

6. Safety Human exposure

6.1 Radio Frequency Exposure Compliance

6.1.1 Electromagnetic Fields

RESULT:
Passed

 Test standard : FCC CFR 47 Part 2 Subpart J Section 2.1091
 RSS-102 Issue 5, Table 4

Separation distance is more than 20 cm, thus mobile device exposure limits can be applied.

FCC Maximum Exposure:

Mode	Frequency (MHz)	Antenna Gain (dBi)	Antenna Gain (numeric)	Maximum Output Power (dBm)	Output Power (mW)	Power Density (S)(mW/cm ²)	Test Result
802.11ac VHT20	5260	2.86	1.9320	16.92	49.21	0.018925	Pass

Limit FCC: 1500-100,000 MHz 1.0 mW/cm²
IC Maximum Exposure:

Mode	Frequency (MHz)	Antenna Gain (dBi)	Antenna Gain (numeric)	Maximum Output Power (dBm)	Output Power (mW)	Power Density (S)(mW/cm ²)	Test Result
802.11ac VHT40	5190	2.86	1.9320	16.70	46.74	0.017973	Pass

Limit Canada: 0.537 mW/cm²

 Table 4: RF Field Strength Limits for Devices Used by the General Public
 (Uncontrolled Environment)

Frequency Range (MHz)	Electric Field (V/m rms)	Magnetic Field (A/m rms)	Power Density (W/m ²)	Reference Period (minutes)
0.003-10 ²¹	83	90	-	Instantaneous*
0.1-10	-	0.73/ f	-	6**
1.1-10	87/ $f^{0.5}$	-	-	6**
10-20	27.46	0.0728	2	6
20-48	58.07/ $f^{0.25}$	0.1540/ $f^{0.25}$	8.944/ $f^{0.5}$	6
48-300	22.06	0.05852	1.291	6
300-6000	3.142 $f^{0.3417}$	0.008335 $f^{0.3417}$	0.02619 $f^{0.6834}$	6
6000-15000	61.4	0.163	10	6
15000-150000	61.4	0.163	10	616000/ $f^{1.2}$
150000-300000	0.158 $f^{0.5}$	4.21 x 10 ⁻⁴ $f^{0.5}$	6.67 x 10 ⁻⁵ f	616000/ $f^{1.2}$

 Note: f is frequency in MHz.

*Based on nerve stimulation (NS).

** Based on specific absorption rate (SAR).

$$f = 5190, 0.02619 f^{0.6834} = 0.905$$