MPE CALCULATION

FCC ID: GKM-XT6264(BLE/ZIGBEE)
XMR201903EG25G(Cellular)

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:
2402-2480 MHz, 2405- 2480 MHz
1850-1910 MHz, 824–849 MHz
1850 - 1910 MHz, 1710 -1755 MHz, 824 -849 MHz, 699 - 716 MHz

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

Frequency Range (MHz)	Power Density (mW/cm²)
1,500-100,000	1.0
300-1,500	f/1500

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: XT6264

Prediction distance 20cm

(Zigbee Radio): Power = 7.46 dBm, Power density = 0.00157 mW/cm^2

(BLE Radio): Power = 7.47 dBm, Power density = 0.00157 mW/cm^2

(WCDMA Band 2): Conducted Output Power = 24.88 dBm, Power density = 0.1537 mW/cm^2

(LTE Band 4): Conducted Output Power = 24.91 dBm, Power density = 0.19046 mW/cm^2

Type	CH Freq (MHz)	Conducted Power (dBm)	Antenna Gain (dBi)	Tune-Up Tolerance	Tolerance Max Power (dBm)	Measurement Distance (cm)	Calculated MPE (mW/cm^2)	MPE Limit (mW/cm^2)	Pass/Fail
Zigbee	2405	6.46	1.5	±1dB	7.46	20	0.00157	1	Pass
BLE	2402	6.47	1.5	±1dB	7.47	20	0.00157	1	Pass
WCDMA B2	1850.2	23.88	4	±1dB	24.88	20	0.1537	1	Pass
LTE B4	1710.7	24.91	3.9	±1dB	24.91	20	0.19046	1	Pass

If Zigbee (2.4GHz) , BLE (2.4GHz) and WCDMA transmit simultaneously.

Total MPE = 0.001567 mW/cm^2+ 0.001570 mW/cm^2+ 0.1537 mW/cm2 = 0.15684 mW/cm^2

If Zigbee (2.4GHz) , BLE (2.4GHz) and LTE transmit simultaneously.

Total MPE = 0.001567 mW/cm^2+ 0.001570 mW/cm^2+ 0.19046 mW/cm2 = 0.1936 mW/cm^2

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

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