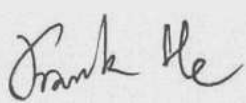
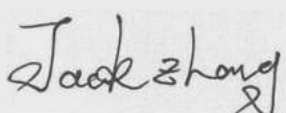


Test report No:
20A0399R-RF-US-P06V02

FCC&ISED TEST REPORT

Product Name	Dual mode Full Color BR30
Trademark	GE
Model and /or type reference	CLEDR309CD1
FCC ID	PUU-BR30-DMFCII
IC	10798A-DMFCBR30II
Applicant's name / address	Savant Technologies LLC, dba GE Lighting, a Savant Company 1975 Noble Road, Cleveland, Ohio, United States, 44112
Test method requested, standard	FCC CFR Title 47 Part 15 Subpart C Section 15.247 ANSI C63.10: 2013 KDB558074 D01v05r02 RSS-Gen Issue 5 / RSS-247 Issue 2
Verdict Summary	IN COMPLIANCE
Documented By (name / position & signature)	Kitty Li/Project Assistant 
Reviewed by (name / position & signature)	Frank He/ Technical Supervisor 
Approved by (name / position & signature)	Jack Zhang/ Supervisor 
Date of issue	2020-12-01
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.

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)	Oct. 16, 2020
Date (start test)	Oct. 28, 2020
Date (finish test)	Nov. 21, 2020

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
20A0399R-RF-US-P06V02	V1.0	Initial issue of report.	2020-11-21
20A0399R-RF-US-P06V02	V1.1	Chapter 4.2.4: Add data of simultaneous transmit.	2020-12-01

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 15.247.
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 Data Rate;
 - Chapter 1.4 Channel List;

USED EQUIPMENT

AC Power Line Conducted Emission / TR1(Chamber details)

Instrument	Manufacturer	Model No.	Serial No.	Cal. Date	Next Cal. Date
EMI Test Receiver	R&S	ESCI	100906	2020.04.20	2021.04.19
Two-Line V-Network	R&S	ENV216	101190	2019.12.28	2020.12.27
Two-Line V-Network	R&S	ENV216	101044	2019.12.28	2020.12.27
Current Probe	R&S	EZ-17	100678	2020.03.12	2021.04.11
50ohm Termination	SHX	TF2	07081402	2020.09.23	2021.09.22
50ohm Termination	SHX	TF2	07081403	2020.09.23	2021.09.22
50ohm Coaxial Switch	Anritsu	MP59B	6200464462	N/A	N/A
Temperature/Humidity Meter	RTS	RTS-8S	TR1-TH	2020.08.13	2021.08.12
Coaxial Cable	Suhner	RG 223	TR1-C1	2020.08.13	2021.08.12
Coaxial Cable	Suhner	RG 223	TR1-C2	2020.08.13	2021.08.12
DEKRA test software	N/A	N/A	N/A	N/A	N/A

RF conducted test / TR8(Chamber details)

Instrument	Manufacturer	Model No.	Serial No.	Cal. Date	Next Cal. Date
Spectrum Analyzer	Agilent	N9010A	MY48030494	2020.08.15	2021.08.14
EXA Spectrum Analyzer	Keysight	N9010A	MY55370495	2020.04.17	2021.04.16
MXA Signal Analyzer	Keysight	N9020A	MY56060147	2020.08.15	2021.08.14
Temperature/Humidity Meter	RTS	RTS-8S	RF08	2020.08.13	2021.08.12
DEKRA test software	N/A	N/A	N/A	N/A	N/A

Radiated Emission(30MHz-1GHz) / AC3(Chamber details)

Instrument	Manufacturer	Model No.	Serial No.	Cal. Date	Next Cal. Date
EMI Test Receiver	R&S	ESCI	100573	2020.03.03	2021.03.02
Bilog Antenna	Teseq GmbH	CBL6112D	27611	2020.08.19	2021.08.18
Temperature/Humidity Meter	RTS	RTS-8S	AC2-TH	2020.08.13	2021.08.12
Coaxial Cable	Huber+Suhner	RG 214	AC2-C	2020.04.05	2021.04.04
DEKRA test software	N/A	N/A	N/A	N/A	N/A

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

Instrument	Manufacturer	Model No.	Serial No.	Cal. Date	Next Cal. Date
EMI Receiver	Agilent	N9038A	MY51210196	2020.05.08	2021.05.07
DRG Horn	ETS-Lindgren	3117	00123988	2020.05.06	2021.05.05
Broad-Band Horn Antenna	Schwarzbeck	BBHA9170D	750	2020.05.06	2021.05.05
Pre-Amplifier	Schwarzbeck	BBV 9721	9721-024	2020.01.22	2021.01.21
Temperature/Humidity Meter	Zhichen	ZC1-2	AC5-TH	2020.08.13	2021.08.12
Coaxial Cable	Huber+Suhner	SUCOFLEX 106	AC5-C2	2020.04.05	2021.04.04
DEKRA test software	N/A	N/A	N/A	N/A	N/A

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~26.5GHz)	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	Dual mode Full Color BR30
Model No.....	CLEDR309CD1
Trademark.....	GE
FCC ID	PUU-BR30-DMFCII
IC	10798A-DMFCBR30II
Manufacturer	Savant Technologies LLC, dba GE Lighting, a Savant Company 1975
Manufacturer address	Noble Road, Cleveland, Ohio, United States, 44112

Wireless specification	WIFI
Operating frequency range(s).....	2400~2483.5MHz
Type of modulation	DSSS: BPSK,QPSK,CCK OFDM: BPSK, QPSK, 16QAM, 64QAM
Number of channel	802.11b/g/n(20MHz): 11 802.11n(40MHz): 7
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
	☒	AC: 120 V, 60 Hz
	☐	DC: 12 - 24 Vdc
	☐	Battery:
	☐	Battery: 3.7 V
Mounting position.....	☐	Table top equipment
	☐	Wall/Ceiling mounted equipment
	☐	Floor standing equipment
	☐	Hand-held equipment
	☒	Other:

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	☐ Basic
			☐ CDD
			☐ Sectorized
			☐ Beam-forming
Antenna Type	☐	External	☐ Dipole
			☐ Sectorized
	☒	Internal	☐ PIFA
			☐ PCB
			☒ Monopole
			☐ Metal Antenna
Antenna Gain	1.44 dBi		

1.3 Data Rate

IEEE 802.11b

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

Table 1 –TX Antenna number = 1

IEEE 802.11g

Modulation	Coding rate	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

Table 1 – MCS parameters for TX Antenna number = 1

IEEE 802.11n

Spatial streames	MCS Index	Modulation	Coding rate	Data Rate(Mb/s)			
				20MHz		40MHz	
				800ns GI	400ns GI	800ns GI	400ns GI
1	0	BPSK	1/2	6.5	7.2	13.5	15.0
1	1	QPSK	1/2	13.0	14.4	27.0	30.0
1	2	QPSK	3/4	19.5	21.7	40.5	45.0
1	3	16-QAM	1/2	26.0	28.9	54.0	60.0
1	4	16-QAM	3/4	39.0	43.3	81.0	90.0
1	5	64-QAM	2/3	52.0	57.8	108.0	120.0
1	6	64-QAM	3/4	58.5	65.0	121.5	135.0
1	7	64-QAM	5/6	65.0	72.2	135.0	150.0

Note 1: Support of 400ns GI is optional on transmit and receive.

Table 1 – MCS parameters for TX Antenna number = 1

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
001	2412 MHz	002	2417 MHz	003	2422 MHz	004	2427 MHz
005	2432 MHz	006	2437 MHz	007	2442 MHz	008	2447 MHz
009	2452 MHz	010	2457 MHz	011	2462 MHz	-	-

IEEE 802.11n(40MHz)

Working Frequency of Each Channel							
Channel	Frequency	Channel	Frequency	Channel	Frequency	Channel	Frequency
003	2422 MHz	004	2427 MHz	005	2432 MHz	006	2437 MHz
007	2442 MHz	008	2447 MHz	009	2452 MHz	-	-

Note: The General Description of the Item, antenna information, Data Rate and Channel List 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)
	Mode 4: Transmit by 802.11n(40MHz)
	Mode 5: Simultaneous transmit

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

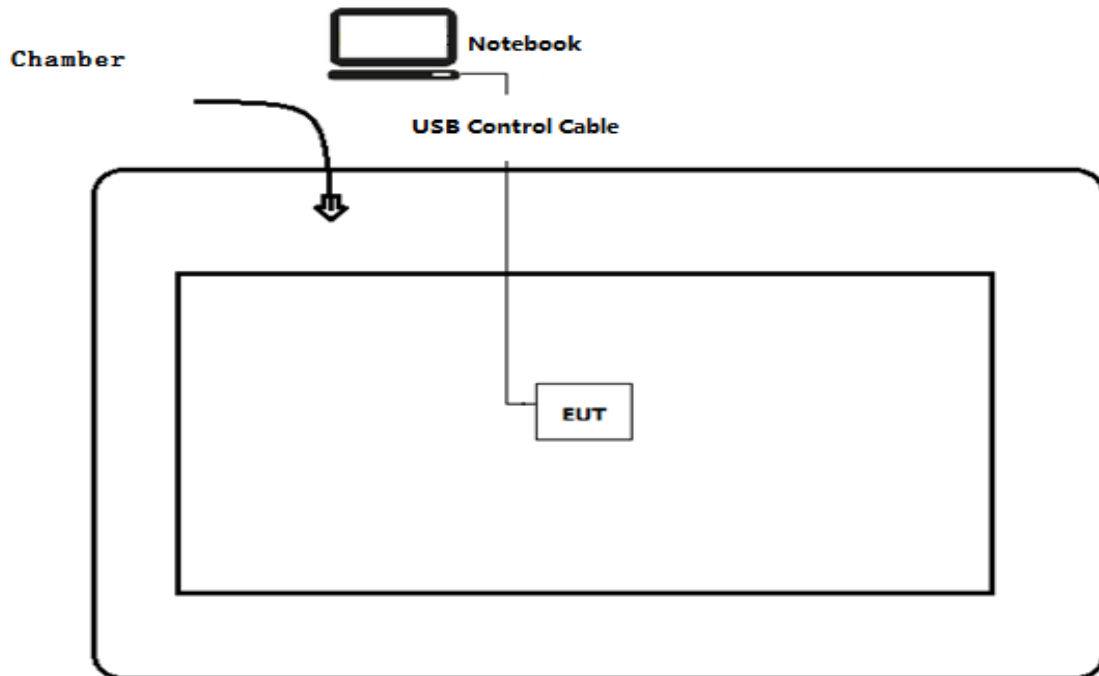
The EUT has been tested with the following auxiliary equipment / unit / software:

Auxiliary equipment	Type / Version	Manufacturer	Supplied by
Notebook	Think pad x220	Lenovo	Adapter
software	Type / Version	Manufacturer	Supplied by
Ameba series mptool	1v16	N/A	N/A

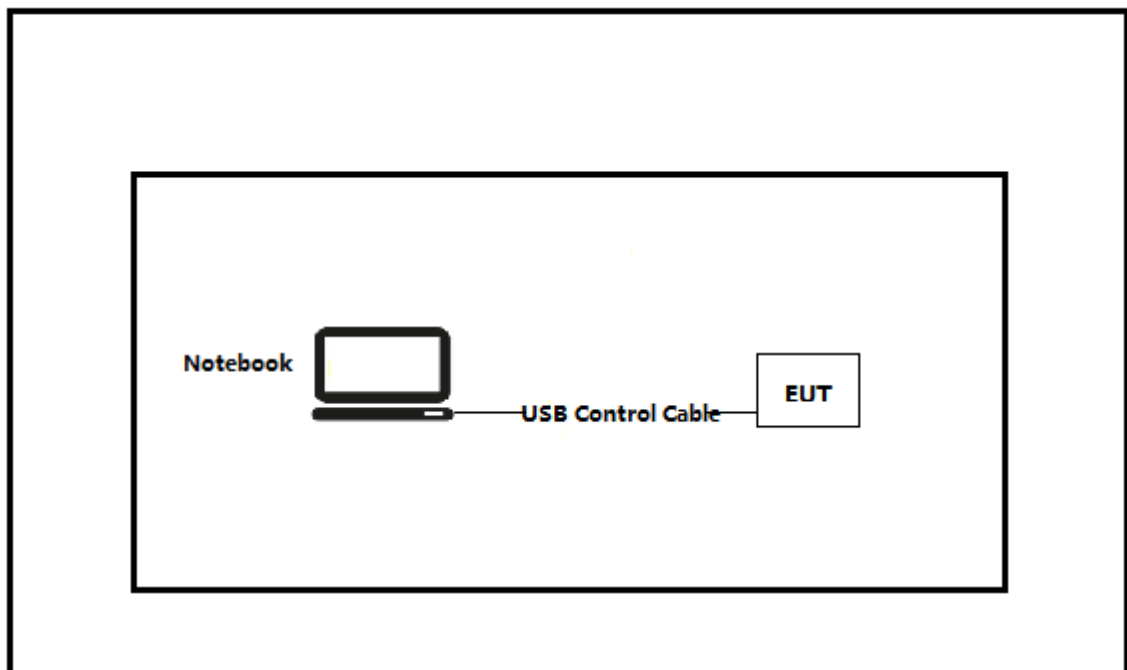
2.3 Test Configuration / Block diagram used for tests

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

Test setup Diagram- Radiated Test



Test setup Diagram- Conducted test



2.4 Testing process

1	Setup the EUT as shown in Section 2.3.
2	Execute the Ameba series mptool 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	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 1	2019	General Requirements for Compliance of Radio Apparatus
RSS-247 Issue 2	2017	Digital Transmission Systems (DTSS), Frequency Hopping Systems (FHSs) and Licence-Exempt Local Area Network (LE-LAN) Devices

3.2 Overview of results

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

Requirement – Test case	Basic standard(s)	Verdict	Remark
AC Power Line Conducted Emission	RSS-Gen Issue 5 Section 8.8	PASS	---
Emissions in restricted frequency bands	RSS-Gen Issue 5 Section 8.9	PASS	---
Emissions in non-restricted frequency bands	RSS-247 Issue 2 Section A5.5	PASS	---
Radiated Emission Band Edge	RSS-247 Issue 2 Section A5.5	PASS	---
Occupied Bandwidth	RSS-Gen Issue 5 Section 6.6 RSS-247 Issue 2 Section A5.2(1)	PASS	---
Fundamental emission output power	RSS-247 Issue 2 Section A5.4(4)	PASS	---
Power Spectral Density	RSS-247 Issue 2 Section A5.2(2)	PASS	---
Antenna Requirement	RSS-Gen Issue 5 Section 8.3	PASS	---
<u>Supplementary information:</u>			

3.3 Test Facility

USA	:	FCC Designation Number: CN1199
Canada	:	CAB identifier Number: CN0040

4 TEST RESULTS

4.1 AC Power Line Conducted Emission

VERDICT: PASS

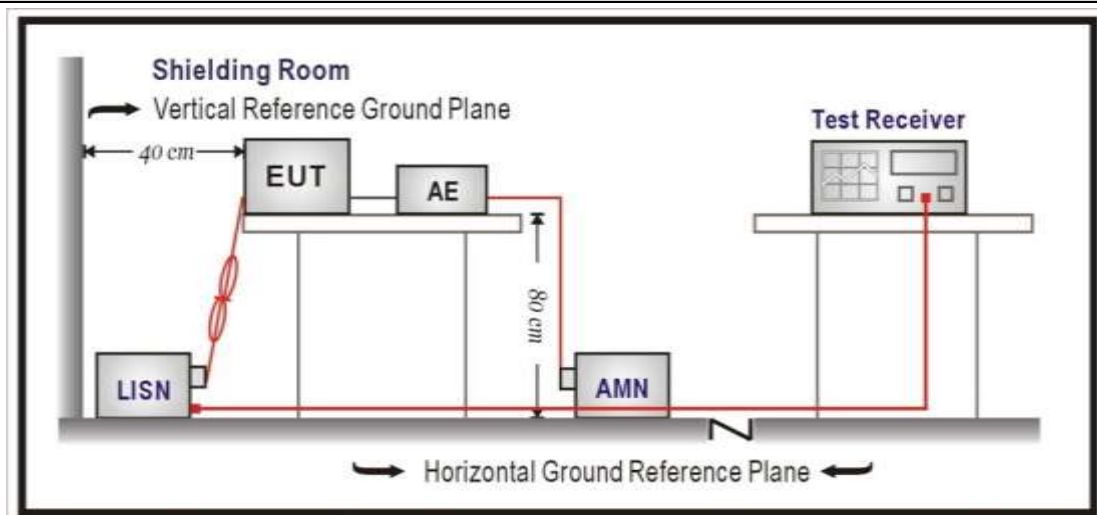
4.1.1 Limit

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.

4.1.2 Test Setup

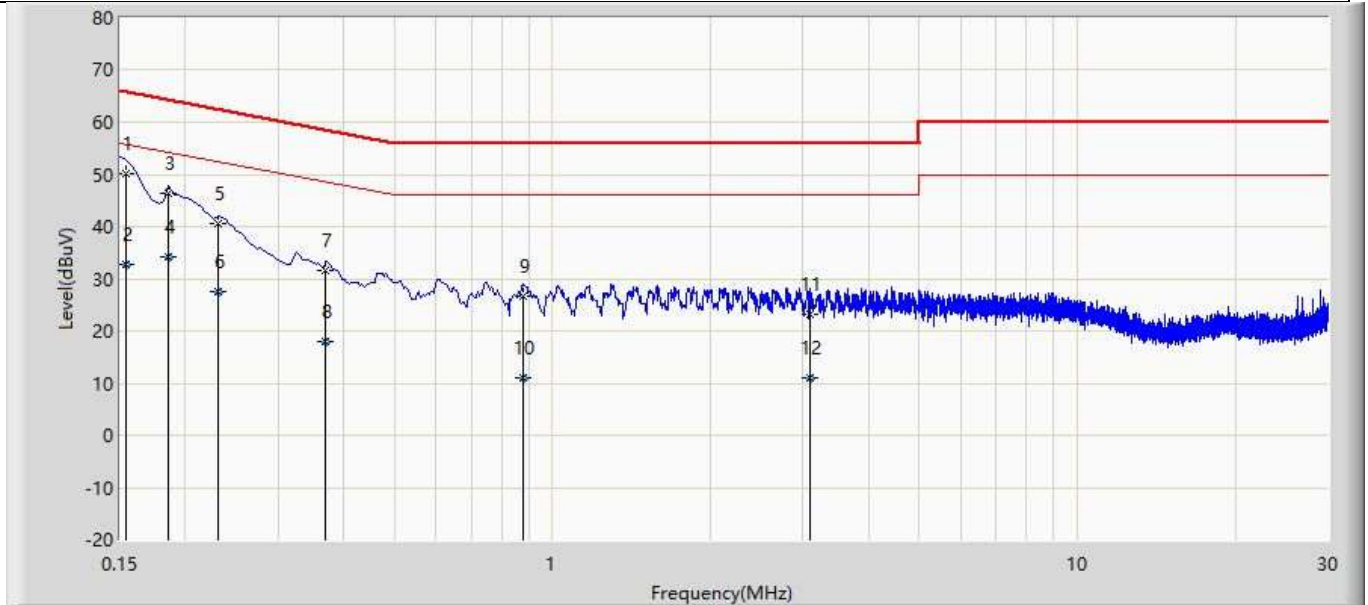


4.1.3 Test Procedure

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

4.1.4 Test Data

Profile: 20A0399R	Page No.: 1
Engineer: Adele	
Site: TR1	Time: 2020/10/21
Limit: FCC_Part15.207_CE_AC Power_ClassB	Margin: 0
Probe: ENV216_101189(0.009-30MHz)	Polarity: Line
EUT: Dual mode Full Color BR30	Power: AC 120V/60Hz
Note: Mode 1	

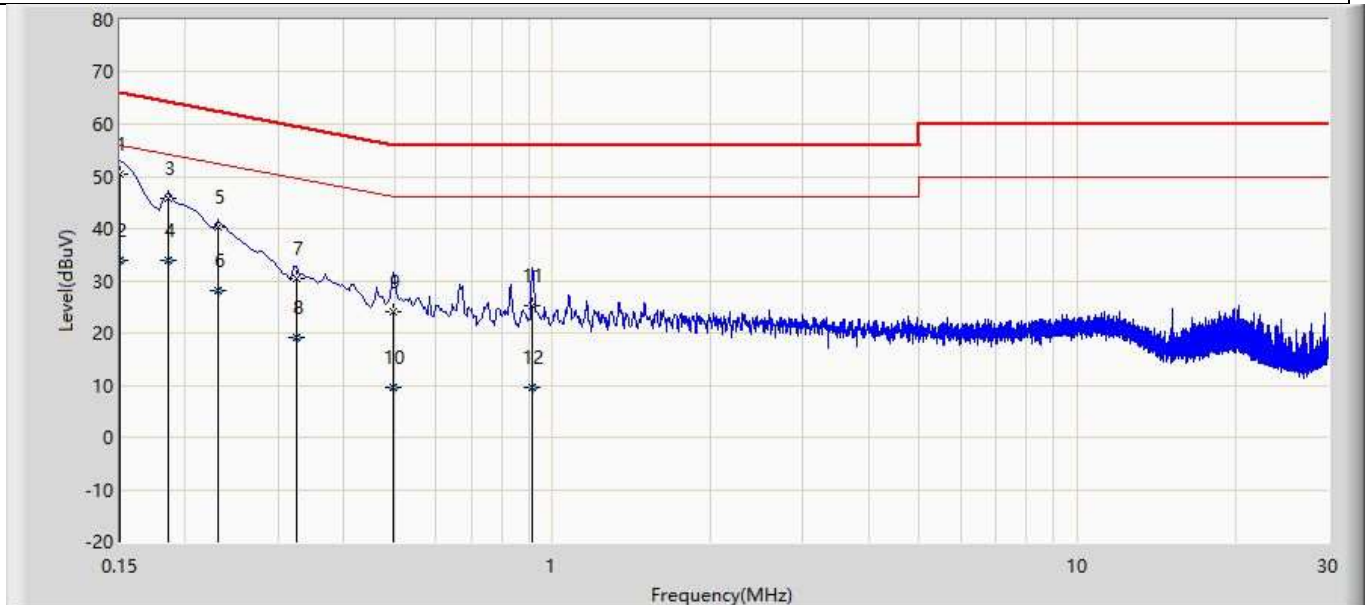


N o	Mar k	Frequency (MHz)	Measure Level (dBuV)	Reading Level (dBuV)	Over Limit (dB)	Limit (dBuV)	Probe (dB)	Cable (dB)	Amp (dB)	Type
1	*	0.154	50.143	40.476	-15.638	65.781	9.642	0.025	0.000	QP
2		0.154	32.849	23.182	-22.933	55.781	9.642	0.025	0.000	AV
3		0.186	46.338	36.664	-17.875	64.213	9.647	0.026	0.000	QP
4		0.186	34.099	24.425	-20.114	54.213	9.647	0.026	0.000	AV
5		0.230	40.713	31.035	-21.736	62.450	9.649	0.029	0.000	QP
6		0.230	27.641	17.963	-24.809	52.450	9.649	0.029	0.000	AV
7		0.370	31.582	21.902	-26.918	58.501	9.644	0.037	0.000	QP
8		0.370	17.827	8.147	-30.674	48.501	9.644	0.037	0.000	AV
9		0.878	26.554	16.860	-29.446	56.000	9.640	0.053	0.000	QP
10		0.878	11.151	1.458	-34.849	46.000	9.640	0.053	0.000	AV
11		3.090	23.048	13.279	-32.952	56.000	9.658	0.112	0.000	QP
12		3.090	10.964	1.194	-35.036	46.000	9.658	0.112	0.000	AV

Note:

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

Profile: 20A0399R	Page No.: 2
Engineer: Adele	
Site: TR1	Time: 2020/10/21
Limit: FCC_Part15.207_CE_AC Power_ClassB	Margin: 0
Probe: ENV216_101189(0.009-30MHz)	Polarity: Neutral
EUT: Dual mode Full Color BR30	Power: AC 120V/60Hz
Note: Mode 1	



N o	Mar k	Frequency (MHz)	Measure Level (dBuV)	Reading Level (dBuV)	Over Limit (dB)	Limit (dBuV)	Probe (dB)	Cable (dB)	Amp (dB)	Type
1	*	0.150	50.548	40.893	-15.452	66.000	9.630	0.025	0.000	QP
2		0.150	33.777	24.122	-22.223	56.000	9.630	0.025	0.000	AV
3		0.186	45.938	36.289	-18.276	64.213	9.623	0.026	0.000	QP
4		0.186	33.904	24.255	-20.309	54.213	9.623	0.026	0.000	AV
5		0.230	40.409	30.760	-22.040	62.450	9.620	0.029	0.000	QP
6		0.230	28.162	18.513	-24.288	52.450	9.620	0.029	0.000	AV
7		0.326	30.483	20.827	-29.070	59.552	9.620	0.035	0.000	QP
8		0.326	19.132	9.477	-30.421	49.552	9.620	0.035	0.000	AV
9		0.498	24.192	14.531	-31.842	56.033	9.620	0.041	0.000	QP
10		0.498	9.596	-0.064	-36.437	46.033	9.620	0.041	0.000	AV
11		0.914	25.324	15.638	-30.676	56.000	9.627	0.059	0.000	QP
12		0.914	9.502	-0.184	-36.498	46.000	9.627	0.059	0.000	AV

Note:

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

4.2 Emissions in restricted frequency bands**VERDICT: PASS****4.2.1 Limit**

Standard		FCC Part 15 Subpart C Paragraph 15.205; 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 Bands of operation for ISED			
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	--
8.41425 - 8.41475	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

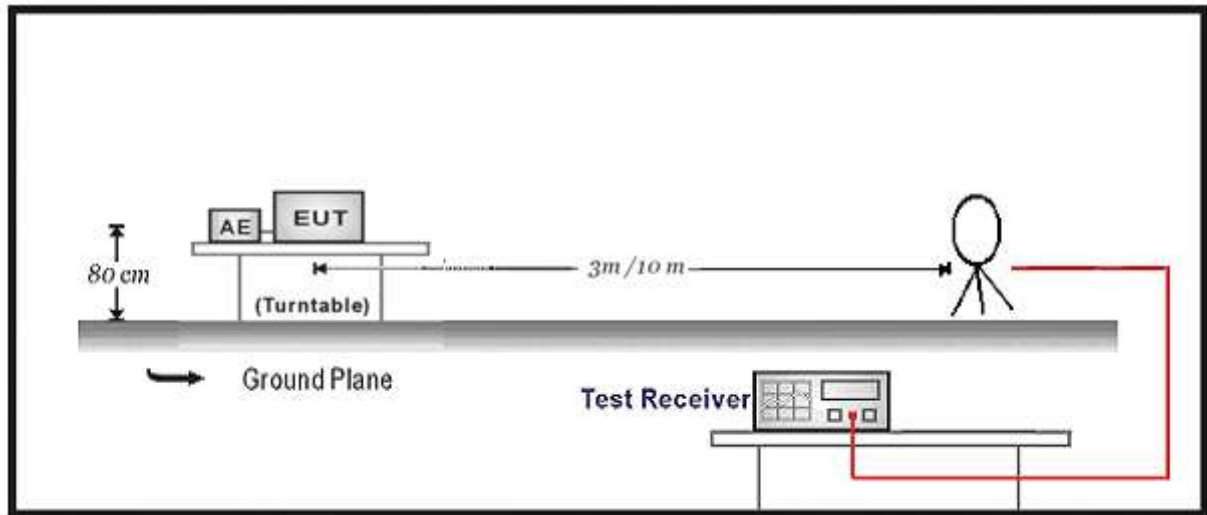
Frequency (MHz)	Field strength ($\mu\text{V/m}$)	Field strength (dB $\mu\text{V/m}$)	Measurement distance (m)
0.009 - 0.49	2400/F(kHz)	48.5 – 13.8	300 _(Note 1)
0.49 - 1.705	24000/F(kHz)	33.8 - 23	30 _(Note 1)
1.705 - 30	30	29.5	30 _(Note 1)
30 - 88	100	40	3 _(Note 2)
88 - 216	150	43.5	3 _(Note 2)
216 - 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).

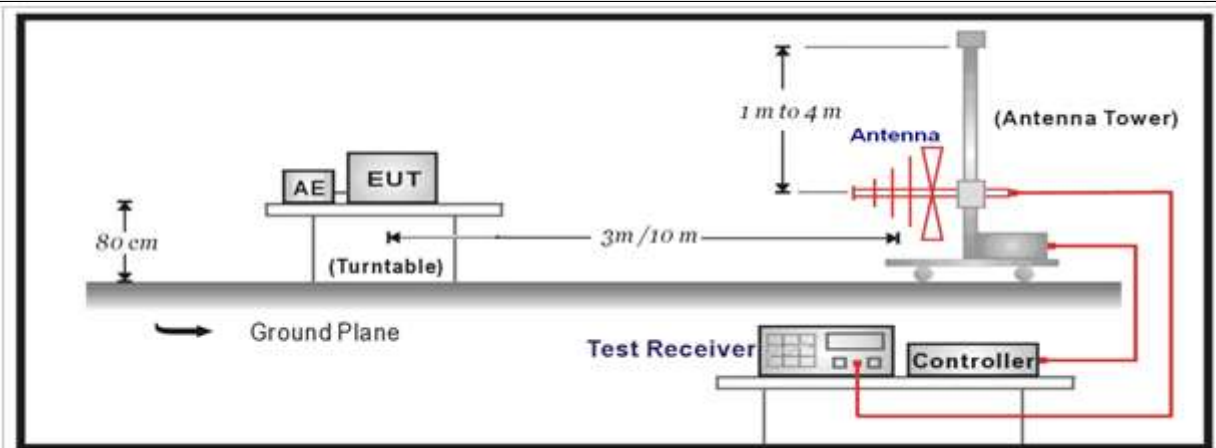
Note 2: At frequencies at or above 30 MHz, measurements may be performed at a distance other than what is specified provided: measurements are not made in the near field except where it can be shown that near field measurements are appropriate due to the characteristics of the device; and it can be demonstrated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

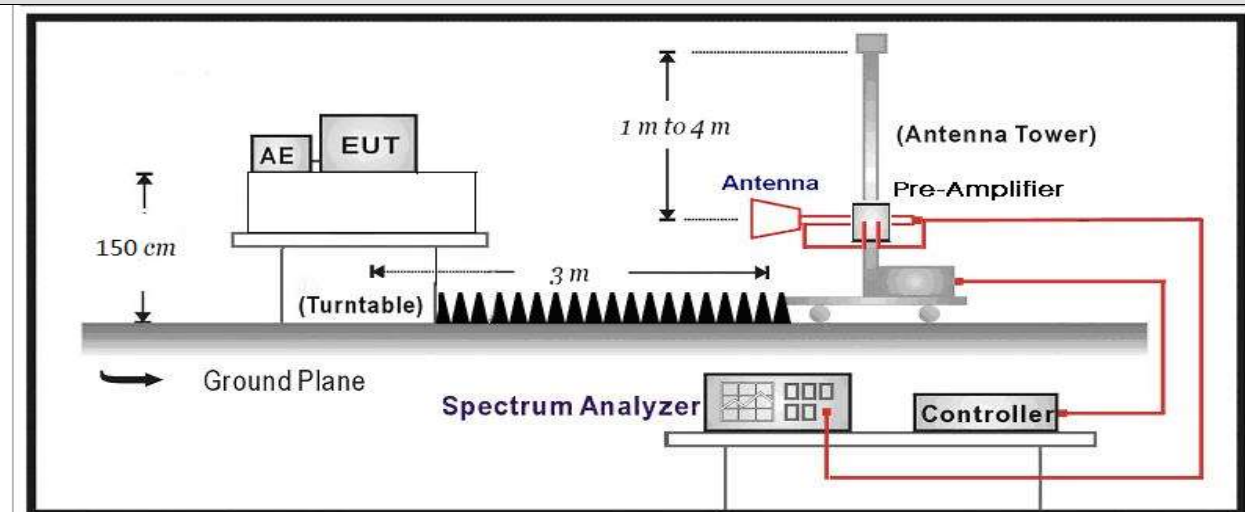
Below 30MHz Test Setup:



30MHz-1GHz Test Setup:



Above 1GHz Test Setup:

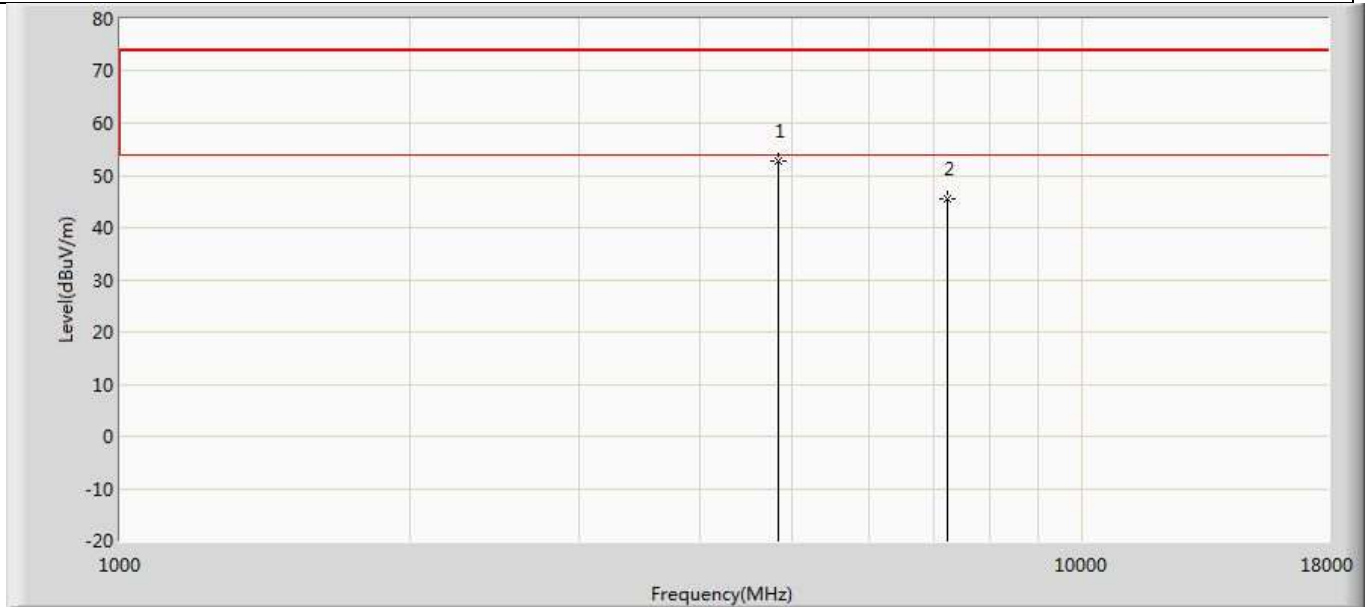


4.2.3 Test Procedure

	References Rule		Chapter	Description
☒	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

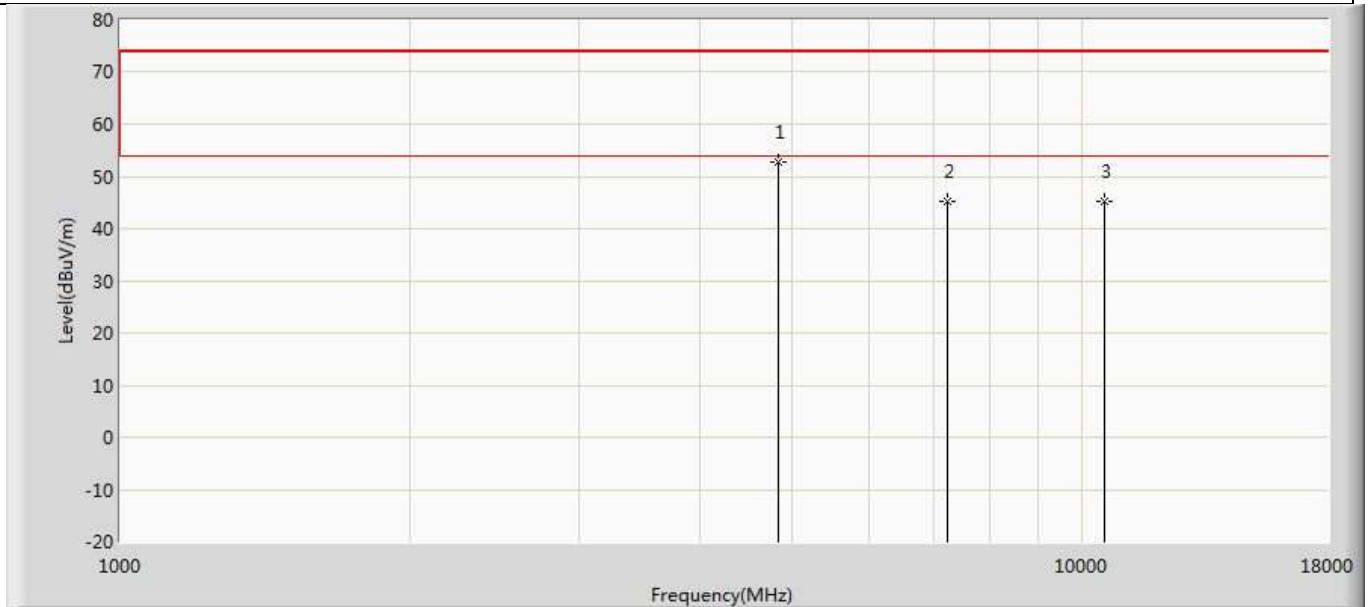
4.2.4 Test Data

Profile: 20A0399R	Page No.: 25
Engineer: Neil	
Site: AC5	Time: 2020/11/05 - 22:39
Limit: FCC_Part15.209_RE(3m)	Margin: 0
Probe: Horn_3117_00167055(1-18GHz)	Polarity: Horizontal
EUT: CLEDR309CD1	Power: AC 120V/60Hz
Note: Mode 1:Transmit at 2412MHz by 802.11b	



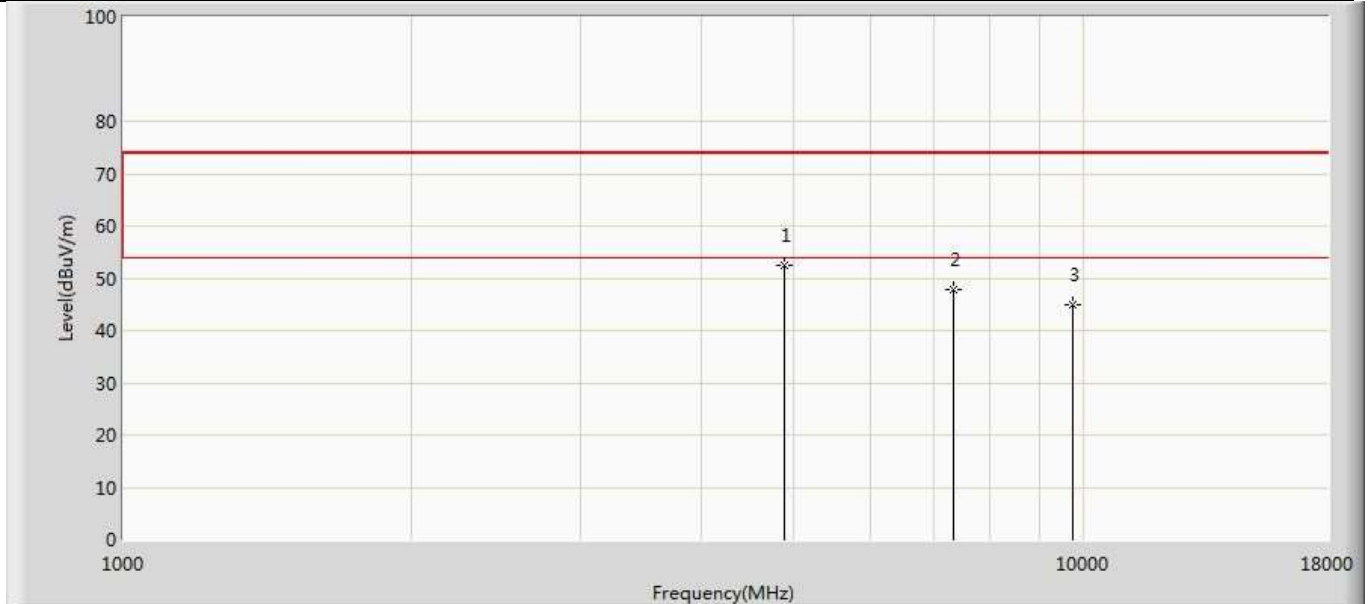
N o	Mar k	Frequency (MHz)	Measure Level (dBuV/m)	Reading Level (dBuV)	Over Limit (dB)	Limit (dBuV/m)	Factor (dB)	Type
1	*	4825.000	52.632	57.620	-21.368	74.000	-4.988	PK
2		7236.000	45.364	46.909	-28.636	74.000	-1.545	PK

Profile: 20A0399R	Page No.: 26
Engineer: Neil	
Site: AC5	Time: 2020/11/05 - 22:39
Limit: FCC_Part15.209_RE(3m)	Margin: 0
Probe: Horn_3117_00167055(1-18GHz)	Polarity: Vertical
EUT: CLEDR309CD1	Power: AC 120V/60Hz
Note: Mode 1:Transmit at 2412MHz by 802.11b	



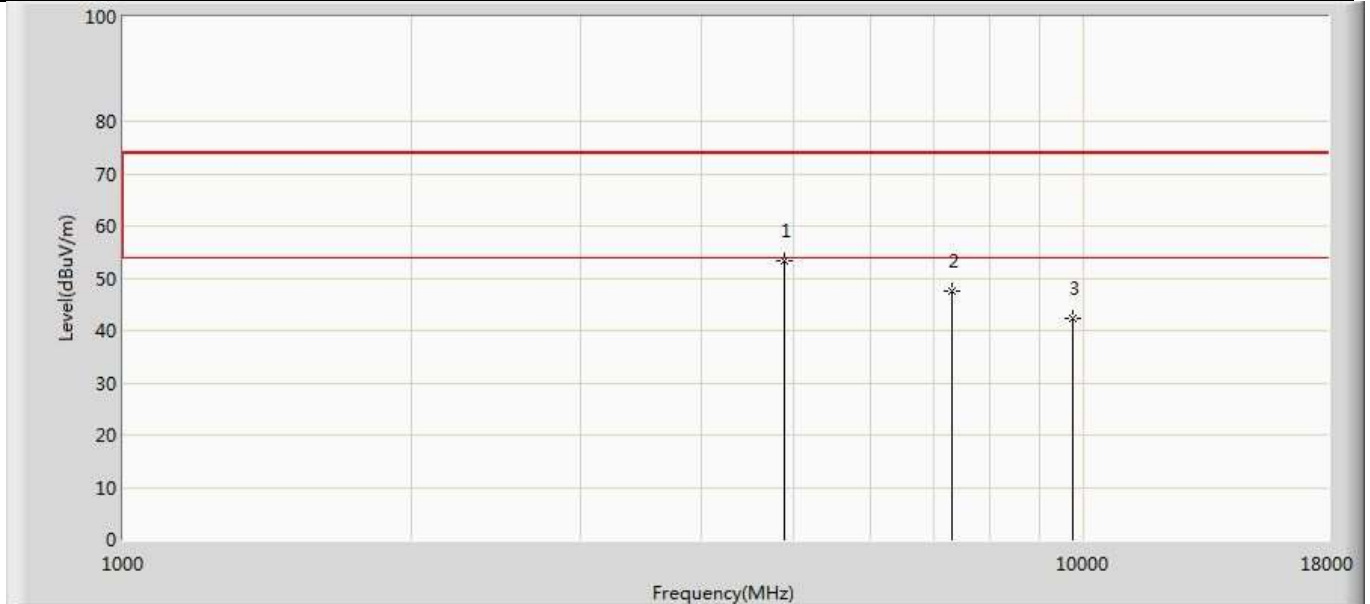
N o	Mar k	Frequency (MHz)	Measure Level (dBuV/m)	Reading Level (dBuV)	Over Limit (dB)	Limit (dBuV/m)	Factor (dB)	Type
1	*	4825.000	52.704	57.692	-21.296	74.000	-4.988	PK
2		7236.000	45.350	46.895	-28.650	74.000	-1.545	PK
3		10554.000	45.076	44.070	-28.924	74.000	1.006	PK

Profile: 20A0399R	Page No.: 5
Engineer: Yingfei.wang	
Site: AC5	Time: 2020/11/05 - 15:56
Limit: FCC_Part15.209_RE(3m)	Margin: 0
Probe: Horn_3117_00167055(1-18GHz)	Polarity: Horizontal
EUT: CLEDR309CD1	Power: AC 120V/60Hz
Note: Mode 3 : Transmit at 2437 MHz by 802.11b	



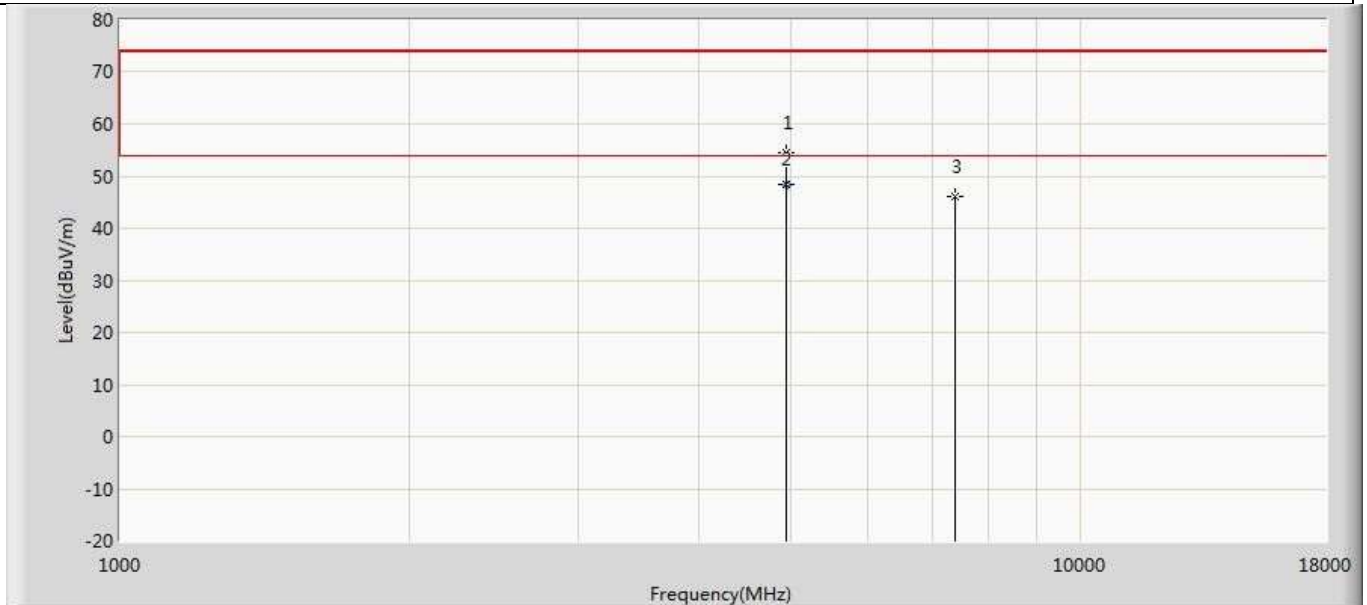
N o	Mar k	Frequency (MHz)	Measure Level (dBuV/m)	Reading Level (dBuV)	Over Limit (dB)	Limit (dBuV/m)	Factor (dB)	Type
1	*	4874.000	52.594	47.772	-21.406	74.000	4.822	PK
2		7311.000	47.867	39.789	-26.133	74.000	8.078	PK
3		9748.000	44.891	35.186	-29.109	74.000	9.705	PK

Profile: 20A0399R	Page No.: 6
Engineer: Yingfei.wang	
Site: AC5	Time: 2020/11/05 - 15:59
Limit: FCC_Part15.209_RE(3m)	Margin: 0
Probe: Horn_3117_00167055(1-18GHz)	Polarity: Vertical
EUT: CLEDR309CD1	Power: AC 120V/60Hz
Note: Mode 3 : Transmit at 2437 MHz by 802.11b	



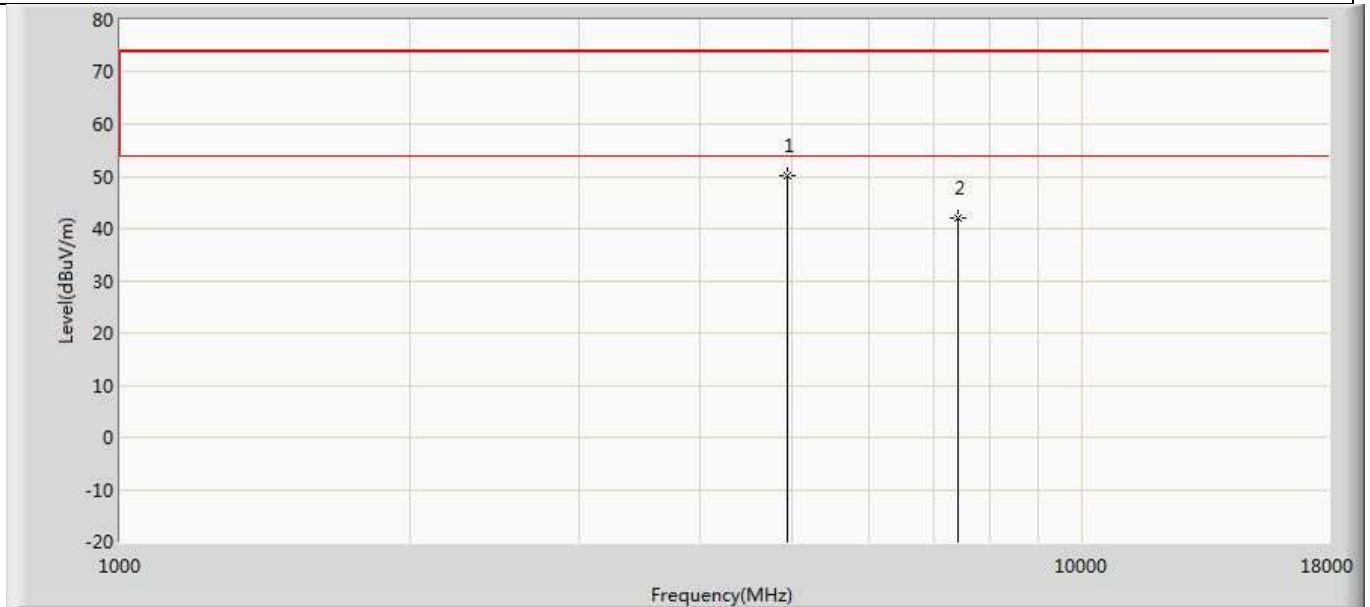
N o	Mar k	Frequency (MHz)	Measure Level (dBuV/m)	Reading Level (dBuV)	Over Limit (dB)	Limit (dBuV/m)	Factor (dB)	Type
1	*	4874.000	53.258	48.436	-20.742	74.000	4.822	PK
2		7311.000	47.642	39.598	-26.358	74.000	8.044	PK
3		9748.000	42.277	32.572	-31.723	74.000	9.705	PK

Profile: 20A0399R	Page No.: 27
Engineer: Neil	
Site: AC5	Time: 2020/11/05 - 22:40
Limit: FCC_Part15.209_RE(3m)	Margin: 0
Probe: Horn_3117_00167055(1-18GHz)	Polarity: Horizontal
EUT: CLEDR309CD1	Power: AC 120V/60Hz
Note: Mode 1: Transmit at 2462MHz by 802.11b	



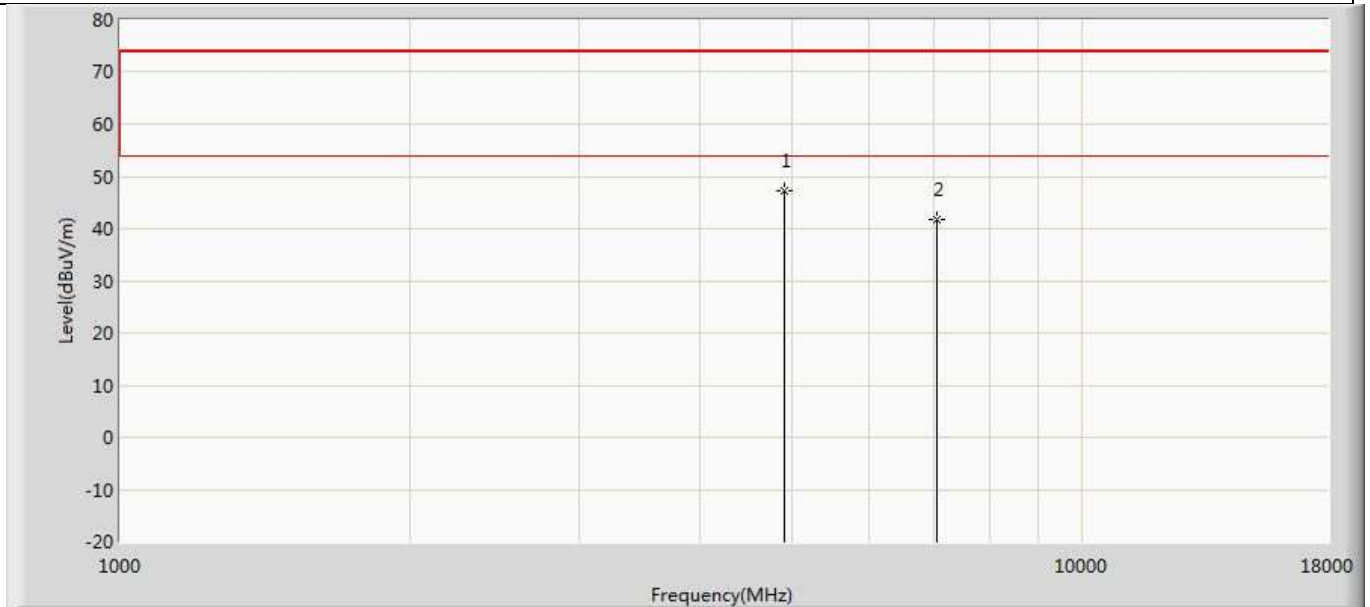
N o	Mar k	Frequency (MHz)	Measure Level (dBuV/m)	Reading Level (dBuV)	Over Limit (dB)	Limit (dBuV/m)	Factor (dB)	Type
1	*	4924.000	54.538	59.281	-19.462	74.000	-4.744	PK
2		4924.000	49.048	53.791	-4.952	54.000	-4.744	AV
3		7386.000	46.140	48.571	-27.860	74.000	-2.431	PK

Profile: 20A0399R	Page No.: 28
Engineer: Neil	
Site: AC5	Time: 2020/11/05 - 22:40
Limit: FCC_Part15.209_RE(3m)	Margin: 0
Probe: Horn_3117_00167055(1-18GHz)	Polarity: Vertical
EUT: CLEDR309CD1	Power: AC 120V/60Hz
Note: Mode 1: Transmit at 2462MHz by 802.11b	



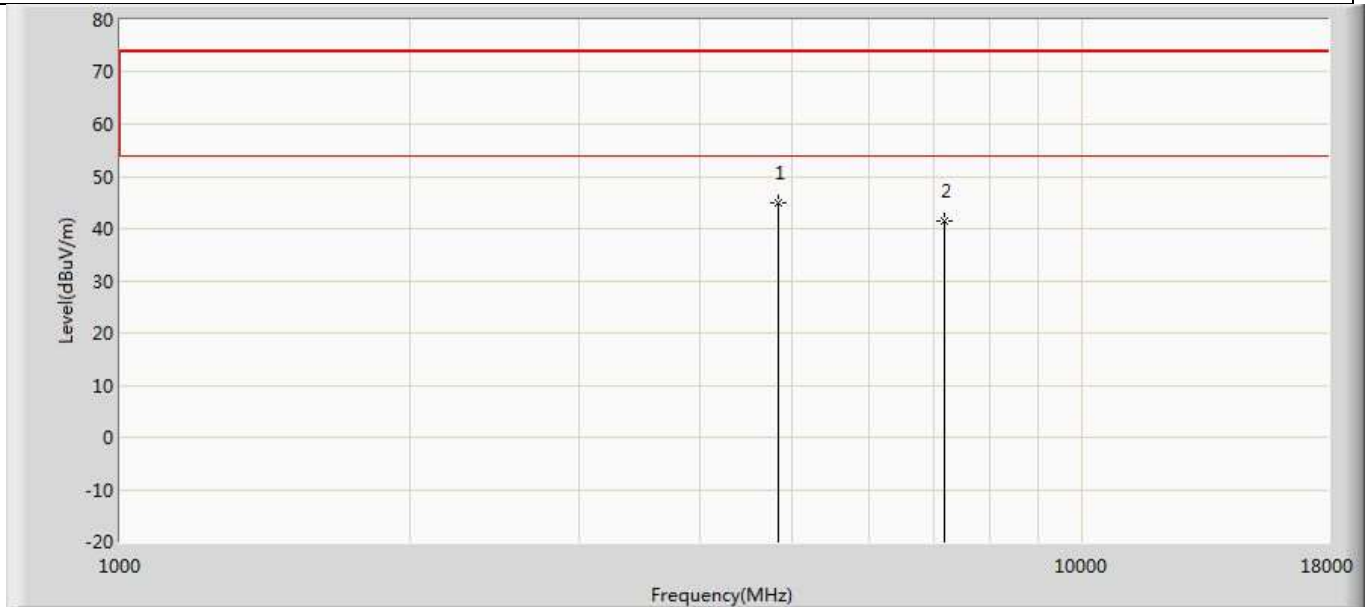
N o	Mar k	Frequency (MHz)	Measure Level (dBuV/m)	Reading Level (dBuV)	Over Limit (dB)	Limit (dBuV/m)	Factor (dB)	Type
1	*	4924.000	50.034	54.777	-23.966	74.000	-4.744	PK
2		7386.000	42.052	44.483	-31.948	74.000	-2.431	PK

Profile: 20A0399R	Page No.: 29
Engineer: Neil	
Site: AC5	Time: 2020/11/05 - 22:39
Limit: FCC_Part15.209_RE(3m)	Margin: 0
Probe: Horn_3117_00167055(1-18GHz)	Polarity: Horizontal
EUT: CLEDR309CD1	Power: AC 120V/60Hz
Note: Mode 1: Transmit at 2412MHz by 802.11g	



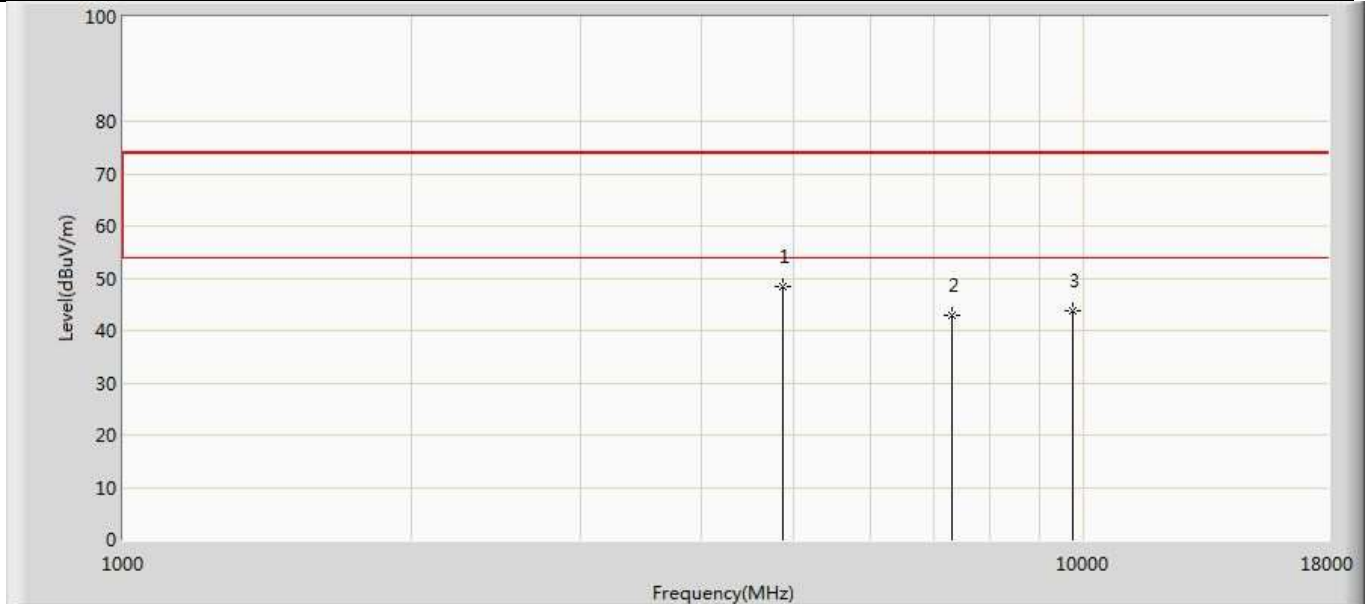
N o	Mar k	Frequency (MHz)	Measure Level (dBuV/m)	Reading Level (dBuV)	Over Limit (dB)	Limit (dBuV/m)	Factor (dB)	Type
1	*	4910.000	47.286	52.332	-26.714	74.000	-5.046	PK
2		7052.000	41.848	43.042	-32.152	74.000	-1.194	PK

Profile: 20A0399R	Page No.: 30
Engineer: Neil	
Site: AC5	Time: 2020/11/05 - 22:39
Limit: FCC_Part15.209_RE(3m)	Margin: 0
Probe: Horn_3117_00167055(1-18GHz)	Polarity: Vertical
EUT: CLEDR309CD1	Power: AC 120V/60Hz
Note: Mode 1: Transmit at 2412MHz by 802.11g	



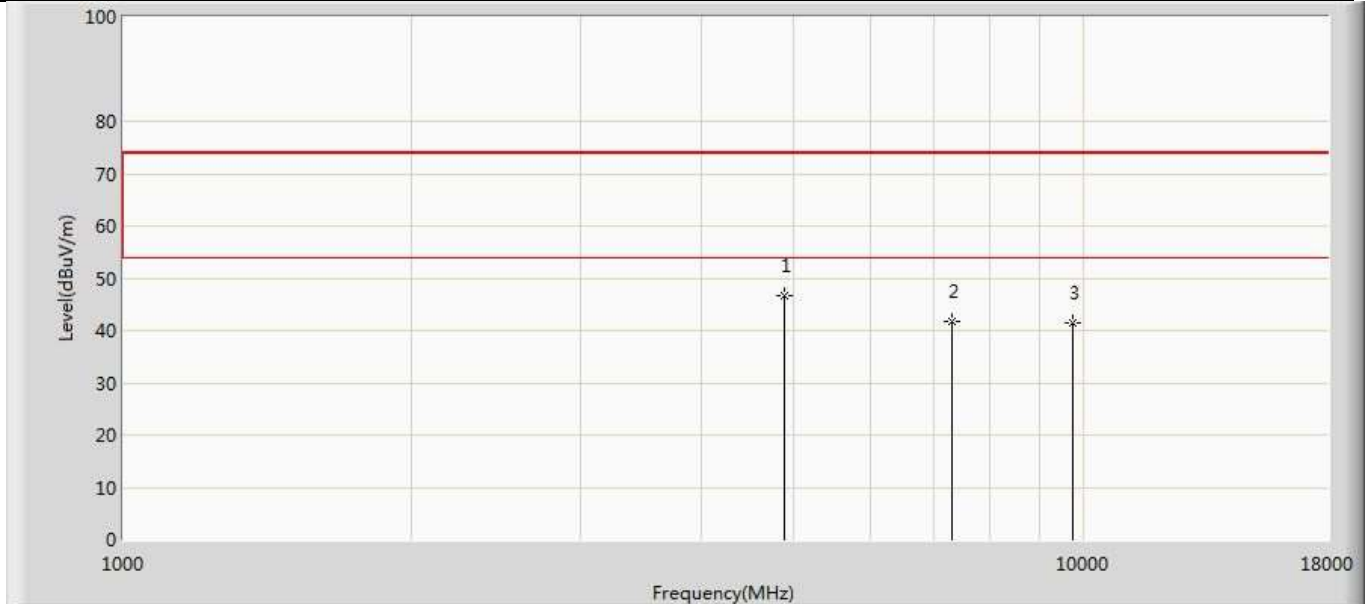
N o	Mar k	Frequency (MHz)	Measure Level (dBuV/m)	Reading Level (dBuV)	Over Limit (dB)	Limit (dBuV/m)	Factor (dB)	Type
1	*	4825.000	44.801	49.789	-29.199	74.000	-4.988	PK
2		7236.000	41.379	42.992	-32.621	74.000	-1.612	PK

Profile: 20A0399R	Page No.: 7
Engineer: Yingfei.wang	
Site: AC5	Time: 2020/11/05 - 16:08
Limit: FCC_Part15.209_RE(3m)	Margin: 0
Probe: Horn_3117_00167055(1-18GHz)	Polarity: Horizontal
EUT: CLEDR309CD1	Power: AC 120V/60Hz
Note: Mode 4 : Transmit at 2437 MHz by 802.11g	



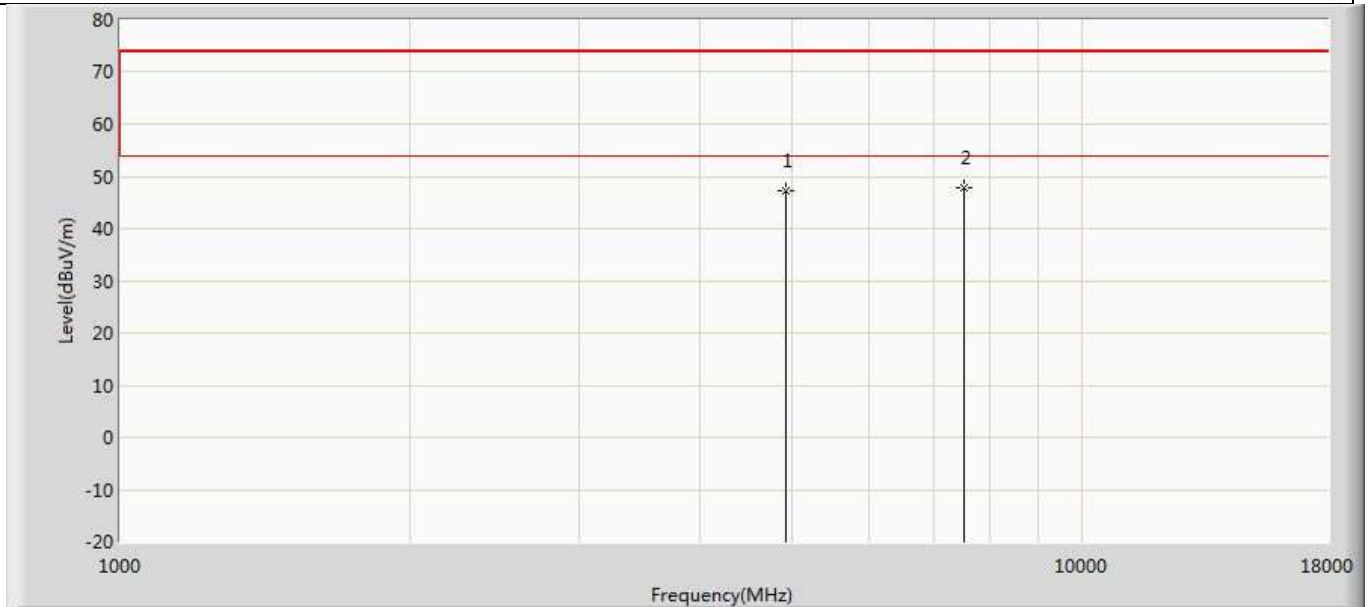
N o	Mar k	Frequency (MHz)	Measure Level (dBuV/m)	Reading Level (dBuV)	Over Limit (dB)	Limit (dBuV/m)	Factor (dB)	Type
1	*	4874.000	48.352	43.505	-25.648	74.000	4.846	PK
2		7311.000	42.784	34.793	-31.216	74.000	7.991	PK
3		9748.000	43.628	33.923	-30.372	74.000	9.705	PK

Profile: 20A0399R	Page No.: 8
Engineer: Yingfei.wang	
Site: AC5	Time: 2020/11/05 - 16:16
Limit: FCC_Part15.209_RE(3m)	Margin: 0
Probe: Horn_3117_00167055(1-18GHz)	Polarity: Vertical
EUT: CLEDR309CD1	Power: AC 120V/60Hz
Note: Mode 4 : Transmit at 2437 MHz by 802.11g	



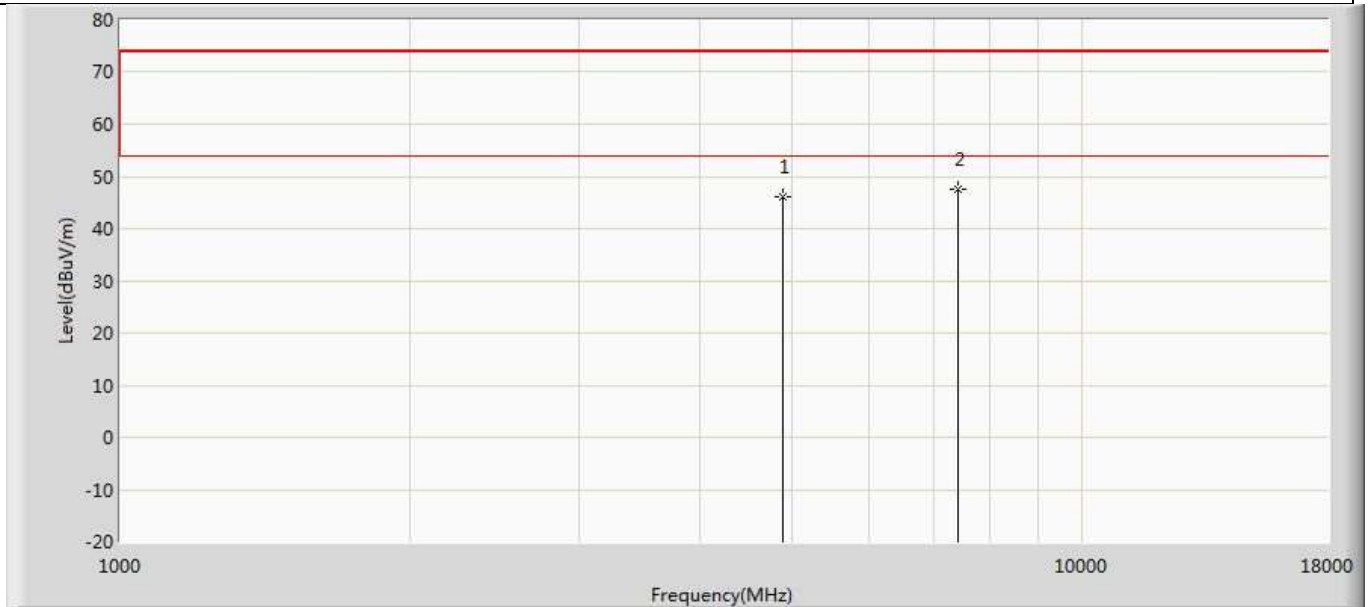
N o	Mar k	Frequency (MHz)	Measure Level (dBuV/m)	Reading Level (dBuV)	Over Limit (dB)	Limit (dBuV/m)	Factor (dB)	Type
1	*	4878.000	46.523	41.701	-27.477	74.000	4.822	PK
2		7311.000	41.657	33.666	-32.343	74.000	7.991	PK
3		9748.000	41.457	31.752	-32.543	74.000	9.705	PK

Profile: 20A0399R	Page No.: 31
Engineer: Neil	
Site: AC5	Time: 2020/11/05 - 22:40
Limit: FCC_Part15.209_RE(3m)	Margin: 0
Probe: Horn_3117_00167055(1-18GHz)	Polarity: Horizontal
EUT: CLEDR309CD1	Power: AC 120V/60Hz
Note: Mode 1: Transmit at 2462MHz by 802.11g	



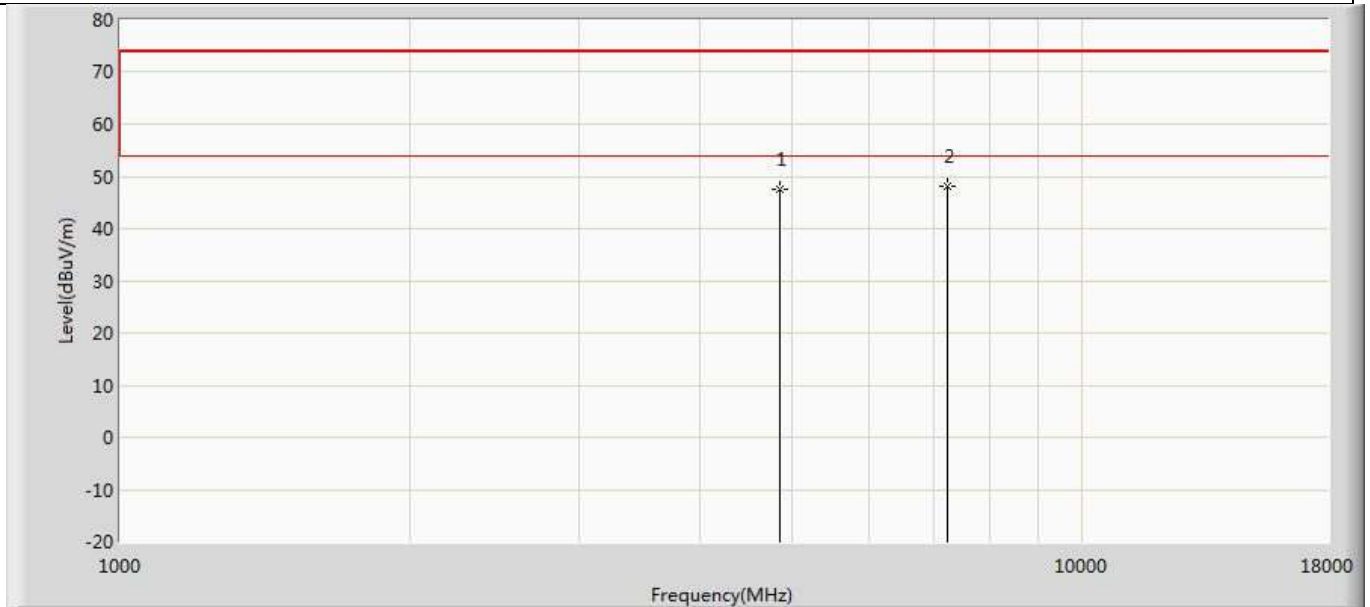
N o	Mar k	Frequency (MHz)	Measure Level (dBuV/m)	Reading Level (dBuV)	Over Limit (dB)	Limit (dBuV/m)	Factor (dB)	Type
1		4924.000	47.304	51.870	-26.696	74.000	-4.566	PK
2	*	7386.000	47.686	49.715	-26.314	74.000	-2.028	PK

Profile: 20A0399R	Page No.: 32
Engineer: Neil	
Site: AC5	Time: 2020/11/05 - 22:40
Limit: FCC_Part15.209_RE(3m)	Margin: 0
Probe: Horn_3117_00167055(1-18GHz)	Polarity: Vertical
EUT: CLEDR309CD1	Power: AC 120V/60Hz
Note: Mode 1: Transmit at 2462MHz by 802.11g	



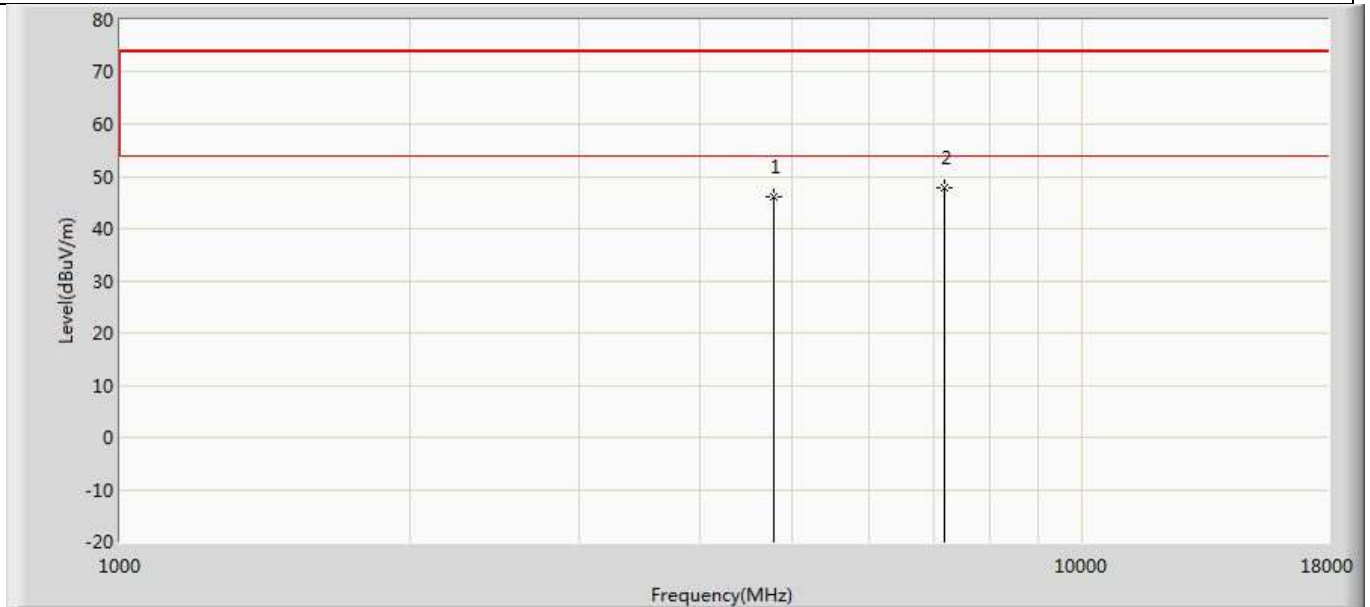
N o	Mar k	Frequency (MHz)	Measure Level (dBuV/m)	Reading Level (dBuV)	Over Limit (dB)	Limit (dBuV/m)	Factor (dB)	Type
1		4924.000	46.112	51.081	-27.888	74.000	-4.969	PK
2	*	7386.000	47.529	49.578	-26.471	74.000	-2.050	PK

Profile: 20A0399R	Page No.: 33
Engineer: Neil	
Site: AC5	Time: 2020/11/05 - 22:40
Limit: FCC_Part15.209_RE(3m)	Margin: 0
Probe: Horn_3117_00167055(1-18GHz)	Polarity: Horizontal
EUT: CLEDR309CD1	Power: AC 120V/60Hz
Note: Mode 1: Transmit at 2412MHz by 802.11n(20MHz)	



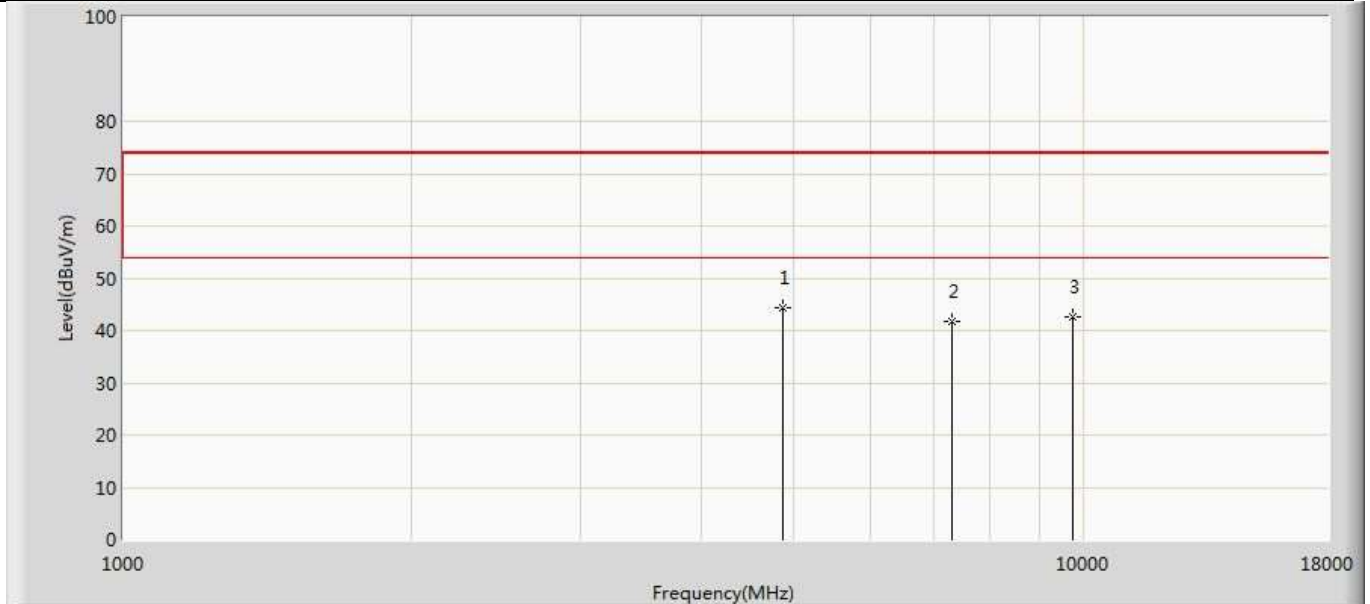
N o	Mar k	Frequency (MHz)	Measure Level (dBuV/m)	Reading Level (dBuV)	Over Limit (dB)	Limit (dBuV/m)	Factor (dB)	Type
1		4824.000	47.519	52.486	-26.481	74.000	-4.967	PK
2	*	7236.000	48.005	49.617	-25.995	74.000	-1.612	PK

Profile: 20A0399R	Page No.: 34
Engineer: Neil	
Site: AC5	Time: 2020/11/05 - 22:40
Limit: FCC_Part15.209_RE(3m)	Margin: 0
Probe: Horn_3117_00167055(1-18GHz)	Polarity: Vertical
EUT: CLEDR309CD1	Power: AC 120V/60Hz
Note: Mode 1: Transmit at 2412MHz by 802.11n(20MHz)	



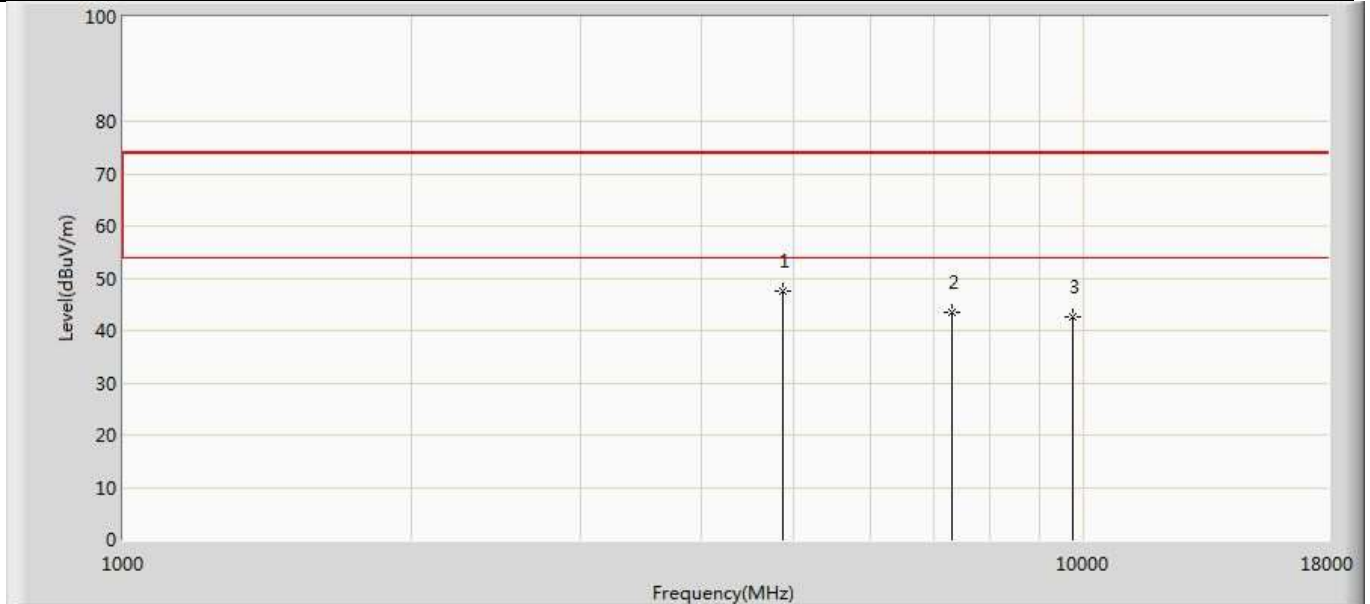
N o	Mar k	Frequency (MHz)	Measure Level (dBuV/m)	Reading Level (dBuV)	Over Limit (dB)	Limit (dBuV/m)	Factor (dB)	Type
1		4824.000	46.228	51.195	-27.772	74.000	-4.967	PK
2	*	7236.000	47.831	49.445	-26.169	74.000	-1.612	PK

Profile: 20A0399R	Page No.: 9
Engineer: Yingfei.wang	
Site: AC5	Time: 2020/11/05 - 16:22
Limit: FCC_Part15.209_RE(3m)	Margin: 0
Probe: Horn_3117_00167055(1-18GHz)	Polarity: Horizontal
EUT: CLEDR309CD1	Power: AC 120V/60Hz
Note: Mode 5 : Transmit at 2437 MHz by 802.11n(20MHz)	



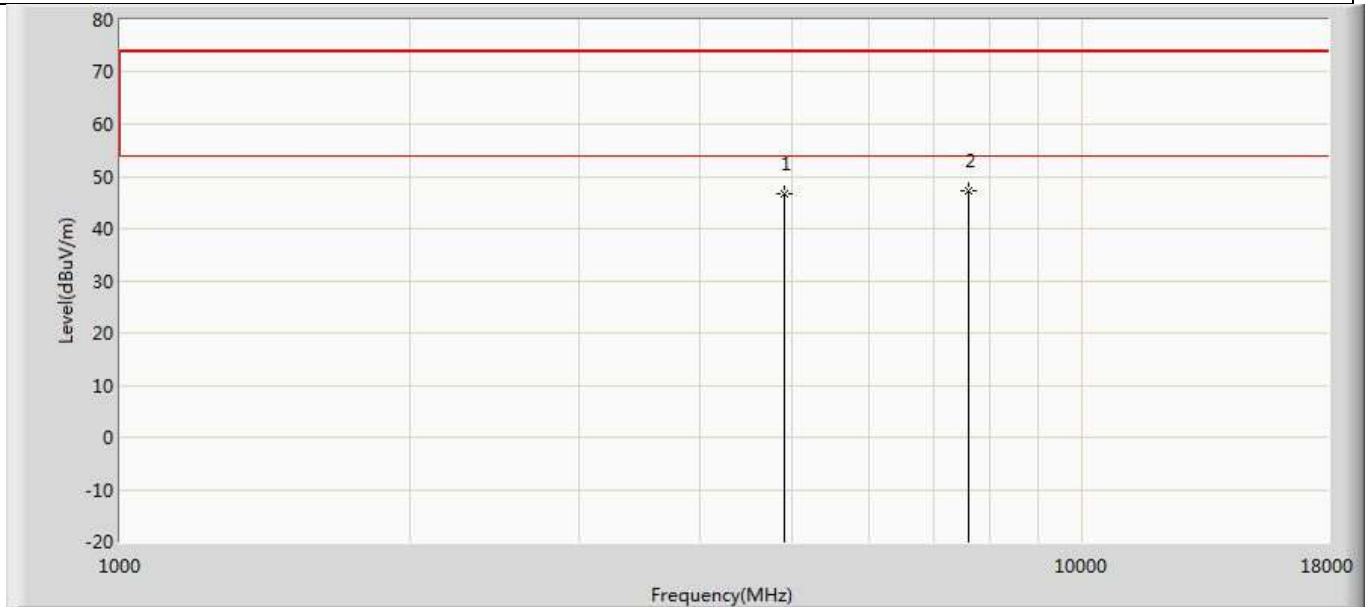
N o	Mar k	Frequency (MHz)	Measure Level (dBuV/m)	Reading Level (dBuV)	Over Limit (dB)	Limit (dBuV/m)	Factor (dB)	Type
1	*	4874.000	44.371	39.524	-29.629	74.000	4.846	PK
2		7311.000	41.659	33.668	-32.341	74.000	7.991	PK
3		9748.000	42.547	32.842	-31.453	74.000	9.705	PK

Profile: 20A0399R	Page No.: 10
Engineer: Yingfei.wang	
Site: AC5	Time: 2020/11/05 - 16:29
Limit: FCC_Part15.209_RE(3m)	Margin: 0
Probe: Horn_3117_00167055(1-18GHz)	Polarity: Vertical
EUT: CLEDR309CD1	Power: AC 120V/60Hz
Note: Mode 5 : Transmit at 2437 MHz by 802.11n(20MHz)	



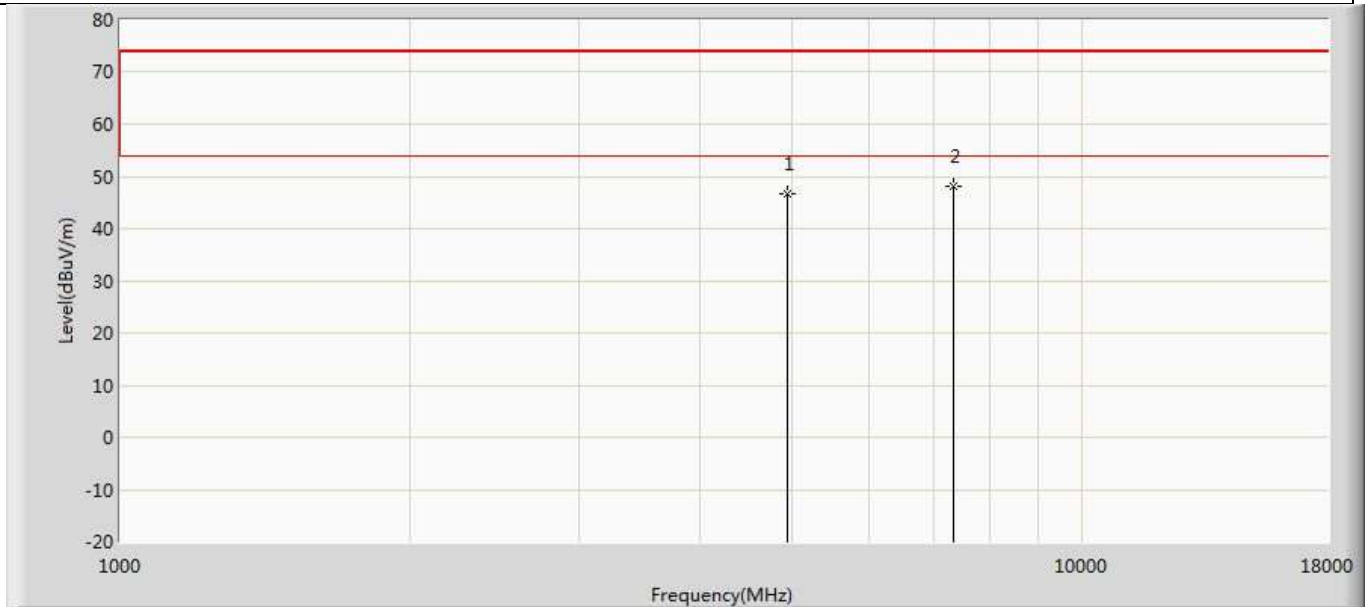
N o	Mar k	Frequency (MHz)	Measure Level (dBuV/m)	Reading Level (dBuV)	Over Limit (dB)	Limit (dBuV/m)	Factor (dB)	Type
1	*	4874.000	47.543	42.696	-26.457	74.000	4.846	PK
2		7311.000	43.571	35.580	-30.429	74.000	7.991	PK
3		9748.000	42.467	32.762	-31.533	74.000	9.705	PK

Profile: 20A0399R	Page No.: 35
Engineer: Neil	
Site: AC5	Time: 2020/11/05 - 22:40
Limit: FCC_Part15.209_RE(3m)	Margin: 0
Probe: Horn_3117_00167055(1-18GHz)	Polarity: Horizontal
EUT: CLEDR309CD1	Power: AC 120V/60Hz
Note: Mode 1: Transmit at 2462MHz by 802.11n(20MHz)	



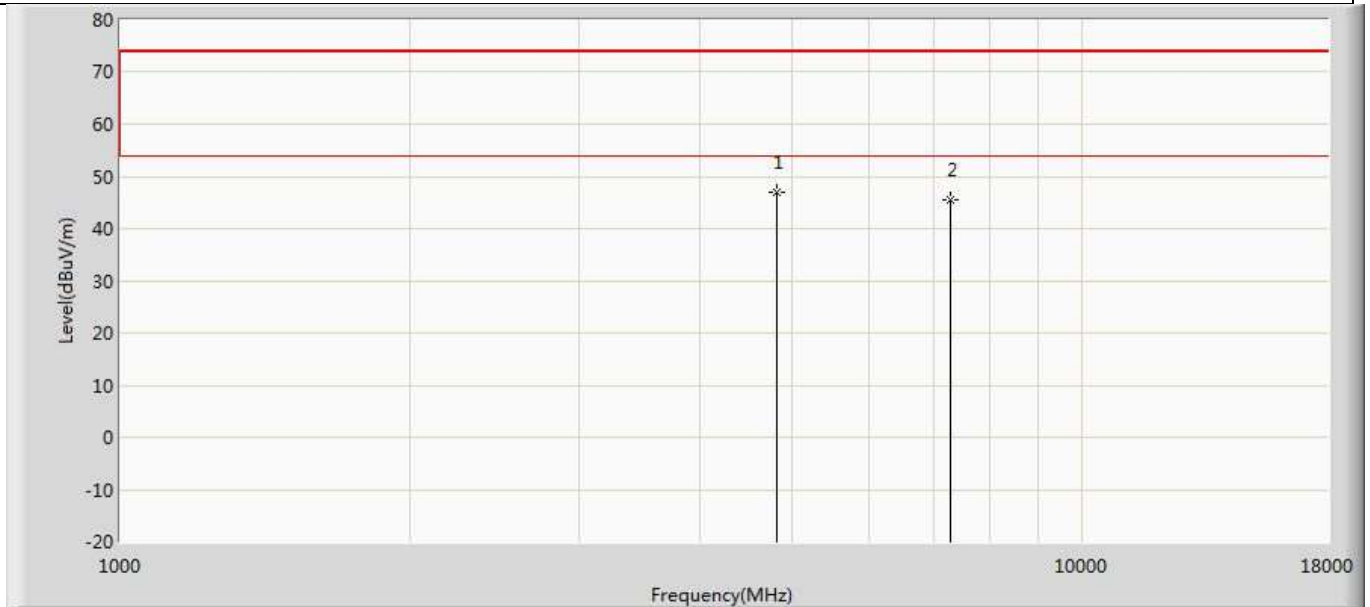
N o	Mar k	Frequency (MHz)	Measure Level (dBuV/m)	Reading Level (dBuV)	Over Limit (dB)	Limit (dBuV/m)	Factor (dB)	Type
1		4924.000	46.607	51.351	-27.393	74.000	-4.744	PK
2	*	7386.000	47.158	49.589	-26.842	74.000	-2.431	PK

Profile: 20A0399R	Page No.: 36
Engineer: Neil	
Site: AC5	Time: 2020/11/05 - 22:40
Limit: FCC_Part15.209_RE(3m)	Margin: 0
Probe: Horn_3117_00167055(1-18GHz)	Polarity: Vertical
EUT: CLEDR309CD1	Power: AC 120V/60Hz
Note: Mode 1: Transmit at 2462MHz by 802.11n(20MHz)	



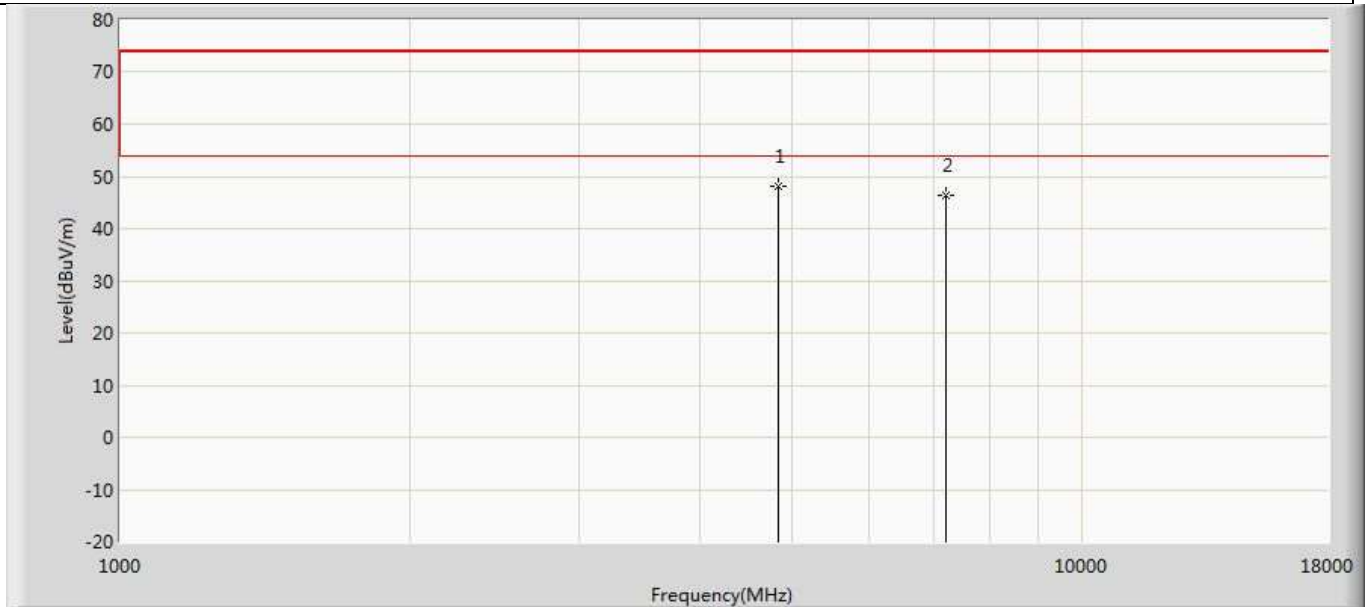
N o	Mar k	Frequency (MHz)	Measure Level (dBuV/m)	Reading Level (dBuV)	Over Limit (dB)	Limit (dBuV/m)	Factor (dB)	Type
1		4924.000	46.811	51.554	-27.189	74.000	-4.744	PK
2	*	7386.000	48.046	50.477	-25.954	74.000	-2.431	PK

Profile: 20A0399R	Page No.: 37
Engineer: Neil	
Site: AC5	Time: 2020/11/05 - 22:40
Limit: FCC_Part15.209_RE(3m)	Margin: 0
Probe: Horn_3117_00167055(1-18GHz)	Polarity: Horizontal
EUT: CLEDR309CD1	Power: AC 120V/60Hz
Note: Mode 1:Transmit at 2422MHz by 802.11n(40MHz)	



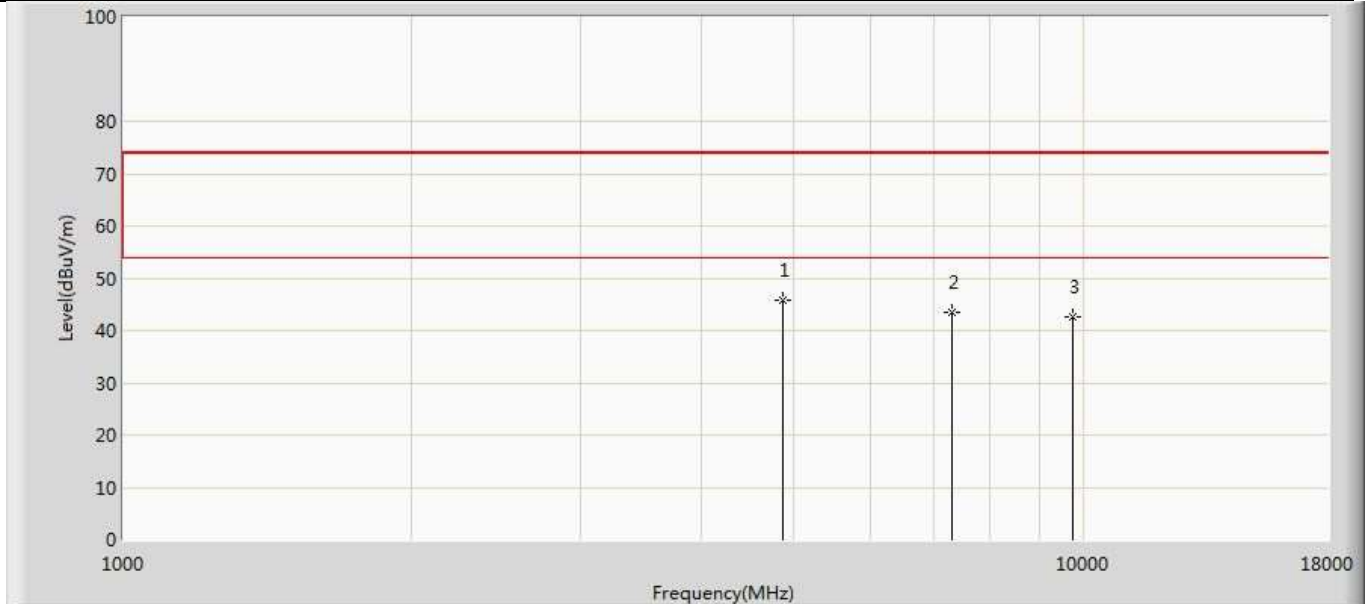
N o	Mar k	Frequency (MHz)	Measure Level (dBuV/m)	Reading Level (dBuV)	Over Limit (dB)	Limit (dBuV/m)	Factor (dB)	Type
1	*	4844.000	46.962	51.783	-27.038	74.000	-4.821	PK
2		7266.000	45.611	47.403	-28.389	74.000	-1.792	PK

Profile: 20A0399R	Page No.: 38
Engineer: Neil	
Site: AC5	Time: 2020/11/05 - 22:40
Limit: FCC_Part15.209_RE(3m)	Margin: 0
Probe: Horn_3117_00167055(1-18GHz)	Polarity: Vertical
EUT: CLEDR309CD1	Power: AC 120V/60Hz
Note: Mode 1:Transmit at 2422MHz by 802.11n(40MHz)	



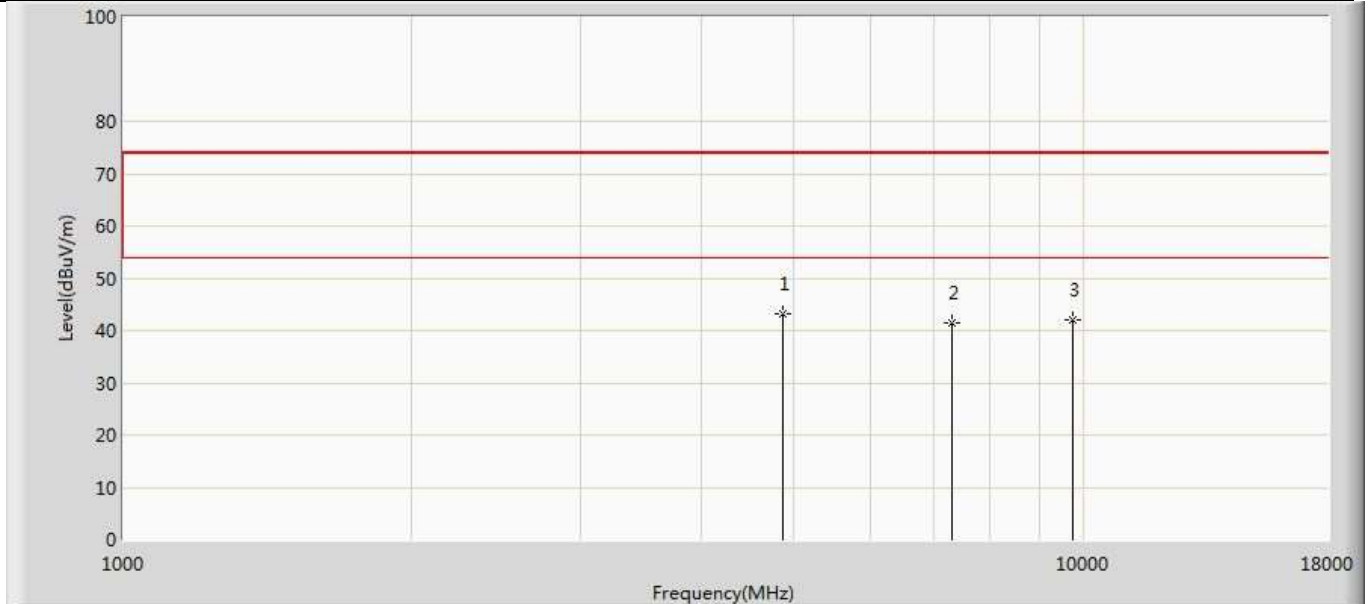
N o	Mar k	Frequency (MHz)	Measure Level (dBuV/m)	Reading Level (dBuV)	Over Limit (dB)	Limit (dBuV/m)	Factor (dB)	Type
1	*	4844.000	48.080	52.901	-25.920	74.000	-4.821	PK
2		7266.000	46.450	48.242	-27.550	74.000	-1.792	PK

Profile: 20A0399R	Page No.: 11
Engineer: Yingfei.wang	
Site: AC5	Time: 2020/11/05 - 16:35
Limit: FCC_Part15.209_RE(3m)	Margin: 0
Probe: Horn_3117_00167055(1-18GHz)	Polarity: Horizontal
EUT: CLEDR309CD1	Power: AC 120V/60Hz
Note: Mode 6 : Transmit at 2437 MHz by 802.11n(40MHz)	



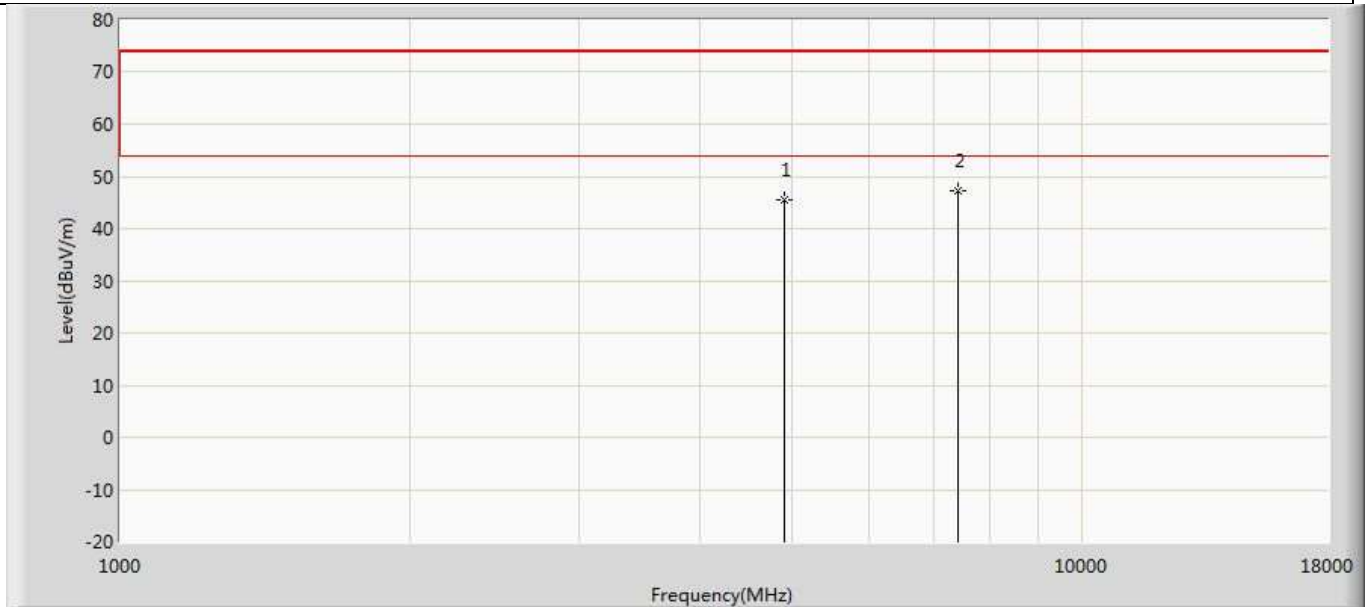
N o	Mar k	Frequency (MHz)	Measure Level (dBuV/m)	Reading Level (dBuV)	Over Limit (dB)	Limit (dBuV/m)	Factor (dB)	Type
1	*	4874.000	45.761	40.914	-28.239	74.000	4.846	PK
2		7311.000	43.582	35.591	-30.418	74.000	7.991	PK
3		9748.000	42.571	32.866	-31.429	74.000	9.705	PK

Profile: 20A0399R	Page No.: 12
Engineer: Yingfei.wang	
Site: AC5	Time: 2020/11/05 - 16:44
Limit: FCC_Part15.209_RE(3m)	Margin: 0
Probe: Horn_3117_00167055(1-18GHz)	Polarity: Vertical
EUT: CLEDR309CD1	Power: AC 120V/60Hz
Note: Mode 6 : Transmit at 2437 MHz by 802.11n(40MHz)	



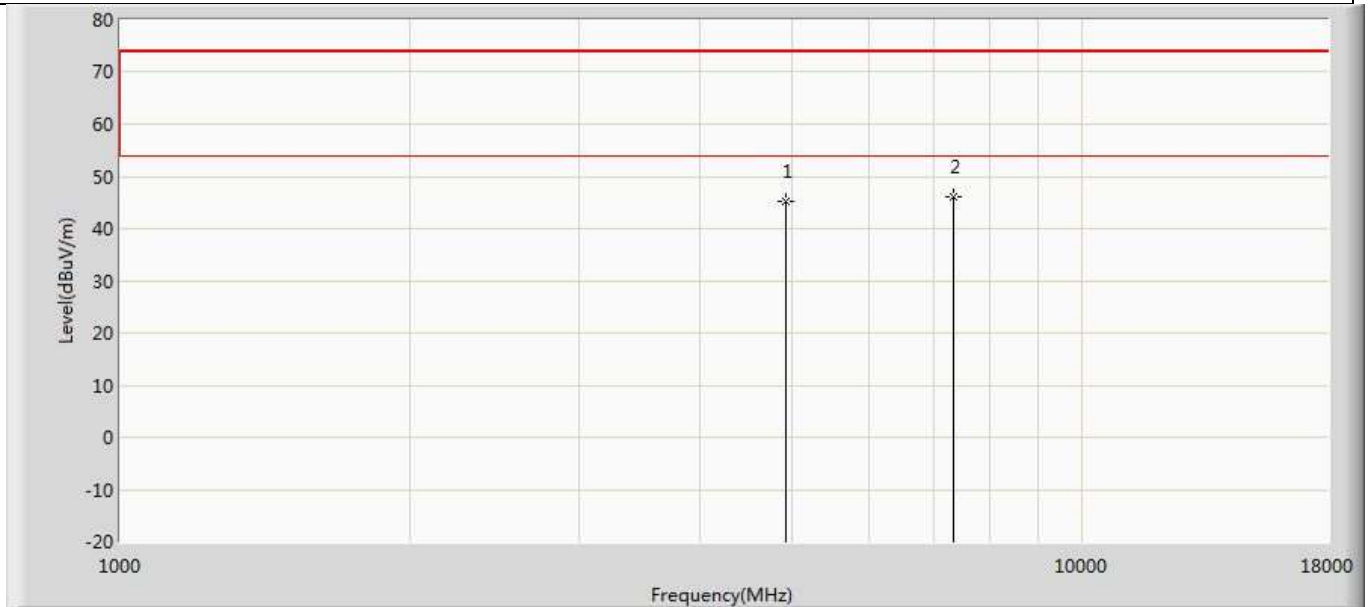
N o	Mar k	Frequency (MHz)	Measure Level (dBuV/m)	Reading Level (dBuV)	Over Limit (dB)	Limit (dBuV/m)	Factor (dB)	Type
1	*	4874.000	43.179	38.332	-30.821	74.000	4.846	PK
2		7311.000	41.488	33.497	-32.512	74.000	7.991	PK
3		9748.000	41.987	32.282	-32.013	74.000	9.705	PK

Profile: 20A0399R	Page No.: 39
Engineer: Neil	
Site: AC5	Time: 2020/11/21 - 02:40
Limit: FCC_Part15.209_RE(3m)	Margin: 0
Probe: Horn_3117_00167055(1-18GHz)	Polarity: Horizontal
EUT: CLEDR309CD1	Power: AC 120V/60Hz
Note: Mode 1: Transmit at 2452MHz by 802.11n(40MHz)	



N o	Mar k	Frequency (MHz)	Measure Level (dBuV/m)	Reading Level (dBuV)	Over Limit (dB)	Limit (dBuV/m)	Factor (dB)	Type
1		4904.000	45.588	50.239	-28.412	74.000	-4.651	PK
2	*	7356.000	47.325	49.232	-26.665	74.000	-1.907	PK

Profile: 20A0399R	Page No.: 40
Engineer: Neil	
Site: AC5	Time: 2020/11/21 - 02:40
Limit: FCC_Part15.209_RE(3m)	Margin: 0
Probe: Horn_3117_00167055(1-18GHz)	Polarity: Vertical
EUT: CLEDR309CD1	Power: AC 120V/60Hz
Note: Mode 1:Transmit at 2452MHz by 802.11n(40MHz)	

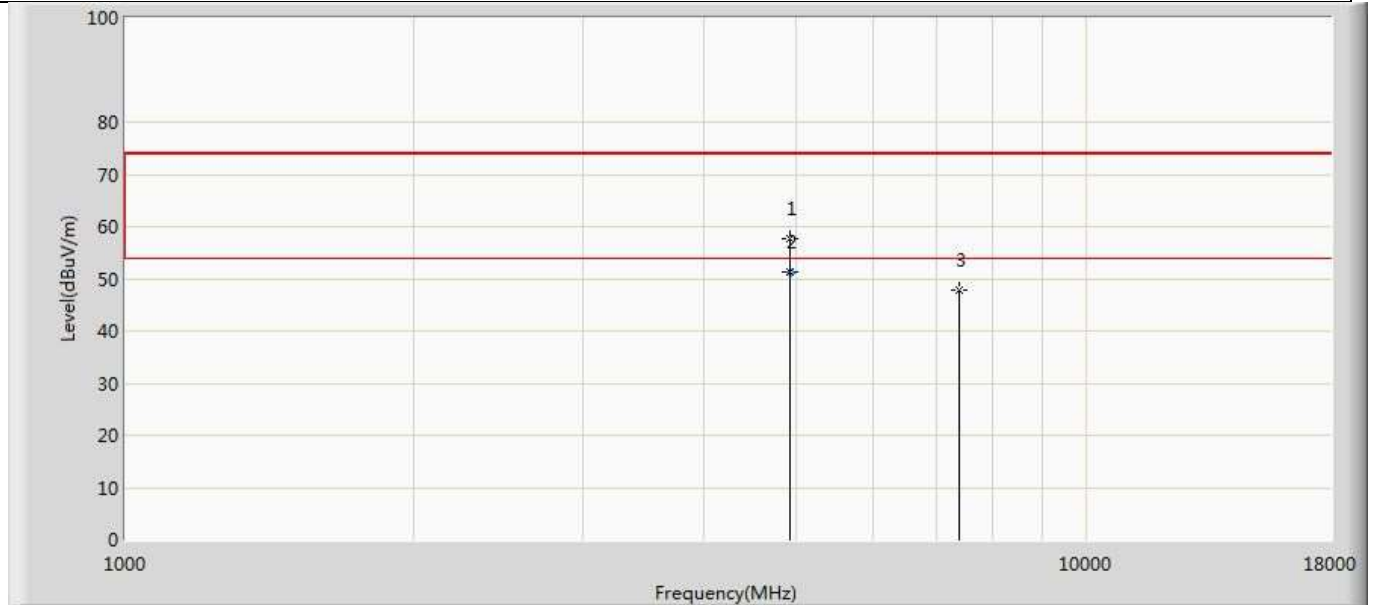


No	Mark	Frequency (MHz)	Measure Level (dBuV/m)	Reading Level (dBuV)	Over Limit (dB)	Limit (dBuV/m)	Factor (dB)	Type
1		4904.000	45.319	49.970	-28.681	74.000	-4.651	PK
2	*	7356.000	46.213	48.120	-27.787	74.000	-1.907	PK

Remark	1. " * ", means this data is the worst emission level. 2. Measurement Level = Reading Level + Factor(Probe+Cable-Amp). 3. The test frequency range, 9kHz~30MHz worst case are at least 6dB below the limits, therefore no data appear in the report. 4. This limit applies for using average detector, if the test result on peak is lower than average limit, then average measurement needn't be performed.
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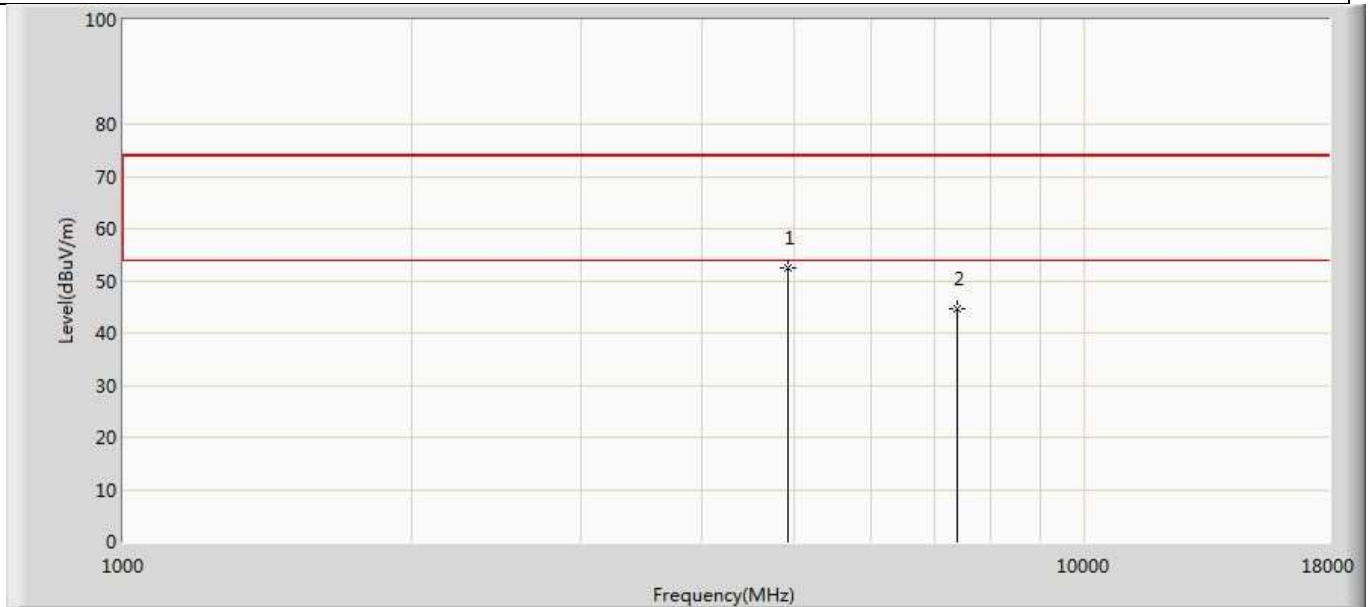
The worst case of Simultaneous transmit:

Profile: 20A0399R	Page No.: 5
Engineer: Pawn	
Site: AC5	Time: 2020/11/06 - 14:17
Limit: FCC_Part15.209_RE(3m)	Margin: 0
Probe: Horn_3117_00167055(1-18GHz)	Polarity: Horizontal
EUT: CLEDR309CD1	Power: AC 120V/60Hz
Note: Mode 5: Simultaneous transmit at 2462MHz by 802.11b and 2462MHz by BLE	



N o	Mar k	Frequency (MHz)	Measure Level (dBuV/m)	Reading Level (dBuV)	Over Limit (dB)	Limit (dBuV/m)	Factor (dB)	Type
1		4924.000	57.786	62.530	-16.214	74.000	-4.744	PK
2	*	4924.000	51.185	55.929	-2.815	54.000	-4.744	AV
3		7386.000	47.849	50.280	-26.151	74.000	-2.431	PK

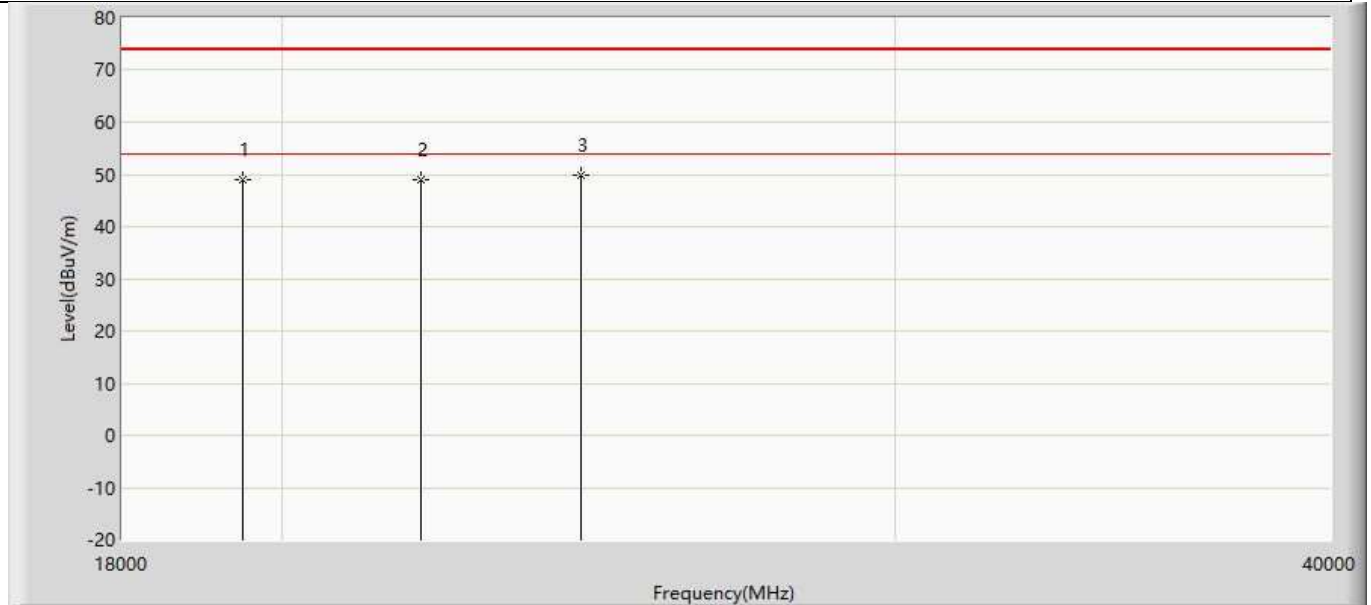
Profile: 20A0399R	Page No.: 6
Engineer: Pawn	
Site: AC5	Time: 2020/11/06 - 14:21
Limit: FCC_Part15.209_RE(3m)	Margin: 0
Probe: Horn_3117_00167055(1-18GHz)	Polarity: Vertical
EUT: CLEDR309CD1	Power: AC 120V/60Hz
Note: Mode 5: Simultaneous transmit at 2462MHz by 802.11b and 2462MHz by BLE	



N o	Mar k	Frequency (MHz)	Measure Level (dBuV/m)	Reading Level (dBuV)	Over Limit (dB)	Limit (dBuV/m)	Factor (dB)	Type
1	*	4924.000	52.321	57.065	-21.679	74.000	-4.744	PK
2		7386.000	44.772	47.203	-29.228	74.000	-2.431	PK

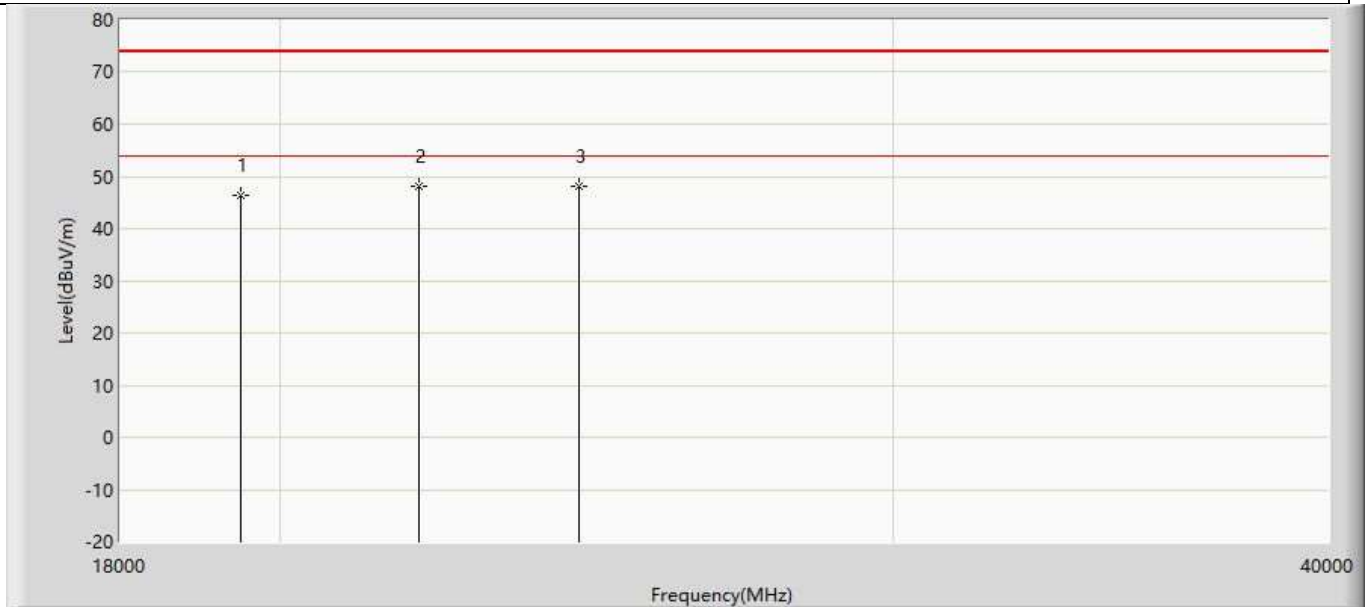
The worst case of Radiated Emission above 18GHz:

Profile: 20A0399R	Page No.: 11
Engineer: Lynee	
Site: AC5	Time: 2020/11/10 - 16:47
Limit: FCC_Part15.209_RE(3m)	Margin: 0
Probe: BBHA 9170_294(18-40GHz)	Polarity: Horizontal
EUT: Dual mode Full Color BR30	Power: AC 120V/60Hz
Note: Mode 1: Transmit at 2437MHz by 802.11b	



N o	Mar k	Frequency (MHz)	Measure Level (dBuV/m)	Reading Level (dBuV)	Over Limit (dB)	Limit (dBuV/m)	Factor (dB)	Type
1		19496.000	49.022	54.806	-24.978	74.000	-5.784	PK
2		21933.000	48.998	52.696	-25.002	74.000	-3.697	PK
3	*	24370.000	49.952	52.116	-24.048	74.000	-2.164	PK

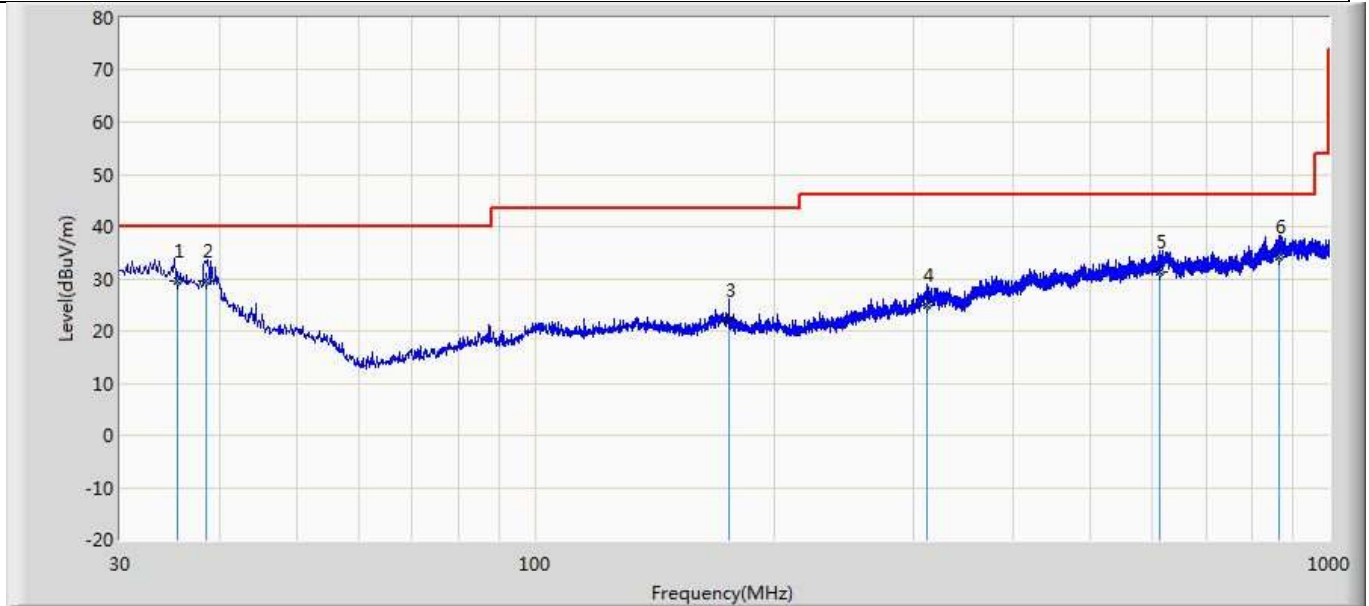
Profile: 20A0399R	Page No.: 12
Engineer: Lynee	
Site: AC5	Time: 2020/11/10 - 16:47
Limit: FCC_Part15.209_RE(3m)	Margin: 0
Probe: BBHA 9170_294(18-40GHz)	Polarity: Vertical
EUT: Dual mode Full Color BR30	Power: AC 120V/60Hz
Note: Mode 1: Transmit at 2437MHz by 802.11b	



N o	Mar k	Frequency (MHz)	Measure Level (dBuV/m)	Reading Level (dBuV)	Over Limit (dB)	Limit (dBuV/m)	Factor (dB)	Type
1		19496.000	46.438	52.222	-27.562	74.000	-5.784	PK
2		21933.000	47.987	51.685	-26.013	74.000	-3.697	PK
3	*	24370.000	48.143	50.307	-25.857	74.000	-2.164	PK

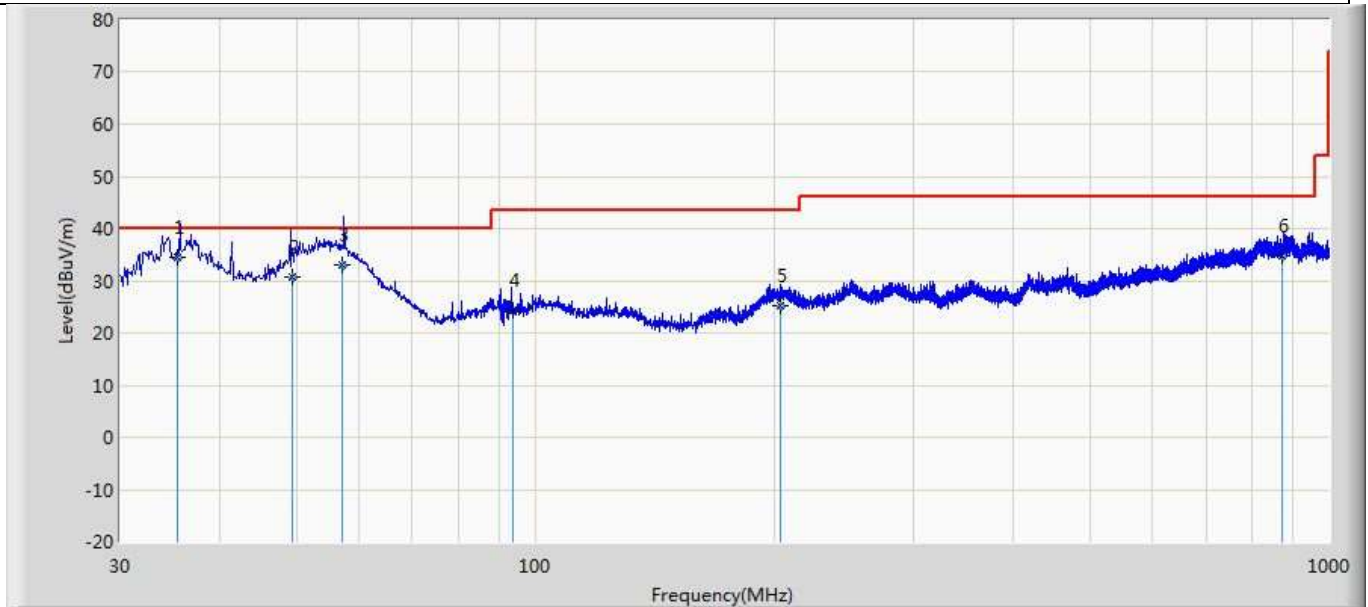
The worst case of Radiated Emission below 1GHz:

Profile: 20A0399R	Page No.: 3
Engineer: Donald	
Site: AC2	Time: 2020/10/22
Limit: FCC_Part15.209_RE(3m)	Margin: 0
Probe: AC2_3M(30-1000M)	Polarity: Horizontal
EUT: Dual mode Full Color BR30	Power: AC 120V/60Hz
Note: Mode 1	



N o	Mar k	Frequen cy (MHz)	Measur e Level (dBuV/ m)	Readin g Level (dBuV)	Over Limit (dB)	Limit (dBuV/m)	Probe (dB/m)	Cable (dB)	Amp (dB)	Ant Pos (cm)	Table Pos (deg)	Typ e
1	*	35.450	29.671	3.144	-10.329	40.000	20.181	6.346	0.000	100	9	QP
2		38.496	29.647	6.004	-10.353	40.000	17.276	6.368	0.000	100	158	QP
3		175.648	22.008	5.011	-21.492	43.500	9.925	7.072	0.000	100	152	QP
4		311.586	24.874	3.891	-21.126	46.000	13.423	7.560	0.000	100	345	QP
5		611.746	31.390	1.847	-14.610	46.000	21.156	8.387	0.000	100	331	QP
6		865.122	34.193	1.414	-11.807	46.000	23.809	8.970	0.000	100	222	QP

Profile: 20A0399R	Page No.: 4
Engineer: Donald	
Site: AC2	Time: 2020/10/22
Limit: FCC_Part15.209_RE(3m)	Margin: 0
Probe: AC2_3M(30-1000M)	Polarity: Vertical
EUT: Dual mode Full Color BR30	Power: AC 120V/60Hz
Note: Mode 1	



N o	Mar k	Frequen cy (MHz)	Measur e Level (dBuV/ m)	Readin g Level (dBuV)	Over Limit (dB)	Limit (dBuV/m)	Probe (dB/m)	Cable (dB)	Amp (dB)	Ant Pos (cm)	Table Pos (deg)	Typ e
1	*	35.450	34.390	12.150	-5.610	40.000	15.894	6.346	0.000	100	61	QP
2		49.415	30.794	11.416	-9.206	40.000	12.928	6.450	0.000	100	11	QP
3		57.154	33.161	16.340	-6.839	40.000	10.321	6.500	0.000	100	21	QP
4		93.584	24.482	5.480	-19.018	43.500	12.297	6.706	0.000	100	116	QP
5		203.450	25.215	1.789	-18.285	43.500	16.238	7.188	0.000	100	287	QP
6		874.160	34.904	2.015	-11.096	46.000	23.899	8.990	0.000	100	95	QP

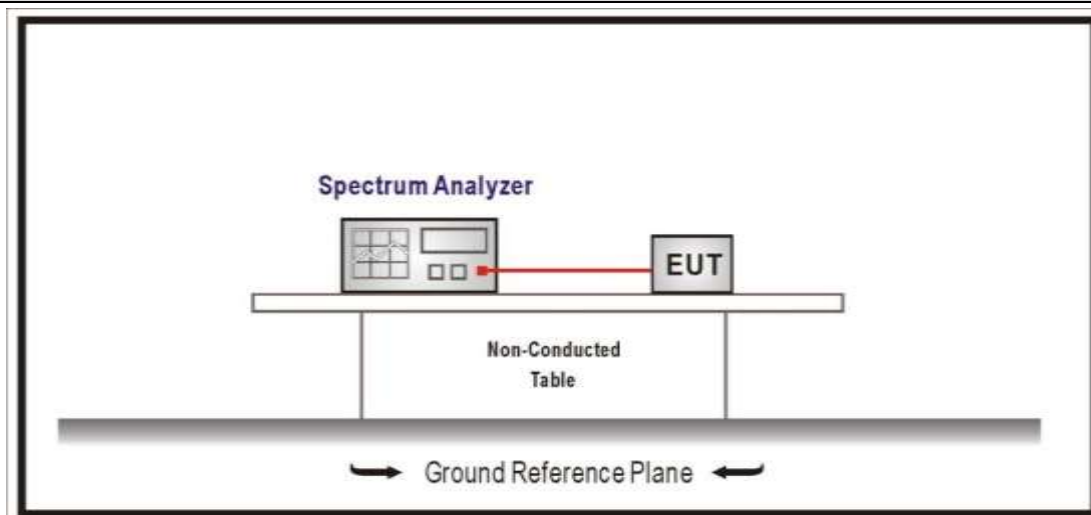
Remark	1. " * ", means this data is the worst emission level. 2. Measurement Level = Reading Level + Factor(Probe+Cable-Amp). 3. All Readings below 1GHz are Quasi-Peak, above are performed with peak and/or average measurements as necessary.
--------	--

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	8.903	2399.955	-29.21	38.113	≥20	Pass
	11	2462	9.014	2500.000	-48.88	57.894	≥20	Pass
2	1	2412	1.118	2400.000	-31.30	32.418	≥20	Pass
	11	2462	0.407	2500.000	-49.11	49.517	≥20	Pass
3	1	2412	1.508	2399.307	-28.41	29.918	≥20	Pass
	11	2462	1.832	2500.000	-48.93	50.762	≥20	Pass
4	3	2422	-1.507	2397.804	-32.38	30.873	≥20	Pass
	9	2452	-1.666	2500.000	-44.85	43.184	≥20	Pass

Note: The worst case of emissions in non-restricted frequency bands as below:

Mode 3 CH01(2412MHz)



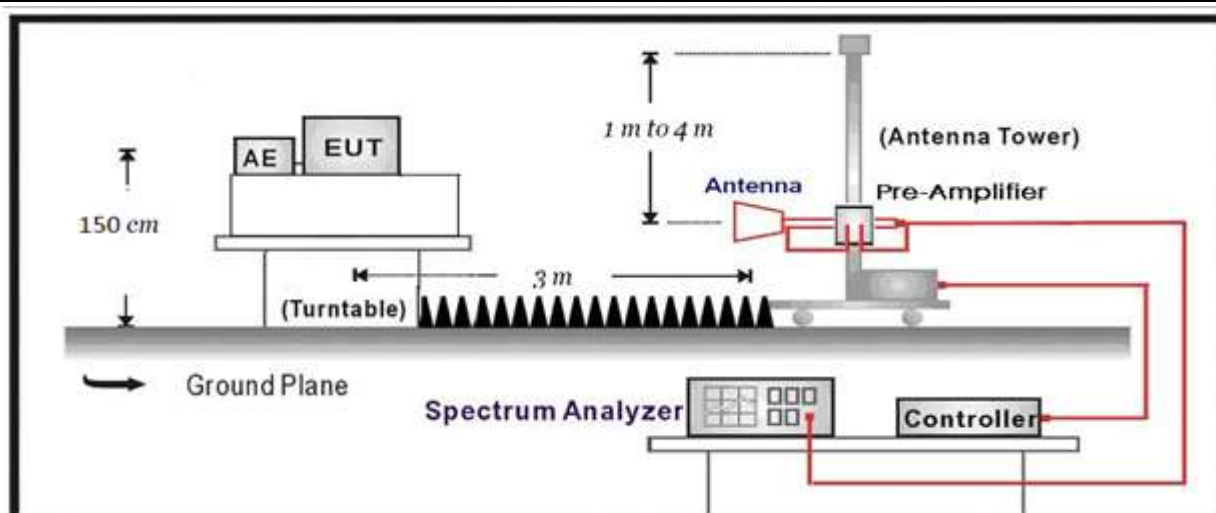
4.4 Radiated Emission Band Edge**VERDICT: PASS****4.4.1 Limit**

Standard		FCC Part 15 Subpart C Paragraph 15.247(d) , 15.205, 15.209		
Frequency bands (MHz)	Detector	Limit (dB μ V/m)	RBW (MHz)	Distance (m)
2310-2390	PK	74	1	3
2483.5-2500	AV	54	1	3

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

4.4.2 Test Setup

Above 1GHz Test Setup:



4.4.3 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	
	☐	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

4.4.4 Test Data

Test Mode	Tx On (ms)	VBW (kHz)	Tx On + Tx Off (ms)	Duty Cycle
1	--	0.01	--	100%
2	--	0.01	--	100%
3	--	0.01	--	100%
4	--	0.01	--	100%

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

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

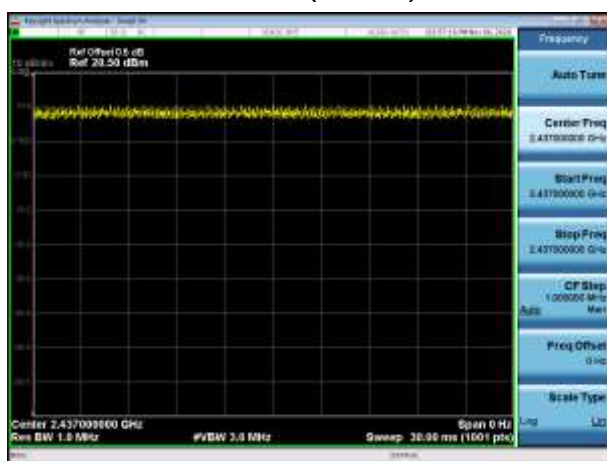
802.11b



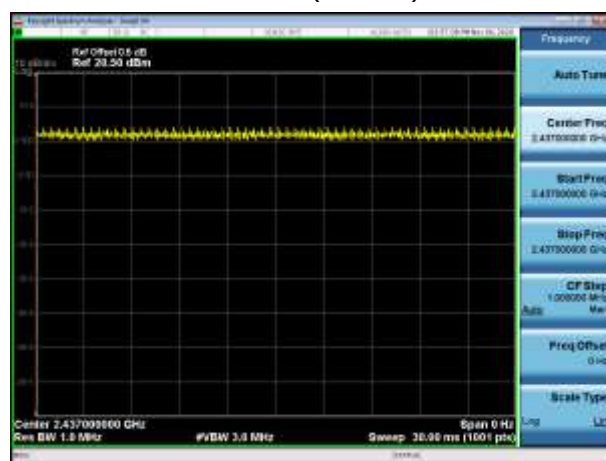
802.11g



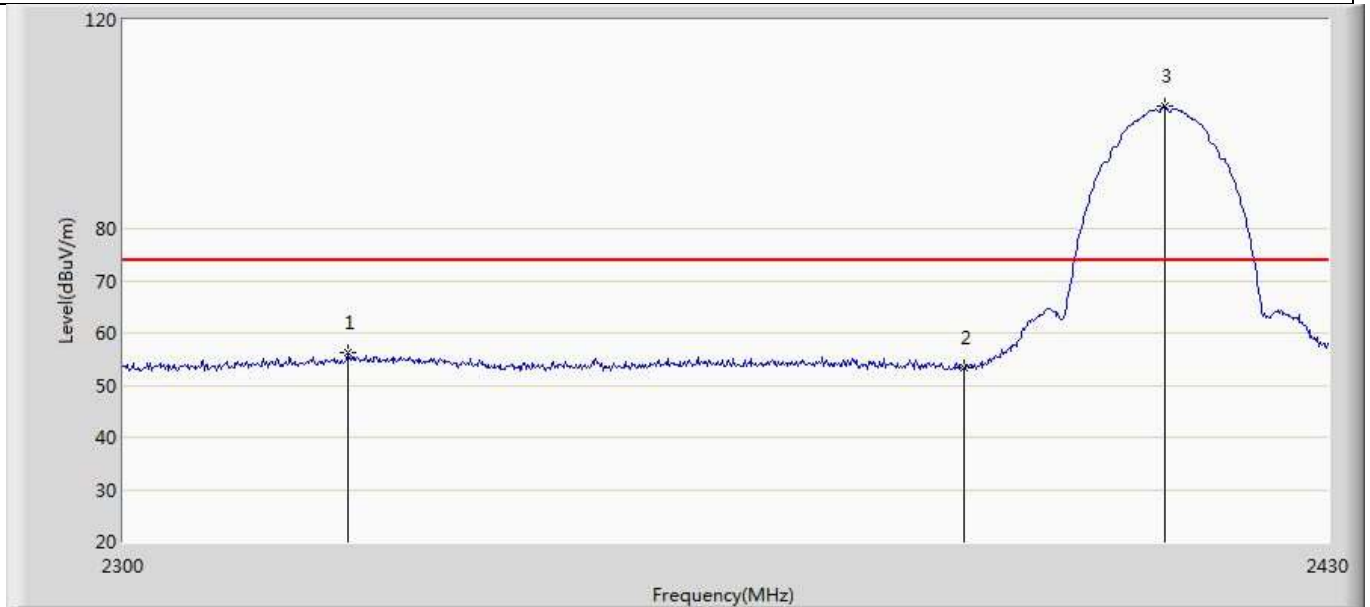
802.11n(20MHz)



802.11n(40MHz)

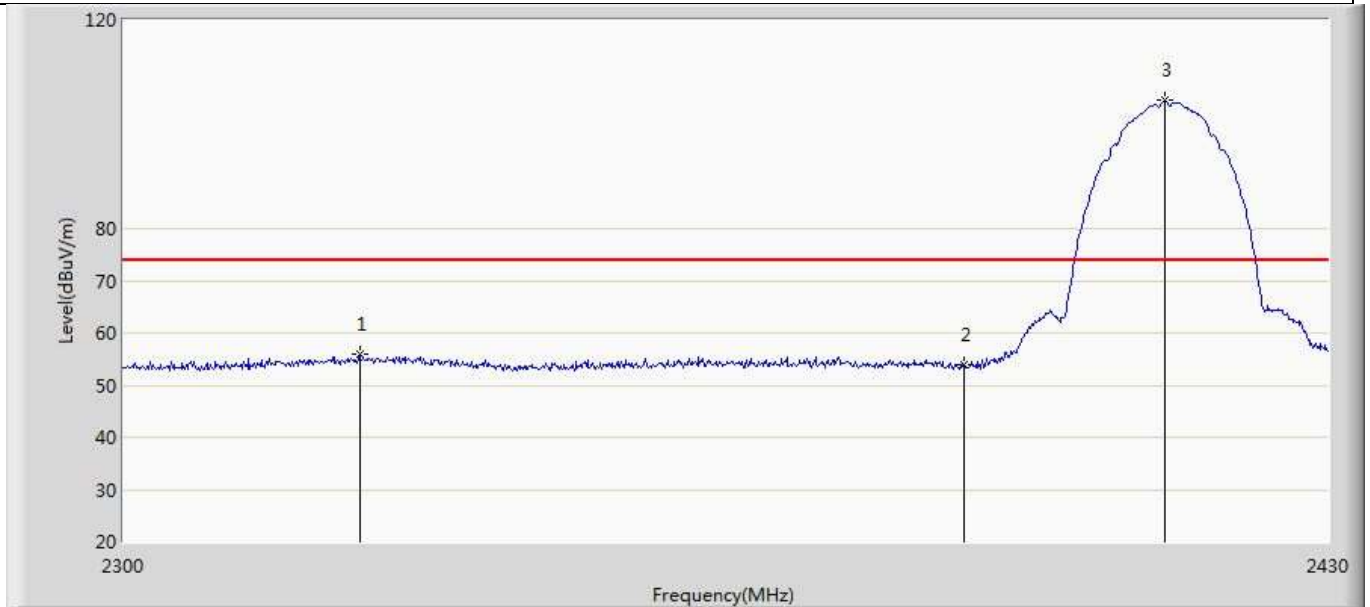


Profile: 20A0399R	Page No.: 56
Engineer: Tongben	
Site: AC5	Time: 2020/11/08 - 13:36
Limit: FCC_Part15.209_RE(3m)	Margin: 0
Probe: Horn_3117_00167055(1-18GHz)	Polarity: Vertical
EUT: CLEDR309CD1	Power: AC 120V/60Hz
Note: Mode 1:Transmit at 2412MHz by 802.11b	



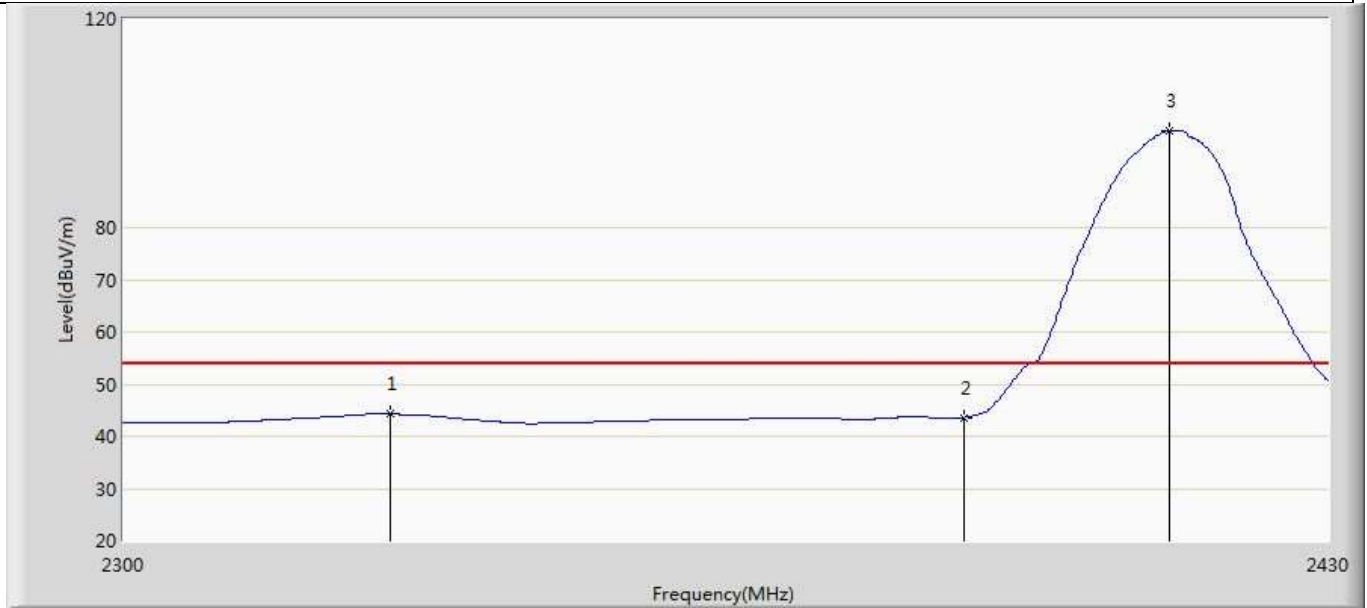
N o	Mar k	Frequency (MHz)	Measure Level (dBuV/m)	Reading Level (dBuV)	Over Limit (dB)	Limit (dBuV/m)	Factor (dB)	Type
1		2323.660	56.244	18.781	-17.756	74.000	37.463	PK
2		2390.000	53.415	17.671	-20.585	74.000	35.745	PK
3	*	2412.060	103.446	66.724	29.446	74.000	36.723	PK

Profile: 20A0399R	Page No.: 53
Engineer: Tongben	
Site: AC5	Time: 2020/11/08 - 13:25
Limit: FCC_Part15.209_RE(3m)	Margin: 0
Probe: Horn_3117_00167055(1-18GHz)	Polarity: Horizontal
EUT: CLEDR309CD1	Power: AC 120V/60Hz
Note: Mode 1:Transmit at 2412MHz by 802.11b	



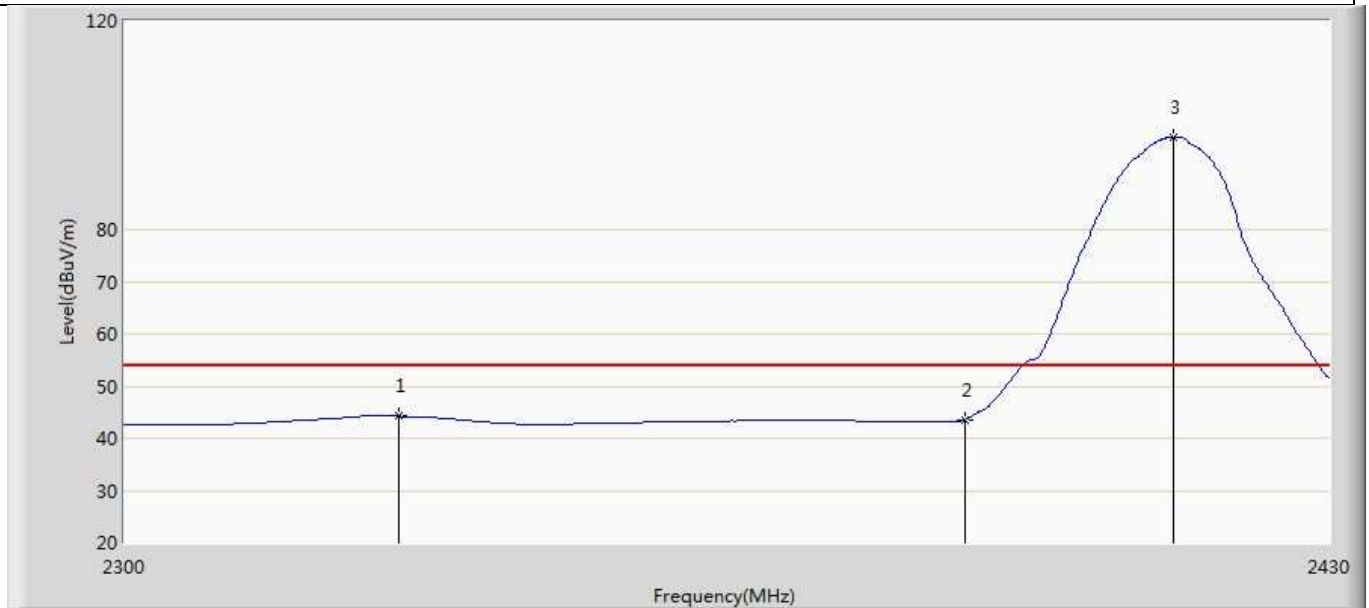
N o	Mar k	Frequency (MHz)	Measure Level (dBuV/m)	Reading Level (dBuV)	Over Limit (dB)	Limit (dBuV/m)	Factor (dB)	Type
1		2324.960	55.868	18.287	-18.132	74.000	37.580	PK
2		2390.000	53.784	18.040	-20.216	74.000	35.745	PK
3	*	2412.060	104.573	67.851	30.573	74.000	36.723	PK

Profile: 20A0399R	Page No.: 54
Engineer: Tongben	
Site: AC5	Time: 2020/11/08 - 13:29
Limit: FCC_Part15.209_RE(3m)	Margin: 0
Probe: Horn_3117_00167055(1-18GHz)	Polarity: Horizontal
EUT: CLEDR309CD1	Power: AC 120V/60Hz
Note: Mode 1:Transmit at 2412MHz by 802.11b	



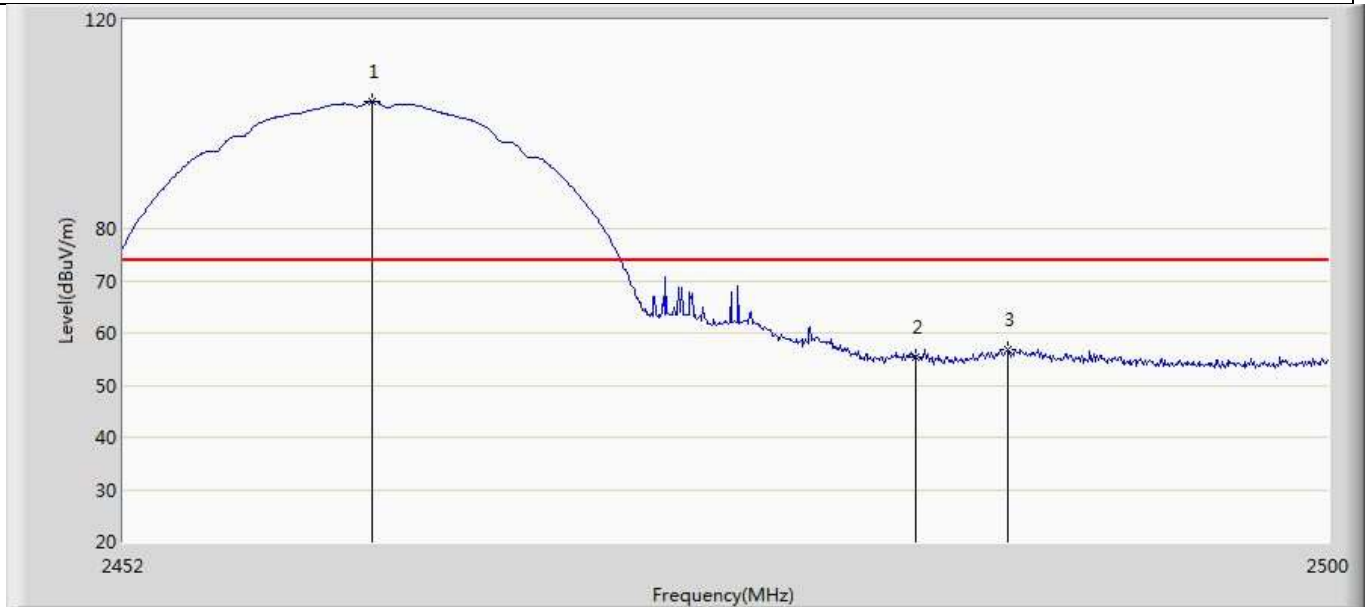
N o	Mar k	Frequency (MHz)	Measure Level (dBuV/m)	Reading Level (dBuV)	Over Limit (dB)	Limit (dBuV/m)	Factor (dB)	Type
1		2328.210	44.288	6.835	-9.712	54.000	37.453	AV
2		2390.000	43.610	7.866	-10.390	54.000	35.745	AV
3	*	2412.450	98.536	61.818	44.536	54.000	36.718	AV

Profile: 20A0399R	Page No.: 55
Engineer: Tongben	
Site: AC5	Time: 2020/11/08 - 13:32
Limit: FCC_Part15.209_RE(3m)	Margin: 0
Probe: Horn_3117_00167055(1-18GHz)	Polarity: Vertical
EUT: CLEDR309CD1	Power: AC 120V/60Hz
Note: Mode 1:Transmit at 2412MHz by 802.11b	



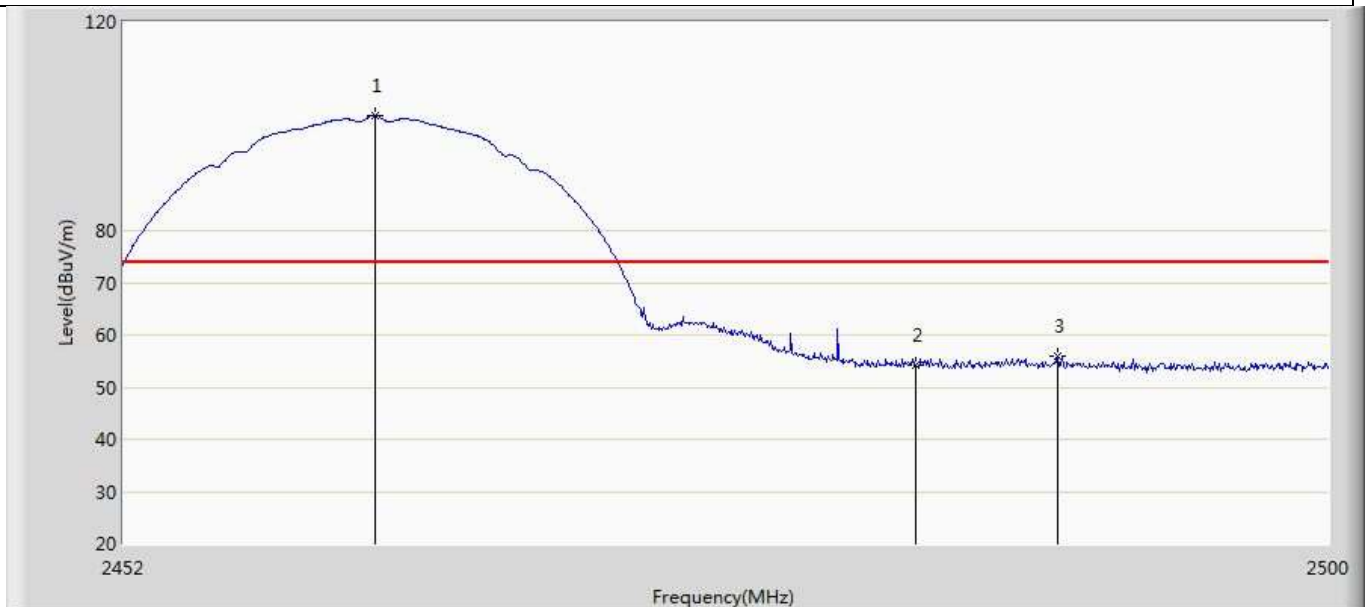
N o	Mar k	Frequency (MHz)	Measure Level (dBuV/m)	Reading Level (dBuV)	Over Limit (dB)	Limit (dBuV/m)	Factor (dB)	Type
1		2328.990	44.229	6.854	-9.771	54.000	37.375	AV
2		2390.000	43.610	7.866	-10.390	54.000	35.745	AV
3	*	2412.840	97.695	60.980	43.695	54.000	36.714	AV

Profile: 20A0399R	Page No.: 52
Engineer: Tongben	
Site: AC5	Time: 2020/11/08 - 13:20
Limit: FCC_Part15.209_RE(3m)	Margin: 0
Probe: Horn_3117_00167055(1-18GHz)	Polarity: Horizontal
EUT: CLEDR309CD1	Power: AC 120V/60Hz
Note: Mode 1:Transmit at 2462MHz by 802.11b	



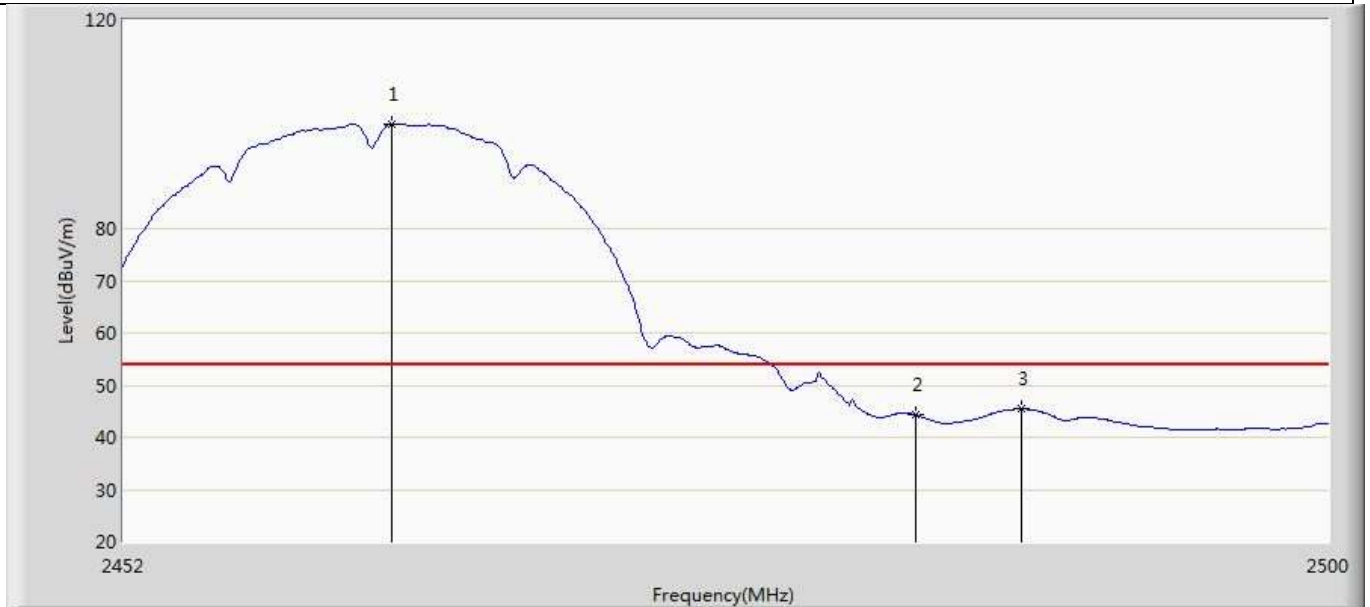
N o	Mar k	Frequency (MHz)	Measure Level (dBuV/m)	Reading Level (dBuV)	Over Limit (dB)	Limit (dBuV/m)	Factor (dB)	Type
1	*	2461.840	104.456	67.618	30.456	74.000	36.838	PK
2		2483.500	55.434	18.735	-18.566	74.000	36.699	PK
3		2487.184	56.856	20.294	-17.144	74.000	36.562	PK

Profile: 20A0399R	Page No.: 57
Engineer: Tongben	
Site: AC5	Time: 2020/11/08 - 13:39
Limit: FCC_Part15.209_RE(3m)	Margin: 0
Probe: Horn_3117_00167055(1-18GHz)	Polarity: Vertical
EUT: CLEDR309CD1	Power: AC 120V/60Hz
Note: Mode 1:Transmit at 2462MHz by 802.11b	



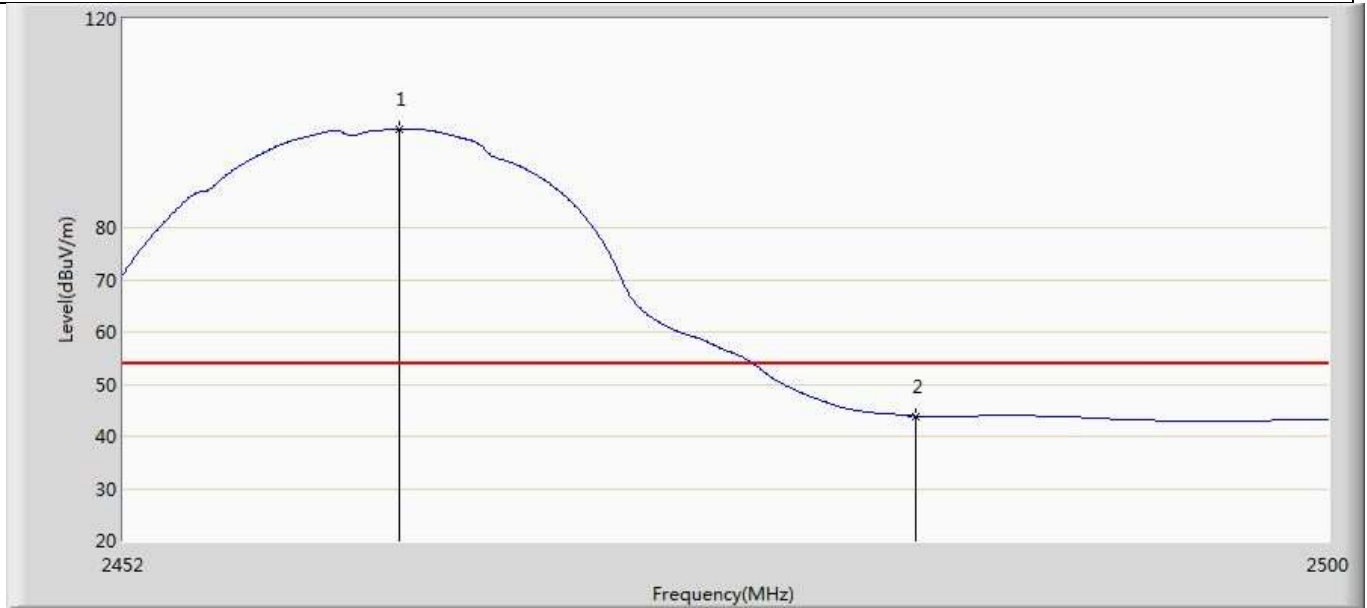
N o	Mar k	Frequency (MHz)	Measure Level (dBuV/m)	Reading Level (dBuV)	Over Limit (dB)	Limit (dBuV/m)	Factor (dB)	Type
1	*	2461.984	102.028	65.189	28.028	74.000	36.839	PK
2		2483.500	54.140	17.441	-19.860	74.000	36.699	PK
3		2489.152	56.055	19.566	-17.945	74.000	36.489	PK

Profile: 20A0399R	Page No.: 51
Engineer: Tongben	
Site: AC5	Time: 2020/11/08 - 10:52
Limit: FCC_Part15.209_RE(3m)	Margin: 0
Probe: Horn_3117_00167055(1-18GHz)	Polarity: Horizontal
EUT: CLEDR309CD1	Power: AC 120V/60Hz
Note: Mode 1:Transmit at 2462MHz by 802.11b	



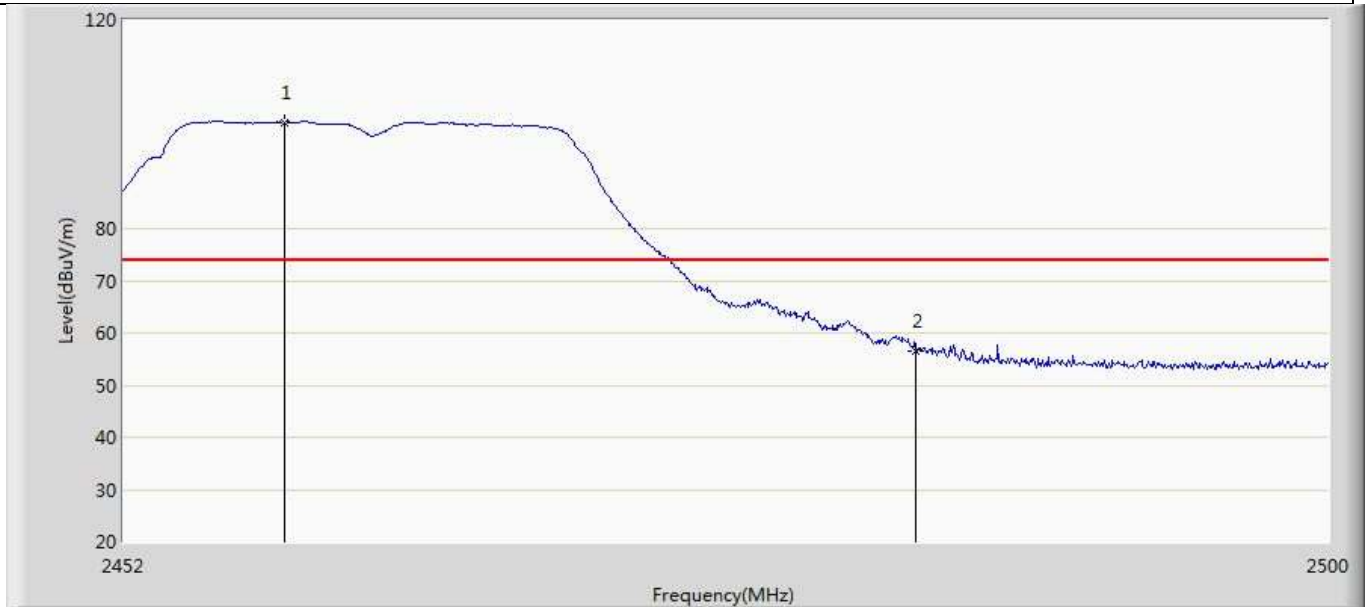
N o	Mar k	Frequency (MHz)	Measure Level (dBuV/m)	Reading Level (dBuV)	Over Limit (dB)	Limit (dBuV/m)	Factor (dB)	Type
1	*	2462.656	100.089	63.249	46.089	54.000	36.840	AV
2		2483.500	44.270	7.571	-9.730	54.000	36.699	AV
3		2487.712	45.420	8.877	-8.580	54.000	36.543	AV

Profile: 20A0399R	Page No.: 58
Engineer: Tongben	
Site: AC5	Time: 2020/11/08 - 13:43
Limit: FCC_Part15.209_RE(3m)	Margin: 0
Probe: Horn_3117_00167055(1-18GHz)	Polarity: Vertical
EUT: CLEDR309CD1	Power: AC 120V/60Hz
Note: Mode 1:Transmit at 2462MHz by 802.11b	



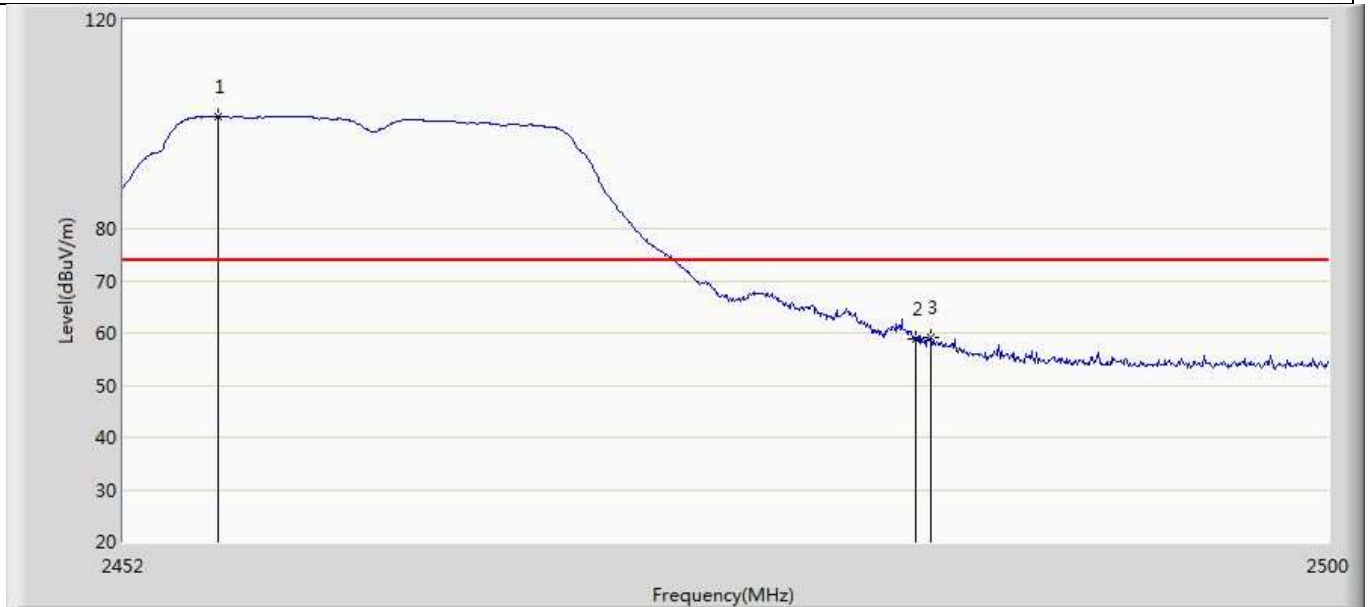
N o	Mar k	Frequency (MHz)	Measure Level (dBuV/m)	Reading Level (dBuV)	Over Limit (dB)	Limit (dBuV/m)	Factor (dB)	Type
1	*	2462.944	98.806	61.966	44.806	54.000	36.841	AV
2		2483.500	43.863	7.164	-10.137	54.000	36.699	AV

Profile: 20A0399R	Page No.: 60
Engineer: Tongben	
Site: AC5	Time: 2020/11/08 - 13:52
Limit: FCC_Part15.209_RE(3m)	Margin: 0
Probe: Horn_3117_00167055(1-18GHz)	Polarity: Vertical
EUT: CLEDR309CD1	Power: AC 120V/60Hz
Note: Mode 2:Transmit at 2462MHz by 802.11g	



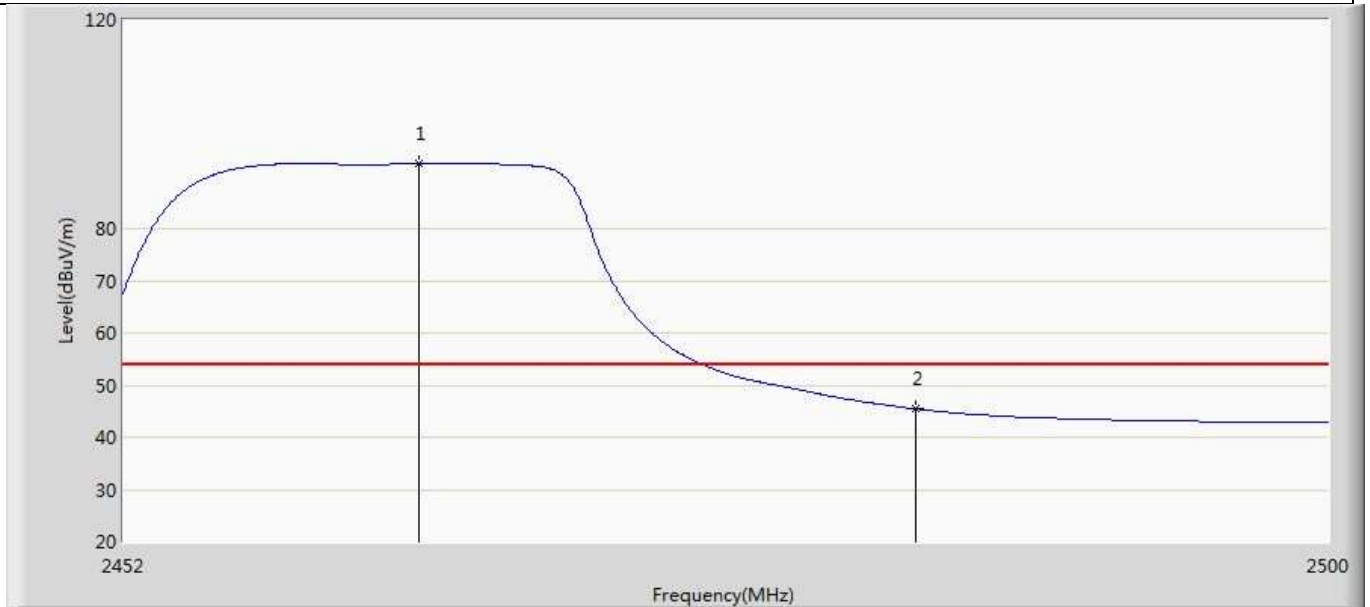
N o	Mar k	Frequency (MHz)	Measure Level (dBuV/m)	Reading Level (dBuV)	Over Limit (dB)	Limit (dBuV/m)	Factor (dB)	Type
1	*	2458.384	100.422	63.596	26.422	74.000	36.825	PK
2		2483.500	56.598	19.899	-17.402	74.000	36.699	PK

Profile: 20A0399R	Page No.: 61
Engineer: Tongben	
Site: AC5	Time: 2020/11/08 - 13:55
Limit: FCC_Part15.209_RE(3m)	Margin: 0
Probe: Horn_3117_00167055(1-18GHz)	Polarity: Horizontal
EUT: CLEDR309CD1	Power: AC 120V/60Hz
Note: Mode 2:Transmit at 2462MHz by 802.11g	



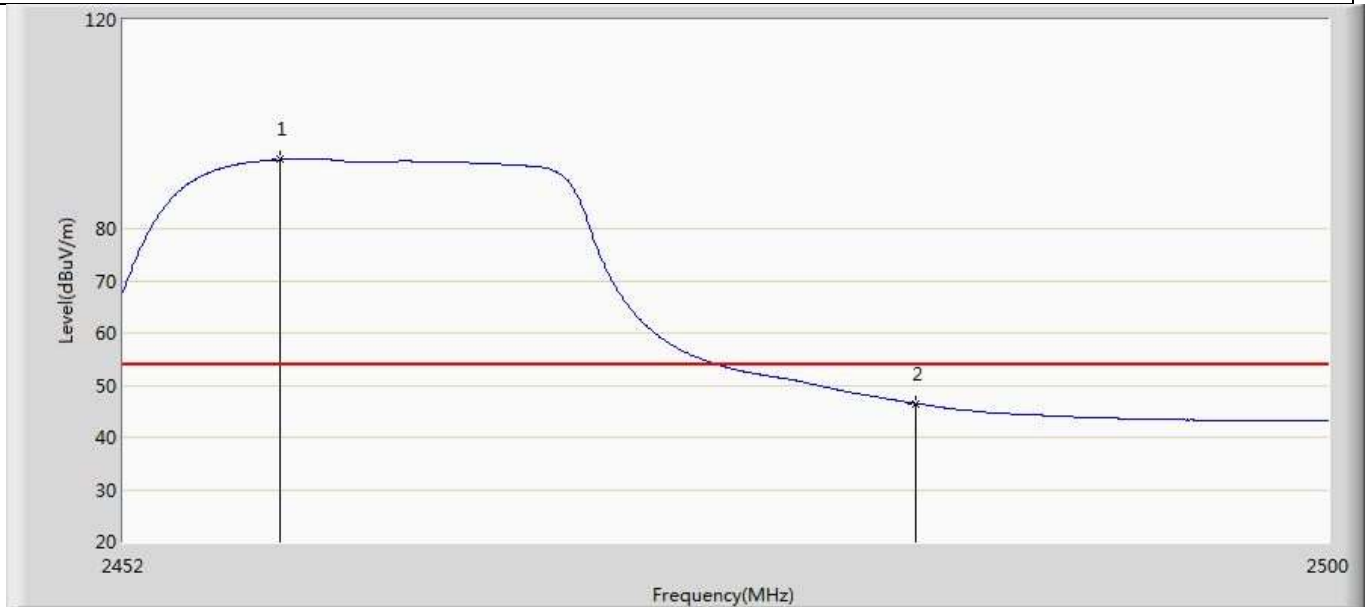
N o	Mar k	Frequency (MHz)	Measure Level (dBuV/m)	Reading Level (dBuV)	Over Limit (dB)	Limit (dBuV/m)	Factor (dB)	Type
1	*	2455.744	101.542	64.726	27.542	74.000	36.816	PK
2		2483.500	58.926	22.227	-15.074	74.000	36.699	PK
3		2484.064	59.169	22.491	-14.831	74.000	36.678	PK

Profile: 20A0399R	Page No.: 59
Engineer: Tongben	
Site: AC5	Time: 2020/11/08 - 13:49
Limit: FCC_Part15.209_RE(3m)	Margin: 0
Probe: Horn_3117_00167055(1-18GHz)	Polarity: Vertical
EUT: CLEDR309CD1	Power: AC 120V/60Hz
Note: Mode 2:Transmit at 2462MHz by 802.11g	



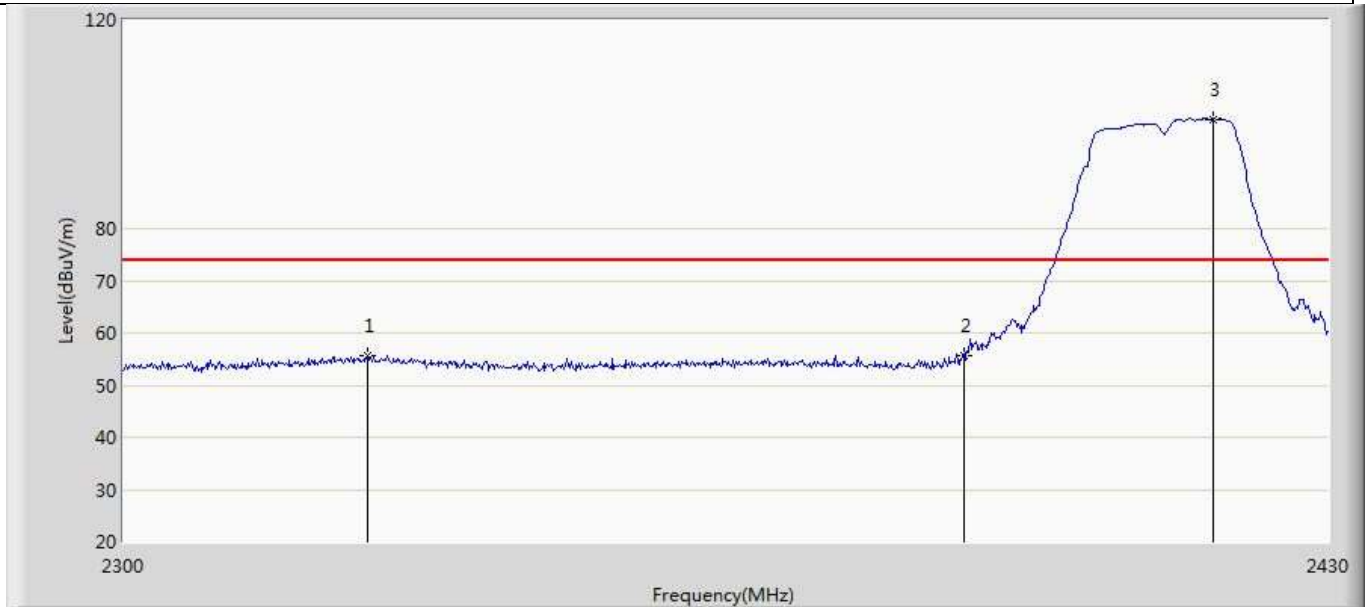
N o	Mar k	Frequency (MHz)	Measure Level (dBuV/m)	Reading Level (dBuV)	Over Limit (dB)	Limit (dBuV/m)	Factor (dB)	Type
1	*	2463.712	92.469	55.627	38.469	54.000	36.841	AV
2		2483.500	45.415	8.716	-8.585	54.000	36.699	AV

Profile: 20A0399R	Page No.: 62
Engineer: Tongben	
Site: AC5	Time: 2020/11/08 - 13:57
Limit: FCC_Part15.209_RE(3m)	Margin: 0
Probe: Horn_3117_00167055(1-18GHz)	Polarity: Horizontal
EUT: CLEDR309CD1	Power: AC 120V/60Hz
Note: Mode 2:Transmit at 2462MHz by 802.11g	



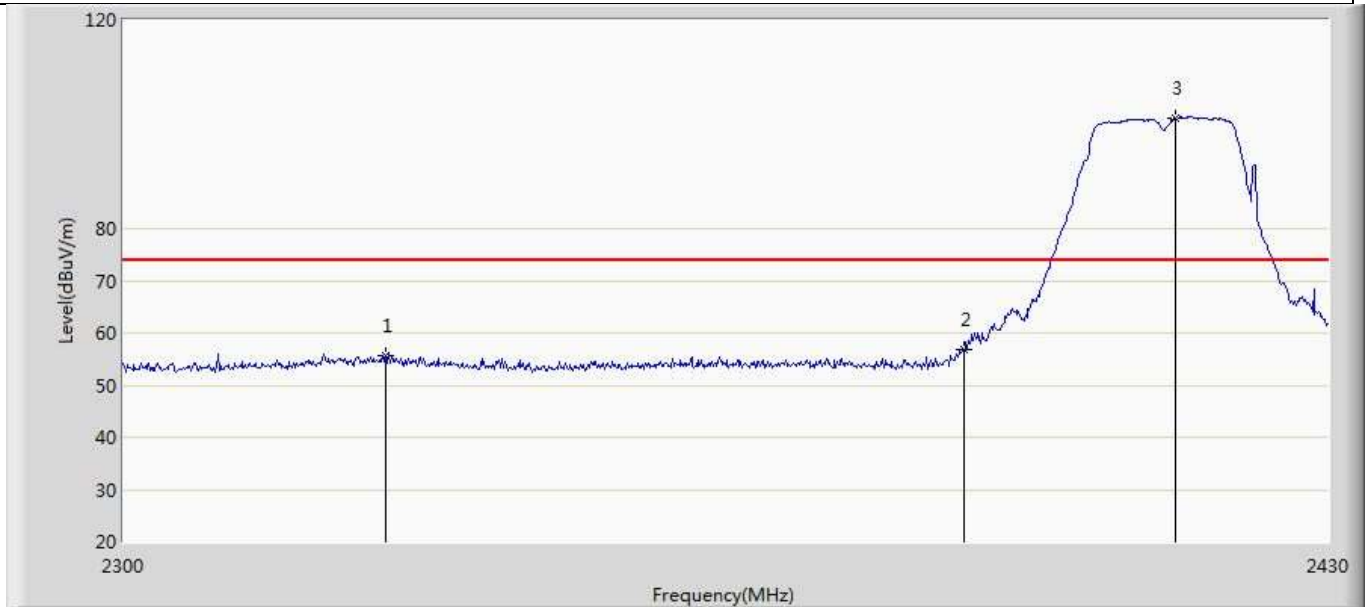
N o	Mar k	Frequency (MHz)	Measure Level (dBuV/m)	Reading Level (dBuV)	Over Limit (dB)	Limit (dBuV/m)	Factor (dB)	Type
1	*	2458.192	93.192	56.367	39.192	54.000	36.825	AV
2		2483.500	46.469	9.770	-7.531	54.000	36.699	AV

Profile: 20A0399R	Page No.: 64
Engineer: Tongben	
Site: AC5	Time: 2020/11/08 - 14:03
Limit: FCC_Part15.209_RE(3m)	Margin: 0
Probe: Horn_3117_00167055(1-18GHz)	Polarity: Horizontal
EUT: CLEDR309CD1	Power: AC 120V/60Hz
Note: Mode 2:Transmit at 2412MHz by 802.11g	



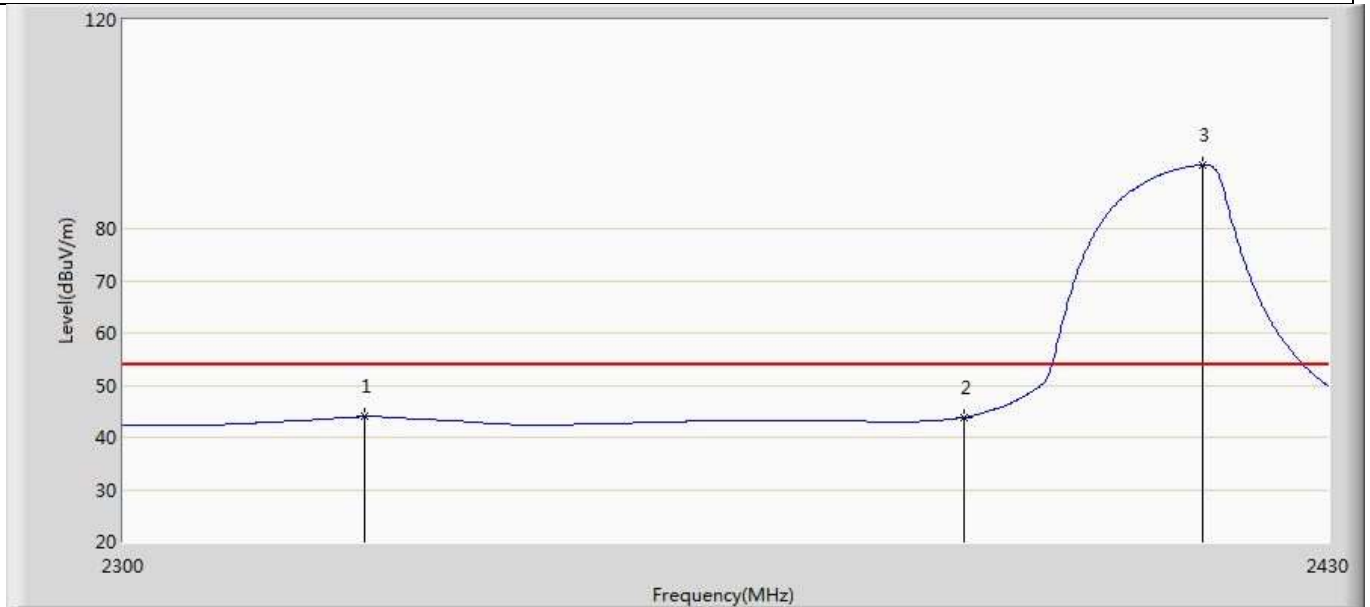
N o	Mar k	Frequency (MHz)	Measure Level (dBuV/m)	Reading Level (dBuV)	Over Limit (dB)	Limit (dBuV/m)	Factor (dB)	Type
1		2325.870	55.595	17.932	-18.405	74.000	37.663	PK
2		2390.000	55.662	19.918	-18.338	74.000	35.745	PK
3	*	2417.260	101.010	64.337	27.010	74.000	36.672	PK

Profile: 20A0399R	Page No.: 65
Engineer: Tongben	
Site: AC5	Time: 2020/11/08 - 14:05
Limit: FCC_Part15.209_RE(3m)	Margin: 0
Probe: Horn_3117_00167055(1-18GHz)	Polarity: Vertical
EUT: CLEDR309CD1	Power: AC 120V/60Hz
Note: Mode 2:Transmit at 2412MHz by 802.11g	



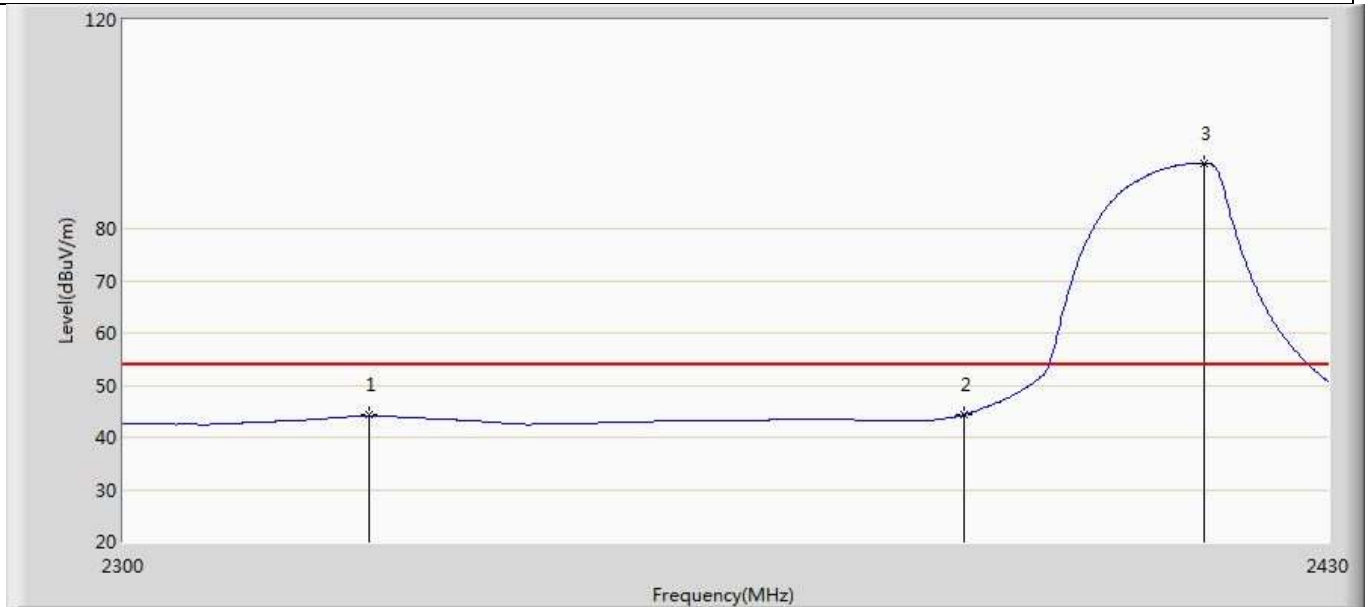
N o	Mar k	Frequency (MHz)	Measure Level (dBuV/m)	Reading Level (dBuV)	Over Limit (dB)	Limit (dBuV/m)	Factor (dB)	Type
1		2327.690	55.738	18.233	-18.262	74.000	37.505	PK
2		2390.000	56.905	21.161	-17.095	74.000	35.745	PK
3	*	2413.230	101.282	64.571	27.282	74.000	36.711	PK

Profile: 20A0399R	Page No.: 63
Engineer: Tongben	
Site: AC5	Time: 2020/11/08 - 13:59
Limit: FCC_Part15.209_RE(3m)	Margin: 0
Probe: Horn_3117_00167055(1-18GHz)	Polarity: Horizontal
EUT: CLEDR309CD1	Power: AC 120V/60Hz
Note: Mode 2:Transmit at 2412MHz by 802.11g	



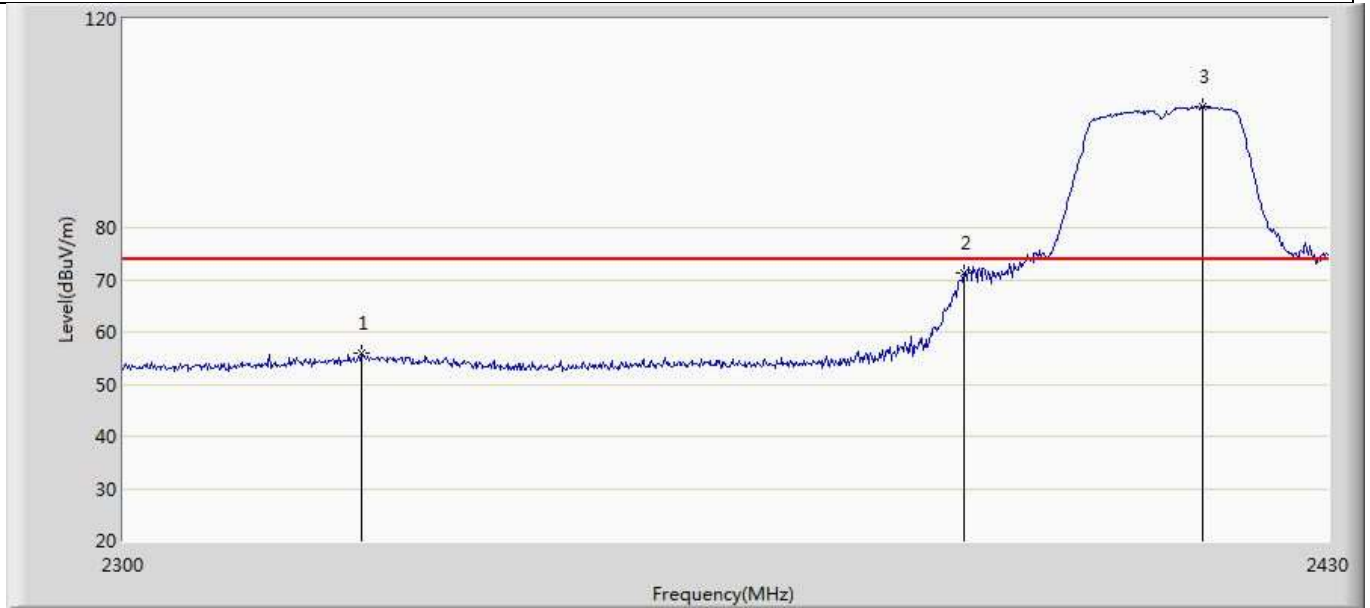
N o	Mar k	Frequency (MHz)	Measure Level (dBuV/m)	Reading Level (dBuV)	Over Limit (dB)	Limit (dBuV/m)	Factor (dB)	Type
1		2325.480	43.969	6.341	-10.031	54.000	37.628	AV
2		2390.000	43.808	8.064	-10.192	54.000	35.745	AV
3	*	2416.220	92.187	55.505	38.187	54.000	36.683	AV

Profile: 20A0399R	Page No.: 66
Engineer: Tongben	
Site: AC5	Time: 2020/11/08 - 14:08
Limit: FCC_Part15.209_RE(3m)	Margin: 0
Probe: Horn_3117_00167055(1-18GHz)	Polarity: Vertical
EUT: CLEDR309CD1	Power: AC 120V/60Hz
Note: Mode 2:Transmit at 2412MHz by 802.11g	



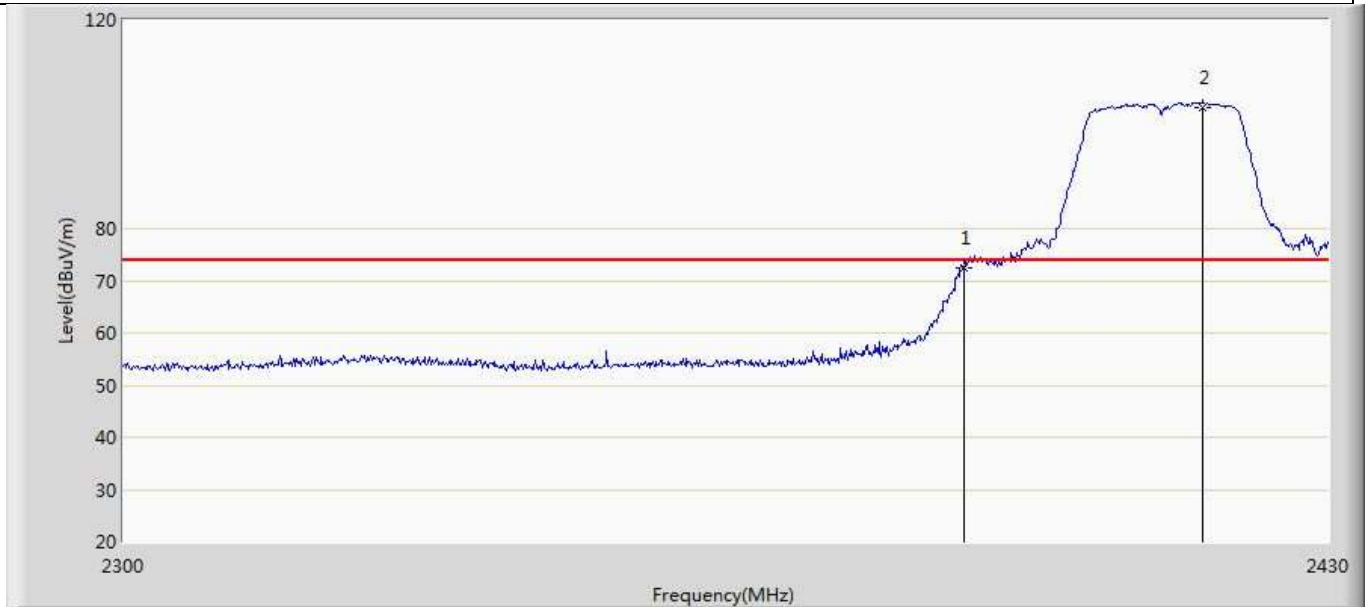
N o	Mar k	Frequency (MHz)	Measure Level (dBuV/m)	Reading Level (dBuV)	Over Limit (dB)	Limit (dBuV/m)	Factor (dB)	Type
1		2326.000	44.204	6.529	-9.796	54.000	37.675	AV
2		2390.000	44.348	8.604	-9.652	54.000	35.745	AV
3	*	2416.350	92.603	55.922	38.603	54.000	36.681	AV

Profile: 20A0399R	Page No.: 72
Engineer: Tongben	
Site: AC5	Time: 2020/11/08 - 14:41
Limit: FCC_Part15.209_RE(3m)	Margin: 0
Probe: Horn_3117_00167055(1-18GHz)	Polarity: Horizontal
EUT: CLEDR309CD1	Power: AC 120V/60Hz
Note: Mode 3:Transmit at 2412MHz by 802.11n(20MHz)	



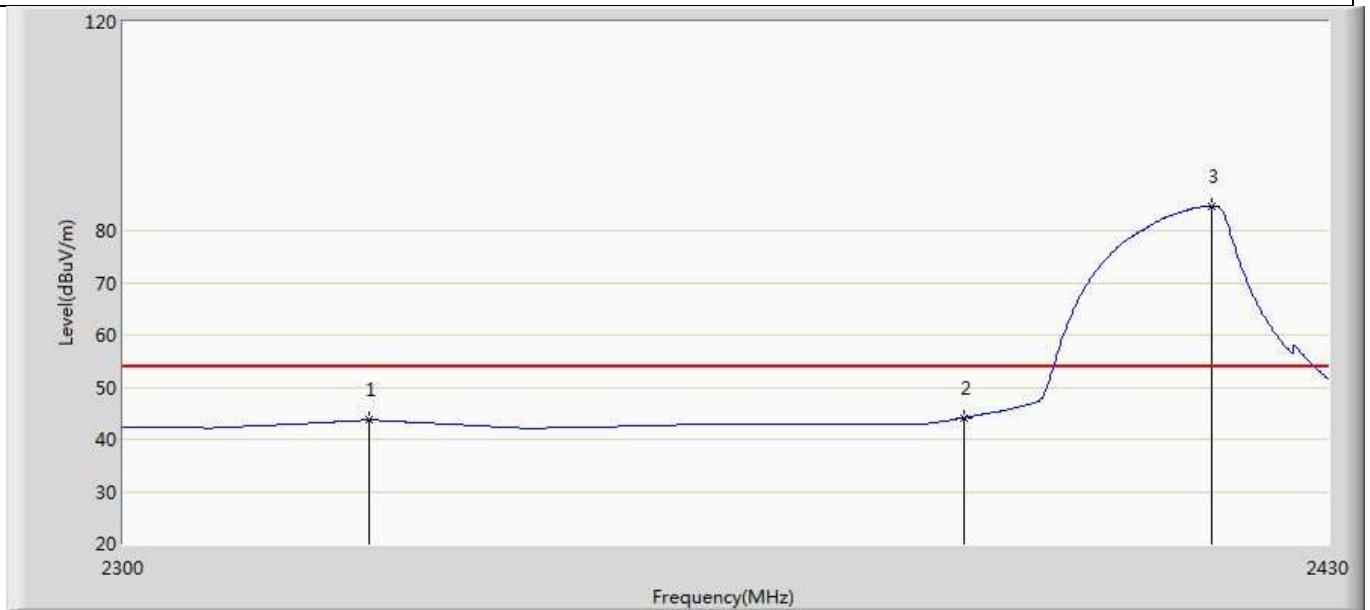
N o	Mar k	Frequency (MHz)	Measure Level (dBuV/m)	Reading Level (dBuV)	Over Limit (dB)	Limit (dBuV/m)	Factor (dB)	Type
1		2325.220	55.813	18.209	-18.187	74.000	37.604	PK
2		2390.000	71.422	35.678	-2.578	74.000	35.745	PK
3	*	2416.220	103.156	66.474	29.156	74.000	36.683	PK

Profile: 20A0399R	Page No.: 73
Engineer: Tongben	
Site: AC5	Time: 2020/11/08 - 14:43
Limit: FCC_Part15.209_RE(3m)	Margin: 0
Probe: Horn_3117_00167055(1-18GHz)	Polarity: Vertical
EUT: CLEDR309CD1	Power: AC 120V/60Hz
Note: Mode 3:Transmit at 2412MHz by 802.11n(20MHz)	



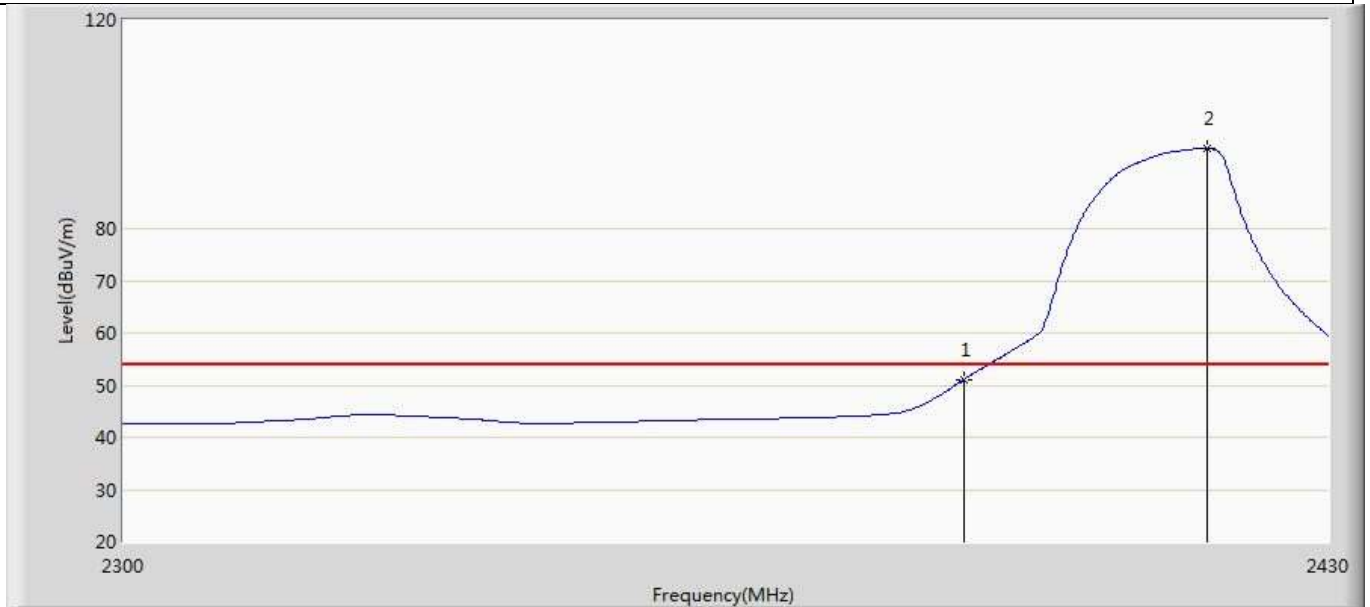
N o	Mar k	Frequency (MHz)	Measure Level (dBuV/m)	Reading Level (dBuV)	Over Limit (dB)	Limit (dBuV/m)	Factor (dB)	Type
1		2390.000	72.597	36.853	-1.403	74.000	35.745	PK
2	*	2416.220	103.156	66.474	29.156	74.000	36.683	PK

Profile: 20A0399R	Page No.: 71
Engineer: Tongben	
Site: AC5	Time: 2020/11/08 - 14:39
Limit: FCC_Part15.209_RE(3m)	Margin: 0
Probe: Horn_3117_00167055(1-18GHz)	Polarity: Horizontal
EUT: CLEDR309CD1	Power: AC 120V/60Hz
Note: Mode 3:Transmit at 2412MHz by 802.11n(20MHz)	



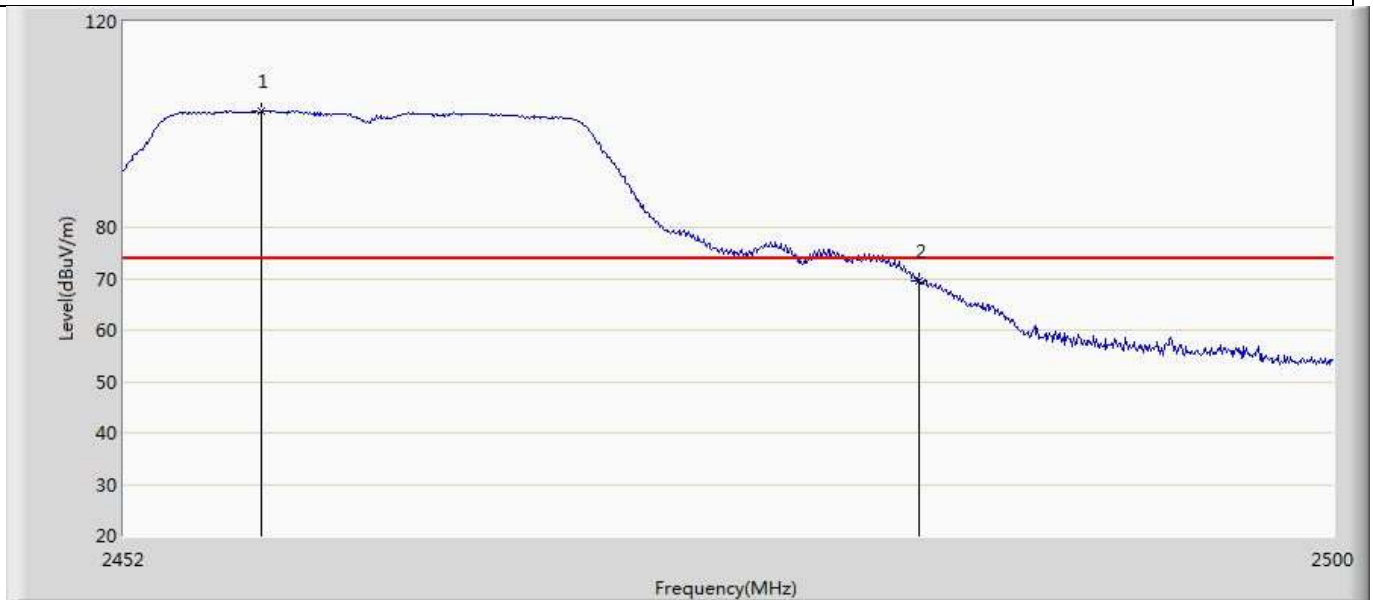
N o	Mar k	Frequency (MHz)	Measure Level (dBuV/m)	Reading Level (dBuV)	Over Limit (dB)	Limit (dBuV/m)	Factor (dB)	Type
1		2326.000	43.707	6.032	-10.293	54.000	37.675	AV
2		2390.000	44.159	8.415	-9.841	54.000	35.745	AV
3	*	2417.130	84.757	48.083	30.757	54.000	36.673	AV

Profile: 20A0399R	Page No.: 74
Engineer: Tongben	
Site: AC5	Time: 2020/11/08 - 14:47
Limit: FCC_Part15.209_RE(3m)	Margin: 0
Probe: Horn_3117_00167055(1-18GHz)	Polarity: Vertical
EUT: CLEDR309CD1	Power: AC 120V/60Hz
Note: Mode 3:Transmit at 2412MHz by 802.11n(20MHz)	



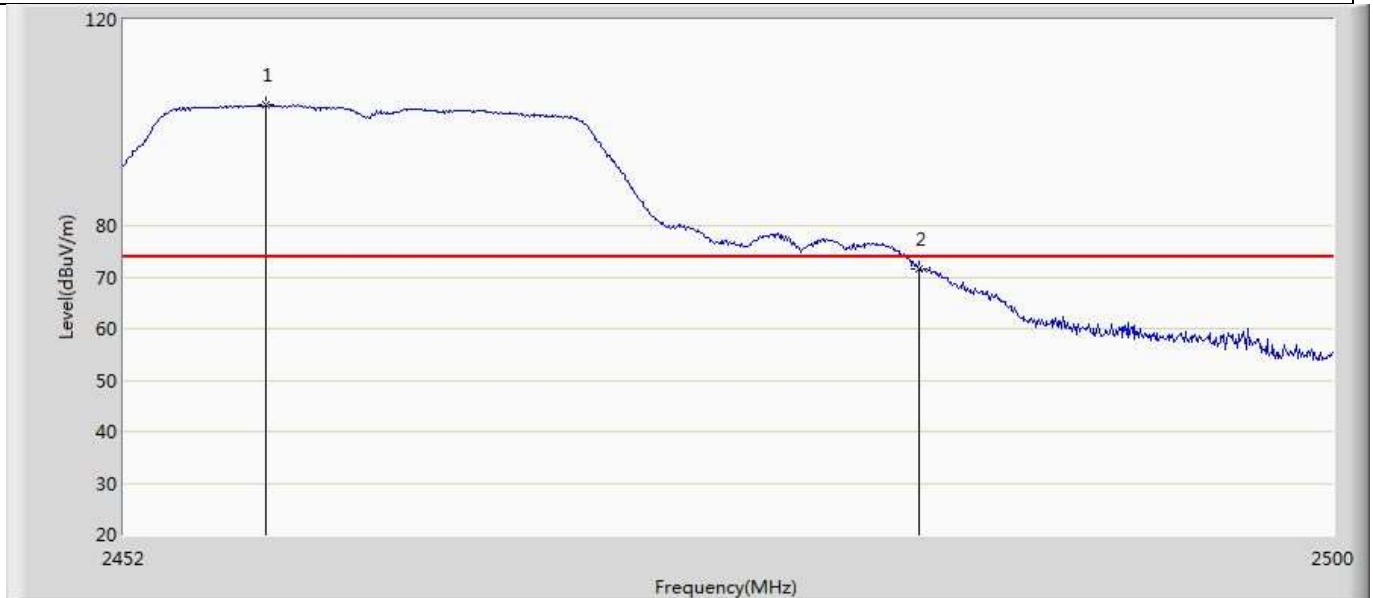
N o	Mar k	Frequency (MHz)	Measure Level (dBuV/m)	Reading Level (dBuV)	Over Limit (dB)	Limit (dBuV/m)	Factor (dB)	Type
1		2390.000	51.130	15.386	-2.870	54.000	35.745	AV
2	*	2416.610	95.253	58.574	41.253	54.000	36.679	AV

Profile: 20A0399R	Page No.: 68
Engineer: Tongben	
Site: AC5	Time: 2020/11/08 - 14:30
Limit: FCC_Part15.209_RE(3m)	Margin: 0
Probe: Horn_3117_00167055(1-18GHz)	Polarity: Vertical
EUT: CLEDR309CD1	Power: AC 120V/60Hz
Note: Mode 3:Transmit at 2462MHz by 802.11n(20MHz)	



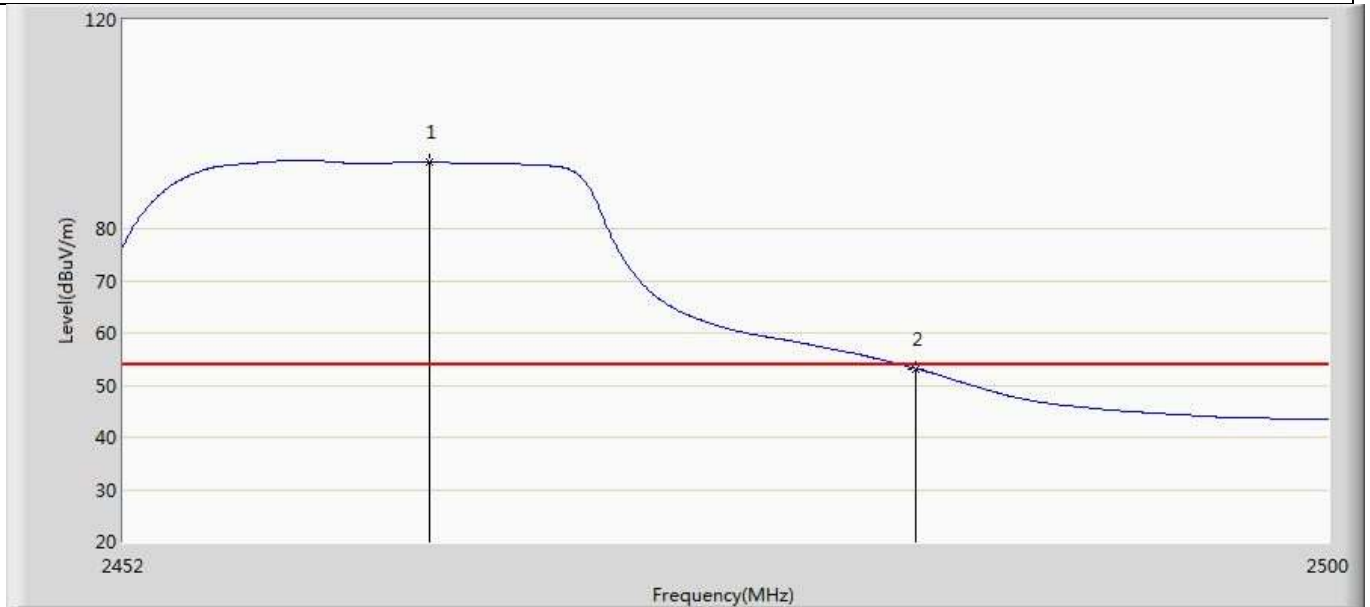
N o	Mar k	Frequency (MHz)	Measure Level (dBuV/m)	Reading Level (dBuV)	Over Limit (dB)	Limit (dBuV/m)	Factor (dB)	Type
1	*	2457.424	102.526	65.704	28.526	74.000	36.822	PK
2		2483.500	69.588	32.889	-4.412	74.000	36.699	PK

Profile: 20A0399R	Page No.: 69
Engineer: Tongben	
Site: AC5	Time: 2020/11/08 - 14:32
Limit: FCC_Part15.209_RE(3m)	Margin: 0
Probe: Horn_3117_00167055(1-18GHz)	Polarity: Horizontal
EUT: CLEDR309CD1	Power: AC 120V/60Hz
Note: Mode 3:Transmit at 2462MHz by 802.11n(20MHz)	



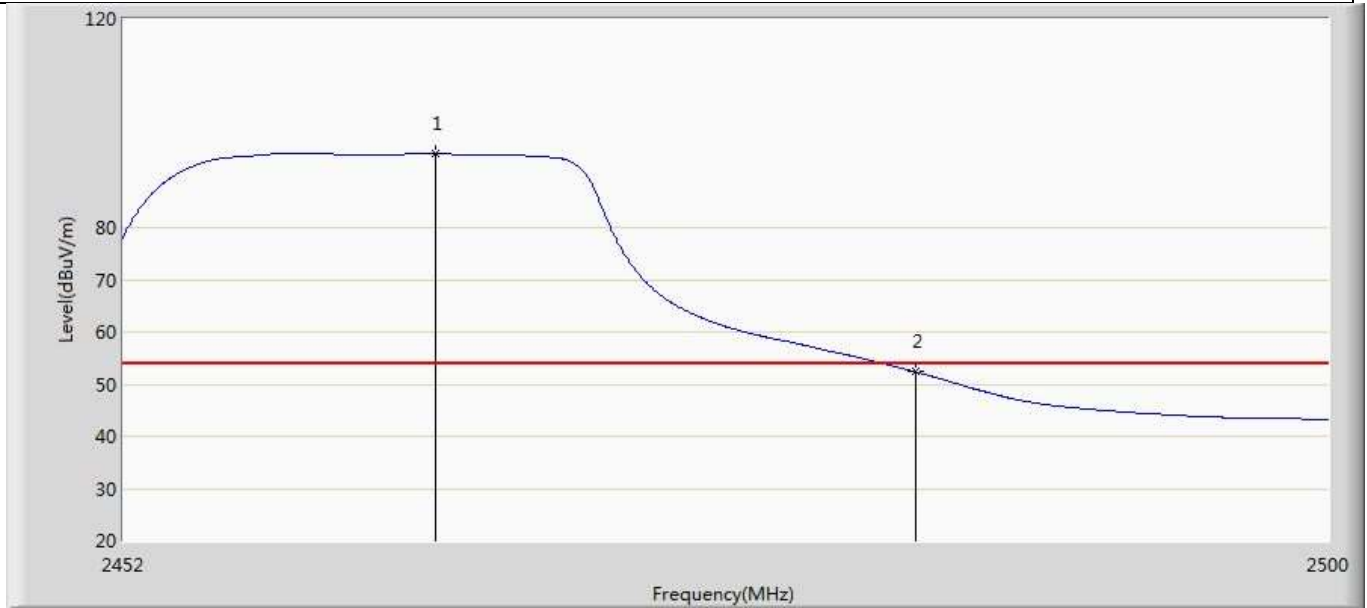
N o	Mar k	Frequency (MHz)	Measure Level (dBuV/m)	Reading Level (dBuV)	Over Limit (dB)	Limit (dBuV/m)	Factor (dB)	Type
1	*	2457.616	103.391	66.568	29.391	74.000	36.823	PK
2		2483.500	71.548	34.849	-2.452	74.000	36.699	PK

Profile: 20A0399R	Page No.: 70
Engineer: Tongben	
Site: AC5	Time: 2020/11/08 - 14:35
Limit: FCC_Part15.209_RE(3m)	Margin: 0
Probe: Horn_3117_00167055(1-18GHz)	Polarity: Horizontal
EUT: CLEDR309CD1	Power: AC 120V/60Hz
Note: Mode 3:Transmit at 2462MHz by 802.11n(20MHz)	



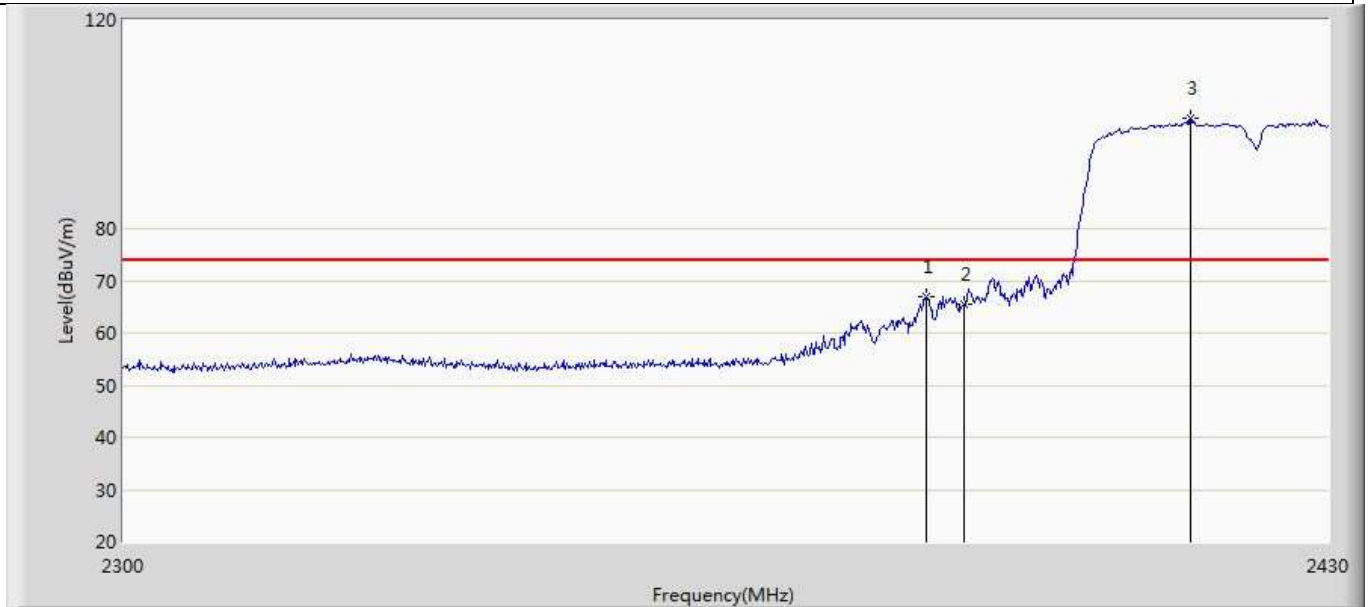
N o	Mar k	Frequency (MHz)	Measure Level (dBuV/m)	Reading Level (dBuV)	Over Limit (dB)	Limit (dBuV/m)	Factor (dB)	Type
1	*	2464.144	92.826	55.984	38.826	54.000	36.842	AV
2		2483.500	53.158	16.459	-0.842	54.000	36.699	AV

Profile: 20A0399R	Page No.: 67
Engineer: Tongben	
Site: AC5	Time: 2020/11/08 - 14:20
Limit: FCC_Part15.209_RE(3m)	Margin: 0
Probe: Horn_3117_00167055(1-18GHz)	Polarity: Vertical
EUT: CLEDR309CD1	Power: AC 120V/60Hz
Note: Mode 3:Transmit at 2462MHz by 802.11n(20MHz)	



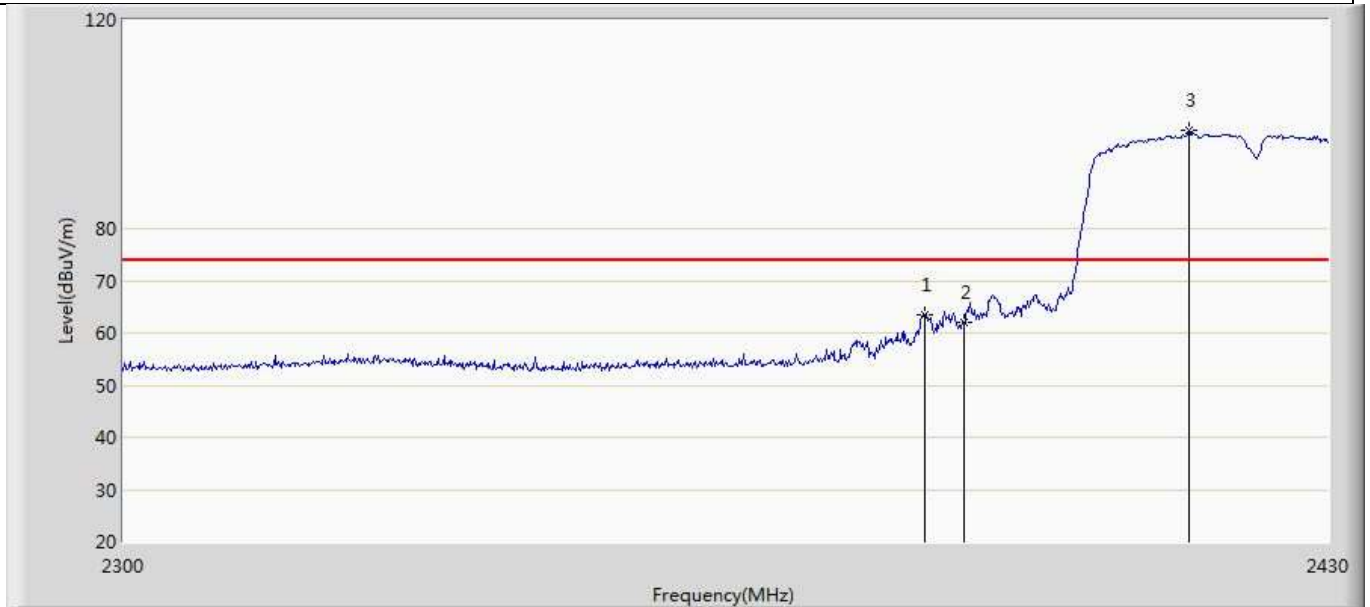
N o	Mar k	Frequency (MHz)	Measure Level (dBuV/m)	Reading Level (dBuV)	Over Limit (dB)	Limit (dBuV/m)	Factor (dB)	Type
1	*	2464.384	94.228	57.385	40.228	54.000	36.843	AV
2		2483.500	52.319	15.620	-1.681	54.000	36.699	AV

Profile: 20A0399R	Page No.: 80
Engineer: Tongben	
Site: AC5	Time: 2020/11/08 - 15:08
Limit: FCC_Part15.209_RE(3m)	Margin: 0
Probe: Horn_3117_00167055(1-18GHz)	Polarity: Vertical
EUT: CLEDR309CD1	Power: AC 120V/60Hz
Note: Mode 4:Transmit at 2422MHz by 802.11n(40MHz)	



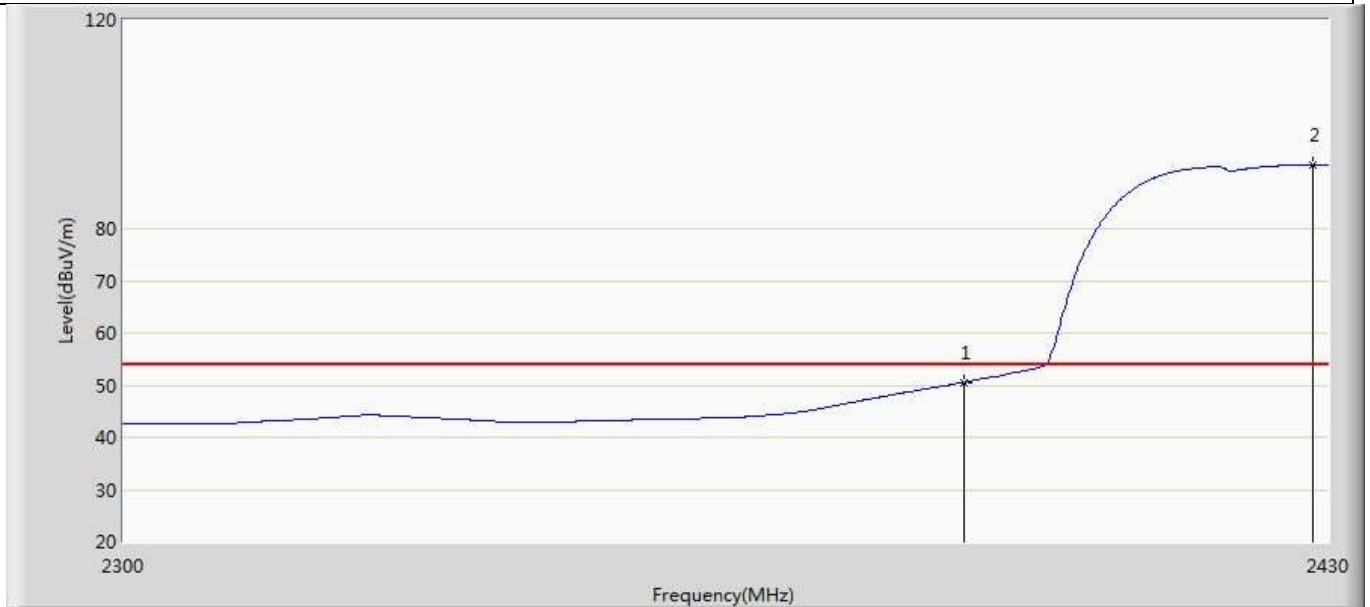
N o	Mar k	Frequency (MHz)	Measure Level (dBuV/m)	Reading Level (dBuV)	Over Limit (dB)	Limit (dBuV/m)	Factor (dB)	Type
1		2385.800	66.957	30.932	-7.043	74.000	36.025	PK
2		2390.000	65.377	29.633	-8.623	74.000	35.745	PK
3	*	2414.790	101.108	64.412	27.108	74.000	36.696	PK

Profile: 20A0399R	Page No.: 81
Engineer: Tongben	
Site: AC5	Time: 2020/11/08 - 15:10
Limit: FCC_Part15.209_RE(3m)	Margin: 0
Probe: Horn_3117_00167055(1-18GHz)	Polarity: Horizontal
EUT: CLEDR309CD1	Power: AC 120V/60Hz
Note: Mode 4:Transmit at 2422MHz by 802.11n(40MHz)	



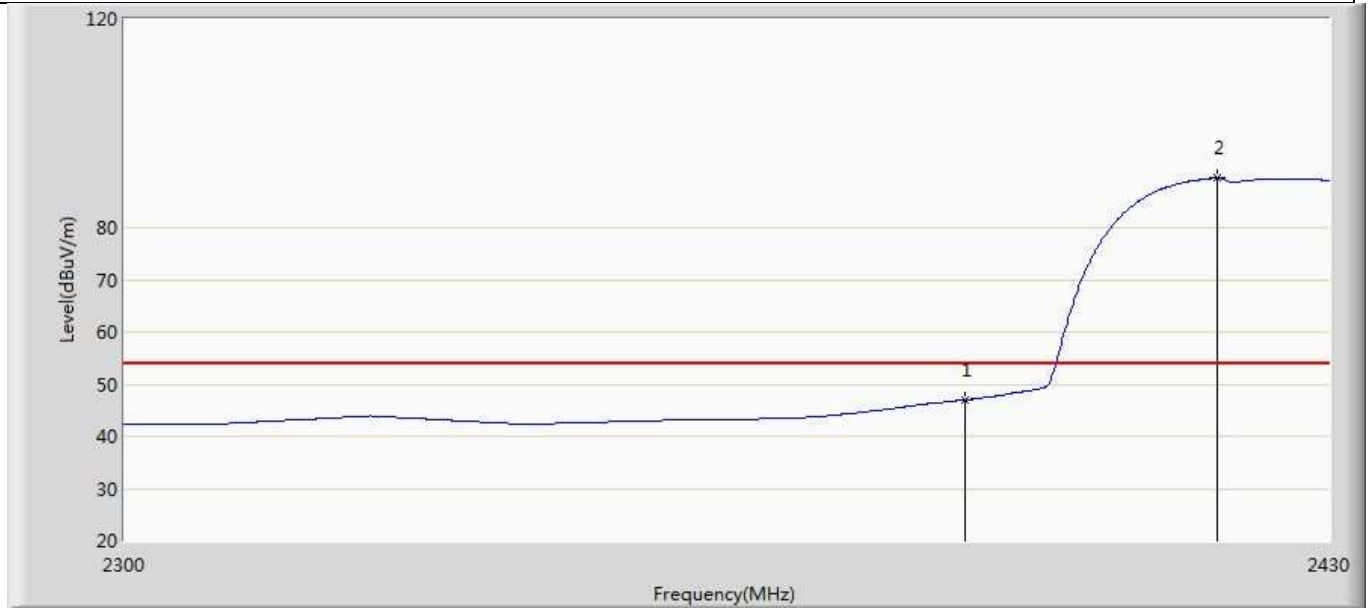
N o	Mar k	Frequency (MHz)	Measure Level (dBuV/m)	Reading Level (dBuV)	Over Limit (dB)	Limit (dBuV/m)	Factor (dB)	Type
1		2385.670	63.597	27.563	-10.403	74.000	36.033	PK
2		2390.000	61.904	26.160	-12.096	74.000	35.745	PK
3	*	2414.660	98.909	62.212	24.909	74.000	36.697	PK

Profile: 20A0399R	Page No.: 79
Engineer: Tongben	
Site: AC5	Time: 2020/11/08 - 15:03
Limit: FCC_Part15.209_RE(3m)	Margin: 0
Probe: Horn_3117_00167055(1-18GHz)	Polarity: Vertical
EUT: CLEDR309CD1	Power: AC 120V/60Hz
Note: Mode 4:Transmit at 2422MHz by 802.11n(40MHz)	



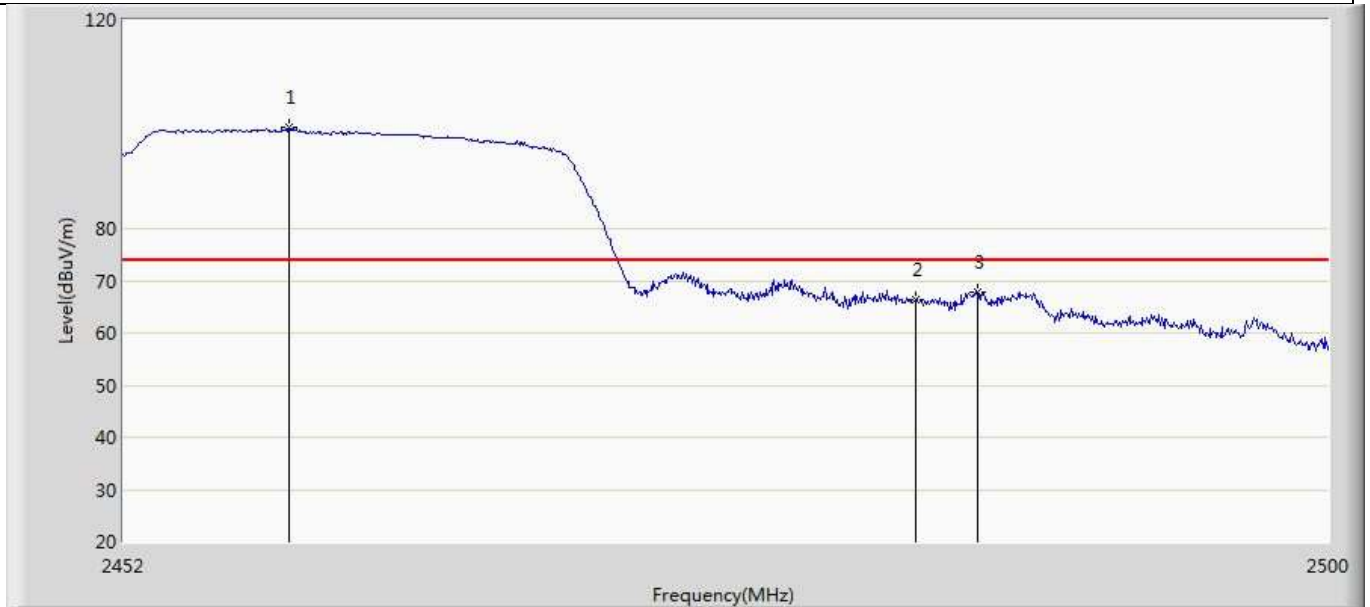
N o	Mar k	Frequency (MHz)	Measure Level (dBuV/m)	Reading Level (dBuV)	Over Limit (dB)	Limit (dBuV/m)	Factor (dB)	Type
1		2390.000	50.551	14.807	-3.449	54.000	35.745	AV
2	*	2428.310	92.243	55.669	38.243	54.000	36.574	AV

Profile: 20A0399R	Page No.: 82
Engineer: Tongben	
Site: AC5	Time: 2020/11/08 - 15:12
Limit: FCC_Part15.209_RE(3m)	Margin: 0
Probe: Horn_3117_00167055(1-18GHz)	Polarity: Horizontal
EUT: CLEDR309CD1	Power: AC 120V/60Hz
Note: Mode 4:Transmit at 2422MHz by 802.11n(40MHz)	



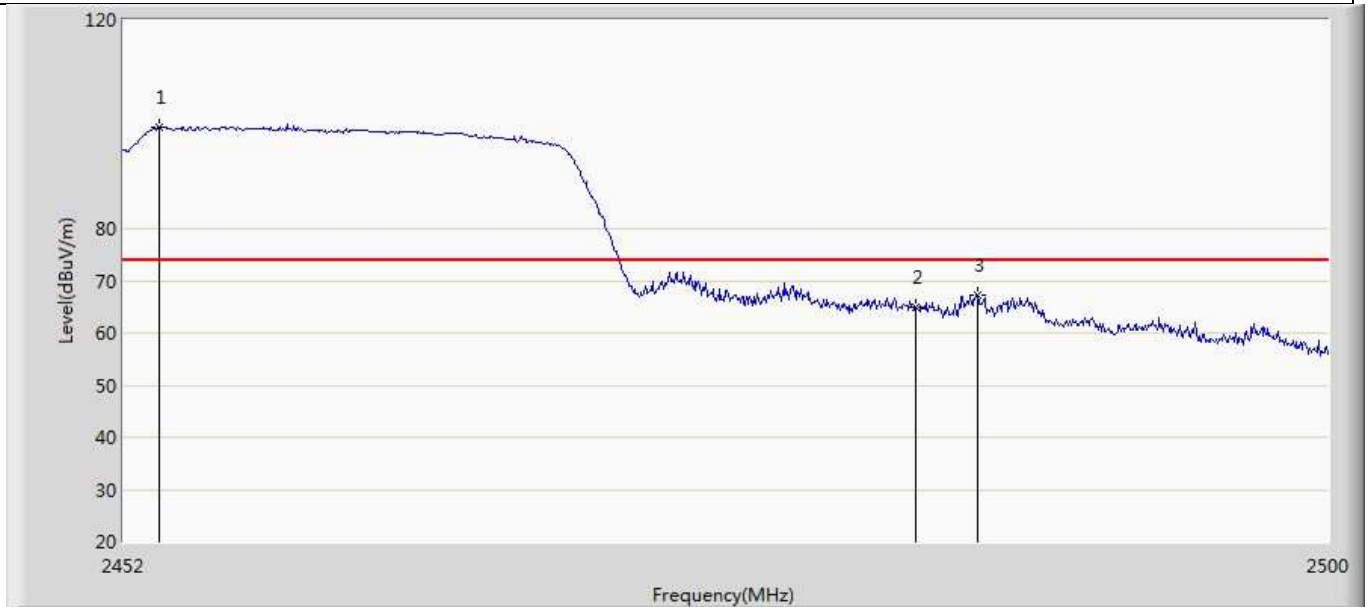
N o	Mar k	Frequency (MHz)	Measure Level (dBuV/m)	Reading Level (dBuV)	Over Limit (dB)	Limit (dBuV/m)	Factor (dB)	Type
1		2390.000	47.020	11.276	-6.980	54.000	35.745	AV
2	*	2417.650	89.474	52.805	35.474	54.000	36.669	AV

Profile: 20A0399R	Page No.: 76
Engineer: Tongben	
Site: AC5	Time: 2020/11/08 - 14:55
Limit: FCC_Part15.209_RE(3m)	Margin: 0
Probe: Horn_3117_00167055(1-18GHz)	Polarity: Horizontal
EUT: CLEDR309CD1	Power: AC 120V/60Hz
Note: Mode 4:Transmit at 2452MHz by 802.11n(40MHz)	



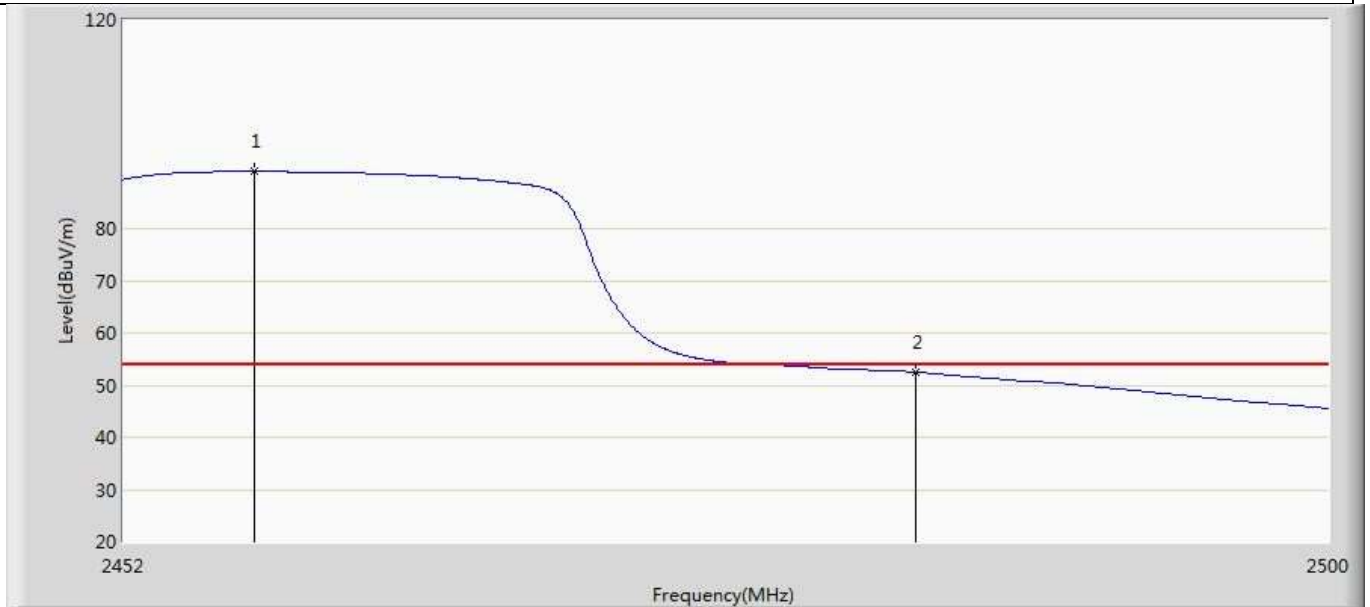
N o	Mar k	Frequency (MHz)	Measure Level (dBuV/m)	Reading Level (dBuV)	Over Limit (dB)	Limit (dBuV/m)	Factor (dB)	Type
1	*	2458.576	99.548	62.722	25.548	74.000	36.826	PK
2		2483.500	66.315	29.616	-7.685	74.000	36.699	PK
3		2485.936	67.960	31.351	-6.040	74.000	36.609	PK

Profile: 20A0399R	Page No.: 77
Engineer: Tongben	
Site: AC5	Time: 2020/11/08 - 14:58
Limit: FCC_Part15.209_RE(3m)	Margin: 0
Probe: Horn_3117_00167055(1-18GHz)	Polarity: Vertical
EUT: CLEDR309CD1	Power: AC 120V/60Hz
Note: Mode 4:Transmit at 2452MHz by 802.11n(40MHz)	



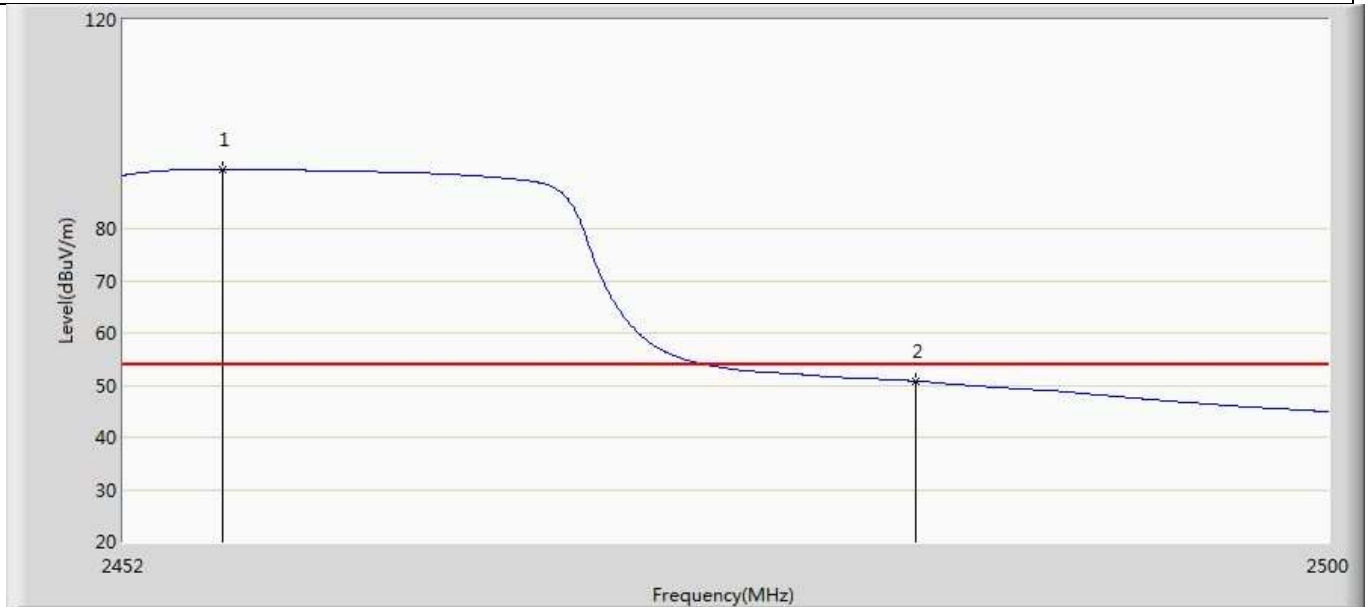
N o	Mar k	Frequency (MHz)	Measure Level (dBuV/m)	Reading Level (dBuV)	Over Limit (dB)	Limit (dBuV/m)	Factor (dB)	Type
1	*	2453.440	99.367	62.559	25.367	74.000	36.808	PK
2		2483.500	64.947	28.248	-9.053	74.000	36.699	PK
3		2485.936	67.205	30.596	-6.795	74.000	36.609	PK

Profile: 20A0399R	Page No.: 75
Engineer: Tongben	
Site: AC5	Time: 2020/11/08 - 14:49
Limit: FCC_Part15.209_RE(3m)	Margin: 0
Probe: Horn_3117_00167055(1-18GHz)	Polarity: Horizontal
EUT: CLEDR309CD1	Power: AC 120V/60Hz
Note: Mode 4:Transmit at 2452MHz by 802.11n(40MHz)	



N o	Mar k	Frequency (MHz)	Measure Level (dBuV/m)	Reading Level (dBuV)	Over Limit (dB)	Limit (dBuV/m)	Factor (dB)	Type
1	*	2457.184	90.935	54.114	36.935	54.000	36.821	AV
2		2483.500	52.496	15.797	-1.504	54.000	36.699	AV

Profile: 20A0399R	Page No.: 78
Engineer: Tongben	
Site: AC5	Time: 2020/11/08 - 15:00
Limit: FCC_Part15.209_RE(3m)	Margin: 0
Probe: Horn_3117_00167055(1-18GHz)	Polarity: Vertical
EUT: CLEDR309CD1	Power: AC 120V/60Hz
Note: Mode 4:Transmit at 2452MHz by 802.11n(40MHz)	



N o	Mar k	Frequency (MHz)	Measure Level (dBuV/m)	Reading Level (dBuV)	Over Limit (dB)	Limit (dBuV/m)	Factor (dB)	Type
1	*	2455.936	91.369	54.552	37.369	54.000	36.816	AV
2		2483.500	50.785	14.086	-3.215	54.000	36.699	AV

Remark	1. " * ", means this data is the worst emission level. 2. Measurement Level = Reading Level + Factor(Probe+Cable-Amp).
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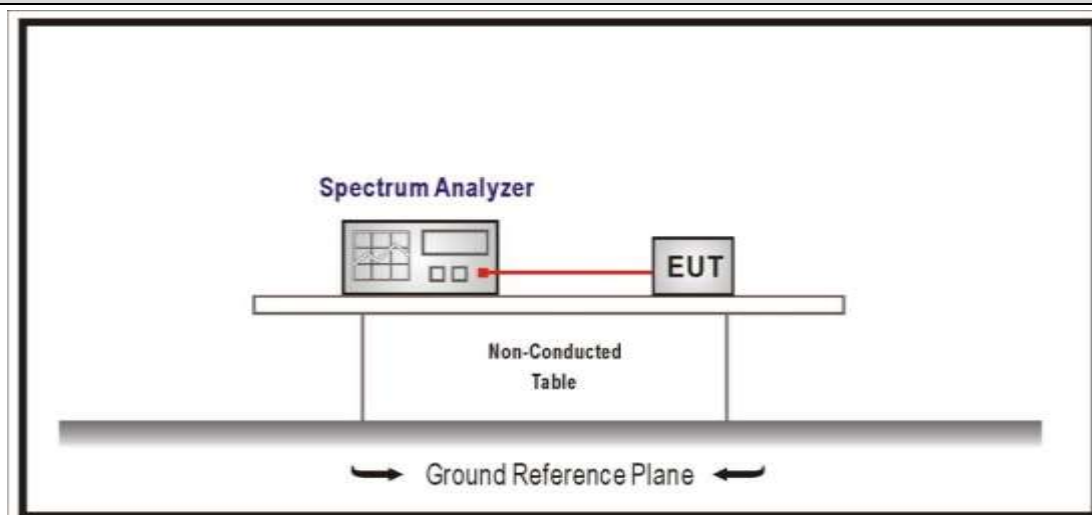
4.5 DTS Bandwidth**VERDICT: PASS****4.5.1 Limit**

Standard	FCC Part 15 Subpart C Paragraph 15.247 (a)(2)
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Systems using digital modulation techniques operate in the 2400-2483.5 MHz. The minimum 6 dB bandwidth shall be at least 500 kHz

Standard	ANSI C63.10 Paragraph 6.7
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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 be within the required frequency range.

4.5.2 Test Setup**4.5.3 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

4.5.4 Test Data

Mode	CH.	Test Freq. (MHz)	6dB Occupied Bandwidth (MHz)	Limit (kHz)	Result
1	1	2412	10.05	≥500	Pass
	6	2437	10.07	≥500	Pass
	11	2462	10.07	≥500	Pass
2	1	2412	16.53	≥500	Pass
	6	2437	16.53	≥500	Pass
	11	2462	16.53	≥500	Pass
3	1	2412	17.73	≥500	Pass
	6	2437	17.73	≥500	Pass
	11	2462	17.73	≥500	Pass
4	3	2422	36.41	≥500	Pass
	6	2437	36.40	≥500	Pass
	9	2452	36.41	≥500	Pass

Note : The worst case of Occupied Bandwidth as below in next page:

6dB Occupied Bandwidth

Mode 1 CH01 (2412MHz)



Mode	CH.	Test Freq. (MHz)	99% Occupied Bandwidth (MHz)	Limit	Result
1	1	2412	14.936	Within frequency range	Pass
	6	2437	14.887	Within frequency range	Pass
	11	2462	14.891	Within frequency range	Pass
2	1	2412	16.605	Within frequency range	Pass
	6	2437	16.601	Within frequency range	Pass
	11	2462	16.610	Within frequency range	Pass
3	1	2412	17.750	Within frequency range	Pass
	6	2437	17.751	Within frequency range	Pass
	11	2462	17.760	Within frequency range	Pass
4	3	2422	35.724	Within frequency range	Pass
	6	2437	35.737	Within frequency range	Pass
	9	2452	35.740	Within frequency range	Pass

Note : The worst case of Occupied Bandwidth as below in next page:

99% Occupied Bandwidth

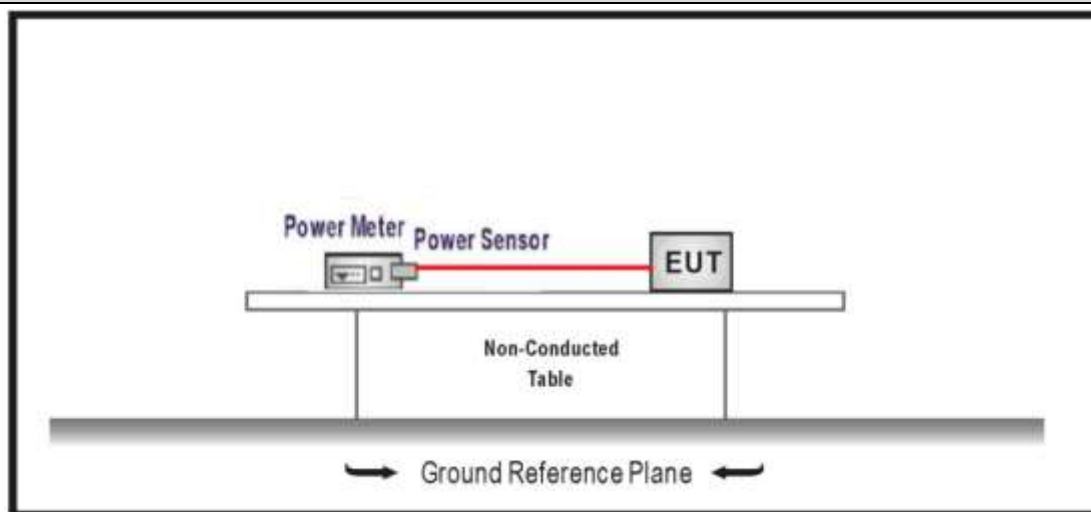
Mode 3 CH01 (2412MHz)



4.6 Fundamental emission output power**VERDICT: PASS****4.6.1 Limit**

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

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

4.6.2 Test Setup

4.6.3 Test Procedure

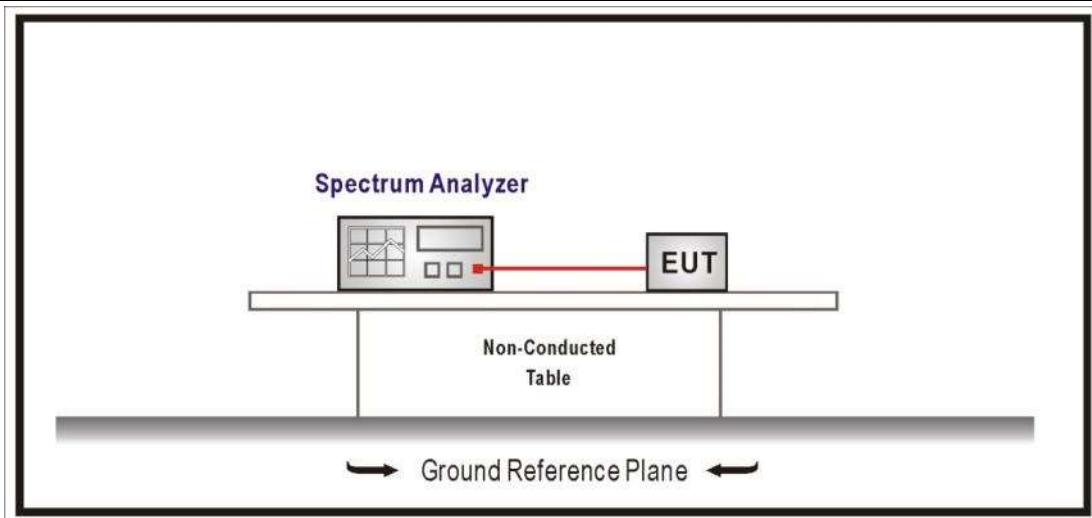
	References Rule			Chapter	Description		
☒	ANSI C63.10			11.9	Fundamental emission output power		
	☐	ANSI C63.10			11.9.1	Maximum peak conducted output power	
		☐	ANSI C63.10	11.9.1.1	RBW ≥ DTS bandwidth		
		☐	ANSI C63.10	11.9.1.2	Integrated band power method		
		☐	ANSI C63.10	11.9.1.3	PKPM1 Peak power 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	

4.6.4 Test Data

Mode	Channel	Test Frequency (MHz)	Power Output (dBm)	Conducted Limit (dBm)	Result
1	1	2412	22.62	30.00	Pass
	6	2437	22.70	30.00	Pass
	11	2462	22.63	30.00	Pass
2	1	2412	22.47	30.00	Pass
	6	2437	22.69	30.00	Pass
	11	2462	22.85	30.00	Pass
3	1	2412	24.53	30.00	Pass
	6	2437	24.41	30.00	Pass
	11	2462	24.44	30.00	Pass
4	3	2422	23.61	30.00	Pass
	6	2437	23.66	30.00	Pass
	9	2452	23.63	30.00	Pass

4.7 Power Density**VERDICT: PASS****4.7.1 Limit:**

Standard	FCC Part 15 Subpart C Paragraph 15.247 (e)
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Power Spectral Density $\leq 8\text{dBm}/3\text{kHz}$ **4.7.2 Test Setup****4.7.3 Test Procedure**

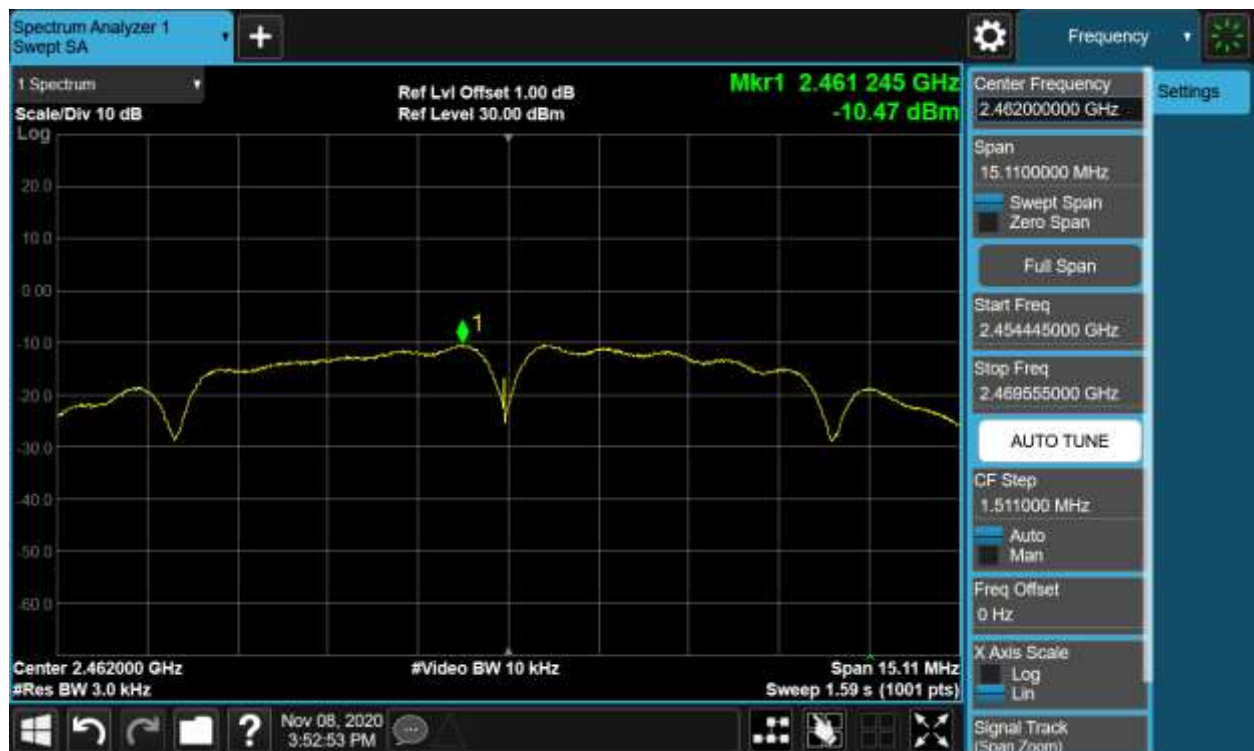
	References Rule	Chapter	Description
☒	ANSI C63.10	11.10	Maximum power spectral density level in the fundamental emission
☐	ANSI C63.10	11.10.2	Method PKPSD (peak PSD)
☒	ANSI C63.10	11.10.3	Method AVGPSD-1(Duty cycle $\geq 98\%$)
☐	ANSI C63.10	11.10.4	Method AVGPSD-1A(Duty cycle $\geq 98\%$)
☒	ANSI C63.10	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

4.7.4 Test Data

Mode	Channel	Test Frequency (MHz)	Measurement PSD (dBm/3kHz)	Limit (dBm/3kHz)	Result
1	1	2412	-11.20	≤8	Pass
	6	2437	-10.56	≤8	Pass
	11	2462	-10.47	≤8	Pass
2	1	2412	-14.18	≤8	Pass
	6	2437	-13.93	≤8	Pass
	11	2462	-13.72	≤8	Pass
3	1	2412	-11.48	≤8	Pass
	6	2437	-11.45	≤8	Pass
	11	2462	-11.18	≤8	Pass
4	3	2422	-12.67	≤8	Pass
	6	2437	-14.25	≤8	Pass
	9	2452	-14.92	≤8	Pass

Remark 1: The worst case of PSD as below:

Mode 1 / CH11 / 2462MHz



4.8 Antenna Requirement**VERDICT: PASS****4.8.1 Limit:**

Standard	FCC Part 15 Subpart C Paragraph 15.203
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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.

4.8.2 Antenna Connector Construction:

- | | |
|-------------------------------------|--|
| ☒ | The use of a permanently attached antenna |
| ☐ | The antenna use of a unique coupling to the intentional radiator |
| ☐ | The use of a nonstandard antenna jack or electrical connector |

Please refer to the attached document "Internal Photograph" to show the antenna connector.



4.9 Test setup photo and EUT Photo	VERDICT: PASS
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Remark: The test setup photo and EUT Photo please see appendix.

_____ The End _____