



## DATE: 05 December 2017

# I.T.L. (PRODUCT TESTING) LTD.

# Test Report According to FCC Part 18, Subpart C

(Equipment Authorization Under FCC Declaration of Conformity Process)

for

# HomeWell Trading Ltd.

Equipment under test:

# SensiFirm Non-invasive Cellulite Reduction Device

# CEL100US01SN; CEL100XXYYZZ\*

\* See customer's declaration on page 4.

Tested by:

. 73

D. Yadidi

Approved by: \_

D. Shidlowsky

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### 1. General Information

### **1.1 Administrative Information**

Manufacturer:	HomeWell Trading Ltd.
Manufacturer's Address:	Omar Hodge Building, Road Town Tortola, VG 1110 BVI
Equipment Under Test (E.U.T):	SensiFirm Non-invasive Cellulite Reduction Device
Equipment Model No.:	CEL100US01SN; CEL100XXYYZZ*
Equipment Serial No.:	002
Date of Receipt of E.U.T:	05.06.16; 13.11.2017**
Start of Test:	05.06.16; 13.11.2017**
End of Test:	03.01.17; 13.11.2017**
Test Laboratory Location:	I.T.L (Product Testing) Ltd. 1 Batsheva St., Lod ISRAEL 7120101
Test Specifications:	FCC Part 18 Subpart C

\* See customer's declaration on following page.

\*\* Full conducted emission tests and preliminary radiated emission tests were performed on the device using switching power supply M/N YJS024Y-1201800G, manufactured by Dongguan Yingju Power Co. Ltd.7.



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23 March 2015		Page 1 of 1

To: ITL Israel Testing Laboratories

P.O. Box 87

Lod 71100

#### Re: Cellulite / SensiFirm Device

Dear Sir/Madam,

We hear by declare that the device named Cellulite will be marketed under the brand name of SensiFirm,

Model CEL100XXYYZZ

- XX = Region power cable (EU, US, UK etc.)
- YY = Marketing option (color, box package, Power adapter etc.).
- ZZ = Customer Code (SN Sensica, BE Beurer....)
- Engineering Model: Celluite

Therefore the test reports for the device should use both names.

Martin Gurovich

VP R&D

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### 1.2 Abbreviations and Symbols

The following abbreviations and symbols are applicable to this test report:

0	J 11
AC	alternating current
AMN	Artificial Mains Network
ARA	Antenna Research Associates
Aux	auxiliary
Avg	average
CDN	coupling-decoupling network
cm	centimeter
dB	decibel
dBm	decibel referred to one milliwatt
dbµV	decibel referred to one microvolt
dbµV/m	decibel referred to one microvolt per meter
DC	direct current
EMC	electromagnetic compatibility
E.U.T.	equipment under test
GHz	gigahertz
HP	Hewlett Packard
Hz	Hertz
kHz	kilohertz
kV	kilovolt
LED	light emitting diode
LISN	line impedance stabilization network
m	meter
mHn	millihenry
MHz	megahertz
msec	millisecond
N/A	not applicable
QP	quasi-peak
PC	personal computer
RF	radio frequency
RE	radiated emission
sec	second
V	volt



### 1.3 List of Accreditations

The EMC laboratory of I.T.L. is accredited by the following bodies:

- 1. The American Association for Laboratory Accreditation (A2LA) (U.S.A.), Certificate No. 1152.01.
- 2. FCC Designation Number IL1005.
- 3. The Israel Ministry of the Environment (Israel), Registration No. 1104/01.
- 4. Industry Canada (Canada), IC File No.: 46405-4025; Site Nos. IC 4025A-1, IC 4025A-2.

I.T.L. Product Testing Ltd. is accredited by the American Association for Laboratory Accreditation (A2LA) and the results shown in this test report have been determined in accordance with I.T.L.'s terms of accreditation unless stated otherwise in the report.



## 2. Applicable Documents

- 2.1 Code of Federal Regulations Title 47, Federal Communications Commission Part 18, Subpart C
- 2.2 FCC Measurement Procedure MP-5

INDUSTRIAL, SCIENTIFIC, AND MEDICAL EQUIPMENT

Methods of Measurements of Radio Noise Emissions fromISM equipment



### 3. Test Site Description

#### 3.1 Location:

The Electromagnetic Compatibility Test Facility of I.T.L. (Product testing) Ltd. Is located at Telrad Industrial Park, Lod, 7120101 Israel.

Telephone: +972-8-9153100

Fax: +972-8-9153101

#### 3.2 Shielded Room

A Modular Shielded Room, Type 20 SpaceSaver, manufactured by ETS, consisting of a Main Room and a Control Room.

The dimensions of the Main Room are: length: 7.0 m, width: 3.0 m, height: 3.0 m.

The shielding performance is:

magnetic field: 60 dB at 10 kHz rising linearly to 100 dB at 100 kHz,

electric field: better than 110 dB between 50 MHz and 1 GHz,

plane wave: 110 dB between 50 MHz and 1 GHz.

All the power lines entering the shielded room are filtered.

#### 3.3 Open Site:

The OATS is located on a one floor-building roof. The OATS consists of 3 meter and 10 meter ranges, using a 21.5m X 8.5m solid metal ground plane, a remote controlled turntable and an antenna mast.

#### 3.4 Ground Plane:

The ground plane is made from steel plates, which are welded continuously together. The Ground plane is lies and welded on welded steel construction with vias to allow for water drainage. All the power, control, and signal lines to the turntable and the 3 m and 10m antenna mast outlets are routed in shielded conduits under the plane to the control building.

#### 3.5 Antenna Mast:

ETS model 2070-2. The antenna position and polarization are remote controlled via Fiber Optical Link using ETS/EMCO Dual Controller Type 2090. The antenna position is adjustable between 1-4 meters. Pressurized air is used to power changing the polarity of the antenna.



ETS model 2087 series. The position of the turntable is remote-controlled via Fiber Optic Link, using ETS/EMCO Dual Controller Type 2090. The turntable is mounted in a pit and its surface is flush with the Open Site Ground Plane. Brushes near the periphery of the turntable ensure good conductive connection to the ground plane. The Turntable maximum load is 1250 Kg.

#### 3.7 EMI Receiver:

Type 8542E, manufactured by HP, being in full compliance with CISPR 16 requirements.

#### 3.8 E.U.T. Support:

Table mounted E.U.T.s are supported during testing on 80 cm high all plastic table.

#### 3.9 Test Equipment:

See details in Section 6.



# 4. System Test Configuration

### 4.1 Mode of Operation

The EUT uses RF technology (1MHz), to heat the skin tissue and thereby to reduce and to eliminate the cellulite phenomenon.

There are three operating levels (three indicators) and one operating indicator lights when EUT at ON. The power adaptor supplies 12Vdc.

During all tests, the EUT was operated at the highest level (level 3), when the resistors used as a loads to simulate skin.



Figure 1. Configuration of Tested System



### 4.2 Equipment Modifications

NOTE – Initially the EUT failed to meet the Conducted Emission limits.

- The manufacturer took the following corrective action:
- 1. Connect capacitor 120 pF 200v per RF pin to GND.
- 2. Replace capacitors C27, C28 to 1 uF 25v X7R.







## 5. Summary of Test Results

Test	Results
<b>Conducted Emissions</b> FCC Part 18, Subpart C	The E.U.T met the performance requirements of the specification.
	<ul> <li>Power Supply M120180E0: The margin between the emission levels and the specification limit is, in the worst case, 4.9 dB for the phase line at 1.0 MHz and 5.5 dB at 1.0 MHz for the neutral line.</li> <li>Power Supply M/N YJS024Y-1201800G: The margin between the emission levels and the specification limit is, in the worst case, 2.5 dB for the phase line at 1.0 MHz and 11.4 dB at 1.0 MHz for the neutral line</li> </ul>
<b>Radiated Emissions</b> FCC Part 18, Subpart C	The E.U.T met the performance requirements of the specification. The margin between the emission level and the specification limit is 61.7 dB in the worst case at the frequency of 63.12 MHz, vertical polarization.



### 6. Equipment Under Test (E.U.T.) Description

Product is used for cellulite reduction. It uses RF technology (1 MHz), to heat the skin tissue and thereby to reduce and to eliminate the cellulite phenomenon. It is powered by an approved wall-mount AC/DC adaptor 100-240VAC, 12VDC/2.5A.

List of ancillary and/or support equipment provided by the applicant

Description	Manufacturer	Model/Part Number	Serial Number
Power Resistor 200			
Connected between electrodes			

#### **Description of Interface Cables for Testing**

Cable Type	Shield	Length [m]	Ferrite	Connection1	Connection2
DC cables	no	0.01	no	electrodes	Resistor

#### **EUT Internal Operating Frequencies:**

Frequency (Hz)	Description	Frequency (Hz)	Description
1MHz	RF Frquency	2.4GHz	BLUETOOTH

#### **Power Interface**

Mode No.	Voltage (V)	Current (A)	Power (W)	Frequency (DC/AC-Hz)	Phases (No.)	Comments
Rated	100v-240v			60		
Nominal	110v			60		
Supplementary information:						



## 7. List of Test Equipment

### 7.1 Emission Tests

The equipment indicated below by an "X" was used for testing Conducted Emission (**CE**)and Radiated Emission (**RE**)

Test equipment calibration is in accordance with ITL Q.A. Procedure PM 110 "Calibration Control Procedure", which complies with ISO/IEC Guide 17025.

Instrument				Used in Test	
	Manufacturer	Model	Serial No.	CE	RE
AMN	Fischer	FCC-LISN-2A	128	Х	
Transient Limiter	HP	11947A	3107A03041	Х	
EMI Receiver	Rohde & Schwarz	ESCI7	100724	Х	
EMI Receiver	HP	8542E	3906A00276		Х
EMI Receiver Filter	HP	85420E	3705A00248		х
EMC Analyzer	HP	HP8593	3536A00120		Х
Biconical Antenna	EMCO	3110B	9912-3337		Х
Log Periodic Antenna	EMCO	3146	9505-4081		Х
Active Loop Antenna	EMCO	6502	9506-2950		Х
Antenna Mast	ETS	2070-2	9608-1497		Х
Turntable	ETS	2087	-		Х
Mast & Table Controller	ETS/EMCO	2090	9608-1456		Х



# 8. Conducted Emission From AC Mains

### 8.1 Test Specification

0.15 - 30 MHz, FCC Part 18, Subpart C

### 8.2 Test Procedure

The E.U.T operation mode and test configuration are as described in Section 4. In order to minimize background noise interference, the conducted emission testing was performed inside a shielded room (see Section 3), with the E.U.T placed on a 0.8 meter high wooden table. In the case of a floor-standing E.U.T., it was placed on the horizontal ground plane.

The E.U.T was powered via 50 Ohm / 50  $\mu$ Hn Artificial Mains Network (AMN) on the phase and neutral lines. The AMN's were grounded to the shielded room ground plane (floor), and were kept at least 0.8 meters from the nearest boundary of the E.U.T

The center of the E.U.T.'s AC cable was folded back and forth, in order to form a bundle less than 0.40 meters and a total cable length of 1 meter.

The effect of varying the position of the cables was investigated to find the configuration that produces maximum emission. The configuration tested is shown in the photograph, *Figure 26. Conducted Emission From AC Mains Test.* 

The emission voltages at the AMN's outputs were measured using a computerized receiver, complying to CISPR 16 requirements. The specification limits are pre-loaded to the receiver and are displayed on the receiver's spectrum display.

A frequency scan between 0.15 and 30 MHz was performed at 9 kHz I.F. band width, using peak detection.

The spectral components having the highest level on each line were measured using a quasipeak and average detector.

#### 8.3 Test Results

The E.U.T met the requirements of the FCC Part 18, Subpart C specification.

#### Power Supply M/N M120180E:

The margin between the emission levels and the specification limit is, in the worst case, 4.9 dB for the phase line at 1.0 MHz and 5.5 dB at 1.0 MHz for the neutral line.

#### Power Supply M/N YJS024Y-1201800G:

The margin between the emission levels and the specification limit is, in the worst case, 2.5 dB for the phase line at 1.0 MHz and 11.4 dB at 1.0 MHz for the neutral line.

The details of the highest emissions are given in Figure 2 to Figure 5.

Note: See modification made on the E.U.T. in order to meet the requirements on page 13



E.U.T Description	SensiFirm Non-invasive Cellulite Reduction Device
Туре	CEL100US01SN
Serial Number:	002

Specification:	FCC Part 18, Subpart C
Lead:	Phase Power Supply M/N M120180E
Detectors:	Quasi-peak, Average

	10D I	IT PEAK LIST (Find	il Measurement Re	30163)
Tra	icel:	CE22BQP		
Tra	ice2:	CE22BAP		
Tra	ice3:			
	TRACE	FREQUENCY	LEVEL dBµV	DELTA LIMIT de
1	Quasi Peak	154 kHz	57.96	-7.82
2	Average	158 kHz	38.56	-17.00
1	Quasi Peak	258 kHz	43.55	-17.94
2	Average	362 kHz	24.34	-24.34
2	Average	458 kHz	20.06	-26.66
1	Quasi Peak	462 kHz	30.96	-25.69
1	Quasi Peak	998 kHz	41.77	-14.22
2	Average	998 kHz	41.08	-4.91
2	Average	1.506 MHz	13.17	-32.82
1	Quasi Peak	1.81 MHz	21.55	-34.45
1	Quasi Peak	2.994 MHz	28.37	-27.62
2	Average	2.994 MHz	26.08	-19.91
2	Average	4.99 MHz	22.69	-23.30
1	Quasi Peak	4.994 MHz	28.53	-27.46
2	Average	6.99 MHz	20.04	-29.95
1	Quasi Peak	8.985 MHz	23.63	-36.36
2	Average	15.65 MHz	24.87	-25.12
1	Quasi Peak	15.774 MHz	32.18	-27.81
1	Quasi Peak	18.378 MHz	23.86	-36.13
2	Average	22.454 MHz	17.66	-32.33

#### Figure 2. Detectors: Quasi-peak, Average

*Note:* DELTA LIMIT refers to the test results obtained minus specified requirement; thus a positive number indicates failure, and a negative result indicates that the product passes the test.



E.U.T Description	SensiFirm Non-invasive Cellulite Reduction Device
Туре	CEL100US01SN
Serial Number:	002

Specification:	FCC Part 18, Subpart C
Lead:	Phase Power Supply M/N M120180E
Detectors:	Quasi-peak, Average



Figure 3. Detectors: Quasi-peak, Average



E.U.T Description	SensiFirm Non-invasive Cellulite Reduction Device
Туре	CEL100US01SN
Serial Number:	002

Specification:	FCC Part 18, Subpart C
Lead:	Neutral Power Supply M/N M120180E
Detectors:	Quasi-peak, Average

	1103	T PEAK LIST (Fin:	il Measurement R	waulte)
Tra	icel:	CE22BQP		
Trace2:		CE22BAP		
Tra	sce3:			
	TRACE	FREQUENCY	LEVEL dBuV	DELTA LIMIT dB
1	Quasi Peak	154 kHz	56.18	-9.59
2	Average	154 kHz	42.00	-13.78
1	Quasi Peak	258 kHz	41.66	-19.83
2	Average	258 kHz	27.21	-24.28
1	Quasi Peak	562 kHz	28.38	-27.61
2	Average	610 kHz	17.25	-28.74
1	Quasi Peak	998 kHz	41.20	-14.79
2	Average	998 kHz	40.53	-5.47
2	Average	1.738 MHz	14.86	-31.13
1	Quasi Peak	1.954 MHz	23.33	-32.66
2	Average	2.994 MHz	26.24	-19.75
1	Quasi Peak	2.998 MHz	28.53	-27.46
1	Quasi Peak	4.99 MHz	27.59	-28.40
2	Average	4.99 MHz	23.50	-22.49
2	Average	8.982 MHz	20.37	-29.62
1	Quasi Peak	8.986 MHz	28.15	-31.84
2	Average	15.57 MHz	26.24	-23.75
1	Quasi Feak	15.69 MHz	33.31	-26.68
1	Quasi Peak	17.978 MHz	25.80	-34.19
2	Average	18.97 MHz	18.67	-31.32

Figure 4. Detectors: Quasi-peak, Average

*Note:* DELTA LIMIT refers to the test results obtained minus specified requirement; thus a positive number indicates failure, and a negative result indicates that the product passes the test.



E.U.T Description	SensiFirm Non-invasive Cellulite Reduction Device
Туре	CEL100US01SN
Serial Number:	002

Specification:	FCC Part 18, Subpart C
Lead:	Neutral Power Supply M/N M120180E
Detectors:	Quasi-peak, Average



Figure 5 Detectors: Quasi-peak, Average



E.U.T Description	SensiFirm Non-invasive Cellulite Reduction Device
Туре	CEL100US01SN
Serial Number:	002

Specification:	FCC Part 18, Subpart C
Lead:	Phase Power Supply M/N YJS024Y-1201800G
Detectors:	Quasi-peak, Average

	EDI	F PEAK LIST (Final	Measurement	Results)
Trad	cel:	CE22BQP		
Trad	ce2:	CE22BAP		
Trad	ce3:			
	TRACE	FREQUENCY	LEVEL dBµV	DELTA LIMIT dB
1	Quasi Peak	158 kHz	40.20	-25.36
1	Quasi Peak	274 kHz	31.66	-29.32
1	Quasi Peak	402 kHz	34.55	-23.26
2	Average	402 kHz	23.52	-24.28
2	Average	426 kHz	28.09	-19.23
1	Quasi Peak	438 kHz	33.07	-24.02
1	Quasi Peak	454 kHz	33.46	-23.33
1	Quasi Peak	998 kHz	45.11	-10.88
2	Average	998 kHz	43.51	-2.48
1	Quasi Peak	2.994 MHz	36.39	-19.60
2	Average	2.994 MHz	34.49	-11.50
2	Average	4.994 MHz	28.66	-17.33
1	Quasi Peak	6.99 MHz	32.63	-27.37
2	Average	6.99 MHz	27.19	-22.80
1	Quasi Peak	8.99 MHz	24.42	-35.57
2	Average	8.99 MHz	15.77	-34.22
1	Quasi Peak	10.978 MHz	34.33	-25.66
2	Average	10.978 MHz	29.84	-20.15
2	Average	12.978 MHz	18.18	-31.81
2	Average	14.974 MHz	18.18	-31.81

Date: 13.NOV.2017 07:41:31

#### Figure 6. Detectors: Quasi-peak, Average

*Note:* DELTA LIMIT refers to the test results obtained minus specified requirement; thus a positive number indicates failure, and a negative result indicates that the product passes the test.



E.U.T Description	SensiFirm Non-invasive Cellulite Reduction Device
Туре	CEL100US01SN
Serial Number:	002

Specification:	FCC Part 18, Subpart C
Lead:	Phase Power Supply M/N YJS024Y-1201800G
Detectors:	Quasi-peak, Average



Date: 13.NOV.2017 07:40:14

#### Figure 7. Detectors: Quasi-peak, Average



	E.U.T Description	SensiFirm Non-invasive Cellulite Reduction Device
	Туре	CEL100US01SN
	Serial Number:	002
Specification: Lead:	FCC Part 18, So Neutral Power S	ubpart C Supply M/N YJS024Y-1201800G

Detectors: Quasi-peak, Average

EDI	T PEAK LIST (Final	Measurement	Results)
Trace1:	CE22BQP		
Trace2:	CE22BAP		
Trace3:			
TRACE	FREQUENCY	LEVEL dBµV	DELTA LIMIT dB
1 Quasi Peak	150 kHz	38.05	-27.94
2 Average	150 kHz	20.03	-35.96
2 Average	182 kHz	17.95	-36.43
1 Quasi Peak	402 kHz	29.63	-28.18
1 Quasi Peak	430 kHz	39.56	-17.69
2 Average	434 kHz	21.21	-25.95
1 Quasi Peak	450 kHz	33.67	-23.19
1 Quasi Peak	998 kHz	40.94	-15.05
2 Average	998 kHz	34.57	-11.42
1 Quasi Peak	2.994 MHz	31.47	-24.52
2 Average	2.994 MHz	25.47	-20.52
1 Quasi Peak	4.986 MHz	31.14	-24.85
2 Average	4.986 MHz	26.11	-19.88
2 Average	6.978 MHz	22.63	-27.36
1 Quasi Peak	6.982 MHz	31.27	-28.72
1 Quasi Peak	8.978 MHz	31.06	-28.93
2 Average	8.978 MHz	25.60	-24.39
1 Quasi Peak	12.966 MHz	29.10	-30.89
2 Average	12.97 MHz	23.24	-26.75
2 Average	14.966 MHz	19.31	-30.68

Date: 13.NOV.2017 07:50:00

#### Figure 8. Detectors: Quasi-peak, Average

*Note:* DELTA LIMIT refers to the test results obtained minus specified requirement; thus a positive number indicates failure, and a negative result indicates that the product passes the test.



E.U.T Description	SensiFirm Non-invasive Cellulite Reduction Device
Туре	CEL100US01SN
Serial Number:	002

Specification:	FCC Part 18, Subpart C
Lead:	Neutral Power Supply M/N YJS024Y-1201800G
Detectors:	Quasi-peak, Average



Date: 13.NOV.2017 07:48:06





# 9. Preliminary Radiated Emission

### 9.1 Test Specification

0.009-400 MHz, FCC Part 18, Subpart C

#### 9.2 Test Procedure

The E.U.T operation mode and test configuration are as described in section 4.

A preliminary measurement to characterize the E.U.T was performed inside the shielded room at a distance of 3 meters, using peak detection mode and broadband antennas. The preliminary measurements produced a list of the highest emissions. The results for the E.U.T. with two different power supplies appear in *Figure 10* to *Figure 23*.



Figure 10: Power Supply M/N M120180E 10 kHz – 0.15 MHz

	P	<b>F</b>	3	<b>P</b>	
Frequency	Top_peaks	speclimit	del_limit	CF	
MHz					Γ
13.935 KHz	57.46	103.50	-46.042	14.898	Γ
15.345 KHz	57.03	103.50	-46.467	14.503	Γ
17.460 KHz	56.49	103.50	-47.009	13.911	Γ
23.805 KHz	54.80	103.50	-48.700	13.060	Γ
28.740 KHz	53.98	103.50	-49.520	12.880	Γ
32.618 KHz	53.56	103.50	-49.943	12.737	Γ
34.380 KHz	52.86	103.50	-50.637	12.673	Γ
37.200 KHz	53.20	103.50	-50.301	12.569	Γ
40.373 KHz	53.13	103.50	-50.367	12.453	Γ
41.782 KHz	52.89	103.50	-50.609	12.401	Γ

Figure 11: Power Supply M/N M120180E 10 kHz – 0.15 MHz Table



Figure 12: Power Supply M/N M120180E 0.15 MHz – 30 MHz

	1	2	3	4
Frequency	Top_peaks	speclimit	del_limit	CF
MHz				
627.600 KHz	43.67	103.50	-59.830	11.500
866.400 KHz	41.38	103.50	-62.117	11.593
985.800 KHz	60.45	103.50	-43.051	11.689
1.389 MHz	38.82	103.50	-64.683	11.817
1.702 MHz	39.00	103.50	-64.499	11.911
1.986 MHz	48.98	103.50	-54.524	11.996
3.001 MHz	38.00	103.50	-65.500	12.100
4.016 MHz	47.97	103.50	-55.532	11.898
4.642 MHz	38.04	103.50	-65.464	11.836
6.016 MHz	38.04	103.50	-65.462	11.818

Figure 13: Power Supply M/N M120180E 0.15 kHz – 30 MHz Table



Figure 14: Power Supply M/N M120180E 30 MHz – 400 MHz Horizontal



Figure 15: Power Supply M/N M120180E 30 MHz – 400 MHz Vertical

	1	2	3	4	5	6	7	8	Т
Frequency	Max Peaks	Limit EN	Delimit	Peak_Hor	Peak_Ver	Angle Hor	Angle Ver	total_cf	t
Hz	dBu¥/m	dBuV/m	dB	dBuV/m	dBuV/m	deg.	deg.		T
46.65 MHz	33.28	103.5	-70.220		33.28	59.100	60.500	-14.960	T
63.12 MHz	23.30	103.5	-80.199		23.30	299.600	300.400	-17.689	T
83.74 MHz	29.51	103.5	-73.987	22.65	29.51	149.500	240.600	-17.567	T
92.99 MHz	32.30	103.5	-71.201	24.45	32.30	1.500	210.200	-16.491	Τ
95.49 MHz	32.27	103.5	-71.232	24.94	32.27	329.200	240.600	-16.270	T
250.61 MHz	30.31	103.5	-73.191	30.00	30.31	1.500	330.300	-10.841	T
303.43 MHz	32.20	103.5	-71.303	31.72	32.20	119.300	300.400	-8.443	Τ
316.75 MHz	32.40	103.5	-71.098	32.16	32.40	89.300	240.600	-8.064	Τ
371.60 MHz	34.09	103.5	-69.409	34.09	33.24	329.200	270.400	-6.476	Τ
383.07 MHz	34.50	103.5	-69.004	34.50		149.500	90.200	-6.134	Τ
									-

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Figure 16: Power Supply M/N M120180E 30 MHz – 400 MHz Table



Figure 17: Power Supply M/N YJS024Y-1201800G 10 kHz – 0.15 MHz

Frequency	Top_peaks	speclimit	del_limit	CF
MHz				
13.935 KHz	57.46	103.50	-46.042	14.898
15.345 KHz	57.03	103.50	-46.467	14.503
17.460 KHz	56.49	103.50	-47.009	13.911
23.805 KHz	54.80	103.50	-48.700	13.060
28.740 KHz	53.98	103.50	-49.520	12.880
32.618 KHz	53.56	103.50	-49.943	12.737
34.380 KHz	52.86	103.50	-50.637	12.673
37.200 KHz	53.20	103.50	-50.301	12.569
40.373 KHz	53.13	103.50	-50.367	12.453
41.783 KHz	52.89	103.50	-50.609	12.401

Figure 18: Power Supply M/N M YJS024Y-1201800G 10 kHz – 0.15 MHz Table



Figure 19: Power Supply M/N YJS024Y-1201800G 0.15 MHz – 30 MHz



	<b>P</b>	<u>د</u>	J	1 <sup>4</sup>
Frequency	Top_peaks	speclimit	del_limit	CF
MHz				
239.550 KHz	49.28	103.50	-54.220	11.740
314.175 KHz	45.17	103.50	-58.331	11.689
358.950 KHz	45.22	103.50	-58.277	11.653
433.575 KHz	45.21	103.50	-58.287	11.593
597.750 KHz	44.30	103.50	-59.199	11.501
985.800 KHz	43.97	103.50	-59.531	11.689
1.822 MHz	47.34	103.50	-56.164	11.946
3.344 MHz	49.91	103.50	-53.589	12.031
3.941 MHz	51.45	103.50	-52.048	11.912
6.448 MHz	53.60	103.50	-49.904	11.826

Figure 20: Power Supply M/N YJS024Y-1201800G 0.15 kHz – 30 MHz Table



Figure 21: Power Supply M/N YJS024Y-1201800G 30 MHz – 400 MHz Horizontal



Figure 22: Power Supply M/N YJS024Y-1201800G 30 MHz – 400 MHz Vertical



		I-	1-	1.	1-	1-	- I- I
Frequency	Max Peaks	Limit EN	Delimit	Peak_Hor	Peak_Ver	Angle Hor	Angle Ver
Hz	dBuV/m	dBu¥/m	dB	dBuV/m	dBuV/m	deg.	deg.
45.20 MHz	29.13	103.5	-74.372		29.13	-0.200	90.200
45.36 MHz	29.89	103.5	-73.613	29.89	29.11	89.300	135.200
102.59 MHz	32.28	103.5	-71.220	25.74	32.28	269.200	-0.100
105.82 MHz	31.31	103.5	-72.195	25.99	31.31	89.300	45.400
253.42 MHz	30.70	103.5	-72.798	30.70	29.96	89.300	90.200
274.28 MHz	33.45	103.5	-70.048	33.45	30.75	89.300	270.400
275.25 MHz	33.58	103.5	-69.920	33.58	30.76	89.300	315.500
334.09 MHz	32.20	103.5	-71.302	32.20	31.32	269.200	315.500
357.38 MHz	31.65	103.5	-71.849	31.65	31.63	314.500	135.200

Figure 23: Power Supply M/N YJS024Y-1201800G 30 MHz – 400 MHz Table



### 10. Radiated Emission

### **10.1Test Specification**

0.009-400 MHz, FCC Part 18, Subpart C

#### **10.2Test Procedure**

The E.U.T operation mode and test configuration are as described in section 4.

A preliminary measurement to characterize the E.U.T was performed inside the shielded room at a distance of 3 meters, using peak detection mode and broadband antennas. The preliminary measurements produced a list of the highest emissions. The E.U.T was then transferred to the open site, and placed on a remote-controlled turntable. The E.U.T was placed on a non-metallic table, 0.8 meters above the ground. The effect of varying the position of the cables was investigated to find the configuration that produces maximum emission. The configuration tested is shown in photographs *Figure 27. Radiated Emission Test 0.009-30 MHz* to *Figure 29. Radiated Emission Test 200-400 MHz*.

The frequency range 0.009-400 MHz was scanned, and the list of the highest emissions was verified and updated accordingly.

In the frequency range of 0.009 MHz - 400 MHz, the emissions were measured using a computerized EMI receiver complying to CISPR 16 requirements. The specification limits and applicable correction factors are pre-loaded to the receiver.

The readings were maximized by adjusting the antenna height between 1-4 meters, the turntable azimuth between 0-360°, and the antenna polarization.

Verification of the E.U.T emissions was based on the following methods: Turning the E.U.T on and off.
Using a frequency span less than 10 MHz.
Observation of the signal level during turntable rotation. Background noise is not affected by the rotation of the E.U.T.

The emissions were measured at a distance of 3 meters.

The field strength is calculated directly by the EMI Receiver software, and a "Correction Factors" data disk, using the following equation:

FS = RA + AF + CF

Where:

- FS: Field strength  $[dB\mu V/m]$
- RA: Receiver Amplitude  $[dB\mu V]$
- AF: Receiving Antenna Correction Factor [dB/m]
- CF: Cable attenuation Factor [dB]

Example:  $FS = 30.7 dB\mu V (RA) + 14.0 dB (AF) + 0.9 dB (CF) = 45.6 dB\mu V$ 



The E.U.T met the requirements of the FCC Part 18, Subpart C specification.

The margin between the emission level and the specification limit is 61.7 dB in the worst case at the frequency of 63.12 MHz, vertical polarization.

The details of the highest emissions are given in Figure 24 to Figure 25.



### **Radiated Emission**

E.U.T Description	SensiFirm Non-invasive Cellulite Reduction Device
Туре	CEL100US01SN
Serial Number:	002

Specification: FCC Part 18, Subpart C

#### Antenna: 3 meters distance

Frequency range: 0.009 MHz to 30 MHz Detectors: Peak, Quasi-peak

Frequency	Peak Amp	Limit	Margin
(MHz)	dBµV/m	dBµV/m	(dB)
0.01393	36.5	103.5	-67.0
0.02380	40.1	103.5	-63.4
0.03720	31.8	103.5	-71.7
0.98580	28.4	103.5	-75.1
2.00	25.9	103.5	-77.6
4.00	24.8	103.5	-78.7

#### Figure 24. Radiated Emission. Antenna Polarization: HORIZONTAL/VERTICAL. Detectors: Peak, Quasi-peak

*Note:* Margin refers to the test results obtained minus specified requirement; thus a positive number indicates failure, and a negative result indicates that the product passes the test.



### **Radiated Emission**

E.U.T Description SensiFirm Non-invasive Cellulite Reduction DeviceType CEL100US01SNSerial Number: 002

Specification: FCC Part 18, Subpart C

Antenna Polarization: Horizontal/Vertical Antenna: 3 meters distance Frequency range: 30 MHz to 1000 MHz Detectors: Peak, Quasi-peak

Frequency	Peak Amp	An Polar	tenna ization:	Limit	Margin
(MHz)	dBµV/m	Hor.	Ver.	dBµV/m	( <b>dB</b> )
30.81	40.1		Х	103.5	-63.4
46.65	37.9		Х	103.5	-65.6
63.12	41.8		Х	103.5	-61.7
75.91	40.7		Х	103.5	-62.8
303.43	39.1		Х	103.5	-64.4
250.00	37.7	Х		103.5	-65.8
371.60	38.4	X		103.5	-65.1
383.00	36.9	X		103.5	-66.6

# Figure 25. Radiated Emission. Antenna Polarization: HORIZONTAL/VERTICAL. Detectors: Peak, Quasi-peak

*Note:* Margin refers to the test results obtained minus specified requirement; thus a positive number indicates failure, and a negative result indicates that the product passes the test.



# 11. Set Up Photographs



Figure 26. Conducted Emission From AC Mains Test



Figure 27. Radiated Emission Test 0.009-30 MHz



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Figure 28. Radiated Emission Test 30-200 MHz



Figure 29. Radiated Emission Test 200-400 MHz



# . Signatures of the E.U.T's Test Engineers

Test	Test Engineer Name	Signature
Conducted Emissions	D. Yadidi	5.13
Radiated Emissions	D. Yadidi	5.33



### **13. APPENDIX A - CORRECTION FACTORS**

#### 13.1 Correction factors for RF OATS Cable 35m ITL #1784

Frequency (MHz)	Cable loss (dB)
10.0	0.3
20.0	0.2
50.0	-0.1
100.0	-0.6
200.0	-1.2
500.0	-2.3
1000.0	-3.6



# 13.2 Correction factors for RF OATS Cable 10m ITL #1794

Frequency(MHz)	Cable loss(dB)
10.0	-0.3
20.0	-0.3
50.0	-0.5
100.0	-0.7
200.0	-1.1
500.0	-1.8
1000.0	-2.7



### **13.1** Correction factors for

#### Log Periodic Antenna EMCO, Model 3146, Serial #9505-4081

	AF
Frequency [MHz]	[dB/m]
200.0	11.47
250.0	12.06
300.0	14.77
400.0	15.77
500.0	18.01
600.0	18.84
700.0	20.93
800.0	21.27
900.0	22.44
1000.0	24.10



#### 13.2 Correction factors for Biconical Antenna EMCO, Model 3110B, Serial #9912-3337

	AF
Frequency [MHz]	[dB/m]
30.0	14.18
35.0	13.95
40.0	12.84
45.0	11.23
50.0	11.10
60.0	10.39
70.0	9.34
80.0	9.02
90.0	9.31
100.0	8.95
120.0	11.53
140.0	12.20
160.0	12.56
180.0	13.49
200.0	15.27



### 13.3 Correction factors for ACTIVE LOOP ANTENNA Model 6502 S/N 9506-2950

f(MHz)	MAF(dBs/m)	AF(dB/m)
0.01	-33.1	18.4
0.02	-37.2	14.3
0.03	-38.2	13.3
0.05	-39.8	11.7
0.1	-40.1	11.4
0.2	-40.3	11.2
0.3	-40.3	11.2
0.5	-40.3	11.2
0.7	-40.3	11.2
1	-40.1	11.4
2	-40	11.5
3	-40	11.5
4	-40.1	11.4
5	-40.2	11.3
6	-40.4	11.1
7	-40.4	11.1
8	-40.4	11.1
9	-40.5	11
10	-40.5	11
20	-41.5	10
30	-43.5	8



### 14. APPENDIX B - MEASUREMENT UNCERTAINTY

### 14.1Radiated Emission

Radiated Emission (CISPR 11, EN 55011, CISPR 22, EN 55022, ANSI C63.4) for open site 30-1000MHz:

Expanded Uncertainty (95% Confidence, K=2):

 $\pm 4.98 \ dB$ 

#### **14.2Conducted Emission**

Conducted Emission (CISPR 11, EN 55011, CISPR 22, EN 55022, ANSI C63.4) 0.15 – 30 MHz:

Expanded Uncertainty (95% Confidence, K=2):

 $\pm$  3.44 dB