



**FCC Part 1 Subpart I  
FCC Part 2 Subpart J**

**CERTIFICATION TEST REPORT**

**FOR**

**WIRELESS CHARGER**

**MODEL NO: A2140**

**FCC ID: BCGA2140**

**REPORT NUMBER: 13181006-E4V3**

**ISSUE DATE: OCTOBER 07, 2020**

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Revision History

Rev.	Issue Date	Revisions	Revised By
V1	09/22/2020	Initial Issue	Thu Chan
V2	10/03/2020	Added Spectrum Analyzer on Page 16	Thu Chan
V3	10/07/2020	Address TCB's question on Page 16	Chin Pang

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## 1. ATTESTATION OF TEST RESULTS

**COMPANY NAME:** APPLE INC.  
1 APPLE PARK WAY  
CUPERTINO, CA 95014, U.S.A

**EUT DESCRIPTION:** WIRELESS CHARGER

**MODEL NUMBER:** A2140


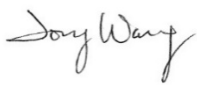
**SERIAL NUMBER:** DLCD42QH06M2

**DATE TESTED:** SEPTEMBER 18 - 22, 2020

APPLICABLE STANDARDS	
STANDARD	TEST RESULTS
FCC PART 1 SUBPART I & PART 2 SUBPART J	Complies

UL Verification Services Inc. measured the RF Exposure of the above equipment in accordance with the requirements set forth in the above standards, using test results reported in the test report documents referenced below and/or documentation furnished by the applicant. All indications of Pass/Fail in this report are opinions expressed by UL Verification Services Inc. based on interpretations of these calculations. The results show that the equipment is capable of demonstrating compliance with the requirements as documented in this report.

**Note:** The results documented in this report apply only to the tested sample, under the conditions and modes of operation as described herein. This document may not be altered or revised in any way unless done so by UL Verification Services Inc. and all revisions are duly noted in the revisions section. Any alteration of this document not carried out by UL Verification Services Inc. will constitute fraud and shall nullify the document. This report must not be used by the client to claim product certification, approval, or endorsement by NVLAP, NIST, any agency of the Federal Government, or any agency of any government.

Reviewed By:		Prepared By:
		
Chin Pang		Tony Wang
Senior engineer		Test Engineer
UL Verification Service Inc.		UL Verification Services Inc.

## 2. TEST METHODOLOGY

All calculations were made in accordance with FCC OET Bulletin 65 Edition 97-01.

## 3. FACILITIES AND ACCREDITATION

The test sites and measurement facilities used to collect data are located at 47173 and 47266 Benicia Street, Fremont, California, USA. Line conducted emissions are measured only at the 47173 address. The following table identifies which facilities were utilized for radiated emission measurements documented in this report. Specific facilities are also identified in the test results sections.

47173 Benicia Street	47266 Benicia Street	47658 Kato Rd.
<input type="checkbox"/> Chamber A (IC:2324B-1)	<input type="checkbox"/> Chamber D (IC:22541-1)	<input type="checkbox"/> Chamber I (IC: 2324A-5)
<input type="checkbox"/> Chamber B (IC:2324B-2)	<input type="checkbox"/> Chamber E (IC:22541-2)	<input type="checkbox"/> Chamber J (IC: 2324A-6)
<input type="checkbox"/> Chamber C (IC:2324B-3)	<input type="checkbox"/> Chamber F (IC:22541-3)	<input type="checkbox"/> Chamber K (IC: 2324A-1)
<input checked="" type="checkbox"/> Temperature B Room	<input type="checkbox"/> Chamber G (IC:22541-4)	<input type="checkbox"/> Chamber L (IC: 2324A-3)
	<input type="checkbox"/> Chamber H (IC:22541-5)	

The above test sites and facilities are covered under FCC Test Firm Registration # 208313. Chambers above are covered under Industry Canada company address and respective code

UL Verification Services Inc. is accredited by NVLAP, Laboratory Code 200065-0

#### 4. KDB 680106 D01 SECTION 5b EQUIPMENT APPROVAL CONSIDERATIONS

Requirement	Device
(1) Power transfer frequency is less than 1 MHz.	Yes. The operating frequencies are 360kHz and 128kHz.
(2) Output power from each primary coil is less than or equal to 15 watts.	Yes. The maximum power is 15 Watts
(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. The system includes one single primary and secondary coil and the device is designed to charge a single client.
(4) Client device is placed directly in contact with the transmitter.	Yes. The client device is placed directly in contact with the transmitter.
(5) Mobile exposure conditions only (portable exposure conditions are not covered by this exclusion).	No. It is a portable operating frequency @360kHz.
(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.	<p>No. For 360kHz operating frequency at portable position, the measurement was taken using a probe place 0mm separate distance for all sides of standby and charging modes. Please see exposure simulation report for the worst case leakage of portable position.</p> <p>For 128kHz operating frequency at mobile position, the measurement was taken based on KDB 680106 D01. The worst case leakage of mobile position @128kHz is 21.66%.</p>

## 5. EQUIPMENT UNDER TEST

### 5.1. DESCRIPTION OF EUT

The EUT is a magnetic charger which inductively charge other wireless charging devices. The charging function operates at 127.7kHz (Qi) and 360kHz. The charger supports charging at 5W, 7.5W and 15W power and NFC tag operation. The charger doesn't have any internal battery.

### 5.2. WORST-CASE CONFIGURATION AND MODE

The EUT is a single frequency magnetic charger enclosed in stainless steel case with 1 meter cable length USB -C type. For the standby mode, the measurements were taken on radiated spurious emissions due to 128kHz is un-intentional radiation coming from the response of LC resonance to the DC pulse signal. For operation mode, it was tested with the WPT clients. For the entire radiated emissions test, the EUT was investigated on the following configuration during the test at its natural orientation.

@360kHz Operating Frequency with Portable Position:

Please see exposure simulation report.

@128kHz Operating Frequency with Mobile Position:

Config	Mode	Descriptions
1	Standby	EUT Alone powered by AC/DC adapter.
2	Operating w/ 7.5W Load	Direct contact charging between the EUT & WPT Client, and the EUT is powered by AC/DC adapter via USB-C cable.
3	Operating w/ 3.5W Load	5mm airgap charging between the EUT & WPT Client 5mm offset shift to Top or Bottom, and the EUT is powered by AC/DC adapter via USB-C cable.
4	Operating w/ 1W Load	Direct contact charging between the EUT & WPT Client, and the EUT is powered by AC/DC adapter via USB-C cable.
5	Operating w/ 1W Load	2mm airgap charging between the EUT & WPT Client 5mm offset shift to Top or Bottom, and the EUT is powered by AC/DC adapter via USB-C cable.

### 5.3. DESCRIPTION OF TEST SETUP

#### SUPPORT EQUIPMENT

SUPPORT EQUIPMENT & PERIPHERALS LIST			
Description	Manufacturer	Model	Serial Number
WPT Client (15W Load iPhone)	Apple	N/A	N/A
WPT Client (7.5W Load iPhone)	Apple	N/A	N/A
WPT Client (1W Load AirPods Charging Case)	Apple	N/A	N/A
AC/DC Adapter	Apple	A1882	C4H748200RXH80MAY

#### I/O CABLES

The EUT with lightning to USB-C cable powered by AC/DC Adapter.

#### TEST SETUP

The following 5 configurations are tested:



@360kHz Operating Frequency:

Please see exposure simulation report.

@128kHz Operating Frequency:

Configuration	Mode	Descriptions
1	Standby	EUT Alone powered by AC/DC adapter
2 (7.5W, Direct Contact)	Operating (iPhone, ~10% Power Charging)	EUT with lightning to USB-C cable powered by AC/DC Adapter & Wireless Charging to WPT Client
	Operating (iPhone, 20~50% Power Charging)	EUT with lightning to USB-C cable powered by AC/DC Adapter & Wireless Charging to WPT Client
	Operating (iPhone, >75% Power Charging)	EUT with lightning to USB-C cable powered by AC/DC Adapter & Wireless Charging to WPT Client
3 (3.5W, 5mm Airgap + 5mm Shift to Top or Bottom)	Operating (iPhone, ~10% Power Charging)	EUT with lightning to USB-C cable powered by AC/DC Adapter & Wireless Charging to WPT Client
	Operating (iPhone, 20~50% Power Charging)	EUT with lightning to USB-C cable powered by AC/DC Adapter & Wireless Charging to WPT Client
	Operating (iPhone, >75% Power Charging)	EUT with lightning to USB-C cable powered by AC/DC Adapter & Wireless Charging to WPT Client
4 (1W, Direct Contact)	Operating (iPhone, ~10% Power Charging)	EUT with lightning to USB-C cable powered by AC/DC Adapter & Wireless Charging to WPT Client
	Operating (iPhone, 20~50% Power Charging)	EUT with lightning to USB-C cable powered by AC/DC Adapter & Wireless Charging to WPT Client
	Operating (iPhone, >75% Power Charging)	EUT with lightning to USB-C cable powered by AC/DC Adapter & Wireless Charging to WPT Client
5 (1W, 2mm Airgap + 5mm Shift to Top or Bottom)	Operating (iPhone, ~10% Power Charging)	EUT with lightning to USB-C cable powered by AC/DC Adapter & Wireless Charging to WPT Client
	Operating (iPhone, 20~50% Power Charging)	EUT with lightning to USB-C cable powered by AC/DC Adapter & Wireless Charging to WPT Client
	Operating (iPhone, >75% Power Charging)	EUT with lightning to USB-C cable powered by AC/DC Adapter & Wireless Charging to WPT Client

### **MEASUREMENT SETUP**

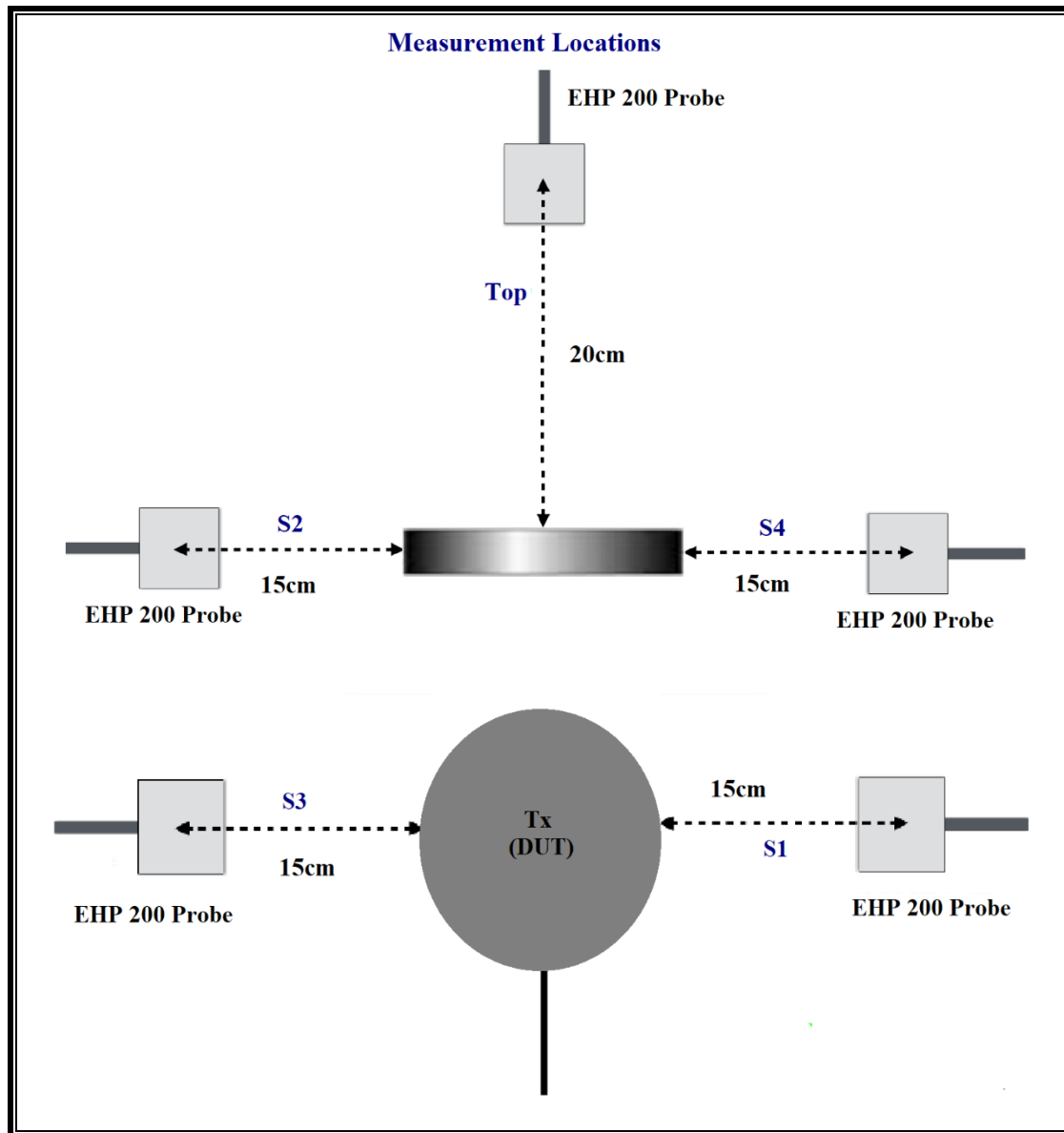
For the 360kHz charging frequency with 15W load at portable position, please see exposure simulation report.

For the 128kHz charging frequency with 7.5W and 1W loads at mobile position, the measurement was taken using a probe placed 15 cm surrounding the device and 20 cm above the top surface for all configurations per KDB 680106 D01.

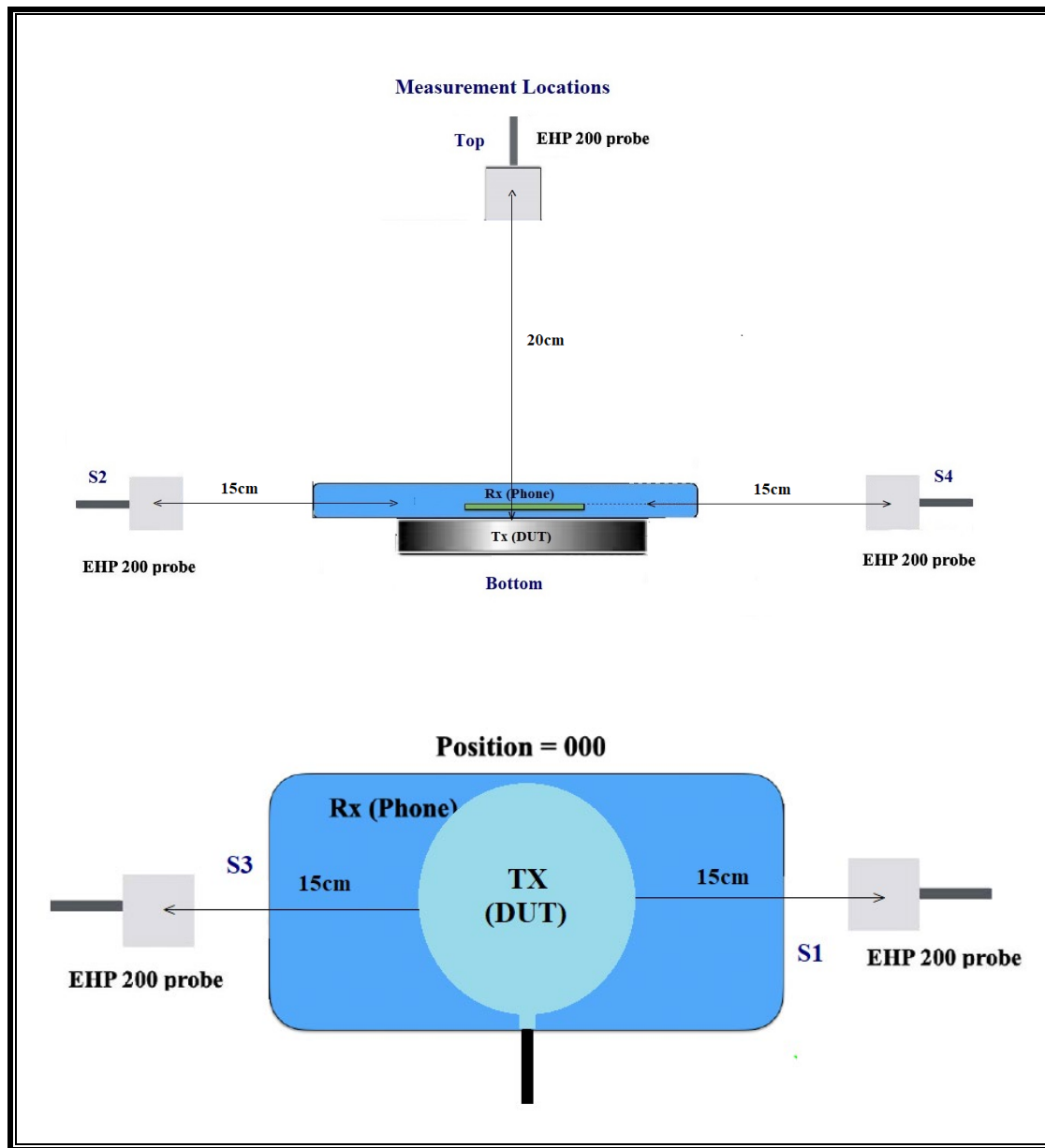
**@128KHZ OPERATING FREQUENCY IN MOBILE POSTION**

**CONFIGURATION 1**

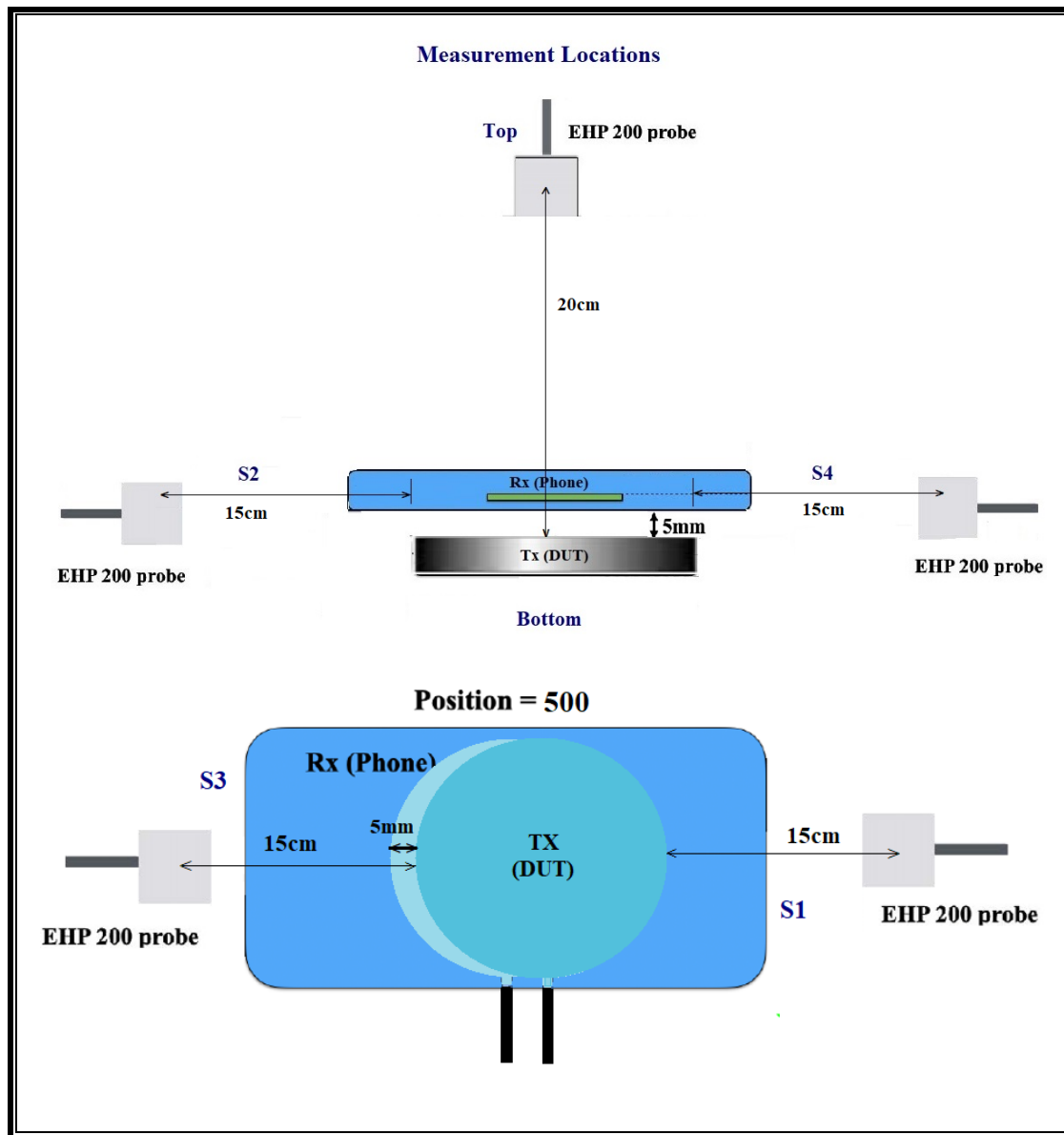
RF Exposure: 10cm Separate Distance from Probe to EUT



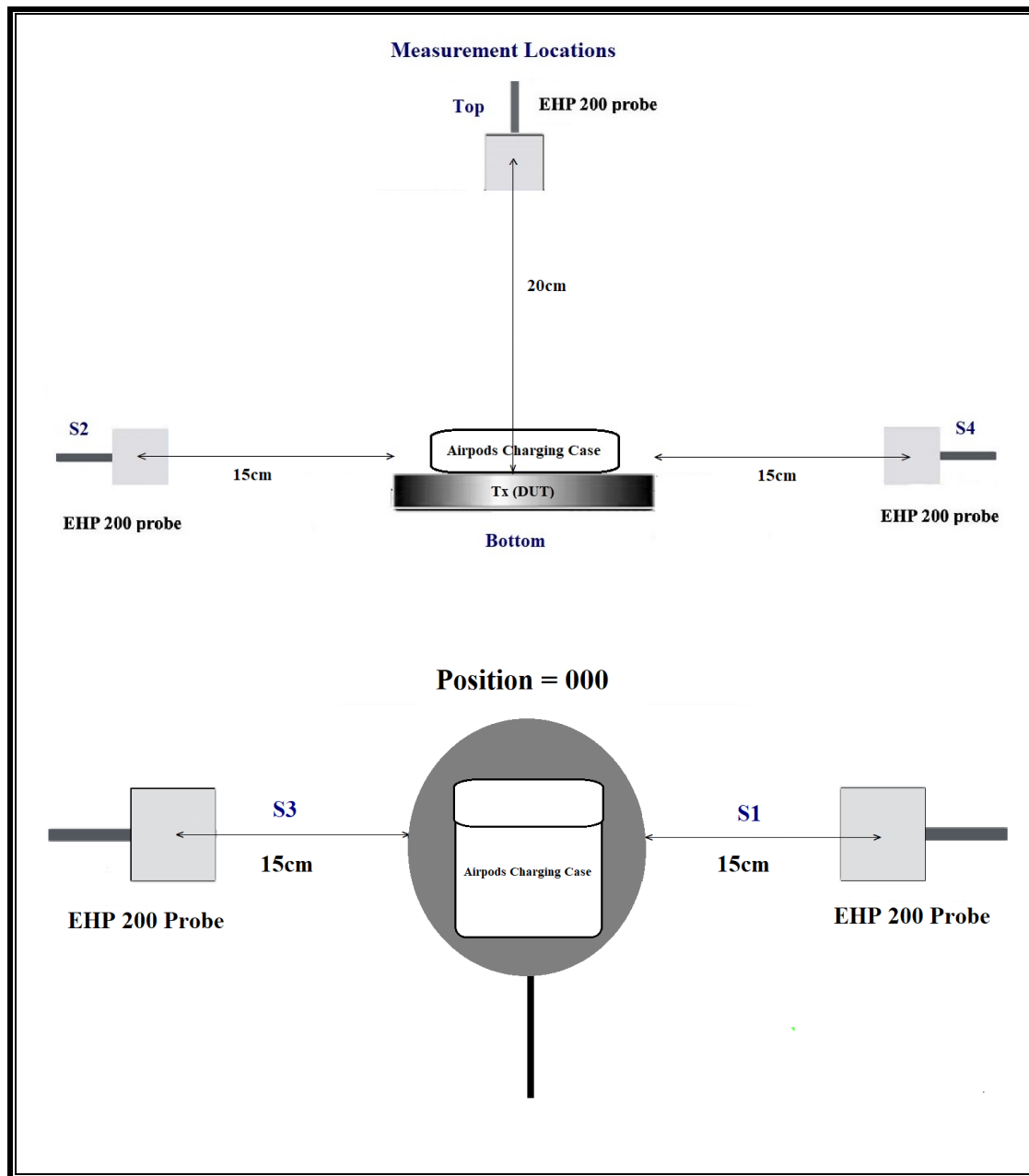
**CONFIGURATION 2 for 7.5W Load**



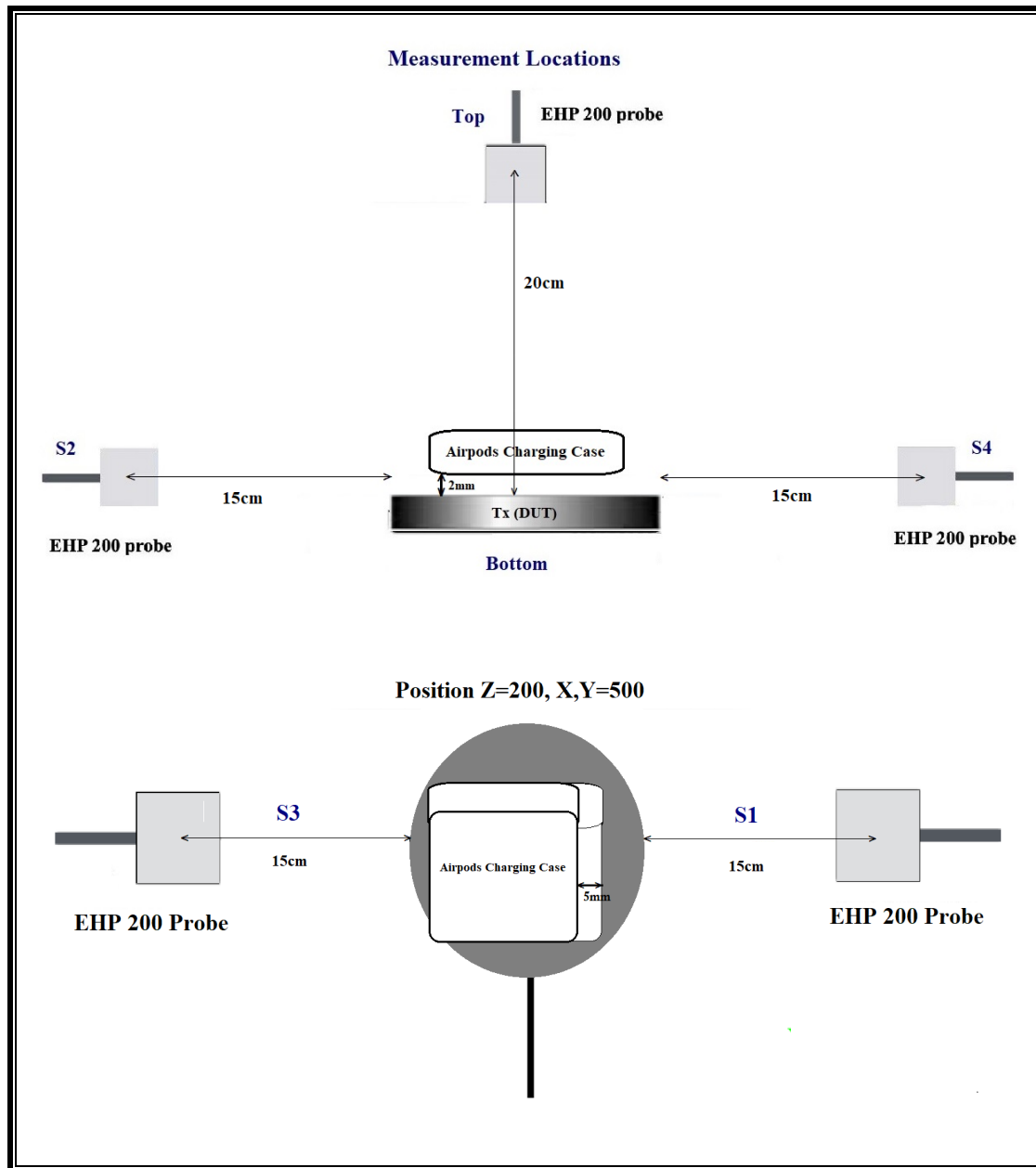
**CONFIGURATION 3 for 3.5W Load**



**CONFIGURATION 4 for 1W Load**



**CONFIGURATION 5 for 1W Load**



## 6. TEST AND MEASUREMENT EQUIPMENT

The following test and measurement equipment was used for the tests documented in this report:

Test Equipment List						
Description	Manufacturer	Model	S/N	Label ID	Cal Due	Cal Date
Electric and Magnetic Field Probe	Narda	EHP-200A	160WX41008	T1085	11/25/2020	11/25/2019
Spectrum Analyzer, PXA, 3Hz to 44GHz	Agilent (Keysight) Technologies	N9030A-544	MY52350671	T342	01/23/2021	01/23/2020



## 7. DUTY CYCLE

### LIMITS

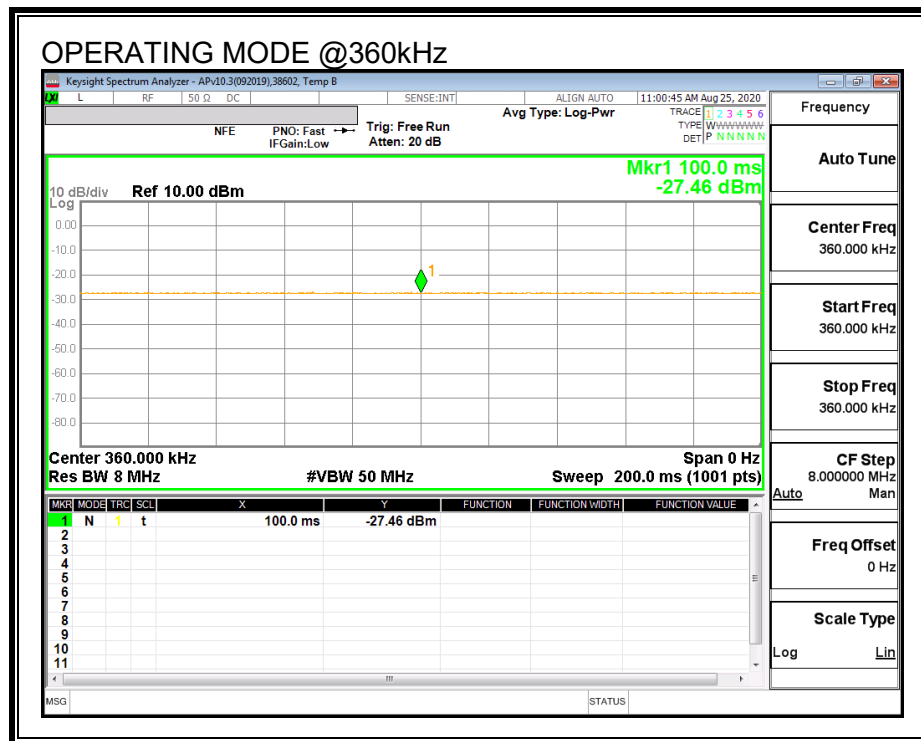
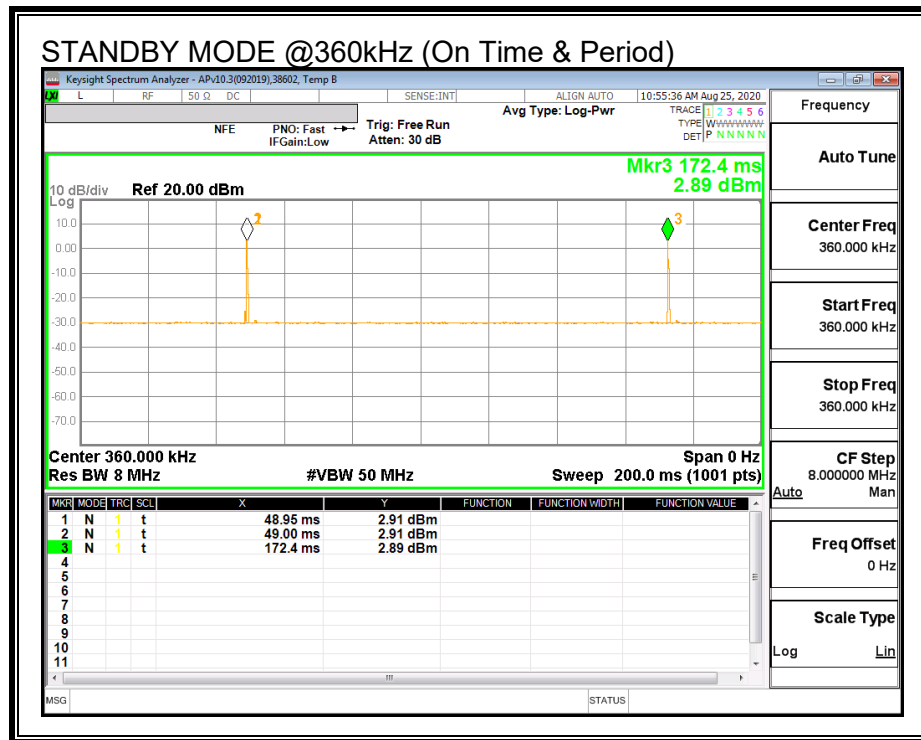
None; for reporting purposes only.

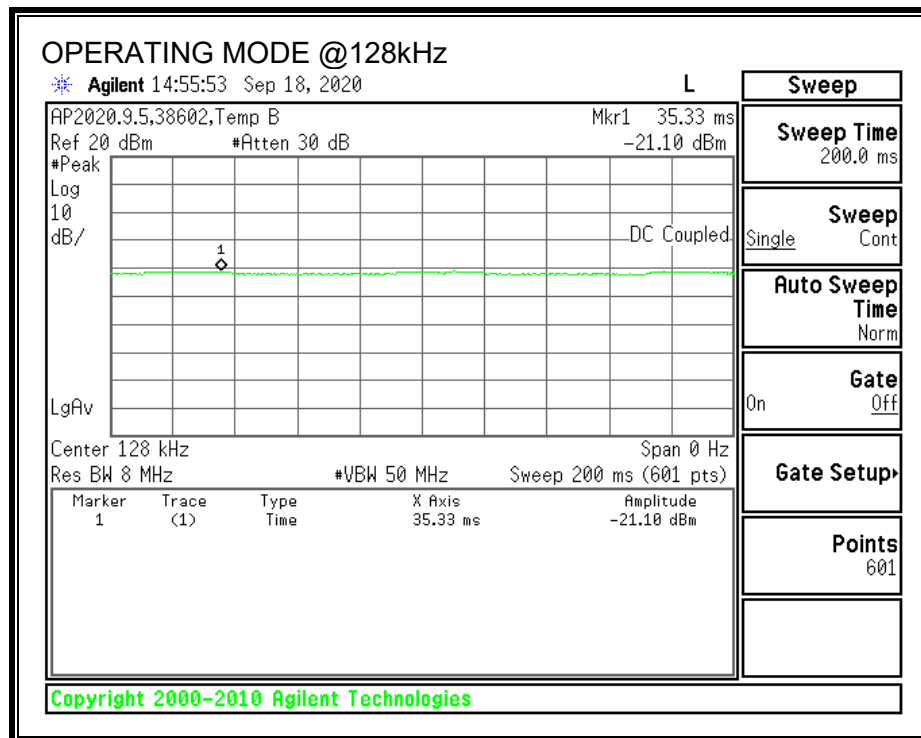
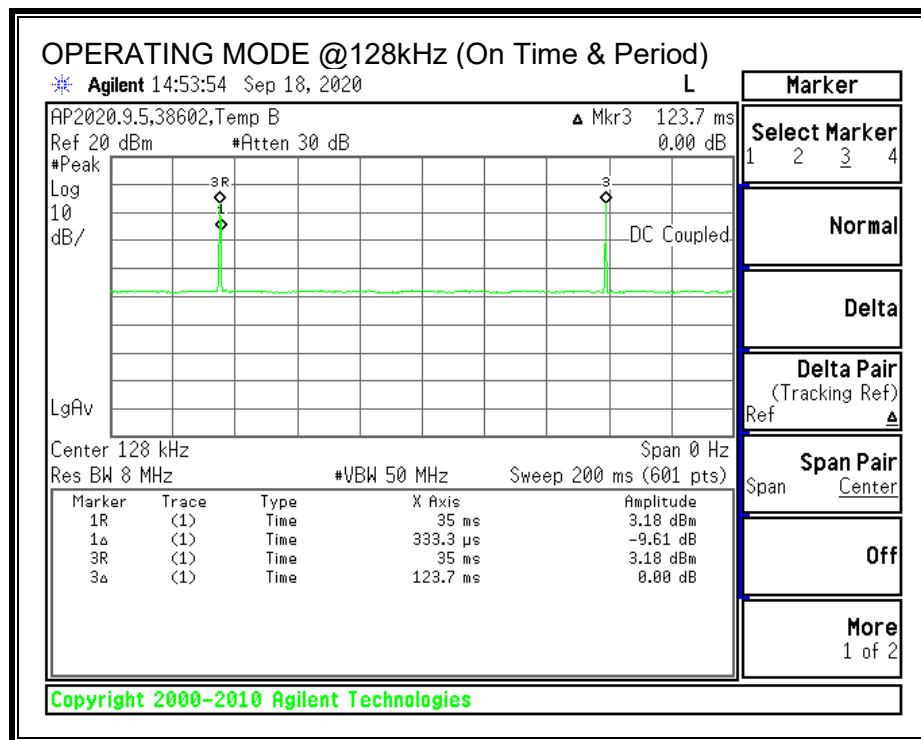
### PROCEDURE

Zero-Span Spectrum Analyzer Method.

### ON TIME AND DUTY CYCLE RESULTS

Mode	ON Time B (msec)	Period (msec)	Duty Cycle x (linear)	Duty Cycle (%)	Duty Cycle Correction Factor (dB)
Standby @ 360kHz	0.50	172.40	0.00	0.29%	25.38
Operating Frequency @360kHz	100.00	100.00	1.00	100.00%	0.00
Standby @ 128kHz	0.33	123.70	0.00	0.27%	25.74
Operating Frequency @128kHz	100.00	100.00	1.00	100.00%	0.00





## 8. MAXIMUM PERMISSIBLE RF EXPOSURE

### 8.1. FCC LIMITS AND SUMMARY

§1.1310 The criteria listed in Table 1 shall be used to evaluate the environmental impact of human exposure to radio-frequency (RF) radiation as specified in §1.1307(b), except in the case of portable devices which shall be evaluated according to the provisions of §2.1093 of this chapter.

TABLE 1—LIMITS FOR MAXIMUM PERMISSIBLE EXPOSURE (MPE)

Frequency range (MHz)	Electric field strength (V/m)	Magnetic field strength (A/m)	Power density (mW/cm <sup>2</sup> )	Averaging time (minutes)
(A) Limits for Occupational/Controlled Exposures				
0.3–3.0 .....	614	1.63	*(100)	6
3.0–30 .....	1842/f	4.89/f	*(900/f <sup>2</sup> )	6
30–300 .....	61.4	0.163	1.0	6
300–1500 .....	.....	.....	f/300	6
1500–100,000 .....	.....	.....	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 <sup>2</sup> )	30

TABLE 1—LIMITS FOR MAXIMUM PERMISSIBLE EXPOSURE (MPE)—Continued

Frequency range (MHz)	Electric field strength (V/m)	Magnetic field strength (A/m)	Power density (mW/cm <sup>2</sup> )	Averaging time (minutes)
30–300 .....	27.5	0.073	0.2	30
300–1500 .....	.....	.....	f/1500	30
1500–100,000 .....	.....	.....	1.0	30

f = frequency in MHz

\* = Plane-wave equivalent power density

NOTE 1 TO TABLE 1: Occupational/controlled 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 an individual is transient through a location where occupational/controlled limits apply provided he or she is made aware of the potential for exposure.

NOTE 2 TO TABLE 1: General population/uncontrolled exposures apply in situations in which the general public may be exposed, or in which persons that are exposed as a consequence of their employment may not be fully aware of the potential for exposure or can not exercise control over their exposure.

## RESULTS

<b>ID:</b>	38602	<b>Date:</b>	9/18/2020 - 9/22/2020
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### Configuration #1:

Electric Field Limit			Magnetic Field Limit		
FCC RF Exposure Limit	Maximum Average (V/m)	Percentage (%)	FCC RF Exposure	Maximum Average (A/m)	Percentage (%)
614	0.422	0.07%	1.63	0.038	2.34%

### Configuration #2:

Electric Field Limit			Magnetic Field Limit		
FCC RF Exposure Limit	Maximum Average (V/m)	Percentage (%)	FCC RF Exposure	Maximum Average (A/m)	Percentage (%)
614	1.353	0.22%	1.63	0.118	7.25%

### Configuration #3:

Electric Field Limit			Magnetic Field Limit		
FCC RF Exposure Limit	Maximum Average (V/m)	Percentage (%)	FCC RF Exposure	Maximum Average (A/m)	Percentage (%)
614	0.986	0.16%	1.63	0.353	21.66%

### Configuration #4:

Electric Field Limit			Magnetic Field Limit		
FCC RF Exposure Limit	Maximum Average (V/m)	Percentage (%)	FCC RF Exposure	Maximum Average (A/m)	Percentage (%)
614	1.014	0.17%	1.63	0.164	10.06%

### Configuration #5:

Electric Field Limit			Magnetic Field Limit		
FCC RF Exposure Limit	Maximum Average (V/m)	Percentage (%)	FCC RF Exposure	Maximum Average (A/m)	Percentage (%)
614	1.013	0.16%	1.63	0.170	10.44%

## E- FIELD AND H- FIELD MEASUREMENTS

Note: Peak measurements were performed. RMS values were calculated from the peak measurement. Please refer to the formula for calculating the RMS values: [Field Strength x  $\sqrt{\text{Duty Cycle}}$ ].

### Configuration #1

FCC Limit				Spurious @128kHz																			
Configuration	Test Mode	Measuring Distance (cm)	Electric Field Limit	Electric Field Reading				Magnetic Field Limit	Magnetic Field Reading														
			(V/m)	(V/m)				(A/m)	(A/m)														
			FCC	Location	Peak	Duty Cycle %	FCC Average	FCC	Location	Peak	Duty Cycle %	FCC Average											
1	Standby	15 cm surrounding the device (S1 - S4) and 20 cm above the top surface of the EUT	614	S1	0.258	0.27	0.258	1.63	S1	0.036	0.27	0.036											
				S2	0.266		0.266		S2	0.036		0.036											
				S3	0.320		0.320		S3	0.036		0.036											
				S4	0.345		0.345		S4	0.038		0.038											
				Top	0.422		0.422		Top	0.036		0.036											
				Max	0.422		0.422		Max	0.036		0.036											

### Configuration #2

FCC Limit												
Configuration	Test Mode	Measuring Distance (cm)	Electric Field Limit	Electric Field Reading				Magnetic Field Limit	Magnetic Field Reading			
			(V/m)	(V/m)				(A/m)	(A/m)			
			FCC	Location	Peak	Duty Cycle %	FCC Average	FCC	Location	Peak	Duty Cycle %	FCC Average
2	Operating Real Product (Power ~10% Charging)	15 cm surrounding the device (S1 - S4) and 20 cm above the top surface of the EUT	614	S1	0.800	100	0.800	1.63	S1	0.081	100	0.081
				S2	0.650		0.650		S2	0.094		0.094
				S3	0.799		0.799		S3	0.082		0.082
				S4	0.679		0.679		S4	0.073		0.073
				Top	0.959		0.959		Top	0.049		0.049
				Max	0.965		0.965		Max	0.097		0.097
				S1	0.835		0.835		S1	0.070		0.070
				S2	0.683		0.683		S2	0.106		0.106
	S3			0.872	0.872	S3	0.081		0.081			
	S4			0.685	0.685	S4	0.076		0.076			
	Top			1.229	1.229	Top	0.099		0.099			
	Max			1.353	1.353	Max	0.118		0.118			
	S1			0.668	0.668	S1	0.078		0.078			
	S2			0.574	0.574	S2	0.100		0.100			
	S3			0.682	0.682	S3	0.076		0.076			
	S4			0.561	0.561	S4	0.079		0.079			
	Top			0.942	0.942	Top	0.049		0.049			
	Max			0.943	0.943	Max	0.050		0.050			

### Configuration #3

FCC Limit													
Configuration	Test Mode	Measuring Distance (cm)	Electric Field Limit	Electric Field Reading				Magnetic Field Limit	Magnetic Field Reading				
			(V/m)	(V/m)				(A/m)	(A/m)				
			FCC	Location	Peak	Duty Cycle %	FCC Average	FCC	Location	Peak	Duty Cycle %	FCC Average	
3	Operating Real Product (Power ~10% Charging) (5mm Airgap at Center)	15 cm surrounding the device (S1 - S4) and 20 cm above the top surface of the EUT	614	S1	0.751	100	0.751	1.63	S1	0.289	100	0.289	
				S2	0.499		0.499		S2	0.096		0.096	
				S3	0.657		0.657		S3	0.323		0.323	
				S4	0.557		0.557		S4	0.115		0.115	
				Top	0.984		0.984		Top	0.059		0.059	
				Max	0.985		0.985		Max	0.325		0.325	
	Operating Real Product (Power ~10% Charging) (5mm Airgap & 5mm Shift to the Top)			S1	0.778	0.778	S1		0.322	0.322			
				S2	0.846	0.846	S2		0.098	0.098			
				S3	0.658	0.658	S3		0.332	0.332			
				S4	0.574	0.574	S4		0.111	0.111			
				Top	0.903	0.903	Top		0.059	0.059			
				Max	0.904	0.904	Max		0.322	0.322			
	Operating Real Product (Power ~10% Charging) (5mm Airgap & 5mm Shift to the Bottom)			S1	0.723	0.723	S1		0.317	0.317			
				S2	0.512	0.512	S2		0.096	0.096			
				S3	0.676	0.676	S3		0.341	0.341			
				S4	0.524	0.524	S4		0.133	0.133			
				Top	0.913	0.913	Top		0.067	0.067			
				Max	0.934	0.934	Max		0.341	0.341			
	Operating Real Product (Power 20% ~ 60% Charging) (5mm Airgap at Center)			S1	0.771	0.771	S1		0.309	0.309			
				S2	0.499	0.499	S2		0.098	0.098			
				S3	0.641	0.641	S3		0.320	0.320			
				S4	0.585	0.585	S4		0.098	0.098			
				Top	0.986	0.986	Top		0.072	0.072			
				Max	0.986	0.986	Max		0.336	0.336			
	Operating Real Product (Power 20% ~ 60% Charging) (5mm Airgap & 5mm Shift to the Top)			S1	0.744	0.744	S1		0.309	0.309			
				S2	0.508	0.508	S2		0.106	0.106			
				S3	0.658	0.658	S3		0.344	0.344			
				S4	0.593	0.593	S4		0.111	0.111			
				Top	0.916	0.916	Top		0.059	0.059			
				Max	0.935	0.935	Max		0.353	0.353			
	Operating Real Product (Power 20% ~ 60% Charging) (5mm Airgap & 5mm Shift to the Bottom)			S1	0.752	0.752	S1		0.311	0.311			
				S2	0.517	0.517	S2		0.099	0.099			
				S3	0.639	0.639	S3		0.351	0.351			
				S4	0.577	0.577	S4		0.094	0.094			
				Top	0.942	0.942	Top		0.071	0.071			
				Max	0.942	0.942	Max		0.351	0.351			
	Operating Real Product (Power >75% Charging) (5mm Airgap at Center)			S1	0.744	0.744	S1		0.309	0.309			
				S2	0.521	0.521	S2		0.106	0.106			
				S3	0.671	0.671	S3		0.304	0.304			
				S4	0.708	0.708	S4		0.114	0.114			
				Top	0.927	0.927	Top		0.062	0.062			
				Max	0.965	0.965	Max		0.317	0.317			
	Operating Real Product (Power >75% Charging) (5mm Airgap & 5mm Shift to the Top)			S1	0.778	0.778	S1		0.296	0.296			
				S2	0.547	0.547	S2		0.100	0.100			
				S3	0.647	0.647	S3		0.335	0.335			
				S4	0.663	0.663	S4		0.114	0.114			
				Top	0.846	0.846	Top		0.055	0.055			
				Max	0.857	0.857	Max		0.335	0.335			
	Operating Real Product (Power >75% Charging) (5mm Airgap & 5mm Shift to the Bottom)			S1	0.765	0.765	S1		0.313	0.313			
				S2	0.538	0.538	S2		0.097	0.097			
				S3	0.651	0.651	S3		0.326	0.326			
				S4	0.726	0.726	S4		0.109	0.109			
				Top	0.917	0.917	Top		0.063	0.063			
				Max	0.917	0.917	Max		0.327	0.327			

### Configuration #4

FCC Limit												
Configuration	Test Mode	Measuring Distance (cm)	Electric Field Limit (V/m)	Electric Field Reading (V/m)				Magnetic Field Limit (A/m)	Magnetic Field Reading (A/m)			
				FCC	Location	Peak	Duty Cycle %		FCC Average	FCC	Location	Peak
			4	Operating Real Product (Power ~10% Charging)	15 cm surrounding the device (S1 - S4) and 20 cm above the top surface of the EUT	614	S1	0.346	100	0.346	1.63	S1
S2	0.366	0.366					S2	0.152		0.152		
S3	0.334	0.334					S3	0.105		0.105		
S4	0.392	0.392					S4	0.147		0.147		
Top	0.897	0.897					Top	0.073		0.073		
Max	0.901	0.901					Max	0.152		0.152		
Operating Real Product (Power 20% ~ 60% Charging)	S1	0.301		0.301			S1	0.045	0.045			
	S2	0.391		0.391			S2	0.128	0.128			
	S3	0.336		0.336			S3	0.047	0.047			
	S4	0.301		0.301			S4	0.151	0.151			
	Top	1.014		1.014			Top	0.073	0.073			
	Max	1.014		1.014			Max	0.154	0.164			
Operating Real Product (Power >75% Charging)	S1	0.294		100			0.294	100	S1	0.046		0.046
	S2	0.319					0.319		S2	0.099		0.099
	S3	0.314					0.314		S3	0.055		0.055
	S4	0.315					0.315		S4	0.065		0.065
	Top	0.725					0.725		Top	0.068		0.068
	Max	0.876					0.876		Max	0.107		0.107



### Configuration #5

FCC Limit														
Configuration	Test Mode	Measuring Distance (cm)	Electric Field Limit (V/m)	Electric Field Reading (V/m)				Magnetic Field Limit (A/m)	Magnetic Field Reading (A/m)					
				FCC	Location	Peak	Duty Cycle %		FCC Average	FCC	Location	Peak	Duty Cycle %	FCC Average
5	Operating Real Product (Power ~10% Charging) (2mm Airgap at Center)	15 cm surrounding the device (S1 - S4) and 20 cm above the top surface of the EUT	614	S1	0.281	100	0.281	1.63	S1	0.054	100	0.054		
				S2	0.311		0.311		S2	0.142		0.142		
				S3	0.332		0.332		S3	0.079		0.079		
				S4	0.357		0.357		S4	0.085		0.085		
				Top	0.851		0.851		Top	0.084		0.084		
				Max	0.851		0.851		Max	0.142		0.142		
	Operating Real Product (Power ~10% Charging) (2mm Airgap & 5mm Shift to the Top)			S1	0.273	100	0.273		S1	0.057	100	0.057		
				S2	0.281		0.281		S2	0.105		0.105		
				S3	0.341		0.341		S3	0.051		0.051		
				S4	0.346		0.346		S4	0.040		0.040		
				Top	0.700		0.700		Top	0.083		0.083		
				Max	0.707		0.707		Max	0.083		0.083		
	Operating Real Product (Power ~10% Charging) (2mm Airgap & 5mm Shift to the Bottom)			S1	0.281	100	0.281		S1	0.059	100	0.059		
				S2	0.294		0.294		S2	0.158		0.158		
				S3	0.328		0.328		S3	0.122		0.122		
				S4	0.357		0.357		S4	0.089		0.089		
				Top	0.282		0.282		Top	0.167		0.167		
				Max	0.357		0.357		Max	0.167		0.167		
	Operating Real Product (Power 20% ~ 60% Charging) (2mm Airgap at Center)			S1	0.266	100	0.266		S1	0.062	100	0.062		
				S2	0.306		0.306		S2	0.170		0.170		
				S3	0.334		0.334		S3	0.101		0.101		
				S4	0.353		0.353		S4	0.115		0.115		
				Top	1.013		1.013		Top	0.091		0.091		
				Max	1.013		1.013		Max	0.170		0.170		
	Operating Real Product (Power 20% ~ 60% Charging) (2mm Airgap & 5mm Shift to the Top)			S1	0.358	100	0.358		S1	0.056	100	0.056		
				S2	0.282		0.282		S2	0.121		0.121		
				S3	0.350		0.350		S3	0.081		0.081		
				S4	0.381		0.381		S4	0.058		0.058		
				Top	0.511		0.511		Top	0.078		0.078		
				Max	0.511		0.511		Max	0.121		0.121		
	Operating Real Product (Power 20% ~ 60% Charging) (2mm Airgap & 5mm Shift to the Bottom)			S1	0.278	100	0.278		S1	0.064	100	0.064		
				S2	0.362		0.362		S2	0.158		0.158		
				S3	0.355		0.355		S3	0.125		0.125		
				S4	0.376		0.376		S4	0.097		0.097		
				Top	0.984		0.984		Top	0.133		0.133		
				Max	0.984		0.984		Max	0.168		0.168		
	Operating Real Product (Power >75% Charging) (2mm Airgap at Center)			S1	0.277	100	0.277		S1	0.068	100	0.068		
				S2	0.301		0.301		S2	0.164		0.164		
				S3	0.337		0.337		S3	0.102		0.102		
				S4	0.320		0.320		S4	0.110		0.110		
				Top	0.921		0.921		Top	0.094		0.094		
				Max	0.921		0.921		Max	0.119		0.119		
	Operating Real Product (Power >75% Charging) (2mm Airgap & 5mm Shift to the Top)			S1	0.281	100	0.281		S1	0.044	100	0.044		
				S2	0.301		0.301		S2	0.112		0.112		
				S3	0.351		0.351		S3	0.057		0.057		
				S4	0.352		0.352		S4	0.056		0.056		
				Top	0.392		0.392		Top	0.079		0.079		
				Max	0.392		0.392		Max	0.115		0.115		
	Operating Real Product (Power >75% Charging) (2mm Airgap & 5mm Shift to the Bottom)			S1	0.269	100	0.269		S1	0.055	100	0.055		
				S2	0.274		0.274		S2	0.134		0.134		
				S3	0.323		0.323		S3	0.085		0.085		
				S4	0.338		0.338		S4	0.107		0.107		
				Top	0.443		0.443		Top	0.088		0.088		
				Max	0.501		0.501		Max	0.118		0.118		

## 9. SETUP PHOTO

Please see setup photo report 13181006-EP1V1

**END OF TEST REPORT**