

FCC EMC Test Report

Report No. : BTL-FCCE-1-2208G029
Equipment : Mobile Phone
Model Name : RMX3686
Brand Name : realme
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.
Factory : Realme Chongqing Mobile Telecommunications Corp., Ltd.
Address : No.178 Yulong Avenue, Yufengshan, Yubei District, Chongqing, China.

FCC Rule Part(s) : FCC CFR Title 47, Part 15, Subpart B, Class B
Measurement : ANSI C63.4-2014
Procedure(s) : ANSI C63.4a-2017

Date of Receipt : 2022/8/18
Date of Test : 2022/10/15 ~ 2022/10/18
Issued Date : 2022/10/19

The above equipment has been tested and found in compliance with the requirement of the above standards by BTL Inc.

Prepared by :

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Declaration

BTL represents to the client that testing is done in accordance with standard procedures as applicable and that test instruments used has been calibrated with standards traceable to international standard(s) and/or national standard(s).

BTL's reports apply only to the specific samples tested under conditions. It is manufacture's responsibility to ensure that additional production units of this model are manufactured with the identical electrical and mechanical components. **BTL** shall have no liability for any declarations, inferences or generalizations drawn by the client or others from **BTL** issued reports.

This report is the confidential property of the client. As a mutual protection to the clients, the public and ourselves, the test report shall not be reproduced, except in full, without our written approval.

BTL's laboratory quality assurance procedures are in compliance with the **ISO/IEC 17025** requirements, and accredited by the conformity assessment authorities listed in this test report.

BTL is not responsible for the sampling stage, so the results only apply to the sample as received.

The information, data and test plan are provided by manufacturer which may affect the validity of results, so it is manufacturer's responsibility to ensure that the apparatus meets the essential requirements of applied standards and in all the possible configurations as representative of its intended use.

Limitation

For the use of the authority's logo is limited unless the Test Standard(s)/Scope(s)/Item(s) mentioned in this test report is (are) included in the conformity assessment authorities acceptance respective.

Please note that the measurement uncertainty is provided for informational purpose only and are not use in determining the Pass/Fail results.

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REVISION HISTORY

Report No.	Version	Description	Issued Date	Note
BTL-FCCE-1-2208G029	R00	Original Report.	2022/10/19	Valid

1 SUMMARY OF TEST RESULTS

Emission			
Standard	Test Item	Limit	Judgment
FCC CFR Title 47, Part 15, Subpart B	AC power line conducted emissions	Class B	PASS
	Radiated emissions below 1 GHz	Class B	PASS
	Radiated emissions above 1 GHz	Class B	PASS

NOTE:

- (1) "N/A" denotes test is not applicable in this Test Report.
- (2) The report format version is TP.1.1.2.

1.1 TEST FACILITY

The test facilities used to collect the test data in this report:

Test Firm Location: No.18, Ln. 171, Sec. 2, Jiuzong Rd., Neihu Dist., Taipei City 114, Taiwan.

TAF Accreditation Number is 0659; FCC Designation Number is TW1115.

The satellite facilities under the test firm used to collect the test data in this report are:

No. 68-1, Ln. 169, Sec. 2, Datong Rd., Xizhi Dist., New Taipei City 221, Taiwan

☒ C05 ☒ CB08 ☒ CB11

1.2 MEASUREMENT UNCERTAINTY

The reported uncertainty of measurement $y \pm U$, where expanded uncertainty U is based on a standard uncertainty multiplied by a coverage factor of $k = 2$, providing a level of confidence of approximately **95 %**.

The measurement instrumentation uncertainty considerations contained in CISPR 16-4-2. The BTL measurement uncertainty is less than the CISPR 16-4-2 U_{CISPR} requirement.

A. AC power line conducted emissions test:

Test Site	Method	Measurement Frequency Range	U (dB)
C05	CISPR	150 kHz ~ 30MHz	3.44

B. Radiated emissions up to 1 GHz/Enclosure (Below 1 GHz)/ Electromagnetic radiation disturbance test:

Test Site	Method	Measurement Frequency Range	Ant. H / V	U (dB)
CB11 (3m)	CISPR	30 MHz ~ 200 MHz	V	4.26
		30 MHz ~ 200 MHz	H	3.76
		200 MHz ~ 1,000 MHz	V	4.46
		200 MHz ~ 1,000 MHz	H	3.84

C. Radiated emissions above 1 GHz/Enclosure (Above 1 GHz) test:

Test Site	Method	Measurement Frequency Range	Ant. H / V	U,(dB)
CB11 (3m)	CISPR	1 GHz ~ 6 GHz	V	4.44
		1 GHz ~ 6 GHz	H	4.40
		6 GHz ~ 18 GHz	V	4.02
		6 GHz ~ 18 GHz	H	4.00

Test Site	Method	Measurement Frequency Range	U,(dB)
CB11 (3m)	CISPR	18 GHz ~ 26.5 GHz	4.76
		26.5 GHz ~ 40 GHz	5.24

NOTE:

Unless specifically mentioned, the uncertainty of measurement has not been taken into account to declare the compliance or non-compliance to the specification.

1.3 TEST ENVIRONMENT CONDITIONS

Test Item	Environment Condition	Tested by
Conducted emissions	22°C, 52%	Brooke Lin
Radiated emissions below 1 GHz	20°C, 65%	Brooke Lin
Radiated emissions above 1 GHz	20°C, 62~65%	Brooke Lin

2 GENERAL INFORMATION

2.1 EUT INFORMATION

Equipment	Mobile Phone
Model Name	RMX3686
Brand Name	realme
Model Difference	N/A
Power Source	#1 DC voltage supplied from AC/DC Adapter. #2 Supplied from Li-ion battery. #3 Supplied from USB port.
Power Rating	#1 For VCB7CAUH: 1. I/P: 100-130V~50-60Hz, 1.8A O/P: 5V---2A or 5-11V---5A(MAX) 2. I/P: 200-240V~50-60Hz, 1.8A O/P: 5V---2A or 5-11V---6.1A(MAX) For VCB8JAUH: 1. I/P: 100-130V~50-60Hz, 2.0A O/P: 5V---2A or 5.0-11.0V---6.1A MAX (67W MAX) 2. I/P: 200-240V~50-60Hz, 2.0A O/P: 5V---2A or 5.0-11.0V---7.3A MAX (80W MAX) #2 DC 3.87V, 4890mAh/18.92Wh (Min) #3 DC 5V
Products Covered	2 * Adapter: (1) VCB7CAUH (2) VCB8JAUH 1 * Li-ion battery: realme / BLP951 1 * TYPE-C Cable
Test Model	RMX3686
Sample Status	Engineering Sample
Highest Internal Frequency	5850 MHz
EUT Modification(s)	N/A

NOTE:

- (1) The above EUT information is declared by manufacturer and for more detailed features description, please refers to the manufacturer's specifications or user's manual.

2.2 TEST MODES

The test system was pre-tested based on the consideration of all possible combinations of EUT operation modes according to test plan.

Pretest Mode	Description
Mode 1	FULL SYSTEM SIM1 (LTE BAND 2) + WIFI 5G LINK + GPS LINK + BT LINK + NFC + PLAY H-Pattern VIDEO + CHANGING (AD: VCB7CAUH)
Mode 2	FULL SYSTEM SIM2 (LTE BAND 4) + WIFI 2.4G LINK + GPS LINK + BT LINK + NFC + PLAY H-Pattern VIDEO + CHANGING (AD: VCB8JAUH)
Mode 3	FULL SYSTEM SIM2 (5G NR n5) + WIFI 2.4G LINK + GPS LINK + BT LINK + NFC + FRONT CAMERA + CHANGING (AD: VCB8JAUH)
Mode 4	FULL SYSTEM SIM2 (GSM 850) + WIFI 2.4G LINK + GPS LINK + BT LINK + NFC + BACK CAMERA + CHANGING (AD: VCB8JAUH)
Mode 5	FULL SYSTEM SIM2 (WCDMA BAND 2) + WIFI 2.4G LINK + GPS LINK + BT LINK + NFC + PLAY H-Pattern VIDEO + NO CHANGING
Mode 6	FULL SYSTEM SIM2 (LTE BAND 4) + WIFI 2.4G LINK + GPS LINK + BT LINK + NFC + PLAY 1KHZ + WITH TYPE C HEADSET
Mode 7	FULL SYSTEM SIM2 (LTE BAND 4) + WIFI 2.4G LINK + GPS LINK + BT LINK + NFC + PLAY H-Pattern VIDEO + Transfer data between the EUT and the NB
Mode 8	IDLE

Following mode(s) was (were) found to be the worst case(s) and selected for the final test.

AC power line conducted emissions test	
Final Test Mode	Description
Mode 2	FULL SYSTEM SIM2 + WIFI 2.4G LINK + GPS LINK + BT LINK + NFC + PLAY H-Pattern VIDEO + CHANGING (AD: VCB8JAUH)

Radiated emissions below 1 GHz test	
Final Test Mode	Description
Mode 2	FULL SYSTEM SIM2 + WIFI 2.4G LINK + GPS LINK + BT LINK + NFC + PLAY H-Pattern VIDEO + CHANGING (AD: VCB8JAUH)

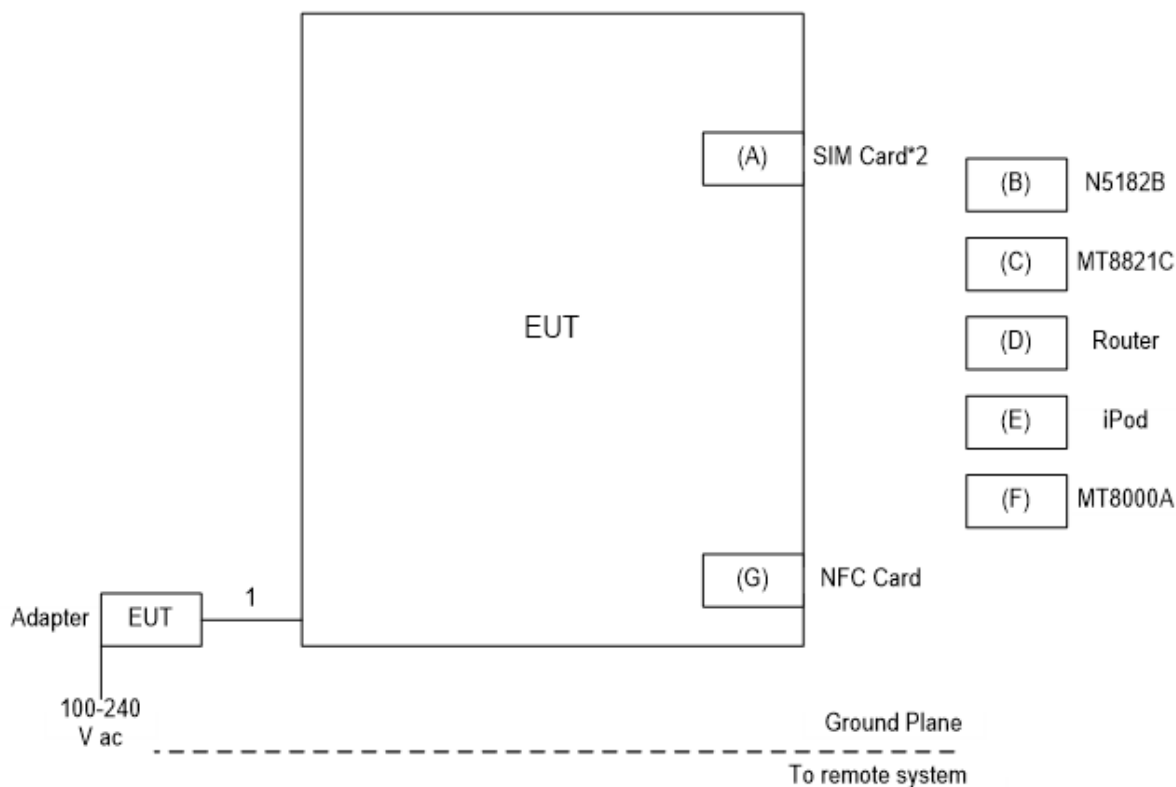
Radiated emissions above 1 GHz test	
Final Test Mode	Description
Mode 2	FULL SYSTEM SIM2 + WIFI 2.4G LINK + GPS LINK + BT LINK + NFC + PLAY H-Pattern VIDEO + CHANGING (AD: VCB8JAUH)

2.3 EUT OPERATING CONDITION

The EUT exercise program (PLAY H-Pattern VIDEO) used during radiated and/or conducted emissions measurement was designed to exercise the various system components in a manner similar to a typical use.

2.4 TESTED CONFIGURATION DIAGRAM

Equipment letters and Cable numbers refer to item numbers described in the tables of clause 2.5.



2.5 SUPPORT UNITS

Item	Equipment	Brand	Model No.	Series No.	Remarks
A	SIM CARD	Anritsu	SIM-1	N/A	Furnished by test lab.
B	MXG Vector Signal	Keysight	N5182B	MY57300051	Furnished by test lab.
C	Radio Communication Analyzer	Anritsu	MT8821C	6262044728	Furnished by test lab.
D	Router	ASUS	RT-AC66U	E11TGG000235	Furnished by test lab.
E	iPod nano	Apple	A1199	YM7214GEVQ5	Furnished by test lab.
F	Radio Communication Analyzer	Anritsu	MT8000A	6262036844	Furnished by test lab.
G	NFC CARD	Easy Card	NFC-1	N/A	Furnished by test lab.

Item	Cable Type	Shielded	Ferrite Core	Length	Remarks
1	TYPE C CABLE	YES	NO	1m	Supplied by test requester.

3 EMC EMISSION TEST

3.1 CONDUCTED EMISSIONS TEST

3.1.1 LIMITS

Frequency (MHz)	Class A (dBμV)		Class B (dBμV)	
	Quasi-peak	Average	Quasi-peak	Average
0.15 - 0.5	79	66	66 - 56 *	56 - 46 *
0.50 - 5.0	73	60	56	46
5.0 - 30.0	73	60	60	50

NOTE:

- (1) The tighter limit applies at the band edges.
- (2) The limit of " * " marked band means the limitation decreases linearly with the logarithm of the frequency in the range.
- (3) The test result calculated as following:

Measurement Value = Reading Level + Correct Factor

Correct Factor = Insertion Loss + Cable Loss + Attenuator Factor (if use)

Margin Level = Measurement Value – Limit Value

Calculation example:

Reading Level		Correct Factor		Measurement Value
38.22	+	3.45	=	41.67

Measurement Value		Limit Value		Margin Level
41.67	-	60	=	-18.33

3.1.2 MEASUREMENT INSTRUMENTS LIST

Item	Kind of Equipment	Manufacturer	Type No.	Serial No.	Calibrated Date	Calibrated Until
1	TWO-LINE V-NETWORK	R&S	ENV216	101339	2022/3/29	2023/3/28
2	Test Cable	EMCI	EMCCFD300-BM-BMR-5000	220331	2022/3/31	2023/3/30
3	EMI Test Receiver	R&S	ESR7	101433	2021/11/24	2022/11/23
4	Measurement Software	Farad	EZ EMC (Ver. NB-03A1-01)	N/A	N/A	N/A

REMARK:

- (1) "N/A" denotes no model name, no serial no. or no calibration specified.
- (2) All calibration period of equipment list is one year.

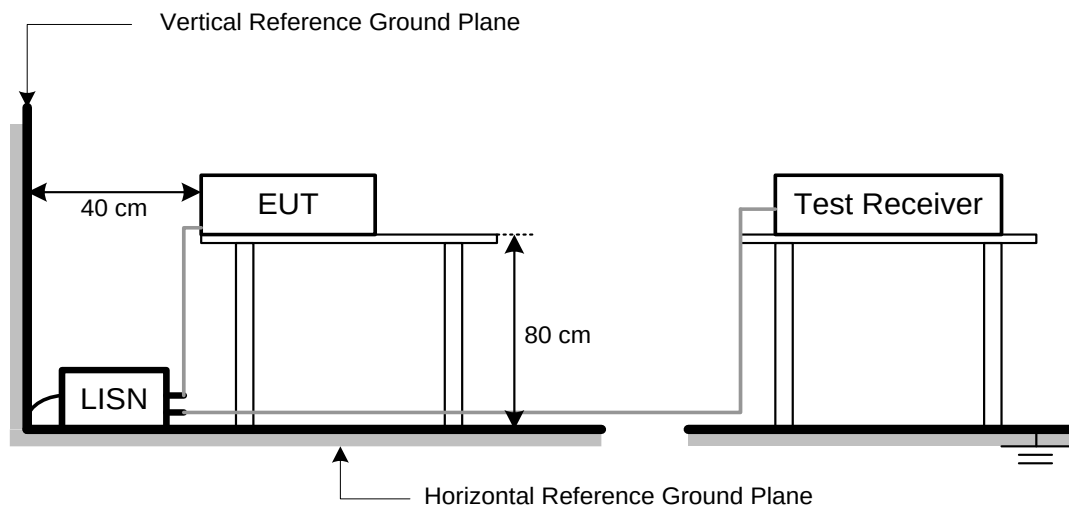
3.1.3 TEST PROCEDURE

- The EUT was placed 0.8 m above the horizontal ground plane with the EUT being connected to the power mains through a line impedance stabilization network (LISN).
All other support equipment were powered from an additional LISN(s).
The LISN provides 50 Ohm/50uH of impedance for the measuring instrument.
- Interconnecting cables that hang closer than 40 cm to the ground plane shall be folded back and forth in the center forming a bundle to keep the cable above 40 cm.
- Excess I/O cables that are not connected to a peripheral shall be bundled in the center.
The end of the cable will be terminated, using the correct terminating impedance.
The overall length shall not exceed 1 m.
- The LISN is spaced at least 80 cm from the nearest part of the EUT chassis.
- The receiver was set to quasi-peak and average detect function and specified bandwidth with maximum hold mode.
- For the actual test configuration, please refer to the related Item - TEST PHOTOS.

3.1.4 DEVIATION FROM TEST STANDARD

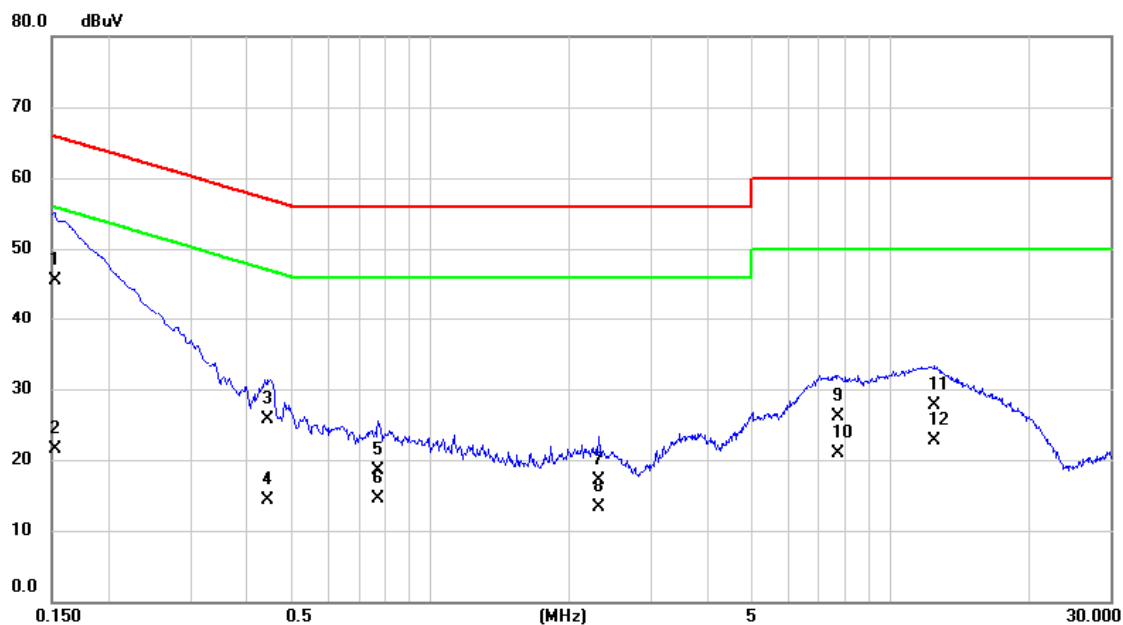
No deviation.

3.1.5 TEST SETUP



3.1.6 TEST RESULT

Test Mode	Mode 2	Tested Date	2022/10/15
Test Voltage	AC 120V/60Hz	Phase	Line



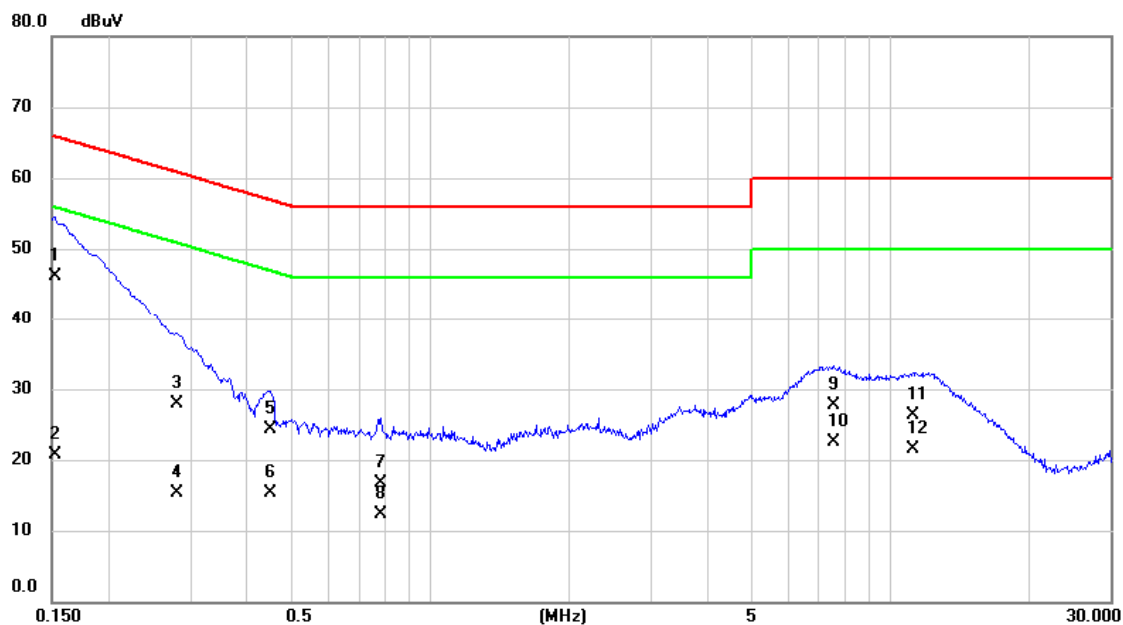
No.	Mk.	Freq.	Reading Level	Correct Factor	Measurement	Limit	Margin		
		MHz	dBuV	dB	dBuV	dBuV	dB	Detector	Comment
1	*	0.1522	35.90	9.63	45.53	65.88	-20.35	QP	
2		0.1522	11.80	9.63	21.43	55.88	-34.45	AVG	
3		0.4425	16.10	9.62	25.72	57.01	-31.29	QP	
4		0.4425	4.70	9.62	14.32	47.01	-32.69	AVG	
5		0.7710	8.80	9.65	18.45	56.00	-37.55	QP	
6		0.7710	4.80	9.65	14.45	46.00	-31.55	AVG	
7		2.3168	7.40	9.70	17.10	56.00	-38.90	QP	
8		2.3168	3.60	9.70	13.30	46.00	-32.70	AVG	
9		7.6920	16.30	9.81	26.11	60.00	-33.89	QP	
10		7.6920	11.10	9.81	20.91	50.00	-29.09	AVG	
11		12.4598	17.80	9.85	27.65	60.00	-32.35	QP	
12		12.4598	12.90	9.85	22.75	50.00	-27.25	AVG	

REMARKS:

(1) Measurement Value = Reading Level + Correct Factor.

(2) Margin Level = Measurement Value - Limit Value.

Test Mode	Mode 2	Tested Date	2022/10/15
Test Voltage	AC 120V/60Hz	Phase	Neutral



No.	Mk.	Freq. MHz	Reading Level dBuV	Correct Factor dB	Measure- ment dBuV	Limit dBuV	Margin dB	Detector	Comment
1	*	0.1522	36.40	9.63	46.03	65.88	-19.85	QP	
2		0.1522	11.10	9.63	20.73	55.88	-35.15	AVG	
3		0.2805	18.30	9.62	27.92	60.80	-32.88	QP	
4		0.2805	5.60	9.62	15.22	50.80	-35.58	AVG	
5		0.4492	14.70	9.62	24.32	56.89	-32.57	QP	
6		0.4492	5.70	9.62	15.32	46.89	-31.57	AVG	
7		0.7800	7.10	9.65	16.75	56.00	-39.25	QP	
8		0.7800	2.60	9.65	12.25	46.00	-33.75	AVG	
9		7.5548	17.80	9.83	27.63	60.00	-32.37	QP	
10		7.5548	12.70	9.83	22.53	50.00	-27.47	AVG	
11		11.1908	16.40	9.88	26.28	60.00	-33.72	QP	
12		11.1908	11.70	9.88	21.58	50.00	-28.42	AVG	

REMARKS:

(1) Measurement Value = Reading Level + Correct Factor.

(2) Margin Level = Measurement Value - Limit Value.

3.2 RADIATED EMISSIONS BELOW 1 GHZ TEST

3.2.1 LIMITS

FCC CFR Title 47, Part 15, Subpart B:

Frequency (MHz)	Class A (at 10 m)		Class A (at 3 m)*	Class B (at 3 m)	
	(uV/m) Field strength	(dBuV/m) Field strength	(dBuV/m) Field strength	(uV/m) Field strength	(dBuV/m) Field strength
30 - 88	90	39	49.46	100	40
88 - 216	150	43.5	53.96	150	43.5
216 - 960	210	46.4	56.86	200	46
Above 960	300	49.5	59.96	500	54

* FCC CFR Title 47, Part 15, Subpart A, section 15.31(f)(1), the distance could be extrapolated by using 20 dB/decade factor.

Alternative Limits:

Frequency (MHz)	Class A (at 10 m)	Class B (at 10 m)
	dBuV/m	dBuV/m
30 - 230	40	30
230 - 1000	47	37

FCC CFR Title 47, Part 15, Subpart B, section 15.109(g) provides, as an alternative, compliance to the CISPR 22 (Third Edition) radiated emission limits in the 30 MHz to 1000 MHz range.

Frequency range of radiated measurements (For unintentional radiators)

Highest frequency generated or Upper frequency of measurement used in the device or on which the device operates or tunes (MHz)	Range (MHz)
Below 1.705	30
1.705 - 108	1000
108 - 500	2000
500 - 1000	5000
Above 1000	5 th harmonic of the highest frequency or 40 GHz, whichever is lower

NOTE:

- The tighter limit applies at the band edges.
- Emission level (dBuV/m) = 20log Emission level (uV/m).
3 m Emission level = 10 m Emission level + 20log(10 m/3 m).
- The test result calculated as following:
Measurement Value = Reading Level + Correct Factor
Correct Factor = Antenna Factor + Cable Loss - Amplifier Gain (if use)
Margin Level = Measurement Value - Limit Value

Calculation example:

Reading Level		Correct Factor		Measurement Value
19.11	+	2.11	=	21.22

Measurement Value		Limit Value		Margin Level
21.22	-	40	=	-18.78

3.2.2 MEASUREMENT INSTRUMENTS LIST

Item	Kind of Equipment	Manufacturer	Type No.	Serial No.	Calibrated Date	Calibrated Until
1	Log-Bicon Antenna	Schwarzbeck	VULB 9168	9168	2022/8/4	2023/8/3
2	Attenuator	EMCI	6N-5dB	AT-N0508	2022/8/4	2023/8/3
3	Pre-Amplifier	EMCI	EMC001330	980144	2022/5/12	2023/5/11
4	Test Cable	EMCI	EMCCFD400-NM-NM-8000	200346	2022/5/12	2023/5/11
5	Test Cable	EMCI	EMC104-SM-SM-2500	150303	2022/5/12	2023/5/11
6	Test Cable	EMCI	EMC104-SM-NM-800	170311	2022/5/12	2023/5/11
7	Signal Analyzer	Agilent	N9020B	MY60112534	2022/4/15	2023/4/14
8	Measurement Software	Farad	EZ EMC (Ver. NB-03A1-01)	N/A	N/A	N/A

REMARK:

- (1) "N/A" denotes no model name, no serial no. or no calibration specified.
- (2) All calibration period of equipment list is one year.

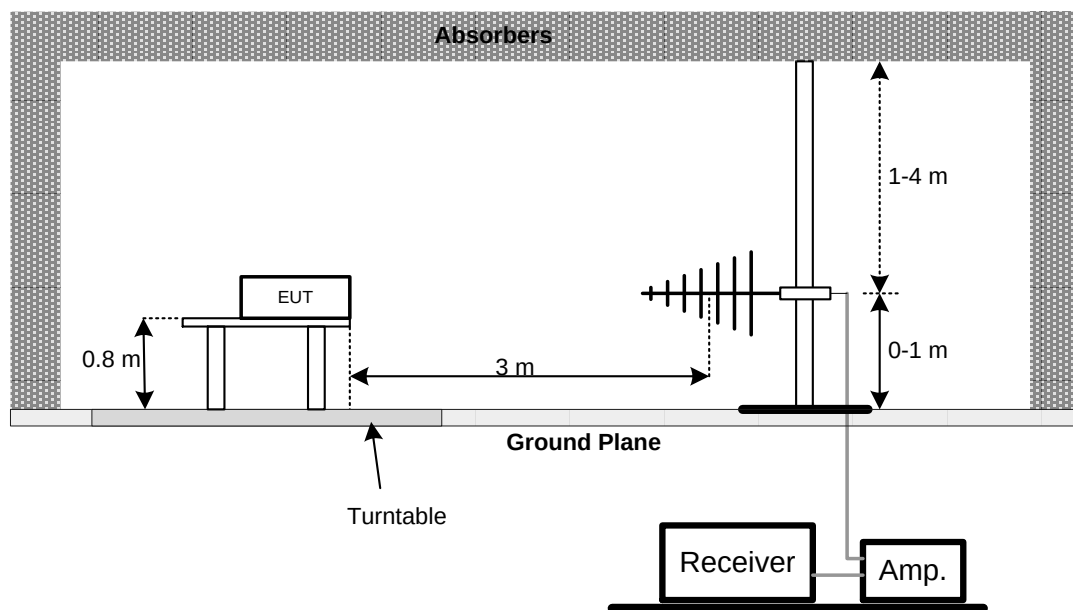
3.2.3 TEST PROCEDURE

- a. The separation distance of 3 m was used for measurements below 1 GHz. The EUT was placed on the top of a rotating table 0.8 m above the ground in a 3 m semi-anechoic chamber.
- b. The table was rotated 360 degrees to determine the position of the highest radiation.
- c. The height of the receive antenna was varied between 1 m and 4 m. Both horizontal and vertical polarizations of the antenna were checked.
- d. For each suspected emission, the EUT was arranged at its worst case and then the antenna was scanned in height to find the maximum. The tower Bore sight function was used.
- e. The receiver was set to quasi-peak detect function and specified bandwidth with maximum hold mode.
- f. For the actual test configuration, please refer to the related Item - TEST PHOTOS.

3.2.4 DEVIATION FROM TEST STANDARD

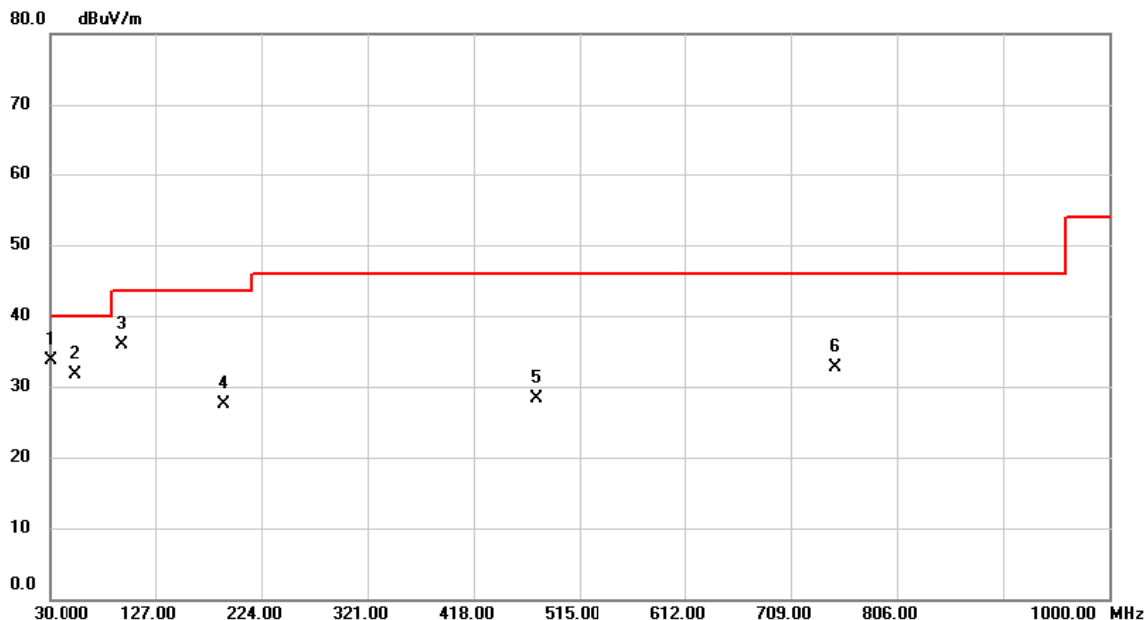
No deviation.

3.2.5 TEST SETUP



3.2.6 TEST RESULT

Test Mode	Mode 2	Tested Date	2022/10/15
Test Voltage	AC 120V/60Hz	Polarization	Vertical



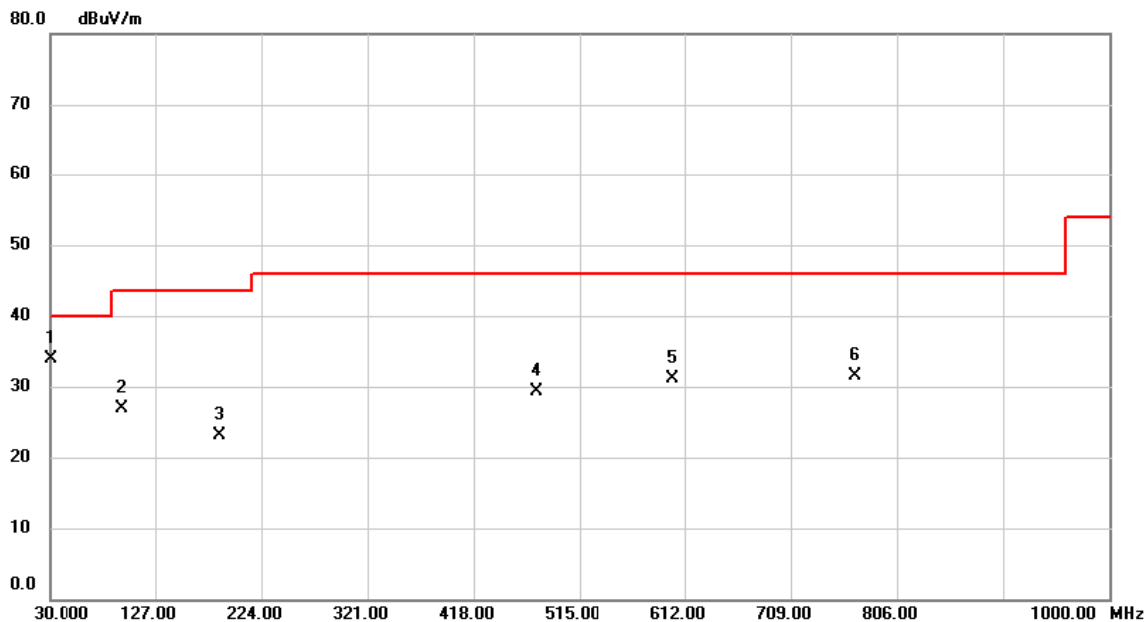
No.	Mk.	Freq.	Reading Level	Correct Factor	Measurement	Limit	Margin	Antenna Height	Table Degree	
		MHz	dBuV	dB	dBuV/m	dBuV/m	dB	Detector	cm	degree
1	*	30.9700	47.77	-14.02	33.75	40.00	-6.25	QP	100	47
2		53.2800	43.95	-12.24	31.71	40.00	-8.29	QP	100	234
3		96.9300	53.06	-17.21	35.85	43.50	-7.65	QP	100	88
4		189.0800	41.97	-14.42	27.55	43.50	-15.95	QP	100	353
5		475.2300	34.56	-6.26	28.30	46.00	-17.70	QP	200	281
6		749.7400	33.50	-0.77	32.73	46.00	-13.27	QP	200	191

REMARKS:

(1) Measurement Value = Reading Level + Correct Factor.

(2) Margin Level = Measurement Value - Limit Value.

Test Mode	Mode 2	Tested Date	2022/10/15
Test Voltage	AC 120V/60Hz	Polarization	Horizontal



No.	Mk.	Freq.	Reading Level	Correct Factor	Measurement	Limit	Margin	Antenna Height	Table Degree	
		MHz	dBuV	dB	dBuV/m	dBuV/m	dB	Detector	cm	degree
1	*	30.0000	47.99	-14.11	33.88	40.00	-6.12	QP	116	360
2		96.9300	44.10	-17.21	26.89	43.50	-16.61	QP	200	205
3		186.1700	37.13	-14.09	23.04	43.50	-20.46	QP	200	253
4		475.2300	35.60	-6.26	29.34	46.00	-16.66	QP	100	282
5		600.3600	34.55	-3.43	31.12	46.00	-14.88	QP	200	353
6		767.2000	32.11	-0.63	31.48	46.00	-14.52	QP	200	81

REMARKS:

(1) Measurement Value = Reading Level + Correct Factor.

(2) Margin Level = Measurement Value - Limit Value.

3.3 RADIATED EMISSIONS ABOVE 1 GHZ TEST

3.3.1 LIMITS

Frequency (GHz)	Class A				Class B	
	(dBuV/m) (at 3 m)		(dBuV/m) (at 10 m)		(dBuV/m) (at 3 m)	
	Peak	Average	Peak	Average	Peak	Average
Above 1	80	60	69.5	49.5	74	54

Frequency range of radiated measurements (For unintentional radiators)

Highest frequency generated or Upper frequency of measurement used in the device or on which the device operates or tunes (MHz)	Range (MHz)
Below 1.705	30
1.705 - 108	1000
108 - 500	2000
500 - 1000	5000
Above 1000	5 th harmonic of the highest frequency or 40 GHz, whichever is lower

NOTE:

- (1) The tighter limit applies at the band edges.
- (2) Emission level (dBuV/m) = 20log Emission level (uV/m).
- (3) The test result calculated as following:

Measurement Value = Reading Level + Correct Factor

Correct Factor = Antenna Factor + Cable Loss - Amplifier Gain (if use)

Margin Level = Measurement Value - Limit Value

Calculation example:

Reading Level		Correct Factor		Measurement Value
36.89	+	4.23	=	41.12

Measurement Value		Limit Value		Margin Level
41.12	-	54	=	-12.88

3.3.2 MEASUREMENT INSTRUMENTS LIST

Item	Kind of Equipment	Manufacturer	Type No.	Serial No.	Calibrated Date	Calibrated Until
1	Horn Antenna	RFSPIN	DRH18-E	210108A18E	2022/5/12	2023/5/11
2	Pre-Amplifier	EMCI	EMC012645SE	980411	2022/1/22	2023/1/21
3	Test Cable	EMCI	EMC104-SM-SM-2500	150306	2022/9/19	2023/9/18
4	Test Cable	EMCI	EMC104-SM-SM-7000	201222	2022/9/19	2023/9/18
5	Test Cable	EMCI	EMC104-SM-SM-1000	170247	2022/9/19	2023/9/18
6	Signal Analyzer	Agilent	N9020B	MY60112534	2022/4/15	2023/4/14
7	Horn Antenna	COM-POWER	AH-1840	10090003	2022/7/29	2023/7/28
8	Pre-Amplifier	EMCI	EMC184045SE	980511	2021/11/11	2022/11/10
9	Test Cable	EMCI	EMC102-KM-KM-1000	150805	2021/10/22	2022/10/21
10	Test Cable	EMCI	EMC101G-KM-KM-3300	201022	2021/10/22	2022/10/21
11	Signal Analyzer	Agilent	N9020B	MY60112534	2022/4/15	2023/4/14
12	Measurement Software	Farad	EZ EMC (Ver. NB-03A1-01)	N/A	N/A	N/A

REMARK:

- (1) "N/A" denotes no model name, no serial no. or no calibration specified.
- (2) All calibration period of equipment list is one year.

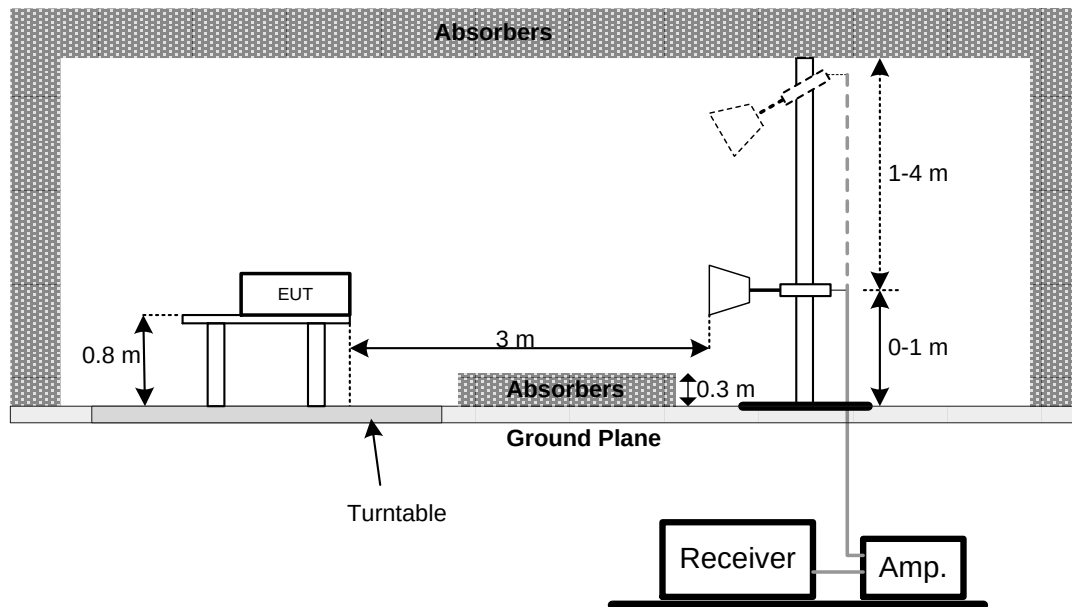
3.3.3 TEST PROCEDURE

- a. The separation distance of 3 m was used for measurements above 1 GHz.
The test limits were altered using the 20 dB/decade extrapolation factor.
The EUT was placed on the top of a rotating table 0.8 m above the ground in a 3 m semi-anechoic chamber.
- b. The table was rotated 360 degrees to determine the position of the highest radiation.
- c. The height of the receive antenna was varied between 1 m and 4 m. Both horizontal and vertical polarizations of the antenna were checked.
- d. For each suspected emission, the EUT was arranged at its worst case and then the antenna was scanned in height to find the maximum. The tower Bore sight function was used.
- e. The receiver/spectrum analyzer was set to peak and average detect function and specified bandwidth with maximum hold mode.
- f. For the actual test configuration, please refer to the related Item - TEST PHOTOS.

3.3.4 DEVIATION FROM TEST STANDARD

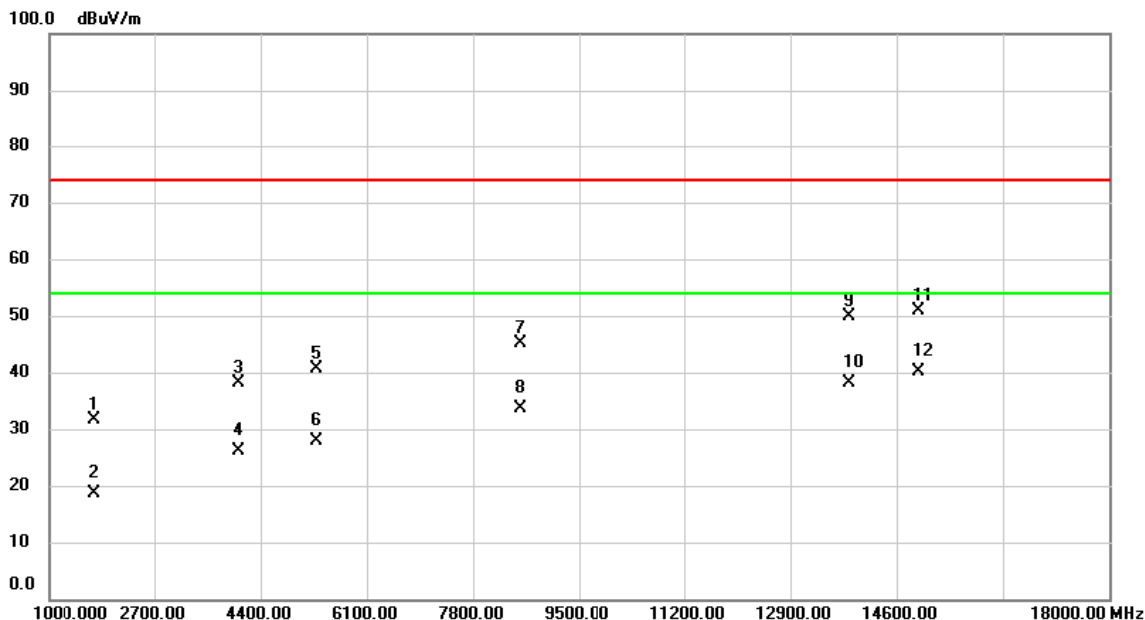
No deviation.

3.3.5 TEST SETUP



3.3.6 TEST RESULT

Test Mode	Mode 2	Tested Date	2022/10/15
Test Voltage	AC 120V/60Hz	Polarization	Vertical



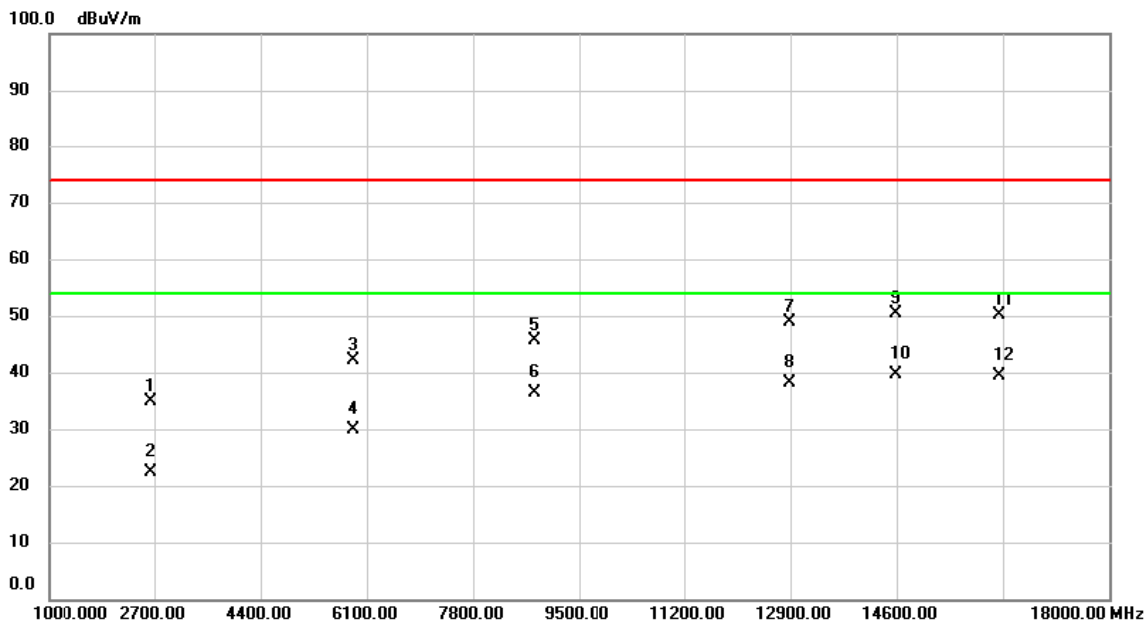
No.	Mk.	Freq.	Reading Level	Correct Factor	Measurement	Limit	Margin	Antenna Height	Table Degree	
		MHz	dBuV	dB	dBuV/m	dBuV/m	dB	Detector	cm	degree
1		1731.000	52.00	-20.38	31.62	74.00	-42.38	peak	127	360
2		1731.000	38.93	-20.38	18.55	54.00	-35.45	AVG	127	360
3		4043.000	49.83	-11.61	38.22	74.00	-35.78	peak	200	299
4		4043.000	37.62	-11.61	26.01	54.00	-27.99	AVG	200	299
5		5301.000	49.70	-9.16	40.54	74.00	-33.46	peak	200	134
6		5301.000	37.12	-9.16	27.96	54.00	-26.04	AVG	200	134
7		8565.000	46.51	-1.36	45.15	74.00	-28.85	peak	200	198
8		8565.000	35.11	-1.36	33.75	54.00	-20.25	AVG	200	198
9		13835.00	46.10	3.87	49.97	74.00	-24.03	peak	100	288
10		13835.00	34.37	3.87	38.24	54.00	-15.76	AVG	100	288
11		14940.00	45.01	5.83	50.84	74.00	-23.16	peak	133	360
12	*	14940.00	34.22	5.83	40.05	54.00	-13.95	AVG	133	360

REMARKS:

(1) Measurement Value = Reading Level + Correct Factor.

(2) Margin Level = Measurement Value - Limit Value.

Test Mode	Mode 2	Tested Date	2022/10/15
Test Voltage	AC 120V/60Hz	Polarization	Horizontal



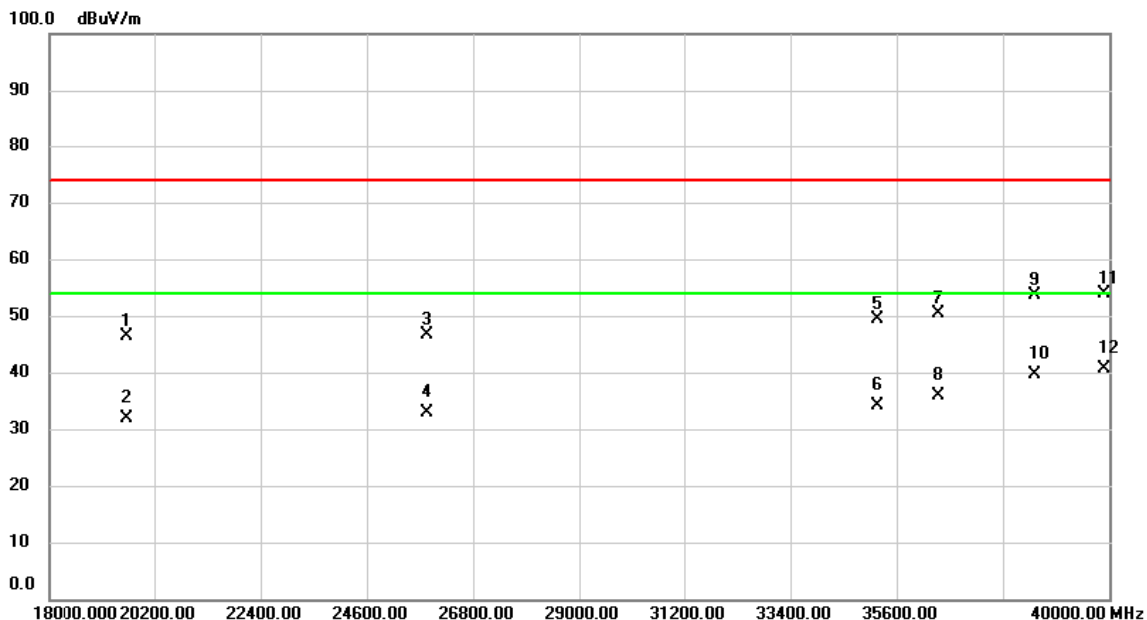
No.	Mk.	Freq.	Reading Level	Correct Factor	Measurement	Limit	Margin	Antenna Height	Table Degree	
		MHz	dBuV	dB	dBuV/m	dBuV/m	dB	Detector	cm	degree
1		2632.000	51.29	-16.38	34.91	74.00	-39.09	peak	200	254
2		2632.000	38.72	-16.38	22.34	54.00	-31.66	AVG	200	254
3		5879.000	50.34	-8.09	42.25	74.00	-31.75	peak	100	356
4		5879.000	38.01	-8.09	29.92	54.00	-24.08	AVG	100	356
5		8786.000	46.86	-1.15	45.71	74.00	-28.29	peak	100	161
6		8786.000	37.54	-1.15	36.39	54.00	-17.61	AVG	100	161
7		12883.00	46.09	2.83	48.92	74.00	-25.08	peak	200	98
8		12883.00	35.22	2.83	38.05	54.00	-15.95	AVG	200	98
9		14583.00	44.83	5.59	50.42	74.00	-23.58	peak	100	130
10	*	14583.00	34.12	5.59	39.71	54.00	-14.29	AVG	100	130
11		16249.00	44.67	5.47	50.14	74.00	-23.86	peak	100	342
12		16249.00	34.01	5.47	39.48	54.00	-14.52	AVG	100	342

REMARKS:

(1) Measurement Value = Reading Level + Correct Factor.

(2) Margin Level = Measurement Value - Limit Value.

Test Mode	Mode 2	Tested Date	2022/10/15
Test Voltage	AC 120V/60Hz	Polarization	Vertical



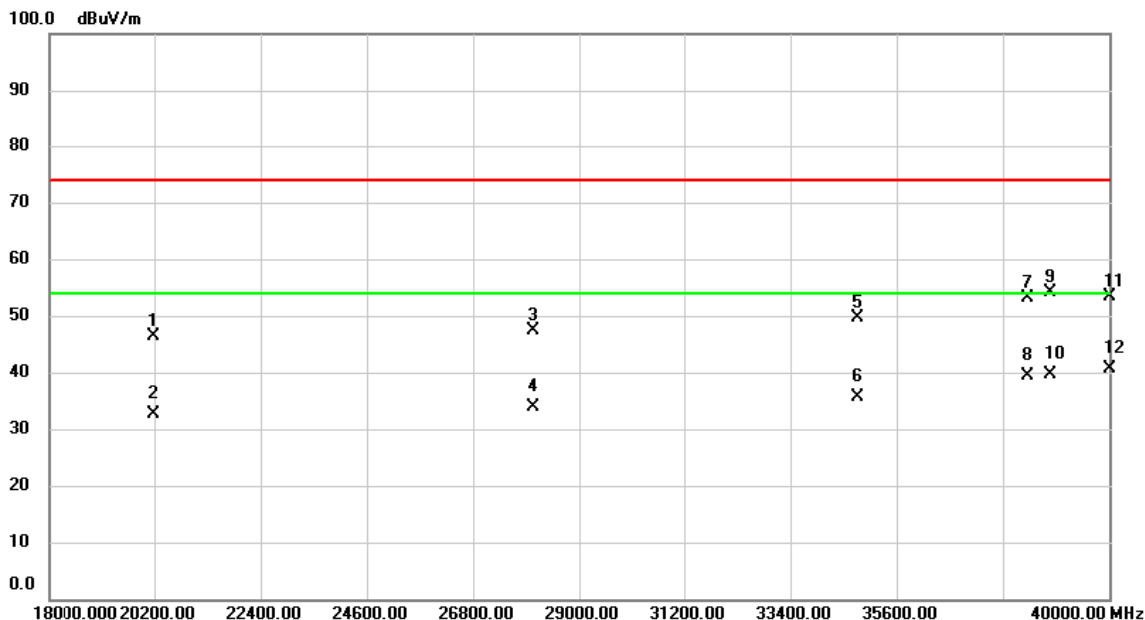
No.	Mk.	Freq.	Reading Level	Correct Factor	Measurement	Limit	Margin	Antenna Height	Table Degree	
		MHz	dBuV	dB	dBuV/m	dBuV/m	dB	Detector	cm	degree
1		19628.00	56.88	-10.56	46.32	74.00	-27.68	peak	100	250
2		19628.00	42.43	-10.56	31.87	54.00	-22.13	AVG	100	250
3		25832.00	54.90	-8.20	46.70	74.00	-27.30	peak	100	117
4		25832.00	41.14	-8.20	32.94	54.00	-21.06	AVG	100	117
5		35204.00	58.97	-9.52	49.45	74.00	-24.55	peak	100	360
6		35204.00	43.60	-9.52	34.08	54.00	-19.92	AVG	100	360
7		36458.00	59.03	-8.70	50.33	74.00	-23.67	peak	100	223
8		36458.00	44.46	-8.70	35.76	54.00	-18.24	AVG	100	223
9		38460.00	57.41	-3.85	53.56	74.00	-20.44	peak	100	16
10		38460.00	43.60	-3.85	39.75	54.00	-14.25	AVG	100	16
11		39890.00	55.79	-1.87	53.92	74.00	-20.08	peak	100	270
12	*	39890.00	42.52	-1.87	40.65	54.00	-13.35	AVG	100	270

REMARKS:

(1) Measurement Value = Reading Level + Correct Factor.

(2) Margin Level = Measurement Value - Limit Value.

Test Mode	Mode 2	Tested Date	2022/10/15
Test Voltage	AC 120V/60Hz	Polarization	Horizontal



No.	Mk.	Freq.	Reading Level	Correct Factor	Measurement	Limit	Margin	Antenna Height	Table Degree	
		MHz	dBuV	dB	dBuV/m	dBuV/m	dB	cm	degree	Comment
1		20178.00	57.01	-10.62	46.39	74.00	-27.61	peak	100	181
2		20178.00	43.31	-10.62	32.69	54.00	-21.31	AVG	100	181
3		28032.00	55.87	-8.53	47.34	74.00	-26.66	peak	100	30
4		28032.00	42.52	-8.53	33.99	54.00	-20.01	AVG	100	30
5		34786.00	58.25	-8.68	49.57	74.00	-24.43	peak	100	127
6		34786.00	44.40	-8.68	35.72	54.00	-18.28	AVG	100	127
7		38306.00	57.31	-4.26	53.05	74.00	-20.95	peak	100	225
8		38306.00	43.60	-4.26	39.34	54.00	-14.66	AVG	100	225
9		38790.00	57.44	-3.39	54.05	74.00	-19.95	peak	100	339
10		38790.00	42.99	-3.39	39.60	54.00	-14.40	AVG	100	339
11		40000.00	55.38	-1.99	53.39	74.00	-20.61	peak	100	142
12	*	40000.00	42.71	-1.99	40.72	54.00	-13.28	AVG	100	142

REMARKS:

(1) Measurement Value = Reading Level + Correct Factor.

(2) Margin Level = Measurement Value - Limit Value.

5 EUT PHOTOS

Please refer to document Appendix No.: EP-2208G029-1 (APPENDIX-EUT PHOTOS).

End of Test Report