TEST REPORT

Report Number.: 15205794-E2V2

Applicant	:	BELKIN INTERNATIONAL, INC. 555 S. AVIATION BLVD., SUITE 180 EL SEGUNDO, CA 90245, USA
Model	:	WIZ027
FCC ID	:	K7SWIZ027
EUT Description	:	BoostCharge Pro 2-in-1 Magnetic Charging Dock
Test Standard(s)	:	FCC PART 1 SUBPART I FCC PART 2 SUBPART J

Date Of Issue:
2024-05-28

Prepared by:
UL Verification Services Inc.
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ACCREDITED
CERT #0751.05

Revision History

Rev.	Issue Date	Revisions	Revised By
V1	2024-05-09	Initial Issue	---
V2	2024-05-28	Updated Section 2, 5, and 7	Steven Tran

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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 2-in-1 Magnetic Charging Dock

MODEL NUMBER: WIZ027

BRAND: belkin

SERIAL NUMBER: 59V10F62E31655

SAMPLE RECEIPT DATE: 2024/03/04

DATE TESTED: 2024/04/03 – 2024/04/08

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.

Approved & Released By:	Reviewed By:	Report By:
		
Dan Coronia Operations Leader UL Verification Services Inc.	Steven Tran Project Engineer UL Verification Services Inc.	Chin Pang Senior Lab Engineer 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 correctly integrating customer-provided data with measurements performed by UL Verification Services Inc.

All testing / calculations were made in accordance with

- FCC KDB 447498 D01 General RF Exposure Guidance v06
- FCC KDB 447498 D03 Supplement C Cross-Reference v01
- FCC KDB 680106 D01 RF Exposure Wireless Charging Apps D01v04

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
☐	Building 1: 47173 Benicia Street, Fremont, CA 94538, USA	US0104	2324A	550739
☐	Building 2: 47266 Benicia Street, Fremont, CA 94538, USA			
☐	Building 3: 843 Auburn Court, Fremont, CA 94538 USA			
☒	Building 4: 47658 Kato Rd, Fremont, CA 94538 USA			
☐	Building 5: 47670 Kato Rd, Fremont, CA 94538 USA			

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) The power transfer frequency is below 1 MHz.	No. The maximum operating frequency is 1.778MHz.
(4) Only § 2.1091-Mobile exposure conditions apply (i.e., this provision does not cover § 2.1093-Portable exposure conditions).	Yes. EUT is mobile only.
(5) The E-field and H-field strengths, at and beyond 20 cm surrounding the device surface, are demonstrated to be less than 50% of the applicable MPE limit, per KDB 447498, Table 1. These measurements shall be taken along the principal axes of the device, with one axis oriented along the direction of the estimated maximum field strength, and for three points per axis or until a 1/d (inverse distance from the emitter structure) field strength decay is observed. Symmetry considerations may be used for test reduction purposes. The device shall be operated in documented worst-case compliance scenarios (i.e., the ones that lead to the maximum field components), and while all the radiating structures (e.g., coils or antennas) that by design can simultaneously transmit are energized at their nominal maximum power.	Yes. The total aggregate H-field strength is : 31.17% of the MPE limit. Note above is worst case from coil #1 and coil #2 See table 1 below
(6) For systems with more than one radiating structure, the conditions specified in (5) must be met when the system is fully loaded (i.e., clients absorbing maximum power available), and with all the radiating structures operating at maximum power at the same time, as per design conditions. If the design allows one or more radiating structures to be powered at a higher level while other radiating structures are not powered, then those cases must be tested as well. For instance, a device may use three RF coils powered at 5 W, or one coil powered at 15 W: in this case, both scenarios shall be tested.	Yes. The system has three individual coils and allows for capable wireless power transfer simultaneously for three clients.
(2) The output power from each transmitting element (e.g., coil) is less than or equal to 15 watts.	Yes. The maximum power is 15W.
(3) A client device providing the maximum permitted load is placed in physical contact with the transmitter (i.e., the surfaces of the transmitter and client device enclosures need to be in physical contact)	Yes. The client device is placed directly in contact with the transmitter.

Table 1

The worst case leakage of H-field strength from all simultaneous transmitting coils						
	1st Coil (worst case)			2nd Coil (worst case)		Total H field of each configuration
Frequency / coil / Test Config	360KHz (New iPhone)	127.7kHz (Legacy iphone)	127.7KHz (AirPods Por Case/standby)	326.5KHz (with Legacy Apple watch/standby)	1.778MHz (Apple Watch)	
1			2.15%	0.86%		3.01%
2	2.45%					2.45%
3		5.52%				5.52%
4			16.56%			16.56%
5				3.68%		3.68%
6					14.61%	14.61%
7			6.13%		3.07%	9.20%
Worst-case	**2.45%**	**5.52%**	**16.56%**	**3.68%**	**14.61%**	**31.17%**
	0.012A/m	0.25A/m	0.06A/m	0.055A/m	0.185A/m	

6. EQUIPMENT UNDER TEST

6.1. DESCRIPTION OF EUT

The EUT, BoostCharge Pro 2-in-1 Magnetic Charging Dock, is a dual coil wireless charger capable of charging two client devices at the same time.

The first coil is used for charging a Qi2 compatible phone at 360kHz (15W Max), a Qi compatible phone at 127.7kHz (7.5W Max), or an AirPods case at 127.7kHz (1W Max) The second coil is used to charge an Apple Watch (5W Max). The EUT is powered though a USB-C to USB-Cable that is connected to a USB-C AC/DC adapter and hardwired at the EUT side.

The EUT is sold with a 30W single port USB PD Type-C Power Supply.

6.2. SOFTWARE AND FIRMWARE

The firmware version installed in the EUT during testing was:

127.7kHz/360kHz: V1.8
326.5kHz/1778kHz: V2.0.3

6.3. WORST-CASE CONFIGURATION AND MODE

Testing for MagSafe phone is based on direct contact with no shifts in position due to the embedded magnet in the charger pads.

Legacy phone does not have an embedded magnet, is placed at the maximum power position during the testing.

Even though New AirPods Pro Case has embedded magnet, it is not strong enough to be attached to the charging pad, it is placed at the maximum power position during the testing.

Investigation has been performed and it is determined that AirPods Pro Case on Coil #1 and new watch (1.778MHz) on Coil#2 are the worst case, thus configuration 7 is tested when AirPods Pro Case and new watch are placed on both coils in charging mode.

The EUT was tested in desktop(mobile) mode in the following configurations:

Config	Descriptions	Frequency	Client and worst-case orientation
1	EUT is powered by AC/DC adapter.	326.5kHz	No WPT client used. Stand-By.
2	EUT is powered by AC/DC adapter. Direct contact during charging/operating between the EUT & WPT Client(s).	360kHz (15W)	Coil 1: MagSafe Phone. Phone on Flatbed Position at 0 Degree
3		127.7kHz (5W)	Coil 1: Legacy Phone.
4		127.7kHz (1W)	Coil 1: AirPods Pro Case. AirPods Case at 180 Degree
5		326.5kHz (1W)	Coil 2: Legacy watch. Watch at 270 Degree
6		1.778MHz (5W)	Coil 2: Series 8 watch. Watch at 180 Degree
7		360kHz (15W) + 1.778MHz (5W)	Coil 1: AirPods at 0 Degree Coil 2: Series 8 watch. Watch at 180 Degree

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**	**Label ID**	**Cal Due**	**Cal Date**
Near-field Electric and Magnetic Field Sensor System	SPEAG Schmid & Partner Engineering AG	MAGPy-8H3D+E3d	235867	2024-08-31	2023-08-31
Spectrum Analyzer, PXA, 3Hz to 44GHz	Keysight Technologies Inc	N9030A	80397	2025-01-25	2024-01-25
Thermometer - Digital	Control Company	14-650-118	175731	2024-08-01	2023-08-01

8. DUTY CYCLE

LIMITS

None; for reporting purposes only.

PROCEDURE

Zero-Span Spectrum Analyzer Method.

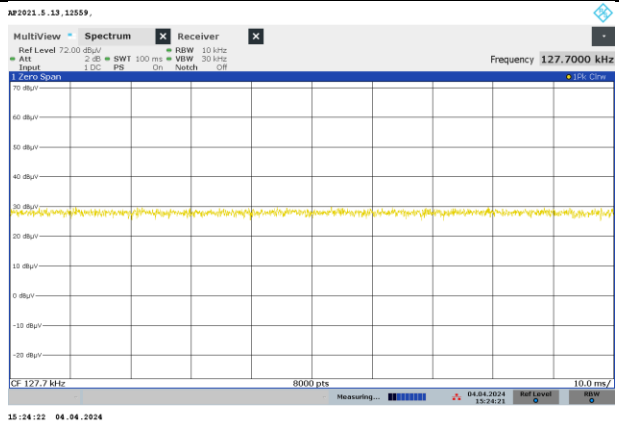
ON TIME AND DUTY CYCLE RESULTS

Test Engineer:	12559

Configuration	Mode	ON Time B (msec)	Period (msec)	Duty Cycle x (linear)	Duty Cycle (%)	Duty Cycle Correction Factor (dB)
1	Standby @ 326.5kHz	14.75	201.53	0.07	7.32	11.36
2	Operating Frequency @ 360kHz (15W)	10.00	10.00	1.00	100.00	0.00
3	Operating Frequency @ 127.7kHz (7.5W)	10.00	10.00	1.00	100.00	0.00
4	Operating Frequency @ 127.7kHz (1W)	10.00	10.00	1.00	100.00	0.00
5	Operating Frequency @ 326.5kHz (1W)	10.00	10.00	1.00	100.00	0.00
6	Operating Frequency @ 1.778MHz (5W)	10.00	10.00	1.00	100.00	0.00

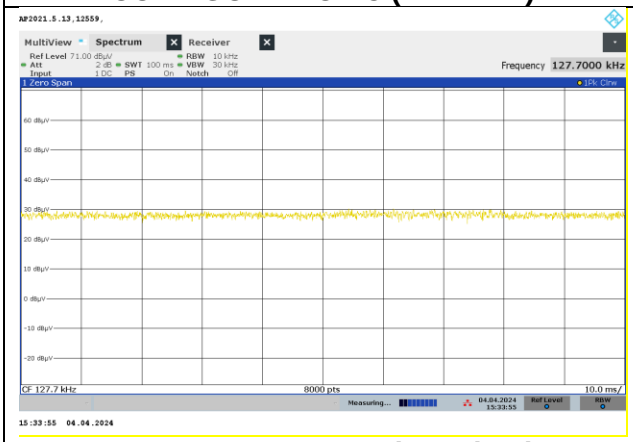
CONFIGURATION 1 (326.5kHz)

CONFIGURATION 2 (360kHz)

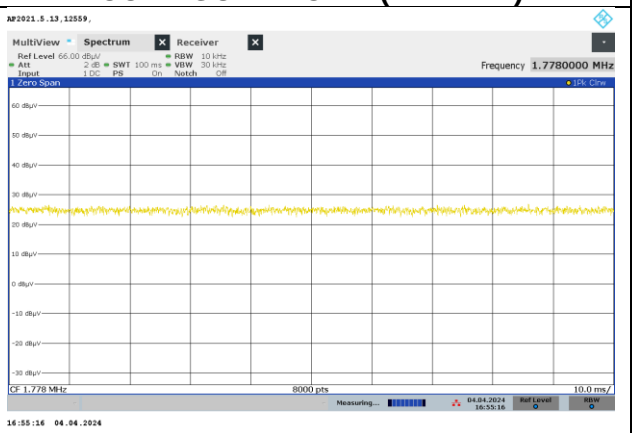


CONFIGURATION 3 (127.7kHz)

CONFIGURATION 4 (127.7kHz)



CONFIGURATION 5 (326.5kHz)



CONFIGURATION 6 (1.778MHz)

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 to § 1.1310(e)(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)
(i) Limits for Occupational/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	1.0	<6
300-1,500			f/300	<6
1,500-100,000			5	<6
(ii) 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
300-1,500			f/1500	<30
1,500-100,000			1.0	<30

f = frequency in MHz. * = Plane-wave equivalent power density.

According to KDB 680106 D01 RF Exposure Wireless Charging App v03r01, section 3 (c) Emissions between 100 kHz to 300 kHz should be assessed versus the limits at 300 kHz in Table 1 of Section 1.1310: 614 V/m and 1.63 A/m.

RESULT

Test Engineer:	29435	Test Date:	2024/04/05 – 2024/04/08

9.1.1. MAXIMUM RESULT SUMMARY

Configuration #1, WPT ON STANDBY (326.5kHz)

Coil #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	0.341	0.06%	1.63	0.035	2.15%

Coil #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	0.106	0.02%	1.63	0.014	0.86%

Configuration #2, OPERATING MODE WITH iPhone (360kHz)

Electric Field Limit			Magnetic Field Limit		
FCC RF Exposure Limit	Maximum Average (V/m)	Percentage (%)	FCC RF Exposure	Maximum Average (A/m)	Percentage (%)
614	0.860	0.14%	1.63	0.040	2.45%

CONFIGURATION 3: OPERATING MODE WITH iPhone (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	3.000	0.49%	1.63	0.090	5.52%

CONFIGURATION 4: OPERATING MODE WITH AirPods Pro Case (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	4.080	0.66%	1.63	0.270	16.56%

CONFIGURATION 5: OPERATING MODE WITH Apple Watch (326.5kHz)

Electric Field Limit			Magnetic Field Limit		
FCC RF Exposure Limit	Maximum Average (V/m)	Percentage (%)	FCC RF Exposure	Maximum Average (A/m)	Percentage (%)
614	0.490	0.08%	1.63	0.060	3.68%

CONFIGURATION 6: OPERATING MODE WITH Apple Watch (1.778MHz)

Electric Field Limit			Magnetic Field Limit		
FCC RF Exposure Limit	Maximum Average (V/m)	Percentage (%)	FCC RF Exposure	Maximum Average (A/m)	Percentage (%)
463.44	0.310	0.07%	1.23	0.180	14.61%

CONFIGURATION 7: OPERATING MODE WITH AirPods Pro Case (127.7kHz) + Apple Watch (1.778MHz)

Coil#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	5.570	0.91%	1.63	0.100	6.13%

Coil#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	0.210	0.03%	1.63	0.050	3.07%

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 √Duty Cycle].

CONFIGURATION 1: WPT ON STANDBY (326.5kHz)

Coil#1

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 Limit	Location	Peak	Duty Cycle %	FCC Average	FCC Limit	Location	Peak	Duty Cycle %	FCC Average
1	Standby	20	614	S1	0.530	7.3	0.143	1.63	S1	0.030	7.3	0.008
				S2	0.880		0.238		S2	0.020		0.005
				S3	1.000		0.271		S3	0.020		0.005
				S4	1.260		**0.341**		S4	0.130		**0.035**
				Top	0.290		0.078		Top	0.040		0.011
				Bottom	0.320		0.087		Bottom	0.030		0.008
				Max	1.260		**0.341**		Max	0.130		**0.035**

Coil#2

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 Limit	Location	Peak	Duty Cycle %	FCC Average	FCC Limit	Location	Peak	Duty Cycle %	FCC Average
1	Standby	20	614	S1	0.130	7.3	0.035	1.63	S1	0.020	7.3	0.005
				S2	0.150		0.041		S2	0.050		**0.014**
				S3	0.160		0.043		S3	0.020		0.005
				S4	0.390		**0.106**		S4	0.030		0.008
				Top	0.120		0.032		Top	0.020		0.005
				Bottom	0.210		0.057		Bottom	0.030		0.008
				Max	0.390		**0.106**		Max	0.050		**0.014**

CONFIGURATION 2: OPERATING MODE WITH iPhone (360kHz)

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
2	Charging	20	614	S1	0.690	100	0.690	1.63	S1	0.030	100	0.030
				S2	0.860		**0.860**		S2	0.020		0.020
				S3	0.370		0.370		S3	0.010		0.010
				S4	0.650		0.650		S4	0.020		0.020
				Top	0.570		0.570		Top	0.040		**0.040**
				Bottom	0.460		0.460		Bottom	0.030		0.030
				Max	0.860		**0.860**		Max	0.040		**0.040**

CONFIGURATION 3: OPERATING MODE WITH iPhone (127.7kHz)

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
3	Charging	20	614	S1	1.420	100	1.420	1.63	S1	0.020	100	0.020
				S2	3.000		**3.000**		S2	0.030		0.030
				S3	0.990		0.990		S3	0.020		0.020
				S4	1.010		1.010		S4	0.090		**0.090**
				Top	2.090		2.090		Top	0.060		0.060
				Bottom	2.600		2.600		Bottom	0.040		0.040
				Max	3.000		**3.000**		Max	0.090		**0.090**

CONFIGURATION 4: OPERATING MODE WITH AirPods Pro Case (127.7kHz)

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
4	Charging	20	614	S1	3.960	100	3.960	1.63	S1	0.180	100	0.180
				S2	4.080		**4.080**		S2	0.270		**0.270**
				S3	1.170		1.170		S3	0.140		0.140
				S4	1.870		1.870		S4	0.110		0.110
				Top	1.430		1.430		Top	0.160		0.160
				Bottom	1.510		1.510		Bottom	0.210		0.210
				Max	4.080		**4.080**		Max	0.270		**0.270**

CONFIGURATION 5: OPERATING MODE WITH Apple Watch (326.5kHz)

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	Charging	20	614	S1	0.360	100	0.360	1.63	S1	0.050	100	0.050
				S2	0.460		0.460		S2	0.030		0.030
				S3	0.300		0.300		S3	0.060		**0.060**
				S4	0.420		0.420		S4	0.030		0.030
				Top	0.340		0.340		Top	0.020		0.020
				Bottom	0.490		**0.490**		Bottom	0.030		0.030
				Max	0.490		**0.490**		Max	0.060		**0.060**

CONFIGURATION 6: OPERATING MODE WITH Apple Watch (1.778MHz)

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
6	Charging	20	463.44	S1	0.200	100	0.200	1.23	S1	0.050	100	0.050
				S2	0.310		**0.310**		S2	0.180		**0.180**
				S3	0.200		0.200		S3	0.030		0.030
				S4	0.240		0.240		S4	0.050		0.050
				Top	0.130		0.130		Top	0.030		0.030
				Bottom	0.150		0.150		Bottom	0.050		0.050
				Max	0.310		**0.310**		Max	0.180		**0.180**

CONFIGURATION 7: OPERATING MODE WITH AirPods Pro Case (127.7kHz) + Apple Watch (1.778MHz)

Coil#1

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
7	Charging	20	614	S1	5.570	100	**5.570**	1.63	S1	0.070	100	0.070
				S2	2.540		2.540		S2	0.060		0.060
				S3	3.350		3.350		S3	0.030		0.030
				S4	3.640		3.640		S4	0.050		0.050
				Top	1.410		1.410		Top	0.100		**0.100**
				Bottom	2.830		2.830		Bottom	0.090		0.090
				Max	5.570		**5.570**		Max	0.100		**0.100**

Coil#2

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
7	Charging	20	614	S1	0.210	100	**0.210**	1.63	S1	0.030	100	0.030
				S2	0.170		0.170		S2	0.050		**0.050**
				S3	0.190		0.190		S3	0.020		0.020
				S4	0.160		0.160		S4	0.020		0.020
				Top	0.210		**0.210**		Top	0.020		0.020
				Bottom	0.180		0.180		Bottom	0.020		0.020
				Max	0.210		**0.210**		Max	0.050		**0.050**

10. RF EXPOSURE TEST SETUP AND SETUP PHOTO

Please see description of RF exposure test up and setup photo report.

END OF TEST REPORT