



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

TEST REPORT

FOR

GSM/WCDMA/LTE Phone with BT, DTS/UNII a/b/g/n/ac/ax, GPS, WPT & NFC

FCC ID: PY7-83262V

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Prepared for
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Revision History

<u>Rev.</u>	<u>Issue Date</u>	<u>Revisions</u>	<u>Revised By</u>
V1	2022-03-10	Initial Issue	Richard Jankovics
V2	2022-03-25	Removed model from sections 1 and 8.	Brian Kiewra
V3	2022-03-31	Added detail on use condition (mobile) to Section 5	Richard Jankovics

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1. ATTESTATION OF TEST RESULTS

COMPANY NAME: Sony Corporation
1-7-1 Konan Minato-ku
Tokyo, 108-0076, Japan

EUT DESCRIPTION: GSM/WCDMA/LTE Phone with BT, DTS/UNII a/b/g/n/ac/ax, GPS,
WPT & NFC

SERIAL NUMBER: QV77008VB8, QV770058B8, QV770014B8, QV77008PB8,
QV770083B8, QV77003JB8

DATE TESTED: 2022-02-22 – 2022-03-01

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

UL LLC tested the above equipment in accordance with the requirements set forth in the above standards. The test results show that the equipment tested is capable of demonstrating compliance with the requirements as documented in this report.

The results documented in this report apply only to the tested sample, under the conditions and modes of operation as described herein. It is the manufacturer's responsibility to assure that additional production units of this model are manufactured with identical electrical and mechanical components. All samples tested were in good operating condition throughout the entire test program. Measurement Uncertainties are published for informational purposes only and were not taken into account unless noted otherwise.

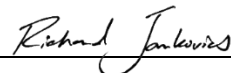
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Approved & Released For
UL LLC By:



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Operations Leader
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2. TEST METHODOLOGY

All testing / calculations were made in accordance with FCC KDB 447498 D01, KDB 447498 D03, KDB 680106 D01 v03r01.

3. FACILITIES AND ACCREDITATION

UL LLC is accredited by A2LA, certification # 0751.06, for all testing performed within the scope of this report. Testing was performed at the locations noted below.

	Address	ISED CABID	ISED Company Number	FCC Registration
<input type="checkbox"/>	Building: 12 Laboratory Dr RTP, NC 27709, U.S.A	US0067	2180C	825374
<input checked="" type="checkbox"/>	Building: 2800 Perimeter Park Dr. Suite B Morrisville, NC 27560, U.S.A		27265	

4. DECISION RULES AND MEASUREMENT UNCERTAINTY

4.1. METROLOGICAL TRACEABILITY

The measuring equipment utilized to perform the tests documented in this report has been calibrated in accordance with the manufacturer's recommendations, and is traceable to recognized national standards.

4.2. DECISION RULES

For all tests where the applicable $U_{LAB} \leq U_{MAX}$ the Decision Rule is based on Simple Acceptance in accordance with ISO Guide 98-4: 2012 Clause 8.2, where $U_{MAX} = 30\%$ (0.3) for RF Exposure evaluations. (Measurement uncertainty is not taken into account when stating conformity with a specified requirement.)

For all tests where the applicable $U_{LAB} > U_{MAX}$ the Decision Rule is based on Guarded Acceptance in accordance with ISO Guide 98-4: 2012 Clause 8.3.2, with a guard band equal to $(U_{LAB} - U_{MAX})$, where $U_{MAX} = 30\%$ (0.3) for RF Exposure evaluations. (Test results are adjusted by the value of the guard band to determine conformity with a specified requirement.)

4.3. MEASUREMENT UNCERTAINTY

Where relevant, the following measurement uncertainty levels have been estimated for tests performed on the apparatus:

PARAMETER	U_{Lab}
Magnetic Field using Exposure Level Meter	+/- 0.80 dB
Electric Field using Exposure Level Meter	+/- 0.91 dB
Time	3.39%

Uncertainty figures are valid to a confidence level of 95%, $k = 2$.

5. EQUIPMENT UNDER TEST

5.1. DESCRIPTION OF EUT

The EUT is a GSM/WCDMA/LTE Phone with BT, DTS/UNII a/b/g/n/ac/ax, GPS, WPT & NFC. This test report covers WPT testing. The device can function as a WPT charger operating from 110-148kHz.

While WPT is functioning, the device is limited to mobile use conditions and was evaluated for desktop applications.

5.2. DESCRIPTION OF TEST SETUP

SUPPORT EQUIPMENT

Support Equipment List				
Description	Manufacturer	Model	Serial Number	FCC ID
Wall Charger	Sony	AC-0540-JP	4640477	NA

I/O CABLES

I/O Cable List						
Cable No	Port	# of identical ports	Connector Type	Cable Type	Cable Length (m)	Remarks
1	USB-C	2	USB-C	USB	< 3	Goes to wall charger

TEST SETUP

The following five configurations are tested:

Configuration	Mode	Descriptions
1	Standby (Power Detecting)	EUT Alone powered by AC/DC adapter
2	Operating with server (source) and client (load) aligned (With EUT charging) Note: Measurements were made when the battery level of the client was at a state of <10%, 50%, and 100%. Spot check worst-case battery level with 5 mm air gap.	EUT powered by AC/DC adapter
3	Operating with server (source) and client (load) aligned, with 90° rotation between them. (With EUT charging) Note: Measurements were made when the battery level of the client was at a state of <10%, 50%, and 100%.	EUT powered by AC/DC adapter
4	Same as configuration 2, with a worst case misalignment between the server and client.	EUT powered by AC/DC adapter
5	Same as configuration 3, with a worst case misalignment between the server and client.	EUT powered by AC/DC adapter

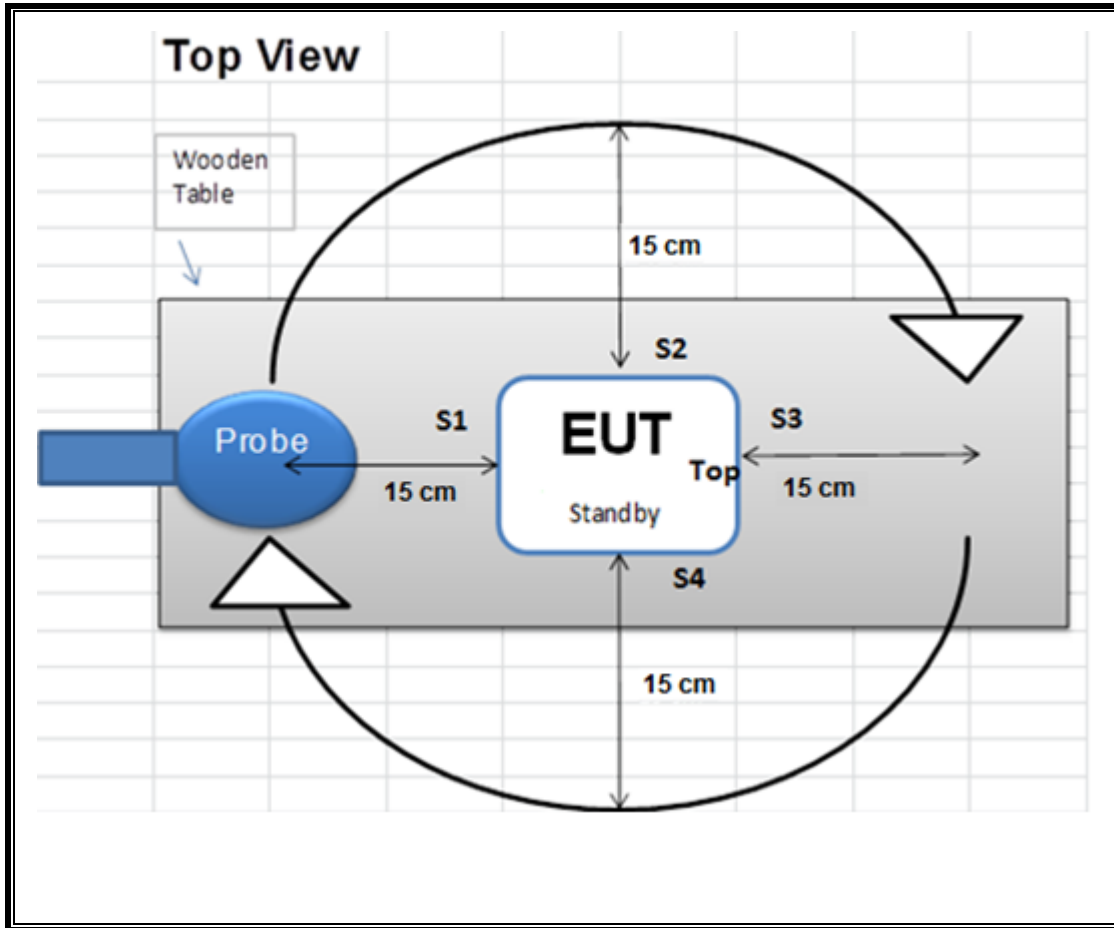
Please refer to R14176139-EP7 for setup diagrams.

MEASUREMENT SETUP

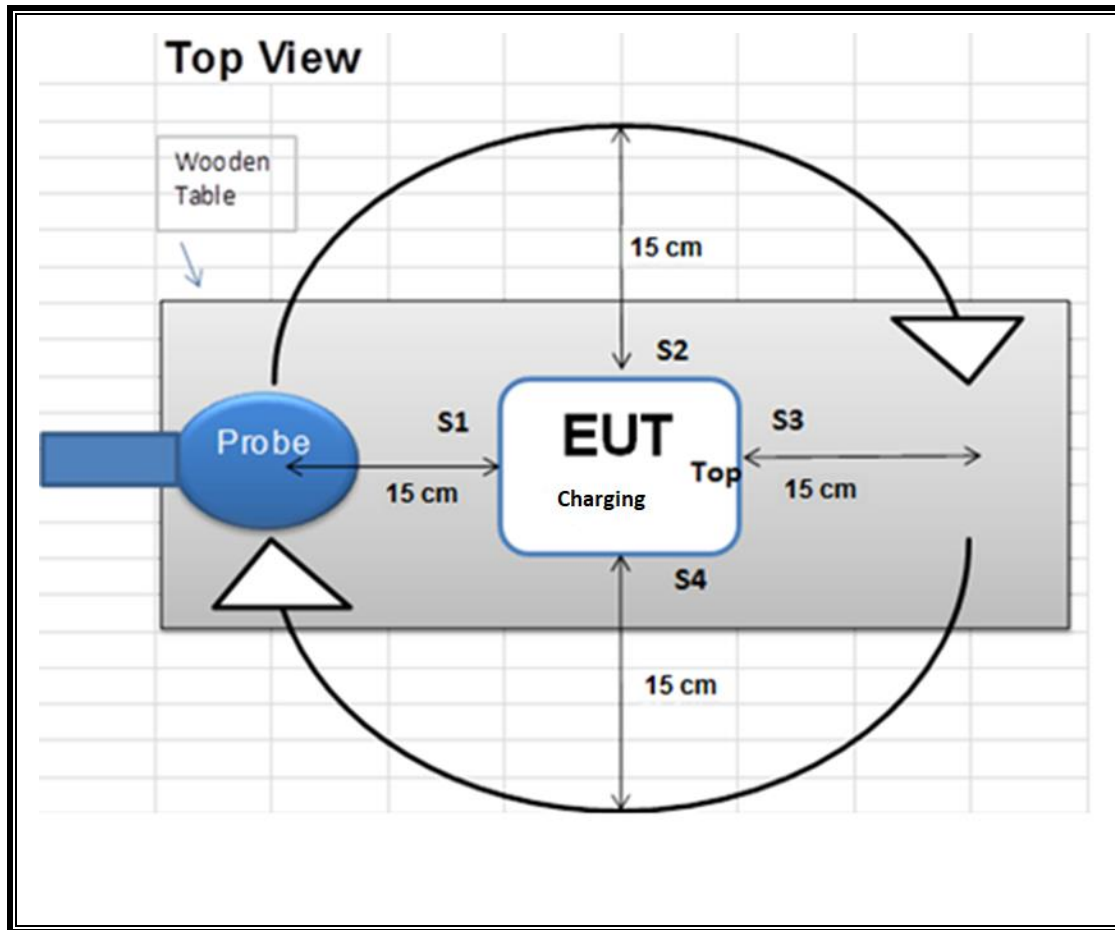
The measurement was taken using a probe placed 15cm surrounding the device and 20cm above the top surface of the EUT.

Measurements were taken from the top and all sides of the EUT per KDB 680106 D01 v03r01.

CONFIGURATION 1



CONFIGURATIONS 2-5



6. TEST AND MEASUREMENT EQUIPMENT

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

Test Equipment List					
Description	Manufacturer	Model	Equip. ID	Cal Date	Cal Due
Electric and Magnetic Field Probe	Narda	EHP-200AC	FA0001	2021-07-14	2022-07-14
Spectrum Analyzer	Agilent	N9030A	SA0025	2021-04-01	2022-04-01

7. DUTY CYCLE

LIMITS

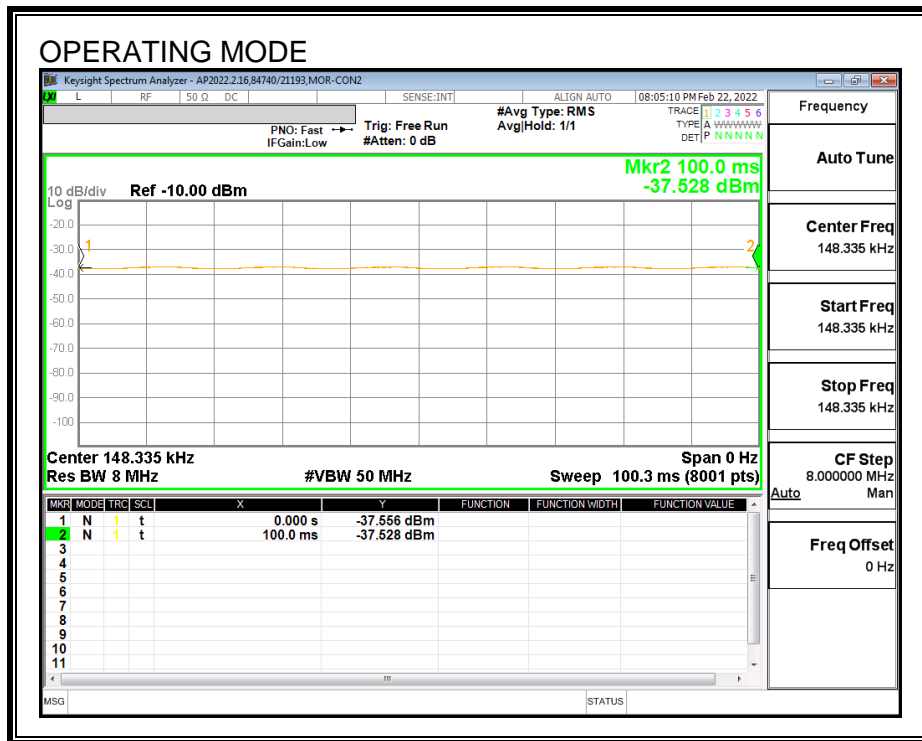
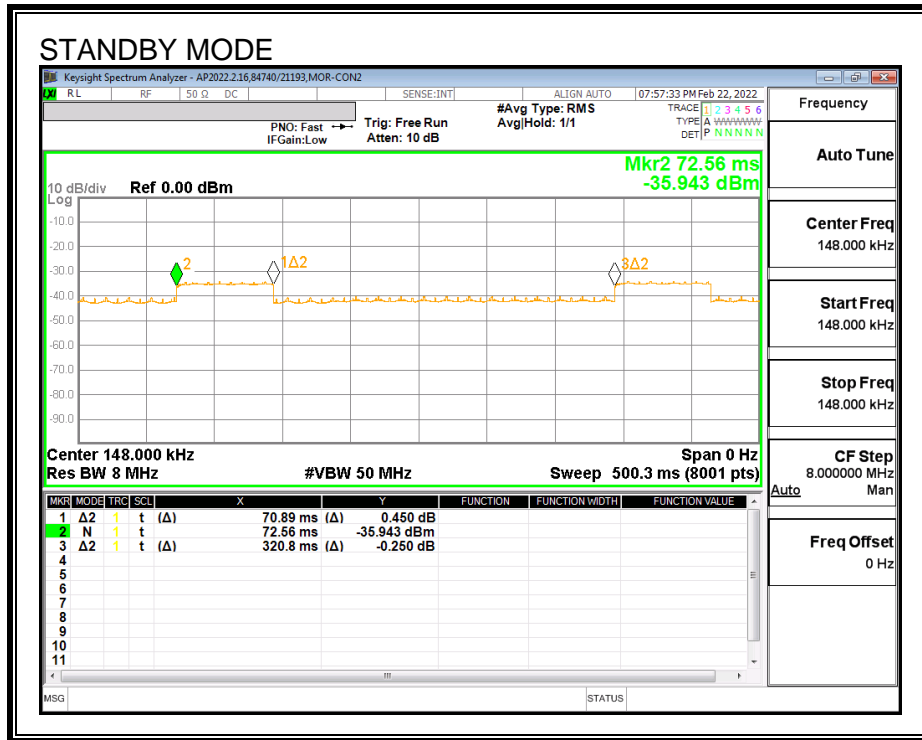
None; for reporting purposes only.

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 (%)
Standby (Config 1)	70.89	320.80	0.2210	22.10%
Operating(Config 2+3)	100.00	100.00	1.00	100.00%



8. MAXIMUM PERMISSIBLE RF EXPOSURE TEST RESULTS

8.1. FCC LIMITS

§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 ²)	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 ²)	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 ²)	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 ²)	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.

Note: The limit at 300 kHz was used for devices operating between 100-300 kHz.

8.2. SUMMARY OF TEST RESULTS

RESULTS

ID:	84740/21193	Date:	2022-02-22 – 2022-03-01
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Note: Both magnetic and electric field strengths have been investigated from 9 kHz to 30 MHz at 15cm surrounding the device and 20cm above the top surface of the EUT operation frequency at 110-148 kHz.

The inductive wireless power transfer device meets all of the following requirements:

- Power transfer frequency is less than 1 MHz
- Output power from each primary coil is less than or equal to 15 watts.
- 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.
- Client device is placed directly in contact with the transmitter.
- Mobile exposure conditions only (portable exposure conditions are not covered by this exclusion).
- 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.

FCC RF Exposure Summary of Results

Electric Field			Magnetic Field		
FCC Limit (V/m)	Maximum Average Reading (V/m)	Percentage (%)	FCC Limit (A/m)	Maximum Average Reading (A/m)	Percentage (%)
614	5.794	0.94%	1.63	0.099	6.07%

Note: since the E and H field are lower than the limit by more than 50% of the limit then a PAG is not required.

8.3. DETAILED TEST RESULTS

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 √Duty Cycle].

Config	Test Mode	Meas Dist (cm)	E 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
1	Standby	15 cm surrounding the device (S1 - S4) and 20 cm above the top surface of the EUT	614	S1	0.628	22.10	0.295	1.63	S1	0.043	22.10	0.020		
				S2	0.587				0.276	S2			0.034	0.016
				S3	0.672				0.316	S3			0.055	0.026
				S4	0.609				0.286	S4			0.026	0.012
				Top	0.562				0.264	Top			0.077	0.036
				Max	0.672				0.316	Max			0.077	0.036
2	Operating Power <10% Charging	15 cm surrounding the device (S1 - S4) and 20 cm above the top surface of the EUT	614	S1	0.586	100.00	0.586	1.63	S1	0.017	100	0.017		
				S2	0.506				0.506	S2			0.007	0.007
				S3	0.580				0.580	S3			0.013	0.013
				S4	0.435				0.435	S4			0.007	0.007
				Top	0.670				0.670	Top			0.007	0.007
				Max	0.670				0.670	Max			0.017	0.017
	Operating Power 50% Charging			S1	0.524	100.00	0.524		S1	0.018	100	0.018		
				S2	0.458				0.458	S2			0.008	0.008
				S3	0.520				0.520	S3			0.023	0.023
				S4	0.365				0.365	S4			0.007	0.007
				Top	0.745				0.745	Top			0.013	0.013
				Max	0.745				0.745	Max			0.023	0.023
	Operating Power 100 % Charged			S1	0.994	100.00	0.994		S1	0.020	100	0.020		
				S2	0.436				0.436	S2			0.005	0.005
				S3	0.628				0.628	S3			0.020	0.020
				S4	0.391				0.391	S4			0.005	0.005
				Top	0.715				0.715	Top			0.013	0.013
				Max	0.994				0.994	Max			0.020	0.020
Operating Power 100 % Charged with 5 mm air gap	S1	0.637	100.00	0.637	S1	0.086	100	0.086						
	S2	0.488			0.488	S2			0.010	0.010				
	S3	0.624			0.624	S3			0.088	0.088				
	S4	0.402			0.402	S4			0.012	0.012				
	Top	0.599			0.599	Top			0.006	0.006				
	Max	0.637			0.637	Max			0.088	0.088				
3	Operating Power <10% Charging	15 cm surrounding the device (S1 - S4) and 20 cm above the top surface of the EUT	614	S1	5.002	100.00	5.002	1.63	S1	0.021	100	0.021		
				S2	0.455				0.455	S2			0.007	0.007
				S3	1.962				1.962	S3			0.013	0.013
				S4	0.427				0.427	S4			0.007	0.007
				Top	0.631				0.631	Top			0.013	0.013
				Max	5.002				5.002	Max			0.021	0.021
	Operating Power 50% Charging			S1	3.640	100.00	3.640		S1	0.027	100	0.027		
				S2	0.402				0.402	S2			0.010	0.010
				S3	1.965				1.965	S3			0.016	0.016
				S4	0.416				0.416	S4			0.010	0.010
				Top	1.075				1.075	Top			0.013	0.013
				Max	3.640				3.640	Max			0.027	0.027
	Operating Power 100 % Charged			S1	5.794	100.00	5.794		S1	0.021	100	0.021		
				S2	0.549				0.549	S2			0.007	0.007
				S3	2.907				2.907	S3			0.012	0.012
S4		0.437	0.437	S4	0.008			0.008						
Top		2.027	2.027	Top	0.008			0.008						
Max		5.794	5.794	Max	0.021			0.021						

Config	Test Mode	Meas Dist (cm)	E 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
4	Operating Power <10% Charging	15 cm surrounding the device (S1 - S4) and 20 cm above the top surface of the EUT	614	S1	0.911	100.00	0.911	1.63	S1	0.081	100	0.081		
				S2	0.476		0.476		S2	0.049		0.049		
				S3	0.537		0.537		S3	0.099		0.099		
				S4	0.449		0.449		S4	0.058		0.058		
				Top	0.729		0.729		Top	0.030		0.030		
				Max	0.911		0.911		Max	0.099		0.099		
	Operating Power 50% Charging			S1	0.961	100.00	0.961		S1	0.028	0.028			
				S2	0.494		0.494		S2	0.050	0.050			
				S3	0.549		0.549		S3	0.088	0.088			
				S4	0.551		0.551		S4	0.062	0.062			
				Top	0.810		0.810		Top	0.042	0.042			
				Max	0.961		0.961		Max	0.088	0.088			
	Operating Power 100 % Charged			S1	0.812	100.00	0.812		S1	0.037	0.037			
				S2	0.364		0.364		S2	0.024	0.024			
				S3	0.404		0.404		S3	0.042	0.042			
				S4	0.396		0.396		S4	0.031	0.031			
				Top	0.692		0.692		Top	0.012	0.012			
				Max	0.812		0.812		Max	0.042	0.042			
5	Operating Power <10% Charging			S1	3.060	100.00	3.060		S1	0.045	100	0.045		
				S2	0.411		0.411		S2	0.012		0.012		
				S3	1.708		1.708		S3	0.030		0.030		
				S4	0.455		0.455		S4	0.011		0.011		
				Top	1.243		1.243		Top	0.010		0.010		
				Max	3.060		3.060		Max	0.045		0.045		
	Operating Power 50% Charging			S1	3.766	100.00	3.766		S1	0.014	0.014			
				S2	0.342		0.342		S2	0.019	0.019			
				S3	1.740		1.740		S3	0.018	0.018			
				S4	0.378		0.378		S4	0.013	0.013			
				Top	0.881		0.881		Top	0.014	0.014			
				Max	3.766		3.766		Max	0.019	0.019			
	Operating Power 100 % Charged			S1	3.070	100.00	3.070		S1	0.034	0.034			
				S2	0.390		0.390		S2	0.015	0.015			
				S3	1.808		1.808		S3	0.014	0.014			
				S4	0.382		0.382		S4	0.014	0.014			
				Top	0.868		0.868		Top	0.009	0.009			
				Max	3.070		3.070		Max	0.034	0.034			

9. SETUP PHOTO

Please refer to R14176139-EP7 for setup photos.

END OF REPORT