# **TEST EQUIPMENT LIST**

Manufacturer	Description	Model	Serial Number	Calibration Date	Calibration Due Date				
Radiated Emission Test (Chamber 1#)									
Rohde & Schwarz	EMI Test Receiver	ESCI	100195	2018-11-30	2019-11-29				
Sunol Sciences	Broadband Antenna	JB3	A090413-1	2016-12-26	2019-12-25				
Sonoma Instrunent	Pre-amplifier	310N	171205	2018-08-14	2019-08-13				
Rohde & Schwarz	Auto test Software	EMC32	100361	/	/				
MICRO-COAX	Coaxial Cable	Cable-8	008	2018-08-15	2019-08-14				
MICRO-COAX	Coaxial Cable	Cable-9	009	2018-08-15	2019-08-14				
MICRO-COAX	Coaxial Cable	Cable-10	010	2018-08-15	2019-08-14				
	Radiated Emission Test (Chamber 2#)								
Rohde & Schwarz	EMI Test Receiver	ESU40	100207	2018-08-27	2019-08-26				
ETS-LINDGREN	PASSIVE LOOP	6512	108100	2019-04-25	2022-04-24				
Sonoma Instrument	Pre-amplifier	310N	185700	2018-08-14	2019-08-13				
Rohde & Schwarz	Auto test Software	EMC32	100361	/	/				
MICRO-COAX	Coaxial Cable	Cable-6	006	2018-08-15	2019-08-14				
MICRO-COAX	Coaxial Cable	Cable-11	011	2018-08-15	2019-08-14				
MICRO-COAX	Coaxial Cable	Cable-12	012	2018-08-15	2019-08-14				
MICRO-COAX	Coaxial Cable	Cable-13	013	2018-08-15	2019-08-14				
	Con	ducted Emission T							
Rohde & Schwarz	EMI Test Receiver	ESR	1316.3003K03- 101746-zn	2019-07-11	2020-07-10				
Rohde & Schwarz	LISN	ESH3-Z5	862770/011	2018-11-30	2019-11-29				
Audix	Test Software	e3	V9						
Narda	Attenuator/6dB	10690812-2	26850-6	2019-01-10	2020-01-09				
MICRO-COAX	Coaxial Cable	Cable-15	015	2018-08-15	2019-08-14				
RF Exposure									
Narda	Exposure Level Tester	ELT-400	N-0229	2017-11-15	2019-11-15				
Narda	B Field Probe	ELT Probe 100cm2	M-0666	2017-11-15	2019-11-15				
Amplifier Research	Isotropic Field Probe	FP5000	301825	2018-11-22	2021-11-22				

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<sup>\*</sup> Statement of Traceability: Bay Area Compliance Laboratories Corp. (Kunshan) attests that all calibrations have been performed in accordance to requirements that traceable to National Primary Standards and International System of Units (SI).

# FCC §1.1307& §1.1310 – RF EXPOSURE

## **Applicable Standard**

FCC §1.1307 & 1.1310

According to the item 5.2 of KDB 680106 D01 RF Exposure Wireless Charging Apps v03: Inductive wireless power transfer applications that meet all of the following requirements are excluded from submitting an RF evaluation.

- a) Power transfer frequency is less that 1 MHz.
- b) Output power from each primary coil is less than or equal to 15 watts.
- c) The transfer system includes only single primary and secondary coils. This includes charging systems that may have multiple primary coils and clients that are able to detect and allow coupling only between individual pairs of coils.

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- d) Client device is placed directly in contact with the transmitter.
- e) Mobile exposure conditions only (portable exposure conditions are not covered by this exclusion).
- f) 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.

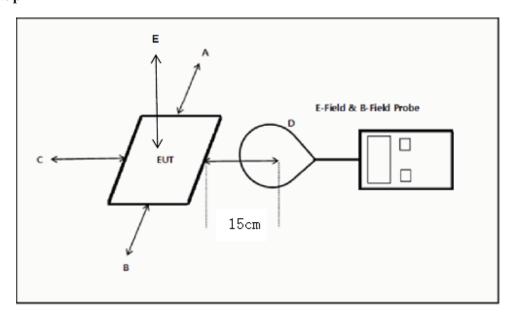
Limits for Maximum Permissible Exposure (MPE)

(B) Limits for General Population/Uncontrolled Exposure								
Frequency Range (MHz)	Electric Field Strength (V/m)	Magnetic Field Strength (A/m)	Power Density (mW/cm²)	Averaging Time (minutes)				
(A) Limits for Occupational/Controlled Exposure								
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				
300-1,500			f/300	6				
1,500-100,000			5	6				
	(B) Limits for Gen	eral Population/Uncon	trolled Exposure					
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;

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# **EUT Setup**



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#### Result

- a) Power transfer frequency is less that 1 MHz. Yes, the device operates in the frequency 110 kHz-215 kHz.
- b) Output power from each primary coil is less than or equal to 15 watts. Yes, the maximum output power of the primary coil is 10W<15W.
- c) The transfer system includes only single primary and secondary coils. This includes charging systems that may have multiple primary coils and clients that are able to detect and allow coupling only between individual pairs of coils..

Yes, the transfer system including a charging system with only single primary coils is to detect and allow only between individual of coils.

- d) Client device is inserted in or placed directly in contact with the transmitter. Yes, client device is placed directly in contact with the transmitter.
- e) Mobile exposure conditions only (portable exposure conditions are not covered by this exclusion). Yes, this is a mobile device.
- f) 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. The EUT H-field Strength levels at 15cm surrounding the device and 20 cm above the top surface are less than 50% the MPE limit.

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## **Test Data**

## **Environmental Conditions**

Temperature:	24.2 ℃		
Relative Humidity:	51 %		
ATM Pressure:	101.2 kPa		

The testing was performed by Max Min on 2019-07-24.

Model name: DOCK-150-B-BK(worst case)

H-Filed Strength

Frequency Range (kHz)	Position A (A/m)	Position B (A/m)	Position C (A/m)	Position D (A/m)	Position E (A/m)	Limit Test (A/m)	50% Limit (A/m)
110-215	0.230	0.228	0.228	0.228	0.246	1.63	0.815

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### E-Filed Strength

Frequency Range (kHz)	Position A (V/m)	Position B (V/m)	Position C (V/m)	Position D (V/m)	Position E (V/m)	Limit Test (V/m)	50% Limit (A/m)
110-215	2.6	2.5	2.3	2.4	2.9	614	307

### Note:

1: According with KDB 680106 D01 RF Exposure Wireless Charging Apps v03, Emissions between 100 kHz to 300 kHz should be assessed versus the limits at 300 kHz in Table 1 of Section 1.1310: 614V/m and 1.63 A/m.

2: The distance for position A, B, C, D are 15cm, the distance for position E is 20cm.

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