


# FCC Radio Test Report

**FCC ID: 2AIMRRN09**

**Report No.** : BTL-FCCP-6-2410C004  
**Equipment** : Xiaomi Mesh System BE3600 Pro  
**Model Name** : RN09  
**Brand Name** : Xiaomi  
**Applicant** : Beijing Xiaomi Electronics Co., Ltd.  
**Address** : Room 802, Floor 8, Building 5, No.15 KeChuang 10th Road, Beijing Economic and Technological Development Zone, Beijing City, China.  
**Manufacturer** : Beijing Xiaomi Electronics Co., Ltd.  
**Address** : Room 802, Floor 8, Building 5, No.15 KeChuang 10th Road, Beijing Economic and Technological Development Zone, Beijing City, China.  
**Factory** : AZROAD (Zhongshan) Technology Company Limited  
**Address** : (Factory Building 2), No.39 Jinchang Industrial Road, West District, Zhongshan City, Guangdong Province, China  
**Radio Function** : NFC (13.553~13.567 MHz)  
**FCC Rule Part(s)** : FCC CFR Title 47, Part 15, Subpart C (15.225)  
**Measurement** : ANSI C63.10-2013  
**Procedure(s)**  
**Date of Receipt** : 2024/12/11  
**Date of Test** : 2024/12/11 ~ 2025/1/17  
**Issued Date** : 2025/1/23

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

**Prepared by** :   
Poken Huang, Engineer

**Approved by** :   
Peter Chen, Manager

**BTL Inc.**

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

Tel: +886-2-2657-3299 Fax: +886-2-2657-3331 Web: www.newbtl.com Service mail: btl\_qa@newbtl.com

**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 assumes no responsibility for the data provided by the Customer, any statements, inferences or generalizations drawn by the customer or others from the reports issued by BTL.

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.

## CONTENTS

REVISION HISTORY	5
1 SUMMARY OF TEST RESULTS	6
1.1 TEST FACILITY	7
1.2 MEASUREMENT UNCERTAINTY	7
1.3 TEST ENVIRONMENT CONDITIONS	7
2 GENERAL INFORMATION	8
2.1 DESCRIPTION OF EUT	8
2.2 TEST MODES	9
2.3 BLOCK DIAGRAM SHOWING THE CONFIGURATION OF SYSTEM TESTED	10
2.4 SUPPORT UNITS	10
3 AC POWER LINE CONDUCTED EMISSIONS TEST	11
3.1 LIMIT	11
3.2 TEST PROCEDURE	11
3.3 DEVIATION FROM TEST STANDARD	12
3.4 TEST SETUP	12
3.5 TEST RESULT	12
4 RADIATED EMISSIONS TEST	13
4.1 LIMIT	13
4.2 TEST PROCEDURE	14
4.3 DEVIATION FROM TEST STANDARD	14
4.4 TEST SETUP	14
4.5 EUT OPERATING CONDITIONS	15
4.6 TEST RESULT – 9 KHZ TO 30 MHZ– FCC PART 15.209	15
4.7 TEST RESULT – 30 MHZ TO 1 GHZ – FCC PART 15.209	15
4.8 TEST RESULT – FCC PART 15.225	15
5 FREQUENCY STABILITY	16
5.1 LIMIT	16
5.2 TEST PROCEDURE	16
5.3 DEVIATION FROM TEST STANDARD	16
5.4 EUT OPERATING CONDITIONS	16
5.5 TEST RESULT	16
6 20 DB BANDWIDTH	17
6.1 LIMIT	17
6.2 TEST PROCEDURE	17
6.3 DEVIATION FROM TEST STANDARD	17
6.4 TEST SETUP	17
6.5 EUT OPERATING CONDITIONS	17
6.6 TEST RESULT	17
7 LIST OF MEASURING EQUIPMENTS	18
8 EUT TEST PHOTO	19
9 EUT PHOTOS	19
APPENDIX A AC POWER LINE CONDUCTED EMISSIONS	20
APPENDIX B RADIATED EMISSIONS - 9 KHZ TO 30 MHZ	25
APPENDIX C RADIATED EMISSIONS - 30 MHZ TO 1 GHZ	28
APPENDIX D RADIATED EMISSIONS - FCC PART 15.225	31
APPENDIX E FREQUENCY STABILITY MEASUREMENT	34

APPENDIX F

20 DB BANDWIDTH

36

### REVISION HISTORY

Report No.	Version	Description	Issued Date	Note
BTL-FCCP-6-2410C004	R00	Original Report.	2025/1/23	Valid

## 1 SUMMARY OF TEST RESULTS

Test procedures according to the technical standards.

Standard(s) Section	Description	Test Result	Judgement	Remark
15.207	AC Power Line Conducted Emissions	APPENDIX A	Pass	-----
15.35 15.209 15.225	Radiated Emissions	APPENDIX B APPENDIX C APPENDIX D	Pass	-----
15.225(e)	Frequency Stability	APPENDIX E	Pass	-----
15.203	Antenna Requirement	-----	Pass	-----
15.215(c)	20 dB Bandwidth	APPENDIX F	Pass	-----

### Statement of Conformity

The statement of conformity is based on the binary decision rule according to IEC Guide 115 and ILAC G8 "simple acceptance" principle. Without considering measurement uncertainty, its specific risk is less than 50% PFA. (PFA: Probability of False Accept)

#### NOTE:

- (1) "N/A" denotes test is not applicable in this Test Report.
- (2) The report format version is TP.1.1.1.

## 1.1 TEST FACILITY

The test locations stated below are under the TAF Accreditation Number 0659.

The test location(s) used to collect the test data in this report are:

(FCC DN: TW0659)

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

☒ CB20 ☒ TR01 ☒ C01

## 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 %**.

A. AC power line conducted emissions test:

Test Site	Method	Measurement Frequency Range	U (dB)
C01	CISPR	150 kHz ~ 30MHz	2.4498

B. Radiated emissions test :

Test Site	Measurement Frequency Range	U,(dB)
CB20	0.03 GHz ~ 0.2 GHz	4.17
	0.2 GHz ~ 1 GHz	4.72

C. Conducted test:

Test Item	U
Occupied Bandwidth	0.83 %
Frequency Stability	166.77 Hz

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	Test Voltage	Tested by
AC Power Line Conducted Emissions	25°C, 45%	AC 120V	Benny Cao
Radiated emissions (9KHz-30MHz)	Refer to data	AC 120V	Benny Cao
Radiated emissions (30MHz TO 1000MHz)	Refer to data	AC 120V	Benny Cao
Frequency Stability	25°C, 55%	AC 120V	Cheng Tsai
20 dB Bandwidth	25°C, 55%	AC 120V	Cheng Tsai

## 2 GENERAL INFORMATION

### 2.1 DESCRIPTION OF EUT

Equipment	Xiaomi Mesh System BE3600 Pro
Model Name	Xiaomi
Brand Name	RN09
Model Difference	N/A
Hardware Version	1.0
Software Version	1.0.1
Power Source	DC Voltage supplied from AC adapter. Model: ADS-18MC-1212018EPCU
Power Rating	I/P:100-240V ~ 50/60Hz 0.6A O/P:12.0V --- 1.5A
Operation Frequency	13.553~13.567 MHz
Max H-field strength	58.84 dBuV/m @3m(Peak)
Test Model	RN09
Sample Status	Engineering Sample
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) Channel List:

Channel	Frequency (MHz)
01	13.56

(3) Table for Filed Antenna:

Antenna	Brand Name	Model name	Type	Connector	Gain (dBi)
1	South star	NR09	PCB	IPEX	N/A

(4) The above Antenna information are derived from the antenna data sheet provided by manufacturer and for more detailed features description, please refer to the manufacturer's specifications, the laboratory shall not be held responsible.

## 2.2 TEST MODES

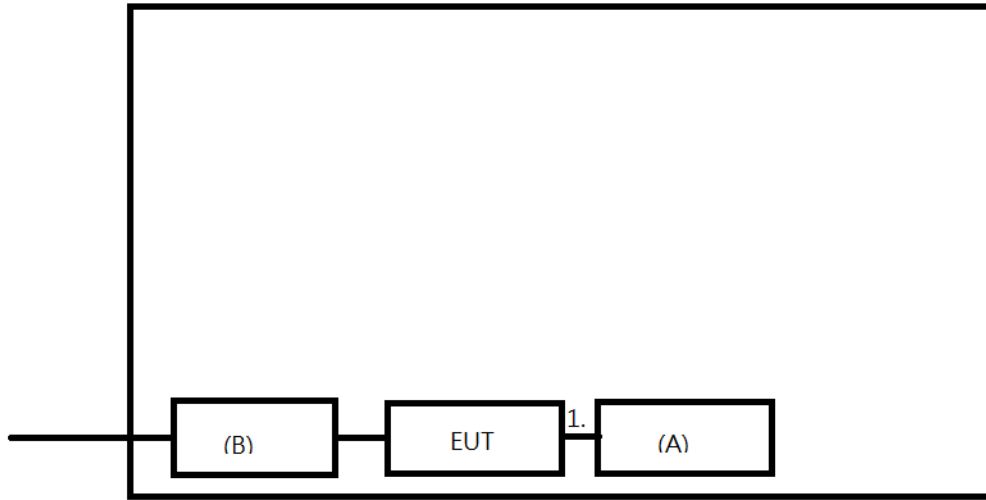
Test Items	Test mode	Channel	Note
AC power line conducted emissions	Normal/Idle	-	-
Radiated emissions (9KHz-30MHz)	TX	01	-
Radiated emissions (30MHz TO 1000MHz)	TX	01	
Frequency Stability	TX	01	-
20 dB Bandwidth	TX	01	-

### NOTE:

(1) All X, Y and Z axes are evaluated, but only the worst case (X axis) is recorded.

### 2.3 BLOCK DIAGRAM SHOWING THE CONFIGURATION OF SYSTEM TESTED

Equipment letters and Cable numbers refer to item numbers described in the tables of clause 2.4.



### 2.4 SUPPORT UNITS

Item	Equipment	Brand	Model No.	Series No.	Remarks
A	Notebook	Lenovo	ThinkBook 14 G4 IAP	MP28KHAH	Furnished by test lab.
B	Adapter	Xiaomi	ADS-18MC-1212 018EPCU	N/A	Supplied by test requester.

Item	Shielded	Ferrite Core	Length	Cable Type	Remarks
1	RJ45 Cable	N	1m	N	Furnished by test lab.

### 3 AC POWER LINE CONDUCTED EMISSIONS TEST

#### 3.1 LIMIT

Frequency (MHz)	Limit (dBμV)	
	Quasi-peak	Average
0.15 - 0.5	66 - 56 *	56 - 46 *
0.50 - 5.0	56	46
5.0 - 30.0	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 (dBμV)		Correct Factor (dB)		Measurement Value (dBμV)
38.22	+	3.45	=	41.67

Measurement Value (dBμV)		Limit Value (dBμV)		Margin Level (dB)
41.67	-	60	=	-18.33

The following table is the setting of the receiver.

Receiver Parameter	Setting
Attenuation	10 dB
Start Frequency	0.15 MHz
Stop Frequency	30 MHz
IF Bandwidth	9 KHz

#### 3.2 TEST PROCEDURE

- a. 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.
- b. 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.
- c. 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.
- d. The LISN is spaced at least 80 cm from the nearest part of the EUT chassis.
- e. For the actual test configuration, please refer to the related Item - EUT TEST PHOTO.

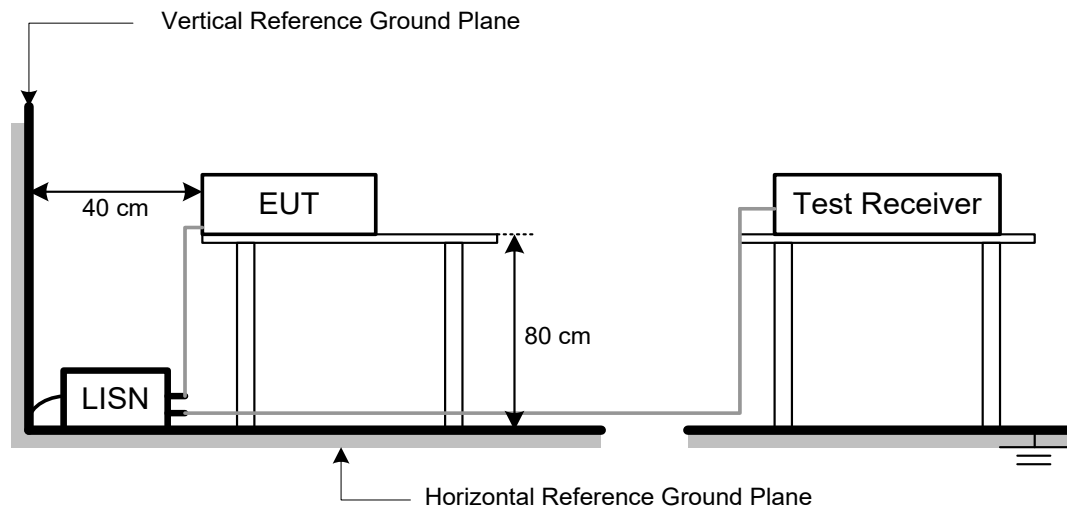
**NOTE:**

- (1) In the results, each reading is marked as Peak, QP or AVG per the detector used.  
 BW=9 kHz (6 dB Bandwidth)
- (2) All readings are Peak unless otherwise stated QP or AVG in column of Note. Both the QP and the AVG readings must be less than the limit for compliance.

### 3.3 DEVIATION FROM TEST STANDARD

No deviation.

### 3.4 TEST SETUP



### 3.5 TEST RESULT

Please refer to the APPENDIX A.

## 4 RADIATED EMISSIONS TEST

### 4.1 LIMIT

FCC Part 15.209				
Frequency (MHz)	Field Strength Limitation		Field Strength Limitation at 3m Measurement Dist	
	(uV/m)	Dist	(uV/m)	(dBuV/m)
0.009 – 0.490	2400 / F(KHz)	300m	10000 * 2400/F(KHz)	20log 2400/F(KHz) + 80
0.490 – 1.705	24000 / F(KHz)	30m	100 * 24000/F(KHz)	20log 24000/F(KHz) + 40
1.705 – 30.00	30	30m	100* 30	20log 30 + 40
30.0 – 88.0	100	3m	100	20log 100
88.0 – 216.0	150	3m	150	20log 150
216.0 – 960.0	200	3m	200	20log 200
Above 960.0	500	3m	500	20log 500
FCC Part 15.225(a)/(b)/(c)				
Frequency (MHz)	Field Strength Limitation		Field Strength Limitation at 3m Measurement Dist	
	(uV/m)	Dist	(uV/m)	(dBuV/m)
13.553 – 13.567	15,848	30 m	15,848*100	124
13.567 – 13.710	334	30 m	334*100	90.5
13.110 – 13.410 13.710 – 14.010	106	30 m	106*100	80.5

**NOTE:**

- (1) The tighter limit shall apply at the boundary between two frequency range.
- (2) Limitation expressed in dBuV/m is calculated by 20log Emission Level (uV/m).
- (3) If measurement is made at 3m distance, then F.S Limitation at 3m distance is adjusted by using the formula of  $L_{d1} = L_{d2} * (d_2/d_1)^2$ .  
Example:  
F.S Limit at 30m distance is 30uV/m , then F.S Limitation at 3m distance is adjusted as  $L_{d1} = L_1 = 30uV/m * (10)^2 = 100 * 30 uV/m$
- (4) 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

## 4.2 TEST PROCEDURE

- The measuring distance of 1 m shall be used for measurements. The EUT was placed on the top of a rotating table 0.8 meter above the ground at a 3 meter semi-anechoic chamber. The table was rotated 360 degrees to determine the position of the highest radiation.(below 30MHz)
- The measuring distance of 3 m shall be used for measurements. The EUT was placed on the top of a rotating table 0.8 meter above the ground at a 3 meter semi-anechoic chamber. The table was rotated 360 degrees to determine the position of the highest radiation.(below 1GHz).
- The height of the equipment or of the substitution antenna shall be 0.8 m or 1.5m, the height of the test antenna shall vary between 1 m to 4 m. Both horizontal and vertical polarizations of the antenna are set to make the measurement.
- The initial step in collecting radiated emission data is a receiver peak detector mode pre-scanning the measurement frequency range. Significant peaks are then marked and then Quasi Peak detector mode re-measured.
- All readings are Peak unless otherwise stated QP in column of Note. Peak denotes that the Peak reading compliance with the QP Limits and then QP Mode measurement didn't perform.
- For the actual test configuration, please refer to the related Item –EUT Test Photos.

### NOTE: (FCC PART 15.209)

- Reading in which marked as QP or Peak means measurements by using are Quasi-Peak Mode with Detector BW=120 kHz.
- All readings are Peak unless otherwise stated QP in column of Note. Peak denotes that the Peak reading compliance with the QP Limits and then QP Mode measurement didn't perform.

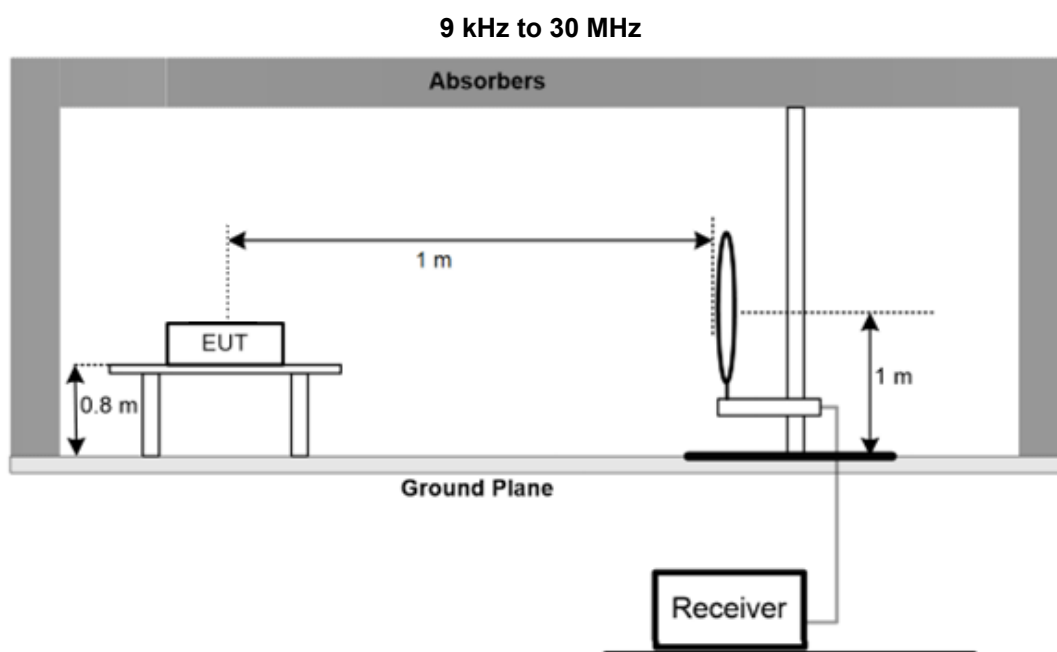
### NOTE: (FCC PART 15.225)

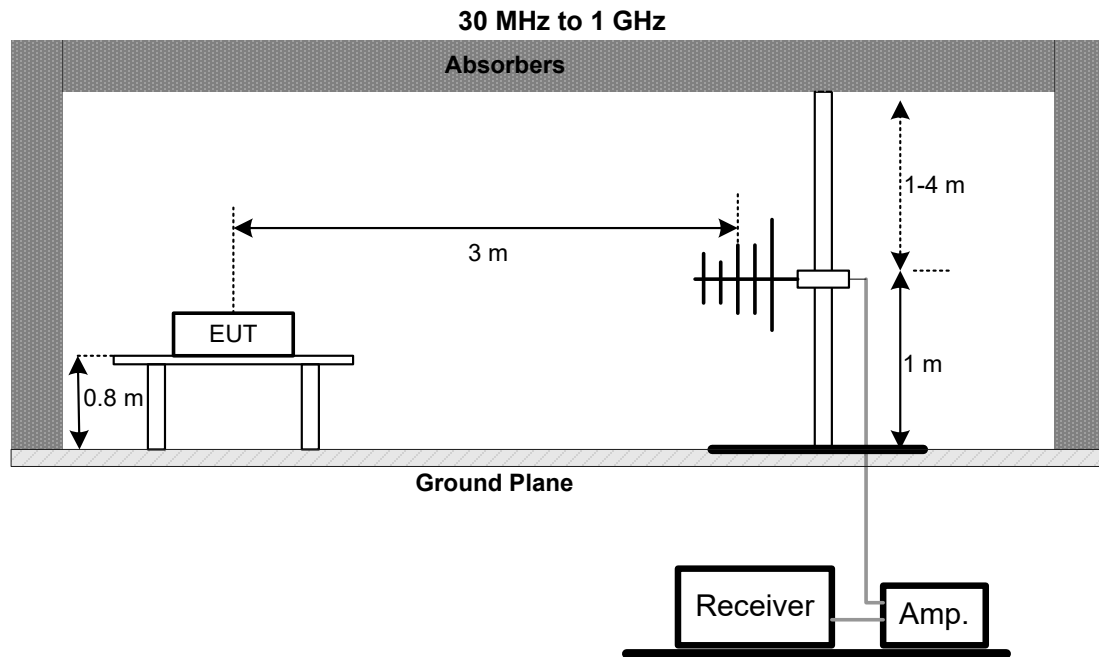
- Spectrum Setting:  
9 KHz – 150 KHz, RBW= 200Hz, VBW=200Hz, Sweep time = 200 ms.  
150 K Hz – 30 MHz, RBW= 10 KHz, VBW=10 KHz, Sweep time = 200 ms.  
30 MHz – 1000 MHz, RBW= 100KHz, VBW=100KHz, Sweep time = 200 ms.
- All readings are Peak unless otherwise stated QP in column of Note. Peak denotes that the Peak reading compliance with the QP Limits and then QP Mode measurement didn't perform.
- The Log-Bicon Antenna will use to test frequency range from 30MHz to 1000MHz and the Loop Antenna will use to test frequency below 30MHz.

## 4.3 DEVIATION FROM TEST STANDARD

No deviation.

## 4.4 TEST SETUP





#### 4.5 EUT OPERATING CONDITIONS

The EUT was programmed to be in continuously transmitting mode.

#### 4.6 TEST RESULT – 9 kHz TO 30 MHz– FCC PART 15.209

Please refer to the APPENDIX B

#### 4.7 TEST RESULT – 30 MHz TO 1 GHz – FCC PART 15.209

Please refer to the APPENDIX C.

#### 4.8 TEST RESULT – FCC PART 15.225

Please refer to the APPENDIX D.

#### NOTE:

- (1) No limit: This is fundamental signal, the judgment is not applicable.  
For fundamental signal judgment was referred to Peak output test.

## 5 FREQUENCY STABILITY

### 5.1 LIMIT

#### FCC Part 15.225(e)

The frequency tolerance of the carrier signal shall be maintained within  $\pm 0.01\%$  of the operating frequency over a temperature variation of - 20 degrees to + 50 degrees C at normal supply voltage, and for a variation in the primary supply voltage from 85% to 115% of the rated supply voltage at a temperature of 20 degrees C.

For battery operated equipment, the equipment tests shall be performed using a new battery.

### 5.2 TEST PROCEDURE

- a. The equipment under test was connected to an external AC power supply and the RF output was connected to a frequency counter via feed through attenuators. The EUT was placed inside the temperature chamber.
- b. At room temperature ( $25 \pm 5^\circ\text{C}$ ), an external variable AC power supply was connected to the EUT. The frequency of the transmitter was measured for 115%, 100% and 85% of the nominal operating input voltage.

### 5.3 DEVIATION FROM TEST STANDARD

No deviation.

### 5.4 EUT OPERATING CONDITIONS

The EUT was programmed to be in continuously transmitting mode.

### 5.5 TEST RESULT

Please refer to the APPENDIX E.

## 6 20 DB BANDWIDTH

### 6.1 LIMIT

#### FCC Part 15.215(c)

Intentional radiators operating under the alternative provisions to the general emission limits, as contained in §15.217 through §15.257 and in subpart E of this part, must be designed to ensure that the 20 dB bandwidth of the emission, or whatever bandwidth may otherwise be specified in the specific rule section under which the equipment operates, is contained within the frequency band designated in the rule section under which the equipment is operated.

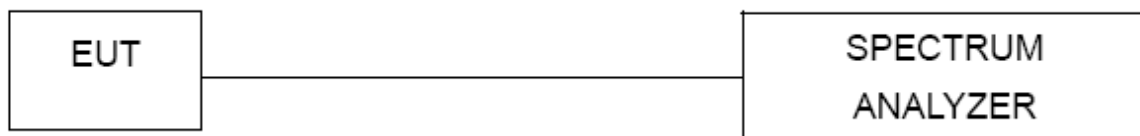
### 6.2 TEST PROCEDURE

- The EUT was directly connected to the spectrum analyzer and antenna output port as show in the block diagram below,
- Spectrum Setting : RBW= 1 kHz, VBW=1 kHz, Sweep time = 20 ms.

### 6.3 DEVIATION FROM TEST STANDARD

No deviation.

### 6.4 TEST SETUP



### 6.5 EUT OPERATING CONDITIONS

The EUT was programmed to be in continuously transmitting mode.

### 6.6 TEST RESULT

Please refer to the APPENDIX F.

## 7 LIST OF MEASURING EQUIPMENTS

AC Power Line Conducted Emissions						
Item	Kind of Equipment	Manufacturer	Type No.	Serial No.	Calibrated Date	Calibrated Until
1	Two-Line V-Network	R&S	ENV216	101051	2024/6/26	2025/6/25
2	Test Cable	EMCI	EMCRG58-BM-B M-9000	210501	2024/12/10	2025/12/9
3	EMC Receiver	Keysight	N9038A	MY54130009	2024/6/27	2025/6/26
4	Measurement Software	Farad	EZ_EMC (Ver. NB-03A1-01)	N/A	N/A	N/A

Radiated Emissions						
Item	Kind of Equipment	Manufacturer	Type No.	Serial No.	Calibrated Date	Calibrated Until
1	Trilog-Broadband Antenna	Schwarzbeck	VULB 9168	01207	2024/12/4	2025/12/3
2	EMC Receiver	Keysight	N9038A	MY54130009	2024/6/27	2025/6/26
3	Pre-Amplifier	EMCI	EMC001330-202 01222	980807	2024/12/9	2025/12/8
4	Test Cable	EMCI	EMC-8D-NM-NM -5000	150106	2024/12/9	2025/12/8
5	Test Cable	EMCI	EMC-CFD-400-N M-NM-8000	200348	2024/12/9	2025/12/8
6	Test Cable	EMCI	EMC-CFD-400-N M-NM-3300	200343	2024/12/9	2025/12/8
7	Loop Ant.	Electro-Metrics	EMCI-LPA600	274	2024/7/5	2025/7/4
8	EMC Receiver	Keysight	N9038A	MY54130009	2024/6/27	2025/6/26
9	Pre-Amplifier	EMCI	EMC001340	980555	2024/12/1	2025/11/30
10	Measurement Software	Farad	EZ_EMC (Ver. NB-03A1-01)	N/A	N/A	N/A

Frequency Stability Measurement						
Item	Kind of Equipment	Manufacturer	Type No.	Serial No.	Calibrated Date	Calibrated Until
1	Spectrum Analyzer	R&S	FSP 30	100854	2024/6/27	2025/6/26
2	10dbAttenuator	INMET	AHC-10dB	1	2024/11/26	2025/11/25
3	BTL-Conducted Test	BTL	1247788684	N/A	N/A	N/A

20 dB Bandwidth Measurement						
Item	Kind of Equipment	Manufacturer	Type No.	Serial No.	Calibrated Date	Calibrated Until
1	Spectrum Analyzer	R&S	FSP 30	100854	2024/6/27	2025/6/26
2	10dbAttenuator	INMET	AHC-10dB	1	2024/11/26	2025/11/25
3	BTL-Conducted Test	BTL	1247788684	N/A	N/A	N/A

Remark: "N/A" denotes no model name, no serial no. or no calibration specified.  
All calibration period of equipment list is one year.

## **8 EUT TEST PHOTO**

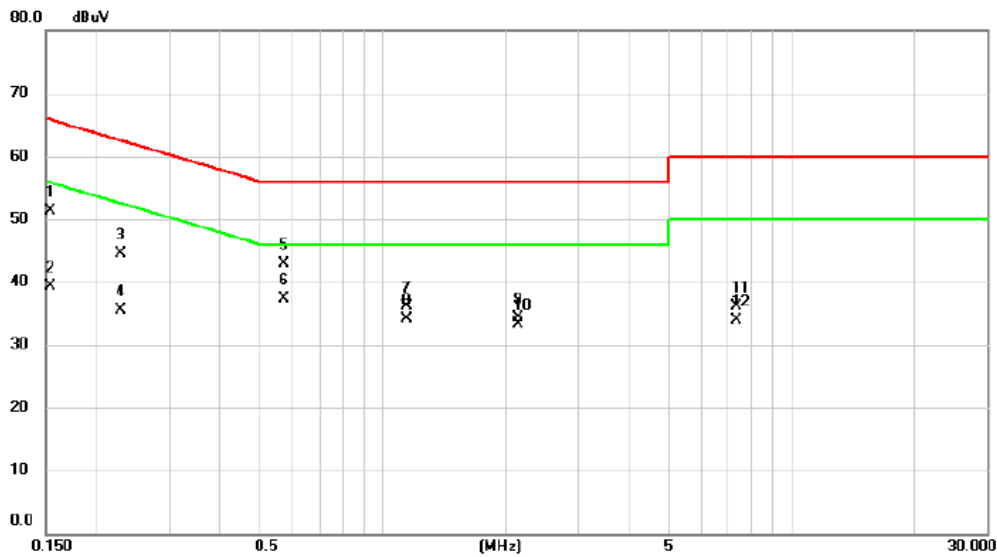
Please refer to document Appendix No.: TP-2410C004-FCCP-2 (APPENDIX-TEST PHOTOS).

## **9 EUT PHOTOS**

Please refer to document Appendix No.: EP-2410C004-1 (APPENDIX-EUT PHOTOS).

## **APPENDIX A AC POWER LINE CONDUCTED EMISSIONS**

Test Mode	Normal	Tested Date	2024/12/24
Test Frequency	-	Phase	Line

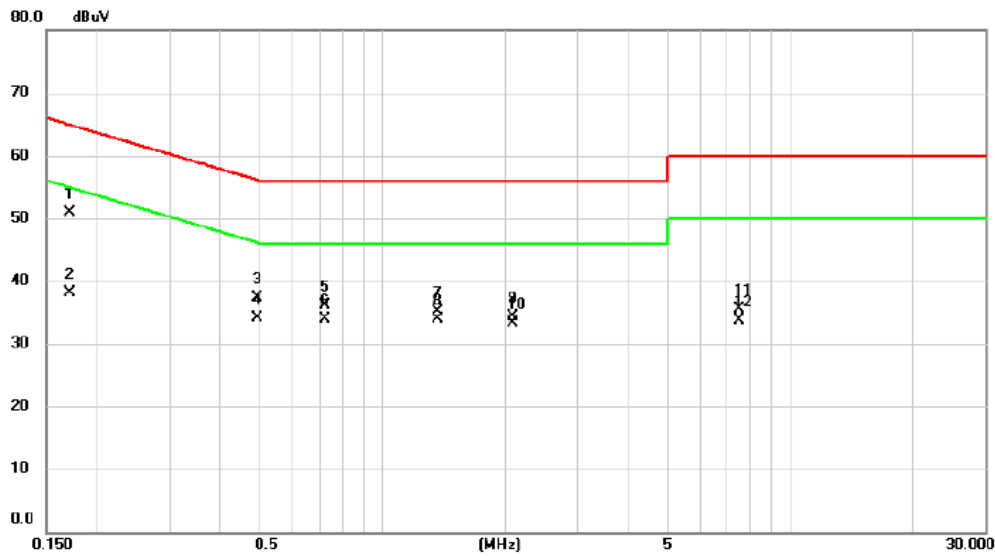


No.	Mk.	Freq. MHz	Reading Level dBuV	Correct Factor dB	Measure- ment dBuV	Limit dBuV	Margin dB	Detector	Comment
1		0.1535	41.75	9.65	51.40	65.81	-14.41	QP	
2		0.1535	29.70	9.65	39.35	55.81	-16.46	AVG	
3		0.2291	34.88	9.62	44.50	62.48	-17.98	QP	
4		0.2291	25.91	9.62	35.53	52.48	-16.95	AVG	
5		0.5720	33.29	9.62	42.91	56.00	-13.09	QP	
6	*	0.5720	27.64	9.62	37.26	46.00	-8.74	AVG	
7		1.1434	26.42	9.63	36.05	56.00	-19.95	QP	
8		1.1434	24.49	9.63	34.12	46.00	-11.88	AVG	
9		2.1514	24.64	9.73	34.37	56.00	-21.63	QP	
10		2.1514	23.61	9.73	33.34	46.00	-12.66	AVG	
11		7.3500	26.29	9.90	36.19	60.00	-23.81	QP	
12		7.3500	23.96	9.90	33.86	50.00	-16.14	AVG	

## REMARKS:

- (1) Measurement Value = Reading Level + Correct Factor.
- (2) Margin Level = Measurement Value - Limit Value.

Test Mode	Normal	Tested Date	2024/12/24
Test Frequency	-	Phase	Neutral

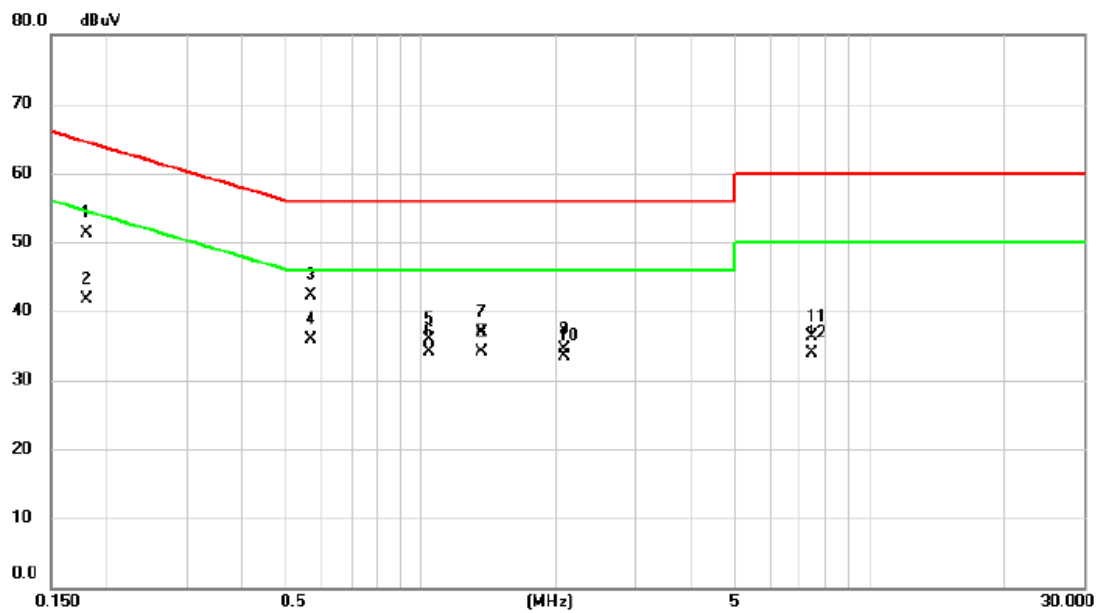


No.	Mk.	Freq.	Reading Level	Correct Factor	Measurement	Limit	Margin		
		MHz	dBuV	dB	dBuV	dBuV	dB	Detector	Comment
1		0.1710	41.33	9.62	50.95	64.91	-13.96	QP	
2		0.1710	28.42	9.62	38.04	54.91	-16.87	AVG	
3		0.4916	27.63	9.60	37.23	56.14	-18.91	QP	
4		0.4916	24.47	9.60	34.07	46.14	-12.07	AVG	
5		0.7205	26.42	9.62	36.04	56.00	-19.96	QP	
6	*	0.7205	24.34	9.62	33.96	46.00	-12.04	AVG	
7		1.3685	25.53	9.66	35.19	56.00	-20.81	QP	
8		1.3685	24.26	9.66	33.92	46.00	-12.08	AVG	
9		2.0840	24.57	9.72	34.29	56.00	-21.71	QP	
10		2.0840	23.65	9.72	33.37	46.00	-12.63	AVG	
11		7.4750	25.70	9.90	35.60	60.00	-24.40	QP	
12		7.4750	23.86	9.90	33.76	50.00	-16.24	AVG	

## REMARKS:

- (1) Measurement Value = Reading Level + Correct Factor.
- (2) Margin Level = Measurement Value - Limit Value.

Test Mode	Idle	Tested Date	2024/12/24
Test Frequency	-	Phase	Line

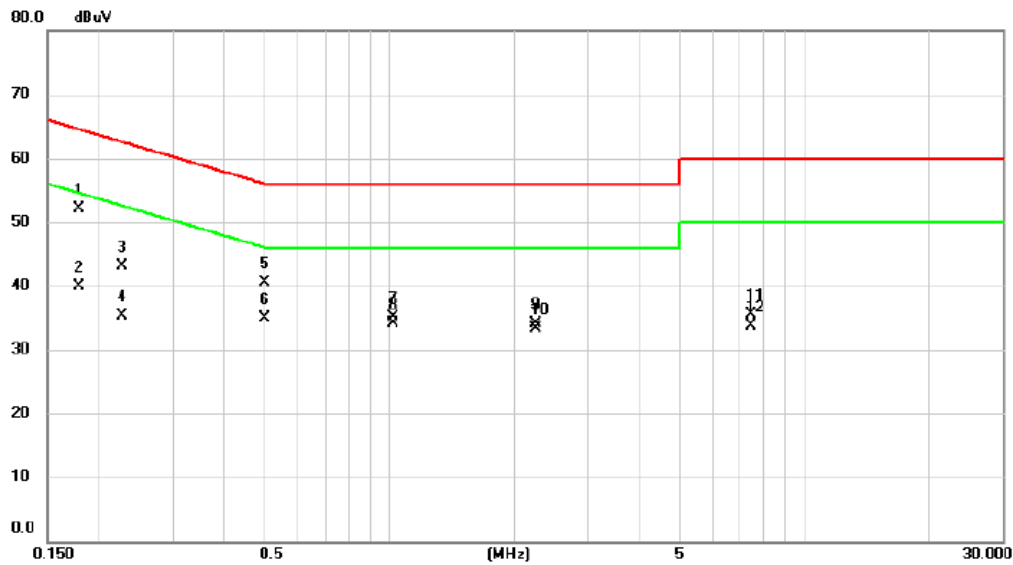


No.	Mk.	Freq.	Reading Level	Correct Factor	Measurement	Limit	Margin		
		MHz	dBuV	dB	dBuV	dBuV	dB	Detector	Comment
1		0.1794	41.68	9.63	51.31	64.51	-13.20	QP	
2		0.1794	32.05	9.63	41.68	54.51	-12.83	AVG	
3		0.5675	32.63	9.62	42.25	56.00	-13.75	QP	
4	*	0.5675	26.25	9.62	35.87	46.00	-10.13	AVG	
5		1.0400	26.21	9.62	35.83	56.00	-20.17	QP	
6		1.0400	24.54	9.62	34.16	46.00	-11.84	AVG	
7		1.3595	27.17	9.66	36.83	56.00	-19.17	QP	
8		1.3595	24.44	9.66	34.10	46.00	-11.90	AVG	
9		2.0885	24.84	9.72	34.56	56.00	-21.44	QP	
10		2.0885	23.70	9.72	33.42	46.00	-12.58	AVG	
11		7.4250	26.35	9.90	36.25	60.00	-23.75	QP	
12		7.4250	23.99	9.90	33.89	50.00	-16.11	AVG	

## REMARKS:

- (1) Measurement Value = Reading Level + Correct Factor.
- (2) Margin Level = Measurement Value - Limit Value.

Test Mode	Idle	Tested Date	2024/12/24
Test Frequency	-	Phase	Neutral



No. Mk.	Freq. MHz	Reading Level dBuV	Correct Factor dB	Measure- ment dBuV	Limit dBuV	Margin dB	Detector	Comment
1	0.1783	42.41	9.62	52.03	64.56	-12.53	QP	
2	0.1783	30.38	9.62	40.00	54.56	-14.56	AVG	
3	0.2273	33.48	9.62	43.10	62.55	-19.45	QP	
4	0.2273	25.78	9.62	35.40	52.55	-17.15	AVG	
5	0.5000	30.85	9.61	40.46	56.00	-15.54	QP	
6 *	0.5000	25.30	9.61	34.91	46.00	-11.09	AVG	
7	1.0175	25.48	9.62	35.10	56.00	-20.90	QP	
8	1.0175	24.47	9.62	34.09	46.00	-11.91	AVG	
9	2.2460	24.34	9.73	34.07	56.00	-21.93	QP	
10	2.2460	23.48	9.73	33.21	46.00	-12.79	AVG	
11	7.4500	25.66	9.90	35.56	60.00	-24.44	QP	
12	7.4500	23.85	9.90	33.75	50.00	-16.25	AVG	

## REMARKS:

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

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

## **APPENDIX B    RADIATED EMISSIONS - 9 KHZ TO 30 MHZ**

Test Mode	TX	Test Date	2024/11/15
Test Frequency	13.56MHz	Polarization	Vertical
Temp	25°C	Hum.	62%

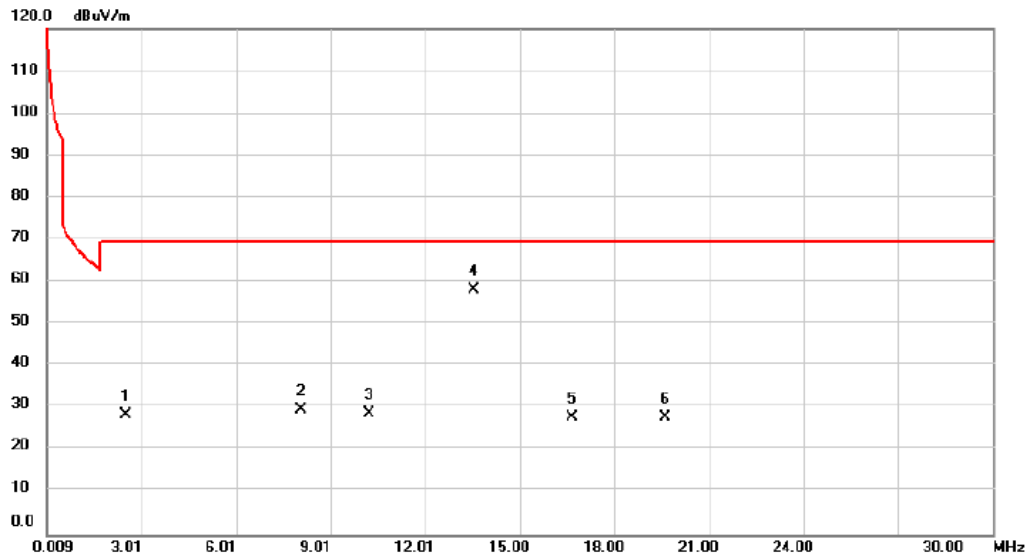


No.	Mk.	Freq. MHz	Reading Level dBuV	Correct Factor dB	Measure- ment dBuV/m	Limit dBuV/m	Margin dB	Detector	Comment
1		5.9772	33.09	-4.29	28.80	69.54	-40.74	QP	
2		8.6464	33.85	-3.70	30.15	69.54	-39.39	QP	
3	*	13.5600	48.82	-4.46	44.36	69.54	-25.18	QP	
4		16.8340	32.57	-4.30	28.27	69.54	-41.27	QP	
5		20.7628	31.98	-5.05	26.93	69.54	-42.61	QP	
6		25.4114	32.83	-6.04	26.79	69.54	-42.75	QP	

## REMARKS:

- (1) Measurement Value = Reading Level + Correct Factor.
- (2) Margin Level = Measurement Value - Limit Value.

Test Mode	TX	Test Date	2024/11/15
Test Frequency	13.56MHz	Polarization	Vertical
Temp	25°C	Hum.	62%



No.	Mk.	Freq. MHz	Reading Level dBuV	Correct Factor dB	Measure- ment dBuV/m	Limit dBuV/m	Margin dB	Detector	Comment
1		2.4983	32.22	-3.95	28.27	69.54	-41.27	QP	
2		8.0466	33.36	-3.70	29.66	69.54	-39.88	QP	
3		10.2060	32.47	-3.69	28.78	69.54	-40.76	QP	
4	*	13.5600	62.50	-4.46	58.04	69.54	-11.50	QP	
5		16.6540	32.13	-4.30	27.83	69.54	-41.71	QP	
6		19.6231	32.37	-4.68	27.69	69.54	-41.85	QP	

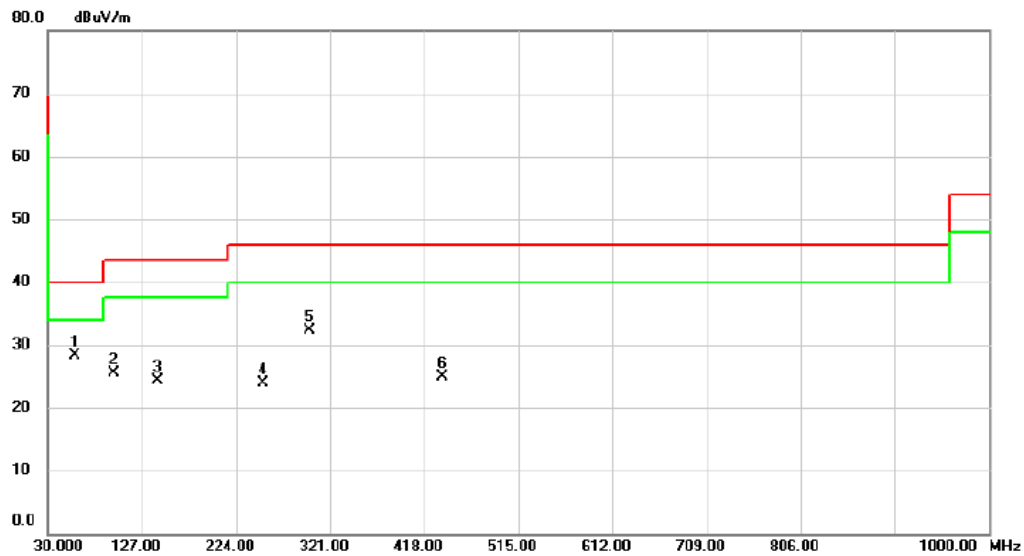
## REMARKS:

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

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

## **APPENDIX C    RADIATED EMISSIONS - 30 MHZ TO 1 GHZ**

Test Mode	TX	Test Date	2024/11/15
Test Frequency	13.56MHz	Polarization	Vertical
Temp	25°C	Hum.	62%



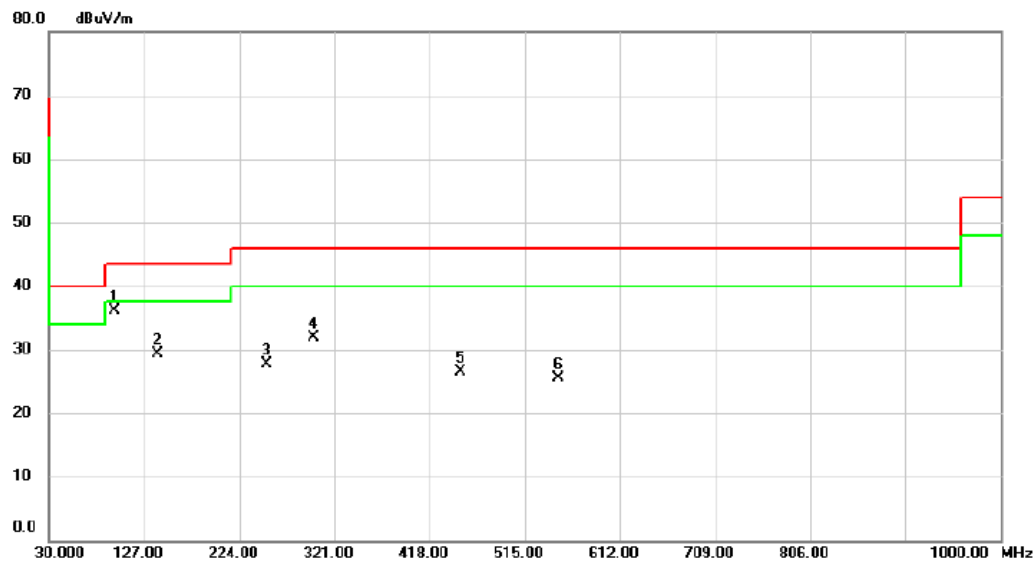
No.	Mk.	Freq. MHz	Reading Level dBuV	Correct Factor dB	Measure- ment dBuV/m	Limit dBuV/m	Margin dB	Detector	Comment
1	*	58.1300	40.00	-11.75	28.25	40.00	-11.75	peak	
2		97.9000	41.82	-16.34	25.48	43.50	-18.02	peak	
3		142.5200	35.99	-11.72	24.27	43.50	-19.23	peak	
4		251.1600	35.75	-11.82	23.93	46.00	-22.07	peak	
5		299.6600	42.21	-10.00	32.21	46.00	-13.79	peak	
6		436.4300	31.10	-6.12	24.98	46.00	-21.02	peak	

## REMARKS:

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

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

Test Mode	TX	Test Date	2024/11/15
Test Frequency	13.56MHz	Polarization	Horizontal
Temp	25°C	Hum.	62%



No.	Mk.	Freq. MHz	Reading Level dBuV	Correct Factor dB	Measure- ment dBuV/m	Limit dBuV/m	Margin dB	Detector	Comment
1	*	96.9300	52.60	-16.44	36.16	43.50	-7.34	peak	
2		140.5800	41.16	-11.88	29.28	43.50	-14.22	peak	
3		252.1300	39.57	-11.79	27.78	46.00	-18.22	peak	
4		299.6600	41.94	-10.00	31.94	46.00	-14.06	peak	
5		450.0100	32.40	-5.81	26.59	46.00	-19.41	peak	
6		549.9200	29.51	-3.98	25.53	46.00	-20.47	peak	

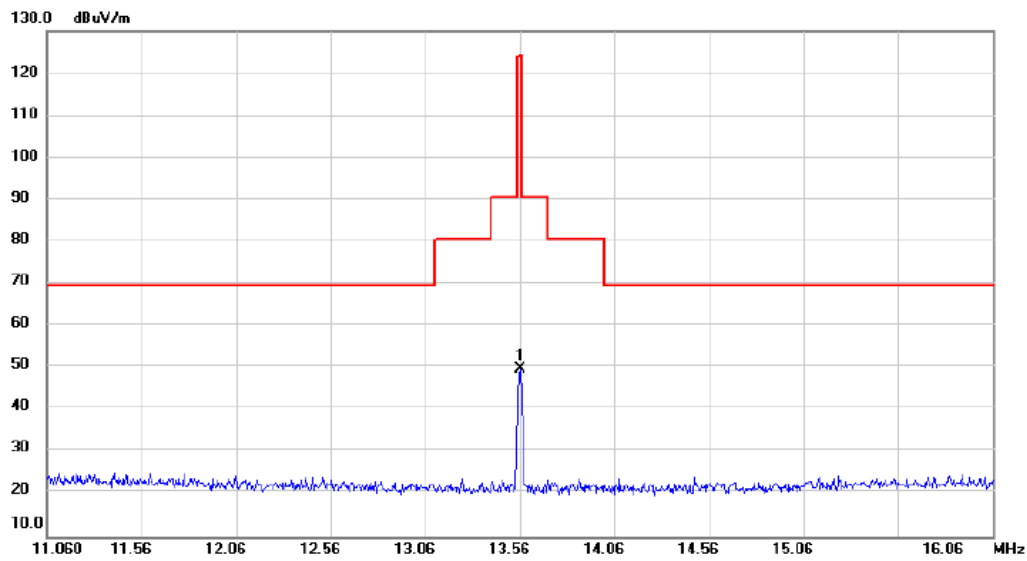
## REMARKS:

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

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

**APPENDIX D    RADIATED EMISSIONS - FCC PART 15.225**

Test Mode	TX	Test Date	2025/1/14
Test Frequency	13.56MHz	Polarization	Vertical
Temp	25°C	Hum.	65%

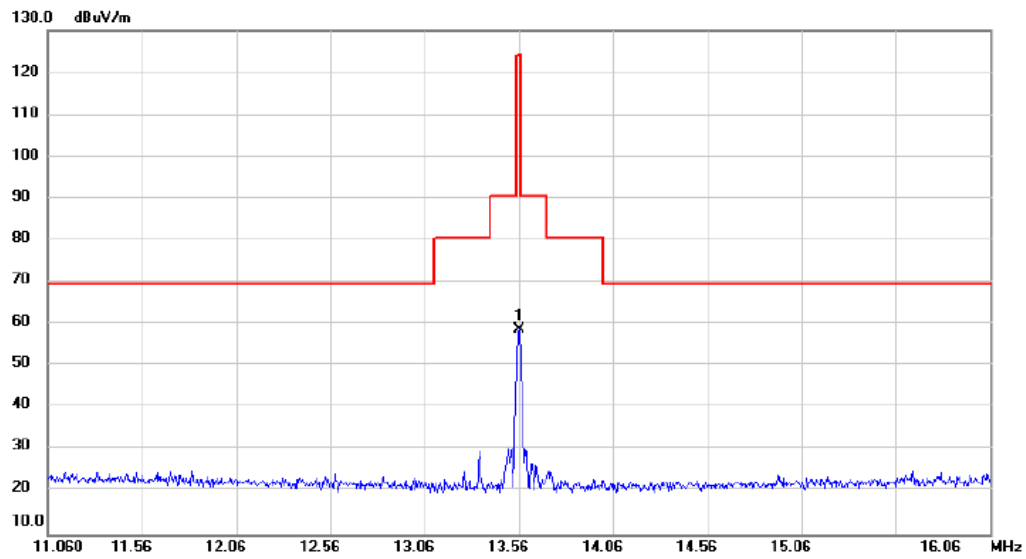


No.	Mk.	Freq.	Reading Level	Correct Factor	Measurement	Limit	Margin		
		MHz	dBuV	dB	dBuV/m	dBuV/m	dB	Detector	Comment
1	*	13.5600	54.14	-4.46	49.68	124.00	-74.32	peak	

## REMARKS:

- (1) Measurement Value = Reading Level + Correct Factor.
- (2) Margin Level = Measurement Value - Limit Value.

Test Mode	TX	Test Date	2025/1/14
Test Frequency	13.56MHz	Polarization	Horizontal
Temp	25°C	Hum.	65%



No.	Mk.	Freq.	Reading Level	Correct Factor	Measurement	Limit	Margin		
		MHz	dBuV	dB	dBuV/m	dBuV/m	dB	Detector	Comment
1	*	13.5600	63.30	-4.46	58.84	124.00	-65.16	peak	

## REMARKS:

- (1) Measurement Value = Reading Level + Correct Factor.
- (2) Margin Level = Measurement Value - Limit Value.

## **APPENDIX E    FREQUENCY STABILITY MEASUREMENT**

Test Mode	TX	Tested Date	2024/11/4
-----------	----	-------------	-----------

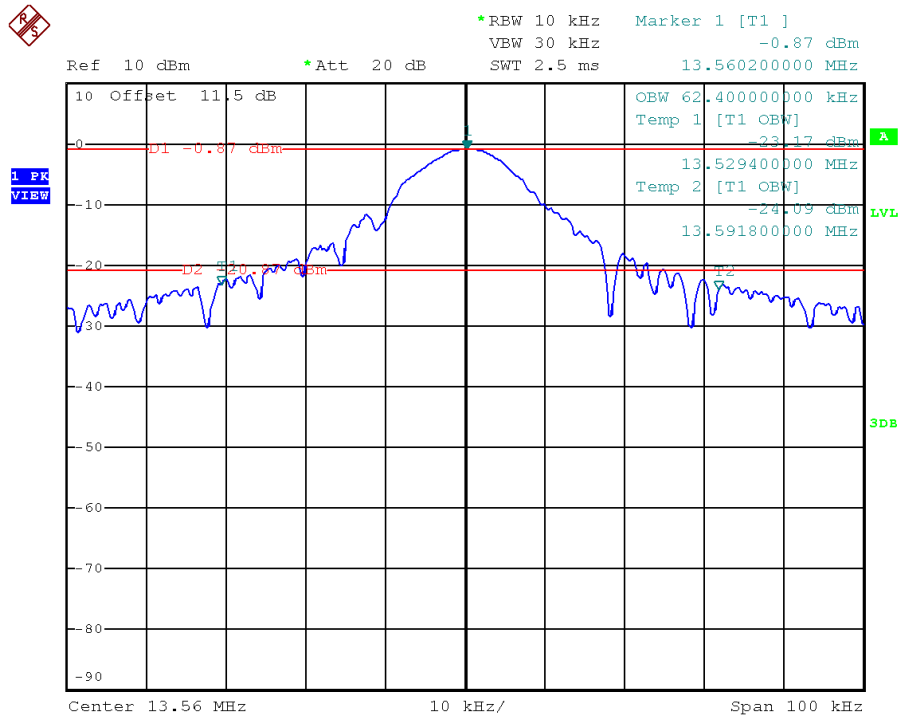
Temperature	Modulation Mode	Test Freq.	0 min	2 min	5 min	10 min	0 min	2 min	5 min	10 min	Limit	Result
Normal												
T <sub>20°C</sub> V <sub>max</sub>	CW	13.56	13.560200	13.560200	13.560200	13.560200	0.001475	0.001475	0.001475	0.001475	±0.01%	Pass
T <sub>20°C</sub> V <sub>min</sub>	CW	13.56	13.560200	13.560200	13.560200	13.560200	0.001475	0.001475	0.001475	0.001475		Pass
Extreme												
T <sub>50°C</sub> V <sub>nom</sub>	CW	13.56	13.560200	13.560200	13.560200	13.560200	0.001475	0.001475	0.001475	0.001475	±0.01%	Pass
T <sub>40°C</sub> V <sub>nom</sub>	CW	13.56	13.560200	13.560200	13.560200	13.560200	0.001475	0.001475	0.001475	0.001475		Pass
T <sub>30°C</sub> V <sub>nom</sub>	CW	13.56	13.560200	13.560200	13.560200	13.560200	0.001475	0.001475	0.001475	0.001475		Pass
T <sub>20°C</sub> V <sub>nom</sub>	CW	13.56	13.560200	13.560200	13.560200	13.560200	0.001475	0.001475	0.001475	0.001475		Pass
T <sub>10°C</sub> V <sub>nom</sub>	CW	13.56	13.560200	13.560200	13.560200	13.560200	0.001475	0.001475	0.001475	0.001475		Pass
T <sub>0°C</sub> V <sub>nom</sub>	CW	13.56	13.560200	13.560200	13.560200	13.560200	0.001475	0.001475	0.001475	0.001475		Pass
T <sub>-10°C</sub> V <sub>nom</sub>	CW	13.56	13.560200	13.560200	13.560200	13.560200	0.001475	0.001475	0.001475	0.001475		Pass
T <sub>-20°C</sub> V <sub>nom</sub>	CW	13.56	13.560200	13.560200	13.560200	13.560200	0.001475	0.001475	0.001475	0.001475		Pass

NOTE: V<sub>max</sub> = 13.2V, V<sub>nom</sub> = 12V, V<sub>min</sub> = 10.8V.

## **APPENDIX F    20 DB BANDWIDTH**

Test Mode	TX
-----------	----

Frequency (MHz)	20 dB Bandwidth (MHz)	Operated Frequency Range (MHz)	Designated Frequency Band (MHz)	Result
13.56	0.0624	13.56	0.014	PASS



Date: 17.JAN.2025 14:17:53

End of Test Report