

## **MPE Calculation for G30/G35**

for

Project Name: **Ericsson Fixed Wireless Terminal**  
Project Code: **ERIFWT102**  
Product: **G3x FWT Product Series**

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## 1. MPE CALCULATION FOR THE FWT G30 PRODUCT SERIES

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### 1.1 Introduction

The FCC requires that the calculated MPE be equal to or less than the limits for general population/uncontrolled exposure as detailed in Part 1.1310 of the FCC regulations at a distance of 20cm from the device to the body of the user. The equation for the calculation is given in OET Bulletin 65, page 19 as:

$$S = \text{EIRP} / 4 \pi R^2$$

Where S = Power density  
EIRP = Effective Isotropically Radiated Power  
R = distance to the centre of the radiation of the antenna

### 1.2 For 850 MHz

Values S = 0.566 mW/cm<sup>2</sup> (f/300) for general population uncontrolled exposure (FCC Part 1.1310 Radiofrequency radiation exposure limits)  
EIRP = 32.4 dBm (1738 mW)  
R = 20 cm

Calculation

$$S = 1738 / 12.56 \times (20)^2$$

$$S = 1738 / 5024$$

$$S = 0.346 \text{ mW}^2$$

### 1.3 For 1900 MHz

Values S = 1 mW/cm<sup>2</sup> for general population uncontrolled exposure (FCC Part 1.1310  
Radiofrequency radiation exposure limits)

EIRP = 28.4 dBm (692 mW)

R = 20 cm

Calculation

$$S = 692 / 12.56 \times (20)^2$$

$$S = 692 / 5024$$

$$S = 0.137 \text{ mW}^2$$

### 1.4 Conclusion

The MPE values of the FWT G30 Product Series at 20 cm meet the RF exposure limits.

