



FCC ID: 2AD9XPIRH
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Rev.: 01

IEEE C95.1
KDB 447498 D03
47 C.F.R. Part 1, Subpart I, Section 1.1310
47 C.F.R. Part 2, Subpart J, Section 2.1091

RF EXPOSURE REPORT

For

Versa PIR

Model: PIR

Trade Name: versa

Issued to

Versa Wireless Inc.
103-19292 60th Ave. Surrey, BC Canada V3S 3M2

Issued By

Compliance Certification Services Inc.
No.11, Wugong 6th Rd., Wugu Dist.,
New Taipei City 24891, Taiwan. (R.O.C.)

Issued Date: May 29, 2019

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Unless otherwise stated the results shown in this test report refer only to the sample(s) tested and such sample(s) are retained for 90 days only.
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REVISION HISTORY

| Rev. | Issue Date | Revisions | Effect Page | Revised By |
|------|----------------|-------------------------------|-------------|-------------|
| 00 | April 25, 2019 | Initial Issue | ALL | Angel Cheng |
| 01 | May 29, 2019 | See the following note rev.01 | ALL | Angel Cheng |
| | | | | |

Note:

- ※ Rev.01 Issue Date: May 29, 2019
Update Limit & Average output power.



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1. TEST RESULT CERTIFICATION

We hereby certify that:

The equipment has been tested by Compliance Certification Services Inc., and found compliance with the requirement of the applicable standards. The test record, data evaluation and Equipment under Test (EUT) configurations represented herein are true and accurate accounts of the measurement of the sample's RF characteristics under the conditions specified in this report.

| APPLICABLE STANDARDS | |
|---|-------------------------|
| STANDARD | TEST RESULT |
| IEEE C95.1 2005 KDB 447498 D03 47 C.F.R. Part 1, Subpart I, Section 1.1310 47 C.F.R. Part 2, Subpart J, Section 2.1091 | No non-compliance noted |

Approved by:

Reporter:

Kevin Tsai
Deputy Manager
Compliance Certification Services Inc.

Angel Cheng
Report coordinator
Compliance Certification Services Inc.

2. LIMIT

According to §1.1310 (e) (B) Limits for General Population/Uncontrolled Exposure, the frequency range (MHz) for 300-1,500 of Power density(mW/cm²) should be **f/1500**.

3. EUT SPECIFICATION

| | | | |
|------------------------------|--|------------|------------|
| EUT | Versa PIR | | |
| Model | PIR | | |
| Trade Name | versa | | |
| Model Discrepancy | N/A | | |
| Frequency band (Operating) | <input type="checkbox"/> 802.11b/g/n HT20: 2412MHz ~ 2462MHz 802.11n HT40: 2422MHz ~ 2452MHz <input checked="" type="checkbox"/> Others (345MHz) | | |
| Device category | <input type="checkbox"/> Portable (<20cm separation) <input checked="" type="checkbox"/> Mobile (>20cm separation) <input type="checkbox"/> Others | | |
| Exposure classification | <input type="checkbox"/> Occupational/Controlled exposure (S = 5mW/cm ²) <input checked="" type="checkbox"/> General Population/Uncontrolled exposure (S=0.23mW/cm ²) | | |
| Antenna Specification | Antenna Gain : -7.30 dBi (Numeric gain: 0.19) | | |
| Maximum Average output power | 345MHz | -20.80 dBm | (0.008 mW) |
| Maximum Tune up Power | 345MHz | -20.50 dBm | (0.009 mW) |
| Evaluation applied | <input checked="" type="checkbox"/> MPE Evaluation* <input type="checkbox"/> SAR Evaluation <input type="checkbox"/> N/A | | |
| Frequency band (Operating) | <input type="checkbox"/> 802.11b/g/n HT20: 2412MHz ~ 2462MHz 802.11n HT40: 2422MHz ~ 2452MHz <input checked="" type="checkbox"/> Others (345MHz) | | |

4. TEST RESULTS

No non-compliance noted.

Calculation

Given $E = \frac{\sqrt{30 \times P \times G}}{d}$ & $S = \frac{E^2}{377}$

Where E = Field strength in Volts / meter

P = Power in Watts

G = Numeric antenna gain

d = Distance in meters

S = Power density in milliwatts / square centimeter

Combining equations and re-arranging the terms to express the distance as a function of the remaining variables yields:

$$S = \frac{30 \times P \times G}{377 d^2}$$

Changing to units of mW and cm, using:

$$P \text{ (mW)} = P \text{ (W)} / 1000 \text{ and}$$

$$d \text{ (cm)} = d \text{ (m)} / 100$$

Yields

$$S = \frac{30 \times (P / 1000) \times G}{377 \times (d / 100)^2} = 0.0796 \times \frac{P \times G}{d^2} \quad \text{Equation 1}$$

Where d = Distance in cm

P = Power in mW

G = Numeric antenna gain

S = Power density in mW / cm²



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5. MAXIMUM PERMISSIBLE EXPOSURE

Substituting the MPE safe distance using $d = 20$ cm into Equation 1:

$$S = 0.000199 \times P \times G$$

Where $P = \text{Power in mW}$

$G = \text{Numeric antenna gain}$

$S = \text{Power density in mW / cm}^2$

IEEE 802.11b Mode :

| Ch. | Frq.(MHz) | P (mW) | Gain (num.) | D (cm) | Power density in mW / cm ² | Limit (mW/cm2) | Result |
|-----|-----------|--------|-------------|--------|---------------------------------------|----------------|--------|
| 1 | 345 | 0.009 | 0.19 | 20 | 0.0000003 | 0.23 | Pass |