

EUT Specification

FCC ID: 2AVNTSOG-BAL-DOT

Characteristics	Description
Product Name	Fast wireless car mount
Model number	SOG_WIRE_BAL_BK_DOT
Power Supply	AC120V/60Hz for car charger
Operating Frequency Range	110-205KHz
Modulation Technique	ASK
Antenna Type	Induction coil
Device category	 ☑Portable (<20cm separation) ☑Mobile (>20cm separation) ☑Others
Exposure classification	$\begin{tabular}{lllllllllllllllllllllllllllllllllll$
Antenna diversity	 Single antenna Multiple antennas Tx diversity Rx diversity Tx/Rx diversity
Evaluation applied	MPE Evaluation □SAR Evaluation

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 Procedure

1.EUT was placed on a table, and the measure probe was placed at a measurement distance of 0~10cm from the EUT to the center of the probe. 2.Power on the measuring probe, the EUT was set at the maximum field strength emission state.

3.The EUT was put in different directions (Left, Right, Front, Rear, Top and Bottom) toward to the measure probe.The distance from the EUT to the probe starts from 0cm, and measures every 2cm until the distance is 10cm. 4.Record the worst data of the different directions.

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Used	Equipment	Manufacturer	Model No.	Serial No.	Last Cal.	Cal. Interval
V	E-Field Probe(100kHz-3 GHz)	Narda	EP 601	611WX70311	November 15, 2020	1 Year
V	H-Field Probe(300KHz-3 0MHz)	Narda	ELT-400	M-0174	August 03, 2020	1 Year
V	Broadband Field Meter	Narda	ELT-400	M-0173	August 03, 2020	1 Year

Measuring Device And Test Equipment

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Description of Support D	evic	ce de la constante de la consta
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
car charger	:	Model number: DT-CC45
		Input: DC 12V
		Output: DC 5V/3A, 9V/2A, 12V/1.5A
	:	Manufacturer: SAMSUNG
SAMSUNG S9		M/N:Samsung Galaxy S9
		S/N: N/A
	:	Manufacturer: Xiaomi
Xiaomi 9		M/N:Xiaomi 9
		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 ²)	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 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			F/1500	30					
1500-100000			1	30					

Note: f denotes for frequency in MHz.

* denotes for plane-wave equivalent power density.

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: 179KHz)test data see the following.



Test Mode: Wireless Charging 5W use iphone							
		Measuring Distance(cm)	H- Field(A/m)	Limit(A/ m)	10% Limit(A/m)		
Measurement Point 1	Front	0	0.147		0.163		
Measurement Point 2	Back	0	0.145				
Measurement Point 3	Left	0	0.148	1.60			
Measurement Point 4	Right	0	0.144	1.63			
Measurement Point 5	Bottom	0	0.128				
Measurement Point 6	Тор	0	0.149				

Test Mode: Wireless Charging 5W use iphone							
		Measuring	E- Field(V/m)	Limit(V/	10%		
		Distance(cm)		m)	Limit(V/m)		
Measurement Point 1	Front	0	45.233		61.4		
Measurement Point 2	Back	0	45.242				
Measurement Point 3	Left	0	45.315	614			
Measurement Point 4	Right	0	46.762	- 614 - -			
Measurement Point 5	Bottom	0	42.375				
Measurement Point 6	Тор	0	48.641				

Test Mode: Wireless Charging 5W use iphone							
		Measuring	H- Field(A/m)	Limit(A/	50%		
		Distance(cm)		m)	Limit(A/m)		
Measurement Point 1	Front	2	0.137		0.400		
Measurement Point 2	Back	2	0.142				
Measurement Point 3	Left	2	0.138	1.62			
Measurement Point 4	Right	2	0.141	1.63	0.163		
Measurement Point 5	Bottom	2	0.122				
Measurement Point 6	Тор	2	0.147				



Test Mode: Wireless Charging 5W use iphone							
		Measuring	E- Field(V/m)	Limit(V/	10%		
		Distance(cm)		m)	Limit(V/m)		
Measurement Point 1	Front	2	42.053		61.4		
Measurement Point 2	Back	2	41.962				
Measurement Point 3	Left	2	41.974	614			
Measurement Point 4	Right	2	41.437	- 614 -			
Measurement Point 5	Bottom	2	39.621				
Measurement Point 6	Тор	2	45.327				

Test Mode: Wireless Charging 5W use iphone							
		Measuring	H- Field(A/m)	Limit(A/	50%		
		Distance(cm)		m)	Limit(A/m)		
Measurement Point 1	Front	4	0.136	1.63	0.163		
Measurement Point 2	Back	4	0.127				
Measurement Point 3	Left	4	0.131				
Measurement Point 4	Right	4	0.122				
Measurement Point 5	Bottom	4	0.129				
Measurement Point 6	Тор	4	0.135				

Test Mode: Wireless Charging 5W use iphone							
		Measuring	E- Field(V/m)	Limit(V/	10%		
		Distance(cm)		m)	Limit(V/m)		
Measurement Point 1	Front	4	40.341	-	61.4		
Measurement Point 2	Back	4	39.526				
Measurement Point 3	Left	4	39.652	614			
Measurement Point 4	Right	4	39.617	- 614 - -			
Measurement Point 5	Bottom	4	37.545				
Measurement Point 6	Тор	4	41.262				



Test Mode: Wireless Charging 5W use iphone							
		Measuring	H- Field(A/m)	Limit(A/	50%		
		Distance(cm)		m)	Limit(A/m)		
Measurement Point 1	Front	6	0.127		0.163		
Measurement Point 2	Back	6	0.123				
Measurement Point 3	Left	6	0.125	1.62			
Measurement Point 4	Right	6	0.124	1.63			
Measurement Point 5	Bottom	6	0.117				
Measurement Point 6	Тор	6	0.132				

Test Mode: Wireless Charging 5W use iphone							
		Measuring	E- Field(V/m)	Limit(V/	10%		
		Distance(cm)		m)	Limit(V/m)		
Measurement Point 1	Front	6	38.212	614	61.4		
Measurement Point 2	Back	6	38.223				
Measurement Point 3	Left	6	38.238				
Measurement Point 4	Right	6	38.754				
Measurement Point 5	Bottom	6	36.576				
Measurement Point 6	Тор	6	40.024				

Test Mode: Wireless Charging 5W use iphone								
		Measuring		Limit(A/	50%			
		Distance(cm)		m)	Limit(A/m)			
Measurement Point 1	Front	8	0.121		0.163			
Measurement Point 2	Back	8	0.115					
Measurement Point 3	Left	8	0.117	1.63				
Measurement Point 4	Right	8	0.113	1.00				
Measurement Point 5	Bottom	8	0.097	-				
Measurement Point 6	Тор	8	0.124					



Test Mode: Wireless Charging 5W use iphone								
		Measuring	E Eiold()//m)	Limit(V/	10%			
		Distance(cm)		m)	Limit(V/m)			
Measurement Point 1	Front	8	35.537		61.4			
Measurement Point 2	Back	8	35.145					
Measurement Point 3	Left	8	35.164	614				
Measurement Point 4	Right	8	34.985	014				
Measurement Point 5	Bottom	8	32.572					
Measurement Point 6	Тор	8	37.586					

Test Mode: Wireless Charging 5W use iphone								
		Measuring	\square Field(Λ/m)	Limit(A/	50%			
		Distance(cm)		m)	Limit(A/m)			
Measurement Point 1	Front	10	0.113					
Measurement Point 2	Back	10	0.112		0.163			
Measurement Point 3	Left	10	0.108	1.63				
Measurement Point 4	Right	10	0.116	1.00				
Measurement Point 5	Bottom	10	0.092	1				
Measurement Point 6	Тор	10	0.114					

Test Mode: Wireless Charging 5W use iphone								
		Measuring		Limit(V/	10%			
		Distance(cm)		m)	Limit(V/m)			
Measurement Point 1	Front	10	32.247		61.4			
Measurement Point 2	Back	10	32.112					
Measurement Point 3	Left	10	32.265	614				
Measurement Point 4	Right	10	31.585	014				
Measurement Point 5	Bottom	10	29.352	1				
Measurement Point 6	Тор	10	33.571					



Test Mode: Wireless Charging 10W use Samsung S9								
		Measuring Distance(cm)	H- Field(A/m)	Limit(A/ m)	10% Limit(A/m)			
Measurement Point 1	Front	0	0.155		0.163			
Measurement Point 2	Back	0	0.153					
Measurement Point 3	Left	0	0.146	1.62				
Measurement Point 4	Right	0	0.143	1.63				
Measurement Point 5	Bottom	0	0.127					
Measurement Point 6	Тор	0	0.155					

Test Mode: Wireless Charging 10W use Samsung S9							
		Measuring	E Field()//m)	Limit(V/	10%		
		Distance(cm)		m)	Limit(V/m)		
Measurement Point 1	Front	0	46.326		61.4		
Measurement Point 2	Back	0	46.257				
Measurement Point 3	Left	0	46.366	614			
Measurement Point 4	Right	0	46.724	614			
Measurement Point 5	Bottom	0	46.332				
Measurement Point 6	Тор	0	49.687				

Test Mode: Wireless Charging 10W use Samsung S9							
		Measuring		Limit(A/	50%		
		Distance(cm)		m)	Limit(A/m)		
Measurement Point 1	Front	2	0.149		0.163		
Measurement Point 2	Back	2	0.143				
Measurement Point 3	Left	2	0.136	1.62			
Measurement Point 4	Right	2	0.144	1.03			
Measurement Point 5	Bottom	2	0.128	1			
Measurement Point 6	Тор	2	0.147				



Test Mode: Wireless Charging 10W use Samsung S9							
		Measuring		Limit(V/	10%		
		Distance(cm)		m)	Limit(V/m)		
Measurement Point 1	Front	2	44.523		61.4		
Measurement Point 2	Back	2	44.342				
Measurement Point 3	Left	2	44.212	614			
Measurement Point 4	Right	2	43.955	014			
Measurement Point 5	Bottom	2	41.347				
Measurement Point 6	Тор	2	46.359				

Test Mode: Wireless Charging 10W use Samsung S9							
		Measuring	H Field(A/m)	Limit(A/	50%		
		Distance(cm)		m)	Limit(A/m)		
Measurement Point 1	Front	4	0.142		0.163		
Measurement Point 2	Back	4	0.138				
Measurement Point 3	Left	4	0.135	1.00			
Measurement Point 4	Right	4	0.132	1.63			
Measurement Point 5	Bottom	4	0.114				
Measurement Point 6	Тор	4	0.146				

Test Mode: Wireless Charging 10W use Samsung S9							
		Measuring		Limit(V/	10%		
		Distance(cm)		m)	Limit(V/m)		
Measurement Point 1	Front	4	41.332		61.4		
Measurement Point 2	Back	4	41.641				
Measurement Point 3	Left	4	41.668	614			
Measurement Point 4	Right	4	41.357	614			
Measurement Point 5	Bottom	4	39.255				
Measurement Point 6	Тор	4	43.249				



Test Mode: Wireless Charging 10W use Samsung S9							
		Measuring	\Box Field(Λ /m)	Limit(A/	50%		
		Distance(cm)		m)	Limit(A/m)		
Measurement Point 1	Front	6	0.137		0.163		
Measurement Point 2	Back	6	0.135				
Measurement Point 3	Left	6	0.134	1.00			
Measurement Point 4	Right	6	0.136	1.63			
Measurement Point 5	Bottom	6	0.122				
Measurement Point 6	Тор	6	0.139				

Test Mode: Wireless Charging 10W use Samsung S9							
		Measuring		Limit(V/	10%		
		Distance(cm)		m)	Limit(V/m)		
Measurement Point 1	Front	6	38.662	-	61.4		
Measurement Point 2	Back	6	38.687				
Measurement Point 3	Left	6	38.252	614			
Measurement Point 4	Right	6	38.696	614			
Measurement Point 5	Bottom	6	36.531				
Measurement Point 6	Тор	6	41.313				

Test Mode: Wireless Charging 10W use Samsung S9							
		Measuring		Limit(A/	50%		
		Distance(cm)		m)	Limit(A/m)		
Measurement Point 1	Front	8	0.122		0.163		
Measurement Point 2	Back	8	0.123				
Measurement Point 3	Left	8	0.126	1.63			
Measurement Point 4	Right	8	0.122	1.00			
Measurement Point 5	Bottom	8	0.104]			
Measurement Point 6	Тор	8	0.137				



Test Mode: Wireless Charging 10W use Samsung S9								
		Measuring		Limit(V/	10%			
		Distance(cm)		m)	Limit(V/m)			
Measurement Point 1	Front	8	36.148		61.4			
Measurement Point 2	Back	8	36.687					
Measurement Point 3	Left	8	36.253	614				
Measurement Point 4	Right	8	35.962	014				
Measurement Point 5	Bottom	8	32.061	1				
Measurement Point 6	Тор	8	38.769	-				

Test Mode: Wireless Charging 10W use Samsung S9								
		Measuring	\Box Field(Λ/m)	Limit(A/	50%			
		Distance(cm)		m)	Limit(A/m)			
Measurement Point 1	Front	10	0.117		0 162			
Measurement Point 2	Back	10	0.115					
Measurement Point 3	Left	10	0.116	1.63				
Measurement Point 4	Right	10	0.114	1.05	0.105			
Measurement Point 5	Bottom	10	0.092]				
Measurement Point 6	Тор	10	0.125					



Test Mode: Wireless Charging 10W use Samsung S9								
		Measuring		Limit(V/	10%			
		Distance(cm)		m)	Limit(V/m)			
Measurement Point 1	Front	10	34.256		61.4			
Measurement Point 2	Back	10	34.527					
Measurement Point 3	Left	10	34.212	614				
Measurement Point 4	Right	10	33.685	014				
Measurement Point 5	Bottom	10	30.667	-				
Measurement Point 6	Тор	10	36.582					

Test Mode: Wireless Charging 10W use Xiaomi 9								
		Measuring	H Eiold(Λ/m)	Limit(A/	10%			
		Distance(cm)		m)	Limit(A/m)			
Measurement Point 1	Front	0	0.152		0.163			
Measurement Point 2	Back	0	0.156					
Measurement Point 3	Left	0	0.151	1.62				
Measurement Point 4	Right	0	0.148	1.03				
Measurement Point 5	Bottom	0	0.127	-				
Measurement Point 6	Тор	0	0.159					

Test Mode: Wireless Charging 10W use Xiaomi 9							
		Measuring	E Field()//m)	Limit(V/	10%		
		Distance(cm)		m)	Limit(V/m)		
Measurement Point 1	Front	0	47.212		04.4		
Measurement Point 2	Back	0	47.364				
Measurement Point 3	Left	0	47.963	614			
Measurement Point 4	Right	0	47.524	014	01.4		
Measurement Point 5	Bottom	0	47.697]			
Measurement Point 6	Тор	0	47.235				



Test Mode: Wireless Charging 10W use Xiaomi 9								
		Measuring	H Field(A/m)	Limit(A/	50%			
		Distance(cm)		m)	Limit(A/m)			
Measurement Point 1	Front	2	0.154		0.163			
Measurement Point 2	Back	2	0.149					
Measurement Point 3	Left	2	0.146	1.00				
Measurement Point 4	Right	2	0.143	1.03				
Measurement Point 5	Bottom	2	0.125]				
Measurement Point 6	Тор	2	0.157					

Test Mode: Wireless Charging 15W use Xiaomi 9								
		Measuring	E Field()//m)	Limit(V/	10%			
		Distance(cm)		m)	Limit(V/m)			
Measurement Point 1	Front	2	45.243		61.4			
Measurement Point 2	Back	2	45.357					
Measurement Point 3	Left	2	45.224	614				
Measurement Point 4	Right	2	45.696	014				
Measurement Point 5	Bottom	2	45.739]				
Measurement Point 6	Тор	2	45.692					

Test Mode: Wireless Charging 15W use Xiaomi 9							
		Measuring		Limit(A/	50%		
		Distance(cm)		m)	Limit(A/m)		
Measurement Point 1	Front	4	0.143		0.400		
Measurement Point 2	Back	4	0.141				
Measurement Point 3	Left	4	0.139	1.62			
Measurement Point 4	Right	4	0.137	1.03	0.163		
Measurement Point 5	Bottom	4	0.126]			
Measurement Point 6	Тор	4	0.147				



Test Mode: Wireless Charging 15W use Xiaomi 9								
		Measuring	E Eield(\//m)	Limit(V/	10%			
		Distance(cm)		m)	Limit(V/m)			
Measurement Point 1	Front	4	42.362		61.4			
Measurement Point 2	Back	4	42.496					
Measurement Point 3	Left	4	42.685	614				
Measurement Point 4	Right	4	42.677	014				
Measurement Point 5	Bottom	4	40.341]				
Measurement Point 6	Тор	4	44.258					

Test Mode: Wireless Charging 15W use Xiaomi 9								
		Measuring	LL Field (A/m)	Limit(A/	50%			
		Distance(cm)		m)	Limit(A/m)			
Measurement Point 1	Front	6	0.134		0.400			
Measurement Point 2	Back	6	0.133					
Measurement Point 3	Left	6	0.134	1.62				
Measurement Point 4	Right	6	0.133	1.03	0.163			
Measurement Point 5	Bottom	6	0.114	-				
Measurement Point 6	Тор	6	0.137					



Test Mode: Wireless Charging 15W use Xiaomi 9								
		Measuring	E_{-} Eiold()//m)	Limit(V/	10%			
		Distance(cm)		m)	Limit(V/m)			
Measurement Point 1	Front	6	39.657		64.4			
Measurement Point 2	Back	6	39.668					
Measurement Point 3	Left	6	38.525	614				
Measurement Point 4	Right	6	39.251	014	01.4			
Measurement Point 5	Bottom	6	36.982]				
Measurement Point 6	Тор	6	42.561					

Test Mode: Wireless Charging 15W use Xiaomi 9					
		Measuring	H- Field(A/m)	Limit(A/	50%
		Distance(cm)		m)	Limit(A/m)
Measurement Point 1	Front	8	0.124	1.63	0.163
Measurement Point 2	Back	8	0.126		
Measurement Point 3	Left	8	0.127		
Measurement Point 4	Right	8	0.129		
Measurement Point 5	Bottom	8	0.112		
Measurement Point 6	Тор	8	0.133		



Test Mode: Wireless Charging 15W use Xiaomi 9					
		Measuring	E Field(\//m)	Limit(V/	10%
		Distance(cm)		m)	Limit(V/m)
Measurement Point 1	Front	8	37.525	614	61.4
Measurement Point 2	Back	8	37.962		
Measurement Point 3	Left	8	37.521		
Measurement Point 4	Right	8	37.656		
Measurement Point 5	Bottom	8	33.024		
Measurement Point 6	Тор	8	39.257		

Test Mode: Wireless Charging 15W use Xiaomi 9					
		Measuring	H_{-} Field(Λ/m)	Limit(A/	50%
		Distance(cm)		m)	Limit(A/m)
Measurement Point 1	Front	10	0.115	1.63	0.163
Measurement Point 2	Back	10	0.118		
Measurement Point 3	Left	10	0.122		
Measurement Point 4	Right	10	0.116		
Measurement Point 5	Bottom	10	0.104		
Measurement Point 6	Тор	10	0.129		

Test Mode: Wireless Charging 15W use Xiaomi 9					
		Measuring	E- Field(V/m)	Limit(V/	10%
		Distance(cm)		m)	Limit(V/m)
Measurement Point 1	Front	10	35.631	614	61.4
Measurement Point 2	Back	10	36.358		
Measurement Point 3	Left	10	35.212		
Measurement Point 4	Right	10	34.952		
Measurement Point 5	Bottom	10	31.255		
Measurement Point 6	Тор	10	37.964		



PHOTOGRAPHS OFTEST SETUP



Signature

Sten. He

Alan He Manager Date: 2020-12-20