



MPE/RF EXPOSURE REPORT

FCC CFR 47 Part 1.1310

Report No.: GEMD02-U5 Rev A

Company: GE MDS, LLC

Model Name: RCL220

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To: FCC CFR 47 Part 1.1310

Report Serial No.: GEMD02-U5 Rev A

This report supersedes: None

Applicant: GE MDS, LLC
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1. MAXIMUM PERMISSABLE EXPOSURE

Calculations for Maximum Permissible Exposure Levels

$$\text{Power Density} = P_d \text{ (mW/cm}^2\text{)} = \text{EIRP}/(4*\pi*d^2)$$

$$\text{EIRP} = P * G$$

P = Peak output power (mW)

G = Antenna numeric gain (numeric)

d = Separation distance (cm)

$$\text{Numeric Gain} = 10 \wedge (G \text{ (dBi)}/10)$$

FCC CFR 47 Part 1.1310 Power Density Limits for General Population/Uncontrolled Exposure:

$$1.34 - 30 \text{ MHz Plane Wave Power Density} = (180/f^2) \text{ mW/cm}^2$$

$$30 - 300 \text{ MHz, Power Density} = 0.2 \text{ mW/cm}^2$$

$$300 - 1,500 \text{ MHz; Power Density} = f/1500 \text{ mW/cm}^2$$

$$1,500 - 100,000 \text{ MHz; Power Density} = 1.0 \text{ mW/cm}^2$$

The calculations in the table below use the highest measured conducted power values together with the antenna gain specified for the EUT. These calculations represent worst case in terms of the exposure levels.

Specification - Maximum Permissible Exposure Limits.

The Limit is defined in Table 1 of FCC §1.1310.

Freq. Band (MHz)	Ant Gain (dBi)	Numeric Gain (numeric)	Peak Output Power (dBm)	Peak Output Power (mW)	Calculated Power Density (mW/cm ²) @ 20cm	Power Density Limit (mW/cm ²)	Min Calculated safe distance for Limit (cm)
217-222 High Power	0.0	1.00	32.92	1958.84	0.390	0.2	27.92
217-222 High Power	2.0	1.58	32.92	1958.84	0.618	0.2	35.15
217-222 Low Power	0.0	1.00	27.31	538.27	0.107	0.2	14.63
217-222 Low Power	2.0	1.58	27.31	538.27	0.170	0.2	18.42

Per the above assessment the minimum safe operating distance for the RCL220 to meet the RF Exposure limits is 36 cm.

Note 1: for mobile or fixed location transmitters the minimum separation distance is 20cm, even if calculations indicate the MPE distance to be less.



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