



## RF EXPOSURE EVALUATION REPORT

**Application No.:** GZCR2108020800AT  
**Applicant:** Very Great, Inc DBA Courant  
**Address of Applicant:** 52 Mercer Street 3rd Floor, New York, 10013 United States  
**Manufacturer:** Very Great Inc., DBA Courant  
**Address of Manufacturer:** 52 Mercer Street 3rd Floor, New York 10013, United States  
**Equipment Under Test (EUT):**  
**EUT Name:** CATCH:2 ESSENTIALS  
**Model No.:** CR-C2-ES-BK, CR-C2-ES-NT, CR-C2-ES-CM ♣  
♣ Please refer to section 2 of this report which indicates which model was actually tested and which were electrically identical.  
**Trade Mark:** **COURANT**  
**Standard(s) :** 47 CFR PART 1, Subpart I, Section 1.1310  
47 CFR PART 2, Subpart J, Section 2.1091  
**Date of Receipt:** 2021-08-02  
**Date of Evaluation:** 2021-08-03 to 2021-08-12  
**Date of Issue:** 2021-08-30

|                           |              |
|---------------------------|--------------|
| <b>Evaluation Result:</b> | <b>Pass*</b> |
|---------------------------|--------------|

\* In the configuration evaluated, the EUT complied with the standards specified above.

Kobe Jian  
EMC Laboratory Manager



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| Revision Record |         |            |          |          |
|-----------------|---------|------------|----------|----------|
| Version         | Chapter | Date       | Modifier | Remark   |
| 01              |         | 2021-08-30 |          | Original |
|                 |         |            |          |          |
|                 |         |            |          |          |

|                         |  |                                                                                     |  |  |
|-------------------------|--|-------------------------------------------------------------------------------------|--|--|
| Authorized for issue by |  |                                                                                     |  |  |
|                         |  |  |  |  |
|                         |  | Curry Wu/Project Engineer                                                           |  |  |
|                         |  |  |  |  |
|                         |  | Ricky Liu/Reviewer                                                                  |  |  |

## 2 Evaluation Summary

| Radio Spectrum Matter Part |                                                |                                                                                |                    |        |
|----------------------------|------------------------------------------------|--------------------------------------------------------------------------------|--------------------|--------|
| Item                       | Standard                                       | Method                                                                         | Requirement        | Result |
| RF Exposure                | 47 CFR PART 1,<br>Subpart I, Section<br>1.1310 | KDB 680106 D01<br>TCB Workshop<br>Presentation<br>November 2019 RF<br>Exposure | CFR 47 Part 1.1310 | Pass   |

**Note:**

E.U.T./EUT means Equipment Under Test.

Pass means the test result passed the test standard requirement, please find the detailed decision rule in the report relative section.

**Declaration of EUT Family Grouping:**

Model No.: CR-C2-ES-BK, CR-C2-ES-NT, CR-C2-ES-CM

Only the model CR-C2-ES-BK was tested. According to the declaration from the applicant, the electrical circuit design, layout, components used, internal wiring and functions were identical for the above models, with only difference on model No. and appearance color.

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## 4 General Information

### 4.1 Details of E.U.T.

Power Supply: Powered by adapter from USB-C port.  
Cable(s): USB-A to USB-C 152cm unshielded  
Operation frequency: 114.20kHz to 157.20kHz  
Modulation type: Load modulation  
Antenna type: Loop Antenna

Remark: This device has been tested the worst status of full load and the device has been tested with load at 5W, 7.5W from coil1 to coil5, The worst case in single charge is the 7.5W output of coil 3, and the worst case in double charge is the simultaneous output of coil 1 (7.5W) + coil 4 (7.5W) are reported.

### 4.2 Description of Support Units

| Description       | Manufacturer | Model No. | Serial No.        |
|-------------------|--------------|-----------|-------------------|
| AC Adapter        | SAMSUNG      | EP-TA200  | REF. No.SEA05K03A |
| Mobile Phone      | Nexus        | MRA58K    | REF. No.SEA16P00  |
| Mobile Phone      | Nexus        | MRA58K    | REF. No.SEA16P01  |
| iPhone 8          | Apple        | A1863     | REF. No.SEA16J00  |
| iPhone 8          | Apple        | A1863     | REF. No.SEA16J01  |
| SAMSUNG Galaxy S8 | SAMSUNG      | SM-G9500  | REF. No.SEA16M00  |
| SAMSUNG Galaxy S8 | SAMSUNG      | SM-G9500  | REF. No.SEA16M01  |
| E-loading         | SGS          | N/A       | REF. No.SEA42A00  |
| E-loading         | SGS          | N/A       | REF. No.SEA42A01  |

### 4.3 Measurement Uncertainty

| Test Item              | Measurement Uncertainty |
|------------------------|-------------------------|
| RF Exposure Evaluation | MF: 0.13dB, EF: 0.4dB   |

## 5 Equipments Used during Test

| RF Exposure                          |                      |          |              |            |              |
|--------------------------------------|----------------------|----------|--------------|------------|--------------|
| Equipment                            | Manufacturer         | Model No | Inventory No | Cal Date   | Cal Due Date |
| 743 Compact 3m Semi-Anechoic Chamber | ChangZhou<br>ZhongYu | N/A      | EMC0525      | 2019-10-20 | 2022-10-19   |
| Electric and Magnetic Field Analyzer | Narada               | NBM-550  | EMC2143      | 2020-01-07 | 2022-01-06   |
| Probe                                | Narada               | EHP-50F  | EMC2143      | 2020-01-07 | 2022-01-06   |

| General used equipment |              |          |              |            |              |
|------------------------|--------------|----------|--------------|------------|--------------|
| Equipment              | Manufacturer | Model No | Inventory No | Cal Date   | Cal Due Date |
| DMM                    | Fluke        | 73       | EMC0006      | 2021-07-08 | 2022-07-07   |
| DMM                    | Fluke        | 73       | EMC0007      | 2021-07-08 | 2022-07-07   |

## 5.1 Evaluating Location

All tests were performed at:

SGS-CSTC Standards Technical Services Co., Ltd., Guangzhou Branch EMC Laboratory,  
198 Kezhu Road, Sciencetech Park, Guangzhou Economic & Technology Development District,  
Guangzhou, China 510663

Tel: +86 20 82155555 Fax: +86 20 82075059

No tests were sub-contracted.

## 5.2 Facility

The facility is recognized, certified, or accredited by the following organizations:

- **NVLAP (Lab Code: 200611-0)**

SGS-CSTC Standards Technical Services Co., Ltd., Guangzhou EMC Laboratory is accredited by the National Voluntary Laboratory Accreditation Program (NVLAP/NIST). NVLAP Code: 200611-0.

The report must not be used by the client to claim product certification, approval, or endorsement by NVLAP, NIST, or any agency of the Federal Government.

- **ACMA**

SGS-CSTC Standards Technical Services Co., Ltd., EMC Laboratory can also perform testing for the Australian/New Zealand Regulatory Compliance Mark (RCM).

- **SGS UK(Certificate No.: 32), SGS-TUV SAARLAND and SGS-FIMKO**

Have approved SGS-CSTC Standards Technical Services Co., Ltd., EMC Laboratory as a supplier of EMC TESTING SERVICES and SAFETY TESTING SERVICES.

- **CNAS (Lab Code: L0167)**

SGS-CSTC Standards Technical Services Co., Ltd., EMC Laboratory has been assessed and in compliance with CNAS-CL01:2018 accreditation criteria for testing laboratories (identical to ISO/IEC 17025:2017 General Requirements) for the Competence of Testing Laboratories.

- **FCC Recognized Accredited Test Firm(Registration No.: 486818)**

SGS-CSTC Standards Technical Services Co., Ltd., EMC Laboratory has been accredited and fully described in a report filed with the (FCC) Federal Communications Commission. The acceptance letter from the FCC is maintained in our files. Designation Number: CN5016, Test Firm Registration Number: 486818.

- **ISED (Registration No.: 4620B, CAB identifier: CN0052)**

SGS-CSTC Standards Technical Services Co., Ltd., has been registered by Innovation Science and Economic Development Canada for Wireless Device Testing laboratories to test to Canadian radio equipment requirements. Registration No. 4620B, CAB identifier: CN0052.

- **VCCI (Registration No.: R-12460, C-12584, G-20107 and T-11179)**

The 10m Semi-anechoic chamber, 966 Anechoic Chamber and Shielded Room of SGS-CSTC Standards Technical Services Co., Ltd. have been registered in accordance with the Regulations for Voluntary Control Measures with Registration No.: R-12460, C-12584, G-20107 and T-11179 respectively.

- **CBTL (Lab Code: TL129)**

SGS-CSTC Standards Technical Services Co., Ltd., E&E Laboratory has been assessed and fully comply with the requirements of ISO/IEC 17025:2017, the Basic Rules, IECEE 01 and Rules of procedure IECEE 02, and the relevant IECEE CB-Scheme Operational documents.



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### 5.3 Deviation from Standards

None

### 5.4 Abnormalities from Standard Conditions

None



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## 6 Test Results

### 6.1 RF Exposure test

Test Requirement: 47 CFR PART 1, Subpart I, Section 1.1310

Measurement Distance: 15/20cm

Limit:

According to FCC Part1.1310: The criteria listed in the following table shall be used to evaluate the environment impact of human exposure to radio frequency (RF) radiation as specified in Part1.1307(b)

**TABLE 1—LIMITS FOR MAXIMUM PERMISSIBLE EXPOSURE (MPE)**

| Frequency range (MHz)                                          | Electric field strength (V/m) | Magnetic field strength (A/m) | Power density (mW/cm <sup>2</sup> ) | Averaging time (minutes) |
|----------------------------------------------------------------|-------------------------------|-------------------------------|-------------------------------------|--------------------------|
| <b>(A) Limits for Occupational/Controlled Exposures</b>        |                               |                               |                                     |                          |
| 0.3-3.0                                                        | 614                           | 1.63                          | *(100)                              | 6                        |
| 3.0-30                                                         | 1842/f                        | 4.89/f                        | *(900/f <sup>2</sup> )              | 6                        |
| 30-300                                                         | 61.4                          | 0.163                         | 1.0                                 | 6                        |
| 300-1500                                                       | /                             | /                             | f/300                               | 6                        |
| 1500-100,000                                                   | /                             | /                             | 5                                   | 6                        |
| <b>(B) Limits for General Population/Uncontrolled Exposure</b> |                               |                               |                                     |                          |
| 0.3-1.34                                                       | 614                           | 1.63                          | *(100)                              | 30                       |
| 1.34-30                                                        | 824/f                         | 2.19/f                        | *(180/f <sup>2</sup> )              | 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

RF exposure compliance will need to be determined with respect to 1.1307(c) and (d) of the FCC rules. The emissions should be within the limits at 300kHz in Table 1 of 1.1310(use the 300kHz limits for 150kHz:614V/m,1.63A/m).

According to IEEE C95.3:2002 section 5.5.1.1, The power density S at a point on the axis at a distance d from a transmitting antenna is given by the Friis free-space transmission formula

$$S = \frac{PG}{4\pi d^2}$$

$S$  = power density (mW/cm<sup>2</sup>)  
 $P$  = the net power delivered to the antenna (mW)  
 $G$  = gain of the antenna in linear scale  
 $d$  = distance between observation point and center of the radiator (cm)



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**6.1.1 E.U.T. Operation**

Operating Environment:

Temperature: 24.5 °C Humidity: 53.6% RH Atmospheric Pressure: 995 mbar

EUT Operation:

This device has been tested the worst status of full load and the device has been tested with load at zero charge, intermediate charge, and full charge.

**6.1.2 Measurement Data**

Single charge:

**Output Voltage=DC 5V; The max output power =7.5W;****Magnetic Field Emissions**

| Operation frequency | Test Distance (cm) | Test Position | Probe Measure Result (A/m) | 50% Limit (A/m) |
|---------------------|--------------------|---------------|----------------------------|-----------------|
| 125 kHz             | 15                 | Side 1        | 0.0318                     | 0.815           |
|                     |                    | Side 2        | 0.0289                     | 0.815           |
|                     |                    | Side 3        | 0.0333                     | 0.815           |
|                     |                    | Side 4        | 0.0226                     | 0.815           |
|                     |                    | Top           | 0.0309                     | 0.815           |

**Mobile phone has been charge at zero charge, intermediate charge, and full charge.****Magnetic Field Emissions**

| Operation frequency | Test Distance (cm) | Test Position | Probe Measure Result(A/m) |                     |             | 50%Limit (A/m) |
|---------------------|--------------------|---------------|---------------------------|---------------------|-------------|----------------|
|                     |                    |               | zero charge               | intermediate charge | full charge |                |
| 125 kHz             | 15                 | Side 1        | 0.0342                    | 0.0287              | 0.0228      | 0.815          |
|                     |                    | Side 2        | 0.0310                    | 0.0261              | 0.0207      | 0.815          |
|                     |                    | Side 3        | 0.0358                    | 0.0301              | 0.0239      | 0.815          |
|                     |                    | Side 4        | 0.0242                    | 0.0204              | 0.0162      | 0.815          |
|                     |                    | Top           | 0.0332                    | 0.0279              | 0.0222      | 0.815          |



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Double charge

Output Voltage=DC 12V; The max output power =7.5W + 7.5W;

## Magnetic Field Emissions

| Operation frequency | Test Distance (cm) | Test Position | Probe Measure Result (A/m) | 50% Limit (A/m) |
|---------------------|--------------------|---------------|----------------------------|-----------------|
| 125 kHz             | 15                 | Side 1        | 0.0324                     | 0.815           |
|                     |                    | Side 2        | 0.0301                     | 0.815           |
|                     |                    | Side 3        | 0.0403                     | 0.815           |
|                     |                    | Side 4        | 0.0461                     | 0.815           |
|                     | 20                 | Top (Coil 1)  | 0.0414                     | 0.815           |
|                     | 20                 | Top (Coil 4)  | 0.0418                     | 0.815           |

Mobile phone has been charge at zero charge, intermediate charge, and full charge.

## Magnetic Field Emissions

| Operation frequency | Test Distance (cm) | Test Position | Probe Measure Result(A/m) |                     |             | 50%Limit (A/m) |
|---------------------|--------------------|---------------|---------------------------|---------------------|-------------|----------------|
|                     |                    |               | zero charge               | intermediate charge | full charge |                |
| 125 kHz             | 15                 | Side 1        | 0.0381                    | 0.0352              | 0.0254      | 0.815          |
|                     |                    | Side 2        | 0.0355                    | 0.0331              | 0.0287      | 0.815          |
|                     |                    | Side 3        | 0.0461                    | 0.0436              | 0.0262      | 0.815          |
|                     |                    | Side 4        | 0.0430                    | 0.0415              | 0.0268      | 0.815          |
|                     | 20                 | Top (Coil 1)  | 0.0471                    | 0.0459              | 0.0313      | 0.815          |
|                     | 20                 | Top (Coil 4)  | 0.0462                    | 0.0451              | 0.0325      | 0.815          |



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## 7 Photographs- RF exposure Setup photos

Refer to Appendix\_RF Exposure SetupPhoto for GZCR2108020800AT.

- End of the Report -