LTA
Laboratory for Test & Approval Co.,Ltd.

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Dates of Tests: May 21 ,2025 ~ June 11 ,2025
Test Report S/N: LR500112506C
Test Site : LTA CO., LTD.

CERTIFICATION OF COMPLIANCE

FCC ID. **2BP4MAIR-Y13A**

APPLICANT **ATEC CO., LTD.**

Equipment Class	:	**Digital Transmission System (DTS)**
Manufacturing Description	:	**Electronic Shelf Label**
Manufacturer	:	**ATEC CO., LTD.**
Model name	:	**AIR-Y13A**
Variant Model name	:	**AIR-R13A**
Test Device Serial No.:	:	**Identical prototype**
Rule Part(s)	:	**FCC Part 15.247 Subpart C ; ANSI C63.10 - 2020**
Frequency Range	:	**2405 ~ 2480 MHz Zigbee**
Max. Output Power	:	**Max 3.04 dBm - Conducted**
Data of issue	:	**June 13 ,2025**

This test report is issued under the authority of:

Eun-Hwan Jung, Manager

The test was supervised by:

In-Sun Lee, Test Engineer

Revision history

Revision	Date of issue	Description	Revised by
--	**April 01 ,2024**	Initial	-

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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	2027-03-29	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	2025-12-13	VCCI registration
IC	CANADA	5799A-1	2025-08-15	IC filing

2. Information about test item

2-1 Client & Manufacturer

Client Company name	:	ATEC CO., LTD.
Address	:	289, Pangyo-ro, Bundang-gu, Seongnam-si, Gyeonggi-do, Republic of Korea
Tel / Fax	:	+82-31-696-9841 / +82-31-696-9899
Manufacturer		ATEC CO., LTD.
Address		289, Pangyo-ro, Bundang-gu, Seongnam-si, Gyeonggi-do, Republic of Korea
Tel / Fax		+82-31-696-9841 / +82-31-696-9899

2-2 Equipment Under Test (EUT)

Model name	:	AIR-Y13A
Serial number	:	Identical prototype
Date of receipt	:	May 21 ,2025
EUT condition	:	Pre-production, not damaged
Antenna type	:	Pattern Antenna (Gain : -0.80 dBi)
Frequency Range	:	2405 ~ 2480 MHz
RF output power	:	Max 3.04 dBm – Conducted
Type of Modulation	:	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

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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:

$S = PG/(4R^2\pi)$ $S = (2.01 * 0.83) / (4 * 5^2 * \pi)$ $S = 0.000\ 3\ mW/cm^2$	Where, S = Maximum power density (mW/cm^2) P = Power input to the antenna (mW) G = Numeric power gain of the antenna R = Distance to the center of the radiation of the antenna (20 cm = limit for MPE)

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	3.04	dBm
Max Peak output Power at antenna input terminal	2.01	mW
Prediction distance	5	mm
Prediction frequency	2480	MHz
Antenna Gain(typical)	-0.80	dBi
Antenna Gain(numeric)	0.83	-

SAR Test exclusion thresholds for 100MHz to 6GHz at test separation distance ≤ 5 mm = **Used**

[(max.power of channel, including tune-up torelance, mW)/(min. test separation distance, mm)] * [√f(GHz)]

= [2.01 / 5] * [√2.480] = 0.6 ≤ 3.0, for 1g SAR

Thus, SAR for this device is not required.

