

**For 0.112-0.205MHz****Date of issue**

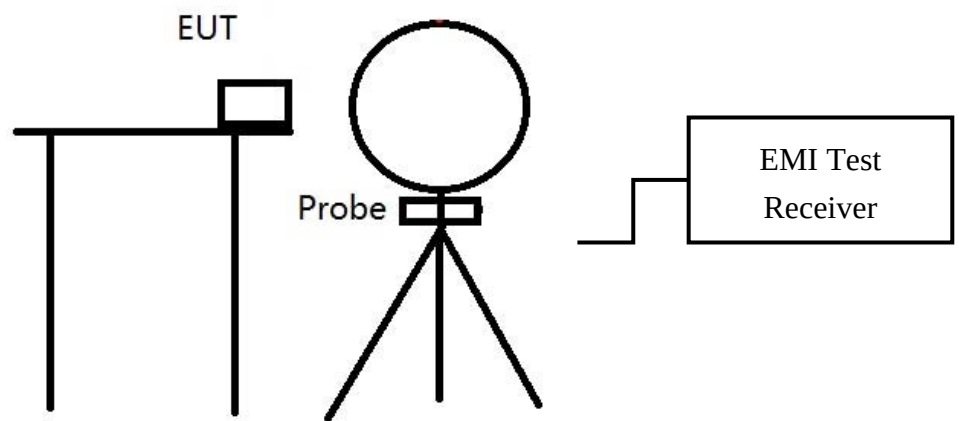
2018-05-18 to 2018-05-21

**RF Exposure**

Test Requirement:

Environmental evaluation and exposure limit according to FCC CFR 47 Part 1.1307(b), 1.1310

According KDB680106 D01v03: RF Exposure Wireless Charging Apps v03

**Test Setup**

These testing were performed at test configuration as above diagram.

EUT was placed on a table, and the measure probe was placed at a measurement distance of 15cm surrounding the device and 20cm above the top surface.

The EUT was put in different directions (Left, Right, Front, Rear, Top and Bottom) to obtain the maximum reading.

**Equipment Used during Test****Equipments List**

| RF EXPOSURE |                    |              |           |            |                       |                      |
|-------------|--------------------|--------------|-----------|------------|-----------------------|----------------------|
| Item        | Equipment          | Manufacturer | Model No. | Serial No. | Last Calibration Date | Calibration Due Date |
| 1           | Protection Network | SCHWARZBECK  | VDHH9502  | 9502-103   | 2018-04-11            | 2019-04-10           |
| 2           | EMI Test Receiver  | R&S          | ESCI      | 101528     | 2018-04-11            | 2019-04-10           |

**Description of Auxiliary Equipment**

| Equipment | Manufacturer | Model No. | Series No. |
|-----------|--------------|-----------|------------|
| /         | /            | /         | /          |

## Test Equipment Calibration

All the test equipments used are valid and calibrated by GUANG ZHOU GRG METROLOGY & TEST CO., LTD. address is No.163, Pingyun Rd. West of Huangpu Ave, Tianhe District, Guangzhou, Guangdong, China.

## The procedures / limit

### (A) Limits for Occupational / Controlled Exposure

| Frequency Range (MHz) | Electric Field Strength (E) (V/m) | Magnetic Field Strength (H) (A/m) | Power Density (S) (mW/ cm <sup>2</sup> ) | Averaging Time  E  <sup>2</sup> ,  H  <sup>2</sup> or S (minutes) |
|-----------------------|-----------------------------------|-----------------------------------|------------------------------------------|-------------------------------------------------------------------|
| 0.3-3.0               | 614                               | 1.63                              | (100)*                                   | 6                                                                 |
| 3.0-30                | 1842 / f                          | 4.89 / f                          | (900 / f)*                               | 6                                                                 |
| 30-300                | 61.4                              | 0.163                             | 1.0                                      | 6                                                                 |
| 300-1500              |                                   |                                   | F/300                                    | 6                                                                 |
| 1500-100,000          |                                   |                                   | 5                                        | 6                                                                 |

### (B) Limits for General Population / Uncontrolled Exposure

| Frequency Range (MHz) | Electric Field Strength (E) (V/m) | Magnetic Field Strength (H) (A/m) | Power Density (S) (mW/ cm <sup>2</sup> ) | Averaging Time  E  <sup>2</sup> ,  H  <sup>2</sup> or S (minutes) |
|-----------------------|-----------------------------------|-----------------------------------|------------------------------------------|-------------------------------------------------------------------|
| 0.3-1.34              | 614                               | 1.63                              | (100)*                                   | 30                                                                |
| 1.34-30               | 824/f                             | 2.19/f                            | (180/f)*                                 | 30                                                                |
| 30-300                | 27.5                              | 0.073                             | 0.2                                      | 30                                                                |
| 300-1500              |                                   |                                   | F/1500                                   | 30                                                                |
| 1500-100,000          |                                   |                                   | 1.0                                      | 30                                                                |

Note: f = frequency in MHz ; \*Plane-wave equivalent power density

## Test Data

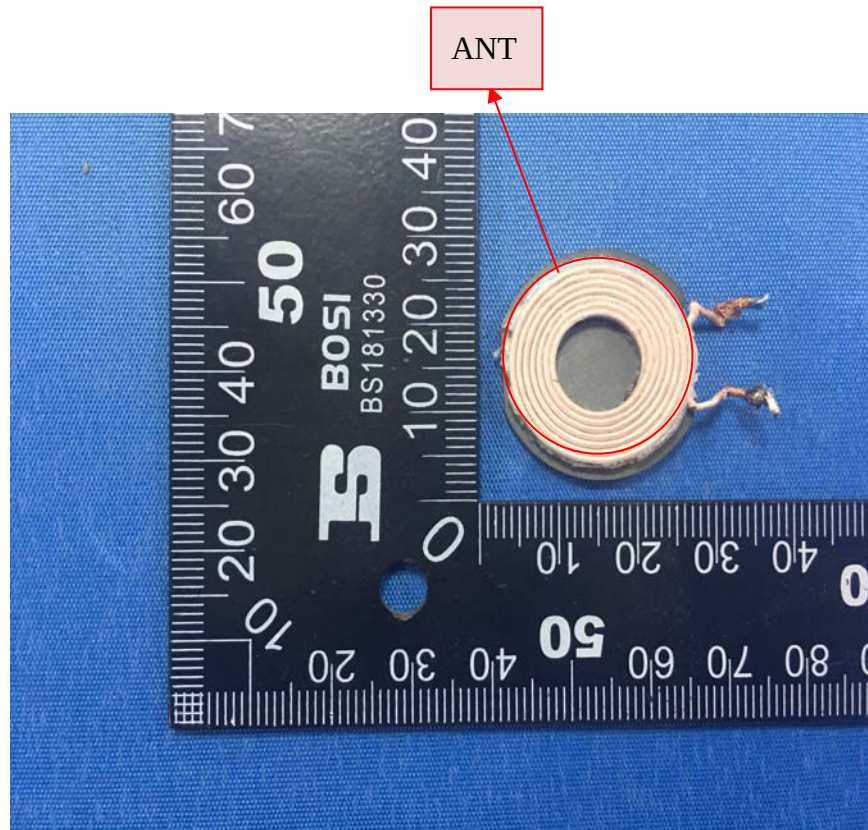
### H-Field

| Test Side        | Separation Distance(cm) | H-Field Measured(A/m) | H-Field Limit(A/m) | Result(%) |
|------------------|-------------------------|-----------------------|--------------------|-----------|
| Left             | 15                      | 0.20                  | 1.63               | 12.27     |
| Right            | 15                      | 0.12                  | 1.63               | 6.13      |
| Front            | 15                      | 0.18                  | 1.63               | 11.66     |
| Rear             | 15                      | 0.23                  | 1.63               | 11.66     |
| Top              | 20                      | 0.42                  | 1.63               | 26.99     |
| Bottom           | 15                      | 0.34                  | 1.63               | 20.25     |
| Margin Limit (%) |                         | 25.77%                |                    |           |

Remark: The aggregate H-field strengths at 15 cm surrounding the device and 20 cm above the top surface from all simultaneous transmitting coils are demonstrated to be less than 50% of the MPE limit.

### EUT coupling surface area

The inductive area is below (Coupling area:  $\varnothing$  24 mm, The located at top of the equipment):



**For BLE****SAR Evaluation**

Test Requirement: FCC Part 1.1307

Evaluation Method: FCC Part 2.1093 &amp; KDB 447498 D01 General RF Exposure Guidance v06

**Requirements**

1) The 1-g and 10-g SAR test exclusion thresholds for 100 MHz to 6 GHz at test separation distances  $\leq 50$  mm are determined by:

$[(\text{max. power of channel, including tune-up tolerance, mW}) / (\text{min. test separation distance, mm})] \cdot [\sqrt{f(\text{GHz})}] \leq 3.0$  for 1-g SAR and  $\leq 7.5$  for 10-g extremity SAR where

1.  $f(\text{GHz})$  is the RF channel transmit frequency in GHz
2. Power and distance are rounded to the nearest mW and mm before calculation
3. The result is rounded to one decimal place for comparison

The test exclusions are applicable only when the minimum test separation distance is  $\leq 50$  mm and for transmission frequencies between 100 MHz and 6 GHz. When the minimum test separation distance is  $< 5$  mm, a distance of 5 mm is applied to determine SAR test exclusion.

**Test result**

| Conducted Peak power (dBm) | Conducted Peak power (mW) | Source-based time-averaged maximum conducted output power (mW) | Minimum test separation distance required for the exposure conditions (mm) | SAR Test Exclusion Thresholds Calculation Value | SAR Test Exclusion Thresholds Limit | Result     |
|----------------------------|---------------------------|----------------------------------------------------------------|----------------------------------------------------------------------------|-------------------------------------------------|-------------------------------------|------------|
| 3.73                       | 2.36                      | 2.36                                                           | 5                                                                          | 0.737                                           | 3.0                                 | Compliance |

Note: No SAR measurement is required.

Remark: Max. duty factor is 100%

Result: Compliance

No SAR measurement is required.

=====END=====