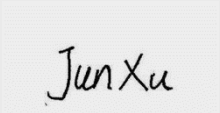
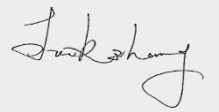
DEKRA Testing and Certification (Suzhou) Co., Ltd.
No.99 Hongye Rd., Suzhou Industrial Park, Suzhou, 215006, Jiangsu, China
TEL: +86-512-6251-5088 / FAX: +86-512-6251-5098

Test report No:
2150803R-RF-US-P06V01

FCC TEST REPORT

Product Name	RM2Track-1-0
Trademark	RM2 Smart Pallet Tracker
Model and /or type reference	GSM/GPS tracking device
FCC ID	2A2KZ-RM2TRACK-1-0
Applicant´s name / address	RM2 S.A. Avenue de la Gare 6, Fribourg, CH-1700, Switzerland
Test method requested, standard	FCC CFR Title 47 Part 15 Subpart C Section 15.247 ANSI C63.10: 2013 KD558074 D01 15.247 Meas Guidance v05r02
Verdict Summary	IN COMPLIANCE
Tested by (name / position & signature)	Jun Xu/Senior Test Engineer 
Approved by (name / position & signature)	Jack Zhang/Supervisor 
Date of issue	2021-09-10
Report Version	V1.0
Report template No	Template_FCC 15.247-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.24, 2021
Date (start test)	Jun. 03, 2021
Date (finish test)	July. 07,2021

1. This report is only referred to the item that has undergone the test.
2. This report does not constitute or imply on its own an approval of the product by the Certification Bodies or Competent Authorities.
3. This document is only valid if complete; no partial reproduction can be made without previous written permission of DEKRA.
4. This test report cannot be used partially or in full for publicity and/or promotional purposes without previous written permission of DEKRA.

ENVIRONMENTAL CONDITIONS

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

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

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

POSSIBLE TEST CASE VERDICTS

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

ABBREVIATIONS

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

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

DOCUMENT HISTORY

Report No.	Version	Description	Issued Date
2150803R-RF-US-P06V01	V1.0	Initial issue of report.	2021-09-10

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.

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	2021.04.17	2022.04.16
Two-Line V-Network	R&S	ENV216	101044	2021.04.17	2022.04.16
50ohm Termination	SHX	TF2	7081402	2020.09.23	2021.09.22
50ohm Termination	SHX	TF2	7081403	2020.09.23	2021.09.22
50ohm Coaxial Switch	Anritsu	MP59B	6200464462	N/A	N/A
Temperature/Humidity Meter	RTS	RTS-8S	TR1-TH	2020.08.23	2021.08.22
Dekra test software	Dekra	-	-	-	-

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

Instrument	Manufacturer	Model No.	Serial No.	Cal. Date	Next Cal. Date
Spectrum Analyzer	Agilent	N9010A	MY48030494	2020.08.15	2021.08.14
EXA Spectrum Analyzer	Keysight	N9010A	MY55370495	2021.04.16	2022.04.15
MXA Signal Anlyzer	Keysight	N9020A	MY56060147	2020.08.15	2021.08.14
4TX MIMO Power Sensor	Keysight	X8750A	MY59400102	2021.02.11	2022.02.10
Coaxial Cable	Woken	SFL402	F02-150410-044	2021.01.01	2021.12.31
Temperature/Humidity Meter	RTS	RTS-8S	RF08	2020.08.13	2021.08.12

Radiated Emission(30MHz-1GHz) / AC2

Instrument	Manufacturer	Model No.	Serial No.	Cal. Date	Next Cal. Date
EMI Test Receiver	R&S	ESCI	100573	2020.12.06	2021.12.05
Bilog Antenna	Teseq GmbH	CBL6112D	27611	2020.09.22	2021.09.21
Coaxial Cable	Huber+Suhner	RG 214	AC2-C	2021.04.04	2022.04.03
Temperature/Humidity Meter	RTS	RTS-8S	AC2-TH	2020.08.13	2021.08.12
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	2021.04.16	2022.04.15
Amplifier	Keleto	LNPA	SK20190225	2020.09.25	2021.09.24
Preamplifier	EMCI	EMC184045SE	980263	2021.05.23	2022.05.22
DRG Horn Antenna	ETS-Lindgren	3117	00167055	2020.08.06	2021.08.05
Broad-Band Horn Antenna	Schwarzbeck	BBHA9170	294	2021.03.22	2023.03.21
Coaxial Cable	Huber+Suhner	SUCOFLEX 106	AC5-C2	2021.04.04	2022.04.03
Coaxial Cable	ROSENBERGER	LA1-C011-2000/3000	AC5-40G	2021.04.17	2022.04.16
Temperature/Humidity Meter	RTS	RTS-8S	AC5-TH	2020.08.13	2021.08.12
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% The Uncertainties is complice with standard required as below.

Test item	Uncertainty
AC Power Line Conducted Emission	9kHz~150kHz: 2.80 dB 150kHz~30MHz: 2.40 dB
Peak Power Output	± 1.27 dB
Radiated Emission(30MHz~1GHz)	Horizontal: 30MHz~200MHz: 3.50 dB 300MHz~1GHz: 3.60 dB Vertical: 30MHz~200MHz: 3.60 dB 300MHz~1GHz: 3.50 dB
Radiated Emission(1GHz~26.5GHz)	Horizontal: 1GHz~18GHz: 5.00 dB Vertical: 1GHz~18GHz: 4.80 dB
RF antenna conducted test	± 1.27 dB
Radiated Emission Band Edge	± 3.9 dB
DTS Bandwidth	±150 Hz
Occupied Bandwidth	±1 kHz
Power Density	±1.27 dB

1 GENERAL INFORMATION

1.1 General Description of the Item(s)

Product Name ..... :	RM2Track-1-0
Model No. ..... :	GSM/GPS tracking device
Trademark ..... :	RM2 Smart Pallet Tracker
FCC ID ..... :	2A2KZ-RM2TRACK-1-0
Manufacturter ..... :	RM2 S.A.
Manufacturer Address ..... :	Avenue de la Gare 6, Fribourg, CH-1700, Switzerland

Wireless specifiction ..... :	Bluetooth 5.0					
Operating frequency range(s) ..... :	2400~2483.5MHz					
Type of Modulation ..... :	GFSK					
PHYs ..... :	☒	LE 1M	☒	LE 2M	☒	LE Coded S=2/8
Data Rate ..... :	☒	1Mbit/s	☒	2Mbit/s	☒	500/125 Kbit/s
Number of channel ..... :	40					

Rated power supply ..... :	Voltage and Frequency	
	☐	AC: 220 – 240 V, 50/60 Hz
	☐	AC: 110 – 130 Vac, 50/60 Hz
	☐	DC: 24 Vdc
	☒	Battery: 6.5 Vdc
Mounting position ..... :	☐	Table top equipment
	☐	Wall/Ceiling mounted equipment
	☐	Floor standing equipment
	☐	Head-mounted equipment
	☒	Other: Module

1.2 Antenna Information

Antenna model / type number ..... :	N/A			
Antenna serial number ..... :	N/A			
Antenna Delivery ..... :	☒	1TX + 1RX		
	☐	2TX + 2RX		
Antenna technology ..... :	☒	SISO		
	☐	MIMO	☐	CDD
			☐	Beam-forming
Antenna Type ..... :	☐	External	☐	Dipole
			☐	Sectorized
	☒	Internal	☐	PIFA
			☒	PCB
			☐	Metal Monopole Antenna
			☐	Others……..
Antenna Gain ..... :	0.77 dBi			

1.3 Channel List

Bluetooth Working Frequency of Each Channel:							
Channel	Frequency	Channel	Frequency	Channel	Frequency	Channel	Frequency
00	2402 MHz	01	2404 MHz	02	2406 MHz	03	2408 MHz
04	2410 MHz	05	2412 MHz	06	2414 MHz	07	2416 MHz
08	2418 MHz	09	2420 MHz	10	2422 MHz	11	2424 MHz
12	2426 MHz	13	2428 MHz	14	2430 MHz	15	2432 MHz
16	2434 MHz	17	2436 MHz	18	2438 MHz	19	2440 MHz
20	2442 MHz	21	2444 MHz	22	2446 MHz	23	2448 MHz
24	2450 MHz	25	2452 MHz	26	2454 MHz	27	2456 MHz
28	2458 MHz	29	2460 MHz	30	2462 MHz	31	2464 MHz
32	2466 MHz	33	2468 MHz	34	2470 MHz	35	2472 MHz
36	2474 MHz	37	2476 MHz	38	2478 MHz	39	2480 MHz

Note: The general description of the Item(s), antenna information 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.

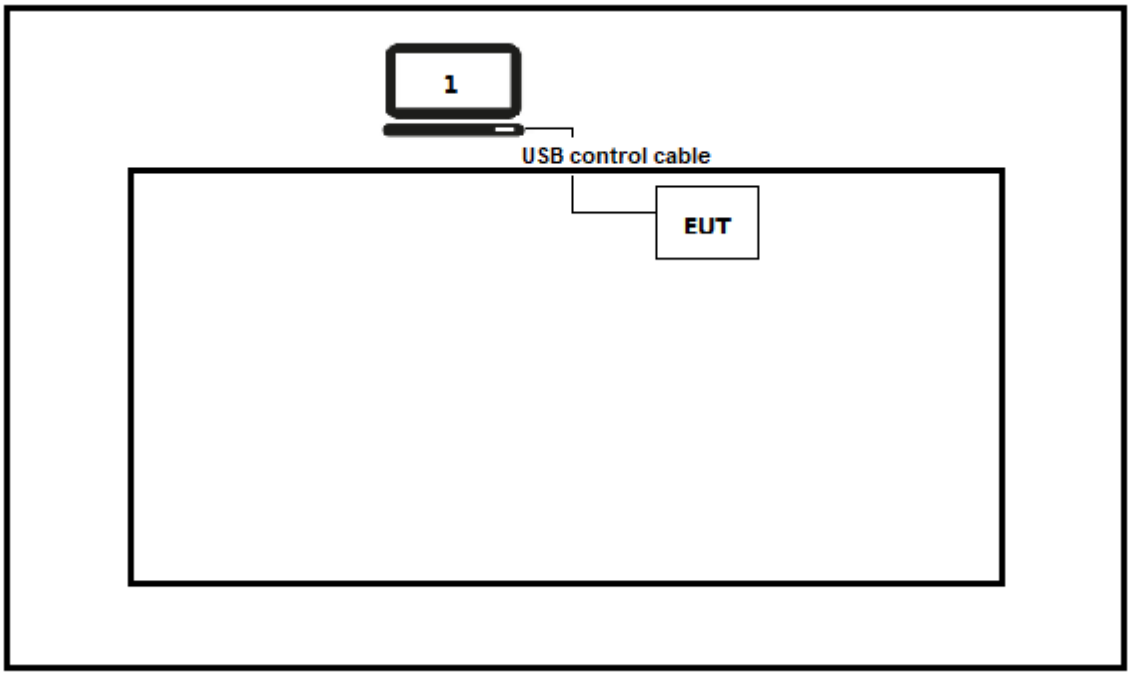
Test Mode For Bluetooth	Mode1: Transmit by LE_1Mbps
	Mode2: Transmit by LE_2Mbps
	Mode3: Transmit by LE_Coded S=2
	Mode4: Transmit by LE_Coded S=8
	Mode5: Simultaneous transmit

2.2 Auxiliary equipment / Test software for the EUT

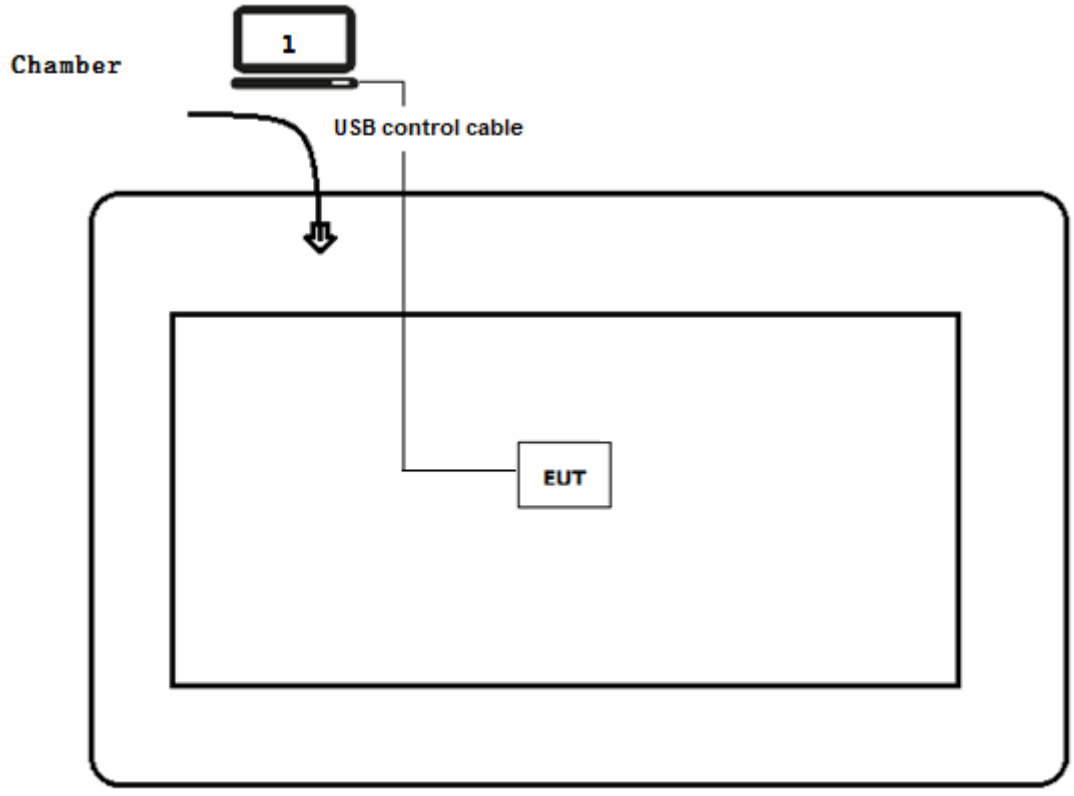
Auxiliary equipment	Type / Version	Manufacturer	Supplied by
Notebook	Think pad x220	Lenovo	Adapter
Software	Type / Version	Manufacturer	Supplied by
Putty	N/A	N/A	N/A

2.3 Test Configuration / Block diagram used for 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 2.3.
2	Execute test software “Putty” on the notebook.
3	Configure the test mode, the test channel, and the data rate.
4	Verify that the EUT works properly.

3 VERDICT SUMMARY SECTION

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

3.1 Standards

Standard	Year	Description
FCC CFR Title 47 Part 15 Subpart C Section 15.247	2019	Operation within the bands 902–928 MHz, 2400–2483.5 MHz, and 5725–5850 MHz.
ANSI C63.10	2013	American National Standard of Procedures for Compliance Testing of Unlicensed Wireless Devices
KDB 558074 D01 v05r02	2019	Guidance for performing compliance measurements on Digital Transmission System (DTS) operating under section 15.247

3.2 Deviation(s) from the Standard(s) / Test Specification(s)

The following deviation(s) was / were made from the published requirements of the listed standards: N/A.

(Please define the deviations from the standard(s) if applicable)

3.3 Overview of results

For FCC

Requirement – Test case	Basic standard(s)	Verdict	Remark
AC Power Line Conducted Emission	FCC 15.207	PASS	---
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	---
Radiated Emission 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	---

3.4 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(μV)[1)]]	Limit: AV [dB(μV) [1)]]
0,15 - 0,50	66 – 56 [2)]	56 - 46 [2)]
0,50 - 5,0	56	46
5,0 - 30	60	50

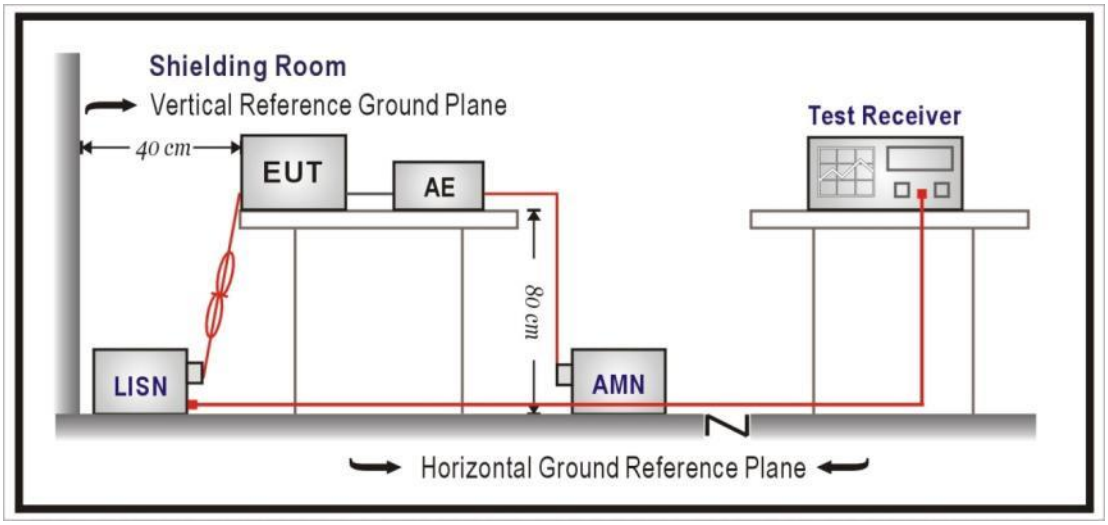
[1)] At the transition frequency, the lower limit applies.

[2)] The limit decreases linearly with the logarithm of the frequency.

NOTE 1: The exclusion band for transmitters shall be considered for transmitters operating at frequencies below 30 MHz.

NOTE 2: Where the AC output port is directly connected (or via a circuit breaker) to the AC power input port of the EUT the AC power output port need not to be tested.

4.1.2 Test Setup



4.1.3 Test Procedure

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

4.1.4 Test Data

N/A: EUT is powered by battery.

4.2 Emissions in restricted frequency bands — VERDICT: PASS

4.2.1 Limit

Standard	FCC Part 15 Subpart C Paragraph 15.209		
Restricted Bands of operation			
Frequency (MHz)	Frequency (MHz)	Frequency (MHz)	Frequency (GHz)
0.090 – 0.110	16.42 – 16.423	399.9 – 410	4.5 – 5.15
0.495 – 0.505	16.69475 –16.69525	608 – 614	5.35 – 5.46
2.1735 – 2.1905	16.80425 – 16.80475	960 – 1240	7.25 – 7.75
4.125 – 4.128	25.5 – 25.67	1300 – 1427	8.025 – 8.5
4.17725 – 4.17775	37.5 – 38.25	1435 – 1626.5	9.0 – 9.2
4.20725 – 4.20775	73 – 74.6	1645.5 – 1646.5	9.3 – 9.5
6.215 – 6.218	74.8 – 75.2	1660 – 1710	10.6 – 12.7
6.26775 – 6.26825	108 – 121.94	1718.8 – 1722.2	13.25 – 13.4
6.31175 – 6.31225	123 – 138	2200 – 2300	14.47 – 14.5
8.291 – 8.294	149.9 – 150.05	2310 – 2390	15.35 – 16.2
8.362 – 8.366	156.52475 – 156.52525	2483.5 – 2500	17.7 – 21.4
8.37625 – 8.38675	156.7 – 156.9	2690 – 2900	22.01 – 23.12
8.81425 – 8.81475	162.0125 – 167.17	3260 – 3267	23.6 – 24.0
12.29 – 12.293	167.72 – 173.2	3332 – 3339	31.2 – 31.8
12.51975–12.52025	240 – 285	3345.8 – 3358	36.43 – 36.5
12.57675–12.57725	322 – 335.4	3600 – 4400	
13.36 – 13.41			

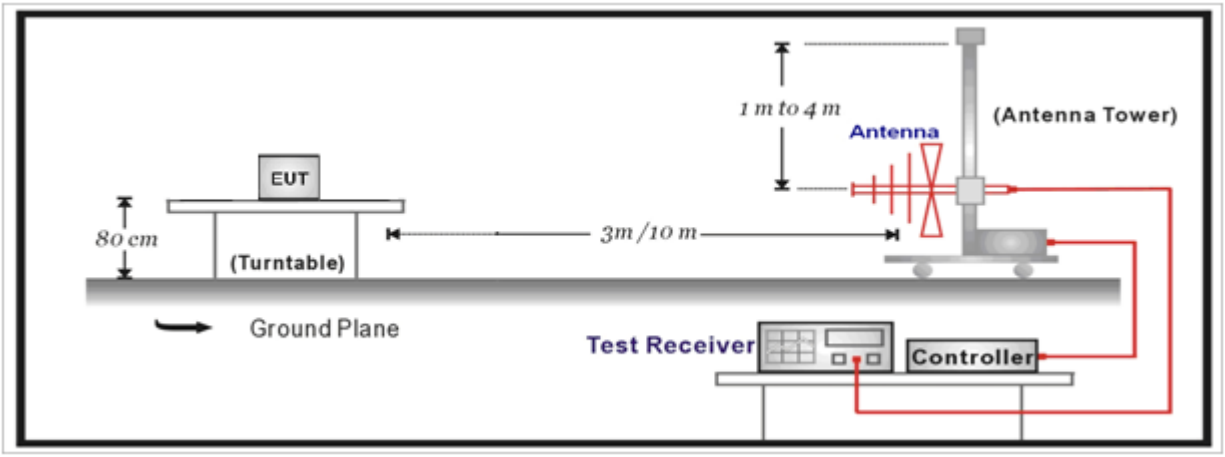
Restricted Band Emissions Limit			
Frequency (MHz)	Field strength (μV/m)	Field strength (dBμV/m)	Measurement distance (m)
0.009 - 0.49	2400/F(kHz)	48.5 – 13.8	300(Note 1)
0.49 - 1.705	24000/F(kHz)	33.8 - 23	30(Note 1)
1.705 - 30	30	29.5	30(Note 1)
30 - 88	100	40	3(Note 2)
88 - 216	150	43.5	3(Note 2)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

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

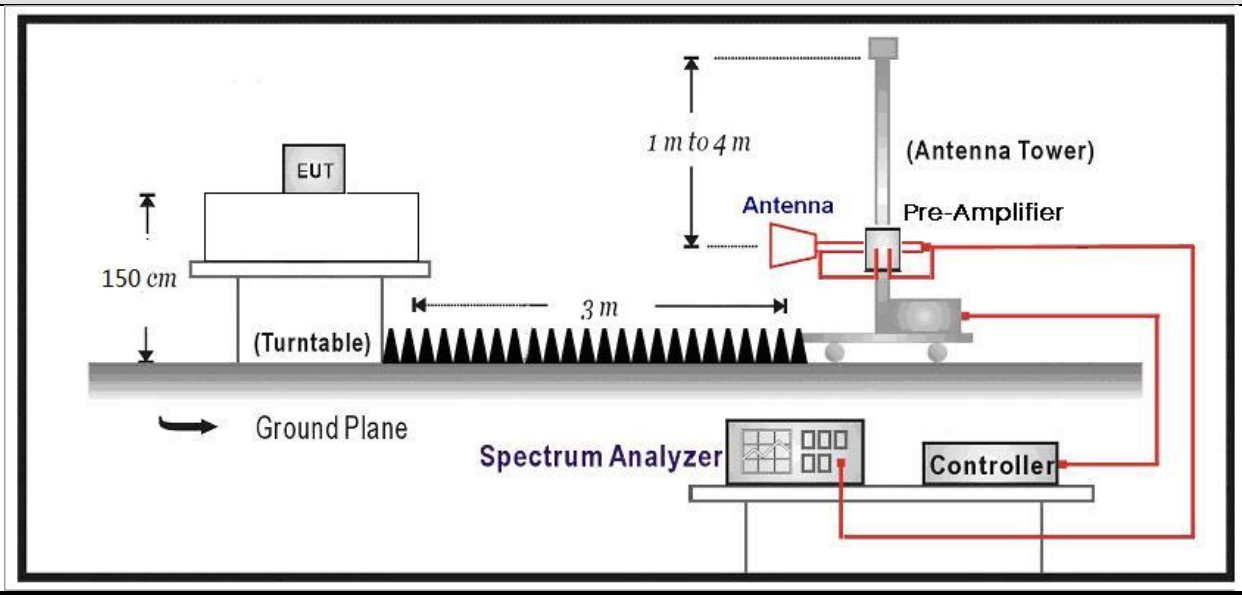
Note 2: At frequencies at or above 30 MHz, measurements may be performed at a distance other than what is specified provided: measurements are not made in the near field except where it can be shown that near field measurements are appropriate due to the characteristics of the device; and it can be demonstrated that the signal levels needed to be measured at the distance employed can be detected by the measurement equipment. Measurements shall not be performed at a distance greater than 30 meters unless it can be further demonstrated that measurements at a distance of 30 meters or less are impractical. When performing measurements at a distance other than that specified, the results shall be extrapolated to the specified distance using an extrapolation factor of 20 dB/decade (inverse linear-distance for field strength measurements; inverse-linear-distance-squared for power density measurements).

4.2.2 Test Setup

30MHz-1GHz Test Setup:



Above 1GHz Test Setup:

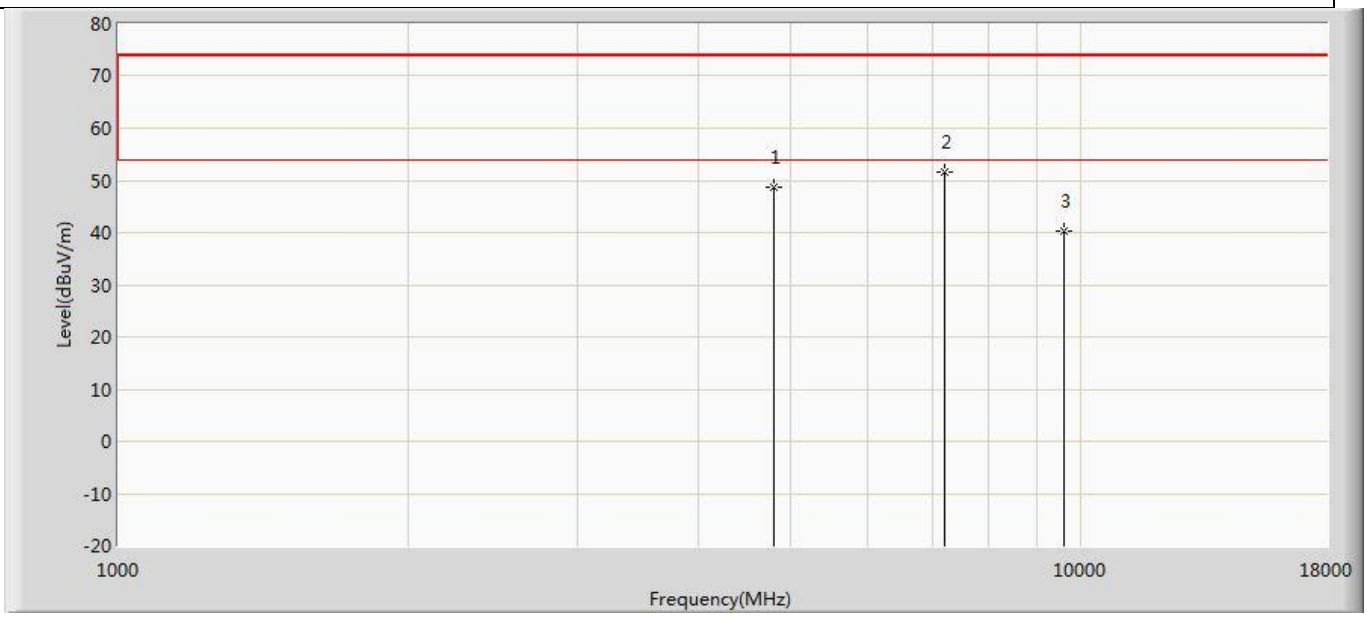


4.2.3 Test Procedure

	References Rule		Chapter	Description
☒	ANSI C63.10		11.12	Emissions in restricted frequency bands
	☒	ANSI C63.10	11.12.1	Radiated emission measurements
	☒	ANSI C63.10	11.12.2.7	Radiated spurious emission test
		☒ ANSI C63.10	6.4	Radiated emissions from unlicensed wireless devices below 30 MHz
		☒ ANSI C63.10	6.5	Radiated emissions from unlicensed wireless devices in the frequency range of 30 MHz to 1000 MHz
		☒ ANSI C63.10	6.6	Radiated emissions from unlicensed wireless devices above 1 GHz

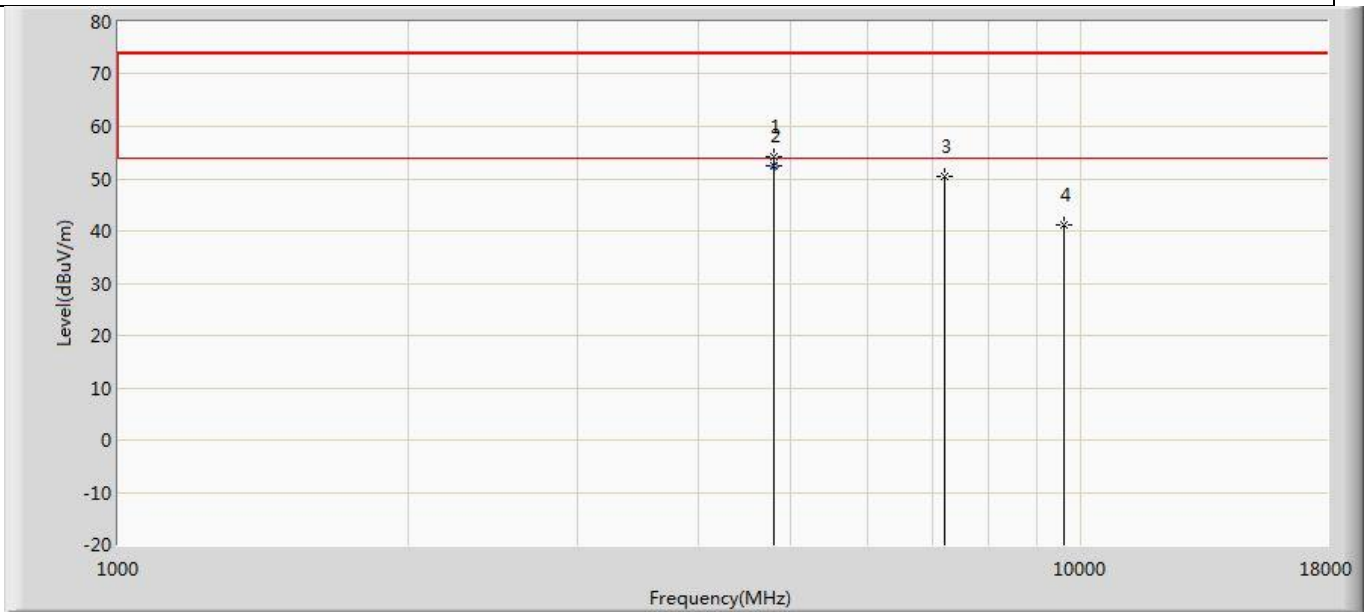
4.2.4 Test Data

Profile:2150803R	Page No.: 43
Engineer: Tongben	
Site: AC5	Time: 2021/06/12 - 18:09
Limit: FCC_Part15.209_RE(3m)	Margin: 0
Probe: Horn_3117_00167055(1-18GHz)	Polarity: Vertical
EUT: RM2-Track-1-0	Power: AC 120V/60Hz
Note: Mode 1:Transmit at 2402MHz by LE_1Mbps	



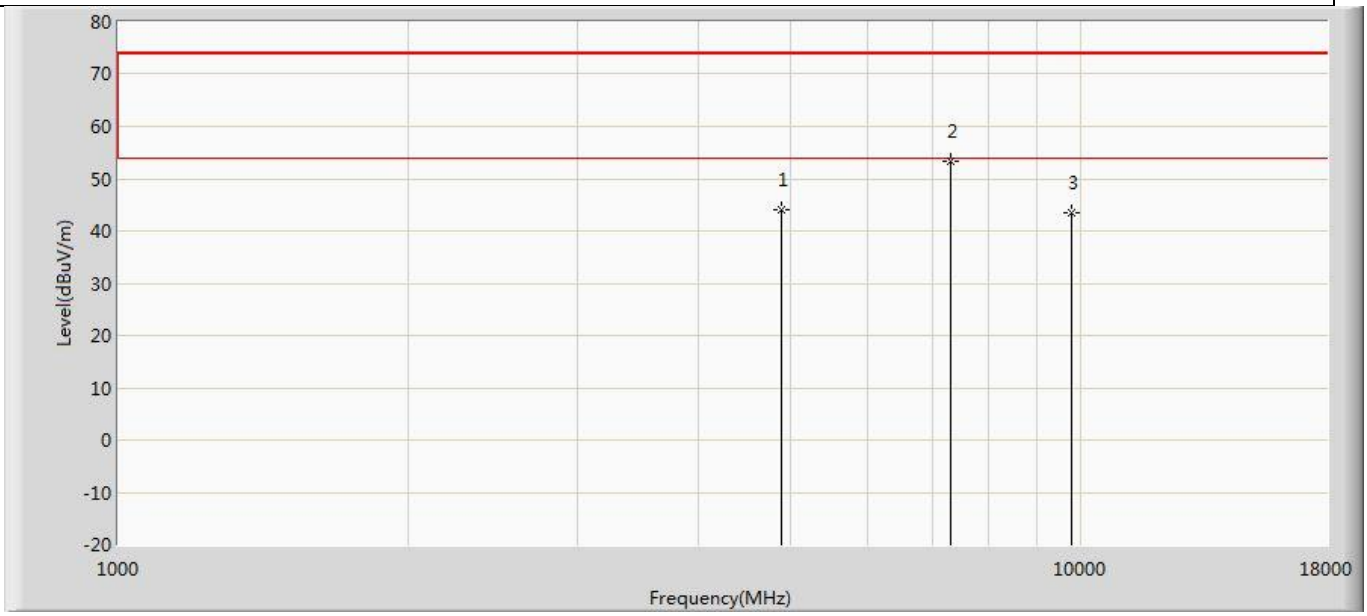
No	Mark	Frequency (MHz)	Measure Level (dBuV/m)	Reading Level (dBuV)	Over Limit (dB)	Limit (dBuV/m)	Factor (dB)	Type
1		4804.000	48.761	53.421	-25.239	74.000	-4.660	PK
2	*	7206.000	51.726	53.874	-22.274	74.000	-2.148	PK
3		9608.000	40.255	41.379	-33.745	74.000	-1.124	PK

Profile:2150803R	Page No.: 44
Engineer: Tongben	
Site: AC5	Time: 2021/06/12 - 18:11
Limit: FCC_Part15.209_RE(3m)	Margin: 0
Probe: Horn_3117_00167055(1-18GHz)	Polarity: Horizontal
EUT: RM2-Track-1-0	Power: AC 120V/60Hz
Note: Mode 1:Transmit at 2402MHz by LE_1Mbps	



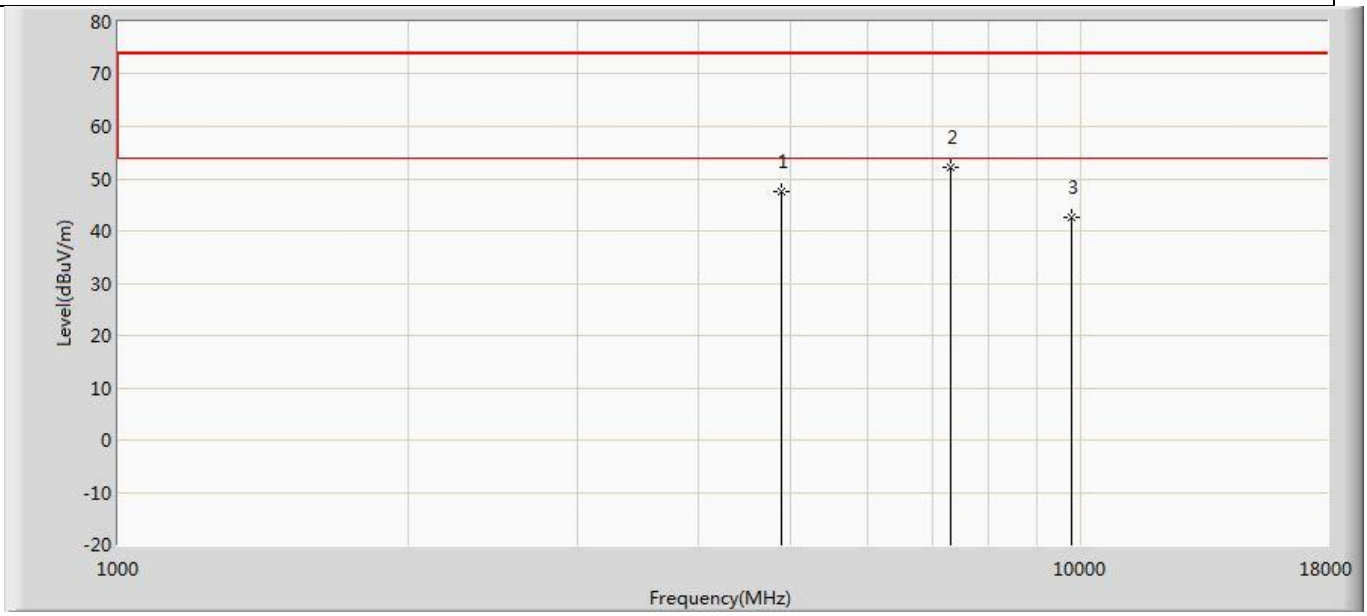
No	Mark	Frequency (MHz)	Measure Level (dBuV/m)	Reading Level (dBuV)	Over Limit (dB)	Limit (dBuV/m)	Factor (dB)	Type
1		4799.500	54.076	58.763	-19.924	74.000	-4.687	PK
2	*	4803.970	52.553	57.213	-1.447	54.000	-4.660	AV
3		7206.000	50.462	52.610	-23.538	74.000	-2.148	PK
4		9608.000	41.258	42.382	-32.742	74.000	-1.124	PK

Profile:2150803R	Page No.: 45
Engineer: Tongben	
Site: AC5	Time: 2021/06/12 - 18:13
Limit: FCC_Part15.209_RE(3m)	Margin: 0
Probe: Horn_3117_00167055(1-18GHz)	Polarity: Vertical
EUT: RM2-Track-1-0	Power: AC 120V/60Hz
Note: Mode 1:Transmit at 2440MHz by LE_1Mbps	



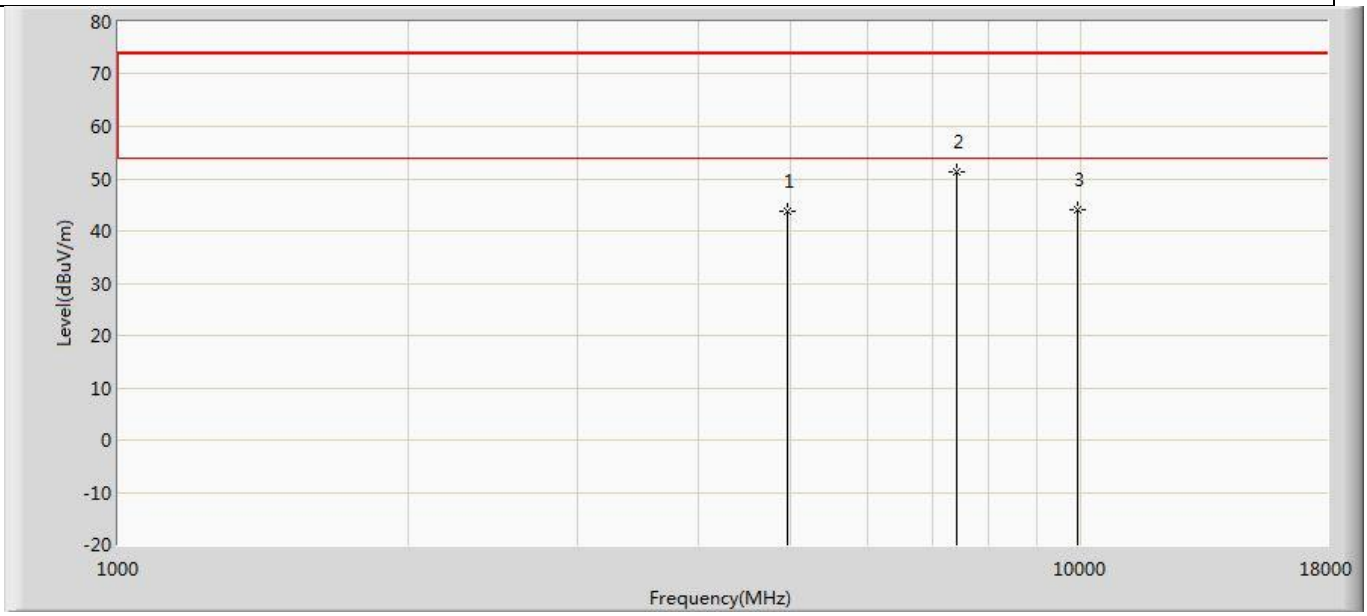
No	Mark	Frequency (MHz)	Measure Level (dBuV/m)	Reading Level (dBuV)	Over Limit (dB)	Limit (dBuV/m)	Factor (dB)	Type
1		4880.000	44.026	48.984	-29.974	74.000	-4.959	PK
2	*	7320.000	53.436	55.478	-20.564	74.000	-2.042	PK
3		9760.000	43.595	44.170	-30.405	74.000	-0.575	PK

Profile:2150803R	Page No.: 46
Engineer: Tongben	
Site: AC5	Time: 2021/06/12 - 18:15
Limit: FCC_Part15.209_RE(3m)	Margin: 0
Probe: Horn_3117_00167055(1-18GHz)	Polarity: Horizontal
EUT: RM2-Track-1-0	Power: AC 120V/60Hz
Note: Mode 1:Transmit at 2440MHz by LE_1Mbps	



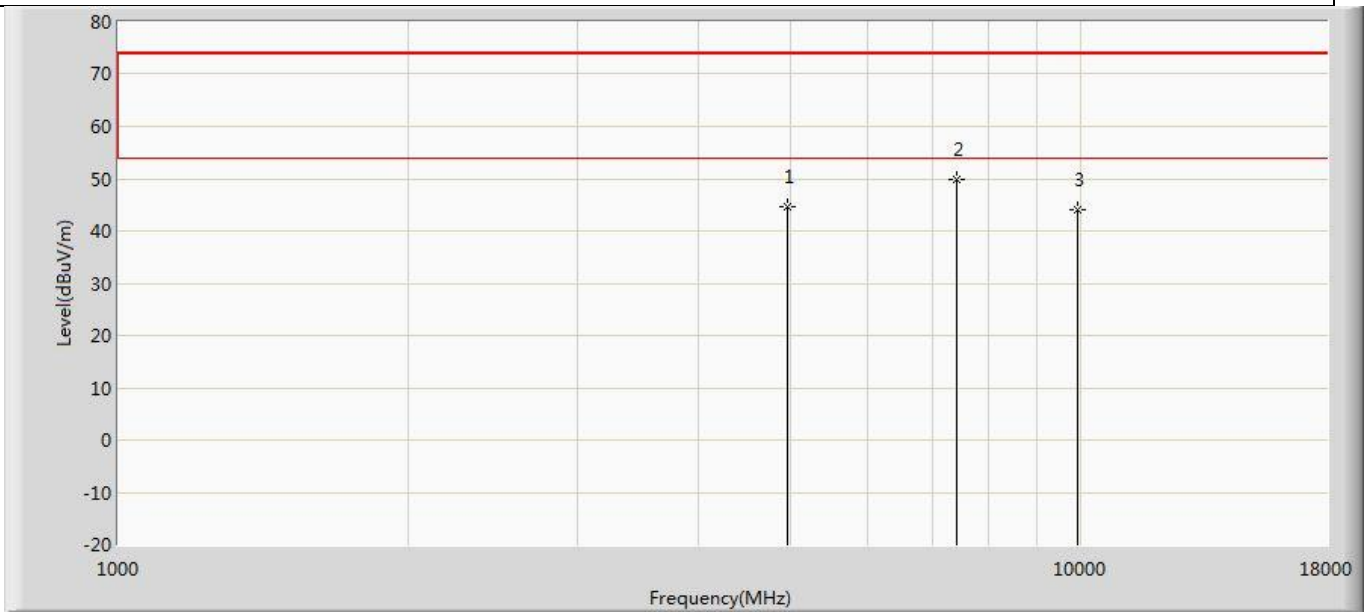
No	Mark	Frequency (MHz)	Measure Level (dBuV/m)	Reading Level (dBuV)	Over Limit (dB)	Limit (dBuV/m)	Factor (dB)	Type
1		4880.000	47.430	52.388	-26.570	74.000	-4.959	PK
2	*	7320.000	52.198	54.240	-21.802	74.000	-2.042	PK
3		9760.000	42.692	43.267	-31.308	74.000	-0.575	PK

Profile:2150803R	Page No.: 47
Engineer: Tongben	
Site: AC5	Time: 2021/06/12 - 18:17
Limit: FCC_Part15.209_RE(3m)	Margin: 0
Probe: Horn_3117_00167055(1-18GHz)	Polarity: Vertical
EUT: RM2-Track-1-0	Power: AC 120V/60Hz
Note: Mode 1:Transmit at 2480MHz by LE_1Mbps	



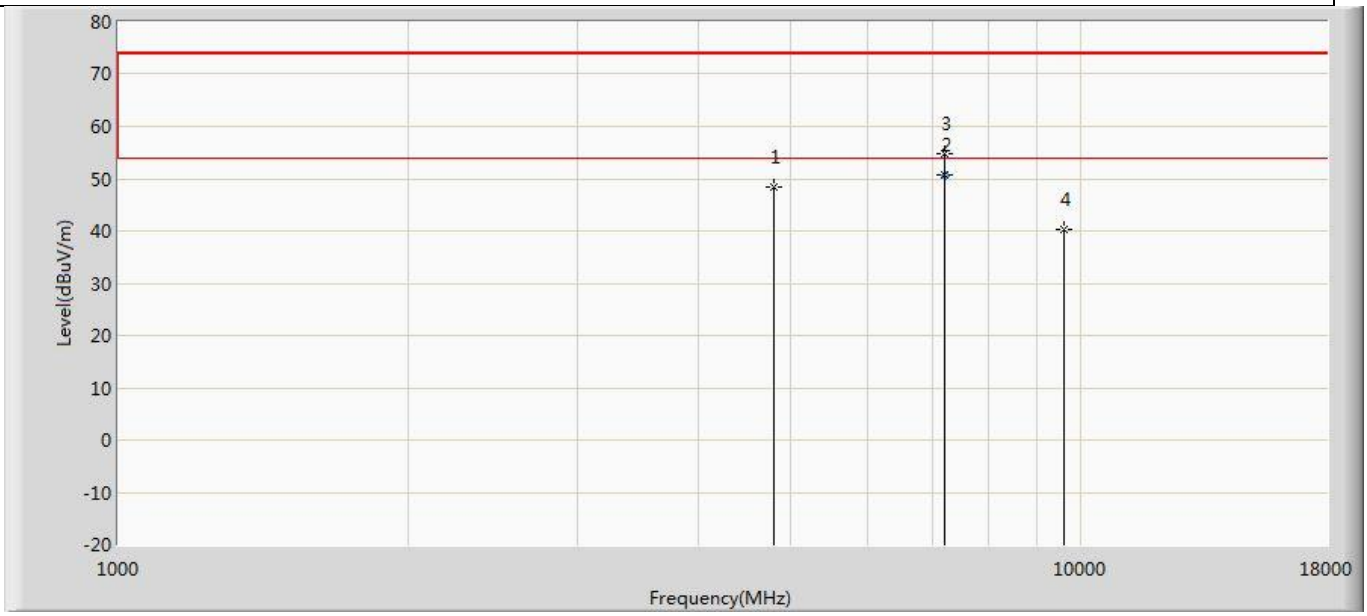
No	Mark	Frequency (MHz)	Measure Level (dBuV/m)	Reading Level (dBuV)	Over Limit (dB)	Limit (dBuV/m)	Factor (dB)	Type
1		4960.000	43.788	48.759	-30.212	74.000	-4.972	PK
2	*	7440.000	51.359	53.336	-22.641	74.000	-1.978	PK
3		9920.000	44.156	43.989	-29.844	74.000	0.167	PK

Profile:2150803R	Page No.: 48
Engineer: Tongben	
Site: AC5	Time: 2021/06/12 - 18:19
Limit: FCC_Part15.209_RE(3m)	Margin: 0
Probe: Horn_3117_00167055(1-18GHz)	Polarity: Horizontal
EUT: RM2-Track-1-0	Power: AC 120V/60Hz
Note: Mode 1:Transmit at 2480MHz by LE_1Mbps	



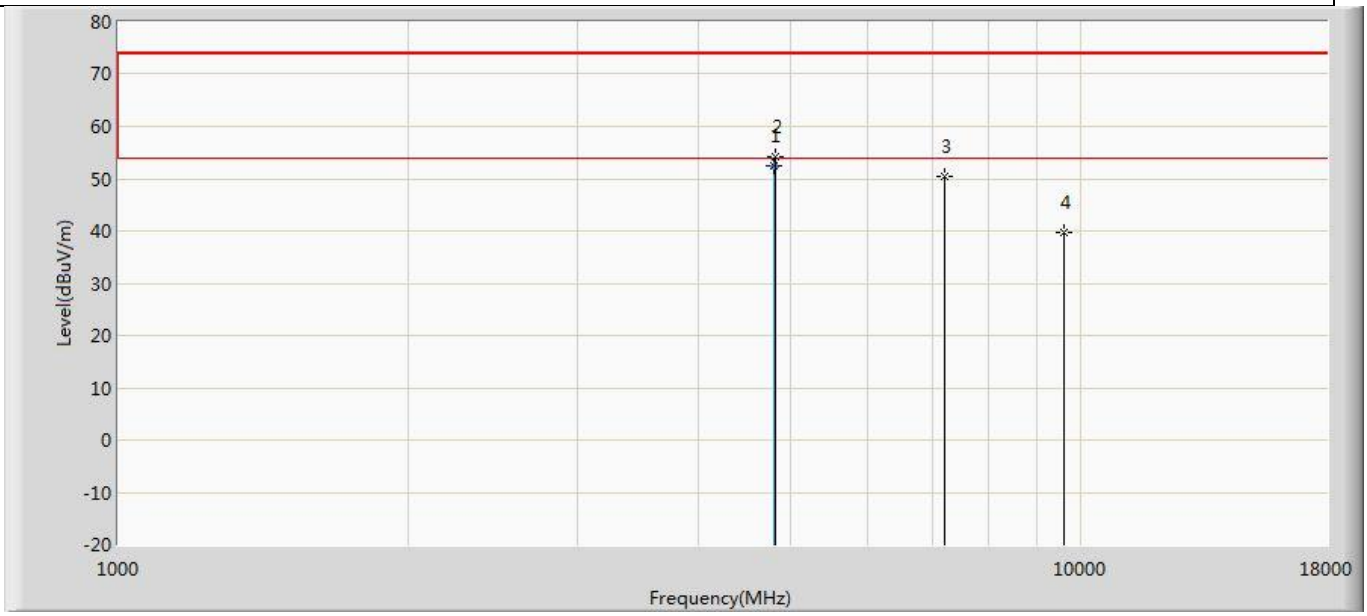
No	Mark	Frequency (MHz)	Measure Level (dBuV/m)	Reading Level (dBuV)	Over Limit (dB)	Limit (dBuV/m)	Factor (dB)	Type
1		4960.000	44.765	49.736	-29.235	74.000	-4.972	PK
2	*	7440.000	49.851	51.828	-24.149	74.000	-1.978	PK
3		9920.000	44.014	43.847	-29.986	74.000	0.167	PK

Profile: 2150803R	Page No.: 25
Engineer: Tongben	
Site: AC5	Time: 2021/06/12 - 18:21
Limit: FCC_Part15.209_RE(3m)	Margin: 0
Probe: Horn_3117_00167055(1-18GHz)	Polarity: Vertical
EUT: RM2-Track-1-0	Power: AC 120V/60Hz
Note: Mode 2:Transmit at 2402MHz by LE_2Mpbs	



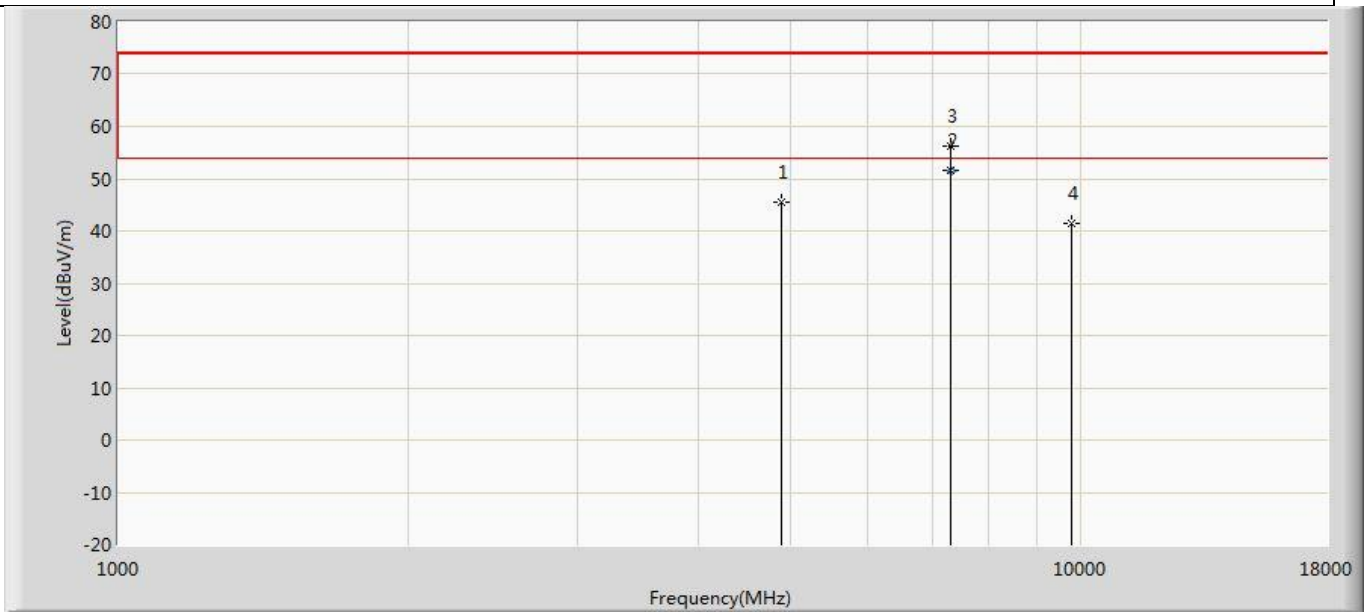
No	Mark	Frequency (MHz)	Measure Level (dBuV/m)	Reading Level (dBuV)	Over Limit (dB)	Limit (dBuV/m)	Factor (dB)	Type
1		4804.000	48.261	52.921	-25.739	74.000	-4.660	PK
2	*	7204.780	50.663	52.816	-3.337	54.000	-2.153	AV
3		7205.000	54.881	57.043	-19.119	74.000	-2.162	PK
4		9608.000	40.308	41.432	-33.692	74.000	-1.124	PK

Profile: 2150803R	Page No.: 26
Engineer: Tongben	
Site: AC5	Time: 2021/06/12 - 18:23
Limit: FCC_Part15.209_RE(3m)	Margin: 0
Probe: Horn_3117_00167055(1-18GHz)	Polarity: Horizontal
EUT: RM2-Track-1-0	Power: AC 120V/60Hz
Note: Mode 2:Transmit at 2402MHz by LE_2Mpbs	



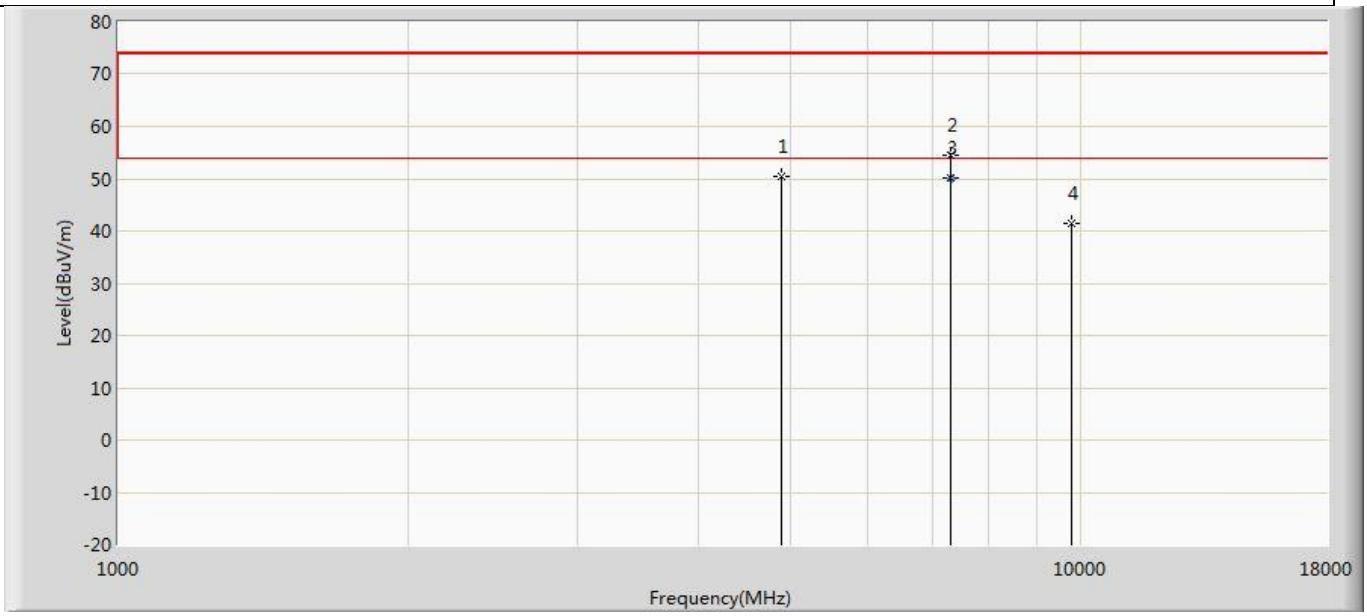
No	Mark	Frequency (MHz)	Measure Level (dBuV/m)	Reading Level (dBuV)	Over Limit (dB)	Limit (dBuV/m)	Factor (dB)	Type
1	*	4803.110	52.597	57.262	-1.403	54.000	-4.665	AV
2		4808.000	54.269	58.905	-19.731	74.000	-4.636	PK
3		7206.000	50.332	52.480	-23.668	74.000	-2.148	PK
4		9608.000	39.781	40.905	-34.219	74.000	-1.124	PK

Profile: 2150803R	Page No.: 27
Engineer: Tongben	
Site: AC5	Time: 2021/06/12 - 18:25
Limit: FCC_Part15.209_RE(3m)	Margin: 0
Probe: Horn_3117_00167055(1-18GHz)	Polarity: Vertical
EUT: RM2-Track-1-0	Power: AC 120V/60Hz
Note: Mode 2:Transmit at 2440MHz by LE_2Mpbs	



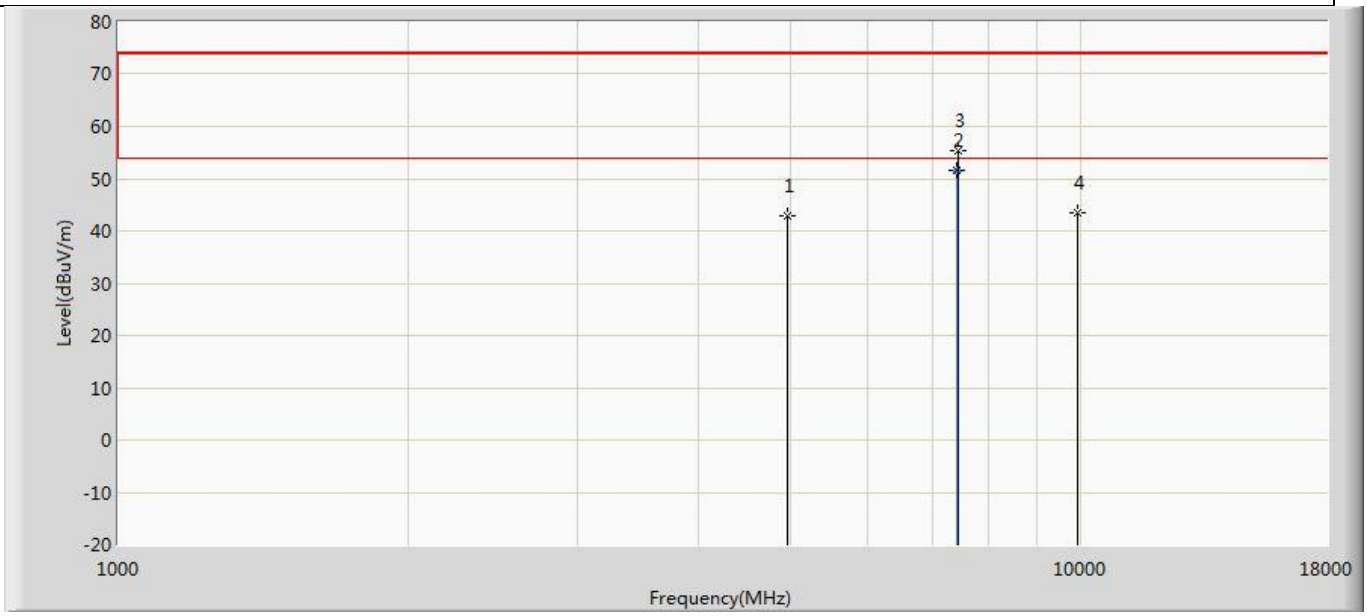
No	Mark	Frequency (MHz)	Measure Level (dBuV/m)	Reading Level (dBuV)	Over Limit (dB)	Limit (dBuV/m)	Factor (dB)	Type
1		4880.000	45.487	50.445	-28.513	74.000	-4.959	PK
2	*	7321.220	51.711	53.738	-2.289	54.000	-2.027	AV
3		7324.000	56.348	58.340	-17.652	74.000	-1.992	PK
4		9760.000	41.329	41.904	-32.671	74.000	-0.575	PK

Profile: 2150803R	Page No.: 28
Engineer: Tongben	
Site: AC5	Time: 2021/06/12 - 18:27
Limit: FCC_Part15.209_RE(3m)	Margin: 0
Probe: Horn_3117_00167055(1-18GHz)	Polarity: Horizontal
EUT: RM2-Track-1-0	Power: AC 120V/60Hz
Note: Mode 2:Transmit at 2440MHz by LE_2Mpbs	



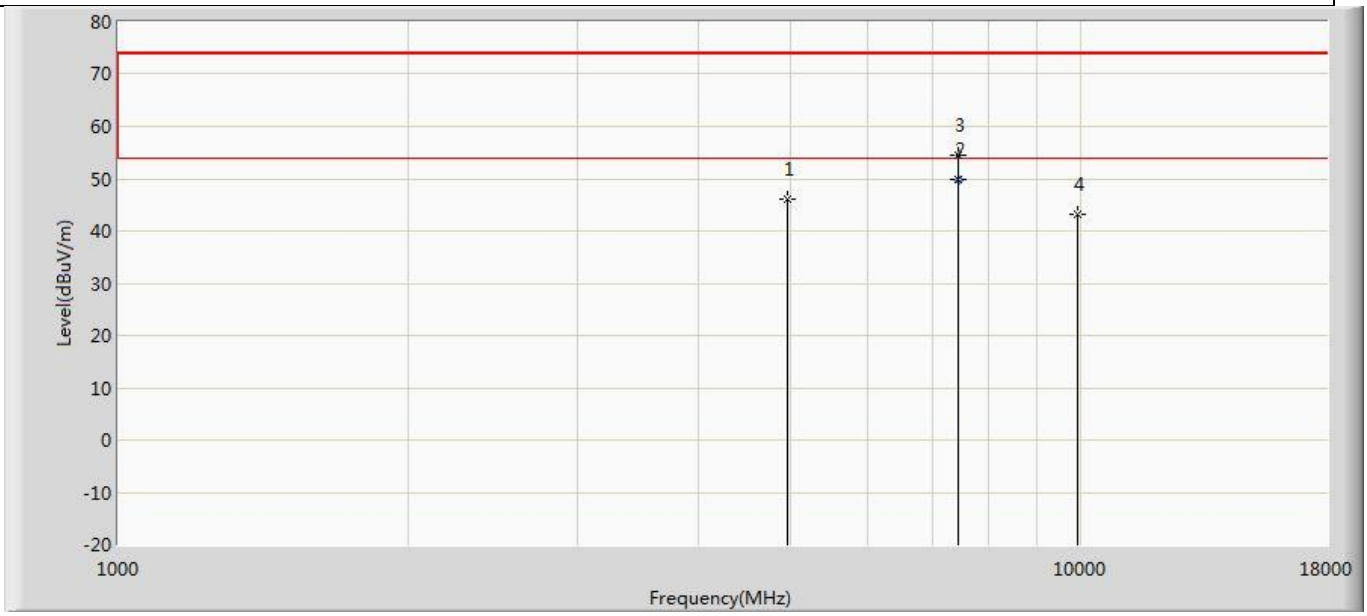
No	Mark	Frequency (MHz)	Measure Level (dBuV/m)	Reading Level (dBuV)	Over Limit (dB)	Limit (dBuV/m)	Factor (dB)	Type
1		4880.000	50.530	55.488	-23.470	74.000	-4.959	PK
2		7315.500	54.479	56.577	-19.521	74.000	-2.098	PK
3	*	7321.240	50.183	52.210	-3.817	54.000	-2.027	AV
4		9760.000	41.564	42.139	-32.436	74.000	-0.575	PK

Profile: 2150803R	Page No.: 29
Engineer: Tongben	
Site: AC5	Time: 2021/06/12 - 18:29
Limit: FCC_Part15.209_RE(3m)	Margin: 0
Probe: Horn_3117_00167055(1-18GHz)	Polarity: Vertical
EUT: RM2-Track-1-0	Power: AC 120V/60Hz
Note: Mode 2:Transmit at 2480MHz by LE_2Mpbs	



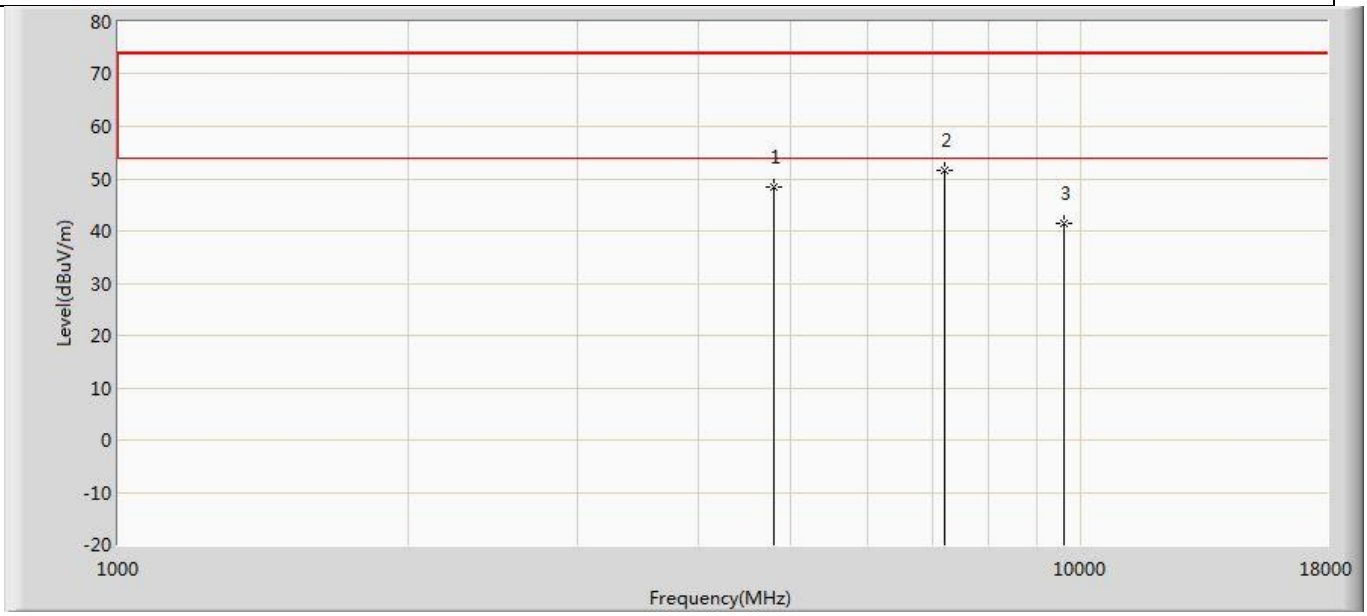
No	Mark	Frequency (MHz)	Measure Level (dBuV/m)	Reading Level (dBuV)	Over Limit (dB)	Limit (dBuV/m)	Factor (dB)	Type
1		4960.000	42.851	47.822	-31.149	74.000	-4.972	PK
2	*	7438.800	51.501	53.485	-2.499	54.000	-1.984	AV
3		7443.000	55.403	57.365	-18.597	74.000	-1.962	PK
4		9920.000	43.600	43.433	-30.400	74.000	0.167	PK

Profile: 2150803R	Page No.: 30
Engineer: Tongben	
Site: AC5	Time: 2021/06/12 - 18:31
Limit: FCC_Part15.209_RE(3m)	Margin: 0
Probe: Horn_3117_00167055(1-18GHz)	Polarity: Horizontal
EUT: RM2-Track-1-0	Power: AC 120V/60Hz
Note: Mode 2:Transmit at 2480MHz by LE_2Mpbs	



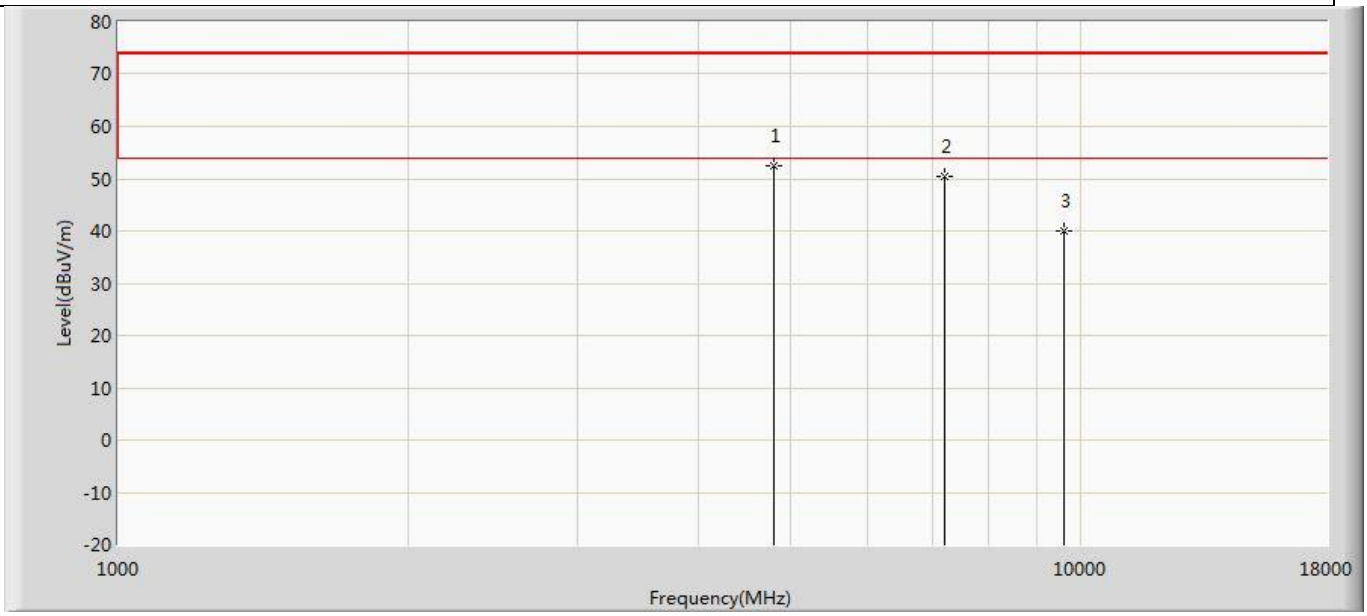
No	Mark	Frequency (MHz)	Measure Level (dBuV/m)	Reading Level (dBuV)	Over Limit (dB)	Limit (dBuV/m)	Factor (dB)	Type
1		4960.000	46.198	51.169	-27.802	74.000	-4.972	PK
2	*	7441.240	49.779	51.750	-4.221	54.000	-1.970	AV
3		7443.000	54.504	56.466	-19.496	74.000	-1.962	PK
4		9920.000	43.049	42.882	-30.951	74.000	0.167	PK

Profile: 2150803R	Page No.: 37
Engineer: Tongben	
Site: AC5	Time: 2021/06/12 - 18:33
Limit: FCC_Part15.209_RE(3m)	Margin: 0
Probe: Horn_3117_00167055(1-18GHz)	Polarity: Vertical
EUT: RM2-Track-1-0	Power: AC 120V/60Hz
Note: Mode 3:Transmit at 2402MHz by LE_Coded S=2	



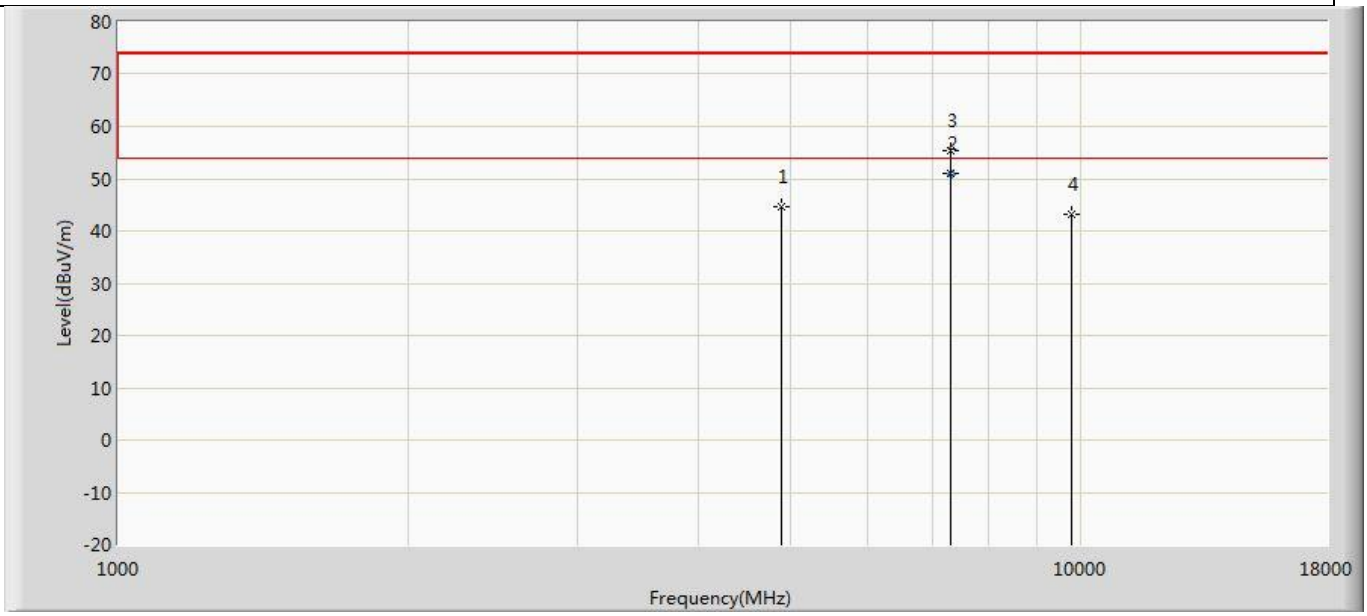
No	Mark	Frequency (MHz)	Measure Level (dBuV/m)	Reading Level (dBuV)	Over Limit (dB)	Limit (dBuV/m)	Factor (dB)	Type
1		4804.000	48.287	52.947	-25.713	74.000	-4.660	PK
2	*	7206.000	51.692	53.840	-22.308	74.000	-2.148	PK
3		9608.000	41.367	42.491	-32.633	74.000	-1.124	PK

Profile: 2150803R	Page No.: 38
Engineer: Tongben	
Site: AC5	Time: 2021/06/12 - 18:35
Limit: FCC_Part15.209_RE(3m)	Margin: 0
Probe: Horn_3117_00167055(1-18GHz)	Polarity: Horizontal
EUT: RM2-Track-1-0	Power: AC 120V/60Hz
Note: Mode 3:Transmit at 2402MHz by LE_Coded S=2	



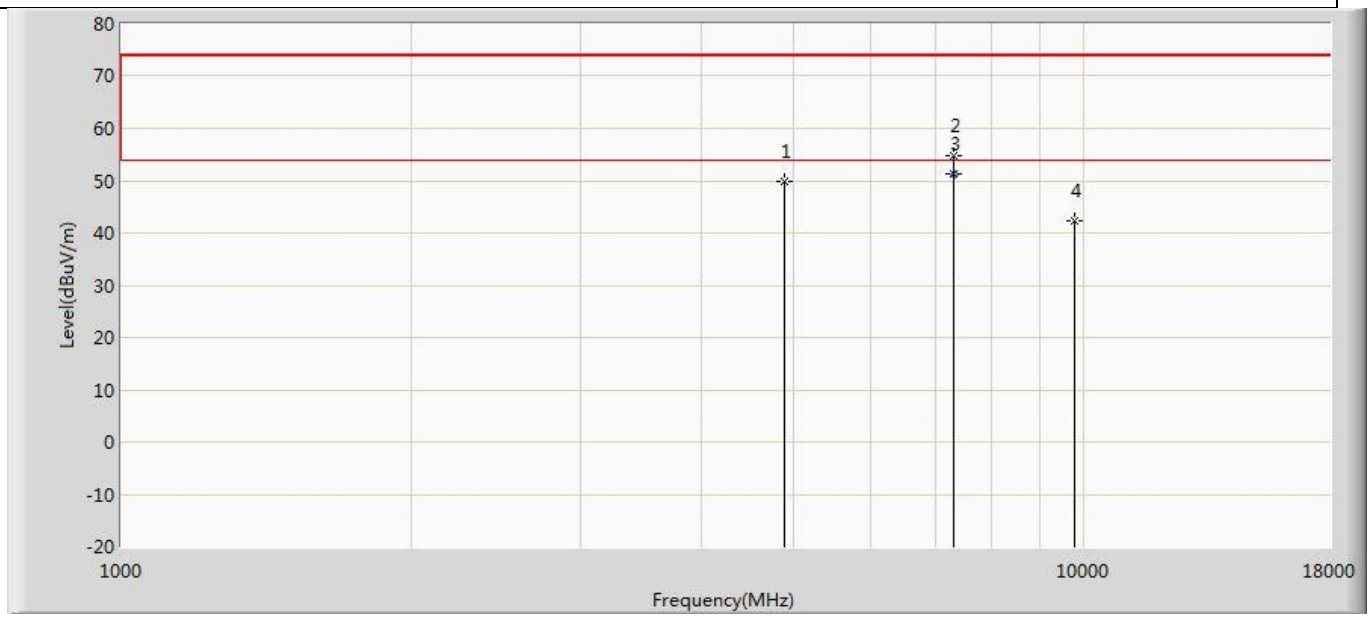
No	Mark	Frequency (MHz)	Measure Level (dBuV/m)	Reading Level (dBuV)	Over Limit (dB)	Limit (dBuV/m)	Factor (dB)	Type
1	*	4804.000	52.562	57.222	-21.438	74.000	-4.660	PK
2		7206.000	50.469	52.617	-23.531	74.000	-2.148	PK
3		9608.000	40.031	41.155	-33.969	74.000	-1.124	PK

Profile: 2150803R	Page No.: 39
Engineer: Tongben	
Site: AC5	Time: 2021/06/12 - 18:37
Limit: FCC_Part15.209_RE(3m)	Margin: 0
Probe: Horn_3117_00167055(1-18GHz)	Polarity: Vertical
EUT: RM2-Track-1-0	Power: AC 120V/60Hz
Note: Mode 3:Transmit at 2440MHz by LE_Coded S=2	



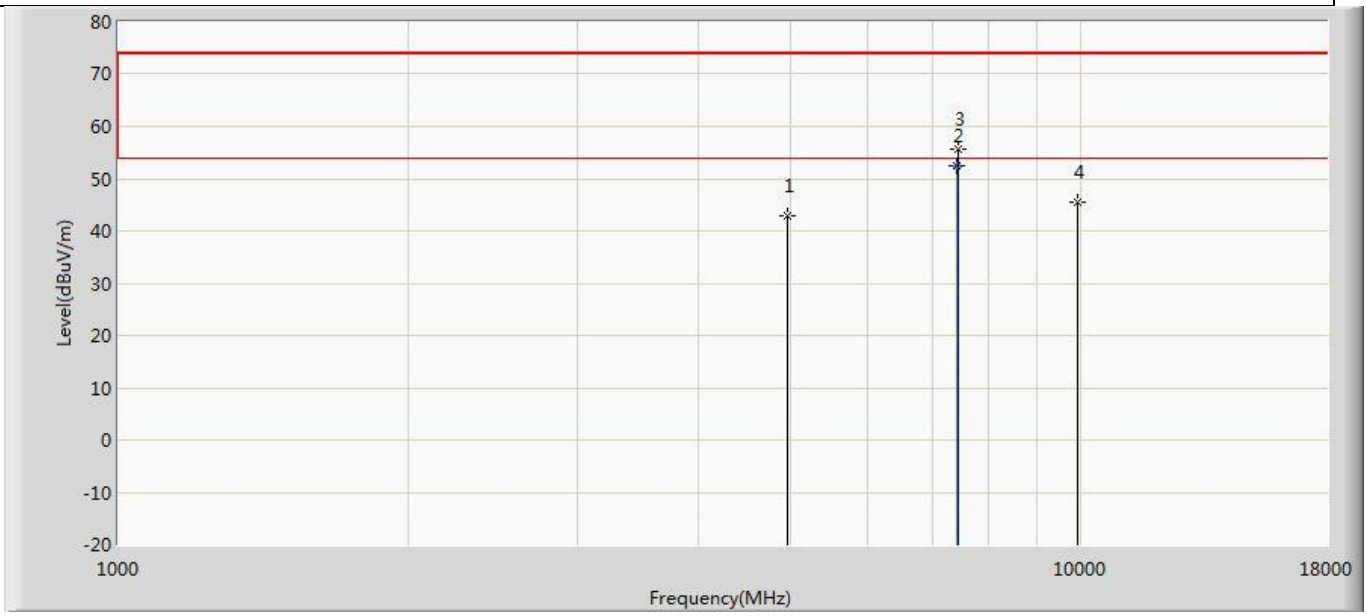
No	Mark	Frequency (MHz)	Measure Level (dBuV/m)	Reading Level (dBuV)	Over Limit (dB)	Limit (dBuV/m)	Factor (dB)	Type
1		4880.000	44.696	49.654	-29.304	74.000	-4.959	PK
2	*	7320.610	51.069	53.104	-2.931	54.000	-2.035	AV
3		7324.000	55.328	57.320	-18.672	74.000	-1.992	PK
4		9760.000	43.058	43.633	-30.942	74.000	-0.575	PK

Profile: 2150803R	Page No.: 40
Engineer: Tongben	
Site: AC5	Time: 2021/06/12 - 18:39
Limit: FCC_Part15.209_RE(3m)	Margin: 0
Probe: Horn_3117_00167055(1-18GHz)	Polarity: Horizontal
EUT: RM2-Track-1-0	Power: AC 120V/60Hz
Note: Mode 3:Transmit at 2440MHz by LE_Coded S=2	



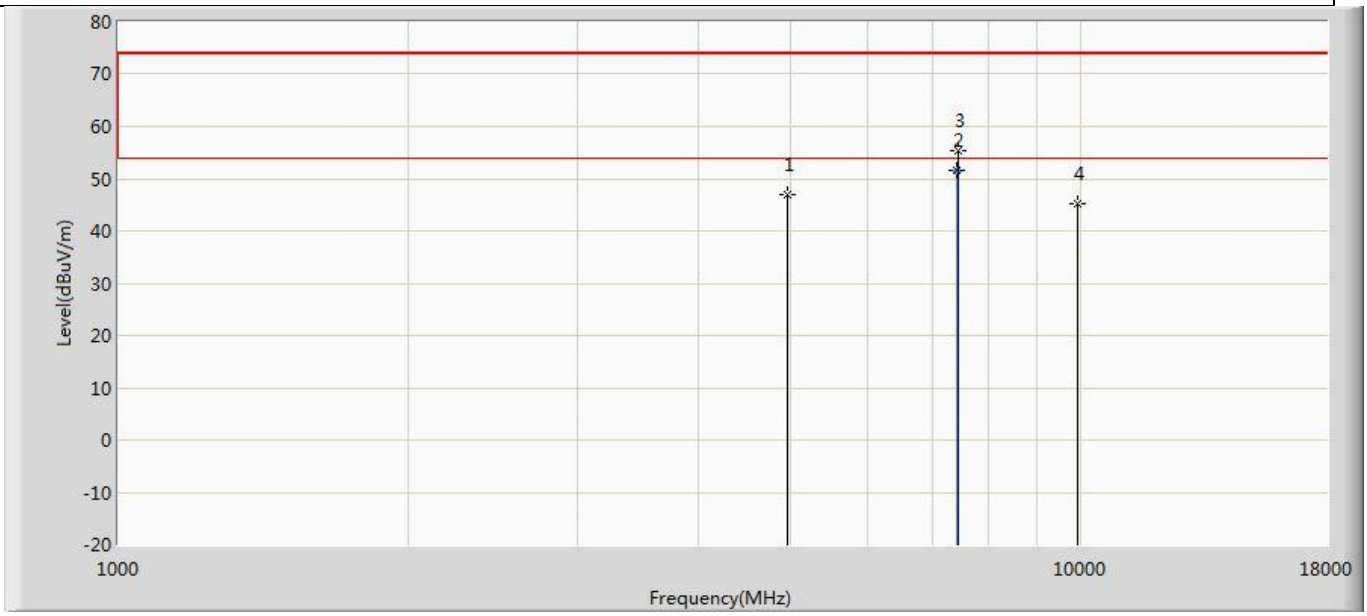
No	Mark	Frequency (MHz)	Measure Level (dBuV/m)	Reading Level (dBuV)	Over Limit (dB)	Limit (dBuV/m)	Factor (dB)	Type
1		4880.000	49.905	54.863	-24.095	74.000	-4.959	PK
2		7315.500	54.708	56.806	-19.292	74.000	-2.098	PK
3	*	7320.560	51.186	53.221	-2.814	54.000	-2.035	AV
4		9760.000	42.208	42.783	-31.792	74.000	-0.575	PK

Profile: 2150803R	Page No.: 41
Engineer: Tongben	
Site: AC5	Time: 2021/06/12 - 18:41
Limit: FCC_Part15.209_RE(3m)	Margin: 0
Probe: Horn_3117_00167055(1-18GHz)	Polarity: Vertical
EUT: RM2-Track-1-0	Power: AC 120V/60Hz
Note: Mode 3:Transmit at 2480MHz by LE_Coded S=2	



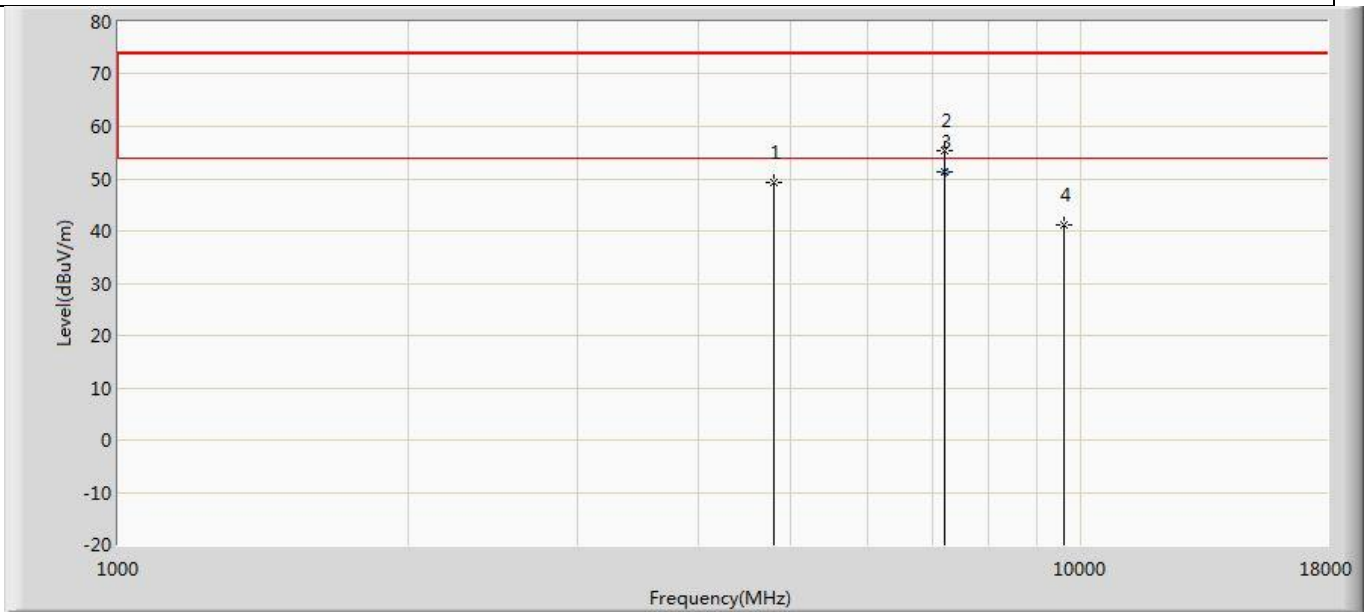
No	Mark	Frequency (MHz)	Measure Level (dBuV/m)	Reading Level (dBuV)	Over Limit (dB)	Limit (dBuV/m)	Factor (dB)	Type
1		4960.000	42.991	47.962	-31.009	74.000	-4.972	PK
2	*	7439.300	52.386	54.367	-1.614	54.000	-1.981	AV
3		7443.000	55.603	57.565	-18.397	74.000	-1.962	PK
4		9920.000	45.397	45.230	-28.603	74.000	0.167	PK

Profile: 2150803R	Page No.: 42
Engineer: Tongben	
Site: AC5	Time: 2021/06/12 - 18:43
Limit: FCC_Part15.209_RE(3m)	Margin: 0
Probe: Horn_3117_00167055(1-18GHz)	Polarity: Horizontal
EUT: RM2-Track-1-0	Power: AC 120V/60Hz
Note: Mode 3:Transmit at 2480MHz by LE_Coded S=2	



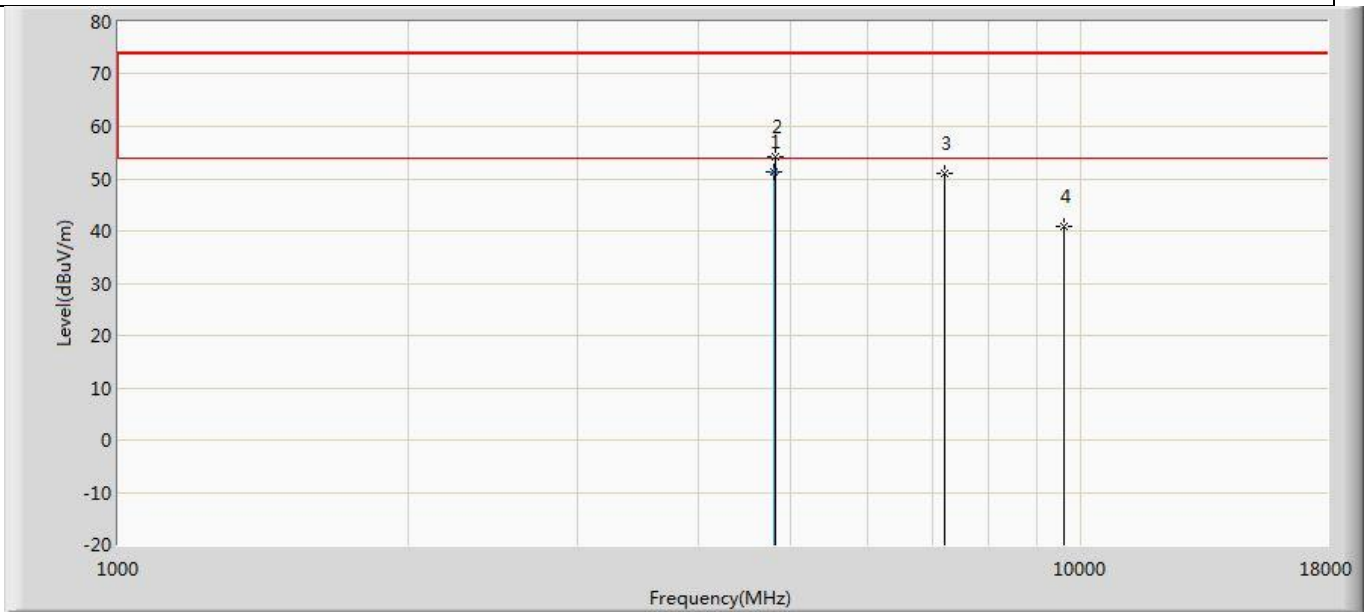
No	Mark	Frequency (MHz)	Measure Level (dBuV/m)	Reading Level (dBuV)	Over Limit (dB)	Limit (dBuV/m)	Factor (dB)	Type
1		4960.000	47.045	52.016	-26.955	74.000	-4.972	PK
2	*	7440.600	51.522	53.496	-2.478	54.000	-1.975	AV
3		7443.000	55.382	57.344	-18.618	74.000	-1.962	PK
4		9920.000	45.113	44.946	-28.887	74.000	0.167	PK

Profile: 2150803R	Page No.: 31
Engineer: Tongben	
Site: AC5	Time: 2021/06/12 - 18:45
Limit: FCC_Part15.209_RE(3m)	Margin: 0
Probe: Horn_3117_00167055(1-18GHz)	Polarity: Vertical
EUT: RM2-Track-1-0	Power: AC 120V/60Hz
Note: Mode 4:Transmit at 2402MHz by LE_Coded S=8	



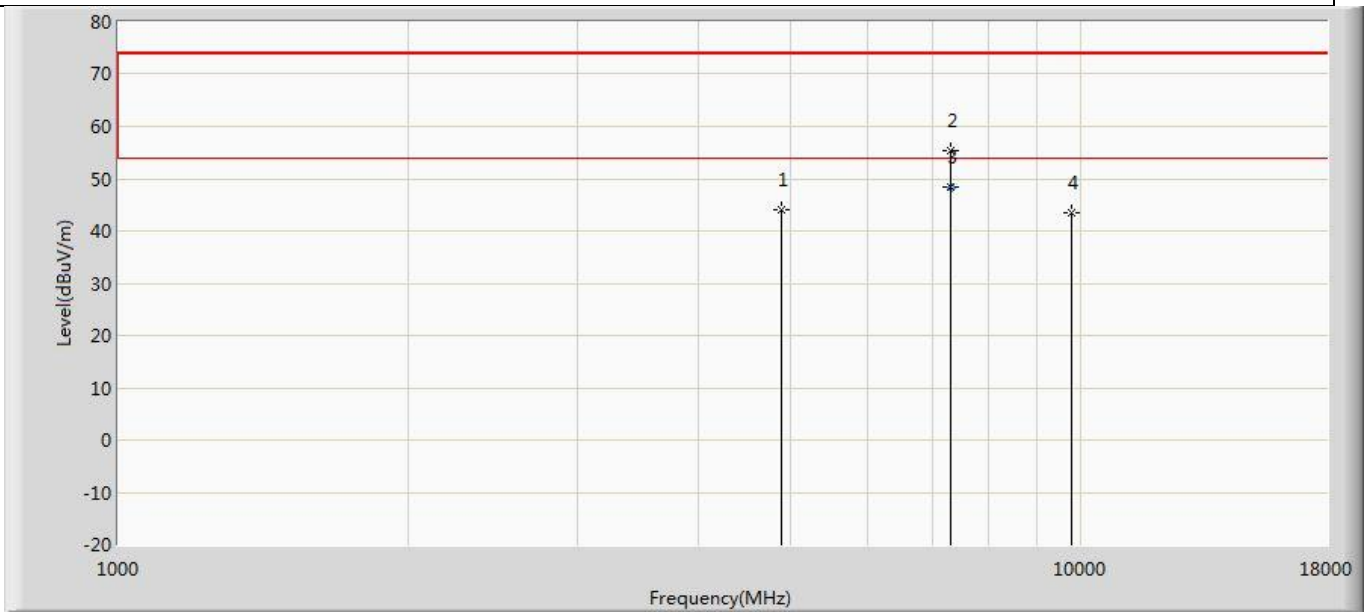
No	Mark	Frequency (MHz)	Measure Level (dBuV/m)	Reading Level (dBuV)	Over Limit (dB)	Limit (dBuV/m)	Factor (dB)	Type
1		4804.000	49.355	54.015	-24.645	74.000	-4.660	PK
2		7205.000	55.409	57.571	-18.591	74.000	-2.162	PK
3	*	7205.350	51.225	53.382	-2.775	54.000	-2.157	AV
4		9608.000	41.022	42.146	-32.978	74.000	-1.124	PK

Profile: 2150803R	Page No.: 32
Engineer: Tongben	
Site: AC5	Time: 2021/06/12 - 18:47
Limit: FCC_Part15.209_RE(3m)	Margin: 0
Probe: Horn_3117_00167055(1-18GHz)	Polarity: Horizontal
EUT: RM2-Track-1-0	Power: AC 120V/60Hz
Note: Mode 4:Transmit at 2402MHz by LE_Coded S=8	



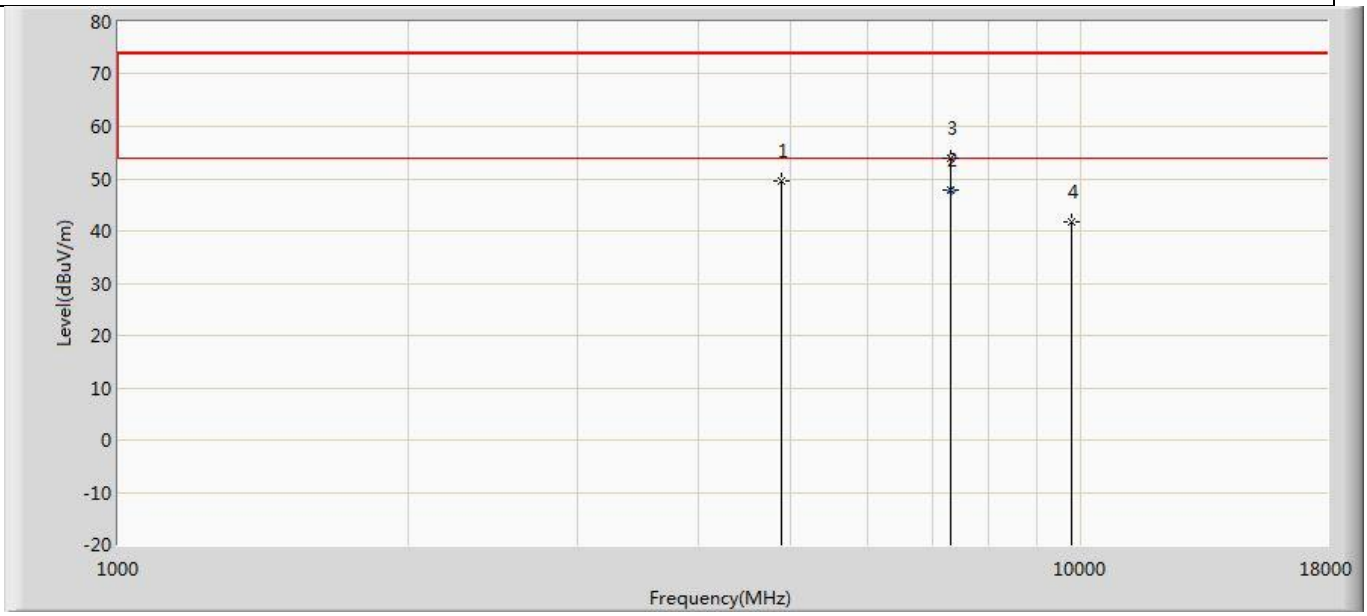
No	Mark	Frequency (MHz)	Measure Level (dBuV/m)	Reading Level (dBuV)	Over Limit (dB)	Limit (dBuV/m)	Factor (dB)	Type
1	*	4804.000	51.202	55.862	-2.798	54.000	-4.660	AV
2		4808.000	54.228	58.864	-19.772	74.000	-4.636	PK
3		7206.000	51.107	53.255	-22.893	74.000	-2.148	PK
4		9608.000	40.896	42.020	-33.104	74.000	-1.124	PK

Profile: 2150803R	Page No.: 33
Engineer: Tongben	
Site: AC5	Time: 2021/06/12 - 18:49
Limit: FCC_Part15.209_RE(3m)	Margin: 0
Probe: Horn_3117_00167055(1-18GHz)	Polarity: Vertical
EUT: RM2-Track-1-0	Power: AC 120V/60Hz
Note: Mode 4:Transmit at 2440MHz by LE_Coded S=8	



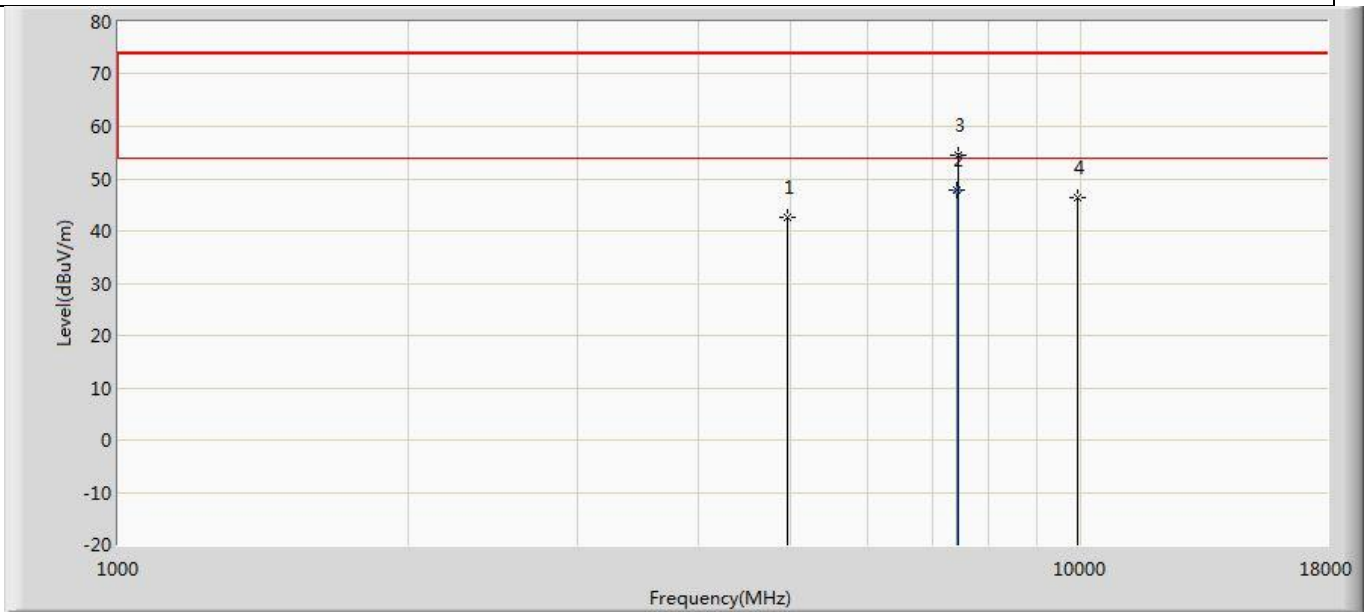
No	Mark	Frequency (MHz)	Measure Level (dBuV/m)	Reading Level (dBuV)	Over Limit (dB)	Limit (dBuV/m)	Factor (dB)	Type
1		4880.000	44.141	49.099	-29.859	74.000	-4.959	PK
2		7320.000	55.312	57.354	-18.688	74.000	-2.042	PK
3	*	7320.650	48.500	50.534	-5.500	54.000	-2.034	AV
4		9760.000	43.368	43.943	-30.632	74.000	-0.575	PK

Profile: 2150803R	Page No.: 34
Engineer: Tongben	
Site: AC5	Time: 2021/06/12 - 18:51
Limit: FCC_Part15.209_RE(3m)	Margin: 0
Probe: Horn_3117_00167055(1-18GHz)	Polarity: Horizontal
EUT: RM2-Track-1-0	Power: AC 120V/60Hz
Note: Mode 4:Transmit at 2440MHz by LE_Coded S=8	



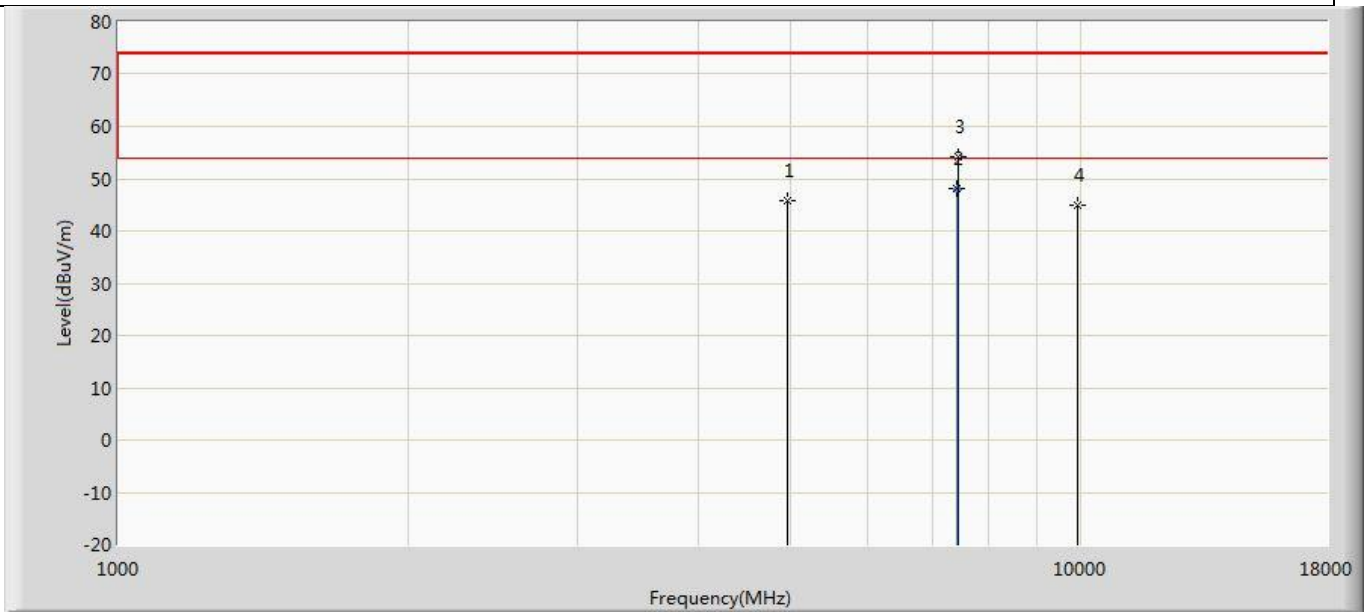
No	Mark	Frequency (MHz)	Measure Level (dBuV/m)	Reading Level (dBuV)	Over Limit (dB)	Limit (dBuV/m)	Factor (dB)	Type
1		4880.000	49.538	54.496	-24.462	74.000	-4.959	PK
2	*	7319.340	47.758	49.808	-6.242	54.000	-2.050	AV
3		7320.000	53.790	55.832	-20.210	74.000	-2.042	PK
4		9760.000	41.749	42.324	-32.251	74.000	-0.575	PK

Profile: 2150803R	Page No.: 35
Engineer: Tongben	
Site: AC5	Time: 2021/06/12 - 18:53
Limit: FCC_Part15.209_RE(3m)	Margin: 0
Probe: Horn_3117_00167055(1-18GHz)	Polarity: Vertical
EUT: RM2-Track-1-0	Power: AC 120V/60Hz
Note: Mode 4:Transmit at 2480MHz by LE_Coded S=8	



No	Mark	Frequency (MHz)	Measure Level (dBuV/m)	Reading Level (dBuV)	Over Limit (dB)	Limit (dBuV/m)	Factor (dB)	Type
1		4960.000	42.557	47.528	-31.443	74.000	-4.972	PK
2	*	7439.350	47.879	49.860	-6.121	54.000	-1.980	AV
3		7443.000	54.448	56.410	-19.552	74.000	-1.962	PK
4		9920.000	46.515	46.348	-27.485	74.000	0.167	PK

Profile: 2150803R	Page No.: 36
Engineer: Tongben	
Site: AC5	Time: 2021/06/12 - 18:55
Limit: FCC_Part15.209_RE(3m)	Margin: 0
Probe: Horn_3117_00167055(1-18GHz)	Polarity: Horizontal
EUT: RM2-Track-1-0	Power: AC 120V/60Hz
Note: Mode 4:Transmit at 2480MHz by LE_Coded S=8	

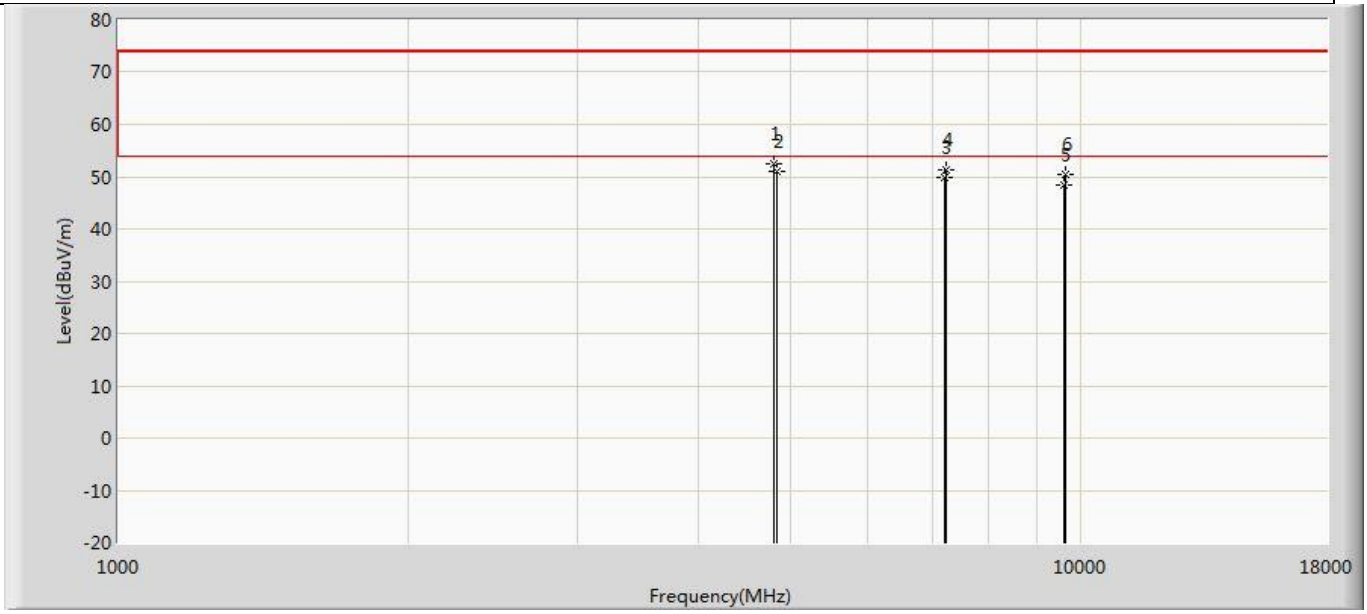


No	Mark	Frequency (MHz)	Measure Level (dBuV/m)	Reading Level (dBuV)	Over Limit (dB)	Limit (dBuV/m)	Factor (dB)	Type
1		4960.000	45.682	50.653	-28.318	74.000	-4.972	PK
2	*	7440.620	48.245	50.219	-5.755	54.000	-1.975	AV
3		7443.000	54.235	56.197	-19.765	74.000	-1.962	PK
4		9920.000	44.975	44.808	-29.025	74.000	0.167	PK

Note:
1. Measured Level = Reading Level + Factor.
2. The test frequency range, 9kHz~30MHz, 18GHz~26GHz, both of the worst case are at least 20dB below the limits, therefore no data appear in the report.
3. 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.
4. As the radiated emission was performed, so conducted emission was not tested.

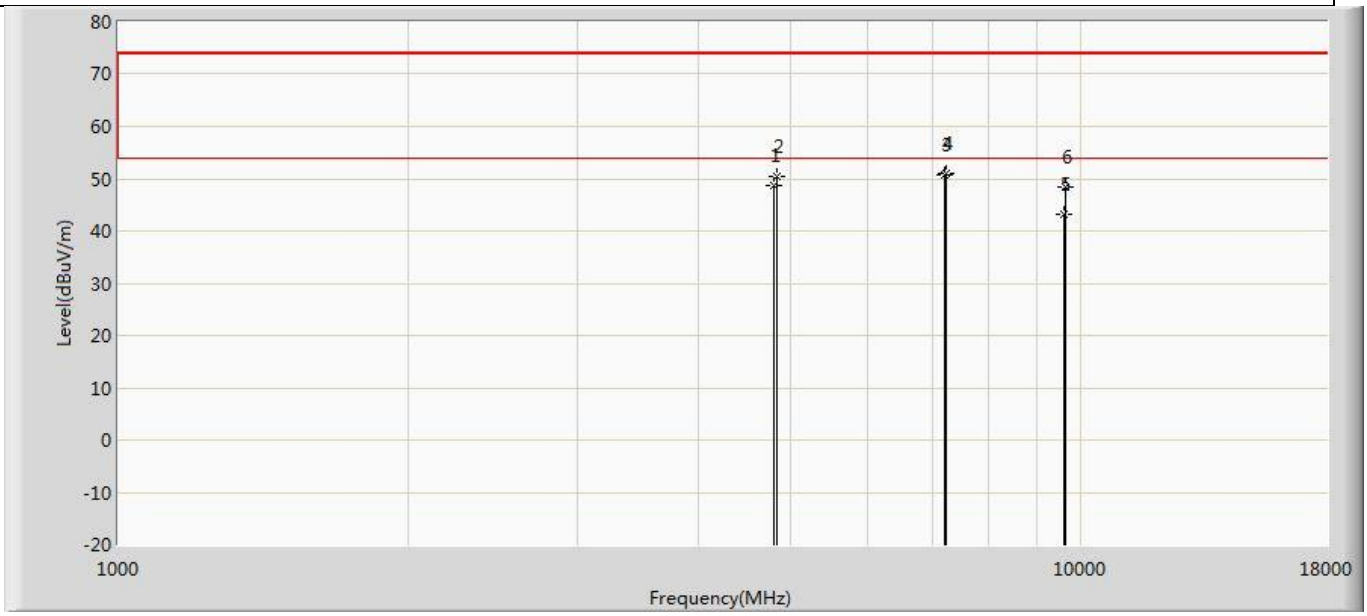
The worst case of simultaneous transmit:

Profile: 2150803R	Page No.: 101
Engineer: Tongben	
Site: AC5	Time: 2021/07/08 - 18:03
Limit: FCC_Part15.209_RE(3m)	Margin: 0
Probe: Horn_3117_00167055(1-18GHz)	Polarity: Vertical
EUT: RM2-Track-1-0	Power: AC 120V/60Hz
Note: Mode 5: Simultaneous transmit at 2412MHz by 802.11b & 2402 MHz by LE_1Mbps(GFSK_LE)	



No	Mark	Frequency (MHz)	Measure Level (dBuV/m)	Reading Level (dBuV)	Over Limit (dB)	Limit (dBuV/m)	Factor (dB)	Type
1	*	4804.000	52.449	45.336	-21.551	74.000	7.113	PK
2		4824.000	51.012	47.512	-22.988	74.000	3.500	PK
3		7206.000	49.961	39.715	-24.039	74.000	10.247	PK
4		7236.000	51.390	40.776	-22.610	74.000	10.614	PK
5		9608.000	48.547	35.332	-25.453	74.000	13.216	PK
6		9648.000	50.399	36.039	-23.601	74.000	14.360	PK

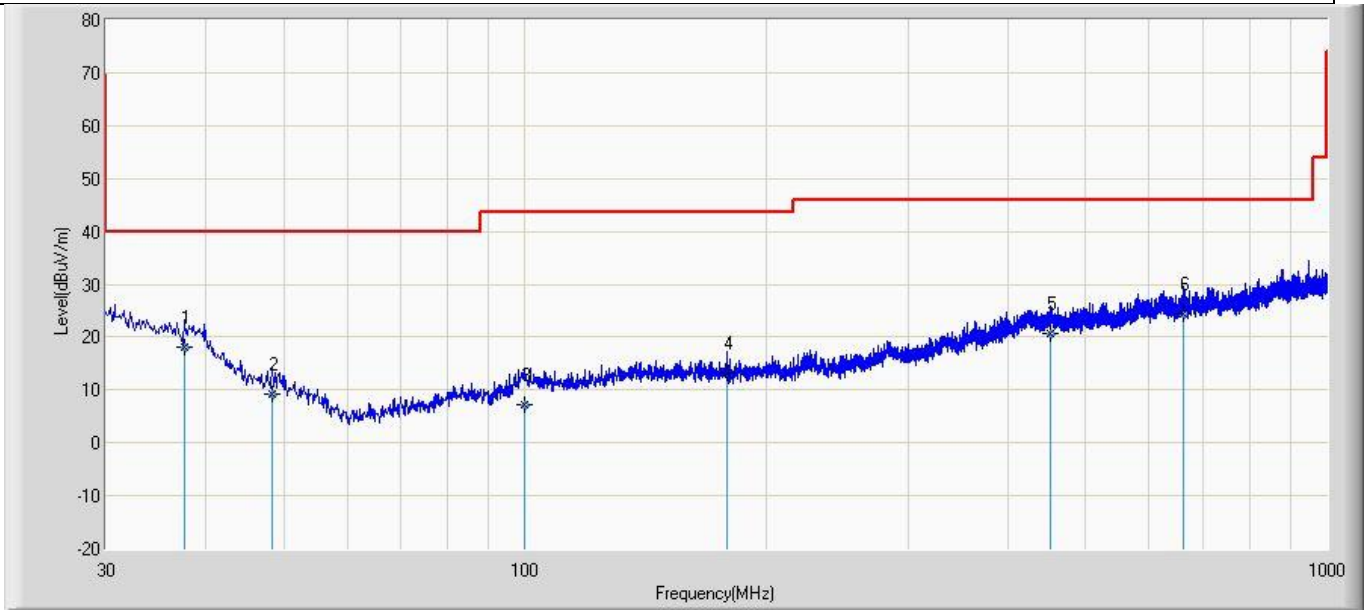
Profile: 2150803R	Page No.: 102
Engineer: Tongben	
Site: AC5	Time: 2021/07/08 - 18:04
Limit: FCC_Part15.209_RE(3m)	Margin: 0
Probe: Horn_3117_00167055(1-18GHz)	Polarity: Horizontal
EUT: RM2-Track-1-0	Power: AC 120V/60Hz
Note: Mode 5: Simultaneous transmit at 2412MHz by 802.11b & 2402 MHz by LE_1Mbps(GFSK_LE)	



No	Mark	Frequency (MHz)	Measure Level (dBuV/m)	Reading Level (dBuV)	Over Limit (dB)	Limit (dBuV/m)	Factor (dB)	Type
1		4804.000	48.634	41.521	-25.366	74.000	7.113	PK
2		4824.000	50.349	43.378	-23.651	74.000	6.971	PK
3		7206.000	50.775	40.529	-23.225	74.000	10.247	PK
4	*	7236.000	50.905	44.057	-23.095	74.000	6.847	PK
5		9608.000	43.231	30.016	-30.769	74.000	13.216	PK
6		9648.000	48.412	34.052	-25.588	74.000	14.360	PK

The worst case of Radiated Emission below 1GHz:

Profile: 2150803R	Page No.: 1
Engineer: Tongben	
Site: AC3	Time: 2021/06/28 - 21:01
Limit: FCC_Part15.209_RE(3m)	Margin: 0
Probe: AC3_3m (30-1000MHz)	Polarity: Horizontal
EUT: RM2-Track-1-0	Power: AC 120V/60Hz
Note: Mode 1	

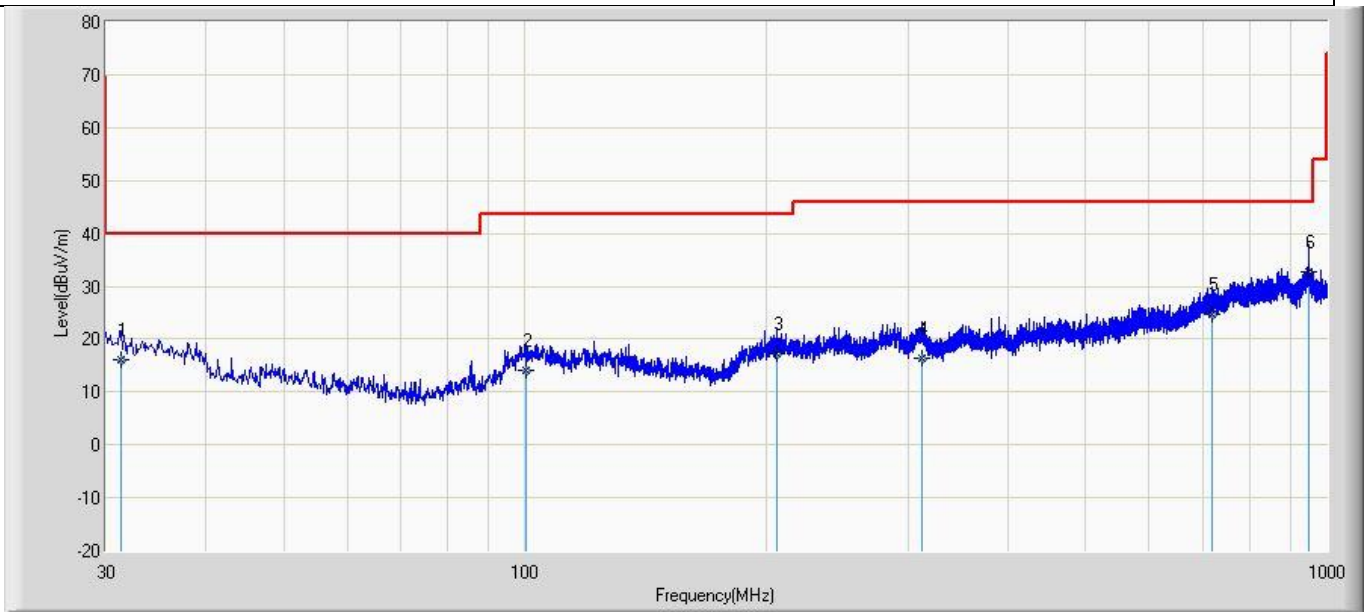


No	Mark	Frequency (MHz)	Measure Level (dBuV/m)	Reading Level (dBuV)	Over Limit (dB)	Limit (dBuV/m)	Factor (dB)	Type
1		37.518	18.235	-5.953	-21.765	40.000	24.189	QP
2		48.430	9.160	-6.638	-30.840	40.000	15.798	QP
3		99.840	7.165	-9.679	-36.335	43.500	16.844	QP
4		178.167	13.231	-3.749	-30.269	43.500	16.980	QP
5		452.193	20.673	-6.300	-25.327	46.000	26.973	QP
6	*	661.349	24.361	-5.022	-21.639	46.000	29.383	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: 2150803R	Page No.: 2
Engineer: Tongben	
Site: AC3	Time: 2021/06/28 - 21:06
Limit: FCC_Part15.209_RE(3m)	Margin: 0
Probe: AC3_3m (30-1000MHz)	Polarity: Vertical
EUT: RM2-Track-1-0	Power: AC 120V/60Hz
Note: Mode 1	



No	Mark	Frequency (MHz)	Measure Level (dBuV/m)	Reading Level (dBuV)	Over Limit (dB)	Limit (dBuV/m)	Factor (dB)	Type
1		31.334	16.216	-7.330	-23.784	40.000	23.546	QP
2		100.446	14.041	-7.959	-29.459	43.500	22.001	QP
3		205.812	17.171	-5.839	-26.329	43.500	23.010	QP
4		312.513	16.336	-8.516	-29.664	46.000	24.851	QP
5		720.398	24.765	-5.287	-21.235	46.000	30.052	QP
6	*	948.347	32.677	-2.175	-13.323	46.000	34.852	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).

4.3 Emissions in non-restricted frequency band	VERDICT: PASS

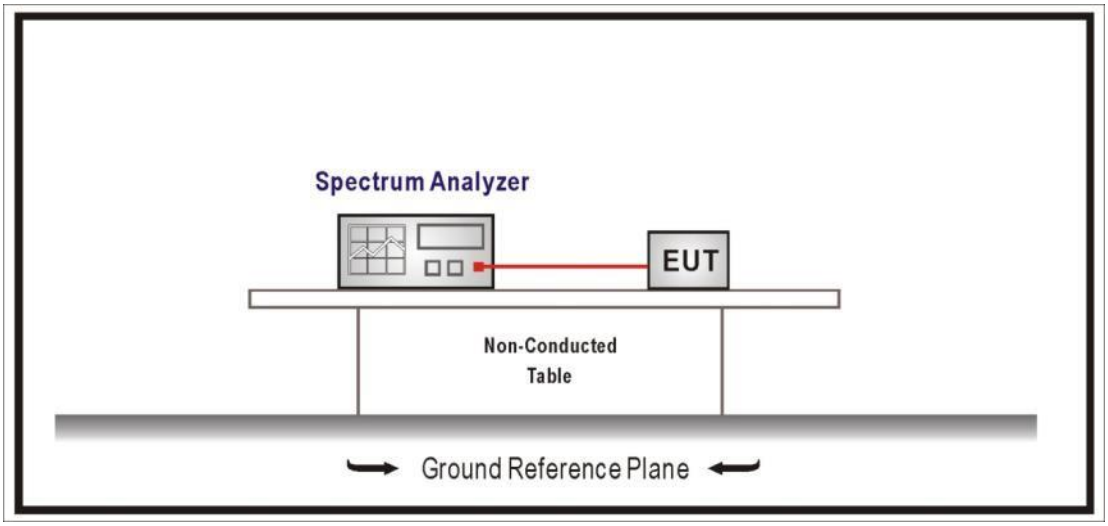
4.3.1 Limit

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

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

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

4.3.2 Test Setup



4.3.3 Test Procedure

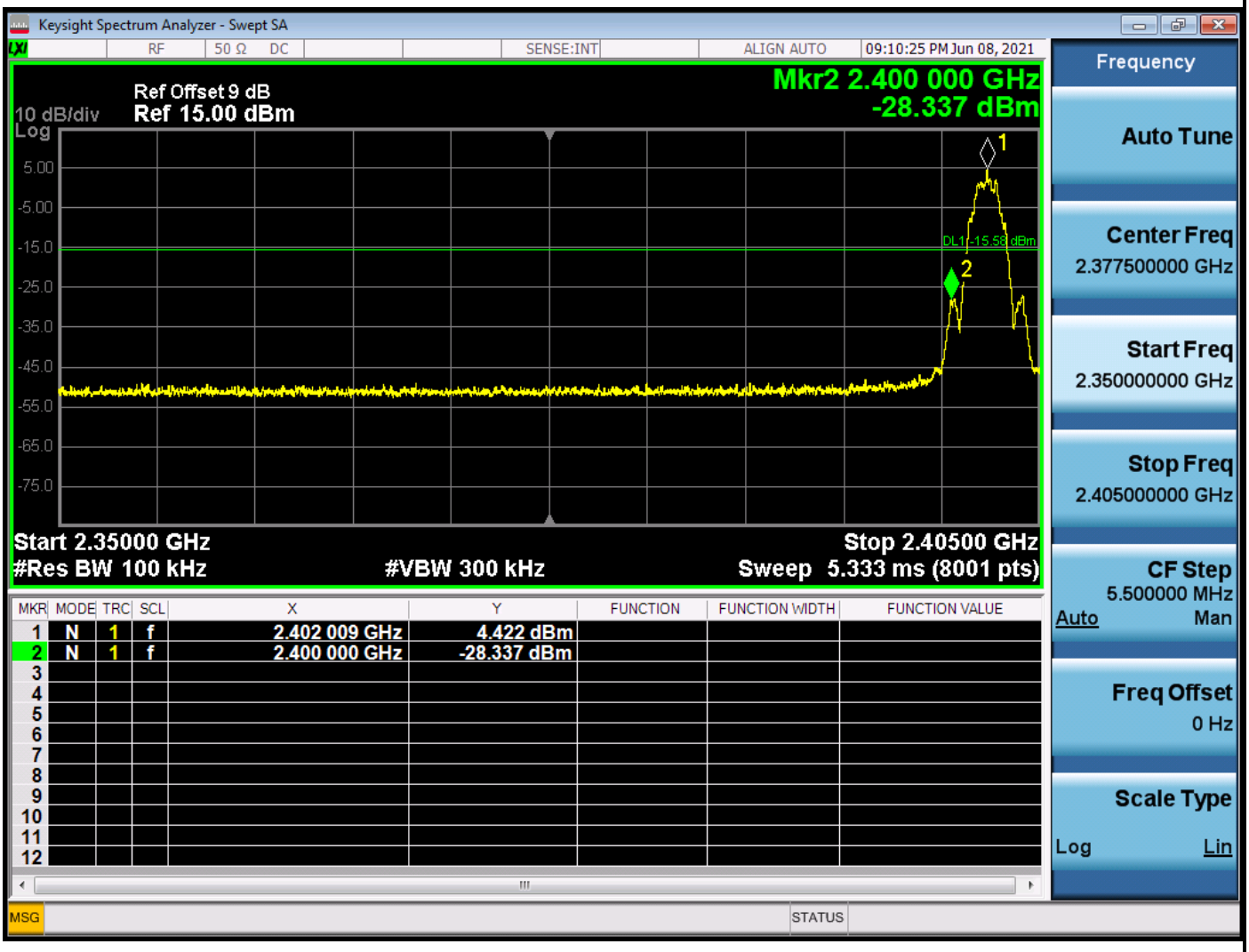
References Rule			Chapter	Description
☒	ANSI C63.10		11.11	Emissions in non-restricted frequency bands
	☒	ANSI C63.10	11.11.1	General
	☒	ANSI C63.10	11.11.2	Reference level measurement
	☒	ANSI C63.10	11.11.3	Emission level measurement

4.3.4 Test Data

Mode	Channel	Test Frequency (MHz)	Maximum In-Band PSD[a] (dBm/100kHz)	Frequency (MHz)	Out-Band PSD[b] (dBm/100kHz)	[a]-[b] (dB)	Limit (dB)	Result
1	00	2402	4.433	2400	-46.088	50.521	>20	Pass
	39	2480	3.743	2500	-49.973	53.716	>20	Pass
2	00	2402	4.422	2400	-28.337	32.759	>20	Pass
	39	2480	3.726	2500	-51.259	54.985	>20	Pass
3	00	2402	4.438	2400	-45.643	50.081	>20	Pass
	39	2480	3.819	2500	-51.006	54.825	>20	Pass
4	00	2402	4.146	2400	-46.445	50.591	>20	Pass
	39	2480	3.300	2500	-51.568	54.868	>20	Pass

Note 1: The worst data plot as below:

Mode2/CH00/2402MHz



The data of entire corresponding spectrum:

Mode 1 CH00 (2402MHz)

Mode 1 CH39 (2480MHz)

Mode 2 CH00 (2402MHz)

Mode 2 CH39 (2480MHz)

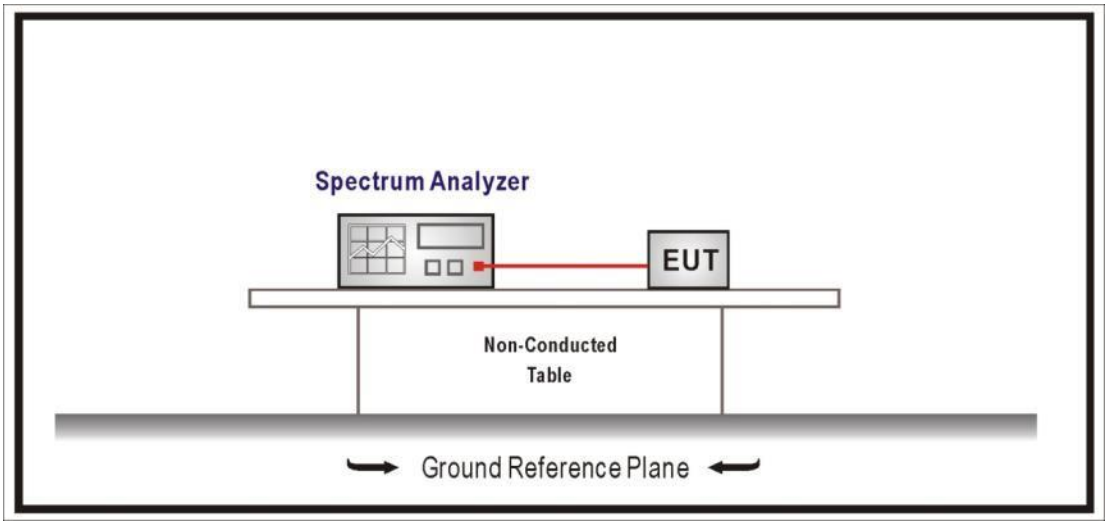
Mode 3 CH00 (2402MHz)	Mode 3 CH39 (2480MHz)
	
Mode 4 CH00 (2402MHz)	Mode 4 CH39 (2480MHz)
	

4.4 Duty cycle	VERDICT: PASS

4.4.1 Limit

N/A

4.4.2 Test Setup



4.4.3 Test Procedure

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

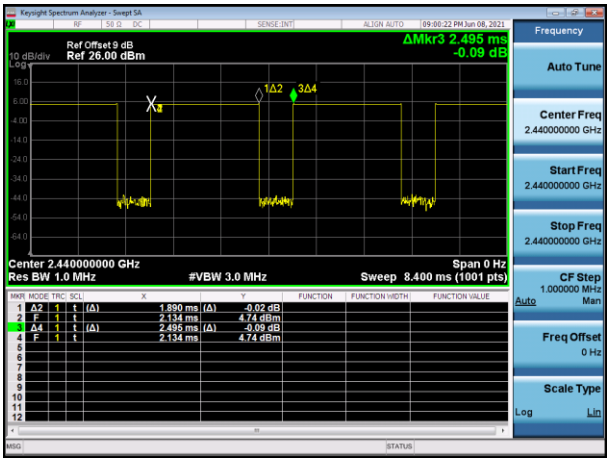
4.4.4 Test Data

Test Mode	Tx On (ms)	Tx Off (ms)	VBW (kHz)	Tx On + Tx Off (ms)	Duty Cycle (%)
Mode 1	1.890	0.605	0.529	2.495	75.75
Mode 2	0.957	0.294	1.045	1.251	76.50
Mode 3	4.090	0.290	0.244	4.380	93.38
Mode 4	15.15	0.450	0.066	15.60	97.12

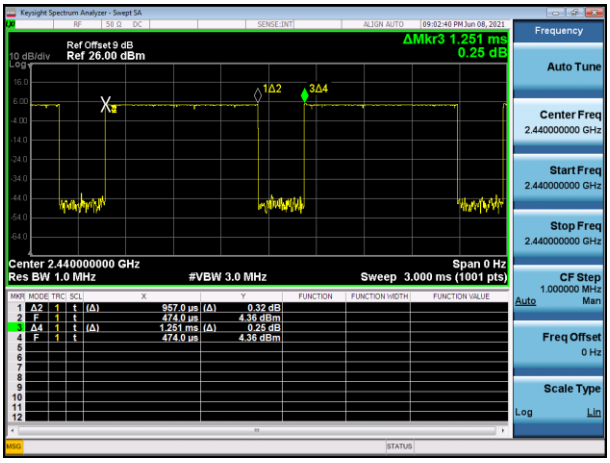
Note 1: T means the minimum transmission duration over which the transmitter is on and is transmitting at its maximum power control level for the tested mode of operation.

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

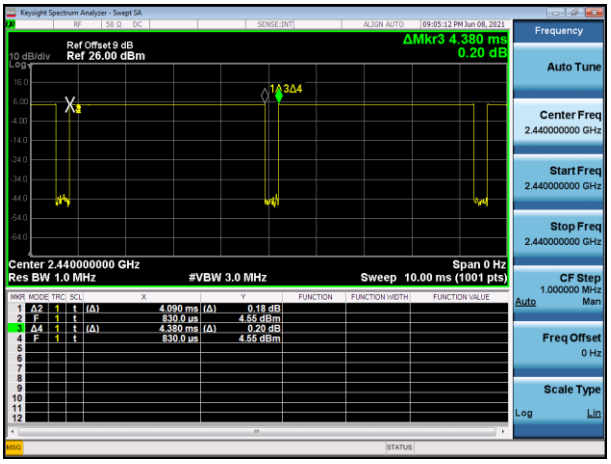
Mode 1 CH00 (2440MHz)



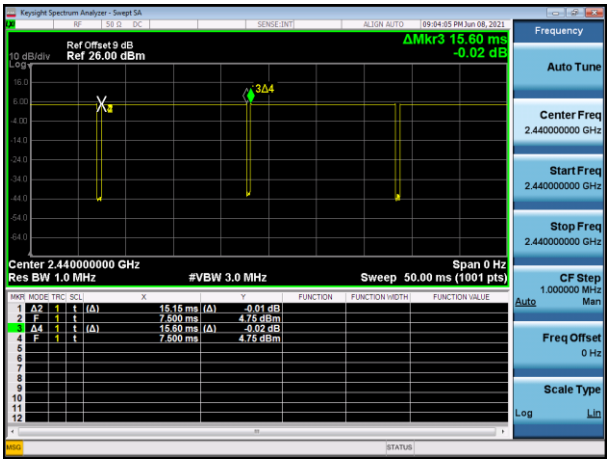
Mode 2 CH00 (2440MHz)



Mode 3 CH00 (2440MHz)



Mode 4 CH00 (2440MHz)



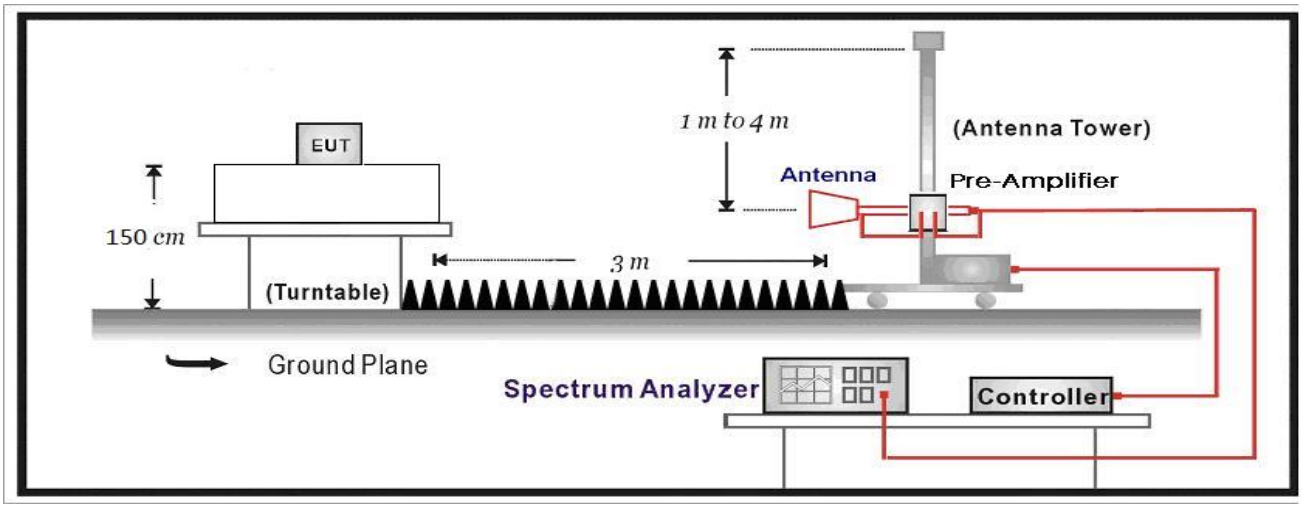
4.5 Radiated Emission Band Edge	VERDICT:	PASS

4.5.1 Limit

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

4.5.2 Test Setup

Above 1GHz Test Setup:

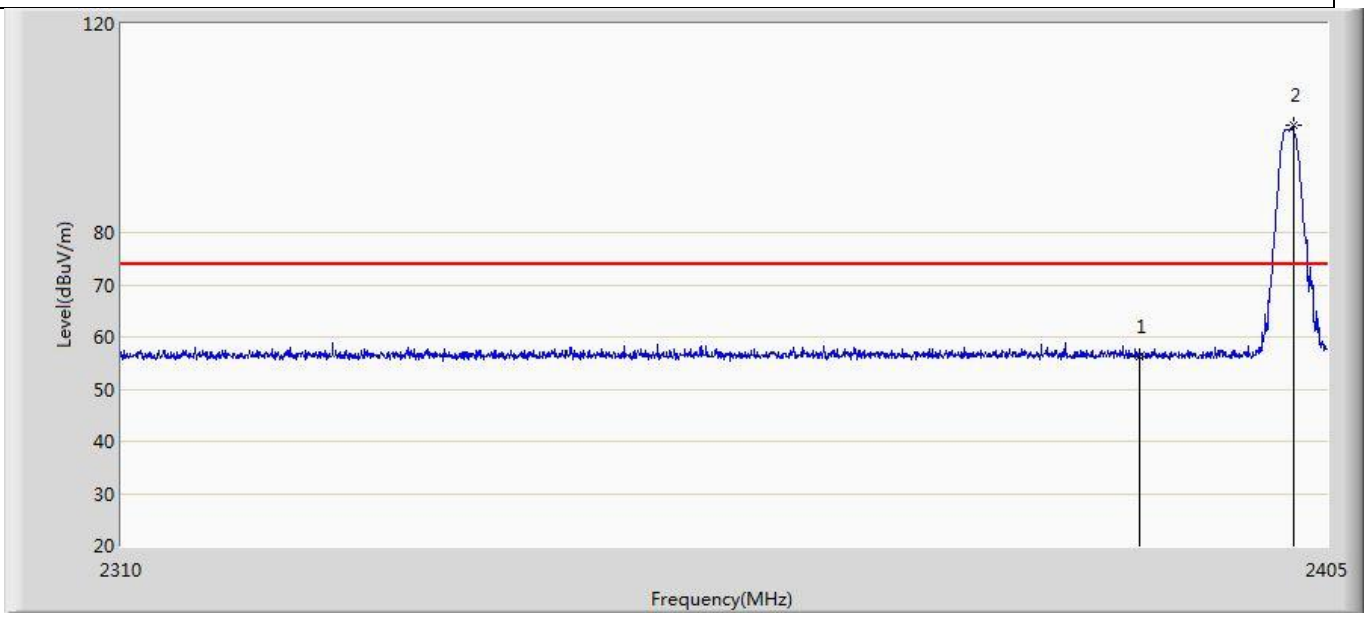


4.5.3 Test Procedure

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

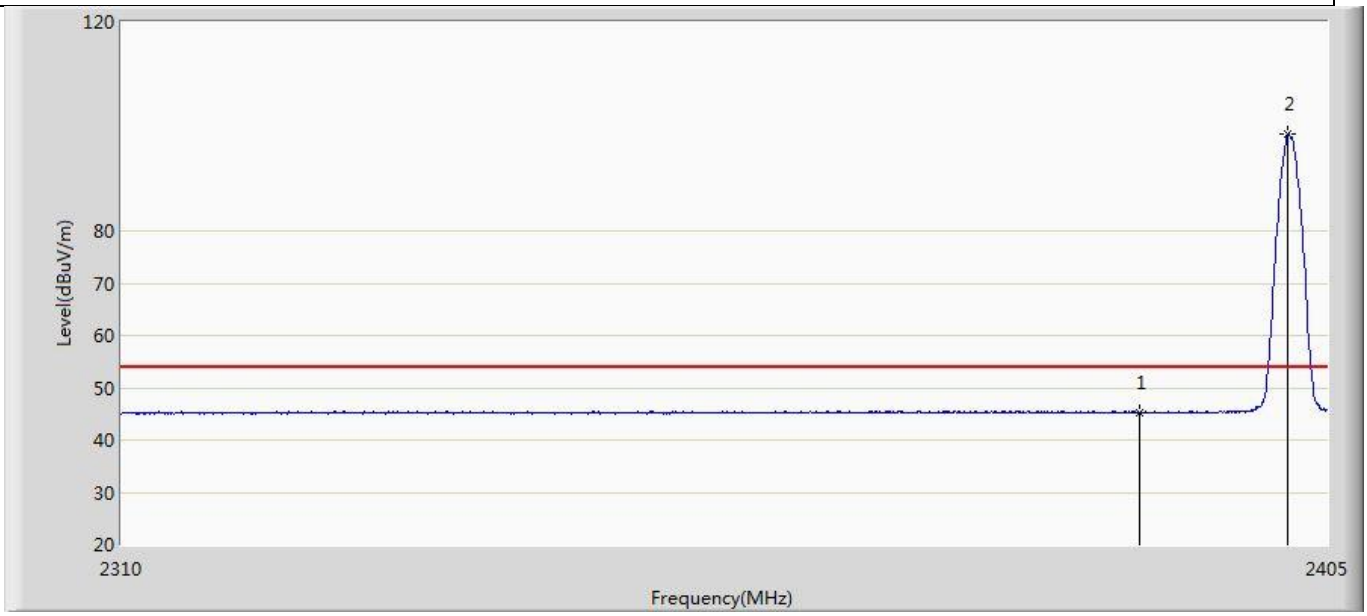
4.5.4 Test Data

Profile: 2150803R	Page No.: 25
Engineer: Tongben	
Site: AC5	Time: 2021/06/13 - 18:53
Limit: FCC_Part15.209_RE(3m)	Margin: 0
Probe: Horn_3117_00167055(1-18GHz)	Polarity: Horizontal
EUT: RM2-Track-1-0	Power: AC 120V/60Hz
Note: Mode 1:Transmit at 2402MHz by BLE 1Mbps	



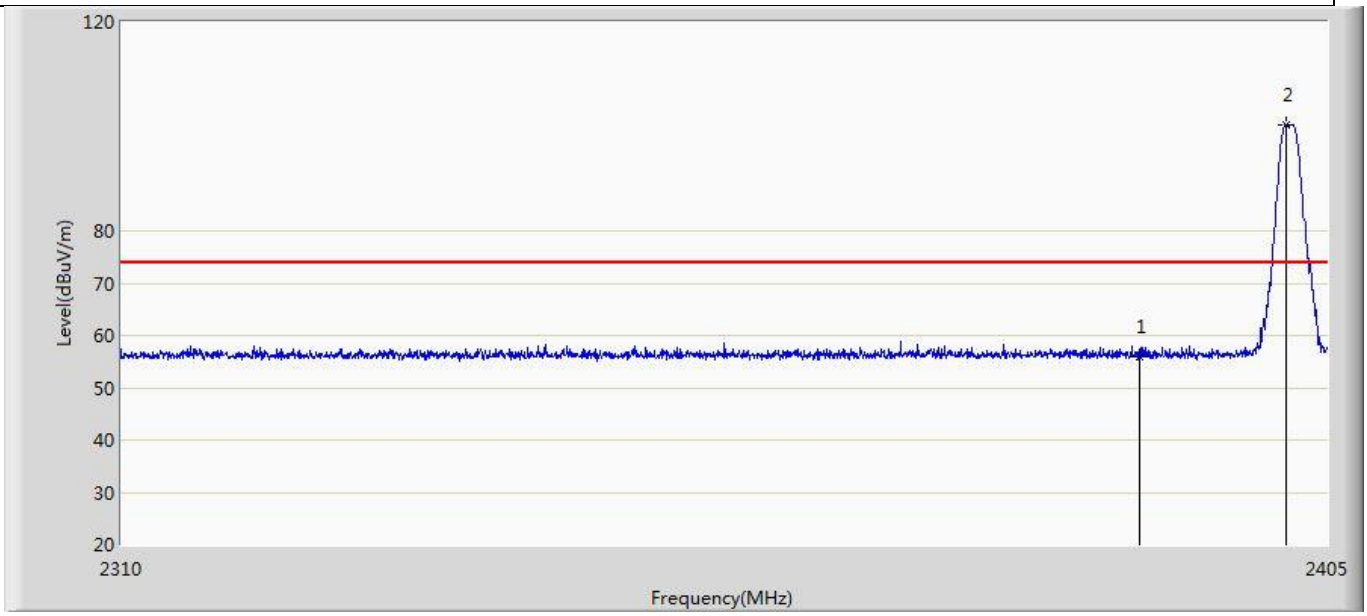
No	Mark	Frequency (MHz)	Measure Level (dBuV/m)	Reading Level (dBuV)	Over Limit (dB)	Limit (dBuV/m)	Factor (dB)	Type
1		2390.000	56.354	22.011	-17.646	74.000	34.344	PK
2	*	2402.292	100.706	66.368	N/A	N/A	34.338	PK

Profile: 2150803R	Page No.: 26
Engineer: Tongben	
Site: AC5	Time: 2021/06/13 - 18:57
Limit: FCC_Part15.209_RE(3m)	Margin: 0
Probe: Horn_3117_00167055(1-18GHz)	Polarity: Horizontal
EUT: RM2-Track-1-0	Power: AC 120V/60Hz
Note: Mode 1:Transmit at 2402MHz by BLE 1Mbps	



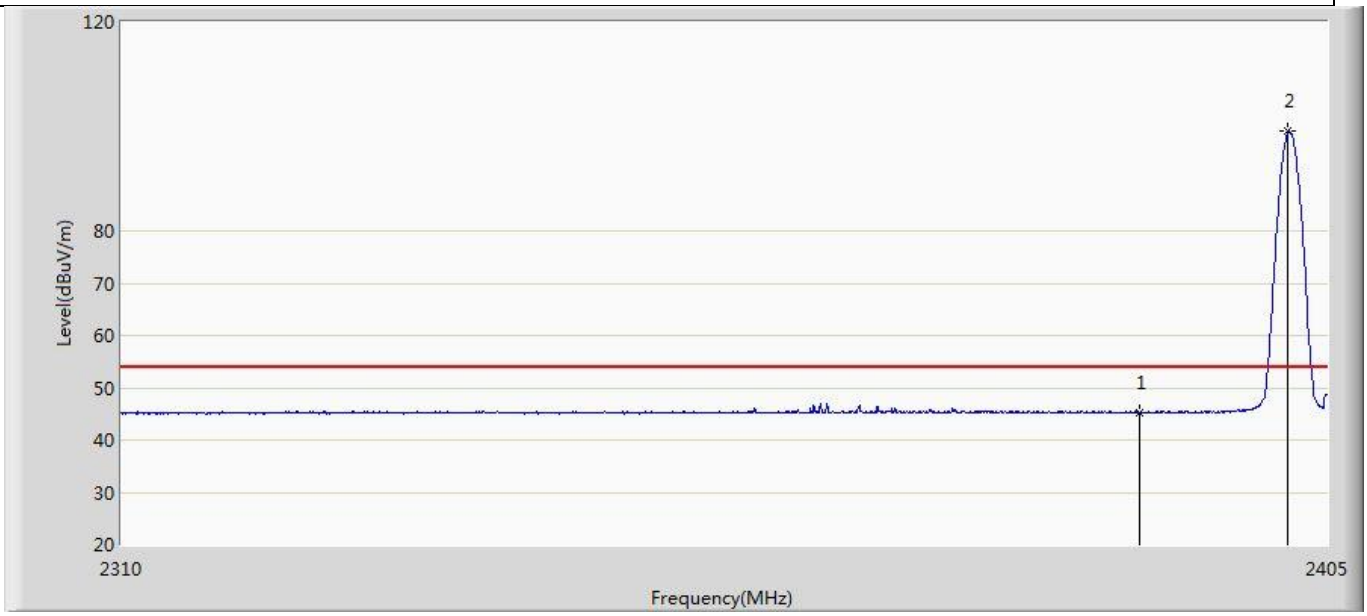
No	Mark	Frequency (MHz)	Measure Level (dBuV/m)	Reading Level (dBuV)	Over Limit (dB)	Limit (dBuV/m)	Factor (dB)	Type
1		2390.000	45.229	10.886	-8.771	54.000	34.344	AV
2	*	2401.865	98.482	64.144	N/A	N/A	34.338	AV

Profile: 2150803R	Page No.: 27
Engineer: Tongben	
Site: AC5	Time: 2021/06/13 - 19:07
Limit: FCC_Part15.209_RE(3m)	Margin: 0
Probe: Horn_3117_00167055(1-18GHz)	Polarity: Vertical
EUT: RM2-Track-1-0	Power: AC 120V/60Hz
Note: Mode 1:Transmit at 2402MHz by BLE 1Mbps	



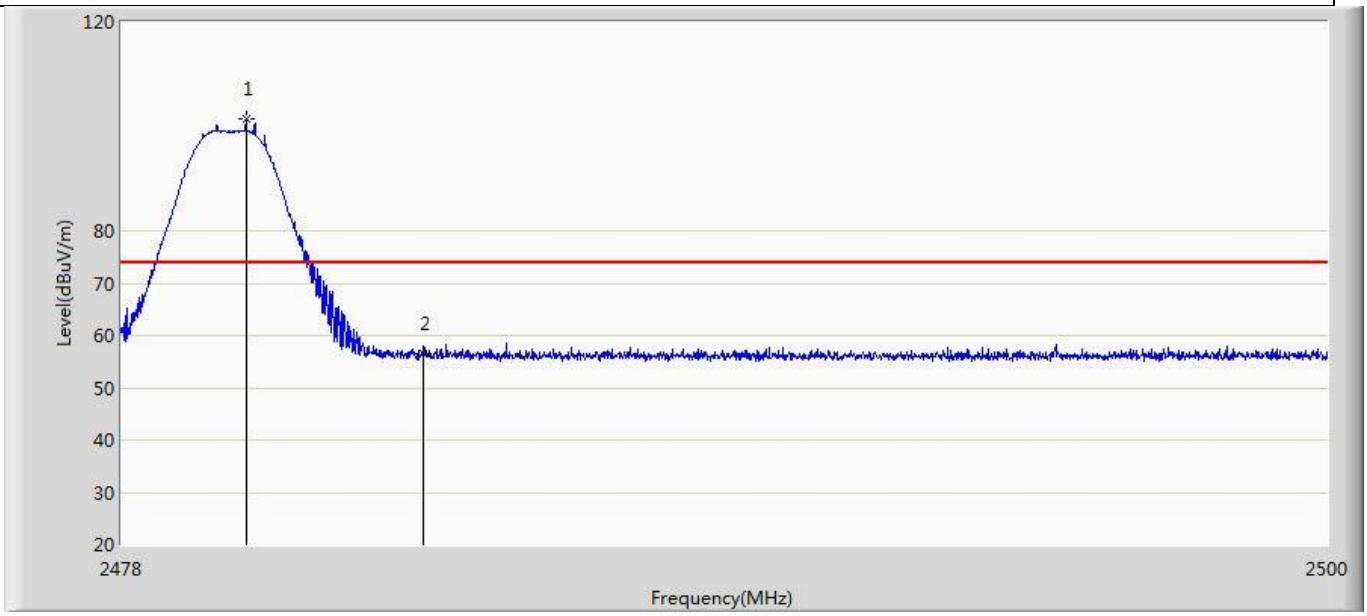
No	Mark	Frequency (MHz)	Measure Level (dBuV/m)	Reading Level (dBuV)	Over Limit (dB)	Limit (dBuV/m)	Factor (dB)	Type
1		2390.000	56.073	21.730	-17.927	74.000	34.344	PK
2	*	2401.675	100.299	65.960	N/A	N/A	34.338	PK

Profile: 2150803R	Page No.: 28
Engineer: Tongben	
Site: AC5	Time: 2021/06/13 - 19:09
Limit: FCC_Part15.209_RE(3m)	Margin: 0
Probe: Horn_3117_00167055(1-18GHz)	Polarity: Vertical
EUT: RM2-Track-1-0	Power: AC 120V/60Hz
Note: Mode 1:Transmit at 2402MHz by BLE 1Mbps	



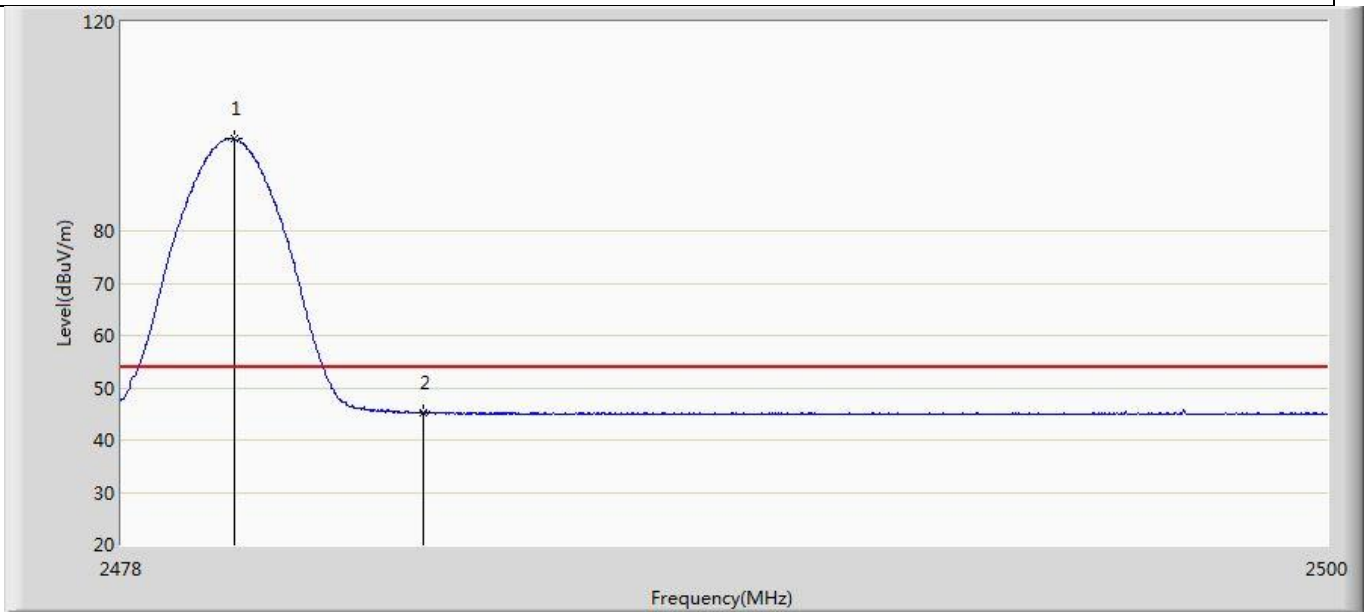
No	Mark	Frequency (MHz)	Measure Level (dBuV/m)	Reading Level (dBuV)	Over Limit (dB)	Limit (dBuV/m)	Factor (dB)	Type
1		2390.000	45.312	10.969	-8.688	54.000	34.344	AV
2	*	2401.865	99.056	64.718	N/A	N/A	34.338	AV

Profile: 2150803R	Page No.: 29
Engineer: Tongben	
Site: AC5	Time: 2021/06/13 - 19:14
Limit: FCC_Part15.209_RE(3m)	Margin: 0
Probe: Horn_3117_00167055(1-18GHz)	Polarity: Horizontal
EUT: RM2-Track-1-0	Power: AC 120V/60Hz
Note: Mode 1:Transmit at 2480MHz by BLE 1Mbps	



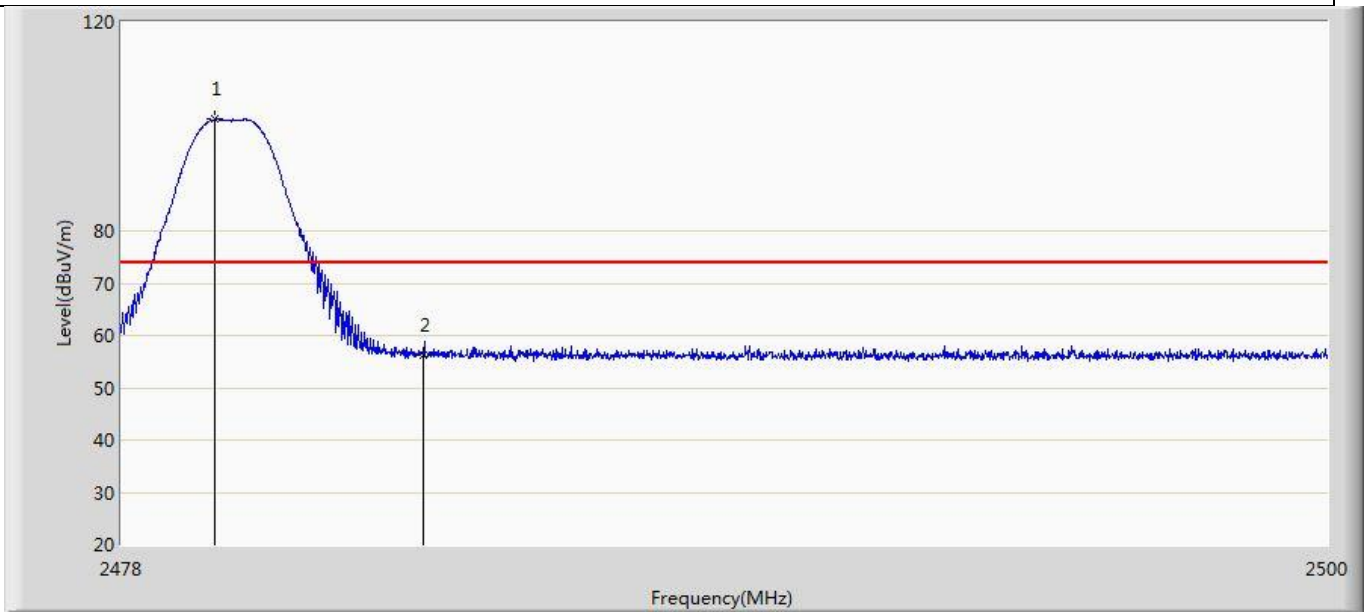
No	Mark	Frequency (MHz)	Measure Level (dBuV/m)	Reading Level (dBuV)	Over Limit (dB)	Limit (dBuV/m)	Factor (dB)	Type
1	*	2480.266	101.426	67.113	N/A	N/A	34.313	PK
2		2483.500	56.565	22.254	-17.435	74.000	34.311	PK

Profile: 2150803R	Page No.: 30
Engineer: Tongben	
Site: AC5	Time: 2021/06/13 - 19:16
Limit: FCC_Part15.209_RE(3m)	Margin: 0
Probe: Horn_3117_00167055(1-18GHz)	Polarity: Horizontal
EUT: RM2-Track-1-0	Power: AC 120V/60Hz
Note: Mode 1:Transmit at 2480MHz by BLE 1Mbps	



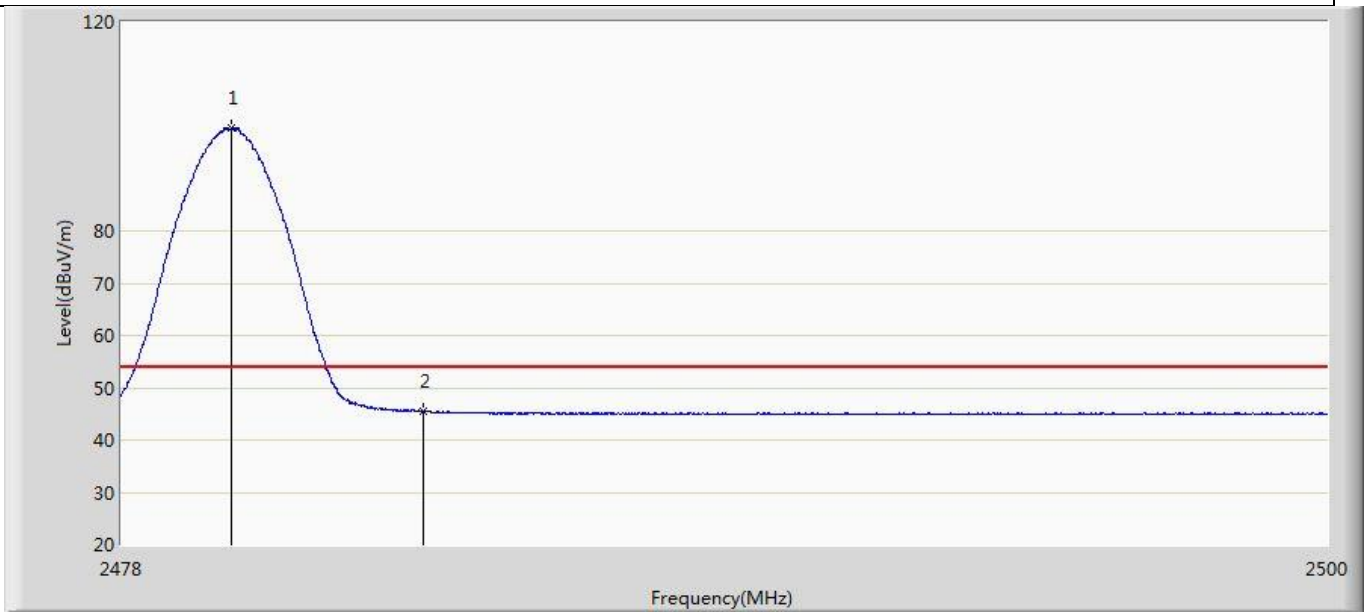
No	Mark	Frequency (MHz)	Measure Level (dBuV/m)	Reading Level (dBuV)	Over Limit (dB)	Limit (dBuV/m)	Factor (dB)	Type
1	*	2480.046	97.683	63.370	N/A	N/A	34.313	AV
2		2483.500	45.151	10.840	-8.849	54.000	34.311	AV

Profile: 2150803R	Page No.: 31
Engineer: Tongben	
Site: AC5	Time: 2021/06/13 - 19:18
Limit: FCC_Part15.209_RE(3m)	Margin: 0
Probe: Horn_3117_00167055(1-18GHz)	Polarity: Vertical
EUT: RM2-Track-1-0	Power: AC 120V/60Hz
Note: Mode 1:Transmit at 2480MHz by BLE 1Mbps	



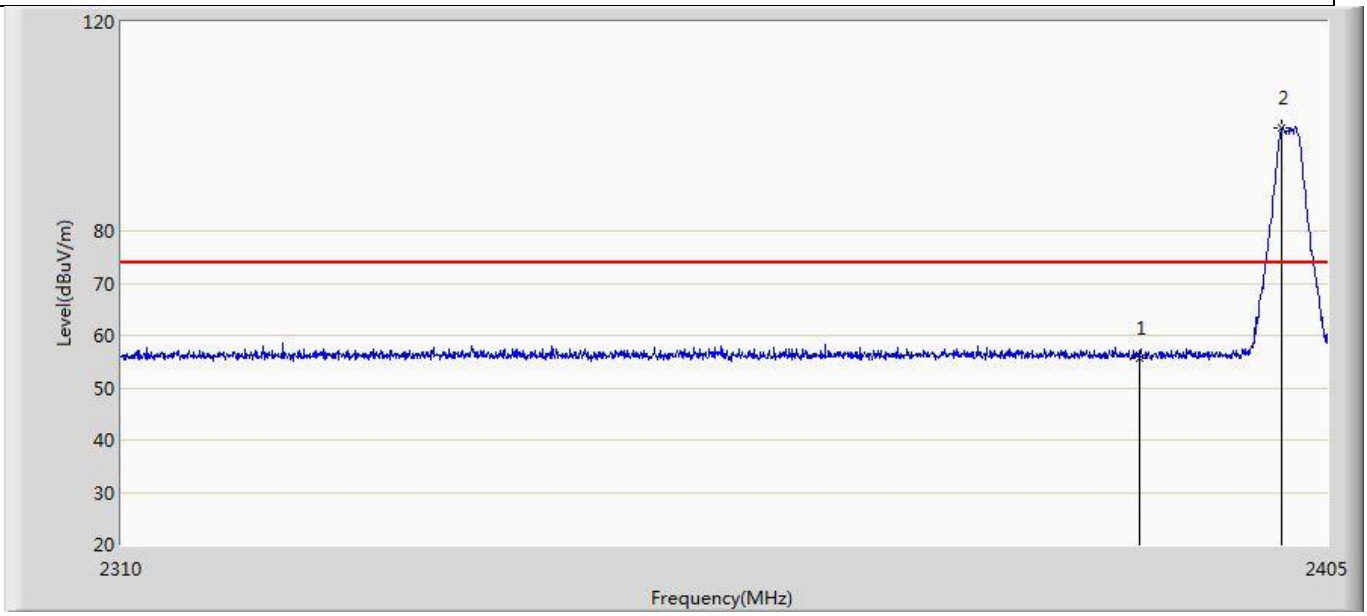
No	Mark	Frequency (MHz)	Measure Level (dBuV/m)	Reading Level (dBuV)	Over Limit (dB)	Limit (dBuV/m)	Factor (dB)	Type
1	*	2479.705	101.329	67.016	N/A	N/A	34.313	PK
2		2483.500	56.111	21.800	-17.889	74.000	34.311	PK

Profile: 2150803R	Page No.: 32
Engineer: Tongben	
Site: AC5	Time: 2021/06/13 - 19:20
Limit: FCC_Part15.209_RE(3m)	Margin: 0
Probe: Horn_3117_00167055(1-18GHz)	Polarity: Vertical
EUT: RM2-Track-1-0	Power: AC 120V/60Hz
Note: Mode 1:Transmit at 2480MHz by BLE 1Mbps	



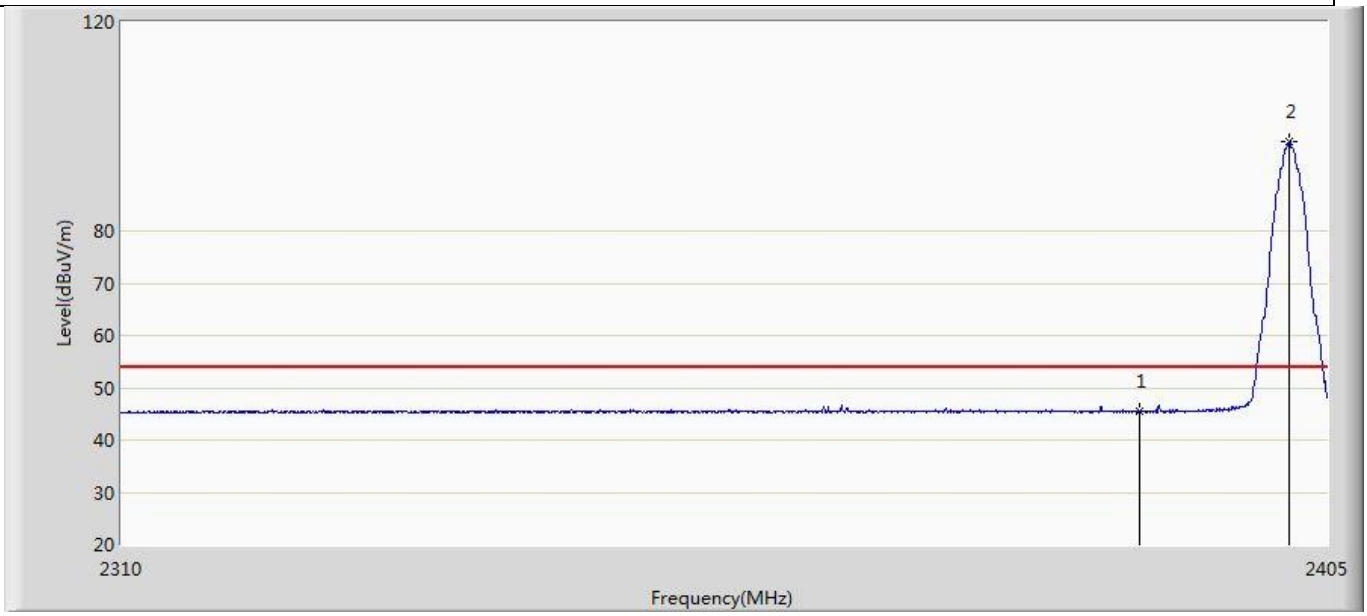
No	Mark	Frequency (MHz)	Measure Level (dBuV/m)	Reading Level (dBuV)	Over Limit (dB)	Limit (dBuV/m)	Factor (dB)	Type
1	*	2480.013	99.595	65.282	N/A	N/A	34.313	AV
2		2483.500	45.494	11.183	-8.506	54.000	34.311	AV

Profile: 2150803R	Page No.: 17
Engineer: Tongben	
Site: AC5	Time: 2021/06/13 - 18:31
Limit: FCC_Part15.209_RE(3m)	Margin: 0
Probe: Horn_3117_00167055(1-18GHz)	Polarity: Horizontal
EUT: RM2-Track-1-0	Power: AC 120V/60Hz
Note: Mode 2:Transmit at 2402MHz by BLE 2Mbps	



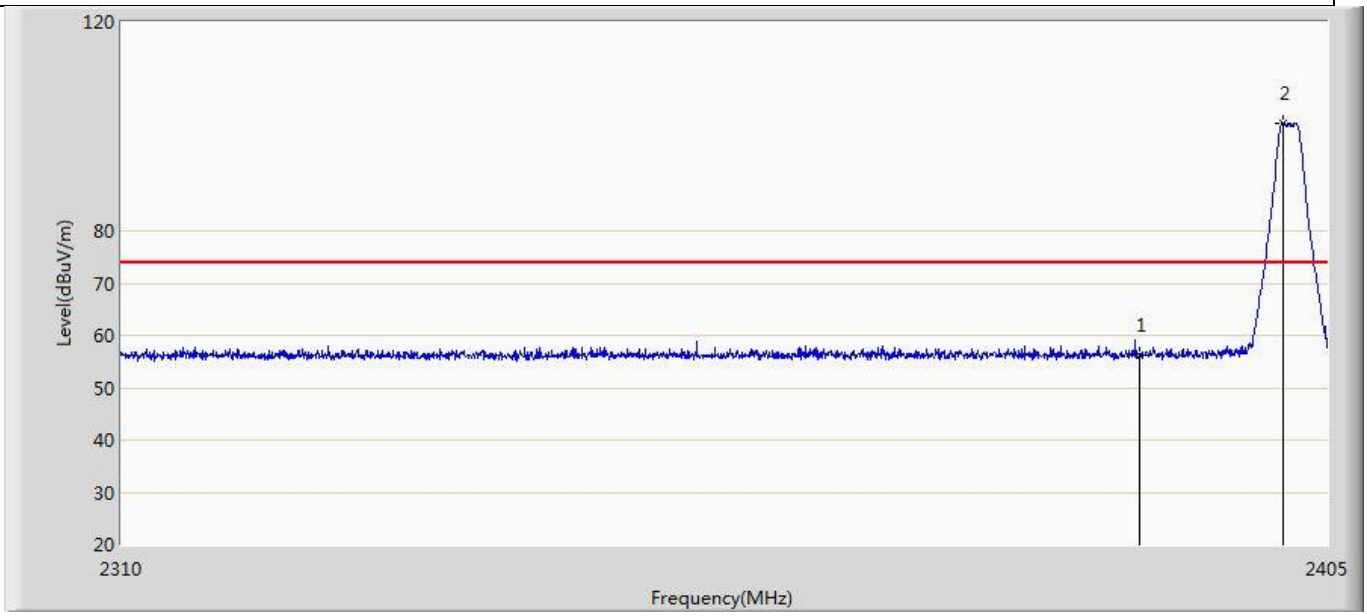
No	Mark	Frequency (MHz)	Measure Level (dBuV/m)	Reading Level (dBuV)	Over Limit (dB)	Limit (dBuV/m)	Factor (dB)	Type
1		2390.000	55.719	21.376	-18.281	74.000	34.344	PK
2	*	2401.390	99.661	65.322	N/A	N/A	34.338	PK

Profile: 2150803R	Page No.: 18
Engineer: Tongben	
Site: AC5	Time: 2021/06/13 - 18:33
Limit: FCC_Part15.209_RE(3m)	Margin: 0
Probe: Horn_3117_00167055(1-18GHz)	Polarity: Horizontal
EUT: RM2-Track-1-0	Power: AC 120V/60Hz
Note: Mode 2:Transmit at 2402MHz by BLE 2Mbps	



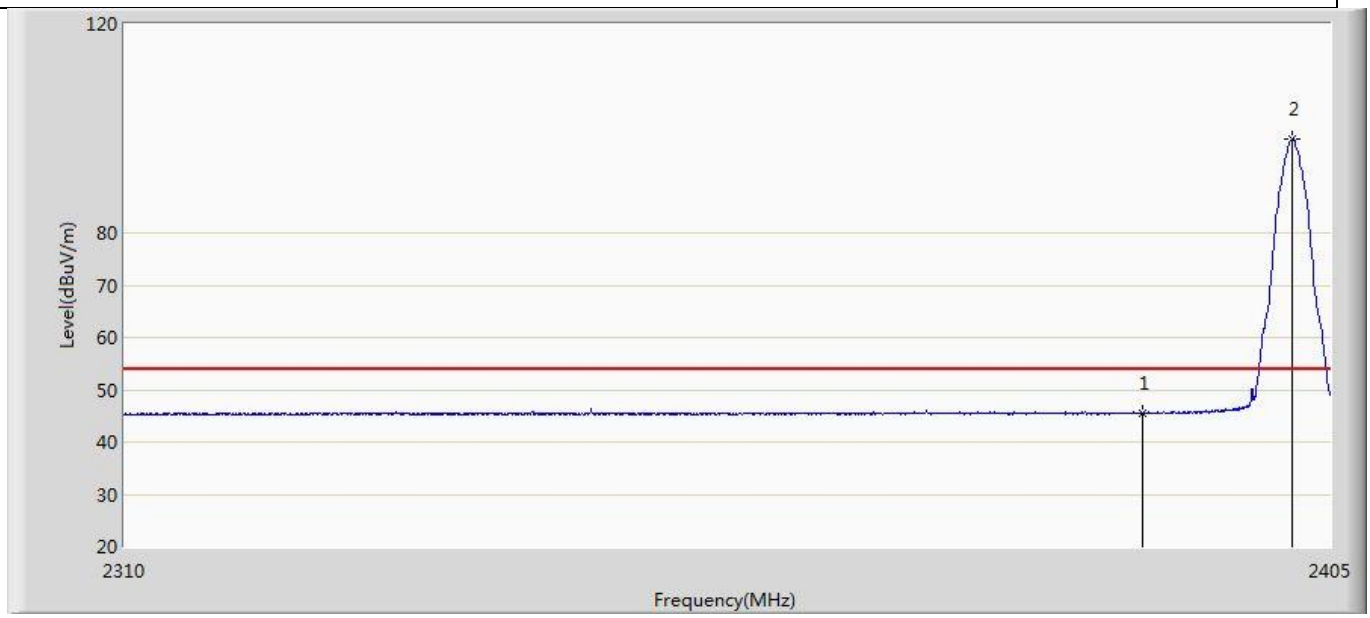
No	Mark	Frequency (MHz)	Measure Level (dBuV/m)	Reading Level (dBuV)	Over Limit (dB)	Limit (dBuV/m)	Factor (dB)	Type
1		2390.000	45.531	11.188	-8.469	54.000	34.344	AV
2	*	2402.008	97.187	62.849	N/A	N/A	34.338	AV

Profile: 2150803R	Page No.: 19
Engineer: Tongben	
Site: AC5	Time: 2021/06/13 - 18:35
Limit: FCC_Part15.209_RE(3m)	Margin: 0
Probe: Horn_3117_00167055(1-18GHz)	Polarity: Vertical
EUT: RM2-Track-1-0	Power: AC 120V/60Hz
Note: Mode 2:Transmit at 2402MHz by BLE 2Mbps	



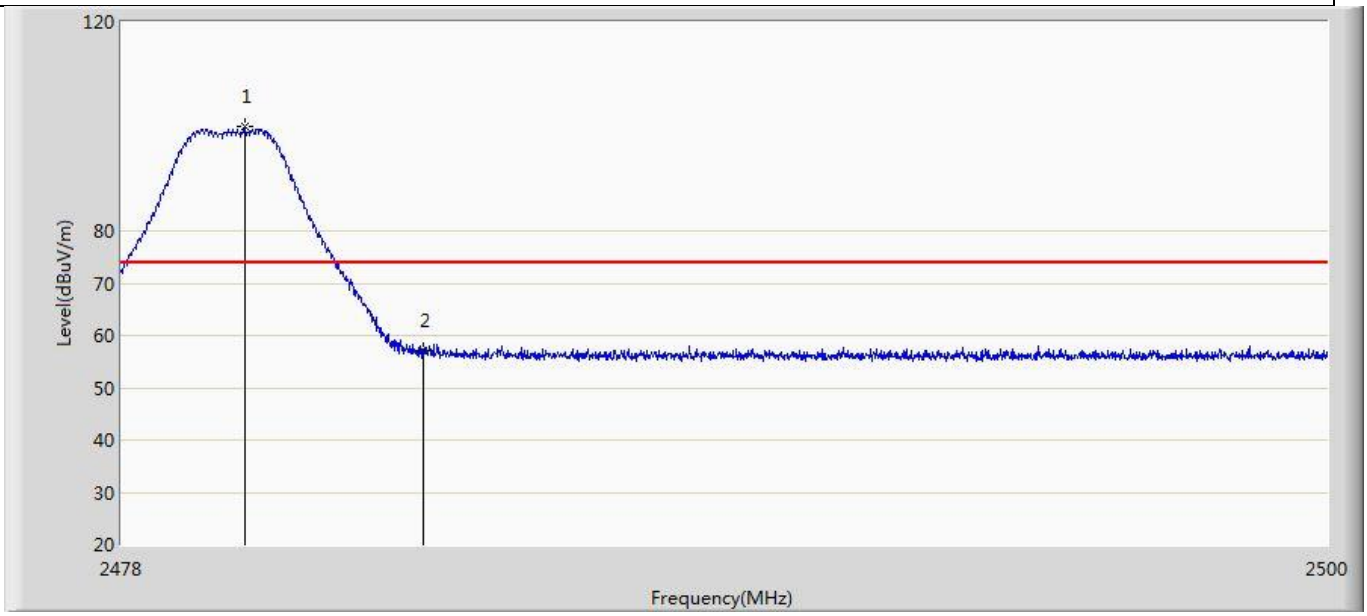
No	Mark	Frequency (MHz)	Measure Level (dBuV/m)	Reading Level (dBuV)	Over Limit (dB)	Limit (dBuV/m)	Factor (dB)	Type
1		2390.000	56.159	21.816	-17.841	74.000	34.344	PK
2	*	2401.437	100.642	66.303	N/A	N/A	34.338	PK

Profile: 2150803R	Page No.: 20
Engineer: Tongben	
Site: AC5	Time: 2021/06/13 - 18:37
Limit: FCC_Part15.209_RE(3m)	Margin: 0
Probe: Horn_3117_00167055(1-18GHz)	Polarity: Vertical
EUT: RM2-Track-1-0	Power: AC 120V/60Hz
Note: Mode 2:Transmit at 2402MHz by BLE 2Mbps	



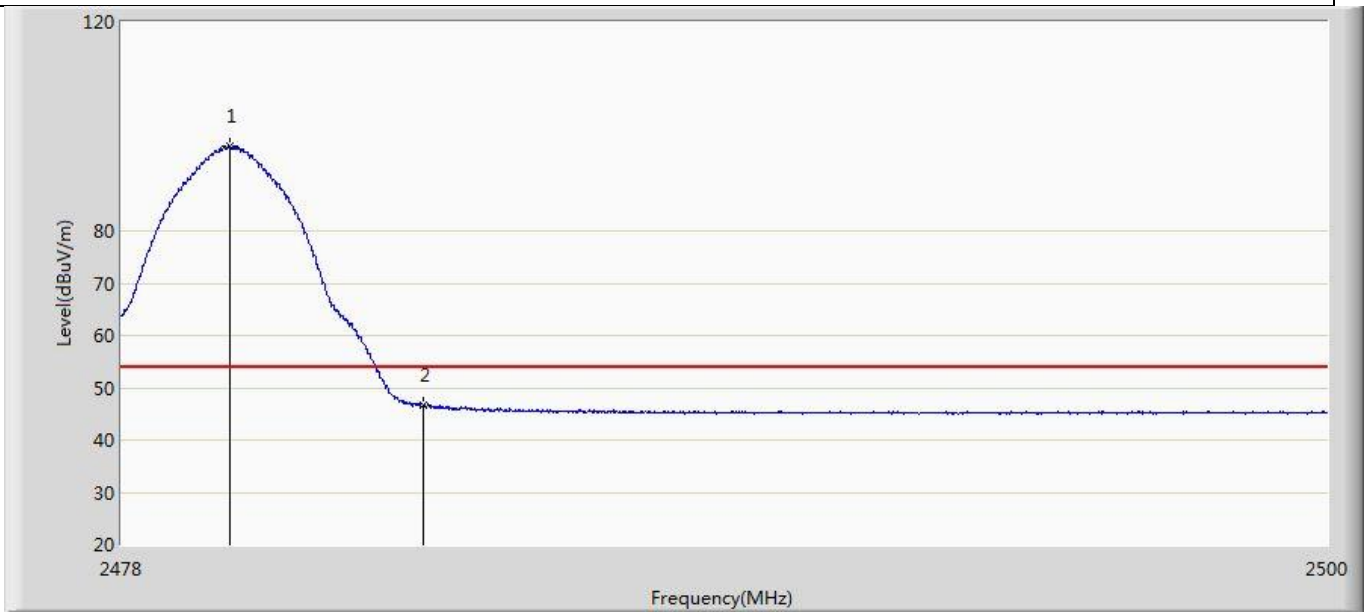
No	Mark	Frequency (MHz)	Measure Level (dBuV/m)	Reading Level (dBuV)	Over Limit (dB)	Limit (dBuV/m)	Factor (dB)	Type
1		2390.000	45.478	11.135	-8.522	54.000	34.344	AV
2	*	2402.008	97.985	63.647	N/A	N/A	34.338	AV

Profile: 2150803R	Page No.: 21
Engineer: Tongben	
Site: AC5	Time: 2021/06/13 - 18:44
Limit: FCC_Part15.209_RE(3m)	Margin: 0
Probe: Horn_3117_00167055(1-18GHz)	Polarity: Horizontal
EUT: RM2-Track-1-0	Power: AC 120V/60Hz
Note: Mode 2:Transmit at 2480MHz by BLE 2Mbps	



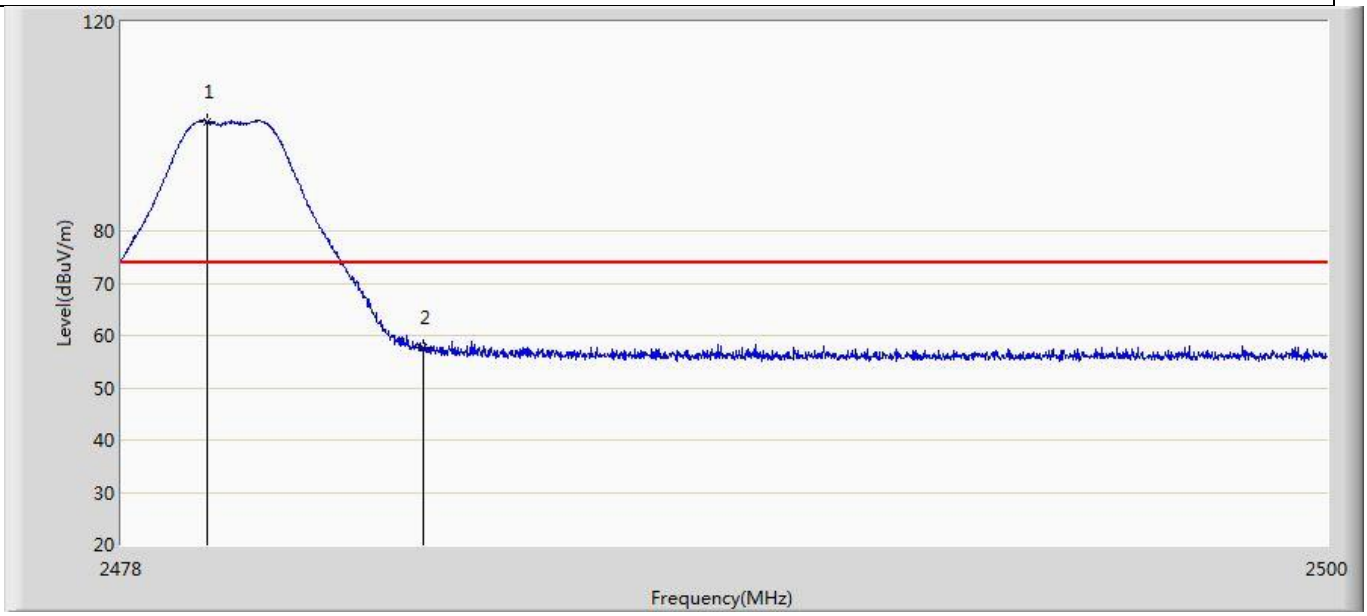
No	Mark	Frequency (MHz)	Measure Level (dBuV/m)	Reading Level (dBuV)	Over Limit (dB)	Limit (dBuV/m)	Factor (dB)	Type
1	*	2480.244	100.020	65.707	N/A	N/A	34.313	PK
2		2483.500	56.978	22.667	-17.022	74.000	34.311	PK

Profile: 2150803R	Page No.: 22
Engineer: Tongben	
Site: AC5	Time: 2021/06/13 - 18:46
Limit: FCC_Part15.209_RE(3m)	Margin: 0
Probe: Horn_3117_00167055(1-18GHz)	Polarity: Horizontal
EUT: RM2-Track-1-0	Power: AC 120V/60Hz
Note: Mode 2:Transmit at 2480MHz by BLE 2Mbps	



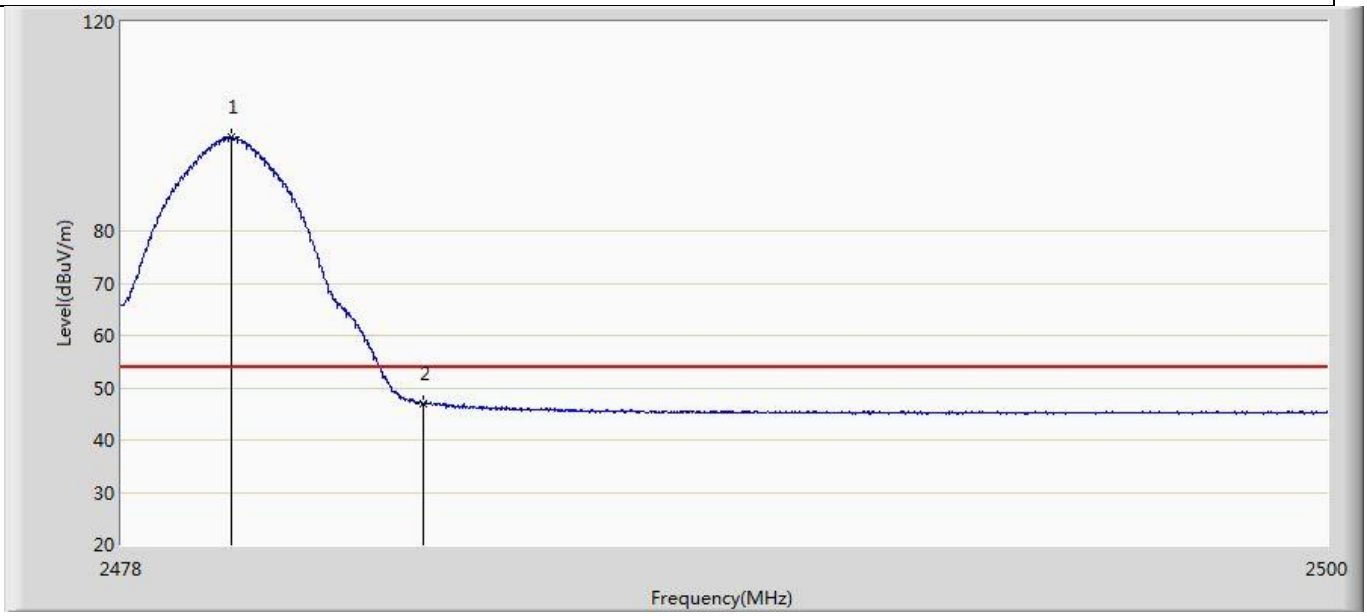
No	Mark	Frequency (MHz)	Measure Level (dBuV/m)	Reading Level (dBuV)	Over Limit (dB)	Limit (dBuV/m)	Factor (dB)	Type
1	*	2479.969	96.250	61.937	N/A	N/A	34.313	AV
2		2483.500	46.725	12.414	-7.275	54.000	34.311	AV

Profile: 2150803R	Page No.: 23
Engineer: Tongben	
Site: AC5	Time: 2021/06/13 - 18:48
Limit: FCC_Part15.209_RE(3m)	Margin: 0
Probe: Horn_3117_00167055(1-18GHz)	Polarity: Vertical
EUT: RM2-Track-1-0	Power: AC 120V/60Hz
Note: Mode 2:Transmit at 2480MHz by BLE 2Mbps	



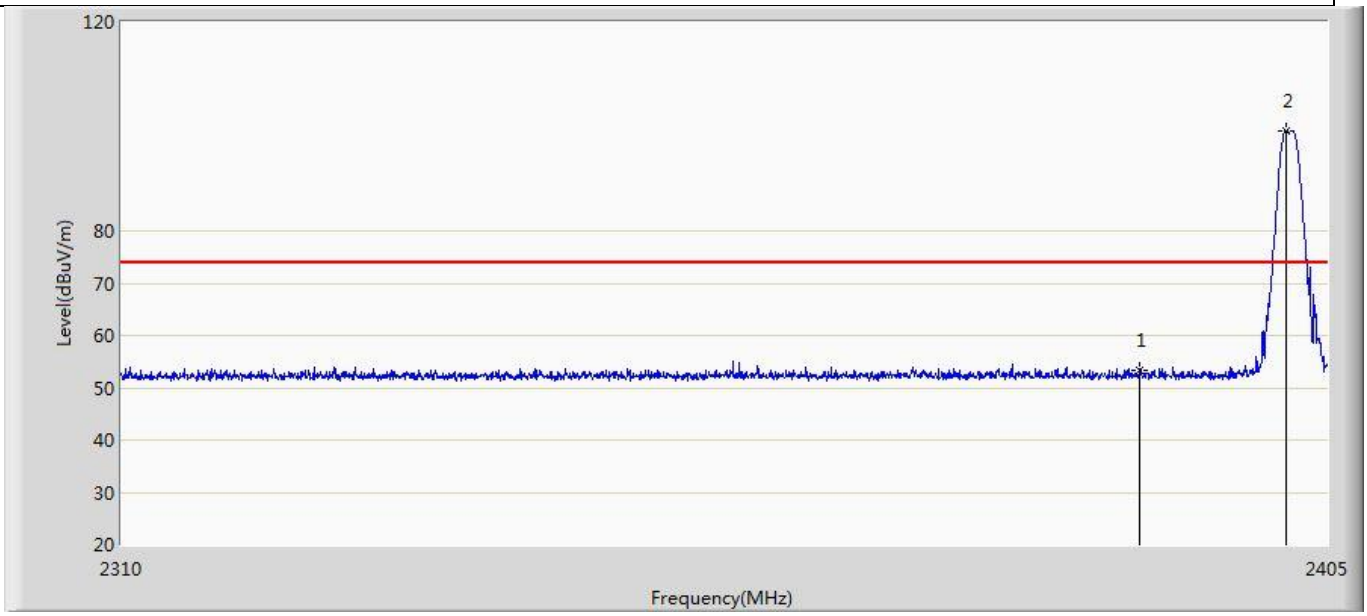
No	Mark	Frequency (MHz)	Measure Level (dBuV/m)	Reading Level (dBuV)	Over Limit (dB)	Limit (dBuV/m)	Factor (dB)	Type
1	*	2479.562	100.914	66.601	N/A	N/A	34.313	PK
2		2483.500	57.596	23.285	-16.404	74.000	34.311	PK

Profile: 2150803R	Page No.: 24
Engineer: Tongben	
Site: AC5	Time: 2021/06/13 - 18:49
Limit: FCC_Part15.209_RE(3m)	Margin: 0
Probe: Horn_3117_00167055(1-18GHz)	Polarity: Vertical
EUT: RM2-Track-1-0	Power: AC 120V/60Hz
Note: Mode 2:Transmit at 2480MHz by BLE 2Mbps	



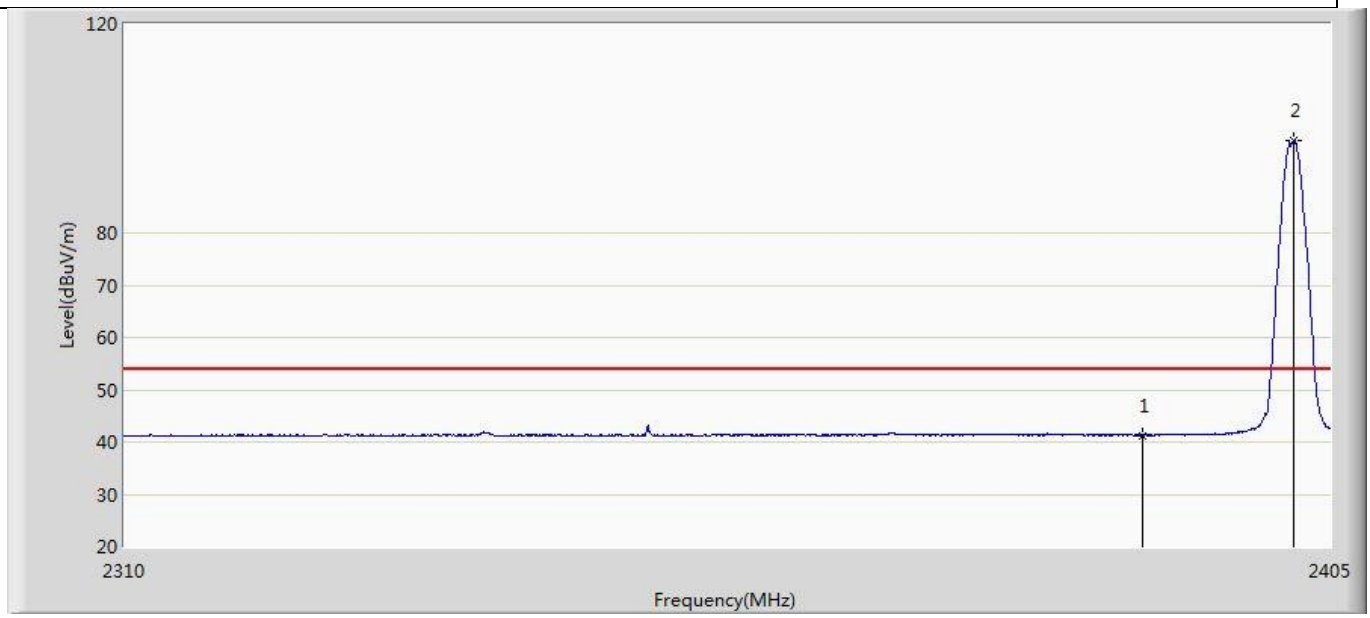
No	Mark	Frequency (MHz)	Measure Level (dBuV/m)	Reading Level (dBuV)	Over Limit (dB)	Limit (dBuV/m)	Factor (dB)	Type
1	*	2480.013	97.843	63.530	N/A	N/A	34.313	AV
2		2483.500	46.998	12.687	-7.002	54.000	34.311	AV

Profile: 2150803R	Page No.: 9
Engineer: Tongben	
Site: AC5	Time: 2021/06/13 - 18:03
Limit: FCC_Part15.209_RE(3m)	Margin: 0
Probe: Horn_3117_00167055(1-18GHz)	Polarity: Horizontal
EUT: RM2-Track-1-0	Power: AC 120V/60Hz
Note: Mode 3:Transmit at 2402MHz by BLE Coded S=2	



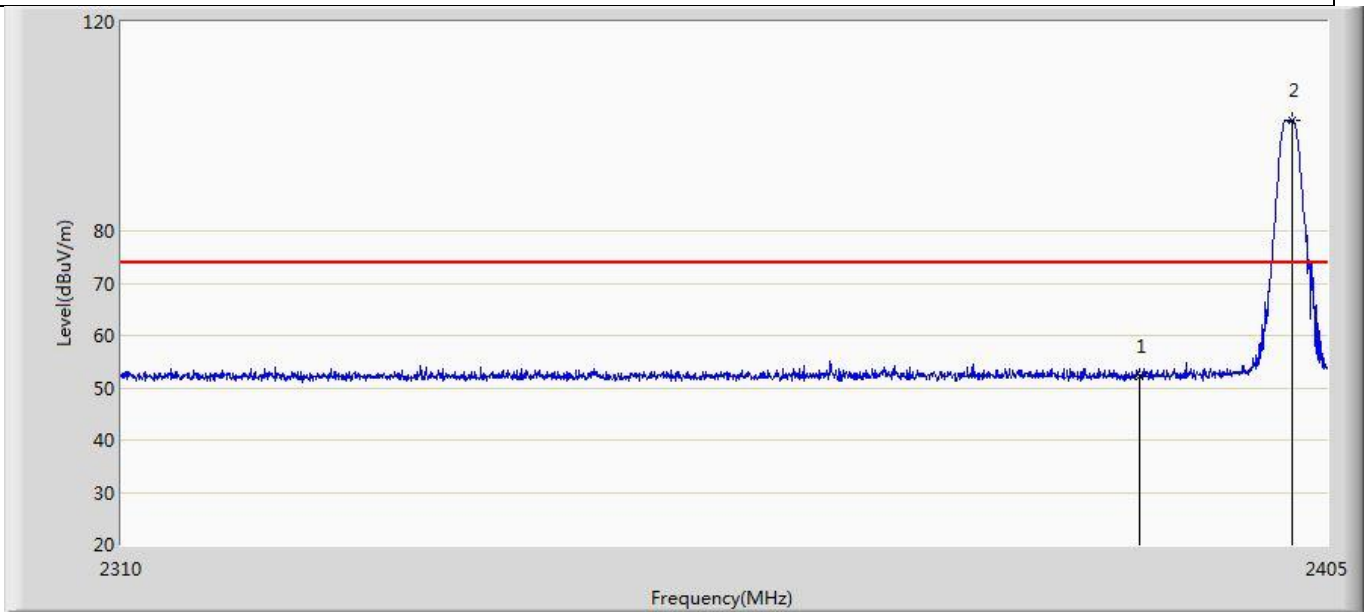
No	Mark	Frequency (MHz)	Measure Level (dBuV/m)	Reading Level (dBuV)	Over Limit (dB)	Limit (dBuV/m)	Factor (dB)	Type
1		2390.000	53.317	18.974	-20.683	74.000	34.344	PK
2	*	2401.675	99.172	64.833	N/A	N/A	34.338	PK

Profile: 2150803R	Page No.: 10
Engineer: Tongben	
Site: AC5	Time: 2021/06/13 - 18:06
Limit: FCC_Part15.209_RE(3m)	Margin: 0
Probe: Horn_3117_00167055(1-18GHz)	Polarity: Horizontal
EUT: RM2-Track-1-0	Power: AC 120V/60Hz
Note: Mode 3:Transmit at 2402MHz by BLE Coded S=2	



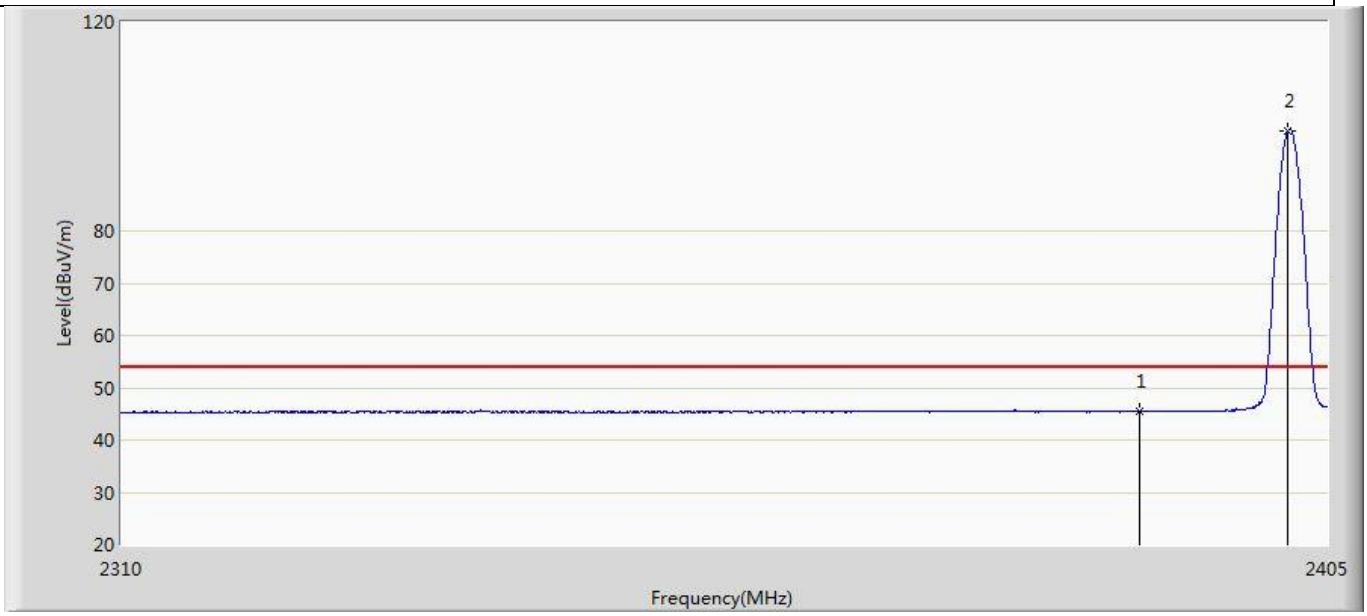
No	Mark	Frequency (MHz)	Measure Level (dBuV/m)	Reading Level (dBuV)	Over Limit (dB)	Limit (dBuV/m)	Factor (dB)	Type
1		2390.000	41.283	6.940	-12.717	54.000	34.344	AV
2	*	2402.055	97.566	63.228	N/A	N/A	34.338	AV

Profile: 2150803R	Page No.: 11
Engineer: Tongben	
Site: AC5	Time: 2021/06/13 - 18:12
Limit: FCC_Part15.209_RE(3m)	Margin: 0
Probe: Horn_3117_00167055(1-18GHz)	Polarity: Vertical
EUT: RM2-Track-1-0	Power: AC 120V/60Hz
Note: Mode 3:Transmit at 2402MHz by BLE Coded S=2	



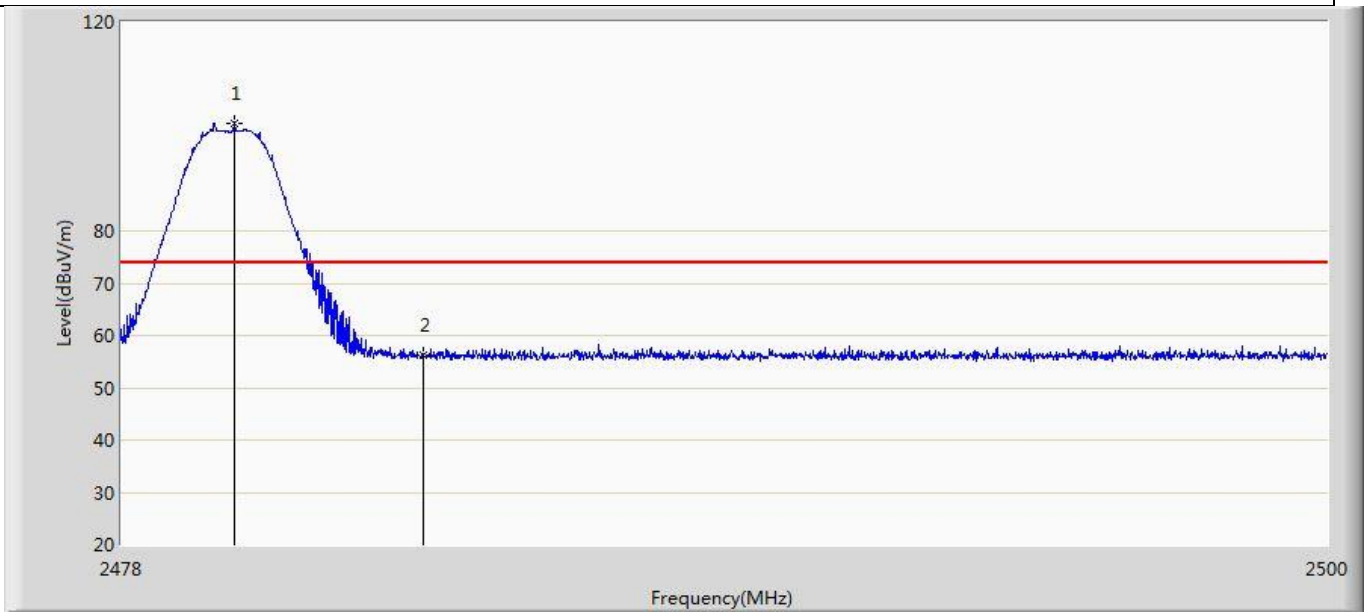
No	Mark	Frequency (MHz)	Measure Level (dBuV/m)	Reading Level (dBuV)	Over Limit (dB)	Limit (dBuV/m)	Factor (dB)	Type
1		2390.000	52.058	17.715	-21.942	74.000	34.344	PK
2	*	2402.198	101.108	66.770	N/A	N/A	34.338	PK

Profile: 2150803R	Page No.: 12
Engineer: Tongben	
Site: AC5	Time: 2021/06/13 - 18:15
Limit: FCC_Part15.209_RE(3m)	Margin: 0
Probe: Horn_3117_00167055(1-18GHz)	Polarity: Vertical
EUT: RM2-Track-1-0	Power: AC 120V/60Hz
Note: Mode 3:Transmit at 2402MHz by BLE Coded S=2	



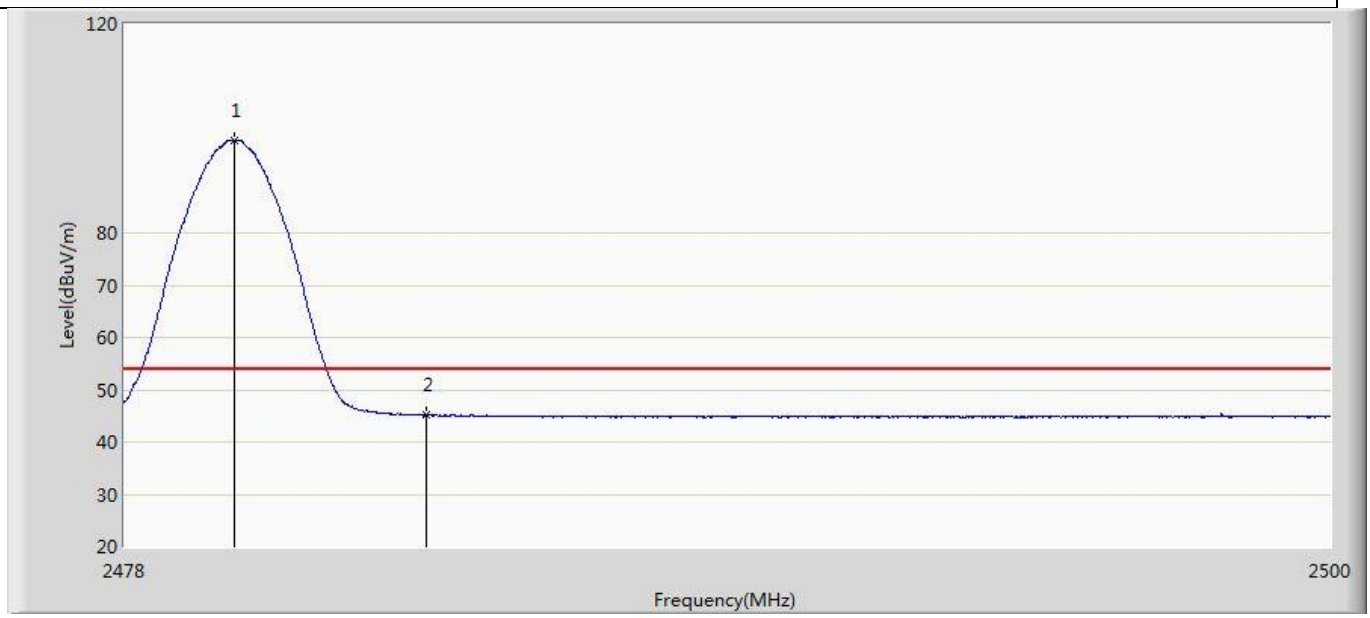
No	Mark	Frequency (MHz)	Measure Level (dBuV/m)	Reading Level (dBuV)	Over Limit (dB)	Limit (dBuV/m)	Factor (dB)	Type
1		2390.000	45.418	11.075	-8.582	54.000	34.344	AV
2	*	2401.865	99.184	64.846	N/A	N/A	34.338	AV

Profile: 2150803R	Page No.: 13
Engineer: Tongben	
Site: AC5	Time: 2021/06/13 - 18:22
Limit: FCC_Part15.209_RE(3m)	Margin: 0
Probe: Horn_3117_00167055(1-18GHz)	Polarity: Horizontal
EUT: RM2-Track-1-0	Power: AC 120V/60Hz
Note: Mode 3:Transmit at 2480MHz by BLE Coded S=2	



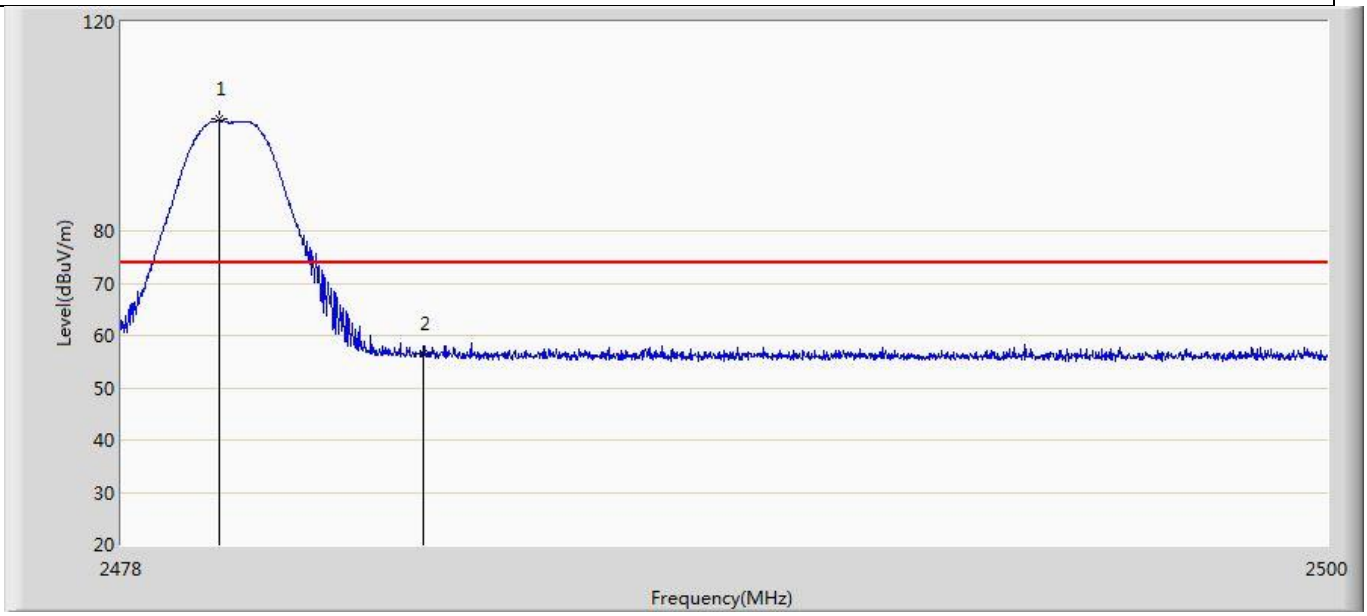
No	Mark	Frequency (MHz)	Measure Level (dBuV/m)	Reading Level (dBuV)	Over Limit (dB)	Limit (dBuV/m)	Factor (dB)	Type
1	*	2480.046	100.635	66.322	N/A	N/A	34.313	PK
2		2483.500	56.361	22.050	-17.639	74.000	34.311	PK

Profile: 2150803R	Page No.: 14
Engineer: Tongben	
Site: AC5	Time: 2021/06/13 - 18:24
Limit: FCC_Part15.209_RE(3m)	Margin: 0
Probe: Horn_3117_00167055(1-18GHz)	Polarity: Horizontal
EUT: RM2-Track-1-0	Power: AC 120V/60Hz
Note: Mode 3:Transmit at 2480MHz by BLE Coded S=2	



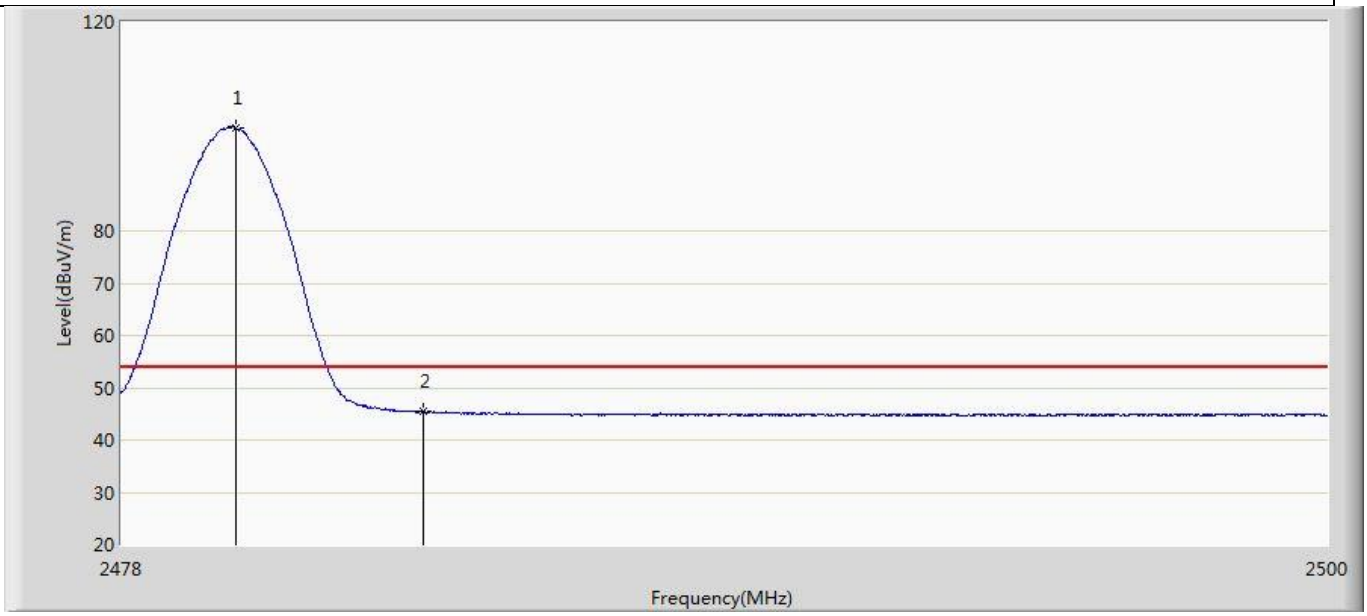
No	Mark	Frequency (MHz)	Measure Level (dBuV/m)	Reading Level (dBuV)	Over Limit (dB)	Limit (dBuV/m)	Factor (dB)	Type
1	*	2480.013	97.617	63.304	N/A	N/A	34.313	AV
2		2483.500	45.184	10.873	-8.816	54.000	34.311	AV

Profile: 2150803R	Page No.: 15
Engineer: Tongben	
Site: AC5	Time: 2021/06/13 - 18:27
Limit: FCC_Part15.209_RE(3m)	Margin: 0
Probe: Horn_3117_00167055(1-18GHz)	Polarity: Vertical
EUT: RM2-Track-1-0	Power: AC 120V/60Hz
Note: Mode 3:Transmit at 2480MHz by BLE Coded S=2	



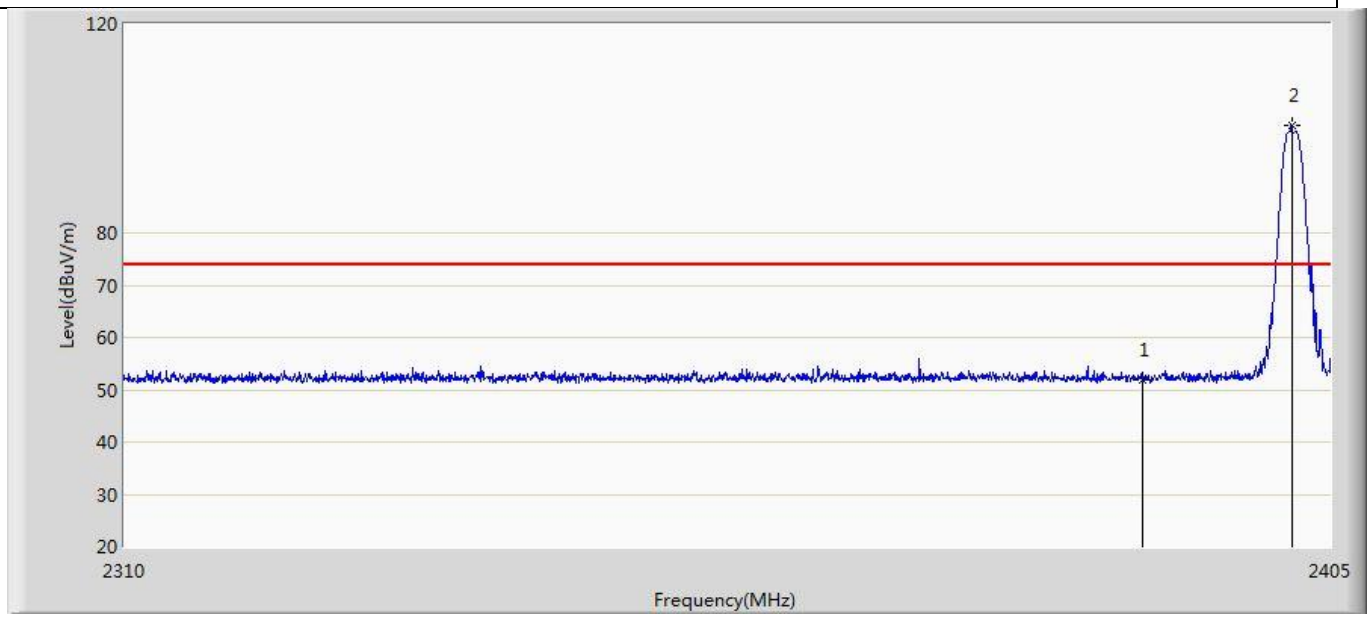
No	Mark	Frequency (MHz)	Measure Level (dBuV/m)	Reading Level (dBuV)	Over Limit (dB)	Limit (dBuV/m)	Factor (dB)	Type
1	*	2479.793	101.454	67.141	N/A	N/A	34.313	PK
2		2483.500	56.384	22.073	-17.616	74.000	34.311	PK

Profile: 2150803R	Page No.: 16
Engineer: Tongben	
Site: AC5	Time: 2021/06/13 - 18:29
Limit: FCC_Part15.209_RE(3m)	Margin: 0
Probe: Horn_3117_00167055(1-18GHz)	Polarity: Vertical
EUT: RM2-Track-1-0	Power: AC 120V/60Hz
Note: Mode 3:Transmit at 2480MHz by BLE Coded S=2	



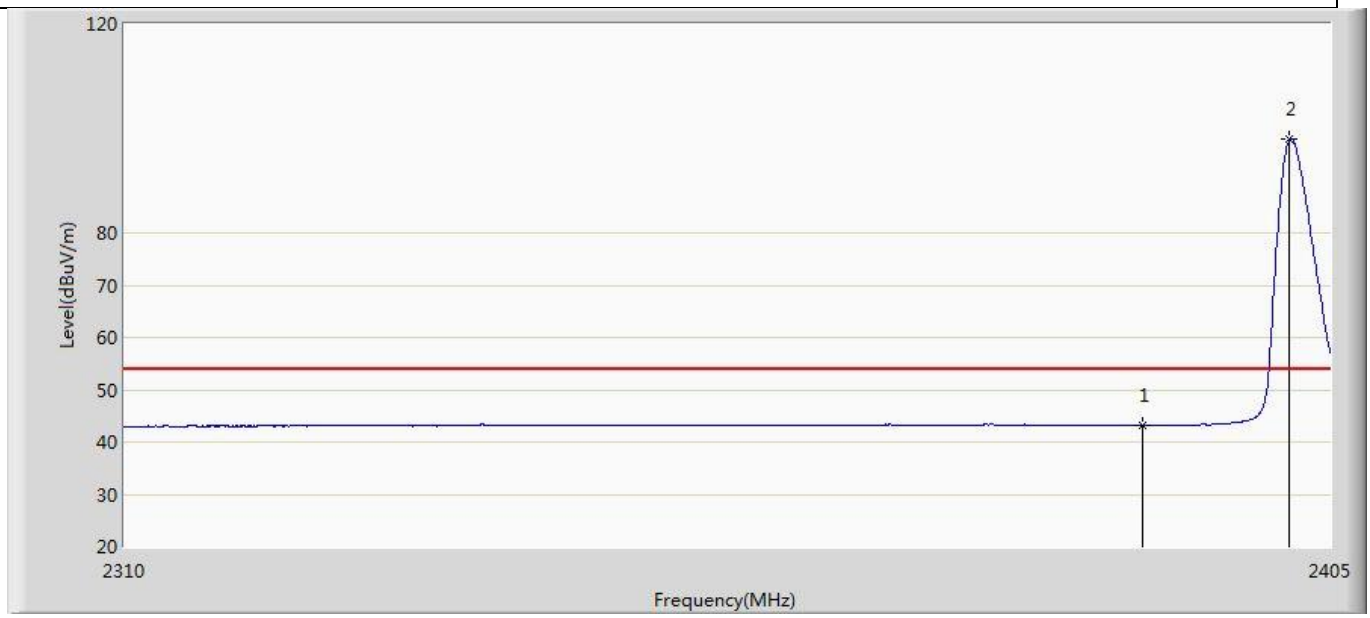
No	Mark	Frequency (MHz)	Measure Level (dBuV/m)	Reading Level (dBuV)	Over Limit (dB)	Limit (dBuV/m)	Factor (dB)	Type
1	*	2480.079	99.792	65.479	N/A	N/A	34.313	AV
2		2483.500	45.366	11.055	-8.634	54.000	34.311	AV

Profile: 2150803R	Page No.: 1
Engineer: Tongben	
Site: AC5	Time: 2021/06/13 - 17:44
Limit: FCC_Part15.209_RE(3m)	Margin: 0
Probe: Horn_3117_00167055(1-18GHz)	Polarity: Horizontal
EUT: RM2-Track-1-0	Power: AC 120V/60Hz
Note: Mode 4:Transmit at 2402MHz by BLE Coded S=8	



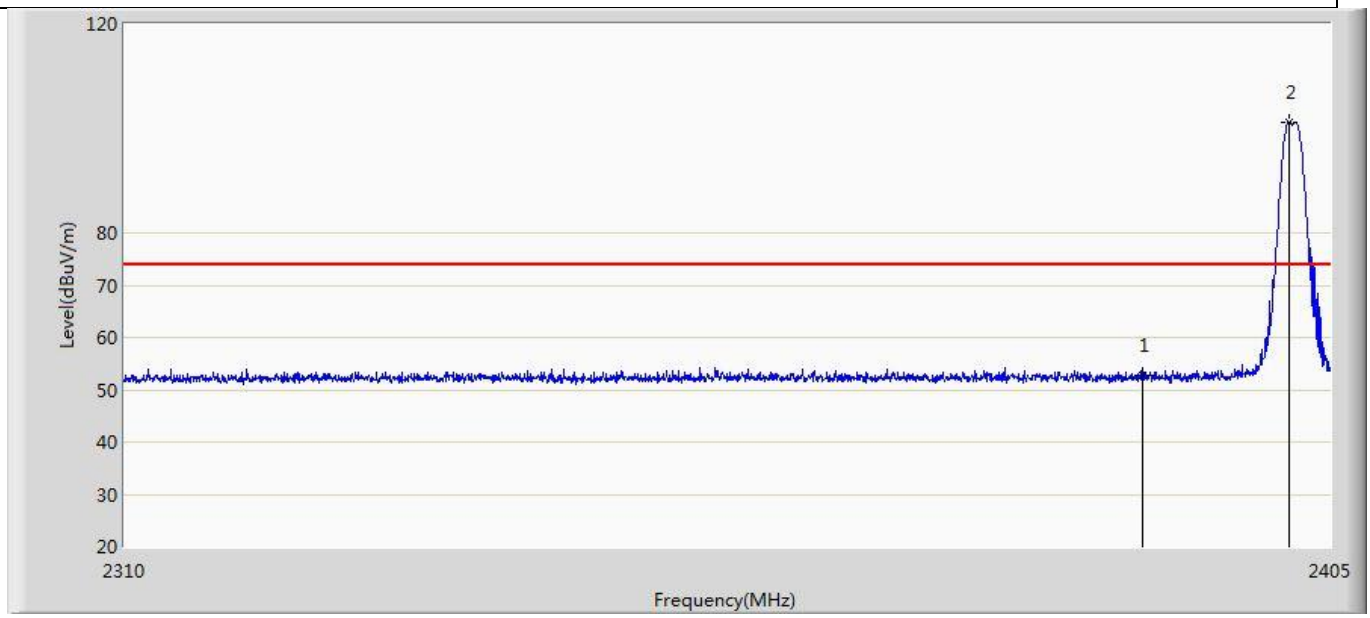
No	Mark	Frequency (MHz)	Measure Level (dBuV/m)	Reading Level (dBuV)	Over Limit (dB)	Limit (dBuV/m)	Factor (dB)	Type
1		2390.000	51.775	17.432	-22.225	74.000	34.344	PK
2	*	2401.913	100.608	66.270	N/A	N/A	34.338	PK

Profile: 2150803R	Page No.: 2
Engineer: Tongben	
Site: AC5	Time: 2021/06/13 - 17:46
Limit: FCC_Part15.209_RE(3m)	Margin: 0
Probe: Horn_3117_00167055(1-18GHz)	Polarity: Horizontal
EUT: RM2-Track-1-0	Power: AC 120V/60Hz
Note: Mode 4:Transmit at 2402MHz by BLE Coded S=8	



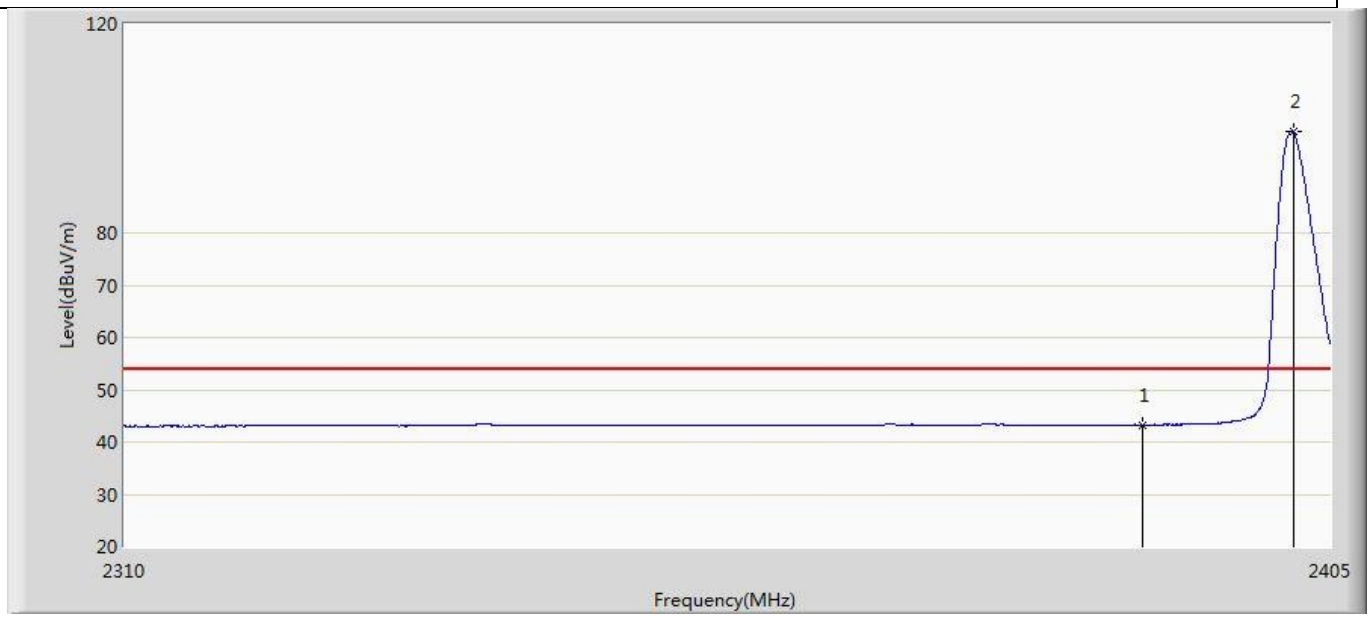
No	Mark	Frequency (MHz)	Measure Level (dBuV/m)	Reading Level (dBuV)	Over Limit (dB)	Limit (dBuV/m)	Factor (dB)	Type
1		2390.000	43.186	8.843	-10.814	54.000	34.344	AV
2	*	2401.770	97.857	63.518	N/A	N/A	34.338	AV

Profile: 2150803R	Page No.: 3
Engineer: Tongben	
Site: AC5	Time: 2021/06/13 - 17:48
Limit: FCC_Part15.209_RE(3m)	Margin: 0
Probe: Horn_3117_00167055(1-18GHz)	Polarity: Vertical
EUT: RM2-Track-1-0	Power: AC 120V/60Hz
Note: Mode 4:Transmit at 2402MHz by BLE Coded S=8	



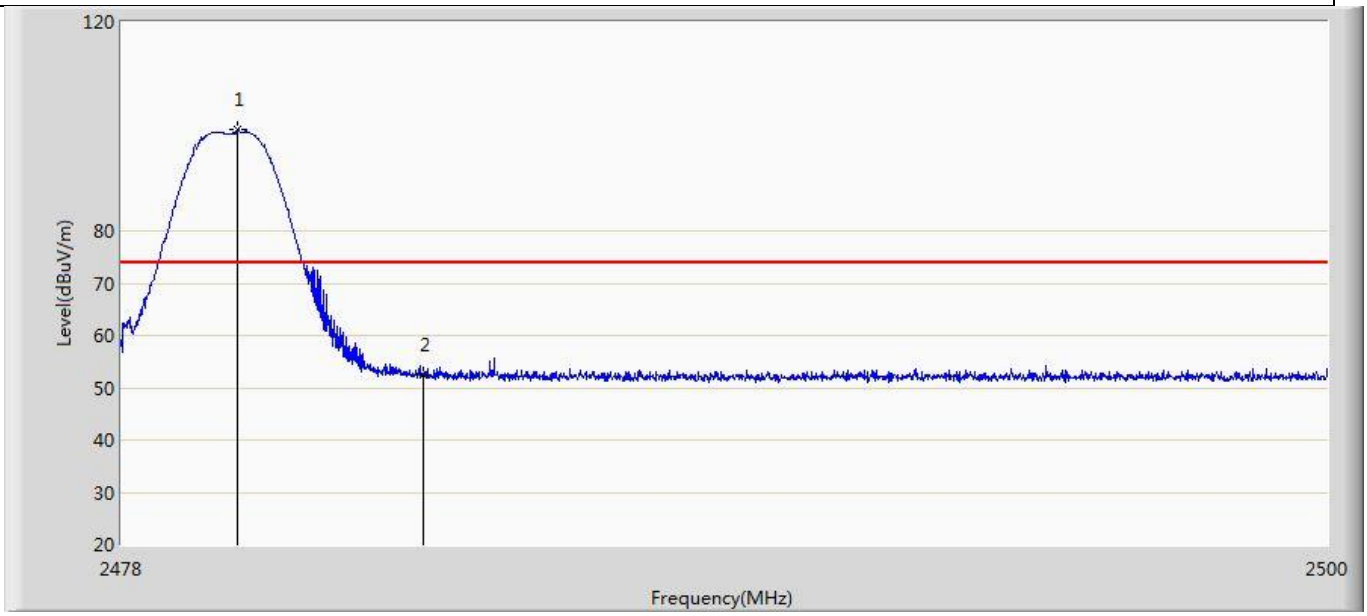
No	Mark	Frequency (MHz)	Measure Level (dBuV/m)	Reading Level (dBuV)	Over Limit (dB)	Limit (dBuV/m)	Factor (dB)	Type
1		2390.000	52.805	18.462	-21.195	74.000	34.344	PK
2	*	2401.675	101.212	66.873	N/A	N/A	34.338	PK

Profile: 2150803R	Page No.: 4
Engineer: Tongben	
Site: AC5	Time: 2021/06/13 - 17:50
Limit: FCC_Part15.209_RE(3m)	Margin: 0
Probe: Horn_3117_00167055(1-18GHz)	Polarity: Vertical
EUT: RM2-Track-1-0	Power: AC 120V/60Hz
Note: Mode 4:Transmit at 2402MHz by BLE Coded S=8	



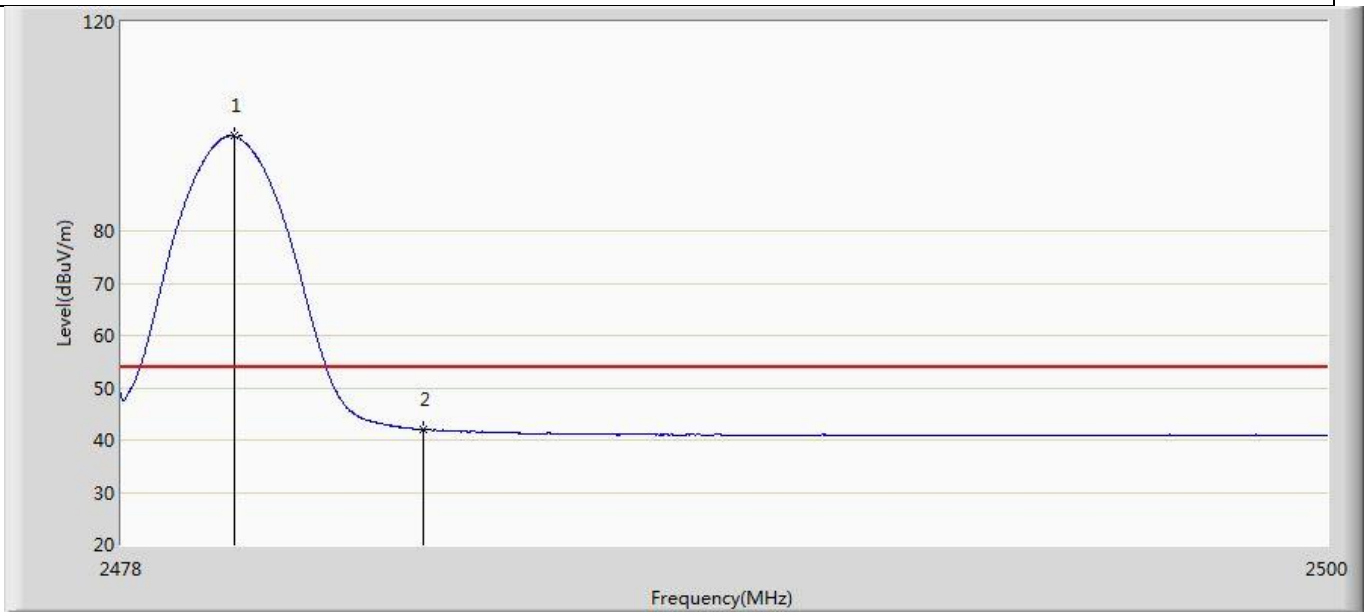
No	Mark	Frequency (MHz)	Measure Level (dBuV/m)	Reading Level (dBuV)	Over Limit (dB)	Limit (dBuV/m)	Factor (dB)	Type
1		2390.000	43.243	8.900	-10.757	54.000	34.344	AV
2	*	2402.055	99.352	65.014	N/A	N/A	34.338	AV

Profile: 2150803R	Page No.: 5
Engineer: Tongben	
Site: AC5	Time: 2021/06/13 - 17:52
Limit: FCC_Part15.209_RE(3m)	Margin: 0
Probe: Horn_3117_00167055(1-18GHz)	Polarity: Horizontal
EUT: RM2-Track-1-0	Power: AC 120V/60Hz
Note: Mode 4:Transmit at 2480MHz by BLE Coded S=8	



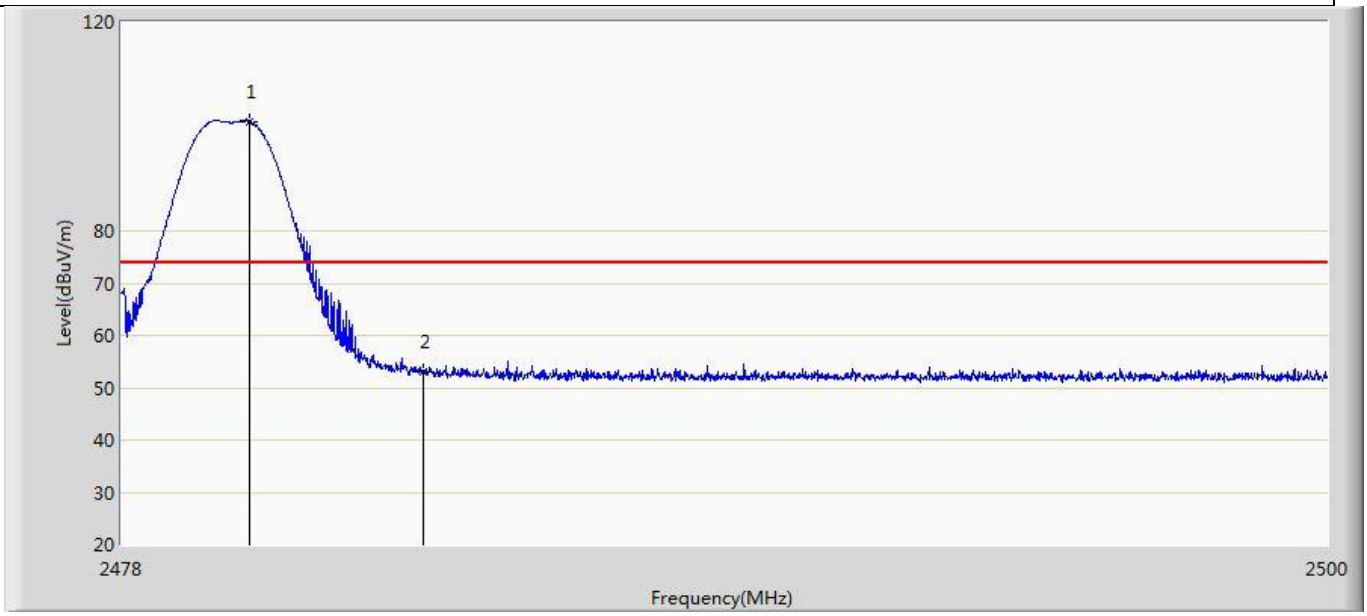
No	Mark	Frequency (MHz)	Measure Level (dBuV/m)	Reading Level (dBuV)	Over Limit (dB)	Limit (dBuV/m)	Factor (dB)	Type
1	*	2480.123	99.316	65.003	N/A	N/A	34.313	PK
2		2483.500	52.507	18.196	-21.493	74.000	34.311	PK

Profile: 2150803R	Page No.: 6
Engineer: Tongben	
Site: AC5	Time: 2021/06/13 - 17:56
Limit: FCC_Part15.209_RE(3m)	Margin: 0
Probe: Horn_3117_00167055(1-18GHz)	Polarity: Horizontal
EUT: RM2-Track-1-0	Power: AC 120V/60Hz
Note: Mode 4:Transmit at 2480MHz by BLE Coded S=8	



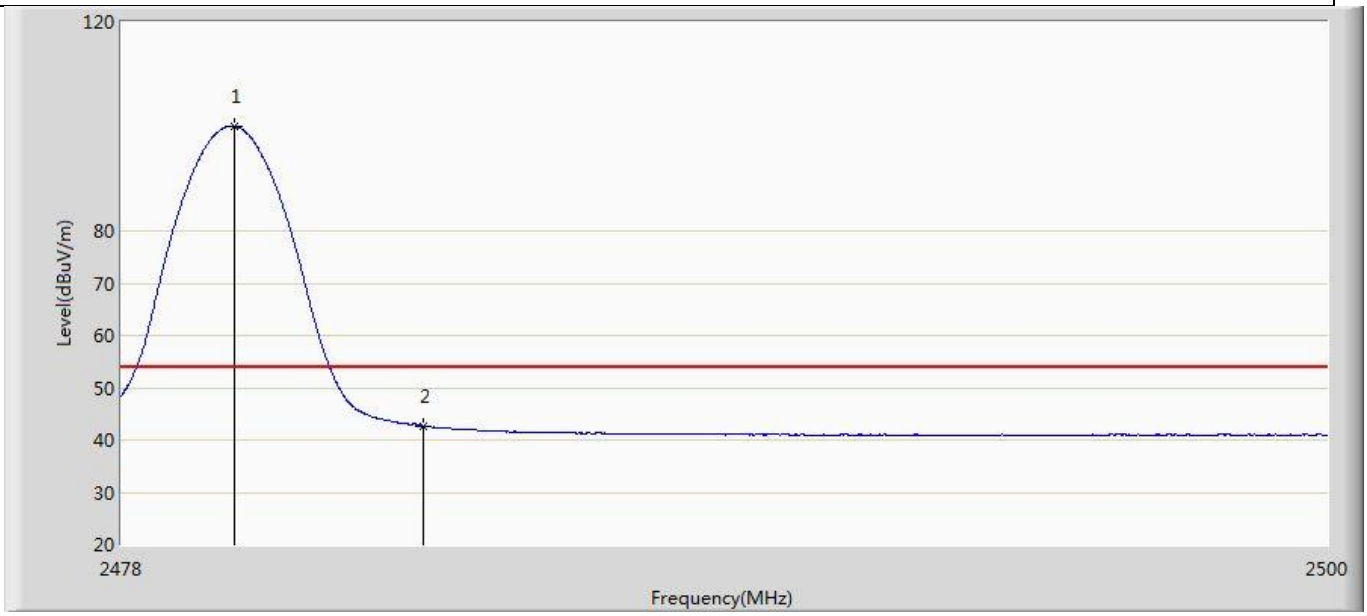
No	Mark	Frequency (MHz)	Measure Level (dBuV/m)	Reading Level (dBuV)	Over Limit (dB)	Limit (dBuV/m)	Factor (dB)	Type
1	*	2480.046	98.148	63.835	N/A	N/A	34.313	AV
2		2483.500	42.074	7.763	-11.926	54.000	34.311	AV

Profile: 2150803R	Page No.: 7
Engineer: Tongben	
Site: AC5	Time: 2021/06/13 - 17:57
Limit: FCC_Part15.209_RE(3m)	Margin: 0
Probe: Horn_3117_00167055(1-18GHz)	Polarity: Vertical
EUT: RM2-Track-1-0	Power: AC 120V/60Hz
Note: Mode 4:Transmit at 2480MHz by BLE Coded S=8	



No	Mark	Frequency (MHz)	Measure Level (dBuV/m)	Reading Level (dBuV)	Over Limit (dB)	Limit (dBuV/m)	Factor (dB)	Type
1	*	2480.321	100.972	66.659	N/A	N/A	34.313	PK
2		2483.500	52.906	18.595	-21.094	74.000	34.311	PK

Profile: 2150803R	Page No.: 8
Engineer: Tongben	
Site: AC5	Time: 2021/06/13 - 18:00
Limit: FCC_Part15.209_RE(3m)	Margin: 0
Probe: Horn_3117_00167055(1-18GHz)	Polarity: Vertical
EUT: RM2-Track-1-0	Power: AC 120V/60Hz
Note: Mode 4:Transmit at 2480MHz by BLE Coded S=8	



No	Mark	Frequency (MHz)	Measure Level (dBuV/m)	Reading Level (dBuV)	Over Limit (dB)	Limit (dBuV/m)	Factor (dB)	Type
1	*	2480.046	100.027	65.714	N/A	N/A	34.313	AV
2		2483.500	42.668	8.357	-11.332	54.000	34.311	AV

Note:
1. Measured Level = Reading Level + Factor.
2. As the radiated emission was performed, so conducted emission was not tested.

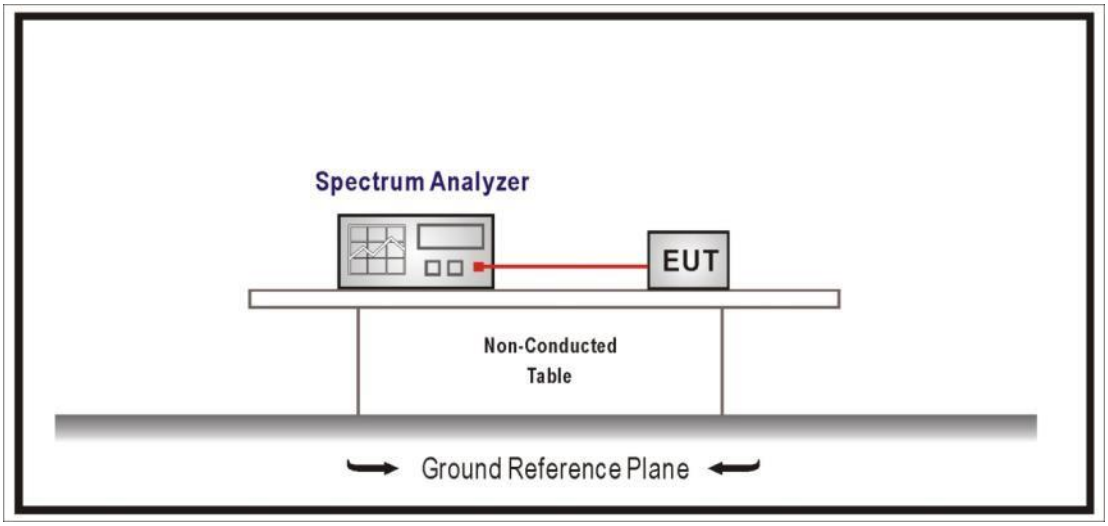
4.6 DTS Bandwidth	VERDICT: PASS

4.6.1 Limit

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

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

4.6.2 Test Setup



4.6.3 Test Procedure

	Reference Rule		Chapter	Description
☒	ANSI C63.10		11.8	DTS bandwidth
	☐	ANSI C63.10	11.8.1	Option 1
	☒	ANSI C63.10	11.8.2	Option 2

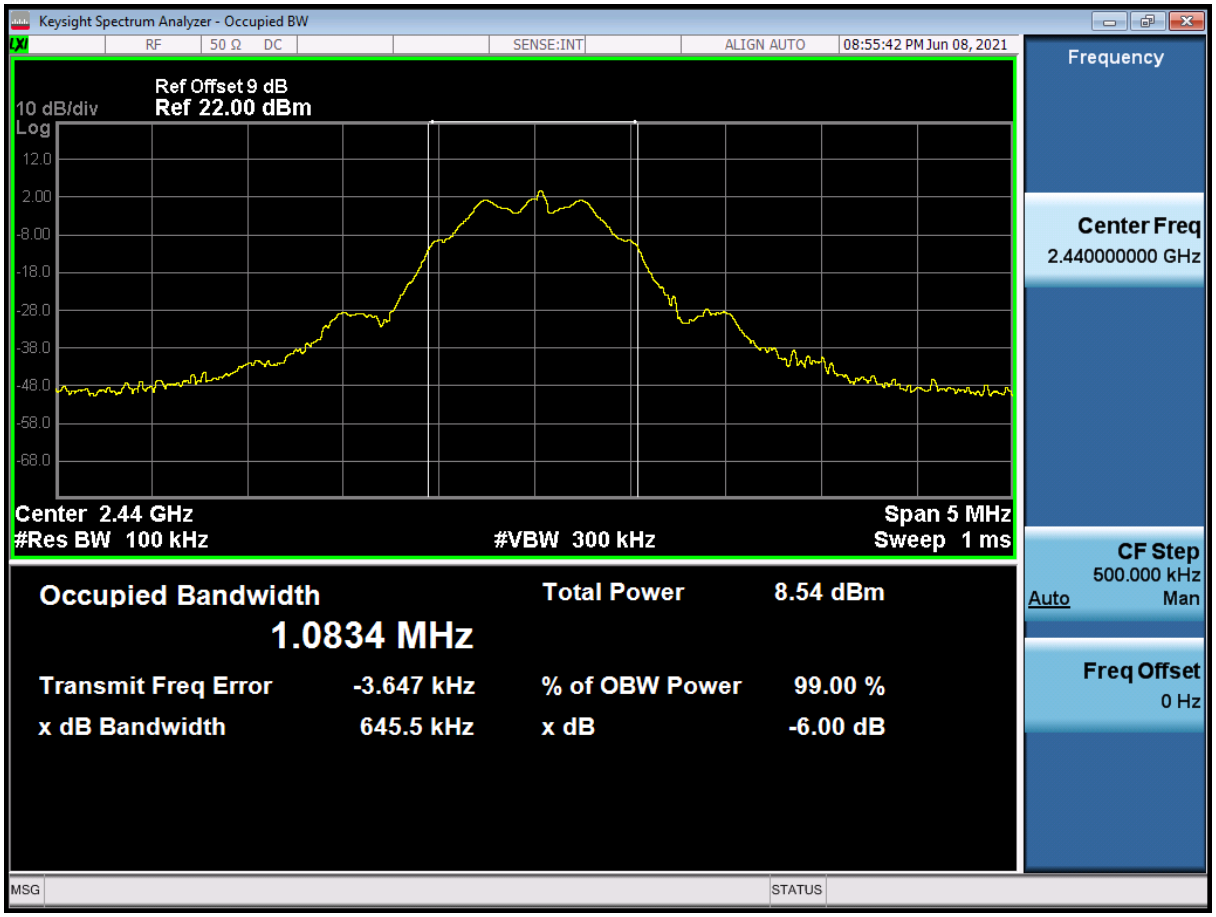
4.6.4 Test Data

Mode	CH.	Test Freq. (MHz)	6dB Occupied Bandwidth (kHz)	Limit (kHz)	Result
1	00	2402	718.5	>500	Pass
	19	2440	715.9	>500	Pass
	39	2480	721.2	>500	Pass
2	00	2402	1171	>500	Pass
	19	2440	1164	>500	Pass
	39	2480	1161	>500	Pass
3	00	2402	704.1	>500	Pass
	19	2440	722.5	>500	Pass
	39	2480	741.0	>500	Pass
4	00	2402	665.4	>500	Pass
	19	2440	645.5	>500	Pass
	39	2480	694.4	>500	Pass

Note : The worst case of Occupied Bandwidth as below:

6dB Occupied Bandwidth

Mode 4 CH19 (2440MHz)



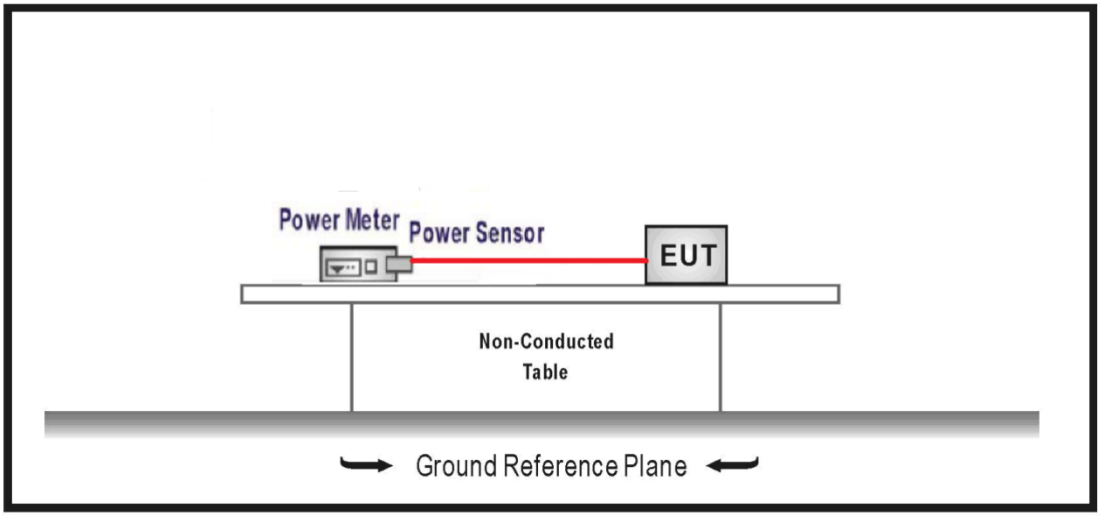
4.7 Fundamental emission output power — VERDICT: PASS

4.7.1 Limit

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

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

4.7.2 Test Setup



4.7.3 Test Procedure

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

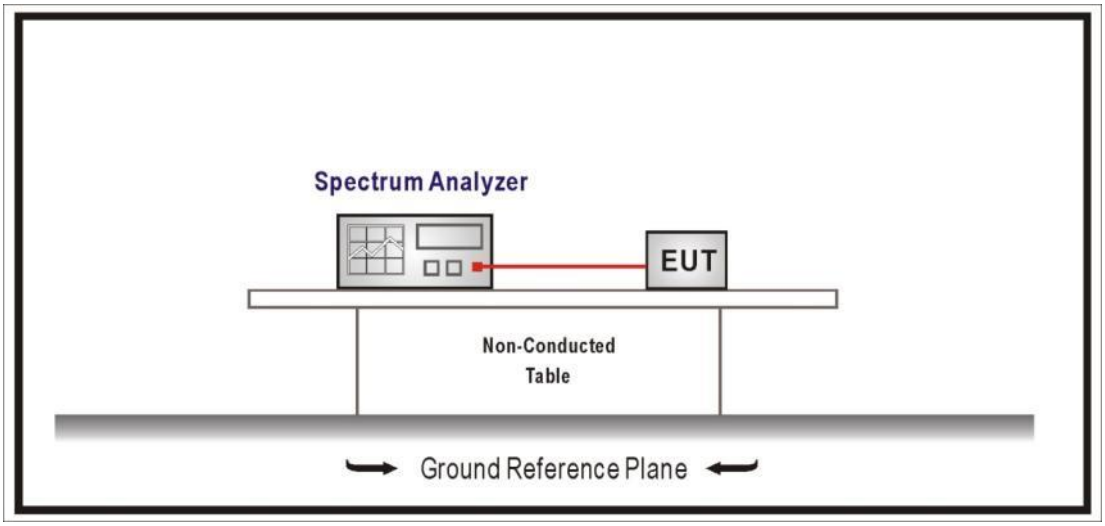
4.7.4 Test Data

Mode	Channel	Test Frequency (MHz)	Conducted Power (dBm)	Conducted Power Limit (dBm)	Result
Mode 1	00	2402	5.64	≤30	Pass
	19	2440	5.59	≤30	Pass
	39	2480	5.63	≤30	Pass
Mode 2	00	2402	6.23	≤30	Pass
	19	2440	6.18	≤30	Pass
	39	2480	6.25	≤30	Pass
Mode 3	00	2402	6.31	≤30	Pass
	19	2440	6.24	≤30	Pass
	39	2480	6.28	≤30	Pass
Mode 4	00	2402	6.29	≤30	Pass
	19	2440	6.22	≤30	Pass
	39	2480	6.26	≤30	Pass

4.8 Power Density	VERDICT: PASS

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

4.8.2 Test Setup



4.8.3 Test Procedure

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

4.8.4 Test Data

Mode	Channel	Test Frequency (MHz)	Measurement PSD (dBm/3kHz)	Limit (dBm/3kHz)	Result
Mode 1	00	2402	-10.402	≤8	Pass
	19	2440	-10.265	≤8	Pass
	39	2480	-11.021	≤8	Pass
Mode 2	00	2402	-13.074	≤8	Pass
	19	2440	-12.842	≤8	Pass
	39	2480	-13.700	≤8	Pass
Mode 3	00	2402	-1.657	≤8	Pass
	19	2440	-1.596	≤8	Pass
	39	2480	-2.528	≤8	Pass
Mode 4	00	2402	-1.526	≤8	Pass
	19	2440	-1.362	≤8	Pass
	39	2480	-2.164	≤8	Pass

Note : The worst case of PSD as below:

Mode 4 CH19(2440MHz)

4.9 Antenna Requirement	VERDICT: PASS

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

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

5 TEST SETUP PHOTO AND EUT PHOTO

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

The End