

Statement of compliance to Maximum Permissible Exposure (MPE)

Equipment : Outdoor Wireless Mesh Router
Type/Model : MSR4K44S
Applicant : Azalea Networks U.S.A, Inc
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United States

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 JSH007120114-001:

For 802.11b/g, the maximum P = 21.79dBm = 151.01mW

$$G = 14\text{dBi} = 25.12$$

R is chosen to be 35cm

$$S = PG / (\pi R^2) = 151.01 * 25.12 / (3.14 * 35 * 35) = 0.99\text{mW/cm}^2$$

For this device, all the RF parameters for 802.11a are unchanged from the test report JSH007080425-001 (corresponds to FCC ID: URP-MSR4000). As we can see from the test report JSH007080425-001:

For 802.11a (5745-5825MHz), the maximum P = 18.32dBm = 67.92mW

$$G = 17\text{dBi} = 50.12$$

R is chosen to be 34cm

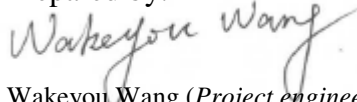
$$S = PG / (\pi R^2) = 67.92 * 50.12 / (3.14 * 34 * 34) = 0.94\text{mW/cm}^2$$

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) (2007) with the precautions are outlined in the User's Manual to prevent exposure to high levels of RF energy. (See appendix I)

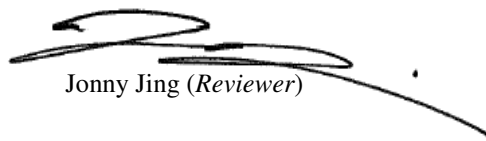
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Reviewed by:



Jonny Jing (Reviewer)

Appendix I

Precautions below must be outlined in the User 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 35cm during normal operation.