

RF EXPOSURE EVALUATION

EUT Specification

| | |
|-----------------------------------|---|
| EUT | Video Baby Monitor-Camera |
| Frequency band (Operating) | <input type="checkbox"/> WLAN: 2.412GHz ~ 2.462GHz <input type="checkbox"/> WLAN: 5.18GHz ~ 5.32GHz / 5.50GHz ~ 5.70GHz <input type="checkbox"/> WLAN: 5.745GHz ~ 5.825GHz <input checked="" type="checkbox"/> Others(2406-2475MHz) |
| Device category | <input type="checkbox"/> Portable (<20cm separation) <input checked="" type="checkbox"/> Mobile (>20cm separation) <input type="checkbox"/> Others ____ |
| Antenna diversity | <input checked="" type="checkbox"/> Single antenna <input type="checkbox"/> Multiple antennas <input type="checkbox"/> Tx diversity <input type="checkbox"/> Rx diversity <input type="checkbox"/> Tx/Rx diversity |
| Max. output power | 17.49dBm(56.10mW) |
| Antenna gain | 3dBi |
| Evaluation applied | <input checked="" type="checkbox"/> MPE Evaluation <input type="checkbox"/> SAR Evaluation |

Limits for Maximum Permissible Exposure (MPE)

| Frequency Range(MHz) | Electric Field Strength(V/m) | Magnetic Field Strength(A/m) | Power Density (mW/cm ²) |
|----------------------|------------------------------|------------------------------|-------------------------------------|
| 300-1500 | -- | -- | F/1500 |
| 1500-100000 | -- | -- | 1 |

Friis transmission formula: $P_d = \frac{P_{out} * G}{4 * \pi * R^2}$

Where

P_d = Power density in mW/cm^2

P_{out} = output power to antenna in Mw

G = gain of antenna in linear scale

π = 3.1416

R = distance between observation point and center of the radiator in cm

P_d the limit of MPE, $1mW/cm^2$. If we know the maximum gain of the antenna and total power input to the antenna, through the calculation, we will know the distance where the MPE limit is reached.

Measurement Result

| Channel | Channel Frequency (MHz) | Max Output power (dBm) | Tolerance | Max Tune-UP power (mW) | Power density at 20cm (mW/cm^2) | Power density Limits (mW/cm^2) |
|---------|-------------------------|------------------------|-----------|------------------------|-------------------------------------|------------------------------------|
| Low | 2406 | 17.49 | ± 0.1 | 57.41 | 0.0228 | 1 |
| Middle | 2442 | 17.12 | ± 0.1 | 52.72 | 0.0209 | 1 |
| High | 2475 | 16.71 | ± 0.1 | 47.97 | 0.0190 | 1 |