Maximum Permissible Exposure

Applicable Standard

According to §1.1307(b), systems operating under the provisions of this section shall be operated in a manner that ensure that the public is not exposed to radio frequency energy level in excess of the Commission's guideline.

Remark: 1) **MIMO MPE:**

The maximum output power for antenna 0 is 25.24dBm (334.20mW) at 5840MHz, 3dBi antenna gain(with 2.00 numeric antenna gain.)

The maximum output power for antenna 0 is 25.13dBm (325.84mW) at 5840MHz, 3dBi antenna gain(with 2.00 numeric antenna gain.)

2) For mobile or fixed location transmitters, no SAR consideration applied. The minimum separation generally be used is at least 20cm, even if the calculation indicate that the MPE distance would be lesser.

Calculation

Given $E = \dfrac{\sqrt{30 \times P \times G}}{d}$ & $S = \dfrac{E^2}{3770}$

Where E = Field Strength in Volts / meter
P = Power in Watts
G = Numeric antenna gain
d = Distance in meters
S = Power Density in milliwatts / square centimeter

Substituting the MPE safe distance using d=20cm into above equation.

Yields: *S=0.000199*P*G*

MPE 0:

Power(*m*W)	numeric antenna gain	Power density (*mW/cm²*)
334.20	2.00	0.133012

MPE 1:

Power(*m*W)	numeric antenna gain	Power density (*mW/cm²*)
325.84	2.00	0.129684

Total MPE:

Maximum Emissions Level				
MPE 0	MPE 1	Total MPE	Limit (*mW/cm²*)	Result
0.133012	0.129684	0.262696	1.0	PASS