



## RF Exposure Evaluation Declaration

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**FCC ID:** 2AT2J-MS11901  
**APPLICANT:** SHENZHEN JMT TECH LTD.

**Application Type:** Certification  
**Product:** Monster Bluetooth Speaker  
**Model No.:** MS11901  
**Brand Name:** MONSTER  
**FCC Classification:** FCC Part 15 Spread Spectrum Transmitter (DSS)

Reviewed By:

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Approved By:

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( 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
1907RSU050-U2	Rev. 01	Initial Report	10-12-2019	Valid

## 1. PRODUCT INFORMATION

### 1.1. Equipment Description

Product Name:	Monster Bluetooth Speaker
Model No.:	MS11901
Brand Name:	MONSTER
Bluetooth Version:	v4.2 (Single mode for BR/EDR)
Power Supply:	By Internal Battery
Battery Specification:	3.7V, 1500mAh, 5.55Wh

### 1.2. Product Specification Subjective

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:	PCB Antenna
Antenna Gain:	2dBi

Note: For other features of this EUT, test report will be issued separately.

## 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	Monster Bluetooth Speaker
Test Item	RF Exposure Evaluation

Frequency Band (MHz)	Maximum Peak Power		Antenna Gain (dBi)	Power Density at R = 20 cm (mW/cm <sup>2</sup> )	Limit (mW/cm <sup>2</sup> )
	(dBm)	(mW)			
2402 ~ 2480	5.67	3.69	2	0.0012	1

### CONCLUSION:

The max Power Density at R (20 cm) = 0.0012mW/cm<sup>2</sup> < 1mW/cm<sup>2</sup>.

Therefore, the Min Safety Distance is 20cm.

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## Appendix A - Test Setup Photograph

Refer to "1907RSU050-UT" file.

## **Appendix B - EUT Photograph**

Refer to "1907RSU050-UE" file.