Test Report

FCC Part15 Subpart C

Product Name	:	CLOUDGATE BASIC WIRELESS WI-FI - 1 RS485
Model No.	:	GTW***MWT0
FCC ID	:	2AJCX-CGMWW

Applicant	:	CAREL INDUSTRIES S.p.A.
Address	:	via dell'Industria, 11 - 35020 Brugine, PD - ITALY

Date of Receipt	:	Jun. 01, 2020
Test Date	:	Jun. 02, 2020 ~ Jul. 08, 2020
Issued Date	:	Aug. 31, 2020
Report No.	:	2060045R-RF-US-P06V03
Report Version	:	V1.0

Test Report Certification

Issued Date: Aug. 31, 2020
Report No. : 2060045R-RF-US-P06V03

Product Name	:	CLOUDGATE BASIC WIRELESS WI-FI - 1 RS485
Applicant	:	CAREL INDUSTRIES S.p.A
Address	:	via dell'Industria, 11 - 35020 Brugine, PD - ITALY
Manufacturer	:	Jinan USR IOT Technology Limited
Address	:	Room 201,301 of East Building,No.889 Chonghua Road,Jinan Free Trade Area,Shandong,250101,China
Model No.	:	GTW***MWT0
Trademark	:	CAREL
FCC ID	:	2AJCX-CGMWW
EUT Voltage	:	9~36 Vdc
Applicable Standard	:	FCC CFR Title 47 Part 15 Subpart C ANSI C63.10:2013; KDB 558074 D01v05r02
Test Result	:	Complied
Performed Location	:	DEKRA Testing and Certification (Suzhou) Co., Ltd. No.99 Hongye Rd., Suzhou Industrial Park, Suzhou, 215006, Jiangsu, China TEL: +86-512-6251-5088 / FAX: +86-512-6251-5098 FCC Designation Number: CN1199

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(Supervisor: Jack Zhang)

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History of This Test Report

REPORT NO.	VERSION	DESCRIPTION	ISSUED DATE
2060045R-RF-US-P06V03	V1.0	Initial Issued Report	Aug. 31, 2020

1. General Information

1.1. EUT Description

Product Name	CLOUDGATE BASIC WIRELESS WI-FI - 1 RS485
Model No.	GTW***MWT0
Software / Hardware version	V1.010
EUT Voltage	9~36 Vdc
Frequency Range	802.11b/g/n(20MHz): 2412~2462MHz 802.11n(40MHz): 2422~2452MHz
Channel Number	802.11b/g/n(20MHz): 11 802.11n(40MHz): 7
Type of Modulation	802.11b: DSSS-DBPSK, DQPSK, CCK
	802.11g/n: OFDM-BPSK, QPSK, 16QAM, 64QAM
Data Rate	802.11b: 1/2/5.5/11 Mbps
	802.11g: 6/9/12/18/24/36/48/54 Mbps
	802.11n: up to 150 Mbps
Channel Control	Auto

Model No. description

GTW	**	*	*	**	*				
Family prefix1	*4-52*	*6*	*7*	*8-9*	*10*				

L.F.S.3	*EU customs code4*	*Harmonized code5*	*...*
6.33.01, 6.33.04, 6.33.05 6.33.06, 6.33.07, 6.33.08 6.33.09, 6.33.10, 6.33.12, 6.33.13, 6.33.14	90329000 90328900	9032.89.6085	

Options structure:

Pos.	*meaning6*	*option7*	*description8*	*note*	*marks9*
4-5	Customer code	00	Standard Carel		
		**	customer		
6	Customization revision	*	Progressive		
7	Family group	0	Trasparent gateway (Made USR - Modbus to radio channel)		
		P	Protocols gateway (4 DIN – Made in CAREL - translator)		
		M	CloudGate 1 device (Made USR – IoT edge)		
		T	CloudGate 10 devices (4DIN – Made CAREL – IoT edge)		
8-9	Version	GR	Greece	DEAD	
		BN	BACnet	DEAD	
		MB	Modbus	DEAD	
		99	Protocoll pers.Carel	DEAD	
		00	Protocoll Carel Modem	DEAD	
		MQ	Protocoll McQuay	DEAD	
		BT	Bluetooth : 1 RS485 – 1 Bluetooth	Only for GTW***0 / GTW***M	
		WT	WiFi : 1 RS485 – 1 Wi-Fi	Only for GTW***0 / GTW***M	
		GP	2G Cellular version Worldwide: 1 RS485, 1 module 2G	Only for GTW***M	
		GT	2G Cellular NON SIM RS485, 1 module 2G	Only for GTW***M	
		WA	Wired version A : 2 RS485, 1 Ethernet	Only for GTW***P/T	
		WB	Wired version B : 2 RS485, 2 Ethernet	Only for GTW***P/T	

1.2. Working Frequency of Each Channel:

802.11b/g/n(20MHz) Working Frequency of Each Channel:							
Channel	Frequency	Channel	Frequency	Channel	Frequency	Channel	Frequency
01	2412 MHz	02	2417 MHz	03	2422 MHz	04	2427 MHz
05	2432 MHz	06	2437 MHz	07	2442 MHz	08	2447 MHz
09	2452 MHz	10	2457 MHz	11	2462 MHz	N/A	N/A

802.11n(40MHz) Working Frequency of Each Channel:							
Channel	Frequency	Channel	Frequency	Channel	Frequency	Channel	Frequency
03	2422 MHz	04	2427 MHz	05	2432 MHz	06	2437 MHz
07	2442 MHz	08	2447 MHz	09	2452 MHz	N/A	N/A

1.3. Antenna information

Antenna model	N/A					
Antenna Delivery	☒	1*TX+1*RX	☐	2*TX+2*RX	☐	3*TX+3*RX
Antenna technology	☒	SISO				
	☐	MIMO	☐	Basic		
			☐	CDD		
			☐	Beam-forming		
Antenna Type	☒	External	☒	Dipole		
	☐	Internal	☐	PIFA		
			☐	PCB		
			☐	Ceramic Chip Antenna		
			☐	Stamping Antenna		
			☐	Metal antenna		
			☐	Monopole antenna		
Antenna Gain	3 dBi					

1.4. Mode of Operation

Test Modes List
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)

Note 1: Regards to the frequency band operation: the lowest, middle and highest frequency channel were selected to perform the test, then shown on this report.

Note 2: For portable device, radiated tests was verified over X, Y, Z axis, and shown the worst case on this report.

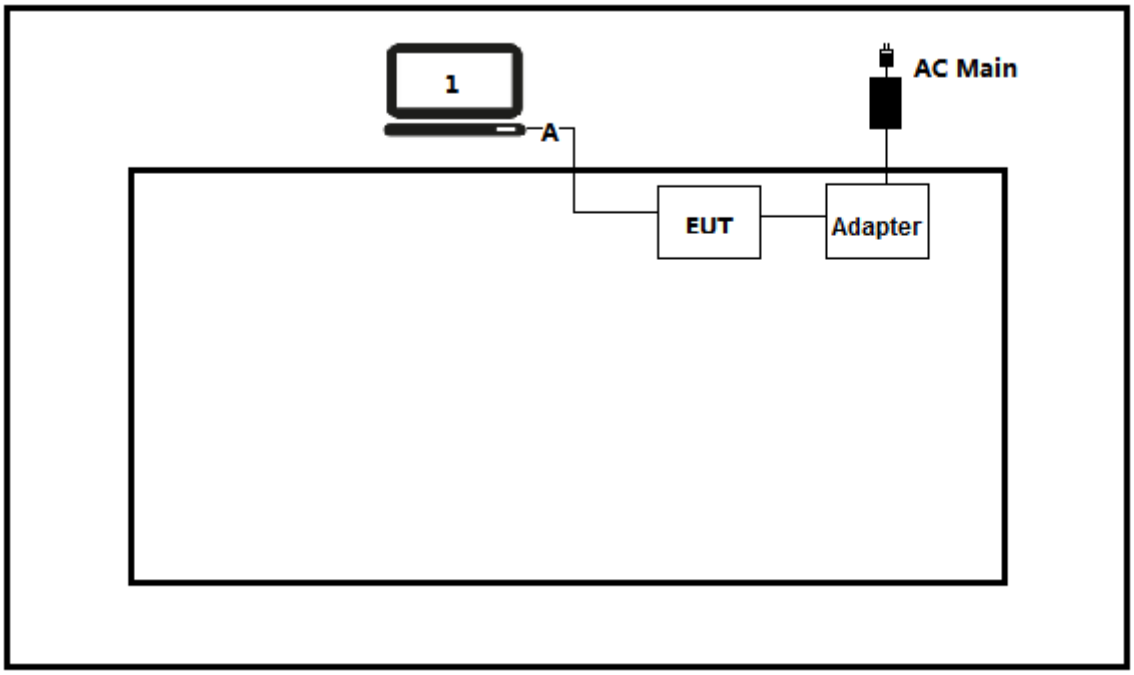
1.5. Tested System Details

The types for all equipment, plus descriptions of all cables used in the tested system (including inserted cards) are:

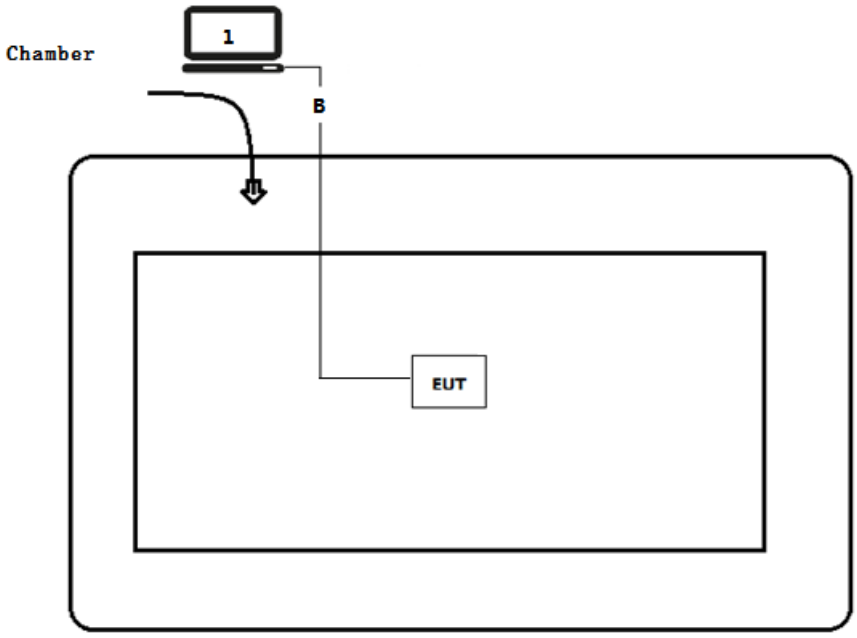
No.	Product	Manufacturer	Model No.	Serial No.	Power Cord
1	Notebook	Lenovo	Think pad x220	SUA0600195	Non-shielded
A	USB cable	N/A	N/A	N/A	Shielded, 0.5m
B	USB cable	N/A	N/A	N/A	Shielded, 10m

1.6. Configuration of Tested System

Test setup Diagram- AC Line Conducted Emission Test



Test setup Diagram- Radiated Emission



1.7. EUT Exercise Software

1	Setup the EUT as shown in Section 1.6.
2	Turn on the power of all equipment.
3	Run RF software [ESP32], and set the test mode and channel, then press OK to start to continue transmit.
4	Verify that the EUT works properly.

2. Technical Test

2.1. Summary of Test Result

Performed Test Item	Normative References	Limit	Result
AC Power Line Conducted Emission	FCC CFR Title 47 Part 15 Subpart C: Section 15.207	FCC 15.207	PASS
Emissions in restricted frequency bands	FCC CFR Title 47 Part 15 Subpart C: Section 15.209	FCC 15.209	PASS
Emissions in non-restricted frequency bands	FCC CFR Title 47 Part 15 Subpart C: Section 15.247(d)	⩾20dBc	PASS
Radiated Emission Band Edge	FCC CFR Title 47 Part 15 Subpart C: 15.247(d)	FCC 15.209	PASS
Occupied Bandwidth	FCC CFR Title 47 Part 15 Subpart C: Section 15.247(a)(2)	⩾500kHz	PASS
Fundamental emission output power	FCC CFR Title 47 Part 15 Subpart C: Section 15.247(b)(3)	⩽30dBm	PASS
Power Spectral Density	FCC CFR Title 47 Part 15 Subpart C: Section 15.247(e)	⩽8dBm/3kHz	PASS
Antenna Requirement	FCC CFR Title 47 Part 15 Subpart C: Section 15.203	FCC 15.203	PASS

2.2. Test Frequency configuration:

Modulation Mode	Channel	Frequency	Channel	Frequency	Channel	Frequency
802.11b	01	2412 MHz	06	2437 MHz	11	2462 MHz
802.11g	01	2412 MHz	06	2437 MHz	11	2462 MHz
802.11n(20MHz)	01	2412 MHz	06	2437 MHz	11	2462 MHz
802.11n(40MHz)	03	2422 MHz	06	2437 MHz	09	2452 MHz

2.3. Power vs Data Rate

MCS Index for 802.11n	Spatial Streams	Data Rate (Mbps)					
		802.11b	802.11g	20MHz Bandwidth		40MHz Bandwidth	
				800ns GI	400ns GI	800ns GI	400ns GI
0	1	1	6	6.5	7.2	13.5	15
1	1	2	9	13.0	14.4	27.0	30
2	1	5.5	12	19.5	21.7	40.5	45
3	1	11	18	26.0	28.9	54.0	60
4	1	---	24	39.0	43.3	81.0	90
5	1	---	36	52.0	57.8	108.0	120
6	1	---	48	58.5	65.0	121.5	135
7	1	---	54	65.0	72.2	135	150

Note 1: The EUT supports all data rate above. The blue form is the maximum power data rate.

2.4. Test Environment

Items	Required (IEC 68-1)	Actual
Temperature (°C)	15-35	21
Humidity (%RH)	25-75	50
Barometric pressure (mbar)	860-1060	950-1000

2.5. Measurement Uncertainty

Test Items	Uncertainty
AC Power Line Conducted Emission	±2.02 dB
Radiated Emission	Below 1GHz ±3.8 dB
	Above 1GHz ±3.9 dB
RF Antenna Port Conducted Emission	±1.27 dB
Radiated Emission Band Edge	±3.9 dB
Occupied Bandwidth	±1 kHz
Power Spectral Density	±1.27 dB

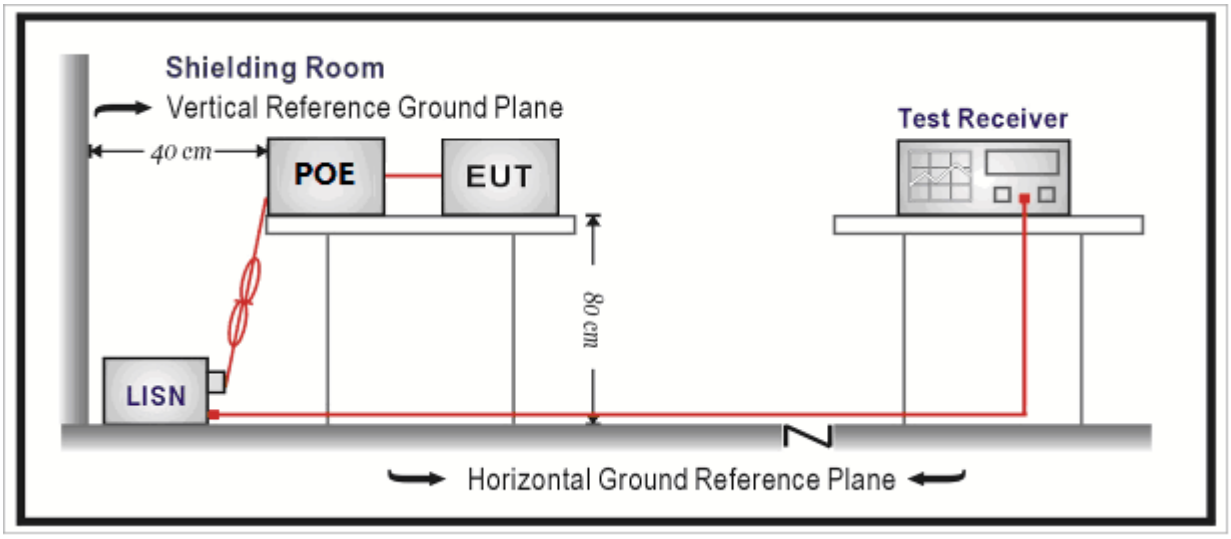
3. AC Power Line Conducted Emission

3.1. Test Equipment

AC Power Line Conducted Emission / TR-1					
Instrument	Manufacturer	Type No.	Serial No.	Cal. Date	Cal. Due Date
EMI Test Receiver	R&S	ESCI	100906	2020.04.18	2021.04.17
Two-Line V-Network	R&S	ENV 216	101189	2019.10.16	2020.10.15
Two-Line V-Network	R&S	ENV 216	101044	2020.04.18	2021.04.17
50ohm Coaxial Switch	Anritsu	MP59B	6200464462	N/A	N/A
50ohm Termination	SHX	TF2	7081402	2019.09.02	2020.09.01
Temperature/Humidity Meter	RTS	RTS-8S	TR1-TH	2019.08.21	2020.08.20
Quietek EMI V3(test software)	Quietek	N/A	N/A	N/A	N/A
Note: All equipment is calibrated with traceable calibrations. Each calibration is traceable to the national or international standards.					

3.2. Test Setup

AC Power Line Conducted Emission test setup



3.3. Limit

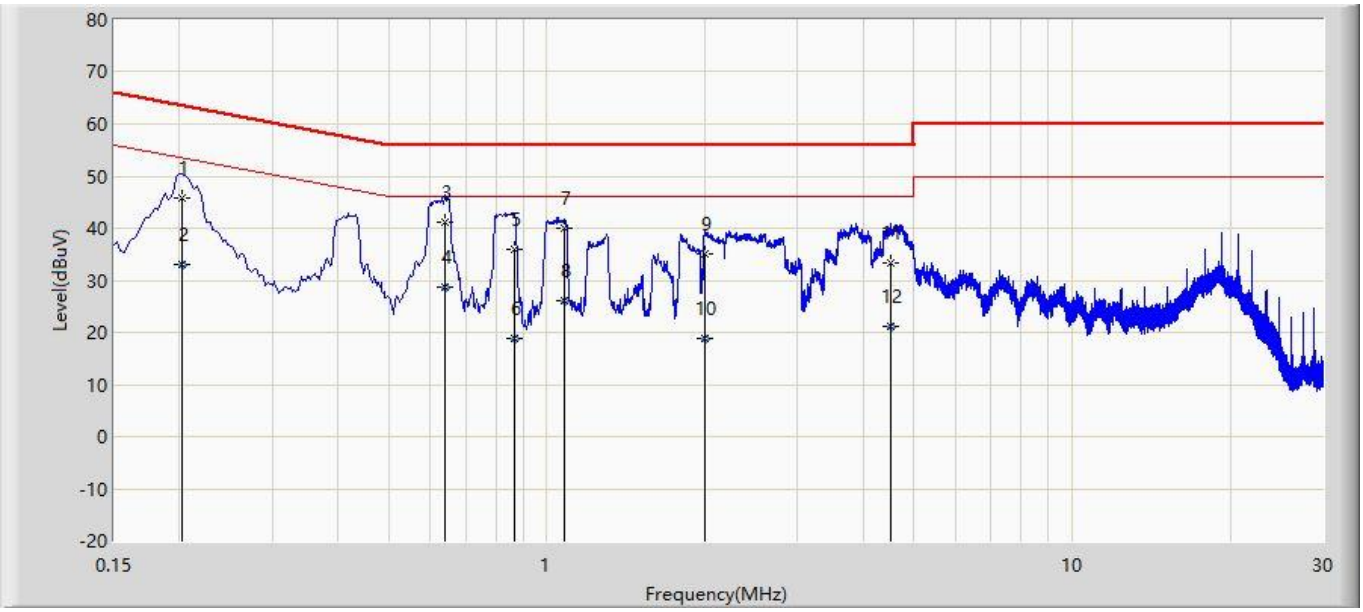
Frequency of Emission (MHz)	Conducted Limit	
	Quasi-peak (dBµV)	Average(dBµV)
0.15-0.5	66 to 56	56 to 46
0.5-5	56	46
5-30	60	50
Note 1: The lower limit shall apply at the transition frequencies. Note 2: The limit decreases linearly with the logarithm of the frequency in the range 0.15 MHz to 0.5 MHz.		

3.4. Test Procedure

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

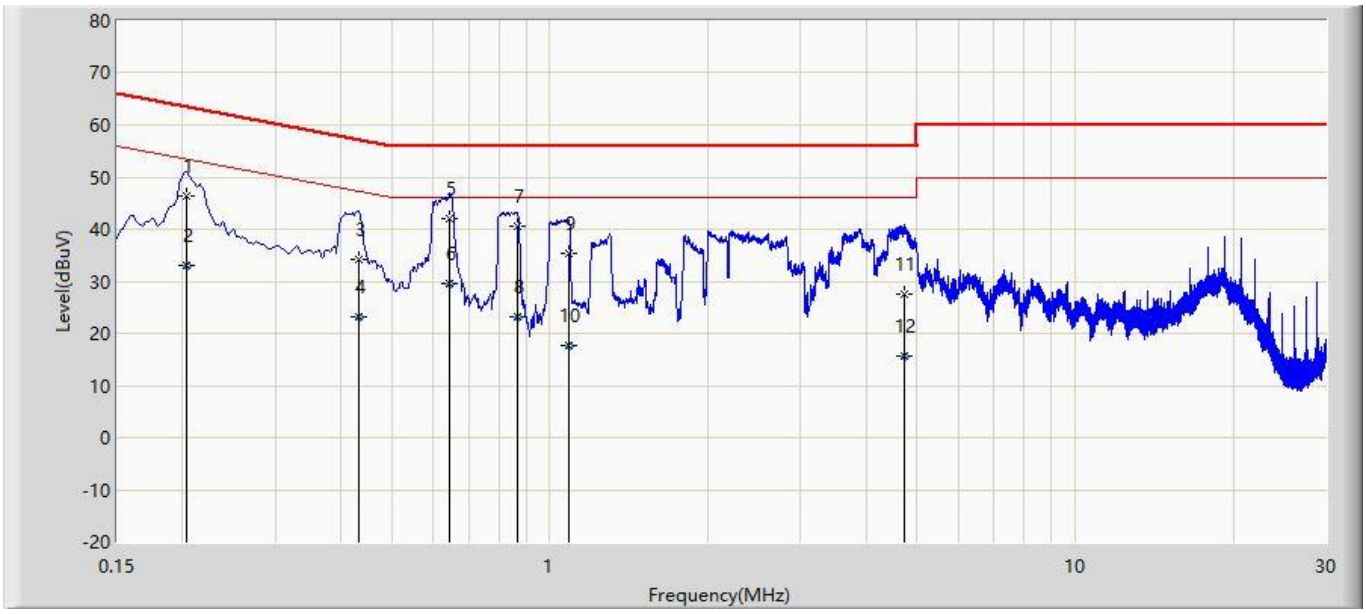
3.5. Test Result

Engineer: Jastion	
Site: TR1	Time: 2020/07/07 - 15:26
Limit: FCC_Part15.207_CE_AC Power	Margin: 0
Probe: ENV216_101189(0.009-30MHz)	Polarity: Line
EUT: CLOUDGATE BASIC WIRELESS WI-FI - 1 RS485	Power: AC 120V/60Hz
Note: Mode 1	



No	Mark	Frequency (MHz)	Measure Level (dBuV)	Reading Level (dBuV)	Over Limit (dB)	Limit (dBuV)	Factor (dB)	Type
1		0.202	45.837	35.949	-17.691	63.528	9.888	QP
2		0.202	33.147	23.259	-20.381	53.528	9.888	AV
3	*	0.640	41.099	31.174	-14.901	56.000	9.925	QP
4		0.640	28.665	18.740	-17.335	46.000	9.925	AV
5		0.868	35.842	25.975	-20.158	56.000	9.867	QP
6		0.868	18.903	9.035	-27.097	46.000	9.867	AV
7		1.079	40.141	30.315	-15.859	56.000	9.826	QP
8		1.079	26.027	16.201	-19.973	46.000	9.826	AV
9		2.004	35.159	25.263	-20.841	56.000	9.897	QP
10		2.004	18.899	9.003	-27.101	46.000	9.897	AV
11		4.511	33.439	23.552	-22.561	56.000	9.887	QP
12		4.511	21.283	11.396	-24.717	46.000	9.887	AV

Engineer: Jastion	
Site: TR1	Time: 2020/07/07 - 15:27
Limit: FCC_Part15.207_CE_AC Power	Margin: 0
Probe: ENV216_101189(0.009-30MHz)	Polarity: Neutral
EUT: CLOUDGATE BASIC WIRELESS WI-FI - 1 RS485	Power: AC 120V/60Hz
Note: Mode 1	



No	Mark	Frequency (MHz)	Measure Level (dBuV)	Reading Level (dBuV)	Over Limit (dB)	Limit (dBuV)	Factor (dB)	Type
1		0.204	46.399	36.521	-17.047	63.446	9.879	QP
2		0.204	33.171	23.293	-20.275	53.446	9.879	AV
3		0.433	34.185	24.286	-23.010	57.195	9.899	QP
4		0.433	23.287	13.387	-23.908	47.195	9.899	AV
5	*	0.645	41.979	32.062	-14.021	56.000	9.916	QP
6		0.645	29.561	19.645	-16.439	46.000	9.916	AV
7		0.868	40.632	30.847	-15.368	56.000	9.784	QP
8		0.868	23.078	13.294	-22.922	46.000	9.784	AV
9		1.084	35.267	25.583	-20.733	56.000	9.684	QP
10		1.084	17.544	7.860	-28.456	46.000	9.684	AV
11		4.731	27.670	17.855	-28.330	56.000	9.815	QP
12		4.731	15.739	5.924	-30.261	46.000	9.815	AV

4. Emissions in restricted frequency bands

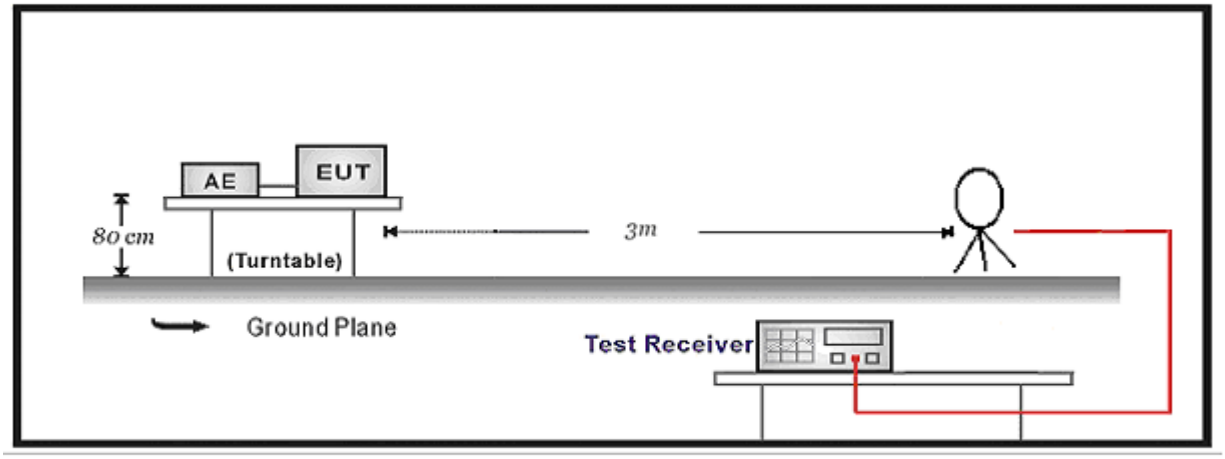
4.1. Test Equipment

Radiated Emission(Below 1GHz) / AC-3					
Instrument	Manufacturer	Type No.	Serial No.	Cal. Date	Cal. Due Date
EMI Test Receiver	R&S	ESCI	100176	2019.08.30	2020.08.29
Loop Antenna	R&S	HFH2-Z2	833799/003	2020.02.17	2021.02.16
Bilog Antenna	Teseq GmbH	CBL6112D	27613	2020.05.25	2021.05.24
Coaxial Cable	Huber+Suhner	SUCOFLEX 106	AC3-C	2020.04.13	2021.04.12
Temperature/Humidity Meter	RTS	RTS-8S	AC3-TH	2019.09.02	2020.09.01
Quietek EMI V3(test software)	Quietek	N/A	N/A	N/A	N/A
Note: All equipment is calibrated with traceable calibrations. Each calibration is traceable to the national or international standards.					

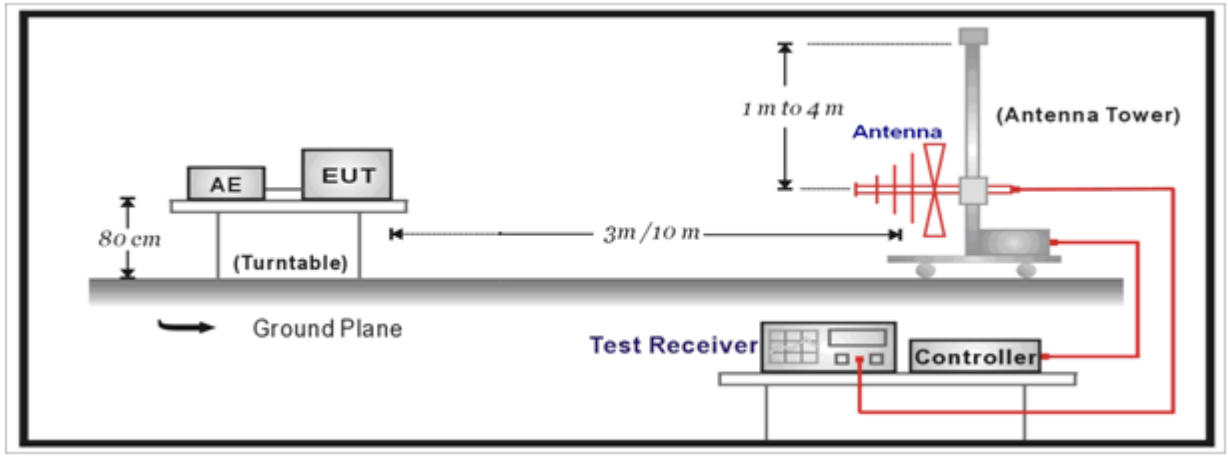
Radiated Emission(Above 1GHz) / AC-5					
Instrument	Manufacturer	Type No.	Serial No.	Cal. Date	Cal. Due Date
Spectrum Analyzer	R&S	FSV	104212	2019.12.28	2020.12.27
Signal analyzer	Agilent	E4446A	MY45300103	2020.05.08	2021.05.07
low Noise Amplifier	BXT	NA2651D	LNA17040209	2020.04.13	2021.04.12
Pre-Amplifier	EMCI	EMC184045SE	980263	2020.05.24	2021.05.23
DRG Horn Antenna	ETS-Lindgren	3117	00167055	2020.05.25	2021.05.24
Broad-Band Horn Antenna	Schwarzbeck	BBHA9170	294	2019.03.23	2021.03.22
Coaxial Cable	Huber+Suhner	SUCOFLEX 106	AC5-C2	2020.04.13	2021.04.12
Coaxial Cable	ROSENBERGER	LA1-C011-2000/3000	AC5-40G	2020.04.18	2021.04.17
High-Pass Filter	Wainwright	WHKX3.0/18G-12SS	81	2020.06.09	2021.06.08
Temperature/Humidity Meter	RTS	RTS-8S	AC5-TH	2019.09.02	2020.09.01
Quietek EMI V3(test software)	Quietek	N/A	N/A	N/A	N/A
Note: All equipment is calibrated with traceable calibrations. Each calibration is traceable to the national or international standards.					

4.2. Test Setup

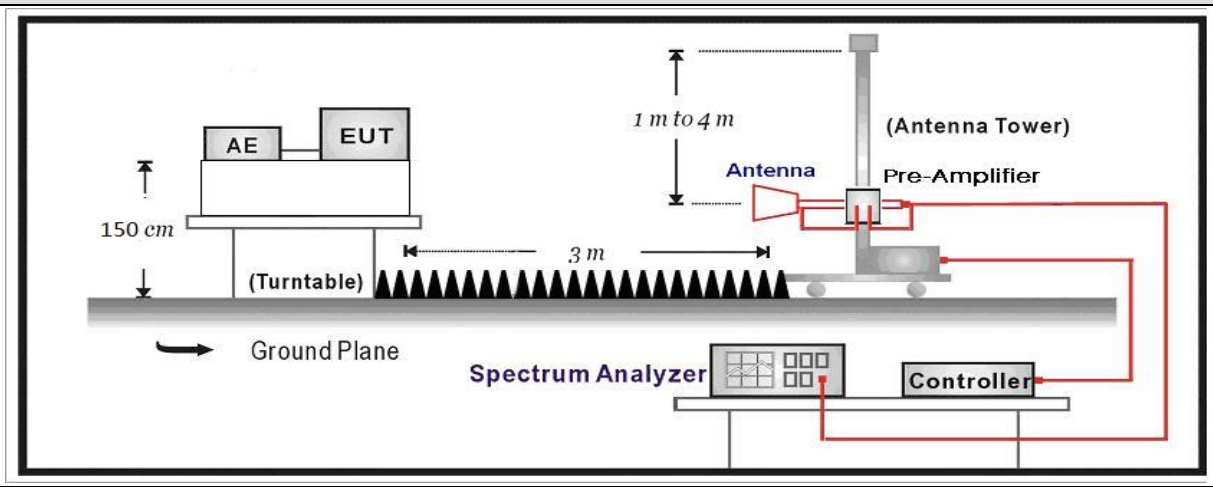
Below 30MHz Test Setup:



30MHz-1GHz Test Setup:



Above 1GHz Test Setup:



4.3. Limit

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

Restricted Band Emissions Limit			
Frequency (MHz)	Field strength (µV/m)	Field strength (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)

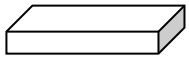
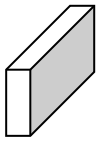
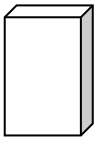
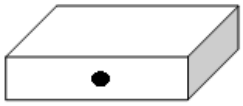
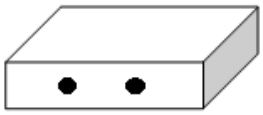
Note 1: At frequencies below 30 MHz, measurements may be performed at a distance closer than that specified in the regulations; however, an attempt should be made to avoid making measurements in the near field. Pending the development of an appropriate measurement procedure for measurements performed 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).

4.4. Test Procedure

Test Method						
	References Rule				Chapter	Description
☐	ANSI C63.10				11.11	Emissions in non-restricted frequency bands
	☐	ANSI C63.10			11.11.2	Reference level measurement
	☐	ANSI C63.10			11.11.3	Emission level measurement
☒	ANSI C63.10				11.12	Emissions in restricted frequency bands
	☒	ANSI C63.10			11.12.1	Radiated emission measurements
	☒	ANSI C63.10			11.12.2.7	Radiated spurious emission test
		☒	ANSI C63.10		6.4	Radiated emissions from unlicensed wireless devices below 30 MHz
		☒	ANSI C63.10		6.5	Radiated emissions from unlicensed wireless devices in the frequency range of 30 MHz to 1000 MHz
		☒	ANSI C63.10		6.6	Radiated emissions from unlicensed wireless devices above 1 GHz
	☐	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

4.5. EUT test Axis definition

<table>
<tr><th>Item</th><th colspan="4">Emissions in restricted frequency bands</th></tr>
<tr><td rowspan="3">Device Category</td><td>☐</td><td colspan="3">Fixed point-to-point</td></tr>
<tr><td>☐</td><td colspan="3">Emit multiple directional beams, simultaneously or sequentially</td></tr>
<tr><td>☒</td><td colspan="3">Other cases</td></tr>
<tr><td>Test mode</td><td colspan="4">Mode 1~4</td></tr>
<tr><td rowspan="12">Test method</td><td>☒</td><td colspan="3">Radiated</td></tr>
<tr><td rowspan="3"></td><td>X Axis</td><td>Y Axis</td><td>Z Axis</td></tr>
<tr><td>  </td><td>  </td><td>  </td></tr>
<tr><td>Worst Axis ☒</td><td>Worst Axis ☐</td><td>Worst Axis ☐</td></tr>
<tr><td>☐</td><td colspan="3">Conducted</td></tr>
<tr><td>☐</td><td colspan="3">Chain 1</td></tr>
<tr><td></td><td colspan="3">  </td></tr>
<tr><td>☐</td><td>Chain 1</td><td colspan="2">Chain 2</td></tr>
<tr><td></td><td colspan="3">  </td></tr>
<tr><td>☐</td><td>Chain 1</td><td>Chain 2</td><td>Chain 3</td></tr>
<tr><td></td><td colspan="3">  </td></tr>
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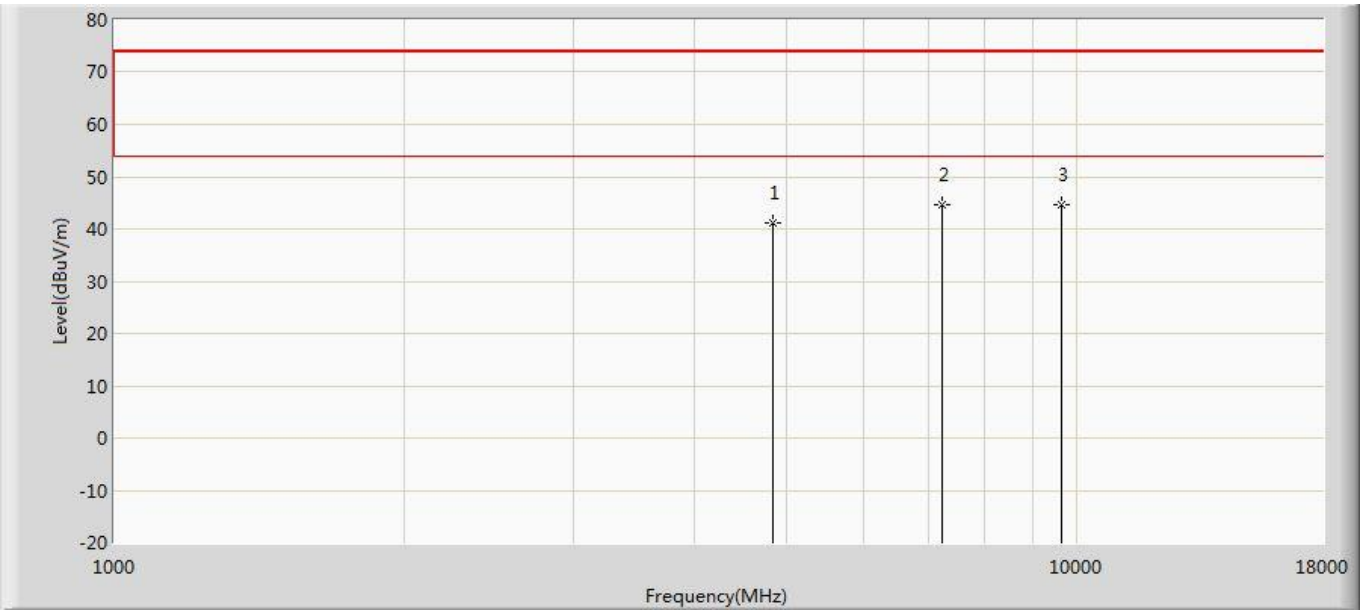
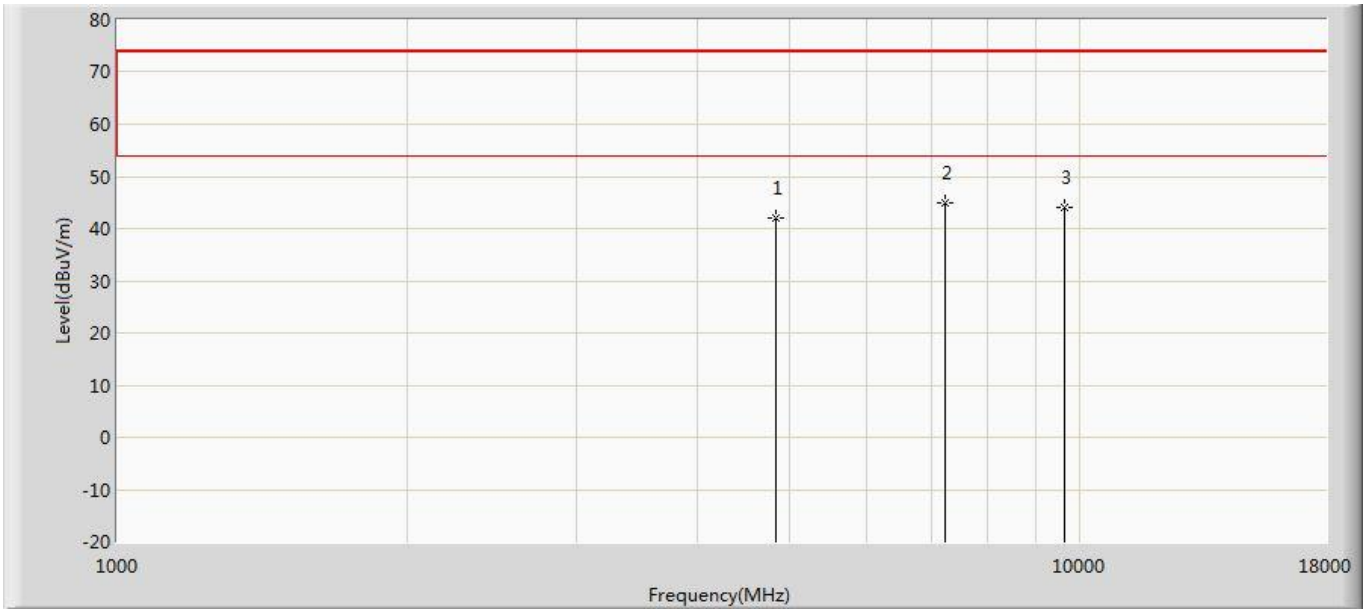
4.6. Test Result

Profile: 2060045R	Page No.: 25
Engineer: YULIU	
Site: AC5	Time: 2020/06/28 - 22:33
Limit: FCC_Part15.209_RE(3m)	Margin: 0
Probe: Horn_3117_00167055(1-18GHz)	Polarity: Vertical
EUT: CLOUDGATE BASIC WIRELESS WI-FI - 1 RS485	Power: DC 5V
Note: Mode 1:Transmit at 2412MHz by 802.11b	



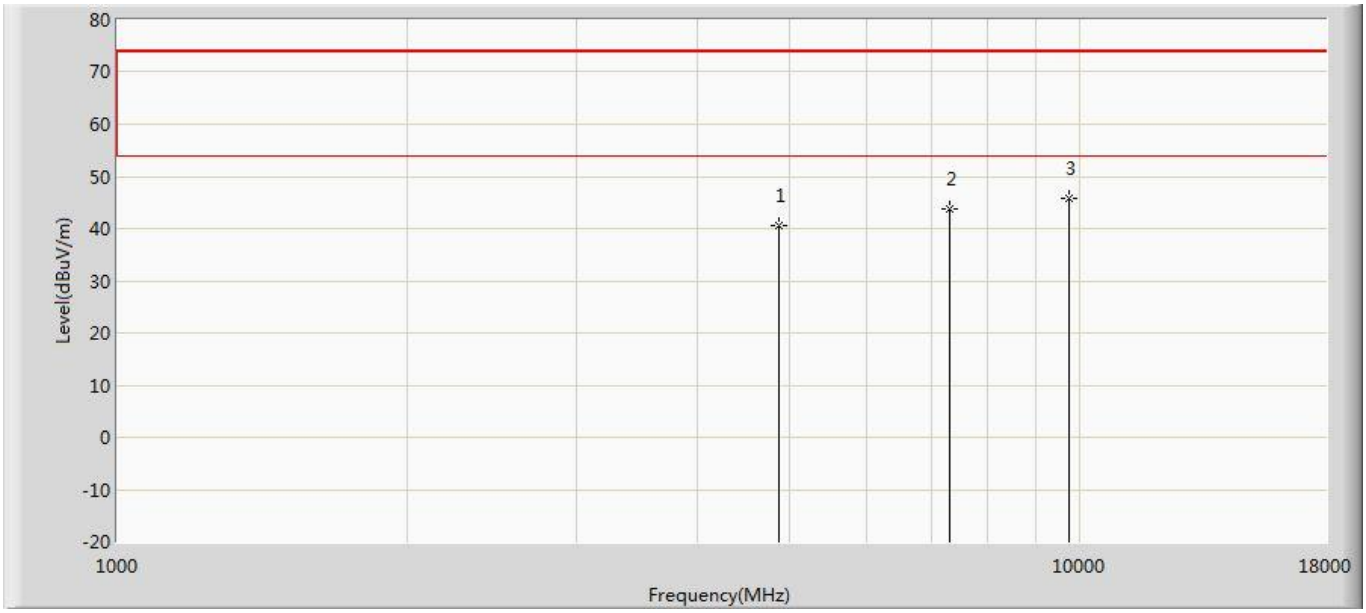
No	Mark	Frequency (MHz)	Measure Level (dBuV/m)	Reading Level (dBuV)	Over Limit (dB)	Limit (dBuV/m)	Factor (dB)	Type
1		4824.000	41.138	36.575	-32.862	74.000	4.563	PK
2	*	7236.000	44.562	36.414	-29.438	74.000	8.147	PK
3		9648.000	44.562	34.891	-29.438	74.000	9.671	PK

Profile: 2060045R	Page No.: 26
Engineer: YULIU	
Site: AC5	Time: 2020/06/28 - 22:33
Limit: FCC_Part15.209_RE(3m)	Margin: 0
Probe: Horn_3117_00167055(1-18GHz)	Polarity: Horizontal
EUT: CLOUDGATE BASIC WIRELESS WI-FI - 1 RS485	Power: DC 5V
Note: Mode 1:Transmit at 2412MHz by 802.11b	



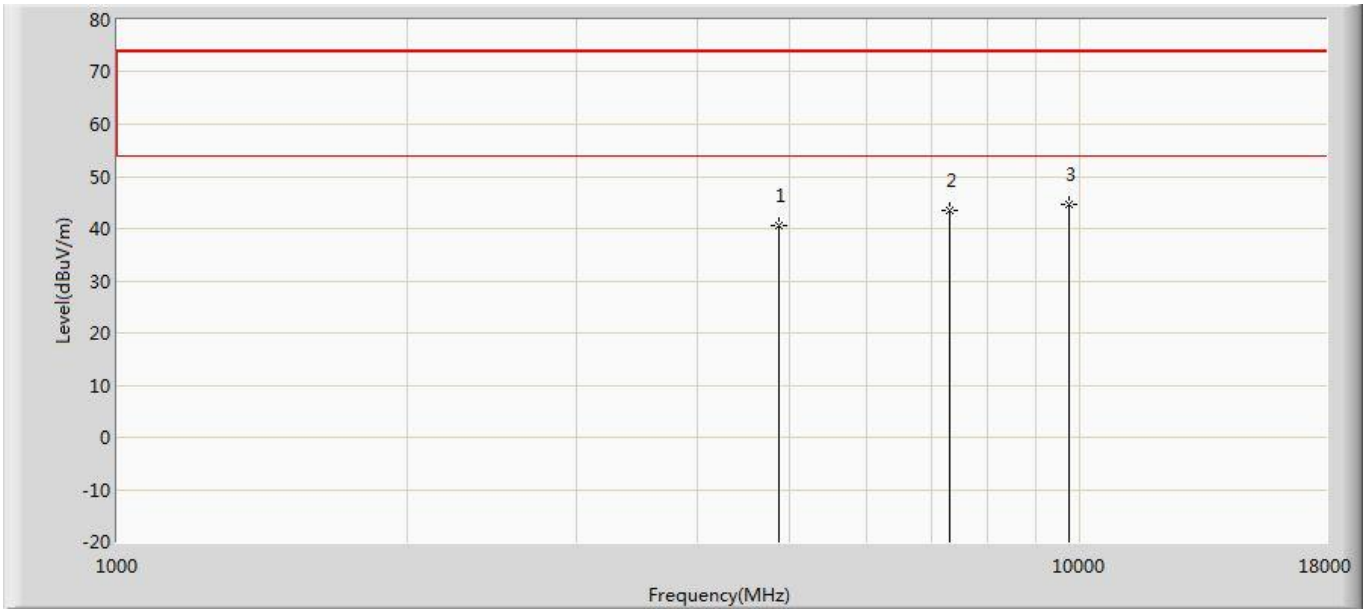
No	Mark	Frequency (MHz)	Measure Level (dBuV/m)	Reading Level (dBuV)	Over Limit (dB)	Limit (dBuV/m)	Factor (dB)	Type
1		4824.000	42.130	37.567	-31.870	74.000	4.563	PK
2	*	7236.000	44.896	36.748	-29.104	74.000	8.147	PK
3		9648.000	44.195	34.524	-29.805	74.000	9.671	PK

Profile: 2060045R	Page No.: 27
Engineer: YULIU	
Site: AC5	Time: 2020/06/28 - 22:33
Limit: FCC_Part15.209_RE(3m)	Margin: 0
Probe: Horn_3117_00167055(1-18GHz)	Polarity: Vertical
EUT: CLOUDGATE BASIC WIRELESS WI-FI - 1 RS485	Power: DC 5V
Note: Mode 1:Transmit at 2437MHz by 802.11b	



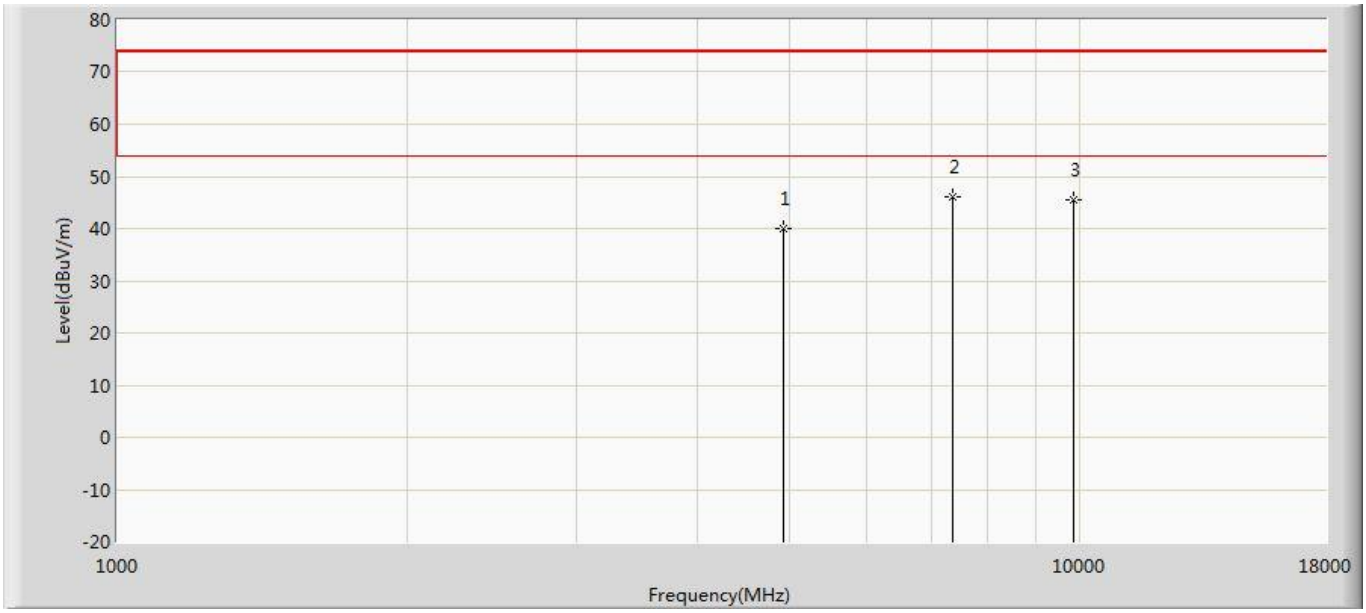
No	Mark	Frequency (MHz)	Measure Level (dBuV/m)	Reading Level (dBuV)	Over Limit (dB)	Limit (dBuV/m)	Factor (dB)	Type
1		4874.000	40.641	35.794	-33.359	74.000	4.846	PK
2		7311.000	43.878	35.887	-30.122	74.000	7.991	PK
3	*	9748.000	45.681	35.976	-28.319	74.000	9.705	PK

Profile: 2060045R	Page No.: 28
Engineer: YULIU	
Site: AC5	Time: 2020/06/28 - 22:33
Limit: FCC_Part15.209_RE(3m)	Margin: 0
Probe: Horn_3117_00167055(1-18GHz)	Polarity: Horizontal
EUT: CLOUDGATE BASIC WIRELESS WI-FI - 1 RS485	Power: DC 5V
Note: Mode 1:Transmit at 2437MHz by 802.11b	



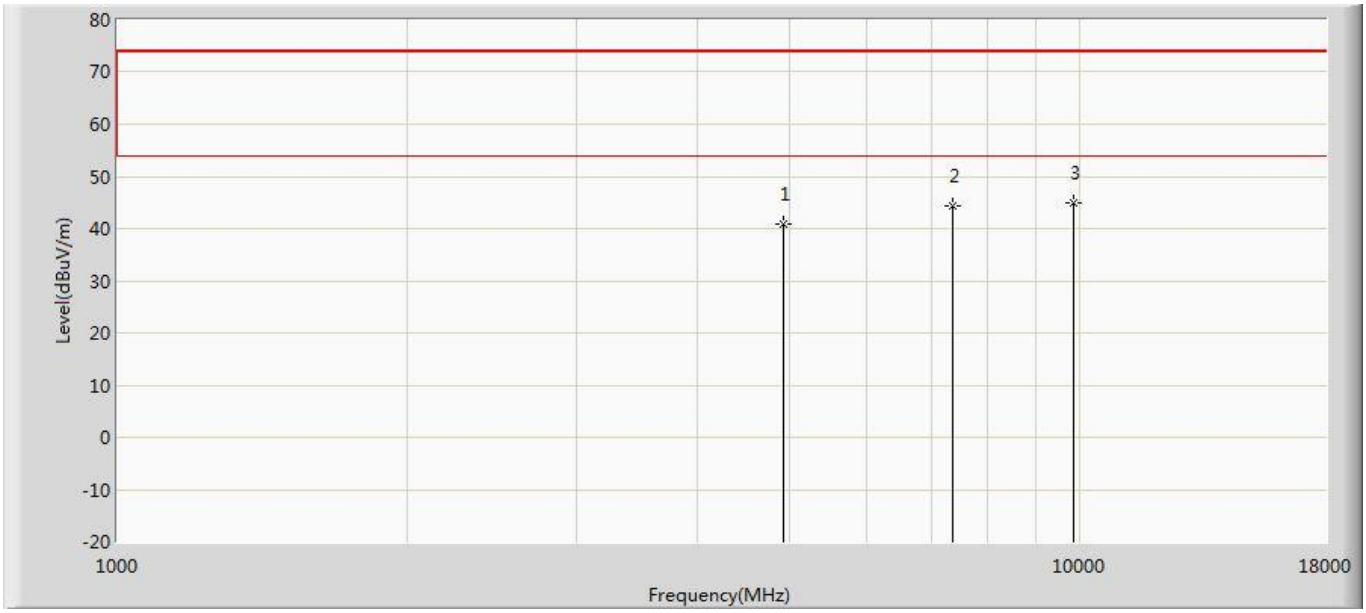
No	Mark	Frequency (MHz)	Measure Level (dBuV/m)	Reading Level (dBuV)	Over Limit (dB)	Limit (dBuV/m)	Factor (dB)	Type
1		4874.000	40.651	35.804	-33.349	74.000	4.846	PK
2		7311.000	43.538	35.547	-30.462	74.000	7.991	PK
3	*	9748.000	44.596	34.891	-29.404	74.000	9.705	PK

Profile: 2060045R	Page No.: 29
Engineer: YULIU	
Site: AC5	Time: 2020/06/28 - 22:33
Limit: FCC_Part15.209_RE(3m)	Margin: 0
Probe: Horn_3117_00167055(1-18GHz)	Polarity: Vertical
EUT: CLOUDGATE BASIC WIRELESS WI-FI - 1 RS485	Power: DC 5V
Note: Mode 1:Transmit at 2462MHz by 802.11b	



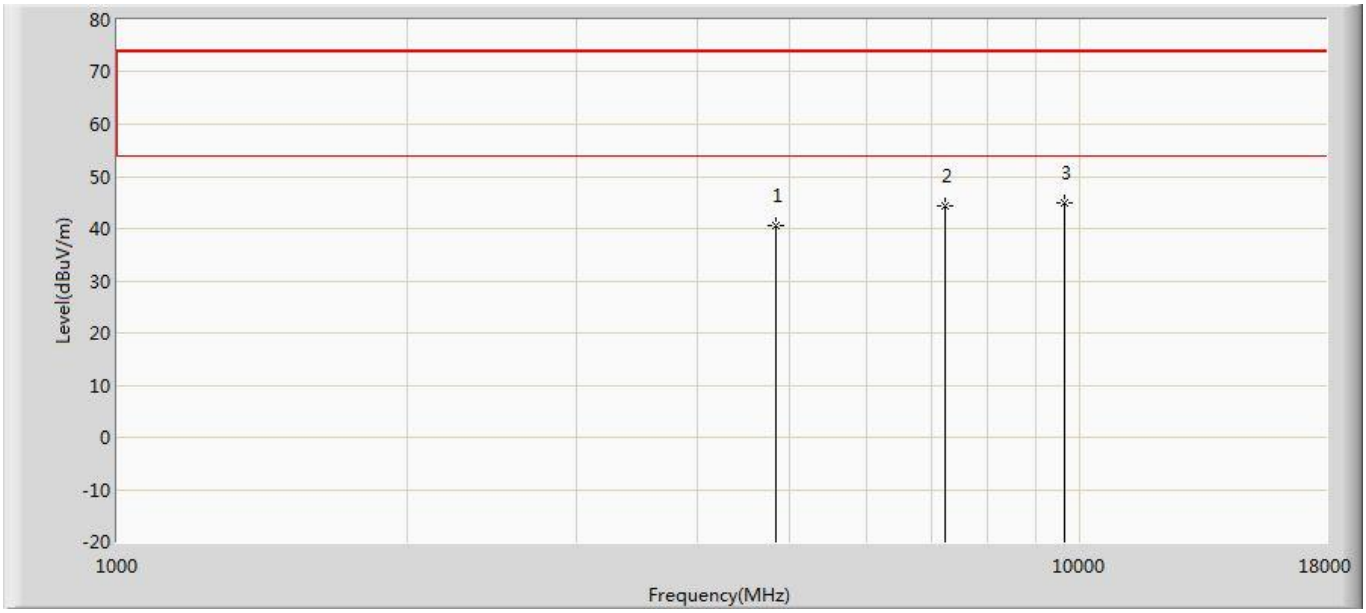
No	Mark	Frequency (MHz)	Measure Level (dBuV/m)	Reading Level (dBuV)	Over Limit (dB)	Limit (dBuV/m)	Factor (dB)	Type
1		4924.000	39.926	35.284	-34.074	74.000	4.641	PK
2	*	7386.000	46.023	37.873	-27.977	74.000	8.149	PK
3		9848.000	45.493	35.834	-28.507	74.000	9.660	PK

Profile: 2060045R	Page No.: 30
Engineer: YULIU	
Site: AC5	Time: 2020/06/28 - 22:33
Limit: FCC_Part15.209_RE(3m)	Margin: 0
Probe: Horn_3117_00167055(1-18GHz)	Polarity: Horizontal
EUT: CLOUDGATE BASIC WIRELESS WI-FI - 1 RS485	Power: DC 5V
Note: Mode 1:Transmit at 2462MHz by 802.11b	



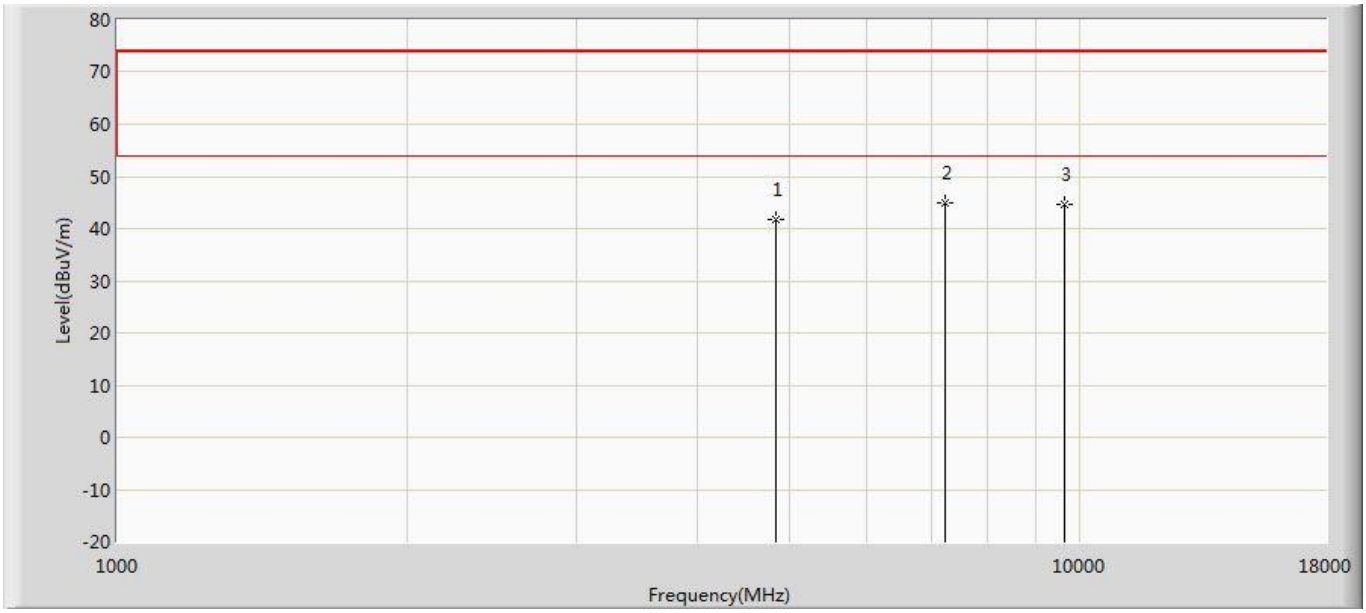
No	Mark	Frequency (MHz)	Measure Level (dBuV/m)	Reading Level (dBuV)	Over Limit (dB)	Limit (dBuV/m)	Factor (dB)	Type
1		4924.000	40.896	36.254	-33.104	74.000	4.641	PK
2		7386.000	44.245	36.095	-29.755	74.000	8.149	PK
3	*	9848.000	44.959	35.300	-29.041	74.000	9.660	PK

Profile: 2060045R	Page No.: 31
Engineer: YULIU	
Site: AC5	Time: 2020/06/28 - 22:33
Limit: FCC_Part15.209_RE(3m)	Margin: 0
Probe: Horn_3117_00167055(1-18GHz)	Polarity: Vertical
EUT: CLOUDGATE BASIC WIRELESS WI-FI - 1 RS485	Power: DC 5V
Note: Mode 2:Transmit at 2412MHz by 802.11g	



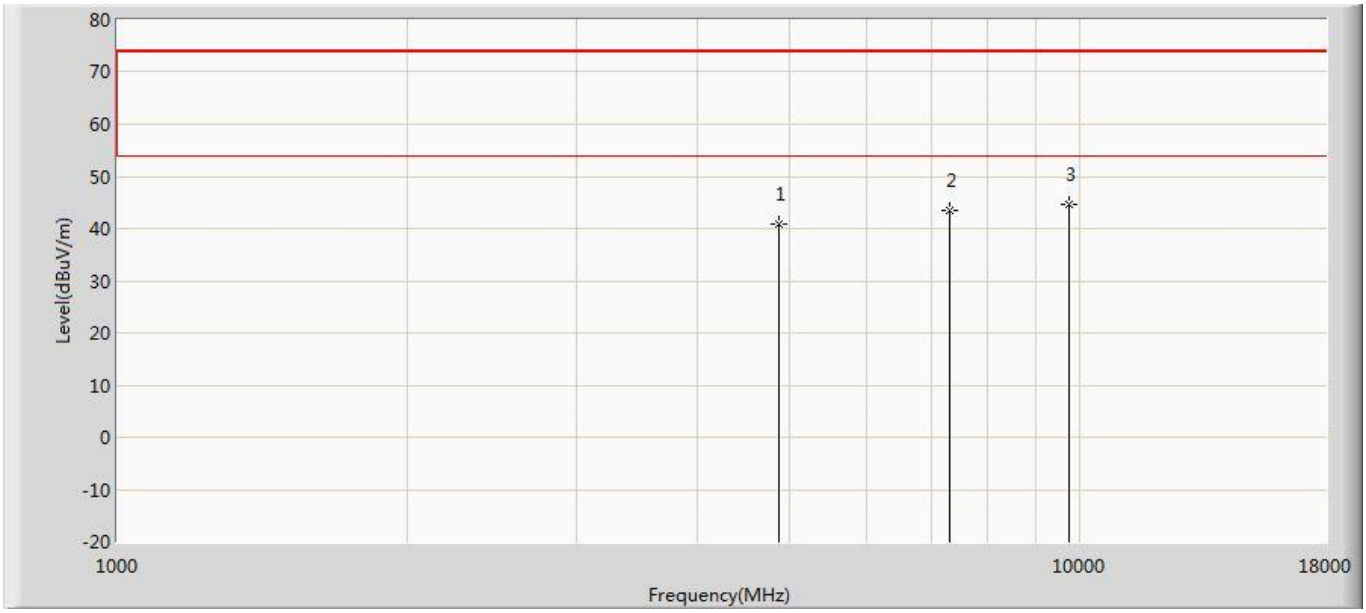
No	Mark	Frequency (MHz)	Measure Level (dBuV/m)	Reading Level (dBuV)	Over Limit (dB)	Limit (dBuV/m)	Factor (dB)	Type
1		4824.000	40.478	35.915	-33.522	74.000	4.563	PK
2		7236.000	44.211	36.063	-29.789	74.000	8.147	PK
3	*	9648.000	44.966	35.295	-29.034	74.000	9.671	PK

Profile: 2060045R	Page No.: 32
Engineer: YULIU	
Site: AC5	Time: 2020/06/28 - 22:34
Limit: FCC_Part15.209_RE(3m)	Margin: 0
Probe: Horn_3117_00167055(1-18GHz)	Polarity: Horizontal
EUT: CLOUDGATE BASIC WIRELESS WI-FI - 1 RS485	Power: DC 5V
Note: Mode 2:Transmit at 2412MHz by 802.11g	



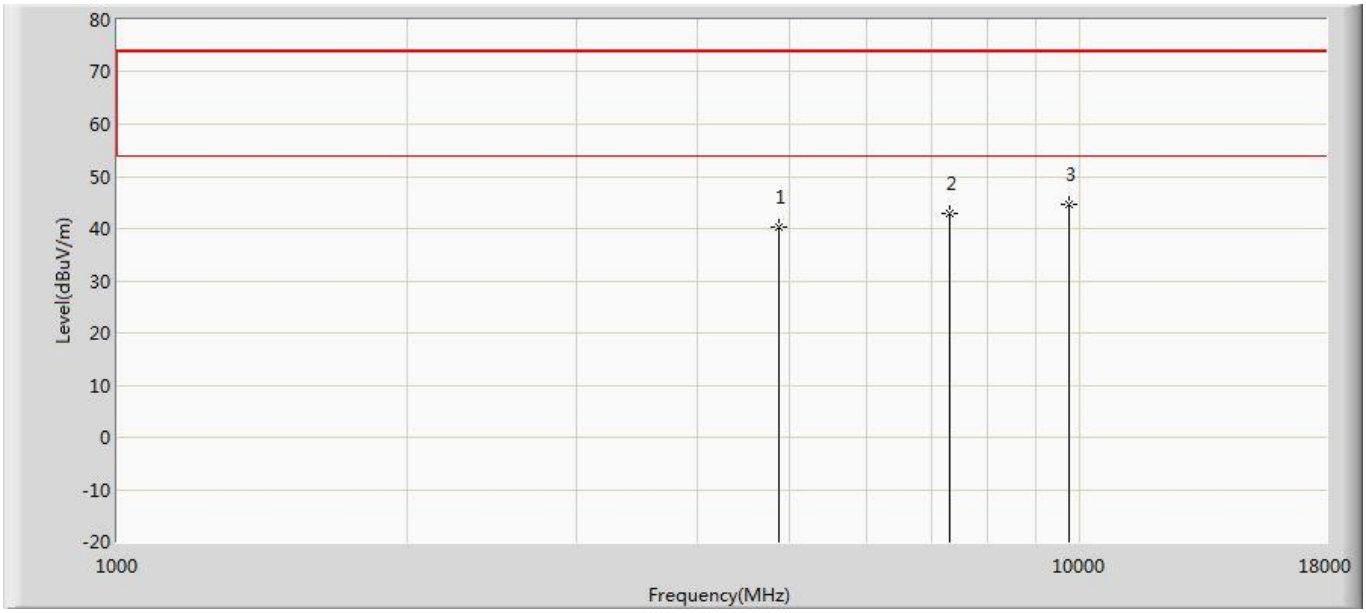
No	Mark	Frequency (MHz)	Measure Level (dBuV/m)	Reading Level (dBuV)	Over Limit (dB)	Limit (dBuV/m)	Factor (dB)	Type
1		4824.000	41.860	37.297	-32.140	74.000	4.563	PK
2	*	7236.000	44.976	36.828	-29.024	74.000	8.147	PK
3		9648.000	44.556	34.885	-29.444	74.000	9.671	PK

Profile: 2060045R	Page No.: 33
Engineer: YULIU	
Site: AC5	Time: 2020/06/28 - 22:34
Limit: FCC_Part15.209_RE(3m)	Margin: 0
Probe: Horn_3117_00167055(1-18GHz)	Polarity: Vertical
EUT: CLOUDGATE BASIC WIRELESS WI-FI - 1 RS485	Power: DC 5V
Note: Mode 2:Transmit at 2437MHz by 802.11g	



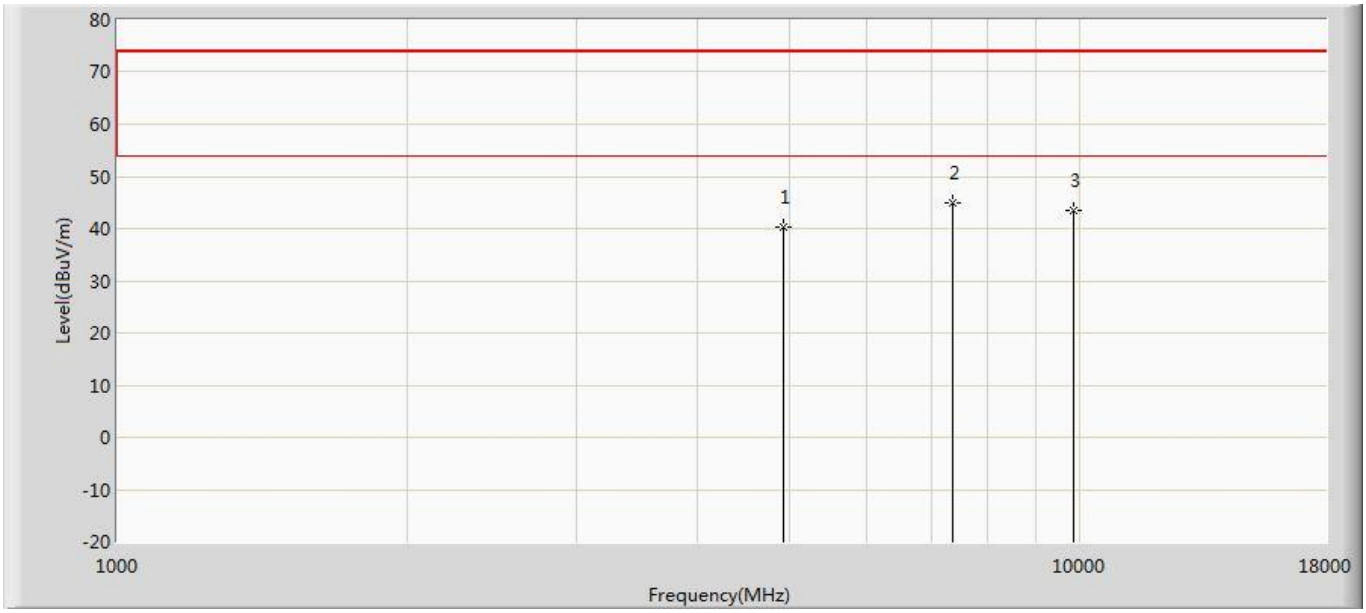
No	Mark	Frequency (MHz)	Measure Level (dBuV/m)	Reading Level (dBuV)	Over Limit (dB)	Limit (dBuV/m)	Factor (dB)	Type
1		4874.000	40.975	36.128	-33.025	74.000	4.846	PK
2		7311.000	43.492	35.501	-30.508	74.000	7.991	PK
3	*	9748.000	44.717	35.012	-29.283	74.000	9.705	PK

Profile: 2060045R	Page No.: 34
Engineer: YULIU	
Site: AC5	Time: 2020/06/28 - 22:34
Limit: FCC_Part15.209_RE(3m)	Margin: 0
Probe: Horn_3117_00167055(1-18GHz)	Polarity: Horizontal
EUT: CLOUDGATE BASIC WIRELESS WI-FI - 1 RS485	Power: DC 5V
Note: Mode 2:Transmit at 2437MHz by 802.11g	



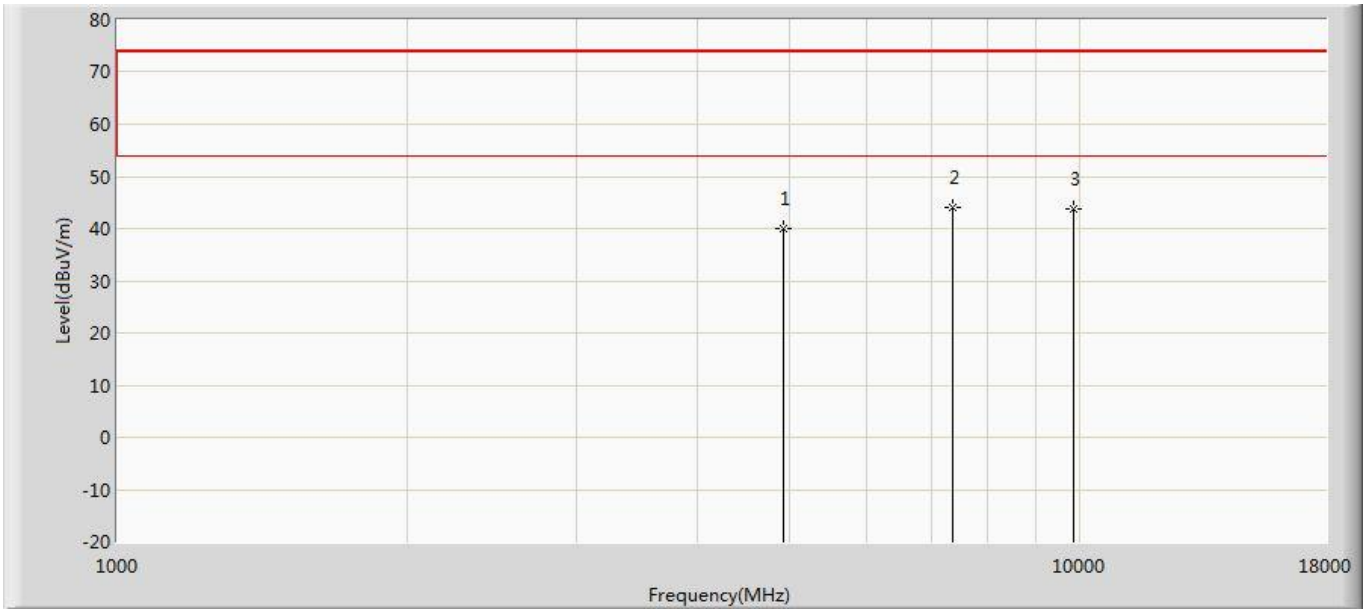
No	Mark	Frequency (MHz)	Measure Level (dBuV/m)	Reading Level (dBuV)	Over Limit (dB)	Limit (dBuV/m)	Factor (dB)	Type
1		4874.000	40.253	35.406	-33.747	74.000	4.846	PK
2		7311.000	42.916	34.925	-31.084	74.000	7.991	PK
3	*	9748.000	44.546	34.841	-29.454	74.000	9.705	PK

Profile: 2060045R	Page No.: 35
Engineer: YULIU	
Site: AC5	Time: 2020/06/28 - 22:34
Limit: FCC_Part15.209_RE(3m)	Margin: 0
Probe: Horn_3117_00167055(1-18GHz)	Polarity: Vertical
EUT: CLOUDGATE BASIC WIRELESS WI-FI - 1 RS485	Power: DC 5V
Note: Mode 2:Transmit at 2462MHz by 802.11g	



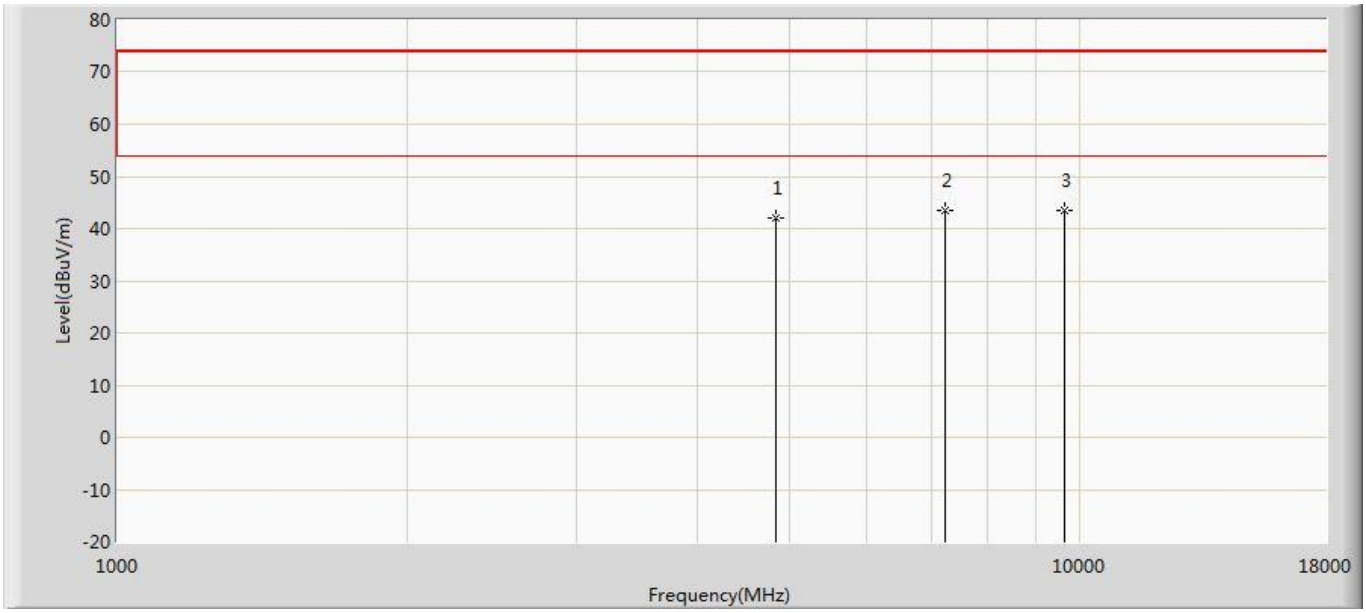
No	Mark	Frequency (MHz)	Measure Level (dBuV/m)	Reading Level (dBuV)	Over Limit (dB)	Limit (dBuV/m)	Factor (dB)	Type
1		4924.000	40.380	35.738	-33.620	74.000	4.641	PK
2	*	7386.000	44.986	36.836	-29.014	74.000	8.149	PK
3		9848.000	43.453	33.794	-30.547	74.000	9.660	PK

Profile: 2060045R	Page No.: 36
Engineer: YULIU	
Site: AC5	Time: 2020/06/28 - 22:34
Limit: FCC_Part15.209_RE(3m)	Margin: 0
Probe: Horn_3117_00167055(1-18GHz)	Polarity: Horizontal
EUT: CLOUDGATE BASIC WIRELESS WI-FI - 1 RS485	Power: DC 5V
Note: Mode 2:Transmit at 2462MHz by 802.11g	



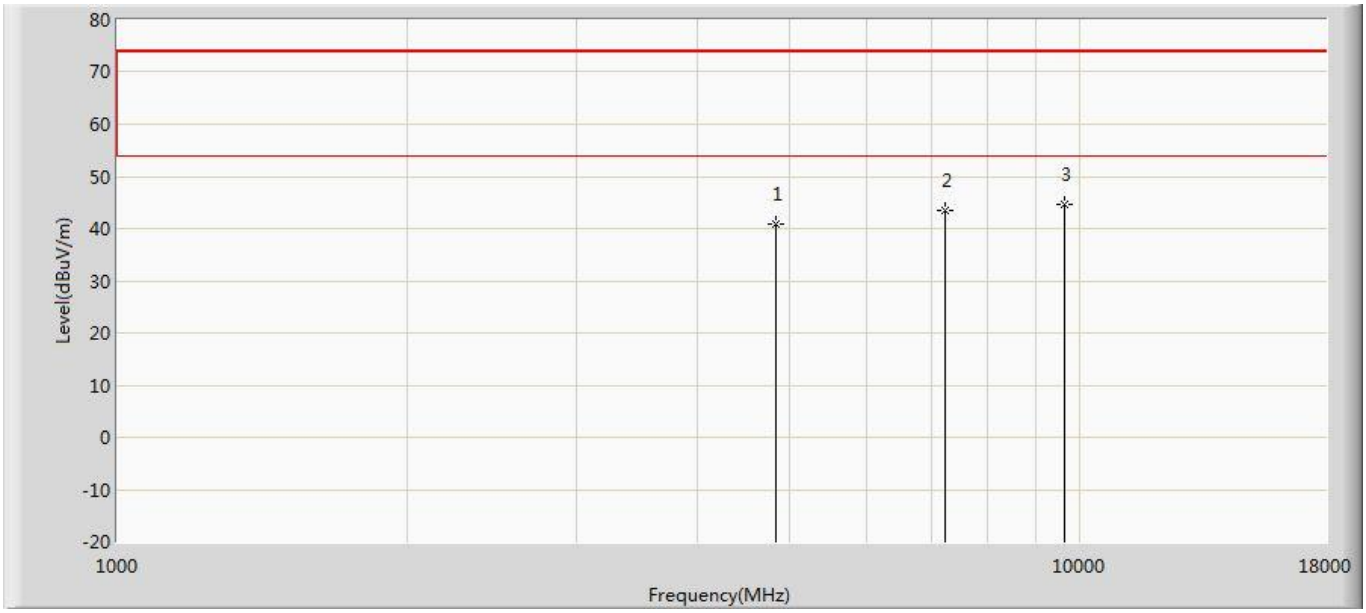
No	Mark	Frequency (MHz)	Measure Level (dBuV/m)	Reading Level (dBuV)	Over Limit (dB)	Limit (dBuV/m)	Factor (dB)	Type
1		4924.000	39.964	35.322	-34.036	74.000	4.641	PK
2	*	7386.000	44.008	35.858	-29.992	74.000	8.149	PK
3		9848.000	43.883	34.224	-30.117	74.000	9.660	PK

Profile: 2060045R	Page No.: 37
Engineer: YULIU	
Site: AC5	Time: 2020/06/28 - 22:34
Limit: FCC_Part15.209_RE(3m)	Margin: 0
Probe: Horn_3117_00167055(1-18GHz)	Polarity: Vertical
EUT: CLOUDGATE BASIC WIRELESS WI-FI - 1 RS485	Power: DC 5V
Note: Mode 3:Transmit at 2412MHz by 802.11n(20MHz)	



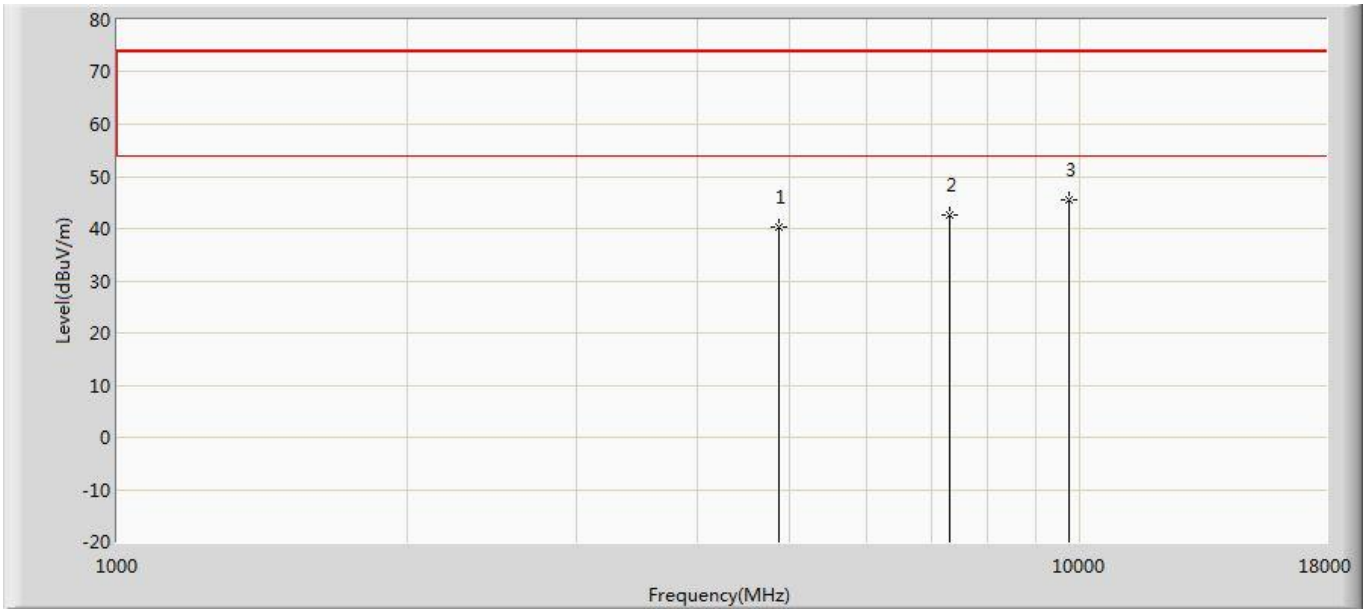
No	Mark	Frequency (MHz)	Measure Level (dBuV/m)	Reading Level (dBuV)	Over Limit (dB)	Limit (dBuV/m)	Factor (dB)	Type
1		4824.000	42.143	37.580	-31.857	74.000	4.563	PK
2	*	7236.000	43.583	35.435	-30.417	74.000	8.147	PK
3		9648.000	43.364	33.693	-30.636	74.000	9.671	PK

Profile: 2060045R	Page No.: 38
Engineer: YULIU	
Site: AC5	Time: 2020/06/28 - 22:34
Limit: FCC_Part15.209_RE(3m)	Margin: 0
Probe: Horn_3117_00167055(1-18GHz)	Polarity: Horizontal
EUT: CLOUDGATE BASIC WIRELESS WI-FI - 1 RS485	Power: DC 5V
Note: Mode 3:Transmit at 2412MHz by 802.11n(20MHz)	



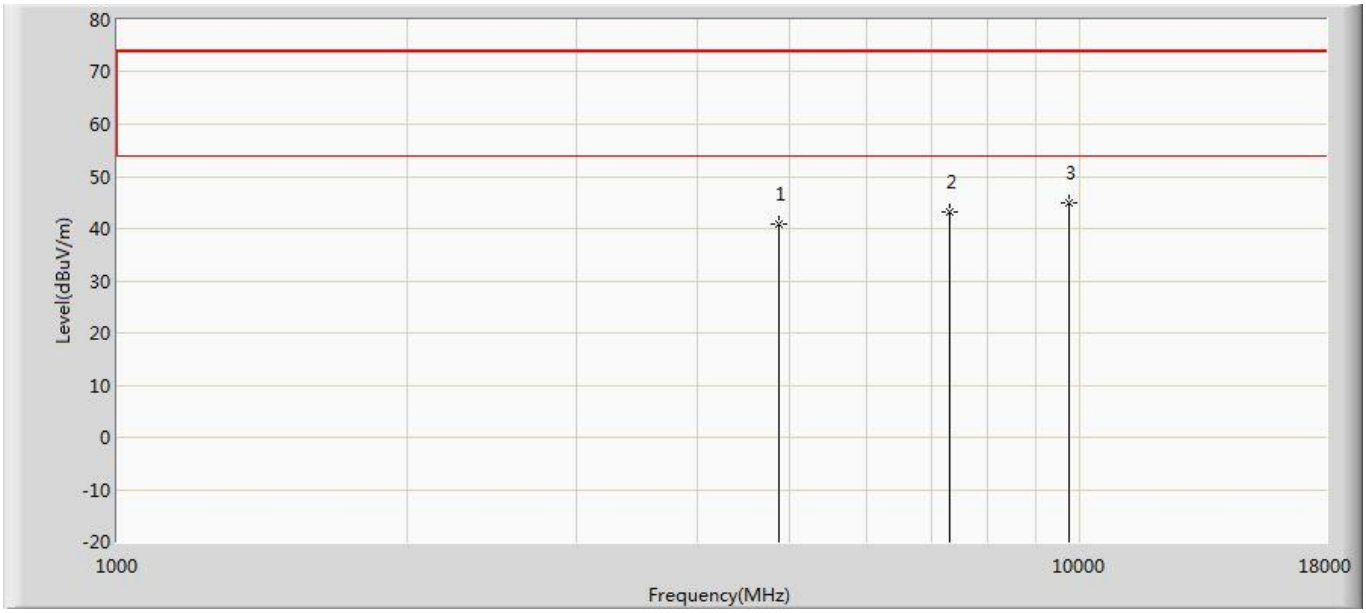
No	Mark	Frequency (MHz)	Measure Level (dBuV/m)	Reading Level (dBuV)	Over Limit (dB)	Limit (dBuV/m)	Factor (dB)	Type
1		4824.000	40.813	36.250	-33.187	74.000	4.563	PK
2		7236.000	43.471	35.323	-30.529	74.000	8.147	PK
3	*	9648.000	44.615	34.944	-29.385	74.000	9.671	PK

Profile: 2060045R	Page No.: 39
Engineer: YULIU	
Site: AC5	Time: 2020/06/28 - 22:34
Limit: FCC_Part15.209_RE(3m)	Margin: 0
Probe: Horn_3117_00167055(1-18GHz)	Polarity: Vertical
EUT: CLOUDGATE BASIC WIRELESS WI-FI - 1 RS485	Power: DC 5V
Note: Mode 3:Transmit at 2437MHz by 802.11n(20MHz)	



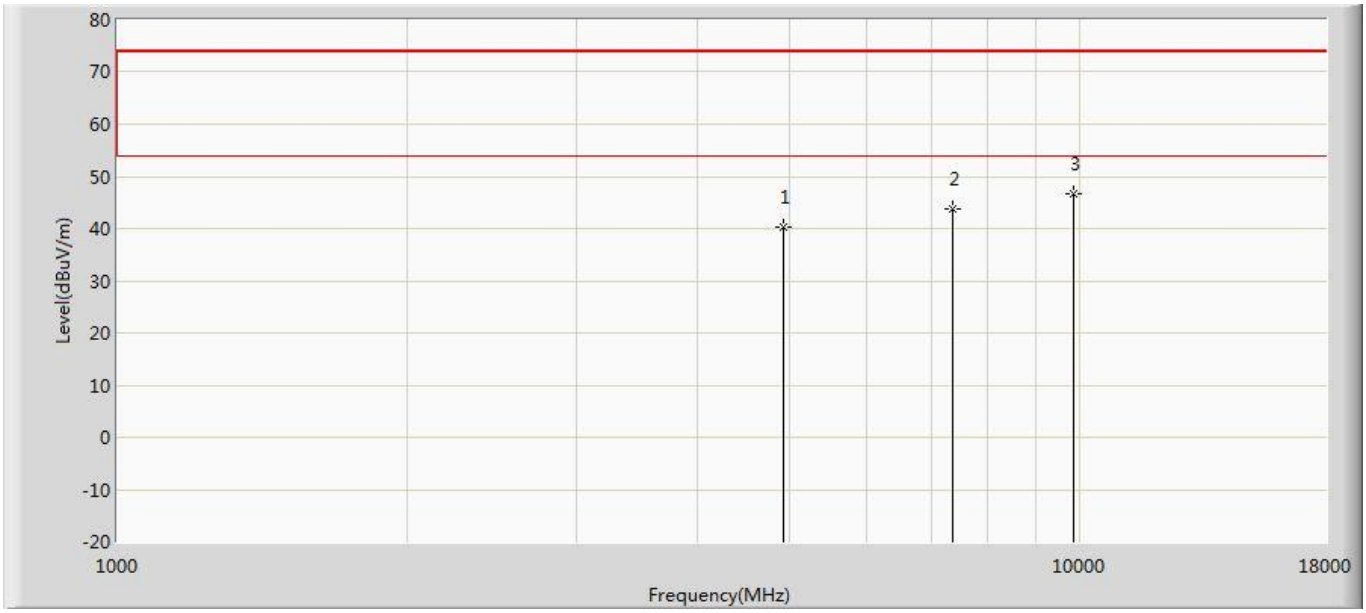
No	Mark	Frequency (MHz)	Measure Level (dBuV/m)	Reading Level (dBuV)	Over Limit (dB)	Limit (dBuV/m)	Factor (dB)	Type
1		4874.000	40.156	35.309	-33.844	74.000	4.846	PK
2		7311.000	42.723	34.732	-31.277	74.000	7.991	PK
3	*	9748.000	45.644	35.939	-28.356	74.000	9.705	PK

Profile: 2060045R	Page No.: 40
Engineer: YULIU	
Site: AC5	Time: 2020/06/28 - 22:34
Limit: FCC_Part15.209_RE(3m)	Margin: 0
Probe: Horn_3117_00167055(1-18GHz)	Polarity: Horizontal
EUT: CLOUDGATE BASIC WIRELESS WI-FI - 1 RS485	Power: DC 5V
Note: Mode 3:Transmit at 2437MHz by 802.11n(20MHz)	



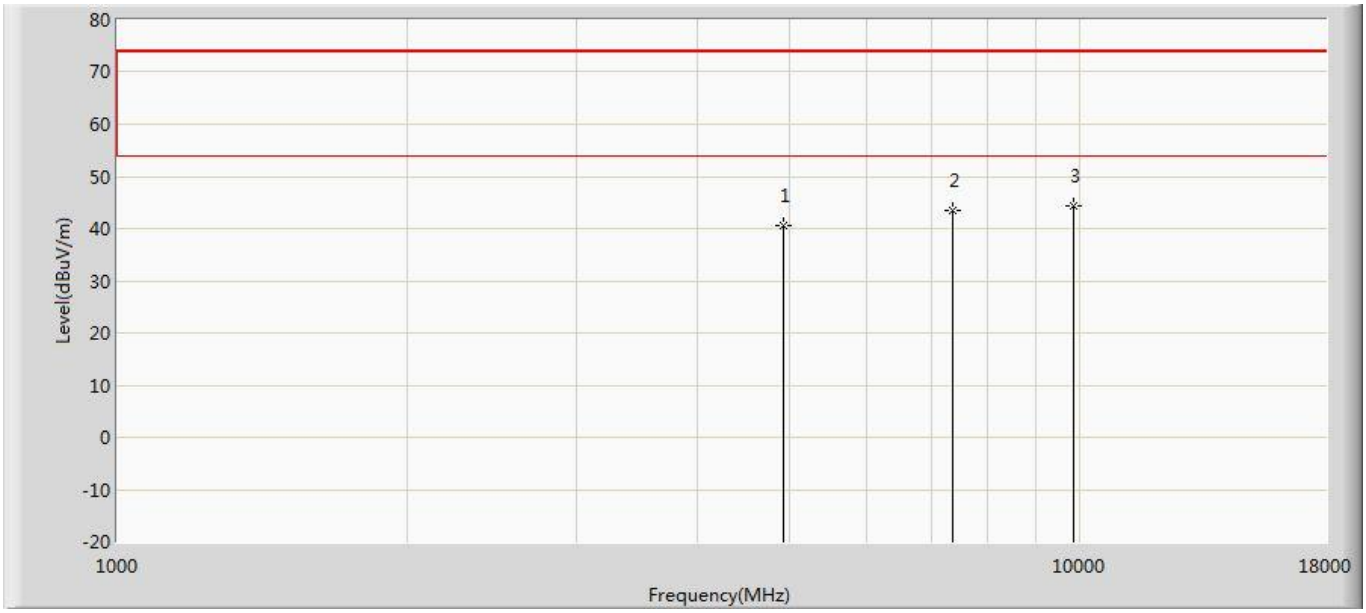
No	Mark	Frequency (MHz)	Measure Level (dBuV/m)	Reading Level (dBuV)	Over Limit (dB)	Limit (dBuV/m)	Factor (dB)	Type
1		4874.000	40.977	36.130	-33.023	74.000	4.846	PK
2		7311.000	43.251	35.260	-30.749	74.000	7.991	PK
3	*	9748.000	44.822	35.117	-29.178	74.000	9.705	PK

Profile: 2060045R	Page No.: 41
Engineer: YULIU	
Site: AC5	Time: 2020/06/28 - 22:34
Limit: FCC_Part15.209_RE(3m)	Margin: 0
Probe: Horn_3117_00167055(1-18GHz)	Polarity: Vertical
EUT: CLOUDGATE BASIC WIRELESS WI-FI - 1 RS485	Power: DC 5V
Note: Mode 3:Transmit at 2462MHz by 802.11n(20MHz)	



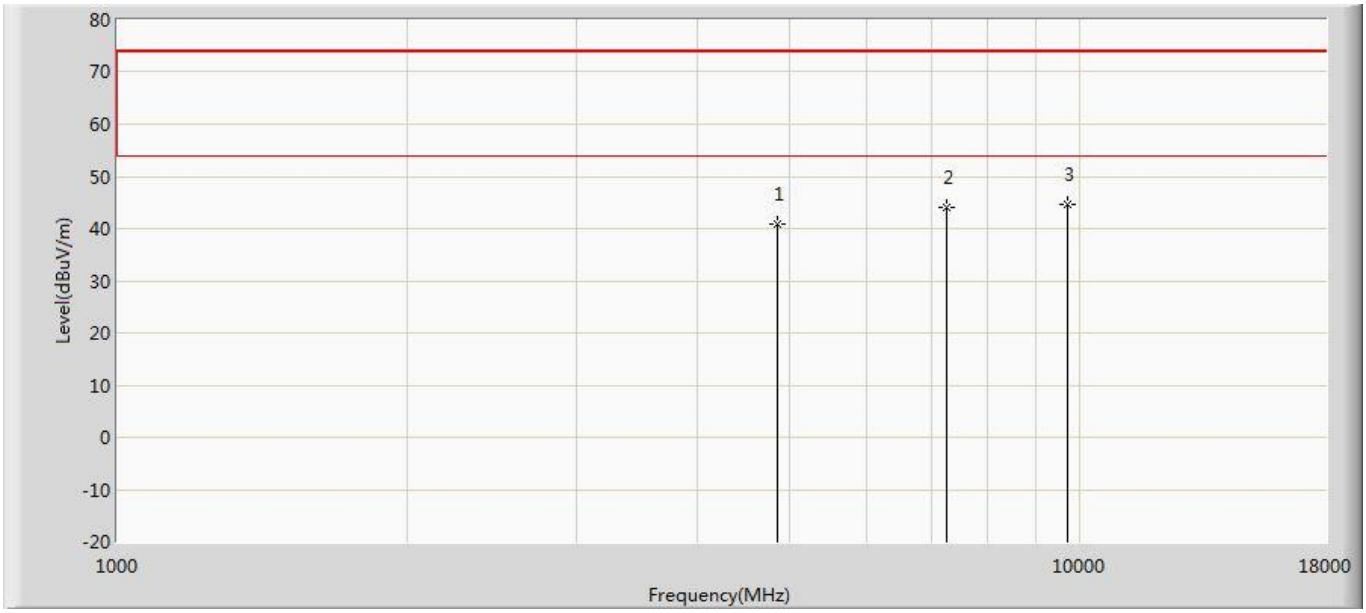
No	Mark	Frequency (MHz)	Measure Level (dBuV/m)	Reading Level (dBuV)	Over Limit (dB)	Limit (dBuV/m)	Factor (dB)	Type
1		4924.000	40.422	35.780	-33.578	74.000	4.641	PK
2		7386.000	43.758	35.608	-30.242	74.000	8.149	PK
3	*	9848.000	46.734	37.075	-27.266	74.000	9.660	PK

Profile: 2060045R	Page No.: 42
Engineer: YULIU	
Site: AC5	Time: 2020/06/28 - 22:35
Limit: FCC_Part15.209_RE(3m)	Margin: 0
Probe: Horn_3117_00167055(1-18GHz)	Polarity: Horizontal
EUT: CLOUDGATE BASIC WIRELESS WI-FI - 1 RS485	Power: DC 5V
Note: Mode 3:Transmit at 2462MHz by 802.11n(20MHz)	



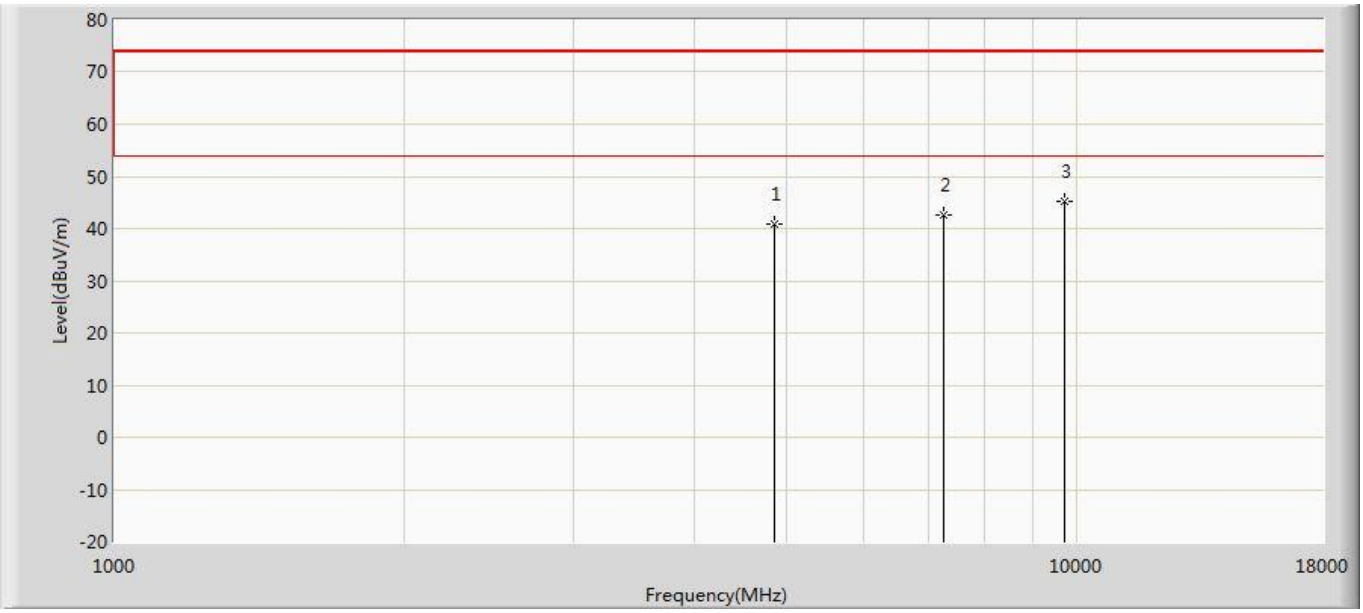
No	Mark	Frequency (MHz)	Measure Level (dBuV/m)	Reading Level (dBuV)	Over Limit (dB)	Limit (dBuV/m)	Factor (dB)	Type
1		4924.000	40.706	36.064	-33.294	74.000	4.641	PK
2		7386.000	43.525	35.375	-30.475	74.000	8.149	PK
3	*	9848.000	44.353	34.694	-29.647	74.000	9.660	PK

Profile: 2060045R	Page No.: 43
Engineer: YULIU	
Site: AC5	Time: 2020/06/28 - 22:35
Limit: FCC_Part15.209_RE(3m)	Margin: 0
Probe: Horn_3117_00167055(1-18GHz)	Polarity: Vertical
EUT: CLOUDGATE BASIC WIRELESS WI-FI - 1 RS485	Power: DC 5V
Note: Mode 4:Transmit at 2422MHz by 802.11n(40MHz)	



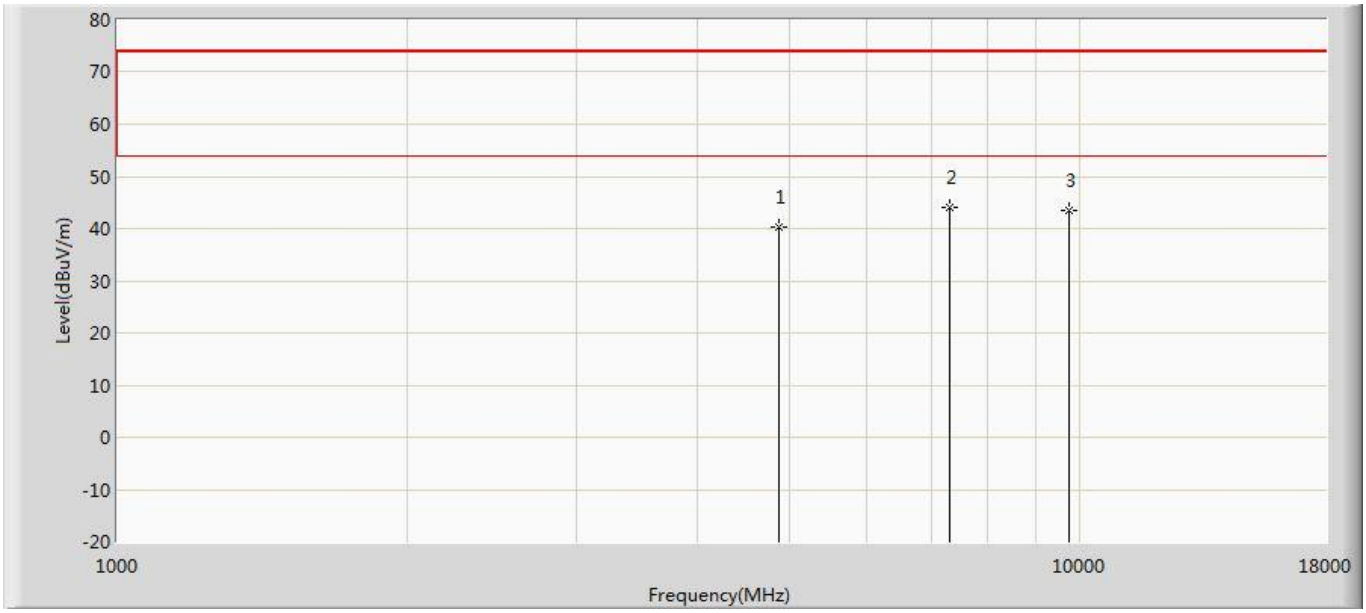
No	Mark	Frequency (MHz)	Measure Level (dBuV/m)	Reading Level (dBuV)	Over Limit (dB)	Limit (dBuV/m)	Factor (dB)	Type
1		4844.000	40.725	36.034	-33.275	74.000	4.691	PK
2		7266.000	44.042	36.094	-29.958	74.000	7.949	PK
3	*	9688.000	44.514	34.585	-29.486	74.000	9.929	PK

Profile: 2060045R	Page No.: 44
Engineer: YULIU	
Site: AC5	Time: 2020/06/28 - 22:35
Limit: FCC_Part15.209_RE(3m)	Margin: 0
Probe: Horn_3117_00167055(1-18GHz)	Polarity: Horizontal
EUT: CLOUDGATE BASIC WIRELESS WI-FI - 1 RS485	Power: DC 5V
Note: Mode 4:Transmit at 2422MHz by 802.11n(40MHz)	



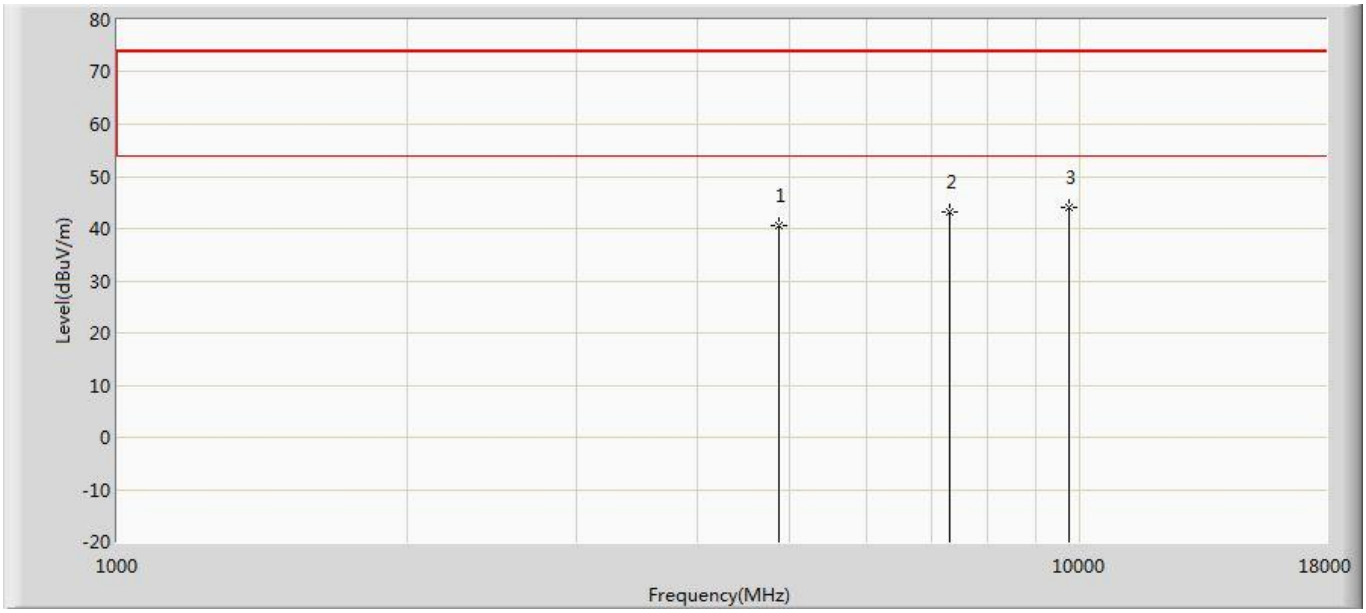
No	Mark	Frequency (MHz)	Measure Level (dBuV/m)	Reading Level (dBuV)	Over Limit (dB)	Limit (dBuV/m)	Factor (dB)	Type
1		4844.000	40.850	36.159	-33.150	74.000	4.691	PK
2		7266.000	42.714	34.766	-31.286	74.000	7.949	PK
3	*	9688.000	45.150	35.221	-28.850	74.000	9.929	PK

Profile: 2060045R	Page No.: 45
Engineer: YULIU	
Site: AC5	Time: 2020/06/28 - 22:35
Limit: FCC_Part15.209_RE(3m)	Margin: 0
Probe: Horn_3117_00167055(1-18GHz)	Polarity: Vertical
EUT: CLOUDGATE BASIC WIRELESS WI-FI - 1 RS485	Power: DC 5V
Note: Mode 4:Transmit at 2437MHz by 802.11n(40MHz)	



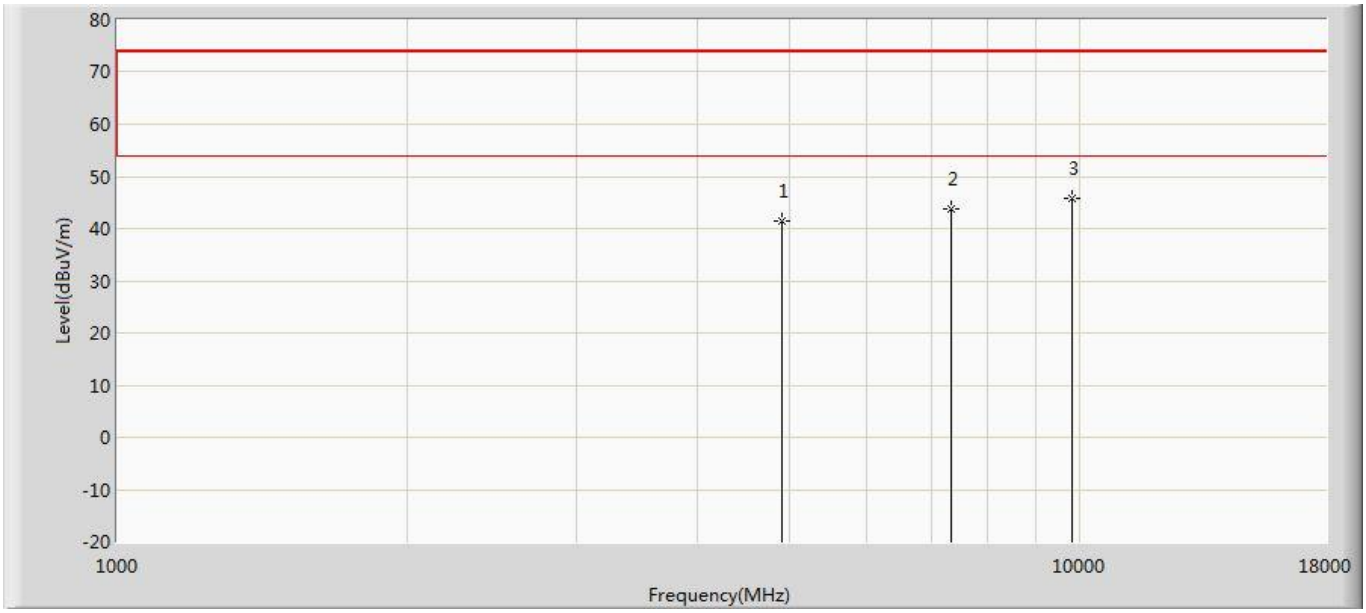
No	Mark	Frequency (MHz)	Measure Level (dBuV/m)	Reading Level (dBuV)	Over Limit (dB)	Limit (dBuV/m)	Factor (dB)	Type
1		4874.000	40.433	35.586	-33.567	74.000	4.846	PK
2	*	7311.000	44.045	36.054	-29.955	74.000	7.991	PK
3		9748.000	43.581	33.876	-30.419	74.000	9.705	PK

Profile: 2060045R	Page No.: 46
Engineer: YULIU	
Site: AC5	Time: 2020/06/28 - 22:35
Limit: FCC_Part15.209_RE(3m)	Margin: 0
Probe: Horn_3117_00167055(1-18GHz)	Polarity: Horizontal
EUT: CLOUDGATE BASIC WIRELESS WI-FI - 1 RS485	Power: DC 5V
Note: Mode 4:Transmit at 2437MHz by 802.11n(40MHz)	



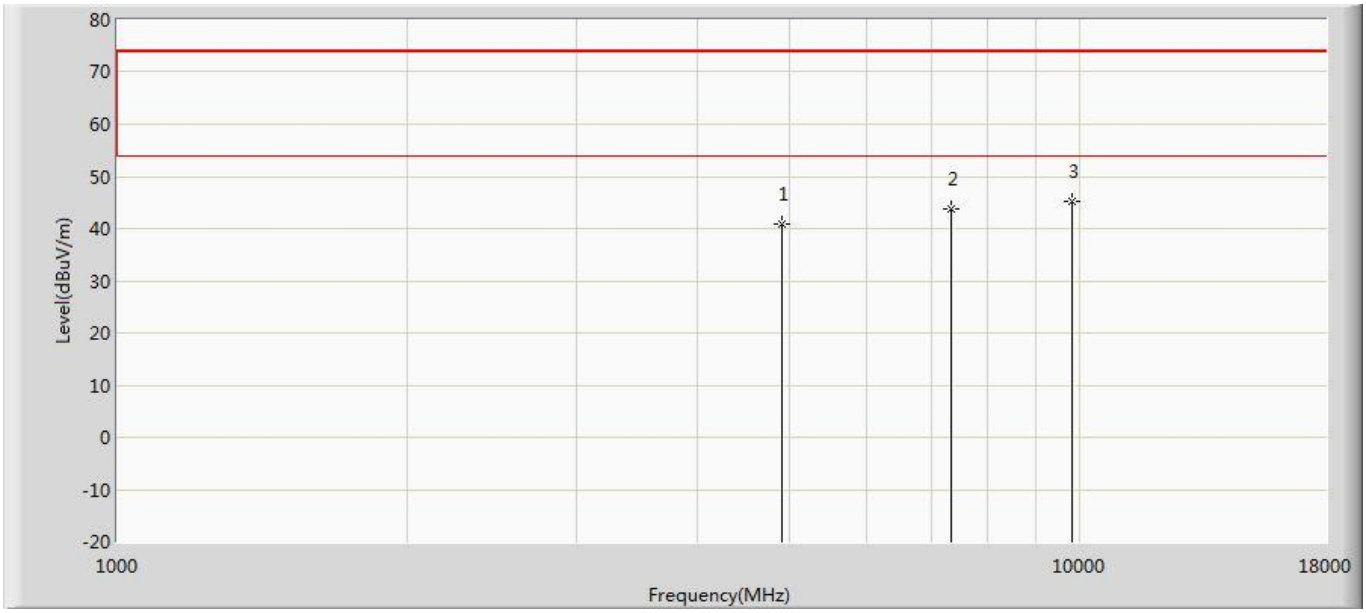
No	Mark	Frequency (MHz)	Measure Level (dBuV/m)	Reading Level (dBuV)	Over Limit (dB)	Limit (dBuV/m)	Factor (dB)	Type
1		4874.000	40.694	35.847	-33.306	74.000	4.846	PK
2		7311.000	43.051	35.060	-30.949	74.000	7.991	PK
3	*	9748.000	43.967	34.262	-30.033	74.000	9.705	PK

Profile: 2060045R	Page No.: 47
Engineer: YULIU	
Site: AC5	Time: 2020/06/28 - 22:35
Limit: FCC_Part15.209_RE(3m)	Margin: 0
Probe: Horn_3117_00167055(1-18GHz)	Polarity: Vertical
EUT: CLOUDGATE BASIC WIRELESS WI-FI - 1 RS485	Power: DC 5V
Note: Mode 4: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	41.338	36.677	-32.662	74.000	4.661	PK
2		7356.000	43.700	35.369	-30.300	74.000	8.331	PK
3	*	9808.000	45.824	35.698	-28.176	74.000	10.126	PK

Profile: 2060045R	Page No.: 48
Engineer: YULIU	
Site: AC5	Time: 2020/06/28 - 22:35
Limit: FCC_Part15.209_RE(3m)	Margin: 0
Probe: Horn_3117_00167055(1-18GHz)	Polarity: Horizontal
EUT: CLOUDGATE BASIC WIRELESS WI-FI - 1 RS485	Power: DC 5V
Note: Mode 4: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	40.849	36.188	-33.151	74.000	4.661	PK
2		7356.000	43.867	35.536	-30.133	74.000	8.331	PK
3	*	9808.000	45.229	35.103	-28.771	74.000	10.126	PK

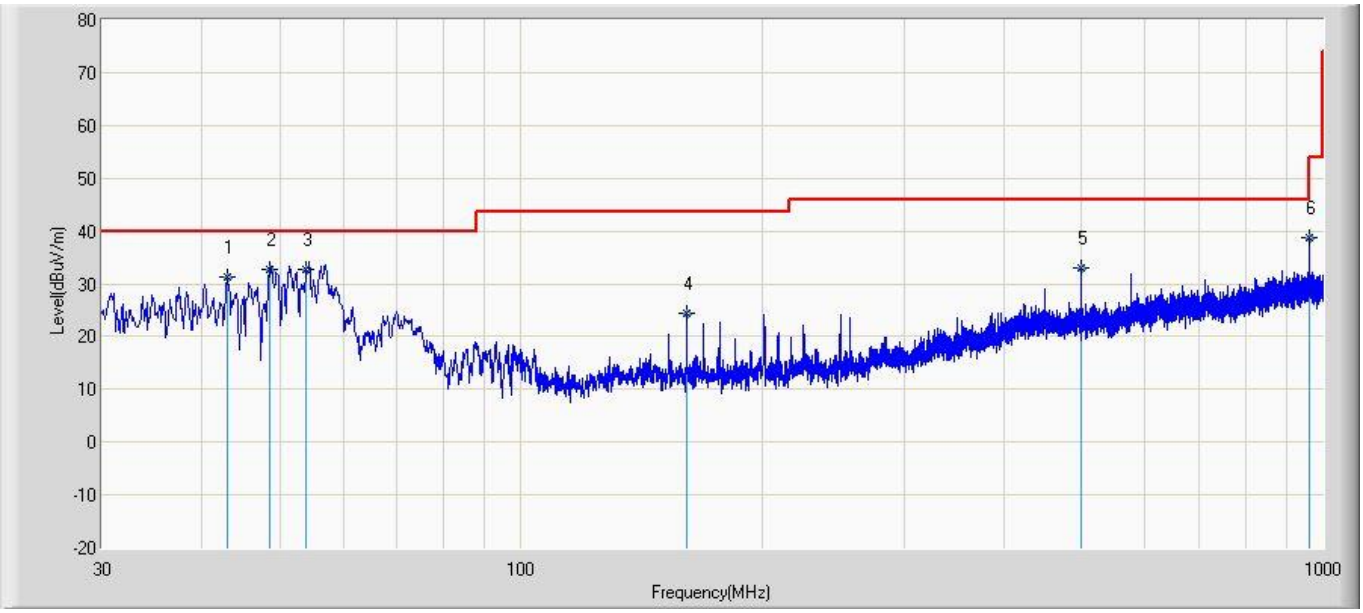
Note1: Measure Level = Reading Level + Factor.

Note2: The test frequency range, 9kHz~30MHz, 18GHz~25GHz, both of the worst case are at least 6dB below the limits, therefore no data appear in the report.

Note3: 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.

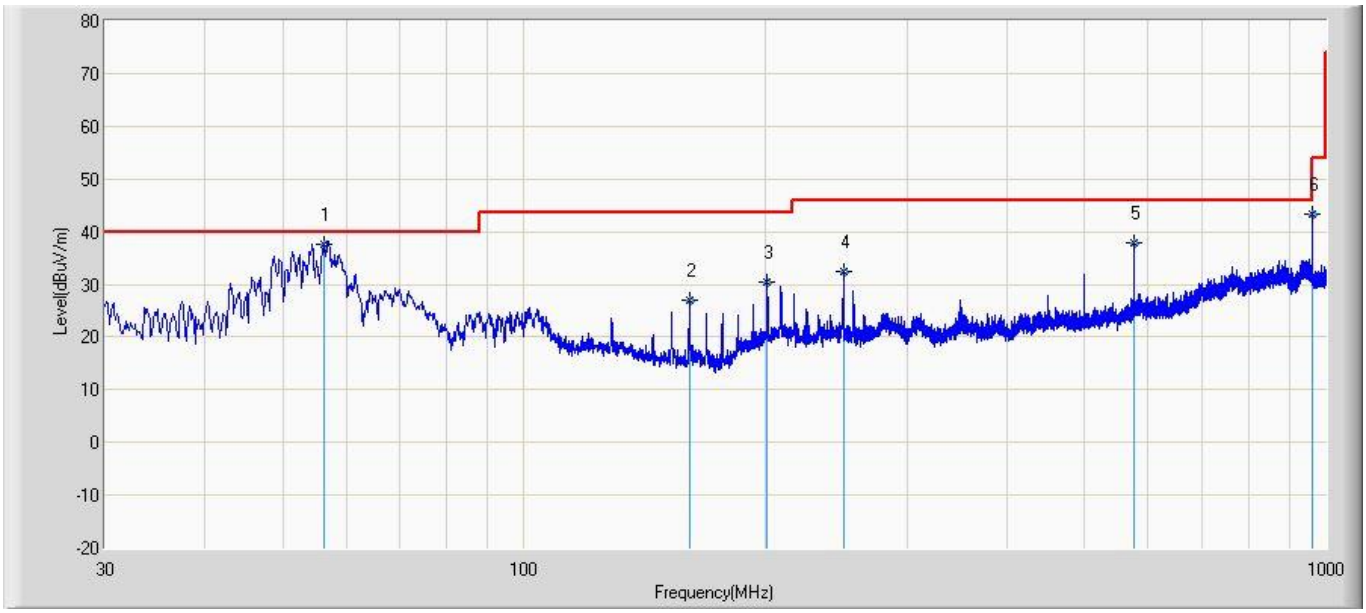
The worst case of Radiated Emission below 1GHz:

Engineer: Pawn	
Site: AC3	Time: 2020/07/08 - 03:46
Limit: FCC_Part15.209_RE(3m)	Margin: 0
Probe: AC3_3m (30-1000MHz)	Polarity: Horizontal
EUT: CLOUDGATE BASIC WIRELESS WI-FI - 1 RS485	Power: DC 5V
Note: Mode 1	



No	Mark	Frequency (MHz)	Measure Level (dBuV/m)	Reading Level (dBuV)	Over Limit (dB)	Limit (dBuV/m)	Factor (dB)	Type
1		42.974	31.389	12.498	-8.611	40.000	18.891	QP
2		48.551	32.683	16.803	-7.317	40.000	15.880	QP
3	*	54.007	32.727	19.051	-7.273	40.000	13.676	QP
4		160.829	24.378	7.028	-19.122	43.500	17.350	QP
5		499.965	33.116	6.208	-12.884	46.000	26.908	QP
6		959.987	38.661	5.934	-7.339	46.000	32.726	QP

Engineer: Pawn	
Site: AC3	Time: 2020/07/08 - 03:46
Limit: FCC_Part15.209_RE(3m)	Margin: 0
Probe: AC3_3m (30-1000MHz)	Polarity: Vertical
EUT: CLOUDGATE BASIC WIRELESS WI-FI - 1 RS485	Power: DC 5V
Note: Mode 1	



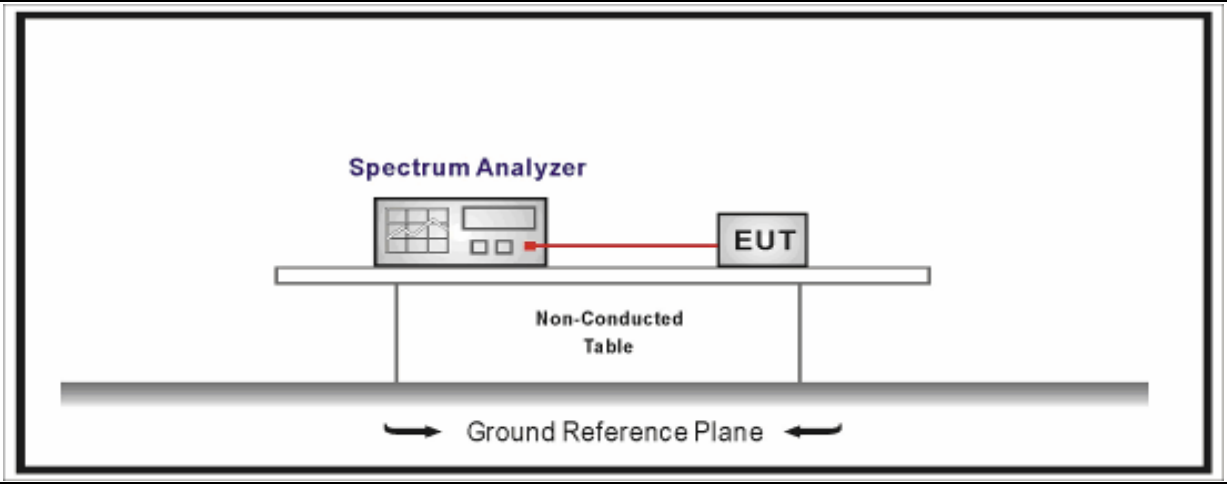
No	Mark	Frequency (MHz)	Measure Level (dBuV/m)	Reading Level (dBuV)	Over Limit (dB)	Limit (dBuV/m)	Factor (dB)	Type
1	*	56.311	37.561	21.162	-2.439	40.000	16.399	QP
2		160.586	27.125	8.512	-16.375	43.500	18.612	QP
3		200.841	30.529	7.962	-12.971	43.500	22.566	QP
4		249.947	32.345	8.909	-13.655	46.000	23.436	QP
5		575.989	37.915	11.326	-8.085	46.000	26.589	QP
6		959.987	43.458	10.126	-2.542	46.000	33.332	QP

5. Emissions in non-restricted frequency bands

5.1. Test Equipment

Emissions in non-restricted frequency bands / TR-8					
Instrument	Manufacturer	Type No.	Serial No.	Cal. Date	Cal. Due Date
Spectrum Analyzer	Agilent	N9010A	MY48030494	2019.09.28	2020.09.27
EXA Spectrum Analyzer	Keysight	N9010A	MY55370495	2020.04.17	2021.04.16
MXA Signal Analyzer	Keysight	N9020A	MY56060147	2019.08.30	2020.08.29
Coaxial Cable	N/A	N/A	2007	2020.06.09	2021.06.08
Temperature/Humidity Meter	Zhichen	ZC1-2	TR8-TH	2019.09.02	2020.09.01
Note: All equipment is calibrated with traceable calibrations. Each calibration is traceable to the national or international standards.					

5.2. Test Setup

Emissions in non-restricted frequency bands


5.3. Limit

Un-Restricted Band Emissions Limit	
RF Output power (Detection methods)	Limit(dB)
RF Output power(Average detector)	30c(Note1)
RF Output power(PK detector)	20c(Note2)

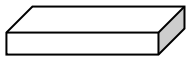
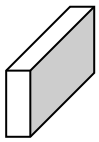
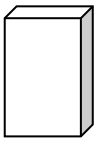
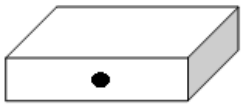
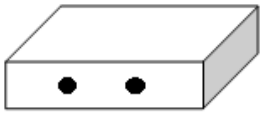
Note 1: If maximum conducted (average) output power was used to demonstrate compliance as described in 9.2, then the peak power in any 100 kHz bandwidth outside of the authorized frequency band shall be attenuated by at least 30 dB relative to the maximum in-band peak PSD level in 100 kHz (i.e., 30 dBc).

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).

5.4. Test Procedure

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

5.5. EUT test Axis definition

<table>
<tr><th>Item</th><th colspan="4">Emissions in non-restricted frequency bands</th></tr>
<tr><td rowspan="3">Device Category</td><td>☐</td><td colspan="3">Fixed point-to-point</td></tr>
<tr><td>☐</td><td colspan="3">Emit multiple directional beams, simultaneously or sequentially</td></tr>
<tr><td>☒</td><td colspan="3">Other cases</td></tr>
<tr><td>Test mode</td><td colspan="4">Mode 1~4</td></tr>
<tr><td rowspan="12">Test method</td><td>☐</td><td colspan="3">Radiated</td></tr>
<tr><td rowspan="3"></td><td>X Axis</td><td>Y Axis</td><td>Z Axis</td></tr>
<tr><td>  </td><td>  </td><td>  </td></tr>
<tr><td>Worst Axis ☐</td><td>Worst Axis ☐</td><td>Worst Axis ☐</td></tr>
<tr><td>☒</td><td colspan="3">Conducted</td></tr>
<tr><td>☒</td><td colspan="3">Chain 1</td></tr>
<tr><td></td><td colspan="3">  </td></tr>
<tr><td>☐</td><td>Chain 1</td><td colspan="2">Chain 2</td></tr>
<tr><td></td><td colspan="3">  </td></tr>
<tr><td>☐</td><td>Chain 1</td><td>Chain 2</td><td>Chain 3</td></tr>
<tr><td></td><td colspan="3">  </td></tr>
</table>

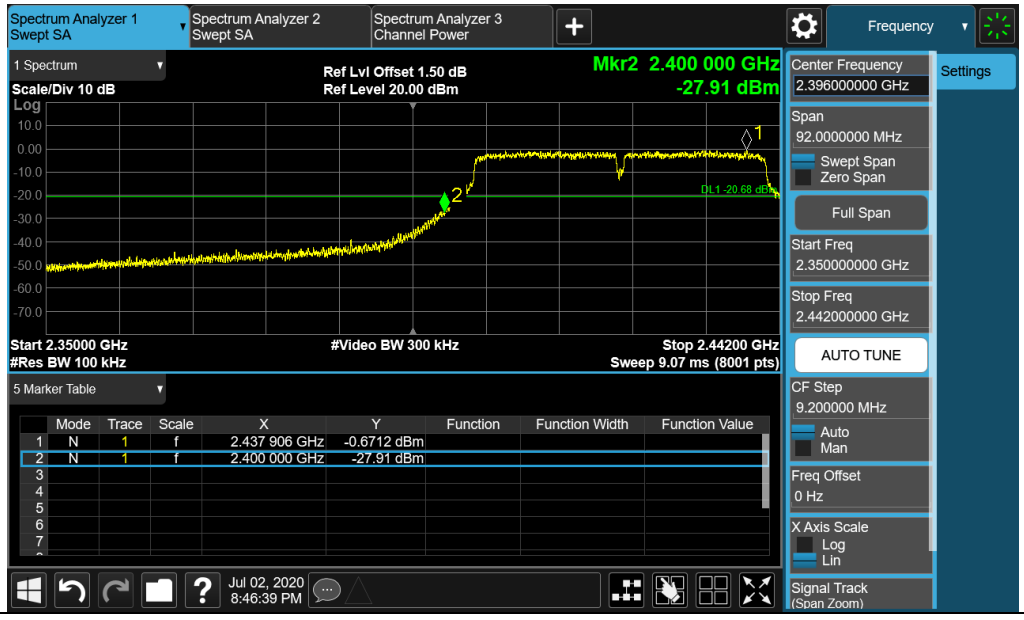
5.6. Test Result

Product Name	:	CLOUDGATE BASIC WIRELESS WI-FI - 1 RS485			
Test Mode	:	Mode1~4	Test Site	:	TR-8
Test Date	:	2020.07.02	Test Engineer	:	Yu

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	01	2412	12.33	2400	-24.15	36.48	>20	Pass
1	11	2462	11.13	2500	-50.73	61.86	>20	Pass
2	01	2412	3.952	2400	-27.75	31.702	>20	Pass
2	11	2462	3.944	2500	-53.83	57.774	>20	Pass
3	01	2412	3.53	2400	-30.25	33.78	>20	Pass
3	11	2462	3.187	2500	-53.14	56.327	>20	Pass
4	03	2422	-0.671	2400	-27.91	27.239	>20	Pass
4	19	2452	-1.095	2500	-46.34	45.245	>20	Pass

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

Mode 4 CH03(2422MHz)

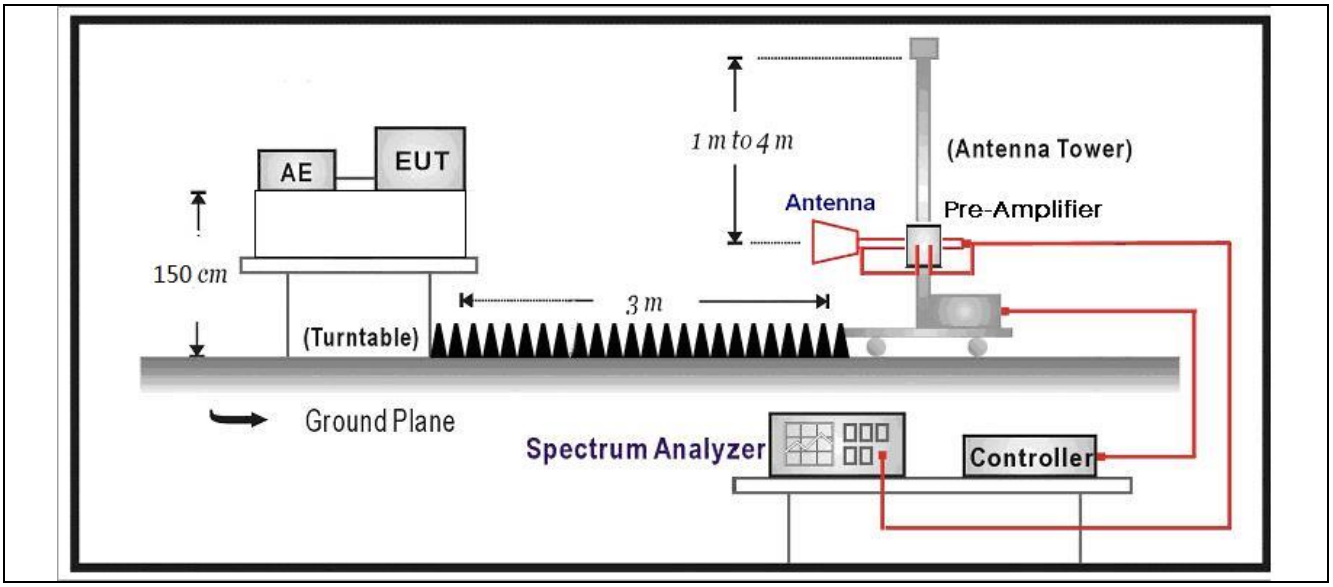


6. Band Edge

6.1. Test Equipment

Band Edge / AC-5					
Instrument	Manufacturer	Type No.	Serial No.	Cal. Date	Cal. Due Date
Spectrum Analyzer	R&S	FSV	104212	2019.12.28	2020.12.27
Signal analyzer	Agilent	E4446A	MY45300103	2020.05.08	2021.05.07
low Noise Amplifier	BXT	NA2651D	LNA17040209	2020.04.13	2021.04.12
Pre-Amplifier	EMCI	EMC184045SE	980263	2020.05.24	2021.05.23
DRG Horn Antenna	ETS-Lindgren	3117	00167055	2020.05.25	2021.05.24
Broad-Band Horn Antenna	Schwarzbeck	BBHA9170	294	2019.03.23	2021.03.22
Coaxial Cable	Huber+Suhner	SUCOFLEX 106	AC5-C2	2020.04.13	2021.04.12
Coaxial Cable	ROSENBERGER	LA1-C011-2000/3000	AC5-40G	2020.04.18	2021.04.17
Coaxial Cable	N/A	N/A	2007	2020.06.09	2021.06.08
Temperature/Humidity Meter	RTS	RTS-8S	AC5-TH	2019.09.02	2020.09.01
Quietek EMI V3(test software)	Quietek	N/A	N/A	N/A	N/A
Note: All equipment is calibrated with traceable calibrations. Each calibration is traceable to the national or international standards.					

6.2. Test Setup



6.3. Limit

Band edge Limit				
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.				

6.4. Test Procedure

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

6.5. EUT test definition

<table>
<tr><th>Item</th><th colspan="4">Radiated Emission Band Edge</th></tr>
<tr><td rowspan="3">Device Category</td><td>☐</td><td colspan="3">Fixed point-to-point</td></tr>
<tr><td>☐</td><td colspan="3">Emit multiple directional beams, simultaneously or sequentially</td></tr>
<tr><td>☒</td><td colspan="3">Other cases</td></tr>
<tr><td>Test mode</td><td colspan="4">Mode 1~4</td></tr>
<tr><td rowspan="13">Test method</td><td>☒</td><td colspan="3">Radiated</td></tr>
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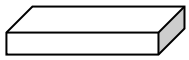
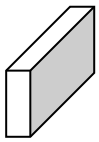
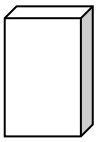
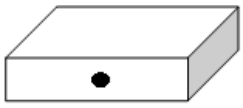
<tr><td>  </td><td>  </td><td>  </td></tr>
<tr><td>Worst Axis ☒</td><td>Worst Axis ☐</td><td>Worst Axis ☐</td></tr>
<tr><td>☐</td><td colspan="3">Conducted</td></tr>
<tr><td>☐</td><td colspan="3">Chain 1</td></tr>
<tr><td></td><td colspan="3">  </td></tr>
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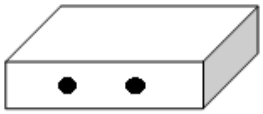
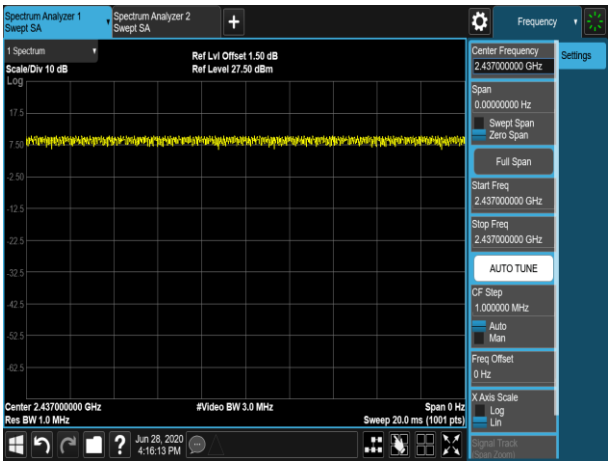
<tr><td></td><td colspan="3">  </td></tr>
<tr><td>☐</td><td>Chain 1</td><td>Chain 2</td><td>Chain 3</td></tr>
<tr><td></td><td colspan="3">  </td></tr>
</table>

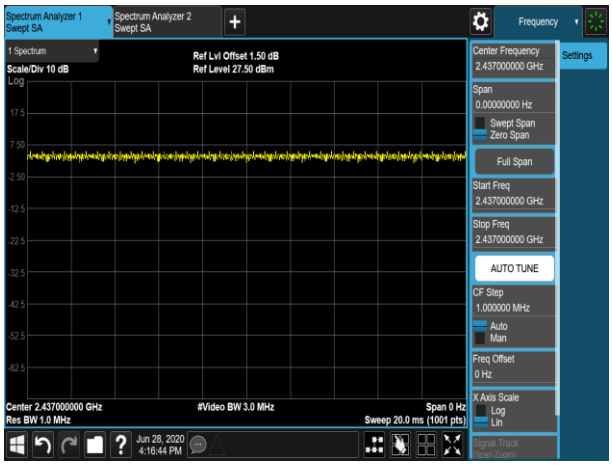
6.6. Duty Cycle

Test Mode	Tx On (ms)	Tx Off (ms)	VBW	Tx On + Tx Off (ms)	Duty Cycle (%)
802.11b	N/A	N/A	10 Hz	N/A	100
802.11g	N/A	N/A	10 Hz	N/A	100
802.11n(20MHz)	N/A	N/A	10 Hz	N/A	100
802.11n(40MHz)	N/A	N/A	10 Hz	N/A	100

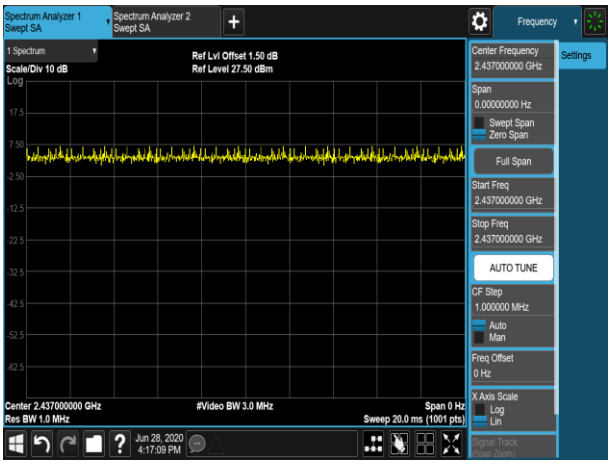
802.11b



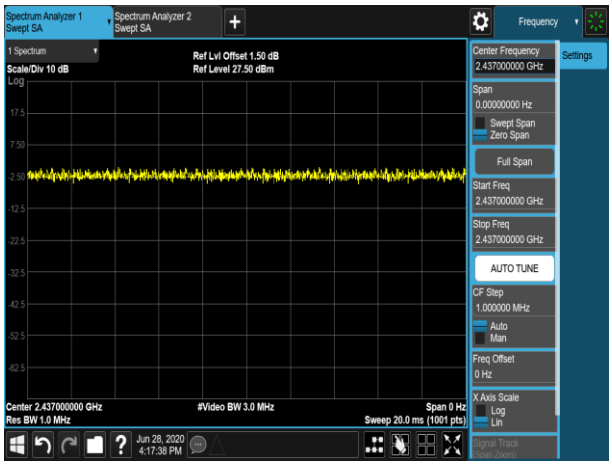
802.11g



802.11n(20MHz)

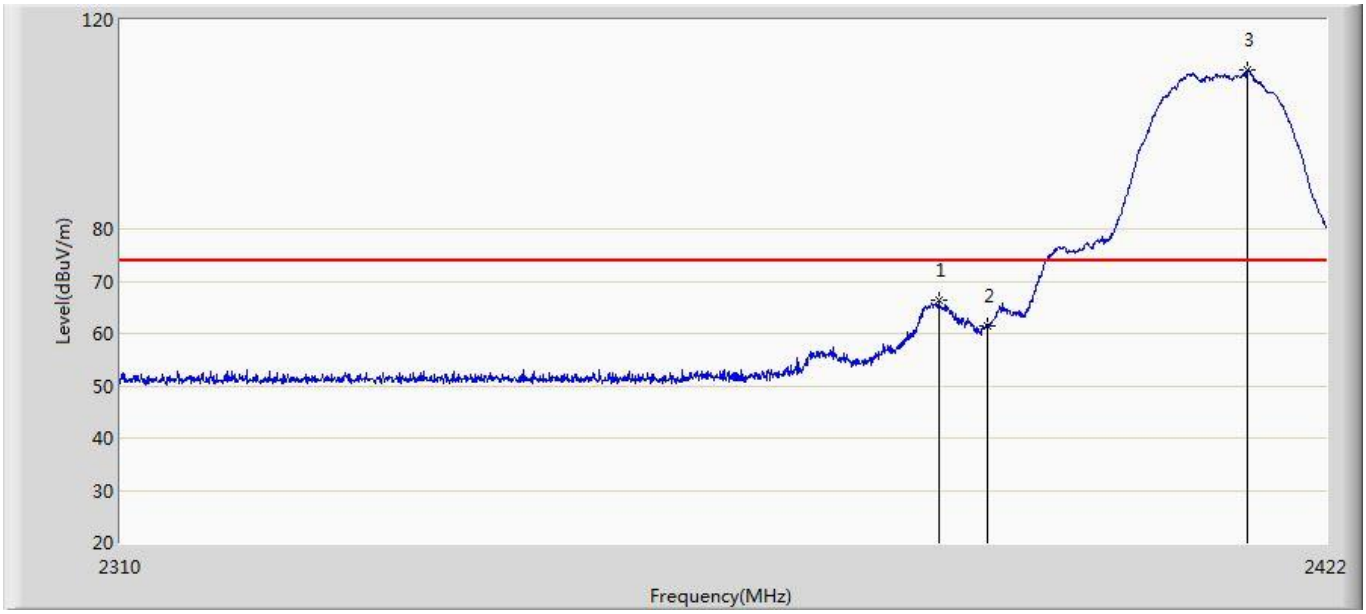


802.11n(40MHz)



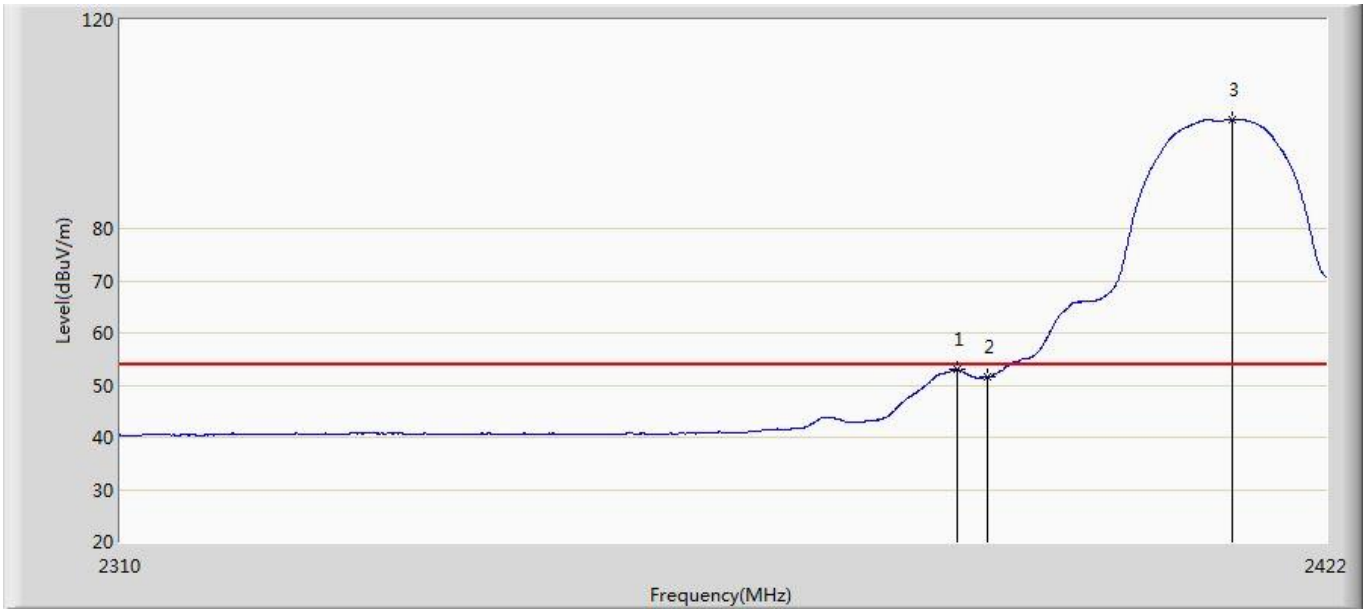
6.7. Test Result

Profile: 2060045R	Page No.: 1
Engineer: YULIU	
Site: AC5	Time: 2020/06/28 - 20:03
Limit: FCC_Part15.209_RE(3m)	Margin: 0
Probe: Horn_3117_00167055(1-18GHz)	Polarity: Vertical
EUT: CLOUDGATE BASIC WIRELESS WI-FI - 1 RS485	Power: DC 5V
Note: Mode 1:Transmit at 2412Mhz by 802.11b	



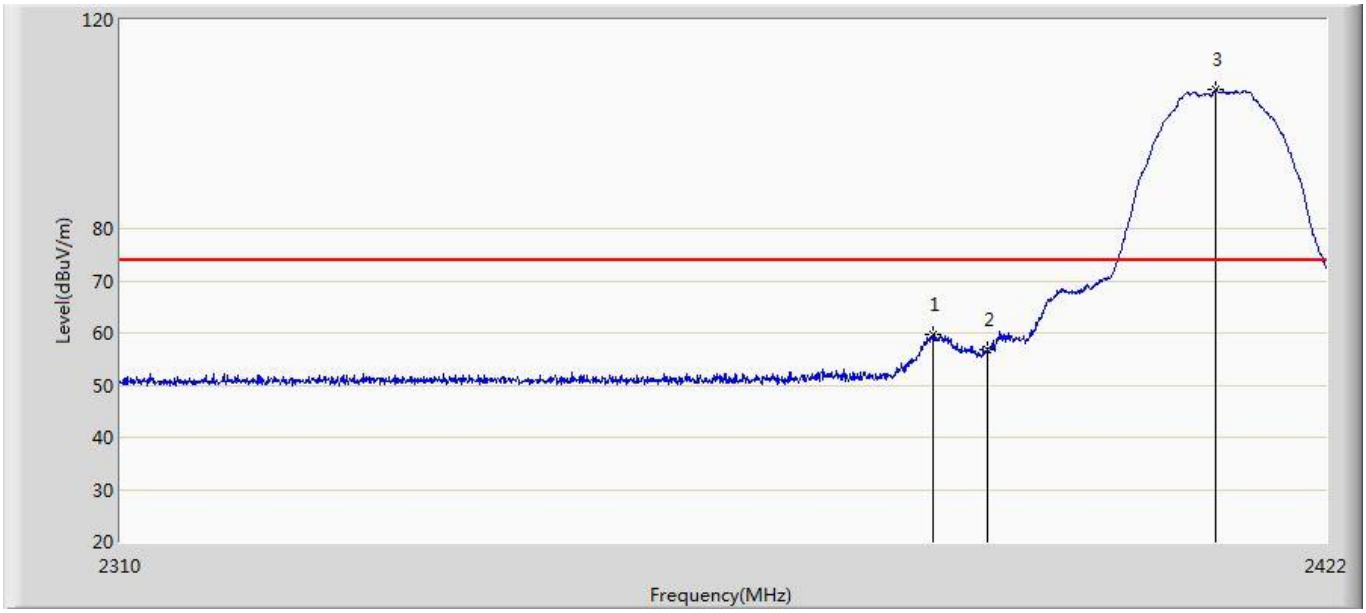
No	Mark	Frequency (MHz)	Measure Level (dBuV/m)	Reading Level (dBuV)	Over Limit (dB)	Limit (dBuV/m)	Factor (dB)	Type
1		2385.432	66.262	30.807	-7.738	74.000	35.455	PK
2		2390.000	61.366	25.909	-12.634	74.000	35.458	PK
3	*	2414.608	110.305	74.816	N/A	N/A	35.490	PK

Profile: 2060045R	Page No.: 2
Engineer: YULIU	
Site: AC5	Time: 2020/06/28 - 20:09
Limit: FCC_Part15.209_RE(3m)	Margin: 0
Probe: Horn_3117_00167055(1-18GHz)	Polarity: Vertical
EUT: CLOUDGATE BASIC WIRELESS WI-FI - 1 RS485	Power: DC 5V
Note: Mode 1:Transmit at 2412Mhz by 802.11b	



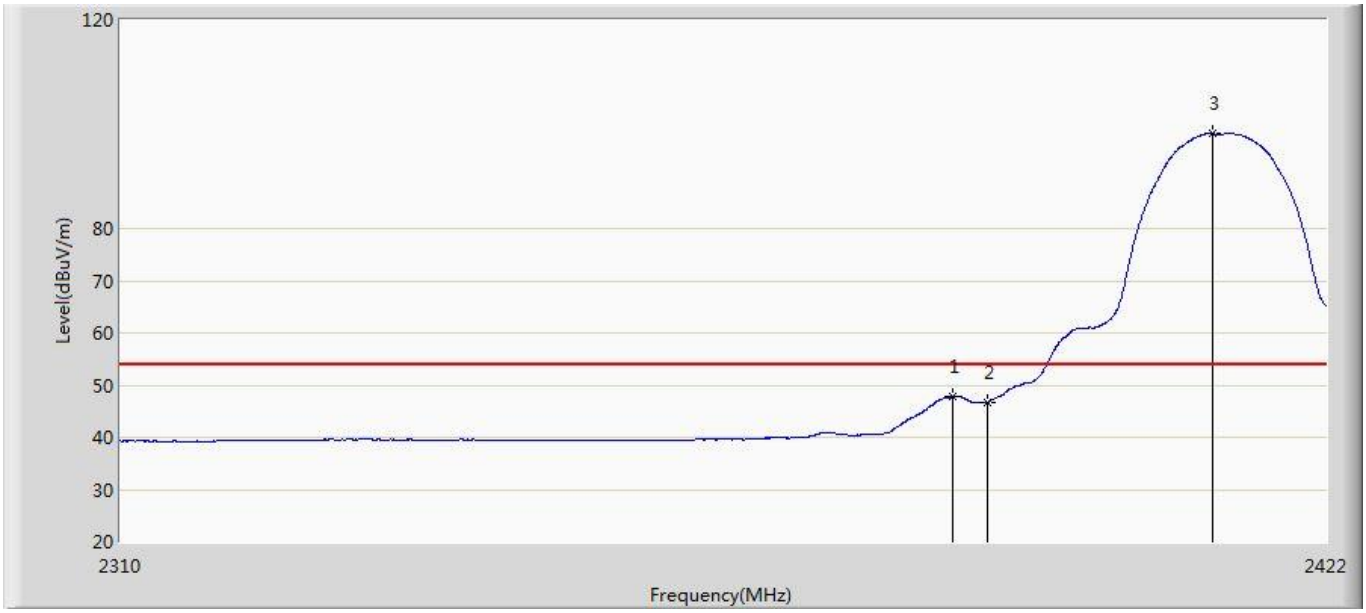
No	Mark	Frequency (MHz)	Measure Level (dBuV/m)	Reading Level (dBuV)	Over Limit (dB)	Limit (dBuV/m)	Factor (dB)	Type
1		2387.168	52.987	17.531	-1.013	54.000	35.456	AV
2		2390.000	51.577	16.120	-2.423	54.000	35.458	AV
3	*	2413.152	100.952	65.466	N/A	N/A	35.486	AV

Profile: 2060045R	Page No.: 3
Engineer: YULIU	
Site: AC5	Time: 2020/06/28 - 20:13
Limit: FCC_Part15.209_RE(3m)	Margin: 0
Probe: Horn_3117_00167055(1-18GHz)	Polarity: Horizontal
EUT: CLOUDGATE BASIC WIRELESS WI-FI - 1 RS485	Power: DC 5V
Note: Mode 1:Transmit at 2412Mhz by 802.11b	



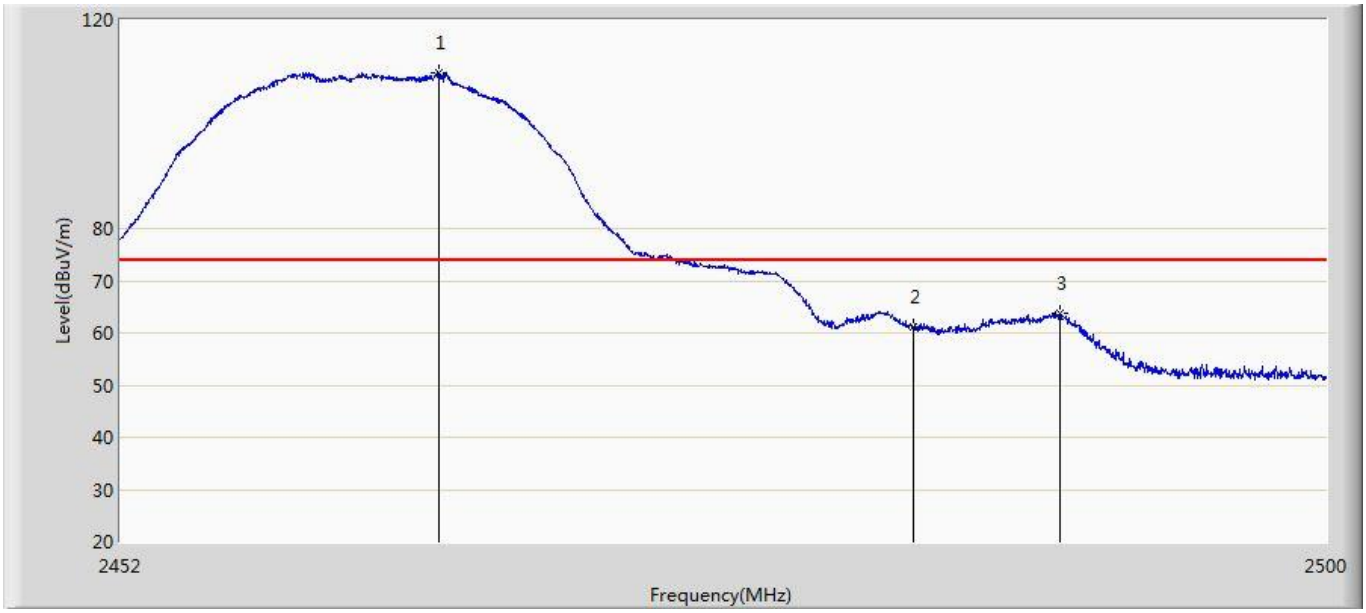
No	Mark	Frequency (MHz)	Measure Level (dBuV/m)	Reading Level (dBuV)	Over Limit (dB)	Limit (dBuV/m)	Factor (dB)	Type
1		2384.872	59.721	24.267	-14.279	74.000	35.455	PK
2		2390.000	56.682	21.225	-17.318	74.000	35.458	PK
3	*	2411.528	106.576	71.094	N/A	N/A	35.482	PK

Profile: 2060045R	Page No.: 4
Engineer: YULIU	
Site: AC5	Time: 2020/06/28 - 20:16
Limit: FCC_Part15.209_RE(3m)	Margin: 0
Probe: Horn_3117_00167055(1-18GHz)	Polarity: Horizontal
EUT: CLOUDGATE BASIC WIRELESS WI-FI - 1 RS485	Power: DC 5V
Note: Mode 1:Transmit at 2412Mhz by 802.11b	



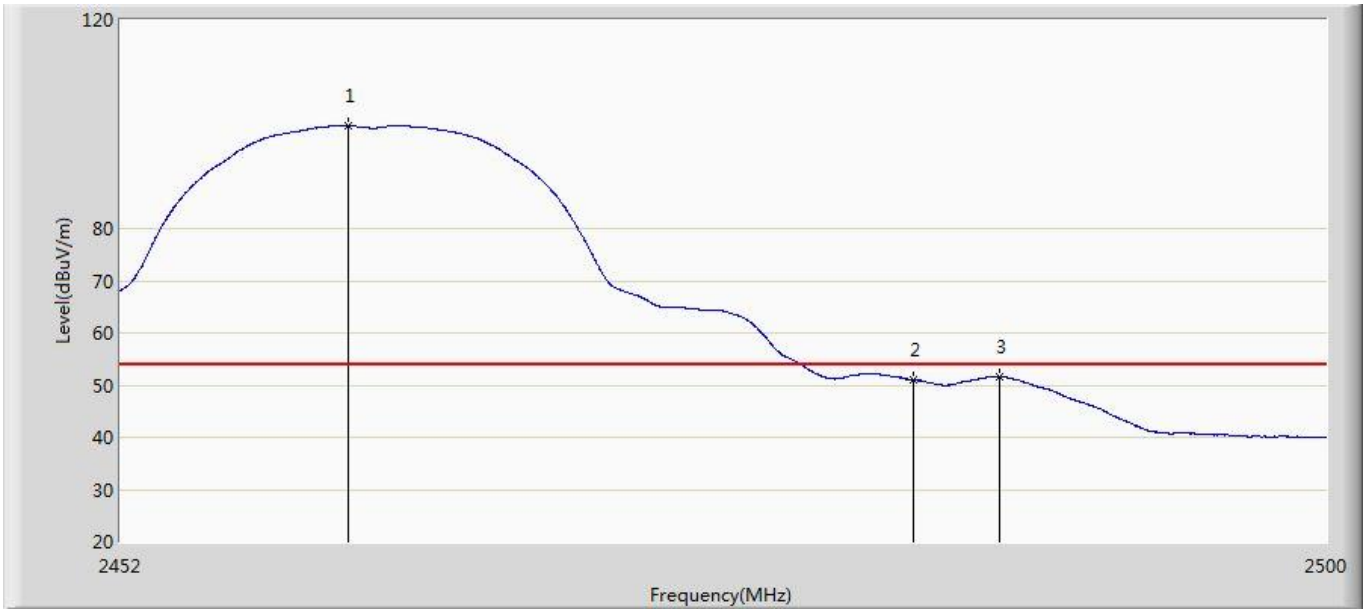
No	Mark	Frequency (MHz)	Measure Level (dBuV/m)	Reading Level (dBuV)	Over Limit (dB)	Limit (dBuV/m)	Factor (dB)	Type
1		2386.832	47.817	12.361	-6.183	54.000	35.456	AV
2		2390.000	46.706	11.249	-7.294	54.000	35.458	AV
3	*	2411.192	98.192	62.711	N/A	N/A	35.481	AV

Profile: 2060045R	Page No.: 5
Engineer: YULIU	
Site: AC5	Time: 2020/06/28 - 20:19
Limit: FCC_Part15.209_RE(3m)	Margin: 0
Probe: Horn_3117_00167055(1-18GHz)	Polarity: Vertical
EUT: CLOUDGATE BASIC WIRELESS WI-FI - 1 RS485	Power: DC 5V
Note: Mode 1:Transmit at 2462Mhz by 802.11b	



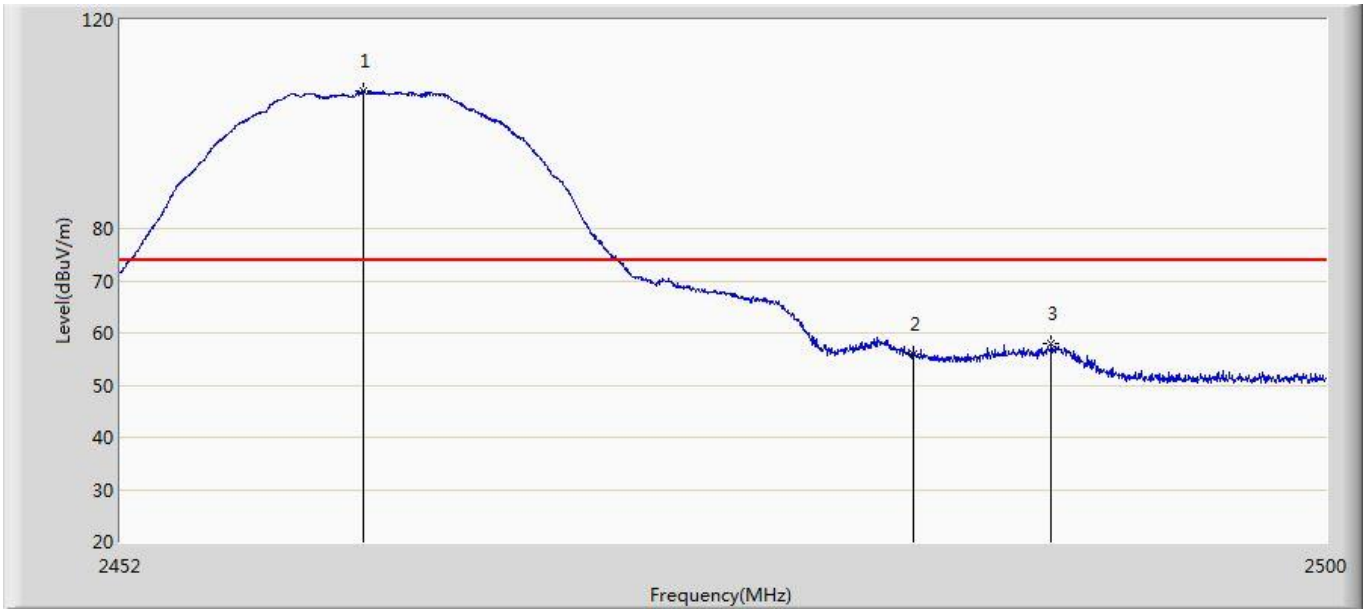
No	Mark	Frequency (MHz)	Measure Level (dBuV/m)	Reading Level (dBuV)	Over Limit (dB)	Limit (dBuV/m)	Factor (dB)	Type
1	*	2464.624	109.963	74.431	N/A	N/A	35.532	PK
2		2483.500	61.133	25.615	-12.867	74.000	35.517	PK
3		2489.320	63.677	28.126	-10.323	74.000	35.551	PK

Profile: 2060045R	Page No.: 6
Engineer: YULIU	
Site: AC5	Time: 2020/06/28 - 20:21
Limit: FCC_Part15.209_RE(3m)	Margin: 0
Probe: Horn_3117_00167055(1-18GHz)	Polarity: Vertical
EUT: CLOUDGATE BASIC WIRELESS WI-FI - 1 RS485	Power: DC 5V
Note: Mode 1:Transmit at 2462Mhz by 802.11b	



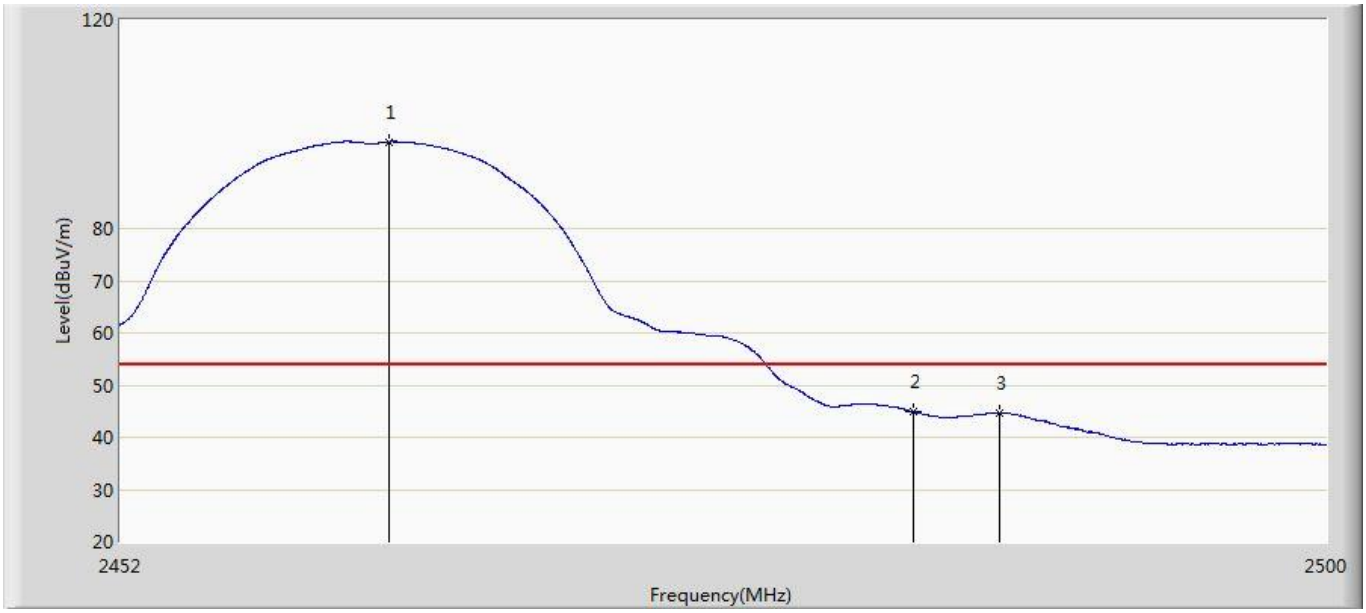
No	Mark	Frequency (MHz)	Measure Level (dBuV/m)	Reading Level (dBuV)	Over Limit (dB)	Limit (dBuV/m)	Factor (dB)	Type
1	*	2461.000	99.751	64.215	N/A	N/A	35.536	AV
2		2483.500	50.933	15.415	-3.067	54.000	35.517	AV
3		2486.896	51.701	16.164	-2.299	54.000	35.537	AV

Profile: 2060045R	Page No.: 7
Engineer: YULIU	
Site: AC5	Time: 2020/06/28 - 20:23
Limit: FCC_Part15.209_RE(3m)	Margin: 0
Probe: Horn_3117_00167055(1-18GHz)	Polarity: Horizontal
EUT: CLOUDGATE BASIC WIRELESS WI-FI - 1 RS485	Power: DC 5V
Note: Mode 1:Transmit at 2462Mhz by 802.11b	



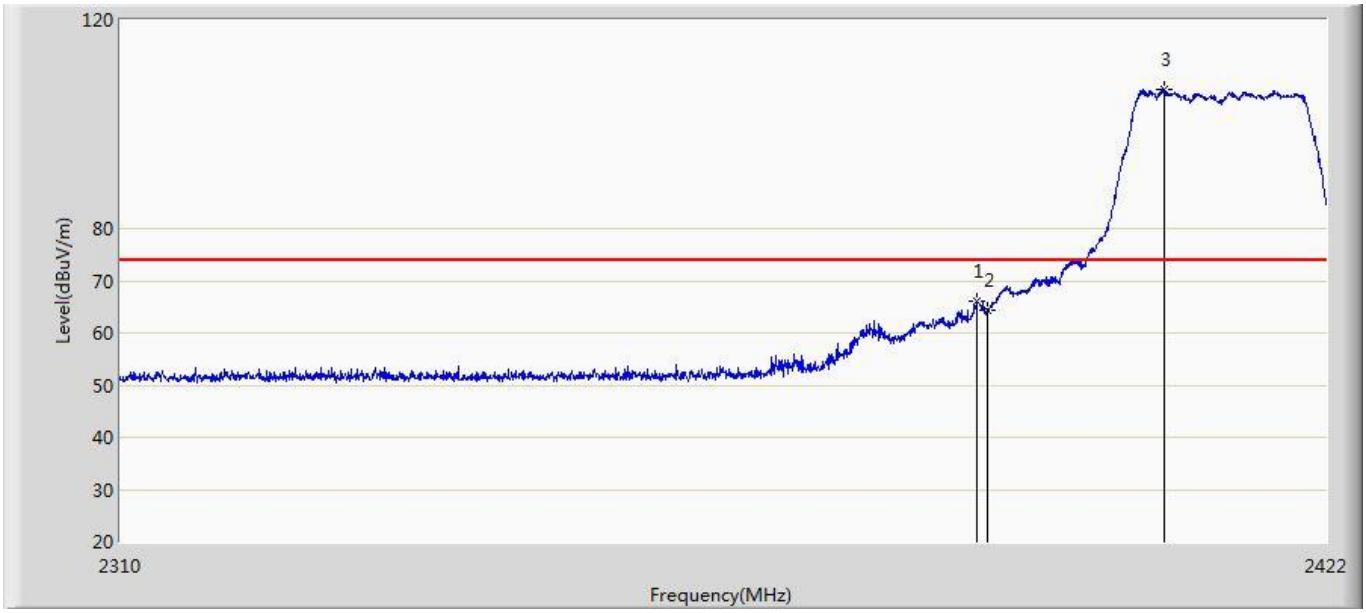
No	Mark	Frequency (MHz)	Measure Level (dBuV/m)	Reading Level (dBuV)	Over Limit (dB)	Limit (dBuV/m)	Factor (dB)	Type
1	*	2461.624	106.358	70.820	N/A	N/A	35.538	PK
2		2483.500	55.861	20.343	-18.139	74.000	35.517	PK
3		2488.984	57.902	22.353	-16.098	74.000	35.549	PK

Profile: 2060045R	Page No.: 8
Engineer: YULIU	
Site: AC5	Time: 2020/06/28 - 20:25
Limit: FCC_Part15.209_RE(3m)	Margin: 0
Probe: Horn_3117_00167055(1-18GHz)	Polarity: Horizontal
EUT: CLOUDGATE BASIC WIRELESS WI-FI - 1 RS485	Power: DC 5V
Note: Mode 1:Transmit at 2462Mhz by 802.11b	



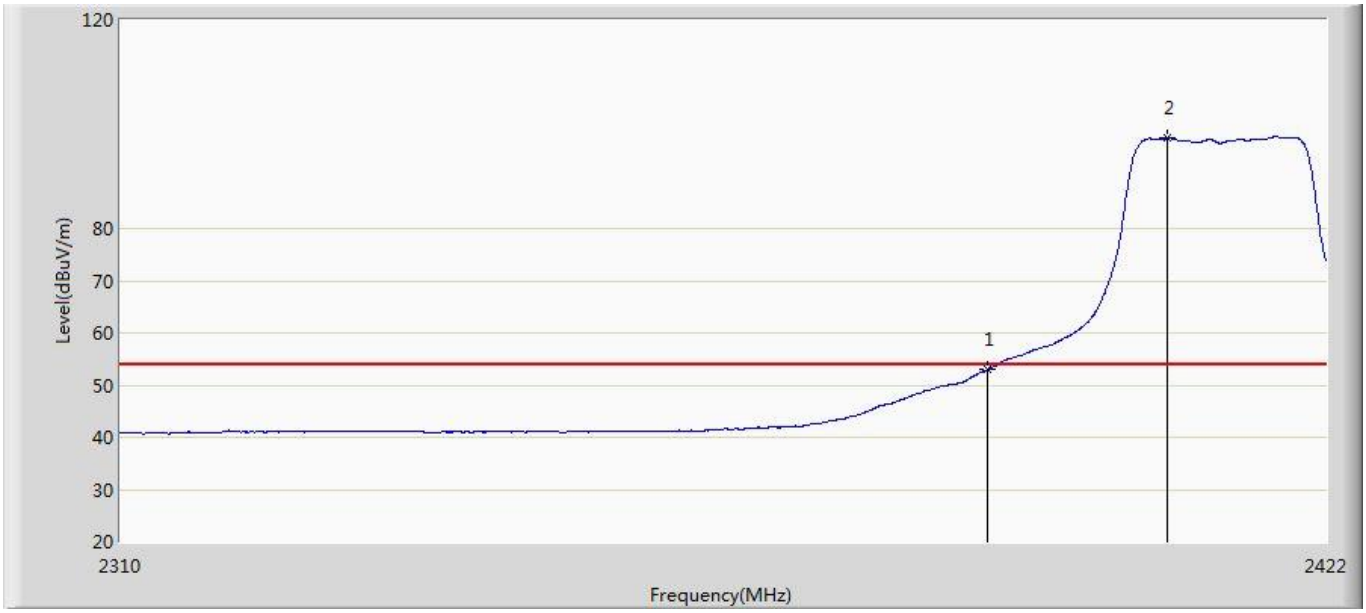
No	Mark	Frequency (MHz)	Measure Level (dBuV/m)	Reading Level (dBuV)	Over Limit (dB)	Limit (dBuV/m)	Factor (dB)	Type
1	*	2462.632	96.660	61.122	N/A	N/A	35.538	AV
2		2483.500	44.860	9.342	-9.140	54.000	35.517	AV
3		2486.896	44.697	9.160	-9.303	54.000	35.537	AV

Profile: 2060045R	Page No.: 9
Engineer: YULIU	
Site: AC5	Time: 2020/06/28 - 20:28
Limit: FCC_Part15.209_RE(3m)	Margin: 0
Probe: Horn_3117_00167055(1-18GHz)	Polarity: Vertical
EUT: CLOUDGATE BASIC WIRELESS WI-FI - 1 RS485	Power: DC 5V
Note: Mode 2:Transmit at 2412Mhz by 802.11g	



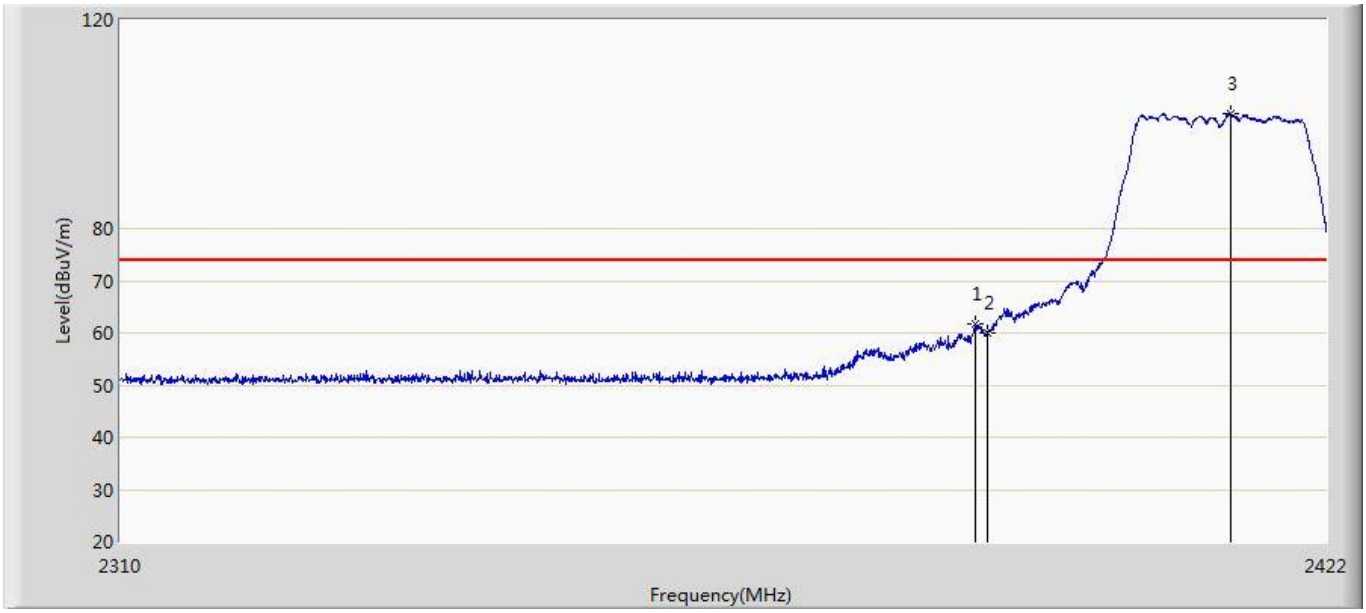
No	Mark	Frequency (MHz)	Measure Level (dBuV/m)	Reading Level (dBuV)	Over Limit (dB)	Limit (dBuV/m)	Factor (dB)	Type
1		2389.016	66.056	30.599	-7.944	74.000	35.457	PK
2		2390.000	64.403	28.946	-9.597	74.000	35.458	PK
3	*	2406.712	106.614	71.139	N/A	N/A	35.476	PK

Profile: 2060045R	Page No.: 10
Engineer: YULIU	
Site: AC5	Time: 2020/06/28 - 20:38
Limit: FCC_Part15.209_RE(3m)	Margin: 0
Probe: Horn_3117_00167055(1-18GHz)	Polarity: Vertical
EUT: CLOUDGATE BASIC WIRELESS WI-FI - 1 RS485	Power: DC 5V
Note: Mode 2:Transmit at 2412Mhz by 802.11g	



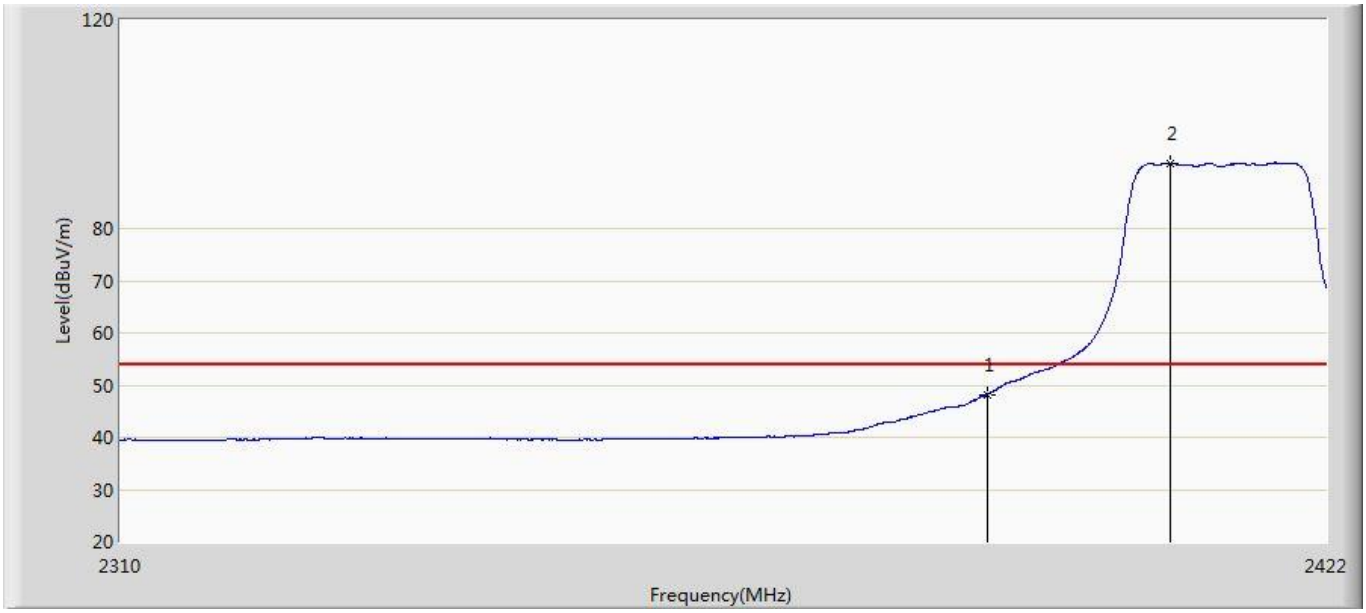
No	Mark	Frequency (MHz)	Measure Level (dBuV/m)	Reading Level (dBuV)	Over Limit (dB)	Limit (dBuV/m)	Factor (dB)	Type
1		2390.000	52.940	17.483	-1.060	54.000	35.458	AV
2	*	2406.936	97.306	61.831	N/A	N/A	35.475	AV

Profile: 2060045R	Page No.: 11
Engineer: YULIU	
Site: AC5	Time: 2020/06/28 - 20:48
Limit: FCC_Part15.209_RE(3m)	Margin: 0
Probe: Horn_3117_00167055(1-18GHz)	Polarity: Horizontal
EUT: CLOUDGATE BASIC WIRELESS WI-FI - 1 RS485	Power: DC 5V
Note: Mode 2:Transmit at 2412Mhz by 802.11g	



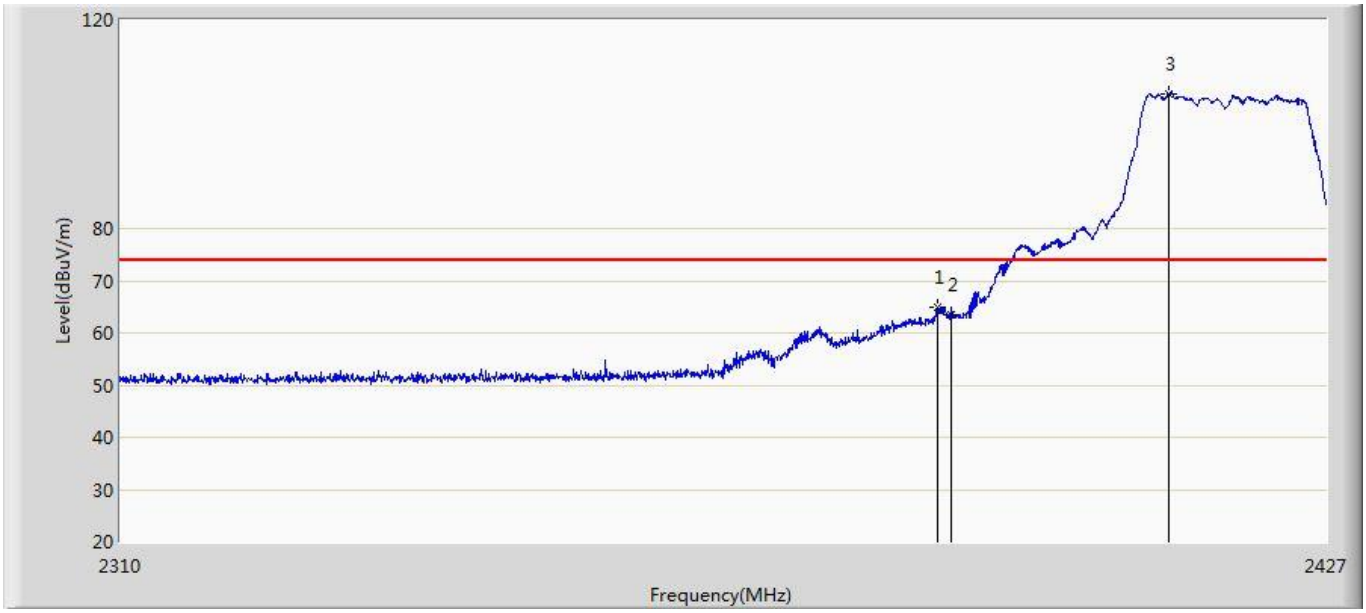
No	Mark	Frequency (MHz)	Measure Level (dBuV/m)	Reading Level (dBuV)	Over Limit (dB)	Limit (dBuV/m)	Factor (dB)	Type
1		2388.960	61.769	26.312	-12.231	74.000	35.457	PK
2		2390.000	60.118	24.661	-13.882	74.000	35.458	PK
3	*	2412.984	101.991	66.506	N/A	N/A	35.485	PK

Profile: 2060045R	Page No.: 12
Engineer: YULIU	
Site: AC5	Time: 2020/06/28 - 20:52
Limit: FCC_Part15.209_RE(3m)	Margin: 0
Probe: Horn_3117_00167055(1-18GHz)	Polarity: Horizontal
EUT: CLOUDGATE BASIC WIRELESS WI-FI - 1 RS485	Power: DC 5V
Note: Mode 2:Transmit at 2412Mhz by 802.11g	



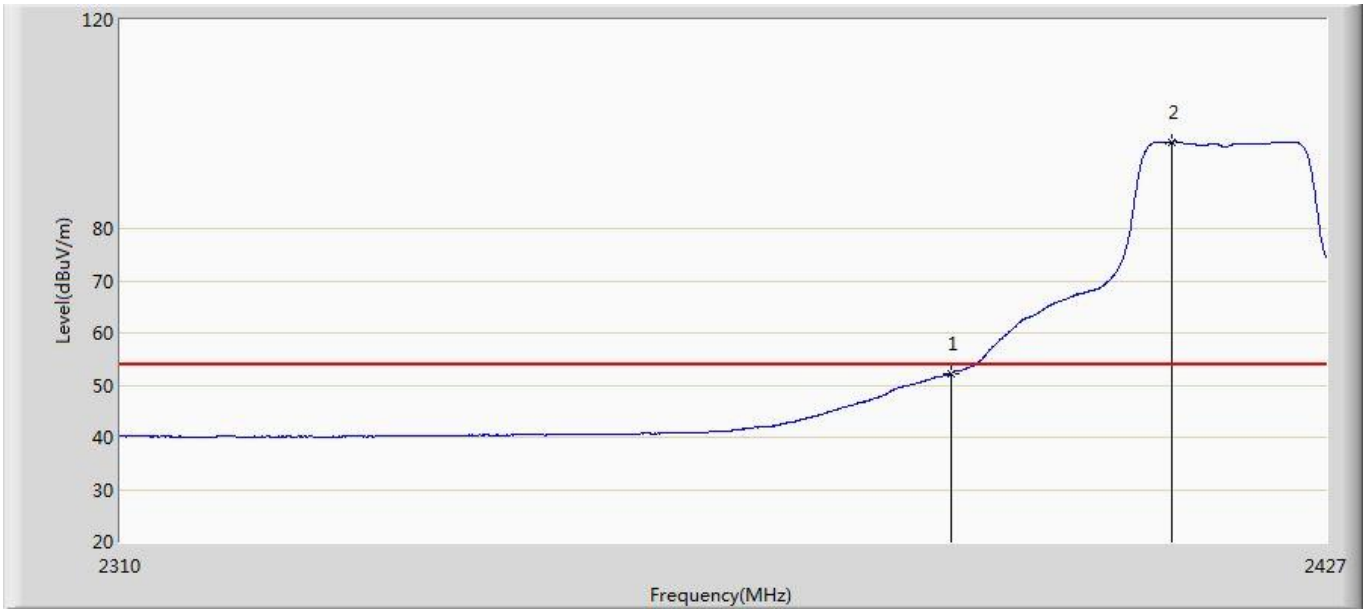
No	Mark	Frequency (MHz)	Measure Level (dBuV/m)	Reading Level (dBuV)	Over Limit (dB)	Limit (dBuV/m)	Factor (dB)	Type
1		2390.000	48.241	12.784	-5.759	54.000	35.458	AV
2	*	2407.272	92.572	57.096	N/A	N/A	35.475	AV

Profile: 2040625R	Page No.: 1
Engineer: YULIU	
Site: AC5	Time: 2019/03/08 - 15:56
Limit: FCC_Part15.209_RE(3m)	Margin: 0
Probe: Horn_3117_00167055(1-18GHz)	Polarity: Vertical
EUT: CLOUDGATE BASIC WIRELESS WI-FI - 1 RS485	Power: DC 5V
Note: Mode 2:Transmit at 2417Mhz by 802.11g	



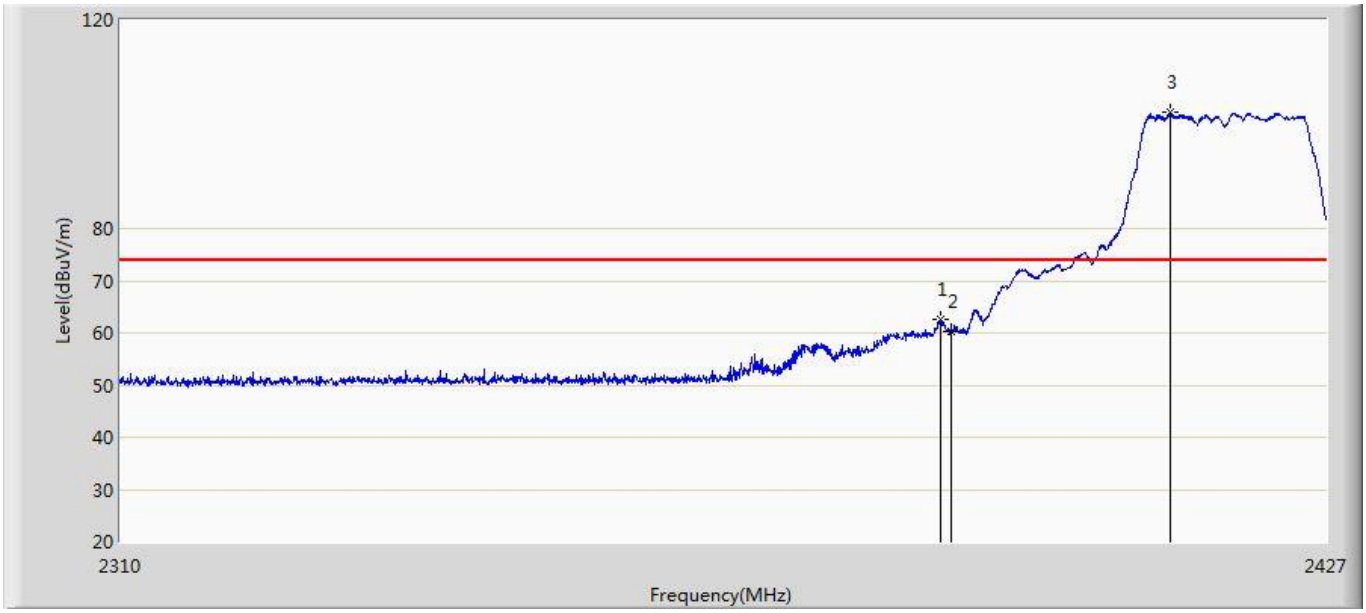
No	Mark	Frequency (MHz)	Measure Level (dBuV/m)	Reading Level (dBuV)	Over Limit (dB)	Limit (dBuV/m)	Factor (dB)	Type
1		2388.683	64.893	29.436	-9.107	74.000	35.456	PK
2		2390.000	63.564	28.107	-10.436	74.000	35.458	PK
3	*	2411.439	105.913	N/A	N/A	74.000	35.482	PK

Profile: 2040625R	Page No.: 2
Engineer: YULIU	
Site: AC5	Time: 2020/07/01 - 18:11
Limit: FCC_Part15.209_RE(3m)	Margin: 0
Probe: Horn_3117_00167055(1-18GHz)	Polarity: Vertical
EUT: CLOUDGATE BASIC WIRELESS WI-FI - 1 RS485	Power: DC 5V
Note: Mode 2:Transmit at 2417Mhz by 802.11g	



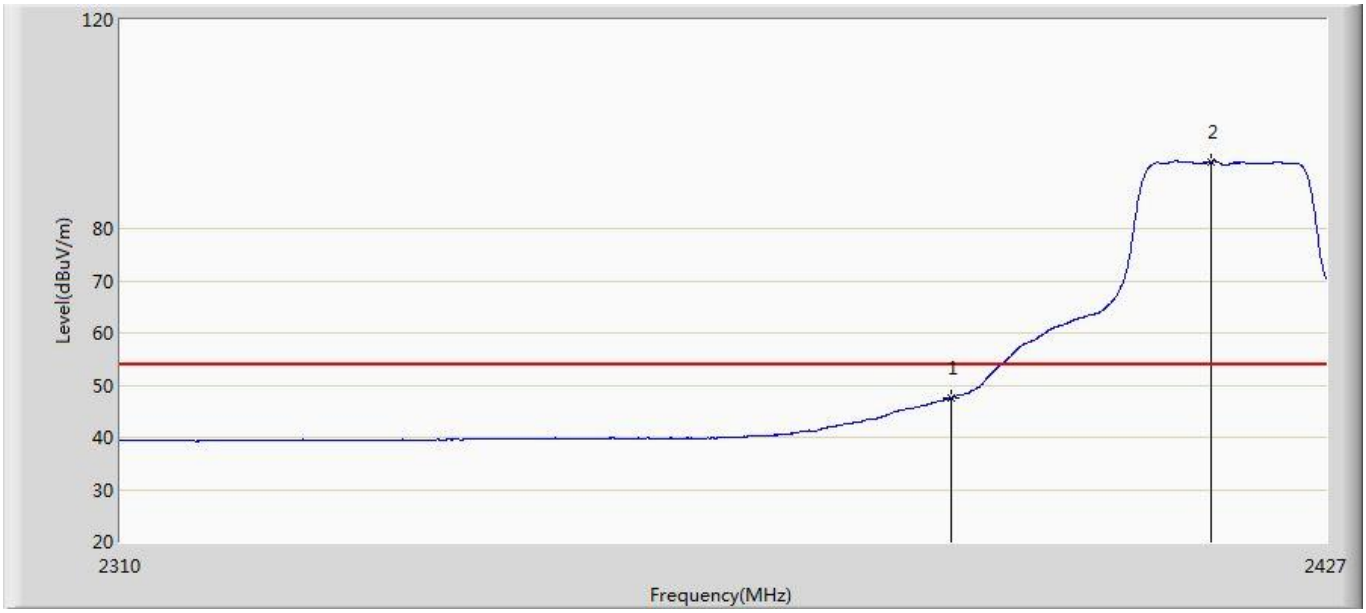
No	Mark	Frequency (MHz)	Measure Level (dBuV/m)	Reading Level (dBuV)	Over Limit (dB)	Limit (dBuV/m)	Factor (dB)	Type
1		2390.000	52.254	16.797	-1.746	54.000	35.458	AV
2	*	2411.790	96.658	N/A	N/A	54.000	35.483	AV

Profile: 2040625R	Page No.: 3
Engineer: YULIU	
Site: AC5	Time: 2020/07/01 - 18:15
Limit: FCC_Part15.209_RE(3m)	Margin: 0
Probe: Horn_3117_00167055(1-18GHz)	Polarity: Horizontal
EUT: CLOUDGATE BASIC WIRELESS WI-FI - 1 RS485	Power: DC 5V
Note: Mode 2:Transmit at 2417Mhz by 802.11g	



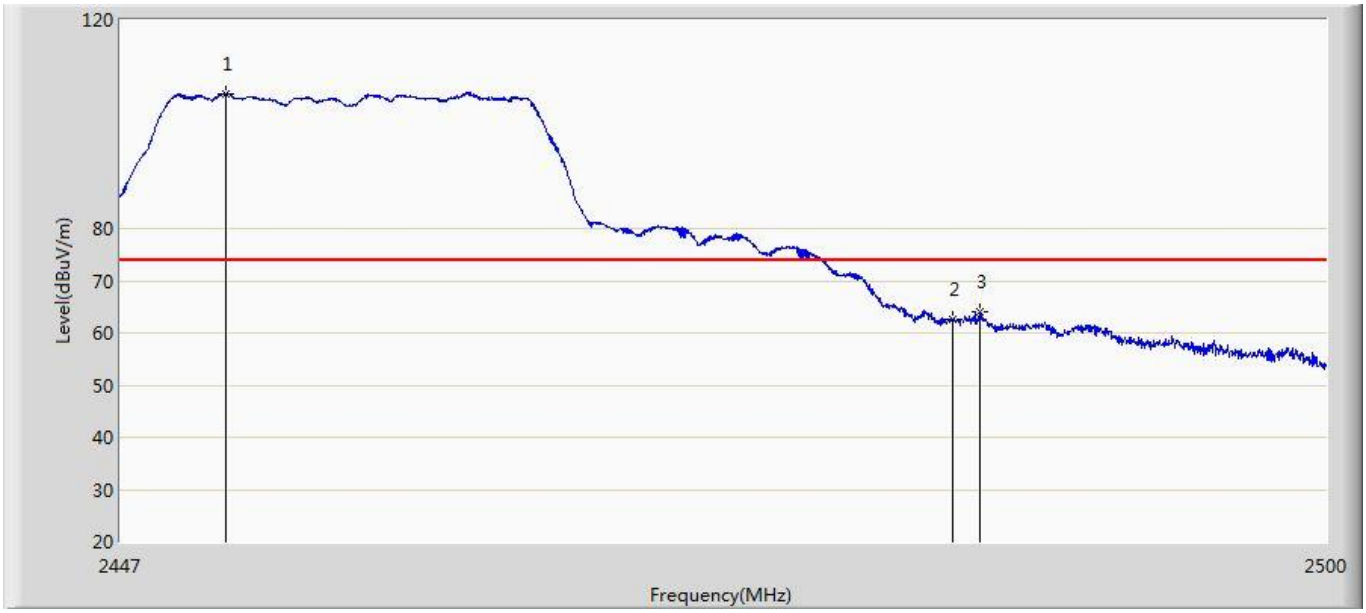
No	Mark	Frequency (MHz)	Measure Level (dBuV/m)	Reading Level (dBuV)	Over Limit (dB)	Limit (dBuV/m)	Factor (dB)	Type
1		2388.975	62.745	27.288	-11.255	74.000	35.457	PK
2		2390.000	60.340	24.883	-13.660	74.000	35.458	PK
3	*	2411.615	102.233	N/A	N/A	74.000	35.482	PK

Profile: 2040625R	Page No.: 4
Engineer: YULIU	
Site: AC5	Time: 2020/07/01 - 18:17
Limit: FCC_Part15.209_RE(3m)	Margin: 0
Probe: Horn_3117_00167055(1-18GHz)	Polarity: Horizontal
EUT: CLOUDGATE BASIC WIRELESS WI-FI - 1 RS485	Power: DC 5V
Note: Mode 2:Transmit at 2417Mhz by 802.11g	



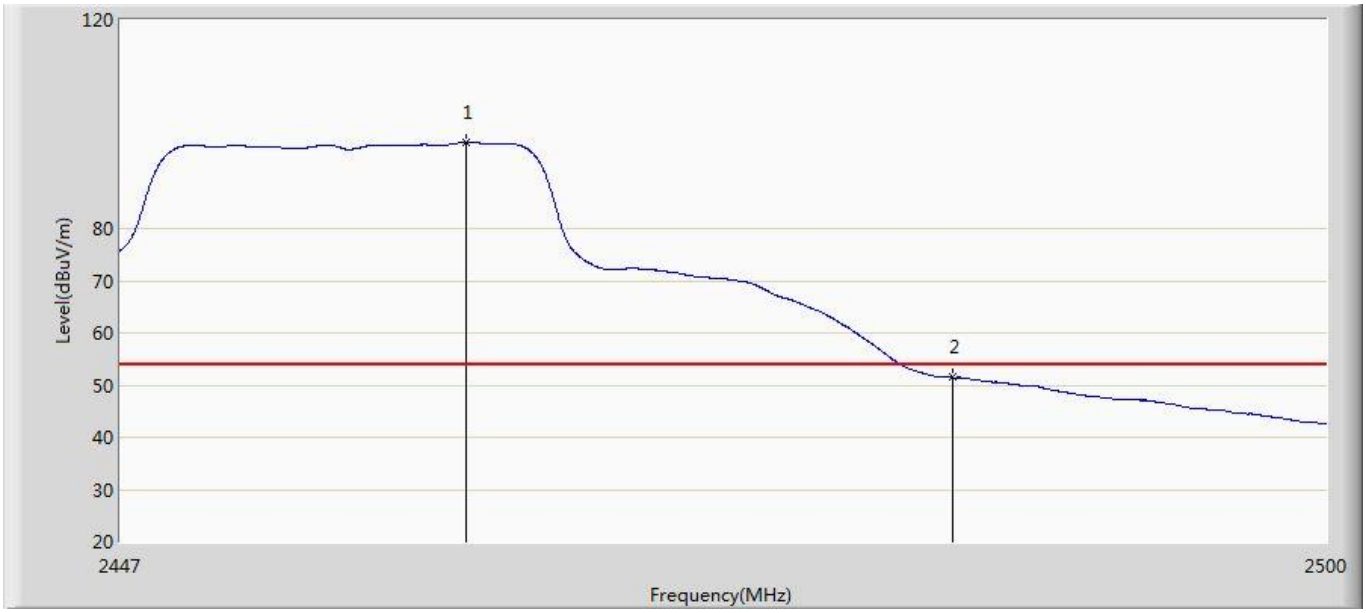
No	Mark	Frequency (MHz)	Measure Level (dBuV/m)	Reading Level (dBuV)	Over Limit (dB)	Limit (dBuV/m)	Factor (dB)	Type
1		2390.000	47.578	12.121	-6.422	54.000	35.458	AV
2	*	2415.593	92.839	N/A	N/A	54.000	35.492	AV

Profile: 2040625R	Page No.: 5
Engineer: YULIU	
Site: AC5	Time: 2020/07/01 - 18:21
Limit: FCC_Part15.209_RE(3m)	Margin: 0
Probe: Horn_3117_00167055(1-18GHz)	Polarity: Vertical
EUT: CLOUDGATE BASIC WIRELESS WI-FI - 1 RS485	Power: DC 5V
Note: Mode 2:Transmit at 2457Mhz by 802.11g	



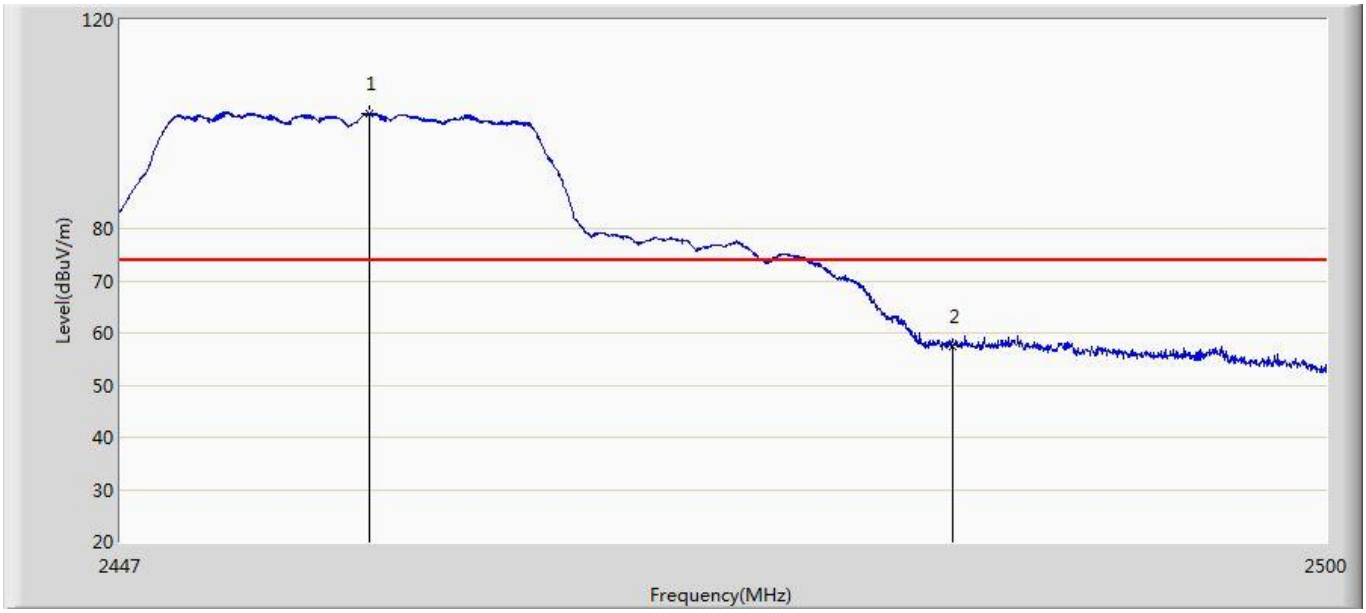
No	Mark	Frequency (MHz)	Measure Level (dBuV/m)	Reading Level (dBuV)	Over Limit (dB)	Limit (dBuV/m)	Factor (dB)	Type
1	*	2451.611	105.886	N/A	N/A	74.000	35.510	PK
2		2483.500	62.480	26.962	-11.520	74.000	35.517	PK
3		2484.656	64.153	28.629	-9.847	74.000	35.524	PK

Profile: 2040625R	Page No.: 6
Engineer: YULIU	
Site: AC5	Time: 2020/07/01 - 18:25
Limit: FCC_Part15.209_RE(3m)	Margin: 0
Probe: Horn_3117_00167055(1-18GHz)	Polarity: Vertical
EUT: CLOUDGATE BASIC WIRELESS WI-FI - 1 RS485	Power: DC 5V
Note: Mode 2:Transmit at 2457Mhz by 802.11g	



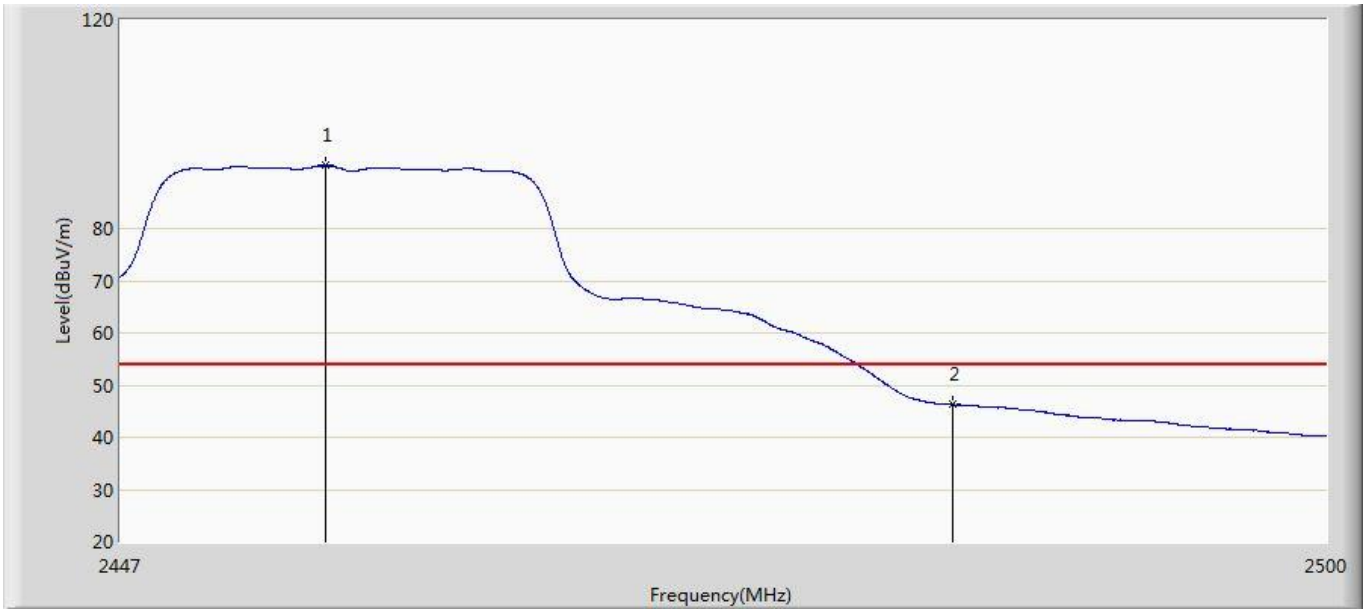
No	Mark	Frequency (MHz)	Measure Level (dBuV/m)	Reading Level (dBuV)	Over Limit (dB)	Limit (dBuV/m)	Factor (dB)	Type
1	*	2462.105	96.608	N/A	N/A	54.000	35.539	AV
2		2483.500	51.450	15.932	-2.550	54.000	35.517	AV

Profile: 2040625R	Page No.: 7
Engineer: YULIU	
Site: AC5	Time: 2020/07/01 - 18:30
Limit: FCC_Part15.209_RE(3m)	Margin: 0
Probe: Horn_3117_00167055(1-18GHz)	Polarity: Horizontal
EUT: CLOUDGATE BASIC WIRELESS WI-FI - 1 RS485	Power: DC 5V
Note: Mode 2:Transmit at 2457Mhz by 802.11g	



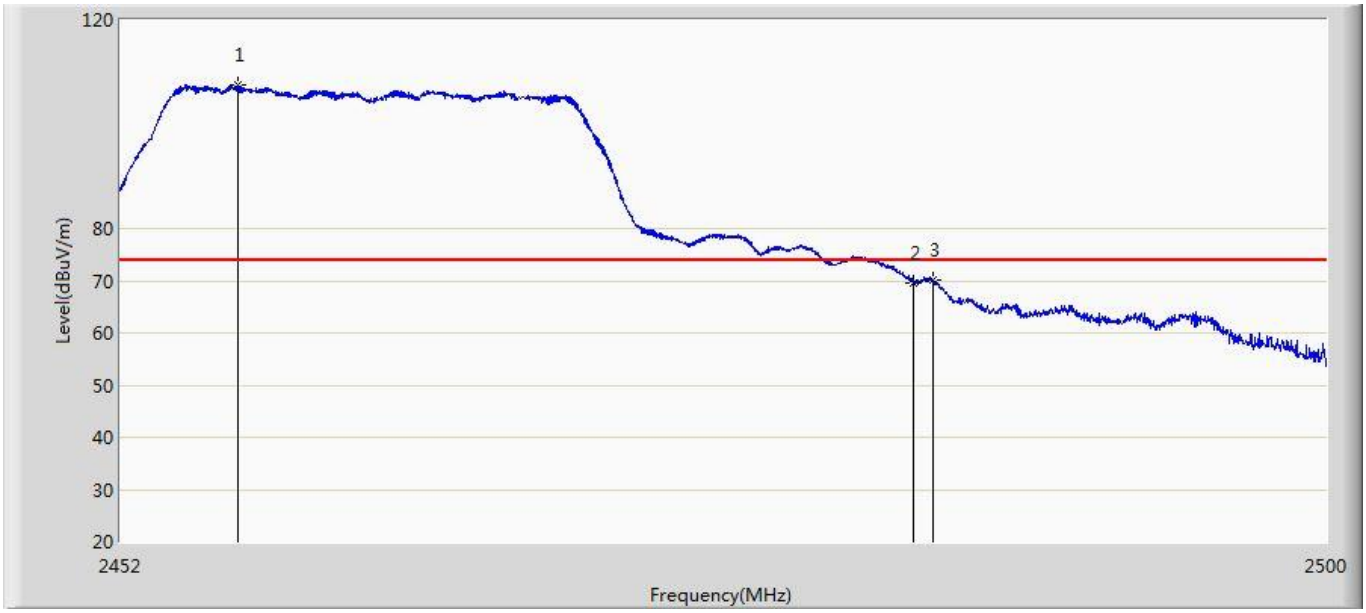
No	Mark	Frequency (MHz)	Measure Level (dBuV/m)	Reading Level (dBuV)	Over Limit (dB)	Limit (dBuV/m)	Factor (dB)	Type
1	*	2457.834	102.002	N/A	N/A	74.000	35.528	PK
2		2483.500	57.499	21.981	-16.501	74.000	35.517	PK

Profile: 2040625R	Page No.: 8
Engineer: YULIU	
Site: AC5	Time: 2020/07/01 - 18:36
Limit: FCC_Part15.209_RE(3m)	Margin: 0
Probe: Horn_3117_00167055(1-18GHz)	Polarity: Horizontal
EUT: CLOUDGATE BASIC WIRELESS WI-FI - 1 RS485	Power: DC 5V
Note: Mode 2:Transmit at 2457Mhz by 802.11g	



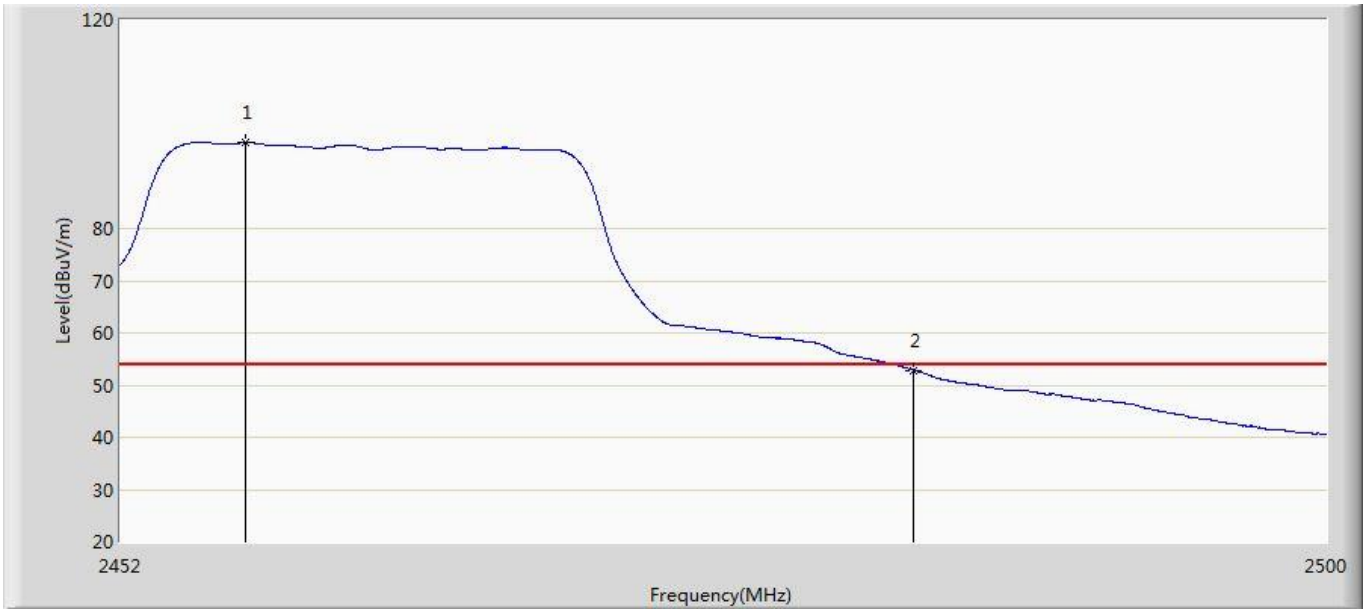
No	Mark	Frequency (MHz)	Measure Level (dBuV/m)	Reading Level (dBuV)	Over Limit (dB)	Limit (dBuV/m)	Factor (dB)	Type
1	*	2455.930	92.052	N/A	N/A	54.000	35.522	AV
2		2483.500	46.305	10.787	-7.695	54.000	35.517	AV

Profile: 2060045R	Page No.: 13
Engineer: YULIU	
Site: AC5	Time: 2020/06/28 - 20:55
Limit: FCC_Part15.209_RE(3m)	Margin: 0
Probe: Horn_3117_00167055(1-18GHz)	Polarity: Vertical
EUT: CLOUDGATE BASIC WIRELESS WI-FI - 1 RS485	Power: DC 5V
Note: Mode 2:Transmit at 2462Mhz by 802.11g	



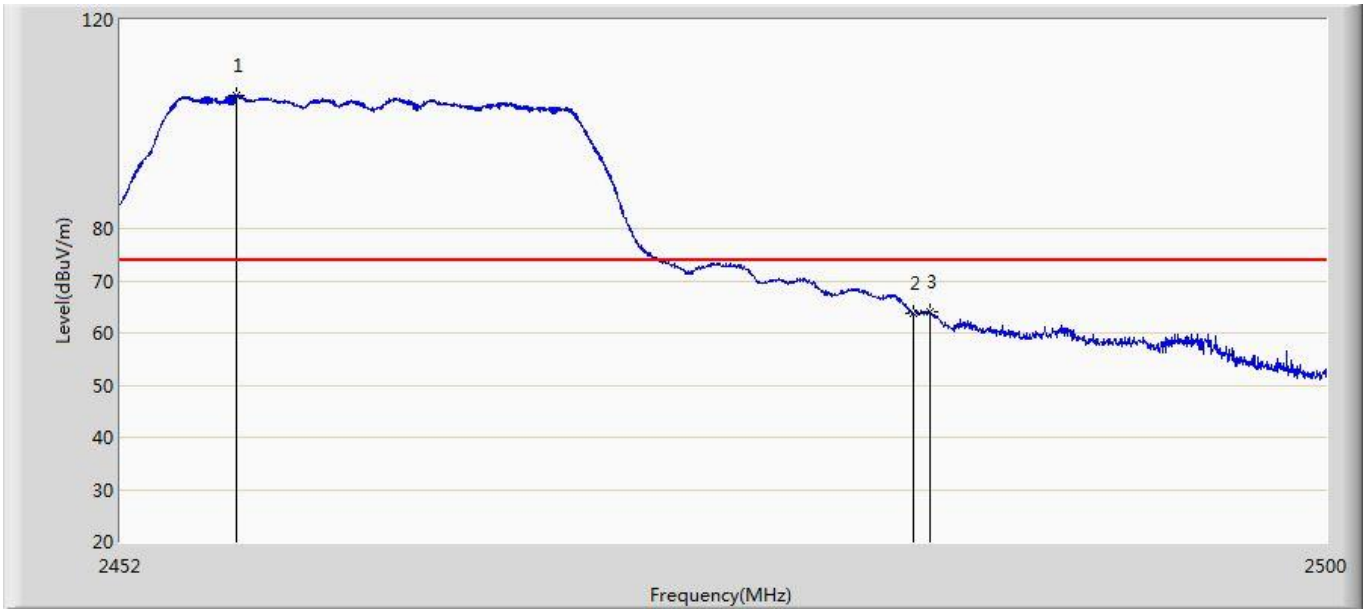
No	Mark	Frequency (MHz)	Measure Level (dBuV/m)	Reading Level (dBuV)	Over Limit (dB)	Limit (dBuV/m)	Factor (dB)	Type
1	*	2456.656	107.579	72.055	N/A	N/A	35.524	PK
2		2483.500	69.685	34.167	-4.315	74.000	35.517	PK
3		2484.280	70.160	34.638	-3.840	74.000	35.522	PK

Profile: 2060045R	Page No.: 14
Engineer: YULIU	
Site: AC5	Time: 2020/06/28 - 21:01
Limit: FCC_Part15.209_RE(3m)	Margin: 0
Probe: Horn_3117_00167055(1-18GHz)	Polarity: Vertical
EUT: CLOUDGATE BASIC WIRELESS WI-FI - 1 RS485	Power: DC 5V
Note: Mode 2:Transmit at 2462Mhz by 802.11g	



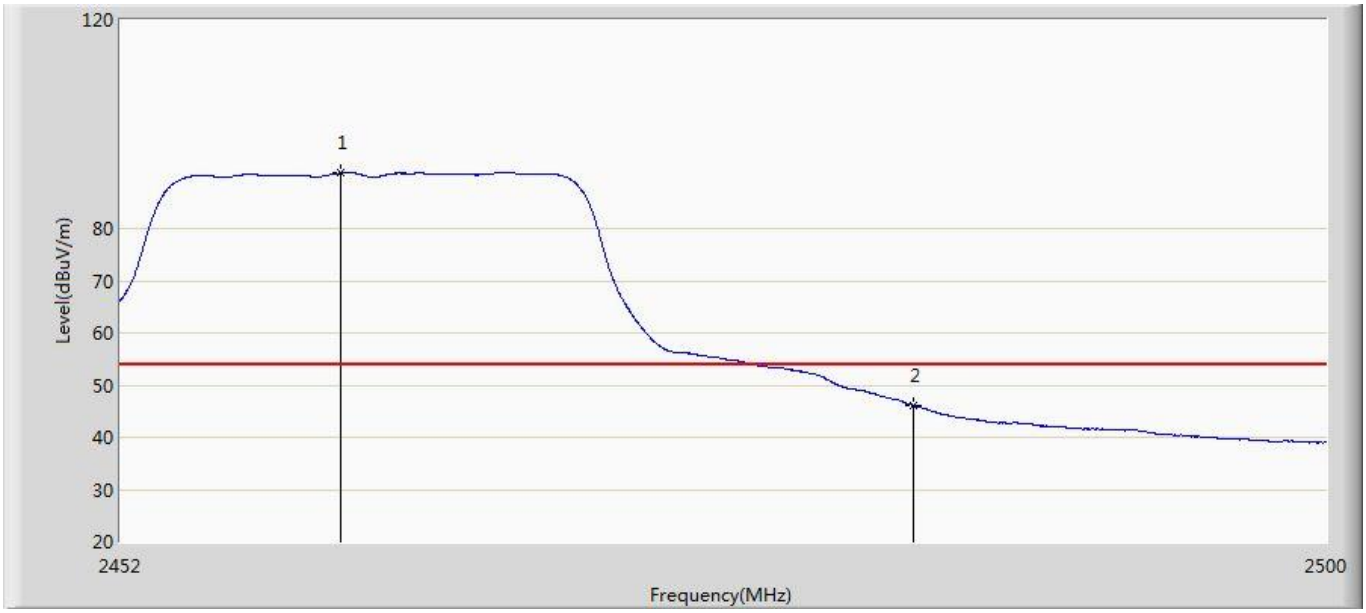
No	Mark	Frequency (MHz)	Measure Level (dBuV/m)	Reading Level (dBuV)	Over Limit (dB)	Limit (dBuV/m)	Factor (dB)	Type
1	*	2456.968	96.469	60.944	N/A	N/A	35.525	AV
2		2483.500	52.829	17.311	-1.171	54.000	35.517	AV

Profile: 2060045R	Page No.: 15
Engineer: YULIU	
Site: AC5	Time: 2020/06/28 - 21:06
Limit: FCC_Part15.209_RE(3m)	Margin: 0
Probe: Horn_3117_00167055(1-18GHz)	Polarity: Horizontal
EUT: CLOUDGATE BASIC WIRELESS WI-FI - 1 RS485	Power: DC 5V
Note: Mode 2:Transmit at 2462Mhz by 802.11g	



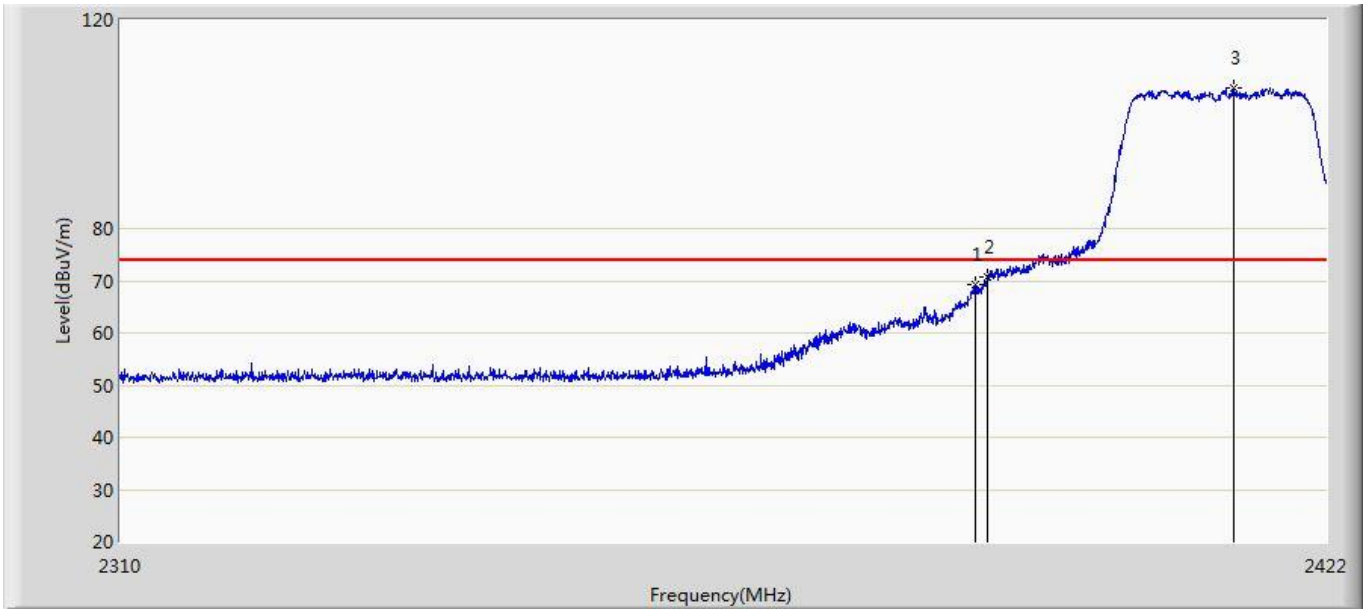
No	Mark	Frequency (MHz)	Measure Level (dBuV/m)	Reading Level (dBuV)	Over Limit (dB)	Limit (dBuV/m)	Factor (dB)	Type
1	*	2456.608	105.578	70.054	N/A	N/A	35.524	PK
2		2483.500	63.733	28.215	-10.267	74.000	35.517	PK
3		2484.160	64.052	28.530	-9.948	74.000	35.521	PK

Profile: 2060045R	Page No.: 16
Engineer: YULIU	
Site: AC5	Time: 2020/06/28 - 21:08
Limit: FCC_Part15.209_RE(3m)	Margin: 0
Probe: Horn_3117_00167055(1-18GHz)	Polarity: Horizontal
EUT: CLOUDGATE BASIC WIRELESS WI-FI - 1 RS485	Power: DC 5V
Note: Mode 2:Transmit at 2462Mhz by 802.11g	



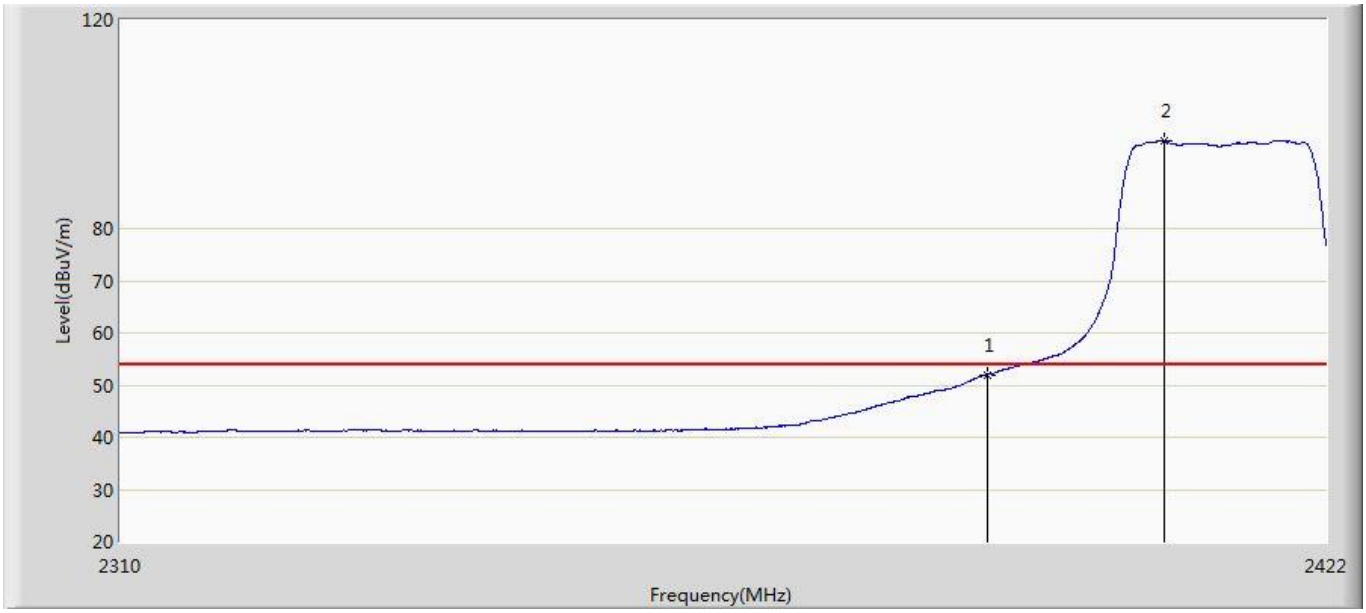
No	Mark	Frequency (MHz)	Measure Level (dBuV/m)	Reading Level (dBuV)	Over Limit (dB)	Limit (dBuV/m)	Factor (dB)	Type
1	*	2460.736	90.662	55.126	N/A	N/A	35.536	AV
2		2483.500	46.088	10.570	-7.912	54.000	35.517	AV

Profile: 2060045R	Page No.: 17
Engineer: YULIU	
Site: AC5	Time: 2020/06/28 - 21:11
Limit: FCC_Part15.209_RE(3m)	Margin: 0
Probe: Horn_3117_00167055(1-18GHz)	Polarity: Vertical
EUT: CLOUDGATE BASIC WIRELESS WI-FI - 1 RS485	Power: DC 5V
Note: Mode 3:Transmit at 2412MHz by 802.11n(20MHz)	



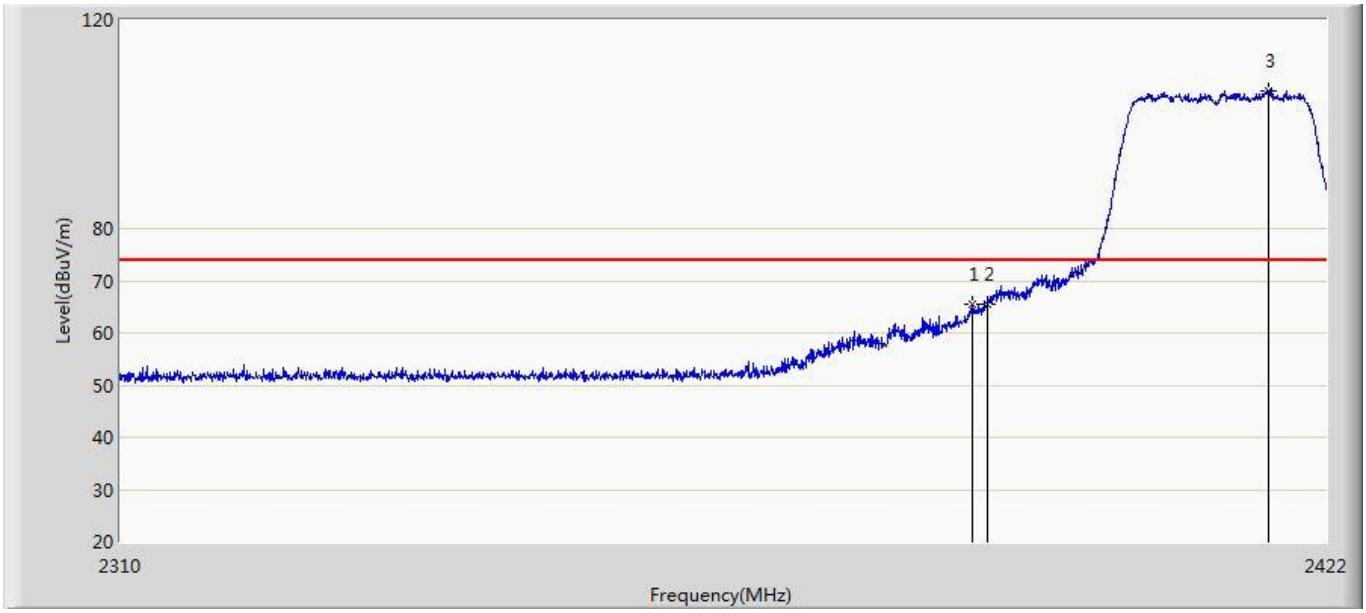
No	Mark	Frequency (MHz)	Measure Level (dBuV/m)	Reading Level (dBuV)	Over Limit (dB)	Limit (dBuV/m)	Factor (dB)	Type
1		2388.904	69.252	33.795	-4.748	74.000	35.457	PK
2		2390.000	70.643	35.186	-3.357	74.000	35.458	PK
3	*	2413.320	106.931	71.445	N/A	N/A	35.486	PK

Profile: 2060045R	Page No.: 18
Engineer: YULIU	
Site: AC5	Time: 2020/06/28 - 21:14
Limit: FCC_Part15.209_RE(3m)	Margin: 0
Probe: Horn_3117_00167055(1-18GHz)	Polarity: Vertical
EUT: CLOUDGATE BASIC WIRELESS WI-FI - 1 RS485	Power: DC 5V
Note: Mode 3:Transmit at 2412MHz by 802.11n(20MHz)	



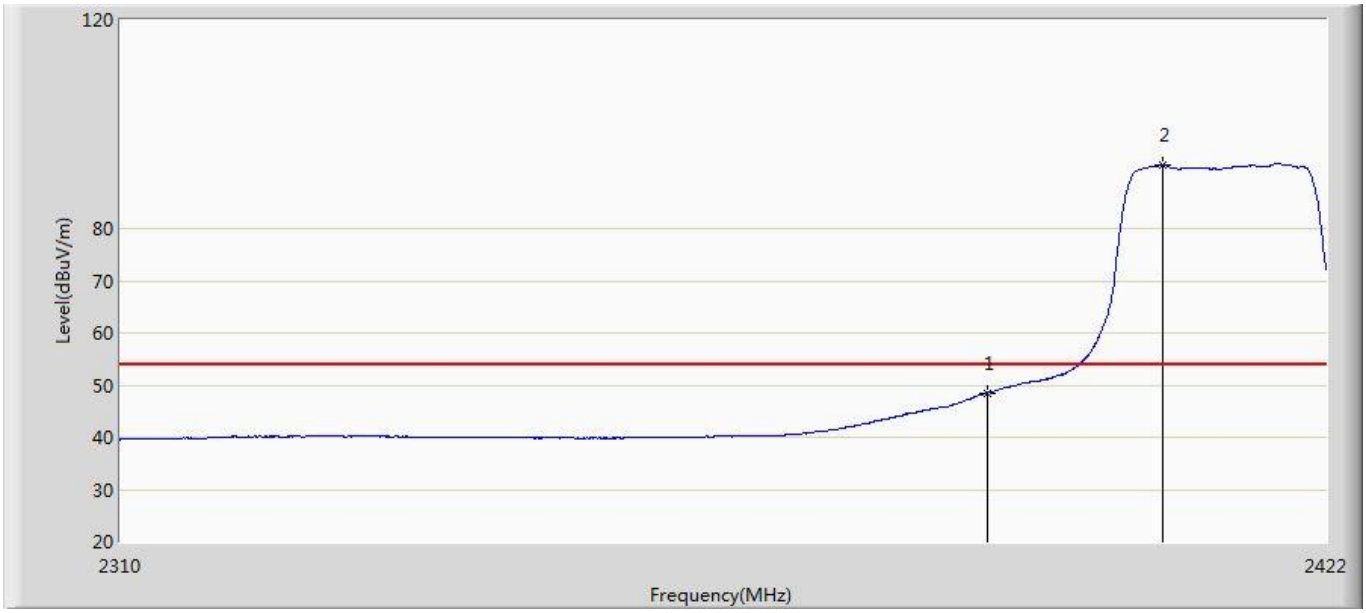
No	Mark	Frequency (MHz)	Measure Level (dBuV/m)	Reading Level (dBuV)	Over Limit (dB)	Limit (dBuV/m)	Factor (dB)	Type
1		2390.000	51.966	16.509	-2.034	54.000	35.458	AV
2	*	2406.712	96.898	61.423	N/A	N/A	35.476	AV

Profile: 2060045R	Page No.: 19
Engineer: YULIU	
Site: AC5	Time: 2020/06/28 - 21:25
Limit: FCC_Part15.209_RE(3m)	Margin: 0
Probe: Horn_3117_00167055(1-18GHz)	Polarity: Horizontal
EUT: CLOUDGATE BASIC WIRELESS WI-FI - 1 RS485	Power: DC 5V
Note: Mode 3:Transmit at 2412MHz by 802.11n(20MHz)	



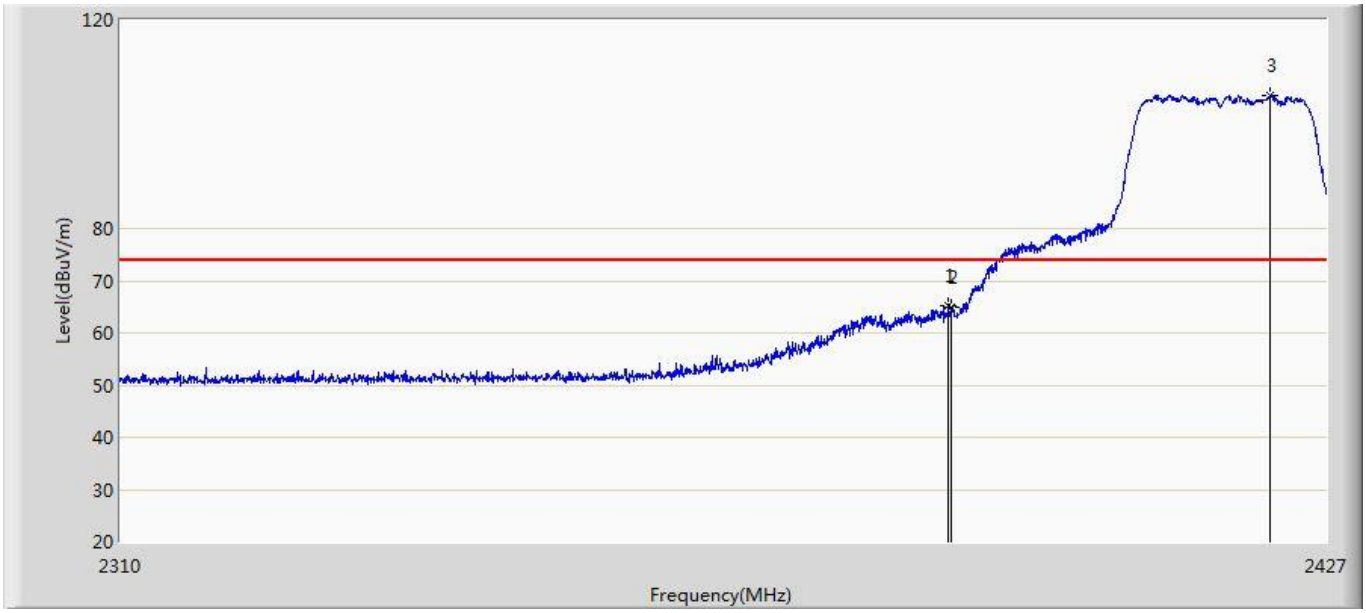
No	Mark	Frequency (MHz)	Measure Level (dBuV/m)	Reading Level (dBuV)	Over Limit (dB)	Limit (dBuV/m)	Factor (dB)	Type
1		2388.568	65.597	30.140	-8.403	74.000	35.456	PK
2		2390.000	65.498	30.041	-8.502	74.000	35.458	PK
3	*	2416.568	106.509	71.015	N/A	N/A	35.495	PK

Profile: 2060045R	Page No.: 20
Engineer: YULIU	
Site: AC5	Time: 2020/06/28 - 21:27
Limit: FCC_Part15.209_RE(3m)	Margin: 0
Probe: Horn_3117_00167055(1-18GHz)	Polarity: Horizontal
EUT: CLOUDGATE BASIC WIRELESS WI-FI - 1 RS485	Power: DC 5V
Note: Mode 3:Transmit at 2412MHz by 802.11n(20MHz)	



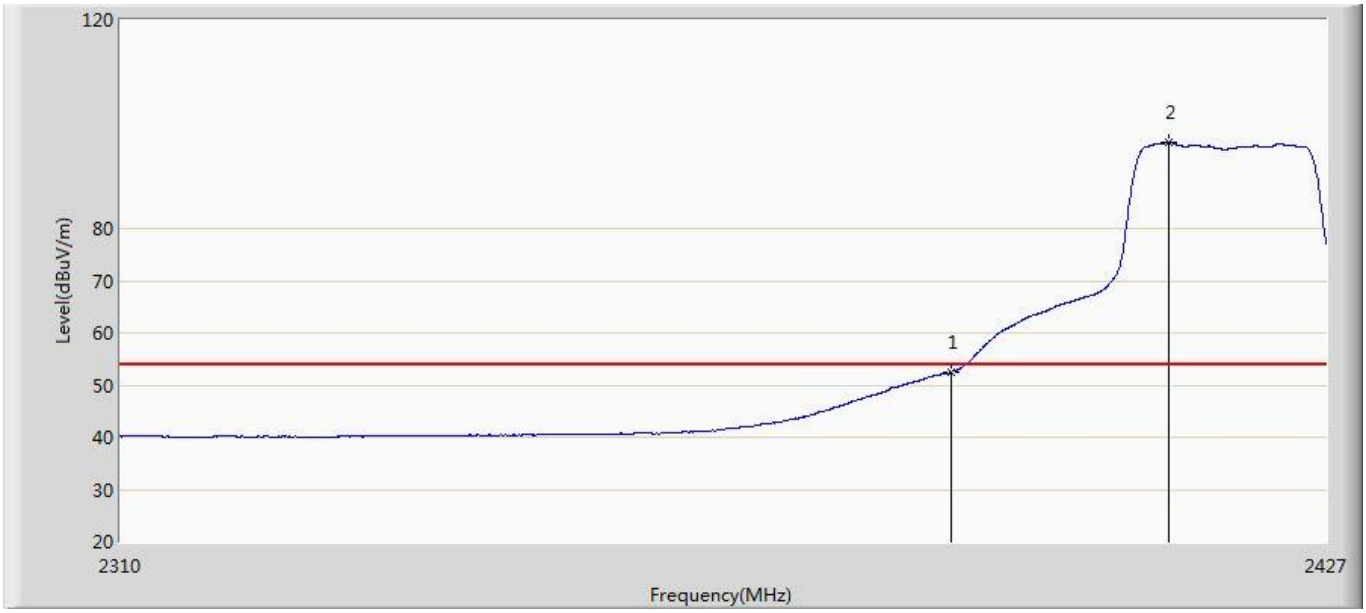
No	Mark	Frequency (MHz)	Measure Level (dBuV/m)	Reading Level (dBuV)	Over Limit (dB)	Limit (dBuV/m)	Factor (dB)	Type
1		2390.000	48.452	12.995	-5.548	54.000	35.458	AV
2	*	2406.544	92.219	56.744	N/A	N/A	35.475	AV

Profile: 2040625R	Page No.: 9
Engineer: YULIU	
Site: AC5	Time: 2020/07/01 - 18:38
Limit: FCC_Part15.209_RE(3m)	Margin: 0
Probe: Horn_3117_00167055(1-18GHz)	Polarity: Vertical
EUT: CLOUDGATE BASIC WIRELESS WI-FI - 1 RS485	Power: DC 5V
Note: Mode 3:Transmit at 2417MHz by 802.11n(20MHz)	



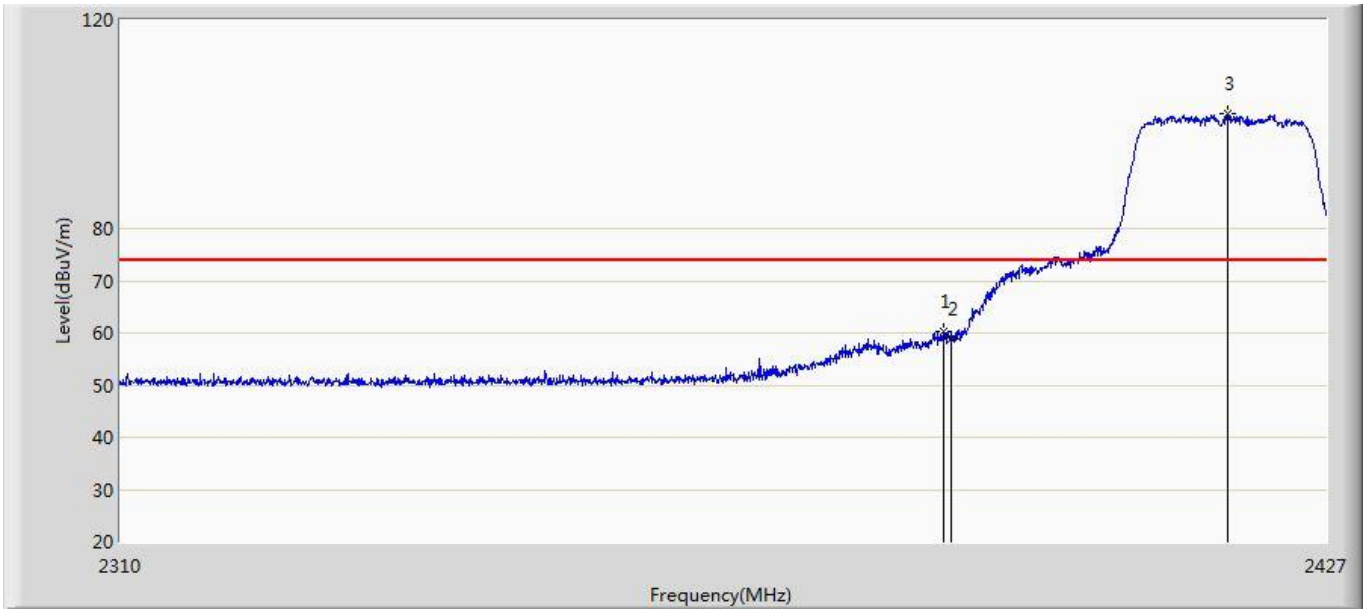
No	Mark	Frequency (MHz)	Measure Level (dBuV/m)	Reading Level (dBuV)	Over Limit (dB)	Limit (dBuV/m)	Factor (dB)	Type
1		2389.736	65.341	29.884	-8.659	74.000	35.458	PK
2		2390.000	64.906	29.449	-9.094	74.000	35.458	PK
3	*	2421.442	105.641	N/A	N/A	74.000	35.507	PK

Profile: 2040625R	Page No.: 10
Engineer: YULIU	
Site: AC5	Time: 2020/07/01 - 18:41
Limit: FCC_Part15.209_RE(3m)	Margin: 0
Probe: Horn_3117_00167055(1-18GHz)	Polarity: Vertical
EUT: CLOUDGATE BASIC WIRELESS WI-FI - 1 RS485	Power: DC 5V
Note: Mode 3:Transmit at 2417MHz by 802.11n(20MHz)	



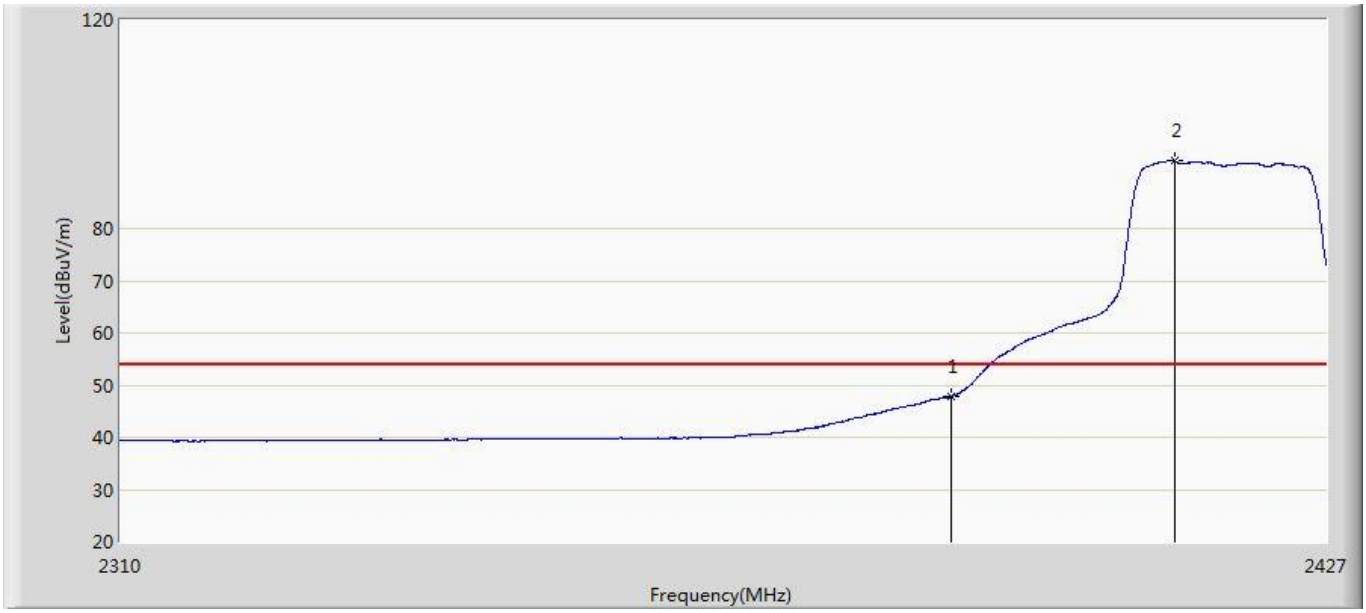
No	Mark	Frequency (MHz)	Measure Level (dBuV/m)	Reading Level (dBuV)	Over Limit (dB)	Limit (dBuV/m)	Factor (dB)	Type
1		2390.000	52.436	16.979	-1.564	54.000	35.458	AV
2	*	2411.439	96.589	N/A	N/A	54.000	35.482	AV

Profile: 2040625R	Page No.: 11
Engineer: YULIU	
Site: AC5	Time: 2020/07/01 - 18:43
Limit: FCC_Part15.209_RE(3m)	Margin: 0
Probe: Horn_3117_00167055(1-18GHz)	Polarity: Horizontal
EUT: CLOUDGATE BASIC WIRELESS WI-FI - 1 RS485	Power: DC 5V
Note: Mode 3:Transmit at 2417MHz by 802.11n(20MHz)	



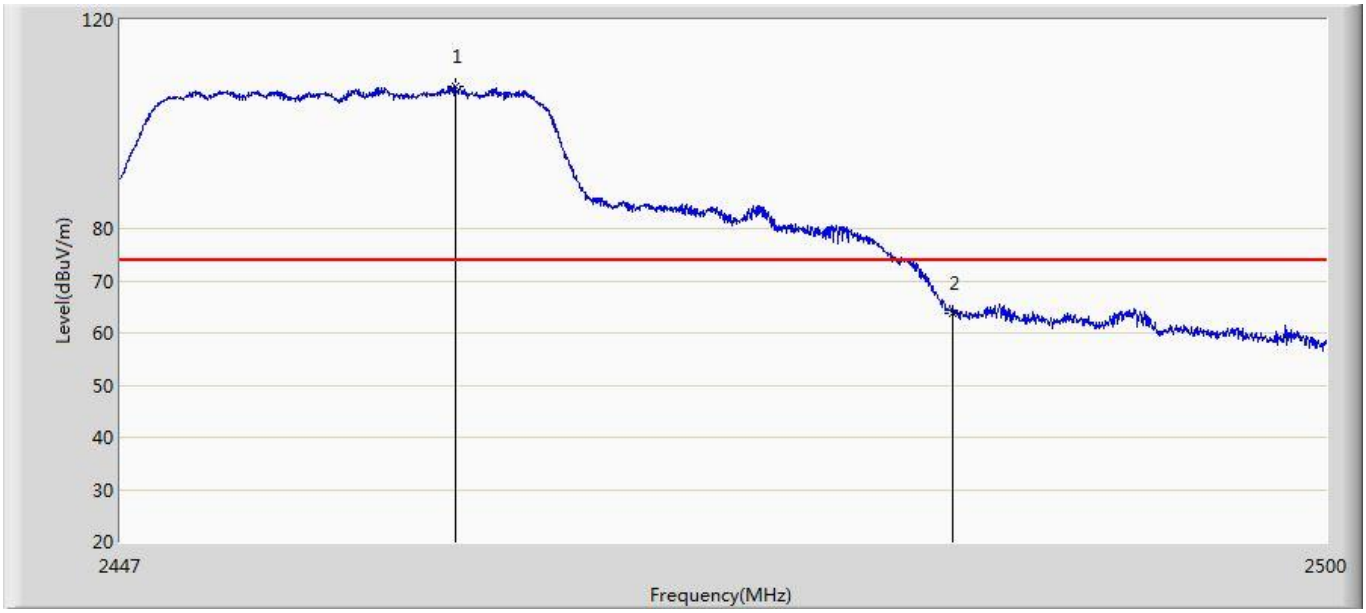
No	Mark	Frequency (MHz)	Measure Level (dBuV/m)	Reading Level (dBuV)	Over Limit (dB)	Limit (dBuV/m)	Factor (dB)	Type
1		2389.209	60.374	24.917	-13.626	74.000	35.457	PK
2		2390.000	58.964	23.507	-15.036	74.000	35.458	PK
3	*	2417.289	101.962	N/A	N/A	74.000	35.496	PK

Profile: 2040625R	Page No.: 12
Engineer: YULIU	
Site: AC5	Time: 2020/07/01 - 18:44
Limit: FCC_Part15.209_RE(3m)	Margin: 0
Probe: Horn_3117_00167055(1-18GHz)	Polarity: Horizontal
EUT: CLOUDGATE BASIC WIRELESS WI-FI - 1 RS485	Power: DC 5V
Note: Mode 3:Transmit at 2417MHz by 802.11n(20MHz)	



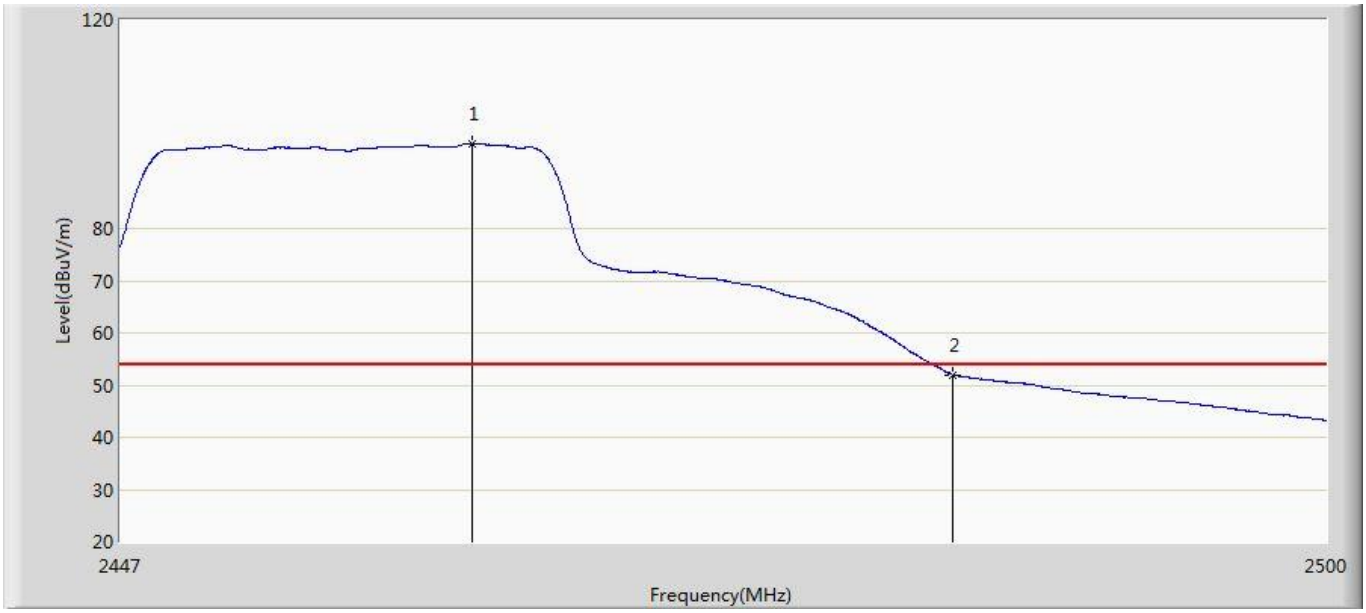
No	Mark	Frequency (MHz)	Measure Level (dBuV/m)	Reading Level (dBuV)	Over Limit (dB)	Limit (dBuV/m)	Factor (dB)	Type
1		2390.000	47.799	12.342	-6.201	54.000	35.458	AV
2	*	2411.966	92.902	N/A	N/A	54.000	35.483	AV

Profile: 2040625R	Page No.: 13
Engineer: YULIU	
Site: AC5	Time: 2020/07/01 - 18:47
Limit: FCC_Part15.209_RE(3m)	Margin: 0
Probe: Horn_3117_00167055(1-18GHz)	Polarity: Vertical
EUT: CLOUDGATE BASIC WIRELESS WI-FI - 1 RS485	Power: DC 5V
Note: Mode 3:Transmit at 2457MHz by 802.11n(20MHz)	



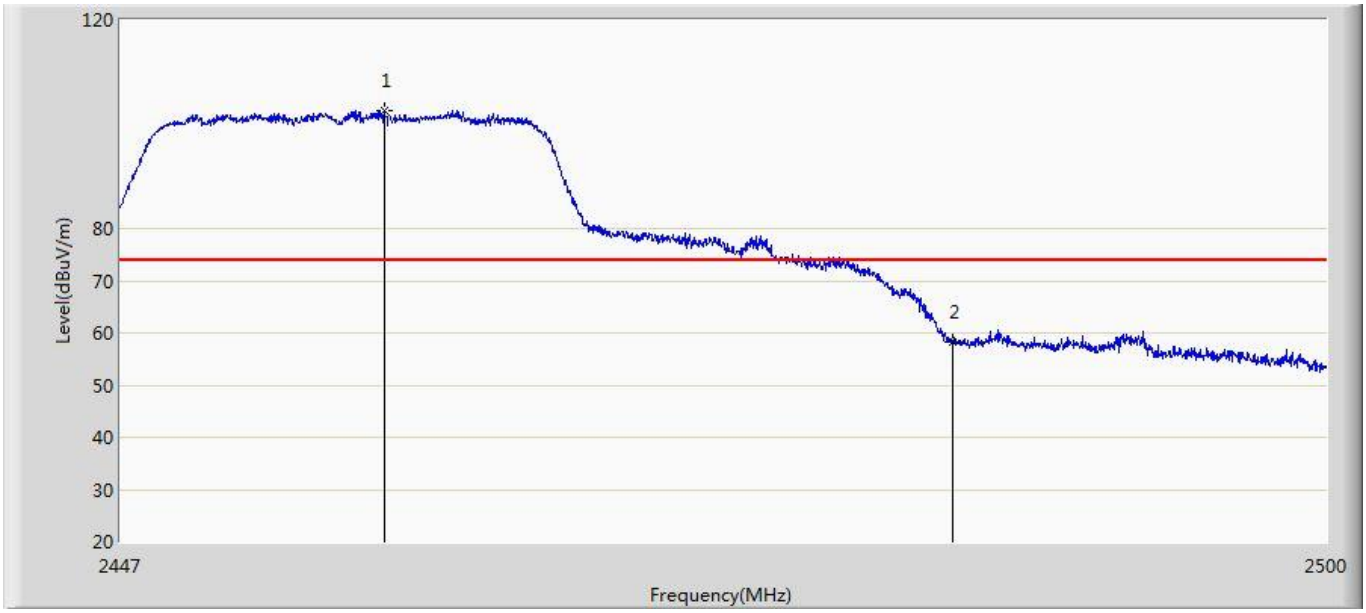
No	Mark	Frequency (MHz)	Measure Level (dBuV/m)	Reading Level (dBuV)	Over Limit (dB)	Limit (dBuV/m)	Factor (dB)	Type
1	*	2461.628	107.296	N/A	N/A	74.000	35.538	PK
2		2483.500	63.676	28.158	-10.324	74.000	35.517	PK

Profile: 2040625R	Page No.: 14
Engineer: YULIU	
Site: AC5	Time: 2020/07/01 - 18:51
Limit: FCC_Part15.209_RE(3m)	Margin: 0
Probe: Horn_3117_00167055(1-18GHz)	Polarity: Vertical
EUT: CLOUDGATE BASIC WIRELESS WI-FI - 1 RS485	Power: DC 5V
Note: Mode 3:Transmit at 2457MHz by 802.11n(20MHz)	



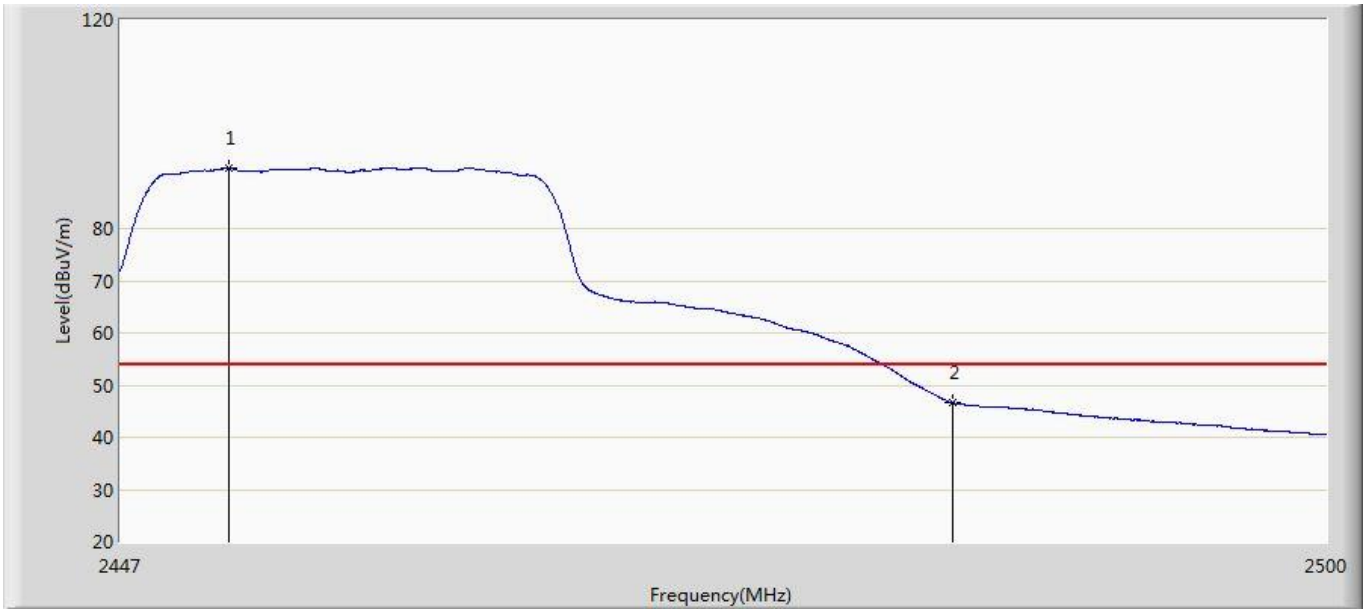
No	Mark	Frequency (MHz)	Measure Level (dBuV/m)	Reading Level (dBuV)	Over Limit (dB)	Limit (dBuV/m)	Factor (dB)	Type
1	*	2462.370	96.289	N/A	N/A	54.000	35.538	AV
2		2483.500	52.003	16.485	-1.997	54.000	35.517	AV

Profile: 2040625R	Page No.: 15
Engineer: YULIU	
Site: AC5	Time: 2020/07/01 - 18:53
Limit: FCC_Part15.209_RE(3m)	Margin: 0
Probe: Horn_3117_00167055(1-18GHz)	Polarity: Horizontal
EUT: CLOUDGATE BASIC WIRELESS WI-FI - 1 RS485	Power: DC 5V
Note: Mode 3:Transmit at 2457MHz by 802.11n(20MHz)	



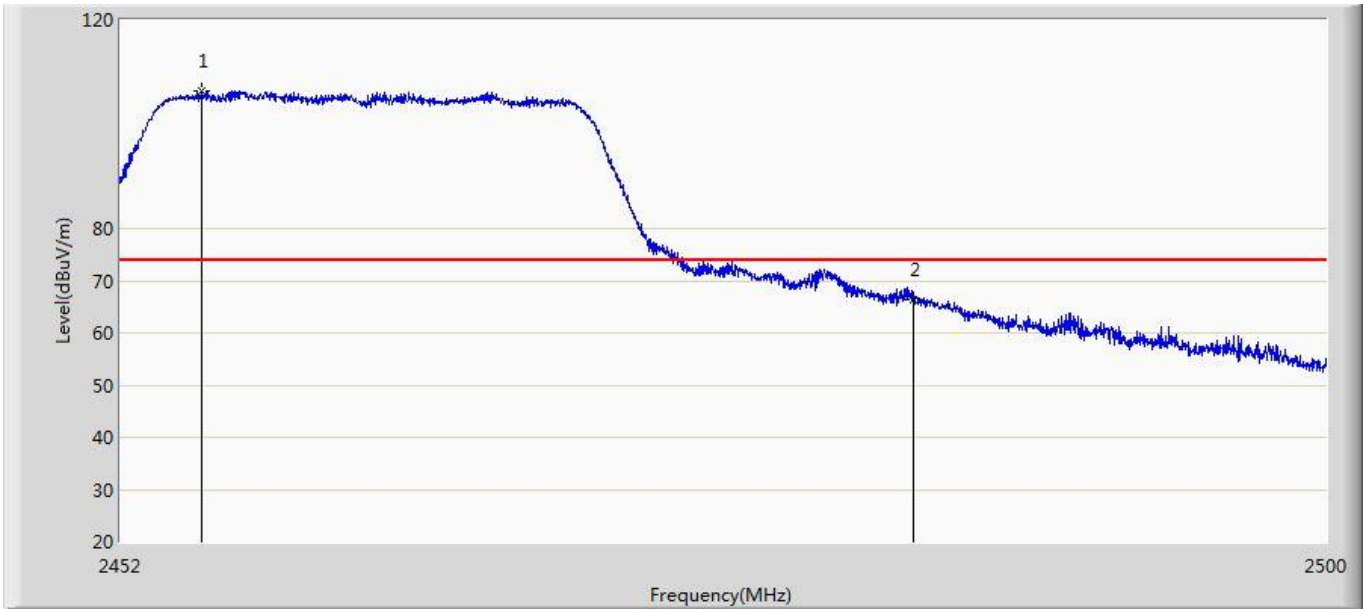
No	Mark	Frequency (MHz)	Measure Level (dBuV/m)	Reading Level (dBuV)	Over Limit (dB)	Limit (dBuV/m)	Factor (dB)	Type
1	*	2458.501	102.472	N/A	N/A	74.000	35.529	PK
2		2483.500	58.350	22.832	-15.650	74.000	35.517	PK

Profile: 2040625R	Page No.: 16
Engineer: YULIU	
Site: AC5	Time: 2020/07/01 - 18:55
Limit: FCC_Part15.209_RE(3m)	Margin: 0
Probe: Horn_3117_00167055(1-18GHz)	Polarity: Horizontal
EUT: CLOUDGATE BASIC WIRELESS WI-FI - 1 RS485	Power: DC 5V
Note: Mode 3:Transmit at 2457MHz by 802.11n(20MHz)	



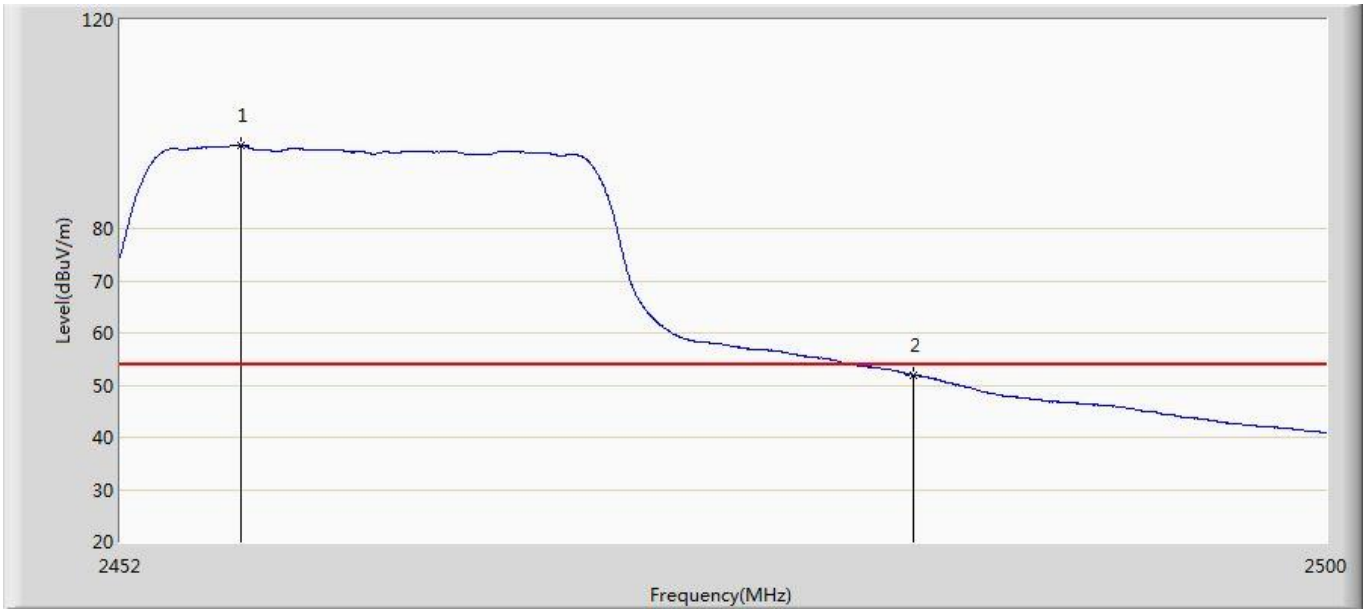
No	Mark	Frequency (MHz)	Measure Level (dBuV/m)	Reading Level (dBuV)	Over Limit (dB)	Limit (dBuV/m)	Factor (dB)	Type
1	*	2451.743	91.610	N/A	N/A	54.000	35.510	AV
2		2483.500	46.584	11.066	-7.416	54.000	35.517	AV

Profile: 2060045R	Page No.: 21
Engineer: YULIU	
Site: AC5	Time: 2020/06/28 - 21:30
Limit: FCC_Part15.209_RE(3m)	Margin: 0
Probe: Horn_3117_00167055(1-18GHz)	Polarity: Vertical
EUT: CLOUDGATE BASIC WIRELESS WI-FI - 1 RS485	Power: DC 5V
Note: Mode 3:Transmit at 2462MHz by 802.11n(20MHz)	



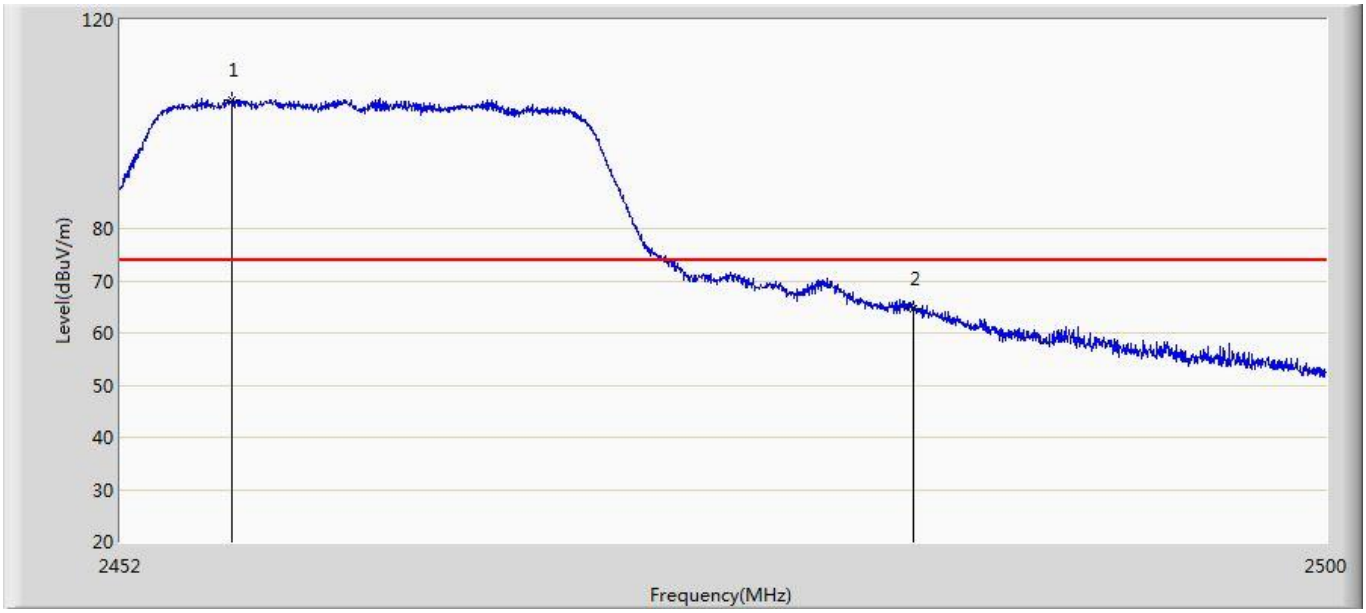
No	Mark	Frequency (MHz)	Measure Level (dBuV/m)	Reading Level (dBuV)	Over Limit (dB)	Limit (dBuV/m)	Factor (dB)	Type
1	*	2455.192	106.286	70.766	N/A	N/A	35.521	PK
2		2483.500	66.385	30.867	-7.615	74.000	35.517	PK

Profile: 2060045R	Page No.: 22
Engineer: YULIU	
Site: AC5	Time: 2020/06/28 - 21:35
Limit: FCC_Part15.209_RE(3m)	Margin: 0
Probe: Horn_3117_00167055(1-18GHz)	Polarity: Vertical
EUT: CLOUDGATE BASIC WIRELESS WI-FI - 1 RS485	Power: DC 5V
Note: Mode 3:Transmit at 2462MHz by 802.11n(20MHz)	



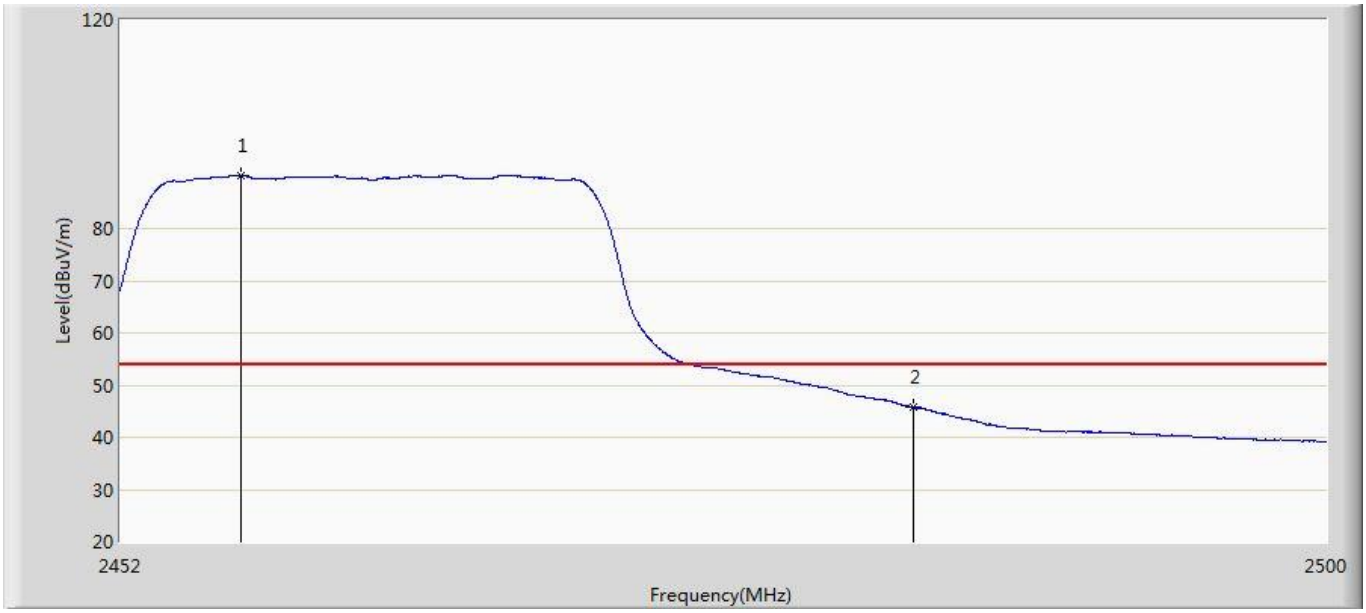
No	Mark	Frequency (MHz)	Measure Level (dBuV/m)	Reading Level (dBuV)	Over Limit (dB)	Limit (dBuV/m)	Factor (dB)	Type
1	*	2456.752	95.984	60.459	N/A	N/A	35.525	AV
2		2483.500	51.950	16.432	-2.050	54.000	35.517	AV

Profile: 2060045R	Page No.: 23
Engineer: YULIU	
Site: AC5	Time: 2020/06/28 - 21:37
Limit: FCC_Part15.209_RE(3m)	Margin: 0
Probe: Horn_3117_00167055(1-18GHz)	Polarity: Horizontal
EUT: CLOUDGATE BASIC WIRELESS WI-FI - 1 RS485	Power: DC 5V
Note: Mode 3:Transmit at 2462MHz by 802.11n(20MHz)	



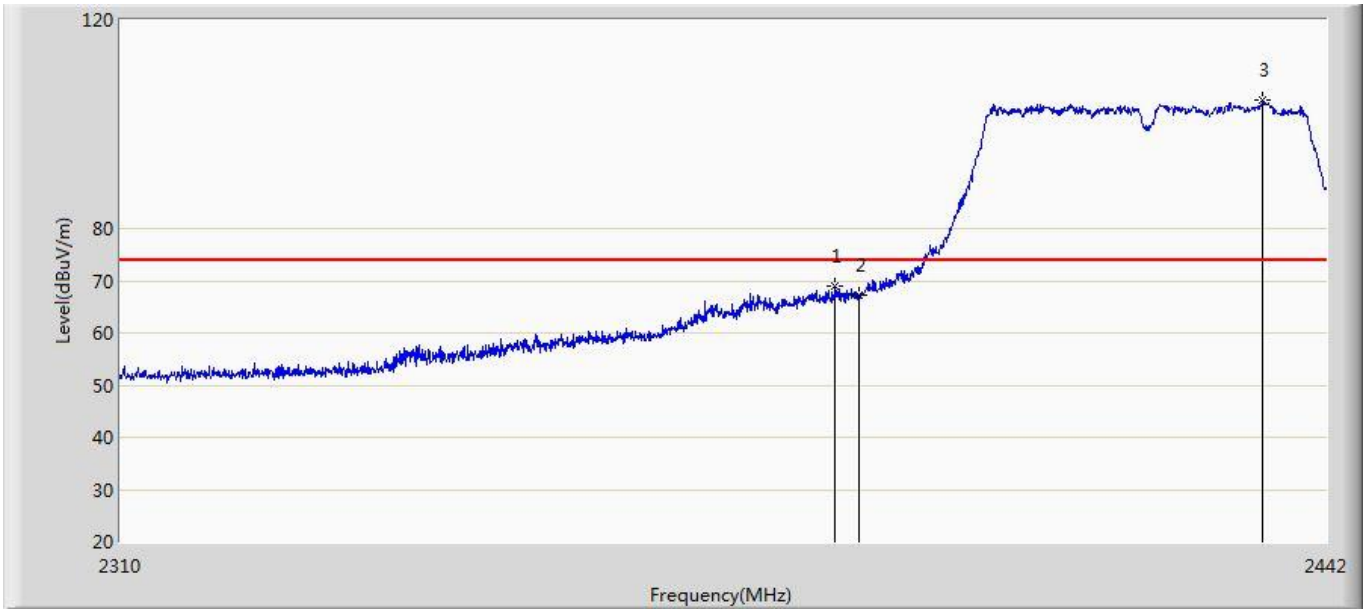
No	Mark	Frequency (MHz)	Measure Level (dBuV/m)	Reading Level (dBuV)	Over Limit (dB)	Limit (dBuV/m)	Factor (dB)	Type
1	*	2456.440	104.678	69.154	N/A	N/A	35.524	PK
2		2483.500	64.665	29.147	-9.335	74.000	35.517	PK

Profile: 2060045R	Page No.: 24
Engineer: YULIU	
Site: AC5	Time: 2020/06/28 - 21:38
Limit: FCC_Part15.209_RE(3m)	Margin: 0
Probe: Horn_3117_00167055(1-18GHz)	Polarity: Horizontal
EUT: CLOUDGATE BASIC WIRELESS WI-FI - 1 RS485	Power: DC 5V
Note: Mode 3:Transmit at 2462MHz by 802.11n(20MHz)	



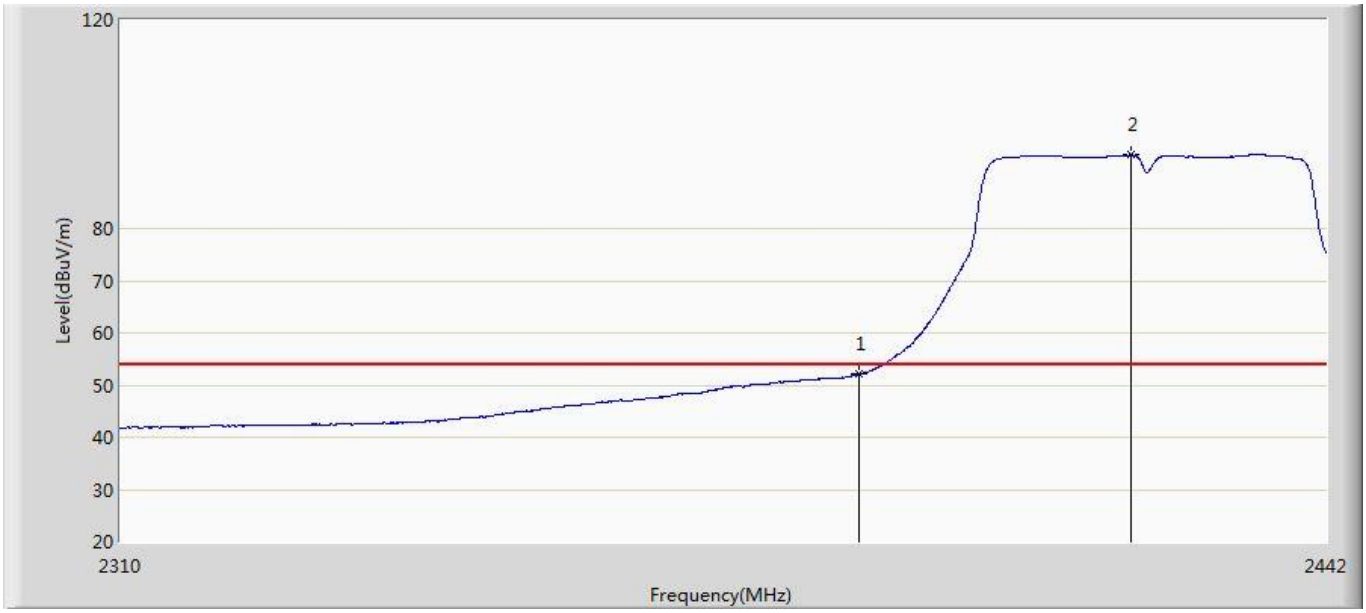
No	Mark	Frequency (MHz)	Measure Level (dBuV/m)	Reading Level (dBuV)	Over Limit (dB)	Limit (dBuV/m)	Factor (dB)	Type
1	*	2456.752	90.275	54.750	N/A	N/A	35.525	AV
2		2483.500	45.716	10.198	-8.284	54.000	35.517	AV

Profile: 2060045R	Page No.: 25
Engineer: YULIU	
Site: AC5	Time: 2020/06/28 - 21:40
Limit: FCC_Part15.209_RE(3m)	Margin: 0
Probe: Horn_3117_00167055(1-18GHz)	Polarity: Vertical
EUT: CLOUDGATE BASIC WIRELESS WI-FI - 1 RS485	Power: DC 5V
Note: Mode 4:Transmit at 2422MHz by 802.11n(40MHz)	



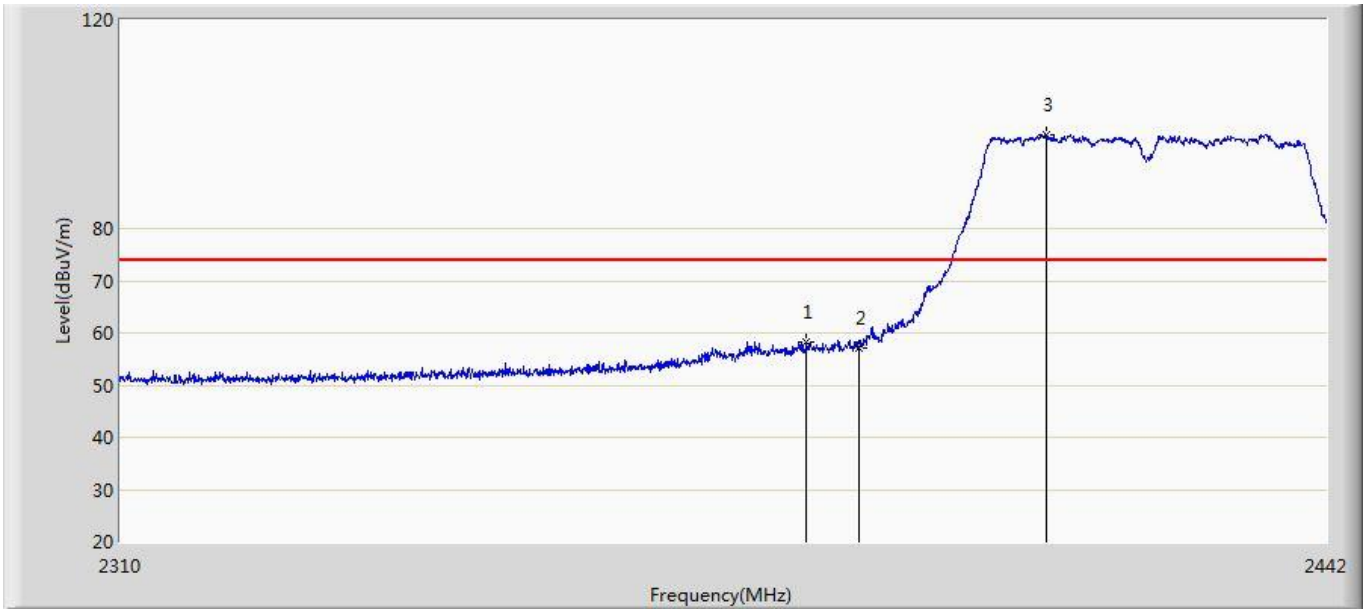
No	Mark	Frequency (MHz)	Measure Level (dBuV/m)	Reading Level (dBuV)	Over Limit (dB)	Limit (dBuV/m)	Factor (dB)	Type
1		2387.352	68.866	33.410	-5.134	74.000	35.456	PK
2		2390.000	67.123	31.666	-6.877	74.000	35.458	PK
3	*	2434.938	104.587	69.076	N/A	N/A	35.510	PK

Profile: 2060045R	Page No.: 26
Engineer: YULIU	
Site: AC5	Time: 2020/06/28 - 21:44
Limit: FCC_Part15.209_RE(3m)	Margin: 0
Probe: Horn_3117_00167055(1-18GHz)	Polarity: Vertical
EUT: CLOUDGATE BASIC WIRELESS WI-FI - 1 RS485	Power: DC 5V
Note: Mode 4:Transmit at 2422MHz by 802.11n(40MHz)	



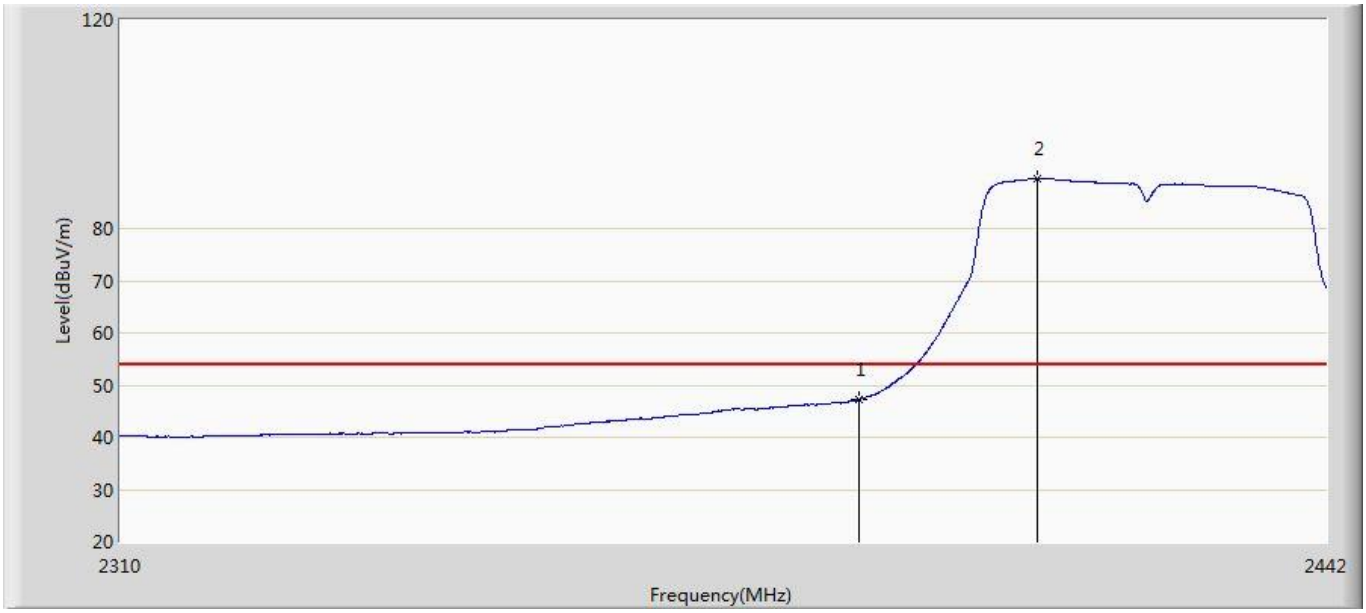
No	Mark	Frequency (MHz)	Measure Level (dBuV/m)	Reading Level (dBuV)	Over Limit (dB)	Limit (dBuV/m)	Factor (dB)	Type
1		2390.000	52.117	16.660	-1.883	54.000	35.458	AV
2	*	2420.154	94.074	58.570	N/A	N/A	35.503	AV

Profile: 2060045R	Page No.: 27
Engineer: YULIU	
Site: AC5	Time: 2020/06/28 - 21:48
Limit: FCC_Part15.209_RE(3m)	Margin: 0
Probe: Horn_3117_00167055(1-18GHz)	Polarity: Horizontal
EUT: CLOUDGATE BASIC WIRELESS WI-FI - 1 RS485	Power: DC 5V
Note: Mode 4:Transmit at 2422MHz by 802.11n(40MHz)	



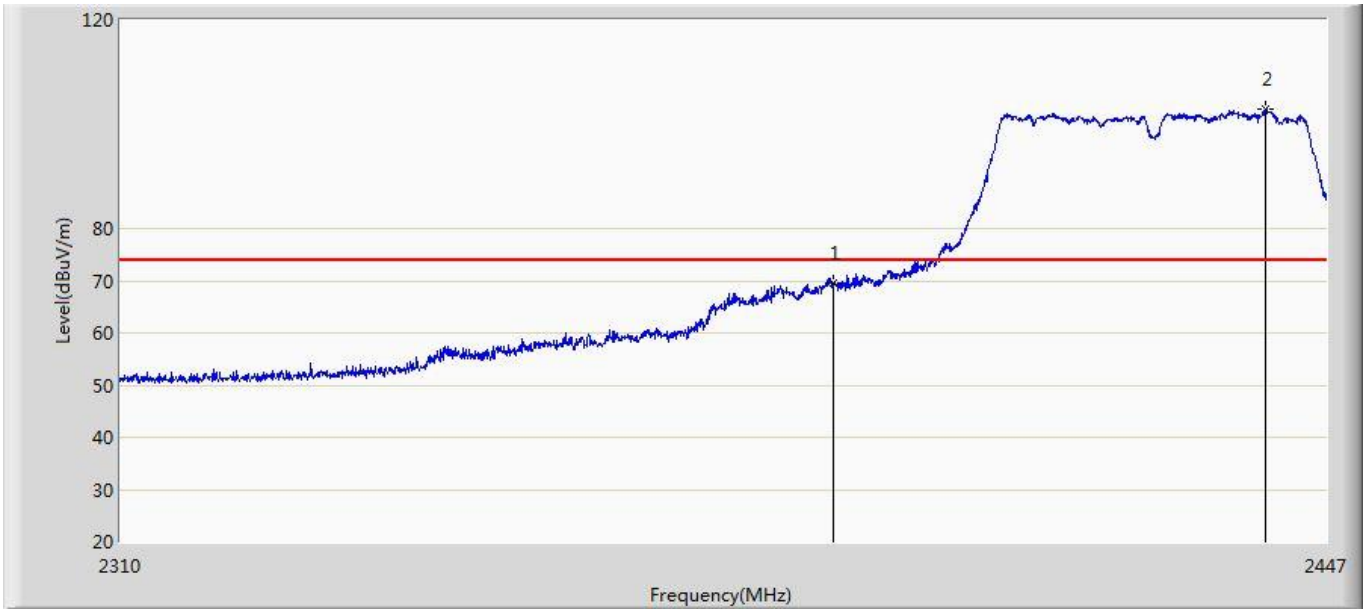
No	Mark	Frequency (MHz)	Measure Level (dBuV/m)	Reading Level (dBuV)	Over Limit (dB)	Limit (dBuV/m)	Factor (dB)	Type
1		2384.250	58.189	22.735	-15.811	74.000	35.454	PK
2		2390.000	56.996	21.539	-17.004	74.000	35.458	PK
3	*	2410.716	97.842	62.362	N/A	N/A	35.480	PK

Profile: 2060045R	Page No.: 28
Engineer: YULIU	
Site: AC5	Time: 2020/06/28 - 21:49
Limit: FCC_Part15.209_RE(3m)	Margin: 0
Probe: Horn_3117_00167055(1-18GHz)	Polarity: Horizontal
EUT: CLOUDGATE BASIC WIRELESS WI-FI - 1 RS485	Power: DC 5V
Note: Mode 4:Transmit at 2422MHz by 802.11n(40MHz)	



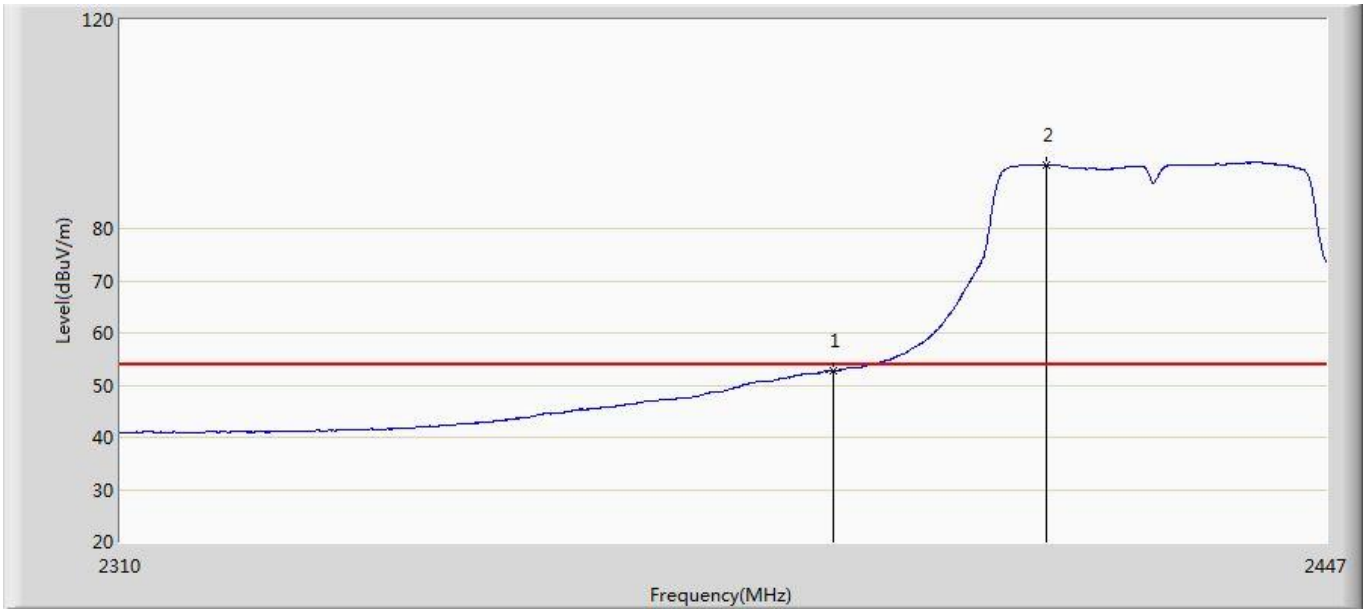
No	Mark	Frequency (MHz)	Measure Level (dBuV/m)	Reading Level (dBuV)	Over Limit (dB)	Limit (dBuV/m)	Factor (dB)	Type
1		2390.000	47.334	11.877	-6.666	54.000	35.458	AV
2	*	2409.660	89.570	54.091	N/A	N/A	35.478	AV

Profile: 2040625R	Page No.: 17
Engineer: YULIU	
Site: AC5	Time: 2020/07/01 - 18:57
Limit: FCC_Part15.209_RE(3m)	Margin: 0
Probe: Horn_3117_00167055(1-18GHz)	Polarity: Vertical
EUT: CLOUDGATE BASIC WIRELESS WI-FI - 1 RS485	Power: DC 5V
Note: Mode 4:Transmit at 2427MHz by 802.11n(40MHz)	



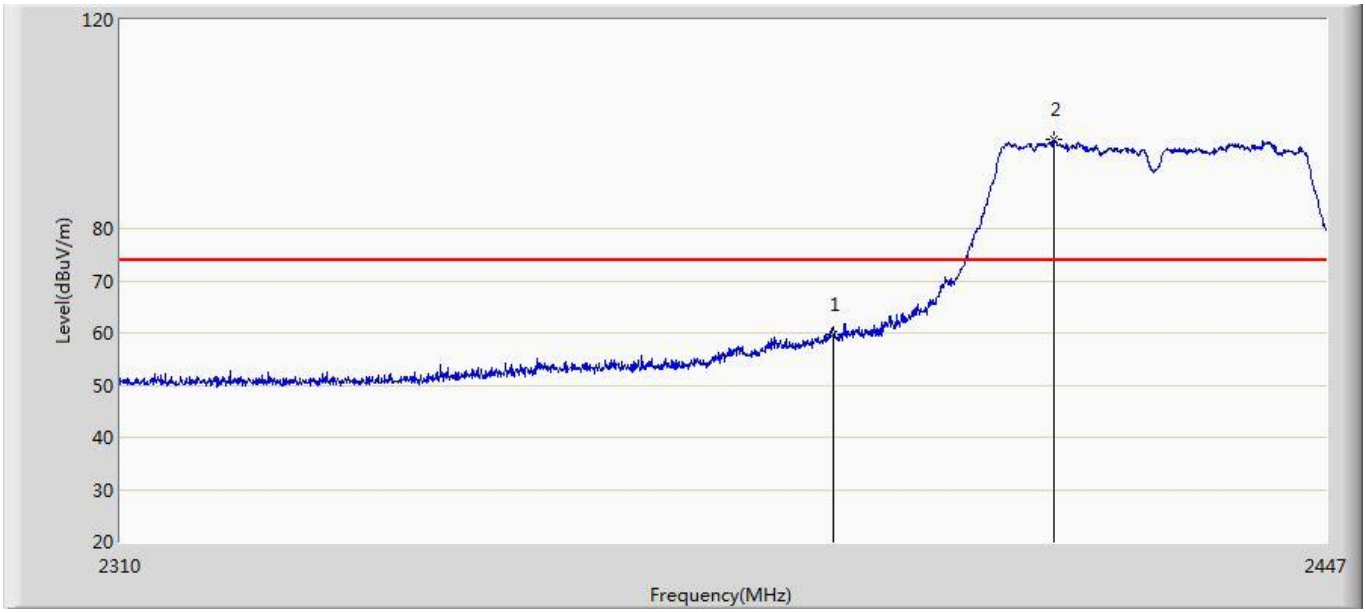
No	Mark	Frequency (MHz)	Measure Level (dBuV/m)	Reading Level (dBuV)	Over Limit (dB)	Limit (dBuV/m)	Factor (dB)	Type
1		2390.000	69.504	34.047	-4.496	74.000	35.458	PK
2	*	2439.876	102.829	N/A	N/A	74.000	35.501	PK

Profile: 2040625R	Page No.: 18
Engineer: YULIU	
Site: AC5	Time: 2020/07/01 - 19:02
Limit: FCC_Part15.209_RE(3m)	Margin: 0
Probe: Horn_3117_00167055(1-18GHz)	Polarity: Vertical
EUT: CLOUDGATE BASIC WIRELESS WI-FI - 1 RS485	Power: DC 5V
Note: Mode 4:Transmit at 2427MHz by 802.11n(40MHz)	



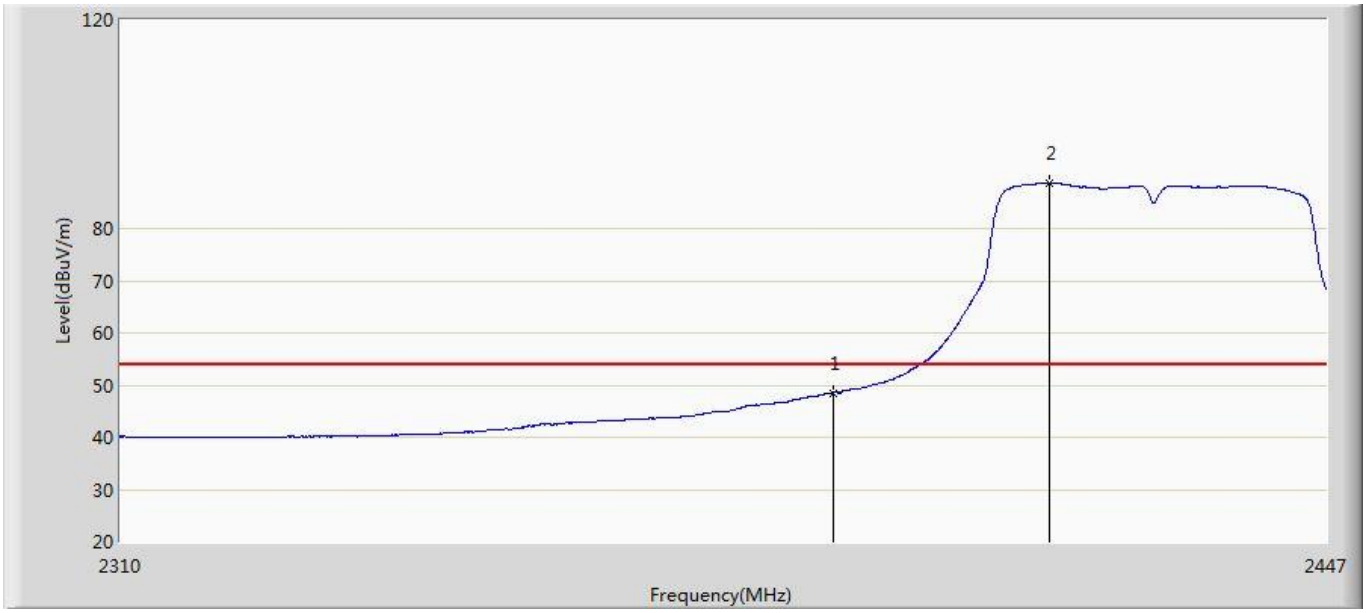
No	Mark	Frequency (MHz)	Measure Level (dBuV/m)	Reading Level (dBuV)	Over Limit (dB)	Limit (dBuV/m)	Factor (dB)	Type
1		2390.000	52.753	17.296	-1.247	54.000	35.458	AV
2	*	2414.462	92.220	N/A	N/A	54.000	35.489	AV

Profile: 2040625R	Page No.: 19
Engineer: YULIU	
Site: AC5	Time: 2020/07/01 - 19:12
Limit: FCC_Part15.209_RE(3m)	Margin: 0
Probe: Horn_3117_00167055(1-18GHz)	Polarity: Horizontal
EUT: CLOUDGATE BASIC WIRELESS WI-FI - 1 RS485	Power: DC 5V
Note: Mode 4:Transmit at 2427MHz by 802.11n(40MHz)	



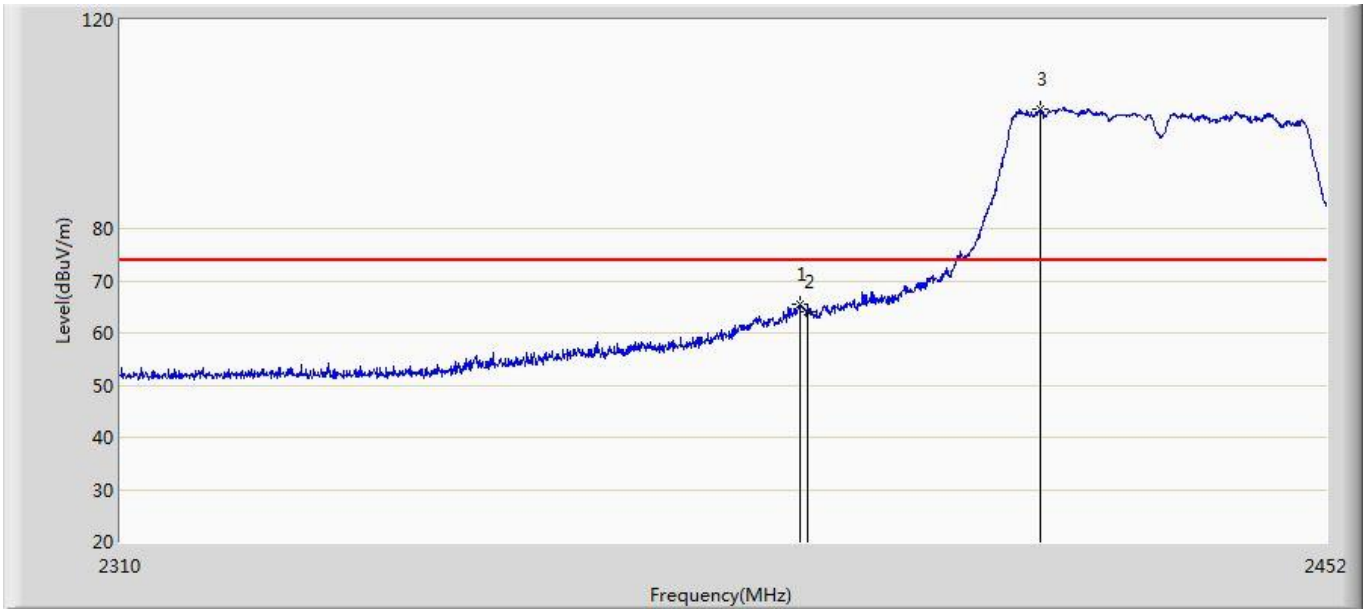
No	Mark	Frequency (MHz)	Measure Level (dBuV/m)	Reading Level (dBuV)	Over Limit (dB)	Limit (dBuV/m)	Factor (dB)	Type
1		2390.000	59.631	24.174	-14.369	74.000	35.458	PK
2	*	2415.421	96.968	N/A	N/A	74.000	35.491	PK

Profile: 2040625R	Page No.: 20
Engineer: YULIU	
Site: AC5	Time: 2020/07/01 - 19:14
Limit: FCC_Part15.209_RE(3m)	Margin: 0
Probe: Horn_3117_00167055(1-18GHz)	Polarity: Horizontal
EUT: CLOUDGATE BASIC WIRELESS WI-FI - 1 RS485	Power: DC 5V
Note: Mode 4:Transmit at 2427MHz by 802.11n(40MHz)	



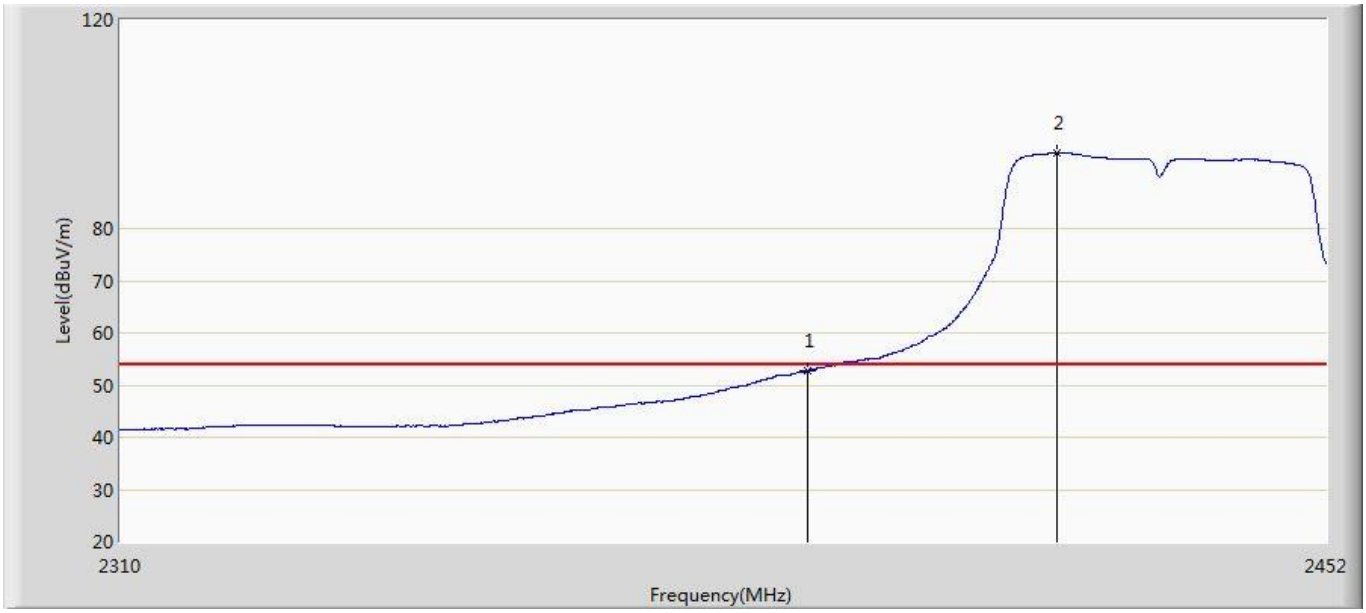
No	Mark	Frequency (MHz)	Measure Level (dBuV/m)	Reading Level (dBuV)	Over Limit (dB)	Limit (dBuV/m)	Factor (dB)	Type
1		2390.000	48.549	13.092	-5.451	54.000	35.458	AV
2	*	2414.942	88.662	N/A	N/A	54.000	35.490	AV

Profile: 2040625R	Page No.: 33
Engineer: YULIU	
Site: AC5	Time: 2020/07/02 - 18:06
Limit: FCC_Part15.209_RE(3m)	Margin: 0
Probe: Horn_3117_00167055(1-18GHz)	Polarity: Vertical
EUT: CLOUDGATE BASIC WIRELESS WI-FI - 1 RS485	Power: DC 5V
Note: Mode 4:Transmit at 2432MHz by 802.11n(40MHz)	



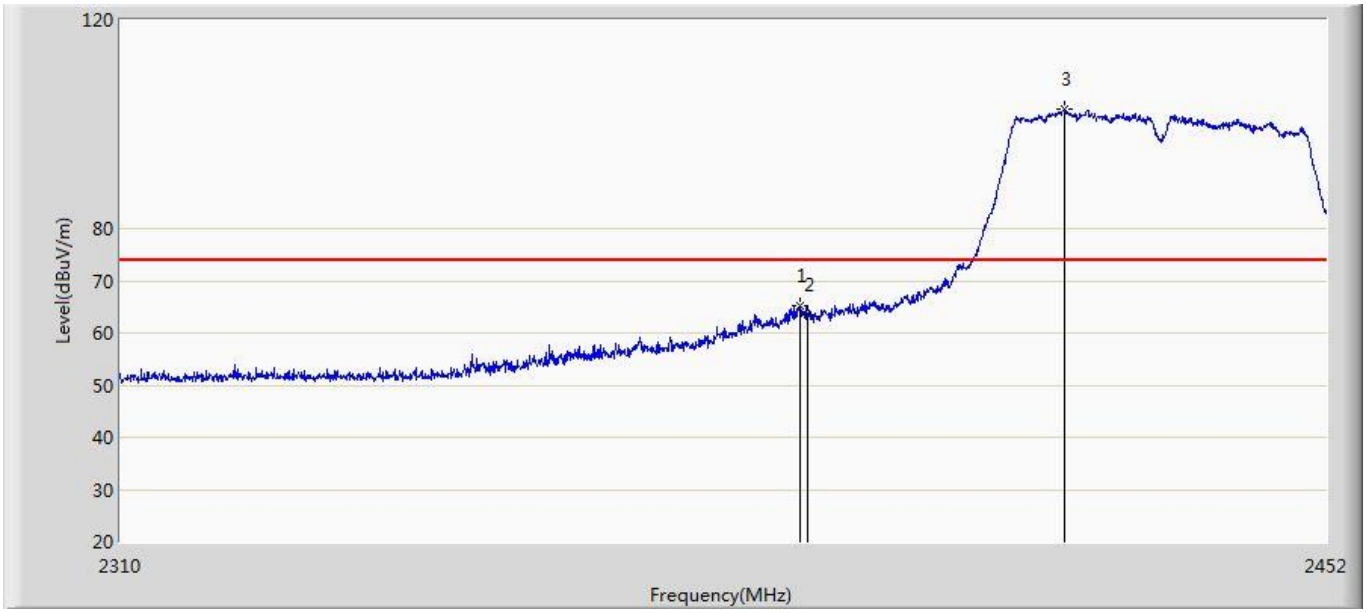
No	Mark	Frequency (MHz)	Measure Level (dBuV/m)	Reading Level (dBuV)	Over Limit (dB)	Limit (dBuV/m)	Factor (dB)	Type
1		2389.094	65.516	30.059	-8.484	74.000	35.457	PK
2		2390.000	64.048	28.591	-9.952	74.000	35.458	PK
3	*	2417.636	102.795	N/A	N/A	74.000	35.497	PK

Profile: 2040625R	Page No.: 34
Engineer: YULIU	
Site: AC5	Time: 2020/07/02 - 18:48
Limit: FCC_Part15.209_RE(3m)	Margin: 0
Probe: Horn_3117_00167055(1-18GHz)	Polarity: Vertical
EUT: CLOUDGATE BASIC WIRELESS WI-FI - 1 RS485	Power: DC 5V
Note: Mode 4:Transmit at 2432MHz by 802.11n(40MHz)	



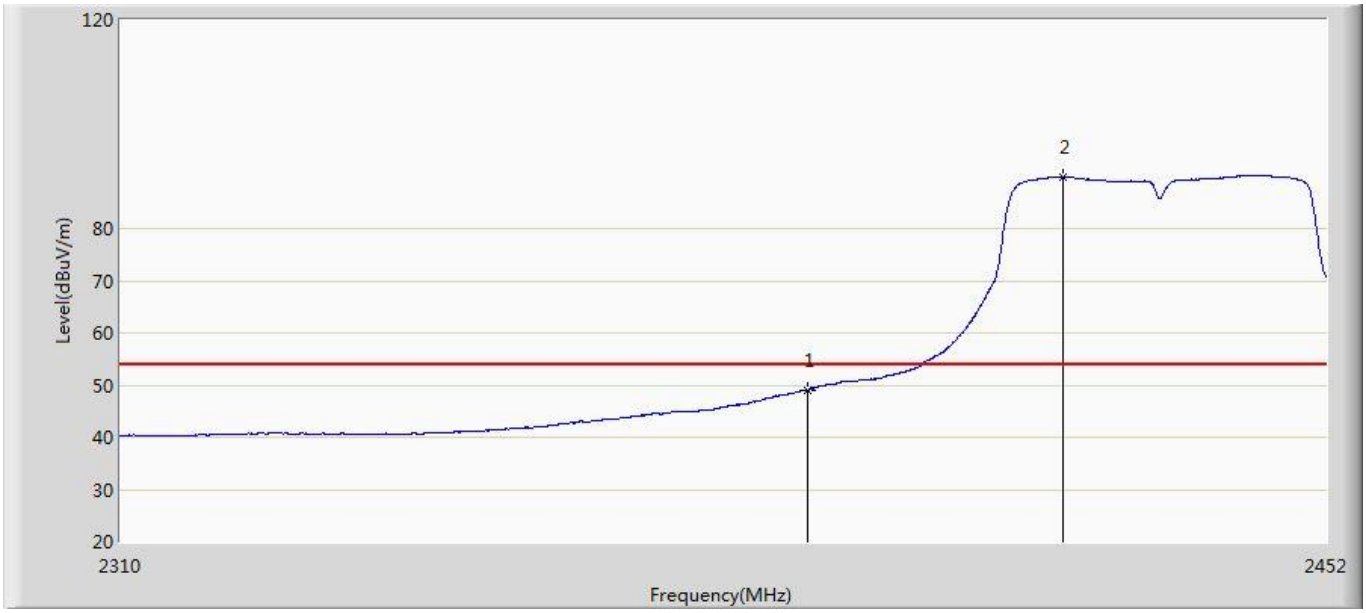
No	Mark	Frequency (MHz)	Measure Level (dBuV/m)	Reading Level (dBuV)	Over Limit (dB)	Limit (dBuV/m)	Factor (dB)	Type
1		2390.000	52.662	17.205	-1.338	54.000	35.458	AV
2	*	2419.624	94.522	N/A	N/A	54.000	35.502	AV

Profile: 2040625R	Page No.: 35
Engineer: YULIU	
Site: AC5	Time: 2020/07/02 - 18:50
Limit: FCC_Part15.209_RE(3m)	Margin: 0
Probe: Horn_3117_00167055(1-18GHz)	Polarity: Horizontal
EUT: CLOUDGATE BASIC WIRELESS WI-FI - 1 RS485	Power: DC 5V
Note: Mode 4:Transmit at 2432MHz by 802.11n(40MHz)	



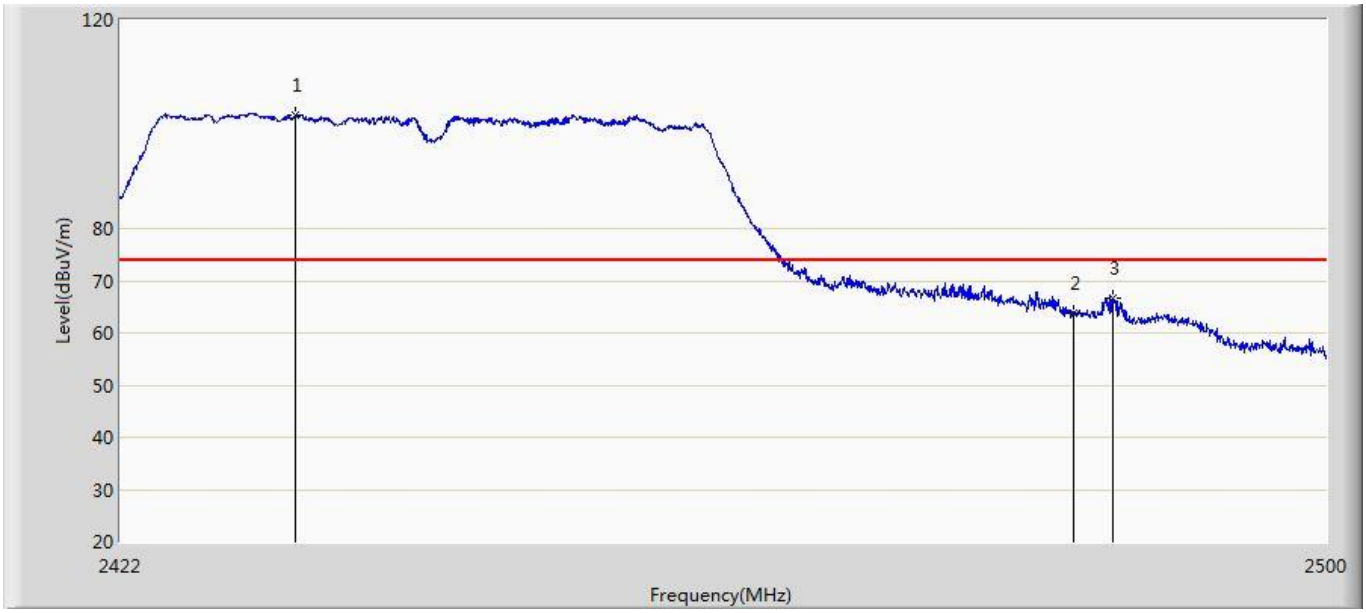
No	Mark	Frequency (MHz)	Measure Level (dBuV/m)	Reading Level (dBuV)	Over Limit (dB)	Limit (dBuV/m)	Factor (dB)	Type
1		2388.952	65.346	29.889	-8.654	74.000	35.457	PK
2		2390.000	63.427	27.970	-10.573	74.000	35.458	PK
3	*	2420.476	102.786	N/A	N/A	74.000	35.504	PK

Profile: 2040625R	Page No.: 36
Engineer: YULIU	
Site: AC5	Time: 2020/07/02 - 18:52
Limit: FCC_Part15.209_RE(3m)	Margin: 0
Probe: Horn_3117_00167055(1-18GHz)	Polarity: Horizontal
EUT: CLOUDGATE BASIC WIRELESS WI-FI - 1 RS485	Power: DC 5V
Note: Mode 4:Transmit at 2432MHz by 802.11n(40MHz)	



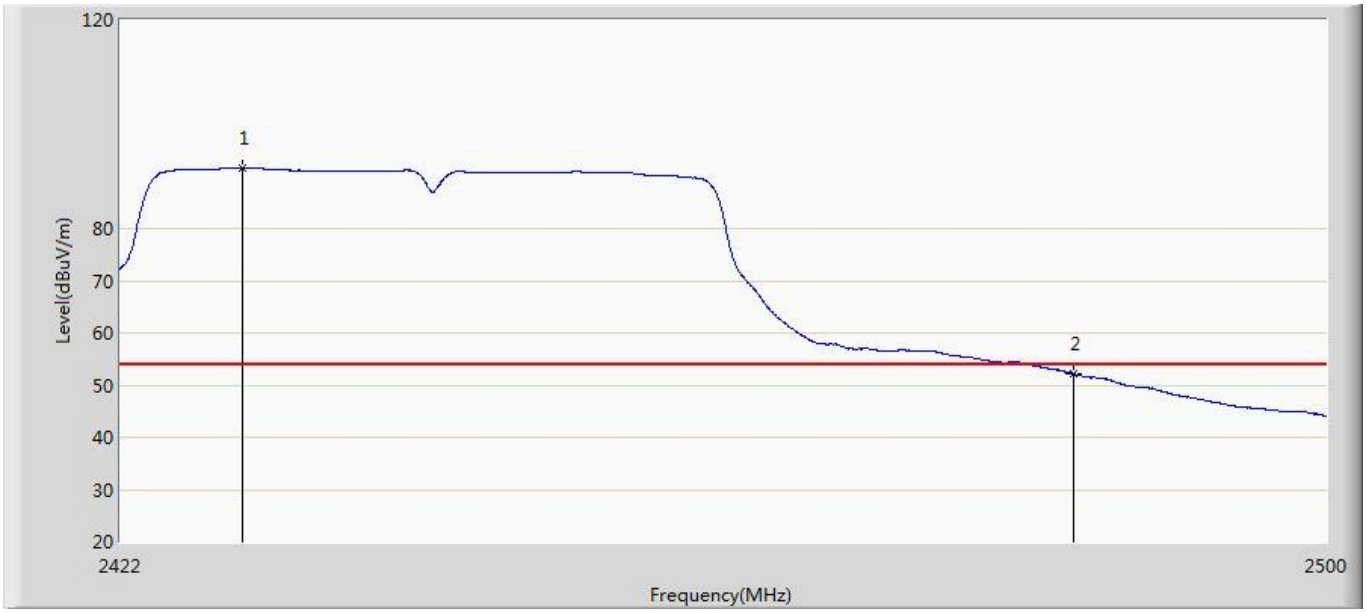
No	Mark	Frequency (MHz)	Measure Level (dBuV/m)	Reading Level (dBuV)	Over Limit (dB)	Limit (dBuV/m)	Factor (dB)	Type
1		2390.000	48.987	13.530	-5.013	54.000	35.458	AV
2	*	2420.334	89.970	N/A	N/A	54.000	35.504	AV

Profile: 2040625R	Page No.: 37
Engineer: YULIU	
Site: AC5	Time: 2020/07/02 - 18:57
Limit: FCC_Part15.209_RE(3m)	Margin: 0
Probe: Horn_3117_00167055(1-18GHz)	Polarity: Vertical
EUT: CLOUDGATE BASIC WIRELESS WI-FI - 1 RS485	Power: DC 5V
Note: Mode 4:Transmit at 2442MHz by 802.11n(40MHz)	



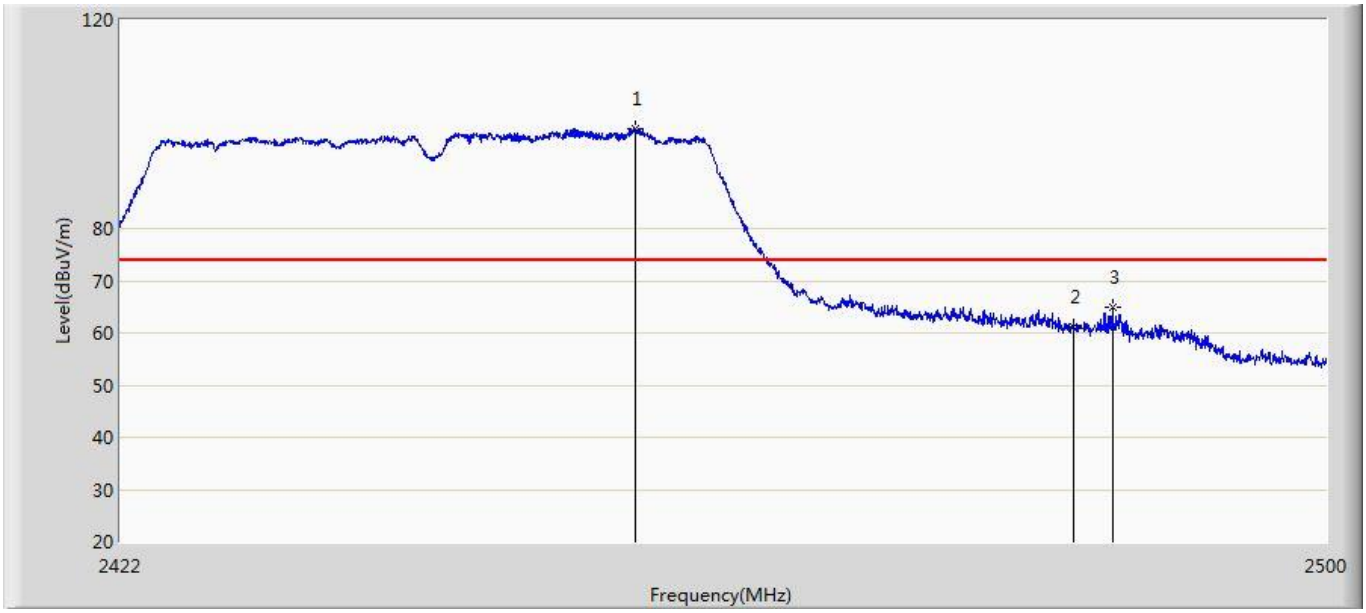
No	Mark	Frequency (MHz)	Measure Level (dBuV/m)	Reading Level (dBuV)	Over Limit (dB)	Limit (dBuV/m)	Factor (dB)	Type
1	*	2433.154	101.854	N/A	N/A	74.000	35.514	PK
2		2483.500	63.770	28.252	-10.230	74.000	35.517	PK
3		2486.038	66.742	31.210	-7.258	74.000	35.533	PK

Profile: 2040625R	Page No.: 38
Engineer: YULIU	
Site: AC5	Time: 2020/07/02 - 18:59
Limit: FCC_Part15.209_RE(3m)	Margin: 0
Probe: Horn_3117_00167055(1-18GHz)	Polarity: Vertical
EUT: CLOUDGATE BASIC WIRELESS WI-FI - 1 RS485	Power: DC 5V
Note: Mode 4:Transmit at 2442MHz by 802.11n(40MHz)	



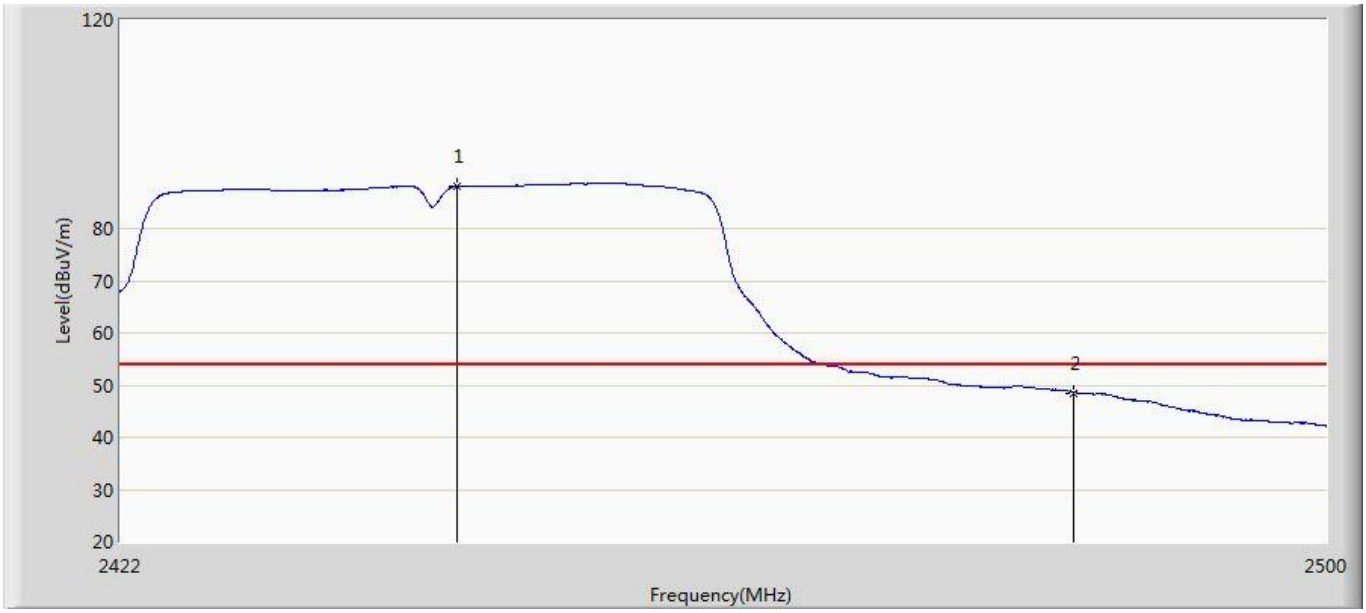
No	Mark	Frequency (MHz)	Measure Level (dBuV/m)	Reading Level (dBuV)	Over Limit (dB)	Limit (dBuV/m)	Factor (dB)	Type
1	*	2429.800	91.587	N/A	N/A	54.000	35.520	AV
2		2483.500	52.155	16.637	-1.845	54.000	35.517	AV

Profile: 2040625R	Page No.: 39
Engineer: YULIU	
Site: AC5	Time: 2020/07/02 - 19:01
Limit: FCC_Part15.209_RE(3m)	Margin: 0
Probe: Horn_3117_00167055(1-18GHz)	Polarity: Horizontal
EUT: CLOUDGATE BASIC WIRELESS WI-FI - 1 RS485	Power: DC 5V
Note: Mode 4:Transmit at 2442MHz by 802.11n(40MHz)	



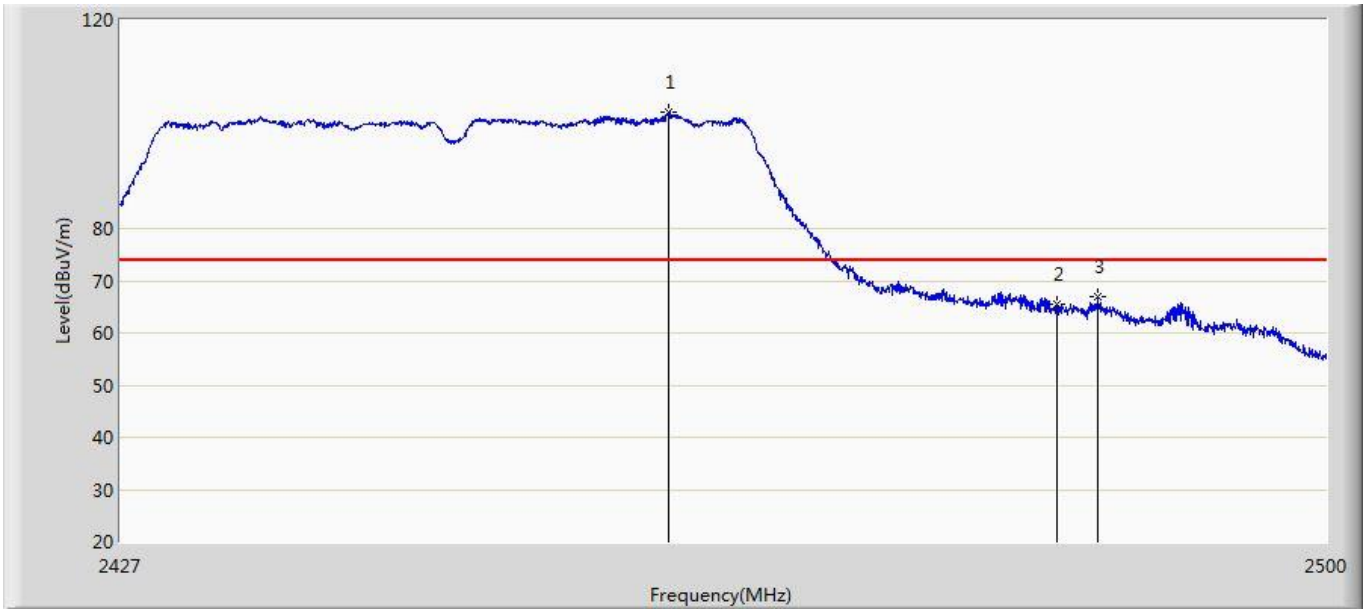
No	Mark	Frequency (MHz)	Measure Level (dBuV/m)	Reading Level (dBuV)	Over Limit (dB)	Limit (dBuV/m)	Factor (dB)	Type
1	*	2454.994	99.193	N/A	N/A	74.000	35.520	PK
2		2483.500	61.138	25.620	-12.862	74.000	35.517	PK
3		2486.038	64.883	29.351	-9.117	74.000	35.533	PK

Profile: 2040625R	Page No.: 40
Engineer: YULIU	
Site: AC5	Time: 2020/07/02 - 19:04
Limit: FCC_Part15.209_RE(3m)	Margin: 0
Probe: Horn_3117_00167055(1-18GHz)	Polarity: Horizontal
EUT: CLOUDGATE BASIC WIRELESS WI-FI - 1 RS485	Power: DC 5V
Note: Mode 4:Transmit at 2442MHz by 802.11n(40MHz)	



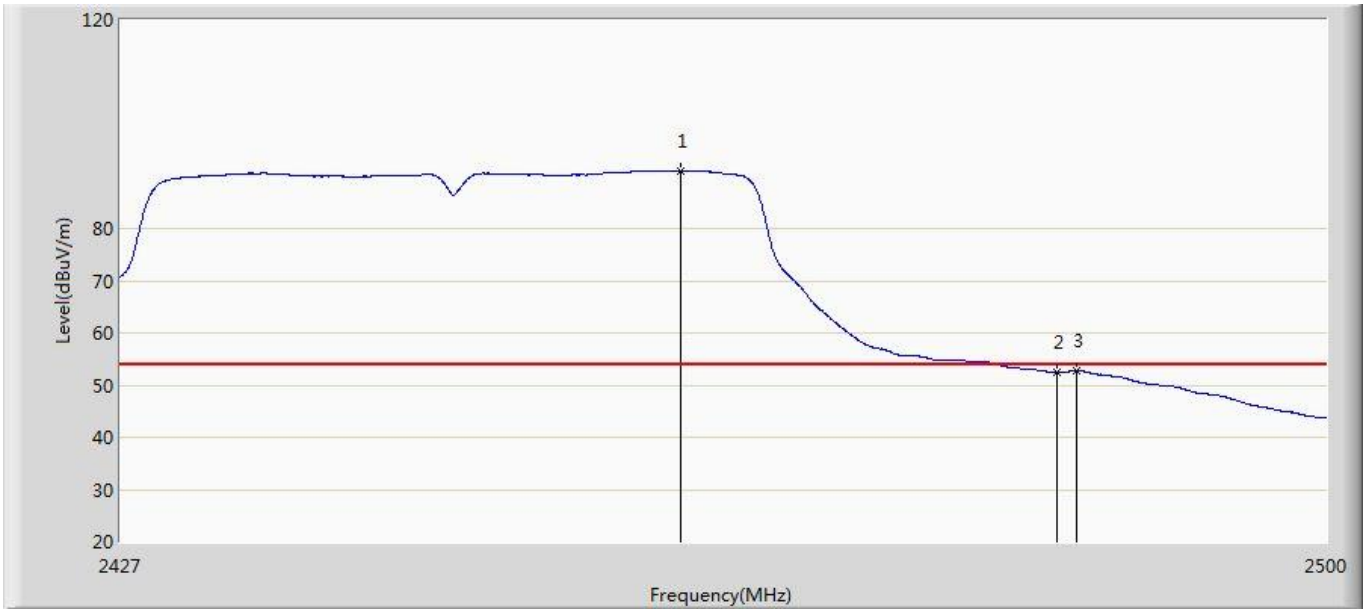
No	Mark	Frequency (MHz)	Measure Level (dBuV/m)	Reading Level (dBuV)	Over Limit (dB)	Limit (dBuV/m)	Factor (dB)	Type
1	*	2443.528	88.174	N/A	N/A	54.000	35.495	AV
2		2483.500	48.550	13.032	-5.450	54.000	35.517	AV

Profile: 2040625R	Page No.: 21
Engineer: YULIU	
Site: AC5	Time: 2020/07/01 - 19:17
Limit: FCC_Part15.209_RE(3m)	Margin: 0
Probe: Horn_3117_00167055(1-18GHz)	Polarity: Vertical
EUT: CLOUDGATE BASIC WIRELESS WI-FI - 1 RS485	Power: DC 5V
Note: Mode 4:Transmit at 2447MHz by 802.11n(40MHz)	



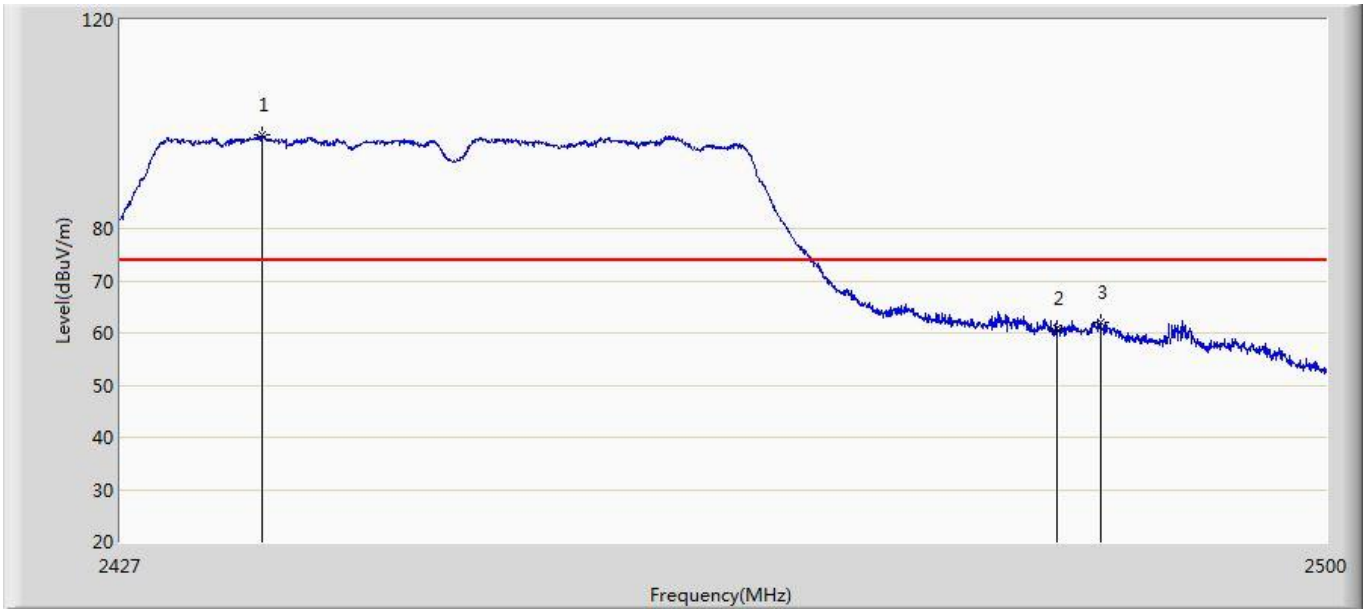
No	Mark	Frequency (MHz)	Measure Level (dBuV/m)	Reading Level (dBuV)	Over Limit (dB)	Limit (dBuV/m)	Factor (dB)	Type
1	*	2459.923	102.179	N/A	N/A	74.000	35.534	PK
2		2483.500	65.414	29.896	-8.586	74.000	35.517	PK
3		2486.021	66.812	31.280	-7.188	74.000	35.533	PK

Profile: 2040625R	Page No.: 22
Engineer: YULIU	
Site: AC5	Time: 2020/07/01 - 19:19
Limit: FCC_Part15.209_RE(3m)	Margin: 0
Probe: Horn_3117_00167055(1-18GHz)	Polarity: Vertical
EUT: CLOUDGATE BASIC WIRELESS WI-FI - 1 RS485	Power: DC 5V
Note: Mode 4:Transmit at 2447MHz by 802.11n(40MHz)	



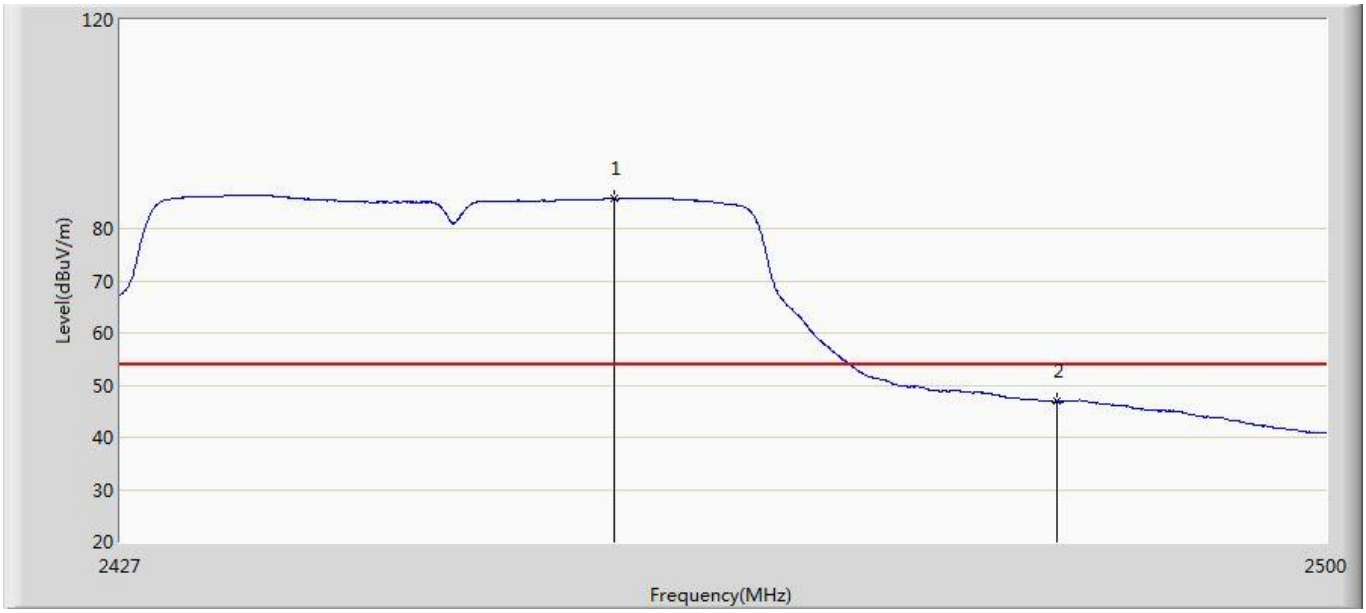
No	Mark	Frequency (MHz)	Measure Level (dBuV/m)	Reading Level (dBuV)	Over Limit (dB)	Limit (dBuV/m)	Factor (dB)	Type
1	*	2460.653	90.966	N/A	N/A	54.000	35.536	AV
2		2483.500	52.435	16.917	-1.565	54.000	35.517	AV
3		2484.707	52.797	17.272	-1.203	54.000	35.525	AV

Profile: 2040625R	Page No.: 23
Engineer: YULIU	
Site: AC5	Time: 2020/07/01 - 19:32
Limit: FCC_Part15.209_RE(3m)	Margin: 0
Probe: Horn_3117_00167055(1-18GHz)	Polarity: Horizontal
EUT: CLOUDGATE BASIC WIRELESS WI-FI - 1 RS485	Power: DC 5V
Note: Mode 4:Transmit at 2447MHz by 802.11n(40MHz)	



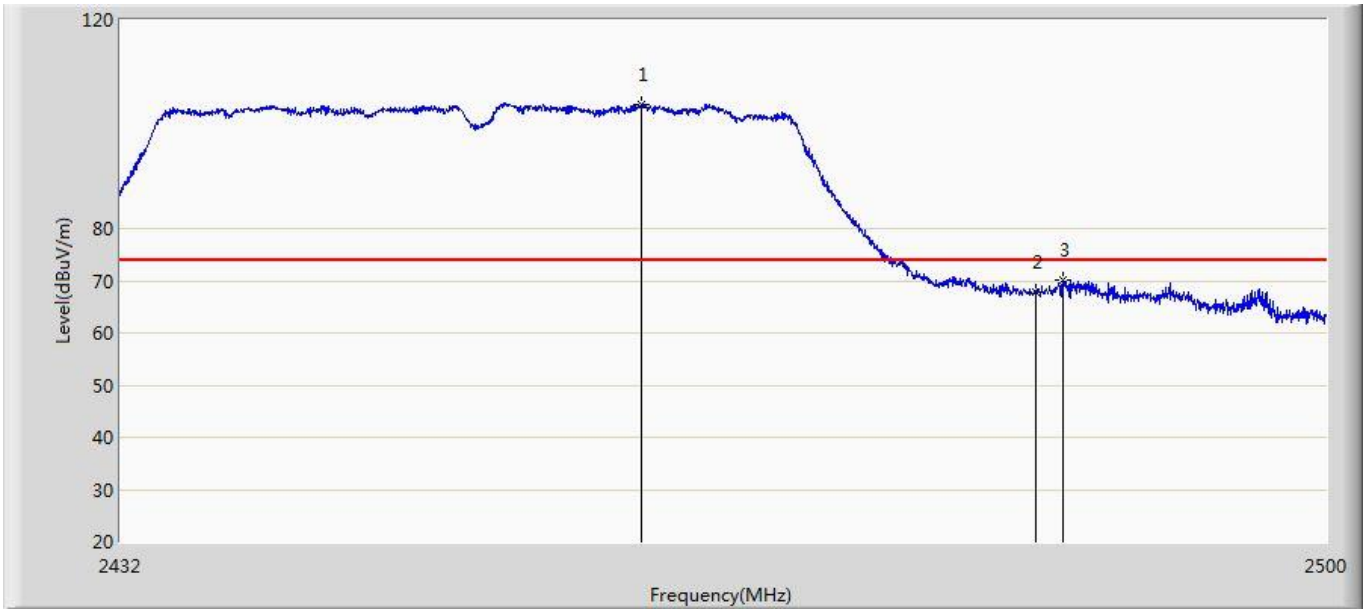
No	Mark	Frequency (MHz)	Measure Level (dBuV/m)	Reading Level (dBuV)	Over Limit (dB)	Limit (dBuV/m)	Factor (dB)	Type
1	*	2435.468	97.846	N/A	N/A	74.000	35.510	PK
2		2483.500	61.013	25.495	-12.987	74.000	35.517	PK
3		2486.167	62.156	26.623	-11.844	74.000	35.532	PK

Profile: 2040625R	Page No.: 24
Engineer: YULIU	
Site: AC5	Time: 2020/07/01 - 19:34
Limit: FCC_Part15.209_RE(3m)	Margin: 0
Probe: Horn_3117_00167055(1-18GHz)	Polarity: Horizontal
EUT: CLOUDGATE BASIC WIRELESS WI-FI - 1 RS485	Power: DC 5V
Note: Mode 4:Transmit at 2447MHz by 802.11n(40MHz)	



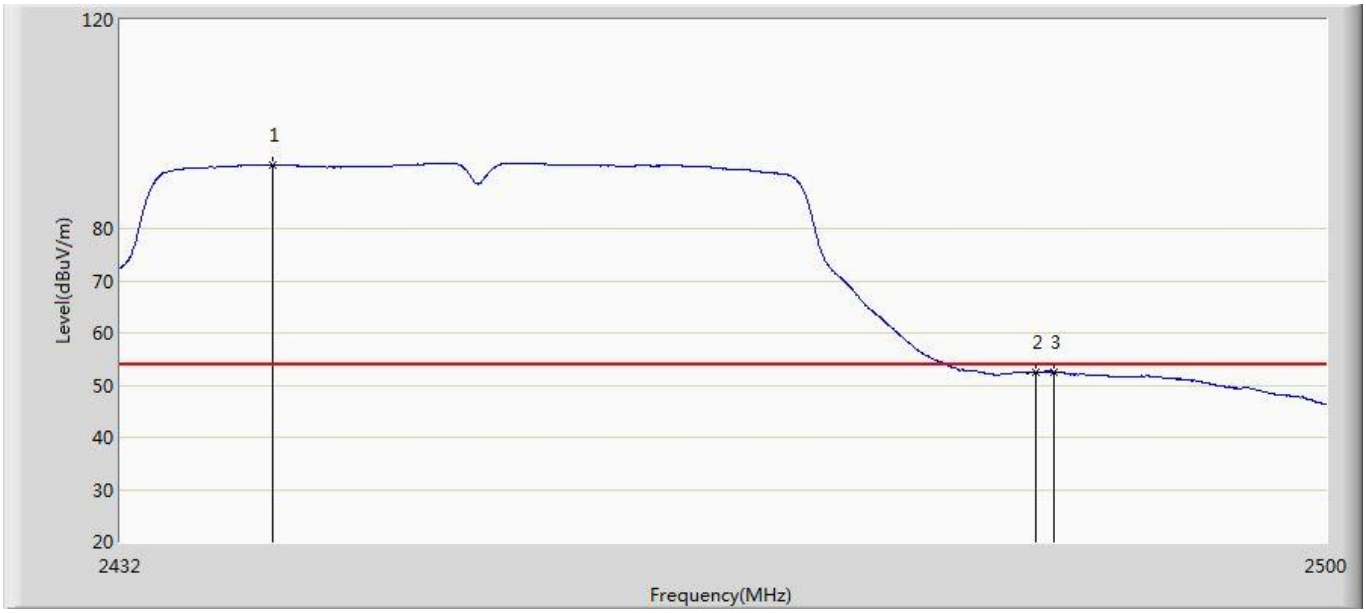
No	Mark	Frequency (MHz)	Measure Level (dBuV/m)	Reading Level (dBuV)	Over Limit (dB)	Limit (dBuV/m)	Factor (dB)	Type
1	*	2456.638	85.687	N/A	N/A	54.000	35.524	AV
2		2483.500	46.865	11.347	-7.135	54.000	35.517	AV

Profile: 2060045R	Page No.: 29
Engineer: YULIU	
Site: AC5	Time: 2020/06/28 - 21:51
Limit: FCC_Part15.209_RE(3m)	Margin: 0
Probe: Horn_3117_00167055(1-18GHz)	Polarity: Vertical
EUT: CLOUDGATE BASIC WIRELESS WI-FI - 1 RS485	Power: DC 5V
Note: Mode 4:Transmit at 2452MHz by 802.11n(40MHz)	



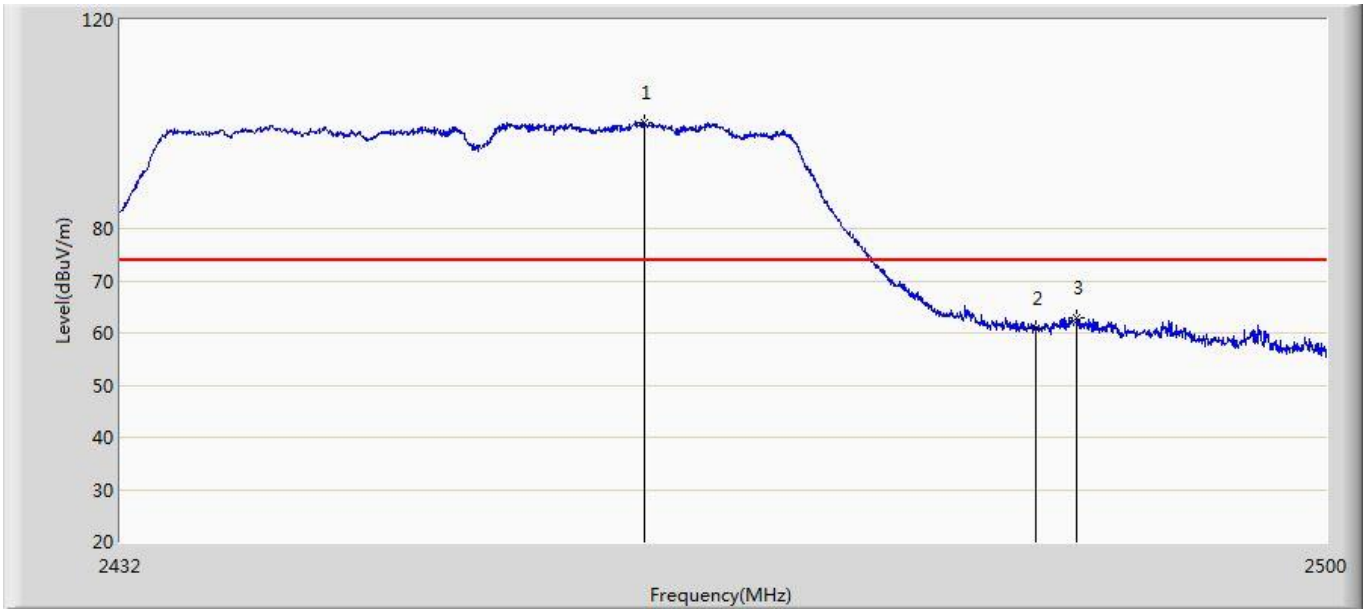
No	Mark	Frequency (MHz)	Measure Level (dBuV/m)	Reading Level (dBuV)	Over Limit (dB)	Limit (dBuV/m)	Factor (dB)	Type
1	*	2461.206	103.858	68.321	N/A	N/A	35.537	PK
2		2483.500	67.748	32.230	-6.252	74.000	35.517	PK
3		2485.006	70.185	34.659	-3.815	74.000	35.526	PK

Profile: 2060045R	Page No.: 30
Engineer: YULIU	
Site: AC5	Time: 2020/06/28 - 21:54
Limit: FCC_Part15.209_RE(3m)	Margin: 0
Probe: Horn_3117_00167055(1-18GHz)	Polarity: Vertical
EUT: CLOUDGATE BASIC WIRELESS WI-FI - 1 RS485	Power: DC 5V
Note: Mode 4:Transmit at 2452MHz by 802.11n(40MHz)	



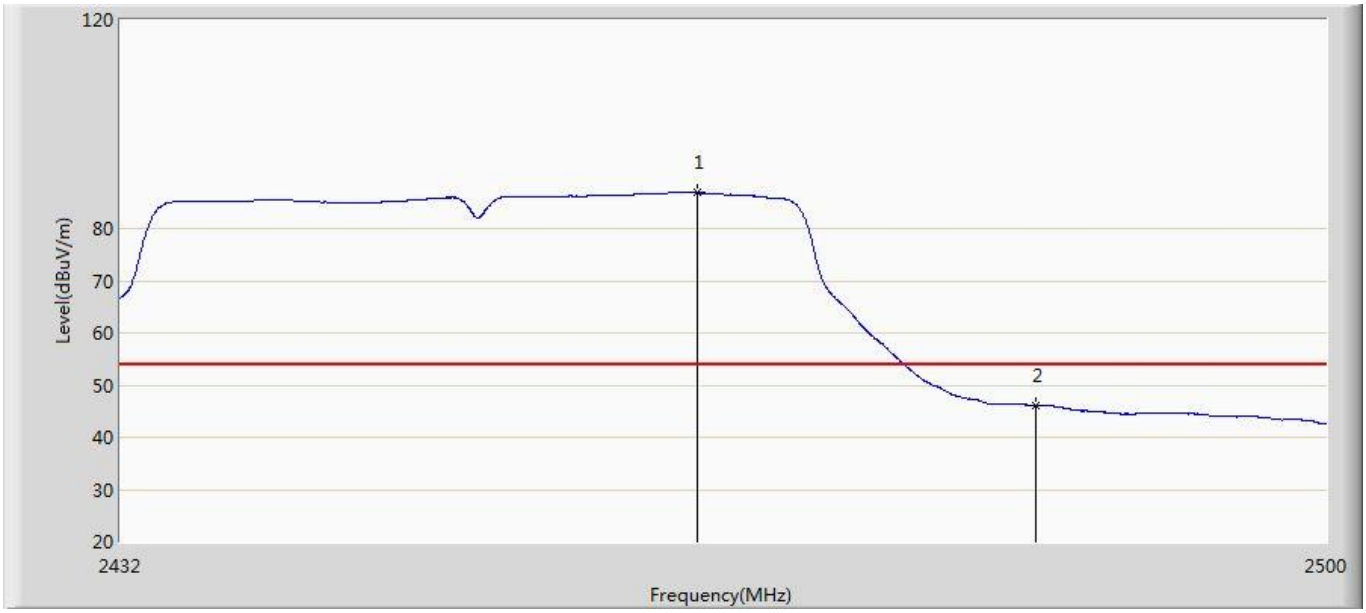
No	Mark	Frequency (MHz)	Measure Level (dBuV/m)	Reading Level (dBuV)	Over Limit (dB)	Limit (dBuV/m)	Factor (dB)	Type
1	*	2440.466	92.240	56.740	N/A	N/A	35.501	AV
2		2483.500	52.423	16.905	-1.577	54.000	35.517	AV
3		2484.462	52.606	17.083	-1.394	54.000	35.523	AV

Profile: 2060045R	Page No.: 31
Engineer: YULIU	
Site: AC5	Time: 2020/06/28 - 21:58
Limit: FCC_Part15.209_RE(3m)	Margin: 0
Probe: Horn_3117_00167055(1-18GHz)	Polarity: Horizontal
EUT: CLOUDGATE BASIC WIRELESS WI-FI - 1 RS485	Power: DC 5V
Note: Mode 4: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	*	2461.308	100.418	64.881	N/A	N/A	35.537	PK
2		2483.500	60.924	25.406	-13.076	74.000	35.517	PK
3		2485.822	63.025	27.494	-10.975	74.000	35.531	PK

Profile: 2060045R	Page No.: 32
Engineer: YULIU	
Site: AC5	Time: 2020/06/28 - 22:00
Limit: FCC_Part15.209_RE(3m)	Margin: 0
Probe: Horn_3117_00167055(1-18GHz)	Polarity: Horizontal
EUT: CLOUDGATE BASIC WIRELESS WI-FI - 1 RS485	Power: DC 5V
Note: Mode 4: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	*	2464.300	86.849	51.316	N/A	N/A	35.533	AV
2		2483.500	46.095	10.577	-7.905	54.000	35.517	AV

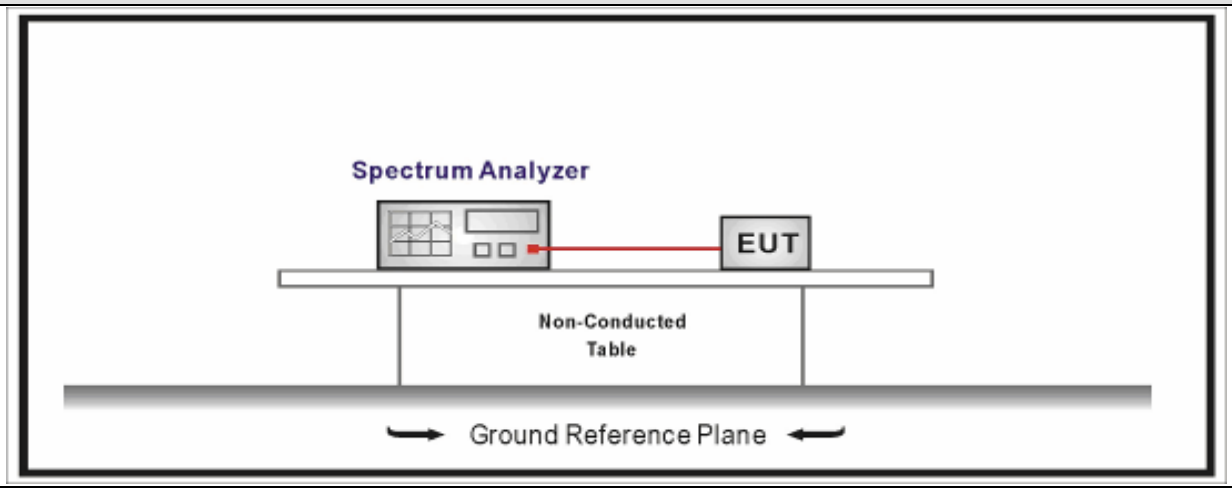
7. Occupied Bandwidth

7.1. Test Equipment

Occupied Bandwidth / TR-8					
Instrument	Manufacturer	Type No.	Serial No.	Cal. Date	Cal. Due Date
Spectrum Analyzer	Agilent	N9010A	MY48030494	2019.09.28	2020.09.27
EXA Spectrum Analyzer	Keysight	N9010A	MY55370495	2020.04.17	2021.04.16
MXA Signal Analyzer	Keysight	N9020A	MY56060147	2019.08.30	2020.08.29
Coaxial Cable	N/A	N/A	2007	2020.06.09	2021.06.08
Temperature/Humidity Meter	Zhichen	ZC1-2	TR8-TH	2019.09.02	2020.09.01
Note: All equipment is calibrated with traceable calibrations. Each calibration is traceable to the national or international standards.					

7.2. Test Setup

Occupied Bandwidth test setup:



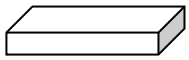
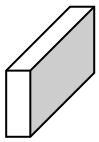
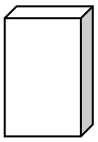
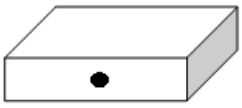
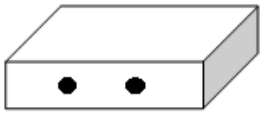
7.3. Limit

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

7.4. Test Procedure

Test Method				
	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

7.5. EUT test definition

<table>
<tr><th>Item</th><th colspan="4">Occupied Bandwidth</th></tr>
<tr><td rowspan="3">Device Category</td><td>☐</td><td colspan="3">Fixed point-to-point</td></tr>
<tr><td>☐</td><td colspan="3">Emit multiple directional beams, simultaneously or sequentially</td></tr>
<tr><td>☒</td><td colspan="3">Other cases</td></tr>
<tr><td>Test mode</td><td colspan="4">Mode 1~4</td></tr>
<tr><td rowspan="12">Test method</td><td>☐</td><td colspan="3">Radiated</td></tr>
<tr><td rowspan="3"></td><td>X Axis</td><td>Y Axis</td><td>Z Axis</td></tr>
<tr><td>  </td><td>  </td><td>  </td></tr>
<tr><td>Worst Axis ☐</td><td>Worst Axis ☐</td><td>Worst Axis ☐</td></tr>
<tr><td>☒</td><td colspan="3">Conducted</td></tr>
<tr><td>☒</td><td colspan="3">Chain 1</td></tr>
<tr><td></td><td colspan="3">  </td></tr>
<tr><td>☐</td><td>Chain 1</td><td colspan="2">Chain 2</td></tr>
<tr><td></td><td colspan="3">  </td></tr>
<tr><td>☐</td><td>Chain 1</td><td>Chain 2</td><td>Chain 3</td></tr>
<tr><td></td><td colspan="3">  </td></tr>
</table>

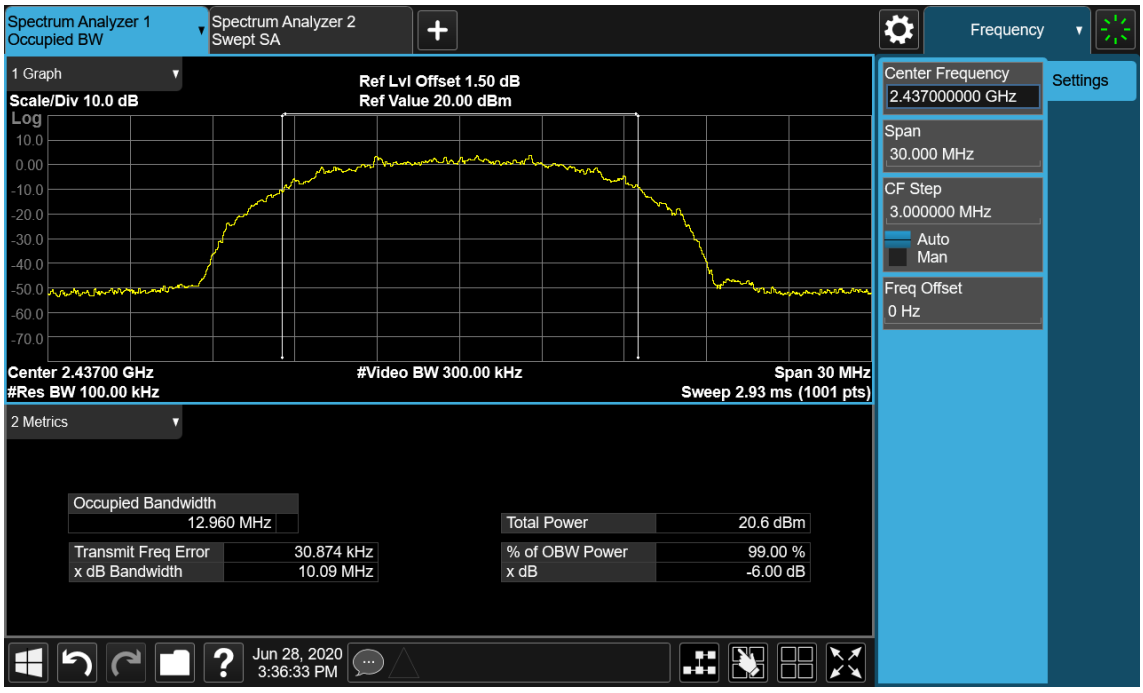
7.6. Test Result

Product Name	:	CLOUDGATE BASIC WIRELESS WI-FI - 1 RS485			
Test Mode	:	Mode1~4	Test Site	:	TR-8
Test Date	:	2020.06.28	Test Engineer	:	Yu

Mode	CH.	Test Freq. (MHz)	6dB Occupied Bandwidth (MHz)	Limit (kHz)	Result
1	01	2412	10.11	>500	Pass
1	06	2437	10.09	>500	Pass
1	11	2462	10.10	>500	Pass
2	01	2412	16.50	>500	Pass
2	06	2437	16.50	>500	Pass
2	11	2462	16.51	>500	Pass
3	01	2412	17.65	>500	Pass
3	06	2437	17.66	>500	Pass
3	11	2462	17.64	>500	Pass
4	03	2422	36.54	>500	Pass
4	06	2437	36.53	>500	Pass
4	09	2452	36.53	>500	Pass

Note : The worst case is as below:

Mode 1 CH06 (2437MHz)



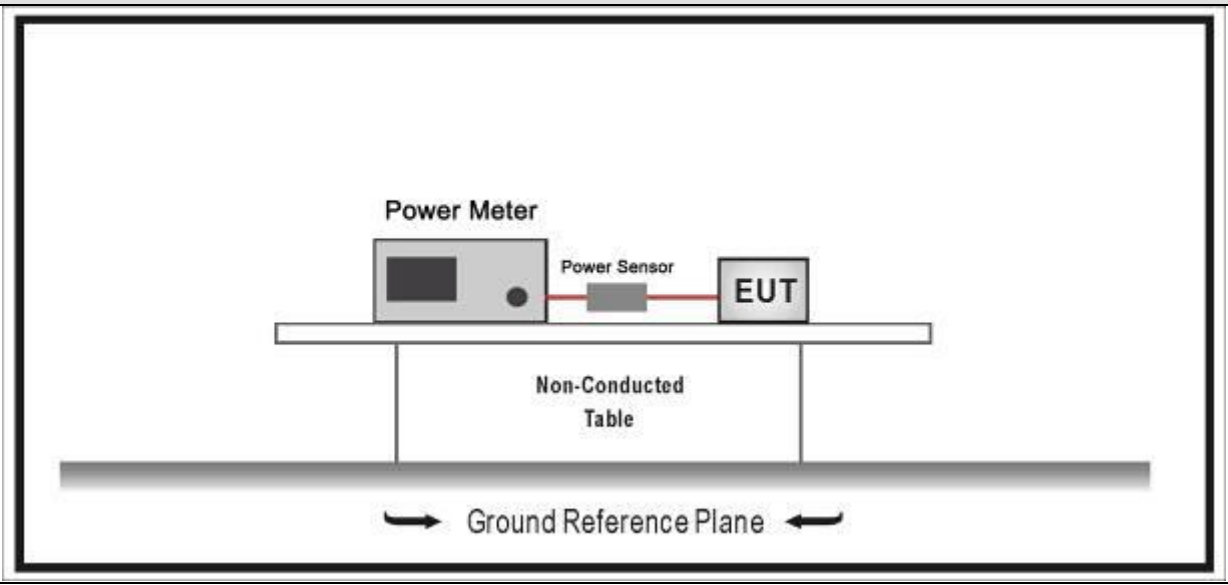
8. Fundamental emission output power

8.1. Test Equipment

Fundamental Emission output power / TR-8					
Instrument	Manufacturer	Type No.	Serial No.	Cal. Date	Cal. Due Date
Spectrum Analyzer	Agilent	N9010A	MY48030494	2019.09.28	2020.09.27
EXA Spectrum Analyzer	Keysight	N9010A	MY55370495	2020.04.17	2021.04.16
MXA Signal Analyzer	Keysight	N9020A	MY56060147	2019.08.30	2020.08.29
Wideband Peak Power Meter	Anritsu	ML2495A	1613005	2019.10.28	2020.10.27
Power Sensor	Anritsu	MA2411B	1531092	2019.10.14	2020.10.13
Coaxial Cable	N/A	N/A	2007	2020.06.09	2021.06.08
Temperature/Humidity Meter	Zhichen	ZC1-2	TR8-TH	2019.09.02	2020.09.01
Note: All equipment is calibrated with traceable calibrations. Each calibration is traceable to the national or international standards.					

8.2. Test Setup

Fundamental emission output power test setup



8.3. Limit

Fundamental emission output power Limit			
☒	G_{TX} ＜6dBi		P_{out}≤30dBm
☐	G_{TX} ＞6dBi		
	☐	Non-Fix point-point	P_{out}≤30-(G_{TX} -6)
	☐	Fix point-point	P_{out}≤30-[(G_{TX}-6)]/3
	☐	Point-to-multipoint	Pout≤30-(GTX-6)
	☐	Overlap Beams	P_{out}≤30-[(G_{TX}-6)]/3
	☐	Aggregate power transmitted simultaneously on all beams	P_{out}≤30-[(G_{TX}-6)]/3
	☐	single directional beam	P_{out}≤30-[(G_{TX}-6)]/3+8dB
Note 1 : G_{TX} directional gain of transmitting antennas. Note 2 : P_{out} is maximum peak conducted output power .			

8.4. Test Procedure

Fundamental emission output power Test Method						
	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

8.5. EUT test definition

<table>
<tr><th>Item</th><th colspan="4">Fundamental emission output power</th></tr>
<tr><td rowspan="3">Device Category</td><td>☐</td><td colspan="3">Fixed point-to-point</td></tr>
<tr><td>☐</td><td colspan="3">Emit multiple directional beams, simultaneously or sequentially</td></tr>
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<tr><td>Test mode</td><td colspan="4">Mode 1~4</td></tr>
<tr><td rowspan="12">Test method</td><td>☐</td><td colspan="3">Radiated</td></tr>
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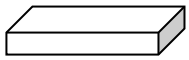
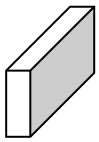
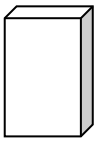
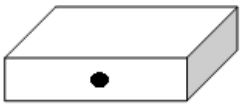
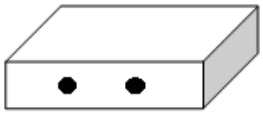
<tr><td>  </td><td>  </td><td>  </td></tr>
<tr><td>Worst Axis ☐</td><td>Worst Axis ☐</td><td>Worst Axis ☐</td></tr>
<tr><td>☒</td><td colspan="3">Conducted</td></tr>
<tr><td>☒</td><td colspan="3">Chain 1</td></tr>
<tr><td></td><td colspan="3">  </td></tr>
<tr><td>☐</td><td>Chain 1</td><td colspan="2">Chain 2</td></tr>
<tr><td></td><td colspan="3">  </td></tr>
<tr><td>☐</td><td>Chain 1</td><td>Chain 2</td><td>Chain 3</td></tr>
<tr><td></td><td colspan="3">  </td></tr>
</table>

8.6. Test Result

Product Name	:	CLOUDGATE BASIC WIRELESS WI-FI - 1 RS485			
Test Mode	:	Mode1~4	Test Site	:	TR-8
Test Date	:	2020.06.30	Test Engineer	:	Yu

Mode	Channel	Test Frequency (MHz)	Output Power (dBm)	Limit (dBm)	Result
1	01	2412	26.74	30	Pass
1	06	2437	27.11	30	Pass
1	11	2462	26.88	30	Pass
2	01	2412	24.98	30	Pass
2	02	2417	26.51	30	Pass
2	06	2437	27.14	30	Pass
2	10	2457	27.08	30	Pass
2	11	2462	25.01	30	Pass
3	01	2412	24.68	30	Pass
3	02	2417	26.75	30	Pass
3	06	2437	27.23	30	Pass
3	10	2457	27.28	30	Pass
3	11	2462	24.68	30	Pass
4	03	2422	24.27	30	Pass
4	04	2427	24.37	30	Pass
4	05	2432	25.52	30	Pass
4	06	2437	27.77	30	Pass
4	07	2442	25.28	30	Pass

4	08	2447	24.57	30	Pass
4	09	2452	24.02	30	Pass

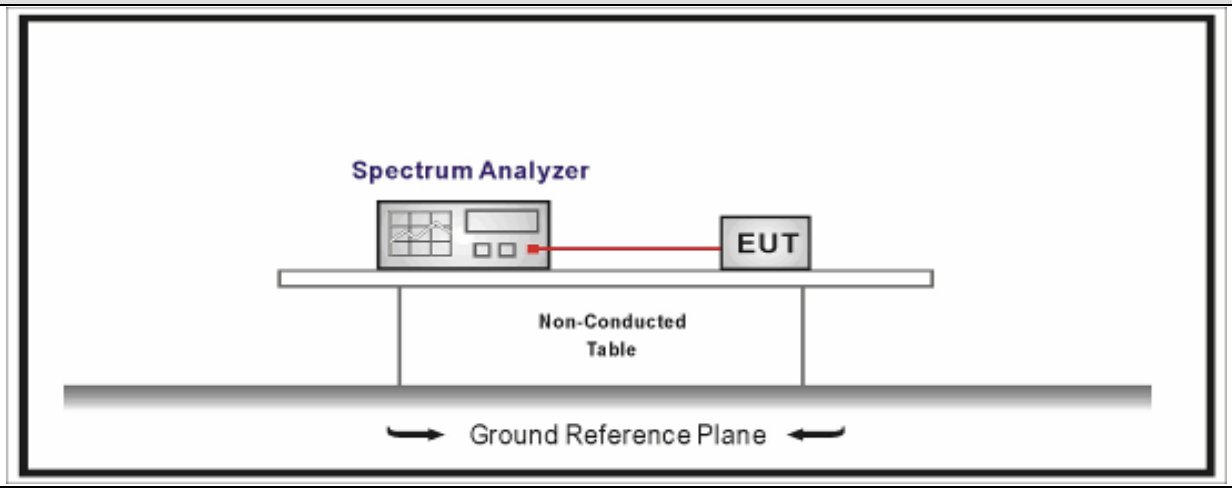
9. Power Spectral Density

9.1. Test Equipment

Power Spectral Density / TR-8					
Instrument	Manufacturer	Type No.	Serial No.	Cal. Date	Cal. Due Date
Spectrum Analyzer	Agilent	N9010A	MY48030494	2019.09.28	2020.09.27
EXA Spectrum Analyzer	Keysight	N9010A	MY55370495	2020.04.17	2021.04.16
MXA Signal Analyzer	Keysight	N9020A	MY56060147	2019.08.30	2020.08.29
Coaxial Cable	N/A	N/A	2007	2020.06.09	2021.06.08
Temperature/Humidity Meter	Zhichen	ZC1-2	TR8-TH	2019.09.02	2020.09.01
Note: All equipment is calibrated with traceable calibrations. Each calibration is traceable to the national or international standards.					

9.2. Test Setup

Power Spectral Density test setup



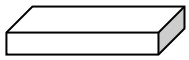
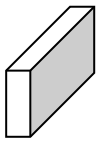
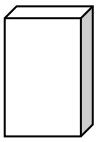
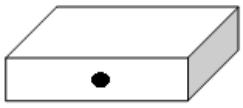
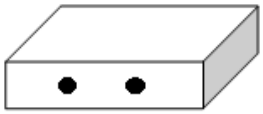
9.3. Limit

Power Spectral Density Limit
Power Spectral Density≤8dBm/3kHz

9.4. Test Procedure

Power Spectral Density Test Method				
	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

9.5. EUT test definition

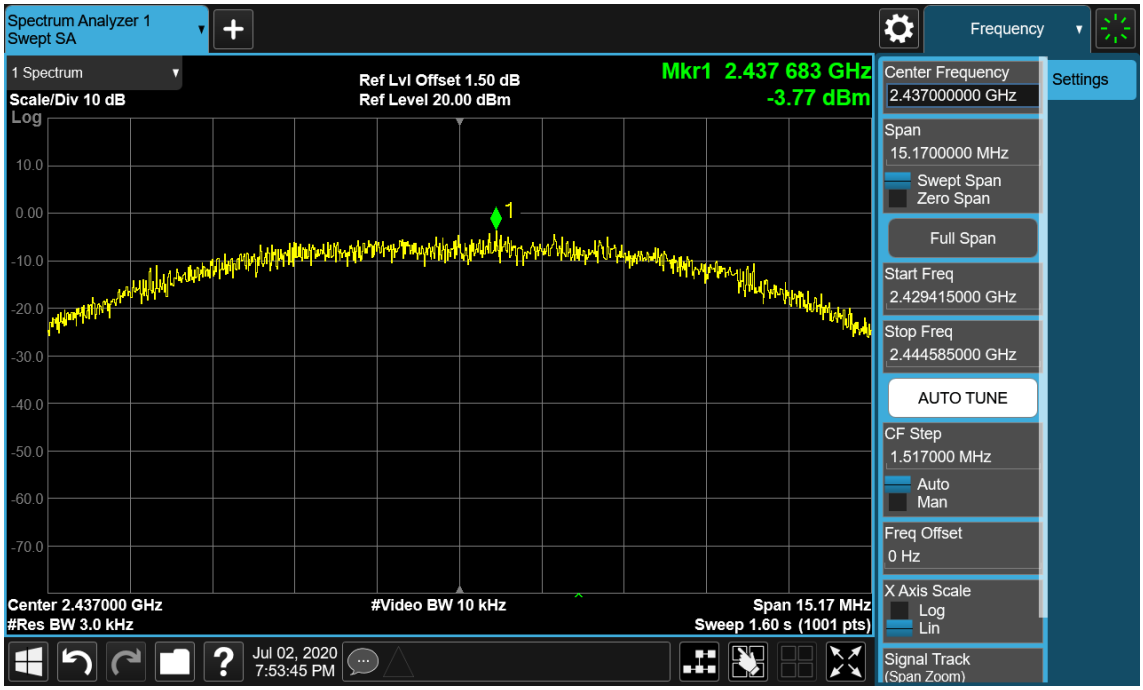
<table>
<tr><th>Item</th><th colspan="4">Power Spectral Density Test Method</th></tr>
<tr><td rowspan="3">Device Category</td><td>☐</td><td colspan="3">Fixed point-to-point</td></tr>
<tr><td>☐</td><td colspan="3">Emit multiple directional beams, simultaneously or sequentially</td></tr>
<tr><td>☒</td><td colspan="3">Other cases</td></tr>
<tr><td>Test mode</td><td colspan="4">Mode 1~4</td></tr>
<tr><td rowspan="13">Test method</td><td>☐</td><td colspan="3">Radiated</td></tr>
<tr><td rowspan="3"></td><td>X Axis</td><td>Y Axis</td><td>Z Axis</td></tr>
<tr><td>  </td><td>  </td><td>  </td></tr>
<tr><td>Worst Axis ☐</td><td>Worst Axis ☐</td><td>Worst Axis ☐</td></tr>
<tr><td>☒</td><td colspan="3">Conducted</td></tr>
<tr><td>☒</td><td colspan="3">Chain 1</td></tr>
<tr><td></td><td colspan="3">  </td></tr>
<tr><td>☐</td><td>Chain 1</td><td colspan="2">Chain 2</td></tr>
<tr><td></td><td colspan="3">  </td></tr>
<tr><td>☐</td><td>Chain 1</td><td>Chain 2</td><td>Chain 3</td></tr>
<tr><td></td><td colspan="3">  </td></tr>
</table>

9.6. Test Result

Product Name	:	CLOUDGATE BASIC WIRELESS WI-FI - 1 RS485			
Test Mode	:	Mode1~4	Test Site	:	TR-8
Test Date	:	2020.07.02	Test Engineer	:	Yu

Mode	Channel	Test Frequency (MHz)	Measurement PSD (dBm/3kHz)	Limit (dBm/3kHz)	Result
1	01	2412	-3.82	8.0	Pass
1	06	2437	-3.77	8.0	Pass
1	11	2462	-3.95	8.0	Pass
2	01	2412	-11.57	8.0	Pass
2	06	2437	-9.45	8.0	Pass
2	11	2462	-11.20	8.0	Pass
3	01	2412	-11.53	8.0	Pass
3	06	2437	-8.94	8.0	Pass
3	11	2462	-11.87	8.0	Pass
4	03	2422	-14.90	8.0	Pass
4	06	2437	-11.74	8.0	Pass
4	09	2452	-14.97	8.0	Pass

Mode 1 CH06(2437MHz)



10. Antenna Requirement

10.1. Limit

Antenna Requirement Limit
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.

10.2. Antenna Connector Construction

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.	

The End