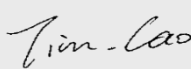
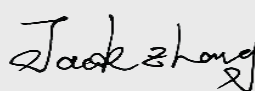


Test report No:
2390782R-RF-US-P06V06

FCC & ISED TEST REPORT

Product Name	Mobile Computer
Trademark	Elo
Model and /or type reference	EMC-M51
FCC ID	RBWEMCM51
IC	10757B-EMCM51
Applicant's name / address	Elo Touch Solutions, Inc 670 N. McCarthy Blvd., Suite 100, Milpitas, CA 95035, USA.
Test method requested, standard	47 CFR FCC Part 15 (Section 15.247) ANSI C63.10: 2013 RSS-Gen Issue 5 RSS-247 Issue 3
Verdict Summary	IN COMPLIANCE
Tested by (name / position & signature)	Tim Cao / Project Manager 
Approved by (name / position & signature)	Jack Zhang / Manager 
Date of issue	2024-09-14
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)	Mar. 20, 2024
Date (start test)	Jun. 01, 2024
Date (finish test)	Jun. 30, 2024

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
2390782R-RF-US-P06V06	V1.0	Initial issue of report.	2024-09-14

REMARKS AND COMMENTS

1. The equipment under test (EUT) does meet the essential requirements of the stated standard(s)/test(s).
2. This report is limited report related to installation tested module in Mobile Computer, the customer declared that the RF parameter of the module installed in the host is exactly same with the certificated module. We verified the RF Output Power and Radiated Emissions on the Host. For other test data, please refer to FCC ID: 2APJ4-SRM955, IC: 23860-SRM955. These test results on a sample of the device are for the purpose of demonstrating Compliance with 47 CFR FCC Part 15 (Section 15.247), RSS-247 Issue 3. RSS-Gen Issue 5.
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

Conducted Test/ TR8

Instrument	Manufacturer	Model No.	Serial No.	Cal. Date	Next Cal. Date	Firmware Version	Software version
Wireless Connectivity Tester	R&S	CMW 270	102593	2024.05.15	2025.05.14	V 4.0.60	N/A
Coaxial Cable	N/A	N/A	2477	2023.10.08	2024.10.07	N/A	N/A
Coaxial Cable	N/A	N/A	2478	2023.10.08	2024.10.07	N/A	N/A
High and low temperature and fast temperature change test box	ASTUOD	ASTD-FBT-225K	N/A	2024.04.21	2025.04.20	N/A	N/A
Temperature/Humidity Meter	RTS	RTS-1909	THM-032	2024.05.17	2025.05.16	N/A	N/A
Test system							
Instrument	Manufacturer	Model No.	Serial No.	Cal. Date	Next Cal. Date	Firmware Version	Software version
MAX Signal Analyzer	Keysight	N9010A	MY48030494	2023.11.08	2024.11.07	A.14.03	N/A
RF Control Unit	Tonscend	JS0806-2	22G8060594	2024.01.31	2025.01.30	N/A	N/A
MXG-B RF Vector Signal Generator	Keysight	N5182B	MY61252529	2024.05.12	2025.05.11	B.01.96	N/A
Frequency extender for EXG or MXG	Keysight	N5182BX07	MY59362500	2024.05.12	2025.05.11	N/A	N/A
EXG-B MW Analog Signal Generator	Keysight	N5173B	MY61252566	2023.08.26	2024.08.25	B.01.95	N/A
Test Software	Tonscend	TS1120	JS1120-3	N/A	N/A	N/A	V3.0.22

Radiated Emission (9KHz-1GHz) / AC2

Instrument	Manufacturer	Model No.	Serial No.	Cal. Date	Next Cal. Date	Firmware Versiom	Software version
EMI Test Receiver	R&S	ESCI	100573	2024.02.06	2025.02.05	4.42 SP3	N/A
Loop Antenna	R&S	HFH2-Z2E	101149	2024.03.27	2025.03.26	N/A	N/A
Bilog Antenna	Teseq GmbH	CBL6112D	27611	2024.03.20	2025.03.19	N/A	N/A
Coaxial Cable	Huber+Suhner	SUCOFLEX 106	AC2-C	2024.04.27	2025.04.26	N/A	N/A
Temperature/Humidity Meter	RTS	RTS-1909	THM-021	2024.05.17	2025.05.16	N/A	N/A
Dekra test software	Dekra	N/A	N/A	N/A	N/A	N/A	3

Radiated Emission (1GHz-40GHz) / AC5

Instrument	Manufacturer	Model No.	Serial No.	Cal. Date	Next Cal. Date	Firmware Versiom	Software version
EXA Spectrum Analyzer	Keysight	N9020B	MY601122 18	2023.11.08	2024.11.07	A.31.05	N/A
Pre-Amplifier	SKET	EMC184045 SE	980263	2023.07.14	2024.07.13	N/A	N/A
Preamplifier	CHENGYI	EMC184045 SE	980263	2023.07.09	2024.07.08	N/A	N/A
DRG Horn Antenna	ETS-Lindgren	3117	123988	2023.11.07	2024.11.06	N/A	N/A
Broad-Band Horn Antenna	Schwarzbeck	BBHA9170	294	2024.05.30	2025.05.29	N/A	N/A
Filter Switch Box	MVE	MSW-F196	C070001S	2024.04.20	2025.04.19	N/A	N/A
Coaxial Cable	ROSENBERGER	LA1-C011-2000/3000	AC5-40G-2	2024.05.26	2025.05.25	N/A	N/A
Cable	Rosenberger	LA1-C011-1000	0523	2024.05.26	2025.05.25	N/A	N/A
Temperature/Humidity Meter	RTS	RTS-1909	THM-001	2023.08.25	2024.08.24	N/A	N/A
Temperature/Humidity Meter	RTS	RTS-1909	THM-024	2024.05.17	2025.05.16	N/A	N/A
Dekra test software	Dekra	N/A	N/A	N/A	N/A	N/A	3

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 comply with standard required as below.

Test item	Uncertainty
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 Horizontal: 18GHz~26.5GHz: 5.30 dB Vertical: 18GHz~26.5GHz: 4.90 dB
Peak OutputPower	± 1.27 dB
Emissions in non-restricted frequency bands	± 1.0 dB

1 GENERAL INFORMATION

1.1 General Description of the Item(s)

Product Name	Mobile Computer
Model No.	EMC-M51
Trademark.	Elo
FCC ID	RBWEMCM51
IC.....	10757B-EMCM51
Hardware Version	V1.06
Software Version.....	MT912NoGms_EQ000_2774.F53FD5F.FD20B6E.6EAD44F_240130_100_V01_T23
Manufacturer.....	Elo Touch Solutions, Inc
Manufacturer Address.....	670 N. McCarthy Blvd., Suite 100, Milpitas, CA 95035, USA.
Factory	ShuoGe Intelligent Technology Co.,Ltd.
Factory address	Room 308-310, Building 1, No.2 8th Road, Baiyang Street, Qiantang New Area, Hangzhou City, Zhejiang Province, P.R. China(310018)
Operating temperature	-20 ~ +50℃
Note: This report is based on 2390782R-RF-US-P06V02. The customer stated that the new EUT has removed the WCDMA and LTE and NR modules and the rest are identical. We verified the worst channel test on the new EUT and the test results did not get worse. Therefore, this report reuses the test data of 2390782R-RF-US-P06V02.	

Wireless Card	SRM955				
Wireless specification.....	Bluetooth (BR/EDR)				
Operating frequency range(s).....	2402~2480MHz				
Type of Modulation.....	GFSK				
PHYS	☒	GFSK	☒	Pi/4 DQPSK	☒ 8DPSK
Data Rate	☒	1Mbit/s	☒	2Mbit/s	☒ 3Mbit/s
Number of channel.....	79				

Rated power supply	Voltage and Frequency	
	☐	AC: 220 - 240 V, 50/60 Hz
	☐	AC: 100 - 240 V, 50/60 Hz
	☒	Battery: 3.8 Vdc
	☒	Adapter:
Adapter Model	UES45LCP-SPC	
	Input: 100-240 V ~ 50/60 Hz, 1.3 A	
	Output: 5.0 V / 3.0 A, 15.0 W;	
	9.0 V / 3.0 A, 27.0 W;	
	12.0 V / 3.0 A, 36.0 W;	
	15.0 V / 3.0 A, 45.0 W;	
	20.0 V / 2.25 A, 45.0 W Max;	
Mounting position.....	☐	Tabletop equipment
	☐	Wall/Ceiling mounted equipment

	☐	Floor standing equipment
	☒	Hand-held/Portable equipment
	☐	Other:

1.2 Antenna Information

Antenna Delivery	☒	1TX + 1RX		
	☒	2TX + 2RX		
	☐	Others:.....		
Antenna technology	☒	SISO		
	☒	MIMO	☒	CDD
			☐	Beam-forming
Antenna Type	☐	External	☐	Dipole
			☐	Sectorized
	☒	Internal	☐	Monopole
			☒	PIFA
			☐	Others
Antenna Gain.....	-1.50 dBi			

1.3 Channel List

Bluetooth Working Frequency of Each Channel: (For FHSS)							
Channel	Frequency	Channel	Frequency	Channel	Frequency	Channel	Frequency
00	2402 MHz	01	2403 MHz	02	2404 MHz	03	2405 MHz
04	2406 MHz	05	2407 MHz	06	2408 MHz	07	2409 MHz
08	2410 MHz	09	2411 MHz	10	2412 MHz	11	2413 MHz
12	2414 MHz	13	2415 MHz	14	2416 MHz	15	2417 MHz
16	2418 MHz	17	2419 MHz	18	2420 MHz	19	2421 MHz
20	2422 MHz	21	2423 MHz	22	2424 MHz	23	2425 MHz
24	2426 MHz	25	2427 MHz	26	2428 MHz	27	2429 MHz
28	2430 MHz	29	2431 MHz	30	2432 MHz	31	2433 MHz
32	2434 MHz	33	2435 MHz	34	2436 MHz	35	2437 MHz
36	2438 MHz	37	2439 MHz	38	2440 MHz	39	2441 MHz
40	2442 MHz	41	2443 MHz	42	2444 MHz	43	2445 MHz
44	2446 MHz	45	2447 MHz	46	2448 MHz	47	2449 MHz
48	2450 MHz	49	2451 MHz	50	2452 MHz	51	2453 MHz
52	2454 MHz	53	2455 MHz	54	2456 MHz	55	2457 MHz
56	2458 MHz	57	2459 MHz	58	2460 MHz	59	2461 MHz
60	2462 MHz	61	2463 MHz	62	2464 MHz	63	2465 MHz
64	2466 MHz	65	2467 MHz	66	2468 MHz	67	2469 MHz
68	2470 MHz	69	2471 MHz	70	2472 MHz	71	2473 MHz
72	2474 MHz	73	2475 MHz	74	2476 MHz	75	2477 MHz
76	2478 MHz	77	2479 MHz	78	2480 MHz	N/A	N/A

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	Mode 1: Transmitter-1Mbps(GFSK_DH5)
	Mode 2: Transmitter-2Mbps(Pi/4 DQPSK_DH5)
	Mode 3: Transmitter-3Mbps(8DPSK_DH5)
	Mode 4: Transmitter-Hopping-1Mbps(GFSK_DH5)
	Mode 5: Transmitter-Hopping-2Mbps(Pi/4 DQPSK_DH5)
	Mode 6: Transmitter-Hopping-3Mbps(8DPSK_DH5)

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

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

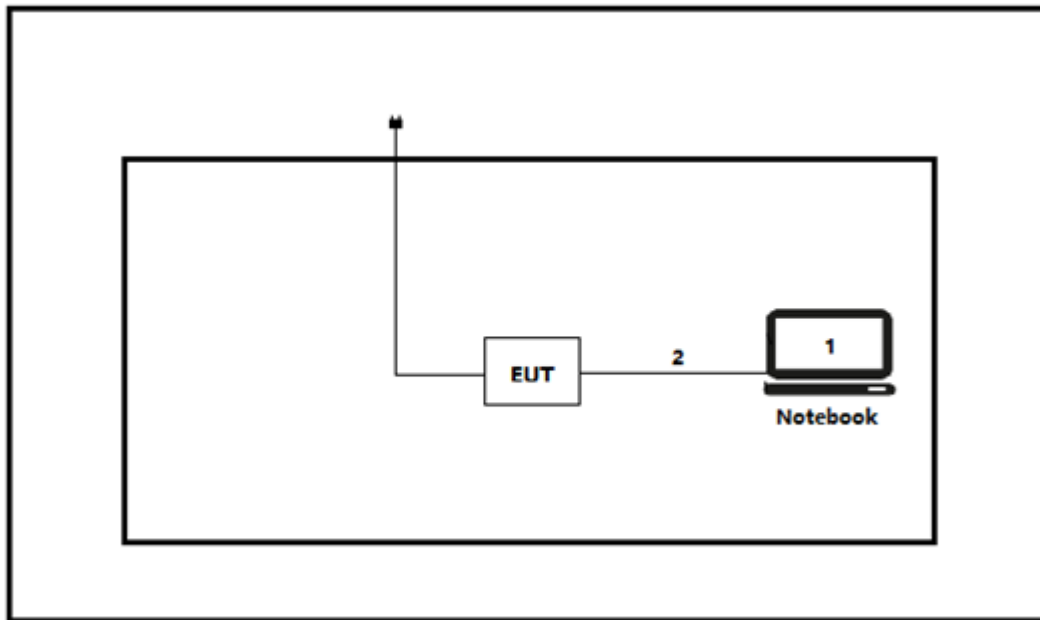
2.2 Auxiliary equipment /Accessories/Test software for the EUT

Auxiliary equipment	Type / Version	Manufacturer	Supplied by
(1) Notebook	Think pad x220	Lenovo	Adapter
(2) USB Control Cable	N/A	N/A	N/A
(3) USB Control Cable	N/A	N/A	N/A
software	Type / Version	Manufacturer	Supplied by
QRCT	V4.0	N/A	N/A

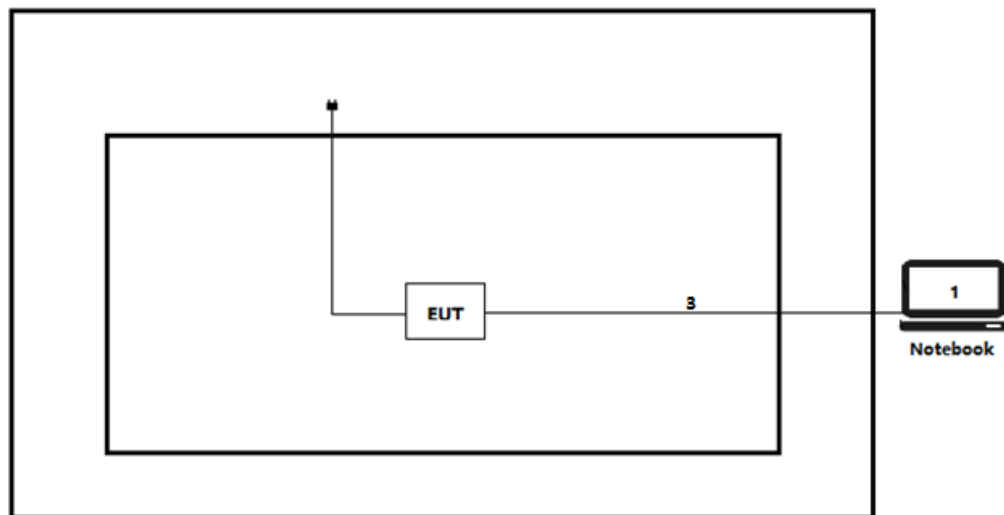
Accessories Information	Cable		
	Length used during test [m]	Attached during test	Shielded
(2)USB Control Cable	1	☒	☒
(3)USB Control Cable	8	☒	☒

2.3 Test Configuration / Block diagram used for tests

Test setup Diagram- Conducted test



Test setup Diagram- Radiated Emission



2.4 Testing process

1	Setup the EUT as shown in Section 2.3.
2	Execute the “QRCT” 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
CFR 47, FCC Part 15 C	2024	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
RSS-Gen Issue 5 Amendment 2	2021	General Requirements for Compliance of Radio Apparatus
RSS-247 Issue 3	2023	Digital Transmission Systems (DTSs), Frequency Hopping Systems (FHSs) and Licence-Exempt Local Area Network (LE-LAN) Devices

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

Requirement – Test Item of FCC	Standard(s)	Verdict	Remark
Maximum Conducted Output Power	FCC 15.247(b)(1)	PASS	Test data please refer to Appendix A
Emissions in Restricted Bands	FCC 15.247(b)(3)	PASS	Test data please refer to Appendix B

Requirement – Test Item of ISCED	Standard(s)	Verdict	Remark
Maximum Conducted Output Power	FCC 15.247(b)(1)	PASS	Test data please refer to Appendix A
Emissions in Restricted Bands	RSS-Gen Issue 5 Paragraph 8.9	PASS	Test data please refer to Appendix B

3.4 Power setting in test

Mode	Channel	Frequency (MHz)	Power Setting
Mode 1	00	2402	10
	39	2441	10
	78	2480	9
Mode 2	00	2402	9
	39	2441	9
	78	2480	9
Mode 3	00	2402	9
	39	2441	9
	78	2480	9

3.5 Test Matrix

Test item	Model : EMC-M51	
	1(#1)	2(#2)
Maximum Conducted Output Power	☒	☐
Emissions in Restricted Bands	☐	☒
Note1: The only difference between sample #1 and sample #2 is whether to keep the original antenna, sample #1 is a conduction test product that removes the original antenna and is equipped with SMA wires, and sample #2 is a complete product that retains the original antenna.		

3.6 Test Facility

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

4 TEST ITEMS OF LIMIT/SETUP/PROCEDURE

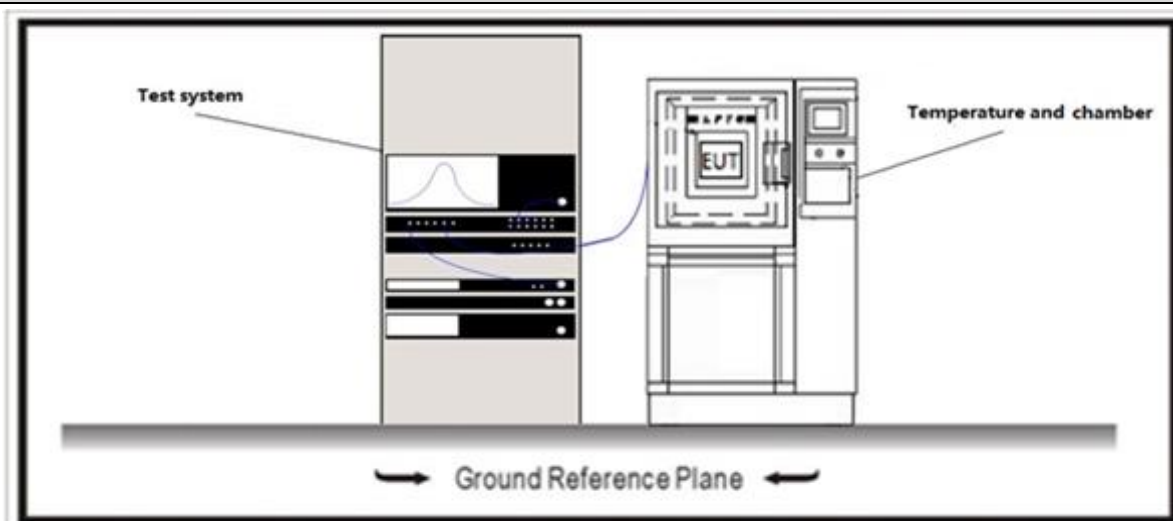
4.1 Maximum Conducted Output Power

VERDICT: PASS

4.1.1 Limit

Standard		FCC Part 15 Subpart C Paragraph 15.247(b); RSS-247 Issue 3 Paragraph 5.1.
☒	Frequency hopping systems operating in the 2400-2483.5 MHz band employing at least 75 non-overlapping hopping channels, and all frequency hopping systems in the 5725-5850 MHz band: 1 watt. For all other frequency hopping systems in the 2400-2483.5 MHz band: 0.125 watts.	
☒	Frequency hopping systems operating in the 2400-2483.5 MHz band may have hopping channel carrier frequencies that are separated by 25 kHz or two-thirds of the 20 dB bandwidth of the hopping channel, whichever is greater, provided the systems operate with an output power no greater than 125 mW.	
☐	For frequency hopping systems operating in the 902-928 MHz band: 1 watt for systems employing at least 50 hopping channels; and, 0.25 watts for systems employing less than 50 hopping channels, but at least 25 hopping channels	

4.1.2 Test Setup



4.1.3 Test Procedure

	References Rule		Chapter	Description
☒	ANSI C63.10		7.8	Evaluation of frequency-hopping device parameters
☒	ANSI C63.10		7.8.5	Output power test procedure for frequency-hopping spread-spectrum (FHSS) devices

4.2 Emissions in Restricted Bands**VERDICT: PASS****4.2.1 Limit****Standard**

FCC Part 15 Subpart C Paragraph 15.205

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			

Standard

RSS-Gen Issue 5 Paragraph 8.10

Restricted Bands of operation for IC

0.090 - 0.110	13.36 - 13.41	960 - 1427	9.0 - 9.2
0.495 - 0.505	16.42 - 16.423	1435 - 1626.5	9.3 - 9.5
2.1735 - 2.1905	16.69475 - 16.69525	1645.5 - 1646.5	10.6 - 12.7
3.020 - 3.026	16.80425 - 16.80475	1660 - 1710	13.25 - 13.4
4.125 - 4.128	25.5 - 25.67	1718.8 - 1722.2	14.47 - 14.5
4.17725 - 4.17775	37.5 - 38.25	2200 - 2300	15.35 - 16.2
4.20725 - 4.20775	73 - 74.6	2310 - 2390	17.7 - 21.4
5.677 - 5.683	74.8 - 75.2	2483.5 - 2500	22.01 - 23.12
6.215 - 6.218	108 - 138	2655 - 2900	23.6 - 24.0
6.26775 - 6.26825	149.9 - 150.05	3260 - 3267	31.2 - 31.8
6.31175 - 6.31225	156.52475 - 156.52525	3332 - 3339	36.43 - 36.5
8.291 - 8.294	156.7 - 156.9	3345.8 - 3358	Above 38.6
8.362 - 8.366	162.0125 - 167.17	3500 - 4400	
8.37625 - 8.38675	167.72 - 173.2	4500 - 5150	
8.41425 - 8.41475	240 - 285	5350 - 5460	
12.29 - 12.293	322 - 335.4	7250 - 7750	
12.51975 - 12.52025	399.9 - 410	8025 - 8500	
12.57675 - 12.57725	608 - 614	--	

Restricted Band Emissions Limit

FCC Part 15 Subpart C Paragraph 15.209

Frequency (MHz)	Field strength ($\mu\text{V/m}$)	Field strength ($\text{dB}\mu\text{V/m}$)	Measurement distance (m)
0.009 - 0.49	$2400/F(\text{kHz})$	48.5 – 13.8	300 _(Note 1)
0.49 - 1.705	$24000/F(\text{kHz})$	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)

RSS-Gen Issue 5 Paragraph 8.9.

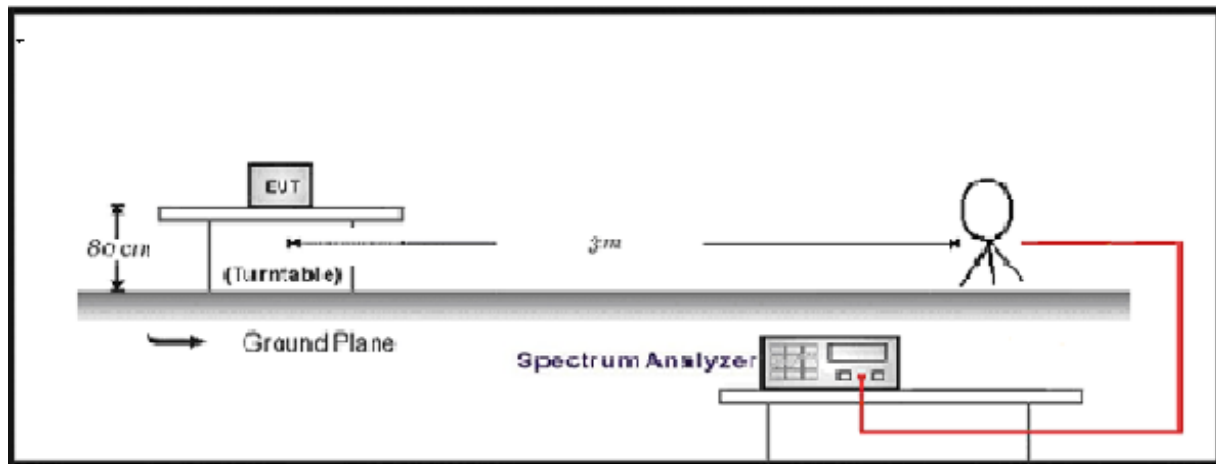
Frequency (MHz)	Field strength	Field strength ($\text{dB}\mu\text{V/m}$)	Measurement distance (m)
0.009 - 0.49	$6.37/F(\text{kHz}) \mu\text{A/m}$	48.5 – 13.8	300 _(Note 1)
0.49 - 1.705	$63.7/F(\text{kHz}) \mu\text{A/m}$	33.8 - 23	30 _(Note 1)
1.705 - 30	30 $\mu\text{V/m}$	29.5	30 _(Note 1)
30 - 88	100 $\mu\text{V/m}$	40	3 _(Note 2)
88 - 216	150 $\mu\text{V/m}$	43.5	3 _(Note 2)
216 - 960	200 $\mu\text{V/m}$	46	3 _(Note 2)
Above 960	500 $\mu\text{V/m}$	54	3 _(Note 2)

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

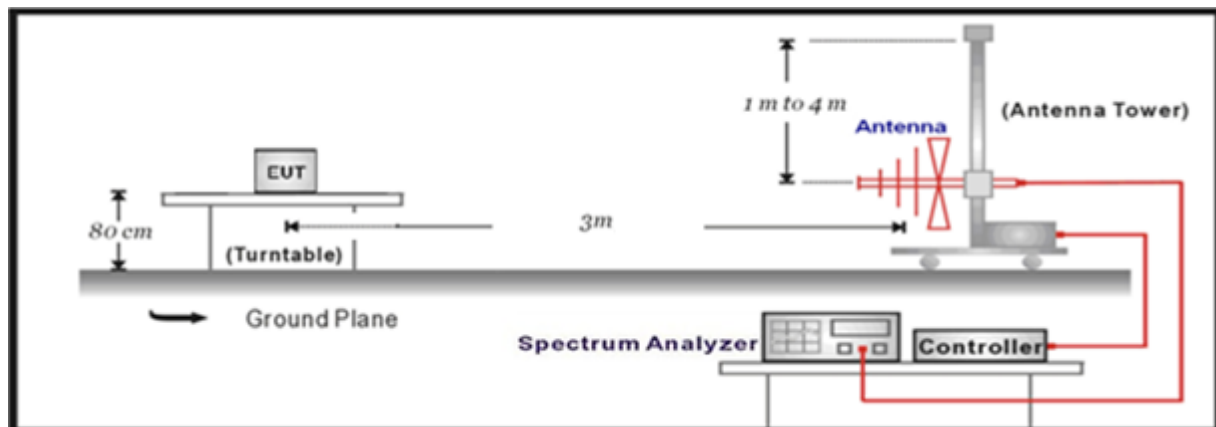
Note 2: At frequencies at or above 30 MHz, measurements may be performed at a distance other than what is specified provided: measurements are not made in the near field except where it can be shown that near field measurements are appropriate due to the characteristics of the device; and it can be demonstrated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

4.2.2 Test Setup

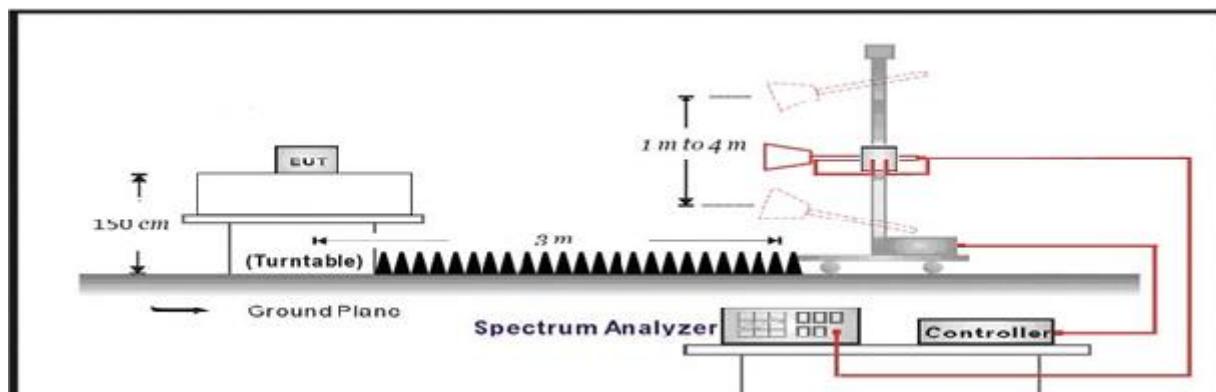
Below 30MHz Test Setup:



30MHz-1GHz Test Setup:



Above 1GHz Test Setup:



4.2.3 Test Procedure

	References Rule		Chapter	Description
☒	ANSI C63.10		11.12	Emissions in restricted frequency bands
	☒	ANSI C63.10	11.12.1	Radiated emission measurements
	☒	ANSI C63.10	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

5 TEST SETUP PHOTO AND EUT PHOTO

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

6 TEST RESULT

Appendix A: Maximum Conducted Output Power

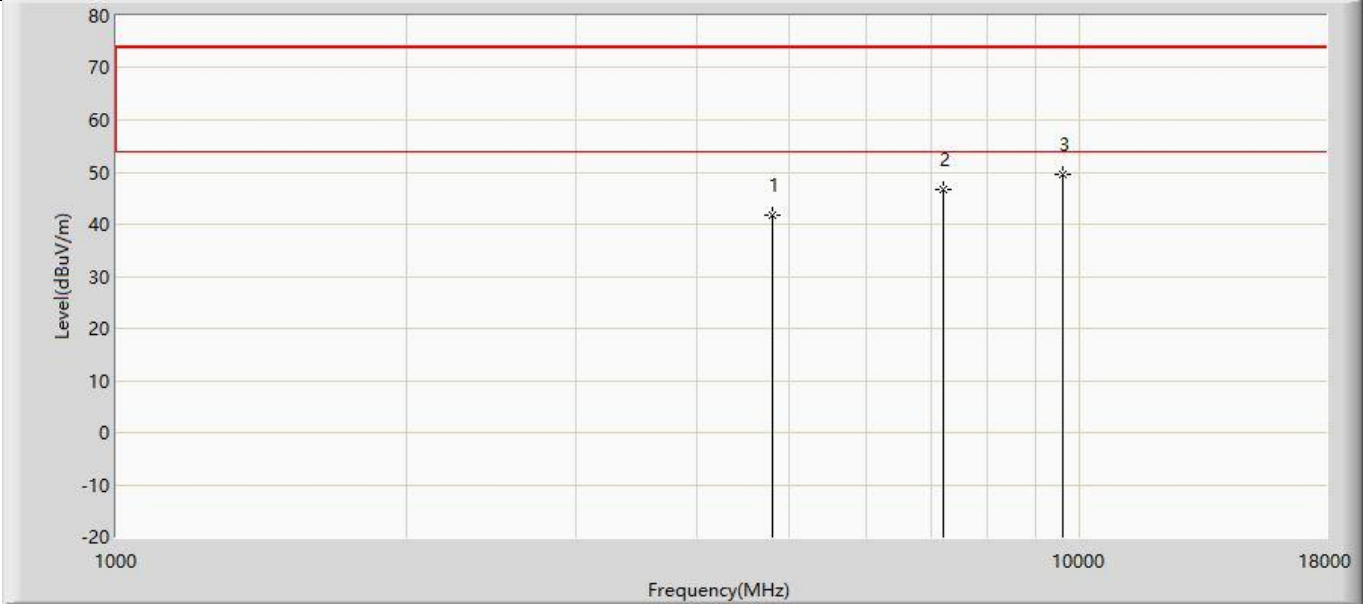
Test Mode	Antenna	Frequency[MHz]	Conducted Power[dBm]	EIRP Power[dBm]	Conducted Limit[dBm]	EIRP Limit[dBm]	Verdict
Mode 1	Ant1	2402	8.61	7.11	≤20.97	≤36	PASS
		2441	8.53	7.03	≤20.97	≤36	PASS
		2480	7.33	5.83	≤20.97	≤36	PASS
Mode 2	Ant1	2402	6.83	5.33	≤20.97	≤36	PASS
		2441	6.81	5.31	≤20.97	≤36	PASS
		2480	6.63	5.13	≤20.97	≤36	PASS
Mode 3	Ant1	2402	6.79	5.29	≤20.97	≤36	PASS
		2441	6.82	5.32	≤20.97	≤36	PASS
		2480	6.58	5.08	≤20.97	≤36	PASS

Note 1: EIRP Power = Conducted Power + Antenna gain

Note 2: The Antenna gain please refer to clause 1.2

Appendix B: Emissions in Restricted Band

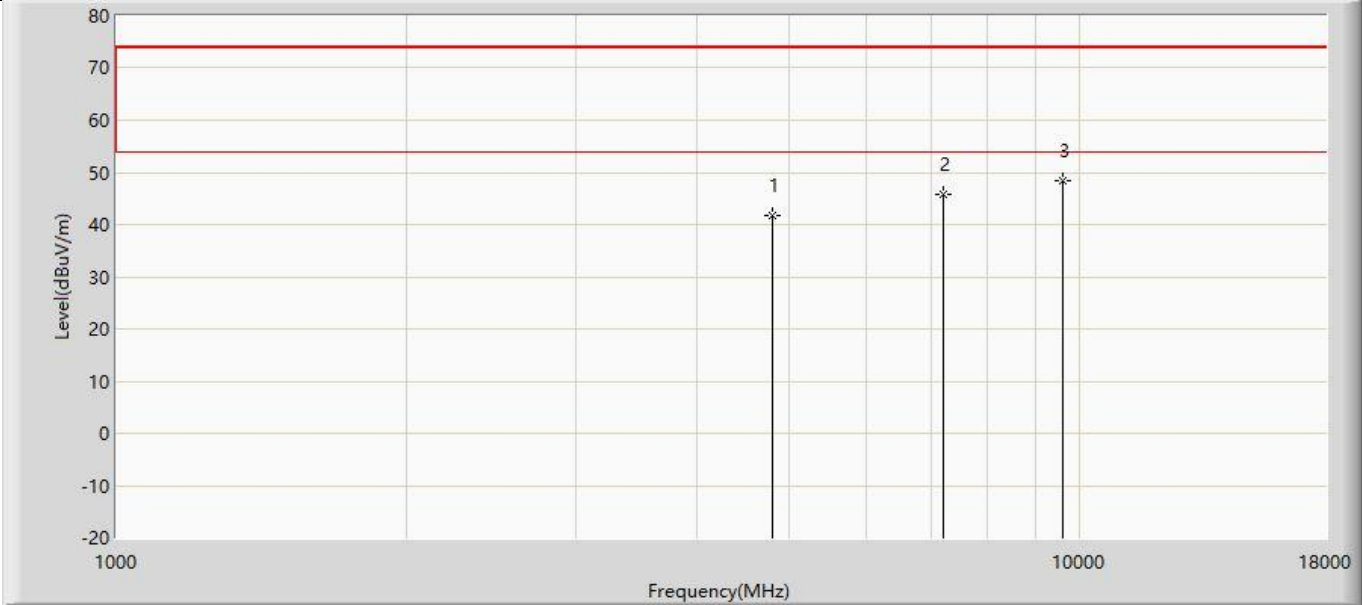
Profile: 2390782R	Page No.: 19
Engineer: Yuliu	
Site: AC5	Time: 2024/06/29 - 19:09
Limit: FCC_Part15.209_RE	Margin: 0
Probe: Horn_3117_00167055(1-18GHz)	Polarity: Horizontal
EUT: Mobile Computer	Power: Battery Powered
Note: Mode 1: Transmit at 2402MHz by DH5	



No	Mark	Frequency (MHz)	Measure Level (dBuV/m)	Reading Level (dBuV)	Over Limit (dB)	Limit (dBuV/m)	Factor (dB)	Type
1		4804.000	41.821	53.709	-32.179	74.000	-11.888	PK
2		7206.000	46.704	52.870	-27.296	74.000	-6.166	PK
3	*	9608.000	49.427	52.650	-24.573	74.000	-3.222	PK



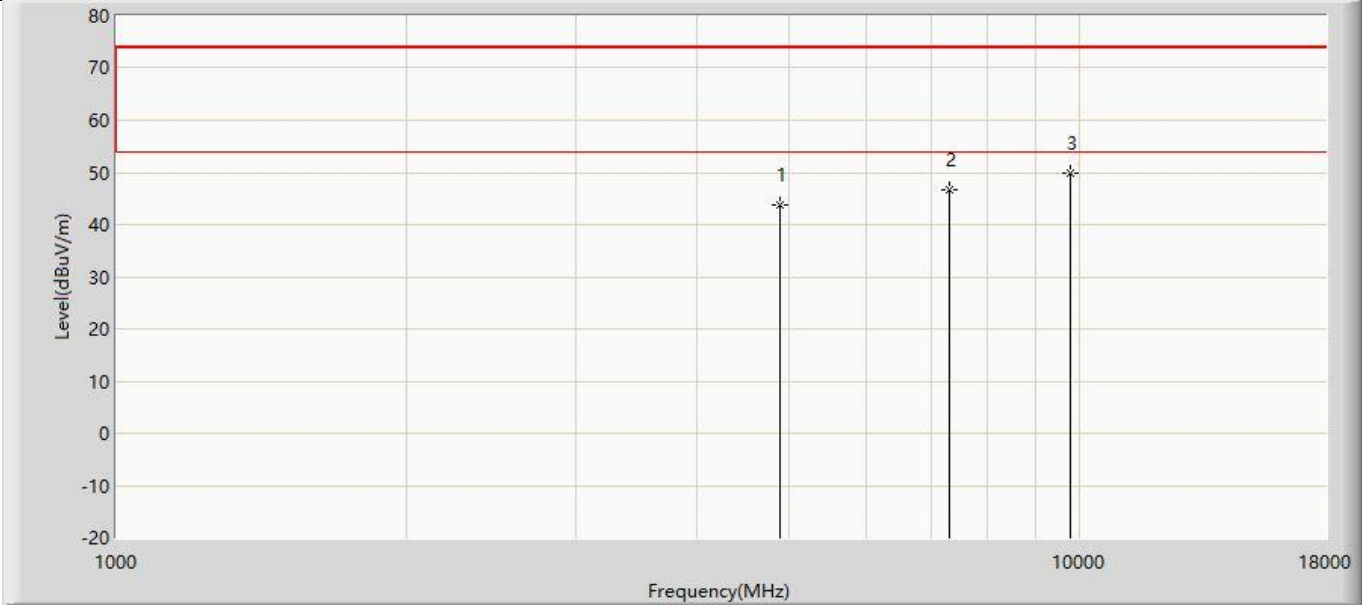
Profile: 2390782R	Page No.: 20
Engineer: Yuliu	
Site: AC5	Time: 2024/06/29 - 19:10
Limit: FCC_Part15.209_RE	Margin: 0
Probe: Horn_3117_00167055(1-18GHz)	Polarity: Vertical
EUT: Mobile Computer	Power: Battery Powered
Note: Mode 1: Transmit at 2402MHz by DH5	



No	Mark	Frequency (MHz)	Measure Level (dBuV/m)	Reading Level (dBuV)	Over Limit (dB)	Limit (dBuV/m)	Factor (dB)	Type
1		4804.000	41.646	53.534	-32.354	74.000	-11.888	PK
2		7206.000	45.699	51.865	-28.301	74.000	-6.166	PK
3	*	9608.000	48.464	51.687	-25.536	74.000	-3.222	PK



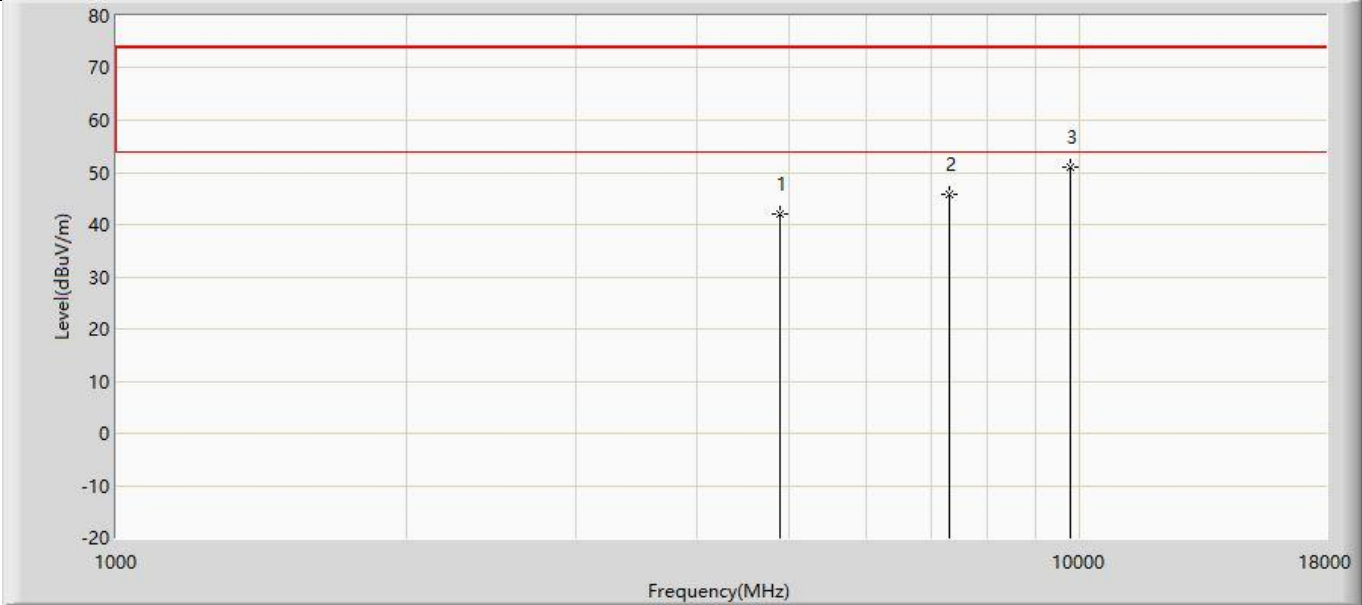
Profile: 2390782R	Page No.: 21
Engineer: Yuliu	
Site: AC5	Time: 2024/06/29 - 19:10
Limit: FCC_Part15.209_RE	Margin: 0
Probe: Horn_3117_00167055(1-18GHz)	Polarity: Horizontal
EUT: Mobile Computer	Power: Battery Powered
Note: Mode 1: Transmit at 2441MHz by DH5	



No	Mark	Frequency (MHz)	Measure Level (dBuV/m)	Reading Level (dBuV)	Over Limit (dB)	Limit (dBuV/m)	Factor (dB)	Type
1		4882.000	43.799	54.491	-30.201	74.000	-10.693	PK
2		7323.000	46.565	53.423	-27.435	74.000	-6.858	PK
3	*	9764.000	49.823	52.733	-24.177	74.000	-2.910	PK

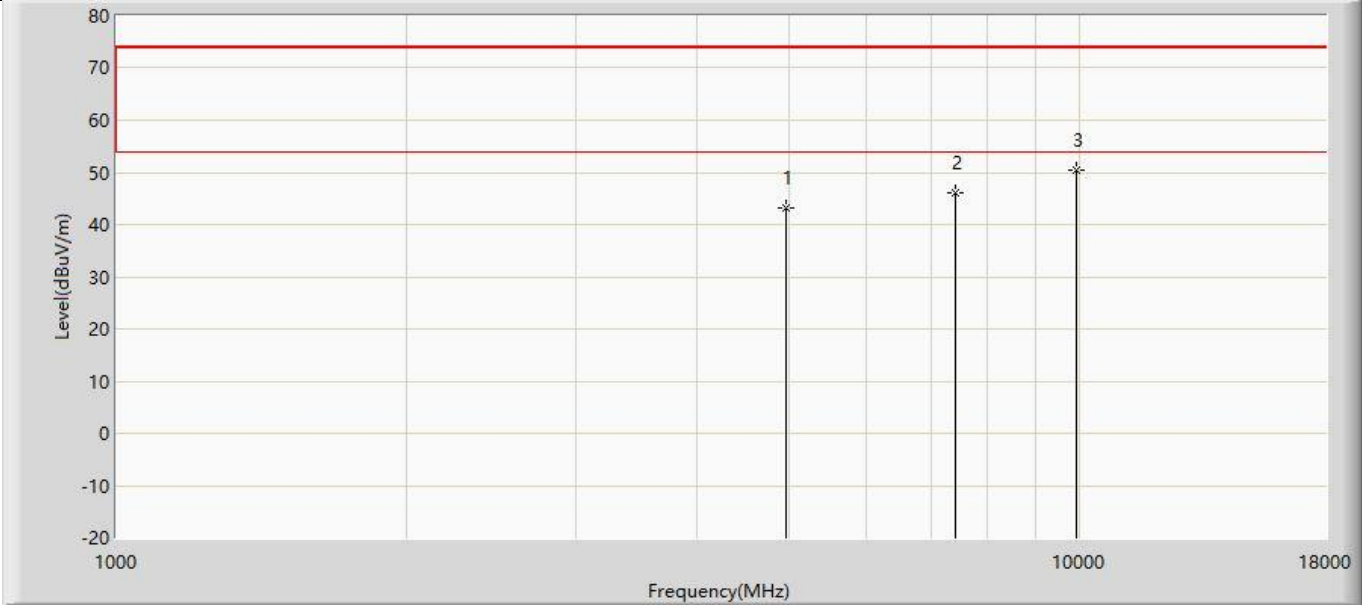


Profile: 2390782R	Page No.: 22
Engineer: Yuliu	
Site: AC5	Time: 2024/06/29 - 19:10
Limit: FCC_Part15.209_RE	Margin: 0
Probe: Horn_3117_00167055(1-18GHz)	Polarity: Vertical
EUT: Mobile Computer	Power: Battery Powered
Note: Mode 1: Transmit at 2441MHz by DH5	



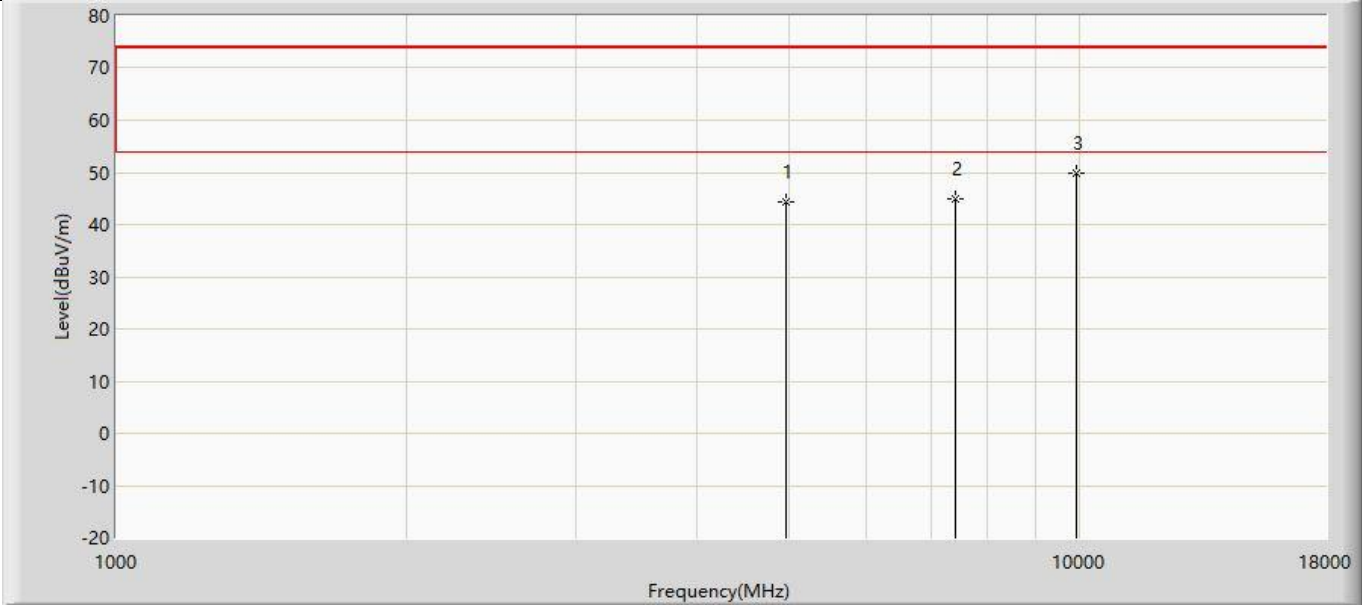
No	Mark	Frequency (MHz)	Measure Level (dBuV/m)	Reading Level (dBuV)	Over Limit (dB)	Limit (dBuV/m)	Factor (dB)	Type
1		4882.000	42.046	52.738	-31.954	74.000	-10.693	PK
2		7323.000	45.737	52.595	-28.263	74.000	-6.858	PK
3	*	9764.000	50.955	53.865	-23.045	74.000	-2.910	PK

Profile: 2390782R	Page No.: 23
Engineer: Yuliu	
Site: AC5	Time: 2024/06/29 - 19:10
Limit: FCC_Part15.209_RE	Margin: 0
Probe: Horn_3117_00167055(1-18GHz)	Polarity: Horizontal
EUT: Mobile Computer	Power: Battery Powered
Note: Mode 1: Transmit at 2480MHz by DH5	



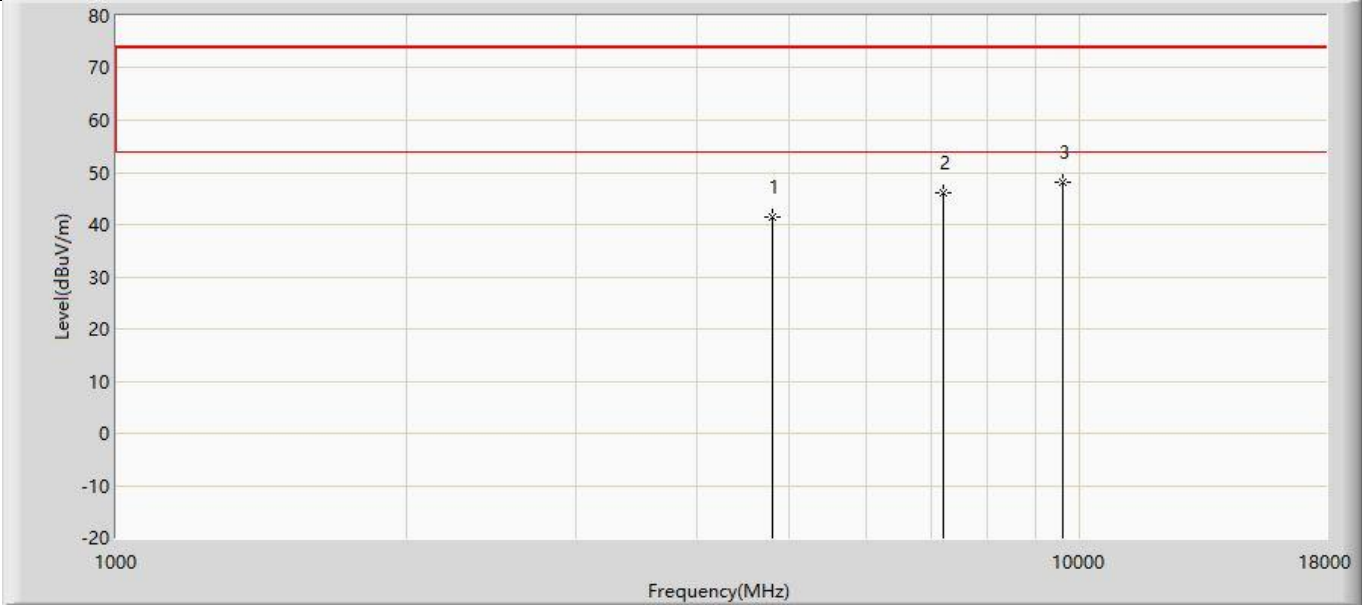
No	Mark	Frequency (MHz)	Measure Level (dBuV/m)	Reading Level (dBuV)	Over Limit (dB)	Limit (dBuV/m)	Factor (dB)	Type
1		4960.000	43.136	53.842	-30.864	74.000	-10.707	PK
2		7440.000	46.163	52.942	-27.837	74.000	-6.779	PK
3	*	9920.000	50.505	52.327	-23.495	74.000	-1.821	PK

Profile: 2390782R	Page No.: 24
Engineer: Yuliu	
Site: AC5	Time: 2024/06/29 - 19:10
Limit: FCC_Part15.209_RE	Margin: 0
Probe: Horn_3117_00167055(1-18GHz)	Polarity: Vertical
EUT: Mobile Computer	Power: Battery Powered
Note: Mode 1: Transmit at 2480MHz by DH5	



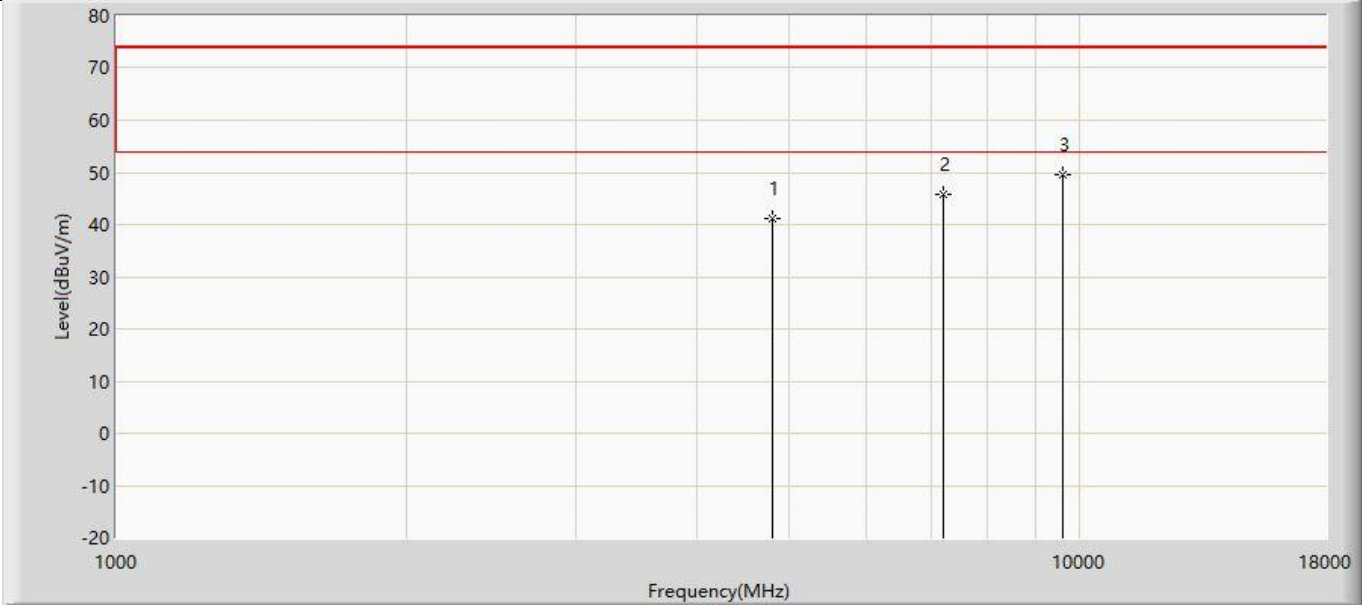
No	Mark	Frequency (MHz)	Measure Level (dBuV/m)	Reading Level (dBuV)	Over Limit (dB)	Limit (dBuV/m)	Factor (dB)	Type
1		4960.000	44.376	55.082	-29.624	74.000	-10.707	PK
2		7440.000	45.038	51.817	-28.962	74.000	-6.779	PK
3	*	9920.000	49.982	51.804	-24.018	74.000	-1.821	PK

Profile: 2390782R	Page No.: 25
Engineer: Yuliu	
Site: AC5	Time: 2024/06/29 - 19:10
Limit: FCC_Part15.209_RE	Margin: 0
Probe: Horn_3117_00167055(1-18GHz)	Polarity: Horizontal
EUT: Mobile Computer	Power: Battery Powered
Note: Mode 2: Transmit at 2402MHz by 2DH5	



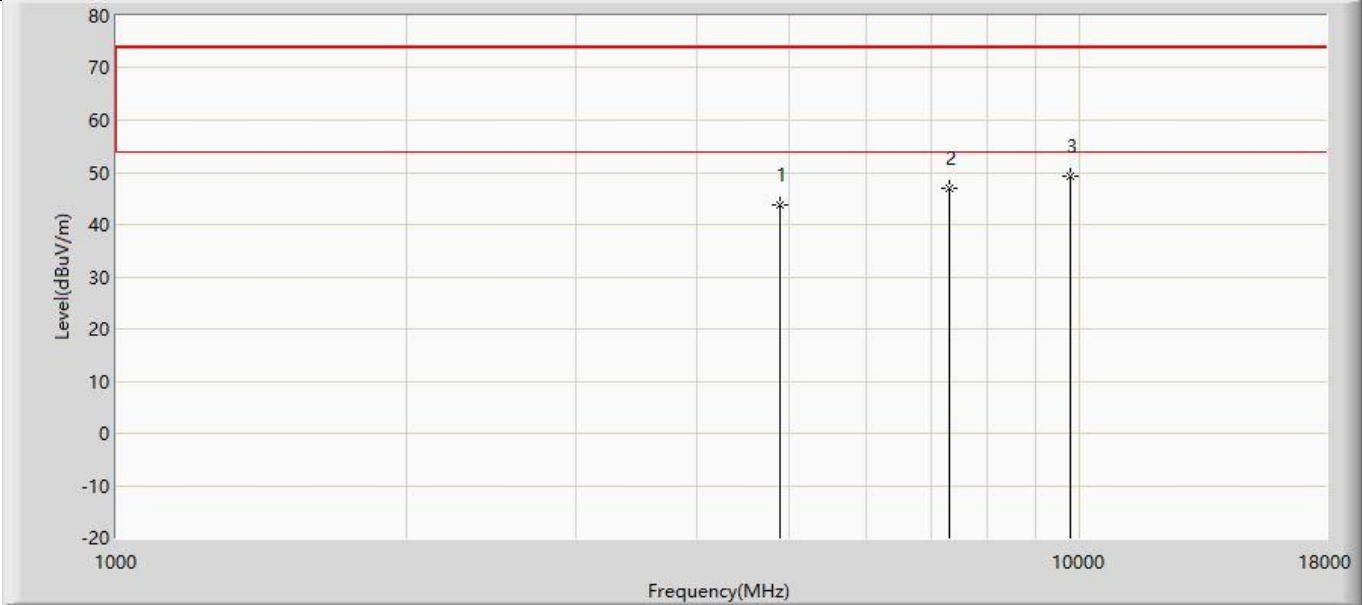
No	Mark	Frequency (MHz)	Measure Level (dBuV/m)	Reading Level (dBuV)	Over Limit (dB)	Limit (dBuV/m)	Factor (dB)	Type
1		4804.000	41.306	53.194	-32.694	74.000	-11.888	PK
2		7206.000	45.980	52.146	-28.020	74.000	-6.166	PK
3	*	9608.000	47.985	51.208	-26.015	74.000	-3.222	PK

Profile: 2390782R	Page No.: 26
Engineer: Yuliu	
Site: AC5	Time: 2024/06/29 - 19:10
Limit: FCC_Part15.209_RE	Margin: 0
Probe: Horn_3117_00167055(1-18GHz)	Polarity: Vertical
EUT: Mobile Computer	Power: Battery Powered
Note: Mode 2: Transmit at 2402MHz by 2DH5	



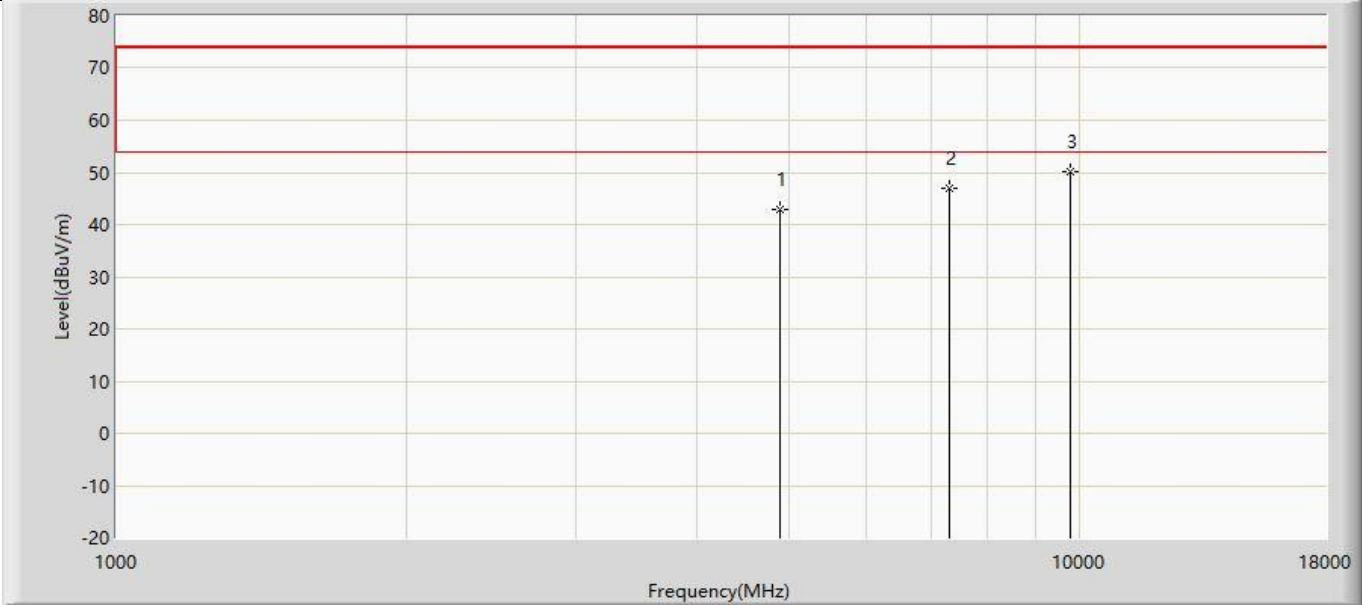
No	Mark	Frequency (MHz)	Measure Level (dBuV/m)	Reading Level (dBuV)	Over Limit (dB)	Limit (dBuV/m)	Factor (dB)	Type
1		4804.000	41.054	52.942	-32.946	74.000	-11.888	PK
2		7206.000	45.893	52.059	-28.107	74.000	-6.166	PK
3	*	9608.000	49.436	52.659	-24.564	74.000	-3.222	PK

Profile: 2390782R	Page No.: 27
Engineer: Yuliu	
Site: AC5	Time: 2024/06/29 - 19:10
Limit: FCC_Part15.209_RE	Margin: 0
Probe: Horn_3117_00167055(1-18GHz)	Polarity: Horizontal
EUT: Mobile Computer	Power: Battery Powered
Note: Mode 2: Transmit at 2441MHz by 2DH5	



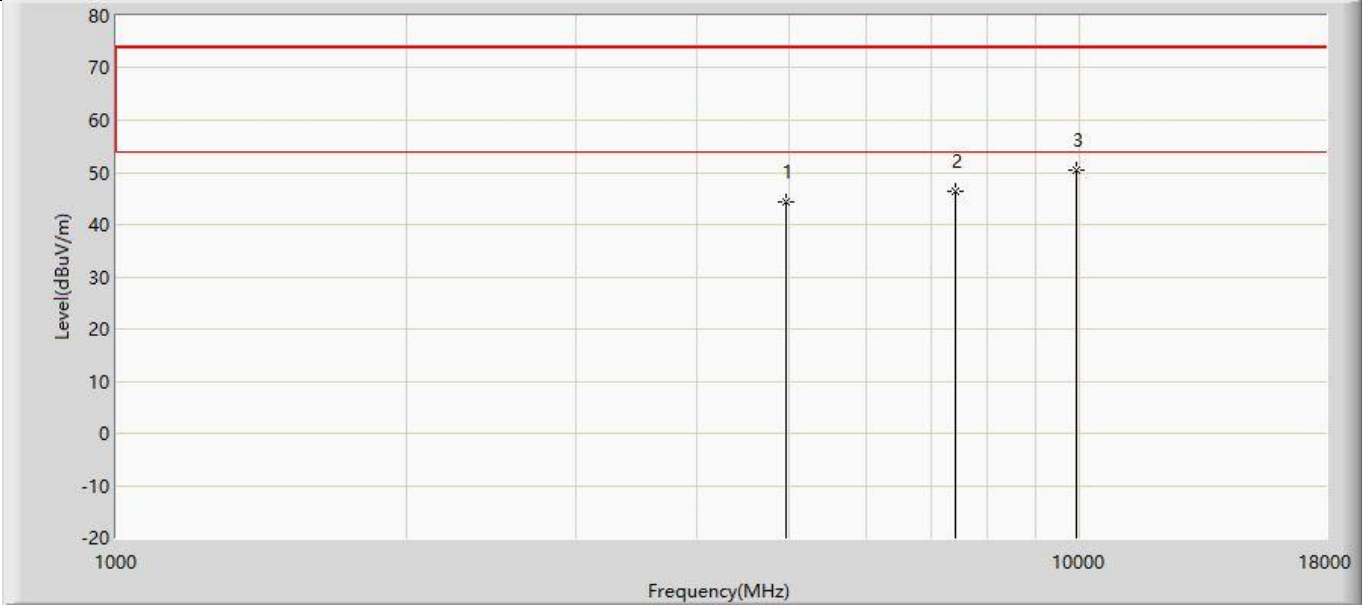
No	Mark	Frequency (MHz)	Measure Level (dBuV/m)	Reading Level (dBuV)	Over Limit (dB)	Limit (dBuV/m)	Factor (dB)	Type
1		4882.000	43.666	54.358	-30.334	74.000	-10.693	PK
2		7323.000	46.933	53.791	-27.067	74.000	-6.858	PK
3	*	9764.000	49.178	52.088	-24.822	74.000	-2.910	PK

Profile: 2390782R	Page No.: 28
Engineer: Yuliu	
Site: AC5	Time: 2024/06/29 - 19:10
Limit: FCC_Part15.209_RE	Margin: 0
Probe: Horn_3117_00167055(1-18GHz)	Polarity: Vertical
EUT: Mobile Computer	Power: Battery Powered
Note: Mode 2: Transmit at 2441MHz by 2DH5	



No	Mark	Frequency (MHz)	Measure Level (dBuV/m)	Reading Level (dBuV)	Over Limit (dB)	Limit (dBuV/m)	Factor (dB)	Type
1		4882.000	42.863	53.555	-31.137	74.000	-10.693	PK
2		7323.000	46.910	53.768	-27.090	74.000	-6.858	PK
3	*	9764.000	50.060	52.970	-23.940	74.000	-2.910	PK

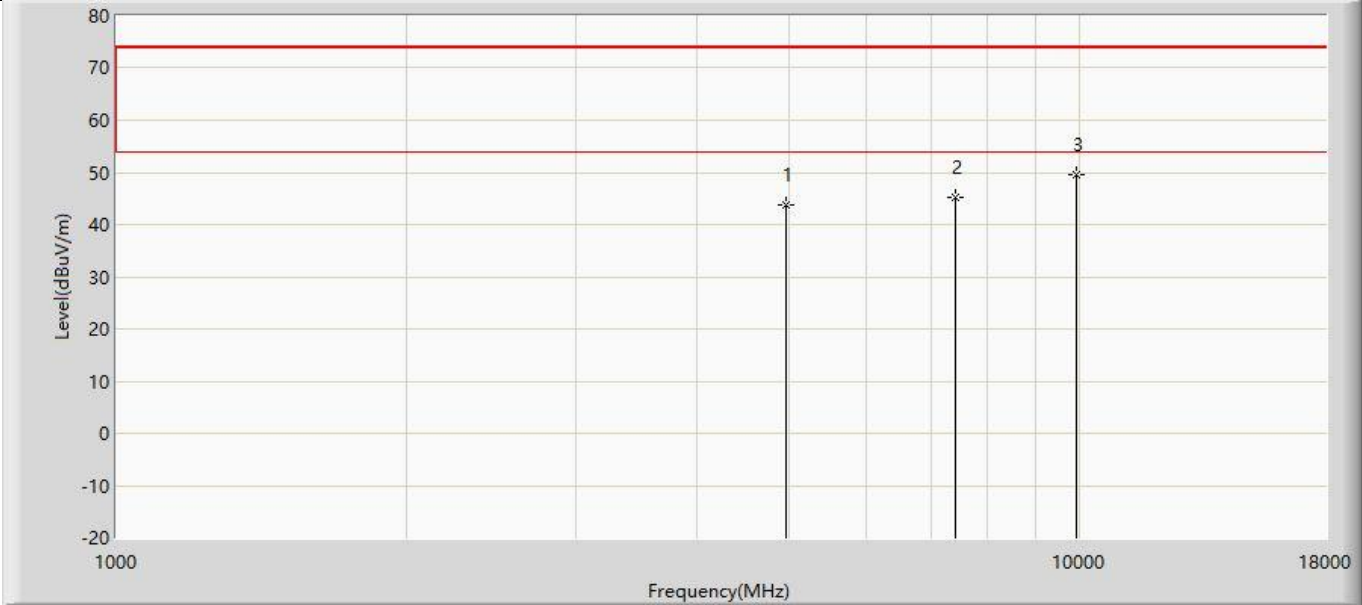
Profile: 2390782R	Page No.: 29
Engineer: Yuliu	
Site: AC5	Time: 2024/06/29 - 19:10
Limit: FCC_Part15.209_RE	Margin: 0
Probe: Horn_3117_00167055(1-18GHz)	Polarity: Horizontal
EUT: Mobile Computer	Power: Battery Powered
Note: Mode 2: Transmit at 2480MHz by 2DH5	



No	Mark	Frequency (MHz)	Measure Level (dBuV/m)	Reading Level (dBuV)	Over Limit (dB)	Limit (dBuV/m)	Factor (dB)	Type
1		4960.000	44.260	54.966	-29.740	74.000	-10.707	PK
2		7440.000	46.273	53.052	-27.727	74.000	-6.779	PK
3	*	9920.000	50.340	52.162	-23.660	74.000	-1.821	PK

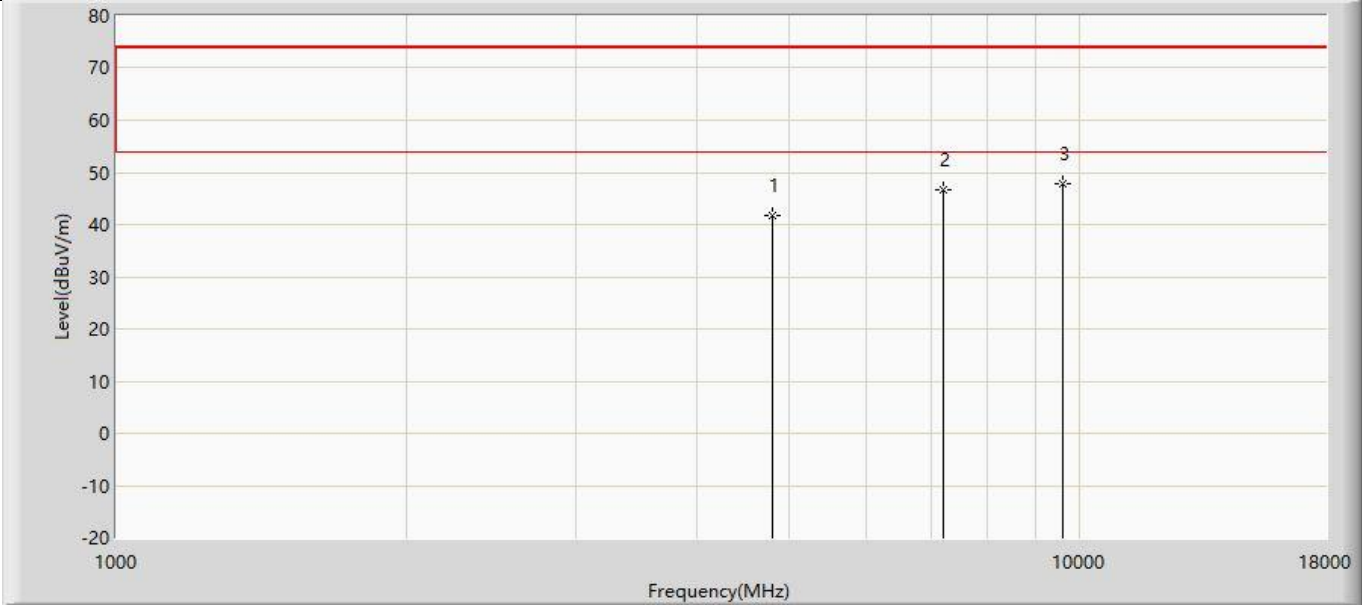


Profile: 2390782R	Page No.: 30
Engineer: Yuliu	
Site: AC5	Time: 2024/06/29 - 19:10
Limit: FCC_Part15.209_RE	Margin: 0
Probe: Horn_3117_00167055(1-18GHz)	Polarity: Vertical
EUT: Mobile Computer	Power: Battery Powered
Note: Mode 2: Transmit at 2480MHz by 2DH5	



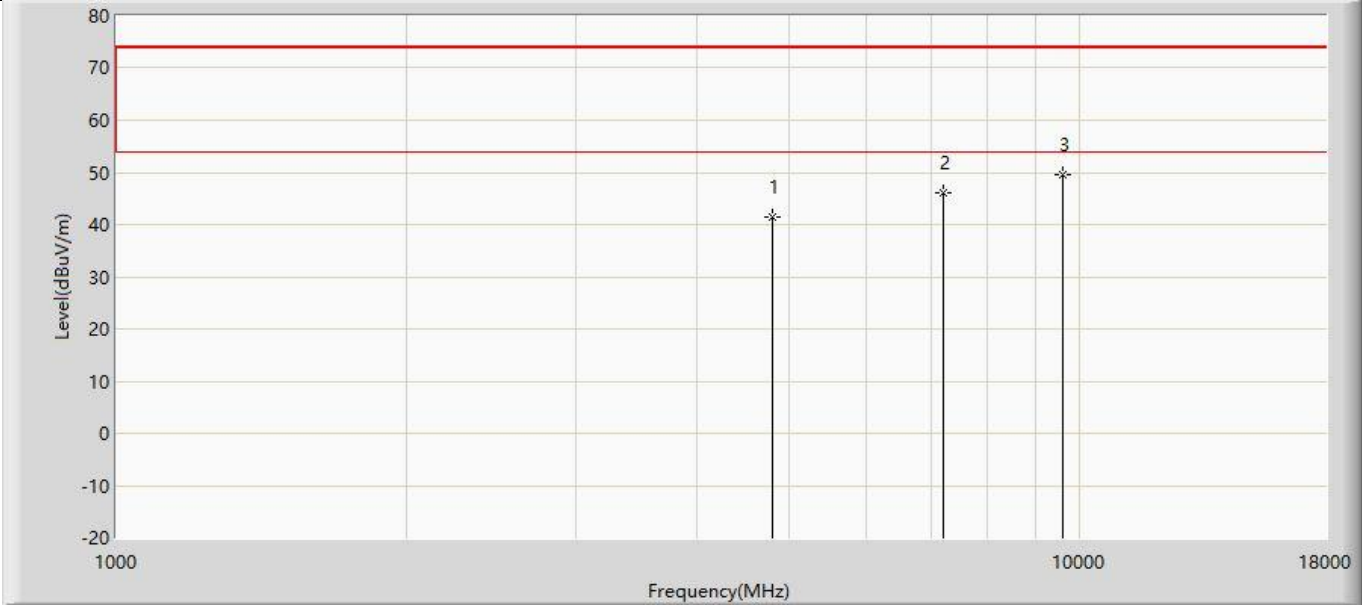
No	Mark	Frequency (MHz)	Measure Level (dBuV/m)	Reading Level (dBuV)	Over Limit (dB)	Limit (dBuV/m)	Factor (dB)	Type
1		4960.000	43.698	54.404	-30.302	74.000	-10.707	PK
2		7440.000	45.112	51.891	-28.888	74.000	-6.779	PK
3	*	9920.000	49.536	51.358	-24.464	74.000	-1.821	PK

Profile: 2390782R	Page No.: 31
Engineer: Yuliu	
Site: AC5	Time: 2024/06/29 - 19:10
Limit: FCC_Part15.209_RE	Margin: 0
Probe: Horn_3117_00167055(1-18GHz)	Polarity: Horizontal
EUT: Mobile Computer	Power: Battery Powered
Note: Mode 3: Transmit at 2402MHz by 3DH5	



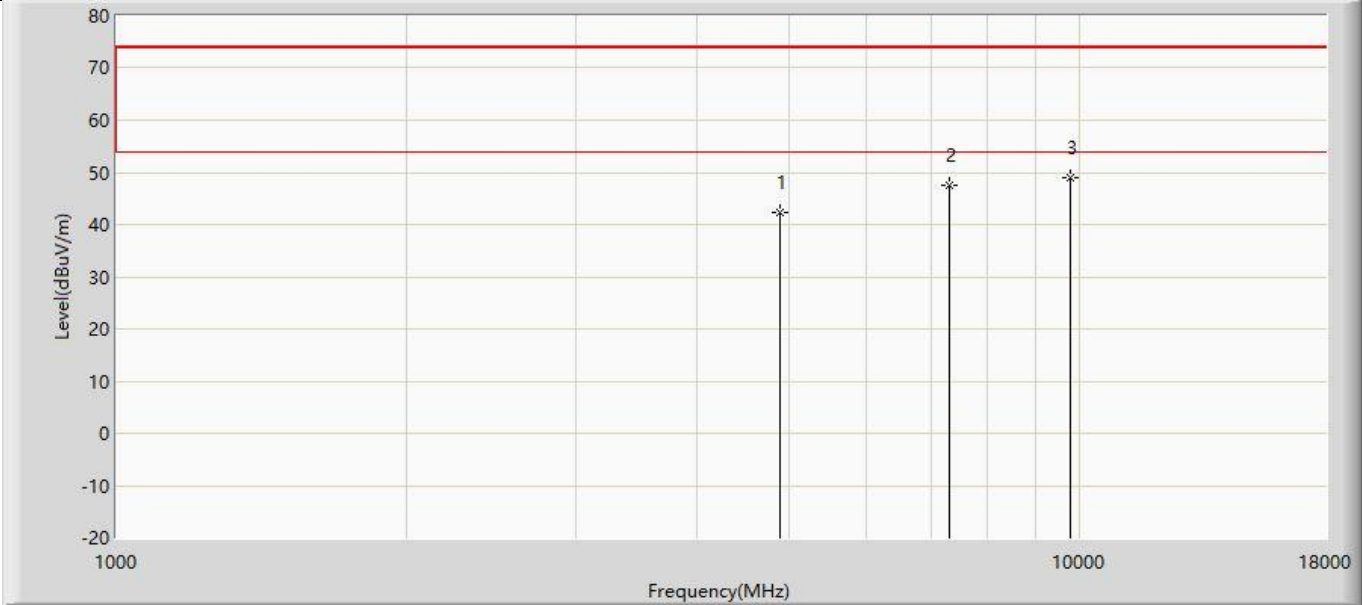
No	Mark	Frequency (MHz)	Measure Level (dBuV/m)	Reading Level (dBuV)	Over Limit (dB)	Limit (dBuV/m)	Factor (dB)	Type
1		4804.000	41.673	53.561	-32.327	74.000	-11.888	PK
2		7206.000	46.596	52.762	-27.404	74.000	-6.166	PK
3	*	9608.000	47.692	50.915	-26.308	74.000	-3.222	PK

Profile: 2390782R	Page No.: 32
Engineer: Yuliu	
Site: AC5	Time: 2024/06/29 - 19:10
Limit: FCC_Part15.209_RE	Margin: 0
Probe: Horn_3117_00167055(1-18GHz)	Polarity: Vertical
EUT: Mobile Computer	Power: Battery Powered
Note: Mode 3: Transmit at 2402MHz by 3DH5	



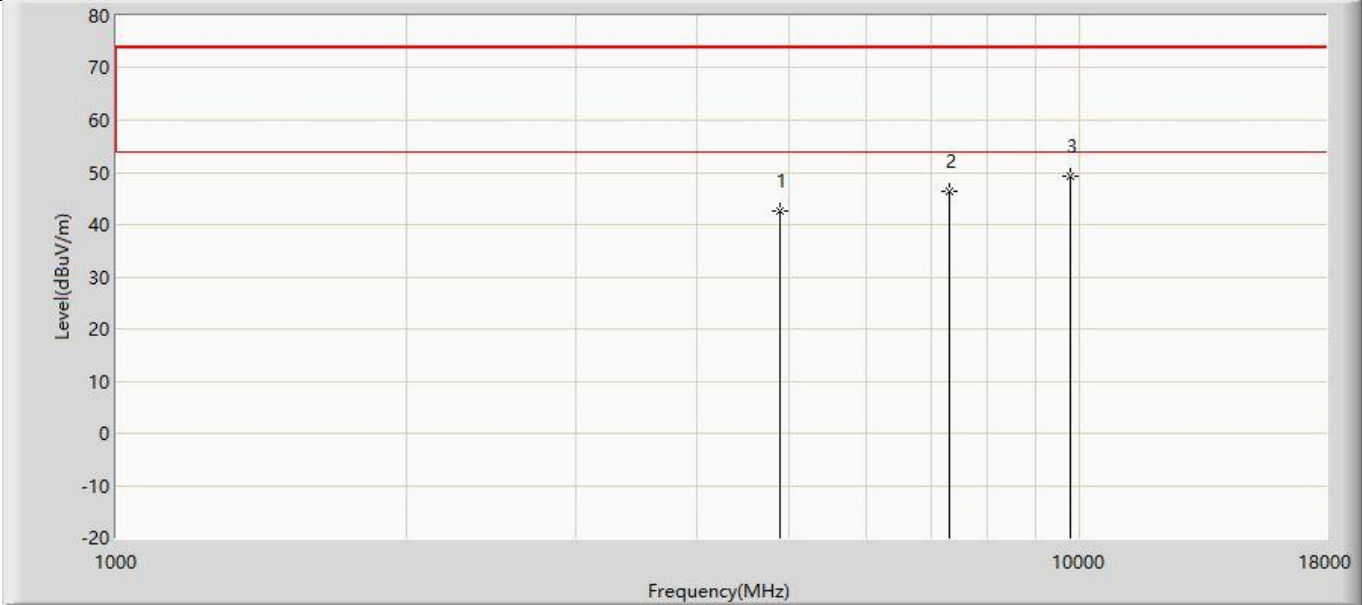
No	Mark	Frequency (MHz)	Measure Level (dBuV/m)	Reading Level (dBuV)	Over Limit (dB)	Limit (dBuV/m)	Factor (dB)	Type
1		4804.000	41.324	53.212	-32.676	74.000	-11.888	PK
2		7206.000	46.220	52.386	-27.780	74.000	-6.166	PK
3	*	9608.000	49.450	52.673	-24.550	74.000	-3.222	PK

Profile: 2390782R	Page No.: 33
Engineer: Yuliu	
Site: AC5	Time: 2024/06/29 - 19:10
Limit: FCC_Part15.209_RE	Margin: 0
Probe: Horn_3117_00167055(1-18GHz)	Polarity: Horizontal
EUT: Mobile Computer	Power: Battery Powered
Note: Mode 3: Transmit at 2441MHz by 3DH5	



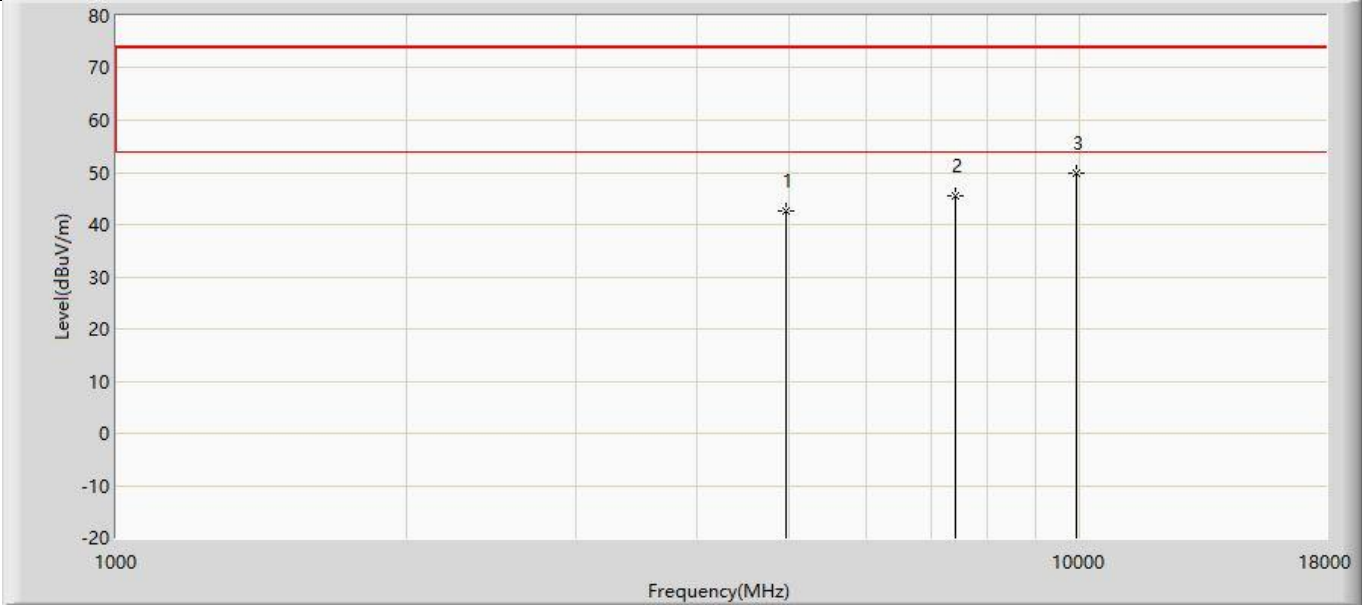
No	Mark	Frequency (MHz)	Measure Level (dBuV/m)	Reading Level (dBuV)	Over Limit (dB)	Limit (dBuV/m)	Factor (dB)	Type
1		4882.000	42.296	52.988	-31.704	74.000	-10.693	PK
2		7323.000	47.653	54.511	-26.347	74.000	-6.858	PK
3	*	9764.000	49.059	51.969	-24.941	74.000	-2.910	PK

Profile: 2390782R	Page No.: 34
Engineer: Yuliu	
Site: AC5	Time: 2024/06/29 - 19:11
Limit: FCC_Part15.209_RE	Margin: 0
Probe: Horn_3117_00167055(1-18GHz)	Polarity: Vertical
EUT: Mobile Computer	Power: Battery Powered
Note: Mode 3: Transmit at 2441MHz by 3DH5	



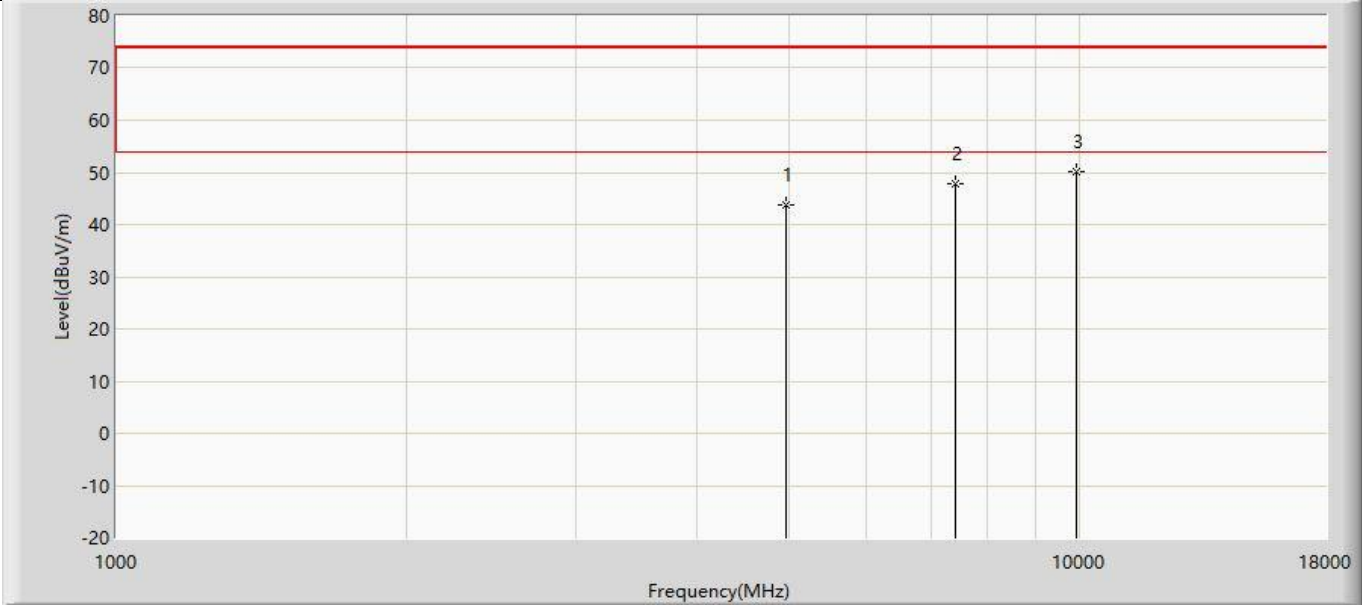
No	Mark	Frequency (MHz)	Measure Level (dBuV/m)	Reading Level (dBuV)	Over Limit (dB)	Limit (dBuV/m)	Factor (dB)	Type
1		4882.000	42.688	53.380	-31.312	74.000	-10.693	PK
2		7323.000	46.390	53.248	-27.610	74.000	-6.858	PK
3	*	9764.000	49.403	52.313	-24.597	74.000	-2.910	PK

Profile: 2390782R	Page No.: 35
Engineer: Yuliu	
Site: AC5	Time: 2024/06/29 - 19:11
Limit: FCC_Part15.209_RE	Margin: 0
Probe: Horn_3117_00167055(1-18GHz)	Polarity: Horizontal
EUT: Mobile Computer	Power: Battery Powered
Note: Mode 3: Transmit at 2480MHz by 3DH5	



No	Mark	Frequency (MHz)	Measure Level (dBuV/m)	Reading Level (dBuV)	Over Limit (dB)	Limit (dBuV/m)	Factor (dB)	Type
1		4960.000	42.506	53.212	-31.494	74.000	-10.707	PK
2		7440.000	45.543	52.322	-28.457	74.000	-6.779	PK
3	*	9920.000	49.924	51.746	-24.076	74.000	-1.821	PK

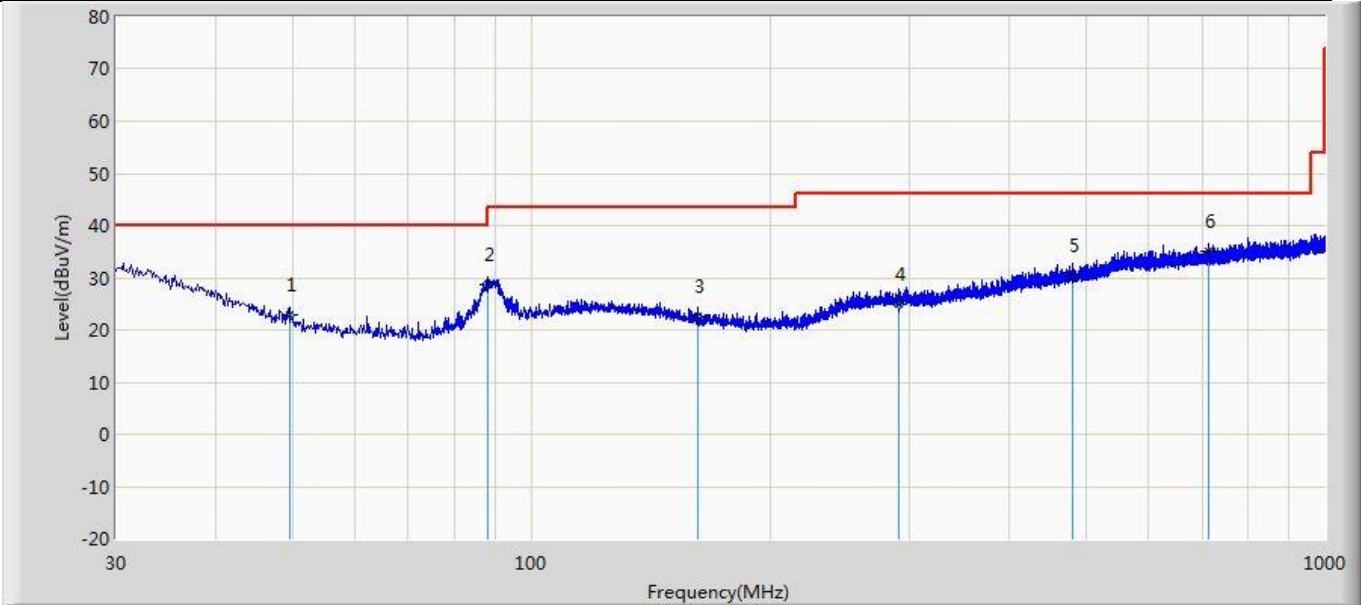
Profile: 2390782R	Page No.: 36
Engineer: Yuliu	
Site: AC5	Time: 2024/06/29 - 19:11
Limit: FCC_Part15.209_RE	Margin: 0
Probe: Horn_3117_00167055(1-18GHz)	Polarity: Vertical
EUT: Mobile Computer	Power: Battery Powered
Note: Mode 3: Transmit at 2480MHz by 3DH5	



No	Mark	Frequency (MHz)	Measure Level (dBuV/m)	Reading Level (dBuV)	Over Limit (dB)	Limit (dBuV/m)	Factor (dB)	Type
1		4960.000	43.719	54.425	-30.281	74.000	-10.707	PK
2		7440.000	47.713	54.492	-26.287	74.000	-6.779	PK
3	*	9920.000	50.005	51.827	-23.995	74.000	-1.821	PK

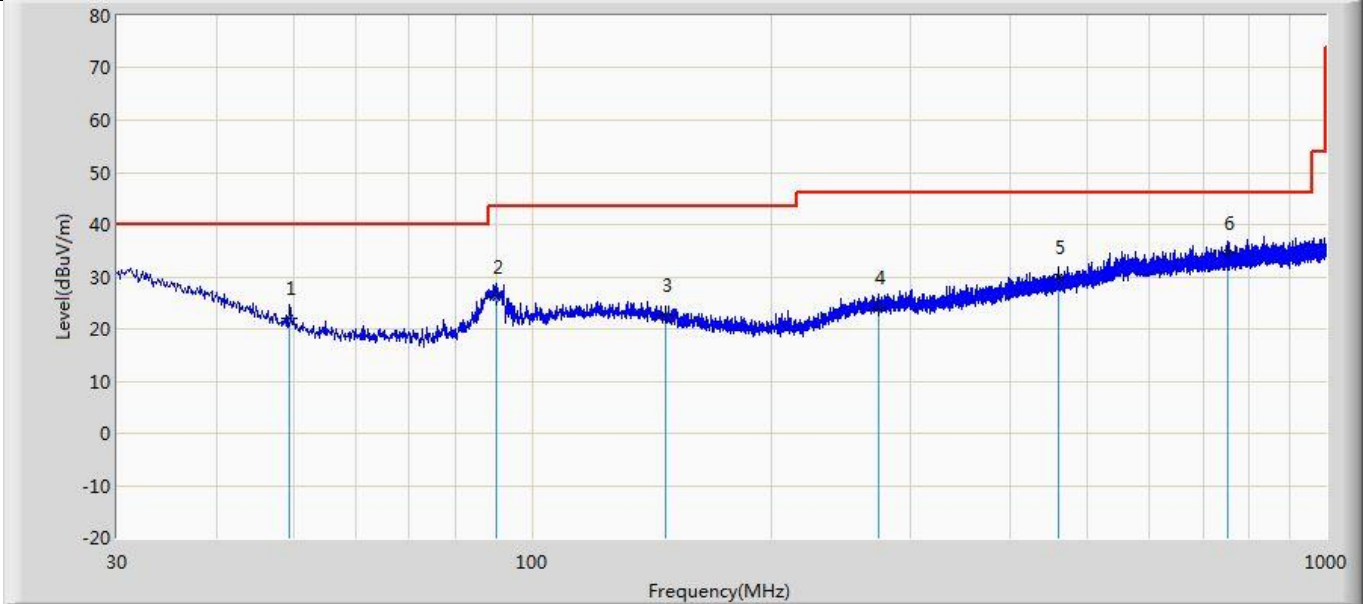
The worst case of Radiated Emission below 1GHz :

Profile: 2390782R	Page No.: 23
Engineer: Yuliu	
Site: AC2	Time: 2024/06/29 - 23:22
Limit: FCC_Part 15.209_RE	Margin: 0
Probe: CBL6112B_2933(30-1000MHz)	Polarity: Horizontal
EUT: Mobile Computer	Power: Battery Powered
Note: Mode 1 : Transmit at 2402MHz by DH5	



N o	Mar k	Frequency (MHz)	Measure Level (dBuV/m)	Reading Level (dBuV)	Over Limit (dB)	Limit (dBuV/m)	Factor (dB)	Type
1		49.643	22.870	7.498	-17.130	40.000	15.372	QP
2		88.079	28.631	13.048	-14.869	43.500	15.583	QP
3		162.405	22.752	5.740	-20.748	43.500	17.012	QP
4		289.960	25.007	4.472	-20.993	46.000	20.535	QP
5		481.171	30.570	5.350	-15.430	46.000	25.219	QP
6	*	713.486	34.970	6.924	-11.030	46.000	28.046	QP

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Engineer: Yuliu	
Site: AC2	Time: 2024/06/29 - 23:23
Limit: FCC_Part 15.209_RE	Margin: 0
Probe: CBL6112B_2933(30-1000MHz)	Polarity: Vertical
EUT: Mobile Computer	Power: Battery Powered
Note: Mode 1 : Transmit at 2402MHz by DH5	



N o	Mar k	Frequency (MHz)	Measure Level (dBuV/m)	Reading Level (dBuV)	Over Limit (dB)	Limit (dBuV/m)	Factor (dB)	Type
1		49.521	22.160	6.736	-17.840	40.000	15.424	QP
2		90.140	26.218	10.243	-17.282	43.500	15.975	QP
3		147.249	22.632	5.000	-20.868	43.500	17.633	QP
4		273.591	24.147	3.727	-21.853	46.000	20.419	QP
5		459.589	29.800	5.039	-16.200	46.000	24.762	QP
6	*	752.286	34.580	6.062	-11.420	46.000	28.518	QP

Note:

1. " * ", means this data is the worst emission level.
2. Measurement Level = Reading Level + Factor(Probe+Cable-Amp)
3. The test frequency range, 9kHz~30MHz, worst case are at least 20dB below the limits, therefore no data appear in the report.
4. 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.
5. If the test result on peak is lower than average limit, then average measurement needn't be performed.

The End