

## RF Exposure Report

**Report No.:** SA150709C20

**FCC ID:** RSL-TQ4400E

**Model:** AT-TQ4400e

**Received Date:** Jul. 09, 2015

**Test Date:** Aug. 05 ~ Sep. 25, 2015

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

**Applicant:** Allied Telesis K.K.

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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
SA150709C20	Original release.	Oct. 05, 2015

## 1 Certificate of Conformity

**Product:** Outdoor Wireless Access Point

**Brand:**



**Model:** AT-TQ4400e

**Sample Status:** Engineering sample

**Applicant:** Allied Telesis K.K.

**Test Date:** Aug. 05 ~ Sep. 25, 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 :** Ivy Lin, **Date:** Oct. 05, 2015  
Ivy Lin / Specialist

**Approved by :** Ken Liu, **Date:** Oct. 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

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

where

Pd = power density in mW/cm<sup>2</sup>

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

### 3 Calculation Result Of Maximum Conducted Power

Frequency Band (MHz)	Max Power (dBm)	Antenna Gain (dBi)	Distance (cm)	Power Density (mW/cm <sup>2</sup> )	Limit (mW/cm <sup>2</sup> )
2412-2462	29.02	8.01	24	0.697	1
5180-5240	21.13	10.01	24	0.180	1
5745-5825	22.79	10.01	24	0.263	1

Note:

2.4GHz: Directional gain = 5dBi + 10log(2) = 8.01dBi

5GHz: Directional gain = 7.00dBi + 10log(2) = 10.01dBi

#### 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 = 0.697 + 0.263 = 0.960

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

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