

## RF Exposure Report

**Report No.:** SA160822E04G

**FCC ID:** KA2BA1210PA1

**Test Model:** DBA-1210P

**Received Date:** Aug. 22, 2016

**Test Date:** Sep. 19, 2016

**Issued Date:** Feb. 22, 2017

**Applicant:** D-Link Corporation

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

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### Release Control Record

Issue No.	Description	Date Issued
SA160822E04G	Original release.	Feb. 22, 2017

## 1 Certificate of Conformity

**Product:** Business Cloud Wave 2 Access Point

**Brand:** D-Link

**Test Model:** DBA-1210P

**Sample Status:** ENGINEERING SAMPLE

**Applicant:** D-Link Corporation

**Test Date:** Sep. 19, 2016

**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 EMC characteristics under the conditions specified in this report.

**Prepared by :**



**Date:** Feb. 22, 2017

Wendy Wu / Specialist

**Approved by :**



**Date:** Feb. 22, 2017

May Chen / Manager

## 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

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

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 22cm away from the body of the user.

So, this device is classified as **Mobile Device**.

### 2.4 Antenna Gain

Antenna No	Brand	Model	Antenna Gain (dBi) <Including cable loss>	Frequency range (GHz ~ GHz)	Antenna Type	Connector Type	Cable Length (mm)
Chain (1)	NA	290-20302	3.07	2.4~2.4835	PIFA	i-pex(MHF)	47
			3.46	5.15~5.85			
Chain (2)	NA	290-20301	2.85	2.4~2.4835	PIFA	i-pex(MHF)	81
			3.75	5.15~5.85			

## 2.5 Calculation Result of Maximum Conducted Power

Frequency Band (MHz)	Max Power (mW)	Antenna Gain (dBi)	Distance (cm)	Power Density (mW/cm <sup>2</sup> )	Limit (mW/cm <sup>2</sup> )
2412-2462	861.713	5.97	22	0.56015	1
5180-5240	426.809	6.62	22	0.32224	1
5745-5825	459.267	6.62	22	0.34674	1

NOTE:

2.4GHz: Directional gain =  $10 \log[(10^{G1/20} + 10^{G2/20})^2 / 2] = 5.97\text{dBi}$

5GHz: Directional gain =  $10 \log[(10^{G1/20} + 10^{G2/20})^2 / 2] = 6.62\text{dBi}$

### 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

WLAN 2.4GHz + WLAN 5GHz =  $0.56015 / 1 + 0.34674 / 1 = 0.90689$

**Therefore the maximum calculations of above situations are less than the “1” limit.**

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