



RF exposure requirements – ZTE MF10

Dear Reviewer,

The maximum power output is

802.11b/g: 19.96dBm

GSM850*: 33dBm

GSM1900*: 30dBm

WCDMA850*: 24dBm

WCDMA1900*: 24dBm

the maximum antenna gain for integral antenna is

802.11b/g: 5dBi

GSM850*: 0dBi

GSM1900*: 0dBi

WCDMA850*: 0dBi

WCDMA1900*: 0dBi

The maximum permissible exposure is defined in 47 CFR 1.1310 with 1 mW/cm².

The Transmitter is using external antennas that operate at 20 cm or more from nearby persons.

The maximum permitted level is calculated using the general equation:

$$S = P' / 4\pi R^2$$

$$802.11b/g: P' = 19.96dBm + 5dBi = 24.96dBm = 313mW$$

$$GSM 850*: P' = 33dBm + 0dBi = 33dBm = 2000mW$$

$$GSM1900*: P' = 30dBm + 0dBi = 30dBm = 1000mW$$

$$WCDMA850*: P' = 24dBm + 0dBi = 24dBm = 250mW$$

$$WCDMA1900*: P' = 24dBm + 0dBi = 24dBm = 250mW$$

$$R = 20cm$$

$$\pi = 3.1416$$

Solving for S, the power density at 20 cm is

$$802.11b/g: \mathbf{0.062mW/cm^2}$$

$$GSM 850: \mathbf{0.398mW/cm^2}$$

$$GSM1900: \mathbf{0.199mW/cm^2}$$

$$UMTS850: \mathbf{0.050mW/cm^2}$$

$$UMTS1900: \mathbf{0.050mW/cm^2}$$

For simultaneous transmission, maximum value is

$$GSM850 + 802.11b/g = 0.398mW/cm^2 + 0.062mW/cm^2 = \mathbf{0.46mW/cm^2}$$

So the limit is kept.

***note: Typical value of a HSPA USB modem, consider this product will be collocated with a HSPA USB modem**

Best Regard.

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