

**EXHIBIT 1. RF EXPOSURE REQUIRMENTS [§§ 15.247(i), 1.1310 & 2.1091]**

**1.1. Limits**

§ 1.1310: The criteria listed in the following table shall be used to evaluate the environmental impact of human exposure to radio-frequency (RF) radiation as specified in 1.1307(b).

**Limits for Maximum Permissible Exposure (MPE)**

Frequency range (MHz)	Electric field strength (V/m)	Magnetic field strength (A/m)	Power density (mW/cm <sup>2</sup> )	Averaging time (minutes)
<b>(A) Limits for Occupational/Controlled Exposures</b>				
0.3-3.0	614	1.63	*(100)	6
3.0-30	1842/f	4.89/f	*(900/f <sup>2</sup> )	6
30-300	61.4	0.163	1.0	6
300-1500			f/300	6
1500-100,000			5	6
<b>(B) Limits for General Population/Uncontrolled Exposure</b>				
0.3-1.34	614	1.63	*(100)	30
1.34-30	824/f	2.19/f	*(180/f <sup>2</sup> )	30
30-300	27.5	0.073	0.2	30
300-1500			f/1500	30
1500-100,000			1.0	30

f = frequency in MHz

\* = Plane-wave equivalent power density

Note 1: Occupational/controlled limits apply in situations in which persons are exposed as a consequence of their employment provided those persons are fully aware of the potential for exposure and can exercise control over their exposure. Limits for occupational/controlled exposure also apply in situations when an individual is transient through a location where occupational/controlled limits apply provided he or she is made aware of the potential for exposure.

Note 2: General population/uncontrolled exposures apply in situations in which the general public may be exposed, or in which persons that are exposed as a consequence of their employment may not be fully aware of the potential for exposure or can not exercise control over their exposure.

**1.2. Method of Measurements**

**Calculation Method of Power Density/RF Safety Distance:**

$$S = \frac{PG}{4\pi \cdot r^2} = \frac{EIRP}{4\pi \cdot r^2}$$

Where,  
 P: power input to the antenna in mW  
 EIRP: Equivalent (effective) isotropic radiated power.  
 S: power density mW/cm<sup>2</sup>  
 G: numeric gain of antenna relative to isotropic radiator  
 r: distance to centre of radiation in cm

### 1.3. RF Evaluation

#### 1.3.1. Co-location

Pursuant to KDB 447498 D01 General RF Exposure Guidance v06, Section 7.2:

*Simultaneous transmission MPE test exclusion applies when the sum of the MPE ratios for all simultaneous transmitting antennas incorporated in a host device, based on the calculated/estimated, numerically modeled or measured field strengths or power density, is  $\leq 1.0$ .*

The following table addresses the co-location of the transmitters at a minimum 20 cm evaluation separation distance, which consist of 2 identical EUTs (FCC ID: 2AYG6SDS002, IC: 26799-SDS002) and a Bluetooth and WLAN Module (FCC ID: 2ABCB-RPI4B, IC: 20953-RPI4B).

Co-located MPE for 2 Identical EUTs and Bluetooth/WLAN Module							
<sup>1</sup> Radio Module/ Transmitter	Frequency (MHz)	EIRP (dBm)	EIRP (mW)	Evaluation Distance (cm)	Power Density (mW/cm <sup>2</sup> )	FCC MPE Limit (mW/cm <sup>2</sup> )	MPE Ratio
Peytec Inc. BLE Module #1 (FCC ID: 2AYG6SDS002, IC: 26799-SDS002)	2402	25.72	373.25	20	0.0743	1.0	0.074
Peytec Inc. BLE Module #2 (FCC ID: 2AYG6SDS002, IC: 26799-SDS002)	2402	25.72	373.25	20	0.0743	1.0	0.074
Bluetooth + WLAN Module (FCC ID: 2ABCB-RPI4B, IC: 20953-RPI4B)	2412	16.9	48.98	20	0.0097	1.0	0.010
Worst Case Combination [(BLE Module #1) + (BLE Module #2) + (WLAN 2.4GHz)] :							0.158
Verdict : Compliant							
<sup>1</sup> The test data of the radio modules represented in this table is the worst-case configuration (maximum MPE ratio) derived from the original radio modules MPE reports. Refer to the report(s) for details.							