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FCC TEST REPORT

FCC 47 CFR Part 15D

Unlicensed Personal Communication Service Devices

Industry Canada RSS-213

2GHz License-exempt Personal Communications Service Devices (LE-PCS)

Report Reference No.	G0M-1412-4399-TFC15DFP-V01
Testing Laboratory	Eurofins Product Service GmbH
Address	Storkower Str. 38c 15526 Reichenwalde Germany
Accreditation	A2LA Accredited Testing Laboratory, Certificate No.: 1983.01 FCC Filed Test Laboratory, Reg.-No.: 96970 IC OATS Filing assigned code: 3470A
Applicant's name	LogicMark, LLC
Address	10106 Bluegrass Parkway 40299 Louisville USA
Test specification:	
Standard	47 CFR Part 15D, 47 CFR Part 15C, 47 CFR Part 15B RSS-213, Issue 2, 2005-12, RSS-Gen, Issue 4, 2014-11 ANSI C63.17:2006, ANSI C63.4:2003
Test scope	Class II Permissive Change
Equipment under test (EUT):	
Product description	CaretakerSentry
Model No.	40914
Additional Model(s)	None
Brand Name(s)	LogicMark
Hardware version	None
Firmware / Software version	2.3
	FCC-ID: TYD-CS40914 IC: 8471A-CS40914
Test result	**Passed**

Possible test case verdicts:

- neither assessed nor tested ..... N/N
- required by standard but not appl. to test object..... N/A
- required by standard but not tested..... N/T
- not required by standard for the test object ..... N/R
- test object does meet the requirement..... P (Pass)
- test object does not meet the requirement..... F (Fail)

Testing:

Test Lab Temperature	20 – 23 °C	
Test Lab Humidity	32 – 38 %	
Date of receipt of test item	2015-01-09	
Date (s) of performance of tests	2015-01-09	
Compiled by	Marcus Klein	
Tested by (+ signature)..... (Responsible for Test)	Marcus Klein	.....
Approved by (+ signature)	Christian Weber	.....
Date of issue	2015-01-12	
Total number of pages	21	

General remarks:

The test results presented in this report relate only to the object tested.

The results contained in this report reflect the results for this particular model and serial number. It is the responsibility of the manufacturer to ensure that all production models meet the intent of the requirements detailed within this report.

This report shall not be reproduced, except in full, without the written approval of the Issuing testing laboratory.

Additional comments:

Version History

Version	Issue Date	Remarks	Revised by
01	2015-01-12	Initial Release	

Eurofins Product Service GmbH
Storkower Str. 38c, D-15526 Reichenwalde, Germany

REPORT INDEX

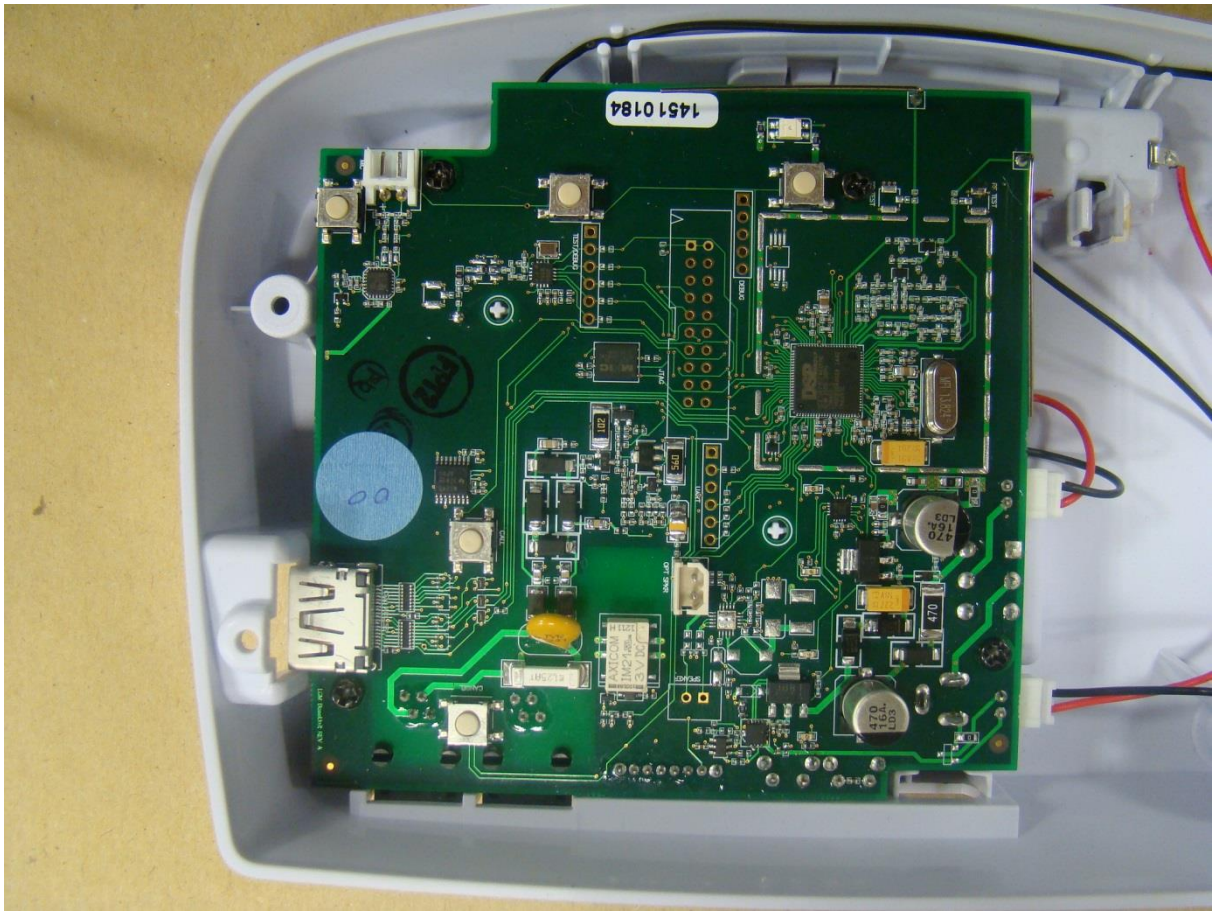
1 Equipment (Test item) Description

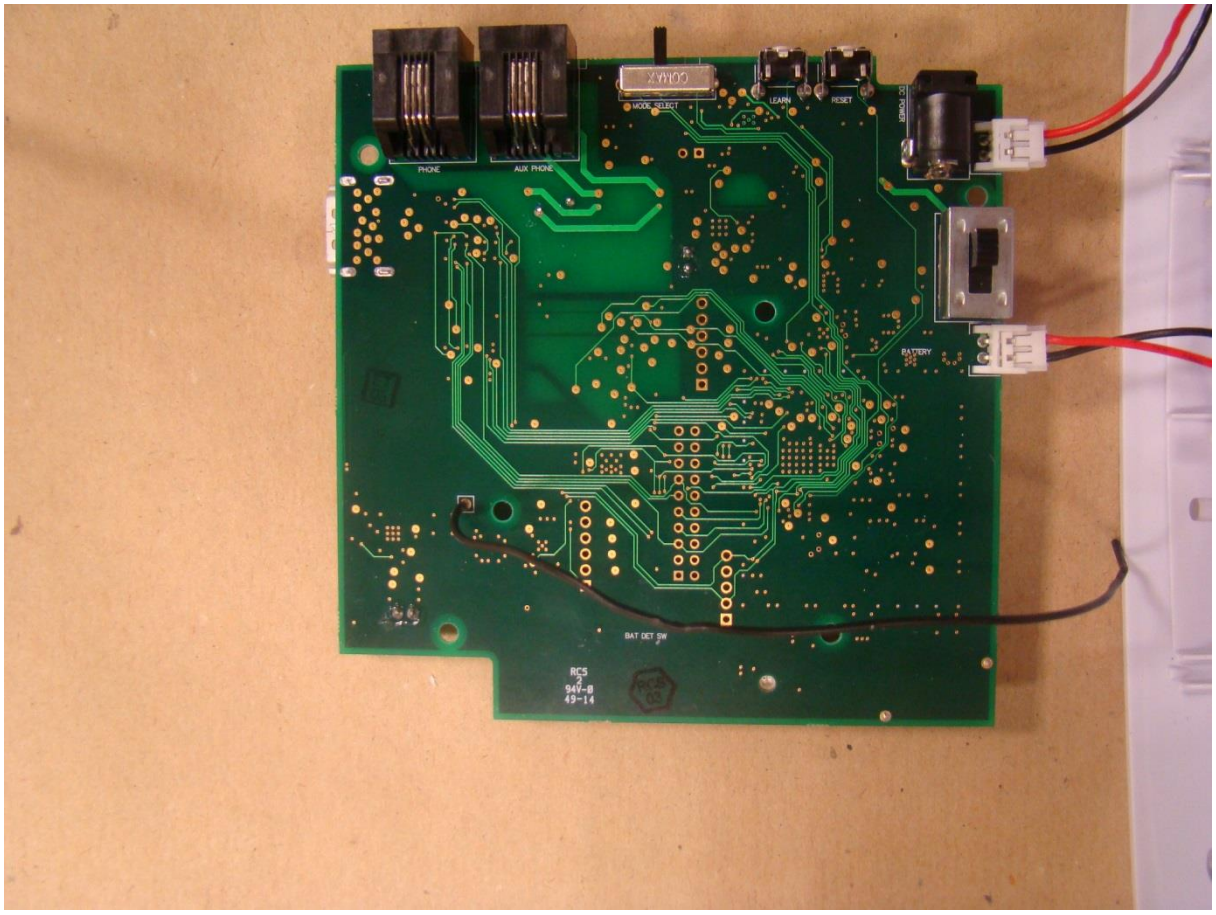
Description	CaretakerSentry	
Model	40914	
Additional Model(s)	None	
Brand Name(s)	LogicMark	
Serial number	None	
Hardware version	None	
Software / Firmware version	2.3	
FCC-ID	TYD-CS40914	
IC	8471A-CS40914	
Equipment type	End Product	
Radio type	DECT Fixed Part	
Number of Radios	1 transceivers is built into the device	
Radio technology	DECT 6.0	
Operating frequency range	1921.536 - 1928.448MHz	
Assigned frequency band	1920 - 1930MHz	
Number of RF channels	5	
Manufacturer	LogicMark, LLC 10106 Bluegrass Parkway 40299 Louisville USA	
Power supply	4.8 VDC Battery / 110 VAC	
AC/DC-Adaptor	Model	ZDC075080US
	Vendor	E-Tek
	Input	100-240 VAC 50/60 Hz
	Output	7.5 VDC / 0.8 A

1.1 Photos - Equipment external


CaretakerSentry Model #40914
by
LogicMark, LLC
www.LogicMark.com
FCC ID: TYD-CS40914
IC: 8471A-CS40914
REN 3.7
Base Station Rechargeable Batteries
Fully charged batteries will provide 24 hours of standby power in the event of a power failure. Replace batteries every 2 years or as needed. Rechargeable NiMH AA batteries only with 2400 mAH or greater capacity.
TEST SYSTEM WEEKLY
CAUTION: No user serviceable parts inside.
IMPORTANT: Do not connect AC power to a receptacle controlled by a switch. Refer to instructions for operation & safety. Privacy of communication may not be ensured when using this device.
This device complies with Part 15 of the FCC Rules. Operation is subject to the following two conditions: (1) this device may not cause harmful interference, and (2) this device must accept any interference received, including interference that may cause undesired operation.
01CS019714
2-Way Voice Pendant Battery Charger
RED Charging
GREEN Charged
OFF No Battery
YELLOW BACK-UP BATTERY STATUS LED
Off: Running on Battery Power
Solid: Normal Operation - Charging
Flashing: Low or Defective Batteries
BLUE PHONE CONNECTED LED
Off: Normal operation
Solid: Dialing/Talking
Flashing: No Phone Connection Detected
GREEN INFO LED
Off: Standby
Solid: Dialing/Talking or Learn Mode
Flashing: Pendant Learning or Problem with Pendant (battery or not in communication)
RED POWER LED
Off: No AC power / No Battery Back-up Power
Solid: AC Power
Flashing: Running on Battery Back-up Power
Made in China Exclusively for LogicMark, LLC
2-WAY VOICE PENDANT BATTERY CHARGER

1.2 Photos - Equipment internal




PHONE
AUX PHONE
MODE SELECT
LEARN
RESET
DC POWER
BATTERY
BAT DET SW

1.3 Photos – Test setup

Eurofins Product Service GmbH
Storkower Str. 38c, D-15526 Reichenwalde, Germany

1.4 Supporting Equipment Used During Testing

Product Type*	Device	Manufacturer	Model No.	Comments
AE	Pendant	LogicMark	DECT 6.0 2-Way	

***Note:** Use the following abbreviations:

AE : Auxiliary/Associated Equipment, or

SIM : Simulator (Not Subjected to Test)

CABL : Connecting cables

1.5 Test Modes

Mode #	Description	
AC-Powerline	General conditions:	Charging via AC/DC Adapter.
	Radio conditions:	Mode = idle Modulation = none

1.6 Test Equipment Used During Testing

Measurement Software			
Description	Manufacturer	Name	Version
EMC Test Software	Dare Instruments	Radimation	2014.1.15

AC powerline conducted emissions					
Description	Manufacturer	Model	Identifier	Cal. Date	Cal. Due
AMN	R&S	ESH2-Z5	EF00036	2014-11	2016-11
EMI Test Receiver	R&S	ESCS 30	EF00295	2014-10	2015-10

1.7 Sample emission level calculation

The following is a description of terms and a sample calculation, as appears in the radiated emissions data table. The numbers used in the calculation are for example only. There is no direct correlation to the specific data taken for the product described in this document:

Reading:

This is the reading obtained on the spectrum analyzer in dBµV. Any external preamplifiers used are taken into account through internal analyzer settings.

A.F.:

This is the antenna factor for the receiving antenna. It is a conversion factor, which converts electric fields strengths to voltages, which can be measured directly on the spectrum analyzer. It is treated as a loss in dB. Cable losses have been included with the A.F. to simplify the calculations. The antenna factor is used in calculations as follows:

Reading on Analyzer (dBµV) + A.F. (dB) = Net field strength (dBµV/m)

Net:

This is the net field strength measurement (as shown above).

Limit:

This is the FCC Class B radiated emission limit (in units of dBµV/m). The FCC limits are given in units of µV/m. The following formula is used to convert the units of µV/m to dBµV/m:

Limit (dBµV/m) = 20*log (µV/m)

Margin:

This is the margin of compliance below the FCC limit. The units are given in dB. A negative margin indicates the emission was below the limit. A positive margin indicates that the emission exceeds the limit.

Example only:

Reading	+	AF	=	Net Reading	:	Net reading - FCC limit = Margin
21.5 dBµV	+	26 dB	=	47.5 dBµV/m	:	47.5 dBµV/m - 57.0 dBµV/m = -9.5 dB

2 Result Summary

FCC 47 CFR Part 15D, 15C, IC RSS-213, IC RSS-Gen				
Product Specific Standard Section	**Requirement – Test**	**Reference Method**	**Result**	**Remarks**
FCC 15.307	Coordination with fixed microwave service	declaration	N/A	
FCC 15.309(b)	Cross reference to subpart B	dedicated report	PASS	Note 1
FCC 15.315 FCC 15.207 IC RSS-213 6.3 IC RSS-213 4.2 IC RSS-Gen 8.8	AC power line conducted emissions	ANSI C63.4	PASS	Note 1
FCC 15.317 FCC 15.203 IC RSS-213 4.1(e)	Antenna requirements	visual inspection	N/A	
FCC 15.319(b) IC RSS-213 6.1	Digital modulation	ANSI C63.17 6.1.4	N/A	
IC RSS-213 6.4 RSS-Gen 4.6.1	Occupied bandwidth	RSS-Gen 4.6.1	N/A	
FCC 15.323(a)	Emission Bandwidth	ANSI C63.17 6.1.3	N/A	
FCC 15.319(c) FCC 15.319(e) IC RSS-213 6.5 IC RSS-213 4.3.1	Peak transmit power	ANSI C63.17 6.1.2	N/A	
FCC 15.319(d) IC RSS-213 6.6 IC RSS-213 4.3.2	Power spectral density	ANSI C63.17 6.1.5	N/A	
FCC 15.323(f) IC RSS-213 6.2	Frequency stability	ANSI C63.17 6.2	N/A	
FCC 15.323(d) IC RSS-213 6.7.2	Transmitter in-band unwanted emissions	ANSI C63.17 6.1.6	N/A	
FCC 15.323(d) IC RSS-213 6.7.1	Transmitter out-of-band emissions	ANSI C63.17 6.1.6 ANSI C63.4	N/A	
IC RSS-213 6.8 IC RSS-Gen 4.10, 6	Receiver spurious emissions	ANSI C63.4	N/A	
FCC 15.319(f) IC RSS-213 4.3.4(a)	Automatic discontinuation of transmission	functional test	N/A	
FCC 15.319(i) RSS-102	Radiofrequency radiation exposure	dedicated report	N/A	
FCC 15.323(c)(2),(5),(9) IC RSS-213 4.3.4(b)(2),(5),(9)	Monitoring threshold + Monitoring threshold relaxation	ANSI C63.17 7.3.1	N/A	
FCC 15.323(c)(5) IC RSS-213 4.3.4(b)(5)	LIC confirmation	ANSI C63.17 7.3.4 / 7.3.4	N/A	
FCC 15.323(c)(5) IC RSS-213 4.3.4(b)(5)	LIC selection	ANSI C63.17 7.3.2 / 7.3.3	N/A	
FCC 15.323(c)(8) IC RSS-213 4.3.4(b)(8)	Monitoring antenna	ANSI C63.17 4	N/A	

FCC 15.323(c)(1) IC RSS-213 4.3.4(b)(1)	Monitoring time	ANSI C63.17 7.3.4	N/A	
FCC 15.323(c)(7) IC RSS-213 4.3.4(b)(7)	Monitoring bandwidth	ANSI C63.17 7.4	N/A	
FCC 15.323(c)(7) IC RSS-213 4.3.4(b)(7)	Monitoring reaction time	ANSI C63.17 7.5	N/A	
FCC 15.323(c)(6) IC RSS-213 4.3.4(b)(6)	Access criteria test interval	ANSI C63.17 8.1.1	N/A	
FCC 15.323(c)(6) IC RSS-213 4.3.4(b)(6)	Access criteria functional test	ANSI C63.17 8.1.2 / 8.1.3	N/A	
FCC 15.323(c)(4) IC RSS-213 4.3.4(b)(4)	Acknowledgements	ANSI C63.17 8.2.1	N/A	
FCC 15.323(c)(3) IC RSS-213 4.3.4(b)(3)	Maximum transmit period	ANSI C63.17 8.2.2	N/A	
FCC 15.323(c)(5) IC RSS-213 4.3.4(b)(5)	Maximum spectrum occupancy	declaration	N/A	
FCC 15.323(c)(10) IC RSS-213 4.3.4(b)(10)	Duplex connections	ANSI C63.17 8.3	N/A	
FCC 15.323(c)(11) IC RSS-213 4.3.4(b)(11)	Alternative monitoring interval	ANSI C63.17 8.4	N/A	
FCC 15.323(c)(12) IC RSS-213 4.3.4(b)(12)	Fair access	declaration	N/A	
FCC 15.323(e)(1),(4),(5) IC RSS-213 4.3.4(c)(1),(4),(5)	Frame period and Jitter	ANSI C63.17 6.2.3	N/A	
FCC 15.323(e)(2),(3) IC RSS-213 4.3.4(c)(2),(3)	Frame and TDMA repetition stability	ANSI C63.17 6.2.2	N/A	

Remarks:

Test case selection is based on modifications described in class II permissive change letter in order to verify all affected test cases.

3 Test Conditions and Results

3.1 Test Conditions and Results – Cross reference to subpart B

Cross reference to subpart B acc. to FCC 47 CFR 15D	**Verdict: N/A**
EUT requirement rule parts and clause	Reference
	FCC 15.309(b)
Test according to measurement reference	Reference Method
	Dedicated Test Report
Requirements	
The requirements of subpart D apply only to the radio transmitter contained in the PCS device. Other aspects of the operation of a PCS device may be subject to requirements contained elsewhere in this chapter. In particular, a PCS device that includes digital circuitry not directly associated with the radio transmitter also is subject to the requirements for unintentional radiators in subpart B.	
Result	
The test results related to subpart B are given in a dedicated test report G0M-1412-4399-EF0115B-V01	

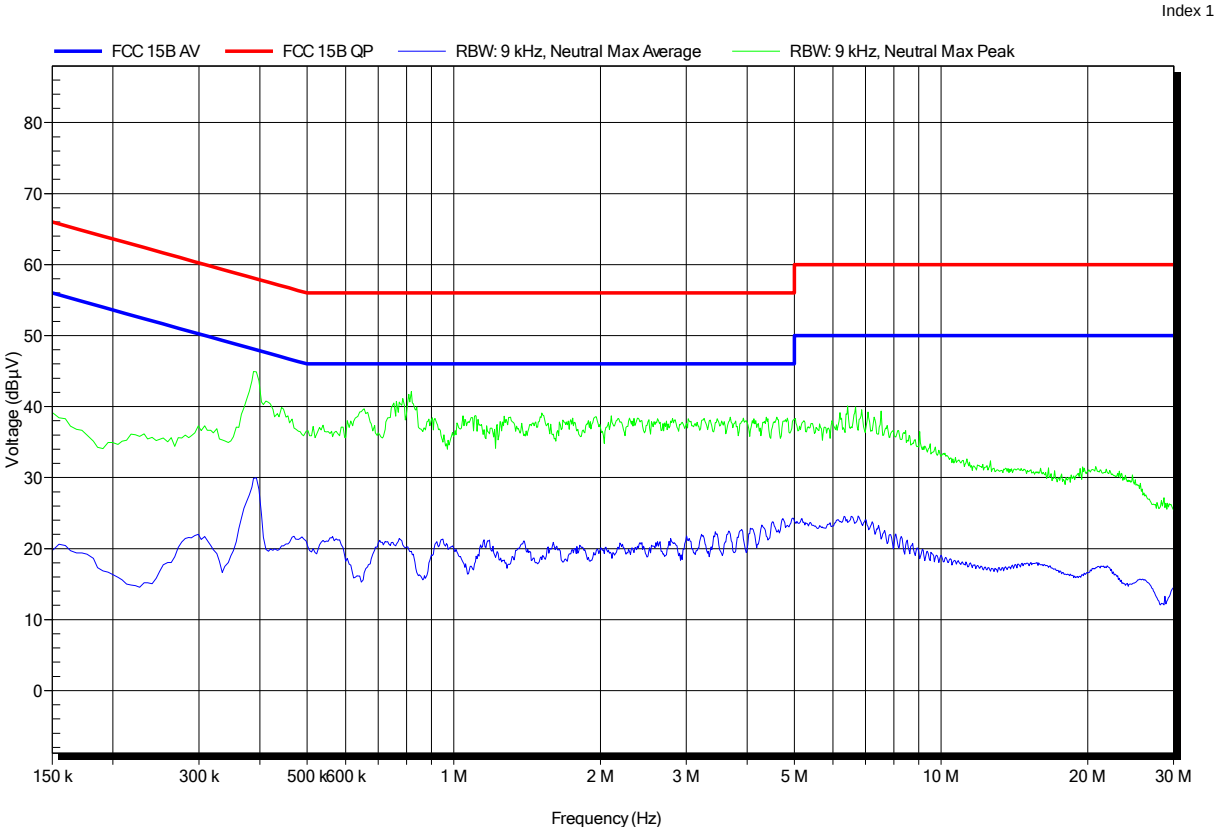
3.2 Test Conditions and Results – AC power line conducted emissions

Conducted emissions acc. to FCC 47 CFR 15D / IC RSS-213				**Verdict: PASS**
EUT requirement rule parts and clause	Reference			
	FCC 15.315 / FCC 15.207 / IC RSS-213 6.3, 4.2			
Test according referenced standards	Reference Method			
	ANSI C63.4			
Fully configured sample scanned over the following frequency range	Frequency range			
	0.15MHz to 30MHz			
Points of Application	Application Interface			
AC Mains	LISN			
EUT test mode	AC-Powerline			
Limits and results				
Frequency [MHz]	Quasi-Peak [dBµV]	Result	Average [dBµV]	Result
0.15 to 5	66 to 56*	PASS	56 to 46*	PASS
0.5 to 5	56	PASS	46	PASS
5 to 30	60	PASS	50	PASS
Comments: * Limit decreases linearly with the logarithm of the frequency.				

EMI voltage test in the ac-mains according to FCC 15.207

Project number: G0M-1412-4399

Manufacturer:	LogicMark, LLC
EUT Name:	CaretakerSentry
Model:	40911
Test Site:	Eurofins Product Service GmbH
Operator:	Mr. Klein
Test Conditions:	Tnom: 23°C, Unom: 120 VAC
LISN:	ESH2-Z5 N
Mode:	Charging
Test Date:	2015-01-09
Note:	



EMI voltage test in the ac-mains according to FCC 15.207

Project number: G0M-1412-4399

Manufacturer:	LogicMark, LLC
EUT Name:	CaretakerSentry
Model:	40911
Test Site:	Eurofins Product Service GmbH
Operator:	Mr. Klein
Test Conditions:	Tnom: 23°C, Unom: 120 VAC
LISN:	ESH2-Z5 L
Mode:	Charging
Test Date:	2015-01-09
Note: