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montena emc sa

Test laboratory accredited according to ISO 17025 by the Swiss Accreditation Service SAS
Laboratoire d'essai accrédité selon ISO 17025 par le Service d'accréditation suisse SAS
Prüflabor akkreditiert nach ISO 17025 durch die Schweizerische Akkreditierungsstelle SAS

Registration number
Numéro d'accréditation
Akkreditierungsnummer **STS 024**

Schweizerischer Prüfstellendienst
Service suisse d'essai
Swiss testing service

Report: Rapport: Bericht:	***Electromagnetic compatibility and Radio spectrum Matters***	Report no: Rapport no: Bericht Nr:	***16'638***
Product name: Nom du produit: Produktname	***Telemetry Set***	Mandate no: Mandat no: Auftrag Nr:	***20119907***
Serial no: No de série: Seriennummer:	***2-R32-0011***	Model number: Numéro de modèle: Modellnummer:	***ST5000***
Customer: Client: Kunde:	***Sensimed AG*** ***Rte de Chavannes 37*** ***1007 Lausanne*** ***Switzerland***	Date of test: Date de l'essai: Prüfdatum:	***September 26, 2011***

Standards / Normes / Normen		Result Résultat Ergebnis
47 CFR, Part 15	(Subpart C, Intentional radiator: §§ 15.207; 15.209, 15.227)	***Pass***
Industry Canada	RSS-Gen, General Requirements and Information for the Certification of Radio Apparatus	***Pass***
	RSS-310, Licence-exempt Radio Apparatus: Category II Equipment	***Pass***

Test performed by
Essai effectué par :
Prüfer

Mr E. de Raemy

Report prepared by
Rapport préparé par :
Berichterstatter

Mr E. de Raemy

Report controlled and approved by
Rapport contrôlé et approuvé par :
Bericht kontrolliert und genehmigt durch

Mr A. Bieri

Rossens, January 17, 2012 (Issue Date / Date d'édition / Ausstelldatum) V2011Avril19

Main language / Langue principale / Hauptsprache : ***english*** / *français* / *deutsch*

The present document results from tests on a specimen and does not prejudge to the conformity of all the manufactured products. - Le présent document résulte d'essais sur un spécimen. Il ne préjuge pas de la conformité de l'ensemble des produits fabriqués à l'objet essayé. - Dieser Bericht beinhaltet die Prüfergebnisse des geprüften Gerätes und macht keine Aussage über die Konformität weiterer gleicher Geräte.

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Foreword / Avant-propos / Vorwort

The Telemetry Set has two functioning modes: 1) measuring and 2) battery charging. It is not possible to use both modes at the same time. As measuring is the main function of the system, it has been tested in this mode. Furthermore, in this mode only the short data cable is connected. Therefore, no conducted tests have been realised.
The EUT includes a Bluetooth communication module for the link to the PC. This module, from the manufactory "LinTech GmbH", is already tested and certified according all applicable standards. For this reason, this Bluetooth module has been excluded from the scope of the present test report.

1. Summary of test results / Résumé des résultats d'essais / Zusammenfassung der Prüfergebnisse

✓ Pass / Réussi / Bestanden

✖ Fail / Echoué / Nicht bestanden

∅ Not applicable to this product / Pas applicable à ce produit / Nicht anwendbar für dieses Produkt

— Not tested / Pas testé / Nicht geprüft

No requirements / Pas d'exigence / Keine Anforderung

§	Test Type / Type d'essai / Art der Prüfung		Result / Résultat / Ergebnis
6	***Emission***		***CFR 47 Part 15 Sub C / Industry Canada***
-	Conducted emission Émission par conduction Geleitete Emission	CFR 47 § 15.207 RSS-Gen Table 4	∅ [1]
6.1	Radiated emission – H-field Émission par rayonnement – Champ H Gestrahlte Emission – H-Feld	CFR 47 § 15.209 RSS-Gen Tables 6	✓
6.2	Radiated emission – Carrier Émission par rayonnement – Porteuse Gestrahlte Emission – Träger	CFR 47 § 15.227 RSS-310 § 3.8	✓
6.3	Radiated emission – EM-field Émission par rayonnement – Champ EM Gestrahlte Emission – EM-Feld	CFR 47 § 15.209 RSS-Gen Tables 5	✓
-	Radiated emission – receiver Émission par rayonnement – récepteur Gestrahlte Emission – Empfänger	CFR 47 § 15.109 RSS-Gen Tables 2	∅ [2, 3]
7	***Emission, modulation, and transmission characteristics***		***CFR 47 Part 2 Sub C***
7.1	Designation of emission Désignation d'emission Bezeichnung der Emission	FCC 47 §2.201 FCC 47 §2.202	**P0N** [3]

1. Powered with internal 3.7 V Li-ion battery
2. Receiver used in combination with permanently co-located transmitter
3. EUT use loadmodulation as it is used in RFID technique. The transmitter sends pulses of unmodulated carrier (27 MHz) to supply the transponder. He sends no information. The transponder sends data back by changing his load characteristics.

2. Applied standards / Normes appliquées / Verwendete Normen

47 CFR Part 2	Code of Federal Regulations - Title 47 - Telecommunication, Part 2 – Frequency allocations and radio treaty matters; General rules and regulations
47 CFR Part 15 Subpart C	Code of Federal Regulations - Title 47 - Telecommunication, Part 15, Subpart C: "Intentional Radiators"
RSS-Gen issue 3, December 2010 CNR-Gen 3e édition Décembre 2010	Spectrum Management and Telecommunications - Radio Standards Specification General Requirements and Information for the Certification of Radio Apparatus Gestion du spectre et télécommunications - Cahier des charges sur les normes radioélectriques Exigences générales et information relatives à la certification des appareils radio
RSS-310 issue 3 December 2010 CNR-310 3e édition, Décembre 2010	Spectrum Management and Telecommunications - Radio Standards Specification Licence-exempt Radio Apparatus (All Frequency Bands): Category II Equipment Gestion du spectre et télécommunications - Cahier des charges sur les normes radioélectriques Appareils exempts de licence (pour toutes les bandes de fréquences) : matériel de catégorie II

3. Client / Client / Kunde

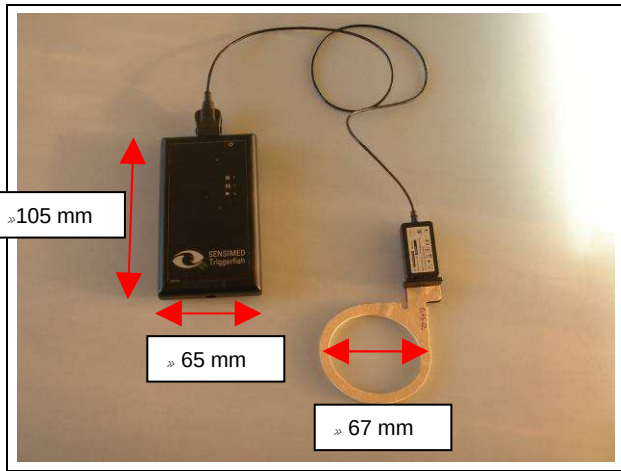
Client name and address Nom et adresse du client Name und Adresse des Kunden	*Sensimed AG* *Rte de Chavannes 37* *1007 Lausanne* *Switzerland*
Contact Person / Responsable / Kontaktperson	*Mr Sacha Cerboni*
Telephone / Téléphone / Telefon	*+41 21 621 91 91*
Fax / Télécopieur / Telefax	*+41 21 621 91 93*
E-mail / Courrier électronique / E-mail	*sacha_cerboni@sensimed.ch*
Mandate no / No. de mandat / Auftragsnr.	*20119907*

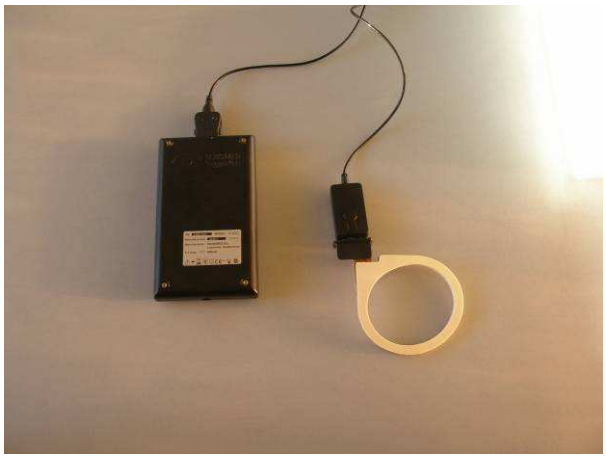
4. Equipment under test / Equipement à l'essai / Prüfling

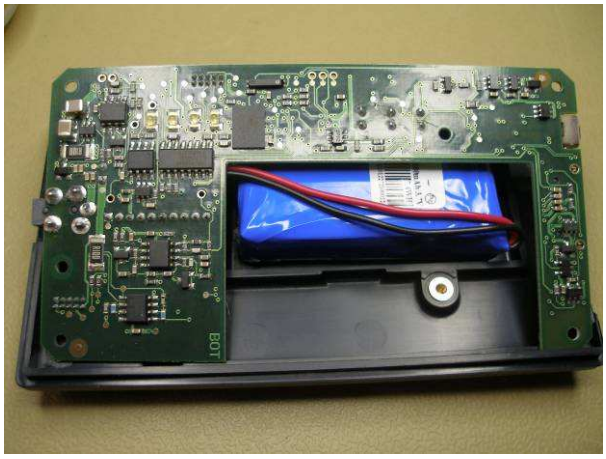
4.1 Identification / Identification / Identifikation

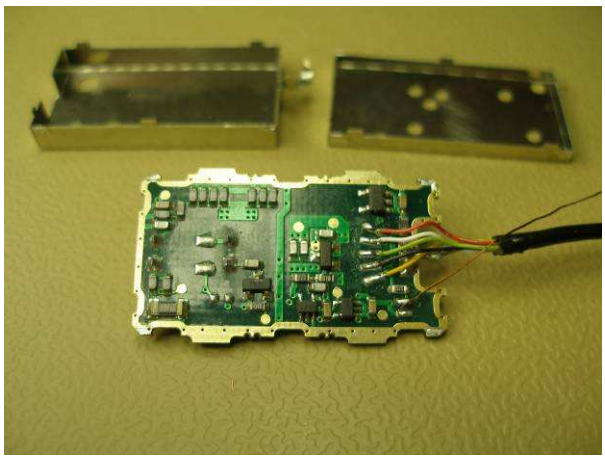
Manufacturer name and address Nom et adresse du fabricant Name und Adresse des Herstellers	*Sensimed AG* *Rte de Chavannes 37* *1007 Lausanne* *Switzerland*
Production country / Pays de fabrication / Ursprungsland	*Switzerland*
Brand name / nom de marque / Verkaufsmarke	*SENSIMED Triggerfish*
Product name / Nom du produit / Produktname	*Telemetry Set*
Product description / Description du produit / Produktbeschreibung	*Telemetry Set consisting of SENSIMED Triggerfish - Ocular Telemetry Sensor / SENSIMED Triggerfish-Recorder / SENSIMED Triggerfish-Data cable / SENSIMED Triggerfish antenna.*
Model number / Numéro de modèle / Modellnummer	*ST5000*
Serial no / No. de série / Seriennummer	*2-R32-0011*
Software version / Version du logiciel / Softwareversion	*V2.0.0*
Highest frequency / Fréquence la plus élevée / Höchste Frequenz	*27 MHz (except Bluetooth module)*
Supply / Alimentation / Speisung	*Internal 3.7 V battery*
Dimension / Dimension / Abmessung	*See photos below*
Weigth / Poids / Gewicht	*≈ 0.2 kg*
Technical documentation Documentation technique Technische Dokumentation	*None. The equipment is completely identified by the above-mentioned informations. Sensimed AG assures the traceability of the documentation and is responsible for the product identification.*

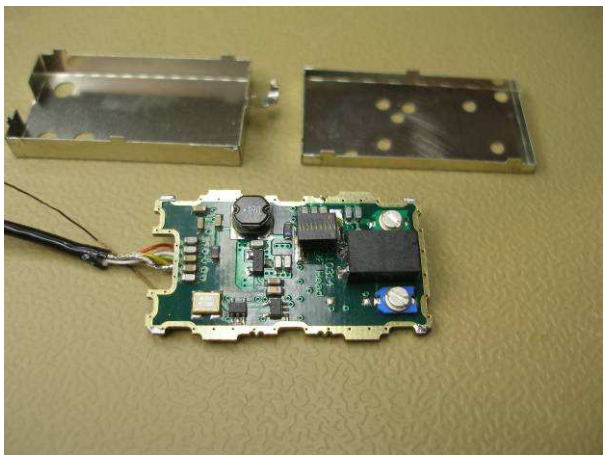
4.2 Pictures of the EUT / Photos de l'EST / Fotos des Prüflings











4.3 Classification / Classification / Klassierung

CFR 47 Part 15	☐ Unintentional radiator (Subpart B) ☐ Class A digital device ☐ Class B digital device ☐ The highest frequency of the internal sources of the EUT is less than 108 MHz (measurement shall be made up to 1 GHz). ☐ The highest frequency of the internal sources of the EUT is between 108 MHz and 500 MHz (measurement shall be made up to 2 GHz). ☐ The highest frequency of the internal sources of the EUT is between 500 MHz and 1 GHz (measurement shall be made up to 5 GHz). ☐ The highest frequency of the internal sources of the EUT is above 1 GHz (measurement shall be made up to 5 times the highest frequency or 40 GHz, whichever is lower). ☒ Intentional radiator (Subpart C) ☒ The highest fundamental frequency of the EUT is less than 10 GHz (measurement shall be made up to the tenth harmonic or 40 GHz, whichever is lower). ☐ The highest fundamental frequency of the EUT is between 10 GHz and 30 GHz (measurement shall be made up to the fifth harmonic or 100 GHz, whichever is lower). ☐ The highest fundamental frequency of the EUT is above 30 GHz (measurement shall be made up to the fifth harmonic or 200 GHz, whichever is lower).

4.4 Ports / Accès / Anschlüsse

Port / Accès / Anschluss	**Cable / Câble / Kabel**			**Remark / Remarque / Bemerkung**
	Max. length / Longueur max. / Max. Länge	**Type / Type / Typ**	**Screen / Blindage / Schirm**	
DC In	*0.8m*	*2-wires*	*none*	*Only connected for battery charging. EUT is OFF during battery charging*
Data cable	*0.5m*	*5x0.037mm²*	*Yes*	*- - -*

4.5 Modifications / Modifications / Angebrachte Änderungen

None

5. Test conditions / Conditions d'essai / Testbedingungen

5.1 Climatic conditions, location and date / conditions climatiques, lieu et date / klimatische Bedingungen, Ort und Datum

Location / Lieu / Ort:	Date / Date / Datum:	Temp. / Temp. / Temp.:	Pressure / Pression / Druck [QFF]:	Rel. humidity / Humidité rel. / Rel. Luftfeuchtigkeit:
montena emc sa 1728 Rossens	*September 26, 2011*	*23 - 26 °C*	*1025 - 1032 hPa*	*41 - 46 %*

5.2 Test facility and methodology / Lieu d'essai et méthodologie / Prüfort und Methodik

The alternate test site (ferrite chamber) is accepted by FCC (Reg. No. 90808).
Conducted and radiated measurements are performed according to the ANSI C63.4 (2003) procedure.

The open area test site is accepted by Industry Canada (Site number 3625A-1).

5.3 Attendant persons / Personnes présentes / Anwesende Personen

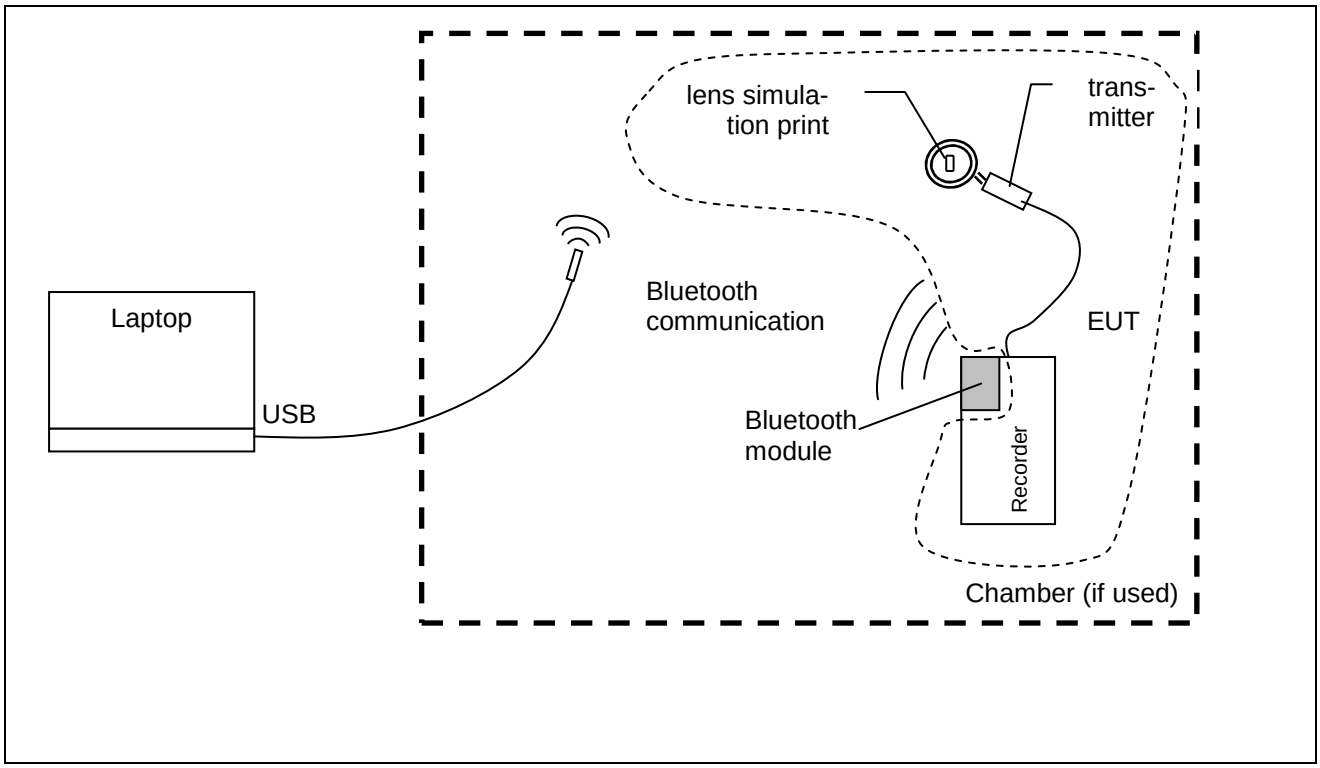
Test Engineer(s) / Ingénieur(s) d'essai / Prüfingenieur(e) :

Mr E. de Raemy

Other(s) / Autre(s) / Andere :

Name / Nom / Name	Company / Société / Firma
Mr Daniel Keller (partially present)	*Sensimed AG*

5.4 Test configuration / Configuration d'essai / Prüfkonfiguration



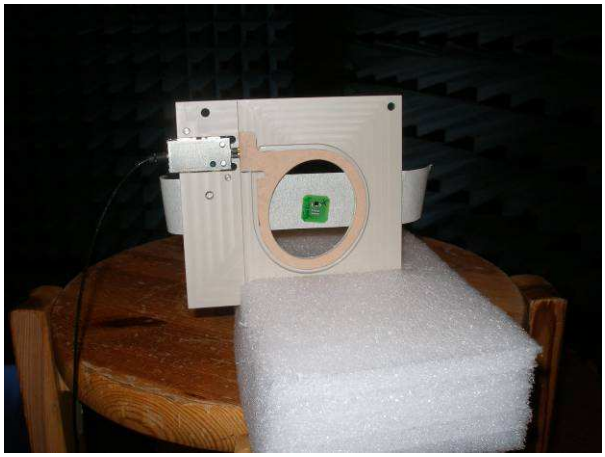
5.5 Operating conditions / Conditions de fonctionnement / Betriebszustand

- *EUT is switched off during battery charging. All tests have been done with the EUT powered by its internal battery.*
- *Most of the emission measurements have been done with maximum output power, (=100% PWM, ➔ antenna current » 350 mA (can slightly change with the charge state of the battery). If required, emission measurement was repeated with minimum output power (0% PWM). Emission measurement has been done without lens simulation print.*
- *The Bluetooth module of EUT was working, to allow communication with the Laptop, but this function is not tested in the present test report (see Foreword on page 2)*

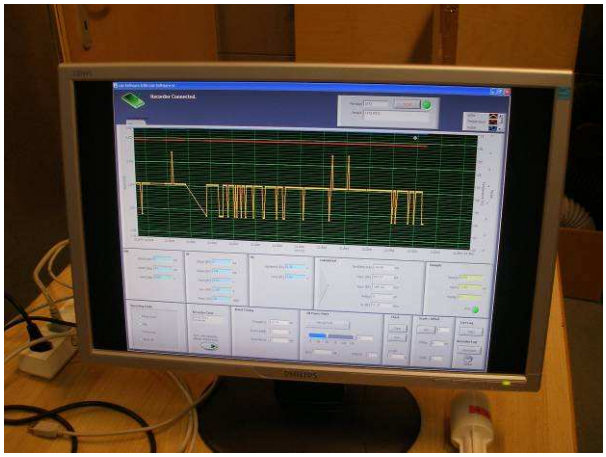
5.6 Auxiliary equipment / Matériel auxiliaire / Zusatzgeräte

The following pieces of equipment are used for the monitoring of the EUT or are necessary for the EUT but they are not part of the EUT / Les équipements suivants servent à la surveillance de l'EST ou sont indispensables au fonctionnement de celui-ci mais ne font pas partie de l'EST / Folgende Geräte werden für die Überwachung des Prüflings gebraucht oder sind notwendig für die korrekte Funktion. Sie gehören jedoch nicht zum Prüfling.

Product / Produit / Produkt	Brand / Marque / Marke	Model No.	ID	Remark / Remarque / Bemerkung
USB Bluetooth stick	*Belkin*	- - -	- - -	- - -
Lens simulation print	*Sensimed*	- - -	- - -	- - -
Laptop with Sensimed "lab Software"	*HP*	*6320*	- - -	- - -



EUT antenna with lens simulation print in the center



Monitoring software

6. Emission

6.1 Radiated emission - Magnetic field

Test site:	☒ anechoic chamber (ferrites)	☐ open test site	
	☐ anechoic chamber (foam)	☐	
Meas. distance:	☐ 3 m	☒ 10 m	☐ 30 m
Meas. uncertainty:	± 2.8 dB (10 m)		
Position of EUT:	*0.8 m* (height above floor of equipment under test)		

Measuring method: The magnetic disturbance radiated by the equipment under test is measured using a spectrum analyser and a wide band magnetic antenna. The center of the antenna is placed at 1 m of height, first in the direction of the apparatus under test, then at 90° to the apparatus and if required also horizontally. If possible the turning table is operated through 360° during the measurement. The recording is carried out taking into account the maximum value of the disturbance appearing during the functioning of the apparatus under test. The peak values are recorded continuously on a graph. The values exceeding the limits are remeasured using a measuring receiver.

Modifications: ☒ None ☐ 1 ☐ 2 ☐ 3 ☐ 4 ☐ 5

Test set-up:

Remarks:

- *The limit does not apply to the intentional emission at 27 MHz.*
- *Limit values expressed in dBuV/m and transformed to a measuring distance of 10m (factor used = 40 dB/decade). e.g.: for f = 9kHz the limit is 2400/f(kHz)µ V/m at 300 m;*

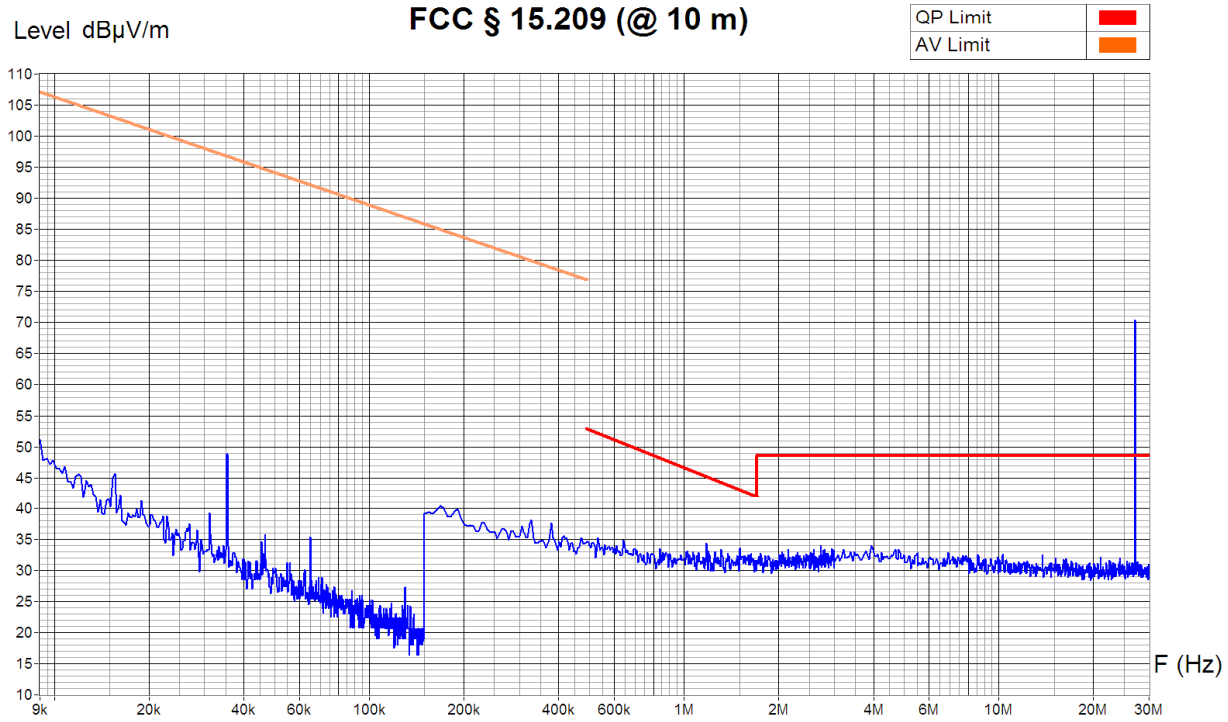
$$20\log\left(\frac{\frac{2400}{9}\frac{\mu V}{m}}{1\frac{\mu V}{m}}\right)+40\log\left(\frac{300\,m}{10\,m}\right)=107.6\,\frac{dB\mu V}{m}\;at\;10m$$

Test equipment:

Spectrum analyser	☐ 88-14	☐ 94-24	☐ 02-06	☐ 03-45	☐ 05-39	☒ 10-70
Receiver	☐ 85-04	☐ 90-43	☐ 94-35	☐ 04-29	☒ 10-70	
Preamplifier	☐ 90-01	☐ 95-86	☐ 05-56	☐ 05-59	☐ 05-62	☐ 05-87
Antenna (typ: magnetic)	☐ 90-25	☐ 90-28	☐ 99-32	☒ 04-79		
Cables	☐ 06-00	☒ 06-01	☐	☐	☐	☐ .....

Result: ☒ **pass** ☐ **fail** ☐ **not applicable** ☐ **not tested**

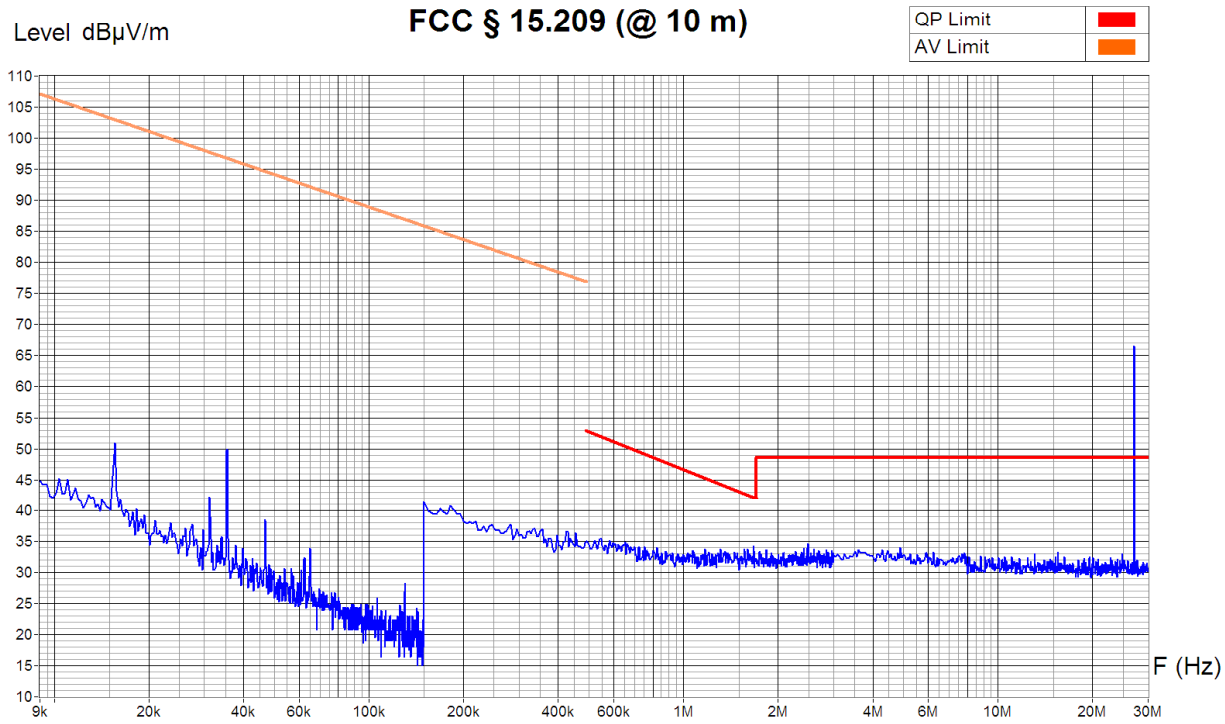
Measurement Type :	Radiated Field
Polarisation :	Parallel
Table Angle :	0 - 360°
Antenna Height :	1.5 m
Equipment Under Test :	Telemetry Set RF Head S/N. 11
Set-Up :	cage 06-01, see photos
Operating Conditions :	Max power (100% PWM, Ant. current 350 mA); Pulse 10 Hz
Remarks :	powered by internal battery
	Limit not applicable for emission at 27 MHz



Zone	9 KHz - 150 KHz	150 KHz - 3 MHz	3 MHz - 30 MHz
Video Bandwidth	500 Hz	30 KHz	30 KHz
Resol Bandwidth	300 Hz	10 KHz	10 KHz

Operator: E. de Raemy
Date/Time: 26.09.2011 17:17
Filename:
RE_FCC_9k-30M_par01a.png/.txt

Measurement Type :	Radiated Field
Polarisation :	Perpendicular
Table Angle :	0 - 360°
Antenna Height :	1.5 m
Equipment Under Test :	Telemetry Set RF Head S/N. 11
Set-Up :	cage 06-01, see photos
Operating Conditions :	Max power (100% PWM, Ant. current 350 mA); Pulse 10 Hz
Remarks :	powered by internal battery
	Limit not applicable for emission at 27 MHz



Zone	9 KHz - 150 KHz	150 KHz - 3 MHz	3 MHz - 30 MHz
Video Bandwidth	500 Hz	30 KHz	30 KHz
Resol Bandwidth	300 Hz	10 KHz	10 KHz

Operator: E. de Raemy
Date/Time: 26.09.2011 17:40
Filename:
RE_FCC_9k-30M_per01a.png/.txt

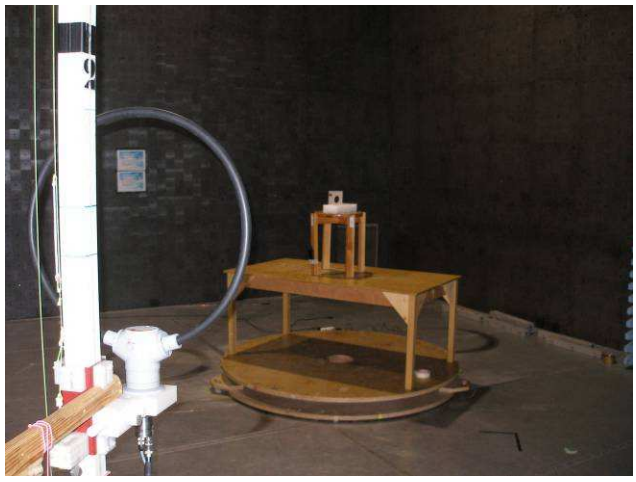
6.2 Carrier - Radiated magnetic field

Test site:	☒ anechoic chamber (ferrites)	☐ open test site	
	☐ anechoic chamber (foam)	☐	
Meas. distance:	☒ 3 m	☐ 10 m	☐ 30 m
Meas. uncertainty:	± 2.8 dB (10 m)		
Position of EUT:	*0.8 m* (height above floor of equipment under test)		

Measuring method: The magnetic disturbance radiated by the equipment under test is measured using a spectrum analyser and a wide band magnetic antenna. The center of the antenna is placed at 1 m of height, first in the direction of the apparatus under test, then at 90° to the apparatus and if required also horizontally. If possible the turning table is operated through 360° during the measurement. The recording is carried out taking into account the maximum value of the disturbance appearing during the functioning of the apparatus under test. The peak values are recorded continuously on a graph. The values exceeding the limits are remeasured using a measuring receiver.

Modifications: ☒ None ☐ 1 ☐ 2 ☐ 3 ☐ 4 ☐ 5

Test set-up:



Remarks: *Limit values expressed in dBuV/m and transformed to the measuring distance, if different from the distance of the limit (factor used = 40 dB/decade). e.g.: for f = 27 MHz the limit is 10'000 µ V/m at 3 m;*

$$20\log\left(\frac{10'000\,\frac{\mu V}{m}}{1\,\frac{\mu V}{m}}\right)+40\log\left(\frac{3m}{3m}\right)=80\,\frac{dB\mu V}{m}\;at\;3m$$

for f ≠ 26.96 MHz - 27.28 MHz the limit is 30µ V/m at 30 m;

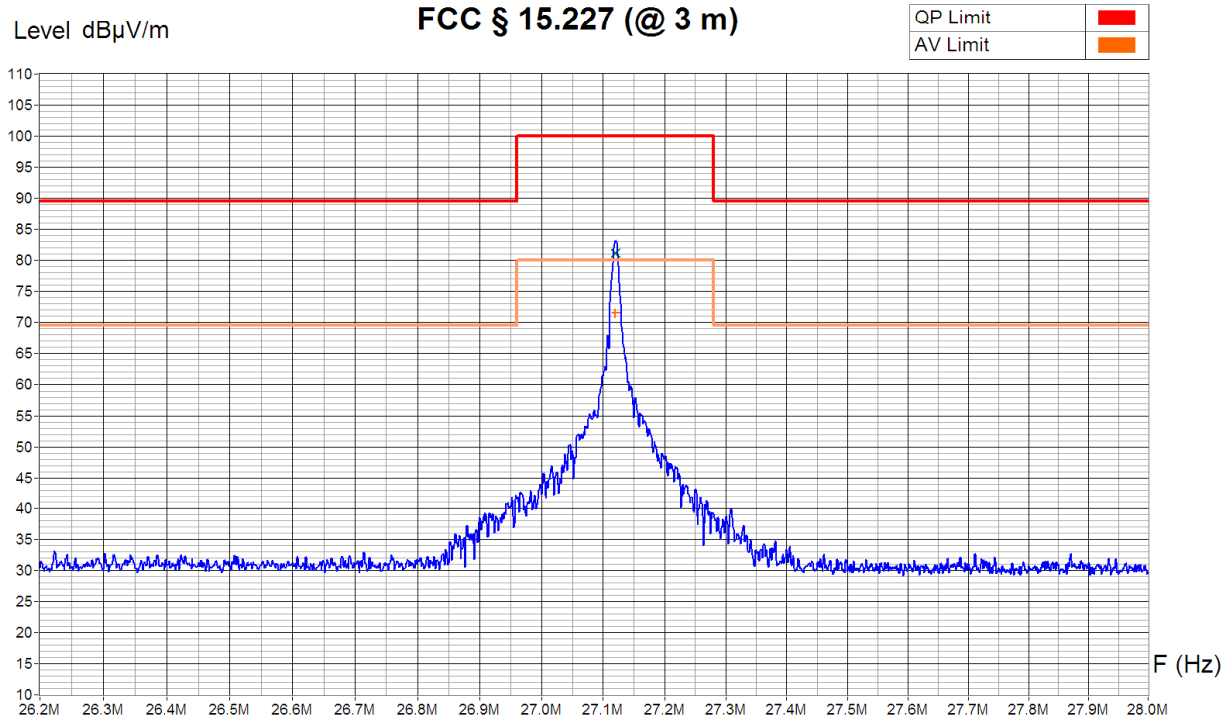
$$20\log\left(\frac{30\,\frac{\mu V}{m}}{1\,\frac{\mu V}{m}}\right)+40\log\left(\frac{30m}{3m}\right)=69.5\,\frac{dB\mu A}{m}\;at\;3m$$

Test equipment:

Spectrum analyser	☐ 88-14	☐ 94-24	☐ 02-06	☐ 03-45	☐ 05-39	☒ 10-70
Receiver	☐ 85-04	☐ 90-43	☐ 94-35	☐ 04-29	☒ 10-70	
Preamplifier	☐ 90-01	☐ 95-86	☐ 05-56	☐ 05-59	☐ 05-62	☐ 05-87
Antenna (typ: magnetic)	☐ 90-25	☐ 90-28	☐ 99-32	☒ 04-79		
Cables	☐ 06-00	☒ 06-01	☐	☐	☐	☐ .....

Result: ☒ **pass** ☐ **fail** ☐ **not applicable** ☐ **not tested**

Measurement Type :	Radiated Field
Polarisation :	Parallel
Table Angle :	0 - 360°
Antenna Height :	1.5 m
Equipment Under Test :	Telemetry Set RF Head S/N. 11
Set-Up :	cage 06-01, see photos
Operating Conditions :	Max power (100% PWM, Ant. current 350 mA); Pulse 10 Hz
Remarks :	powered by internal battery



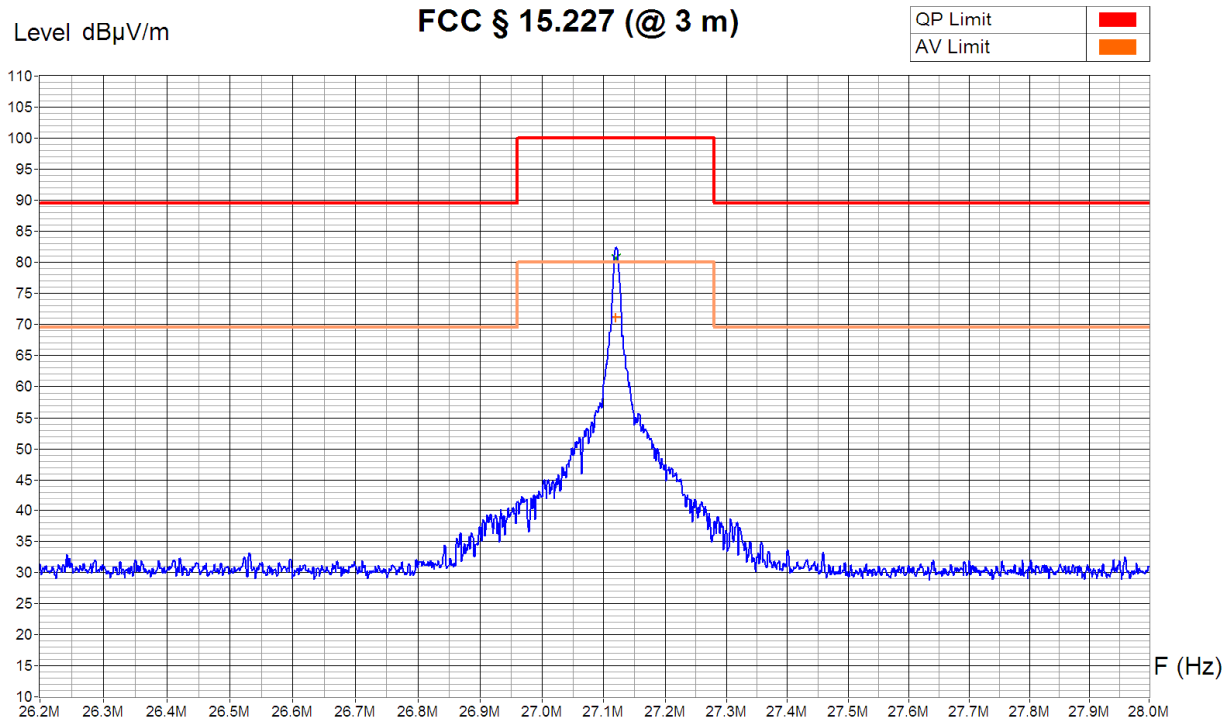
Zone	26.20 MHz - 26.80	26.80 MHz - 27.45	27.45 MHz - 28 MHz
Video Bandwidth	30 KHz	30 KHz	30 KHz
Resol Bandwidth	10 KHz	10 KHz	10 KHz

Receiver Measures

Frequency	Peak	QuasiPeak (x)	Average (+)	QP Margin
27.12 MHz	82.6 dBµV/m	81.1 dBµV/m	71.6 dBµV/m	18.9 dB

Operator: E. de Raemy
Date/Time: 26.09.2011 16:52
Filename: RE_FCC_27M_par01.png/.txt

Measurement Type :	Radiated Field
Polarisation :	Perpendicular
Table Angle :	0 - 360°
Antenna Height :	1.5 m
Equipment Under Test :	Telemetry Set RF Head S/N. 11
Set-Up :	cage 06-01, see photos
Operating Conditions :	Max power (100% PWM, Ant. current 350 mA); Pulse 10 Hz
Remarks :	powered by internal battery



Zone	26.20 MHz - 26.80	26.80 MHz - 27.45	27.45 MHz - 28 MHz
Video Bandwidth	30 KHz	30 KHz	30 KHz
Resol Bandwidth	10 KHz	10 KHz	10 KHz

Receiver Measures

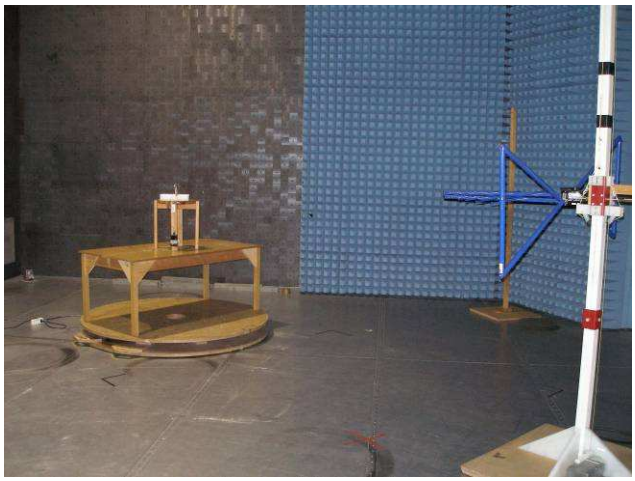
Frequency	Peak	QuasiPeak (x)	Average (+)	QP Margin
27.12 MHz	82.2 dBµV/m	80.7 dBµV/m	71.1 dBµV/m	19.3 dB

Operator: E. de Raemy
Date/Time: 26.09.2011 16:40
Filename:
RE_FCC_27M_per01.png/.txt

6.3 Radiated emission - Electromagnetic field (30 MHz to 1 GHz)

Test site:	☐ anechoic chamber (foam)	☐ open test site
	☒ anechoic chamber (ferrites)	☐ .....
Distance:	☒ 3 m ☐ 10 m	☐ 30 m
Position of EUT:	*0.8 m* (height of the equipment under test above floor)	
Meas. uncertainty:	± 4.6 dB (30 - 300 MHz) / ± 3.7 dB (300 - 1000 MHz)	
Test method:	The electromagnetic disturbance radiated by the equipment is measured using a spectrum analyser and a wide band antenna. The antenna is moved from 1 to 4 m in height successively with horizontal and vertical polarisations. The turning table is operated through 360° during the measurements. The recordings are carried out taking into account the maximum value of all the disturbances appearing while the apparatus is under test. The peak values are recorded continuously on the graph. The values exceeding a limit are remeasured manually using a receiver.	
Modifications:	☒ None ☐ 1 ☐ 2 ☐ 3 ☐ 4 ☐ 5	

Test set-up:



Remarks: *Limit values expressed in dBµ V/m and transformed to the measuring distance, if different from the distance of the limit (factor used = 20 dB/decade) e.g.: for f = 40MHz the limit is 100µ V/m at 3m;*

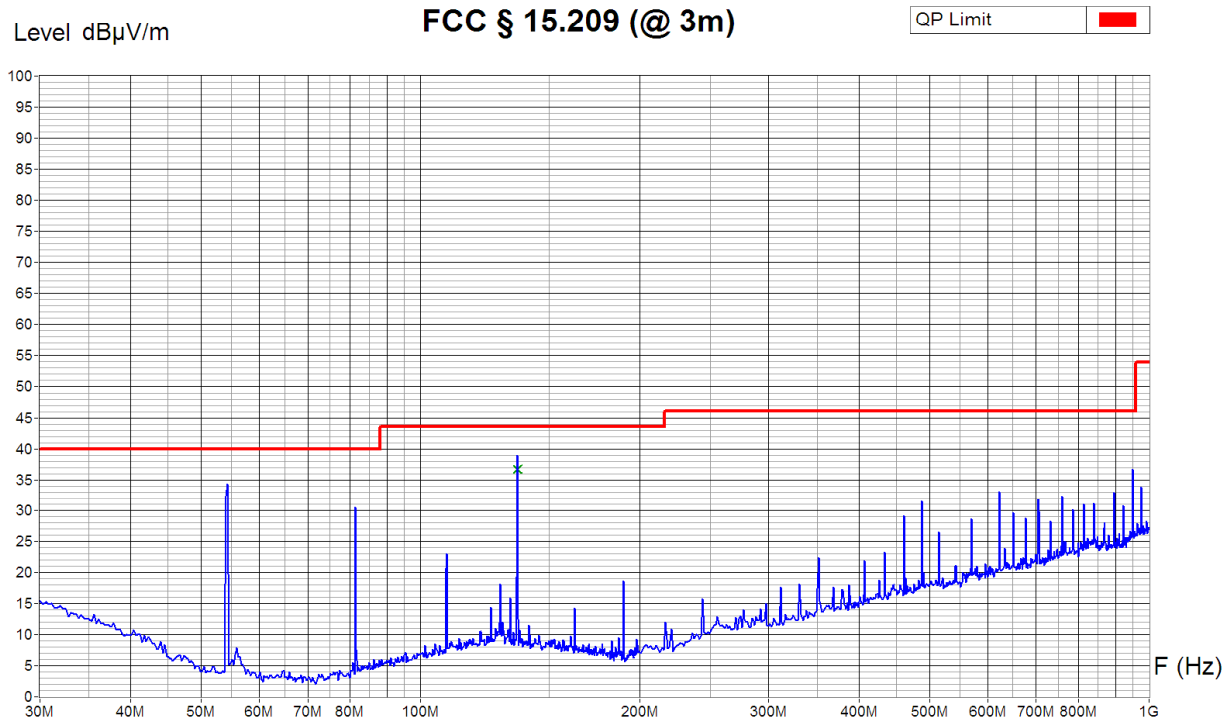
$$20\log\left(\frac{100\,\frac{\mu V}{m}}{1\,\frac{\mu V}{m}}\right)+20\log\left(\frac{3m}{3m}\right)=40\,\frac{dB\mu V}{m}\;at\;3m$$

Test equipment:

Spectrum analyser		☐ 88-14	☐ 94-24	☐ 02-06	☐ 03-45	☐ 05-39	☒ 10-70
Receiver		☐ 85-04	☐ 90-43	☐ 94-35	☐ 04-29	☒ 10-70	
Preamplifier		☐ 90-01	☐ 95-86	☐ 05-56	☒ 05-59	☐ 05-62	☐ 05-87
Antenna	(biconical)	☐ 82-02	☐ 87-05	☐ 87-16	☐ 91-05	☐ 94-37	
Antenna	(log-per)	☐ 88-20	☐ 90-30	☐ 91-35	☐ 94-64		
Antenna	(bilog)	☒ 94-03	☐ 05-38				
Antenna	(horn)	☐ 90-24	☐ 98-12	☐ 98-13	☐ 07-31		
Cables		☐ 06-00	☒ 06-01	☐	☐	☐	☐ .....

Result:	**☒ pass**	**☐ fail**	**☐ not applicable**	**☐ not tested**

Measurement Type :	Radiated Field
Polarisation :	Vertical
Table Angle :	0 - 360°
Antenna Height :	1 - 2 - 3 - 4 m
Equipment Under Test :	Telemetry Set RF Head S/N 11
Set-Up :	cage 06-01, see photos
Operating Conditions :	Max power (100% PWM); Pulse 10 Hz, powered by internal battery;
Remarks :	



Zone	25 MHz - 199 MHz	199 MHz - 1 GHz
Video Bandwidth	300 KHz	300 KHz
Resol Bandwidth	100 KHz	100 KHz

Receiver Measures

Frequency	Peak	QuasiPeak (x)	Average (+)	QP Margin
135.60 MHz	37.9 dBµV/m	36.7 dBµV/m	26.8 dBµV/m	6.9 dB

Operator: E. de Raemy
Date/Time: 26.09.2011 10:15
Filename:
RE_FCC_25M-1G_v02.png/.txt

Measurement Type :	Radiated Field
Polarisation :	Horizontal
Table Angle :	0 - 360°
Antenna Height :	1 - 2 - 3 - 4 m

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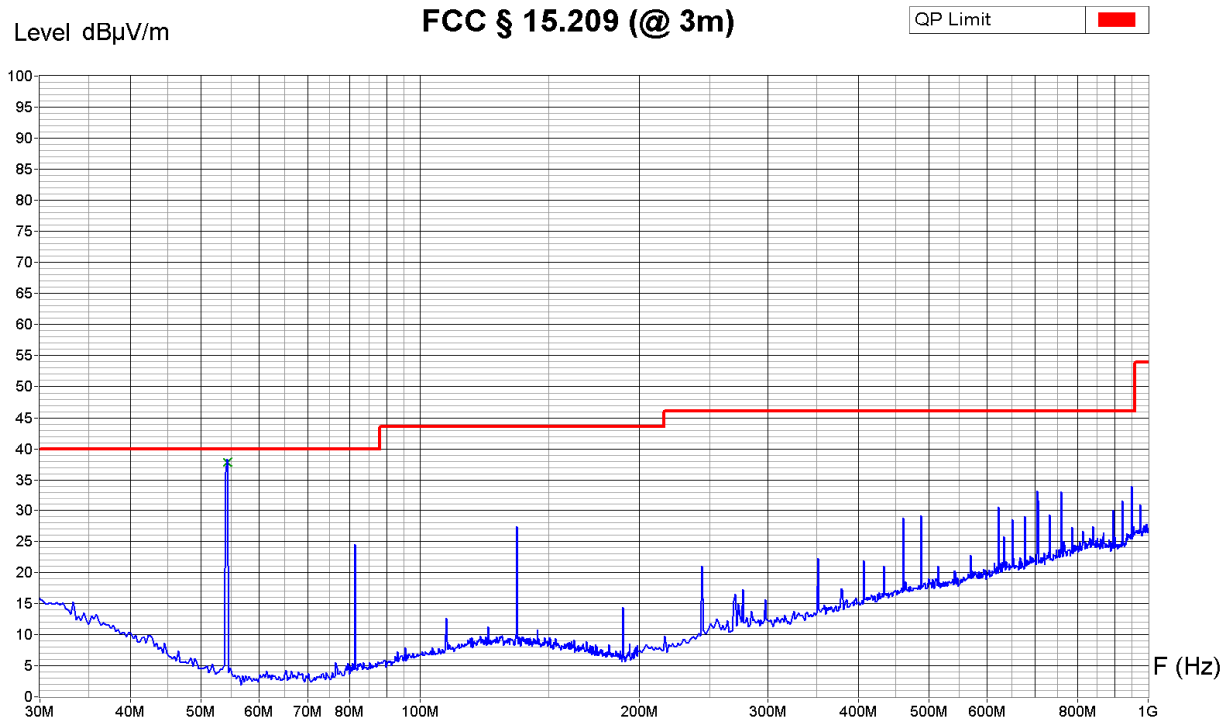
Equipment Under Test :	Telemetry Set RF Head S/N. 11
Set-Up :	cage 06-01, see photos
Operating Conditions :	Max power (100% PWM); Pulse 10 Hz, powered by internal battery;
Remarks :	



Zone	25 MHz - 199 MHz	199 MHz - 1 GHz
Video Bandwidth	300 KHz	300 KHz
Resol Bandwidth	100 KHz	100 KHz

Receiver Measures

Frequency	Peak	QuasiPeak (x)	Average (+)	QP Margin
54.24 MHz	39.8 dBµV/m	37.8 dBµV/m	27.6 dBµV/m	2.2 dB

Operator: E. de Raemy
Date/Time: 26.09.2011 10:52
Filename:
RE_FCC_25M-1G_h02.png/.txt

7. Emission, modulation, and transmission characteristics

7.1 Designiation of emission

Standard:	United States: 47 CFR "Code of Federal Regulations" – Telecommunication ☒ FCC Part 2, Subpart C: Emission: §2.201 and §2.202	
Introduction:	A system of designating emission, modulation and transmission characteristics shall be employed. (a) Emissions are designated according to their classification and their necessary bandwidth. (b) A minimum of three symbols are used to describe the basic characteristics of radio waves. (c) Four symbols are used to describe the necessary bandwidth.	
Necessary bandwidth:	For a given class of emission, the minimum value of the occupied bandwidth sufficient to ensure the transmission of information at the rate and with the quality required for the system employed, under specified conditions.	
	B_n = 2M + 2D	B_n = necessary bandwidth M = maximum modulation frequency (audio) = NA D = Peak frequency deviation = NA
	B_n = NA	
Basic characteristics:	P0N	P : sequence of unmodulated pulses 0 : no modulating signal N : no information transmitted
Designation of emission:	P0N	

NA: not applicable