



TEST REPORT

REPORT NUMBER: I22W00023-EMC

ON

Type of Equipment: LTE Module
Type of Designation: L508
Brand Name: LYNQ
Manufacturer: Shanghai MobileTek Communication Ltd.
FCC ID: 2AK9DL508

ACCORDING TO

Subpart B, PART 15, RADIO FREQUENCY DEVICES

Chongqing Academy of Information and Communications Technology

Month date, year

Mar 20, 2022

Signature



Xiang Luoyong

Director

Note:

The test results in this test report relate only to the devices specified in this report. This report shall not be reproduced except in full without the written approval of Chongqing Academy of Information and Communications Technology.



Report No.: I22W00023-EMC

Revision Version

Report Number	Revision	Date	Memo
I22W00023-EMC	00	2022-03-20	Initial creation of test report

Chongqing Academy of Information and Communication Technology

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1. Test Laboratory

1.1. Testing Location

Name:	Chongqing Academy of Information and Communications Technology
FCC Registration Number:	CN1239
Address:	Building C, Technology Innovation Center, No.8, Yuma Road, Chayuan New Area, Nan'an District, Chongqing, People's Republic of China
Postal Code:	401336
Telephone:	0086-23-88069965
Fax:	0086-23-88608777

1.2. Testing Environment

Normal Temperature:	24.1-24.5°C
Relative Humidity:	48.0-52.0%

1.3. Project data

Testing Start Date:	2022-03-19
Testing End Date:	2022-03-20

1.4. Signature



2022-3-20

Li Quan
(Prepared this test report)

Date



2022-3-20

Xiao Yu
(Reviewed this test report)

Date



2022-3-20

Xiang Luoyong Director of the
laboratory (Approved this test report)

Date

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2. Client Information

2.1. Applicant Information

Company Name:	Shanghai MobileTek Communication Ltd.
Address /Post:	Free Trade Zone No. 33, No. 17 building 6H3 Xiya Road China (Shanghai)
City:	Shanghai
Country:	China
Telephone:	15821966417
Fax:	--
Email:	Qinghua Zhang
Contact Person:	qh.zhang@mobiletek.cn

2.2. Manufacturer Information

Company Name:	Shanghai MobileTek Communication Ltd.
Address /Post:	Free Trade Zone No. 33, No. 17 building 6H3 Xiya Road China (Shanghai)
City:	Shanghai
Country:	China
Telephone:	15821966417
Fax:	--
Email:	Qinghua Zhang
Contact Person:	qh.zhang@mobiletek.cn

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3. Equipment under Test (EUT) and Ancillary Equipment (AE)

3.1. About EUT

EUT Description	Shanghai MobileTek Communication Ltd.
Model name	LTE Module
Brand name	LYNQ
LTE Frequency Band	4
WCDMA Frequency Band	5

Note: Photographs of EUT are shown in ANNEX B of this test report.

3.2. Internal Identification of EUT used during the test

EUT ID	SN or IMEI	HW Version	SW Version	Date of receipt
S2	864788050018584	V2	--	2022-03-18

*EUT ID: is used to identify the test sample in the lab internally.

3.3. Internal Identification of AE used during the test

AE ID	Description	SN
--	--	--

*AE ID: is used to identify the test sample in the lab internally.

dB*: is provided customer.

4. Reference Documents

4.1. Reference Documents for testing

The following documents listed in this section are referred for testing.

Reference	Title	Version
FCC CFR Part 15, Subpart B,	RADIO FREQUENCY DEVICES	March 05, 2018

5. Test Equipments Utilized

No.	Equipment	Model	SN	HW Version	SW Version	Manufacture	Cal.Due Date
1	Test Receiver	ESU26	100367	--	5.1-24-3	R&S	2022-06-11
2	Ultra-wideband Log Periodic Antenna	VULB 9163	01392	--	--	Schwarzbeck	2023-03-04
3	Double Ridged Guide Antenna	HF907	100357	--	--	R&S	2023-02-10

Test software

No.	Name	version	SN	Manufacture
1	EMC32	V 8.51.00	--	R&S

6. Test Results

6.1. Summary of Test Results

FCC Rules	Name of Test	Result
15.109	Radiated Emission	Pass
Note: N/A means not applicable.		

7. Test Results

7.1. Radiated Emission

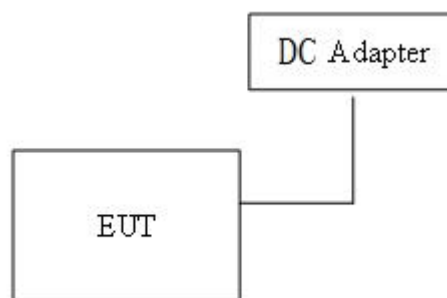
Specifications:	15.109
Date of Tests	2022-03-19—2022-03-20
Test conditions:	Ambient Temperature:24.1℃-24.5℃ Relative Humidity:48.0%RH-52.0%RH Air pressure:97.2-97.4kPa
Operation Mode	Normal
Test Results:	Pass

Limit Level Construction(Except for Class A digital devices):

Frequency Range (MHz)	Quasi-Peak (dBuV/m)
30-88	40
88-216	43.5
216-960	46
Above 960	54

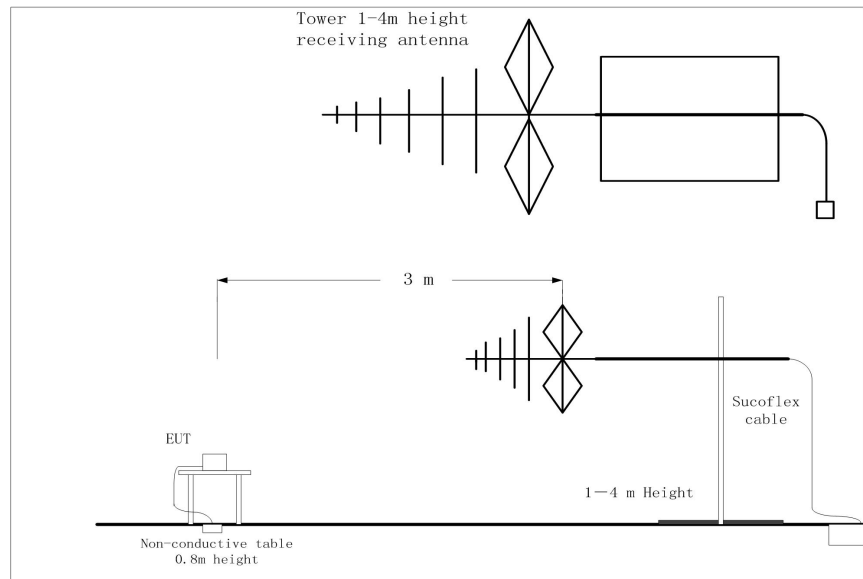
Frequency Range (MHz)	Peak (dBuV/m)	Average (dBuV/m)
Above 1000	74	54

EUT Setup:

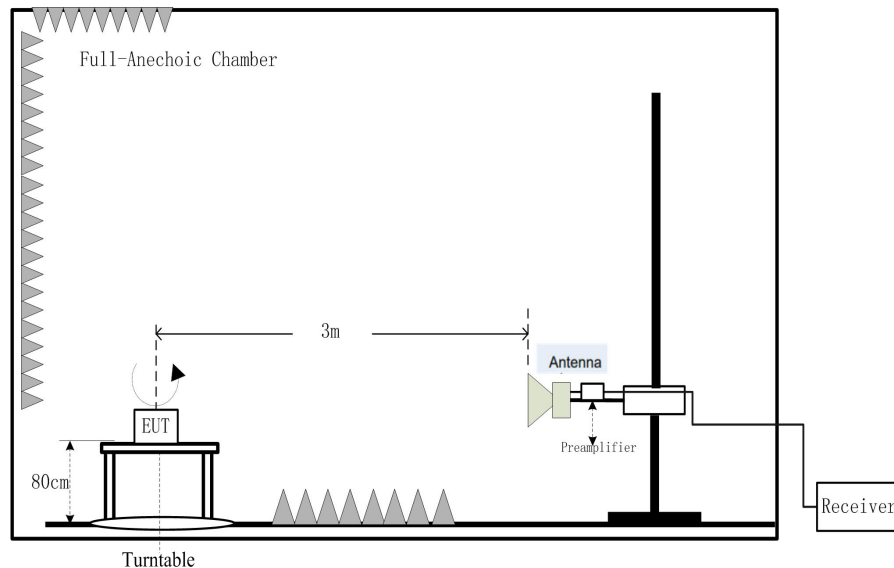


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30MHz-1GHz



1GHz-18GHz

Test Method:

For 30-1000MHz, the EUT was placed on the top of a rotating 0.8m table above the ground at a semi-anechoic chamber. The distance between the EUT and the received antenna was 3 meters. The table was rotated 360 degree and the received antenna mounted on a variable-height antenna tower was varied from 1m to 4m to find the maximum value of the field strength. Both horizontal and vertical polarizations of the antenna were set during the measurement. Tested in accordance with the procedures of ANSI C63.4-2014, section 8.3.

For 1000-18000MHz, the maximal emission value was acquired by adjusting the antenna height, and the table was rotated 360 degree to determine the maximum value of the field strength. Both horizontal and vertical polarizations of the antenna were set during the measurement.

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Uncertainty Measurement:

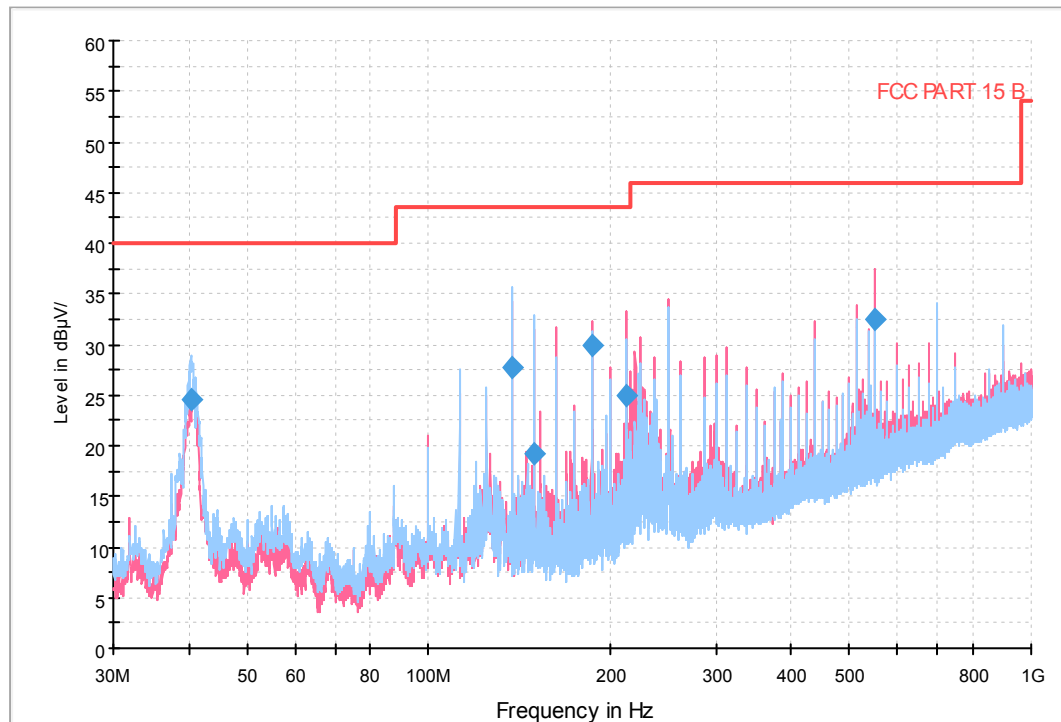
The measurement uncertainty (30MHz-1000MHz) is 5.20 dB (k=2).

The measurement uncertainty (1000MHz-6000MHz) is 4.70 dB (k=2).

The measurement uncertainty (6000MHz-18000MHz) is 4.79 dB (k=2).

Test Data

RE 30MHz-1GHz



RE 30M-1G

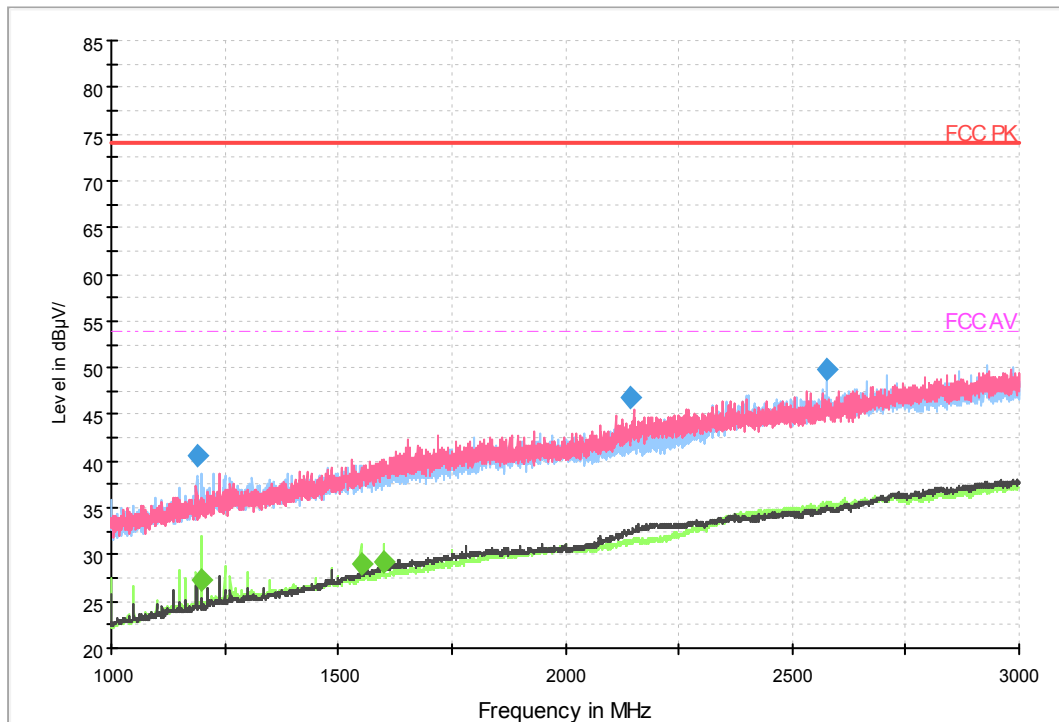
Frequency (MHz)	QuasiPeak (dBμV/m)	Limit (dBμV/m)	Margin (dB)	Meas. Time	Bandwidth (kHz)	Height (cm)	Pol	Azimuth (deg)	Corr. (dB)
40.330500	24.6	40.0	15.4	5000.0	120.000	100.0	H	0.0	-17.5
137.524500	27.7	43.5	15.8	5000.0	120.000	100.0	H	190.0	-20.8
149.989000	19.2	43.5	24.3	5000.0	120.000	100.0	H	190.0	-21.2
187.479500	30.0	43.5	13.5	5000.0	120.000	185.0	V	280.0	-17.6
212.505500	24.9	43.5	18.6	5000.0	120.000	185.0	V	280.0	-16.6
550.017000	32.5	46.0	13.5	5000.0	120.000	100.0	V	170.0	-8.4

Note: The red curve represents V polarization, the blue curve represents H polarization.

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RE 1GHz-3GHz



RE 1-3G

Frequency (MHz)	MaxPeak (dBμV/m)	Limit (dBμV/m)	Margin (dB)	Meas. Time	Bandwidth (kHz)	Height (cm)	Pol	Azimuth (deg)	Corr. (dB)
1188.000000	40.5	74.0	33.5	1500.0	1000.000	100.0	H	273.0	-1.3
2145.400000	46.8	74.0	27.2	1500.0	1000.000	100.0	V	75.0	5.6
2576.400000	49.7	74.0	24.3	1500.0	1000.000	100.0	H	285.0	9.1

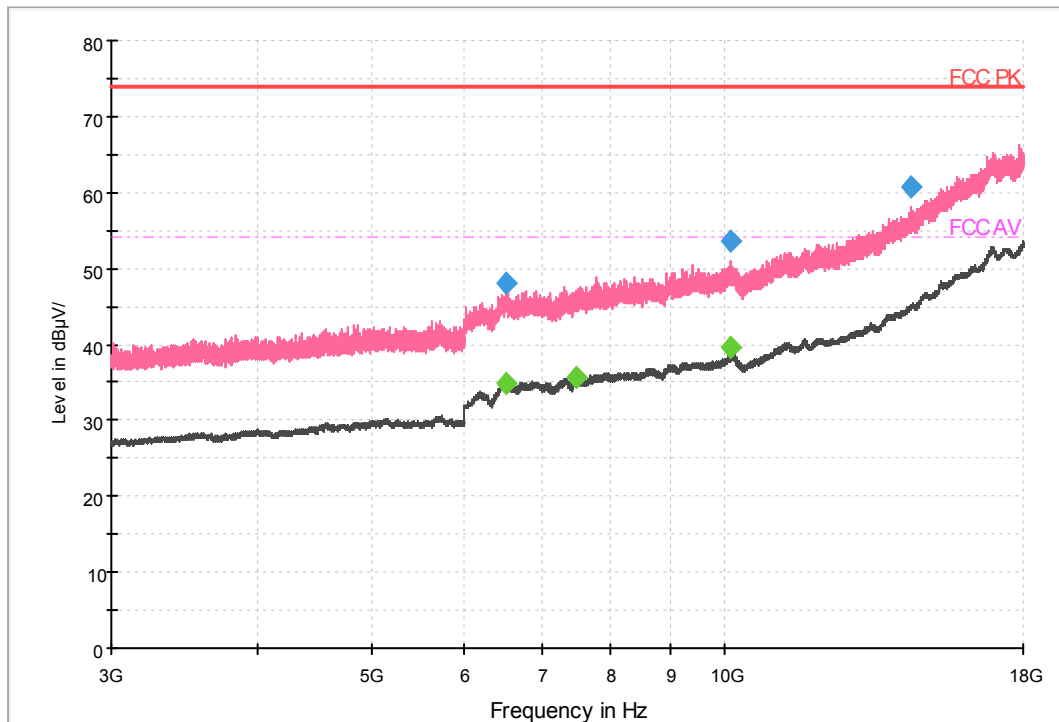
Frequency (MHz)	Average (dBμV/m)	Limit (dBμV/m)	Margin (dB)	Meas. Time	Bandwidth (kHz)	Height (cm)	Pol	Azimuth (deg)	Corr. (dB)
1200.000000	27.4	54.0	26.6	1500.0	1000.000	100.0	H	84.0	-1.2
1550.000000	29.1	54.0	24.9	1500.0	1000.000	100.0	H	255.0	1.2
1600.000000	29.2	54.0	24.8	1500.0	1000.000	100.0	H	263.0	1.5

Note: The red curve represents V polarization, the blue curve represents H polarization.

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RE 3GHz-18GHz



RE 3-18G

Frequency (MHz)	MaxPeak (dBμV/m)	Limit (dBμV/m)	Margin (dB)	Meas. Time	Bandwidth (kHz)	Height (cm)	Pol	Azimuth (deg)	Corr. (dB)
6520.125000	48.1	74.0	25.9	1500.0	1000.000	200.0	V	15.0	8.7
10140.150000	53.6	74.0	20.4	1500.0	1000.000	100.0	V	15.0	13.5
14432.200000	60.7	74.0	13.3	1500.0	1000.000	200.0	V	-6.0	21.1

Frequency (MHz)	Average (dBμV/m)	Limit (dBμV/m)	Margin (dB)	Meas. Time	Bandwidth (kHz)	Height (cm)	Pol	Azimuth (deg)	Corr. (dB)
6520.825000	34.8	54.0	19.2	1500.0	1000.000	100.0	V	-5.0	8.7
7467.725000	35.5	54.0	18.5	1500.0	1000.000	100.0	V	15.0	9.2
10134.650000	39.7	54.0	14.3	1500.0	1000.000	100.0	V	5.0	13.5

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Annex A EUT Photos

See the document "I22W00023-External Photos".

See the document "I22W00023-Internal Photos".

Test photo See the document "I22W00023-EMC Test Setup Photos".

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ANNEX B Deviations from Prescribed Test Methods

No deviation from Prescribed Test Methods.

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

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