Maximum Permissible Exposure

EUT : 2.4GHz Digital Wireless Camera

Applicant : Neotech Photoelectric Inc.
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Model No : W-DCB11-HS
Serial No : W-DCB11-MS , W-QCB41-MS , W-QCB41-HS

FCC ID : XL9-WDCB11HS

Basis of Calculations:

Assumed use distance from EUT to Human, 0.2m separation distance warning is required. In this section, the power density at 0.2m location is calculated to examine if it is lower than the limit.

E (V/m) $= \frac{\sqrt{30 \times P \times G}}{d}$ Power Density: *Pd* (W/m²) $= \frac{E^2}{377}$

E = Electric field (V/m)

P = Peak RF output power (W)

G = EUT Antenna numeric gain (numeric)

d = Separation distance between radiator and human body (m)

The formula can be changed to

$Pd = \frac{30 \times P \times G}{377 \times d^2}$

From the peak EUT RF output power, the minimum mobile separation distance, d=0.2m, as well as the gain of the used antenna, the RF power density can be obtained.

Test Result:

Max RF Power (dBm)	TX Antenna Gain (dBi)	Max EIRP Output Power(W)
10.00	2.00	0.01

Power Density (W/m2)	Limit of Power Density (W/m2)
0.0397877	10