

RF Exposure Evaluation Report

Product : Single mode Bluetooth(5.0) Module
Trade mark : Richmat
Model/Type reference : HJ8258
Serial Number : N/A
Report Number : EED32P81585305
FCC ID : 2AJJGHJ8258
Date of Issue : October 10, 2023
Test Standards : 47 CFR Part 1.1307
47 CFR Part 1.1310
KDB447498D01 General RF
Exposure Guidance v06
Test result : PASS

Prepared for:

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Prepared by:

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2 Version

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4 General Information

4.1 Client Information

Applicant:	Qingdao Richmat Intelligence Technology Inc
Address of Applicant:	NO. 78 Kongquehe 4th Road Qingdao Clothing Industry park Jimo, Qingdao, Shandong Province 266000, China
Manufacturer:	Qingdao Richmat Intelligence Technology Inc
Address of Manufacturer:	NO. 78 Kongquehe 4th Road Qingdao Clothing Industry park Jimo, Qingdao, Shandong Province 266000, China
Factory:	Qingdao Richmat Intelligence Technology Inc
Address of Factory:	NO. 78 Kongquehe 4th Road Qingdao Clothing Industry park Jimo, Qingdao, Shandong Province 266000, China

4.2 General Description of EUT

Product Name:	Single mode Bluetooth(5.0) Module
Model No.(EUT):	HJ8258
Trade Mark:	Richmat
EUT Supports Radios application:	2402MHz~2480MHz

4.3 Product Specification subjective to this standard

Frequency Range:	2402MHz~2480MHz
Modulation Type:	GFSK
Test Power Grade:	Default
Test Software of EUT:	EMI_TEST_v1.5
Antenna Type:	PCB Antenna
Antenna Gain:	5.3dBi
Power Supply:	DC 3.3V
Max Conducted Peak Output Power:	BT5.0: 2.193 dBm
	The Max Conducted Peak Output Power data refer to the report EED32M00310701
Sample Received Date:	2023.10.07
Sample tested Date:	2023.10.08~2023.10.09
Company Name and Address shown on Report, the sample(s) and sample Information was/ were provided by the applicant who should be responsible for the authenticity which CTI hasn't verified.	

4.4 Tested System Details

Product	Manufacturer	Model No.
handset	Ríchmat	Model Name.: HJSR81 Ble, HJSR81B Ble, HJSR81C Ble, HJSR81D Ble, HJSR81E Ble, HJSR77 Ble, HJSR77B Ble, HJSR77C Ble, HJSR32 Ble, HJSR32B Ble, HJSR32C Ble, HJSR79 Ble
They all use the same PCB. The circuit design, layout, components and wiring are identical, but the number of backlights used is different.		

4.5 Test Location

All tests were performed at:

Centre Testing International Group Co., Ltd

Building C, Hongwei Industrial Park Block 70, Bao'an District, Shenzhen, China

Telephone: +86 (0) 755 33683668 Fax: +86 (0) 755 33683385

No tests were sub-contracted.

FCC Designation No.: CN1164

4.6 Deviation from Standards

None.

4.7 Abnormalities from Standard Conditions

None.

4.8 Other Information Requested by the Customer

None.

5 SAR Evaluation

5.1 RF Exposure Compliance Requirement

5.1.1 Limits

According to FCC Part1.1310: 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 part1.1307(b)

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 (minutees)
(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 ~ 100000	---	---	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 ~ 100000	---	---	1.0	30

A rough estimation of the expected exposure in power flux density on a given point can be made with the following equation:

$$S = \frac{P \times G}{4 \times \pi \times R^2}$$

Where:

S = power density

P = power input to the antenna

G = numeric gain of the antenna in the direction of interest relative to an isotropic radiator

R= distance to the centre of radiation of the antenna

EIRP = P*G

The antenna of the product, under normal use condition is at least 20 cm away from the body of the user.

Warning statement to the user for keeping at least 20cm separation distance and the prohibition of operating to a person has been printed on the user's manual. Therefore, the S of the device is calculated with R=20cm, and if it is below the limit S, then we can conclude the device complies with the rules.

5.1.2 Test Procedure

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

5.1.3 EUT RF Exposure Evaluation

Output Power Into Antenna & RF Exposure Evaluation Distance:

Channel	Frequency (MHz)	Max Conducted Output Power(dBm)	Gain (dBi)	EIRP* (dBm)	EIRP (mW)	R (cm)	S (mW/cm ²)	Limit (mW/cm ²)	Result
BLE	2402	2.193	5.3	7.493	5.614	20	0.0011	1.0	Pass

The test report is effective only with both signature and specialized stamp, The result(s) shown in this report refer only to the sample(s) tested. Without written approval of CTI, this report can't be reproduced except in full.

*** End of Report ***