

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:

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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:	☐ Mobile ☐ Portable ☒ 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
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. Model No.: CV298, CV297 Only the model CV298 was tested, Their electrical circuit design, layout, components used and internal wiring are identical, Only the shell is different.	

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 / cm²

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 / cm²

Ch.	Frq.(MHz)	P (mW)	Gain (num.)	D (cm)	Power density in mW / cm ²	Limit (mW/cm ²)
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 ***