# RF EXPOSURE REPORT

**REPORT NO.:** SA981215L24

**MODEL NO.:** VA121V-Q

**FCC  ID:** X7PVA12X

**ACCORDING:**  FCC Guidelines for Human Exposure

IEEE C95.1

**APPLICANT:**  Vololink Pty 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 Tsuen, Kwei Shan Hsiang, Taoyuan Hsien 333, Taiwan, R.O.C.

## 1. RF EXPOSURE LIMIT

**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. MPE CALCULATION FORMULA

Pd = (Pout*G) / (4*pi*r2)

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

## 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**.

# 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$^2$) |
|---|---|---|---|---|---|
| 824 ~ 849 | 32.88 | -1.04 | 20 | 0.304 | 0.558 |
| 1850 ~ 1910 | 29.85 | 1.8 | 20 | 0.291 | 1.00 |
| 2412 ~ 2462 | 27.8 | 1.5 | 20 | 0.169 | 1.00 |

**CONCULSION:**

WLAN and Mobile function can transmit simultaneously, the formula of calculated the MPE is:

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

CPD = Calculation power density

LPD = Limit of power density

1.  WLAN 2.4G + GSM 850 (824 ~ 849MHz) = 0.169/1 + 0.304/0.558 = 0.714

2.  WLAN 2.4G + PCS 1900 (1850 ~ 1910MHz) = 0.169/1 + 0.291/1 = 0.460


**Therefore, the maximum calculation of this situation is 0.714, which is less than the "1" limit.**