

Test Report No.: 25112601-SE-US-01

RF Exposure Report

FCC ID: 2BBQK-ACTONIV

Applicant: Marshall Group AB

Address: Centralplan 15 111 20 Stockholm Sweden

Manufacturer: Marshall Group AB

Address: Centralplan 15 111 20 Stockholm Sweden

Product: HOME BLUETOOTH SPEAKER

Brand(s): Marshall, *Marshall*

Test Model(s): ACTON IV

Series Model(s): N/A

Test Date: Dec. 22, 2025 ~ Dec. 29, 2025

Issued Date: Dec. 31, 2025

Issued By: Hwa-Hsing (Dongguan) Testing Co., Ltd.

Address: No.101, Building N1, Yuyuan 2 Road, Yuyuan Industrial Park,
HuangJiang Town, Dongguan City, People's Republic of China

Test Firm Registration No.: 915896

Designation No.: CN1255

Standards: FCC Part 2 (Section 2.1091)
KDB 447498 D01
IEEE C95.1

The above equipment has been tested by **Hwa-Hsing (Dongguan) Testing Co., Ltd.**, and found compliance with the requirement of the above standards. The test record, data evaluation & Equipment Under Test (EUT) configurations represented herein are true and accurate accounts of the measurements of the sample's EMC characteristics under the conditions specified in this report.

Prepared by :

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Release

[Ver. 1.5](#)

Table of contents

Release control record	3
1 General Information	4
1.1 General Description of EUT	4
2 RF exposure limit	5
2.1 MPE calculation formula	5
3 Calculation result of maximum conducted power	6
Appendix - Information on the Testing Laboratories	7

Test Report No.: 25101703-SE-US-01

Release control record

Issue No.	Reason for change	Date issued
25101703-SE-US-01	Original Release	Dec. 31, 2025

Test Report No.: 25101703-SE-US-01

1 General Information**1.1 General Description of EUT**

Product	HOME BLUETOOTH SPEAKER
Sample No.	ACTON IV
Test Model(s)	HX2510170301, HX2510170302
Series Model(s)	N/A
Status of EUT	Engineering Prototype
Power Supply Rating	100-240V~,50/60Hz,36W
Modulation Type	GFSK, $\pi/4$ DQPSK,8DPSK for FHSS GFSK for DTS
Transfer Rate	1Mbps, 2Mbps, 3Mbps
Operating Frequency	2402 ~ 2480MHz
Number of Channel	79 for FHSS 40 for DTS
Maximum Output Power	13.99dBm-Peak
Antenna Type and Antenna Gain	PCB Antenna, 3.52dBi
Antenna Connector	N/A
Accessory Device	AC cable 190cm

Note:

1. Please refer to the EUT photo document (Reference No.:25101703-01&02) for detailed product photo.
2. Hwa-Hsing (Dongguan) Testing Co., Ltd. is not responsible for the accuracy of the information provided by the manufacturer.
3. 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.

Test Report No.: 25101703-SE-US-01

2 RF exposure limit

Limits for maximum permissible exposure (MPE)

Limits for general population / uncontrolled exposure				
Frequency range (MHz)	Electric field strength (V/m)	Magnetic field strength (A/m)	Power density (mW/cm ²)	Average time (minutes)
300-1500	...	...	F/1500	30
1500-100,000	...	...	1.0	30
Note: F = Frequency in MHz				

2.1 MPE calculation formula

$$Pd = (Pout * G) / (4 * \pi * r^2)$$

*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

Classification:

The antenna of this product, under normal use condition, is at least 20cm away from the body of the user.

Test Report No.: 25101703-SE-US-01

3 Calculation result of maximum conducted power

The antennas provided to the EUT, please refer to the following table:

Function	Frequency (MHz)	Antenna Gain (dBi)	Antenna Type	Transmit and Receive Chain	Maximum Power
BT	2402-2480	3.52	PCB	1TX,1RX	13.99dBm
BLE	2402-2480	3.52	PCB	1TX,1RX	6.15dBm

Frequency (MHz)	Max power (mW)	Antenna gain (dBi)	Distance (cm)	Power density (mW/cm ²)	Limit (mW/cm ²)
2402-2480	25.0611	3.52	20	0.011213	1.0
2402-2480	4.1210	3.52	20	0.001844	1.0

Conclusion:

Therefore, the worst-case situation is 0.011213 mW/cm², which is less than "1". This confirmed that the device compliance with FCC 1.1310 MPE limit.

Test Report No.: 25101703-SE-US-01

Appendix – Information on the Testing Laboratories

We, [Hwa-Hsing \(Dongguan\) Testing Co., Ltd.](#), A global provider of TESTING and CERTIFICATION services for consumer products, electronic products and wireless information technology products. Adhering to the core values "HONEST and TRUSTWORTHY, OBJECTIVE and IMPARTIALITY, RIGOROUS and AFFICIENT", commitment to provide professional, perfect and efficient comprehensive ONE-STOP solution of TESTING and CERTIFICATION services for Manufacturers, Buyers, Traders, Brands, Retailers. Assist client to better manage risk, protect their brands, reduce costs and cut time to over 150 markets in global. Our laboratories are FCC recognized accredited test firms and accredited and approved according to ISO/IEC 17025.

If you have any comments, please feel free to contact us at the following:

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