



RF EXPOSURE REPORT

Applicant	:	SHENZHEN FENDA TECHNOLOGY CO., LTD.
Address of Applicant	:	Fenda Hi-Tech Park, Zhoushi Road, Shiyan Town, Baoan District, Shenzhen City, Guangdong, China
Manufacturer	:	SHENZHEN FENDA TECHNOLOGY CO., LTD.
Address of Manufacturer	:	Fenda Hi-Tech Park, Zhoushi Road, Shiyan Town, Baoan District, Shenzhen City, Guangdong, China
Equipment under Test	:	5.1CH Soundbar with Wireless Subwoofer 3.1CH Soundbar with Wireless Subwoofer
Model No.	:	M510WR, M310WR, M510WR1, M510WR2, M510WR3, M510WR4, M510WR5, M310WR1, M310WR2, M310WR3, M310WR4, M310WR5
Trade Mark	:	TOSHIBA
FCC ID	:	HBOM510WR
Test Standard(s)	:	KDB447498 D01 General RF Exposure Guidance v06
Report No.	:	DDT-RE25052319-1E03
Issue Date	:	2025/08/22
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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Address of Manufacturer	:	Fenda Hi-Tech Park, Zhoushi Road, Shiyan Town, Baoan District, Shenzhen City, Guangdong, China




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-RE25052319-1E03		
Date of Receipt:	2025/06/13	Date of Test:	2025/06/13~2025/07/25

Created: Chen Ziqin	Reviewed: Zoe Peng	Approved: Damon Hu
		
2025/07/25	2025/08/22	2025/08/22

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

Version	Revision Content	Issue Date	Approved
V0	Initial issue	2025/08/22	Damon Hu

1. General Test Information

1.1. Description of EUT

EUT Name	: 5.1CH Soundbar with Wireless Subwoofer 3.1CH Soundbar with Wireless Subwoofer
Model Number	: M510WR, M310WR, M510WR1, M510WR2, M510WR3, M510WR4, M510WR5, M310WR1, M310WR2, M310WR3, M310WR4, M310WR5
Difference of model number	: Above models are identical in schematic and structure, but the model number, appearance and trademark are different, therefore the test performed on the model M510WR
EUT Function Description	: Please reference user manual of this device
Power Supply	: AC 100-240V, 50/60Hz
Hardware Version	: M510WR-MF
Software Version	: V1.0

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.

1.2. Accessories of EUT

Accessories	Manufacturer	Model number	Description
Remote control	/	/	/
Power cable	/	/	Length: 138cm, without core
HDMI cable	/	/	Length: 141cm, without core
Link cable of Surround	/	/	Length: 796cm, without core
Adapter	Shenzhen Fangxin	FX36E-200120C	Input: 100-240V~ 50/60Hz 0.8A Output: 20.0V = 1.2A (24.0W) Wire Length: 142cm, without core

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-20240, G-20118

2. RF Exposure evaluation for FCC

2.1. Assessment procedure

Requirement:

Systems operating under the provisions of FCC 47 CFR section shall be operated in a manner that ensures that the public is not exposed to radio frequency energy level in excess of the Commission's guidelines.

In accordance with 47 CFR FCC Part 2 Subpart J, section 2.1091 this device has been defined as mobile device whereby a distance of 0.2 m normally can be maintained between the user and the device, and below RF Permissible Exposure limit shall comply with.

Limits for General Population/Uncontrolled Exposure

Frequency Range (MHz)	Electric Field Strength (E) (V/m)	Magnetic Field Strength (H) (A/m)	Power Density (S) (mW/cm ²)	Averaging Time E ² , H ² or S (minutes)
0.3-1.34	614	1.63	(100)*	30
1.34-30	824/f	2.19/f	(180/f)*	30
30-300	27.5	0.073	0.2	30
300-1500			F/1500	30
1500-100000			1.0	30
Note: f= frequency in MHz; *Plane-wave equivalent power density				

Calculation method

$$E(\text{V/m}) = \frac{\sqrt{30 \times P \times G}}{d} \quad \text{Power Density: } S(\text{mW/cm}^2) = \frac{E^2}{377}$$

E = Electric field (V/m)

P = Peak RF output power (mW)

G = EUT Antenna numeric gain (numeric)=

d = Separation distance between radiator and human body (m)

The formula can be changed to

We can change the formula to:

$$S = \frac{30 \times P \times G}{377 \times d^2} \quad \text{or, } d = \sqrt{\frac{30 \times P \times G}{377 \times S}}$$

From the peak EUT RF output power, the minimum mobile separation distance, d=0.2 m, as well as the gain of the used antenna, the RF power density can be obtained.

2.2. Assess result

Mode	Output power (dBm)	Output power (mW)	Tune up power (dBm)	Tune up power (mW)	Antenna Gain (dBi)	Antenna Gain (linear)	MPE Values (mW/cm ²)	MPE Limit (mW/cm ²)
BT	8.02	6.34	8.5	7.08	3.87	2.44	0.0034	1
SRD	5.43	3.49	6.0	3.98	2.85	1.93	0.0015	1

Simultaneous transmit evaluation result: $0.0034 + 0.0015 = 0.0049 < 1$.

Note: The estimation distance is 20 cm

PK Output Power = $100.63 \text{ dBuV/m} @ 3\text{m} - 95.2 = 5.43 \text{ dBm}$

Please refer to the test report "DDT-RE25052319-1E02"

Conclusion: MPE evaluation required since transmitter power is below FCC threshold

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