TEST REPORT

For

Mobile Phone

Model Number: CPH2477

FCC ID: R9C-CPH2477

Report Number : WT228001827

Test Laboratory	:	Shenzhen Academy of Metrology and Quality Inspection
Site Location	:	NETC Building, No.4 Tongfa Rd., Xili, Nanshan, Shenzhen, China
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TEST REPORT DECLARATION

Applicant	:	Guangdong OPPO Mobile Telecommunications Corp., Ltd.
Address	:	NO.18 Haibin Road, Wusha Village, Chang'an Town, Dongguan City, Guangdong, China
Manufacturer	:	Guangdong OPPO Mobile Telecommunications Corp., Ltd.
Address	:	NO.18 Haibin Road, Wusha Village, Chang'an Town, Dongguan City, Guangdong, China
EUT Description	:	Mobile Phone
Model No.	:	CPH2477
Trade mark	:	OPPO
Serial Number	:	/
FCC ID	:	R9C-CPH2477

Test Standards:

FCC Part 15 Subpart C 15.247 (2020)

The EUT described above is tested by Shenzhen Academy of Metrology and Quality Inspection EMC Laboratory to determine the maximum emissions from the EUT. Shenzhen Academy of Metrology and Quality Inspection EMC Laboratory is assumed full responsibility for the accuracy of the test results.

The test report is valid for above tested sample only and shall not be reproduced in part without written approval of the laboratory.

Project Engineer:	(Zhou Fangai 周芳媛)	Date:	Aug.18, 2022
Checked by:	(Shi Changda 施昌达)	Date:	Aug.18, 2022
Approved by:	(Lin Yixiang 林奕翔)	Date:	Aug.18, 2022

TABLE OF CONTENTS

1. TEST RESULTS SUMMARY

Table 1 Test Results Summary

Test Items	FCC Rules	Test Results
6dB DTS Bandwidth	15.247 (a) (2)	Pass
Maximum Peak Conducted Power	15.247 (b) (3)	Pass
Maximum Power Spectral Density Level	15.247 (e)	Pass
Conducted Bandedge and Spurious	15.247 (d)	Pass
Radiated Bandedge and Spurious	15.247 (d) 15.209 15.205	Pass
Conducted Emission Test for AC Power Port	15.207	Pass
Antenna Requirements	15.203	Pass

Remark: “N/A” means “Not applicable.”

2. GENERAL INFORMATION

2.1. Report Information

This report is not a certificate of quality; it only applies to the sample of the specific product/equipment given at the time of its testing. The results are not used to indicate or imply that they are application to the similar items. In addition, such results must not be used to indicate or imply that SMQ approves recommends or endorses the manufacture, supplier or use of such product/equipment, or that SMQ in any way guarantees the later performance of the product/equipment.

The sample/s mentioned in this report is/are supplied by Applicant, SMQ therefore assumes no responsibility for the accuracy of information on the brand name, model number, origin of manufacture or any information supplied.

Additional copies of the report are available to the Applicant at an additional fee. No third part can obtain a copy of this report through SMQ, unless the applicant has authorized SMQ in writing to do so.

The lab will not be liable for any loss or damage resulting for false, inaccurate, inappropriate or incomplete product information provided by the applicant/manufacturer.

2.2. Laboratory Accreditation and Relationship to Customer

The testing report were performed by the Shenzhen Academy of Metrology and quality Inspection EMC Laboratory (Guangdong EMC compliance testing center), in their facilities located at NETC Building, No.4 Tongfa Rd., Xili, Nanshan, Shenzhen, China. At the time of testing, Laboratory is accredited by the following organizations:

China National Accreditation Service for Conformity Assessment (CNAS) accredits the Laboratory for conformance to FCC standards, EMC international standards and EN standards. The Registration Number is CNAS L0579.

The Laboratory is Accredited Testing Laboratory of FCC with Designation number CN1165 and Site registration number 582918.

The Laboratory is registered to perform emission tests with Innovation, Science and Economic Development (ISED), and the registration number is 11177A.

The Laboratory is registered to perform emission tests with VCCI, and the registration number are C-20048, G20076, R-20077, R-20078 and T-20047.

The Laboratory is Accredited Testing Laboratory of American Association for Laboratory Accreditation (A2LA) and certificate number is 3292.01.

2.3. Measurement Uncertainty

Conducted Emission
9 kHz~150 kHz U=3.7dB k=2
150 kHz~30MHz U=3.3dB k=2

Radiated Emission
30MHz~1000MHz U=4.3dB k=2
1GHz~6GHz U=4.6 dB k=2
6GHz~40GHz U=5.1dB k=2

3. PRODUCT DESCRIPTION

NOTE: The extreme test conditions for temperature and antenna gain were declared by the manufacturer.

3.1. EUT Description

Description	:	Mobile Phone
Manufacturer	:	Guangdong OPPO Mobile Telecommunications Corp., Ltd.
Model Number	:	CPH2477
Operate Frequency	:	2.402GHz~2.480GHz
Antenna Designation	:	Fixed Internal Antenna 1dBi
Operating voltage	:	DC3.6V (Low)/DC3.87V (Nominal)/DC4.45V (Max)
Software Version	:	ColorOS V12.1
Hardware Version	:	11

Remark: 1. There are two adapters, only the worst data of OP52YAUH (1#) shown in this report.
2. There are three batteries, only the worst data of BLP915 (1#) shown in this report.

Bluetooth Low Energy:

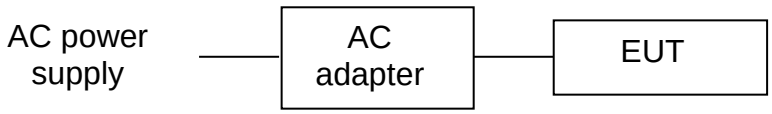
Table 2 Working Frequency List

Regulatory Range	RF Channels
2.400-2.4835 GHz	f=2402+k*2 MHz, k=0, … ,39

3.2. Related Submittal(s) / Grant (s)

This submittal(s) (test report) is intended for FCC ID: **R9C-CPH2477** filing to comply with Section 15.207, 15.209, 15.247 of the FCC Part 15, Subpart C Rules.

3.3. Block Diagram of EUT Configuration



Setup of test

3.4. Operating Condition of EUT

Worst-case mode and channel used for 30-1000 MHz radiated and power line conducted emissions was the mode and channel with the highest output power.
Worst-case data rates as provided by the client were:
Bluetooth low energy
Test mode is configured to be with duty cycle >98%

3.5. Directional Antenna Gain

Directional gain need NOT to be considered.

3.6. Support Equipment List

Table 3 Support Equipment List

Name	Model No	S/N	Manufacturer
Adapter 1# for EUT	OP52YAUH	---	Jiangsu Chenyang Electron Co., Ltd.
Adapter 2# for EUT	OP52JAUH	---	Huizhou Golden Lake Industrial Co., Ltd.
Rechargeable Li-ion Polymer Battery 1# for EUT	BLP915	---	Chongqing CosMX Battery Co.,Ltd
Rechargeable Li-ion Polymer Battery 2# for EUT	BLP915	---	TWS Technology (Guangzhou) Limited
Rechargeable Li-ion Polymer Battery 3# for EUT	BLP915	---	Sunwoda Electronic CO.,LTD.
USB for EUT	DL122	---	---

3.7. Test Conditions

Date of test：Jul.25, 2022- Aug.16, 2022
Date of EUT Receive：Jul.20, 2022
Temperature: 23℃-25℃
Relative Humidity: 46%-58%

3.8. Special Accessories

Not available for this EUT intended for grant.

3.9. Equipment Modifications

Not available for this EUT intended for grant.

4. TEST EQUIPMENT USED

Table 4 Test Equipment

No.	Equipment	Manufacturer	Model No.	Last Cal.	Cal. Interval
SB9058/05	Test Receiver	R&S	ESCI 3	Sep.24,2021	1 Year
SB4357	AMN	R&S	ENN216	Aug.25,2021	1 Year
SB9549	Shielded Room	Albatross	SR	Sep.24,2021	1 Year
SB17366	Test Receiver	R&S	ESR26	Jun.24,2022	1 Year
SB3955	Broadband Antenna	Schwarzbeck	VULB9163	Dec.30,2021	1 Year
SB9555/01	Semi Anechoic Chamber	Albatross	9×6×6(m)	Aug.25,2021	1 Year
SB13956	Test Receiver	R&S	ESR26	Feb.07,2022	1 Year
SB13961	Horn Antenna	R&S	HF907	Mar.22,2022	1 Year
SB8501/09	Test Receiver	R&S	ESU40	Jan.20,2022	1 Year
SB3435	Horn Antenna	R&S	HF906	Dec.03,2021	1 Year
SB9058/03	Pre-Amplifier	R&S	SCU 18	Jan.20,2022	1 Year
SB8501/10	Horn Antenna	R&S	3160-09	Mar.10,2020	3 Years
SB8501/11	Horn Antenna	R&S	3160-09	Mar.09,2020	3 Years
SB8501/12	Horn Antenna	R&S	3160-10	Mar.17,2020	3 Years
SB8501/13	Horn Antenna	R&S	3160-10	Mar.10,2020	3 Years
SB8501/14	Pre-Amplifier	R&S	SCU-03	Jan.20,2022	1 Year
SB8501/15	Pre-Amplifier	R&S	SCU-03	Jan.20,2022	1 Year
SB8501/16	Pre-Amplifier	R&S	SCU 26	Jan.20,2022	1 Year
SB8501/17	Pre-Amplifier	R&S	SCU-18	Jan.18,2022	1 Year
SB9555/02	Fully Anechoic Chamber	Albatross	10.0×5.2×5.4(m)	Aug.25,2021	1 Year
SB20321/01	Spectrum Analyzer	R&S	FSV3044	Dec.24, 2021	1 Year

Table 5 Test software

Name	Manufacturer	Version
Bluetooth and WiFi Test System	Shenzhen JS tonscend co.,ltd	2.6.87.0615

5. 6DB BANDWIDTH MEASUREMENT

5.1. Limits of 6dB Bandwidth Measurement

CFR 47 (FCC) part 15.247 (a) (2), 558074 D01 DTS Meas Guidance v05r02

5.2. Test Procedure

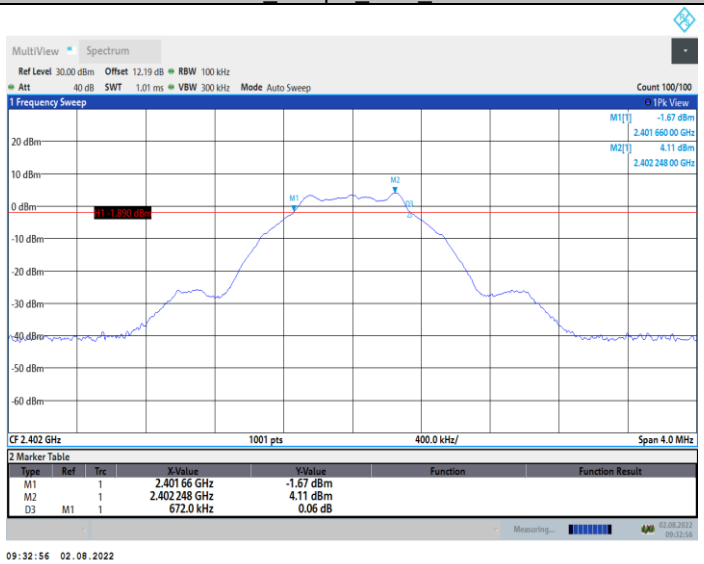
The transmitter output was connected to the spectrum analyzer.
a) Set RBW = 100 kHz.
b) Set the video bandwidth (VBW) ≥ 3 x RBW.
c) Detector = Peak.
d)Trace mode = max hold.
e)Sweep = auto couple.
f) Allow the trace to stabilize.
g) Measure the maximum width of the emission that is constrained by the frequencies associated with the two outermost amplitude points (upper and lower frequencies) that are attenuated by 6 dB relative to the maximum level measured in the fundamental emission.

5.3. Test Setup

5.4. Test Data

Table 6 6dB Bandwidth Test Data BLE

Test Mode	Channel Frequency [MHz]	6dB Bandwidth [MHz]	Limit [MHz]	Result
BLE_1Mbps	2402	0.67	>=0.50	Pass
	2440	0.68	>=0.50	Pass
	2480	0.68	>=0.50	Pass
BLE_2Mbps	2402	1.18	>=0.50	Pass
	2440	1.18	>=0.50	Pass
	2480	1.18	>=0.50	Pass

BLE_1Mbps _Ant1_2402

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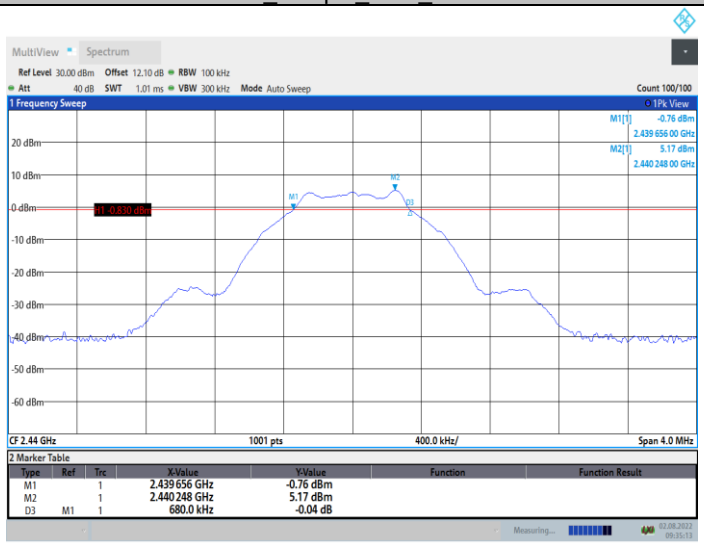
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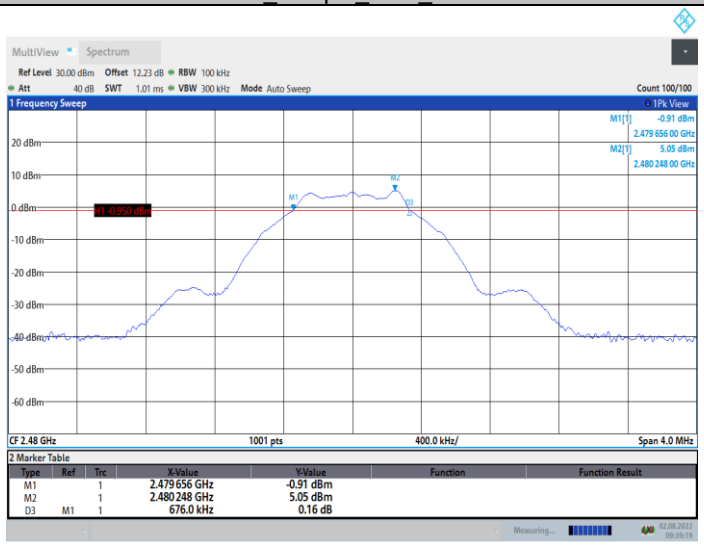
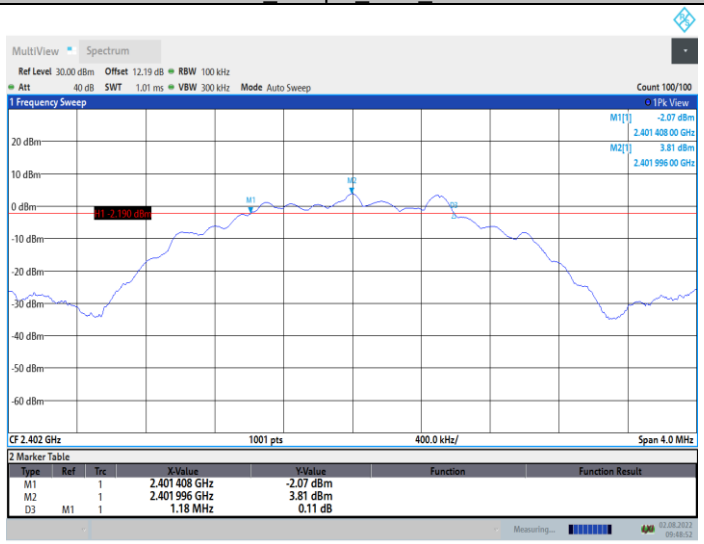


BLE_2Mbps _Ant1_2402
 09:48:52 02.08.2022
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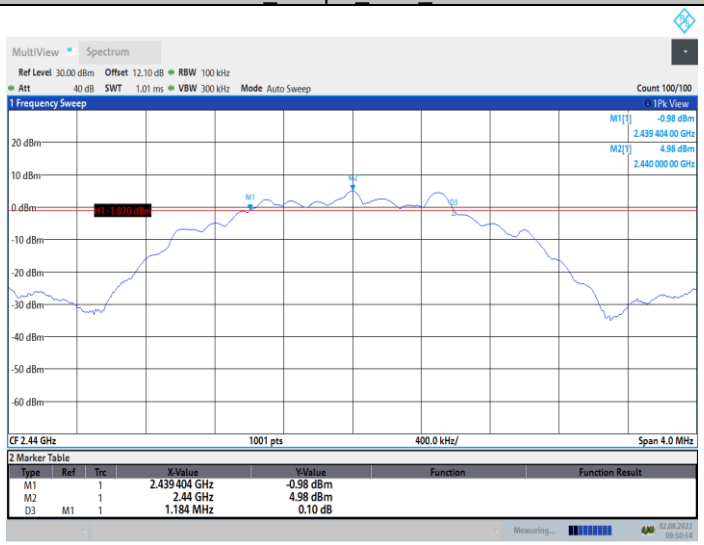
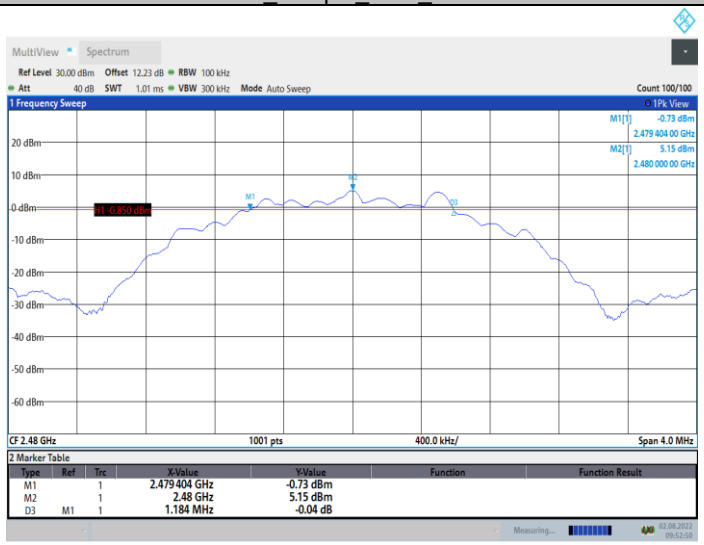
 09:50:55 02.08.2022
BLE_2Mbps _Ant1_2480
 09:52:51 02.08.2022

6. MAXIMUM CONDUCTED OUTPUT POWER MEASUREMENT

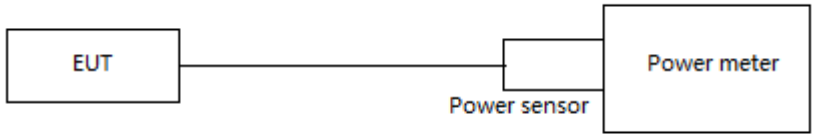
6.1. Limits of Maximum Conducted Output Power Measurement

CFR 47 (FCC) part 15.247 (b) (3), 558074 D01 DTS Meas Guidance v05r02

6.2. Test Procedure

The transmitter output was connected to the spectrum analyzer.
a)Set the RBW ≥ DTS bandwidth.
b)Set VBW ≥ 3 x RBW.
c)Set span ≥ 3 x RBW
d)Sweep time = auto couple.
e)Detector = peak.
f)Trace mode = max hold.
g)Allow trace to fully stabilize.
h)Use peak marker function to determine the peak amplitude level.

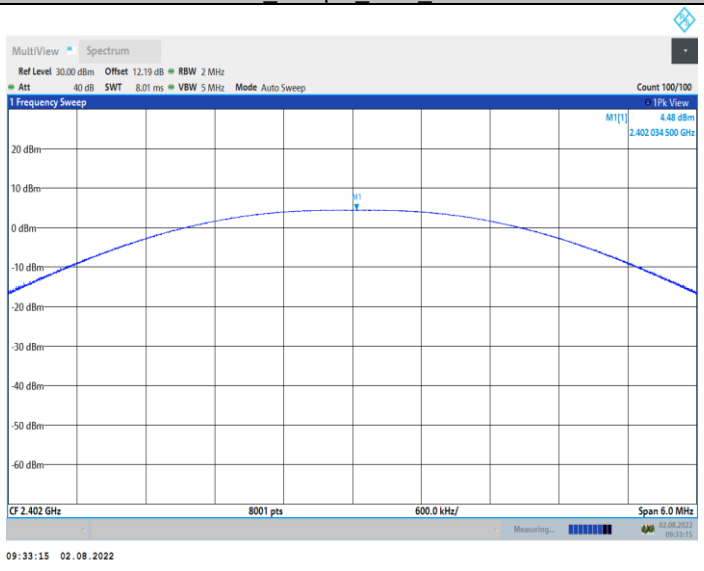
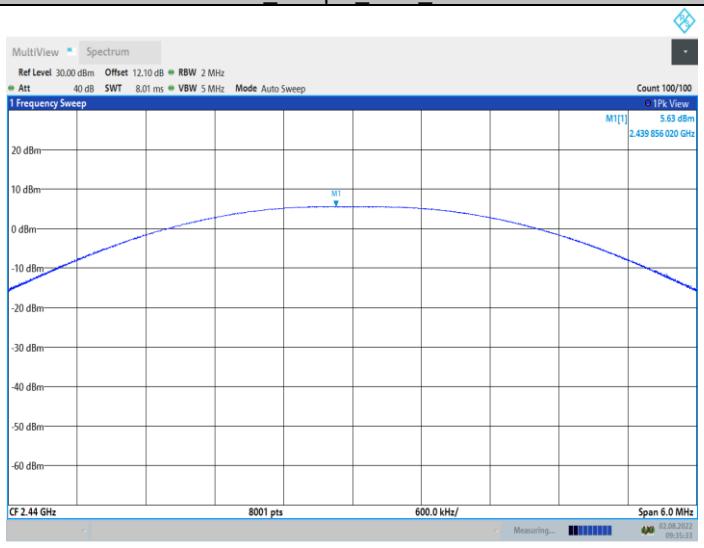
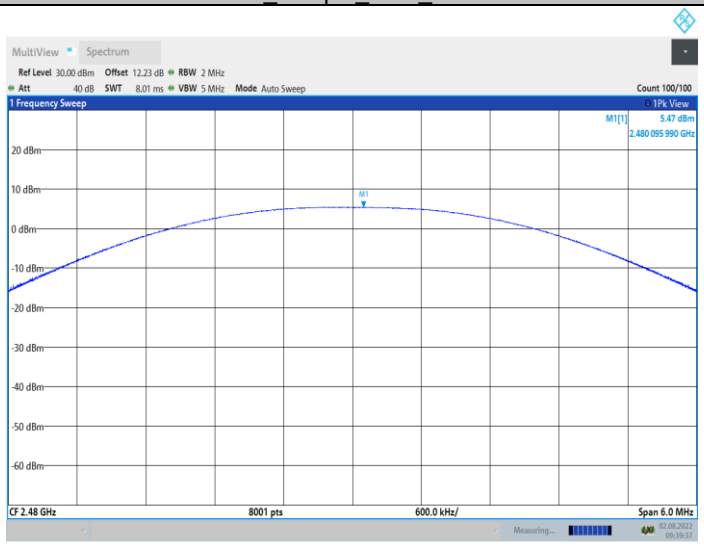
6.3. Test Setup

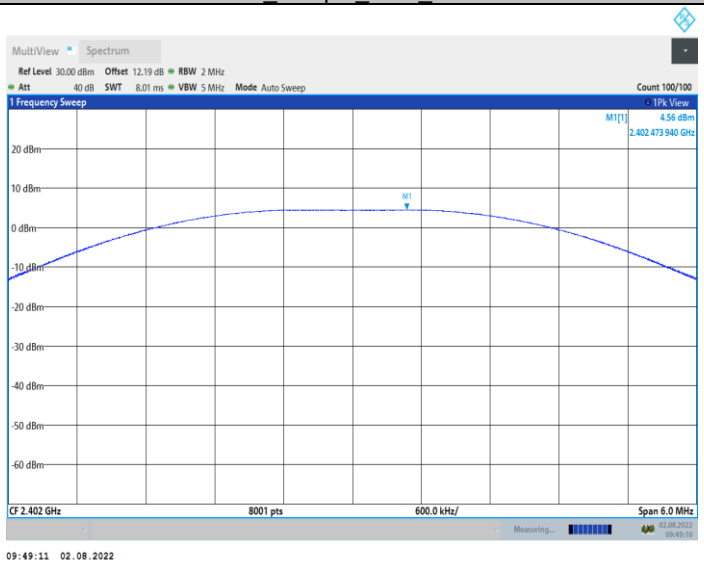
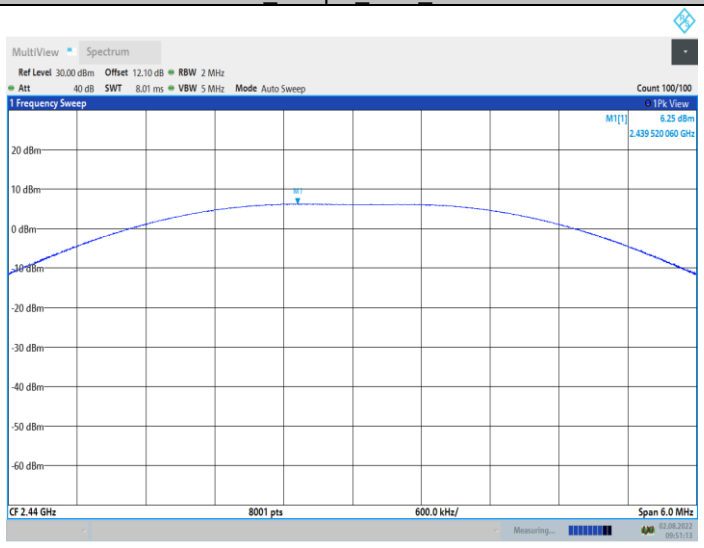
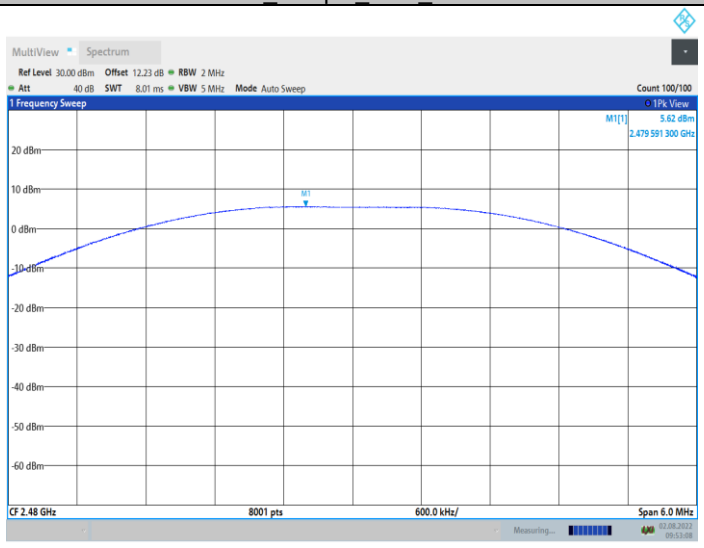


6.4. Test Data

Table 7 Maximum Conducted Output Power Test Data BLE

Test Mode	Center Freq. [MHz]	Meas. Level (Cond.) [dBm]	Limit [dBm]	Result
BLE_1Mbps	2402	4.48	<=30	Pass
	2440	5.63	<=30	Pass
	2480	5.47	<=30	Pass
BLE_2Mbps	2402	4.56	<=30	Pass
	2440	6.25	<=30	Pass
	2480	5.62	<=30	Pass

BLE_1Mbps _Ant1_2402

BLE_1Mbps _Ant1_2440

BLE_1Mbps _Ant1_2480


BLE_2Mbps _Ant1_2402

BLE_2Mbps _Ant1_2440

BLE_2Mbps _Ant1_2480


7. MAXIMUM POWER SPECTRAL DENSITY LEVEL MEASUREMENT

7.1. Limits of Maximum Power Spectral Density Level Measurement

CFR 47 (FCC) part 15.247 (e) , 558074 D01 DTS Meas Guidance v05r02

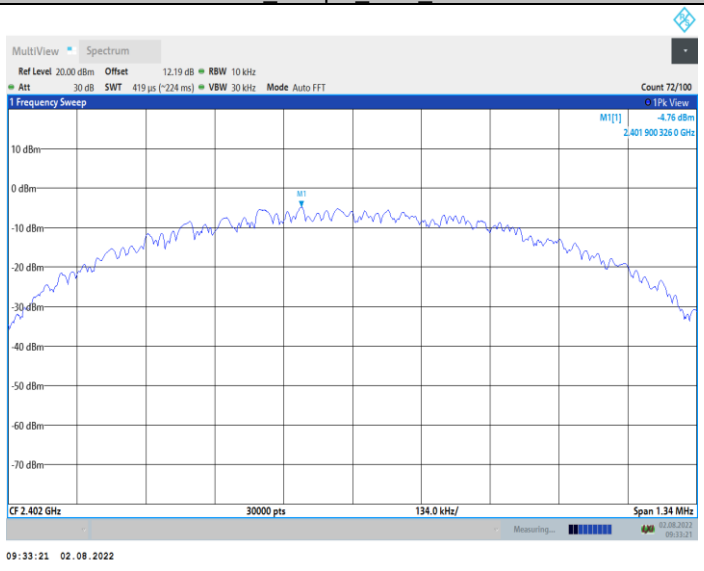
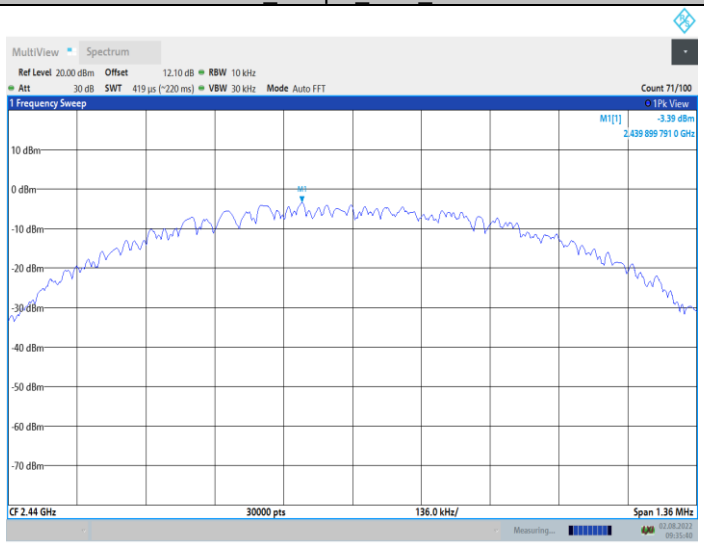
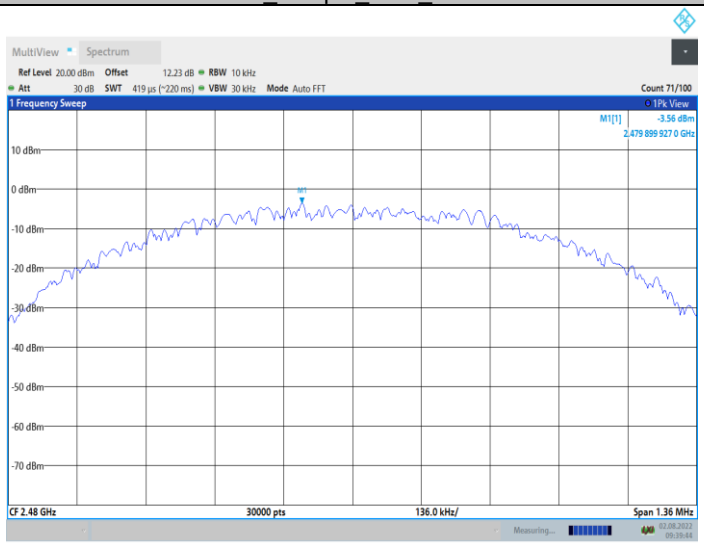
7.2. Test Procedure

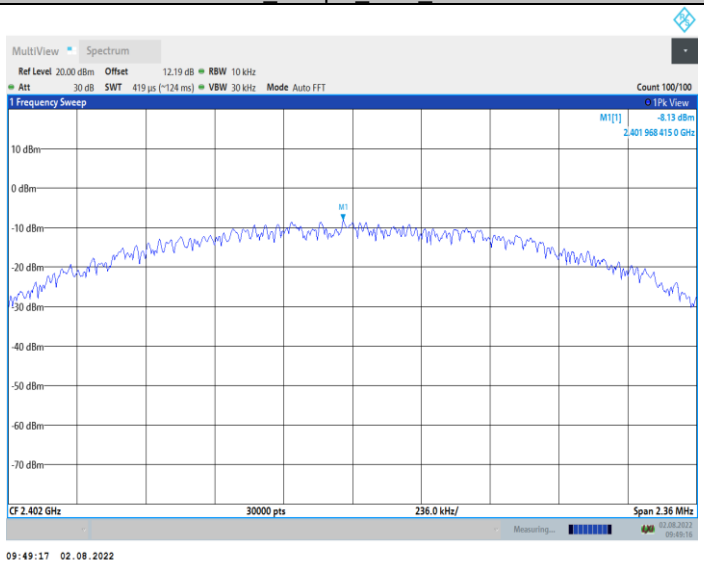
The transmitter output was connected to the spectrum analyzer.
a)Set analyzer center frequency to DTS channel center frequency.
b) Set the span to 1.5 times the DTS bandwidth.
c) Set RBW to：3kHz≤RBW≤100 kHz.
d) Set VBW ≥ 3 x RBW.
e) Detector = peak.
f) Sweep time = auto couple.
g) Trace mode = max hold.
h)Allow trace to fully stabilize.
i)Use the peak marker function to determine the maximum amplitude level within the RBW.
j)If measured value exceeds limit, reduce RBW (no less than 3 kHz) and repeat.

7.3. Test Data

Table 8 Maximum Power Spectral Density Level Test Data BLE

Test Mode	Freq.[MHz]	PSD [dBm]	Limit [dBm]	Result
BLE_1Mbps	2402	-4.76	<=8	Pass
	2440	-3.39	<=8	Pass
	2480	-3.56	<=8	Pass
BLE_2Mbps	2402	-8.13	<=8	Pass
	2440	-6.93	<=8	Pass
	2480	-6.91	<=8	Pass

BLE_1Mbps _Ant1_2402

BLE_1Mbps _Ant1_2440

BLE_1Mbps _Ant1_2480


BLE_2Mbps _Ant1_2402

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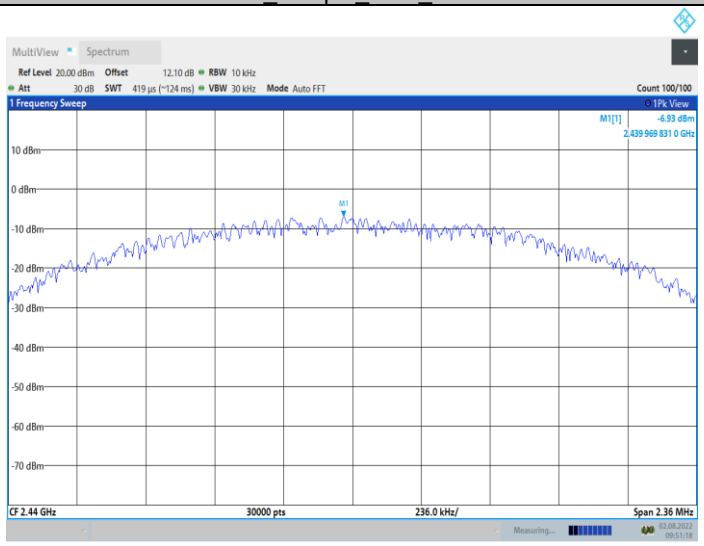
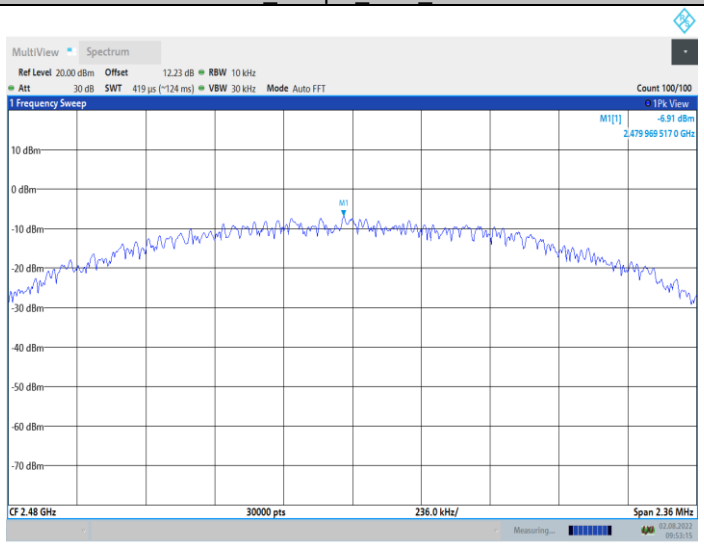

BLE_2Mbps _Ant1_2480


8. CONDUCTED BANDEDGE AND SPURIOUS MEASURMENT

8.1. Limits of Conducted Bandedge and Spurious Measurement

CFR 47 (FCC) part 15.247 (d) and 558074 D01 DTS Meas Guidance v05r02

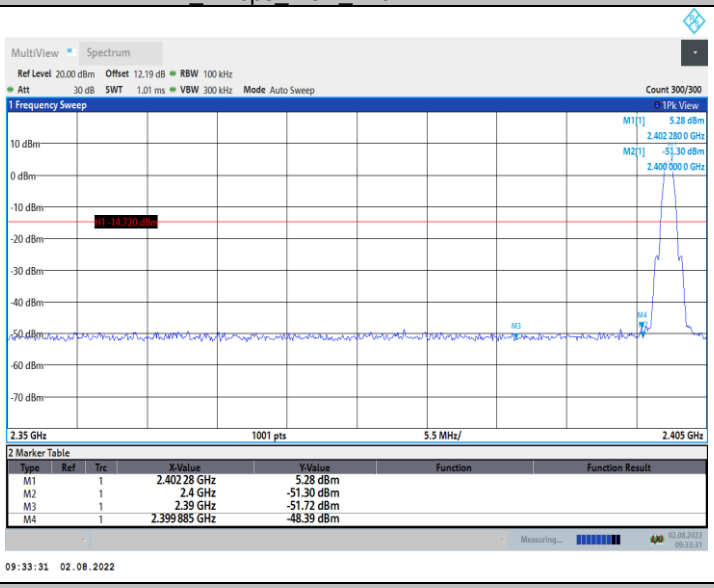
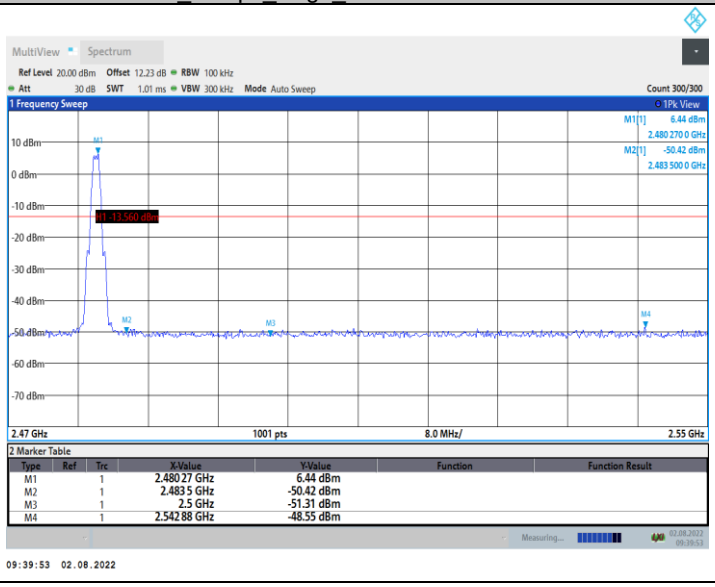
8.2. Test Procedure

The transmitter output was connected to the spectrum analyzer.
Establish a reference level by using the following procedure:
a)Set instrument center frequency to DTS channel center frequency.
b)Set the span to ≥ 1.5 times the DTS bandwidth.
c)Set the RBW = 100 kHz.
d)Set the VBW ≥ 3 x RBW.
e)Detector = peak.
f)Sweep time = auto couple.
g)Trace mode = max hold.
h)Allow trace to fully stabilize.
i)Use the peak marker function to determine the maximum PSD level.
Emission level measurement
a)Set the center frequency and span to encompass frequency range to be measured.
b)Set the RBW = 100 kHz.
c)Set the VBW ≥ 3 x RBW.
d)Detector = peak.
e)Ensure that the number of measurement points ≥ span/RBW
f)Sweep time = auto couple.
g)Trace mode = max hold.
h)Allow trace to fully stabilize.
i)Use the peak marker function to determine the maximum amplitude level.

8.3. Test Data

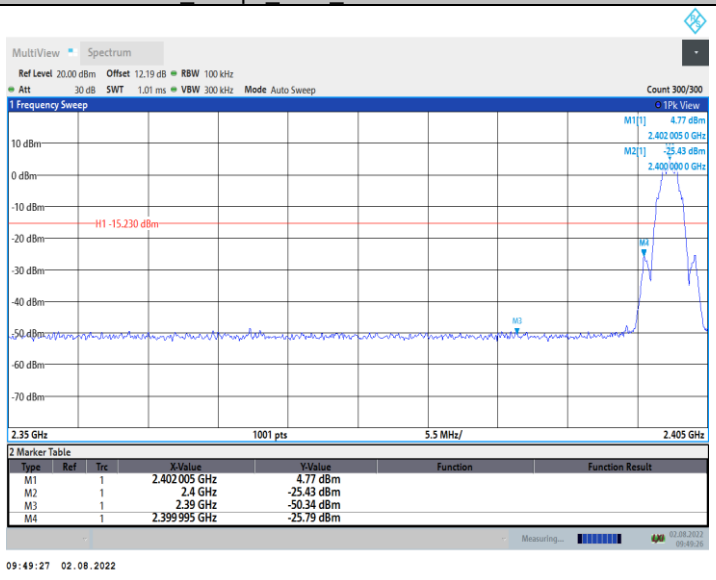
BLE_1Mbps

Band Edge

BLE_1Mbps_ Low_2402 MHz

BLE_1Mbps_ High_2480 MHz


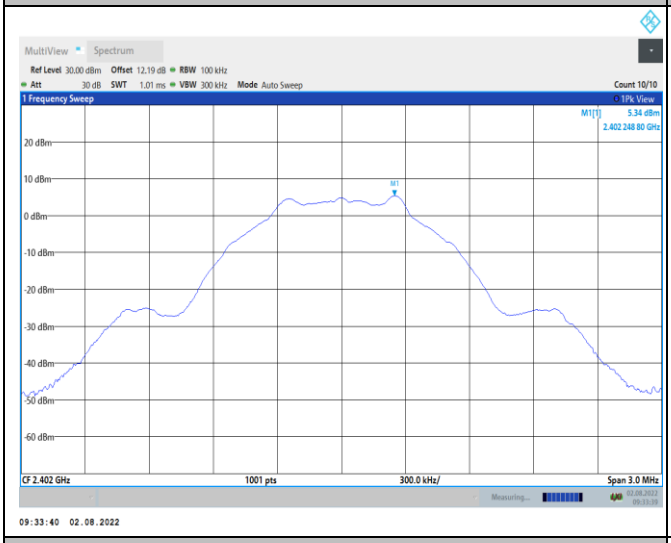
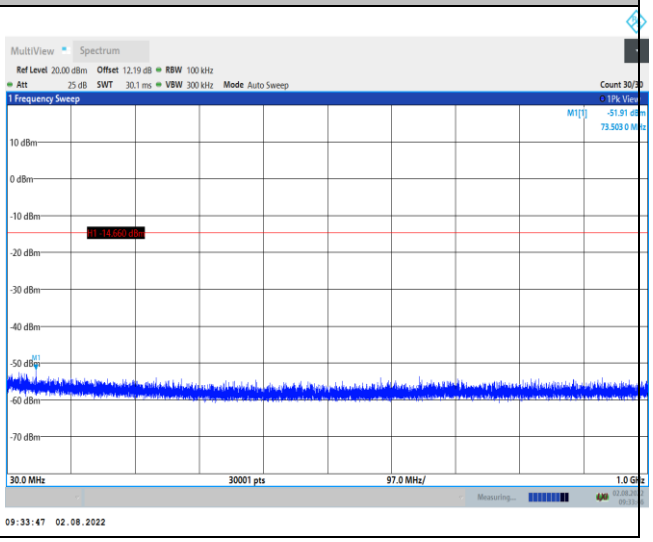
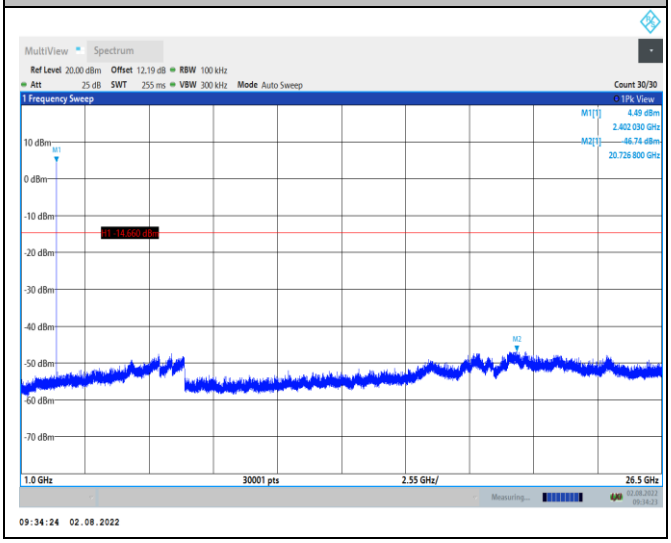
BLE_2Mbps

Band Edge

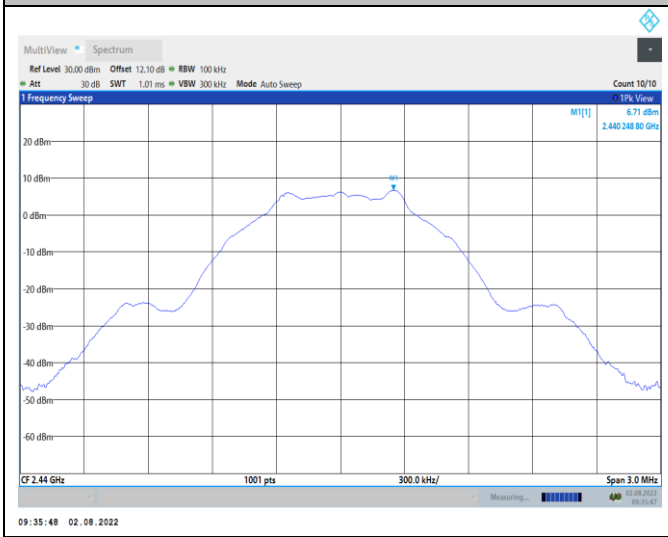
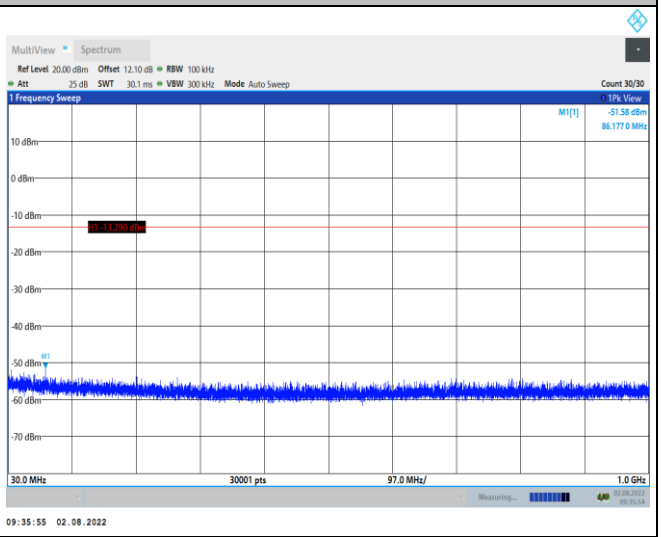
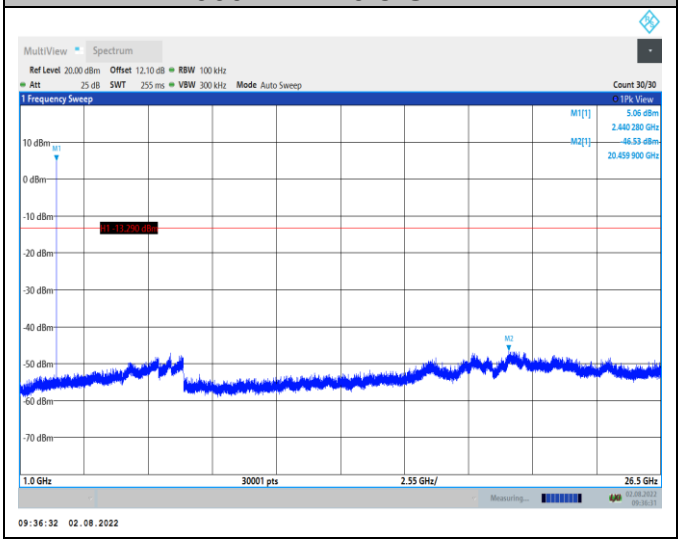
BLE_2Mbps_ Low_2402 MHz

BLE_2Mbps_ High_2480 MHz


Conducted Spurious Emission

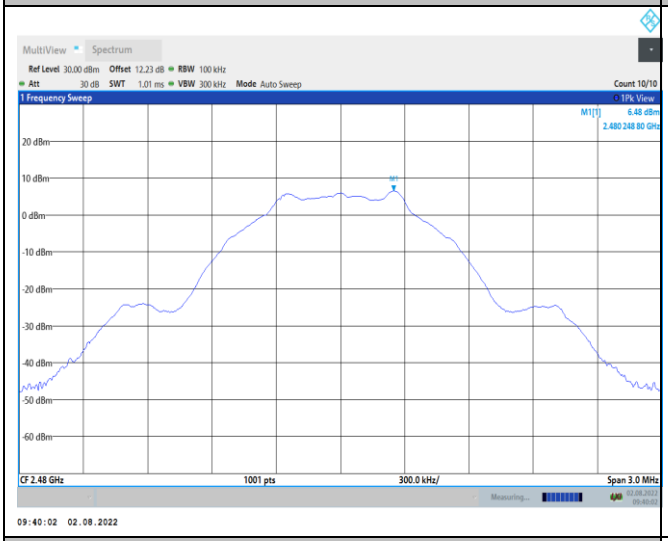
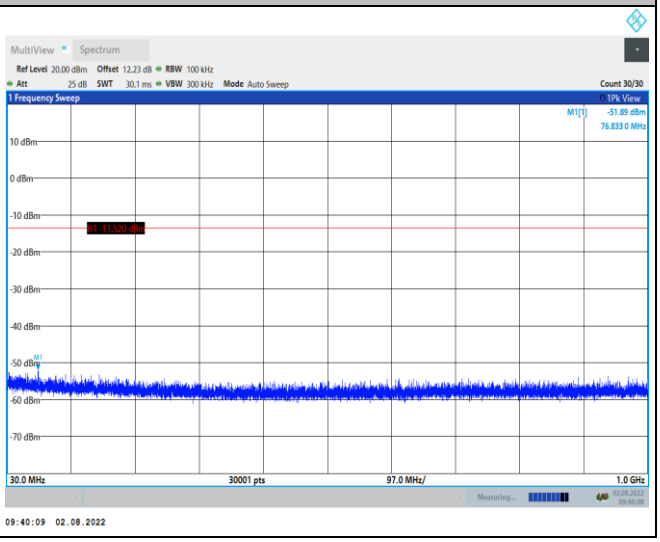
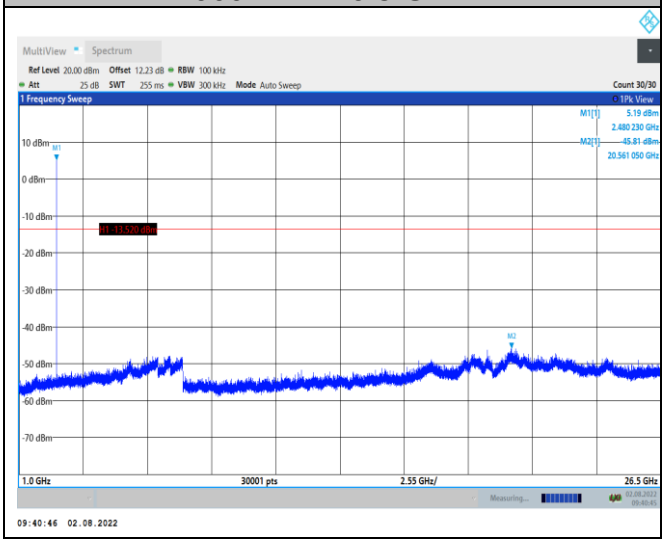
BLE_1Mbps
Low Channel

Pref.	30 MHz-1000 MHz
	
1000 MHz-26.5 GHz	
	

Mid. Channel

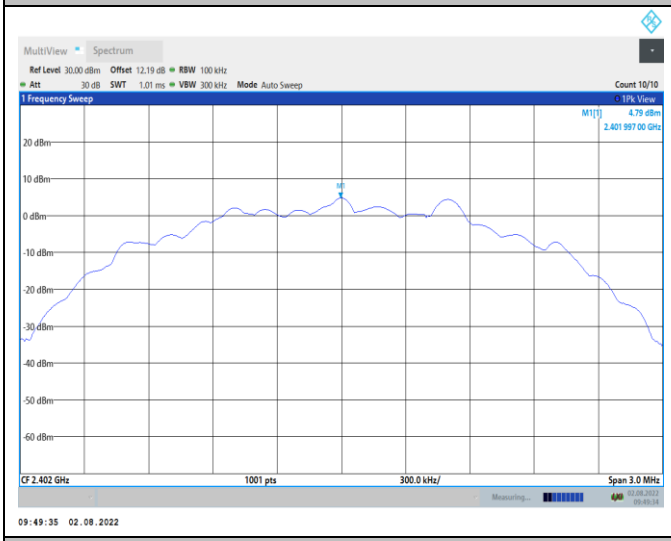
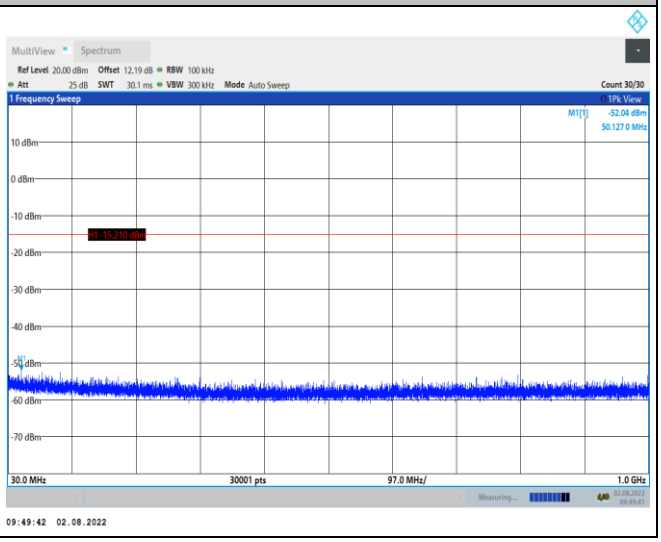
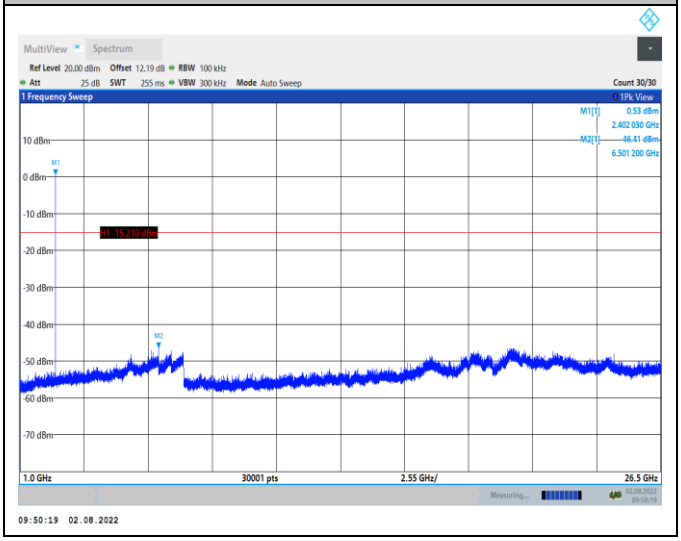
Pref.	30 MHz-1000 MHz
	
1000 MHz-26.5 GHz	
	

High Channel

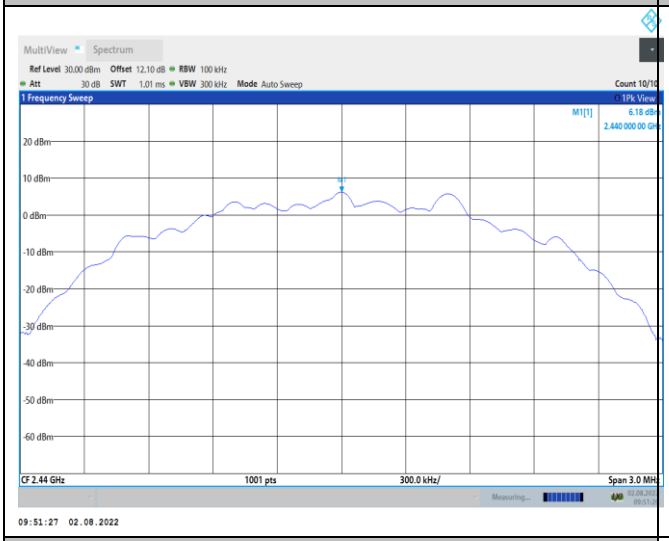
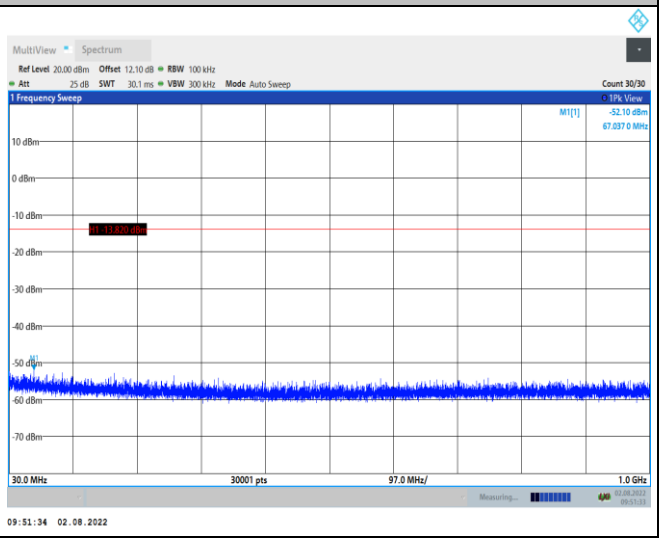
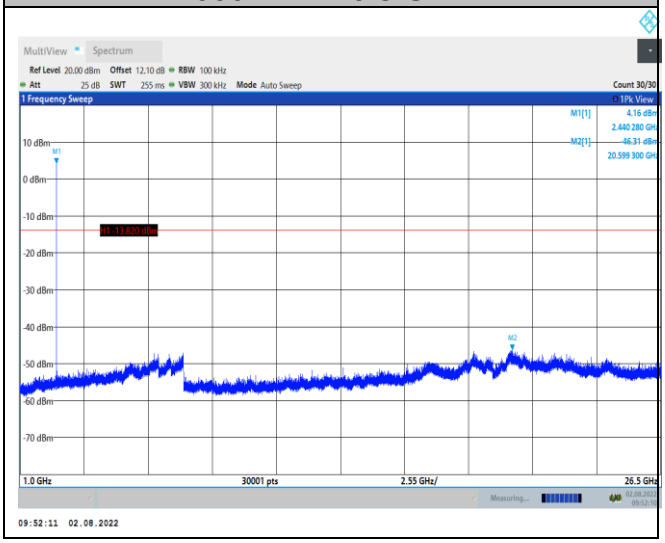
Pref.	30 MHz-1000 MHz
	
1000 MHz-26.5 GHz	
	

Conducted Spurious Emission

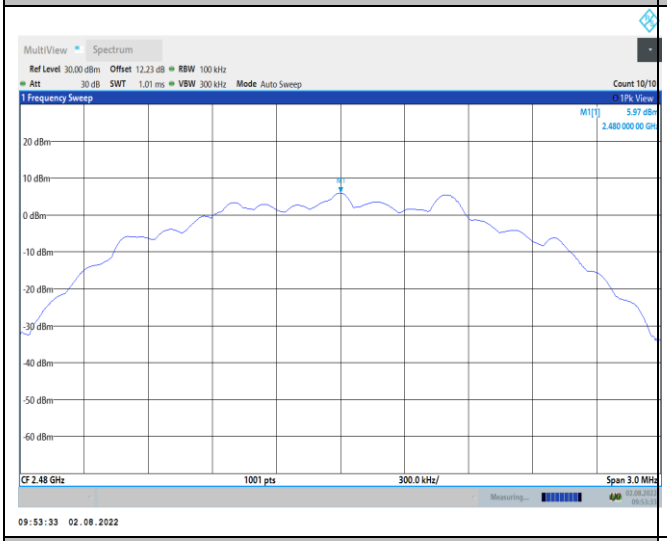
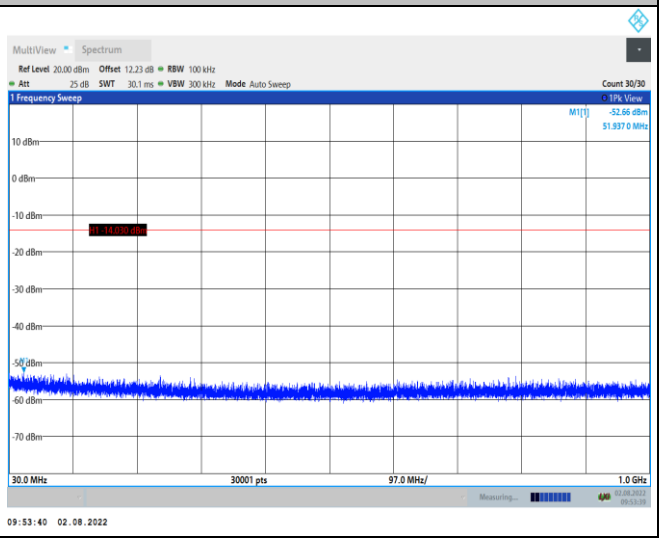
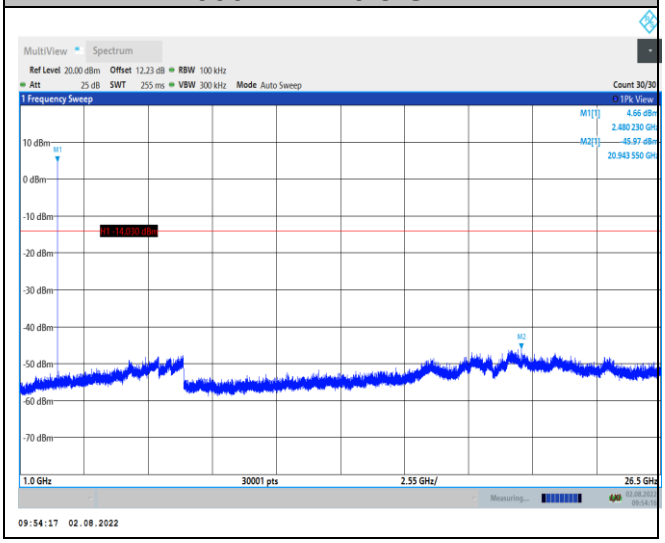
BLE_2Mbps
Low Channel

Pref.	30 MHz-1000 MHz
	
1000 MHz-26.5 GHz	
	

Mid. Channel

Pref.	30 MHz-1000 MHz
	
1000 MHz-26.5 GHz	
	

High Channel

Pref.	30 MHz-1000 MHz
	
1000 MHz-26.5 GHz	
	

9. RADIATED BANDEDGE AND SPURIOUS MEASUREMENT

9.1. Limits of Radiated Bandedge and Spurious Measurement

CFR 47 (FCC) part 15.247 (d) and 558074 D01 DTS Meas Guidance v05r02

9.2. Test Procedure

1. The testing follows the guidelines in ANSI C63.10-2013.
2. The EUT was arranged to its worst case and then tune the antenna tower (from 1 m to 4 m) and turntable (from 0 degree to 360 degrees) to find the maximum reading. A pre-amp and a high pass filter are used for the test in order to get better signal level.
3. For measurement below 1GHz, the EUT was placed on a turntable with 0.8meter, above ground. For measurement above 1 GHz, test at FAR, the EUT is placed on a non-conductive table, which is 1.5 meter above ground.
4. The EUT was set 3 meters from the interference receiving antenna, which was mounted on the top of a variable height antenna tower.
5. Corrected Reading: Antenna Factor + Cable Loss + Read Level - Preamp Factor = Level
6. For measurement below 1GHz, If the emission level of the EUT measured by the peak detector is 3 dB lower than the applicable limit, the peak emission level will be reported. Otherwise, the emission measurement will be repeated using the quasi-peak detector and reported.
7. Use the following spectrum analyzer settings:
(1) Span shall wide enough to fully capture the emission being measured;
(2) Set RBW=100 kHz for f < 1 GHz; VBW >= RBW; Sweep = auto; Detector function = peak; Trace = max hold;
(3) Set RBW = 1 MHz, VBW= 3MHz for f > 1 GHz for peak measurement.
Set RBW = 1 MHz, and 1/T (on time) for average measurement.

9.3. Test Data

9 kHz-30 MHz

The low frequency, which started from 9 kHz to 30MHz, was pre-scanned and the res ult which was 20dB lower than the limit line per 15.31(o) was not reported.

Table 9 Radiated Emission Test Data 9k Hz-30MHz

Frequency (MHz)	Cable Loss +preamp (dB)	Antenna Factor (dB)	Reading (dBμV/m)	Level (dBμV/m)	Polarity (H/V)	Limit (dBμV/m)	Margin (dB)	Note
--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--

30 MHz-1 GHz

Worst case is shown below for 30MHz-1GHz only.

The emissions don't show in following result tables are more than 20dB below the limits.

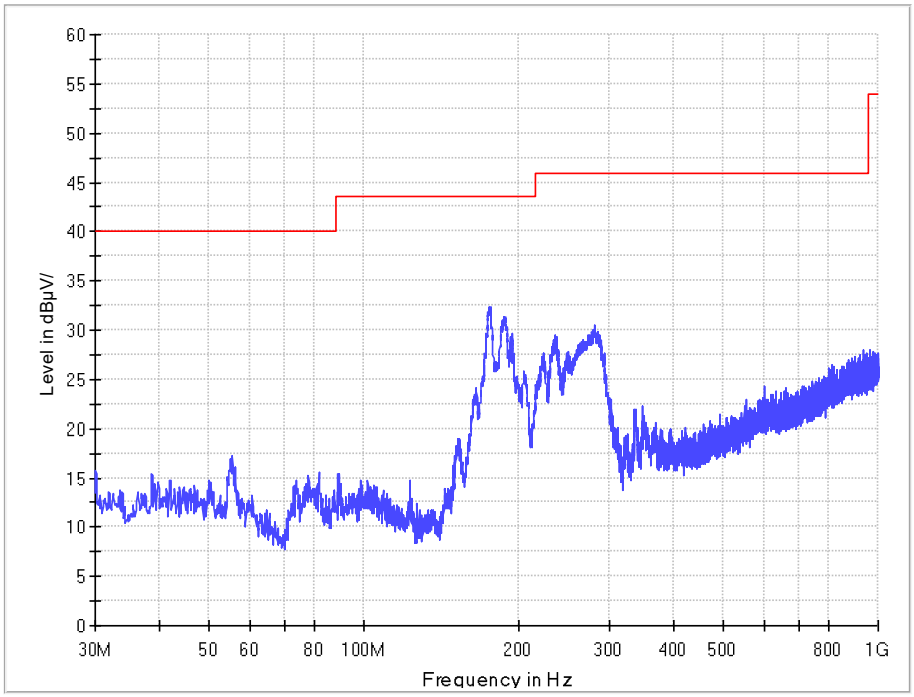
Table 10 Radiated Emission Test Data 30MHz-1GHz

Frequency (MHz)	Cable Loss +preamp (dB)	Antenna Factor (dB)	Reading (dBμV/m)	Level (dBμV/m)	Polarity (Horizontal/ Vertical)	Limit (dBμV/m)	Margin (dB)	Note
30.000	0.6	12.3	11.2	24.1	Vertical	40	15.9	QP
38.439	0.7	12.3	10.8	23.8	Vertical	40	16.2	QP
54.347	0.8	13.3	10.5	24.6	Vertical	40	15.4	QP
65.502	0.9	10.7	11.5	23.1	Vertical	40	16.9	QP
175.985	1.5	9.0	25.2	35.7	Vertical	43.5	7.8	QP
188.013	1.5	9.7	22.2	33.4	Vertical	43.5	10.1	QP
55.511	0.9	13.0	1.4	15.3	Horizontal	40	24.7	QP
152.317	1.4	8.3	6.8	16.5	Horizontal	43.5	27.0	QP
175.500	1.5	9.0	20.3	30.8	Horizontal	43.5	12.7	QP
186.849	1.5	9.7	18.9	30.1	Horizontal	43.5	13.4	QP
193.833	1.7	10.6	15.6	27.9	Horizontal	43.5	15.6	QP
280.745	1.9	12.7	14.7	29.3	Horizontal	46	16.7	QP

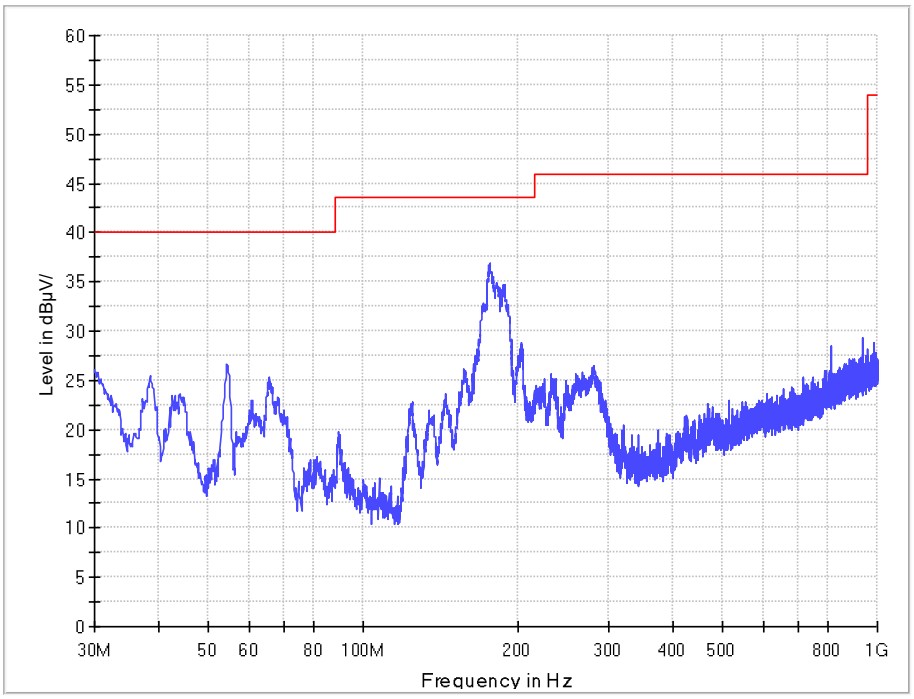
Remark: Emission level (dBμV)=Read Value(dBμV/m) + Antenna Factor(dB)+ Cable Loss +preamp(dB)

30MHz-1GHz

Horizontal

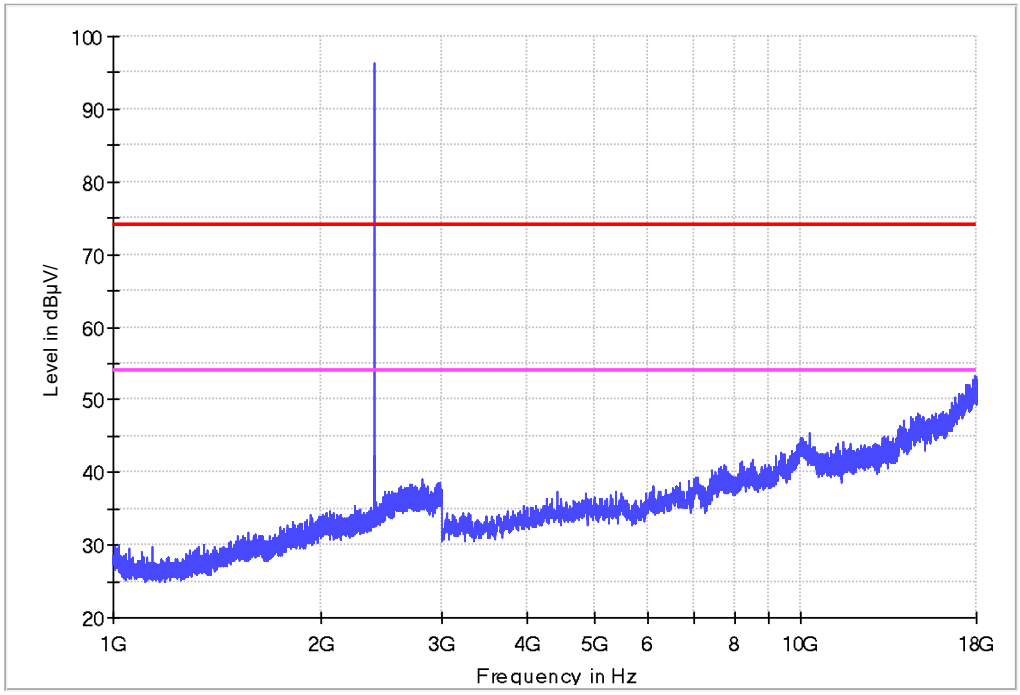


Vertical

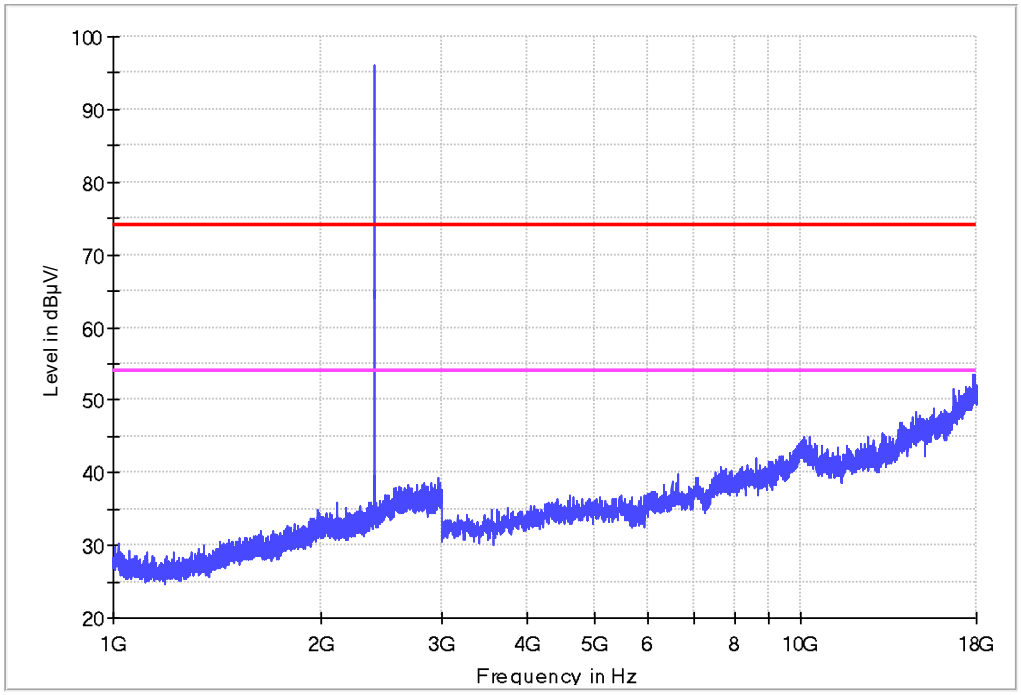


1-18 GHz

BLE_1Mbps CH0
Horizontal

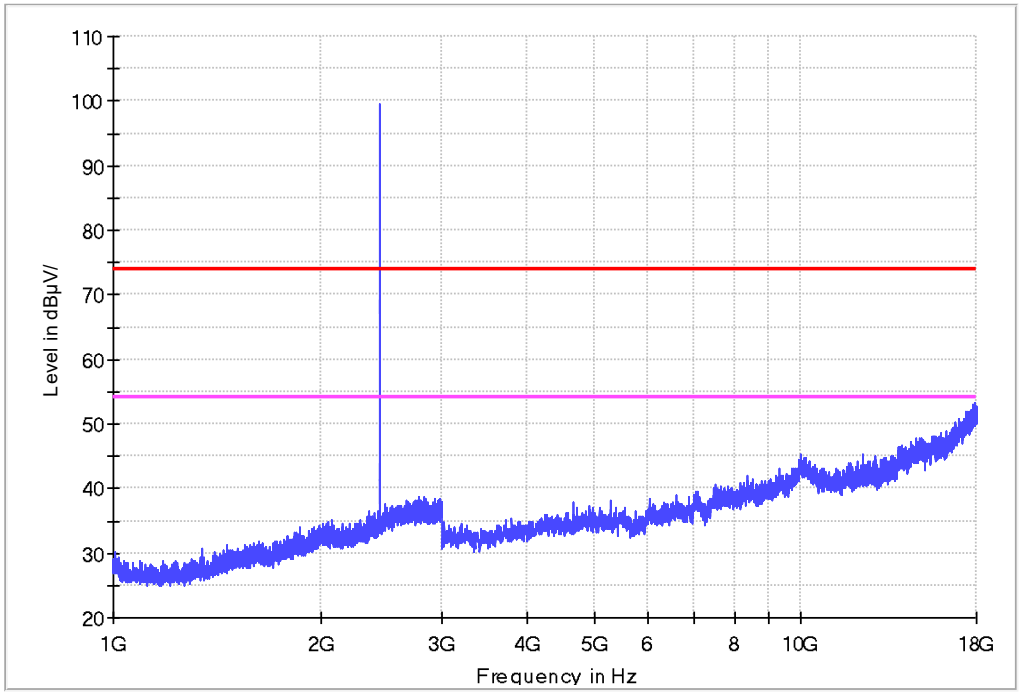


Vertical

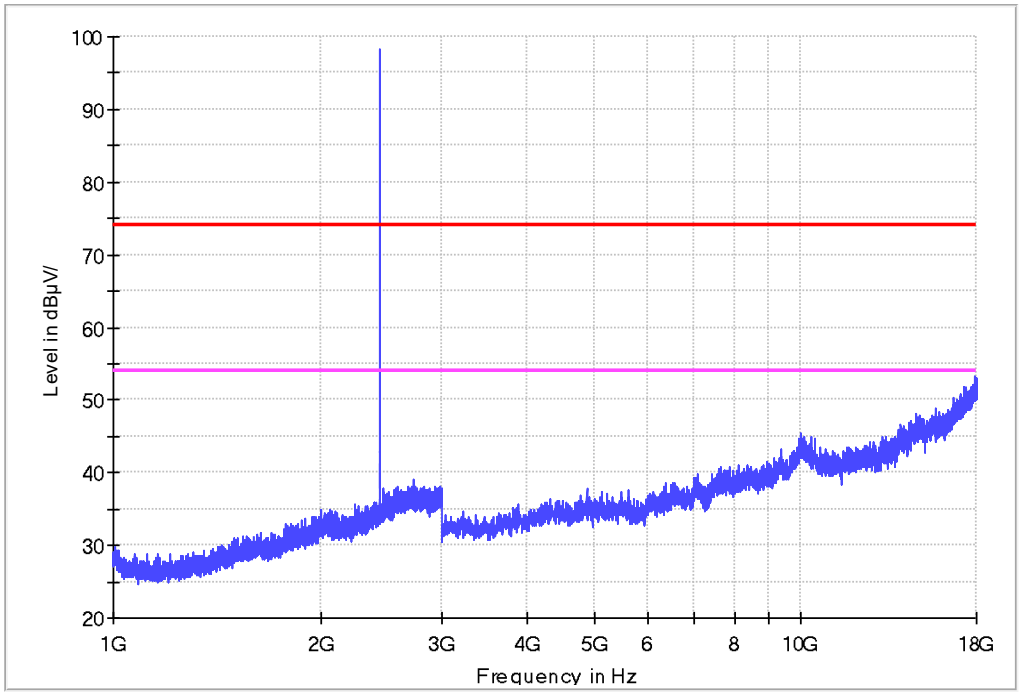


1-18 GHz

BLE_1Mbps BLE CH19
Horizontal

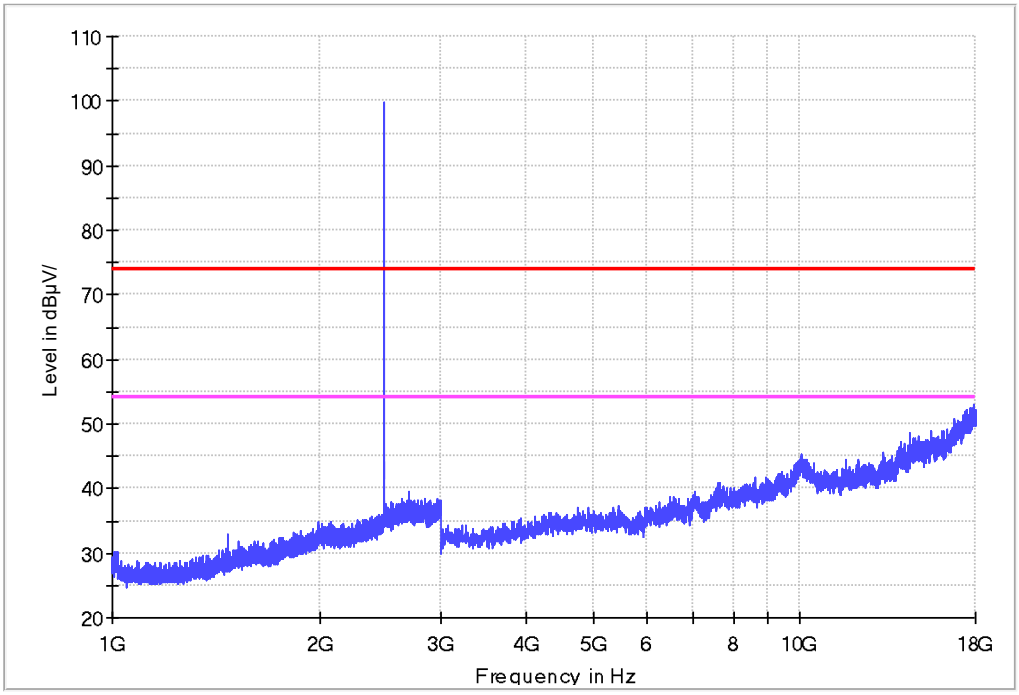


Vertical

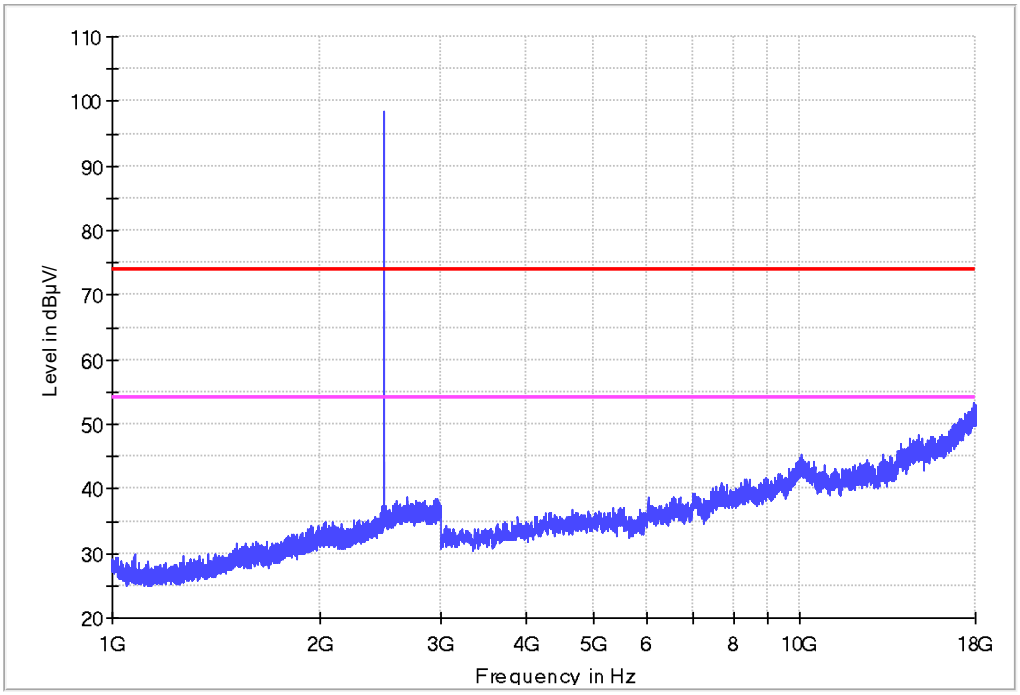


1-18 GHz

BLE_1Mbps BLE CH39
Horizontal

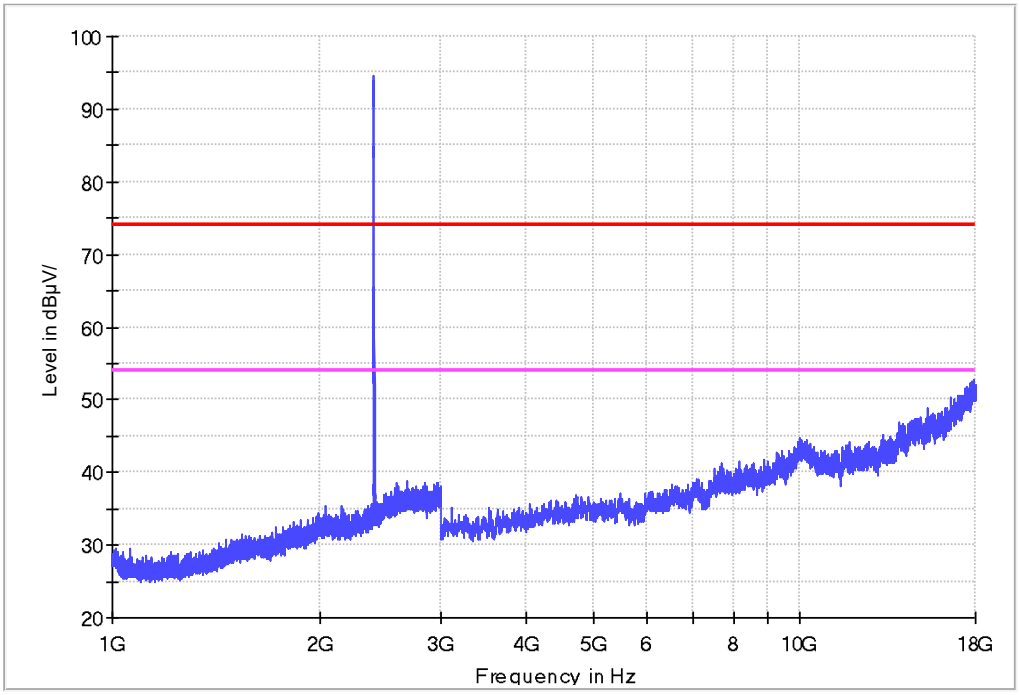


Vertical

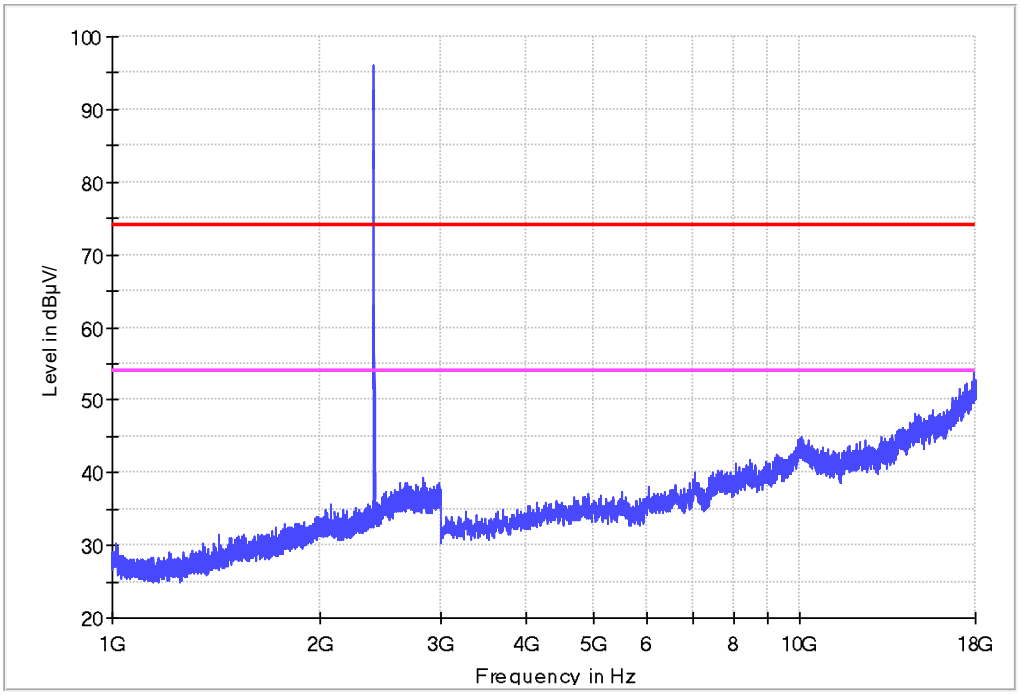


1-18 GHz

BLE_2Mbps CH0
Horizontal

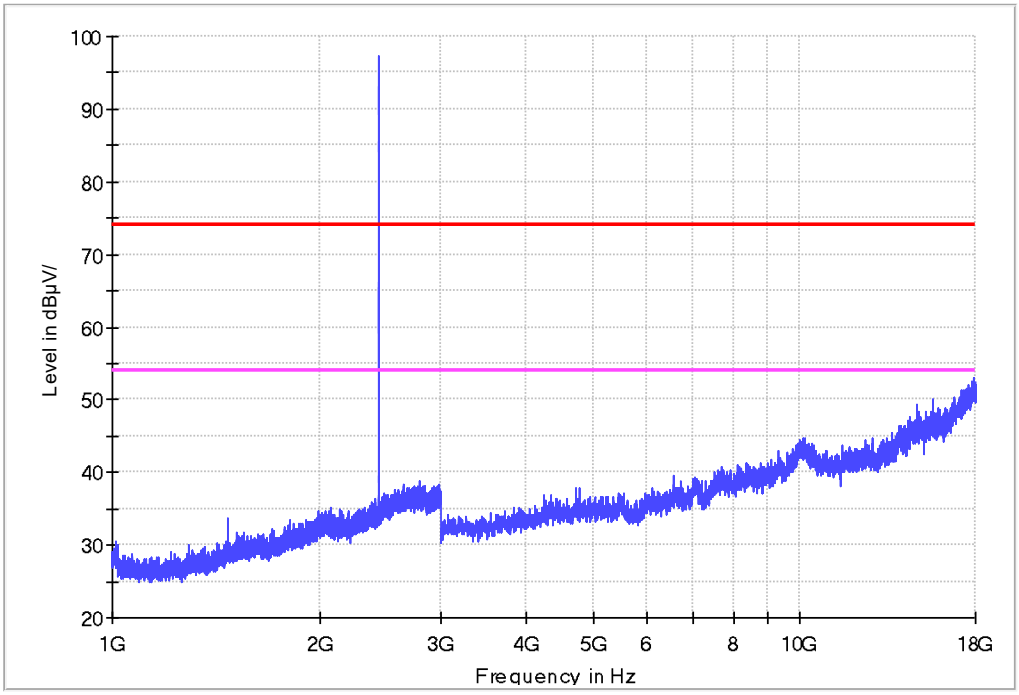


Vertical

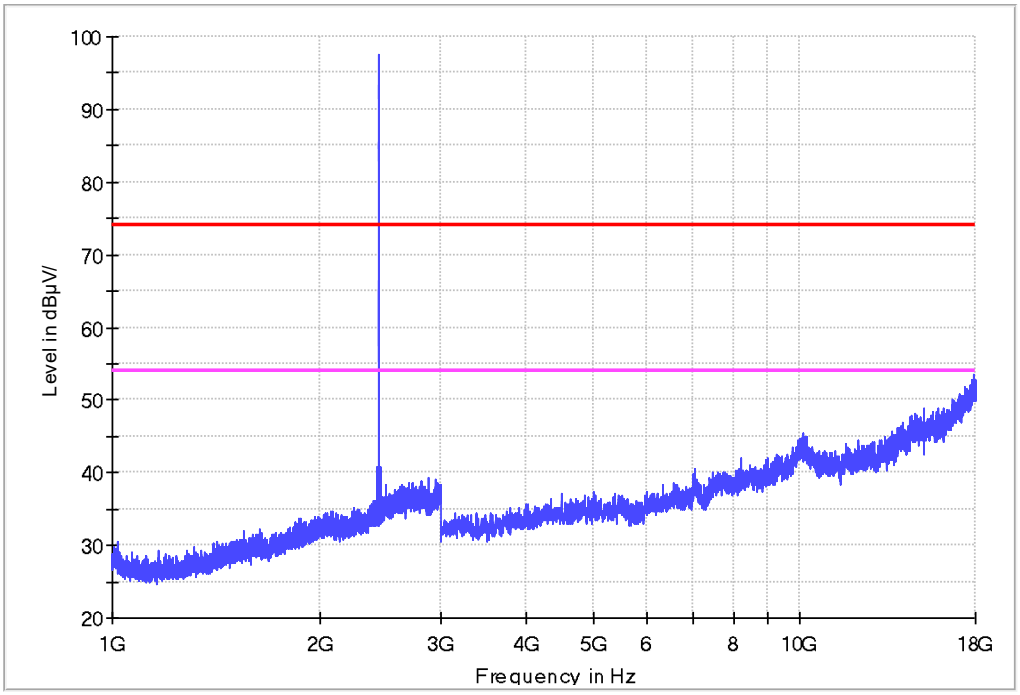


1-18 GHz

BLE_2Mbps CH19
Horizontal

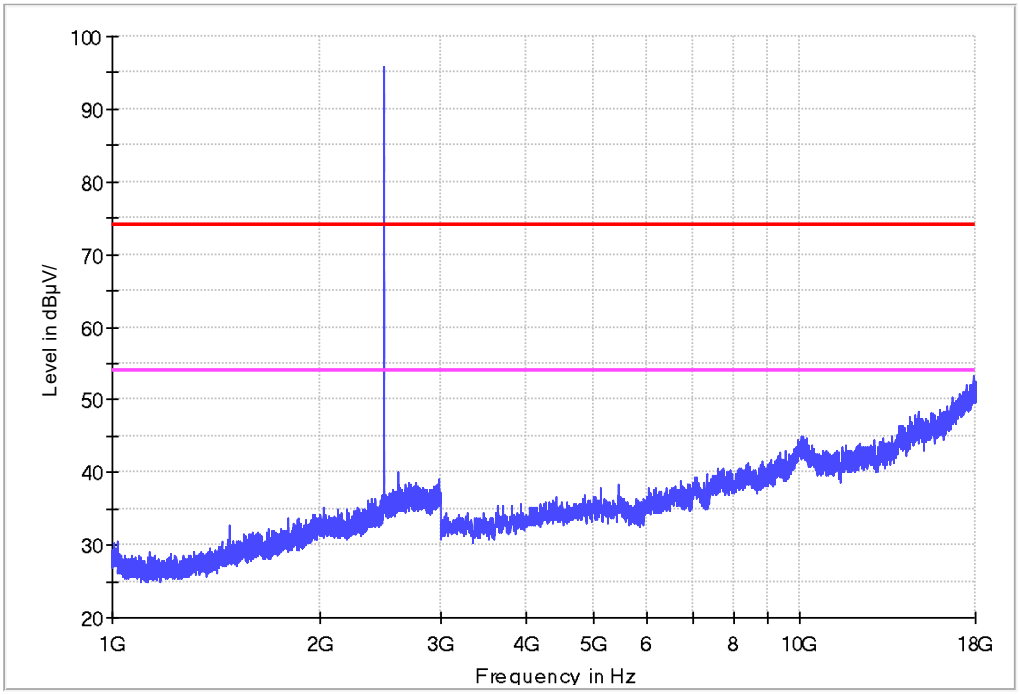


Vertical

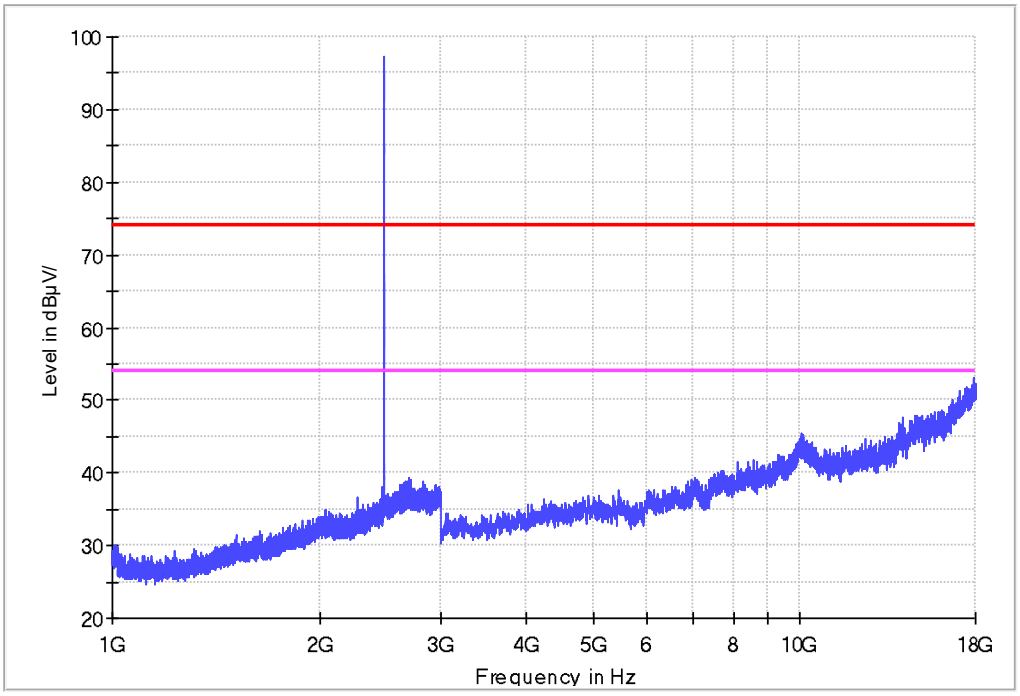


1-18 GHz

BLE_2Mbps CH39
Horizontal

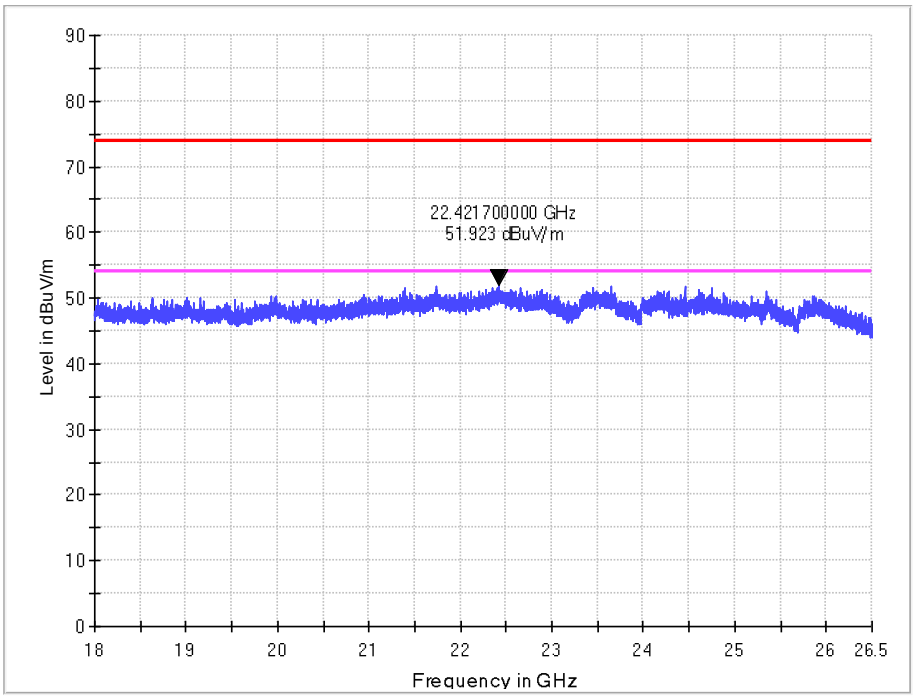


Vertical

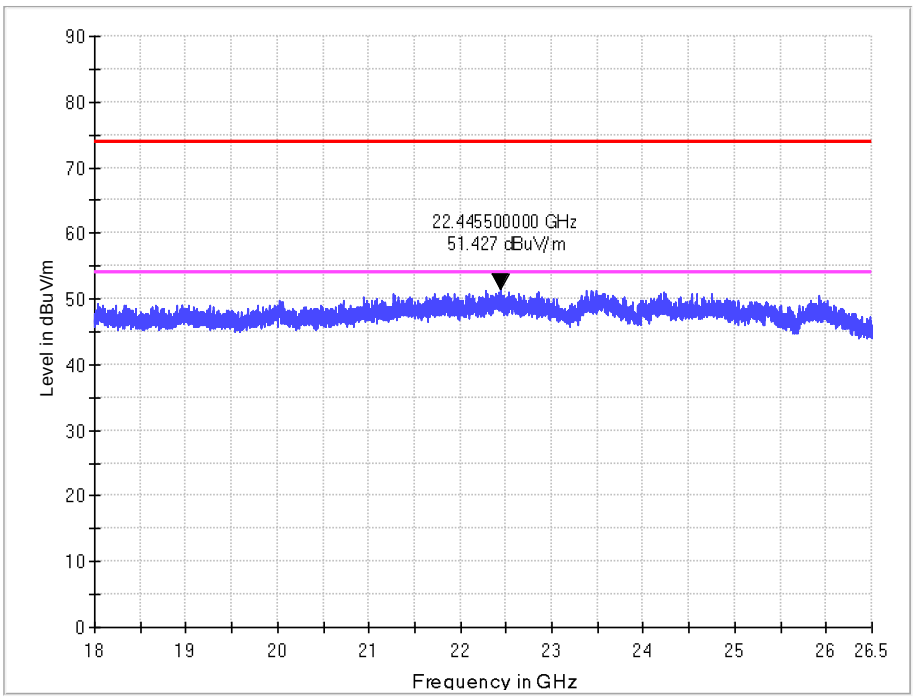


18-26.5 GHz

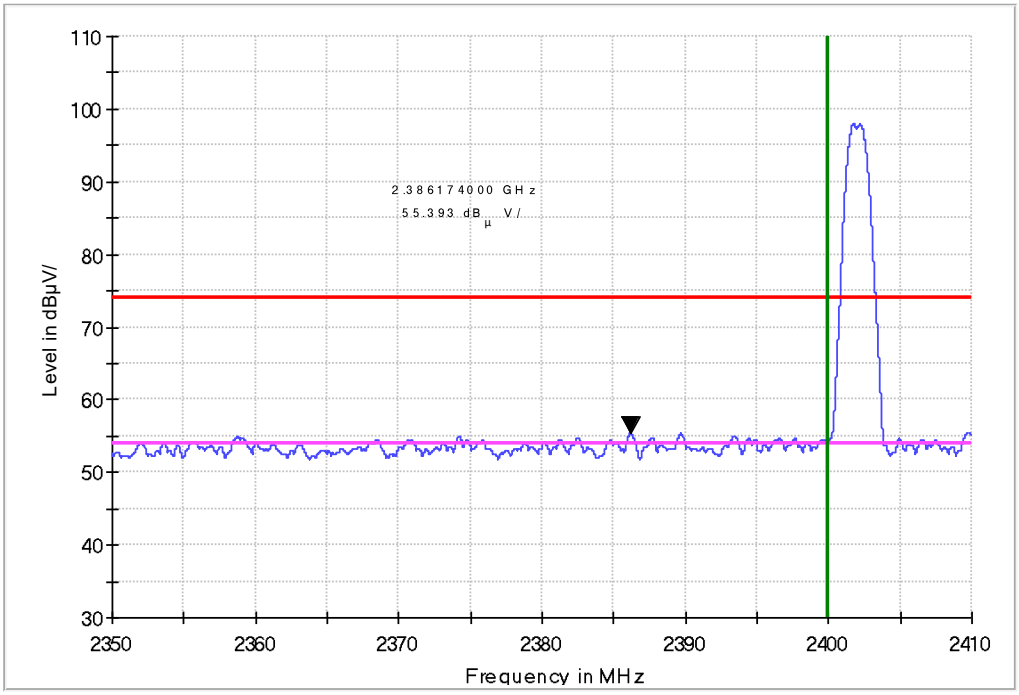
No Peak found in pre-scan, only worst case result is listed in this report.
Horizontal



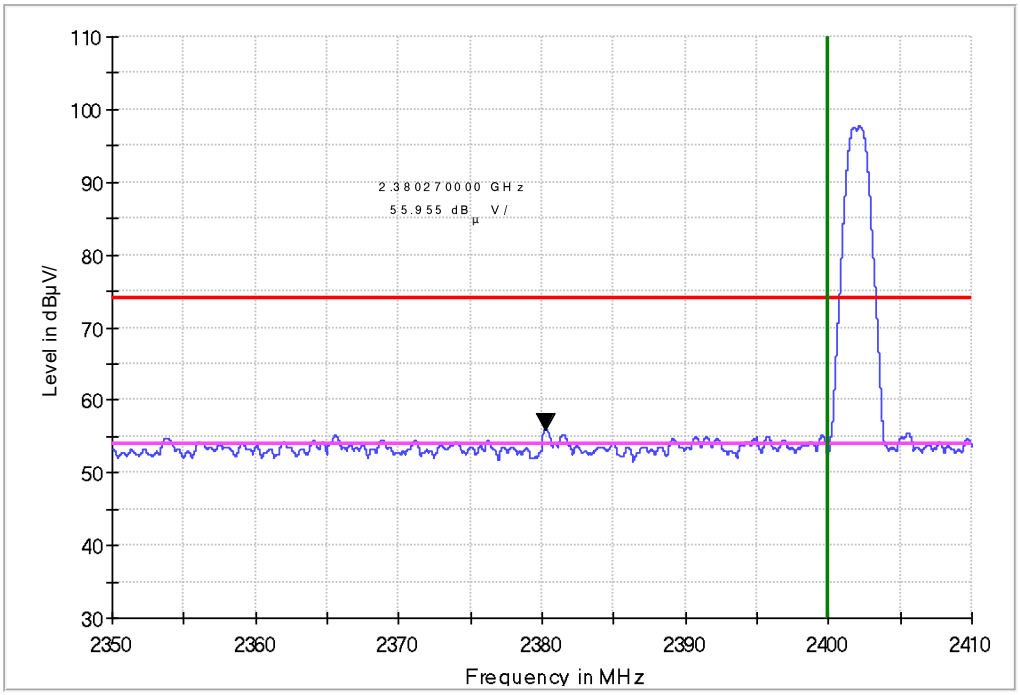
Vertical



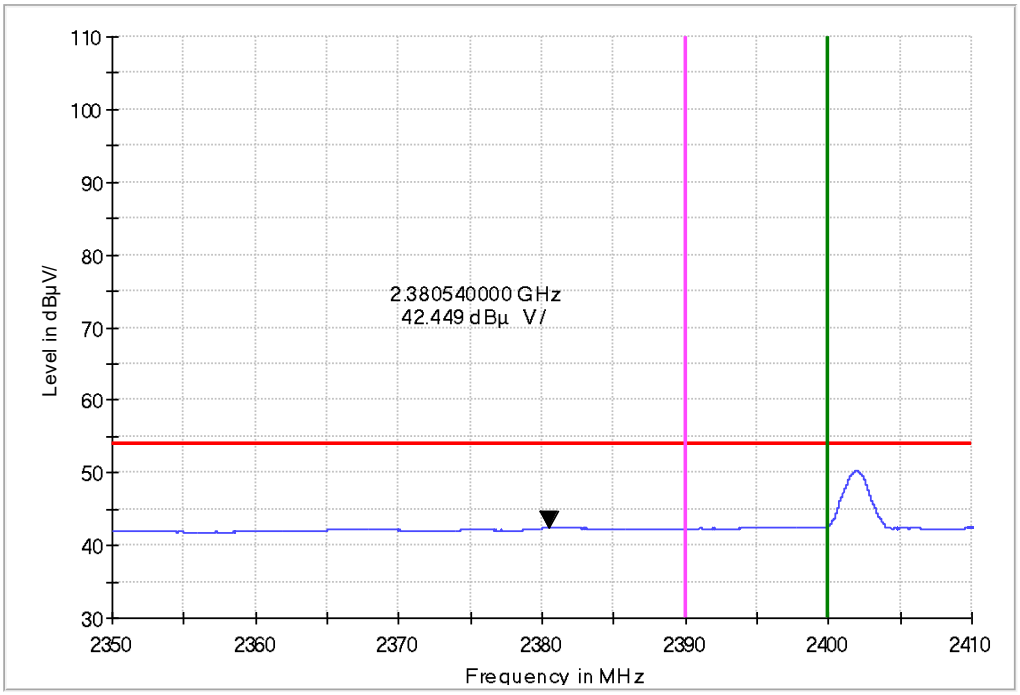
Band Edge
BLE_1Mbps BLE CH0
PK
Horizontal



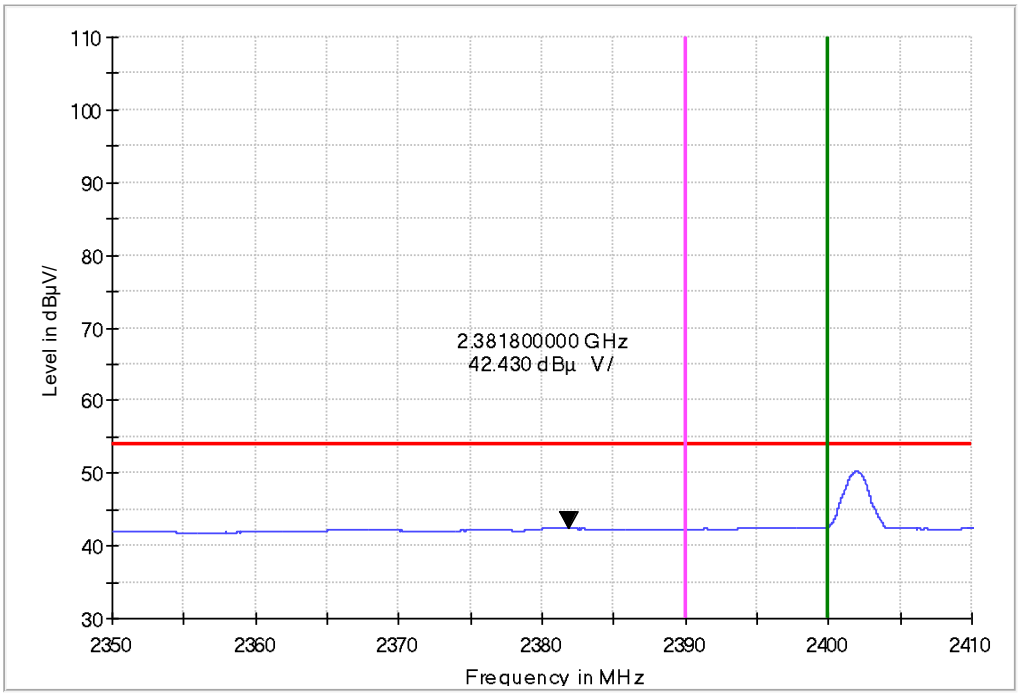
Vertical



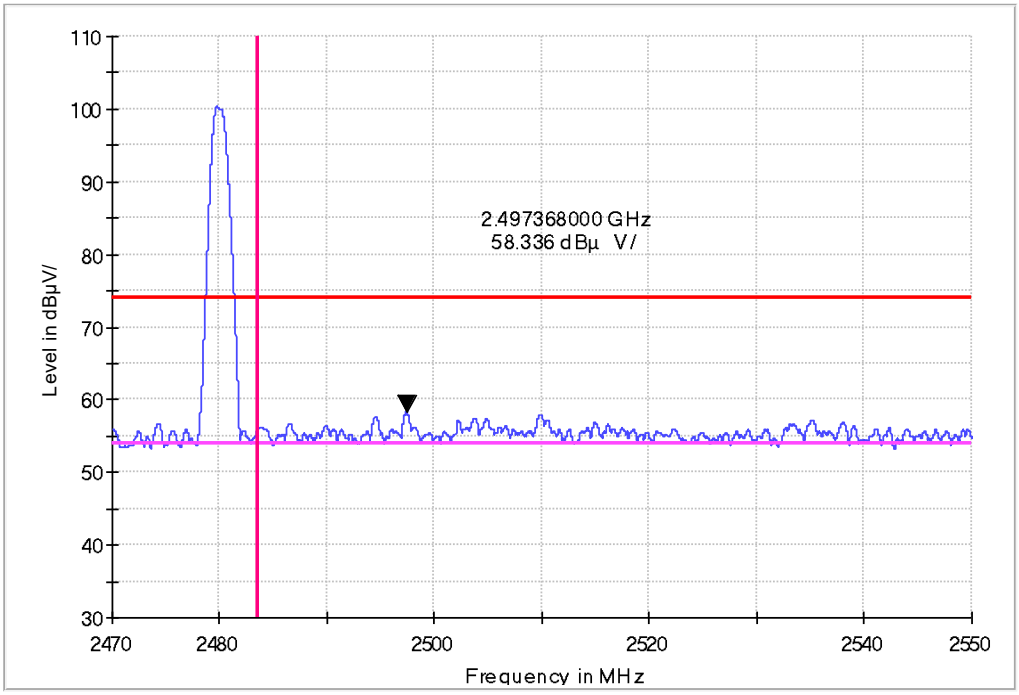
AV
Horizontal



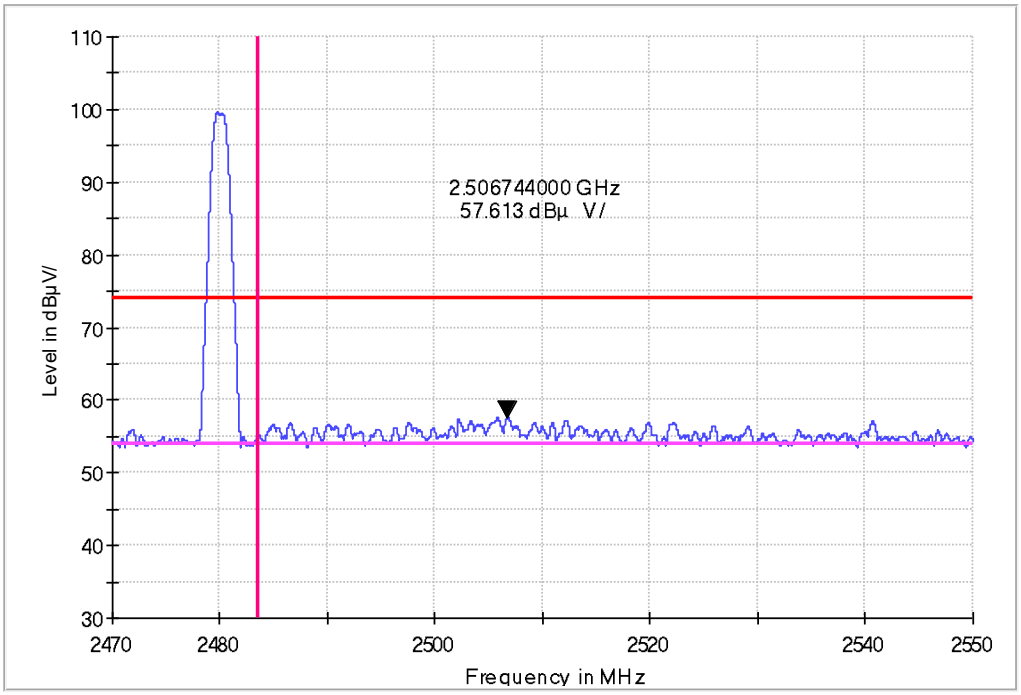
Vertical



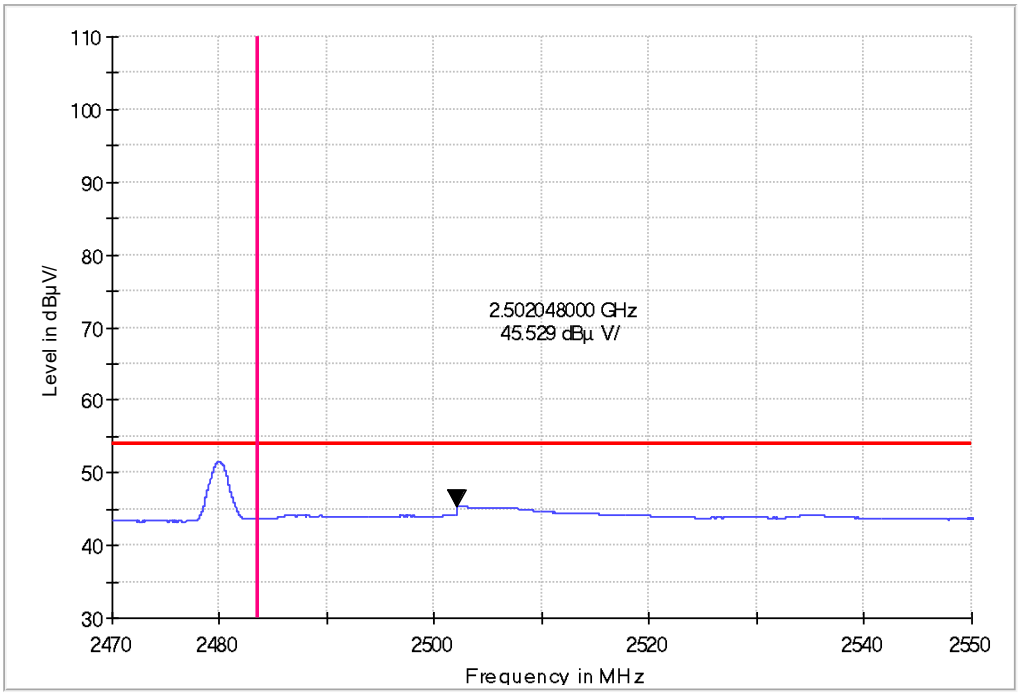
Band Edge
BLE_1Mbps BLE CH39
PK
Horizontal



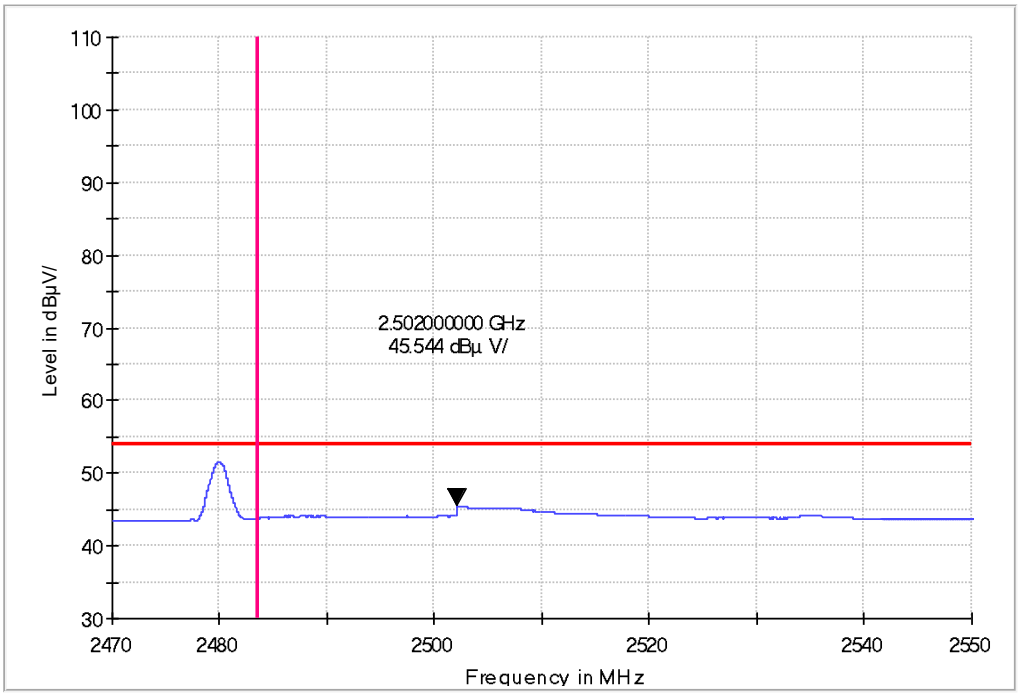
Vertical



AV
Horizontal

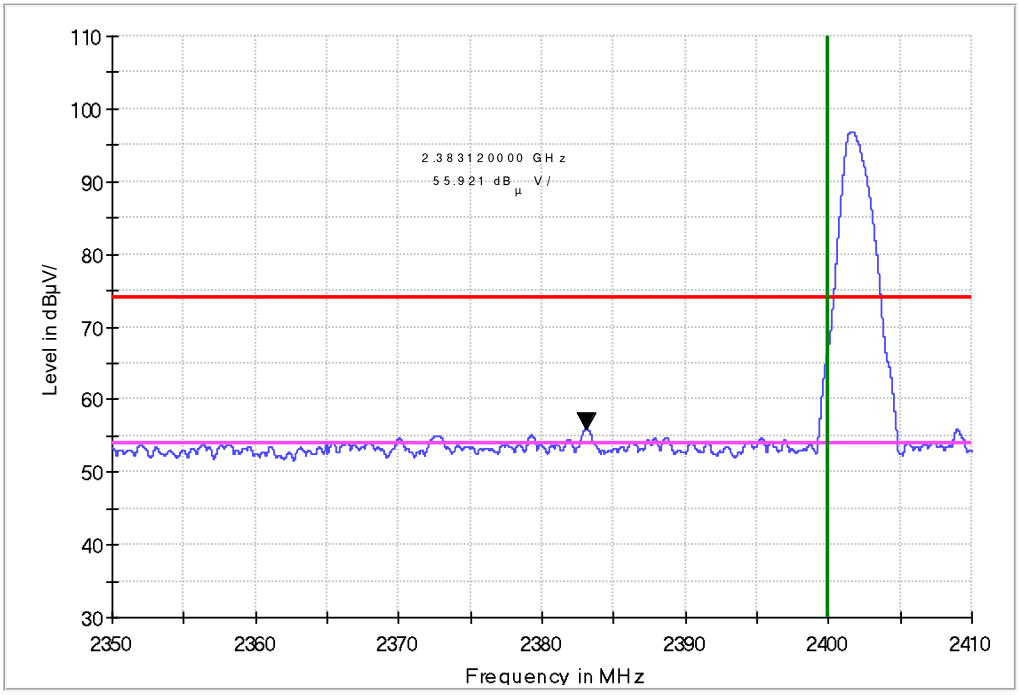


Vertical

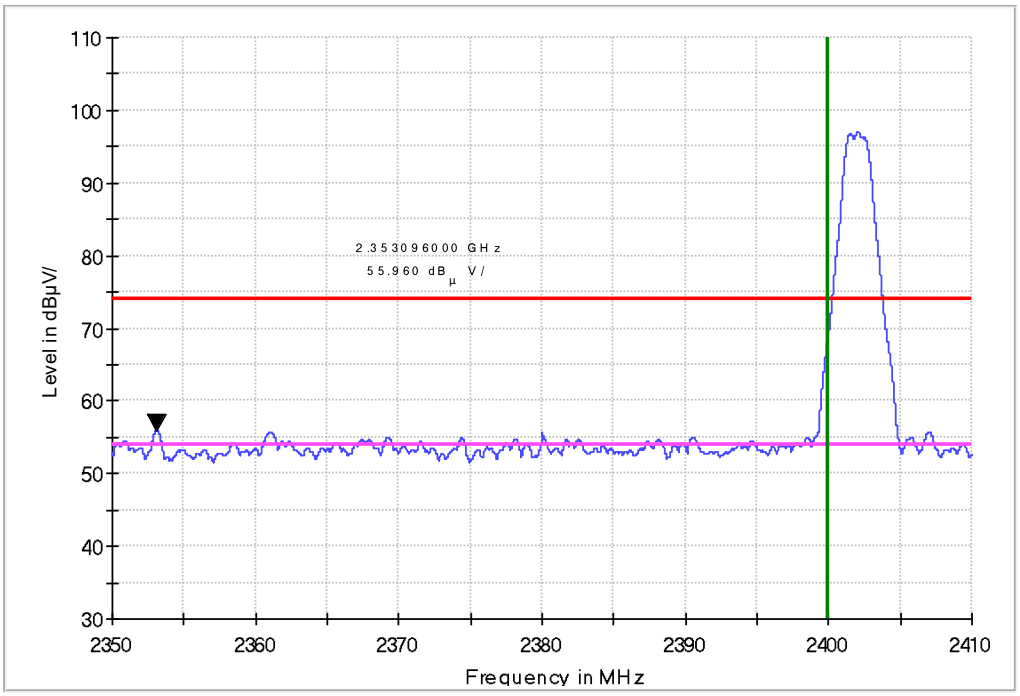


Band Edge
BLE_2Mbps BLE CH0

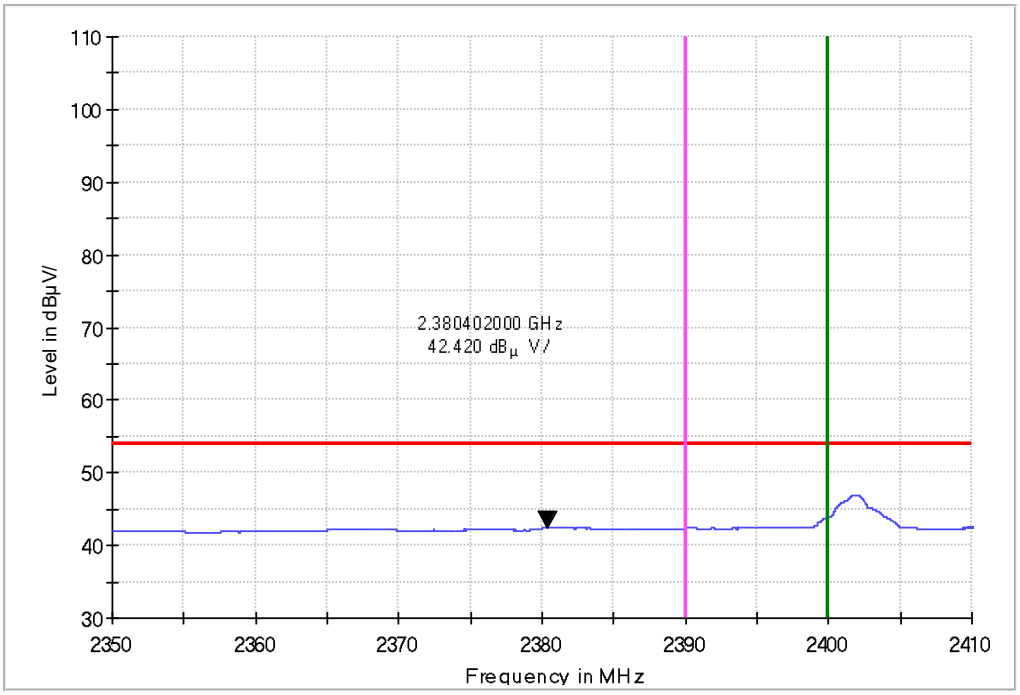
PK
Horizontal



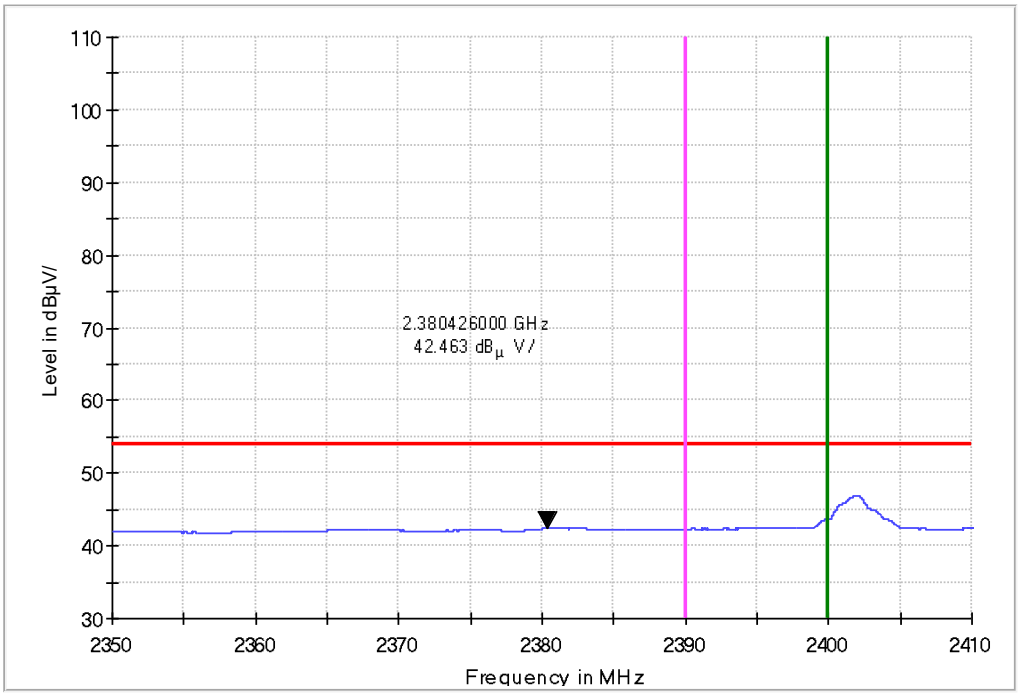
Vertical



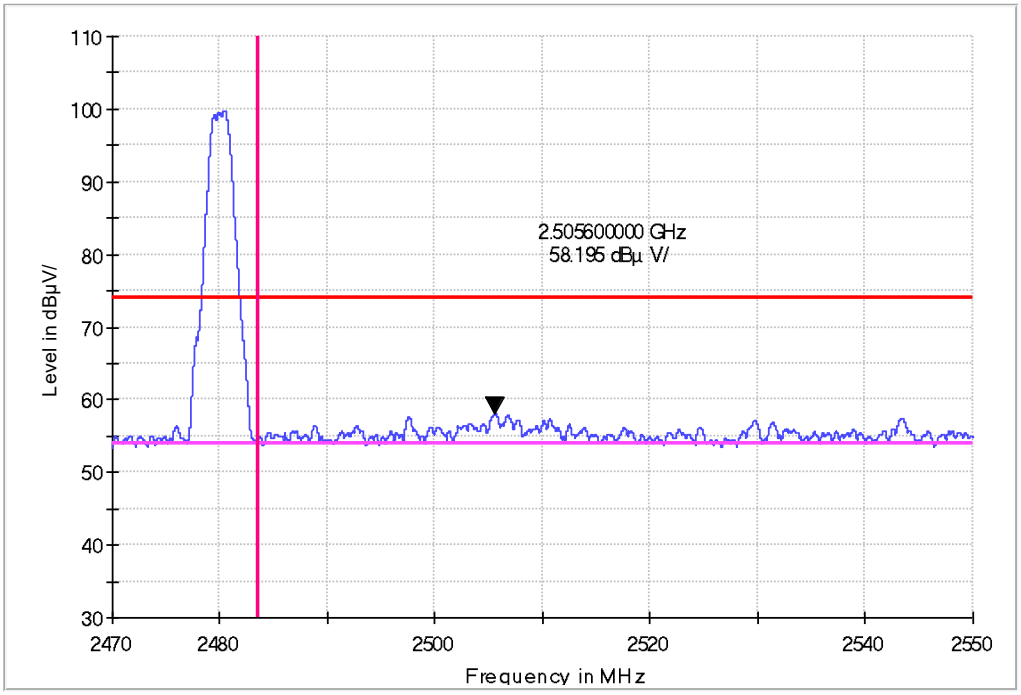
AV
Horizontal



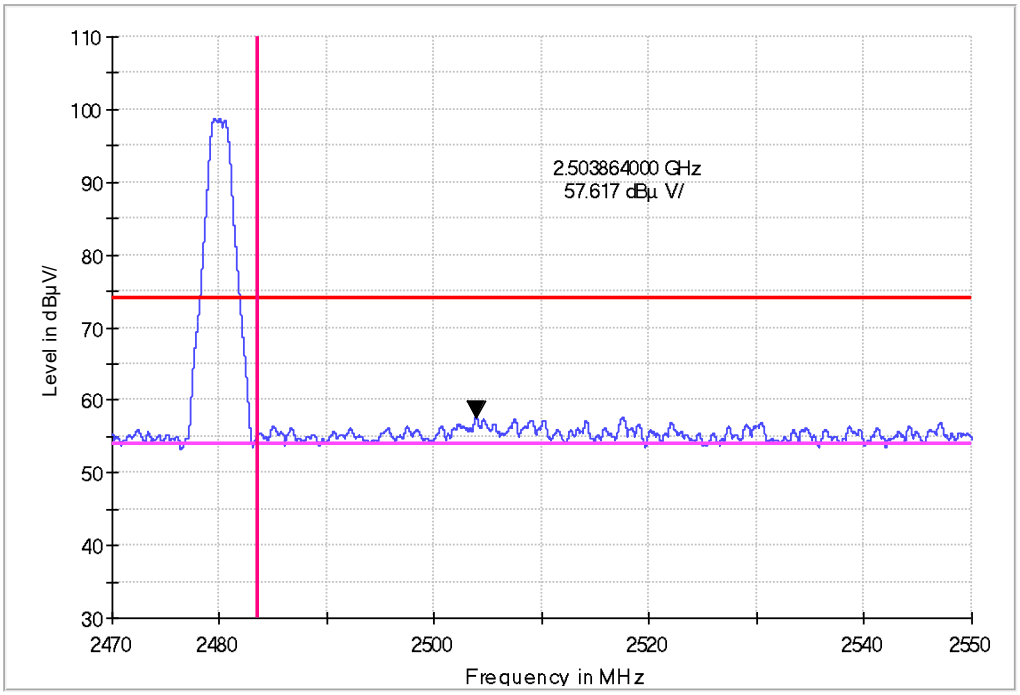
Vertical



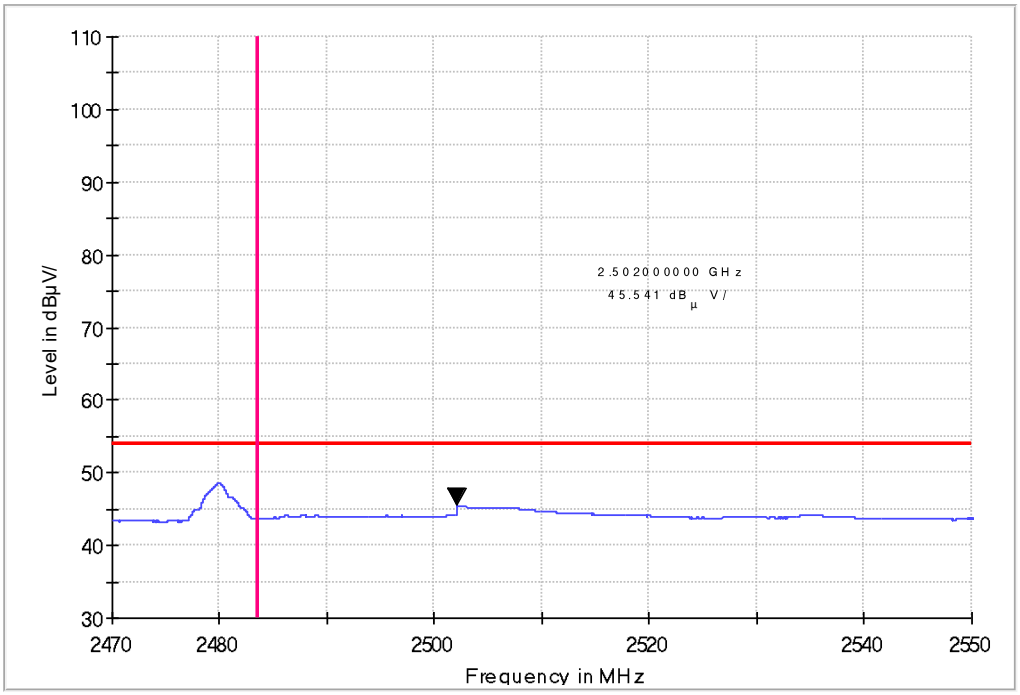
Band Edge
BLE_2Mbps BLE CH39
PK
Horizontal



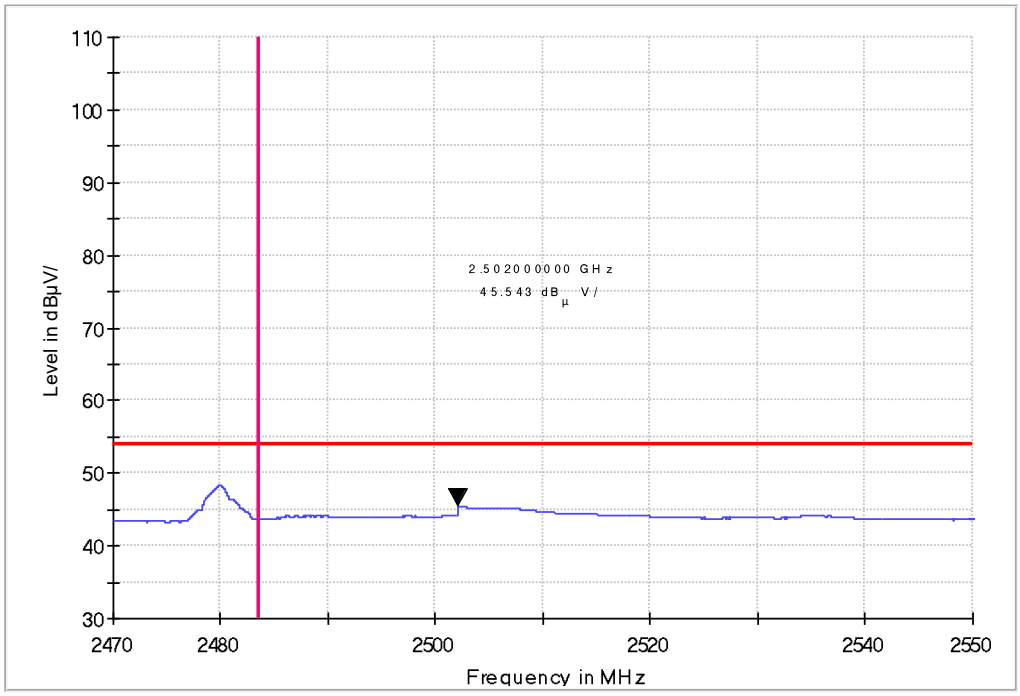
Vertical



AV
Horizontal



Vertical



10. CONDUCTED EMISSION TEST FOR AC POWER PORT MEASUREMENT

10.1.Test Standard and Limit

10.1.1.Test Standard

FCC Part 15.207

10.1.2.Test Limit

Table 11 Conducted Emission Test Limit

Frequency	Maximum RF Line Voltage (dBμV)	
	Quasi-peak Level	Average Level
150kHz~500kHz	66 ~ 56 *	56 ~ 46 *
500kHz~5MHz	56	46
5MHz~30MHz	60	50

* Decreasing linearly with logarithm of the frequency
* The lower limit shall apply at the transition frequency.

10.2.Test Procedure

The EUT is put on a table of non-conducting material that is 80cm high. The vertical conducting wall of shielding is located 40cm to the rear of the EUT. The power line of the EUT is connected to the AC mains through a Artificial Mains Network (A.M.N.). A EMI test receiver is used to test the emissions from both sides of AC line. According to the requirements of ANSI C63.10-2013.Conducted emissions from the EUT measured in the frequency range between 0.15 MHz and 30MHz using CISPR Quasi-Peak and average detector mode.
The bandwidth of EMI test receiver is set at 9 kHz.

10.3.Test Arrangement

The arrangement of the equipment is installed to meet the standards and operating in a manner, which tends to maximize its emission characteristics in a normal application. The detailed information refers to test picture.

10.4.Test Data

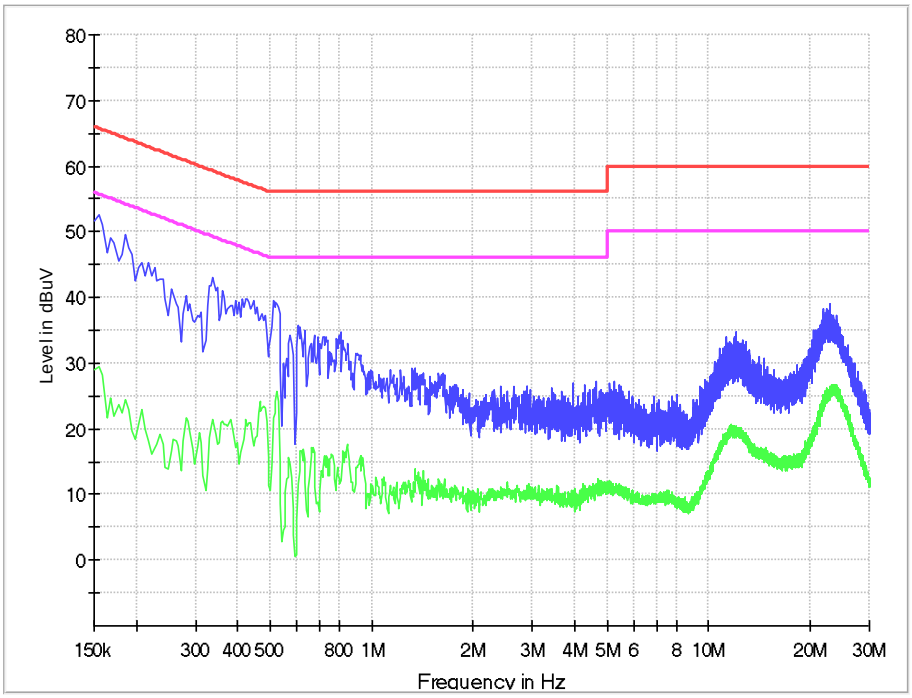
The emissions don’t show in below are too low against the limits. Refer to the test curves.

Table 12 Conducted Emission Test Data

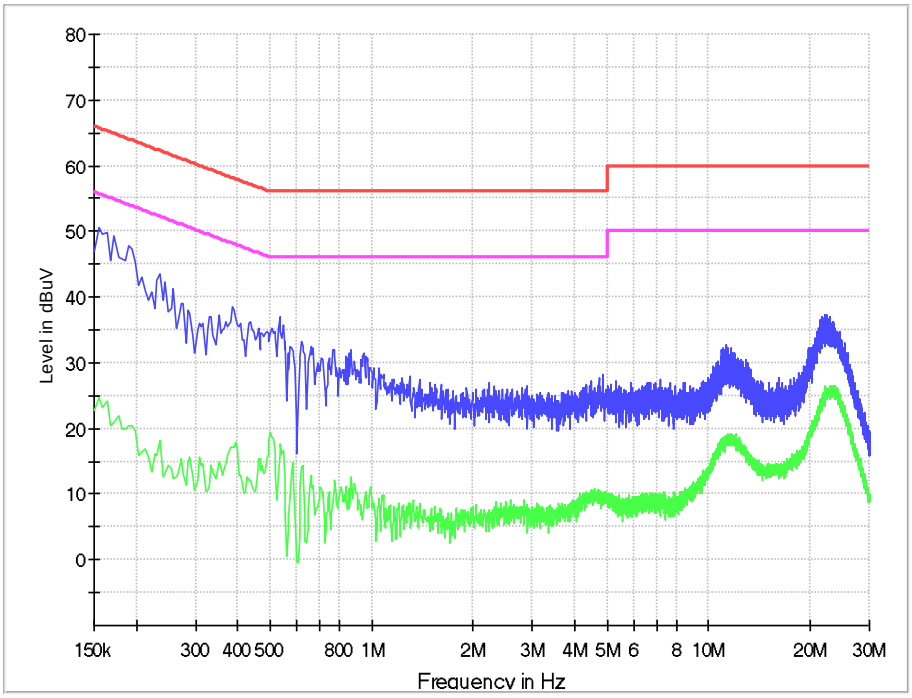
Test mode: Charging and Transmitting								
	Frequency (MHz)	Correction Factor (dB)	Quasi-Peak			Average		
			Reading (dBμV)	Emission Level (dBμV)	Limit (dBμV)	Reading (dBμV)	Emission Level (dBμV)	Limit (dBμV)
Line	0.154	9.7	38.4	48.1	65.8	18.1	27.8	55.8
	0.186	9.7	30.4	40.1	64.2	10.2	19.9	54.2
	0.339	9.7	25.5	35.2	59.2	8.5	18.2	49.2
	0.523	9.8	26.0	35.8	56	13.7	23.5	46
	0.807	9.8	17.3	27.1	56	6.0	15.8	46
	22.884	10.2	22.0	32.2	60	15.9	26.1	50
Neutral	0.154	9.7	34.8	44.5	65.8	14.5	24.2	55.8
	0.190	9.7	28.9	38.6	64.0	9.1	18.8	54.0
	0.379	9.7	21.4	31.1	58.3	6.9	16.6	48.3
	0.501	9.8	20.5	30.3	56	8.4	18.2	46
	11.319	9.9	15.2	25.1	60	8.3	18.2	50
	22.983	10.2	21.0	31.2	60	15.4	25.6	50

REMARKS: 1. Emission level (dBμV) =Read Value (dBμV) + Correction Factor (dB)
2. Correction Factor (dB) =LISN Factor (dB) + Cable Factor (dB) +Limiter Factor (dB)
3. The other emission levels were very low against the limit.

Line



Neutral



11. ANTENNA REQUIREMENTS

15.203 requirements:
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.
15.247(b) (4) requirements:
The conducted output power limit specified in paragraph (b) of this section is based on the use of antennas with directional gains that do not exceed 6 dBi. Except as shown in paragraph (c) of this section, if transmitting antennas of directional gain greater than 6 dBi are used, the conducted output power from the intentional radiator shall be reduced below the stated values in paragraphs (b)(1), (b)(2), and (b)(3) of this section, as appropriate, by the amount in dB that the directional gain of the antenna exceeds 6 dBi.

11.1. Antenna Connector

Antenna Connector is on the PCB within enclosure and not accessible to user.

11.2. Antenna Gain

The antenna gain of EUT is less than 6 dBi.

----------End of Report----------