

MPE CALCULATION
FCC ID: F53193G4000W

RF Exposure Requirements:
RF Radiation Exposure Limits:
RF Radiation Exposure Guidelines:

47 CFR §1.1307(b)
47 CFR §1.1310
FCC OST/OET Bulletin Number 65

EUT Frequency Band:
Limits for General Population/Uncontrolled Exposure in the band of:

824-849MHz, 1710-1755MHz, 1850-1910MHz
300-1500MHz, 1500-100,000 MHz

Power Density Limit:

f/1500; 1 mW / cm²

Equation: $S = PG / 4\pi R^2$ or $R = \sqrt{PG / 4\pi S}$
Where, S = Power Density
P = Power Input to Antenna
G = Antenna Gain
R = distance to the center of radiated antenna

EUT: Cellular Alarm Communicator, Model No.: 3G4000W

Dipole Antenna

Prediction distance 30cm

GSM850: Power = 33.00 dBm, Antenna Gain = 2.5 dBi, Power density = 0.395 mW/cm²

GSM1900: Power = 29.90 dBm, Antenna Gain = 6.2 dBi, Power density = 0.454 mW/cm²

WCDMA Band II: Power=26.39 dBm, Antenna Gain = 6.2 dBi, Power density = 0.202 mW/cm²

WCDMA Band V: Power=26.63 dBm, Antenna Gain = 2.5 dBi, Power density = 0.091 mW/cm²

Type	CH Freq (MHz)	Conducted Power (dBm)	Antenna Gain (dBi)	Directional Gain (dBi)	Tune-Up Tolerance	Tolerance Max Power (dBm)	Measurement Distance (cm)	Calculated MPE (mW/cm ²)	MPE Limit (mW/cm ²)	Pass/Fail
GSM/ GPRS850	824.2	33.00	2.5	2.5	±1dB	34.00	30	0.395	0.549	Pass
GSM/ GPRS1900	1850.2	29.90	6.2	6.2	±1dB	30.90	30	0.454	1	Pass
WCDMA (Band II)	1852.4	26.39	6.2	6.2	±1dB	27.39	30	0.202	1	Pass
WCDMA (Band V)	824.6	26.63	2.5	2.5	±1dB	27.63	30	0.091	0.549	Pass

The Above Result had shown that the device complied with MPE requirement at a prediction distance of 30cm.

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