RF TEST REPORT

Product Name: Smart LTE Terminal

Model Name: M6G, M6, M6A, M6E, M6H, M6L, M6P, M6Pro, M6Plus

FCC ID: 2AYEZ-M6G

Issued For : Telo Communication (Shenzhen) Co., Ltd

13th Floor, Building B, Union RSD Center, No. 287 Guangshen Road (Xixiang Section), Xixiang Street, Bao'an District, Shenzhen, China.

Issued By : Shenzhen LGT Test Service Co., Ltd.

Room 205, Building 13, Zone B, Zhenxiong Industrial Park, No.177, Renmin West Road, Jinsha, Kengzi Street, Pingshan District, Shenzhen, Guangdong, China

Report Number:	LGT24L192HA01
Sample Received Date:	Dec. 26, 2024
Date of Test:	Dec. 26, 2024 ~ Feb. 26, 2025
Date of Issue:	Feb. 26, 2025

TEST REPORT CERTIFICATION

Applicant:	Telo Communication (Shenzhen) Co., Ltd
Address:	13th Floor, Building B, Union RSD Center, No. 287 Guangshen Road (Xixiang Section), Xixiang Street, Bao'an District, Shenzhen, China.
Manufacturer:	Telo Communication (Shenzhen) Co., Ltd
Address:	13th Floor, Building B, Union RSD Center, No. 287 Guangshen Road (Xixiang Section), Xixiang Street, Bao'an District, Shenzhen, China.
Product Name:	Smart LTE Terminal
Trademark:	Telox
Model Name:	M6G
Series Model:	M6, M6A, M6E, M6H, M6L, M6P, M6Pro, M6Plus
Sample Status:	Normal

APPLICABLE STANDARDS	
STANDARD	TEST RESULTS
FCC 47 CFR §2.1091 KDB 447498 D01 General RF Exposure Guidance v06	PASS

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Revision History

Rev.	Issue Date	Revisions
00	Feb. 26, 2025	Initial Issue

1. GENERAL INFORMATION

1.1 GENERAL DESCRIPTION OF THE EUT

Product Name:	Smart LTE Terminal	
Trademark:	Telox	
Model Name:	M6G	
Series Model:	M6, M6A, M6E, M6H, M6L, M6P, M6Pro, M6Plus	
Model Difference:	Customers are not the same, the model name is not the same.	
Frequency Bands:	Bluetooth	2402-2480MHz
	2.4G WLAN	802.11b/g/n(20MHz): 2412~2462MHz 802.11n(40MHz):2422~2452MHz
	5G WLAN	802.11a/n/ac(20MHz): 5180~5825MHz 802.11n/ac(40MHz): 5190~5795MHz 802.11ac(80MHz): 5210~5775MHz
	GSM	GSM 850: 824 MHz ~ 849MHz GSM 1900: 1710 ~ 1785 MHz
	WCDMA	Band V: 824 MHz ~ 849 MHz Band II: 1850 MHz ~ 1910 MHz Band IV: 1710 MHz ~ 1755 MHz
	LTE	LTE Band 2:1850~1910MHz LTE Band 4:1710~1755MHz LTE Band 5: 824~849MHz LTE Band 7:2500~2570MHz LTE Band 12: 699-716MHz LTE Band 13: 777-787MHz LTE Band 17:704~716MHz LTE Band 38: 2570-2620MHz LTE Band 40: 2305-2315/2350-2360MHz
Rating:	Input: DC 12-24V 1A	
Hardware Version:	N/A	
Software Version:	M6G_US_V1P_20241224	

1.2 TEST LABORATORY

Company Name:	Shenzhen LGT Test Service Co., Ltd.
Address:	Room 205, Building 13, Zone B, Zhenxiong Industrial Park, No.177, Renmin West Road, Jinsha, Kengzi Street, Pingshan District, Shenzhen, Guangdong, China
Accreditation Certificate:	A2LA Certificate No.: 6727.01
	FCC Registration No.: 746540
	CAB ID: CN0136

2. FCC 47CFR §2.1091 REQUIREMENT

2.1 TEST STANDARDS

The limit for Maximum Permissible Exposure (MPE) specified in FCC 1.1310 is followed. The gain of the antennas used in the product is extracted from the Antenna data sheets provided and also the maximum total power input to the antenna is measured. Through the Friis transmission formula and the maximum gain of the antenna, we can calculate the distance, away from the product, where the limit of MPE is reached.
Although the Friis Transmission formula is far field assumption, the calculated result of that is an over-prediction for near field power density. It is taken as worst case to specify the safety range.

2.2 LIMIT

According to FCC 1.1310: The criteria listed in the following table shall be used to evaluate the environmental impact of the human exposure to radio-frequency (RF) radiation as specified in 1.1307 (b)

Limits for Maximum Permissible Exposure (MPE)

Frequency Range (MHz)	Electric Field Strength (V/m)	Magnetic Field Strength (A/m)	Power Density (mW/cm^2)
Limits for Occupational / controlled Exposures			
0.3-3.0	614	1.63	*(100)
3.0-30	1842/f	4.89/f	*($900/f^2$)
30-300	61.4	0.163	1.0
300 - 1500	--	--	F/300
1500 – 100000	--	--	5.0
Limits for General population / Uncontrolled Exposure			
0.3-1.34	614	1.63	*(100)
1.34-30	824/f	2.19/f	*($180/f^2$)
30-300	27.5	0.073	0.2
300 - 1500	--	--	F/1500
1500 – 100000	--	--	1.0

F= Frequency in MHz

* = Plane-wave equivalent power density.

Friss Formula

Friss Transmission Formula: $Pd = (Pout * G) / (4*pi*r^2)$

Where

Pd = power density in mW/cm^2

Pout = output power to antenna in mW

G = gain of antenna in linear scale

Pi = 3.1416

R = Distance between observation point and the center of radiator in cm

If we know the maximum gain of the antenna and the total output power to the antenna, through calculation, we will know MPE value at distance 20cm.

2.3 EUT OPERATION CONDITION

EUT was enabled to transmit and receive at lowest, middle and highest channels.

2.4 CLASSIFICATION

The antenna of this product, under normal use condition, is at least 20cm away from the body of the user. Warning statement to the user for keeping at least 20cm or more separation distance from the antenna should be included in the User manual. So, this device is classified as Mobile device.

2.5 TEST RESULT

Turn up Result

Mode	Turn up Power
GSM 850	32.5±1dBm
GSM 1900	29.5±1dBm
WCDMA B2	23.5±1dBm
WCDMA B4	23.5±1dBm
WCDMA B5	23.5±1dBm
LTE B2	24±1dBm
LTE B4	23.5±1dBm
LTE B5	24±1dBm
LTE B7	23±1dBm
LTE B12	23.5±1dBm
LTE B13	24±1dBm
LTE B17	24.5±1dBm
LTE B38	23.5±1dBm
LTE B40	11±1dBm
BT-GFSK	4.5±1dBm
BT-π/4-DQPSK	3.5±1dBm
BT-8DPSK	3.5±1dBm
BLE-GFSK	0±1dBm
2.4G WIFI-802.11b	17±1dBm
2.4G WIFI-802.11g	15±1dBm
2.4G WIFI-802.11n(HT20)	14±1dBm
2.4G WIFI-802.11n(HT40)	15±1dBm
5G WIFI-802.11a	13.5±1dBm
5G WIFI-802.11n(HT20)	11±1dBm
5G WIFI-802.11n(HT40)	11±1dBm
5G WIFI-802.11ac(VHT20)	11.5±1dBm
5G WIFI-802.11ac(VHT40)	11±1dBm
5G WIFI-802.11ac(VHT80)	10±1dBm

The MPE result of worst mode:

RF Function	Frequency (MHz)	Max Turn up Power (dBm)	Duty cycle factor	Max Power (dBm)	Max Power (mW)	ANT Gain (dBi)	ANT Gain (gain of antenna in linear scale)	Power Density (mW/cm²)	Limit (mW/cm²)	Ratio	Result
GSM (1Slot)	848.8	33.5	-9.03	24.47	279.90	1.96	1.57	0.087	0.566	0.155	Pass
WCDMA	836.4	24.5	0	24.5	281.84	1.98	1.58	0.088	0.558	0.159	Pass
LTE	706.5	25.5	0	25.5	354.81	0.73	1.18	0.084	0.471	0.177	Pass

RF Function	Frequency (MHz)	Max Turn up Power (dBm)	Max Turn up Power (mW)	ANT Gain (dBi)	ANT Gain (gain of antenna in linear scale)	Power Density (mW/cm²)	Limit (mW/cm²)	Ratio	Result
BLE	2440	1.00	1.26	1.05	1.27	0.000	1	0.000	Pass
BT	2441	5.50	3.55	1.05	1.27	0.001	1	0.001	Pass
2.4G WIFI	2437	18.00	63.10	1.05	1.27	0.016	1	0.016	Pass
5G WIFI	5700	14.50	28.18	1.88	1.54	0.009	1	0.009	Pass

The max MPE of simultaneous transmission:

LTE (0.177)+2.4G WIFI(0.016)=0.193＜1

Note:

1. The Bluetooth and WLAN can't simultaneous transmission at the same time.

2. The Maximum Power Density is less than the limit, complies with the exemption requirements.

※※※※※END OF THE REPORT※※※※※