

MPE CALCULATION

FCC ID: W22-ATH

RF Exposure Requirements:
RF Radiation Exposure Limits:
RF Radiation Exposure Guidelines:

47 CFR §1.1307(b)
47 CFR §1.1310
FCC OST/OET Bulletin Number 65

EUT Frequency Band:
Limits for General Population/Uncontrolled Exposure in the band of:

2401.5-2479.5 MHz,
1500-100,000 MHz

Power Density Limit:

1 mW / cm²

Equation: $S = PG / 4\pi R^2$ or $R = \sqrt{PG / 4\pi S}$

Where, S = Power Density

P = Power Input to Antenna

G = Antenna Gain

R = distance to the center of radiated antenna

EUT: Wireless Large display tag, Model No.: ATH100ES

PIFA Antenna

Prediction distance 20cm

(FHSS 2.4GHz): Power = 19.96 dBm, Antenna Gain = 0 dBi, Power density = 0.0248 mW/cm²

Type	CH Freq (MHz)	Conducted Power (dBm)	Antenna Gain (dBi)	Directional Gain (dBi)	Tune-Up Tolerance	Tolerance Max Power (dBm)	Measurement Distance (cm)	Calculated MPE (mW/cm ²)	MPE Limit (mW/cm ²)	Pass/Fail
FHSS 2.4GHz	2401.5	19.96	0	0	±1dB	20.96	20	0.0248	1	Pass

The Above Result had shown that the device complied with MPE requirement at a prediction distance of 20cm.

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