

RF Exposure Information for WMP100 Wireless Microprocessor

1) Power measurement :

Measured max conducted power at 850 MHz : 33 dBm

Measured max conducted power at 1900 MHz : 29,9 dBm

2) Calculation of the acceptable gain maximum for fixed operations :

According to rule \$1.1310 the limits are for the following frequency :

300-1500 MHz: $f/1500$ mW/cm² therefore for 850 MHz: 0,57 mW/cm²

1500-100,000 MHz: 1 mW/cm²

2.1 Calculation for 850 MHz

$$G = 10 \log (0,57 \times 4 \times \text{PI} \times 400) - 33 = 0,9 \text{ dBi}$$

2.2 Calculation for 1900 MHz

$$G = 10 \log (1 \times 4 \times \text{PI} \times 400) - 29,9 = 7,1 \text{ dBi}$$

3) Calculation of the acceptable gain maximum for mobile operations :

According to rule \$24.232 the limits are for the following frequency :

850 MHz: 1,5W [ERP]

1900 MHz: 2W [EIRP]

3.1 Calculation for 850 MHz

$$G = 10 \log (1,5) - 33 + 2,15 = 0,9 \text{ dBi}$$

3.2 Calculation for 1900 MHz

$$G = 10 \log (2) - 29,9 = 3,1 \text{ dBi}$$

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