

Prediction of MPE limit at a given distance

MPE for HM Electornics BLE transmitter in Battery Charger AC70.

Equation from page 18 of OET Bulletin 65, Edition 97-01

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

where: S = power density

P = power input to the antenna

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

R = distance to the center of radiation of the antenna

Maximum peak output power at device output terminal:	<u>-2.94</u> dBm
Cable and Jumper loss:	<u>0.0</u> dB
Maximum peak output power at antenna input terminal:	<u>-2.94</u> dBm
	<u>0.508159443</u> mW
Single Antenna gain (typical):	<u>3</u> dBi
Number of Antennae:	<u>1</u>
Total Antenna gain (typical):	<u>3</u> dBi
	<u>1.995262315</u> (numeric)
Prediction distance:	<u>20</u> cm
Prediction frequency:	<u>2402</u> MHz
MPE limit for uncontrolled exposure at prediction frequency:	<u>1</u> mW/cm ²
Power density at prediction frequency:	0.000202 mW/cm ²
	0.002017 W/m ²
Tx On time:	1.000000 ms
Tx period time:	1.000000 ms
Average Factor:	100.000000 %
Average Power density at prediction frequency:	0.002017 W/m ²