RRA-EMIESS25A515AXO-01Av0

Certification Radio test report

According to the standard:

CFR 47 FCC PART 15

Equipment under test:

LOKI MKII

FCC ID: *X4GSH-00002*

Company:

SKY-HERO

Distribution: Mr FRANCK **(Company:** SKY-HERO**)**

Number of pages: 38 with 2 appendixes

Ed.	Date	Modified Page(s)	Technical Verification and Quality Approval Name and Function / Visa
0	21-Mar-25	Creation	M. DUMESNIL, Radio Laboratory Manager

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DESIGNATION OF PRODUCT:	***LOKI MKII***
Serial number (S/N):	*01203AD3C0026* ***(Radiated)*** *01203AD3C0246* ***(Conducted)***
Reference / model (P/N):	*SH-00002*
Software version:	*3.3.2*
MANUFACTURER:	*AXON ENTERPRISE, INC*

COMPANY CERTIFYING THE PRODUCT:

Company:	*AXON ENTERPRISE, INC*
Address:	17800 N 85TH ST SCOTTSDALE, AZ 85255 UNITED STATES

COMPANY SUBMITTING THE PRODUCT:

Company:	SKY-HERO
Address:	18 RUE D'ENGHIEN B-1080 - BRUSSELS BELGIQUE
Responsible:	Mr Franck
DATES OF TEST:	From 31-Jan-25 to 24-Feb-25
TESTING LOCATION:	EMITECH ANGERS laboratory at BEAUCOUZE (49) FRANCE FCC Accredited under US-EU MRA Designation Number: FR0009 Test Firm Registration Number: 873677
TESTED BY:	B. VOVARD
VISA:	
WRITTEN BY:	B. VOVARD

CONTENTS

REVISIONS HISTORY

Revision	Date	Modified pages	Modifications
0	**27-Feb-25**	/	Creation

1. INTRODUCTION

This report presents the results of radio test carried out on the following radio equipment: ***LOKI MKII***, in accordance with normative reference.

The equipment under test integrates:

- Proprietary protocol 5 GHz transmitter radio function not already certified,
- 915 MHz SRD transceiver radio part already certified (FCC ID: QOS-RXNANO).

This report concerns only proprietary protocol 5 GHz radio part.

The tests were conducted in accordance with the derogations outlined in document “DA-24-1216A1”.

These measurements used the methodology of CRF FCC Part 15.247.

2. PRODUCT DESCRIPTION

Class:	B
Utilization:	Law Enforcement
Antenna type and gain:	3.9 dBi / Cable dipole antenna
Operating frequency range:	From 5725 MHz to 5850 MHz
Number of channels:	4, see below : - Channel SH23 at 5732 MHz - Channel SH24 at 5769 MHz - Channel SH25 at 5806 MHz - Channel SH26 at 5843 MHz
Channel spacing:	37 MHz
Power Setting:	Video Power 2
Power source:	Battery pack Li-Po 11.1 Vdc 2400 mAh
Frequencies tested:	**Sample 1 (Radiated):** Lowest channel SH23 - 5732 MHz **Sample 1 (Radiated):** Central channel SH25 - 5806 MHz **Sample 1 (Radiated):** Highest channel SH26 - 5843 MHz **Sample 2 (Conducted):** Lowest channel SH23 - 5732 MHz **Sample 2 (Conducted):** Central channel SH25 - 5806 MHz **Sample 2 (Conducted):** Highest channel SH26 - 5843 MHz

The radio is not operational during charge mode. All measurements are realized on internal battery.

Power level, frequency range and channels characteristics are not user adjustable.

The details pictures of the product and the circuit boards are joined with this file.

3. NORMATIVE REFERENCE

The standards and testing methods related throughout this report are those listed below.
They are applied on the whole test report even though the extensions (version, date and amendment) are not repeated.

CFR 47 FCC Part 15 (2025)	Radio Frequency Devices
ANSI C63.10	2013 Procedures for ComplianceTesting of Unlicensed Wireless Devices.
558074 D01 15.247 Meas Guidance v05r02	Guidance for compliance measurements on digital transmission system, frequency hopping spread spectrum system, and hybrid system devices operating under section 15.247 of the FCC rules.

4. TEST METHODOLOGY

Radio performance tests procedures given in CFR 47 part 15:

Subpart C – Intentional Radiators

- Paragraph 203: Antenna requirement
- Paragraph 205: Restricted bands of operation
- Paragraph 207: Conducted limits
- Paragraph 209: Radiated emission limits; general requirements
- Paragraph 212: Modular transmitter
- Paragraph 215: Additional provisions to the general radiated emission limitations
- Paragraph 247: Operation within the bands 902-928 MHz, 2400-2483.5 MHz and 5725-5850 MHz

5. TEST EQUIPMENT CALIBRATION DATES

Emitech Number	Model	Type	Last calibration	Calibration interval (years)	Next calibration due
0	BAT-EMC V3.18.0.26	Software	/	/	/
842	Electro Metrics LPA-30	Log periodic antenna	12/05/2022	3	11/05/2025
1103	Electro Metrics BIA-30HF	Biconical antenna	02/06/2022	3	01/06/2025
1406	EMCO 6502	Loop antenna	04/04/2024	1	04/04/2025
1469	FEM Aéro N-13m	cable	09/10/2023	2	08/10/2025
1766	Mini-circuit ZFL-1000LN	Low-noise amplifier	22/04/2024	1	22/04/2025
2736	N-10m	cable	26/02/2024	2	25/02/2026
3316	10dB	Attenuator	17/09/2024	3	17/09/2027
4087	Filtek LP03/1000-7GH	Low Pass Filter	07/02/2023	3	06/02/2026
4088	R&S FSP40	Spectrum Analyzer	10/06/2024	2	10/06/2026
4353	ATM WR28	Antenna	02/08/2022	3	01/08/2025
4354	ALC ALS2640-30-10	Low-noise amplifier	04/04/2024	1	04/04/2025
6606	Microtronics LPM 15601	Low Pass Filter	16/08/2022	3	15/08/2025
7124	A.H. Systems SAS-572	Antenna	23/05/2022	3	22/05/2025
7566	Testo 608-H1	Meteo station	17/12/2024	2	17/12/2026
8548	Midwest Microwave 10dB	Attenuator	08/02/2023	3	07/02/2026
8552	Aéroflex 30dB 25W	Attenuator	26/07/2022	3	25/07/2025
8855	EMITECH	Turntable and mat controller	/	/	/
8896	ACQUISYS GPS8	Satellite synchronized frequency standard	/	/	/
8974	STORM MICROWAE k-20cm	cable	29/01/2024	2	28/01/2026
10771	EMCO 3117	Antenna	30/11/2022	3	30/11/2025
10789	MATURO	Turntable and mat controller NCD	/	/	/
12590	LUCIX Corp S005180M3201	Low-noise amplifier	29/05/2024	1	29/05/2025
12944	SUCOFLEX N-SMA-30cm	cable	11/12/2024	2	11/12/2026
14903	Fluke 177	Multimeter	22/12/2023	2	21/12/2025
16109	C&C HPF180400	High pass filter	11/08/2022	3	10/08/2025

Emitech Number	Model	Type	Last calibration	Calibration interval (years)	Next calibration due
17008	R&S ESW44	Test receiver	03/05/2024	1	03/05/2025
17296	Huber + Suhner	Cable	25/09/2024	2	25/09/2026
17377	Comtest SAC	Semi Anechoic Chamber	/	/	/
18418	MecHANC - Type K - 1m	Cable	02/09/2024	2	02/09/2026
19154	QOTANA DBLNA317202120S	Low-noise amplifier 18-26GHz	23/09/2024	1	23/09/2025
19263	Radiall R412706124 - 6dB	Attenuator	06/12/2023	3	05/12/2026
19264	Radiall R412706124 - 6dB	Attenuator	06/12/2023	3	05/12/2026
19462	R&S ESW44	Test receiver	25/04/2024	1	25/04/2025
19877	HYTEM - N - 5m	Cable	30/08/2024	2	30/08/2026
19887	HYTEM - N - 1m	Cable	30/08/2024	2	30/08/2026
19898	HYTEM - N - 2.5m	Cable	30/08/2024	2	30/08/2026
19907	HYTEM - N - 5.8m	Cable	30/08/2024	2	30/08/2026
20040	COMTEST FAR-2	Anechoic chamber	/	/	/
//	RS Commander V2.4.2	Software	/	/	/

6. TESTS RESULTS SUMMARY

6.1 CFR 47 part 15requirements

Test procedure	Description of test	Respected criteria?				Comment
		Yes	No	NAp	NAs	
FCC Part 15.203	ANTENNA REQUIREMENT	X				Note 1
FCC Part 15.205	RESTRICTED BANDS OF OPERATION	X				
FCC Part 15.207	CONDUCTED LIMITS				X	Note 2
FCC Part 15.209	RADIATED EMISSION LIMITS; general requirements	X				Note 3
FCC part 15.215	ADDITIONAL PROVISIONS TO THE GENERAL RADIATED EMISSION LIMITATIONS					
	(a) Alternative to general radiated emission limits	X				
	(b) Unwanted emissions outside of §15.247 frequency bands	X				Note 4
	(c) 20 dB bandwidth and band-edge compliance	X				
FCC Part 15.247	OPERATION WITHIN THE BANDS 902-928 MHZ, 2400-2483.5 MHz and 5725-5850 MHz					
	(a) (1) Hopping systems			X		
	(a) (2) Digital modulation techniques	X				Note 5
	(b) Maximum peak output power	X				
	(c) Operation with directional antenna gains > 6 dBi			X		
	(d) Intentional radiator	X				
	(e) Peak power spectral density	X				
	(f) Hybrid system			X		
	(g) Frequency hopping requirements			X		
	(h) Frequency hopping intelligence			X		
	(i) RF exposure compliance	X				

NAp: Not Applicable NAs: Not Asked

Note 1: Integral antenna with 3.9 dBi.

Note 2: The radio is not operational during charge mode. All measurements are realized on internal battery.

Note 3: See FCC part 15.247 (d).

Note 4: See FCC part 15.209. Unwanted emissions levels are all below the fundamental emission field strength level.

Note 5: The minimum 6 dB bandwidth of the equipment is 6858.75 kHz.

7. MEASUREMENT UNCERTAINTY

To declare, or not, the compliance with the specifications, it was not explicitly taken into account of uncertainty associated with the result(s)

The reported expanded uncertainty of measurement is stated as the standard uncertainty of measurement multiplied by the coverage factor k=2, which for normal distribution corresponds to a coverage probability of approximately 95%.

Parameter	Emitech Uncertainty
RF power, conducted	± 0.8dB
Radiated emission valid to 26 GHz 9kHz – 30MHz 30MHz – 1GHz 1GHz – 18GHz 18GHz – 40GHz	 ± 4.3 dB ± 5.9 dB ± 4.8 dB ± 5.9 dB
AC Power Lines conducted emissions	± 3.7 dB
Temperature	± 0.95 °C
Humidity	± 4.6 %

8. OCCUPIED BANDWIDTH

Temperature (°C) : 20 **Humidity (%HR):** 55 **Date :** January 31, 2025
Technician : B. VOVARD

Standard: FCC Part 15

Test procedure:
Method of paragraphs 11.8 of ANSI C63.10 (6dB Measurement)
Method of paragraphs 6.9.3 of ANSI C63.10 (99% Measurement)

Test set up:

Test realized in near field.

Setting:

Measure	**6dB**	**99%**
Center frequency	The centre frequency of the channel under test	
Detector	Peak	
Span	2 to 5 times the OBW	1.5 to 5 times the OBW
RBW	100kHz	1% to 5% of the OBW
VBW	300kHz	3 x RBW
Trace	Max hold	
Sweep	Auto	

Test operating condition of the equipment:

The equipment under test is blocked in discontinuous modulated transmission mode with constant duty cycle and a power setting at “Video Power 2”.

We used for power source the internal battery:
Voltage at the beginning of test (Vdc): 11.40
Voltage at the end of test (Vdc): 11.32
Percentage of voltage drop during the test (%): 0.70

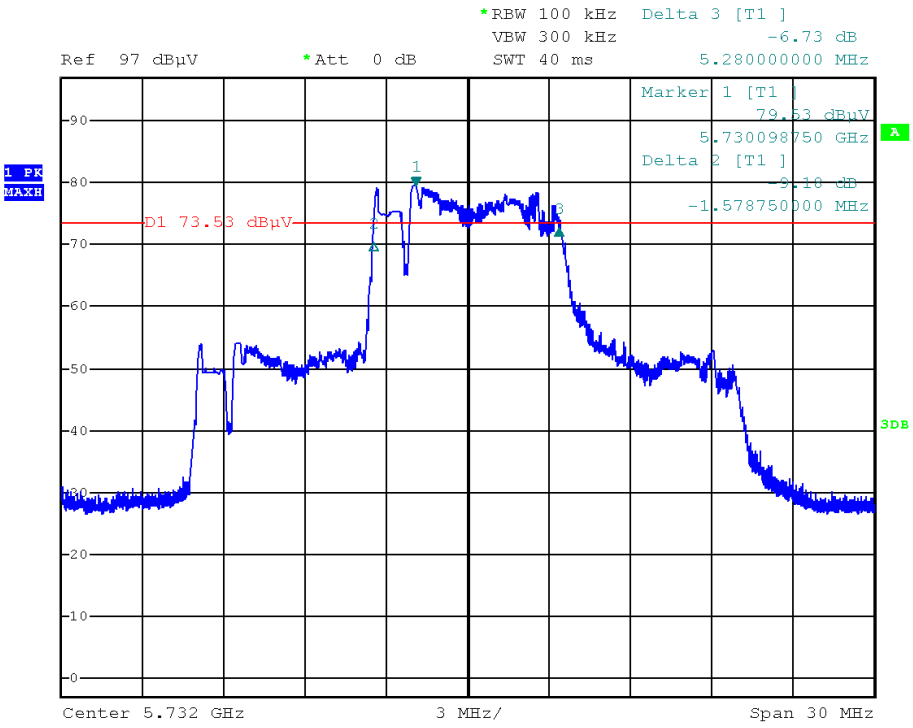
Results:

EUT	Channel	Frequency (MHz)	6 dB Emissions Bandwidth (MHz)
Sample 1	SH23	5732	6.85
Sample 1	SH25	5806	7.38
Sample 1	SH26	5843	7.26

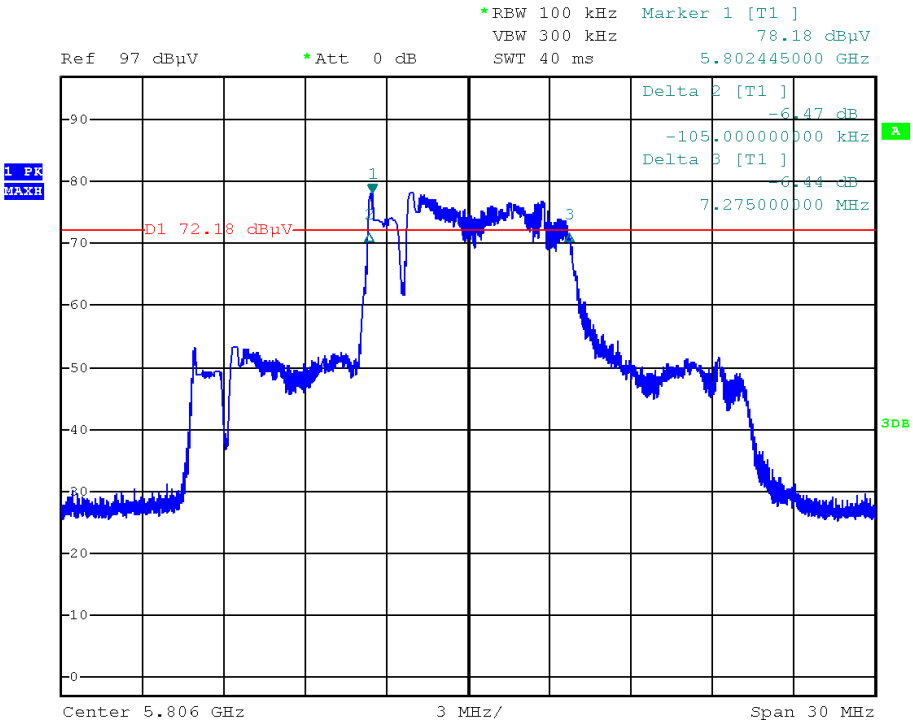
EUT	Channel	Frequency (MHz)	99% Emissions Bandwidth (MHz)
Sample 1	SH23	5732	7.22
Sample 1	SH25	5806	7.67
Sample 1	SH26	5843	7.50

Sample N° 1

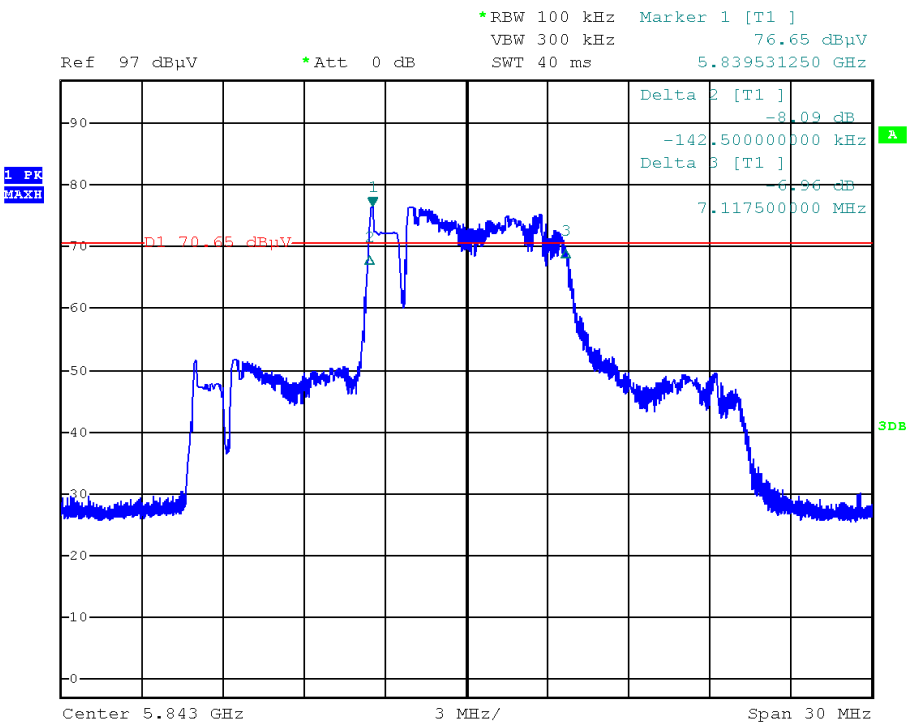
6dB bandwidth – Channel SH23 - 5732 MHz



6dB bandwidth – Channel SH25 - 5806 MHz



6dB bandwidth – Channel SH26 - 5843 MHz

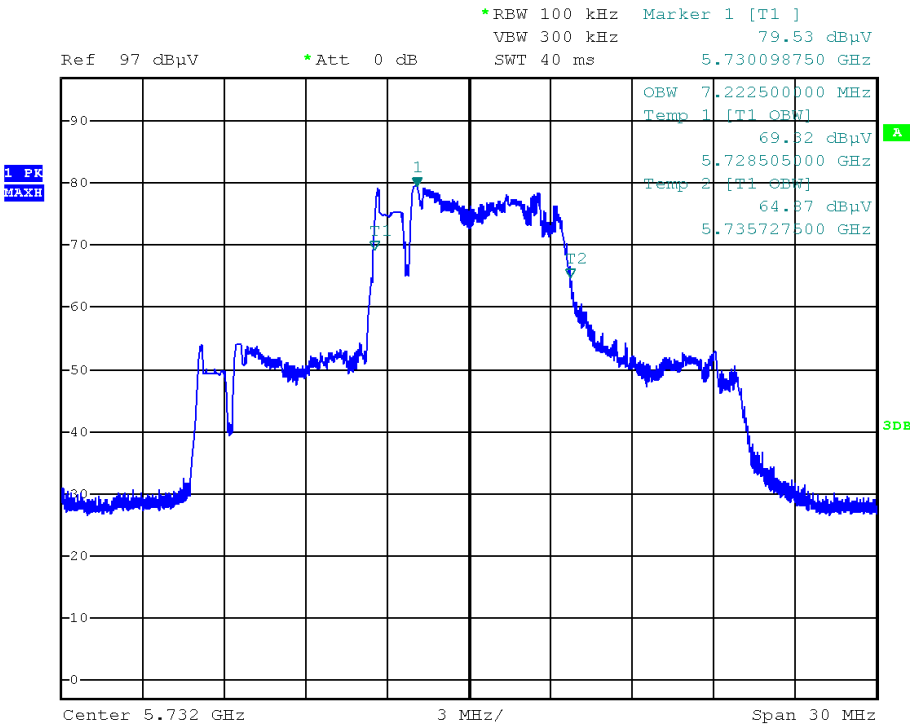


Limit:

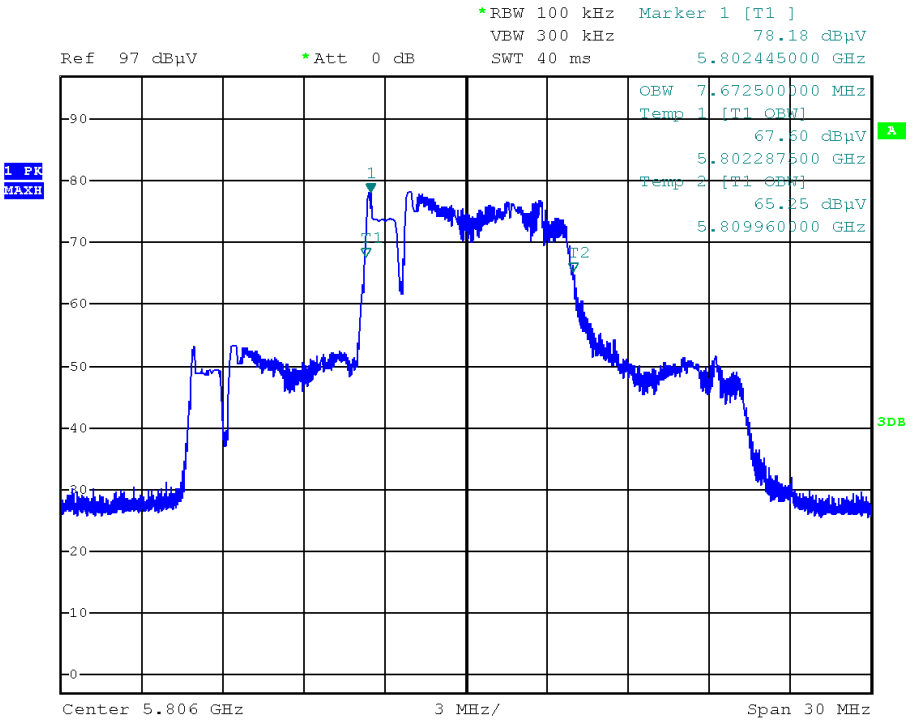
Shall be at least 500 kHz

Sample N° 1

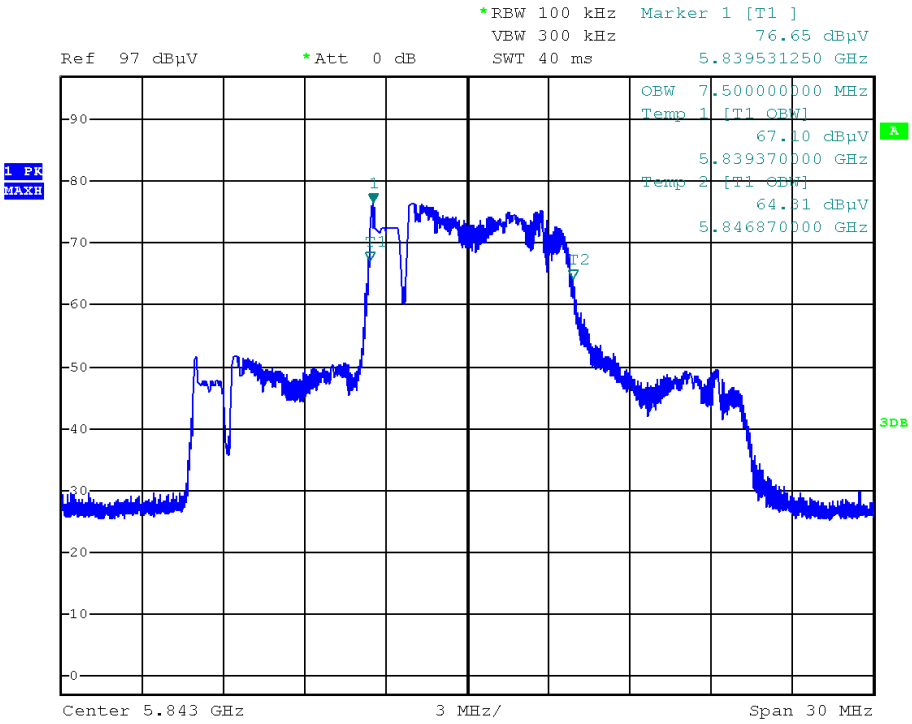
99% bandwidth – Channel SH23 - 5732 MHz



99% bandwidth – Channel SH25 - 5806 MHz



99% bandwidth – Channel SH26 - 5843 MHz



Measure realized for reporting only

Test conclusion:

RESPECTED STANDARD

9. BAND EDGE

Temperature (°C) : 20 **Humidity (%HR):** 33 **Date :** February 7, 2025
Technician : B. VOVARD

Standard: FCC Part 15

Test procedure:

Method of paragraph 11.13.2 of ANSI C63.10
Method of paragraph 11.13.4 of ANSI C63.10

Test set up:

Test realized in near field. All field strength measurements are correlated with the radiated maximum peak output power.

Test operating condition of the equipment:

The equipment under test is blocked in discontinuous modulated transmission mode with constant duty cycle and a power setting at “Video Power 2”.

We used for power source the internal battery:

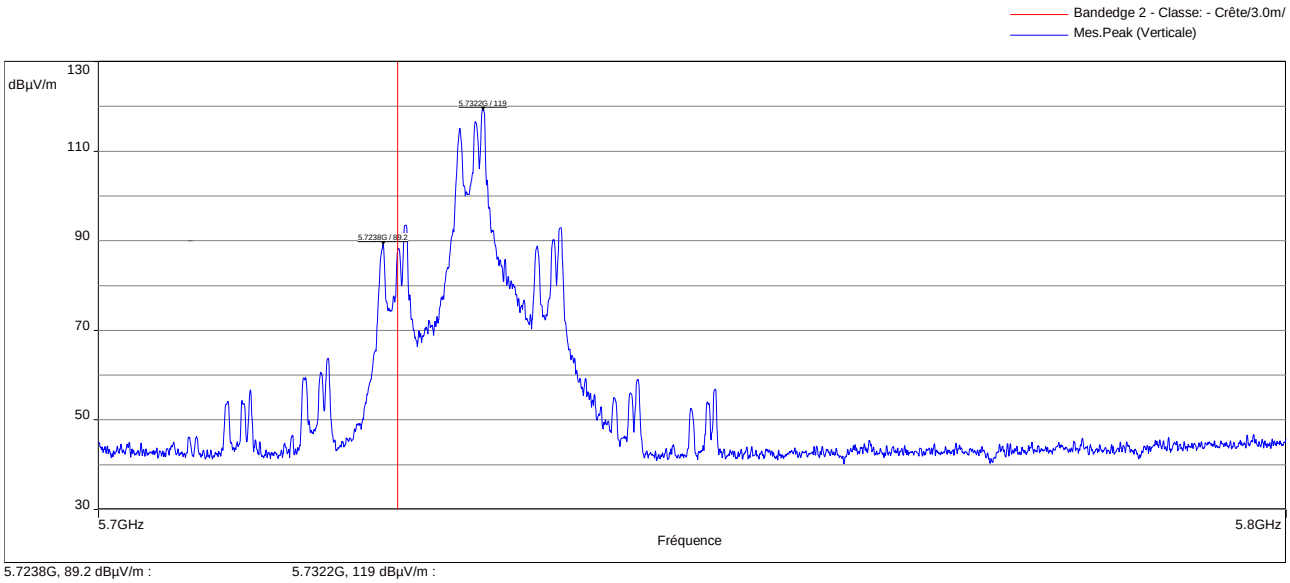
Voltage at the beginning of test (Vdc):	11.40
Voltage at the end of test (Vdc):	11.32
Percentage of voltage drop during the test (%):	0.70

Results:

Sample N° 1

Lower Band Edge: From 5723 MHz to 5725 MHz

Channel SH23 - 5732 MHz



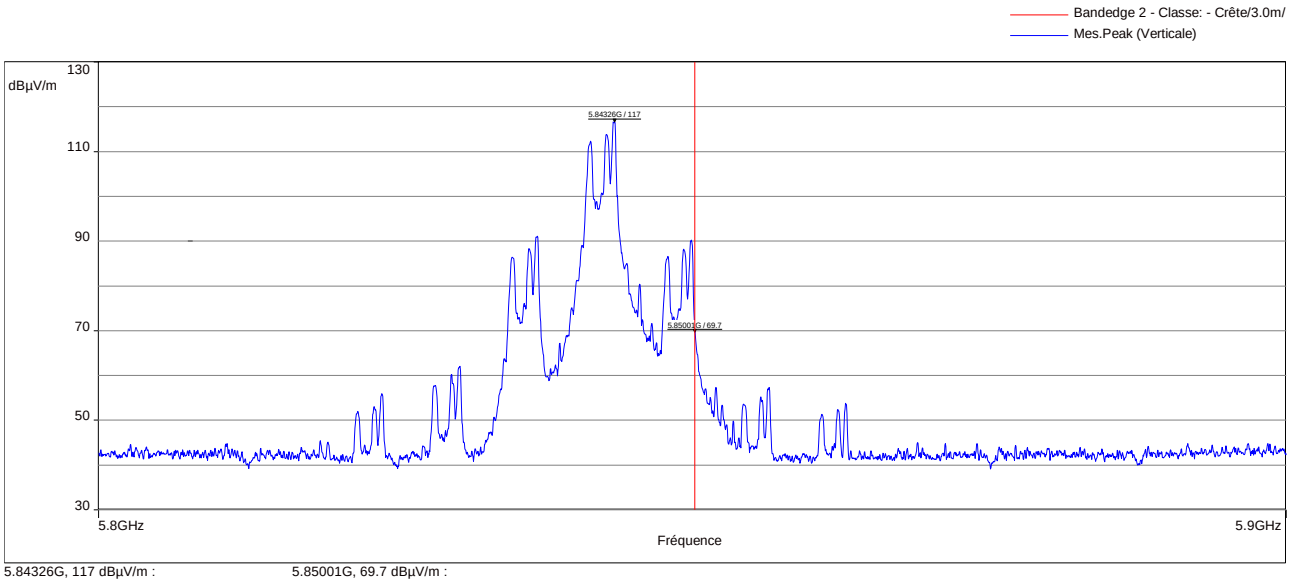
5.7238G, 89.2 dBµV/m : 5.7322G, 119 dBµV/m :

Fundamental frequency (MHz)	Field Strength Level of fundamental (dBµV/m)	Detector (Peak or Average)	Frequency of maximum Band-edges Emission (MHz)	Delta Marker (dB) (1)	Calculated Max Out-of-Band Emission Level (dBµV/m)	Limit (dBµV/m)	Margin (dB)
5732	119.26	Peak	5723.80	29.80	89.46	95.26 (2)	5.80

(1) Marker-Delta method
(2) Limit increased by 6 dB, see derogation in document “DA-24-1216A1”.

Upper Band Edge: From 5850 MHz to 5852 MHz

Channel SH26 - 5843 MHz



Fundamental frequency (MHz)	Field Strength Level of fundamental (dBµV/m)	Detector (Peak or Average)	Frequency of maximum Band-edges Emission (MHz)	Delta Marker (dB) (1)	Calculated Max Out-of-Band Emission Level (dBµV/m)	Limit (dBµV/m)	Margin (dB)
5843	116.01	Peak	5850.01	47.30	68.71	95.26 (2)	26.55

(1) Marker-Delta method
(2) Limit increased by 6 dB, see derogation in document “DA-24-1216A1”.

Applicable limits: In any 100 kHz bandwidth outside the frequency band in which the spread spectrum or digitally modulated intentional radiator is operating, the radio frequency power that is produced by the intentional radiator shall be at least 30 dB below that in the 100 kHz bandwidth within the band that contains the highest level of the desired power.
The highest level recorded in a 100 kHz bandwidth is 119.26 dBµV/m on channel SH23.
So the applicable limit is 89.26 dBµV/m.

In addition, radiated emissions which fall in the restricted band, as defined in section 15.205 (a), must also comply with the radiated emission limits specified in section 15.209 (a) (see section 15.205 (c)).
In addition, radiated emissions which fall in the restricted band, as defined in Table 6 of RSS-Gen, must also comply with the radiated emission limits specified in Table 4 and Table 5 of RSS-Gen.

Test conclusion:

RESPECTED STANDARD

10. AVERAGE CONDUCTED OUTPUT POWER

Temperature (°C) : 22 **Humidity (%HR):** 34 **Date :** February 6, 2025
Technician : B. VOVARD

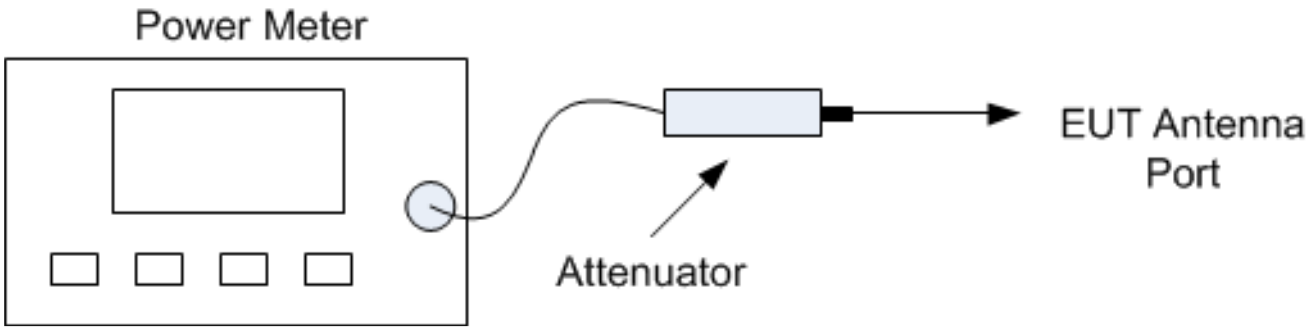
Standard: FCC Part 15

Test procedure:
For FCC Part 15: paragraph 15.247 (b)

AVGSA-2 of paragraph 11.9.2.2.4 of ANSI C63.10

Test set up:

Conducted test



The measure is realized in conducted mode and average output power is measured with a spectrum analyzer:

Resolution bandwidth:	1% to 5% of the OBW, not to exceed 1 MHz.
Video bandwidth:	3 x RBW
Span:	At least 1.5 x OBW
Detector:	RMS
Sweep points:	At least 2 x SPAN/RBW
Sweep time:	Auto
Trace:	Average detector RMS
Trace Number:	At least 100 traces

Then channel power function is used to compute power on OBW band.

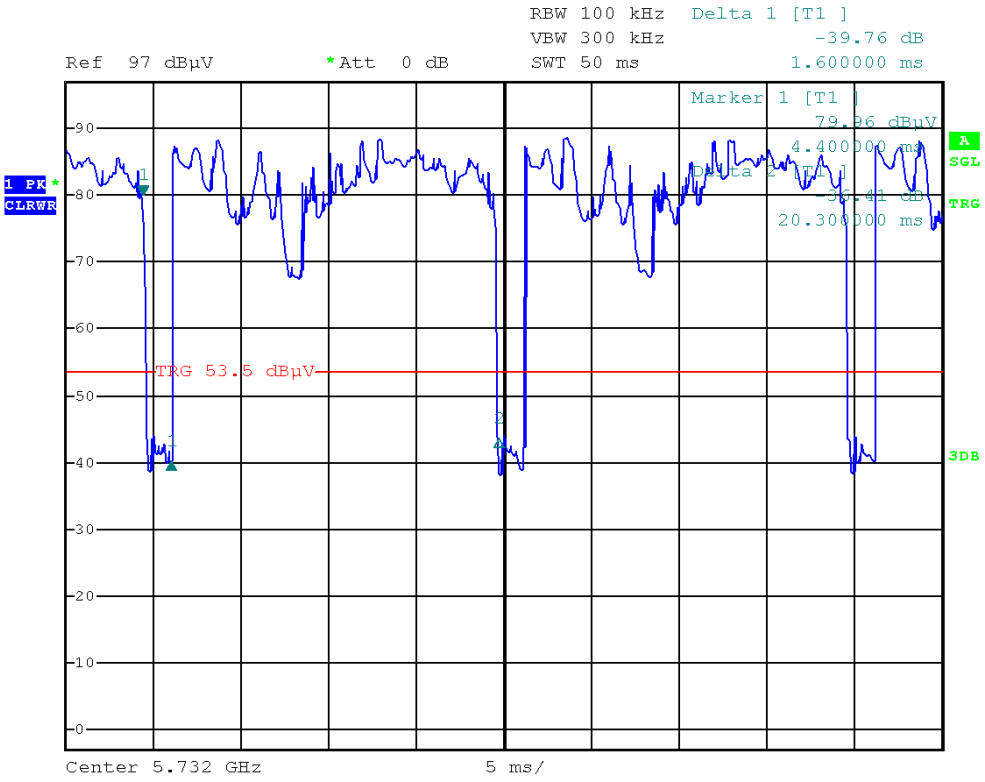
Then the measure is adjusted with the duty cycle correction factor (10log(1/x) with x is the duty cycle).

Equipment under test operating condition:

The equipment under test is blocked in discontinuous modulated transmission mode with constant duty cycle and a power setting at “Video Power 2”.

Duty cycle measured:
Ton= 18.70 ms
Toff= 1.60 ms
X= 0.92

Correction= 10 log (1/X) = 0.35 dB



We used for power source the internal battery:

Voltage at the beginning of test (Vdc):	11.42
Voltage at the end of test (Vdc):	11.38
Percentage of voltage drop during the test (%):	0.35

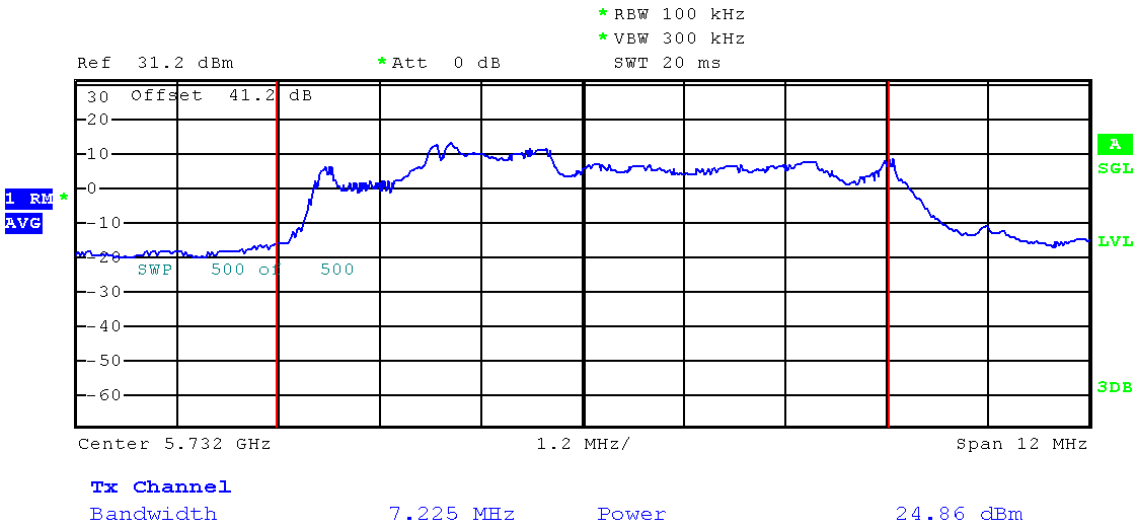
Results:

Sample N° 1

Channel SH23 - 5732 MHz

	Maximum Average conducted output power (1)		Limit	Maximum Average EIRP		Limit
	(dBm)	(W)	(W)	(dBm)	(W)	(W)
Nominal supply voltage: 11.1 Vdc	24.86	0.306	0.563 (2)	28.76	0.752	2.241 (2)

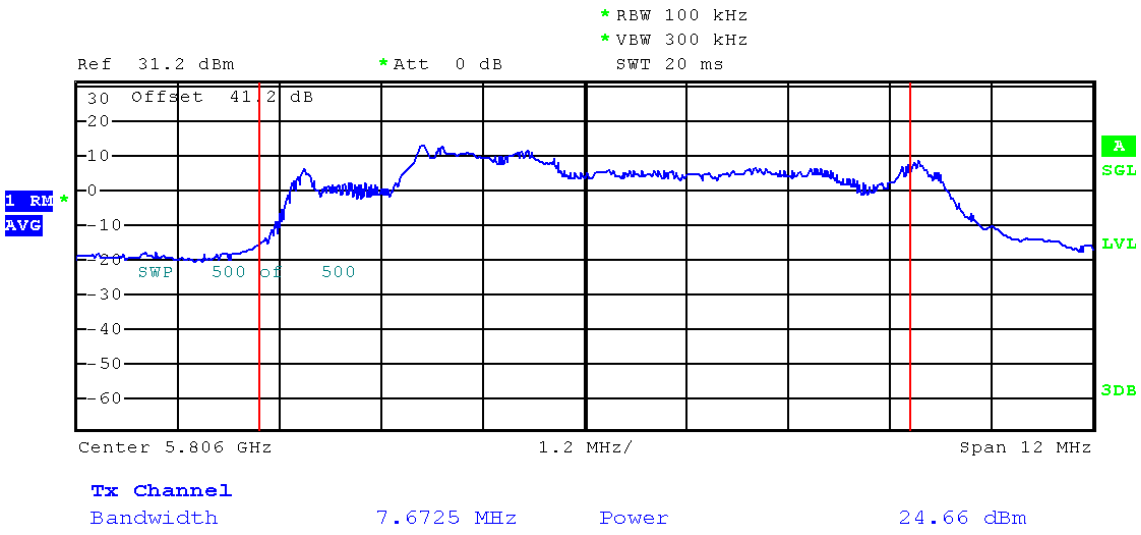
(1) duty cycle included
(2) see document "DA-24-1216A1"
Declared maximum antenna gain: 3.9 dBi



Channel SH25 - 5806 MHz

	Maximum Average conducted output power (1)		Limit	Maximum Average EIRP		Limit
	(dBm)	(W)	(W)	(dBm)	(W)	(W)
Nominal supply voltage: 11.1 Vdc	24.66	0.292	0.563 (2)	28.56	0.718	2.241 (2)

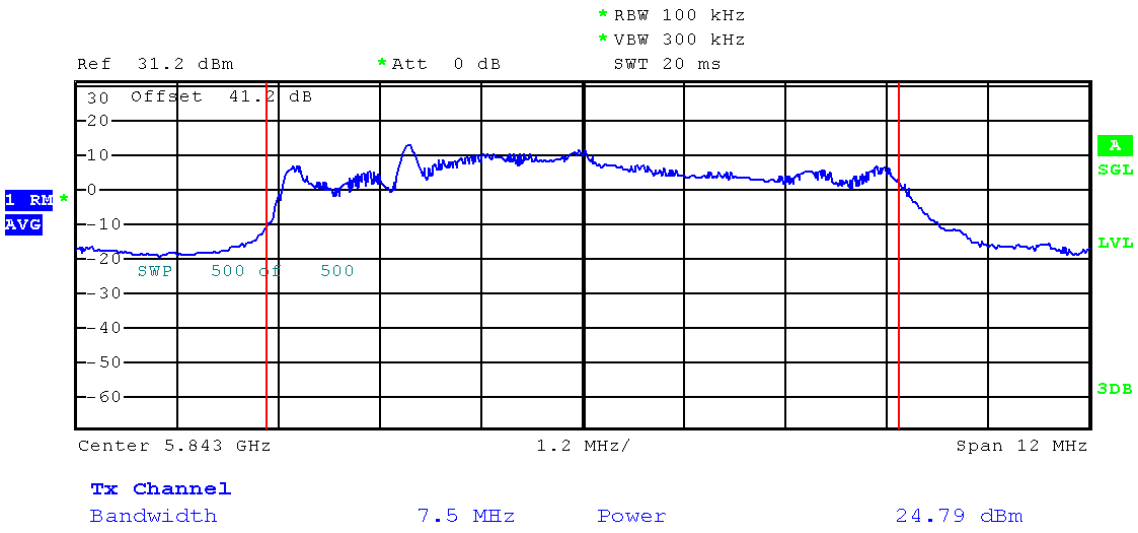
(1) duty cycle included
(2) see document “DA-24-1216A1”
Declared maximum antenna gain: 3.9 dBi



Channel SH26 - 5843 MHz

	Maximum Average conducted output power (1)		Limit	Maximum Average EIRP		Limit
	(dBm)	(W)	(W)	(dBm)	(W)	(W)
Nominal supply voltage: 11.1 Vdc	24.79	0.301	0.563 (2)	28.69	0.740	2.241 (2)

(1) duty cycle included
(2) see document “DA-24-1216A1”
Declared maximum antenna gain: 3.9 dBi



Test conclusion:

RESPECTED STANDARD

11. RADIATED SPURIOUS EMISSIONS

Temperature (°C) : 19 **Humidity (%HR):** 51 **Date :** February 20, 2025 to March 24, 2025

Technician : B. VOVARD

Standard: FCC Part 15

Test procedure:

For FCC Part 15: paragraph 15.205, paragraph 15.209, paragraph 15.247 (d)

Emissions in non-restricted frequency bands method of paragraph 11.11 of ANSI C63.10
Emissions in restricted frequency bands method of paragraph 11.12 of ANSI C63.10

Test set up: (Refer Appendix 2)

First an exploratory radiated measurement was performed. During this phase the product is oriented in this normal position.

Then the final measurement is realized with the product on the most critical orientation.

The measure is realized on semi anechoic room under 1 GHz and in anechoic chamber above 1 GHz.

When the system is tested in semi anechoic room , the EUT is placed on a rotating table, 0.8m from a ground plane.

When the system is tested in anechoic chamber, the EUT is placed on a rotating table, 1.5 m from a ground plane.

Zero degree azimuths correspond to the front of the device under test.

See test setup in appendix 2

Frequency range: From 9 kHz to 10th harmonic of the highest fundamental frequency (5843 MHz)

Detection mode: Quasi-peak (F < 1 GHz) Peak / Average (F > 1 GHz)

Bandwidth: 200Hz (9 kHz < F < 150kHz)
9 kHz (150 kHz < F < 30MHz)
120 kHz (30 MHz < F < 1 GHz)
100 kHz / 1 MHz (F > 1 GHz)

Distance of antenna: 3 meters (in semi anechoic room) / 3 meters (in anechoic room)

Antenna height: 1 to 4 meters (in semi anechoic room) / 1 to 2.5 meters or 0.5 m above the top of the EUT, whichever is higher (in anechoic room)

Antenna polarization: vertical and horizontal (only the highest level is recorded)

Equipment under test operating condition:

The equipment under test is blocked in discontinuous modulated transmission mode with constant duty cycle and a power setting at “Video Power 2”.

We used for power source the internal battery:
Voltage at the beginning of test (Vdc): 11.27
Voltage at the end of test (Vdc): 11.01
Percentage of voltage drop during the test (%): 2.30

Results:

Sample N° 1

Channel SH23 - 5732 MHz

Frequencies (MHz)	Detector P QP Av	Antenna height (cm)	Azimuth (degree)	RBW (kHz)	Polarization H: Horizontal V: Vertical	Field strength Measured at 3 m (dBµV/m)	Limits at 3 m (dBµV/m)	Margin (dB)
10000	P	150	0	1000	V	48.75 (1)	95.26 (4)	46.51
11464 (2)	P	200	332	1000	V	57.89	74	16.11
11464 (2)	Av	200	332	1000	V	52.61	54	1.39
17196	P	150	0	1000	H	51.33 (1)	95.26 (4)	43.93
22928 (2)	P	120	0	1000	V	45.55 (3)	74	28.45
28660	P	140	0	1000	V	44.72 (1)	95.26 (4)	50.54
34392	P	140	0	1000	H	49.12 (1)	95.26 (4)	46.14

P= Peak, QP=Quasi-peak, Av=Average
(1) Noise floor
(2) Restricted bands of operation in 15.205
(3) The peak level is lower than the average limit (54 dBµV/m)
(4) Limit increased by 6 dB, see derogation in document “DA-24-1216A1”

Channel SH24 - 5806 MHz

Frequencies (MHz)	Detector P QP Av	Antenna height (cm)	Azimuth (degree)	RBW (kHz)	Polarization H: Horizontal V: Vertical	Field strength Measured at 3 m (dBµV/m)	Limits at 3 m (dBµV/m)	Margin (dB)
10000	P	150	0	1000	V	48.73 (1)	95.26 (4)	46.53
11612 (2)	P	150	346	1000	V	50.78 (3)	74	23.22
17418	P	150	0	1000	V	52.85	95.26 (4)	42.41
23224	P	120	0	1000	V	37.38 (1)	95.26 (4)	57.88
29030	P	140	0	1000	V	44.58 (1)	95.26 (4)	50.68
34836	P	140	0	1000	V	47.75 (1)	95.26 (4)	47.51

P= Peak, QP=Quasi-peak, Av=Average
(1) Noise floor
(2) Restricted bands of operation in 15.205
(3) The peak level is lower than the average limit (54 dBµV/m)
(4) Limit increased by 6 dB, see derogation in document “DA-24-1216A1”

Channel SH26 - 5843 MHz

Frequencies (MHz)	Detector P QP Av	Antenna height (cm)	Azimuth (degree)	RBW (kHz)	Polarization H: Horizontal V: Vertical	Field strength Measured at 3 m (dBµV/m)	Limits at 3 m (dBµV/m)	Margin (dB)
10000	P	150	0	1000	V	48.72 (1)	95.26 (4)	46.54
11686 (2)	P	150	74	1000	V	52.65 (3)	74	21.35
17529	P	150	0	1000	V	51.02 (1)	95.26 (4)	44.24
23372	P	120	0	1000	V	35.71 (1)	95.26 (4)	59.55
29215	P	140	0	1000	V	45.60 (1)	95.26 (4)	49.66
35058	P	140	0	1000	V	49.01 (1)	95.26 (4)	46.25

P= Peak, QP=Quasi-peak, Av=Average
(1) Noise floor
(2) Restricted bands of operation in 15.205
(3) The peak level is lower than the average limit (54 dBµV/m)
(4) Limit increased by 6 dB, see derogation in document “DA-24-1216A1”

Applicable limits: In any 100 kHz bandwidth outside the frequency band in which the spread spectrum or digitally modulated intentional radiator is operating, the radio frequency power that is produced by the intentional radiator shall be at least 30 dB below that in the 100 kHz bandwidth within the band that contains the highest level of the desired power.

The highest level recorded in a 100 kHz bandwidth is 119.26 dBµV/m on channel SH23. So the applicable limit is 89.26 dBµV/m.

In addition, radiated emissions which fall in the restricted band, as defined in section 15.205 (a), must also comply with the radiated emission limits specified in section 15.209 (a) (see section 15.205 (c)).

Test conclusion:

RESPECTED STANDARD

12. AVERAGE CONDUCTED POWER SPECTRAL DENSITY

Temperature (°C) : 22 **Humidity (%HR):** 34 **Date :** February 6, 2025
Technician : B. VOVARD

Standard: FCC Part 15

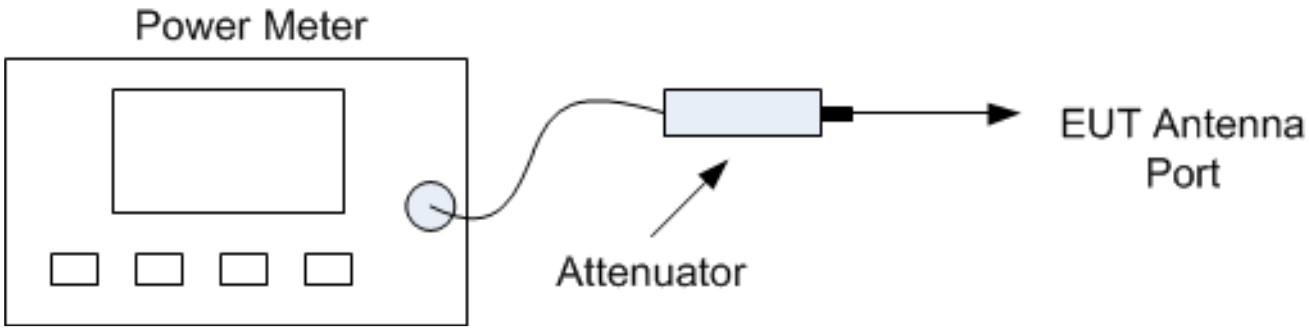
Test procedure:

For FCC Part 15: paragraph 15.247 (e), paragraph 15.247 (f)

AVGPSD-2 of paragraph 11.10.5 of ANSI C63.10

Test set up:

Conducted test



The measure is realized in conducted mode and average output power spectral density is measured with a spectrum analyzer:

Resolution bandwidth:	3 kHz
Video bandwidth:	10 kHz
Span:	12 MHz
Detector:	RMS
Sweep points:	100
Sweep time:	Auto
Trace:	Average detector RMS
Trace Number:	At least 100 traces

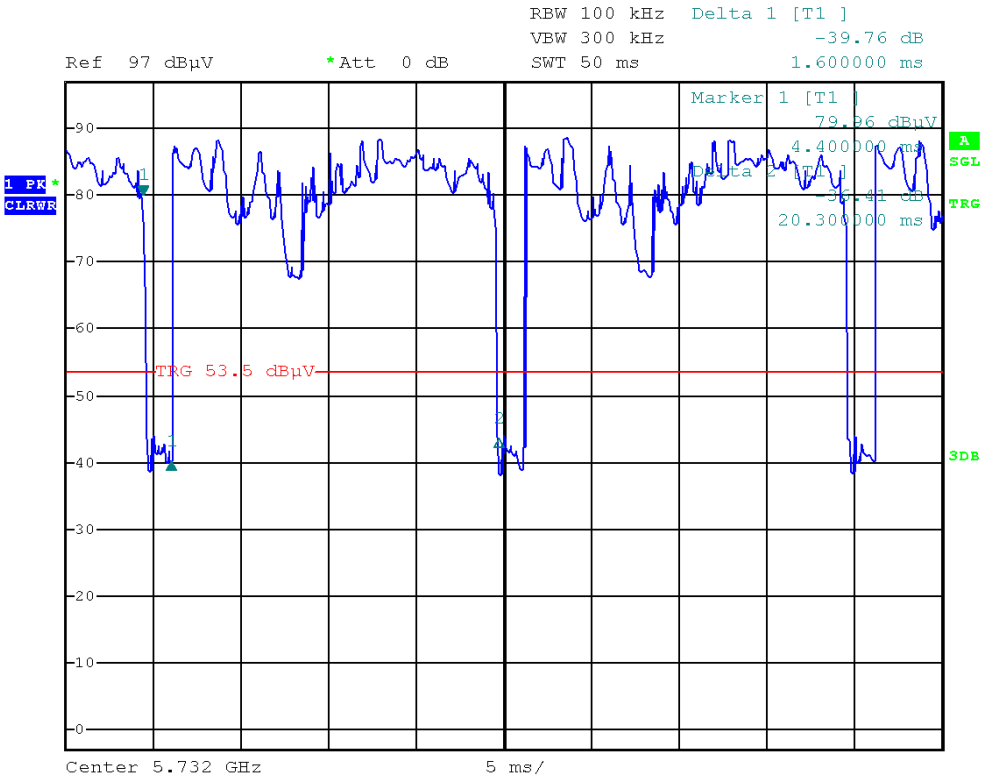
Then the measure is adjusted with the duty cycle correction factor (10log(1/x) with x is the duty cycle).

Equipment under test operating condition:

The equipment under test is blocked in discontinuous modulated transmission mode with constant duty cycle and a power setting at “Video Power 2”.

Duty cycle measured:
Ton= 18.70 ms
Toff= 1.60 ms
X= 0.92

Correction= 10 log (1/X) = 0.35 dB



We used for power source the internal battery:

Voltage at the beginning of test (Vdc):	11.38
Voltage at the end of test (Vdc):	11.35
Percentage of voltage drop during the test (%):	0.26

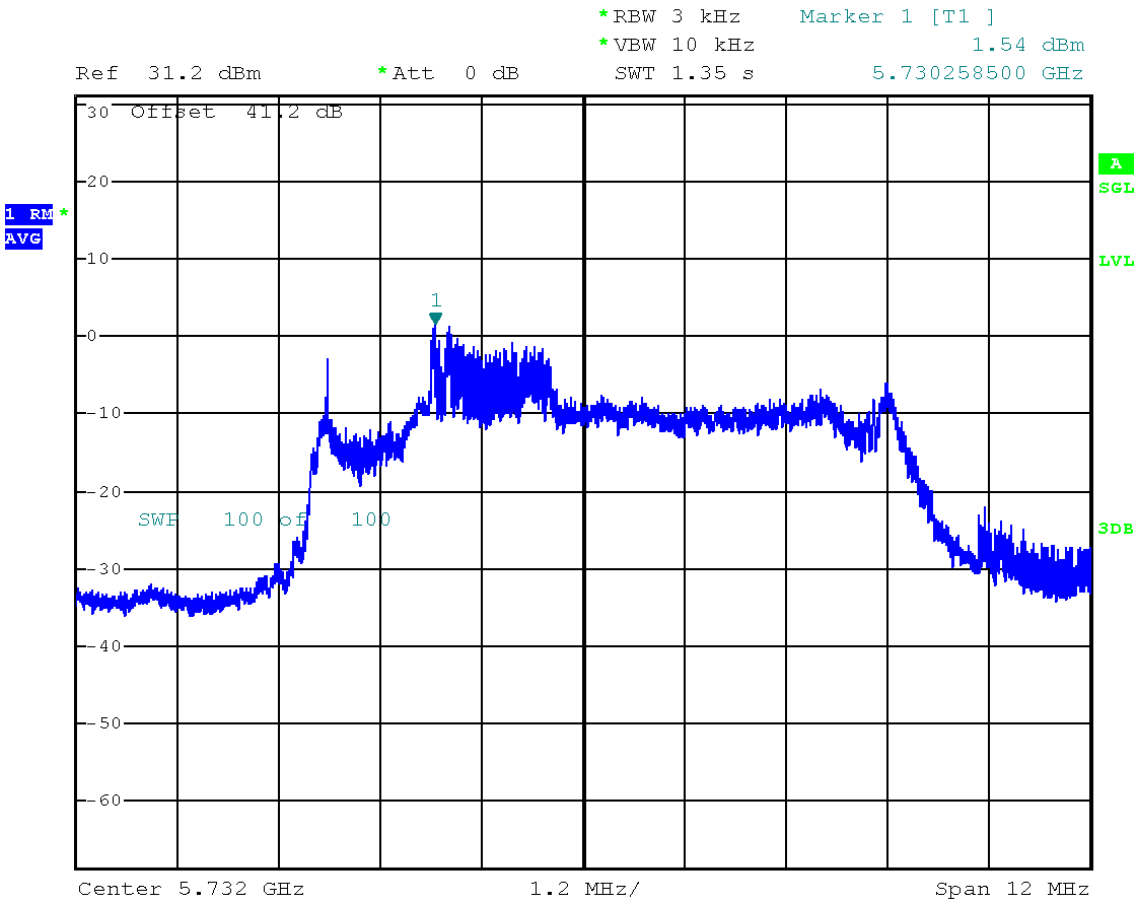
Results:

Sample N° 1

Channel SH23 - 5732 MHz

	Maximum Average conducted power density (dBm / 3 kHz) (1)	Limit (dBm / 3 kHz)
Nominal supply voltage: 11.1 Vdc	1.54	6.5 (2)

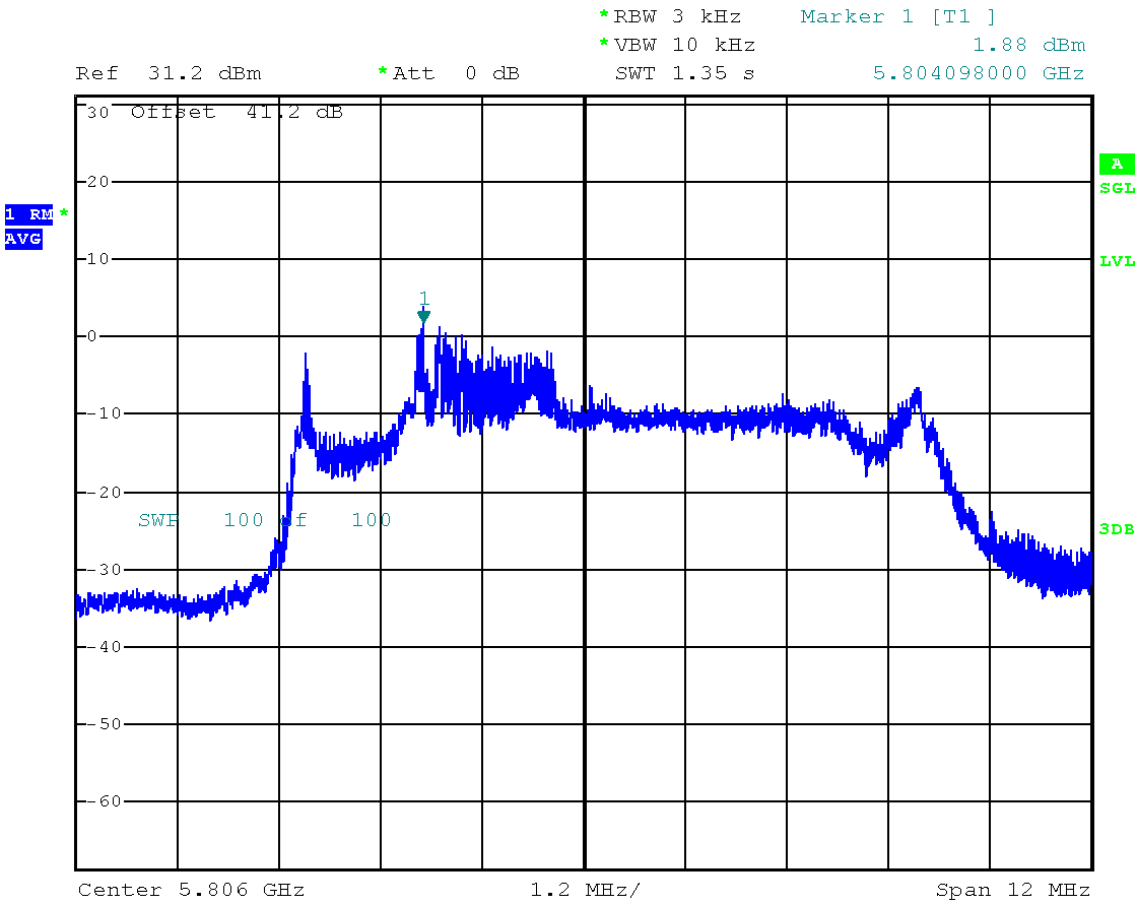
(1) duty cycle included
(2) see document "DA-24-1216A1"
Declared maximum antenna gain: 3.9 dBi



Channel SH25 - 5806 MHz

	Maximum Average conducted power density (dBm / 3 kHz) (1)	Limit (dBm / 3 kHz)
Nominal supply voltage: 11.1 Vdc	1.88	6.5 (2)

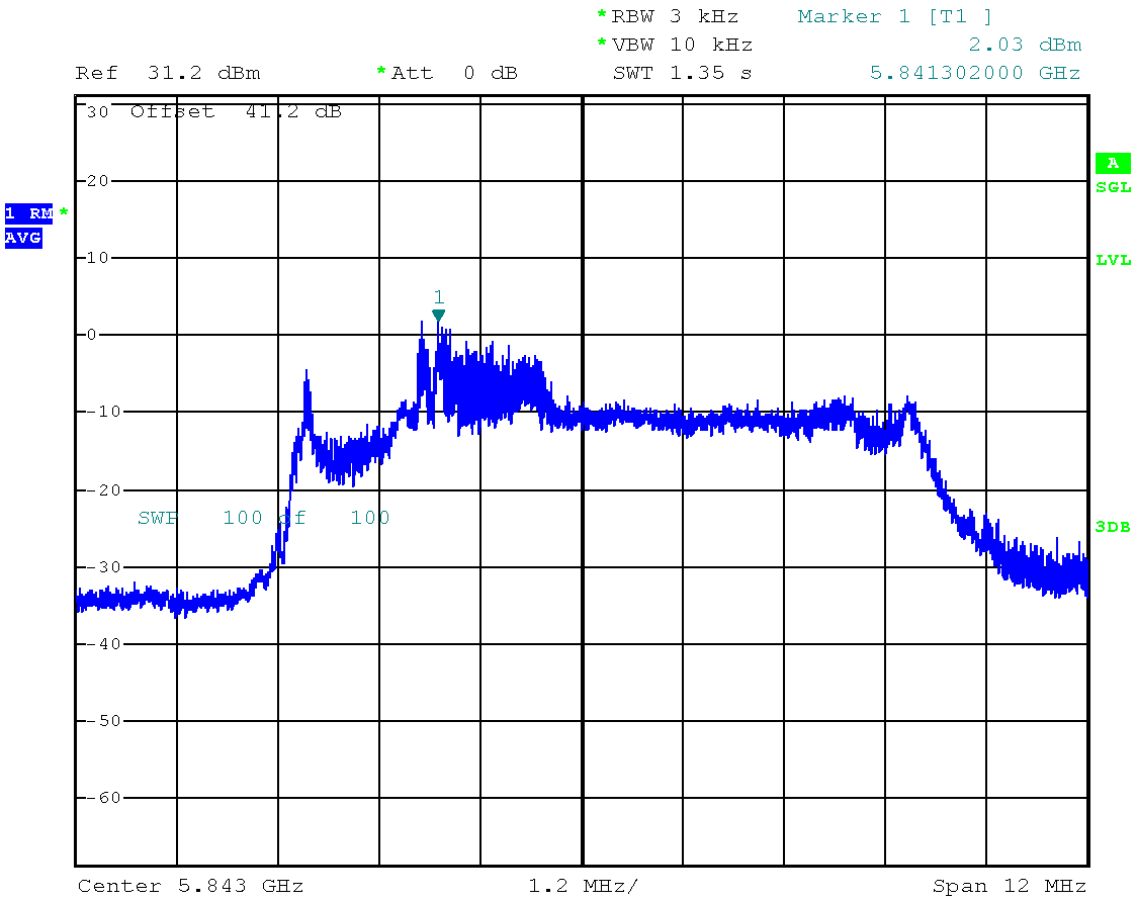
(1) duty cycle included
(2) see document “DA-24-1216A1”
Declared maximum antenna gain: 3.9 dBi



Channel SH26 - 5843 MHz

	Maximum Average conducted power density (dBm / 3 kHz) (1)	Limit (dBm / 3 kHz)
Nominal supply voltage: 11.1 Vdc	2.03	6.5 (2)

(1) duty cycle included
(2) see document “DA-24-1216A1”
Declared maximum antenna gain: 3.9 dBi



Test conclusion:

RESPECTED STANDARD

□□□ End of report, 2 appendixes to be forwarded □□□

APPENDIX 1: Test equipment list

Occupied bandwidth

TYPE	MANUFACTURER	EMITECH NUMBER
Satellite synchronized frequency standard GPS8	ACQUISYS	8896
Full anechoic chamber 2	EMITECH	20040
Turntable and mat controller NCD	MATURO	10789
Spectrum Analyzer FSP40	Rohde & Schwarz	4088
Low-noise amplifier S005180M3201	LUCIX Corp.	12590
Attenuator 10dB	Midwest Microwave	8548
N-1M Cable	HYTEM	19887
N-2.5M Cable	HYTEM	19898
N-5M Cable	HYTEM	19877
N-5.8M Cable	HYTEM	19907
Antenna 3117	ETS-Lindgren	10771
Multimeter 177	Fluke	14903
Meteo station 608-H1	Testo	7566
Software	RS Commander V2.4.2	//

Band edge

TYPE	MANUFACTURER	EMITECH NUMBER
Satellite synchronized frequency standard GPS8	ACQUISYS	8896
Full anechoic chamber 2	EMITECH	20040
Turntable and mat controller NCD	MATURO	10789
Spectrum Analyzer FSP40	Rohde & Schwarz	4088
Low-noise amplifier S005180M3201	LUCIX Corp.	12590
Attenuator 10dB	Midwest Microwave	8548
N-1M Cable	HYTEM	19887
N-2.5M Cable	HYTEM	19898
N-5M Cable	HYTEM	19877
N-5.8M Cable	HYTEM	19907
Antenna 3117	ETS-Lindgren	10771
Multimeter 177	Fluke	14903
Meteo station 608-H1	Testo	7566
Software	BAT-EMC V3.18.0.26	0000

Average conducted output power

TYPE	MANUFACTURER	EMITECH NUMBER
Satellite synchronized frequency standard GPS8	ACQUISYS	8896
Spectrum Analyzer FSP40	Rohde & Schwarz	4088
Attenuator 30 dB 25W	Aeroflex	8552
Attenuator 10dB 50W	Pasternack	3316
N-0.3M Cable	SUCOFLEX	12944
Multimeter 177	Fluke	14903
Meteo station 608-H1	Testo	7566
Software	RS Commander V2.4.2	//

Radiated spurious emissions

TYPE	MANUFACTURER	EMITECH NUMBER
Semi anechoic room	EMITECH	17377
Turntable and mat controller	EMITECH	8855
Full anechoic chamber 2	EMITECH	20040
Turntable and mat controller NCD	MATURO	10789
Satellite synchronized frequency standard GPS8	ACQUISYS	8896
Test receiver ESW44	Rohde & Schwarz	19462
Test receiver ESW44	Rohde & Schwarz	17008
Loop antenna 6502	EMCO	1406
Biconical antenna BIA-30HF	Electro Metrics	1103
Log periodic antenna LPA-30	Electro Metrics	0842
Antenna 3117	ETS-Lindgren	10771
Antenna SAS-572	A.H Systems	7124
Antenna WR28	ATM	4353
Low-noise amplifier S005180M3201	LUCIX Corp.	12590
Low-noise amplifier ZFL-1000LN	Mini-circuit	1766
Low-noise amplifier DBLNA317202120S	QOTANA	19154
Low-noise amplifier ALS2640-30-10	ALC	4354
Attenuator 6dB	Radiall	19263
Attenuator 6dB	Radiall	19264
N-1M Cable	HYTEM	19887
N-2.5M Cable	HYTEM	19898
N-5M Cable	HYTEM	19877
N-5.8M Cable	HYTEM	19907
N-13M Cable	FEM Aero	1469
N-5M Cable	Huber + Suhner	17296
N-10M Cable	EMITECH	2736
Cable k-20cm	STORM MICROWAE	8974
Cable k-100cm	MecHANC	18418
Low pass filter LP03/1000-7GH	Filtek	4087
Low Pass Filter LPM15601	Microtronics	6606
Low Pass Filter LPM15601	Microtronics	6606
High pass filter HPF180400	C&C	16109
Multimeter 177	Fluke	14903
Meteo station 608-H1	Testo	7566
Software	BAT-EMC V3.18.0.26	0000

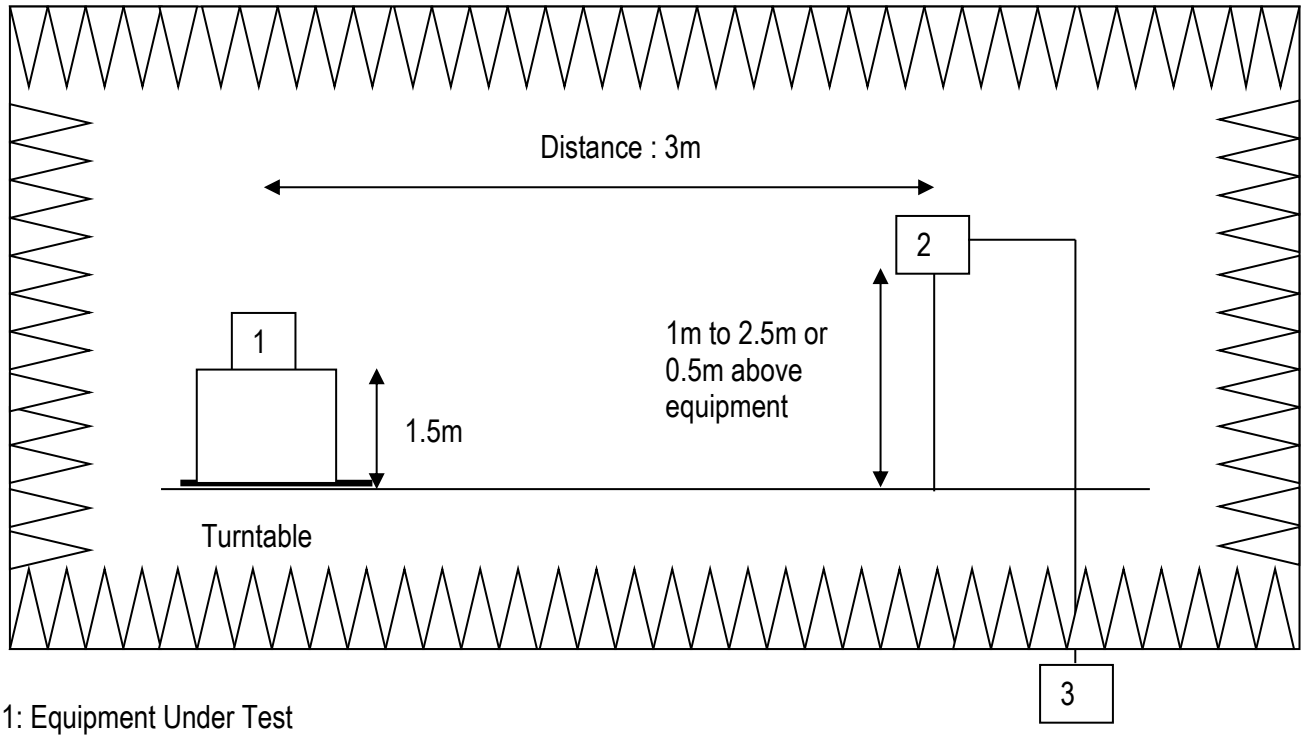
Average conducted power spectral density

TYPE	MANUFACTURER	EMITECH NUMBER
Satellite synchronized frequency standard GPS8	ACQUISYS	8896
Spectrum Analyzer FSP40	Rohde & Schwarz	4088
Attenuator 30 dB 25W	Aeroflex	8552
Attenuator 10dB 50W	Pasternack	3316
N-0.3M Cable	SUCOFLEX	12944
Multimeter 177	Fluke	14903
Meteo station 608-H1	Testo	7566
Software	RS Commander V2.4.2	//

APPENDIX 2: Radiated Test Setup

Anechoic chamber setup

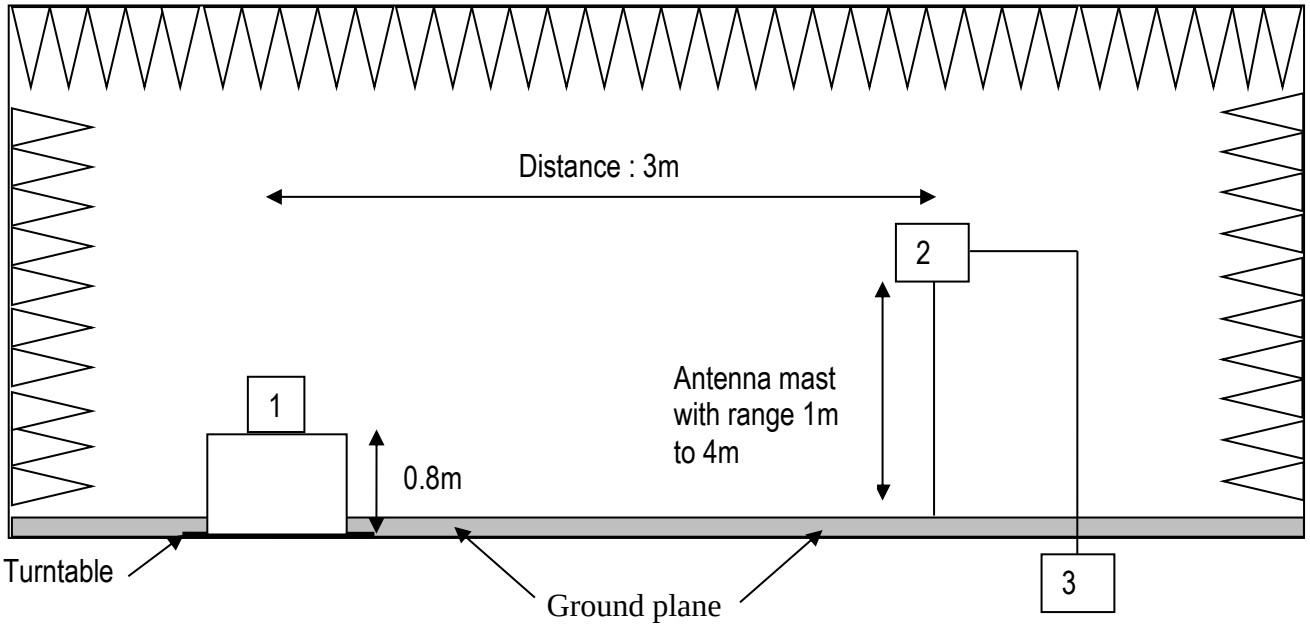
Above 1 GHz



1: Equipment Under Test
2: Measurement antenna with tilt for variation from 1 to 2.5m or 0.5m above top of equipment
3: Measurement equipment

Semi anechoic chamber setup

Between 30 MHz and 1 GHz



1: Equipment Under Test
2: Measurement antenna
3: Measurement equipment