

Contact us.
info@vivint.com
800.216.5232

Visit us online.
vivint.com

**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 ISM band radio transmitting at one of 51 possible frequencies:
902.5 MHz to 927.5 MHz

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

Limits for General Population/Uncontrolled Exposure				
Frequency Range (MHz)	Electric Strength (V/m)	Field Magnetic Strength (A/m)	Field Power Density (mW/cm ²)	Averaging Time (Minutes)
0.3-1.34	614	1.63	*(100)	30
1.34-30	824/f	2.19/f	*(180/f ²)	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

Utah
4931 North 300 West
Provo, UT 84604 USA
801.705.2900

Canada
1602 3rd Avenue S.
Lethbridge, AB T1J 0L2
403.214.6740

Minnesota
2854 Highway 55, Suite 200
Eagan, MN 55121 USA
651.450.4853

vivint.SmartHome

Contact us.
info@vivint.com
800.216.5232

Visit us online.
vivint.com

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/cm²)

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)	Output Power (dBm)	Antenna Gain (dBi)	EIRP (dBm)	EIRP (mW)	Power Density (mW/cm ²)	Limit (mW/cm ²)	Δ
902.5	17.49	2.97	20.46	111.2	0.0221	0.6056	0.5835
915.0	17.86	2.97	20.83	121.1	0.0241	0.6056	0.5815
927.5	17.98	2.97	20.95	124.5	0.0248	0.6107	0.5856

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

Utah
4931 North 300 West
Provo, UT 84604 USA
801.705.2900

Canada
1602 3rd Avenue S.
Lethbridge, AB T1J 0L2
403.214.6740

Minnesota
2854 Highway 55, Suite 200
Eagan, MN 55121 USA
651.450.4853

vivint.SmartHome