



RF Exposure Evaluation Report

Application No.: DNT2505220502R5396-06406
Applicant: LG H&H Co., Ltd.
Address of Applicant: 58, Saemunan-ro, Jongno-gu, Seoul, Republic of Korea
EUT Description: Bluetooth module
Model No.: F-9833
FCC ID: 2AIYU-F-9833
Power supply DC 3.3V
Trade Mark: /
47 CFR Part 2.1091
Standards: FCC KDB 447498 D01 v06
Date of Receipt: 2025/5/22
Date of Test: 2025/5/23 to 2025/5/30
Date of Issue: 2025/6/3
Test Result: **PASS**

Prepared By: Wayne . Lin (Testing Engineer)



Reviewed By: Pengils . chen (Project Engineer)

Approved By: Jiuse . Chen (Manager)

Note: If there is any objection to the results in this report, please submit a written inquiry to the company within 15 days from the date of receiving the report. The test report is effective only with both signature and specialized stamp, and is issued by the company in accordance with the requirements of the "Conditions of Issuance of Test Reports" printed in the attached page. Unless otherwise stated, the results presented in this report only apply to the samples tested this time. Partial reproduction of this report is not allowed unless approved by the company in writing.

Dongguan DN Testing Co., Ltd.

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**Report Revise Record**

Report Version	Revise Time	Issued Date	Valid Version	Notes
V1.0	/	June.3, 2025	Valid	Original Report



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1 General Information

1.1 Test Location

Company:	Dongguan DN Testing Co., Ltd
Address:	No. 1, West Fourth Street, South Xingfa Road, Wusha Liwu, Chang'an Town, Dongguan City, Guangdong P.R.China
Test engineer:	Wayne Lin

1.2 General Description of EUT

Manufacturer:	SHENZHEN XINZHONGXIN TECHNOLOGY CO.,LTD
Address of Manufacturer:	Qianhai Kexing Science Park, Laodong Community, Xixiang Subdistrict, Bao'an District, Shenzhen City
EUT Description::	Bluetooth module
Model No.:	F-9833
Additional Model(s):	N/A
Chip Type:	BK3633
Serial Number	PR2505220502R5396
Power Supply	DC 3.3V
Trade Mark:	/
Hardware Version:	V1.0
Software Version:	V1.0
Operation Frequency:	2402 MHz to 2480 MHz
Type of Modulation:	GFSK
Sample Type:	<input type="checkbox"/> Portable Device, <input checked="" type="checkbox"/> Module, <input type="checkbox"/> Mobile Device
Antenna Type:	<input type="checkbox"/> External, <input checked="" type="checkbox"/> Integrated
Antenna Gain:	<input checked="" type="checkbox"/> Provided by applicant 1.38dBi

Remark:

*Since the above data and/or information is provided by the applicant relevant results or conclusions of this report are only made for these data and/or information , DNT is not responsible for the authenticity, integrity and results of the data and information and/or the validity of the conclusion.



2 RF Exposure Evaluation

2.1 RF Exposure Compliance Requirement

2.1.1 Limits

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

*=Plane-wave equivalent power density

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

Where

Pd = power density in mW/cm²

Pout = output power to antenna in mW

G = gain of antenna in linear scale

$\pi = 3.1416$

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

Pd 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.



2.1.2 Test Procedure

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

2.1.3 EUT RF Exposure Evaluation

Antenna Gain: The maximum Gain measured in fully anechoic chamber is 2.0 / 2.0 in linear scale.

Output Power Into Antenna & RF Exposure Evaluation Distance:

This confirmed that the device comply with MPE limit.

Test Mode	Antenna	Freq(MHz)	Power [dBm]
BLE 1M	Ant1	2402	5.49
		2440	4.53
		2480	4.85
BLE 2M	Ant1	2402	5.53
		2440	4.69
		2480	4.75

The Worst Mode	Antenna	Peak output power (dBm)	Target power (dBm)	MAX Target power (dBm)	Antenna gain		Power Density (S) (mW /cm ²)	Limited of Power Density (S) (mW /cm ²)	Test Result	Distance (cm)
					(dBi)	(Linear)				
2.4G Band										
BLE 2M	Ant1	5.53	5±1	6	1.38	1.3740	0.0011	1	Complies	20

The End Report