

Maximum Permissible Exposure Evaluation

FCC ID: 2BFNI-CCB007AA

1. Client Information

Applicant	:	Sun Cupid Industries Ltd.
Address	:	16/F, CEO Tower, 77 Wing Hong Street, Cheung Sha Wan, Kowloon, Hong Kong China
Manufacturer	:	Shenzhen Sun Cupid Industries Ltd. Longgang Branch
Address	:	No. 7, Gao Ke Blvd., Bao Long Sub-district, Long Gang District, Shen Zhen, Guang Dong, China.

2. General Description of EUT

EUT Name	:	Milktea Machine
Models No.	:	CCB007AA
Model Different	:	----
Product Description	:	Operation Frequency: 29KHz
	:	Antenna Gain: Coil Antenna
Power Rating	:	Input: AC120V, 60Hz
Software Version	:	EB-5.04
Hardware Version	:	-----
Connecting I/O Port(S)	:	Please refer to the User's Manual
Remark	:	the evaluation report used the EUT(HC-C-202402-0079-01-02#).

MPE Calculations

1. EUT Operation Condition:

KDB 680106 D01 RF Exposure Wireless Charging App v04.

2. Requirements:

According to the item 5.2 of KDB 680106 D01v04:

Inductive wireless power transfer applications that meet all of the following requirements are excluded from submitting an RF exposure evaluation:

(1) The power transfer frequency is below 1 MHz.

(2) The output power from each transmitting element (e.g., coil) is less than or equal to 15 watts.

(3) A client device providing the maximum permitted load is placed in physical contact with the transmitter

(i.e., the surfaces of the transmitter and client device enclosures need to be in physical contact)

(4) Only § 2.1091-Mobile exposure conditions apply (i.e., this provision does not cover § 2.1093-Portable exposure conditions).

(5) The E-field and H-field strengths, at and beyond 20 cm surrounding the device surface, are demonstrated to be less than 50% of the applicable MPE limit, per KDB 447498, Table 1. These measurements shall be taken along the principal axes of the device, with one axis oriented along the direction of the estimated maximum field strength, and for three points per axis or until a 1/d (inverse distance from the emitter structure) field strength decay is observed. Symmetry considerations may be used for test reduction purposes. The device shall be operated in documented worst-case compliance scenarios (i.e., the ones that lead to the maximum field components), and while all the radiating structures (e.g., coils or antennas) that by design can simultaneously transmit are energized at their nominal maximum power.

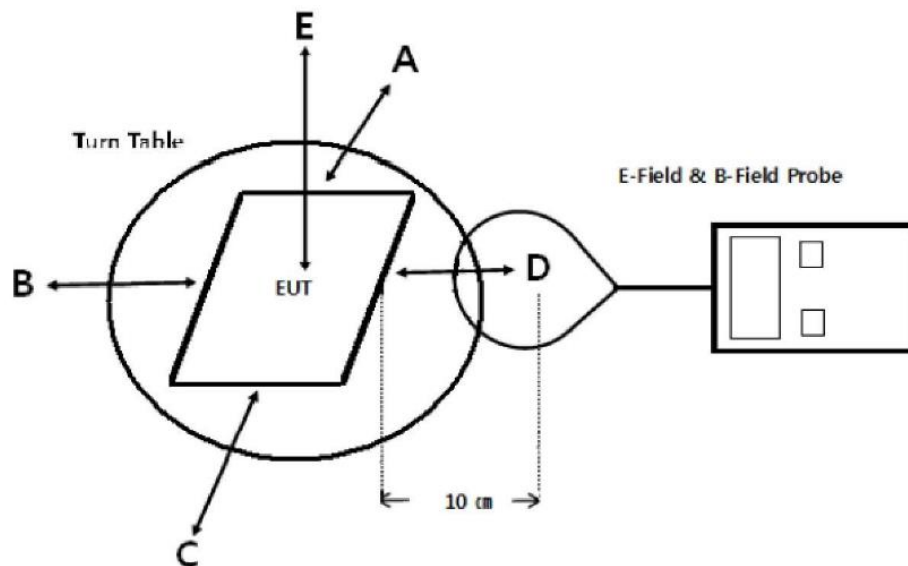
(6) For systems with more than one radiating structure, the conditions specified in (5) must be met when the system is fully loaded (i.e., clients absorbing maximum power available), and with all the radiating structures operating at maximum power at the same time, as per design conditions. If the design allows one or more radiating structures to be powered at a higher level while other radiating structures are not powered, then those cases must be tested as well. For instance, a device may use three RF coils powered at 5 W, or one coil powered at 15 W: in this case, both scenarios shall be tested.

Limits For Maximum Permissible Exposure (MPE)

Furthermore, consistent with FCC's equipment authorization RF exposure guidance, any device (both portable and mobile) operating at frequencies below 100 kHz is considered compliant for the purpose of equipment authorization when the external (unperturbed) temporal peak field strengths do not exceed the following reference levels:

83 V/m for the electric field strength (E) and 90 A/m for the magnetic field strength (H).

3. Test Setup



Note: The aggregate H-field strengths at 15 cm surrounding the device and 20 cm above the top surface.

4. Test Procedure

- 1) The RF exposure test was performed in anechoic chamber.
- 2) The aggregate H-field strengths at 15 cm surrounding the device and 20 cm above the top surface.
- 3) The highest emission level was recorded and compared with limit as soon as measurement of each points (A, B, C, D, E) were completed.
- 4) The EUT was measured according to the dictates of KDB 680106 D01 v04.

Remark:

The EUT's test position A, B, C, D and E is valid for the E and H field measurements.

5. Test Equipment List

Equipment	Manufacturer	Model No.	Serial No.	Last Cal.	Cal. Due Date
Magnetic field meter	NARDA	ELT-400	EE030	Sep. 08, 2023	Sep. 07, 2024
Magnetic field probe	NARDA	EP 601	811ZX01000	Jun. 02, 2024	Jun. 01, 2025

6. Deviation From Test Standard

No deviation

6. Mode of operation during the test / Test peripherals used

Test Modes:		
TM1	AC/DC Adapter + EUT (no-load: Power<1%)	record
TM2	AC/DC Adapter + EUT + (Half load: Power<50%)	record
TM3	AC/DC Adapter + EUT + (Full load: Power <99%)	record

8. Test Result

E-Filed Strength at 15 cm from the edges surrounding the EUT and 15 cm above the top surface

Charging Battery Level	Frequency Range (MHz)	Measured E-Field Strength Values (V/m)					E-Field Strength 50% Limits (V/m)	E-Field Strength Limits (V/m)
		Test Position						
		A	B	C	D	E		
1%	0.029	40.224	40.847	40.074	40.355	40.748	41.5	83.0
50%	0.029	40.748	40.978	40.764	40.125	40.224	41.5	83.0
99%	0.029	40.074	40.387	40.601	40.307	40.224	41.5	83.0

Note: V/m= A/m *377

H-Filed Strength at 15 cm from the edges surrounding the EUT and 15 cm above the top surface

Charging Battery Level	unit	Frequency Range (MHz)	Measured H-Field Strength Values (A/m)					H-Field Strength 50% Limits (A/m)	H-Field Strength Limits (A/m)
			Test Position						
			A	B	C	D	E		
1%	uT	0.029	0.140	0.139	0.203	0.144	0.155	--	--
1%	A/m	0.029	0.112	0.111	0.162	0.115	0.124	45	90
50%	uT	0.029	0.155	0.143	0.165	0.156	0.140	--	--
50%	A/m	0.029	0.124	0.114	0.132	0.125	0.112	45	90
99%	uT	0.029	0.203	0.164	0.141	0.114	0.140	--	--
99%	A/m	0.029	0.162	0.131	0.113	0.091	0.112	45	90

H-Field Strength at 20cm from the top surface of the EUT

Charging Battery Level	Unit	Frequency Range (MHz)	Measured H-Field Strength Values (A/m)	FCC H-Field Strength 50% Limits (A/m)	FCC H-Field Strength Limits (A/m)
			Test Position E		
1%	uT	0.029	0.141	--	--
1%	A/m	0.029	0.113	45	90
50%	uT	0.029	0.151	--	--
50%	A/m	0.029	0.121	45	90
99%	uT	0.029	0.204	--	--
99%	A/m	0.029	0.163	45	90

Note: A/m=uT/1.25

-----END OF REPORT-----