

### **ZRT170 RF Exposure:**

The ZRT170 is intended as a fixed or mobile device, depending upon the final installation. A warning statement is included in the user manual advising users to maintain a minimum distance dependent upon the antenna used. All distances being greater than 20cm.

Evaluation is therefore for exposure potential against the MPE limits given in Appendix A of OET Bulletin 65, Supplement C: 30-300MHz; 0.2mW/cm<sup>2</sup>

Compliance requirements are based upon General population / Uncontrolled exposure.

Equation (3) of OET Bulletin 65:

$$S = \frac{PG}{4\pi R^2}$$

where: S = power density (in appropriate units, e.g. mW/cm<sup>2</sup>)

P = power input to the antenna (in appropriate units, e.g. mW)

G = power gain of the antenna in the direction of interest relative to an isotropic radiator

R = distance to the centre of radiation of the antenna (appropriate units, e.g. cm)

Substituting known values for the ZRT170: P = 5010mW

Antenna Gain (dBi)	Numerical Antenna Gain	Minimum distance (cm)	Power density (mW/cm <sup>2</sup> )	Limit of power density (mW/cm <sup>2</sup> )
0	1.0	50	0.16	0.2
3	2.0	70	0.16	0.2
6	4.0	100	0.16	0.2
8	6.3	130	0.15	0.2
10	10.0	160	0.16	0.2
12	15.8	200	0.16	0.2

Therefore if recommended minimum distances stated in the user manual are adhered to then the ZRT170 complies with the requirement of 0.2 mW/cm<sup>2</sup>.