



Shenzhen Huaxia Testing Technology Co., Ltd

1F., Block A of Tongsheng Technology Building, Huahui Road, Dalang Street, Longhua District, Shenzhen, China

Telephone: +86-755-26648640
Fax: +86-755-26648637
Website: www.cqa-cert.com

Report Template Version: V03
Report Template Revision Date: Mar.1st, 2017

RF Exposure Evaluation Report

Report No. : CQASZ20200500012EX-02
Applicant: Radiant RFID, LLC
Address of Applicant: 1023 Springdale Road, Bldg 4, Suite B Austin TX 78721
Equipment Under Test (EUT):
Product: T21 Beacon
Model No.: RADMEDIA-BLE-T21
Brand Name: N/A
FCC ID: 2AHP7-T21BEACON
Standards: 47 CFR Part 1.1307
47 CFR Part 2.1093
KDB447498D01 General RF Exposure Guidance v06
Date of Test: 2022.04.21 - 2022.05.05
Date of Issue: 2022-05-10
Test Result : **PASS***

Tested By:

Tom Chen

(Tom Chen)

Reviewed By:

Aaron Ma

(Aaron Ma)

Approved By:

Jack Ai

(Jack Ai)



* In the configuration tested, the EUT complied with the standards specified above.

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 CQA, this report can't be reproduced except in full.

1 Version

Revision History Of Report

Report No.	Version	Description	Issue Date
CQASZ20200500012EX-02	Rev.01	Initial report	2022-05-10

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3 General Information

3.1 Client Information

Applicant:	Radiant RFID, LLC
Address of Applicant:	1023 Springdale Road, Bldg 4, Suite B Austin TX 78721
Manufacturer:	Wuhan Yixin Technology Co., Ltd
Address of Manufacturer:	Room 02, 4/F, building 10, Sun city, Gezhouba, No.40, Gaoxin 4th Road, East Lake New Technology Development Zone, Wuhan City, Hubei Province, China
Factory:	MOKO TECHNOLOGY Ltd
Address of Factory:	Factory 201, 107 Pinshun Rd Guixiang community, Guanlan Street, Longhua, Shenzhen, China 518110

3.2 General Description of EUT

Product:	T21 Beacon
Model Number:	RADMEDIA-BLE-T21
Power supply:	<input checked="" type="checkbox"/> : DC 3V <input type="checkbox"/> : Adapter information
Modulation:	BLE
Frequency Range:	2402MHz~2480MHz
Number of Channels:	40channels
Channel Space:	1MHz
Antenna Gain:	-0.1dBi
Antenna:	PCB Antenna
Temperature Range:	0°C ~ +45°C

4 SAR Evaluation

4.1 RF Exposure Compliance Requirement

4.1.1 Standard Requirement

According to KDB447498D01 General RF Exposure Guidance v06

4.3.1. Standalone SAR test exclusion considerations

Unless specifically required by the published RF exposure KDB procedures, standalone 1-g head or body and 10-g extremity SAR evaluation for general population exposure conditions, by measurement or numerical simulation, is not required when the corresponding SAR Exclusion Threshold condition, listed below, is satisfied.

4.1.2 Limits

The 1-g and 10-g SAR test exclusion thresholds for 100 MHz to 6 GHz at test separation distances ≤ 50 mm are determined by:

$[(\text{max. power of channel, including tune-up tolerance, mW})/(\text{min. test separation distance, mm})] \cdot [\sqrt{f(\text{GHz})}] \leq 3.0$ for 1-g SAR and ≤ 7.5 for 10-g extremity SAR, where

$f(\text{GHz})$ is the RF channel transmit frequency in GHz

Power and distance are rounded to the nearest mW and mm before calculation¹⁷

The result is rounded to one decimal place for comparison

The test exclusions are applicable only when the minimum test separation distance is ≤ 50 mm and for transmission frequencies between 100 MHz and 6 GHz. When the minimum test separation distance is < 5 mm, a distance of 5 mm is applied to determine SAR test exclusion

4.1.3 EUT RF Exposure

1) For BLE

Operation Mode: BLE						
Channel	Maximum Peak Conducted Output Power (dBm)	Tune up tolerance (dBm)	Maximum tune-up Power		Calculated value	Exclusion threshold
			(dBm)	(mW)		
Lowest (2402MHz)	0.12	1±1	2	1.585	0.49	3.0
Middle (2440MHz)	2.34	2±1	3	1.995	0.62	
Highest (2480MHz)	2.95	2±1	3	1.995	0.63	
Conclusion: the calculated value ≤ 3.0 , SAR is exempted.						

Remark: The Max Conducted Peak Output Power data refer to report Report No.: 90306-22-72-22-PP001