

MPE CALCULATION

FCC ID: I28MD-ZBR7BTLE, I28MD-FXLAN11AC, I28-RFIDM6EMTT

RF Exposure Requirements:

47 CFR §1.1307(b)

RF Radiation Exposure Limits:

47 CFR §1.1310

RF Radiation Exposure Guidelines:

FCC OST/OET Bulletin Number 65

EUT Frequency Band: 902-928MHz

EUT Frequency Band: 2.4 GHz

EUT Frequency Band: 5 GHz

902.75-927.25MHz

2402- 2480MHz, 2412-2462MHz

5180- 5320MHz, 5500-5720MHz, 5745-5825MHz

5210-5290MHz, 5530-5610MHz, 5690-5775MHz

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

1500 - 100,000 MHz

Power Density Limit:

0.62 mW / cm² (300-1500 MHz)

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

Prediction distance 20cm

EUT: ZT610, ZT620 Label Printer

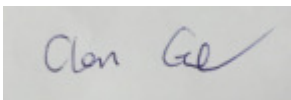
Type	CH Freq (MHz)	Conducted Power (dBm)	Antenna Gain (dBi)	Apparent Gain (dBi)	Tune-Up Tolerance	Tolerance Max Power (dBm)	Measurement distance (cm)	Calculated MPE (W/m ²)	MPE Limit (W/m ²)
BT LE	2402	8.5	2.8	2.8	±1dB	9.5	20	0.033	10
RFID	902.75	28.11	-36	-36	±1dB	29.11	20	0.0004	6.2
2.4GHz WLAN	2412	16.77	3	3	±1dB	17.77	20	0.23	10
5GHz WLAN	5500	14.76	5	5	±1dB	19.76	20	0.59	10

If all radios working simultaneously,

Total Ratio= 0.033 W/ m²/10+ 0.0004 W/ m²/6.2+ 0.23 W/ m²/10+ 0.59 W/ m²/10= (0.33+0.0064+2.3+5.9) %=8.53% < 100%

The Above Result had shown that the Device complied with MPE requirement.

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