

RRA-EMIESS25C202ADE-08Av0

Radio test report

According to the standard:

CFR 47 FCC PART 15

RSS GEN – Issue 5

RSS 247 – Issue 3

Equipment under test:

ARFWL55 integrated to Renew Adeunis range

FCCID : U3Z-ARFWL55

Company:

ADEUNIS

Distribution: Mr Emmanuel MONNET

(Company: ADEUNIS)

Number of pages: 137 with 3 annexes

Ed.	Date	Modified Page(s)	Technical Verification and Quality Approval	
			Name and Function	Visa
0	5-Mar-26	Creation	J.C. BOGA, Laboratories Manager	

Duplication of this document is only permitted for an integral photographic facsimile. It includes the number of pages referenced here above.

This document is the result of testing a specimen or a sample of the product submitted. It does not imply an assessment of the conformity of the whole manufactured products of the tested sample.

Information in italics are declared by the manufacturer/customer and are under his responsibility

DESIGNATION OF PRODUCT: *ARFWL55 integrated to Renew Adeunis range*

Serial number (S/N): 0018B2100001ACA5

Reference / model (P/N): ARFWL55

Software version: V1.3.0

MANUFACTURER: ADEUNIS

COMPANY SUBMITTING THE PRODUCT:

Company: ADEUNIS

Address: 283, rue Louis Neel Parc technologique Pre Roux
38920 CROLLES
FRANCE

Responsible: Mr Emmanuel MONNET

DATES OF TEST: From 22-Apr-25 to 28-Apr-25

TESTING LOCATION: EMITECH LYON laboratory at CHASSIEU (69) FRANCE

FCC Accredited under US-EU MRA Designation Number: FR0013
Test Firm Registration Number: 807590

ISED Accredited under CANADA-EU MRA Designation Number: FR0007
Industry Canada Registration Number: 4379D

TESTED BY: T. LEDRESSEUR

VISA:



WRITTEN BY: T. LEDRESSEUR

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REVISIONS HISTORY

Revision	Date	Modified pages	Modifications
0	25-Feb-26	/	Creation

1. INTRODUCTION

This report presents the results of radio test carried out on the following radio equipment: **ARFWL55 integrated to Renew Adeunis range**, in accordance with normative reference.

This report concern only the test plan 1, 2 and 3 indicated below.

2. PRODUCT DESCRIPTION

Utilization:	Residential use
Power source:	Internal battery 3.7Vdc
Antenna type and gain:	External antenna, gain 1dBi (maximum gain)
Operating frequency band:	From 902 MHz to 928 MHz

Channel plan 1 (US 915)

Operating frequency range:	From 902.3 MHz to 914.9 MHz
Number of channels:	64
Channel spacing:	200kHz
Modulation:	LoRa (Chirp spread spectrum)
Spread Factor:	7 to 10

During test the output power was adjusted at the maximal level with the following setting (Power 20)

Channel plan 2 (AU 915)

Operating frequency range:	From 915.2 MHz to 927.8 MHz
Number of channels:	64
Channel spacing:	200kHz
Modulation:	LoRa (Chirp spread spectrum)
Spread Factor:	7 to 10

During test the output power was adjusted at the maximal level with the following setting (Power 20)

Channel plan 3 (AS 923)

Operating frequency range: From 923.2 MHz to 923.4 MHz

Number of channels: 2

Channel spacing: 200kHz

Modulation: LoRa (Chirp spread spectrum)

Spread Factor: 7 to 10

During test the output power was adjusted at the maximal level with the following setting (Power 16)

Channel plan 4 (US 915)

Operating frequency range: From 903 MHz to 914.2 MHz

Number of channels: 8

Channel spacing: 1600kHz

Modulation: LoRa (Chirp spread spectrum)

Spread Factor: 7 to 12

During test the output power was adjusted at the maximal level with the following setting (Power 20)

Channel plan 5 (AU 915)

Operating frequency range: From 915.9 MHz to 927.1 MHz

Number of channels: 8

Channel spacing: 1600kHz

Modulation: LoRa (Chirp spread spectrum)

Spread Factor: 7 to 12

During test the output power was adjusted at the maximal level with the following setting (Power 20)

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 (2026)	Radio Frequency Devices
ANSI C63.10	2020 + Corrigendum (2023) + Amendment 1 (2024) Procedures for Compliance Testing 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.
RSP-100	Issue 12, August 2019 Certification of Radio Apparatus and Broadcasting equipment
RSS-Gen	Issue 5, April 2018 General Requirements for Compliance of Radio Apparatus
RSS-247	Issue 3, August 2023 Digital Transmission Systems (DTSs), Frequency Hopping Systems (FHSs) and Licence-Exempt Local Area Network (LE-LAN) Devices

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

Radio performance tests procedures given in RSS-Gen:

- Paragraph 2 - General
- Paragraph 3 - Normative publications and related documents
- Paragraph 4 - Labelling requirements
- Paragraph 6 - General administrative and technical requirements
- Paragraph 8 - Licence-exempt Radio Apparatus

Radio performance tests procedures given in RSS-247:

- Paragraph 3 - Certification requirements
- Paragraph 4 - Measurement method
- Paragraph 5 - Standard specifications for frequency hopping systems and digital transmission systems operating in 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	/	/	/
5609	EMCO 3146A	Log periodic antenna	14/12/2024	3	14/12/2027
6118	Rohde et Schwarz HK116	Biconical antenna	14/12/2024	3	14/12/2027
6217	Rohde & Schwarz ESH3-Z5	LISN	27/07/2024	1	27/07/2025
6290	HAEFELY PHF555	Power source	(1)	(1)	(1)
6970	Schwarzbeck BBHA 9120D	Antenna	16/12/2021	3	16/12/2025
7302	Filtek HP12/1200-5AA	High-pass filter	17/08/2022	3	16/08/2025
7564	La Crosse Technology WS-9232	Meteo station	09/06/2024	2	09/06/2026
7651	SIDT Cage	Anechoic chamber	/	/	/
10262	Agilent Technologies 8449B	Low-noise amplifier	11/03/2025	1	11/03/2026
10952	Agilent 34401A	Multimeter	21/07/2023	2	21/07/2025
11316	Agilent N9010A	Receiver	05/09/2024	1	05/09/2025
11588	Rohde et Schwarz NRP-Z86	Power Sensor	07/03/2024	2	07/03/2026
11855	EMITECH	Outside room	/	/	/
12492	Weinschel 10dB 18GHz 2W	Attenuator	26/02/2024	3	26/02/2027
14037	Microtronics HPM15162	High-pass filter	20/10/2024	3	20/10/2027
14522	Huber + Suhner k-1m	Cable	29/01/2024	2	29/01/2026
14690	ETS lindgren 3160-09	Antenna	07/01/2025	3	07/01/2028
14851	Wright Technologie ASL40-B3015	Low-noise amplifier	29/01/2024	2	29/01/2026
14887	JYE BAO k-15cm	Cable	29/01/2024	2	29/01/2026
15775	RFPA INT-BA011000-25	Low-noise amplifier	07/03/2025	1	07/03/2026
15776	Rohde & Schwarz FSV40	Spectrum Analyzer	22/02/2025	1	22/02/2026
15790	Testo 608-H1	Meteo station	20/11/2024	1	20/11/2025
15892	HUBER et SUHNER N 18GHz 3m	Cable	31/05/2023	2	31/05/2025
15893	HUBER et SUHNER SMA 18GHz 3m	Cable	31/05/2023	2	31/05/2025
15916	HUBER et SUHNER SMA 18GHz 3.5m	Cable	31/05/2023	2	31/05/2025
15933	HUBER et SUHNER SMA 18GHz 5m	Cable	31/05/2023	2	31/05/2025
17207	COM-POWER LIT-930A	Transient limiter	02/09/2022	3	02/09/2025
17829	Emitech	Absorber sheath current	01/06/2023	2	01/06/2025
19114	Fluke 177	Multimeter	31/05/2023	2	31/05/2025
///	Rohde et Schwarz Power Viewer Plus V5.9	Software	/	/	/

(1) The equipment is not verified; instead, the output voltage is checked before each measurement with the calibrated multimeter.

6. TESTS RESULTS SUMMARY

6.1 CFR 47 part 15 requirements

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				
FCC Part 15.209	RADIATED EMISSION LIMITS; general requirements	X				Note 2
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 3
	(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		
	(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 without standard connector.

Note 2: See FCC part 15.247 (d).

Note 3: See FCC part 15.209. Unwanted emissions levels are all below the fundamental emission field strength level.

6.2 RSS-Gen requirements

Test procedure	Description of test	Criteria respected ?				Comment
		Yes	No	NAp	NAs	
Paragraph 8	Licence-exempt radio apparatus					
§ 8.1	Measurement Bandwidths and Detector Functions	X				
§ 8.2	Pulsed operation	X				
§ 8.3	Prohibition of amplifiers	X				
§ 8.4	User manual notice				X	see certification documents
§ 8.5	Measurement of licence-exempt devices on-site (in-situ)			X		
§ 8.6	Operating frequency range of devices in master/slave networks	X				
§ 8.7	Radio frequency identification (RFID) devices			X		
§ 8.8	AC power line conducted emissions limits	X				
§ 8.9	Transmitter emission limits	X				
§ 8.10	Restricted frequency bands	X				
§ 8.11	Frequency stability			X		

NAp: Not Applicable

NAs: Not Asked

6.3 RSS-247 requirements

Test Procedure RSS-247	Description of test	Criteria respected ?				Comment
		Yes	No	NAp	NAs	
Paragraph 5	Standard specifications for frequency hopping system and digital transmission systems operating in the bands 902-928 MHz, 2400-2483.5 MHz and 5725-5850 MHz					
5.1	Frequency hopping systems (FHSS)			X		
5.2	Digital transmission systems			X		
5.3	Hybrid systems	X				
5.4	Transmitter output power and equivalent isotropically radiated power (e.i.r.p.) requirements	X				
5.5	Unwanted emissions	X				

NAp: Not Applicable

NAs: Not Asked

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	$\pm 0.8\text{dB}$
Radiated emission valid to 26 GHz	
9kHz – 30MHz	$\pm 4.3 \text{ dB}$
30MHz – 1GHz	$\pm 5.9 \text{ dB}$
1GHz – 18GHz	$\pm 4.8 \text{ dB}$
18GHz – 40GHz	$\pm 5.9 \text{ dB}$
AC Power Lines conducted emissions	$\pm 3.7 \text{ dB}$
Temperature	$\pm 0.95 \text{ }^{\circ}\text{C}$
Humidity	$\pm 4.6 \text{ \%}$

8. AC CONDUCTED EMISSIONS

Temperature (°C) : 19 to 23

Humidity (%HR): 39 to 48

Date : April 22, 2025 to
April 28, 2025

Technician : T. LEDRESSEUR

Standard: FCC Part 15
RSS-Gen

Test procedure:

For FCC Part 15: Paragraph 15.207

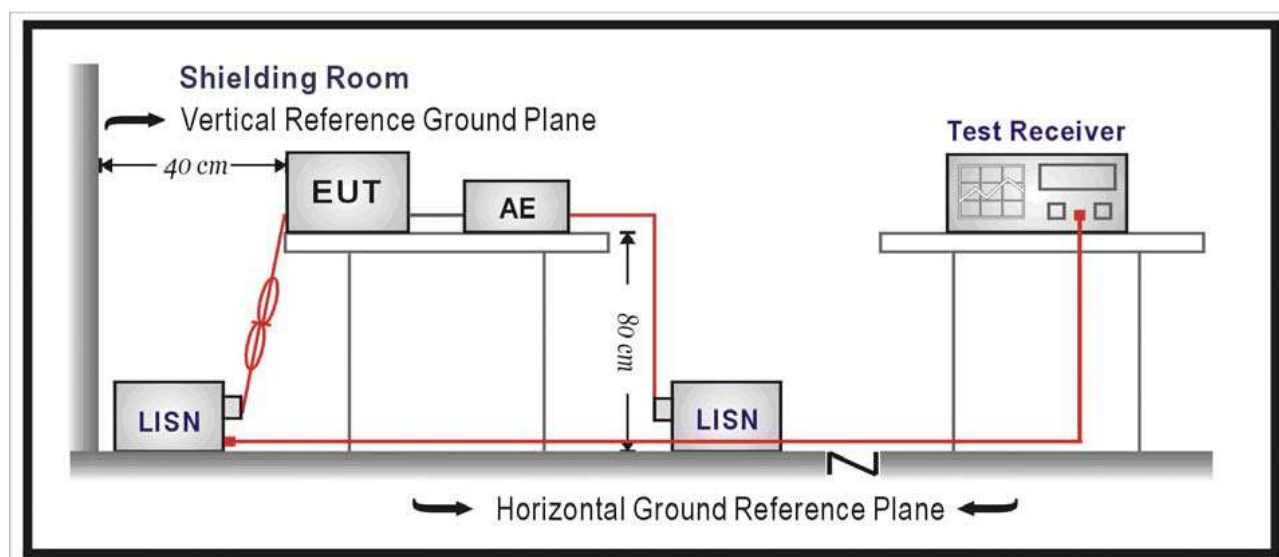
For RSS-Gen: Paragraph 8.8

Method of paragraph 6.2 of ANSI C63.10

Software used: BAT-EMC V3.18.0.26

Test set up:

The EUT is isolated and placed on a wooden table, 0.8 m over an horizontal reference plane and 0.4 m from a vertical reference plane. It is powered by an artificial main network placed on the ground reference plane. The equipment is powered with the AC power operating voltage of 120 V / 60 Hz.



Frequency range: 150 kHz - 30 MHz

Detection mode: Peak / Quasi-peak / Average

Bandwidth: 10 kHz / 9 kHz

Equipment under test operating condition:

The equipment under test is blocked in continuous modulated transmission mode, at the highest output power level at which the transmitter is intended to operate.

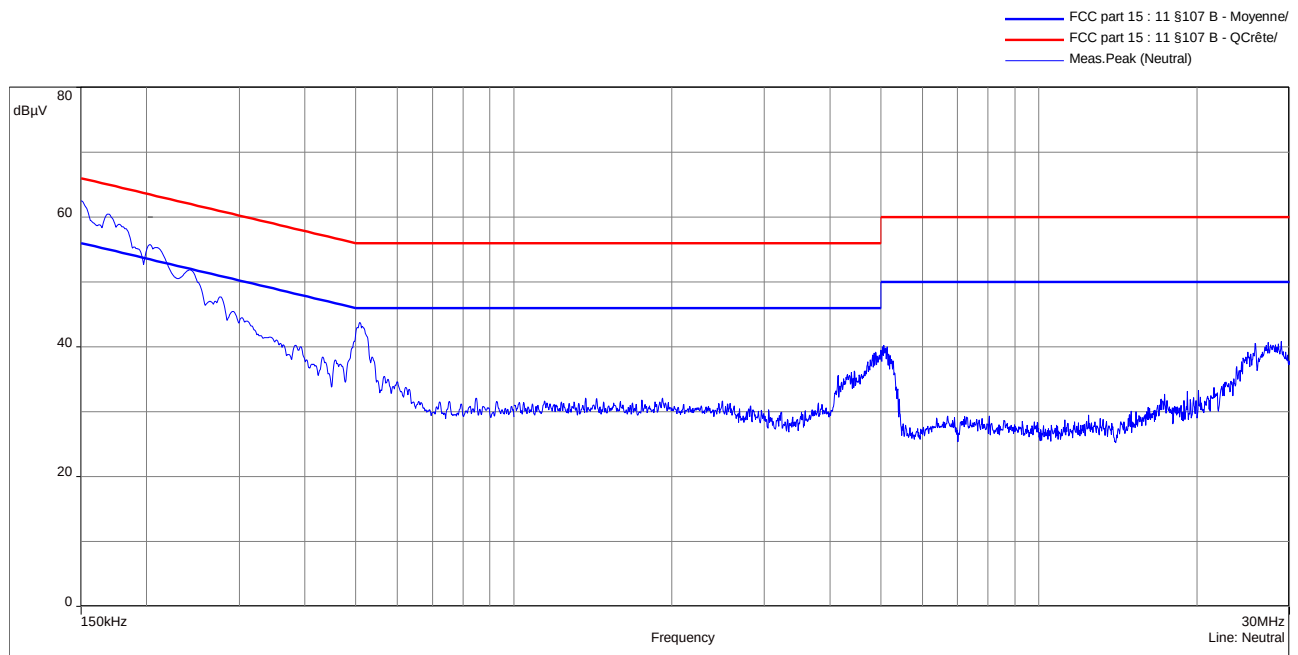
Results:

Sample N° 1:

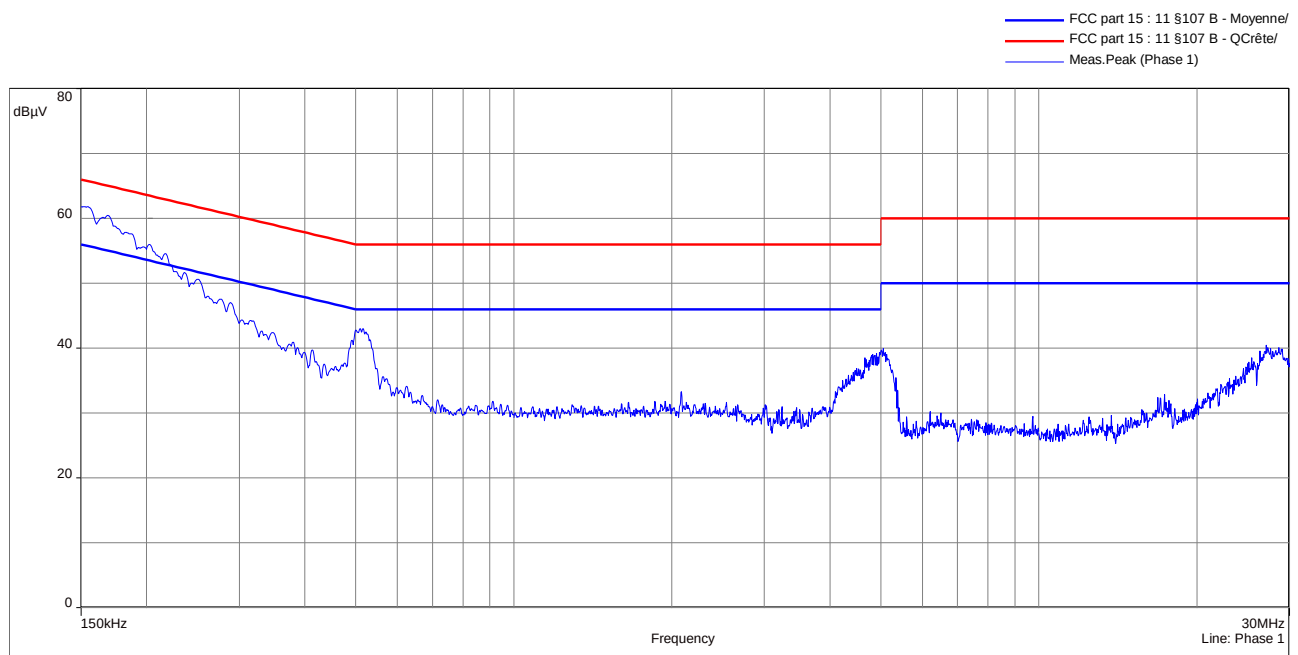
Measurement on the mains power supply:

The measurement is first realized with peak detector.

Curve N° 1: measurement on the Neutral with peak detector



Curve N° 2: measurement on the Line with peak detector



The highest frequencies are then analyzed with Quasi-peak detector and Average detector

Table N° 1: measurement on the Neutral, for the frequency range:

Frequency	Quasi-peak	QP Limit	QP margin	Frequency	Average	Average Limit	Average margin
(MHz)	(dBμV)	(dBμV)	(dB)	(MHz)	(dBμV)	(dBμV)	(dB)
0.150	58.4	66.0	7.59	0.150	36.02	56.0	19.97
0.169	50.65	65.0	14.35	0.169	35.54	55.0	19.46
0.178	56.81	64.6	7.77	0.178	35.02	54.6	19.56
0.203	52.78	63.5	10.71	0.203	34.48	53.5	19.01
0.242	46.06	62.0	15.96	0.242	32.17	52.0	19.85
0.509	41.59	56.0	14.41	0.509	31.83	46.0	14.17
4.890	28.61	56.0	27.39	4.890	20.14	46.0	25.86
25.786	30.84	60.0	29.16	25.786	20.67	50.0	29.33
28.920	36.67	60.000	23.330	28.920	28.8	50.000	21.200

Table N° 2: measurement on the Line, for the frequency range:

Frequency	Quasi-peak	QP Limit	QP margin	Frequency	Average	Average Limit	Average margin
(MHz)	(dBμV)	(dBμV)	(dB)	(MHz)	(dBμV)	(dBμV)	(dB)
0.152	54.83	65.9	11.07	0.152	32.45	55.9	23.45
0.169	58.63	65.0	6.38	0.169	39.91	55.0	15.10
0.187	54.76	64.2	9.40	0.187	34.48	54.2	19.68
0.203	51.99	63.5	11.50	0.203	31.97	53.5	21.52
0.217	48.79	62.9	14.13	0.217	30.79	52.9	22.13
0.510	41.24	56.0	14.76	0.510	32.08	46.0	13.92
4.905	27.2	56.000	28.800	4.905	19.72	46.000	26.280
27.100	35.43	60.000	24.570	27.100	26.5	50.000	23.500

Test conclusion:

RESPECTED STANDARD

9. CARRIER FREQUENCY SEPARATION

Temperature (°C) : 19 to 23

Humidity (%HR): 39 to 48

Date : April 22, 2025 to
April 28, 2025

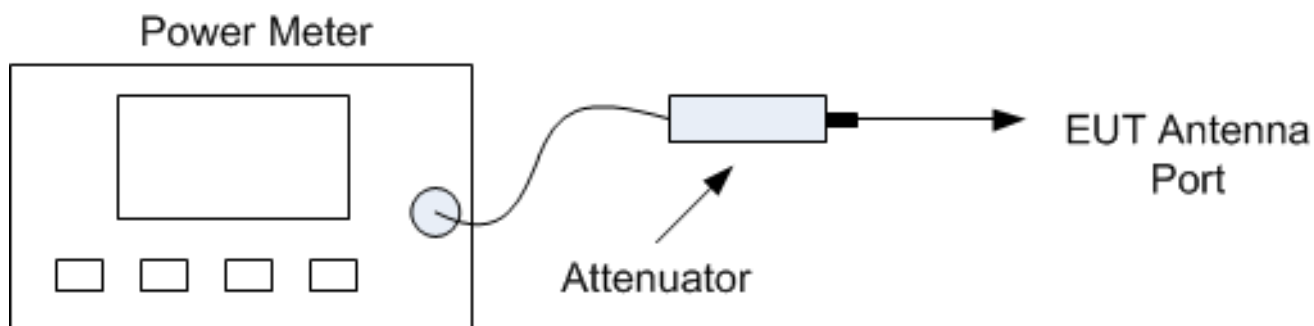
Technician : T. LEDRESSEUR

Standard: FCC Part 15
RSS-247

Test procedure: Method of paragraphs 7.8.2 of ANSI C63.10

Test set up:

Conducted test



Setting:

Center frequency	Centre of two adjacent channels
Detector	Peak
Span	Wide enough to capture the peaks of two adjacent channels
RBW	Approximately 30% of the channel spacing
VBW	≥ RBW
Trace	Max hold
Sweep	Auto.

Test operating condition of the equipment:

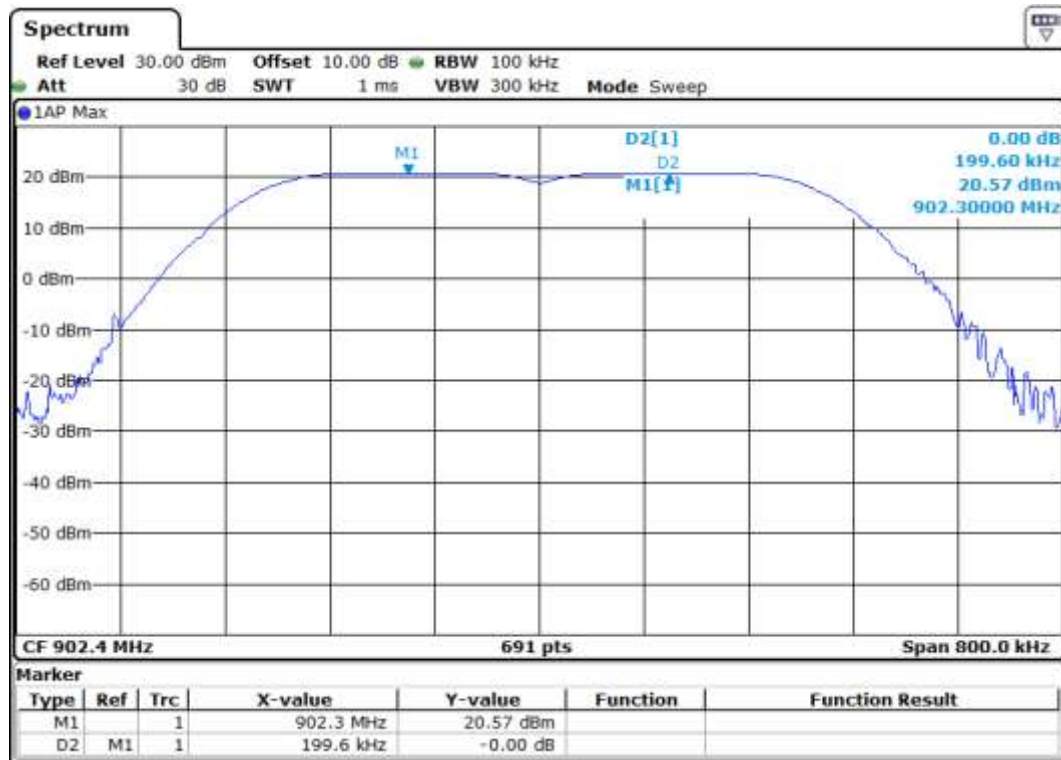
The equipment under test is blocked in continuous modulated transmission mode, at the highest output power level at which the transmitter is intended to operate.

We used for power source the internal battery of the equipment

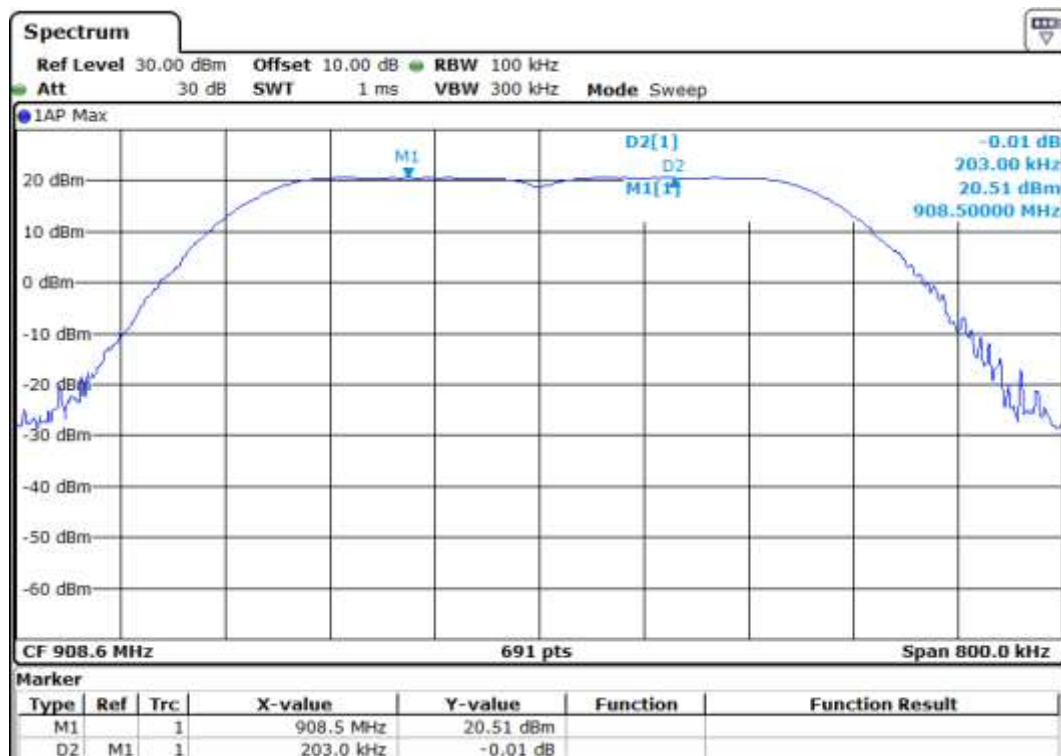
Results:

Sample N° 1 Channel plan 1 – SF 7

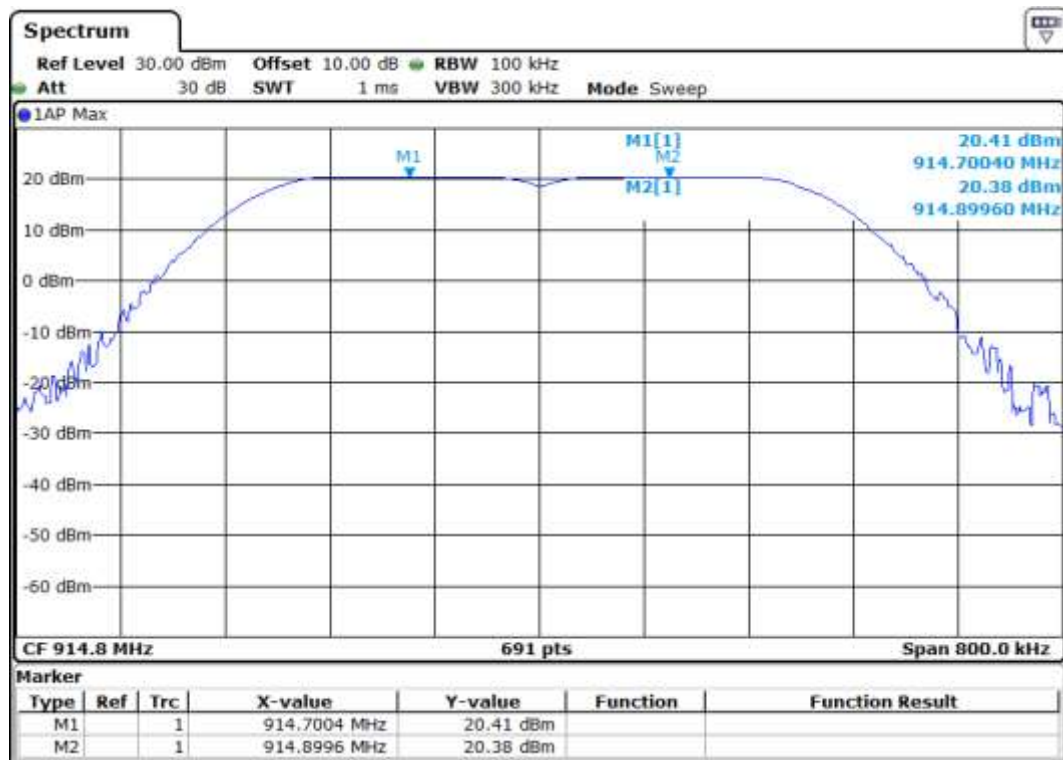
Channel 902.3 MHz and Chanel 902.5 MHz



Channel 908.5 MHz and Channel 908.7 MHz

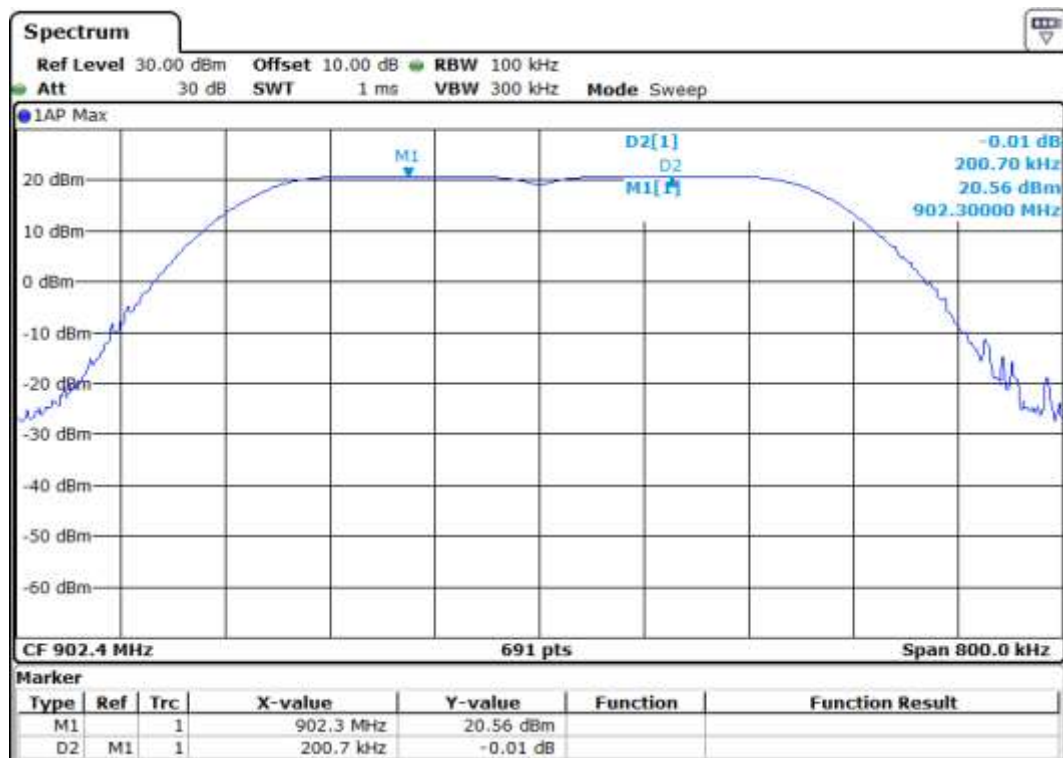


Channel 914.7 MHz and Channel 914.9 MHz

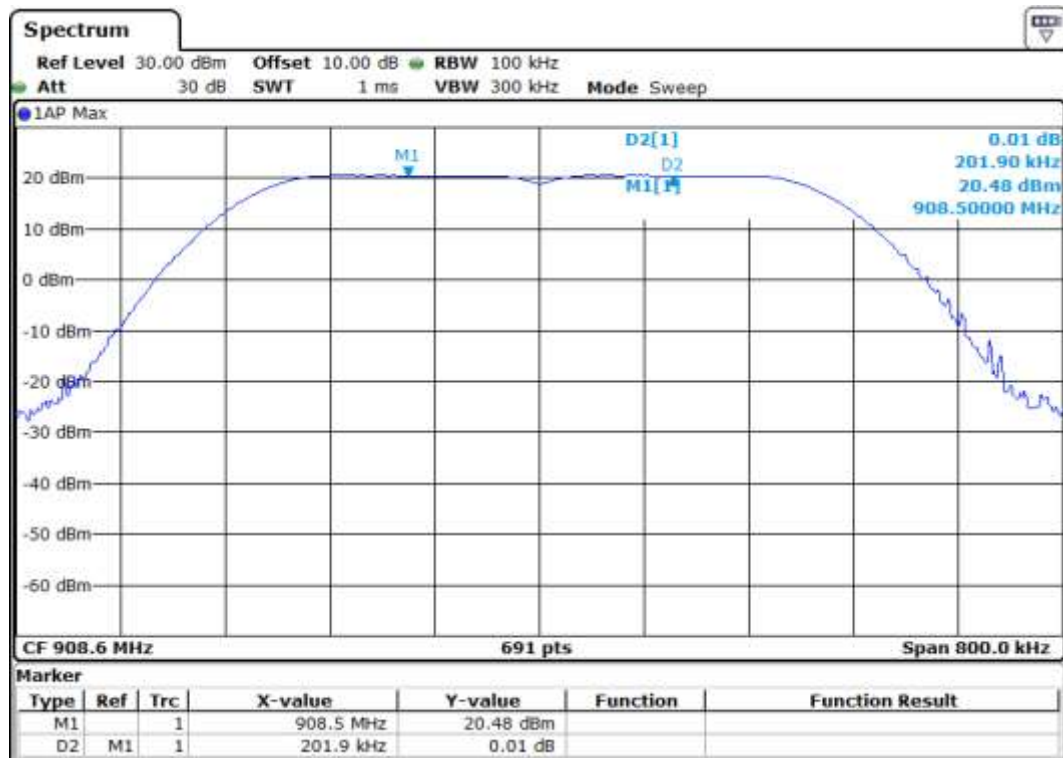


Sample N° 1 Channel plan 1 – SF 10

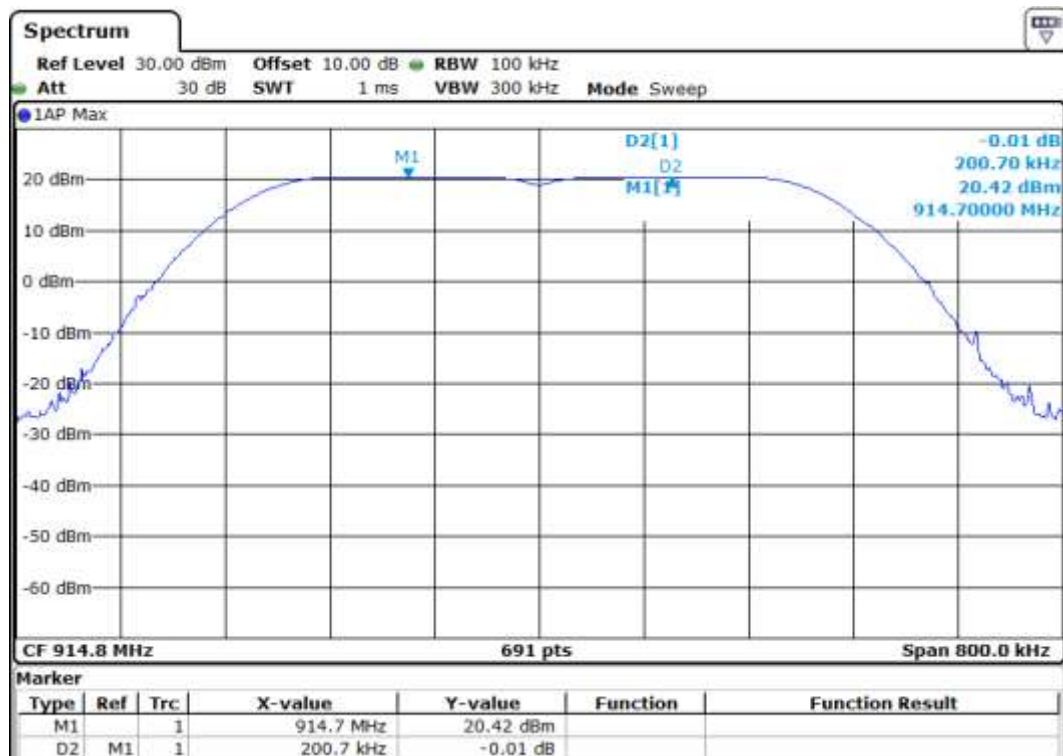
Channel 902.3 MHz and Channel 902.5 MHz



Channel 908.5 MHz and Channel 908.7 MHz

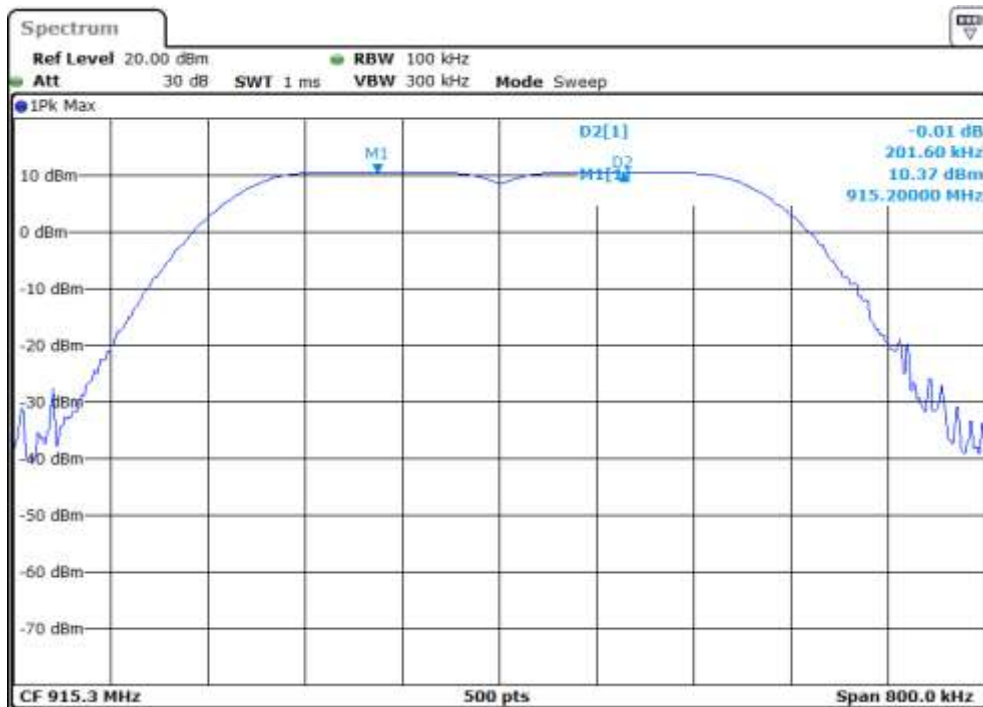


Channel 914.7 MHz and Channel 914.9 MHz

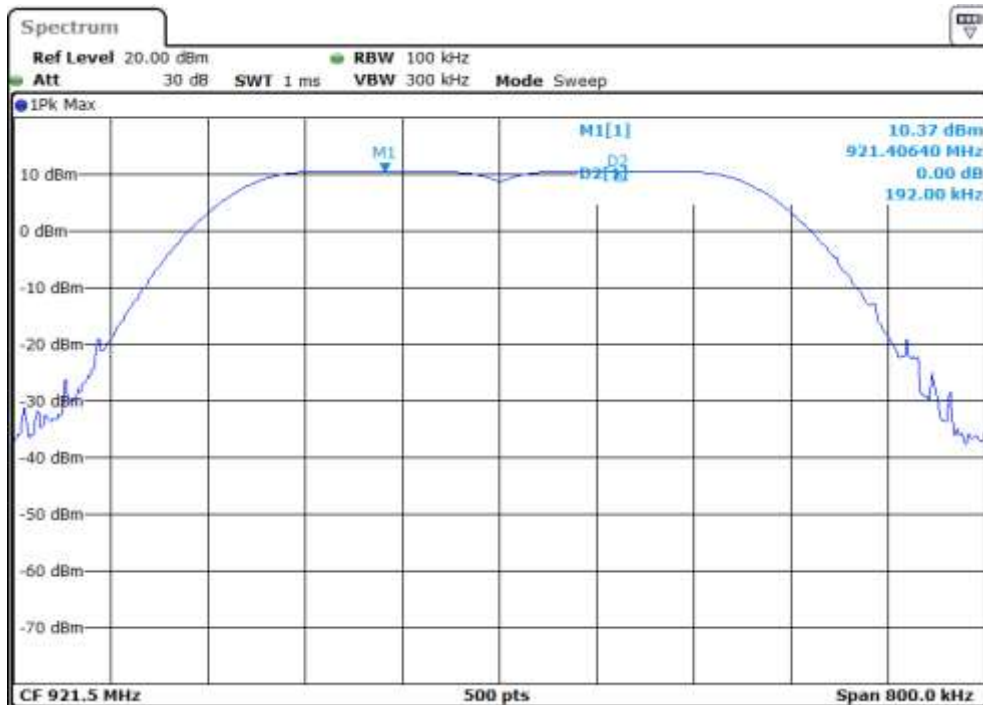


Sample N° 1 Channel plan 2 – SF 7

Channel 915.2 MHz and Chanel 915.4 MHz



Channel 921.4 MHz and Channel 921.6 MHz

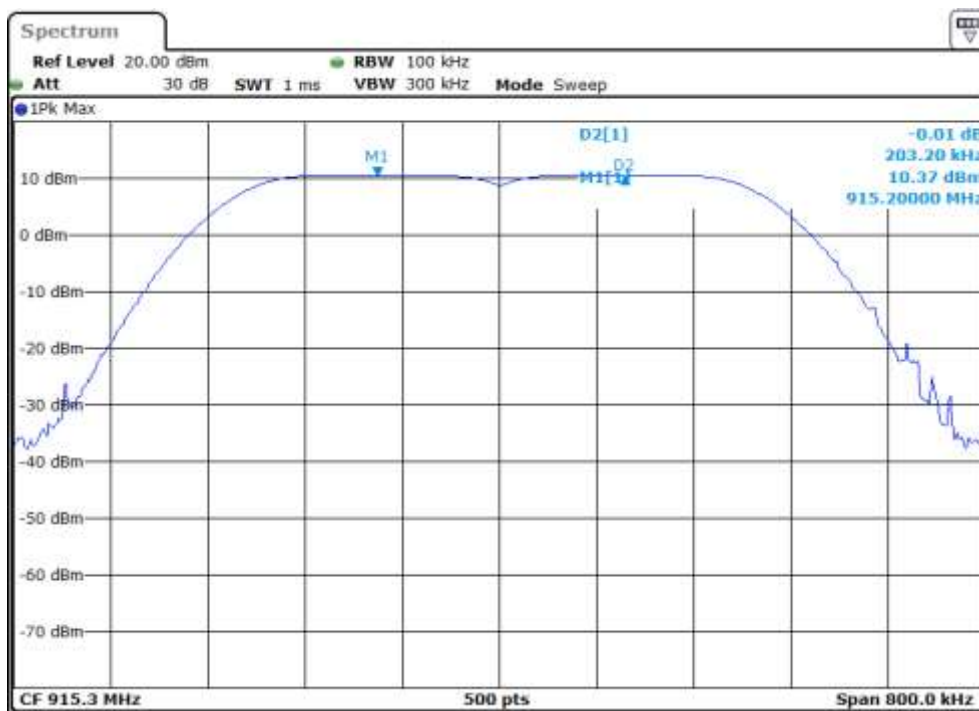


Channel 927.6 MHz and Channel 927.8 MHz

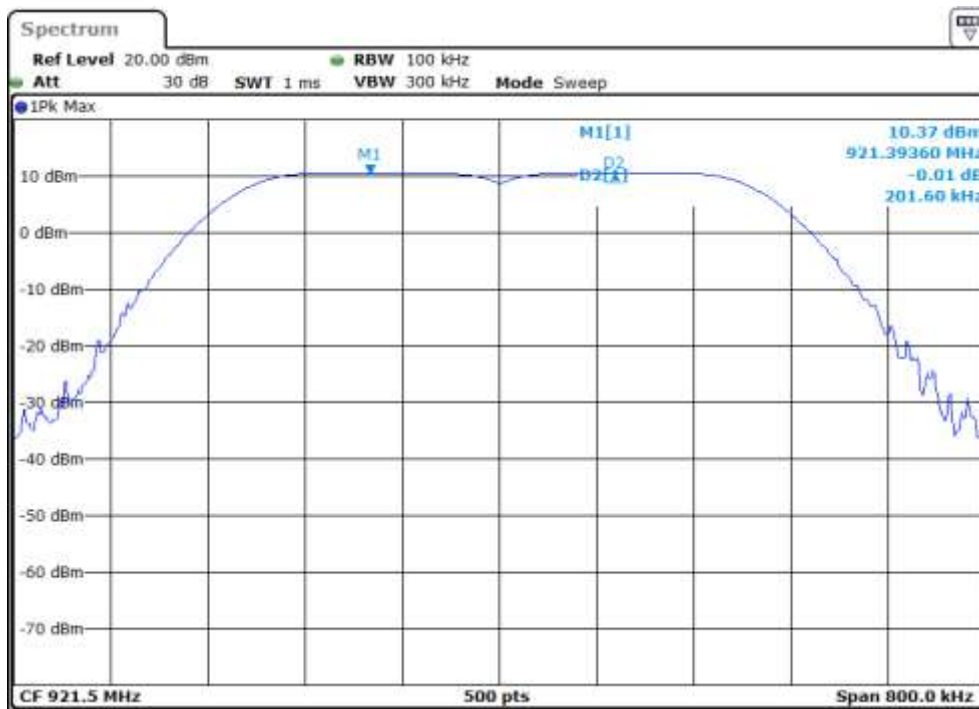


Sample N° 1 Channel plan 2 – SF 10

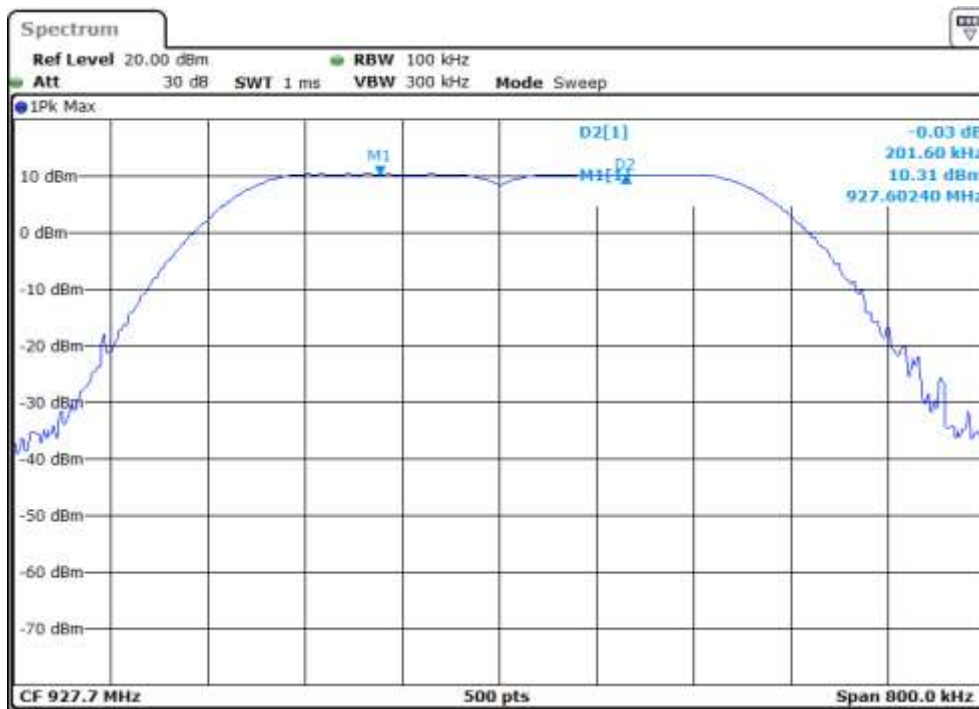
Channel 915.2 MHz and Chanel 915.4 MHz



Channel 921.4 MHz and Channel 921.6 MHz

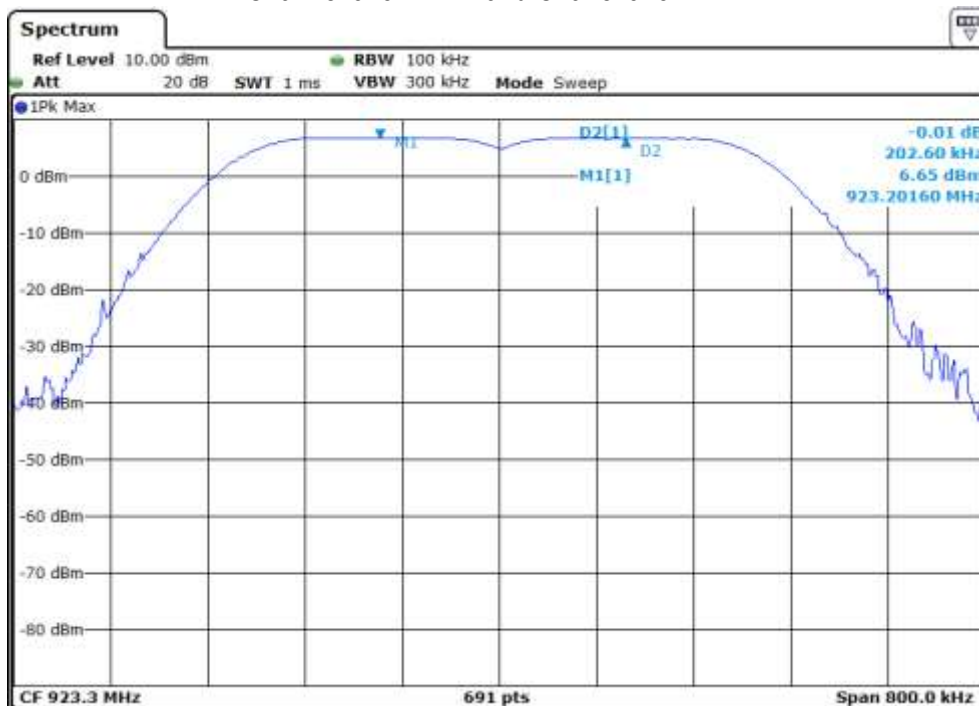


Channel 927.6 MHz and Channel 927.8 MHz



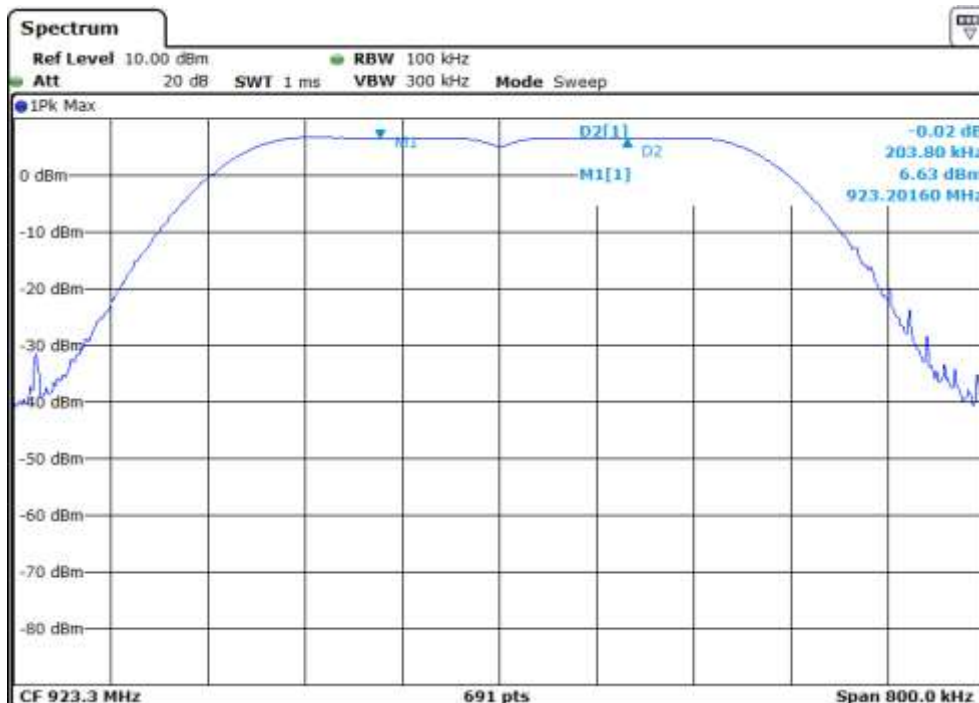
Sample N° 1 Channel plan 3 – SF 7

Channel 923.2 MHz and Chanel 923.4 MHz



Sample N° 1 Channel plan 3 – SF 10

Channel 923.2 MHz and Chanel 923.4 MHz



Limit:

The system hops to channel frequencies from a pseudo randomly ordered list of hopping frequencies. Each frequency is used equally on the average by the transmitter, and separated by a minimum of 25 kHz or 20 dB bandwidth of the hopping channel, whichever is greater.

Test conclusion:

RESPECTED STANDARD

10. NUMBER OF HOPPING FREQUENCIES

Temperature (°C) : 19 to 23

Humidity (%HR): 39 to 48

Date : April 22, 2025 to
April 28, 2025

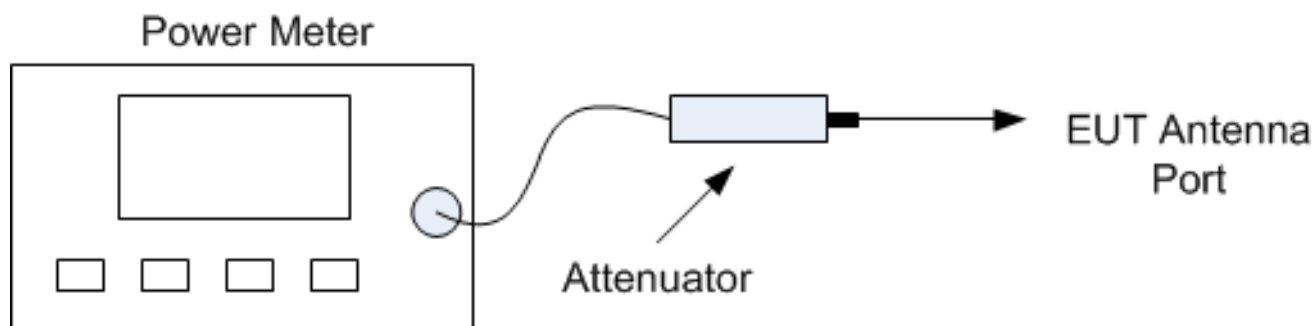
Technician : T. LEDRESSEUR

Standard: FCC Part 15
RSS-247

Test procedure: Method of paragraphs 7.8.3 of ANSI C63.10

Test set up:

Conducted test



Setting:

Detector	Peak
Span	The frequency band of operation
RBW	30% of the channel spacing or the 20 dB bandwidth, whichever is smaller
VBW	≥ RBW
Trace	Max hold
Sweep	Auto.

Test operating condition of the equipment:

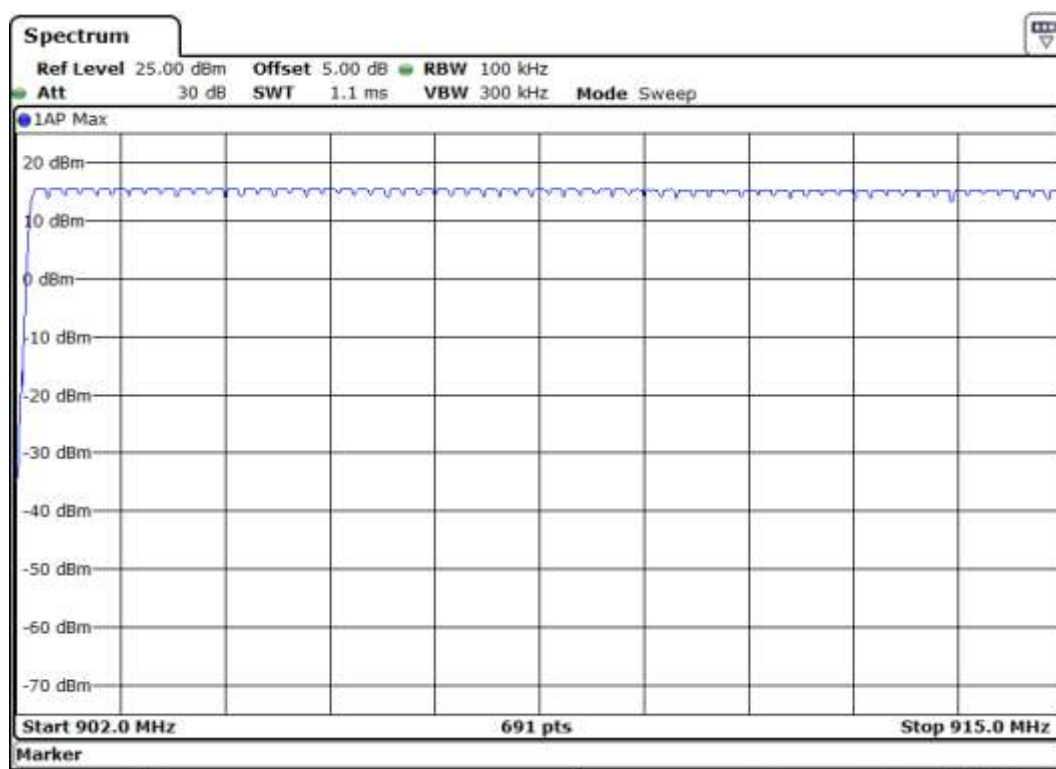
The equipment under test is blocked in continuous modulated transmission mode, at the highest output power level at which the transmitter is intended to operate.

We used for power source the internal battery of the equipment

Realized only in SF 7

Results:

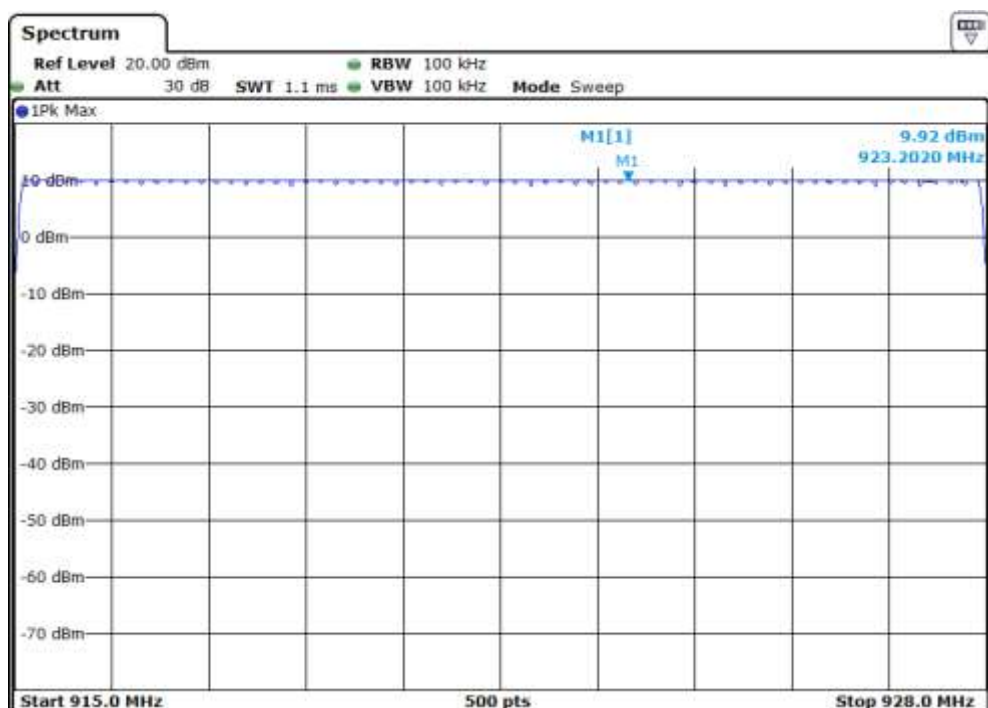
Sample N° 1 Channel plan 1 – SF 7



Number of channel used: 64

Measure realized for reporting only

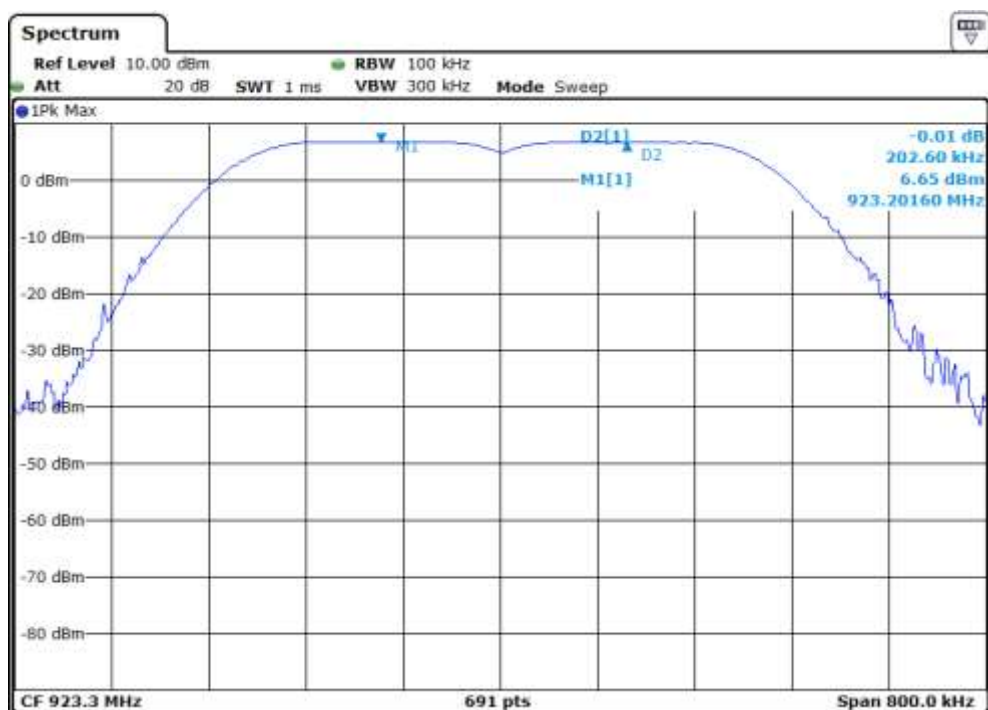
Sample N° 1 Channel plan 2 – SF 7



Number of channel used: 64

Measure realized for reporting only

Sample N° 1 Channel plan 3 – SF 7



Number of channel used: 2

Measure realized for reporting only

Test conclusion:

RESPECTED STANDARD

11. DWELL TIME

Temperature (°C) : 19 to 23

Humidity (%HR): 39 to 48

Date : April 22, 2025 to
April 28, 2025

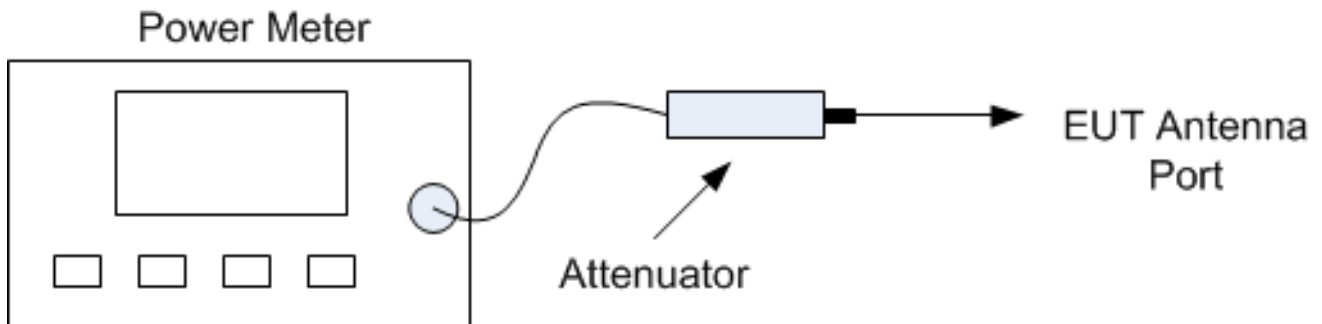
Technician : T. LEDRESSEUR

Standard: FCC Part 15
RSS-247

Test procedure: Method of paragraphs 7.8.4 of ANSI C63.10

Test set up:

Conducted test



Setting:

Center frequency	Hopping channel
Detector	Peak
Span	Zero
RBW	$\leq$ channel spacing
VBW	$\geq$ RBW
Trace	Max hold
Sweep	First : As necessary to capture the entire dwell time per hopping channel Second: sweep time to determine the number of hops over the period specified in the requirements

Test operating condition of the equipment:

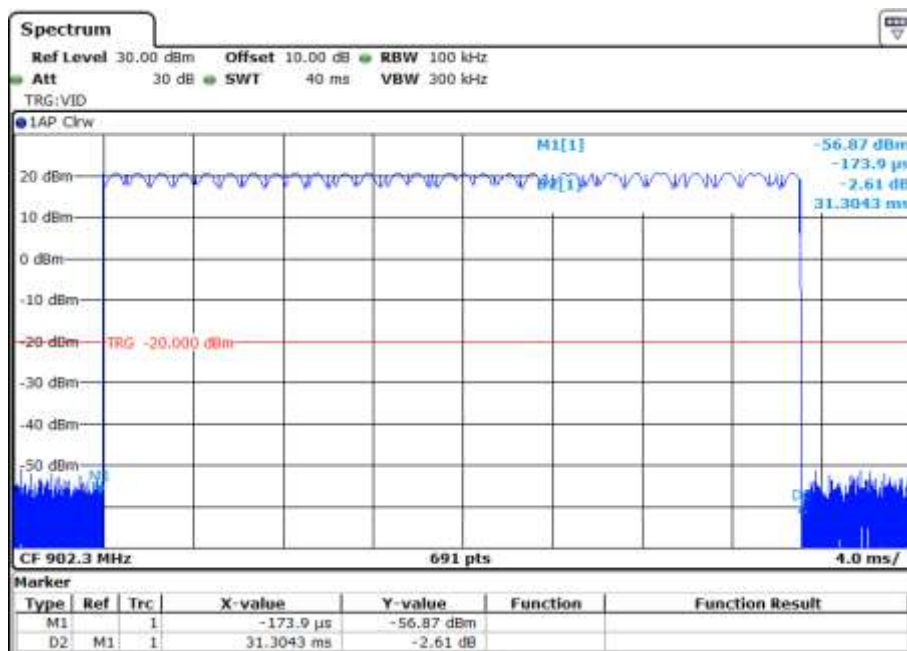
The equipment under test is blocked in continuous modulated transmission mode, at the highest output power level at which the transmitter is intended to operate.

We used for power source the internal battery of the equipment

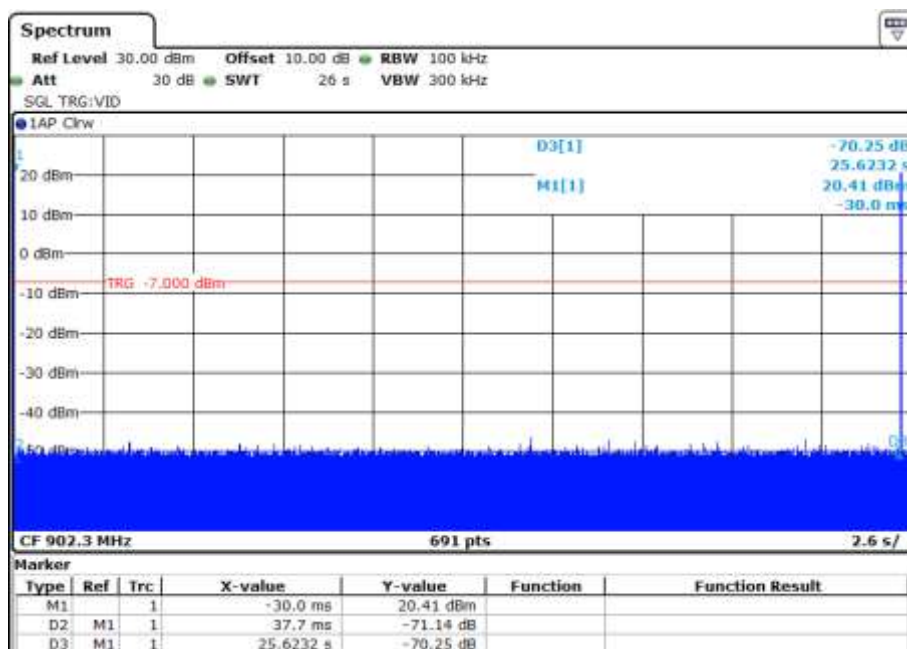
Results:

Sample N° 1 Channel plan 1 – SF 7

Burst duration - Channel 902.3 MHz

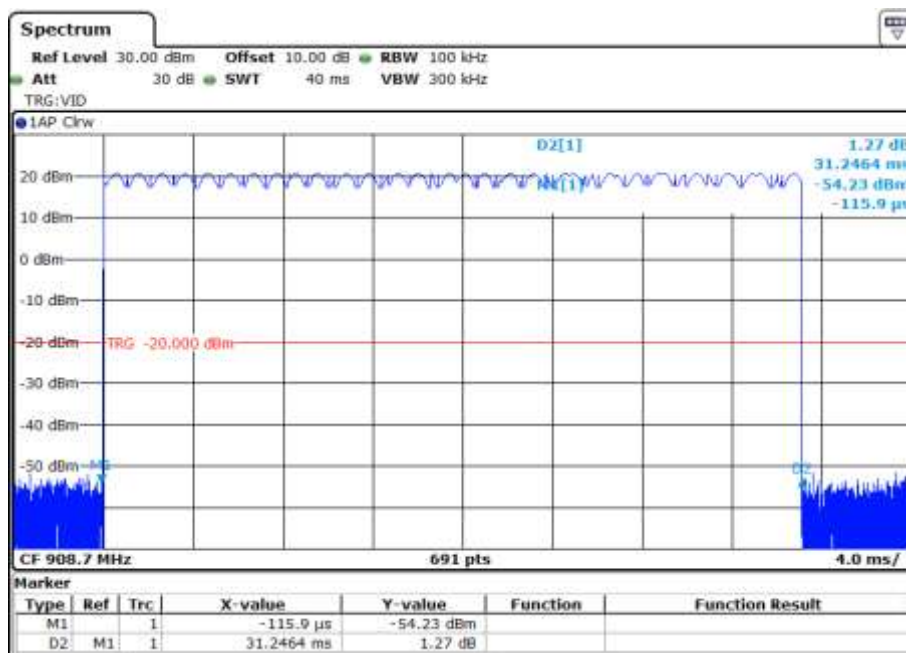


Burst repetition during observation period duration - Channel 902.3 MHz

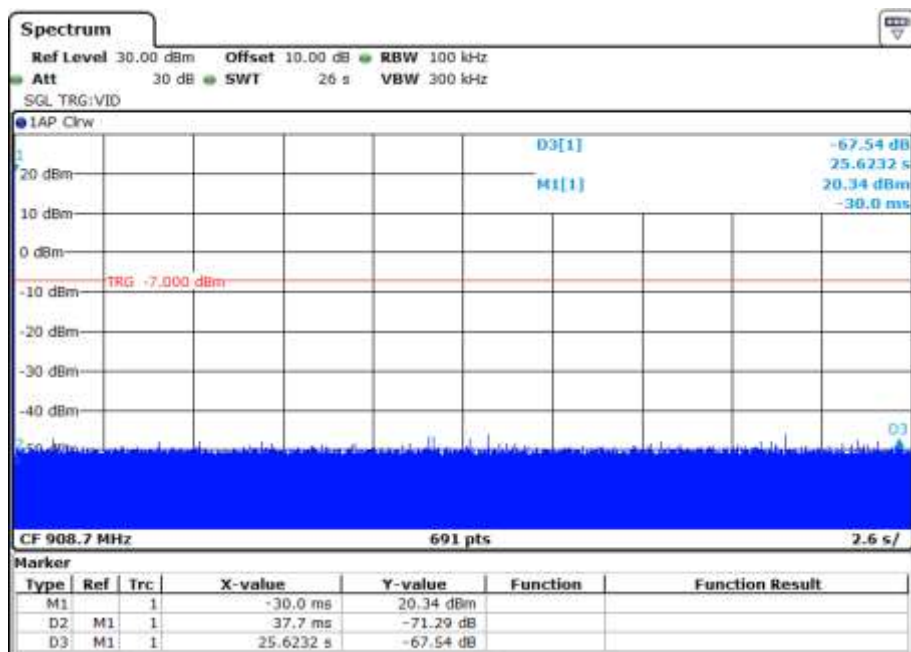


Number of channels	Observation period (0.4s * Nbr of channel) (s)	Maximal Duration of each burst (ms)	Number of burst repetition during observation period	average time of occupancy on any channel (s)	Limits (s)
64	25.6	31.3043	2	0.0626086	0.4

Burst duration - Channel 908.7 MHz

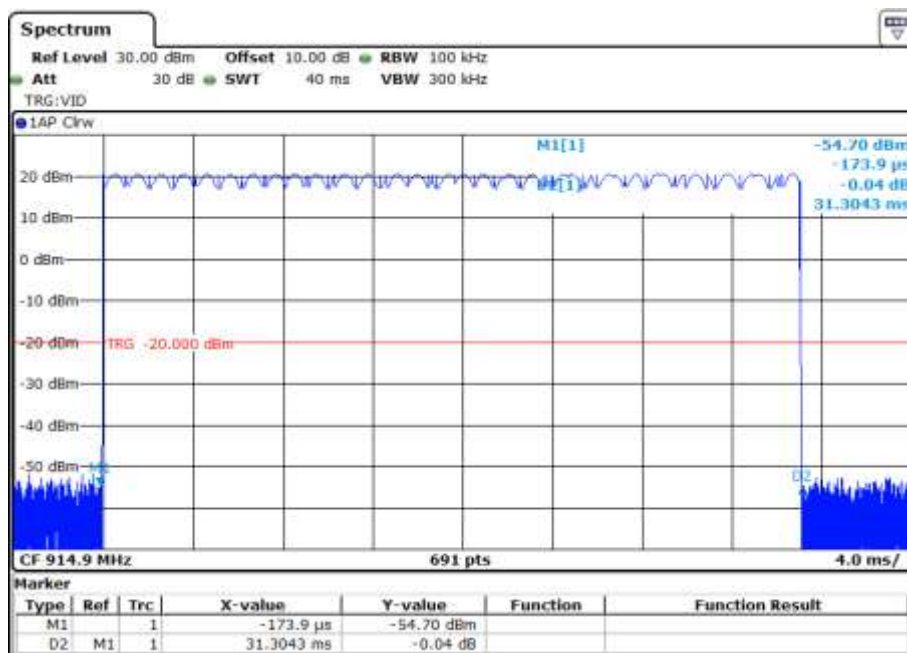


Burst repetition during observation period duration - Channel 908.7 MHz

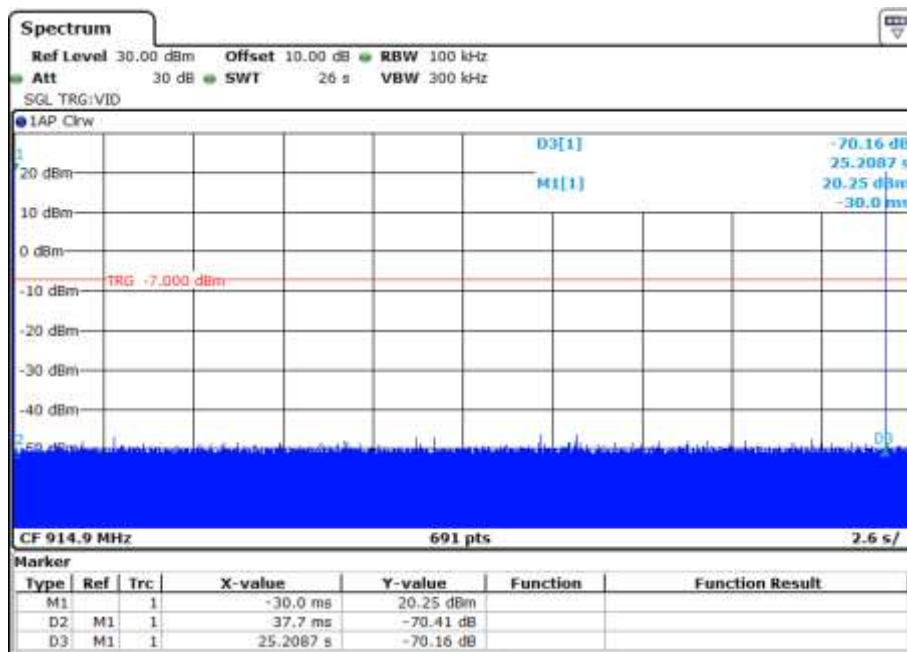


Number of channels	Observation period (0.4s * Nbr of channel) (s)	Maximal Duration of each burst (ms)	Number of burst repetition during observation period	average time of occupancy on any channel (s)	Limits (s)
64	25.6	31.2464	1	0.0624928	0.4

Burst duration - Channel 914.9 MHz



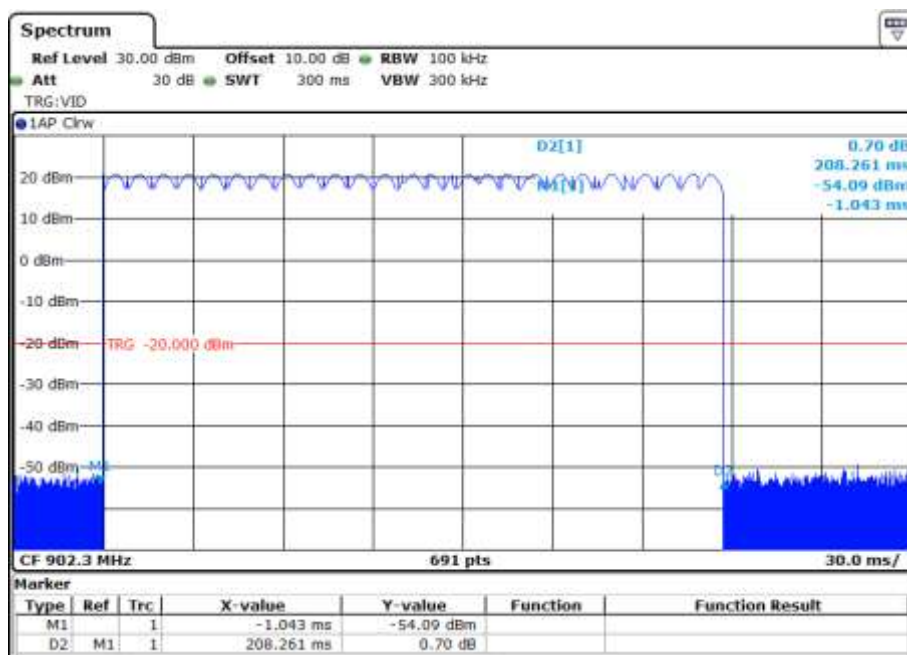
Burst repetition during observation period duration - Channel 914.9 MHz



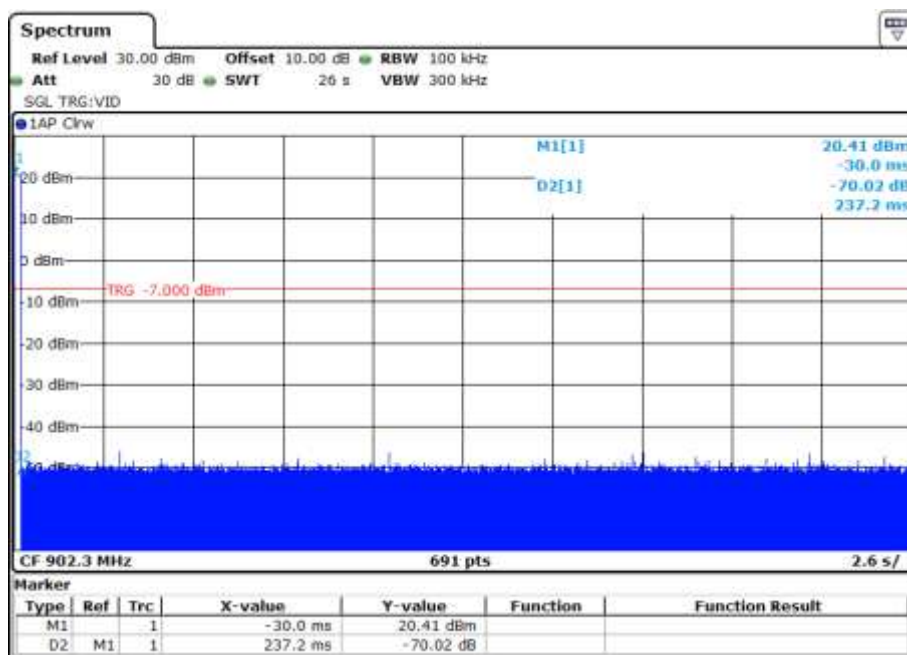
Number of channels	Observation period (0.4s * Nbr of channel) (s)	Maximal Duration of each burst (ms)	Number of burst repetition during observation period	average time of occupancy on any channel (s)	Limits (s)
64	25.6	31.3043	2	0.0626086	0.4

Sample N° 1 Channel plan 1 – SF 10

Burst duration - Channel 902.3 MHz

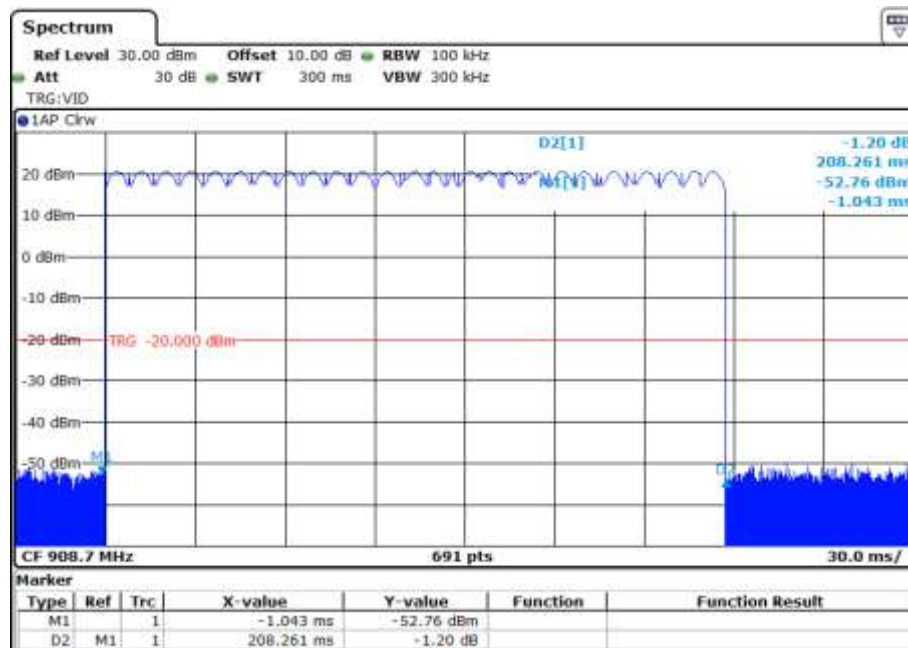


Burst repetition during observation period duration - Channel 902.3 MHz

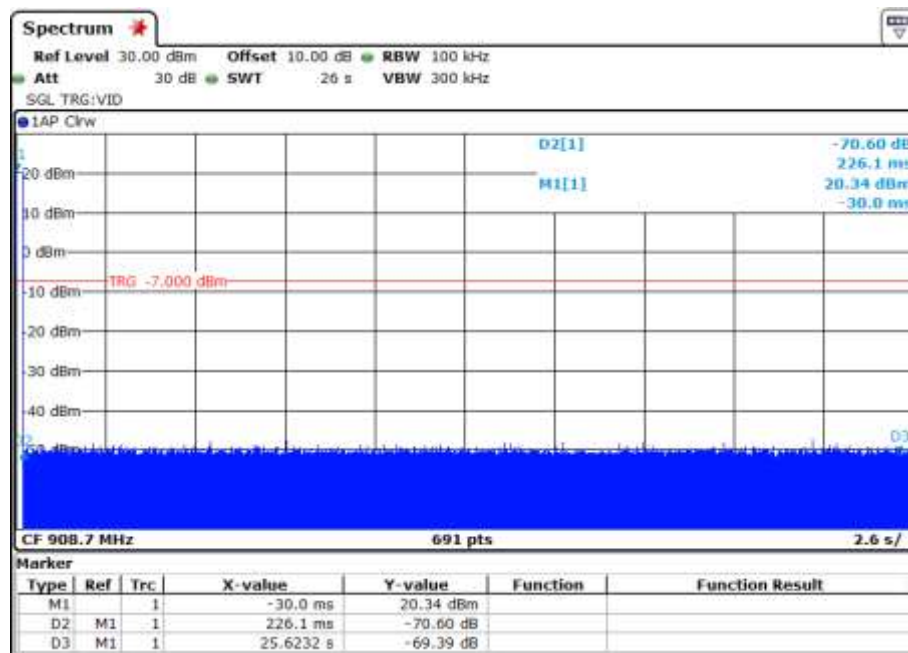


Number of channels	Observation period (0.4s * Nbr of channel) (s)	Maximal Duration of each burst (ms)	Number of burst repetition during observation period	average time of occupancy on any channel (s)	Limits (s)
64	25.6	208.261	1	0.208261	0.4

Burst duration - Channel 908.7 MHz

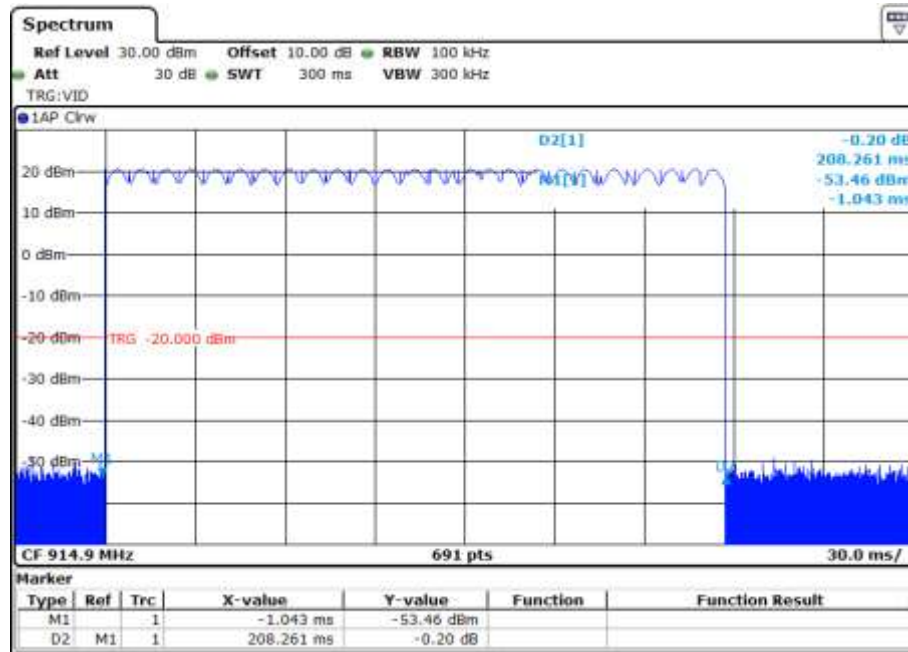


Burst repetition during observation period duration - Channel 908.7 MHz

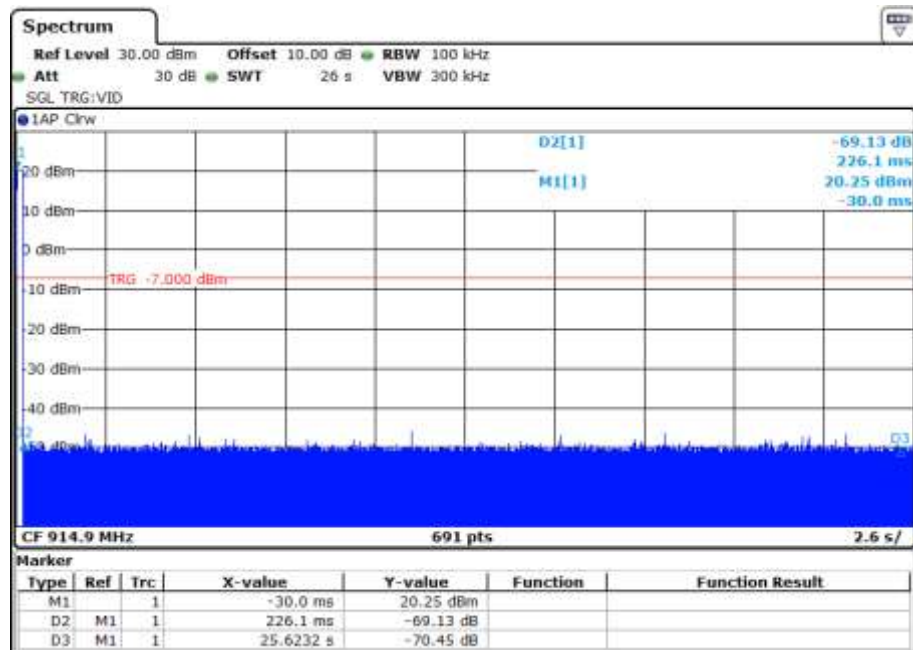


Number of channels	Observation period (0.4s * Nbr of channel) (s)	Maximal Duration of each burst (ms)	Number of burst repetition during observation period	average time of occupancy on any channel (s)	Limits (s)
64	25.6	208.261	1	0.208261	0.4

Burst duration - Channel 914.9 MHz



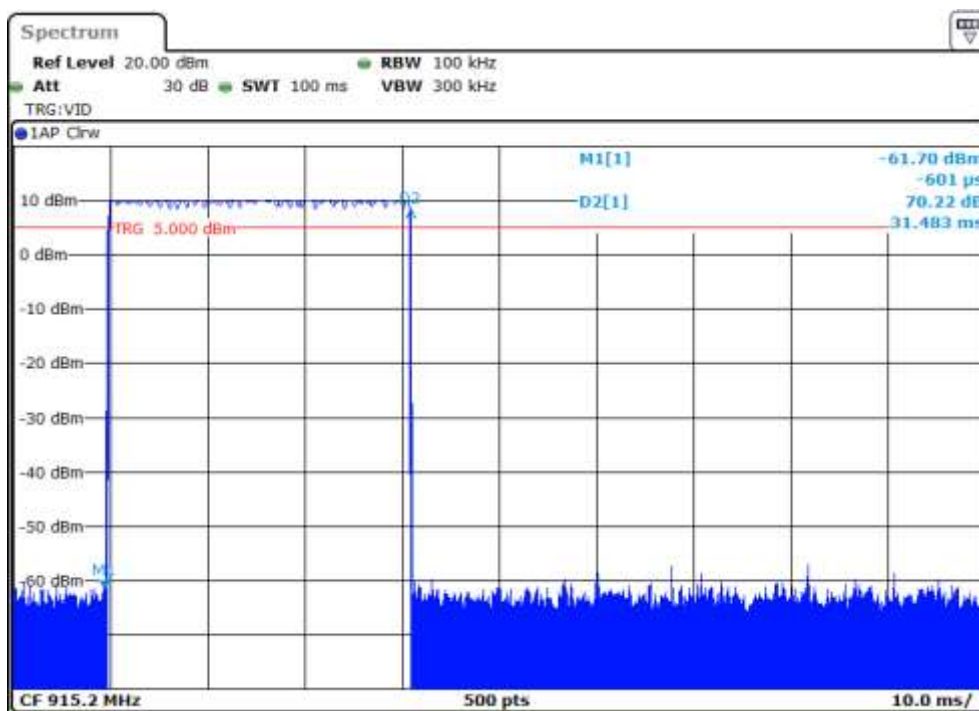
Burst repetition during observation period duration - Channel 914.9 MHz



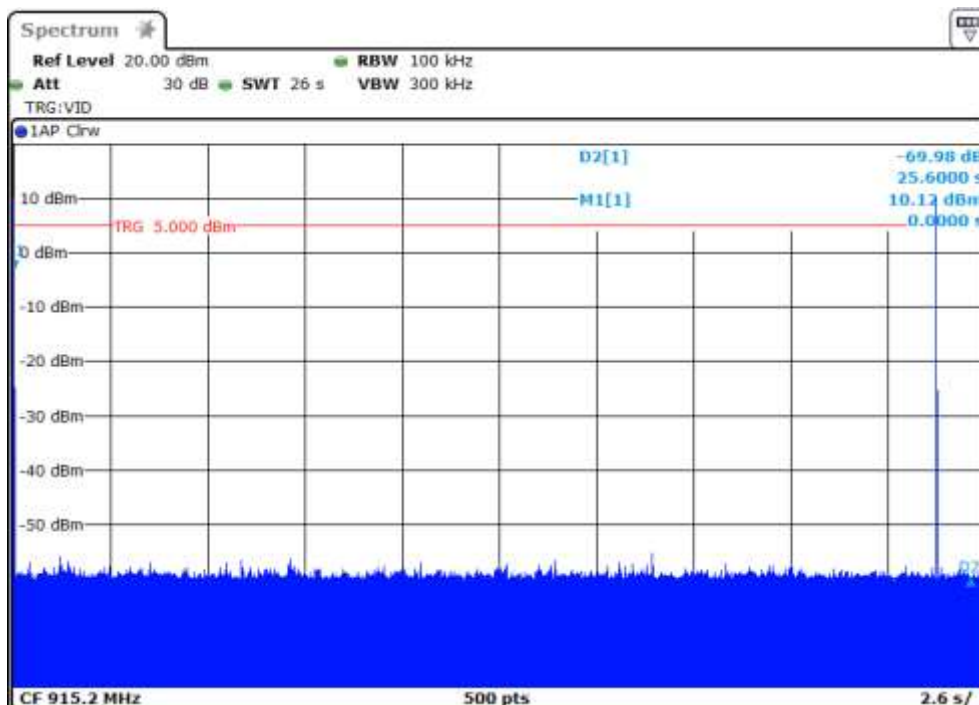
Number of channels	Observation period (0.4s * Nbr of channel) (s)	Maximal Duration of each burst (ms)	Number of burst repetition during observation period	average time of occupancy on any channel (s)	Limits (s)
64	25.6	208.261	1	0.208261	0.4

Sample N° 1 Channel plan 2 – SF 7

Burst duration - Channel 915.2 MHz

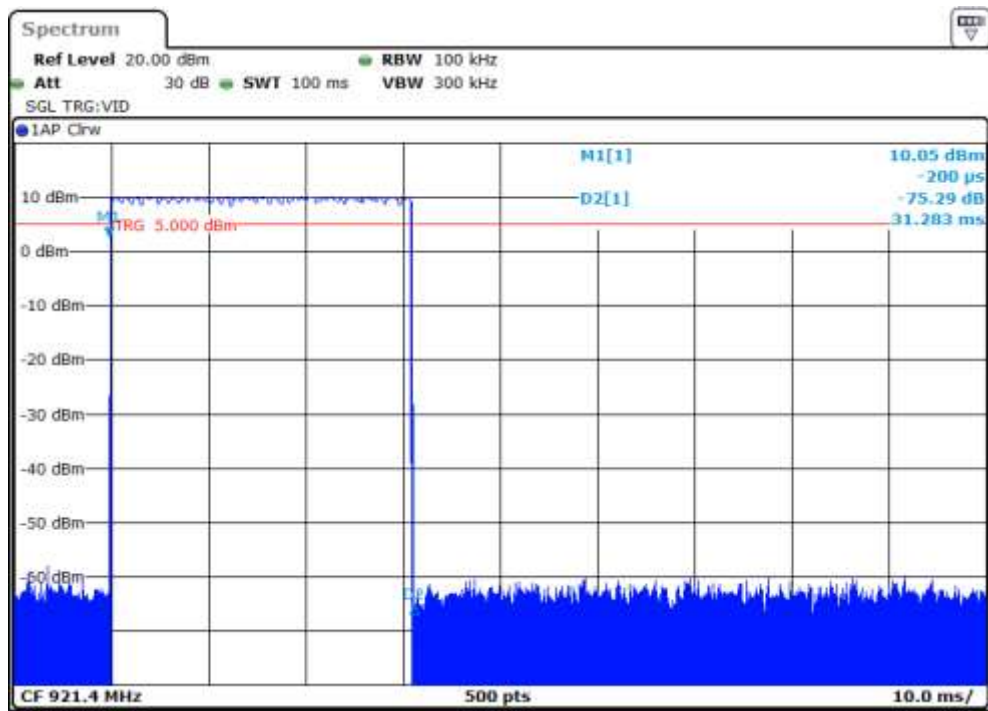


Burst repetition during observation period duration - Channel 915.2 MHz

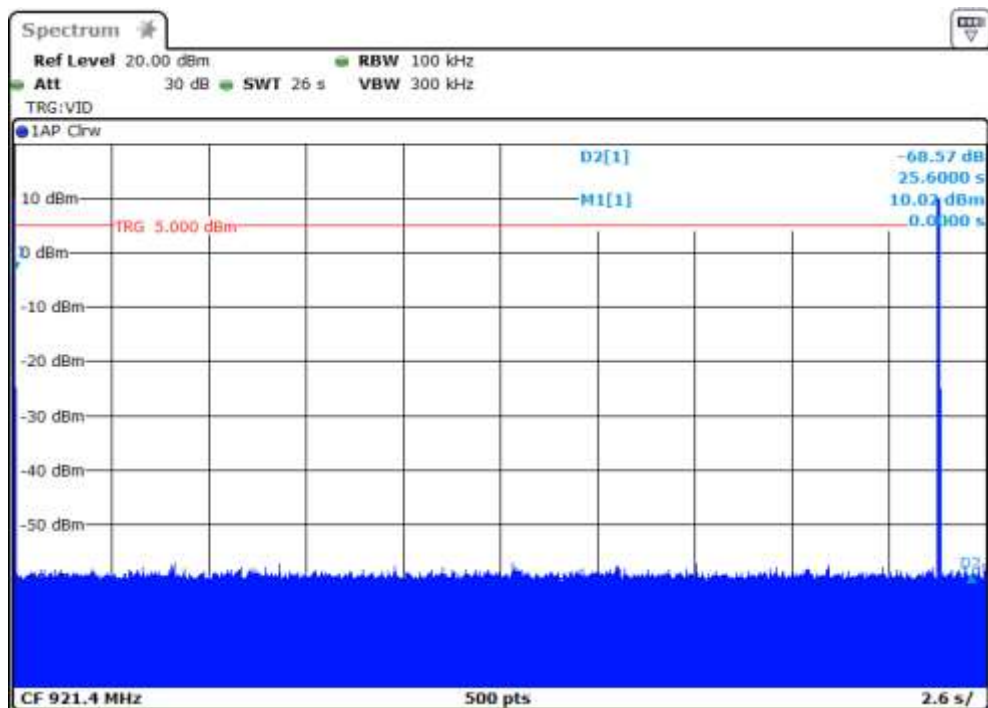


Number of channels	Observation period (0.4s * Nbr of channel) (s)	Maximal Duration of each burst (ms)	Number of burst repetition during observation period	average time of occupancy on any channel (s)	Limits (s)
64	25.6	31.48	2	0.06296	0.4

Burst duration - Channel 921.4 MHz

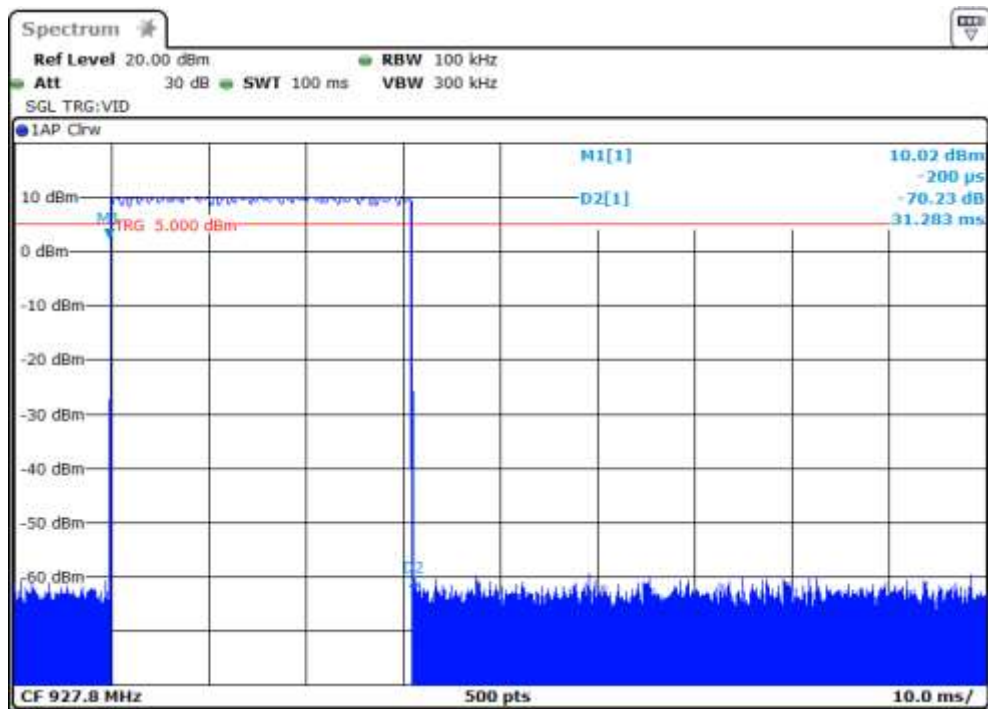


Burst repetition during observation period duration - Channel 921.4 MHz

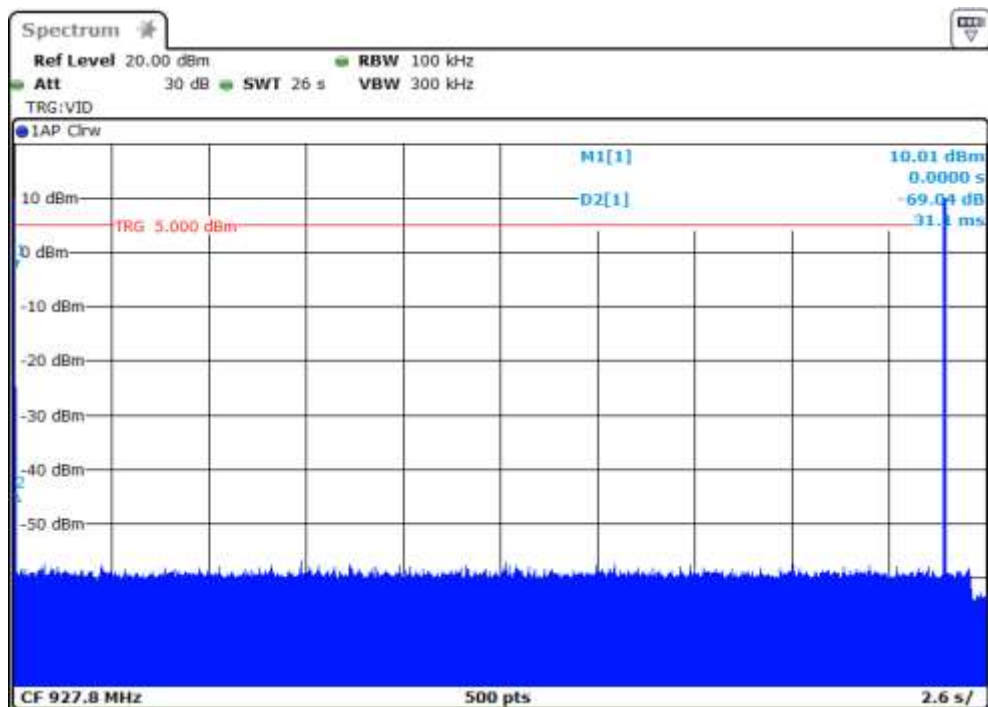


Number of channels	Observation period (0.4s * Nbr of channel) (s)	Maximal Duration of each burst (ms)	Number of burst repetition during observation period	average time of occupancy on any channel (s)	Limits (s)
64	25.6	31.283	2	0.062566	0.4

Burst duration - Channel 927.8 MHz



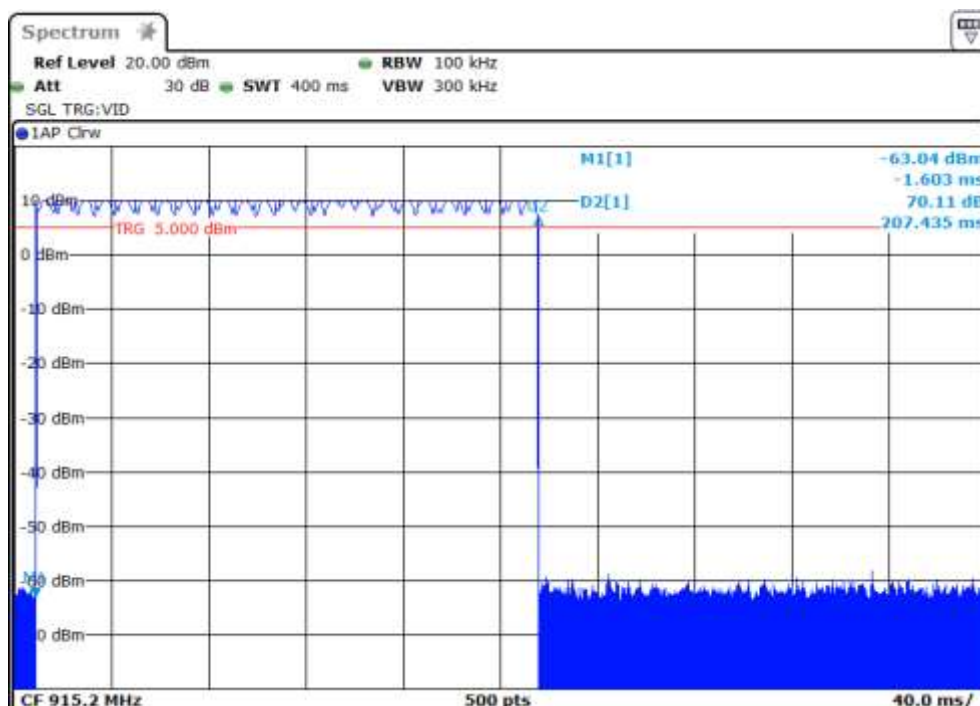
Burst repetition during observation period duration - Channel 927.8 MHz



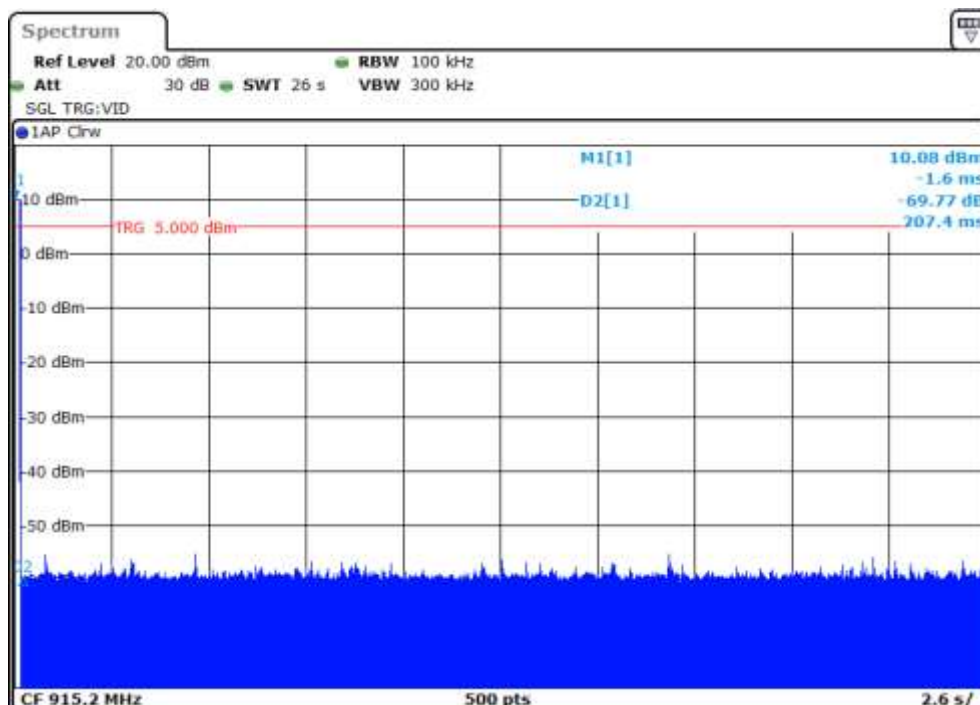
Number of channels	Observation period (0.4s * Nbr of channel) (s)	Maximal Duration of each burst (ms)	Number of burst repetition during observation period	average time of occupancy on any channel (s)	Limits (s)
64	25.6	31.283	2	0.062566	0.4

Sample N° 1 Channel plan 2 – SF 10

Burst duration - Channel 915.2 MHz

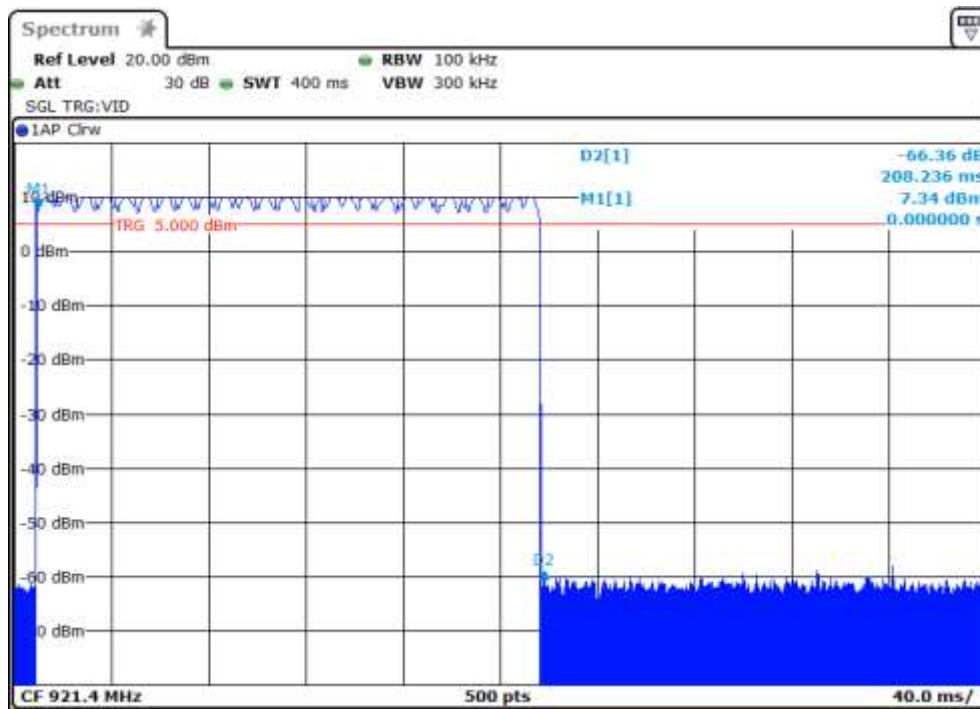


Burst repetition during observation period duration - Channel 915.2 MHz

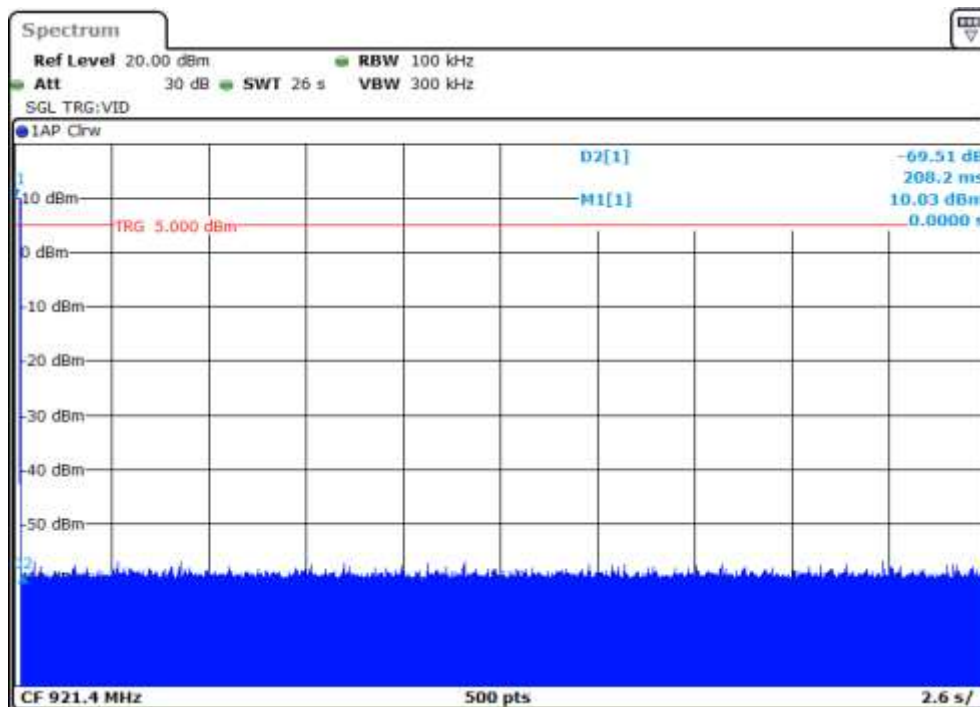


Number of channels	Observation period (0.4s * Nbr of channel) (s)	Maximal Duration of each burst (ms)	Number of burst repetition during observation period	average time of occupancy on any channel (s)	Limits (s)
64	25.6	207.435	1	0.207435	0.4

Burst duration - Channel 921.4 MHz

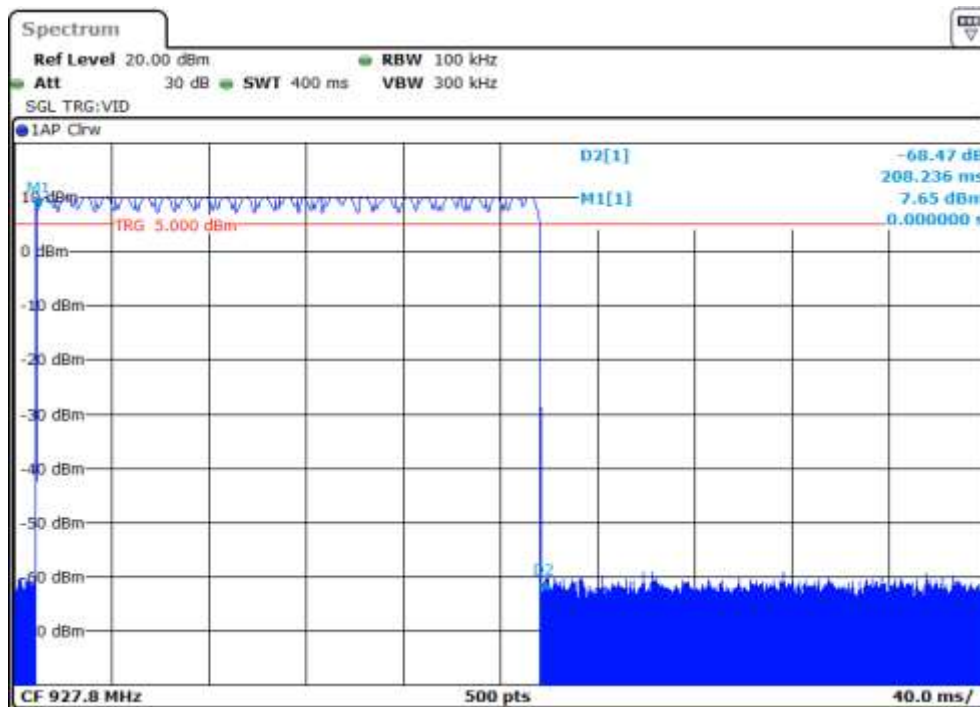


Burst repetition during observation period duration - Channel 921.4 MHz

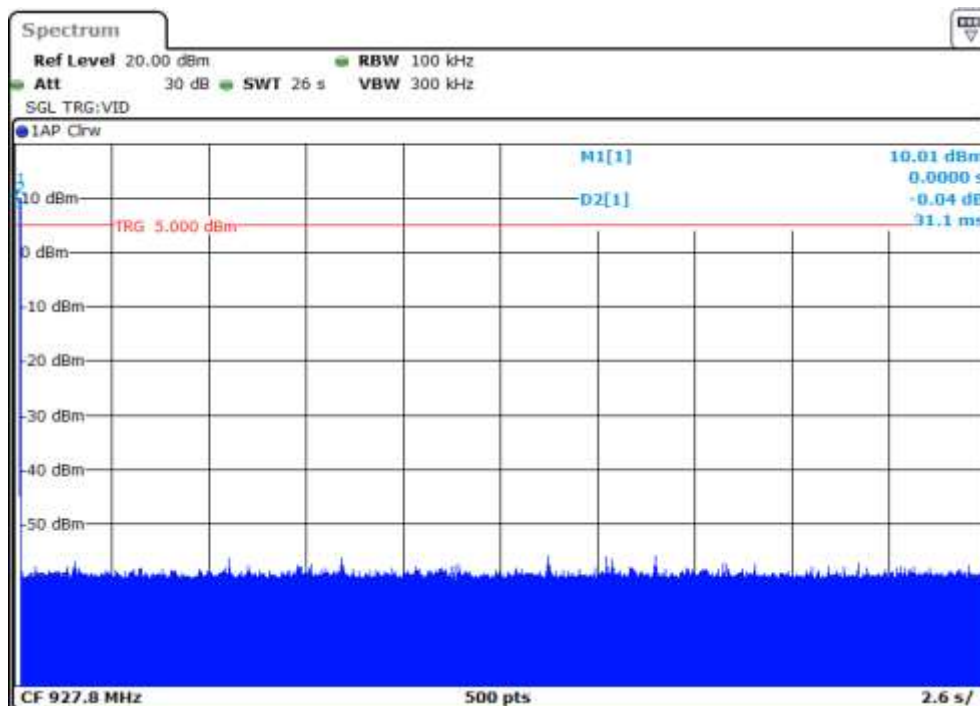


Number of channels	Observation period (0.4s * Nbr of channel) (s)	Maximal Duration of each burst (ms)	Number of burst repetition during observation period	average time of occupancy on any channel (s)	Limits (s)
64	25.6	208.238	1	0.208236	0.4

Burst duration - Channel 927.8 MHz



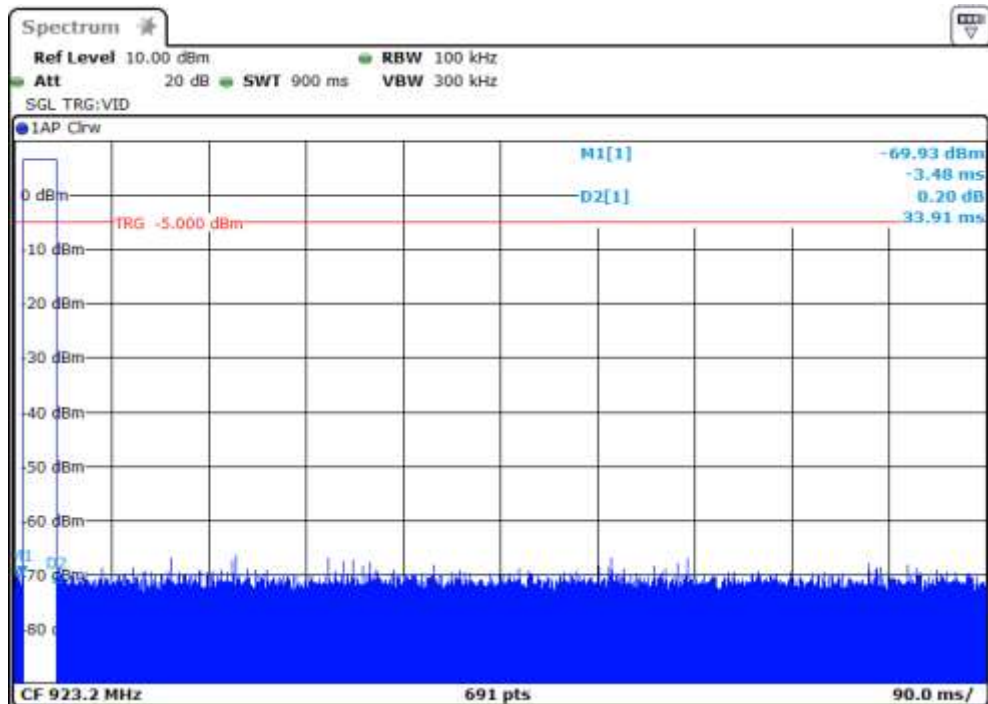
Burst repetition during observation period duration - Channel 927.8 MHz



Number of channels	Observation period (0.4s * Nbr of channel) (s)	Maximal Duration of each burst (ms)	Number of burst repetition during observation period	average time of occupancy on any channel (s)	Limits (s)
64	25.6	208.238	1	0.208236	0.4

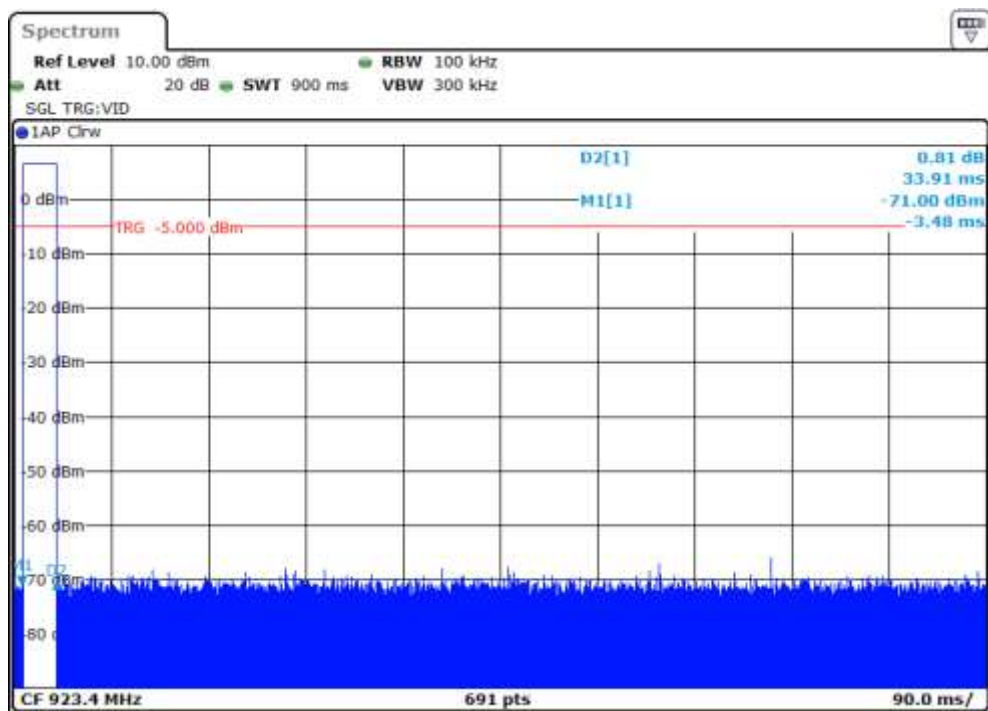
Sample N° 1 Channel plan 3 – SF 7

Burst duration and repetition - Channel 923.2 MHz



Number of channels	Observation period (0.4s * Nbr of channel) (s)	Maximal Duration of each burst (ms)	Number of burst repetition during observation period	average time of occupancy on any channel (s)	Limits (s)
2	0.8	33.91	1	0.03391	0.4

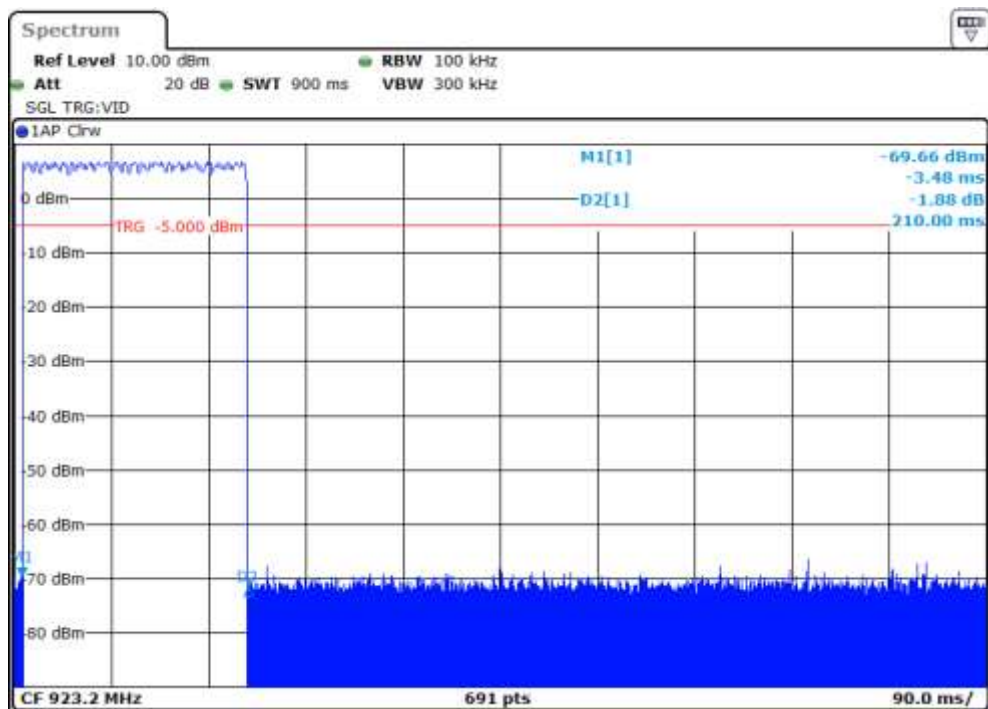
Burst duration and repetition - Channel 923.4 MHz



Number of channels	Observation period (0.4s * Nbr of channel) (s)	Maximal Duration of each burst (ms)	Number of burst repetition during observation period	average time of occupancy on any channel (s)	Limits (s)
2	0.8	33.91	1	0.03391	0.4

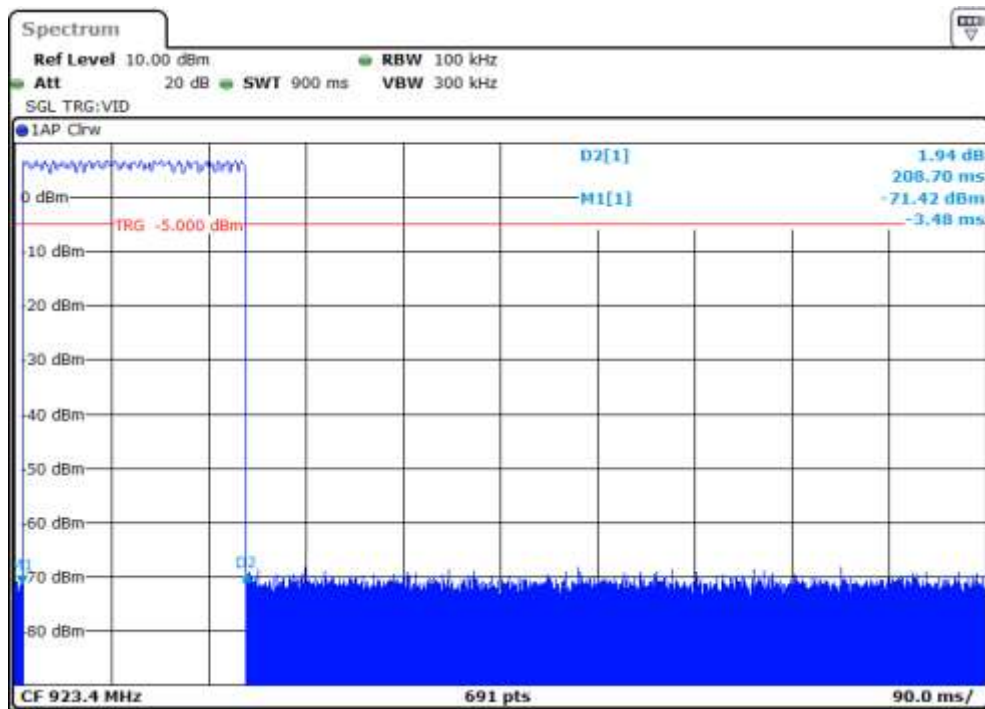
Sample N° 1 Channel plan 3 – SF 10

Burst duration and repetition - Channel 923.2 MHz



Number of channels	Observation period (0.4s * Nbr of channel) (s)	Maximal Duration of each burst (ms)	Number of burst repetition during observation period	average time of occupancy on any channel (s)	Limits (s)
2	0.8	210	1	0.210	0.4

Burst duration and repetition - Channel 923.4 MHz



Number of channels	Observation period (0.4s * Nbr of channel) (s)	Maximal Duration of each burst (ms)	Number of burst repetition during observation period	average time of occupancy on any channel (s)	Limits (s)
2	0.8	208.70	1	0.20870	0.4

Test conclusion:

RESPECTED STANDARD

12. OCCUPIED BANDWIDTH

Temperature (°C) : 19 to 23

Humidity (%HR): 39 to 48

Date : April 22, 2025 to
April 28, 2025

Technician : T. LEDRESSEUR

Standard: FCC Part 15
RSS-Gen

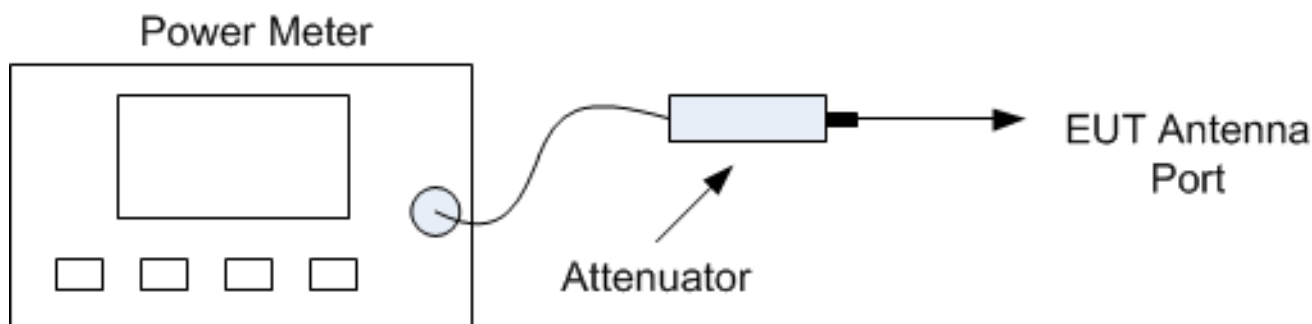
Test procedure:

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:

Conducted test



Setting:

Measure	6dB	99%	20dB
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	2 to 5 times the OBW
RBW	100kHz	1% to 5% of the OBW	1% to 5% of the OBW
VBW	300kHz	3 x RBW	3 x RBW
Trace	Max hold		
Sweep	Auto		

Test operating condition of the equipment:

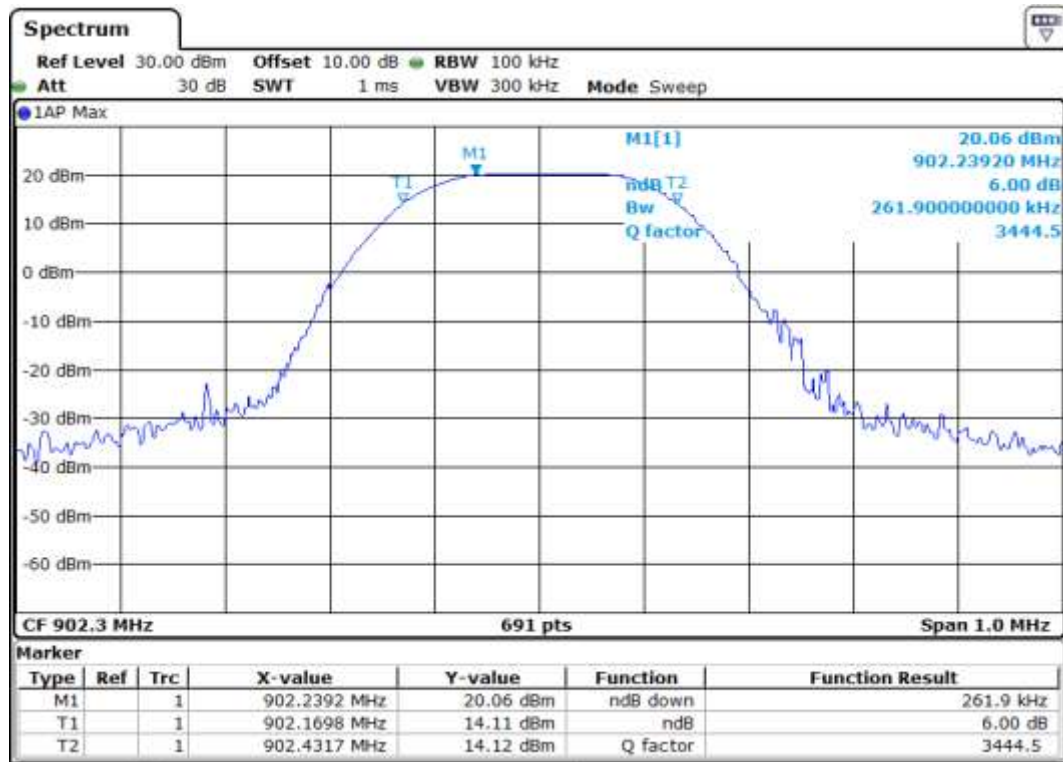
The equipment under test is blocked in continuous modulated transmission mode, at the highest output power level at which the transmitter is intended to operate.

We used for power source the internal battery of the equipment

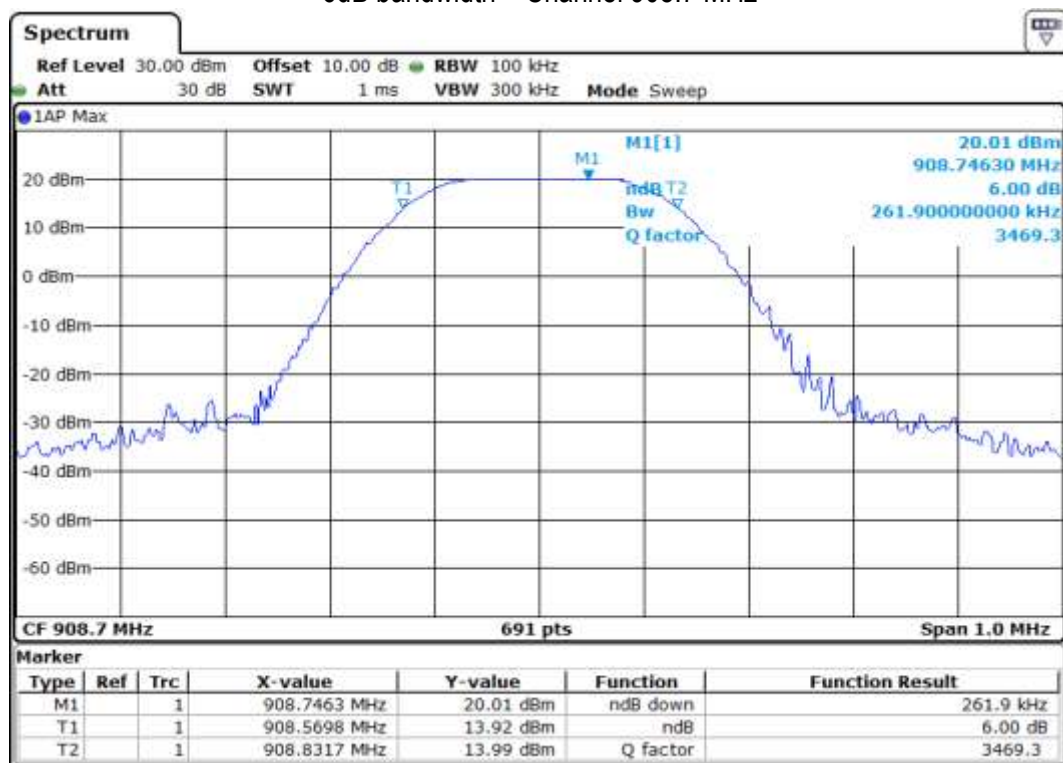
Results:

Sample N° 1 Channel plan 1 – SF 7

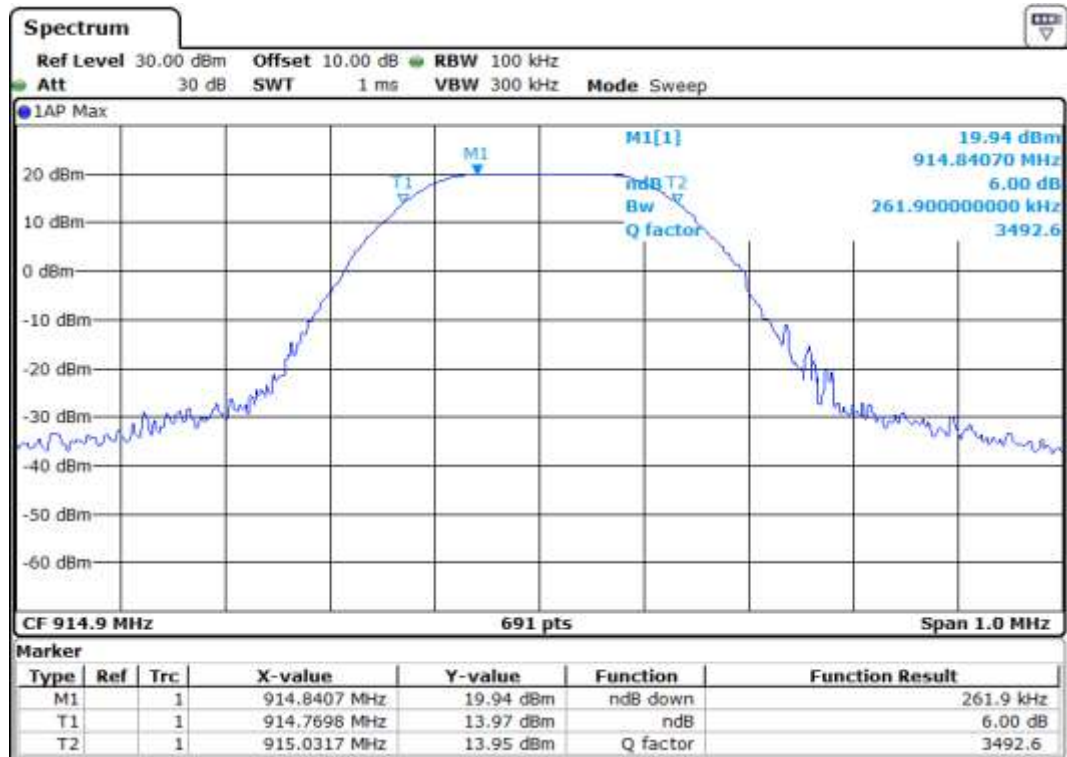
6dB bandwidth – Channel 902.3 MHz



6dB bandwidth – Channel 908.7 MHz



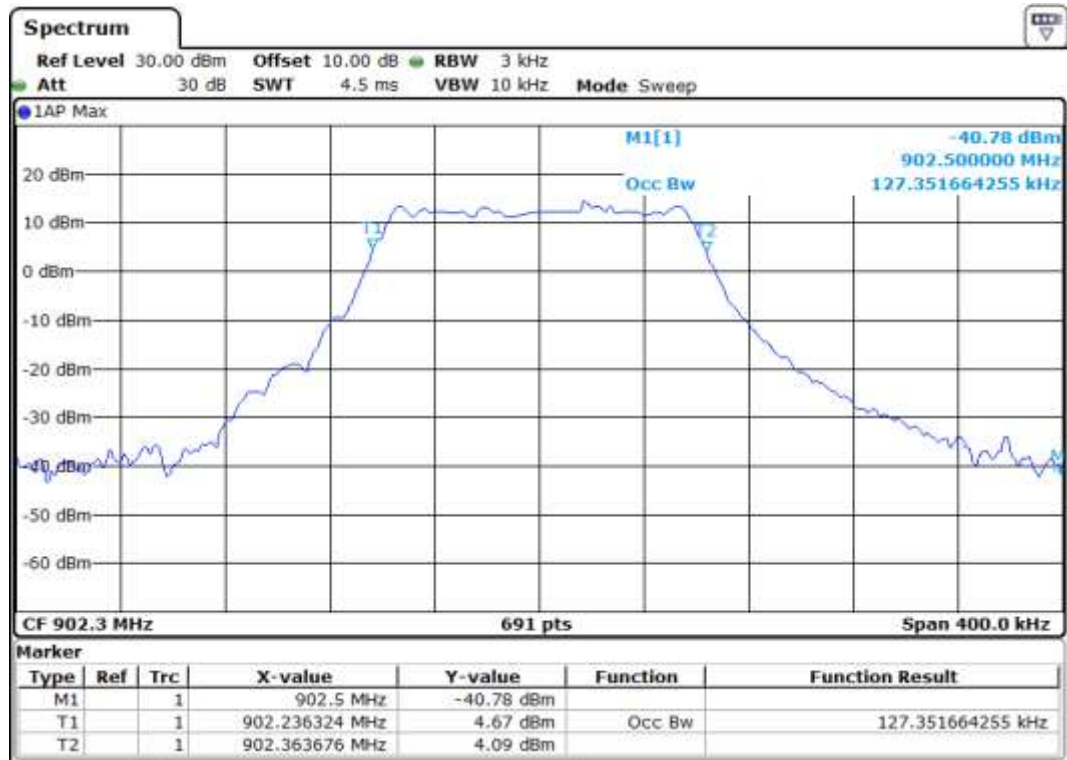
6dB bandwidth – Channel 914.9 MHz



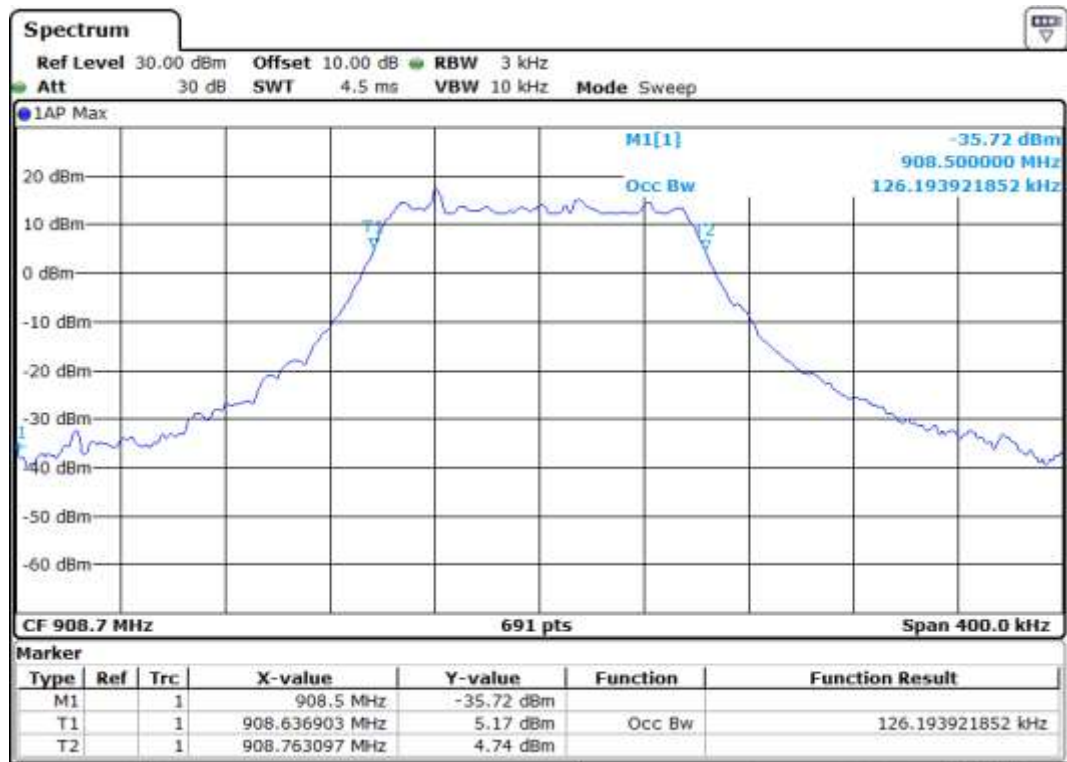
Limit:

Measure realized for reporting only

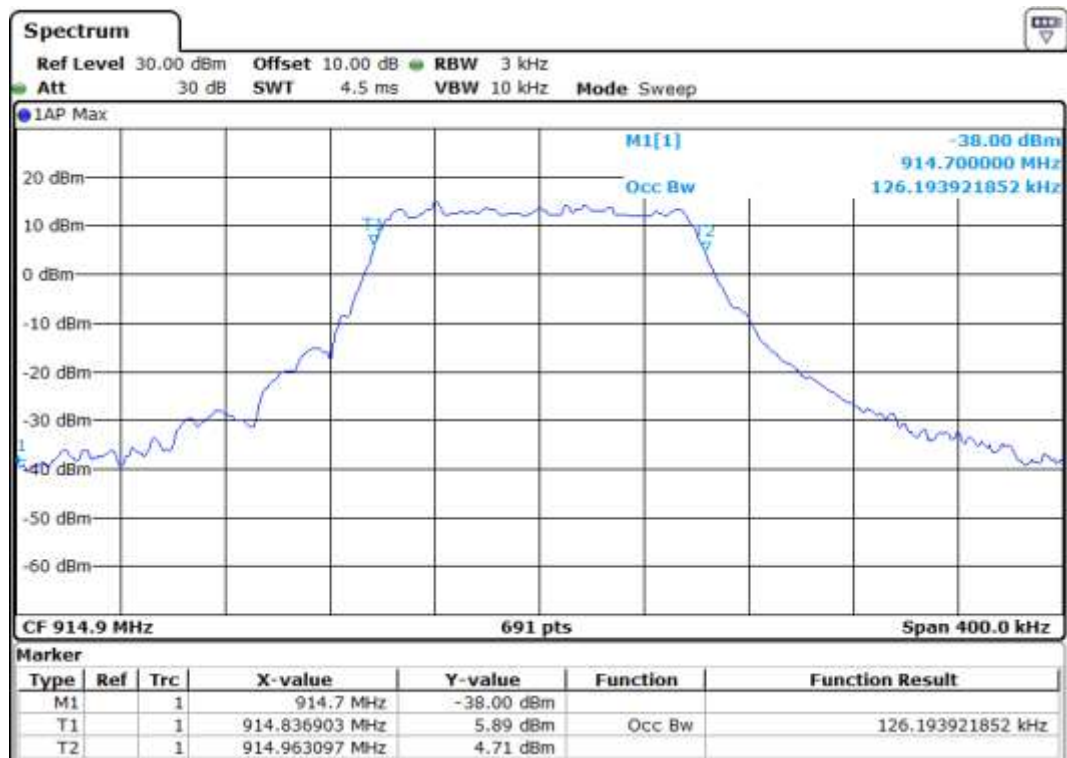
99% bandwidth – Channel 902.3 MHz



99% bandwidth – Channel 908.7 MHz



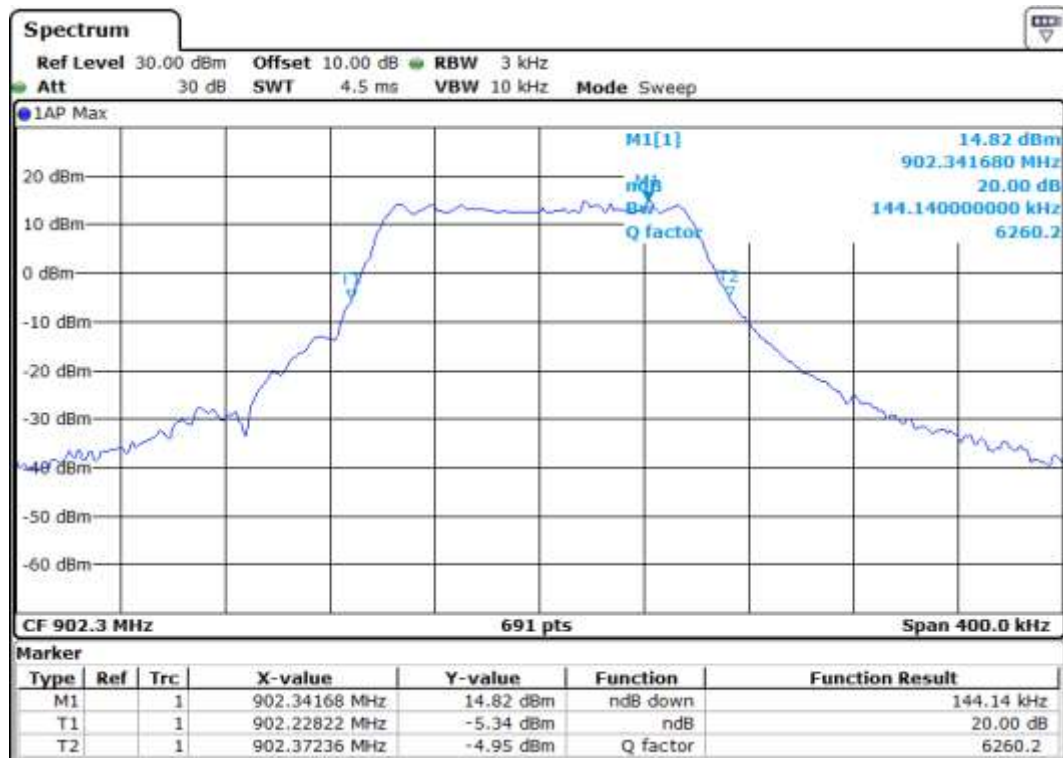
99% bandwidth – Channel 914.9 MHz



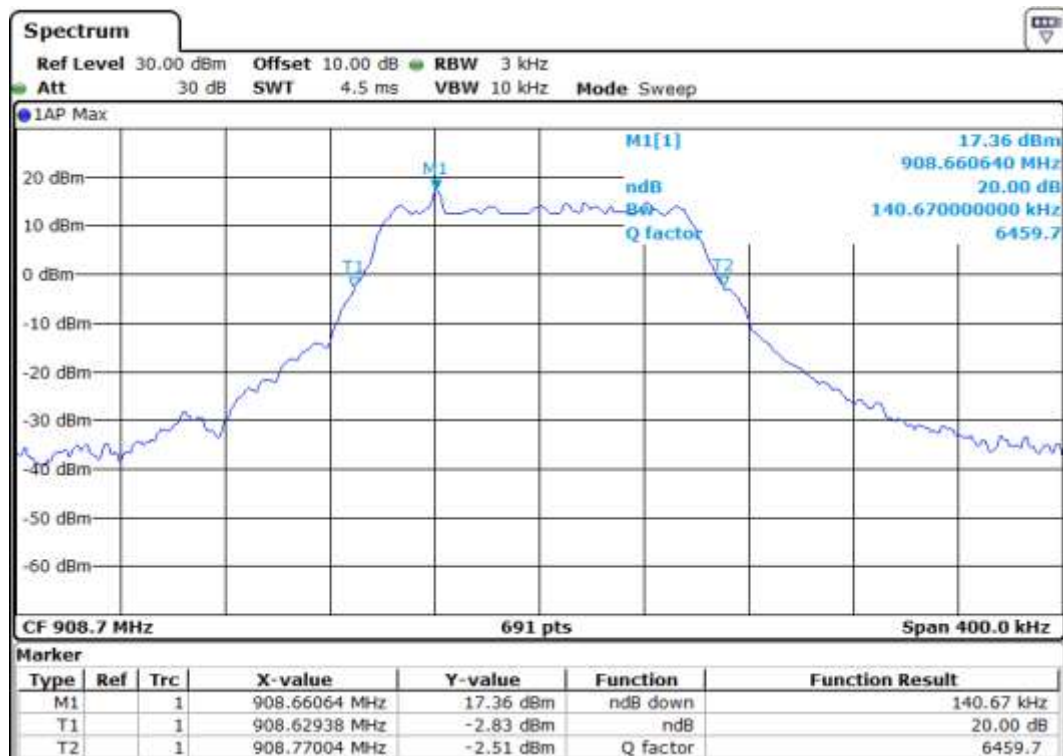
Limit:

Measure realized for reporting only

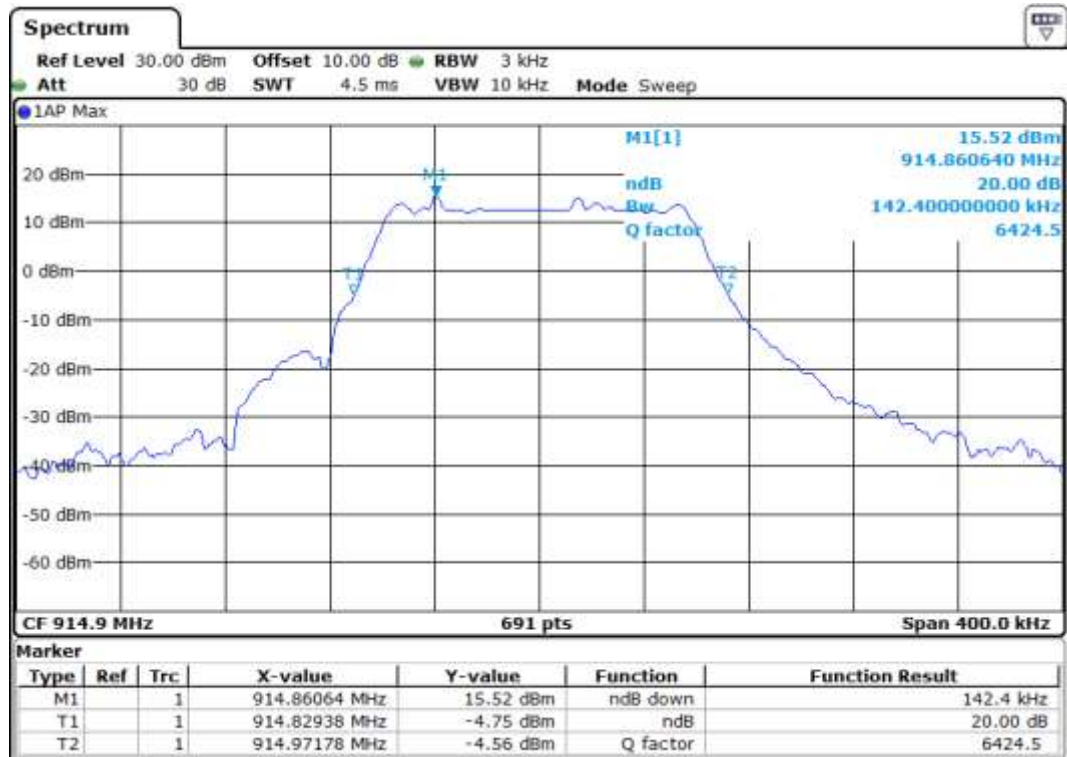
20dB bandwidth – Channel 902.3 MHz



20dB bandwidth – Channel 908.7 MHz



20dB bandwidth – Channel 914.9 MHz

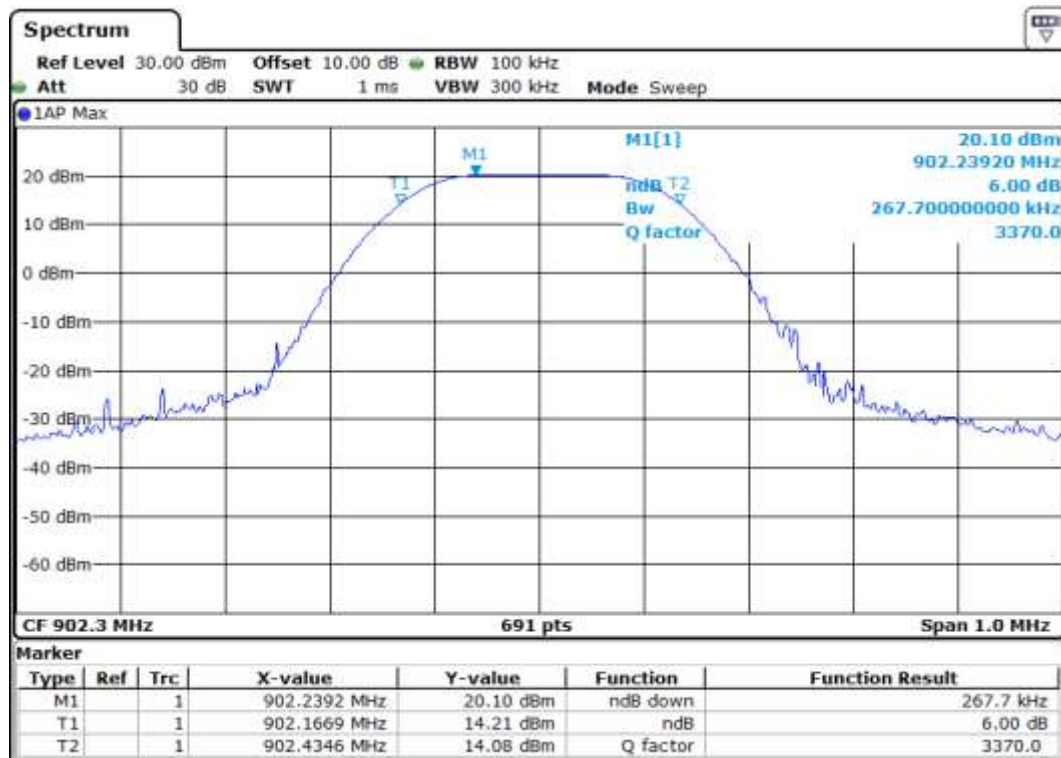


Limit:

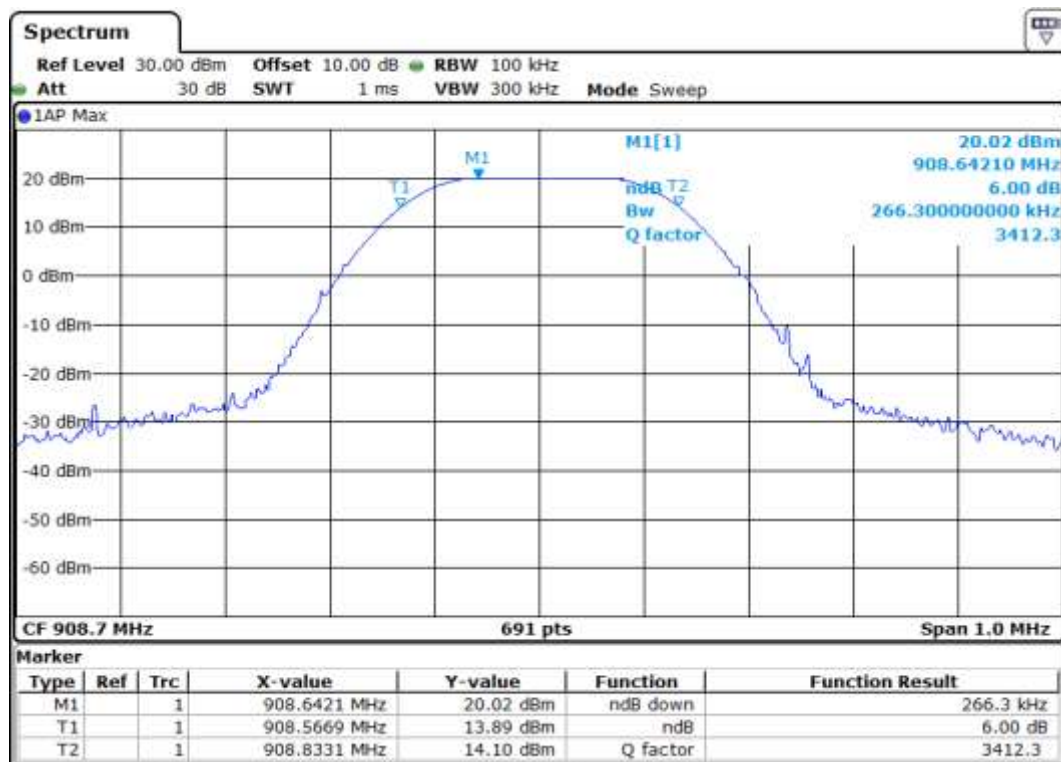
Measure realized for reporting only

Sample N° 1 Channel plan 1 – SF 10

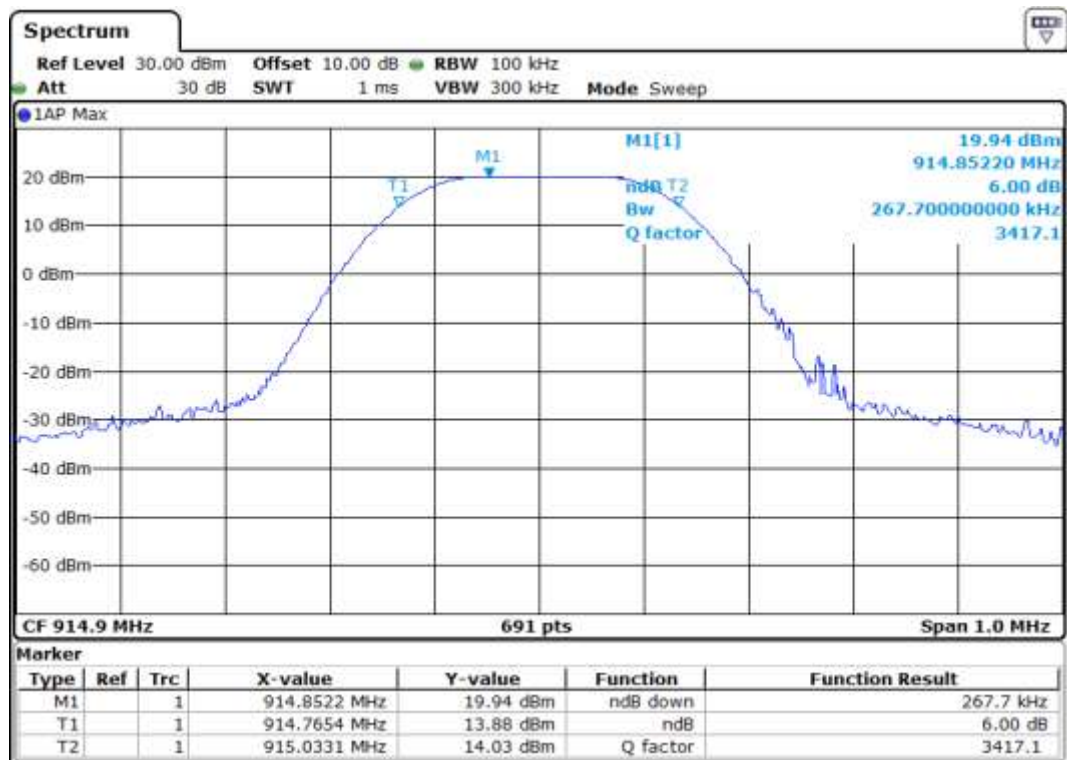
6dB bandwidth – Channel 902.3 MHz



6dB bandwidth – Channel 908.7 MHz



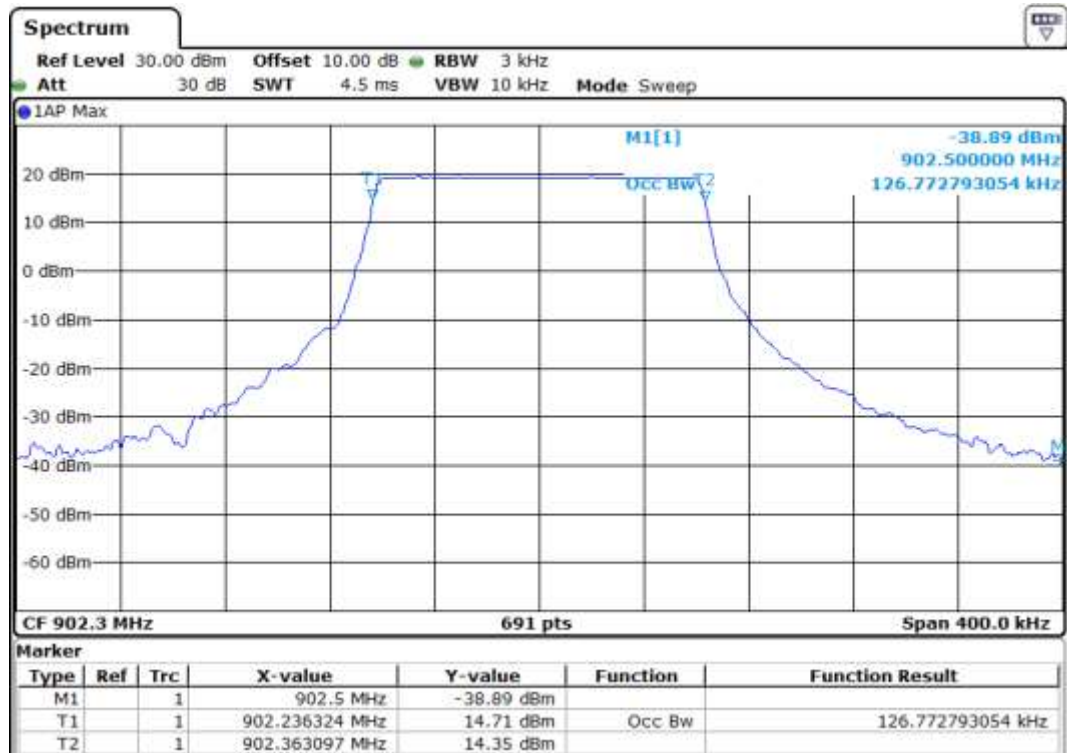
6dB bandwidth – Channel 914.9 MHz



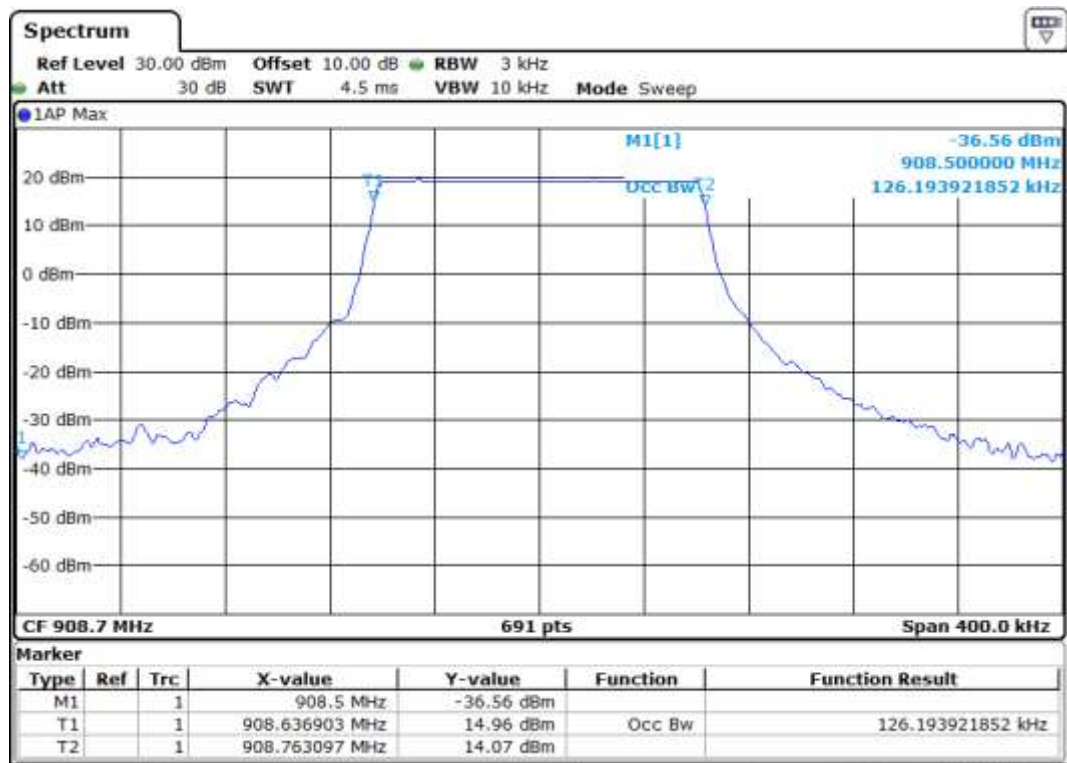
Limit:

Measure realized for reporting only

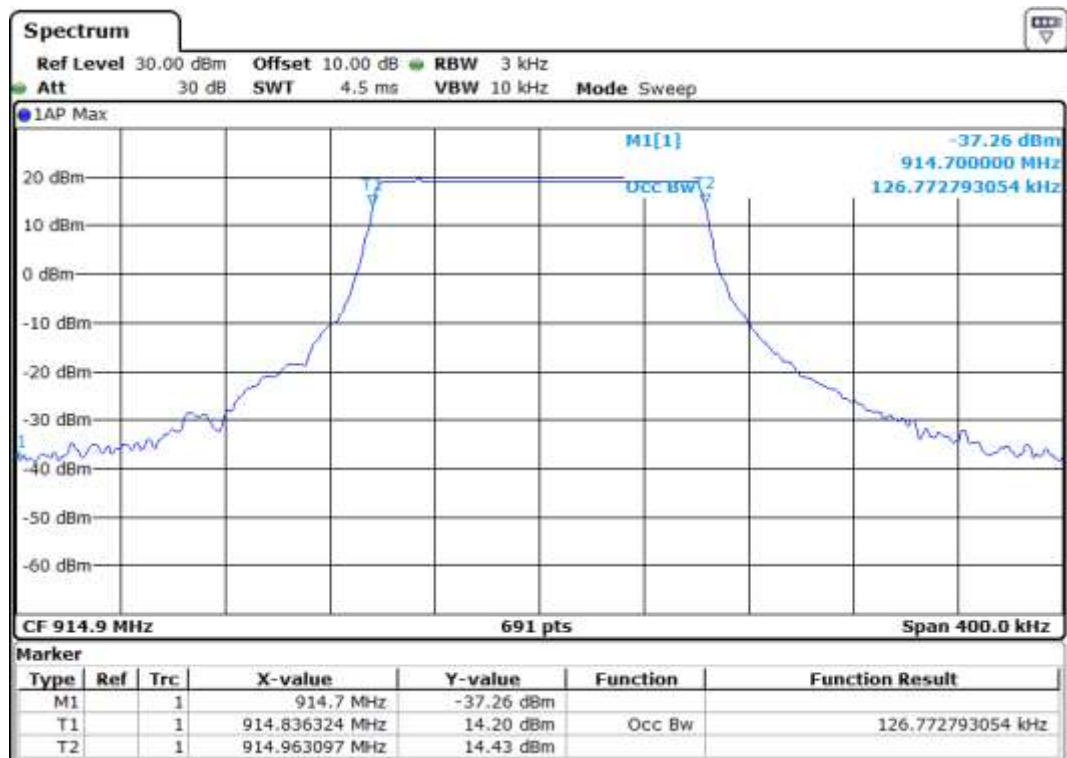
99% bandwidth – Channel 902.3 MHz



99% bandwidth – Channel 908.7 MHz



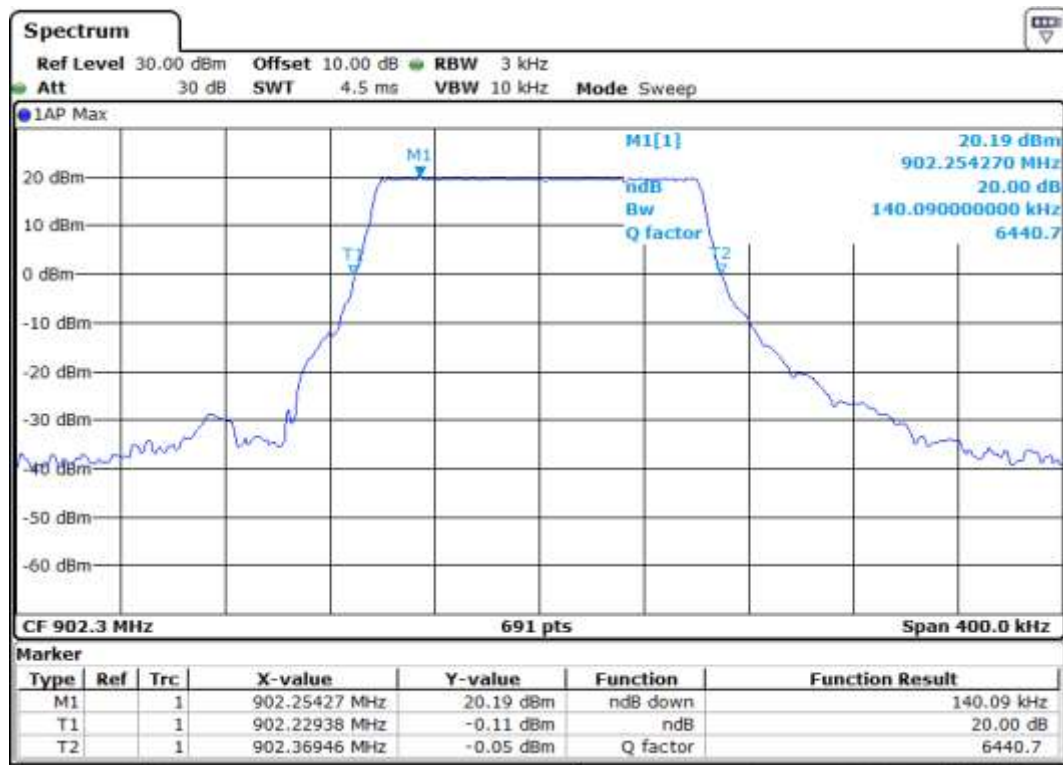
99% bandwidth – Channel 914.9 MHz



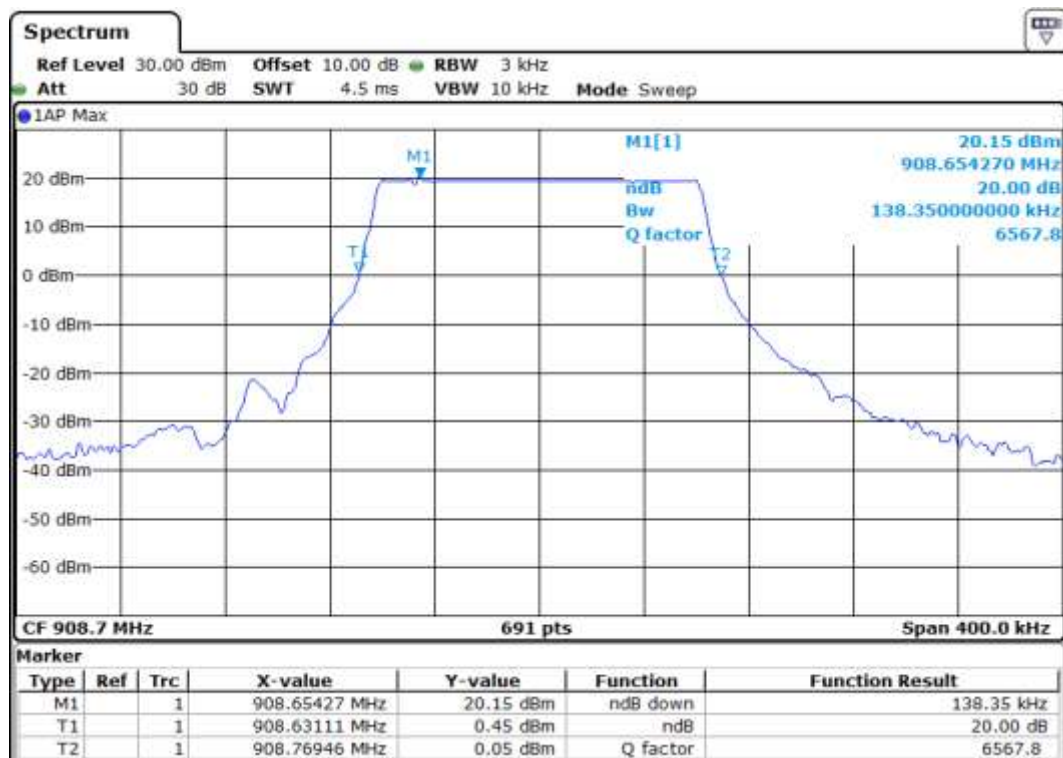
Limit:

Measure realized for reporting only

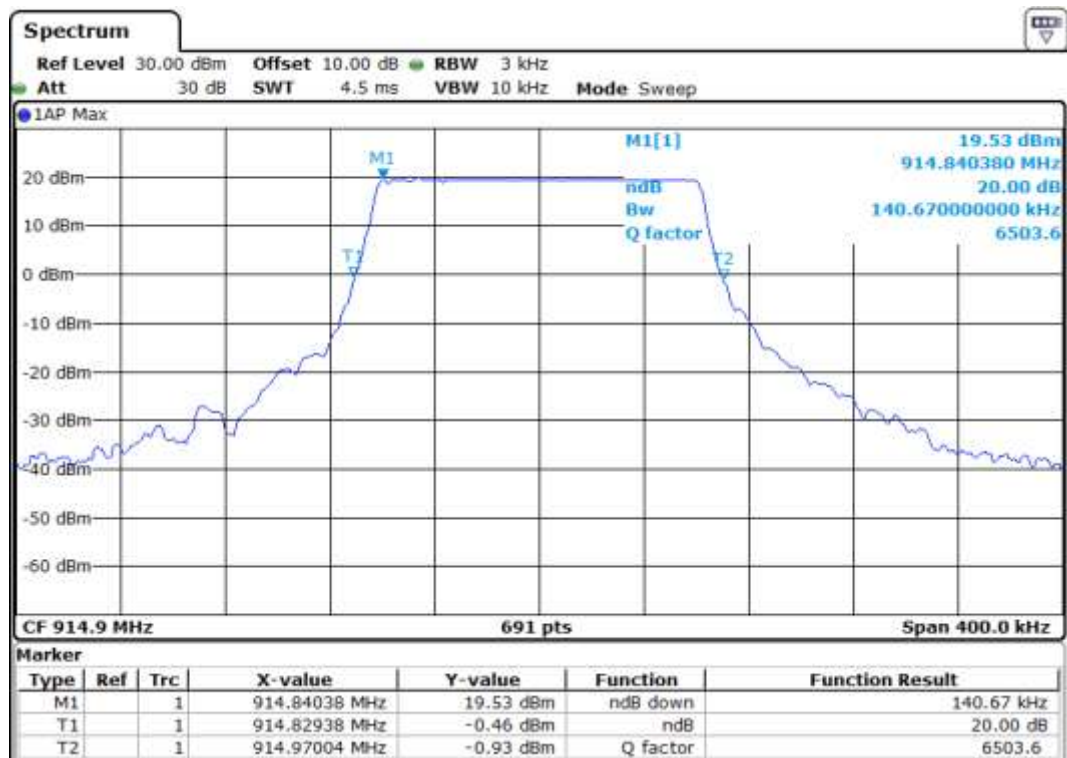
20dB bandwidth – Channel 902.3 MHz



20dB bandwidth – Channel 908.7 MHz



20dB bandwidth – Channel 914.9 MHz

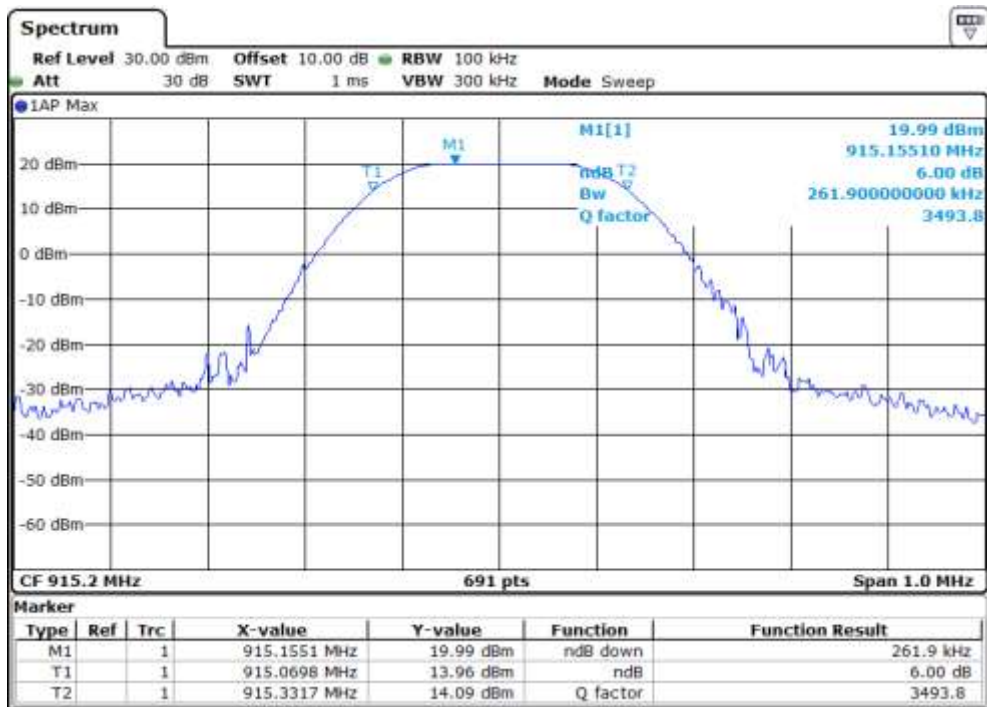


Limit:

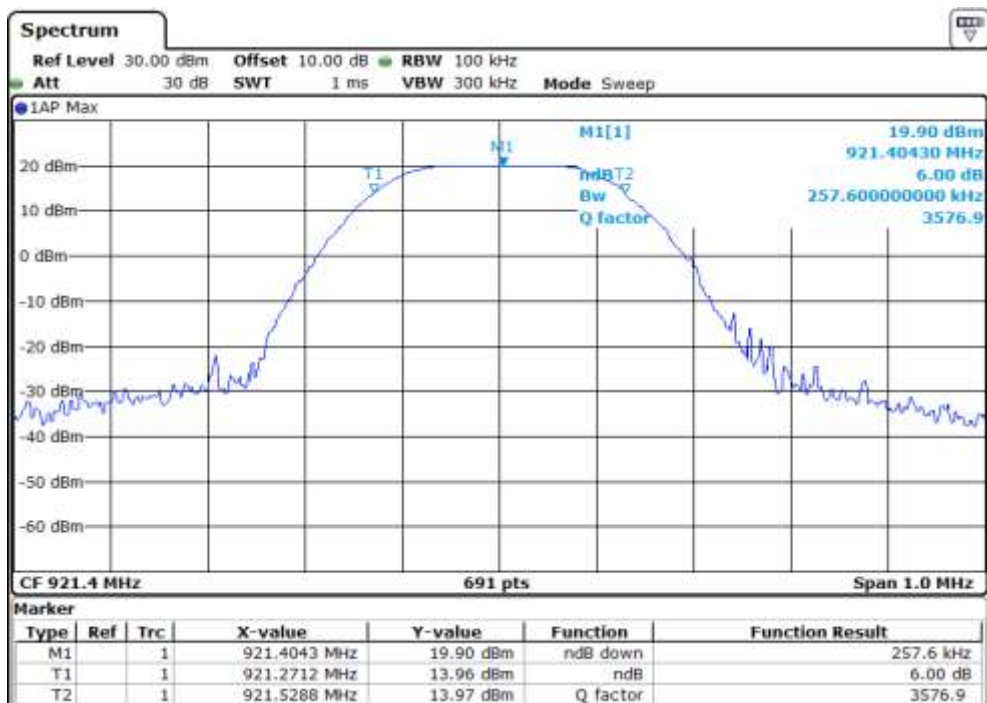
Measure realized for reporting only

Sample N° 1 Channel plan 2 – SF 7

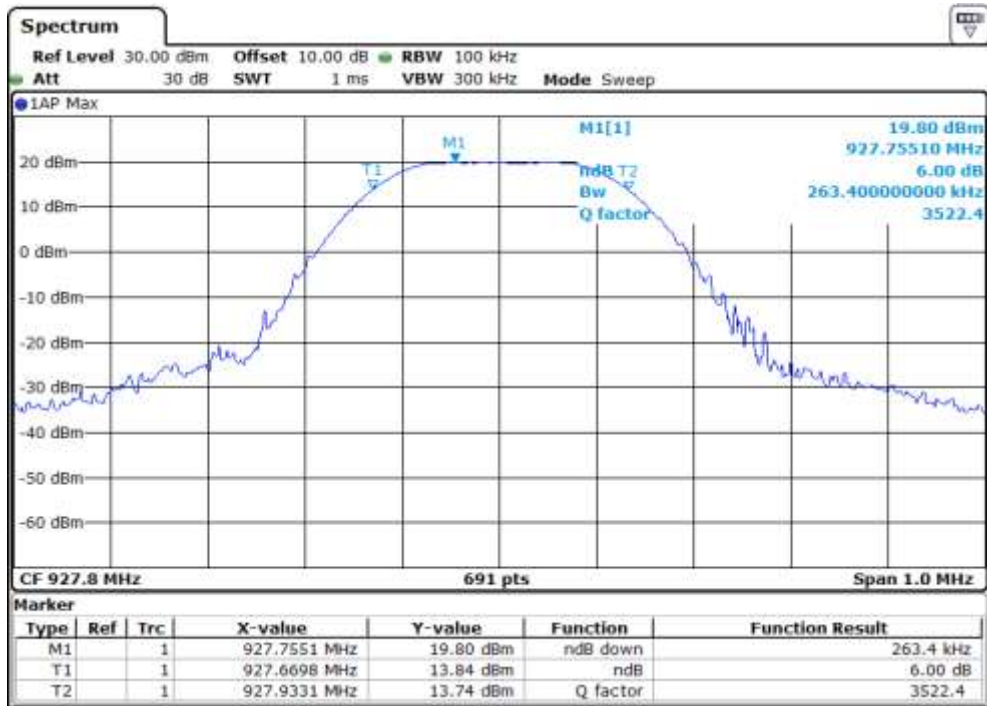
6dB bandwidth – Channel 915.2 MHz



6dB bandwidth – Channel 921.4 MHz



6dB bandwidth – Channel 927.8 MHz



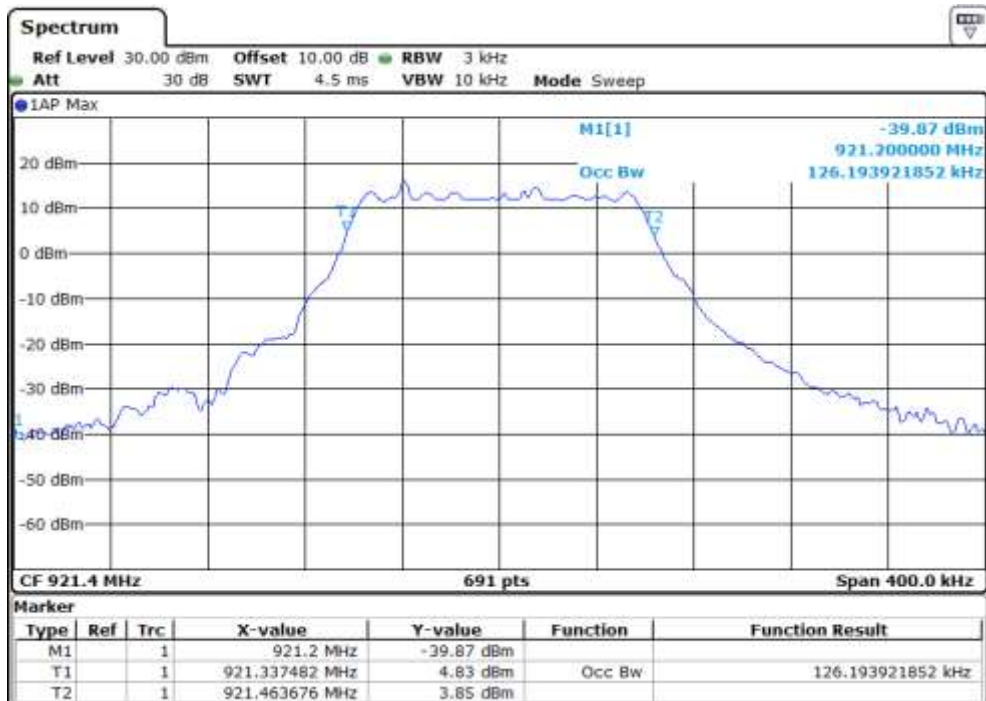
Limit:

Measure realized for reporting only

99% bandwidth – Channel 915.2 MHz



99% bandwidth – Channel 921.4 MHz



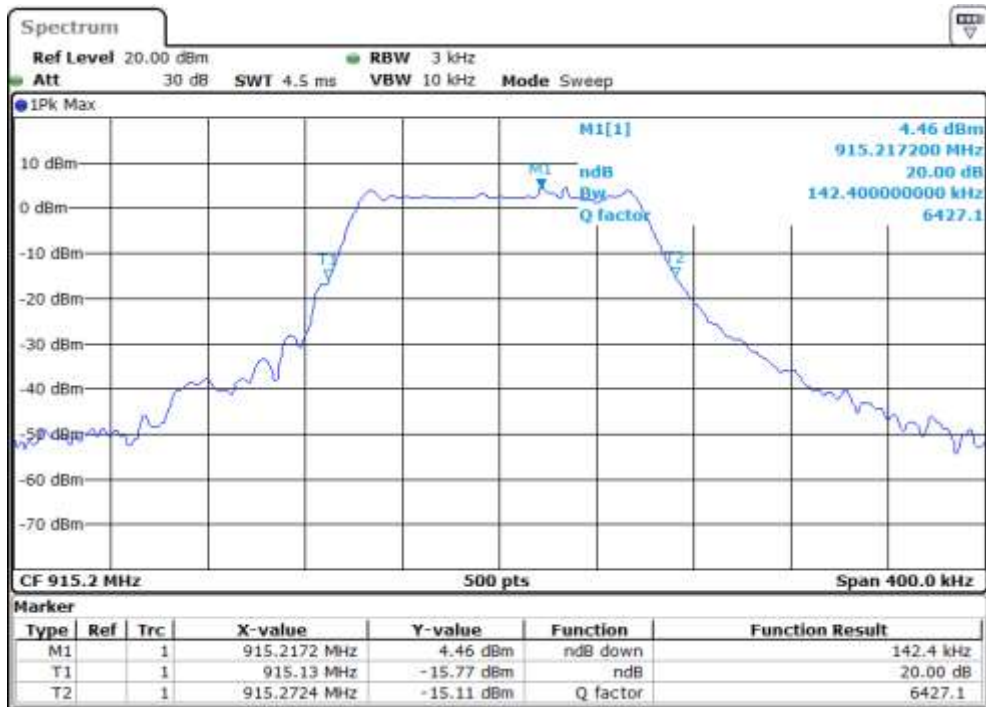
99% bandwidth – Channel 927.8 MHz



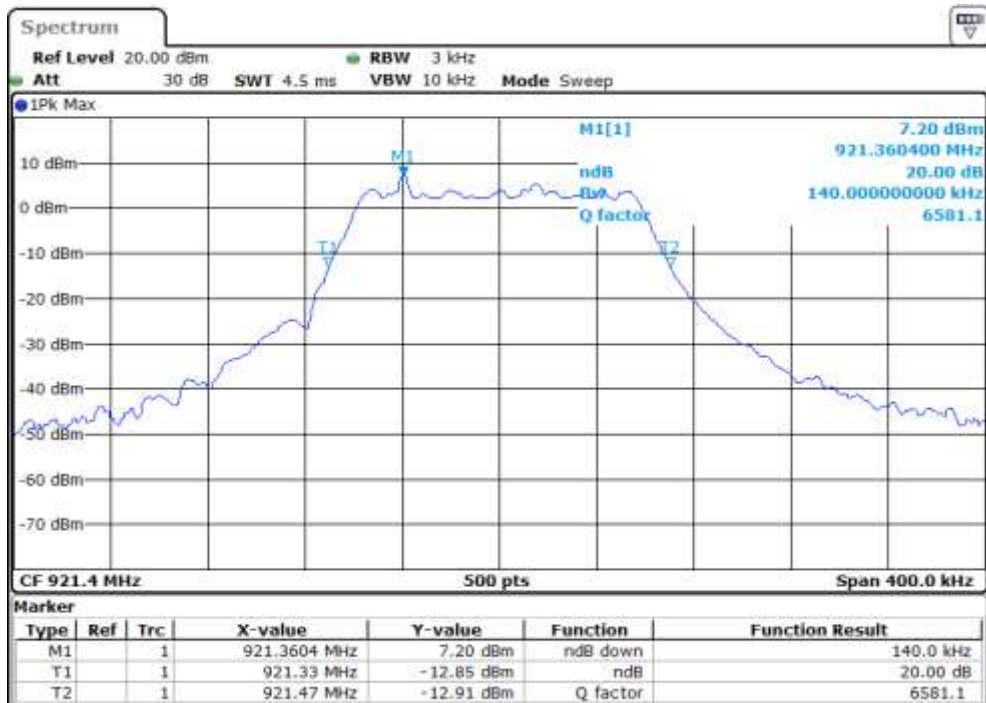
Limit:

Measure realized for reporting only

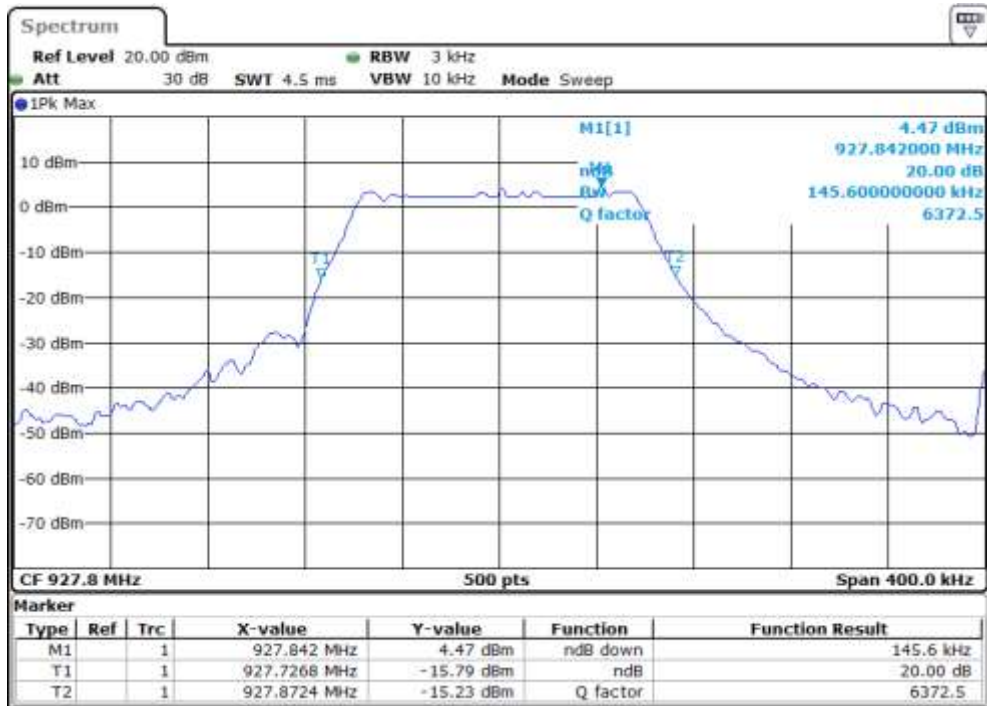
20dB bandwidth – Channel 915.2 MHz



20dB bandwidth – Channel 921.4 MHz



20dB bandwidth – Channel 927.8 MHz

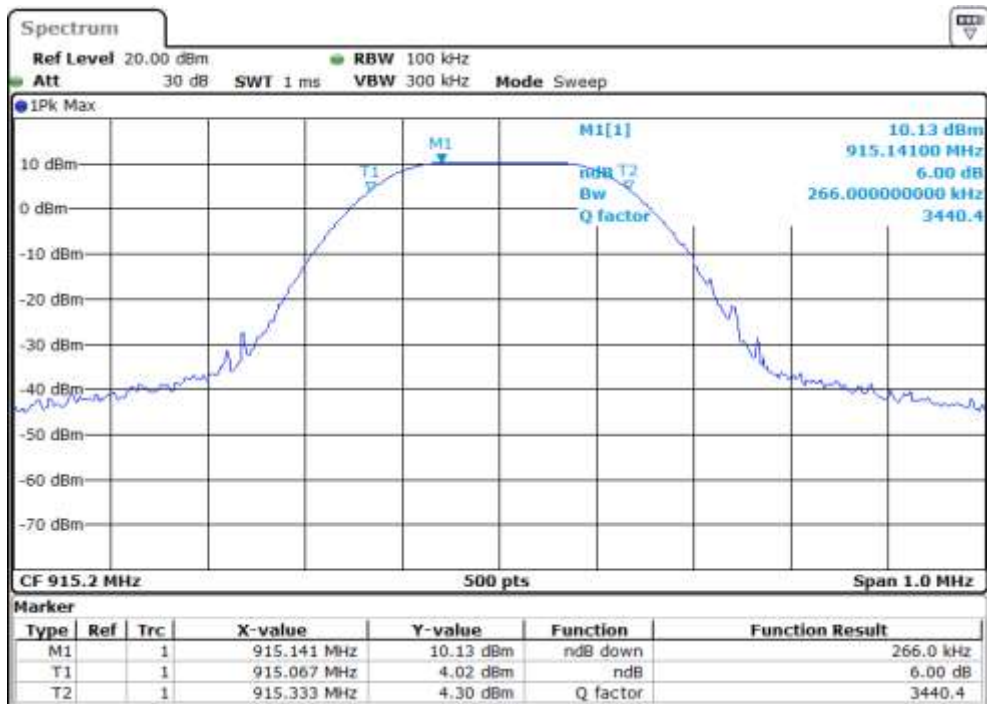


Limit:

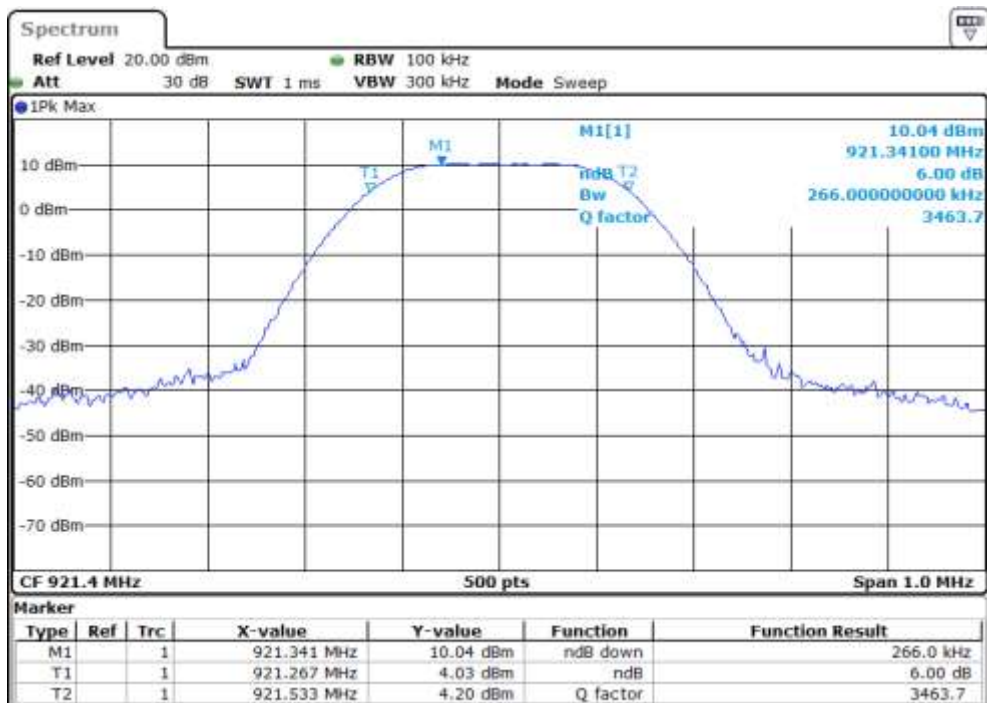
Measure realized for reporting only

Sample N° 1 Channel plan 2 – SF 10

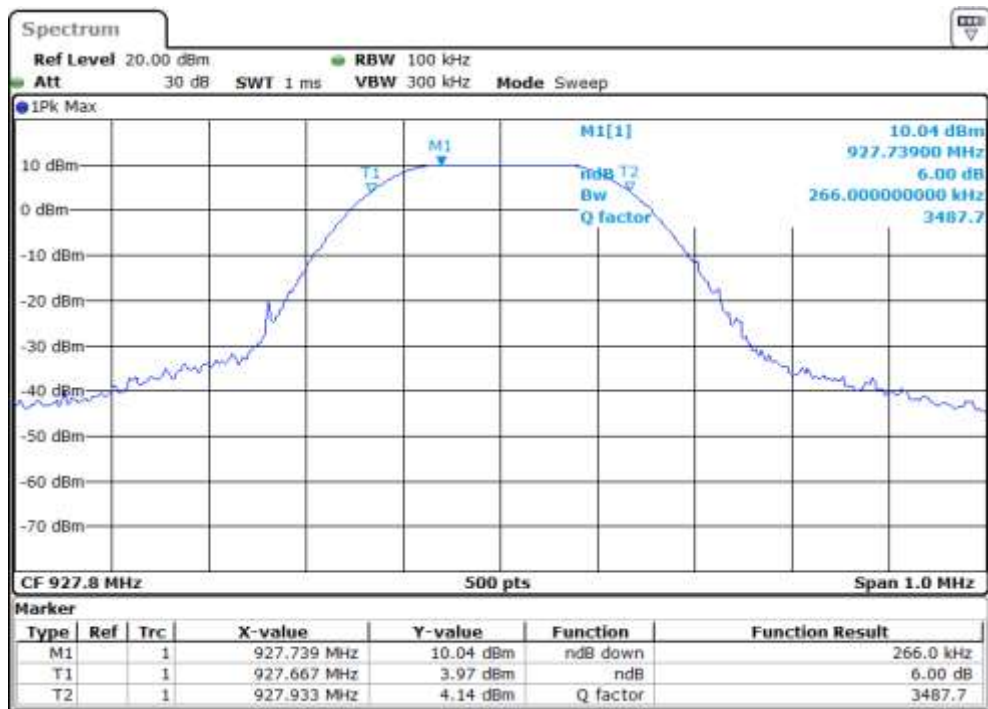
6dB bandwidth – Channel 915.2 MHz



6dB bandwidth – Channel 921.4 MHz



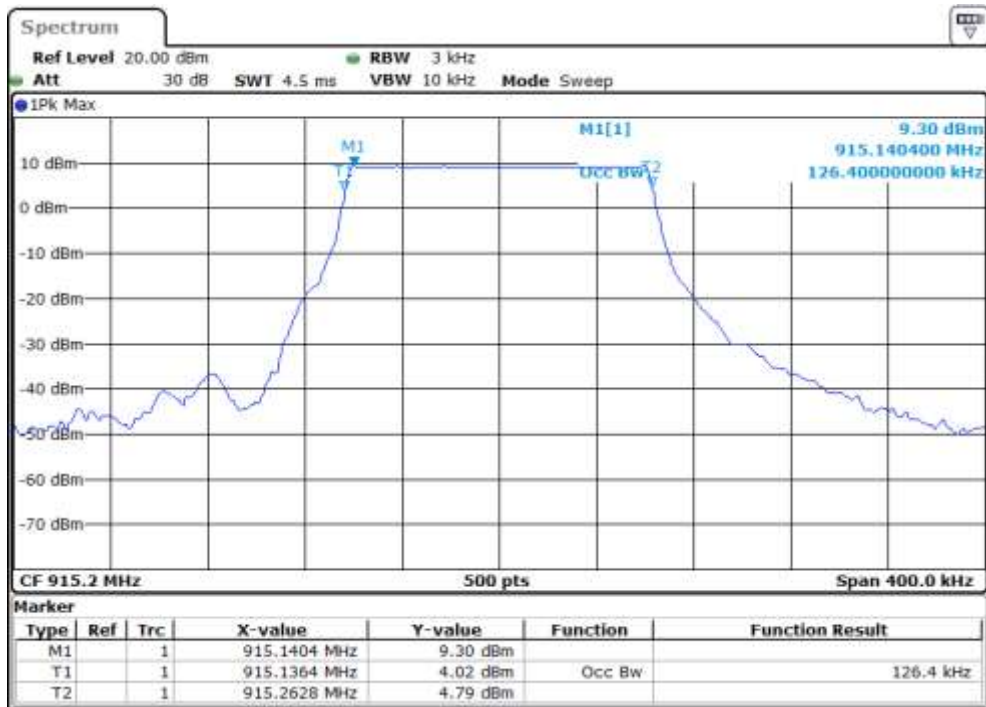
6dB bandwidth – Channel 927.8 MHz



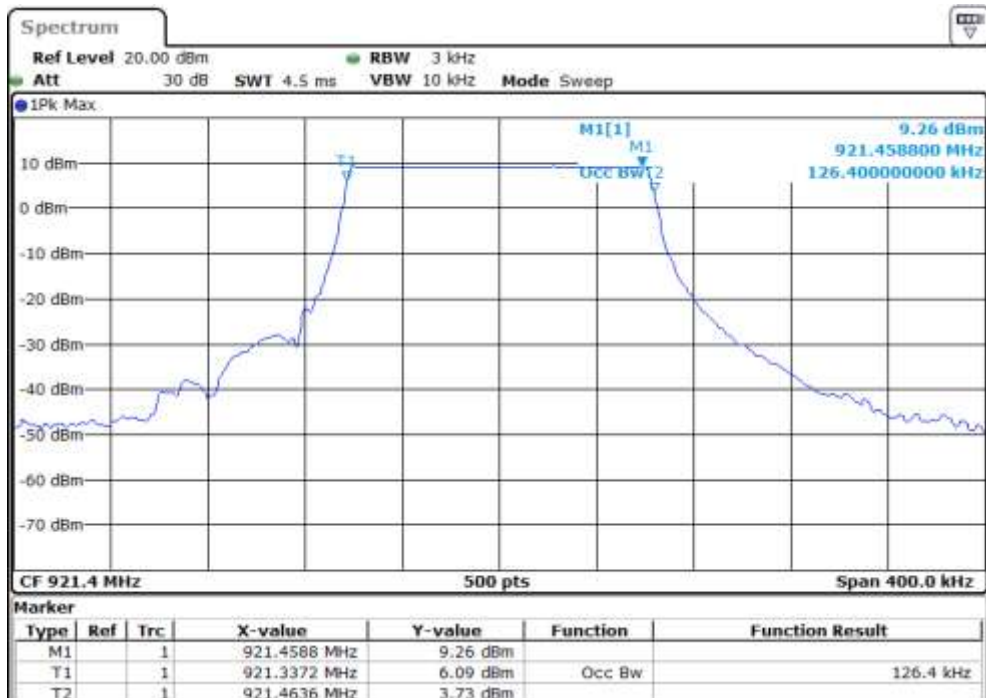
Limit:

Measure realized for reporting only

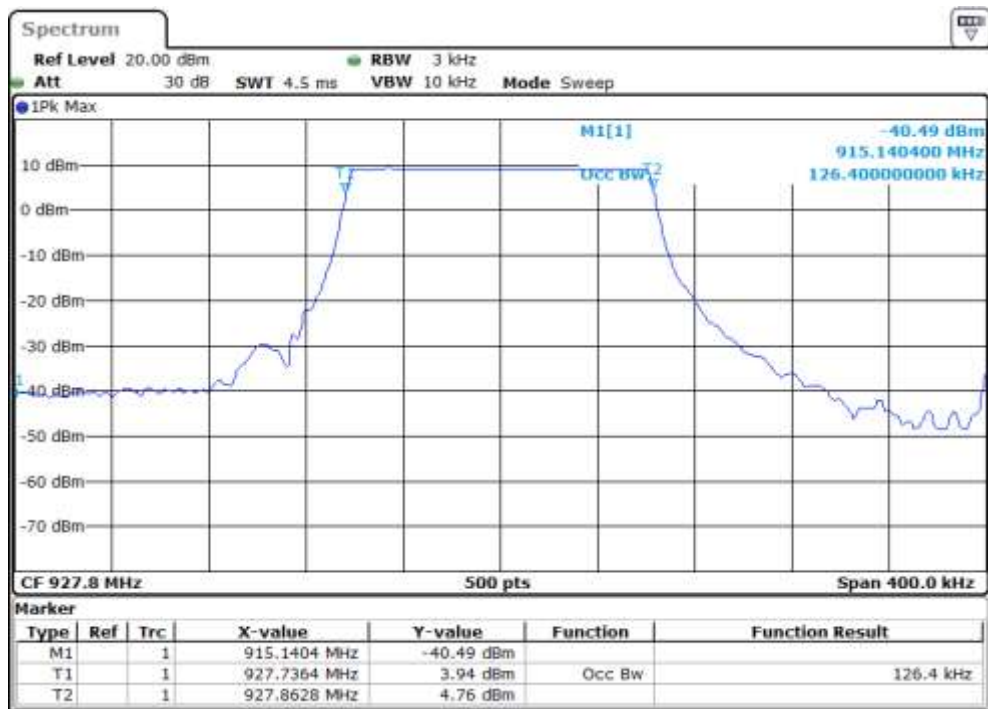
99% bandwidth – Channel 915.2 MHz



99% bandwidth – Channel 921.4 MHz



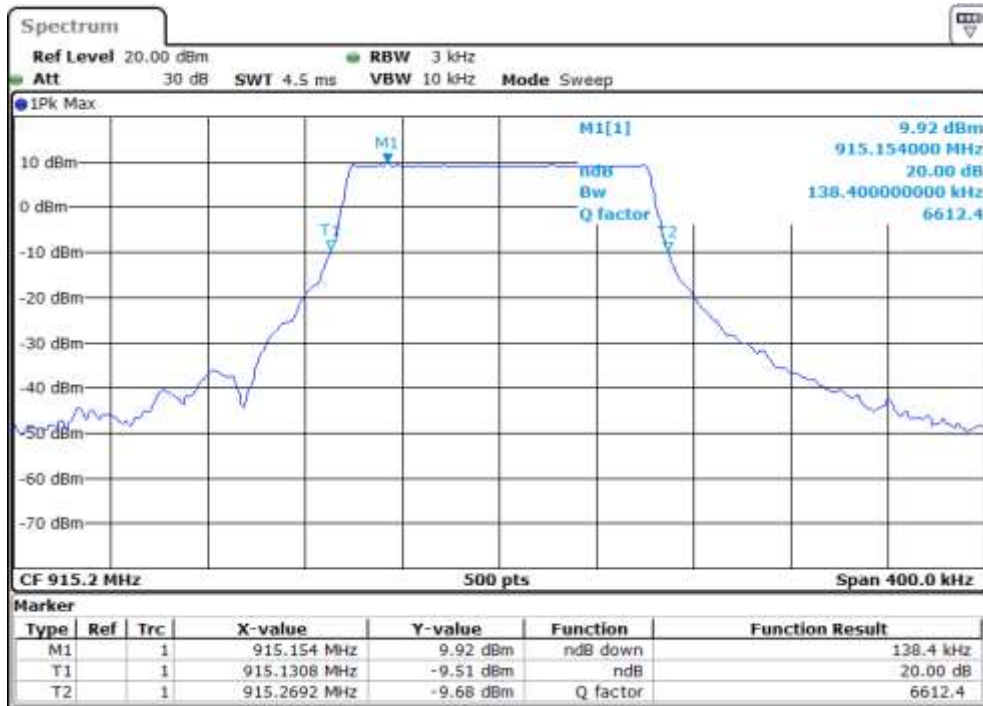
99% bandwidth – Channel 927.8 MHz



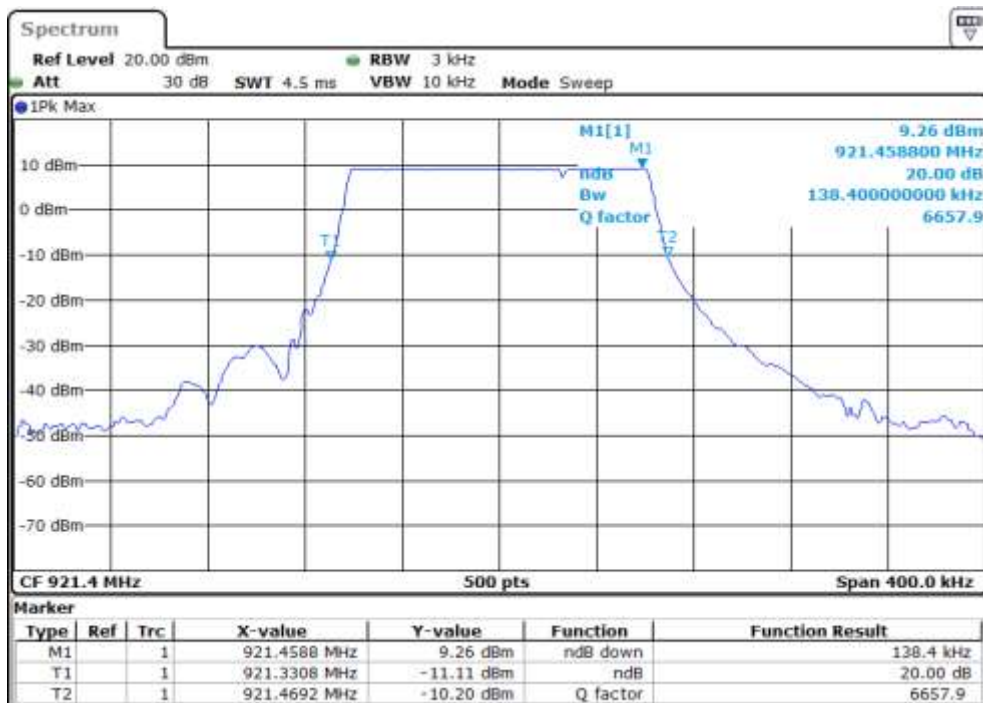
Limit:

Measure realized for reporting only

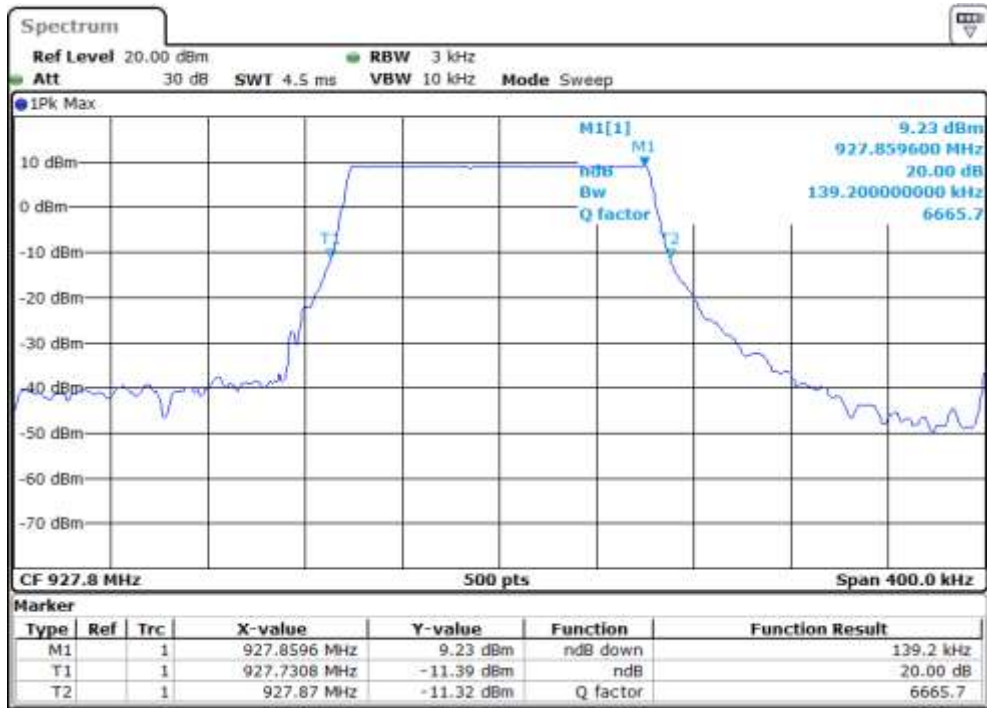
20dB bandwidth – Channel 915.2 MHz



20dB bandwidth – Channel 921.4 MHz

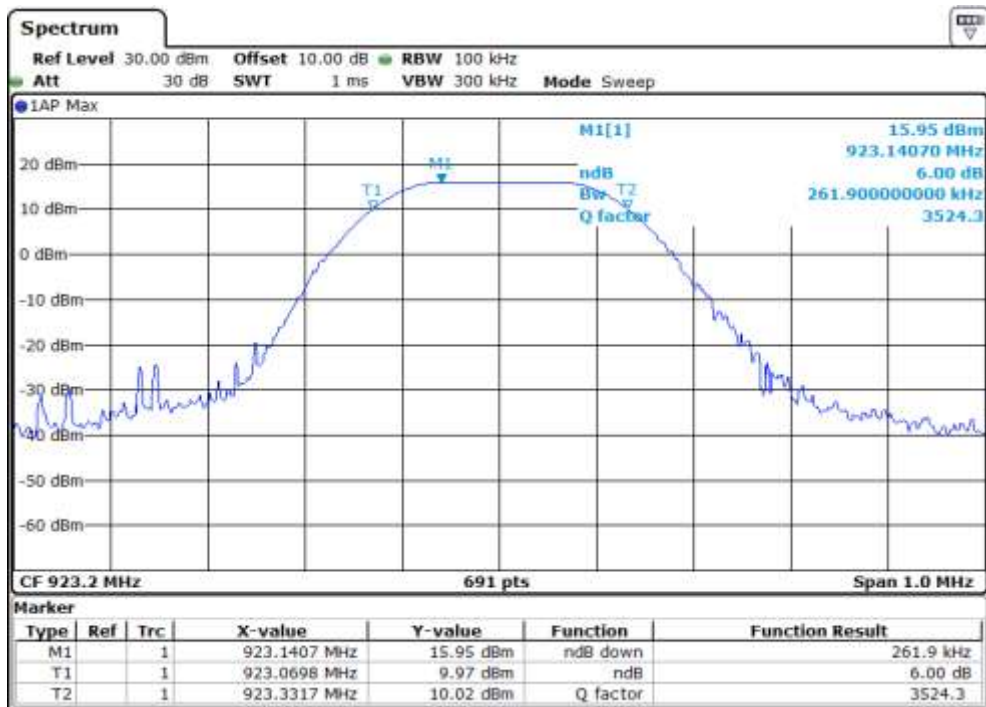


20dB bandwidth – Channel 927.8 MHz

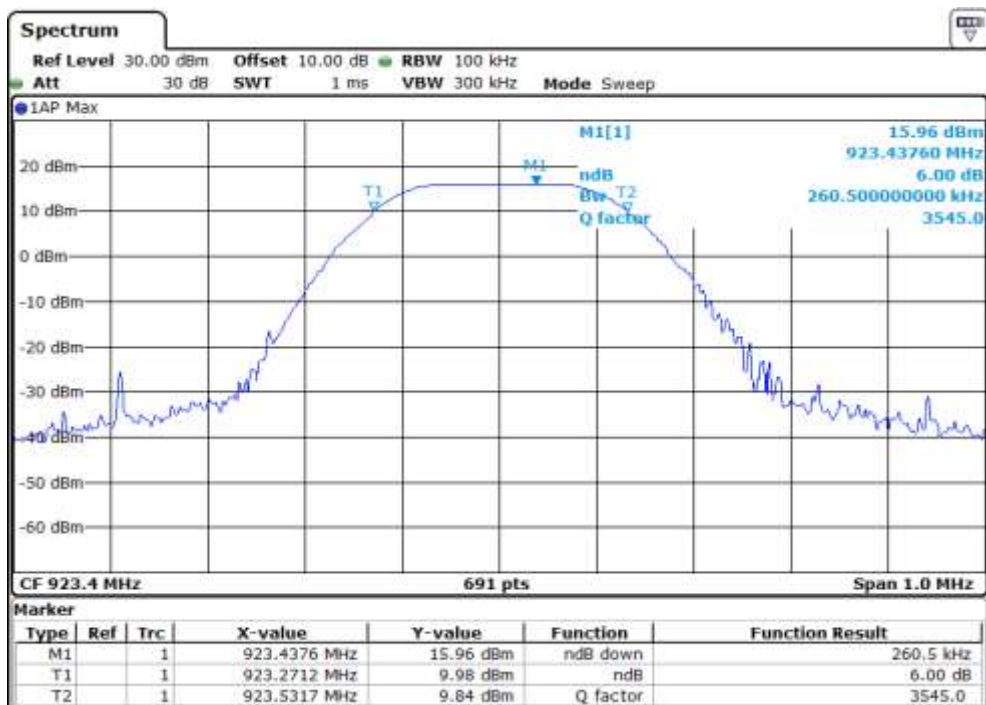


Sample N° 1 Channel plan 3 – SF 7

6dB bandwidth – Channel 923.2 MHz



6dB bandwidth – Channel 923.4 MHz



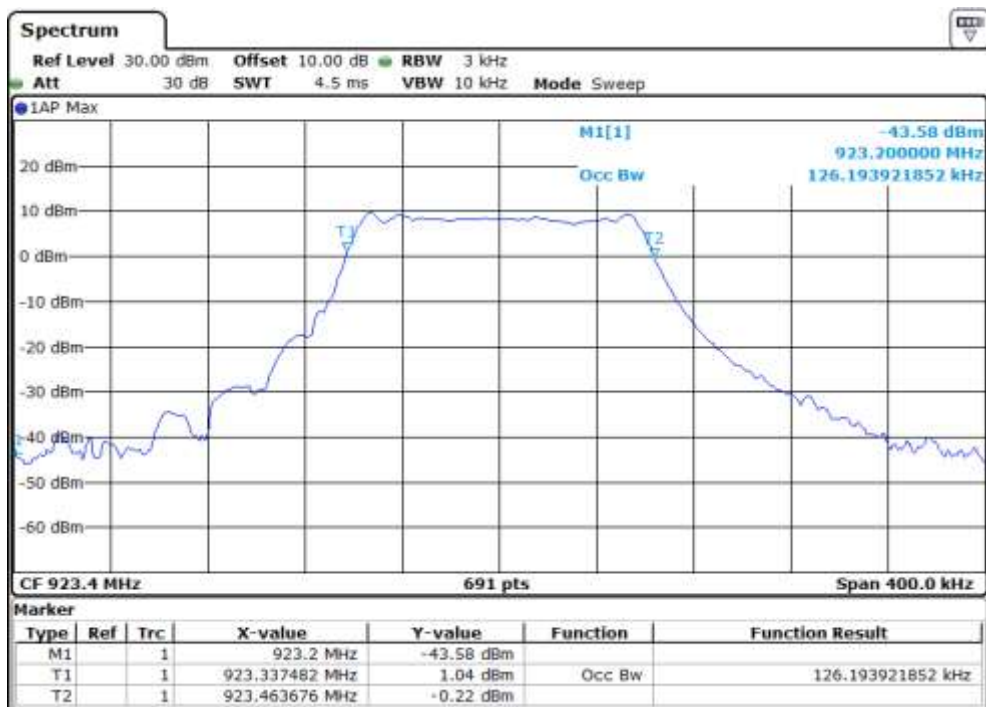
Limit:

Measure realized for reporting only

99% bandwidth – Channel 923.2 MHz



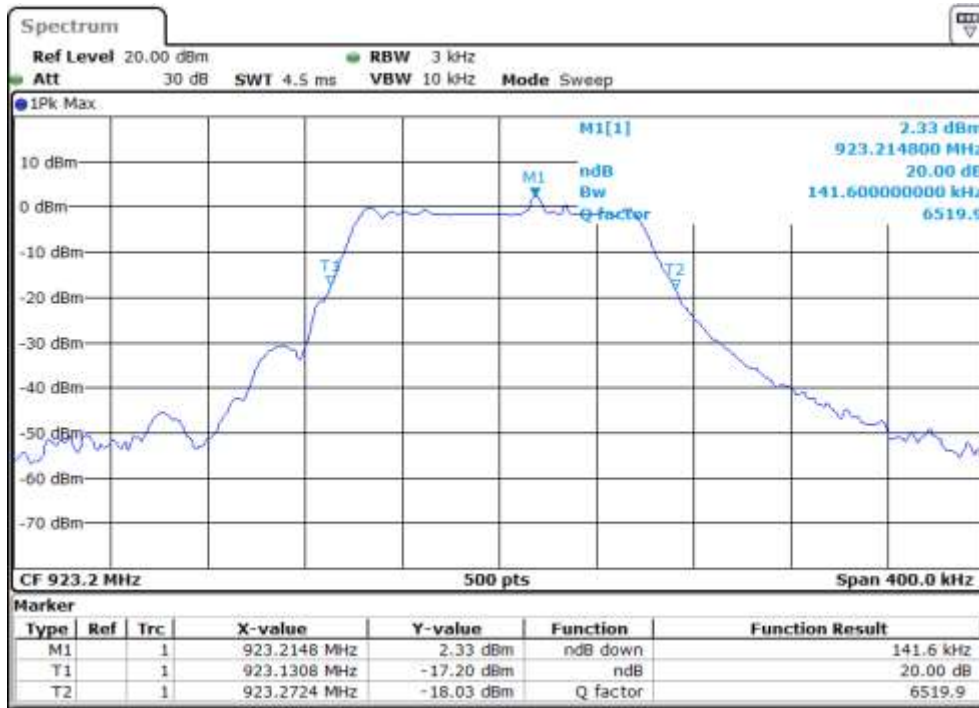
99% bandwidth – Channel 923.4 MHz



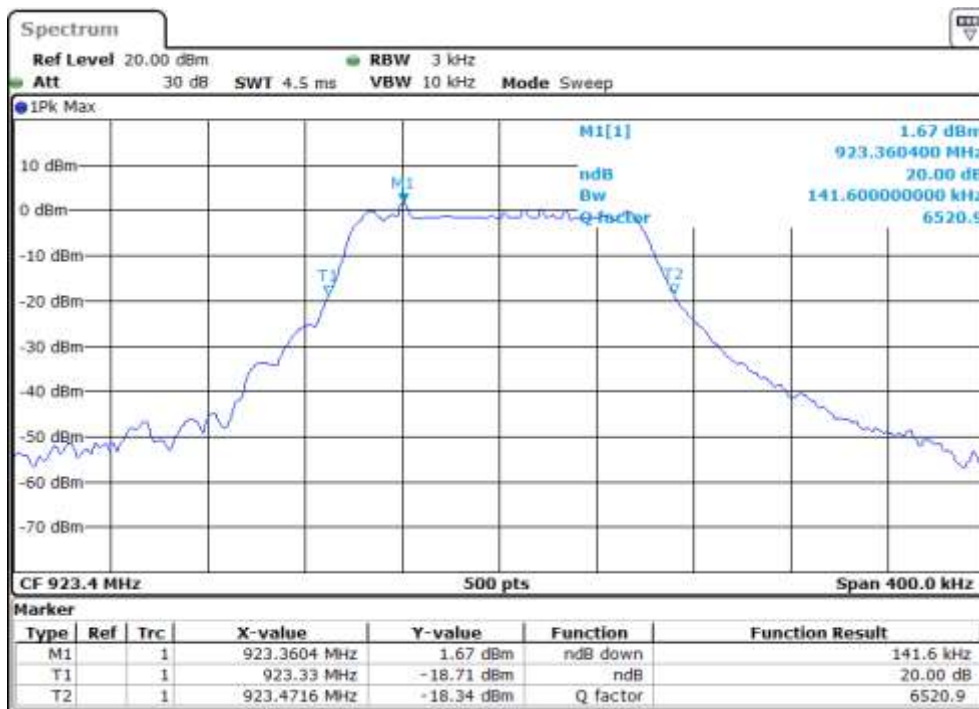
Limit:

Measure realized for reporting only

20dB bandwidth – Channel 923.2 MHz



20dB bandwidth – Channel 923.4 MHz

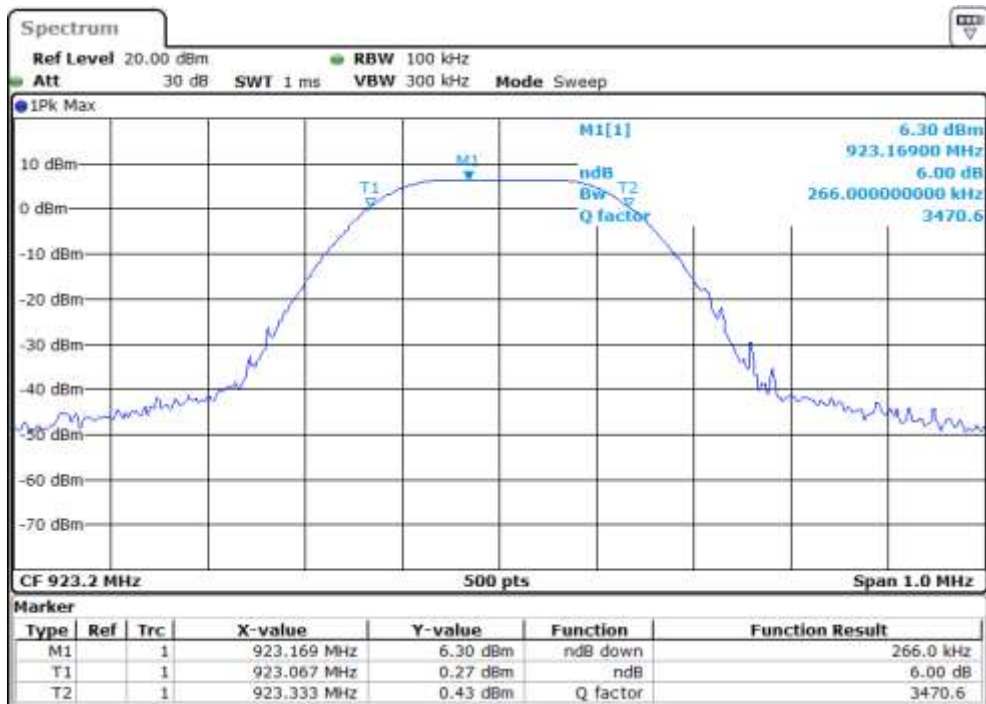


Limit:

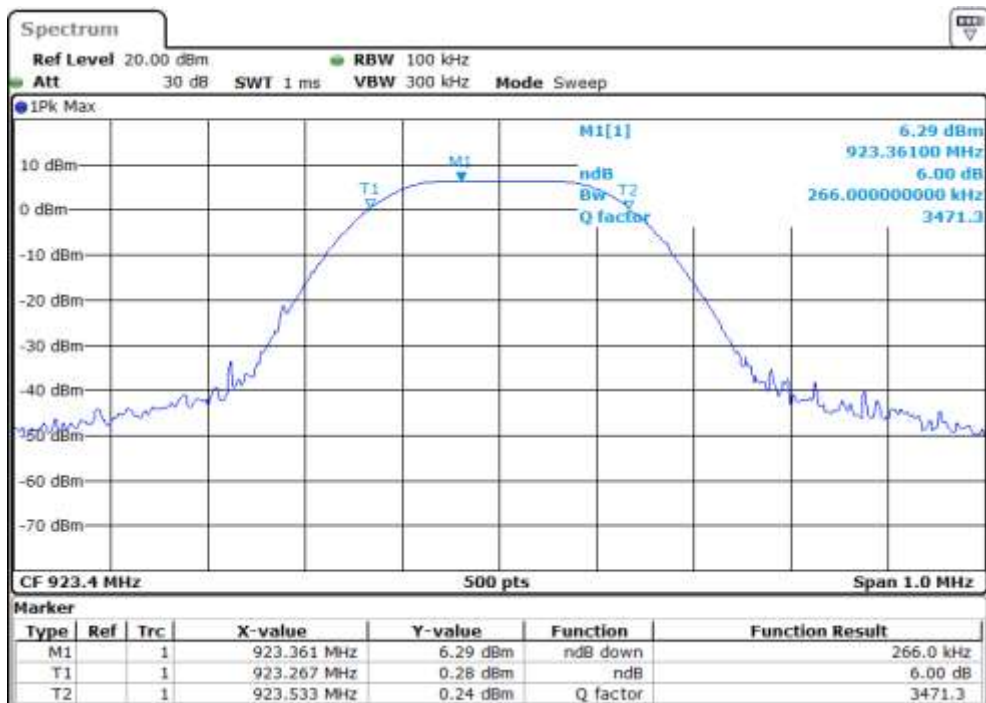
Measure realized for reporting only

Sample N° 1 Channel plan 3 – SF 10

6dB bandwidth – Channel 923.2 MHz



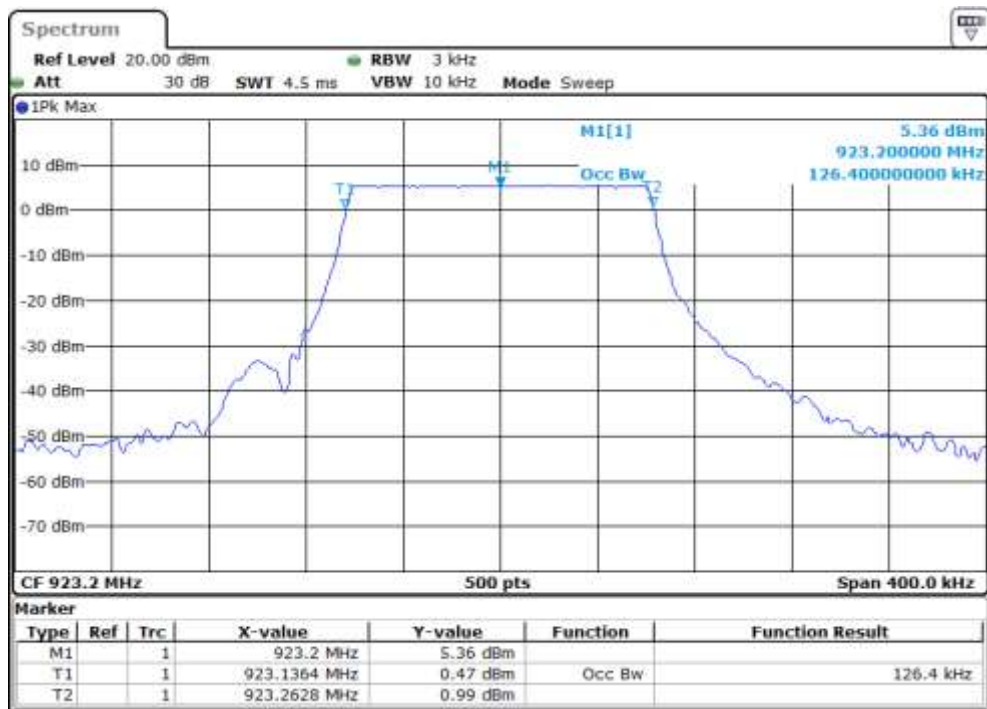
6dB bandwidth – Channel 923.4 MHz



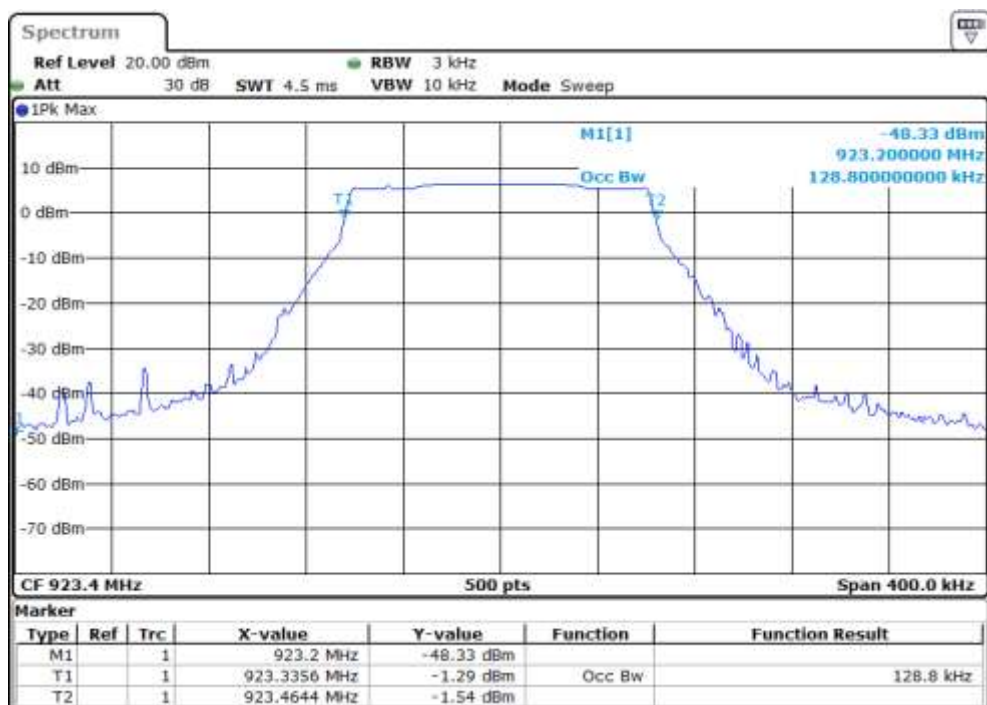
Limit:

Measure realized for reporting only

99% bandwidth – Channel 923.2 MHz



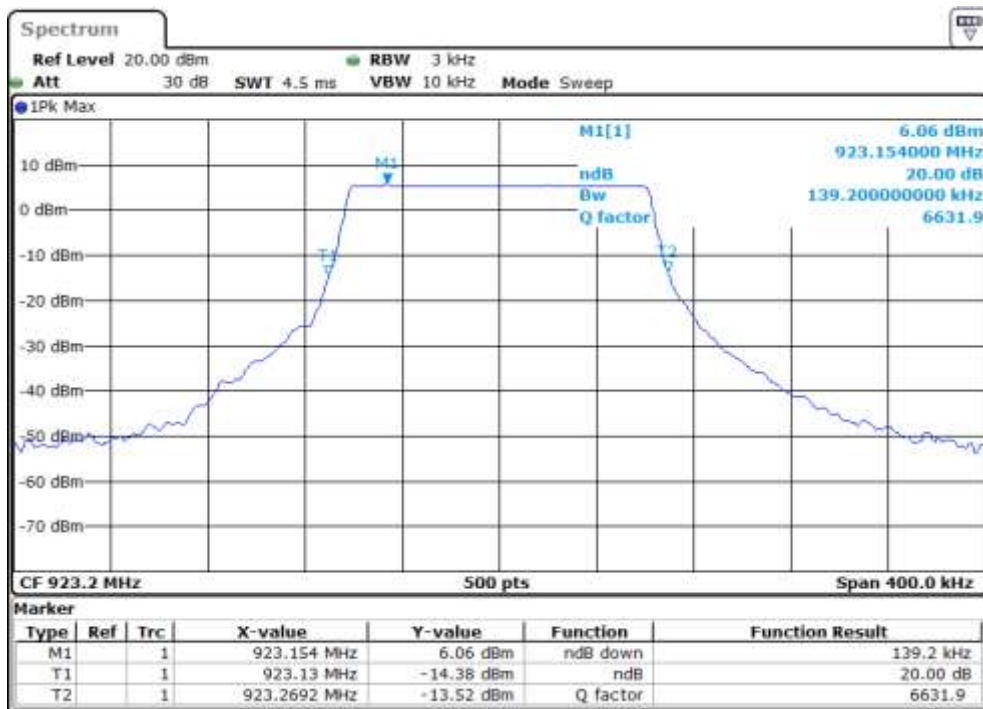
99% bandwidth – Channel 923.4 MHz



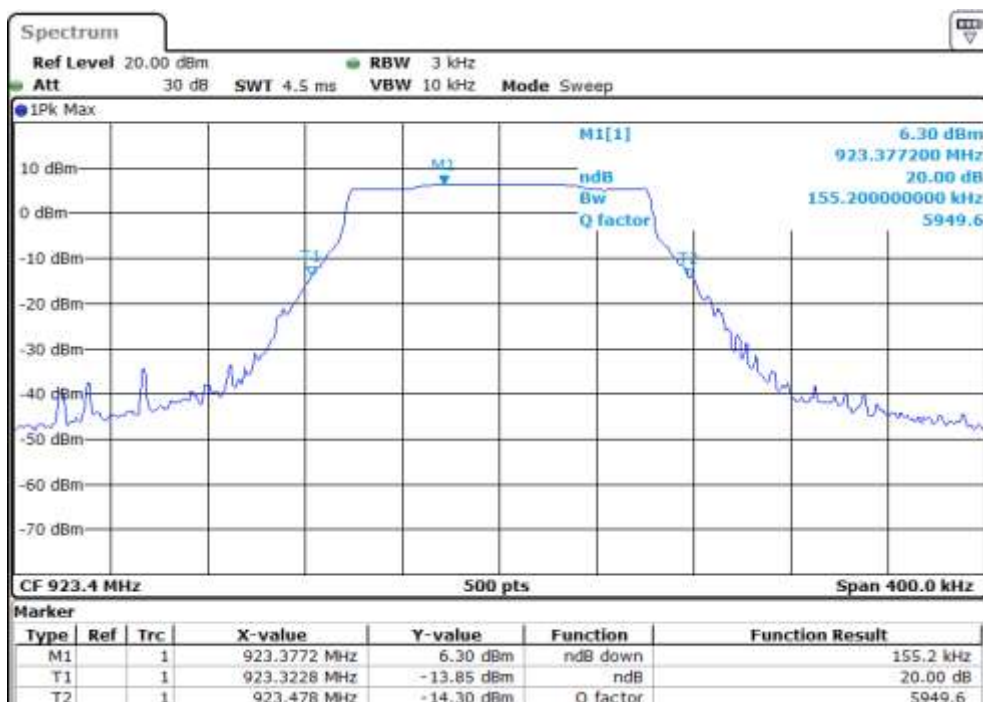
Limit:

Measure realized for reporting only

20dB bandwidth – Channel 923.2 MHz



20dB bandwidth – Channel 923.4 MHz



Limit:

Measure realized for reporting only

Test conclusion:

RESPECTED STANDARD

13. BAND EDGE

Temperature (°C) : 19 to 23

Humidity (%HR): 39 to 48

Date : April 22, 2025 to
April 28, 2025

Technician : T. LEDRESSEUR

Standard: FCC Part 15
RSS-247

Test procedure:

Method of paragraph 11.13.2 of ANSI C63.10

Method of paragraph 11.13.3 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 continuous modulated transmission mode, at the highest output power level at which the transmitter is intended to operate.

We used for power source the internal battery of the equipment

First the measure is realized with hopping function disabled and then repeated with the hopping function activated.

Results:

Lower Band Edge: From 900 MHz to 902 MHz

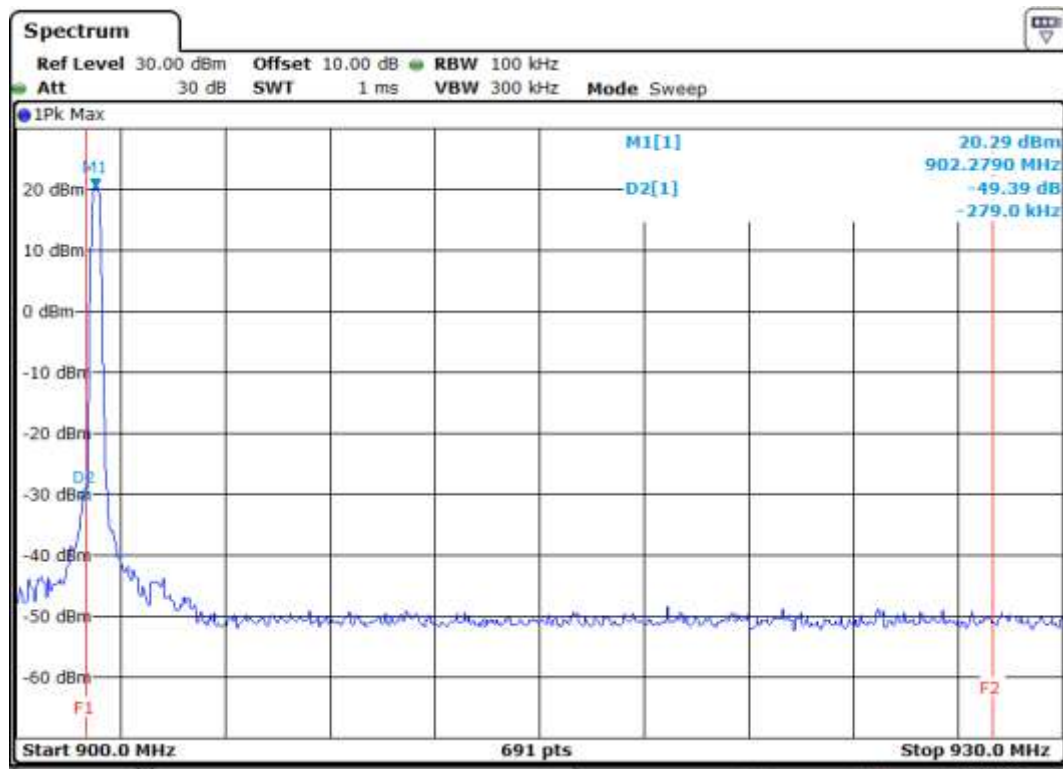
Upper Band Edge: From 928 MHz to 930 MHz

Sample N° 1 Channel plan 1 – SF 7 - Mode hopping Off

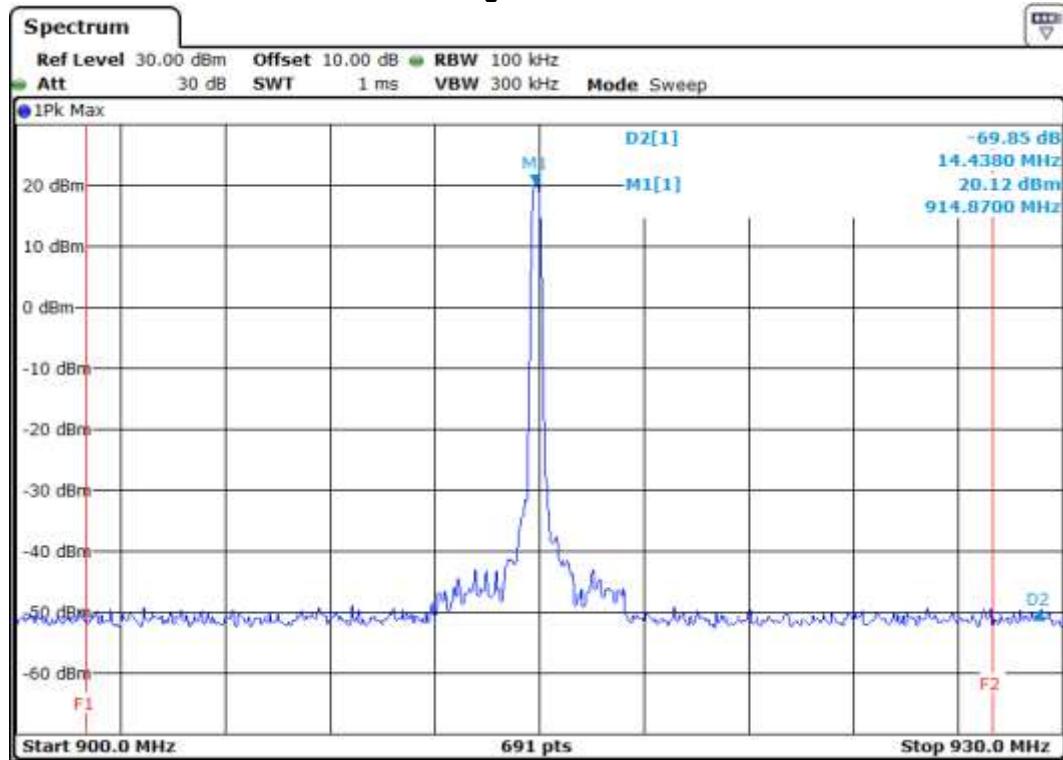
Fundamental frequency (MHz)	Detector (Peak or Average)	Frequency of maximum Band-edges Emission (MHz)	Delta Marker (dB) (1)	Limit (dBc) (2)	Margin (dB)
902.3	Peak	902	-49.39	-30	19.39
914.2	Peak	929.308	-69.85	-30	39.85

(1) Marker-Delta method

Low channel



High channel

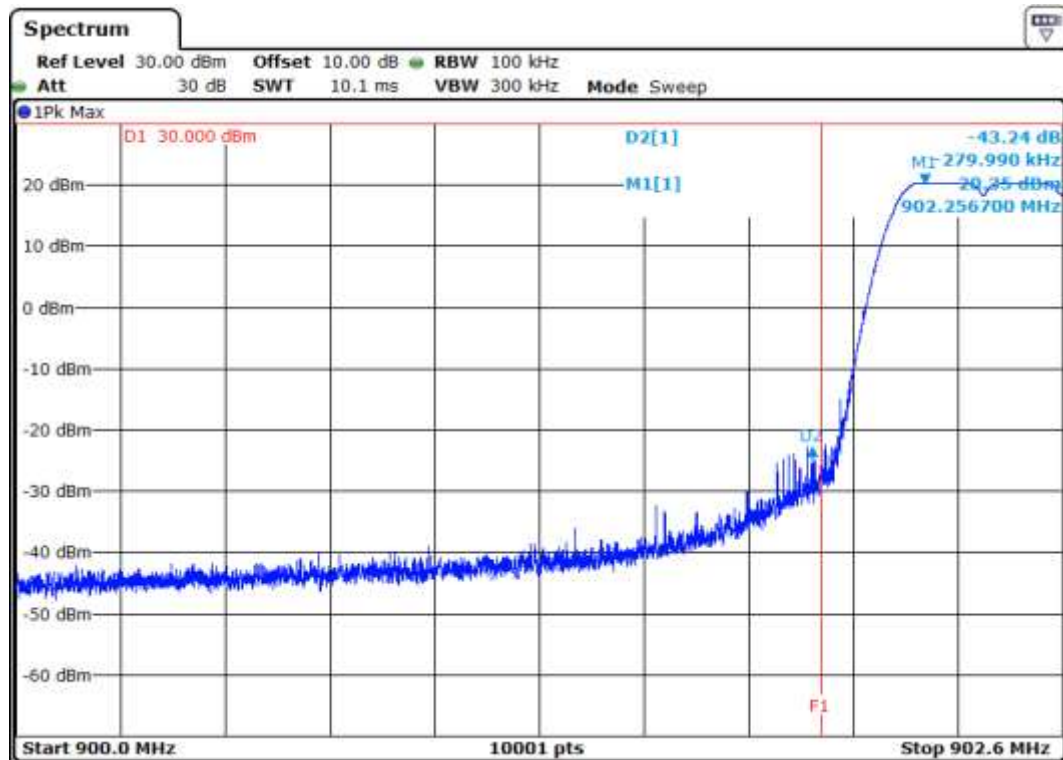


Sample N° 1 Channel plan 1 – SF 7 - Mode hopping On

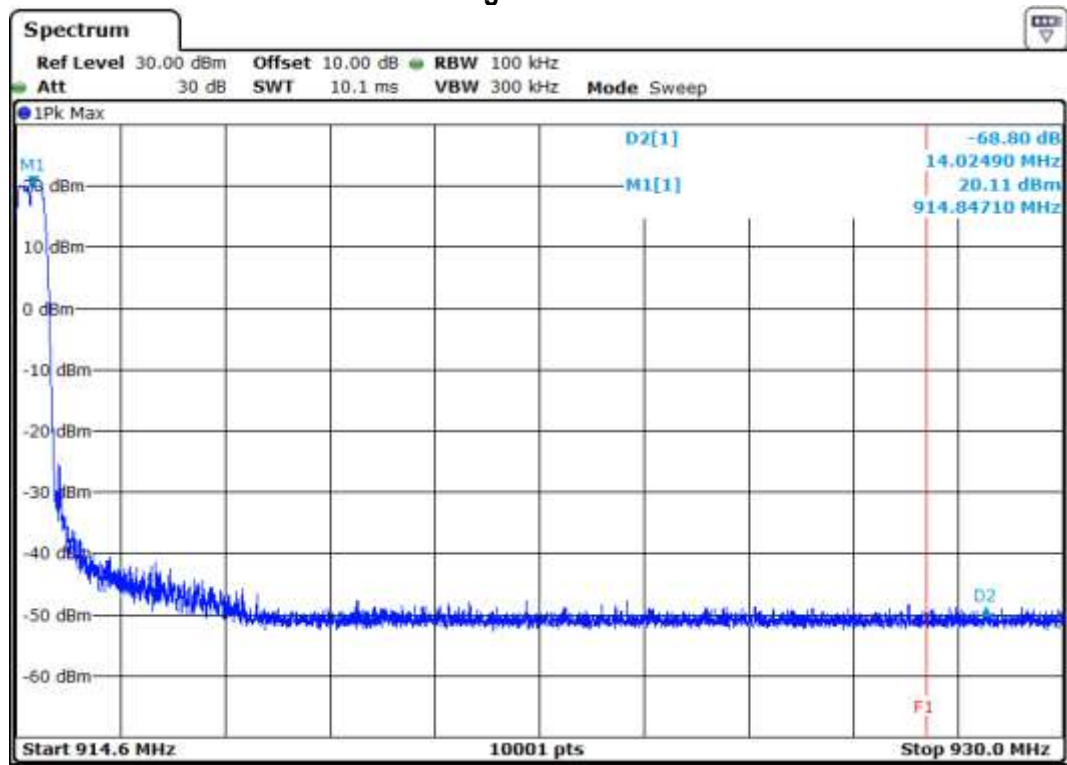
Fundamental frequency (MHz)	Detector (Peak or Average)	Frequency of maximum Band-edges Emission (MHz)	Delta Marker (dB) (1)	Limit (dBc) (2)	Margin (dB)
902.3	Peak	902	-43.24	-30	13.24
914.2	Peak	928.872	-68.8	-30	38.8

(1) Marker-Delta method

Low channel



High channel

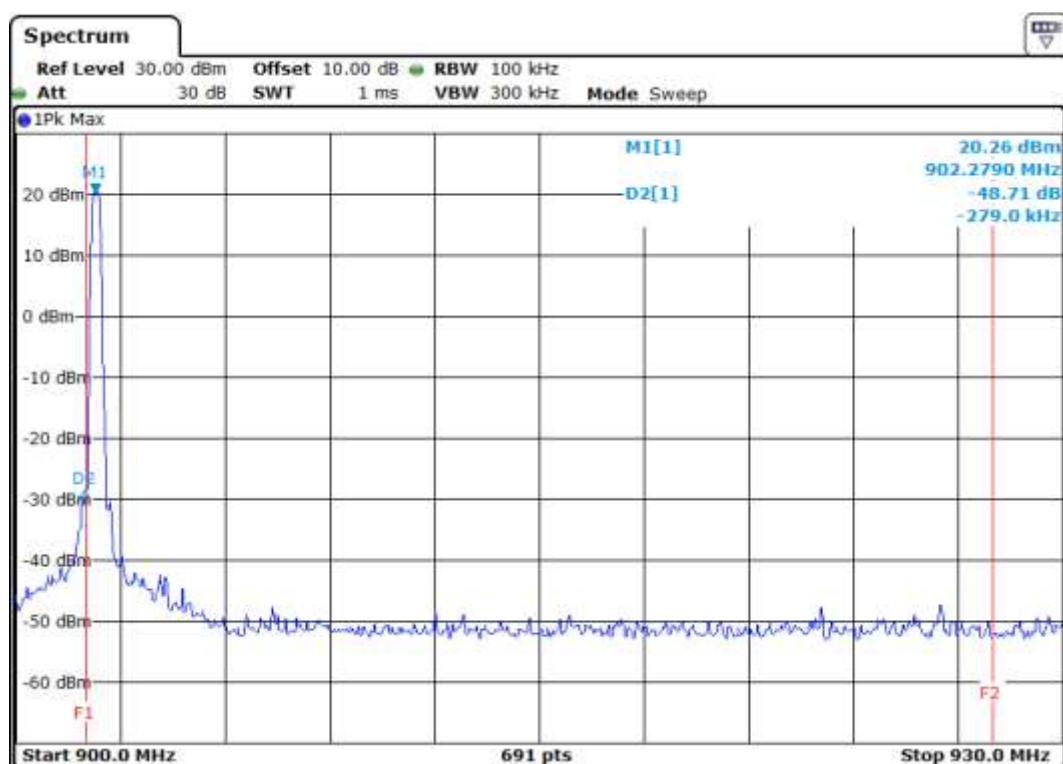


Sample N° 1 Channel plan 1 – 10 - Mode hopping Off

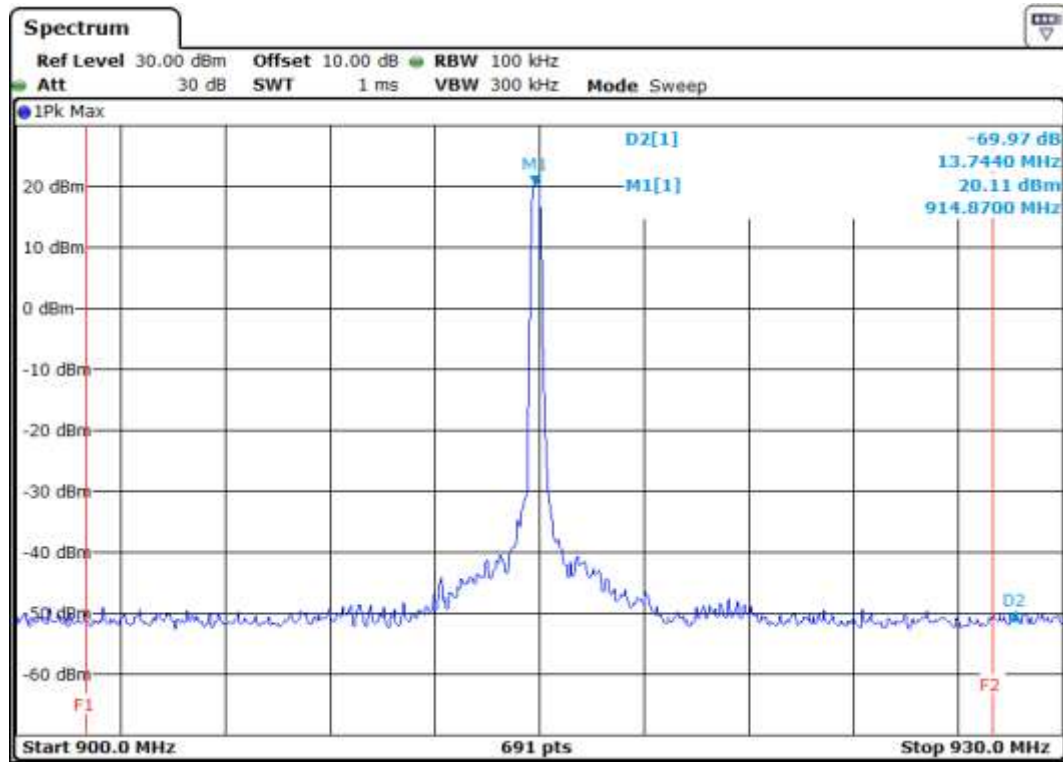
Fundamental frequency (MHz)	Detector (Peak or Average)	Frequency of maximum Band-edges Emission (MHz)	Delta Marker (dB) (1)	Limit (dBc) (2)	Margin (dB)
902.3	Peak	902	-40.71	-30	10.71
914.2	Peak	928.614	-69.97	-30	39.97

(1) Marker-Delta method

Low channel



High channel

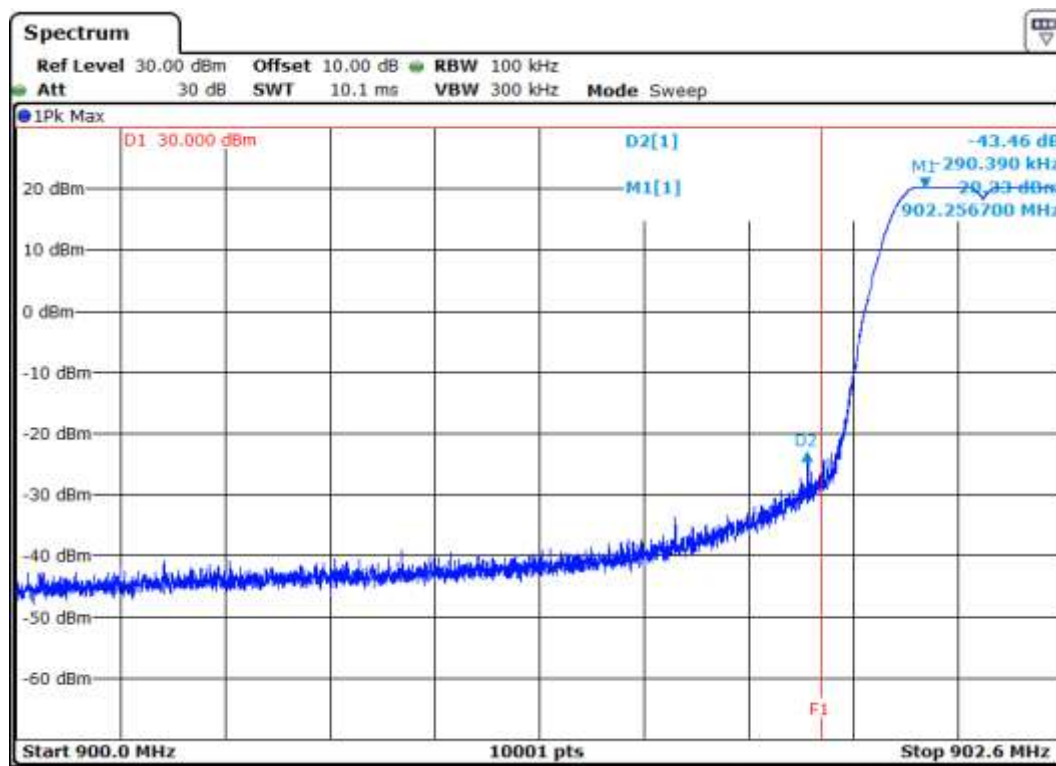


Sample N° 1 Channel plan 1 – 10 - Mode hopping On

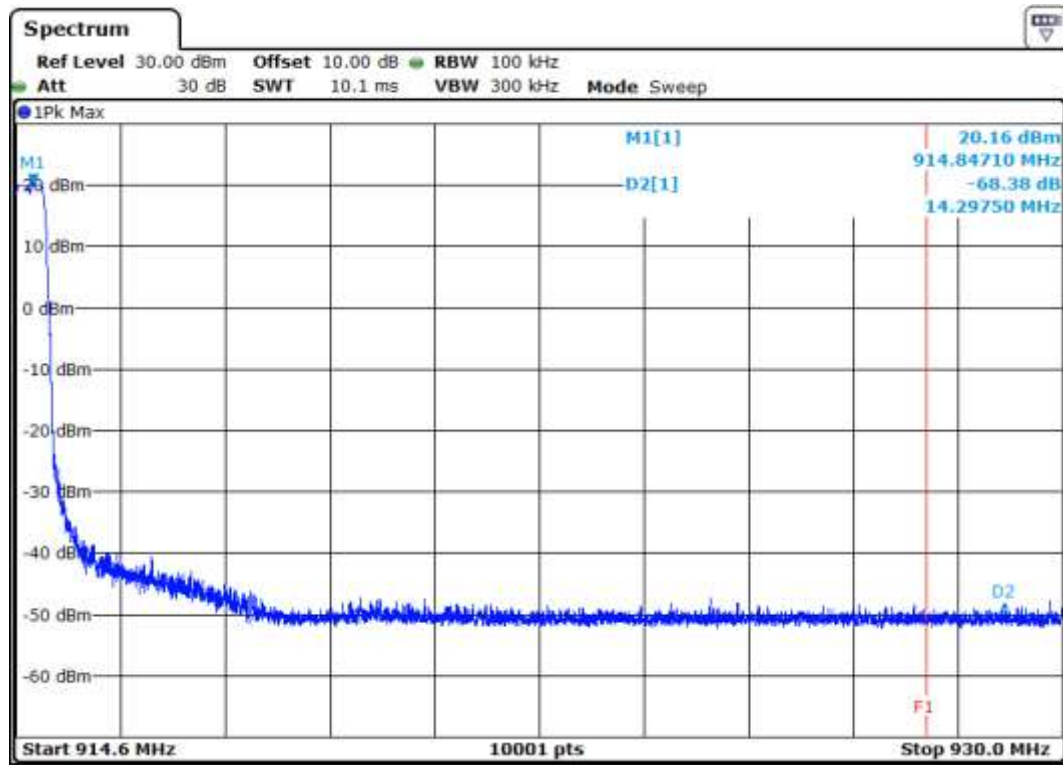
Fundamental frequency (MHz)	Detector (Peak or Average)	Frequency of maximum Band-edges Emission (MHz)	Delta Marker (dB) (1)	Limit (dBc) (2)	Margin (dB)
902.3	Peak	902	-43.46	-30	13.46
914.2	Peak	929.1446	-68.38	-30	38.38

(1) Marker-Delta method

Low channel



High channel

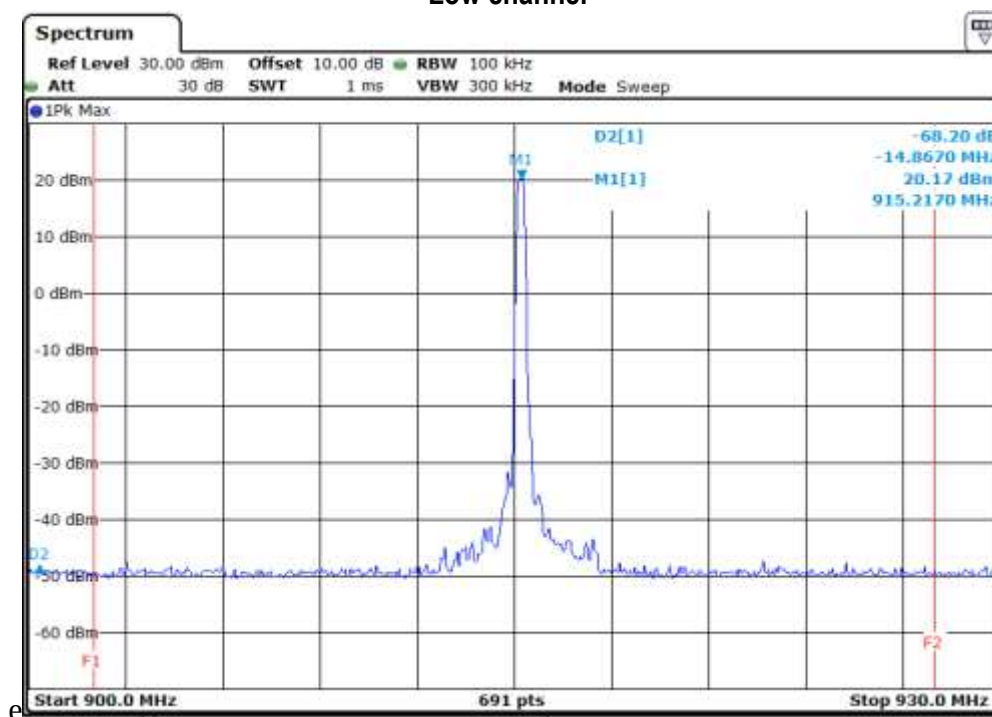


Sample N° 1 Channel plan 2 – SF 7 - Mode hopping Off

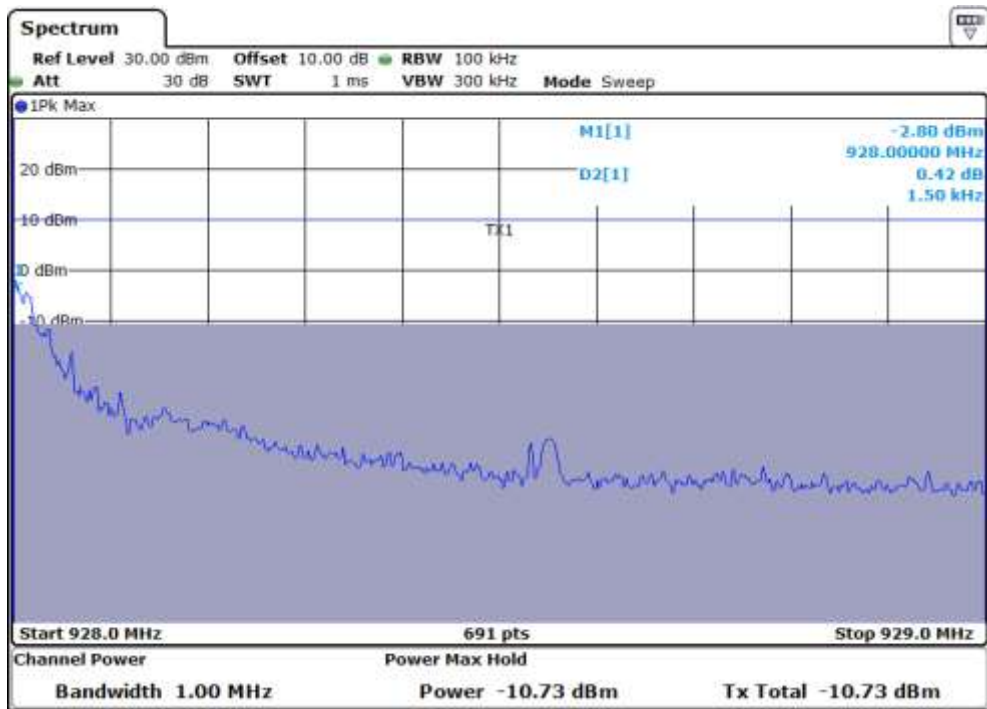
Fundamental frequency (MHz)	Detector (Peak or Average)	Frequency of maximum Band-edges Emission (MHz)	Delta Marker (dB) or absolute power (dBm) (1)	Limit (dBc or dBm)	Margin (dB)
915.2	Peak	900.35	68.20 dBc	-30 dBc	38.2
927.8	Peak	928	-10.73 dBm	-9.9 dBm	0.83

(1) Marker-Delta method or integration method

Low channel



High channel

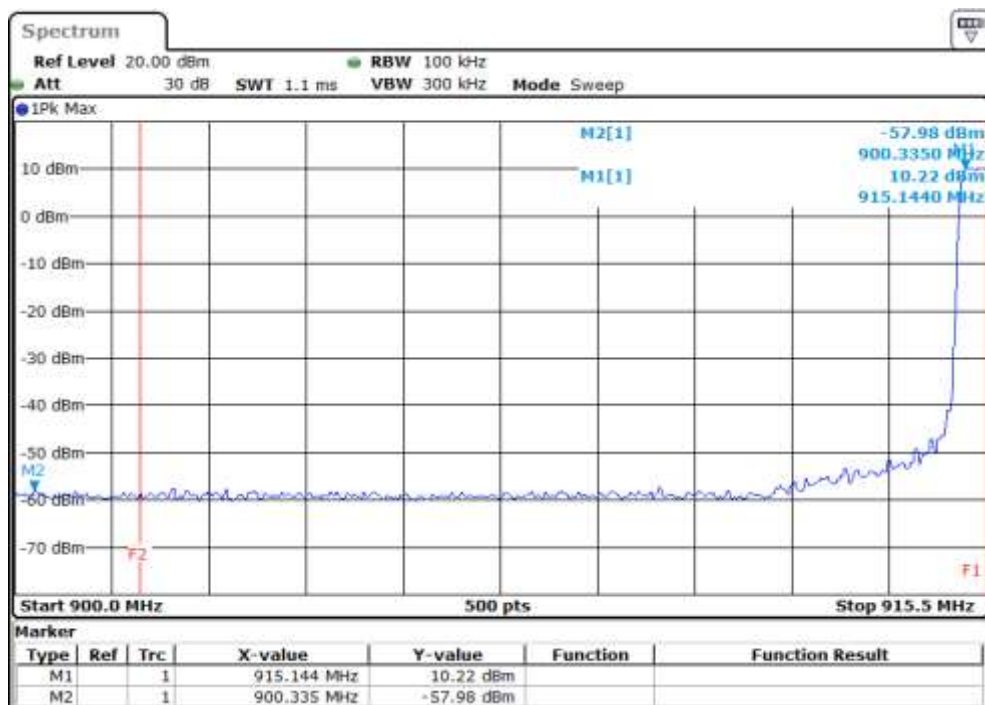


Sample N° 1 Channel plan 2 – SF 7 - Mode hopping On

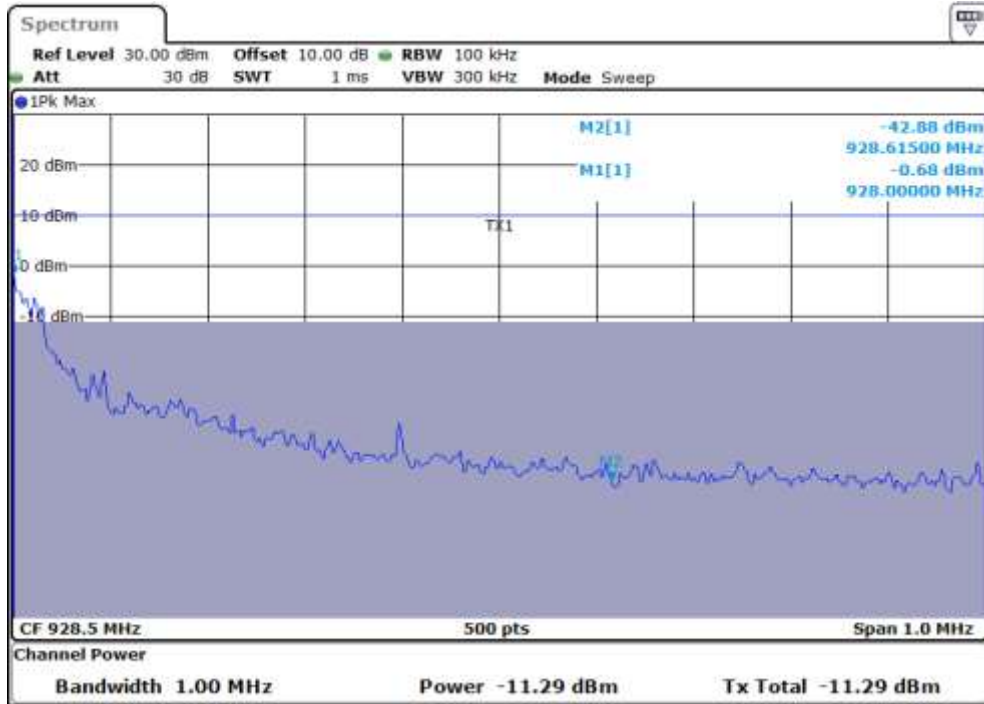
Fundamental frequency (MHz)	Detector (Peak or Average)	Frequency of maximum Band-edges Emission (MHz)	Delta Marker (dB) or absolute power (dBm) (1)	Limit (dBc or dBm)	Margin (dB)
915.2	Peak	900.35	68.2 dBc	-30 dBc	38.2
927.8	Peak	928	-11.29 dBm	-9.9 dBm	1.39

(1) Marker-Delta method or integration method

Low channel



High channel

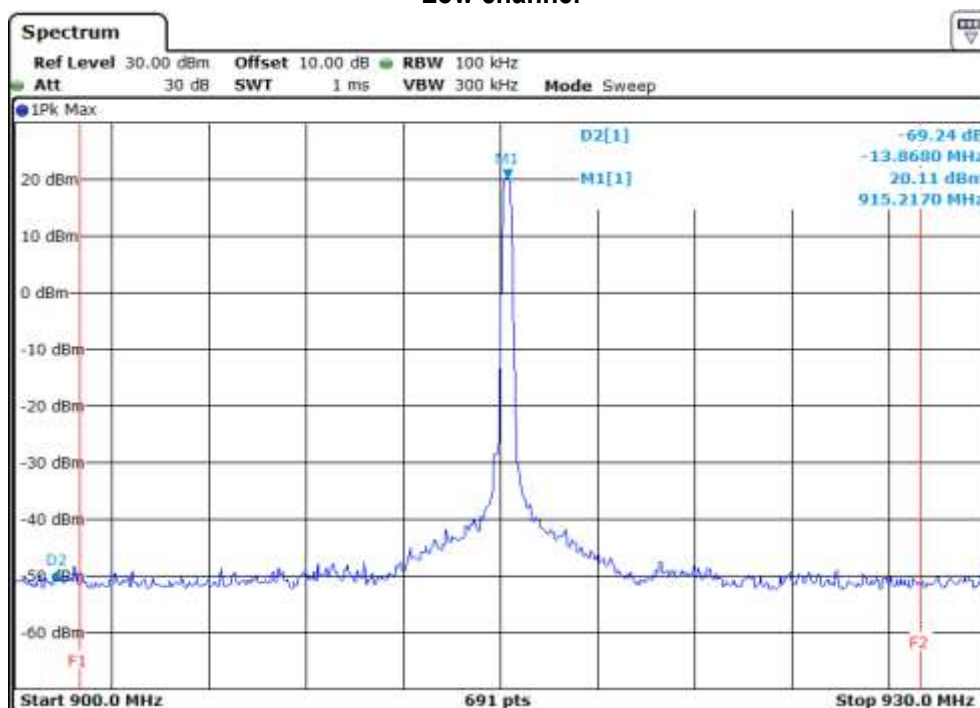


Sample N° 1 Channel plan 2 – 10 - Mode hopping Off

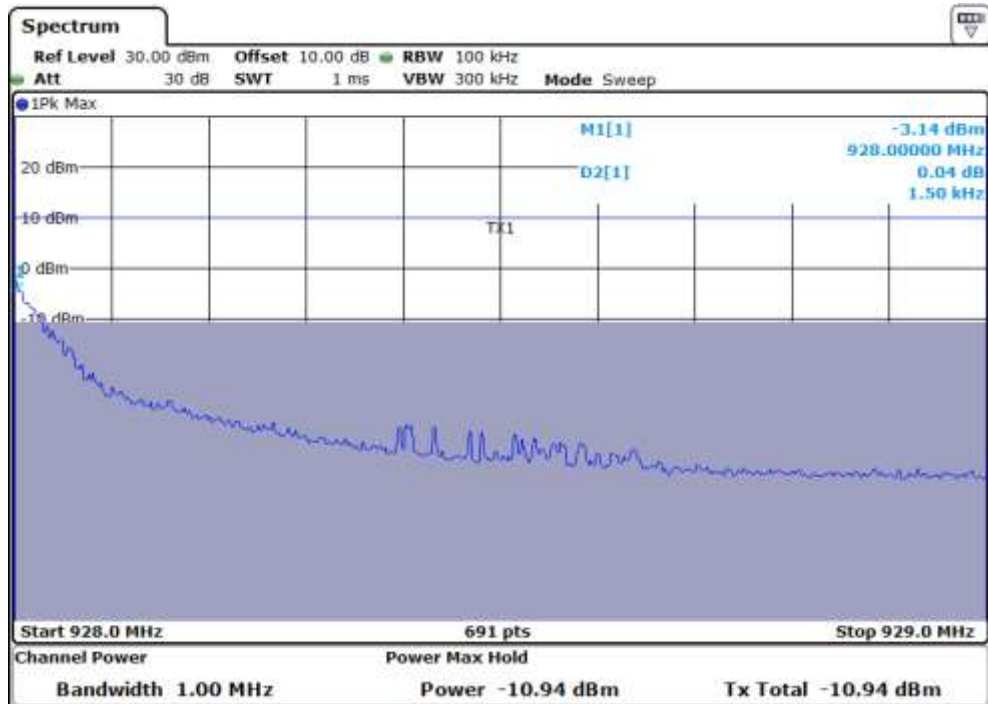
Fundamental frequency (MHz)	Detector (Peak or Average)	Frequency of maximum Band-edges Emission (MHz)	Delta Marker (dB) or absolute power (dBm) (1)	Limit (dBc or dBm)	Margin (dB)
915.2	Peak	900.35	68.20 dBc	-30 dBc	38.2
927.8	Peak	928	-10.94 dBm	-9.89 dBm	1.05

(1) Marker-Delta method or integration method

Low channel



High channel

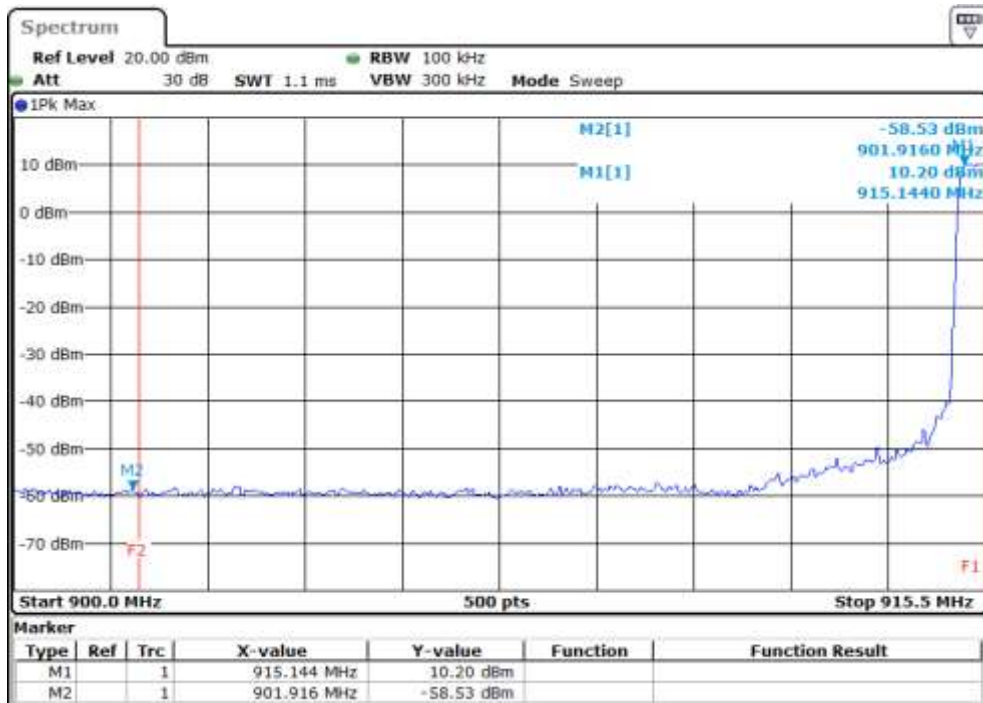


Sample N° 1 Channel plan 2 – 10 - Mode hopping On

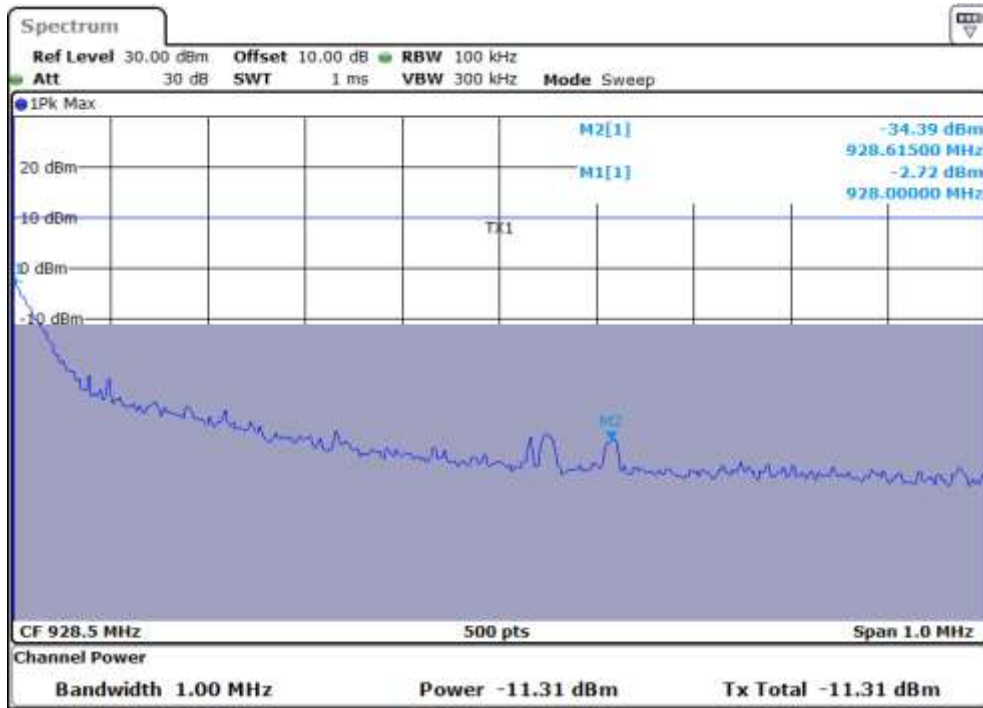
Fundamental frequency (MHz)	Detector (Peak or Average)	Frequency of maximum Band-edges Emission (MHz)	Delta Marker (dB) or absolute power (dBm) (1)	Limit (dBc or dBm)	Margin (dB)
915.2	Peak	901.96	68.73 dBc	-30 dBc	38.73
927.8	Peak	928	-11.31 dBm	-9.89 dBm	1.42

(1) Marker-Delta method or integration method

Low channel



High channel

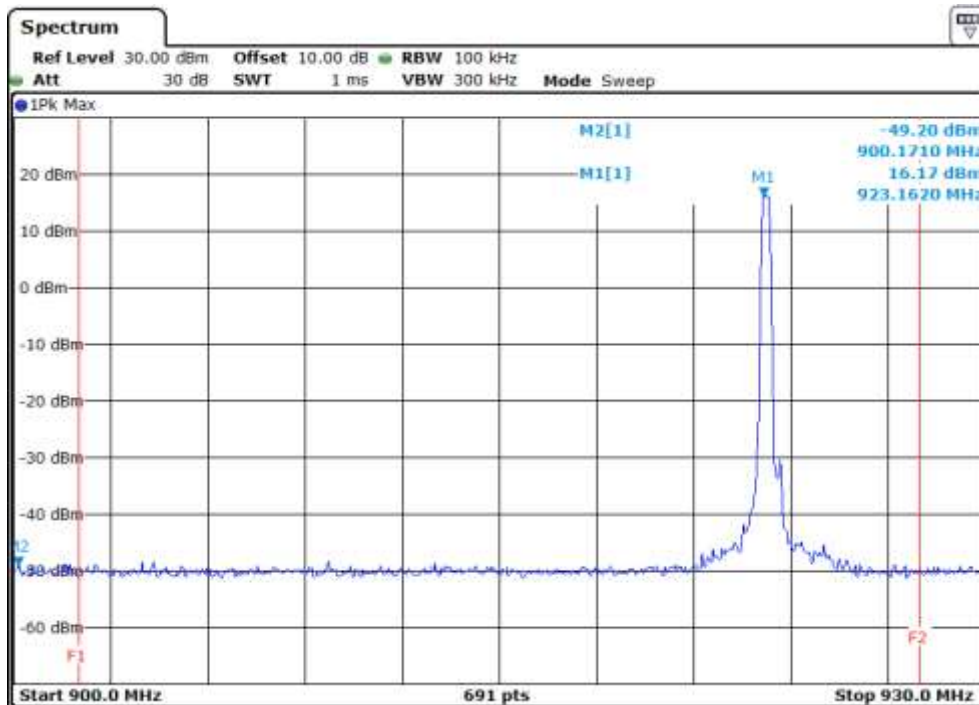


Sample N° 1 Channel plan 3 – SF 7 - Mode hopping Off

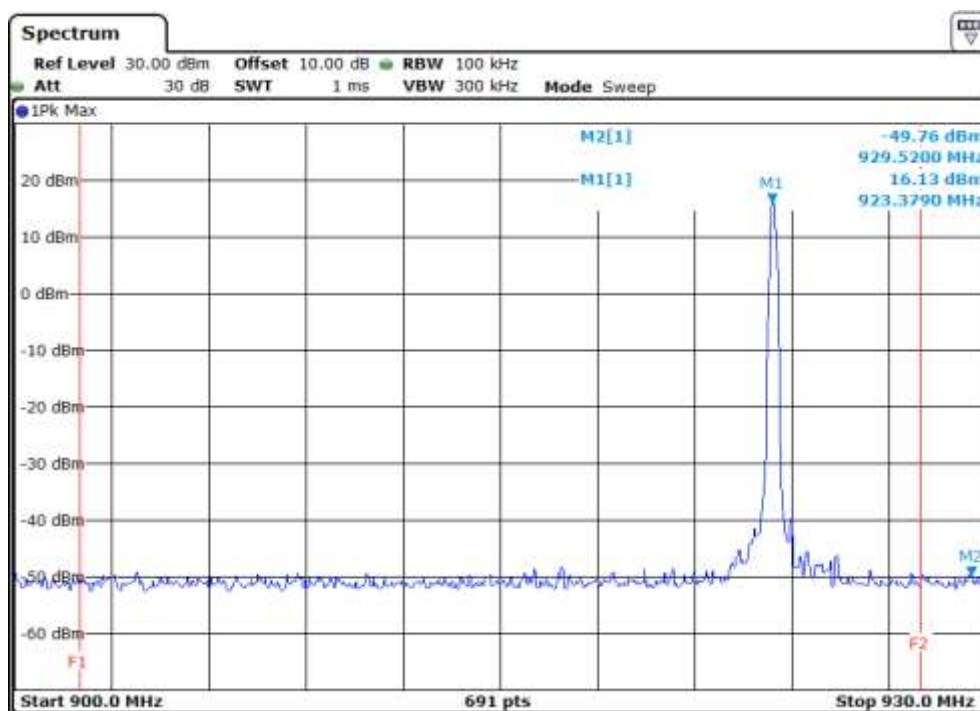
Fundamental frequency (MHz)	Detector (Peak or Average)	Frequency of maximum Band-edges Emission (MHz)	Delta Marker (dB) (1)	Limit (dBc) (2)	Margin (dB)
923.2	Peak	900.171	65.37	-30	35.37
923.4	Peak	929.52	65.89	-30	35.89

(1) Marker-Delta method

Low channel



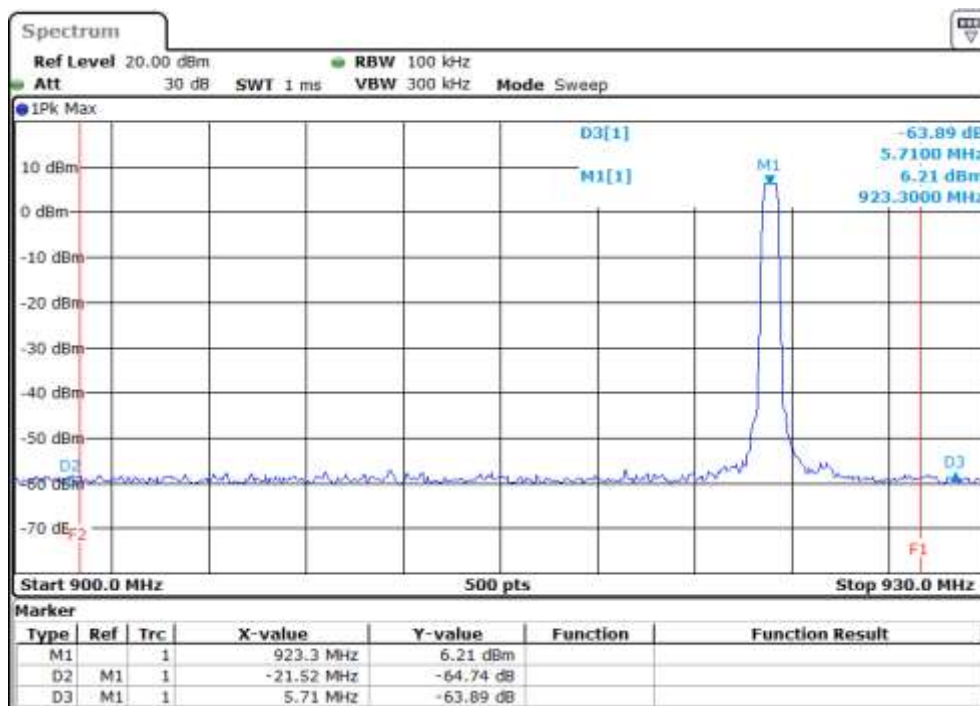
High channel



Sample N° 1 Channel plan 3 – SF 7 - Mode hopping On

Fundamental frequency (MHz)	Detector (Peak or Average)	Frequency of maximum Band-edges Emission (MHz)	Delta Marker (dB) (1)	Limit (dBc) (2)	Margin (dB)
923.2	Peak	901.78	64.74	-30	34.74
923.4	Peak	929.01	63.89	-30	33.89

(1) Marker-Delta method

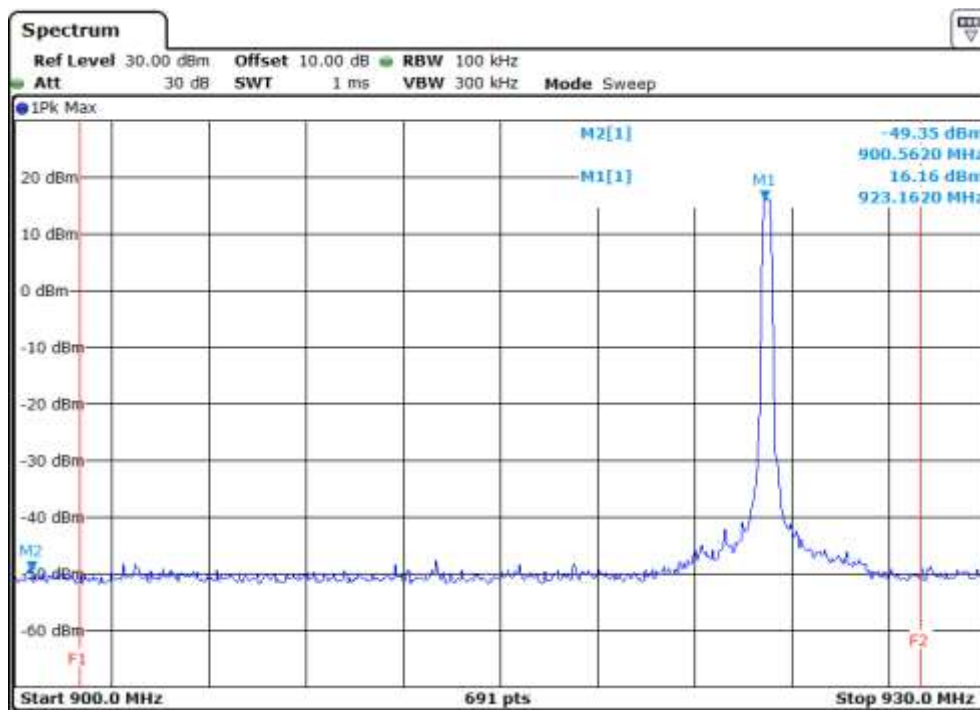


Sample N° 1 Channel plan 3 – 10 - Mode hopping Off

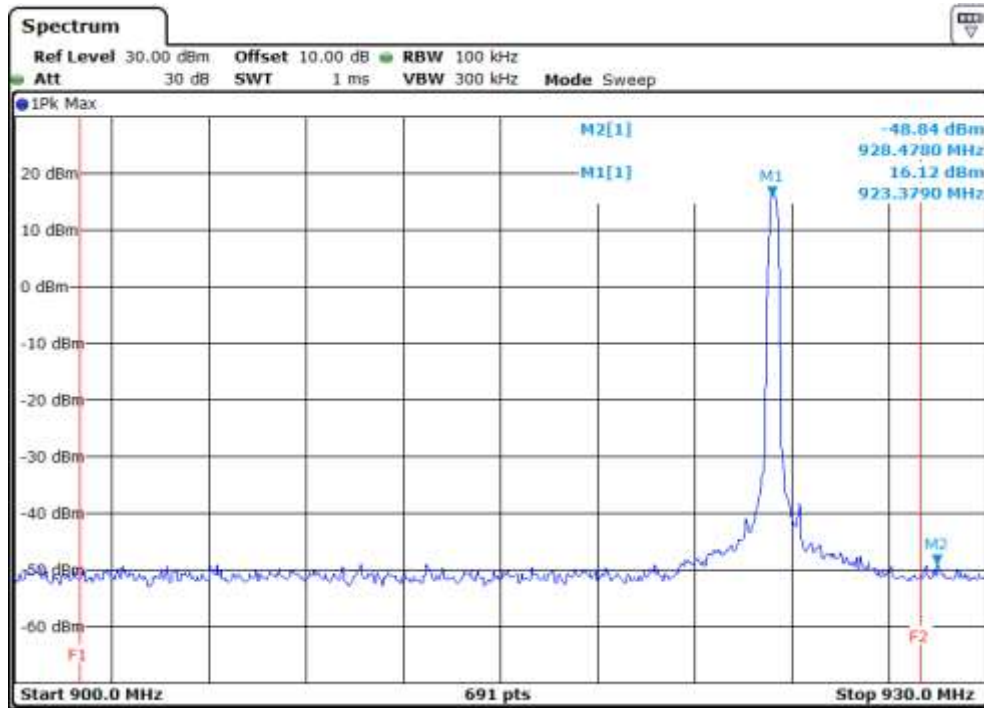
Fundamental frequency (MHz)	Detector (Peak or Average)	Frequency of maximum Band-edges Emission (MHz)	Delta Marker (dB) (1)	Limit (dBc) (2)	Margin (dB)
923.2	Peak	900.562	65.51	-30	35.51
923.4	Peak	928.478	64.96	-30	34.96

(1) Marker-Delta method

Low channel



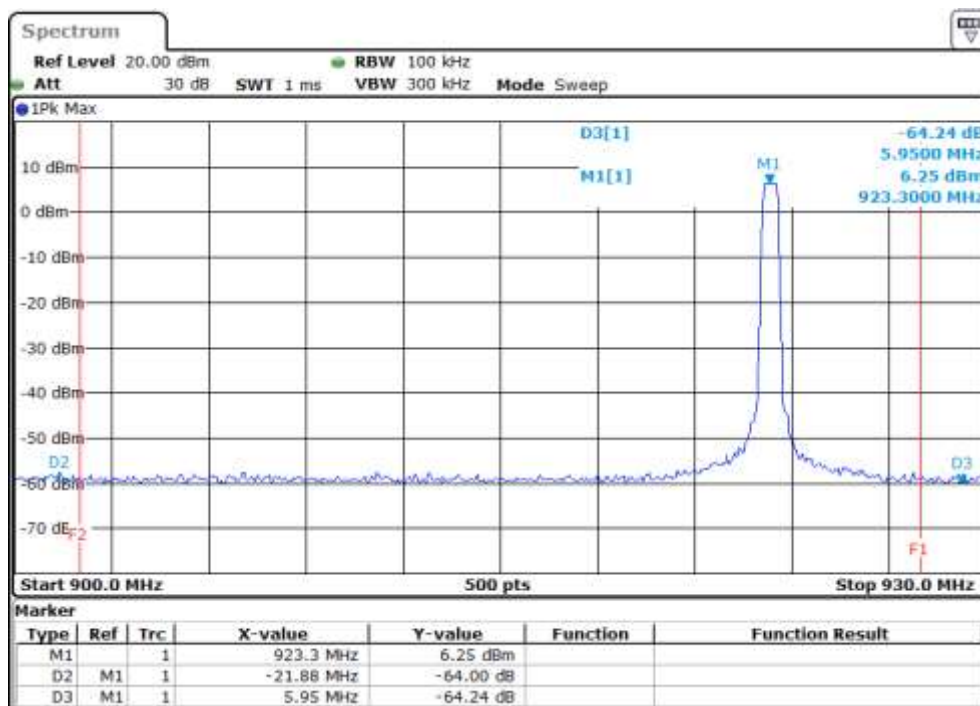
High channel



Sample N° 1 Channel plan 3 – 10 - Mode hopping On

Fundamental frequency (MHz)	Detector (Peak or Average)	Frequency of maximum Band-edges Emission (MHz)	Delta Marker (dB) (1)	Limit (dBc) (2)	Margin (dB)
923.2	Peak	901.42	64	-30	34
923.4	Peak	929.25	64.24	-30	34.24

(1) Marker-Delta method



Test conclusion:

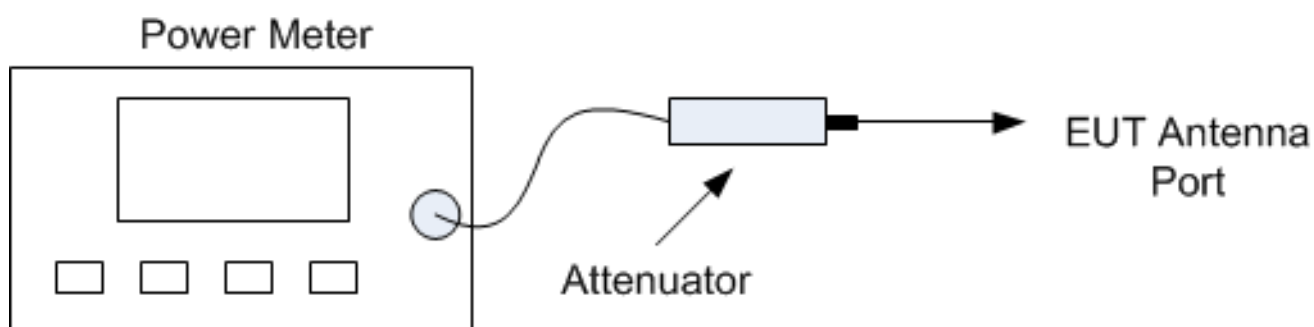
RESPECTED STANDARD

14. OUTPUT POWER**Temperature (°C) :** 19 to 23**Humidity (%HR):** 39 to 48**Date :** April 22, 2025 to
April 28, 2025**Technician :** T. LEDRESSEUR**Standard:** FCC Part 15
RSS-247**Test procedure:**

For FCC Part 15: paragraph 15.247 (b)

For RSS-247: paragraph 5.4

AVGPM-G method (using a gated RF average-reading power meter) of paragraph 11.9.2.3.2 of ANSI C63.10

Test set up:Conducted test

The measure is realized in conducted mode with a calibrated gated RF average reading power meter.

Equipment under test operating condition:**Test operating condition of the equipment:**

The equipment under test is blocked in continuous modulated transmission mode, at the highest output power level at which the transmitter is intended to operate.

We used for power source the internal battery of the equipment

Results:

Sample N° 1 Channel plan 1 – SF 7

Channel 902.3 MHz

	Maximum conducted output power		Maximum EIRP		Limit (W)
	(dBm)	(W)	(dBm)	(W)	
Nominal supply voltage:	20.41	0.1099	21.41	0.1384	1

Declared maximum antenna gain: 1 dBi

Channel 908.7 MHz

	Maximum conducted output power		Maximum EIRP		Limit (W)
	(dBm)	(W)	(dBm)	(W)	
Nominal supply voltage:	20.31	0.1074	21.31	0.1352	1

Declared maximum antenna gain: 1 dBi

Channel 914.9 MHz

	Maximum conducted output power		Maximum EIRP		Limit (W)
	(dBm)	(W)	(dBm)	(W)	
Nominal supply voltage:	20.23	0.1054	21.23	0.1327	1

Declared maximum antenna gain: 1 dBi

Sample N° 1 Channel plan 1 – SF 10

Channel 902.3 MHz

	Maximum conducted output power		Maximum EIRP		Limit (W)
	(dBm)	(W)	(dBm)	(W)	
Nominal supply voltage:	20.44	0.1107	21.44	0.1393	1

Declared maximum antenna gain: 1 dBi

Channel 908.7 MHz

	Maximum conducted output power		Maximum EIRP		Limit (W)
	(dBm)	(W)	(dBm)	(W)	
Nominal supply voltage:	20.32	0.1076	21.32	0.1355	1

Declared maximum antenna gain: 1 dBi

Channel 914.9 MHz

	Maximum conducted output power		Maximum EIRP		Limit (W)
	(dBm)	(W)	(dBm)	(W)	
Nominal supply voltage:	20.25	0.1059	21.25	0.1334	1

Declared maximum antenna gain: 1 dBi

Sample N° 1 Channel plan 2 – SF 7

Channel 915.2 MHz

	Maximum conducted output power		Maximum EIRP		Limit (W)
	(dBm)	(W)	(dBm)	(W)	
Nominal supply voltage:	20.33	0.1079	21.33	0.1358	1

Declared maximum antenna gain: 1 dBi

Channel 921.4 MHz

	Maximum conducted output power		Maximum EIRP		Limit (W)
	(dBm)	(W)	(dBm)	(W)	
Nominal supply voltage:	20.19	0.1045	21.19	0.1315	1

Declared maximum antenna gain: 1 dBi

Channel 927.8 MHz

	Maximum conducted output power		Maximum EIRP		Limit (W)
	(dBm)	(W)	(dBm)	(W)	
Nominal supply voltage:	20.1	0.1023	21.1	0.1288	1

Declared maximum antenna gain: 1 dBi

Sample N° 1 Channel plan 2 – SF 10

Channel 915.2 MHz

	Maximum conducted output power		Maximum EIRP		Limit (W)
	(dBm)	(W)	(dBm)	(W)	
Nominal supply voltage:	20.29	0.1069	21.29	0.1346	1

Declared maximum antenna gain: 1 dBi

Channel 921.4 MHz

	Maximum conducted output power		Maximum EIRP		Limit (W)
	(dBm)	(W)	(dBm)	(W)	
Nominal supply voltage:	20.2	0.1047	21.2	0.1318	1

Declared maximum antenna gain: 1 dBi

Channel 927.8 MHz

	Maximum conducted output power		Maximum EIRP		Limit (W)
	(dBm)	(W)	(dBm)	(W)	
Nominal supply voltage:	20.11	0.1026	21.11	0.1291	1

Declared maximum antenna gain: 1 dBi

Sample N° 1 Channel plan 3 – SF 7

Channel 923.2 MHz

	Maximum conducted output power		Maximum EIRP		Limit (W)
	(dBm)	(W)	(dBm)	(W)	
Nominal supply voltage:	16.23	0.0420	17.23	0.0528	1

Declared maximum antenna gain: 1 dBi

Channel 923.4 MHz

	Maximum conducted output power		Maximum EIRP		Limit (W)
	(dBm)	(W)	(dBm)	(W)	
Nominal supply voltage:	16.23	0.0420	17.23	0.0528	1

Declared maximum antenna gain: 1 dBi

Sample N° 1 Channel plan 3 – SF 10

Channel 923.2 MHz

	Maximum conducted output power		Maximum EIRP		Limit (W)
	(dBm)	(W)	(dBm)	(W)	
Nominal supply voltage:	16.24	0.0421	17.24	0.0530	1

Declared maximum antenna gain: 1 dBi

Channel 923.4 MHz

	Maximum conducted output power		Maximum EIRP		Limit (W)
	(dBm)	(W)	(dBm)	(W)	
Nominal supply voltage:	16.23	0.0420	17.23	0.0528	1

Declared maximum antenna gain: 1 dBi

Test conclusion:

RESPECTED STANDARD

15. RADIATED SPURIOUS EMISSIONS**Temperature (°C) :** 19 to 23**Humidity (%HR):** 39 to 48**Date :** April 22, 2025 to
April 28, 2025**Technician :** T. LEDRESSEUR**Standard:** FCC Part 15
RSS-247**Test procedure:**

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

For RSS-247: paragraph 5.5

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 three orthogonal planes.

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

The measure is realized on open area test site under 1 GHz and in anechoic chamber above 1 GHz.

When the system is tested in an open area test site (OATS), 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**Detection mode:** Quasi-peak ($F < 1 \text{ GHz}$)Peak / Average ($F > 1 \text{ GHz}$)**Bandwidth:** 200Hz ($9 \text{ kHz} < F < 150\text{kHz}$)
9 kHz ($150 \text{ kHz} < F < 30\text{MHz}$)
120 kHz ($30 \text{ MHz} < F < 1 \text{ GHz}$)
100 kHz / 1 MHz ($F > 1 \text{ GHz}$)**Distance of antenna:** 10 meters (in open area test site) / 3 meters (in anechoic room)

Antenna height: 1 to 4 meters (in open area test site) / 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 continuous modulated transmission mode, at the highest output power level at which the transmitter is intended to operate.

Measurement repeated with the equipment blocked in reception.

We used for power source the internal battery of the equipment

Results: in emission

Sample N° 1 Channel plan 1 – SF 7

Channel 902.3 MHz

Frequencies (MHz)	Detector P QP Av	Antenna height (cm)	RBW (kHz)	Polarization H: Horizontal V: Vertical	Field strength Measured at 3 m (dBμV/m)	Limits at 3 m (dBμV/m)	Margin (dB)
1804.6	P	150	100	V	42.02	84.3	42.28
2707 (2)	P	150	1000	V	39.97 (1)	74	34.03
3609.3 (2)	P	150	1000	V	43.82 (1)	74	30.18
4511.7 (2)	P	150	1000	V	44.75 (1)	74	29.25
5413.8 (2)	P	150	1000	V	40.52 (1)	74	33.48
9023.2 (2)	P	150	1000	H	49.46 (1)	74	24.54

P= Peak, QP=Quasi-peak, Av=Average

(1) The peak level is lower than the average limit (54 dBμV/m)

(2) Restricted bands of operation in 15.205

Channel 908.7 MHz

Frequencies (MHz)	Detector P QP Av	Antenna height (cm)	RBW (kHz)	Polarization H: Horizontal V: Vertical	Field strength Measured at 3 m (dB μ V/m)	Limits at 3 m (dB μ V/m)	Margin (dB)
1817.6	P	150	100	V	41.81	84.3	42.49
2726.4 (2)	P	150	1000	V	40.36 (1)	74	33.64
3635.1 (2)	P	150	1000	V	43.19 (1)	74	30.81
4543.5 (2)	P	150	1000	V	43.73 (1)	74	30.27
5452.2 (2)	P	150	1000	H	38.08 (1)	74	35.92
9087.6 (2)	P	150	1000	H	49 (1)	74	25

P= Peak, QP=Quasi-peak, Av=Average

(1) The peak level is lower than the average limit (54 dB μ V/m)

(2) Restricted bands of operation in 15.205

Channel 914.9 MHz

Frequencies (MHz)	Detector P QP Av	Antenna height (cm)	RBW (kHz)	Polarization H: Horizontal V: Vertical	Field strength Measured at 3 m (dB μ V/m)	Limits at 3 m (dB μ V/m)	Margin (dB)
1829.4	P	150	100	V	40.31	84.3	43.99
2744.2 (2)	P	150	1000	V	40.86 (1)	74	33.14
3658.8 (2)	P	150	1000	V	42.48 (1)	74	31.52
4573.2 (2)	P	150	1000	H	40.9 (1)	74	33.1

P= Peak, QP=Quasi-peak, Av=Average

(1) The peak level is lower than the average limit (54 dB μ V/m)

(2) Restricted bands of operation in 15.205

Sample N° 1 Channel plan 1 – SF 10

Channel 902.3 MHz

Frequencies (MHz)	Detector P QP Av	Antenna height (cm)	RBW (kHz)	Polarization H: Horizontal V: Vertical	Field strength Measured at 3 m (dB μ V/m)	Limits at 3 m (dB μ V/m)	Margin (dB)
1804.8	P	150	100	V	42.96	84.3	41.34
2707 (2)	P	150	1000	V	40.11 (1)	74	33.89
3609.3 (2)	P	150	1000	V	43.92 (1)	74	30.08
4512 (2)	P	150	1000	V	46.08 (1)	74	27.92
5414.1 (2)	P	150	1000	V	41.93 (1)	74	32.07
9023.2 (2)	P	150	1000	H	50.98 (1)	74	23.02

P= Peak, QP=Quasi-peak, Av=Average

(1) The peak level is lower than the average limit (54 dB μ V/m)

(2) Restricted bands of operation in 15.205

Channel 908.7 MHz

Frequencies (MHz)	Detector P QP Av	Antenna height (cm)	RBW (kHz)	Polarization H: Horizontal V: Vertical	Field strength Measured at 3 m (dB μ V/m)	Limits at 3 m (dB μ V/m)	Margin (dB)
1817.4	P	150	100	V	41.93	84.3	42.37
2726.2 (2)	P	150	1000	V	40.16 (1)	74	33.84
3634.8 (2)	P	150	1000	V	43.11 (1)	74	30.89
4543.8 (2)	P	150	1000	V	43.95 (1)	74	30.05
5452.8 (2)	P	150	1000	H	38.14 (1)	74	35.86
9087.2 (2)	P	150	1000	H	48.37 (1)	74	25.63

P= Peak, QP=Quasi-peak, Av=Average

(1) The peak level is lower than the average limit (54 dB μ V/m)

(2) Restricted bands of operation in 15.205

Channel 914.9 MHz

Frequencies (MHz)	Detector P QP Av	Antenna height (cm)	RBW (kHz)	Polarization H: Horizontal V: Vertical	Field strength Measured at 3 m (dB μ V/m)	Limits at 3 m (dB μ V/m)	Margin (dB)
1830	P	150	100	V	40.91	84.3	43.39
2744.8 (2)	P	150	1000	V	40.98 (1)	74	33.02
3659.7 (2)	P	150	1000	V	42.49 (1)	74	31.51
4574.7 (2)	P	150	1000	V	41.47 (1)	74	32.53
9149.2 (2)	P	150	1000	H	45.51 (1)	74	28.49

P= Peak, QP=Quasi-peak, Av=Average

(1) The peak level is lower than the average limit (54 dB μ V/m)

(2) Restricted bands of operation in 15.205

Sample N° 1 Channel plan 2 – SF 7

Channel 915.2 MHz

Frequencies (MHz)	Detector P QP Av	Antenna height (cm)	RBW (kHz)	Polarization H: Horizontal V: Vertical	Field strength Measured at 3 m (dB μ V/m)	Limits at 3 m (dB μ V/m)	Margin (dB)
1830.4	P	150	100	V	38.77	84.8	46.03
2745.8 (2)	P	150	1000	V	41.36 (1)	74	32.64
3660.9 (2)	P	150	1000	V	43.51 (1)	74	30.49
4575.6 (2)	P	150	1000	H	41.23 (1)	74	32.77
9152 (2)	P	150	1000	H	46.43 (1)	74	27.57

P= Peak, QP=Quasi-peak, Av=Average

(1) The peak level is lower than the average limit (54 dB μ V/m)

(2) Restricted bands of operation in 15.205

Channel 921.4 MHz

Frequencies (MHz)	Detector P QP Av	Antenna height (cm)	RBW (kHz)	Polarization H: Horizontal V: Vertical	Field strength Measured at 3 m (dB μ V/m)	Limits at 3 m (dB μ V/m)	Margin (dB)
1842.6	P	150	100	V	35.95	84.8	48.85
2764.4 (2)	P	150	1000	V	41.9 (1)	74	32.1
3685.5 (2)	P	150	1000	V	42.18 (1)	74	31.82
4607.7 (2)	P	150	1000	H	42.72 (1)	74	31.28
8293.2 (2)	P	150	1000	H	48.51 (1)	74	25.49
9215.2	P	150	100	V	47.72	84.8	37.08

P= Peak, QP=Quasi-peak, Av=Average

(1) The peak level is lower than the average limit (54 dB μ V/m)

(2) Restricted bands of operation in 15.205

Channel 927.8 MHz

Frequencies (MHz)	Detector P QP Av	Antenna height (cm)	RBW (kHz)	Polarization H: Horizontal V: Vertical	Field strength Measured at 3 m (dB μ V/m)	Limits at 3 m (dB μ V/m)	Margin (dB)
1855.6	P	150	100	V	37.05	84.8	47.75
2783.4 (2)	P	150	1000	V	41.97 (1)	74	32.03
3711.6 (2)	P	150	1000	V	41.51 (1)	74	32.49
4639.2 (2)	P	150	1000	H	41.66 (1)	74	32.34
8350 (2)	P	150	1000	H	52.04 (1)	74	21.96
9277.6	P	150	100	V	45.88	84.8	38.92

P= Peak, QP=Quasi-peak, Av=Average

(1) The peak level is lower than the average limit (54 dB μ V/m)

(2) Restricted bands of operation in 15.205

Sample N° 1 Channel plan 2 – SF 10

Channel 915.2 MHz

Frequencies (MHz)	Detector P QP Av	Antenna height (cm)	RBW (kHz)	Polarization H: Horizontal V: Vertical	Field strength Measured at 3 m (dBμV/m)	Limits at 3 m (dBμV/m)	Margin (dB)
1830.6	P	150	100	V	39.4	84.7	45.3
2745.8 (2)	P	150	1000	V	41.6 (1)	74	32.4
3660.6 (2)	P	150	1000	V	43.3 (1)	74	30.7
4576.5 (2)	P	150	1000	H	42 (1)	74	32
8236.8 (2)	P	150	1000	H	49.8 (1)	74	24.2
9152.4	P	150	1000	V	48 (1)	74	26

P= Peak, QP=Quasi-peak, Av=Average

(1) The peak level is lower than the average limit (54 dBμV/m)

(2) Restricted bands of operation in 15.205

Channel 921.4 MHz

Frequencies (MHz)	Detector P QP Av	Antenna height (cm)	RBW (kHz)	Polarization H: Horizontal V: Vertical	Field strength Measured at 3 m (dBμV/m)	Limits at 3 m (dBμV/m)	Margin (dB)
1843	P	150	100	V	36.47	84.7	48.23
2764.4 (2)	P	150	1000	V	41.83 (1)	74	32.17
3685.5 (2)	P	150	1000	V	41.97 (1)	74	32.03
4607.1 (2)	P	150	1000	H	43.28 (1)	74	30.72
8292.4 (2)	P	150	1000	H	50.1 (1)	74	23.9
9214.8	P	150	100	V	48.38	84.7	36.32

P= Peak, QP=Quasi-peak, Av=Average

(1) The peak level is lower than the average limit (54 dBμV/m)

(2) Restricted bands of operation in 15.205

Channel 927.8 MHz

Frequencies (MHz)	Detector P QP Av	Antenna height (cm)	RBW (kHz)	Polarization H: Horizontal V: Vertical	Field strength Measured at 3 m (dB μ V/m)	Limits at 3 m (dB μ V/m)	Margin (dB)
1855.8	P	150	100	V	38.27	84.7	46.43
2783.6 (2)	P	150	1000	V	41.99 (1)	74	32.01
3711 (2)	P	150	1000	V	41.62 (1)	74	32.38
4639.5 (2)	P	150	1000	H	41.43 (1)	74	32.57
8350 (2)	P	150	1000	H	53.09 (1)	74	20.91
9278.4	P	150	100	V	47.46	84.7	37.24

P= Peak, QP=Quasi-peak, Av=Average

 (1) The peak level is lower than the average limit (54 dB μ V/m)

(2) Restricted bands of operation in 15.205

Sample N° 3 Channel plan 1 – SF 7

Channel 923.2 MHz

Frequencies (MHz)	Detector P QP Av	Antenna height (cm)	RBW (kHz)	Polarization H: Horizontal V: Vertical	Field strength Measured at 3 m (dB μ V/m)	Limits at 3 m (dB μ V/m)	Margin (dB)
1846.8 (2)	P	150	100	V	35.09	81.43	46.34

P= Peak, QP=Quasi-peak, Av=Average

(1) The peak level is lower than the average limit (54 dB μ V/m)

(2) Restricted bands of operation in 15.205

Channel 923.4 MHz

Frequencies (MHz)	Detector P QP Av	Antenna height (cm)	RBW (kHz)	Polarization H: Horizontal V: Vertical	Field strength Measured at 3 m (dB μ V/m)	Limits at 3 m (dB μ V/m)	Margin (dB)
1846.8	P	150	100	V	35.17	81.43	46.26
2770.8 (2)	P	150	1000	V	27.55 (1)	74	46.45

P= Peak, QP=Quasi-peak, Av=Average

(1) The peak level is lower than the average limit (54 dB μ V/m)

(2) Restricted bands of operation in 15.205

Sample N° 3 Channel plan 1 – SF 10

Channel 923.2 MHz

Frequencies (MHz)	Detector P QP Av	Antenna height (cm)	RBW (kHz)	Polarization H: Horizontal V: Vertical	Field strength Measured at 3 m (dB μ V/m)	Limits at 3 m (dB μ V/m)	Margin (dB)
1846.4	P	150	100	V	35.8	81.4	45.63
2769.4 (2)	P	150	1000	V	28.2 (1)	74	45.8
8309.2 (2)	P	150	1000	H	27.31 (1)	74	46.69

P= Peak, QP=Quasi-peak, Av=Average

(1) The peak level is lower than the average limit (54 dB μ V/m)

(2) Restricted bands of operation in 15.205

Channel 923.4 MHz

Frequencies (MHz)	Detector P QP Av	Antenna height (cm)	RBW (kHz)	Polarization H: Horizontal V: Vertical	Field strength Measured at 3 m (dB μ V/m)	Limits at 3 m (dB μ V/m)	Margin (dB)
1847	P	150	100	V	35.47	81.4	45.96
2770.2 (2)	P	150	1000	V	28.31 (1)	74	45.69

P= Peak, QP=Quasi-peak, Av=Average

(1) The peak level is lower than the average limit (54 dB μ V/m)

(2) Restricted bands of operation in 15.205

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.

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.

Note: any spurious which has more than 20 dB of margin compared to the applicable limit is not necessarily reported.

Test conclusion:

RESPECTED STANDARD

16. POWER SPECTRAL DENSITY

Temperature (°C) : 19 to 23

Humidity (%HR): 39 to 48

Date : April 22, 2025 to
April 28, 2025

Technician : T. LEDRESSEUR

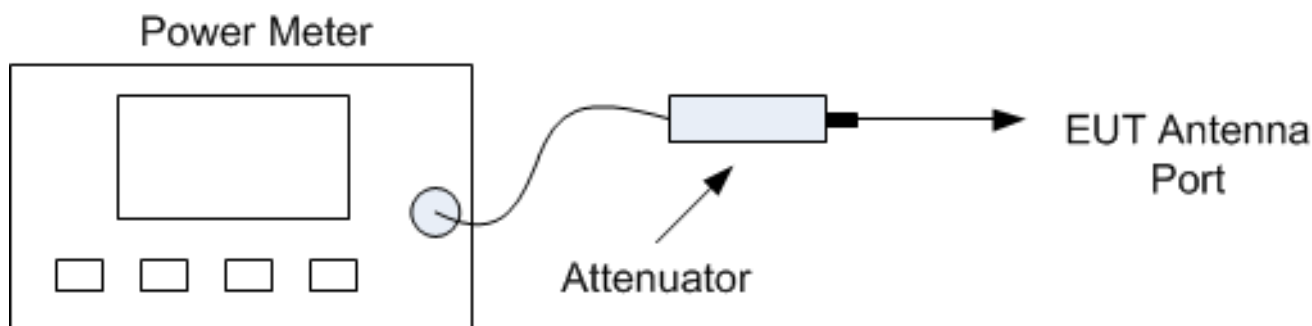
Standard: FCC Part 15
RSS-247

Test procedure:

For FCC Part 15: paragraph 15.247 (e), paragraph 15.247 (f)
For RSS-247: paragraph 5.2

Test set up:

Conducted test



The measure is realized in conducted mode with an analyser.

Span: at least 1.5 times the OBW

Resolution bandwidth: 3kHz

Video bandwidth: 3 xRBW

Detector: power averaging

Number of points: 691

Sweep time: auto

Trace mode: trace averaging (rms)

Then the peak marker function is used.

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

Equipment under test operating condition:

The equipment under test is blocked in continuous modulated transmission mode, at the highest output power level at which the transmitter is intended to operate.

We used for power source the internal battery of the equipment

Results:

Sample N° 1 Channel plan 1 – SF 7

Duty cycle measured:

Ton= 36 ms

Toff= 2000 ms

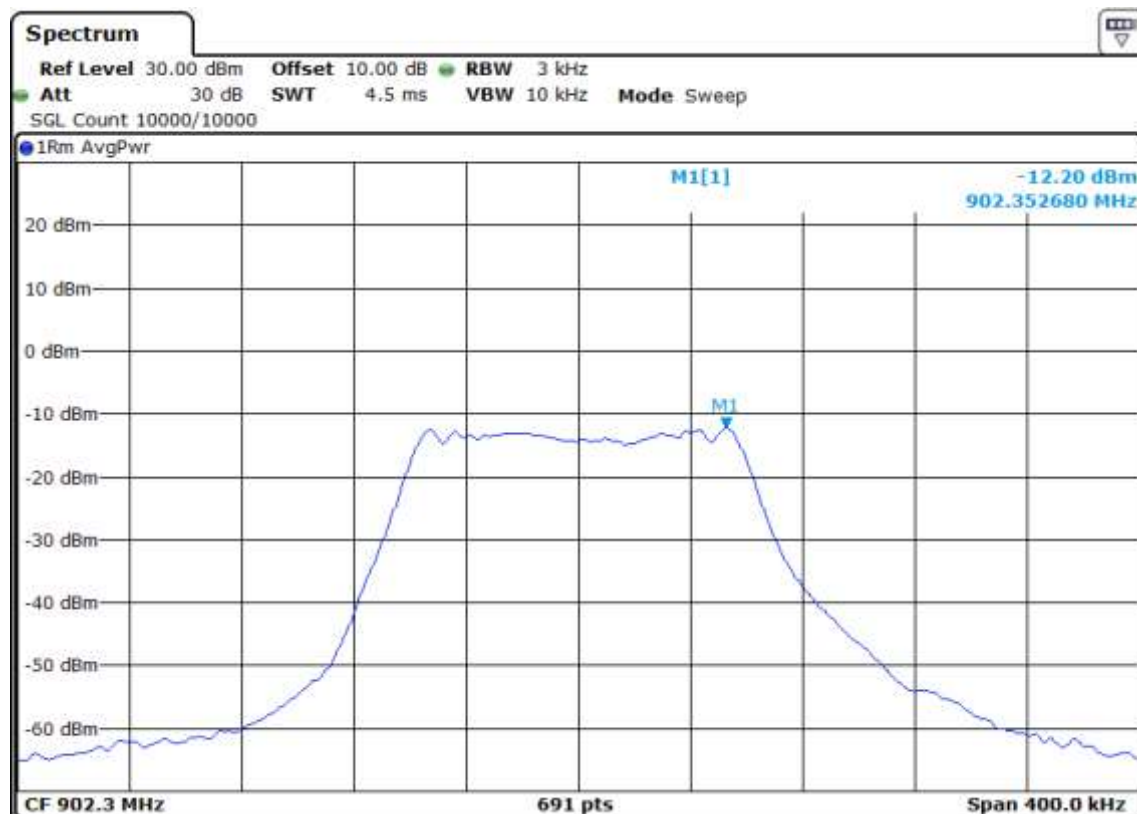
X= 0.02

Correction= $10 \log (1/X) = 17.5 \text{ dB}$

Channel 902.3 MHz

	Power spectral density (dBm / 3 kHz)	Limit (dBm / 3 kHz)
Nominal supply voltage:	5.3	8

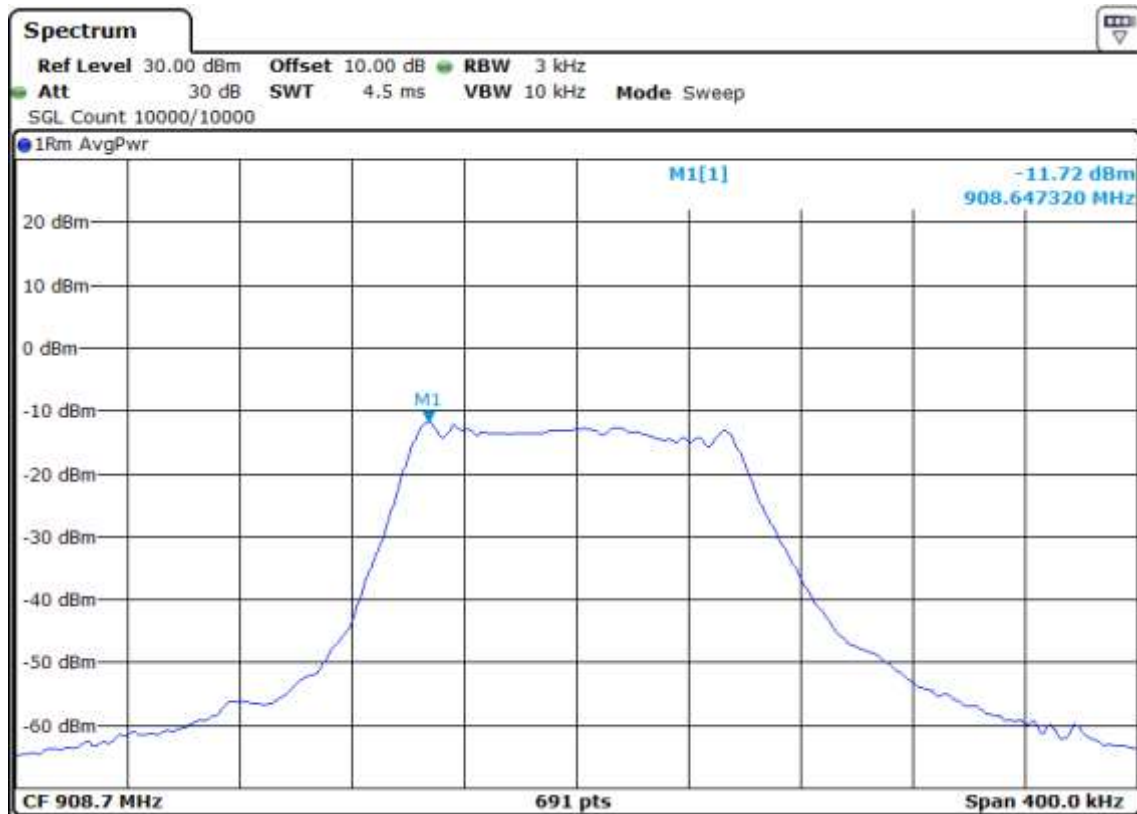
(1) duty cycle included



Channel 908.7 MHz

	Power spectral density (dBm / 3 kHz)	Limit (dBm / 3 kHz)
Nominal supply voltage:	5.8	8

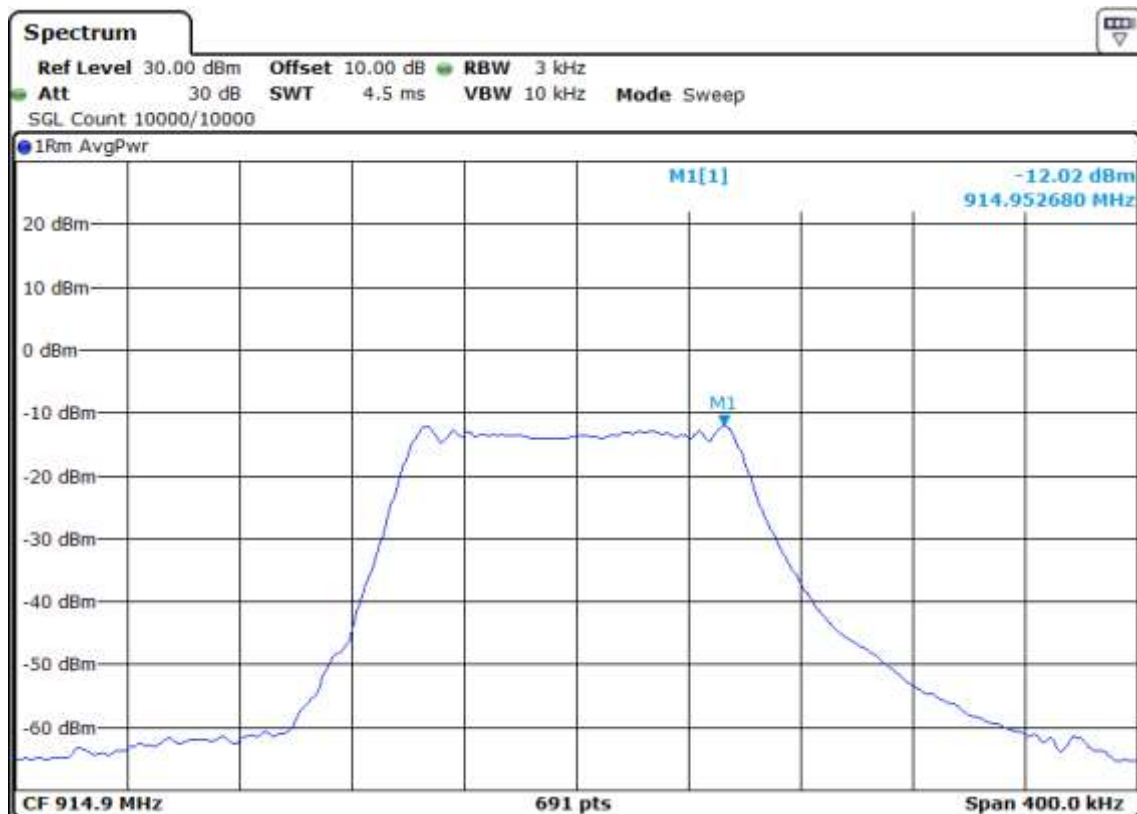
(1) duty cycle included



Channel 914.9 MHz

	Power spectral density (dBm / 3 kHz)	Limit (dBm / 3 kHz)
Nominal supply voltage:	5.48	8

(1) duty cycle included



Sample N° 1 Channel plan 1 – SF 10

Duty cycle measured:

Ton= 210 ms

Toff= 1840 ms

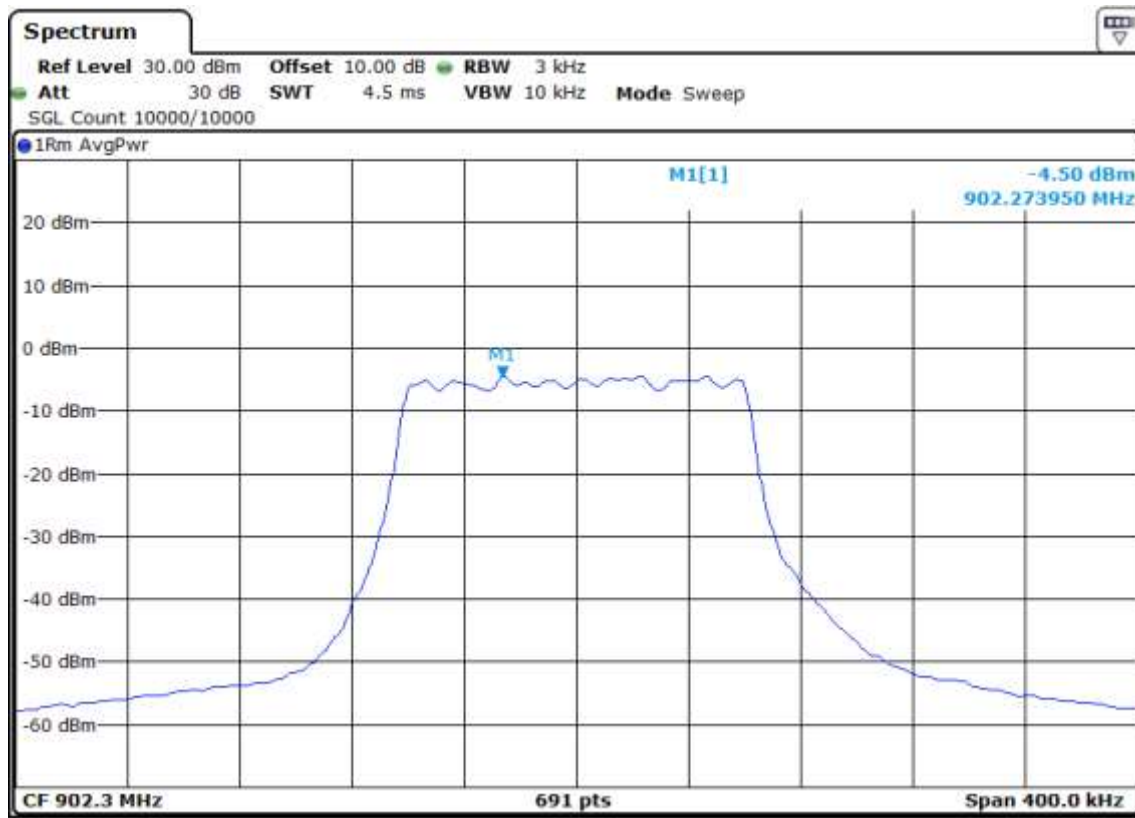
X= 0.102

Correction= $10 \log (1/X) = 9.9 \text{ dB}$

Channel 902.3 MHz

	Power spectral density (dBm / 3 kHz)	Limit (dBm / 3 kHz)
Nominal supply voltage:	5.4	8

(1) duty cycle included



Channel 908.7 MHz

	Power spectral density (dBm / 3 kHz)	Limit (dBm / 3 kHz)
Nominal supply voltage:	5.96	8

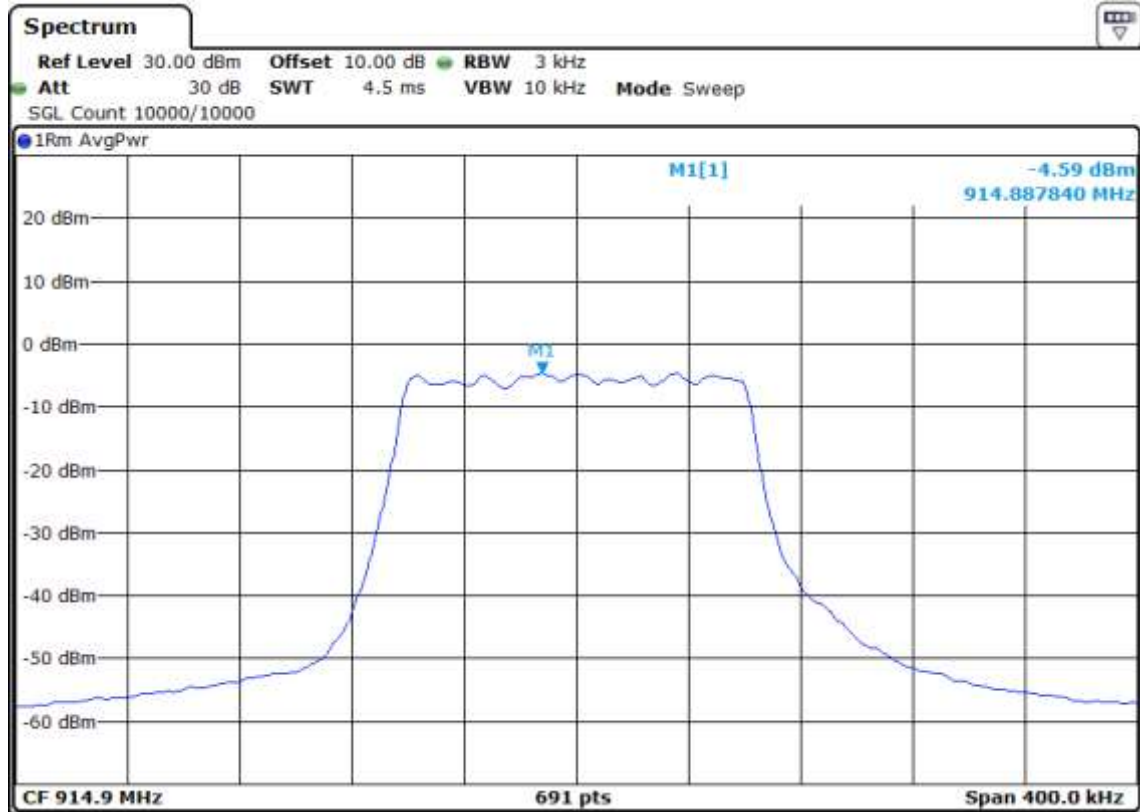
(1) duty cycle included



Channel 914.9 MHz

	Power spectral density (dBm / 3 kHz)	Limit (dBm / 3 kHz)
Nominal supply voltage:	5.31	8

(1) duty cycle included



Sample N° 1 Channel plan 2 – SF 7

Duty cycle measured:

Ton= 32.7 ms

Toff= 2270 ms

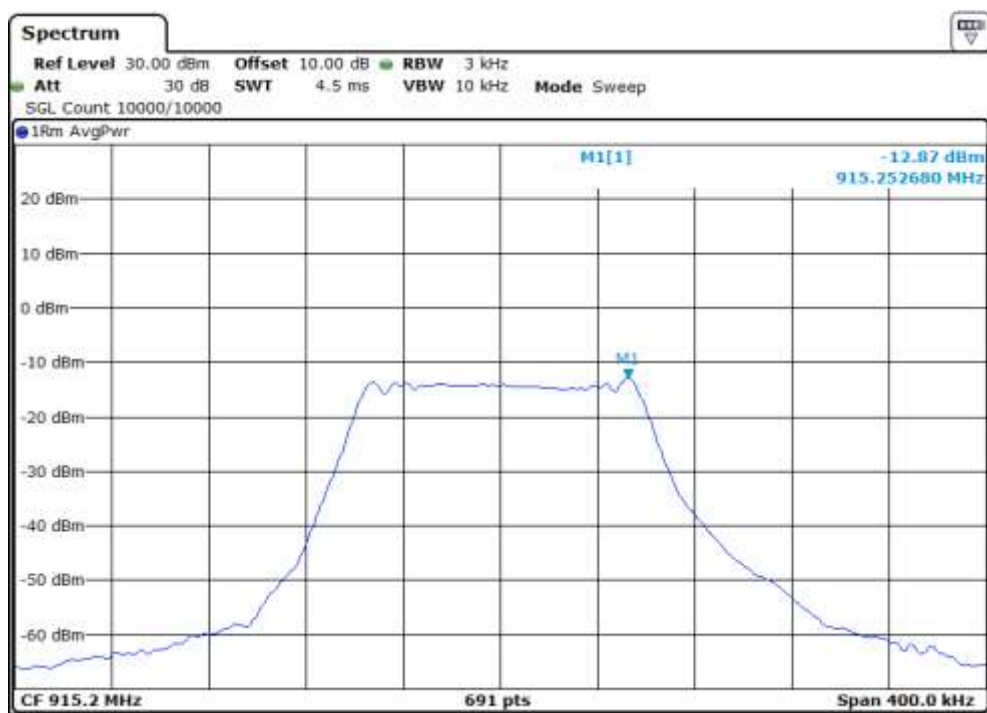
X= 0.014

Correction= $10 \log (1/X) = 18.5 \text{ dB}$

Channel 915.2 MHz

	Power spectral density (dBm / 3 kHz)	Limit (dBm / 3 kHz)
Nominal supply voltage:	5.63	8

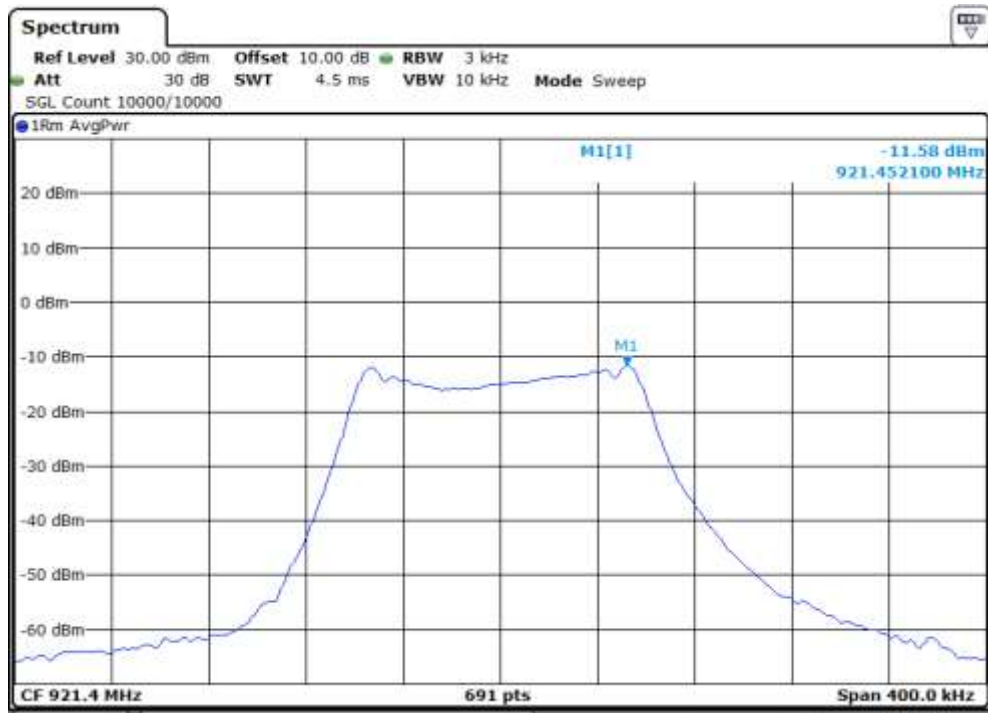
(1) duty cycle included



Channel 921.4 MHz

	Power spectral density (dBm / 3 kHz)	Limit (dBm / 3 kHz)
Nominal supply voltage:	6.92	8

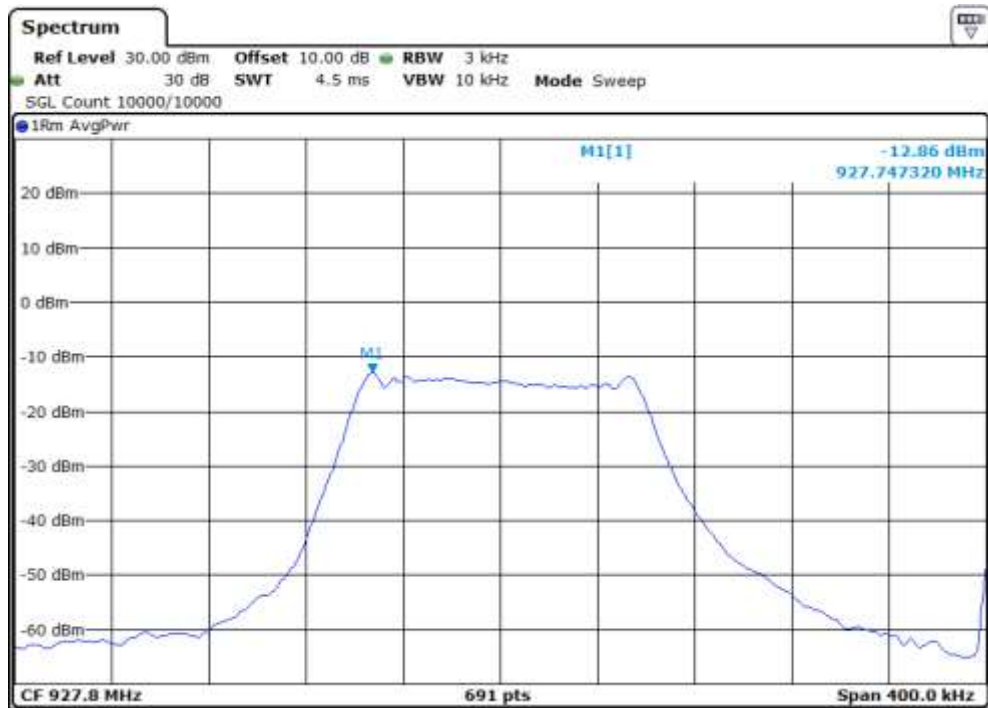
(1) duty cycle included



Channel 927.8 MHz

	Power spectral density (dBm / 3 kHz)	Limit (dBm / 3 kHz)
Nominal supply voltage:	5.64	8

(1) duty cycle included



Sample N° 1 Channel plan 1 – SF 10

Duty cycle measured:

Ton= 210 ms

Toff= 1840 ms

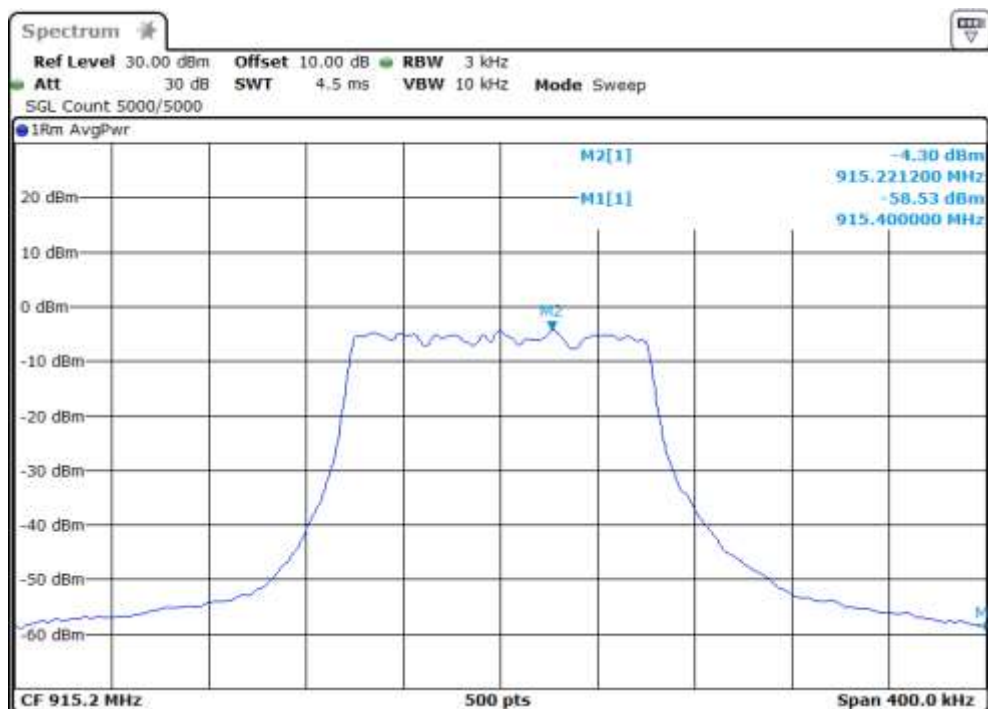
X= 0.102

Correction= $10 \log (1/X) = 9.9 \text{ dB}$

Channel 915.2 MHz

	Power spectral density (dBm / 3 kHz)	Limit (dBm / 3 kHz)
Nominal supply voltage:	5.6	8

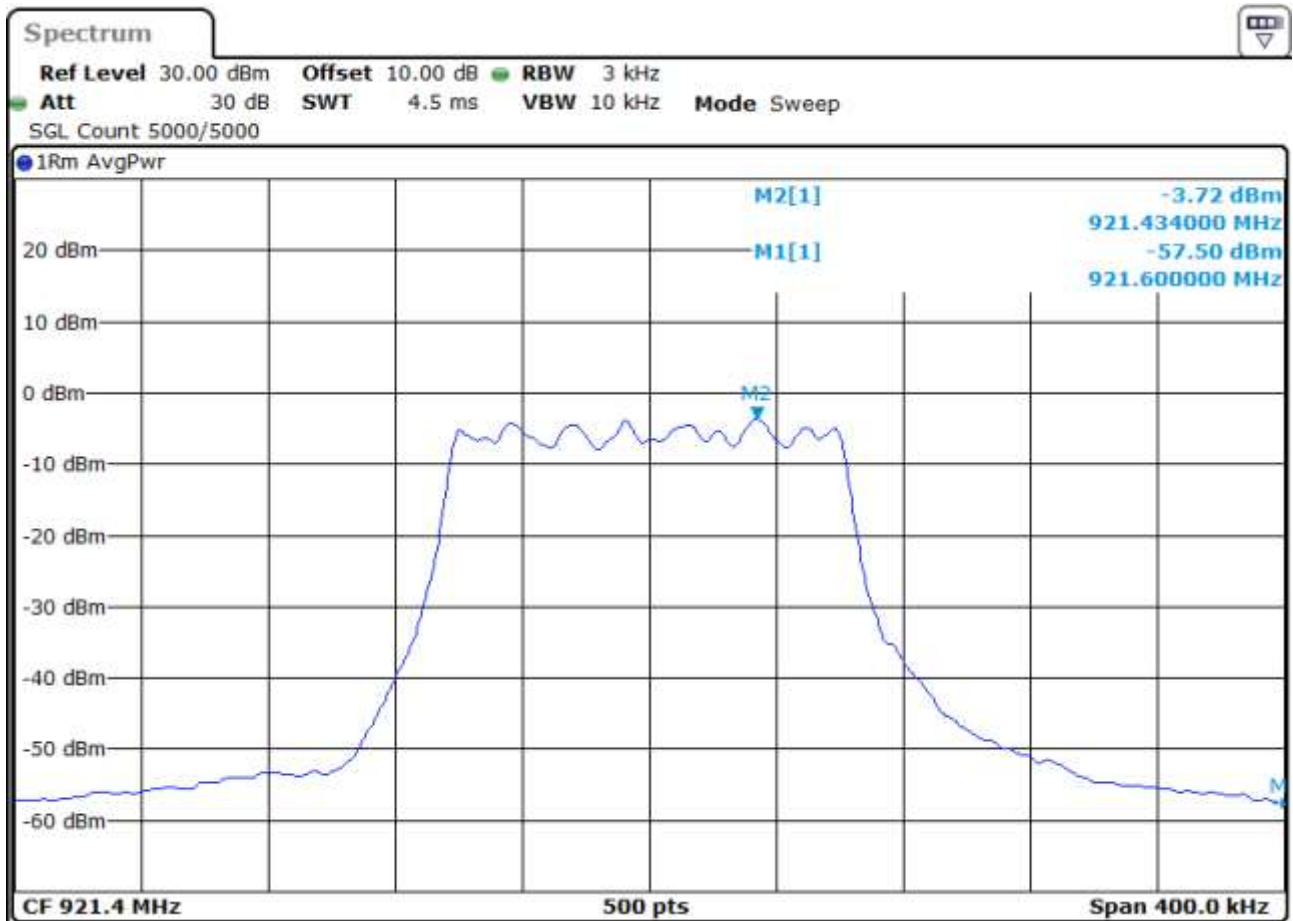
(1) duty cycle included



Channel 921.4 MHz

	Power spectral density (dBm / 3 kHz)	Limit (dBm / 3 kHz)
Nominal supply voltage:	6.18	8

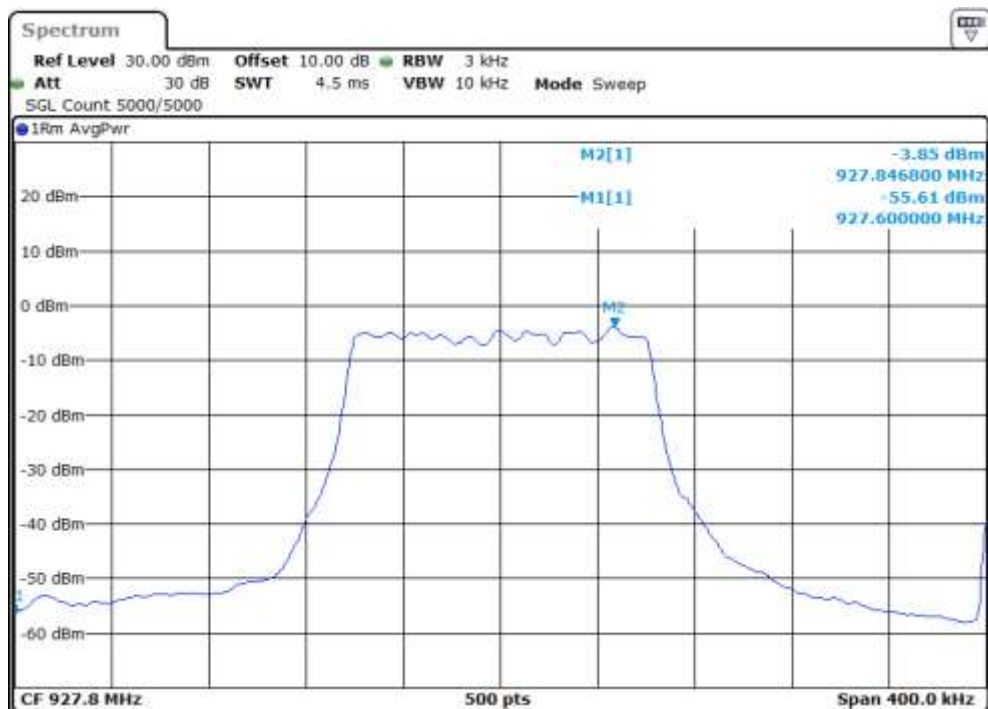
(1) duty cycle included



Channel 927.8 MHz

	Power spectral density (dBm / 3 kHz)	Limit (dBm / 3 kHz)
Nominal supply voltage:	6.05	8

(1) duty cycle included



Sample N° 3 Channel plan 1 – SF 7

Duty cycle measured:

Ton= 32.7 ms

Toff= 2270 ms

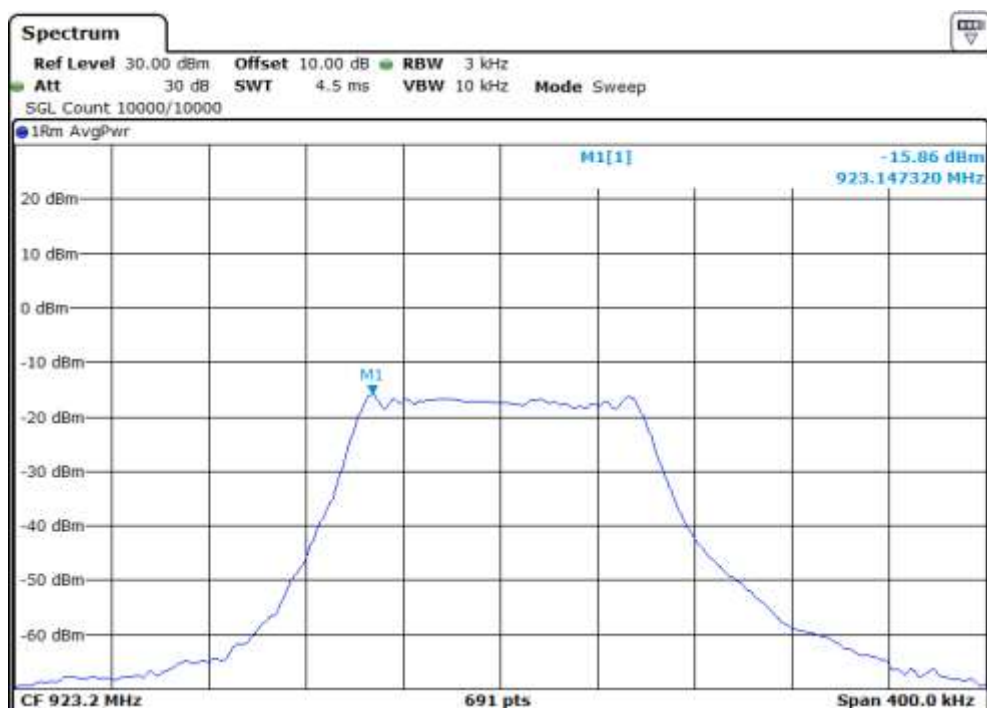
X= 0.014

Correction= $10 \log (1/X) = 18.5 \text{ dB}$

Channel 923.2 MHz

	Power spectral density (dBm / 3 kHz)	Limit (dBm / 3 kHz)
Nominal supply voltage:	2.64	8

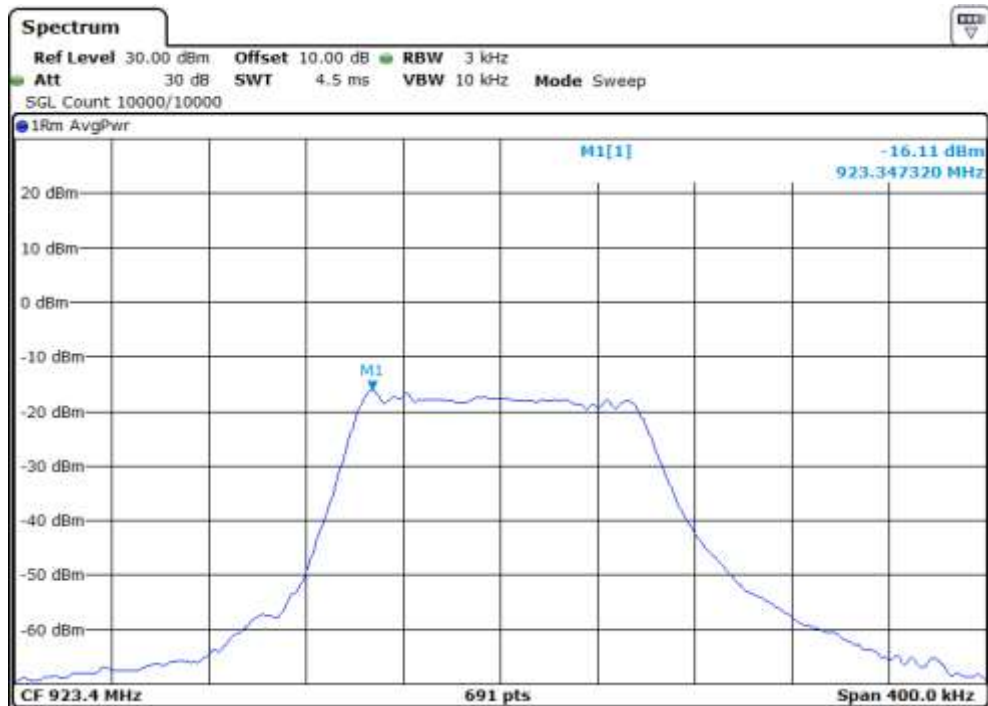
(1) duty cycle included



Channel 923.4 MHz

	Power spectral density (dBm / 3 kHz)	Limit (dBm / 3 kHz)
Nominal supply voltage:	2.39	8

(1) duty cycle included



Sample N° 3 Channel plan 1 – SF 10

Duty cycle measured:

Ton= 210 ms

Toff= 1840 ms

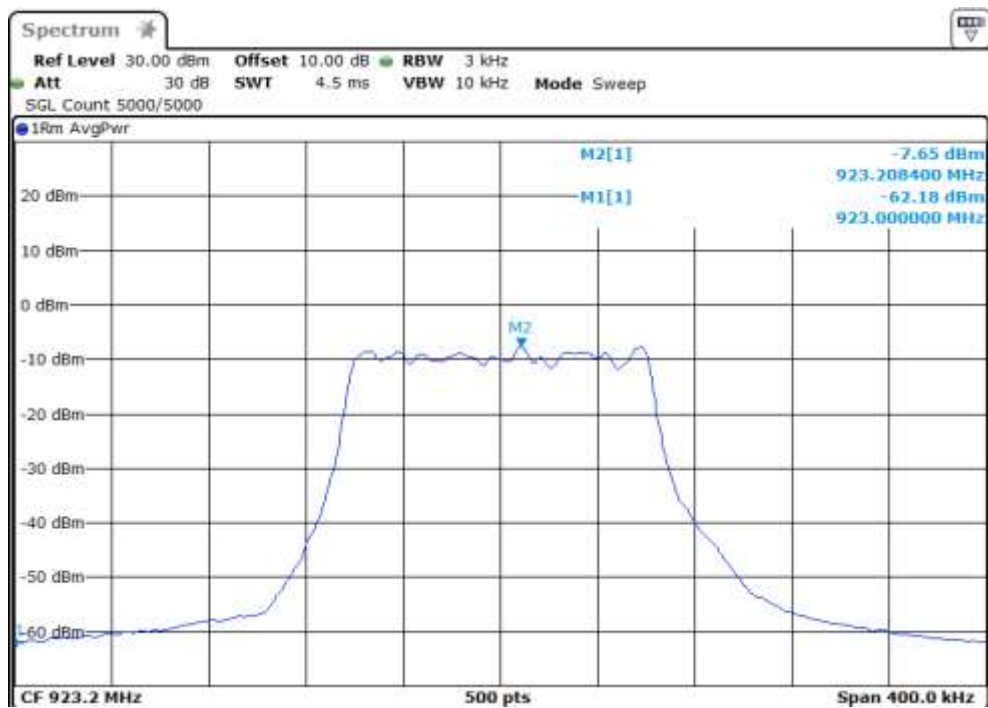
X= 0.102

Correction= $10 \log (1/X) = 9.9 \text{ dB}$

Channel 923.2 MHz

	Power spectral density (dBm / 3 kHz)	Limit (dBm / 3 kHz)
Nominal supply voltage:	2.25	8

(1) duty cycle included



	Power spectral density (dBm / 3 kHz)	Limit (dBm / 3 kHz)
Nominal supply voltage:	2.43	8

Spectrum

Ref Level 30.00 dBm **Offset** 10.00 dB **RBW** 3 kHz
Att 30 dB **SWT** 4.5 ms **VBW** 10 kHz **Mode** Sweep
SGL Count 5000/5000

● IRm AvgPwr

M2[1] -7.47 dBm
923.446800 MHz
M1[1] -61.72 dBm
923.200000 MHz

CF 923.4 MHz 500 pts Span 400.0 kHz

RESPECTED STANDARD

□□□ End of report, (3) appendix(es) to be forwarded □□□

APPENDIX 1: Calculation example for radiated spurious emission

Frequencies (MHz)	Level (dBμV/m) (1)	Margin (dB) (2)	Limit (dBμV/m)	Read level (dBμV)	Antenna Factor (dBm)	Cable Loss (dB)	Preamp Factor (dB)
2390 (Peak)	57.63	16.37	74	64.3	32.7	3.27	42.64
2390 (Av)	46.43	7.57	54	53.1	32.7	3.27	42.64

(1) Level (dBμV/m) = Antenna Factor (dBm) + Cable loss (dB) + Read level (dBμV) – Preamp Factor (dB)

(2) Margin (dB) = Limit (dBμV/m) - Level (dBμV/m)

For Peak Limit @ 2390MHz:

(1) Level (dBμV/m)

= Antenna Factor (dBm) + Cable loss (dB) + Read level (dBμV) – Preamp Factor (dB)

= 32.7 (dBm) + 3.27 (dB) + 64.3 (dBμV) - 42.64 (dB)

= 57.63 (dBμV/m)

(2) Margin (dB)

= Limit (dBμV/m) - Level (dBμV/m)

= 74 (dBμV/m) - 57.63 (dBμV/m)

= 16.37 (dB)

For Average Limit @ 2390MHz:

(1) Level (dBμV/m)

= Antenna Factor (dBm) + Cable loss (dB) + Read level (dBμV) – Preamp Factor (dB)

= 32.7 (dBm) + 3.27 (dB) + 53.1 (dBμV) - 42.64 (dB)

= 46.43 (dBμV/m)

(2) Margin (dB)

= Limit (dBμV/m) - Level (dBμV/m)

= 54 (dBμV/m) – 46.43 (dBμV/m)

= 7.57 (dB)

APPENDIX 2: Test equipment list

AC conducted emissions

TYPE	MANUFACTURER	EMITECH NUMBER
Outside room	Emitech	11855
Test receiver N9010A	Agilent	11316
Transient limiter LIT-930A	COM-POWER	17207
LISN ESH3-Z5	Rohde & Schwarz	6217
Absorber sheath current	Emitech	17829
Cable SMA-4m	Huber + Suhner	15933
Power source PHF555	HAEFELY	6290
Multimeter 34401A	Agilent	10952
Meteo station 608-H1	Testo	15790
Software	BAT-EMC V3.18.0.26	0000

Carrier frequency separation

TYPE	MANUFACTURER	EMITECH NUMBER
Spectrum Analyzer FSV40	Rohde & Schwarz	15776
Attenuator 10dB 18GHz 2W	Weinschel	12492
Multimeter 177	Fluke	19114
Meteo station 608-H1	Testo	15790

Number of hopping frequencies

TYPE	MANUFACTURER	EMITECH NUMBER
Spectrum Analyzer FSV40	Rohde & Schwarz	15776
Attenuator 10dB 18GHz 2W	Weinschel	12492
Multimeter 177	Fluke	19114
Meteo station 608-H1	Testo	15790

Dwell time

TYPE	MANUFACTURER	EMITECH NUMBER
Spectrum Analyzer FSV40	Rohde & Schwarz	15776
Attenuator 10dB 18GHz 2W	Weinschel	12492
Multimeter 177	Fluke	19114
Meteo station 608-H1	Testo	15790

Occupied bandwidth

TYPE	MANUFACTURER	EMITECH NUMBER
Spectrum Analyzer FSV40	Rohde & Schwarz	15776
Attenuator 10dB 18GHz 2W	Weinschel	12492
Multimeter 177	Fluke	19114
Meteo station 608-H1	Testo	15790

Band edge

TYPE	MANUFACTURER	EMITECH NUMBER
Spectrum Analyzer FSV40	Rohde & Schwarz	15776
Anechoic Chamber	EMITECH	7651
Antenna BBHA 9120B	Schwarzbeck	6970
Low-noise amplifier 8449B	Agilent Technologies	10262
Cable N-3m	Huber + Suhner	15892
Cable SMA-3m	Huber + Suhner	15893
Cable SMA-3m	Huber + Suhner	15916
Cable SMA-4m	Huber + Suhner	15933
High pass filter HP12/1200-5AA	Filtek	7302
Multimeter 177	Fluke	19114
Meteo station WS-9232	La Crosse Technology	7564
Software	BAT-EMC V3.18.0.26	0000

Output power

TYPE	MANUFACTURER	EMITECH NUMBER
Spectrum Analyzer FSV40	Rohde & Schwarz	15776
Power sensor NRV-Z86	Rohde & Schwarz	11588
Attenuator 10dB 18GHz 2W	Weinschel	12492
Multimeter 177	Fluke	19114
Meteo station 608-H1	Testo	15790
Software	R&S Power Viewer Plus V13.1	///

Radiated spurious emissions

TYPE	MANUFACTURER	EMITECH NUMBER
Spectrum Analyzer FSV40	Rohde & Schwarz	15776
Anechoic Chamber	EMITECH	7651
Biconical antenna HK116	Rohde & Schwarz	6118
Log periodic antenna 3146A	EMCO	5609
Low-noise amplifier INT-BA011000-25	RFPA	15775
Antenna BBHA 9120B	Schwarzbeck	6970
Low-noise amplifier 8449B	Agilent Technologies	10262
Cable k 1m	Huber + Suhner	14522
Antenna 3160-09	ETS lindgren	14690
Low-noise amplifier	Low-noise amplifier	14851
Cable K-15cm	JYE BAO	14887
Cable N-3m	Huber + Suhner	15892
Cable SMA-3m	Huber + Suhner	15893
Cable SMA-3m	Huber + Suhner	15916
Cable SMA-4m	Huber + Suhner	15933
High pass filter HPM15162	Microtronics	14037
Multimeter 177	Fluke	19114
Meteo station WS-9232	La Crosse Technology	7564
Software	BAT-EMC V3.18.0.26	0000

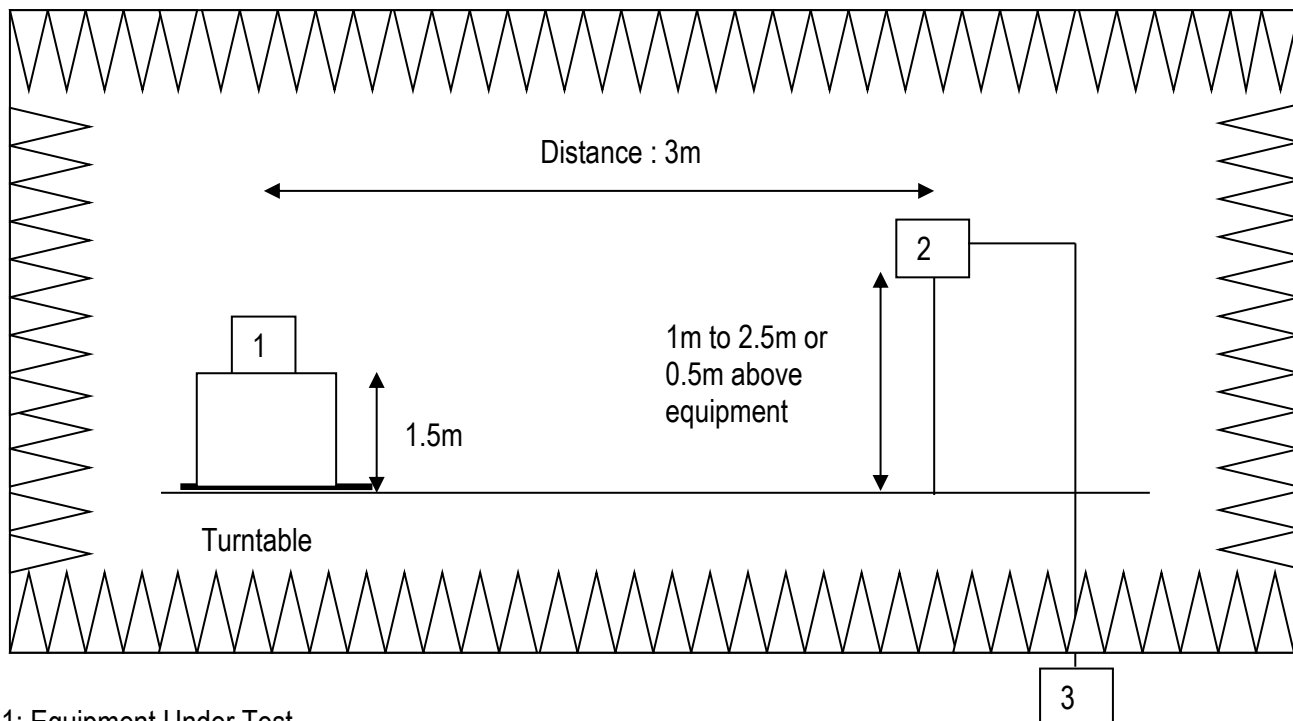
Power spectral density

TYPE	MANUFACTURER	EMITECH NUMBER
Spectrum Analyzer FSV40	Rohde & Schwarz	15776
Attenuator 10dB 18GHz 2W	Weinschel	12492
Multimeter 177	Fluke	19114
Meteo station 608-H1	Testo	15790

APPENDIX 3: Radiated Test Setup

Anechoic chamber setup

Above 1 GHz



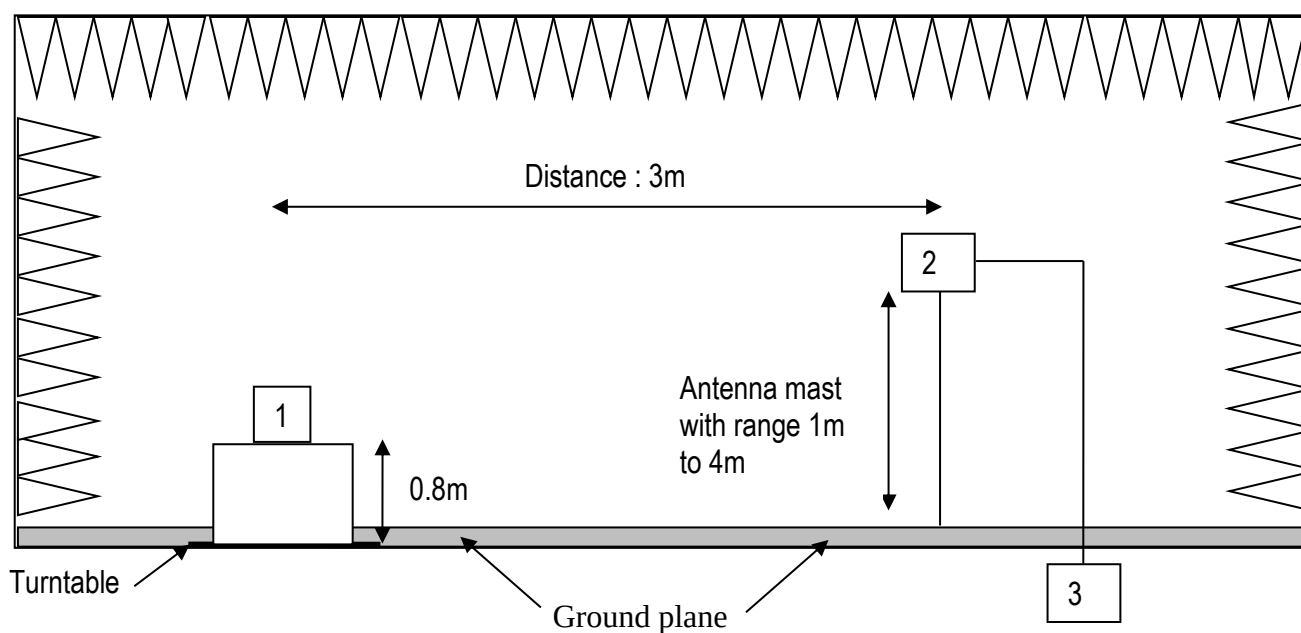
1: Equipment Under Test

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