Compliance Testing, LLC
Previously Flom Test Lab
EMI, EMC, RF Testing Experts Since 1963

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Test Report

Prepared for: Sparton Medical

Model: 100, 101

Description: SkinPen Precision & SkinPen Precision Charger

Serial Number: N/A

FCC ID: 2AGLK-101
IC: 21314-101

To

FCC Part 15.207 and FCC Part 15.209

And

IC RSS-GEN

Date of Issue: April 7, 2016

On the behalf of the applicant:	**Sparton Medical** **22740 Lunn Road** **Strongsville, OH 44149**
Attention of:	**Tanzeel Ur Rahman** **Ph: (440)878-2316** **E-Mail: trahman@sparton.com**

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Project No: p1630011

Paul Hay

Project Test Engineer

Test Report Revision History

Revision	Date	Revised By	Reason for Revision
1.0	March 24, 2016	Paul Hay	Original Document
2.0	April 7, 2016	Amanda Reed	Added IC ID

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ILAC / A2LA

Compliance Testing, LLC, has been accredited in accordance with the recognized International Standard ISO/IEC 17025:2005. This accreditation demonstrates technical competence for a defined scope and the operation of a laboratory quality management system (refer to the joint ISO-ILAC-IAF Communiqué dated January 2009).

The tests results contained within this test report all fall within our scope of accreditation, unless noted in the table below.

Please refer to http://www.compliancetesting.com/labscope.html for current scope of accreditation.

Testing Certificate Number: **2152.01**

FCC Site Reg. #349717

IC Site Reg. #2044A-2

Non-accredited tests contained in this report:

N/A

The applicant has been cautioned as to the following:

15.21 Information to User

The user's manual or instruction manual for an intentional radiator shall caution the user that changes or modifications not expressly approved by the party responsible for compliance could void the user's authority to operate the equipment.

15.27(a) Special Accessories

Equipment marketed to a consumer must be capable of complying with the necessary regulations in the configuration in which the equipment is marketed. Where special accessories, such as shielded cables and/or special connectors are required to enable an unintentional or intentional radiator to comply with the emission limits in this part, the equipment must be marketed with, i.e. shipped and sold with, those special accessories. However, in lieu of shipping or packaging the special accessories with the unintentional or intentional radiator the responsible part may employ other methods of ensuring that the special accessories are provided to the consumer, without an additional charge.

Information detailing any alternative method used to supply the special accessories for a grant of equipment authorization or retained in the verification records, as appropriate. The party responsible for the equipment, as detailed in § 2.909 of this chapter, shall ensure that these special accessories are provided with the equipment. The instruction manual for such devices shall include appropriate instructions on the first page of text concerned with the installation of the device that these special accessories must be used with the device. It is the responsibility of the user to use the needed special accessories supplied with the equipment.

Standard Test Conditions Engineering Practices

Except as noted herein, the following conditions and procedures were observed during the testing:

In accordance with ANSI C63.10-2009 and unless otherwise indicated in the specific measurement results, the ambient temperature of the actual EUT was maintained within the range of 10° to 40°C (50° to 104°F), unless the particular equipment requirements specified testing over a different temperature range. Also, unless otherwise indicated, the humidity levels were in the range of 10% to 90% relative humidity.

Measurement results, unless otherwise noted, are worst-case measurements.

Environmental Conditions		
Temperature (°C)	**Humidity (%)**	**Pressure (mbar)**
22.0 – 26.0	24.9 – 29.1	967.6 – 972.2

EUT Description
Model: 100, 101
Description: SkinPen Precision & SkinPen Precision Charger
Serial Number: N/A
Additional Information:
The SkinPen Precision is an automated, non-surgical, hand held, reusable, battery powered micro needling device.

EUT Operation during Tests
The charger was provided 120VAC 60 Hz for all testing.

Accessories:

Qty	Description	Manufacturer	Model	S/N
1	AC/DC Adapter	Sparton Medical	DA12-050MP-M	N/A

Cables: None

Modifications: None

Test Results Summary

Specification	Test Name	Pass, Fail, N/A	Comments
12.209	Radiated Emissions	Pass	
12.207	Conducted Powerline Emissions	Pass	
RSS-Gen	99% Occupied Bandwidth	Pass	
RSS-Gen	Receiver Spurious Emission Limits	Pass	

15.203: Antenna Requirement:

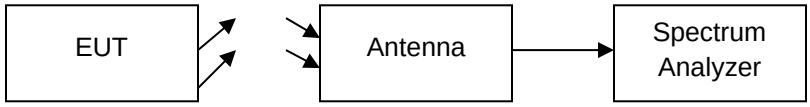
X	The antenna is permanently attached to the EUT
	The antenna uses a unique coupling
	The EUT must be professionally installed
	The antenna requirement does not apply

Radiated Emissions
Engineer: Paul Hay
Test Date: 3/10/16

Test Procedure

The EUT was tested in a semi-anechoic chamber at a distance of 1 meter from the receiving antenna. A spectrum analyzer was used to verify that the UUT met the requirements for Radiated Emissions. The spectrum for each tuned frequency was examined beyond the 10th harmonic.

Test Setup



Radiated Emissions

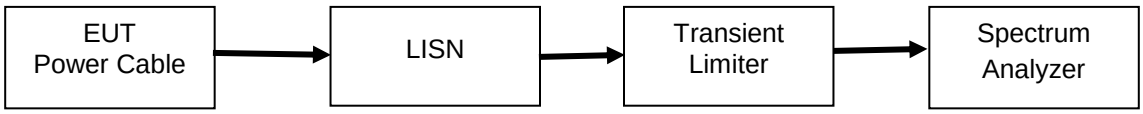
Emission Frequency (kHz)	Measured Value (dBuV/m)	Correction Factor (dB)	Corrected Value (dBuV/m)	Limit (dBuV/m)	Margin (dB)
178	99.87	99.08	0.79	22.60	-21.81
534	77.82	59.08	18.74	33.05	-14.32
719	74.33	59.08	15.25	30.47	-15.22
885	68.98	59.08	9.90	28.67	-18.77
1237	64.76	59.08	5.68	25.76	-20.08
1431	67.79	59.08	8.71	24.49	-15.79
1588	61.28	59.08	2.20	23.59	-21.39
1912	57.41	59.08	-1.67	29.54	-31.22

Powerline Conducted Emissions
Engineer: Paul Hay
Test Date: 3/21/16

Test Procedure

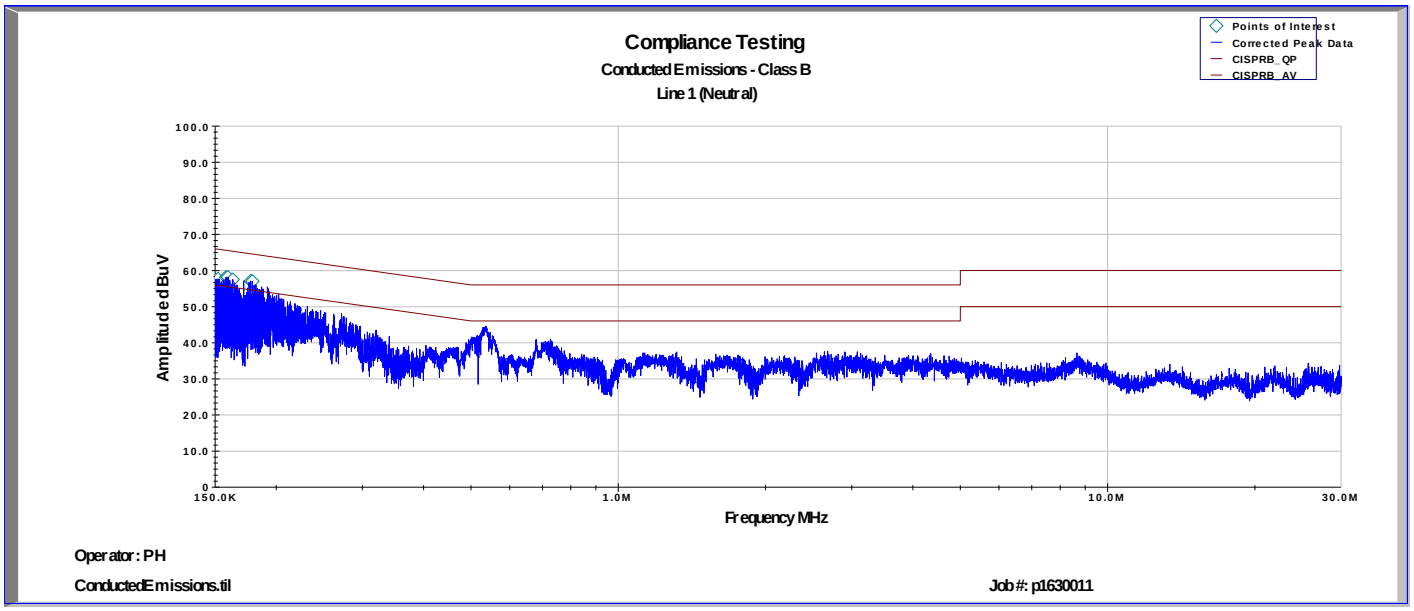
The EUT power cable was connected to a LISN and the monitored output of the LISN was connected to a transient limiter, which then connected directly to a spectrum analyzer. The conducted emissions from 150 kHz to 30 MHz were measured and compared to the specification limits.

Test Setup

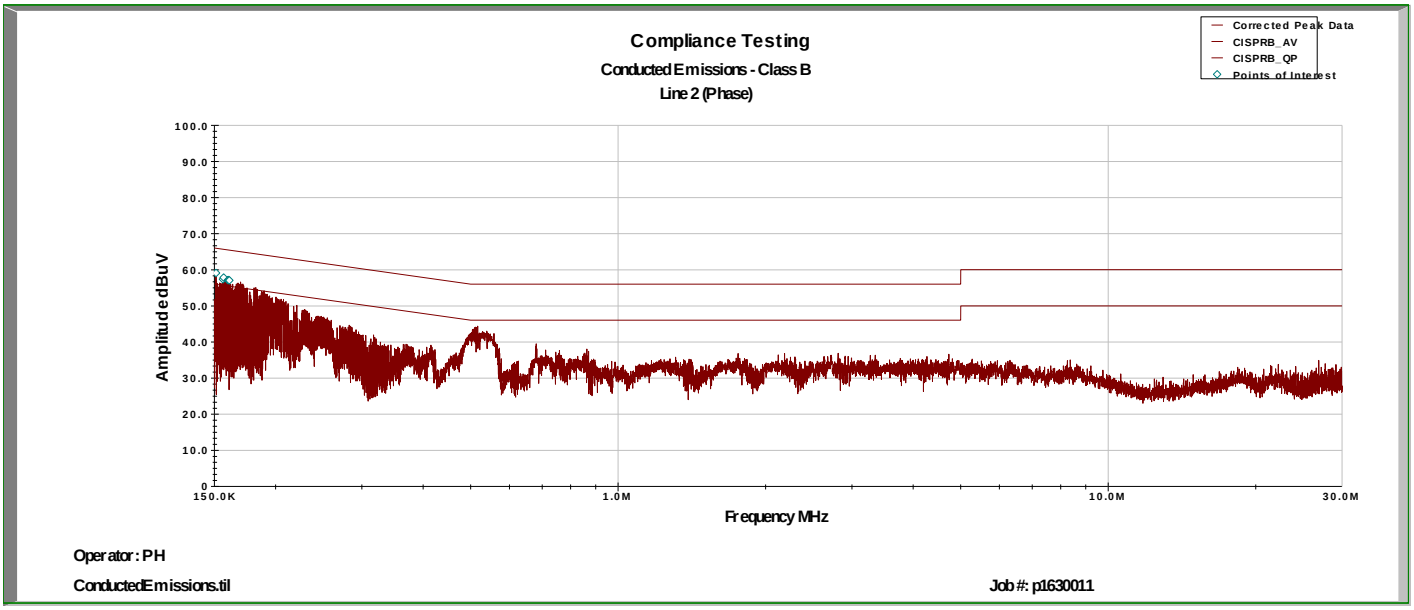


Powerline Conducted Emissions Test Results

Line 1 Peak Plot



Line 2 Peak Plot



Line 1 Neutral Avg Detector

Frequency	Measured Value (dBuV)	LISN Correction Factor (dB)	Cable Loss (dB)	Transient Limiter (dB)	Final Data (dBuV)	Limit (dBuV)	Avg Margin (dB)
152.43 KHz	20.78	0.28	0.02	10.2	31.272	55.931	-24.658
152.85 KHz	19.88	0.27	0.02	10.2	30.371	55.919	-25.547
157.9 KHz	20.83	0.22	0.02	10.2	31.271	55.774	-24.503
158.9 KHz	20.91	0.21	0.02	10.2	31.344	55.746	-24.401
168.79 KHz	23.94	0.2	0.02	10.112	34.275	55.463	-21.188
176.2 KHz	22.34	0.2	0.02	10.1	32.663	55.251	-22.588

Line 2 Phase Avg Detector

Frequency	Measured Value (dBuV)	LISN Correction Factor (dB)	Cable Loss (dB)	Transient Limiter (dB)	Final Data (dBuV)	Limit (dBuV)	Avg Margin (dB)
151.35 KHz	19.2	0.29	0.02	10.2	29.71	55.961	-26.252
152.0 KHz	18.62	0.28	0.02	10.2	29.12	55.943	-26.823
152.98 KHz	18.7	0.27	0.02	10.2	29.187	55.915	-26.728
157.03 KHz	18.54	0.23	0.02	10.2	28.993	55.799	-26.806
158.6 KHz	18.96	0.21	0.02	10.2	29.397	55.754	-26.357
157.45 KHz	19.04	0.23	0.02	10.2	29.482	55.787	-26.305

Line 1 Neutral QP Detector

Frequency	Measured Value (dBuV)	LISN Correction Factor (dB)	Cable Loss (dB)	Transient Limiter (dB)	Final Data (dBuV)	Limit (dBuV)	QP Margin (dB)
152.43 KHz	44.47	0.276	0.02	10.2	54.966	65.931	-10.965
152.85 KHz	44.25	0.272	0.02	10.2	54.741	65.919	-11.177
157.9 KHz	44.94	0.221	0.02	10.2	55.381	65.774	-10.393
158.9 KHz	43.49	0.211	0.02	10.2	53.921	65.746	-11.825
168.79 KHz	43.8	0.2	0.02	10.112	54.132	65.463	-11.331
176.2 KHz	42	0.2	0.02	10.1	52.32	65.251	-12.931

Line 2 Phase QP Detector

Frequency	Measured Value (dBuV)	LISN Correction Factor (dB)	Cable Loss (dB)	Transient Limiter (dB)	Final Data (dBuV)	Limit (dBuV)	QP Margin (dB)
151.35 KHz	39.18	0.29	0.02	10.2	49.686	65.961	-16.275
152.0 KHz	39.82	0.28	0.02	10.2	50.32	65.943	-15.623
152.98 KHz	46.18	0.27	0.02	10.2	56.67	65.915	-9.245
157.03 KHz	42.94	0.23	0.02	10.2	53.39	65.799	-12.409
158.6 KHz	43.89	0.21	0.02	10.2	54.324	65.754	-11.43
157.45 KHz	40.38	0.23	0.02	10.2	50.825	65.787	-14.962

Receiver Spurious Emissions

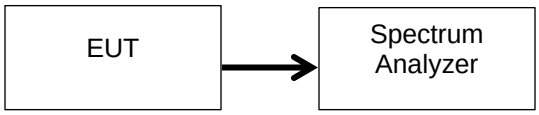
Engineer: Paul Hay

Test Date: 3/23/15

Test Procedure

The EUT was connected directly to a spectrum analyzer. The receiver spurious emissions were measured from 30 MHz to greater than 3 times the highest tunable frequency.

Test Setup



Receiver Spurious Emissions Summary

Frequency Range (MHz)	Recorded Measurement (pW)	Specification Limit	Result
30 – 1000	29	2 nW (-57dBm)	Pass

99% Occupied Bandwidth

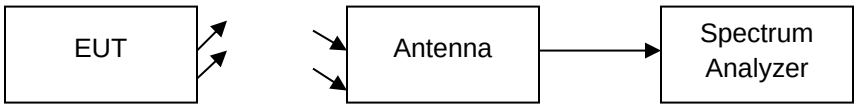
Engineer: Paul Hay

Test Date: 3/23/15

Test Procedure

The EUT was tested on an anechoic chamber at a distance of 1 meter from the receiving loop antenna. A spectrum analyzer was used to measure the 99% occupied bandwidth.

Test Setup



99% Bandwidth Summary

Frequency (kHz)	Recorded Measurement (kHz)	Result
176.157	21.375	Pass

Test Equipment Utilized

Description	Manufacturer	Model #	CT Asset #	Last Cal Date	Cal Due Date
EMI Receiver	HP	8546A	i00033	2/26/15	2/26/16*
Transient Limiter	Com-Power	LIT-153	i00123	Verified on: 3/21/16	
Humidity / Temp Meter	Newport	IBTHX-W-5	i00282	4/1/15	4/1/16
Active Loop Antenna 1 kHz - 30 MHz	EMCO	6507	i00326	9/1/15	9/1/17
Bi-Log Antenna	Schaffner	CBL 6111D	i00349	10/19/15	10/19/17
AC Power Source	Behlman	BL 6000	i00362	Verified on: 3/21/16	
EMI Analyzer	Agilent	E7405A	i00379	2/11/16	2/11/17
3 Meter Semi-Anechoic Chamber	Panashield	3 Meter Semi-Anechoic Chamber	i00428	7/27/14	7/27/16
LISN	COM-Power	LI-125A	i00447	7/25/14	7/25/16
LISN	COM-Power	LI-125A	i00449	8/28/15	8/28/17

*30-day calibration extension at engineering manager's discretion.

In addition to the above listed equipment standard RF connectors and cables were utilized in the testing of the described equipment. Prior to testing these components were tested to verify proper operation.

END OF TEST REPORT