

# FCC TEST REPORT

For

**Mobile Phone**

**Model Number: RMX3624**

**FCC ID: 2AUYFRMX3624**

**Report Number : WT228001725**

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## TEST REPORT DECLARATION

Applicant : Realme Chongqing Mobile Telecommunications Corp., Ltd.  
Address : No.178 Yulong Avenue, Yufengshan, Yubei District,  
Chongqing, China  
Manufacturer : Realme Chongqing Mobile Telecommunications Corp., Ltd.  
Address : No.178 Yulong Avenue, Yufengshan, Yubei District,  
Chongqing, China  
EUT Description : Mobile Phone  
Model No. : RMX3624  
Trade mark : realme  
Serial Number : /  
FCC ID : 2AUYFRMX3624

Test Standards:

### FCC Part 15 Subpart B (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:	<u>Jul.22, 2022</u>
Checked by:	 _____ (Shi Changda 施昌达)	Date:	<u>Jul.22, 2022</u>
Approved by:	 _____ (Lin Yixiang 林奕翔)	Date:	<u>Jul.22, 2022</u>

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## 1. TEST RESULTS SUMMARY

Table 1 Test Results Summary

Test Items	FCC Rules	Test Results
Conducted Emission	15.107	Pass
Radiation Emission	15.109	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 : Realme Chongqing Mobile Telecommunications Corp., Ltd.

Model Number : RMX3624

Operating voltage : DC3.65V (Low)/DC3.87V (Nominal)/DC4.45V (Max)

Test voltage : AC 120V/60Hz

Software Version : S Edition

Hardware Version : 11

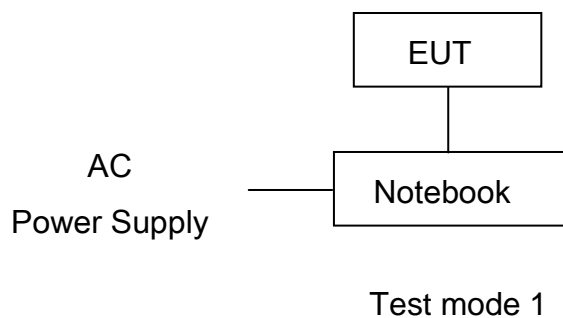
Frequency : GSM850:TX 824MHz~849MHz  
RX 869MHz~894MHz  
PCS1900: TX 1850MHz~1910MHz  
RX 1930MHz~1990MHz  
WCDMA 850: TX 824MHz~849MHz  
RX 869MHz~894MHz  
WCDMA 1700: TX 1710MHz~1755MHz  
RX 2110MHz~2155MHz  
WCDMA 1900:TX 1850MHz~1910MHz  
RX 1930MHz~1990MHz  
LTE Band 2: TX 1850MHz~1910MHz  
RX 1930MHz~1990MHz  
LTE Band 4: TX 1710MHz~1755MHz  
RX 2110MHz~2155MHz  
LTE Band 5:TX 824MHz~849MHz  
RX 869MHz~894MHz  
LTE Band 7:TX 2500MHz~2570MHz  
RX 2620MHz~2690MHz  
LTE Band 13:TX 777MHz~787MHz  
RX 746MHz~756MHz  
LTE Band 38:TX 2570MHz~2620MHz  
RX 2570MHz~2620MHz  
LTE Band 41:TX 2535MHz~2655MHz  
RX 2535MHz~2655MHz  
LTE Band 66: TX 1710MHz~1780MHz  
RX 2110MHz~2200MHz  
WiFi:2412MHz~2462MHz  
BT:2402MHz~2480MHz  
NFC:13.56MHz

Type(s) of : GSM850/PCS1900:GMSK 8PSK

Modulation	WCDMA:QPSK LTE:QPSK, 16QAM DSSS (DBPSK, DQPSK, CCK) for 802.11b OFDM (BPSK, QPSK, 16QAM, 64QAM) for 802.11g/n Bluetooth: GFSK, pi/4-DQPSK, 8DPSK NFC:ASK
Antenna Type	: GSM/WCDMA/LTE: Fixed Internal Antenna WLAN/Bluetooth: Fixed Internal Antenna NFC: Integral Antenna GSM850: -5.77 dBi PCS1900: -2.82 dBi WCDMA 850: -5.77 dBi WCDMA 1700: -3.12 dBi WCDMA 1900: -2.82 dBi LTE Band 2: -2.82 dBi LTE Band 4: -3.12 dBi LTE Band 5: -5.77 dBi LTE Band 7: -0.55 dBi LTE Band 13: -6.12 dBi LTE Band 38: -0.44 dBi LTE Band 41: -0.44 dBi LTE Band 66: -2.99 dBi WiFi: Fixed Internal Antenna -0.37dBi BT: Fixed Internal Antenna -0.37dBi

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 BLP877 (2#) shown in this report.

### 3.2. Block Diagram of EUT Configuration



### 3.3. Operating Condition of EUT

Test mode 1: Connected to a pc and data transmission.

Test mode 2: Adapter+ GSM 850 Idle

Test mode 3: Adapter+ WCDMA 850 Idle

Test mode 4: Adapter+ LTE band 5 Idle

Test mode 5: Adapter+ LTE band 13 Idle

EUT has more than one typical operation, only the worst test mode will be recorded in this report.

The Radiated emission measurements were carried out in semi-anechoic chamber with 3-meter test range, and EUT is rotated on three test planes to find out the worst emission (X plane).



### 3.4. Support Equipment List

Table 2 Support Equipment List

Name	Model No.	S/N	Manufacturer
Adapter 1# for EUT	OP52YAUH	---	Jiangsu Chenyang Electron Co., Ltd.
Adapter 2# for EUT	OP52JAUH	---	Ten Pao Industrial Co., Ltd.
Rechargeable Li-ion Polymer Battery 1# for EUT	BLP877	---	Huizhou Desay Battery Co., Ltd.
Rechargeable Li-ion Polymer Battery 2# for EUT	BLP877	---	Dongguan NVT Technology Co., Ltd.
Rechargeable Li-ion Polymer Battery 3# for EUT	BLP877	---	TWS Technology (Guangzhou) Limited
USB for EUT	DL122	---	---
Notebook	HP ProBook 440 G6	---	HP

### 3.5. Test Conditions

Date of test : Jul.15, 2022- Jul.22, 2022

Date of EUT Receive : Jul.08, 2022

Temperature: 23°C-24°C

Relative Humidity: 43%-50%

### 3.6. Modifications

No modification was made.

#### 4. TEST EQUIPMENT USED

Table 3 Test Equipment List

No.	Equipment	Manufacturer	Model No.	LAST CALIB	Period
<b>Conducted Emission</b>					
SB3319	Test Receiver	R&S	ESCS30	Nov.04,2021	1 Year
SB8501/06	AMN	R&S	ESH2-Z5	Jan.20,2022	1 Year
SB9548	Shielded Room	Albatross	SR	Sep.24,2021	1 Year
<b>Radiated Emission</b>					
SB17366	Test Receiver	R&S	ESR26	Jun.24,2022	1 Year
SB3955	Broadband Antenna	Schwarzbeck	VULB9163	Dec.30,2021	1 Year
SB13958	Horn Antenna	R&S	HF907	Mar.22,2022	1 Year
SB9555/01	Semi Anechoic Chamber	Albatross	9x6x6(m)	Aug.25,2021	1 Year

## 5. CONDUCTED EMISSION TEST

### 5.1. Test Standard and Limit

#### 5.1.1. Test Standard

FCC Part 15: Section 15.107

#### 5.1.2. Test Limit

Table 4 Conducted Emission Test Limit (Class B)

Frequency	Power Port limits (dB $\mu$ V)	
	Quasi-peak	Average
0.15MHz ~ 0.5MHz	66~56*	56~46*
0.5MHz ~ 5 MHz	56	46
5 MHz ~ 30MHz	60	50

\* Decreasing linearly with logarithm of the frequency

### 5.2. 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. The bandwidth of EMI test receiver is set at 9kHz.

### 5.3. 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.

### 5.4. Test Data

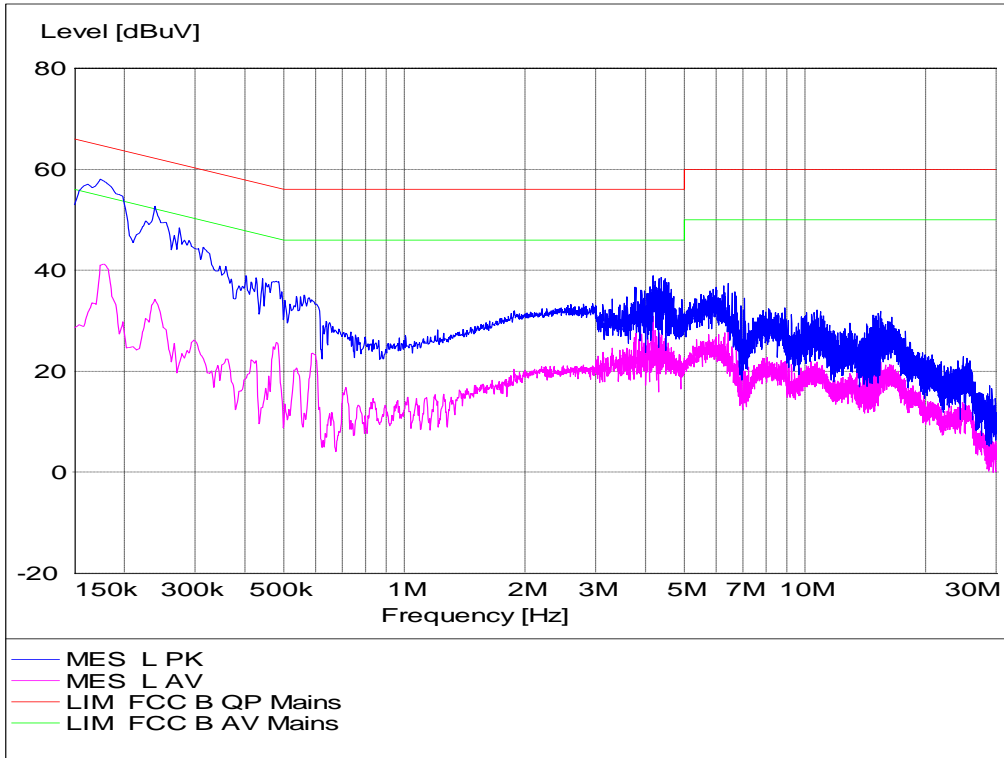
The emissions don't show in below are too low against the limits. Refer to the test curves.

Table 5 Conducted Emission Test Data at mains Port

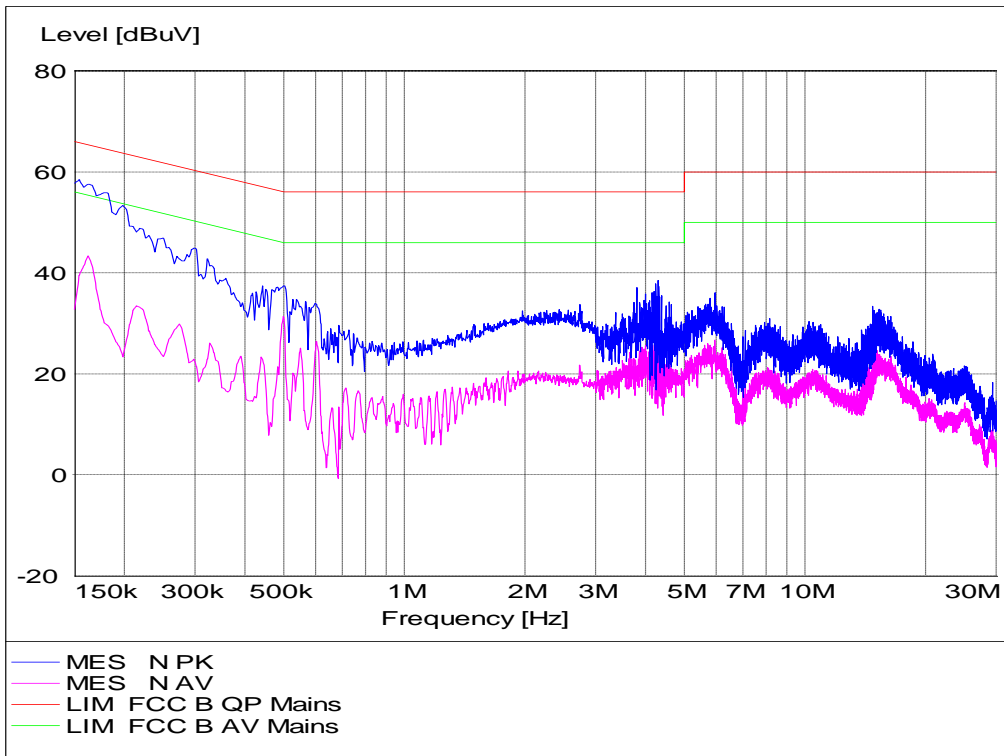
Test mode: 1								
	Frequency (MHz)	Correction Factor (dB)	Quasi-Peak			Average		
			Reading (dB $\mu$ V)	Emission Level (dB $\mu$ V)	Limits (dB $\mu$ V)	Reading (dB $\mu$ V)	Emission Level (dB $\mu$ V)	Limits (dB $\mu$ V)
Line	0.174	9.7	44.4	54.1	64.8	29.5	39.2	54.8
	0.238	9.7	38.6	48.3	62.2	24.5	34.2	52.2
	0.302	9.7	30.5	40.2	60.2	15.0	24.7	50.2
	0.482	9.7	24.1	33.8	56.3	14.8	24.5	46.3
	4.172	9.9	24.8	34.7	56	19.9	29.8	46
	6.432	10.0	24.4	34.4	60	17.9	27.9	50
Neutral	0.162	9.7	42.9	52.6	65.4	32.7	42.4	55.4
	0.218	9.7	35.1	44.8	62.9	22.3	32.0	52.9
	0.498	9.7	23.8	33.5	56.0	20.7	30.4	46.0
	0.602	9.8	20.0	29.8	56	15.7	25.5	46
	4.304	9.9	24.6	34.5	56	12.7	22.6	46
	5.944	10.0	21.9	31.9	60	15.7	25.7	50

- REMARKS: 1. Emission level (dBuV) =Read Value (dBuV) + Correction Factor (dB)  
 2. Correction Factor (dB) =LISN Factor (dB) + Cable Factor (dB) +Limiter Factor (dB)  
 3. The other emission levels were more than 20dB below the limits.

### Line



### Neutral



## 6. RADIATION EMISSION TEST

### 6.1. Test Standard and Limit

#### 6.1.1. Test Standard

FCC Part 15: Section 15.109

#### 6.1.2. Test Limit

Table 6 Radiation Emission Test Limit for FCC (Class B)

Frequency	Test distance	Limit dB( $\mu$ V/m)		
		Quasi-peak	Average	Peak
30MHz~88MHz	<b>3m</b>	40	/	/
88MHz~216MHz	<b>3m</b>	43.5		
216MHz~960MHz	<b>3m</b>	46		
960MHz~1000MHz	<b>3m</b>	54		
>1000MHz	<b>3m</b>		54	74
<b>Conditional testing procedure for above 1 GHz :</b>				
<b>Highest frequency generated or used in the device or on which the device operates or tunes (MHz)</b>		<b>Upper frequency of measurement range (MHz)</b>		
Below 1.705		30		
1.705~108		1000		
108~500		2000		
500~1000		5000		
Above 1000		5th harmonic of the highest frequency or 40 GHz, whichever is lower.		

\* The lower limit shall apply at the transition frequency.

\* The test distance is 3m.

### 6.2. Test Procedure

The EUT is placed on a turntable, which is 0.8 meter above ground. The turntable can rotate 360 degrees to determine the position of the maximum emission level. EUT is set **3 meters** away from the receiving antenna, which is mounted on an antenna tower. The antenna can move up and down between 1 to 4 meters to find out the maximum emission level. Broadband antenna is used as a receiving antenna. Both horizontal and vertical polarization of the antenna is set on test.

RBW = 100 kHz (less than or equal to 1 GHz); 1 MHz (above 1 GHz)

VBW  $\geq$  3 x RBW

Detector = Peak & Quasi-Peak (frequency range 30 MHz to 1 GHz);

Peak & Average (frequency range above 1 GHz);

Changing VBW to 10 Hz for average measurement

The use of a higher-than-specified video bandwidth produces a conservative measurement result.

### 6.3. 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.

### 6.4. Test Data

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

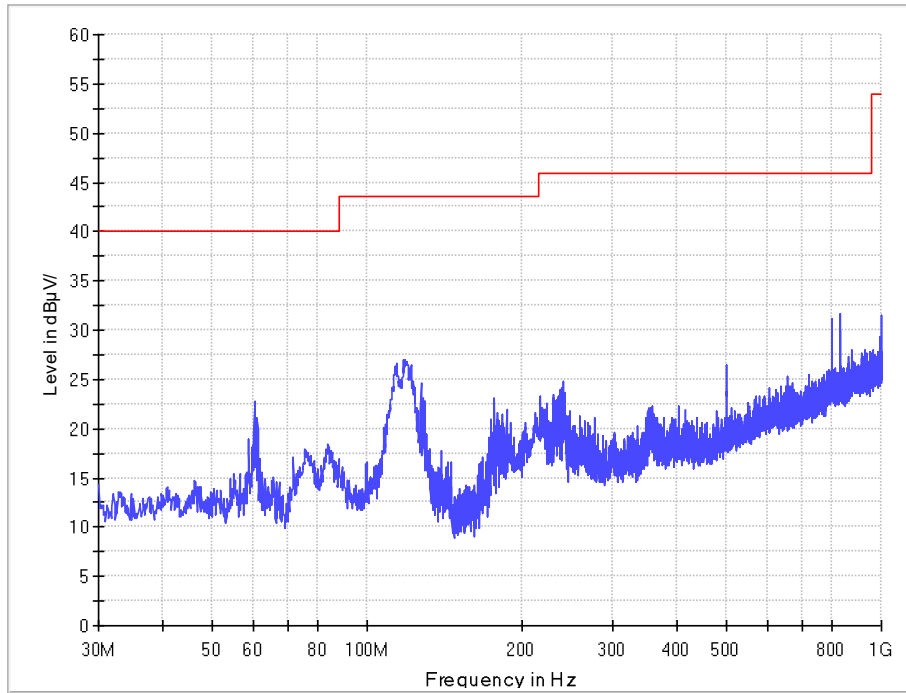
Table 7 Radiated Emission Test Data

Test mode: 1								
Frequency (MHz)	Cable Loss +preamp (dB)	Antenna Factor (dB)	Reading (dBμV/m)	Level (dBμV/m)	Polarity (Horizontal/Vertical)	Limits (dBμV/m)	Margin (dB)	Note
37.954	0.7	12.3	5.5	18.5	Vertical	40	21.5	QP
58.615	0.8	13.0	6.3	20.1	Vertical	40	19.9	QP
122.829	1.3	10.5	11.4	23.2	Vertical	43.5	20.3	QP
175.791	1.5	9.0	14.0	24.5	Vertical	43.5	19.0	QP
60.361	1.0	12.7	5.1	18.8	Horizontal	40	21.2	QP
113.808	1.2	12.3	12.0	25.5	Horizontal	43.5	18.0	QP
118.173	1.3	12.3	12.3	25.9	Horizontal	43.5	17.6	QP
176.955	1.5	9.0	9.1	19.6	Horizontal	43.5	23.9	QP
1438.600	-40.8	25.1	56.1	40.4	Vertical	74	33.6	PK
1986.000	-40.4	26.9	58.7	45.2	Vertical	74	28.8	PK
2388.900	-40.2	28.3	58.0	46.1	Vertical	74	27.9	PK
2654.100	-39.9	29.6	61.6	51.3	Vertical	74	22.7	PK
1198.900	-41.0	24.4	53.3	36.7	Horizontal	74	37.3	PK
1438.600	-40.8	25.1	54.2	38.5	Horizontal	74	35.5	PK
1586.500	-40.6	25.1	49.6	34.1	Horizontal	74	39.9	PK
2397.400	-40.2	28.3	43.6	31.7	Horizontal	74	42.3	PK
1438.600	-40.8	25.1	38.9	23.2	Vertical	54	30.8	AV
1986.000	-40.4	26.9	38.9	25.4	Vertical	54	28.6	AV
2388.900	-40.2	28.3	35.0	23.1	Vertical	54	30.9	AV
2654.100	-39.9	29.6	37.2	26.9	Vertical	54	27.1	AV
1198.900	-41.0	24.4	38.4	21.8	Horizontal	54	32.2	AV
1438.600	-40.8	25.1	37.8	22.1	Horizontal	54	31.9	AV
1586.500	-40.6	25.1	37.3	21.8	Horizontal	54	32.2	AV
2397.400	-40.2	28.3	30.0	18.1	Horizontal	54	35.9	AV

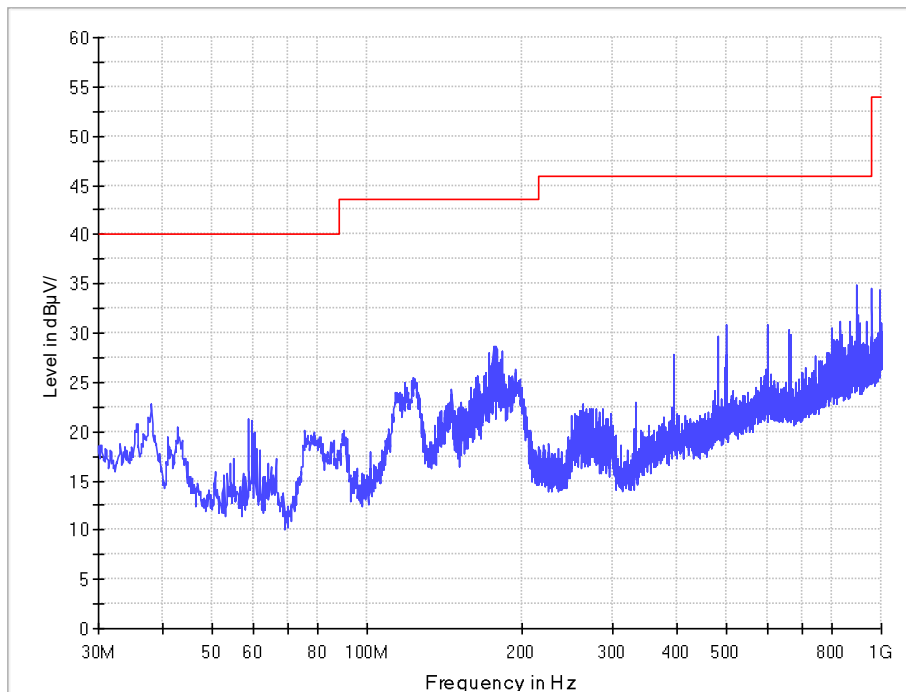
Emission level (dBuV)=Read Value(dBuV/m) + Antenna Factor(dB)+ Cable Loss +preamp(dB)

30MHz-1GHz

Horizontal



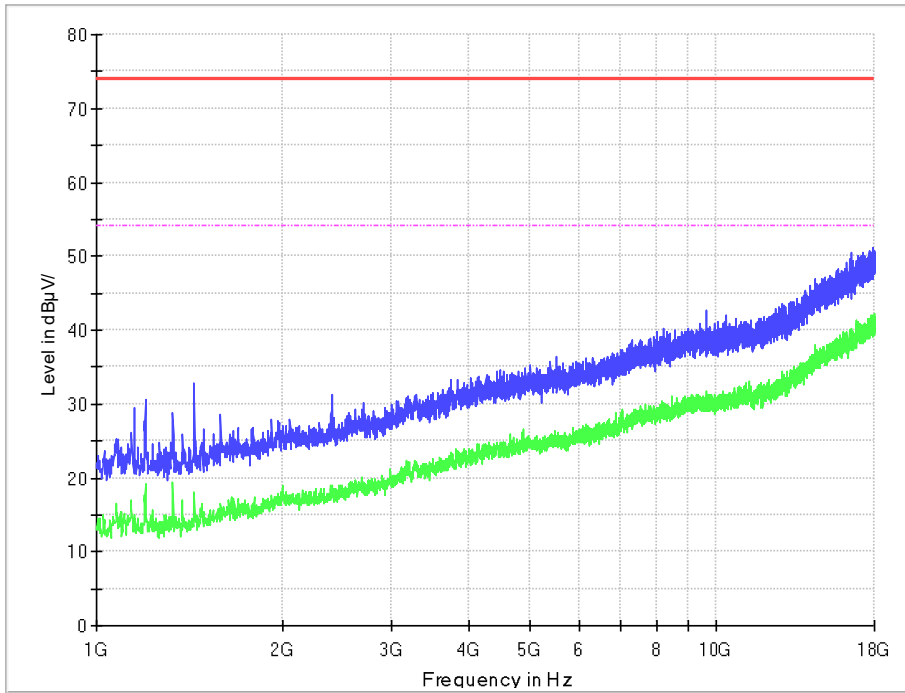
Vertical



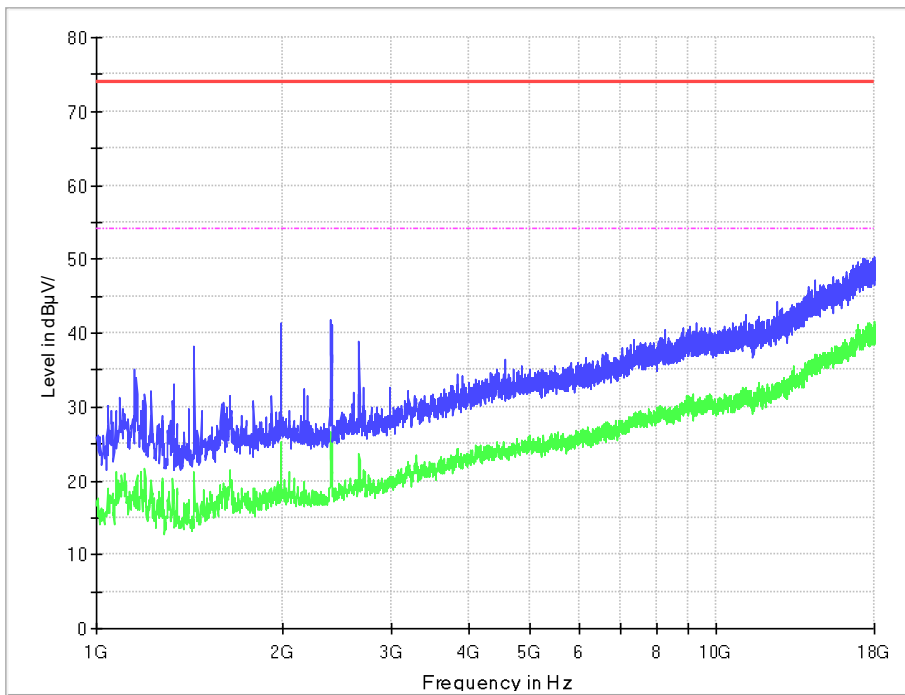


1GHz-18GHz

Horizontal



Vertical



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