



RF Exposure Evaluation Report

APPLICANT : Power Idea Technology Limited
EQUIPMENT : Push To Talk with Bluetooth audio link
BRAND NAME : RugGear
MODEL NAME : Bluetooth PTT Remote Speaker Microphone
FCC ID : ZLE3103
STANDARD : 47 CFR Part 2.1093
FCC KDB 447498 D01 v05r01

We, SPORTON INTERNATIONAL (SHENZHEN) INC., would like to declare that the device has been evaluated in accordance with 47 CFR Part 2.1093 and pass the limit. Without written approval of SPORTON INTERNATIONAL (SHENZHEN) INC., the test report shall not be reproduced except in full.

Reviewed by: Eric Huang / Deputy Manager

Approved by: Jones Tsai / Manager

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Revision History

| REPORT NO. | VERSION | DESCRIPTION | ISSUED DATE |
|------------|---------|-------------------------|---------------|
| FA351401 | Rev. 01 | Initial issue of report | Dec. 18, 2013 |
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1. Administration Data

1.1 Testing Laboratory

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|---------------------------|--|
| Test Site | SPORTON INTERNATIONAL (SHENZHEN) INC. |
| Test Site Location | No. 3 Building, the third floor of south, Shahe River west, Fengzeyuan warehouse, Nanshan District, Shenzhen, Guangdong, P.R.C. TEL: +86-755- 3320-2398 |

1.2 Applicant

| | |
|---------------------|--|
| Company Name | Power Idea Technology Limited |
| Address | 4th Floor, A Section, Languang Science&technology, Xinxi RD, Hi-Tech Industrial Park North, Nanshan, ShenZhen, China |

1.3 Manufacturer

| | |
|---------------------|--|
| Company Name | Power Idea Technology Limited |
| Address | 4th Floor, A Section, Languang Science&technology, Xinxi RD, Hi-Tech Industrial Park North, Nanshan, ShenZhen, China |

2. General Information

2.1 Description of Device Under Test (DUT)

| Product Feature & Specification | |
|---|---|
| DUT Type | Push To Talk with Bluetooth audio link |
| Brand Name | RugGear |
| Model Name | Bluetooth PTT Remote Speaker Microphone |
| FCC ID | ZLE3103 |
| Wireless Technology and Frequency Range | Bluetooth: 2402 MHz ~ 2480 MHz |
| Mode | • Bluetooth v3.0 + EDR |
| Antenna Type | Ceramic Chip Antenna |
| HW Version | RTKRSM0 2.0 20130325 |
| SW Version | RTKRSM0 1.0 20130502 |
| DUT Stage | Identical Prototype |

Remark: The above DUT's information was declared by manufacturer. Please refer to the specifications or user's manual for more detailed description.

3. Maximum RF output power among production units

| Mode / Band | Average Power (dBm) | | |
|------------------|---------------------|----------------|----------|
| | 1Mbps | 2Mbps | 3Mbps |
| | (GFSK) | $\pi/4$ -DQPSK | (8-DPSK) |
| 2.4GHz Bluetooth | -4 | -8 | -7.5 |

3.1 Applied Standard

- FCC KDB 447498 D01 v05r01

4. Conducted RF Output Power (Unit: dBm)

<Bluetooth Conducted Power>

| Channel | Frequency (MHz) | Bluetooth Average Power (dBm) | | | | | | | | |
|---------|-----------------|-------------------------------|-------|-------|--------|--------|--------|--------|--------|--------|
| | | Data Rate | | | | | | | | |
| | | DH1 | DH3 | DH5 | 2DH1 | 2DH3 | 2DH5 | 3DH1 | 3DH3 | 3DH5 |
| CH 00 | 2402 | -7.72 | -7.70 | -7.84 | -10.37 | -10.89 | -11.13 | -10.22 | -10.85 | -11.11 |
| CH 39 | 2441 | -5.15 | -4.72 | -4.84 | -8.52 | -8.78 | -8.99 | -8.42 | -8.76 | -9.01 |
| CH 78 | 2480 | -4.39 | -4.44 | -4.40 | -8.14 | -8.65 | -8.42 | -7.90 | -8.73 | -8.46 |

5. RF Exposure Evaluation

| Bluetooth Max Power (dBm) | mW | Test Distance (mm) | Frequency (GHz) | Exclusion Thresholds |
|---------------------------|------|--------------------|-----------------|----------------------|
| -4 | 0.40 | 5 | 2.48 | 0.13 |

Note:

- Per KDB 447498 D01v05r01, the 1-g and 10-g SAR test exclusion thresholds for 100 MHz to 6 GHz at *test separation distances* ≤ 50 mm are determined by:

$$[(\text{max. power of channel, including tune-up tolerance, mW})/(\text{min. test separation distance, mm})] \cdot [\sqrt{f(\text{GHz})}] \leq 3.0 \text{ for}$$

1-g SAR and ≤ 7.5 for 10-g extremity SAR

- $f(\text{GHz})$ is the RF channel transmit frequency in GHz
- Power and distance are rounded to the nearest mW and mm before calculation
- The result is rounded to one decimal place for comparison
- If the test separation distance (antenna-user) is $< 5\text{mm}$, 5mm is used for excluded SAR calculation

Conclusion: According to KDB 447498 D01v05r01 exclusion thresholds is $0.13 < 3$, RF exposure evaluation is not required.