



## **MPE/RF EXPOSURE REPORT**

**FCC CFR 47 Part 1.1310**

**Report No.: DIGI93-U5 Rev A**

**Company:** Digi International

**Model Name:** XBee-PRO S2C

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**Model Name:** XBee-PRO S2C

**To:** FCC CFR 47 Part 1.1310

**Test Report Serial No.:** DIGI93-U5 Rev A

This report supersedes: NONE

**Applicant:** Digi International  
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## 1. MAXIMUM PERMISSIBLE 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)

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

The calculations in the table below use the highest conducted power values together with the lowest antenna gain and the highest antenna gain after cable loss taken into consideration for the EUT. These calculations represent worst case in terms of the exposure levels.

Frequency Band (MHz)	Ant Gain (dBi)	Numeric Gain (numeric)	Peak Output Power (dBm)	Peak Output Power (mW)	Calculated Power Density (mW/cm <sup>2</sup> ) @ 20cm	Power Density Limit (mW/cm <sup>2</sup> )	Min Calculated safe distance for Limit (cm)	Calculated Power Density (mW/cm <sup>2</sup> ) @ Safe Distance
2400.0 - 2483.5	2.1	1.62	16.95	49.55	0.02	1.00	2.53	1.00
2400.0 - 2483.5	15.0	31.62	*11.95	15.67	0.098	1.00	6.28	1.00

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

\*Note 2: The specified antenna (15 dBi) has a 5 dB loss cable which is reflected in the output power column.

### Specification - Maximum Permissible Exposure Limits

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



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