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## RF Exposure Report

**Report No.:** SA150427C42

**FCC ID:** TE7TDW9970V1

**Test Model:** TD-W9970

**Received Date:** Apr. 27, 2015

**Test Date:** May 25 ~ May 30, 2015

**Issued Date:** Jun. 05, 2015

**Applicant:** TP-LINK TECHNOLOGIES CO., LTD.

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

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



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### Release Control Record

Issue No.	Description	Date Issued
SA150427C42	Original release	Jun. 05, 2015



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## 1 Certificate of Conformity

**Product:** 300Mbps Wireless N USB VDSL2 Modem Router

**Brand:** TP-LINK

**Test Model:** TD-W9970

**Sample Status:** PROTOTYPE

**Applicant:** TP-LINK TECHNOLOGIES CO., LTD.

**Test Date:** May 25 ~ May 30, 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 :**  , **Date:** Jun. 05, 2015  
Ivy Lin / Specialist

**Approved by :**  , **Date:** Jun. 05, 2015  
Ken Liu / Senior 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

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

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

Mode	Max Power (dBm)	Antenna Gain (dBi)	Distance (cm)	Power Density (mW/cm <sup>2</sup> )	Limit (mW/cm <sup>2</sup> )
802.11b	22.56	3.81	20	0.086	1
802.11g	24.07	3.81	20	0.122	1
802.11n (HT20)	23.38	7.30	20	0.233	1
802.11n (HT40)	19.01	7.30	20	0.085	1

Note:

802.11b, 802.11g: gain = 3.81dBi

802.11n (HT20), 802.11n (HT40): Directional gain =  $10 \log[10^{G_1/20} + 10^{G_2/20} + \dots + 10^{G_N/20}] = 7.30\text{dBi}$

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