RF Exposure Evaluation Report

Product	:	Remote control
Trade mark	:	N/A
Model/Type reference	:	Q5
Serial Number	:	N/A
Report Number	:	EED32Q80665602
FCC ID	:	2AS78-Q5
Date of Issue	:	Jul. 04, 2024
Test Standards	:	47 CFR Part 1.1307 47 CFR Part 1.1310 47 CFR Part 2.1091 47 CFR Part 2.1093 KDB 447498 D04 Interim General RF Exposure Guidance v01
Test result	:	PASS

Prepared for:

SHENZHEN TIANZUN TECHNOLOGY CO., LIMITED
6th Floor, Building 65, Baotian Industrial Park, Chentian Community, Baoan District, Shenzhen, China

Prepared by:

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2 Version

Version No.	Date	Description
00	Jul. 04, 2024	Original

3 Contents

4 General Information

4.1 Client Information

Applicant:	SHENZHEN TIANZUN TECHNOLOGY CO., LIMITED
Address of Applicant:	6th Floor, Building 65, Baotian Industrial Park, Chentian Community, Baoan District, Shenzhen, China
Manufacturer:	SHENZHEN TIANZUN TECHNOLOGY CO., LIMITED
Address of Manufacturer:	6th Floor, Building 65, Baotian Industrial Park, Chentian Community, Baoan District, Shenzhen, China
Factory:	SHENZHEN TIANZUN TECHNOLOGY CO., LIMITED
Address of Factory:	6th Floor, Building 65, Baotian Industrial Park, Chentian Community, Baoan District, Shenzhen, China

4.2 General Description of EUT

Product Name:	Remote control
Model No.(EUT):	Q5
Trade Mark:	N/A

4.3 Product Specification subjective to this standard

Frequency Range:	2402MHz~2480MHz	
Modulation Type:	GFSK	
Test Power Grade:	Default	
Test Software of EUT:	FCC Tool V1.08	
Antenna Type:	PCB Antenna	
Antenna Gain:	2.47dBi	
Power Supply:	Battery:	DC 3V
Sample Received Date:	May 31, 2024	
Sample tested Date:	Jun. 04, 2024 to Jun. 13, 2024	

Remark:
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 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

4.5 Deviation from Standards

None.

4.6 Abnormalities from Standard Conditions

None.

4.7 Other Information Requested by the Customer

None.

5 SAR Evaluation

5.1 RF Exposure Compliance Requirement

5.1.1 Limits

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 Pth (mW).
This method shall only be used at separation distances from 0.5 cm to 40 cm and at frequencies from 0.3 GHz to 6 GHz (inclusive). Pth is given by Formula

$$P_{\text{th}}\,(\text{mW}) = \begin{cases} ERP_{20\text{ cm}}(d/20\text{ cm})^{x} & d \le 20\text{ cm} \\ ERP_{20\text{ cm}} & 20\text{ cm} < d \le 40\text{ cm} \end{cases}$$

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 ERP20cm is per Formula (B.1).

$$P_{\text{th}}\,(\text{mW}) = ERP_{20\text{ cm}}\,(\text{mW}) = \begin{cases} 2040f & 0.3\text{ GHz} \le f < 1.5\text{ GHz} \\ 3060 & 1.5\text{ GHz} \le f \le 6\text{ GHz} \end{cases} \qquad (\text{B.1})$$

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.

5.1.2 Test Procedure

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

5.1.3 EUT RF Exposure Evaluation

For Stand alone:

For Bluetooth LE:

Frequency (MHz)	Max. Conducted Output power (dBm)	Antenna Gain (dBi)	EIRP (dBm)	ERP (dBm)	ERP (mW)	Limit (mW)	Result
2402	-1.64	2.47	0.83	-1.32	0.738	2.788	PASS

Note：

①EIRP=conducted power+antenna gain；

②ERP=EIRP-2.15;

③EIRP(dBm) = Field strength of the fundamental signal(dBuV/m@3m) – 95.23;

④ERP(mW) = 10^(ERP (dBm)/10);

⑤The estimation distance is 0.5cm;

⑥The test data please refer to the report of EED32Q80665601 and only the worst case data was recorded in the report.

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 ***