MPE Evaluation

Applicant: ChamSys Ltd
FCC ID: 2AQWR-QUICKQR
Model: QuickQ Rack, MagicQ Rack

MPE Evaluation

RF Exposure Compliance Requirement

Standard Requirement

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

EUT RF Exposure

$Pd=PG/4\pi R^2$

Pd = power density in mW/cm2

P = output power to antenna in mW

G = gain of antenna in linear scale

π =3.14

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

Bluetooth (Classic mode):

The Max Output Power is 5.808 dBm in EDR mode 2.480GHz;

Antenna gain: 3 dBi, gain of antenna in linear scale: 1.99

R=20cm

Pd =PG/(4 π R2)=0.0015 mW/cm2<1(limits)mW/cm^2

WIFI:

The Max Output Power is 18.16 dBm in 802.11b mode 2.462GHz;

Antenna gain: 3 dBi, gain of antenna in linear scale: 1.99

R=20cm

Pd =PG/(4 π R2)=0.026 mW/cm2<1(limits)mW/cm^2

CONCLUSION: Both of the WIFI, and BDR/EDR, can transmit simultaneously, the formula of calculated the MPE is:

CPD1 / LPD1 + CPD2 / LPD2+ CPD3 / LPD3 < 1

CPD = Calculation power density

LPD = Limit of power density

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