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Report No.: 1903RSU018-U2 Report Version: V01 Issue Date: 03-29-2019

# **RF Exposure Evaluation Declaration**

**FCC ID**: 2AB9SM100

APPLICANT: Shenzhen Jonter Digital Co., Ltd

**Application Type:** Certification

**Product:** Bluetooth Speaker

Model No.: M100

Serial Model No.: GDI-EXRMX101

Trademark: ECOXGEAR

FCC Classification: FCC Part 15 Spread Spectrum Transmitter(DSS)

Reviewed By:

(Jame Yuan)

Approved By:

(Robin Wu)



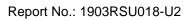


The test results relate only to the samples tested.

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.

The test report shall not be reproduced except in full without the written approval of MRT Technology (Suzhou) Co., Ltd.

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# **Revision History**

Report No.	Version	Description	Issue Date	Note
1903RSU018-U2	Rev. 01	Initial Report	03-29-2019	Valid

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### 1. PRODUCT INFORMATION

### 1.1. Equipment Description

Product Name	Bluetooth Speaker	
Model No.	M100	
Serial Model No.	GDI-EXRMX101	
Brand Name	ECOXGEAR	
Bluetooth Specification	v4.2 (Single mode for EDR)	
Frequency Range	2402~2480MHz	
Type of Modulation	GFSK, Pi/4 DQPSK, 8DPSK	
Antenna Type	PCB Antenna	
Antenna Gain	0dBi	

Note: The different models are only for marketing different clients, others are the same.

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### 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/cm²)	Average Time (Minutes)	
(A) Limits for Occupational/ Control Exposures					
300-1500	-	-	f/300	6	
1500-100,000	1	1	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<sub>out</sub> = output power to antenna in mW

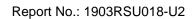
G = gain of antenna in linear scale

Pi = 3.1416

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

P<sub>d</sub> 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.

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### 2.2. Test Result of RF Exposure Evaluation

Product	Bluetooth Speaker
Test Item	RF Exposure Evaluation

#### Antenna Gain = 0dBi

Frequency Band	Maximum Peak Power	Power Density at	Limit
(MHz)	(dBm)	R = 20 cm	(mW/cm <sup>2</sup> )
		(mW/cm <sup>2</sup> )	
2402 ~ 2480	3.19	0.0004	1

#### **CONCLUSION:**

The max Power Density at R (20 cm) = 0.0004mW/cm<sup>2</sup> < 1mW/cm<sup>2</sup>.

Therefore, the Min Safety Distance is 20cm.

———— The End

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# Appendix A - Test Setup Photograph

Refer to "1903RSU018-UT" file.

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# Appendix B - EUT Photograph

Refer to "1903RSU018-UE" file.

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