

MPE Evaluation

Applicant: ChamSys Ltd
FCC ID: 2AQWR-MOSTAD
Model: MagicQ 250M

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

Note: This device doesn't support simultaneous transmission.

EUT RF Exposure

$$P_d = \frac{P}{4\pi R^2}$$

P_d = 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

For 2.4G WIFI

The Max Output Power is 29.99 dBm in 2.452 GHz;

Antenna gain: 2.65 dBi, gain of antenna in linear scale: 1.84

$R=20\text{cm}$

$$P_d = \frac{P}{4\pi R^2} = 0.365 \text{ mW/cm}^2 < 1 \text{ (limits) mW/cm}^2$$

For 5G WIFI Band I

The Max Output Power is 22.96 dBm in 5.230 GHz;

Antenna gain: 4.2 dBi, gain of antenna in linear scale: 2.63

$R=20\text{cm}$

$$P_d = \frac{P}{4\pi R^2} = 0.103 \text{ mW/cm}^2 < 1 \text{ (limits) mW/cm}^2$$

For 5G WIFI Band II

The Max Output Power is 23.09 dBm in 5.270 GHz;

Antenna gain: 4.2 dBi, gain of antenna in linear scale: 2.63

$R=20\text{cm}$

$$P_d = \frac{P}{4\pi R^2} = 0.106 \text{ mW/cm}^2 < 1 \text{ (limits) mW/cm}^2$$

For 5G WIFI Band III

The Max Output Power is 23.33 dBm in 5.550 GHz;

Antenna gain: 4.2 dBi, gain of antenna in linear scale: 2.44

R=20cm

$P_d = PG/(4\pi R^2) = 0.112 \text{ mW/cm}^2 < 1 (\text{limits}) \text{ mW/cm}^2$

For 5G WIFI Band IV

The Max Output Power is 24.86 dBm in 5.745 GHz;

Antenna gain: 4.2 dBi, gain of antenna in linear scale: 2.63

R=20cm

$P_d = PG/(4\pi R^2) = 0.160 \text{ mW/cm}^2 < 1 (\text{limits}) \text{ mW/cm}^2$

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