



RF EXPOSURE REPORT

Applicant	:	Klein Tools Inc.
Address of Applicant	:	450 Bond Street Lincolnshire IL, 60069 USA
Manufacturer	:	Klein Tools Inc.
Address of Manufacturer	:	450 Bond Street Lincolnshire IL, 60069 USA
Equipment under Test	:	Hardhat Bluetooth Speaker
Model No.	:	AEPHS1
FCC ID	:	2AI28-AEPHS1
Test Standard(s)	:	KDB447498 D01 General RF Exposure Guidance v06
Report No.	:	DDT-RE24053007-1E03
Issue Date	:	2024/07/19
Issue By	:	Guangdong Dongdian Testing Service Co., Ltd. Unit 2, Building 1, No. 17, Zongbu 2nd Road, Songshan Lake Park, Dongguan, Guangdong, China, 523808

REPORT

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Test Report Declare

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Equipment under Test	:	Hardhat Bluetooth Speaker
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Test Standard Used:

KDB447498 D01 General RF Exposure Guidance v06

We Declare:

The equipment described above is tested by Guangdong Dongdian Testing Service Co., Ltd. and in the configuration tested the equipment complied with the standards specified above. The test results are contained in this test report and Guangdong Dongdian Testing Service Co., Ltd. is assumed of full responsibility for the accuracy and completeness of these tests.

Report No.:	DDT-RE24053007-1E03		
Date of Receipt:	2024/06/17	Date of Test:	2024/06/17~2024/07/19

Prepared By:

Ziqin Chen
Ziqin Chen/Engineer

Approved By:

Damon Hu
Damon Hu/EMC Manager

Note: This report applies to above tested sample only. This report shall not be reproduced in parts without written approval of Guangdong Dongdian Testing Service Co., Ltd.

Revision History

Rev.	Revisions	Issue Date	Revised By
---	Initial issue	2024/07/19	

1. General Test Information

1.1. Description of EUT

EUT Name	: Hardhat Bluetooth Speaker
Model Number	: AEPHS1
Difference of model number	: /
EUT Function Description	: Please reference user manual of this device
Power Supply	: Input: 5V = 1A (via type-C port) Internal Li-ion Polymer battery: 3.8Vdc, 250mAh, 0.95Wh
Hardware Version	: V1.3
Software Version	: V1.0.0.7

Note: The above EUT information is declared by manufacturer and for more detailed features description please refer to the manufacturer's specifications or User's Manual. The above Antenna information is declared by manufacturer and for more detailed features description please refer to the manufacturer's specifications, the laboratory shall not be held responsible.

“☒” means to be chosen or applicable; “☐” means don't to be chosen or not applicable; This note applies to entire report.

1.2. Accessories of EUT

Accessories	Manufacturer	Model number	Description
/	/	/	/

1.3. Test laboratory

Guangdong Dongdian Testing Service Co., Ltd.

Add.: Unit 2, Building 1, No. 17, Zongbu 2nd Road, Songshan Lake Park, Dongguan, Guangdong, China, 523808.

Tel.: +86-0769-38826678, <http://www.dgddt.com>, Email: ddt@dgddt.com.

CNAS Accreditation No. L6451; A2LA Accreditation Number: 3870.01

FCC Designation Number: CN1182, Test Firm Registration Number: 540522

Innovation, Science and Economic Development Canada Site Registration Number: 10288A

Conformity Assessment Body identifier: CN0048

VCCI facility registration number: C-20087, T-20088, R-20123, R-20155, G-20118

2. RF Exposure evaluation for FCC

2.1. Assessment procedure

According to 447498 D01 General RF Exposure Guidance v06

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 calculation

The result is rounded to one decimal place for comparison

2.2. Assess result

Manufacturing Tolerance:

BT:

Mode	Antenna	Frequency [MHz]	Target Power	Tolerance $\pm$ (dBm)
GFSK (Peak)	Left side and Right side	2402	1.5	1
		2441	0.5	1
		2480	1	1
π /4DQPSK (Peak)	Left side and Right side	2402	1.5	1
		2441	0.5	1
		2480	1	1
8DPSK (Peak)	Left side and Right side	2402	1.5	1
		2441	0.5	1
		2480	1	1

BLE:

Mode	Antenna	Frequency [MHz]	Target Power	Tolerance $\pm$ (dBm)
GFSK 1M(Peak)	Left side and Right side	2402	1	1
		2440	1	1
		2480	1	1

Estimtion Result:

Worse case is as below: [2402 MHz, 2.5 dBm, (1.78 mW) output power]

$(1.78/5) \cdot [\sqrt{2.402(\text{GHz})}] = 0.551 < 3.0$ for 1-g SAR

Then SAR evaluation is not required.

-----End Report-----