Maximum Permissible Exposure

as specified in Table 1B of 47 CFR 1.1310 – Limits for Maximum Permissible Exposure (MPE), Limits for General Population/Uncontrolled Exposure

Frequency range (MHz)	*Power density (mW/cm²)*
300 – 1,500	f/1500
1,500 – 100,000	1.0

Limits specified per RSS-102, Issue 5.

Frequency range (MHz)	*Power density (W/m²)*	*Power density (mW/cm²)*
300 – 6000	$0.02619\ f^{0.6834}$	*mW/cm² = W/m² * 0.1*

Calculations

The output power at antenna input terminal:
Prediction frequency 1(PF 1) (**P**): 20MHz BW - 2412 MHz @ 15.8 dBm
Prediction frequency 2(PF 2) (**P**): 40MHz BW - 2422 MHz @ 15.6 dBm
Antenna gain(**G**) @ 2.4GHz: 5.0dBi
Prediction distance **R**: 20 cm
MPE limit **S**: 1 mW/cm²

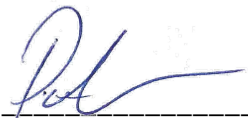
Equation OET bulletin 65, page 18, edition 97-01: $S = \frac{PG}{4\pi R^2} = \frac{EIRP}{4\pi R^2}$
S = power density
P = power input to the antenna
G = power gain of the antenna in the direction of interest relative to an isotropic radiator
R = distance to the centre of radiation of the antenna (20cm)

Maximum Power density	Limit FCC	Limit IC	Verdict
PF 1: 0.0239 mW/cm²	1.0 mW/cm²	0.5366	Pass
PF 2: 0.0228 mW/cm²	1.0 mW/cm²	0.5381	Pass

Margin to FCC Limit (mW/cm²)	Margin to IC Limit (mW/cm²)	Minimum Distance to be ensured cm (FCC)	Minimum Distance to be ensured cm (IC)
0.9761	**0.5127**	**3.0931**	**4.2225**
0.9772	**0.5153**	**3.0227**	**4.1206**

Note. The calculation was made under the consideration of the duty cycle effect.

Yours sincerely



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