



RF Exposure Evaluation

FCC ID: DLAMW-42BT

Applicant: TOA Corporation

Address: 1-10 Takamatsu-cho, Takarazuka, 665-0043 Japan

Manufacturer: TOA Corporation

Address: 1-10 Takamatsu-cho, Takarazuka, 665-0043 Japan

EUT: AUDIO INTERFACE WITH USB AND BLUETOOTH

Trade Mark: -

Model Number: MW-42BT-AM

Date of Receipt: Jul. 25, 2025

Test Date: Jul. 28, 2025-Aug. 20, 2025

Date of Report: Aug. 21, 2025

Prepared By: Shenzhen DL Testing Technology Co., Ltd.

Address: 101-201, Building C, Shuanghuan, No.8, Baoqing Road, Baolong Industrial Zone, Baolong Street, Longgang District, Shenzhen, Guangdong, China
47CFR§1.1310, 47CFR§1.1307

Applicable Standards: FCC CFR 47 part2 2.1091
KDB 447498 D01 General RF Exposure Guidance v06

Test Result: Pass

Report Number: DLE-250815042R-1

Prepared (Test Engineer): Alisa Song

Reviewer (Supervisor): Jack Bu

Approved (Manager): Jade Yang



This test report is based on a single evaluation of one sample of above mentioned products. It is not permitted to be duplicated in extracts without written approval of Shenzhen DL Testing Technology Co., Ltd.



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1. Product Information

Product Name:	AUDIO INTERFACE WITH USB AND BLUETOOTH
Model No.:	MW-42BT-AM
Model Difference	-
BT Version:	5.4
Operation Frequency:	2402~2480MHz
Channel numbers:	79 Channels
Channel separation:	2M
Modulation technology:	GFSK , $\pi/4$ DQPSK, 8DPSK
Antenna Type:	PCB antenna
Antenna gain:	2.0dBi
Power supply:	DC 24V by adapter
Test sample(s) ID:	DLE-250815042R01

Note:

- 1.For a more detailed features description, please refer to the manufacturer's specifications or the User's Manual.
- 2.The EUT's all information provided by client.



2. Test laboratory information

Test Lab: Shenzhen DL Testing Technology Co., Ltd.
101-201, Building C, Shuanghuan, No.8, Baoqing Road, Baolong
Address: Industrial Zone, Baolong Street, Longgang District, Shenzhen,
Guangdong, China
FCC Test Firm Registration Number: 854456
Designation Number: CN1307
IC Registered No.: 27485
CAB ID.: CN0118

3. MEASUREMENT UNCERTAINTY

The reported uncertainty of measurement $y \pm U$, where expanded uncertainty U is based on a standard uncertainty multiplied by a coverage factor of $k=2$, providing a level of confidence of approximately 95 %.

No.	Item	Uncertainty
1	Conducted Emission Test	$\pm 2.56\text{dB}$
2	RF power,conducted	$\pm 0.42\text{dB}$
3	Spurious emissions,conducted	$\pm 2.76\text{dB}$
4	All emissions,radiated(<1G)	$\pm 3.65\text{dB}$
5	All emissions,radiated(>1G)	$\pm 4.89\text{dB}$
6	Temperature	$\pm 0.5^{\circ}\text{C}$
7	Humidity	$\pm 2\%$
8	Bandwidth	$\pm 0.2\text{MHz}$
9	Time	$\pm 2\%$



4. METHOD OF MEASUREMENT

4.1 APPLICABLE STANDARD

ANSI C95.1 – 1999: IEEE Standard for Safety Levels with Respect to Human Exposure to Radio Frequency Electromagnetic Fields, 3 kHz to 300 GHz.

FCC KDB447498 D01 General RF Exposure Guidance v06: Mobile and Portable Device, RF Exposure, Equipment Authorization Procedures.

FCC CFR 47 part1 1.1310: Radio frequency radiation exposure limits

FCC CFR 47 part2 2.1091: Radiofrequency radiation exposure evaluation: mobile devices

The criteria listed in the following table shall be used to evaluate the environment impact of human exposure to radio frequency (RF) radiation as specified in 1.1307(b)

4.2 LIMIT

Frequency range (MHz)	Electric field strength (V/m)	Magnetic field strength (A/m)	Power density (mW/cm ²)	Averaging time (minutes)
(A) Limits for Occupational/Controlled Exposures				
0.3–3.0	614	1.63	*(100)	6
3.0–30	1842/f	4.89/f	*(900/f ²)	6
30–300	61.4	0.163	1.0	6
300–1500			f/300	6
1500–100,000			5	6
(B) Limits for General Population/Uncontrolled Exposure				
0.3–1.34	614	1.63	*(100)	30
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

Friis transmission formula: $Pd = (Pout \cdot G) / (4 \cdot \pi \cdot r^2)$

Where

Pd = power density in mW/cm², **Pout** = output power to antenna in mW;

G = gain of antenna in linear scale, **Pi** = 3.1416;

R = distance between observation point and center of the radiator in cm

Pd is the limit of MPE, 1 mW/cm². If we know the maximum gain of the antenna and the total power input to the antenna, through the calculation, we will know the distance r where the MPE limit is reached.



Test Procedure

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

5. EVALUATION RESULTS

Tune-up Power

EDR					
Mode	Frequency	Output power to antenna (dBm)	Output power to antenna (mW)	Max Tune-up Power(dBm) ± 1	Target Power(dBm)
GFSK	2441	-1.21	0.757	-1	0
Pi/4DQPSK	2441	-0.42	0.908	0	1
8DPSK	2441	-0.25	0.944	0	1
BLE					
GFSK	2440	-0.27	0.94	0	1

Mode	Max Output power to antenna (dBm)	Max Output power to antenna (mW)	Power Density at R=20cm (mW/cm ²)	Limit (mW/cm ²)	Result
GFSK	0	1.000	0.00032	1.0	PASS
Pi/4DQPSK	1	1.259	0.00040	1.0	PASS
8DPSK	1	1.259	0.00040	1.0	PASS
GFSK	1	1.259	0.00040	1.0	PASS

Remark: antenna gain=2.00dBi

So a SAR test is not required

****END OF REPORT****