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TEST REPORT

N°117005-633927

FCC REGISTRATION NUMBER: 166175
INDUSTRY CANADA NUMBER: 6230B

ISSUED TO : **INGENICO**
28-32 Boulevard de Grenelle
75015 PARIS - France

SUBJECT : **ELECTROMAGNETIC COMPATIBILITY TESTS ACCORDING TO THE
STANDARD 47 CFR PART 15, SUBPART C, 15.225 and RSS-GEN, RSS-102,
RSS-210**

Apparatus under test :
Product : Payment terminal
Trade mark : Ingenico
Manufacturer : Ingenico
Model : ISC250-OPT
Reference : ISC250-01T2192A
Serial number : 12113SC70091805

Applicant : **INGENICO**
FCC ID : **XKB-ISC250NEWCL**
IC : **2586D-ISC250NEWCL**

Test date : November 2012

Composition of document : 39 pages

Fontenay-Aux-Roses, January 16th, 2013

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1 – GENERAL

1.1 – Summary of test results

Radiated emissions are made in anechoic chamber, located at Fontenay-Aux-Roses (92260, FRANCE).
 FCC REGISTRATION NUMBER: 166175
 INDUSTRY CANADA NUMBER: 6230B

A description of the test facility is on file with the FCC.

47 CFR Part 15 & RSS 210			
Paragraph No.	Name of test	Remarks	Result
§ 15.203	Antenna requirement	Internal antenna	Pass
§ 15.205	Restricted band operation		Pass
§ 15.207 (a) & RSS GEN §7.2.2	Power line conducted limits		Pass
§ 15.209 (a) (b) (c) (d) & table 3 RSS 210	Radiated measurement of spurious emissions		Pass
§15.225 (a) (b) (c) & RSS 210	Field strength within the band 13.110-14.010 MHz		Pass
§15.225 (d) & A2.6 of RSS 210	Field strength outside of the bands 13.110-14.010 MHz		Pass
§15.225 (e) & A.2 of RSS 210	Frequency stability over extreme temperature and voltage conditions		Pass

NA : Not Applicable

Remark:

1.2 – References

Measurements were performed in accordance with the following standards:

47 CFR Part 15 of October, 2012: Code of federal regulations – Telecommunication –Radiofrequency devices

RSS-Gen of December 2010: General Requirements and Information for the Certification of Radiocommunication Equipment

RSS-102 of Mars 2010: Radio Frequency Exposure Compliance of Radiocommunication Apparatus

RSS-210 of December 2010: 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 modelling – Uncertainty in EMC measurements.

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 225: radiated emission limits; general requirements



1.3 - Equipment under test specification

1.3.1 – General equipment information

Applicant	: INGENICO 9 Avenue de la Gare Rovaltain TGV BP 25156 26958 VALENCE FRANCE
Manufacturer	: INGENICO 28-32 Boulevard de Grenelle 75015 PARIS - France
Dimensions	: 166 x156 x 48 mm
Frequency band	: 13.56 MHz
Number of channel	: 1
Channel spacing	: -
User frequency adjustment	: No
User power adjustment	: No
Type of antenna	: Dedicated loop antenna permanently connected on the PCB
Is the operation point to point?	: No
Power supply	: 120V 60Hz
Internal frequencies	: Ethernet PoE Quartz 25 MHz, Thunder3 quartz 12MHz, Video oscillator 24 MHz, Booster3 processor quartz 32.7 kHz + 18.4 MHz, Contactless microcontroller quartz 27.12 MHz
External links	: Port 1 : Mini USB Port 2 : Power supply FRIWO or PHIHONG

1.3.2 – Description of modifications

The equipment has not been modified during tests.

1.3.3 – Description of operation

The equipment was configured in the following operation mode:

- Maximum transmission power: Permanently emission at 13.56 MHz with the usual modulation.

1.3.4 – Photographs of the sample



General view of the ISC250-OPT



Power supply of the ISC250-OPT



Power supply FRIWO marking plate



Power supply PHIHONG marking plate

1.3.5 – Auxiliary equipment

None

2- TEST RESULTS

2.1 Power line conducted emission test

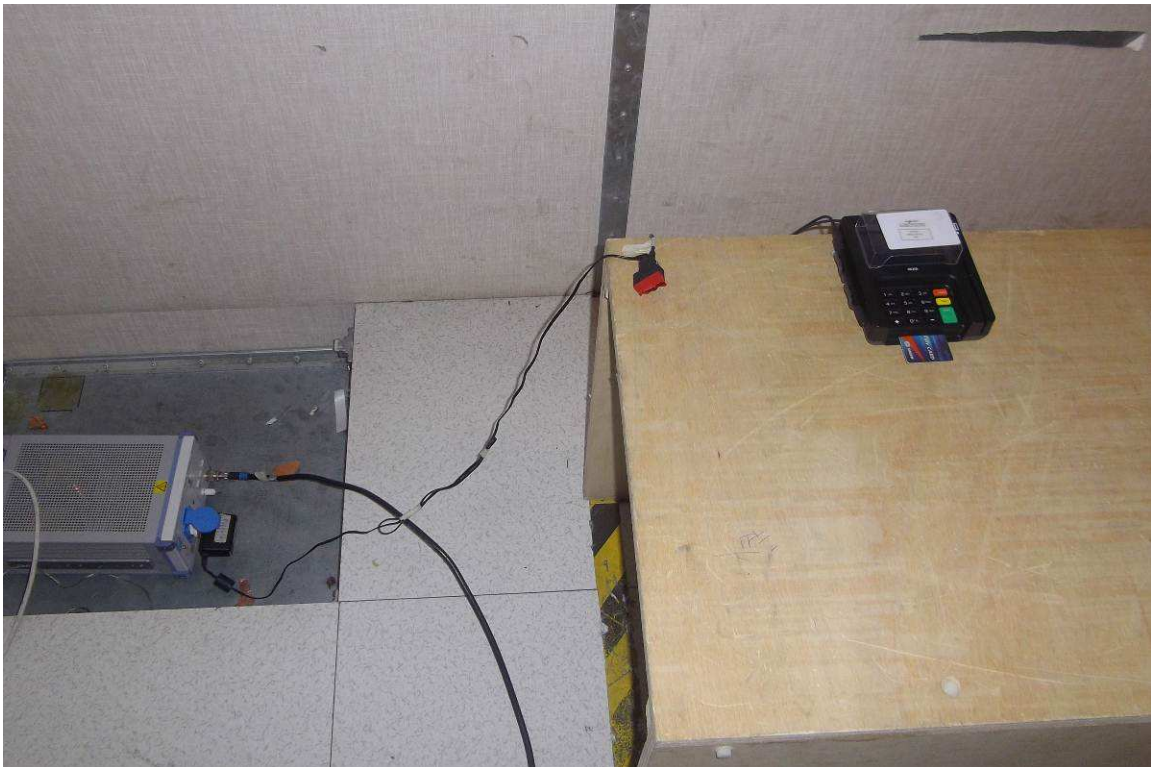
2.1.1 - General

The product has been tested with 120 V / 60 Hz power line voltage and compared to the FCC part 15 subpart C § 15.207 limits.

The 6 dB 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.



2.1.3 – Equipment list

Description	Manufacturer	Model	Identifier	Cal. Date	Cal. Due
Spectrum analyser	ROHDE & SHWARZ	ESI40	A2642010	2012/09	2013/09
V ISLN	ROHDE & SHWARZ	ENV216	C2320162	2012/09	2013/10



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	3.51 dB	3.6 dB

2.1.5 – Test results

ISC250-OPT with power supply FRIWO / RFID ON

Conducted measurement on conductor 1

Frequency (MHz)	Peak measurements (dBµV)	Quasi-Peak measurements (dBµV)	Quasi-Peak limits (dBµV)	Average measurement (dBµV)	Average limits (dBµV)
0.15	52.6	49.7	66.0	31.2	56.0
0.22	45.2	-	62.9	26.2	52.9
0.42	41.0	38.1	57.4	30.3	47.4
2.82	33.0	-	56.0	20.2	46.0
14.34	31.3	-	60.0	20.6	50.0

Conducted measurement on conductor 2

Frequency (MHz)	Peak measurements (dBµV)	Quasi-Peak measurements (dBµV)	Quasi-Peak limits (dBµV)	Average measurement (dBµV)	Average limits (dBµV)
0.15	50.2	44.3	66.0	28.1	56.0
0.24	42.2	-	62.0	26.1	52.0
0.42	42.9	37.8	57.4	29.4	47.4
1.09	33.8	-	56.0	21.6	46.0
14.34	35.4	-	60.0	21.5	50.0
27.12	39.4	-	60.0	26.1	50.0



ISC250-OPT with power supply PHIHONG / RFID ON

Conducted measurement on conductor 1

Frequency (MHz)	Peak measurements (dB μ V)	Quasi-Peak measurements (dB μ V)	Quasi-Peak limits (dB μ V)	Average measurement (dB μ V)	Average limits (dB μ V)
0.180	61.5	60.2	64.5	40.3	54.5
0.245	58.0	56.8	62.0	41.0	52.0
0.290	53.6	52.3	60.5	37.5	50.5
0.385	49.3	47.3	58.1	32.1	48.1
0.400	48.5	46.7	57.3	31.5	47.3
0.605	40.4	-	56.0	21.1	46.0
0.940	39.5	-	56.0	22.5	46.0
2.74	39.2	-	56.0	24.2	46.0
3.90	41.0	-	56.0	25.3	46.0
9.65	44.2	43.0	60.0	34.3	50.0
15.65	44.1	-	60.0	29.2	50.0
22.74	36.6	-	60.0	25.6	50.0
27.11	26.8	-	60.0	20.1	50.0

Conducted measurement on conductor 2

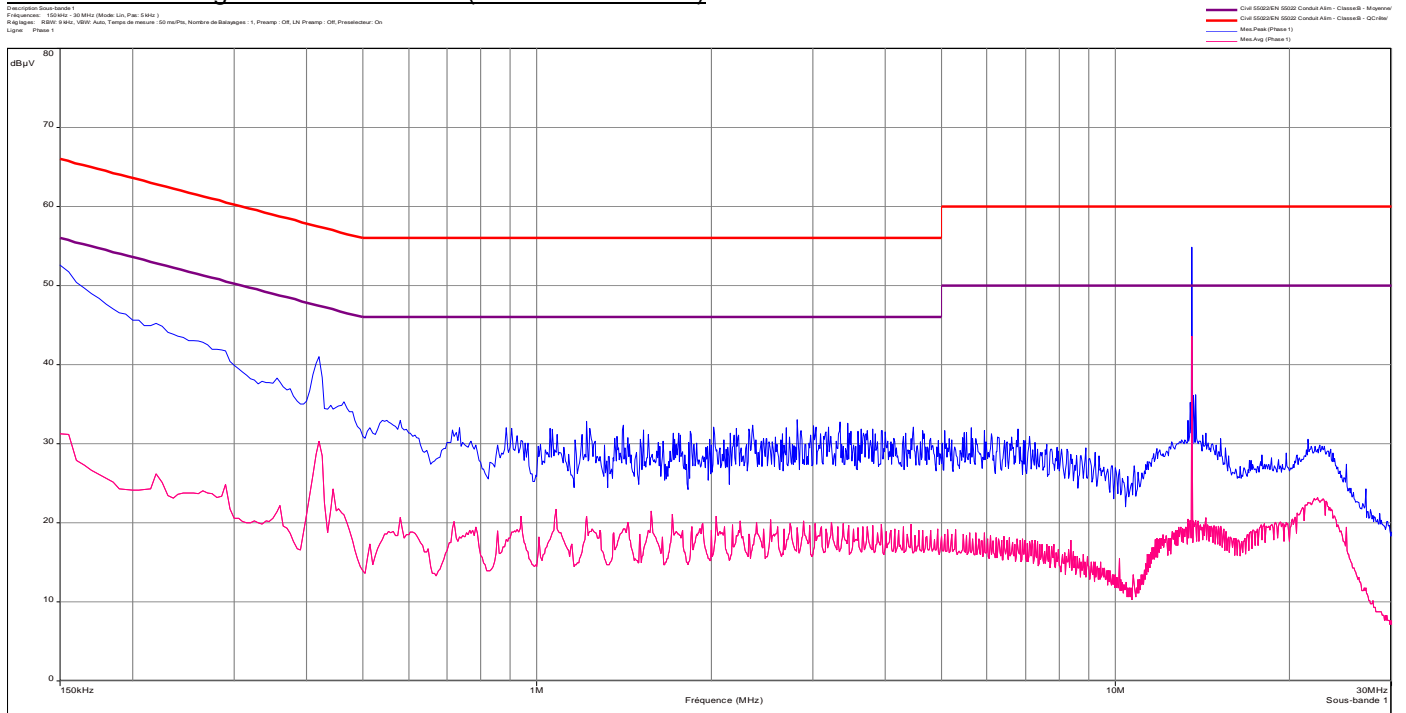
Frequency (MHz)	Peak measurements (dB μ V)	Quasi-Peak measurements (dB μ V)	Quasi-Peak limits (dB μ V)	Average measurement (dB μ V)	Average limits (dB μ V)
0.180	61.5	60.1	64.5	40.3	54.5
0.245	58.0	56.6	62.0	41.0	52.0
0.290	53.6	52.4	60.4	37.5	50.4
0.385	49.3	47.5	58.4	32.1	48.4
0.400	48.4	46.5	57.7	31.5	47.7
0.605	40.4	-	56.0	21.1	46.0
0.885	39.0	-	56.0	22.5	46.0
2.74	39.2	-	56.0	24.2	46.0
3.90	41.0	-	56.0	25.3	46.0
9.65	44.2	43.1	60.0	34.3	50.0
16.43	43.7	42.3	60.0	29.2	50.0
21.66	37.3	-	60.0	23.3	50.0
27.11	26.8	-	60.0	20.1	50.0

Remark:

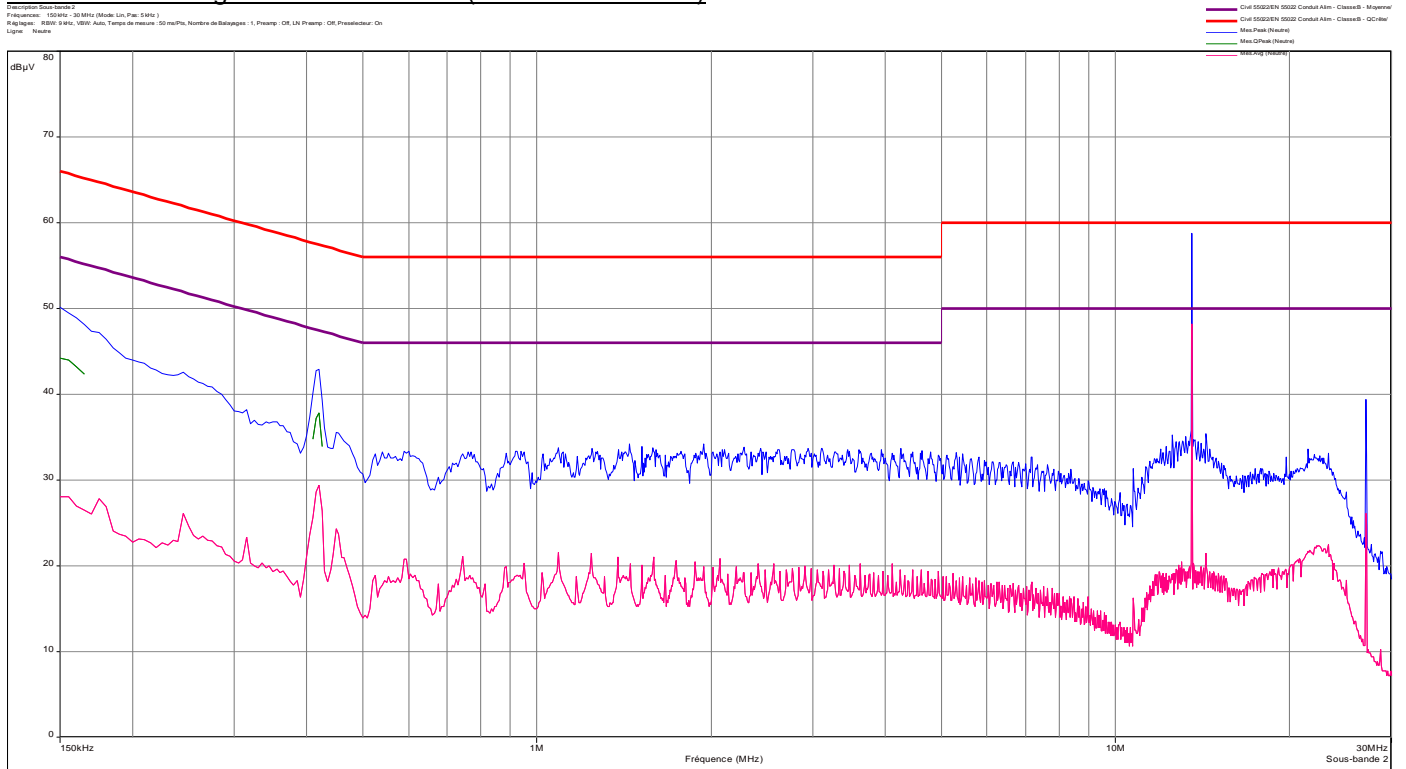
The carrier of the transmitter is at 13.56 MHz, measurements with the antenna removed are given in annex to show the compliance at this frequency. The antenna was replaced by a dummy load equal in impedance to the original antenna.

ISC250-OPT with power supply FRIWO

Measurement diagram for conductor 1 (FRIWO / RFID ON)



Measurement diagram for conductor 2 (FRIWO / RFID ON)



ISC250-OPT with power supply PHIHONG

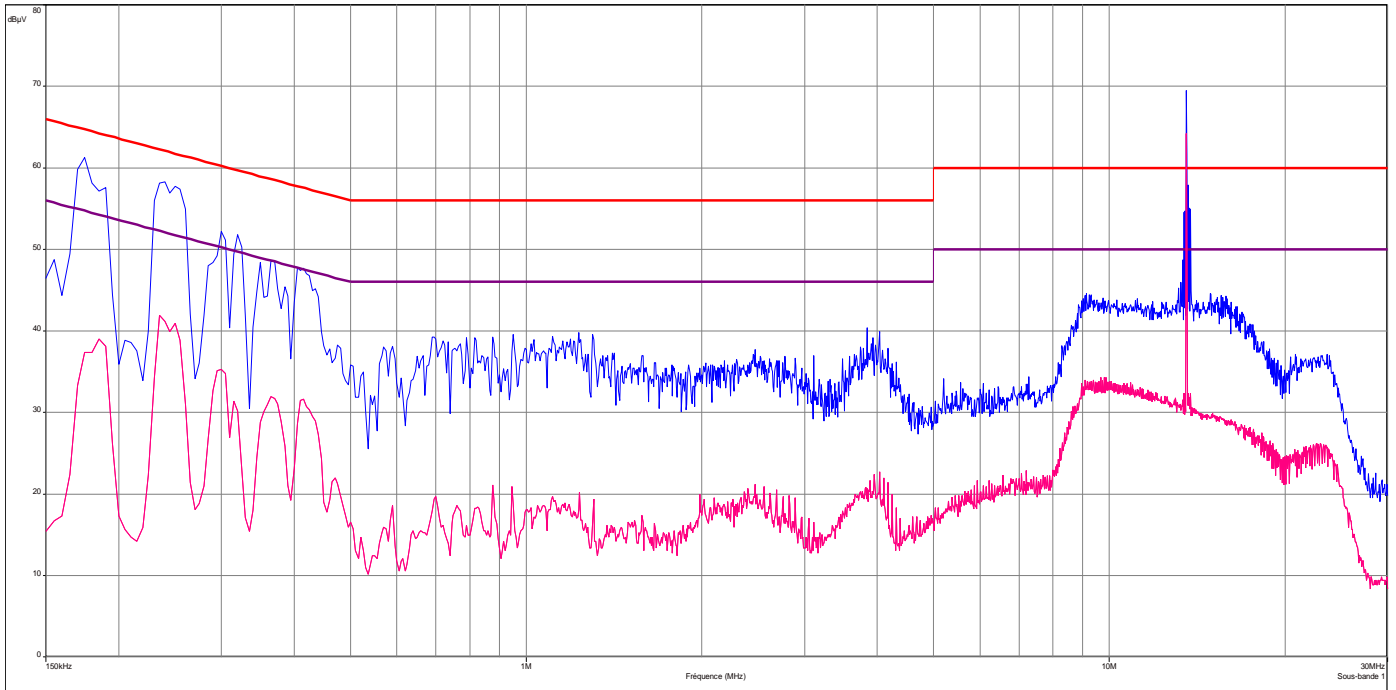
Measurement diagram for conductor 1 (PHIHONG / RFID ON)



L C I E

Description Sous-Bande 1
Fréquence: 10 kHz - 30 MHz (Mise en Paq. 0.001)
Réglage: 500V (Auto), 500V Auto, Temps de Mesure: 30 ms (Paq), Nombre de Balayage: 1, Phase: 0 (L), Préamp: 0 (F), Pression: 0 (A)

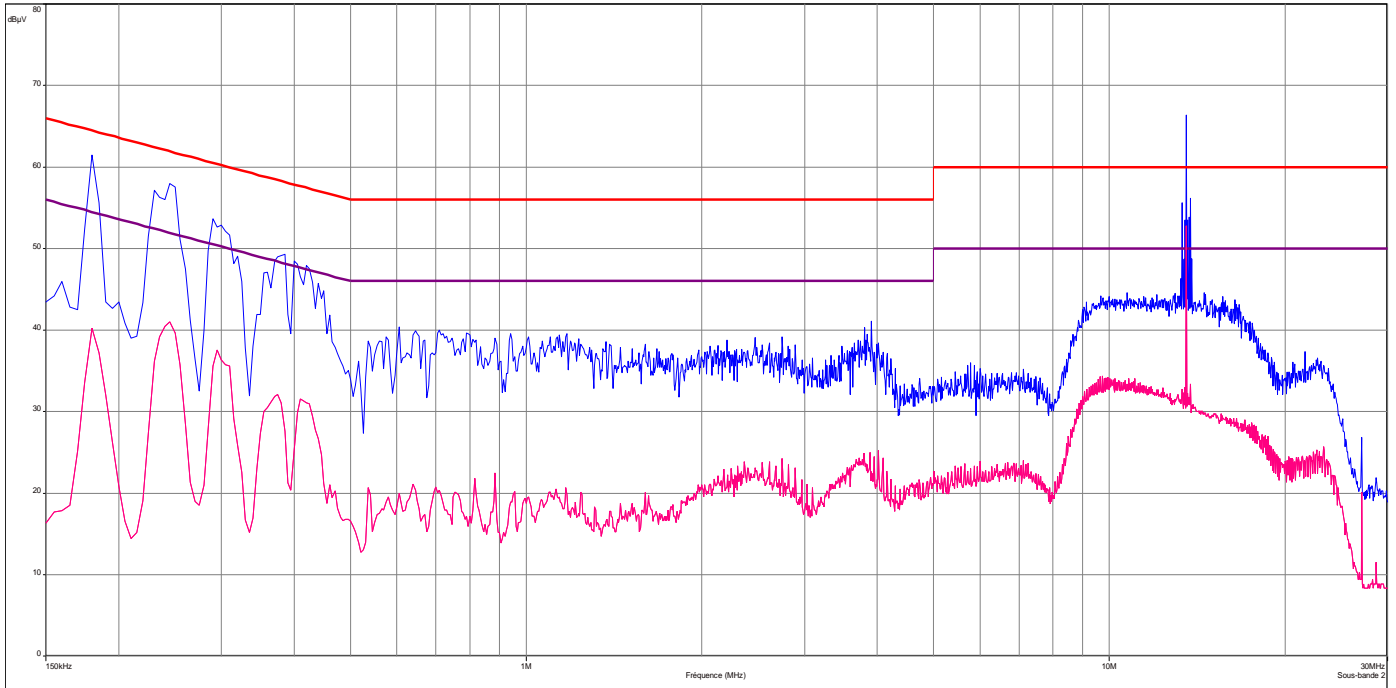
— Cou 0000EN 0000 CoustMin - CoustB - Imped
— Cou 0000EN 0000 CoustMin - CoustB - OC/Br
— Max/Min (Power 1)
— Max/Min (Power 2)



Measurement diagram for conductor 2 (PHIHONG / RFID ON)

Description Sous-Bande 2
Fréquence: 10 kHz - 30 MHz (Mise en Paq. 0.001)
Réglage: 500V (Auto), 500V Auto, Temps de Mesure: 30 ms (Paq), Nombre de Balayage: 1, Phase: 0 (L), Préamp: 0 (F), Pression: 0 (A)

— Cou 0000EN 0000 CoustMin - CoustB - Imped
— Cou 0000EN 0000 CoustMin - CoustB - OC/Br
— Max/Min (Power)
— Max/Min (Power)



2.2 – Field strength within the band 13.110-14.010MHz

2.2.1 – General

The product has been tested with 120 V / 60 Hz power line voltage on charger and compared to the FCC part 15 subpart C §15.225 (a) (b) and (c) limits.

The 6dB resolution bandwidth was :

- 9 KHz from 150 kHz to 30 MHz

2.2.2 – Test setup

The EUT is placed at 3m distance of the loop antenna on a table 80cm height. The level has been maximised by turning the EUT with the rotating table and with the antenna at 0° and 90° around its vertical and horizontal axes. Antenna height was 1m. Pre scans were performed on the EUT put on its three axes to determine the position with maximum radiation.

The measuring value has been extrapolated to a 30m distance measured level according to § 15.31 (f) (2) by the following formula:

$$E_{30m} = E_d \times \left(\frac{d}{30} \right)^2$$

E_{30m} is the field strength at 30m in $\mu\text{V/m}$
 E_d is the field strength at the measured distance in $\mu\text{V/m}$
 d is the used distance between antenna and EUT in m



2.2.3 – Equipment list



Description	Manufacturer	Model	Identifier	Cal. Date	Cal. Due
Spectrum analyser	ROHDE & SHWARZ	ESI40	A2642010	2012/09	2013/09
Loop antenna	ROHDE & SHWARZ	HFH H2 Z2	C2040007	2012/08	2013/08

2.2.4 – Uncertainty

Kind of measurement	Wide uncertainty laboratory (k=2) ± x	CISPR uncertainty limit ± y
E field measurement	4.75 dB	Not defined

2.2.5 – Test results

ISC250-OPT with power supply FRIWO

The measure result at 3 m is 56,58 dB μ V/m for 13.56 MHz

The 30 m measure corrected is M@3m - 40dB

Frequency MHz	Maximum Quasi Peak (30m) dB μ V/m	Quasi Peak Limit (30m) dB μ V/m
13.56	16,58	84.0

ISC250-OPT with power supply PHIHONG

The measure result at 3 m is 55,66 dB μ V/m for 13.56 MHz

The 30 m measure corrected is M@3m - 40dB

Frequency MHz	Maximum Quasi Peak (30m) dB μ V/m	Quasi Peak Limit (30m) dB μ V/m
13.56	15,66	84.0

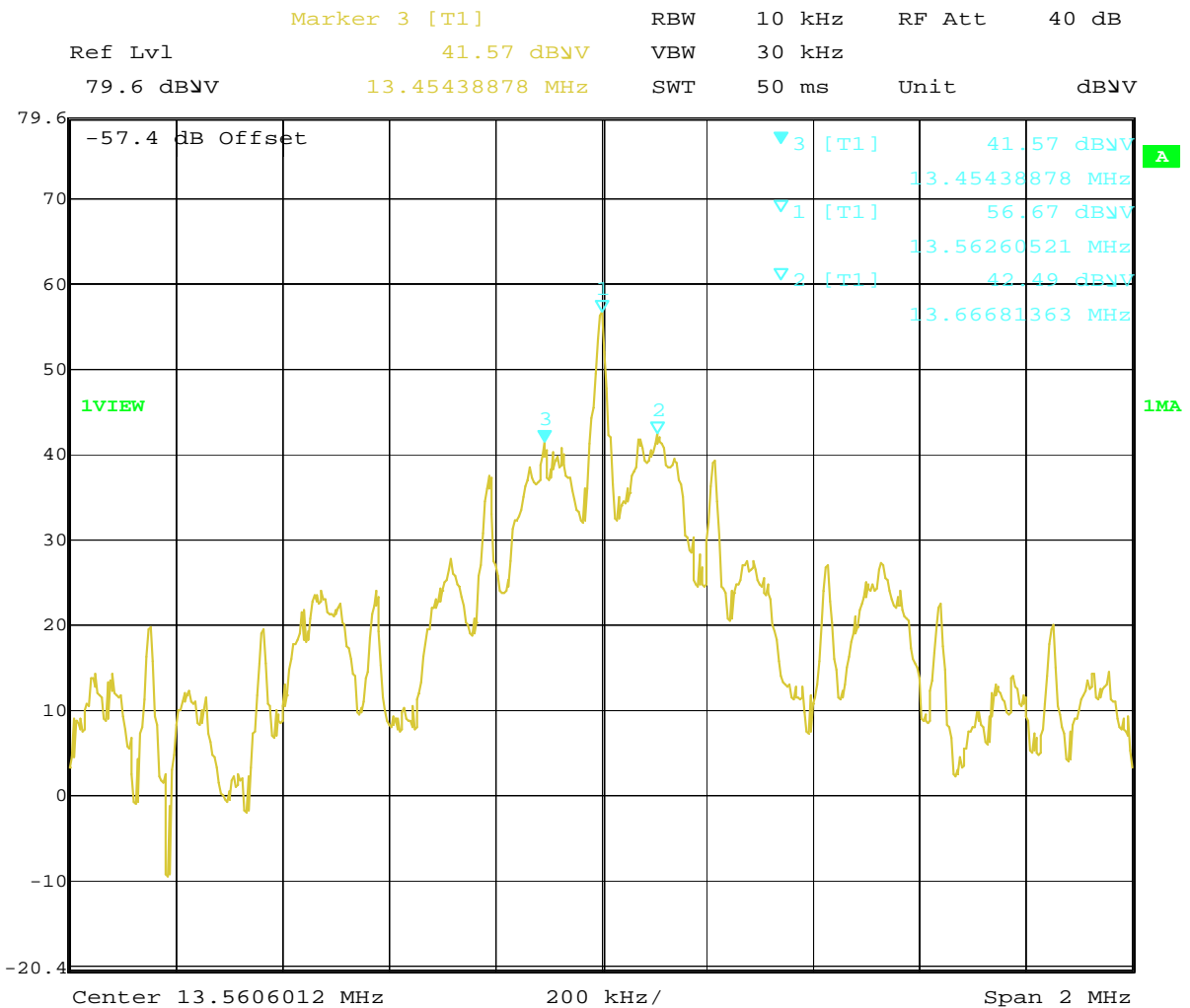


2.2.6 – Band-edge compliance

Frequency (MHz)	Field strength ($\mu\text{V}/\text{m}$)	Measurement distance (m)
13.553-13.567	15848 (= 84 dB $\mu\text{V}/\text{m}$)	30
13.410-13.553 13.567-13.710	334 (= 50.5 dB $\mu\text{V}/\text{m}$)	30
13.110-13.410 13.710-14.010	106 (= 40.5 dB $\mu\text{V}/\text{m}$)	30
Outside 13.110-14.010	30 (= 29.5 dB $\mu\text{V}/\text{m}$)	30

ISC250-OPT with power supply FRIWO

Graph from 12.5 to 14.5 MHz with RBW=10kHz and VBW=30kHz (measurement @ 3m)

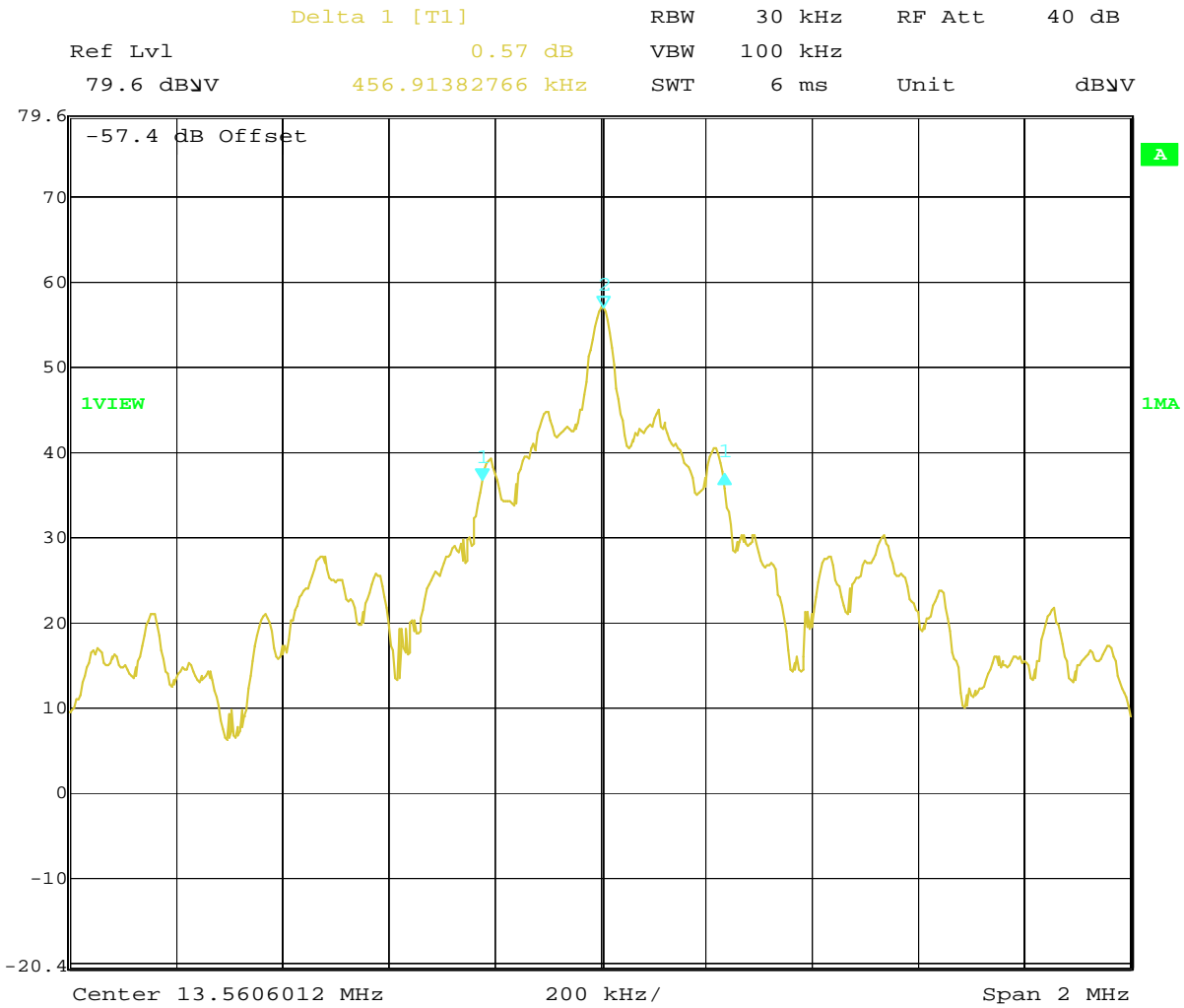


Date: 16.NOV.2012 10:27:53



L C I E

ISC250-OPT with power supply FRIWO
The 99% occupied bandwidth is 456.9 kHz.



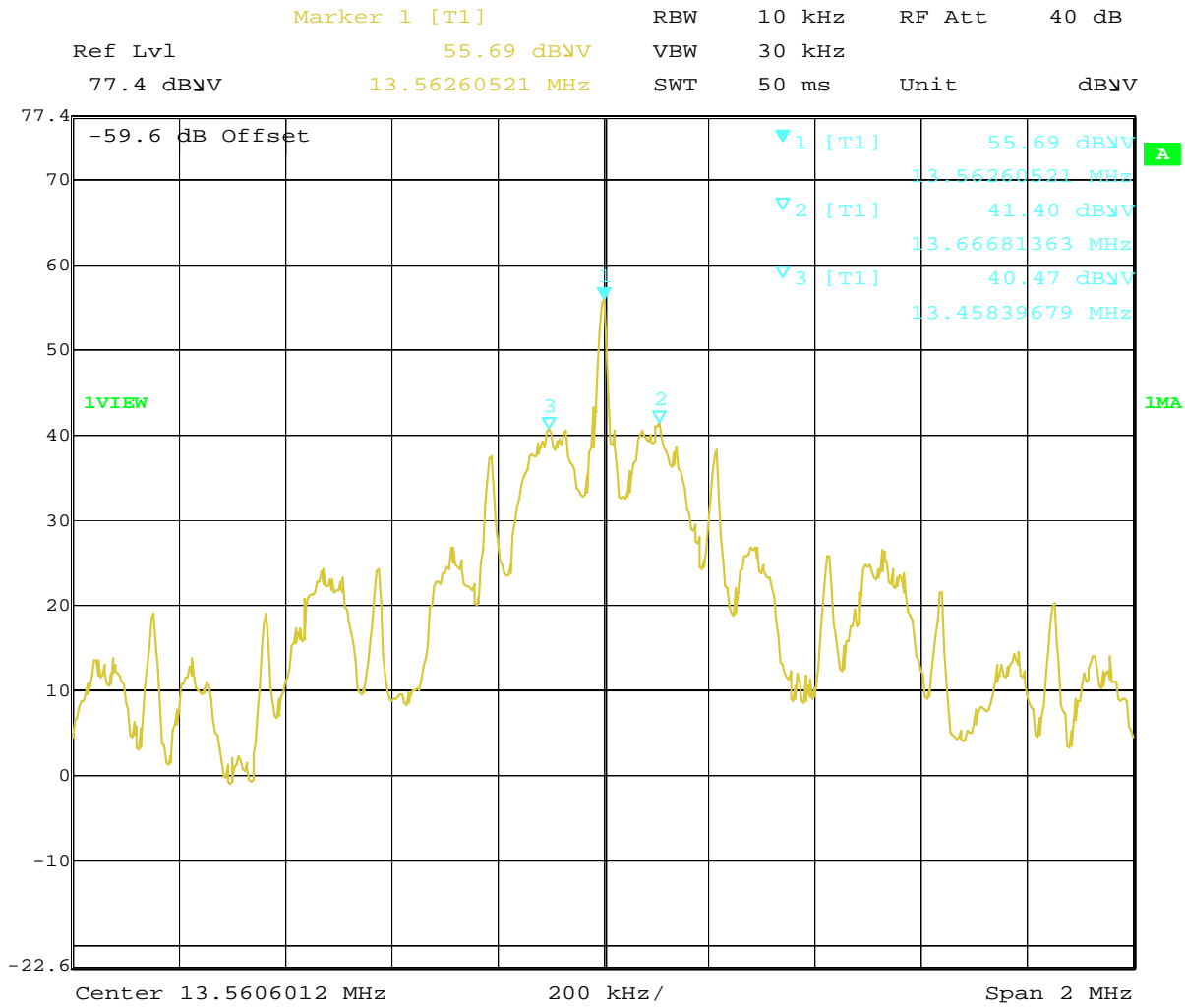
Date: 16.NOV.2012 10:32:04



L C I E

ISC250-OPT with power supply PHIHONG

Graph from 12.5 to 14.5 MHz with RBW=10kHz and VBW=30kHz (measurement @ 3m)



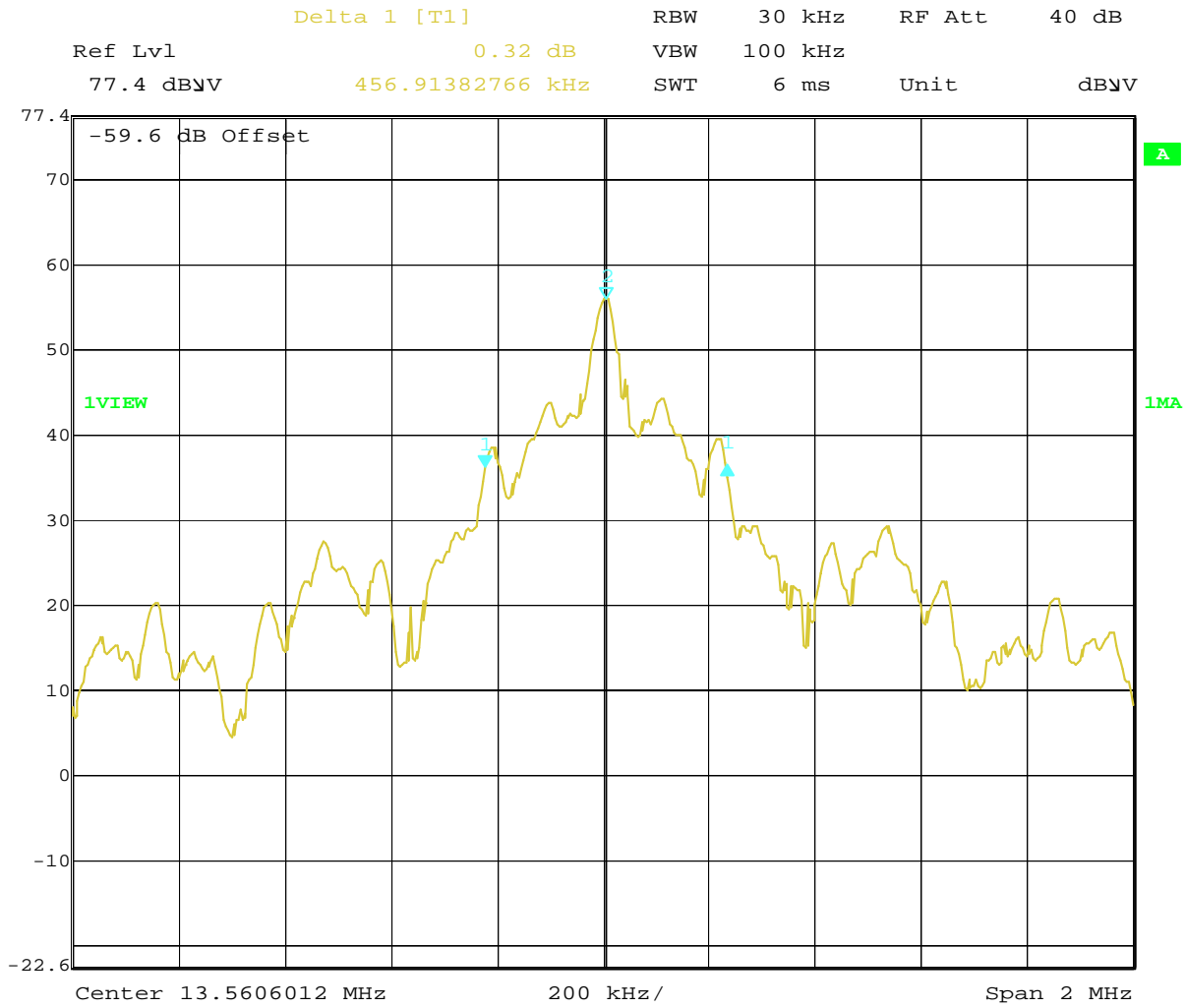
Date: 15.NOV.2012 16:09:29



L C I E

ISC250-OPT with power supply PHIHONG

The 99% occupied bandwidth is 456.9 kHz.



Date: 15.NOV.2012 16:02:24

2.3 – Field strength outside the 13.110-14010MHz band

2.3.1 – General

The product has been tested with 120 V / 60 Hz power line voltage on charger and compared to the FCC part 15 subpart C § 15.209 limits.

The 6dB resolution bandwidth was:

- 200 Hz from 9 kHz to 150 kHz.
- 9 kHz from 150 kHz to 30 MHz.
- 120 kHz from 30 MHz to 1000 MHz.
- 1 MHz from 1 GHz to 18 GHz.

-Frequency range: 9 kHz to 30 MHz

Measuring Distance: **3 m**

Antenna:

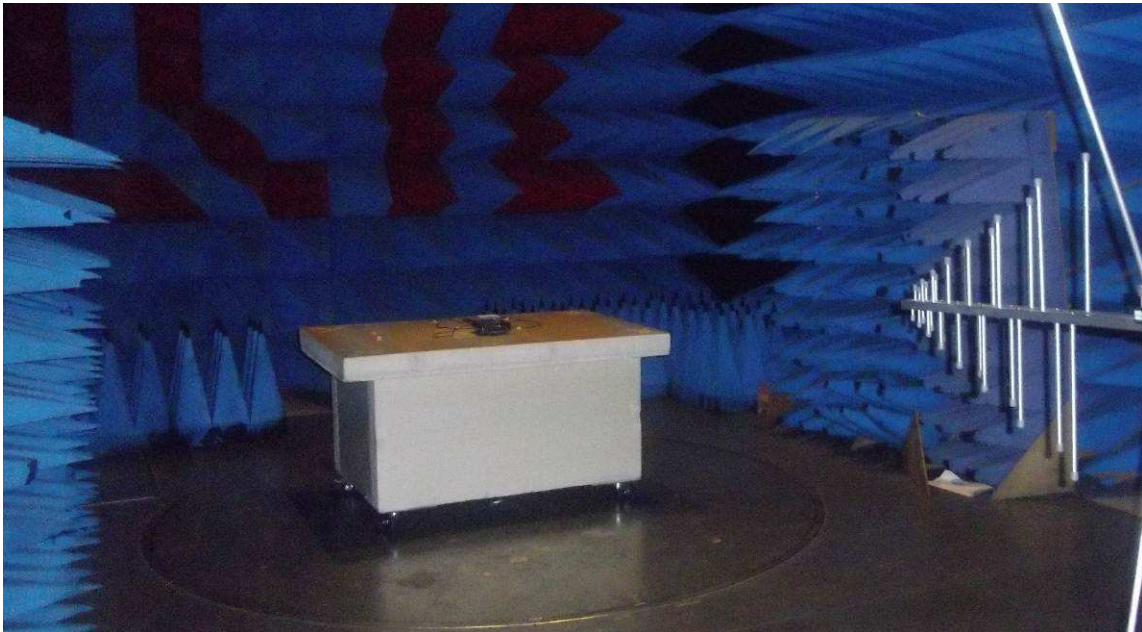
- Loop antenna (9 KHz to 30 MHz)

-Frequency range: 30 MHz to 18000 MHz

Measuring Distance: **3 m**

Antenna:

- BiLog (30 MHz to 1000 MHz)
- horn (1000 MHz to 18000 MHz)



The EUT is placed at 3m distance of the loop antenna (0.009 to 30MHz) on a table 80cm height. The level has been maximised by turning the EUT with the rotating table and with the antenna at 0° and 90° around its vertical and horizontal axes. Antenna height was 1m. Pre scans were performed on the EUT put on its three axes to determine the position with maximum radiation.

The EUT is placed at 3m distance of the BiLog (30 to 1000MHz) or horn (above 1GHz) antenna on a table 80cm height. The level has been maximised by turning the EUT with the rotating table and with the antenna in horizontal and vertical polarity. Antenna height search was performed from 1 to 4m.



2.3.2 – Equipment list

Description	Manufacturer	Model	Identifier	Cal. Date	Cal. Due
Spectrum analyser	ROHDE & SCHWARZ	ESI40	A2642010	2012/09	2013/09
BiLog antenna	SCHWARZBECK	VULB 9160	C2040150	2011/12	2012/12
Horn antenna	EMCO	3115	C2042018	2012/04	2013/04
Loop antenna	ROHDE & SCHWARZ	HFH H2 Z2	C2040007	2012/08	2013/08

2.3.3 – 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
E field measurement within the band 150kHz-30MHz	4.75 dB	Not defined
Measurement of radiated electric field from 30 to 200MHz in horizontal position on the Fontenay-aux-Roses site (with EATON 96002 antenna)	4.80 dB	5.2 dB
Measurement of radiated electric field from 30 to 200MHz in vertical position on the Fontenay-aux-Roses site (with EATON 96002 antenna)	5.03 dB	5.2 dB
Measurement of radiated electric field from 200 to 1000MHz on the Fontenay-aux-Roses site	5.07 dB	5.2 dB

2.3.4 – Test results on transmitter

3 m radiated measurement from 9 kHz to 30 MHz

Frequency (MHz)	Level @ 3m (dBµV/m)	Limit @ 3m (dBµV/m)
27.12	36.1	69.5

Note: these values are the maximum level for both measurements on ISC250-OPT with power supply FRIWO or PHIHONG



3 m radiated measurement graph from 30 to 1000 MHz

<u>Frequency (MHz)</u>	<u>Quasi-peak measurements @ 3m (dBμV/m)</u>	<u>Limits @ 3m (dBμV/m)</u>
83.3	31.6	40.0
139.7	38.2	43.5
141.7	38.2	43.5
143.4	36.4	43.5
225.0	28.3	46.0
250.0	33.6	46.0
392.2	31.1	46.0
400.0	33.7	46.0
800.1	36.8	46.0

Note: these values are the maximum level for both measurements on ISC250-OPT with power supply FRIWO or PHIHONG

3 m radiated measurement graph from 1 to 6 GHz

<u>Frequency (MHz)</u>	<u>Peak measurements (dBμV/m)</u>	<u>Peak limits (dBμV/m)</u>	<u>Average measurement (dBμV/m)</u>	<u>Average limits (dBμV/m)</u>
1066.7	35.8	74	27.9	54

Note: these values are the maximum level for both measurements on ISC250-OPT with power supply FRIWO or PHIHONG

2.3.5 – Test results on receiver

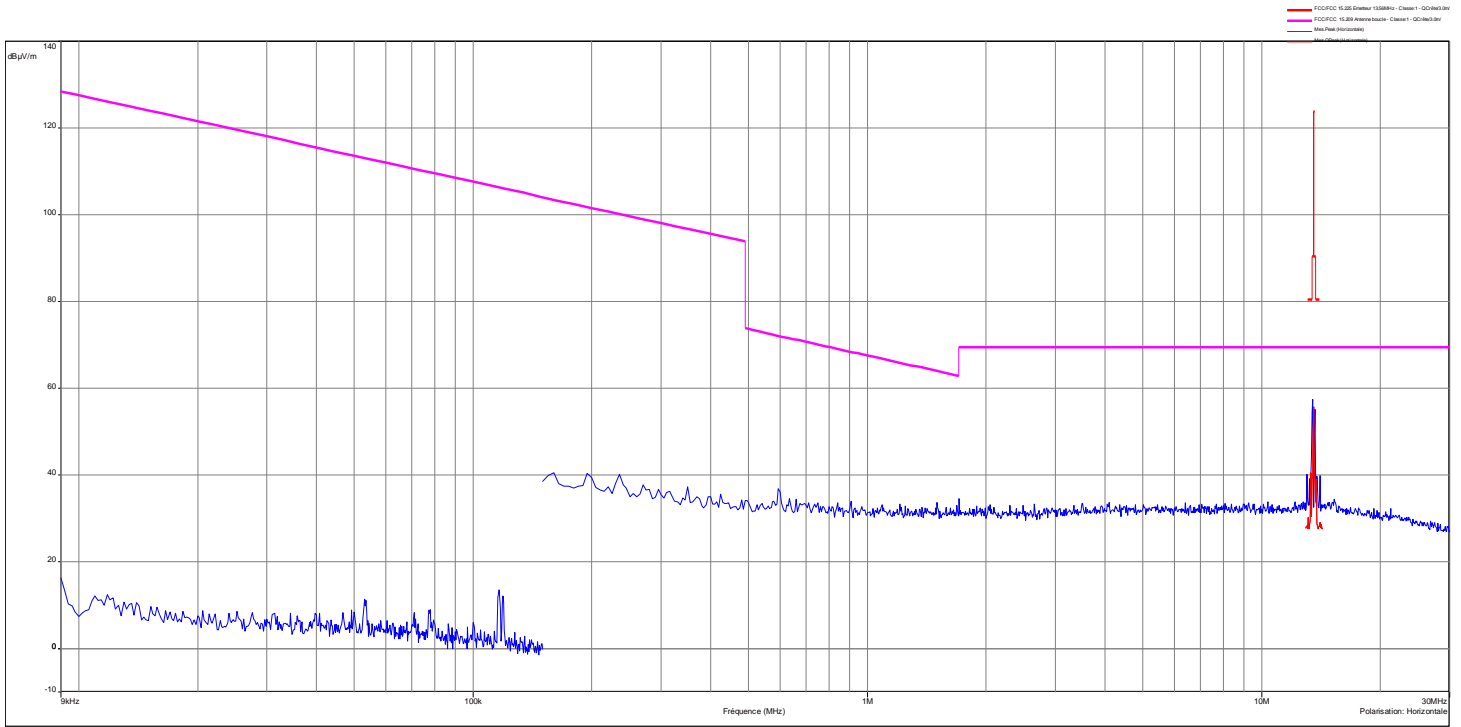
The RFID receiver works at the same time as the transmitter. Spurious emissions for transmitter already represents the receive mode.



2.3.6 – Measurements diagrams

3 m radiated measurement from 9 kHz to 30 MHz

ISC250-OPT with power supply PHIHONG

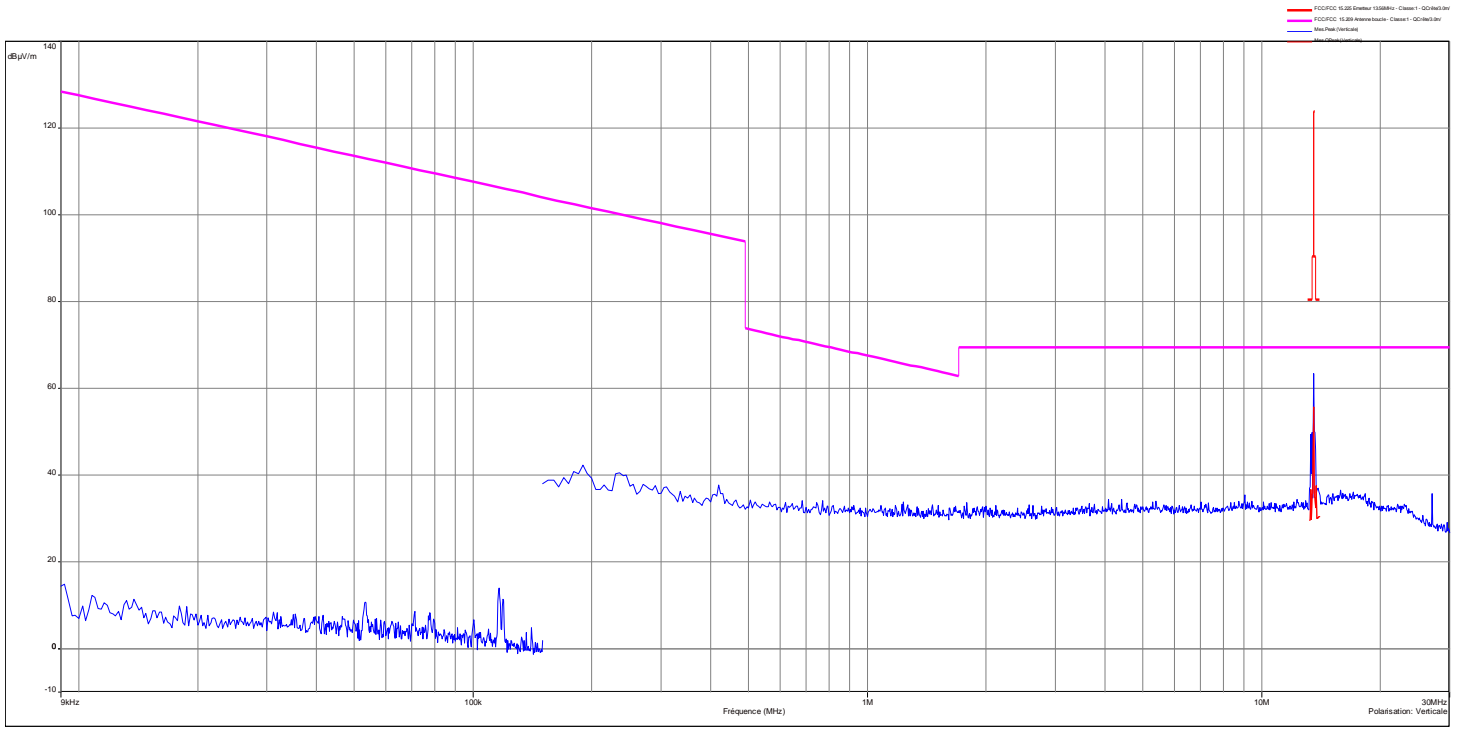


Perpendicular antenna from 9 KHz to 30 MHz

Loop antenna measurements



ISC250-OPT with power supply PHIHONG



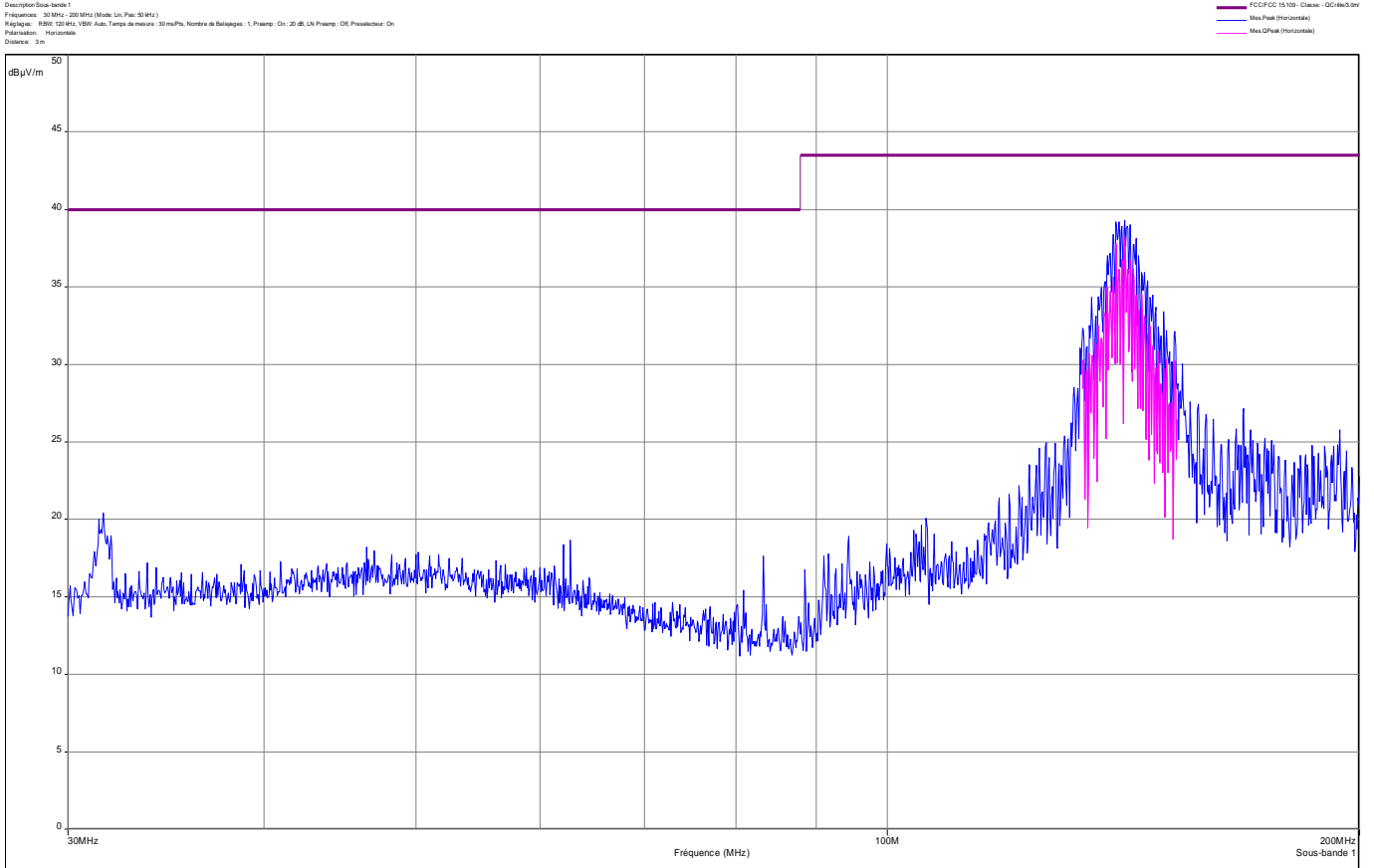
Parallel antenna from 9 KHz to 30 MHz

Loop antenna measurements



3 m radiated measurement graph from 30 to 1000 MHz

ISC250-OPT with power supply PHIHONG



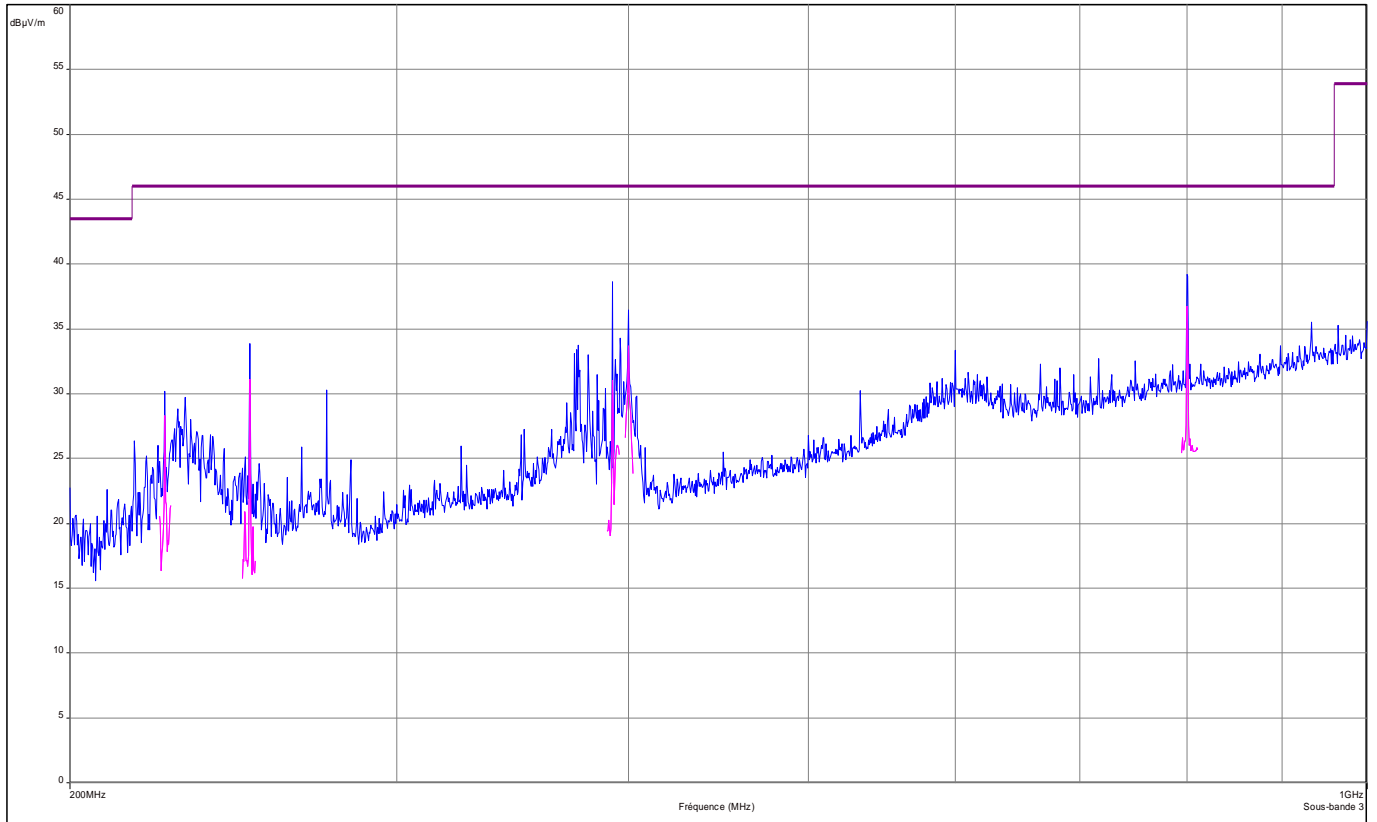
Horizontal antenna from 30 to 200 MHz



ISC250-OPT with power supply PHIHONG

Description Sous-bande 3
Fréquence : 200 MHz - 1 GHz (Mode Lix, Pas: 50 kHz)
Polarisation : RH; 50 dB; 100° Azim; Temps de mesure : 30 ms/Pa; Nombre de Balayages : 1; Pramp: On; 20 dB; Lix Pramp: Off; Postdétour: On
Polarisation : Horizontale
Distance : 3m

— FCC/FCC 15.109 - Classe - QCh3.0/m
— Max Peak (Horizontale)
— Max QPeak (Horizontale)



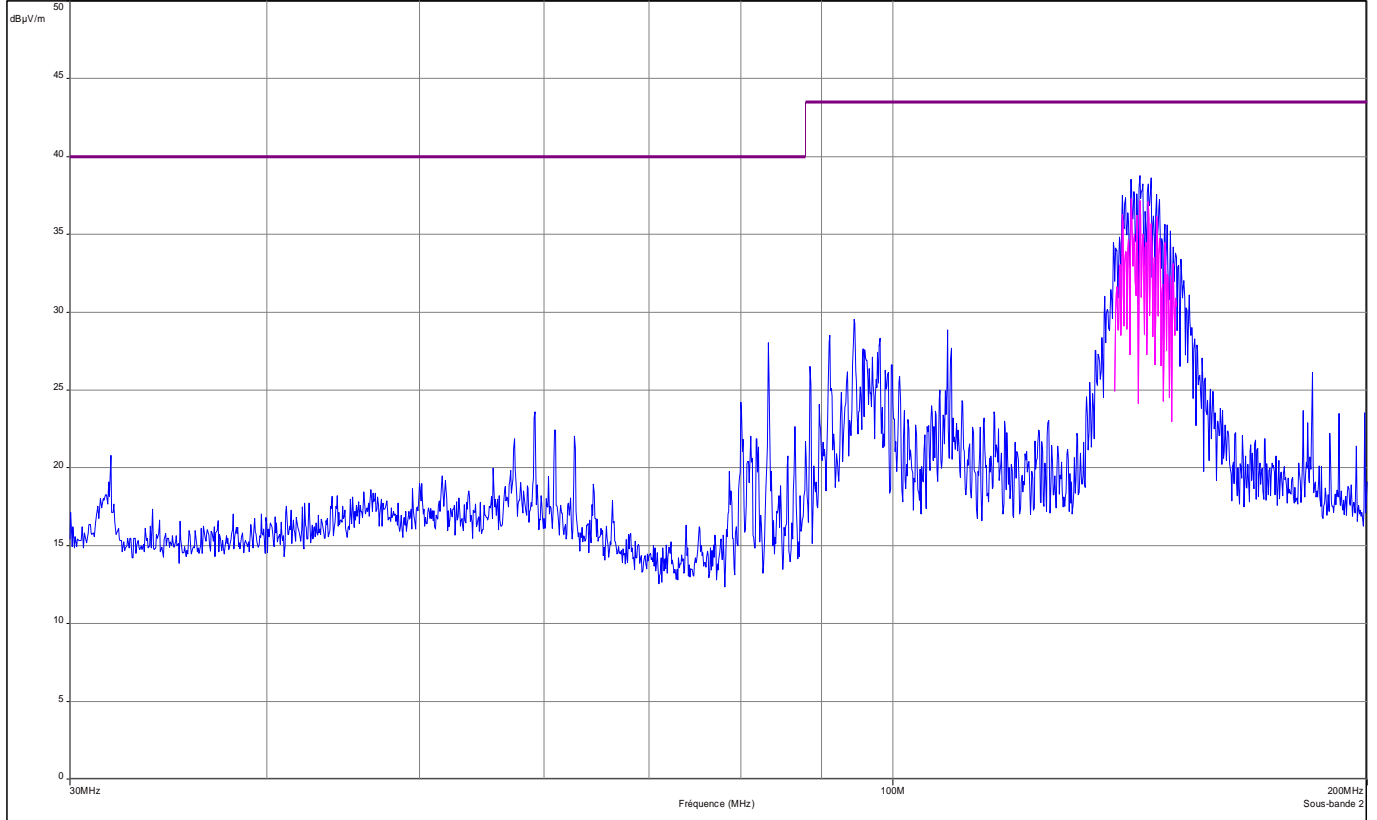
Horizontal antenna from 200 to 1000 MHz



ISC250-OPT with power supply PHIHONG

Description Sous-bande 2
Fréquences: 30 MHz - 200 MHz (Mode Lin, Pas: 50 kHz)
Période: 1000 (100 kHz), 1000 (100 kHz), Temps de mesure: 20 (ms/Hz), Nombre de Balayages: 1, Préamp: On, 20 dB, LN Préamp: Off, Postlecteur: On
Polarisation: Verticale
Distance: 3m

FCC/FCC 15.109 - Classe - OC44v3.0v1
Max Peak (Verticale)
Max QPMax (Verticale)



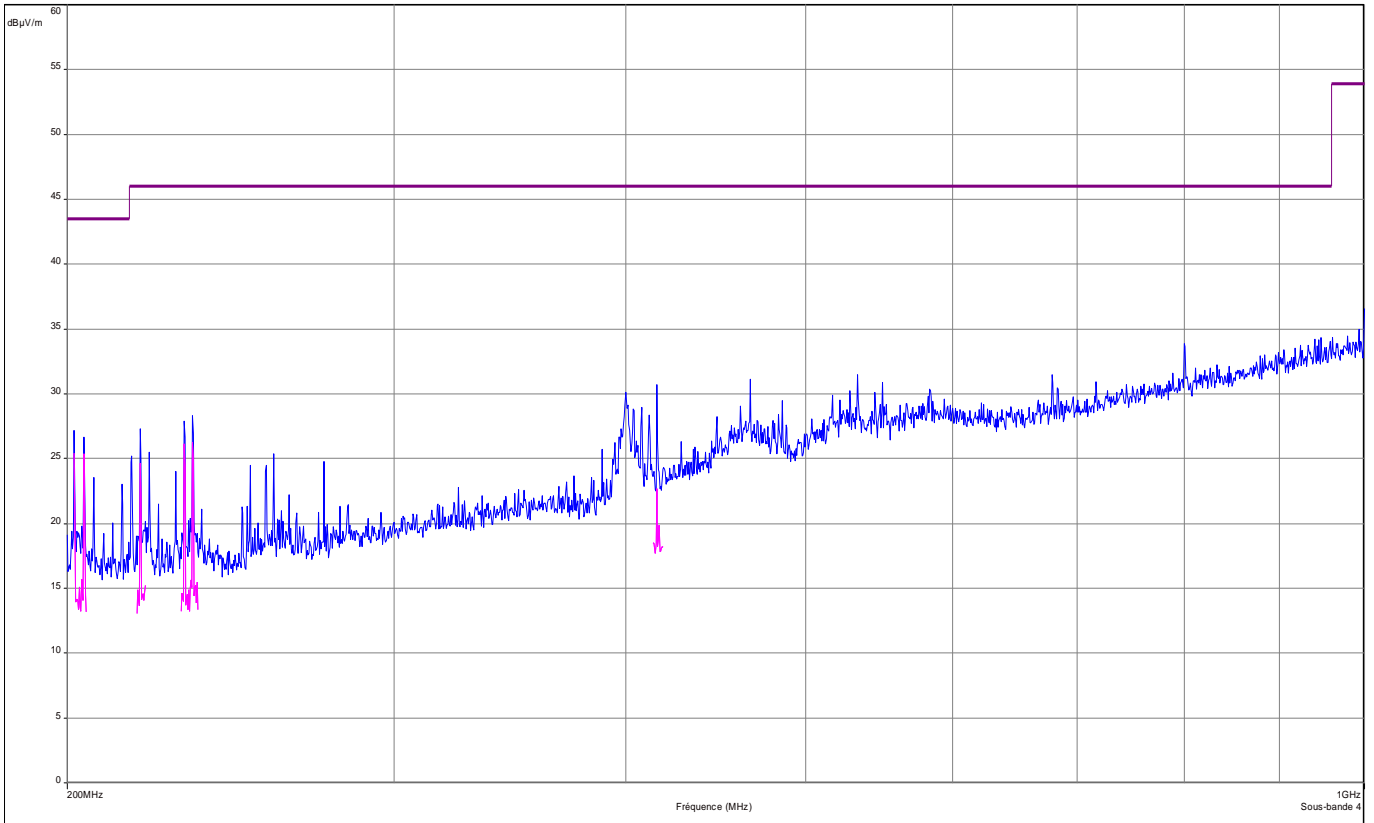
Vertical antenna from 30 to 200 MHz



ISC250-OPT with power supply PHIHONG

Description Sous-bande 4
Fréquences: 200MHz - 1GHz (Mode Lin, Pas: 80MHz)
Réglage: RBW: 120MHz, VBW: Auto, Temps de mesure: 30ms/Plot, Nombre de Balayages: 1, Préamp: On: 20dB, LN Préamp: Off, Préselecteur: On
Polarisation: Verticale
Distance: 3m

— FCC/CEC 15.109 - Classe - CC-1632m
— Max Peak (Vertical)
— Max QPeak (Vertical)



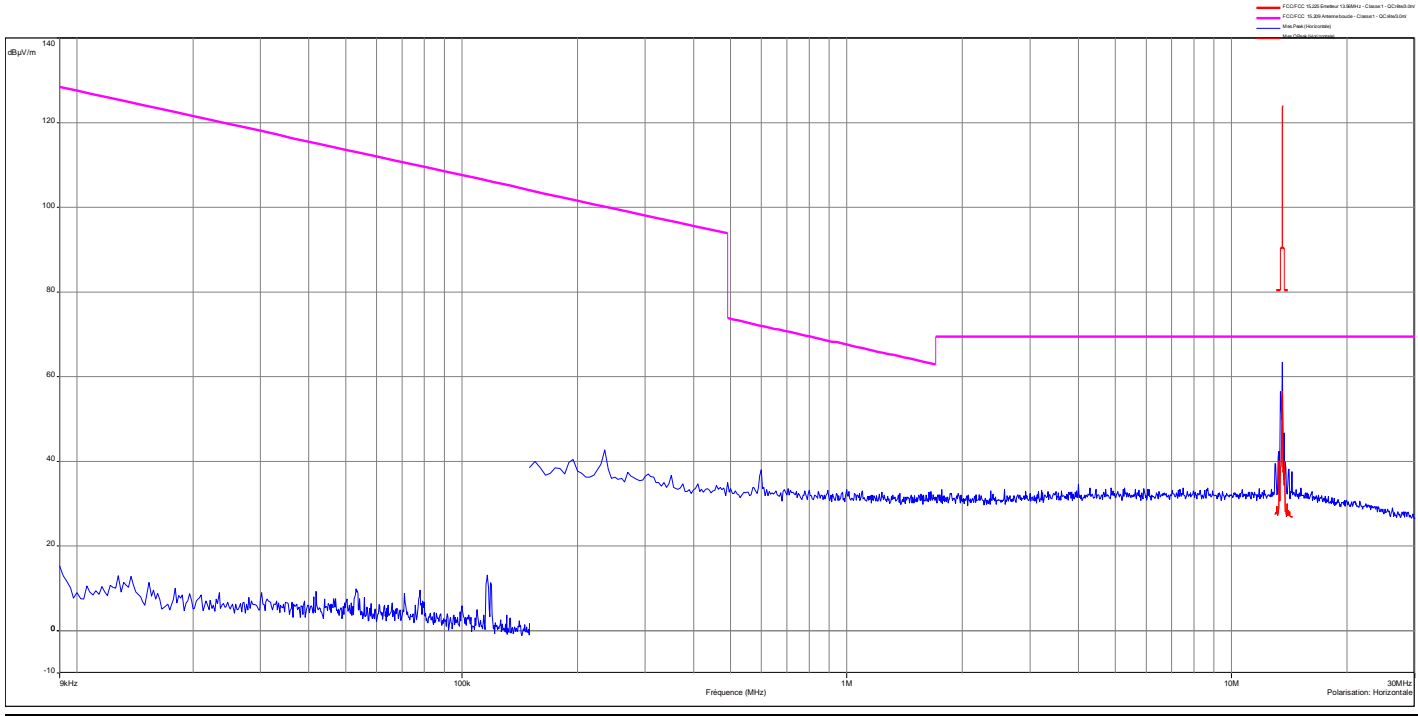
Vertical antenna from 200 to 1000 MHz



2.3.7 – Measurements diagrams

3 m radiated measurement from 9 kHz to 30 MHz

ISC250-OPT with power supply FRIWO

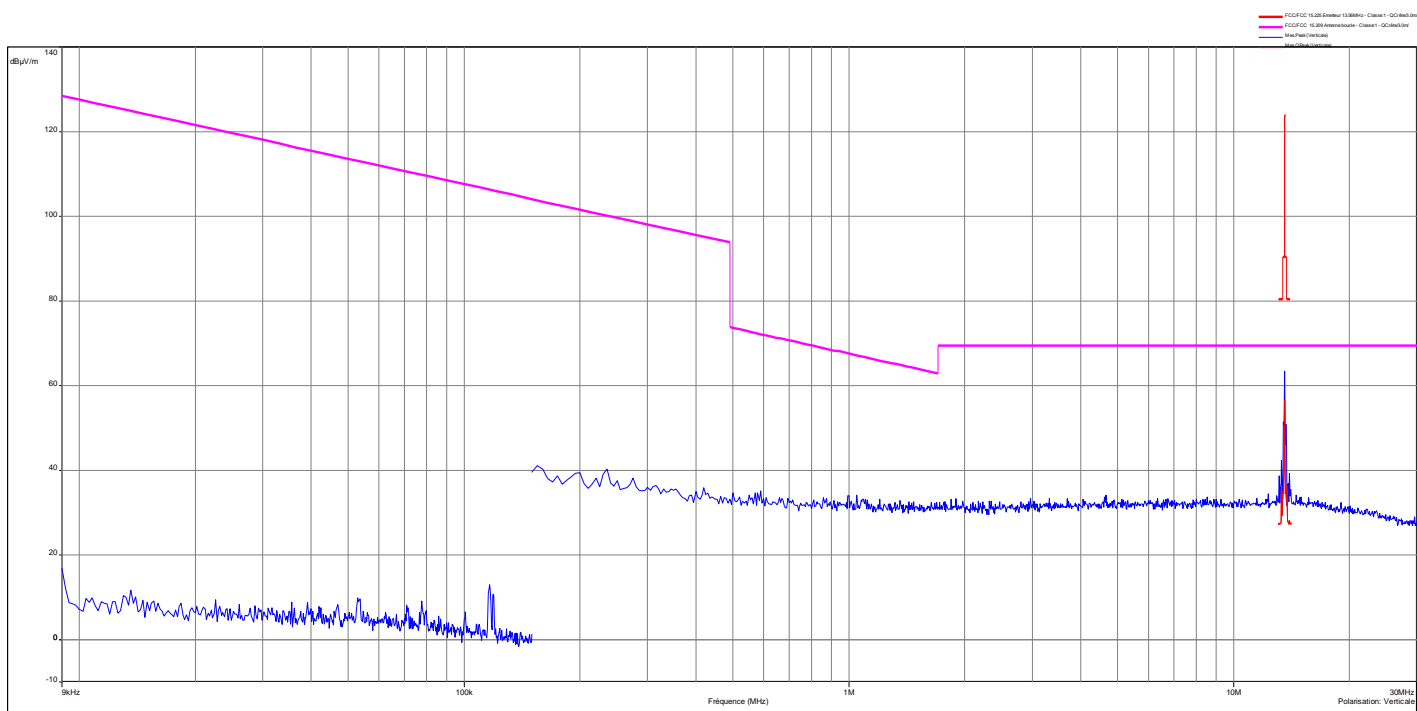


Perpendicular antenna from 9 KHz to 30 MHz

Loop antenna measurements



ISC250-OPT with power supply FRIWO



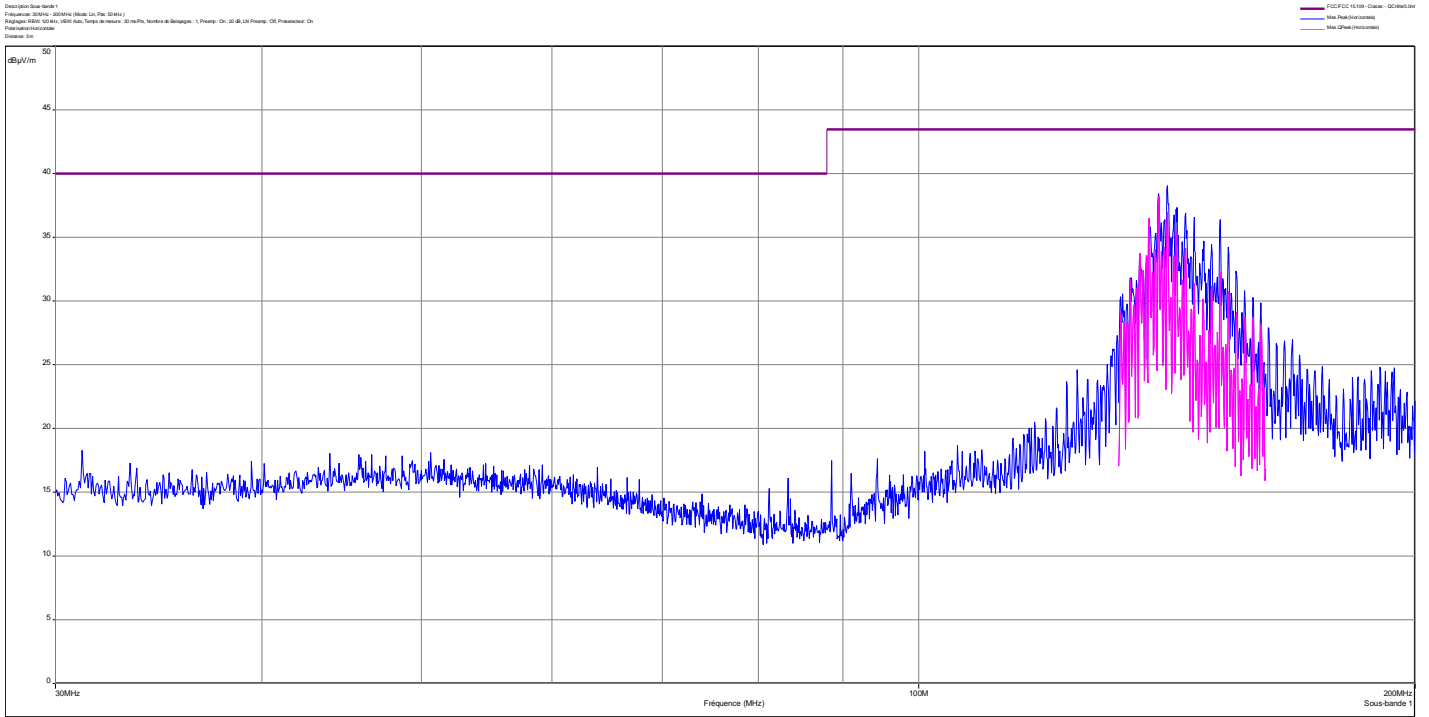
Parallel antenna from 9 KHz to 30 MHz

Loop antenna measurements



3 m radiated measurement graph from 30 to 1000 MHz

ISC250-OPT with power supply FRIWO

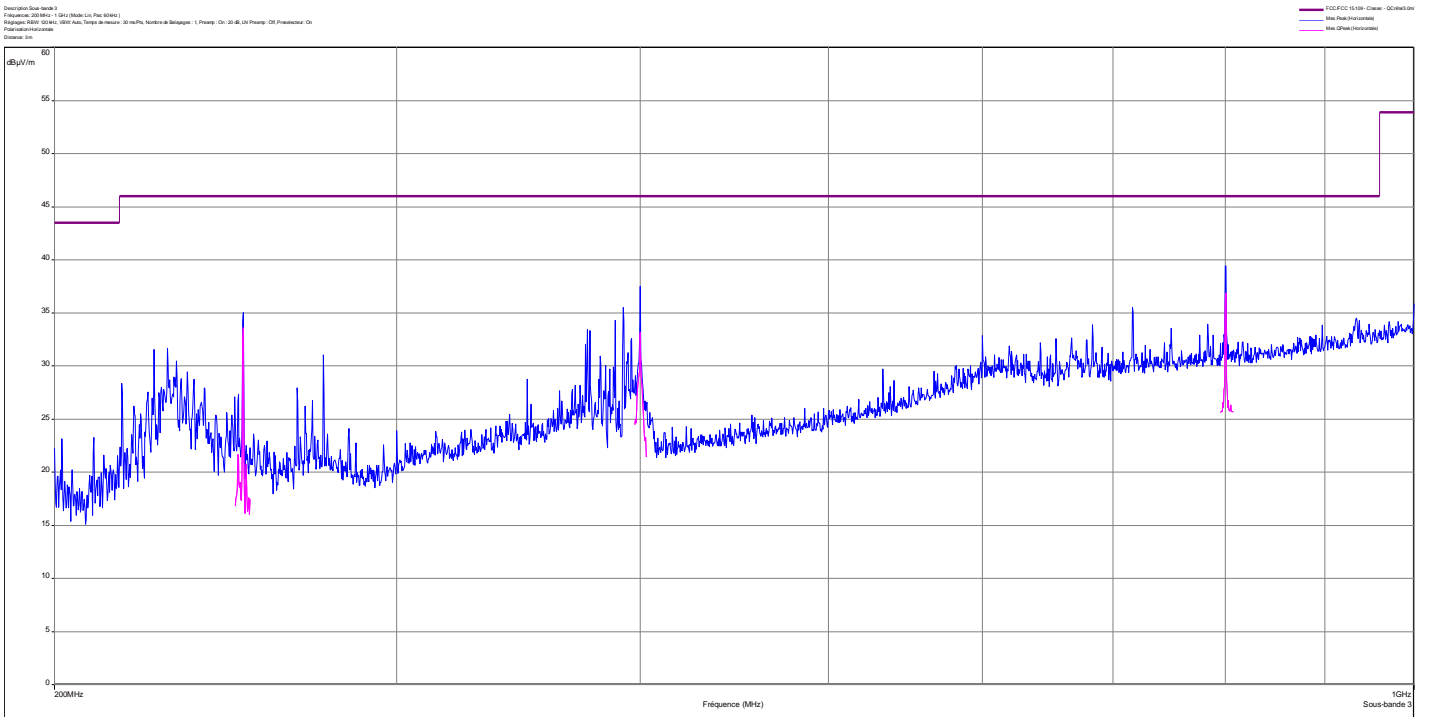


Horizontal antenna from 30 to 200 MHz



L C I E

ISC250-OPT with power supply FRIWO



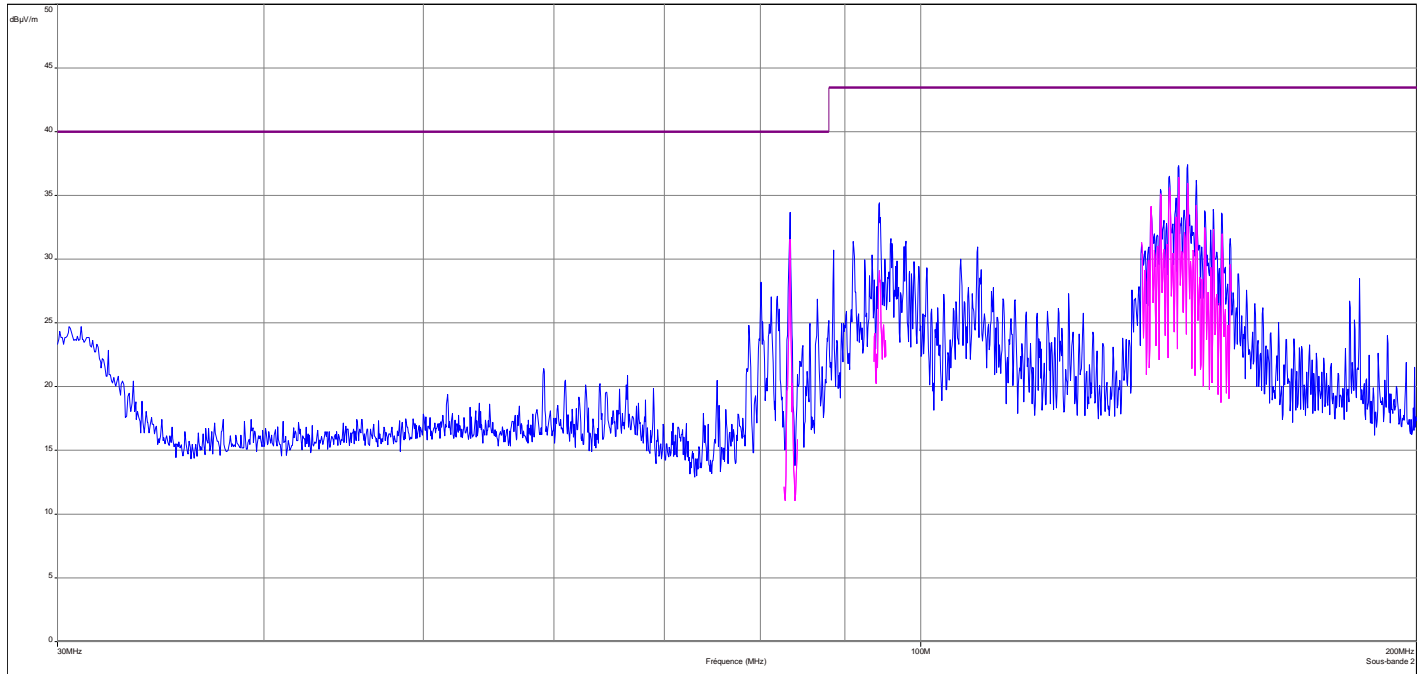
Horizontal antenna from 200 to 1000 MHz



ISC250-OPT with power supply FRIWO

Designation: SAE 2008-01-0010
Référence: 2008-01-0010 (SAE 2008-01-0010)
Page: 18/18
Date: 08/09/2008
Document: 2008-01-0010

FCCECC 15108 - Classe - 00000000
Max Peak (Vertical)
Max QPeak (Vertical)

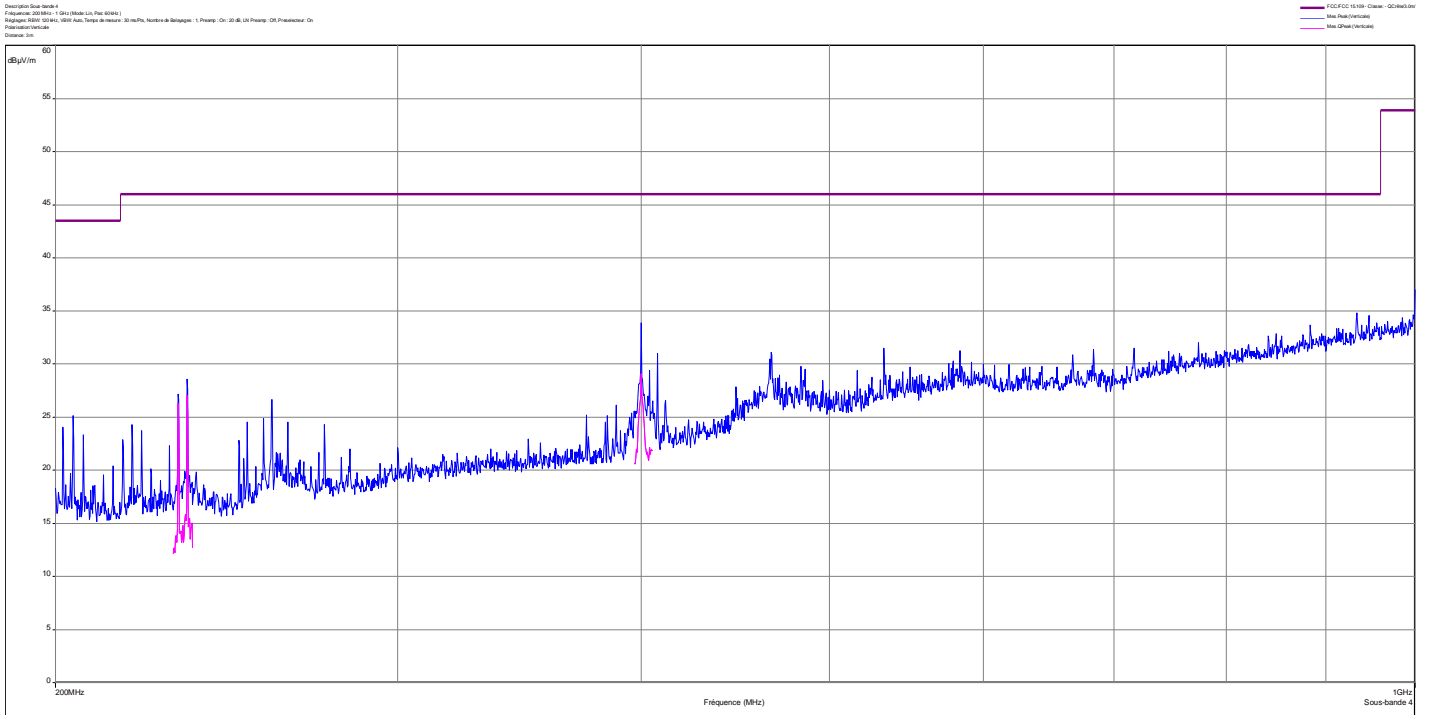


Vertical antenna from 30 to 200 MHz



L C I E

ISC250-OPT with power supply FRIWO



Vertical antenna from 200 to 1000 MHz

2.4 – Frequency stability over extreme voltage and temperature condition

2.4.1 – General

The product has been powered with AC power supply and it was tested inside a climatic chamber and compared to the FCC part 15 subpart C § 15.225 (e) limits.

2.4.2 – Test setup





2.4.3 – Equipment list

Description	Manufacturer	Model	Identifier	Cal. Date	Cal. Due
Spectrum analyser	ROHDE & SCHWARZ	FSIQ7	A4060040	2012/05	2013/05
Voltmeter	KEITHLEY	2000	A1241084	2011/10	2013/10
Climatic chamber	CLIMATS	-	D1025029	2012/02	2013/02
AC power supply	CALIFORNIA INSTRUMENT	1501L	A7042261	Inspected before test	-

2.4.4 – 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
Frequency stability	±10 ⁻⁷ of frequency

2.4.5 – Test results

ISC250-OPT with power supply FRIWO

Temperature	Voltage	Frequency (MHz)	Limits
20 °C	120V	13.55989	Reference
20 °C	138V	13.55989	Fmin = 13.55854 - Fmax = 13.56125
20 °C	102V	13.55989	
- 20 °C	120V	13.55989	
- 20 °C	138V	13.55989	
- 20 °C	102V	13.55989	
- 30 °C	120V	13.55969	
- 30 °C	138V	13.55989	
- 30 °C	102V	13.55989	
+ 50 °C	120V	13.55989	
+ 50 °C	138V	13.55989	
+ 50 °C	102V	13.55989	



ISC250-OPT with power supply PHIHONG

Temperature	Voltage	Frequency (MHz)	Limits
20 °C	120V	13.55989	Reference
20 °C	138V	13.55989	Fmin = 13.55854 - Fmax = 13.56125
20 °C	102V	13.55989	
- 20 °C	120V	13.55989	
- 20 °C	138V	13.55989	
- 20 °C	102V	13.55989	
- 30 °C	120V	13.55989	
- 30 °C	138V	13.55969	
- 30 °C	102V	13.55989	
+ 50 °C	120V	13.55989	
+ 50 °C	138V	13.55989	
+ 50 °C	102V	13.55989	

ANNEX

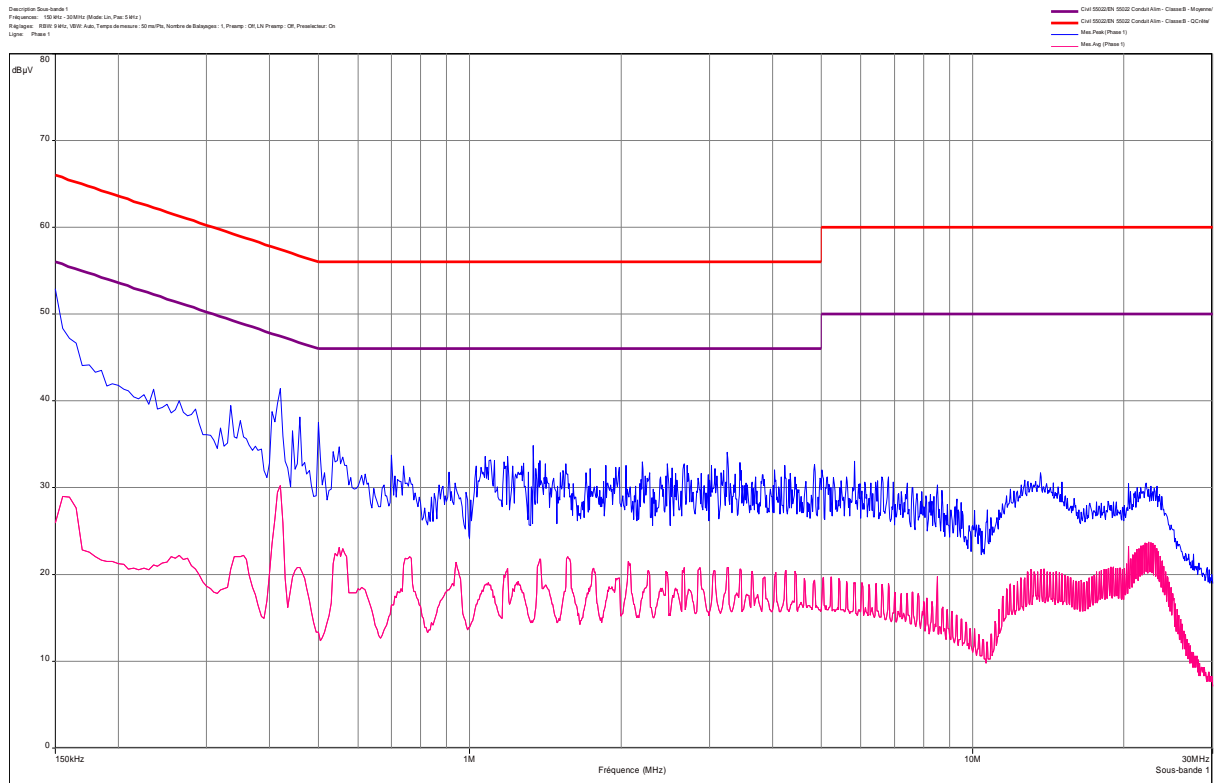
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ISC250-OPT

FRIWO power supply, mode RFID activated with antenna removed.
The antenna was replaced by a dummy load equal in impedance to the original antenna.

120V 60Hz

Conductor 1





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ISC250-OPT

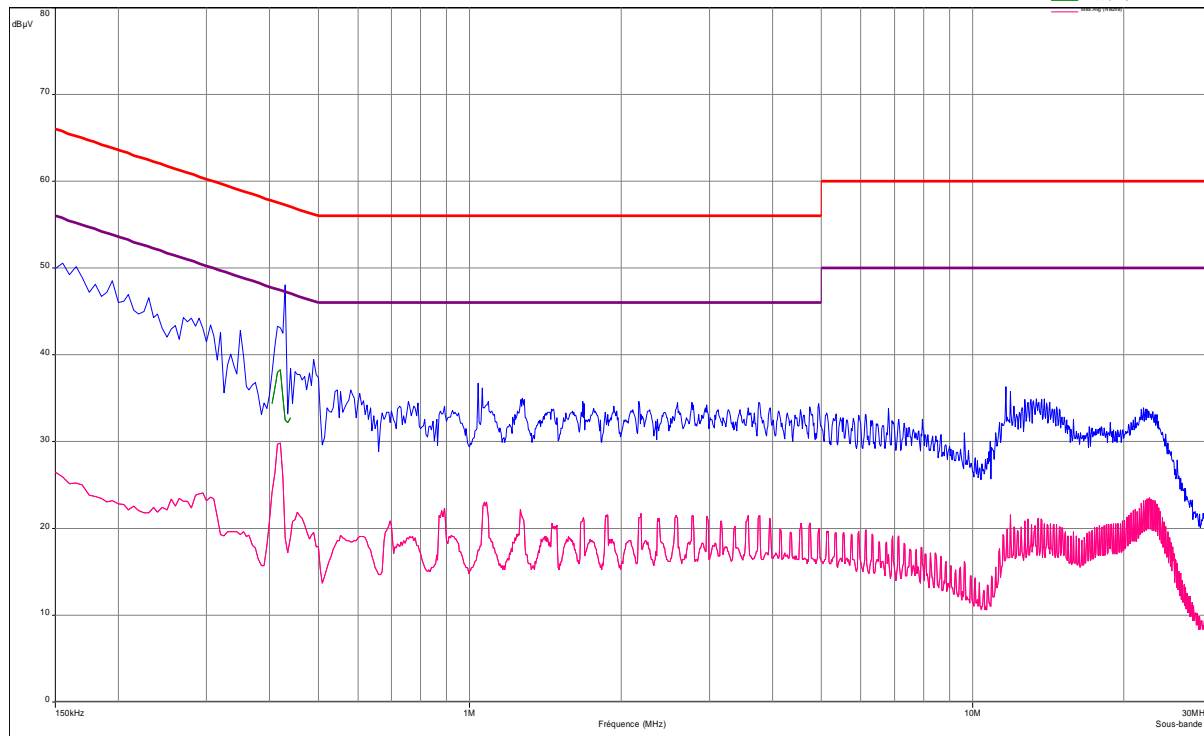
FRIWO power supply, mode RFID activated with antenna removed.
The antenna was replaced by a dummy load equal in impedance to the original antenna.

120V 60Hz

Conductor 2

Description: Sous bande 2
Fréquences: 150 kHz - 300 MHz (Bande Lic. Pas 5 MHz)
Réglages: RBW: 9 kHz, VBW: Auto, Temps de mesure: 50 ms/Hz, Nombre de Balayages: 1, Préamp: ON, LN Preamp: ON, Postselecteur: On
Log: - Norme

— Ciel 55022EN 55022 Cordat Alin - Classe B - Magenta
— Ciel 55022EN 55022 Cordat Alin - Classe B - OC Air
— Max Peak (Norme)
— Min (Norme)
— RBW (Norme)





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ISC250-OPT

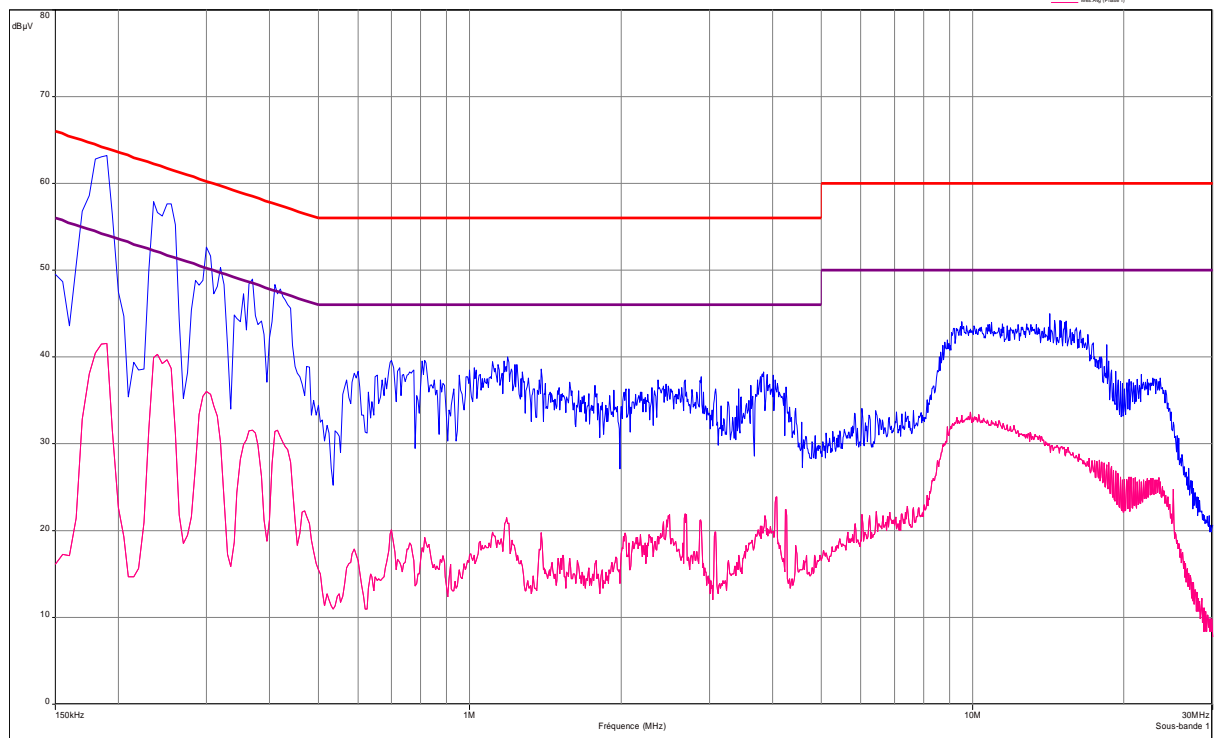
PHIHONG power supply, mode RFID activated with antenna removed.
The antenna was replaced by a dummy load equal in impedance to the original antenna.

120V 60Hz

Conductor 1

Configuration: 500000000
Fréquence: 150 kHz - 30 MHz (Mode Lin, Pas: 5 kHz)
Réglage: 8000 0 kHz, 10000 Auto, Tempo de mesure: 50 ms (Pa, Nombre de Balayages: 1, Préamp: Off, Lin Préamp: Off, Post-Amplificateur: On)
Signal: Phase 1

Ch1: 5000000000 ConductAlim - Class:B - Max:60
Ch2: 5000000000 ConductAlim - Class:B - DC:60
Max Peak (Phase 1)
Max Avg (Phase 1)



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ISC250-OPT

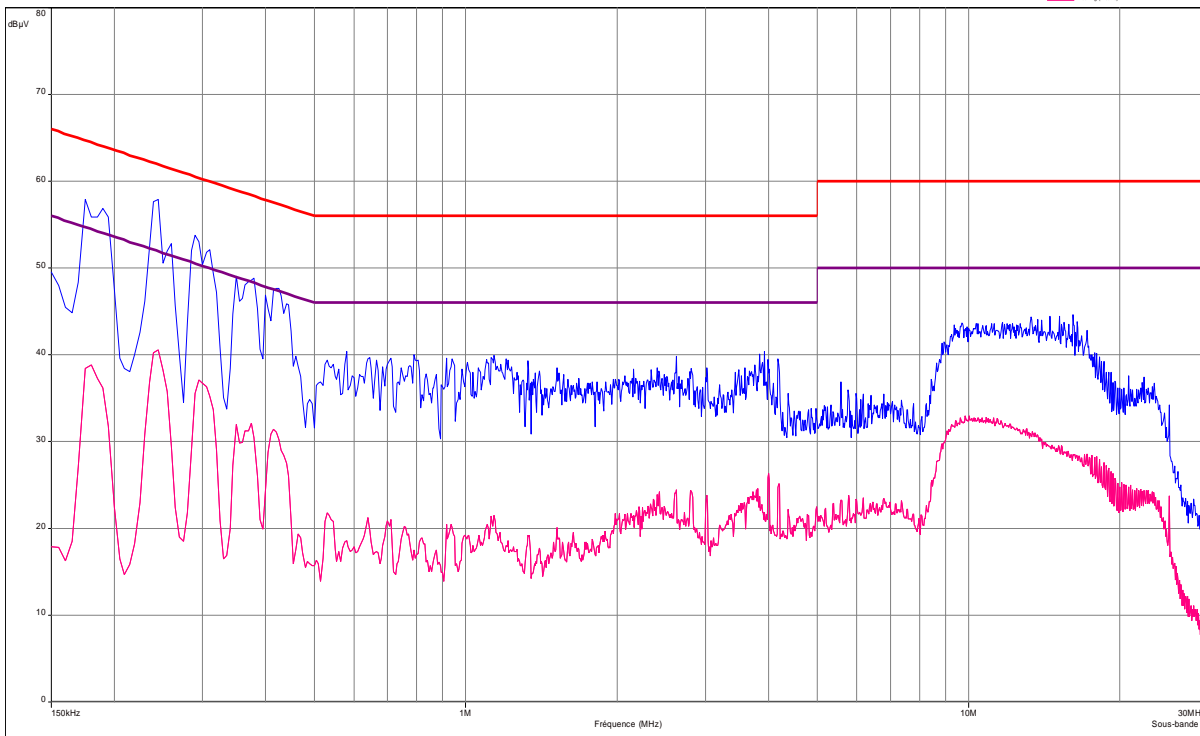
PHIHONG power supply, mode RFID activated with antenna removed.
The antenna was replaced by a dummy load equal in impedance to the original antenna.

120V 60Hz

Conductor 2

Description: Sous bande 2
Fréquences: 150 kHz - 30 MHz (Bande Lic. Pas 5 MHz)
Réglages: RBW: 9 kHz, VBW: Auto, Temps de mesure: 50 ms/Pk, Nombre de Balayages: 1, Préamp: Off, Lin Preamp: Off, Préamplificateur: On
Log: Norm

— Cui 55022EN 55022 Cordia Alim - Classe B - Magenta
— Cui 55022EN 55022 Cordia Alim - Classe B - OC noir
— Max Peak (Noise)
— Max Avg (Noise)



End of test report