RF Exposure Evaluation Report

APPLICANT	:	**Ring LLC**
EQUIPMENT	:	**Ring Intercom**
BRAND NAME	:	ring
MODEL NAME	:	**5F99F2**
FCC ID	:	**2AEUPBHART011**
STANDARD	:	**47 CFR Part 2.1091** **FCC KDB 447498 D01 V06**

The product evaluation date was started from Mar. 26, 2024 and completed on Apr. 20, 2024. We, Sporton International Inc. (Shenzhen), would like to declare that the device has been evaluated in accordance with 47 CFR Part 2.1091 and FCC KDB 447498 D01 v06, and pass the limit. Without written approval of Sporton International Inc. (Shenzhen), the test report shall not be reproduced except in full.

Si Zhang

Approved by: Si Zhang

Sporton International Inc. (Shenzhen)
1/F, 2/F, Bldg 5, Shiling Industrial Zone, Xinwei Village, Xili, Nanshan, Shenzhen, 518055
People's Republic of China

Table of Contents

Revision History

REPORT NO.	VERSION	DESCRIPTION	ISSUED DATE
FA412405	Rev. 01	Initial issue of report.	May 06, 2024

1. Administration Data

1.1. Testing Laboratory

Sporton International Inc. (Shenzhen) is accredited to ISO/IEC 17025:2017 by American Association for Laboratory Accreditation with Certificate Number 5145.01.

Testing Laboratory			
Test Firm	Sporton International Inc. (Shenzhen)		
Test Site Location	1/F, 2/F, Bldg 5, Shiling Industrial Zone, Xinwei Village, Xili, Nanshan, Shenzhen, 518055 People's Republic of China TEL: +86-755-86379589 FAX: +86-755-86379595		
Test Site No.	**Sporton Site No.**	**FCC Designation No.**	**FCC Test Firm Registration No.**
	SAR01-SZ	CN1256	421272

Applicant	
Company Name	Ring LLC
Address	1523 26th Street, Santa Monica, CA 90404 USA

Manufacturer	
Company Name	Ring LLC
Address	1523 26th Street, Santa Monica, CA 90404 USA

2. Description of Equipment Under Test (EUT)

Product Feature & Specification	
EUT Type	Ring Intercom
Brand Name	ring
Model Name	5F99F2
FCC ID	2AEUPBHART011
Wireless Technology and Frequency Range	WLAN 2.4GHz Band: 2412 MHz ~ 2472 MHz Bluetooth: 2402 MHz ~ 2480 MHz
Mode	WLAN 2.4GHz 802.11b/g/n HT20 Bluetooth LE
Antenna Gain	Bluetooth: 2.50 dBi WLAN: 2.00 dBi
Antenna Type	WLAN: Inverted F Antenna Bluetooth: Meandered Loop Antenna
EUT Stage	Identical Prototype
Remark: **1.** WLAN2.4GHz n-HT40MHz is not supported. **2.** The above EUT's information was declared by manufacturer. Please refer to the specifications or user's manual for more detailed description.	

Comments and Explanations:
1. The declared of product specification for EUT presented in the report are provided by the manufacturer, and the manufacturer takes all the responsibilities for the accuracy of product specification.
2. The maximum RF output tune up power, antenna gain also the safe distance used for evaluate RF exposure were declared by manufacturer.

3. Maximum RF average output tune up power among production units

<Bluetooth>

Mode		Maximum Average power(dBm)
Bluetooth	LE	6.00

<2.4GHz WLAN >

Mode		Maximum Average Power (dBm)
2.4GHz	802.11b	20.50
	802.11g	20.00
	802.11n-HT20	18.50

4. RF Exposure Limit Introduction

According to ANSI/IEEE C95.1-1992, the criteria listed in Table 1 shall be used to evaluate the environmental impact of human exposure to radio frequency (RF) radiation as specified in §1.1310.

Frequency range (MHz)	Electric field strength (V/m)	Magnetic field strength (A/m)	Power density (mW/cm^2)	Averaging time (minutes)
(A) Limits for Occupational/Controlled Exposures				
0.3-3.0	614	1.63	*(100)	6
3.0-30	1842/f	4.89/f	*(900/f2)	6
30-300	61.4	0.163	1.0	6
300-1500			f/300	6
1500-100,000			5	6
(B) Limits for General Population/Uncontrolled Exposure				
0.3-1.34	614	1.63	*(100)	30
1.34-30	824/f	2.19/f	*(180/f2)	30
30-300	27.5	0.073	0.2	30
300-1500			f/1500	30
1500-100,000			1.0	30

The MPE was calculated at 20 cm to show compliance with the power density limit.

The following formula was used to calculate the Power Density:

$$S = \frac{PG}{4\pi R^2}$$

Where:
S = Power Density
P = Output Power at Antenna Terminals
G = Gain of Transmit Antenna (linear gain)
R = Distance from Transmitting Antenna

5. Radio Frequency Radiation Exposure Evaluation

5.1. Standalone Power Density Calculation

Band	Frequency (MHz)	Antenna Gain (dBi)	Maximum Power (dBm)	Maximum EIRP (dBm)	Average EIRP (mW)	Power Density at 20cm (mW/cm^2)	Limit (mW/cm^2)
Bluetooth	2402.0	2.50	6.00	8.500	7.079	0.001	1.000
2.4GHz WLAN	2412.0	2.00	20.50	22.500	177.828	0.035	1.000

Note:
1. For conservativeness, the lowest frequency of each band is used to determine the MPE limit of that band.
2. Chose the maximum power to do MPE analysis.
3. According to the EUT characteristic, WLAN2.4GHz and Bluetooth cannot transmit simultaneously.

Conclusion:

According to 47 CFR §2.1091, the RF exposure analysis concludes that the RF Exposure is FCC compliant.

------THE END------