

FCCID: YCP-32WB5MMGH02

Prediction of MPE limit at a given distance

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

BLE								
Prediction		Max	Distance	Power	Limit			
Frequency	Conducted Output Power dBm	Antenna		Density	mW/cm2			
MHz		Gain dBi	cm	mW/cm2	IIIVV/CIIIZ			
2402	-1.45	1.9	20	0.0002	1.00			
2440	-1.29	1.9	20	0.0002	1.00			
2480	-0.93	1.9	20	0.0002	1.00			

ZIGBEE								
Prediction Frequency MHz	Conducted Output Power dBm	Max Antenna Gain dBi	Distance cm	Power Density mW/cm2	Limit mW/cm2			
2405	-1.58	1.9	20	0.0002	1.00			
2440	-1.45	1.9	20	0.0002	1.00			
2480	-1.08	1.9	20	0.0002	1.00			

<u>Conclusion:</u> Therefore our device complies with FCC's RF radiation exposure limits for general population without SAR evaluation with at least 20cm separation from all persons and must not be co-located or operating in conjunction with any other antenna or transmitter.