

TEST REPORT		
Report Number. :	91153-24-72-25-PP004	
Date of issue :	2025-12-31	
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Manufacturer's name :	MOKO TECHNOLOGY LIMITED	
Address :	Factory 201, 107 Pinshun Rd Guixiang community, Guanlan Street, Longhua, Shenzhen, China 518110	
Factory's name :	MOKO TECHNOLOGY LIMITED	
Address :	Factory 201, 107 Pinshun Rd Guixiang community, Guanlan Street, Longhua, Shenzhen, China 518110	
Standard(s) :	FCC 1.1310: §1.1307(b)	
Test item description :	BLE to Cellular Gateway	
Trade Mark :	N/A	
Model/Type reference :	MKGW4-40G (GL)-VE; MKGW4-40G (GL)-VI; MKGW4-40G (GL)-UE; MKGW4-40G (GL)-UI; MKGW4-40E (LA)-VE; MKGW4-40E (LA)-VI; MKGW4-40E (LA)-UE; MKGW4-40E (LA)-UI; MKGW4-40E (NA)-VE; MKGW4-40E (NA)-VI; MKGW4-40E (NA)-UE; MKGW4-40E (NA)-UI	
FCC ID :	2AO94-MKGW4	
Date of receipt of test item :	2025.02.06	
Date (s) of performance of test:	2025.02.06- 2025.11.20	
Test Report Form No. :	FCC CFR Part 1_B1	
Master TRF..... :	Dated 2021-09	
Summary of Test Results :	Pass	
The Summary of Test Results based on a technical opinion belongs to the standard(s).		
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Table of Contents

1. EUT SPECIFICATION.....	4
2. TEST REQUIREMENT	5
3. MEASUREMENT RESULT	6

Modified History

Report No.	Revision Date	Summary
91153-24-72-24-PP002	2025.03.24	Original Report
91153-24-72-25-PP004	2025-12-31	C1PC: 1. Modify applicant information 2. Modify the model name to match the new applicant's model name 3. Add a new model (see the difference statement for details of the differences)

1. EUT Specification

EUT:	BLE to Cellular Gateway
Model Number:	MKGW4-40G (GL)-VE; MKGW4-40G (GL)-VI; MKGW4-40G (GL)-UE; MKGW4-40G (GL)-UI; MKGW4-40E (LA)-VE; MKGW4-40E (LA)-VI; MKGW4-40E (LA)-UE; MKGW4-40E (LA)-UI; MKGW4-40E (NA)-VE; MKGW4-40E (NA)-VI; MKGW4-40E (NA)-UE; MKGW4-40E (NA)-UI
FCC ID:	2AO94-MKGW4
Antenna gain (Max)	Dipole Antenna: 2.5dBi ,FPC Antenna:1.86dBi
Operation Frequency:	2402-2480MHz
Input Rating:	Input:5-60Vdc, 0.15~2.0A, 10W max ; Battery: 3.7V, 11.8Wh, 3200mAh
Input Rating:	47 CFR Part 1.130747 CFR Part 1.1310 KDB447498D01 General RF Exposure Guidance v06
Modulation:	BLE(GFSK)

2. Test Requirement

RF EXPOSURE EVALUATION

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

Limits for Maximum Permissible Exposure (MPE)

TABLE 1—LIMITS FOR MAXIMUM PERMISSIBLE EXPOSURE (MPE)

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 Exposures				
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
1500–100,000			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
1500–100,000			1.0	30

F= Frequency in MHz

Friis Formula

Friis transmission formula: $P_d = (P_{out} * G) / (4 * \pi * R^2)$

Where

P_d = power density in mW/cm²

P_{out} = output power to antenna in mW

G = gain of antenna in linear scale

$\pi = 3.1416$

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

P_d is 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.

Test Procedure:

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

3. Measurement Result

Mode	Frequency (MHz)	Peak output power (dBm)	Peak output power (mW)	Target power (dBm)	Maximum tune-up Power (mW)	Antenna gain		Power Density (S) (mW /cm ²)	Limited of Power Density (S) (mW /cm ²)	Test Result
						(dBi)	(Linear)			
BLE-GFSK	2402	1.93	1.56	1±1	1.58	2.5	1.78	0.0056	1	Complies
	2440	2.62	1.83	1±1	1.58	2.5	1.78	0.0056	1	Complies
	2480	2.40	1.74	1±1	1.58	2.5	1.78	0.0056	1	Complies

Remark: The Max Conducted Peak Output Power data refer to report Report No.: 91153-24-72-25-PP003. The Maximum power is less than the limit, complies with the exemption requirements, SAR is exempted. LTE cannot transmit simultaneously with BLE RF function.

THE END

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