

RF Exposure Report

Report No.: SA181009E01A

FCC ID: KA2AP2620A1

Test Model: DAP-2620

Received Date: Oct. 09, 2018

Test Date: Nov. 14, 2018

Issued Date: Mar. 27, 2019

Applicant: D-Link Corporation

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Issued By: Bureau Veritas Consumer Products Services (H.K.) Ltd., Taoyuan Branch
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**FCC Registration /
Designation Number:** 723255 / TW2022

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Table of Contents

Release Control Record	3
1 Certificate of Conformity	4
2 RF Exposure	5
2.1 Limits for Maximum Permissible Exposure (MPE).....	5
2.2 MPE Calculation Formula	5
2.3 Classification	5
2.4 Antenna Gain	5
2.5 Calculation Result of Maximum Conducted Power	6

Release Control Record

Issue No.	Description	Date Issued
SA181009E01A	Original release.	Mar. 27, 2019

1 Certificate of Conformity

Product: Wireless AC1200 Wave 2 Dual-Band wall-plate PoE AP

Brand: D-Link

Test Model: DAP-2620

Sample Status: ENGINEERING SAMPLE

Applicant: D-Link Corporation

Test Date: Nov. 14, 2018

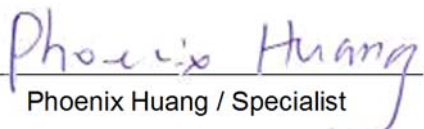
Standards: FCC Part 2 (Section 2.1091)

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 EMC characteristics under the conditions specified in this report.

Prepared by :


Phoenix Huang / Specialist

Date:

Mar. 27, 2019

Approved by :


May Chen / Manager

Date:

Mar. 27, 2019

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 ²)	Average Time (minutes)
Limits For General Population / Uncontrolled Exposure				
0.3-1.34	614	1.63	(100)*	30
1.34-30	824/f	2.19/f	(180/f ²)*	30
30-300	27.5	0.073	0.2	30
300-1500	...	...	f/1500	30
1500-100,000	...	...	1.0	30

f = Frequency in MHz ; *Plane-wave equivalent power density

2.2 MPE Calculation Formula

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

where

P_d = power density in mW/cm²

P_{out} = output power to antenna in mW

G = gain of antenna in linear scale

π = 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 24cm away from the body of the user. So, this device is classified as **Mobile Device**.

2.4 Antenna Gain

Ant No.	Transmitter Circuit	Antenna Gain (dBi)	Frequency rang (GHz)	Antenna type	Connector type	Cable Length (mm)
1	Chain (1)	3	2.4~2.4835	PCB	i-pex(MHF)	55
		4.5	5.15~5.85	PCB	i-pex(MHF)	
2	Chain (0)	2.8	2.4~2.4835	PCB	i-pex(MHF)	35
		4.1	5.15~5.85	PCB	i-pex(MHF)	

2.5 Calculation Result of Maximum Conducted Power

For 2.4GHz and 5GHz (U-NII-3 band) data was copied from the original test report (Report No.: SA181009E01)

Operation Mode	Evaluation Frequency (MHz)	Max Power (mW)	Antenna Gain (dBi)	Distance (cm)	Power Density (mW/cm ²)	Limit (mW/cm ²)
WLAN 2.4GHz	2437	764.733	5.91	24	0.41198	1
WLAN U-NII-1	5200	425.632	7.31	24	0.31652	1
WLAN 5GHz U-NII-2A	5270	244.474	7.31	24	0.18180	1
WLAN 5GHz U-NII-2C	5550	229.306	7.31	24	0.17052	1
WLAN 5GHz U-NII-3	5745	690.333	7.31	24	0.51336	1

Note:

2.4GHz: The directional gain = $10 \log[(10^{\text{Chain0/20}} + 10^{\text{Chain1/20}})^2 / 2] = 5.91\text{dBi}$

5GHz: The directional gain = $10 \log[(10^{\text{Chain0/20}} + 10^{\text{Chain1/20}})^2 / 2] = 7.31\text{dBi}$

Conclusion:

The formula of calculated the MPE is:

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

CPD = Calculation power density

LPD = Limit of power density

$\text{WLAN 2.4GHz} + \text{WLAN 5GHz} = 0.41198 / 1 + 0.51336 / 1 = 0.92534$

Therefore the maximum calculations of above situations are less than the "1" limit.

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