TCT 通测检测
TESTING CENTRE TECHNOLOGY

TEST REPORT

FCC ID. ..... :	2A9LJ-CIAO	
Test Report No..... :	TCT240619E045	
Date of issue..... :	Oct. 09, 2024	
Testing laboratory ..... :	SHENZHEN TONGCE TESTING LAB	
Testing location/ address:	2101 & 2201, Zhenchang Factory Renshan Industrial Zone, Fuhai Subdistrict, Bao'an District, Shenzhen, Guangdong, 518103, People's Republic of China	
Applicant's name..... :	Meferi Technologies Co., Ltd.	
Address..... :	4F, A6, Tianfu Software Park, No. 1129, Century City Road, High-tech Zone, 610041, Chengdu, Sichuan, 610041 China	
Manufacturer's name ... :	Meferi Technologies Co., Ltd.	
Address..... :	4F, A6, Tianfu Software Park, No. 1129, Century City Road, High-tech Zone, 610041, Chengdu, Sichuan, 610041 China	
Standard(s) ..... :	FCC CFR Title 47 Part 15 Subpart C Section 15.225	
Test item description ..... :	INTELLIGENT SHOPPER ASSISTANT	
Trade Mark ..... :	MEFERI	
Model/Type reference..... :	CIAO, MS35, MS35P, MS35T, MS35H, MS35L, MS35S, CIAO plus	
Rating(s)..... :	Refer to EUT description of page 3	
Date of receipt of test item ..... :	Jun. 19, 2024	
Date (s) of performance of test..... :	Jun. 19, 2024 ~ Oct. 09, 2024	
Tested by (+signature) ... :	Aaron MO	Aaron Mo
Check by (+signature).... :	Beryl ZHAO	Beryl Zhao
Approved by (+signature):	Tomsin	Tomsin

SHENZHEN TONGCE TESTING LAB TCT

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1. General Product Information

1.1. EUT description

Test item description .....:	INTELLIGENT SHOPPER ASSISTANT
Model/Type reference.....:	CIAO
Sample Number.....:	TCT240619E003-0101
Operation Frequency .....:	13.56MHz
Antenna Type.....:	FPC Antenna
Antenna Gain.....:	0dBi
Rating(s).....:	Adapter Information: Model: HJ-12010000 Input: AC 100-240V, 50/60Hz, 2.0A Output: DC 12.0V, 10.0A 120.0W Rechargeable Li-ion Battery DC 3.7V

Note: The antenna gain listed in this report is provided by applicant, and the test laboratory is not responsible for this parameter.

1.2. Model(s) list

No.	Model No.	Tested with
1	CIAO	☒
Other models	MS35, MS35P, MS35T, MS35H, MS35L, MS35S, CIAO plus	☐
Note: CIAO is tested model, other models are derivative models. The models are identical in circuit and PCB layout, only different on the model names. So the test data of CIAO can represent the remaining models.		

2. Test Result Summary

Requirement	CFR 47 Section IC Paragraph	Result
Antenna requirement	§15.203	PASS
AC Power Line Conducted Emission	§15.207	PASS
Spurious emissions	§15.225/ §15.209	PASS
Occupied Bandwidth	§15.215 (c)	PASS
Frequency stability	§15.225	PASS

Note:

1. PASS: Test item meets the requirement.

2. Fail: Test item does not meet the requirement.

3. N/A: Test case does not apply to the test object.

4. The test result judgment is decided by the limit of test standard.

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3. General Information

3.1. Test Environment and Mode

Operating Environment:		
Condition	Conducted Emission	Radiated Emission
Temperature:	25.7 °C	24.6 °C
Humidity:	51 % RH	53 % RH
Atmospheric Pressure:	1010 mbar	1010 mbar
Test Mode:		
Operation mode:	Keep the EUT in continuous transmitting with modulation	
The sample was placed (0.8m below 1GHz, 1.5m above 1GHz) above the ground plane of 3m chamber. Measurements in both horizontal and vertical polarities were performed. During the test, each emission was maximized by: having the EUT continuously working, investigated all operating modes, rotated about all 3 axis (X, Y & Z) and considered typical configuration to obtain worst position, manipulating interconnecting cables, rotating the turntable, varying antenna height from 1m to 4m in both horizontal and vertical polarizations. The emissions worst-case(Z axis) are shown in Test Results of the following pages.		

3.2. Description of Support Units

The EUT has been tested as an independent unit together with other necessary accessories or support units. The following support units or accessories were used to form a representative test configuration during the tests.

Equipment	Model No.	Serial No.	FCC ID	Trade Name
IC Card	/	/	/	/

Note:

1. All the equipment/cables were placed in the worst-case configuration to maximize the emission during the test.

2. Grounding was established in accordance with the manufacturer's requirements and conditions for the intended use.

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4. Facilities and Accreditations

4.1. Facilities

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

● FCC - Registration No.: 645098
SHENZHEN TONGCE TESTING LAB
Designation Number: CN1205
The testing lab has been registered and fully described in a report with the (FCC) Federal Communications Commission. The acceptance letter from the FCC is maintained in our files.

●● IC - Registration No.: 10668A
SHENZHEN TONGCE TESTING LAB
CAB identifier: CN0031
The testing lab has been registered by Innovation, Science and Economic Development Canada for radio equipment testing.

4.2. Location

SHENZHEN TONGCE TESTING LAB
Address: 2101 & 2201, Zhenchang Factory, Renshan Industrial Zone, Fuhai Subdistrict, Bao'an District, Shenzhen, Guangdong, 518103, People's Republic of China
TEL: +86-755-27673339

4.3. Measurement Uncertainty

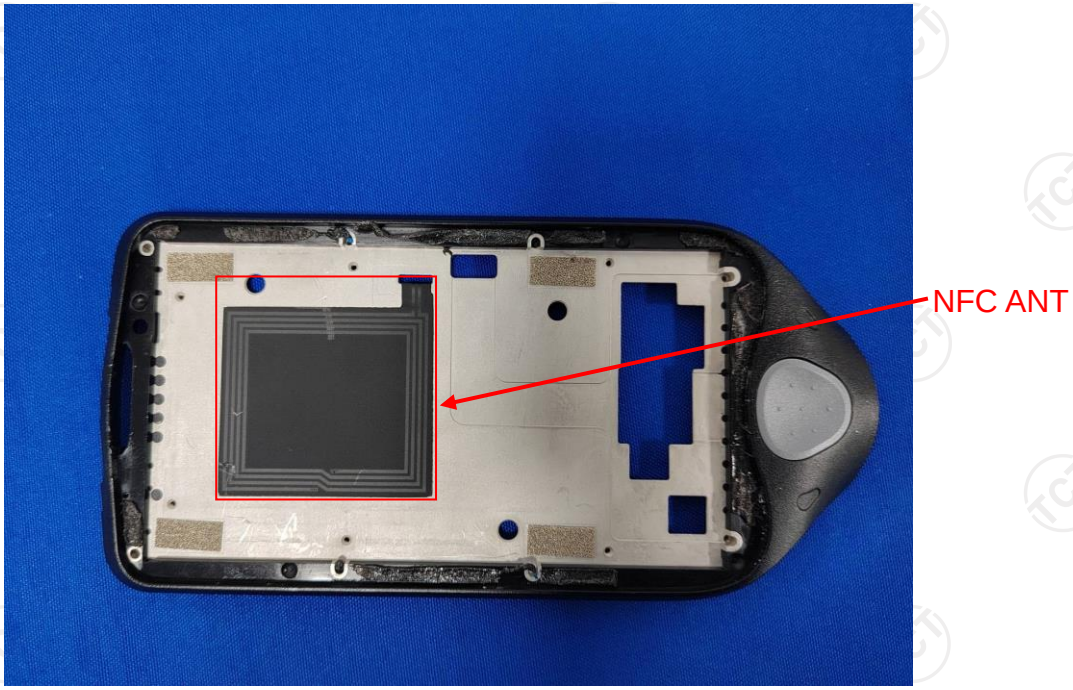
The reported uncertainty of measurement y ± U, where expended uncertainty U is based on a standard uncertainty multiplied by a coverage factor of k=2, providing a level of confidence of approximately 95 %.

No.	Item	MU
1	Conducted Emission	± 3.10 dB
2	RF power, conducted	± 0.12 dB
3	Spurious emissions, conducted	± 0.11 dB
4	All emissions, radiated(<1 GHz)	± 4.56 dB
5	All emissions, radiated(1 GHz - 18 GHz)	± 4.22 dB
6	All emissions, radiated(18 GHz- 40 GHz)	± 4.36 dB

5. Test Results and Measurement Data

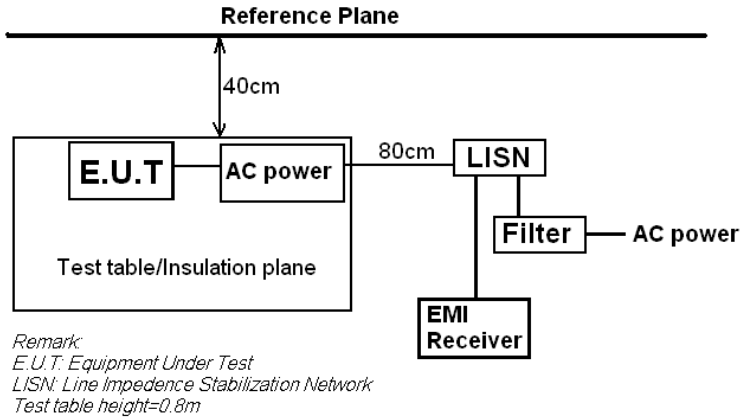
5.1. Antenna Requirement

Standard requirement:	FCC Part15 C Section 15.203
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. This requirement does not apply to carrier current devices or to devices operated under the provisions of §15.211, §15.213, §15.217, §15.219, or §15.221. Further, this requirement does not apply to intentional radiators that must be professionally installed, such as perimeter protection systems and some field disturbance sensors, or to other intentional radiators which, in accordance with §15.31(d), must be measured at the installation site. However, the installer shall be responsible for ensuring that the proper antenna is employed so that the limits in this part are not exceeded.	
E.U.T Antenna:	
The NFC antenna is FPC antenna which permanently attached, and the best case gain of the antenna is 0dBi.	



5.2. Conducted Emission

5.2.1. Test Specification

<table>
<tr><td>Test Requirement:</td><td>FCC Part15 C Section 15.207</td></tr>
<tr><td>Test Method:</td><td>ANSI C63.10:2020</td></tr>
<tr><td>Frequency Range:</td><td>150 kHz to 30 MHz</td></tr>
<tr><td>Receiver setup:</td><td>RBW=9 kHz, VBW=30 kHz, Sweep time=auto</td></tr>
<tr><td>Limits:</td><td>
<table>
<tr><td rowspan="2">Frequency range (MHz)</td><td colspan="2">Limit (dBuV)</td></tr>
<tr><td>Quasi-peak</td><td>Average</td></tr>
<tr><td>0.15-0.5</td><td>66 to 56*</td><td>56 to 46*</td></tr>
<tr><td>0.5-5</td><td>56</td><td>46</td></tr>
<tr><td>5-30</td><td>60</td><td>50</td></tr>
</table>
</td></tr>
<tr><td>Test Setup:</td><td>


</td></tr>
<tr><td>Test Mode:</td><td>Refer to section 3.1 for details</td></tr>
<tr><td>Test Procedure:</td><td>1. The E.U.T is connected to the main power through a line impedance stabilization network (L.I.S.N.). This provides a 50ohm/50uH coupling impedance for the measuring equipment.
2. The peripheral devices are also connected to the main power through a LISN that provides a 50ohm/50uH coupling impedance with 50ohm termination. (Please refer to the block diagram of the test setup and photographs).
3. Both sides of A.C. line are checked for maximum conducted interference. In order to find the maximum emission, the relative positions of equipment and all of the interface cables must be changed according to ANSI C63.10:2020 on conducted measurement.</td></tr>
<tr><td>Test Result:</td><td>PASS</td></tr>
</table>

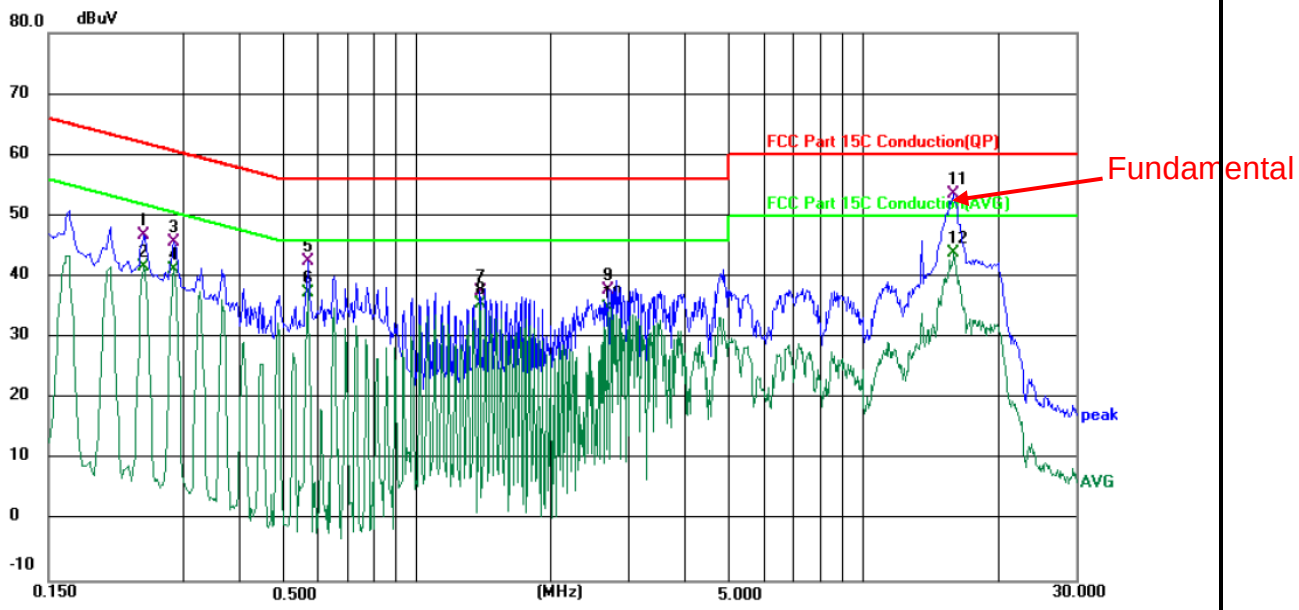
5.2.2. Test Instruments

Conducted Emission Shielding Room Test Site (843)				
Equipment	**Manufacturer**	**Model**	**Serial Number**	**Calibration Due**
EMI Test Receiver	R&S	ESCI3	100898	Jun. 26, 2025
LISN	Schwarzbeck	NSLK 8126	8126453	Jan. 31, 2025
Attenuator	N/A	10dB	164080	Jun. 26, 2025
Line-5	TCT	CE-05	/	Jun. 26, 2025
EMI Test Software	EZ_EMC	EMEC-3A1	1.1.4.2	/

5.2.3. Test data

Please refer to following diagram for individual

Conducted Emission on Line Terminal of the power line (150 kHz to 30MHz)



Site 844 Shielding Room | Phase: *L1* | Temperature: 25.7 (℃) | Humidity: 51 %

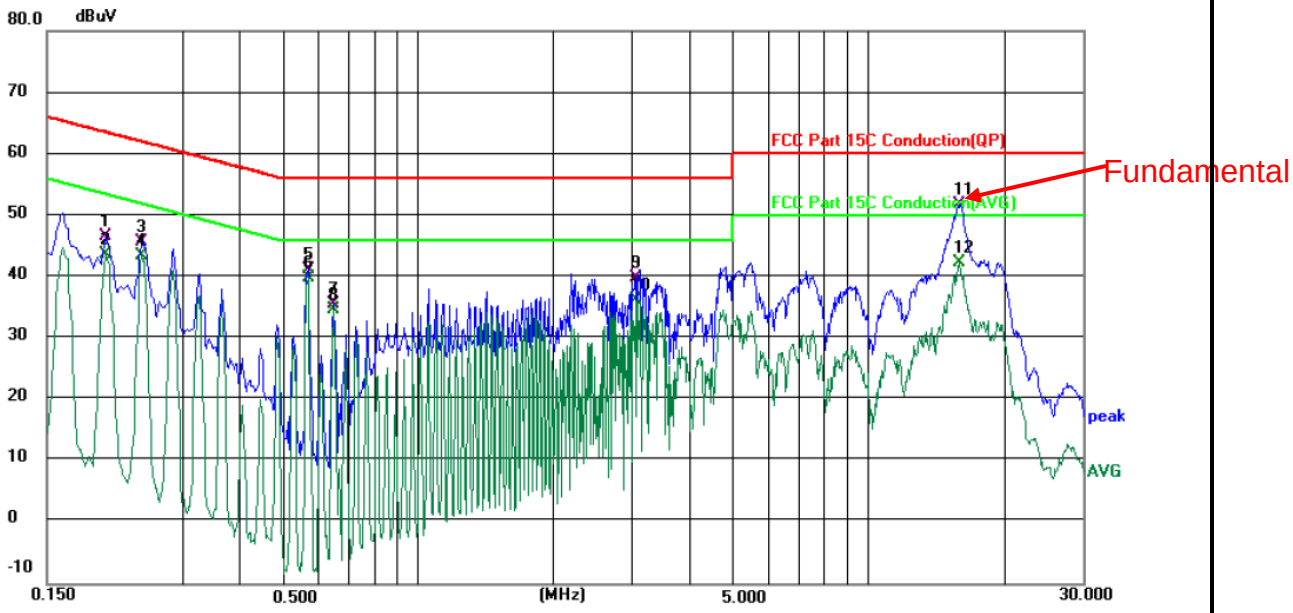
Limit: FCC Part 15C Conduction(QP) | Power: DC 3.7 V

No.	Mk.	Freq.	Reading Level	Correct Factor	Measure-ment	Limit	Over		
		MHz	dBuV	dB	dBuV	dBuV	dB	Detector	Comment
1		0.2454	37.15	9.65	46.80	61.91	-15.11	QP	
2		0.2454	31.93	9.65	41.58	51.91	-10.33	AVG	
3		0.2857	36.09	9.66	45.75	60.65	-14.90	QP	
4		0.2857	31.53	9.66	41.19	50.65	-9.46	AVG	
5		0.5700	32.25	10.25	42.50	56.00	-13.50	QP	
6		0.5700	27.05	10.25	37.30	46.00	-8.70	AVG	
7		1.3851	27.81	9.78	37.59	56.00	-18.41	QP	
8		1.3851	25.75	9.78	35.53	46.00	-10.47	AVG	
9		2.6900	27.84	9.93	37.77	56.00	-18.23	QP	
10		2.6900	24.96	9.93	34.89	46.00	-11.11	AVG	
11		15.9300	43.23	10.27	53.50	60.00	-6.50	QP	
12	*	15.9300	33.58	10.27	43.85	50.00	-6.15	AVG	

Note:

Freq. = Emission frequency in MHz
Reading level (dBµV) = Receiver reading
Corr. Factor (dB) = LISN factor + Cable loss
Measurement (dBµV) = Reading level (dBµV) + Corr. Factor (dB)
Limit (dBµV) = Limit stated in standard
Margin (dB) = Measurement (dBµV) – Limits (dBµV)
Q.P. =Quasi-Peak, AVG =average
** is meaning the worst frequency has been tested in the frequency range 150 kHz to 30MHz*

Conducted Emission on Neutral Terminal of the power line (150 kHz to 30MHz)



Site 844 Shielding Room | Phase: *N* | Temperature: 25.7 (℃) | Humidity: 51 %

Limit: FCC Part 15C Conduction(QP) | Power: DC 3.7 V

No.	Mk.	Freq.	Reading Level	Correct Factor	Measure-ment	Limit	Over		
		MHz	dBuV	dB	dBuV	dBuV	dB	Detector	Comment
1		0.2020	36.93	9.63	46.56	63.53	-16.97	QP	
2		0.2020	34.14	9.63	43.77	53.53	-9.76	AVG	
3		0.2419	35.99	9.63	45.62	62.03	-16.41	QP	
4		0.2419	33.72	9.63	43.35	52.03	-8.68	AVG	
5		0.5700	30.94	10.22	41.16	56.00	-14.84	QP	
6	*	0.5700	29.62	10.22	39.84	46.00	-6.16	AVG	
7		0.6500	25.30	10.31	35.61	56.00	-20.39	QP	
8		0.6500	24.45	10.31	34.76	46.00	-11.24	AVG	
9		3.0459	29.86	9.90	39.76	56.00	-16.24	QP	
10		3.0459	26.44	9.90	36.34	46.00	-9.66	AVG	
11		15.9300	41.63	10.23	51.86	60.00	-8.14	QP	
12		15.9300	31.99	10.23	42.22	50.00	-7.78	AVG	

Note:

Freq. = Emission frequency in MHz
Reading level (dBµV) = Receiver reading
Corr. Factor (dB) = LISN factor + Cable loss
Measurement (dBµV) = Reading level (dBµV) + Corr. Factor (dB)
Limit (dBµV) = Limit stated in standard
Margin (dB) = Measurement (dBµV) – Limits (dBµV)
Q.P. =Quasi-Peak
AVG =average
** is meaning the worst frequency has been tested in the frequency range 150 kHz to 30MHz*

5.3. Radiated Emission Measurement

5.3.1. Test Specification

Test Requirement:	FCC Part15 C Section 15.225
Test Method:	ANSI C63.10: 2020
Frequency Range:	9 kHz to 1000 MHz
Measurement Distance:	3 m
Antenna Polarization:	Horizontal & Vertical

Receiver Setup:

Frequency	Detector	RBW	VBW	Remark
9kHz- 150kHz	Quasi-peak	200Hz	1kHz	Quasi-peak Value
150kHz-30MHz	Quasi-peak	9kHz	30kHz	Quasi-peak Value
30MHz-1GHz	Quasi-peak	120kHz	300kHz	Quasi-peak Value

Limit:

FCC Part15 C Section 15.225

Frequency (MHz)	Limit (uV/m @30m)	Limit (dBuV/m @3m)	Detector
13.110-13.410	106	80.5	QP
13.410-13.553	334	90.5	QP
13.553-13.567	15848	124.0	QP
13.567-13.710	334	90.5	QP
13.710-14.010	106	80.5	QP

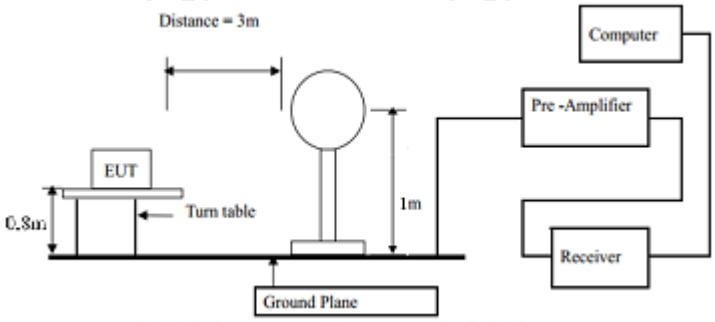
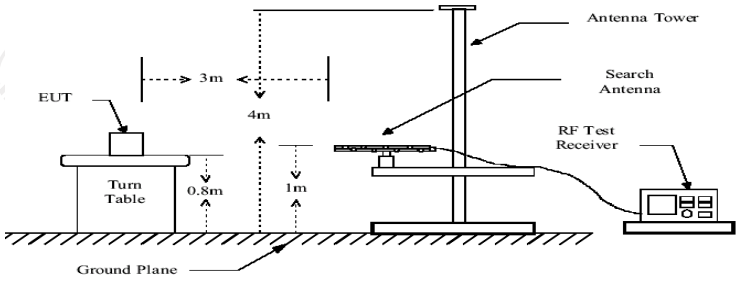
Note: *RF Voltage (dBuV) = 20 log RF Voltage (uV)*
Limit (dBuV/m @3m) = 20log(Limit (uV/m @30m)) + 40

FCC Part15 C Section 15.209

Frequency Range (MHz)	Distance (m)	Field strength (dB μ V/m)	Detector
0.009-0.490	3	20log 2400/F (kHz) + 80	QP
0.490-1.705	3	20log 24000/F (kHz) + 40	QP
1.705-30	3	20log 30 + 40	QP
30-88	3	40.0	QP
88-216	3	43.5	QP
216-960	3	46.0	QP
Above 960	3	54.0	QP

Note:

1. *RF Voltage (dBuV) = 20 log RF Voltage (uV)*
2. *In the Above Table, the tighter limit applies at the band edges.*
3. *Distance refers to the distance in meters between the measuring instrument antenna and the EUT*
4. *The radiated emissions should be tested under 3-axes position (Lying, Side, and Stand), After pre-test. It was found that the worse radiated emission was get at the lying position.*
5. *If measurement is made at 3m distance, then F.S Limitation at 3m distance is adjusted by using the formula Ld1 = Ld2 * (d2/d1)*

Test Procedure:	1. The EUT was placed on the top of a rotating table 0.8 meters above the ground at a 3 meter camber in below 1GHz. The table was rotated 360 degrees to determine the position of the highest radiation. 2. The EUT was set 3 meters away from the interference-receiving antenna, which was mounted on the top of a variable-height antenna tower. 3. 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. 4. 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 and the rotatable table was turned from 0 degrees to 360 degrees to find the maximum reading. 5. The test-receiver system was set to Peak Detect Function and Specified Bandwidth with Maximum Hold Mode. 6. 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.
Test setup:	For radiated emissions below 30MHz  30MHz to 1GHz 
Test Mode:	Refer to section 3.1 for details

Test results:	PASS

5.3.2. Test Instruments

Radiated Emission Test Site (966)				
Name of Equipment	**Manufacturer**	**Model**	**Serial Number**	**Calibration Due**
EMI Test Receiver	R&S	ESCI7	100529	Jan. 31, 2025
Spectrum Analyzer	R&S	FSQ40	200061	Jun. 26, 2025
Pre-amplifier	SKET	LNPA_0118G-45	SK2021012102	Jan. 31, 2025
Pre-amplifier	SKET	LNPA_1840G-50	SK202109203500	Jan. 31, 2025
Pre-amplifier	HP	8447D	2727A05017	Jun. 26, 2025
Loop antenna	Schwarzbeck	FMZB1519B	00191	Jun. 26, 2025
Broadband Antenna	Schwarzbeck	VULB9163	340	Jun. 28, 2025
Horn Antenna	Schwarzbeck	BBHA 9120D	631	Jun. 28, 2025
Horn Antenna	Schwarzbeck	BBHA 9170	00956	Feb. 02, 2025
Coaxial cable	SKET	RE-03-D	/	Jun. 26, 2025
Coaxial cable	SKET	RE-03-M	/	Jun. 26, 2025
Coaxial cable	SKET	RE-03-L	/	Jun. 26, 2025
Coaxial cable	SKET	RE-04-D	/	Jun. 26, 2025
Coaxial cable	SKET	RE-04-M	/	Jun. 26, 2025
Coaxial cable	SKET	RE-04-L	/	Jun. 26, 2025
Antenna Mast	Keleto	RE-AM	/	/
EMI Test Software	EZ_EMC	FA-03A2 RE+	1.1.4.2	/

5.3.3. Test Data

Field Strength of Fundamental

Frequency (MHz)	Emission (dBuV/m)	Limits (dBuV/m)	Detector	Margin (dB)
13.56	51.75	124.0	QP	-72.25

Field Strength Within the bands 13.410-13.553 MHz and 13.567-13.710 MHz

Frequency (MHz)	Emission Level dBuV/m@3m	Emission Level dBuV/m@30m	Limits dBuV/m@30m	Result
13.460	47.62	7.62	50.47	PASS
13.685	49.53	9.53	50.47	PASS

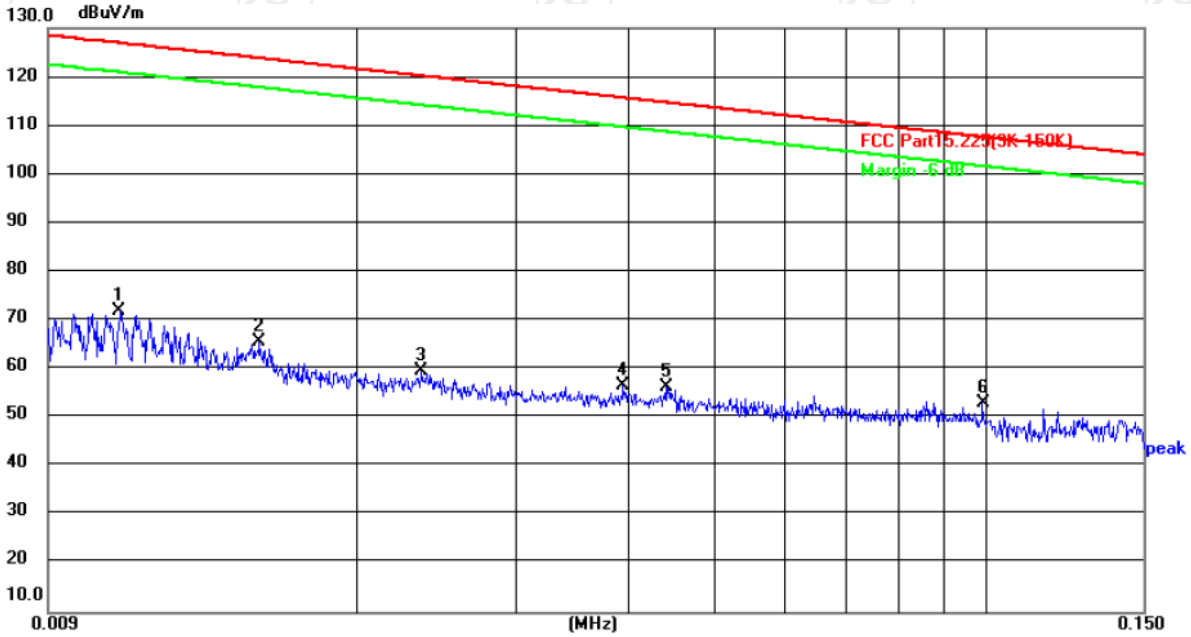
Field Strength Within the bands 13.110-13.410 MHz and 13.710-14.010

Frequency (MHz)	Emission Level dBuV/m@3m	Emission Level dBuV/m@30m	Limits dBuV/m@30m	Result
13.272	47.26	7.26	40.50	PASS
13.980	48.89	8.89	40.50	PASS

Spurious Emissions

9KHz-30MHz

9KHz-150KHz:

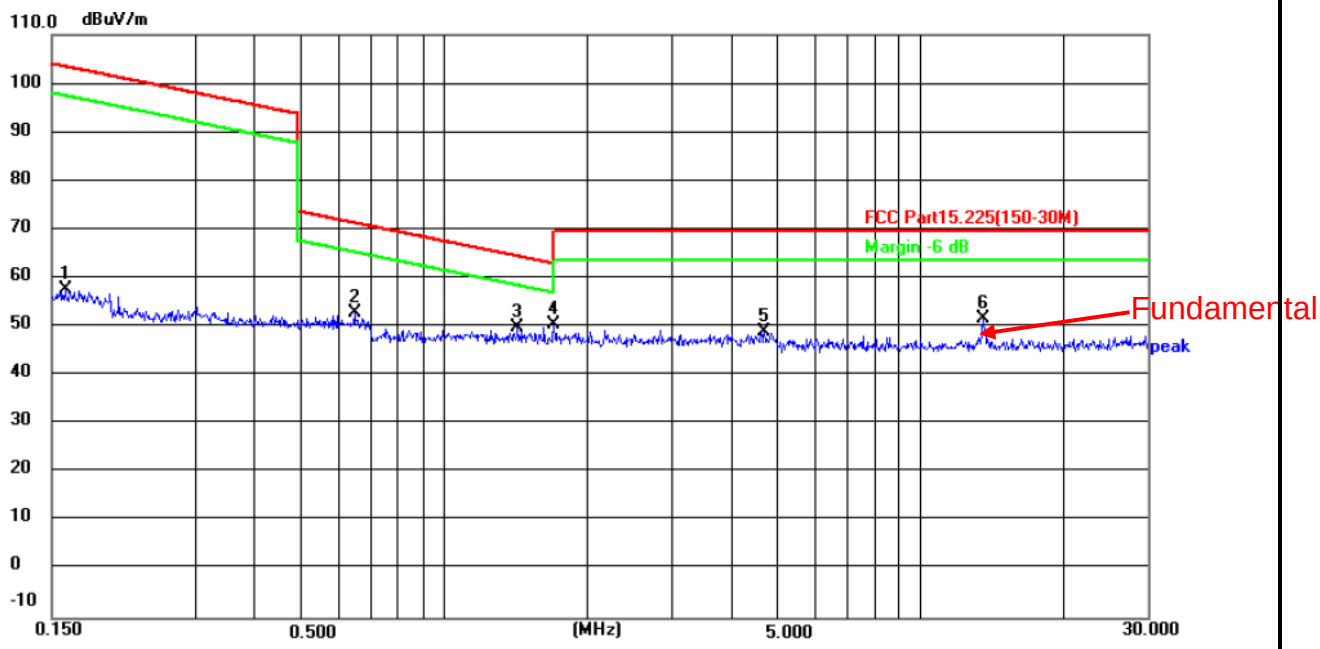


Site: 3m Anechoic Chamber Polarization: ***Horizontal*** Temperature: 24.8(℃) Humidity: 51 %

Limit: FCC Part15.225(9K-150K) Power:DC 3.7 V

No.	Frequency (MHz)	Reading (dBuV)	Factor (dB/m)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector	P/F	Remark
1	0.0108	51.50	20.53	72.03	126.94	-54.91	peak	P	
2	0.0155	45.01	20.55	65.56	123.80	-58.24	peak	P	
3	0.0235	38.95	20.56	59.51	120.18	-60.67	peak	P	
4	0.0395	36.28	20.46	56.74	115.67	-58.93	peak	P	
5	0.0440	35.97	20.39	56.36	114.74	-58.38	peak	P	
6 *	0.0995	32.57	20.43	53.00	107.65	-54.65	peak	P	

150KHz-30MHz:



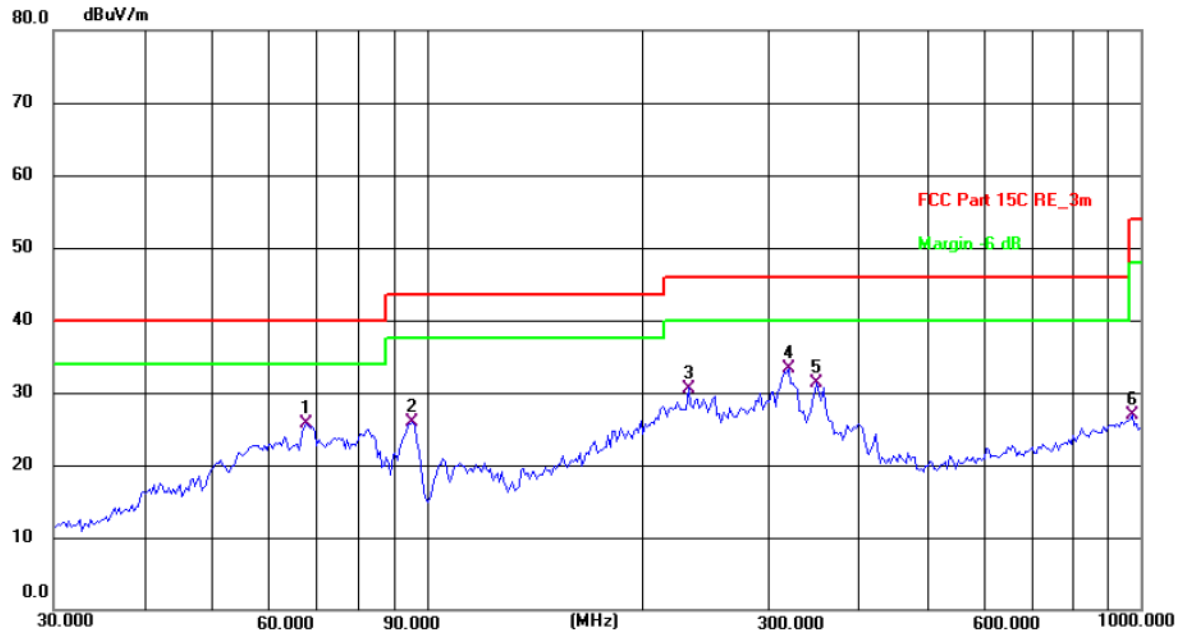
Site: 3m Anechoic Chamber Polarization: ***Horizontal*** Temperature: 24.8(℃) Humidity: 51 %

Limit: FCC Part15.225(150-30M) Power:DC 3.7 V

No.	Frequency (MHz)	Reading (dBuV)	Factor (dB/m)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector	P/F	Remark
1	0.1604	36.78	20.75	57.53	103.50	-45.97	peak	P	
2	0.6490	31.08	21.65	52.73	71.36	-18.63	peak	P	
3	1.4277	26.70	23.25	49.95	64.51	-14.56	peak	P	
4 *	1.7029	26.76	23.81	50.57	62.98	-12.41	peak	P	
5	4.7005	19.13	29.92	49.05	69.54	-20.49	peak	P	
6	13.5628	31.30	20.45	51.75	69.54	-17.79	peak	P	

Note *: 1) Emission Level=Peak Reading + Correction Factor;*
Correction Factor= Antenna Factor + Cable loss – Pre-amplifier

Horizontal:

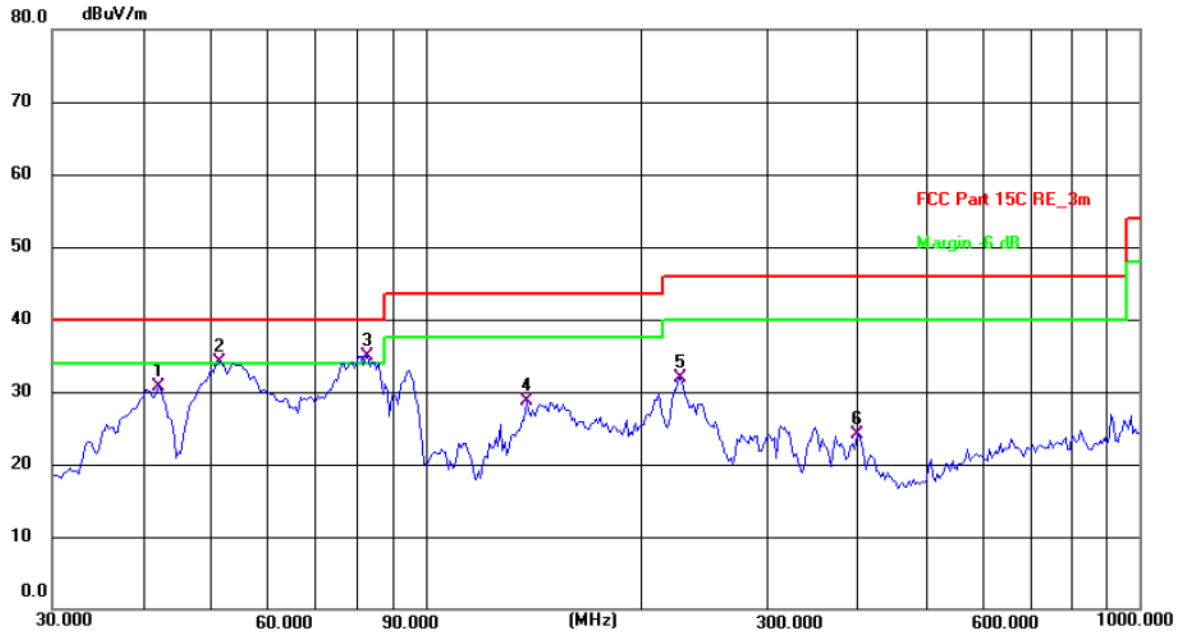


Site: 3m Anechoic Chamber1 Polarization: *Horizontal* Temperature: 24.6(C) Humidity: 53 %

Limit: FCC Part 15C RE_3m Power: DC 3.7 V

No.	Frequency (MHz)	Reading (dBuV)	Factor (dB/m)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector	P/F	Remark
1	67.6751	39.67	-13.92	25.75	40.00	-14.25	QP	P	
2	95.4269	41.91	-15.98	25.93	43.50	-17.57	QP	P	
3	232.5318	44.76	-14.16	30.60	46.00	-15.40	QP	P	
4 *	321.0605	43.69	-10.35	33.34	46.00	-12.66	QP	P	
5	351.7078	41.32	-10.02	31.30	46.00	-14.70	QP	P	
6	972.3373	26.50	0.34	26.84	54.00	-27.16	QP	P	

Vertical:



Site: 3m Anechoic Chamber1 Polarization: *Vertical* Temperature: 24.6(C) Humidity: 53 %

Limit: FCC Part 15C RE_3m Power: DC 3.7 V

No.	Frequency (MHz)	Reading (dBuV)	Factor (dB/m)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector	P/F	Remark
1	42.3021	42.78	-11.98	30.80	40.00	-9.20	QP	P	
2 !	51.4806	46.51	-12.41	34.10	40.00	-5.90	QP	P	
3 *	82.9384	51.44	-16.46	34.98	40.00	-5.02	QP	P	
4	138.3873	41.01	-12.26	28.75	43.50	-14.75	QP	P	
5	227.6904	46.46	-14.52	31.94	46.00	-14.06	QP	P	
6	401.8383	33.14	-8.96	24.18	46.00	-21.82	QP	P	

Note *: 1) Emission Level=Peak Reading + Correction Factor;*
Correction Factor= Antenna Factor + Cable loss – Pre-amplifier

5.4. Occupied Bandwidth

5.4.1. Test Specification

Test Requirement:	FCC Part15 C Section 15.215(c)
Test Method:	ANSI C63.10: 2020
Limit:	N/A
Test Procedure:	1. According to the follow Test-setup, keep the relative position between the artificial antenna and the EUT. 2. Set to the maximum power setting and enable the EUT transmit continuously. 3. Use the following spectrum analyzer settings for 20dB Bandwidth measurement. Span = approximately 2 to 3 times the 20 dB bandwidth, centered on a hopping channel; RBW≥1% of the 20 dB bandwidth; VBW≥RBW; Sweep = auto; Detector function = peak; Trace = max hold. 4. Measure and record the results in the test report.
Test setup:	
Test Mode:	Refer to section 3.1 for details
Test results:	PASS

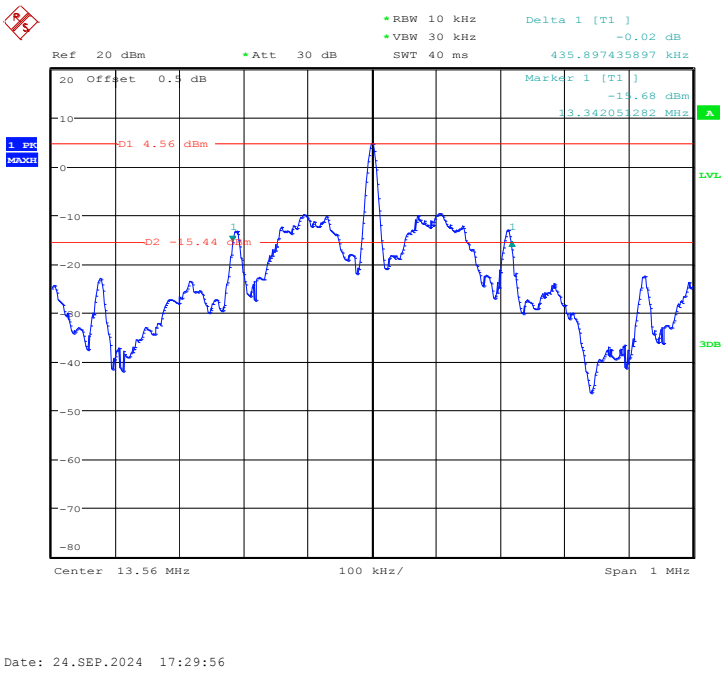
5.4.2. Test Instruments

RF Test Room				
Equipment	**Manufacturer**	**Model**	**Serial Number**	**Calibration Due**
Spectrum Analyzer	R&S	FSU	200054	Jun. 26, 2025

5.4.3. Test data

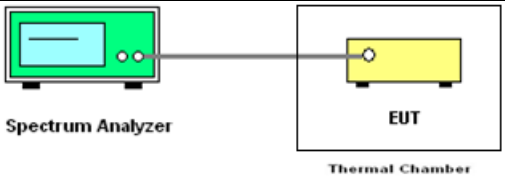
Frequency(MHz)	20dB Occupy Bandwidth (kHz)	Limit (kHz)	Conclusion
13.56	435.90	---	PASS

Test plots as follows:



5.5. Frequency stability

5.5.1. Test Specification

Test Requirement:	FCC Part15 C Section 15.225
Test Method:	ANSI C63.10 : 2020
Operation mode:	Refer to item 3.1
Limit:	+/-0.01%
Test Setup:	
Test Procedure:	1. The equipment under test was connected to an external DC power supply and input rated voltage. 2. RF output was connected to a spectrum analyzer. 3. The EUT was placed inside the temperature chamber. 4. Set the spectrum analyzer RBW low enough to obtain the desired frequency resolution and measure EUT 20℃ operating frequency as reference frequency. 5. Turn EUT off and set the chamber temperature to -20℃. After the temperature stabilized for approximately 30 minutes recorded the frequency. 6. Repeat step measure with 10℃ increased per stage until the highest temperature of +55℃ reached. 7. Repeat step measure with a variation in the primary supply voltage from 85% to 115% of the rated supply voltage at a temperature of 20 degrees C
Test Result:	PASS

5.5.2. Test Instruments

RF Test Room				
Equipment	**Manufacturer**	**Model**	**Serial Number**	**Calibration Due**
Spectrum Analyzer	R&S	FSU	200054	Jun. 26, 2025
DC power supply	Kingrang	KR3005K	/	Jun. 26, 2025

5.5.3. Test Data

Voltage (Vdc)	Temperature (℃)	Frequency (MHz)	Deviation (%)	Limit (%)
3.7	-20	13.559764	-0.00174	+/-0.01%
3.7	-10	13.559752	-0.00183	
3.7	0	13.559753	-0.00182	
3.7	10	13.559751	-0.00184	
3.7	20	13.559758	-0.00178	
3.7	30	13.559759	-0.00178	
3.7	40	13.559752	-0.00183	
3.7	50	13.559757	-0.00179	
3.7	55	13.559752	-0.00183	
4.2	20	13.559761	-0.00176	
3.3	20	13.559753	-0.00182	

Hotline: 400-6611-140 Tel: 86-755-27673339 Fax: 86-755-27673332 http://www.tct-lab.com

Appendix A: Photographs of Test Setup

Please refer to document Appendix No.: TCT240619E003-A

Appendix B: Photographs of EUT

Please refer to document Appendix No.: TCT240619E003-B & TCT240619E003-C

********END OF REPORT********