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TEST REPORT

N° 91861-583540C

FCC REGISTRATION NUMBER: 888863
INDUSTRY CANADA NUMBER 6230B-1

ISSUED TO	:	**TROPHY** 4 rue F. Peloutier Croissy-Beaubourg 77437 Marne la Vallée Cedex 2 - FRANCE
SUBJECT	:	**ELECTROMAGNETIC COMPATIBILITY TESTS ACCORDING TO THE STANDARD 47 CFR PART 15, SUBPART C, 15.247 and RSS-GEN, RSS-102, RSS-210**

Apparatus under test	:	
Product	:	INTRA ORAL WIFI / WIRELESS SENSOR INTRA ORAL
Trade mark	:	KODAK
Manufacturer	:	TROPHY
Model	:	KODAK RVG6500 IPS *
Serial number	:	XEHA0009
Applicant	:	**CARESTREAM HEALTH INC**
FCC ID	:	**U72RVG00001**
IC	:	**7027A-RVG00001**

* information given by the customer

Test date	:	May, June and August, 2009
Composition of document :		34 pages including related document

Fontenay-Aux-Roses, April 06th 2010

Writen by
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1 – GENERAL

1.1 – Summary of test results

Radiated emissions are made on open area test site located "rue Théo Bonhomme, Moret-Sur-Loing (77, France)".
A description of the test facility is on file with the FCC (FCC registration number 888863) and Industry Canada (IC registration number 6230B-1).

FCC requirements : 47 CFR Part 15

47 CFR Part 15			
Paragraph No.	**Name of test**	**Remarks**	**Result**
§ 15.203	Antenna requirement	Note 5	Pass
§ 15.205	Restricted bands of operation		Pass
§ 15.207 (a)	Power line conducted limits		Pass
§15.247 (a) (1)	Frequency hopping system : Channel separation	No hopping	NA
§15.247 (a) (2)	Digital modulation system : 6dB bandwidth	Note 6	Pass
§15.247 (b)	Maximum peak conducted output power	Note 3	Pass
§15.247 (c)	Operation with directional antenna gains greater than 6dBi	Note 1	NA
§15.209 (a)	Emission radiated outside the specified frequency band	Note 2	Pass
§15.247 (d)	Band edge emission	DA 00-705	Pass
§15.247 (e)	Digital modulation system : power spectral density		Pass
§15.247 (f)	Hybrid system : time of occupancy		NA
§15.247 (h)	Frequency hopping system : individual hopping frequency management		NA
§15.247 (i)	Public exposure to RF energy	Note 4	Pass

Note 1: the antenna gain is less than 6 dBi.
Note 2: see FCC part 15.247 (d).
Note 3: conducted measurement is not possible (integral antenna), so we used the radiated method in open field.
Note 4: this type of equipment uses less than 0.5 W of output power with a high signal transmitting duty factor (section 3 from OET 65c).
Note 5: dedicated antenna (see photos).
Note 6: the minimum 6 dB bandwidth is at least 500 kHz (see results).

Industry Canada requirements : RSS GEN AND RSS 210 Annex 8

RSS GEN AND RSS 210 Annex 8			
Paragraph No.	**Name of test**	**Remarks**	**Result**
RSS-GEN §7.2.2	Power line conducted limits		Pass
RSS-210 §A8.1	Frequency hopping system		NA
RSS-210 §A8.2 (a)	Digital modulation system : 6dB bandwidth	Note 3	Pass
RSS-210 §A8.2 (b)	Digital modulation system : power spectral density		Pass
RSS-210 §A8.3	Hybrid system		NA
RSS-210 §A8.4	Output power and EIRP limits		Pass
RSS-210 §A8.4	Licence-exempt receiver	7.2.3 of RSS-GEN	Pass
RSS-GEN §6 (a)	Emission radiated outside the specified frequency band	Note 1	Pass
RSS-210 §A8.5	Band edge emission		
RSS 102 §2.5.1	Public exposure to RF energy	Note 2	Pass

NA : Not Applicable

Note 1: conducted measurement is not possible (integral antenna), so we used the radiated method in open field.

Note 2: this type of equipment uses less than 0.5 W of output power with a high signal transmitting duty factor

Note 3: the minimum 6 dB bandwidth is at least 500 kHz (see results).

1.2 – References

Measurements were performed in accordance with the following standards:

47 CFR Part 15 of September 9, 2007: Code of federal regulations – Telecommunication – Radiofrequency devices

RSS-Gen of June 2007: General Requirements and Information for the Certification of Radiocommunication Equipment

RSS-102 of November 2005: Radio Frequency Exposure Compliance of Radiocommunication Apparatus

RSS-210 of June 2007 - Low-power Licence-exempt Radiocommunication Devices (All Frequency Bands): Category I Equipment

ANSI C63.4 of December 11, 2003: American national standard for methods of measurement of radio noise emissions from low-voltage electrical and electronic equipment in the range of 9 kHz to 40 GHz.

CISPR 16-4-2 of November, 2003: International electrotechnical commission - Specification for radio disturbance and immunity measuring apparatus and methods – Uncertainties, statistics and limit modeling – Uncertainty in EMC measurements.

Measurement of Digital Transmission Systems Operating under Section 15.247 : March 23, 2005

1.3 – Test methodology

Radio performance tests procedures given in part 15:

Paragraph 33: frequency range of radiated measurements

Paragraph 35: measurement detector functions and bandwidths

Paragraph 203: antenna requirement

Paragraph 205: restricted bands of operation

Paragraph 207: conducted limits

Paragraph 209: radiated emission limits; general requirements

Paragraph 247: operation within the bands 2400-2483.5 MHz

1.3 – Equipment under test specification

1.3.1 – General equipment information

Applicant : **CARESTREAM HEALTH INC**
150 Verona Street
ROCESTER, NEW YORK
14608 - USA

Manufacturer : **TROPHY**
4 rue F. Peloutier
Croissy-Beaubourg
77437 Marne la Vallée Cedex 2 - FRANCE

Dimensions : 8.5cm long, 5cm large, 1.5cm high
Frequency band : 2400 – 2483.5MHz
Number of channel : 11
Channel spacing : 5 MHz
Modulation : Digital modulation OFDM
User frequency adjustment : YES
User power adjustment : NO
Type of antenna : Integrated Helical SMD Antenna with 1.5 dBi gain
Is the operation point to point? NO

Label identification : see user guide
Power supply : power supply AC-DC (5V) reference MW172KB0500F02 of trade mark SL POWER
or batteries 3.7V

Cables :

Type	EUT port	Long (m)	Shielded	Number of wire
Power	AC	2m	NO	2
Input/output	sensor	3m	YES	-

1.3.2 – Description of modifications

The capacitor C18 has changed before the start of tests with a new value of 47pF

1.3.3 – Description of operation

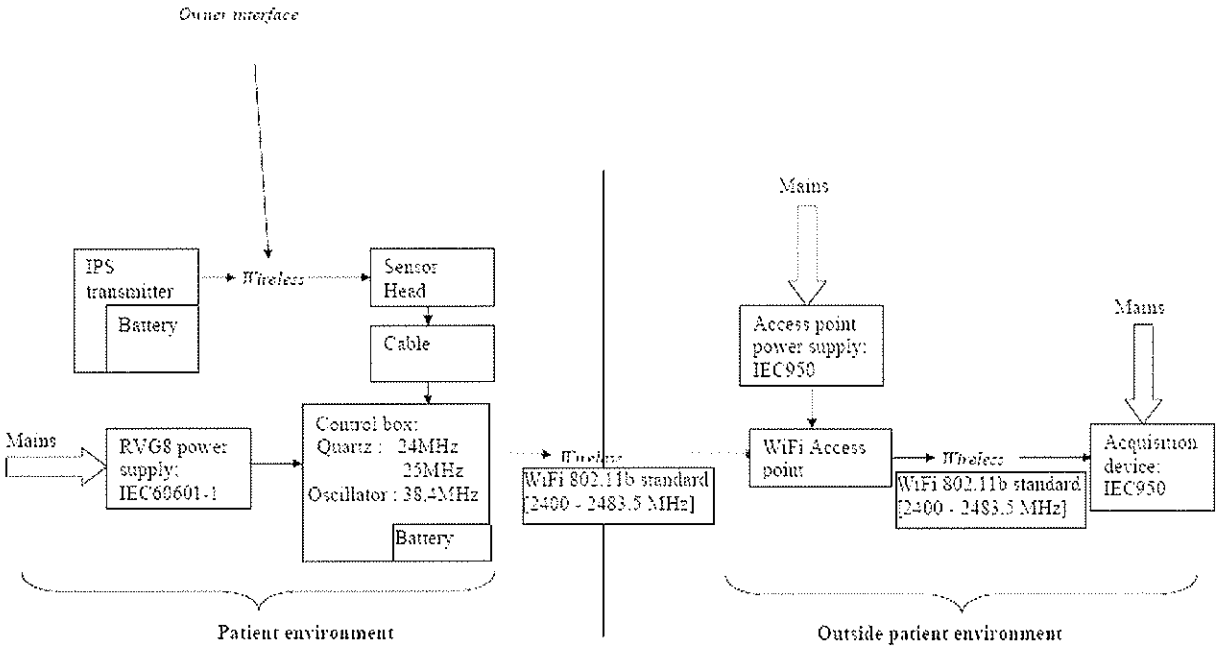
The equipment was configured in the following operation mode:

- Maximum transmission power and loader

This equipment uses only the 802.11g (OFDM) modulation. The 802.11b (DSSS) modulation is not available for the equipment.
When the channel is not listed in the tests of this report, the emission is configured only for the channel 6.

1.3.4 – System diagram

Block Diagram:



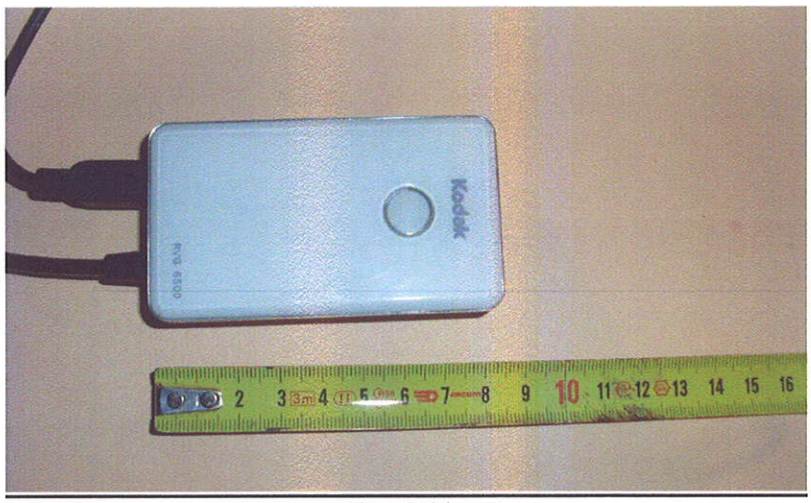
1.3.5 – Apparatus of same family

Type : RVG Ultimate+ IPS ; Trade mark : TROPHY
Type : KODAK RVG 6500 ; Trade mark : KODAK
Type : RVG Ultimate+ ; Trade mark : TROPHY

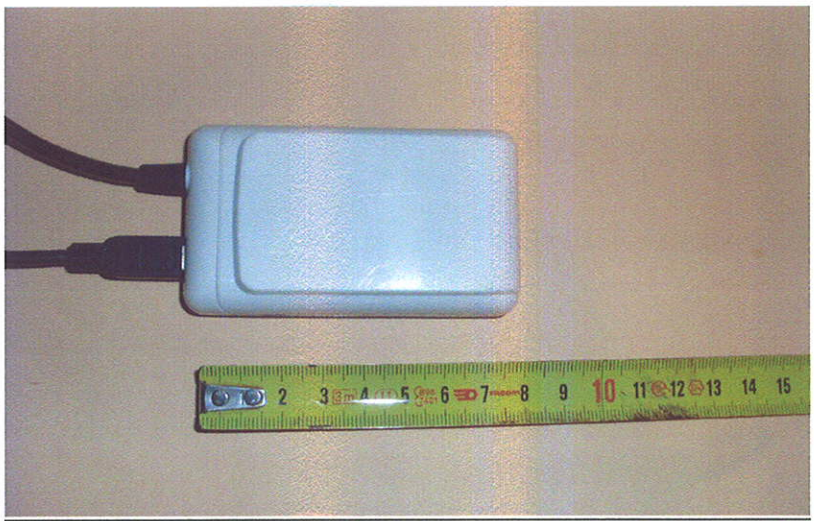
See annex

1.3.6 – Photograph of the sample

sensor

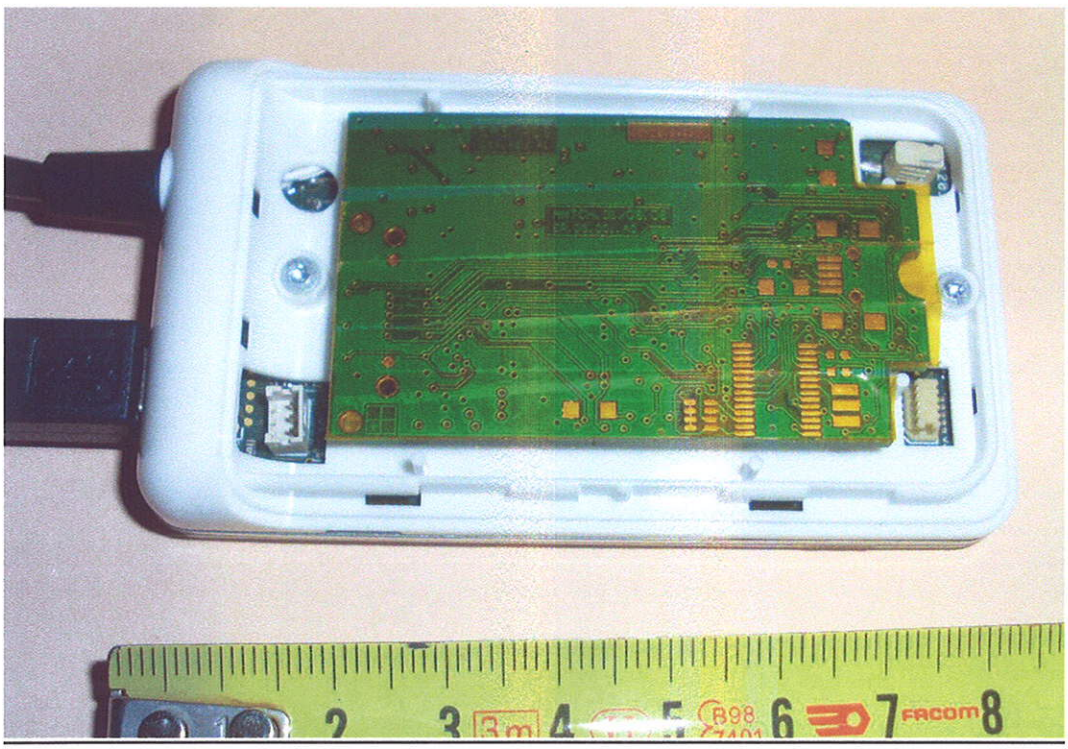


Front side



back side


1/LPP 523450 DL
VKB :
1000mAh 3.7V 3.7Wh
Made in China
019C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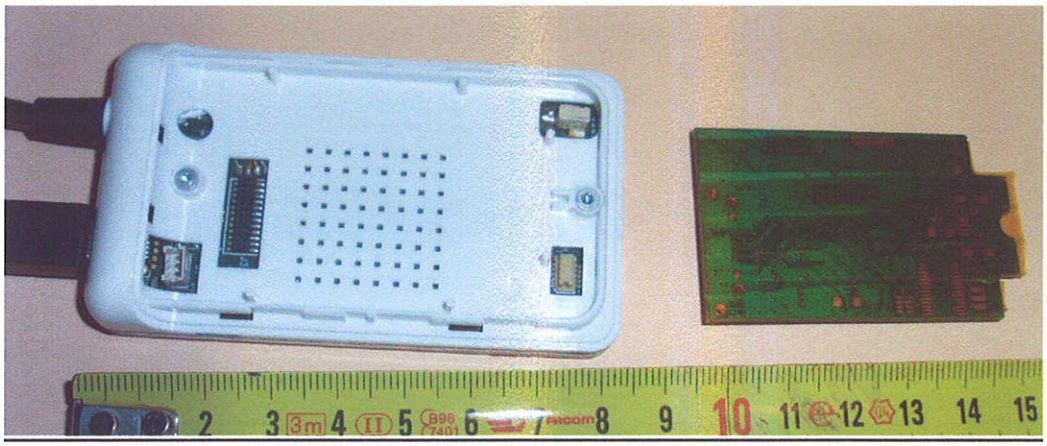
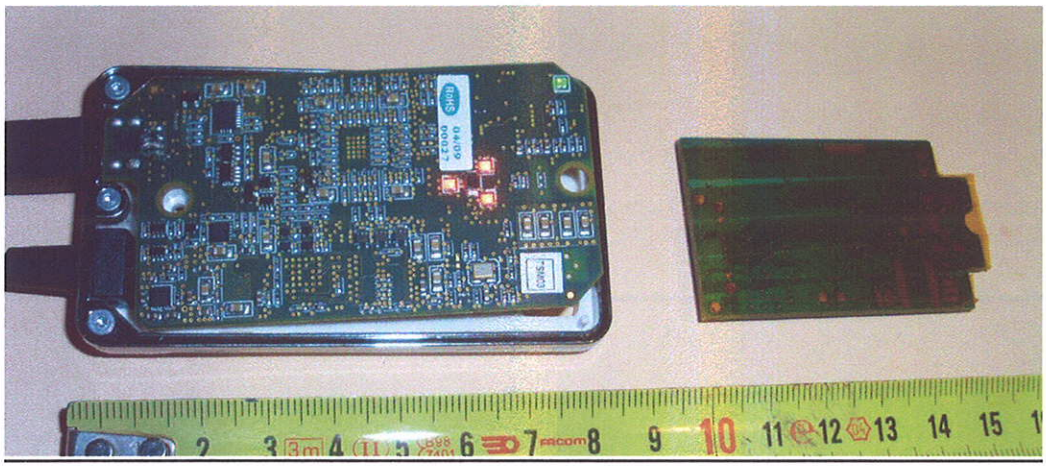
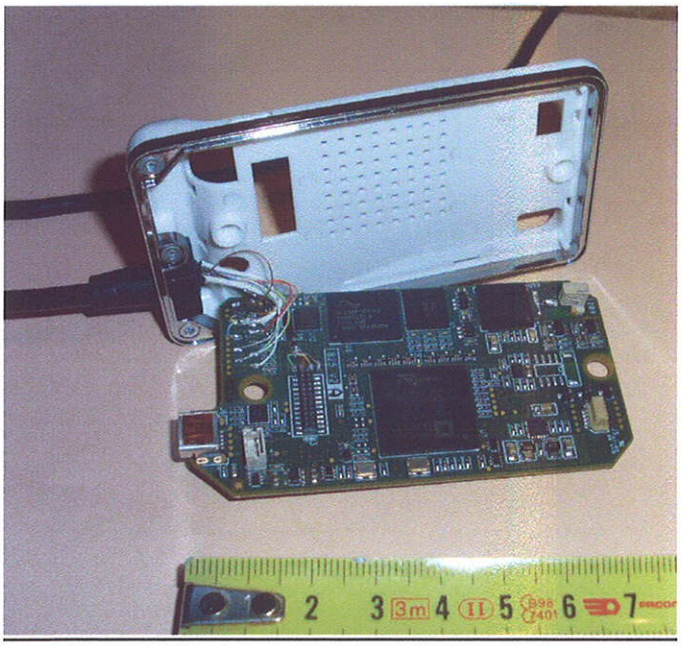
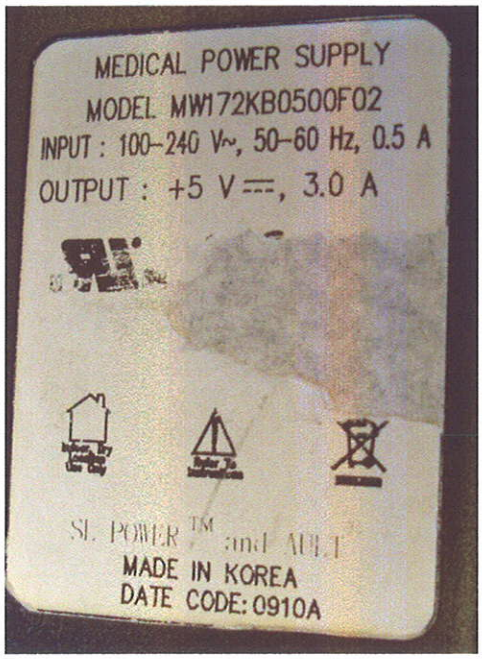


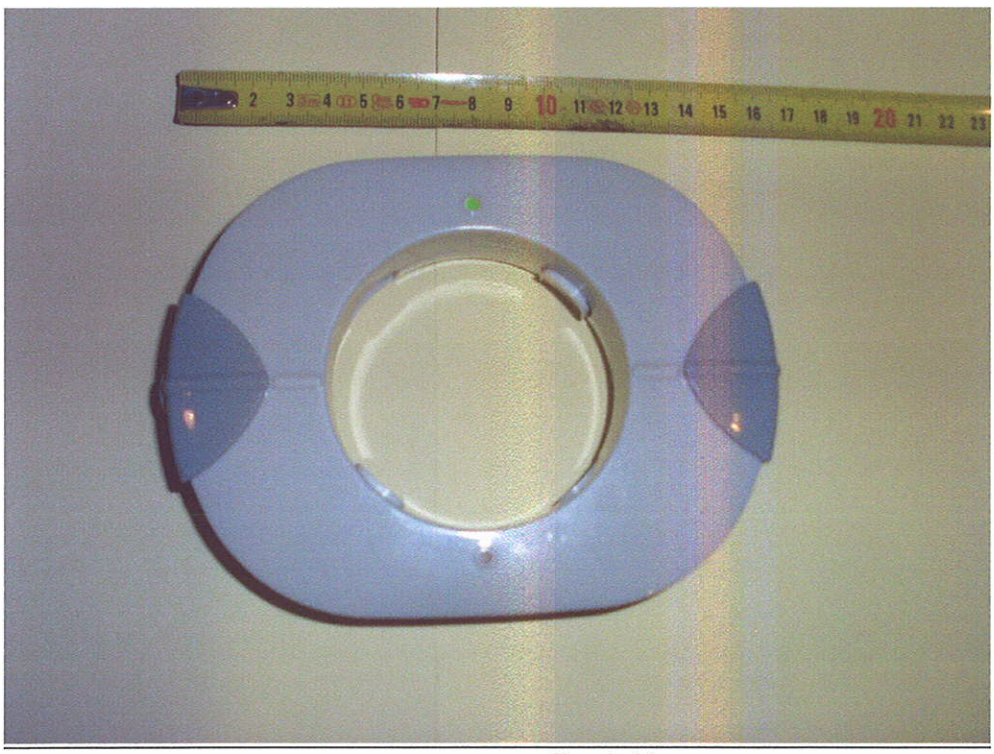




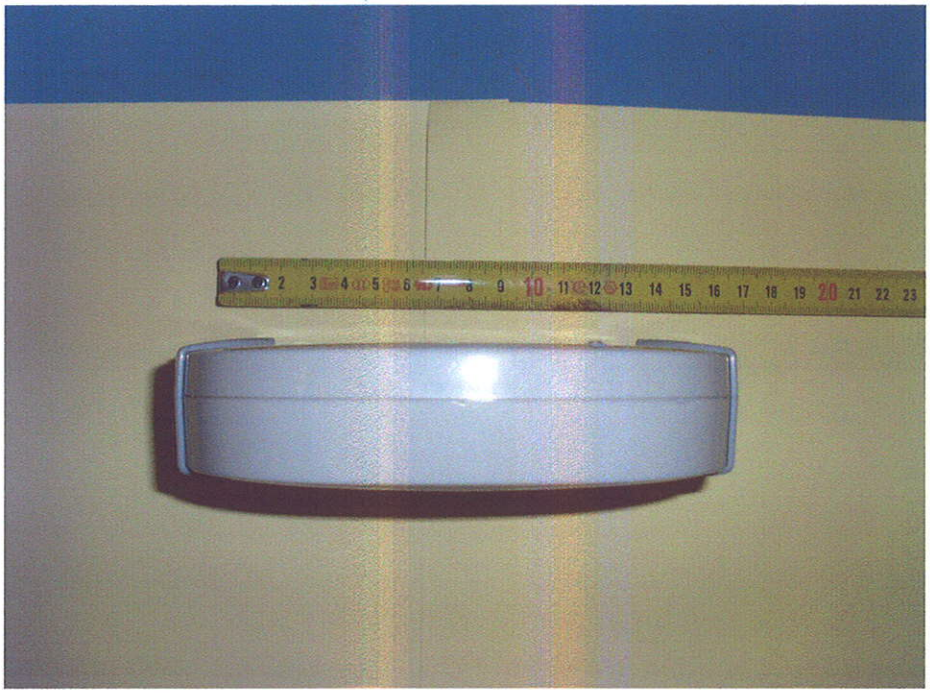
Power supply



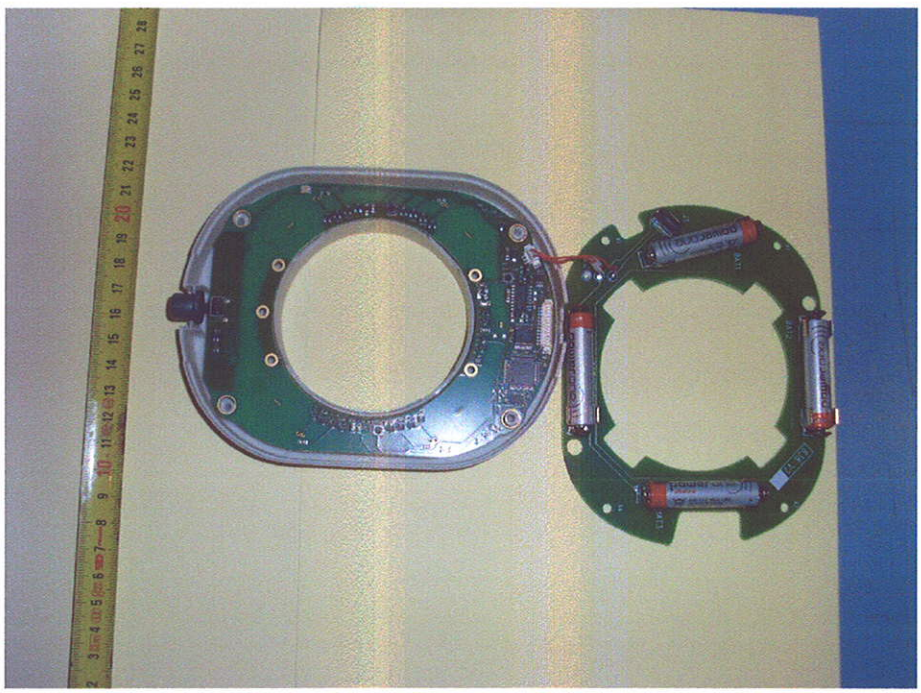
Accessories: IPS option



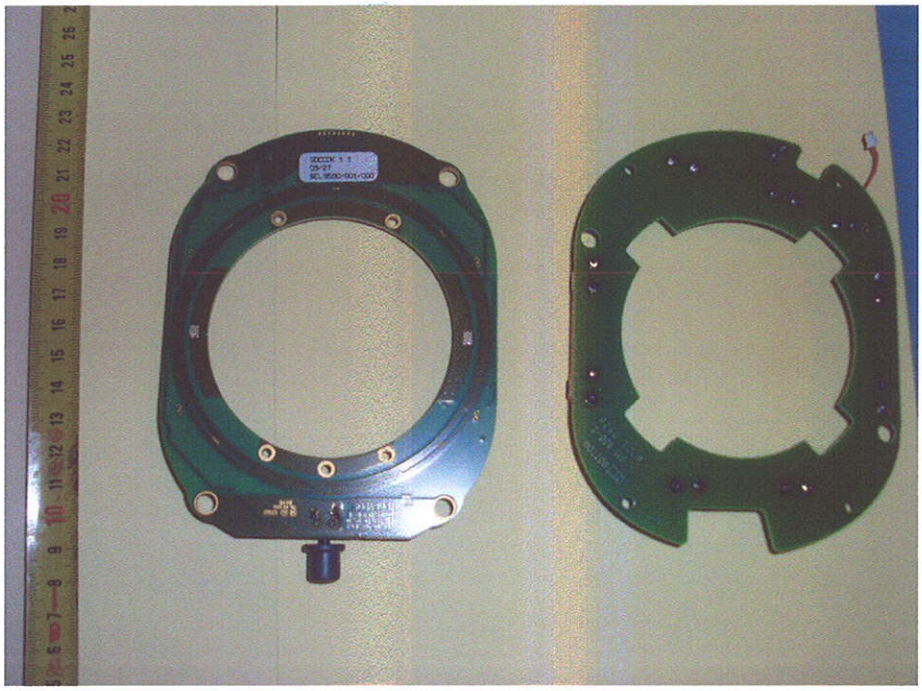
Front side



Top side



Internal view



Internal view

2 – TEST RESULTS

2.1 – Power line conducted emission test

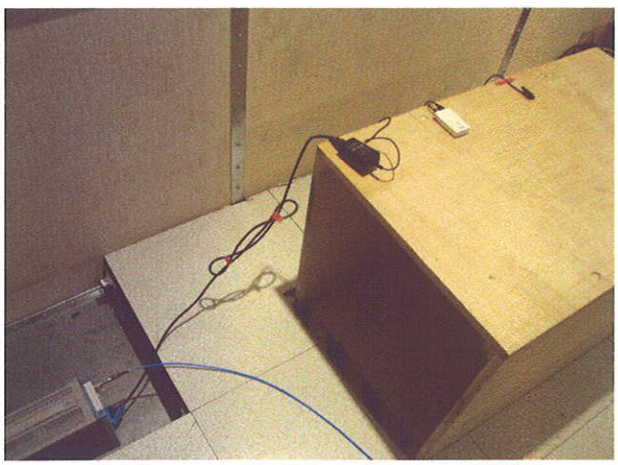
2.1.1 – General

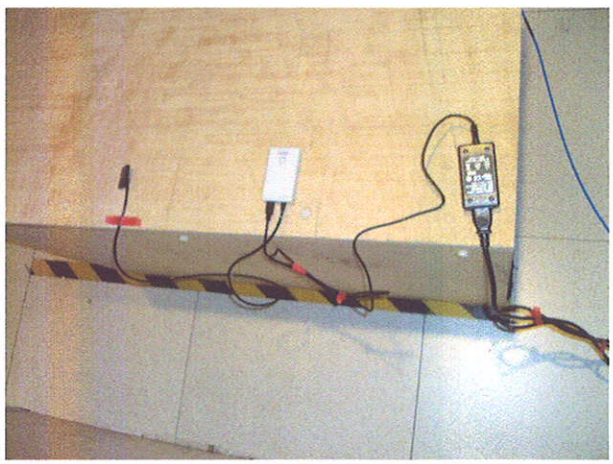
The product has been tested with 110V/60Hz power line voltage and compared to the FCC part 15 subpart C §15.207 limits and the RSS-GEN Table 2

The 6dB resolution bandwidth was 9 kHz from 150 kHz to 30 MHz.

2.1.2 – Test setup

The EUT is placed on a table at 0.8 m height. The cable of the power port has been shorted to 1 meter length. The EUT is powered through the LISN.





Test set for conducted measurement

2.1.3 – Equipment list

Description	Manufacturer	Model	Identifier	Cal. Date	Cal. Due
Receiver	RHODE & SCHWARZ	ESU	A2642018	07/2009	07/2010
V ISLN	RHODE & SCHWARZ	ESH2-Z5	C2322001	10/2009	10/2010

2.1.4 – Uncertainty

The uncertainty values calculated by the laboratory are lower than limit uncertainty values defined by the CISPR 16-4-2. The conformity of the sample is directly established by the applicable limits values.

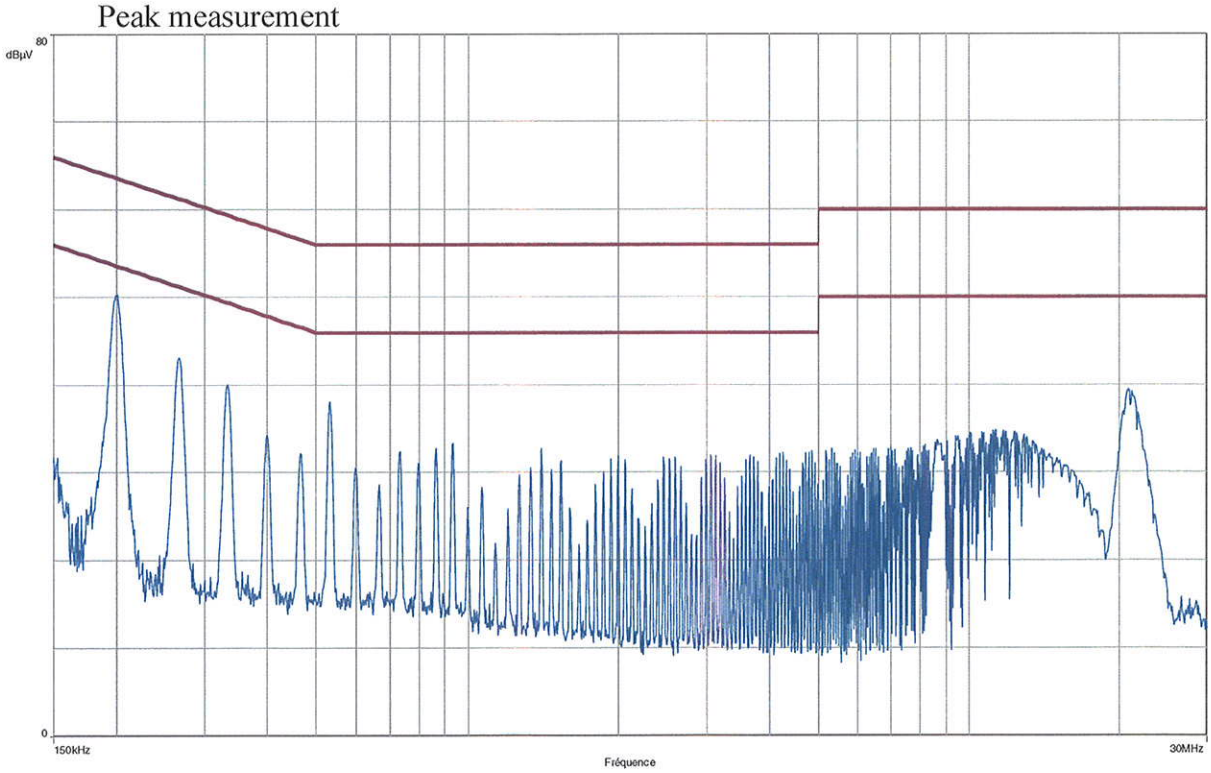
Kind of measurement	Wide uncertainty laboratory (k=2) ±x	CISPR uncertainty limit ±y
Measurement of conducted disturbances in voltage on the power port	3.57 dB	3.6 dB

2.1.5 – Test results

Power line 1

FCC PART .15 CLASS B
TYPE : KODAK RVG6500 IPS
CONDUCTOR 1 ; 120V 60Hz

Peak measurement

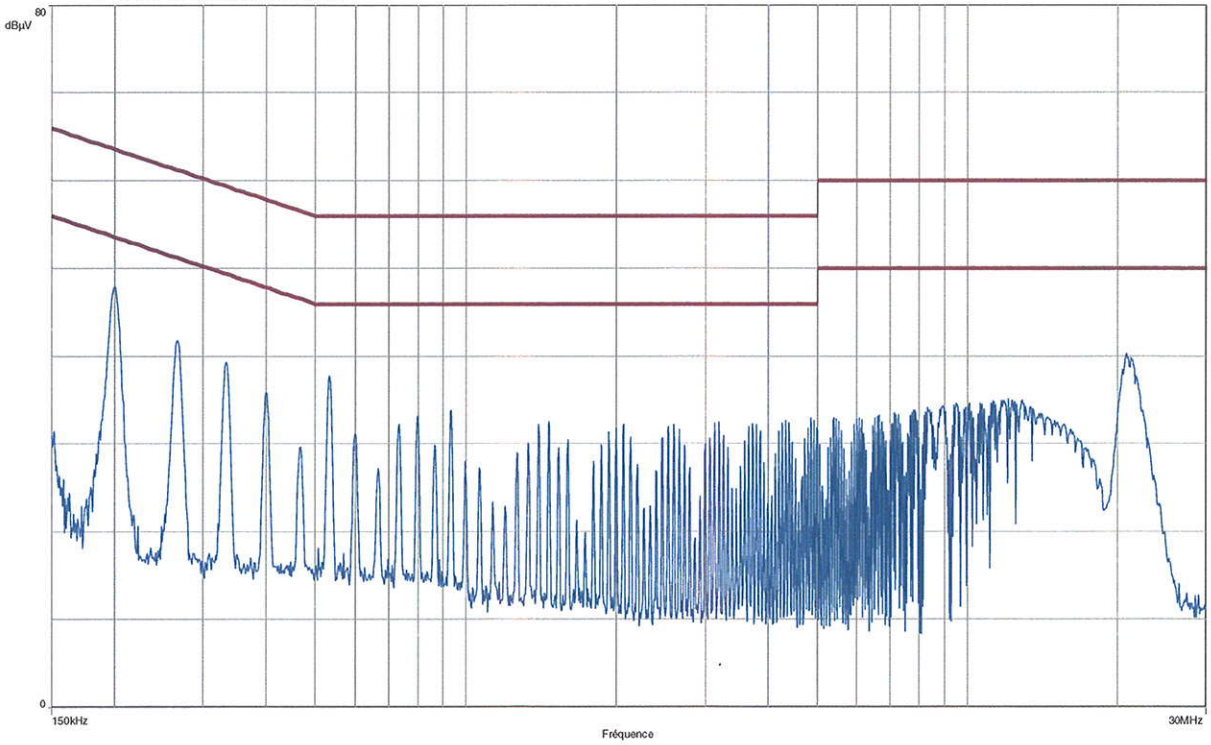


Frequency (MHz)	Peak value ($dB_{\mu V}$)	Average value ($dB_{\mu V}$)	Average limit ($dB_{\mu V}$)	Quasi Peak value ($dB_{\mu V}$)	Quasi Peak limit ($dB_{\mu V}$)
0.20	50.2	49.4	53.6	49.7	63.6
0.36	40.3	39.6	48.7	39.9	58.7
0.53	38.1	36.8	46	37.2	56
21.05	39.6	38.9	50	-	60

Power line 2

FCC PART .15 CLASS B
TYPE : KODAK RVG6500 IPS
CONDUCTOR 2 ; 120V 60Hz

Peak measurement



Frequency (MHz)	Peak value ($dB_{\mu V}$)	Average value ($dB_{\mu V}$)	Average limit ($dB_{\mu V}$)	Quasi Peak value ($dB_{\mu V}$)	Quasi Peak limit ($dB_{\mu V}$)
0.20	46.7	45.5	53.6	45.8	63.6
0.36	38.9	37.6	48.7	38.2	58.7
0.53	37.4	36.2	46	36.7	56
21.05	40.5	38.4	50	39.2	60