

Company: Itron.

Evaluation of: RIVA MOD LE

To: FCC CFR 47 Part 1.1310

Report No.: ITRO09-U2_FCC_MPE

MPE/RF EXPOSURE TEST REPORT



MPE/RF EXPOSURE REPORT

FROM



Evaluation of: Itron RIVA MOD LE

To: FCC CFR 47 Part 1.1310

Report Serial No.: ITRO09-U2_FCC_MPE Rev A

This report supersedes: NONE

Applicant: Itron
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Liberty Lake, Washington 99019
USA

Product Function; Wireless Tag

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This Test Report is Issued Under the Authority of:

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1. MAXIMUM PERMISSABLE EXPOSURE

Calculations for Maximum Permissible Exposure Levels

$$\text{Power Density} = P_d (\text{mW/cm}^2) = \text{EIRP} / (4 \cdot \pi \cdot d^2)$$

$$\text{EIRP} = P \cdot G$$

P = Peak output power (mW)

G = Antenna numeric gain (numeric)

d = Separation distance (cm)

$$\text{Numeric Gain} = 10^{(G (\text{dBi})/10)}$$

The calculations in the table below use the highest measured conducted power values together with the antenna gain specified for the EUT. These calculations represent worst case in terms of the exposure levels.

Specification - Maximum Permissible Exposure Limits.

The Limit is defined in Table 1 of FCC §1.1310.

Freq. Band (MHz)	Ant Gain (dBi)	Numeric Gain (numeric)	Peak Output Power (dBm)	Peak Output Power (mW)	Calculated Power Density (mW/cm ²) @ 20cm	Power Density Limit (mW/cm ²)	Min Calculated safe distance for Limit (cm)
900 FHSS	2.0	1.58	29.53	897.43	0.283	0.6	13.74

Note: for mobile or fixed location transmitters the minimum separation distance is 20cm, even if calculations indicate the MPE distance to be less.

Specification

Maximum Permissible Exposure Limits

FCC §1.1310 Table 1

300 to 1500MHz = $f/1500$ (mW/cm²)

1500 to 100,000MHz = 1 mW/cm²

Laboratory Measurement Uncertainty for Power Measurements

Measurement uncertainty	±1.33 dB
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