

TEST REPORT

Application No.: KSCR2609002297LM
FCC ID: 2A4AE-C21ZC002
Applicant: Pujiang Yuansheng Electronic Commerce Co., Ltd.
Address of Applicant: No.388 Yidianhong Avenue,Xianhua Street,Pujiang County, Zhejiang Province
Manufacturer: Pujiang Yuansheng Electronic Commerce Co., Ltd.
Address of Manufacturer: No.388 Yidianhong Avenue,Xianhua Street,Pujiang County, Zhejiang Province
Factory: Zhejiang Puzhao Photoelectric Technology Co., Ltd
Address of Factory: No.388 Yidianhong Avenue,Xianhua Street,Pujiang County, Zhejiang Province
Equipment Under Test (EUT):
EUT Name: LED Motion Sensor Garage Ceiling Light
Model No.: C21ZC002-E0100A15
Trade Mark: SANSI
Standard(s) : 47 CFR Part 15, Subpart C 15.249
Date of Receipt: 2026-09-03
Date of Test: 2026-09-03 to 2026-09-07
Date of Issue: 2026-09-08

Test Result:
Pass*

* In the configuration tested, the EUT complied with the standards specified above.

This document is issued by the Company subject to its General Conditions of Service printed overleaf, available on request or accessible at <http://www.sgs.com/en/Terms-and-Conditions> and, for electronic format documents, subject to Terms and Conditions for Electronic Documents at <http://www.sgs.com/en/Terms-and-Conditions/Terms-e-Document>. Attention is drawn to the limitation of liability, indemnification and jurisdiction issues defined therein.

Any holder of this document is advised that information contained hereon reflects the Company's findings at the time of its intervention only and within the limits of Client's instructions, if any. The Company's sole responsibility is to its Client and this document does not exonerate parties to a transaction from exercising all their rights and obligations under the transaction documents. This document cannot be reproduced except in full, without prior written approval of the Company. Any unauthorized alteration, forgery or falsification of the content or appearance of this document is unlawful and offenders may be prosecuted to the fullest extent of the law.

Unless otherwise stated the results shown in this test report refer only to the sample(s) tested and such sample(s) are retained for 30 days only.

Revision Record			
Version	Description	Date	Remark
00	Original	2026-09-08	/

Authorized for issue by:				
Prepared By		Damon Zhou		
		Damon_Zhou/Project Engineer		
Approved By		Terry Hou		
		Terry Hou /Reviewer		

2 Test Summary

Radio Spectrum Technical Requirement				
Item	Standard	Method	Requirement	Result
Antenna Requirement	47 CFR Part 15, Subpart C 15.249	N/A	47 CFR Part 15, Subpart C 15.203	Pass

Radio Spectrum Matter Part				
Item	Standard	Method	Requirement	Result
Conducted Emissions at AC Power Line (150kHz-30MHz)	47 CFR Part 15, Subpart C 15.249	ANSI C63.10-2020+Cor.1-2023 Section 6.2	47 CFR Part 15, Subpart C 15.207	Pass
Field Strength of the Fundamental Signal (15.249(a))		ANSI C63.10-2020+Cor.1-2023 Section 6.5&6.6	47 CFR Part 15, Subpart C 15.249(a)	Pass
Restricted Band Around Fundamental Frequency		ANSI C63.10-2020+Cor.1-2023 Section 6.10.5	47 CFR Part 15, Subpart C 15.205 & 15.249(d) & 15.209	Pass
Radiated Emissions Below 1GHz		ANSI C63.10-2020+Cor.1-2023 Section 6.4&6.5	47 CFR Part 15, Subpart C 15.209 & 15.249 (a),(d)	Pass
Radiated Emissions Above 1GHz		ANSI C63.10-2020+Cor.1-2023 Section 6.6	47 CFR Part 15, Subpart C 15.209 & 15.249 (a),(d)	Pass
20dB Bandwidth		ANSI C63.10-2020+Cor.1-2023 Section 6.9	47 CFR Part 15, Subpart C 15.215	Pass

3 Contents

	Page
1 COVER PAGE	1
2 Test Summary.....	3
3 Contents	4
4 General Information.....	5
4.1 Details of E.U.T.	5
4.2 Description of Support Units.....	5
4.3 Measurement Uncertainty	5
4.4 Test Location	6
4.5 Test Facility.....	6
4.6 Deviation from Standards	6
4.7 Abnormalities from Standard Conditions	6
5 Equipment List	7
6 Radio Spectrum Technical Requirement.....	8
6.1 Antenna Requirement	8
7 Radio Spectrum Matter Test Results	9
7.1 Conducted Emissions at AC Power Line (150kHz-30MHz)	9
7.2 Field Strength of the Fundamental Signal (15.249(a))	13
7.3 Restricted Band Around Fundamental Frequency.....	15
7.4 Radiated Emissions Below 1GHz	19
7.5 Radiated Emissions Above 1GHz.....	23
7.6 20dB Bandwidth	29
8 Test Setup Photo	31
9 EUT Constructional Details (EUT Photos).....	31

4 General Information

4.1 Details of E.U.T.

Power supply:	AC 120V, 60Hz
Test voltage:	AC 120V, 60Hz
Antenna Type:	Integral Antenna
Number of Channels:	1
Modulation Type:	FMCW
Operation Frequency:	5725MHz-5850MHz

4.2 Description of Support Units

Description	Manufacturer	Model No.	Serial No.
--	--	--	--
The EUT has been tested as an independent unit.			

4.3 Measurement Uncertainty

No.	Item	Measurement Uncertainty
1	Radio Frequency	8.4×10^{-8}
2	Timeout	2s
3	Duty Cycle	0.37%
4	Occupied Bandwidth	3%
5	RF Conducted Power	0.6dB
6	RF Power Density	2.9dB
7	Conducted Spurious Emissions	0.75dB
8	RF Radiated Power	5.2dB (Below 1GHz) 5.9dB (Above 1GHz)
9	Radiated Spurious Emission Test	4.2dB (Below 30MHz) 4.5dB (30MHz-1GHz) 5.1dB (1GHz-18GHz) 5.4dB (Above 18GHz)
10	Temperature Test	1°C
11	Humidity Test	3%
12	Supply Voltages	1.5%
13	Time	3%

Note: The measurement uncertainty represents an expanded uncertainty expressed at approximately the 95% confidence level using a coverage factor of k=2.

4.4 Test Location

All tests were performed at:

Compliance Certification Services (Kunshan) Inc.

No.10 Weiye Rd, Innovation park, Eco&Tec, Development Zone, Kunshan City, Jiangsu, China.

Tel: +86 512 5735 5888 Fax: +86 512 5737 0818

No tests were sub-contracted.

Note:

1. SGS is not responsible for wrong test results due to incorrect information (e.g., max. internal working frequency, antenna gain, cable loss, etc) is provided by the applicant. (If applicable).
2. SGS is not responsible for the authenticity, integrity and the validity of the conclusion based on results of the data provided by applicant. (If applicable).
3. Sample source: sent by customer.

4.5 Test Facility

The test facility is recognized, certified, or accredited by the following organizations:

• **A2LA (Certificate No. 2541.01)**

Compliance Certification Services (Kunshan) Inc. is accredited by the American Association for Laboratory Accreditation (A2LA).

• **FCC (Designation Number: CN1172)**

Compliance Certification Services (Kunshan) Inc. has been recognized as an accredited testing laboratory.

• **ISED (CAB Identifier: CN0072)**

Compliance Certification Services (Kunshan) Inc. has been recognized by Innovation, Science and Economic Development Canada (ISED) as an accredited testing laboratory.

Company Number: 2324E

• **VCCI (Member No:1938)**

The 3m and 10m Semi-anechoic chamber and Shielded Room of Compliance Certification Services (Kunshan) Inc. has been registered in accordance with the Regulations for Voluntary Control Measures with Registration No.: R-20134, R-11600, C-11707, T-11499, G-10216 respectively.

4.6 Deviation from Standards

None

4.7 Abnormalities from Standard Conditions

None

5 Equipment List

Item	Equipment	Manufacturer	Model	Inventory No	Cal Date	Cal. Due Date
Conducted Emission at Mains Terminals						
1	EMI Test Receive	R&S	ESCI	KS301196	07/06/2026	07/05/2027
2	LISN	R&S	ENV216	KS301197	01/08/2026	01/07/2027
3	LISN	Schwarzbeck	NNLK 8129	KS301091	01/08/2026	01/07/2027
4	Pulse Limiter	R&S	ESH3-Z2	KUS1902E001	12/18/2025	12/17/2026
5	CE test Cable	Thermax	/	CZ301102	12/18/2025	12/17/2026
6	Software	Faratronic	E3	/	N.C.R	N.C.R
RF Conducted Test						
1	Spectrum Analyzer	Keysight	N9020A	KUS1911E004-2	07/07/2026	07/06/2027
2	Spectrum Analyzer	Keysight	N9020A	KUS2001M001-2	07/07/2026	07/06/2027
3	Spectrum Analyzer	Keysight	N9030B	KSEM021-1	12/17/2025	12/16/2026
4	Signal Generator	R&S	SMBV100B	KSEM032	12/17/2025	12/16/2026
5	Signal Generator	R&S	SMW200A	KSEM020-1	07/07/2026	07/06/2027
6	Signal Generator	Agilent	N5182A	KUS2001M001-1	07/07/2026	07/06/2027
7	Signal Generator	Agilent	E8257C	KS301066	07/07/2026	07/06/2027
8	Radio Communication Test Station	Anritsu	MT8000A	KSEM001-1	07/07/2026	07/06/2027
9	Radio Communication Analyzer	Anritsu	MT8821C	KSEM002-1	12/17/2025	12/16/2026
10	Universal Radio Communication Tester	R&S	CMW500	KUS1911E004-1	07/07/2026	07/06/2027
11	Switcher	TST	FY562	KUS2001M001-4	12/17/2025	12/16/2026
12	Conducted Test Cable	Thermax	RF01-RF04	CZ301111- CZ301120	12/17/2025	12/16/2026
13	Temp. / Humidity Chamber	TERCHY	MHK-120AK	KS301190	07/07/2026	07/06/2027
14	Temperature & Humidity Recorder	Renke Control	RS-WS-N01-6J	KSEM024-5	12/30/2025	12/29/2026
15	Software	BST	TST-PASS	/	NCR	NCR
RF Radiated Test						
1	Spectrum Analyzer	R&S	FSV40	KUS1806E003	07/06/2026	07/05/2027
2	Universal Radio Communication Tester	R&S	CMW500	KSEM009-1	12/17/2025	12/16/2026
3	Signal Generator	Agilent	E8257C	KS301066	07/07/2026	07/06/2027
4	Loop Antenna (9KHz-30MHz)	COM-POWER	AL-130R	KUS1806E001	07/07/2026	07/06/2027
5	Bilog Antenna (30MHz-1GHz)	TESEQ	CBL 6112D	KUS1806E005	07/07/2026	07/06/2027
6	Horn-antenna(1-18GHz)	Schwarzbeck	BBHA9120D	KS301079	01/11/2026	01/10/2028
7	Horn Antenna(18-40GHz)	Schwarzbeck	BBHA9170	CZ301058	01/11/2026	01/10/2028
8	Amplifier(30MHz~1GHz)	TST	LNA009100G30	KSEM061	12/18/2025	12/17/2026
9	Amplifier(400MHz~8GHz)	TST	LNA004080G30	KSEM062	12/18/2025	12/17/2026
10	Amplifier(1GHz~18GHz)	TST	LNA010180G45	KSEM039	07/07/2026	07/06/2027
11	Amplifier(18~40GHz)	TST	LNA180400G40	KSEM038	07/07/2026	07/06/2027
12	Radiation Test Cable	REBES MICROWAVE	A81-SMSM-10M	CZ301097- CZ301100	11/14/2025	11/13/2026
13	Temperature & Humidity Recorder	Renke Control	RS-WS-N01-6J	KSEM024-4	12/30/2025	12/29/2026
14	Software	ESE	E3_V 6.111221a	/	NCR	NCR
15	Measurement Software	Tonscend	JS32-RE V5.0.0.1	/	NCR	NCR
16	Measurement Software	Tonscend	JS32-RSE V5.0.0.0	/	NCR	NCR

6 Radio Spectrum Technical Requirement

6.1 Antenna Requirement

6.1.1 Test Requirement:

47 CFR Part 15, Subpart C 15.203

6.1.2 Conclusion

15.203 requirement:

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, 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.

EUT Antenna:

The antenna is integrated on the main PCB and no consideration of replacement.

Antenna location: Refer to Internal photos

7 Radio Spectrum Matter Test Results

7.1 Conducted Emissions at AC Power Line (150kHz-30MHz)

Test Requirement 47 CFR Part 15, Subpart C 15.207
Test Method: ANSI C63.10-2020+Cor.1-2023 Section 6.2

Limit:

Frequency of emission(MHz)	Conducted limit(dB μ V)	
	Quasi-peak	Average
0.15-0.5	66 to 56*	56 to 46*
0.5-5	56	46
5-30	60	50

*Decreases with the logarithm of the frequency.
Detector: Peak for pre-scan (9kHz resolution bandwidth) 0.15M to 30MHz

7.1.1 E.U.T. Operation

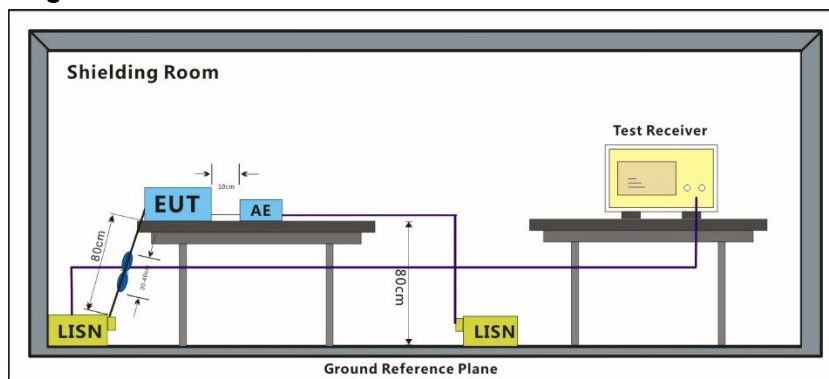
Operating Environment:

Temperature: 23.5 °C Humidity: 45.6 % RH Atmospheric Pressure: 1010 mbar

7.1.2 Test Mode Description

Pre-scan / Final test	Mode Code	Description
Final test	00	TX mode_Keep the EUT in transmitting with modulation mode.

7.1.3 Test Setup Diagram

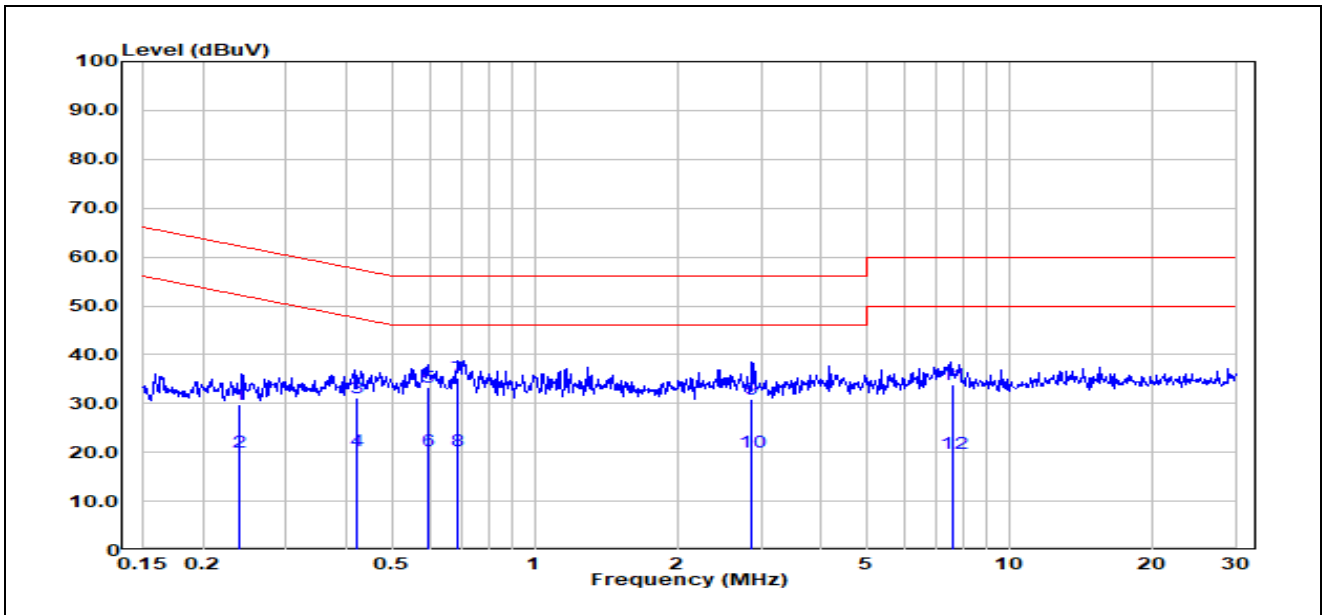


7.1.4 Measurement Procedure and Data

- 1) The mains terminal disturbance voltage test was conducted in a shielded room.
- 2) The EUT was connected to AC power source through a LISN 1 (Line Impedance Stabilization Network) which provides a 50ohm/50μH + 5ohm linear impedance. The power cables of all other units of the EUT were connected to a second LISN 2, which was bonded to the ground reference plane in the same way as the LISN 1 for the unit being measured. A multiple socket outlet strip was used to connect multiple power cables to a single LISN provided the rating of the LISN was not exceeded.
- 3) The tabletop EUT was placed upon a non-metallic table 0.8m above the ground reference plane. And for floor-standing arrangement, the EUT was placed on the horizontal ground reference plane.
- 4) The test was performed with a vertical ground reference plane. The rear of the EUT shall be 0.4 m from the vertical ground reference plane. The vertical ground reference plane was bonded to the horizontal ground reference plane. The LISN 1 was placed 0.8 m from the boundary of the unit under test and bonded to a ground reference plane for LISNs mounted on top of the ground reference plane. This distance was between the closest points of the LISN 1 and the EUT. All other units of the EUT and associated equipment was at least 0.8 m from the LISN 2.
- 5) In order to find the maximum emission, the relative positions of equipment and all of the interface cables must be changed according to ANSI C63.10 on conducted measurement.

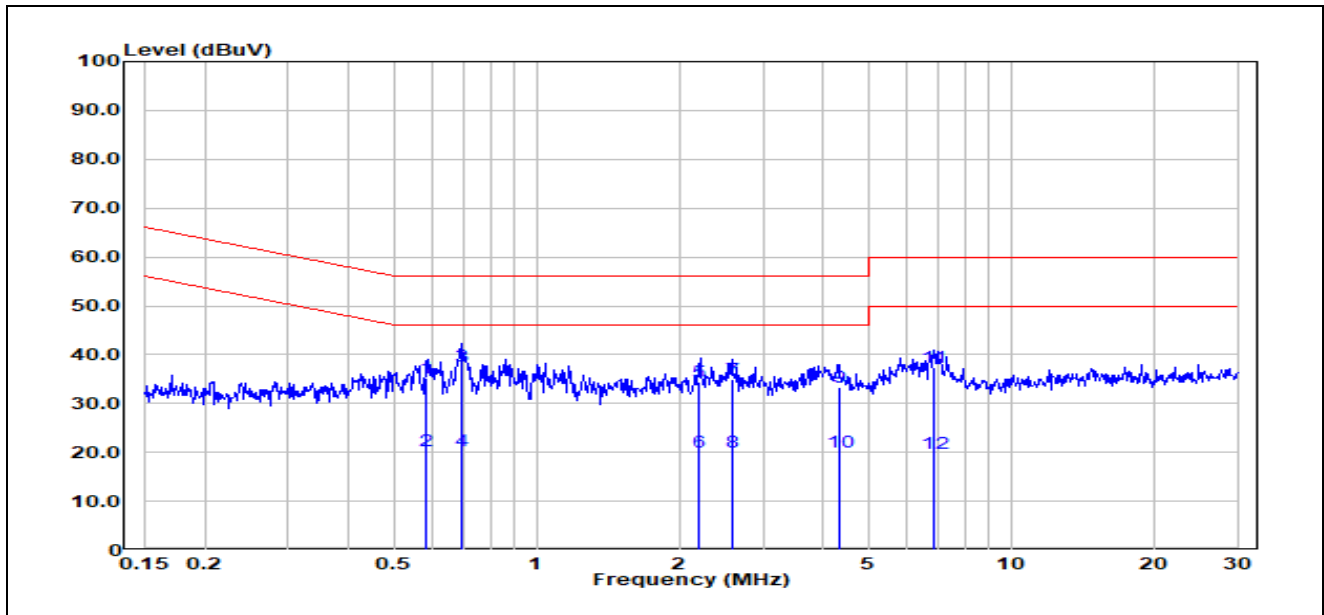
Remark : $\text{Level} = \text{Read Level} + \text{Cable Loss} + \text{LISN Factor}$

Test Mode: 00; Line: Live line



No.	Frequency (MHz)	Reading (dBuV)	Correct Factor(dB)	Result (dBuV)	Limit (dBuV)	Margin (dB)	Remark
1	0.2398	9.77	20.13	29.90	52.10	-22.20	Average
2	0.2398	0.00	20.13	20.13	62.10	-41.97	QP
3	0.4202	10.99	20.21	31.21	47.44	-16.24	Average
4	0.4202	0.00	20.21	20.21	57.44	-37.23	QP
5	0.5964	13.23	20.20	33.43	46.00	-12.57	Average
6	0.5964	0.00	20.20	20.20	56.00	-35.80	QP
7	0.6874	15.06	20.19	35.25	46.00	-10.75	Average
8	0.6874	0.00	20.19	20.19	56.00	-35.81	QP
9	2.8557	10.86	20.16	31.02	46.00	-14.98	Average
10	2.8557	0.00	20.16	20.16	56.00	-35.84	QP
11	7.6193	14.19	19.79	33.98	50.00	-16.02	Average
12	7.6193	0.00	19.79	19.79	60.00	-40.21	QP

Test Mode: 00; Line: Neutral Line



No.	Frequency (MHz)	Reading (dBuV)	Correct Factor(dB)	Result (dBuV)	Limit (dBuV)	Margin (dB)	Remark
1	0.5876	15.10	20.20	35.30	46.00	-10.70	Average
2	0.5876	0.00	20.20	20.20	56.00	-35.80	QP
3	0.6949	17.35	20.22	37.57	46.00	-8.43	Average
4	0.6949	0.00	20.22	20.22	56.00	-35.78	QP
5	2.1917	14.24	20.08	34.32	46.00	-11.68	Average
6	2.1917	0.00	20.08	20.08	56.00	-35.92	QP
7	2.5902	14.76	20.11	34.87	46.00	-11.13	Average
8	2.5902	0.00	20.11	20.11	56.00	-35.89	QP
9	4.3496	13.21	20.00	33.21	46.00	-12.79	Average
10	4.3496	0.00	20.00	20.00	56.00	-36.00	QP
11	6.8846	17.67	19.75	37.42	50.00	-12.58	Average
12	6.8846	0.00	19.75	19.75	60.00	-40.25	QP

7.2 Field Strength of the Fundamental Signal (15.249(a))

Test Requirement 47 CFR Part 15, Subpart C 15.249(a)

Test Method: ANSI C63.10-2020+Cor.1-2023 Section 6.5&6.6

Limit:

Fundamental frequency(MHz)	Field strength of fundamental(millivolts/meter)	Field strength of harmonics(microvolts/meter)
902-928	50	500
2400-2483.5	50	500
5725-5875	50	500
24000-24250	250	2500

Remark: The frequencies above 1000MHz are based on average limits. However, the peak field strength of any emission shall not exceed the maximum permitted average limits specified above by more than 20 dB under any condition of modulation.

For fundamental frequency in "902-928MHz", the field strength of fundamental is based on Quasi-Peak.

7.2.1 E.U.T. Operation

Operating Environment:

Temperature: 22.1 °C

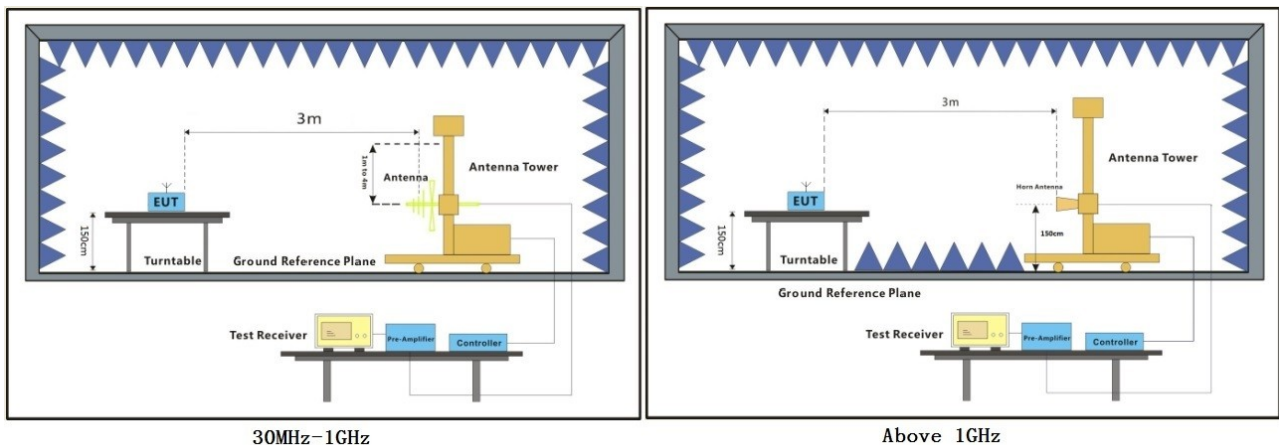
Humidity: 48.9 % RH

Atmospheric Pressure: 1010 mbar

7.2.2 Test Mode Description

Pre-scan / Final test	Mode Code	Description
Final test	00	TX mode_Keep the EUT in transmitting with modulation mode.

7.2.3 Test Setup Diagram



7.2.4 Measurement Procedure and Data

- a. For below 1GHz, the EUT was placed on the top of a rotating table 0.8 meters above the ground at a 3 or 10 meter semi-anechoic chamber. The table was rotated 360 degrees to determine the position of the highest radiation.
- b. For above 1GHz, the EUT was placed on the top of a rotating table 1.5 meters above the ground at a 3 meter fully-anechoic chamber. The table was rotated 360 degrees to determine the position of the highest radiation.
- c. The EUT was set 3 or 10 meters away from the interference-receiving antenna, which was mounted on the top of a variable-height antenna tower.
- d. The antenna height is varied from one meter to four meters above the ground to determine the maximum value of the field strength. Both horizontal and vertical polarizations of the antenna are set to make the measurement.
- e. For each suspected emission, the EUT was arranged to its worst case and then the antenna was tuned to heights from 1 meter to 4 meters (for the test frequency of below 30MHz, the antenna was tuned to heights 1 meter) and the rotatable table was turned from 0 degrees to 360 degrees to find the maximum reading.
- f. The test-receiver system was set to Peak Detect Function and Specified Bandwidth with Maximum Hold Mode.
- g. If the emission level of the EUT in peak mode was 10dB lower than the limit specified, then testing could be stopped and the peak values of the EUT would be reported. Otherwise the emissions that did not have 10dB margin would be re-tested one by one using peak, quasi-peak or average method as specified and then reported in a data sheet.
- h. Test the EUT in the lowest channel, the middle channel, the Highest channel.
- i. The radiation measurements are performed in X, Y, Z axis positioning for Transmitting mode, and found the X axis positioning which it is the worst case.
- j. Repeat above procedures until all frequencies measured was complete.

Remark: Level= Read Level+ Cable Loss+ Antenna Factor- Preamp Factor

Frequency (MHz)	Read Level (dBuV)	Factor (dB/m)	Level (dBuV/m)	Limit Line (dBuV/m)	Over Limit (dB)	Detector	Polarization
5825	90.85	-11.96	78.89	94	-15.11	Peak	Horizontal
	95.22	-11.96	83.26	94	-10.74	Peak	Vertical

Remark:

- 1) The basic equation with a sample calculation is as follows: Level = Read Level + Factor.

(The Factor is calculated by adding the Antenna Factor, Cable Loss and Preamp Factor)

If the Peak value below the Average Limit, the Average test doesn't perform for this submission.

7.3 Restricted Band Around Fundamental Frequency

Test Requirement 47 CFR Part 15, Subpart C 15.205 & 15.249(d) & 15.209

Test Method: ANSI C63.10-2020+Cor.1-2023 Section 6.10.5

Limit:

Frequency	Limit (dBuV/m @3m)	Remark
30MHz-88MHz	40.0	Quasi-peak Value
88MHz-216MHz	43.5	Quasi-peak Value
216MHz-960MHz	46.0	Quasi-peak Value
960MHz-1GHz	54.0	Quasi-peak Value
Above 1GHz	54.0	Average Value
Above 1GHz	74.0	Peak Value

Emission radiated outside of the specified frequency bands, except for harmonics, shall be attenuated by at least 50 dB below the level of the fundamental or to the general radiated emission limits in Section 15.209, whichever is the lesser attenuation.

7.3.1 E.U.T. Operation

Operating Environment:

Temperature: 22.2 °C

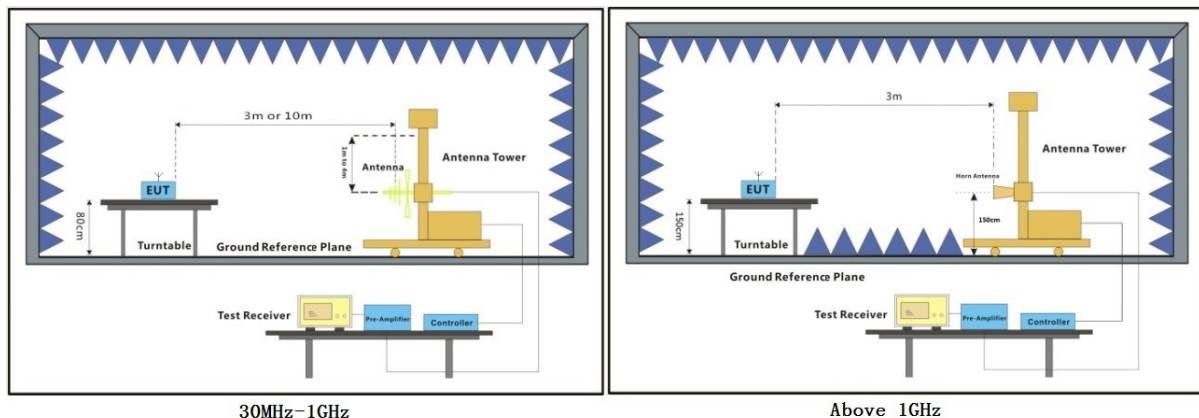
Humidity: 48.8 % RH

Atmospheric Pressure: 1010 mbar

7.3.2 Test Mode Description

Pre-scan / Final test	Mode Code	Description
Final test	00	TX mode_Keep the EUT in transmitting with modulation mode.

7.3.3 Test Setup Diagram



7.3.4 Measurement Procedure and Data

- a. For below 1GHz, the EUT was placed on the top of a rotating table 0.8m above the ground at a semi-anechoic chamber. The table was rotated 360 degrees to determine the position of the highest radiation.
- b. The EUT was set 3m or 10m away from the interference-receiving antenna, which was mounted on the variable-height antenna tower.
- c. The antenna height is varied from 1m to 4m above the ground to determine the maximum value of the field strength. Both horizontal and vertical polarizations of the antenna are set to make the measurement.
- d. For each suspected emission, the EUT was arranged to its worst case and then the antenna was tuned to heights from 1m to 4m (for the test frequency of below 30MHz, the antenna was tuned to heights 1m) and the rotatable table was turned from 0 degrees to 360 degrees to find the maximum reading.
- e. The test-receiver system was set to Peak Detect Function and Specified Bandwidth with Maximum Hold Mode.
- f. If the emission level of the EUT in peak mode was 10dB lower than the limit specified, then testing could be stopped and the peak values of the EUT would be reported. Otherwise the emissions that did not have 10dB margin would be re-tested one by one using quasi-peak method as specified and then reported in a data sheet.
- g. Test the EUT in the lowest channel, the middle channel, the Highest channel.
- h. The radiation measurements are performed in X, Y, Z axis positioning for Transmitting mode, and found the X axis positioning which it is the worst case.
- i. Repeat above procedures until all frequencies measured was complete.

Remark:

1. At frequencies below 1GHz, measurements may be performed at a distance different to specified in the regulations.

Level= Read Level+ Cable Loss+ Antenna Factor- Preamp Factor+ Aux Factor (if applicable)

The aux factor needs to be added when measurements are performed at a distance other than the limit distance provided.

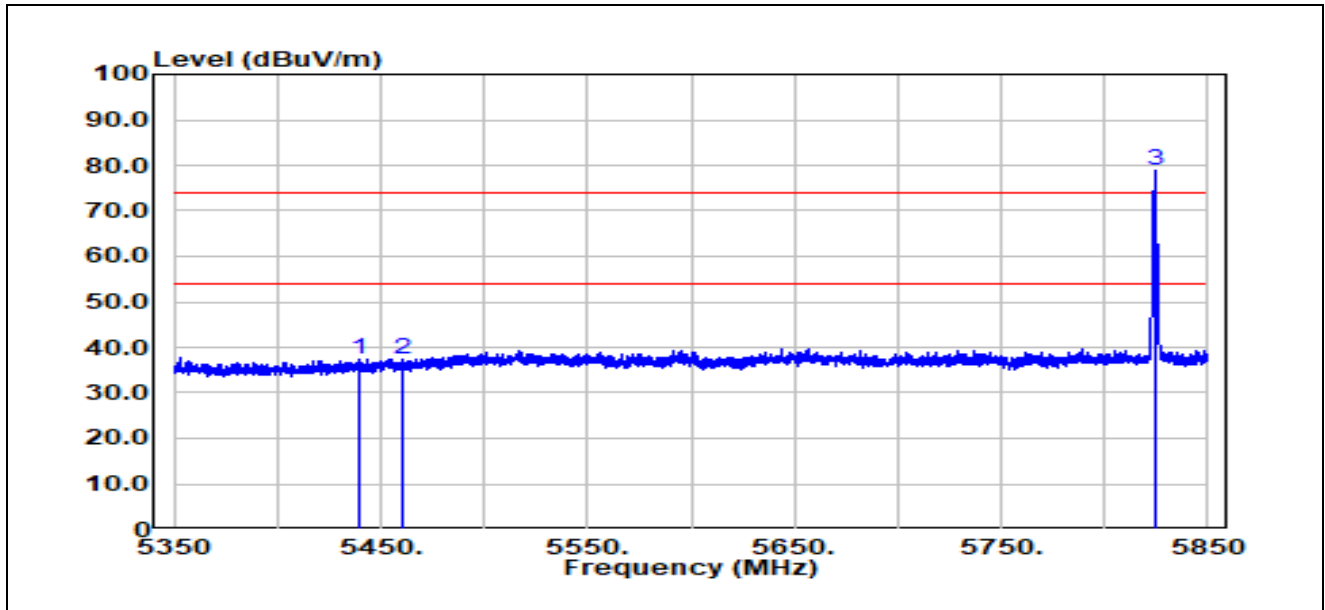
EX. Below 30MHz, Aux Factor = 40 dB/decade of distance, the aux factor is $40\log(3/300) = -80\text{dB}$ (for 3m test distance).

EX. Above 30MHz, Aux Factor = 20 dB/decade of distance, the aux factor is $20\log(10/3) = 10.46\text{dB}$ (for 10m test distance).

2. Scan from 9kHz to 30MHz, the disturbance below 30MHz was very low. The amplitude of spurious emissions from the radiator which are attenuated more than 20dB below the limit need not be reported.

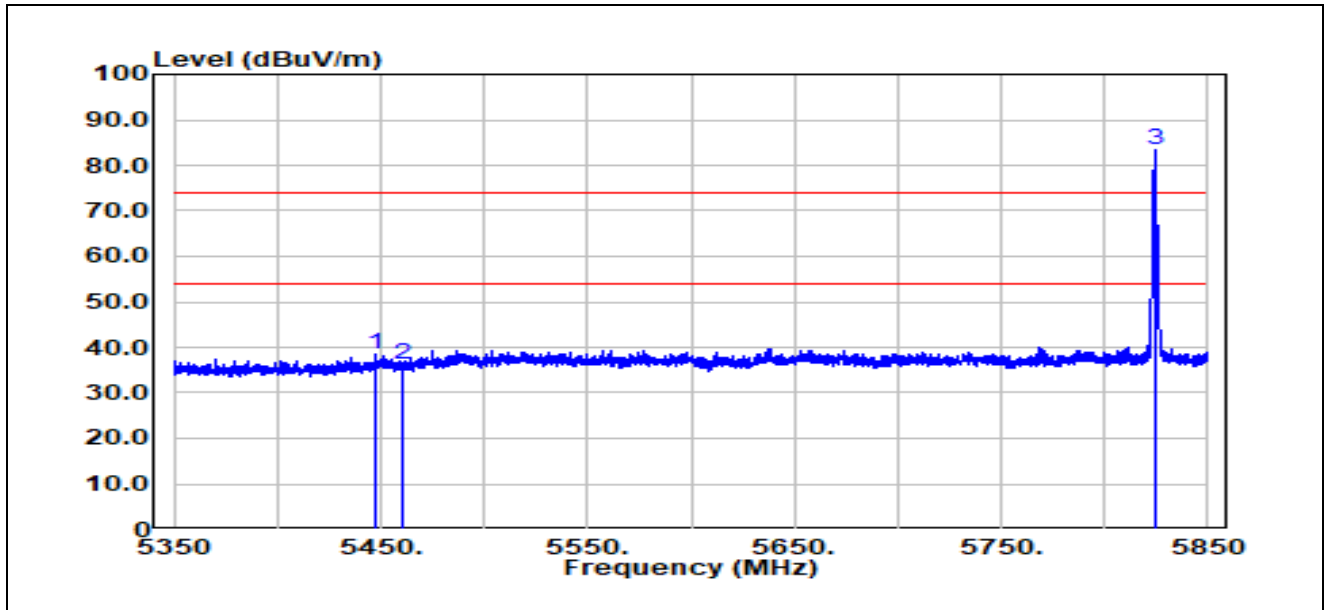
3. The disturbance below 1GHz was very low and the harmonics were the highest point could be found when testing, so only the worst-case test curve is displayed.

Mode:00; Polarization: Horizontal



No.	Frequency (MHz)	Reading (dBuV)	Correct Factor(dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Height (cm)	Degree (deg.)	Remark
1	5439.50	49.49	-12.19	37.30	74.00	-36.70	150	42	Peak
2	5460.00	49.68	-12.17	37.51	74.00	-36.49	150	0	Peak
3	5824.38	90.85	-11.96	78.89	74.00	4.89	150	3	Peak

Mode:00; Polarization: Vertical



No.	Frequency (MHz)	Reading (dBUV)	Correct Factor(dB/m)	Result (dBUV/m)	Limit (dBUV/m)	Margin (dB)	Height (cm)	Degree (deg.)	Remark
1	5447.88	50.57	-12.17	38.40	74.00	-35.60	150	95	Peak
2	5460.00	48.55	-12.17	36.38	74.00	-37.62	150	262	Peak
3	5824.38	95.22	-11.96	83.26	74.00	9.26	150	95	Peak

7.4 Radiated Emissions Below 1GHz

Test Requirement 47 CFR Part 15, Subpart C 15.209 & 15.249 (a),(d)

Test Method: ANSI C63.10-2020+Cor.1-2023 Section 6.4&6.5

Limit:

Frequency(MHz)	Field strength(microvolts/meter)	Measurement distance(meters)
0.009-0.490	2400/F(kHz)	300
0.490-1.705	24000/F(kHz)	30
1.705-30.0	30	30
30-88	100	3
88-216	150	3
216-960	200	3
960-1000	500	3

Note

1. The emission limits for the ranges 9-90 kHz and 110-490 kHz are based on measurements employing a linear average detector.

2. At frequencies below 1GHz, measurements may be performed at a distance different to specified in the regulations.

Level= Read Level+ Cable Loss+ Antenna Factor- Preamp Factor+ Aux Factor (if applicable)

The aux factor needs to be added when measurements are performed at a distance other than the limit distance provided.

EX. Below 30MHz, Aux Factor = 40 dB/decade of distance, the aux factor is $40\log(3/300) = -80\text{dB}$ (for 3m test distance).

EX. Above 30MHz, Aux Factor = 20 dB/decade of distance, the aux factor is $20\log(10/3) = 10.46\text{dB}$ (for 10m test distance).

7.4.1 E.U.T. Operation

Operating Environment:

Temperature: 23.5 °C

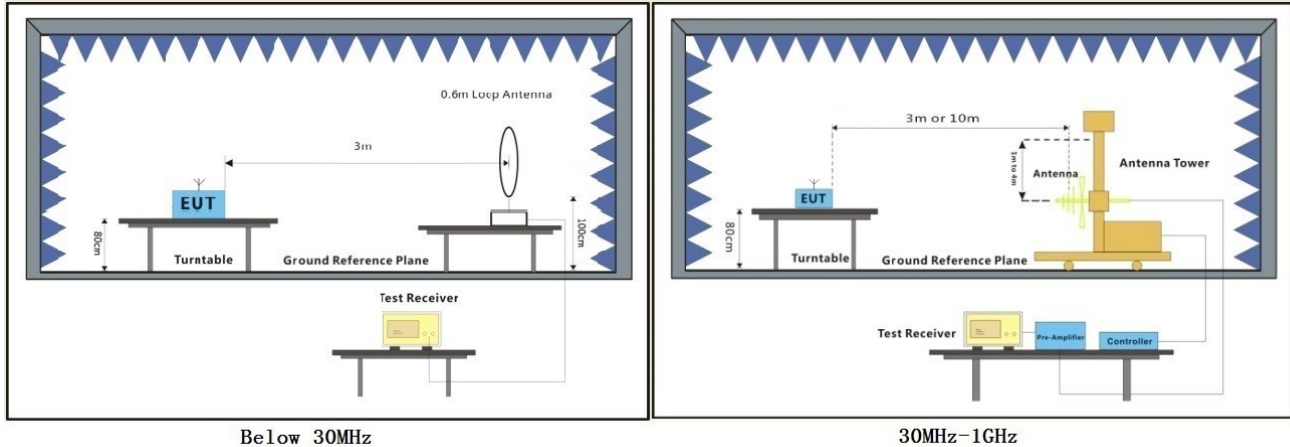
Humidity: 45.6 % RH

Atmospheric Pressure: 1010 mbar

7.4.2 Test Mode Description

Pre-scan / Final test	Mode Code	Description
Final test	00	TX mode_Keep the EUT in transmitting with modulation mode.

7.4.3 Test Setup Diagram



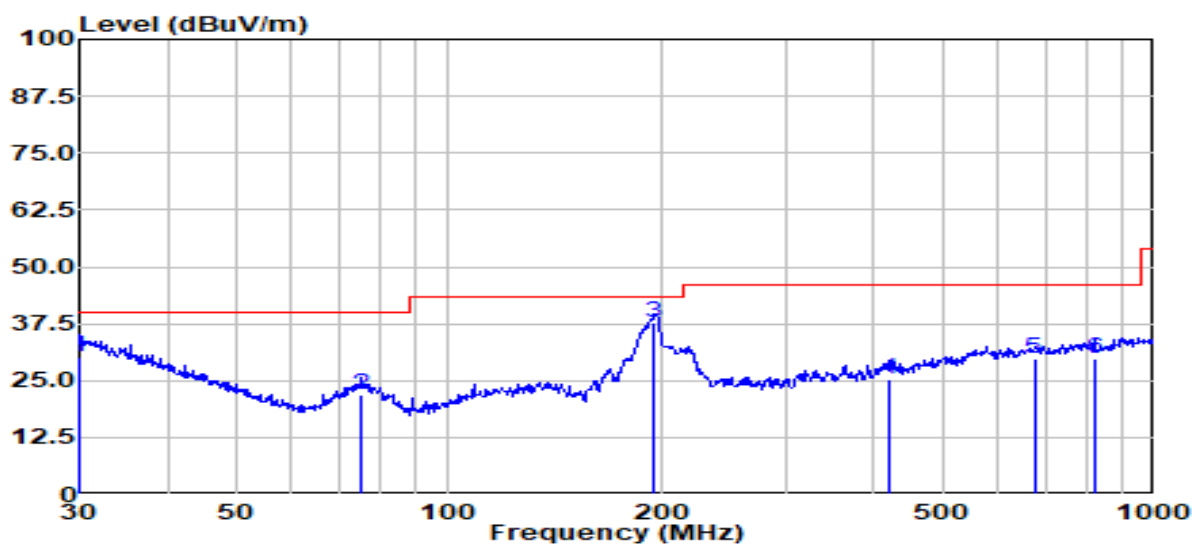
7.4.4 Measurement Procedure and Data

- a. For below 1GHz, the EUT was placed on the top of a rotating table 0.8m above the ground at a semi-anechoic chamber. The table was rotated 360 degrees to determine the position of the highest radiation.
- b. The EUT was set 3m or 10m away from the interference-receiving antenna, which was mounted on the variable-height antenna tower.
- c. The antenna height is varied from 1m to 4m above the ground to determine the maximum value of the field strength. Both horizontal and vertical polarizations of the antenna are set to make the measurement.
- d. For each suspected emission, the EUT was arranged to its worst case and then the antenna was tuned to heights from 1m to 4m (for the test frequency of below 30MHz, the antenna was tuned to heights 1m) and the rotatable table was turned from 0 degrees to 360 degrees to find the maximum reading.
- e. The test-receiver system was set to Peak Detect Function and Specified Bandwidth with Maximum Hold Mode.
- f. If the emission level of the EUT in peak mode was 10dB lower than the limit specified, then testing could be stopped and the peak values of the EUT would be reported. Otherwise the emissions that did not have 10dB margin would be re-tested one by one using quasi-peak method as specified and then reported in a data sheet.
- g. Test the EUT in the lowest channel, the middle channel, the Highest channel.
- h. The radiation measurements are performed in X, Y, Z axis positioning for Transmitting mode, and found the X axis positioning which it is the worst case.
- i. Repeat above procedures until all frequencies measured was complete.

Remark:

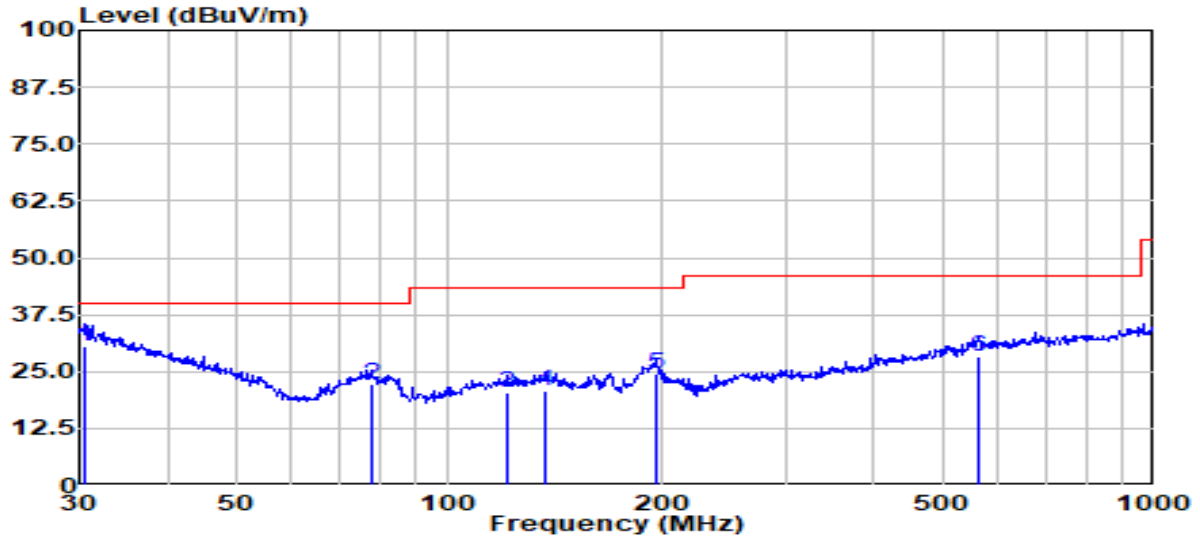
1. Scan from 9kHz to 30MHz, the disturbance below 30MHz was very low. The points marked on above plots are the highest emissions could be found when testing, so only below points had been displayed. The amplitude of spurious emissions from the radiator which are attenuated more than 20dB below the limit need not be reported.
2. The disturbance below 1GHz was very low and the harmonics were the highest point could be found when testing, so only the worst-case test curve is displayed.

Test Mode: 00; Polarity: Horizontal



No.	Frequency (MHz)	Reading (dBuV)	Correct Factor(dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1	30.11	0.04	30.02	30.06	40.00	-9.94	QP
2	75.18	1.13	20.58	21.71	40.00	-18.29	QP
3	195.82	20.91	16.65	37.56	43.50	-5.94	QP
4	419.11	1.39	24.07	25.46	46.00	-20.54	QP
5	675.21	1.75	27.88	29.63	46.00	-16.37	QP
6	821.71	1.66	28.21	29.87	46.00	-16.13	QP

Test Mode: 00; Polarity: Vertical



No.	Frequency (MHz)	Reading (dBuV)	Correct Factor(dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1	30.53	0.66	29.77	30.43	40.00	-9.57	QP
2	77.87	2.37	19.92	22.29	40.00	-17.71	QP
3	120.70	1.44	18.88	20.32	43.50	-23.18	QP
4	136.94	1.20	19.53	20.73	43.50	-22.77	QP
5	197.20	7.86	16.64	24.50	43.50	-19.00	QP
6	564.64	1.02	27.35	28.37	46.00	-17.63	QP

7.5 Radiated Emissions Above 1GHz

Test Requirement 47 CFR Part 15, Subpart C 15.209 & 15.249 (a),(d)

Test Method: ANSI C63.10-2020+Cor.1-2023 Section 6.6

Limit:

Frequency(MHz)	Field strength(microvolts/meter)	Measurement distance(meters)
Above 1000	500	3

Note:

At Above 18GHz, measurements may be performed at a distance shorter than that specified in the regulations

Level= Read Level+ Cable Loss+ Antenna Factor- Preamp Factor+ Aux Factor (if applicable)

The aux factor needs to be added when measurements are performed at a distance other than the limit distance provided.

EX. Above 18GHz, Aux Factor = 20 dB/decade of distance, the aux factor is $20\log(1/3) = -9.54\text{dB}$ (for 1m test distance).

7.5.1 E.U.T. Operation

Operating Environment:

Temperature: 23.5 °C

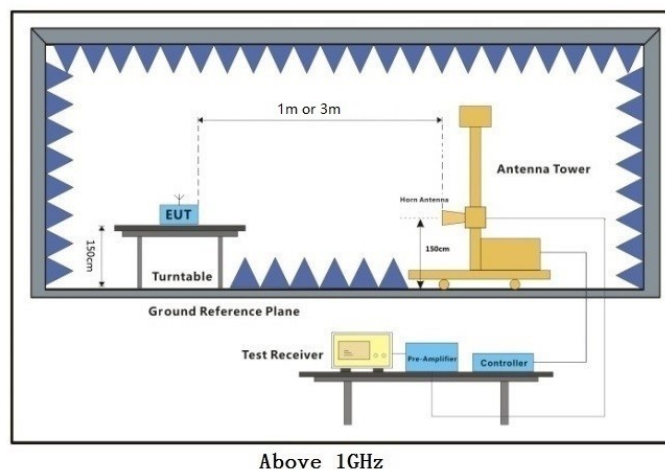
Humidity: 45.6 % RH

Atmospheric Pressure: 1010 mbar

7.5.2 Test Mode Description

Pre-scan / Final test	Mode Code	Description
Final test	00	TX mode_Keep the EUT in transmitting with modulation mode.

7.5.3 Test Setup Diagram



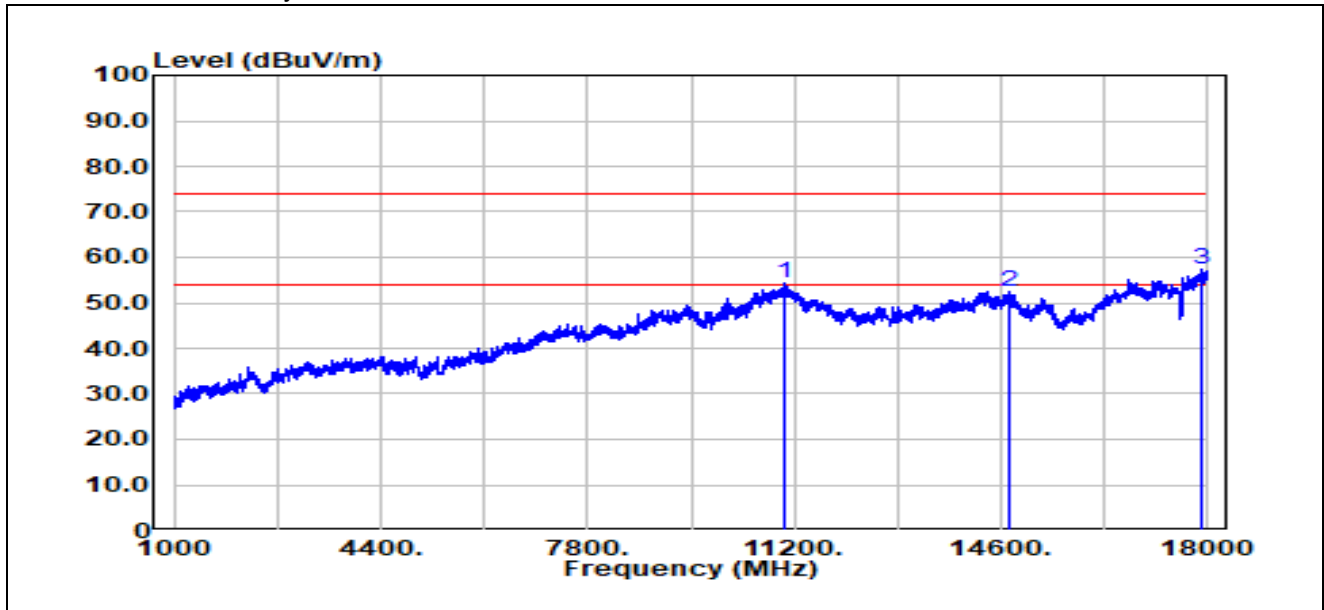
7.5.4 Measurement Procedure and Data

- a. For above 1GHz, the EUT was placed on the top of a rotating table 1.5m above the ground at a 3m fully-anechoic chamber. The table was rotated 360 degrees to determine the position of the highest radiation. The EUT was set 3m away from the interference-receiving antenna from 1GHz to 18GHz, and 1m away from the interference-receiving antenna above 18GHz.
- b. The interference-receiving antenna was mounted on the variable-height antenna tower, with its boresight facing the EUT throughout the test.
- c. The antenna height is varied from 1m to 4m above the ground to determine the maximum value of the field strength. Both horizontal and vertical polarizations of the antenna are set to make the measurement.
- d. For each suspected emission, the EUT was arranged to its worst case and then the antenna was tuned to heights from 1m to 4m and the rotatable table was turned from 0 degrees to 360 degrees to find the maximum reading.
- e. The test-receiver system was set to Peak Detect Function and Specified Bandwidth with Maximum Hold Mode.
- f. Test the EUT in the lowest channel, the middle channel, the Highest channel.
- g. The radiation measurements are performed in X, Y, Z axis positioning for Transmitting mode, and found the X axis positioning which it is the worst case.
- h. Repeat above procedures until all frequencies measured was complete.

Remark:

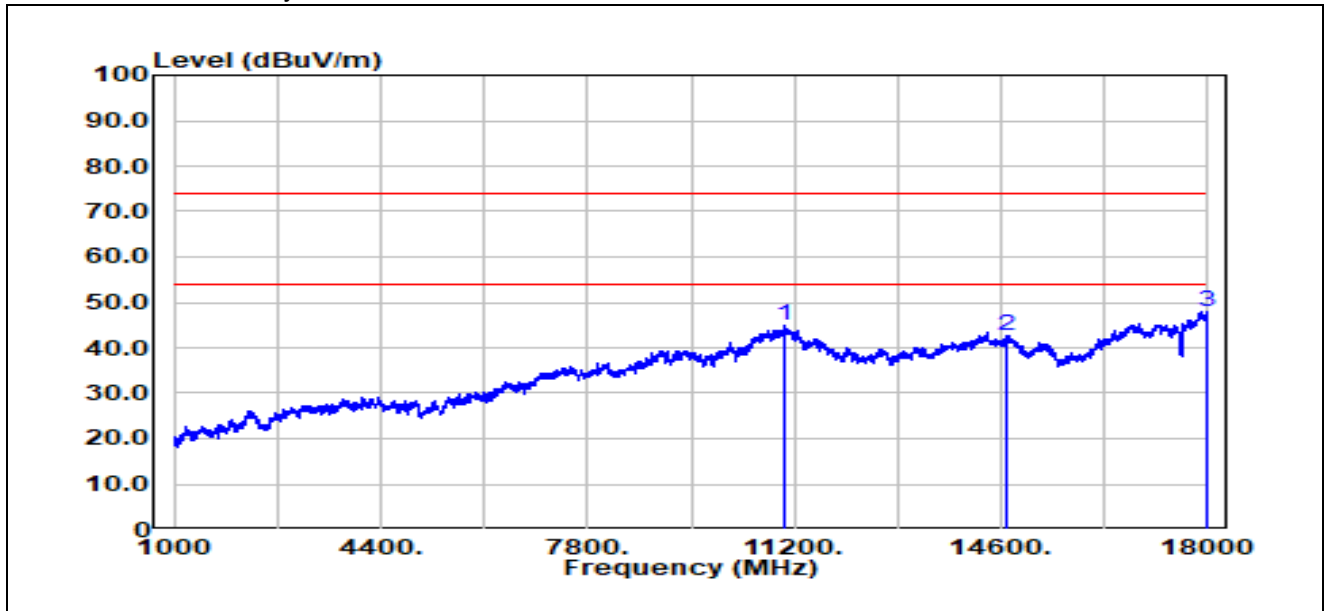
1. Scan from 1GHz to 10th harmonic of the highest frequency or 40 GHz, whichever is lower.
2. As shown in this section, for frequencies above 1GHz, the field strength limits are based on average limits. However, the peak field strength of any emission shall not exceed the maximum permitted average limits specified above by more than 20 dB under any condition of modulation. For the emissions whose peak level is lower than the average limit, only the peak measurement is shown in the report.
3. For the frequency above 18GHz, testing had been executed under all test modes, only the worst-case test curve is displayed in the report.
4. For devices with multiple operating modes, measurements on the middle channel is used to determine the worst-case mode(s). Only the worst-case mode with the highest output power and the mode with the highest output power spectral density for each modulation family (e.g., OFDM and direct sequence spread spectrum) is recorded in the test report.

Test Mode: 00; Polarity: Horizontal



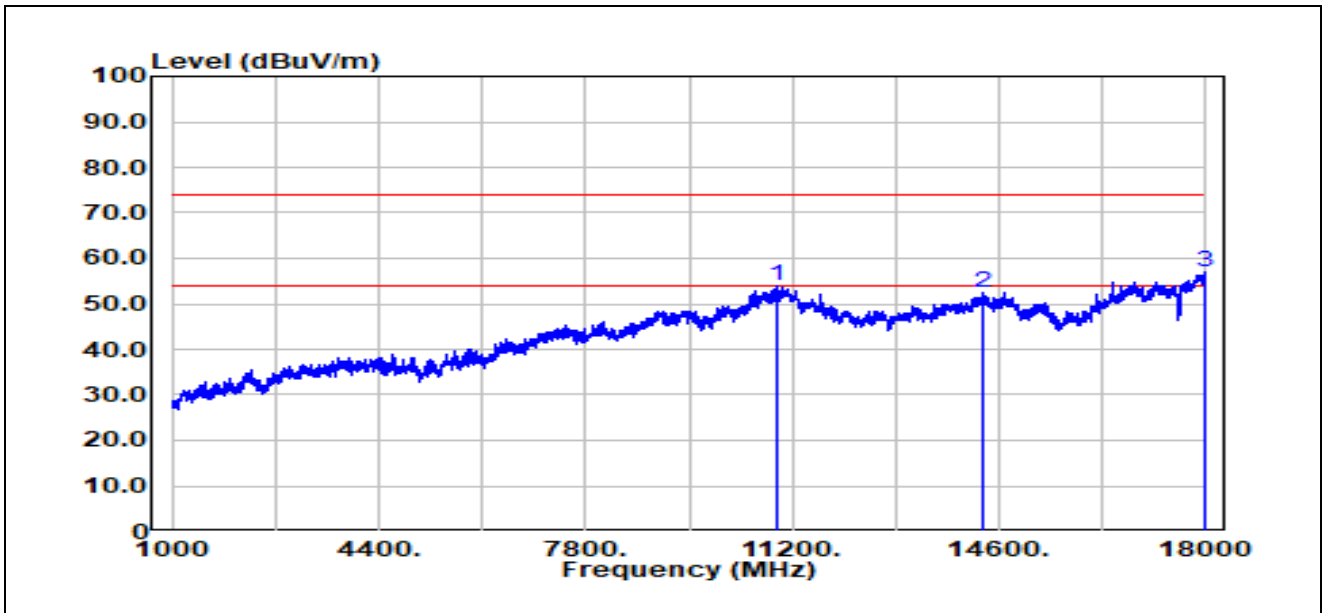
No.	Frequency (MHz)	Reading (dBuV)	Correct Factor(dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Height (cm)	Degree (deg.)	Remark
1	11047.00	51.08	3.07	54.15	74.00	-19.85	150	159	Peak
2	14723.25	49.79	2.82	52.62	74.00	-21.38	150	310	Peak
3	17915.00	47.77	9.50	57.26	74.00	-16.74	150	113	Peak

Test Mode: 00; Polarity: Horizontal



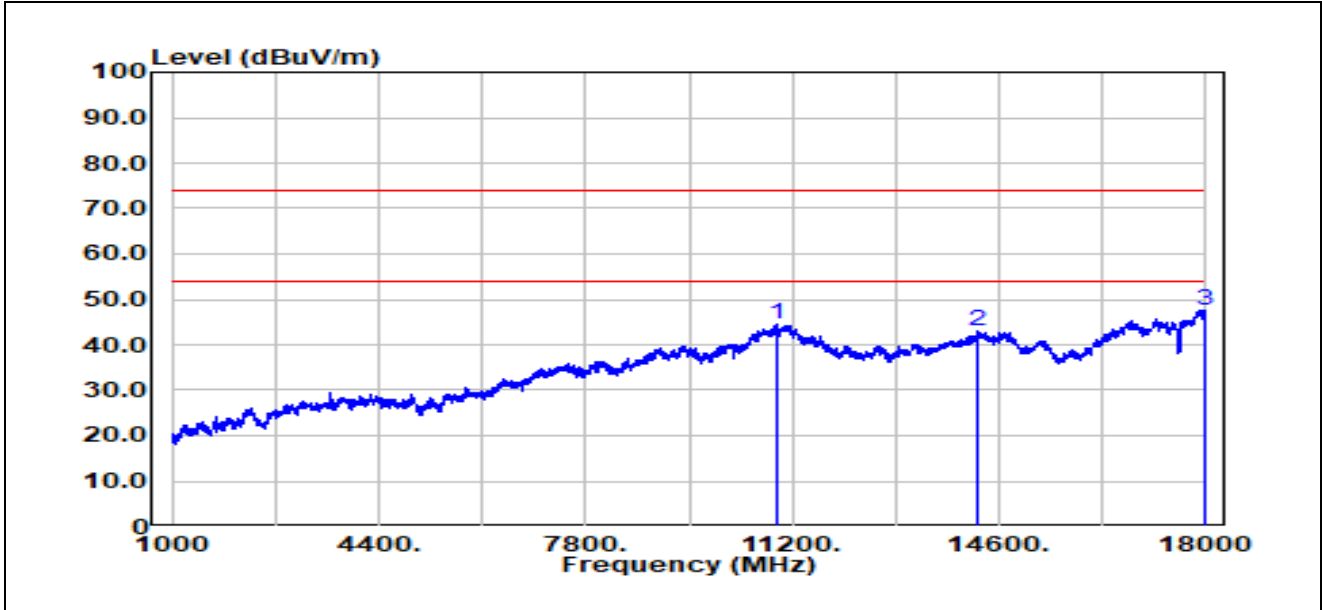
No.	Frequency (MHz)	Reading (dBuV)	Correct Factor(dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Height (cm)	Degree (deg.)	Remark
1	11042.75	41.72	3.09	44.81	54.00	-9.19	150	1	Average
2	14689.25	39.95	2.83	42.78	54.00	-11.22	150	1	Average
3	17987.25	37.32	10.45	47.77	54.00	-6.23	150	1	Average

Mode:00 Polarity: Vertical



No.	Frequency (MHz)	Reading (dBuV)	Correct Factor(dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Height (cm)	Degree (deg.)	Remark
1	10962.00	50.97	3.13	54.11	74.00	-19.89	150	45	Peak
2	14345.00	50.32	2.20	52.52	74.00	-21.48	150	85	Peak
3	17987.25	46.66	10.45	57.11	74.00	-16.89	150	267	Peak

Mode:00 Polarity: Vertical



No.	Frequency (MHz)	Reading (dBuV)	Correct Factor(dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Height (cm)	Degree (deg.)	Remark
1	10949.25	41.42	3.09	44.51	54.00	-9.49	150	359	Average
2	14255.75	41.19	1.85	43.04	54.00	-10.96	150	359	Average
3	17987.25	37.26	10.45	47.72	54.00	-6.28	150	359	Average

7.6 20dB Bandwidth

Test Requirement 47 CFR Part 15, Subpart C 15.215

Test Method: ANSI C63.10-2020+Cor.1-2023 Section 6.9

7.6.1 E.U.T. Operation

Operating Environment:

Temperature: 22.2 °C

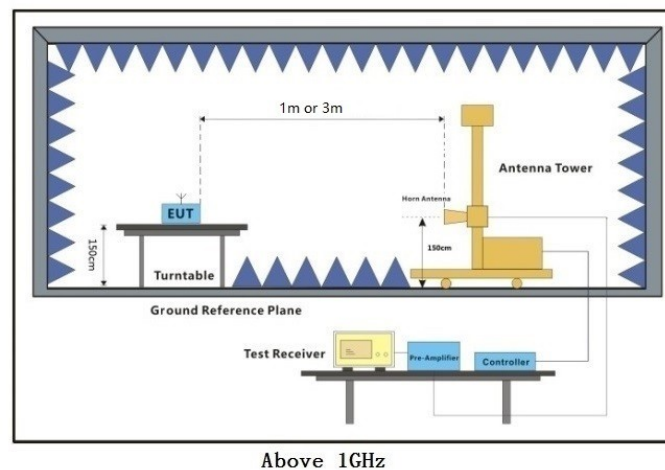
Humidity: 48.6 % RH

Atmospheric Pressure: 1010 mbar

7.6.2 Test Mode Description

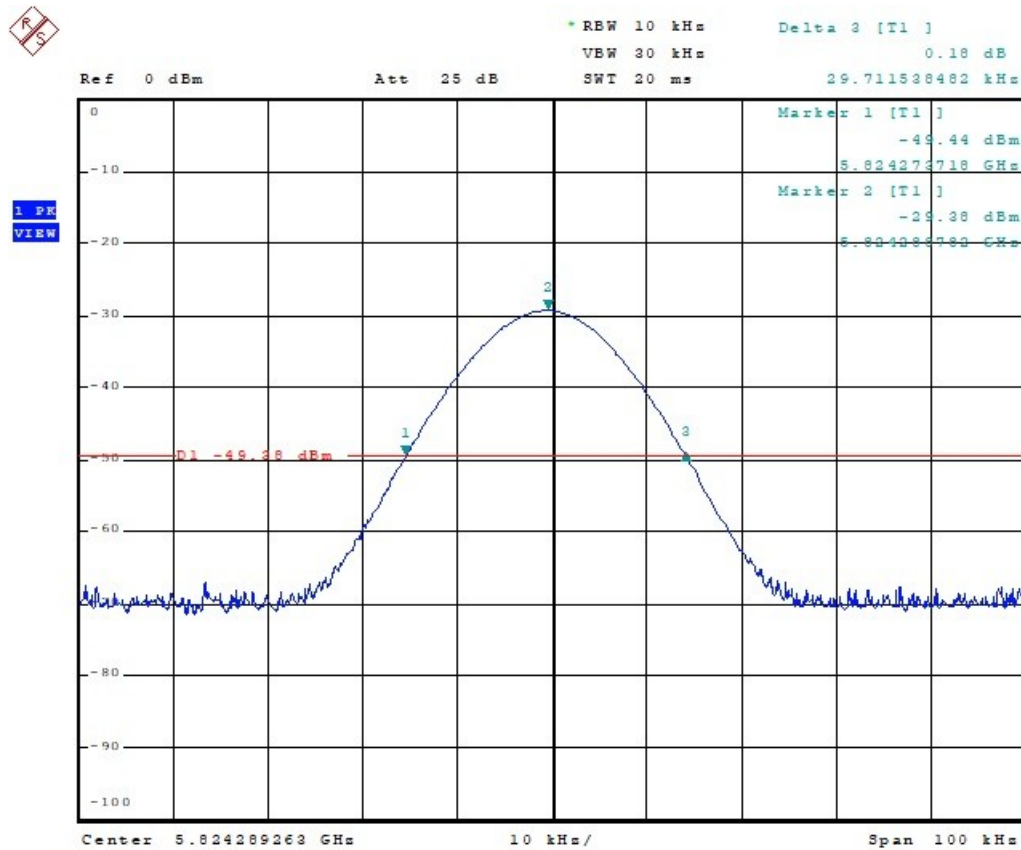
Pre-scan / Final test	Mode Code	Description
Final test	00	TX mode_Keep the EUT in transmitting with modulation mode.

7.6.3 Test Setup Diagram



7.6.4 Measurement Procedure and Data

Frequency (MHz)	Bandwidth (KHz)	Result
5825	29.71	PASS



Note: Since the EUT transmits a CW or CW-like signal, the measured bandwidth is dominated by and varies with the analyzer RBW. Therefore, further RBW adjustment is not applicable

8 Test Setup Photo

Refer to Appendix - Test Setup Photo for KSCR2609002297LM

9 EUT Constructional Details (EUT Photos)

Refer to Appendix_Photographs of EUT Constructional Details for KSCR2609002297LM

- End of the Report -