TEST REPORT

REPORT NUMBER: I20W00001-Rev1

ON

Type of Equipment:	LTE Module
Type of Designation:	L506
Manufacturer:	Shanghai MobileTek Communication Ltd
FCC ID:	2AK9DL506LA1

ACCORDING TO

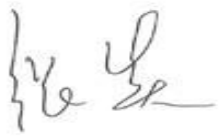
FCC CFR 47 Part 2.1091《Radiofrequency radiation exposure evaluation: mobile devices》
FCC CFR 47 Part1.1310《Radiofrequency radiation exposure limits》

Chongqing Academy of Information and Communication Technology

Month date, year

Jun, 3, 2020

Signature



Zhang Yan

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.

CONTENTS

1. Test Laboratory

1.1. Testing Location

Company Name:	Chongqing Academy of Information andCommunications Technology
Address:	No. 8, Yuma Road, Chayuan New City, Nan'an District, Chongqing, P. R. China
Postal Code:	401336
Telephone:	0086-23-88069965
Fax:	0086-23-88608777
Website:	http://www.cqcatr.com

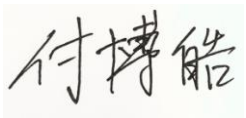
1.2. Testing Environment

Normal Temperature:	21.3℃
Relative Humidity:	75%

1.3. Project Data

Testing Start Date:	2020-06-03
Testing End Date:	2020-06-03

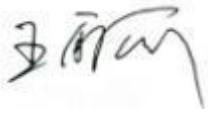
1.4. Signature



2020-06-03

Fu Bohao
(Prepared this test report)

Date



2020-06-03

Wang Lili
(Reviewed this test report)

Date

2020-06-03

Zhang Yan
Director of the laboratory
(Approved this test report)

Date

2. Client Information

2.1. Applicant Information

Company Name:	Shanghai MobileTek Communication Ltd
Address /Post:	Free Trade Zone No.33, No.17 building 6H Xiya Road, Shanghai
Telephone:	18616835910
Fax:	+86-21-54451877
Email:	b.yang@mobiletek.cn
Contact Person:	bin yang

2.2. Manufacturer Information

Company Name:	Shanghai MobileTek Communication Ltd
Address /Post:	Free Trade Zone No.33, No.17 building 6H Xiya Road, Shanghai
Telephone:	18616835910
Fax:	+86-21-54451877
Email:	b.yang@mobiletek.cn
Contact Person:	bin yang

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

3.1. About EUT

Description:	LTE Module
Model name:	L506
UMTS Frequency Band	Band5
LTE Frequency Band	Band4/5
Note：Photographs of EUT are shown in ANNEX A 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**
S1	865699031154043	V1	L506LA1v04.01b02	2020-05-25

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

3.3. Internal Identification of AE used during the test

EUT ID*	SN	Description
NA	NA	NA

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

4. Reference Documents

4.1. Applicable Standards

The MPE report was carried out on a sample equipment to demonstrate limited compliance with FCC CFR 47 Part 2.1091.

FCC CFR 47 Part 2.1091: Radiofrequency radiation exposure evaluation: mobile devices

4.2. Test Limits

Systems operating under the provisions of this section shall be operated in a mannerthat ensures that the public is not exposed to radio frequency energy level in excesslimit for maximum permissible exposure. In accordance with 47 CFR FCC Part 2Subpart J, section 2.1091 this device has been defined as a mobile device whereby adistance of 0.2m normally can be maintained between the user and the device.

MPE for the upper tier (people in controlled environments)

Frequency Range [MHz]	Electric field strength (V/m)	Magnetic field strength (A/m)	Power density (mW/cm^2)	Averaging time (minutes)
(A) Limits for Occupational/Controlled Exposure				
0.3-3.0	614	1.63	(100)*	6
3.0-30	1842/f	4.89/f	($900/f^2$)*	6
30-300	61.4	0.163	1.0	6
300-1500	--	--	f/300	6
1500-100000	--	--	5	6
(B) Limits for General Population/Uncontrolled Exposure				
0.3-1.34	614	1.63	(100)*	30
1.34-30	824/f	2.19/f	($180/f^2$)*	30
30-300	27.5	0.073	0.2	30
300-1500	--	--	f/1500	30
1500-100000	--	--	1.0	30

Note: f=frequency in MHz; *Plane-wave equivalent power density

For the DUT, the limits for the general public when an RF safety program is unavailable.

5. Test Results

5.1. RF Power Output

Frequency Band	Highest Averaged Power Output(dBm)	Highest Frame-Averaged Output Power (dBm)	Antenna Gain(dBi)
WCDMA Band5	25.7	25.7	4.0
LTE Band4	25.7	25.7	4.0
LTE Band5	25.7	25.7	4.0

Notes:

1) Division Factors

To average the power, the division factor is as follows:

1TX-slot = 1 transmit time slot out of 8 time slots=> conducted power divided by (8/1) => -9.03dB

2TX-slots = 2 transmit time slots out of 8 time slots=> conducted power divided by (8/2) => -6.02dB

3TX-slots = 3 transmit time slots out of 8 time slots=> conducted power divided by (8/3) => -4.26dB

4TX-slots = 4 transmit time slots out of 8 time slots=> conducted power divided by (8/4) => -3.01dB

2) According to the conducted power as above, the measurements are performed with 1Txslots for 850MHz and 1900MHz.

5.2. Calculation Information

For conservative evaluation consideration, only maximum power of each frequency band based on the tighter limits respectively are used to calculate the boundary power density.

Based on the FCC KDB 447498 D01 and 47 CFR §2.1091, the DUT is evaluated as a mobile device.

$$S = \frac{PG}{4\pi d^2}$$

Where

P = Power in Watts

G = Numeric antenna gain

d = Distance in meters

S = Power density in milliwatts / square centimeter

5.3. Results

Frequency range	Limit(mW/cm^2)	Results(mW/cm^2)	Verdict
WCDMA Band5	0.551	0.186	Pass
LTE Band4	1.0	0.186	Pass
LTE Band5	0.549	0.186	Pass

5.4. Result of WCDMA Band5

Test Results: MPE Limit Calculation: the EUT'S operating frequencies @ 826.4~846.6MHz; The maximum conducted is 25.7 dBm. The maximum gain is 4.0 dBi. Therefore, maximum limit for general public RF exposure:826.4/1500=0.551 mW/cm^2.

$$S = \frac{PG}{4\pi d^2}$$

P= input power of the antenna（371.535 mW）
G = antenna gain（2.512numeric）
r = distance to the center of radiation of antenna (in meter)=20 cm

S=(371.535*2.512)/(4 π*20^2)=0.186mW/cm^2

Therefore, at 20 cm the spectral power density is less than the 0.551 mW/cm^2 limit for uncontrolled exposure.

5.5. Result of LTE Band4

Test Results: MPE Limit Calculation: the EUT'S operating frequencies @ 1710.0～1754.9 MHz; The maximum conducted is 25.7dBm. The maximum gain is 4.0 dBi. Therefore, maximum limit for general public RF exposure: 1.0 mW/cm^2.

$$S = \frac{PG}{4\pi d^2}$$

P= input power of the antenna（371.535 mW）
G = antenna gain（2.512numeric）
r = distance to the center of radiation of antenna (in meter)=20 cm

S=(371.535*2.512)/(4 π*20^2)=0.186mW/cm^2

Therefore, at 20 cm the spectral power density is less than the 1.0mW/cm^2 limit for uncontrolled exposure.

5.6. Result of LTE Band5

Test Results: MPE Limit Calculation: the EUT'S operating frequencies @ 824.0～848.9 MHz; The maximum conducted is 25.7dBm. The maximum gain is 4.0 dBi. Therefore, maximum limit

for general public RF exposure: 824.0/1500=0.549 mW/cm^2.

$$S = \frac{PG}{4\pi d^2}$$

P= input power of the antenna（371.535 mW）

G = antenna gain（2.512numeric）

r = distance to the center of radiation of antenna (in meter)=20 cm

S=(371.535*2.512)/(4 π*20^2)=0.186mW/cm^2

Therefore, at 20 cm the spectral power density is less than the 0.549mW/cm^2 limit for uncontrolled exposure.

ANNEX A: EUT photograph

See the document” L506 -External Photos”.

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