5. RF EXPOSURE EVALUATION

5.1 Applicable Standard

FCC §15.247 (i)

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 §1.1307(b)(1) of this chapter.

5.2 Procedure

According to §1.1307(b)(3)(i)

(B) Or the available maximum time-averaged power or effective radiated power (ERP), whichever is greater, is less than or equal to the threshold P_{th} (mW) described in the following formula. This method shall only be used at separation distances (cm) from 0.5 centimeters to 40 centimeters and at frequencies from 0.3 GHz to 6 GHz (inclusive). P_{th} is given by:

$$P_{th} \text{ (mW)} = \begin{cases} ERP_{20\,cm}(d/20\,cm)^x & d \leq 20\,cm \\ ERP_{20\,cm} & 20\,cm < d \leq 40\,cm \end{cases}$$

Where

$$x = -\log_{10}\left(\frac{60}{ERP_{20\,cm}\sqrt{f}}\right) \text{ and } f \text{ is in GHz;}$$

and

$$ERP_{20\,cm} \text{ (mW)} = \begin{cases} 2040f & 0.3\,GHz \leq f < 1.5\,GHz \\ 3060 & 1.5\,GHz \leq f \leq 6\,GHz \end{cases}$$

d = the separation distance (cm);

5.3 Measurement Result

Radio	Frequency (MHz)	Distance (mm)	P_{th} (mW)	Maximum Conducted Power including Tune-up Tolerance (dBm)	Antenna Gain (dBi)	The Greater Of Conducted Power or ERP		SAR-Based Exemption
						dBm	mW	
BLE Module 1	2402-2480	5	2.72	1	2.34	1.19	1.32	Compliant
BLE Module 2	2402-2480	5	2.72	2	-0.61	2	1.58	Compliant
SRD	2403-2480	5	2.72	1	-0.61	1	1.26	Compliant

Note：Two BLE Module can't transmit simultaneously.

Result: The device compliant the SAR-Based Exemption at 5mm distances.

===== END OF REPORT =====