RF Exposure Evaluation Report

Product	:	UWB Kbeacon
Trade mark	:	Kbeacon
Model/Type reference	:	K4W,K5W,K9W
Serial Number	:	N/A
Report Number	:	EED32R80707903
FCC ID	:	2AXZL-UWBTAG
Date of Issue	:	Jul. 04, 2025
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:

KKM Company Limited
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3 General Information

3.1 Client Information

Applicant:	KKM Company Limited
Address of Applicant:	3CDE, Building6, Baoneng Science&Technology Park, Qingxiang Rd, Longhua Street, Longhua District,Shenzhen City,Guangdong Province, China
Manufacturer:	KKM Company Limited
Address of Manufacturer:	3CDE, Building6, Baoneng Science&Technology Park, Qingxiang Rd, Longhua Street, Longhua District,Shenzhen City,Guangdong Province, China
Factory:	KKM Company Limited
Address of Factory:	3CDE, Building6, Baoneng Science&Technology Park, Qingxiang Rd, Longhua Street, Longhua District,Shenzhen City,Guangdong Province, China

3.2 General Description of EUT

Product Name:	UWB Kbeacon
Model No.:	K4W,K5W,K9W
Test Model No.:	K4W
Trade Mark:	Kbeacon

3.3 Product Specification subjective to this standard

Frequency Range:	Bluetooth LE:2402MHz~2480MHz, UWB:6489.6MHz
Modulation Type:	Bluetooth LE:GFSK UWB:BPM
Test Power Grade:	Default
Test Software of EUT:	Bluetooth LE:Direct Test Mode Tool, UWB:RF test
Antenna Type:	Bluetooth LE:PCB Antenna, UWB:Chip Antenna
Antenna Gain:	Bluetooth LE: 0.31dBi, UWB: 5.2dBi
Power Supply:	Battery DC 3V
Sample Received Date:	Jun. 24, 2025
Sample tested Date:	Jun. 24, 2025 to Jul. 01, 2025
Remark: Model No.:K4W,K5W,K9W Only the model K4W was tested, their electrical circuit design,layout,components used and internal wiring are identical.Only the case design is different.	

3.4 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

3.5 Deviation from Standards

None.

3.6 Abnormalities from Standard Conditions

None.

3.7 Other Information Requested by the Customer

None.

4 SAR Evaluation

4.1 RF Exposure Compliance Requirement

4.1.1 Limits

For Bluetooth LE:

1) 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).

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

2) 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.

For UWB:

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.

4.1.2 Test Procedure

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

4.1.3 EUT RF Exposure Evaluation

For Stand alone:

For Bluetooth LE:

Frequency (MHz)	Estimation distance (cm)	Max. Conducted Output power (dBm)	Antenna Gain (dBi)	ERP (dBm)	ERP (mW)	Limit (mW)	MPE ratio	Result
@2.4GHz	20	-0.33	-1.30	-2.48	0.5649	1	0.5649	Pass

For UWB:

Frequency (MHz)	Field strength of the fundamental signal (dBuV/m@3m)	EIRP (dBm)	EIRP (mW)	Limit (mW)	MPE Ratio2	Result
6367.6	66.49	-28.74	0.0013	1.00	0.0013	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 20cm;

⑥The test data please refer to the report of EED32R80707901 and EED32R80707902, and only the worst case data was recorded in the report.

For co-launch:

Simultaneous launch is not supported.

Statement

1. This report is considered invalid without approved signature, special seal and the seal on the perforation;

2. The Company Name shown on Report and Address, the sample(s) and sample information was/were provided by the applicant who should be responsible for the authenticity which CTI hasn't verified;

3. The result(s) shown in this report refer(s) only to the sample(s) tested;

4. Unless otherwise stated,the decision rule for conformity reporting is based on Binary Statement for Simple Acceptance Rule stated in ILAC-G8:09/2019/CNAS-GL015:2022;

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*** End of Report ***