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**47 C.F.R. Part 1, Subpart I, Section 1.1310  
 47 C.F.R. Part 2, Subpart J, Section 2.1091  
 Maximum Permissible Exposure Calculations**

**For Vivint M/N: CP04**

**908.4 / 908.42 / 916.0 MHz Z-Wave Transceiver**

EUT Device Category = General Population/Uncontrolled Exposure

EUT consists of one Z-Wave radio transmitting at one of three possible frequencies:  
**908.4MHz, 908.42MHz, 916.0MHz**

MPE Summary:

According subpart 1.1307 (b)(1) and 2.1091 systems operating under the provisions of this section shall be operated in a manner that ensures the public is not exposed to RF energy level in excess of the communication guidelines.

Limits for General Population/Uncontrolled Exposure

| <b>Limits for General Population/Uncontrolled Exposure</b> |                                |                                      |  |                                 |
|--|--------------------------------|--------------------------------------|--|---------------------------------|
| <b>Frequency Range (MHz)</b>                               | <b>Electric Strength (V/m)</b> | <b>Field Magnetic Strength (A/m)</b> | <b>Field Power Density (mW/cm<sup>2</sup>)</b> | <b>Averaging Time (Minutes)</b> |
| 0.3-1.34   | 614                            | 1.63                                 | *(100)   | 30                              |
| 1.34-30  | 824/f                          | 2.19/f                               | *(180/f <sup>2</sup> )                         | 30                              |
| 30-300   | 27.5                           | 0.073                                | 0.2  | 30                              |
| 300-1500   | /                              | /                                    | f/1500   | 30                              |
| 1500-100,000   | /                              | /                                    | 1.0  | 30                              |

f = frequency in MHz; \* = Plane-wave equivalent power density

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**Calculated Formulary:**

Predication of MPE limit at a given distance

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

S = power density (in appropriate units, e.g. mW/cm<sup>2</sup>)

R = distance to the center of radiation of the antenna (appropriate units, e.g., cm)

PG = EIRP

MPE and Limit are calculated as follows:

| f (MHz) | Field Strength<br>(dBuV/m [@3m]) | EIRP<br>(mW) | Power Density<br>(mW/cm <sup>2</sup> ) | Limit<br>(mW/cm <sup>2</sup> ) | Δ       |
|---------|----------------------------------|--------------|--|--------------------------------|---------|
| 13.56   | 55.5                             | 0.0001064    | 0.000000021                            | 1.00846                        | 1.00846 |

**Result:** The device meets FCC MPE limit at 20 cm for General Population/Uncontrolled Exposure as specified in 47 CRF §1.1310 and §2.1091.

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