

RF TEST REPORT

Applicant Gosuncn Technology Group Co., Ltd.

FCC ID 2APNR-GL103G

Product Tracker

Brand GOSUNCN

Model GL103G

Report No. EFTA25110228-IE-03-R3

Issue Date February 4, 2026

Eurofins TA Technology (Shanghai) Co., Ltd. tested the above equipment in accordance with the requirements in **FCC CFR 47 Part 22H / FCC CFR 47 Part 24E / FCC CFR47 Part 27C / FCC CFR 47 Part 90S**. The test results show that the equipment tested is capable of demonstrating compliance with the requirements as documented in this report.

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Summary of Measurement Results

Test Case	Clause in FCC rules	Limits	Verdict
NB-IoT Band 5			
RF Power Output and Effective Radiated Power	2.1046 22.913(a)(5)	$\leq 7 \text{ W}$ (38.45 dBm)	PASS Note 1
Occupied Bandwidth	Refer to the Module report (Report No.: R2106A0549-R4; FCC ID: XMR201910BG95M3, Grant date: 09/24/2021)		
Band Edge Compliance			
Peak-to-Average Power Ratio			
Frequency Stability			
Spurious Emissions at Antenna Terminals			
Radiated Spurious Emission	2.1053 22.917 (a)	$\leq -13 \text{ dBm}$	PASS
NB-IoT Band 2/25			
RF Power Output and Effective Isotropic Radiated Power	2.1046 24.232(c)	$\leq 2 \text{ W}$ (33 dBm)	PASS Note 1
Occupied Bandwidth	Refer to the Module report (Report No.: R2106A0549-R5; FCC ID: XMR201910BG95M3, Grant date: 03/12/2021)		
Band Edge Compliance			
Peak-to-Average Power Ratio			
Frequency Stability			
Spurious Emissions at Antenna Terminals			
Radiated Spurious Emission	2.1053 24.238(a)	$\leq -13 \text{ dBm}$	PASS
NB-IoT Band 4/66			
RF Power Output and Effective Isotropic Radiated Power	2.1046 27.50(d)(4)	$\leq 1 \text{ W}$ (30 dBm)	PASS Note 1
Occupied Bandwidth	Refer to the Module report (Report No.: R2106A0549-R6; FCC ID: XMR201910BG95M3, Grant date: 03/12/2021)		
Band Edge Compliance			
Peak-to-Average Power Ratio			
Frequency Stability			
Spurious Emissions at Antenna Terminals			
Radiated Spurious Emission	2.1053 27.53(h)	$\leq -13 \text{ dBm}$	PASS

Test Case	Clause in FCC rules	Limits	Verdict
NB-IoT Band 12/71/85;			
RF Power Output and Effective Radiated Power	2.1046 27.50(c)(10)	≤ 3 W (34.77 dBm)	PASS Note 1
Occupied Bandwidth	Refer to the Module report (Report No.: R2106A0549-R6; FCC ID: XMR201910BG95M3, Grant date: 03/12/2021)		
Band Edge Compliance			
Peak-to-Average Power Ratio			
Frequency Stability			
Spurious Emissions at Antenna Terminals			
Radiated Spurious Emission	2.1053 27.53(g)	≤ -13 dBm	PASS
NB-IoT Band 13			
RF Power Output and Effective Radiated Power	2.1046 27.50(b)(10)	≤ 3 W (34.77 dBm)	PASS Note 1
Occupied Bandwidth	Refer to the Module report (Report No.: R2106A0549-R6; FCC ID: XMR201910BG95M3, Grant date: 03/12/2021)		
Band Edge Compliance			
Peak-to-Average Power Ratio			
Frequency Stability			
Spurious Emissions at Antenna Terminals			
Radiated Spurious Emission	2.1053 27.53(c) 27.53(f)	Limit out of the band 1559-1610 MHz ≤ -13 dBm	PASS
		Limit in the band 1559-1610 MHz ≤ -40 dBm	
Date of Testing: November 25, 2025 ~ December 3, 2025			
Date of Sample Received: November 17, 2025			
Note:			
1. Because of the change of antenna gain, ERP/EIRP need to be re-evaluated.			
2. PASS: The EUT complies with the essential requirements in the standard.			
3. FAIL: The EUT does not comply with the essential requirements in the standard.			
4. All indications of Pass/Fail in this report are opinions expressed by Eurofins TA Technology (Shanghai) Co., Ltd. based on interpretations and/or observations of test results. Measurement Uncertainties were not taken into account and are published for informational purposes only.			

1 Test Laboratory

1.1 Notes of the Test Report

This report shall not be reproduced in full or partial, without the written approval of **Eurofins TA Technology (Shanghai) Co., Ltd.** The results documented in this report apply only to the tested sample, under the conditions and modes of operation as described herein. Measurement Uncertainties were not taken into account and are published for informational purposes only. This report is written to support regulatory compliance of the applicable standards stated above.

1.2. Test facility

FCC (Designation number: CN1179, Test Firm Registration Number: 446626)

Eurofins TA Technology (Shanghai) Co., Ltd. has been listed on the US Federal Communications Commission list of test facilities recognized to perform measurements.

A2LA (Certificate Number: 3857.01)

Eurofins TA Technology (Shanghai) Co., Ltd. has been listed by American Association for Laboratory Accreditation to perform measurement.

1.3 Testing Location

Company:	Eurofins TA Technology (Shanghai) Co., Ltd.
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2 General Description of Equipment under Test

2.1 Applicant and Manufacturer Information

Applicant	Gosuncn Technology Group Co., Ltd.
Applicant address	6F, 2819 KaiChuang Blvd., Science Town, Huangpu District, Guangzhou City, Guangdong, China. 510530
Manufacturer	Gosuncn Technology Group Co., Ltd.
Manufacturer address	6F, 2819 KaiChuang Blvd., Science Town, Huangpu District, Guangzhou City, Guangdong, China. 510530

2.2 General information

EUT Description				
Model	GL103G			
Lab internal SN	251117-24-001			
Hardware Version	GL103_MB_C			
Software Version	MCU GL103V3.0.0B03			
Power Supply	External power supply			
Antenna Type	Internal Antenna			
Rated Power Supply Voltage	3.0 VDC			
Operating Voltage	Minimum: 2.70VDC Maximum: 3.10VDC			
Operating Temperature	Lowest: 0°C Highest: +70°C			
Testing Temperature	Lowest: -30°C Highest: +50°C			
Operating Frequency Range(s)	Mode	Tx (MHz)	Rx (MHz)	Gain (dBi)
	NB-IoT Band 2	1850 ~ 1910	1930 ~ 1990	2.71
	NB-IoT Band 4	1710 ~ 1755	2110 ~ 2155	0.78
	NB-IoT Band 5	824 ~ 849	869 ~ 894	-2.67
	NB-IoT Band 12	699 ~ 716	729 ~ 746	-9.71
	NB-IoT Band 13	777 ~ 787	746 ~ 756	-5.22
	NB-IoT Band 25	1850 ~ 1915	1930 ~ 1995	2.71
	NB-IoT Band 66	1710 ~ 1780	2110 ~ 2180	1.12
	NB-IoT Band 71	663 ~ 698	617 ~ 652	-10.27
	NB-IoT Band 85	698 ~ 716	728 ~ 746	-9.71
Test Modulation	BPSK, QPSK			
Category	NB2			
Deployment	stand-alone			
Sub-carrier spacing	3.75KHz, 15KHz			
Ntones	single-tone, multi-tone			
Maximum E.I.R.P./ E.R.P.	NB-IoT Band 2	23.28 dBm		

	NB-IoT Band 4	20.97 dBm
	NB-IoT Band 5	15.92 dBm
	NB-IoT Band 12	18.41 dBm
	NB-IoT Band 13	13.33 dBm
	NB-IoT Band 25	22.69 dBm
	NB-IoT Band 66	21.21 dBm
	NB-IoT Band 71	8.12 dBm
	NB-IoT Band 85	8.99 dBm
Note: The EUT is sent from the applicant to Eurofins TA and the information of the EUT is declared by the applicant.		

3 Applied Standards

According to the specifications of the manufacturer, it must comply with the requirements of the following standards:

Test standards:

FCC CFR 47 Part 22H (2025)

FCC CFR 47 Part 24E (2025)

FCC CFR 47 Part 27C (2025)

Reference standard:

FCC CFR47 Part 2 (2025)

ANSI C63.26-2015

KDB 971168 D01 Power Meas License Digital Systems v03r01

4 Test Case

4.1 RF Power Output and Effective Isotropic Radiated Power

Ambient condition

Temperature	Relative humidity	Pressure
15°C ~ 35°C	20% ~ 80%	86 kPa ~ 106 kPa

Methods of Measurement

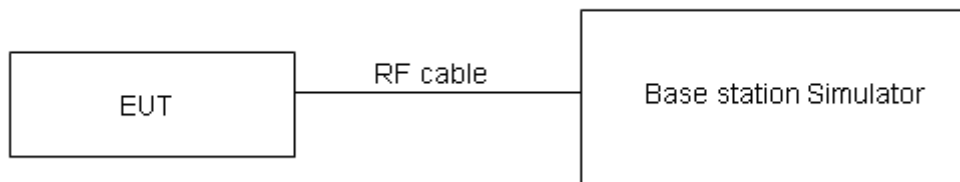
During the process of the testing, The EUT was connected to the Base Station Simulator with a known loss. The EUT is controlled by the Base Station Simulator test set to ensure max power transmission with proper modulation.

ERP can then be calculated as follows:

$EIRP \text{ (dBm)} = \text{Output Power (dBm)} + \text{Antenna Gain (dBi)}$

$EIRP \text{ (dBm)} = ERP \text{ (dBm)} + 2.15 \text{ (dB.)}$

Test Setup



Measurement Uncertainty

The assessed measurement uncertainty to ensure 95% confidence level for the normal distribution is with the coverage factor $k = 2$, $U=0.4$ dB for RF power output, $k = 2$, $U= 1.19$ dB for ERP/EIRP.

Test Results

Refer to the section 6.1 of this report for test data.

4.2 Radiated Spurious Emission

Ambient condition

Temperature	Relative humidity	Pressure
15°C ~ 35°C	20% ~ 80%	86 kPa ~ 106 kPa

Method of Measurement

1. The testing follows FCC KDB 971168 D01 v03r01 Section 5.8 and ANSI C63.26-2015.
2. Below 1GHz: The EUT is placed on a turntable 0.8 meters above the ground in the chamber, 3 meter away from the antenna. The maximal emission value is acquired by adjusting the antenna height, polarisation and turntable azimuth. Normally, the height range of antenna is 1 m to 4 m, the azimuth range of turntable is 0° to 360°, and the receive antenna has two polarizations Vertical (V) and Horizontal (H). Above 1GHz: (Note: the FCC's permission to use 1.5m as an alternative per TCBC Conf call of Dec. 2, 2014.) The EUT is placed on a turntable 1.5 meters above the ground in the chamber, 3 meter away from the antenna. The maximal emission value is acquired by adjusting the antenna height, polarisation and turntable azimuth. Normally, the height range of antenna is 1 m to 4 m, the azimuth range of turntable is 0° to 360°, and the receive antenna has two polarizations Vertical (V) and Horizontal (H).
3. A loop antenna, A log-periodic antenna or horn antenna shall be substituted in place of the EUT. The log-periodic antenna will be driven by a signal generator and the level will be adjusted till the same power value on the spectrum analyzer or receiver. The level of the spurious emissions can be calculated through the level of the signal generator, cable loss, the gain of the substitution antenna and the reading of the spectrum analyzer or receiver.
4. The EUT is then put into continuously transmitting mode at its maximum power level during the test. Set Test Receiver or Spectrum RBW=100kHz, VBW=300kHz for 30MHz to 1GHz and RBW=1MHz, VBW=3MHz for above 1GHz, and the maximum value of the receiver should be recorded as (Pr).
5. The EUT shall be replaced by a substitution antenna. In the chamber, an substitution antenna for the frequency band of interest is placed at the reference point of the chamber. An RF Signal source for the frequency band of interest is connected to the substitution antenna with a cable that has been constructed to not interfere with the radiation pattern of the antenna. A power (PMea) is applied to the input of the substitution antenna, and adjust the level of the signal generator output until the value of the receiver reach the previously recorded (Pr). The power of signal source (PMea) is recorded. The test should be performed by rotating the test item and adjusting the receiving antenna polarization.
6. A amplifier should be connected to the Signal Source output port. And the cable should be connect between the Amplifier and the Substitution Antenna. The cable loss (Pcl) ,the Substitution Antenna Gain (Ga) and the Amplifier Gain (PAg) should be recorded after test.
7. The measurement results are obtained as described below:

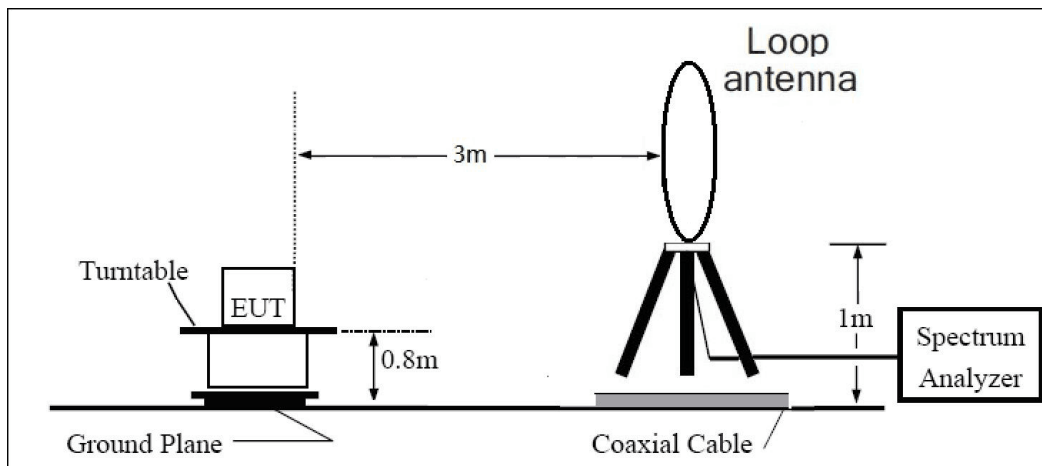
$$\text{Power(EIRP)} = \text{PMea} - \text{PAg} - \text{Pcl} + \text{Ga}$$
The measurement results are amend as described below:

$$\text{Power(EIRP)} = \text{PMea} - \text{Pcl} + \text{Ga}$$
8. This value is EIRP since the measurement is calibrated using an antenna of known gain (2.15 dB) and known input power. ERP can be calculated from EIRP by subtracting the gain of the dipole, $\text{ERP} = \text{EIRP} - 2.15\text{dB}$.

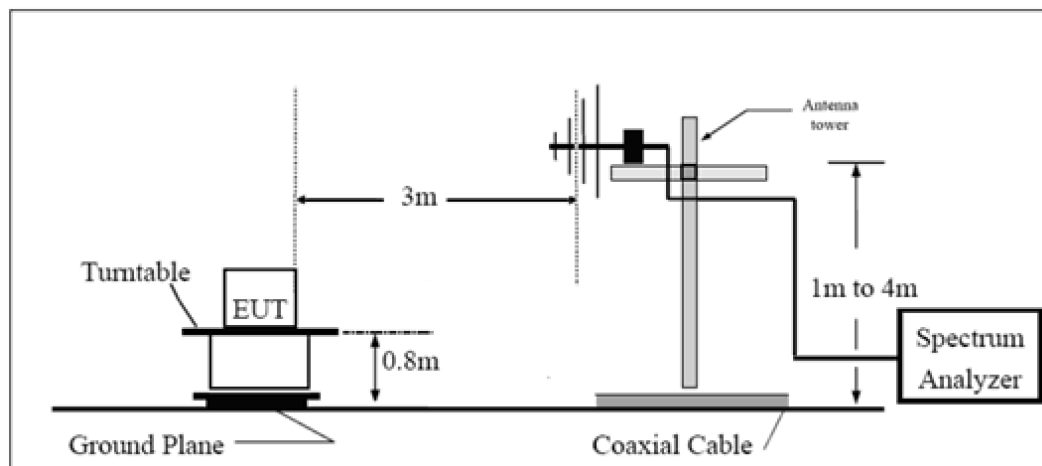
The modulation mode and RB allocation refer to section 5.1, using the maximum output power configuration.

Test setup

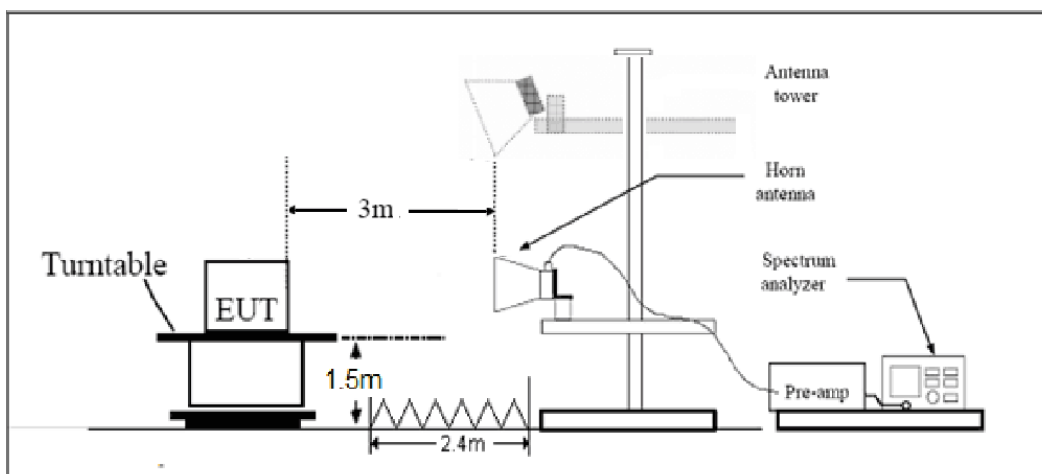
9KHz~ 30MHz



30MHz~ 1GHz



Above 1GHz



Note: Area side:2.4mX3.6m

Measurement Uncertainty

The assessed measurement uncertainty to ensure 95% confidence level for the normal distribution is with the coverage factor $k = \pm 1.96$, $U = \pm 3.55$ dB.

Test Results

Refer to the section 6.2 of this report for test data.

5 Test Results

5.1 RF Power Output and Effective (Isotropic) Radiated Power

Mode	Modulation	Sub-carrier spacing (KHz)	Ntones	Conducted Power (dBm) for low/mid/high channel	EIRP (dBm)
				18900/1880.0	
Band 2 Standalone	QPSK	15	1@0	20.57	23.28
Mode	Modulation	Sub-carrier spacing (KHz)	Ntones	Conducted Power (dBm) for low/mid/high channel	EIRP (dBm)
				20399/1754.9	
Band 4 Standalone	QPSK	15	1@0	20.19	20.97
Mode	Modulation	Sub-carrier spacing (KHz)	Ntones	Conducted Power (dBm) for low/mid/high channel	ERP (dBm)
				20401/824.1	
Band 5 Standalone	QPSK	15	1@0	20.74	15.92
Mode	Modulation	Sub-carrier spacing (KHz)	Ntones	Conducted Power (dBm) for low/mid/high channel	ERP (dBm)
				23095/707.5	
Band 12 Standalone	QPSK		1@47	30.27	18.41
Mode	Modulation	Sub-carrier spacing (KHz)	Ntones	Conducted Power (dBm) for low/mid/high channel	ERP (dBm)
				23279/786.9	
Band 13 Standalone	QPSK	15	1@0	20.7	13.33
Mode	Modulation	Sub-carrier spacing (KHz)	Ntones	Conducted Power (dBm) for low/mid/high channel	EIRP (dBm)
				26041/1850.1	
Band 25 Standalone	BPSK	15	1@0	19.98	22.69
Mode	Modulation	Sub-carrier spacing (KHz)	Ntones	Conducted Power (dBm) for low/mid/high channel	EIRP (dBm)
				132671/1779.9	
Band 66 Standalone	BPSK	15	1@0	20.09	21.21
Mode	Modulation	Sub-carrier spacing	Ntones	Conducted Power (dBm) for low/mid/high channel	ERP (dBm)

		(KHz)		134181/715.9	
Band 85 Standalone	BPSK	15	1@0	20.85	8.99

Mode	Modulation	Sub-carrier spacing (KHz)	Ntones	Conducted Power (dBm) for low/mid/high channel		ERP (dBm)	
				133297/680.5	133471/697.9		
Band 71 Standalone	BPSK	3.75	1@0	20.54	\	8.12	\
Band 71 Standalone	BPSK	15	1@0	\	20.54	\	8.12

5.2 Radiated Spurious Emission

The detailed test data see *EFTA25110228-IE-03-R3-ANNEX A* Test Result.

6 Main Test Instruments

Name	Manufacturer	Type	Serial Number	Calibration Date	Expiration Date
Loop Antenna	SCHWARZBECK	FMZB1519	1519-047	2023-04-16	2026-04-15
Spectrum Analyzer	R&S	FSV40	101186	2025-05-06	2026-05-05
TRILOG Broadband Antenna	SCHWARZBECK	VULB 9163	1439	2024-07-06	2027-07-05
Horn Antenna	STEATITE	QSH-SL-26-40-K-15	16779	2023-01-17	2026-01-16
Software	R&S	EMC32	10.35.10	/	/

7 The EUT Appearance

Refer to *EUT Appearance*.

8 Test Setup Photos

Refer to *Part22_24_27_90 Test Setup*.

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