



CE-Mesures

SMEE CE-Mesures

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Apparatus: MRU400 (FCC ID: QHKMRU400)

Prediction of MPE limit at a prediction distance:

$$S = \frac{P.G}{4.\Pi.R^2} = \frac{E.I.R.P}{4.\Pi.R^2}$$

S: Power density (mW/cm²)

P: Peak output power at antenna terminal (mW)

G: Numerical Antenna gain

R: Distance of radiation to antenna (cm)

MPE for RFID module (FCC ID: QHKMRU400)

F = 928MHz

E.I.R.P = 2692mW / 34.3dBm (Max allowable antenna gain 6dB + peak conducted power 28.3dBm of MRU400 reader)

R= 20cm

S=0.535mW/cm²

MPE limit for uncontrolled exposure: 0.618mW/cm²

→ Below MPE limit

MPE for Bluetooth module (FCC ID: QOQWT12)

F = 2445MHz

P= 2.218mW (3.46dBm)

R= 20cm

G= 1.12 (0.5 dBi)

S=0.00049mW/cm²

MPE limit for uncontrolled exposure: 1mW/cm²

→ Below MPE limit

MPE for summation of modules

$$\frac{0.535}{0.618} + \frac{0.0005}{1} = 0.866 < 1 \rightarrow \text{PASS}$$

When all the antennas are at least 20cm away from the user, but individual antennas can not be separated by 20cm from each other.

Therefore, the device complies with FCC's RF radiation exposure limit for general population for a mobile device.