

RF EXPOSURE REPORT

REPORT NO.: SA140514C03

MODEL NO.: C8

FCC ID: TE7C8

RECEIVED: Mar. 11, 2014

TESTED: Mar. 11 ~ May 29, 2014

ISSUED: May 30, 2014

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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RELEASE CONTROL RECORD

ISSUE NO.	REASON FOR CHANGE	DATE ISSUED
SA140514C03	Original release.	May 30, 2014

1. CERTIFICATION

PRODUCT: AC1750 Wireless Dual Band Gigabit Router
MODEL: C8
BRAND: TP-LINK
APPLICANT: TP-LINK TECHNOLOGIES CO., LTD.
TESTED: Mar. 11 ~ May 29, 2014
TEST SAMPLE: Prototype
STANDARDS: **FCC Part 2 (Section 2.1091)**
FCC OET Bulletin 65, Supplement C (01-01)
IEEE C95.1

The above equipment (model: C8) 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.

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Suntee Liu / Specialist

APPROVED BY : Ken Liu , **DATE :** May 30, 2014
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 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

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

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 20cm away from the body of the user. So, this device is classified as **Mobile Device**.

2.4 CALCULATION RESULT OF MAXIMUM CONDUCTED POWER

FREQUENCY BAND (MHz)	MAX POWER (dBm)	ANTENNA GAIN (dBi)	DISTANCE (cm)	POWER DENSITY (mW/cm ²)	LIMIT (mW/cm ²)
2412-2462	27.20	5.37	20	0.360	1
5180-5240	16.95	7.07	20	0.050	1
5745-5825	27.25	7.07	20	0.538	1

Note:

2.4GHz Directional gain = 0.6dBi + 10log(3) = 5.37dBi

5GHz Directional gain = 2.3dBi + 10log(3) = 7.07dBi

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 = 0.360 + 0.538 = 0.898

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

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