Maximum Permissible Exposure (MPE) Calculation -Rev2 for BT & Wlan technologies separately

Reference document:	**47 CFR §15.247(i) & §1.1310**	
Test Requirements:	According to §1.1310, the criteria listed in tab. 1 shall be used to evaluate the environmental impact of human exposure to RF radiation as specified in §1.1307(b). For equipment authorization purposes the term co-location refers to simultaneously transmitting (co-transmitting) antennas located within 20cm of each other within a product.	
Limit	$1mW/cm^2$	**Comply**
Calculation Result*:	**Power Density = 0.0605 mW/cm2** on a 20cm radius sphere.	

The RF Module is capable of operating in the ranges 2412-2462 MHz for WLAN application 24012- 2462 MHz the maximum conducted power is 152.40 mW into a single antenna with a 3 dBi Antenna.

The maximum exposure level in this scenario is 0.0605 mW/cm^2 at a distance of 20 cm.

* Equation (3) given in OET Bulletin 65 is used to estimate the MPE distance.

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

S=power density, in mW/cm^2
P=power input to the antenna, in mW
G=numeric gain of the antenna,
R= distance to the center of the antenna, in cm

Frequency Band (MHz)	MPE Distance [cm]	Total Output Power per [mW]	Antenna Gain [dBi]	Power density [mW/cm^2]	Limit [mW/cm^2]	Margin [mW/cm^2]
2412-2462	20	152.40	3	0.0605	1	0.9395