



RF Exposure Report

Report No.: SA120530E05E

FCC ID: KA2AP2690B1

Test Model: DAP-2690

Received Date: Oct. 26, 2015

Test Date: Nov. 09, 2015

Issued Date: Nov. 17, 2015

Applicant: D-Link Corporation

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

| Issue No. | Description | Date Issued |
|--------------|-------------------|---------------|
| SA120530E05E | Original release. | Nov. 17, 2015 |



1 Certificate of Conformity

Product: DAP-2690 AirPremier N Dual Band Concurrent PoE Access Point
Brand: D-Link
Test Model: DAP-2690
Sample Status: MASS-PRODUCTION
Applicant: D-Link Corporation
Test Date: Nov. 09, 2015
Standards: FCC Part 2 (Section 2.1091)
KDB 447498 D03
IEEE C95.1

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 : Midoli Peng, **Date:** Nov. 17, 2015
Midoli Peng / Specialist

Approved by : May Chen, **Date:** Nov. 17, 2015
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 ²) | 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

$$Pd = (Pout * G) / (4 * \pi * r^2)$$

where

Pd = power density in mW/cm²

Pout = 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 23cm away from the body of the user.

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

3 Antenna Gain

The antennas provided to the EUT, please refer to the following table:

| For 2.4GHz | | | | | |
|---------------------|--------------|------------|--|--------------|------------------|
| Transmitter Circuit | Manufacture | Model name | Antenna Gain | Antenna Type | Connector |
| | | | Gain (dBi) | | |
| Chain (0) | WHA YU GROUP | NP-9022 | 4.29 | Dipole | SMA Plug Reverse |
| Chain (1) | WHA YU GROUP | NP-9022 | 4.29 | Dipole | SMA Plug Reverse |
| For 5GHz | | | | | |
| Transmitter Circuit | Manufacture | Model name | Antenna Gain | Antenna Type | Connector |
| | | | Gain (dBi) | | |
| Chain (0) | WHA YU GROUP | SSR-12968 | 5G Band1: 5.646 5G Band2: 6.270 5G Band3: 5.428 5G Band4: 5.264 | Dipole | SMA Plug Reverse |
| Chain (1) | WHA YU GROUP | SSR-12968 | 5G Band1: 5.646 5G Band2: 6.270 5G Band3: 5.428 5G Band4: 5.264 | Dipole | SMA Plug Reverse |

4 Calculation Result Of Maximum Conducted Power

For 2.4GHz Maximum Conducted Power data was copied from the original test report (Report No.: SA120530E05)

| Frequency Band (MHz) | Max Power (mW) | Antenna Gain (dBi) | Distance (cm) | Power Density (mW/cm ²) | Limit (mW/cm ²) |
|----------------------|----------------|--------------------|---------------|-------------------------------------|-----------------------------|
| 2412-2462 | 424.097 | 7.3 | 23 | 0.34261 | 1 |
| 5180-5240 | 523.384 | 8.66 | 23 | 0.57830 | 1 |
| 5745-5825 | 477.909 | 8.27 | 23 | 0.48270 | 1 |

NOTE:

2.4GHz: Directional gain = 4.29dBi + 10log(2) = 7.3dBi

5GHz (5180-5240MHz): Directional gain = 5.646dBi + 10log(2) = 8.66dBi

5GHz (5745-5825MHz): Directional gain = 5.264dBi + 10log(2) = 8.27dBi

Conclusion:

The formula of calculated the MPE is:

CPD1 / LPD1 + CPD2 / LPD2 +etc. < 1

CPD = Calculation power density

LPD = Limit of power density

WLAN 2.4GHz + WLAN 5GHz = 0.34261 + 0.57830 = 0.921

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

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