

Merchsource, LLC

TEST REPORT

SCOPE OF WORK

SAR Assessment– 1015211, 1012025

REPORT NUMBER

210708036SZN-003

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[REVISED DATE]

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PAGES

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DOCUMENT CONTROL NUMBER

RF Exposure

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Test Report

Applicant : Merchsource, LLC
7755 Irvine Center Drive, Suite 100, Irvine, CA 92618

Sample Description

Product : Car Phone Mount Air Vent with Wireless Charging
Model No. : 1015211, 1012025
Brand Name : Black Series, Sharper Image
Electrical Rating : Input: DC 5V 2A via USB port

Date Received : 08 July 2021
Date Test Conducted : 08 July 2021 to 27 August 2021

Test Requested : Test for compliance with CFR 47 part 1
Test Method : Environmental evaluation and exposure limit according to FCC CFR 47 part 1, 1.1307(c) and (d), 1.1310

Test Result : Pass
Conclusion : When determining of test conclusion, measurement uncertainty of tests have been considered.

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Date: 30 August 2021

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Intertek Testing Services Shenzhen Ltd. Longhua Branch

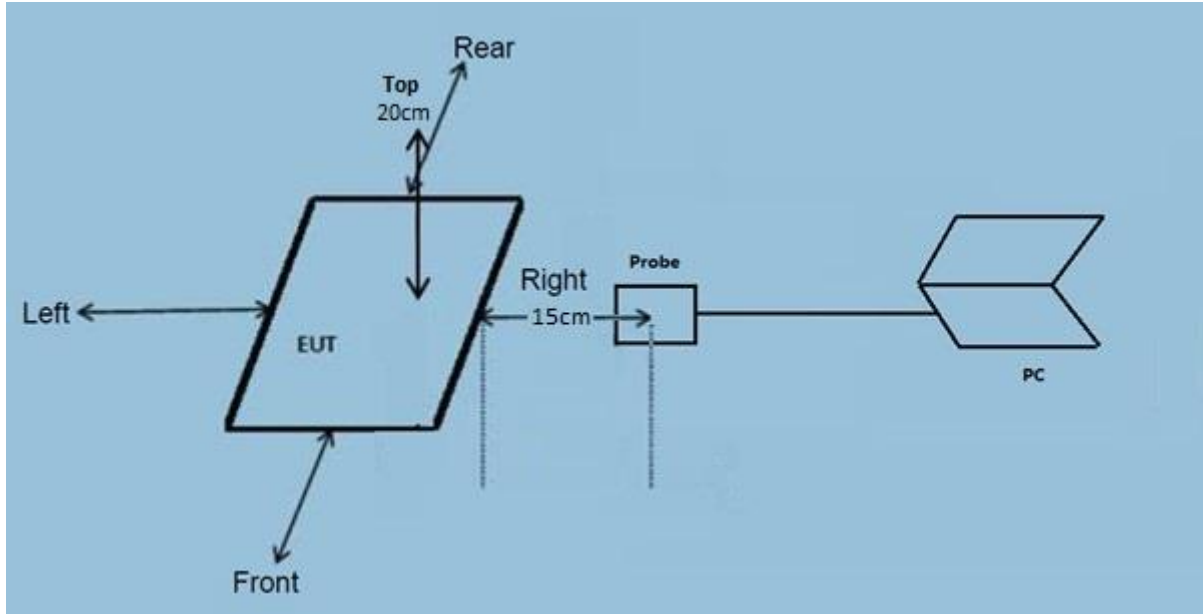
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Test Report

Test Setup Configuration



Note

- The RF exposure test is performed in the shield room.
- The test distance is between the edge of the charger and the geometric centre of probe.

Test Equipment List

Equipment No.	Equipment	Manufacturer	Model No.	Serial No.	Cal. Date	Due Date
SZ186-04	Electric and Magnetic Field Analyzer	Narda	EHP-50F	510WY90119	2020-07-28 2021-07-20	2021-07-28 2022-07-20

Support Equipment List

Description	Manufacturer	Detail
Mobile Phone (Provided by Intertek)	Samsung	S7
USB cable (Provided by Applicant)	Merchsource, LLC	Unshielded, 80cm
Car Charger (Provided by Applicant)	Merchsource, LLC	Input DC 12/24V Output 5V2.1A
Car Charger Adapter with DC undetachable cable (Provided by Intertek)	/	Unshield, 70cm
VALVE REGULATED LEAD-ACID BATTERY (Provided by Intertek)	OCEAN	12V7Ah (20HR)

Reference Limit:

Environmental evaluation and exposure limit according to FCC CFR 47 part 1, 1.1307(c) and (d), 1.1310

According to FCC 1.1310: The criteria listed in the following table shall be used to evaluate the environment impact of human exposure to radio frequency (RF) radiation.

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 (minutes)
(A) Limits for Occupational/Controlled Exposure				
0.3 – 3.0	614	1.63	(100) *	6
(B) Limits for General Population/Uncontrolled Exposure				
0.3 – 1.34	614	1.63	(100) *	30

Note: * = Plane wave equivalent power density

Test Result: Pass

H-Field Strength at 0 cm surrounding the EUT

Frequency Range (MHz)	EUT Operation mode	Probe Position Front (A/m)	Probe Position Rear (A/m)	Probe Position Left (A/m)	Probe Position Right (A/m)	Probe Position Top (A/m)	Probe Position Bottom (A/m)	Limits (A/m)
0.110-0.205	1% Battery Level	0.0436	0.0327	0.0502	0.0463	0.0983	0.0498	1.63
0.110-0.205	50% Battery Level	0.0362	0.0312	0.0453	0.0421	0.0877	0.0309	1.63
0.110-0.205	99% Battery Level	0.0220	0.0285	0.0376	0.0314	0.0564	0.0301	1.63
0.110-0.205	Stand-by	0.0201	0.0227	0.0268	0.0289	0.0255	0.0238	1.63

E-Field Strength at 0 cm surrounding the EUT

Frequency Range (MHz)	EUT Operation mode	Probe Position Front (V/m)	Probe Position Rear (V/m)	Probe Position Left (V/m)	Probe Position Right (V/m)	Probe Position Top (V/m)	Probe Position Bottom (V/m)	Limits (V/m)
0.110-0.205	1% Battery Level	0.9673	0.8029	0.9362	1.1382	1.2583	1.0138	614
0.110-0.205	50% Battery Level	0.9028	0.8430	0.7631	0.8643	1.1032	0.7384	614
0.110-0.205	99% Battery Level	0.7483	0.8102	0.7201	0.7324	1.0852	0.7239	614
0.110-0.205	Stand-by	0.6473	0.6109	0.6287	0.6683	0.6352	0.6832	614

H-Field Strength at 2 cm surrounding the EUT

Frequency Range (MHz)	EUT Operation mode	Probe Position Front (A/m)	Probe Position Rear (A/m)	Probe Position Left (A/m)	Probe Position Right (A/m)	Probe Position Top (A/m)	Probe Position Bottom (A/m)	Limits (A/m)
0.110-0.205	1% Battery Level	0.0434	0.0349	0.0499	0.0503	0.0932	0.0460	1.63
0.110-0.205	50% Battery Level	0.0367	0.0369	0.0439	0.0473	0.0921	0.0327	1.63
0.110-0.205	99% Battery Level	0.0278	0.0242	0.0308	0.0448	0.0631	0.0334	1.63
0.110-0.205	Stand-by	0.0212	0.0209	0.0244	0.0273	0.0232	0.0221	1.63

E-Field Strength at 2 cm surrounding the EUT

Frequency Range (MHz)	EUT Operation mode	Probe Position Front (V/m)	Probe Position Rear (V/m)	Probe Position Left (V/m)	Probe Position Right (V/m)	Probe Position Top (V/m)	Probe Position Bottom (V/m)	Limits (V/m)
0.110-0.205	1% Battery Level	0.9683	0.8902	0.9329	1.0241	1.2387	1.1283	614
0.110-0.205	50% Battery Level	0.9120	0.8387	0.8623	0.8233	1.0863	0.7725	614
0.110-0.205	99% Battery Level	0.7209	0.8076	0.7949	0.7320	0.9763	0.7547	614
0.110-0.205	Stand-by	0.6276	0.6287	0.6309	0.6278	0.6208	0.5908	614

H-Field Strength at 4 cm surrounding the EUT

Frequency Range (MHz)	EUT Operation mode	Probe Position Front (A/m)	Probe Position Rear (A/m)	Probe Position Left (A/m)	Probe Position Right (A/m)	Probe Position Top (A/m)	Probe Position Bottom (A/m)	Limits (A/m)
0.110-0.205	1% Battery Level	0.0409	0.0498	0.0464	0.0503	0.0886	0.0484	1.63
0.110-0.205	50% Battery Level	0.0428	0.0452	0.0403	0.0434	0.08537	0.0365	1.63
0.110-0.205	99% Battery Level	0.0247	0.0276	0.0321	0.0545	0.0682	0.0332	1.63
0.110-0.205	Stand-by	0.0239	0.0212	0.0223	0.0287	0.0232	0.0212	1.63

E-Field Strength at 4 cm surrounding the EUT

Frequency Range (MHz)	EUT Operation mode	Probe Position Front (V/m)	Probe Position Rear (V/m)	Probe Position Left (V/m)	Probe Position Right (V/m)	Probe Position Top (V/m)	Probe Position Bottom (V/m)	Limits (V/m)
0.110-0.205	1% Battery Level	0.9658	0.1029	0.9084	0.8543	1.1937	0.8043	614
0.110-0.205	50% Battery Level	0.8948	0.8430	0.8041	0.7909	1.1339	0.7931	614
0.110-0.205	99% Battery Level	0.7638	0.8102	0.7481	0.7932	1.0682	0.7832	614
0.110-0.205	Stand-by	0.6209	0.6013	0.6047	0.6398	0.7553	0.6873	614

H-Field Strength at 6 cm surrounding the EUT

Frequency Range (MHz)	EUT Operation mode	Probe Position Front (A/m)	Probe Position Rear (A/m)	Probe Position Left (A/m)	Probe Position Right (A/m)	Probe Position Top (A/m)	Probe Position Bottom (A/m)	Limits (A/m)
0.110-0.205	1% Battery Level	0.0503	0.0577	0.0638	0.0564	0.0736	0.0353	1.63
0.110-0.205	50% Battery Level	0.0493	0.0503	0.0426	0.0332	0.0737	0.0323	1.63
0.110-0.205	99% Battery Level	0.0239	0.0431	0.0244	0.0345	0.0694	0.0271	1.63
0.110-0.205	Stand-by	0.0193	0.0176	0.0188	0.0193	0.0276	0.0187	1.63

E-Field Strength at 6 cm surrounding the EUT

Frequency Range (MHz)	EUT Operation mode	Probe Position Front (V/m)	Probe Position Rear (V/m)	Probe Position Left (V/m)	Probe Position Right (V/m)	Probe Position Top (V/m)	Probe Position Bottom (V/m)	Limits (V/m)
0.110-0.205	1% Battery Level	0.9837	0.8400	0.8039	1.1382	1.0378	0.7652	614
0.110-0.205	50% Battery Level	0.9488	0.8328	0.8304	0.8643	1.0312	0.7312	614
0.110-0.205	99% Battery Level	0.7423	0.7989	0.7478	0.7303	0.8937	0.7098	614
0.110-0.205	Stand-by	0.5783	0.5373	0.5973	0.5977	0.6232	0.5792	614

H-Field Strength at 8 cm surrounding the EUT

Frequency Range (MHz)	EUT Operation mode	Probe Position Front (A/m)	Probe Position Rear (A/m)	Probe Position Left (A/m)	Probe Position Right (A/m)	Probe Position Top (A/m)	Probe Position Bottom (A/m)	Limits (A/m)
0.110-0.205	1% Battery Level	0.0436	0.0389	0.0462	0.0432	0.0693	0.0465	1.63
0.110-0.205	50% Battery Level	0.0421	0.0342	0.0378	0.0431	0.0649	0.0367	1.63
0.110-0.205	99% Battery Level	0.0236	0.0263	0.0328	0.0239	0.0437	0.0287	1.63
0.110-0.205	Stand-by	0.0167	0.0187	0.0198	0.0147	0.0233	0.0176	1.63

E-Field Strength at 8 cm surrounding the EUT

Frequency Range (MHz)	EUT Operation mode	Probe Position Front (V/m)	Probe Position Rear (V/m)	Probe Position Left (V/m)	Probe Position Right (V/m)	Probe Position Top (V/m)	Probe Position Bottom (V/m)	Limits (V/m)
0.110-0.205	1% Battery Level	0.7691	0.7408	0.7203	0.7599	0.9763	0.7032	614
0.110-0.205	50% Battery Level	0.7400	0.7491	0.6074	0.7532	0.8658	0.7192	614
0.110-0.205	99% Battery Level	0.6948	0.6492	0.6348	0.6942	0.7432	0.6443	614
0.110-0.205	Stand-by	0.5948	0.5143	0.5382	0.5930	0.6724	0.5442	614

H-Field Strength at 10 cm surrounding the EUT

Frequency Range (MHz)	EUT Operation mode	Probe Position Front (A/m)	Probe Position Rear (A/m)	Probe Position Left (A/m)	Probe Position Right (A/m)	Probe Position Top (A/m)	Probe Position Bottom (A/m)	Limits (A/m)
0.110-0.205	1% Battery Level	0.0459	0.0354	0.0474	0.0563	0.0684	0.0302	1.63
0.110-0.205	50% Battery Level	0.0473	0.0304	0.0455	0.0445	0.0673	0.0341	1.63
0.110-0.205	99% Battery Level	0.0245	0.0229	0.0321	0.0223	0.0439	0.0223	1.63
0.110-0.205	Stand-by	0.0163	0.0167	0.0183	0.0152	0.0208	0.0187	1.63

E-Field Strength at 10 cm surrounding the EUT

Frequency Range (MHz)	EUT Operation mode	Probe Position Front (V/m)	Probe Position Rear (V/m)	Probe Position Left (V/m)	Probe Position Right (V/m)	Probe Position Top (V/m)	Probe Position Bottom (V/m)	Limits (V/m)
0.110-0.205	1% Battery Level	0.5988	0.5482	0.5843	0.5673	0.6938	0.6203	614
0.110-0.205	50% Battery Level	0.5790	0.5448	0.5349	0.5837	0.6998	0.5674	614
0.110-0.205	99% Battery Level	0.5384	0.5503	0.5673	0.5374	0.6857	0.5386	614
0.110-0.205	Stand-by	0.5678	0.5238	0.5098	0.5384	0.6083	0.5436	614

H-Field Strength at 15 cm surrounding the EUT and 20cm above the top surface of the EUT

Frequency Range (MHz)	EUT Operation mode	Probe Position Front (A/m)	Probe Position Rear (A/m)	Probe Position Left (A/m)	Probe Position Right (A/m)	Probe Position Top (A/m)	Limits (A/m)
0.110-0.205	1% Battery Level	0.0149	0.0157	0.0154	0.0161	0.0167	1.63
0.110-0.205	50% Battery Level	0.0148	0.0152	0.0148	0.0165	0.0163	1.63
0.110-0.205	99% Battery Level	0.0149	0.0156	0.0158	0.0159	0.0168	1.63
0.110-0.205	Stand-by	0.0145	0.0155	0.0156	0.0148	0.0158	1.63

E-Field Strength at 15 cm surrounding the EUT and 20cm above the top surface of the EUT

Frequency Range (MHz)	EUT Operation mode	Probe Position Front (V/m)	Probe Position Rear (V/m)	Probe Position Left (V/m)	Probe Position Right (V/m)	Probe Position Top (V/m)	Limits (V/m)
0.110-0.205	1% Battery Level	0.6287	0.6284	0.6230	0.5540	0.6324	614
0.110-0.205	50% Battery Level	0.6337	0.6178	0.6189	0.5512	0.6283	614
0.110-0.205	99% Battery Level	0.6279	0.6389	0.6098	0.5673	0.6091	614
0.110-0.205	Stand-by	0.6098	0.6038	0.6033	0.5531	0.5981	614

Configuration photo of the test:

H-Field & E-Field Strength test photos



Front 0cm



Rear 0cm



Left 0cm



Right 0cm



Top 0cm

***** End of Report *****