

Appendix for TEST REPORT, No. I17D00184-MPE01

JRN-430K has two modules in the device, WL18MODGB and PLS62-W.

For WL18MODGB, please refer to the following data.

- Equipment: WiFi and Bluetooth Module
- Model name: WL18MODGB
- FCC ID: Z64-WL18SBMOD
- IC: 451I-WL18SBMOD

1. Radio Frequency Radiation Exposure Evaluation

1.1 Standalone and Collocated Power Density Calculation results, WL18MODGB

[FCC]

(Standalone) WLAN Power Density / Limit	(Standalone) Bluetooth Power Density / Limit	(Collocated) Σ (Power Density / Limit) of WLAN+Bluetooth
0.019	0.007	0.026

The worst case is 0.019 of WLAN.

[ISED]

(Standalone) WLAN Power Density / Limit	(Standalone) Bluetooth Power Density / Limit	(Collocated) Σ (Power Density / Limit) of WLAN+Bluetooth
0.035	0.012	0.047

The worst case is 0.035 of WLAN.

1.2 Standalone Power Density Calculation results, PLS62-W

This application is used the following antenna for PLS62-W.

- Model name: 7ABLE0009
- Antenna type: Half-wave length dipole antenna
- Antenna again: -1.0 ~ +1.6dBi

[FCC]

From page 10, #5.4, LTE Band 2, the Power Density is 0.091 mW/cm² and the MPE limit is 1 mW/cm², so the ratio is 0.091/1 = 0.091.

*Ant. gain: 1.6 dBi (numeric gain 1.45)

From page 10, #5.5, LTE Band 4, the Power Density is 0.091 mW/cm² and the MPE limit is 1 mW/cm², so the ratio is 0.091/1 = 0.091.

*Ant. gain: 1.6 dBi (numeric gain 1.45)

From page 10, #5.6, LTE Band 5, the Power Density is 0.079 mW/cm² and the MPE limit is 0.549 mW/cm², so the ratio is 0.079/0.549 = 0.144

*Ant. gain: 1.0 dBi (numeric gain 1.26)

From page 11, #5.8, LTE Band 12, the Power Density is 0.050 mW/cm² and the MPE limit is 0.477 mW/cm², so the ratio is $0.050/0.477 = 0.105$.

*Ant. gain: -1.0 dBi (numeric gain 0.79)

From page 12, #5.11, GSM850, the Power Density is 0.099 mW/cm² and the MPE limit is 0.549 mW/cm², so the ratio is $0.099/0.549 = 0.180$.

*Ant. gain: 1.0 dBi (numeric gain 1.26)

From page 13, #5.12, GSM1900, the Power Density is 0.057 mW/cm² and the MPE limit is 1 mW/cm², so the ratio is $0.057/1 = 0.057$.

*Ant. gain: 1.6 dBi (numeric gain 1.45)

From page 13, #5.13, WCDMA Band 2, the Power Density is 0.091 mW/cm² and the MPE limit is 1 mW/cm², so the ratio is $0.091/1 = 0.091$.

*Ant. gain: 1.6 dBi (numeric gain 1.45)

From page 13, #5.14, WCDMA Band 4, the Power Density is 0.091 mW/cm² and the MPE limit is 1 mW/cm², so the ratio is $0.091/1 = 0.091$.

*Ant. gain: 1.6 dBi (numeric gain 1.45)

From page 14, #5.15, WCDMA Band 5, the Power Density is 0.079 mW/cm² and the MPE limit is 0.549 mW/cm², so the ratio is $0.079/0.549 = 0.144$.

*Ant. gain: 1.0 dBi (numeric gain 1.26)

The worst case is 0.180 of GSM850.

[ISED]

From page 10, #5.4, LTE Band 2, the Power Density is 0.091 mW/cm² and the MPE limit @1850MHz is 4.48 W/m² = 0.448 mW/cm², so the ratio is $0.091/0.448 = 0.203$.

*Ant. gain: 1.6 dBi (numeric gain 1.45)

From page 10, #5.5, LTE Band 4, the Power Density is 0.091 mW/cm² and the MPE limit @1710MHz is 4.24 W/m² = 0.424 mW/cm², so the ratio is $0.091/0.424 = 0.215$.

*Ant. gain: 1.6 dBi (numeric gain 1.45)

From page 10, #5.6, LTE Band 5, the Power Density is 0.079 mW/cm² and the MPE limit @824MHz is 2.58 W/m² = 0.258 mW/cm², so the ratio is $0.079/0.258 = 0.306$.

*Ant. gain: 1.0 dBi (numeric gain 1.26)

From page 11, #5.8, LTE Band 12, the Power Density is 0.079 mW/cm² and the MPE limit @699MHz is 2.30 W/m² = 0.230 mW/cm², so the ratio is $0.079/0.230 = 0.343$.

*Ant. gain: -1.0 dBi (numeric gain 0.79)

From page 12, #5.11, GSM850, the Power Density is 0.099 mW/cm² and the MPE limit @824MHz is 2.58 W/m² = 0.258 mW/cm², so the ratio is $0.099/0.258 = 0.384$.

*Ant. gain: 1.0 dBi (numeric gain 1.26)

From page 13, #5.12, GSM1900, the Power Density is 0.057 mW/cm² and the MPE limit @1850MHz is 4.48 W/m² = 0.448 mW/cm², so the ratio is 0.057/0.448 = 0.127.

*Ant. gain: 1.6 dBi (numeric gain 1.45)

From page 13, #5.13, WCDMA Band 2, the Power Density is 0.091 mW/cm² and the MPE limit @1850MHz is 4.48 W/m² = 0.448 mW/cm², so the ratio is 0.091/0.448 = 0.203.

*Ant. gain: 1.6 dBi (numeric gain 1.45)

From page 13, #5.14, WCDMA Band 4, the Power Density is 0.091 mW/cm² and the MPE limit @1710MHz is 4.24 W/m² = 0.424 mW/cm², so the ratio is 0.091/0.424 = 0.215.

*Ant. gain: 1.6 dBi (numeric gain 1.45)

From page 14, #5.15, WCDMA Band 5, the Power Density is 0.079 mW/cm² and the MPE limit @824MHz is 2.58 W/m² = 0.258 mW/cm², so the ratio is 0.079/0.258 = 0.306.

*Ant. gain: 1.0 dBi (numeric gain 1.26)

The worst case is 0.384 of GSM850.

1.3 Summation of the calculation results

[FCC]

WL18MODGB (WLAN) + GSM850 = 0.019 + 0.180 = 0.199

According to 47 CFR § 2.1091, the RF exposure analysis concludes that the RF Exposure is FCC compliant.

[ISED]

WL18MODGB (WLAN) + GSM850 = 0.035 + 0.384 = 0.419

According to ISED RSS-102 Issue 5, the RF exposure analysis concludes that the RF Exposure is IC compliant.