



FCC TEST REPORT

Shenzhen Anysecu Technology Co., Ltd.

Mobile FM Transceiver

Test Model: WP-9900

Additional Model No.: Please Refer to Page 7

Prepared for	:	Shenzhen Anysecu Technology Co., Ltd.
Address	:	2B-2413, COFCO Xiangyun international, Longcheng street, Longgang, Shenzhen, Guangdong, China
Prepared by	:	Shenzhen LCS Compliance Testing Laboratory Ltd.
Address	:	Room 101, 201, Building A and Room 301, Building C, Juji Industrial Park, Yabianxueziwei, Shajing Street, Bao'an District, Shenzhen, Guangdong, China
Tel	:	(+86)755-82591330
Fax	:	(+86)755-82591332
Web	:	www.LCS-cert.com
Mail	:	webmaster@LCS-cert.com
Date of receipt of test sample	:	November 10, 2021
Number of tested samples	:	1
Serial number	:	Prototype
Date of Test	:	November 10, 2021 ~ November 15, 2021
Date of Report	:	November 15, 2021



FCC TEST REPORT FCC 47 CFR Part 15 Subpart B, Class B, ANSI C63.4 -2014	
Report Reference No. : LCS210902073AE	
Date Of Issue : November 15, 2021	
Testing Laboratory Name : Shenzhen LCS Compliance Testing Laboratory Ltd.	
Address : 2B-2413, COFCO Xiangyun international, Longcheng street, Longgang, Shenzhen, Guangdong, China	
Testing Location/ Procedure ... : Full application of Harmonised standards ■ Partial application of Harmonised standards □ Other standard testing method □	
Applicant's Name : Shenzhen Anysecu Technology Co., Ltd.	
Address : Room2413,Bld.2B,COFCO Xiangyun,Longcheng, Longgang,Shenzhen,Guangdong,China	
Test Specification	
Standard..... : FCC 47 CFR Part 15 Subpart B, Class B, ANSI C63.4 -2014	
Test Report Form No. : LCSEMC-1.0	
TRF Originator..... : Shenzhen LCS Compliance Testing Laboratory Ltd.	
Master TRF : Dated 2011-03	
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Test Item Description..... : Mobile FM Transceiver	
Trade Mark..... : ANYSECU	
Test Model : WP-9900	
Ratings : Input: DC 13.8V(Max)	
Result : Pass	

Compiled by:

Vera Deng/ Administrators

Supervised by:

Jin Wang/ Technique principal

Approved by:

Gavin Liang/ Manager



TEST REPORT

Test Report No. : LCS210902073AE

November 15, 2021

Date of issue

Test Model..... : WP-9900

EUT..... : Mobile FM Transceiver

Applicant..... : Shenzhen Anysecu Technology Co., Ltd.

Address..... : 2B-2413, COFCO Xiangyun international, Longcheng street, Longgang, Shenzhen, Guangdong, China

Telephone..... : +86-755-82726057

Fax..... : /

Manufacturer..... : Shenzhen Anysecu Technology Co., Ltd.

Address..... : 2B-2413, COFCO Xiangyun international, Longcheng street, Longgang, Shenzhen, Guangdong, China

Telephone..... : +86-755-82726057

Fax..... : /

Factory..... : Shenzhen Anysecu Technology Co., Ltd.

Address..... : 2B-2413, COFCO Xiangyun international, Longcheng street, Longgang, Shenzhen, Guangdong, China

Telephone..... : +86-755-82726057

Fax..... : /

Test Result according to the standards on page 6: **Pass**

The test report merely corresponds to the test sample.

It is not permitted to copy extracts of these test result without the written permission of the test laboratory.



Revision History

Revision	Issue Date	Revisions	Revised By
000	November 15, 2021	Initial Issue	Gavin Liang



TABLE OF CONTENTS

Test Report Description	Page
1. SUMMARY OF STANDARDS AND RESULTS	6
1.1. Description of Standards and Results	6
2. GENERAL INFORMATION	7
2.1. Description of Device (EUT)	7
2.2. Support Equipment List.....	7
2.3. External I/O	7
2.4. Description of Test Facility	8
2.5. Statement of the Measurement Uncertainty	8
2.6. Measurement Uncertainty.....	8
3. TEST RESULTS	9
3.1. Radiated Emission Measurement.....	9
3.2. Compliance for Scanning Receiver.....	16
4. PHOTOGRAPHS OF TEST SETUP	18
5. EXTERNAL AND INTERNAL PHOTOS OF THE EUT	19



1. SUMMARY OF STANDARDS AND RESULTS

1.1. Description of Standards and Results

The EUT have been tested according to the applicable standards as referenced below.

EMISSION			
Description of Test Item	Standard	Limits	Results
Conducted disturbance at mains terminals	FCC 47 CFR Part 15 Subpart B, Class B, ANSI C63.4 -2014	Class B	N/A
Radiated disturbance	FCC 47 CFR Part 15 Subpart B, Class B, ANSI C63.4 -2014	Class B	PASS
Compliance for Scanning Receiver	FCC 47 CFR Part 15.121	FCC 47 CFR Part 15.121	PASS
N/A is an abbreviation for Not Applicable.			

Test mode:		
Mode1	Operate in 144-148MHz mode	Record
Mode2	Operate in 420-450MHz mode	Pre-scan
***Note: All test modes were tested, but we only recorded the worst case in this report.		



2. GENERAL INFORMATION

2.1. Description of Device (EUT)

EUT : Mobile FM Transceiver

Trade Mark : ANYSECU

Test Model : WP-9900

Additional Model No. : WP9900plus, WP-3600, WP-3800, WP-5200, WP-5800, WP-5900, WP-6500, WP-6800, WP-6900

Model Declaration : PCB board, structure and internal of these model(s) are the same, So no additional models were tested

Power Supply : DC 13.8V(Max)

Frequency Band : 144-148MHz/420-450MHz

Highest internal frequency (Fx)	Highest measured frequency
Fx ≤ 108 MHz	1 GHz
108 MHz < Fx ≤ 500 MHz	2 GHz
500 MHz < Fx ≤ 1 GHz	5 GHz
Fx > 1 GHz	5 × Fx up to a maximum of 6 GHz
NOTE 1 For FM and TV broadcast receivers, Fx is determined from the highest frequency generated or used excluding the local oscillator and tuned frequencies. Where Fx is unknown, the radiated emission measurements shall be performed up to 6 GHz.	

2.2. Support Equipment List

Manufacturer	Description	Model	Serial Number	Certificate
--	--	--	--	--

2.3. External I/O

I/O Port Description	Quantity	Cable
--	--	--



2.4. Description of Test Facility

Site Description

EMC Lab. : NVLAP Accreditation Code is 600167-0.

FCC Designation Number is CN5024.

CAB identifier is CN0071.

CNAS Registration Number is L4595.

2.5. Statement of the Measurement Uncertainty

The data and results referenced in this document are true and accurate. The reader is cautioned that there may be errors within the calibration limits of the equipment and facilities. The measurement uncertainty was calculated for all measurements listed in this test report acc. To CISPR 16 – 4 “Specification for radio disturbance and immunity measuring apparatus and methods – Part 4: Uncertainty in EMC Measurements” and is documented in the LCS quality system acc. To DIN EN ISO/IEC 17025. Furthermore, component and process variability of devices similar to that tested may result in additional deviation. The manufacturer has the sole responsibility of continued compliance of the device.

2.6. Measurement Uncertainty

Test	Parameters	Expanded Uncertainty (U_{lab})	Expanded Uncertainty (U_{cispr})
Conducted Emission	Level accuracy (9kHz to 150kHz) (150kHz to 30MHz)	± 2.63 dB ± 2.35 dB	± 3.8 dB ± 3.4 dB
Radiated Emission	Level accuracy (9kHz to 30MHz)	± 3.68 dB	N/A
Radiated Emission	Level accuracy (30MHz to 1000MHz)	± 3.48 dB	± 5.3 dB
Radiated Emission	Level accuracy (above 1000MHz)	± 3.90 dB	± 5.2 dB

- (1) Where relevant, the following measurement uncertainty levels have been estimated for tests performed on the apparatus.
- (2) The reported expanded uncertainty of measurement is stated as the standard uncertainty of measurement multiplied by the coverage factor of $k=2$, which for a normal distribution corresponds to a coverage probability of approximately 95%.



3. TEST RESULTS

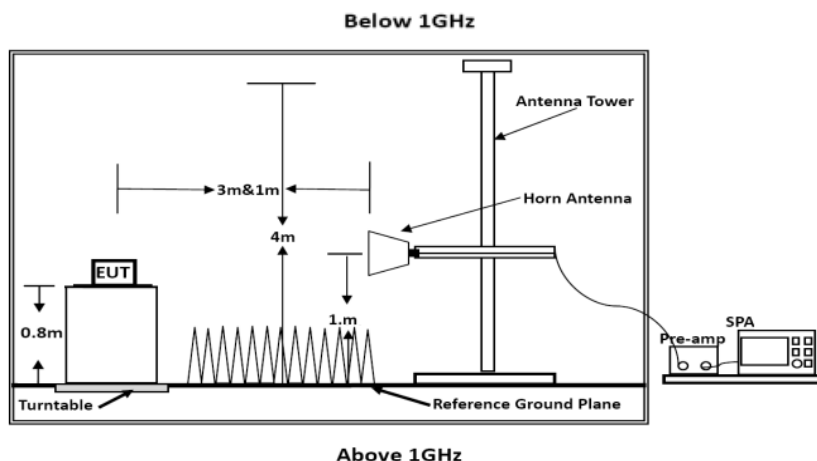
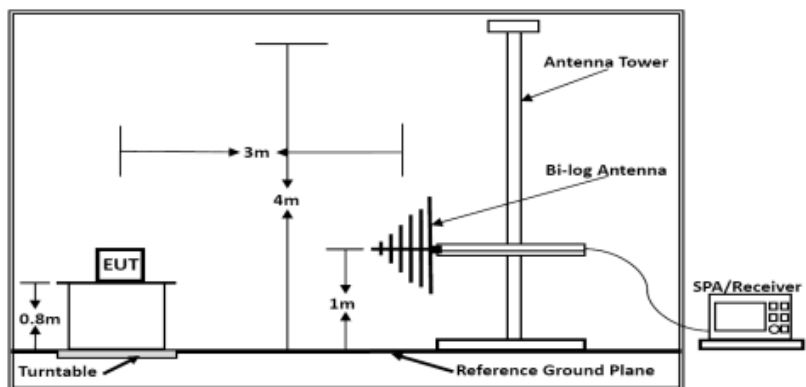
3.1. Radiated Emission Measurement

3.1.1. Test Equipment

The following test equipments are used during the radiated emission measurement:

Item	Equipment	Manufacturer	Model No.	Serial No.	Cal Date	Due Date
1	EMI Test Software	AUDIX	E3	/	N/A	N/A
2	EMI Test Receiver	R&S	ESR3	102311	2021-03-16	2022-03-15
3	Artificial Mains	R&S	ENV216	101288	2021-06-21	2022-06-20
4	10dB Attenuator	SCHWARZBECK	MTS-IMP-136	261115-001-003 2	2021-06-21	2022-06-20
5	Impedance Stabilization Network	TESEQ	ISN T800	45130	2020-12-02	2021-12-01

3.1.2. Block Diagram of Test Setup





3.1.3. Radiated Emission Limit (Class B)

Limits for Radiated Disturbance Below 1GHz			
FREQUENCY MHz	DISTANCE Meters	FIELD STRENGTHS LIMIT	
		$\mu\text{V/m}$	$\text{dB}(\mu\text{V})/\text{m}$
30 ~ 88	3	100	40
88 ~ 216	3	150	43.5
216 ~ 960	3	200	46
960 ~ 1000	3	500	54
Remark : (1) Emission level $(\text{dB})\mu\text{V} = 20 \log$ Emission level $\mu\text{V/m}$ (2) The smaller limit shall apply at the cross point between two frequency bands. (3) Distance is the distance in meters between the measuring instrument, antenna and the closest point of any part of the device or system.			
Limits for Radiated Emission Above 1GHz			
Frequency (MHz)	Distance (Meters)	Peak Limit ($\text{dB}\mu\text{V/m}$)	Average Limit ($\text{dB}\mu\text{V/m}$)
Above 1000	3	74	54
***Note: The lower limit applies at the transition frequency.			

3.1.4. EUT Configuration on Measurement

The following equipment are installed on Radiated Emission Measurement to meet the commission requirements and operating regulations in a manner which tends to maximize its emission characteristics in normal application.

3.1.5. Operating Condition of EUT

3.5.1. Setup the EUT as shown in Section 3.2.

3.5.2. Let the EUT work in test Mode (Working) and measure it.

3.1.6. Test Procedure

EUT and its simulators are placed on a turntable, which is 0.8 meter high above ground. The turntable can rotate 360 degrees to determine the position of the maximum emission level. EUT is set 3.0 meters away from the receiving antenna, which is mounted on a antenna tower. The antenna can be moved up and down between 1.0 meter and 4 meters to find out the maximum emission level. Broadband antenna (calibrated by-log antenna) is used as receiving antenna. Both horizontal and vertical polarization of the antenna is set on measurement. In order to find the maximum emission levels, all of the interface cables must be manipulated according to ANSI C63.4-2009 on radiated emission measurement.

3.1.7. Measuring Instruments and Setting

Please refer to equipment list in this report. The following table is the setting of spectrum analyzer and receiver



Receiver Parameter	Setting
Attenuation	Auto
Start ~ Stop Frequency	9kHz~150kHz / RB/VB 200Hz/1KHz for QP/AVG
Start ~ Stop Frequency	150kHz~30MHz / RB/VB 9kHz/30KHz for QP/AVG
Start ~ Stop Frequency	30MHz~1000MHz / RB/VB 120kHz/1MHz for QP

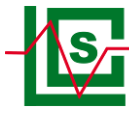
Spectrum Parameter	Setting
Attenuation	Auto
Start Frequency	1000 MHz
Stop Frequency	10th carrier harmonic
RB / VB (Emission in restricted band)	1MHz / 1MHz for Peak, 1 MHz / 1/B kHz for Average
RB / VB (Emission in non-restricted band)	1MHz / 1MHz for Peak, 1 MHz / 1/B kHz for Average

The frequency range from 30MHz to 1000MHz and above 1000MHz is checked.

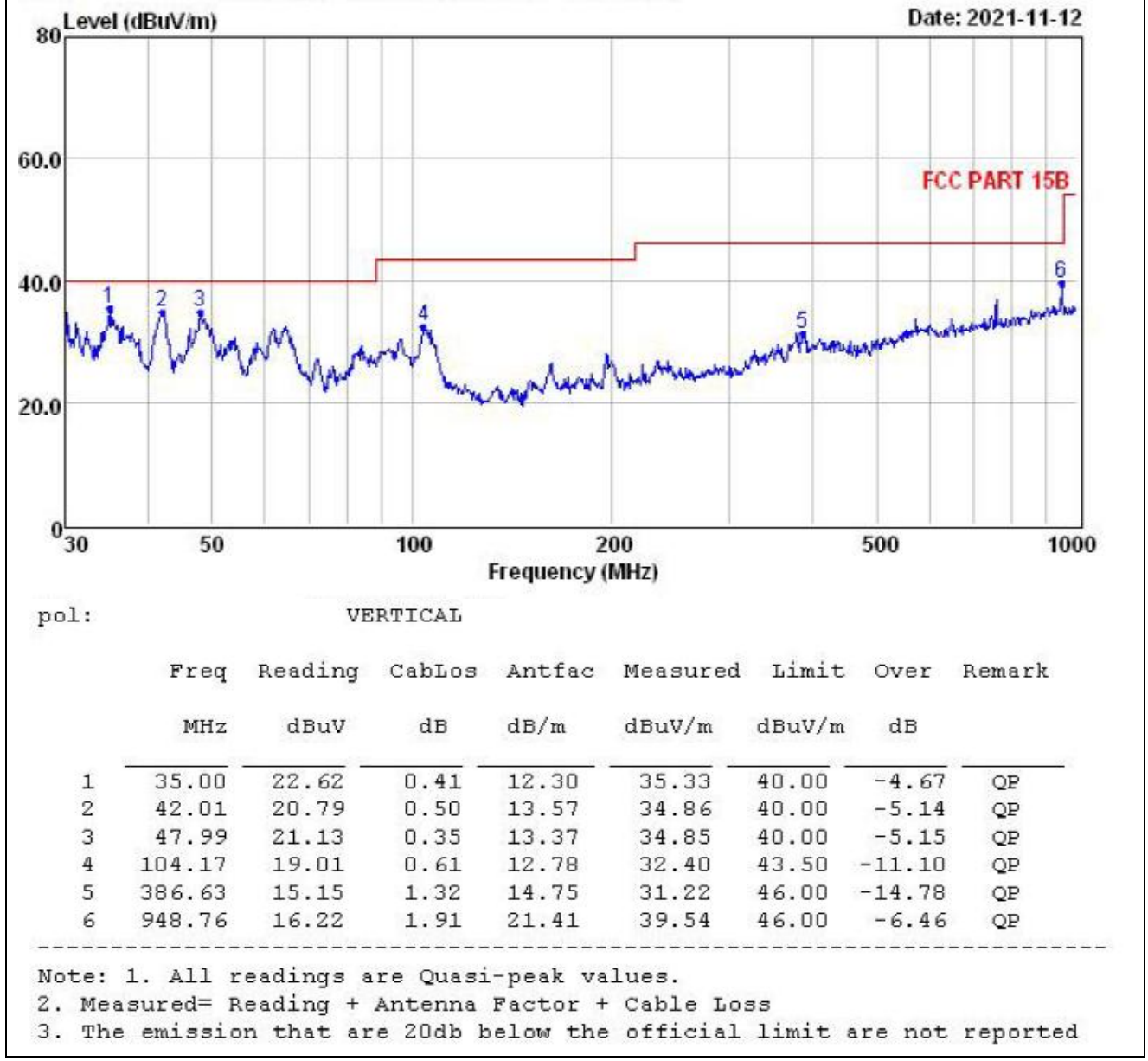
3.1.8. Test Results

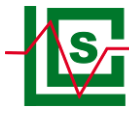
PASS.

The test result please refer to the next page.

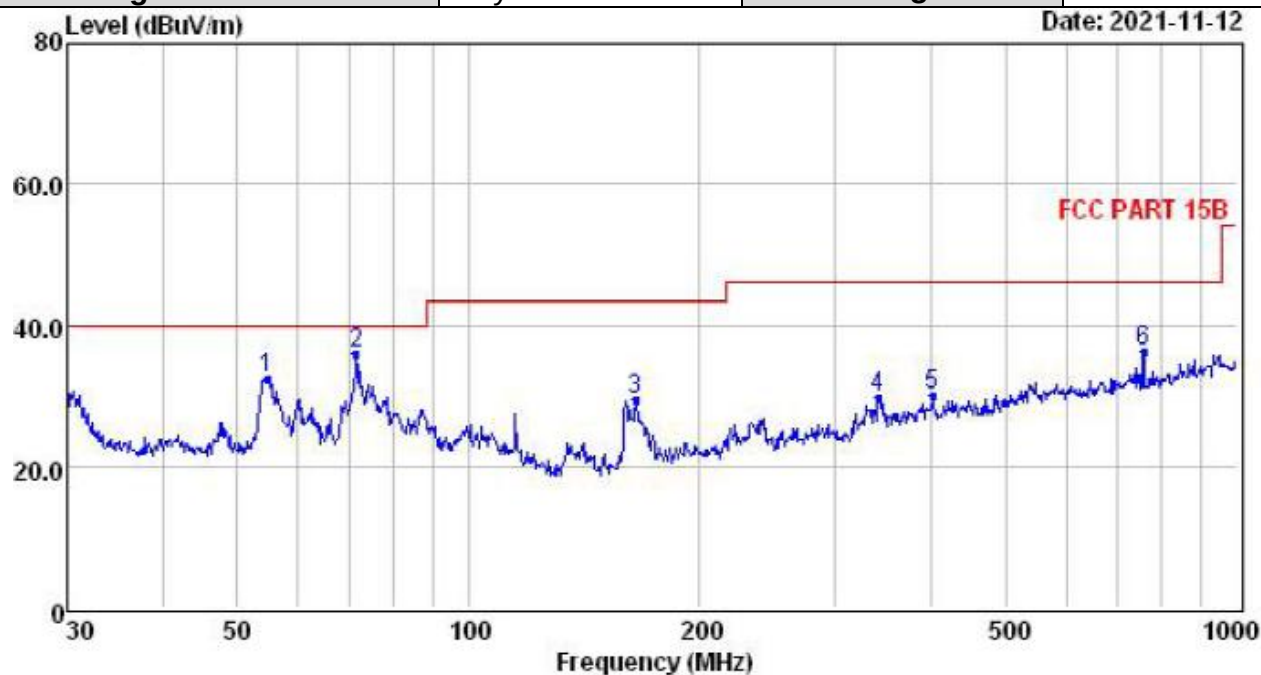


Test Model	WP-9900	Test Mode	Mode 1
Environmental Conditions	22.3℃, 53.1% RH	Detector Function	Quasi-peak
Pol	Vertical	Distance	3m
Test Engineer	Kay Hu	Test Voltage	DC 12V





Test Model	WP-9900	Test Mode	Mode 1
Environmental Conditions	22.3℃, 53.1% RH	Detector Function	Quasi-peak
Pol	Horizontal	Distance	3m
Test Engineer	Kay Hu	Test Voltage	DC 12V



pol:

HORIZONTAL

	Freq	Reading	CabLos	Antfac	Measured	Limit	Over	Remark
	MHz	dBuV	dB	dB/m	dBuV/m	dBuV/m	dB	
1	54.64	19.00	0.46	13.04	32.50	40.00	-7.50	QP
2	71.33	26.92	0.55	8.42	35.89	40.00	-4.11	QP
3	164.91	19.74	0.86	8.82	29.42	43.50	-14.08	QP
4	341.98	14.38	1.12	14.15	29.65	46.00	-16.35	QP
5	401.84	13.79	1.20	15.10	30.09	46.00	-15.91	QP
6	758.04	14.99	1.69	19.54	36.22	46.00	-9.78	QP

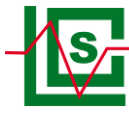
Note: 1. All readings are Quasi-peak values.

2. Measured= Reading + Antenna Factor + Cable Loss

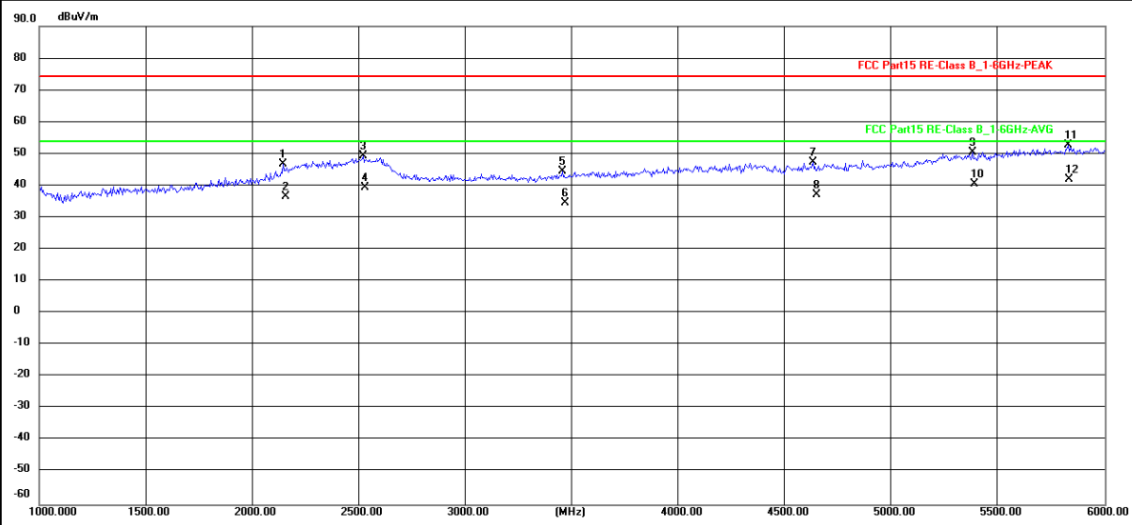
3. The emission that are 20db below the official limit are not reported

Note: 1. Pre-Scan all mode, Thus record worse case mode result in this report.

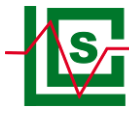
2. For above 1000MHz, Because the emission it too low to be reported.



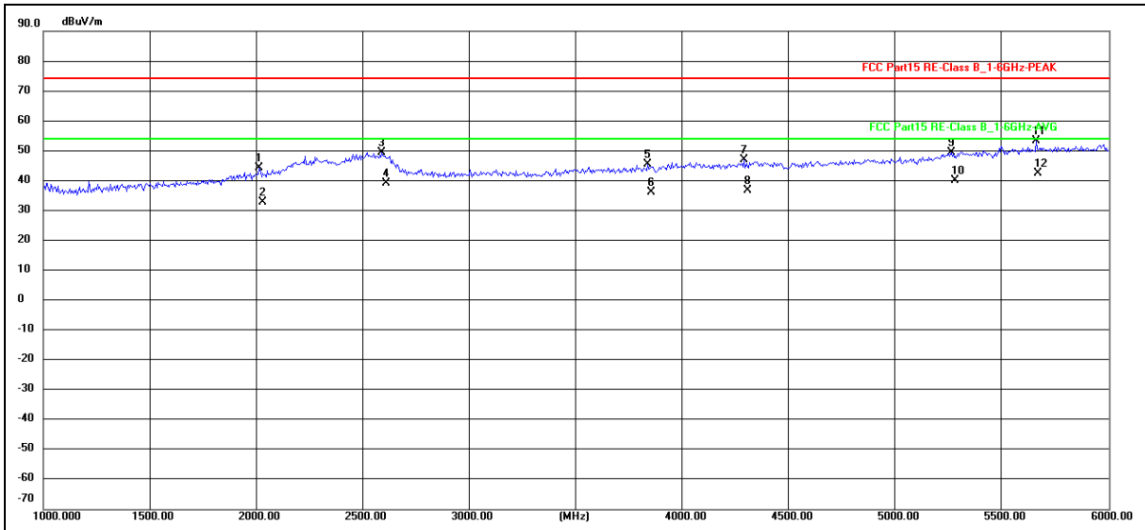
Test Model	WP-9900	Test Mode	Mode 1
Environmental Conditions	22.3℃, 53.1% RH	Detector Function	Peak+Average
Pol	Vertical	Distance	3m
Test Engineer	Kay Hu	Test Voltage	DC 12V



No.	Frequency (MHz)	Reading (dBuV)	Factor (dB/m)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Det.
1	2145.000	45.45	1.50	46.95	74.00	-27.05	peak
2	2155.000	34.78	1.81	36.59	54.00	-17.41	AVG
3	2520.000	44.02	5.50	49.52	74.00	-24.48	peak
4	2530.000	33.99	5.48	39.47	54.00	-14.53	AVG
5	3455.000	44.38	0.25	44.63	74.00	-29.37	peak
6	3470.000	34.25	0.37	34.62	54.00	-19.38	AVG
7	4630.000	44.11	3.23	47.34	74.00	-26.66	peak
8	4650.000	34.02	3.26	37.28	54.00	-16.72	AVG
9	5380.000	43.67	6.80	50.47	74.00	-23.53	peak
10	5390.000	33.78	6.88	40.66	54.00	-13.34	AVG
11	5830.000	43.91	8.83	52.74	74.00	-21.26	peak
12 *	5835.000	33.15	8.84	41.99	54.00	-12.01	AVG



Test Model	WP-9900	Test Mode	Mode 1
Environmental Conditions	22.3℃, 53.1% RH	Detector Function	Peak+Average
Pol	Horizontal	Distance	3m
Test Engineer	Kay Hu	Test Voltage	DC 12V



No.	Frequency (MHz)	Reading (dBuV)	Factor (dB/m)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Det.
1	2015.000	45.02	-0.71	44.31	74.00	-29.69	peak
2	2030.000	33.49	-0.55	32.94	54.00	-21.06	AVG
3	2590.000	43.95	5.41	49.36	74.00	-24.64	peak
4	2610.000	34.34	4.85	39.19	54.00	-14.81	AVG
5	3835.000	43.71	1.80	45.51	74.00	-28.49	peak
6	3855.000	34.36	1.88	36.24	54.00	-17.76	AVG
7	4290.000	44.34	2.74	47.08	74.00	-26.92	peak
8	4305.000	33.94	2.76	36.70	54.00	-17.30	AVG
9	5260.000	43.52	5.99	49.51	74.00	-24.49	peak
10	5280.000	34.05	6.11	40.16	54.00	-13.84	AVG
11	5660.000	45.00	8.39	53.39	74.00	-20.61	peak
12 *	5670.000	34.13	8.41	42.54	54.00	-11.46	AVG

Note: Pre-Scan all mode, Thus record worse case mode result in this report.



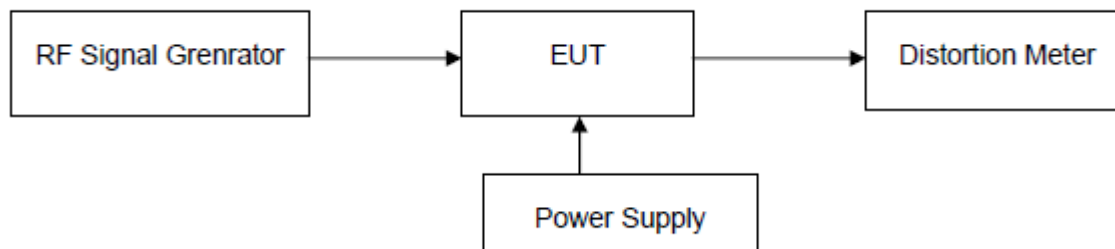
3.2. Compliance for Scanning Receiver

3.2.1 Applicable Standard

FCC §15.121

3.2.2 EUT Setup

For FCC §15.121 (b) Scanning Receiver Cellular Band Rejection Test



3.2.3 Test Procedure

- 1) Connected the EUT as shown in the above block diagram.
- 2) Apply a RF signal to the receiver input port at lowest, middle and highest channel frequencies of receiver operation band.
- 3) Adjust the audio output level of the receiver to it' s rated value with the distortion less than 10%.
- 4) Adjust the RF Signal Generator Output Power to produce 12 dB SINAD without the audio output power dropping by more than 3 dB.This output level of the RF SG at each channel frequency is the sensitivity of the receiver.
- 5) Select the lowest or worse-case sensitivity level for all of the bands as the reference sensitivity.
- 6) Adjust the RF Signal Generator output to a level of +60 dB above the reference sensitivity obtained in step 5) and its frequency to the frequency points in the cellular band.
- 7) Set the Receiver squelch to threshold, the signal required to open the squelch must be lower than the reference sensitivity level.
- 8) Set the receiver in a scanning mode and allow it to scan through it' s complete receiving range.
- 9) If the receiver unsquelched or stopped on any frequency, receiving at this frequency, then adjust the signal generator output level until 12 dB SINAD is produced, this level is the spurious value and the difference between the reference sensitivity and the spurious value is the rejection ratio and must be at least 38dB.
- 10) Repeat above procedure at the frequencies 824.5, 836.0, and 848.5 MHz for the mobile band, and 869.1, 881.5, and 893.5MHz for the cellular base band.

3.2.4. Test Equipment

The following test equipments are used during the radiated emission measurement:

Item	Equipment	Manufacturer	Model No.	Serial No.	Cal Date	Due Date
1	RF Communication s Test Set	HP	8921A	3344A00457	2021-09-28	2022-09-27
2	Sign Geal nerator	Agilent	E8257D	MY46520521	2021-06-22	2022-06-21
3	Multimeter	FLUKE	12E	48270370WS	2021-06-22	2022-06-21



3.2.5 Test Results Summary

Comply with FCC 121(a):

- Please refer to the technical informations or the attestation letter conforming compliance with this requirement.

Comply with FCC 121(b):

- Please refer to the following Scanning Receiver Cellular Band Rejection Test Result.

Comply with FCC 121(c):

- Not applicable.

Comply with FCC 121(d):

- Please refer to the User Manual.

Comply with FCC 121(e):

- This Scanning Receiver is not assembled from kits or marketed in kit form.

Comply with FCC 121(f):

- Please refer to the label of the product.

3.2.6 Test Data

Passed

Temperature	24.3°C	Humidity	53.9%
Test Engineer	Kay Hu		

EUT'S Scanning Frequency Band(MHz)	Test Frequencies of Cellular Band (MHz)	Spurious Value of Cellular Frequencies for 12 dB SINAD (dBm)	Reference Sensitivity for 12 dB SINAD (dBm)	Rejection Ratio (dB)	Rejection Ratio Limit (dB)	Result
1 2	824.5, 836.0, 848.5, 869.1, 881.5,893.5	> -51.2	-115.5	< 64.3	< -38.0	PASS

Note: Rejection Ratio = Reference Sensitivity - Spurious Value



4. PHOTOGRAPHS OF TEST SETUP



Photo of Radiated Measurement (30MHz~1GHz)

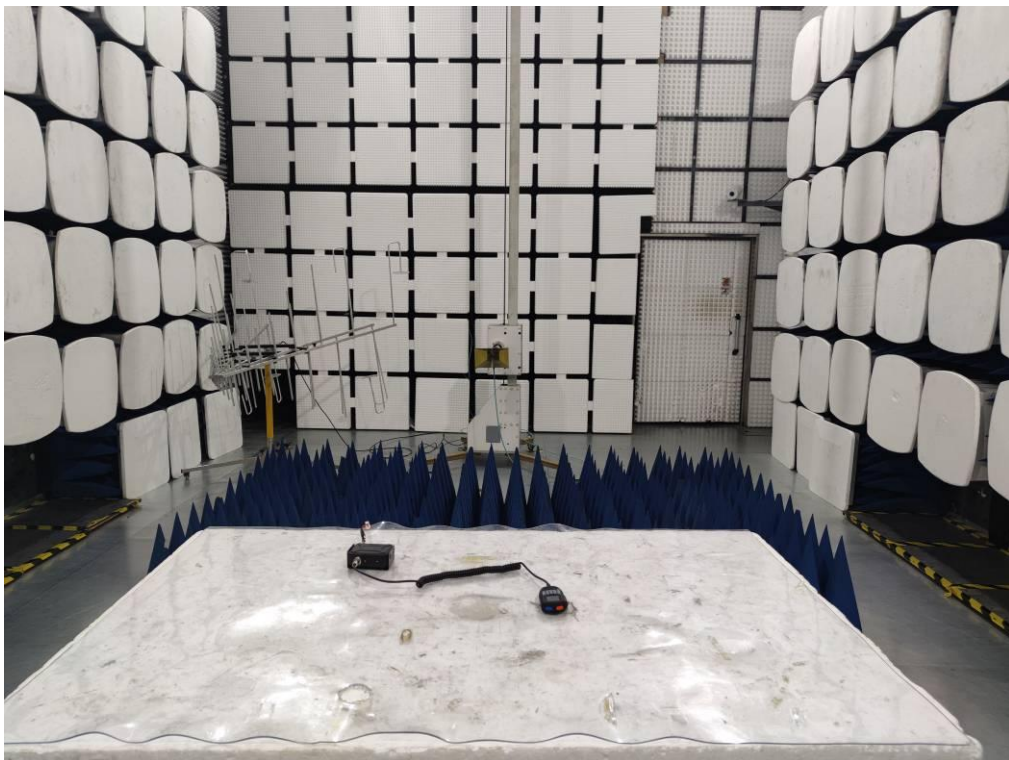


Photo of Radiated Measurement (Above 1GHz)



5. EXTERNAL AND INTERNAL PHOTOS OF THE EUT



Fig.1



Fig.2



Fig.3



Fig.4



Fig.5



Fig.6



Fig.7

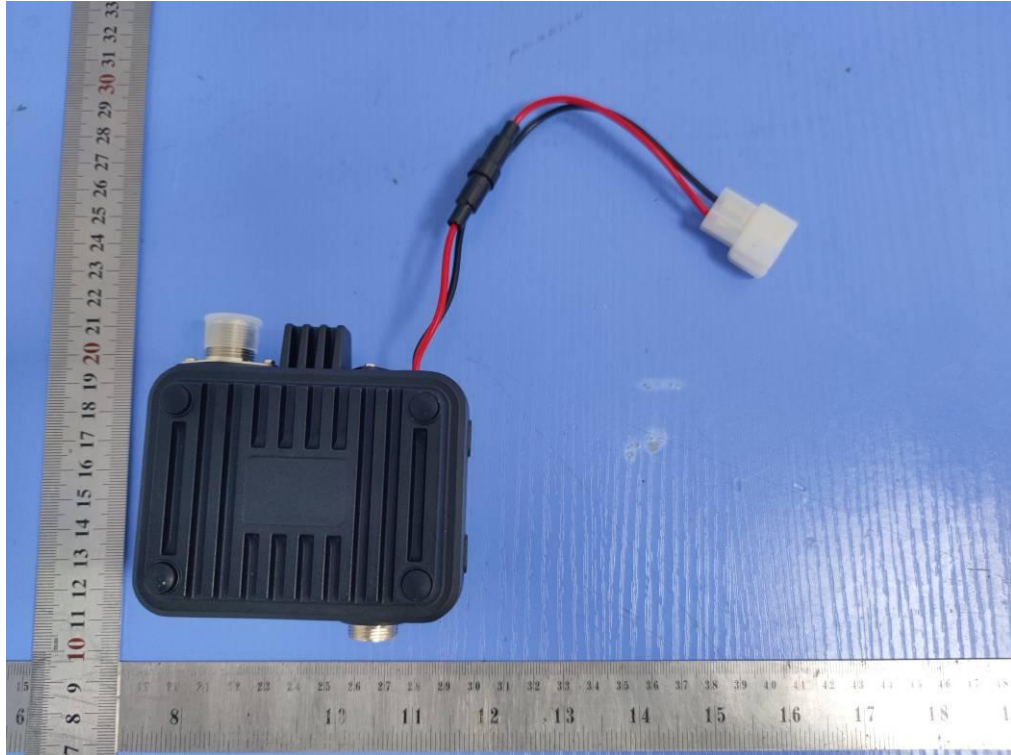


Fig.8



Fig.9

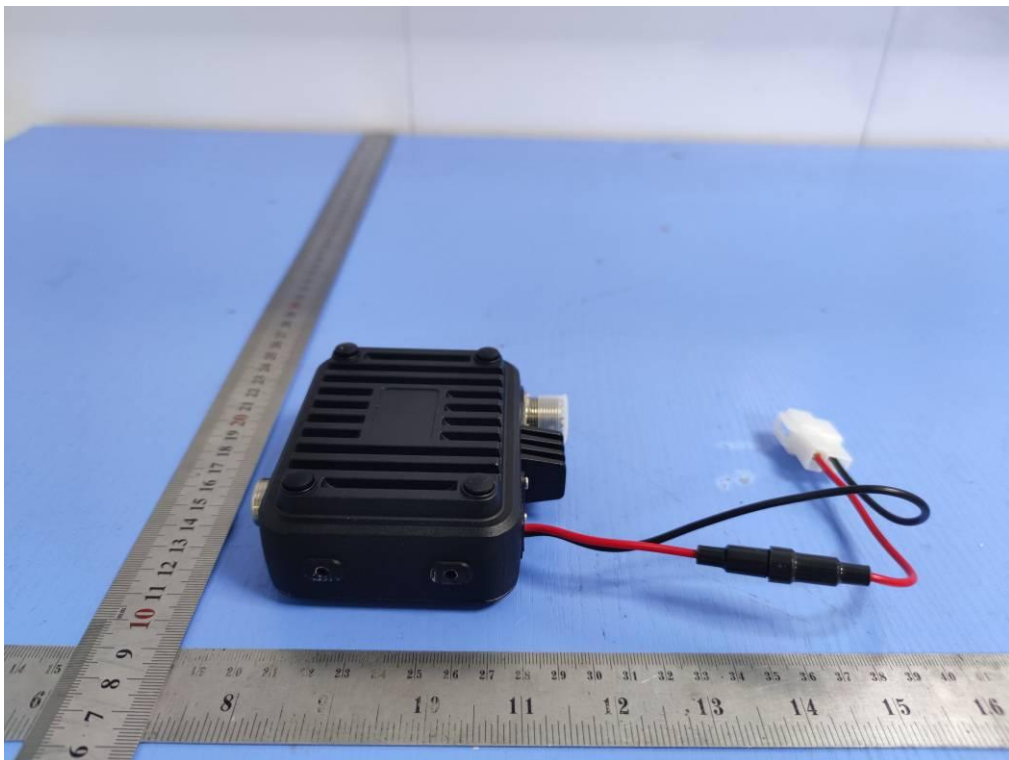


Fig.10

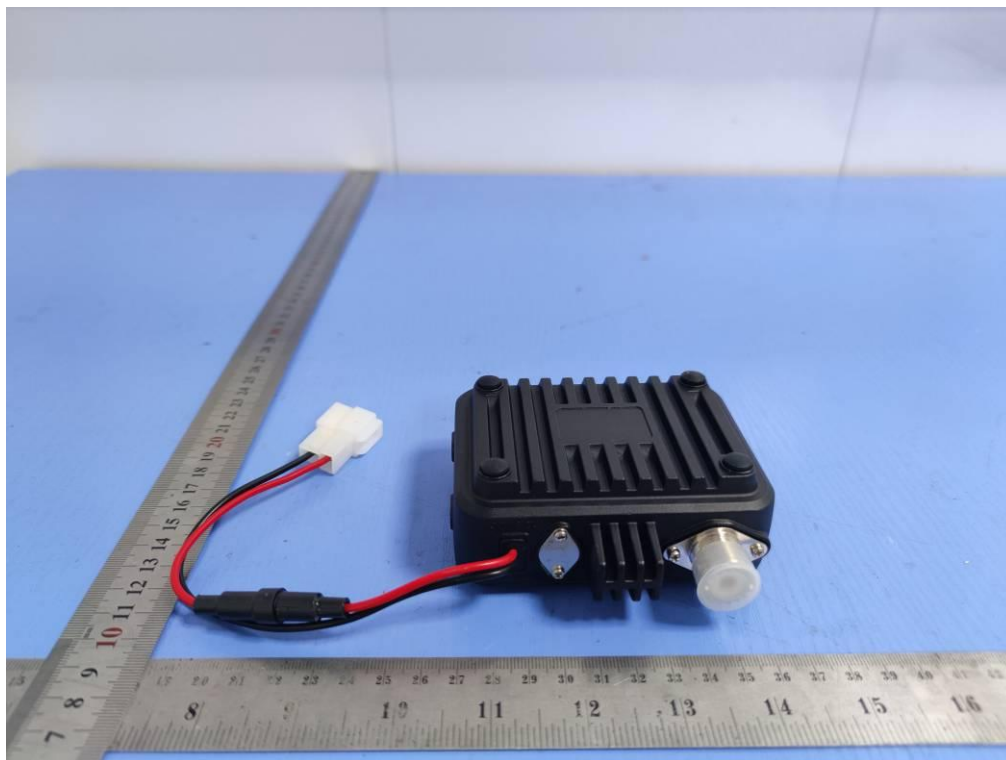


Fig.11

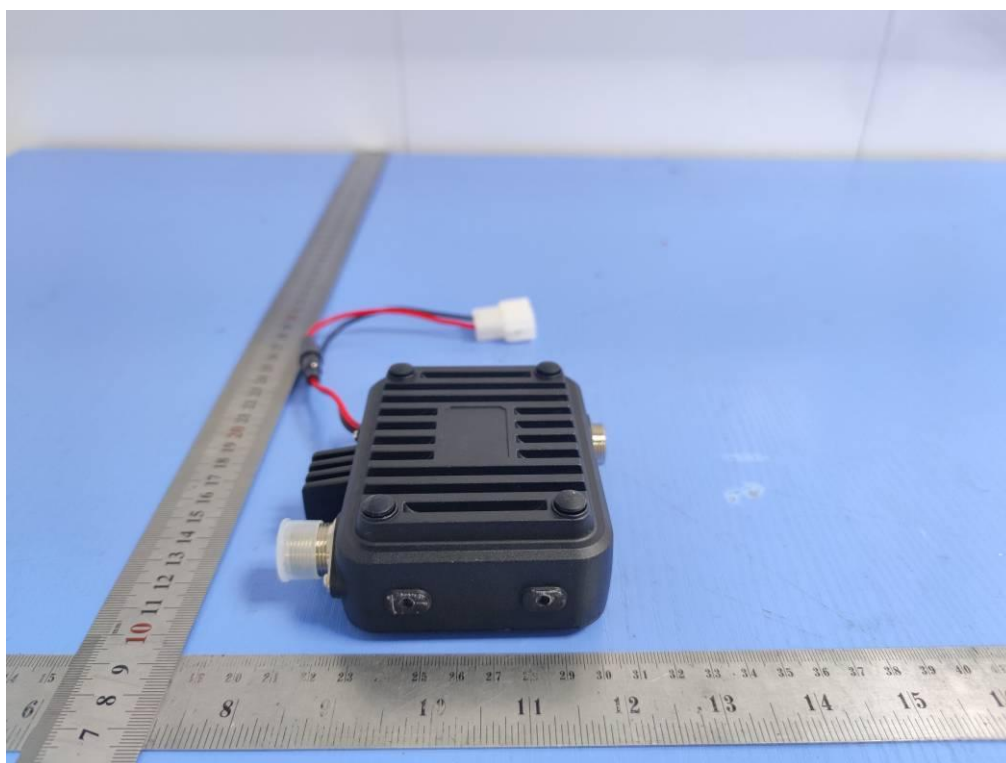


Fig.12

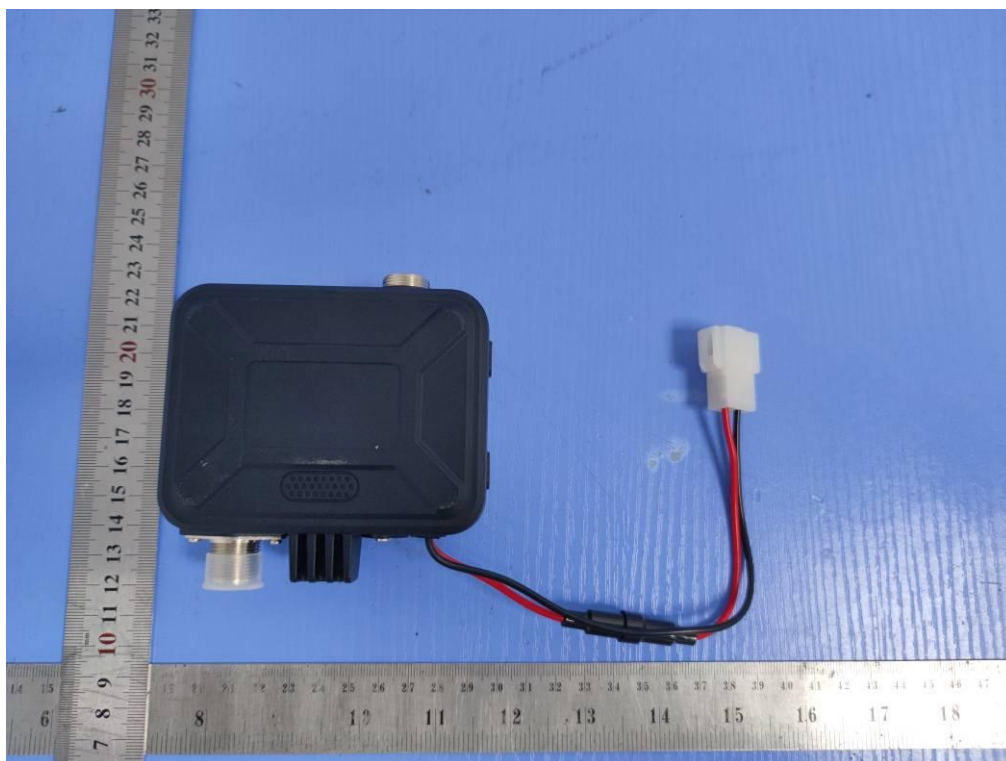


Fig.13

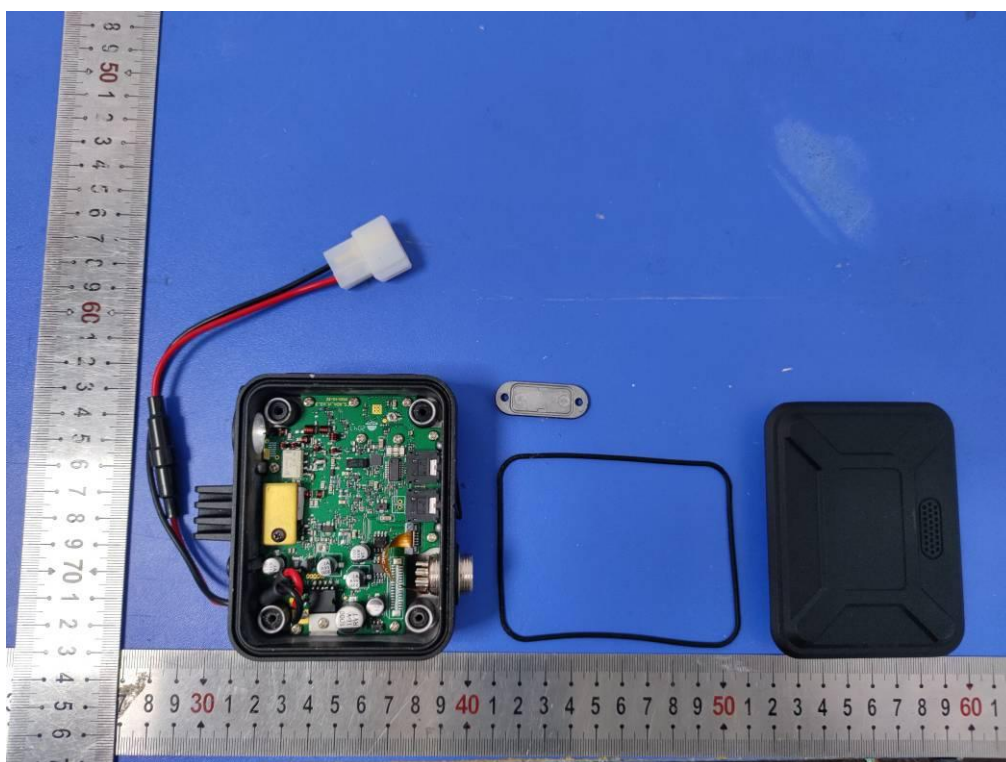


Fig.14



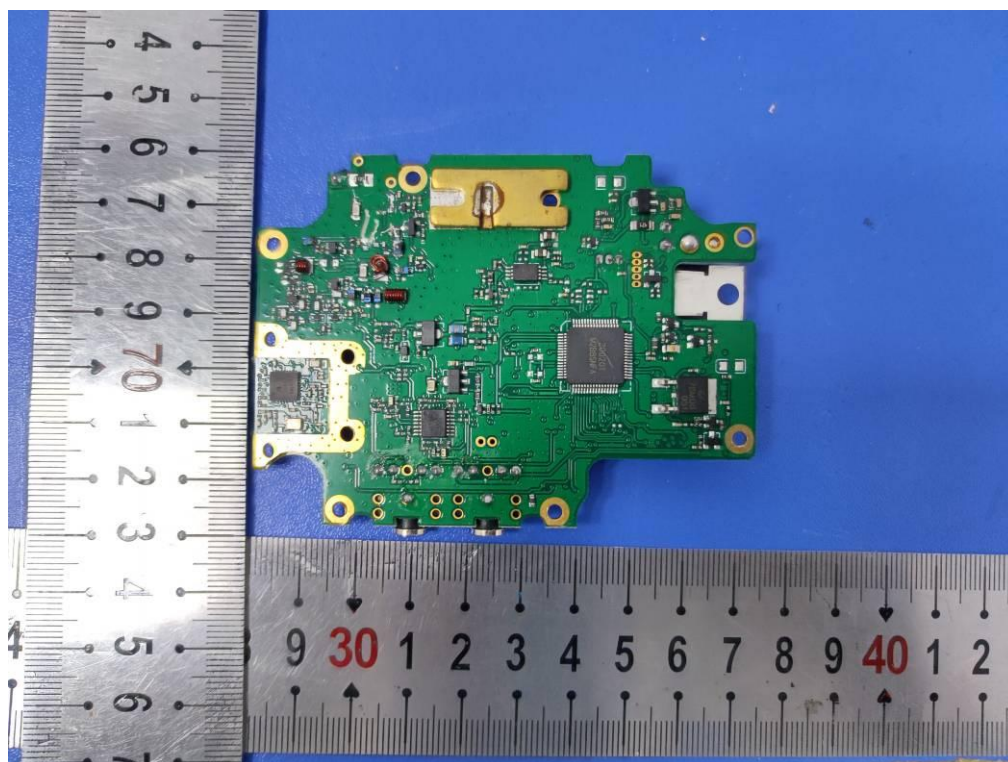


Fig.17



Fig.18

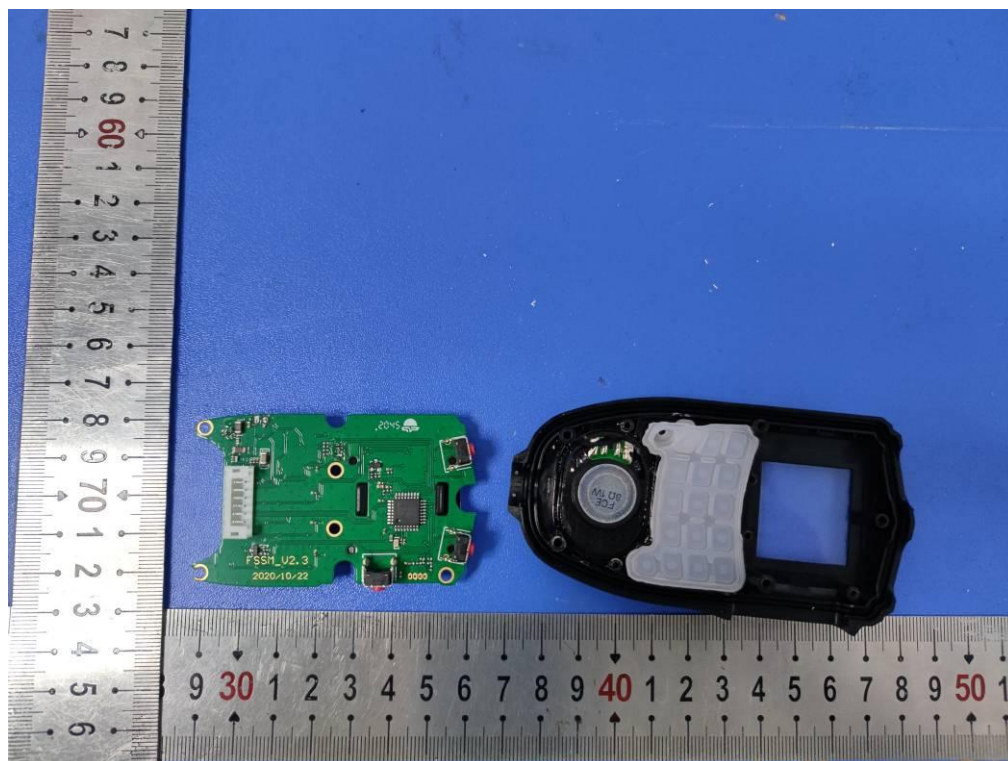


Fig.19

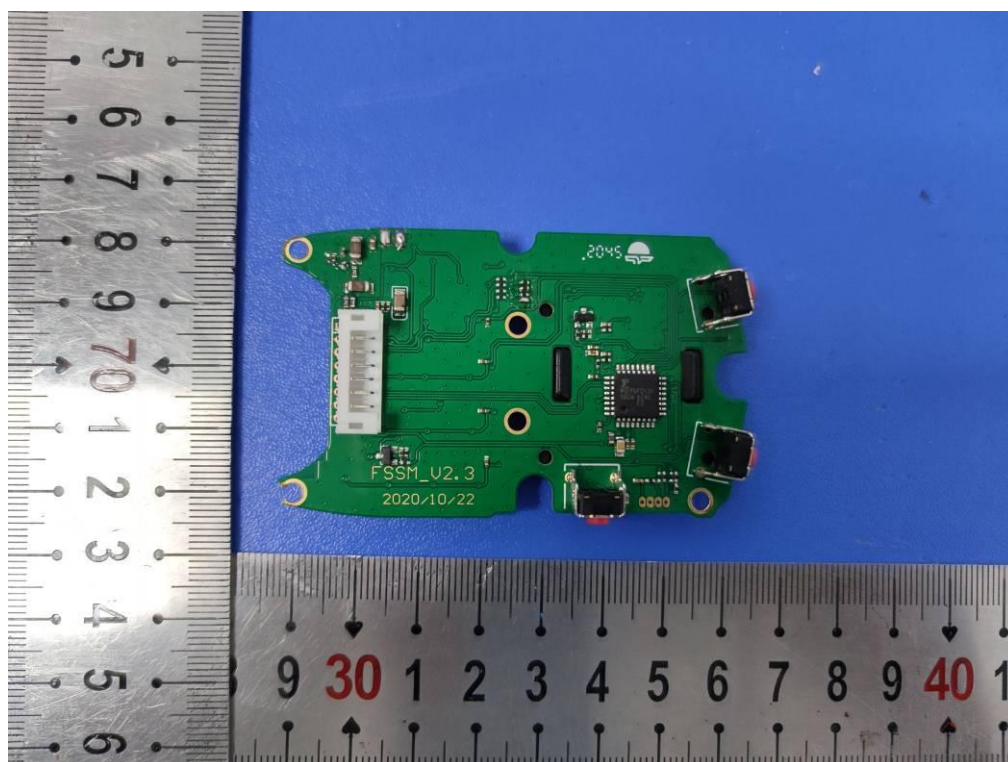


Fig.20

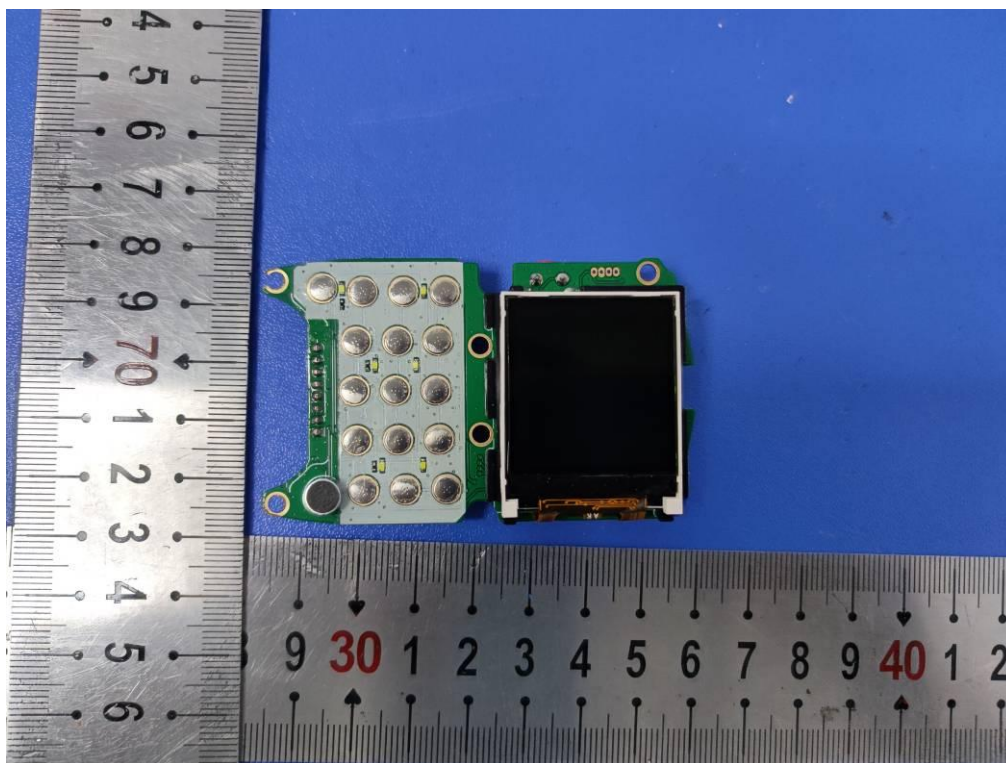


Fig.21

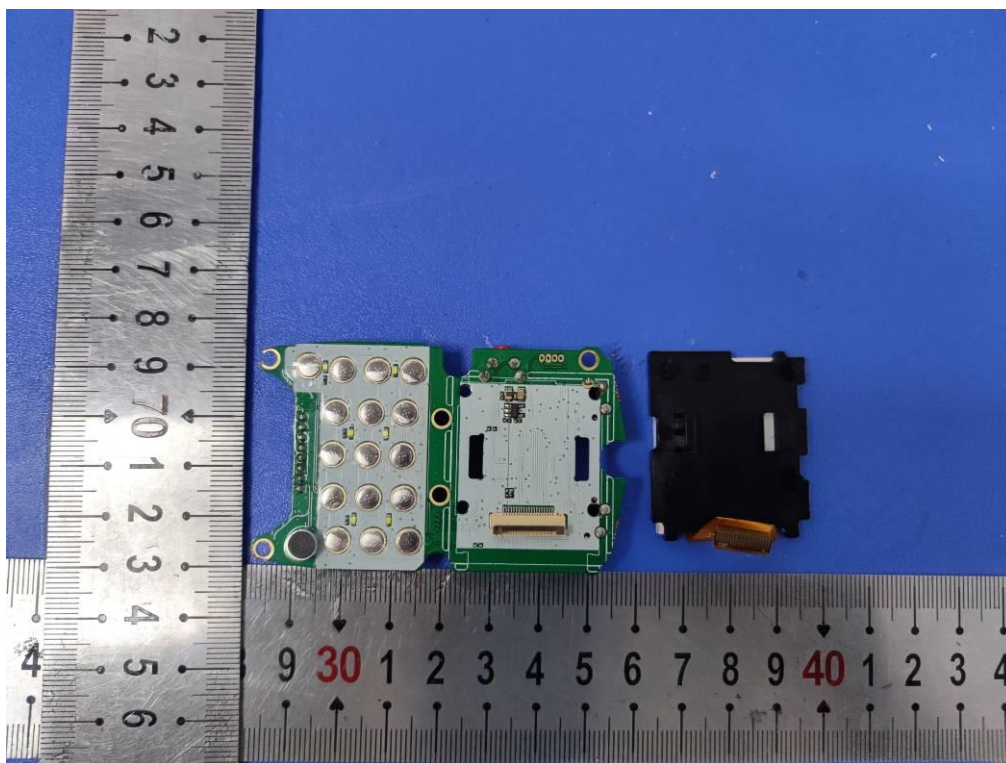


Fig.22

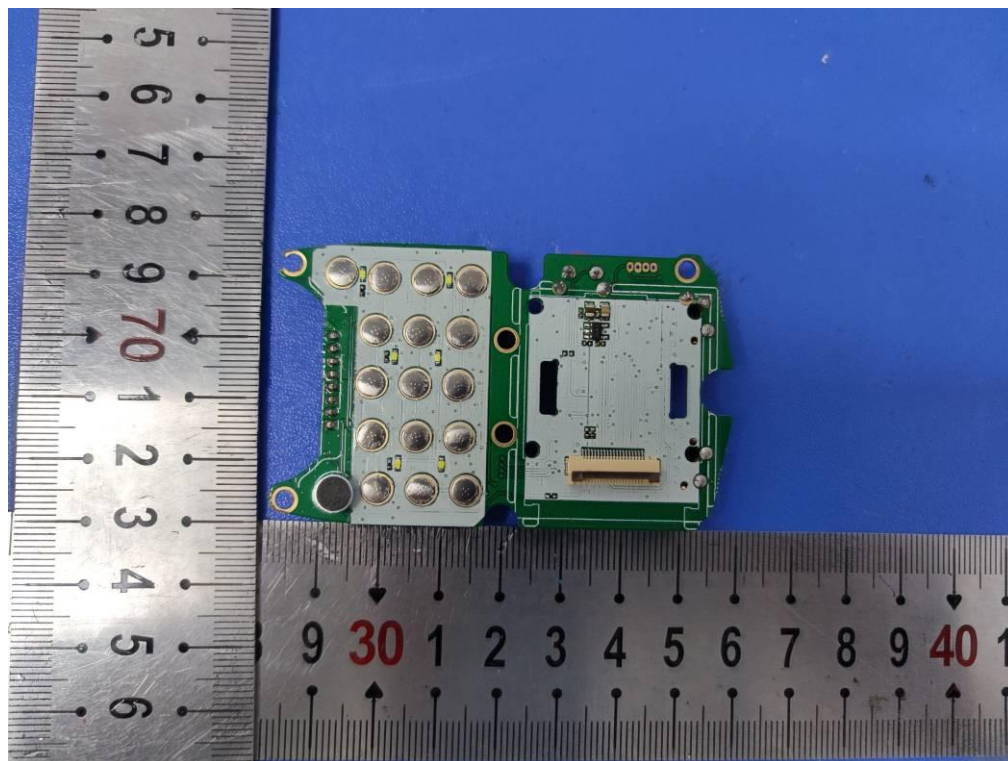


Fig.23

-----THE END OF TEST REPORT-----