

## RF Exposure Report

**Report No.:** SA180731C10

**FCC ID:** E2K-E42W001

**Test Model:** E42W001

**Series Model:** E42W, VEP1400

**Received Date:** Jul. 31, 2018

**Test Date:** Aug. 13 ~ Aug. 27, 2018

**Issued Date:** Aug. 28, 2018

**Applicant:** Dell Inc.

**Address:** One Dell Way, Round Rock, Texas 78682, USA

**Issued By:** Bureau Veritas Consumer Products Services (H.K.) Ltd., Taoyuan Branch

**Lab Address:** No. 47-2, 14th Ling, Chia Pau Vil., Lin Kou Dist., New Taipei City, Taiwan (R.O.C.)

**Test Location:** No. 19, Hwa Ya 2nd Rd., Wen Hwa Vil., Kwei Shan Dist., Taoyuan City 33383, TAIWAN (R.O.C.)

**FCC Registration /** 788550 / TW0003

**Designation Number:**



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### Release Control Record

Issue No.	Description	Date Issued
SA180731C10	Original release.	Aug. 28, 2018

## 1 Certificate of Conformity

**Product:** Automatic data processing machines

**Brand:** DELL or Dell EMC

**Test Model:** E42W001

**Series Model:** E42W, VEP1400

**Sample Status:** Mass production

**Applicant:** Dell Inc.

**Test Date:** Aug. 13 ~ Aug. 27, 2018

**Standards:** FCC Part 2 (Section 2.1091)

KDB 447498 D01 General RF Exposure Guidance v06

IEEE C95.1-1992

The above equipment has been tested by **Bureau Veritas Consumer Products Services (H.K.) Ltd., Taoyuan Branch**, and found compliance with the requirement of the above standards. The test record, data evaluation & Equipment Under Test (EUT) configurations represented herein are true and accurate accounts of the measurements of the sample's RF characteristics under the conditions specified in this report.

**Prepared by :**



**Date:**

Aug. 28, 2018

Suntee Liu / Specialist

**Approved by :**



**Date:**

Aug. 28, 2018

Bruce Chen / Project Engineer

## 2 RF Exposure

### 2.1 Limits for Maximum Permissible Exposure (MPE)

Frequency Range (MHz)	Electric Field Strength (V/m)	Magnetic Field Strength (A/m)	Power Density (mW/cm <sup>2</sup> )	Average Time (minutes)
Limits For General Population / Uncontrolled Exposure				
300-1500	...	...	F/1500	30
1500-100,000	...	...	1.0	30

F = Frequency in MHz

### 2.2 MPE Calculation Formula

$$P_d = (P_{out} * G) / (4 * \pi * r^2)$$

where

$P_d$  = power density in mW/cm<sup>2</sup>

$P_{out}$  = output power to antenna in mW

$G$  = gain of antenna in linear scale

$\pi$  = 3.1416

$R$  = distance between observation point and center of the radiator in cm

### 2.3 Classification

The antenna of this product, under normal use condition, is at least 20cm away from the body of the user. So, this device is classified as Mobile Device.

### 3 Calculation Result of Maximum Conducted Power

Function	Frequency Band (MHz)	Max Power (dBm)	Antenna Gain (dBi)	Distance (cm)	Power Density (mW/cm <sup>2</sup> )	Limit (mW/cm <sup>2</sup> )
BT LE	2402~2480	4.80	2.1	20	0.001	1
WLAN	2412~2462	24.22	6.4	20	0.229	1
WLAN	5180~5240	21.85	3.8	20	0.073	1
WLAN	5260~5320	22.89	3.8	20	0.093	1
WLAN	5500~5700	22.91	4.3	20	0.105	1
WLAN	5745~5825	24.63	5.2	20	0.191	1
WCDMA Band 2 & LTE Band 2	1850~1910	23.64	1.75	20	0.069	1
WCDMA Band 4	1710~1755	23.45	1.75	20	0.066	1
WCDMA Band 5 & LTE Band 5	824~849	23.51	1	20	0.056	0.549
LTE Band 4	1710~1755	23.99	1.75	20	0.075	1
LTE Band 7	2500~2570	22.93	3.5	20	0.087	1
LTE Band 12	699~716	23.99	1	20	0.063	0.466
LTE Band 13	777~787	23.93	1	20	0.062	0.518
LTE Band 25	1850~1915	23.99	1.75	20	0.075	1
LTE Band 26	814~849	23.98	1	20	0.063	0.543
LTE Band 30	2305~2315	22.95	0.3	20	0.042	1
LTE Band 41	2496~2690	22.95	3.5	20	0.088	1

Conclusion:

The formula of calculated the MPE is:

$CPD1 / LPD1 + CPD2 / LPD2 + \dots \text{etc.} < 1$

CPD = Calculation power density

LPD = Limit of power density

Max. BT + WLAN + WWAN =  $0.001/1 + 0.229/1 + 0.063/0.466 = 0.365 < 1$

---END---