



Report No.: SZEM190301208102

Page: 1 of 9

## Human Exposure Report

**Application No.:** SZEM1903012081CR  
**Applicant:** Superior communications  
**Address of Applicant:** 5027 Irwindale Ave. Suite, Irwindale Ave, California, 91706, United States  
**Manufacturer:** SHENZHEN POWERQI TECHNOLOGY CO., LTD  
**Address of Manufacturer:** Floor 2, 3 building A4, Fangxing Science and Technology park, NO. 13 Baonan Road, Longgang street, Longgang District  
**Factory:** SHENZHEN POWERQI TECHNOLOGY CO., LTD  
**Address of Factory:** Floor 2, 3 building A4, Fangxing Science and Technology park, NO. 13 Baonan Road, Longgang street, Longgang District  
**Equipment Under Test (EUT):**  
**EUT Name:** Single Wireless Charging Pad  
**Model No.:** 06181, 06182 ♣  
♣ Please refer to section 3.1 of this report which indicates which model was actually tested and which were electrically identical.  
**Trade mark:** AT&T  
**FCC ID:** YJW-06181  
**Standards:** 47 CFR PART 1, Subpart I, Section 1.1310  
**Date of Receipt:** 2019-03-26  
**Date of Test:** 2019-03-27 to 2019-04-15  
**Date of Issue:** 2019-04-19

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

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

Kenx. Xu

Kenx Xu  
EMC Laboratory Manager



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Shenzhen Branch EMC Laboratory

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| Revision Record |         |            |          |          |
|-----------------|---------|------------|----------|----------|
| Version         | Chapter | Date       | Modifier | Remark   |
| 01              |         | 2019-04-19 |          | Original |
|                 |         |            |          |          |
|                 |         |            |          |          |

|                          |  |                                                                                     |  |
|--------------------------|--|-------------------------------------------------------------------------------------|--|
| Authorized for issue by: |  |                                                                                     |  |
|                          |  |    |  |
|                          |  | <hr/>                                                                               |  |
|                          |  | Harry Wu /Project Engineer                                                          |  |
|                          |  |  |  |
|                          |  | <hr/>                                                                               |  |
|                          |  | Eric Fu /Reviewer                                                                   |  |



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### 3 General Information

#### 3.1 Details of E.U.T.

Power supply: Input: DC 5V, 2A, DC 9V, 1.67A  
AC/DC adapter  
Model: QC01  
Input: AC110-240V, 50/60Hz, 0.6A  
Cable: Type C Cable: 150cm, Unshielded  
Antenna Type: Loop Antenna  
Modulation Type: Load Modulation  
Operation Frequency: 112.18kHz to 179.65kHz  
Remark: Tests were conducted in all three load modes and the worst case(10W) is reported only.

**Remark:**

Model No.: 06181, 06182

Only the model 06181 was tested, since the electrical circuit design, layout, components used, internal wiring and functions were identical for the above models, with only difference on color.

#### 3.2 Description of Support Units

| Description  | Manufacturer | Model No. | Serial No.  |
|--------------|--------------|-----------|-------------|
| Mobile Phone | SAMSUNG      | SM-G9500  | R28J9140LPB |



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### 3.3 Test Location

All tests were performed at:

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No tests were sub-contracted.

### 3.4 Test Facility

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

• **CNAS (No. CNAS L2929)**

CNAS has accredited SGS-CSTC Standards Technical Services Co., Ltd. Shenzhen Branch EMC Lab to ISO/IEC 17025:2005 General Requirements for the Competence of Testing and Calibration Laboratories (CNAS-CL01 Accreditation Criteria for the Competence of Testing and Calibration Laboratories) for the competence in the field of testing.

• **A2LA (Certificate No. 3816.01)**

SGS-CSTC Standards Technical Services Co., Ltd., Shenzhen EMC Laboratory is accredited by the American Association for Laboratory Accreditation (A2LA). Certificate No. 3816.01.

• **VCCI**

The 3m Fully-anechoic chamber for above 1GHz, 10m Semi-anechoic chamber for below 1GHz, Shielded Room for Mains Port Conducted Interference Measurement and Telecommunication Port Conducted Interference Measurement of SGS-CSTC Standards Technical Services Co., Ltd. have been registered in accordance with the Regulations for Voluntary Control Measures with Registration No.: G-20026, R-14188, C-12383 and T-11153 respectively.

• **FCC –Designation Number: CN1178**

SGS-CSTC Standards Technical Services Co., Ltd., Shenzhen EMC Laboratory has been recognized as an accredited testing laboratory.

Designation Number: CN1178. Test Firm Registration Number: 406779.

• **Innovation, Science and Economic Development Canada**

SGS-CSTC Standards Technical Services Co., Ltd., Shenzhen EMC Laboratory has been recognized by ISED as an accredited testing laboratory.

CAB identifier: CN0006.

IC#: 4620C.

### 3.5 Deviation from Standards

None.

### 3.6 Abnormalities from Standard Conditions

None.



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## 4 Equipments Used during Test

| Item | Test Equipment                       | Manufacturer | Model No. | Inventory No. | Cal. Due date |
|------|--------------------------------------|--------------|-----------|---------------|---------------|
| 1    | Electric and Magnetic Field Analyzer | Narda        | EHP-50F   | EMC092        | 2020-02-06    |



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## 5 Test Results

### 5.1 RF Exposure test

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

Measurement Distance: 15cm

Limit:

| 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).

#### 5.1.1 E.U.T. Operation

Operating Environment:

Temperature: 24.5 °C Humidity: 52 % RH Atmospheric Pressure: 1015 mbar

EUT Operation:

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



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## 5.1.2 Measurement Data

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

### Electric Field Emissions

| Operation frequency | Test Distance (cm) | Test Position | Probe Measure Result(V/m) |                     |             | 50%Limit (V/m) |
|---------------------|--------------------|---------------|---------------------------|---------------------|-------------|----------------|
|                     |                    |               | zero charge               | intermediate charge | full charge |                |
| 178.3 kHz           | 15                 | Side 1        | 4.24                      | 3.92                | 3.54        | 307            |
|                     |                    | Side 2        | 2.08                      | 1.87                | 1.48        | 307            |
|                     |                    | Side 3        | 3.08                      | 2.67                | 2.21        | 307            |
|                     |                    | Side 4        | 5.19                      | 4.82                | 4.31        | 307            |
|                     |                    | Top           | 1.61                      | 1.24                | 0.67        | 307            |

### 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 |                |
| 178.3 kHz           | 15                 | Side 1        | 0.0935                    | 0.0755              | 0.0588      | 0.815          |
|                     |                    | Side 2        | 0.0816                    | 0.0607              | 0.0441      | 0.815          |
|                     |                    | Side 3        | 0.0544                    | 0.0365              | 0.0198      | 0.815          |
|                     |                    | Side 4        | 0.0413                    | 0.0269              | 0.0157      | 0.815          |
|                     |                    | Top           | 0.0449                    | 0.0291              | 0.0107      | 0.815          |





## 6 Photographs

### 6.1 Test setup photos

Please refer to RF Exposure Setup Photos.

- End of the Report -



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