

# MPE/RF EXPOSURE TEST REPORT



Test of: HP Inc 0960-4025 and 0960-4034

To: FCC CFR 47 Part 1.1310

Test Report Serial No.: MARS11\_MPE Rev B FCC All Bands

This report supersedes: MARS11\_MPE Rev A FCC All Bands

Applicant: HP Inc  
1115 SE 164th Ave., Suite 210,  
Vancouver,  
Washington 98683,  
USA

Product Function 802.11 a/b/g/n SDIO dual band  
with BT/BLE

Issue Date: 20th December 2017

## **This Test Report is Issued Under the Authority of:**

**MiCOM Labs, Inc.**  
575 Boulder Court  
Pleasanton California 94566  
USA  
Phone: +1 (925) 462-0304  
Fax: +1 (925) 462-0306  
[www.micomlabs.com](http://www.micomlabs.com)



**MiCOM Labs is an ISO 17025 Accredited Testing Laboratory**



**Title:** HP Inc. 0960-4025 and 0960-4034  
**To:** FCC CFR 47 Part 1.1310  
**Serial #:** MARS11\_MPE FCC Rev B All Bands  
**Issue Date:** 20<sup>th</sup> December 2017  
**Page:** 2 of 4

---

## 1. PRODUCT DETAILS

| Details                          | Description                                                                               |
|----------------------------------|-------------------------------------------------------------------------------------------|
| Purpose:                         | Evaluation of the HP Inc 0960-4025 and 0960-4034 for compliance to FCC CFR 47 Part 1.1310 |
| Applicant:                       | HP Inc<br>1115 SE 164th Ave., Suite 210,<br>Vancouver,<br>Washington 98683,<br>USA        |
| Manufacturer:                    | HP Inc                                                                                    |
| Laboratory performing the tests: | MiCOM Labs, Inc.<br>575 Boulder Court<br>Pleasanton California 94566 USA                  |
| Product Family Name:             | VCVRA-1712                                                                                |
| Model(s):                        | Model: HP Inc.'s VCVRA-1712<br>Part numbers: 0960-4025 and 0960-4034                      |
| Equipment Dimensions:            | 37mm x 40mm                                                                               |
| Weight:                          | 0.3 oz                                                                                    |
| Hardware Rev:                    | V4                                                                                        |
| Software Rev:                    | P130                                                                                      |

---

This test report may be reproduced in full only. The document may only be updated by MiCOM Labs personnel. All changes will be noted in the Document History section of the report.



## 2. MAXIMUM PERMISSABLE EXPOSURE

### Calculations for Maximum Permissible Exposure Levels

Power Density =  $P_d$  (mW/cm<sup>2</sup>) =  $EIRP / (4 * \pi * d^2)$

$EIRP = P * G$

$P$  = Peak output power (mW)

$G$  = Antenna numeric gain (numeric)

$d$  = Separation distance (cm)

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

These calculations represent worst case in terms of the exposure levels.

| Freq. Band (MHz)                | Total 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) |
|---------------------------------|------------------|------------------------|-------------------------|------------------------|-------------------------------------------------------|-------------------------------------------|---------------------------------------------|
| 2400.0 - 2483.5 (BLE DTS GFSK)) | 2.5              | 1.78                   | 7.55                    | 5.69                   | 0.002                                                 | 1                                         | 0.90                                        |
| 2400.0 - 2483.5 (BLE FHSS)      | 2.5              | 1.78                   | 7.25                    | 5.31                   | 0.002                                                 | 1                                         | 0.90                                        |
| 2400.0 - 2483.5 WiFi            | 2.5              | 1.78                   | 18.47                   | 70.31                  | 0.025                                                 | 1                                         | 3.15                                        |
| 5725.0 - 5850.0 WiFi            | 3.8              | 2.40                   | 17.48                   | 55.98                  | 0.027                                                 | 1                                         | 3.27                                        |
| 5150.0 - 5250.0 WiFi            | 3.8              | 2.40                   | 15.55                   | 35.89                  | 0.017                                                 | 1                                         | 2.62                                        |
| 5470.0 - 5725.0 WiFi            | 3.8              | 2.40                   | 15.90                   | 38.90                  | 0.019                                                 | 1                                         | 2.73                                        |
| 5250.0 - 5350.0 WiFi            | 3.8              | 2.40                   | 16.23                   | 41.98                  | 0.020                                                 | 1                                         | 2.83                                        |

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.



575 Boulder Court  
Pleasanton, California 94566, USA  
Tel: +1 (925) 462 0304  
Fax: +1 (925) 462 0306  
[www.micomlabs.com](http://www.micomlabs.com)