中认信通
CHINA CERTIFICATION ICT CO., LTD (DONGGUAN)

ACCREDITED
TESTING LABORATORY
CERTIFICATE # 6356.01

TEST REPORT

Applicant: **TECNO MOBILE LIMITED**

Address: FLAT N 16/F BLOCK B UNIVERSAL INDUSTRIAL CENTRE 19-25 SHAN MEI STREET FOTAN NT HONGKONG

FCC ID: **2ADYY-CM8**

Product Name: **Mobile Phone**

Standard(s): **47 CFR Part 15, Subpart C(15.225)**
ANSI C63.10-2013

The above device has been tested and found compliant with the requirement of the relative standards by China Certification ICT Co., Ltd (Dongguan)

Report Number: **2403Z104805E-RF-00H**

Date Of Issue: **2025/1/10**

Reviewed By: **Calvin Chen**

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Test Facility

The Test site used by China Certification ICT Co., Ltd (Dongguan) to collect test data is located on the No. 113, Pingkang Road, Dalang Town, Dongguan, Guangdong, China.

The lab has been recognized as the FCC accredited lab under the KDB 974614 D01 and is listed in the FCC Public Access Link (PAL) database, FCC Registration No. : 442868, the FCC Designation No. : CN1314.

Declarations

China Certification ICT Co., Ltd (Dongguan) is not responsible for the authenticity of any test data provided by the applicant. Data included from the applicant that may affect test results are marked with a triangle symbol "▲". Customer model name, addresses, names, trademarks etc. are not considered data.

Unless otherwise stated the results shown in this test report refer only to the sample(s) tested.

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Each test item follows the test standard(s) without deviation.

CONTENTS

DOCUMENT REVISION HISTORY 5
1. GENERAL INFORMATION 6
1.1 PRODUCT DESCRIPTION FOR EQUIPMENT UNDER TEST (EUT) 6
1.2 DESCRIPTION OF TEST CONFIGURATION 7
1.2.1 EUT Operation Condition: 7
1.2.2 Support Equipment List and Details 7
1.2.3 Support Cable List and Details 7
1.2.4 Block Diagram of Test Setup 8
1.3 MEASUREMENT UNCERTAINTY 9
2. SUMMARY OF TEST RESULTS 10
3. REQUIREMENTS AND TEST PROCEDURES 11
3.1 AC LINE CONDUCTED EMISSIONS 11
3.1.1 Applicable Standard 11
3.1.2 EUT Setup 12
3.1.3 EMI Test Receiver Setup 12
3.1.4 Test Procedure 13
3.1.5 Corrected Amplitude & Margin Calculation 13
3.2 RADIATED EMISSIONS 14
3.2.1 Applicable Standard 14
3.2.2 EMI Test Receiver & Spectrum Analyzer Setup 15
3.2.3 Test Procedure 15
3.2.4 Corrected Amplitude & Margin Calculation 15
3.3 20 DB EMISSION BANDWIDTH 16
3.3.1 Applicable Standard 16
3.3.2 EUT Setup 16
3.3.3 Test Procedure 16
3.4 FREQUENCY STABILITY 18
3.4.1 Applicable Standard 18
3.4.2 EUT Setup 18
3.4.3 Test Procedure 18
3.5 ANTENNA REQUIREMENT 20
3.5.1 Applicable Standard 20
3.5.2 Judgment 20
4. TEST DATA AND RESULTS 21
4.1 AC LINE CONDUCTED EMISSIONS 21
4.2 RADIATION SPURIOUS EMISSIONS 24
4.3 20 DB EMISSION BANDWIDTH 36
4.4 FREQUENCY STABILITY 38
5. RF EXPOSURE EVALUATION 40

5.1 APPLICABLE STANDARD 40
5.2 MEASUREMENT RESULT 40
6. EUT PHOTOGRAPHS 41
7. TEST SETUP PHOTOGRAPHS 42

DOCUMENT REVISION HISTORY

Revision Number	Report Number	Description of Revision	Date of Revision
1.0	2403Z104805E-RF-00H	Original Report	2025/1/10

1. GENERAL INFORMATION

1.1 Product Description for Equipment under Test (EUT)

EUT Name:	Mobile Phone
Trade Name:	TECNO
EUT Model:	CM8
Operation Frequency:	13.56 MHz
Modulation Type:	ASK
Rated Input Voltage:	DC 3.91V from battery or DC 5.0V/5-10.0V/11.0V/4.0-20.0V from adapter
Serial Number:	2UGN-1
EUT Received Date:	2024/11/13
EUT Received Status:	Good

Antenna Information Detail▲:

Antenna Type	input impedance (Ohm)	Frequency Range	Antenna Gain
Loop	50	13.56MHz	Unknown

The Method of §15.203 Compliance:

☒ Antenna was permanently attached to the unit.

☐ Antenna uses a unique type of connector to attach to the EUT.

☐ Unit was professionally installed, and installer shall be responsible for verifying that the correct antenna is employed with the unit.

Accessory Information:

Accessory Description	Manufacturer	Model
Adapter	TECNO	U700TSA

1.2 Description of Test Configuration

1.2.1 EUT Operation Condition:

EUT Operation Mode:	The system was configured for testing in Engineering Mode, which was provided by the manufacturer. Per BT report test, radiated emissions test with adapter was the worst.
Equipment Modifications:	No
EUT Exercise Software:	Engineering Mode
Engineering Mode was provided by manufacturer▲. The maximum power was configured default setting.	

1.2.2 Support Equipment List and Details

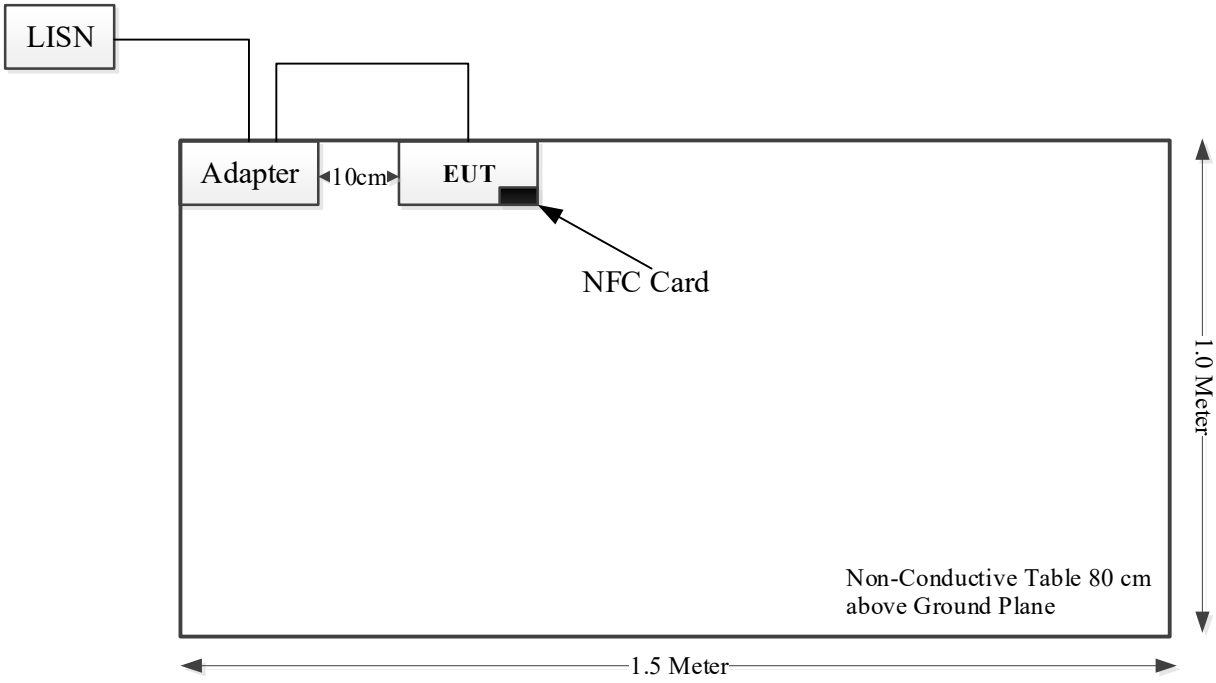
Manufacturer	Description	Model	Serial Number
TECNO	Adapter	U700TSA	KX07018884A25
Unknown	NFC Card	Unknown	CR2024122801

1.2.3 Support Cable List and Details

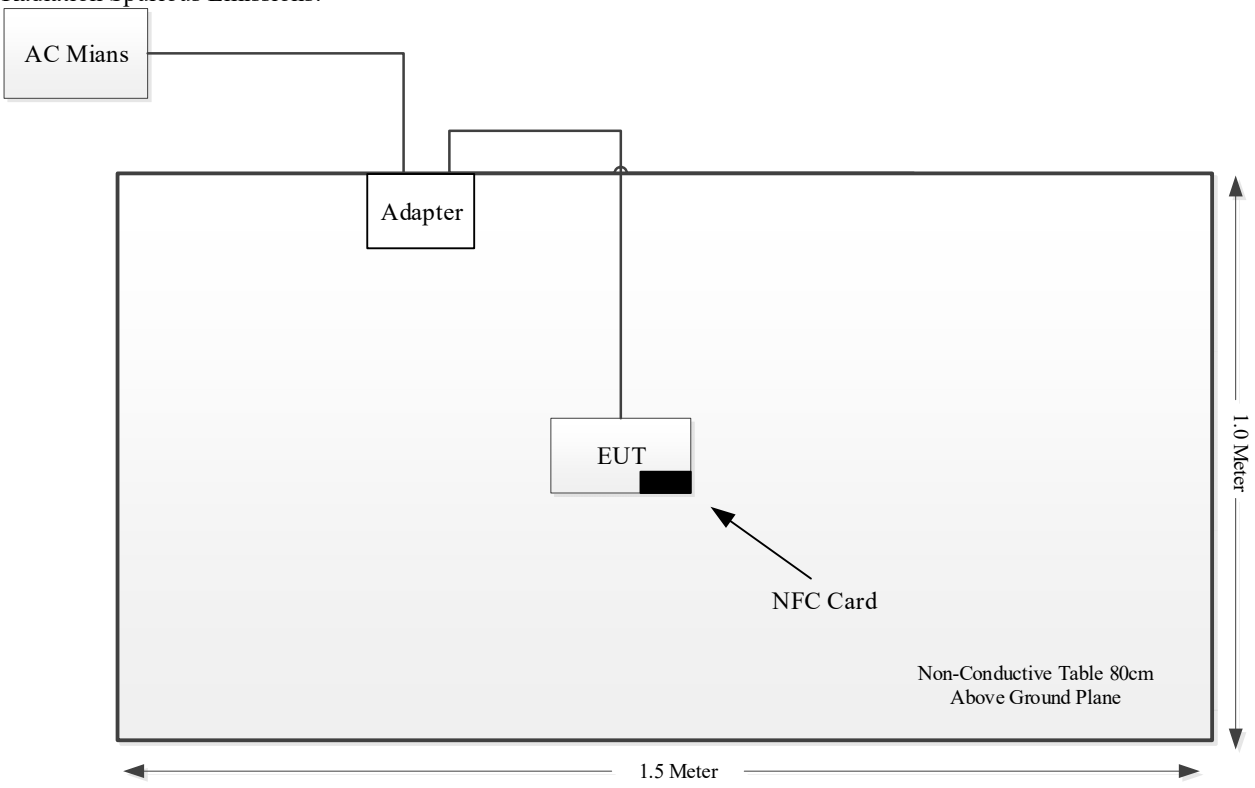
Cable Description	Shielding Type	Ferrite Core	Length (m)	From Port	To
Power Cable	NO	NO	1	Adapter	EUT

1.2.4 Block Diagram of Test Setup

AC Line Conducted Emissions:



Radiation Spurious Emissions:



1.3 Measurement Uncertainty

Otherwise required by the applicant or Product Regulations, Decision Rule in this report did not consider the uncertainty. The extended uncertainty given in this report is obtained by combining the standard uncertainty times the coverage factor K with the 95% confidence interval.

Parameter	Measurement Uncertainty
Occupied Channel Bandwidth	±5 %
Unwanted Emissions, radiated	9kHz~30MHz: 4.12dB,30M~200MHz: 4.15 dB,200M~1GHz: 5.61 dB,1G~6GHz: 5.14 dB, 6G~18GHz: 5.93 dB,18G~26.5G:5.47 dB,26.5G~40G:5.63 dB
Temperature	±1℃
Humidity	±5%
DC and low frequency voltages	±0.4%
Duty Cycle	1%
AC Power Lines Conducted Emission	2.8 dB (150 kHz to 30 MHz)

2. SUMMARY OF TEST RESULTS

FCC Rules	Description of Test	Result
FCC§15.203	Antenna Requirement	Compliant
FCC§15.207 (a)	Conducted Emissions	Compliant
§15.225 §15.209 §15.205	Radiated Emission Test	Compliant
§15.225(e)	Frequency Stability	Compliant
§15.215(c)	20 dB Bandwidth	Compliant
§1.1310 & §2.1093	RF Exposure	Compliant

3. REQUIREMENTS AND TEST PROCEDURES

3.1 AC Line Conducted Emissions

3.1.1 Applicable Standard

FCC§15.207(a).

(a) Except as shown in paragraphs (b) and (c) of this section, for an intentional radiator that is designed to be connected to the public utility (AC) power line, the radio frequency voltage that is conducted back onto the AC power line on any frequency or frequencies, within the band 150 kHz to 30 MHz, shall not exceed the limits in the following table, as measured using a 50 μH/50 ohms line impedance stabilization network (LISN). Compliance with the provisions of this paragraph shall be based on the measurement of the radio frequency voltage between each power line and ground at the power terminal. The lower limit applies at the boundary between the frequency ranges.

	Conducted limit (dBμV)	
Frequency of emission (MHz)	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.

(b) The limit shown in paragraph (a) of this section shall not apply to carrier current systems operating as intentional radiators on frequencies below 30 MHz. In lieu thereof, these carrier current systems shall be subject to the following standards:

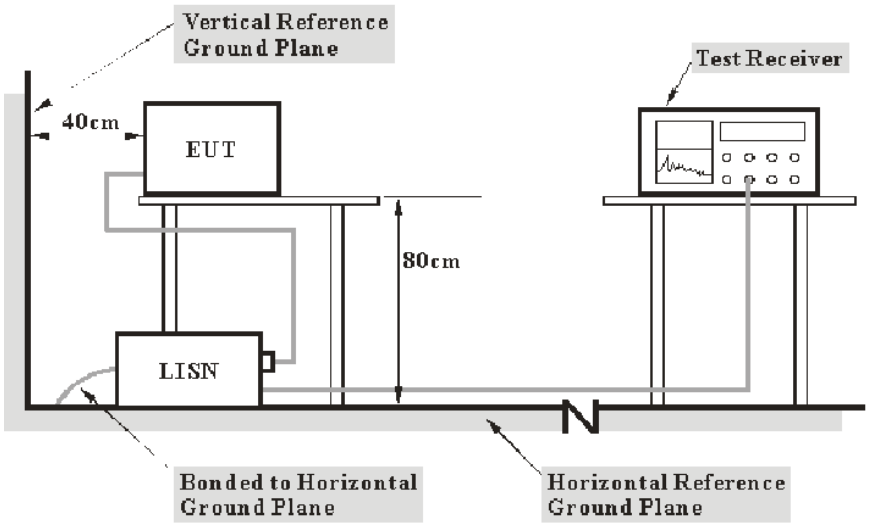
(1) For carrier current system containing their fundamental emission within the frequency band 535-1705 kHz and intended to be received using a standard AM broadcast receiver: no limit on conducted emissions.

(2) For all other carrier current systems: 1000 μV within the frequency band 535-1705 kHz, as measured using a 50 μH/50 ohms LISN.

(3) Carrier current systems operating below 30 MHz are also subject to the radiated emission limits in §15.205, §15.209, §15.221, §15.223, or §15.227, as appropriate.

(c) Measurements to demonstrate compliance with the conducted limits are not required for devices which only employ battery power for operation and which do not operate from the AC power lines or contain provisions for operation while connected to the AC power lines. Devices that include, or make provisions for, the use of battery chargers which permit operating while charging, AC adapters or battery eliminators or that connect to the AC power lines indirectly, obtainig their power through another device which is connected to the AC power lines, shall be tested to demonstrate compliance with the conducted limits.

3.1.2 EUT Setup



Note: 1. Support units were connected to second LISN.
2. Both of LISNs (AMN) 80 cm from EUT and at the least 80 cm from other units and other metal planes support units.

The setup of EUT is according with per ANSI C63.10-2013 measurement procedure. The specification used was with the FCC Part 15.207 limits.

The spacing between the peripherals was 10 cm.

3.1.3 EMI Test Receiver Setup

The EMI test receiver was set to investigate the spectrum from 150 kHz to 30 MHz.

During the conducted emission test, the EMI test receiver was set with the following configurations:

Frequency Range	IF B/W
150 kHz – 30 MHz	9 kHz

3.1.4 Test Procedure

During the conducted emission test, the adapter was connected to the outlet of the LISN.

The frequency and amplitude of the six highest ac power-line conducted emissions relative to the limit, measured over all the current-carrying conductors of the EUT power cords, and the operating frequency or frequency to which the EUT is tuned (if appropriate), should be reported, unless such emissions are more than 20 dB below the limit. AC power-line conducted emissions measurements are to be separately carried out only on each of the phase ("hot") line(s) and (if used) on the neutral line(s), but not on the ground [protective earth] line(s). If less than six emission frequencies are within 20 dB of the limit, then the noise level of the measuring instrument at representative frequencies should be reported. The specific conductor of the power-line cord for each of the reported emissions should be identified. Measure the six highest emissions with respect to the limit on each current-carrying conductor of each power cord associated with the EUT (but not the power cords of associated or peripheral equipment that are part of the test configuration). Then, report the six highest emissions with respect to the limit from among all the measurements identifying the frequency and specific current-carrying conductor identified with the emission. The six highest emissions should be reported for each of the current-carrying conductors, or the six highest emissions may be reported over all the current-carrying conductors.

According FCC publication number 174176,for a device with a permanent antenna operating at or below 30 MHz, the measurements done with a suitable dummy load, in lieu of the permanent antenna under the following conditions: (1) perform the AC line conducted tests with the permanent antenna to determine compliance with the Section 15.207 limits outside the transmitter's fundamental emission band; (2) retest with a dummy load in lieu of the permanent antenna to determine compliance with the Section 15.207 limits within the transmitter's fundamental emission band.

3.1.5 Corrected Amplitude & Margin Calculation

The basic equation is as follows:

Result = Reading + Factor
Factor = attenuation caused by cable loss + voltage division factor of AMN

The "**Margin**" column of the following data tables indicates the degree of compliance within the applicable limit. The equation for margin calculation is as follows:

Margin = Limit – Result

3.2 Radiated Emissions

3.2.1 Applicable Standard

As per FCC Part 15.225

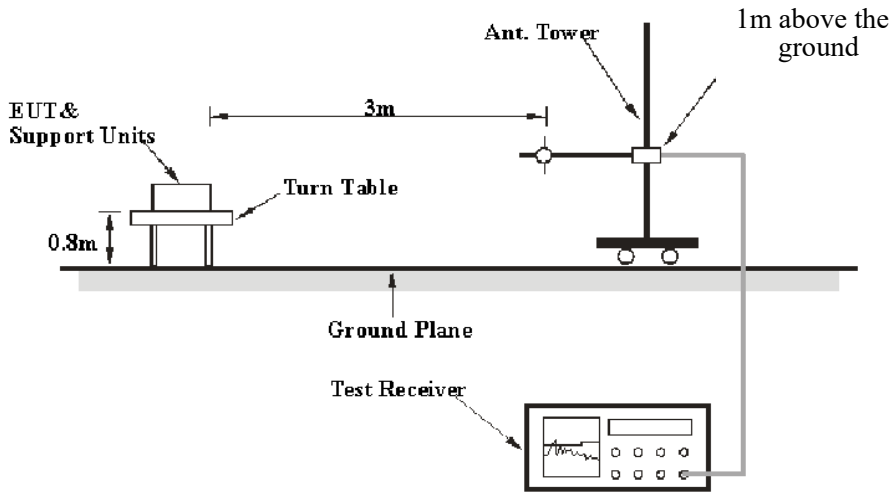
(a) The field strength of any emissions within the band 13.553–13.567 MHz shall not exceed 15,848 microvolts/meter at 30 meters.

(b) Within the bands 13.410–13.553 MHz and 13.567–13.710 MHz, the field strength of any emissions shall not exceed 334 microvolts/meter at 30 meters.

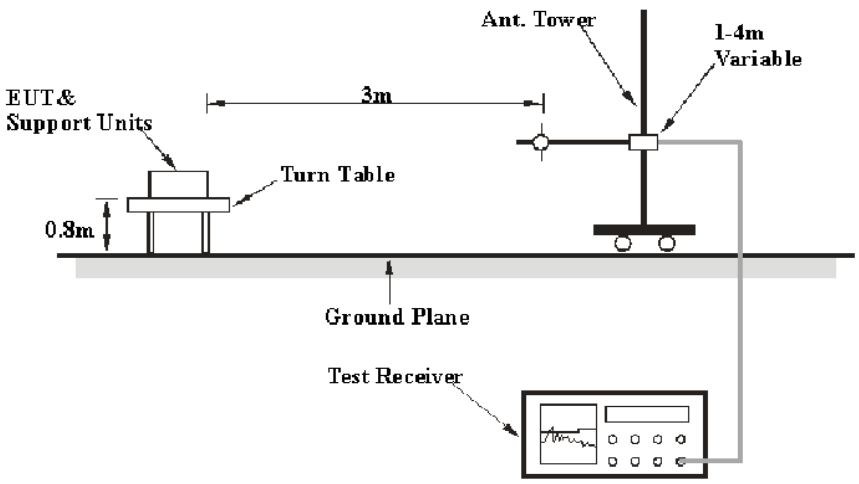
(c) Within the bands 13.110–13.410 MHz and 13.710–14.010 MHz the field strength of any emissions shall not exceed 106 microvolts/meter at 30 meters.

(d) The field strength of any emissions appearing outside of the 13.110–14.010 MHz band shall not exceed the general radiated emission limits in §15.209.

9kHz~30MHz:



30MHz~1GHz:



The radiated emission tests were performed in the 3-meter chamber test site, using the setup accordance with the ANSI C63.10-2013.

The spacing between the peripherals was 10 cm.

For 9kHz-30MHz test, the lowest height of the magnetic antenna shall be 1 m above the ground and three antenna orientations (parallel, perpendicular, and ground-parallel) shall be measured.

3.2.2 EMI Test Receiver & Spectrum Analyzer Setup

The system was investigated from 9 kHz to 1 GHz.

During the radiated emission test, the EMI test Receiver was set with the following configurations:

Frequency Range	RBW	Video B/W	IF B/W	Measurement
9 kHz – 150 kHz	300 Hz	1 kHz	/	PK
	/	/	200 Hz	QP/AV
150 kHz – 30 MHz	9 kHz	30 kHz	/	PK
	/	/	9 kHz	QP/AV
30 MHz – 1000 MHz	100 kHz	300 kHz	/	PK
	/	/	120 kHz	QP

If the maximized peak measured value complies with the limit, then it is unnecessary to perform an QP measurement

3.2.3 Test Procedure

Maximizing procedure was performed on the highest emissions to ensure that the EUT complied with all installation combinations.

Data was recorded in Quasi-peak detection mode for frequency range of 9 kHz-1 GHz except 9 – 90 kHz, 110 – 490 kHz, employing an average detector.

3.2.4 Corrected Amplitude & Margin Calculation

The basic equation is as follows:

Result = Reading + Factor
Factor = Antenna Factor + Cable Loss- Amplifier Gain

The "**Margin**" column of the following data tables indicates the degree of compliance within the applicable limit. The equation for margin calculation is as follows:

Margin = Limit – Result

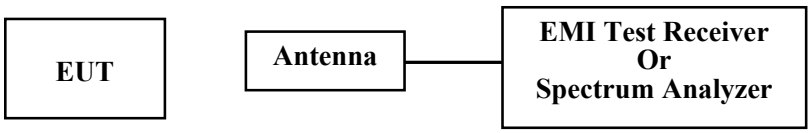
3.3 20 dB Emission Bandwidth

3.3.1 Applicable Standard

FCC §15.215

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. The requirement to contain the designated bandwidth of the emission within the specified frequency band includes the effects from frequency sweeping, frequency hopping and other modulation techniques that may be employed as well as the frequency stability of the transmitter over expected variations in temperature and supply voltage. If a frequency stability is not specified in the regulations, it is recommended that the fundamental emission be kept within at least the central 80% of the permitted band in order to minimize the possibility of out-of band operation.

3.3.2 EUT Setup



3.3.3 Test Procedure

According to ANSI C63.10-2013 Section 6.9.2

a) The spectrum analyzer center frequency is set to the nominal EUT channel center frequency. The span range for the EMI receiver or spectrum analyzer shall be between two times and five times the OBW.
b) The nominal IF filter bandwidth (3 dB RBW) shall be in the range of 1% to 5% of the OBW and video bandwidth (VBW) shall be approximately three times RBW, unless otherwise specified by the applicable requirement.
c) Set the reference level of the instrument as required, keeping the signal from exceeding the maximum input mixer level for linear operation. In general, the peak of the spectral envelope shall be more than [10 log (OBW/RBW)] below the reference level. Specific guidance is given in 4.1.5.2
d) Steps a) through c) might require iteration to adjust within the specified tolerances.
e) The dynamic range of the instrument at the selected RBW shall be more than 10 dB below the target "−xx dB down" requirement; that is, if the requirement calls for measuring the −20 dB OBW, the instrument noise floor at the selected RBW shall be at least 30 dB below the reference value.
f) Set detection mode to peak and trace mode to max hold.
g) Determine the reference value: Set the EUT to transmit an unmodulated carrier or modulated signal, as applicable. Allow the trace to stabilize. Set the spectrum analyzer marker to the highest level of the displayed trace (this is the reference value).

h) Determine the "−xx dB down amplitude" using [(reference value) − xx]. Alternatively, this calculation may be made by using the marker-delta function of the instrument.
i) If the reference value is determined by an unmodulated carrier, then turn the EUT modulation ON, and either clear the existing trace or start a new trace on the spectrum analyzer and allow the new trace to stabilize. Otherwise, the trace from step g) shall be used for step j).

j) Place two markers, one at the lowest frequency and the other at the highest frequency of the envelope of the spectral display, such that each marker is at or slightly below the "−xx dB down amplitude" determined in step h). If a marker is below this "−xx dB down amplitude" value, then it shall be as close as possible to this value. The occupied bandwidth is the frequency difference between the two markers. Alternatively, set a marker at the lowest frequency of the envelope of the spectral display, such that the marker is at or slightly below the "−xx dB down
amplitude" determined in step h). Reset the marker-delta function and move the marker to the other side of the emission until the delta marker amplitude is at the same level as the reference marker amplitude. The marker-delta frequency reading at this point is the specified emission bandwidth.
k) The occupied bandwidth shall be reported by providing plot(s) of the measuring instrument display; the plot axes and the scale units per division shall be clearly labeled. Tabular data may be reported in addition to the plot(s).

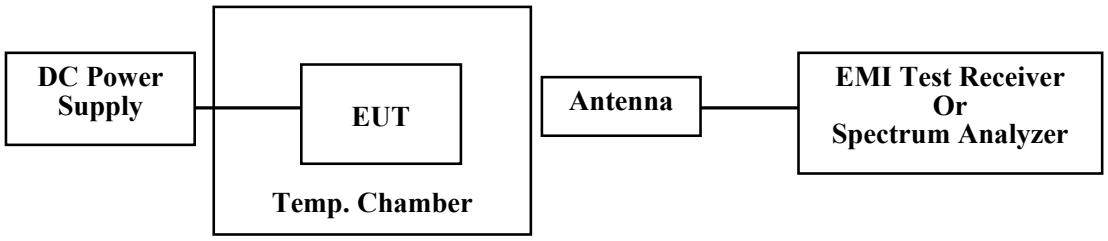
3.4 Frequency Stability

3.4.1 Applicable Standard

As per FCC Part 15.225:

The frequency tolerance of the carrier signal shall be maintained within ±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.

3.4.2 EUT Setup



3.4.3 Test Procedure

According to ANSI C63.10-2013 Section 6.8

Frequency stability with respect to ambient temperature

a) Supply the EUT with a nominal ac voltage or install a new or fully charged battery in the EUT. If possible, a dummy load shall be connected to the EUT because an antenna near the metallic walls of an environmental test chamber could affect the output frequency of the EUT. If the EUT is equipped with a permanently attached, adjustable-length antenna, then the EUT shall be placed in the center of the chamber with the antenna adjusted to the shortest length possible. Turn ON the EUT and tune it to one of the number of frequencies shown in 5.6.

b) Couple the unlicensed wireless device output to the measuring instrument by connecting an antenna to the measuring instrument with a suitable length of coaxial cable and placing the measuring antenna near the EUT (e.g., 15 cm away), or by connecting a dummy load to the measuring instrument, through an attenuator if necessary.

NOTE—An instrument that has an adequate level of accuracy as specified by the procuring or regulatory agency is the recommended measuring instrument.

c) Adjust the location of the measurement antenna and the controls on the measurement instrument to obtain a suitable signal level (i.e., a level that will not overload the measurement instrument but is strong enough to allow measurement of the operating or fundamental frequency of the EUT).

d) Turn the EUT OFF and place it inside the environmental temperature chamber. For devices that have oscillator heaters, energize only the heater circuit.

e) Set the temperature control on the chamber to the highest specified in the regulatory requirements for the type of device and allow the oscillator heater and the chamber temperature to stabilize.

f) While maintaining a constant temperature inside the environmental chamber, turn the EUT ON and record the operating frequency at startup, and at 2 minutes, 5 minutes, and 10 minutes after the EUT is energized. Four measurements in total are made.

g) Measure the frequency at each of frequencies specified in 5.6.

h) Switch OFF the EUT but do not switch OFF the oscillator heater.

i) Lower the chamber temperature by not more that 10 °C, and allow the temperature inside the chamber to stabilize.

j) Repeat step f) through step i) down to the lowest specified temperature.

Frequency stability when varying supply voltage

Unless otherwise specified, these tests shall be made at ambient room temperature (+15 °C to +25 °C). An antenna shall be connected to the antenna output terminals of the EUT if possible. If the EUT is equipped with or uses an adjustable-length antenna, then it shall be fully extended.

a) Supply the EUT with nominal voltage or install a new or fully charged battery in the EUT. Turn ON the EUT and couple its output to a frequency counter or other frequency-measuring instrument.

NOTE—An instrument that has an adequate level of accuracy as specified by the procuring or regulatory agency is the recommended measuring instrument.

b) Tune the EUT to one of the number of frequencies required in 5.6. Adjust the location of the measurement antenna and the controls on the measurement instrument to obtain a suitable signal level (i.e., a level that will not overload the measurement instrument but is strong enough to allow measurement of the operating or fundamental frequency of the EUT).

c) Measure the frequency at each of the frequencies specified in 5.6.

d) Repeat the above procedure at 85% and 115% of the nominal supply voltage as described in 5.13.

3.5 Antenna Requirement

3.5.1 Applicable Standard

FCC §15.203

An intentional radiator shall be designed to ensure that no antenna other than that furnished by the responsible party shall be used with the device. The use of a permanently attached antenna or of an antenna that uses a unique coupling to the intentional radiator shall be considered sufficient to comply with the provisions of this section. The manufacturer may design the unit so that a broken antenna can be replaced by the user, but the user of a standard antenna jack or electrical connector is prohibited. The structure and application of the EUT were analyzed to determine compliance with section §15.203 of the rules. §15.203 state that the subject device must meet the following criteria:

a. Antenna must be permanently attached to the unit.
b. Antenna must use a unique type of connector to attach to the EUT.
c. Unit must be professionally installed, and installer shall be responsible for verifying that the correct antenna is employed with the unit.

3.5.2 Judgment

Please refer to the Antenna Information detail in Section 1.

4. TEST DATA AND RESULTS

4.1 AC Line Conducted Emissions

Sample Number:	2UGN-1	Test Date:	2024/12/10
Test Site:	CE	Test Mode:	Transmitting
Tester:	David Huang	Test Result:	Pass

Environmental Conditions:

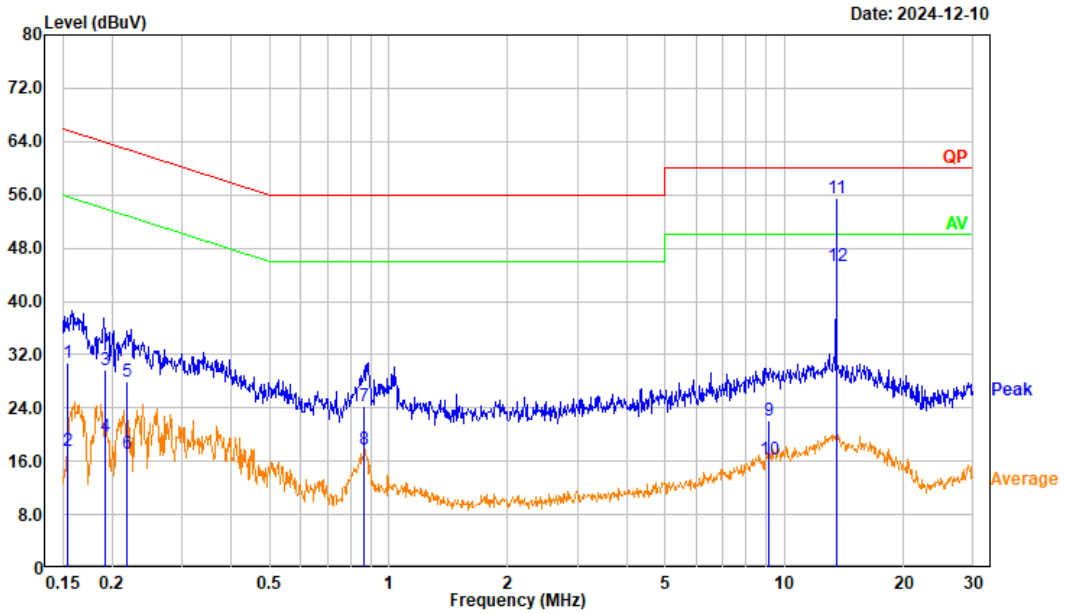
Temperature: (℃)	25.1	Relative Humidity: (%)	47	ATM Pressure: (kPa)	101.8

Test Equipment List and Details:

Manufacturer	Description	Model	Serial Number	Calibration Date	Calibration Due Date
R&S	LISN	ENV216	101132	2024/4/1	2025/3/31
R&S	EMI Test Receiver	ESR3	103104	2024/5/10	2025/5/9
MICRO-COAX	Coaxial Cable	UTIFLEX	C-0200-01	2024/1/15	2025/1/14
Audix	Test Software	E3	191218 (V9)	N/A	N/A

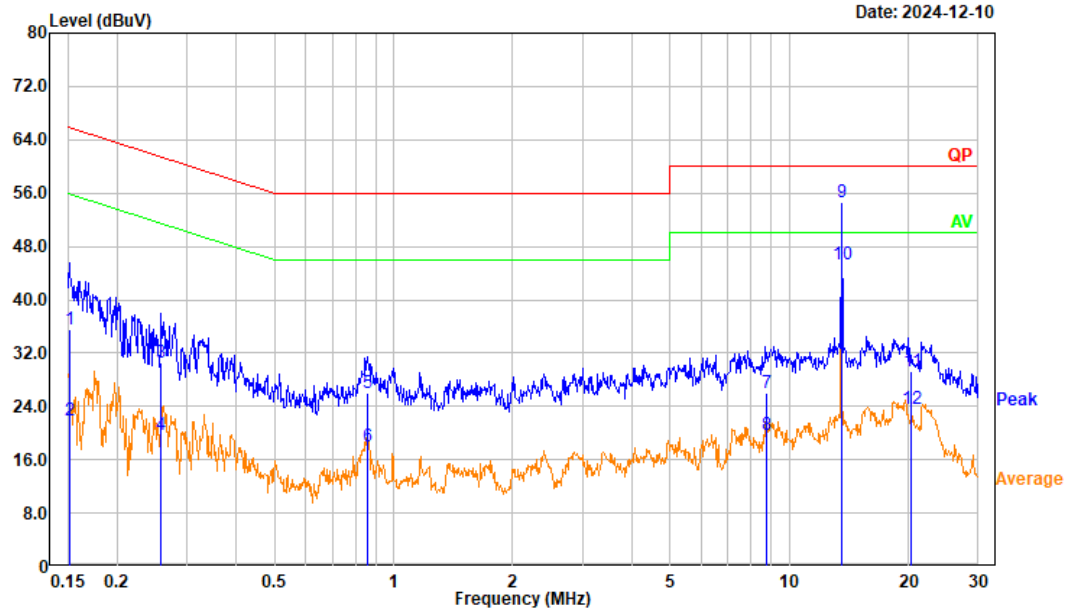
** Statement of Traceability: China Certification ICT Co., Ltd (Dongguan) attests that all calibrations have been performed, traceable to National Primary Standards and International System of Units (SI).*

Project No.: 2403Z104805E-RF
Tester: David Huang
Condition: IFBW:9 kHz Meas Time:0.025sec
Port: Line
Note: Transmitting(NFC)



No.	Frequency (MHz)	Reading (dBµV)	Factor (dB)	Result (dBµV)	Limit (dBµV)	Margin (dB)	Detector
1	0.154	20.43	10.29	30.72	65.78	35.06	QP
2	0.154	7.24	10.29	17.53	55.78	38.25	Average
3	0.192	19.58	10.06	29.64	63.94	34.30	QP
4	0.192	9.72	10.06	19.78	53.94	34.16	Average
5	0.218	17.90	10.04	27.94	62.88	34.94	QP
6	0.218	7.17	10.04	17.21	52.88	35.67	Average
7	0.863	13.62	10.66	24.28	56.00	31.72	QP
8	0.863	7.22	10.66	17.88	46.00	28.12	Average
9	9.102	11.64	10.37	22.01	60.00	37.99	QP
10	9.102	5.97	10.37	16.34	50.00	33.66	Average
11	13.561	45.26	10.23	55.49	60.00	4.51	QP
12	13.561	35.08	10.23	45.31	50.00	4.69	Average

Project No.: 2403Z104805E-RF
Tester: David Huang
Condition: IFBW:9 kHz Meas Time:0.025sec
Port: neutral
Note: Transmitting(NFC)



No.	Frequency (MHz)	Reading (dBµV)	Factor (dB)	Result (dBµV)	Limit (dBµV)	Margin (dB)	Detector
1	0.152	25.02	10.51	35.53	65.87	30.34	QP
2	0.152	11.29	10.51	21.80	55.87	34.07	Average
3	0.258	20.04	10.53	30.57	61.48	30.91	QP
4	0.258	9.10	10.53	19.63	51.48	31.85	Average
5	0.861	15.84	10.27	26.11	56.00	29.89	QP
6	0.861	7.79	10.27	18.06	46.00	27.94	Average
7	8.775	15.57	10.40	25.97	60.00	34.03	QP
8	8.775	9.27	10.40	19.67	50.00	30.33	Average
9	13.561	44.57	10.14	54.71	60.00	5.29	QP
10	13.561	35.10	10.14	45.24	50.00	4.76	Average
11	20.351	19.10	10.12	29.22	60.00	30.78	QP
12	20.351	13.56	10.12	23.68	50.00	26.32	Average

4.2 Radiation Spurious Emissions

Sample Number:	2UGN-1	Test Date:	2024/12/27
Test Site:	966-2	Test Mode:	Transmitting
Tester:	Carl Xue	Test Result:	Pass

Environmental Conditions:					
Temperature: (℃)	24.4	Relative Humidity: (%)	59	ATM Pressure: (kPa)	102.1

Test Equipment List and Details:

Manufacturer	Description	Model	Serial Number	Calibration Date	Calibration Due Date
BACL	Loop Antenna	1313-1A	3110611	2023/12/4	2026/12/3
Daruikang	Coaxial Cable	BNC-JJ-RG58	C-0300-01	2024/1/11	2025/1/10
Daruikang	Coaxial Cable	BNC-JJ-RG58	C-0500-01	2024/1/11	2025/1/10
Sunol Sciences	Antenna	JB6	A082520-5	2023/12/1	2026/11/30
R&S	EMI Test Receiver	ESR3	102724	2024/2/29	2025/2/28
TIMES MICROWAVE	Coaxial Cable	LMR-600-UltraFlex	C-0100-03	2024/12/3	2025/12/2
TIMES MICROWAVE	Coaxial Cable	LMR-600-UltraFlex	C-0370-01	2024/12/3	2025/12/2
XQY	Coaxial Cable	XQY-CMR400UF-NJ-NJ-7M	24056379	2024/6/11	2025/6/10
Sonoma	Amplifier	310N	186165	2024/12/3	2025/12/2
Audix	Test Software	E3	191218 (V9)	N/A	N/A

** Statement of Traceability: China Certification ICT Co., Ltd (Dongguan) attests that all calibrations have been performed, traceable to National Primary Standards and International System of Units (SI).*

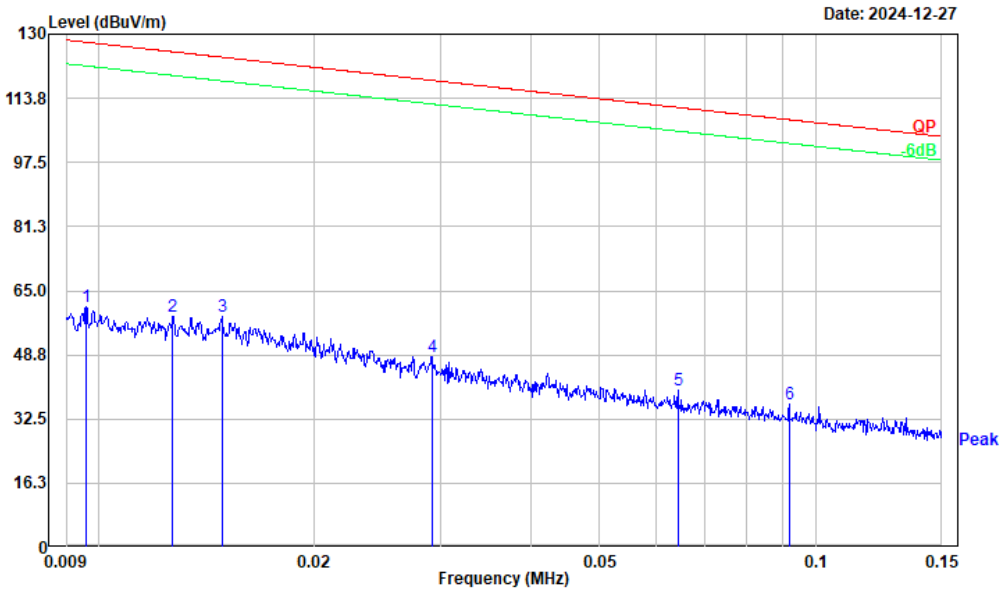
Test Data:

After pre-scan in the X, Y and Z axes of orientation, the worst case is refer to plots.

1)9kHz~30MHz

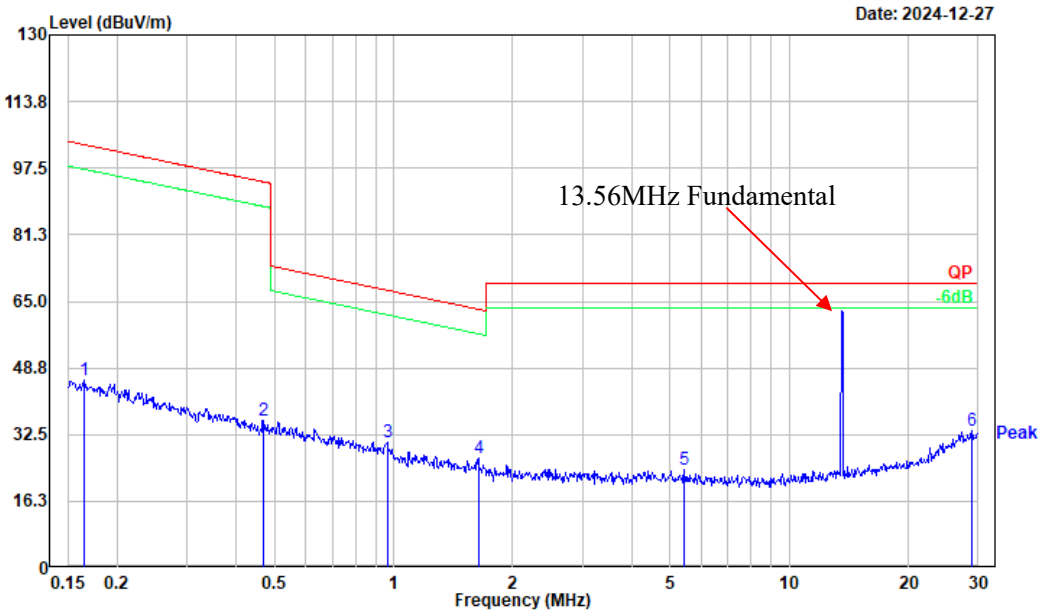
Parallel:

```
Project No.: 2403Z104805E-RF
     Tester: Carl Xue
  Condition: RBW:0.3  kHz  VBW:1    kHz  SWT:0.1  sec
Polarization: Parallel
       Note: Transmitting
```



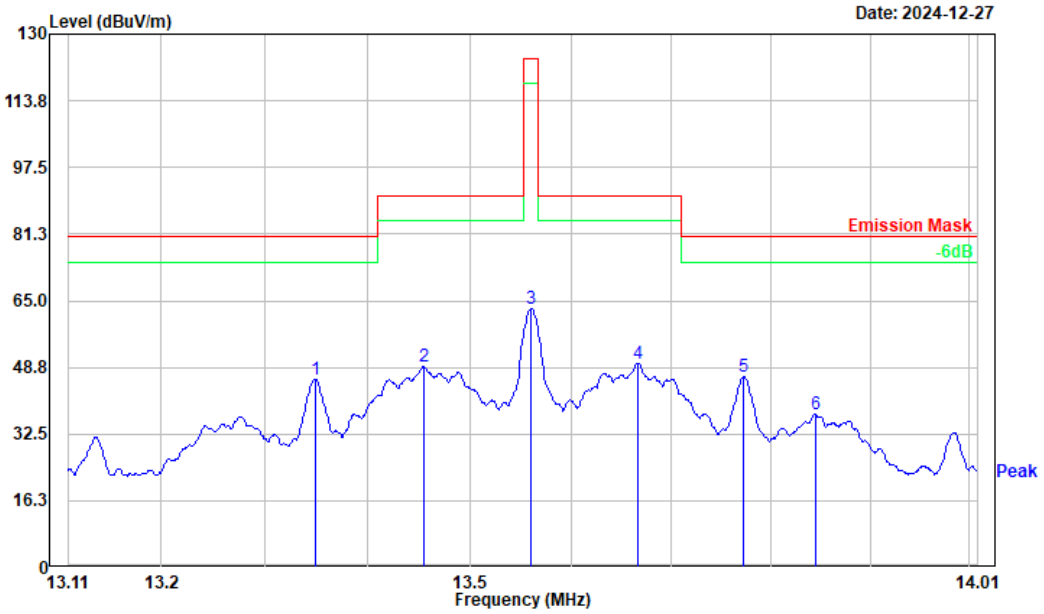
No.	Frequency (MHz)	Reading (dBµV)	Factor (dB/m)	Result (dBµV/m)	Limit (dBµV/m)	Margin (dB)	Detector
1	0.010	26.10	34.95	61.05	127.96	66.91	Peak
2	0.013	25.45	33.11	58.56	125.54	66.98	Peak
3	0.015	26.45	32.05	58.50	124.17	65.67	Peak
4	0.029	23.12	25.04	48.16	118.31	70.15	Peak
5	0.064	21.35	18.47	39.82	111.44	71.62	Peak
6	0.092	21.04	15.32	36.36	108.33	71.97	Peak

Project No.: 2403Z104805E-RF
Tester: Carl Xue
Condition: RBW:10 kHz VBW:30 kHz SWT:0.1 sec
Polarization: Parallel
Note: Transmitting



No.	Frequency (MHz)	Reading (dBµV)	Factor (dB/m)	Result (dBµV/m)	Limit (dBµV/m)	Margin (dB)	Detector
1	0.165	34.05	11.62	45.67	103.25	57.58	Peak
2	0.469	34.32	1.65	35.97	94.19	58.22	Peak
3	0.963	34.38	-3.90	30.48	67.80	37.32	Peak
4	1.636	33.37	-6.47	26.90	63.10	36.20	Peak
5	5.419	32.86	-8.91	23.95	69.54	45.59	Peak
6	28.908	40.79	-7.28	33.51	69.54	36.03	Peak

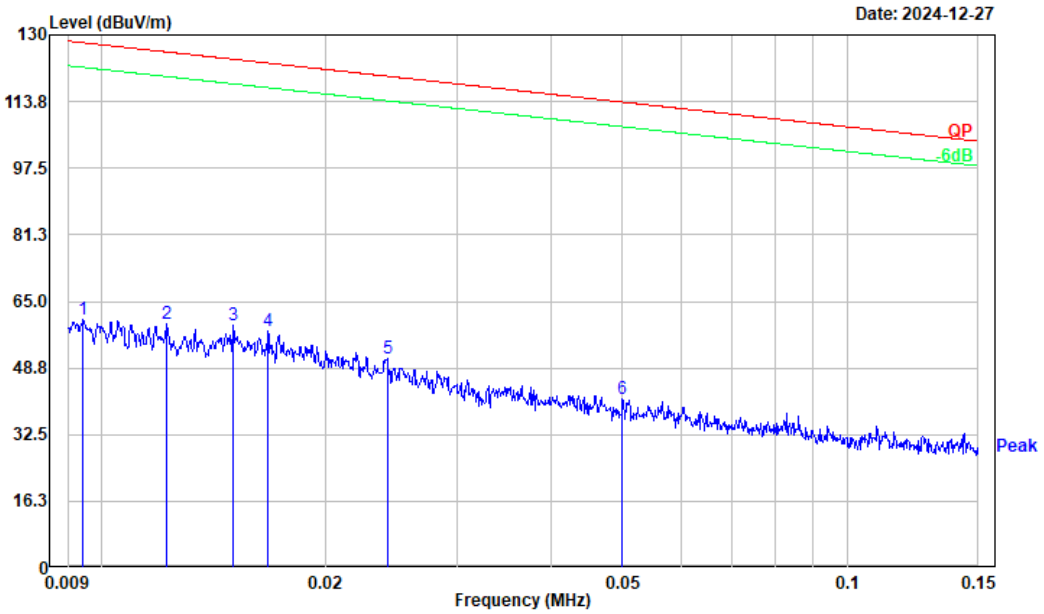
Project No.: 2403Z104805E-RF
Tester: Carl Xue
Condition: RBW:10 kHz VBW:30 kHz SWT:0.1 sec
Polarization: Parallel
Note: Transmitting



No.	Frequency (MHz)	Reading (dBµV)	Factor (dB/m)	Result (dBµV/m)	Limit (dBµV/m)	Margin (dB)	Detector
1	13.349	53.70	-7.79	45.91	80.51	34.60	Peak
2	13.455	56.81	-7.77	49.04	90.47	41.43	Peak
3	13.561	70.83	-7.76	63.07	124.00	60.93	Peak
4	13.667	57.53	-7.75	49.78	90.47	40.69	Peak
5	13.772	54.15	-7.73	46.42	80.51	34.09	Peak
6	13.844	44.99	-7.73	37.26	80.51	43.25	Peak

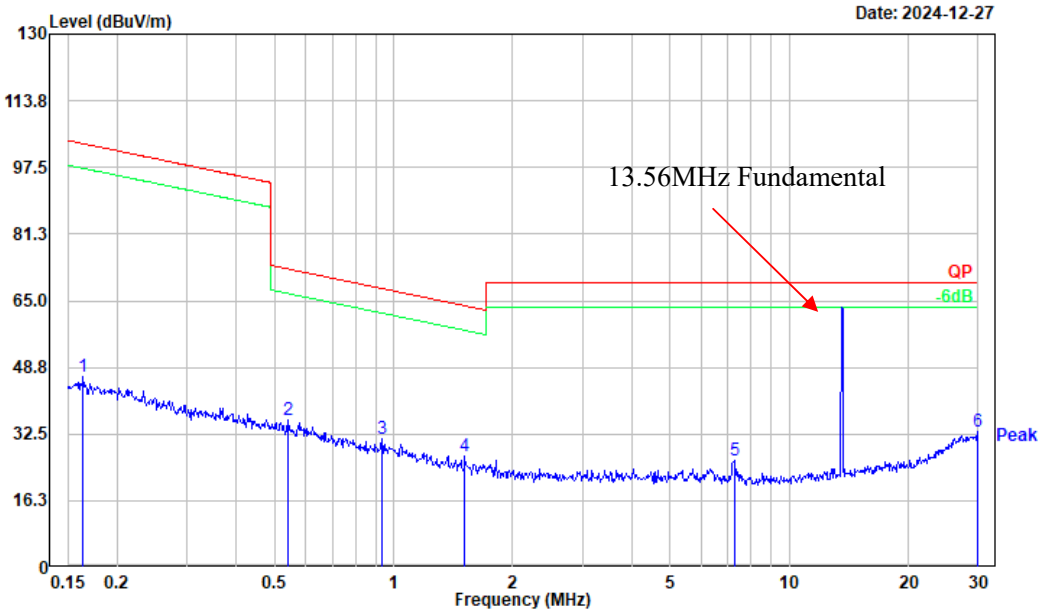
Perpendicular:

Project No.: 2403Z104805E-RF
Tester: Carl Xue
Condition: RBW:0.3 kHz VBW:1 kHz SWT:0.1 sec
Polarization: Perpendicular
Note: Transmitting



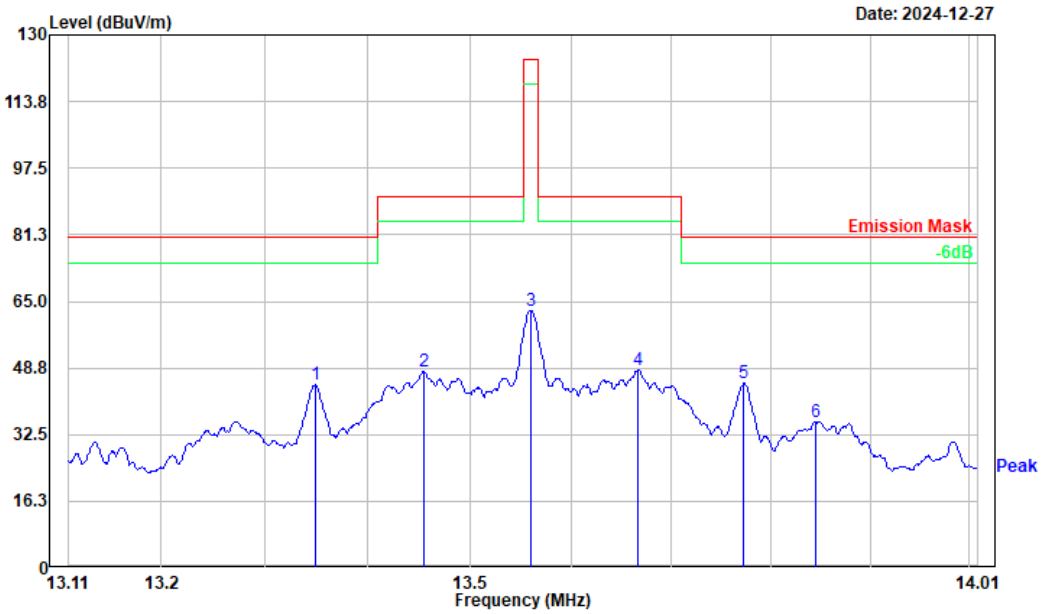
No.	Frequency (MHz)	Reading (dBµV)	Factor (dB/m)	Result (dBµV/m)	Limit (dBµV/m)	Margin (dB)	Detector
1	0.009	25.35	35.16	60.51	128.10	67.59	Peak
2	0.012	26.16	33.34	59.50	125.86	66.36	Peak
3	0.015	27.20	31.97	59.17	124.07	64.90	Peak
4	0.017	26.56	31.14	57.70	123.14	65.44	Peak
5	0.024	23.61	27.49	51.10	119.94	68.84	Peak
6	0.050	20.77	20.45	41.22	113.64	72.42	Peak

Project No.: 2403Z104805E-RF
Tester: Carl Xue
Condition: RBW:10 kHz VBW:30 kHz SWT:0.1 sec
Polarization: Perpendicular
Note: Transmitting



No.	Frequency (MHz)	Reading (dBµV)	Factor (dB/m)	Result (dBµV/m)	Limit (dBµV/m)	Margin (dB)	Detector
1	0.164	35.01	11.66	46.67	103.30	56.63	Peak
2	0.541	35.61	0.49	36.10	72.93	36.83	Peak
3	0.933	34.85	-3.64	31.21	68.09	36.88	Peak
4	1.511	33.17	-6.02	27.15	63.81	36.66	Peak
5	7.290	35.02	-8.77	26.25	69.54	43.29	Peak
6	29.841	40.27	-7.13	33.14	69.54	36.40	Peak

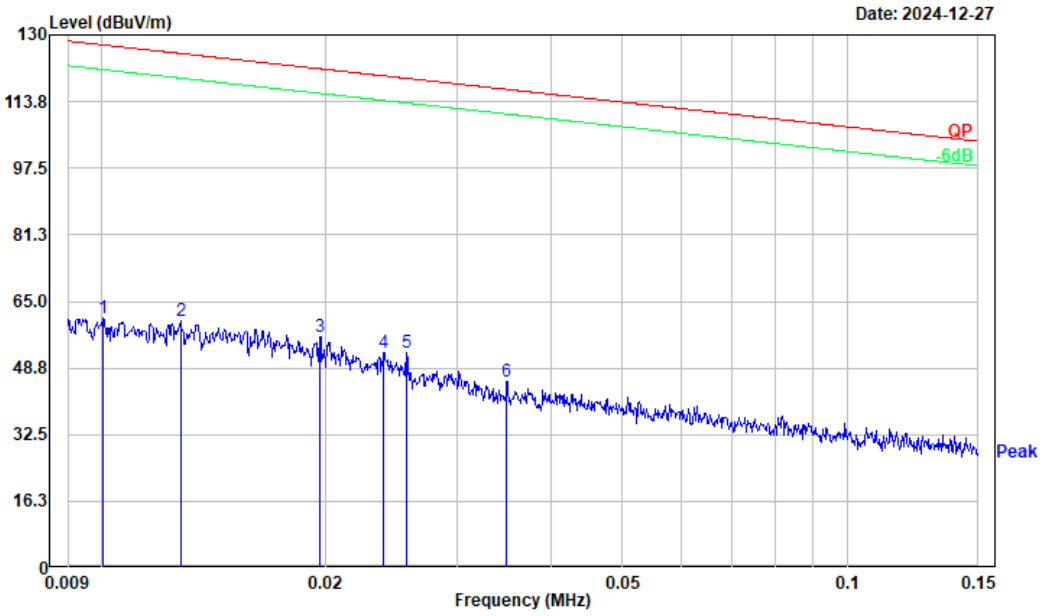
Project No.: 2403Z104805E-RF
Tester: Carl Xue
Condition: RBW:10 kHz VBW:30 kHz SWT:0.1 sec
Polarization: Perpendicular
Note: Transmitting



No.	Frequency (MHz)	Reading (dBµV)	Factor (dB/m)	Result (dBµV/m)	Limit (dBµV/m)	Margin (dB)	Detector
1	13.349	52.38	-7.79	44.59	80.51	35.92	Peak
2	13.455	55.76	-7.77	47.99	90.47	42.48	Peak
3	13.560	70.63	-7.76	62.87	124.00	61.13	Peak
4	13.667	56.01	-7.75	48.26	90.47	42.21	Peak
5	13.772	52.70	-7.73	44.97	80.51	35.54	Peak
6	13.844	43.48	-7.73	35.75	80.51	44.76	Peak

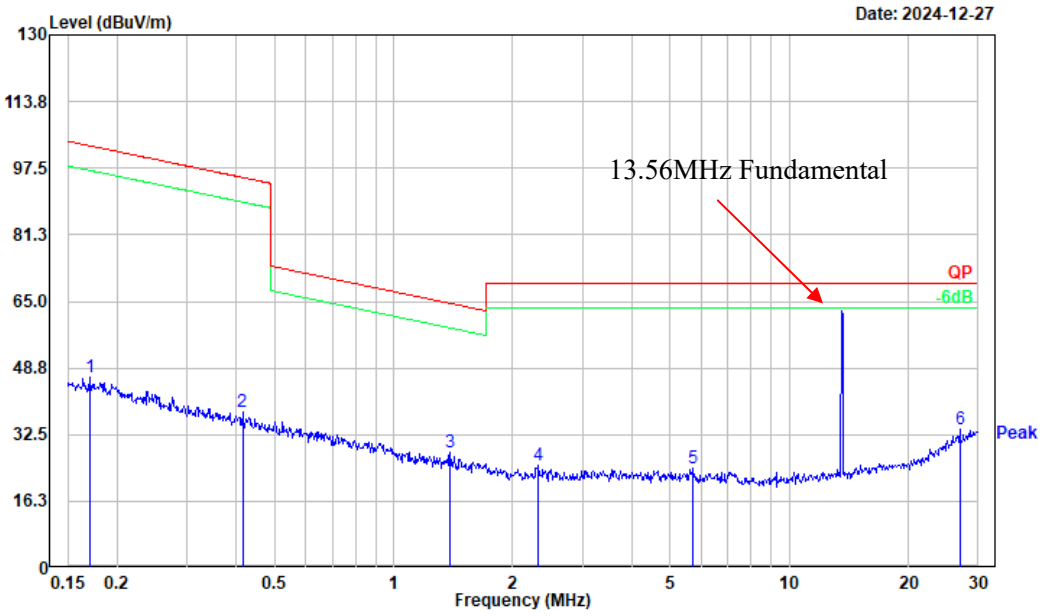
Ground-parallel:

Project No.: 2403Z104805E-RF
Tester: Carl Xue
Condition: RBW:0.3 kHz VBW:1 kHz SWT:0.1 sec
Polarization: Ground-parallel
Note: Transmitting



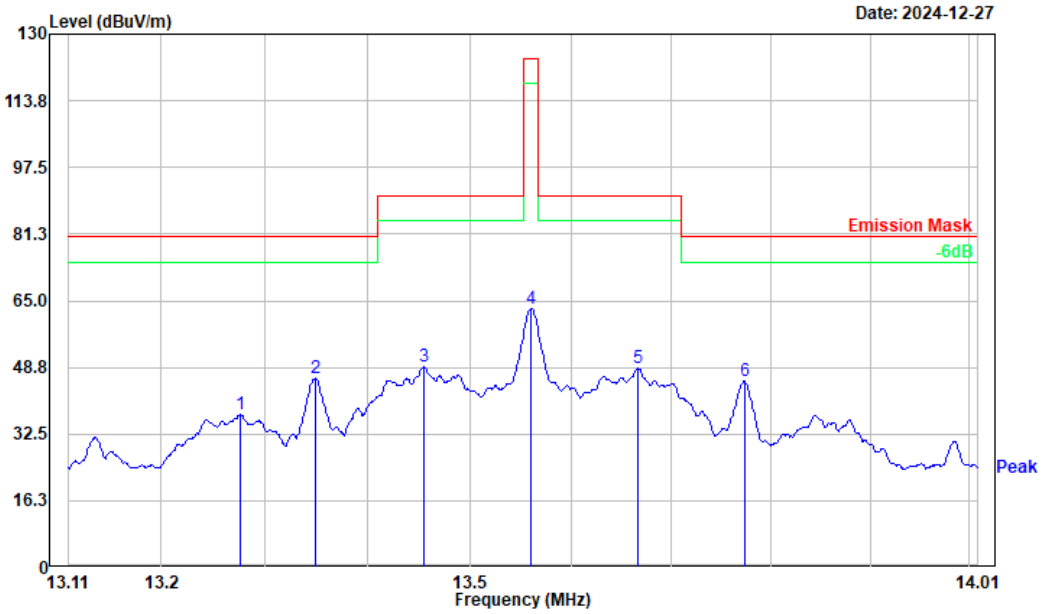
No.	Frequency (MHz)	Reading (dBµV)	Factor (dB/m)	Result (dBµV/m)	Limit (dBµV/m)	Margin (dB)	Detector
1	0.010	26.59	34.41	61.00	127.57	66.57	Peak
2	0.013	27.00	33.08	60.08	125.49	65.41	Peak
3	0.020	26.71	29.72	56.43	121.75	65.32	Peak
4	0.024	24.94	27.62	52.56	120.04	67.48	Peak
5	0.026	25.66	26.77	52.43	119.43	67.00	Peak
6	0.035	21.87	23.60	45.47	116.74	71.27	Peak

Project No.: 2403Z104805E-RF
Tester: Carl Xue
Condition: RBW:10 kHz VBW:30 kHz SWT:0.1 sec
Polarization: Ground-parallel
Note: Transmitting



No.	Frequency (MHz)	Reading (dBµV)	Factor (dB/m)	Result (dBµV/m)	Limit (dBµV/m)	Margin (dB)	Detector
1	0.170	34.99	11.37	46.36	102.98	56.62	Peak
2	0.415	35.22	2.82	38.04	95.25	57.21	Peak
3	1.388	33.68	-5.59	28.09	64.56	36.47	Peak
4	2.321	32.80	-7.93	24.87	69.54	44.67	Peak
5	5.713	33.37	-8.92	24.45	69.54	45.09	Peak
6	26.984	41.38	-7.50	33.88	69.54	35.66	Peak

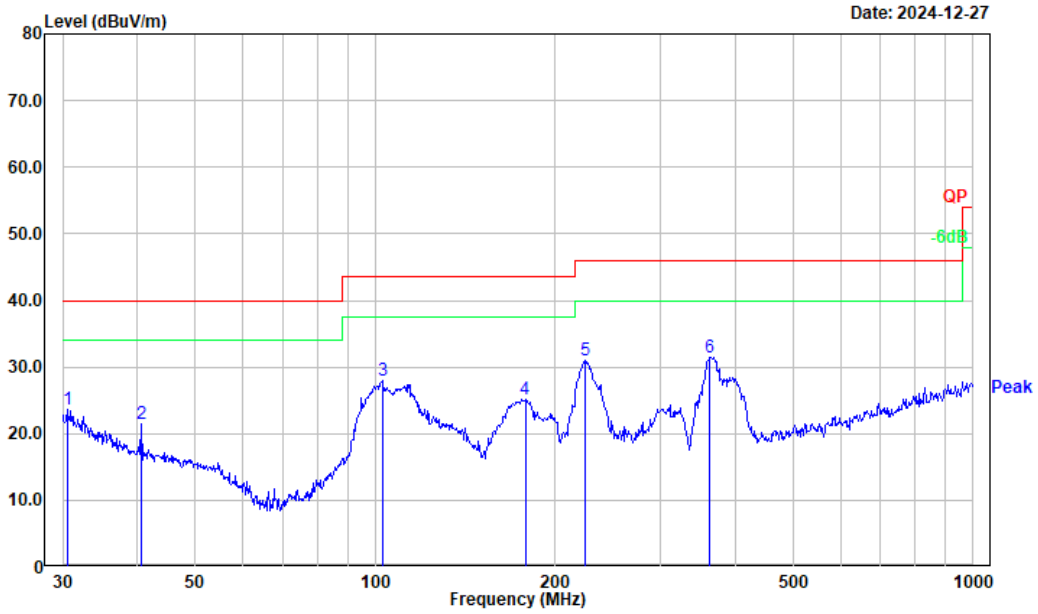
Project No.: 2403Z104805E-RF
Tester: Carl Xue
Condition: RBW:10 kHz VBW:30 kHz SWT:0.1 sec
Polarization: Ground-parallel
Note: Transmitting



No.	Frequency (MHz)	Reading (dBµV)	Factor (dB/m)	Result (dBµV/m)	Limit (dBµV/m)	Margin (dB)	Detector
1	13.277	45.05	-7.79	37.26	80.51	43.25	Peak
2	13.349	53.86	-7.79	46.07	80.51	34.44	Peak
3	13.455	56.57	-7.77	48.80	90.47	41.67	Peak
4	13.561	70.82	-7.76	63.06	124.00	60.94	Peak
5	13.667	56.31	-7.75	48.56	90.47	41.91	Peak
6	13.773	53.07	-7.73	45.34	80.51	35.17	Peak

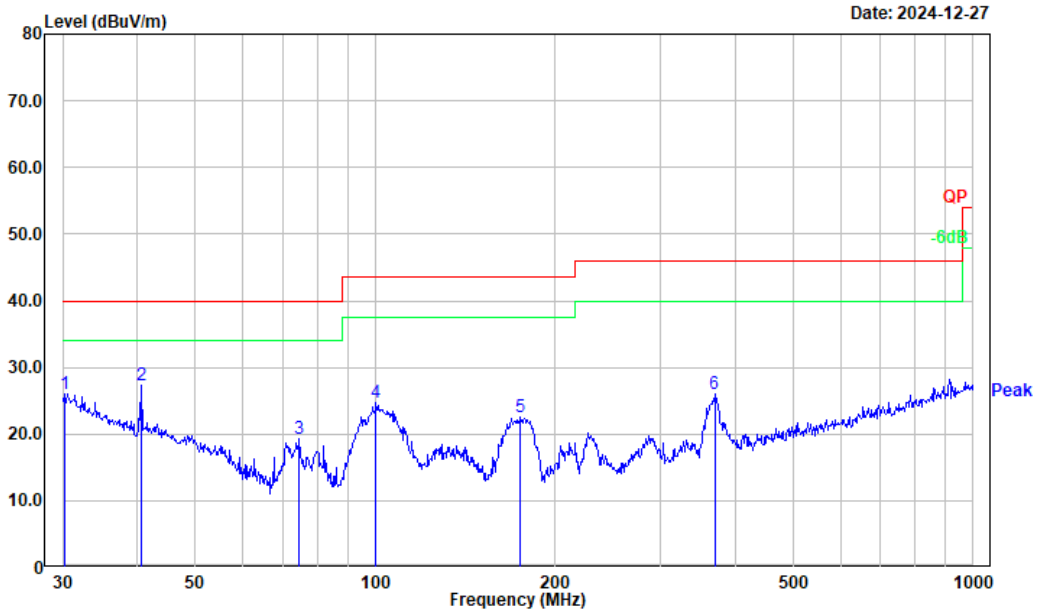
2) 30MHz-1GHz:

Project No.: 2403Z104805E-RF
Tester: Carl Xue
Condition: RBW:100 kHz VBW:300 kHz SWT:0.1 sec
Polarization: horizontal
Note: Transmitting



No.	Frequency (MHz)	Reading (dBµV)	Factor (dB/m)	Result (dBµV/m)	Limit (dBµV/m)	Margin (dB)	Detector
1	30.531	27.74	-4.14	23.60	40.00	16.40	Peak
2	40.559	32.99	-11.62	21.37	40.00	18.63	Peak
3	102.719	41.64	-13.76	27.88	43.50	15.62	Peak
4	178.133	38.45	-13.29	25.16	43.50	18.34	Peak
5	224.519	44.53	-13.56	30.97	46.00	15.03	Peak
6	362.985	40.91	-9.38	31.53	46.00	14.47	Peak

Project No.: 2403Z104805E-RF
Tester: Carl Xue
Condition: RBW:100 kHz VBW:300 kHz SWT:0.1 sec
Polarization: vertical
Note: Transmitting



No.	Frequency (MHz)	Reading (dBµV)	Factor (dB/m)	Result (dBµV/m)	Limit (dBµV/m)	Margin (dB)	Detector
1	30.211	29.88	-3.93	25.95	40.00	14.05	Peak
2	40.559	38.84	-11.62	27.22	40.00	12.78	Peak
3	74.657	36.48	-17.22	19.26	40.00	20.74	Peak
4	100.229	39.11	-14.47	24.64	43.50	18.86	Peak
5	175.037	35.46	-13.02	22.44	43.50	21.06	Peak
6	369.405	35.29	-9.25	26.04	46.00	19.96	Peak

4.3 20 dB Emission Bandwidth

Sample Number:	2UGN-1	Test Date:	2024/12/27
Test Site:	966-2	Test Mode:	Transmitting
Tester:	Carl Xue	Test Result:	Pass

Environmental Conditions:					
Temperature: (℃)	24.4	Relative Humidity: (%)	59	ATM Pressure: (kPa)	102.1

Test Equipment List and Details:

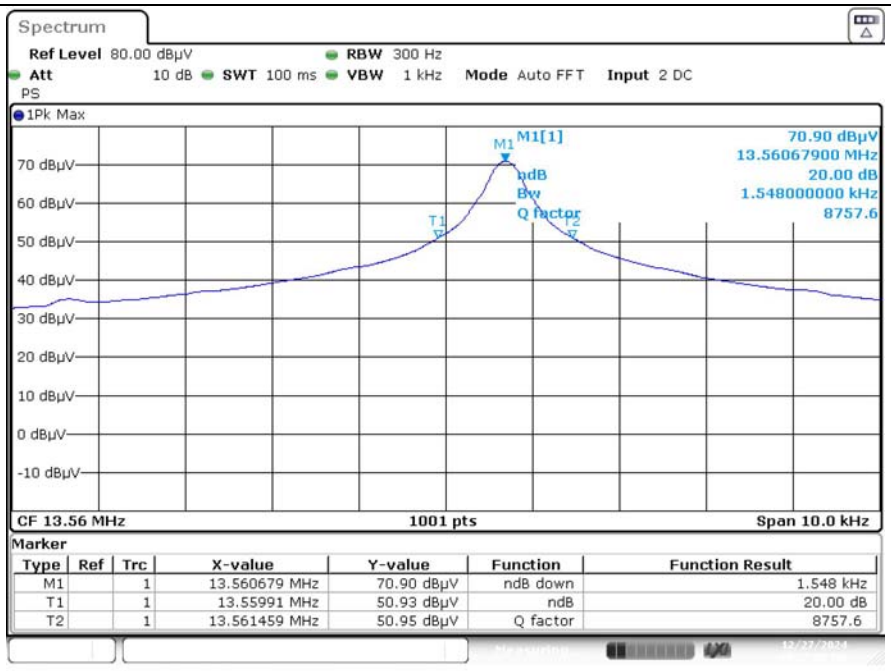
Manufacturer	Description	Model	Serial Number	Calibration Date	Calibration Due Date
BACL	Loop Antenna	1313-1A	3110611	2023/12/4	2026/12/3
R&S	EMI Test Receiver	ESR3	102724	2024/2/29	2025/2/28
Daruikang	Coaxial Cable	BNC-JJ-RG58	C-0300-01	2024/1/11	2025/1/10
Daruikang	Coaxial Cable	BNC-JJ-RG58	C-0500-01	2024/1/11	2025/1/10

**** Statement of Traceability:*** *China Certification ICT Co., Ltd (Dongguan) attests that all calibrations have been performed, traceable to National Primary Standards and International System of Units (SI).*

Test Data:

Test Frequency (MHz)	20 dB Emission Bandwidth (Hz)
13.56	1548

20dB Emission Bandwidth



4.4 Frequency Stability

Sample Number:	2UGN-1	Test Date:	2024/12/27
Test Site:	RF	Test Mode:	Transmitting
Tester:	Carl Xue	Test Result:	Pass

Environmental Conditions:					
Temperature: (℃)	24.9	Relative Humidity: (%)	57	ATM Pressure: (kPa)	102.1

Test Equipment List and Details:

Manufacturer	Description	Model	Serial Number	Calibration Date	Calibration Due Date
BACL	Loop Antenna	1313-1A	3110611	2023/12/4	2026/12/3
R&S	EMI Test Receiver	ESR3	102724	2024/2/29	2025/2/28
BACL	TEMP&HUMI Test Chamber	BTH-150-40	30174	2024/4/1	2025/3/31
YINSAIGE	Coaxial Cable	SS402	SJ0300001	Each time	N/A
UNI-T	Multimeter	UT39A+	C210582554	2024/1/23	2025/1/22
ZHAOXIN	DC Power Supply	RXN-6010D	21R6010D0912386	N/A	N/A

**** Statement of Traceability:*** *China Certification ICT Co., Ltd (Dongguan) attests that all calibrations have been performed, traceable to National Primary Standards and International System of Units (SI).*

Test Data:

f_o = 13.56 MHz				
Temperature	**Power Supplied**	**Measured frequency**	**Frequency Error**	**Limit**
℃	**V_{DC}**	**MHz**	**Hz**	**Hz**
-20	3.91	13.560569	569	±1356
-10		13.560510	510	±1356
0		13.560845	845	±1356
10		13.560398	398	±1356
20		13.560679	679	±1356
25		13.560436	436	±1356
30		13.560790	790	±1356
40		13.560593	593	±1356
50		13.560695	695	±1356
20	4.5	13.560746	746	±1356
20	3.3	13.560608	608	±1356

5. RF EXPOSURE EVALUATION

5.1 Applicable Standard

According to KDB447498 D01 General RF Exposure Guidance v06: 4.3. General SAR test exclusion guidance

c) For frequencies below 100 MHz, the following may be considered for SAR test exclusion (also illustrated in Appendix C):

1) For *test separation distances* > 50 mm and < 200 mm, the power threshold at the corresponding test separation distance at 100 MHz in step b) is multiplied by [1 + log(100/$f_{(MHz)}$)]

2) For *test separation distances* ≤ 50 mm, the power threshold determined by the equation in c) 1) for 50 mm and 100 MHz is multiplied by ½

3) SAR measurement procedures are not established below 100 MHz

5.2 Measurement Result

For NFC, the power of EUT: E Field@3m is 63.07dBuV/m =-32.13 dBm(0.001mW)
Note: E[dBμV/m] = EIRP[dBm] + 95.2 for d = 3 m.

SAR test exclusion threshold for NFC(13.56MHz) separation distance < 50mm

=[474*(1 + log(100/$f_{(MHz)}$))]/2

= 443mW

>0.001mW

Result: Compliant.

6. EUT PHOTOGRAPHS

Please refer to the attachment 2403Z104805E-RF-EXP EUT EXTERNAL PHOTOGRAPHS and 2403Z104805E-RF-INP EUT INTERNAL PHOTOGRAPHS

7. TEST SETUP PHOTOGRAPHS

Please refer to the attachment 2403Z104805E-RF-00H-TSP TEST SETUP PHOTOGRAPHS.

===== END OF REPORT =====