

RF Exposure Report

Report No.: SABHDI-WTW-P21060617

FCC ID: 2ARXKVHE10

Contains module FCC ID: 2ATM8EG25G

Test Model: VHE10

Series Model: VHE10XXXXX (X=A-Z, 0-9, blank or "-")

Received Date: Jun. 21, 2021

Date of Evaluation: Jul. 27, 2021

Issued Date: Jul. 30, 2021

Applicant: Veea Inc

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Issued By: Bureau Veritas Consumer Products Services (H.K.) Ltd., Taoyuan Branch
Lin Kou Laboratories

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FCC Registration /
Designation Number: 788550 / TW0003



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Release Control Record

| Issue No. | Description | Date Issued |
|----------------------|------------------|---------------|
| SABHDI-WTW-P21060617 | Original Release | Jul. 30, 2021 |

1 Certificate of Conformity

Product: veeaHub

Brand:



Test Model: VHE10

Series Model: VHE10XXXX (X=A-Z, 0-9, blank or "-")

Sample Status: Engineering Sample

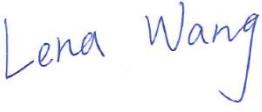
Applicant: Veea Inc

Date of Evaluation: Jul. 27, 2021

Standards: FCC Part 2 (Section 2.1091)

References Test KDB 447498 D01 General RF Exposure Guidance v06
Guidance :

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 RF characteristics under the conditions specified in this report.

Prepared by :  , **Date:** Jul. 30, 2021

Lena Wang / Specialist

Approved by :  , **Date:** Jul. 30, 2021

Dylan Chiou / Senior Project Engineer

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 | | | | |
| 0.3-1.34 | 614 | 1.63 | (100)* | 30 |
| 1.34-30 | 824/f | 2.19/f | (180/f ²)* | 30 |
| 30-300 | 27.5 | 0.073 | 0.2 | 30 |
| 300-1500 | ... | ... | f/1500 | 30 |
| 1500-100,000 | ... | ... | 1.0 | 30 |

f = Frequency in MHz ; *Plane-wave equivalent power density

2.2 MPE Calculation Formula

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

where

Pd = power density in mW/cm²

Pout = 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 33 cm 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) |
|------------------------|-----------------|--------------------|---------------|-------------------------------------|-----------------------------|
| WLAN, CDD Mode | | | | | |
| 2412-2462 | 27.02 | 6.21 | 33 | 0.1537 | 1 |
| 5180-5240 | 28.96 | 8.12 | 33 | 0.3730 | 1 |
| 5260-5320 | 23.88 | 8.12 | 33 | 0.1158 | 1 |
| 5500-5720 | 23.88 | 8.12 | 33 | 0.1158 | 1 |
| 5745-5825 | 29.70 | 8.12 | 33 | 0.4423 | 1 |
| WLAN, Beamforming Mode | | | | | |
| 5180-5240 | 27.77 | 8.12 | 33 | 0.1827 | 1 |
| 5260-5320 | 21.82 | 8.12 | 33 | 0.0721 | 1 |
| 5500-5720 | 21.83 | 8.12 | 33 | 0.0722 | 1 |
| 5745-5825 | 27.87 | 8.12 | 33 | 0.2902 | 1 |
| Bluetooth LE | | | | | |
| 2402-2480 | -2.94 | 6.00 | 33 | 0.0001 | 1 |
| Bluetooth EDR | | | | | |
| 2402-2480 | 5.92 | 6.00 | 33 | 0.0011 | 1 |
| Zigbee | | | | | |
| 2405-2475 | 20.02 | 3.20 | 33 | 0.0153 | 1 |

WWAN (module model: EG25G MINPCIE)

| Band | Frequency Band (MHz) | Max Power (dBm) | Antenna Gain (dBi) | Distance (cm) | Power Density (mW/cm ²) | Limit (mW/cm ²) |
|----------|----------------------|-----------------|--------------------|---------------|-------------------------------------|-----------------------------|
| GSM850 | 824-849 | 32.70 | 1.6 | 33 | 0.1967 | 0.55 |
| PCS1900 | 1850-1910 | 28.70 | 1.5 | 33 | 0.0765 | 1.00 |
| WCDMA II | 1850-1910 | 23.57 | 1.5 | 33 | 0.0235 | 1.00 |
| WCDMA IV | 1710-1755 | 23.71 | 1.5 | 33 | 0.0243 | 1.00 |
| WCDMA V | 824-849 | 23.52 | 1.6 | 33 | 0.0238 | 0.55 |
| LTE 2 | 1850-1910 | 22.11 | 1.5 | 33 | 0.0168 | 1.00 |
| LTE 4 | 1710-1755 | 22.28 | 1.5 | 33 | 0.0174 | 1.00 |
| LTE 5 | 824-849 | 24.08 | 1.6 | 33 | 0.0270 | 0.55 |
| LTE 7 | 2500-2570 | 23.51 | 2.9 | 33 | 0.0320 | 1.00 |
| LTE 12 | 699-716 | 24.50 | 1.6 | 33 | 0.0298 | 0.47 |
| LTE 13 | 777-787 | 23.88 | 1.6 | 33 | 0.0258 | 0.52 |
| LTE 25 | 1850-1915 | 22.93 | 1.5 | 33 | 0.0203 | 1.00 |
| LTE 26 | 814-849 | 23.90 | 1.6 | 33 | 0.0259 | 0.54 |
| LTE 38 | 2575-2610 | 23.83 | 2.9 | 33 | 0.0344 | 1.00 |
| LTE 41 | 2496-2690 | 23.77 | 2.9 | 33 | 0.0339 | 1.00 |

Note:

1. This report is issued as a supplementary report to BV CPS report no. SA190514C12A. The difference compared with original report is changing WWAN Module (EG25G MINPCIE) and series model name. Therefore, MPE value was re-calculated in this report.
2. Determining compliance based on the results of the compliance measurement, not taking into account measurement instrumentation uncertainty.
3. The above Antenna information is declared by manufacturer and for more detailed features description, please refer to the manufacturer's specifications, the laboratory shall not be held responsible
4. 2.4GHz: Directional Gain = $3.2\text{dBi} + 10\log(2) = 6.21\text{dBi}$
5. 5GHz: Directional Gain = $2.1\text{dBi} + 10\log(4) = 8.12\text{dBi}$

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

1. WLAN 2.4G + WLAN 5G + Bluetooth + Zigbee = $0.1537 / 1 + 0.4423 / 1 + 0.0011 / 1 + 0.0153 / 1 = 0.6214$
2. WLAN 2.4G + WLAN 5G + Bluetooth + Zigbee + WWAN = $0.1537 / 1 + 0.4423 / 1 + 0.0011 / 1 + 0.0153 / 1 + 0.1967 / 0.55 = 0.97$

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

---END---