MPE Calculation (for Mobile Device)

FCC ID: PU5DW271HL

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

Typical use distance: d ≥ 20 cm
Power density limit for mobile devices at 2.4 and 5 GHz: S ≤ 1 mW/cm^2
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.

Frequency range: 5180-5230MHz
Maximum measured conducted power (Peak): $P_{conducted}$ = 10.23 dBm
Antenna Gain: G = 5 dBi
Calculation: $P_{radiated}$ = $P_{conducted}$ + G_{linear} = 10.23 dBm + 5 dBi = 15.23 dBm = 33.34 mW
Power density S = ($P_{radiated}$) / (4π x d^2) =0.0067 mW/cm^2 → below limit, pass.

Frequency range: 5190-5220MHz
Maximum measured conducted power (Peak): $P_{conducted}$ = 7.80 dBm
Antenna Gain: G = 5 dBi
Calculation: $P_{radiated}$ = $P_{conducted}$ + G_{linear} = 7.80 dBm + 5 dBi = 12.80 dBm = 19.05 mW
Power density S = ($P_{radiated}$) / (4π x d^2) =0.0038 mW/cm^2 → below limit, pass.