

# **EUT Specification**

# FCC ID: 2A45H303-0079

Characteristics	Description
Product Name	Wireless Charging Stand
Model number	303-0079
Power Supply	AC120V/60Hz for adapter
Operating Frequency Range	110-205KHz
Modulation Technique	ASK
Antenna Type	Induction coil
Device category	☐Portable (<20cm separation) ☐Mobile (>20cm separation) ☐Others
Exposure classification	☐ Occupational/Controlled exposure (S = 5mW/cm2) ☐ General Population/Uncontrolled exposure (S=1mW/cm2)
Antenna diversity	Single antenna  ☐Multiple antennas  ☐Tx diversity  ☐Rx diversity  ☐Tx/Rx diversity
Evaluation applied	

### **Applicable Standard:**

FCC Part 1(1.1310) ,Part 2(2.1091) 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:

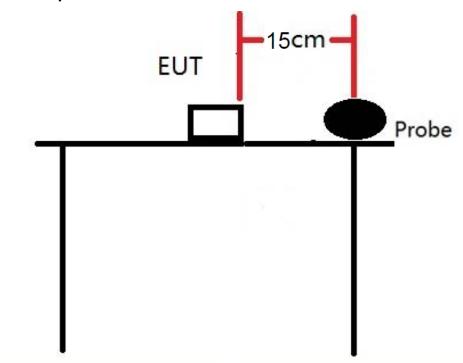
Occupational/controlled exposure limits apply in situations in which persons are exposed as a consequence of their employment provided those persons are fully aware of the potential for exposure and can exercise control over their exposure. Limits for occupational/controlled exposure also apply in situations 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



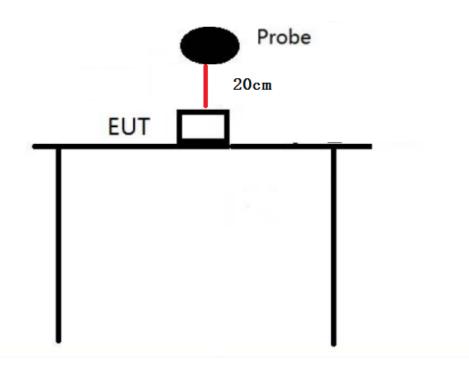
potential for exposure or cannot exercise control over their exposure. Licensees and applicants are responsible for compliance with both the occupational/controlled exposure limits and the general population/uncontrolled exposure limits as they apply to transmitters under their jurisdiction. Licensees 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
	E-Field					
$\checkmark$	Probe(9kHz-30M	Narda	EHP-200A	180ZX11012	2022.01.19	1 Year
	Hz)					



### **Description of Support Device**

adapter Model number: PD23U-1TNA

: Input: AC 100-240V, 50/60Hz, 0.8A Max

Output: DC 5V/3A, DC 9V/2.5A

iPhone Manufacturer: Apple Inc.

: M/N: A1524

S/N: N/A

Wireless Charger Receiver

Manufacturer: Universal

Module : M/N: N/A

S/N: N/A

Manufacturer: SAMSUNG

SAMSUNG S9 : M/N:Samsung Galaxy S9

S/N: N/A



# **Limits for Maximum Permissible Exposure(MPE)**

Frequency	Electric Field	Magnetic Field	Power	Average
Range(MHz)	Strength(V/m)	Strength(A/m)	Density(mW/cm <sup>2</sup> )	Time
	(A) Limits for C	occupational/Cont	trol 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 Gene	ral Population/Un	control 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	300-1500		F/1500	30
1500-100000			1	30

Note: f denotes for frequency in MHz.

### **Measurement Result**

We pretested four modes (max load, mid load, min load, Standby) for EUT. The worst mode (max load) and worst test frequency(frequency: 147.5KHz)test data see the following.

<sup>\*</sup> denotes for plane-wave equivalent power density.



Calculated Electric Field (E-Field) strength at 15cm from the boundaries of the EUT, and 20cm from the top.

Test Mode: Wireless Charging 15w for 1% battery								
		Measuring Distance(cm)	H- Field( A/m)	50% H- Field(A/ m)	Limit(A /m)	50% Limit(A/m)		
Measurement Point 1	Front	15	0.185	0.0925				
Measurement Point 2	Back	15	0.182	0.091				
Measurement Point 3	Left	15	0.186	0.093	4.00	0.045		
Measurement Point 4	Right	15	0.179	0.0895	1.63	0.815		
Measurement Point 5	Bottom	15	0.150	0.075				
Measurement Point 6	Тор	20	0.251	0.1255				

Test Mode: Wireless Charging 15w for 1% battery								
		Measuring Distance(cm)	E- Field(V/ m)	50% E- Field(V/ m)	Limit(V/ m)	50% Limit(V/m)		
Measurement Point 1	Front	15	119.215	59.6075				
Measurement Point 2	Back	15	120.369	60.1845				
Measurement Point 3	Left	15	121.471	60.7355	614	207		
Measurement Point 4	Right	15	121.321	60.6605	614	307		
Measurement Point 5	Bottom	15	113.527	56.7635				
Measurement Point 6	Тор	20	129.635	64.8175				

Test Mode: Wireless Charging 15w for 50% battery								
		Measuring Distance(cm)	H- Field( A/m)	50% H- Field(A/ m)	Limit(A /m)	50% Limit(A/m)		
Measurement Point 1	Front	15	0.173	0.0865				
Measurement Point 2	Back	15	0.174	0.087				
Measurement Point 3	Left	15	0.176	0.088	4.00	0.045		
Measurement Point 4	Right	15	0.168	0.084	1.63	0.815		
Measurement Point 5	Bottom	15	0.145	0.0725				
Measurement Point 6	Тор	20	0.239	0.1195				



Test Mode: Wireless Charging 15w for 50% battery								
		Measuring Distance(cm)	E- Field(V/ m)	50% E- Field(V/ m)	Limit(V/ m)	50% Limit(V/m)		
Measurement Point 1	Front	15	118.474	59.237				
Measurement Point 2	Back	15	118.251	59.1255				
Measurement Point 3	Left	15	118.696	59.348	614	307		
Measurement Point 4	Right	15	117.458	58.729	014	307		
Measurement Point 5	Bottom	15	112.693	56.3465				
Measurement Point 6	Тор	20	128.254	64.127				

Test Mode: Wireless Charging 15w for 100% battery								
		Measuring Distance(cm)	H- Field( A/m)	50% H- Field(A/ m)	Limit(A /m)	50% Limit(A/m)		
Measurement Point 1	Front	15	0.160	0.08				
Measurement Point 2	Back	15	0.161	0.0805				
Measurement Point 3	Left	15	0.162	0.081	4.60	0.045		
Measurement Point 4	Right	15	0.145	0.0725	1.63	0.815		
Measurement Point 5	Bottom	15	0.123	0.0615				
Measurement Point 6	Тор	20	0.214	0.107				

Test Mode: Wireless Charging 15w for 100% battery								
		Measuring Distance(cm)	E- Field(V/ m)	50% E- Field(V/ m)	Limit(V/ m)	50% Limit(V/m)		
Measurement Point 1	Front	15	106.415	53.2075				
Measurement Point 2	Back	15	106.816	53.408				
Measurement Point 3	Left	15	109.632	54.816	614	307		
Measurement Point 4	Right	15	109.784	54.892	614	307		
Measurement Point 5	Bottom	15	93.574	46.787				
Measurement Point 6	Тор	20	111.685	55.8425				



Test Mode: Wireless Charging 10w for 1% battery								
		Measuring Distance(cm)	H- Field( A/m)	50% H- Field(A/ m)	Limit(A /m)	50% Limit(A/m)		
Measurement Point 1	Front	15	0.173	0.0865				
Measurement Point 2	Back	15	0.170	0.0850				
Measurement Point 3	Left	15	0.180	0.0900	4.00	0.045		
Measurement Point 4	Right	15	0.154	0.0770	1.63	0.815		
Measurement Point 5	Bottom	15	0.142	0.0710				
Measurement Point 6	Тор	20	0.230	0.1150				

Test Mode: Wireless Charging 10w for 1% battery								
		Measuring Distance(cm)	E- Field(V/ m)	50% E- Field(V/ m)	Limit(V/ m)	50% Limit(V/m)		
Measurement Point 1	Front	15	117.125	58.5625				
Measurement Point 2	Back	15	116.986	58.4930				
Measurement Point 3	Left	15	117.023	58.5115	614	207		
Measurement Point 4	Right	15	114.025	57.0125	614	307		
Measurement Point 5	Bottom	15	111.114	55.5570				
Measurement Point 6	Тор	20	124.269	62.1345				

Test Mode: Wireless Charging 10w for 50% battery								
		Measuring Distance(cm)	H- Field( A/m)	50% H- Field(A/ m)	Limit(A /m)	50% Limit(A/m)		
Measurement Point 1	Front	15	0.169	0.0845				
Measurement Point 2	Back	15	0.168	0.084				
Measurement Point 3	Left	15	0.178	0.089	4.60	0.045		
Measurement Point 4	Right	15	0.151	0.0755	1.63	0.815		
Measurement Point 5	Bottom	15	0.140	0.07				
Measurement Point 6	Тор	20	0.228	0.114				



Test Mode: Wireless Charging 10w for 50% battery								
		Measuring Distance(cm)	E- Field(V/ m)	50% E- Field(V/ m)	Limit(V/ m)	50% Limit(V/m)		
Measurement Point 1	Front	15	116.854	58.427				
Measurement Point 2	Back	15	115.369	57.6845				
Measurement Point 3	Left	15	116.941	58.4705	614	207		
Measurement Point 4	Right	15	113.568	56.784	614	307		
Measurement Point 5	Bottom	15	110.694	55.347				
Measurement Point 6	Тор	20	124.125	62.0625				

Test Mode: Wireless Charging 10w for 100% battery							
		Measuring Distance(cm)	H- Field( A/m)	50% H- Field(A/ m)	Limit(A /m)	50% Limit(A/m)	
Measurement Point 1	Front	15	0.156	0.078			
Measurement Point 2	Back	15	0.158	0.079			
Measurement Point 3	Left	15	0.165	0.0825	4.60	0.045	
Measurement Point 4	Right	15	0.135	0.0675	1.63	0.815	
Measurement Point 5	Bottom	15	0.120	0.06			
Measurement Point 6	Тор	20	0.204	0.102			

Test Mode: Wireless Charging 10w for 100% battery							
		Measuring Distance(cm)	E- Field(V/ m)	50% E- Field(V/ m)	Limit(V/ m)	50% Limit(V/m)	
Measurement Point 1	Front	15	105.324	52.662			
Measurement Point 2	Back	15	107.365	53.6825			
Measurement Point 3	Left	15	108.547	54.2735	614	307	
Measurement Point 4	Right	15	109.654	54.827	014	307	
Measurement Point 5	Bottom	15	92.587	46.2935			
Measurement Point 6	Тор	20	110.650	55.325			



Test Mode: Wireless Charging 7.5w for 1% battery							
		Measuring Distance(cm)	H- Field( A/m)	50% H- Field(A/ m)	Limit(A /m)	50% Limit(A/m)	
Measurement Point 1	Front	15	0.153	0.0765			
Measurement Point 2	Back	15	0.156	0.078			
Measurement Point 3	Left	15	0.154	0.077	4.00	0.045	
Measurement Point 4	Right	15	0.148	0.074	1.63	0.815	
Measurement Point 5	Bottom	15	0.126	0.063			
Measurement Point 6	Тор	20	0.201	0.1005			

Test Mode: Wireless Charging 7.5w for 1% battery							
		Measuring Distance(cm)	E- Field(V/ m)	50% E- Field(V/ m)	Limit(V/ m)	50% Limit(V/m)	
Measurement Point 1	Front	15	104.254	52.127			
Measurement Point 2	Back	15	106.582	53.291			
Measurement Point 3	Left	15	107.140	53.57	614	207	
Measurement Point 4	Right	15	108.256	54.128	014	307	
Measurement Point 5	Bottom	15	93.741	46.8705			
Measurement Point 6	Тор	20	112.364	56.182			

Test Mode: Wireless Charging 7.5w for 50% battery							
		Measuring Distance(cm)	H- Field( A/m)	50% H- Field(A/ m)	Limit(A /m)	50% Limit(A/m)	
Measurement Point 1	Front	15	0.148	0.074			
Measurement Point 2	Back	15	0.144	0.072			
Measurement Point 3	Left	15	0.146	0.073	4.00	0.045	
Measurement Point 4	Right	15	0.149	0.0745	1.63	0.815	
Measurement Point 5	Bottom	15	0.120	0.06			
Measurement Point 6	Тор	20	0.191	0.0955			



Test Mode: Wireless Charging 7.5w for 50% battery								
		Measuring Distance(cm)	E- Field(V/ m)	50% E- Field(V/ m)	Limit(V/ m)	50% Limit(V/m)		
Measurement Point 1	Front	15	103.540	51.77				
Measurement Point 2	Back	15	105.148	52.574				
Measurement Point 3	Left	15	105.690	52.845	614	307		
Measurement Point 4	Right	15	106.203	53.1015	014	307		
Measurement Point 5	Bottom	15	93.034	46.517				
Measurement Point 6	Тор	20	109.634	54.817				

Test Mode: Wireless Charging 7.5w for 100% battery							
		Measuring Distance(cm)	H- Field( A/m)	50% H- Field(A/ m)	Limit(A /m)	50% Limit(A/m)	
Measurement Point 1	Front	15	0.148	0.074			
Measurement Point 2	Back	15	0.144	0.072			
Measurement Point 3	Left	15	0.142	0.071	4.60	0.045	
Measurement Point 4	Right	15	0.131	0.0655	1.63	0.815	
Measurement Point 5	Bottom	15	0.115	0.0575			
Measurement Point 6	Тор	20	0.196	0.098			

Test Mode: Wireless Charging 7.5w for 100% battery							
		Measuring Distance(cm)	E- Field(V/ m)	50% E- Field(V/ m)	Limit(V/ m)	50% Limit(V/m)	
Measurement Point 1	Front	15	103.204	51.602			
Measurement Point 2	Back	15	102.145	51.0725			
Measurement Point 3	Left	15	102.527	51.2635	614	207	
Measurement Point 4	Right	15	104.126	52.063	614	307	
Measurement Point 5	Bottom	15	91.050	45.525			
Measurement Point 6	Тор	20	108.442	54.221			



Test Mode: Wireless Charging 5w for 1% battery							
		Measuring Distance(cm)	H- Field( A/m)	50% H- Field(A/ m)	Limit(A /m)	50% Limit(A/m)	
Measurement Point 1	Front	15	0.154	0.077			
Measurement Point 2	Back	15	0.157	0.079			
Measurement Point 3	Left	15	0.155	0.078	4.00	0.045	
Measurement Point 4	Right	15	0.150	0.075	1.63	0.815	
Measurement Point 5	Bottom	15	0.127	0.064			
Measurement Point 6	Тор	20	0.203	0.102			

Test Mode: Wireless Charging 5w for 1% battery							
		Measuring Distance(cm)	E- Field(V/ m)	50% E- Field(V/ m)	Limit(V/ m)	50% Limit(V/m)	
Measurement Point 1	Front	15	104.252	52.126			
Measurement Point 2	Back	15	106.564	53.282			
Measurement Point 3	Left	15	107.138	53.569	614	207	
Measurement Point 4	Right	15	108.252	54.126	614	307	
Measurement Point 5	Bottom	15	93.738	46.869			
Measurement Point 6	Тор	20	112.357	56.179			

Test Mode: Wireless Charging 5w for 50% battery							
		Measuring Distance(cm)	H- Field( A/m)	50% H- Field(A/ m)	Limit(A /m)	50% Limit(A/m)	
Measurement Point 1	Front	15	0.146	0.073			
Measurement Point 2	Back	15	0.142	0.071			
Measurement Point 3	Left	15	0.144	0.072	4.60	0.045	
Measurement Point 4	Right	15	0.147	0.074	1.63	0.815	
Measurement Point 5	Bottom	15	0.122	0.061			
Measurement Point 6	Тор	20	0.187	0.094			



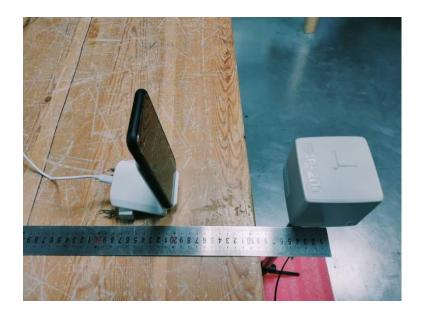
Test Mode: Wireless Charging 5w for 50% battery						
		Measuring Distance(cm)	E- Field(V/ m)	50% E- Field(V/ m)	Limit(V/ m)	50% Limit(V/m)
Measurement Point 1	Front	15	103.538	51.769		
Measurement Point 2	Back	15	105.146	52.573		
Measurement Point 3	Left	15	105.677	52.839	614	307
Measurement Point 4	Right	15	106.204	53.102	014	307
Measurement Point 5	Bottom	15	93.031	46.516		
Measurement Point 6	Тор	20	109.632	54.816		

Test Mode: Wireless Charging 5w for 100% battery						
		Measuring Distance(cm)	H- Field( A/m)	50% H- Field(A/ m)	Limit(A /m)	50% Limit(A/m)
Measurement Point 1	Front	15	0.146	0.073		
Measurement Point 2	Back	15	0.143	0.072	4.00	0.045
Measurement Point 3	Left	15	0.140	0.070		
Measurement Point 4	Right	15	0.132	0.066	1.63	0.815
Measurement Point 5	Bottom	15	0.112	0.056		
Measurement Point 6	Тор	20	0.197	0.099		

Test Mode: Wireless Charging 5w for 100% battery						
		Measuring Distance(cm)	E- Field(V/ m)	50% E- Field(V/ m)	Limit(V/ m)	50% Limit(V/m)
Measurement Point 1	Front	15	103.201	51.601		
Measurement Point 2	Back	15	102.142	51.071	614	307
Measurement Point 3	Left	15	102.525	51.263		
Measurement Point 4	Right	15	104.125	52.063	014	307
Measurement Point 5	Bottom	15	91.048	45.524		
Measurement Point 6	Тор	20	108.443	54.222		



# PHOTOGRAPHS OFTEST SETUP



Signature

Alan He Manager

Date: 2022-03-01

Mon. He