

## MAXIMUM PERMISSIBLE EXPOSURE (MPE) CALCULATIONS

The § 1.1310 Radiofrequency radiation exposure limits are listed in the table below.

	Frequency Range (MHz)	Power Density Limit (mW/cm <sup>2</sup> )
<b>Limits for Occupational/Controlled Exposures</b>	0.3-3.0	100
	3.0-30	900/ Frequency <sup>2</sup>
	30-300	1.0
	300-1500	Frequency/300
	1500-100,000	5.0
<b>Limits for General Population/Uncontrolled Exposure</b>	0.3-1.34	100
	1.34-30	180/Frequency <sup>2</sup>
	30-300	0.2
	300-1500	Frequency/1500
	1500-100,000	1.0

### **TEST PROCEDURE (FCC RULE: §15.247(B)(5), RSS-102 §4.3)**

The ERP and EIRP were measured in section 5 of the test report. The radiated RF power was used to calculate the maximum RF exposure at a 20 cm distance using the formula:

$$\text{Maximum RF Exposure at 20cm} = (\text{EIRP in mW}) / (4\text{Pi}(20\text{cm})^2)$$

Where ERP was measured in section 5, a 2.15dB conversion factor was added to the reading to convert it to EIRP before applying the Maximum RF Exposure formula above. Once the Maximum RF Exposure calculations were complete the results were compared to the MPE limits above.

### **TEST RESULTS**

The following calculations show the Maximum RF Exposure from the MarkNet N8050 at 20cm for the worst case measured EIRP. The MPE level is well below the limits for the general population described in the table above.

$$\text{Maximum Measured EIRP} = 24.942\text{dBm} = 312.03\text{mW}$$

$$\text{MPE} = 312.03\text{mW} / (4\text{Pi}(20\text{cm})^2) = 0.062\text{mW}/\text{cm}^2$$