

RF TEST REPORT

Report No.: SET2023-02195

Product Name: PoC Radio

Model No.: iTALK-310, iTALK-300

FCC ID: 2A2II-ITALK310

Applicant: iTALKPTT Corporation

Address: 6905 S 1300 E #450, Cottonwood Heights, UT 84047-1817, USA

Dates of Testing: 02/14/2023 - 03/10/2023

Issued by: CCIC Southern Testing Co., Ltd.

Electronic Testing Building, No. 43 Shahe Road, Xili Street,

Lab Location:

Nanshan District, Shenzhen, Guangdong, China.

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Test Report

Product...... PoC Radio

Brand Name....: iTALKPTT

Trade Name: iTALKPTT

Applicant.....: iTALKPTT Corporation

Applicant Address.....: 6905 S 1300 E #450, Cottonwood Heights, UT

84047-1817, USA

Manufacturer...... Shenzhen VTU Systems Co., Ltd.

Manufacturer Address.....: 6/F, Building A, Ganghongji High-tech Intelligent

Industrial Park, No. 1008, Songbai Road, Nanshan

District, Shenzhen 518055, P.R. China

Test Standards....: 47 CFR Part 15.225

ANSI C63.10-2013

Test Result.....: Pass

Chuiwang Zhang, Test Engineer

Chris You, Senior Engineer

Approved by.....: 2023.03.21

Yang Fan, Manager





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Change History						
Issue Date Reason for change						
1.0	2023.03.21	First edition				



1. GENERAL INFORMATION

1.1. EUT Description

Product Name	PoC Radio
Model No.	iTALK-310, iTALK-300
Hardware Version	IT330_MB_V1.0
Software Version	iTALK310_V1.0
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 DC3.8V/4000mAh

- Note 1: Model No.: iTALK-310 and iTALK-300 are same in circuit board and specification, the samefrequency range, antenna, modulation method, and RF output power. The difference is the Screen and keys, iTALK-310 with screen and keys, while iTALK-300 does not.
- Note 2: Both the iTALK-310 and iTALK-300 were tested, iTALK-310 was found to have the worst test results, only the worst cases are recorded in this report.
- Note 3: For a more detailed description, please refer to Specification or User's Manual supplied by the applicant and/or manufacturer.



1.1. 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
	KDB 174176 D01 Line	AC Power-Line Conducted Emissions
2	Conducted FAQ v01r01	Frequently Asked Questions
2	ANGLO(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.



1.2. 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 April 19th, 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 Jun. 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.

1.3. Test Environment Conditions

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

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



2. 47 CFR Part 15C Requirements

2.1. Antenna requirement

2.1.1. 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.

2.1.2. 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	LoRaWAN Sensor Terminal	13.56 MHz	Internal	0

2.1.3. Result: comply

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



2.2. Field Strength of Radiated Emissions

2.2.1. 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 = $20 \log_{10}(30/3)^2 = 40 dB$.

2.2.2. Measuring Instruments

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

2.2.3. Test Description

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

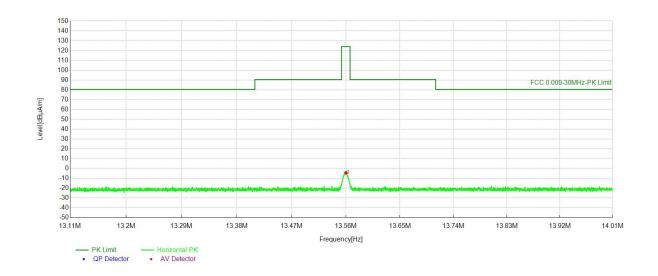
2.2.4. Test Setup

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.



2.2.5. Test Result

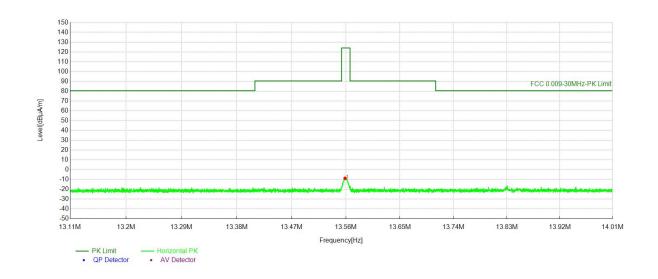
Field Strength of Radiated Emissions								
Test site: 5M anechoic chamber Environment: Temp: 23℃; Humi:59%;101Pka								
Operator:	Operator: Yang zhicheng Test Date: 2023.03.08							
Test Mode:	NFC Tx	Polarization:	Vertical					



Suspected List								
NO.	Freq.	Level	Factor	Limit	Margin	Height	Angle	Polarity
INO.	[MHz]	[dBµV/m]	[dB]	[dBµV/m]	[dBµV/m]	[cm]	[°]	Polarity
1	13.56	-4.33	-28.25	124.00	128.33	100	206	Horizontal



Field Strength of Radiated Emissions								
Test site: 5M anechoic chamber Environment: Temp: 23℃; Humi:59%;101Pka								
Operator:	Operator: Yang zhicheng Test Date: 2023.03.08							
Test Mode:	NFC Tx	Polarization:	Vertical					



Suspected List								
NO.	Freq.	Level	Factor	Limit	Margin	Height	Angle	Dolority
INO.	[MHz]	[dBµV/m]	[dB]	[dBµV/m]	[dBµV/m]	[cm]	[°]	Polarity
1	13.56	-8.72	-28.25	124.00	132.72	100	142	Vertical



2.3. 20 dB Bandwidth

2.3.1. Requirement

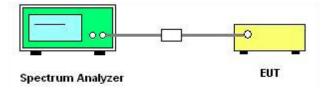
Per 15.215 (c) Intentional radiators operating under the alternative provisions to the general emission limits, as contained in §§ 15.217 through 15.257 and in Subpart E of this part, must be designed to ensure that the 20 dB bandwidth of the emission, or whatever bandwidth may otherwise be specified 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).

2.3.2. Measuring Instruments

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

2.3.3. 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.



2.3.4. Test Results

Test Frequency(MHz)	20dB Bandwidth(kHz)	Limit (kHz)	Results
13.56	0.427	11.2	Pass

Note: For 13.56MHz, permitted Band is 14 kHz, so the Limit is 11.2 kHz.



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.



2.4. Frequency Stability

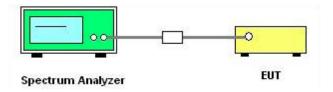
2.4.1. Requirement

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

2.4.2. Measuring Instruments

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

2.4.3. 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.

2.4.4. 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.



2.4.5. Test Results

Test Mode: Continuous Transmitting

Test Environn	nent	Frequency	Frequency	Frequency	Limit	
Adapter Power	Temperature	Reading	Error	Error	(%)	Result
Supply	(°C)	(MHz)	(%)	(ppm)	(70)	
	-20	13.559961	-0.0000008112	-0.8112		Pass
	-10	13.559963	-0.0000005900	-0.5900		Pass
	0	13.559963	-0.0000028024	-2.8024		Pass
DC 3.80V	10	13.559958	-0.0000028761	-2.8761		Pass
DC 3.80 V	20	13.559960	-0.0000029499	-2.9499	±0.01%	Pass
	30	13.559959	-0.0000030236	-3.0236	(±100ppm)	Pass
	40	13.559965	-0.0000008112	-0.8112		Pass
	50	13.559964	-0.0000025811	-2.5811		Pass
Max. = DC 4.35V	20	13.559962	-0.0000026549	-2.6549		Pass
Min. = DC 3.60V	20	13.559961	-0.0000028024	-2.8024		Pass



2.5. AC Power Line Conducted Emission

2.5.1. 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 $50\mu H/50\Omega$ line impedance stabilization network (LISN).

Frequency range (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			

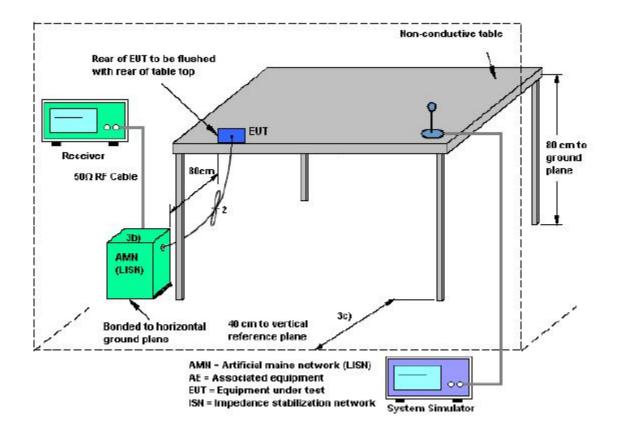
NOTE:

- (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.

2.5.2. Measuring Instruments

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

2.5.3. Test Setup





2.5.4. 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.

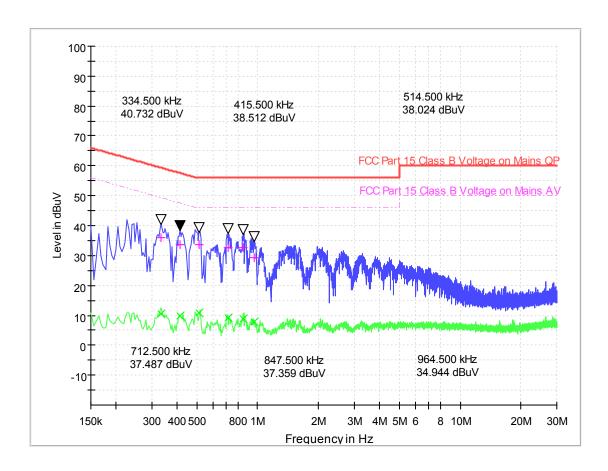
2.5.5. Test Results

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









Frequency (MHz)	QuasiPeak (dBμV)	Average (dBμV)	Corr.Factor (dB)	Margin - QPK	Limit - QPK	Margin - AV	Limit - AV (dBµV)
0.334500	36.07	10.67	10.3	23.27	59.3	38.67	49.3
0.415500	33.73	9.97	10.3	23.81	57.5	37.57	47.5
0.514500	33.48	10.76	10.2	22.52	56.0	35.24	46.0
0.712500	32.62	9.04	10.3	23.38	56.0	36.96	46.0
0.847500	32.57	8.74	10.3	23.43	56.0	37.26	46.0
0.964500	29.36	7.69	10.3	26.64	56.0	38.31	46.0

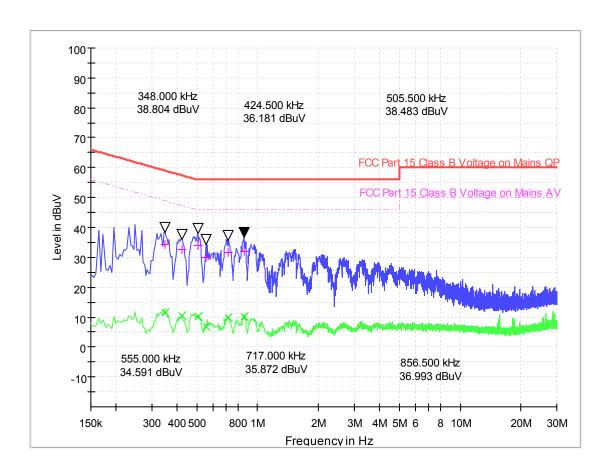
Test Result: Pass

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)
0.348000	34.24	11.48	10.3	24.77	59.0	37.53	49.0
0.424500	32.55	10.56	10.3	24.81	57.4	36.80	47.4
0.505500	33.87	10.33	10.2	22.13	56.0	35.67	46.0
0.555000	30.10	6.91	10.2	25.90	56.0	39.09	46.0
0.717000	31.57	9.83	10.2	24.43	56.0	36.17	46.0
0.856500	32.11	10.14	10.2	23.89	56.0	35.86	46.0

Test Result: Pass

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



2.6. Radiated Emission

2.6.1. 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 defi ned 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.

2.6.2. Measuring Instruments

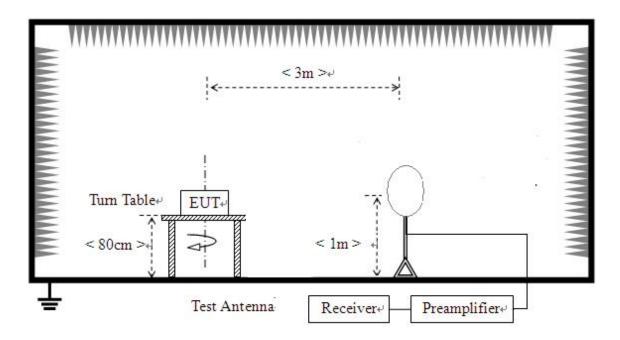
The measuring equipment is listed in the section 3 of this test report.



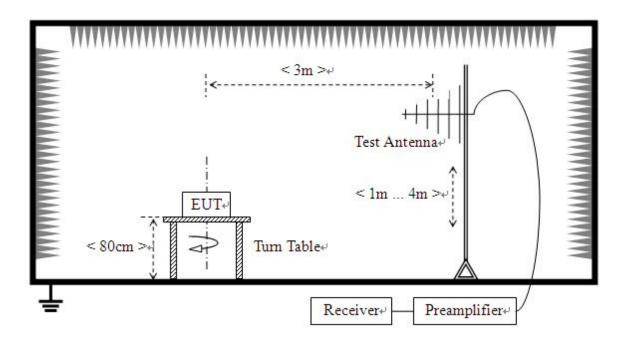


2.6.3. Test Setup

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.

2.6.4. 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:

 $E[dB\mu V/m] = U_R + A_T + A_{Factor}[dB]; A_T = L_{Cable loss}[dB] - G_{preamp}[dB]$

A_T: Total correction Factor except Antenna

U_R: Receiver Reading G_{preamp}: Preamplifier Gain

A_{Factor}: Antenna Factor at 3m

L_{Cable loss}: Cable loss

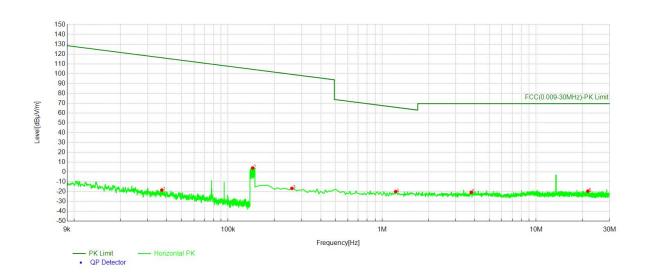
During the test, the total correction Factor AT and A_{Factor} were built in test software.

The radiated frequency ranges from 9 kHz to 1 GHz.



For 9 kHz to 30MHz

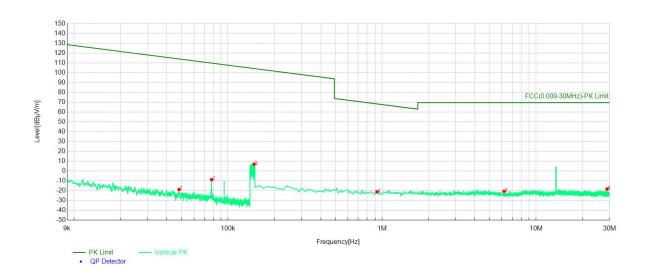
Project Information							
Test site:	5M anechoic chamber	Environment:	Temp: 23°C; Humi:59%;101Pka				
Operator:	Yang zhicheng	Test Date:	2023.03.08				
Test Mode:	NFC Tx	Polarization:	Horizontal				



	Suspected List								
NO	Freq.	Level	Factor	Limit	Margin	Height	Angle	Dolovitu	
NO.	[MHz]	[dBµV/m]	[dB]	[dBµV/m]	[dBµV/m]	[cm]	[°]	Polarity	
1	0.04	-18.25	-29.94	116.21	134.46	100	90	Horizontal	
2	0.14	4.14	-29.77	104.42	100.28	100	10	Horizontal	
3	0.26	-16.57	-29.70	99.32	115.89	100	130	Horizontal	
4	1.23	-19.79	-29.26	65.84	85.63	100	130	Horizontal	
5	3.79	-20.60	-29.01	69.54	90.14	100	150	Horizontal	
6	21.70	-19.37	-28.36	69.54	88.91	100	210	Horizontal	



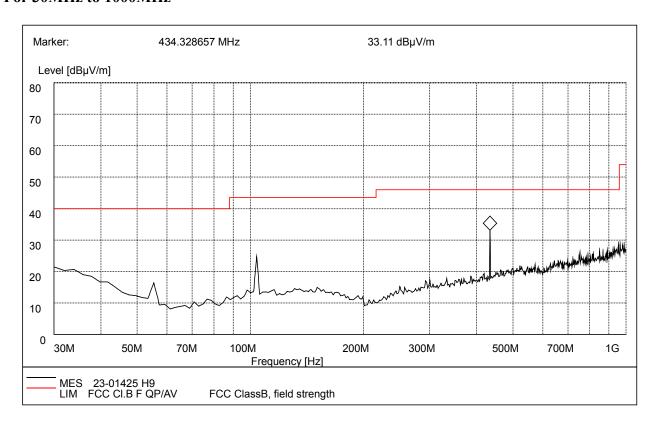
Project Information						
Test site:	5M anechoic chamber	Environment:	Temp: 23°C; Humi:59%;101Pka			
Operator:	Yang zhicheng	Test Date:	2023.03.08			
Test Mode:	NFC Tx	Polarization:	Vertical			



	Suspected List								
NO.	Freq. Level Factor Limit Margin Height Angl		Angle	Dolority					
NO.	[MHz]	[dBµV/m]	[dB]	[dBµV/m]	[dBµV/m]	[cm]	Polarity		
1	0.05	-18.75	-29.85	113.98	132.73	100	250	Vertical	
2	0.08	-8.69	-29.95	109.75	118.44	100	150	Vertical	
3	0.15	6.99	-29.72	104.23	97.24	100	10	Vertical	
4	0.93	-21.08	-29.40	68.27	89.35	100	200	Vertical	
5	6.19	-20.63	-29.30	69.54	90.17	100	90	Vertical	
6	28.93	-18.25	-28.47	69.54	87.79	100	0	Vertical	



For 30MHz to 1000MHz



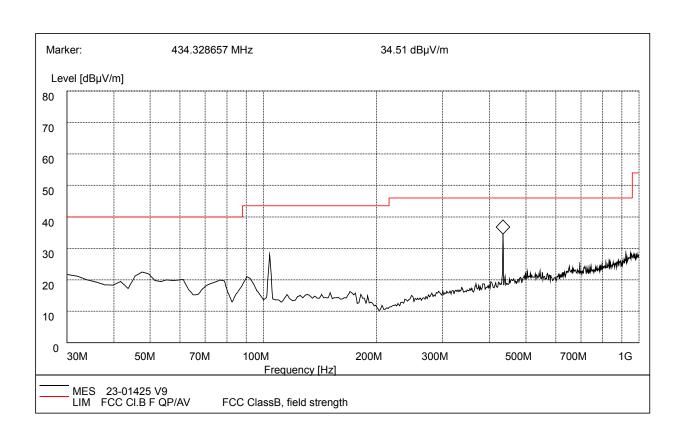
Frequency (MHz)	QuasiPeak (dB µ V/m)	Bandwidth (kHz)	Corr.Factor (dB/m)	Antenna height (cm)	Limit (dB µ V/m)	Margin (dB)	Polarity
30.480000	20.63	120.000	19.3	100.0	40.0	19.37	Horizontal
54.120000	15.48	120.000	8.6	100.0	40.0	24.52	Horizontal
102.950000	24.11	120.000	10.9	100.0	43.5	19.39	Horizontal
154.400000	13.71	120.000	12.4	100.0	43.5	29.79	Horizontal
433.660000	31.96	120.000	17.9	100.0	46.0	14.04	Horizontal
760.200000	23.19	120.000	22.1	100.0	46.0	22.81	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 μ V/m)	Bandwidth (kHz)	Corr.Factor (dB/m)	Antenna height (cm)	Limit (dB µ V/m)	Margin (dB)	Polarity
30.520000	21.05	120.000	19.3	100.0	40.0	18.95	Vertical
47.850000	21.63	120.000	11.2	100.0	40.0	18.37	Vertical
102.520000	26.13	120.000	10.9	100.0	43.5	17.37	Vertical
168.740000	15.34	120.000	12.5	100.0	43.5	28.16	Vertical
434.850000	33.96	120.000	17.9	100.0	46.0	12.04	Vertical
784.120000	22.48	120.000	22.1	100.0	46.0	23.52	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.



3. List of measuring equipment

Item	Test Equipment	Manufacturer	Model No.	Serial No.	Cal Date	Due Date
1	EMI Test Receiver	ROHDE&SCHWARZ	ESW26	A180502935	2022.07.21	2023.07.20
2	5M Anechoic Chamber	Albatross	SAC-5MAC 12.8x6.8x6.4m	A0304210	2019.03.25	2023.03.24
3	Loop Antenna	Schwarz beck	HFH2-Z2	A0304220	2022.05.02	2025.05.01
4	Broadband antenna (30MHz~1GHz)	R&S	HL562	A0304224	2020.06.19	2023.06.18
5	EMI Horn Ant. (1-18G)	ETC	1209	A150402241	2021.01.02	2024.01.01
6	Horn antenna (18GHz~26.5GHz)	AR	AT4510	A0804450	2020.06.19	2023.06.18
7	Amplifier 30M~1GHz	MILMEGA	80RF1000-10004	A140101634	2022.12.13	2023.12.12
8	Amplifier 1G~18GHz	MILMEGA	AS0104R-800/400	A160302517	2022.12.13	2023.12.12
9	Spectrum Analyzer	KEYSIGHT	N9030A	A160702554	2022.03.25	2023.03.24
10	Test Receiver	R&S	ESIB7	A0501375	2022.04.18	2023.04.17
11	Broadband Ant.	2786	ETC	A150402240	2021.09.16	2024.03.03
12	3M Anechoic Chamber	Albatross	SAC-3MAC 9*6*6m	A0412375	2019.03.26	2023.03.25
13	Test Receiver	KEYSIGHT	N9038A	A141202036	2022.07.21	2023.07.20
14	LISN	ROHDE&SCHWARZ	ENV216	A140701847	2022.07.21	2023.07.20
15	Cable	MATCHING PAD	W7	/	2022.07.21	2023.07.20



4. 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 (9kHz~30MHz)	
Measuring Uncertainty for a level of confidence of 95%(U=2Uc(y))	3.5dB
Uncertainty of Radiated Emission Measurement (30MHz~1GHz)	
Measuring Uncertainty for a level of confidence of 95%(U=2Uc(y))	3.91dB
Uncertainty of Radiated Emission Measurement (1GHz~18GHz)	
Measuring Uncertainty for a level of confidence of 95%(U=2Uc(y))	4.5dB
Uncertainty of Radiated Emission Measurement (18GHz~40GHz)	
Measuring Uncertainty for a level of confidence of 95%(U=2Uc(y))	4.9dB
Uncertainty of RF Conducted Measurement (9kHz~40GHz)	
Measuring Uncertainty for a level of confidence of 95%(U=2Uc(y))	1.2dB

END OF REPORT