



Product Service

FCC&IC - TEST REPORT

Report Number : **68.950.12.260.02** Date of Issue: 4 March 2013

Model : **339294, 335644, 339295, 337652**

Product Type : MP10v1 Module

Applicant : ICON Health & Fitness Inc.

Address : 1500 South 1000 West, Logan, UT 84321, USA

Production Facility : Wanlida Group Co., Ltd.

Address : Wanlida Industry Zone, Nanjing, Fujian, China 363601

Test Result : **Positive** **Negative**

Total pages including Appendices : 18

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Jiangsu TÜV Product Service Ltd. – Shenzhen Branch reports apply only to the specific samples tested under stated test conditions. Construction of the actual test samples has been documented. It is the manufacturer's responsibility to assure that additional production units of this model are manufactured with identical electrical and mechanical components. The manufacturer/importer is responsible to the Competent Authorities in Europe for any modifications made to the production units which result in non-compliance to the relevant regulations. Jiangsu TÜV Product Service Ltd. – Shenzhen Branch shall have no liability for any deductions, inferences or generalizations drawn by the client or others from Jiangsu TÜV Product Service Ltd. – Shenzhen Branch issued reports.

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2 Details about the Test Laboratory

Details about the Test Laboratory

Test site1:

Company name: Jiangsu TÜV Product Service Ltd. – Shenzhen Branch
6th Floor, H Hall,
Century Craftwork Culture Square,
No. 4001, Fuqiang Road,
Futian District 518048,
Shenzhen,P.R.C.

Telephone: 86 755 8828 6998

Fax: 86 755 8828 5299

Test site2:

Company name: Audix Technology (shenzhen) Co.,Ltd
Block Shenzhen, Science & Industry Park,
Nantou, Shenzhen,
Guangdong,
China

Telephone: 86 755 2663 9496

Fax: 86 755 2663 2877



3 Description of the Equipment Under Test

Description of the Equipment Under Test

Product: MP10v1 Module
Model no.: 339294
Options and accessories: NIL
Rating: DC 12V
Powered by external adaptor:
Adaptor Input: 100-240VAC, 50/60Hz, 1.5A Max
Adaptor Output: 12VDC, 3.3A
Antenna: Unique Antenna, NOT accessible by end user
Max. Gain: 1dBi
RF Transmission Frequency: 2412-2462MHz
Description of the EUT: NIL

Auxiliary Equipment Used during Test:

DESCRIPTION	MANUFACTURER	MODEL NO.(SHIELD)	S/N(LENGTH)
Notebook	Lenovo	T400	----



4 Summary of Test Standards

Test Standards	
FCC Part 15 Subpart C, Intentional Radiators, 10-1-12 Edition	PART 15 – RADIO FREQUENCY DEVICES Subpart C – Intentional Radiators
RSS-210, Issue 8	RSS-210 — Licence-exempt Radio Apparatus (All Frequency Bands): Category I Equipment
RSS-Gen, Issue 3	General Requirements and Information for the Certification of Radio Apparatus

**5 Summary of Test Results**

Technical Requirements					
FCC Part 15 Subpart C 10-1-12 Edition, RSS-210 Issue 8, RSS-Gen Issue 3					
Test Condition	Pages	Test Result			Test Location
		Pass	Fail	N/A	
15.207 & RSSGEN 7.2.4 Conducted Emission AC Power Port	8	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Test Site2
15.247 (b) (1) & RSS-210 A8.4 Conducted peak output power	11	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Test Site2
15.247(d) & RSS-210 A8.5 Band edge compliance of RF emissions	---	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	Test Site2
15.247(d) & RSS-210 A8.5 Spurious RF conducted emissions	---	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	Test Site2
15.247(d) & 15.209 & RSS-210 2.5 & RSSGEN 7.2.5 & RSSGEN 6.1 Spurious radiated emissions for transmitter and receiver	12	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Test Site2
15.247(a)(2) & RSS-210 A8.2(a) 6dB bandwidth	---	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	Test Site2
RSSGEN 4.6.1 99% Occupied Bandwidth	---	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	Test Site2
15.247(e) & RSS-210 A8.2(b) Power spectral density	---	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	Test Site2



6 General Remarks

Remarks

This submittal(s) (test report) is intended for the Class 2 permissive change of FCC ID: OMC342047 and IC ID: 3673A-342047 comply with Section 15.207, 15.209, 15.247 of the FCC Part 15, Subpart C Rules, and RSS-210, RSS-GEN. All models (339294, 335644, 339295 and 337652) have the same technical construction, so test was applied on 339294, others are deemed to fulfill the relevant requirement without further testing.

SUMMARY:

All tests according to the regulations cited on page 5 were

- Performed

- **Not** Performed

The Equipment Under Test

- **Fulfills** the general approval requirements.


- **Does not** fulfill the general approval requirements.

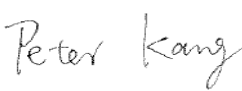
Sample Received Date: 16 January 2013


Testing Start Date: 18 January 2013

Testing End Date: 27 February 2013

- Jiangsu TÜV Product Service Ltd. – Shenzhen Branch -

Tested By	<u>2013-03-01</u>	<u>Sunny Lu</u>	
	EMC Project Engineer	Date	Name Signature

Prepared By	<u>2013-03-01</u>	<u>Peter Kang</u>	
	EMC Project Engineer	Date	Name Signature

Approved by	<u>2013-03-01</u>	<u>Ken Li</u>	
	EMC Project Manager	Date	Name Signature

7 Technical Requirement

7.1 Conducted Emission

Test Method

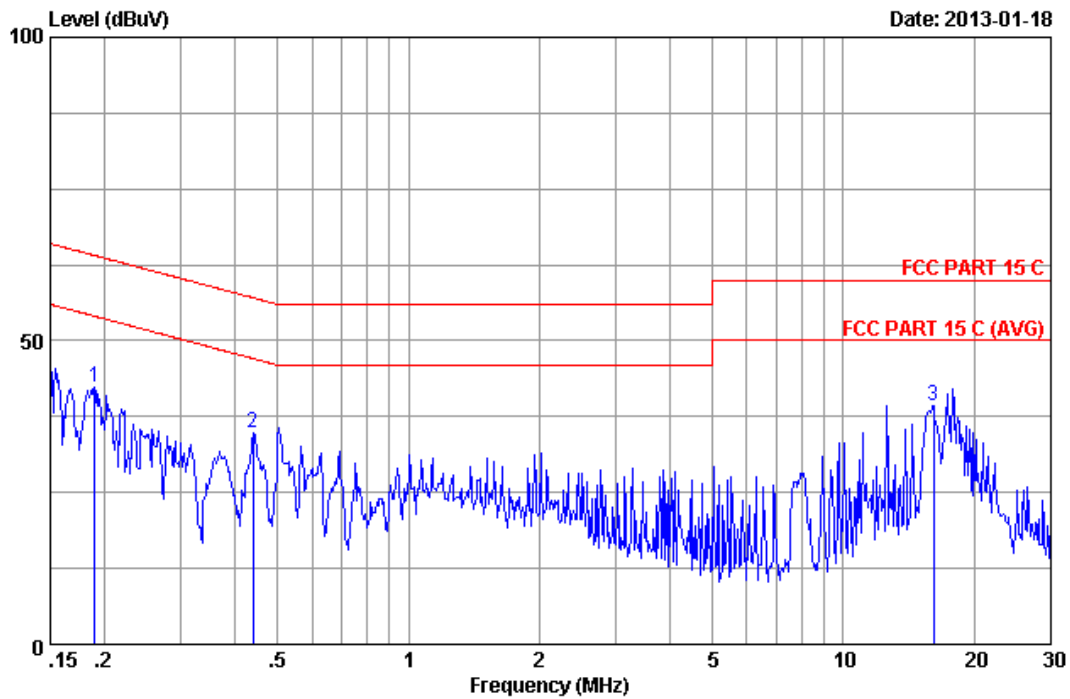
- 1 The EUT was placed on a table, which is 0.8m above ground plane
- 2 The power line of the EUT is connected to the AC mains through a Artificial Mains Network (A.M.N.).
- 3 Maximum procedure was performed to ensure EUT compliance
- 4 A EMI test receiver is used to test the emissions from both sides of AC line

Limit

Frequency MHz	QP Limit dB μ V	AV Limit dB μ V
0.150-0.500	66-56*	56-46*
0.500-5	56	46
5-30	60	50

“*”Decreasing linearly with logarithm of the frequency

Conducted Emission

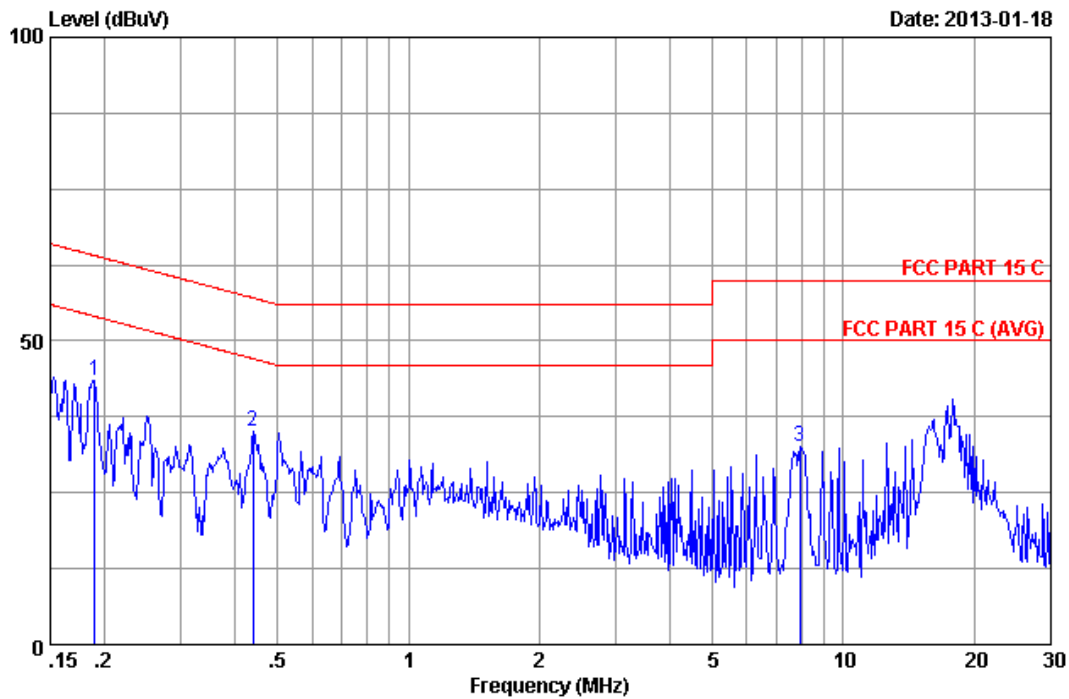


Site no :1#conduction Data No :2
 Dis./Ant. :** 2012 ESH2-25 LINE
 Limit :FCC PART 15 C
 Env./Ins. :Temp:23.1'C Humi:51% Engineer :Jolly_Xu
 EUT :339294
 Power Rating :AC 120V/60Hz
 Test Mode :WIFI ON
 :

No	Freq (MHz)	LISN Factor (dB)	Cable Loss (dB)	Reading (dBuV)	Emission Level (dBuV)	Limits (dBuV)	Margin (dB)	Remark
1	0.18938	0.19	0.00	42.12	42.31	64.06	21.75	Peak
2	0.43974	0.19	0.00	34.71	34.90	57.07	22.17	Peak
3	16.140	0.84	0.00	38.46	39.30	60.00	20.70	Peak

Remarks: 1.Emission Level=LISN Factor+Cable Loss(Include 10dB pulse limit)+Reading.
 2.If the average limit is met when using a quasi-peak detector, the EUT shall be deemed to meet both limits and measurement with average detector is unnecessary.

Conducted Emission



```

Site no      :1#conduction           Data No     :1
Dis./Ant.   **: 2012 ESH2-Z5 NEUTRAL
Limit       :FCC PART 15 C
Env./Ins.   :Temp:23.1'C   Humi:51%   Engineer   :Jolly_Xu
EUT         :339294
Power Rating:AC 120V/60Hz
Test Mode   :WIFI ON
:
    
```

No	Freq (MHz)	LISN Factor (dB)	Cable Loss (dB)	Reading (dBuV)	Emission Level (dBuV)	Limits (dBuV)	Margin (dB)	Remark
1	0.18938	0.21	0.00	43.31	43.52	64.06	20.54	Peak
2	0.43974	0.23	0.00	34.77	35.00	57.07	22.07	Peak
3	7.935	0.41	0.00	32.07	32.48	60.00	27.52	Peak

Remarks: 1.Emission Level=LISN Factor+Cable Loss(Include 10dB pulse limit)+Reading.
 2.If the average limit is met when using a quasi-peak detector, the EUT shall be deemed to meet both limits and measurement with average detector is unnecessary.

7.2 Conducted peak output power

Test Method

The transmitter output is connected to the Spectrum analyzer. The Spectrum analyzer is set to the peak power detection.

Limits for conducted peak output power measurements

Frequency Range MHz	Limit W	Limit dBm
2400-2483.5	≤1	≤30

Conducted peak output power

WIFI Mode IEEE 802.11b modulation (1Mbps) Test Result

Frequency MHz	Conducted Peak Output Power dBm	Result
CH1 2412MHz	16.58	Pass
CH6 2437MHz	16.80	Pass
CH11 2462MHz	17.40	Pass

WIFI Mode IEEE 802.11g modulation (6Mbps) Test Result

Frequency MHz	Conducted Peak Output Power dBm	Result
CH1 2412MHz	22.48	Pass
CH6 2437MHz	22.00	Pass
CH11 2462MHz	21.33	Pass

WIFI Mode IEEE 802.11n HT20 modulation (6.5Mbps) Test Result

Frequency MHz	Conducted Peak Output Power dBm	Result
CH1 2412MHz	21.16	Pass
CH6 2437MHz	21.80	Pass
CH11 2462MHz	22.34	Pass

7.3 Spurious radiated emissions for transmitter and receiver

Test Method

- 1 The EUT is placed on a turntable, which is 0.8m above ground plane.
- 2 The turntable shall be rotated for 360 degrees to determine the position of maximum emission level
- 3 EUT is set 3m away from the receiving antenna, which is varied from 1m to 4m to find out the highest emissions.
- 4 Maximum procedure was performed on the six highest emissions to ensure EUT compliance.
- 5 Each emission was to be maximized by changing the polarization of receiving antenna both horizontal and vertical.

Limit

Frequency MHz	Field Strength uV/m	Field Strength dB μ V/m	Detector
30-88	100	40	QP
88-216	150	43.5	QP
216-960	200	46	QP
960-1000	500	54	QP
Above 1000	500	54	AV
Above 1000	5000	74	PK

Transmitter Spurious radiated emissions

WIFI Mode IEEE 802.11b modulation (1 Mbps) CH1 2412MHz Test Result

Frequency MHz	Antenna Factor dB/m	Cable Loss dB	Amp. Factor dB	Reading dBμV	Emission Level dBμV/m	Polarization	Limit dBμV/m	Detector	Result
4824.000	32.51	8.69	35.71	49.39	54.88	Horizontal	74	PK	Pass
4824.000	32.51	8.69	35.71	44.38	49.87	Horizontal	54	AV	Pass
4824.000	32.51	8.69	35.71	46.28	51.77	Vertical	74	PK	Pass
4824.000	32.51	8.69	35.71	39.31	44.80	Vertical	54	AV	Pass
7236.000	-	-	-	-	-	-	-	-	-
7236.000	-	-	-	-	-	-	-	-	-

WIFI Mode IEEE 802.11b modulation (1 Mbps) CH6 2437MHz Test Result

Frequency MHz	Antenna Factor dB/m	Cable Loss dB	Amp. Factor dB	Reading dBμV	Emission Level dBμV/m	Polarization	Limit dBμV/m	Detector	Result
4874.000	32.62	8.73	35.69	49.90	55.56	Horizontal	74	PK	Pass
4874.000	32.62	8.73	35.69	44.42	50.08	Horizontal	54	AV	Pass
4874.000	32.62	8.73	35.69	48.18	53.84	Vertical	74	PK	Pass
4874.000	32.62	8.73	35.69	42.52	48.18	Vertical	54	AV	Pass
7311.000	-	-	-	-	-	-	-	-	-
7311.000	-	-	-	-	-	-	-	-	-

WIFI Mode IEEE 802.11b modulation (1 Mbps) CH11 2462MHz Test Result

Frequency MHz	Antenna Factor dB/m	Cable Loss dB	Amp. Factor dB	Reading dBμV	Emission Level dBμV/m	Polarization	Limit dBμV/m	Detector	Result
4924.000	32.73	8.78	35.68	49.04	54.87	Horizontal	74	PK	Pass
4924.000	32.73	8.78	35.68	44.05	49.88	Horizontal	54	AV	Pass
4924.000	32.73	8.78	35.68	47.95	53.78	Vertical	74	PK	Pass
4924.000	32.73	8.78	35.68	43.97	49.80	Vertical	54	AV	Pass
7386.000	-	-	-	-	-	-	-	-	-
7386.000	-	-	-	-	-	-	-	-	-

Remark:

- (1) Emission Level= Antenna Factor +Cable Loss - Amp. factor + Reading
- (2) Data of measurement within this frequency range shown "-" in the table above means the reading of emissions are attenuated more than 20db below the permissible limits or the field strength is too small to be measured.

**Transmitter Spurious radiated emissions**

WIFI Mode IEEE 802.11g modulation (6 Mbps) CH1 2412MHz Test Result

Frequency MHz	Antenna Factor dB/m	Cable Loss dB	Amp. Factor dB	Reading dB μ V	Emission Level dB μ V/m	Polarization	Limit dB μ V/m	Detector	Result
311.25	13.08	1.31	0	25.10	39.49	Horizontal	46.00	QP	Pass
4824.000	-	-	-	-	-	-	-	-	-
4824.000	-	-	-	-	-	-	-	-	-
4824.000	-	-	-	-	-	-	-	-	-
4824.000	-	-	-	-	-	-	-	-	-
7236.000	-	-	-	-	-	-	-	-	-
7236.000	-	-	-	-	-	-	-	-	-

WIFI Mode IEEE 802.11g modulation (6 Mbps) CH6 2437MHz Test Result

Frequency MHz	Antenna Factor dB/m	Cable Loss dB	Amp. Factor dB	Reading dB μ V	Emission Level dB μ V/m	Polarization	Limit dB μ V/m	Detector	Result
4874.000	-	-	-	-	-	-	-	-	-
4874.000	-	-	-	-	-	-	-	-	-
7311.000	-	-	-	-	-	-	-	-	-
7311.000	-	-	-	-	-	-	-	-	-

WIFI Mode IEEE 802.11g modulation (6 Mbps) CH11 2462MHz Test Result

Frequency MHz	Antenna Factor dB/m	Cable Loss dB	Amp. Factor dB	Reading dB μ V	Emission Level dB μ V/m	Polarization	Limit dB μ V/m	Detector	Result
355.74	311.28	13.08	1.31	23.96	38.35	Horizontal	46.0	QP	Pass
4924.000	32.73	8.78	35.68	45.19	51.02	Horizontal	74	PK	Pass
4924.000	32.73	8.78	35.68	33.17	39.00	Horizontal	54	AV	Pass
7386.000	-	-	-	-	-	-	-	-	-
7386.000	-	-	-	-	-	-	-	-	-

Remark:

- (1) Emission Level= Antenna Factor +Cable Loss - Amp. factor + Reading
- (2) Data of measurement within this frequency range shown “-” in the table above means the reading of emissions are attenuated more than 20db below the permissible limits or the field strength is too small to be measured.

**Transmitter Spurious radiated emissions**

WIFI Mode IEEE 802.11n HT20 modulation (6.5 Mbps) CH1 2412MHz Test Result

Frequency MHz	Antenna Factor dB/m	Cable Loss dB	Amp. Factor dB	Reading dB μ V	Emission Level dB μ V/m	Polarization	Limit dB μ V/m	Detector	Result
4824.000	-	-	-	-	-	-	-	-	-
4824.000	-	-	-	-	-	-	-	-	-
7236.000	-	-	-	-	-	-	-	-	-
7236.000	-	-	-	-	-	-	-	-	-

WIFI Mode IEEE 802.11n HT20 modulation (6.5 Mbps) CH6 2437MHz Test Result

Frequency MHz	Antenna Factor dB/m	Cable Loss dB	Amp. Factor dB	Reading dB μ V	Emission Level dB μ V/m	Polarization	Limit dB μ V/m	Detector	Result
4874.000	-	-	-	-	-	-	-	-	-
4874.000	-	-	-	-	-	-	-	-	-
7311.000	-	-	-	-	-	-	-	-	-
7311.000	-	-	-	-	-	-	-	-	-

WIFI Mode IEEE 802.11n HT20 modulation (6.5 Mbps) CH11 2462MHz Test Result

Frequency MHz	Antenna Factor dB/m	Cable Loss dB	Amp. Factor dB	Reading dB μ V	Emission Level dB μ V/m	Polarization	Limit dB μ V/m	Detector	Result
4924.000	-	-	-	-	-	-	-	-	-
4924.000	-	-	-	-	-	-	-	-	-
7386.000	-	-	-	-	-	-	-	-	-
7386.000	-	-	-	-	-	-	-	-	-

Remark:

- (1) Emission Level= Antenna Factor +Cable Loss - Amp. factor + Reading
- (2) Data of measurement within this frequency range shown “-” in the table above means the reading of emissions are attenuated more than 20db below the permissible limits or the field strength is too small to be measured.

**Receiver Spurious radiated emissions**

WIFI Receiver Mode IEEE 802.11b/g/n modulation Test Result (Worst case)

Frequency MHz	Antenna Factor dB/m	Cable Loss dB	Amp. Factor dB	Reading dB μ V	Emission Level dB μ V/m	Polarization	Limit dB μ V/m	Detector	Result
311.28	13.08	1.31	0	26.7	41.09	Horizontal	46.0	QP	Pass
41.87	13.91	0.57	0	18.30	32.78	Vertical	46.0	QP	Pass
Above 1GHz	-	-	-	-	-	-	-	-	-
-	-	-	-	-	-	-	-	-	-

Remark:

- (1) Emission Level= Antenna Factor +Cable Loss - Amp. factor + Reading
- (2) Data of measurement within this frequency range shown “-” in the table above means the reading of emissions are attenuated more than 20db below the permissible limits or the field strength is too small to be measured.



Product Service

8 Product Information

To: Jiangsu TÜV Product Service Ltd.
Shenzhen Branch

Attention: Mr. Radu Gosav

From: M

Date: January 29, 2013

Fax No: 86 755 8828 5299

Total Page (Cover Included): 1

Project No.:

Declaration Letter

We: ICON Health & Fitness Inc.
1500 South 1000 West, Logan, UT 84321, United States

Officially notify Jiangsu TÜV Product Service Ltd. Shenzhen Branch that Model 339294 are same as 342047, except Lan function is added on model 339294. please look up attachment of circuit on model 339294 for this function as details. The Models 339294, 335644, 339295, 337652 are all the same, except the model name.

Applicant: ICON Health & Fitness Inc.

2013-01-29

(Date)

(Applicant's authorized signature and company Chop)

9 Test Equipment

TEST ITME	DESCRIPTION	MANUFACTURER	MODEL NO.	SERIAL NO.	CAL.DUE.DAT E
CE	Test Receiver	Rohde & Schwarz	ESHS10	838693/001	2013-12-17
	L.I.S.N.#1	Rohde & Schwarz	ESH2-Z5	834066/011	2013-05-07
	L.I.S.N.#3	Kyoritsu	KNW-242C	8-1920-1	2013-05-07
	Terminator	Hubersuhner	50Ω	No. 1	2013-05-07
	Terminator	Hubersuhner	50Ω	No. 2	2013-05-07
	RF Cable	Fujikura	3D-2W	LISN Cable 1#	2013-05-07
	Coaxial Switch	Anritsu	MP59B	M55367	2013-05-07
	Passive Probe	Rohde & Schwarz	ESH2-Z3	299.7810.52	2013-05-07
	Pulse Limiter	Rohde & Schwarz	ESH3-Z2	100341	2013-05-07
Peak Power	Spectrum Analyzer	Agilent	E4446A	US44300459	2013-05-07
Band Edge	Spectrum	Agilent	E4446A	US44300459	2013-05-07
	Amp	HP	8449B	3008A02495	2013-05-07
	Antenna	EMCO	3115	9607-4877	2013-05-16
	Bilog Antenna	Schaffner	CBL6111C	2598	2013-12-13
	HF Cable	Hubersuhne	Sucoflex104	---	2013-05-07
Conducted RF Emissions	Spectrum Analyzer	Agilent	E4446A	US44300459	2013-05-07
RSE	Spectrum	Agilent	E4446A	US44300459	2013-05-07
	Amp	HP	8449B	3008A02495	2013-05-07
	Antenna	EMCO	3115	9607-4877	2013-05-17
	Bilog Antenna	Schaffner	CBL6111C	2598	2013-12-14
	HF Cable	Hubersuhne	Sucoflex104	---	2013-05-07
Bandwidth	Spectrum Analyzer	Agilent	E4446A	MY41440292	2013-05-07
PSD	Spectrum Analyzer	Agilent	E4446A	MY41440292	2013-05-07

10 System Measurement Uncertainty

For a 95% confidence level, the measurement expanded uncertainties for defined systems, in accordance with the recommendations of ISO 17025 were:

System Measurement Uncertainty

Items		Extended Uncertainty
RE	Field strength (dBμV/m)	U=4.32dB (30MHz-25GHz)
CE	Disturbance Voltage (dBμV)	U=2.40dB(150KHz-30MHz)