

RF Exposure Report

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 dBi

R = 20 cm

$\pi = 3.1416$

Antenna gain:2dBi

The power density limit is:

For 1,500 – 100,000MHz: 1.0 mW/cm^{2c}

Solving for S, the power density at 20 cm

EUT model number:EMW3166-P. With the software which was provide by applicant he EUT could be set to continuous transmit mode (duty cycle $\geq 98\%$) with a certain modulation scheme and data rate on a certain frequency. 802.11g Channel 1 was identified as the worst case condition when data rate is set to 9 Mbps. The report was made base on the worst data recorded in report SH16100058W02.

802.11b:

Frequency (MHz)	dBm (PK)	mW	G (dBi)	Numeric	R (cm)	S (mW/cm ²)	Limit (mW/cm ²)
2412	18. 21	66. 22	2. 0	1. 6	20	0. 02088	1
2437	19. 82	95. 94	2. 0	1. 6	20	0. 03025	1
2462	19. 86	96. 83	2. 0	1. 6	20	0. 03053	1

802.11g:

Frequency (MHz)	dBm (PK)	mW	G (dBi)	Numeric	R (cm)	S (mW/cm ²)	Limit (mW/cm ²)
2412	22. 81	190. 99	2. 0	1. 6	20	0. 06022	1
2437	21. 9	154. 88	2. 0	1. 6	20	0. 04883	1
2462	21. 61	144. 88	2. 0	1. 6	20	0. 04568	1

802.11n-20:

Frequency (MHz)	dBm (PK)	mW	G (dBi)	Numeric	R (cm)	S (mW/cm ²)	Limit (mW/cm ²)
2412	22.65	184.08	2.0	1.6	20	0.05804	1
2437	22.01	158.85	2.0	1.6	20	0.05009	1
2462	21.9	154.88	2.0	1.6	20	0.04883	1

So, the power density is kept.

Please contact us if you have any additional questions.

Best Regards

Skylabs

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