

For 0.112-0.205MHz

Date of issue

2018-05-18 to 2018-05-21

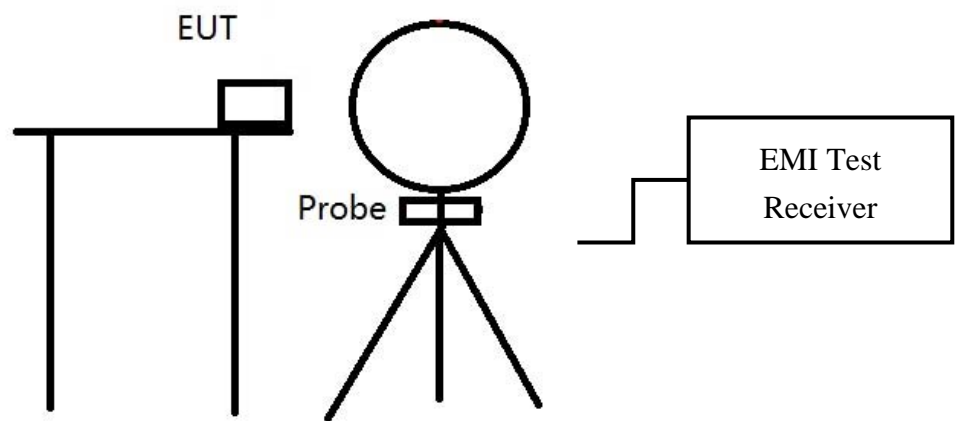
RF Exposure

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 ²)	Averaging Time E ² , H ² 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 ²)	Averaging Time E ² , H ² 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

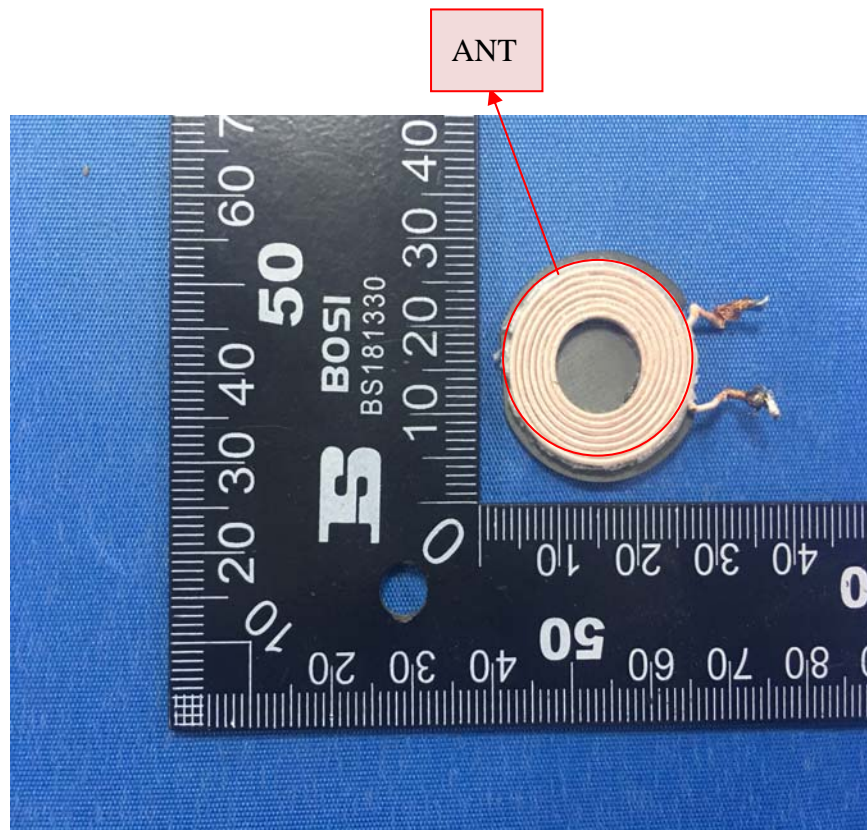
H-Field

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 & 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 ≤ 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 ≤ 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 ≤ 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=====