WiBear11n-DF1 MPE calculation

Model number: AN00J93172
FCC ID PV7-WIBEAR11N-DF1
IC: 7738A-WB11NDF1

According to FCC §15.247(b)(4) and §1.1307(b)(1), systems operation under the provisions of this section shall be operated in a manner that ensures that the public is not exposed to radio frequency energy level in excess of the Commission's guidelines.

MPE Prediction

Frequency range (MHz)	*Power density (mW/cm²)*
400 – 1500	f/2000
1500 - 100000	1 mW/cm²

Equation for calculation

$$S = P*G / (4\pi R^2)$$

Where: S – Power density
P – Power input to antenna
G – Antenna gain relative to isotropic radiator
R – Distance to antenna

Maximum peak output power at antenna terminal at 2.5GHz band: +24.0 dBm (252 mW)
Maximum peak output power at antenna terminal at 5GHz band: +22.2 dBm (166 mW)
Antenna gain at 2.5GHz band: 3.0 dBi
Antenna gain at 5GHz band: 4.1 dBi
Prediction distance: 20cm
MPE limit for General Population/Uncontrolled Exposure: 1 mW/cm²

Intermediate results:

MPE safe distance at 2.5GHz: **6.32 cm**
MPE safe distance at 5GHz: **5.83 cm**
Power density at 20cm distance at 2.5GHz: **0.0997 mW/cm²**

Power density at 20cm distance at 5GHz: **0.0849 mW/cm²**

Final results:

MPE safe distance: **6.32 cm**
Power density at 20cm distance: **0.0997 mW/cm²**

Best Regards

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