

MPE Calculation (for Mobile Device)

FCC ID: PU5DW271HL

EUT Description: LCD Monitor
Company: Wistron Corporation
Model: DW271HL

Typical use distance: $d \geq 20$ cm

Power density limit for mobile devices at 2.4 and 5 GHz: $S \leq 1$ mW/cm²

Remark: Average \leq 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.

Frequency range: 2412-2462MHz

Maximum measured conducted power (Peak): $P_{\text{conducted}} = 13.3$ dBm

Antenna Gain: $G = 3$ dBi

Calculation: $P_{\text{radiated}} = P_{\text{conducted}} + G_{\text{linear}} = 13.3$ dBm + 3 dBi = 16.3 dBm = 42.66 mW

Power density $S = (P_{\text{radiated}}) / (4\pi \times d^2) = 0.0085$ mW/cm² \rightarrow below limit, pass.

Frequency range: 2422-2452MHz

Maximum measured conducted power (Peak): $P_{\text{conducted}} = 12.36$ dBm

Antenna Gain: $G = 3$ dBi

Calculation: $P_{\text{radiated}} = P_{\text{conducted}} + G_{\text{linear}} = 12.36$ dBm + 3 dBi = 15.36 dBm = 34.36 mW

Power density $S = (P_{\text{radiated}}) / (4\pi \times d^2) = 0.0068$ mW/cm² \rightarrow below limit, pass.

Frequency range: 5745-5805MHz

Maximum measured conducted power (Peak): $P_{\text{conducted}} = 11.76$ dBm

Antenna Gain: $G = 5$ dBi

Calculation: $P_{\text{radiated}} = P_{\text{conducted}} + G_{\text{linear}} = 11.76$ dBm + 5 dBi = 16.76 dBm = 47.42 mW

Power density $S = (P_{\text{radiated}}) / (4\pi \times d^2) = 0.0094$ mW/cm² \rightarrow below limit, pass.