



## **MPE/RF EXPOSURE TEST REPORT**

**FCC CFR 47 Part 1.1310**

**REPORT No.: HPEN141-U12\_MPE Rev A**

**Company:** Hewlett Packard Enterprise

**Model No.:** ASIN0301

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**To:** FCC CFR 47 Part 1.1310

**Test Report Serial No.:** HPEN141-U12\_MPE Rev A

This report supersedes: NONE

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## 1. MAXIMUM PERMISSIBLE EXPOSURE

### Calculations for Maximum Permissible Exposure Levels

$$\text{Power Density} = P_d \text{ (mW/cm}^2\text{)} = \text{EIRP}/(4*\pi*d^2)$$

$$\text{EIRP} = P * G$$

P = Peak output power (mW)

G = Antenna numeric gain (numeric)

d = Separation distance (cm)

$$\text{Numeric Gain} = 10 \wedge (\text{G (dBi)}/10)$$

The calculations in the table below use the highest conducted power values together with the lowest antenna gain specified for the EUT. These calculations represent worst case in terms of the exposure levels.

| Freq. Band (MHz)        | Ant Gain (dBi) | Numeric Gain (numeric) | Peak Output Power (dBm) | Peak Output Power (mW) | Calculated Power Density (mW/cm <sup>2</sup> ) @ 20cm | Power Density Limit (mW/cm <sup>2</sup> ) | Min Calculated safe distance for Limit (cm) | Calculated Power Density (mW/cm <sup>2</sup> ) @ Safe Distance |
|-------------------------|----------------|------------------------|-------------------------|------------------------|---|---|---|--|
| 5150.0 - 5250.0         | 4.90           | 3.09                   | 20.55                   | 134.00                 | 0.08  | 1.00                                      | 5.7   | 1.00   |
| 5470.0 - 5725.0         | 4.90           | 3.09                   | 21.19                   | 131.77                 | 0.08  | 1.00                                      | 5.7   | 1.00   |
| 5725.0 - 5850.0         | 4.90           | 3.09                   | 21.18                   | 131.26                 | 0.08  | 1.00                                      | 5.8   | 1.00   |
| 5250.0 - 5350.0         | 4.90           | 3.09                   | 20.72                   | 118.03                 | 0.07  | 1.00                                      | 4.8   | 1.00   |
| 2400.0 - 2483.5 (Wi-Fi) | 2.00           | 1.58                   | 21.41                   | 138.21                 | 0.04  | 1.00                                      | 4.2   | 1.00   |
| 2400.0 - 2483.5 (BLE)   | 1.80           | 1.51                   | 3.06                    | 2.00                   | 0.001   | 1.00                                      | 0.5   | 1.00   |

Assessment for simultaneous operation:

Only the BLE and highest Power Density used for simultaneous operation.

| Freq. Band (MHz)           | Ant Gain (dBi) | Numeric Gain (numeric) | Peak Output Power (dBm) | Peak Output Power (mW) | Power Density Limit (mW/cm <sup>2</sup> ) E <sub>ref</sub> | Power Density (mW/cm <sup>2</sup> ) | E <sub>i</sub> /E <sub>ref</sub> |
|----------------------------|----------------|------------------------|-------------------------|------------------------|--|-------------------------------------|----------------------------------|
| 2400.0 - 2483.5 (BLE)      | 1.80           | 1.51                   | 3.06                    | 2.00                   | 1.00   | 0.001                               | 0.001                            |
| 5470.0 - 5725.0            | 4.90           | 3.09                   | 21.19                   | 131.50                 | 1.00   | 0.08                                | 0.08                             |
| <b>Summation of Ratio:</b> |                |                        |                         |                        |  |                                     | <b>0.081</b>                     |

The Total Evaluation was calculated using the formula:

$$\sum_{i=1}^n E_i / E_{ref} \leq 1$$

Where

E<sub>i</sub>: calculated E-field Strength for transmitter

E<sub>ref</sub>: E-field strength related limit

Note: for mobile or fixed location transmitters the minimum separation distance is 20cm, even if calculations indicate the MPE distance to be less.

### Specification - Maximum Permissible Exposure Limits

The Limit is defined in Table 1 of FCC §1.1310.



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