

## RADIO TEST REPORT

According to the standard(s):

FCC part 15 Subpart C

Equipment under test:

PE3LR-S

FCC ID: R8T-PE3LR-S

Company:

ADVEEZ

Diffusion: Mr CREMOUX

(Company: ADVEEZ)

Number of pages: 28 including 1 annex

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*NAME OF THE EQUIPMENT UNDER TEST (E.U.T.)* : PE3LR-S

*Serial number* : None

*Part number* : FCC ID: R8T-PE3LR-S

*Software Version* : None

*MANUFACTURER'S NAME* : ADVEEZ

*APPLICANT'S ADDRESS:*

*Company* : ADVEEZ

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*Person(s) present during the tests* : Mr CREMOUX

*Responsible* : Mr BENDHIA

*DATE(S) OF TESTS* : October 3<sup>rd</sup> to 8<sup>th</sup> and November 14<sup>th</sup> of  
2013

*TESTS LOCATION(S)* : EMITECH MONTPELLIER laboratory in  
VENDARGUES (34) - FRANCE  
Open area test site in SALINELLES (30) -  
FRANCE  
FCC Registration number: 8127-19

*TESTS SUPERVISOR(S)* : None

*TESTS OPERATOR(S)* : David MONTAULON

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## 1. INTRODUCTION

This document submits the results of Electromagnetic Compatibility tests performed on the equipment PE3LR-S (denominated hereafter E.U.T.: equipment under test) according to document(s) listed below.

## 2. REFERENCE DOCUMENT(S)

FCC Part 15

Code of Federal Regulations  
Title 47 – Telecommunications  
Chapter 1 – Federal Communications Commission  
Part 15 – Radio frequency devices  
Subpart C – Intentional Radiators

ANSI C 63.4 (2003)

American National Standard for Methods of measurement of  
Radio-Noise from low-voltage  
Electrical and Electronic Equipment in the Range of 9 kHz to  
40 GHz

### **3. EQUIPMENT UNDER TEST CONFIGURATION**

#### **Equipment under test (E.U.T.) description:**

The reader "PE3LR-S" read tags ID of several technologies. This ID goes back to an UTL (Logical Treatment Unit) to accept or reject the access. The reader doesn't take any decision on the access.

The primary functions of the reader are:

- LF Emit signal
- Receive RF signal
- Transponder operation
- Provision of visual and audio information to the user
- Communicate with UTL via a bus communication

#### **1 LF Emit signal**

The LF signal is a WUP (Wake Up Signal) at 125KHz emitted on an accuracy short range (2 meters around the reader) to activate "free hand" tags (PERLR-T, PERLR-TCH or AD-CARE-W).

#### **2 Receive RF signal**

When a "hand free" tag is activated, it responds by a 908 MHz signal, the reader receives this signal and decrypts the data.

#### **3 Transponder operation**

The reader is able to read several passive tags such as EM, Mifare...

Likewise if the battery of an active tag is empty, the reader can identify tag in safe mode: the proximity mode.

#### **4 Provision of visual and audio information to the user**

A buzzer and two LED inside the reader provide to the user visual and audio information. To interpret this information, go back to the notice.

#### **5 Communicate with UTL via a bus communication**

This reader communication with the UTL through a bus communication is set up in two different standards: RS485 and Wiegand.

FCC ID: R8T-PE3LR-S

Transmitter frequency range: 125 kHz, 13.56 MHz

Receiver frequency range: 908MHz

Number of channels: 1

Tested frequencies: 125 kHz, 13.56 MHz, receiver part at 908 MHz

Power supply: 12/24Vdc

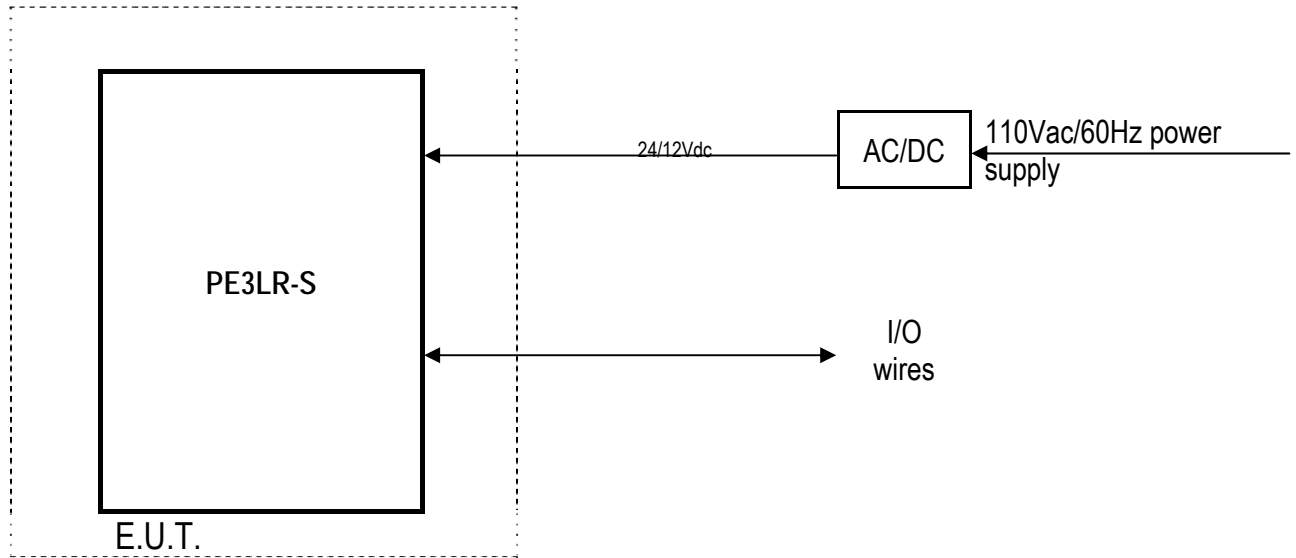
Consumption: 0.2/1A peak

Mounting: Wall mounting

Antennas: integrated and external

**Cycle and operating mode during emission tests:** Permanent emission mode

**Equipment modifications applied during tests:** No

**4. EQUIPMENT UNDER TEST CONFIGURATION SCHEME**

Note 12/24 power supply wires and I/O wires are in the same cable.  
Tests were performed on 12Vdc only.

5. SUMMARY OF TEST RESULTS

Tests designation	Results satisfying?	Comments
<b>Antenna requirement</b> - FCC part 15.203	YES	Integrated antenna
<b>Restricted band of operation</b> - FCC part 15.205	YES	
<b>Conducted power lines</b> - FCC part 15.107 and 15.207	YES	
<b>Unwanted radiated emissions</b> - FCC part 15.209	YES	
<b>Field strength</b> - FCC part 15.225 a) to d)	YES	
<b>Frequency tolerance</b> - FCC part 15.225 e)	YES	

N.P.: Not Performed.

N.A.: Not Applicable.

- In emission:

Sample subject to the test complies with prescriptions of the standard(s) FCC Part 15 Radio part 15.225 according to limits specified in this test report.

**6. CONDUCTED EMISSIONS – SECTION 15.207, 15.107**

Standard: FCC part 15 Subpart C 15.107, 15.207

Test method: ANSI C63.4:2003

Test configuration:

Tested cable(s)	Measure with	E.U.T. height
115Vac/60Hz power supply	L.I.S.N.	80cm
115Vac/60Hz power supply on 50 Ohms load	L.I.S.N.	80cm

Frequency band	Tested cable(s)	Resolution bandwidth	Video bandwidth	Detection mode
150kHz-30MHz	115Vac/60Hz power supply	10KHz	30kHz	Peak / Average
150kHz-30MHz	115Vac/60Hz power supply on 50 Ohms load	10KHz	30kHz	Peak / Average

Integrated antenna is replaced by an equivalent 50Ohms load.

Test method deviation: No

Test equipment list:

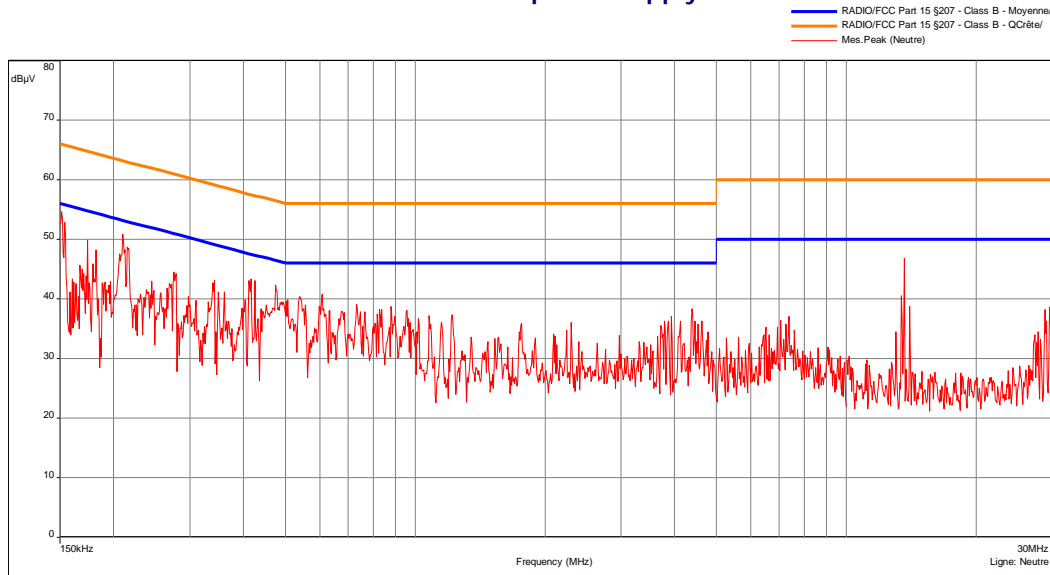
CATEGORY	BRAND	TYPE	N° EMITECH	DATE CAL.	DATE VAL
Cable	EMITECH	Current absorber sheath	9491	14/09/2012	14/11/2014
Cable		N-0.5m	3237	29/06/2012	29/08/2014
Cable		N-1m	2704	04/10/2012	04/12/2014
Cable		N-5m	2713	27/03/2013	27/05/2015
Ground choke	EMITECH	CISPR 16-2-1 : 2008	10071	#	#
Ground choke	EMITECH	CISPR 16-2-1 : 2008	10080	#	#
Limiter	Hewlett Packard	11947A	0239	22/10/2013	22/12/2015
LISN	PMM	L3-25	0821	04/11/2011	04/01/2014
Receiver	Agilent	E4440A	5824	22/10/2013	22/12/2015
Software	Nexio	BAT EMC	0000	#	#

#: Permanent validity

BAT-EMC software version: V3.6.0.32

Results: See Graph(s) hereafter. Limits on the graphs are average and quasi-peak limits (upper limit).



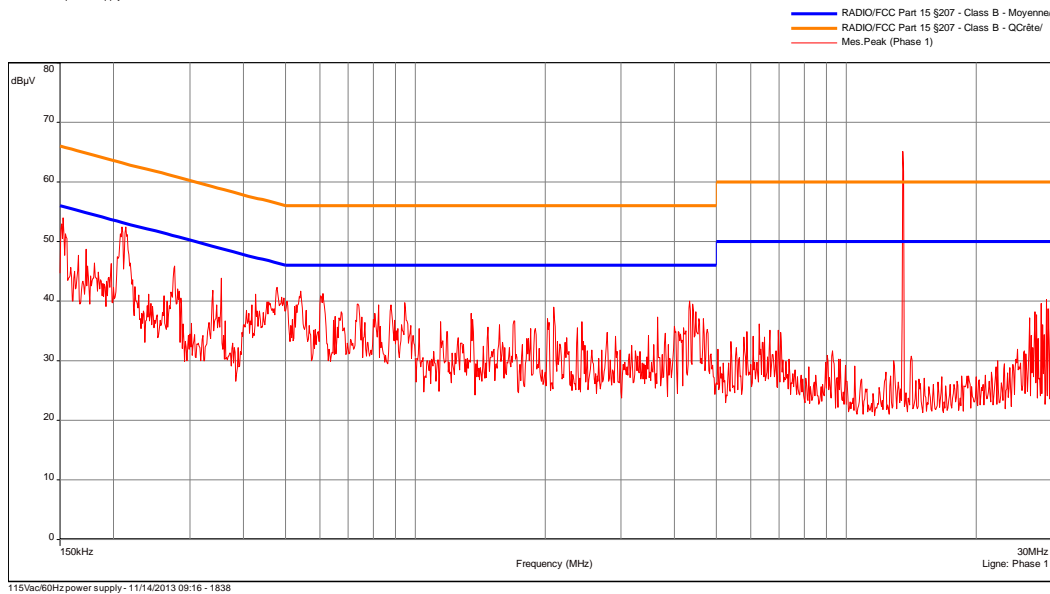
**Conducted voltage emission (measurement)**  
**115Vac/60Hz power supply**
**EMI1838**


Date: 14/11/2013 09:16:23

Technician: DM

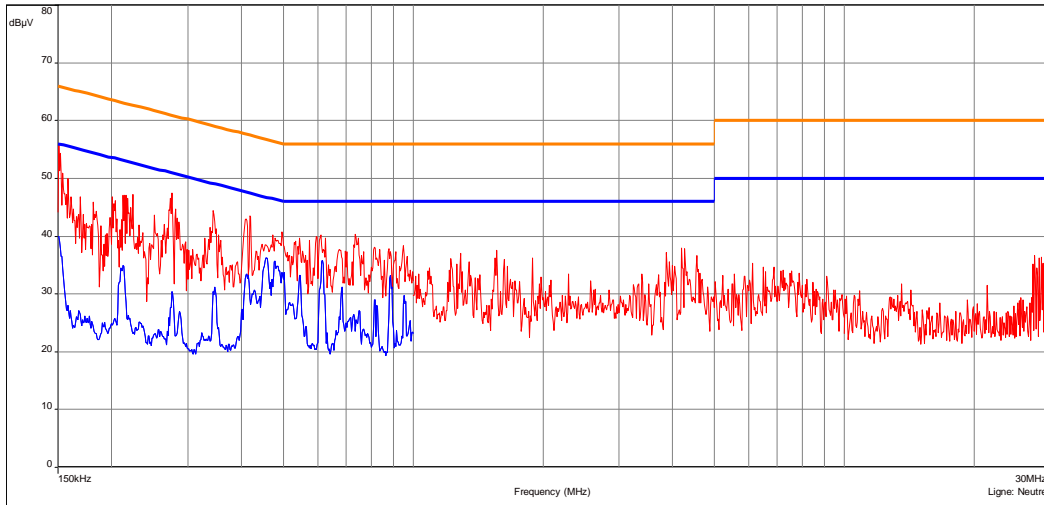
Class: B of the standard

 Detection:  
 Peak

 Modification(s) during test:  
 No


**Conducted voltage emission (measurement)**  
**115Vac/60Hz power supply on 50 Ohms load**
**EMI1839**

— RADIO/FCC Part 15 §207 - Class B - Moyenne/  
 — RADIO/FCC Part 15 §207 - Class B - QCrête/  
 — Mes.Peak (Neutre)  
 — Mes.Avg (Neutre)



Date: 14/11/2013 09:29:09

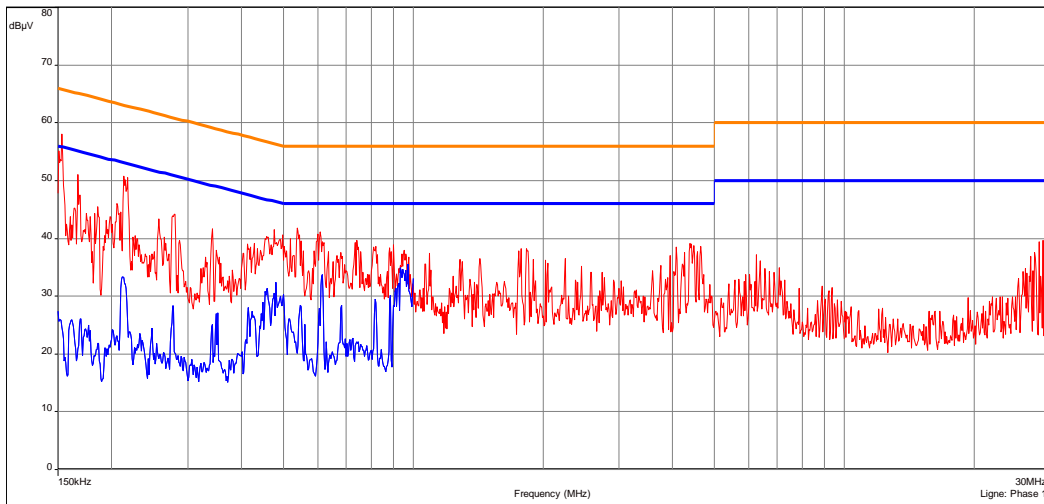
Technician: DM

Class: B of the standard

 Detection:  
 Peak and average

 Modification(s) during test:  
 No

— RADIO/FCC Part 15 §207 - Class B - Moyenne/  
 — RADIO/FCC Part 15 §207 - Class B - QCrête/  
 — Mes.Peak (Phase 1)  
 — Mes.Avg (Phase 1)



115Vac/60Hz power supply on 50 Ohms load - 11/14/2013 09:29 - 1839

**7. UNWANTED RADIATED EMISSIONS – SECTION 15.209, 15.109**

Standards: FCC part 15 Radio part 15.209

Test methods: FCC part 15.109, 15.209 and ANSI C63.4:2003

a) Pre-measurement in semi anechoic chamber:

Frequency band	Tested side	Resolution bandwidth	Video bandwidth	Detection mode	E.U.T. height
9kHz-150kHz	Front side	200Hz	1kHz	Peak	80cm
150kHz-30MHz	Front side	10kHz	30kHz	Peak	80cm
30MHz-1GHz	Front side	100kHz	300kHz	Peak	80cm
1GHz-10GHz	Front side	1MHz	3MHz	Peak	80cm

Measurements below 30MHz are done with a loop antenna as describe in the standard.  
 Measurements are done in semi anechoic chamber at 3m. E.U.T. is set on a wooden table.  
 E.U.T. measurements are maximized at 360° in max-hold peak detection.

Limits:

From 9 kHz to 30MHz: Limit indicated on the curves is calculated with 40 dB/decade extrapolation factor and 51.5 dB conversion factor.

From 30MHz to 1GHz: quasi peak limit provided is the limit given in 15.209.

Above 1GHz average limits in restricted bands §15.205 and general limits §15.209 are 54dBµV/m. However, the peak field strength of any emission shall not exceed the maximum permitted average limits specified above by more than 20dB under any condition of modulation.

Test method deviation:

From 9 kHz to 30MHz: measurements are made in peak detection instead of average mode in frequency band 9 kHz-500 kHz

- Measurements are given in dBµA/m instead of µV/m
- Measuring distance is 3 meters instead of 30 and 300 meters

Radiated emissions limits in this frequency band are specified at 30 or 300 meters. Measurement distance used during the test, subject of this report, is 3 meters. Then published limits come from a theoretical conversion using an extrapolation factor of 40dB / decade.

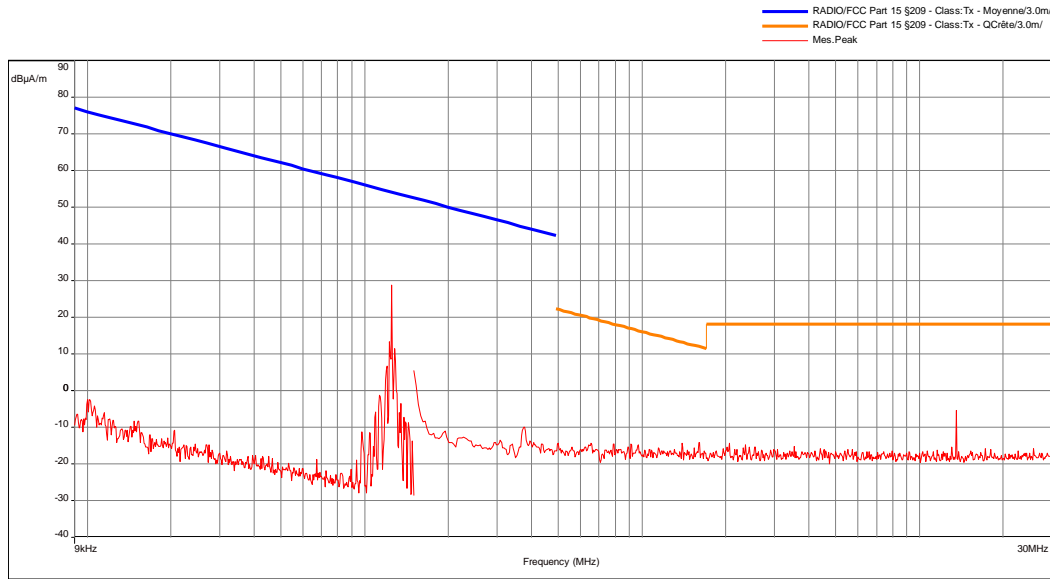
Measuring distance: 3 meters

Test equipment list:

CATEGORY	BRAND	TYPE	N° EMITECH	DATE CAL.	DATE VAL
Antenna	ETS LINDGREN	3117	8387	26/08/2011	26/10/2015
Antenna	Rohde & Schwarz	HFH2-Z2	5825	22/10/2012	22/12/2014
Antenna	Electro-Metrics	BIA-30HF	1107	03/03/2011	03/05/2015
Antenna	Rohde & Schwarz	HL223	1137	03/03/2011	03/05/2015
Cable	STORM MICROWAVE	N-1.5m	10263	04/06/2013	04/08/2015
Cable	C&C	N-1.5m	10553	27/09/2013	27/11/2015
Cable	Câbles & Connetiques	N-1.5m	4203	04/06/2013	04/08/2015
Cable		N-5m	2713	27/03/2013	27/05/2015
Cable	C&C	N-6m	5015	27/12/2012	27/02/2015
Preamplifier	IMPULSE	CA118-546ACN	9169	28/03/2013	28/05/2014
Receiver	Agilent	E4440A	5824	22/10/2013	22/12/2015
Software	Nexio	BAT EMC	0000	#	#

#: Permanent validity

*BAT-EMC software version: V3.6.0.32*
Results: See Graphs hereafter.

**Radiated magnetic field emission (measurement)**  
**Front side / antenna 0°**
**EMI1826**

*Date:* 04/10/2013 11:34:51

*Technician:* DM

*Class:* Tx of the standard

*Detection:*  
 Peak

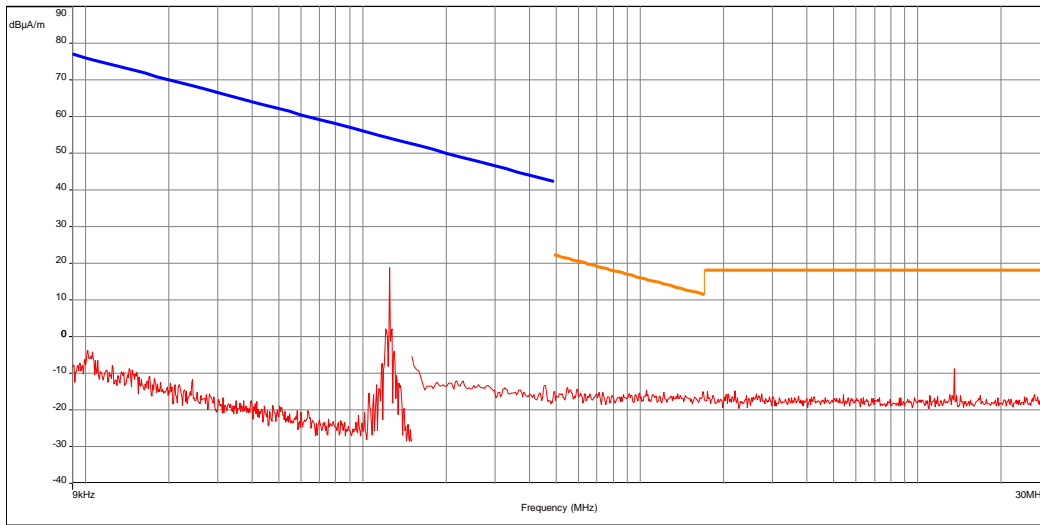
*Modification(s) during test:*  
 No

Limit indicated on this plot is calculated with 40 dB/decade extrapolation factor and 51.5dB conversion factor.

**Radiated magnetic field emission (measurement)**  
**Front side / antenna 45°**

**EMI1828**

— RADIO/FCC Part 15 §209 - Class:Tx - Moyenne/3.0m/  
 — RADIO/FCC Part 15 §209 - Class:Tx - QCRéte/3.0m/  
 — Mes.Peak



Date: 04/10/2013 11:30:50

Technician: DM

Class: Tx of the standard

Detection:  
Peak

Modification(s) during test:  
No

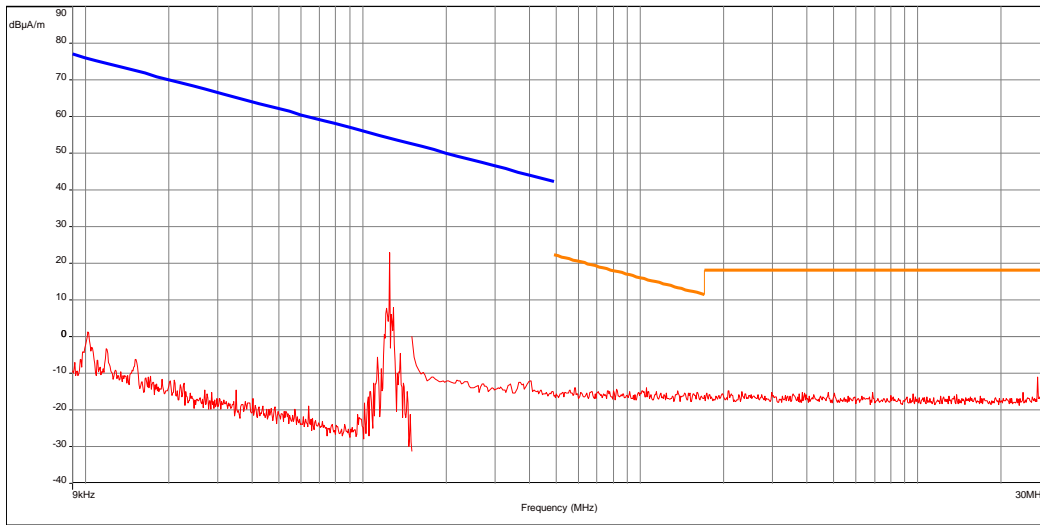
Front side / antenna 45° - 1004/2013 11:30 - 1828

Limit indicated on this plot is calculated with 40 dB/decade extrapolation factor and 51.5dB conversion factor.

**Radiated magnetic field emission (measurement)**  
**Front side / antenna 90°**

**EMI1830**

— RADIO/FCC Part 15 §209 - Class:Tx - Moyenne/3.0m/  
 — RADIO/FCC Part 15 §209 - Class:Tx - QCRéle/3.0m/  
 — Mes.Peak



Date: 04/10/2013 11:24:49

Technician: DM

Class: Tx of the standard

Detection:  
 Peak

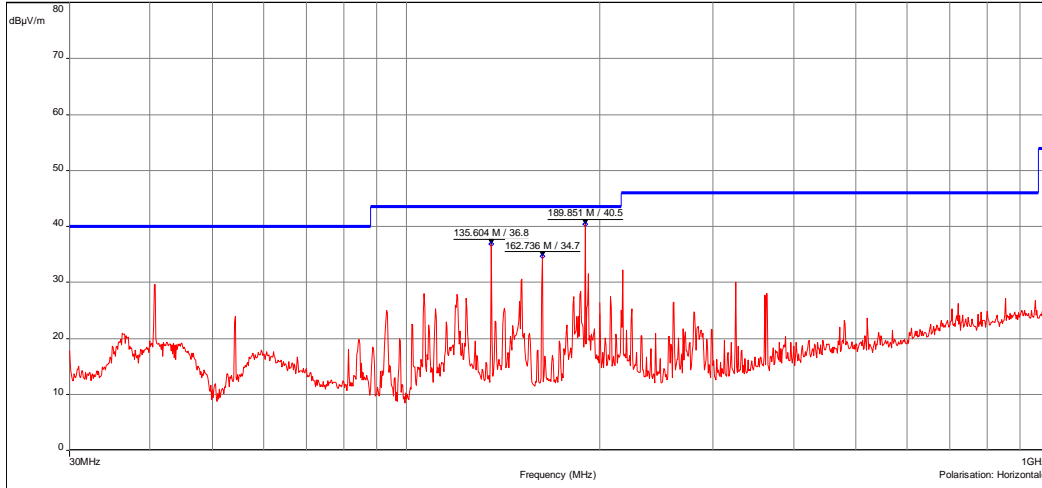
Modification(s) during test:  
 No

Limit indicated on this plot is calculated with 40 dB/decade extrapolation factor and 51.5dB conversion factor.

Radiated electric emission (measurement)  
Front side / 12Vdc power supply

EMI1840

- RADIO/FCC Part 15 §209 - Class:Tx - Moyenne/3.0m/
- RADIO/FCC Part 15 §209 - Class:Tx - QCrête/3.0m/
- RADIO/FCC Part 15 §209 - Class:Tx - Crête/3.0m/
- Mes. Peak (Horizontale)
- ◊ Peak/LimQ-Peak (Horizontale)



Front side / 12Vdc power supply - 11/14/2013 10:03 - 1840

Date: 14/11/2013 10:03:08

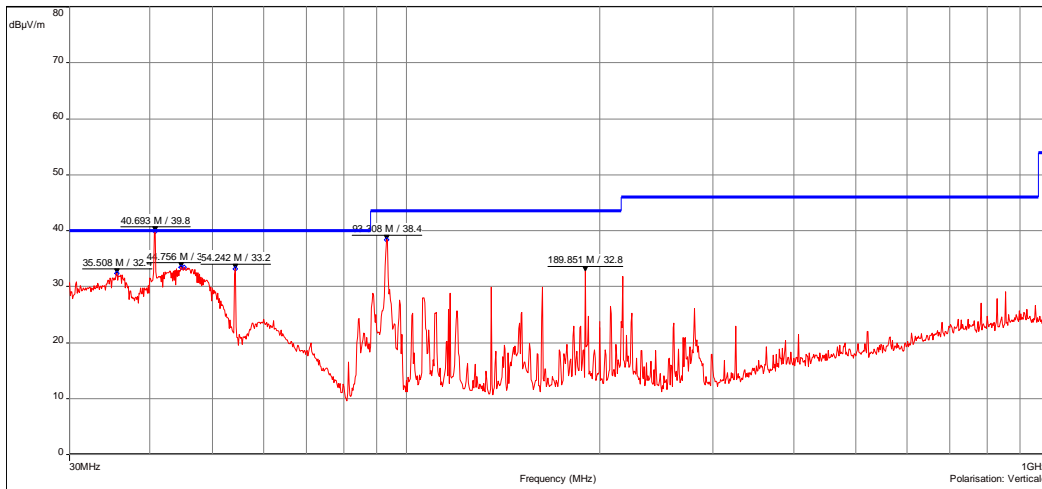
Technician: DM

Class: Tx of the standard

Detection:  
Peak

Modification(s) during test:  
No

- RADIO/FCC Part 15 §209 - Class:Tx - Moyenne/3.0m/
- RADIO/FCC Part 15 §209 - Class:Tx - QCrête/3.0m/
- RADIO/FCC Part 15 §209 - Class:Tx - Crête/3.0m/
- Mes. Peak (Verticale)
- ◊ Peak/LimQ-Peak (Verticale)



Front side / 12Vdc power supply - 11/14/2013 10:03 - 1840



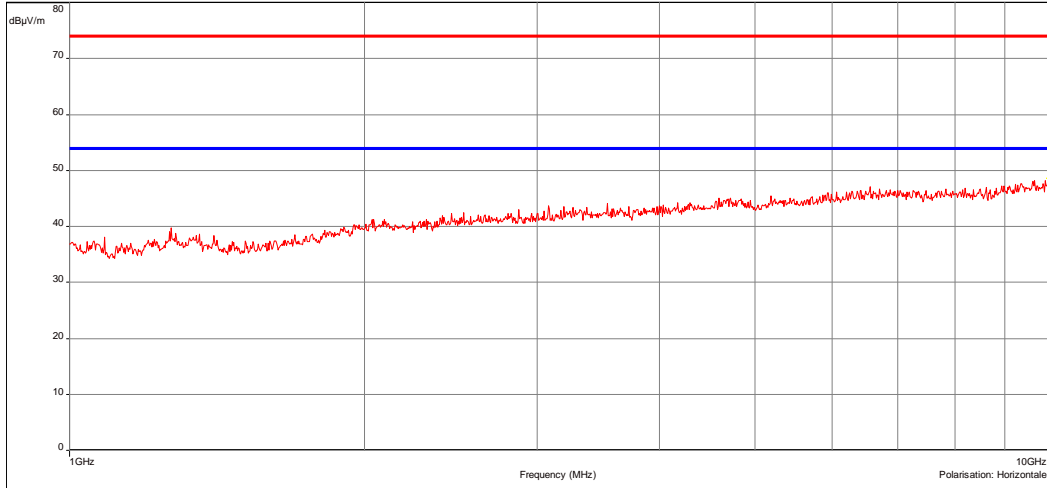
## Radiated electric emission (measurement)

### Front side / 12Vdc power supply

**EMI1832**

Frequency (MHz) : 1 GHz - 10 GHz (Analyzer mode)  
 Settings: RBW: 1 MHz, VBW: 3 MHz, Holding time: 1 ms/Pt, sweep count 2  
 Polarisation : Horizontale  
 Distance: 3 m

— RADIO/FCC Part 15 §209 - Class:Tx - Moyenne/3.0m/  
— RADIO/FCC Part 15 §209 - Class:Tx - QCrête/3.0m/  
— RADIO/FCC Part 15 §209 - Class:Tx - Crête/3.0m/  
— Mes. Peak (Horizontale)  
● Peak/LimAvg (Horizontale)



Date: 04/10/2013 11:53:12

Technician: DM

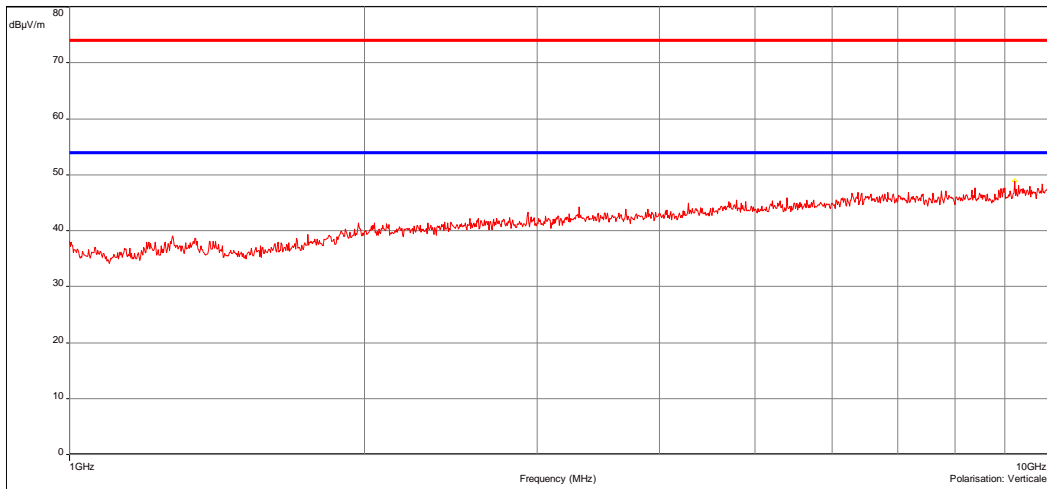
Class: Tx of the standard

 Detection:  
 Peak

 Modification(s) during test:  
 No

Front side / 12Vdc power supply - 10/04/2013 11:53 - 1832  
 Frequency (MHz) : 1 GHz - 10 GHz (Analyzer mode)  
 Settings: RBW: 1 MHz, VBW: 3 MHz, Holding time: 1 ms/Pt, sweep count 2  
 Polarisation : Verticale  
 Distance: 3 m

— RADIO/FCC Part 15 §209 - Class:Tx - Moyenne/3.0m/  
— RADIO/FCC Part 15 §209 - Class:Tx - QCrête/3.0m/  
— RADIO/FCC Part 15 §209 - Class:Tx - Crête/3.0m/  
— Mes. Peak (Verticale)  
● Peak/LimAvg (Verticale)



b) Measurement at 3 meters on open area test site:

Temperature (°C): 20

Humidity (%HR): 35

Pressure (hPa): 1003

Test configuration: For each measured frequencies, E.U.T. is set via a turntable in order to find the highest level. Test antenna is set between 1m and 4m in order to find the highest level in vertical and horizontal polarization. Only highest levels are recorded.

Frequency band	Initial position (0°)	Resolution bandwidth	Measuring distance	Detection mode	E.U.T. height
9kHz-150kHz	Front side	200Hz	3m	Peak	80cm
150kHz-30MHz	Front side	10kHz	3m	Peak	80cm
30MHz-1GHz	Front side	120kHz	3m	Quasi-peak	80cm
1GHz-10GHz	Front side	1MHz	3m	Average	80cm

Test method deviation: Between 9 kHz to 30MHz: measurements are given in dB $\mu$ A/m instead of dB $\mu$ V/m (conversion factor: 51.5dB) and measuring distance is 10 meters instead of 300m.

Test equipment list:

CATEGORY	BRAND	TYPE	N° EMITECH	CAL DATE	DUE DATE
Antenna	ETS LINDGREN	3117	5456	17/08/2012	17/10/2016
Antenna	Rohde & Schwarz	HL223	3126	03/03/2011	03/05/2015
Antenna	Rohde & Schwarz	HFH2-Z2	5825	22/10/2012	22/12/2014
Antenna	Electro-Metrics	BIA-30HF	1107	03/03/2011	03/05/2015
Antenna mast	INNCO	MA4000-EP-O	10261	#	#
Cable	Cables & Connetiques	N-1.5m	4203	04/06/2013	04/08/2015
Cable	Huber Sumner	N-14m	8146	04/06/2013	04/08/2015
Cable	Huber Sumner	N-20m	8385	04/06/2013	04/08/2015
Mast controller	INNCO	CO3000	10260	#	#
Open area test site	EMITECH	Salinelles	3482	04/03/2011	04/05/2014
Preamplifier	IMPULSE	CA118-546ACN	9169	28/03/2013	28/05/2014
Receiver	Agilent	E4440A	5824	22/10/2013	22/12/2015
Turntable	Heinrich Deisel	D4420	4038	#	#
Turntable controller	Heinrich Deisel	HD100	4036	#	#

#: Permanent validity

Results: See Boards hereafter.

Frequency (MHz)	Polarization	Azimut (degree)	Antenna Height (cm)	Measure (dB $\mu$ A/m)	Limit (dB $\mu$ A/m) (*)	Comments
0.125	Circular 0°	180	100	-2.64	33.24	C
0.125	Circular 45°	180	100	-4.13	33.24	C
0.125	Circular 90°	240	100	-4.00	33.24	C

C=Compliant

Carrier measurement at 10m: -2.64 dB $\mu$ A/m ( $\approx$  48.86dB $\mu$ V/m)

(\*) Using an extrapolation factor of 40 dB/decade (as described in section 15.31 (f)), the level at 300m is about -10.22dB $\mu$ V/m (0.308 $\mu$ V/m) for a limit at 19.2  $\mu$ V/m.

Frequency (MHz)	Polarization	Azimet (degree)	Antenna Height (cm)	Measure (dB $\mu$ V/m)	Limit (dB $\mu$ V/m)	Comments
135,61	Horizontal	90	235	39,36	43	C
162,74	Horizontal	99	197	34,61	43	C
189,86	Horizontal	95	160	41,34	43	C
35,51	Vertical	0	100	19,09	40	C
40,68	Vertical	44	100	36,21	40	C
44,25	Vertical	319	100	29,61	40	C
54,24	Vertical	180	100	29,37	40	C
189,86	Vertical	320	100	41,60	43	C
93,31	Vertical	0	100	33,88	43	C

C=Compliant

All other unwanted radiated spurious are at least 20 dB below specified limits

**8. OPERATION WITHIN THE BAND 13.110-14.010 MHZ – SECTION 15.225**
**a) Field strength**

**Standard:** FCC Part 15 Radio part 15.225 a) to d)

**Test method:** ANSI C63.4:2003

**Test configuration:**

Frequency band	Tested side	Resolution bandwidth	Video bandwidth	Detection mode	E.U.T. height
13.11MHz-14.01MHz	Front side / antenna 0	10kHz	30kHz	Peak	80cm
13.11MHz-14.01MHz	Front side / antenna 45	10kHz	30kHz	Peak	80cm
13.11MHz-14.01MHz	Front side / antenna 90	10kHz	30kHz	Peak	80cm

Measure is done with an antenna position of 0°, 90° and 45°.

**Test method deviation:** Measurements are given in dB $\mu$ A/m instead of dB $\mu$ V/m (conversion factor: 51.5dB). Final measuring distance is 10m instead of 30 m. Pre measurement distance is 3m.

**Test equipment list:**

CATEGORY	BRAND	TYPE	N° EMITECH	DATE CAL.	DATE VAL
Antenna	Rohde & Schwarz	HFH2-Z2	5825	22/10/2012	22/12/2014
Cable		N-1.5m	3621	04/06/2013	04/08/2015
Cable		N-5m	2716	11/02/2013	11/04/2015
Receiver	Agilent	E4440A	5824	24/08/2011	24/10/2013
Shielded enclosure	RAY PROOF	C.GS3	1123	#	#
Software	Nexio	BAT EMC	0000	#	#

#: Permanent validity

BAT-EMC software version: V3.6.0.32

**Results:** See Graph(s) of pre-measurements hereafter

Frequency (MHz)	Polarization	Azimut (degree)	Antenna Height (cm)	Measure (dB $\mu$ A/m)	Limit (dB $\mu$ A/m) (*)	Comments
13.56	Circular 0°	0	100	-16.04	51.58	C
13.56	Circular 45°	90	100	-15.33	51.58	C
13.56	Circular 90°	90	100	-13.10	51.58	C

C=Compliant

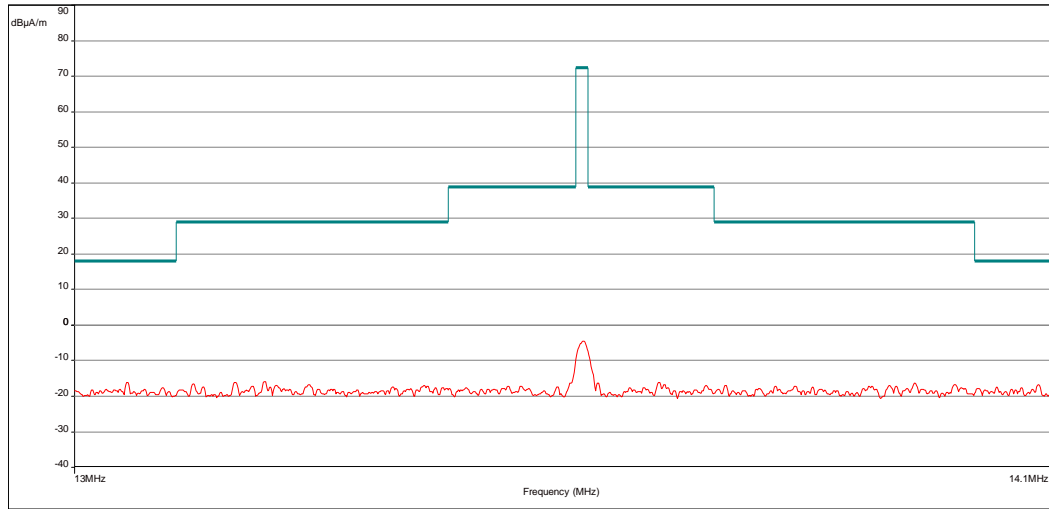
Carrier measurement at 10m: -13.10 dB $\mu$ A/m ( $\approx$  34.40dB $\mu$ V/m)

(\*) Using an extrapolation factor of 40 dB/decade (as described in section 15.31 (f)), the level at 30m is about 15.32dB $\mu$ V/m (5.83 $\mu$ V/m) for a limit at 15.848 mV/m.

**Radiated magnetic field emission (Pre measurement)**
**EMI1827**
**Front side / antenna 0° / 13.56MHz**

Frequency (MHz) : 13 MHz - 14.1 MHz (Analyzer mode)  
 Settings: RBW: 10 kHz, VBW: 30 kHz, Holding time: 1 ms/Pt, sweep count 1  
 Polarisation : Circulaire  
 Distance: 3 m

— RADIO/FCC Part 15 §225 - Class:Tx - QCrête/3.0m/  
 Mes. Peak

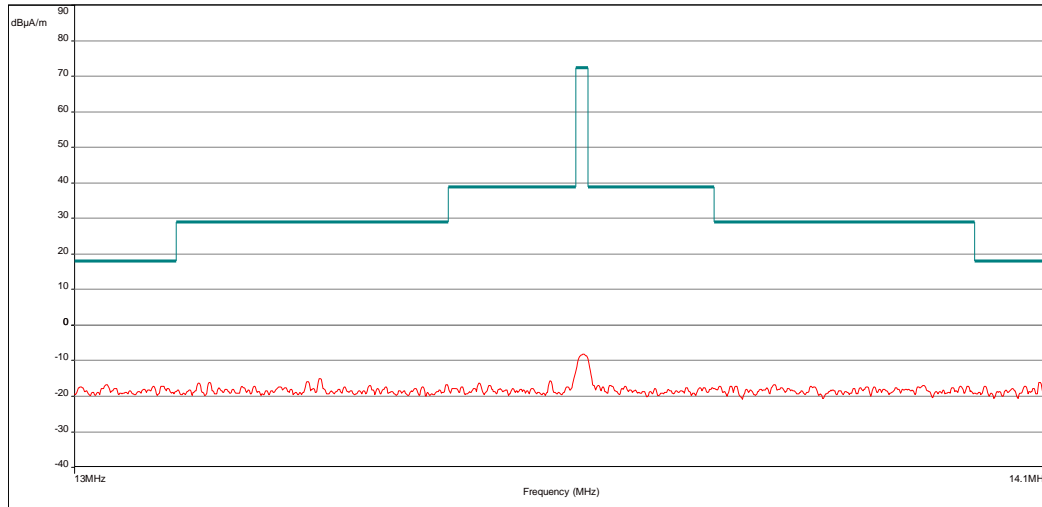

*Date: 04/10/2013 11:33:59*
*Technician: DM*
*Class: Tx of the standard*
*Detection:  
Peak*
*Modification(s) during test:  
No*

Limit indicated on this plot is calculated with 40 dB/decade extrapolation factor and 51.5dB conversion factor.

**Radiated magnetic field emission (Pre measurement)**
**EMI1829**
**Front side / antenna 45° / 13.56MHz**

Frequency (MHz) : 13 MHz - 14.1 MHz (Analyzer mode)  
 Settings: RBW: 10 kHz, VBW: 30 kHz, Holding time: 1 ms/Pt, sweep count 1  
 Polarisation : Circulaire  
 Distance: 3 m

RADIO/FCC Part 15 §225 - Class:Tx - QCrête/3.0m/  
 Mes. Peak



Front side / antenna 45° / 13.56MHz - 10/04/2013 11:29 - 1829

Date: 04/10/2013 11:29:57

Technician: DM

Class: Tx of the standard

 Detection:  
 Peak

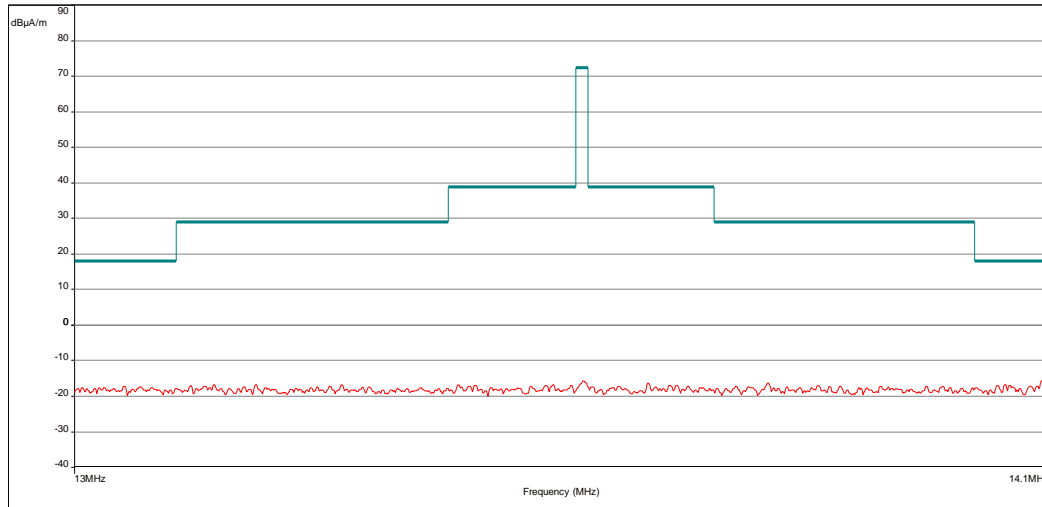
 Modification(s) during test:  
 No

Limit indicated on this plot is calculated with 40 dB/decade extrapolation factor and 51.5dB conversion factor.

**Radiated magnetic field emission (Pre measurement)**
**EMI1831**
**Front side / antenna 90° / 13.56MHz**

Frequency (MHz) : 13 MHz - 14.1 MHz (Analyzer mode)  
 Settings: RBW: 10 kHz, VBW: 30 kHz, Holding time: 1 ms/Pt, sweep count 1  
 Polarisation : Circulaire  
 Distance: 3 m

RADIO/FCC Part 15 §225 - Class:Tx - QCrête/3.0m/  
 Mes. Peak



Front side / antenna 90° / 13.56MHz - 10/04/2013 11:27 - 1831

Date: 04/10/2013 11:27:59

Technician: DM

Class: Tx of the standard

Detection:  
Peak

Modification(s) during test:  
No

Limit indicated on this plot is calculated with 40 dB/decade extrapolation factor and 51.5dB conversion factor.

**9. FREQUENCY TOLERANCE – SECTION 15.225**

Standard: FCC Part 15 Radio part 15.225

Test method: FCC Part 15 Radio part 15.225 e)

Test configuration: A near field probe detects field near equipment (relative measurement).

Resolutions:

Frequency	Resolution bandwidth	Video bandwidth
13.56MHz	3Hz	10Hz

Test method deviation: E.U.T. is powered by internal batteries which cannot be submitted by external power supply (smart batteries); due to this E.U.T. configuration no power supply variations were done.

Test equipment list:

CATEGORY	BRAND	TYPE	N° EMITECH	CAL DATE	DUE DATE
Antenna	EMITECH	3.5 cm	4653	#	#
Climatic enclosure	Secasi	SM600C	1670	20/01/2012	20/03/2014
Multimeter	Agilent	U1252A	6138	11/03/2011	16/10/2013
Power supply	KIKUSUI	PCR2000L	0800	#	#
Receiver	Agilent	E4440A	5824	24/08/2011	24/10/2013

#: Permanent validity

Standard limits: +/- 0.01% of the operating frequency

Results: See Board(s) below

E.U.T. operating mode: with modulation

	Temperature	Power supply (Vdc)	Measured Frequency (MHz)	Frequency tolerance (%)	Limit (kHz)
Normal condition	20°C Humidity 32%	12	13,560983	0,00000%	+/-0.01%
		10,2	13,560983	0,00000%	
		13,8	13,560983	0,00000%	
Extremes conditions	-20°C	12	13,560956	0,00020%	
		10,2	13,560956	0,00020%	
		13,8	13,560956	0,00020%	
	+50°C	12	13,560943	0,00029%	
		10,2	13,560943	0,00029%	
		13,8	13,560943	0,00029%	

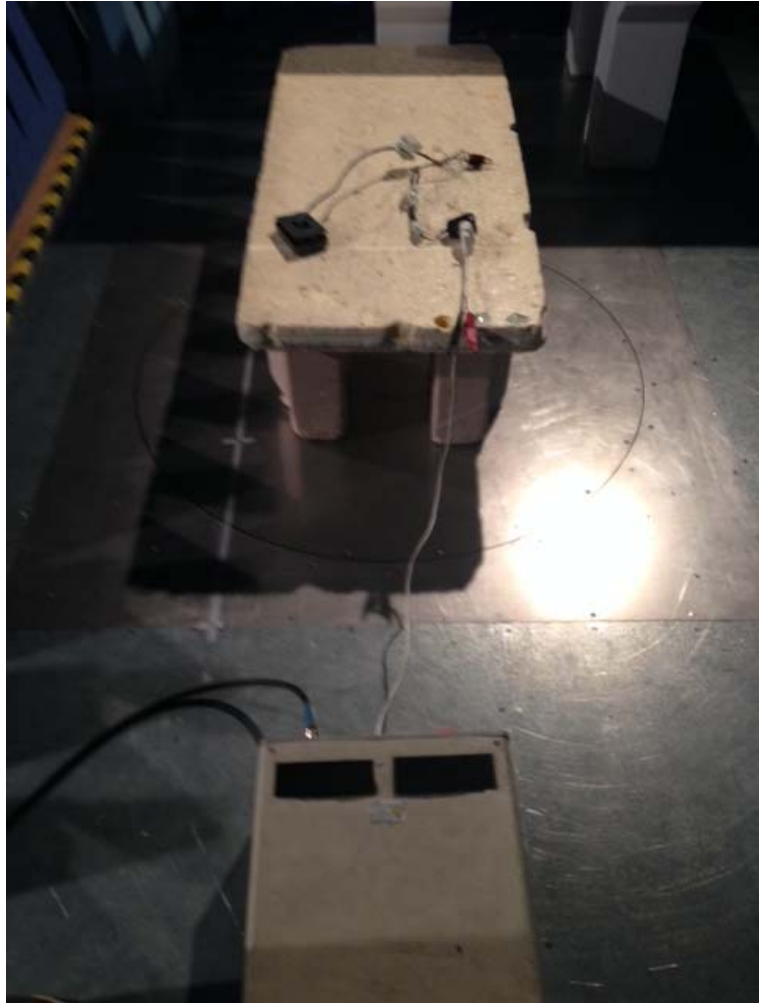
□□□ End of report – 1 annex to be forwarded □□□



# ANNEX: PHOTOGRAPH(S)

PE3LR-S

Conducted emissions



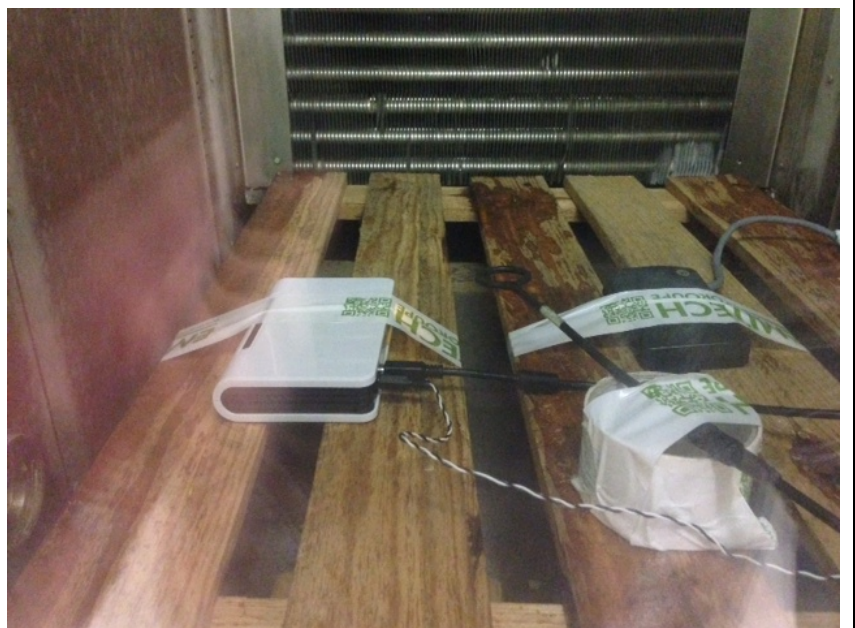
Radiated measurement on open area test site



Radiated measurement on open  
area test site (carriers  
measurements)



Frequency tolerance (climatic  
enclosure)



Ac power supply used for 115Vac  
power supply measurement

