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FCC Registration Number: 0020356952 (FRN) Test Firm Registration Number: 171131
IC Company Number: 9545A

Matériel testé : *Equipment under test*:	**PL LV2** **(Plastron V2)**

Constructeur:
Manufacturer: **LASER GAME EQUIPEMENT**
21, rue Colonel Dumont
3800 Grenoble

Rapport délivré à :
Issued to: **LASER GAME EQUIPEMENT**
21, rue Colonel Dumont
3800 Grenoble

Référence de la proposition : 022014-20933
Proposal number:

Date de l'essai : March 3rd to 18th, 2014
Date of test:

Objectif des essais : Qualification FCC suivant les normes :
Test purpose: *FCC qualification according to standards:*
CFR 47, Part 15C (chapter 15.231)
Industry Canada RSS-210, Issue 1 (Annex 1.1)

FCC ID: 2ABZ40002
IC: 11833A-0002

Lieu du test: SMEE CE-Mesures
Test location: 38 VOIRON - France

Test réalisé par : Laurent CHAPUS – Jérémy BLANCHER
Test realized by:

Conclusion : L'équipement satisfait aux prescriptions des normes citées en référence.
Conclusion: *The appliance complies with requirements of above mentioned standards.*

Ed.	Date	Modifications / Pages	Written by: Visa	Approved by: Visa
1	April 25th, 2014	Initial Edition	Jérémy Blancher	Laurent Chapus

SUMMARY

1. Test program

- **References**

FCC CFR 47, PART 15, Subpart B and C
ANSI C63.4 (2009). 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.
Chapter 15.231 of Subpart C (Periodic operation in the band 40.66–40.70 MHz and above 70 MHz.).

Industry Canada RSS-GEN (Issue 3/2010) - General Requirements and Information for the Certification of Radio Apparatus
Industry Canada RSS-210 (Issue 8/2010) - Momentarily Operated Devices and Remote Control

- **Test Results**

TEST	Paragraph number (FCC Part 15.231 / IC RSS-210)	Spec. (FCC Part 15.231)	RESULTS (comments)
Conducted emissions test	15.107 / 15.207 (a) RSS GEN 7.2.4	Table 15.207 (a) Table 4	**PASS**
De-activation time	15.231 (a) 1) RSS-210 A1.1.1 (a)	Automatically deactivate the transmitter within not more than 5 seconds of being released.	**PASS**
Periodic operations at regular intervals	15.231 (a) 3) RSS-210 A1.1.2 (c)	Maximum duration allowed 2s per hour	N/A (No such operation)
Field strength of fundamental	15.231 (b) RSS-210 A1.1.2 (1)	10964µV/m max at 433MHz (80.8dBµV/m, Average) (100.8dBµV/m, Peak)	**PASS**
Spurious emissions	15.231 (b) RSS-210 A1.1.2 (3)	1096.4µV/m max for fundamental at 433MHz (60.8dBµV/m, Average) (80.8dBµV/m, Peak)	**PASS**
Unintentional radiations	15.205 / 15.209 RSS-Gen 4.10 / RSS-210 A1.1.2 (3)	Measure at 300m 9-490kHz: 2400µV/m/F(kHz) Measure at 30m 0.490-1.705: 24000µV/m/F(kHz) 1.705-30MHz: 30µV/m Measure at 3m 30MHz-88MHz : 40 dBµV/m 88MHz-216MHz : 43.5 dBµV/m 216MHz-960MHz : 46.0 dBµV/m Above 960MHz : 54.0 dBµV/m	**PASS**
Maximum bandwidth	15.231 (c) RSS-210 A1.1.3	Shall be lower than 0.25% of center frequency (-20dB bandwidth for FCC section / 99% bandwidth for RSS section)	**PASS**

PASS: EUT complies with standard's requirement
FAIL: EUT does not comply with standard's requirement

- **General conclusion:**

Measures and tests performed on the sample of the product Plastron V2 (Model PL LV2), in configuration and description presented in this test report, show compliance with standards FCC CFR 47, PART 15, Subpart C and Industry Canada RSS-Gen & RSS-210.

2. Equipment Under Test (EUT)

Nom /
Identification

PL LV2
(Plastron V2)

Ref N°: 40

Auxiliaires /
Auxiliaries

Command Box (LGE equipment, radio communication)

Entrées-Sorties /
Input / Output

	Câbles pour essai / *Cables for test*	Blindé / *Shielded*	Prévu pour >3m / *Intended for >3m*
AC Main cable	1.50m, 2wires	No	-

Version programme /
Firmware version

CMDBox 3.01m

Alimentation /
Power supply

- 6V from battery in normal use
- 100-240V/50-60Hz via power adapter in charge
(NiCd/NiMH charger, MASCOTT, type 2115)

Mode de fonctionnement /
Running mode

The tested sample is set in following modes:
- Periodic transmition mode with modulation
- Continuous transmit mode with modulation (Test mode)
- Receive mode
- Charging mode

Information sur l'équipement /
Equipment information

- Center frequency: 433.93MHz (Transmit)
- Wideband equipment
- Antenna type: Single wire antenna soldered on PCB
- Modulation: FSK +/-50kHz
- Transmit time:16ms every 100ms (automatic operation, activated by control signal, as declared by manufacturer)
- No periodic transmissions at regular intervals
- Battery type NiMH 6V (5 cells)

3. Test conditions

Relative Humidity : 55%
Temperature : 20°C

Power supply voltage:
Equipment under test: 6Vdc from battery
All relevant tests are performed with a full charged battery (except for conducted emission)

4. Modifications of the equipment under test

No modification applied to the tested equipment during tests.

5. Conducted Emission Measurement

TEST: Limits for conducted disturbance 150kHz – 30MHz	**Verdict**
Method: The LISN is placed 0,8 m from the boundary of the unit under test and bonded to a ground reference plane. This distance was between the closest points of the AMN and the EUT. All other units of the EUT and associated equipment were at least 0,8 m from the AMN. All power was connected to the system through Artificial Mains Network (AMN). Conducted voltage measurements on lines were made at the output of the LISN. The LISN (measure) is 50Ω / 50µH. The EUT is 80cm above the ground reference plane and 40cm from the vertical ground plane. The AC power cable is 1m length.	**Pass**

Laboratory Parameters:	Required prior to the test	During the test
Ambient Temperature	10 to 40 °C	20°C
Relative Humidity	10 to 90 %	55%
Fully configured sample scanned over the following frequency range	Frequency range on each side of line	Measurement Point
	150kHz to 30MHz	AC input port (110V)
Running mode	Battery charging	

Limits for AC power port

Frequency (MHz)	Limit dB (µV)			
	Quasi-Peak	Result	Average	Result
0.15 – 0.50	66 \ 56	**Pass**	56 \ 46	**Pass**
0.50 – 5	56	**Pass**	46	**Pass**
5 – 30	60	**Pass**	50	**Pass**

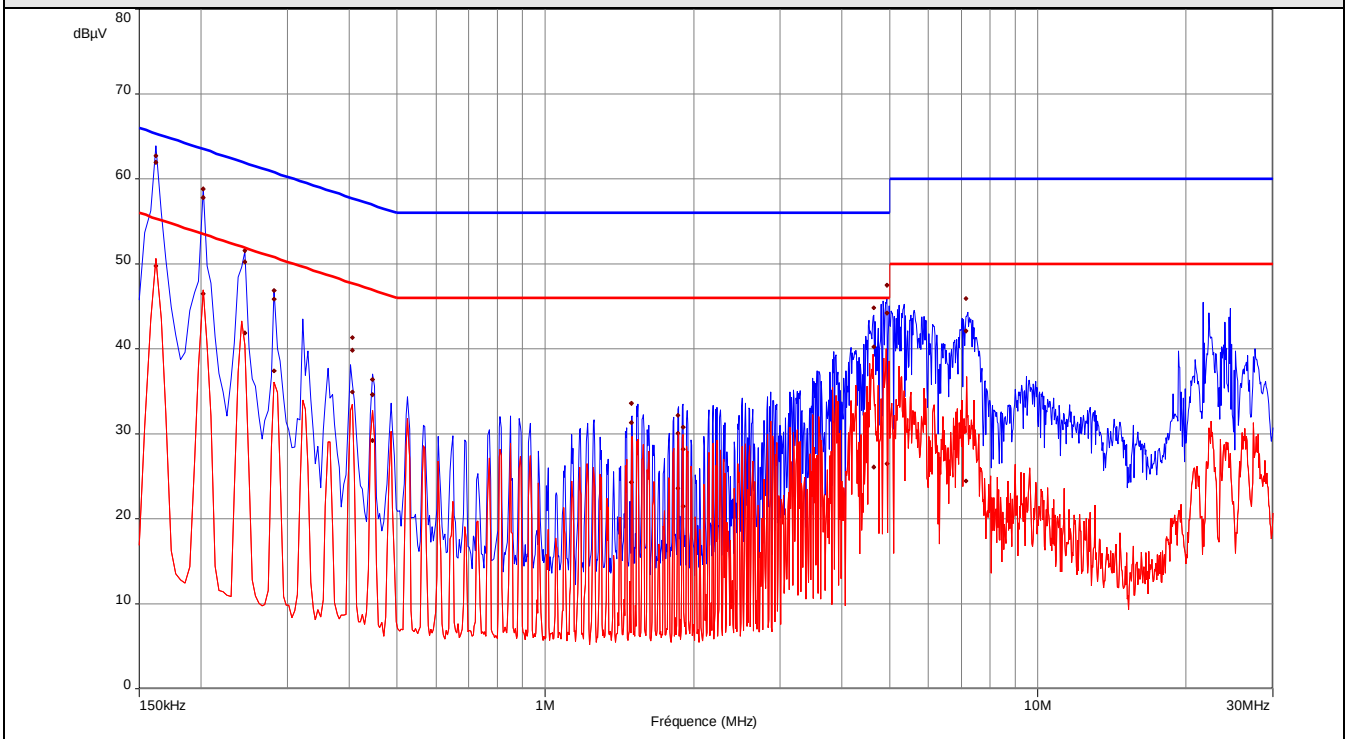
Supplementary information:
Test location: SMEE – CE Mesures / Test date: March 3rd, 2014
Power supply voltage: 110V / 60Hz

Test Equipment Used					
Description	Manufacturer	Model	Identifier	Cal. Date	Cal. Due
Attenuator	SMEE	ATT#1	ATT-101-004	2014/3	2015/3
Cable RF	Div	2m / BNC	CAB-101-005	2014/3	2015/3
LISN (50Ω / 50µH)	AFJ	LS16C	RSI-101-001	2014/3	2015/3
LISN (50Ω / 50µH)	AFJ	LS16C	RSI-101-002	2014/3	2015/3
Reference comb gen.	SMEE	EMC-250K	REF-111-001	-	-
Measuring receiver	Rohde & Schwarz	ESL3	REC-101-001	2012/6	2014/6

Tabulated Results for Mains Terminal Disturbance Voltage on AC port								
FREQ (MHz)	**Meas. PK** (dBµV)	**Mes. QP** (dBµV)	**LIMIT QP** (dBµV)	**Margin QP** (dB)	**Mes. AV** (dBµV)	**LIMIT AV** (dBµV)	**Margin AV** (dB)	Line
0.162	62.8	62.0	65.4	**-3.4**	49.8	55.4	**-5.6**	L1
0.201	58.9	57.9	63.5	**-5.7**	46.5	53.5	**-7.1**	L1
0.244	51.5	50.3	61.9	**-11.6**	41.9	51.9	**-10.0**	L1
0.283	46.9	45.9	60.8	**-14.9**	37.4	50.8	**-13.4**	L1
0.404	41.3	39.8	57.8	**-18.0**	34.9	47.8	**-12.9**	L1
0.446	36.4	34.6	57.0	**-22.4**	29.2	47.0	**-17.8**	L1
1.500	33.6	31.3	56.0	**-24.7**	24.3	46.0	**-21.7**	L1
1.864	32.2	30.1	56.0	**-25.9**	23.6	46.0	**-22.4**	L1
1.904	30.8	28.2	56.0	**-27.8**	21.5	46.0	**-24.5**	L1
4.648	44.9	40.2	56.0	**-15.8**	26.1	46.0	**-19.9**	L1
4.945	47.5	44.2	56.0	**-11.8**	26.5	46.0	**-19.5**	L1
7.142	46.0	42.1	60.0	**-17.9**	24.4	50.0	**-25.6**	L1
0.163	61.7	60.3	65.4	**-5.1**	49.4	55.4	**-6.0**	Neutral
0.201	58.8	58.1	63.5	**-5.5**	48.0	53.5	**-5.5**	Neutral
0.241	51.5	50.5	62.0	**-11.5**	43.1	52.0	**-9.0**	Neutral
0.284	46.5	45.4	60.6	**-15.2**	38.5	50.6	**-12.2**	Neutral
0.324	41.9	40.8	59.7	**-18.8**	35.1	49.7	**-14.5**	Neutral
0.364	39.6	37.7	58.7	**-21.0**	34.2	48.7	**-14.5**	Neutral
0.402	41.1	39.3	57.8	**-18.5**	34.1	47.8	**-13.7**	Neutral
0.485	36.8	35.3	56.2	**-20.9**	30.3	46.2	**-15.9**	Neutral
0.526	35.6	33.9	56.0	**-22.1**	28.7	46.0	**-17.4**	Neutral
1.169	36.0	34.4	56.0	**-21.7**	27.1	46.0	**-18.9**	Neutral
4.494	44.7	41.8	56.0	**-14.2**	28.9	46.0	**-17.1**	Neutral
4.816	48.2	45.4	56.0	**-10.6**	32.1	46.0	**-13.9**	Neutral

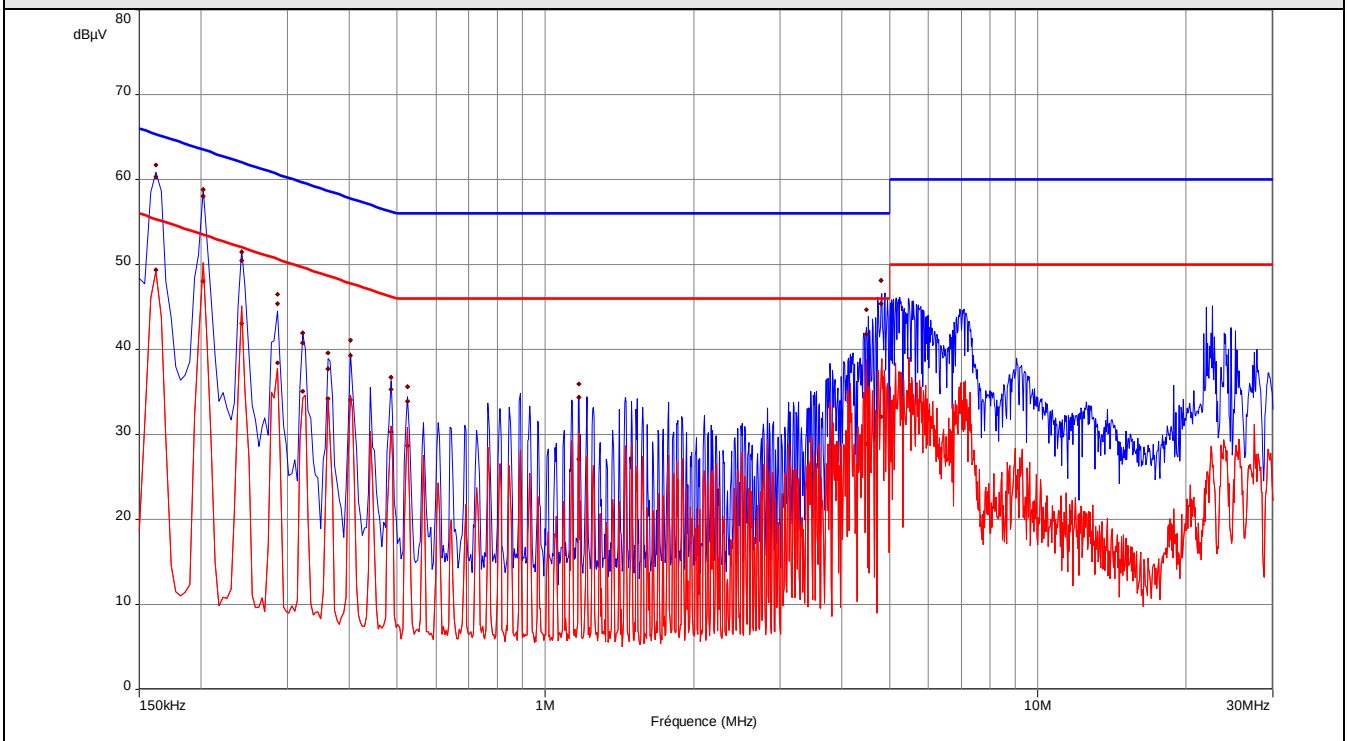
Frequency band investigated:	150kHz-30MHz
RBW:	9kHz
Voltage:	110V / 60Hz
Limit:	15.207 a)
Final measurement detector:	Quasi-Peak and Average
Wide Measurement Uncertainty:	± 5dB (k=2)

Graphical representation of Conducted Disturbance Measurement (Peak and Average detection)
AC port, Line L1



----: Peak | ----: Average

Graphical representation of Conducted Disturbance Measurement (Peak and Average detection)
AC port, Neutral (Wireless mode)



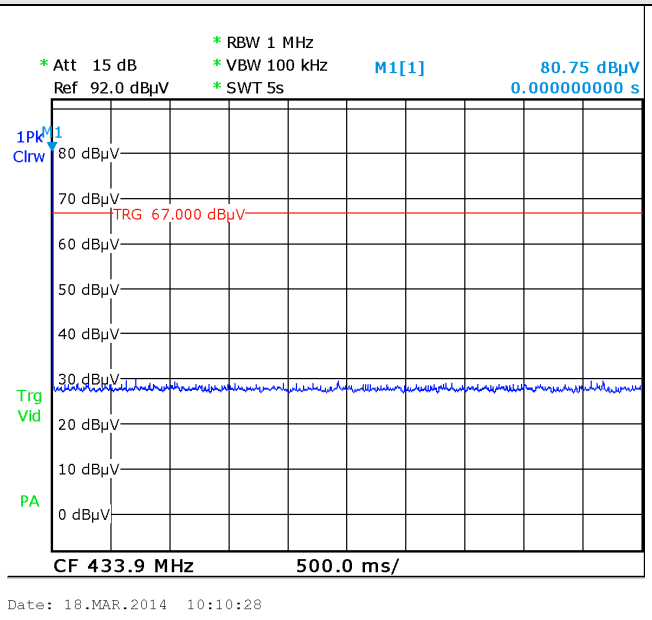
----: Peak | ----: Average

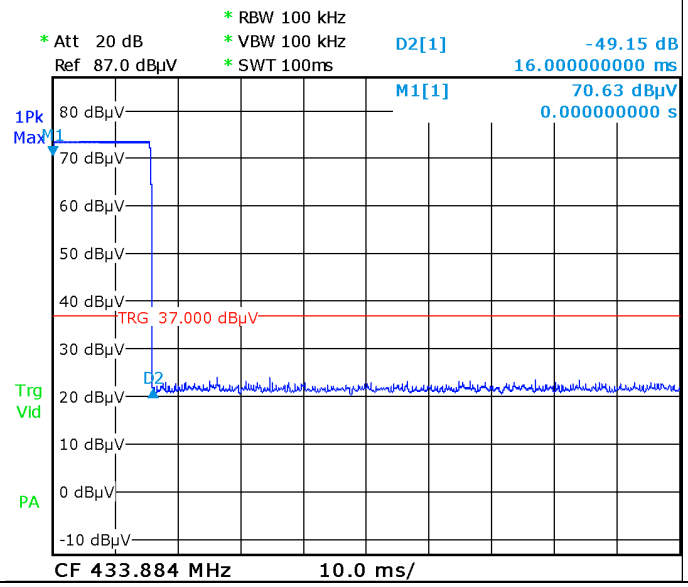
6. De-activation time / Periodic operations at regular intervals

TEST: De-activate time and Periodic operations at regular intervals	**Verdict**
Method: Measurements were performed with peak detector using a 100kHz RBW. The VBW is set to 100kHz. The spectrum analyzer is connected via suitable means (GTEM cell) to the RF signal of the tested equipment. The tested equipment is set to transmit operation. Measurement is done with a zero span at fundamental frequency. The transmission duration was measured and recorded Limits: A manually operated transmitter shall employ a switch that will automatically deactivate the transmitter within not more than 5 seconds of being released. A transmitter activated automatically shall cease transmission within 5 seconds after activation.	**Pass**
Supplementary information: Test location: SMEE – CE Mesures / Test date: March 18th, 2014 Power supply voltage: 6V from battery (Full charged)	

Test Equipment Used					
Description	Manufacturer	Model	Identifier	Cal. Date	Cal. Due
GTEM cell	TESEQ	750	GTE-101-001	2014/3	2015/3
Measuring Rec.	Rohde&Schwarz	ESL3	REC-101-001	2012/6	2014/6

Graphical representation of transmission duration



Graphical representation for transmission duration


Tabulated Results for transmission duration			
FREQ	**Duration of pulse**	**Limit**	**Result**
(MHz)	(s)		
433.93	0.016	Shall be < 5s	PASS

7. Field strength of fundamental

TEST: Field strength of fundamental			**Verdict**
Method: Measurements were made in a 3-meter Open Area Test Site (OATS) that complies to CISPR 16 and ANSI C63.4 requirements. Preliminary (peak) measurements were performed at an antenna to EUT separation distance of 3 meter. The EUT was rotated 360° about its azimuth with the receive antenna located at various heights in horizontal and vertical polarities. Final measurements were then performed by rotating the EUT 360° and adjusting the receive antenna height from 1 to 4 m. All frequencies were investigated in both horizontal and vertical antenna polarity, where applicable. EUT is placed 80cm above the ground reference plane. A pre-scan frequency identification of the EUT has been performed in a GTEM cell. The measured radiated field of the EUT is correlated to the corresponding measurement distance. The algorithm used for calculation is 3 axes measurement. The pre-characterization graphs are obtained in PEAK detection.			**Pass**
Laboratory Parameters:	Required prior to the test	During the test	
Ambient Temperature	10 to 40 °C	20°C	
Relative Humidity	10 to 90 %	55%	
Fully configured sample scanned over the following frequency range	Frequency range on each side of line	Measurement Point	
	9kHz – 5GHz	3 m measurement distance	
Running mode	Continuous Transmission mode		

Limits – FCC Part 15.231 / RSS-210 Iss8

Frequency (MHz)	Limit (dBµV/m)		
Fundamental frequency (MHz)	µV/meter	dBµV/m	Results
40.66 – 40.70	2250	67.04	PASS
70 – 130	1250	61.94	PASS
130 – 174	1250 to 3750	61.94 to 71.48	PASS
174 – 260	3750	71.48	PASS
260 – 470	3750 to 12500	71.48 to 81.94	PASS
Above 470	12500	81.94	PASS

Supplementary information:
Test location: SMEE – CE Mesures / Test date: March 17th, 2014
Power supply voltage: 6V from battery (Full charge)

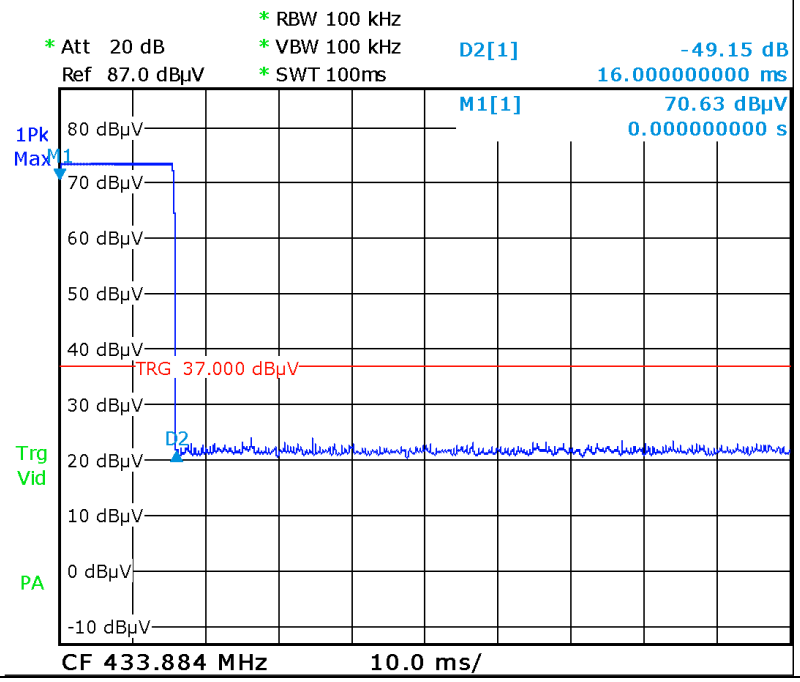
Notes:
(1) Where F is the frequency in MHz, the formula for calculating the maximum permitted fundamental field strengths are as follows:
for the band 130-174 MHz, uV/m at 3 meters = 56.81818(F)-6136.3636;
for the band 260-470 MHz, uV/m at 3 meters = 41.6667(F)- 7083.3333.
(2): The above field strength limits are specified at a distance of 3meters. The tighter limits apply at the band edges.
(3) At 433MHz, the limit is 10964.8µV/m (80.8dBµV/m). Intentional radiators shall demonstrate compliance with the limits on the field strength of emissions, as shown in the above table, based on the average value of the measured emissions. A peak limit shall be applied 20dB above the average limit.

Test Equipment Used					
Description	Manufacturer	Model	Identifier	Cal. Date	Cal. Due
Log-periodic antenna	TDK	PLP3003	ANT-101-001	2013/5	2014/5
RF cable	Div	2m	CAB-101-011	2014/3	2015/3
RF cable	Div	OATS/25m	CAB-101-017	2014/3	2015/3
GTEM cell	TESEQ	750	GTE-101-001	2014/3	2015/3
OATS	Div	3 / 10m	SIT-101-001	2013/5	2014/5
Antenna mast	Innco- Systems	MA4000EP	MAT-101-001	-	-
Turntable	Innco- Systems	DS1200S	PLA-101-001	-	-
Measuring Rec	Rohde&Schwarz	ESL3	REC-101-001	2012/6	2014/6

Tabulated Results for Radiated Field Strength of fundamental OATS measurement 3m									
Test Frequency (MHz)	Meter Reading dB(µV)	Detector (Pk/QP/Av)	Polarity (V/H)	Azimuth (Degrees)	Antenna Height (cm)	Total Factor (dB)	Level dB(µV/m)	Limit dB(µV/m)	Margin (dB)
433,919	73,5	Pk	V	360	100	20,5	94,0	100.8	**-6,8**
433,919	57,6	Av	V	360	100	20,5	78,1	80.8	**-2,7**

Supplementary information:
Frequency list measured on the Open Area Test Site has been created with pre-scan results.
Worst case results for 3 axes position.
Equipment transmits continuously.

RBW:	120kHz
Measurement distance:	3m
Limit:	15.231
Wide Measurement Uncertainty:	± 5.2dB (k=2)
Field Strength Calculation:	The field strength is calculated by adding the Antenna Factor and Cable Factor, and subtracting the Amplifier Gain (if any) from the measured reading. The basic equation is as follow: FS = RA + AF + CF – AG Where FS = Field Strength (Level dBµV/m) RA = Receiver Amplitude (Meter reading dBµV) AF = Antenna Factor CF = Cable Factor AG = Amplifier Gain Total factor (dB) is AF + CF – AG Margin value = Emission level – Limit value (1): The average value of fundamental frequency emission is: Average = Peak value + 20log(Duty Cycle) Where the duty factor (DC) is calculated from following formula: DC = Tx ON on a period of 100ms (16/100ms) 20log(DC)=-15.9dB

Graphical representation for Duty Cycle corrector factor

Pulse width : 16ms (Max value) Number of pulse within 100ms: 1 Duty cycle average factor = 20log(1x16/100)= -15.9dB

8. Spurious Emissions

TEST: Field strength of spurious emission			**Verdict**
Method: Measurements were made in a 3-meter Open Area Test Site (OATS) that complies to CISPR 16 and ANSI C63.4 requirements. Preliminary (peak) measurements were performed at an antenna to EUT separation distance of 3 meter. The EUT was rotated 360° about its azimuth with the receive antenna located at various heights in horizontal and vertical polarities. Final measurements were then performed by rotating the EUT 360° and adjusting the receive antenna height from 1 to 4 m. All frequencies were investigated in both horizontal and vertical antenna polarity, where applicable. EUT is placed 80cm above the ground reference plane. A pre-scan frequency identification of the EUT has been performed in a GTEM cell. The measured radiated field of the EUT is correlated to the corresponding measurement distance. The algorithm used for calculation is 3 axes measurement. The pre-characterization graphs are obtained in PEAK detection.			**Pass**
Laboratory Parameters:	Required prior to the test		During the test
Ambient Temperature	10 to 40 °C		20°C
Relative Humidity	10 to 90 %		55%
Fully configured sample scanned over the following frequency range	Frequency range on each side of line		Measurement Point
	9kHz – 25GHz		3 m measurement distance
Running mode	Transmission mode / Receive mode / Battery charging		
Limits – FCC Part 15.231 / RSS-210 Iss 8			
Frequency (MHz)	Limit (dBµV/m)		
Fundamental frequency (MHz)	µV/meter	dBµV/m	Results
40.66 – 40.70	225	47.04	PASS
70 – 130	125	41.94	PASS
130 – 174	125 to 375	41.94 to 51.48	PASS
174 – 260	375	51.48	PASS
260 – 470	375 to 1250	51.48 to 61.94	PASS
Above 470	1250	61.94	PASS
Supplementary information: Test location: SMEE – CE Mesures / Test date: March 17th, 2014 Power supply voltage: 6V from battery (Full charge)			
Notes: (1) The above field strength limits are specified at a distance of 3meters. The tighter limits apply at the band edges. (2): The maximum permitted unwanted emission level is 20 dB below the maximum permitted fundamental level. (3) At 433MHz, the limit is 1096.648µV/m (60.8dBµV/m). Intentional radiators shall demonstrate compliance with the limits on the field strength of emissions, as shown in the above table, based on the average value of the measured emissions. A peak limit shall be applied 20dB above the average limit. In addition, radiated emissions which fall in the restricted bands, as defined in FCC § 15.205(a), must also comply with the radiated emission limits specified in § 15.209(a).			

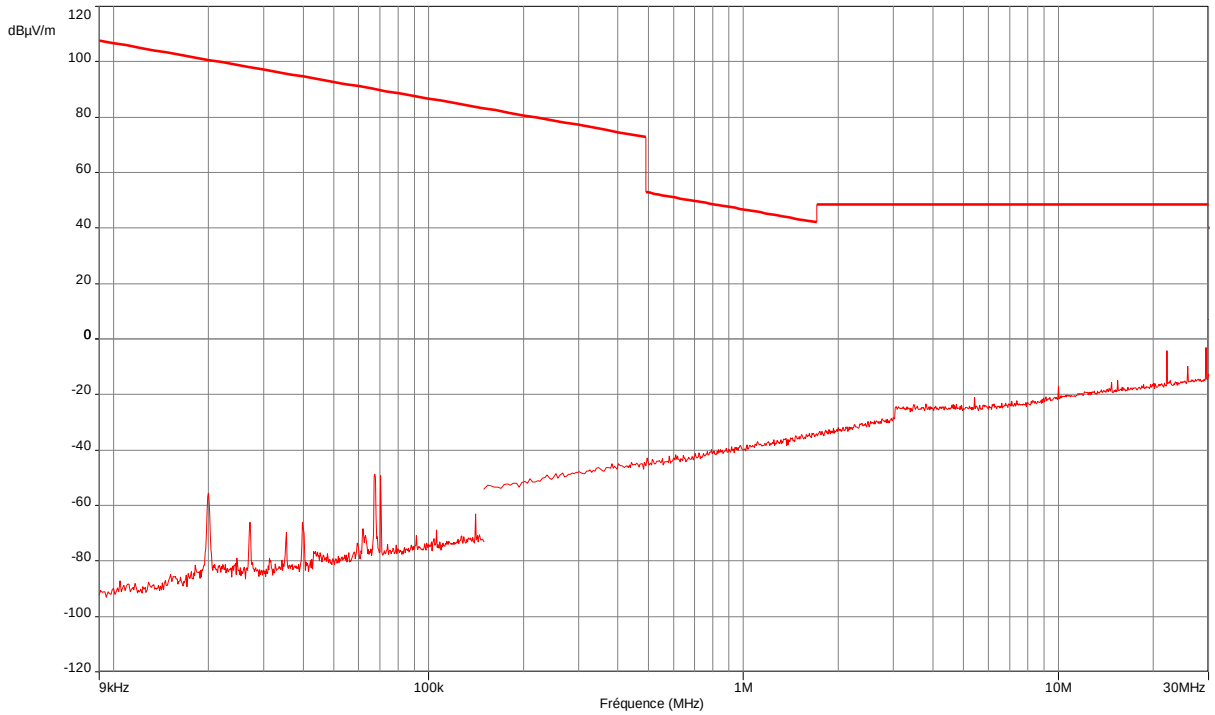
Test Equipment Used					
Description	Manufacturer	Model	Identifier	Cal. Date	Cal. Due
Log-periodic antenna	TDK	PLP3003	ANT-101-001	2013/5	2014/5
Biconnic antenna	COM-POWER	AB- 900	ANT-101-003	2013/5	2014/5
Horn antenna	COM-POWER	AH-118	ANT-101-004	2013/5	2014/5
RF cable	Div	2m	CAB-101-011	2014/3	2015/3
RF cable	Div	OATS/25m	CAB-101-017	2014/3	2015/3
Pre-amplifier	PE	PE1524	PRE-101-002	2014/3	2015/3
GTEM cell	TESEQ	750	GTE-101-001	2014/3	2015/3
OATS	Div	3 / 10m	SIT-101-001	2013/5	2014/5
Antenna mast	Innco- Systems	MA4000EP	MAT-101-001	-	-
Turntable	Innco- Systems	DS1200S	PLA-101-001	-	-
Measuring Rec	Rohde&Schwarz	ESL3	REC-101-001	2012/6	2014/6
Spectrum analyzer	AGILENT	HP 8563E	ASP-111-003	2013/9	2015/9
Ref. Comb generator	SMEE	EMR-10M	REF-111-002	-	-

Tabulated Results for Radiated Disturbance (3m measurement on Open Area Test Site) 30MHz-5GHz									
Test Frequency (MHz)	Meter Reading dB(µV)	Detector (Pk/QP/Av)	Polarity (V/H)	Azimuth (Degrees)	Antenna Height (cm)	Total Factor (dB)	Level dB(µV/m)	Limit dB(µV/m)	Margin (dB)
55,300	24,5	QP	V	260	100	12,1	36,6	40.0	**-3,4**
56,203	24,2	QP	V	215	100	11,8	36,0	40.0	**-4,0**
61,889	25,5	QP	V	90	100	10,8	36,3	40.0	**-3,7**
84,356	27,1	QP	V	125	125	10,1	37,2	40.0	**-2,8**
867,831	19,3	Pk	V	90	100	29,1	45,7	80,8	**-12,4**
867,831	3,4	Av	V	90	100	29,1	29,8	60,8	**-31,0**

Supplementary information:
Frequency list measured on the Open Area Test Site has been created with pre-scan results.
Worst case results for 3 axes position. Worst case results for transmit, receive or battery charging.
All others spurious show at least 20dB of margin.

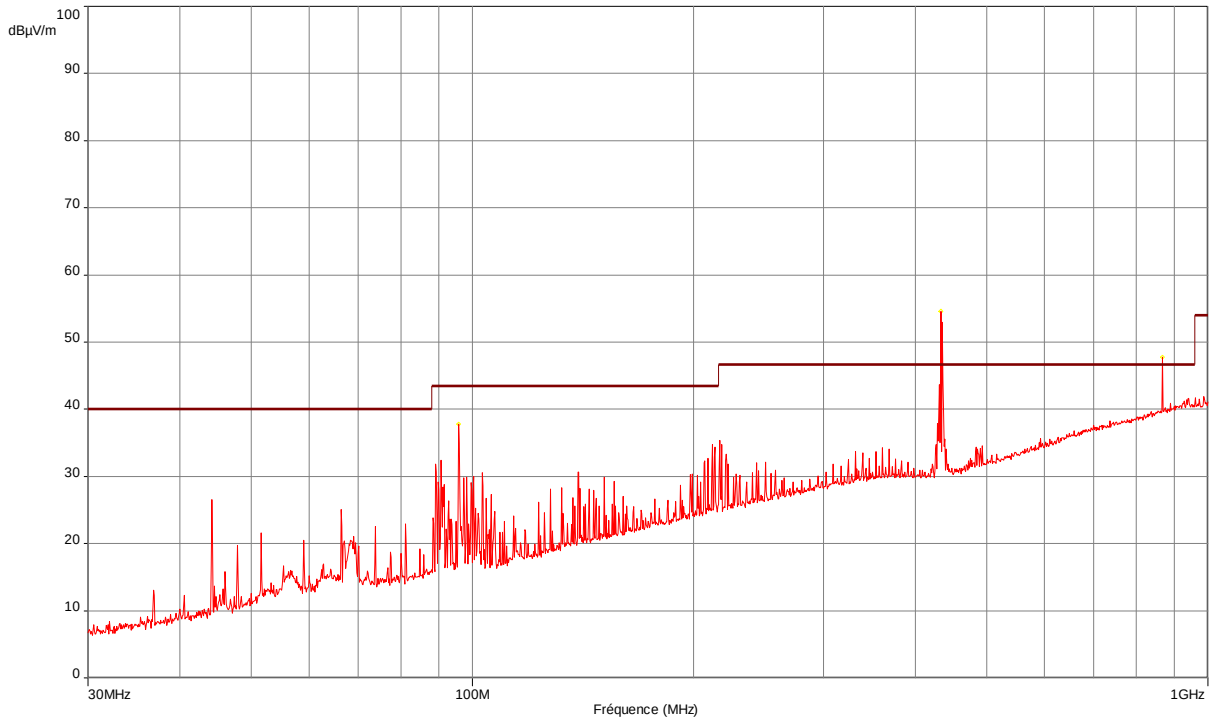
Frequency band investigated:	30MHz-5GHz
RBW:	120kHz - Below 1GHz
	1MHz – Above 1GHz
Measurement distance:	3m
Limit:	15.109 / 15.209 / 15.231
Wide Measurement Uncertainty:	± 5.2dB (k=2)
Field Strength Calculation:	The field strength is calculated by adding the Antenna Factor and Cable Factor, and subtracting the Amplifier Gain (if any) from the measured reading. The basic equation with a sample calculation is as follow: FS = RA + AF + CF – AG Where FS = Field Strength (Level dBµV/m) RA = Receiver Amplitude (Meter reading) AF = Antenna Factor CF = Cable Factor AG = Amplifier Gain Total factor (dB) is AF + CF – AG Margin value = Emission level – Limit value
Average Field Strength Calculation:	The average value of spurious emission is: Average = Peak value + 20log(Duty Cycle) Where the duty factor (DC) is calculated from following formula: DC = Tx ON on a period of 100ms (16/100ms) 20log(DC)=-15.9dB

Graphical representation of Radiated Disturbance Measurement (Peak detection, GTEM pre-scan) 9kHz-30MHz (10m)



------ : Peak measure

Graphical representation of Radiated Disturbance Measurement (Peak detection, GTEM pre-scan) 30MHz-1GHz (3m) – Transmit mode

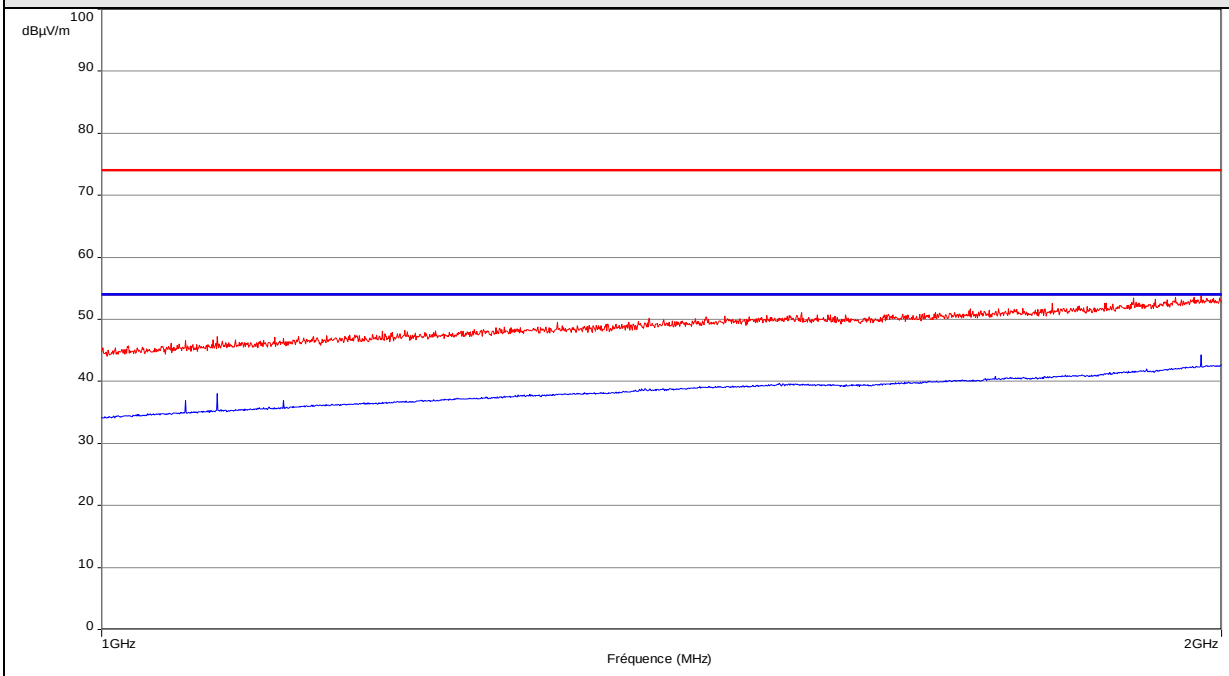


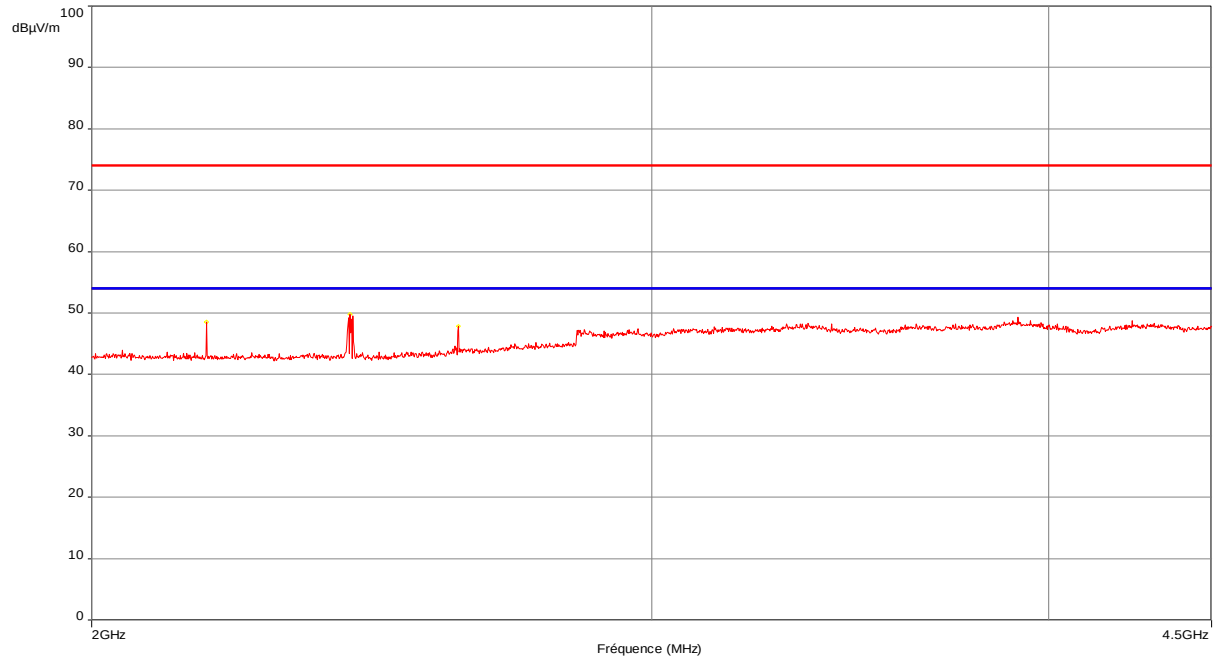
Frequency (MHz)	Level Peak (dBµV/m)	Limit Peak (dBµV/m)	Note
96.650	37.8	60.8	Not in restricted band
434.600	81.6	80.8	Intentional radiation
869.250	48.5	60.8	Not in restricted band

Note: Pre-scan graph only for identification purpose.

------ : Peak measure

Graphical representation of Radiated Disturbance Measurement (Peak detection, GTEM pre-scan) 1GHz-5GHz (3m) – Transmit mode



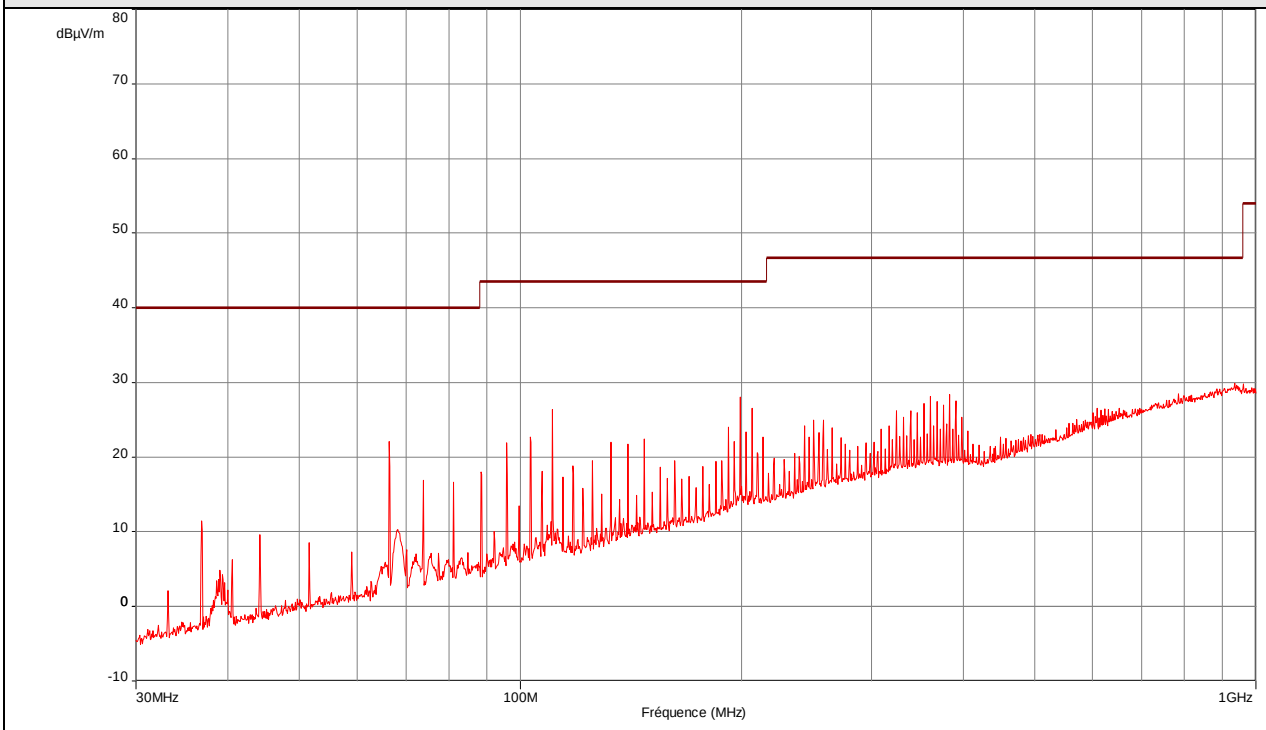


Frequency (MHz)	Level Peak (dBµV/m)	Limit Peak (dBµV/m)	Note
2173.20	48.5	75.6	Not in restricted band
2411.60	49.8	74.0	External noise
2608.10	47.9	75.6	Not in restricted band

Note: Pre-scan graph only for identification purpose.

------ : Peak measure

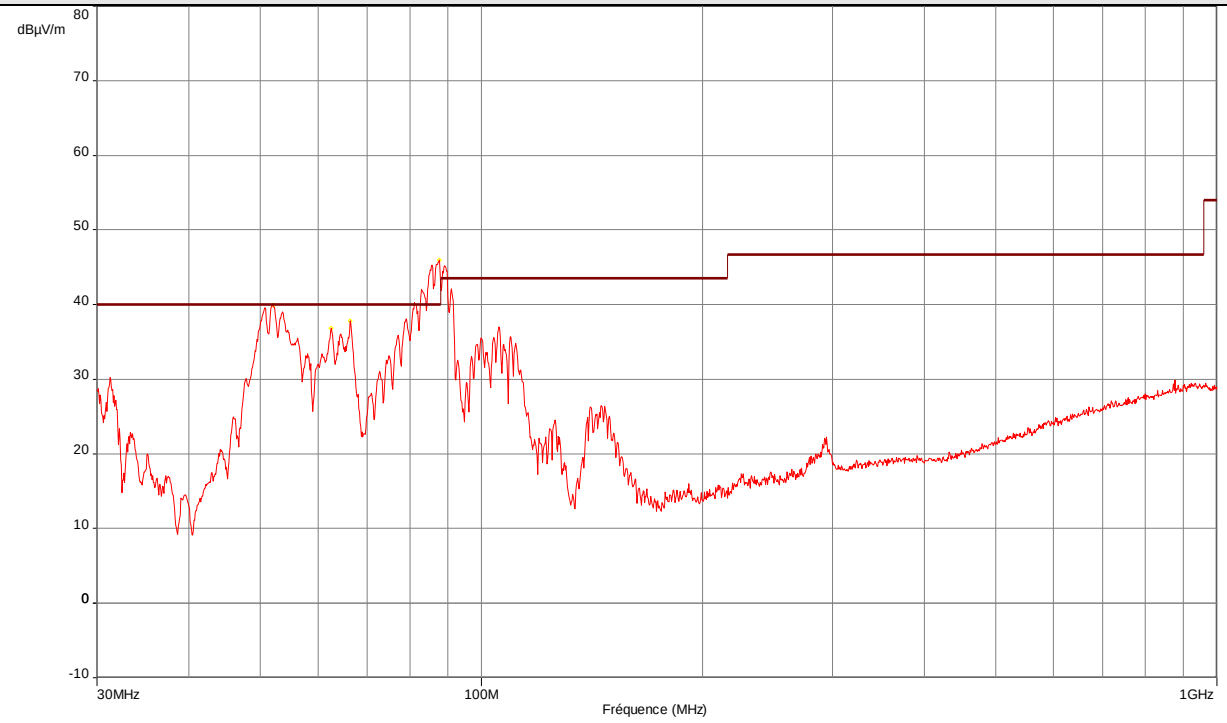
Graphical representation of Radiated Disturbance Measurement (Peak detection, GTEM pre-scan) 30MHz-1GHz (3m) – Receive mode



Note: Pre-scan graph only for identification purpose.

------ : Peak measure

Graphical representation of Radiated Disturbance Measurement (Peak detection, GTEM pre-scan) 30MHz-1GHz (3m) – Charging mode

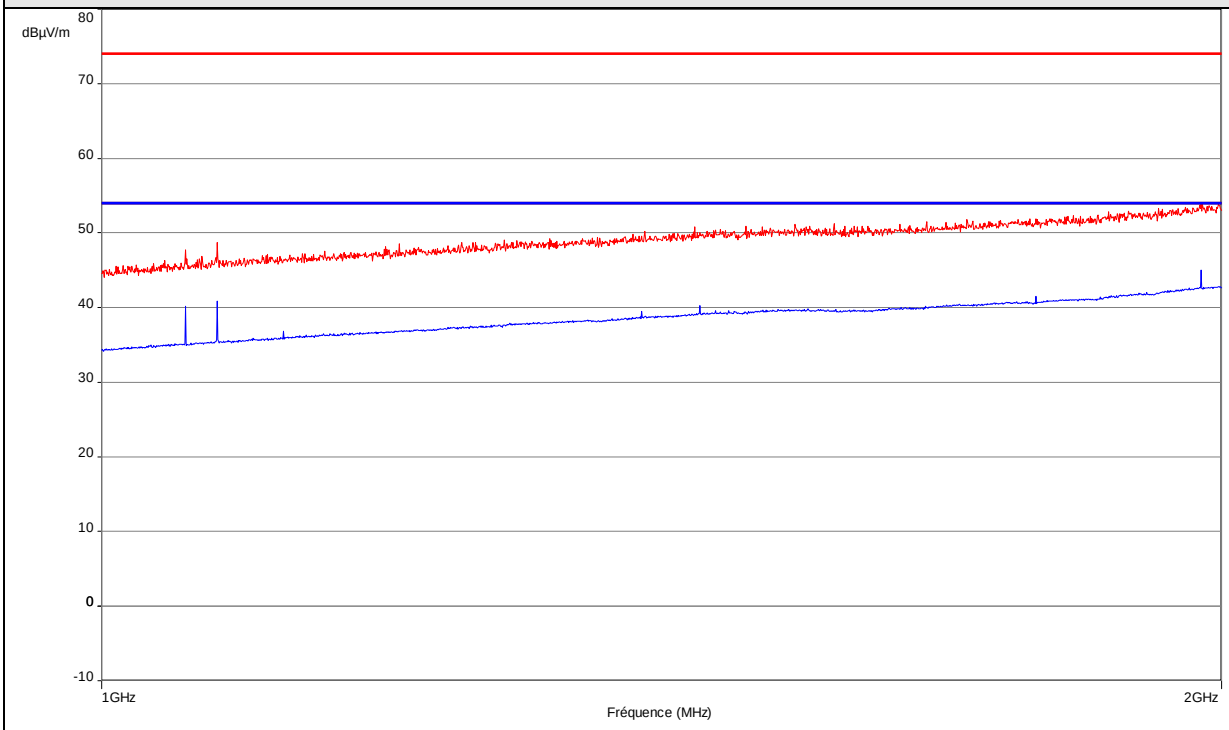


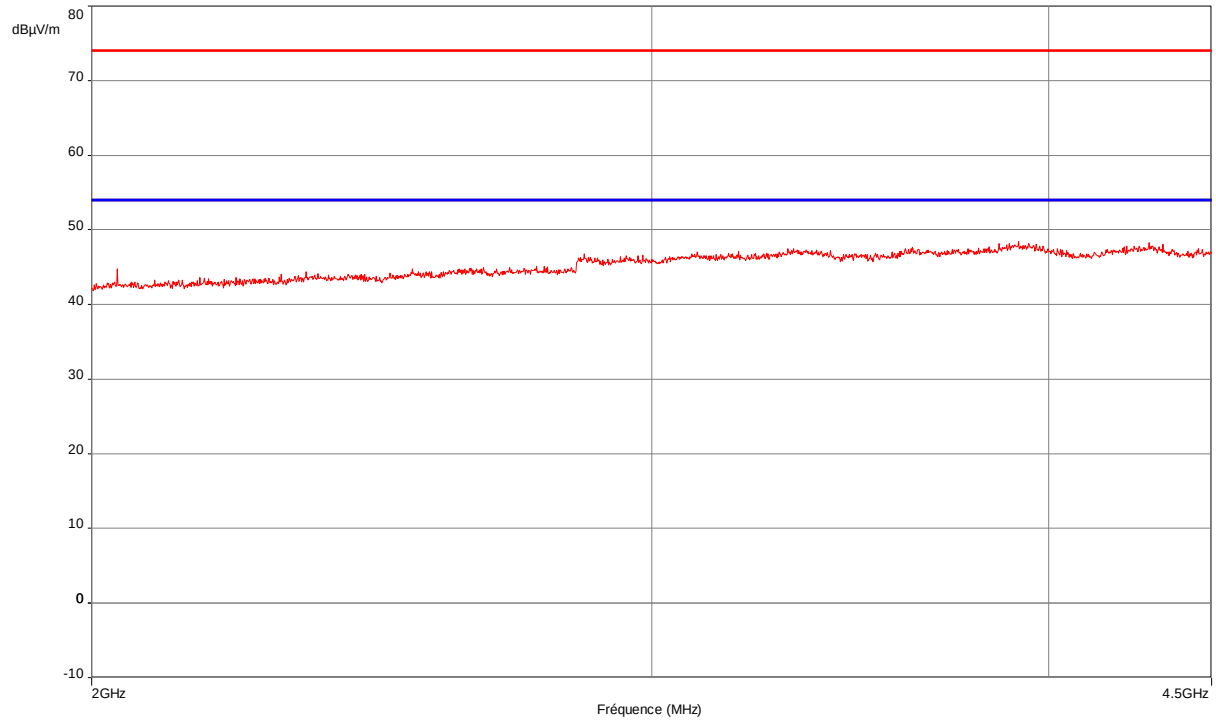
Frequency (MHz)	Level Peak (dBµV/m)	Limit Peak (dBµV/m)
52.150	39.9	40.0
62.450	36.8	40.0
66.350	37.9	40.0
87.600	46.0	40.0

Note: Pre-scan graph only for identification purpose.

------ : Peak measure

Graphical representation of Radiated Disturbance Measurement (Peak detection, GTEM pre-scan) 1GHz-5GHz (3m) – Receive & charging mode





Note: Pre-scan graph only for identification purpose.

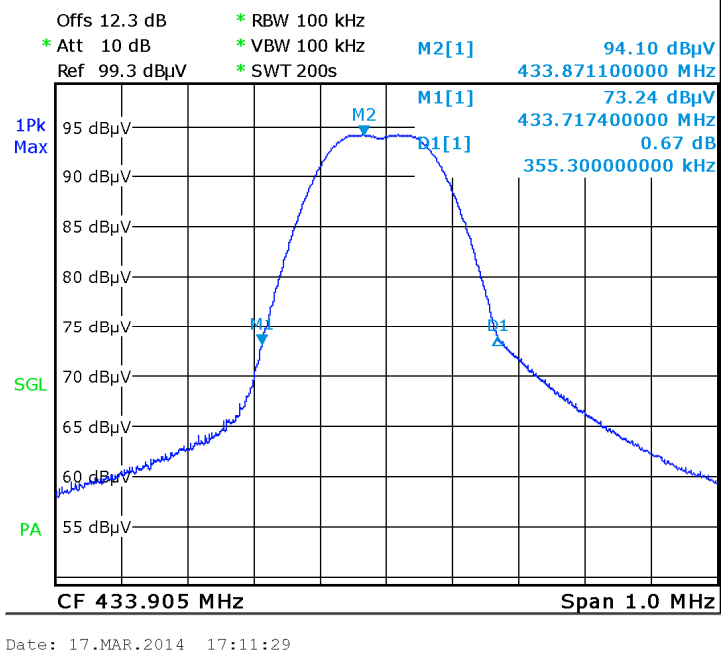
------ : Peak measure

9. Occupied bandwidth

TEST: Occupied bandwidth measurement	**Verdict**
Method: Measurements were performed with peak detector using a 100kHz RBW. The VBW is set to 100kHz. The spectrum analyzer is connected to the GTEM cell. The tested equipment is placed in the GTEM cell at the maximum field strength of fundamental. The tested equipment is set to transmit operation. Limits: The maximum 20 dB bandwidth and 99% bandwidth shall be lower than 0.25% of the center frequency	**Pass**
Supplementary information: Test location: SMEE – CE Mesures / Test date: March 17th, 2014 Power supply voltage: 3V from battery	

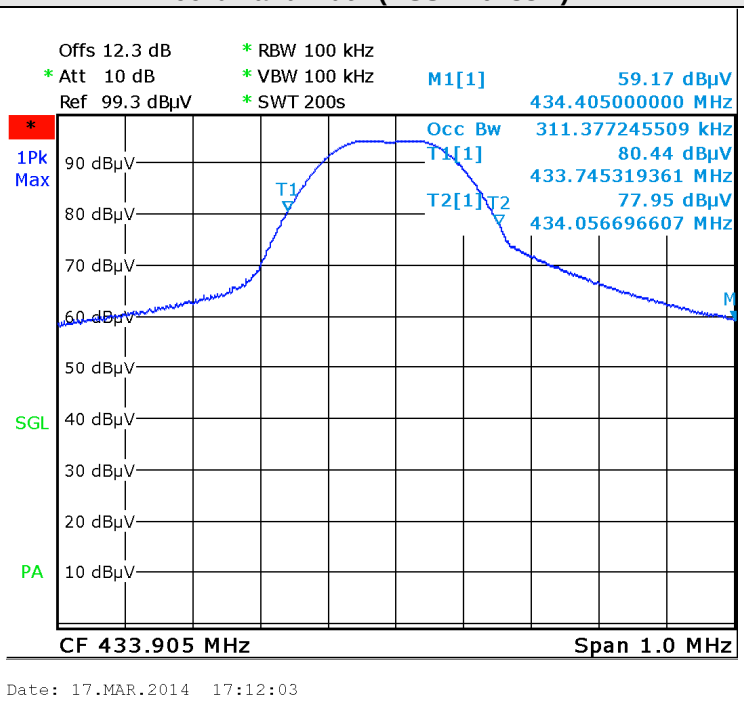
Test Equipment Used					
Description	Manufacturer	Model	Identifier	Cal. Date	Cal. Due
GTEM cell	TESEQ	750	GTE-101-001	2014/3	2015/3
Measuring Rec.	Rohde&Schwarz	ESL3	REC-101-001	2012/6	2014/6

Graphical representation Occupied Bandwidth
20dB Bandwidth (FCC Part 15.231)



Tabulated Results for Occupied Bandwidth **20dB Bandwidth (FCC Part 15.231 result)**			
FREQ	**20dB bandwidth**	**Limit**	**Result**
(MHz)	(kHz)		
433.93	355.300	Shall be < 1086.6kHz	PASS

Graphical representation Occupied Bandwidth 99% Bandwidth (RSS-210 Iss 1)



Tabulated Results for Occupied Bandwidth 99% Bandwidth (RSS-210 Iss 1 result)			
FREQ	**20dB bandwidth**	**Limit**	**Result**
(MHz)	(kHz)		
433.93	311.377	Shall be < 1086.6kHz	PASS