

MPE Evaluation

Applicant: Aurodi Corporation

FCC ID: 2BBTA-VZW32SN

Model: VZW32-SN

MPE Evaluation

RF Exposure Compliance Requirement

Standard Requirement

According to KDB447498D01 General RF Exposure Guidance v06 and FCC 1.1310 Radiofrequency radiation exposure limits for General Population/Uncontrolled Exposure

EUT RF Exposure

According to the calculation formula of power:

$$\text{EIRP} = P * G = (E * d)^2 / 30, \text{ So } P = (E * d)^2 / (30 * G)$$

Where:

P= transmitter output power in watts,

G=numeric gain of the antenna in the direction of interest relative to an isotropic radiator (unitless),

E= electric field strength in V/m, ... $10^{((\text{dBuV/m})/20)/10^6}$

d=measurement distance in meters (m)---3m,

Maximum Electric field strength: 87.89 dBuV/m

$$\text{The Maximum EIRP} = (10^{(87.89/20)/10^6} \times 3)^2 / 30 \times 1000\text{mW} = 0.1845\text{mW} = -7.34\text{dBm}$$

$$P_d = PG / (4 \pi R^2)$$

Pd = power density in mW/cm²

P = output power to antenna in mW

G = gain of antenna in linear scale

$$\pi = 3.14$$

R = distance between observation point and center of the radiator in cm

The Max Output Power is -7.34 dBm

Antenna gain: 0 dBi, gain of antenna in linear scale: 1

R=20cm

$$P_d = PG / (4 \pi R^2) = 0.0000367 \text{ mW/cm}^2 < 1(\text{limits}) \text{mW/cm}^2$$

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