

# RF Exposure Evaluation Report

**Product** : Vgate vLinker BM+  
**Trade mark** : Vgate、vLinker  
**Model/Type reference** : CV298, CV297  
**Serial Number** : N/A  
**Report Number** : EED32O80248603  
**FCC ID** : 2A45F-CV298  
**Date of Issue** : Mar. 07, 2022  
: 47 CFR Part 1.1307  
: 47 CFR Part 2.1093  
**Test Standards** : KDB447498D01 General RF  
Exposure Guidance v06  
**Test result** : PASS

Prepared for:

**Shenzhen Chebotong Technology Co., Ltd.**  
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**Nanshan District shenzhen 518000 China**

Prepared by:

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Date:

Mar. 07, 2022



Check No.:4723240222

## 1 Version

| Version No. | Date          | Description |
|-------------|---------------|-------------|
| 00          | Mar. 04, 2022 | Original    |
|             |               |             |
|             |               |             |

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### 3 General Information

#### 3.1 Client Information

|                          |                                                                                                          |
|--------------------------|----------------------------------------------------------------------------------------------------------|
| Applicant:               | Shenzhen Chebotong Technology Co., Ltd.                                                                  |
| Address of Applicant:    | Room5c 5th Building2, BanDao Chengbang Garden 2th, Shekou Street, Nanshan District shenzhen 518000 China |
| Manufacturer:            | Shenzhen Chebotong Technology Co., Ltd.                                                                  |
| Address of Manufacturer: | Room5c 5th Building2, BanDao Chengbang Garden 2th, Shekou Street, Nanshan District shenzhen 518000 China |
| Factory:                 | Shenzhen Chebotong Technology Co., Ltd.                                                                  |
| Address of Factory:      | Room5c 5th Building2, BanDao Chengbang Garden 2th, Shekou Street, Nanshan District shenzhen 518000 China |

#### 3.2 General Description of EUT

|                                                                                                                                                                                                                                                                                                                                                                                                     |                                                                                                                    |
|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------|
| Product Name:                                                                                                                                                                                                                                                                                                                                                                                       | Vgate vLinker BM+                                                                                                  |
| Model No.:                                                                                                                                                                                                                                                                                                                                                                                          | CV298, CV297                                                                                                       |
| Test Model No.:                                                                                                                                                                                                                                                                                                                                                                                     | CV298                                                                                                              |
| Trade mark:                                                                                                                                                                                                                                                                                                                                                                                         | Vgate、vLinker                                                                                                      |
| Operation Frequency:                                                                                                                                                                                                                                                                                                                                                                                | 2402MHz~2480MHz                                                                                                    |
| Modulation Type:                                                                                                                                                                                                                                                                                                                                                                                    | GFSK, $\pi/4$ DQPSK, 8DPSK                                                                                         |
| Product Type:                                                                                                                                                                                                                                                                                                                                                                                       | <input type="checkbox"/> Mobile <input type="checkbox"/> Portable <input checked="" type="checkbox"/> Fix Location |
| Antenna Type:                                                                                                                                                                                                                                                                                                                                                                                       | PCB Antenna                                                                                                        |
| Antenna Gain:                                                                                                                                                                                                                                                                                                                                                                                       | 3.5 dBi                                                                                                            |
| Power Supply:                                                                                                                                                                                                                                                                                                                                                                                       | DC 12V                                                                                                             |
| Test Voltage:                                                                                                                                                                                                                                                                                                                                                                                       | DC 12V                                                                                                             |
| Sample Received Date:                                                                                                                                                                                                                                                                                                                                                                               | Feb. 25, 2022                                                                                                      |
| Sample tested Date:                                                                                                                                                                                                                                                                                                                                                                                 | Feb. 25, 2022 to Mar. 03, 2022                                                                                     |
| <p>Company Name and Address shown on Report, the sample(s) and sample Information was/ were provided by the applicant who should be responsible for the authenticity which CTI hasn't verified.</p> <p>Model No.: CV298, CV297</p> <p>Only the model CV298 was tested, Their electrical circuit design, layout, components used and internal wiring are identical, Only the shell is different.</p> |                                                                                                                    |

### 3.3 Test Location

All tests were performed at:

Centre Testing International Group Co., Ltd

Building C, Hongwei Industrial Park Block 70, Bao'an District, Shenzhen, China

Telephone: +86 (0) 755 33683668 Fax: +86 (0) 755 33683385

No tests were sub-contracted.

FCC Designation No.: CN1164

### 3.4 Deviation from Standards

None.

### 3.5 Abnormalities from Standard Conditions

None.

### 3.6 Other Information Requested by the Customer

None.

## 4 RF Exposure Evaluation

### 4.1 RF Exposure Compliance Requirement

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 / cm<sup>2</sup>

## 4.2 Maximum Permissible Exposure

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

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

Where  $P$  = Power in mW

$G$  = Numeric antenna gain

$S$  = Power density in mW / cm<sup>2</sup>

| Ch. | Frq.(MHz) | P (mW) | Gain (num.) | D (cm) | Power density in mW / cm <sup>2</sup> | Limit (mW/cm <sup>2</sup> ) |
|-----|-----------|--------|-------------|--------|---------------------------------------|-----------------------------|
| 39  | 2480      | 2.099  | 2.239       | 20     | 0.0009                                | 1                           |

## PHOTOGRAPHS OF EUT Constructional Details

Refer to Report No. EED32O80248601 for EUT external and internal photos.

The test report is effective only with both signature and specialized stamp, The result(s) shown in this report refer only to the sample(s) tested. Without written approval of CTI, this report can't be reproduced except in full.

\*\*\* End of Report \*\*\*