13. Radio Frequency Exposure

13.1. Applicable Standards

☐ §1.1307(b)(3)(i)(A)	The available maximum time-averaged power is no more than 1 mW, regardless of separation distance.
☒ §1.1307(b)(3)(i)(c)	ERP is below a threshold calculated based on the distance , R between the person and t antenna / radiating structure, where R > λ / 2 π. TABLE B.1—THRESHOLDS FOR SINGLE RF SOURCES SUBJECT TO ROUTINE ENVIRONMENTAL EVALUATION <table><tr><td colspan="2">RF Source Frequency</td><td colspan="3">Minimum Distance</td><td>Threshold ERP</td></tr><tr><td>f_L MHz</td><td>f_H MHz</td><td>λ_L / 2π</td><td></td><td>λ_H / 2π</td><td>W</td></tr><tr><td>0.3 –</td><td>1.34</td><td>159 m</td><td>–</td><td>35.6 m</td><td>1,920 R²</td></tr><tr><td>1.34 –</td><td>30</td><td>35.6 m</td><td>–</td><td>1.6 m</td><td>3,450 R²/f²</td></tr><tr><td>30 –</td><td>300</td><td>1.6 m</td><td>–</td><td>159 mm</td><td>3.83 R²</td></tr><tr><td>300 –</td><td>1,500</td><td>159 mm</td><td>–</td><td>31.8 mm</td><td>0.0128 R²f</td></tr><tr><td>1,500 –</td><td>100,000</td><td>31.8 mm</td><td>–</td><td>0.5 mm</td><td>19.2R²</td></tr></table> Subscripts L and H are low and high; λ is wavelength. From § 1.1307(b)(3)(i)(C), modified by adding Minimum Distance columns.
☐ § 1.1307(b)(3)(i)(B).	Device operates between 300 MHz and 6 GHz and the maximum time-averaged power or effective radiated power (ERP), whichever is greater, <= Pth $$P_{th}\,(mW) = \begin{cases} ERP_{20\,cm}\,(d/20\,cm)^x & d \le 20\,cm \\ ERP_{20\,cm} & 20\,cm < d \le 40\,cm \end{cases}$$ Where $$x = -\log_{10}\left(\frac{60}{ERP_{20\,cm}\sqrt{f}}\right) \text{ and } f \text{ is in GHz;}$$ and $$ERP_{20\,cm}\,(mW) = \begin{cases} 2040f & 0.3\,GHz \le f < 1.5\,GHz \\ 3060 & 1.5\,GHz \le f \le 6\,GHz \end{cases}$$ d = the separation distance (cm);

13.2.EUT Specification

Frequency band (Operating)	☒ WLAN: 5925MHz~6425MHz ☒ WLAN: 6425MHz~6525MHz ☒ WLAN: 6525MHz~6875MHz ☒ WLAN: 6875MHz~7125MHz
Device category	☐ Portable (<20cm separation) ☒ Mobile (>20cm separation)

Antenna diversity	☐ Single antenna
	☒ Multiple antennas
	  ☐ Tx diversity
	  ☐ Rx diversity
	  ☒ Tx/Rx diversity

Evaluation applied	☐ Blanket 1 mW Blanket Exemption ☒ MPE-based Exemption ☐ SAR-based Exemption

Remark:

1. *The maximum conducted output power is 18.80 dBm (75.887mW) at 6985MHz (with 4.50dBi antenna gain.) From Non BeamForming*
2. *The maximum conducted output power is 16.14 dBm (41.153 mW) at 6185MHz (with 7.51dBi antenna gain.) From BeamForming*

13.3.Result

Non BeamForming

Channel Frequency (MHz)	Max. Conducted output power(dBm)	Max. Tune up power (dBm)	Antenna Gain(dBi)	Max. Tune up EIRP (dBm)	Max. Tune up ERP (dBm)	Distance (cm)	λ/2π (m)	Max. Tune up ERP (W)	ERP Threshold (W)
6985	18.80	19.30	4.00	23.30	21.15	20	0.0068	0.043	1

No non-compliance noted.

BeamForming

Channel Frequency (MHz)	Max. Conducted output power(dBm)	Max. Tune up power (dBm)	Antenna Gain(dBi)	Max. Tune up EIRP (dBm)	Max. Tune up ERP (dBm)	Distance (cm)	λ/2π (cm)	Max. Tune up ERP (W)	ERP Threshold (W)
6185	16.14	16.64	7.31	23.95	21.80	20	0.77	0.151	0.768

No non-compliance noted.

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