

Statement of compliance to Maximum Permissible Exposure (MPE)

Equipment : BAM for the iRobot Create
Type/Model : 10542B
Applicant : Element Products, Inc.
5155 West 123rd Place, Broomfield, CO, 80020, US
Manufacturer : Moduletek Inc.
No.208, Zhengkang 1st St., Taoyuan City,
Taoyuan County 33043, Taiwan

Here assuming a worst-case prediction of power density (100% reflection), then
 $S = 4PG / (4\pi R^2) = PG / (\pi R^2)$.

Where S = power density in mW/cm²

P = transmit power in mW

G = numeric gain of transmit antenna

R = distance (cm)

As we can see from the test report JSH007040579-001:

The maximum P = 9.14dBm = 8.20mW

G = 0.5dBi = 1.12

Here R is chosen to be 1.8 cm.

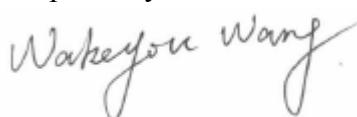
$S = PG / (\pi R^2) = 8.20 * 1.12 / (1.8^2 * 3.14) = 0.91 \text{ mW/cm}^2$

This level is below the 1 mW/cm² MPE for General Population / Uncontrolled Exposure as stated in OET BULLETIN 65 Edition 97-01.

Conclusion: this EUT fulfills 47CFR Part 15.247(i) (2006) with the precautions are outlined in the User's Manual to prevent exposure to high levels of RF energy. (See appendix I)

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Appendix I

Precautions below must be outlined in the User's Manual to prevent exposure to high levels of RF energy:

The radiated output power of this device is below the FCC radio frequency exposure limits based on that human proximity to the antenna shall not be less than 1.8cm (3/4 inch) during normal operation.