

Report No.: SUCR240800028402

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# **TEST REPORT**

**Application No.:** SUCR2408000284MO

**Applicant:** Gosuncn Technology Group Co., Ltd.

6F, No. 2819, KaiChuang Avenue, Science City, Huangpu District, **Address of Applicant:** 

Guangzhou City, Guangdong Province, China

Manufacturer: Gosuncn Technology Group Co., Ltd.

6F, No. 2819, KaiChuang Avenue, Science City, Huangpu District, **Address of Manufacturer:** 

Guangzhou City, Guangdong Province, China

**EUT Description:** LTE Module GM500 U1A Model No.: Trade Mark: **GOSUNCN** 

FCC ID: 2APNR-GM500U1A Standards: 47 CFR Part 2.1091

FCC KDB 447498 D01 v06

August 3, 2024 **Date of Receipt:** Date of Issue: August 29, 2024

Test Result: PASS\*

Nature Shen

In the configuration tested, the EUT complied with the standards specified above.

**Prepared by : Nature Shen / Project** 

Manager

Approved by : Cloud Peng /

**Technical Manager** 

Cloud Peng

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### 1 Version

Revision Record						
Version Chapter		Date	Modifier	Remark		
01		August 29, 2024		Original		

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South of No. 6 Plant, No. 1, Runsheng Road, Suzhou Industrial Park, Suzhou Area, China (Jiangsu) Pilot Free Trade Zone 215000 t (86-512) 62992980



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### **General Information**

#### 2.1 Client Information

Applicant:	Gosuncn Technology Group Co., Ltd.			
Address of Applicant:	6F, No. 2819, KaiChuang Avenue, Science City, Huangpu District, Guangzhou City, Guangdong Province, China			
Manufacturer:	Gosuncn Technology Group Co., Ltd.			
Address of Manufacturer:	6F, No. 2819, KaiChuang Avenue, Science City, Huangpu District, Guangzhou City, Guangdong Province, China			

## 2.2 Test Facility

The test facility is recognized, certified, or accredited by the following organizations:

#### • A2LA (Certificate No. 6336.01)

SGS-CSTC STANDARDS TECHNICAL SERVICES (SUZHOU) CO., LTD. is accredited by the American Association for Laboratory Accreditation(A2LA). Certificate No. 6336.01.

#### • Innovation, Science and Economic Development Canada

SGS-CSTC STANDARDS TECHNICAL SERVICES (SUZHOU) CO., LTD. has been recognized by ISED as an accredited testing laboratory.

CAB identifier: CN0120.

IC#: 27594.

• FCC -Designation Number: CN1312

SGS-CSTC STANDARDS TECHNICAL SERVICES (SUZHOU) CO., LTD. has been recognized as an

accredited testing laboratory. Designation Number: CN1312.

Test Firm Registration Number: 717327

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## 2.3 General Description of EUT

EUT Description:	LTE Module						
Model No.:	GM500_U1A						
Trade Mark:	GOSUNCN	GOSUNCN					
Hardware Version:	ME3630-U1B_MB_	A					
Software Version:	QS_GM500U1AV2	QS_GM500U1AV2.0B06					
Power Supply:	5V						
Antenna Type:		⊠ External, ☐ Integrated					
	GSM850:	2.72dB i	GSM1900:	2.15dBi			
	WCDMA Band II:	2.15dBi	WCDMA Band V:	2.72dBi			
	LTE Band 2:	2.15dBi	LTE Band 4:	2.66dBi			
Antenna Gain:	LTE Band 5:	2.72dBi	LTE Band 12:	2.01dBi			
	Note:						
	The antenna gain are derived from the gain information report provided by the manufacturer.						
Remark:							
As above information is provided and confirmed by the applicant. SGS is not liable to the accuracy, suitability, reliability or/and integrity of the information.							

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## 3 RF Exposure Evaluation

## 3.1 RF Exposure Compliance Requirement

#### **3.1.1 Limits**

Frequency range (MHz)	Electric field strength (V/m)	Magnetic field strength (A/m)	Power density (mW/cm2)	Averaging time (minutes)				
(A) Limits for Occupational/Controlled Exposures								
0.3-3.0	614	1.63	*(100)	6				
3.0-30	1842/f	4.89/f	*(900/f2)	6				
30-300	61.4	0.163	1.0	6				
300-1500	1	1	f/300	6				
1500-100,000	1	1	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/f2)	30				
30-300	27.5	0.073	0.2	30				
300-1500	1	1	f/1500	30				
1500-100,000	1	1	1.0	30				

F=frequency in MHz

RF exposure compliance will need to be determined with respect to 1.1307(c) and (d) of the FCC rules. The emissions should be within the limits at 300kHz in Table 1 of 1.1310(use the 300kHz limits for 150kHz:614V/m,1.63A/m).

Friis Formula

Friis transmission formula:  $Pd = (Pout*G)/(4*Pi*R^2)$ 

Where

Pd = power density in mW/cm2

Pout = output power to antenna in mW

G = gain of antenna in linear scale

Pi = 3.1416

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<sup>\*=</sup>Plane-wave equivalent power density



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

Pd id the limit of MPE, 1 mW/cm2. If we know the maximum gain of the antenna and the total power input to the antenna, through the calculation, we will know the distance r where the MPE limit is reached.

#### 3.1.2 Test Procedure

Software provided by client enabled the EUT to transmit data at lowest, middle and highest channel individually

### 3.1.3 EUT RF Exposure Evaluation

Output Power Into Antenna & RF Exposure Evaluation Distance:

This confirmed that the device comply with MPE limit.

Band	Frequency	Max power (dBm)	Ant Gain (dBi)	EIRP (dBm)	Max EIRP (mW)	Limit (mW)	Distance R (cm)	Result	Ratio
GSM 850	824.2	35.00	2.72	37.72	712.85	1681	20	Pass	0.42
GSM 1900	1850.2	32.00	2.15	34.15	313.33	3060	20	Pass	0.10
WCDMA Band II	1852.4	25.00	2.15	27.15	518.80	3060	20	Pass	0.17
WCDMA Band V	828.4	25.00	2.72	27.72	591.56	1690	20	Pass	0.35
LTE Band 2	1850.7	25.00	2.15	27.15	518.80	3060	20	Pass	0.17
LTE Band 4	1710.7	25.00	2.66	27.66	583.45	3060	20	Pass	0.19
LTE Band 5	824.7	25.00	2.72	27.72	591.56	1682	20	Pass	0.35
LTE Band 12	699.7	25.00	2.01	27.01	502.34	1427	20	Pass	0.35

Remark: Frame-average power=Burst power+ Division Factors(-9.19)

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