

RF TEST REPORT

Report No.: 20230517G05491X-W8

Product Name: Smart LTE Terminal

 Model No.:
 TE620, TELOX-TE620, Telo-TE620, TE620A, TE620B, TE620C, TE620D, TE620E, TE620F, TELOX_TE620G, TE620H, TE620J, TE620K, TE620L, TE620M, TE620Q, TE620R, TE620S, TE620T, TE620U, TE620V, TE620X, TE620Y

 FCC ID:
 2AYEZ-TE620G

Applicant: Telo Communication (Shenzhen) Co., Ltd

Address: 6/F, No.42 Liuxian 1st Road, Bao'an District, Shenzhen, China

Dates of Testing: 06/01/2023 - 08/17/2023

Issued by: CCIC Southern Testing Co., Ltd.

Electronic Testing Building, No. 43 Shahe Road, Xili Street, Lab Location:

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	Test Report				
Product	Smart LTE Terminal				
Brand Name:	TELOX				
Trade Name:	TELOX				
Applicant	Telo Communication (Shenzhen) Co., Ltd				
Applicant Address:	6/F, No.42 Liuxian 1st Road, Ba	o'an District, Shenzhen,			
	China				
Manufacturer	Telo Communication (Shenzhen)	Co., Ltd			
Manufacturer Address:	6/F, No.42 Liuxian 1st Road, Ba	o'an District, Shenzhen,			
	China				
Test Standards	47 CFR Part 15C 15.225 ANSI C63.10-2013				
Test Result:	Pass				
Tested by	(huizwony : Thank	2023.08.18			
	Chuiwang Zhang, Test Engineer				
Reviewed by	Chris You	2023.08.18			
	Chris You, Senior Engineer				
Approved by	Yang Fan	2023.08.18			
	Yang Fan, Manager				

CCIC-SET/ TRF:IRF(2019-05-23)



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Change History				
Issue	Date	Reason for change		
1.0	2023.08.18	First edition		



1. GENERAL INFORMATION

1.1. EUT Description

Product Name	Smart LTE Terminal
Operating Rang	13.56MHz
Number of channel	1
Modulation Type	ASK
Antenna Type	Internal Antenna
Antenna Gain	0dBi
Power supply	Rechargeable Li-ion Polymer Battery DC 3.8V/5000mAh

- Note 1: For a more detailed description, please refer to Specification or User's Manual supplied by the applicant and/or manufacturer.
- Note 2: For model differences, the electrical circuit design, layout, components used and internal wiring, with only difference in model name.



1.2. Test Standards and Results

The purpose of the report is to conduct testing according to the following FCC certification standards:

No.	Identity	Document Title
1	47 CFR Part 15 Subpart C	Radio Frequency Devices
2	KDB 174176 D01 Line	AC Power-Line Conducted Emissions
	Conducted FAQ v01r01	Frequently Asked Questions
2	ANEL C/2 10 2012	American National Standard for Testing Unlicensed
3	ANSI C63.10-2013	Wireless Devices

Test detailed items/section required by FCC/IC rules and results are as below:

No.	Section in CFR 47	Description	Result
1	15.203	Antenna Requirement	PASS
2	15.207	AC Power Line Conducted Emission	PASS
3	15.225(d) 15.209	Radiated Emission	PASS
4	15.225(a) (b) (c), 15.31(f)	Field Strength of Radiated Emissions	PASS
5	15.225(e)	Frequency Stability	PASS
6	15.215(c)	20 dB Bandwidth	PASS

Note 1: The tests of Conducted Emission and Radiated Emission were performed according to the method of measurements prescribed in ANSI C63.10-2013.

1.3. Test Environment Conditions

During the measurement, the environmental conditions were within the listed ranges:

Temperature (°C):	15°C-35°C
Relative Humidity (%):	30% -60%
Atmospheric Pressure (kPa):	86KPa-106KPa



1.4. Laboratory Facilities

FCC-Registration No.: 406086

CCIC Southern Testing Co., Ltd EMC Laboratory has been registered and fully described in a report filed with the FCC (Federal Communications Commission). The acceptance letter from the FCC is maintained in our files. Designation Number: CN1283, valid time is until Sep. 30th, 2023.

ISED Registration: 11185A-1

CCIC Southern Testing Co., Ltd. EMC Laboratory has been registered by Certification and Engineering Bureau of Industry Canada for the performance of radiated measurements with Registration No. 11185A-1 on Aug. 04, 2016, valid time is until Sep. 30th, 2023.

A2LA Code: 5721.01

CCIC-SET is a third party testing organization accredited by A2LA according to ISO/IEC 17025. The accreditation certificate number is 5721.01.



1. 47 CFR Part 15C Requirements

1.1. Antenna requirement

1.1.1. Applicable Standard

According to 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.

1.1.2. Antenna Information

Antenna Category: Internal Antenna

A internal Antenna was soldered to the antenna port of EUT via an adaptor cable, can't be removed.

Antenna General Information:

No.	EUT	Operating frequency range	Ant. Type	Ant. Gain
1	Smart LTE Terminal	13.56 MHz	Internal	0

1.1.3. Result: comply

The EUT has a permanently and irreplaceable attached antenna. Please refer to the EUT internal photos.



1.2. Field Strength of Radiated Emissions

1.2.1. Requirement

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) Extrapolation Factor = $20 \log_{10}(30/3)^2 = 40$ dB.

1.2.2. Measuring Instruments

The measuring equipment is listed in the section 3 of this test report.

1.2.3. Test Description

The measured Field Strength of Radiated Emissions was calculated by the reading of the spectrum analyzer and calibration.

1.2.4. Test Setup

The radiated emission tests were performed in the 5-meter chamber test site, using the setup accordance with the ANSI C63.10-2013. The specification used was the FCC Part Subpart C limits.

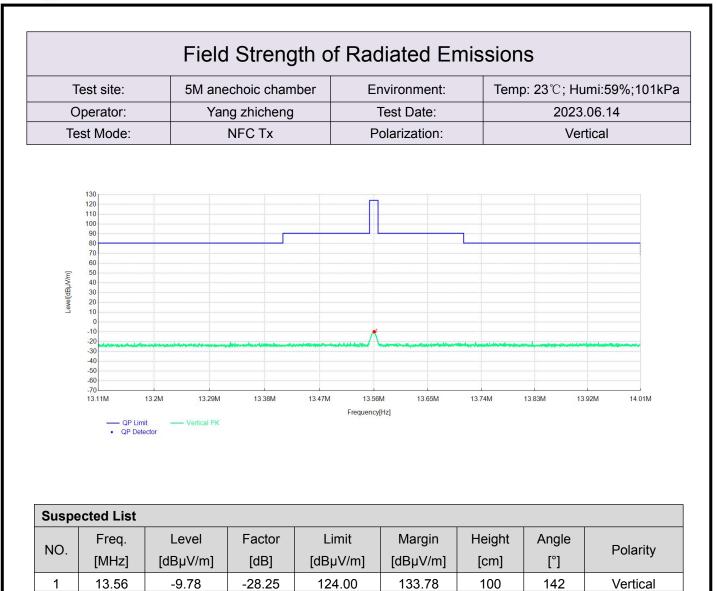


1.2.5. Test Result

Test site:	5M anechoic chamber	Environment:	Temp: 23°C; Humi:59%;101
Operator:	Yang zhicheng	Test Date:	2023.06.14
Test Mode:	NFC Tx	Polarization:	Vertical
European Contract of the second secon	13.29M 13.38M 13.47M	13.56M 13.65M Frequency[Hz]	13.74M 13.83M 13.92M 14.01M

Suspected List								
NO.	Freq.	Level	Factor	Limit	Margin	Height	Angle	Delerity (
NO.	[MHz]	[dBµV/m]	[dB]	[dBµV/m]	[dBµV/m]	[cm]	[°]	Polarity
1	13.56	-10.3	-28.25	124.00	134.30	100	188	Horizontal







1.3. 20 dB Bandwidth

1.3.1. Requirement

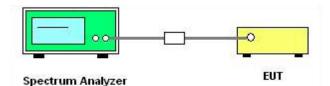
Per 15.215 (c) Intentional radiators operating under the alternative provisions to the general emission limits, as contained in §§ 15.217 through 15.257 and in Subpart E of this part, must be designed to ensure that the 20 dB bandwidth of the emission, or whatever bandwidth may otherwise be specified in the specific rule section under which the equipment operates, is contained within the frequency band designated in the rule section under which the equipment is operated. 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.

Intentional radiators must be designed to ensure that the 20 dB bandwidth of the emissions in the specific band (13.553-13.567MHz).

1.3.2. Measuring Instruments

The measuring equipment is listed in the section 3 of this test report.

1.3.3. Test Setup



- 1. The EUT which is powered by the AC 120V/60Hz is coupled to the Spectrum Analyzer; the RF load attached to the EUT antenna terminal is 50Ohm; the path loss and Atten as the factor is calibrated to correct the reading.
- 2. Check the calibration of the measuring instrument using either an internal calibrator or a known signal from an external generator.
- 3. Position the EUT without connection to measurement instrument. Turn on the EUT and connect it to measurement instrument. Then set it to any one convenient frequency within its operating range. Set a reference level on the measuring instrument equal to the highest peak value.
- 4. Measure the frequency difference of two frequencies that were attenuated 20 dB from the reference level. Record the frequency difference as the emission bandwidth.



1.3.4. Test Results

st Frequency(MHz)	20dB Bandwidth(kl	Hz) Limit (kHz)	Results
13.56	0.494	11.2	Pass
For 13.56MHz, permitted	l Band is 14 kHz, so	the Limit is 11.2 kHz.	
Keysight Spectrum Analyzer - Occupied BW WL RF 50 Ω DC Center Freq 13.560000 MH	SENSE:INT	ALIGN AUTO 02:55:55 PM.	
10 dB/div Ref -20.00 dBn	#IFGain:Low #Atten: 0 dB	Avg Hold:>10/10 Radio Devic	e: BTS
-30.0 -40.0 -50.0 -60.0			Center Freq 13.560000 MHz
-70.0			
-100 -110 Center 13.56 MHz #Res BW 200 Hz	#VBW 620	Spa Hz Swe	IN 1 KHZ EP FFT 100 Hz
Occupied Bandwidt	n Total I 418 Hz	Power -43.6 dBm	Auto Man Freq Offset
Transmit Freq Error x dB Bandwidth	-24 Hz % of C 494 Hz x dB	0BW Power 99.00 % -20.00 dB	0 Hz
		STATUS	

Note: Because the measured signal is CW adjusting the RBW per C63.10-2013 would not be practical since measured bandwidth will always follow the RBW and the result will be approximately twice the RBW.



1.4. Frequency Stability

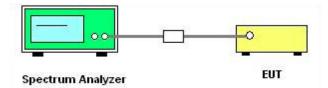
1.4.1. Requirement

According to FCC section 15.225(e), the frequency tolerance of the carrier signal shall be maintained within $\pm 0.01\%(100$ ppm) 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.

1.4.2. Measuring Instruments

The measuring equipment is listed in the section 3 of this test report.

1.4.3. Test Setup



The EUT is powered by Battery, which is coupled to the Spectrum Analyzer; the RF load attached to the EUT antenna terminal is 500hm; the path loss as the factor is calibrated to correct the reading.

1.4.4. Test Procedures

- 1. Frequency Stability vs. Temperature: The EUT is powered by Battery, than antenna was connected to a Spectrum Analyzer. The EUT was placed inside the temperature chamber.
- 2. After the temperature stabilized for approximately 20 minutes, the frequency output was recorded from the Spectrum Analyzer.
- 3. Frequency Stability vs. Voltage: An external variable DC power supply Source. The voltage was set to 115% of the nominal value and was then decreased until the transmitter light no longer illuminated; i.e., the end point. The output frequency was recorded for each voltage.



1.4.5. Test Results

Test Mode:	Continuous	Transmitting
1000101040.	commacas	1 million B

Test Environn	nent	Frequency	Frequency	Frequency	Limit	
Adapter Power	Temperature	Reading	Error	Error	(%)	Result
Supply	(⁰ C)	(MHz)	(%)	(ppm)	(70)	
	-20	13.55996	-0.0000029499	-2.9499		Pass
	-10	13.55996	-0.0000029499	-2.9499		Pass
	0	13.55997	-0.0000022124	-2.2124		Pass
DC 3.8V	10	13.55996	-0.0000029499	-2.9499		Pass
DC 5.8V	20	13.55996	-0.0000029499	-2.9499	±0.01%	Pass
	30	13.55995	-0.0000036873	-3.6873	(±100ppm)	Pass
	40	13.55996	-0.0000029499	-2.9499		Pass
	50	13.55997	-0.0000022124	-2.2124		Pass
Max. = DC 4.35V	20	13.55996	-0.0000029499	-2.9499		Pass
Min. = DC 3.50V	20	13.55996	-0.0000029499	-2.9499		Pass



1.5. AC Power Line Conducted Emission

1.5.1. Requirement

According to FCC section 15.207, 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 within the band 150kHz to 30MHz shall not exceed the limits in the following table, as measured using a 50μ H/50 Ω line impedance stabilization network (LISN).

Eraquanay ranga (MHz)	Conducted Limit (dBµV)		
Frequency range (MHz)	Quai-peak	Average	
0.15 - 0.50	66 to 56	56 to 46	
0.50 - 5	56	46	
5 - 30	60	50	

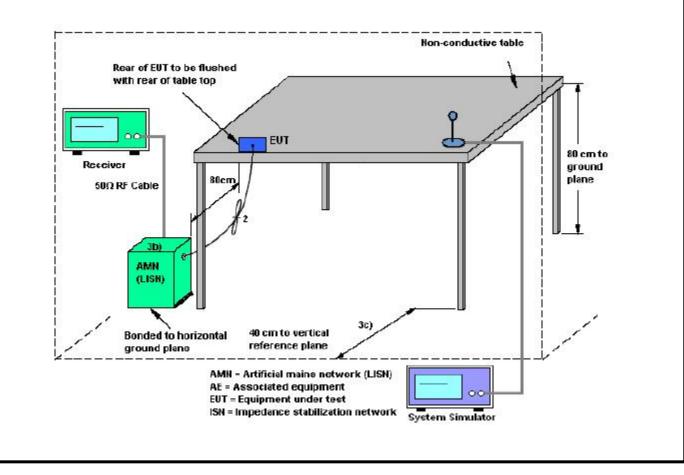
NOTE:

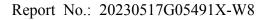
- (a) The lower limit shall apply at the band edges.
- (b) The limit decreases linearly with the logarithm of the frequency in the range 0.15 0.50MHz.

1.5.2. Measuring Instruments

The measuring equipment is listed in the section 3 of this test report.

1.5.3. Test Setup







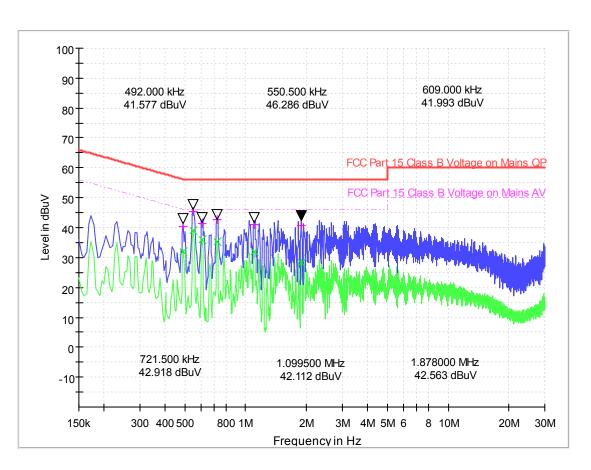
1.5.4. Test Procedures

- 1. The EUT was placed 0.4 meter from the conducting wall of the shielding room was kept at least 80 centimeters from any other grounded conducting surface.
- 2. Connect EUT to the power mains through a line impedance stabilization network (LISN).
- 3. All the support units are connecting to the other LISN.
- 4. The LISN provides 50 ohm coupling impedance for the measuring instrument.
- 5. The FCC states that a 50 ohm, 50 micrometry LISN should be used.
- 6. Both sides of AC line were checked for maximum conducted interference.
- 7. The frequency range from 150 kHz to 30 MHz was searched.
- 8. Set the test-receiver system to Peak Detect Function and specified bandwidth (IF Bandwidth = 9kHz) with Maximum Hold Mode. Then measurement is also conducted by Average Detector and Quasi-Peak Detector Function respectively.

1.5.5. Test Results

The EUT configuration of the emission tests is NFC Tx + Charging from Adapter.

Line Phase

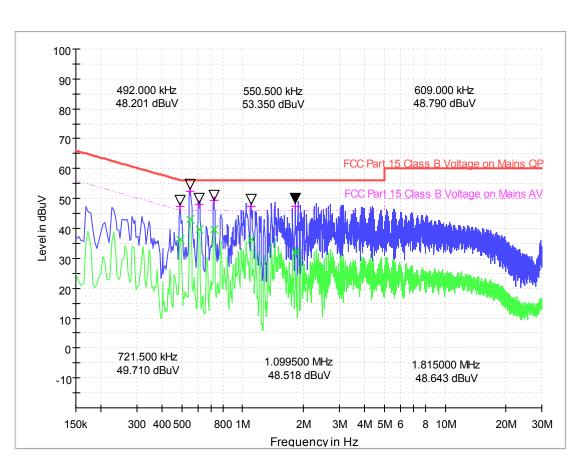


Frequency (MHz)	QuasiPeak (dBµV)	Average (dBμV)	Corr.Factor (dB)	Margin - QPK	Limit - QPK	Margin - AV	Limit - AV (dBµV)
0.492000	40.43	32.00	10.4	15.70	56.1	14.13	46.1
0.550500	45.45	38.87	10.4	10.55	56.0	7.13	46.0
0.609000	41.48	35.87	10.4	14.52	56.0	10.13	46.0
0.721500	42.64	35.15	10.4	13.36	56.0	10.85	46.0
1.099500	40.86	31.90	10.4	15.14	56.0	14.10	46.0
1.878000	40.68	28.34	10.4	15.32	56.0	17.66	46.0

Test Result : Pass

Note: Final Level = Receiver Read level + Correction factor.

Neutral Phase



Frequency (MHz)	QuasiPeak (dBµV)	Average (dBμV)	Corr.Factor (dB)	Margin - QPK	Limit - QPK	Margin - AV	Limit - AV (dBµV)
0.492000	47.42	36.24	10.5	8.71	56.1	9.89	46.1
0.550500	52.34	42.99	10.5	3.66	56.0	3.01	46.0
0.609000	47.92	39.52	10.5	8.08	56.0	6.48	46.0
0.721500	49.34	39.58	10.6	6.66	56.0	6.42	46.0
1.099500	47.32	36.23	10.5	8.68	56.0	9.77	46.0
1.815000	47.27	32.09	10.5	8.73	56.0	13.91	46.0

Test Result : Pass

Note: Final Level = Receiver Read level + Correction factor.



1.6. Radiated Emission

1.6.1. Limit of Radiated Band Edges and Spurious Emission

In any 100 kHz bandwidth outside the frequency band in which the intentional radiator is operating, the radio frequency power that is produced by the intentional radiator shall be at least 20 dB below that in the 100 kHz bandwidth within the band that contains the highest level. If the transmitter uses an RMS average conducted power limit, the attenuation required under this paragraph shall be 30 dB instead of 20 dB. In addition, radiated emissions which fall in the estricted bands, as defined in §15.205(a), must also comply with the radiated emission limits specified in §15.209(a).

§15.209(a) Radiated emission limits:

Frequency (MHz)	Field Strength (µV/m)	Measurement Distance (m)
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
Above 960	500	3

Note:

- 1. The radiated emission tests were performed in the 3-meter chamber test site, using the setup accordance with the ANSI C63.10-2013. The specification used was the FCC Part Subpart C limits.
- 2. The EUT was connected to a 120VAC/60Hz power source.

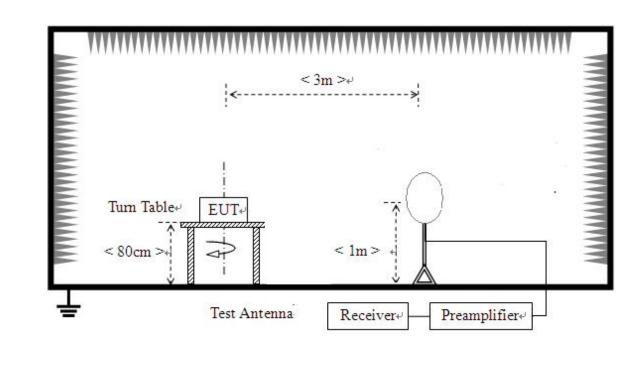
1.6.2. Measuring Instruments

The measuring equipment is listed in the section 3 of this test report.

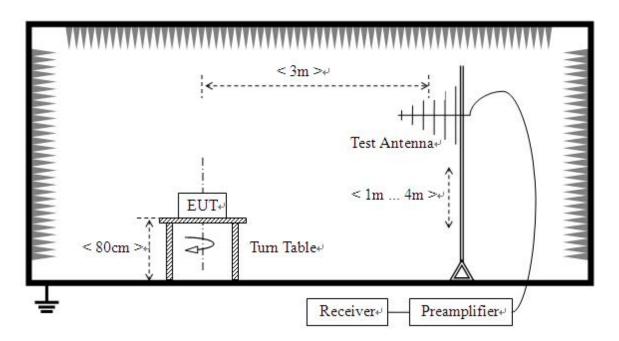


1.6.3. Test Setup

For radiated emissions from 9 kHz to 30 MHz



For radiated emissions from 30MHz to 1GHz



The test site semi-anechoic chamber has met the requirement of NSA tolerance 4 dB according to the standards: ANSI C63.10:2013. The EUT was set-up on insulator 80cm above the Ground Plane. The set-up and test methods were according to ANSI C63.10:2013.



For the Test Antenna:

- (a) In the frequency range of 9 kHz to 30MHz, magnetic field is measured with Loop Test Antenna. The Test Antenna is positioned with its plane vertical at 1m distance from the EUT. The center of the Loop Test Antenna is 1m above the ground. During the measurement the Loop Test Antenna rotates about its vertical axis for maximum response at each azimuth about the EUT.
- (b) In the frequency range above 30MHz, Bi-Log Test Antenna (30MHz to 1GHz). Test Antenna is 3m away from the EUT. Test Antenna height is varied from 1m to 4m above the ground to determine the maximum value of the field strength. The emission levels at both horizontal and vertical polarizations should be tested.

1.6.4. Test Results

According to ANSI C63.10-2013 selection 4.2.2, because of peak detection will yield amplitudes equal to or greater than amplitudes measured with the quasi-peak (or average) detector, the measurement data from a spectrum analyzer peak detector will represent the worst-case results, if the peak measured value complies with the quasi-peak limit, it is unnecessary to perform an quasi-peak measurement.

The measurement results are obtained as below:

$$\begin{split} & E \left[dB\mu V/m \right] = & U_R + A_T + A_{Factor} \left[dB \right]; A_T = & L_{Cable loss} \left[dB \right] \text{-}G_{preamp} \left[dB \right] \\ & A_T: \text{ Total correction Factor except Antenna} \\ & U_R: \text{ Receiver Reading} \\ & G_{preamp}: \text{ Preamplifier Gain} \\ & A_{Factor}: \text{ Antenna Factor at } 3m \\ & L_{Cable loss}: \text{ Cable loss} \end{split}$$

During the test, the total correction Factor AT and A_{Factor} were built in test software.

The radiated frequency ranges from 9 kHz to1 GHz.



For 9 kHz to 30MHz

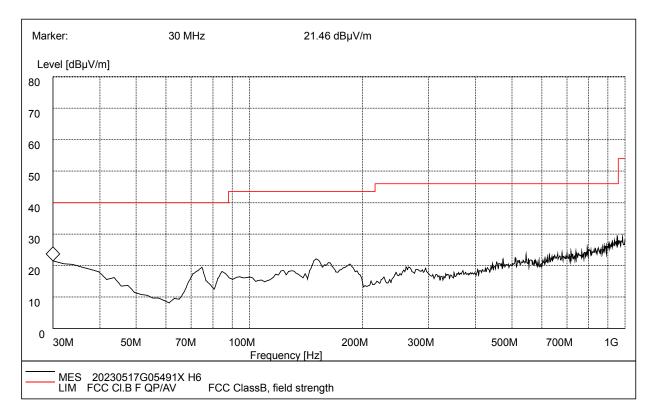
	cor one.	ite: 5M anechoic chamber		5M anechoic chamber Environment:		Temp	Temp: 23℃; Humi:59%;101kl		
	Operator: Test Mode:		Yang zhicheng		Test Date:		2023.	06.14	
IE			NFC Tx		olarization:		Horiz	ontal	
Level(dBµV/m)	130 120 110 100 90 80 70 60 50 40 30 20 10 -10 -20 -30 -40 -50 -70 -9k		100k				FCC(0.005	9-30MHz)-PK Limit	
	PK Limi QP Det			Frequency	[Hz]				
				Suspected					
			Factor			Height	Angle		
NO.	• QP Del	ector	Factor [dB]	Suspected	List	Height [cm]	Angle [°]	Polarity	
NO. 1	• QP Def	Level		Suspected Limit	List Margin			Polarity Horizontal	
	Freq.	Level [dBµV/m]	[dB]	Suspected Limit [dBµV/m]	List Margin [dBµV/m]	[cm]	[°]		
1	• QP Det Freq. [MHz] 0.02	Level [dBµV/m] -44.86	[dB] -30.03	Suspected Limit [dBµV/m] 119.78	List Margin [dBµV/m] 164.64	[cm] 100	[°] 140	Horizontal	
2	• QP Def Freq. [MHz] 0.02 0.08	Level [dBµV/m] -44.86 -48.42	[dB] -30.03 -29.94	Suspected Limit [dBµV/m] 119.78 109.78	List Margin [dBµV/m] 164.64 158.20	[cm] 100 100	[°] 140 360	Horizontal Horizontal	
				Flequency	[Hz]				



Test site:		5M ane	choic cham	nber E	nvironment:	Temp	o: 23℃; Hu	ımi:59%;101kP
C	Operator:Yang zhichengTest Mode:NFC Tx			Test Date:		2023.06.14		
Te			F	olarization:		Ver	tical	
Leve[dBjJV/m]	130 120 110 100 90 80 70 60 50 40 30 20 10 0 -10 -20 -30						FCC(0.009	9-30MHz)-PK Limit
	-40 -50 -60 -70 9k — PK Lim • QP Det		100k	Frequenc	1M ([Hz]		10M	ЗОМ
	-50 -60 -70 9k —— PK Limi		100k	Frequenc	y[H2]		10M	30M
NO	-50 -60 -70 9k —— PK Limi		Tactor		y[H2]	Height	10M	
NO.	-50 -60 -70 9k PK Lim • QP Del	lector		Suspected	v[Hz]			Polarity
NO. 1	-50 -60 -70 9k -70 9k -70 -70 -70 -70 -70 -70 -70 -70 -70 -70	Level	Factor	Suspected Limit	List Margin	Height	Angle	
	-50 -60 -70 9k -70 -70 -70 -70 -70 -70 -70 -70 -70 -70	Level [dBµV/m]	Factor [dB]	Suspected Limit [dBµV/m]	List Margin [dBµV/m]	Height [cm]	Angle [°]	Polarity
1	-50 -60 -70 9к -70 9к -70 -70 -70 -70 -70 -70 -70 -70 -70 -70	Level [dBµV/m] -48.02	Factor [dB] -30.03	Suspected Limit [dBµV/m] 119.78	List Margin [dBµV/m] 166.34	Height [cm] 100	Angle [°] 250	Polarity Vertical
1	-50 -60 -70 -70 -70 -70 -70 -70 -70 -70 -70 -7	Level [dBµV/m] -48.02 -37.88	Factor [dB] -30.03 -29.70	Suspected Limit [dBµV/m] 119.78 99.32	List Margin [dBµV/m] 166.34 137.20	Height [cm] 100 100	Angle [°] 250 350	Polarity Vertical Vertical



For 30MHz to 1000MHz

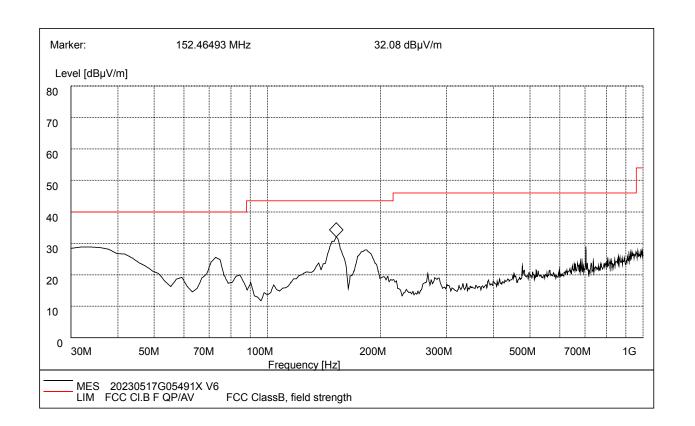


Frequency (MHz)	QuasiPeak (dB	Bandwidth (kHz)	Corr.Factor (dB/m)	Antenna height (cm)	Limit (dB µ V/m)	Margin (dB)	Polarity
30.320000	20.46	120.000	19.3	100.0	40.0	19.54	Horizontal
74.950000	18.43	120.000	8.6	100.0	40.0	21.57	Horizontal
150.432000	21.12	120.000	12.4	100.0	43.5	22.38	Horizontal
185.5100000	19.47	120.000	11.0	100.0	43.5	24.03	Horizontal
545.130000	22.49	120.000	19.5	100.0	46.0	23.51	Horizontal
718.240000	23.51	120.000	21.9	100.0	46.0	22.49	Horizontal

Test Result : Pass

Remark:

- 1. Emission Level(dBuV/m) = Raw Value(dBuV) + Correction Factor(dB/m).
- 2. Correction Factor(dB/m) = Antenna Factor(dB/m) + Cable Factor(dB).
- **3**. Margin value = Limit value Emission Level.
- 4. The other emission levels were very low against the limit.



Frequency (MHz)	QuasiPeak (dB	Bandwidth (kHz)	Corr.Factor (dB/m)	Antenna height (cm)	Limit (dB µ V/m)	Margin (dB)	Polarity
32.130000	27.84	120.000	19.3	100.0	40.0	12.16	Vertical
72.160000	24.53	120.000	6.8	100.0	40.0	15.47	Vertical
152.980000	31.08	120.000	12.4	100.0	43.5	12.42	Vertical
181.420000	26.66	120.000	11.0	100.0	43.5	16.84	Vertical
477.090000	21.77	120.000	18.9	100.0	46.0	24.23	Vertical
704.230000	27.02	120.000	21.9	100.0	46.0	18.98	Vertical

Test Result : Pass

Remark:

- 1. Emission Level(dBuV/m) = Raw Value(dBuV) + Correction Factor(dB/m).
- 2. Correction Factor(dB/m) = Antenna Factor(dB/m) + Cable Factor(dB).
- **3**. Margin value = Limit value Emission Level.
- 4. The other emission levels were very low against the limit.



2. List of measuring equipment

Item	Test Equipment	Manufacturer	Model No.	Serial No.	Cal Date	Due Date
1	5M Anechoic Chamber	Albatross	SAC-5MAC 12.8x6.8x6.4m	A0304210	2022.06.09	2026.06.08
2	Loop Antenna	Schwarz beck	HFH2-Z2	A0304220	2022.05.02	2025.05.01
3	Broadband antenna (30MHz~1GHz)	R&S	HL562	A0304224	2023.06.08	2024.06.07
4	EMI Horn Ant. (1-18G)	ETC	1209	A150402241	2021.01.02	2024.01.01
5	Horn antenna (18GHz~26.5GHz)	AR	AT4510	A0804450	2023.06.01	2024.05.31
6	Amplifier 30M~1GHz	MILMEGA	80RF1000-10004	A140101634	2022.12.13	2023.12.12
7	Amplifier 1G~18GHz	MILMEGA	AS0104R-800/400	A160302517	2022.12.13	2023.12.12
8	Spectrum Analyzer	KEYSIGHT	N9030A	A160702554	2023.02.20	2024.02.19
9	Test Receiver	R&S	ESIB7	A0501375	2023.03.16	2024.03.15
10	Broadband Ant.	2786	ETC	A150402240	2021.09.16	2024.03.03
11	3M Anechoic Chamber	Albatross	SAC-3MAC 9*6*6m	A0412375	2019.03.26	2024.03.25
12	Temperature chamber	TABAI	PS-232	A8708054	2022.08.18	2023.08.17
13	Test Receiver	KEYSIGHT	N9038A	A141202036	2023.06.12	2024.06.11
14	LISN	ROHDE&SCHWARZ	ENV216	A140701847	2023.06.08	2024.06.07



3. Uncertainty of Evaluation

The measurement uncertainties shown below were calculated in accordance with the requirements of ANSI C63.10-2013. All the measurement uncertainty value were shown with a coverage K=2 to indicate 95% level of confidence. The measurement data show herein meets or exceeds the CISPR measurement uncertainty values specified in CISPR 16-4-2 and can be compared directly to specified limit to determine compliance.

Uncertainty of AC Power Line Conducted Emission Measurement (150kHz~30MHz)

Measuring Uncertainty for a level of confidence of 95%(U=2Uc(y))	2.8dB
Uncertainty of Radiated Emission Measurement (9kH	Iz~30MHz)
Measuring Uncertainty for a level of confidence of 95%(U=2Uc(y))	3.5dB
Uncertainty of Radiated Emission Measurement (30M	/Hz~1GHz)
Measuring Uncertainty for a level of confidence of 95%(U=2Uc(y))	3.91dB
Uncertainty of Radiated Emission Measurement (1GF	Hz~18GHz)
Measuring Uncertainty for a level of confidence of 95%(U=2Uc(y))	4.5dB
Uncertainty of Radiated Emission Measurement (18G	GHz~40GHz)
Measuring Uncertainty for a level of confidence of 95%(U=2Uc(y))	4.9dB
Uncertainty of RF Conducted Measurement (9kHz~4	0GHz)
Measuring Uncertainty for a level of confidence of 95%(U=2Uc(y))	1.2dB
END OF RE	EPORT