



Report No.: SUCR260500046105
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RF Exposure Evaluation Report

Application No.: SUCR2605000461AT
Applicant: Gosuncn Technology Group Co., Ltd.
Address of Applicant: Address: 6F, No. 2819, KaiChuang Avenue, Science City, Huangpu District, Guangzhou City, Guangdong Province, China
Manufacturer: Gosuncn Technology Group Co., Ltd.
Address of Manufacturer: Address: 6F, No. 2819, KaiChuang Avenue, Science City, Huangpu District, Guangzhou City, Guangdong Province, China
Equipment Under Test (EUT):
EUT Name: HARDWARE ASSY-TELEMATIC NODE
Model No.: GT819
Trade Mark: GOSUNCN
FCC ID: 2APNRGT819
Standard(s) : FCC Rules 47 CFR §2.1091
KDB 447498 D04 interim General RF Exposure Guidance v01
Date of Receipt: 2026-06-12
Date of Issue: 2026-07-06

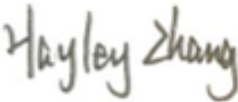
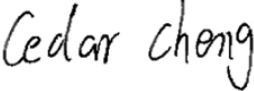
Test Result:	Pass*
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* In the configuration tested, the EUT complied with the standards specified above.

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Revision Record			
Version	Description	Date	Remark
00	Original	2026-07-06	/

Authorized for issue by:				
Tested By				
		Hayley Zhang/Project Engineer		
Approved By				
		Cedar Cheng /Reviewer		

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2 General Information

2.1 General Description of E.U.T.

Hardware Version:	6608656717/A
Software Version:	6608656593/B
Antenna Type:	Monopole Antenna
Antenna Gain:	GSM850: 0.33dBi(Internal Antenna); 0.29dBi(External Antenna DX1H); -0.5dBi(External Antenna EX1H) GSM1900: 1.49dBi(Internal Antenna); 2.75dBi(External Antenna DX1H); 0.83dBi(External Antenna EX1H) WCDMA Band II: 1.49dBi(Internal Antenna); 2.75dBi(External Antenna DX1H); 0.83dBi(External Antenna EX1H) WCDMA Band IV: 2.75dBi(Internal Antenna); 3.16dBi(External Antenna DX1H); 0.82dBi(External Antenna EX1H) WCDMA Band V: 0.33dBi(Internal Antenna); 0.29dBi(External Antenna DX1H); -0.5dBi(External Antenna EX1H) LTE Band 2: 1.49dBi(Internal Antenna); 2.75dBi(External Antenna DX1H); 0.83dBi(External Antenna EX1H) LTE Band 4: 2.75dBi(Internal Antenna); 3.16dBi(External Antenna DX1H); 0.82dBi(External Antenna EX1H) LTE Band 5: 0.33dBi(Internal Antenna); 0.29dBi(External Antenna DX1H); -0.5dBi(External Antenna EX1H) LTE Band 7: 2.75dBi(Internal Antenna); 2.63dBi(External Antenna DX1H); 1.91dBi(External Antenna EX1H) LTE Band 12: 0.27dBi(Internal Antenna); -0.87dBi(External Antenna DX1H); -0.81dBi(External Antenna EX1H) LTE Band 13: 0.47dBi(Internal Antenna); -0.94dBi(External Antenna DX1H); -0.53dBi(External Antenna EX1H) LTE Band 14: 0.26dBi(Internal Antenna); -0.94dBi(External Antenna DX1H); -0.52dBi(External Antenna EX1H) LTE Band 17: 0.33dBi(Internal Antenna); -0.87dBi(External Antenna DX1H); -0.81dBi(External Antenna EX1H) LTE Band 25: 1.49dBi(Internal Antenna); 2.75dBi(External Antenna DX1H); 0.83dBi(External Antenna EX1H) LTE Band 26: 0.33dBi(Internal Antenna); 0.29dBi(External Antenna DX1H); -0.5dBi(External Antenna EX1H) LTE Band 38: 2.93dBi(Internal Antenna); 2.63dBi(External Antenna DX1H); 1.91dBi(External Antenna EX1H) LTE Band 41: 2.90dBi(Internal Antenna); 2.63dBi(External Antenna DX1H); 1.91dBi(External Antenna EX1H) LTE Band 48/ CA_48C: 3.22dBi(Internal Antenna); 2.84dBi(External Antenna DX1H); 2.5dBi(External Antenna EX1H) LTE Band 66/ CA_66C: 2.75dBi(Internal Antenna); 3.16dBi(External Antenna DX1H); 0.82dBi(External Antenna EX1H) LTE Band 71: -0.12dBi(Internal Antenna); -0.99dBi(External Antenna DX1H); -1.1dBi(External Antenna EX1H) NR Band n2: 1.49dBi(Internal Antenna); 2.75dBi(External Antenna DX1H); 0.83dBi(External Antenna EX1H) NR Band n5: 0.33dBi(Internal Antenna); 0.29dBi(External Antenna DX1H); -0.5dBi(External Antenna EX1H) NR Band n7: 2.75dBi(Internal Antenna); 2.63dBi(External Antenna DX1H); 1.91dBi(External Antenna EX1H) NR Band n12: 0.27dBi(Internal Antenna); -0.87dBi(External Antenna DX1H); -0.81dBi(External Antenna EX1H) NR Band n14: 0.26dBi(Internal Antenna); -0.94dBi(External Antenna DX1H); -0.52dBi(External Antenna EX1H)

	NR Band n25: 1.49dBi(Internal Antenna); 2.75dBi(External Antenna DX1H); 0.83dBi(External Antenna EX1H) NR Band n38: 2.93dBi(Internal Antenna); 2.63dBi(External Antenna DX1H); 1.91dBi(External Antenna EX1H) NR Band n41: 2.90dBi(Internal Antenna); 2.63dBi(External Antenna DX1H); 1.91dBi(External Antenna EX1H) NR Band n48: 3.22dBi(Internal Antenna); 2.84dBi(External Antenna DX1H); 2.5dBi(External Antenna EX1H) NR Band n66: 2.75dBi(Internal Antenna); 3.16dBi(External Antenna DX1H); 0.82dBi(External Antenna EX1H) NR Band n71: -0.12dBi(Internal Antenna); -0.99dBi(External Antenna DX1H); -1.1dBi(External Antenna EX1H) NR Band n77: 3.25dBi(Internal Antenna); 2.98dBi(External Antenna DX1H); 2.58dBi(External Antenna EX1H) NR Band n78: 3.63dBi(Internal Antenna); 2.84dBi(External Antenna DX1H); 2.58dBi(External Antenna EX1H) Bluetooth BLE: 2.00 dBi Note: The antenna gain are derived from the gain information report provided by the manufacturer.
Note: Since the above data and/or information is provided by the client relevant results or conclusions of this report are only made for these data and/or information, SGS is not responsible for the authenticity, integrity and results of the data and information and/or the validity of the conclusion.	

2.2 Separation Distance

Separation distance between the antenna to person (R):	>20cm
Remark: This minimum test separation distance is determined by the smallest distance from the antenna and radiating structures or outer surface of the device, according to the host form factor, exposure conditions and platform requirements, to any part of the body or extremity of a user or bystander. R has been stated in user manual.	

2.3 Test Location

All tests were performed at:

SGS-CSTC Standards Technical Services (Suzhou) Co., Ltd.

South of No. 6 Plant, No. 1, Runsheng Road, Suzhou Industrial Park, Suzhou Area, China
(Jiangsu) Pilot Free Trade Zone

Post code: 215000

No tests were sub-contracted.

Note:

1. SGS is not responsible for wrong test results due to incorrect information (e.g. max. clock frequency, highest internal frequency, antenna gain, cable loss, etc) is provided by the applicant. (if applicable).
2. SGS is not responsible for the authenticity, integrity and the validity of the conclusion based on results of the data provided by applicant. (if applicable).

2.4 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).

- **FCC (Designation Number: CN1312)**

SGS-CSTC Standards Technical Services (Suzhou) Co., Ltd. has been recognized as an accredited testing laboratory. Test Firm Registration Number: 717327

- **ISED (CAB Identifier: CN0120)**

SGS-CSTC Standards Technical Services (Suzhou) Co., Ltd. has been recognized by Innovation, Science and Economic Development Canada (ISED) as an accredited testing laboratory.

Company Number: 27594

3 RF Exposure Test Exemptions

Test exemptions apply for devices used in general population/uncontrolled exposure environments, according to the SAR-based, or MPE-based exemption thresholds.

3.1 RF Exposure Test Exemptions for single RF sources

3.1.1 Blanket 1 mW Blanket Exemption

The 1 mW Blanket Exemption of §1.1307(b)(3)(i)(A) applies for single fixed, mobile, and portable RF sources with available maximum time-averaged power of no more than 1 mW, regardless of separation distance.

The 1-mW blanket exemption applies at separation distances less than 0.5 cm, including where there is no separation. This exemption shall not be used in conjunction with other exemption criteria other than those for multiple RF sources in paragraph §1.1307(b)(3)(ii)(A).

The 1-mW exemption is independent of service type and covers the full range of 100 kHz to 100 GHz, but it shall not be used in conjunction with other exemption criteria or in devices with higher-power transmitters operating in the same time-averaging period. Exposure from such higher-power transmitters would invalidate the underlying assumption that exposure from the lower-power transmitter is the only contributor to SAR in the relevant volume of tissue.

Medical implant devices may only use this exemption and that in paragraph (b)(3)(ii)(A);

3.1.2 MPE-based Exemption

General frequency and separation-distance dependent MPE-based effective radiated power (ERP) thresholds are in Table B.1 [Table 1 of §1.1307(b)(1)(i)(C)] to support an exemption from further evaluation from 300 kHz through 100 GHz. The minimum separation distance (R in meters) from the body of a nearby person for the frequency (f in MHz) at which the source operates, the ERP (watts) is no more than the calculated value prescribed for that frequency. For the exemption in Table 1 to apply, **R must be at least $\lambda / 2\pi$** , where λ is the free-space operating wavelength in meters. If the ERP of a single RF source is not easily obtained, then the available maximum time-averaged power may be used in lieu of ERP if the physical dimensions of the radiating structure(s) do not exceed the electrical length of $\lambda / 4$ or if the antenna gain is less than that of a half-wave dipole (1.64 linear value).

Table B.1—Thresholds For Single RF Sources Subject to Routine Environmental Evaluation

RF Source Frequency			Minimum Distance			Threshold ERP
f_L MHz		f_H MHz	$\lambda_L / 2\pi$		$\lambda_H / 2\pi$	W
0.3	–	1.34	159 m	–	35.6 m	1,920 R ²
1.34	–	30	35.6 m	–	1.6 m	3,450 R ² /f ²
30	–	300	1.6 m	–	159 mm	3.83 R ²
300	–	1,500	159 mm	–	31.8 mm	0.0128 R ² f
1,500	–	100,000	31.8 mm	–	0.5 mm	19.2R ²
Subscripts L and H are low and high; λ is wavelength. R: Separation distance between the antenna to person						

The table applies to any RF source (i.e. single fixed, mobile, and portable transmitters) and specifies power and distance criteria for each of the five frequency ranges used for the MPE limits. These criteria apply at separation distances from any part of the radiating structure of at least $\lambda/2\pi$. The thresholds are based on the general population MPE limits with a single perfect reflection, outside of the reactive near-field, and in the main beam of the radiator.

Limit calculation				
Frequency range	Frequency(MHz)	$\lambda/2\pi$ (m)	R(m)	Threshold ERP(W)
1500~100000MHz	2402	0.0199	0.2000	0.768
1500~100000MHz	2462	0.0194	0.2000	0.768
1500~100000MHz	5200	0.0092	0.2000	0.768
1500~100000MHz	5260	0.0091	0.2000	0.768
1500~100000MHz	5550	0.0086	0.2000	0.768
1500~100000MHz	5785	0.0083	0.2000	0.768
1500~100000MHz	6345	0.0075	0.2000	0.768
1500~100000MHz	6465	0.0074	0.2000	0.768
1500~100000MHz	6665	0.0072	0.2000	0.768
1500~100000MHz	6985	0.0068	0.2000	0.768

3.1.3 SAR-based Exemption

SAR-based thresholds are derived based on frequency, power, and separation distance of the RF source. The formula defines the thresholds in general for either available maximum time-averaged power or maximum time-averaged ERP, whichever is greater.

If the ERP of a device is not easily determined, such as for a portable device with a small form factor, the applicant may use the available maximum time-averaged power exclusively if the device antenna or radiating structure does not exceed an electrical length of $\lambda/4$.

As for devices with antennas of length greater than $\lambda/4$ where the gain is not well defined, but always less than that of a half-wave dipole (length $\lambda/2$), the available maximum time-averaged power generated by the device may be used in place of the maximum time-averaged ERP, where that value is not known.

The separation distance is the smallest distance from any part of the antenna or radiating structure for all persons, during operation at the applicable ERP. In the case of mobile or portable devices, the separation distance is from the outer housing of the device where it is closest to the antenna.

The SAR-based exemption formula of §1.1307(b)(3)(i)(B), repeated here as Formula (B.2), applies for single fixed, mobile, and portable RF sources with available maximum time-averaged power or effective radiated power (ERP), whichever is greater, of less than or equal to the threshold P_{th} (mW).

This method shall only be used at separation distances from **0.5cm to 40cm** and at frequencies from 0.3 GHz to 6 GHz (inclusive). P_{th} is given by Formula (B.2).

$$P_{th} \text{ (mW)} = \begin{cases} ERP_{20 \text{ cm}}(d/20 \text{ cm})^x & d \leq 20 \text{ cm} \\ ERP_{20 \text{ cm}} & 20 \text{ cm} < d \leq 40 \text{ cm} \end{cases} \quad (\text{B.2})$$

where

$$x = -\log_{10} \left(\frac{60}{ERP_{20 \text{ cm}} \sqrt{f}} \right)$$

and f is in GHz, d is the separation distance (cm), and $ERP_{20 \text{ cm}}$ is per Formula (B.1).

Limit calculation				
Frequency range(GHz)	Frequency(GHz)	X	d(cm)	Pth (mW)
0.3~1.5	0.45	1.011	1	44.373
1.5~6	2.462	1.903	20	3060.000

3.2 RF Exposure Test Exemptions for Simultaneous Transmission

The available maximum time-averaged power of each source is no more than 1 mW and there is a separation distance of two centimeters between any portion of a radiating structure operating and the nearest portion of any other radiating structure in the same device, except if the sum of multiple sources is less than 1 mW during the time-averaging period, in which case they may be treated as a single source (separation is not required). This exemption may not be used in conjunction with other exemption criteria other than those is paragraph (b)(3)(i)(A) of this section. Medical implant devices may only use this exemption and that in paragraph (b)(3)(i)(A).

Either SAR-based or MPE-based exemption may be considered for test exemption for fixed, mobile, or portable device exposure conditions; therefore, the contributions from each exemption in conjunction with the measured SAR (Evaluated k term) shall be used to determine exemption for simultaneous transmission. In the case of fixed RF sources operating in the same time-averaging period, or of multiple mobile or portable RF sources within a device operating in the same time averaging period, if the sum of the fractional contributions to the applicable thresholds is less than or equal to 1 as indicated in the following equation.

$$\sum_{i=1}^a \frac{P_i}{P_{th,i}} + \sum_{j=1}^b \frac{ERP_j}{ERP_{th,j}} + \sum_{k=1}^c \frac{Evaluated_k}{Exposure Limit_k} \leq 1$$

Where:

a = number of fixed, mobile, or portable RF sources claiming exemption using paragraph (b)(3)(i)(B) of this section for P_{th} , including existing exempt transmitters and those being added.

b = number of fixed, mobile, or portable RF sources claiming exemption using paragraph (b)(3)(i)(C) of this section for Threshold ERP, including existing exempt transmitters and those being added.

c = number of existing fixed, mobile, or portable RF sources with known evaluation for the specified minimum distance including existing evaluated transmitters.

P_i = the available maximum time-averaged power or the ERP, whichever is greater, for fixed, mobile, or portable RF source *i* at a distance between 0.5 cm and 40 cm (inclusive).

P_{th,i} = the exemption threshold power (P_{th}) according to paragraph (b)(3)(i)(B) of this section for fixed, mobile, or portable RF source *i*.

ERP_j = the ERP of fixed, mobile, or portable RF source *j*.

ERP_{th,j} = exemption threshold ERP for fixed, mobile, or portable RF source *j*, at a distance of at least $\lambda / 2 \pi$ according to the applicable formula of paragraph (b)(3)(i)(C) of this section.

Evaluated_k = the maximum reported SAR or MPE of fixed, mobile, or portable RF source *k* either in the device or at the transmitter site from an existing evaluation at the location of exposure.

Exposure Limit_k = either the general population/uncontrolled maximum permissible exposure (MPE) or specific absorption rate (SAR) limit for each fixed, mobile, or portable RF source *k*, as applicable from § 1.1310 of this chapter.

4 Measurement and Calculation

4.1 RF Exposure Calculation

For single RF source :

	Evaluation method	Separation distance between the antenna to person (R)
☐	Blanket 1 mW Blanket Exemption	Regardless of separation distance
☐	MPE-based Exemption(ERP)	$R \geq (\lambda / 2 \pi)$
☒	SAR-based Exemption(P_{th})	0.5cm<R<40cm

Band	Frequency	Max power (dBm)	Ant Gain (dBi)	EIRP (dBm)	Max EIRP (mW)	Limit (mW)	Distance R (cm)	Result	Ratio
GSM850	824.2	35.00	0.33	35.33	411.15	1681	20	Pass	0.2445
GSM1900	1850.2	31.00	2.75	33.75	285.76	3060	20	Pass	0.0934
UMTS Band II	1852.4	25.70	2.75	28.45	699.84	3060	20	Pass	0.2287
UMTS Band IV	1712.4	25.70	3.16	28.86	769.13	3060	20	Pass	0.2513
UMTS Band V	826.4	25.70	0.33	26.03	400.87	1686	20	Pass	0.2378
LTE Band 2	1850.7	25.70	2.75	28.45	699.84	3060	20	Pass	0.2287
LTE Band 4	1710.7	25.70	3.16	28.86	769.13	3060	20	Pass	0.2513
LTE Band 5	824.7	25.70	0.33	26.03	400.87	1682	20	Pass	0.2383
LTE Band 7	2502.5	25.70	2.75	28.45	699.84	3060	20	Pass	0.2287
LTE Band 12	699.7	25.70	0.27	25.97	395.37	1427	20	Pass	0.2770
LTE Band 13	779.5	25.70	0.47	26.17	414.00	1590	20	Pass	0.2603
LTE Band 14	790.5	25.70	0.26	25.96	394.46	1613	20	Pass	0.2446
LTE Band 17	706.5	25.70	0.33	26.03	400.87	1441	20	Pass	0.2781
LTE Band 25	1850.7	25.70	2.75	28.45	699.84	3060	20	Pass	0.2287
LTE Band 26(814-824)	814.7	25.70	0.33	26.03	400.87	1662	20	Pass	0.2412
LTE Band 26(824-849)	824.7	25.70	0.33	26.03	400.87	1682	20	Pass	0.2383
LTE Band 38	2572.5	25.70	2.93	28.63	729.46	3060	20	Pass	0.2384
LTE Band 41	2498.5	25.70	2.90	28.6	724.44	3060	20	Pass	0.2367
LTE Band 48/ CA_48C	3552.5	19.00	3.22	22.22	166.72	3060	20	Pass	0.0545
LTE Band 66/ CA_66C	1710.7	25.70	3.16	28.86	769.13	3060	20	Pass	0.2513
LTE Band 71	665.5	25.70	-0.12	25.58	361.41	1358	20	Pass	0.2662
NR Band n2	1852.5	25.00	2.75	27.75	595.66	3060	20	Pass	0.1947
NR Band n5	826.5	25.00	0.33	25.33	341.19	1686	20	Pass	0.2024
NR Band n7	2502.5	25.00	2.75	27.75	595.66	3060	20	Pass	0.1947
NR Band n12	701.5	25.00	0.27	25.27	336.51	1431	20	Pass	0.2351
NR Band n14	790.5	25.00	0.26	25.26	335.74	1613	20	Pass	0.2082
NR Band n25	1852.5	25.00	2.75	27.75	595.66	3060	20	Pass	0.1947
NR Band n38	2572.5	25.00	2.93	27.93	620.87	3060	20	Pass	0.2029
NR Band n41(PC2)	2501.01	28.00	2.90	30.9	1230.27	3060	20	Pass	0.4020
NR Band n48	2552.51	20.50	3.22	23.72	235.50	3060	20	Pass	0.0770
NR Band n66	1712.5	25.00	3.16	28.16	654.64	3060	20	Pass	0.2139
NR Band n71	665.5	25.00	-0.12	24.88	307.61	1358	20	Pass	0.2266
NR Band n77(PC2) (3450-3550)	3455.01	26.50	3.25	29.75	944.06	3060	20	Pass	0.3085
NR Band n77(PC2) (3700-3980)	3705	26.50	3.25	29.75	944.06	3060	20	Pass	0.3085
NR Band n78(PC2) (3450-3550)	3455.01	26.50	3.63	30.13	1030.39	3060	20	Pass	0.3367

NR Band n78(PC2) (3700-3800)	3705	26.50	3.63	30.13	1030.39	3060	20	Pass	0.3367
Bluetooth BLE	2402	11.00	2	13.00	19.95	3060	20	Pass	0.0065

So the MPE of collocated transmitter is compliant.

Due to the EUT support NR ENDC and CA

Both LTE and NR/LTE band can transmit simultaneously, the formula of the calculated the MPE is:

$$\sum_{i=1}^n \frac{S_{E_i}(\text{duty factor})}{MPE_{E_i}} < 1$$

NOTE The corresponding MEs must be expressed in terms of power density in the above summation
Therefore, the worst-case(ENDC_4A_n78A) situation is 0.2513+0.3367=0.5881, which is less than “1”, this confirmed that the device comply with MPE limit.

4.1.1 Exposure calculations for multiple sources

To ensure compliance with the MPE for a controlled environment, the sum of the ratios of the power density to the corresponding MPE should not exceed unity. That is

$$\sum_{i=1}^n \frac{S_i}{MPE_i} \leq 1$$

The product also has multiple transmitters The Simultaneous Transmission Possibilities are as below:

Simultaneous Tx Combination	Configuration
1	WWAN + BLE

No.	Mode	Max EIRP (mW)	MPE Limit (mW)	Result Ratio	Total Ratio	Limit	Result
1	NR Band n41(PC2)	1230.27	3060	0.4020	0.4085	1.00	Pass
	Bluetooth BLE	19.95	3060	0.0065			

--End of the Report--