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Dates of Tests: March 20 ,2024
Test Report S/N: LR500112404L
Test Site : LTA CO., LTD.

CERTIFICATION OF COMPLIANCE

FCC ID.

2AZKWAIR-R75A

APPLICANT

ATEC IoT CO., LTD.

Equipment Class	:	Digital Transmission System (DTS)
Manufacturing Description	:	Electronic Shelf Label
Manufacturer	:	ATEC IoT CO., LTD.
Model name	:	AIR-R75A
Variant Model name	:	-
Test Device Serial No.:	:	Identical prototype
Rule Part(s)	:	FCC Part 15.247 Subpart C ; ANSI C63.10 - 2013
Frequency Range	:	2405 ~ 2480 MHz Zigbee
Max. Output Power	:	Max 4.79 dBm - Conducted
Data of issue	:	April 01 ,2024

This test report is issued under the authority of:

Ja-Beom Koo, Manager

The test was supervised by:

Eun-Hwan Jung, Test Engineer

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1. General information

1-1 Test Performed

Company name : LTA Co., Ltd.
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Quality control in the testing laboratory is implemented as per ISO/IEC 17025 which is the “General requirements for the competents of calibration and testing laboratory”.

1-2 Accredited agencies

LTA Co., Ltd. is approved to perform EMC testing by the following agencies:

Agency	Country	Accreditation No.	Validity	Reference
RRA	KOREA	KR0049	-	EMC accredited Lab.
FCC	U.S.A	649054	2025-03-29	FCC CAB
VCCI	JAPAN	C-4948,	2026-09-10	VCCI registration
VCCI	JAPAN	T-2416,	2026-09-10	VCCI registration
VCCI	JAPAN	R-4483(10 m),	2026-10-15	VCCI registration
VCCI	JAPAN	G-847	2024-12-13	VCCI registration
IC	CANADA	5799A-1	2024-08-15	IC filing

2. Information about test item

2-1 Client & Manufacturer

Client Company name : ATEC IoT CO., LTD.
 Address : 289, Pangyo-ro, Bundang-gu, Seongnam-si, Gyeonggi-do, Republic of Korea
 Tel / Fax : +82-31-696-9829 / +82-31-696-9899
 Manufacturer : ATEC IoT CO., LTD.
 Address : 289, Pangyo-ro, Bundang-gu, Seongnam-si, Gyeonggi-do, Republic of Korea
 Tel / Fax : +82-31-696-9829 / +82-31-696-9899

2-2 Equipment Under Test (EUT)

Model name : AIR-R58A
 Serial number : Identical prototype
 Date of receipt : February 27 ,2024
 EUT condition : Pre-production, not damaged
 Antenna type : Pattern Antenna (Gain : 0.95 dBi)
 Frequency Range : 2405 ~ 2480 MHz
 RF output power : Max 4.79 dBm – Conducted
 Type of Modulation : GFSK, O-QPSK
 Power Source : DC 3 V

2-3 Tested frequency

Bluetooth	LOW	MID	HIGH
Frequency (MHz)	2405	2440	2480

2-4 Ancillary Equipment

Equipment	Model No.	Serial No.	Manufacturer
Notebook	-	MS-1736	MSI

3. Test Report

3.1 Summary of tests

FCC Part Section(s)	Parameter	Limit	Test Condition	Status (note 1)
§ 1.1310 and §2.1091	RF EXPOSURE EVULATION	-	-	C

Note 1: C=Complies NC=Not Complies NT=Not Tested NA=Not Applicable

3.2 RF EXPOSURE EVULATION

1.1 Limit

According to §1.1310 and §2.1091 RF exposure is calculated.

(B) Limits for General Population/Uncontrolled Exposures

Frequency range (MHz)	Electric field Strength	Magnetic field Strength	Power density (mW/cm ²)	Averaging time
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

1.2 MAXIMUM PERMISSIBLE EXPOSURE Prediction

Prediction of MPE limit at a given distance

Power density at the specific separation:

<p>$S = PG/(4R^2\pi)$</p> <p>$S = (3.01 * 1.24) / (4 * 5^2 * \pi)$</p> <p>$S = 0.012 \text{ mW/cm}^2$</p>	<p>Where,</p> <p>S = Maximum power density (mW/cm²)</p> <p>P = Power input to the antenna (mW)</p> <p>G = Numeric power gain of the antenna</p> <p>R = Distance to the center of the radiation of the antenna (20 cm = limit for MPE)</p>
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1.3 MAXIMUM PERMISSIBLE EXPOSURE Prediction

- Calculated under the worst-case conditions of each mode.

(Measured power 3 dBm ± 0.5dB)

2.4GHz Mode

Max Peak output Power at antenna input terminal	4.79	dBm
Max Peak output Power at antenna input terminal	3.01	mW
Prediction distance	5	cm
Prediction frequency	2440	MHz
Antenna Gain(typical)	0.95	dBi
Antenna Gain(numeric)	1.24	-

SAR Test exclusion thresholds for 100MHz to 6GHz at test separation distance ≤ 50 mm = **Used**

$[(\text{max. power of channel, including tune-up tolerance, mW}) / (\text{min. test separation distance, mm})] * [\sqrt{f}(\text{GHz})]$

$= [3.01 / 50] * [\sqrt{2.440}] = 0.10 \leq 3.0$, for 1g SAR

Thus, SAR for this device is not required.