

RF EXPOSURE REPORT

REPORT NO.: SA130926C18

MODEL NO.: ESR1750

FCC ID: A8JESR1750

RECEIVED: Sep. 26, 2013

TESTED: Oct. 07 ~ Nov. 30, 2013

ISSUED: Dec. 04, 2013

APPLICANT: EnGenius Technologies

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ISSUED BY: Bureau Veritas Consumer Products Services
(H.K.) Ltd., Taoyuan Branch

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TABLE OF CONTENTS

RELEASE CONTROL RECORD	3
1. CERTIFICATION	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 CALCULATION RESULT OF MAXIMUM CONDUCTED POWER.....	6




RELEASE CONTROL RECORD

ISSUE NO.	REASON FOR CHANGE	DATE ISSUED
SA130926C18	Original release.	Dec. 04, 2013

1. CERTIFICATION

PRODUCT: Dual Band Wireless AC1750 Router
MODEL: ESR1750
BRAND: EnGenius
APPLICANT: EnGenius Technologies
TESTED: Oct. 07 ~ Nov. 30, 2013
TEST SAMPLE: ENGINEERING SAMPLE
STANDARDS: **FCC Part 2 (Section 2.1091)**
FCC OET Bulletin 65, Supplement C (01-01)
IEEE C95.1

The above equipment (model: ESR1750) 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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Polly Chien / Specialist

, DATE : Dec. 04, 2013

APPROVED BY : 
Ken Liu / Senior Manager

, DATE : Dec. 04, 2013

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

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

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 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	MAX POWER (dBm)	ANTENNA GAIN (dBi)	DISTANCE (cm)	POWER DENSITY (mW/cm ²)	LIMIT (mW/cm ²)
2412-2462	29.94	2.45	20	0.345	1
5180-5240	16.18	5.51	20	0.029	1
5745-5825	27.45	5.51	20	0.393	1

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 = 0.345 + 0.393 = 0.738

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

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