

1.3 Brief Summary of Results

A brief summary of the tests carried out in accordance with specifications as shown below.

Specification Clause	Test Description	Result	Comments/Base Standard
47 CFR FCC Part 15			
18.305(b)	Conducted Emissions	Pass	FCC/OST MP-5: 1986
18.307(b)	Radiated Field Strength	Pass	FCC/OST MP-5: 1986
18.313	Maximum Permissible Exposure	Pass	KDB 680106 D01 RF Exposure Wireless Charging App v03r01

Notes

- See the table below for the equipment approval considerations according to KDB 680106 D01 RF Exposure Wireless Charging App v03r01 §5b):

KDB 680106 D01 RF Exposure Wireless Charging App v03r01 §5b)

- Power transfer frequency is less than 1 MHz ☒
 - The transfer frequency of the Equipment Under Test (EUT) is 110kHz – 205kHz
- Output power from each primary coil is less than or equal to 15 watts. ☒
 - The output power from the primary coil is 10 watts.
- The system may consist of more than one source primary coils, charging one or more clients. If more than one primary coil is present, the coil pairs may be powered on at the same time. ☒
 - The Equipment Under Test (EUT) and the client each has one primary coil only.
- Client device is placed directly in contact with the transmitter. ☒
 - The client device is placed directly in contact with the transmitter.
- Mobile exposure conditions only (portable exposure conditions are not covered by this exclusion). ☒
 - Mobile exposure conditions was used.
- The aggregate H-field strengths anywhere at or beyond 15 cm surrounding the device, and 20 cm away from the surface from all coils that by design can simultaneously transmit, and while those coils are simultaneously energized, are demonstrated to be less than 50% of the applicable MPE limit. ☒
 - The measured H-field and E-field are less than 50% of the applicable MPE limit. Please refer to page 19.

2.3 Maximum Permissible Exposure (MPE)

2.3.1 Test Limits

The EUT shows compliance to the requirements of this section, which states the MPE limits for General Population / Uncontrolled Exposure are as shown below:

Frequency Range (MHz)	Electric Field Strength (V/m)	Magnetic Field Strength (A/m)	Power Density (mW/cm ²)	Average Time (min)
0.3 - 1.34	614	1.63	100 ^{Note 2}	30
1.34 - 30	824 / f	2.19 / f	180 / f ² ^{Note 2}	30
30 - 300	27.5	0.073	0.2	30
300 - 1500	-	-	f / 1500	30
1500 - 100000	-	-	1.0	30
Notes				
1. f = frequency in MHz				
2. Plane wave equivalent power density				

2.3.2 Test Setup

2.3.2.1 The EUT and supporting equipment were set up as shown on the setup photo.

2.3.2.2 The relevant field probe was positioned at least 20cm away from the EUT and supporting equipment boundary.

2.3.3 Test Method

2.3.3.1 The EUT was switched on and allowed to warm up to its normal operating condition.

2.3.3.2 The test was first carried out at one of the positions / sides of the EUT.

2.3.3.3 Magnetic Field Strength measurement (A/m) was made using the field meter set to the r.m.s detector and the required averaging time.

2.3.3.4 Measurements were repeated for the next position and its associate EUT operating mode, until all possible positions and modes were measured.

Sample Calculation Example

At 2400 MHz, limit = 1.0 mW/cm^2

Power density reading obtained directly from field meter = 0.3 mW/cm^2 averaged over the required 30 minutes.

Therefore, margin = $0.3 - 1.0 = -0.7 \text{ mW/cm}^2$ i.e. 0.7 mW/cm^2 below limit

2.3.4 Test Results

Test Input Power	120V 60Hz	Temperature	24°C
		Relative Humidity	60%
		Atmospheric Pressure	1030mbar
		Tested By	Chang Wai Kit
		Test Date	22 Sep 2022

Sides	Measuring Distance (cm)	Measured Electric Field Strength (V/m)	Electric Field Strength (V/m)	50% of Electric Field Strength Limit (VV/m)	Averaging Time (min)
Top	20	33.7	614	307	30
Front	15	20.0	614	307	30
Left	15	15.5	614	307	30
Right	15	15.0	614	307	30
Rear	15	18.6	614	307	30
Bottom	15	20.3	614	307	30

Sides	Measuring Distance (cm)	Measured Magnetic Field Strength (A/m)	Magnetic Field Strength Limit (A/m)	50% of Magnetic Field Strength Limit (AV/m)	Averaging Time (min)
Top	20	0.7	1.63	0.815	30
Front	15	0.3	1.63	0.815	30
Left	15	0.5	1.63	0.815	30
Right	15	0.3	1.63	0.815	30
Rear	15	0.3	1.63	0.815	30
Bottom	15	0.7	1.63	0.815	30

Notes

1.	All possible modes of operation were investigated. Only the worst case highest radiation levels were measured. Measurements were taken at the required averaging time. All other radiation levels were relatively insignificant.
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TEST SETUP

