

RF EXPOSURE

Equipment Under Test (EUT)

Vital Signs Monitor (WLAN)

Type/ Model: VC150

FCC ID: 2ABKEVC150

IC: 11902A-VC150

Project number: 277435

Standard applicable

According to §1.1307(b)(1), 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 guideline.

This is a mobile device, the MPE is required.

According to §1.1310 and §2.1093 RF exposure is calculated.

Limits for Maximum Permissible Exposure (MPE)

Frequency range (MHz)	Electric field strength (V/m)	Magnetic field strength (A/m)	Power density (mW/cm ²)	Averaging time (minutes)
Limits for General Population/Uncontrolled Exposure				
0.3-1.34	614	1.63	*100	30
1.34-30	824/f	2.19/f	*180/f ²	30
30-300	27.5	0.073	0.2	30
300-1,500			f/1500	30
1,500-100,000			1.0	30

f = frequency in MHz * = Plane-wave equivalent power density

MPE Prediction

Prediction of MPE limit at a given distance, equation from OET Bulletin 65, Edition 97-01

$$S = (PG)/(4\pi R^2)$$

Where: S = power density

P = power input to antenna

G = power gain of the antenna in the direction of interest relative to an isotropic radiator

R = distance to the center of radiation of the antenna

MPE Results 2212 – 2462 MHz

Maximum peak output power at antenna input terminal (dBm):	25.0
Maximum peak output power at antenna input terminal (mW):	316
Maximum antenna gain (dBi):	0.5
Maximum antenna gain (typical) (numerical):	1.12
Prediction distance (cm)	20
Prediction frequency (MHz)	2462
Power density of prediction frequency at 20.0 cm (mW/cm ²)	0.07
MPE limit for uncontrolled exposure at prediction frequency (mW/cm ²)	1.0
Margin (dB)	11.5

MPE Results 5180 – 5805 MHz

Maximum peak output power at antenna input terminal (dBm):	19.81
Maximum peak output power at antenna input terminal (mW):	96
Maximum antenna gain (dBi):	2.0
Maximum antenna gain (typical) (numerical):	1.58
Prediction distance (cm)	20
Prediction frequency (MHz)	5785
Power density of prediction frequency at 20.0 cm (mW/cm ²)	0.03
MPE limit for uncontrolled exposure at prediction frequency (mW/cm ²)	1.0
Margin(dB)	15.2

Conclusion

The predicted power density level at 20 cm is 0.07 mW/cm² (2462 MHz) or 0.03 mW/cm² (5785 MHz) which is below the uncontrolled exposure limit of 1.0 mW/cm².

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