

RF Exposure

FCC ID: PZ3-TX400

1.0 INTRODUCTION

These calculations are based on the highest EIRP possible from the EUT considering maximum power and antenna gain. The highest output power of the EUT is 1 W and the gain of the antenna is 2.15 dBi. For all calculations, 100% will be used as a worst-case in any given 6-minute period, as this is a worst case.

There is a software interlock to prevent the BLE from transmitting at the same time as the 72-73 MHz transmission. When the device is in the BLE mode the 72-73 MHz output is disabled.

2.0 RF EXPOSURE PER FCC 1.1310

MHz	Max Power dBm	Max Ant Gain dBi	Duty Cycle %	EIRP Watts	(S) GP Limit mW/cm ²	Declared Minimum separation Distance (cm)	EUT power Density mW/cm ²	Result
72.1	29.9	2.15	100	1.6032	0.2	35.0	0.1041	Pass
72.98	30.0	2.15	100	1.6406	0.2	35.0	0.1066	Pass
2402	4.39	2.21	100	0.0046	1.0	35.0	0.0003	Pass

Note that the BLE will not transmit at the same time as the 72-73 MHz transmitter so they are considered separately.

Notes on the above table:

- S is the power density General Population Limit from FCC 1.1310 Table 1
- EIRP Power is the Peak Effective Radiated Power.
$$\text{EIRP} = (\text{Average Conducted Power} + \text{Antenna gain}) * \text{Duty Cycle}.$$

POWER DENSITY

Power density is given by:

$$S = \text{EIRP} / (4 * \pi * D^2)$$

Where

S = Power density in mW/cm²

EIRP = Equivalent Isotropic Radiated Power in mW

D = Separation distance in cm

Since the calculated power density is less than the limit, this product fully meets the OET 65 requirements for the general population.