MPE Calculation

FCC: 2ANWVION1

Remark: Average ≤ Peak, which means that calculating the power density applying Peak power is worst case. The worst case operation mode generating the highest power in each frequency range is taken for calculation. Duty cycle is 100%

Frequency range: 2402-2480 MHz

Typical use distance: d ≥ 20 cm

Power density limit for mobile devices at 2.4 GHz: $S \leq 10$ W/m^2

S = PG / (4 * pi * R^2)

where: 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 center of radiation of the antenna

S	PG in watts	constant	pi	distance in meters	$P_{conducted}$ dBm	mW
5.08E-05	2.55E-05	4	3.141593	0.2	-21.23	0.007533556
W/m^2	Peak Power			20cm		

	$G_{antenna}$ dBi	mW
	5.3	3.388441561
	PG =	0.02552701 mW

5.08E-06
mW/cm^2