

RF Exposure

This calculation is based on the highest EIRP possible from the Remote or the Base considering maximum power and antenna gain. The following formulas were used:

The highest output power of the EUT is 24 mW equivalent radiated Power

1 MINIMUM SEPARATION DISTANCE PER OET 65

The following information provides the minimum separation distance for the EUT, as calculated from **FCC OET 65 Appendix B, Table 1B** "Guidelines for General Population/Uncontrolled Exposure"

Freq. MHz	S GP limit mW/cm ²	Maximum RF power dBm	Antenna Gain dB	EIRP dBm	EIRP watts	MSD d meters	
2445	1	13.5	0	13.5	0.0224	0.0133	USB Powered; Portable
2245	1	13.8	0	13.8	0.0240	0.0138	Hand held; Battery Powered

GP is the limit for general Population/Uncontrolled Exposure

MSD is the minimum Separation Distance

Notes on above table.

(S) GP limit is from OET 65 table 1B

EIRP = Power in dBm + Antenna Gain in dBi

MSD (Minimum Separation Distance) = $((\text{EIRP} \times 30) / 3770 \times S)^{0.5}$

NOTE: For mobile or fixed location transmitters, minimum separation distance is 20 cm, even if calculations indicate MPE distance is less.

The low threshold for a device operated within 2.5 cm from human body is $60/(f \text{ GHz}) = 60/2.440 = 24.59 \text{ mw}$. Since the hand held version of this device has a power which is lower than 24.59 mw, no SAR is required.

2 RF EVALUATION FOR RSS-102E

Since the e.i.r.p. of the Product is 35 mW it is exempt from routine SAR and RF exposure evaluations in accordance to Sections 2.5.1 or 2.5.2 of RSS-102e.

The following information provides the calculation for section 4.2 of RSS-102e for the General Public.

Freq. MHz	RF Power dBm	Antenna Gain dB	Effective RF power dBm	Effective RF power mW	Measurment Distance meters	RF field from EUT V/m	Exposure GP limit V/m rms
2440	15.5	0	13.8	23.99	0.025	33.9	61.4

GP is the limit for general Public

Note on above table.

ERP = $(V/m \times \text{dist})^{2/30}$