

FCC Part 1 Subpart I FCC Part 2 Subpart J INDUSTRY CANADA RSS 102 ISSUE 5

**CERTIFICATION TEST REPORT** 

FOR

### WIRELESS CHARGER

MODEL NO: F7U052

FCC ID: K7SF7U052

IC: 3623A-F7U052

REPORT NUMBER: 12152703-E2V5

ISSUE DATE: APRIL 20, 2018

Prepared for BELKIN INTERNATIONAL, INC. 12045 EAST WATERFRONT DRIVE PLAYA VISTA, CA 90094, U.S.A.

PREPARED BY UL VERIFICATION SERVICES INC. 47173 BENICIA STREET FREMONT, CA 94538, U.S.A. TEL: (510) 771-1000 FAX: (510) 661-0888



## **Revision History**

Rev.	Issue Date	Revisions	Revised By
V1	03/05/2018	Initial Issue	Chin Pang
V2	04/06/2018	Split FCC and IC data on Section 8	Chin Pang
V3	04/09/2018	Removed IC NS data	Chin Pang
V4	04/10/2018	Removed IC Limit on Section 8.1.1	Chin Pang
V5	04/20/2018	Address TCB's Question at Section 8.3.	Chin Pang

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# **1. ATTESTATION OF TEST RESULTS**

COMPANY NAME:	BELKIN INTERNATIONAL, INC. 12045 EAST WATERFRONT DF PLAYA VISTA, CA 90094, U.S.A	RIVE A.
EUT DESCRIPTION:	WIRELESS CHARGER	
MODEL NUMBER:	F7U052	
SERIAL NUMBER:	05211EH2800342	
DATE TESTED:	FEBRUARY 19-22 and MARCH	14, 2018
	APPLICABLE STANDARDS	
5	STANDARD	TEST RESULTS
FCC PART 1 SUB	PART I & PART 2 SUBPART J	Complies
INDUSTRY CA	ANADA RSS 102 ISSUE 5	Complies

UL Verification Services Inc. calculated 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.

Approved & Released For UL Verification Services Inc. By:

Prepared By:

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# 2. TEST METHODOLOGY

All calculations were made in accordance with FCC OET Bulletin 65 Edition 97-01 and IC Safety Code 6.

# 3. REFERENCES

All measurements were made as documented in test report UL Verification Services Inc. Document 12152703-E1V1 for operation in the 127.7 kHz band.

Output power data is excerpted from the applicable test reports.

# 4. 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
□ Chamber A (IC:2324B-1)	Chamber D (IC:22541-1)
□ Chamber B (IC:2324B-2)	□ Chamber E (IC:22541-2)
□ Chamber C (IC:2324B-3)	Chamber F (IC:22541-3)
Immunity Area	Chamber G (IC:22541-4)
	Chamber H (IC:22541-5)

The above test sites and facilities are covered under FCC Test Firm Registration # 208313. UL Verification Services Inc. is accredited by NVLAP, Laboratory Code 200065-0. The full scope of accreditation can be viewed at <a href="http://ts.nist.gov/standards/scopes/2000650.htm">http://ts.nist.gov/standards/scopes/2000650.htm</a>.

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# 5. EQUIPMENT UNDER TEST

## 5.1. DESCRIPTION OF EUT

The EUT is wireless charging base capable of up to 10 watt power transfer.

# 5.2. DESCRIPTION OF TEST SETUP

#### SUPPORT EQUIPMENT

SUPPORT EQUIPMENT & PERIPHERALS LIST								
Description	Manufacturer	Model	Serial Number					
QI Receiver Simulator	AVID Technologies, Inc.	102-03	000011122117					
AC Adapter	Belkin	ADS-26FSG-12 15023EPCU	N/A					
Resistor Load	N/A	N/A	N/A					
iPhone X	Apple	NMQAQ2LL/A	G6TVJ7H8JCLH					

#### I/O CABLES

N/A

#### TEST SETUP

The following three configurations are tested:

Configuration	Mode	Descriptions
1	Standby	EUT Alone powered by AC/DC
	(< 10% Power Detecting)	adapter
2	Operating	EUT and real phone powered by
(5mm shift	(Real Phone 5W, ~50% Power	AC/DC adapter
L/R/T/B; with &	Charging)	
without 3mm	Note: For the configuration 2 operating	
airgap)	with real phone, battery level of the	
	phone was at a state of 20 – 50%.	
3	Operating	EUT and 10W load powered by
(5mm shift	(10W Load, >90% Power Charging)	AC/DC adapter
L/R/T/B; with &		
without 3mm		
airgap)		

Note: For the configuration 2 operating with real phone, battery level of the phone was at a state of 20 - 50%. For the configurations 2 and 3, operating with 5mm shift around four different positions (Right/Left/Top/Bottom) with and without 3mm Airgap between the phone / simulator RX and WPT EUT.

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#### MEASUREMENT SETUP

The measurement was taken using a probe placed 10 cm from the center of the probe to the edge of the EUT. Measurements were taken from the top and all sides of the EUT per KDB 680106 D01

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#### **CONFIGURATION 1**



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#### **CONFIGURATIONS 2**



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#### **CONFIGURATIONS 3**



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# 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	Local ID (T No.)	Cal Date	Cal Due				
Electric and Magnetic Field Probe	Narda	EHP-200A	170WX60227	03/17/2017	03/17/2018				

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# 7. DUTY CYCLE

#### <u>LIMITS</u>

None; for reporting purposes only.

#### PROCEDURE

Zero-Span Spectrum Analyzer Method.

#### ON TIME AND DUTY CYCLE RESULTS

Mode	<b>ON</b> Time	Period	<b>Duty Cycle</b>	Duty	Duty Cycle
	В		x	Cycle	<b>Correction Factor</b>
	(msec)	(msec)	(linear)	(%)	(dB)
Standby (Config 1)	93.49	4811.00	0.02	1.94%	17.11
Operating(Config 2)	100.00	100.00	1.00	100.00%	0.00
Operating(Config 3)	100.00	100.00	1.00	100.00%	0.00

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Agi	lent 10	.33:40	Feb 26,	2018						Freq/unanne
Pv8.0⊓ ef —1⊓ <sup>P</sup> eak ∥	(02141 0 dBm	.8),3729	0, Condu Atten 10	cted B dB			۸ 	4kr1 : -51.1	1./46 s 1 dBm	Center Fred 127.700000 kH:
og 0 B/			1							<b>Start Fred</b> 127.700000 kH:
										Stop Fred 127.700000 kH
gAv										<b>CF Ste</b> j 9.10000000 kH <u>Auto</u> Ma
enter es BW Marke	127.7 9.1 kł ≥r T	kHz Iz race	Туре	#VBW (	30 kHz X Axis	Swee	эр 6.17	Spa s (100 Amplit	n 0 Hz^ 1 pts) <sup>ude</sup>	Freq Offse 0.00000000 H
1		(1)	lime		1.746	8		-51.11	dBm	Signal Tracl <sup>On <u>Of</u></sup>

APUS 0/021	A18) 3729	10 Condu	inted B			Mbr1	900 mc	
Ref -10 dB #Peak	²V8.0(021418),37230, Conducted B ≥f −10 dBm #Atten 10 dB ?eak					-47.	78 dBm	Center Fred 127.700000 kH:
Log 10 dB/								<b>Start Fred</b> 127.700000 kH:
								<b>Stop Fre</b> 127.700000 kH
LgAv								<b>CF Ste</b> 10.0000000 kH <u>Auto</u> Ma
V1 S2 S3 FC AA								Freq Offse 0.00000000 H
£(f): f>50k								<b>Signal Tracl</b> On <u>Of</u>
Center 127. Res BW 10	.7 kHz kHz		#VBW 3	0 kHz	Swe	Sp ep 6 s (10	an 0 Hz^ 01 pts)	

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OPERATI	NG MODE	E (Configs	s 4_With	Receiv	er 10W 3	3mm Airgap)
🔆 Agilent 10	0:25:19 Feb 20	6,2018			L	Freq/Channel
APv8.0(02141 Ref -10 dBm #Peak	18),37290, Con #Atten	ducted B 10 dB		Mkr	1 390 ms -46.81 dBm	Center Freq 127.700000 kHz
Log 10 dB/						<b>Start Freq</b> 127.700000 kHz
						<b>Stop Freq</b> 127.700000 kHz
LgAv						<b>CF Step</b> 10.0000000 kHz <u>Auto</u> Man
V1 S2 S3 FC AA						Freq Offset 0.00000000 Hz
£(f): f>50k						<b>Signal Track</b> <sup>On <u>Off</u></sup>
Center 127.7 Res BW 10 kH	kHz kHz	#VBW 30 I		Sweep 6 s	Span 0 Hz (1001 pts)	
Copyright 20	000-2011 Agi	lent Technol	ogies			

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# 8. MAXIMUM PERMISSIBLE RF EXPOSURE

#### 8.1. FCC RULES

§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.

Frequency range (MHz)	Electric field strength (V/m)	Magnetic field strength (A/m)	Power density (mW/cm²)	Averaging time (minutes)
(A) Lim	nits for Occupational	I/Controlled Exposu	res	
0.3-3.0 3.0-30 30-300 300-1500 1500-100,000	614 1842/f 61.4	1.63 4 <i>.89/</i> f 0.163	*(100) *(900/f²) 1.0 f/300 5	6 6 6 6
(B) Limits	for General Populati	on/Uncontrolled Exp	posure	
0.3–1.34	614 824 <i>1</i> 7	1.63 2.19/f	*(100) *(180/f <sup>2</sup> )	30 30

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

#### 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/cm²)	Averaging time (minutes)	
30–300	27.5	0.073	0.2 £/1500	30	
1500-100,000			1.0	30	

f = frequency in MHz

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.

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#### 8.1.1. MEASUREMENTS RESULTS

**RESULTS** 

ID:	37290	Date:	2/19/2018 - 02/22/2018
Ю.	57250	Date.	

Note: Both magnetic and electric field strengths have been investigated from 9 KHz to 30 MHz at 10cm to find that the EUT operation frequency is at 127.7 KHz.

#### Maximum RF exposure reading and percentage

FCC

	Electric Field Li	imit	Magnetic Field Limit					
FCC	Maximum RMS (V/m)	Percentage (%)	FCC	Maximum RMS (A/m)	Percentage (%)			
614	22.213	3.62%	1.63	1.623	99.57%			

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# 8.2. CANADA RSS 102 LIMITS AND SUMMARY

### 8.2.1. CANADA LIMITS

Radio Standards Specification 102, Issue 5 Radio Frequency (RF) Exposure Compliance of Radio communication Apparatus (All Frequency Bands), sets out the requirements and measurement techniques used to evaluate radio frequency (RF) exposure compliance of radio communication apparatus designed to be used within the vicinity of the human body

### Table 2: Internal Electric Field Strength Basic Restrictions (3 kHz-10 MHz)

Condition	Internal Electric Field Strength <sup>*</sup> (V/m) (any part of the body)
Controlled Environment	2.7 x 10 <sup>-4</sup> f
Uncontrolled Environment	1.35 X 10 <sup>-4</sup> <i>f</i>

**Note:** *f* is frequency in Hz. \* Instantaneous, RMS values apply.

 Table 4: RF Field Strength Limits for Devices Used by the General Public (Uncontrolled Environment)

Frequency Range (MHz)	Electric Field (V/m rms)	Magnetic Field (A/m rms)	Power Dentisty (W/m <sup>2</sup> )	Reference Period (minutes)
0.003-10	83	90		Instantaneous*
0.1-10	-	0.73/ <i>f</i>	-	6**
1.1-10	87/ f <sup>0.5</sup>	-	-	6**
10-20	27.46	0.0728	-2	6
20-48	58.07/ f <sup>0.25</sup>	0.1540/ f <sup>0.25</sup>	8.944/ f <sup>0.5</sup>	6
48-300	22.06	0.05852	1.291	6
300-6000	3.142 f <sup>0.3417</sup>	0.008335 f <sup>0.3417</sup>	0.02619 f <sup>0.6834</sup>	6
6000-15000	61.4	0.163	10	6
15000-150000	61.4	0.163	10	616000/ f <sup>1.2</sup>
150000-300000	0.158 f <sup>0.5</sup>	$4.21 \times 10^{-4} f^{0.5}$	6.67 x 10 <sup>-5</sup> <i>f</i>	616000/ <i>f</i> <sup>1.2</sup>

**Note:** *f* is frequency in MHz.

\* Based on nerve stimulation (NS).

\*\* Based on specific absorption rate (SAR).

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### 8.2.2. CANADA SUMMARY OF RESULTS

**RESULTS** 

ID:	37290	Date:	2/19/2018 - 02/22/2018
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Note: Both magnetic and electric field strengths have been investigated from 9 KHz to 30 MHz at 10cm to find that the EUT operation frequency is at 127.7 KHz. Since 127.7 KHz is within the frequency range of 0.1-10MHz, The Industry Canada both magnetic field limits of 90 A/m (NS) and 0.73/ f A/m (SAR) are applied.

#### **RSS 102 RF Exposure Summary of Results**

Magnetic Field									
IC Limit	Max. A/m rms	Percentage							
5.72	1.623	28.37%							

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## 8.2.3. STANDBY AND CONTACT MODES

#### E- FIELD AND H- FIELD RMS MEASUREMENTS

			Electric Field Limit		Electric	Field Reading		Magnetic F	ield Limit		Ма	agnetic Field Re	ading	
Configuration	Test Mode	Measuring Distance (cm)	(V/m)		(V/m)			(A/n	(A/m)		(A/m)			
			FCC	Location	Peak	Duty Cyde %	FCC Average	FCC	ю	Location	Peak	Duty Cyde %	FCC Average	IC RMS
				S1	0.389		0.008			\$1	0.180		0.003	0.025
				S2	0.354	] [	0.007	]		S2	0.053		0.001	0.007
	Standby			53	0.371		0.007			53	0.055		0.001	0.008
1	power < 10% detecting			<u>\$4</u>	0.364	1.94	0.007			<u>\$4</u>	0.159	1.94	0.003	0.022
				Тор	0.390		0.008			Тор	0.250		0.005	0.035
				Max	0.397		0.008			Max	1.264		0.025	0.176
				6 mins	0.337		0.007	4		6 mins	1.255		0.024	0.175
				51	0.371	4	0.007	-		51	0.710	-	0.	710
	Operating, 5W Real Product			52	0.362	4 4	0.007	4		52 52	0.163	-	0.	163
	(Center)			53	0.381	100.00	0.007	-		53	0.391	100	0.	391
	Power ~ 50% Charging			- 54	0.355	4 4	0.007	-		- 54	0.2/6	-	0.276	
				Top	0.382	4 4	0.007	-		Top	0.820	-	0.820	
				Max	0.390		0.008			Max	0.842		0.842	
				51	0.460	4 -	0.009	-		51	51 0.805 52 0.463	-	0.463	
	Operating, 5W Real Product (Shift			52	0,480	4 1	0.009	-		52		-		
	5mm to Right) Power ~ 50%			33	0.429	100.00	0.008	-		25	0.825	100	0.	820
	Charging			34	0.543	4 1	0.009	1		34	0.010	-	0.591	
		10	614	Max	0.548	1 1	0.011	1.63	5.72	Max	0.821	-	0	921
		10		\$1	0.532		0.010			\$1	0.711		0.831	
					0.360	1 1	0.007	1		0	0.260	-		
	Operating, 5W Real Product (Shift			53	0.513	1 1	0.010			53	0.741		0	741
2	5mm to Left) Power ~ 50%			\$4	0.381	100.00	0.007	1		\$4	0.248	100	0	248
	Charging			Top	0.520	1 1	0.010	1		Тор	0.867	1	0	867
				Max	0.552	1 1	0.011	1		Max	0.923	1	0.	923
				S1	0.371		0.007	1		51	0.656		0	656
				52	0.389	1 1	0.008	1		52	0.326	1	0.	3 26
	Operating, SW Real Product (Shift			53	0.362		0.007	]		S3	0.058		0.	058
	Characian Characian			<u>\$4</u>	0.401	100.00	0.008	]		<u>\$4</u>	0.453	100	0	453
	Charging			Тор	0.425		0.008	]		Тор	0.743		0.	743
				Max	0.458		0.009			Max	0.812		0	812
				51	0.362		0.007			51	0.131		0.	131
	Operating 5W/Real Product /Chift			52	0.362	] [	0.007	.		52	0.209		0.	209
	Smm to Bottom) Power *			53	0.355	100.00	0.007	1		53	0.353	100	0	353
	50% Charging			54	0.362		0.007	4		<u>54</u>	0.348		0	348
				Тор	0.505	1 I	0.010	4		Тор	0.483	-	0.	483
				Max	0.627		0.012			Max	0.749		0.	749

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#### REPORT NO: 12152703-E2V5 EUT: WIRELESS CHARGER

Configuration	Test Mode	Measuring	Electric Field Limit (V/m)		Electric	Field Reading (V/m)		Magnetic Field Limit (A/m)		Magnetic Field Reading (A/m)			
		Distance (cm)	FCC	Location	Peak	Duty Cycle %	RMS	FCC	IC	Location	Peak	Duty Cycle %	RM
				\$1	8.980		8.980			\$1	0.442		0.4
	o			\$2	11.083		11.083	1		\$2	0.888	1	0.8
	Operating, 10W Load			S3	6.516	100.00	6.516	1		S3	0.450	100	0.4
	(Center)	S4         7.835         100.00         7.835           Top         11.964         11.964         11.964           Max         12.240         12.240         12.240		S4	7.835	100.00	7.835	1		S4	1.140	100	1.1
	Power > 50% charging			Тор	11.964		11.964			Тор	1.509		1.5
				Max	1.524		1.5						
				S1	19.136		19.136			S1	0.885		0.8
	Operating 10W Load			S2	6.324		6.324			\$2	1.039	]	1.0
	(Shift Smm to Right)			S3	7.956	100.00	7.956			S3	0.406	100	0.4
	Power > 90% Charging			S4	8.921	100.00	8.921			S4	0.769	100	0.7
	rowers somenarging			Тор	20.500		20.500			Тор	1.464		1.4
				Max	22.213		22.213			Max	1.483		1.4
				\$1	11.941		11.941			\$1	0.452		0.4
	Operating 10W Load (Shift			S2	9.709	100.00	9.709			\$2	1.397		1.3
3	5mm to Left) Power >	10	614	S3	9.343		9.343	1.63	5.72	S3	0.940	100	0.9
5	90% Charging		014	S4 8.942	100.00	8.942	1.05	5.72	S4	1.001	100	1.0	
	Solo charging			Тор	12.673		12.673			Тор	1.622		1.6
				Max	15.214		15.214			Max	1.623		1.6
				\$1	15.102		15.102			\$1	0.161		0.1
	Operating 10W Load (Shift			S2	8.180		8.180			\$2	0.514		0.5
	5mm to Top) Power >			S3	9.102	100.00	9.102			S3	0.394	100	0.3
	90% Charging			S4	8.355		8.355	4		S4	0.286		0.2
				Тор	15.300		15.300			Тор	1.343	1	1.3
		4		Max	16.321		16.321	4		Max	1.424		1.4
				\$1	9.415		9.415	4		S1	0.525	ł	0.5
	Operating, 10W Load			S2	9.517		9.517	4		\$2	1.549	4	1.5
	(Shift 5mm to Bottom)			S3	8.118	100.00	8.118	4		S3	0.376	100	0.3
	Power > 90% Charging		S4 9.333 100.00 9.333		S4	1.543	4	1.5					
				Тор	9.910	9.910			Тор	1.434	ļ	1.4	
				Max	11.230		11.230			Max	1.587		1.5

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### 8.2.4. WITH 3mm AIRGAP

#### E- FIELD AND H- FIELD RMS MEASUREMENTS

Conformation	Test Made	M easuring	Electric Field Limit		Electric	ield Reading		Magnetic F	ield Limit		Magnetic	Field Reading	
Jonniguration	Test Mode	Distance	(v/m)			(v/m)		(Avn	1)		(	AVM)	
		(cm)	FCC	Location	Peak	Duty Cycle	RMS	FCC	IC	Location	Peak	Duty Cycle	RMS
				51	0.354		0.354			51	0.160		0.160
	Operating, 5W Real Product			52	0.581		0.581			52	0.320		0.32
	(3mm Airgap at Center)			53	0.562	100.00	0.562			53	0.091	100	0.09
	Power > 50% Charging			54	0.470		0.470	-		54	0.207		0.20
				тор	0.662	-	0.662			Тор	0.235	4 1	0.23
		l		Max	0.788		0.788	4		Max	0.351		0.35
				51	0.371		0.371			51	0.240		0.24
	Operating, 5W Real Product			52	0.389		0.389			52	0.264		0.26
	(3mm Airgap & 5mm Shift to			53	0.372	100.00	0.372			53	860.0	100	0.09
	the Right)			34	0.343		0.343	-		54	0.312		0.31
	Power > 50% Charging			тор	0.953		0.953			тор	0.230		0.2
				Max	1.256		1.256	-		Max	0.432		0.43
				21	0.381	-	0.581	-		21	0.106		0.10
	Operating, 5W Real Product			52	0.571	-	0.571			52	0.256		0.23
2	(Smm Airgap & Smm Snitt to	10	614	22	0.489	100.00	0.489	1.63	5.72	222	0.209	100	0.20
	Downers 50% Charging			34	0.369	-	0.369			34	0.351		0.55
	Power > 50% charging			Top	0.782	-	0.782			Top	0.187		0.18
				Max	0.952		0.952	-		Max 51	0.441		0.44
	Occupation EW/ Real Product			57	0.363	-	0.363	-		57	0.500		0.50
	Operating, SW Real Product			52	0.311	-	0.221			52	0.364		0.56
	the Top)			51	0.301	100.00	0.301	1		51	0.058	100	0.04
	Power > 50% Charging			Top	0.762	1	0.323	1		Ton	0.038	1	0.05
				Max	0.875	-	0.875	1		Max	0.595	1 1	0.59
				51	0.362		0.362			51	0.114		0.11
	Operating, 5W Real Product			52	0.464	1	0.454			52	0.269	1 1	0.26
	(3mm Airgap & 5mm Shift to			53	0.552	1	0.552	1		53	0.069	1	0.05
	the Bottom)			54	0.571	100.00	0.571	1		54	0.350	100	0.35
	Power > 50% Charging			Top	0.850	1	0.850	1		Тор	0.196	1 1	0.19
				Max	0.983	1	0.983	1		Max	0.378	1 1	0.37

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			Electric Field Limit		Electric F	ield Reading		Magnetic F	ield Limit		Magnetic F	ield Reading		
Configuration	Test Mode	Measuring Distance (cm)	(V/m)		(	V/m)		(A/r	n)		(A	/m)		
		Distance (CIII)	FCC	Location	Peak	Duty Cycle %	RMS	FCC	IC	Location	Peak	Duty Cycle %	RMS	
				S1	11.194		11.194			\$1	0.568		0.568	
	Operating 10W Load			S2	5.065		5.065			S2	1.039		1.039	
	(2mm Airgan at Center)			S3	3.907	100.00	3.907			S3	0.526	100	0.526	
	Power > 90% Charging			\$4	4.588	100.00	4.588			S4	0.625	100	0.625	
	rower v boys entrying			Тор	11.570		11.570			Тор	1.436		1.436	
				Max	12.230		12.230			Max	1.437		1.437	
				\$1	4.591		4.591			\$1	1.171		1.171	
	Operating, 10W Load			\$2	4.856		4.856			\$2	1.400		1.400	
	(3mm Airgap & 5mm Shift to			S3	5.952	100.00	5.952			\$3	0.296	100	0.296	
	the Right) Power > 90%			\$4	5.758	100.00	5.758			S4	1.024		1.024	
	Charging			Тор	10.675		10.675			Тор	1.426		1.426	
				Max	12.462		12.462			Max	1.427		1.427	
				\$1	15.663		15.663			\$1	0.317		0.317	
	Operating, 10W Load (3mm			\$2	5.689		5.689			\$2	1.460		1.460	
3	Airgap & 5mm Shift to the	10	10	614	S3	6.900	100.00	6.900	1.63	5.72	\$3	1.051	100	1.051
	Left) Power > 90%			S4	7.680		7.680		5.72	S4	1.167		1.167	
	Charging			Тор	15.854		15.854			Тор	1.470		1.470	
				Max	17.772		17.772			Max	1.560		1.560	
				\$1	12.560		12.560			\$1	0.508		0.508	
	Operating, 10W Load (3mm			\$2	7.132		7.132			\$2	0.919	4	0.919	
	Airgap & 5mm Shift to the			S3	6.288	100.00	6.288			\$3	0.440	100	0.440	
	Top) Power > 90%			S4	8.093		8.093			\$4	0.395		0.395	
	Charging	1		Тор	13.094		13.094	1		*Top	1.412	4 4	1.412	
		4		Max	15.860		15.860	4		*Max	1.450		1.450	
				\$1	6.812		6.812	-		\$1	1.459	4 4	1.459	
	Operating, 10W Load (3mm	1		\$2	5.474		5.474	4		\$2	1.440	4 -	1.440	
	Airgap & 5mm Shift to the			\$3	6.945	100.00	6.945	-		\$3	0.467	100	0.467	
	Bottom) Power > 90%			S4	7.044		7.044			54	1.514	4 4	1.514	
	Charging	1		Тор	10.998		10.998	4		•Тор	1.450	4	1.450	
		L	l	Max	11.211		11.211	I		*Max	1.520		1.520	

\* Scan over 6 mins RMS averaging

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# 8.3. NEW SAMPLE WORST CASE SPOT CHECK

ID:	37290	Date:	3/14/18			
	Electric	c Field Li	mit		Magnetic Field	Limit
FCC	Maximum RMS	S (V/m)	Percentage (%)	FCC	C Maximum RMS (A/m)	Percentage (%)
614	11.650		1.90%	1.63	1.524	93.50%

#### E- FIELD AND H-FIELD RMS MEASUREMENTS

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 %	RMS	FCC	IC	Location	Peak	Duty Cycle %	RMS
3	Operating, 10W Load (Center) Power > 90% Charging	10	614	S1	7.560	100.00	7.560		s3 5.72	S1	0.570	100	0.570
				52	6.500		6.500			52	0.950		0.950
				53	2.403		2.403			53	0.450		0.450
				S4	3.560		3.560			S4	0.714		0.714
				Тор	8.650		8.650			Тор	1.202		1.202
				Max	9.620		9.620			Max	1.350		1.350
	Operating, 10W Load (Shift 5mm to Right) Power > 90% Charging			51	3.560	100.00	3.560			S1	0.825	100	0.825
				52	4.500		4.500			52	0.734		0.734
				S3	5.560		5.560			53	0.965		0.965
				S4	5.250		5.250			S4	0.916		0.916
				Тор	8.652		8.652			Тор	0.911		0.911
				Max	9.850		9.850			Max	1.350		1.350
	Operating, 10W Load (Shift 5mm to Left) Power > 90% Charging			51	7.550	100.00	7.550			S1	0.410		0.410
				52	6.520		6.520			52	0.850		0.850
				S3	6.240		6.240	1.62		53	0.653		0.653
				S4	6.800		6.800	1.05		S4	0.461		0.461
				Тор	10.750		10.750			Тор	1.196		1.196
				Max	11.650		11.650			Max	1.524		1.524
	Operating 10W Load (Shift			51	7.550	100.00	7.550			S1	0.278	100	0.278
				52	6.750		6.750			52	0.189		0.189
	Emm to Top) Bower >			S3	6.200		6.200			S3	0.166		0.166
	90% Charging			54	7.250		7.250			54	0.182		0.182
				Тор	8.900		8.900			Тор	1.068		1.068
				Max	9.550		9.550			Max	1.087		1.087
	Operating, 10W Load (Shift Smm to Bottom) Power > 90% Charging			51	5.200	100.00	5.200	]		51	0.552	100	0.552
				52	4.650		4.650	]		52	0.900		0.900
				S3	5.860		5.860	]		S3	0.347		0.347
				S4	6.350		6.350	1		S4	0.549		0.549
				Тор	8.520		8.520	1		Тор	1.084		1.084
				Max	9,750		9,750	1		Max	1.245		1.245

Note: At the request of the FCC via PAG / KDB the field strengths for the worst case exposure condition were remeasured on a second sample because the field strengths were high relative to the limit

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