



RADIO FREQUENCY EXPOSURE

LIMIT

Systems operating under the provisions of this section shall be operated in a manner that ensures that the public is not exposed to radio frequency energy levels in excess of the Commission's guidelines. See §15.247(b)(4) and §1.1307(b)(1) of this chapter.

Conducted Power Results

Mode	Channel	Frequency(MHz)	Peak Conducted Output Power (dBm)
HSDPA (BAND II)	9262	1852.40	24.61
	9400	1880.00	24.79
	9538	1907.60	24.31

Manufacturing tolerance

HSDPA (Peak Power) (BAND II)			
Channel	Channel 9262	Channel 9400	Channel 9538
Target (dBm)	24.0	24.0	24.0
Tolerance \pm (dB)	1.0	1.0	1.0

**EUT Specification**

EUT	GXW Wireless Camera
Frequency band (Operating)	<input type="checkbox"/> WLAN: 2.412GHz ~ 2.462GHz <input type="checkbox"/> WLAN: 5.18GHz ~ 5.32GHz / 5.50GHz ~ 5.70GHz <input type="checkbox"/> WLAN: 5.745GHz ~ 5.825GHz <input type="checkbox"/> Bluetooth: 2.402GHz~ 2.480GHz <input checked="" type="checkbox"/> UMTS Band II/GSM1900: 1850MHz~1910MHz <input type="checkbox"/> UMTS Band V/GSM850: 824MHz~849MHz <input type="checkbox"/> Others _
Device category	<input type="checkbox"/> Portable (<20cm separation) <input checked="" type="checkbox"/> Mobile (>20cm separation) <input type="checkbox"/> Others _____
Exposure classification	<input type="checkbox"/> Occupational/Controlled exposure ($S = 5mW/cm^2$) <input checked="" type="checkbox"/> General Population/Uncontrolled exposure ($S=1mW/cm^2$)
Duty Cycle	100%
Antenna diversity	<input checked="" type="checkbox"/> Single antenna <input type="checkbox"/> Multiple antennas <input checked="" type="checkbox"/> Tx diversity <input type="checkbox"/> Rx diversity <input type="checkbox"/> Tx/Rx diversity
Max. output power (Including turn tolerance)	24.0dBm (251.189mW)
Antenna gain (Max)	-2dBi (Numeric gain: 0.63)
Evaluation applied	<input checked="" type="checkbox"/> MPE Evaluation <input type="checkbox"/> SAR Evaluation

Note:

1. The maximum output power (including turn tolerance) is 24.0dBm (251.189mW) and maximum antenna gain is -2dBi
2. For mobile or fixed location transmitters, no SAR consideration applied. The minimum separation generally be used is at least 20 cm, even if the calculations indicate that the MPE distance would be lesser.



TEST RESULT

No non-compliance noted.

Calculation

Given $S = \frac{P \times G}{4\pi d^2}$ *Equation 1*

Where $d = \text{distance in cm}$

$P = \text{Power in mW}$

$G = \text{Numeric antenna gain}$

$S = \text{Power Density in mW/cm}^2$

Maximum Permissible Exposure

EUT Output Power=251.189mW

Numeric antenna gain=1.58

Substituting the MPE safe distance using $d=20$ cm into *Equation 1*:

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The power density $S = 251.189 \times 1.58 / (4\pi \times 400) \text{ cm}^2 = 7.90 \times 10^{-2} \text{ mW/cm}^2$

(For mobile or fixed location transmitters, the maximum power density is 1.0 mW/cm^2 even if the calculation indicates that the power density would be larger.)