

## 5.9 Radio Frequency Exposure

### 5.9.1 limit

Systems operating under the provisions of this section shall be operated in a manner that ensures that the public is not exposed to radio frequency energy levels in excess of the Commission's guidelines. See §15.247(b)(4) and §1.1307(b)(1) of this chapter.

### 5.9.2 EUT Specification

EUT	Wireless FM Modulator
Frequency band (Operating)	<input type="checkbox"/> WLAN: 2.412GHz ~ 2.462GHz <input type="checkbox"/> WLAN: 5.18GHz ~ 5.32GHz / 5.50GHz ~ 5.70GHz <input type="checkbox"/> WLAN: 5.745GHz ~ 5825GHz <input checked="" type="checkbox"/> Others <u>Bluetooth: 2402GHz ~ 2480GHz</u>
Device category	<input checked="" type="checkbox"/> Portable (<20cm separation) <input type="checkbox"/> Mobile (>20cm separation) <input type="checkbox"/> Others _____
Exposure classification	<input type="checkbox"/> Occupational/Controlled exposure ( $S = 5mW/cm^2$ ) <input checked="" type="checkbox"/> General Population/Uncontrolled exposure ( $S=1mW/cm^2$ )
Antenna diversity	<input checked="" type="checkbox"/> Single antenna <input type="checkbox"/> Multiple antennas <input type="checkbox"/> Tx diversity <input type="checkbox"/> Rx diversity <input type="checkbox"/> Tx/Rx diversity
Max. output power	3.822dBm (2.411mW)
Antenna gain (Max)	1.0 dBi
Evaluation applied	<input checked="" type="checkbox"/> MPE Evaluation <input type="checkbox"/> SAR Evaluation
<b>Note:</b> 1. The maximum output power is <u>3.822dBm (2.411mW) at 2441MHz.</u> 2. The Bluetooth and FM cannot be used at the same time. 3. DSS device is not subject to routine RF evaluation; MPE estimate is used to justify the compliance. 4. For mobile or fixed location transmitters, no SAR consideration applied. The minimum separation generally be used is at least 20 cm, even if the calculations indicate that the MPE distance would be lesser.	

### 5.9.4 MPE Evaluation

The general population low threshold:

$$60/f \text{ (GHz)} = 60/2.441 = 24.58 \text{ mW.}$$

### 5.9.3 Test Results

#### PASS

(SAR evaluation is not required for the portable device while its maximum output power is lower than the general population low threshold:  $60/f \text{ (GHz)} = 60/2.441 = 24.58mW.$ )