5. RF EXPOSURE EVALUATION

5.1 Applicable Standard

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:

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

Where

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

and

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

d = the separation distance (cm);

5.2 Measurement Result

Operation Modes	Frequency (MHz)	Distance (mm)	(mW)	(dBm)	Maximum Conducted Power including Tune-up Tolerance (dBm)	Antenna Gain (dBi)	ERP (P) (dBm)	ERP (P) (mW)	Exemption
WLAN 2.4G	2412-2462	200	3060	34.86	23	7.1	27.95	623.73	Compliant
WLAN 5G	5150-5250	200	3060	34.86	23	7.0	27.85	609.54	Compliant
	5725-5850	200	3060	34.86	25	7.8	30.65	1161.45	Compliant

Note:

Antenna gain includes bearmforming gain. The Maximum Conducted Power including Tune-up Tolerance was declared by manufacturer.

WLAN 2.4G and 5G can't transmit simultaneously.

Result: The device compliant the Exemption at 20cm distances.

==== END OF REPORT ====