

EUT Specification

FCC ID: 2BCJZ-WP1

Characteristics	Description
Product Name	Wireless watch charge
Model number	WP1
Power Supply	DC 5V/DC 3.7V
Operating Frequency Range	200-350KHz
Modulation Technique	ASK
Antenna Type	Coil Antenna
Device category	<input checked="" type="checkbox"/> Portable (<20cm separation) <input type="checkbox"/> Mobile (>20cm separation) <input type="checkbox"/> Others ____
Antenna diversity	<input checked="" type="checkbox"/> Single antenna <input type="checkbox"/> Multiple antennas <input type="checkbox"/> Tx diversity <input type="checkbox"/> Rx diversity <input type="checkbox"/> Tx/Rx diversity
Evaluation applied	<input checked="" type="checkbox"/> MPE Evaluation <input type="checkbox"/> SAR Evaluation

Applicable Standard:

FCC Part 1(1.1310) ,Part 2(2.1093) and KDB 680106 D01 RF Exposure
Wireless Charging Apps v03

Applicable Requirement:

Three different categories of transmitters are defined by the FCC in OET Bulletin 65.

These categories are fixed installation, mobile, and portable and are defined as follows:

Fixed Installations: fixed location means that the device, including its antenna, is physically secured at a permanent location and is not able to be

easily moved to another location. Additionally, distance to humans from the antenna is maintained to at least 2 meters.

Mobile Devices: a mobile device is defined as a transmitting device designed to be used in other than fixed locations and to be generally used in such a way that a separation distance of at least 20 centimeters is normally maintained between the transmitter's radiating structures and the body of the user or nearby persons. Transmitters designed to be used by consumers or workers that can be easily re-located, such as a wireless modem operating in a laptop computer, are considered mobile devices if they meet the 20 centimeter separation requirement. The FCC rules for evaluating mobile devices for RF compliance are found in 47 CFR §2.1091.

Portable Devices: a portable device is defined as a transmitting device designed to be used so that the radiating structure(s) of the device is/are within 20 centimeters of the body of the user. Portable device requirements are found in Section 2.1093 of the FCC's Rules (47 CFR§2.1093).

The FCC also categorizes the use of the device as based upon the user's awareness and ability to exercise control over his or her exposure. The two categories defined are Occupational/ Controlled Exposure and General Population/Uncontrolled Exposure.

These two categories are defined as follows:

Occupational/controlled exposure limits apply in situations in which persons are exposed as a consequence of their employment provided those persons are fully aware of the potential for exposure and can exercise control over their exposure. Limits for occupational/controlled exposure also apply in situations when a person is transient through a location where occupational/controlled limits apply provided he or she is made aware of the potential for exposure. The phrase fully aware in the context of applying these exposure limits means that an exposed person has received written and/or verbal information fully explaining the potential for RF exposure resulting from his or her employment. With the exception of transient persons, this phrase also means that an exposed person has received appropriate training regarding work practices relating to controlling or mitigating his or her exposure. Such training is not required for transient persons, but they must receive written and/or verbal information and notification (for example, using signs) concerning their exposure potential and appropriate means available to mitigate their exposure. The phrase exercise control means that an exposed person is allowed to and knows how to reduce or avoid exposure by administrative or engineering controls and work practices, such as use of personal protective equipment or time averaging of exposure.

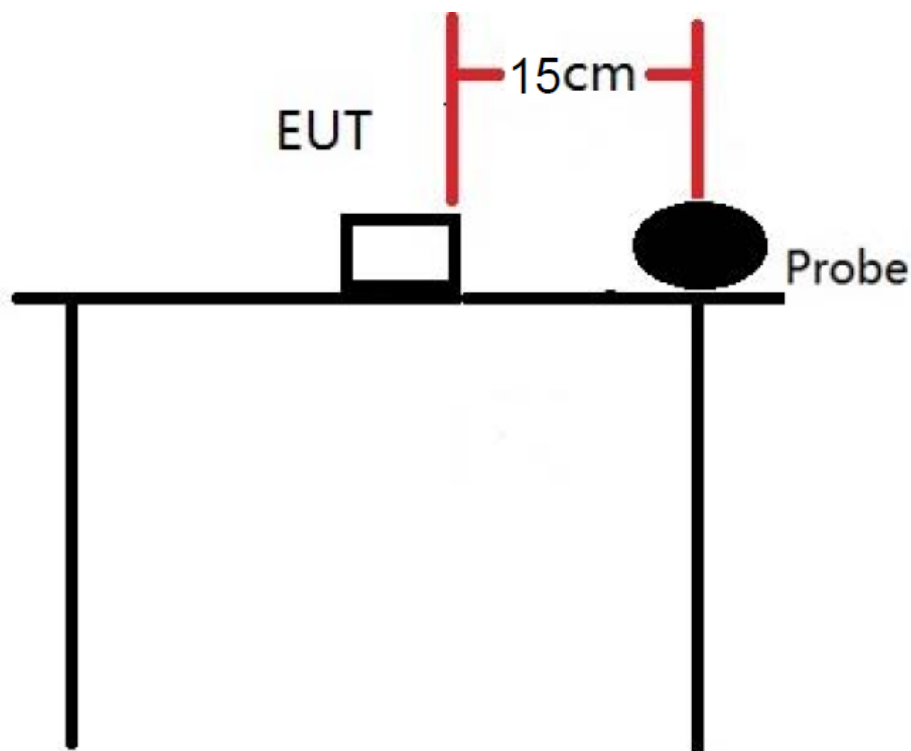
General population/uncontrolled exposure limits apply in situations in which the general public may be exposed, or in which persons who are exposed as a consequence of their employment may not be fully aware of the potential for exposure or cannot exercise control over their exposure.

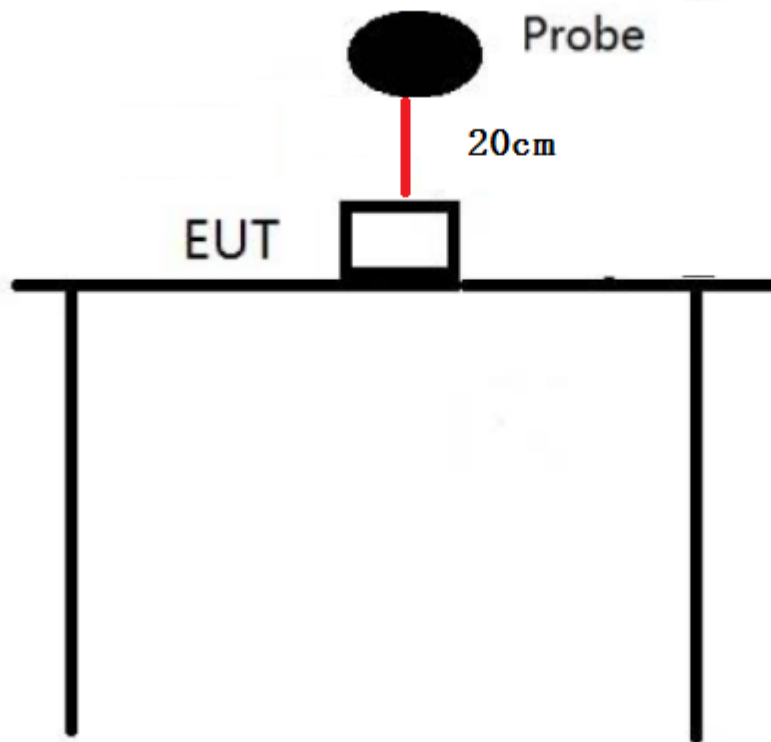
Licensees and applicants are responsible for compliance with both the

occupational/controlled exposure limits and the general population/uncontrolled exposure limits as they apply to transmitters under their jurisdiction. Licensees and applicants should be aware that the occupational/controlled exposure limits apply especially in situations where workers may have access to areas in very close proximity to antennas and access to the general public may be restricted.

In lieu of evaluation with the general population/uncontrolled exposure limits, amateur licensees authorized under part 97 of this chapter and members of his or her immediate household may be evaluated with respect to the occupational/controlled exposure limits in this section, provided appropriate training and information has been provided to the amateur licensee and members of his/her household. Other nearby persons who are not members of the amateur licensee's household must be evaluated with respect to the general population/uncontrolled exposure limits.

Test Setup Block





Test Procedure

1. Connect the EUT and equipment as above diagram of test configuration.
2. EUT was placed on a table, and the measure probe was placed at a measurement distance of 15cm from the EUT to the center of the probe.
3. Power on the measuring probe, the EUT was set at the maximum field strength emission state.
4. The EUT was put in different directions (Left, Right, Front, Rear, Top and Bottom) toward to the measure probe. The distance from the top of the EUT to the probe is 20CM, and the distance from other directions is 15cm. Measure the value of field strength.
5. Record the worst data of the different directions.

Measuring Device And Test Equipment

Used	Equipment	Manufacturer	Model No.	Serial No.	Last Cal.	Cal. Interval
<input checked="" type="checkbox"/>	E&H-Field Probe(9kHz-30M Hz)	Narda	EHP-200A	180ZX11012	Oct. 28, 2023	1 Year

Description of Support Device

Watch : Manufacturer: Apple Inc.
M/N: A1859
S/N: N/A

Adapter : Model number:580245A087
Input: AC 100-240V, 50/60Hz

Limits for Maximum Permissible Exposure(MPE)

Frequency Range(MHz)	Electric Field Strength(V/m)	Magnetic Field Strength(A/m)	Power Density(mW/cm ²)	Average Time
(A) Limits for Occupational/Control Exposures				
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
1500-100000	--	--	5	6
(B) Limits for General Population/Uncontrol Exposures				
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
1500-100000	--	--	1	30

Note: f denotes for frequency in MHz.

* denotes for plane-wave equivalent power density.

Measurement Result

The data of Probe's X,Y and Z axes were tested respectively, and only the worst data recorded in the report.

Magnetic Field (H-Field) strength at 0cm from the boundaries of EUT.

Test Mode: Wireless Charging 2.5W						
		Measuring Distance(cm)	H-Field(A/m)	50% H-Field(A/m)	Limit(A/m)	50% Limit(A/m)
Measurement Point 1	Front	0	0.0212	0.0106	1.63	0.815
Measurement Point 2	Back	0	0.0164	0.0082		
Measurement Point 3	Left	0	0.0176	0.0088		
Measurement Point 4	Right	0	0.0183	0.0091		
Measurement Point 5	Bottom	0	0.0204	0.0102		
Measurement Point 6	Top	0	0.0356	0.0178		

Test Mode: Wireless Charging 2.5W						
		Measuring Distance(cm)	E-Field(V/m)	50% E-Field(V/m)	Limit(V/m)	50% Limit(V/m)
Measurement Point 1	Front	0	12.978	6.489	614	307
Measurement Point 2	Back	0	13.743	6.871		
Measurement Point 3	Left	0	12.886	6.443		
Measurement Point 4	Right	0	12.968	6.484		
Measurement Point 5	Bottom	0	13.523	6.761		
Measurement Point 6	Top	0	15.664	7.832		

Magnetic Field (H-Field) strength at 2cm from the boundaries of EUT.

Test Mode: Wireless Charging 2.5W						
		Measuring Distance(cm)	H-Field(A/m)	50% H-Field(A/m)	Limit(A/m)	50% Limit(A/m)
Measurement Point 1	Front	2	0.0197	0.0098	1.63	0.815
Measurement Point 2	Back	2	0.0158	0.0079		
Measurement Point 3	Left	2	0.0166	0.0083		
Measurement Point 4	Right	2	0.0176	0.0088		
Measurement Point 5	Bottom	2	0.0194	0.0097		
Measurement Point 6	Top	2	0.0326	0.0163		

Test Mode: Wireless Charging 2.5W						
		Measuring Distance(cm)	E-Field(V/m)	50% E-Field(V/m)	Limit(V/m)	50% Limit(V/m)
Measurement Point 1	Front	2	12.784	6.392	614	307
Measurement Point 2	Back	2	13.547	6.773		
Measurement Point 3	Left	2	12.746	6.373		
Measurement Point 4	Right	2	12.884	6.442		
Measurement Point 5	Bottom	2	13.246	6.623		
Measurement Point 6	Top	2	15.342	7.671		

Magnetic Field (H-Field) strength at 4cm from the boundaries of EUT.

Test Mode: Wireless Charging 2.5W						
		Measuring Distance(cm)	H-Field(A/m)	50% H-Field(A/m)	Limit(A/m)	50% Limit(A/m)
Measurement Point 1	Front	4	0.0182	0.0091	1.63	0.815
Measurement Point 2	Back	4	0.0146	0.0073		
Measurement Point 3	Left	4	0.0158	0.0079		
Measurement Point 4	Right	4	0.0162	0.0081		
Measurement Point 5	Bottom	4	0.0182	0.0091		
Measurement Point 6	Top	4	0.0293	0.0146		

Test Mode: Wireless Charging 2.5W						
		Measuring Distance(cm)	E-Field(V/m)	50% E-Field(V/m)	Limit(V/m)	50% Limit(V/m)
Measurement Point 1	Front	4	12.568	6.284	614	307
Measurement Point 2	Back	4	13.248	6.624		
Measurement Point 3	Left	4	12.524	6.262		
Measurement Point 4	Right	4	12.684	6.342		
Measurement Point 5	Bottom	4	12.976	6.488		
Measurement Point 6	Top	4	14.892	7.446		

Magnetic Field (H-Field) strength at 6cm from the boundaries of EUT.

Test Mode: Wireless Charging 2.5W						
		Measuring Distance(cm)	H-Field(A/m)	50% H-Field(A/m)	Limit(A/m)	50% Limit(A/m)
Measurement Point 1	Front	6	0.0168	0.0084	1.63	0.815
Measurement Point 2	Back	6	0.0134	0.0067		
Measurement Point 3	Left	6	0.0142	0.0071		
Measurement Point 4	Right	6	0.0149	0.0074		
Measurement Point 5	Bottom	6	0.0175	0.0087		
Measurement Point 6	Top	6	0.0264	0.0132		

Test Mode: Wireless Charging 2.5W						
		Measuring Distance(cm)	E-Field(V/m)	50% E-Field(V/m)	Limit(V/m)	50% Limit(V/m)
Measurement Point 1	Front	6	12.326	6.163	614	307
Measurement Point 2	Back	6	12.986	6.493		
Measurement Point 3	Left	6	12.224	6.112		
Measurement Point 4	Right	6	12.526	6.263		
Measurement Point 5	Bottom	6	12.726	6.363		
Measurement Point 6	Top	6	14.668	7.334		

Magnetic Field (H-Field) strength at 8cm from the boundaries of EUT.

Test Mode: Wireless Charging 2.5W						
		Measuring Distance(cm)	H-Field(A/m)	50% H-Field(A/m)	Limit(A/m)	50% Limit(A/m)
Measurement Point 1	Front	8	0.0152	0.0076	1.63	0.815
Measurement Point 2	Back	8	0.0126	0.0063		
Measurement Point 3	Left	8	0.0132	0.0066		
Measurement Point 4	Right	8	0.0143	0.0071		
Measurement Point 5	Bottom	8	0.0168	0.0084		
Measurement Point 6	Top	8	0.0246	0.0123		

Test Mode: Wireless Charging 2.5W						
		Measuring Distance(cm)	E-Field(V/m)	50% E-Field(V/m)	Limit(V/m)	50% Limit(V/m)
Measurement Point 1	Front	8	12.124	6.062	614	307
Measurement Point 2	Back	8	12.872	6.436		
Measurement Point 3	Left	8	11.986	5.993		
Measurement Point 4	Right	8	12.346	6.173		
Measurement Point 5	Bottom	8	12.658	6.329		
Measurement Point 6	Top	8	14.452	7.226		

Magnetic Field (H-Field) strength at 10cm from the boundaries of EUT.

Test Mode: Wireless Charging 2.5W						
		Measuring Distance(cm)	H-Field(A/m)	50% H-Field(A/m)	Limit(A/m)	50% Limit(A/m)
Measurement Point 1	Front	10	0.0134	0.0067	1.63	0.815
Measurement Point 2	Back	10	0.0114	0.0057		
Measurement Point 3	Left	10	0.0128	0.0064		
Measurement Point 4	Right	10	0.0132	0.0066		
Measurement Point 5	Bottom	10	0.0152	0.0076		
Measurement Point 6	Top	10	0.0202	0.0101		

Test Mode: Wireless Charging 2.5W						
		Measuring Distance(cm)	E-Field(V/m)	50% E-Field(V/m)	Limit(V/m)	50% Limit(V/m)
Measurement Point 1	Front	10	11.872	5.936	614	307
Measurement Point 2	Back	10	12.674	6.337		
Measurement Point 3	Left	10	11.788	5.894		
Measurement Point 4	Right	10	11.998	5.999		
Measurement Point 5	Bottom	10	12.423	6.211		
Measurement Point 6	Top	10	14.116	7.058		

Magnetic Field (H-Field) strength at 12cm from the boundaries of EUT.

Test Mode: Wireless Charging 2.5W						
		Measuring Distance(cm)	H-Field(A/m)	50% H-Field(A/m)	Limit(A/m)	50% Limit(A/m)
Measurement Point 1	Front	12	0.0124	0.0062	1.63	0.815
Measurement Point 2	Back	12	0.0108	0.0054		
Measurement Point 3	Left	12	0.0118	0.0059		
Measurement Point 4	Right	12	0.0114	0.0057		
Measurement Point 5	Bottom	12	0.0134	0.0067		
Measurement Point 6	Top	12	0.0183	0.0091		

Test Mode: Wireless Charging 2.5W						
		Measuring Distance(cm)	E-Field(V/m)	50% E-Field(V/m)	Limit(V/m)	50% Limit(V/m)
Measurement Point 1	Front	12	11.547	5.773	614	307
Measurement Point 2	Back	12	12.582	6.291		
Measurement Point 3	Left	12	11.653	5.826		
Measurement Point 4	Right	12	11.874	5.937		
Measurement Point 5	Bottom	12	12.212	6.106		
Measurement Point 6	Top	12	13.884	6.942		

Magnetic Field (H-Field) strength at 14cm from the boundaries of EUT.

Test Mode: Wireless Charging 2.5W						
		Measuring Distance(cm)	H-Field(A/m)	50% H-Field(A/m)	Limit(A/m)	50% Limit(A/m)
Measurement Point 1	Front	14	0.0106	0.0053	1.63	0.815
Measurement Point 2	Back	14	0.0098	0.0049		
Measurement Point 3	Left	14	0.0112	0.0056		
Measurement Point 4	Right	14	0.0102	0.0051		
Measurement Point 5	Bottom	14	0.0118	0.0059		
Measurement Point 6	Top	14	0.0156	0.0078		

Test Mode: Wireless Charging 2.5W						
		Measuring Distance(cm)	E-Field(V/m)	50% E-Field(V/m)	Limit(V/m)	50% Limit(V/m)
Measurement Point 1	Front	14	11.386	5.693	614	307
Measurement Point 2	Back	14	12.422	6.211		
Measurement Point 3	Left	14	11.438	5.719		
Measurement Point 4	Right	14	11.662	5.831		
Measurement Point 5	Bottom	14	11.984	5.992		
Measurement Point 6	Top	14	13.586	6.793		

Magnetic Field (H-Field) strength at 16cm from the boundaries of EUT.

Test Mode: Wireless Charging 2.5W						
		Measuring Distance(cm)	H-Field(A/m)	50% H-Field(A/m)	Limit(A/m)	50% Limit(A/m)
Measurement Point 1	Front	16	0.0082	0.0041	1.63	0.815
Measurement Point 2	Back	16	0.0074	0.0037		
Measurement Point 3	Left	16	0.0088	0.0044		
Measurement Point 4	Right	16	0.0085	0.0042		
Measurement Point 5	Bottom	16	0.0094	0.0047		
Measurement Point 6	Top	16	0.0148	0.0074		

Test Mode: Wireless Charging 2.5W						
		Measuring Distance(cm)	E-Field(V/m)	50% E-Field(V/m)	Limit(V/m)	50% Limit(V/m)
Measurement Point 1	Front	16	11.234	5.617	614	307
Measurement Point 2	Back	16	11.776	5.888		
Measurement Point 3	Left	16	11.256	5.628		
Measurement Point 4	Right	16	11.462	5.731		
Measurement Point 5	Bottom	16	11.546	5.773		
Measurement Point 6	Top	16	13.246	6.623		

Magnetic Field (H-Field) strength at 18cm from the boundaries of EUT.

Test Mode: Wireless Charging 2.5W						
		Measuring Distance(cm)	H-Field(A/m)	50% H-Field(A/m)	Limit(A/m)	50% Limit(A/m)
Measurement Point 1	Front	18	0.0068	0.0034	1.63	0.815
Measurement Point 2	Back	18	0.0063	0.0031		
Measurement Point 3	Left	18	0.0072	0.0036		
Measurement Point 4	Right	18	0.0069	0.0034		
Measurement Point 5	Bottom	18	0.0078	0.0039		
Measurement Point 6	Top	18	0.0138	0.0069		

Test Mode: Wireless Charging 2.5W						
		Measuring Distance(cm)	E-Field(V/m)	50% E-Field(V/m)	Limit(V/m)	50% Limit(V/m)
Measurement Point 1	Front	18	10.882	5.441	614	307
Measurement Point 2	Back	18	10.986	5.493		
Measurement Point 3	Left	18	10.974	5.487		
Measurement Point 4	Right	18	10.684	5.342		
Measurement Point 5	Bottom	18	10.892	5.446		
Measurement Point 6	Top	18	12.996	6.498		

Magnetic Field (H-Field) strength at 20cm from the boundaries of EUT.

Test Mode: Wireless Charging 2.5W						
		Measuring Distance(cm)	H-Field(A/m)	50% H-Field(A/m)	Limit(A/m)	50% Limit(A/m)
Measurement Point 1	Front	20	0.0056	0.0028	1.63	0.815
Measurement Point 2	Back	20	0.0062	0.0031		
Measurement Point 3	Left	20	0.0058	0.0029		
Measurement Point 4	Right	20	0.0066	0.0033		
Measurement Point 5	Bottom	20	0.0072	0.0036		
Measurement Point 6	Top	20	0.0126	0.0063		

Test Mode: Wireless Charging 2.5W						
		Measuring Distance(cm)	E-Field(V/m)	50% E-Field(V/m)	Limit(V/m)	50% Limit(V/m)
Measurement Point 1	Front	20	10.684	5.342	614	307
Measurement Point 2	Back	20	10.876	5.438		
Measurement Point 3	Left	20	10.774	5.387		
Measurement Point 4	Right	20	10.562	5.281		
Measurement Point 5	Bottom	20	10.652	5.326		
Measurement Point 6	Top	20	12.708	6.354		

PHOTOGRAPHS OF TEST SETUP



Signature

Shawn Wen

Shawn Wen
General Manager
Date: 2023-10-08