

# TEST REPORT

**Report Number. :** 14497921-E2V1

**Applicant :** BELKIN INTERNATIONAL, INC.  
555 S. AVIATION BLVD., SUITE 180  
EL SEGUNDO, CA 90245, USA

**Model :** WIC008

**FCC ID :** K7SWIC008

**EUT Description :** BoostCharge™ Pro Wireless Car Charger With MagSafe 15W

**Test Standard(s) :** FCC PART 1 SUBPART I  
FCC PART 2 SUBPART J

**Date Of Issue:**  
2022-10-03

**Prepared by:**  
UL Verification Services Inc.  
47173 Benicia Street  
Fremont, CA 94538 U.S.A.  
TEL: (510) 319-4000  
FAX: (510) 661-0888



Revision History

<u>Rev.</u>	<u>Issue Date</u>	<u>Revisions</u>	<u>Revised By</u>
V1	2022-10-03	Initial Issue	---

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# 1. ATTESTATION OF TEST RESULTS

**COMPANY NAME:** BELKIN INTERNATIONAL, INC.  
555 S. AVIATION BLVD., SUITE 180  
EL SEGUNDO, CA 90245, USA

**EUT DESCRIPTION:** BoostCharge™ Pro Wireless Car Charger With MagSafe 15W

**MODEL NUMBER:** WIC008

**SERIAL NUMBER:** 57L00F69C00168

**DATE TESTED:** 2022-09-20 TO 2022-09-23

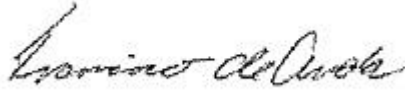
APPLICABLE STANDARDS	
STANDARD	TEST RESULTS
FCC PART 1 SUBPART I & PART 2 SUBPART J	Complies

UL Verification Services Inc. 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.

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 A2LA, NIST, any agency of the Federal Government, or any agency of the U.S. government.

Approved & Released For  
UL Verification Services Inc. By:



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Francisco de Anda  
Staff Engineer  
Consumer Technology Division  
UL Verification Services Inc.

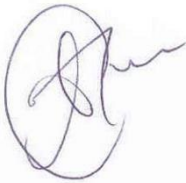
Prepared By:



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Tom Chen  
Senior Test Engineer  
Consumer Technology Division  
UL Verification Services Inc.

Reviewed By:



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Tina Chu  
Senior Project Engineer  
Consumer Technology Division  
UL Verification Services Inc.

## 2. TEST METHODOLOGY

This report contains data provided by the customer which can impact the validity of results. UL Verification Services Inc. is only responsible for the validity of results after the integration of the data provided by the customer.

All testing / calculations were made in accordance with FCC KDB 447498 D01 v6, KDB 447498 D03 v01, KDB 680106 D01 v03r01

## 3. FACILITIES AND ACCREDITATION

UL Verification Services Inc. is accredited by A2LA, certification #0751.05, 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 1: 47173 Benicia Street, Fremont, CA 94538, USA	US0104	2324A	550739
<input type="checkbox"/>	Building 2: 47266 Benicia Street, Fremont, CA 94538, USA	US0104	22541	550739
<input checked="" type="checkbox"/>	Building 4: 47658 Kato Rd, Fremont, CA 94538, USA	US0104	2324B	550739

## 4. DECISION RULES AND MEASUREMENT UNCERTAINTY

### 4.1. METROLOGICAL TRACEABILITY

All test and measuring equipment utilized to perform the tests documented in this report are calibrated on a regular basis, with a maximum time between calibrations of one year or the manufacturers' recommendation, whichever is less, and where applicable is traceable to recognized national standards.

### 4.2. DECISION RULES

The Decision Rule is based on Simple Acceptance in accordance with ISO Guide 98-4:2012 Clause 8.2. (Measurement uncertainty is not taken into account when stating 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 Reading (A/m)	+/-0.04284 (A/m)
Electric Field Reading (V/m)	+/-0.03682 (V/m)

Uncertainty figures are valid to a confidence level of 95.45%.

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

Requirement	Device
(1) Power transfer frequency is less than 1 MHz.	Yes. The maximum operating frequency is 360kHz
(2) Output power from each primary coil is less than or equal to 15 watts.	Yes. The maximum power is 15W.
(3) The system may consist of more than one source primary coils, charging one or more clients. If more than one primary coil is present, the coil pairs may be powered on at the same time.	Yes. The system has one individual coil and only allows for capable wireless power transfer between one source and one client at any given time.
(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 car vent mount WPT portable device.
(6) The aggregate H-field strengths anywhere at or beyond 15 cm surrounding the device, and 20 cm away from the surface from all coils that by design can simultaneously transmit, and while those coils are simultaneously energized, are demonstrated to be less than 50% of the applicable MPE limit.	Yes. Note there is only single coil transmitting.  The maximum aggregate H-field strength is <b>12.02 %</b> of the MPE limit.

Table 1

Summary of E- and H-fields as percentage of RF exposure limits								
Frequency / coil	127.7kHz (Standby)		360kHz (New iPhone)		127.7kHz (Legacy iPhone)		127.7kHz (AirPods Case)	
	E	H	E	H	E	H	E	H
1	0.05%	2.84%						
2			0.16%	3.87%				
3					0.06%	4.55%		
4							0.06%	12.02%
Worst-case	0.05%	2.84%	<b>0.16%</b>	3.87%	0.06%	4.55%	0.06%	<b>12.02%</b>
	0.303 V/m	0.046A/m	<b>0.962V/m</b>	0.063A/m	0.373V/m	0.074A/m	0.362V/m	<b>0.196A/m</b>
Worst E-field	0.962V/m							
Worst H-field	0.196A/m							



## 6. EQUIPMENT UNDER TEST

### 6.1. DESCRIPTION OF EUT

The EUT, BoostCharge™ Pro Wireless Car Charger With MagSafe 15W, is a single charging coil that is capable of charging one client device at a time.

The coil is used for charging a MagSafe iPhone at 360kHz (15W), a legacy iPhone at 127.7kHz (7.5W), and an AirPods Case at 127.7kHz (1W).

EUT is sold with a 20W PD 3.0 single port USB Type-C Cigarette Lighter Adapter (CLA).

### 6.2. WORST-CASE CONFIGURATION AND MODE

The EUT is a Car Vent Mount wireless charger. For all tests, the EUT was connected to a USB Type-C CLA and powered by a 12V battery.

MagSafe phone is based on direct contact with no shifts in position due to the embedded magnet in the charger pad and in the client. Testing is performed with the EUT at its natural orientation (Portrait orientation).

Legacy phone and the AirPods Pro Case that do not have an embedded magnet, are placed at the maximum power position during the testing. Testing is performed with the EUT at a flatbed orientation only.

This report does not cover this portable configuration EUT + new Phone at 360kHz, please refer to a separate exhibit.

Portable configuration was not applicable for clients charging at 127.7kHz because they do not have magnetic capabilities.

The following configurations were tested:

Config	Descriptions	EUT orientation	Frequency	Client and worst-case orientation
1	EUT stand alone, standby, EUT is powered by 12V battery via CLA	Z-orientation (Portrait)	@127.7kHz	None
2	Direct contact during charging/operating between the EUT & WPT Client, EUT is powered by 12V battery via CLA	Z-orientation (Portrait)	@360kHz	iPhone 12. Portrait orientation where the lighting connector of iPhone at the bottom
3		X-orientation (Flatbed)	@127.7kHz	Legacy iPhone. Flatbed orientation where the lighting connector of iPhone facing USB cable
4		X-orientation (Flatbed)	@127.7kHz	AirPods Pro Case. Flatbed orientation with the lighting connector 90 degree away from USB cable to the left.

## 7. 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	87095	2023-03-10	2022-03-10
EMI TEST RECEIVER	Rohde & Schwarz	ESW44	101724	169927	2023-02-16	2022-02-16

## 8. DUTY CYCLE

### LIMITS

None; for reporting purposes only.

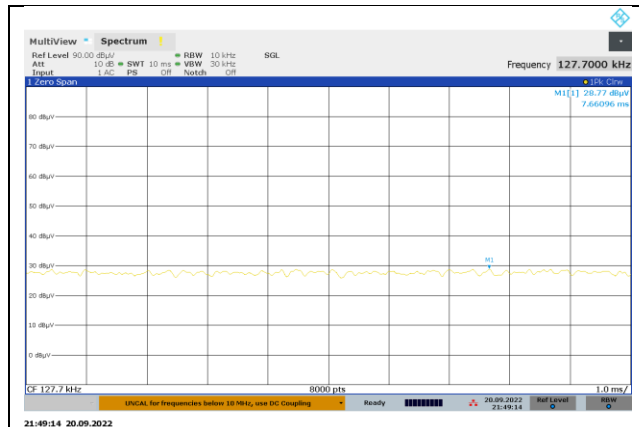
### PROCEDURE

Zero-Span Spectrum Analyzer Method.

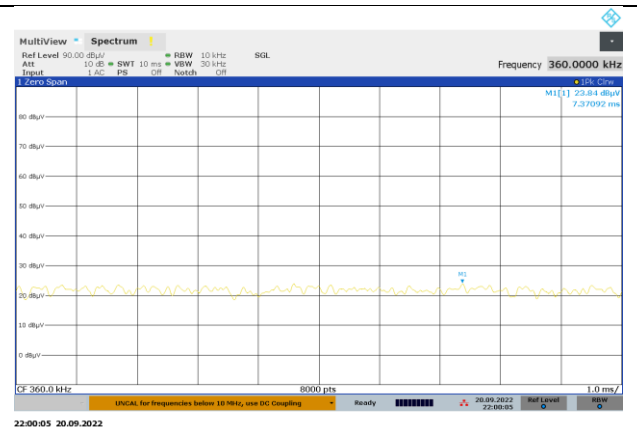
### ON TIME AND DUTY CYCLE RESULTS

Test Engineer:	45256 JB
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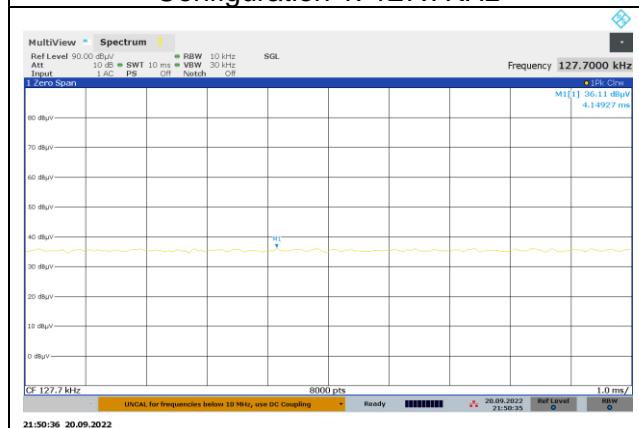
Configuration	Mode	ON Time B (msec)	Period (msec)	Duty Cycle x (linear)	Duty Cycle (%)	Duty Cycle Correction Factor (dB)
1	Standby @ 127.7kHz	1.00	1.00	1.00	100.00	0.00
2	Operating Frequency @ 360kHz (15W)	1.00	1.00	1.00	100.00	0.00
3	Operating Frequency @ 127.7kHz (7.5W)	1.00	1.00	1.00	100.00	0.00
4	Operating Frequency @ 127.7kHz (1W)	1.00	1.00	1.00	100.00	0.00



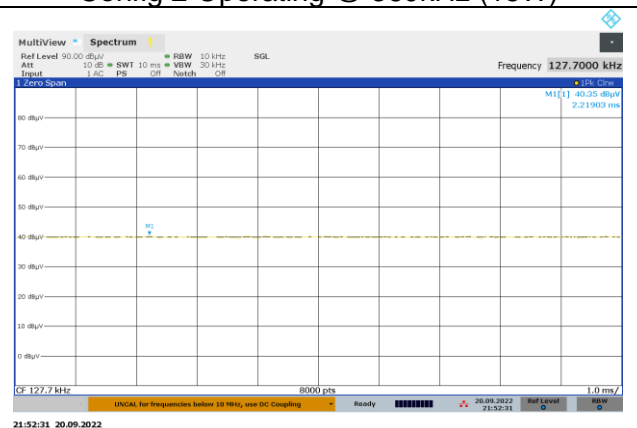
Configuration 1: 127.7KHz



Config 2 Operating @ 360kHz (15W)



Config 3 Operating @ 127.7kHz (7.5W)



Config 4 Operating @ 127.7kHz (1W)

## 9. MAXIMUM PERMISSIBLE RF EXPOSURE

### 9.1. 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.

## RESULT

Test Engineer:	29435 TC, 12471 AM	Test Date:	2022-09-20~2022-09-23
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### 9.1.1. MAXIMUM RESULT SUMMARY

#### CONFIGURATION 1: STANDBY MODE 127.7kHz

Electric Field Limit			Magnetic Field Limit		
FCC RF Exposure Limit	Maximum Average (V/m)	Percentage (%)	FCC RF Exposure	Maximum Average (A/m)	Percentage (%)
614	0.303	0.05%	1.63	0.046	2.84%

#### CONFIGURATION 2: OPERATING MODE WITH NEW PHONE

Electric Field Limit			Magnetic Field Limit		
FCC RF Exposure Limit	Maximum Average (V/m)	Percentage (%)	FCC RF Exposure	Maximum Average (A/m)	Percentage (%)
614	0.962	0.16%	1.63	0.063	3.87%

#### CONFIGURATION 3: OPERATING MODE WITH LEGACY PHONE

Electric Field Limit			Magnetic Field Limit		
FCC RF Exposure Limit	Maximum Average (V/m)	Percentage (%)	FCC RF Exposure	Maximum Average (A/m)	Percentage (%)
614	0.373	0.06%	1.63	0.074	4.55%

#### CONFIGURATION 4: OPERATING MODE WITH AIRPODS PRO CASE

Electric Field Limit			Magnetic Field Limit		
FCC RF Exposure Limit	Maximum Average (V/m)	Percentage (%)	FCC RF Exposure	Maximum Average (A/m)	Percentage (%)
614	0.362	0.06%	1.63	0.196	12.02%

### 9.1.2. 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: STANDBY MODE

127.7 kHz:														
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 Limit	Location	Peak	Duty Cycle %	FCC Average	FCC Limit	Location	Peak	Duty Cycle %	FCC Average		
1	Standby	15 cm surrounding the device (S1 - S4, bottom) and 20 cm above the top surface of the coil	614	S1	0.268	100.0	0.268	1.63	S1	0.046	100.0	0.046	0.046	
				S2	0.240				S2	0.045				0.045
				S3	0.293				S3	0.046				0.046
				S4	0.293				S4	0.043				0.043
				Top	0.268				Top	0.045				0.045
				Bottom	0.303				Bottom	0.045				0.045
				Max	0.303				Max	0.046				0.046

**CONFIGURATION 2: OPERATING MODE WITH NEW PHONE**

**360 kHz:**

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
2	Operating Real Product (Power ~10% Charging)	15 cm surrounding the device (S1 - S4, bottom) and 20 cm above the top surface of the coil	614	S1	0.429	100	0.429	1.63	S1	0.058	100	0.058
				S2	0.590		0.590		S2	0.056		0.056
				S3	0.436		0.436		S3	0.059		0.059
				S4	0.434		0.434		S4	0.059		0.059
				Top	0.461		0.461		Top	0.056		0.056
				Bottom	0.362		0.362		Bottom	0.059		0.059
				Max	0.590		0.590		Max	0.059		0.059
				Max	0.474		0.474		Max	0.055		0.055
	Operating Real Product (Power 20% ~ 60% Charging)			S1	0.962	100	0.962		S1	0.057	100	0.057
				S2	0.599		0.599		S2	0.056		0.056
				S3	0.599		0.599		S3	0.056		0.056
				S4	0.599		0.599		S4	0.056		0.056
				Top	0.453		0.453		Top	0.063		0.063
				Bottom	0.453		0.453		Bottom	0.058		0.058
				Max	0.962		0.962		Max	0.063		0.063
				Max	0.441		0.441		Max	0.057		0.057
	Operating Real Product (Power >75% Charging)			S1	0.613	100	0.613		S1	0.055	100	0.055
				S2	0.498		0.498		S2	0.056		0.056
				S3	0.491		0.491		S3	0.058		0.058
				S4	0.354		0.354		S4	0.053		0.053
				Top	0.354		0.354		Top	0.056		0.056
				Bottom	0.613		0.613		Bottom	0.056		0.056
				Max	0.613		0.613		Max	0.058		0.058
				Max	0.613		0.613		Max	0.058		0.058

**CONFIGURATION 3: OPERATING MODE WITH LEGACY PHONE**

**127.7 kHz:**

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
3	Operating Real Product (Power ~10% Charging)	15 cm surrounding the device (S1 - S4, bottom) and 20 cm above the top surface of the coil	614	S1	0.346	100	0.346	1.63	S1	0.054	100	0.054
				S2	0.334		0.334		S2	0.049		0.049
				S3	0.310		0.310		S3	0.047		0.047
				S4	0.371		0.371		S4	0.051		0.051
				Top	0.346		0.346		Top	0.050		0.050
				Bottom	0.335		0.335		Bottom	0.048		0.048
				Max	0.371		0.371		Max	0.054		0.054
				Max	0.352		0.352		Max	0.074		0.074
	Operating Real Product (Power 20% ~ 60% Charging)			S1	0.352	100	0.352		S1	0.074	100	0.074
				S2	0.334		0.334		S2	0.051		0.051
				S3	0.343		0.343		S3	0.074		0.074
				S4	0.373		0.373		S4	0.060		0.060
				Top	0.310		0.310		Top	0.045		0.045
				Bottom	0.335		0.335		Bottom	0.051		0.051
				Max	0.373		0.373		Max	0.074		0.074
				Max	0.334		0.334		Max	0.073		0.073
	Operating Real Product (Power >75% Charging)			S1	0.334	100	0.334		S1	0.049	100	0.049
				S2	0.352		0.352		S2	0.068		0.068
				S3	0.371		0.371		S3	0.049		0.049
				S4	0.325		0.325		S4	0.068		0.068
				Top	0.325		0.325		Top	0.046		0.046
				Bottom	0.326		0.326		Bottom	0.046		0.046
				Max	0.371		0.371		Max	0.073		0.073
				Max	0.371		0.371		Max	0.073		0.073

**CONFIGURATION 4: OPERATING MODE WITH AIRPODS PRO CASE**

**127.7 kHz:**

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, bottom) and 20 cm above the top surface of the coil	614	S1	0.326	100	0.326	1.63	S1	0.069	100	0.069
				S2	0.326				S2	0.046		
				S3	0.309				S3	0.094		
				S4	0.325				S4	0.049		
				Top	0.326				Top	0.064		
				Bottom	0.326				Bottom	0.069		
				Max	0.326				Max	0.146		
				S1	0.325				S1	0.102		
	S2			0.343	S2	0.049						
	S3			0.334	S3	0.083						
	S4			0.343	S4	0.067						
	Top			0.314	Top	0.196						
	Bottom			0.343	Bottom	0.053						
	Max			0.343	Max	0.196						
	S1			0.362	S1	0.123						
	S2			0.320	S2	0.051						
	S3			0.334	S3	0.093						
	S4			0.335	S4	0.073						
	Top			0.352	Top	0.100						
	Bottom			0.300	Bottom	0.053						
	Max			0.362	Max	0.123						

**10. RF EXPOSURE TEST SETUP AND SETUP PHOTO**

Please see description of RF exposure test up and setup photo report 14497921-EP1

**END OF TEST REPORT**