

MPE Report
Calculation and sample for Confirmation

Dear Reviewer,

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/cm ²)
300 – 1,500	f/1500
1,500 – 100,000	1.0

The RF Exposure level is calculated using the general equation:

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

the EUT antenna gain is -2.4dBi

R = 20 cm

$\pi = 3.1416$

The power density limit is:

For 300 – 1500MHz: f/1500 mW/cm²

For 1,500 – 100,000MHz: 1.0 mW/cm²

Solving for S, the power density at 20 cm is

GFSK(1Mbps)

Frequency(MHz)	dBm	mW	G(dBi)	Numeric	R(cm)	S(mW/cm ²)
2402	-1.97	0.635331	-2.4	0.6	20	7.27E-05
2441	-0.94	0.805378	-2.4	0.6	20	9.22E-05
2480	-1.03	0.78886	-2.4	0.6	20	9.03E-05

As stated in Test Report: SH12010005B01, the possible average power is below the limit 20mW. So this equipment is deemed to comply with the basic restrictions.

FCC ID : OL3OT8HSBT IC number : 1737D-OT8HSBT

So, the power density is kept.

Please contact us if you have any additional questions.

Best Regards

Morlab

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