RF Exposure Report

Report No.:	**FCC_RF Exposure_KLA_CSLC300_21040101_17April2023**
FCC ID:	QTA-CLSC
Test Model(s):	CSLC300
Series Model No.:	CSLC200
Received Date:	02/24/2023
Test Date:	02/27/2023
Issued Date:	03/16/2023
Applicant:	KLA Corporation
Address:	1 Technology Dr, Milpitas, CA 95035
Manufacturer:	KLA Corporation
Address:	1 Technology Dr, Milpitas, CA 95035
Issued By:	Bureau Veritas Consumer Products Services, Inc.
Lab Address:	775 Montague Expressway Milpitas, CA, 95035, USA
FCC Registration / Designation Number:	540430

TESTING CERT # 2742-01

Table of Contents

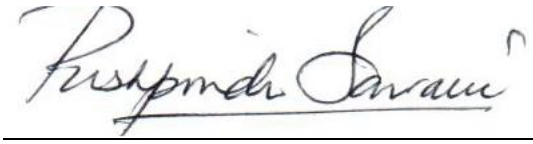
Release Control Record

Issue No.	Description	Date Issued
FCC_RF Exposure_KLA_CSLC300_21040101_16mar2023	Orignal Release	03/16/2023
FCC_RF Exposure_KLA_CSLC300_21040101_17April2023	Added KDB 680106 D01 v03r01RF Exposure Wireless Charging: KDB 447498 D01 v06	04/17/2023

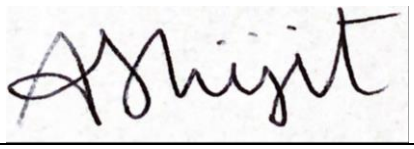
1 Certificate of Conformity

Product:	RF Large Coil Carrier Station
Brand:	KLA SensArray
Test Model(s):	CSLC300
Series Model No.:	CSLC200
Sample Status:	Product Validation
Applicant:	KLA Corporation
Test Date:	03/24/2023
Standards:	KDB 680106 D01 v03r01RF Exposure Wireless Charging: KDB 447498 D01 v06

The above equipment has been tested by **Bureau Veritas Consumer Products Services, Inc., Milpitas Branch**, and found compliance with the requirement of the above standards. The test record, data evaluation & Equipment Under Test (EUT) configurations represented herein are true and accurate accounts of the measurements of the sample's EMC characteristics under the conditions specified in this report.

Prepared by :  **Date:** *03/17/2023*

Pushpinder Sawanni/ Test Engineer

Approved by :  **Date:** *03/17/2023*

Abhijit/ Review Engineer

2 General Information

2.1 General Description of EUT

Product	RF Large Coil Storage Case
Brand	KLA SensArray
Test Model	CSLC300
Serial Number	SA20223
Series Model	CSLC200
Status of EUT	Product Validation
Power Supply Rating	4.5Vdc
Modulation Type	OOK
Operating Frequency	1.5MHz
Antenna Type	Loop PCB Antenna
Antenna Connector	N/A
Product Description	The EUT communicates with the SA Wafer to determine the charge state of the SA Wafer batteries through an RF induction interface and charges the SA Wafer batteries through that same RF induction circuit so they remain at the optimum charge level.

2.2 Wireless Power Transfer

2.3 Description of Support Units

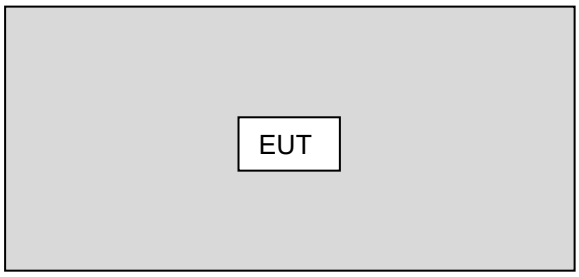
The EUT has been tested as an independent unit together with other necessary accessories or support units. The following support units or accessories were used to form a representative test configuration during the tests.

ID	Product	Brand	Model No.	Serial No.	FCC ID	Remarks
A.						

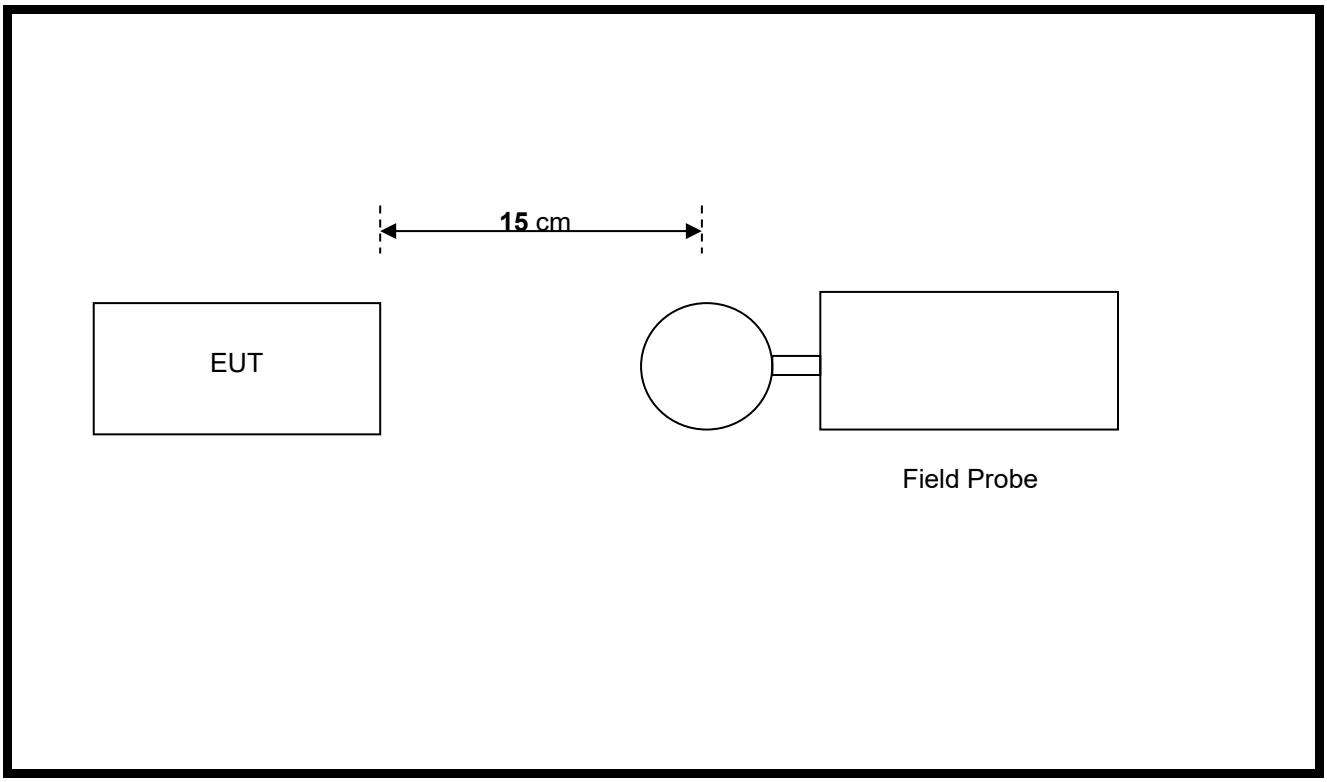
ID	Descriptions	Qty.	Length (m)	Shielding (Yes/No)	Cores (Qty.)	Remarks
1.	-	-	-	-	-	-

Note: The core(s) is(are) originally attached to the cable(s).

2.4 Configuration of System under Test



2.5 Test Setup



2.6 Test Instruments

DESCRIPTION & MANUFACTURER	MODEL NO.	SERIAL NO.	DATE OF CALIBRATION	DUE DATE OF CALIBRATION
Field strength meter WAVECONTROL	SMP2	19SN0981	July19, 2022	July19, 2023
WP400 Field Probe WAVECONTROL	WP400	19WP100500	July19, 2022	July19, 2023
Electric Field Probe ETS-Lindgren	HI-6005	156327	July20, 2022	July20, 2023

3 Limit for Maximum Pecrmissible Exposure (MPE)

Frequency Range(MHz)	Electric field strength(V/m)	Magnetic field strength(A/m)	Power density(mW/cm2)	Averaging time(minutes)
(A) Limits for occupation/controlled Exposure				
0.3-3.0	614	1.63	*100	6
3.0-30	1842/f	4.89/f	*900/f^2	6
30-300	61.4	0.163	1.06	6
300-1500			f/300	6
1500-100000			5	6
(B) Limits for General Population/Uncontrolled Exposure				
0.3-1.34	614	1.63	*100	30
1.34-30	824/f	2.19/f	*180/f^2	30
30-300	27.5	0.073	0.2	30
300-1500			f/1500	30
1500-100000			1	30
f = frequency in MHz * = Plane-wave equivalent power density				

E and H-field measurements should be made with the center of the probe at a distance of 15 cm surrounding the device and 20 cm above the top surface of the primary/client pair.

KDB 680106 D01 RF Exposure Wireless Charging App v03:

(1) Power transfer frequency is less than 1MHz
-------No, Power transfer frequency is 1.528MHz

(2) Output power from each primary coil is less than or equal to 15 watts
------Yes, power is 2W

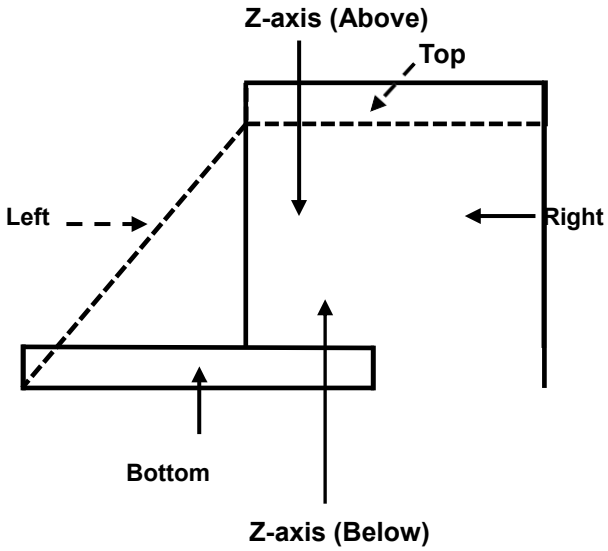
(3) The transfer system includes only single primary and secondary coils. This includes charging systems that may have multiple primary coils and clients that are able to detect and allow coupling only between individual pairs of coils.
------Yes, Transmitter and receiver have only one coil each

(4) Client device is placed directly in contact with the transmitter.
------No, Distance between charger and receiver is 11mm max.

(5) Mobile exposure conditions only (portable exposure conditions are not covered by this exclusion).
------Yes, Mobile exposure condition only, product is used >20cm from user.

(6) The aggregate H-field strengths at 15 cm surrounding the device and 20 cm above the top surface from all simultaneous transmitting coils are demonstrated to be less than 50% of the MPE limit.
------Yes, 0.11 A/m < 0.815 A/m (50% of limit 1.63 A/m)

4 Test Point Description



Evaluation Method

The evaluation method first requires a determination of the antenna region(s) in which the exposure occurs, and from this determination the appropriate evaluation method (calculation or measurement) can then be used.

For each region there is a preferred (or “reference”) evaluation method and possible alternatives. When an alternative method is used it typically provides a more conservative evaluation of the RF hazard.
The region is determined, based on the minimum separation distance from the device antennas to persons and the size/gain of the antenna. The minimum separation distance is based on either a distance specified in the installation/user’s manual or on an evaluation of intended use.

5 Measurement results

Charging and Operating Mode

E-Field Measurement (15cm)						E-Field Measurement (15cm)	E-Field Measurement (20cm)	E-Field Measurement (15cm)
Frequency (MHz)	EUT Side	Left	Right	Top	Bottom	Z-axis (Above)	Z-axis (Above)	Z-axis (Below)
1.528	Max E-field (V/m)	0.11	0.12	0.11	0.11	0.12	0.11	0.12
1.528	Limit (V/m)	614	614	614	614	614	614	614
1.528	Margin (V/m)	-613.89	-613.88	-613.89	-613.89	-613.88	-613.89	-613.88
1.528	50 % Limit (V/m)	307	307	307	307	307	307	307
1.528	50 % Margin (V/m)	-306.89	-306.88	-306.89	-306.89	-306.88	-306.89	-306.88

H-Field Measurement (15cm)						H-Field Measurement (15cm)	H-Field Measurement (20cm)	H-Field Measurement (0cm)
Frequency (MHz)	EUT Side	Left	Right	Top	Bottom	Z-axis (Above)	Z-axis (Above)	Z-axis (Below)
1.528	Max H-field (A/m)	0.442	0.44	0.456	0.514	0.435	0.514	0.512
1.528	Limit (A/m)	1.63	1.63	1.63	1.63	1.63	1.63	1.63
1.528	Margin (A/m)	-1.188	-1.19	-1.174	-1.116	-1.195	-1.116	-1.118
1.528	50 % Limit (A/m)	0.815	0.815	0.815	0.815	0.815	0.815	0.815
1.528	50 % Margin (A/m)	-0.373	-0.375	-0.359	-0.301	-0.38	-0.301	-0.303

Measurements were made from all sides and the top of the primary/client pair, with the 15/20cm measured from the center of the probe(s) to the edge of the device. The highest emission level was recorded.

Appendix A: Pictures of Test Arrangements

Setup photos

H Field

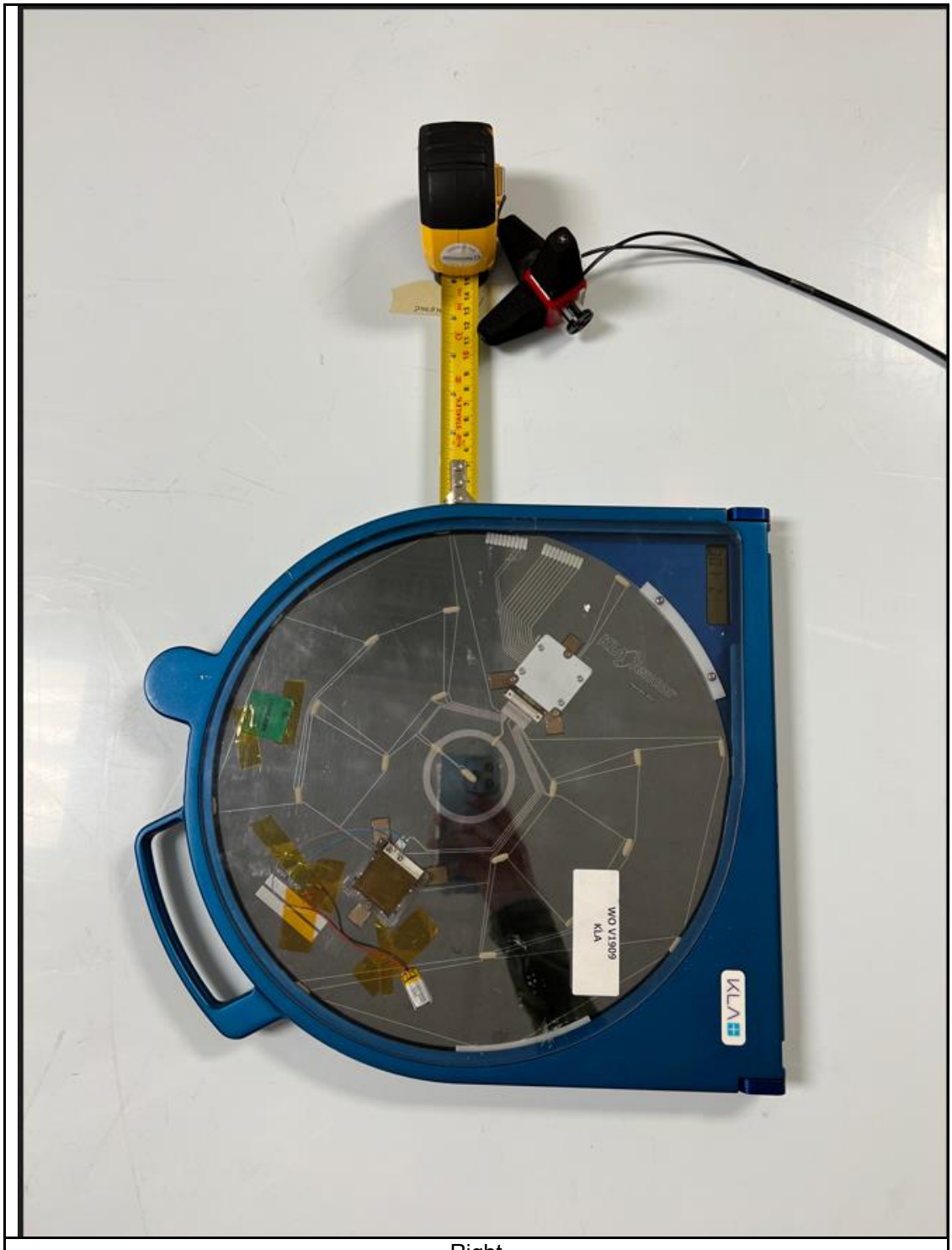
Top

Bottom

Probe 20cms from EUT

Z-axis Below 20cm

E Field

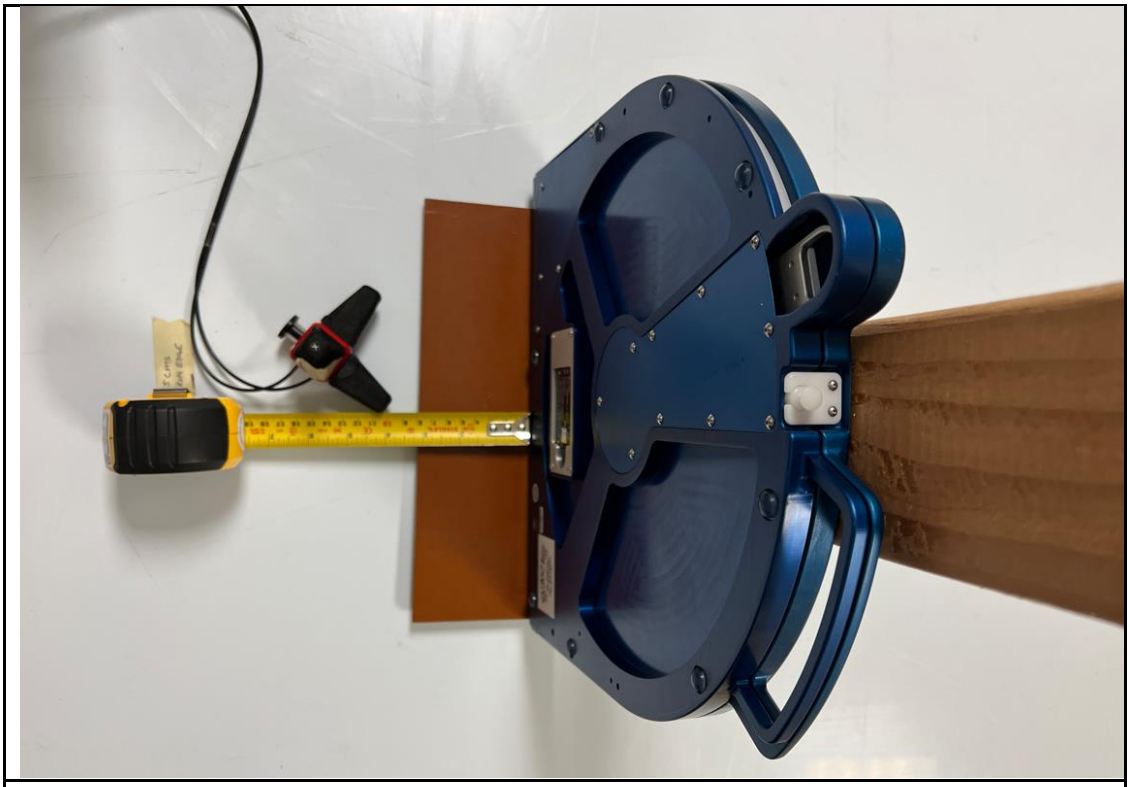


Right

Left

Top

Bottom



Z-axis Above

Z-axis Below

ppendix B: Information of the Testing Laboratories

Bureau Veritas is a global leader in testing, inspection, and certification (TIC) services. We help businesses improve safety, sustainability, and productivity; and our clients include most leading brands in retail, manufacturing, and other industries. With a presence in every major country around the world, our quality assurance and compliance solutions are vital in helping our customers enhance product quality and concept-to-consumer journeys. We also assist with increasing speed to market, profitability, and brand equity throughout the supply chain. Bureau Veritas is a leading wireless/IoT testing, inspection, audit, and certification provider, with a global network of test laboratories to support the IoT industry in areas of connectivity, security, interoperability as well as quality, health & safety, and environmental/chemical requirements.

If you have any comments, please feel free to contact us at the following:

Milpitas EMC/RF/Safety/Telecom Lab
775 Montague Expressway, Milpitas, CA 95035
Tel: +1 408 526 1188

Sunnyvale OTA/Bluetooth Lab
1293 Anvilwood Avenue, Sunnyvale, CA 94089
Tel: +1 669 600 5293

Littleton EMC/RF/Safety/Environmental Lab
1 Distribution Center Cir #1, Littleton, MA 01460
Tel: +1 978 486 8880

Email: sales.eaw@us.bureauveritas.com
Web Site: www.cpsusa-bureauveritas.com

The address and road map of all our labs can be found in our web site also.

Appendix C: Declaration of Model Differences Letter

KLA Corporation ■ One Technology Drive ■ Milpitas, CA 95035 ■ www.kla.com

Declaration of Model Differences Letter

Applicant: KLA SensArray
Product name: RF Large Coil Storage Case
Brand: KLA SensArray
Model:

Model Name	Model Number
STORAGE CASE LC 300	SCLC300
STORAGE CASE LC 200	SCLC200

Please refer to model difference as below.
Circuit board layout, component models are exactly the same.

#	Product Characteristics:	Products are:	
		Same	Different
1	Radio Frequency Operating Range(s)	X	
2	RF Power / Field Strength	X	
3	Radio Frequency Circuitry	X	
4	Antenna Characteristics	X	
5	Associated Digital Circuitry	X	
6	Functional Capabilities	X	
7	Cosmetic/Dimension Differences		X
8	Case Design/Materials		X

For any differences, a description is provided in the table below.

#	Description of differences:
1	STORAGE CASE LC 300 is based on 300mm diameter plastic case, STORAGE CASE LC 200 is based on 300mm diameter plastic case with plastic adaptor.
2	STORAGE CASE LC 200 is a modified design based on STORAGE CASE LC 300 with adaptor design, the material is still plastic.

The difference between them impose no deviation in their RF aspect, and hence, there applies no change to RF test results

KLA Corporation ■ One Technology Drive ■ Milpitas, CA 95035 ■ www.kla.com

Name and position: Lei Mei, Senior Electrical Design Engineer and Compliance Owner
Name of Applicant: KLA SensArray
Address: 7 Technology Drive. Milpitas, CA 95035

--- Report End ---