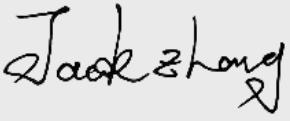


Test report No:  
2231093R-RF-US-P06V01

## FCC TEST REPORT

Product Name	Barcode Scanner
Trademark	Honeywell
Model and /or type reference	8690i
FCC ID	HD5-8690B
Applicant's name / address	HONEYWELL INTERNATIONAL INC Honeywell Safety and Productivity Solutions 9680 OLD BAILES RD FORT MILL SC 29707-7539,USA
Test method requested, standard	FCC CFR Title 47 Part 15 Subpart C Section 15.247 ANSI C63.10: 2013 KDB 558074 D01v05r02 KDB 662911 D01 Multiple Transmitter Output v02r01
Verdict Summary	IN COMPLIANCE
Tested By (name / position & signature)	Tim Cao/Project Engineer 
Approved by (name / position & signature)	Jack Zhang/ Supervisor 
Date of issue	2022-06-07
Report Version	V1.0
Report template No	Template_FCC Part 15C-RF-V1.0

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## COMPETENCES AND GUARANTEES

DEKRA is a testing laboratory competent to carry out the tests described in this report.

In order to assure the traceability to other national and international laboratories, DEKRA has a calibration and maintenance program for its measurement equipment.

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

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

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

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

## GENERAL CONDITIONS

Test Location	No. 99, Hongye Road, Suzhou Industrial Park Suzhou, 215006, P.R. China
Date(receive sample)	May. 13, 2022
Date (start test)	May. 14, 2022
Date (finish test)	May. 25, 2022

1. This report is only referred to the item that has undergone the test.
2. This report does not constitute or imply on its own an approval of the product by the Certification Bodies or Competent Authorities.
3. This document is only valid if complete; no partial reproduction can be made without previous written permission of DEKRA.
4. This test report cannot be used partially or in full for publicity and/or promotional purposes without previous written permission of DEKRA.
5. The 2.4G WLAN part of AirEngine6761-21T is exactly the same as AirEngine5761-11, so we only verified the power and AC Power Line Conducted Emission, and other data are quoted from AirEngine5761-11.

## ENVIRONMENTAL CONDITIONS

The climatic conditions during the tests are within the limits specified by the manufacturer for the operation of the EUT and the test equipment. The climatic conditions during the tests were within the following limits:

Ambient temperature	15 °C – 35 °C
Relative Humidity air	30% - 60%

If explicitly required in the basic standard or applied product / product family standard the climatic values are recorded and documented separately in this test report.

## POSSIBLE TEST CASE VERDICTS

Test case does not apply to test object	N/A
Test object does meet requirement	P (Pass) / PASS
Test object does not meet requirement	F (Fail) / FAIL
Not measured	N/M

## ABBREVIATIONS

For the purposes of the present document, the following abbreviations apply:

EUT	: Equipment Under Test
QP	: Quasi-Peak
CAV	: CISPR Average
AV	: Average
CDN	: Coupling Decoupling Network
SAC	: Semi-Anechoic Chamber
OATS	: Open Area Test Site
BW	: Bandwidth
AM	: Amplitude Modulation
PM	: Pulse Modulation
HCP	: Horizontal Coupling Plane
VCP	: Vertical Coupling Plane
$U_N$	: Nominal voltage
$T_x$	: Transmitter
$R_x$	: Receiver
N/A	: Not Applicable
N/M	: Not Measured

## DOCUMENT HISTORY

## **REMARKS AND COMMENTS**

1. The equipment under test (EUT) does meet the essential requirements of the stated standard(s)/test(s).
  2. These test results on a sample of the device are for the purpose of demonstrating Compliance with Part 15 Subpart C Paragraph 15.247.
  3. The measurement result is considered in conformance with the requirement if it is within the prescribed limit. It is not necessary to account the uncertainty associated with the measurement result.
  4. The test results presented in this report relate only to the object tested.
  5. The test report shall not be reproduced without the written approval of DEKRA Testing and Certification (Suzhou) Co., Ltd.
  6. This report will not be used for social proof function in China market.
  7. DEKRA declines any responsibility with the following test data provided by customer that may affect the validity of result:
    - Chapter 1.1 General Description of the Item(s);
    - Chapter 1.2 Antenna Information;
    - Chapter 1.3 Channel List;
  8. The EUT supports the simultaneous operation of RFID and WIFI, so we evaluated the test of Emissions in restricted frequency bands emitted by RFID and WIFI at the same time.

## USED EQUIPMENT

### AC Power Line Conducted Emission / TR1

Instrument	Manufacturer	Model No.	Serial No.	Cal. Date	Next Cal. Date
EMI Test Receiver	R&S	ESCI	100906	2021.07.11	2022.07.10
Two-Line V-Network	R&S	ENV216	15/Jan/77	2022.03.12	2023.03.11
50ohm Termination	SHX	TF2	7081403	2021.09.04	2022.09.03
50ohm Coaxial Switch	Anritsu	MP59B	6200464462	N/A	N/A
Temperature/Humidity Meter	RTS	RTS-8S	TR1-TH	2021.07.09	2022.07.08
Dekra test software	Dekra	-	-	-	-

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

Instrument	Manufacturer	Model No.	Serial No.	Cal. Date	Next Cal. Date
Spectrum Analyzer	Agilent	N9010A	MY48030494	2021.07.11	2022.07.10
EXA Spectrum Analyzer	Keysight	N9010A	MY55370495	2021.08.12	2022.08.11
MXA Signal Analyzer	Keysight	N9020A	MY56060147	2021.07.11	2022.07.12
4TX MIMO Power Sensor	Keysight	X8750A	MY59400102	2022.03.16	2023.03.15
Coaxial Cable	Woken	SFL402	F02-150410-044	2021.06.10	2022.06.09
Temperature/Humidity Meter	RTS	RTS-8S	RF08	2021.07.09	2022.07.08

### Radiated Emission(30MHz-1GHz) / AC3

Instrument	Manufacturer	Model No.	Serial No.	Cal. Date	Next Cal. Date
EMI Test Receiver	R&S	ESCI	100176	2021.07.11	2022.07.10
Bilog Antenna	Teseq GmbH	CBL6112D	27613	2021.08.23	2022.08.22
Coaxial Cable	Huber+Suhner	RG 214	AC3-C	2021.06.10	2022.06.09
Temperature/Humidity Meter	RTS	RTS-8S	AC3-TH	2021.07.09	2022.07.08
Dekra test software	Dekra	-	-	-	-

Radiated Emission(1GHz-40GHz) / AC5

Instrument	Manufacturer	Model No.	Serial No.	Cal. Date	Next Cal. Date
EXA Spectrum Analyzer	Keysight	N9010A	MY55370495	2021.08.12	2022.08.11
Pre-Amplifier	Quietek	AP-025C	CHM-0511006	2021.11.26	2022.11.25
Pre-Amplifier	SKET	LNPA_0118G-45	SK2021090101	2021.12.13	2022.12.12
Broad-Band Horn Antenna	Schwarzbeck	BBHA9170	294	2021.04.14	2023.04.13
Coaxial Cable	Huber+Suhner	SUCOFLEX 106	AC5-C2	2021.06.10	2022.06.09
Coaxial Cable	ROSENBERGER	LA1-C011-2000/3000	AC5-40G	2022.03.21	2023.03.20
Temperature/Humidity Meter	RTS	RTS-8S	AC5-TH	2021.07.09	2022.07.08
High-Pass Filter	Wainwright	WHKX3.0/18G-12SS	AC5&AC6	2021.06.08	2022.06.07
Dekra test software	Dekra	-	-	-	-

## UNCERTAINTY

Uncertainties have been calculated according to the DEKRA internal document. The reported expanded uncertainties are based on a standard uncertainty multiplied by a coverage factor of k=2, providing a level of confidence of approximately 95%.

Test item	Uncertainty
AC Power Line Conducted Emission	± 2.92 dB
Peak Power Output	± 1.13 dB
Radiated Emission(30MHz~1GHz)	Horizontal: 30MHz~200MHz: 4.60 dB 200MHz~1GHz: 4.10 dB Vertical: 30MHz~200MHz: 4.80 dB 200MHz~1GHz: 4.10 dB
Radiated Emission(1GHz~40GHz)	Horizontal: 1GHz~18GHz: 5.00 dB Vertical: 1GHz~18GHz: 4.80 dB Horizontal: 18GHz~40GHz: 4.70 dB Vertical: 18GHz~40GHz: 4.60 dB
RF antenna conducted test	± 1.13 dB
Radiated Emission Band Edge	± 5.00 dB
DTS Bandwidth	± 279 Hz
Occupied Bandwidth	± 279 Hz
Power Density	± 1.13 dB

## 1 GENERAL INFORMATION

### 1.1 General Description of the Item(s)

Product Name .....	Barcode Scanner
Model No.....	8690i
FCC ID .....	HD5-8690B
Manufacturter .....	HONEYWELL INTERNATIONAL INC Honeywell Safety and Productivity Solutions
Manufacturer Address.....	9680 OLD BAILES RD FORT MILL SC 29707-7539,USA
Factory .....	Metro(Suzhou)Technologies Co.,Ltd
Address .....	No.221 Xinghai street China-Singapore Suzhou Industrial Park.

Wireless specification .....	WIFI	
Operating frequency range(s) .....	2400~2483.5MHz	
Type of modulation .....	802.11b: DSSS-DBPSK, DQPSK, CCK 802.11g/n/ac/ax: OFDM-BPSK, QPSK, 16QAM, 64QAM,256QAM, 1024QAM	
Number of channel.....	802.11b/g/n/ac/ax(20MHz) : 11	
Data Rate .....	802.11ax: up to 143.4 Mbps	
Device category .....	<input type="checkbox"/>	Fixed point-to-point
	<input type="checkbox"/>	Emit multiple directional beams, simultaneously or sequentially
	<input checked="" type="checkbox"/>	Other cases

Rated power supply .....	Voltage and Frequency	
	<input type="checkbox"/>	AC: 220 – 240 V, 50/60 Hz
	<input type="checkbox"/>	AC: 100 – 240 V, 50/60 Hz
	<input type="checkbox"/>	48 Volt via POE
	<input checked="" type="checkbox"/>	Battery: 3.7 V
Mounting position .....	<input type="checkbox"/>	Table top equipment
	<input type="checkbox"/>	Wall/Ceiling mounted equipment
	<input type="checkbox"/>	Floor standing equipment
	<input checked="" type="checkbox"/>	Hand-held equipment
	<input checked="" type="checkbox"/>	Other: Wearable equipment

## 1.2 Antenna Information

Antenna model / type number.....:	N/A		
Antenna serial number.....:	N/A		
Antenna Delivery .....	<input checked="" type="checkbox"/>	1TX + 1RX	
	<input type="checkbox"/>	2TX + 2RX	
	<input type="checkbox"/>	Others:.....	
Antenna technology .....	<input checked="" type="checkbox"/>	SISO	
	<input type="checkbox"/>	MIMO	<input type="checkbox"/> CDD <input type="checkbox"/> Beam-forming
			<input type="checkbox"/> Dipole <input type="checkbox"/> Sectorized
Antenna Type.....:	<input type="checkbox"/>	External	<input type="checkbox"/> FPC <input checked="" type="checkbox"/> PCB <input type="checkbox"/> Metal Monopole Antenna <input type="checkbox"/> Ceramic chip <input type="checkbox"/> Others.....
	<input checked="" type="checkbox"/>	Internal	
Antenna Gain .....	0.5dBi		

### 1.3 Channel List

#### IEEE 802.11b/g & IEEE 802.11n/ac/ax (20MHz)

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

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

## 2 DESCRIPTION OF TEST SETUP

### 2.1 Operating mode(s) used for tests

During the tests the following operating mode(s) has(have) been used.

Test Mode	Mode 1: Transmit by 802.11b
	Mode 2: Transmit by 802.11g
	Mode 3: Transmit by 802.11n(20MHz)
	Mode 4: Transmit by 802.11ac(20MHz)
	Mode 5: Transmit by 802.11ax(20MHz)

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

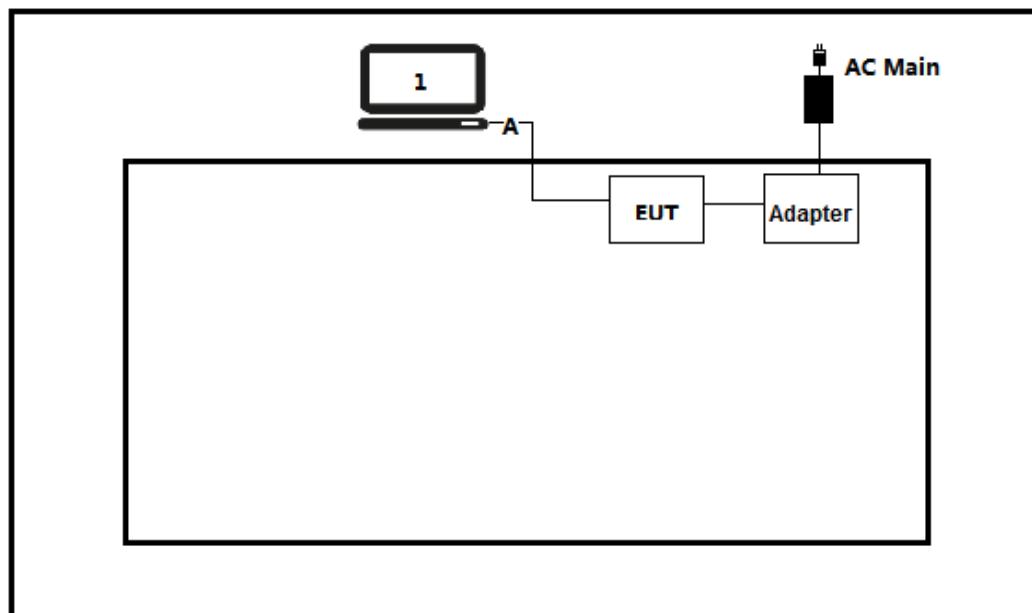
The EUT has been tested with the following auxiliary equipment / unit / software:

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

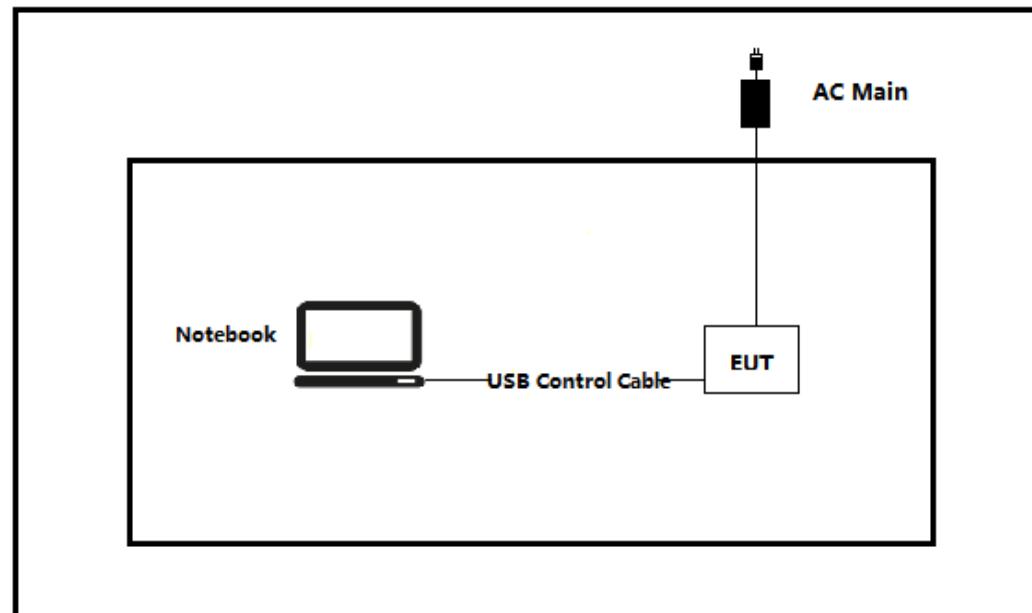
## 2.3 Test Configuration / Block diagram used for tests

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

Test setup Diagram- AC Line Conducted Emission Test



Test setup Diagram- Radiated Emission



## 2.4 Testing process

1	Setup the EUT as shown in Section 2.4.
2	Run the software “putty” on the notebook computer.
3	Open the serial port and enter the corresponding commands to configure the test mode, test channel, test power and data rate.
4	Verify that the EUT works properly.

### 3 VERDICT SUMMARY SECTION

This chapter presents an overview of standards and results. Refer to the next chapters for details of measured test results and applied test levels.

#### 3.1 Standards

Standard	Year	Description
FCC CFR Title 47 Part 15 Subpart C Section 15.247	2020	Operation within the bands 902–928 MHz, 2400–2483.5 MHz, and 5725–5850 MHz.
ANSI C63.10	2013	American National Standard of Procedures for Compliance Testing of Unlicensed Wireless Devices
KDB 558074 D01V05r02	2019	Guidance for performing compliance measurements on Digital Transmission System (DTS) operating under section 15.247

### 3.2 Overview of results

#### For FCC

Requirement – Test case	Basic standard(s)	Verdict	Remark
AC Power Line Conducted Emission	FCC 15.207	PASS	---
Emissions in restricted frequency bands	FCC 15.247(b)(3)	PASS	---
Duty cycle	ANSI C63.10:2013	PASS	---
Emissions in non-restricted frequency bands	FCC 15.247(d), FCC 15.209	PASS	---
Band Edge	FCC 15.247(d)	PASS	---
Fundamental emission output power	FCC 15.247(d), FCC 15.209	PASS	---
DTS Bandwidth	FCC 15.247(a)(2)	PASS	---
Power Spectral Density	FCC 15.247(e)	PASS	---
Antenna Requirement	FCC 15.203	PASS	---

### 3.3 Test Facility

**USA : FCC Designation Number: CN1199**

## 4 TEST RESULTS

### 4.1 AC Power Line Conducted Emission

VERDICT: PASS

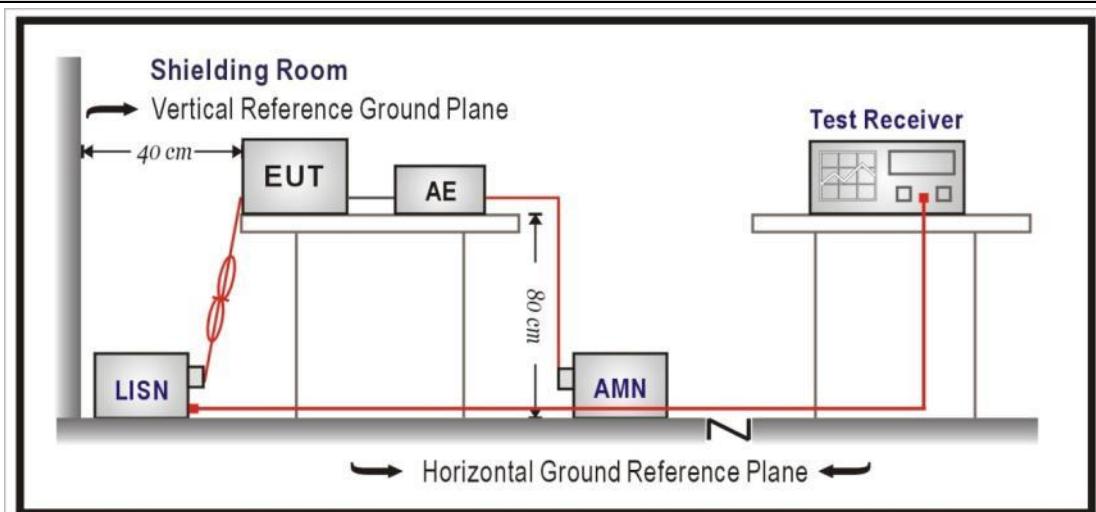
#### 4.1.1 Limit

Standard	FCC Part 15 Subpart C Paragraph 15.207	
Frequency range [MHz]	Limit: QP [dB( $\mu$ V) <sup>1)</sup> ]	Limit: AV [dB( $\mu$ V) <sup>1)</sup> ]
0,15 - 0,50	66 - 56 <sup>2)</sup>	56 - 46 <sup>2)</sup>
0,50 - 5,0	56	46
5,0 - 30	60	50

<sup>1)</sup> At the transition frequency, the lower limit applies.

<sup>2)</sup> The limit decreases linearly with the logarithm of the frequency.

#### 4.1.2 Test Setup

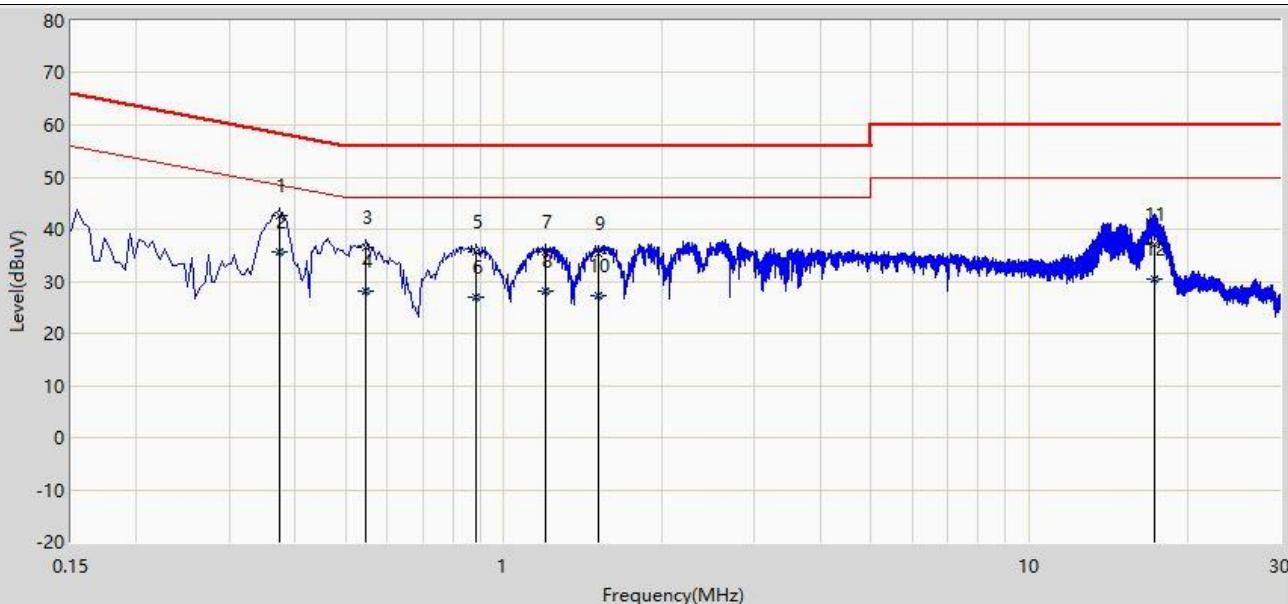


#### 4.1.3 Test Procedure

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

#### 4.1.4 Test Data

Profile: 2231093R	Page No.: 5
Engineer: Tony	
Site: TR1	Time: 2022/05/17 - 11:14
Limit: FCC_Part15.207_CE_AC Power_ClassB	Margin: 0
Probe: ENV216_101190(0.009-30MHz)	Polarity: Neutral
EUT: Barcode Scanner	Power: AC 120V/60Hz
Note: Mode 1	

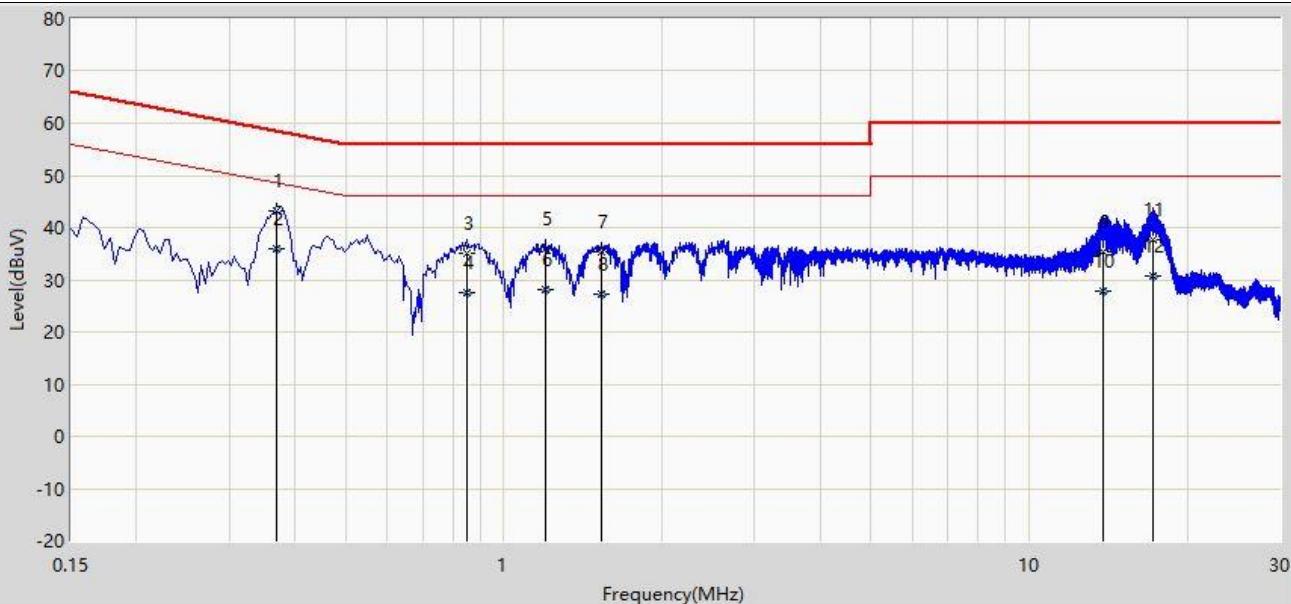


No	Mark	Frequency (MHz)	Measure Level (dBuV)	Reading Level (dBuV)	Over Limit (dB)	Limit (dBuV)	Probe (dB)	Cable (dB)	Amp (dB)	Type
1		0.374	42.635	33.035	-15.777	58.412	9.568	0.032	0.000	QP
2	*	0.374	35.677	26.077	-12.735	48.412	9.568	0.032	0.000	AV
3		0.546	36.406	26.781	-19.594	56.000	9.580	0.045	0.000	QP
4		0.546	28.186	18.561	-17.814	46.000	9.580	0.045	0.000	AV
5		0.886	35.588	25.953	-20.412	56.000	9.586	0.049	0.000	QP
6		0.886	26.932	17.297	-19.068	46.000	9.586	0.049	0.000	AV
7		1.198	35.711	26.053	-20.289	56.000	9.590	0.068	0.000	QP
8		1.198	28.118	18.460	-17.882	46.000	9.590	0.068	0.000	AV
9		1.514	35.280	25.621	-20.720	56.000	9.590	0.069	0.000	QP
10		1.514	27.184	17.525	-18.816	46.000	9.590	0.069	0.000	AV
11		17.306	37.184	26.979	-22.816	60.000	9.937	0.268	0.000	QP
12		17.306	30.357	20.152	-19.643	50.000	9.937	0.268	0.000	AV

Note:

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

Profile: 2231093R	Page No.: 6
Engineer: Tony	
Site: TR1	Time: 2022/05/17 - 11:20
Limit: FCC_Part15.207_CE_AC_Power_ClassB	Margin: 0
Probe: ENV216_101190(0.009-30MHz)	Polarity: Line
EUT: Barcode Scanner	Power: AC 120V/60Hz
Note: Mode 1	



No	Mark	Frequency (MHz)	Measure Level (dBuV)	Reading Level (dBuV)	Over Limit (dB)	Limit (dBuV)	Probe (dB)	Cable (dB)	Amp (dB)	Type
1		0.370	43.300	33.698	-15.201	58.501	9.571	0.030	0.000	QP
2	*	0.370	35.960	26.358	-12.541	48.501	9.571	0.030	0.000	AV
3		0.850	35.167	25.519	-20.833	56.000	9.590	0.058	0.000	QP
4		0.850	27.527	17.880	-18.473	46.000	9.590	0.058	0.000	AV
5		1.198	35.836	26.178	-20.164	56.000	9.590	0.068	0.000	QP
6		1.198	28.150	18.492	-17.850	46.000	9.590	0.068	0.000	AV
7		1.538	35.414	25.754	-20.586	56.000	9.590	0.070	0.000	QP
8		1.538	27.203	17.543	-18.797	46.000	9.590	0.070	0.000	AV
9		13.854	35.309	25.207	-24.691	60.000	9.864	0.239	0.000	QP
10		13.854	27.864	17.761	-22.136	50.000	9.864	0.239	0.000	AV
11		17.242	37.632	27.453	-22.368	60.000	9.912	0.267	0.000	QP
12		17.242	30.837	20.658	-19.163	50.000	9.912	0.267	0.000	AV

Note:

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

## 4.2 Emissions in restricted frequency bands

**VERDICT: PASS**

### 4.2.1 Limit

Standard	FCC Part 15 Subpart C Paragraph 15.205; 15.209
----------	--

#### Restricted Bands of operation for FCC

Frequency (MHz)	Frequency (MHz)	Frequency (MHz)	Frequency (GHz)
0.090 – 0.110	16.42 – 16.423	399.9 – 410	4.5 – 5.15
0.495 – 0.505	16.69475 – 16.69525	608 – 614	5.35 – 5.46
2.1735 – 2.1905	16.80425 – 16.80475	960 – 1240	7.25 – 7.75
4.125 – 4.128	25.5 – 25.67	1300 – 1427	8.025 – 8.5
4.17725 – 4.17775	37.5 – 38.25	1435 – 1626.5	9.0 – 9.2
4.20725 – 4.20775	73 – 74.6	1645.5 – 1646.5	9.3 – 9.5
6.215 – 6.218	74.8 – 75.2	1660 – 1710	10.6 – 12.7
6.26775 – 6.26825	108 – 121.94	1718.8 – 1722.2	13.25 – 13.4
6.31175 – 6.31225	123 – 138	2200 – 2300	14.47 – 14.5
8.291 – 8.294	149.9 – 150.05	2310 – 2390	15.35 – 16.2
8.362 – 8.366	156.52475 – 156.52525	2483.5 – 2500	17.7 – 21.4
8.37625 – 8.38675	156.7 – 156.9	2690 – 2900	22.01 – 23.12
8.81425 – 8.81475	162.0125 – 167.17	3260 – 3267	23.6 – 24.0
12.29 – 12.293	167.72 – 173.2	3332 – 3339	31.2 – 31.8
12.51975 – 12.52025	240 – 285	3345.8 – 3358	36.43 – 36.5
12.57675 – 12.57725	322 – 335.4	3600 – 4400	Above 38.6
13.36 – 13.41	--	--	--

#### Restricted Band Emissions Limit

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

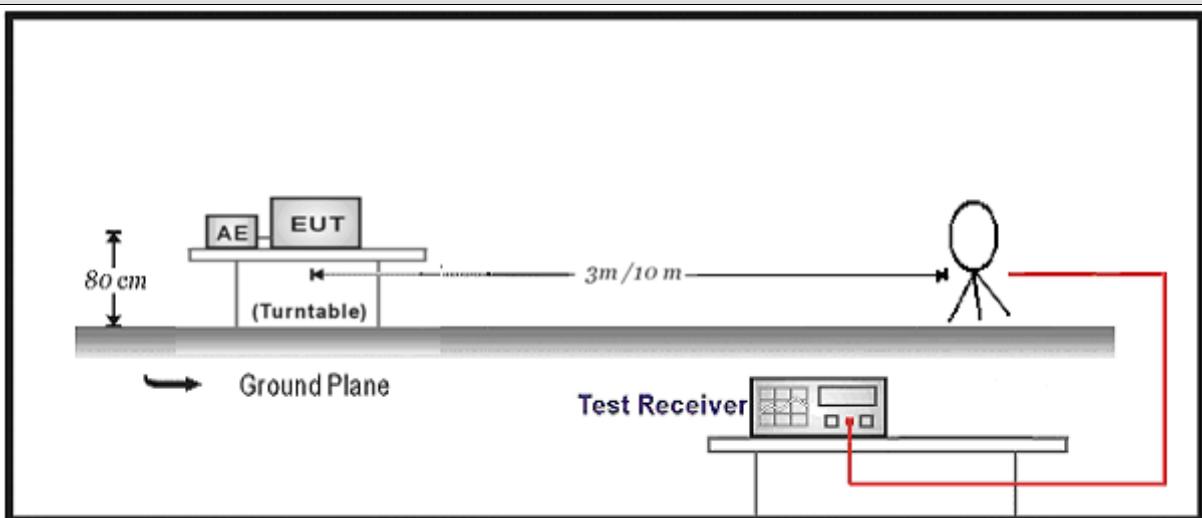
Note 1: At frequencies below 30 MHz, measurements may be performed at a distance closer than that specified in the regulations; however, an attempt should be made to avoid making measurements in the near field. Pending the development of an appropriate measurement procedure for measurements performed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

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

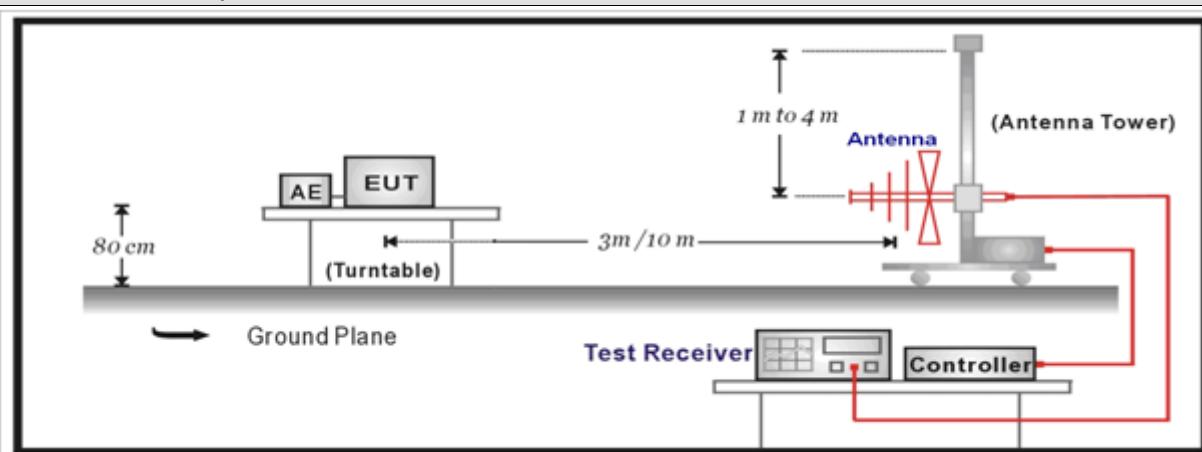
that measurements at a distance of 30 meters or less are impractical. When performing measurements at a distance other than that specified, the results shall be extrapolated to the specified distance using an extrapolation factor of 20 dB/decade (inverse linear-distance for field strength measurements;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

#### 4.2.2 Test Setup

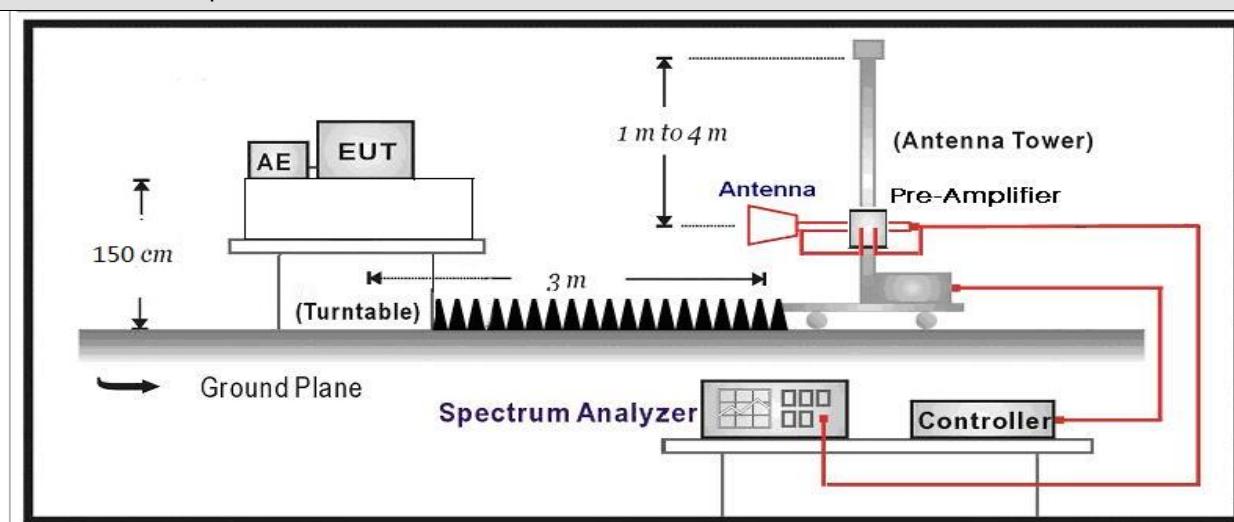
Below 30MHz Test Setup:



30MHz-1GHz Test Setup:



Above 1GHz Test Setup:



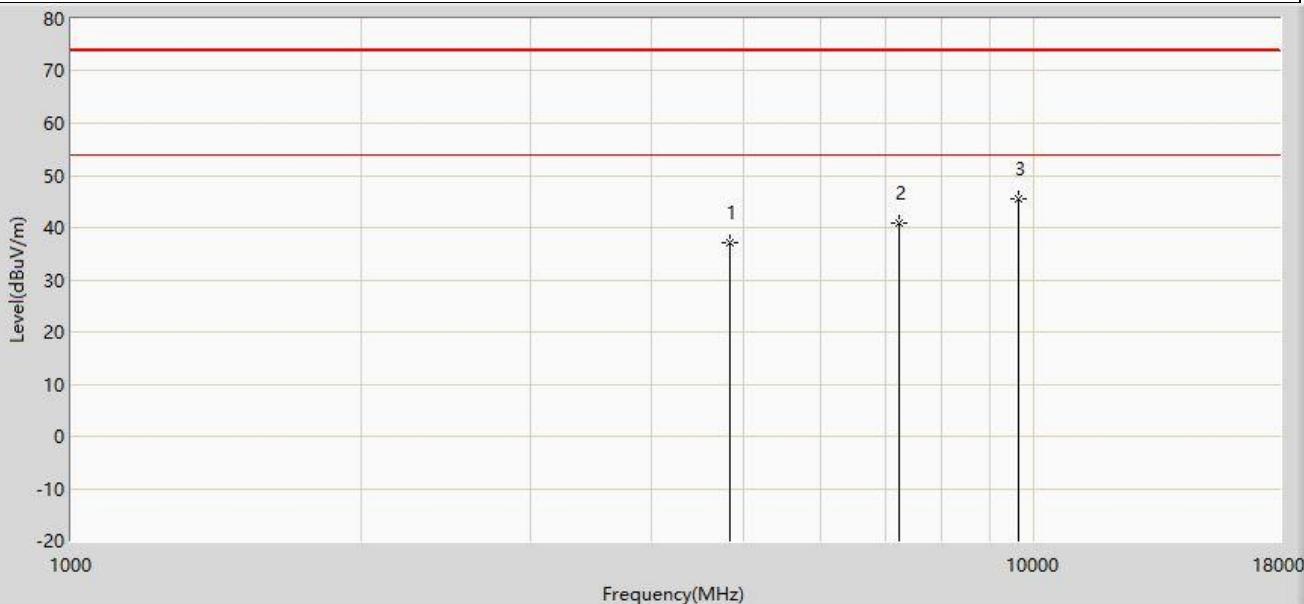
#### 4.2.3 Test Procedure

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

#### 4.2.4 Test Data

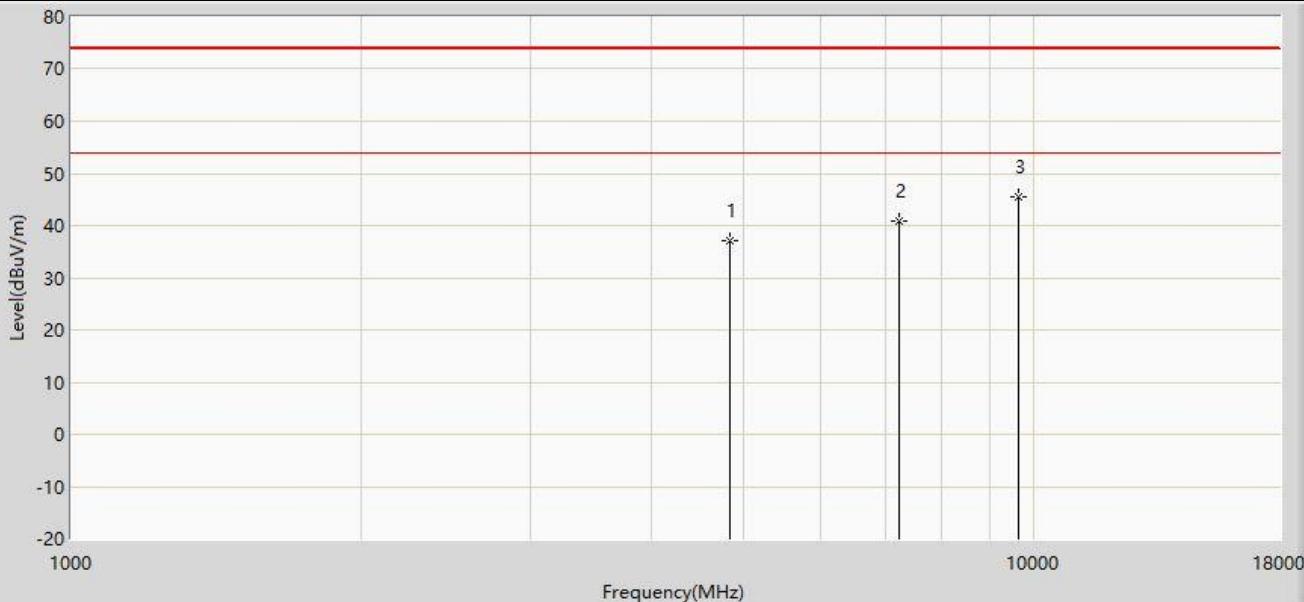
Profile: 2231093R 2231093R	Page No.: 31
Engineer: Pengchengyang	
Site: AC5	Time: 2022/05/25 - 22:30
Limit: FCC-15.209	Margin: 0
Probe: FCC_ANT_1-18G	Polarity: Vertical
EUT: BARCODE SCANNER	Power: DC3.7V

Note: Mode 1:Transmit at 2412MHz by 11b



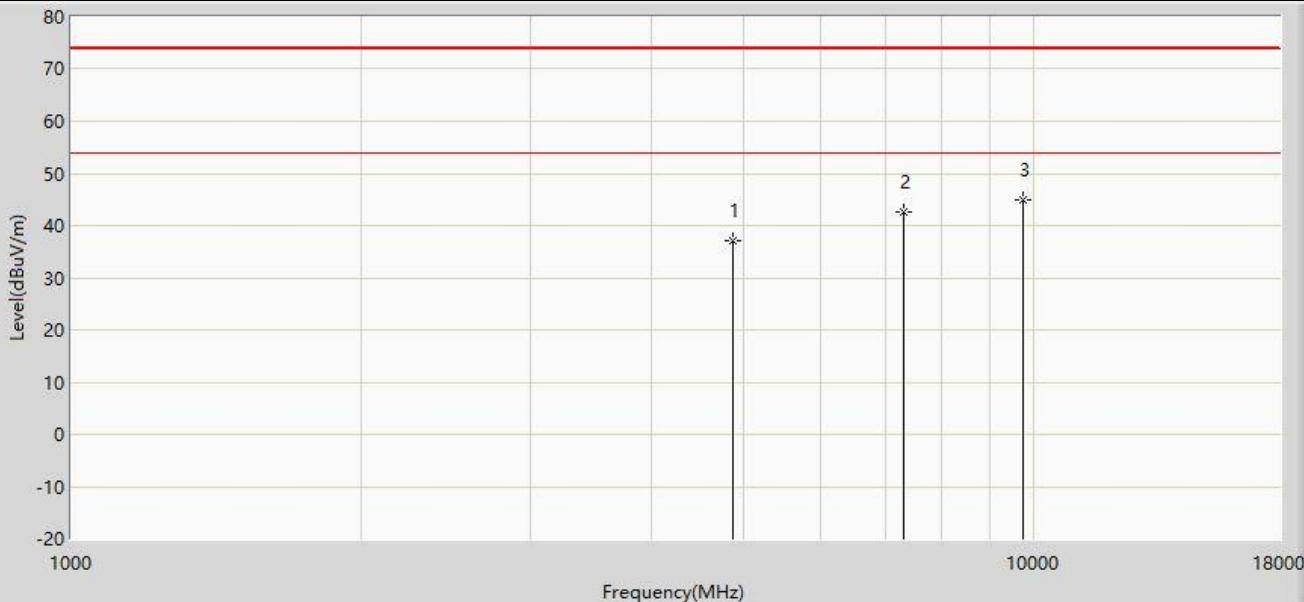
No	Mark	Frequency (MHz)	Measure Level (dBuV/m)	Reading Level (dBuV)	Over Limit (dB)	Limit (dBuV/m)	Factor (dB)	Type
1		4824.000	36.973	51.647	-37.027	74.000	-14.674	PK
2		7236.000	40.797	49.191	-33.203	74.000	-8.394	PK
3	*	9648.000	45.591	50.636	-28.409	74.000	-5.045	PK

Profile: 2231093R	Page No.: 32
Engineer: Pengchengyang	
Site: AC5	Time: 2022/05/25 - 22:30
Limit: FCC-15.209	Margin: 0
Probe: FCC_ANT-1-18G	Polarity: Vertical
EUT: BARCODE SCANNER	Power: DC3.7V
Note: Mode 1:Transmit at 2412MHz by 11b	



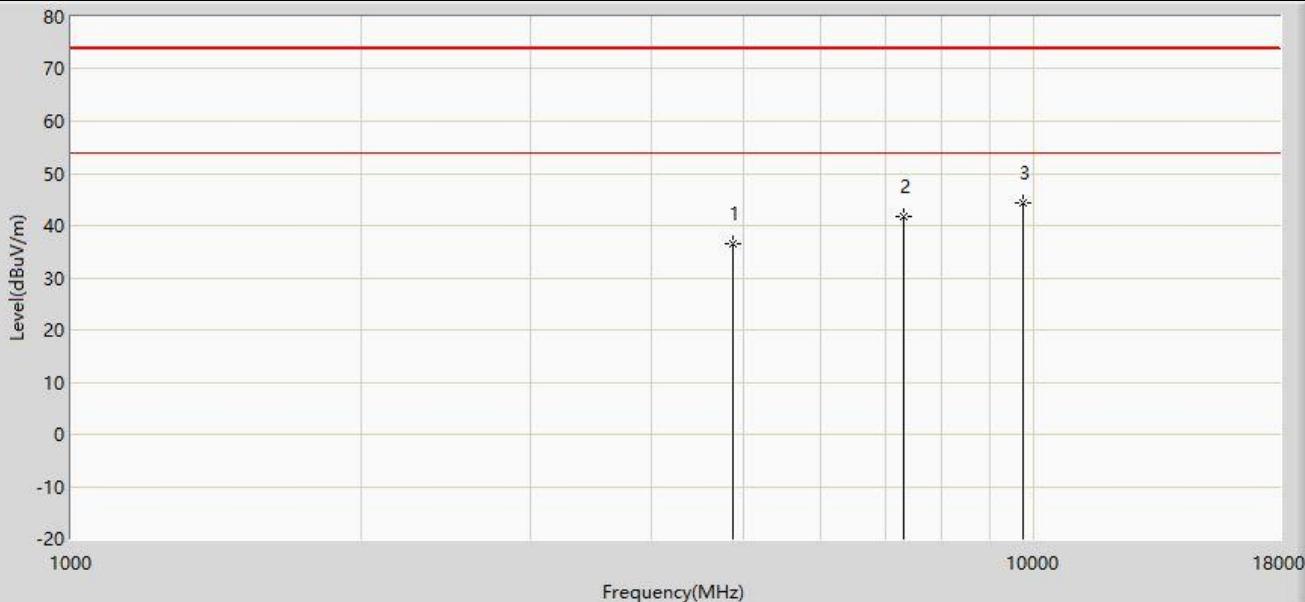
No	Mark	Frequency (MHz)	Measure Level (dBuV/m)	Reading Level (dBuV)	Over Limit (dB)	Limit (dBuV/m)	Factor (dB)	Type
1		4824.000	36.973	51.647	-37.027	74.000	-14.674	PK
2		7236.000	40.797	49.191	-33.203	74.000	-8.394	PK
3	*	9648.000	45.591	50.636	-28.409	74.000	-5.045	PK

Profile: 2231093R	Page No.: 33
Engineer: Pengchengyang	
Site: AC5	Time: 2022/05/25 - 22:30
Limit: FCC-15.209	Margin: 0
Probe: FCC_ANT-1-18G	Polarity: Horizontal
EUT: BARCODE SCANNER	Power: DC3.7V
Note: Mode 1:Transmit at 2437MHz by 11b	



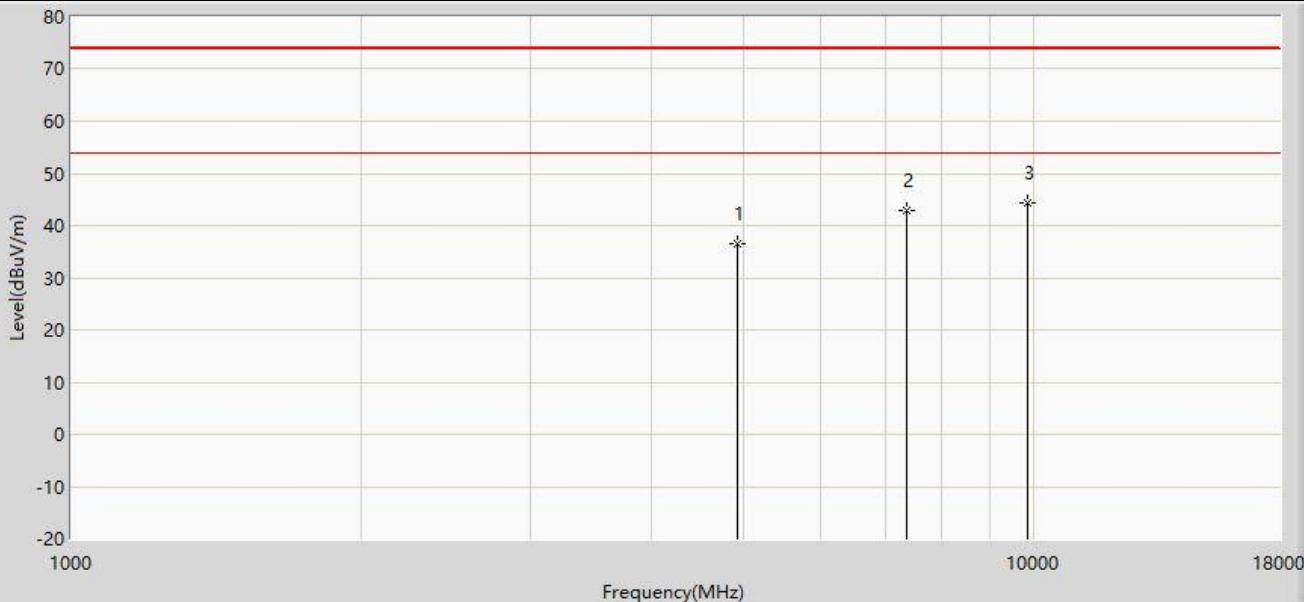
No	Mark	Frequency (MHz)	Measure Level (dBuV/m)	Reading Level (dBuV)	Over Limit (dB)	Limit (dBuV/m)	Factor (dB)	Type
1		4874.000	37.131	51.571	-36.869	74.000	-14.440	PK
2		7311.000	42.533	50.832	-31.467	74.000	-8.299	PK
3	*	9748.000	44.825	49.503	-29.175	74.000	-4.677	PK

Profile: 2231093R	Page No.: 34
Engineer: Pengchengyang	
Site: AC5	Time: 2022/05/25 - 22:30
Limit: FCC-15.209	Margin: 0
Probe: FCC_ANT-1-18G	Polarity: Vertical
EUT: BARCODE SCANNER	Power: DC3.7V
Note: Mode 1:Transmit at 2437MHz by 11b	



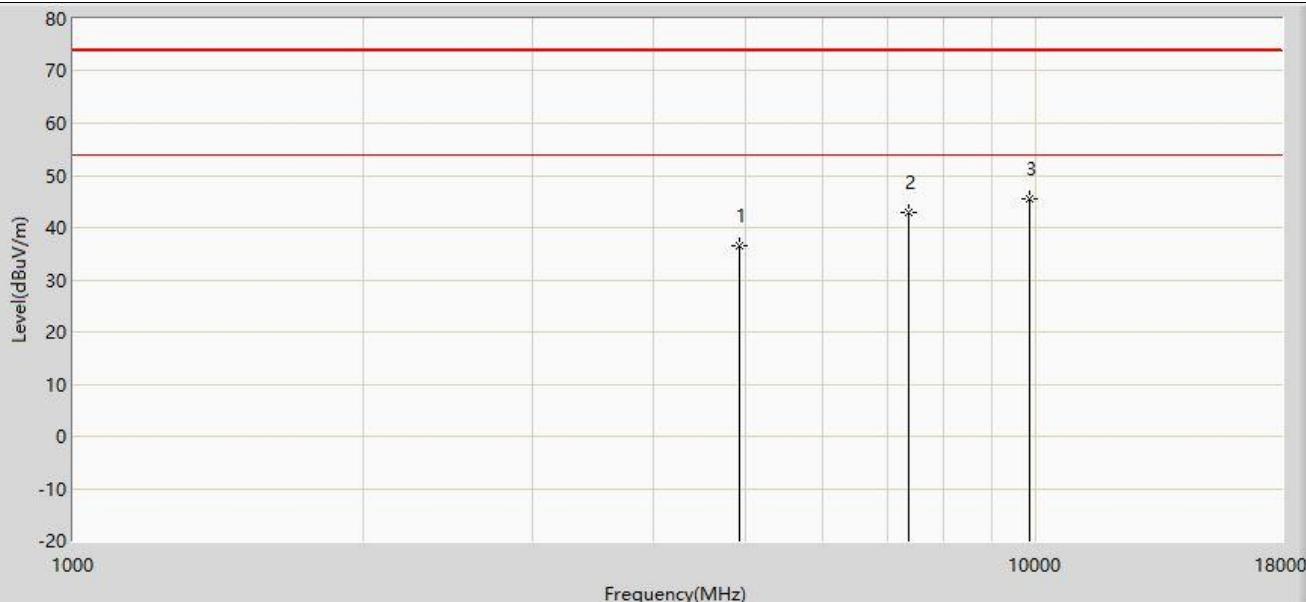
No	Mark	Frequency (MHz)	Measure Level (dBuV/m)	Reading Level (dBuV)	Over Limit (dB)	Limit (dBuV/m)	Factor (dB)	Type
1		4874.000	36.566	51.006	-37.434	74.000	-14.440	PK
2		7311.000	41.824	50.123	-32.176	74.000	-8.299	PK
3	*	9748.000	44.311	48.989	-29.689	74.000	-4.677	PK

Profile: 2231093R	Page No.: 35
Engineer: Pengchengyang	
Site: AC5	Time: 2022/05/25 - 22:30
Limit: FCC-15.209	Margin: 0
Probe: FCC_ANT-1-18G	Polarity: Horizontal
EUT: BARCODE SCANNER	Power: DC3.7V
Note: Mode 1:Transmit at 2462MHz by 11b	



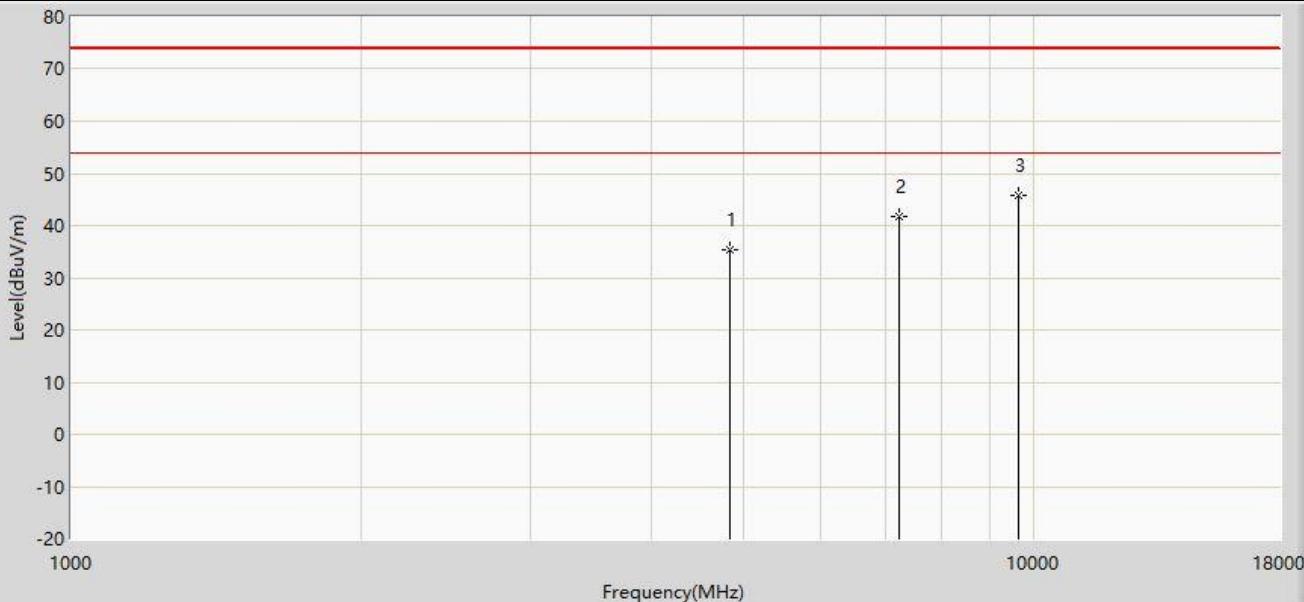
No	Mark	Frequency (MHz)	Measure Level (dBuV/m)	Reading Level (dBuV)	Over Limit (dB)	Limit (dBuV/m)	Factor (dB)	Type
1		4924.000	36.645	50.855	-37.355	74.000	-14.210	PK
2		7386.000	42.880	50.712	-31.120	74.000	-7.832	PK
3	*	9848.000	44.349	48.756	-29.651	74.000	-4.408	PK

Profile: 2231093R	Page No.: 36
Engineer: Pengchengyang	
Site: AC5	Time: 2022/05/25 - 22:31
Limit: FCC-15.209	Margin: 0
Probe: FCC_ANT-1-18G	Polarity: Vertical
EUT: BARCODE SCANNER	Power: DC3.7V
Note: Mode 1:Transmit at 2462MHz by 11b	



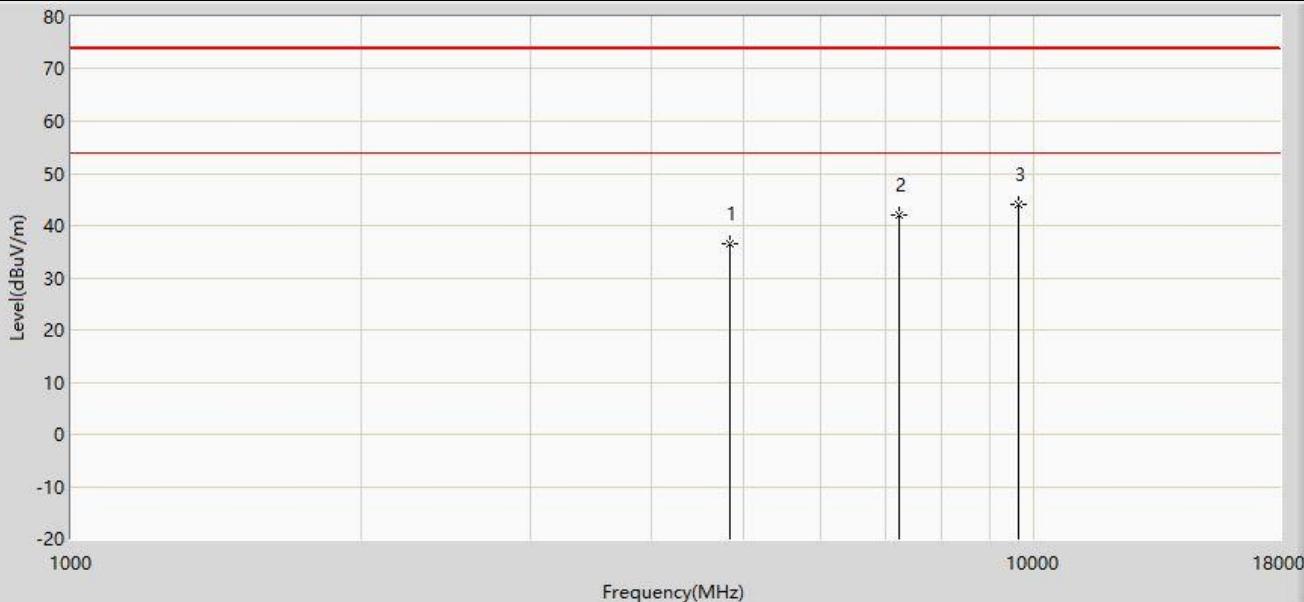
No	Mark	Frequency (MHz)	Measure Level (dBuV/m)	Reading Level (dBuV)	Over Limit (dB)	Limit (dBuV/m)	Factor (dB)	Type
1		4924.000	36.434	50.644	-37.566	74.000	-14.210	PK
2		7386.000	42.844	50.676	-31.156	74.000	-7.832	PK
3	*	9848.000	45.502	49.909	-28.498	74.000	-4.408	PK

Profile: 2231093R	Page No.: 37
Engineer: Pengchengyang	
Site: AC5	Time: 2022/05/25 - 22:31
Limit: FCC-15.209	Margin: 0
Probe: FCC_ANT-1-18G	Polarity: Horizontal
EUT: BARCODE SCANNER	Power: DC3.7V
Note: Mode 2:Transmit at 2412MHz by 11g	



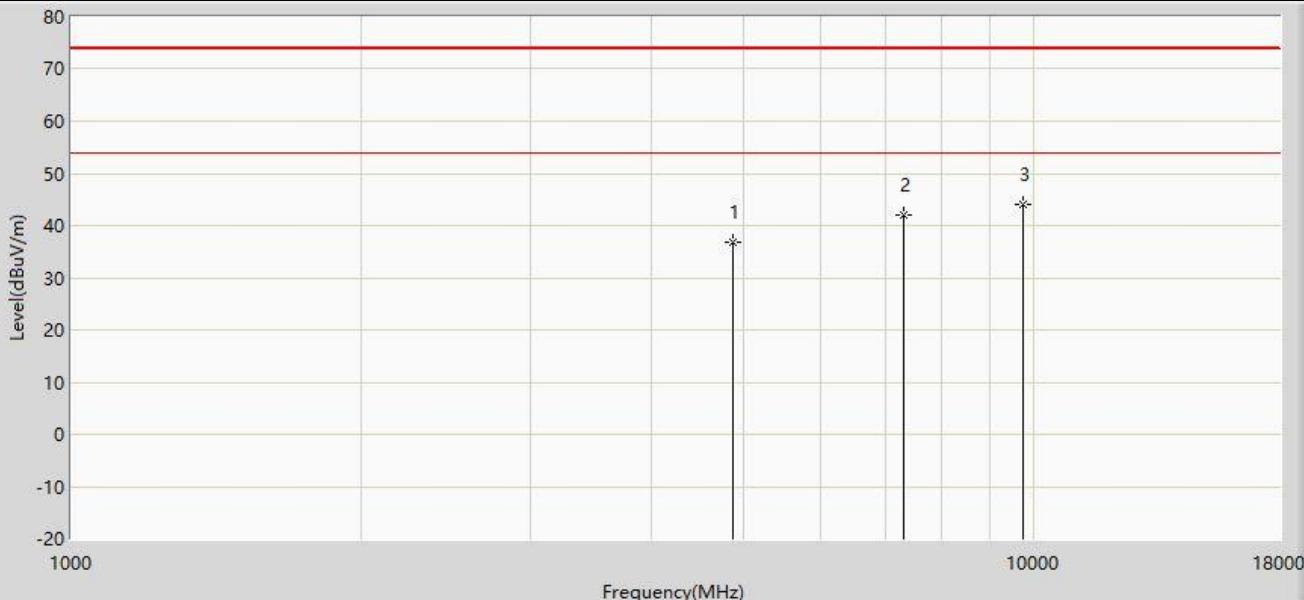
No	Mark	Frequency (MHz)	Measure Level (dBuV/m)	Reading Level (dBuV)	Over Limit (dB)	Limit (dBuV/m)	Factor (dB)	Type
1		4824.000	35.452	50.126	-38.548	74.000	-14.674	PK
2		7236.000	41.842	50.236	-32.158	74.000	-8.394	PK
3	*	9648.000	45.844	50.889	-28.156	74.000	-5.045	PK

Profile: 2231093R	Page No.: 38
Engineer: Pengchengyang	
Site: AC5	Time: 2022/05/25 - 22:31
Limit: FCC-15.209	Margin: 0
Probe: FCC_ANT-1-18G	Polarity: Vertical
EUT: BARCODE SCANNER	Power: DC3.7V
Note: Mode 2:Transmit at 2412MHz by 11g	



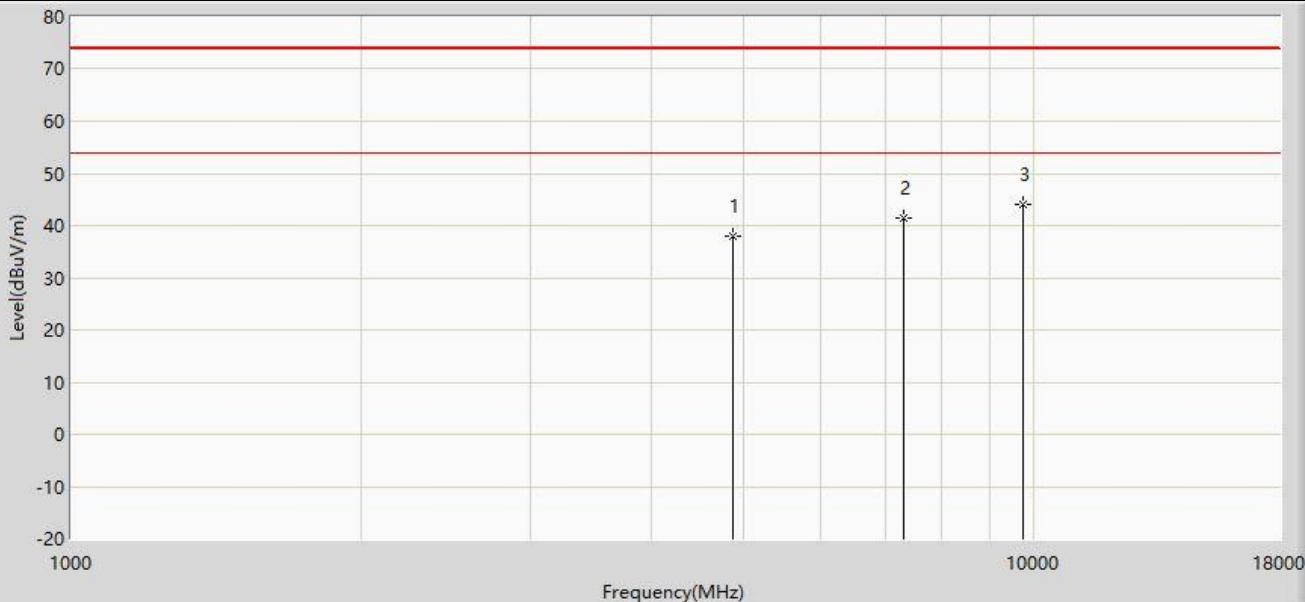
No	Mark	Frequency (MHz)	Measure Level (dBuV/m)	Reading Level (dBuV)	Over Limit (dB)	Limit (dBuV/m)	Factor (dB)	Type
1		4824.000	36.502	51.176	-37.498	74.000	-14.674	PK
2		7236.000	41.916	50.310	-32.084	74.000	-8.394	PK
3	*	9648.000	44.045	49.090	-29.955	74.000	-5.045	PK

Profile: 2231093R	Page No.: 39
Engineer: Pengchengyang	
Site: AC5	Time: 2022/05/25 - 22:31
Limit: FCC-15.209	Margin: 0
Probe: FCC_ANT-1-18G	Polarity: Horizontal
EUT: BARCODE SCANNER	Power: DC3.7V
Note: Mode 2:Transmit at 2437MHz by 11g	



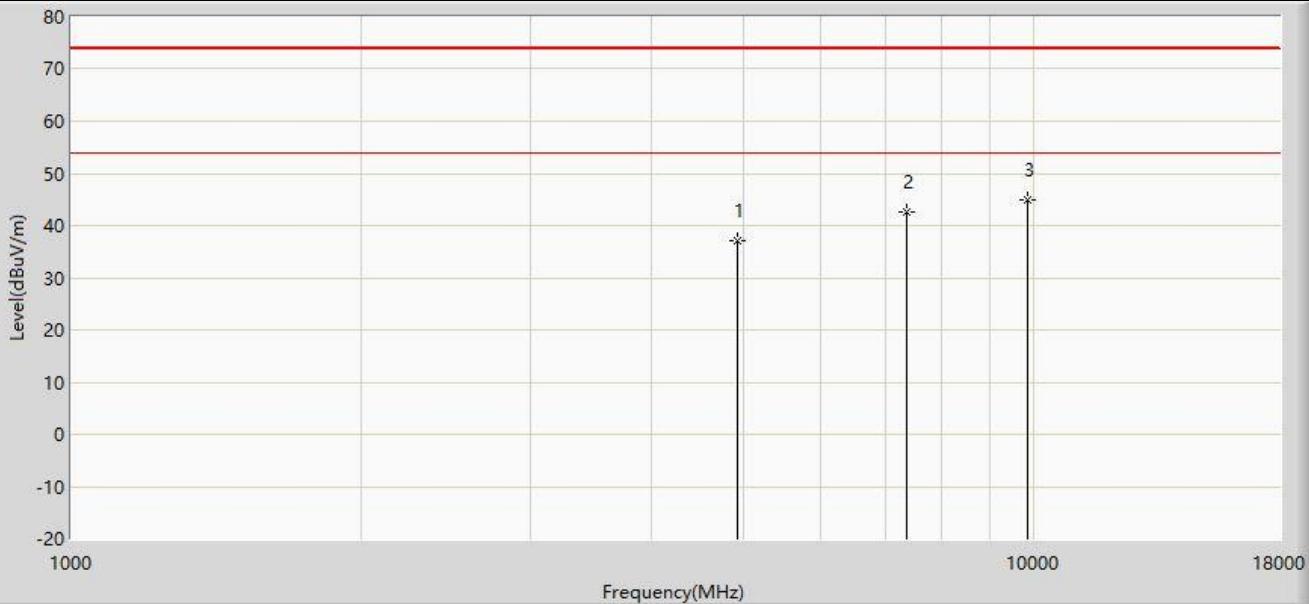
No	Mark	Frequency (MHz)	Measure Level (dBuV/m)	Reading Level (dBuV)	Over Limit (dB)	Limit (dBuV/m)	Factor (dB)	Type
1		4874.000	36.940	51.380	-37.060	74.000	-14.440	PK
2		7311.000	42.124	50.423	-31.876	74.000	-8.299	PK
3	*	9748.000	44.149	48.827	-29.851	74.000	-4.677	PK

Profile: 2231093R	Page No.: 40
Engineer: Pengchengyang	
Site: AC5	Time: 2022/05/25 - 22:31
Limit: FCC-15.209	Margin: 0
Probe: FCC_ANT-1-18G	Polarity: Vertical
EUT: BARCODE SCANNER	Power: DC3.7V
Note: Mode 2:Transmit at 2437MHz by 11g	



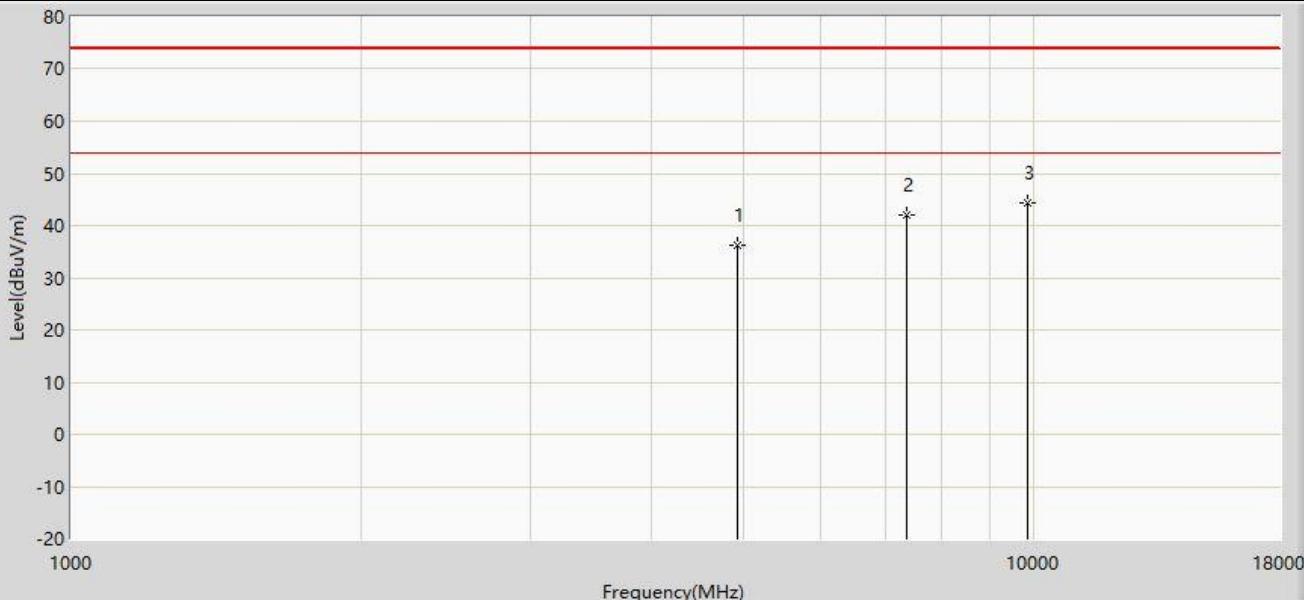
No	Mark	Frequency (MHz)	Measure Level (dBuV/m)	Reading Level (dBuV)	Over Limit (dB)	Limit (dBuV/m)	Factor (dB)	Type
1		4874.000	37.899	52.339	-36.101	74.000	-14.440	PK
2		7311.000	41.337	49.636	-32.663	74.000	-8.299	PK
3	*	9748.000	44.180	48.858	-29.820	74.000	-4.677	PK

Profile: 2231093R	Page No.: 41
Engineer: Pengchengyang	
Site: AC5	Time: 2022/05/25 - 22:31
Limit: FCC-15.209	Margin: 0
Probe: FCC_ANT-1-18G	Polarity: Horizontal
EUT: BARCODE SCANNER	Power: DC3.7V
Note: Mode 2:Transmit at 2462MHz by 11g	



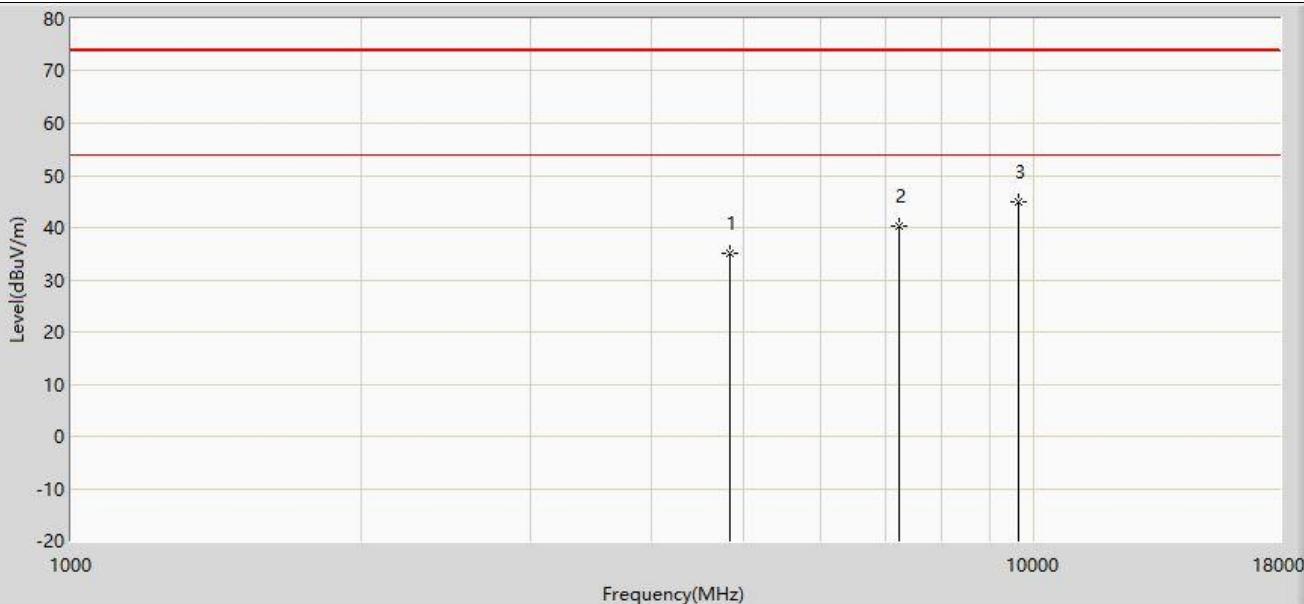
No	Mark	Frequency (MHz)	Measure Level (dBuV/m)	Reading Level (dBuV)	Over Limit (dB)	Limit (dBuV/m)	Factor (dB)	Type
1		4924.000	37.060	51.270	-36.940	74.000	-14.210	PK
2		7386.000	42.530	50.362	-31.470	74.000	-7.832	PK
3	*	9848.000	45.027	49.434	-28.973	74.000	-4.408	PK

Profile: 2231093R	Page No.: 42
Engineer: Pengchengyang	
Site: AC5	Time: 2022/05/25 - 22:31
Limit: FCC-15.209	Margin: 0
Probe: FCC_ANT-1-18G	Polarity: Vertical
EUT: BARCODE SCANNER	Power: DC3.7V
Note: Mode 2:Transmit at 2462MHz by 11g	



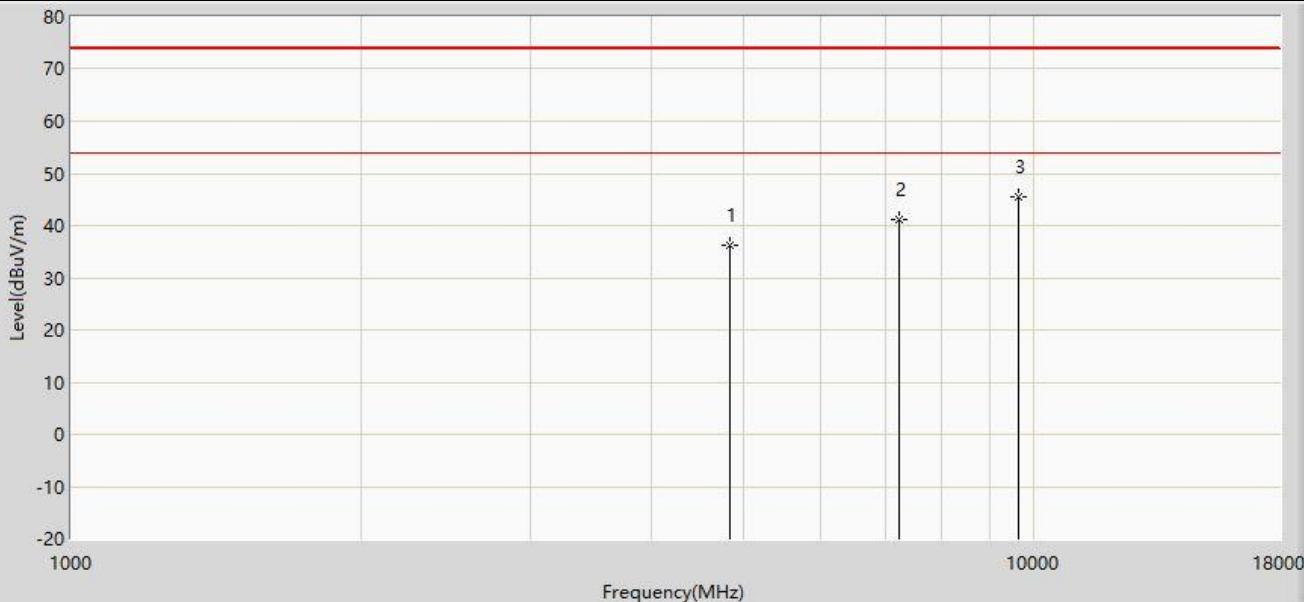
No	Mark	Frequency (MHz)	Measure Level (dBuV/m)	Reading Level (dBuV)	Over Limit (dB)	Limit (dBuV/m)	Factor (dB)	Type
1		4924.000	36.229	50.439	-37.771	74.000	-14.210	PK
2		7386.000	41.975	49.807	-32.025	74.000	-7.832	PK
3	*	9848.000	44.444	48.851	-29.556	74.000	-4.408	PK

Profile: 2231093R	Page No.: 43
Engineer: Pengchengyang	
Site: AC5	Time: 2022/05/25 - 22:31
Limit: FCC-15.209	Margin: 0
Probe: FCC_ANT-1-18G	Polarity: Horizontal
EUT: BARCODE SCANNER	Power: DC3.7V
Note: Mode 3:Transmit at 2412MHz by 11n20	



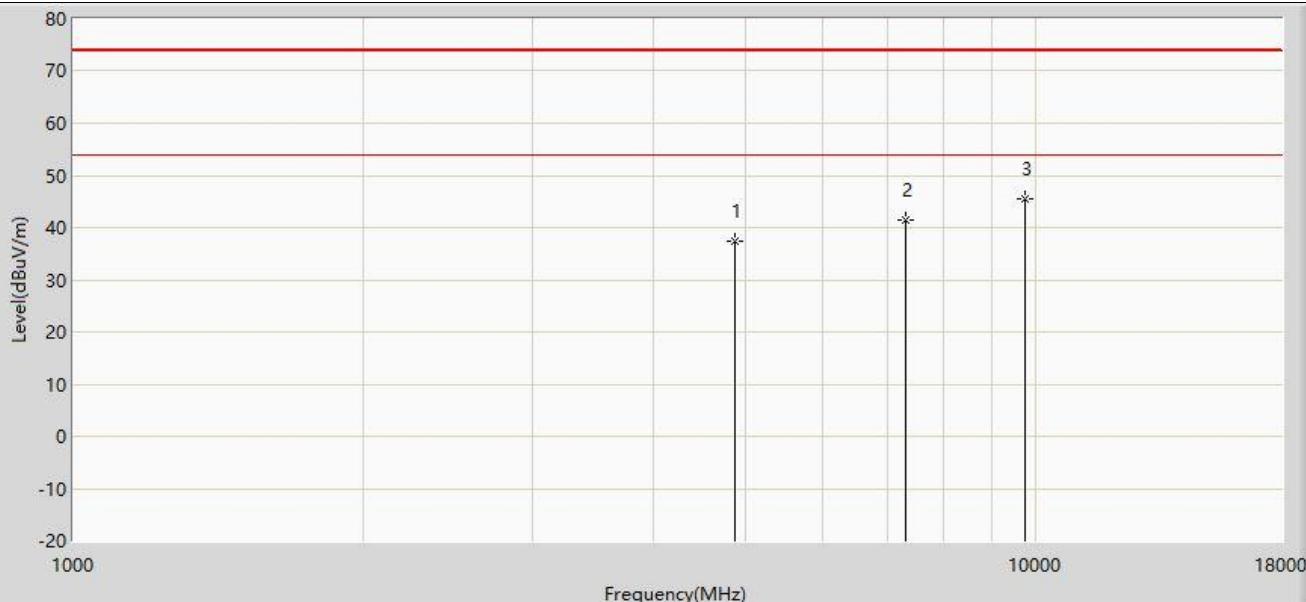
No	Mark	Frequency (MHz)	Measure Level (dBuV/m)	Reading Level (dBuV)	Over Limit (dB)	Limit (dBuV/m)	Factor (dB)	Type
1		4824.000	35.085	49.759	-38.915	74.000	-14.674	PK
2		7236.000	40.389	48.783	-33.611	74.000	-8.394	PK
3	*	9648.000	44.908	49.953	-29.092	74.000	-5.045	PK

Profile: 2231093R	Page No.: 44
Engineer: Pengchengyang	
Site: AC5	Time: 2022/05/25 - 22:31
Limit: FCC-15.209	Margin: 0
Probe: FCC_ANT-1-18G	Polarity: Vertical
EUT: BARCODE SCANNER	Power: DC3.7V
Note: Mode 3:Transmit at 2412MHz by 11n20	



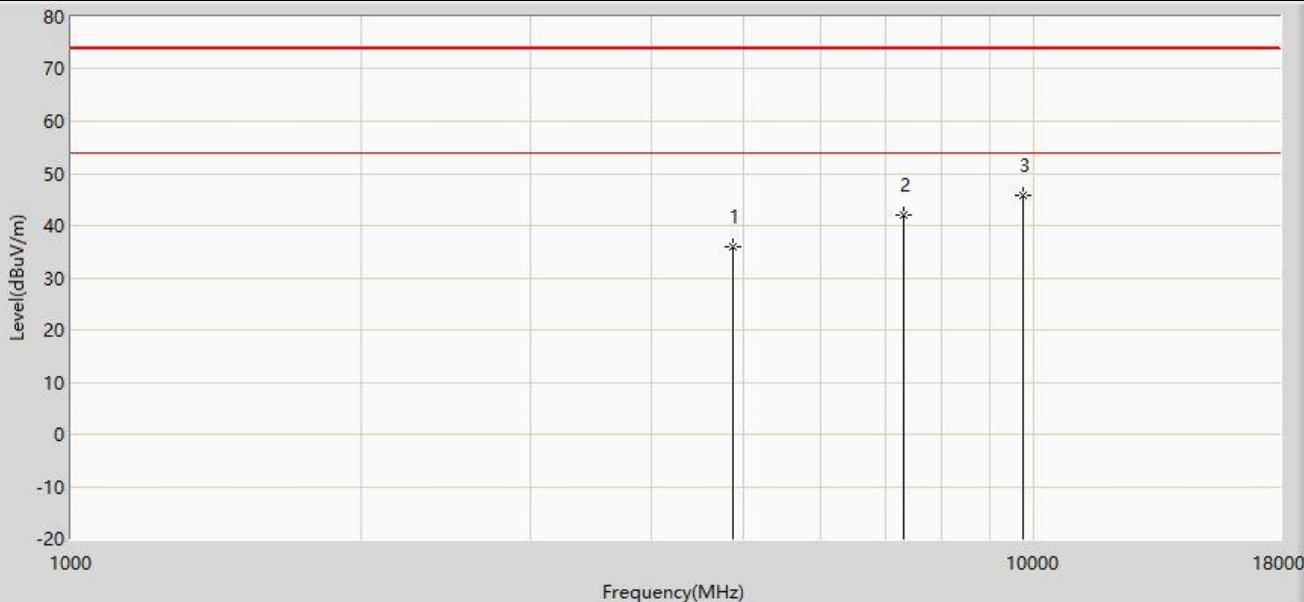
No	Mark	Frequency (MHz)	Measure Level (dBuV/m)	Reading Level (dBuV)	Over Limit (dB)	Limit (dBuV/m)	Factor (dB)	Type
1		4824.000	36.340	51.014	-37.660	74.000	-14.674	PK
2		7236.000	41.094	49.488	-32.906	74.000	-8.394	PK
3	*	9648.000	45.631	50.676	-28.369	74.000	-5.045	PK

Profile: 2231093R	Page No.: 45
Engineer: Pengchengyang	
Site: AC5	Time: 2022/05/25 - 22:31
Limit: FCC-15.209	Margin: 0
Probe: FCC_ANT-1-18G	Polarity: Horizontal
EUT: BARCODE SCANNER	Power: DC3.7V
Note: Mode 3:Transmit at 2437MHz by 11n20	



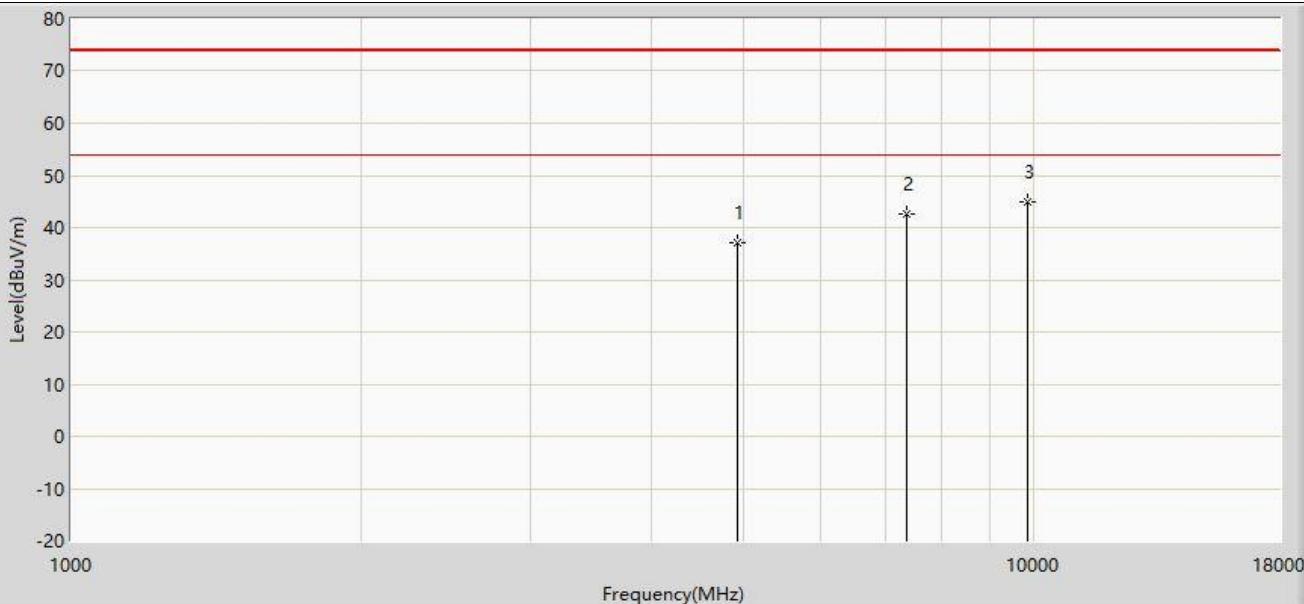
No	Mark	Frequency (MHz)	Measure Level (dBuV/m)	Reading Level (dBuV)	Over Limit (dB)	Limit (dBuV/m)	Factor (dB)	Type
1		4874.000	37.369	51.809	-36.631	74.000	-14.440	PK
2		7311.000	41.486	49.785	-32.514	74.000	-8.299	PK
3	*	9748.000	45.586	50.264	-28.414	74.000	-4.677	PK

Profile: 2231093R	Page No.: 46
Engineer: Pengchengyang	
Site: AC5	Time: 2022/05/25 - 22:31
Limit: FCC-15.209	Margin: 0
Probe: FCC_ANT-1-18G	Polarity: Vertical
EUT: BARCODE SCANNER	Power: DC3.7V
Note: Mode 3:Transmit at 2437MHz by 11n20	



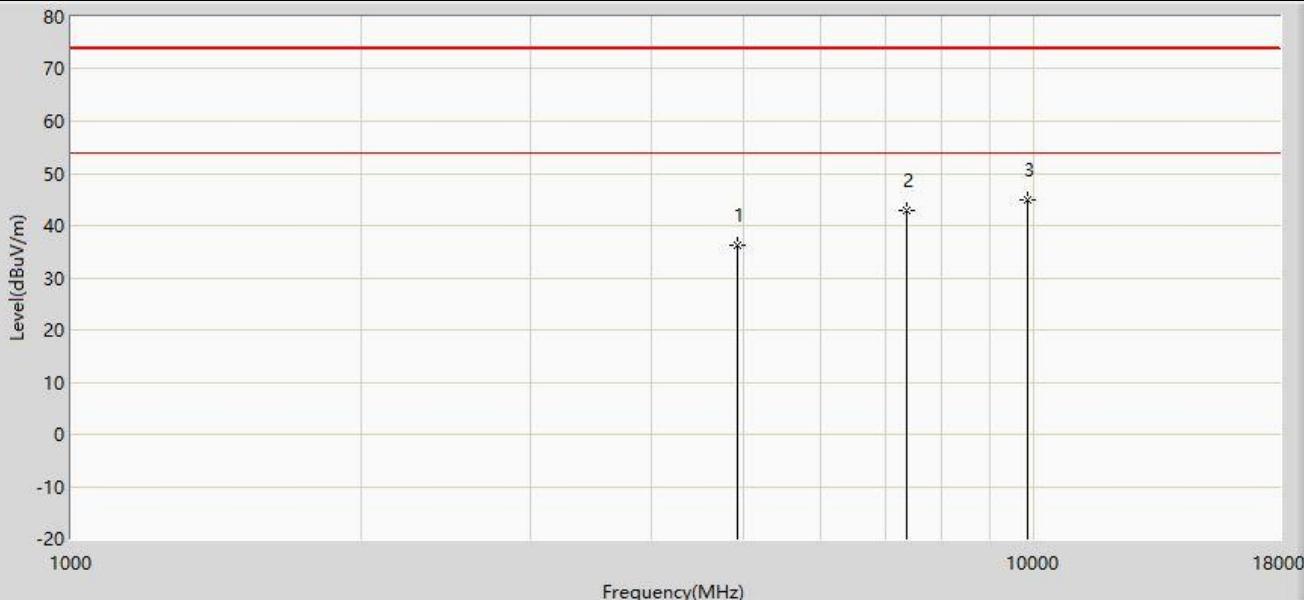
No	Mark	Frequency (MHz)	Measure Level (dBuV/m)	Reading Level (dBuV)	Over Limit (dB)	Limit (dBuV/m)	Factor (dB)	Type
1		4874.000	36.046	50.486	-37.954	74.000	-14.440	PK
2		7311.000	42.172	50.471	-31.828	74.000	-8.299	PK
3	*	9748.000	45.926	50.604	-28.074	74.000	-4.677	PK

Profile: 2231093R	Page No.: 47
Engineer: Pengchengyang	
Site: AC5	Time: 2022/05/25 - 22:31
Limit: FCC-15.209	Margin: 0
Probe: FCC_ANT-1-18G	Polarity: Horizontal
EUT: BARCODE SCANNER	Power: DC3.7V
Note: Mode 3:Transmit at 2462MHz by 11n20	



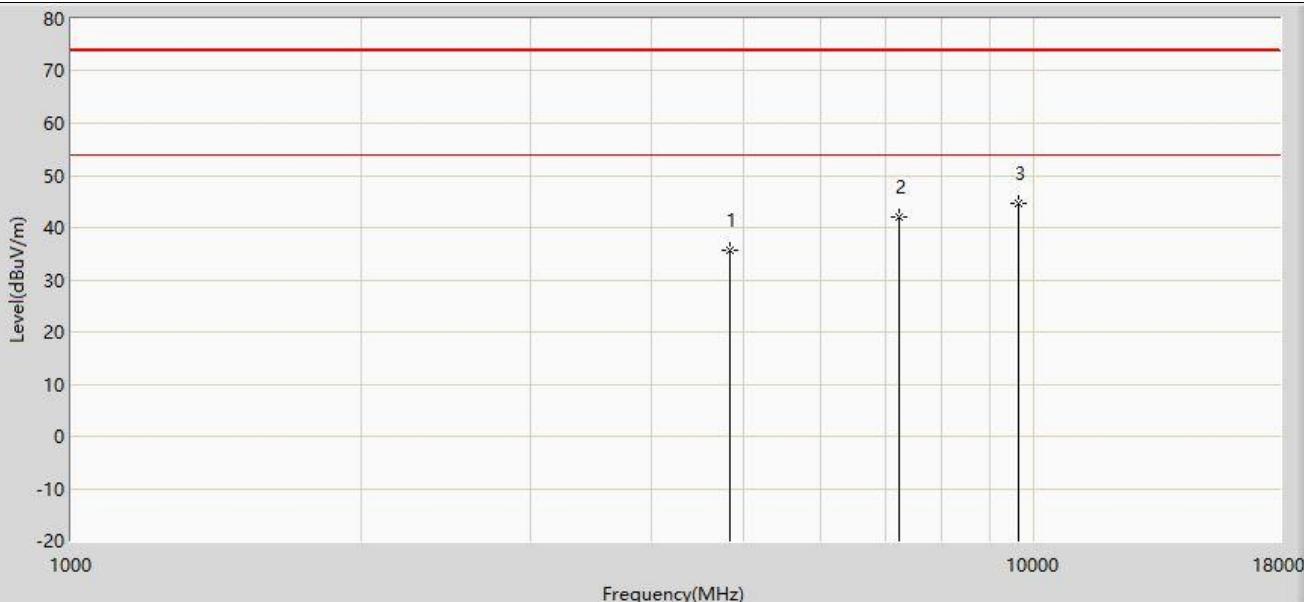
No	Mark	Frequency (MHz)	Measure Level (dBuV/m)	Reading Level (dBuV)	Over Limit (dB)	Limit (dBuV/m)	Factor (dB)	Type
1		4924.000	37.019	51.229	-36.981	74.000	-14.210	PK
2		7386.000	42.648	50.480	-31.352	74.000	-7.832	PK
3	*	9848.000	44.806	49.213	-29.194	74.000	-4.408	PK

Profile: 2231093R	Page No.: 48
Engineer: Pengchengyang	
Site: AC5	Time: 2022/05/25 - 22:31
Limit: FCC-15.209	Margin: 0
Probe: FCC_ANT-1-18G	Polarity: Vertical
EUT: BARCODE SCANNER	Power: DC3.7V
Note: Mode 3:Transmit at 2462MHz by 11n20	



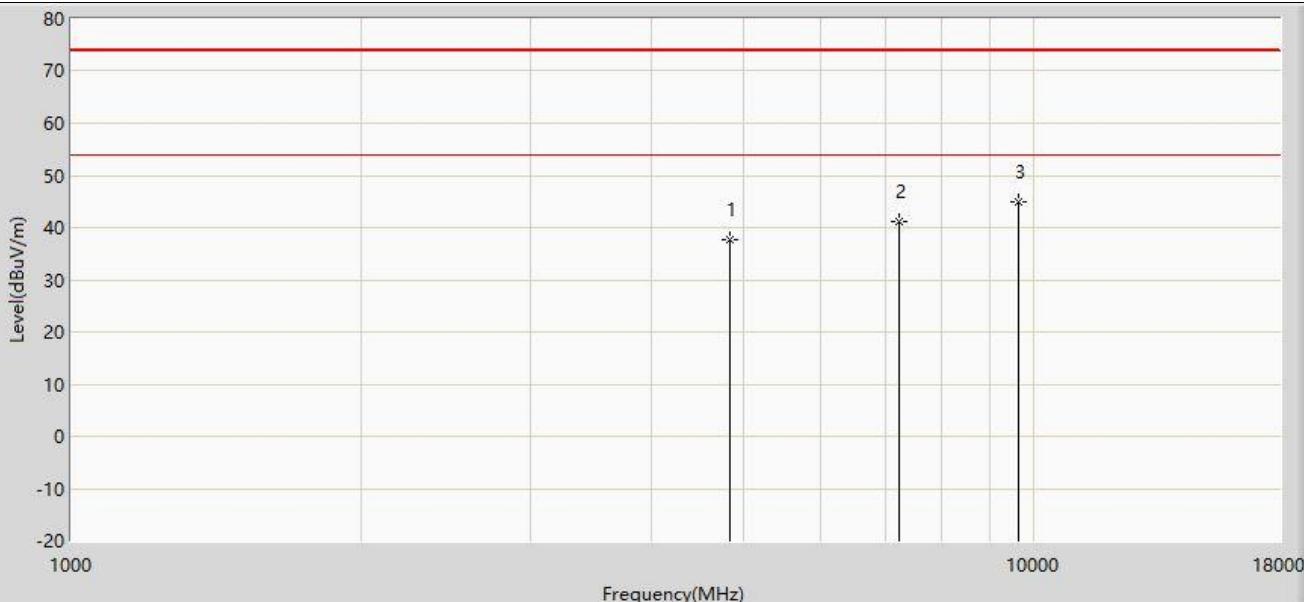
No	Mark	Frequency (MHz)	Measure Level (dBuV/m)	Reading Level (dBuV)	Over Limit (dB)	Limit (dBuV/m)	Factor (dB)	Type
1		4924.000	36.229	50.439	-37.771	74.000	-14.210	PK
2		7386.000	42.859	50.691	-31.141	74.000	-7.832	PK
3	*	9848.000	44.869	49.276	-29.131	74.000	-4.408	PK

Profile: 2231093R	Page No.: 49
Engineer: Pengchengyang	
Site: AC5	Time: 2022/05/25 - 22:31
Limit: FCC-15.209	Margin: 0
Probe: FCC_ANT-1-18G	Polarity: Horizontal
EUT: BARCODE SCANNER	Power: DC3.7V
Note: Mode 4:Transmit at 2412MHz by 11ac20	



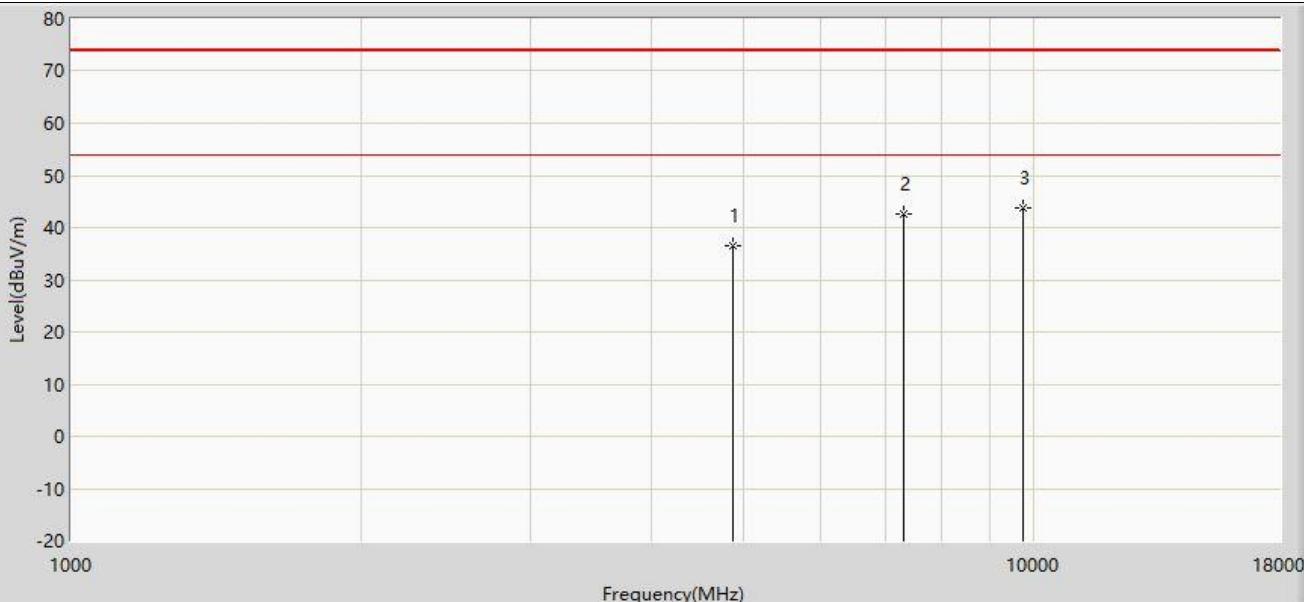
No	Mark	Frequency (MHz)	Measure Level (dBuV/m)	Reading Level (dBuV)	Over Limit (dB)	Limit (dBuV/m)	Factor (dB)	Type
1		4824.000	35.624	50.298	-38.376	74.000	-14.674	PK
2		7236.000	41.950	50.344	-32.050	74.000	-8.394	PK
3	*	9648.000	44.742	49.787	-29.258	74.000	-5.045	PK

Profile: 2231093R	Page No.: 50
Engineer: Pengchengyang	
Site: AC5	Time: 2022/05/25 - 22:31
Limit: FCC-15.209	Margin: 0
Probe: FCC_ANT-1-18G	Polarity: Vertical
EUT: BARCODE SCANNER	Power: DC3.7V
Note: Mode 4:Transmit at 2412MHz by 11ac20	



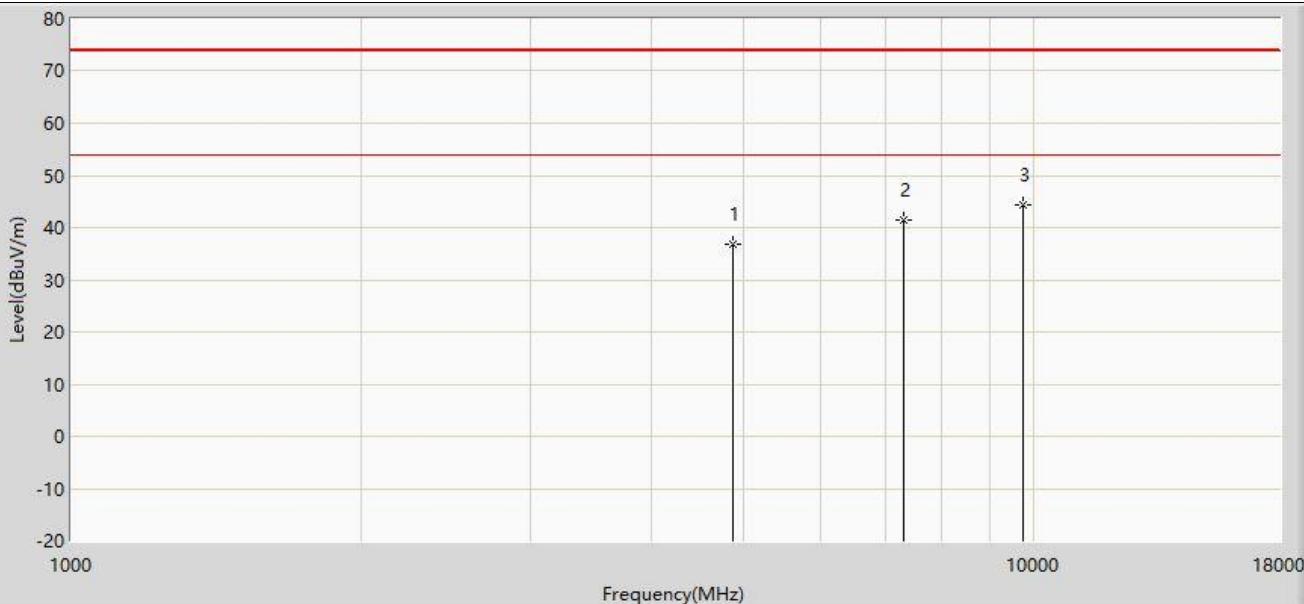
No	Mark	Frequency (MHz)	Measure Level (dBuV/m)	Reading Level (dBuV)	Over Limit (dB)	Limit (dBuV/m)	Factor (dB)	Type
1		4824.000	37.657	52.331	-36.343	74.000	-14.674	PK
2		7236.000	41.097	49.491	-32.903	74.000	-8.394	PK
3	*	9648.000	44.867	49.912	-29.133	74.000	-5.045	PK

Profile: 2231093R	Page No.: 51
Engineer: Pengchengyang	
Site: AC5	Time: 2022/05/25 - 22:32
Limit: FCC-15.209	Margin: 0
Probe: FCC_ANT-1-18G	Polarity: Horizontal
EUT: BARCODE SCANNER	Power: DC3.7V
Note: Mode 4:Transmit at 2437MHz by 11ac20	



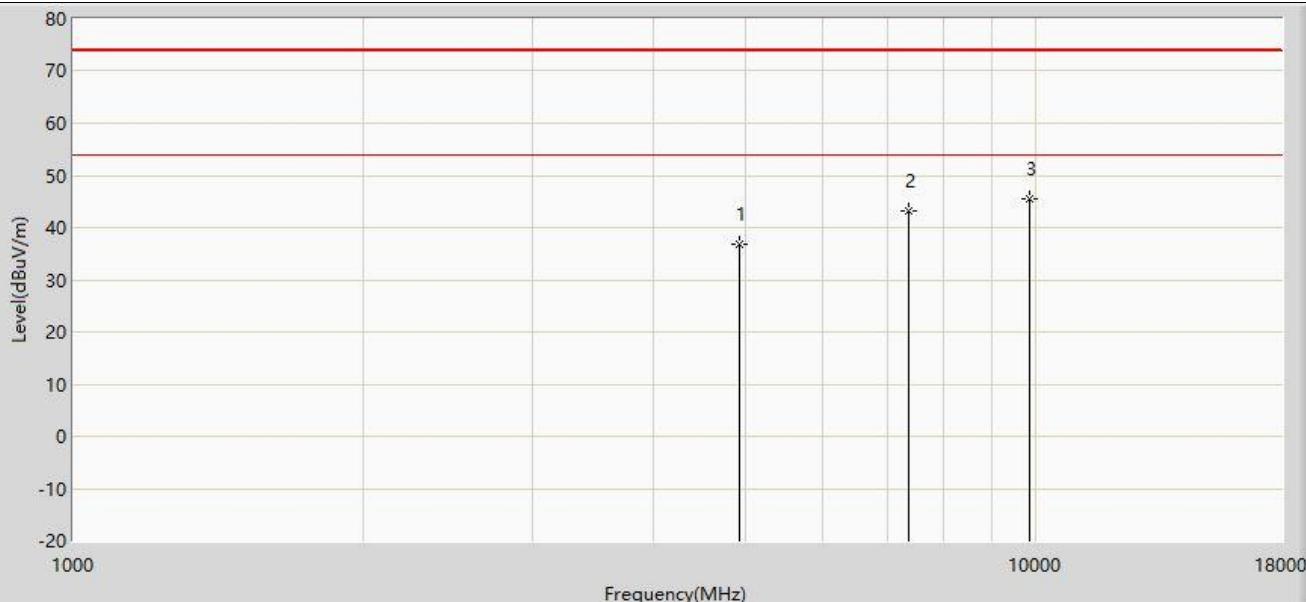
No	Mark	Frequency (MHz)	Measure Level (dBuV/m)	Reading Level (dBuV)	Over Limit (dB)	Limit (dBuV/m)	Factor (dB)	Type
1		4874.000	36.494	50.934	-37.506	74.000	-14.440	PK
2		7311.000	42.730	51.029	-31.270	74.000	-8.299	PK
3	*	9748.000	43.898	48.576	-30.102	74.000	-4.677	PK

Profile: 2231093R	Page No.: 52
Engineer: Pengchengyang	
Site: AC5	Time: 2022/05/25 - 22:32
Limit: FCC-15.209	Margin: 0
Probe: FCC_ANT-1-18G	Polarity: Vertical
EUT: BARCODE SCANNER	Power: DC3.7V
Note: Mode 4:Transmit at 2437MHz by 11ac20	



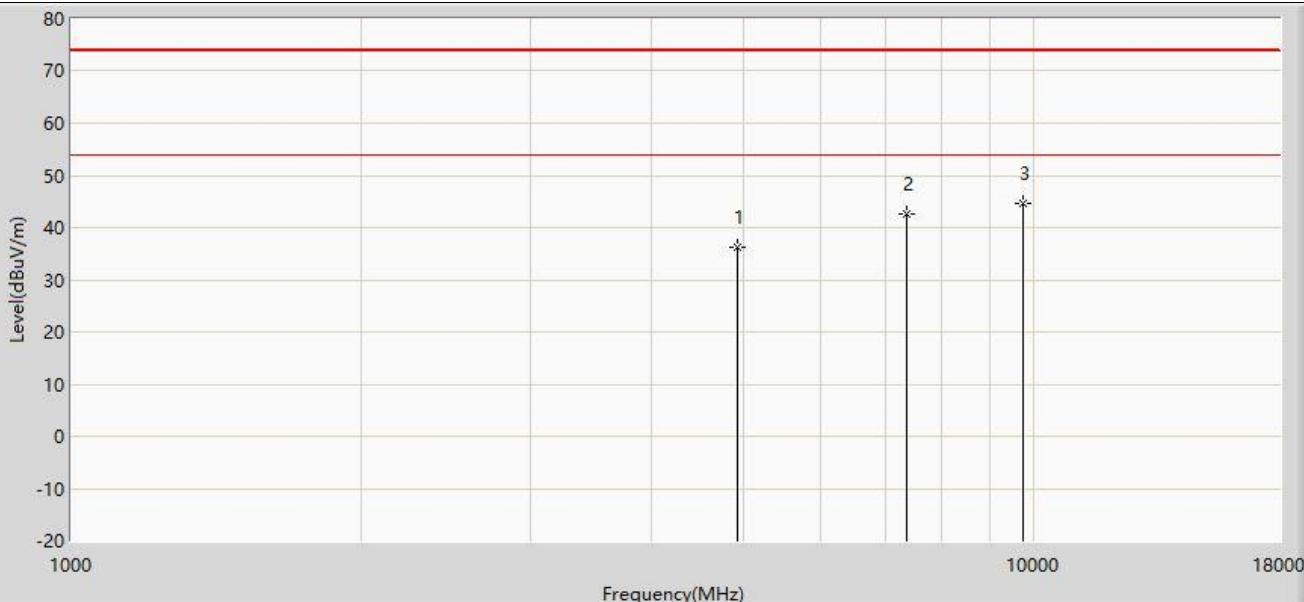
No	Mark	Frequency (MHz)	Measure Level (dBuV/m)	Reading Level (dBuV)	Over Limit (dB)	Limit (dBuV/m)	Factor (dB)	Type
1		4874.000	36.772	51.212	-37.228	74.000	-14.440	PK
2		7311.000	41.487	49.786	-32.513	74.000	-8.299	PK
3	*	9748.000	44.400	49.078	-29.600	74.000	-4.677	PK

Profile: 2231093R	Page No.: 53
Engineer: Pengchengyang	
Site: AC5	Time: 2022/05/25 - 22:32
Limit: FCC-15.209	Margin: 0
Probe: FCC_ANT-1-18G	Polarity: Horizontal
EUT: BARCODE SCANNER	Power: DC3.7V
Note: Mode 4:Transmit at 2462MHz by 11ac20	



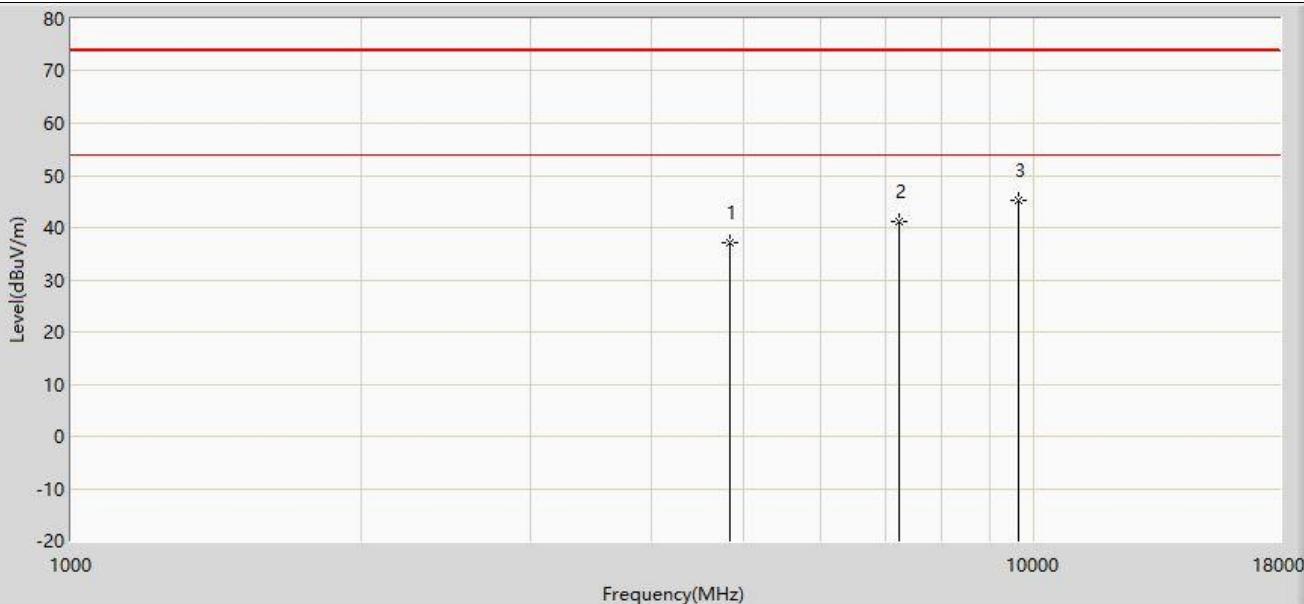
No	Mark	Frequency (MHz)	Measure Level (dBuV/m)	Reading Level (dBuV)	Over Limit (dB)	Limit (dBuV/m)	Factor (dB)	Type
1		4924.000	36.783	50.993	-37.217	74.000	-14.210	PK
2		7386.000	43.257	51.089	-30.743	74.000	-7.832	PK
3	*	9848.000	45.434	49.841	-28.566	74.000	-4.408	PK

Profile: 2231093R	Page No.: 54
Engineer: Pengchengyang	
Site: AC5	Time: 2022/05/25 - 22:32
Limit: FCC-15.209	Margin: 0
Probe: FCC_ANT-1-18G	Polarity: Vertical
EUT: BARCODE SCANNER	Power: DC3.7V
Note: Mode 4:Transmit at 2462MHz by 11ac20	



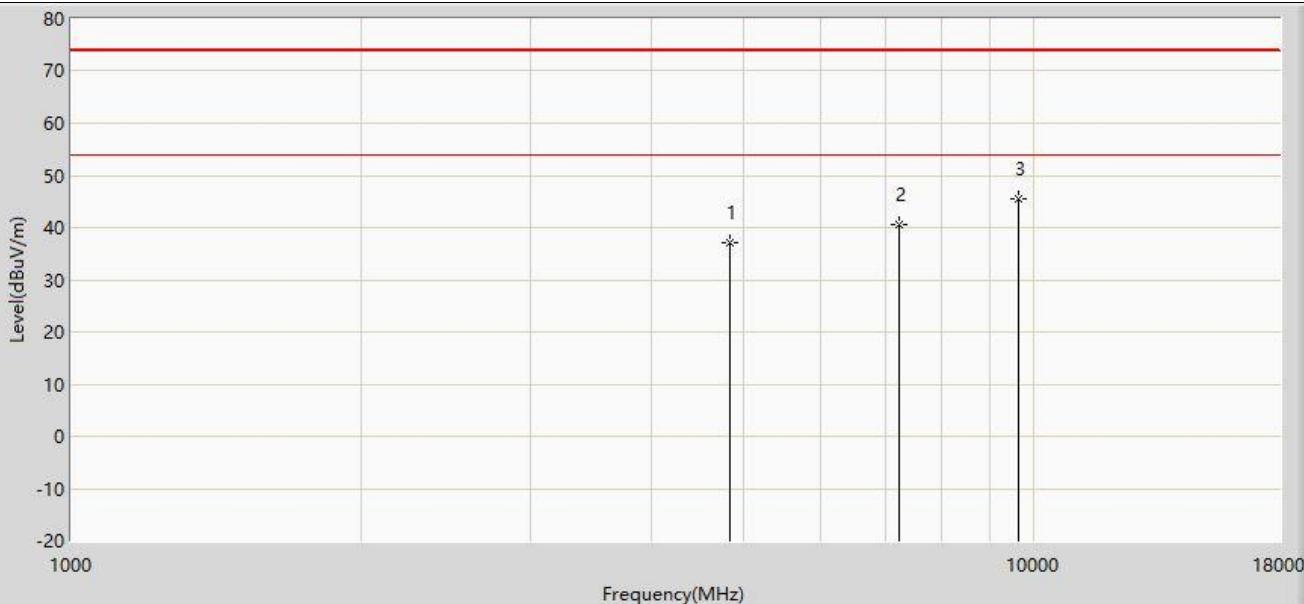
No	Mark	Frequency (MHz)	Measure Level (dBuV/m)	Reading Level (dBuV)	Over Limit (dB)	Limit (dBuV/m)	Factor (dB)	Type
1		4924.000	36.266	50.476	-37.734	74.000	-14.210	PK
2		7386.000	42.472	50.304	-31.528	74.000	-7.832	PK
3	*	9748.000	44.607	49.285	-29.393	74.000	-4.677	PK

Profile: 2231093R	Page No.: 55
Engineer: Pengchengyang	
Site: AC5	Time: 2022/05/25 - 22:32
Limit: FCC-15.209	Margin: 0
Probe: FCC_ANT-1-18G	Polarity: Horizontal
EUT: BARCODE SCANNER	Power: DC3.7V
Note: Mode 5:Transmit at 2412MHz by 11ax20	



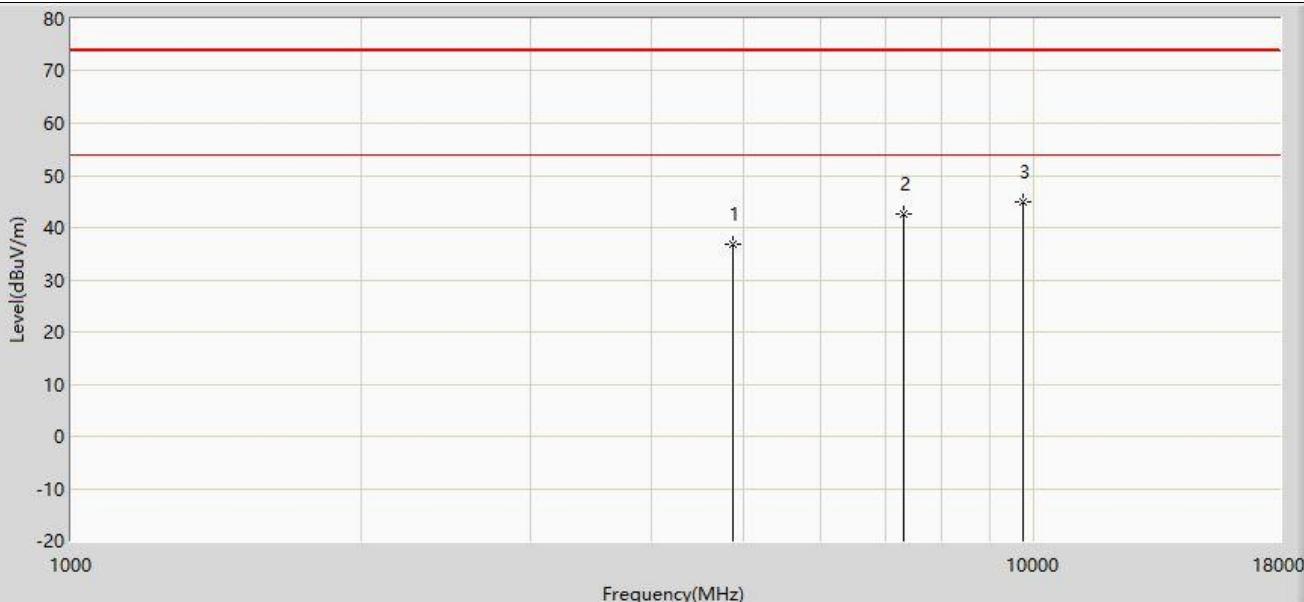
No	Mark	Frequency (MHz)	Measure Level (dBuV/m)	Reading Level (dBuV)	Over Limit (dB)	Limit (dBuV/m)	Factor (dB)	Type
1		4824.000	37.140	51.814	-36.860	74.000	-14.674	PK
2		7236.000	41.150	49.544	-32.850	74.000	-8.394	PK
3	*	9648.000	45.091	50.136	-28.909	74.000	-5.045	PK

Profile: 2231093R	Page No.: 56
Engineer: Pengchengyang	
Site: AC5	Time: 2022/05/25 - 22:32
Limit: FCC-15.209	Margin: 0
Probe: FCC_ANT-1-18G	Polarity: Vertical
EUT: BARCODE SCANNER	Power: DC3.7V
Note: Mode 5:Transmit at 2412MHz by 11ax20	



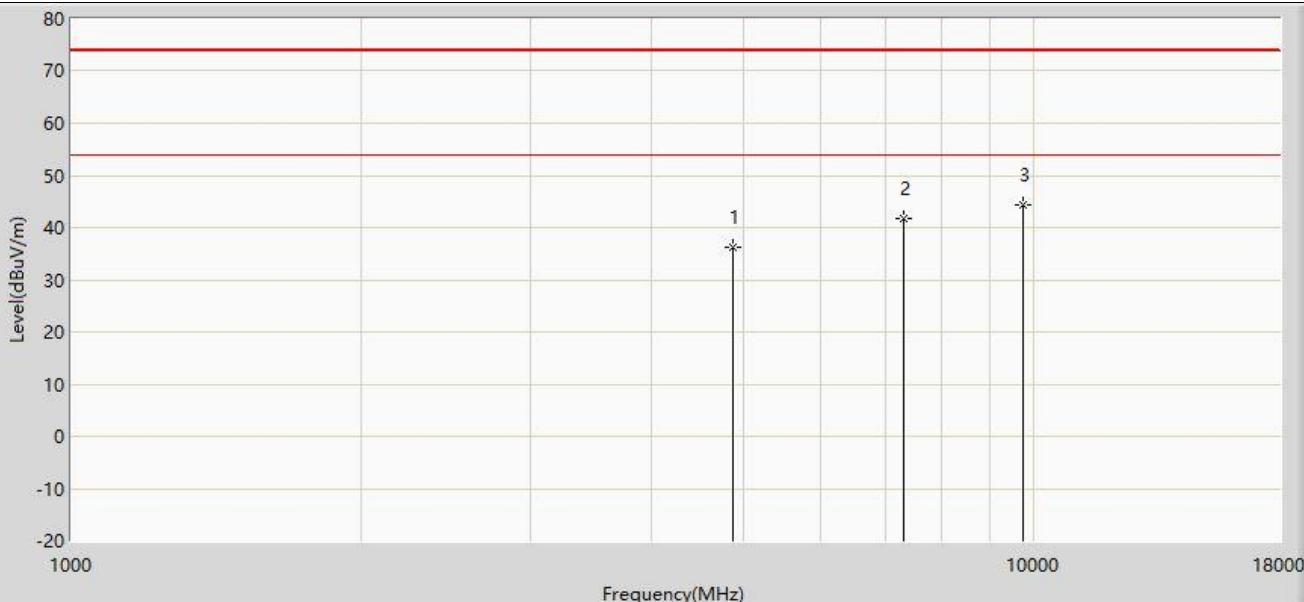
No	Mark	Frequency (MHz)	Measure Level (dBuV/m)	Reading Level (dBuV)	Over Limit (dB)	Limit (dBuV/m)	Factor (dB)	Type
1		4824.000	37.061	51.735	-36.939	74.000	-14.674	PK
2		7236.000	40.688	49.082	-33.312	74.000	-8.394	PK
3	*	9648.000	45.447	50.492	-28.553	74.000	-5.045	PK

Profile: 2231093R	Page No.: 57
Engineer: Pengchengyang	
Site: AC5	Time: 2022/05/25 - 22:32
Limit: FCC-15.209	Margin: 0
Probe: FCC_ANT-1-18G	Polarity: Horizontal
EUT: BARCODE SCANNER	Power: DC3.7V
Note: Mode 5:Transmit at 2437MHz by 11ax20	



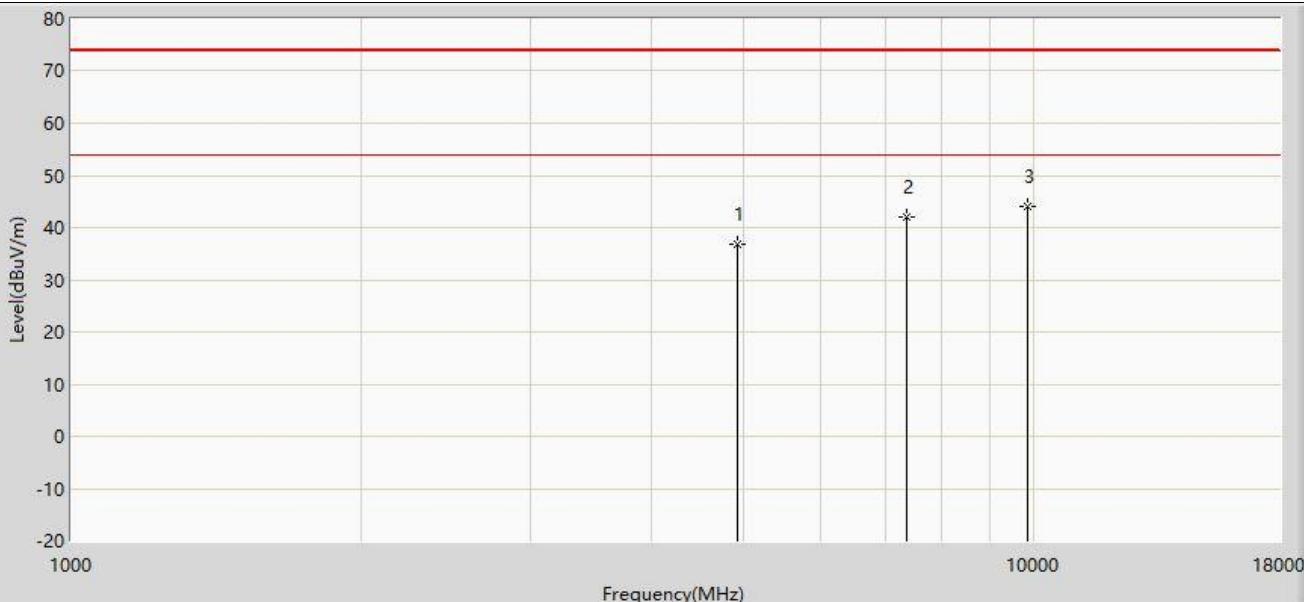
No	Mark	Frequency (MHz)	Measure Level (dBuV/m)	Reading Level (dBuV)	Over Limit (dB)	Limit (dBuV/m)	Factor (dB)	Type
1		4874.000	36.673	51.113	-37.327	74.000	-14.440	PK
2		7311.000	42.602	50.901	-31.398	74.000	-8.299	PK
3	*	9748.000	44.949	49.627	-29.051	74.000	-4.677	PK

Profile: 2231093R	Page No.: 58
Engineer: Pengchengyang	
Site: AC5	Time: 2022/05/25 - 22:32
Limit: FCC-15.209	Margin: 0
Probe: FCC_ANT-1-18G	Polarity: Vertical
EUT: BARCODE SCANNER	Power: DC3.7V
Note: Mode 5:Transmit at 2437MHz by 11ax20	



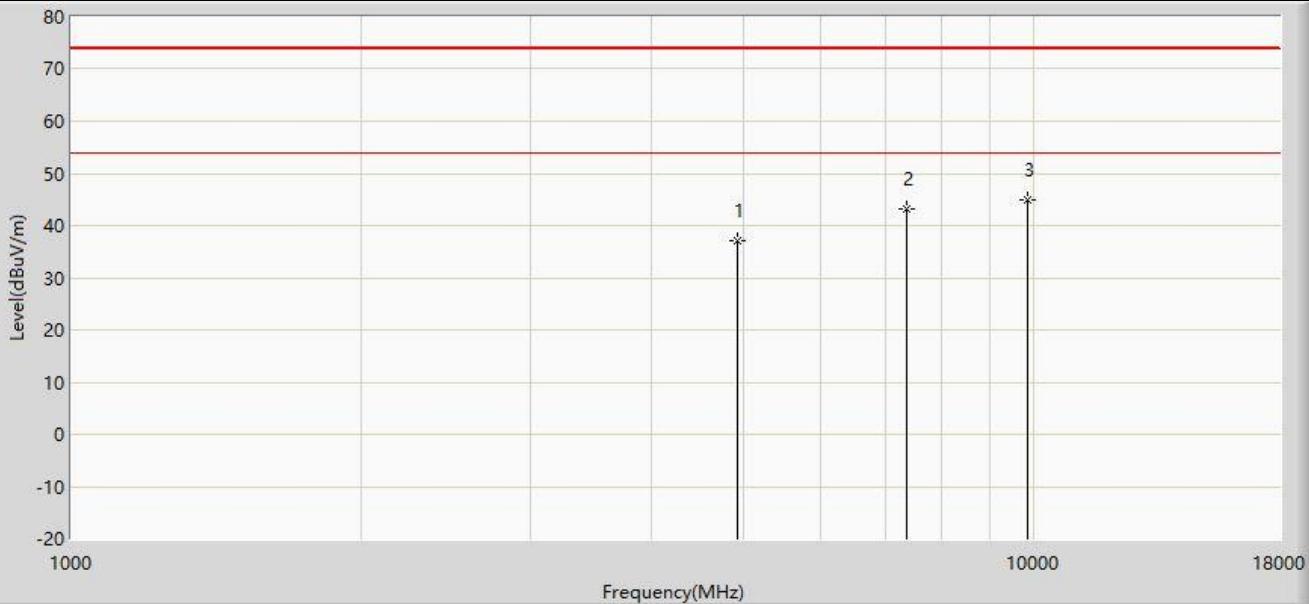
No	Mark	Frequency (MHz)	Measure Level (dBuV/m)	Reading Level (dBuV)	Over Limit (dB)	Limit (dBuV/m)	Factor (dB)	Type
1		4874.000	36.196	50.636	-37.804	74.000	-14.440	PK
2		7311.000	41.848	50.147	-32.152	74.000	-8.299	PK
3	*	9748.000	44.490	49.168	-29.510	74.000	-4.677	PK

Profile: 2231093R	Page No.: 59
Engineer: Pengchengyang	
Site: AC5	Time: 2022/05/25 - 22:32
Limit: FCC-15.209	Margin: 0
Probe: FCC_ANT-1-18G	Polarity: Horizontal
EUT: BARCODE SCANNER	Power: DC3.7V
Note: Mode 5:Transmit at 2462MHz by 11ax20	



No	Mark	Frequency (MHz)	Measure Level (dBuV/m)	Reading Level (dBuV)	Over Limit (dB)	Limit (dBuV/m)	Factor (dB)	Type
1		4924.000	36.855	51.065	-37.145	74.000	-14.210	PK
2		7386.000	42.073	49.905	-31.927	74.000	-7.832	PK
3	*	9848.000	43.969	48.376	-30.031	74.000	-4.408	PK

Profile: 2231093R	Page No.: 60
Engineer: Pengchengyang	
Site: AC5	Time: 2022/05/25 - 22:32
Limit: FCC-15.209	Margin: 0
Probe: FCC_ANT-1-18G	Polarity: Vertical
EUT: BARCODE SCANNER	Power: DC3.7V
Note: Mode 5:Transmit at 2462MHz by 11ax20	



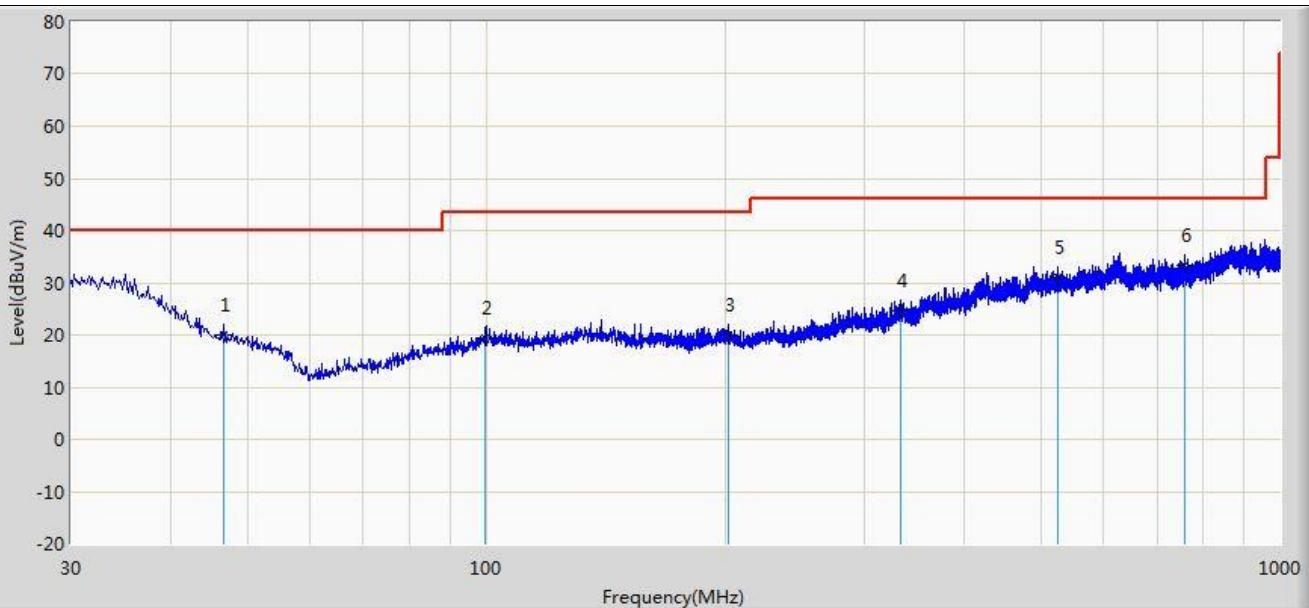
No	Mark	Frequency (MHz)	Measure Level (dBuV/m)	Reading Level (dBuV)	Over Limit (dB)	Limit (dBuV/m)	Factor (dB)	Type
1		4924.000	36.974	51.184	-37.026	74.000	-14.210	PK
2		7386.000	43.186	51.018	-30.814	74.000	-7.832	PK
3	*	9848.000	44.987	49.394	-29.013	74.000	-4.408	PK

Note:

1. Measured Level = Reading Level + Factor.
2. The test frequency range, 9kHz~30MHz, worst case are at least 20dB below the limits, therefore no data appear in the report.
3. The test frequency range, 18GHz~26GHz test result on peak is lower than average limit, all is the noise base, therefore no data appear in the report.
4. This limit applies for using average detector, if the test result on peak is lower than average limit, then average measurement needn't be performed.
5. As the radiated emission was performed, so conducted emission was not tested.

### The worst case of Radiated Emission below 1GHz:

Profile: 2231093R	Page No.: 19
Engineer: JunXu	
Site: AC2	Time: 2022/05/26 - 21:56
Limit: FCC_Part15.209_RE(3m)_ClassB	Margin: 0
Probe: AC2_3M(30-1000M)	Polarity: Horizontal
EUT: BARCODE SCANNER	Power: DC3.7V
Note: Mode1	

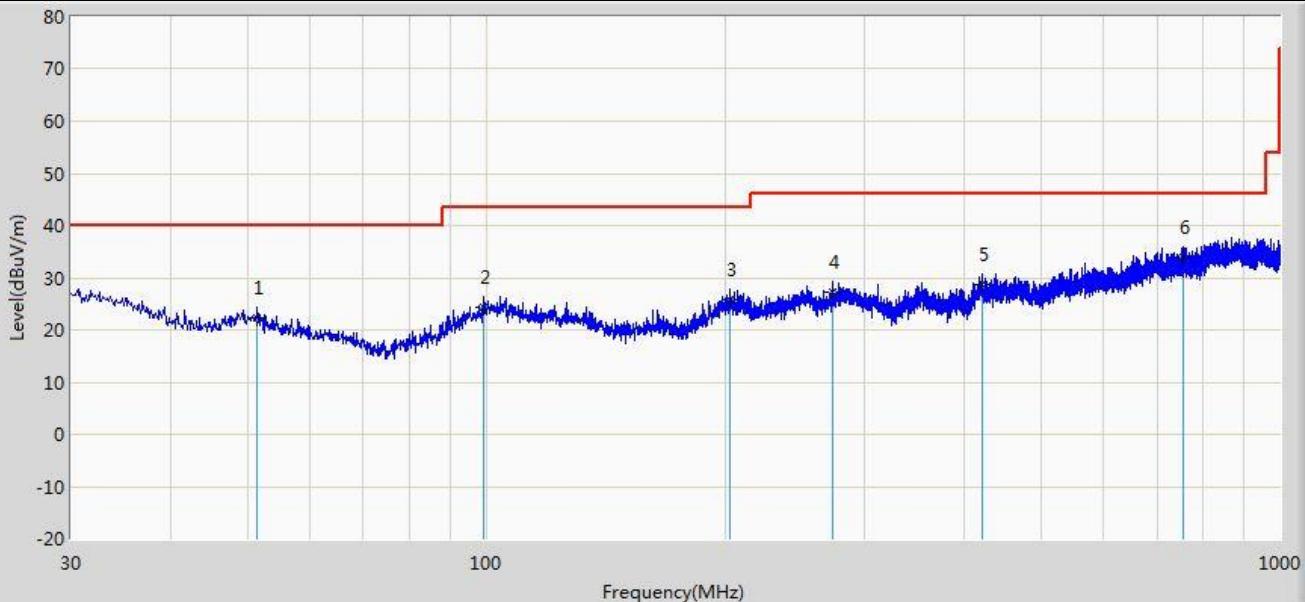


No	Mark	Frequency (MHz)	Measure Level (dBuV/m)	Reading Level (dBuV)	Over Limit (dB)	Limit (dBuV/m)	Factor (dB)	Type
1		46.611	20.012	3.484	-19.988	40.000	16.528	QP
2		99.840	19.460	2.332	-24.040	43.500	17.128	QP
3		201.569	19.956	2.225	-23.544	43.500	17.731	QP
4		332.155	24.740	1.846	-21.260	46.000	22.894	QP
5		524.579	31.120	2.032	-14.880	46.000	29.088	QP
6	*	757.985	33.260	3.855	-12.740	46.000	29.405	QP

Note:

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

Profile: 2231093R	Page No.: 20
Engineer: JunXu	
Site: AC2	Time: 2022/05/26 - 21:58
Limit: FCC_Part15.209_RE(3m)_ClassB	Margin: 0
Probe: AC2_3M(30-1000M)	Polarity: Vertical
EUT: BARCODE SCANNER	Power: DC3.7V
Note: Mode1	



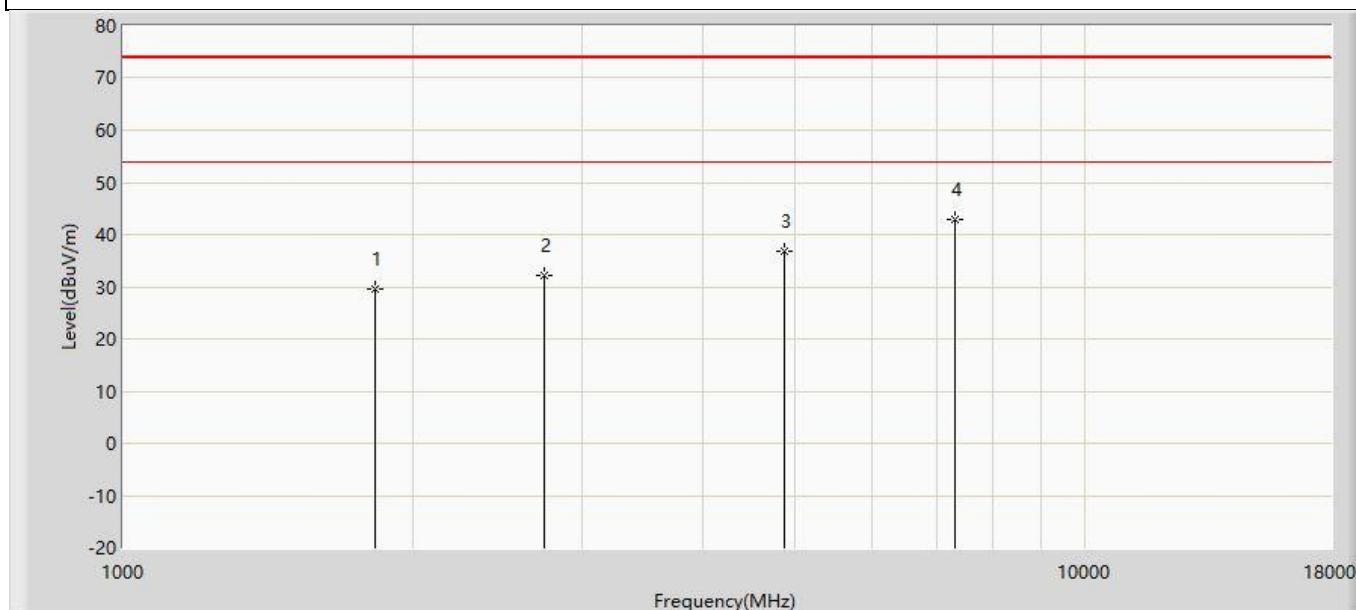
No	Mark	Frequency (MHz)	Measure Level (dBuV/m)	Reading Level (dBuV)	Over Limit (dB)	Limit (dBuV/m)	Factor (dB)	Type
1		51.461	22.410	3.434	-17.590	40.000	18.975	QP
2		99.476	24.260	2.553	-19.240	43.500	21.707	QP
3		202.781	25.680	2.198	-17.820	43.500	23.482	QP
4		272.742	27.360	3.507	-18.640	46.000	23.853	QP
5		421.759	28.622	2.061	-17.378	46.000	26.562	QP
6	*	754.266	33.884	2.703	-12.116	46.000	31.181	QP

Note:

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

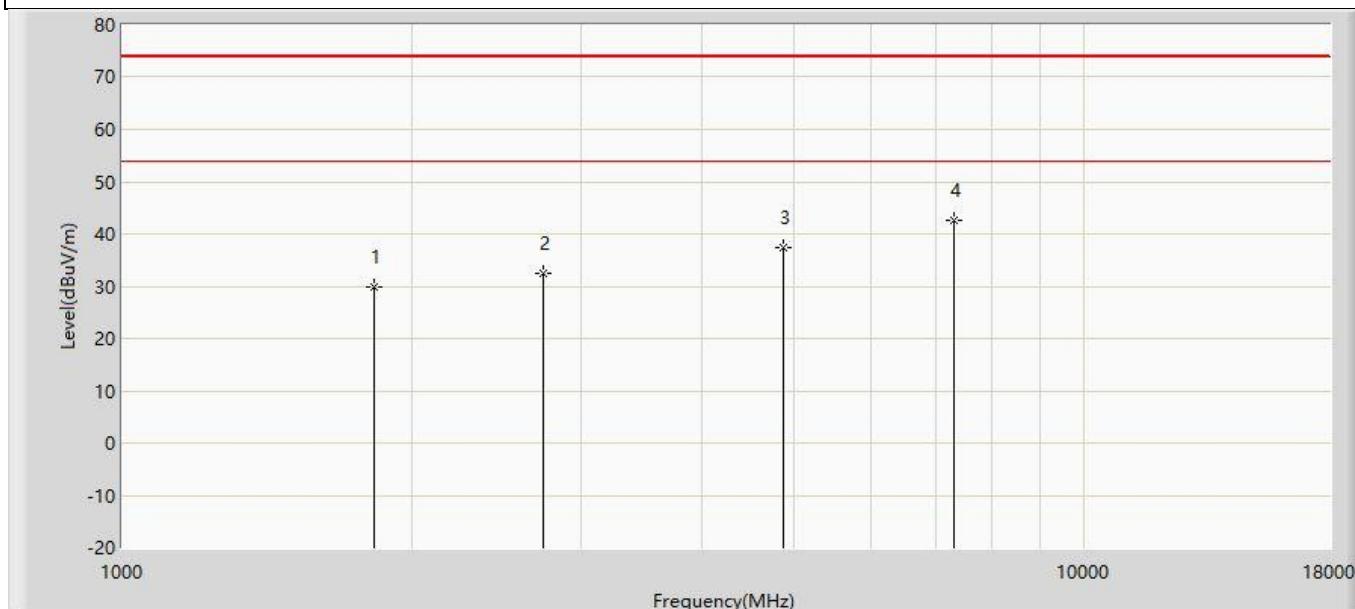
### The worst case of Simultaneous Radiated Emission:

Profile: 2231093R	Page No.: 9
Engineer: Juliuszhou	
Site: AC5	Time: 2022/05/30 - 14:41
Limit: FCC-15.209	Margin: 0
Probe: FCC_ANT-1-18G	Polarity: Horizontal
EUT: Barcode Scanner	Power: DC3.7V
Note: Mode 1:Transmit 2.4G WIFI 2437MHz & RFID 914.25	



No	Mark	Frequency (MHz)	Measure Level (dBuV/m)	Reading Level (dBuV)	Over Limit (dB)	Limit (dBuV/m)	Factor (dB)	Type
1		1828.500	29.584	52.157	-44.416	74.000	-22.573	PK
2		2742.750	32.105	51.951	-41.895	74.000	-19.846	PK
3		4874.000	36.853	51.293	-37.147	74.000	-14.440	PK
4	*	7311.000	42.854	51.153	-31.146	74.000	-8.299	PK

Profile: 2231093R	Page No.: 10
Engineer: Juliuszhou	
Site: AC5	Time: 2022/05/30 - 14:41
Limit: FCC-15.209	Margin: 0
Probe: FCC_ANT-1-18G	Polarity: Vertical
EUT: Barcode Scanner	Power: DC3.7V
Note: Mode 1:Transmit 2.4G WIFI 2437MHz & RFID 914.25	



No	Mark	Frequency (MHz)	Measure Level (dBuV/m)	Reading Level (dBuV)	Over Limit (dB)	Limit (dBuV/m)	Factor (dB)	Type
1		1828.500	29.870	52.443	-44.130	74.000	-22.573	PK
2		2742.750	32.591	52.437	-41.409	74.000	-19.846	PK
3		4874.000	37.376	51.816	-36.624	74.000	-14.440	PK
4	*	7311.000	42.491	50.790	-31.509	74.000	-8.299	PK

#### 4.3 Emissions in non-restricted frequency band

VERDICT: PASS

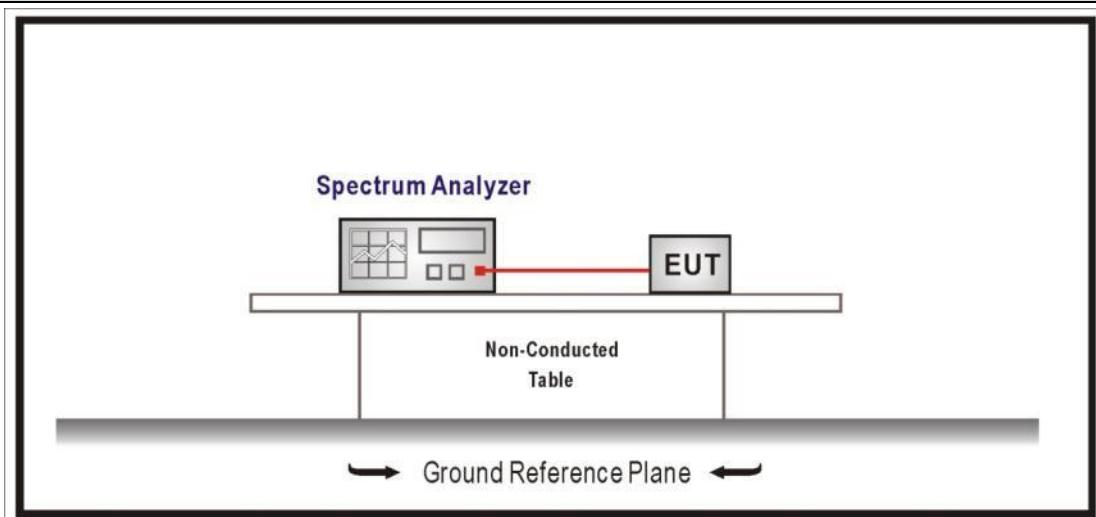
##### 4.3.1 Limit

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

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

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

##### 4.3.2 Test Setup



##### 4.3.3 Test Procedure

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

#### 4.3.4 Test Data

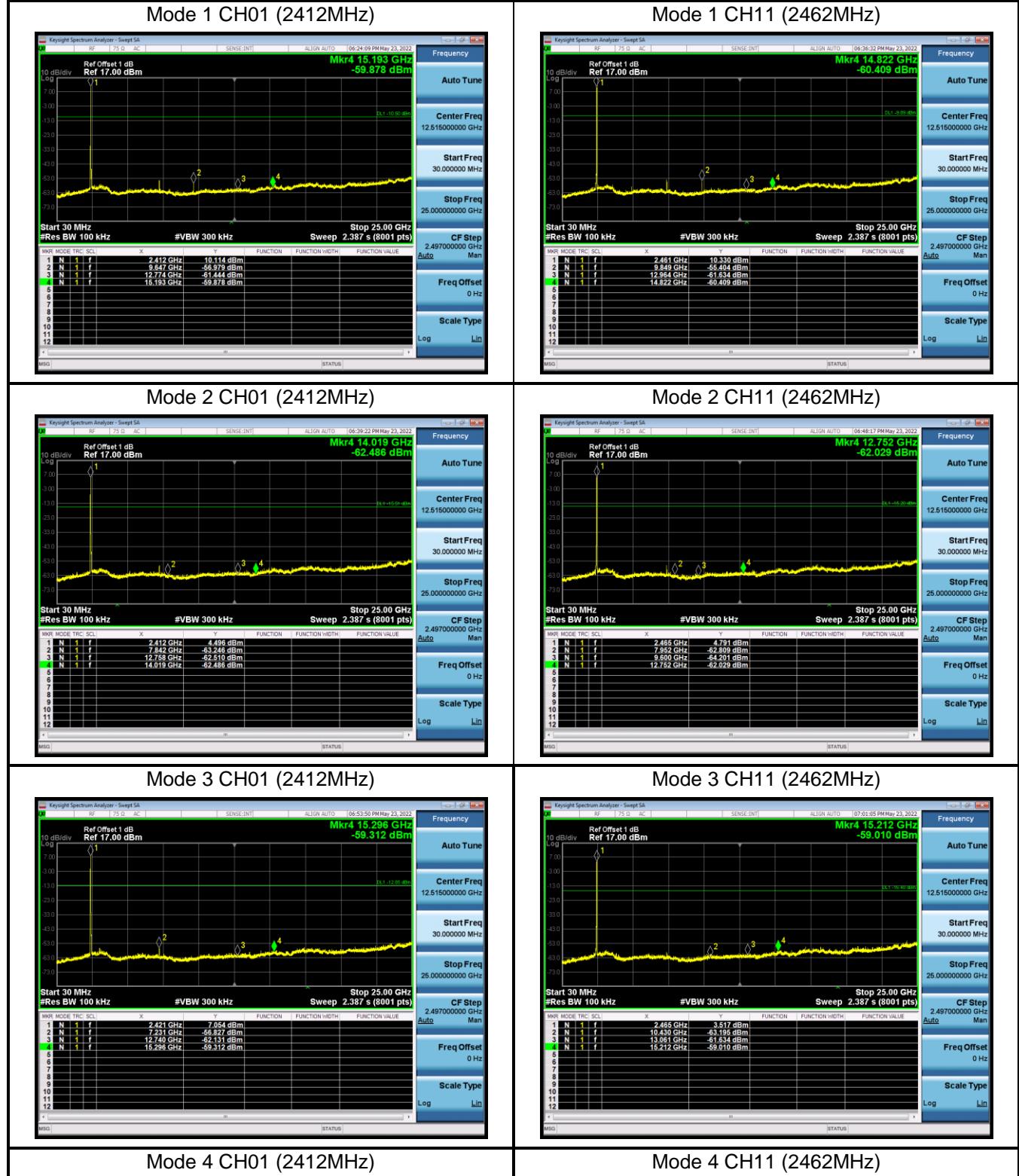
Mode	Channel	Test Frequency (MHz)	Maximum In-Band PSD[a] (dBm/100kHz)	Frequency (MHz)	Out-Band PSD[b] (dBm/100kHz)	[a]-[b] (dB)	Limit (dB)	Result
1	1	2412	10.193	2398.537	-38.930	49.123	≥20	Pass
	11	2462	10.559	2500	-63.006	73.565	≥20	Pass
2	1	2412	7.097	2400	-27.090	34.187	≥20	Pass
	11	2462	6.032	2500	-62.137	68.169	≥20	Pass
3	1	2412	11.129	2400	-26.176	37.305	≥20	Pass
	11	2462	5.193	2500	-61.718	66.911	≥20	Pass
4	1	2412	7.904	2398.87	-23.574	31.478	≥20	Pass
	11	2462	8.339	2500	-57.800	66.139	≥20	Pass
5	1	2412	7.583	2400	-26.810	34.393	≥20	Pass
	11	2462	7.772	2500	-61.747	69.519	≥20	Pass

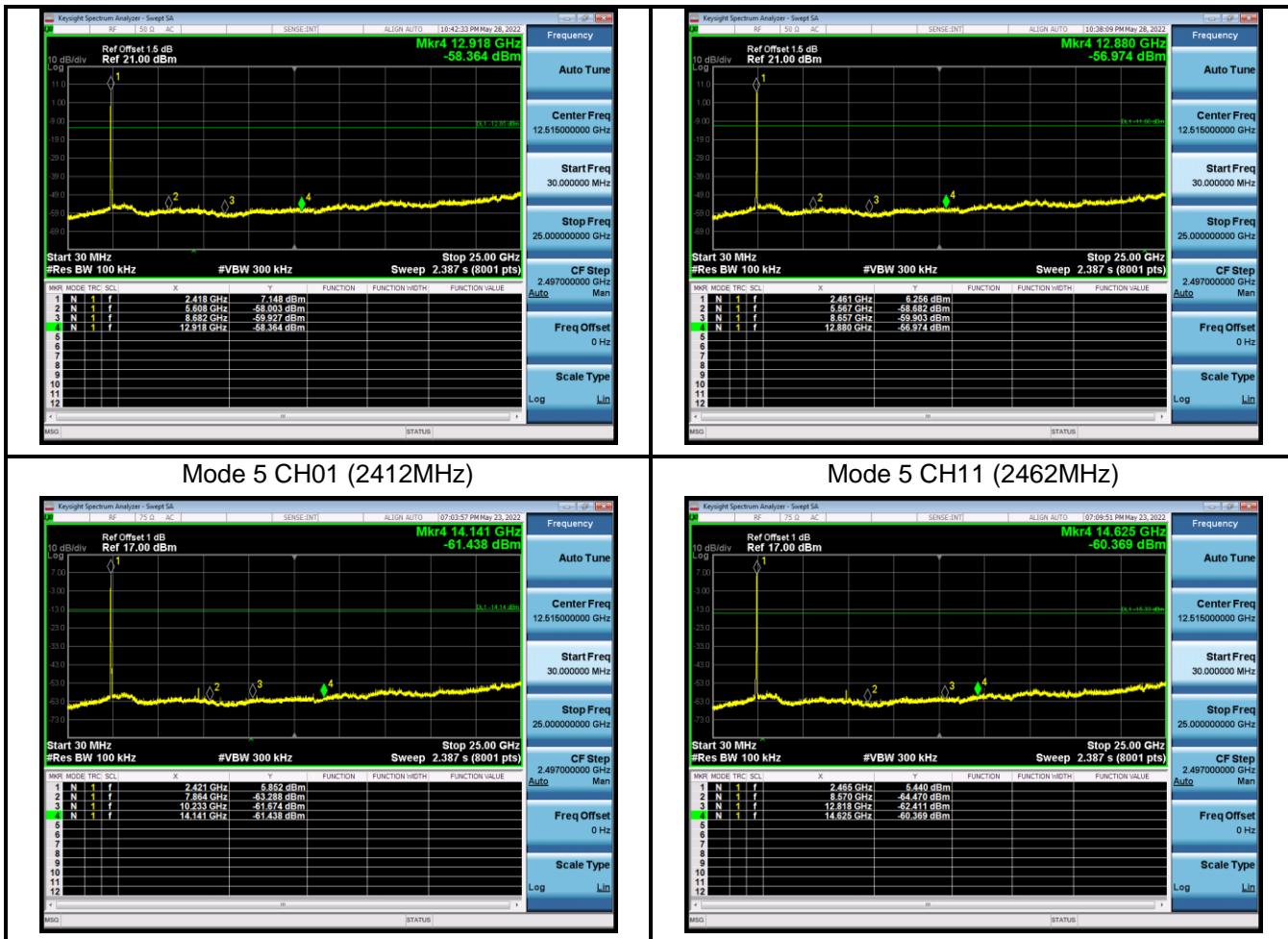
Note: The worst case of emissions in non-restricted frequency bands as below:

Mode 4 CH01(2412MHz)



The data of entire corresponding spectrum:





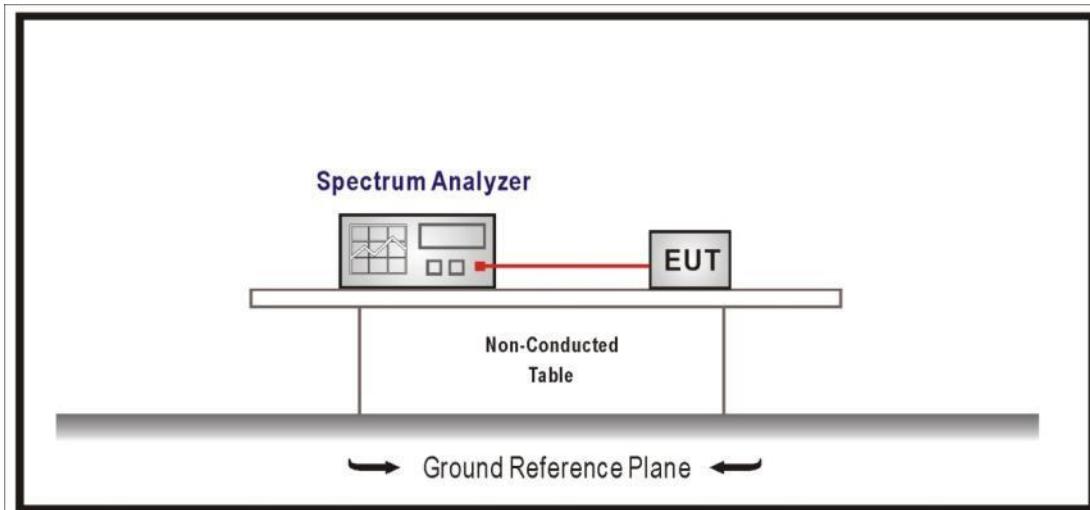
#### 4.4 Duty cycle

VERDICT: PASS

##### 4.4.1 Limit

N/A

##### 4.4.2 Test Setup



##### 4.1.1 Test Procedure

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

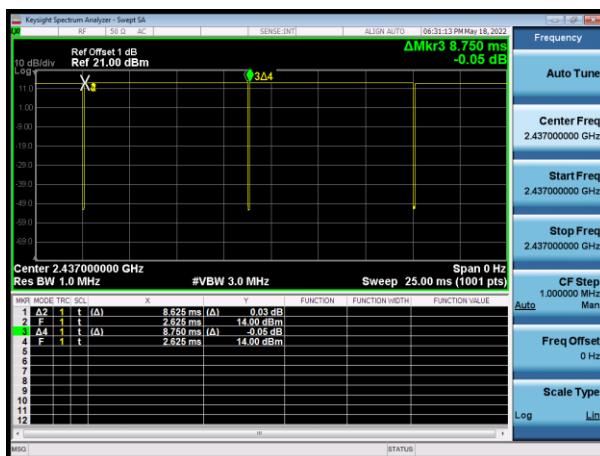
#### 4.4.3 Test Data

Test Mode	Tx On (ms)	VBW (KHz)	Tx On + Tx Off (ms)	Duty Cycle (%)
Mode 1	8.625	0.116	8.750	98.57
Mode 2	1.400	0.714	1.570	89.17
Mode 3	1.320	0.758	1.480	89.19
Mode 4	1.280	0.781	1.470	87.07
Mode 5	1.300	0.769	1.480	87.84

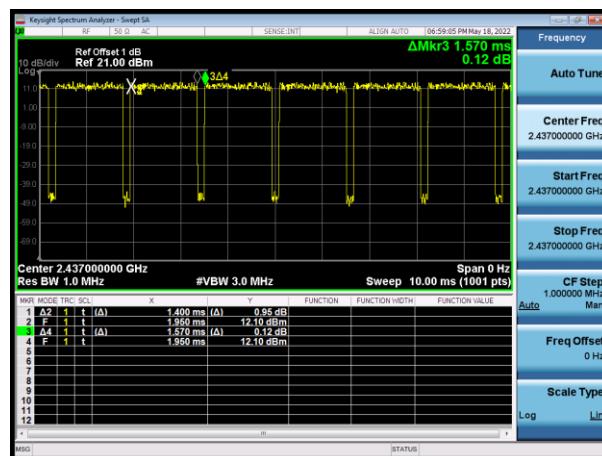
Note 1: T means the minimum transmission duration over which the transmitter is on and is transmitting at its maximum power control level for the tested mode of operation.

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

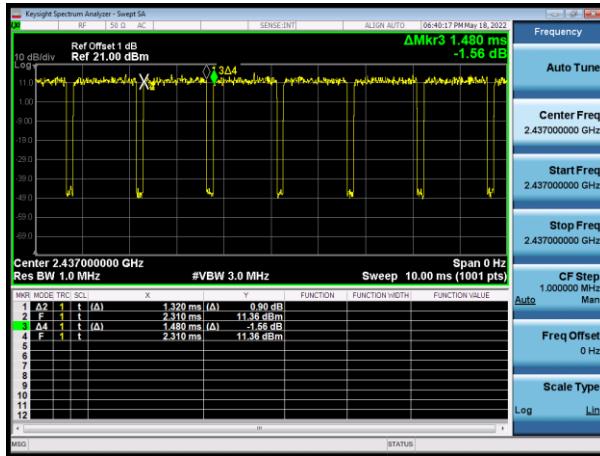
Mode 1 2437MHz



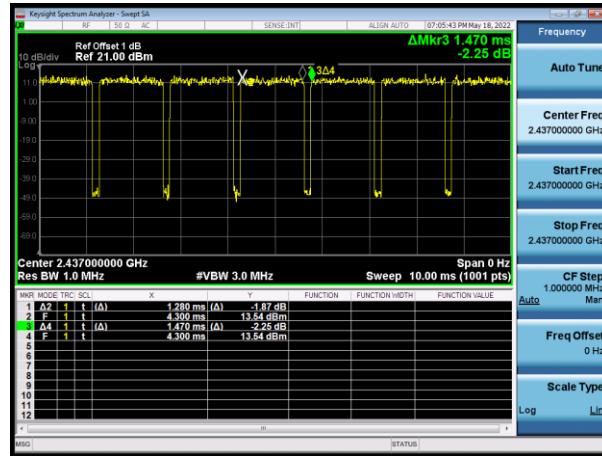
Mode 2 2437MHz

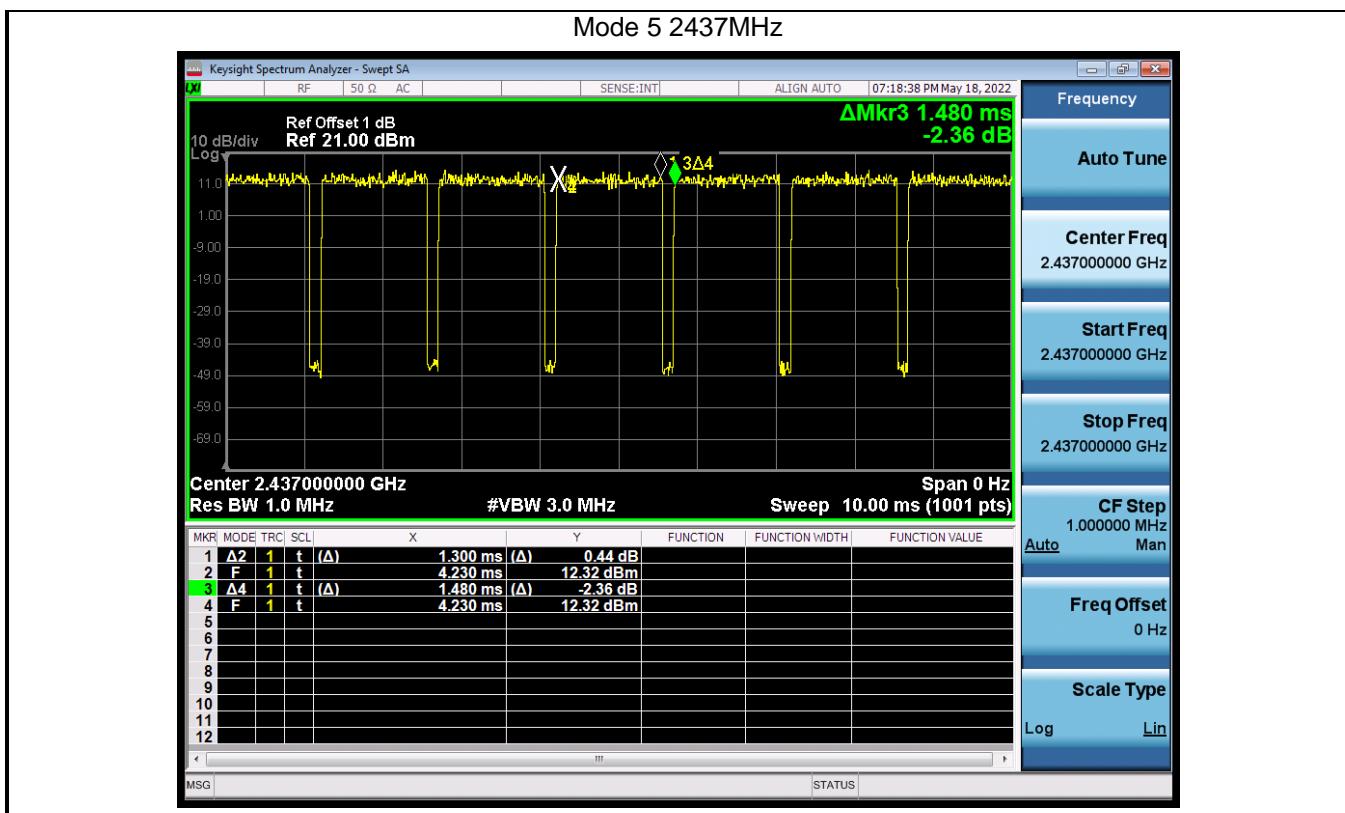


Mode 3 2437MHz



Mode 4 2437MHz





## 4.5 Radiated Emission Band Edge

VERDICT: PASS

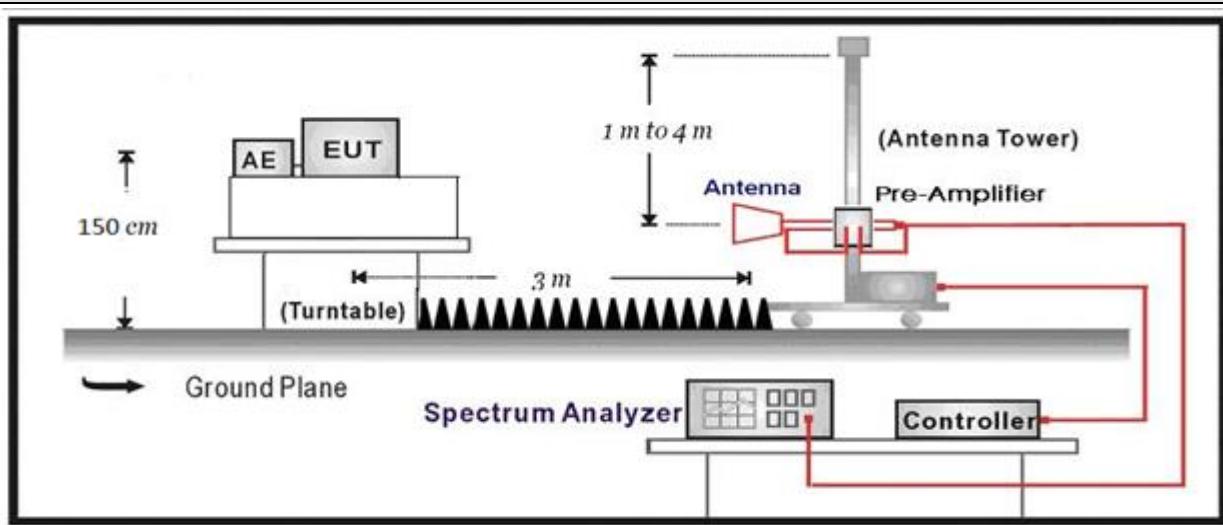
### 4.5.1 Limit

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

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

### 4.5.2 Test Setup

Above 1GHz Test Setup:

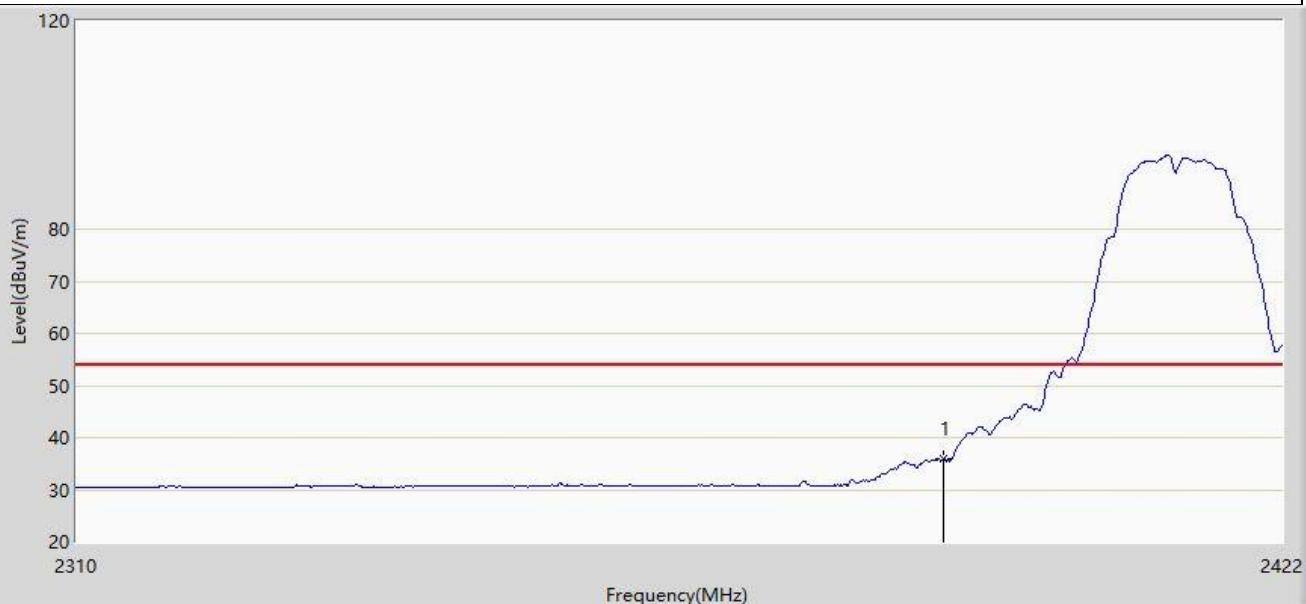


#### 4.5.3 Test Procedure

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

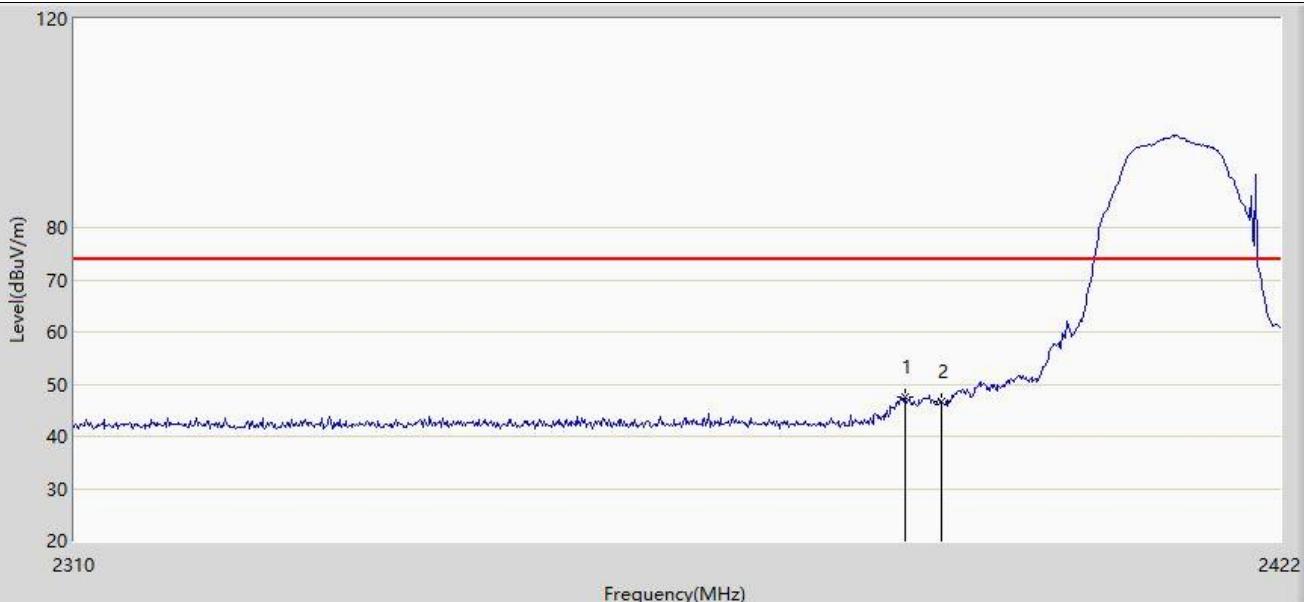
#### 4.5.4 Test Data

Profile: 2231093R	Page No.: 1
Engineer: Pengchengyang	
Site: AC5	Time: 2020/03/12 - 00:39
Limit: FCC-15.209	Margin: 0
Probe: FCC_ANT_1-18G	Polarity: Horizontal
EUT: BARCODE SCANNER	Power: DC3.7V
Note: Mode 1:Transmit at 2412MHz by 11b	



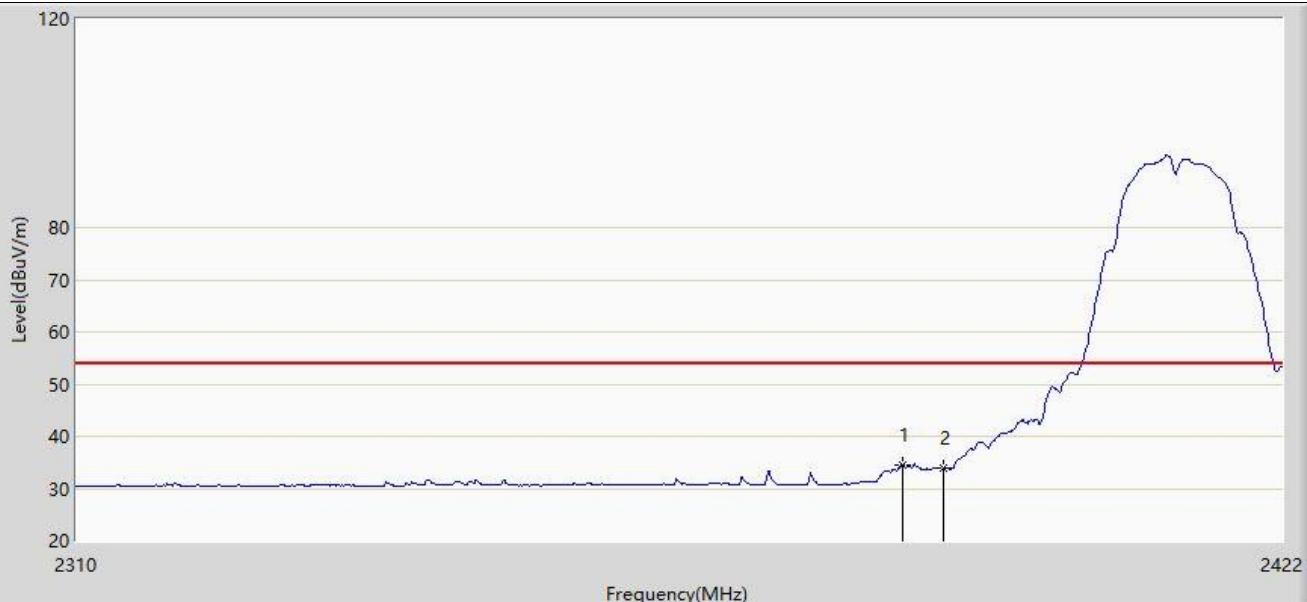
No	Mark	Frequency (MHz)	Measure Level (dBuV/m)	Reading Level (dBuV)	Over Limit (dB)	Limit (dBuV/m)	Factor (dB)	Type
1	*	2390.000	35.897	4.755	-18.103	54.000	31.141	AV

Profile: 2231093R	Page No.: 2
Engineer: Pengchengyang	
Site: AC5	Time: 2021/12/09 - 07:40
Limit: FCC-15.209	Margin: 0
Probe: FCC_ANT-1-18G	Polarity: Horizontal
EUT: BARCODE SCANNER	Power: DC3.7V
Note: Mode 1:Transmit at 2412MHz by 11b	



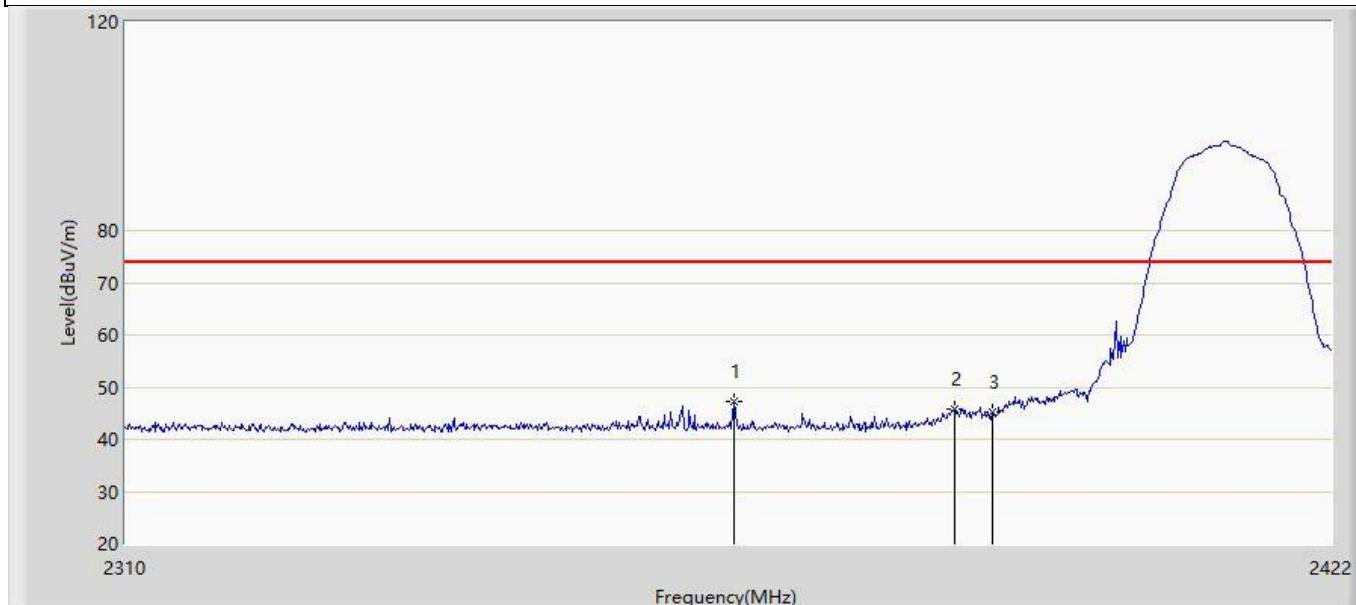
No	Mark	Frequency (MHz)	Measure Level (dBuV/m)	Reading Level (dBuV)	Over Limit (dB)	Limit (dBuV/m)	Factor (dB)	Type
1	*	2386.608	47.438	16.308	-26.562	74.000	31.129	PK
2		2390.000	46.527	15.385	-27.473	74.000	31.141	PK

Profile: 2231093R	Page No.: 3
Engineer: Pengchengyang	
Site: AC5	Time: 2021/12/09 - 07:41
Limit: FCC-15.209	Margin: 0
Probe: FCC_ANT-1-18G	Polarity: Vertical
EUT: BARCODE SCANNER	Power: DC3.7V
Note: Mode 1:Transmit at 2412MHz by 11b	



No	Mark	Frequency (MHz)	Measure Level (dBuV/m)	Reading Level (dBuV)	Over Limit (dB)	Limit (dBuV/m)	Factor (dB)	Type
1	*	2386.160	34.583	3.455	-19.417	54.000	31.128	AV
2		2390.000	33.853	2.711	-20.147	54.000	31.141	AV

Profile: 2231093R	Page No.: 4
Engineer: Pengchengyang	
Site: AC5	Time: 2021/12/09 - 07:42
Limit: FCC-15.209	Margin: 0
Probe: FCC_ANT-1-18G	Polarity: Vertical
EUT: BARCODE SCANNER	Power: DC3.7V
Note: Mode 1:Transmit at 2402MHz by 11b	



No	Mark	Frequency (MHz)	Measure Level (dBuV/m)	Reading Level (dBuV)	Over Limit (dB)	Limit (dBuV/m)	Factor (dB)	Type
1	*	2365.888	47.116	16.062	-26.884	74.000	31.054	PK
2		2386.496	45.803	14.674	-28.197	74.000	31.129	PK
3		2390.000	45.224	14.082	-28.776	74.000	31.141	PK

Profile: 2231093R	Page No.: 5
Engineer: Pengchengyang	
Site: AC5	Time: 2021/12/09 - 07:44
Limit: FCC-15.209	Margin: 0
Probe: FCC_ANT-1-18G	Polarity: Horizontal
EUT: BARCODE SCANNER	Power: DC3.7V
Note: Mode 1:Transmit at 2462MHz by 11b	



No	Mark	Frequency (MHz)	Measure Level (dBuV/m)	Reading Level (dBuV)	Over Limit (dB)	Limit (dBuV/m)	Factor (dB)	Type
1		2483.500	34.905	3.479	-19.095	54.000	31.426	AV
2	*	2488.048	36.799	5.360	-17.201	54.000	31.439	AV

Profile: 2231093R	Page No.: 6
Engineer: Pengchengyang	
Site: AC5	Time: 2021/12/09 - 07:49
Limit: FCC-15.209	Margin: 0
Probe: FCC_ANT-1-18G	Polarity: Horizontal
EUT: BARCODE SCANNER	Power: DC3.7V
Note: Mode 1:Transmit at 2462MHz by 11b	



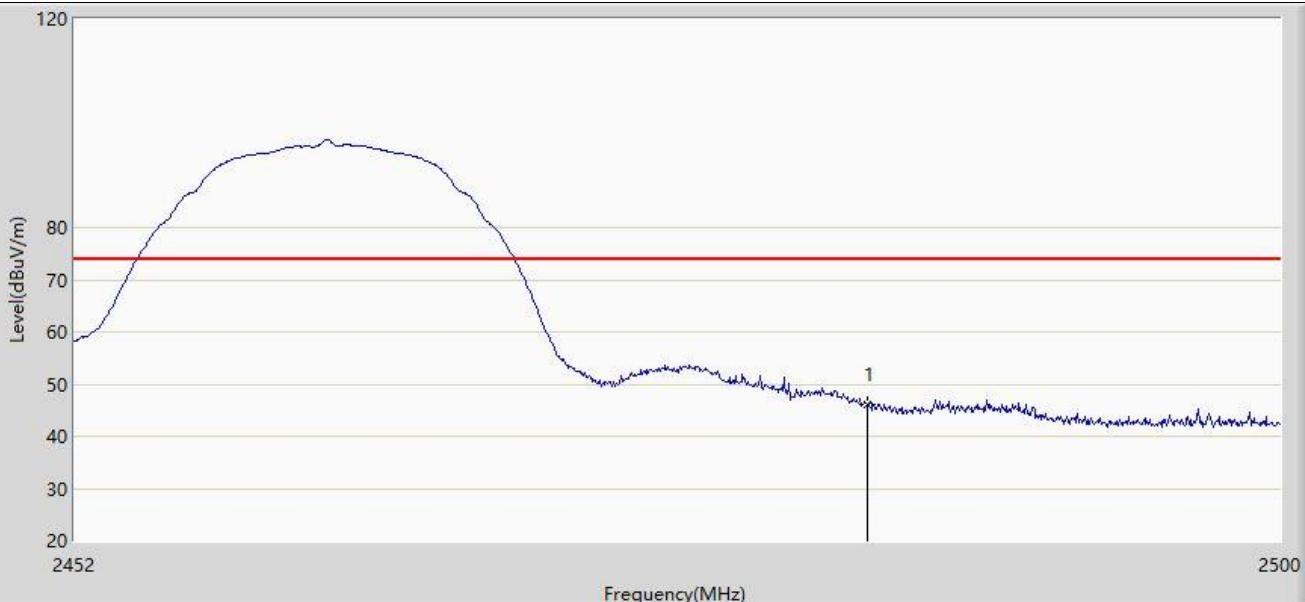
No	Mark	Frequency (MHz)	Measure Level (dBuV/m)	Reading Level (dBuV)	Over Limit (dB)	Limit (dBuV/m)	Factor (dB)	Type
1		2483.500	46.639	15.213	-27.361	74.000	31.426	PK
2	*	2487.568	47.934	16.496	-26.066	74.000	31.438	PK

Profile: 2231093R	Page No.: 7
Engineer: Pengchengyang	
Site: AC5	Time: 2021/12/09 - 07:52
Limit: FCC-15.209	Margin: 0
Probe: FCC_ANT-1-18G	Polarity: Vertical
EUT: BARCODE SCANNER	Power: DC3.7V
Note: Mode 1:Transmit at 2462MHz by 11b	



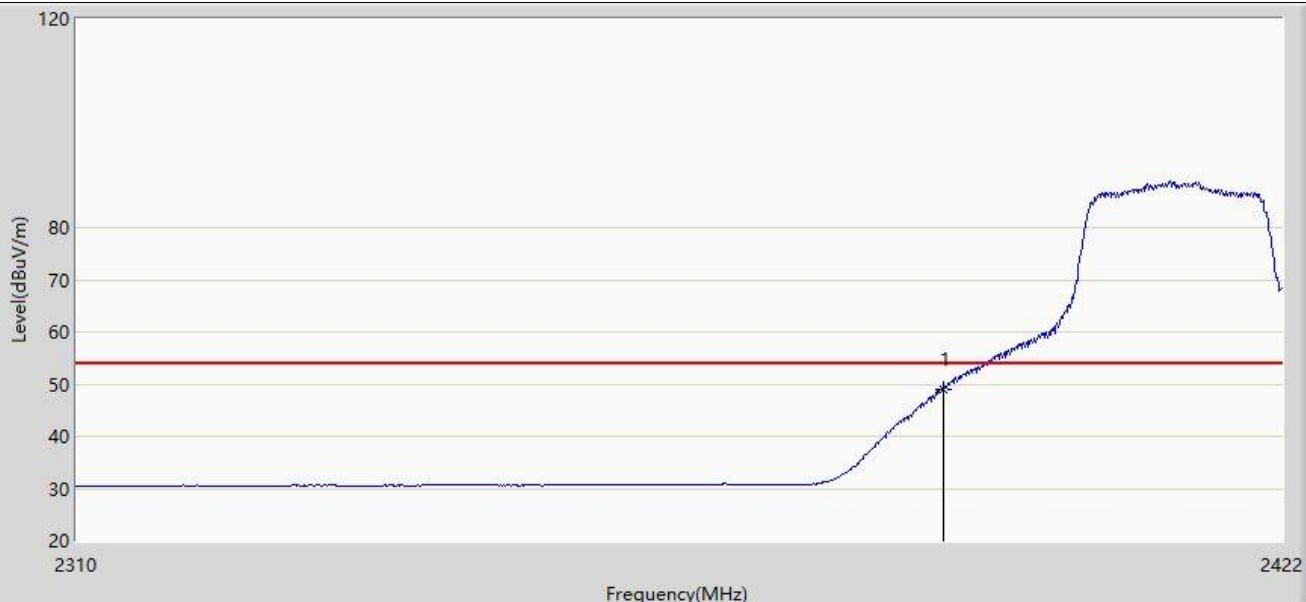
No	Mark	Frequency (MHz)	Measure Level (dBuV/m)	Reading Level (dBuV)	Over Limit (dB)	Limit (dBuV/m)	Factor (dB)	Type
1		2483.500	34.824	3.398	-19.176	54.000	31.426	AV
2	*	2487.664	35.391	3.953	-18.609	54.000	31.438	AV

Profile: 2231093R	Page No.: 8
Engineer: Pengchengyang	
Site: AC5	Time: 2021/12/09 - 07:53
Limit: FCC-15.209	Margin: 0
Probe: FCC_ANT-1-18G	Polarity: Vertical
EUT: BARCODE SCANNER	Power: DC3.7V
Note: Mode 1:Transmit at 2462MHz by 11b	



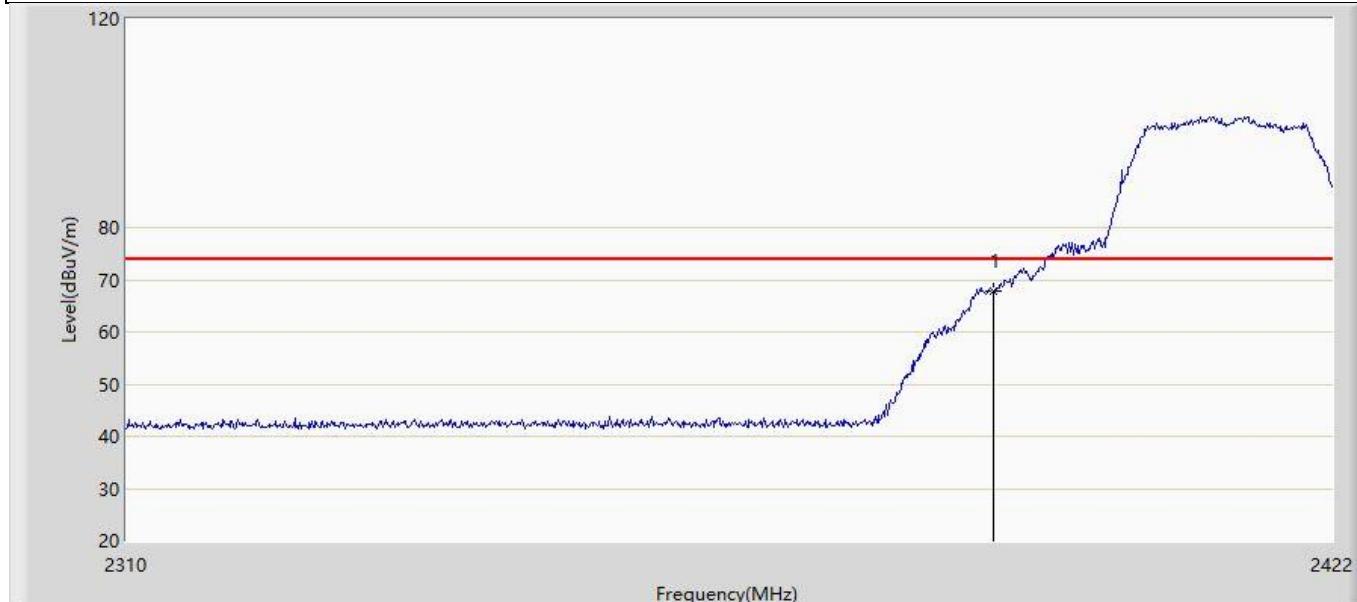
No	Mark	Frequency (MHz)	Measure Level (dBuV/m)	Reading Level (dBuV)	Over Limit (dB)	Limit (dBuV/m)	Factor (dB)	Type
1	*	2483.500	46.008	14.582	-27.992	74.000	31.426	PK

Profile: 2231093R	Page No.: 9
Engineer: Pengchengyang	
Site: AC5	Time: 2021/12/09 - 07:55
Limit: FCC-15.209	Margin: 0
Probe: FCC_ANT-1-18G	Polarity: Horizontal
EUT: BARCODE SCANNER	Power: DC3.7V
Note: Mode 2:Transmit at 2412MHz by 11g	



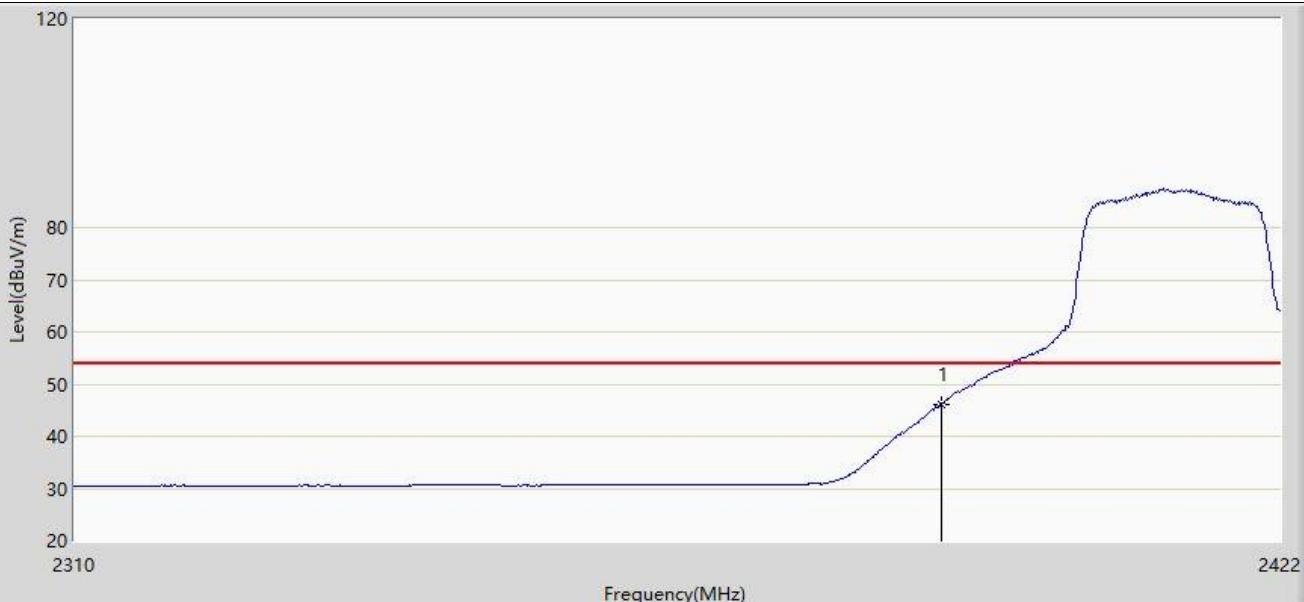
No	Mark	Frequency (MHz)	Measure Level (dBuV/m)	Reading Level (dBuV)	Over Limit (dB)	Limit (dBuV/m)	Factor (dB)	Type
1	*	2390.000	49.065	17.923	-4.935	54.000	31.141	AV

Profile: 2231093R	Page No.: 10
Engineer: Pengchengyang	
Site: AC5	Time: 2021/12/09 - 07:57
Limit: FCC-15.209	Margin: 0
Probe: FCC_ANT-1-18G	Polarity: Horizontal
EUT: BARCODE SCANNER	Power: DC3.7V
Note: Mode 2:Transmit at 2402MHz by 11g	



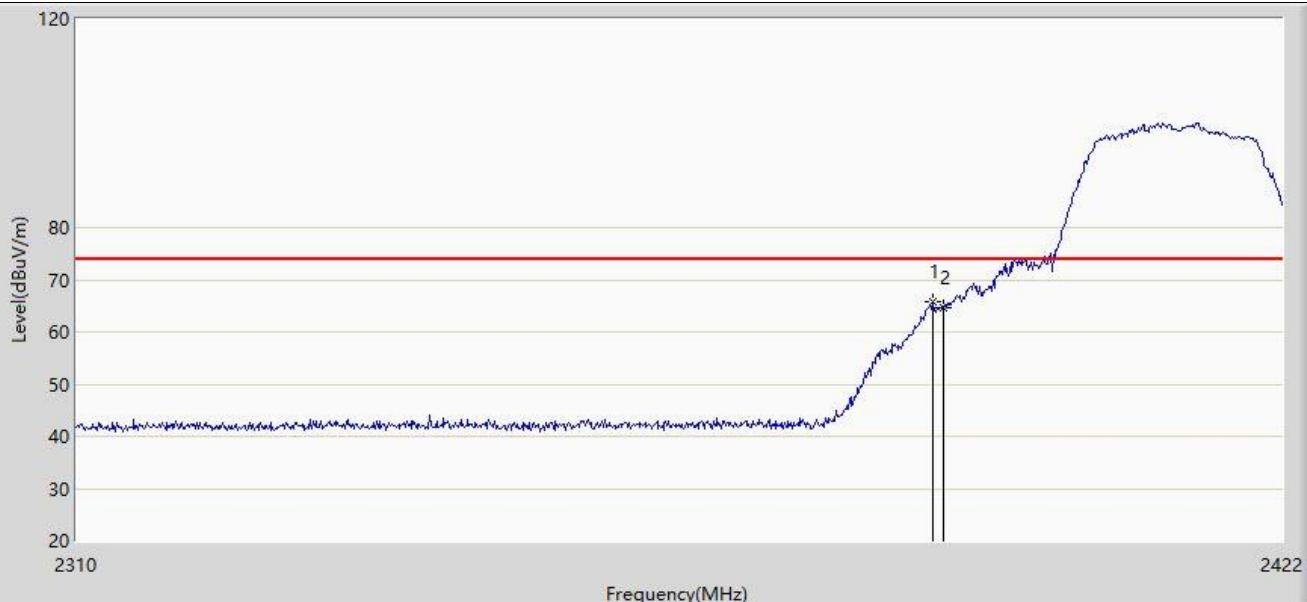
No	Mark	Frequency (MHz)	Measure Level (dBuV/m)	Reading Level (dBuV)	Over Limit (dB)	Limit (dBuV/m)	Factor (dB)	Type
1	*	2390.000	67.718	36.576	-6.282	74.000	31.141	PK

Profile: 2231093R	Page No.: 11
Engineer: Pengchengyang	
Site: AC5	Time: 2021/12/09 - 07:58
Limit: FCC-15.209	Margin: 0
Probe: FCC_ANT-1-18G	Polarity: Vertical
EUT: BARCODE SCANNER	Power: DC3.7V
Note: Mode 2:Transmit at 2402MHz by 11g	



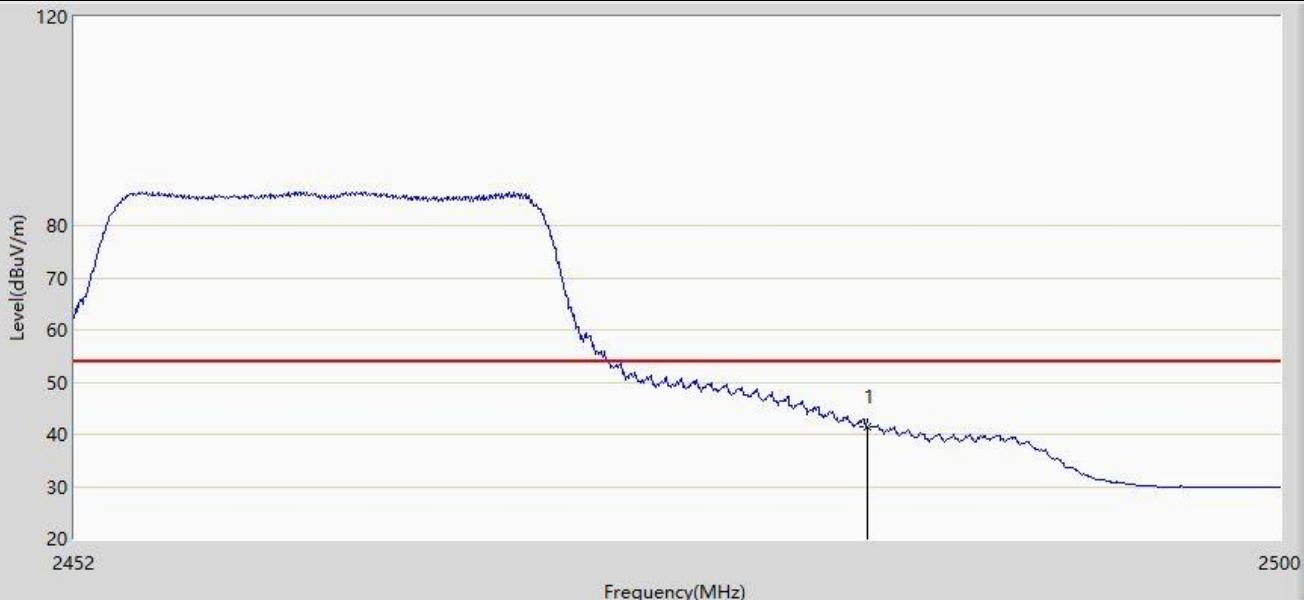
No	Mark	Frequency (MHz)	Measure Level (dBuV/m)	Reading Level (dBuV)	Over Limit (dB)	Limit (dBuV/m)	Factor (dB)	Type
1	*	2390.000	46.121	14.979	-7.879	54.000	31.141	AV

Profile: 2231093R	Page No.: 12
Engineer: Pengchengyang	
Site: AC5	Time: 2021/12/09 - 08:00
Limit: FCC-15.209	Margin: 0
Probe: FCC_ANT-1-18G	Polarity: Vertical
EUT: BARCODE SCANNER	Power: DC3.7V
Note: Mode 2:Transmit at 2402MHz by 11g	



No	Mark	Frequency (MHz)	Measure Level (dBuV/m)	Reading Level (dBuV)	Over Limit (dB)	Limit (dBuV/m)	Factor (dB)	Type
1	*	2389.072	65.775	34.637	-8.225	74.000	31.139	PK
2		2390.000	64.765	33.623	-9.235	74.000	31.141	PK

Profile: 2231093R	Page No.: 13
Engineer: Pengchengyang	
Site: AC5	Time: 2021/12/09 - 08:02
Limit: FCC-15.209	Margin: 0
Probe: FCC_ANT-1-18G	Polarity: Horizontal
EUT: BARCODE SCANNER	Power: DC3.7V
Note: Mode 2:Transmit at 2462MHz by 11g	



No	Mark	Frequency (MHz)	Measure Level (dBuV/m)	Reading Level (dBuV)	Over Limit (dB)	Limit (dBuV/m)	Factor (dB)	Type
1	*	2483.500	41.418	9.992	-12.582	54.000	31.426	AV

Profile: 2231093R	Page No.: 14
Engineer: Pengchengyang	
Site: AC5	Time: 2021/12/09 - 08:03
Limit: FCC-15.209	Margin: 0
Probe: FCC_ANT-1-18G	Polarity: Horizontal
EUT: BARCODE SCANNER	Power: DC3.7V
Note: Mode 2:Transmit at 2462MHz by 11g	



No	Mark	Frequency (MHz)	Measure Level (dBuV/m)	Reading Level (dBuV)	Over Limit (dB)	Limit (dBuV/m)	Factor (dB)	Type
1	*	2483.500	64.463	33.037	-9.537	74.000	31.426	PK
2		2489.392	61.443	30.000	-12.557	74.000	31.443	PK

Profile: 2231093R	Page No.: 15
Engineer: Pengchengyang	
Site: AC5	Time: 2021/12/09 - 08:05
Limit: FCC-15.209	Margin: 0
Probe: FCC_ANT-1-18G	Polarity: Vertical
EUT: BARCODE SCANNER	Power: DC3.7V
Note: Mode 2:Transmit at 2462MHz by 11g	



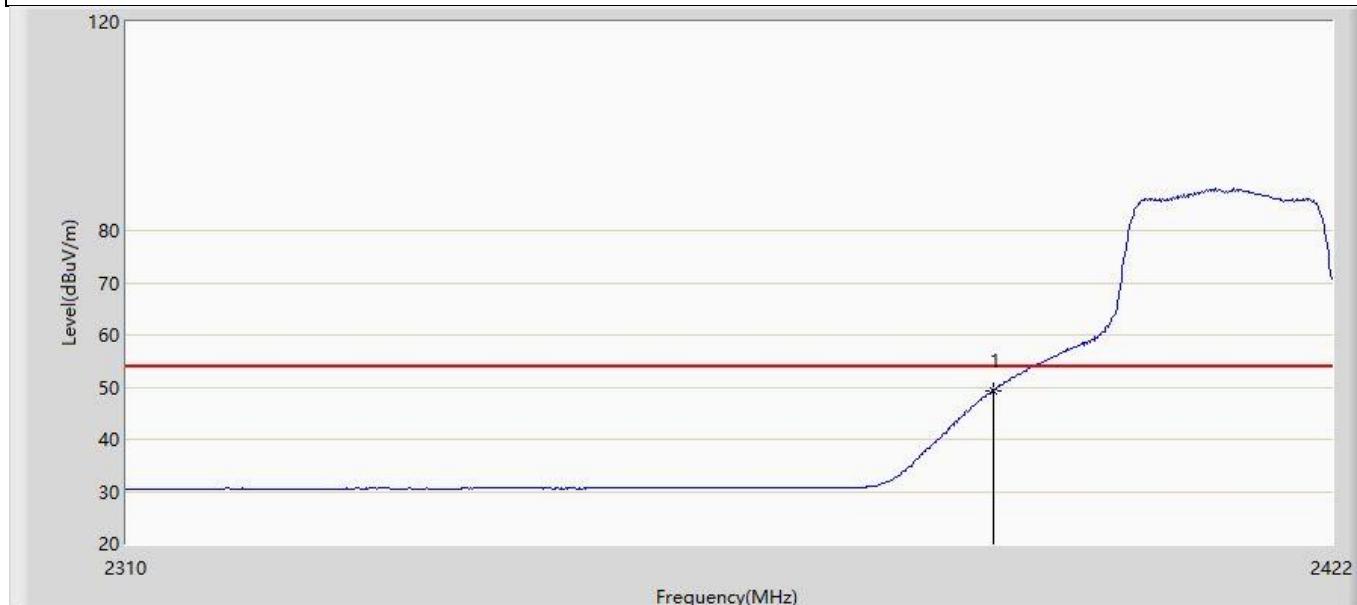
No	Mark	Frequency (MHz)	Measure Level (dBuV/m)	Reading Level (dBuV)	Over Limit (dB)	Limit (dBuV/m)	Factor (dB)	Type
1	*	2483.500	38.956	7.530	-15.044	54.000	31.426	AV

Profile: 2231093R	Page No.: 16
Engineer: Pengchengyang	
Site: AC5	Time: 2021/12/09 - 08:06
Limit: FCC-15.209	Margin: 0
Probe: FCC_ANT-1-18G	Polarity: Vertical
EUT: BARCODE SCANNER	Power: DC3.7V
Note: Mode 2:Transmit at 2462MHz by 11g	



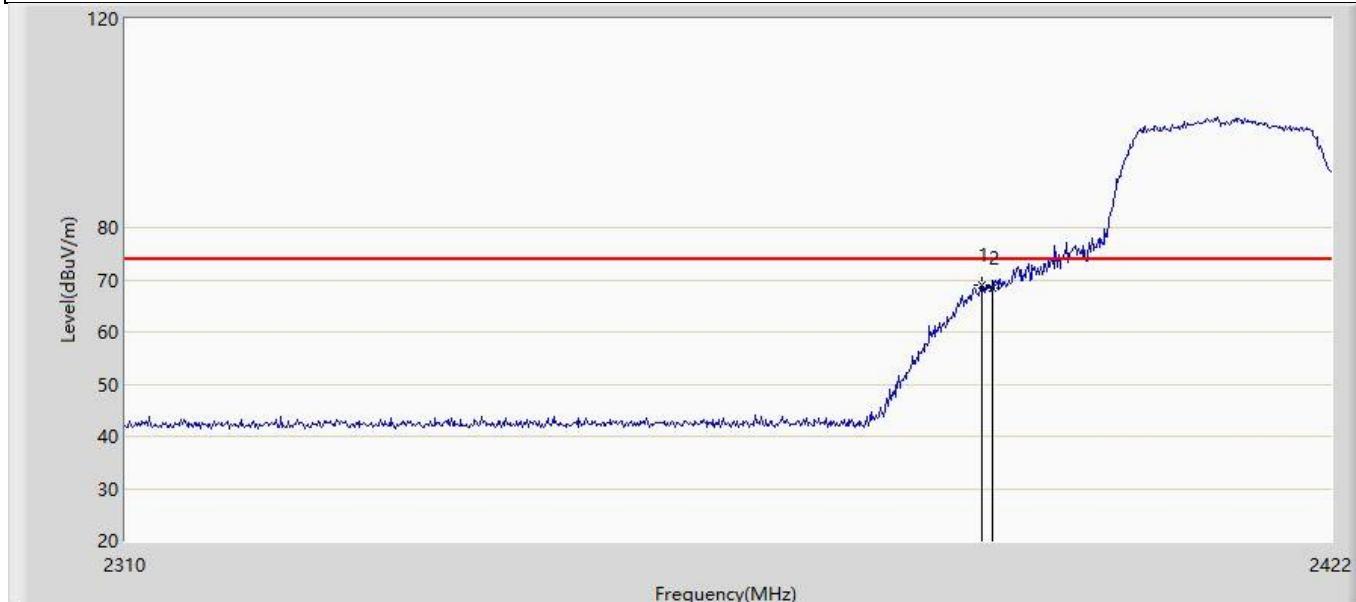
No	Mark	Frequency (MHz)	Measure Level (dBuV/m)	Reading Level (dBuV)	Over Limit (dB)	Limit (dBuV/m)	Factor (dB)	Type
1		2483.500	61.505	30.079	-12.495	74.000	31.426	PK
2	*	2484.016	62.393	30.966	-11.607	74.000	31.428	PK

Profile: 2231093R	Page No.: 17
Engineer: Pengchengyang	
Site: AC5	Time: 2021/12/09 - 08:07
Limit: FCC-15.209	Margin: 0
Probe: FCC_ANT-1-18G	Polarity: Horizontal
EUT: BARCODE SCANNER	Power: DC3.7V
Note: Mode 3:Transmit at 2412MHz by 11n20	



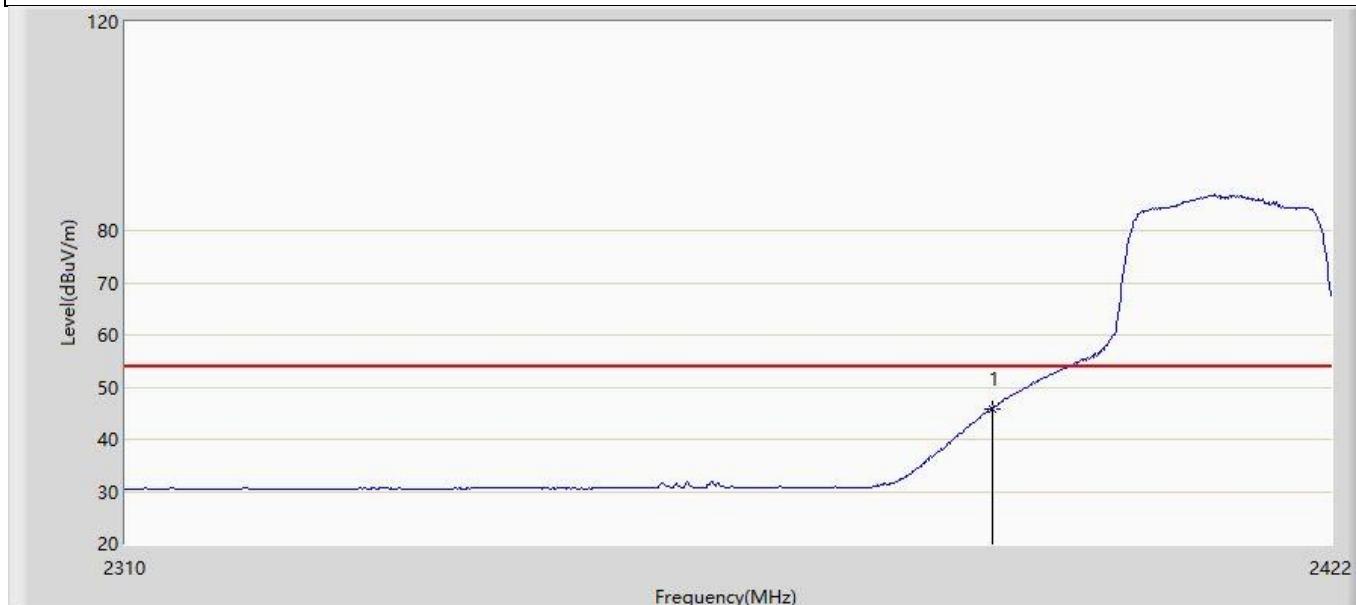
No	Mark	Frequency (MHz)	Measure Level (dBuV/m)	Reading Level (dBuV)	Over Limit (dB)	Limit (dBuV/m)	Factor (dB)	Type
1	*	2390.000	49.404	18.262	-4.596	54.000	31.141	AV

Profile: 2231093R	Page No.: 18
Engineer: Pengchengyang	
Site: AC5	Time: 2021/12/09 - 08:09
Limit: FCC-15.209	Margin: 0
Probe: FCC_ANT-1-18G	Polarity: Horizontal
EUT: BARCODE SCANNER	Power: DC3.7V
Note: Mode 3:Transmit at 2412MHz by 11n20	



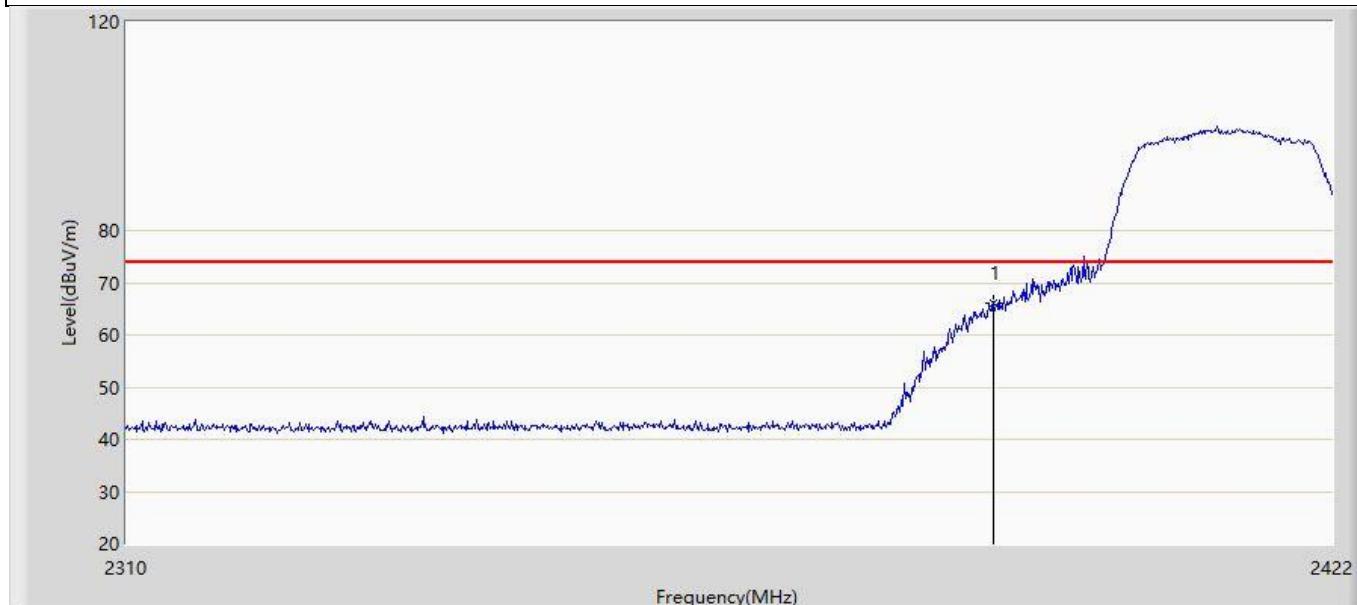
No	Mark	Frequency (MHz)	Measure Level (dBuV/m)	Reading Level (dBuV)	Over Limit (dB)	Limit (dBuV/m)	Factor (dB)	Type
1	*	2389.072	68.890	37.752	-5.110	74.000	31.139	PK
2		2390.000	68.439	37.297	-5.561	74.000	31.141	PK

Profile: 2231093R	Page No.: 19
Engineer: Pengchengyang	
Site: AC5	Time: 2021/12/09 - 08:11
Limit: FCC-15.209	Margin: 0
Probe: FCC_ANT-1-18G	Polarity: Vertical
EUT: BARCODE SCANNER	Power: DC3.7V
Note: Mode 3:Transmit at 2412MHz by 11n20	



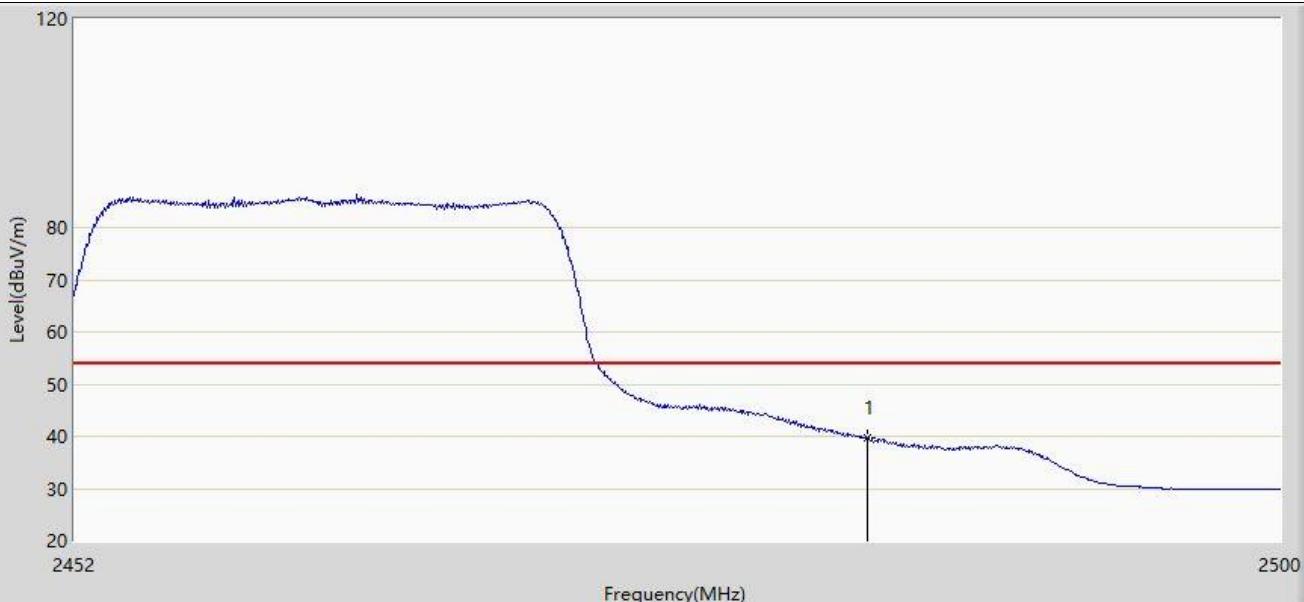
No	Mark	Frequency (MHz)	Measure Level (dBuV/m)	Reading Level (dBuV)	Over Limit (dB)	Limit (dBuV/m)	Factor (dB)	Type
1	*	2390.000	45.908	14.766	-8.092	54.000	31.141	AV

Profile: 2231093R	Page No.: 20
Engineer: Pengchengyang	
Site: AC5	Time: 2021/12/09 - 08:12
Limit: FCC-15.209	Margin: 0
Probe: FCC_ANT-1-18G	Polarity: Vertical
EUT: BARCODE SCANNER	Power: DC3.7V
Note: Mode 3:Transmit at 2412MHz by 11n20	



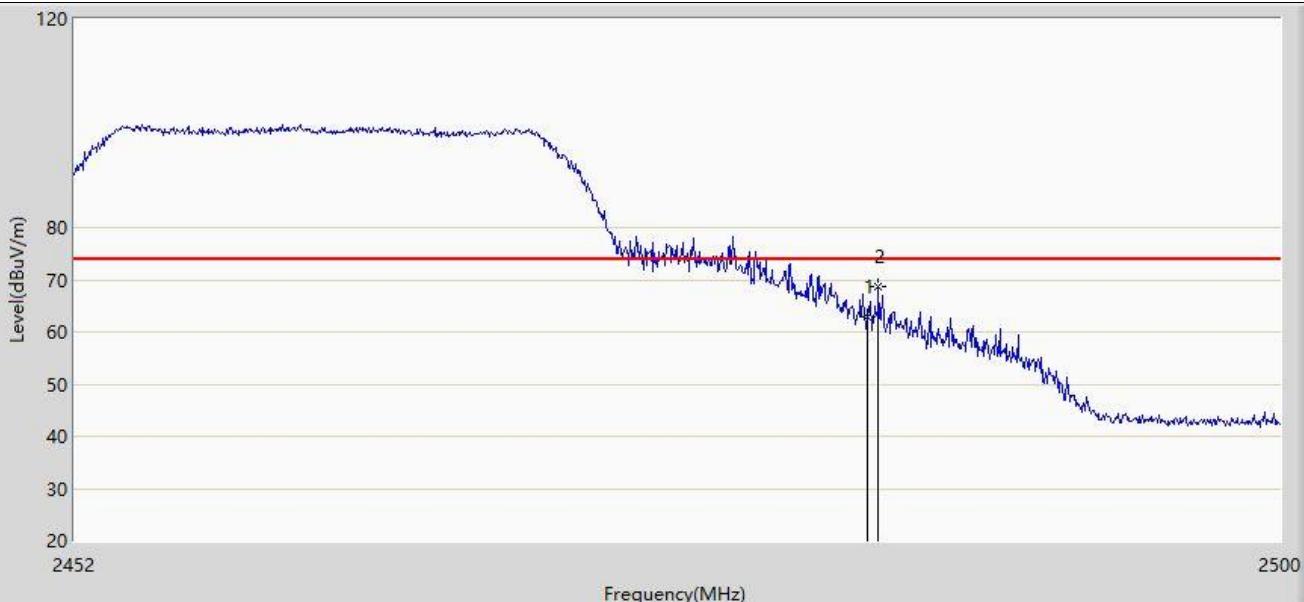
No	Mark	Frequency (MHz)	Measure Level (dBuV/m)	Reading Level (dBuV)	Over Limit (dB)	Limit (dBuV/m)	Factor (dB)	Type
1	*	2390.000	66.101	34.959	-7.899	74.000	31.141	PK

Profile: 2231093R	Page No.: 21
Engineer: Pengchengyang	
Site: AC5	Time: 2021/12/09 - 08:13
Limit: FCC-15.209	Margin: 0
Probe: FCC_ANT-1-18G	Polarity: Horizontal
EUT: BARCODE SCANNER	Power: DC3.7V
Note: Mode 3:Transmit at 2462MHz by 11n20	



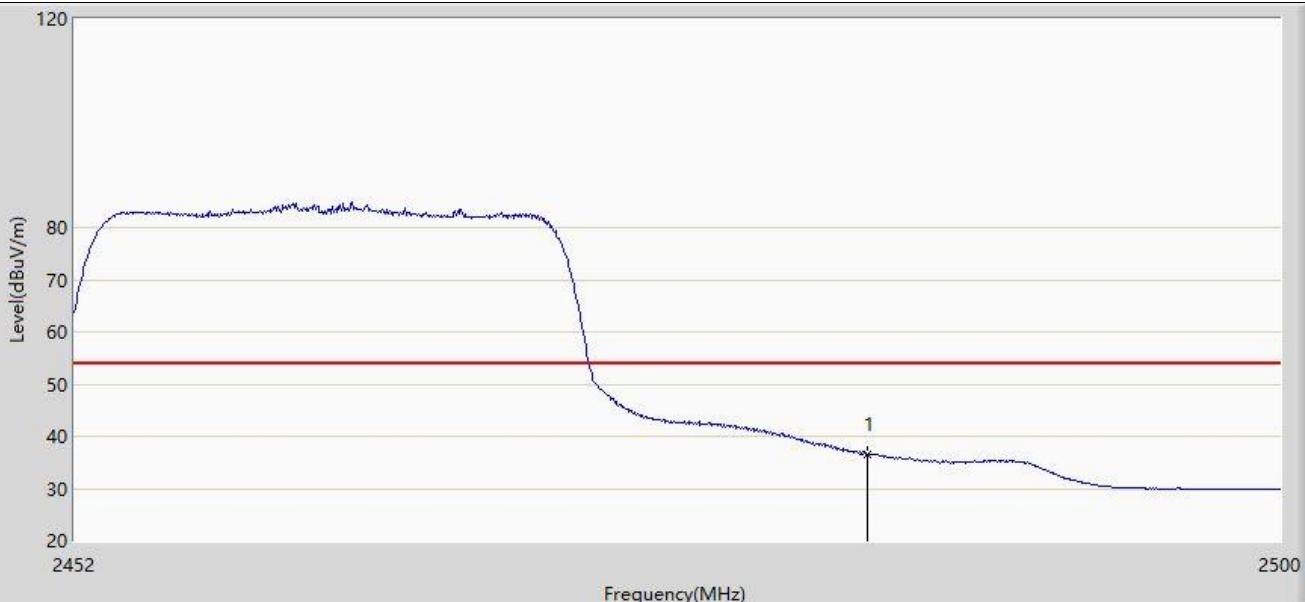
No	Mark	Frequency (MHz)	Measure Level (dBuV/m)	Reading Level (dBuV)	Over Limit (dB)	Limit (dBuV/m)	Factor (dB)	Type
1	*	2483.500	39.604	8.178	-14.396	54.000	31.426	AV

Profile: 2231093R	Page No.: 22
Engineer: Pengchengyang	
Site: AC5	Time: 2021/12/09 - 08:15
Limit: FCC-15.209	Margin: 0
Probe: FCC_ANT-1-18G	Polarity: Horizontal
EUT: BARCODE SCANNER	Power: DC3.7V
Note: Mode 3:Transmit at 2462MHz by 11n20	



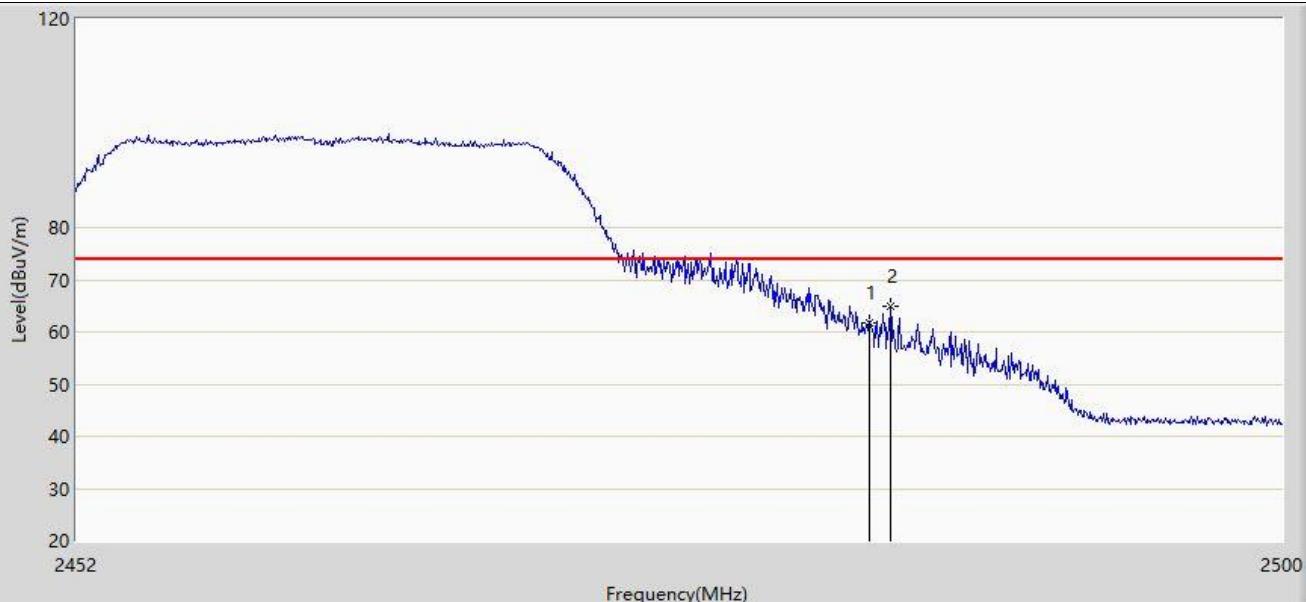
No	Mark	Frequency (MHz)	Measure Level (dBuV/m)	Reading Level (dBuV)	Over Limit (dB)	Limit (dBuV/m)	Factor (dB)	Type
1		2483.500	62.927	31.501	-11.073	74.000	31.426	PK
2	*	2483.920	68.665	37.238	-5.335	74.000	31.428	PK

Profile: 2231093R	Page No.: 23
Engineer: Pengchengyang	
Site: AC5	Time: 2021/12/09 - 08:18
Limit: FCC-15.209	Margin: 0
Probe: FCC_ANT-1-18G	Polarity: Vertical
EUT: BARCODE SCANNER	Power: DC3.7V
Note: Mode 3:Transmit at 2462MHz by 11n20	



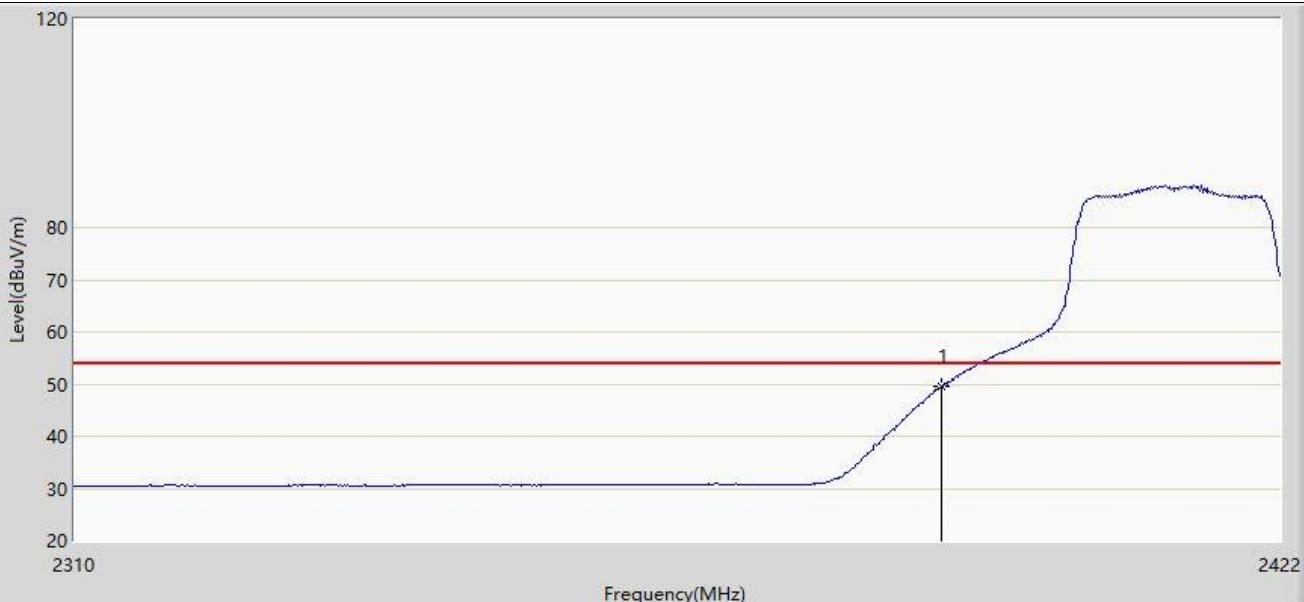
No	Mark	Frequency (MHz)	Measure Level (dBuV/m)	Reading Level (dBuV)	Over Limit (dB)	Limit (dBuV/m)	Factor (dB)	Type
1	*	2483.500	36.524	5.098	-17.476	54.000	31.426	AV

Profile: 2231093R	Page No.: 24
Engineer: Pengchengyang	
Site: AC5	Time: 2021/12/09 - 08:19
Limit: FCC-15.209	Margin: 0
Probe: FCC_ANT-1-18G	Polarity: Vertical
EUT: BARCODE SCANNER	Power: DC3.7V
Note: Mode 3:Transmit at 2462MHz by 11n20	



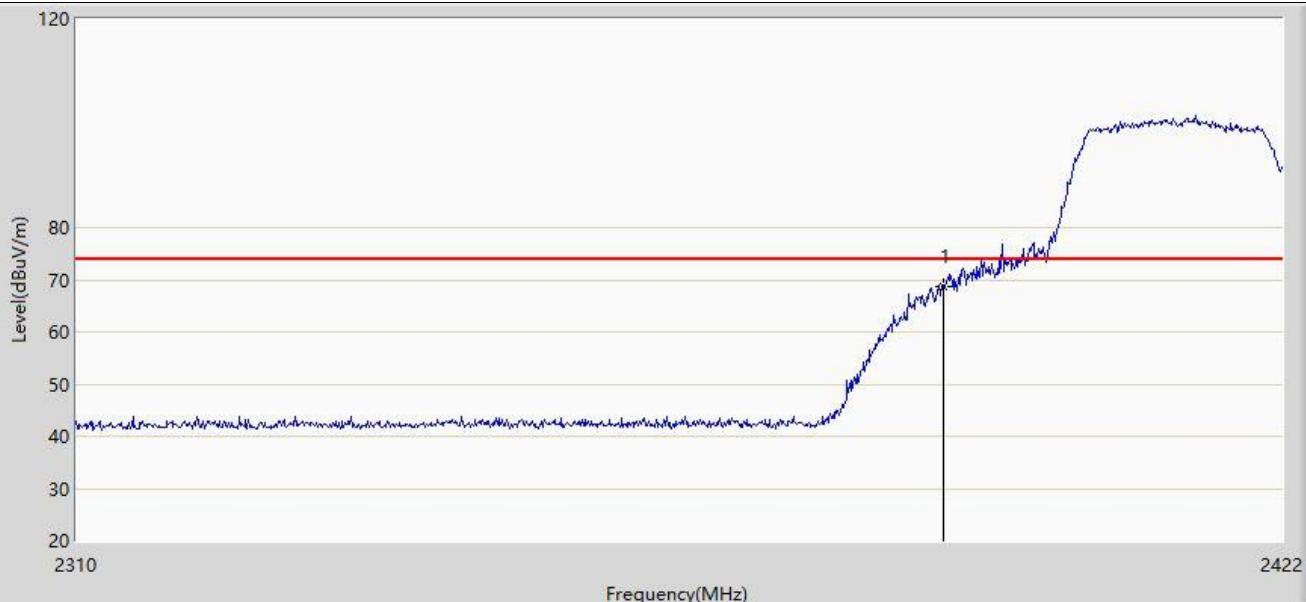
No	Mark	Frequency (MHz)	Measure Level (dBuV/m)	Reading Level (dBuV)	Over Limit (dB)	Limit (dBuV/m)	Factor (dB)	Type
1		2483.500	61.716	30.290	-12.284	74.000	31.426	PK
2	*	2484.304	64.826	33.398	-9.174	74.000	31.428	PK

Profile: 2231093R	Page No.: 25
Engineer: Pengchengyang	
Site: AC5	Time: 2022/03/31 - 23:32
Limit: FCC-15.209	Margin: 0
Probe: FCC_ANT-1-18G	Polarity: Horizontal
EUT: BARCODE SCANNER	Power: DC3.7V
Note: Mode 4:Transmit at 2412MHz by 11ac20	



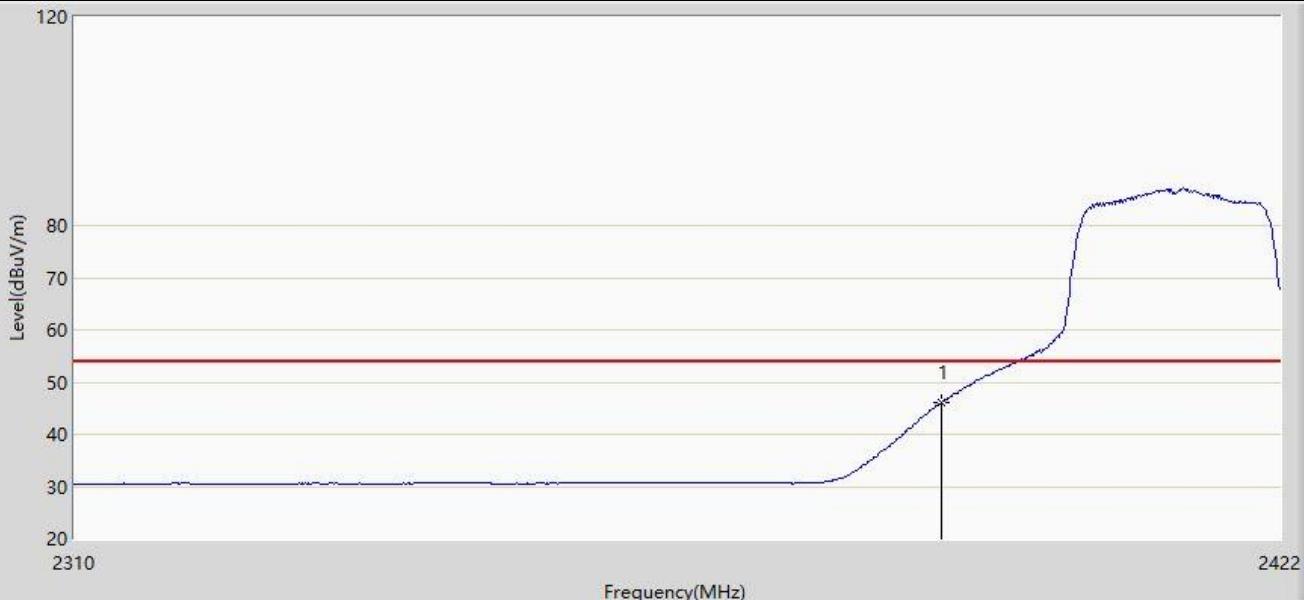
No	Mark	Frequency (MHz)	Measure Level (dBuV/m)	Reading Level (dBuV)	Over Limit (dB)	Limit (dBuV/m)	Factor (dB)	Type
1	*	2390.000	49.502	18.360	-4.498	54.000	31.141	AV

Profile: 2231093R	Page No.: 26
Engineer: Pengchengyang	
Site: AC5	Time: 2022/04/01 - 00:02
Limit: FCC-15.209	Margin: 0
Probe: FCC_ANT-1-18G	Polarity: Horizontal
EUT: BARCODE SCANNER	Power: DC3.7V
Note: Mode 4:Transmit at 2412MHz by 11ac20	



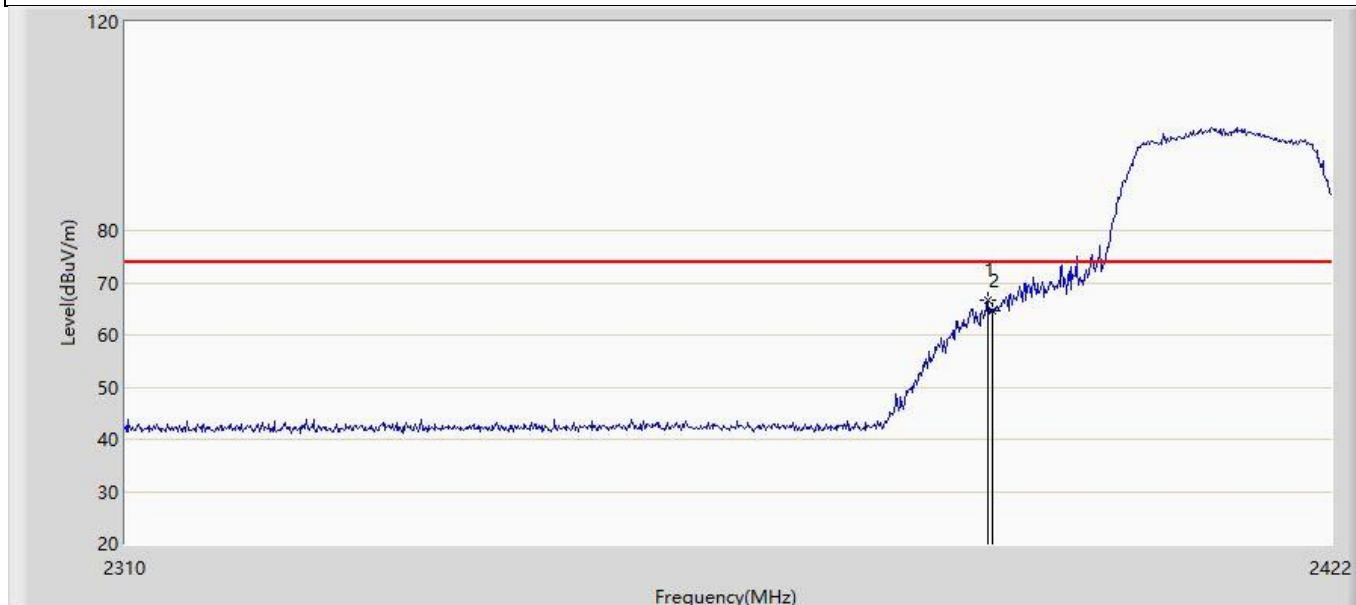
No	Mark	Frequency (MHz)	Measure Level (dBuV/m)	Reading Level (dBuV)	Over Limit (dB)	Limit (dBuV/m)	Factor (dB)	Type
1	*	2390.000	68.735	37.593	-5.265	74.000	31.141	PK

Profile: 2231093R	Page No.: 27
Engineer: Pengchengyang	
Site: AC5	Time: 2022/04/01 - 00:03
Limit: FCC-15.209	Margin: 0
Probe: FCC_ANT-1-18G	Polarity: Vertical
EUT: BARCODE SCANNER	Power: DC3.7V
Note: Mode 4:Transmit at 2412MHz by 11ac20	



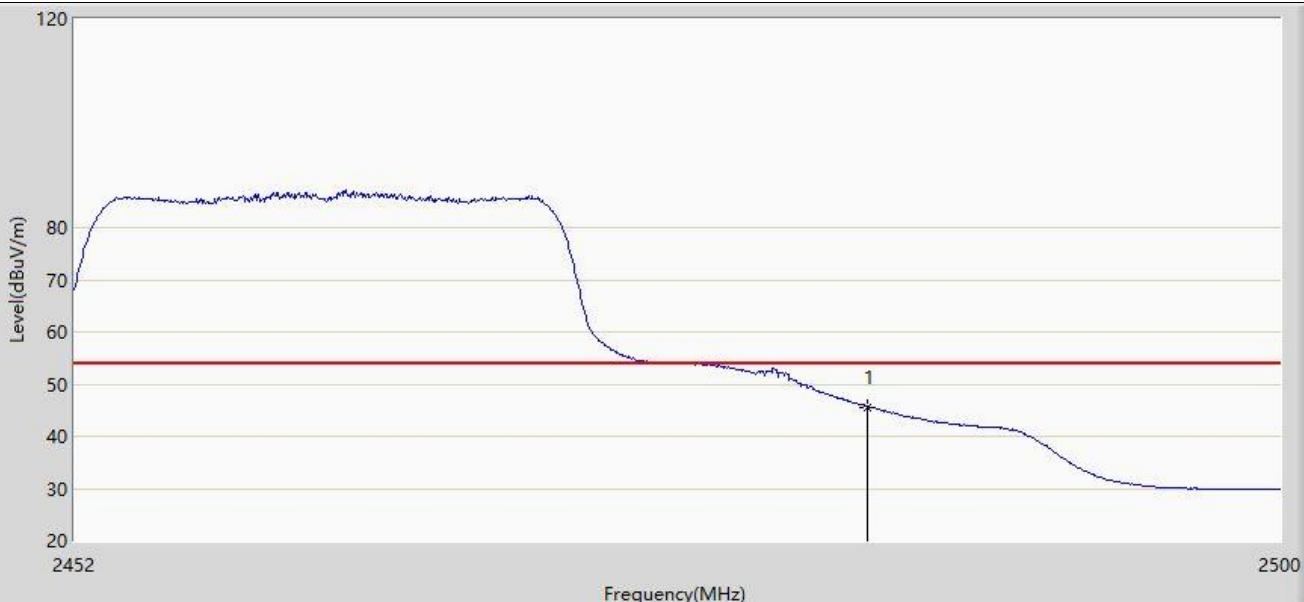
No	Mark	Frequency (MHz)	Measure Level (dBuV/m)	Reading Level (dBuV)	Over Limit (dB)	Limit (dBuV/m)	Factor (dB)	Type
1	*	2390.000	46.044	14.902	-7.956	54.000	31.141	AV

Profile: 2231093R	Page No.: 28
Engineer: Pengchengyang	
Site: AC5	Time: 2022/04/01 - 00:03
Limit: FCC-15.209	Margin: 0
Probe: FCC_ANT-1-18G	Polarity: Vertical
EUT: BARCODE SCANNER	Power: DC3.7V
Note: Mode 4:Transmit at 2412MHz by 11ac20	



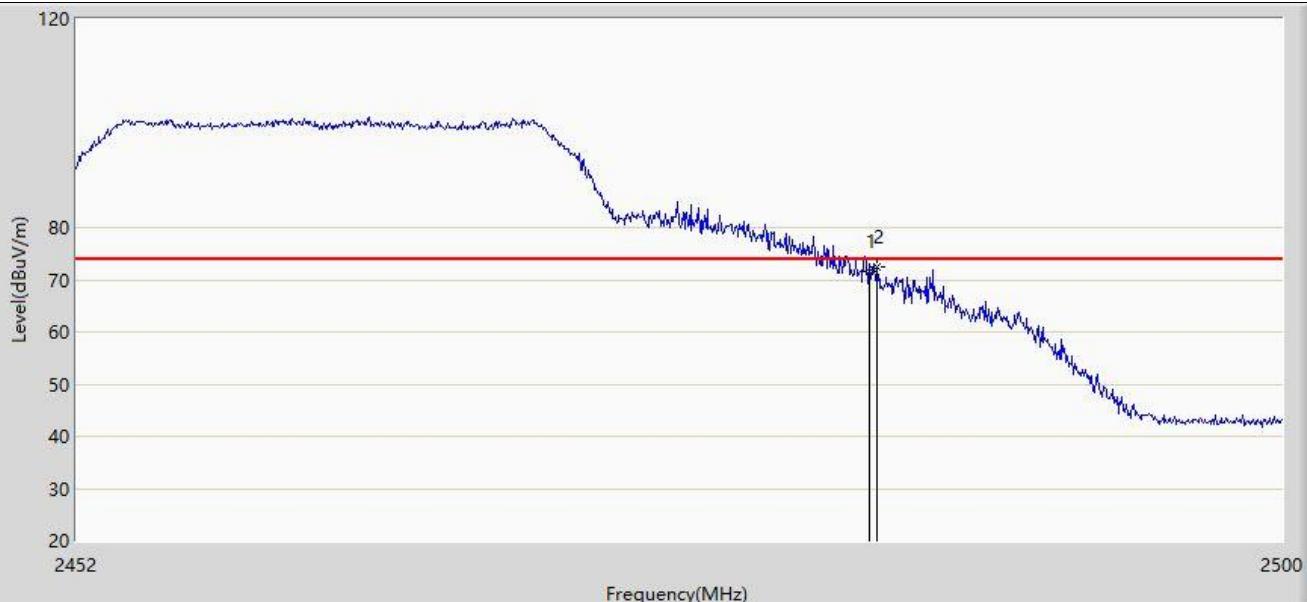
No	Mark	Frequency (MHz)	Measure Level (dBuV/m)	Reading Level (dBuV)	Over Limit (dB)	Limit (dBuV/m)	Factor (dB)	Type
1	*	2389.632	66.682	35.542	-7.318	74.000	31.140	PK
2		2390.000	64.528	33.386	-9.472	74.000	31.141	PK

Profile: 2231093R	Page No.: 29
Engineer: Pengchengyang	
Site: AC5	Time: 2022/04/01 - 00:06
Limit: FCC-15.209	Margin: 0
Probe: FCC_ANT-1-18G	Polarity: Horizontal
EUT: BARCODE SCANNER	Power: DC3.7V
Note: Mode 4:Transmit at 2462MHz by 11ac20	



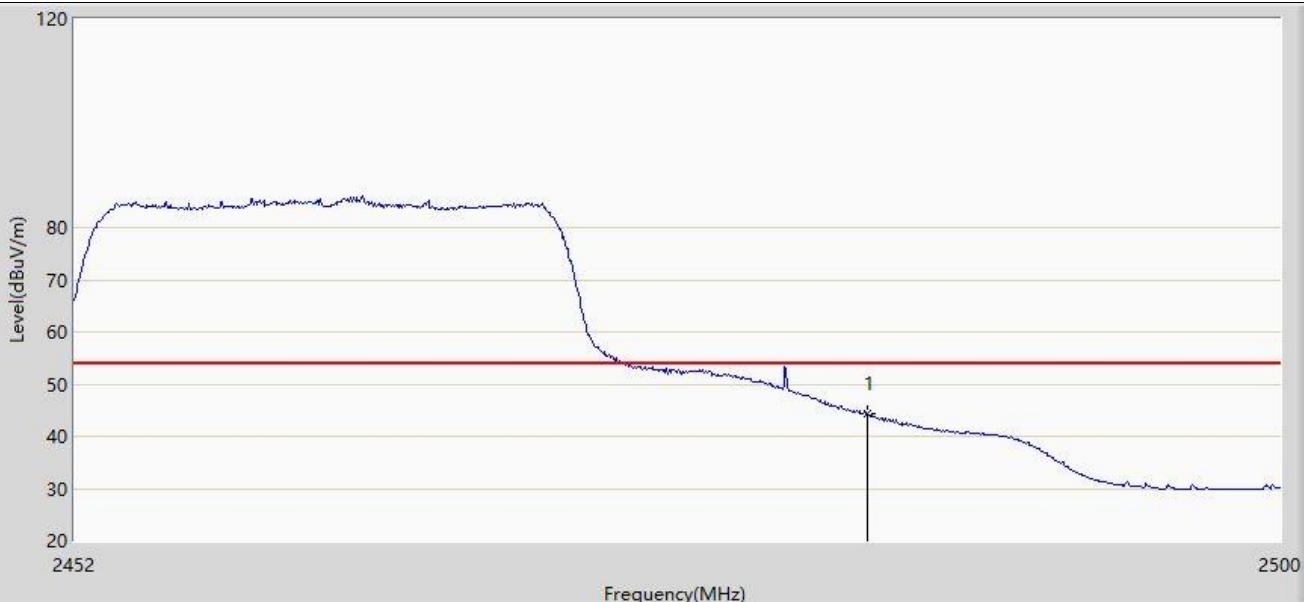
No	Mark	Frequency (MHz)	Measure Level (dBuV/m)	Reading Level (dBuV)	Over Limit (dB)	Limit (dBuV/m)	Factor (dB)	Type
1	*	2483.500	45.647	14.221	-8.353	54.000	31.426	AV

Profile: 2231093R	Page No.: 30
Engineer: Pengchengyang	
Site: AC5	Time: 2022/04/01 - 00:06
Limit: FCC-15.209	Margin: 0
Probe: FCC_ANT-1-18G	Polarity: Horizontal
EUT: BARCODE SCANNER	Power: DC3.7V
Note: Mode 4:Transmit at 2462MHz by 11ac20	



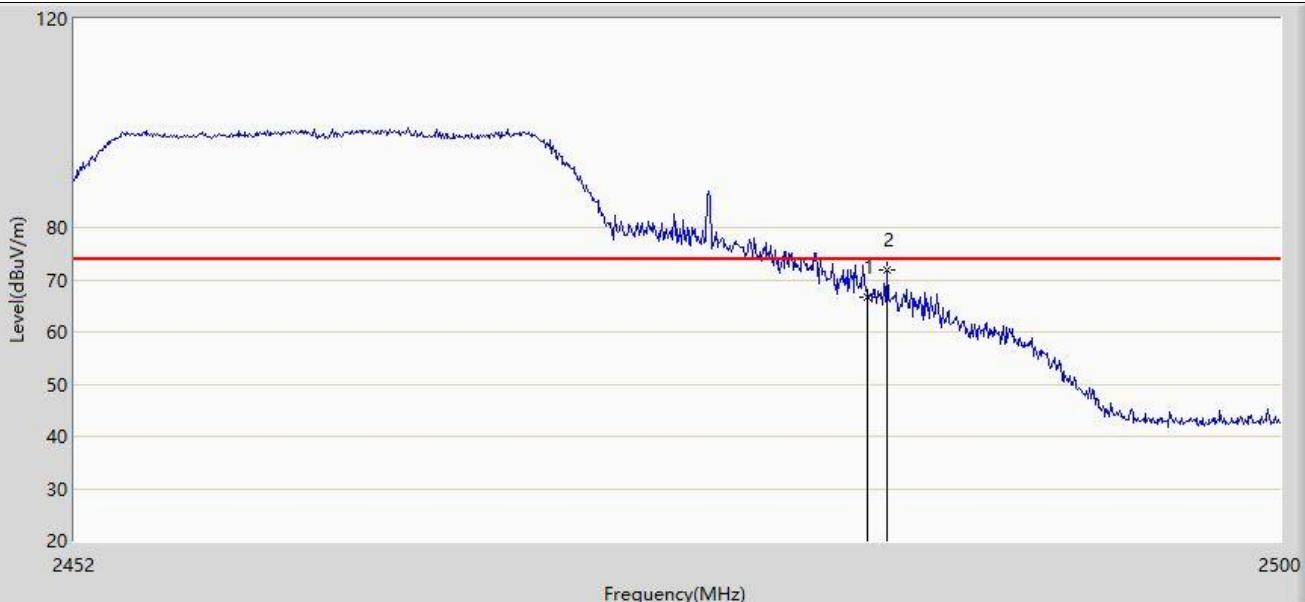
No	Mark	Frequency (MHz)	Measure Level (dBuV/m)	Reading Level (dBuV)	Over Limit (dB)	Limit (dBuV/m)	Factor (dB)	Type
1		2483.500	71.675	40.249	-2.325	74.000	31.426	PK
2	*	2483.776	72.398	40.971	-1.602	74.000	31.426	PK

Profile: 2231093R	Page No.: 31
Engineer: Pengchengyang	
Site: AC5	Time: 2022/04/01 - 00:07
Limit: FCC-15.209	Margin: 0
Probe: FCC_ANT-1-18G	Polarity: Vertical
EUT: BARCODE SCANNER	Power: DC3.7V
Note: Mode 4:Transmit at 2462MHz by 11ac20	



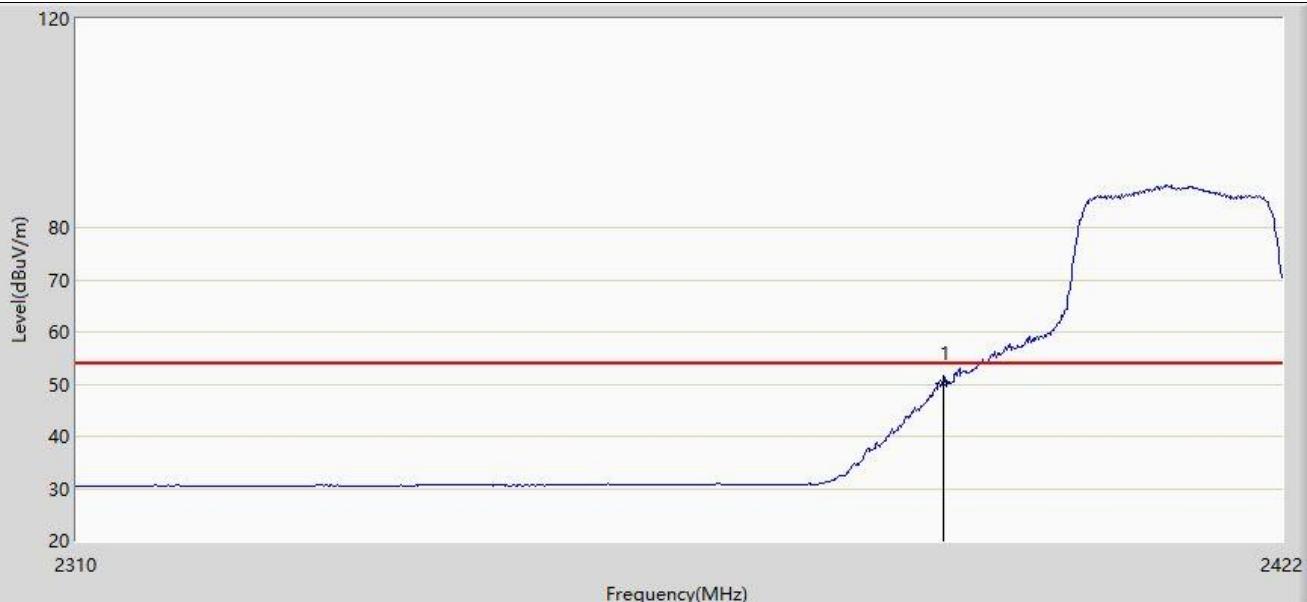
No	Mark	Frequency (MHz)	Measure Level (dBuV/m)	Reading Level (dBuV)	Over Limit (dB)	Limit (dBuV/m)	Factor (dB)	Type
1	*	2483.500	44.270	12.844	-9.730	54.000	31.426	AV

Profile: 2231093R	Page No.: 32
Engineer: Pengchengyang	
Site: AC5	Time: 2022/04/01 - 00:07
Limit: FCC-15.209	Margin: 0
Probe: FCC_ANT-1-18G	Polarity: Vertical
EUT: BARCODE SCANNER	Power: DC3.7V
Note: Mode 4:Transmit at 2462MHz by 11ac20	



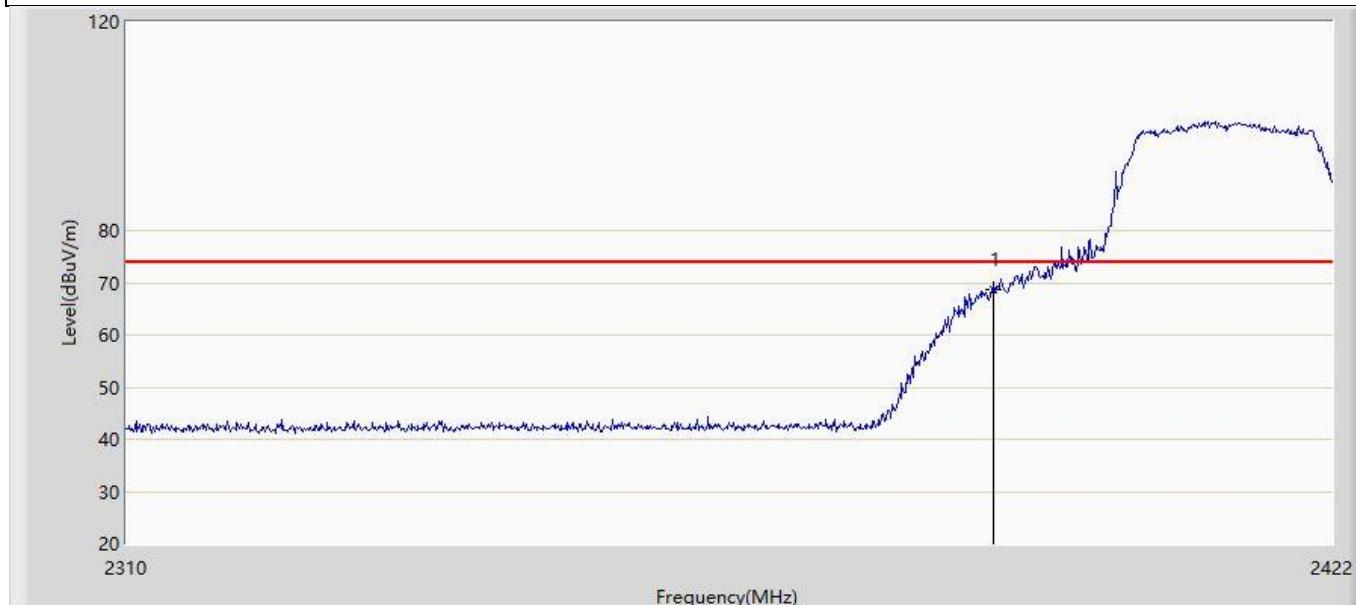
No	Mark	Frequency (MHz)	Measure Level (dBuV/m)	Reading Level (dBuV)	Over Limit (dB)	Limit (dBuV/m)	Factor (dB)	Type
1		2483.500	66.524	35.098	-7.476	74.000	31.426	PK
2	*	2484.256	71.896	40.468	-2.104	74.000	31.428	PK

Profile: 2231093R	Page No.: 33
Engineer: Pengchengyang	
Site: AC5	Time: 2022/04/01 - 00:19
Limit: FCC-15.209	Margin: 0
Probe: FCC_ANT-1-18G	Polarity: Horizontal
EUT: BARCODE SCANNER	Power: DC3.7V
Note: Mode 5:Transmit at 2412MHz by 11ax20	



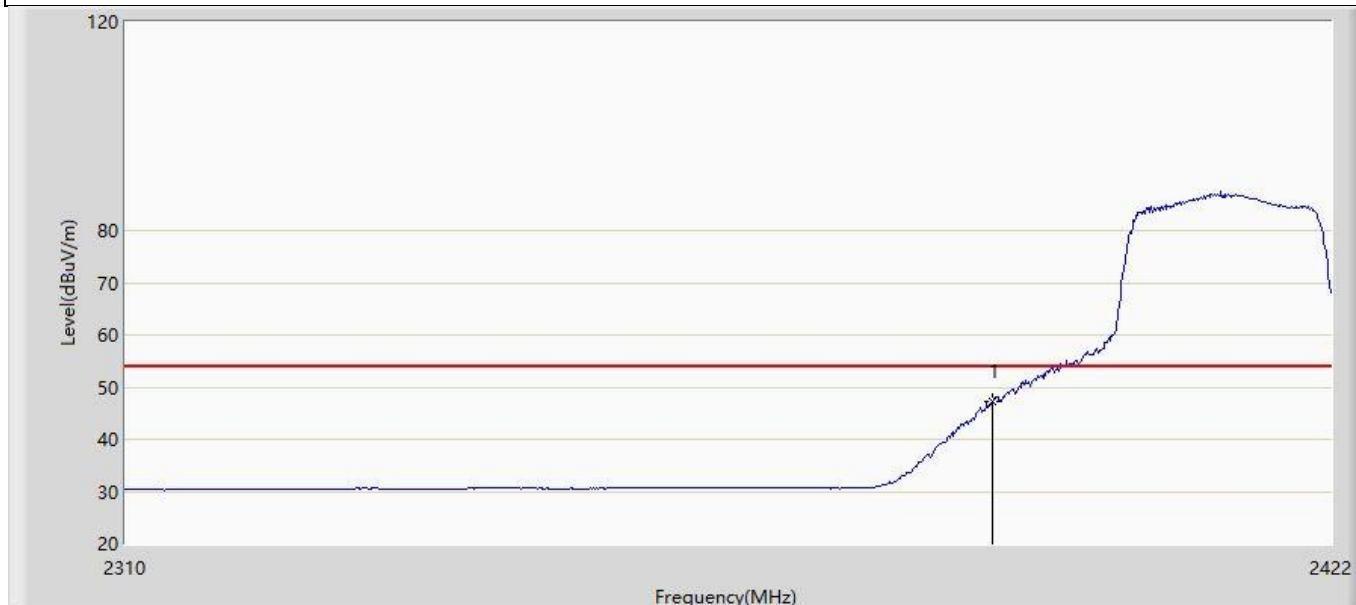
No	Mark	Frequency (MHz)	Measure Level (dBuV/m)	Reading Level (dBuV)	Over Limit (dB)	Limit (dBuV/m)	Factor (dB)	Type
1	*	2390.000	50.105	18.963	-3.895	54.000	31.141	AV

Profile: 2231093R	Page No.: 34
Engineer: Pengchengyang	
Site: AC5	Time: 2022/04/01 - 00:21
Limit: FCC-15.209	Margin: 0
Probe: FCC_ANT-1-18G	Polarity: Horizontal
EUT: BARCODE SCANNER	Power: DC3.7V
Note: Mode 5:Transmit at 2412MHz by 11ax20	



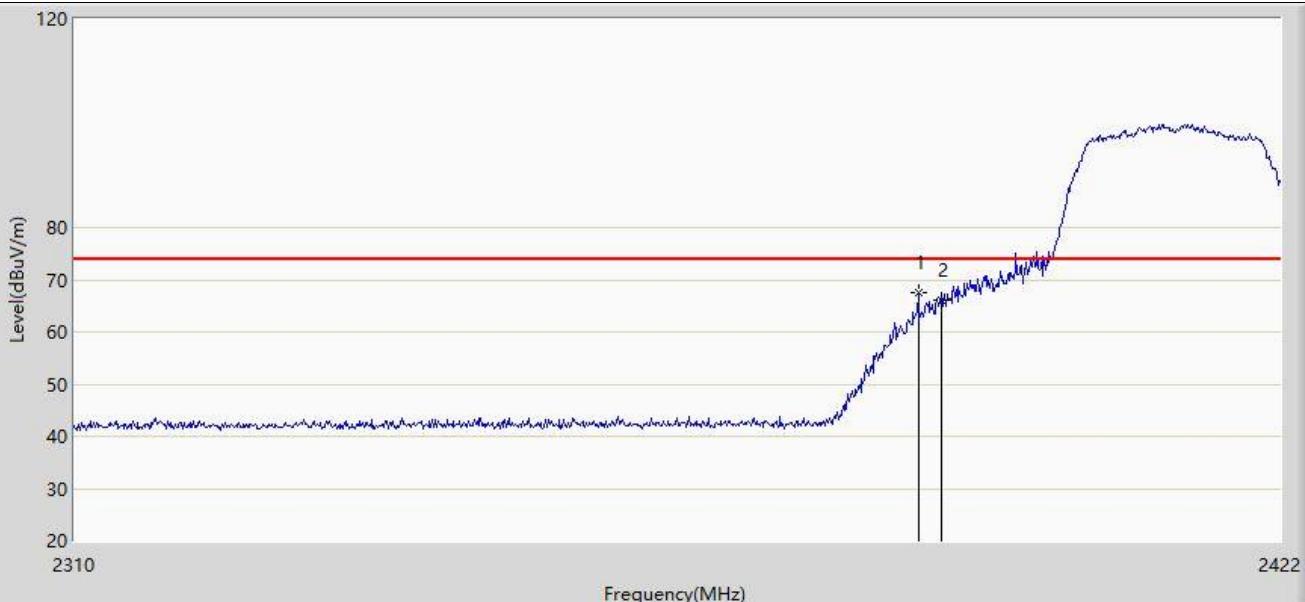
No	Mark	Frequency (MHz)	Measure Level (dBuV/m)	Reading Level (dBuV)	Over Limit (dB)	Limit (dBuV/m)	Factor (dB)	Type
1	*	2390.000	68.615	37.473	-5.385	74.000	31.141	PK

Profile: 2231093R	Page No.: 35
Engineer: Pengchengyang	
Site: AC5	Time: 2022/04/01 - 00:21
Limit: FCC-15.209	Margin: 0
Probe: FCC_ANT-1-18G	Polarity: Vertical
EUT: BARCODE SCANNER	Power: DC3.7V
Note: Mode 5:Transmit at 2412MHz by 11ax20	



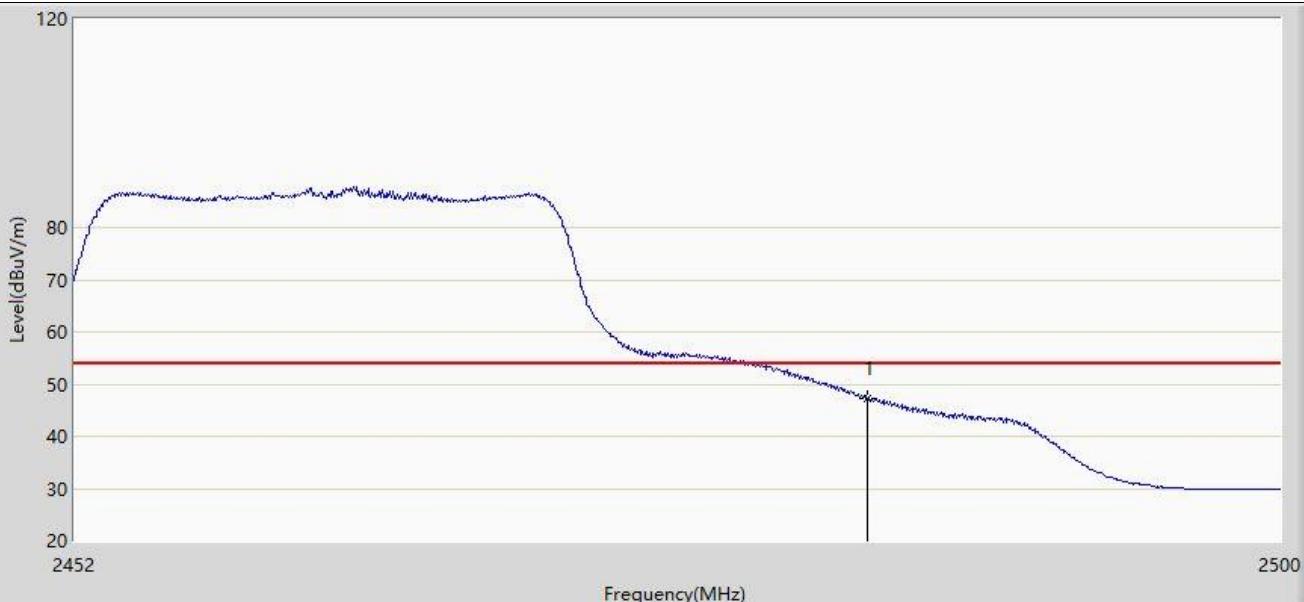
No	Mark	Frequency (MHz)	Measure Level (dBuV/m)	Reading Level (dBuV)	Over Limit (dB)	Limit (dBuV/m)	Factor (dB)	Type
1	*	2390.000	47.203	16.061	-6.797	54.000	31.141	AV

Profile: 2231093R	Page No.: 36
Engineer: Pengchengyang	
Site: AC5	Time: 2022/04/01 - 00:22
Limit: FCC-15.209	Margin: 0
Probe: FCC_ANT-1-18G	Polarity: Vertical
EUT: BARCODE SCANNER	Power: DC3.7V
Note: Mode 5:Transmit at 2412MHz by 11ax20	



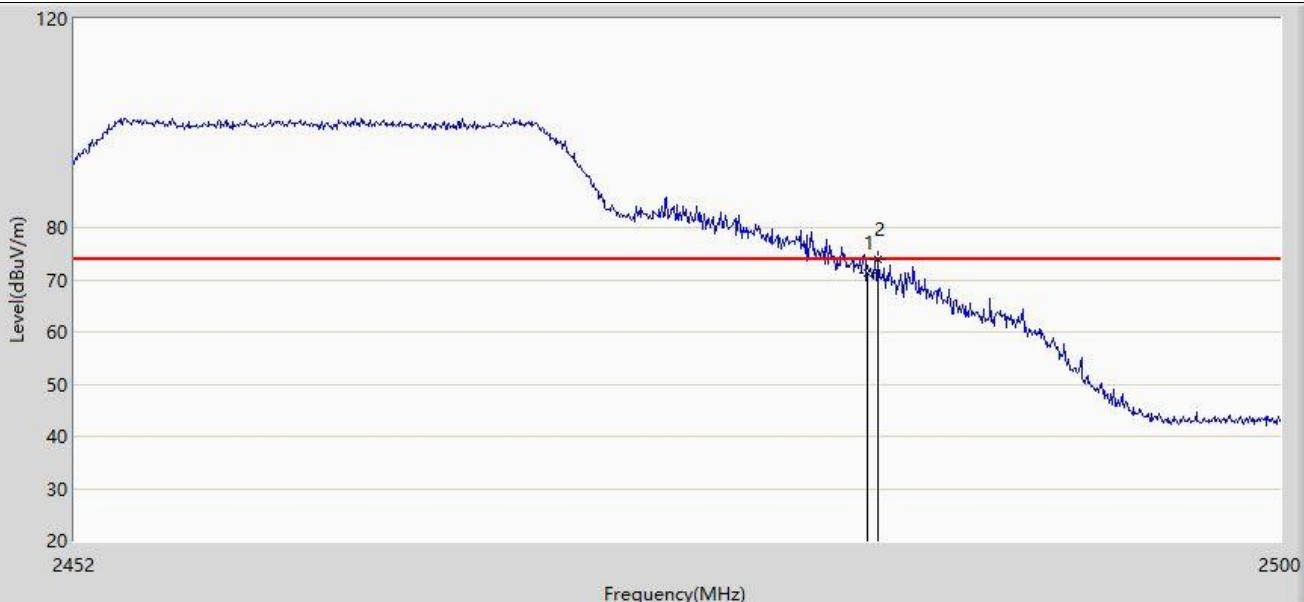
No	Mark	Frequency (MHz)	Measure Level (dBuV/m)	Reading Level (dBuV)	Over Limit (dB)	Limit (dBuV/m)	Factor (dB)	Type
1	*	2387.840	67.617	36.483	-6.383	74.000	31.134	PK
2		2390.000	66.081	34.939	-7.919	74.000	31.141	PK

Profile: 2231093R	Page No.: 37
Engineer: Pengchengyang	
Site: AC5	Time: 2022/04/01 - 00:23
Limit: FCC-15.209	Margin: 0
Probe: FCC_ANT-1-18G	Polarity: Horizontal
EUT: BARCODE SCANNER	Power: DC3.7V
Note: Mode 5:Transmit at 2462MHz by 11ax20	



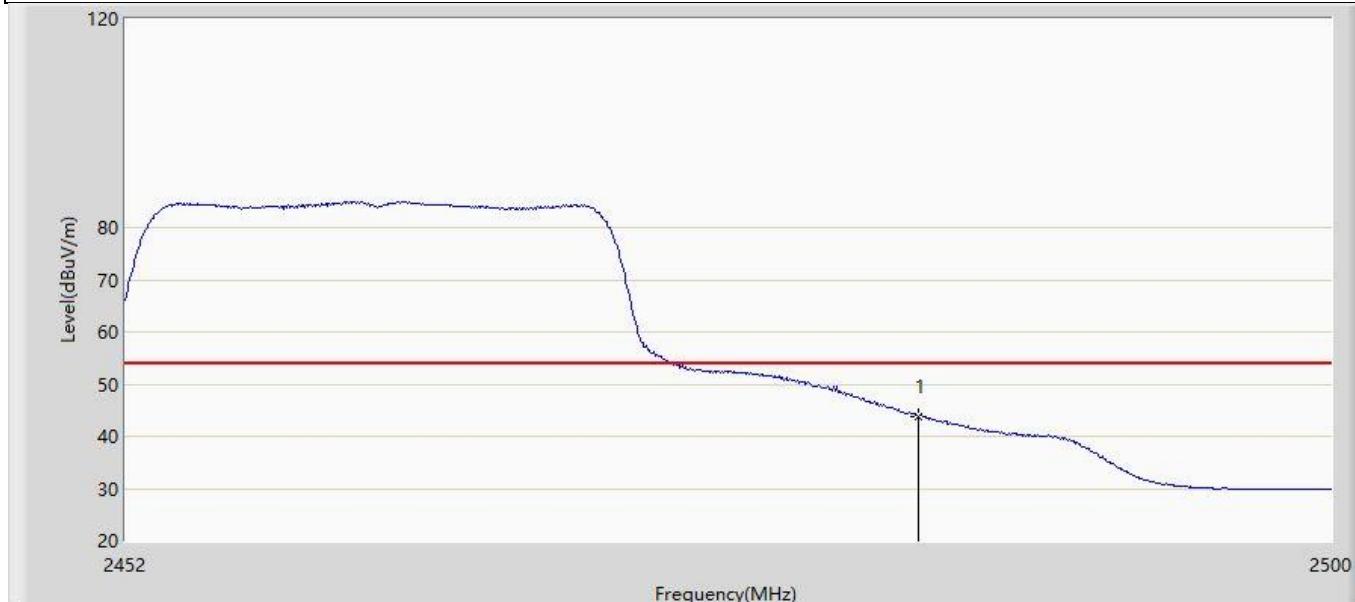
No	Mark	Frequency (MHz)	Measure Level (dBuV/m)	Reading Level (dBuV)	Over Limit (dB)	Limit (dBuV/m)	Factor (dB)	Type
1	*	2483.500	47.333	15.907	-6.667	54.000	31.426	AV

Profile: 2231093R	Page No.: 38
Engineer: Pengchengyang	
Site: AC5	Time: 2022/04/01 - 00:24
Limit: FCC-15.209	Margin: 0
Probe: FCC_ANT-1-18G	Polarity: Horizontal
EUT: BARCODE SCANNER	Power: DC3.7V
Note: Mode 5:Transmit at 2462MHz by 11ax20	



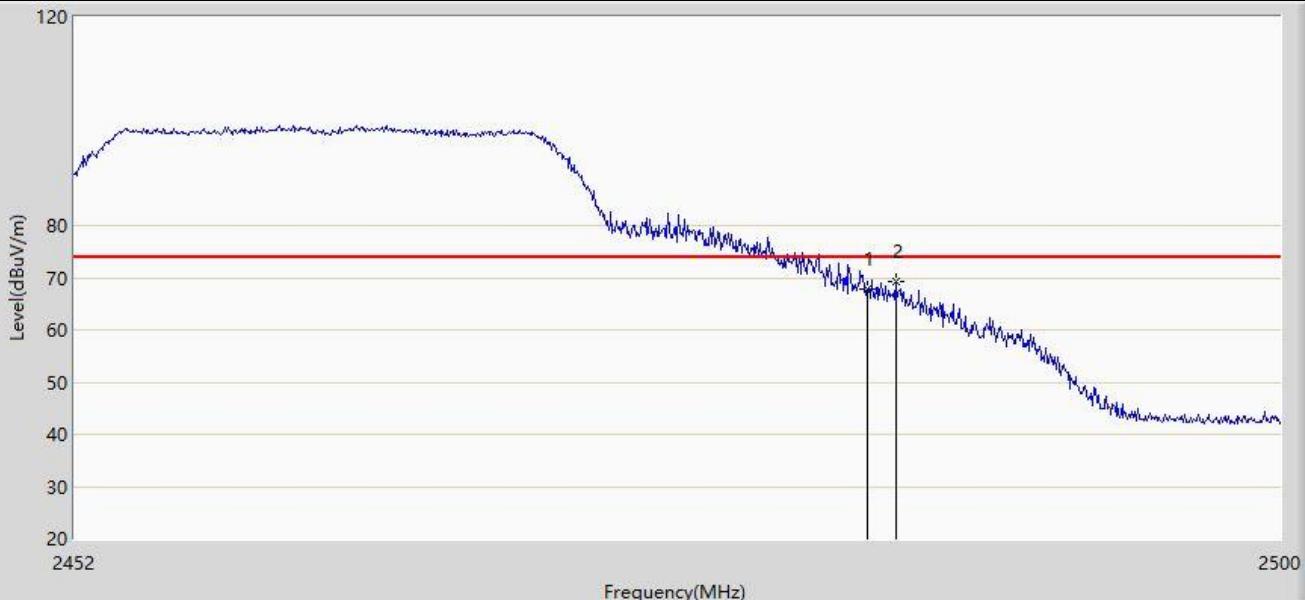
No	Mark	Frequency (MHz)	Measure Level (dBuV/m)	Reading Level (dBuV)	Over Limit (dB)	Limit (dBuV/m)	Factor (dB)	Type
1		2483.500	71.179	39.753	-2.821	74.000	31.426	PK
2	*	2483.872	73.844	42.417	-0.156	74.000	31.427	PK

Profile: 2231093R	Page No.: 39
Engineer: Pengchengyang	
Site: AC5	Time: 2022/04/01 - 00:24
Limit: FCC-15.209	Margin: 0
Probe: FCC_ANT-1-18G	Polarity: Vertical
EUT: BARCODE SCANNER	Power: DC3.7V
Note: Mode 5:Transmit at 2462MHz by 11ax20	



No	Mark	Frequency (MHz)	Measure Level (dBuV/m)	Reading Level (dBuV)	Over Limit (dB)	Limit (dBuV/m)	Factor (dB)	Type
1	*	2483.500	43.912	12.486	-10.088	54.000	31.426	AV

Profile: 2231093R	Page No.: 40
Engineer: Pengchengyang	
Site: AC5	Time: 2022/04/01 - 00:25
Limit: FCC-15.209	Margin: 0
Probe: FCC_ANT-1-18G	Polarity: Vertical
EUT: BARCODE SCANNER	Power: DC3.7V
Note: Mode 5:Transmit at 2462MHz by 11ax20	



No	Mark	Frequency (MHz)	Measure Level (dBuV/m)	Reading Level (dBuV)	Over Limit (dB)	Limit (dBuV/m)	Factor (dB)	Type
1		2483.500	67.734	36.308	-6.266	74.000	31.426	PK
2	*	2484.592	69.209	37.780	-4.791	74.000	31.429	PK

## 4.6 DTS Bandwidth

VERDICT: PASS

### 4.6.1 Limit

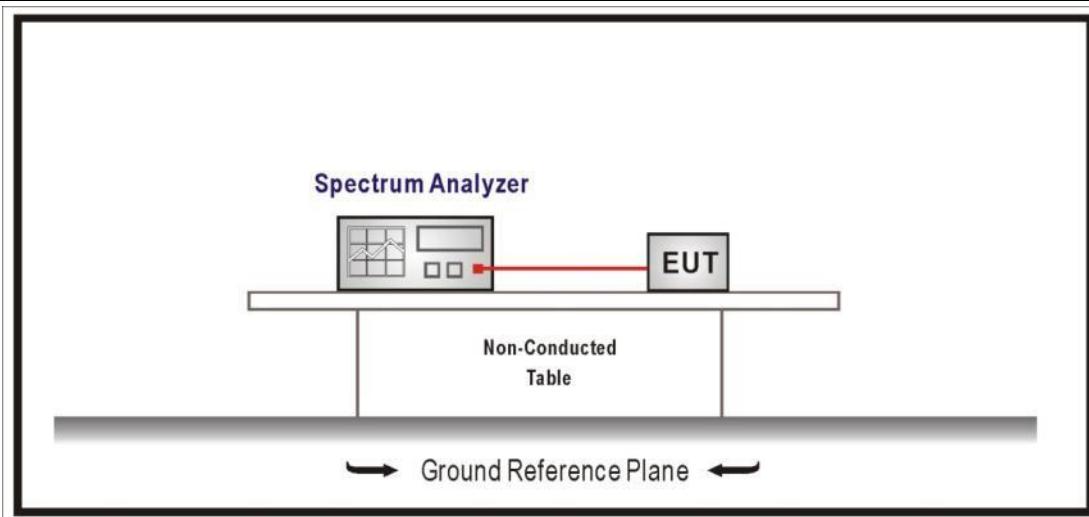
Standard	FCC Part 15 Subpart C Paragraph 15.247 (a)(2)
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Systems using digital modulation techniques operate in the 2400-2483.5 MHz. The minimum 6 dB bandwidth shall be at least 500 kHz

Standard	ANSI C63.10 Paragraph 6.7
----------	---------------------------

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

### 4.6.2 Test Setup



### 4.6.3 Test Procedure

	Reference Rule	Chapter	Description
<input checked="" type="checkbox"/>	ANSI C63.10	11.8	DTS bandwidth
<input type="checkbox"/>	<input type="checkbox"/> ANSI C63.10	11.8.1	Option 1
	<input checked="" type="checkbox"/> ANSI C63.10	11.8.2	Option 2
<input checked="" type="checkbox"/>	ANSI C63.10	6.9	Occupied bandwidth
<input type="checkbox"/>	<input type="checkbox"/> ANSI C63.10	6.9.2	relative measurement procedure
	<input checked="" type="checkbox"/> ANSI C63.10	6.9.3	power bandwidth (99%) measurement procedure

#### 4.6.4 Test Data

Mode	CH.	Test Freq. (MHz)	6dB Occupied Bandwidth (MHz)	99% Occupied Bandwidth (MHz)	Limit For 6dB (kHz)	Result
1	1	2412	7.598	11.064	≥500	Pass
	6	2437	7.574	11.209	≥500	Pass
	11	2462	7.578	11.000	≥500	Pass
2	1	2412	15.78	16.837	≥500	Pass
	6	2437	16.36	16.998	≥500	Pass
	11	2462	15.78	16.662	≥500	Pass
3	1	2412	16.42	17.920	≥500	Pass
	6	2437	17.58	18.058	≥500	Pass
	11	2462	16.40	17.773	≥500	Pass
4	1	2412	16.40	18.223	≥500	Pass
	6	2437	17.35	18.103	≥500	Pass
	11	2462	17.709	17.819	≥500	Pass
5	1	2412	16.39	18.040	≥500	Pass
	6	2437	16.39	18.151	≥500	Pass
	11	2462	16.39	17.863	≥500	Pass

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



## 4.7 Fundamental emission output power

VERDICT: PASS

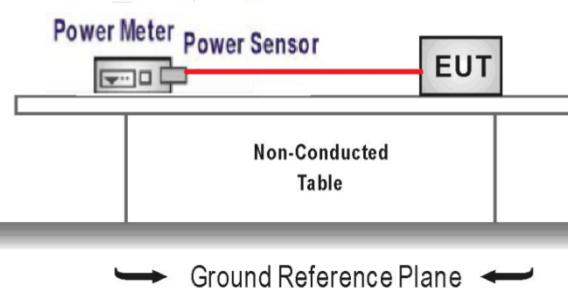
### 4.7.1 Limit

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

Note 1 : GTX directional gain of transmitting antennas.

Note 2 : Pout is maximum conducted output power .

### 4.7.2 Test Setup



#### 4.7.3 Test Procedure

	References Rule	Chapter	Description
<input checked="" type="checkbox"/>	ANSI C63.10	11.9	Fundamental emission output power
	<input checked="" type="checkbox"/> ANSI C63.10	11.9.1	Maximum peak conducted output power
	<input type="checkbox"/> ANSI C63.10	11.9.1.1	RBW $\geq$ DTS bandwidth
	<input type="checkbox"/> ANSI C63.10	11.9.1.2	Integrated band power method
	<input type="checkbox"/> ANSI C63.10	11.9.1.3	PKPM1 Peak power meter method
	<input type="checkbox"/> ANSI C63.10	11.9.2	Maximum conducted (average) output power
	<input type="checkbox"/> ANSI C63.10	11.9.2.2	Measurement using a spectrum analyzer (SA)
	<input type="checkbox"/> ANSI C63.10	11.9.2.2.2	Method AVGSA-1(Duty cycle $\geq$ 98%)
	<input type="checkbox"/> ANSI C63.10	11.9.2.2.3	Method AVGSA-1A(Duty cycle $\geq$ 98%)
	<input type="checkbox"/> ANSI C63.10	11.9.2.2.4	Method AVGSA-2(Duty cycle $\leq$ 98%)
	<input type="checkbox"/> ANSI C63.10	11.9.2.2.5	Method AVGSA-2A(Duty cycle $\leq$ 98%)
	<input type="checkbox"/> ANSI C63.10	11.9.2.2.4	Method AVGSA-3
	<input type="checkbox"/> ANSI C63.10	11.9.2.2.5	Method AVGSA-3A
	<input checked="" type="checkbox"/> ANSI C63.10	11.9.2.3	Measurement using a power meter (PM)
	<input checked="" type="checkbox"/> ANSI C63.10	11.9.2.3.1	Method AVGPM
	<input type="checkbox"/> ANSI C63.10	11.9.2.3.2	Method AVGPM-G

**Directional Gain Calculations for In-Band test method**

	References Rule	Chapter	Description
<input type="checkbox"/>	KDB 662911	F2)a)	Basic methodology
<input type="checkbox"/>	<input type="checkbox"/> KDB 662911	F2)a) (i)	transmit signals are correlated
	<input type="checkbox"/> KDB 662911	F2)a) (ii)	transmit signals are uncorrelated
<input type="checkbox"/>	KDB 662911	F2)b)	Sectorized antenna systems.
<input type="checkbox"/>	KDB 662911	F2)c)	Cross-polarized antennas
<input type="checkbox"/>	<input type="checkbox"/> ANSI C63.10	F2)c) (i)	Cross-polarized antennas
	<input type="checkbox"/> ANSI C63.10	F2)c) (ii)	Multiple antennas
<input checked="" type="checkbox"/>	KDB 662911	F2)e)	Spatial stream
<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/> KDB 662911	F2)e) (i)	Antennas have the same gain
	<input type="checkbox"/> KDB 662911	F2)e) (ii)	Antenna have the different gain with one spatial stream
	<input type="checkbox"/> KDB 662911	F2)e) (iii)	Antenna have the different gain with more than one spatial stream
<input checked="" type="checkbox"/>	KDB 662911	F2)f)	Cyclic Delay Diversity (CDD)
<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/> KDB 662911	F2)f) (i)	Antennas have the same gain
	<input type="checkbox"/> KDB 662911	F2)f) (ii)	Antenna have the different gain with one spatial stream
	<input type="checkbox"/> KDB 662911	F2)f) (iii)	Antenna have the different gain with more than one spatial stream

#### 4.7.4 Test Data

Mode	Channel	Test Frequency (MHz)	Conducted Power (dBm)	EIRP (dBm)	Conducted Power Limit (dBm)	EIRP Limit (dBm)	Result
Mode 1	1	2412	19.41	19.91	≤30	≤36	Pass
	6	2437	21.21	21.71	≤30	≤36	Pass
	11	2462	20.45	20.95	≤30	≤36	Pass
Mode 2	1	2412	19.47	19.97	≤30	≤36	Pass
	6	2437	20.62	21.12	≤30	≤36	Pass
	11	2462	19.46	19.96	≤30	≤36	Pass
Mode 3	1	2412	19.45	19.95	≤30	≤36	Pass
	6	2437	20.51	21.01	≤30	≤36	Pass
	11	2462	18.44	18.94	≤30	≤36	Pass
Mode 4	1	2412	19.46	19.96	≤30	≤36	Pass
	6	2437	20.64	21.14	≤30	≤36	Pass
	11	2462	20.53	21.03	≤30	≤36	Pass
Mode 5	1	2412	19.52	20.02	≤30	≤36	Pass
	6	2437	20.62	21.12	≤30	≤36	Pass
	11	2462	20.54	21.04	≤30	≤36	Pass

Mode	Channel	Test Frequency (MHz)	Power setting
Mode 1	1	2412	19
	6	2437	19
	11	2462	19
Mode 2	1	2412	19
	6	2437	19
	11	2462	18
Mode 3	1	2412	19
	6	2437	19
	11	2462	17
Mode 4	1	2412	19
	6	2437	19
	11	2462	19
Mode 5	1	2412	19
	6	2437	19
	11	2462	19

## 4.8 Power Density

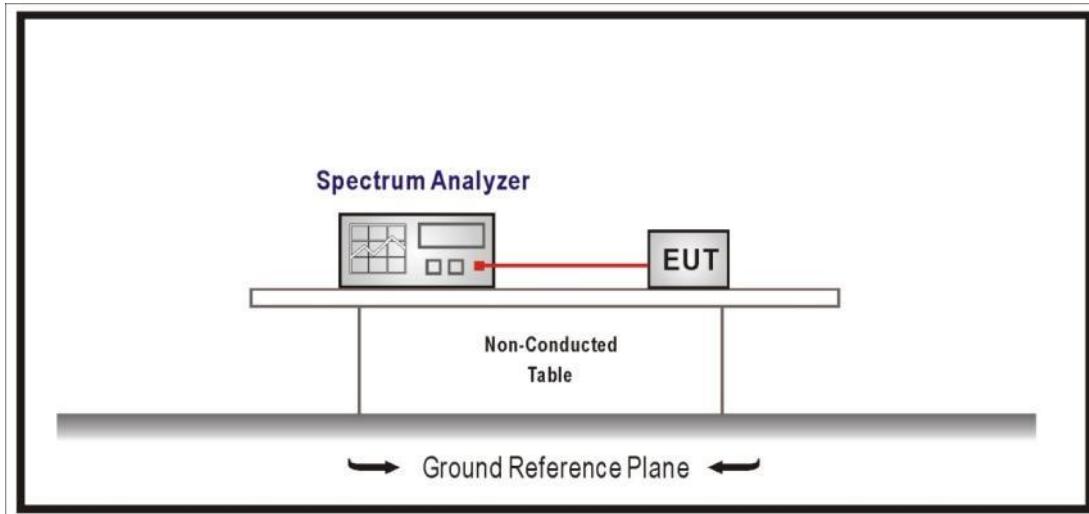
VERDICT: PASS

### 4.8.1 Limit:

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

### 4.8.2 Test Setup



### 4.8.3 Test Procedure

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

### Directional Gain Calculations for In-Band test method

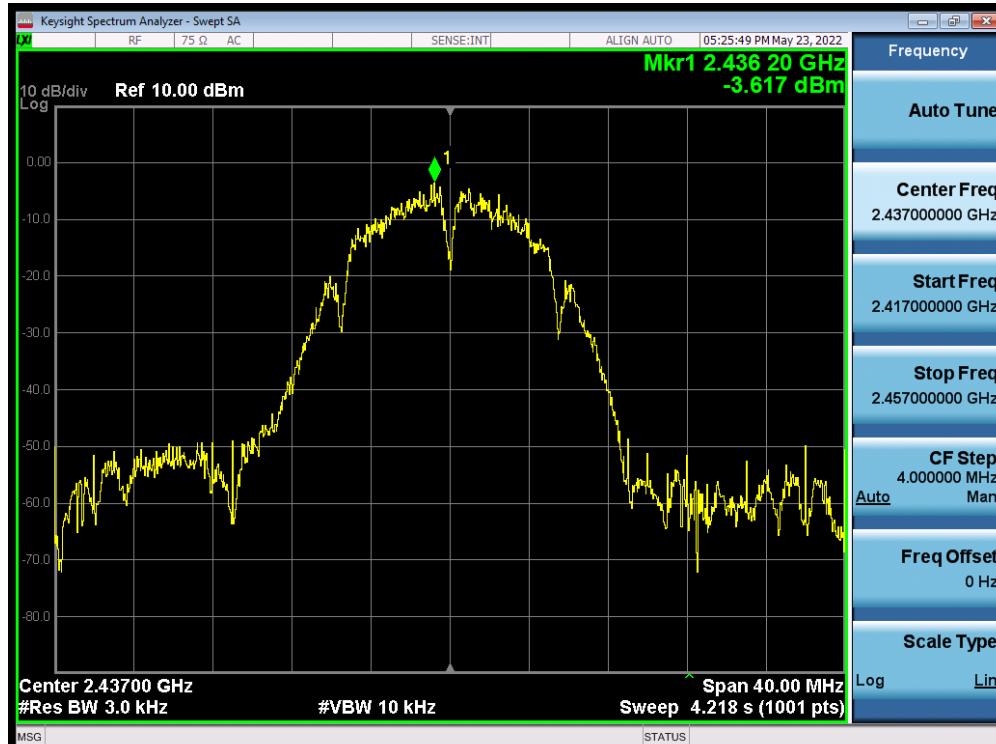
	References Rule	Chapter	Description
<input type="checkbox"/>	KDB 662911	F2)a)	Basic methodology
<input type="checkbox"/>	<input type="checkbox"/> KDB 662911	F2)a) (i)	transmit signals are correlated
	<input type="checkbox"/> KDB 662911	F2)a) (ii)	transmit signals are uncorrelated
<input type="checkbox"/>	KDB 662911	F2)b)	Sectorized antenna systems.
<input type="checkbox"/>	KDB 662911	F2)c)	Cross-polarized antennas
<input type="checkbox"/>	<input type="checkbox"/> ANSI C63.10	F2)c) (i)	Cross-polarized antennas
	<input type="checkbox"/> ANSI C63.10	F2)c) (ii)	Multiple antennas
<input checked="" type="checkbox"/>	KDB 662911	F2)e)	Spatial stream
<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/> KDB 662911	F2)e) (i)	Antennas have the same gain
	<input type="checkbox"/> KDB 662911	F2)e) (ii)	Antenna have the different gain with one spatial stream
	<input type="checkbox"/> KDB 662911	F2)e) (iii)	Antenna have the different gain with more than one spatial stream
<input checked="" type="checkbox"/>	KDB 662911	F2)f)	Cyclic Delay Diversity (CDD)
<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/> KDB 662911	F2)f) (i)	Antennas have the same gain
	<input type="checkbox"/> KDB 662911	F2)f) (ii)	Antenna have the different gain with one spatial stream
	<input type="checkbox"/> KDB 662911	F2)f) (iii)	Antenna have the different gain with more than one spatial stream

#### 4.8.4 Test Data

Mode	Channel	Test Frequency (MHz)	Measurement PSD (dBm/3kHz)	Limit (dBm/3kHz)	Result
1	1	2412	-4.406	≤8	Pass
	6	2437	-3.617	≤8	Pass
	11	2462	-5.709	≤8	Pass
2	1	2412	-8.310	≤8	Pass
	6	2437	-6.144	≤8	Pass
	11	2462	-7.834	≤8	Pass
3	1	2412	-8.604	≤8	Pass
	6	2437	-8.469	≤8	Pass
	11	2462	-9.962	≤8	Pass
4	1	2412	-5.422	≤8	Pass
	6	2437	-5.979	≤8	Pass
	11	2462	-5.043	≤8	Pass
5	1	2412	-8.145	≤8	Pass
	6	2437	-6.785	≤8	Pass
	11	2462	-7.773	≤8	Pass

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

Mode1 (2437MHz)



## 4.9 Antenna Requirement

VERDICT: PASS

### 4.9.1 Limit:

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

### 4.9.2 Antenna Connector Construction:

- |                                     |  |
|-------------------------------------|--|
| <input type="checkbox"/>            | The use of a permanently attached antenna                        |
| <input type="checkbox"/>            | The antenna use of a unique coupling to the intentional radiator |
| <input checked="" type="checkbox"/> | The use of a nonstandard antenna jack or electrical connector    |

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

## 5 TEST SETUP PHOTO AND EUT PHOTO

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

The End