

FCC Test Report

Report No.: AGC02129241002FR01

| FCC ID | : | 2AGPD-ZEDC29W |
|-----------------------|---|-------------------------|
| APPLICATION PURPOSE | : | Original Equipment |
| PRODUCT DESIGNATION | : | 4-1 Wireless charger |
| BRAND NAME | : | Zens |
| MODEL NAME | : | ZEDC29W/00, ZEDC29W/06 |
| APPLICANT | : | Zens International B.V. |
| DATE OF ISSUE | : | Oct. 29, 2024 |
| STANDARD(S) | : | FCC Part 15 Subpart C |
| REPORT VERSION | : | V1.0 |







Report Revise Record

| Report Version | Revise Time | Issued Date | Valid Version | Notes |
|----------------|-------------|---------------|---------------|-----------------|
| V1.0 | / | Oct. 29, 2024 | Valid | Initial Release |



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1. General Information

| Applicant | Zens International B.V. |
|------------------------------|---|
| Address | High Tech Campus 84, 5656 AG Eindhoven, The Netherlands |
| Manufacturer | Zens International B.V. |
| Address | High Tech Campus 84, 5656 AG Eindhoven, The Netherlands |
| Factory | Huizhou SPEED Wireless Technology Co., Ltd. |
| Address | No.138 Huize Road, Hi-Tech Industrial Park of East River, Zhongkai Hi-tech District, Huizhou City, Guangdong Province, China |
| Product Designation | 4-1 Wireless charger |
| Brand Name | Zens |
| Test Model | ZEDC29W/00 |
| Series Model(s) | ZEDC29W/06 |
| Difference Description | All the series models are the same as the test model except for the model names. |
| Date of receipt of test item | Oct. 12, 2024 |
| Date of Test | Oct. 12, 2024~ Oct. 29, 2024 |
| Deviation from Standard | No any deviation from the test method |
| Condition of Test Sample | Normal |
| Test Result | Pass |
| Test Report Form No | AGCER -FCC-WPT-V1 |

Note: The test results of this report relate only to the tested sample identified in this report.

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2. Product Information

2.1 Product Technical Description

| Equipment Type | WPT System |
|-------------------------------|---|
| Operation Frequency Band | WPT Band I: 360±5kHz for coil 1# WPT Band I: 128±5kHz for coil 1# WPT Band II: 110.5kHz-148.5kHz for coil 2# WPT Band III: 1.770MHz-1.780MHz for coil 3# |
| Hardware Version | V1.2 |
| Software Version | V13 |
| Modulation Type | ASK/FSK |
| Number of channels | 4 |
| Field Strength of Fundamental | 65.60dBuV/m (Max) |
| Antenna Designation | Coil Antenna |
| Antenna Gain | 0dBi |
| Input Rating | Input: DC 24V-2.7A |
| Output Rating | Output1: MPP 15W Output2: Qi Charger 5W Output3: Watch Charger 5W Max Output4: USB-C 18W/60W Max (stand alone) |

2.2 Test Frequency List

| Frequency Band | Channel Number | Frequency |
|--------------------|----------------|-----------|
| | 01 | 360.0KHz |
| 360±5kHz/128±5 kHz | 02 | 127.8KHz |
| 110.5-148.5kHz | 01 | 126.6KHz |
| 1770 kHz ~1785 kHz | 01 | 1.778 MHz |



2.3 Related Submittal(S) / Grant (S)

This submittal(s) (test report) is intended for FCC ID: 2AGPD-ZEDC29W, filing to comply with Part 2, Part 15 of the Federal Communication Commission rules.

2.4 Test Methodology

The tests were performed according to following standards:

| No. | Identity | Document Title |
|-----|--------------------|---|
| 1 | FCC 47 CFR Part 2 | Frequency allocations and radio treaty matters; general rules and regulations |
| 2 | FCC 47 CFR Part 15 | Radio Frequency Devices |
| 3 | ANSI C63.10-2013 | American National Standard for Testing Unlicensed Wireless Devices |

2.5 Special Accessories

Not available for this EUT intended for grant.

2.6 Equipment Modifications

Not available for this EUT intended for grant.

2.7 Antenna Requirement

Standard Requirement

15.203 requirement:

An intentional radiator shall be designed to ensure that no antenna other than that furnished by the responsible party shall be used with the device. The use of a permanently attached antenna or of an antenna that uses a unique coupling to the intentional radiator, the manufacturer may design the unit so that a broken antenna can be replaced by the user, but the use of a standard antenna jack or electrical connector is prohibited.

EUT Antenna:

The non-detachable antenna inside the device cannot be replaced by the user at will. The gain of the antenna is 0dBi.



3. Test Environment

3.1 Address of The Test Laboratory

Laboratory: Attestation of Global Compliance (Shenzhen) Co., Ltd.

Address: 1-2/F, Building 19, Junfeng Industrial Park, Chongqing Road, Heping Community, Fuhai Street, Bao'an District, Shenzhen, Guangdong, China

3.2 Test Facility

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

CNAS-Lab Code: L5488

Attestation of Global Compliance (Shenzhen) Co., Ltd. has been assessed and proved to FOLLOW CNAS-CL01 Accreditation Criteria for Testing and Calibration Laboratories (identical to ISO/IEC17025: 2017 General Requirements for the Competence of Testing and Calibration Laboratories.)

A2LA-Lab Cert. No.: 5054.02

Attestation of Global Compliance (Shenzhen) Co., Ltd. EMC Laboratory has been accredited by A2LA for technical competence in the field of electrical testing, and proved to follow ISO/IEC 17025: 2017 General Requirements for the Competence of Testing and Calibration Laboratories and any additional program requirements in the identified field of testing.

FCC-Registration No.: 975832

Attestation of Global Compliance (Shenzhen) Co., Ltd. EMC Laboratory has been registered and fully described in a report filed with the FCC (Federal Communications Commission). The acceptance letter from the FCC is maintained in our files with Registration 975832.

IC-Registration No.: 24842 (CAB identifier: CN0063)

Attestation of Global Compliance (Shenzhen) Co., Ltd. EMC Laboratory has been registered and fully described in a report filed with the Certification and Engineering Bureau of Industry Canada. The acceptance letter from the IC is maintained in our files with Registration 24842.



3.3 Environmental Conditions

| | Normal Conditions |
|-------------------------|-------------------|
| Temperature range (°C) | 15 - 35 |
| Relative humidity range | 20% - 75% |
| Pressure range (kPa) | 86 - 106 |

3.4 Measurement Uncertainty

The reported uncertainty of measurement y $\pm U$, where expended uncertainty U is based on a standard uncertainty multiplied by a coverage factor of k=2, providing a level of confidence of approximately 95%.

| Item | Measurement Uncertainty |
|---|----------------------------|
| Uncertainty of Conducted Emission for AC Port | $U_c = \pm 2.9 \text{ dB}$ |
| Uncertainty of Radiated Emission below 150kHz | $U_c = \pm 4.2 \text{ dB}$ |
| Uncertainty of Radiated Emission below 30MHz | $U_c = \pm 3.8 \text{ dB}$ |
| Uncertainty of Radiated Emission below 1GHz | $U_c = \pm 3.9 \text{ dB}$ |
| Uncertainty of Occupied Channel Bandwidth | U _c = ±2 % |



3.5 List of Equipment Used

| RF Conducted Test System | | | | | | | |
|--------------------------|----------------|----------------------------------|--------------|------------|------------|------------------------------|------------------------------|
| Used | Equipment No. | Test Equipment | Manufacturer | Model No. | Serial No. | Last Cal. Date (YY-MM-DD) | Next Cal. Date (YY-MM-DD) |
| \boxtimes | AGC-ER-E036 | Spectrum Analyzer | Agilent | N9020A | MY49100060 | 2024-05-24 | 2025-05-23 |
| | N/A | RF Connection Cable | N/A | 2# | N/A | Each time | N/A |
| • R | adiated Spuric | ous Emission | | | | | |
| Used | Equipment No. | Test Equipment | Manufacturer | Model No. | Serial No. | Last Cal. Date (YY-MM-DD) | Next Cal. Date (YY-MM-DD) |
| | AGC-EM-E046 | EMI Test Receiver | R&S | ESCI | 10096 | 2024-02-01 | 2025-01-31 |
| | AGC-EM-E116 | EMI Test Receiver | R&S | ESCI | 100034 | 2024-05-24 | 2025-05-23 |
| | AGC-EM-E061 | Spectrum Analyzer | Agilent | N9010A | MY53470504 | 2024-05-28 | 2025-05-27 |
| | AGC-EM-E086 | Loop Antenna | ZHINAN | ZN30900C | 18051 | 2024-03-05 | 2026-03-04 |
| | AGC-EM-E001 | Wideband Antenna | SCHWARZBECK | VULB9168 | D69250 | 2023-05-11 | 2025-05-10 |
| \boxtimes | AGC-EM-E029 | Broadband Ridged Horn Antenna | ETS | 3117 | 00034609 | 2024-03-31 | 2025-03-30 |
| \boxtimes | AGC-EM-E082 | Horn Antenna | SCHWARZBECK | BBHA 9170 | #768 | 2023-09-24 | 2025-09-23 |
| \boxtimes | AGC-EM-E146 | Pre-amplifier | ETS | 3117-PA | 00246148 | 2024-07-24 | 2026-07-23 |
| | AGC-EM-A119 | 2.4G Filter | SongYi | N/A | N/A | 2024-05-23 | 2025-05-22 |
| \boxtimes | AGC-EM-A138 | 6dB Attenuator | Eeatsheep | LM-XX-6-5W | N/A | 2023-06-09 | 2025-06-08 |
| | AGC-EM-A139 | 6dB Attenuator | Eeatsheep | LM-XX-6-5W | N/A | 2023-06-09 | 2025-06-08 |

| • A | AC Power Line Conducted Emission | | | | | | | |
|---|----------------------------------|-------------------|-----------|------------|---------|------------------------------|------------|--|
| Used Foundation I lest Foundant Manufacturer I Model No. I Serial No. I | | | | | | Next Cal. Date (YY-MM-DD) | | |
| \boxtimes | AGC-EM-E045 | EMI Test Receiver | R&S | ESPI | 101206 | 2024-05-28 | 2025-05-27 | |
| \boxtimes | AGC-EM-A130 | 6dB Attenuator | Eeatsheep | LM-XX-6-5W | DC-6GZ | 2023-06-09 | 2025-06-08 | |
| | AGC-EM-E023 | AMN | R&S | 100086 | ESH2-Z5 | 2024-05-28 | 2025-05-27 | |

| Test Software | | | | | | | | |
|---------------|---------------|---------------------|--------------|----------------------|---------------------|--|--|--|
| Used | Equipment No. | Test Equipment | Manufacturer | Model No. | Version Information | | | |
| \square | AGC-EM-S001 | CE Test System | R&S | ES-K1 | V1.71 | | | |
| | AGC-EM-S003 | RE Test System | FARA | EZ-EMC | VRA-03A | | | |
| | AGC-ER-S012 | BT/WIFI Test System | Tonscend | JS1120-2 | 2.6 | | | |
| | AGC-EM-S011 | RSE Test System | Tonscend | TS+-Ver2.1(JS36-RSE) | 4.0.0.0 | | | |



4.System Test Configuration

4.1 EUT Configuration

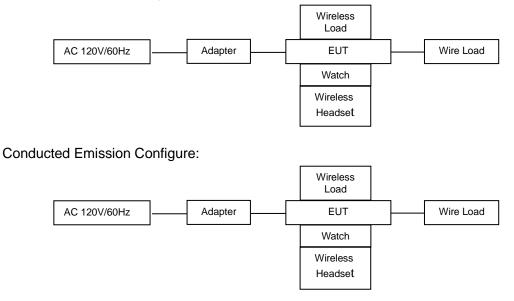
The EUT configuration for testing is installed on RF field strength measurement to meet the Commission's requirement and operating in a manner which intends to maximize its emission characteristics in a continuous normal application.

4.2 EUT Exercise

The Transmitter was operated in the normal operating mode. The TX frequency was fixed which was for the purpose of the measurements.

4.3 Configuration of Tested System

Radiated Emission Configure:





4.4 Equipment Used in Tested System

The following peripheral devices and interface cables were connected during the measurement:

I Test Accessories Come From The Laboratory

| No. | Equipment | Model No. | Manufacturer | Specification Information | Cable |
|-----|---------------------------|-----------|--------------|---------------------------|-------|
| 1 | Apple Watch | | | | |
| 2 | Wireless Headset | | | | |
| 3 | Digital multimeter | VC9806 | VICTOR | | |
| 4 | Cement resistance | | | | |
| 5 | Wireless Charging Load | | Huawei | | |

☑ Test Accessories Come From The Manufacturer

| No. | Equipment | Model No. | Manufacturer | Specification Information | Cable |
|-----|-----------|---|----------------------|--|--------------------|
| 1 | Adapter | Shenzhen Guijin Technology Co., Ltd. | GJ60WD-2400270 DP | AC100V-240V, 50/60Hz, 1500mA, DC24.0V, 2700mA | 1.5m unshielded |



4.5 Summary of Test Results

| Item | FCC Rules | Description Of Test | Result |
|------|---------------|----------------------------------|--------|
| 1 | §15.203 | Antenna Equipment | Pass |
| 2 | §15.209(a)(f) | Radiated Spurious Emission | Pass |
| 3 | §15.215(c) | 20dB Bandwidth | Pass |
| 4 | §15.205(a) | Restricted Bands of Operation | Pass |
| 5 | §15.207 | AC Power Line Conducted Emission | Pass |



5. Description of Test Modes

| Summary table of Test Cases | | | | | | | |
|-----------------------------------|--|--|--|--|--|--|--|
| Test Item | Equipment type / Modulation | | | | | | |
| rest tiem | WPT_ASK | | | | | | |
| Radiated &Conducted Test Cases | Mode 1: EUT + Wireless load 1(Full Load)+ Wireless Headset(Battery Status:<1%) + Apple Watch.(Battery Status:<1%) +Type-C load(18W) Mode 2: EUT + Wireless load 1(Full Load)+ Wireless Headset(Battery Status:<1%) + Apple Watch.(Battery Status:<1%) Mode 3: EUT + Wireless load 1(Half Load)+ Wireless Headset(Battery Status:<50%) + Apple Watch.(Battery Status:<50%) Mode 4: EUT + Wireless load 1(Full Load)+ Wireless Headset(Battery Status:<1%)+Type-C load(18W) Mode 5: EUT + Wireless load 1(Full Load) Mode 6: EUT + Wireless load 1(Full Load) Mode 6: EUT + Wireless load (Null)+ Type-C load(60W) Mode 7: EUT + Wireless load (Null) | | | | | | |
| | Mode 1: EUT + Wireless load 1(Full Load)+ Wireless Headset(Battery Status:<1%) + Apple Watch.(Battery Status:<1%) +Type-C load(18W) Mode 2: EUT + Wireless load 1(Full Load)+ Wireless Headset(Battery Status:<1%) + Apple Watch.(Battery Status:<1%) Mode 3: EUT + Wireless load 1(Half Load)+ Wireless Headset(Battery Status:<50%) + Apple Watch.(Battery Status:<50%) Mode 4: EUT + Wireless load 1(Full Load)+ Wireless Headset(Battery Status:<1%)+Type-C load(18W) Mode 5: EUT + Wireless load 1(Full Load) Mode 6: EUT+ Wireless load (Null)+ Type-C load(60W) Mode 7: EUT+ Wireless load (Null) | | | | | | |
| Note: | | | | | | | |

1. Only the result of the worst case was recorded in the report, if no other cases.

For Radiated Emission, 3axis were chosen for testing for each applicable mode.

2. 3. 4. The manufacturer provides wireless charging equipment for testing and evaluation

The Test Lab provides wireless charging equipment for testing and evaluation (Apple Watch, Wireless He adset), and the wireless load replaces the Apple Mobile Phone.



6. Field Strength of Fundamental

6.1 Measurement Limits

| Test Requirement: | FCC Part15 C Section 15.209 | | | | | | | | |
|-----------------------|-----------------------------|--------------------------|--------|--------|------------|--|--|--|--|
| Test Method: | ANSI C63.10:2013 | | | | | | | | |
| Test Frequency Range: | 9kHz to 1GHz | | | | | | | | |
| Test site: | Measurement Dista | Measurement Distance: 3m | | | | | | | |
| | Frequency | Detector | RBW | VBW | Value | | | | |
| | 9KHz-150KHz | Quasi-peak | 200Hz | 600Hz | Quasi-peak | | | | |
| Receiver setup: | 150KHz-30MHz | Quasi-peak | 9KHz | 30KHz | Quasi-peak | | | | |
| Receiver setup. | 30MHz-1GHz | Quasi-peak | 100kHz | 300kHz | Quasi-peak | | | | |
| | Above 4011- | Peak | 1MHz | 3MHz | Peak | | | | |
| | Above 1GHz | Peak | 1MHz | 10Hz | Average | | | | |
| | | | | | | | | | |

Limits for frequency below 30MHz

| Frequency | Limit (µV /m) | Measurement Distance(m) | Remark |
|-------------|---------------|-------------------------|------------------|
| 0.009-0.490 | 2400/F(kHz) | 300 | Quasi-peak Value |
| 0.490-1.705 | 24000/F(kHz) | 30 | Quasi-peak Value |
| 1.705-30 | 30 | 30 | Quasi-peak Value |

Limits for frequency Above 30MHz

| Frequency | Limit (dBµV/m @3m) | Remark | |
|---------------|--------------------|------------------|--|
| 30MHz-88MHz | 40.00 | Quasi-peak Value | |
| 88MHz-216MHz | 43.50 | Quasi-peak Value | |
| 216MHz-960MHz | 46.00 | Quasi-peak Value | |
| 960MHz-1GHz | 54.00 | Quasi-peak Value | |
| Above 1GHz | 54.00 | Average Value | |
| | 74.00 | Peak Value | |

Remark: (1) Emission level $dB\mu V = 20 \log Emission level \mu V/m$

(2) The smaller limit shall apply at the cross point between two frequency bands.

(3) Distance Is The Distance In Meters Between The Measuring Instrument, Antenna And The Closest Point Of Any Part Of The Device Or System.



6.2 Measurement Procedure

- 1. The equipment was set up as per the test configuration to simulate typical actual usage per the user's manual. When the EUT is a tabletop system, a wooden table with a height of 0.8 meters is used and is placed on the ground plane as per ANSI C63.10 (see Test Facility for the dimensions of the ground plane used). When the EUT is a floor-standing equipment, it is placed on the ground plane which has a 3-12 mm non-conductive covering to insulate the EUT from the ground plane.
- 2. Power on the EUT and all the supporting units. The turntable was rotated by 360 degrees to determine the position of the highest radiation.
- 3. The height of the broadband receiving antenna was varied between one meter and four meters above ground to find the maximum emissions field strength of both horizontal and vertical polarization.
- 4. For each suspected emission, the antenna tower was scan (from 1 M to 4 M) and then the turntable was rotated (from 0 degree to 360 degrees) to find the maximum reading.
- 5. Set the test-receiver system to Peak or CISPR quasi-peak Detect Function with specified bandwidth under Maximum Hold Mode.
- 6. For emissions above 1GHz, use 1MHz RBW and 3MHz VBW for peak reading. Place the measurement antenna away from each area of the EUT determined to be a source of emissions at the specified measurement distance, while keeping the measurement antenna aimed at the source of emissions at each frequency of significant emissions, with polarization oriented for maximum response. The measurement antenna may have to be higher or lower than the EUT, depending on the radiation pattern of the emission and staying aimed at the emission source for receiving the maximum signal. The final measurement antenna elevation shall be that which maximizes the emissions. The measurement antenna elevation for maximum emissions shall be restricted to a range of heights of from 1 m to 4 m above the ground or reference ground plane.
- 7. When the radiated emissions limits are expressed in terms of the average value of the emissions, and pulsed operation is employed, the measurement field strength shall be determined by averaging over one complete pulse train, including blanking intervals, as long as the pulse train does not exceed 0.1 seconds. As an alternative (provided the transmitter operates for longer than 0.1 seconds) or in cases where the pulse train exceeds 0.1 seconds, the measured field strength shall be determined from the average absolute voltage during a 0.1 second interval during which the field strength is at its maximum values.
- 8. If the emissions level of the EUT in peak mode was 3 dB lower than the average limit specified, then testing will be stopped and peak values of EUT will be reported, otherwise, the emissions which do not have 3 dB margin will be repeated one by one using the quasi-peak method for below 1GHz.
- 9. For testing above 1GHz, the emissions level of the EUT in peak mode was lower than average limit (that means the emissions level in peak mode also complies with the limit in average mode), then testing will be stopped and peak values of EUT will be reported, otherwise, the emissions will be measured in average mode again and reported.
- 10. In case the emission is lower than 30MHz, loop antenna has to be used for measurement and the recorded data should be QP measured by receiver. High Low scan is not required in this case.



6.3 Field Strength Calculation

The field strength is calculated by adding the Antenna Factor and Cable Factor, and subtracting the Amplifier Gain (if any), Average Factor (optional) from the measured reading. The basic equation with a sample calculation is as follows:

 $\begin{array}{ll} FS = RA + AF + CF - AG - AV \\ where & FS = Field Strength in dB\mu V/m \\ RA = Receiver Amplitude (including preamplifier) in dB\mu V \\ CF = Cable Attenuation Factor in dB \\ AF = Antenna Factor in dB/m \\ AG = Amplifier Gain in dB \\ AV = Average Factor in dB \end{array}$

In the following table(s), the reading shown on the data table reflects the preamplifier gain. An example for the calculations in the following table is as follows:

FS = RR + LF

where $FS = Field Strength in dB\mu V/m$ RR = RA - AG - AV in dB μ V LF = CF + AF in dB

Assume a receiver reading of 52.0 dB μ V is obtained. The antenna factor of 7.4 dB/m and cable factor of 1.6 dB are added. The amplifier gain of 29 dB and average factor of 5 dB are subtracted, giving a field strength of 27 dB μ V/m.

This value in dB μ V/m was converted to its corresponding level in μ V/m.

 $\begin{array}{ll} RA = 52.0 \ dB\mu V/m \\ AF = 7.4 \ dB/m \\ CF = 1.6 \ dB \\ AG = 29.0 \ dB \\ AV = 5.0 \ dB \\ FS = RR + LF \\ FS = 18 + 9 = 27 \ dB\mu V/m \end{array}$

Level in μ V/m = Common Antilogarithm [(27 dB μ V/m)/20] = 22.4 μ V/m

Magnetic field strength calculation (9 kHz – 30 MHz)

When the limit is in terms of magnetic field, the following equation applies: $H[dB(\mu A/m)] = V[dB(\mu V)] + LC [dB] - GPA [dB] + AFH [dB(S/m)]$

Where,

H is the magnetic field strength (to be compared with the limit),

V is the voltage level measured by the receiver or spectrum analyzer,

LC is the cable loss,

GPA is the gain of the preamplifier (if used), and

AFH is the magnetic antenna factor.

If the "electrical" antenna factor is used instead, the above equation becomes:

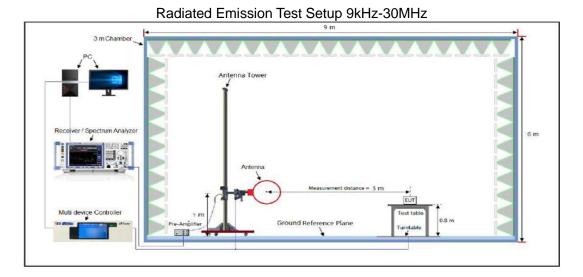
 $H[dB(\mu A/m)] = V[dB(\mu V)] + LC [dB] - GPA [dB] + AFE [dB(m-1)] - 51.5 [dB\Omega]$

where AFE is the "electric" antenna factor, as provided by the antenna calibration laboratory.

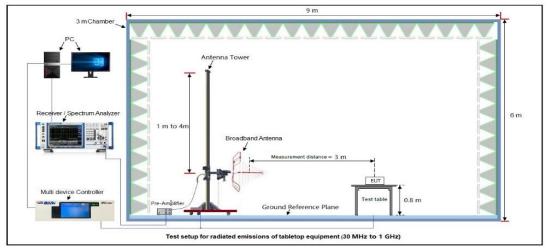
Any report having not been signed by authorized approver, or having been altered without authorization, or having not been stamped by the "Dedicated Testing/Inspection Stamp" is deemed to be invalid. Copying or excerpting portion of, or altering the content of the report is not permitted without the written authorization of AGC. The test results presented in the report apply only to the tested sample. Any objections to report issued by AGC should be submitted to AGC within 15days after the issuance of the test report. Further enquiry of validity or verification of the test report should be addressed to AGC by agc01@agccert.com.



6.4 Measurement Setup



Radiated Emission Test Setup 30MHz-1000MHz



The radiated emission tests were performed in the 3 meters chamber test site, using the setup accordance with the ANSI C63.10-2013. The specification used was the FCC 15.209 and FCC 15.205 limits.



6.5 Measurement Result

| | | Electric | Field lest in | n ine Freq | uency Range | 9 9KHZ-150 | JKHZ | | |
|-------------|---------|---------------------------------------|---------------------|-------------------|------------------|------------|-------------|----------------|--|
| EUT Name | 4 | -1 Wireless | charger | Model Nam | e | ZEDC | 29W/00 | | |
| Temperature | 2 | 2.6°C | | Relative Humidity | | 56.3% | 56.3% | | |
| Pressure | 9 | 960hPa | | | Test Voltag | е | Norma | Normal Voltage | |
| Test Mode | Mode 1 | | | | Antenna | | Face | Face | |
| 132. | 0 dBu∀/ | /m | | | | | | | |
| | | | | | | | Limi Man | | |
| | | | | | | | | | |
| 72 | | | | | | | | <u>6</u> | |
| 12.0 | | A A A A A A A A A A A A A A A A A A A | VL-northern to Area | | | , | Mund | | |
| | .009 | | | (MHz) | | | | 0.150 | |
| No. | Mk. | Freq. | Reading Level | Correct Factor | Measure- ment | Limit | Over | | |
| | | MHz | dBuV | dB | dBuV/m | dBuV/m | dB | Detector | |
| 1 | | 0.0117 | 8.05 | 42.65 | 50.70 | 126.04 | -75.34 | peak | |
| 2 | | 0.0154 | 5.44 | 40.57 | 46.01 | 123.67 | -77.66 | peak | |
| 3 | | 0.0238 | 2.69 | 37.09 | 39.78 | 119.91 | -80.13 | peak | |
| 4 | | 0.0357 | 7.69 | 34.92 | 42.61 | 116.41 | -73.80 | peak | |
| 5 | | 0.0747 | 6.48 | 32.57 | 39.05 | 110.04 | -70.99 | peak | |
| 6 | * | 0.1266 | 33.33 | 32.27 | 65.60 | 40E 4E | -39.85 | peak | |

Electric Field Test in The Frequency Range 9kHz-150kHz

Result: Pass



| Electric Field Test in The Frequency Range Ski2-130ki2 EUT Name Quattro Wireless Charger Pro 4 Model Name ZEQC01W/00 | | | | | | | | |
|--|------------------|------------------|-------------------|------------------|--------|-----------|-------------------|--|
| EUT Name | Quattro Wir | J | | | e | ZEQC | 01W/00 | |
| Temperature | 22°C | | Relative Hu | umidity | 55% | 55% | | |
| Pressure | 960hPa | 960hPa | | | e | Norma | Normal Voltage | |
| Test Mode | Antenna | | | | | | | |
| 132.0 dl | 132.0 dBuV/m | | | | | | | |
| | | | | | | Lin Ma | nc: — Irgin: — | |
| | | | | | | | | |
| | | | | | | | | |
| | | | | | | | | |
| 72 | | | | | | | | |
| 12 | | | | | | | 6 | |
| a de la compañía de l | 2 | | | | | | | |
| | Mark Mark Marker | 3 | 4 | | 5 | | | |
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| | | | | | | | | |
| 12.0 | | | (MHz) | | | | 0.150 | |
| | | Deading | | Maggurg | | | | |
| No. | Mk. Freq. | Reading Level | Correct Factor | Measure- ment | Limit | Over | | |
| | MHz | dBuV | dB | dBuV/m | dBuV/m | dB | Detector | |
| 1 | 0.0099 | 16.54 | 43.66 | 60.20 | 127.48 | -67.28 | peak | |
| 2 | 0.0117 | 9.37 | 42.65 | 52.02 | 126.04 | -74.02 | peak | |
| 3 | 0.0198 | 5.28 | 38.09 | 43.37 | 121.50 | -78.13 | peak | |
| 4 | 0.0335 | 7.31 | 35.21 | 42.52 | 116.96 | -74.44 | peak | |
| 5 | 0.0632 | 6.30 | 32.94 | 39.24 | 111.48 | -72.24 | peak | |
| 6 | * 0.1266 | 32.72 | 32.28 | 65.00 | 105.43 | 40.43 | peak | |
| | | | | | | | | |

Electric Field Test in The Frequency Range 9kHz-150kHz

Result: Pass



| T Nomo | Quattro Mirol | occ Chargor | Dro 1 | Model Nam | • | 7500 | 01W/00 |
|--------------------------------------|---|---|---|--|--|--|--|
| T Name | Quattro Wirel | ess charger | | | | | |
| nperature | 22°C | | | Relative Hu | 55% | 55% | |
| ssure | 960hPa | | | Test Voltage | e | Norma | al Voltage |
| t Mode | Mode 1 | | Antenna | | Face | | |
| 122.0 dBuV | /n | | | | | Lim | • |
| | | | | | | | nc. — rgin: — |
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| | 7 | | | | | | |
| 62 | Z X | | | | | | |
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| Mmm | Martin Land | 3 × | 5 | tak and a later strategy to | 6 | | |
| When | mhurma walama | MM hom mand | structure of the second | annan ag haistean an a | ~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~ | hurmhnulrun | and marked and and |
| | ndurmal cumpton | MM lon March | man and the second s | omening-generalitati | -1.4NP114-1 | h mhairse | montan |
| 2.0 0.150 | 0.5 | | 5 //~//./././././/.//.////////////////// | ommeridenteringen 5 | | h mhair an | 30.000 |
| 2.0 0.150 | 0.5 | | manunahanan | | | | |
| 2.0 | 0.5 | j | Marin (MHz) | 5 | | Over | |
| 2.0 0.150 | 0.5 | Reading | (MHz) | 5 Measure- | | | |
| 2.0 0.150 | k. Freq. | Reading | (MHz) Correct Factor | 5 Measure- ment | Limit | Over | 30.000 |
| 2.0 0.150 No. M | k. Freq. MHz | Reading Level dBuV | (MHz) Correct Factor dB | 5 Measure- ment dBuV/m | Limit dBuV/m | Over dB | 30.000 Detector |
| 2.0 0.150 No. M | 0.5 k. Freq. MHz 0.2455 | Reading Level dBuV 9.26 | (MHz) Correct Factor dB 32.55 | 5 Measure- ment dBuV/m 41.81 | Limit dBuV/m 99.78 | Over dB -57.97 | 30.000 Detector peak |
| 2.0 0.150 No. M 1 2 | 0.5 k. Freq. MHz 0.2455 0.3600 | Reading Level dBuV 9.26 32.87 | (MHz) Correct Factor dB 32.55 32.35 | 5 Measure- ment dBuV/m 41.81 65.22 | Limit dBuV/m 99.78 96.48 | Over dB -57.97 -31.26 | 30.000 Detector peak peak |
| 2.0 0.150 No. M 1 2 3 | k. Freq. MHz 0.2455 0.3600 0.6140 | Reading Level dBuV 9.26 32.87 2.69 | <u>(МНг)</u> Соггест Factor dB 32.55 32.35 32.18 | 5 Measure- ment dBuV/m 41.81 65.22 34.87 | Limit dBuV/m 99.78 96.48 71.84 | Over dB -57.97 -31.26 -36.97 | 30.000 Detector peak peak peak |

Electric Field Test in The Frequency Range 150kHz-30MHz

Result: Pass



| EUT Name | EUT Name Quattro Wireless Charger Pro 4 | | | Pro 4 | Model Name | | ZEQCO | 1W/00 |
|------------|---|---|---|---|--|--|----------------------------------|----------------------------------|
| Temperatur | rature 22°C | | | F | Relative Hun | nidity | 55% | |
| Pressure | Pressure 960hPa | | | | Test Voltage Normal Voltag | | | Voltage |
| Test Mode | | Mode 1 | | | Antenna | | Side | |
| 62 | | | | | 44404447 | | Limi Mar | |
| 2.0 | 150 | | | | | | | 30.000 |
| | 150 | 0.5 | | (MHz) | 5 | | | 30.000 |
| | 150 No. 1 | 0.5 | Reading | | | Limit | Over | 30.000 |
| | | 0.5 | Reading | (MHz) | Measure- | | Over | 30.000 Detector |
| | | 0.5 Mk. Freq. | Reading | (MHz) Correct Factor | Measure- ment | Limit | | |
| | No. | Mk. Freq. MHz | Reading Level dBuV | (MHz) Correct Factor dB | Measure- ment dBuV/m | Limit dBuV/m | dB | Detector |
| | No. 1 | Mk. Freq. MHz 0.1806 | Reading Level dBuV 13.29 | (MHz) Correct Factor dB 32.56 | Measure- ment dBuV/m 45.85 | Limit dBuV/m 102.4 | dB -56.59 | Detector peak |
| | No. 1 1 2 | Mk. Freq. Mk. Freq. MHz 0.1806 0.3600 0.5265 | Reading Level dBuV 13.29 31.62 | (MHz) Correct Factor dB 32.56 32.35 | 5 Measure- ment dBuV/m 45.85 63.97 | Limit dBuV/m 102.4 96.47 | dB -56.59 -32.50 | Detector peak peak |
| | No. 1 1 2 3 | Mk. Freq. Mk. Freq. MHz 0.1806 0.3600 0.5265 | Reading Level dBuV 13.29 31.62 15.08 | (MHz) Correct Factor dB 32.56 32.35 32.20 | 5 Measure- ment dBuV/m 45.85 63.97 47.28 | Limit dBuV/m 102.4 96.47 73.17 | dB -56.59 -32.50 -25.89 | Detector peak peak peak |

Electric Field Test in The Frequency Range 150kHz-30MHz

Result: Pass

Notes:

- 1. Quasi-Peak detector is used for frequency below 30MHz.
- 2. Negative value in the margin column shows emission below limit.
- 3. All measurements were made with 0.6m loop antenna at 3m distance. All emissions are below the QP limit.
- 4. Corr. Factor= Antenna Factor (dB/m) + Cable Loss (dB)
- 5. Loop antenna is used for the emission under 30MHz.



7. 20 dB Bandwidth Measurement

7.1 Provisions Applicable

N/A

7.2 Measurement Procedure

Set the parameters of SPA as below:

- 1. The spectrum analyzer connected via a receive antenna placed near the EUT in peak Max hold mode.
- 2. Centre frequency = Operation Frequency
- 3. The resolution bandwidth of 300 Hz and the video bandwidth of 1 kHz were used.
- 4. Span: 3kHz, Sweep time: Auto
- 5. Set the EUT to continue transmitting mode. Allow the trace to stabilize. Use the "N dB down" function of SPA to define the bandwidth.
- 6. Measured the spectrum width with power higher than 20dB below carrier.
- 7. Measured the 99% OBW.
- 8. Record the plots and Reported.

7.3 Measurement Setup



Spectrum Analyzer

7.4 Measurement Result

| | Test Data of Occupied Bandwidth and -20dB Bandwidth | | | | | | | | | | |
|--------------|---|---------------------------------|--------------------------|-----------------|--------------|--|--|--|--|--|--|
| Test Mode | Test Channel (kHz) | 99% Occupied Bandwidth (kHz) | -20dB Bandwidth (kHz) | Limits (kHz) | Pass or Fail | | | | | | |
| Mode 1 | 360 | 0.756 | 0.866 | N/A | Pass | | | | | | |
| Mode 1 | 127.8 | 0.772 | 0.826 | N/A | Pass | | | | | | |
| Mode 1 | 126.6 | 0.717 | 0.847 | N/A | Pass | | | | | | |
| Mode 1 | 1778 | 0.780 | 0.834 | N/A | Pass | | | | | | |





Test Graphs of -20dB Bandwidth





Test_ Graph_ ASK_1778kHz _ 99% Occupied Bandwidth

Note: Because the measured signal is CW-like, adjusting the RBW per C63.30 would not be practical since m easured bandwidth will always follow the RBW and the result will be approximately twice the RBW.



8. AC Power Line Conducted Emission Test

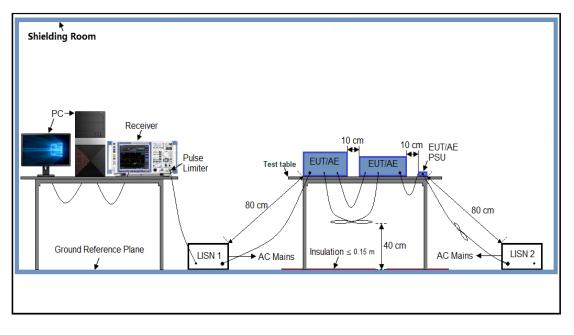
8.1 Measurement Limits

| Frequency Range | Maximum RF Line Voltage | |
|-----------------|-------------------------|----------------|
| | Q.P. (dBµV) | Average (dBµV) |
| 150kHz~500kHz | 66-56 | 56-46 |
| 500kHz~5MHz | 56 | 46 |
| 5MHz~30MHz | 60 | 50 |

Note:

- 1. The lower limit shall apply at the transition frequency.
- 2. The limit decreases linearly with the logarithm of the frequency in the range 0.15 MHz to 0.50 MHz.

8.2 Measurement Setup





8.3 Preliminary Procedure of Line Conducted Emission Test

- The equipment was set up as per the test configuration to simulate typical actual usage per the user's manual. When the EUT is a tabletop system, a wooden table with a height of 0.8 meters is used and is placed on the ground plane as per ANSI C63.10 (see Test Facility for the dimensions of the ground plane used). When the EUT is a floor-standing equipment, it is placed on the ground plane which has a 3-12 mm non-conductive covering to insulate the EUT from the ground plane.
- 2. Support equipment, if needed, was placed as per ANSI C63.10.
- 3. All I/O cables were positioned to simulate typical actual usage as per ANSI C63.10.
- 4. All support equipment received AC120V/60Hz power from a LISN, if any.
- 5. The EUT received DC 24V power from adapter which received AC120V/60Hz power from a LISN.
- 6. The test program was started. Emissions were measured on each current carrying line of the EUT using a spectrum Analyzer / Receiver connected to the LISN powering the EUT. The LISN has two monitoring points: Line 1 (Hot Side) and Line 2 (Neutral Side). Two scans were taken: one with Line 1 connected to Analyzer / Receiver and Line 2 connected to a 50ohm load; the second scan had Line 1 connected to a 50 ohm load and Line 2 connected to the Analyzer / Receiver.
- 7. Analyzer / Receiver scanned from 150 kHz to 30MHz for emissions in each of the test modes.
- 8. During the above scans, the emissions were maximized by cable manipulation.
- 9. The test mode(s) were scanned during the preliminary test.

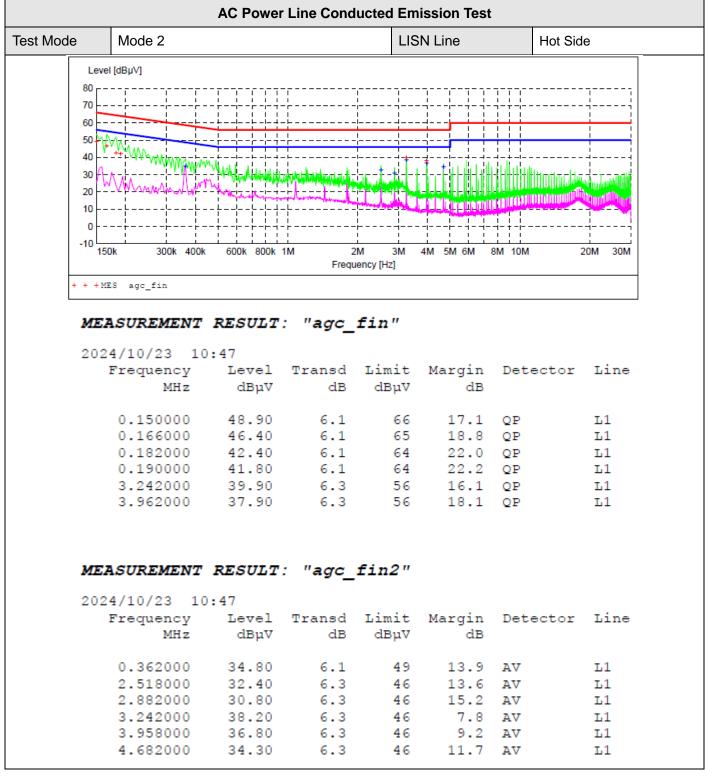
Then, the EUT configuration and cable configuration of the above highest emission level were recorded for reference of final testing.

8.4 Final Procedure of Line Conducted Emission Test

- 1. EUT and support equipment was set up on the test bench as per step 2 of the preliminary test.
- 2. A scan was taken on both power lines, Line 1 and Line 2, recording at least the six highest emissions. Emission frequency and amplitude were recorded into a computer in which correction factors were used to calculate the emission level and compare reading to the applicable limit. If EUT emission level was less – 2dB to the A.V. limit in Peak mode, then the emission signal was re-checked using Q.P and Average detector.
- 3. The test data of the worst case condition(s) was reported on the Summary Data page.



8.5 Measurement Result



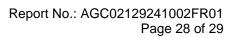
Result: Pass

Any report having not been signed by authorized approver, or having been altered without authorization, or having not been stamped by the "Dedicated Testing/Inspection Stamp" is deemed to be invalid. Copying or excerpting portion of, or altering the content of the report is not permitted without the written authorization of AGC. The test results presented in the report apply only to the tested sample. Any objections to report issued by AGC should be submitted to AGC within 15days after the issuance of the test report. Further enquiry of validity or verification of the test report should be addressed to AGC by agc01@agccert.com.

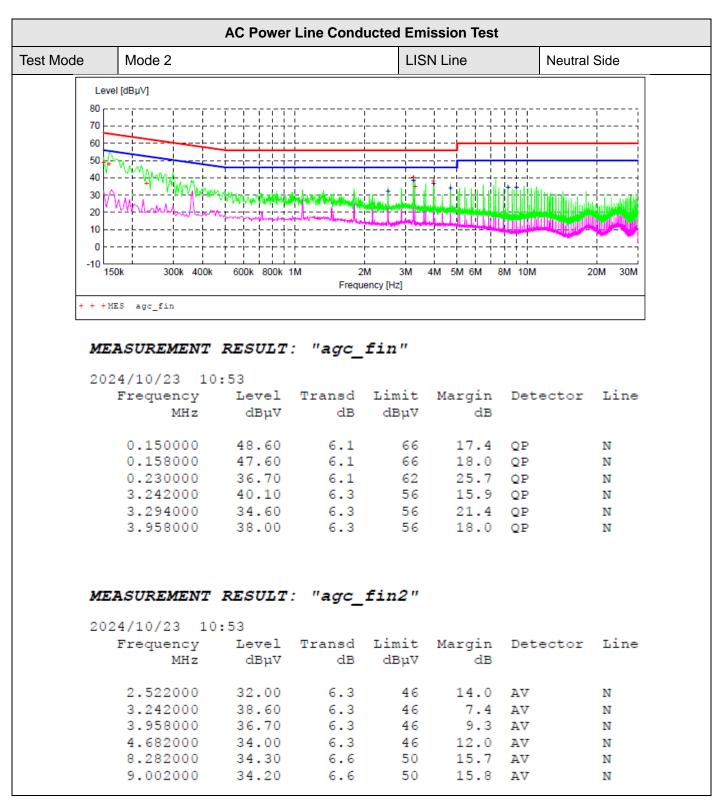
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 Attestation of Global Compliance(Shenzhen)Std & Tech Co., Ltd

 Tel: +86-755 2523 4088
 E-mail: agc@agccert.com







Result: Pass

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 E-mail: agc@agccert.com



Appendix I: Photographs of Test Setup

Refer to the Report No.: AGC02129241002AP02

Appendix II: Photographs of Test EUT

Refer to the Report No.: AGC02129241002AP03

-----End of Report-----



Conditions of Issuance of Test Reports

1. All samples and goods are accepted by the Attestation of Global Compliance (Shenzhen) Co., Ltd (the "Company") solely for testing and reporting in accordance with the following terms and conditions. The company provides its services on the basis that such terms and conditions constitute express agreement between the company and any person, firm or company requesting its services (the "Clients").

2. Any report issued by Company as a result of this application for testing services (the "Report") shall be issued in confidence to the Clients and the Report will be strictly treated as such by the Company. It may not be reproduced either in its entirety or in part and it may not be used for advertising or other unauthorized purposes without the written consent of the Company. The Clients to whom the Report is issued may, however, show or send it, or a certified copy thereof prepared by the Company to its customer, supplier or other persons directly concerned. The Company will not, without the consent of the Clients, enter into any discussion or correspondence with any third party concerning the contents of the Report, unless required by the relevant governmental authorities, laws or court orders.

3. The Company shall not be called or be liable to be called to give evidence or testimony on the Report in a court of law without its prior written consent, unless required by the relevant governmental authorities, laws or court orders.

4. In the event of the improper use of the report as determined by the Company, the Company reserves the right to withdraw it, and to adopt any other additional remedies which may be appropriate.

5. Samples submitted for testing are accepted on the understanding that the Report issued cannot form the basis of, or be the instrument for, any legal action against the Company.

6. The Company will not be liable for or accept responsibility for any loss or damage however arising from the use of information contained in any of its Reports or in any communication whatsoever about its said tests or investigations.

7. Clients wishing to use the Report in court proceedings or arbitration shall inform the Company to that effect prior to submitting the sample for testing.

8. The Company is not responsible for recalling the electronic version of the original report when any revision is made to them. The Client assumes the responsibility to providing the revised version to any interested party who uses them.

9. Subject to the variable length of retention time for test data and report stored hereinto as otherwise specifically required by individual accreditation authorities, the Company will only keep the supporting test data and information of the test report for a period of six years. The data and information will be disposed of after the aforementioned retention period has elapsed. Under no circumstances shall we provide any data and information which has been disposed of after retention period. Under no circumstances shall we be liable for damage of any kind, including (but not limited to) compensatory damages, lost profits, lost data, or any form of special, incidental, indirect, consequential or punitive damages of any kind, whether based on breach of contract of warranty, tort (including negligence), product liability or otherwise, even if we are informed in advance of the possibility of such damages.