



## RF Exposure Evaluation Declaration

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**FCC ID:** Z9G-EDF137

**APPLICANT:** Edifier International Limited

**Application Type:** Certification

**Product:** Multimedia Speaker

**Model No.:** EDF100007

**Brand Name:** EDIFIER

**FCC Rule Part(s):** FCC Part 2 (Section 2.1091)  
KDB 447498 D01 General RF Exposure Guidance v06  
IEEE C95.1-1992

**Test Date:** March 02 ~ 10, 2021

Reviewed By:

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The test results relate only to the samples tested.

The test results shown in the test report are traceable to the national/international standards through the calibration of the equipment and evaluated measurement uncertainty herein.

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## Revision History

Report No.	Version	Description	Issue Date	Note
2102RSU082-U2	Rev. 01	Initial Report	03-19-2021	Valid

## 1. PRODUCT INFORMATION

### 1.1. Equipment Description

Product Name	Multimedia Speaker
Model No.	EDF100007
Operating Temp.	0 ~ 45°C
Rated Input	100-240V~50/60Hz, 500mA
Bluetooth Version	v5.1 single mode, BR/EDR only

### 1.2. RF Specification

Operating Frequency	2402~2480MHz
Channel Number	79
Type of modulation	GFSK, Pi/4 DQPSK, 8DPSK
Data Rate	1Mbps (GFSK), 2Mbps (Pi/4 DQPSK), 3Mbps (8DPSK)
Antenna Type	Chip Antenna
Antenna Gain	2.5dBi

## 2. RF Exposure Evaluation

### 2.1. Limits

According to FCC 1.1310: 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)

#### LIMITS FOR MAXIMUM PERMISSIBLE EXPOSURE (MPE)

Frequency Range (MHz)	Electric Field Strength (V/m)	Magnetic Field Strength (A/m)	Power Density (mW/cm <sup>2</sup> )	Average Time (Minutes)
(A) Limits for Occupational/ Control Exposures				
300-1500	--	--	f/300	6
1500-100,000	--	--	5	6
(B) Limits for General Population/ Uncontrolled Exposures				
300-1500	--	--	f/1500	6
1500-100,000	--	--	1	30

f= Frequency in MHz

Calculation Formula:  $P_d = (P_{out} * G) / (4 * \pi * r^2)$

Where

$P_d$  = power density in mW/cm<sup>2</sup>

$P_{out}$  = 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

$P_d$  is the limit of MPE, 1mW/cm<sup>2</sup>. 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.

## 2.2. Test Result of RF Exposure Evaluation

Product	Multimedia Speaker
Test Item	RF Exposure Evaluation

Test Mode	Frequency Band (MHz)	Maximum Output Power (dBm)	E.I.R.P (dBm)	Power Density at R = 20 cm (mW/cm <sup>2</sup> )	Limit (mW/cm <sup>2</sup> )
Bluetooth	2402 ~ 2480	12.03	14.53	0.0056	1

### CONCLUSION:

The Max Power Density at R (20 cm) = 0.0056mW/cm<sup>2</sup> < 1mW/cm<sup>2</sup>.

So the EUT complies with the requirement.

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## **Appendix - EUT Photograph**

Refer to "2102RSU082-UE" file.