



## Maximum Permissible Exposure (MPE)

### EUT INFORMATION

<b>EUT</b>	In-Vehicle Computer
<b>Frequency band (Operating)</b>	2.412 GHz ~ 2.462 GHz
<b>Antenna diversity</b>	<input checked="" type="checkbox"/> Single antenna <input type="checkbox"/> Multiple antennas <input type="checkbox"/> Tx diversity <input type="checkbox"/> Rx diversity <input checked="" type="checkbox"/> Tx/Rx diversity
<b>Max. output power</b>	20.12 dBm (102.80 mW)
<b>Antenna gain (Max)</b>	2.79 dBi

### TEST RESULT

The modular use shall be at least 20cm distance away from human body.

MPE Calculation Method

$$E (V/m) = \frac{\sqrt{30 \cdot P \cdot G}}{d}$$

$$\text{Power Density} = Pd (mW/cm^2) = E^2 / 3770$$

Combine these two formulas can be changed to

$$Pd = (30 \cdot P \cdot G) / (3770 \cdot d^2)$$

Note:

1. "E" means Electric field (V/m).
2. "P" means Peak RF output power (W).
3. "G" means EUT Antenna numeric gain (numeric).
4. "d" means the minimum mobile separation distance is 0.2m between radiator and human body.



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Modulation Type	Channel	Frequency (MHz)	Output Power to Antenna (dBm)	Power Density (mW/cm <sup>2</sup> )	Limit of Power Density (mW/cm <sup>2</sup> )
802.11b	01	2412	17.53	0.021403	<1
	06	2437	16.95	0.018727	<1
	11	2462	16.46	0.016729	<1
802.11g	01	2412	19.84	0.036431	<1
	06	2437	19.08	0.030583	<1
	11	2462	18.62	0.027509	<1
802.11n HT20	01	2412	20.12	0.038857	<1
	06	2437	19.12	0.030866	<1
	11	2462	18.71	0.028085	<1
802.11n HT40	03	2422	19.04	0.030302	<1
	06	2437	18.60	0.027383	<1
	09	2452	18.19	0.024916	<1