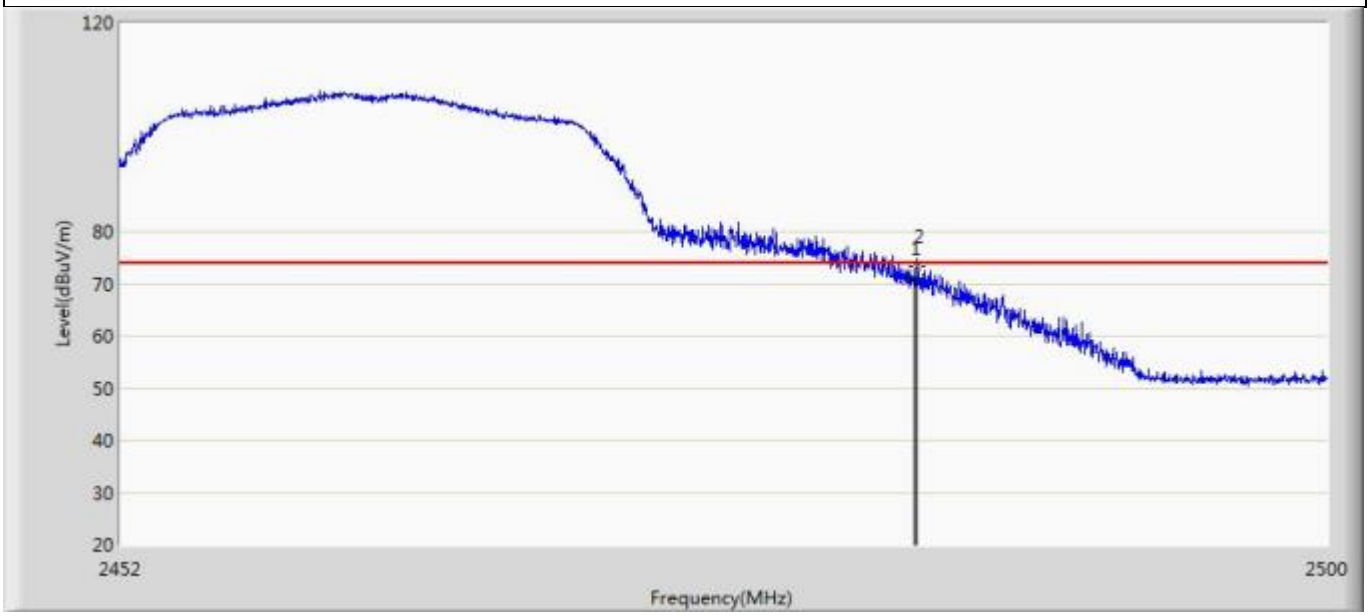
No	Mark	Frequency (MHz)	Measure Level (dBuV/m)	Reading Level (dBuV)	Over Limit (dB)	Limit (dBuV/m)	Factor (dB)	Type
1	*	2390.000	55.912	19.814	-18.088	74.000	36.098	PK

Profile: 2260325R	Page No.: 19
Engineer: Carlosshen	
Site: AC5	Time: 2022/06/30 - 08:11
Limit: FCC_Part15.209_RE(3m)	Margin: 0
Probe: Horn_3117_00167055(1-18GHz)	Polarity: Vertical
EUT:LBEE5HY2DU	Power: DC 3.6V
Note: Mode 3:Transmit at 2412MHz by 11n(20MHz)	



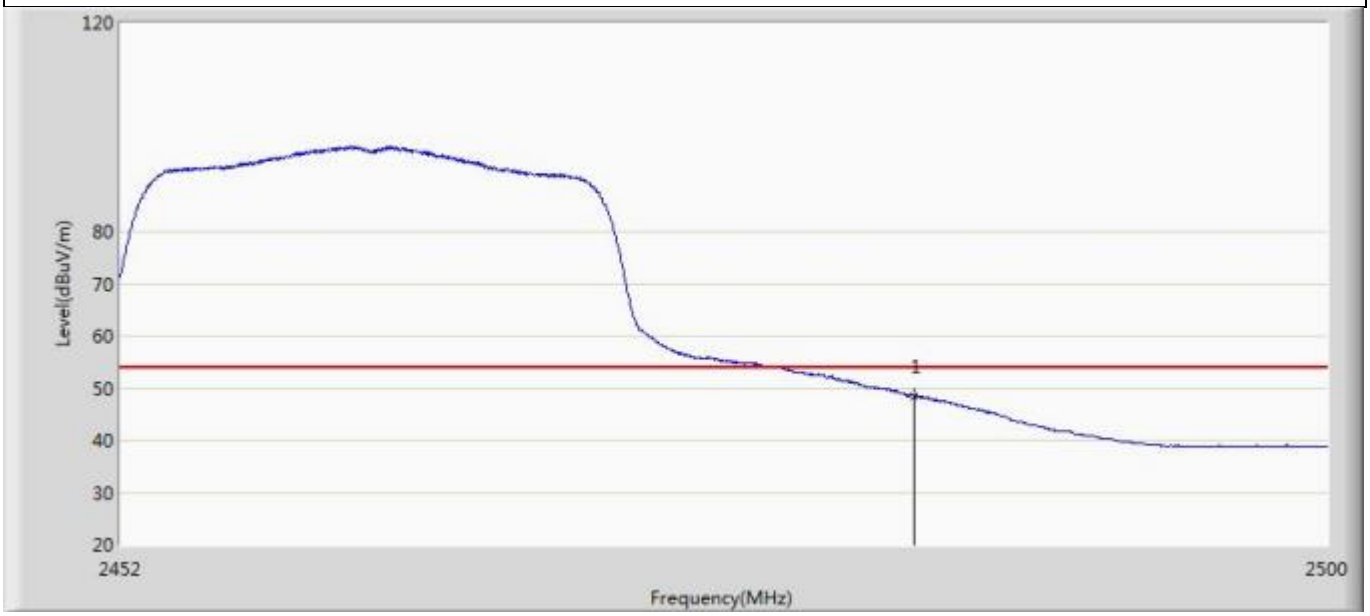
No	Mark	Frequency (MHz)	Measure Level (dBuV/m)	Reading Level (dBuV)	Over Limit (dB)	Limit (dBuV/m)	Factor (dB)	Type
1	*	2390.000	41.190	5.092	-12.810	54.000	36.098	AV

Profile: 2260325R	Page No.: 22
Engineer: Carlosshen	
Site: AC5	Time: 2022/06/30 - 08:15
Limit: FCC_Part15.209_RE(3m)	Margin: 0
Probe: Horn_3117_00167055(1-18GHz)	Polarity: Horizontal
EUT:LBEE5HY2DU	Power: DC 3.6V
Note: Mode 3:Transmit at 2462MHz by 11n(20MHz)	



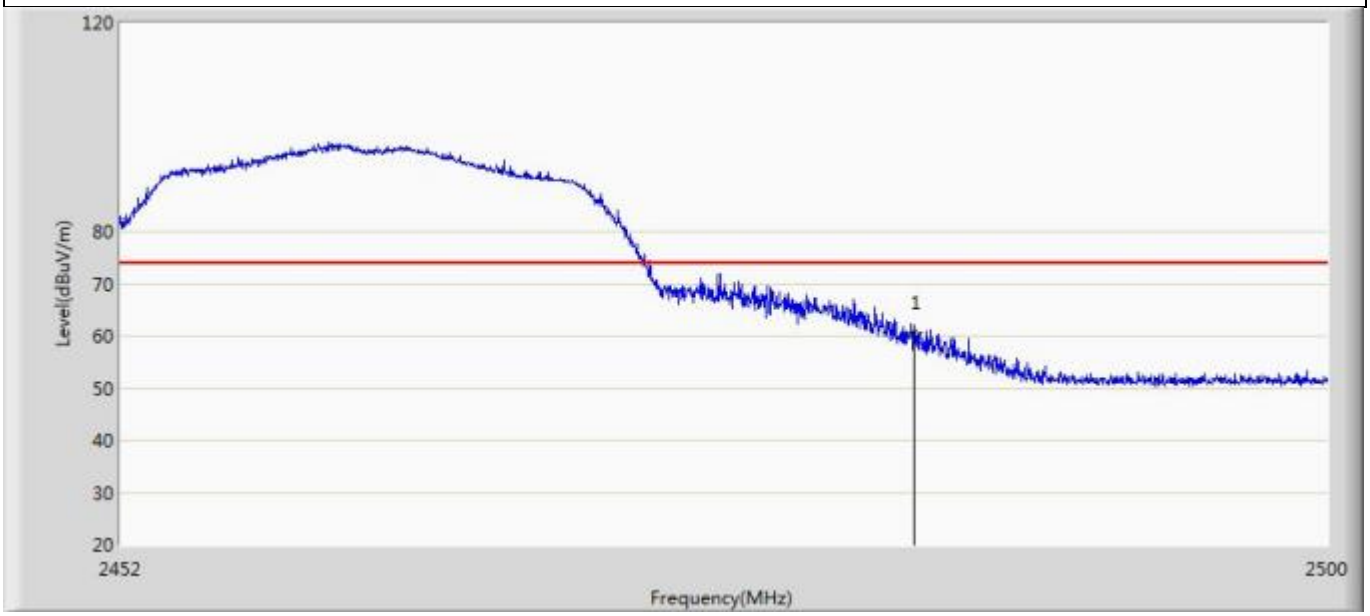
No	Mark	Frequency (MHz)	Measure Level (dBuV/m)	Reading Level (dBuV)	Over Limit (dB)	Limit (dBuV/m)	Factor (dB)	Type
1		2483.500	71.018	34.797	-2.982	74.000	36.220	PK
2	*	2483.584	73.326	37.105	-0.674	74.000	36.220	PK

Profile: 2260325R	Page No.: 21
Engineer: Carlosshen	
Site: AC5	Time: 2022/06/30 - 08:13
Limit: FCC_Part15.209_RE(3m)	Margin: 0
Probe: Horn_3117_00167055(1-18GHz)	Polarity: Horizontal
EUT:LBEE5HY2DU	Power: DC 3.6V
Note: Mode 3:Transmit at 2462MHz by 11n(20MHz)	



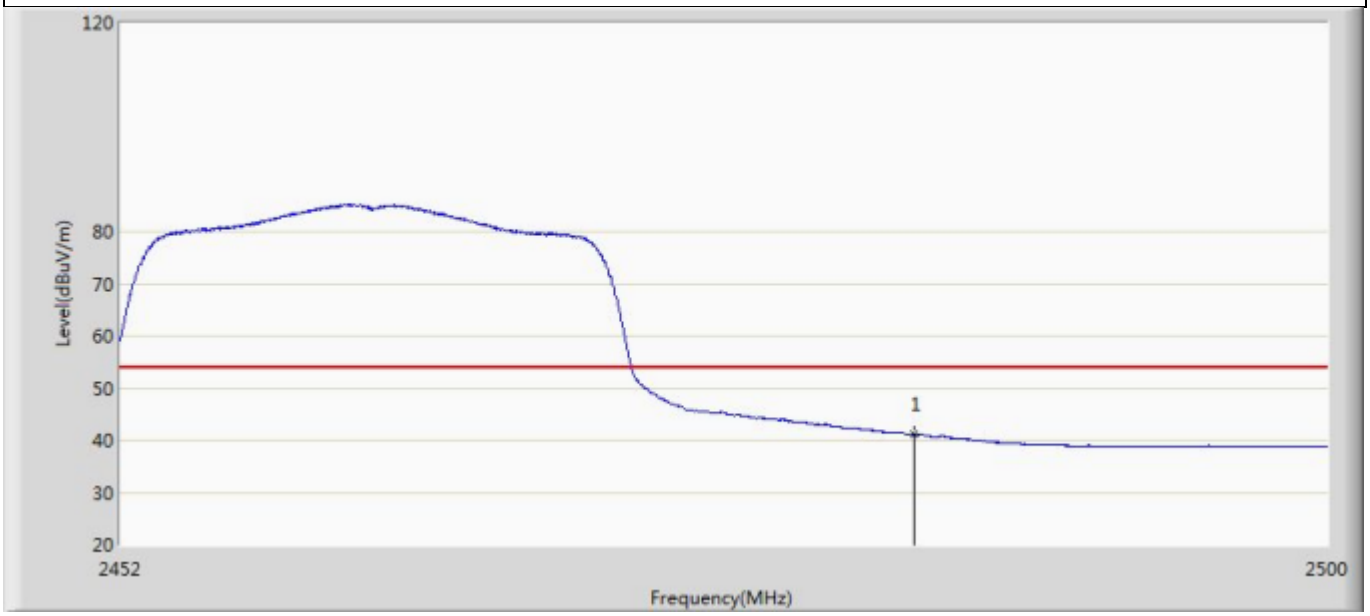
No	Mark	Frequency (MHz)	Measure Level (dBuV/m)	Reading Level (dBuV)	Over Limit (dB)	Limit (dBuV/m)	Factor (dB)	Type
1	*	2483.500	48.413	12.192	-5.587	54.000	36.220	AV

Profile: 2260325R	Page No.: 24
Engineer: Carlosshen	
Site: AC5	Time: 2022/06/30 - 08:19
Limit: FCC_Part15.209_RE(3m)	Margin: 0
Probe: Horn_3117_00167055(1-18GHz)	Polarity: Vertical
EUT:LBEE5HY2DU	Power: DC 3.6V
Note: Mode 3:Transmit at 2462MHz by 11n(20MHz)	



No	Mark	Frequency (MHz)	Measure Level (dBuV/m)	Reading Level (dBuV)	Over Limit (dB)	Limit (dBuV/m)	Factor (dB)	Type
1	*	2483.500	60.632	24.411	-13.368	74.000	36.220	PK

Profile: 2260325R	Page No.: 23
Engineer: Carlosshen	
Site: AC5	Time: 2022/06/30 - 08:18
Limit: FCC_Part15.209_RE(3m)	Margin: 0
Probe: Horn_3117_00167055(1-18GHz)	Polarity: Vertical
EUT:LBEE5HY2DU	Power: DC 3.6V
Note: Mode 3:Transmit at 2462MHz by 11n(20MHz)	



No	Mark	Frequency (MHz)	Measure Level (dBuV/m)	Reading Level (dBuV)	Over Limit (dB)	Limit (dBuV/m)	Factor (dB)	Type
1	*	2483.500	41.072	4.851	-12.928	54.000	36.220	AV

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

4.6 DTS Bandwidth	VERDICT: PASS

4.6.1 Limit

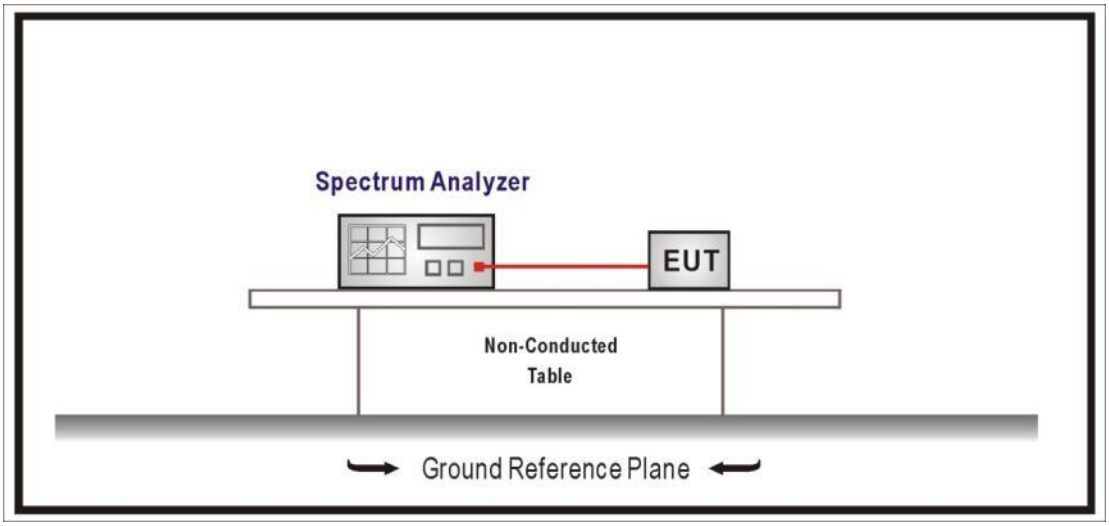
Standard	FCC Part 15 Subpart C Paragraph 15.247 (a)(2)

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

Standard	ANSI C63.10 Paragraph 6.7

The occupied bandwidth or the “99% emission bandwidth” is defined as the frequency range between two points, one above and the other below the carrier frequency, within which 99% of the total transmitted power of the fundamental transmitted emission is contained. The occupied bandwidth shall be reported for all equipment in addition to the specified bandwidth required in the applicable RSSs. The occupied bandwidth should within the required frequency range.

4.6.2 Test Setup



4.6.3 Test Procedure

	Reference Rule		Chapter	Description
☒	ANSI C63.10		11.8	DTS bandwidth
	☐	ANSI C63.10	11.8.1	Option 1
	☒	ANSI C63.10	11.8.2	Option 2
☒	ANSI C63.10		6.9	Occupied bandwidth
	☐	ANSI C63.10	6.9.2	relative measurement procedure
	☒	ANSI C63.10	6.9.3	power bandwidth (99%) measurement procedure

4.6.4 Test Data

Mode	CH.	Test Freq. (MHz)	6dB Occupied Bandwidth (MHz)	99% Occupied Bandwidth (MHz)	Limit For 6dB (kHz)	Result
1	1	2412	8.080	12.010	≥500	Pass
	6	2437	8.560	12.131	≥500	Pass
	11	2462	8.520	12.003	≥500	Pass
2	1	2412	13.800	16.934	≥500	Pass
	6	2437	16.280	17.258	≥500	Pass
	11	2462	12.520	16.869	≥500	Pass
3	1	2412	15.080	17.812	≥500	Pass
	6	2437	17.320	18.285	≥500	Pass
	11	2462	15.160	17.727	≥500	Pass

Note : 1.We have evaluated SISO and MIMO mode, shown in the report is the worst data.
2.The worst case of Occupied Bandwidth as below in below:

6dB Occupied Bandwidth	99% Occupied Bandwidth
Mode 1 (2412MHz)	Mode 3 (2412MHz)
	

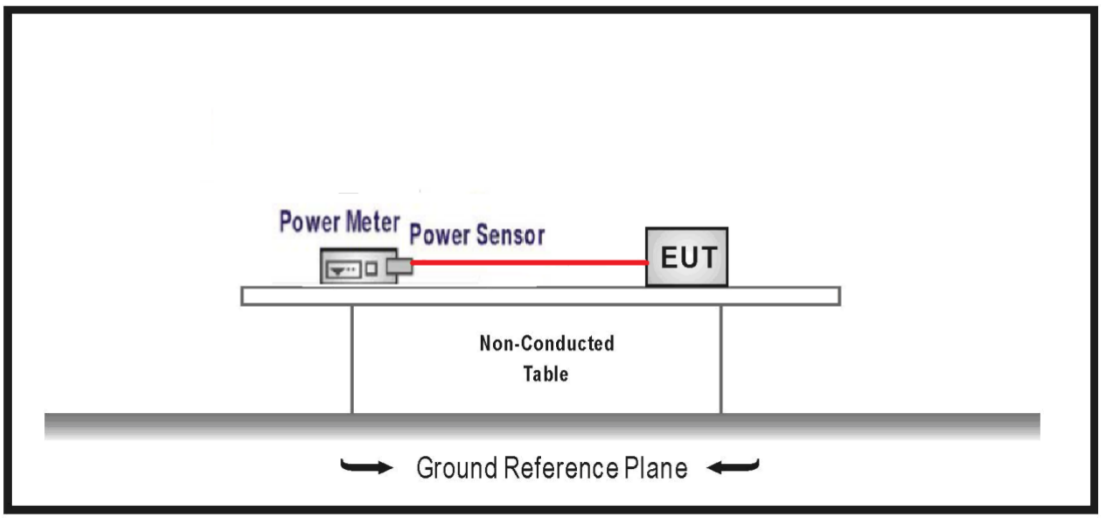
4.7 Fundamental emission output power	VERDICT: PASS

4.7.1 Limit

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

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

4.7.2 Test Setup



4.7.3 Test Procedure

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

4.7.4 Test Data

Mode	Channel	Test Frequency (MHz)	Conducted Power (dBm)	EIRP (dBm)	Conducted Power Limit (dBm)	EIRP Limit (dBm)	Result
Mode 1	1	2412	20.88	20.98	⩽30	⩽36	Pass
	6	2437	20.64	20.74	⩽30	⩽36	Pass
	11	2462	21.09	21.19	⩽30	⩽36	Pass
Mode 2	1	2412	25.78	25.88	⩽30	⩽36	Pass
	6	2437	25.44	25.54	⩽30	⩽36	Pass
	11	2462	25.83	25.93	⩽30	⩽36	Pass
Mode 3	1	2412	23.67	23.77	⩽30	⩽36	Pass
	6	2437	23.90	24.00	⩽30	⩽36	Pass
	11	2462	23.73	23.83	⩽30	⩽36	Pass

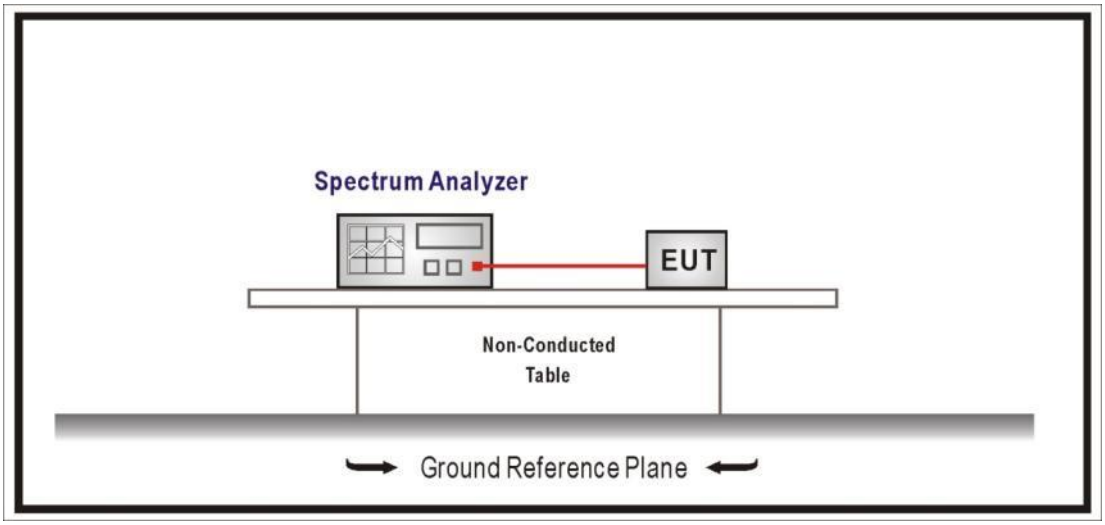
Power Setting:

Mode	Channel	Test Frequency (MHz)	Power Setting
Mode 1	1	2412	17
	6	2437	17
	11	2462	17
Mode 2	1	2412	16
	6	2437	16
	11	2462	16
Mode 3	1	2412	14
	6	2437	14
	11	2462	14

4.8 Power Density	VERDICT: PASS

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

4.8.2 Test Setup



4.8.3 Test Procedure

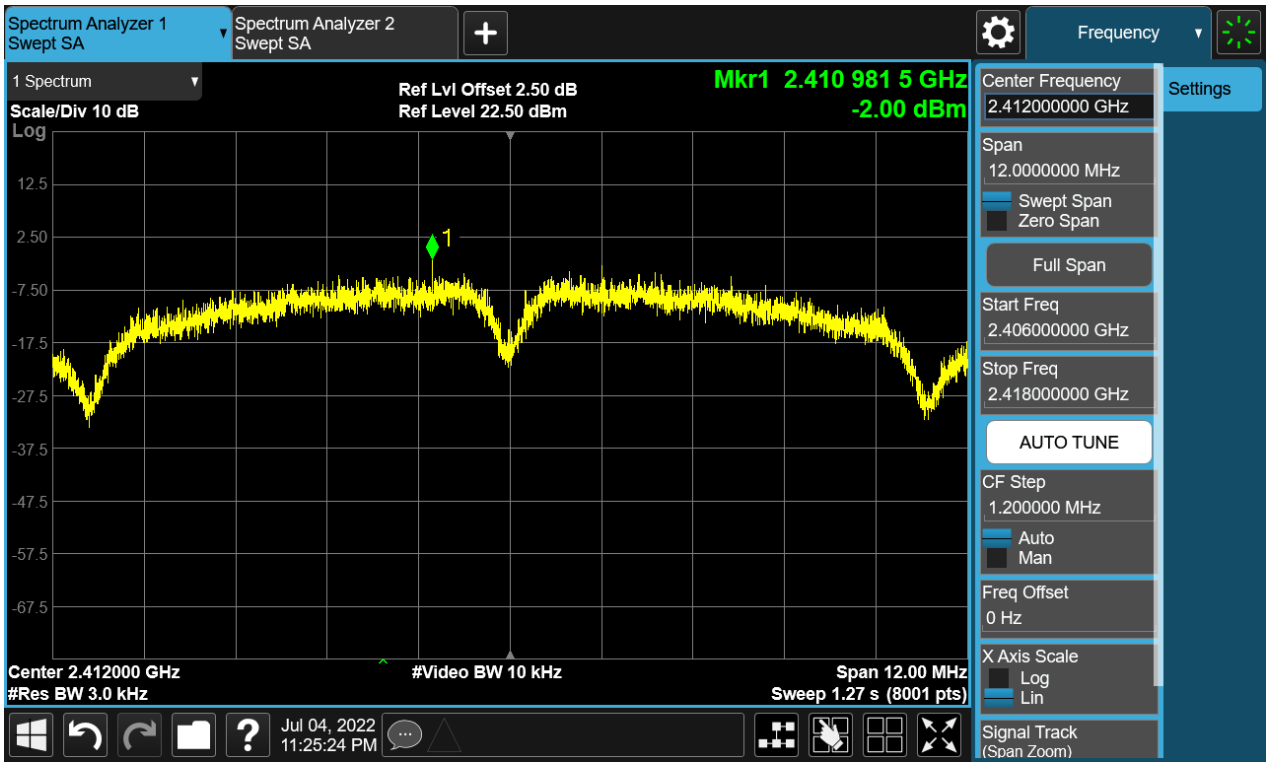
	References Rule		Chapter	Description
☒	ANSI C63.10		11.10	Maximum power spectral density level in the fundamental emission
	☒	ANSI C63.10	11.10.2	Method PKPSD (peak PSD)
	☐	ANSI C63.10	11.10.3	Method AVGPSD-1(Duty cycle≥98%)
	☐	ANSI C63.10	11.10.4	Method AVGPSD-1A(Duty cycle≥98%)
	☐	ANSI C63.10	11.10.5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

4.8.4 Test Data

Mode	Channel	Test Frequency (MHz)	Measurement PSD (dBm/3kHz)	Limit (dBm/3kHz)	Result
1	1	2412	-2	≤8	Pass
	6	2437	-2.87	≤8	Pass
	11	2462	-4.24	≤8	Pass
2	1	2412	-4.77	≤8	Pass
	6	2437	-6.95	≤8	Pass
	11	2462	-4.81	≤8	Pass
3	1	2412	-7.92	≤8	Pass
	6	2437	-9.45	≤8	Pass
	11	2462	-7.79	≤8	Pass

Note :The worst case of Power Density as below in below:

Mode1（2412MHz）



Note：We used the peak detector test result below the limit of 9db, so did not use the RMS detector.

4.9 Antenna Requirement	VERDICT: PASS

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

4.9.2 Antenna Connector Construction:	
☐	The use of a permanently attached antenna
☐	The antenna use of a unique coupling to the intentional radiator
☒	The use of a nonstandard antenna jack or electrical connector
Please refer to the attached document “Internal Photograph” to show the antenna connector.	

5 TEST SETUP PHOTO AND EUT PHOTO

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

The End