EMITECH GROUPE

RR051-19-100336-1-A Ed. 0

Certification Radio test report

According to the standard:
CFR 47 FCC PART 15

Equipment under test:
Wirnet iBTS 64 Highway

FCC ID: 2AFYS-KLK64HIGHWAY

Company:
KERLINK

Distribution: Mr LOUVEAU **(Company:** KERLINK**)**

Number of pages: 399 with 7 appendixes

Ed.	Date	Modified Page(s)	Technical Verification and Quality Approval Name and Function / Visa
0	18-Apr-19	Creation	M. DUMESNIL, Radio Technical 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.

S51 RTY 000 INT 00004 [02]

DESIGNATION OF PRODUCT:	***Wirnet iBTS 64 Highway***
Serial number (S/N):	841BXa010006
Reference / model (P/N):	Wirnet iBTS 64 Highway
Software version:	RF software
MANUFACTURER:	KERLINK

COMPANY SUBMITTING THE PRODUCT:

Company:	KERLINK
Address:	1 Rue Jacqueline Auriol 35235 THORIGNE-FOUILLARD FRANCE
Responsible:	Mr LOUVEAU
DATES OF TEST:	From 1-Apr-19 to 11-Apr-19
TESTING LOCATION:	EMITECH ANGERS laboratory at JUIGNE SUR LOIRE (49) FRANCE FCC Accredited under US-EU MRA Designation Number: FR0009 Test Firm Registration Number: 873677
TESTED BY:	T. LEDRESSEUR ***VISA:*** 
WRITTEN BY:	T. LEDRESSEUR

CONTENTS

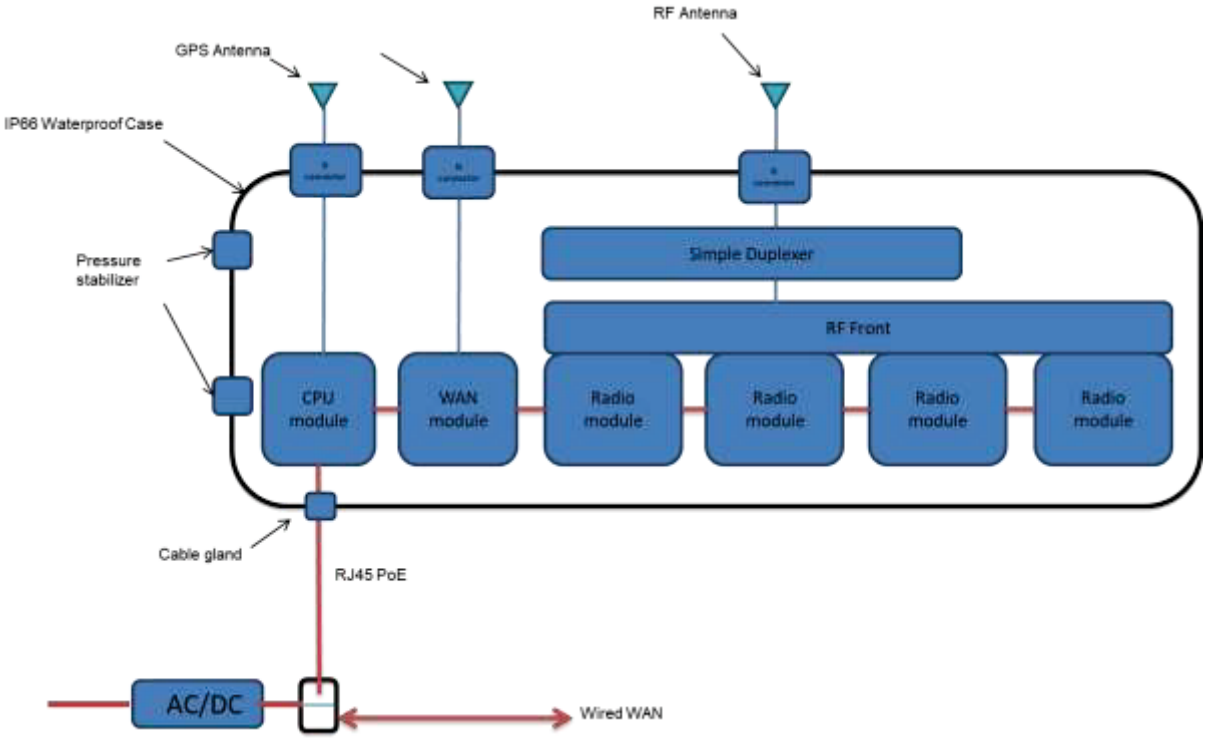
1. INTRODUCTION

This report presents the results of radio test carried out on the following radio equipment: *Wirnet iBTS 64 Highway* , in accordance with normative reference.

The device under test integrates the followings radio function:

- GPS receiver Integrated with CPU
- 3G/LTE module already certified (FCC ID:N7NMC7355). Slot 1
- LoRa function Slot 2 to 5

This test report concern test realized on LoRa function for certification procedure. (Slot 2 to 5)



Each slot 2 to 5 corresponds to a LoRa module and each LoRa module possesses 2 RF output.

The product can emit on a single LoRa module at 30 dBm or on 4 modules at 24 dBm.
Only one RF output is used during normal use, but both can be used.

In addition when the 4 modules are used it's impossible they emit on the same frequency

2. PRODUCT DESCRIPTION

Frequency band used 902MHz to 928 MHz

Frequencies plan detailed (LoRaWAN standard)

Transmitter

Channel frequencies	LoRa bandwidth (kHz)	Number of channel	Channel width (kHz)	SPREAD FACTOR
923,3+i*0,6MHz (i=0 to 7)	500	8	600	7 to 12

Receiver

Channel frenquencies	LoRa bandwidth (kHz)	Number of channel	Channel width (kHz)	SPREAD FACTOR
902,3+i*0,2MHz (i=0 to 63)	125	64	200	7 to 10
903,0+i*1,6MHz (i=0 to 7)	500	8	600	7 to 12

Class: B

Utilization: Residential use

Antenna type and gain: 3 dBi or 6dBi

Power source: AC/DC Midspan PoE injector 60W

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 (2019)	Radio Frequency Devices
ANSI C63.10	2013 Procedures for ComplianceTesting of Unlicensed Wireless Devices.
558074 D01 DTS v05r02	Apr 2, 2019 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.
447498 D01 General RF Exposure Guidance v06	RF Exposure procedures and equipment authorization policies for mobile and portable equipment

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 V3.17.0.25	Software	/	/	/
6884	Suhner 1.5m	Cable	29/03/2018	2	29/03/2020
7310	Filtek HP12/1200-5AA	High-pass filter	29/03/2018	2	29/03/2020
8508	California instruments 1251RP	Power source	23/01/2019	1	23/01/2020
8511	HP 8447D	Low-noise amplifier	14/03/2019	1	14/03/2020
8526	Schwarzbeck VHBB 9124	Biconical antenna	16/08/2018	3	16/08/2021
8535	EMCO 3115	Antenna	10/02/2017	3	10/02/2020
8543	Schwarzbeck UHALP 9108A	Log periodic antenna	16/08/2018	3	16/08/2021
8552	Aéroflex 30dB 25W	Attenuator	13/11/2017	2	13/11/2019
8590	RG214 N-5m	Cable	29/03/2018	2	29/03/2020
8593	SIDT Cage 2	Anechoic chamber	/	/	/
8707	R&S ESI7	Test receiver	13/04/2018	1	13/04/2019
8720	R&S ESH3-Z5	LISN	06/12/2018	2	06/12/2020
8750	La Crosse Technology WS-9232	Meteo station	24/09/2018	2	24/09/2020
8896	ACQUISYS GPS8	Satellite synchronized frequency standard	/	/	/
10523	Absorber sheath current	Emitech	06/04/2018	2	06/04/2020
10788	Emitech	Outside room Hors cage	/	/	/
11535	R&S EZ-25	High pass filter	21/03/2019	2	21/03/2021
11592	R&S NRV-Z86	Power Sensor	10/08/2018	1	10/08/2019
12911	Huber + Suhner N-2m	cable	29/03/2018	2	29/03/2020
14736	MATURO	Turntable and mat controller MCU	/	/	/
14831	Fluke 177	Multimeter	12/01/2018	2	12/01/2020
15666	R&S FSV40	Spectrum Analyzer	19/07/2018	1	19/07/2019
15812	COMP-POWER PAM-118A	Low-noise amplifier 18GHz	12/11/2018	1	12/11/2019
15882	SUCOFLEX	cable N 5m	27/11/2018	2	27/11/2020

6. TESTS RESULTS SUMMARY

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 15.212	MODULAR TRANSMITTERS	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: Professionally installed equipment

Note 2: See FCC part 15.247 (d).

Note 3: See certification document

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 556 kHz (see appendix 4).

RF EXPOSURE: The analyze is realized only with the worst critical antenna 6 dBi

Maximum measured power = 28.35 dBm at 925.7 MHz
With a gain at 6dBi
EIRP = 34.35 dBm = 2.7227 W

The maximum duty cycle is 40% on the reference period of 6min, so the power computed is: 1089.1mW

In accordance with KDB 447498 D01 General RF Exposure Guidance v06:

PSD= $EIRP/(4*\pi*R^{2)}$

- ⇨ *1089.1/(4*π*(20 cm)²)=* ***0.39 mW/cm² (limit=0.6183 mW/cm2)***

The equipment fulfils the requirements on power density for general population/uncontrolled exposure and therefore fulfils the requirements of 47 CFR §1.1310.

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	± 0.75dB
Radiated emission valid to 26 GHz F < 62.5 MHz: 62.5 MHz < F < 1 GHz: 1 GHz < F < 26 GHz:	 ± 5.14 dB ± 5.13 dB ± 5.16 dB
AC Power Lines conducted emissions	± 3.38 dB
Temperature	± 1 °C
Humidity	± 5 %

8. CONDUCTED LIMITS

Temperature (°C) : 21 **Humidity (%HR):** 43 **Date :** April 3, 2019

Technician : T. LEDRESSEUR

Standard: FCC Part 15

Test procedure: Paragraph 15.207

Software used: BAT-EMC V3.17.0.25

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.

See photos in appendix 2

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.

The measure is realized with the followings configuration of the product.

Number of LoRa module in emission	Conducted power (dBm)	SPREAD FACTOR	Antenna (dBi)	N° configuration
1	30	7	3	1
1	30	12	3	2
4	24	7	3	3
4	24	12	3	4
1	30	7	6	5
1	30	12	6	6
4	24	7	6	7
4	24	12	6	8

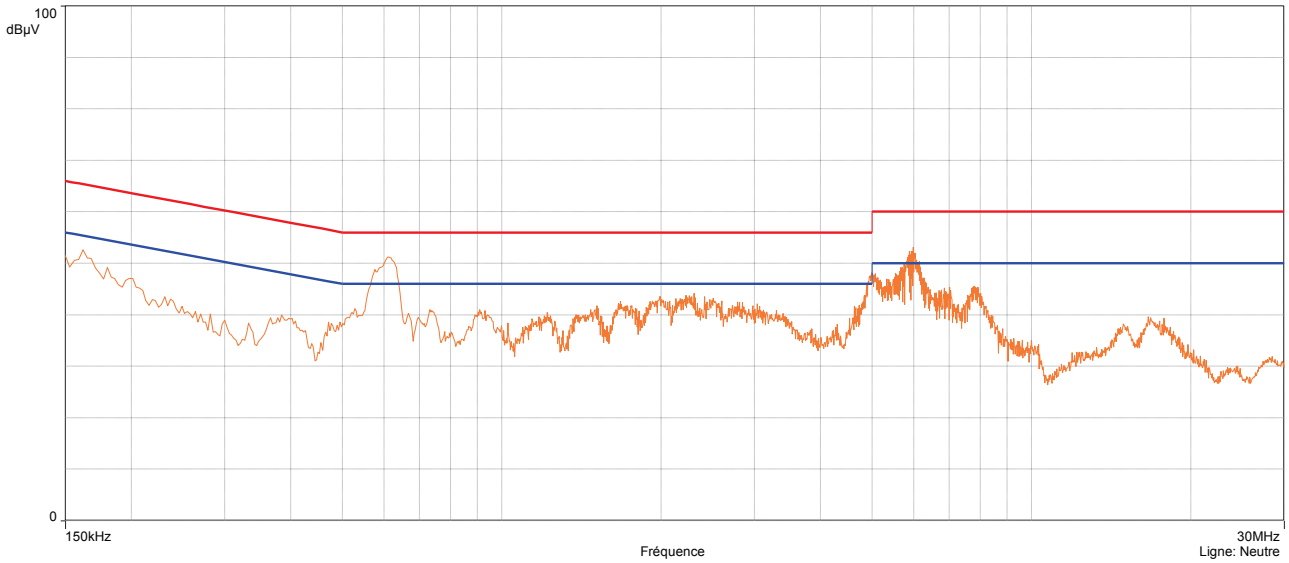
Results:

Configuration 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)
0.170	45.15	65.0	19.81	0.170	35.19	55.0	19.77
0.609	50.72	56.0	5.28	0.609	42.31	46.0	3.69
0.914	40.07	56.0	15.93	0.914	42.38	46.0	3.62
1.224	40.5	56.0	15.50	1.224	31.1	46.0	14.90
1.705	42.76	56.0	13.24	1.705	32.63	46.0	13.37
2.038	43.52	56.0	12.48	2.038	32.79	46.0	13.21
2.263	43.79	56.0	12.21	2.263	32.63	46.0	13.37
2.580	42.7	56.0	13.30	2.580	32.61	46.0	13.39
2.987	41.73	56.000	14.270	2.987	29.75	46.000	16.250
3.274	41	56.000	15.000	3.274	28.49	46.000	17.510
4.732	42.38	56.000	13.620	4.732	29.7	46.000	16.300
4.981	52.11	56.000	3.890	4.981	31.26	46.000	14.740
5.335	48.24	60.000	11.760	5.335	34.79	50.000	15.210
5.726	49.72	60.000	10.280	5.726	39.6	50.000	10.400
5.989	52.84	60.000	7.160	5.989	41.88	50.000	8.120
6.227	47.68	60.000	12.320	6.227	41.9	50.000	8.100

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

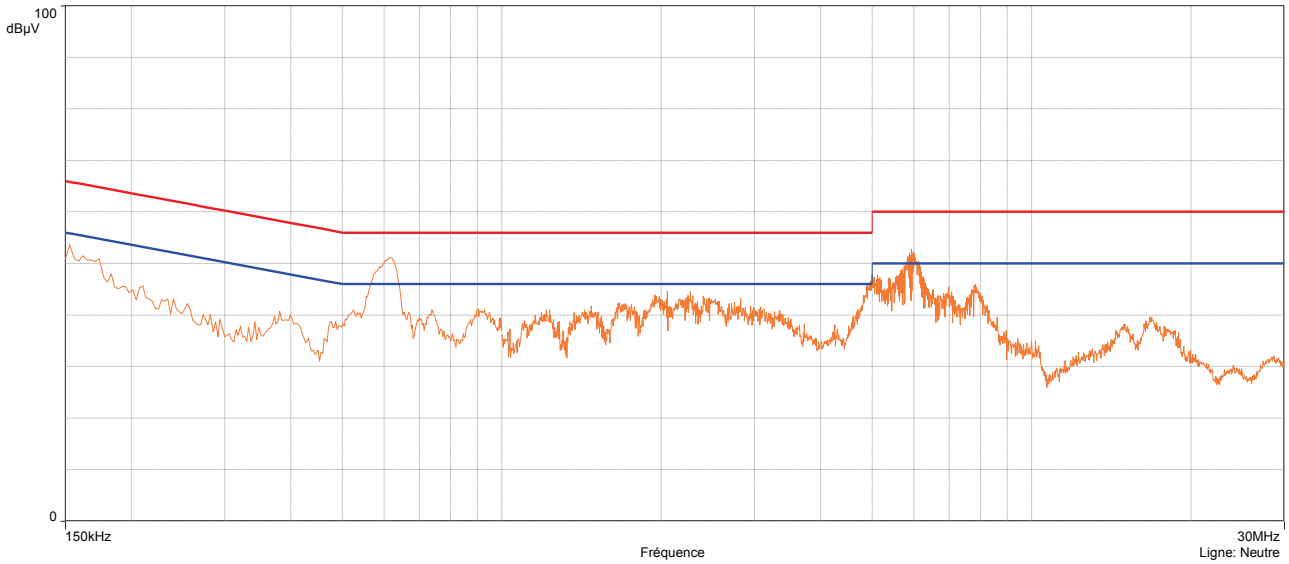
Frequency	Quasi-peak	QP Limit	QP margin	Frequency	Average	Average Limit	Average margin
(MHz)	(dBµV)	(dBµV)	(dB)	(MHz)	(dBµV)	(dBµV)	(dB)
0.170	45.66	65.0	19.30	0.170	33.88	55.0	21.08
0.617	48.2	56.0	7.80	0.617	42.41	46.0	3.59
0.898	36.51	56.0	19.49	0.898	42.41	46.0	3.59
1.391	36.76	56.0	19.24	1.391	31.19	46.0	14.81
1.728	37.99	56.0	18.01	1.728	32.11	46.0	13.89
1.944	39.5	56.0	16.50	1.944	33.58	46.0	12.42
2.241	39.7	56.000	16.300	2.241	33.65	46.000	12.350
2.476	38.56	56.000	17.440	2.476	33.36	46.000	12.640
2.715	36.85	56.000	19.150	2.715	32.09	46.000	13.910
3.082	36.01	56.000	19.990	3.082	29.81	46.000	16.190
4.968	45.06	56.000	10.940	4.968	36.32	46.000	9.680
5.437	43.54	60.000	16.460	5.437	36.97	50.000	13.030
5.726	46.95	60.000	13.050	5.726	39.8	50.000	10.200
5.964	49.81	60.000	10.190	5.964	40.84	50.000	9.160
6.197	46.33	60.000	13.670	6.197	40.79	50.000	9.210
6.488	40.32	60.000	19.680	6.488	39.59	50.000	10.410

Configuration 2

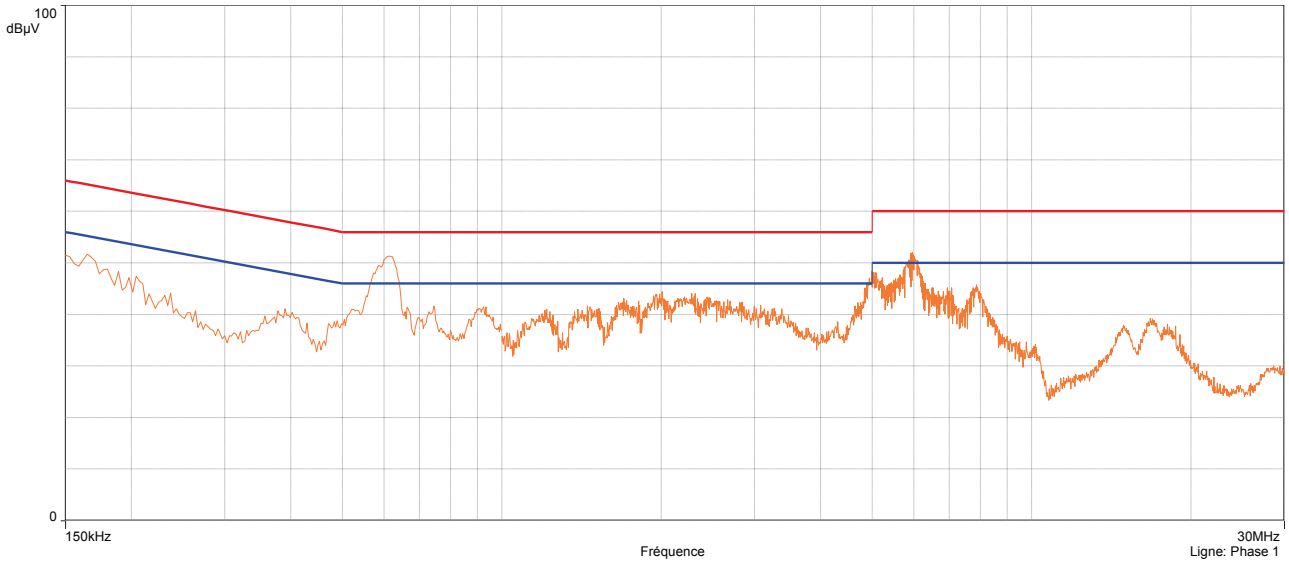
Measurement on the mains power supply:

The measurement is first realized with peak detector.

Curve N° 3: measurement on the Neutral with peak detector



Curve N° 4: measurement on the Line with peak detector



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

Table N° 3: 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)
0.170	45.06	65.0	19.90	0.170	35.59	55.0	19.37
0.615	51.13	56.0	4.87	0.615	41.09	46.0	4.91
0.907	40.76	56.0	15.24	0.907	41.05	46.0	4.95
1.191	40.06	56.0	15.94	1.191	30.69	46.0	15.31
1.706	43.59	56.0	12.41	1.706	32.63	46.0	13.37
2.053	43	56.0	13.00	2.053	32.59	46.0	13.41
5.021	48.85	60.000	11.150	5.021	36.18	50.000	13.820
5.361	45.96	60.000	14.040	5.361	36.23	50.000	13.770
5.649	48.12	60.000	11.880	5.649	37.77	50.000	12.230
5.938	51.99	60.000	8.010	5.938	40.09	50.000	9.910
6.146	49.42	60.000	10.580	6.146	40.12	50.000	9.880
6.484	44.4	60.000	15.600	6.484	39.46	50.000	10.540
6.982	45.93	60.000	14.070	6.982	35.7	50.000	14.300
7.793	46.02	60.000	13.980	7.793	34.42	50.000	15.580

Table N° 4: measurement on the Line, for the frequency range:

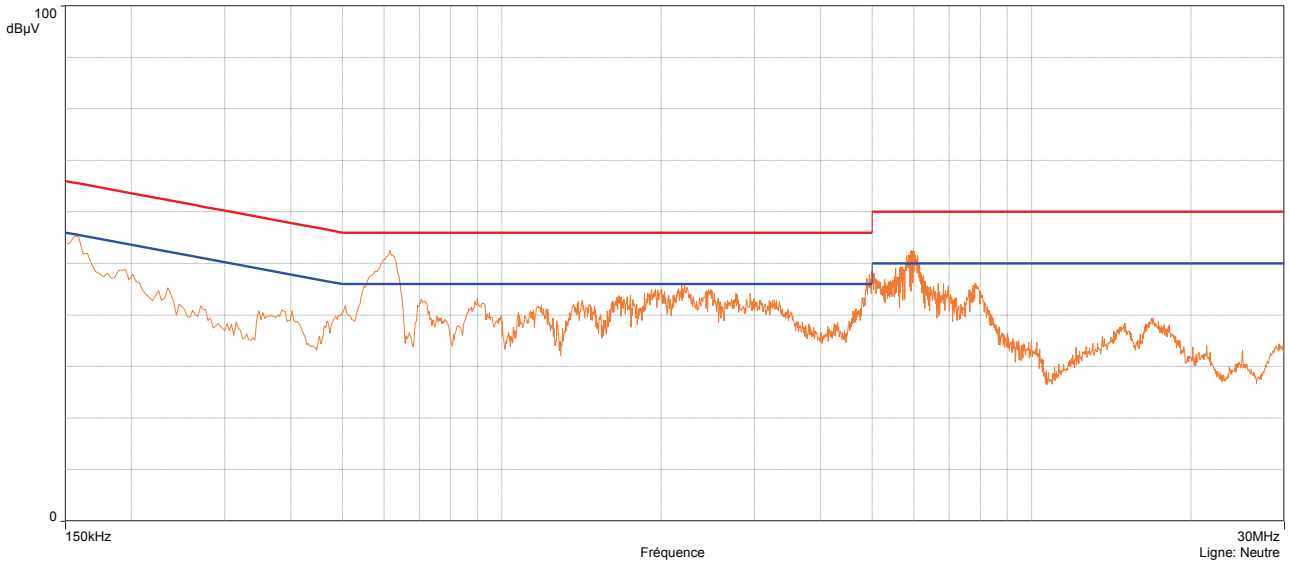
Frequency	Quasi-peak	QP Limit	QP margin	Frequency	Average	Average Limit	Average margin
(MHz)	(dBµV)	(dBµV)	(dB)	(MHz)	(dBµV)	(dBµV)	(dB)
0.175	44.62	64.7	20.10	0.175	33.87	54.7	20.85
0.612	48.97	56.0	7.03	0.612	40.57	46.0	5.43
0.903	38.07	56.0	17.93	0.903	40.81	46.0	5.19
1.383	36.93	56.0	19.07	1.383	31.27	46.0	14.73
1.669	38.84	56.0	17.16	1.669	32.7	46.0	13.30
1.963	40.08	56.0	15.92	1.963	33.99	46.0	12.01
2.327	37.8	56.000	18.200	2.327	34.01	46.000	11.990
2.636	36.35	56.000	19.650	2.636	29.83	46.000	16.170
5.016	42.53	60.000	17.470	5.016	34.38	50.000	15.620
5.386	43.31	60.000	16.690	5.386	36.34	50.000	13.660
5.647	45.21	60.000	14.790	5.647	38.68	50.000	11.320
5.937	49.39	60.000	10.610	5.937	41.47	50.000	8.530
6.196	46.03	60.000	13.970	6.196	41.44	50.000	8.560
6.461	40.97	60.000	19.030	6.461	39.65	50.000	10.350
7.063	40.07	60.000	19.930	7.063	33.9	50.000	16.100
7.870	43.42	60.000	16.580	7.870	35.05	50.000	14.950

Configuration 3

Measurement on the mains power supply:

The measurement is first realized with peak detector.

Curve N° 5: measurement on the Neutral with peak detector



Curve N° 6: measurement on the Line with peak detector

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

Table N° 5: 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)
0.155	49.52	65.7	16.21	0.155	37.37	55.7	18.36
0.610	51.72	56.0	4.28	0.610	36.82	46.0	9.18
0.905	41.9	56.0	14.10	0.905	36.87	46.0	9.13
1.147	40.87	56.0	15.13	1.147	33.36	46.0	12.64
1.391	42.22	56.0	13.78	1.391	31.43	46.0	14.57
1.661	43.88	56.0	12.12	1.661	33.74	46.0	12.26
1.933	44.96	56.0	11.04	1.933	34.77	46.0	11.23
2.230	45.66	56.0	10.34	2.230	34.86	46.0	11.14
5.020	48.83	60.000	11.170	5.020	36.25	50.000	13.750
5.231	46.26	60.000	13.740	5.231	36.29	50.000	13.710
5.699	49.85	60.000	10.150	5.699	39.44	50.000	10.560
5.939	52.56	60.000	7.440	5.939	39.56	50.000	10.440
6.200	48.98	60.000	11.020	6.200	38.83	50.000	11.170
6.564	45.71	60.000	14.290	6.564	36.66	50.000	13.340
6.776	44.33	60.000	15.670	6.776	34.56	50.000	15.440

Table N° 6: measurement on the Line, for the frequency range:

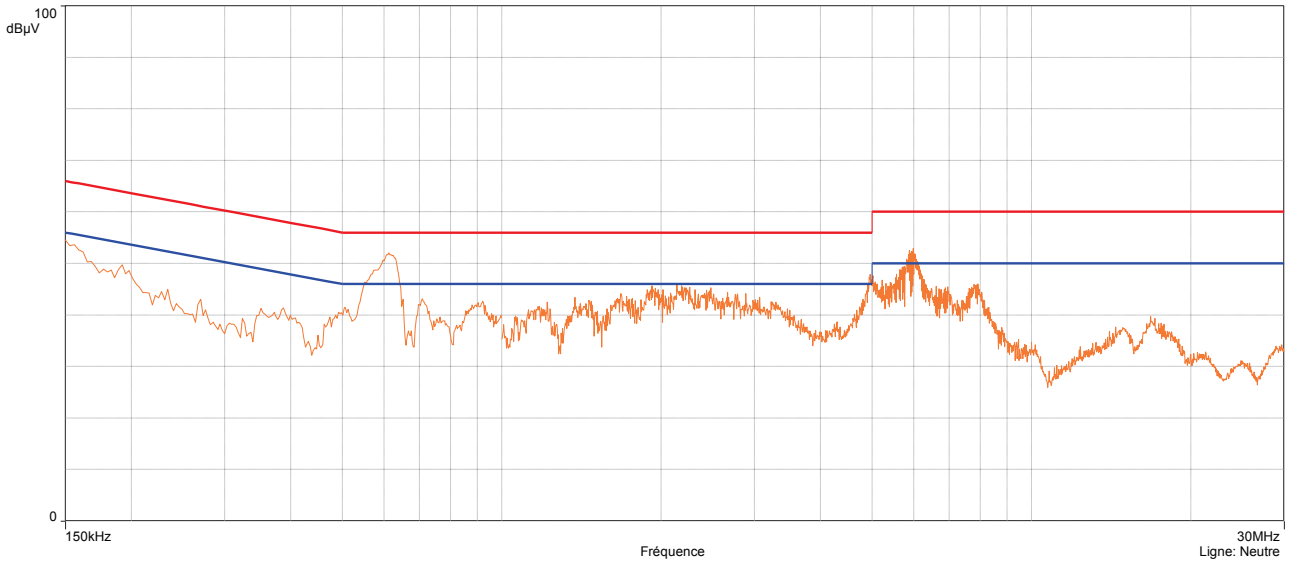
Frequency	Quasi-peak	QP Limit	QP margin	Frequency	Average	Average Limit	Average margin
(MHz)	(dBµV)	(dBµV)	(dB)	(MHz)	(dBµV)	(dBµV)	(dB)
0.160	48.73	65.5	16.73	0.160	37.15	55.5	18.31
0.617	49.39	56.0	6.61	0.617	39.05	46.0	6.95
0.925	38.26	56.0	17.74	0.925	38.86	46.0	7.14
1.134	37.87	56.0	18.13	1.134	31.26	46.0	14.74
1.362	37.84	56.0	18.16	1.362	31.19	46.0	14.81
1.647	40.01	56.0	15.99	1.647	33.74	46.0	12.26
1.925	41.41	56.000	14.590	1.925	34.9	46.000	11.100
2.205	41.44	56.000	14.560	2.205	34.91	46.000	11.090
2.488	40.04	56.000	15.960	2.488	34.64	46.000	11.360
4.989	42.53	56.000	13.470	4.989	34.55	46.000	11.450
5.465	43.95	60.000	16.050	5.465	37.12	50.000	12.880
5.728	46.72	60.000	13.280	5.728	38.6	50.000	11.400
5.937	50.18	60.000	9.820	5.937	41.48	50.000	8.520
6.225	45.16	60.000	14.840	6.225	41.6	50.000	8.400
6.618	40.04	60.000	19.960	6.618	37.23	50.000	12.770

Configuration 4

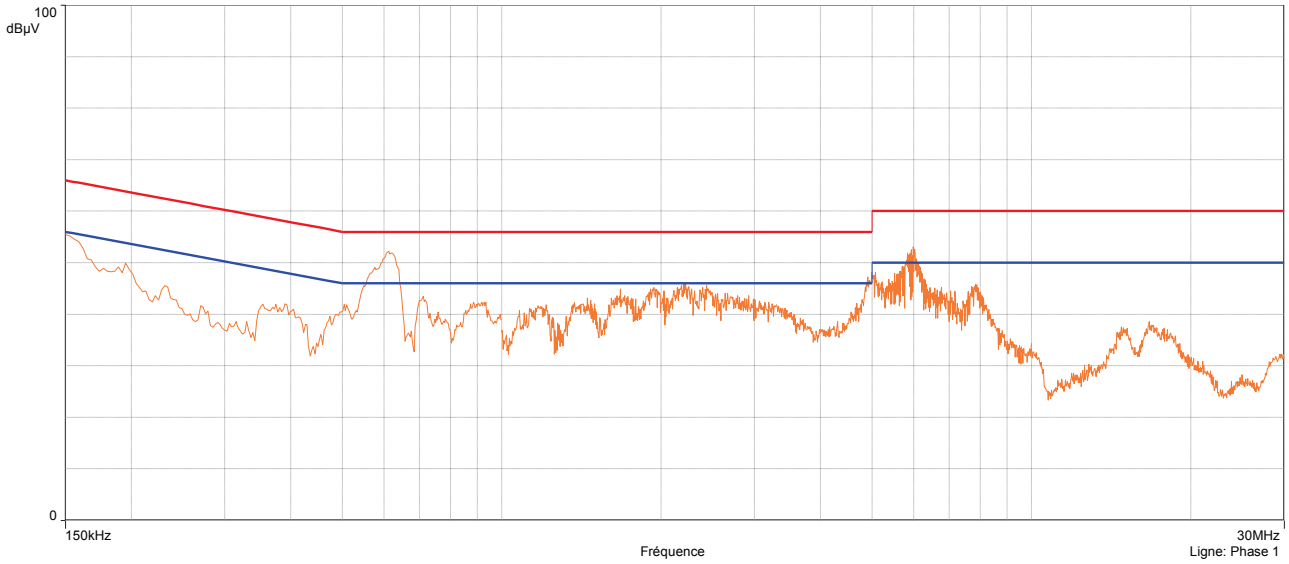
Measurement on the mains power supply:

The measurement is first realized with peak detector.

Curve N° 7: measurement on the Neutral with peak detector



Curve N° 8: measurement on the Line with peak detector



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

Table N° 7: 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)
0.160	48.33	65.5	17.13	0.160	35.72	55.5	19.74
0.607	51.86	56.0	4.14	0.607	40.43	46.0	5.57
0.901	42.27	56.0	13.73	0.901	37.87	46.0	8.13
1.123	40.64	56.0	15.36	1.123	33.07	46.0	12.93
1.420	41.92	56.0	14.08	1.420	32.28	46.0	13.72
1.665	44.18	56.0	11.82	1.665	33.68	46.0	12.32
1.932	44.87	56.0	11.13	1.932	34.71	46.0	11.29
2.160	45.26	56.0	10.74	2.160	34.86	46.0	11.14
2.432	44.97	56.000	11.030	2.432	34.5	46.000	11.500
4.991	48.44	56.000	7.560	4.991	35	46.000	11.000
5.230	46.57	60.000	13.430	5.230	35.04	50.000	14.960
5.731	48.65	60.000	11.350	5.731	34.86	50.000	15.140
6.014	52.55	60.000	7.450	6.014	42.57	50.000	7.430
6.247	47.27	60.000	12.730	6.247	42.66	50.000	7.340
6.644	45.31	60.000	14.690	6.644	38.5	50.000	11.500
7.871	45.9	60.000	14.100	7.871	35.05	50.000	14.950

Table N° 8: measurement on the Line, for the frequency range:

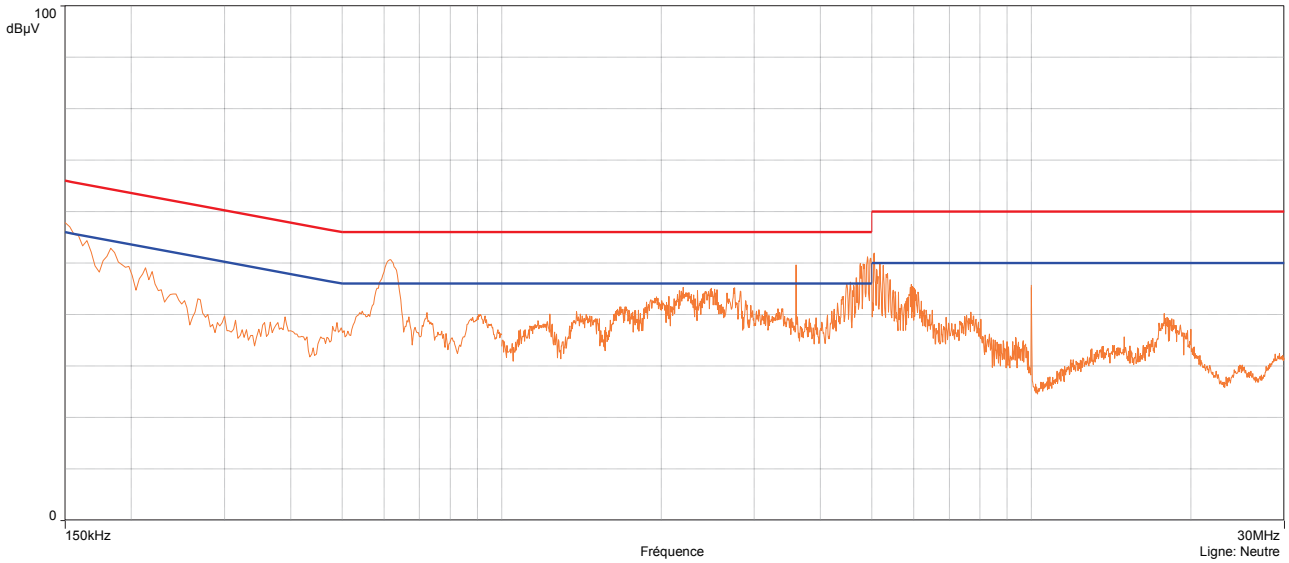
Frequency	Quasi-peak	QP Limit	QP margin	Frequency	Average	Average Limit	Average margin
(MHz)	(dBµV)	(dBµV)	(dB)	(MHz)	(dBµV)	(dBµV)	(dB)
0.155	50.02	65.7	15.71	0.155	38.64	55.7	17.09
0.617	49.75	56.0	6.25	0.617	41	46.0	5.00
0.923	38.23	56.0	17.77	0.923	40.98	46.0	5.02
1.640	39.89	56.0	16.11	1.640	33.56	46.0	12.44
1.934	41.05	56.0	14.95	1.934	34.82	46.0	11.18
2.202	41.39	56.0	14.61	2.202	34.86	46.0	11.14
2.441	40.41	56.000	15.590	2.441	34.11	46.000	11.890
2.966	37.49	56.000	18.510	2.966	33.48	46.000	12.520
4.968	44.32	56.000	11.680	4.968	35.73	46.000	10.270
5.383	42.45	60.000	17.550	5.383	35.83	50.000	14.170
5.726	47.06	60.000	12.940	5.726	39.83	50.000	10.170
5.964	49.7	60.000	10.300	5.964	40.36	50.000	9.640
6.252	43.78	60.000	16.220	6.252	40.29	50.000	9.710
6.797	40.58	60.000	19.420	6.797	35.54	50.000	14.460

Configuration 5

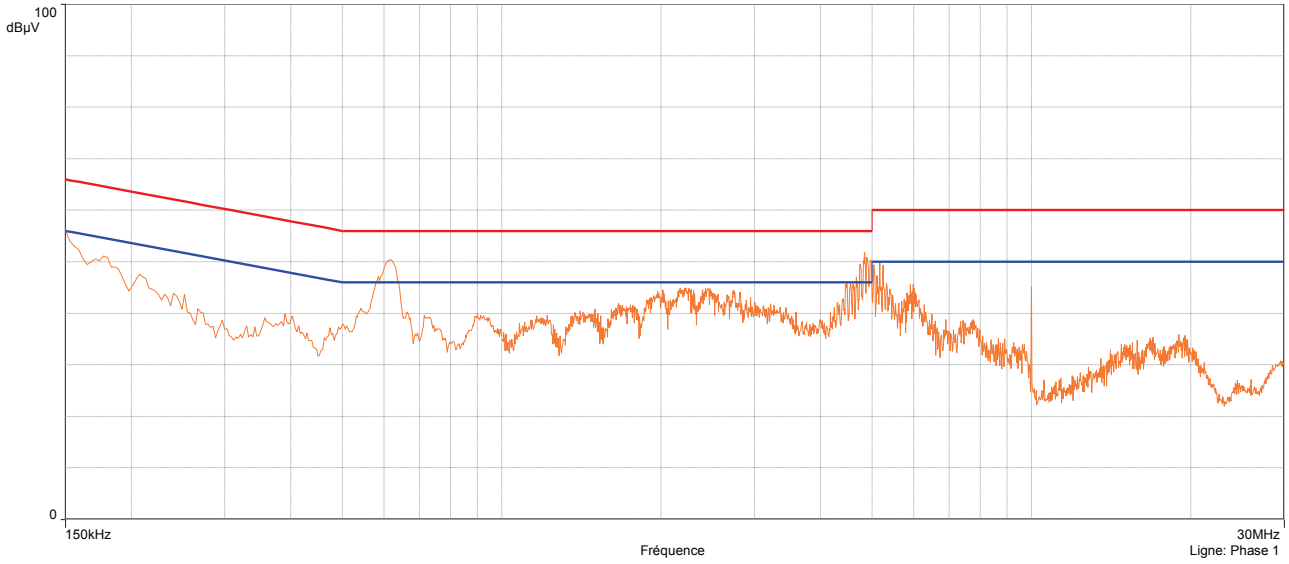
Measurement on the mains power supply:

The measurement is first realized with peak detector.

Curve N° 9: measurement on the Neutral with peak detector



Curve N° 10: measurement on the Line with peak detector



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

Table N° 9: 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)
0.160	50.31	65.5	15.15	0.160	36.39	55.5	19.07
0.610	50.42	56.0	5.58	0.610	42.23	46.0	3.77
1.757	41.34	56.0	14.66	1.757	30.8	46.0	15.20
1.945	43.63	56.0	12.37	1.945	33.61	46.0	12.39
2.230	44.5	56.0	11.50	2.230	33.89	46.0	12.11
4.656	48.19	56.0	7.81	4.656	36.82	46.0	9.18
4.703	48.17	56.0	7.83	4.703	35.89	46.0	10.11
4.766	48.03	56.0	7.97	4.766	31.08	46.0	14.92
4.773	48.73	56.000	7.270	4.773	35.15	46.000	10.850
4.869	45.95	56.000	10.050	4.869	31.25	46.000	14.750
4.957	48.43	56.000	7.570	4.957	31.88	46.000	14.120
5.092	49.28	60.000	10.720	5.092	36.14	50.000	13.860
5.099	49.24	60.000	10.760	5.099	36.55	50.000	13.450
5.153	46.83	60.000	13.170	5.153	34.3	50.000	15.700
5.958	45.2	60.000	14.800	5.958	34.94	50.000	15.060
5.962	44.54	60.000	15.460	5.962	33.86	50.000	16.140
5.985	45.32	60.000	14.680	5.985	34.94	50.000	15.060
6.034	43.31	60.000	16.690	6.034	35	50.000	15.000
10.000	42.48	60.000	17.520	10.000	41.4	50.000	8.600

Table N° 10: measurement on the Line, for the frequency range:

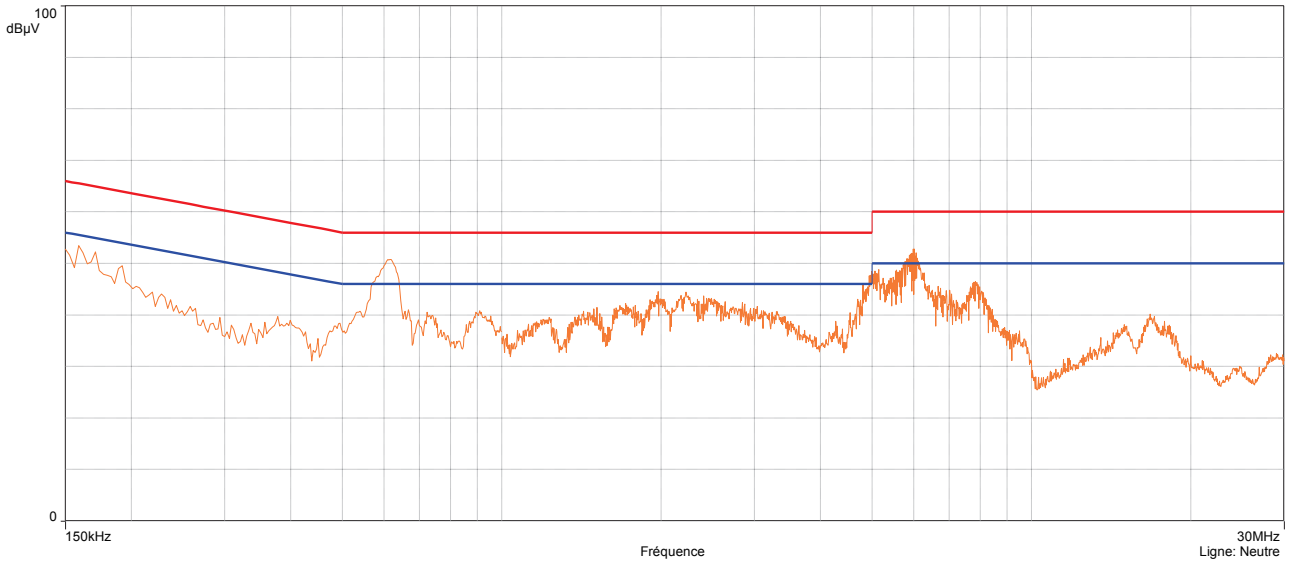
Frequency	Quasi-peak	QP Limit	QP margin	Frequency	Average	Average Limit	Average margin
(MHz)	(dBµV)	(dBµV)	(dB)	(MHz)	(dBµV)	(dBµV)	(dB)
0.165	49.04	65.2	16.17	0.165	42	55.2	13.21
0.615	47.52	56.0	8.48	0.615	41.03	46.0	4.97
2.460	39.52	56.0	16.48	2.460	34.02	46.0	11.98
4.654	42.79	56.0	13.21	4.654	35.25	46.0	10.75
4.657	43.23	56.0	12.77	4.657	36.23	46.0	9.77
4.702	42.4	56.0	13.60	4.702	36.28	46.0	9.72
4.797	38.15	56.000	17.850	4.797	34.45	46.000	11.550
5.035	42.82	60.000	17.180	5.035	34.55	50.000	15.450
5.105	40.1	60.000	19.900	5.105	34.1	50.000	15.900
9.995	32.89	60.000	27.110	9.995	34.91	50.000	15.090
10.000	41.21	60.000	18.790	10.000	40.71	50.000	9.290

Configuration 6

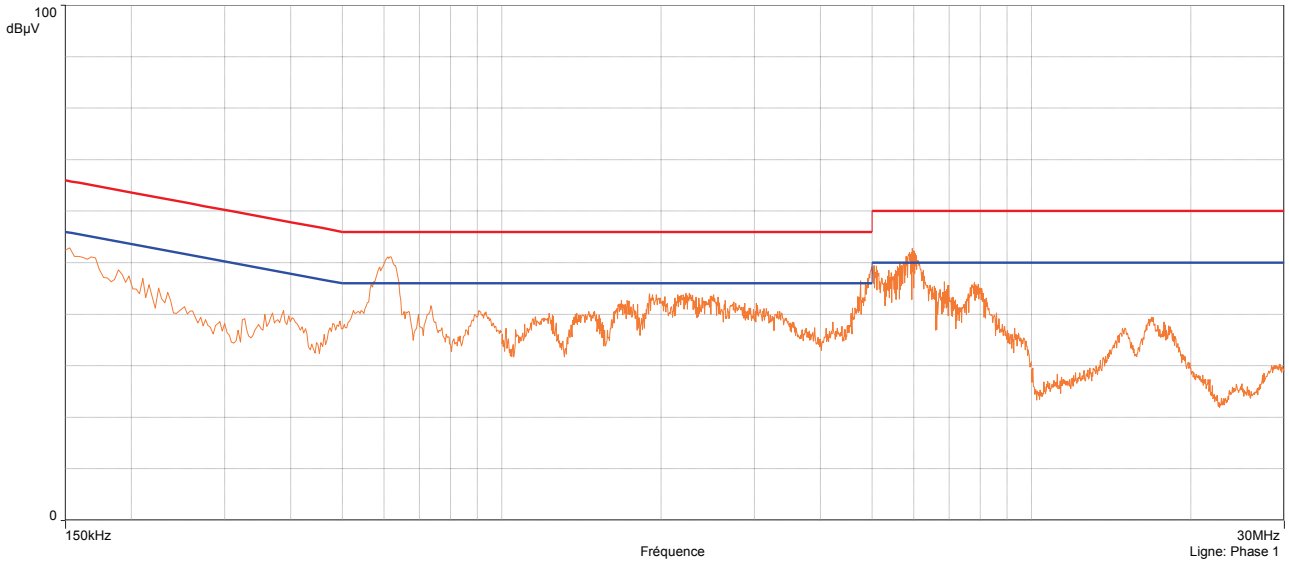
Measurement on the mains power supply:

The measurement is first realized with peak detector.

Curve N° 11: measurement on the Neutral with peak detector



Curve N° 12: measurement on the Line with peak detector



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

Table N° 11: 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)
0.165	47.17	65.2	18.04	0.165	34.27	55.2	20.94
0.614	50.88	56.0	5.12	0.614	40.61	46.0	5.39
0.728	40.05	56.0	15.95	0.728	40.87	46.0	5.13
2.190	43.75	56.0	12.25	2.190	33.86	46.0	12.14
5.071	48.6	60.0	11.40	5.071	35.91	50.0	14.09
5.099	46.89	60.0	13.11	5.099	35.86	50.0	14.14
5.855	51.05	60.0	8.95	5.855	41.35	50.0	8.65
5.879	50.51	60.0	9.49	5.879	41.42	50.0	8.58
5.909	51.9	60.000	8.100	5.909	41.46	50.000	8.540
5.987	51.68	60.000	8.320	5.987	41.61	50.000	8.390
6.014	52.02	60.000	7.980	6.014	41.52	50.000	8.480
6.038	51.2	60.000	8.800	6.038	42.05	50.000	7.950
6.065	51.22	60.000	8.780	6.065	41.96	50.000	8.040
6.115	49.25	60.000	10.750	6.115	41.15	50.000	8.850
7.815	45.28	60.000	14.720	7.815	34.94	50.000	15.060
7.840	45.27	60.000	14.730	7.840	34.84	50.000	15.160
7.891	45	60.000	15.000	7.891	34.89	50.000	15.110

Table N° 12: measurement on the Line, for the frequency range:

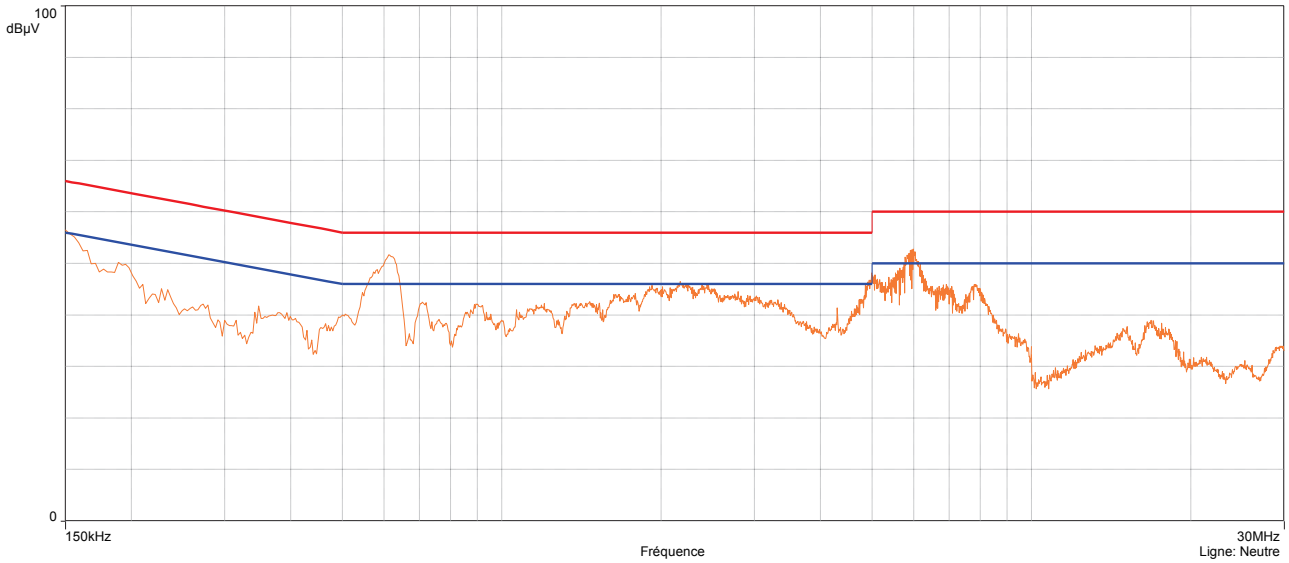
Frequency	Quasi-peak	QP Limit	QP margin	Frequency	Average	Average Limit	Average margin
(MHz)	(dBµV)	(dBµV)	(dB)	(MHz)	(dBµV)	(dBµV)	(dB)
0.609	48.56	56.0	7.44	0.609	41.27	46.0	4.73
0.730	37.08	56.0	18.92	0.730	41.25	46.0	4.75
5.827	49.48	60.0	10.52	5.827	42.54	50.0	7.46
5.856	49.51	60.0	10.49	5.856	42.47	50.0	7.53
5.883	49.95	60.0	10.05	5.883	41.96	50.0	8.04
5.909	50.21	60.0	9.79	5.909	43.56	50.0	6.44
5.987	50.43	60.000	9.570	5.987	42.77	50.000	7.230
6.013	50.49	60.000	9.510	6.013	43.38	50.000	6.620
6.038	50.46	60.000	9.540	6.038	43.31	50.000	6.690
6.039	50.16	60.000	9.840	6.039	42.52	50.000	7.480
6.068	46.56	60.000	13.440	6.068	43.14	50.000	6.860
6.115	48.83	60.000	11.170	6.115	42.14	50.000	7.860
6.143	48.02	60.000	11.980	6.143	41.54	50.000	8.460
7.786	44.24	60.000	15.760	7.786	36.1	50.000	13.900
7.815	43.3	60.000	16.700	7.815	36.15	50.000	13.850
7.947	43.05	60.000	16.950	7.947	35.74	50.000	14.260

Configuration 7

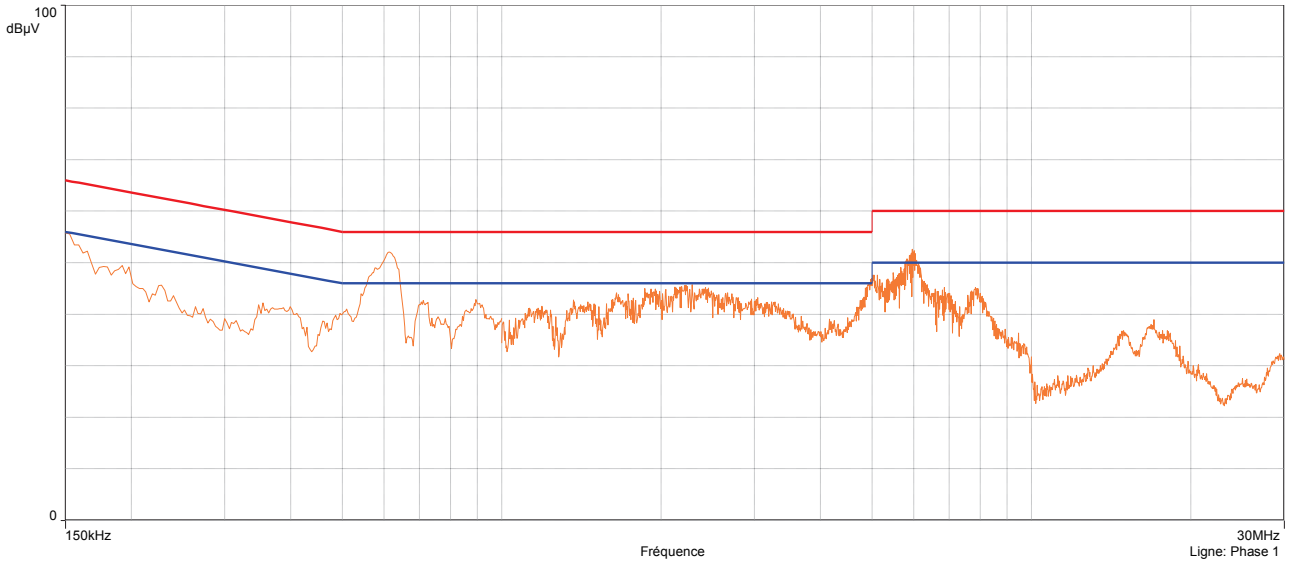
Measurement on the mains power supply:

The measurement is first realized with peak detector.

Curve N° 13: measurement on the Neutral with peak detector



Curve N° 14: measurement on the Line with peak detector



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

Table N° 13: 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)
0.155	49.89	65.7	15.84	0.155	36.43	55.7	19.30
0.612	51.99	56.0	4.01	0.612	39.1	46.0	6.90
0.896	42.36	56.0	13.64	0.896	34.56	46.0	11.44
1.454	42.62	56.0	13.38	1.454	32.38	46.0	13.62
1.669	44.54	56.0	11.46	1.669	33.8	46.0	12.20
1.911	45.41	56.0	10.59	1.911	34.92	46.0	11.08
2.213	45.93	56.0	10.07	2.213	34.94	46.0	11.06
2.448	44.97	56.0	11.03	2.448	34.19	46.0	11.81
2.749	44.26	56.000	11.740	2.749	33.25	46.000	12.750
4.993	48.3	56.000	7.700	4.993	35.88	46.000	10.120
5.408	45.86	60.000	14.140	5.408	36.02	50.000	13.980
5.755	49.93	60.000	10.070	5.755	36.87	50.000	13.130
5.989	52.71	60.000	7.290	5.989	41.01	50.000	8.990
6.220	47.08	60.000	12.920	6.220	41.1	50.000	8.900
6.458	45.59	60.000	14.410	6.458	38.68	50.000	11.320
6.876	45.21	60.000	14.790	6.876	35.86	50.000	14.140
7.867	45.28	60.000	14.720	7.867	34.86	50.000	15.140

Table N° 14: measurement on the Line, for the frequency range:

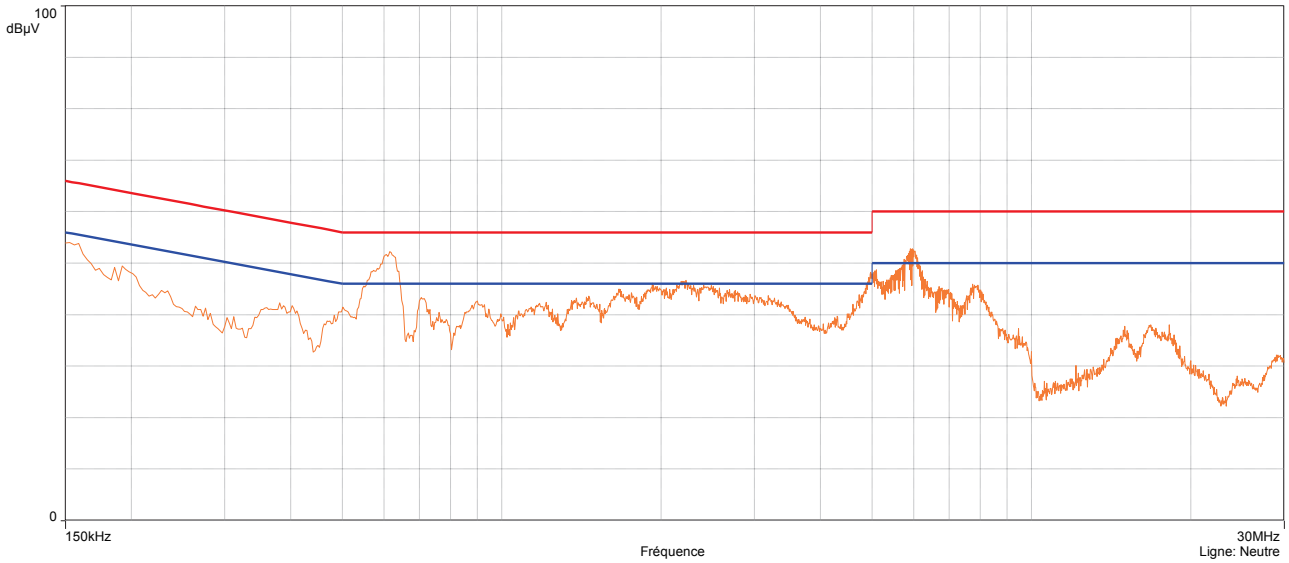
Frequency	Quasi-peak	QP Limit	QP margin	Frequency	Average	Average Limit	Average margin
(MHz)	(dBµV)	(dBµV)	(dB)	(MHz)	(dBµV)	(dBµV)	(dB)
0.160	48.54	65.5	16.92	0.160	36.09	55.5	19.37
0.612	48.81	56.0	7.19	0.612	39.82	46.0	6.18
0.889	38.76	56.0	17.24	0.889	34.93	46.0	11.07
1.133	38.11	56.0	17.89	1.133	33.07	46.0	12.93
1.416	38.45	56.0	17.55	1.416	32.28	46.0	13.72
1.911	40.89	56.0	15.11	1.911	34.16	46.0	11.84
2.270	39.34	56.000	16.660	2.270	34.29	46.000	11.710
4.966	43.6	56.000	12.400	4.966	35.24	46.000	10.760
5.334	42.05	60.000	17.950	5.334	35.26	50.000	14.740
5.699	46.43	60.000	13.570	5.699	39.32	50.000	10.680
5.937	49.49	60.000	10.510	5.937	40.3	50.000	9.700
6.170	46.73	60.000	13.270	6.170	40.24	50.000	9.760
6.564	40.59	60.000	19.410	6.564	39.81	50.000	10.190
7.868	43.36	60.000	16.640	7.868	35.13	50.000	14.870

Configuration 8

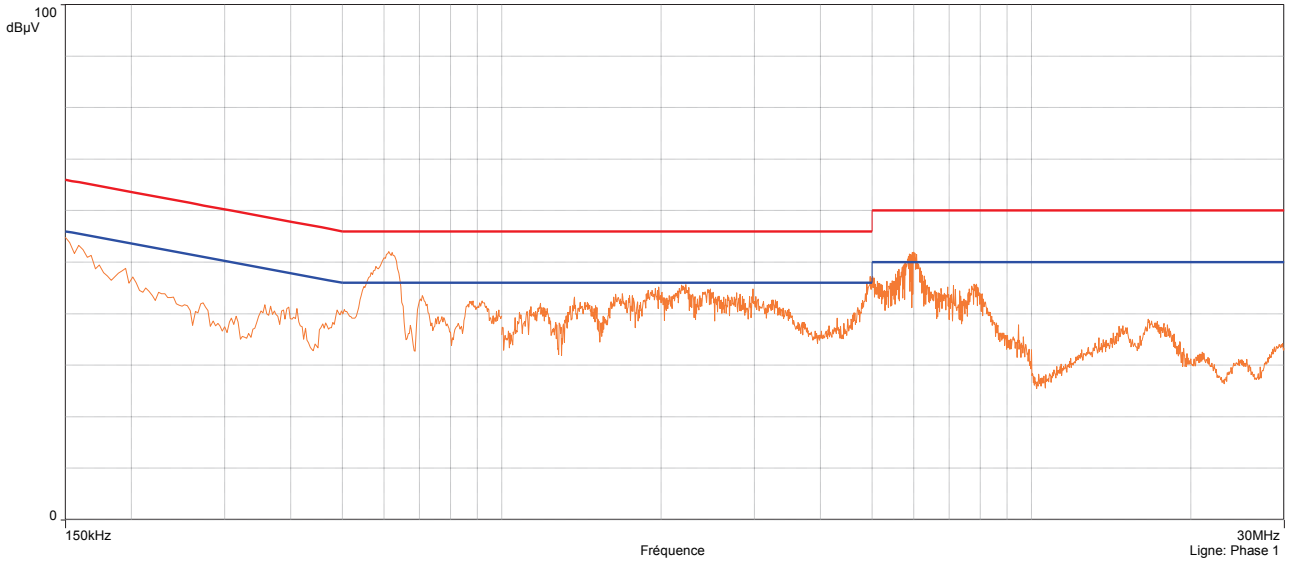
Measurement on the mains power supply:

The measurement is first realized with peak detector.

Curve N° 15: measurement on the Neutral with peak detector



Curve N° 16: measurement on the Line with peak detector



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

Table N° 15: 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)
0.160	48.44	65.5	17.02	0.160	35.72	55.5	19.74
0.610	51.75	56.0	4.25	0.610	37.84	46.0	8.16
0.890	42.14	56.0	13.86	0.890	38.03	46.0	7.97
1.169	41.54	56.0	14.46	1.169	31.8	46.0	14.20
1.374	42.56	56.0	13.44	1.374	31.88	46.0	14.12
1.681	44.93	56.0	11.07	1.681	33.56	46.0	12.44
1.917	44.96	56.0	11.04	1.917	34.74	46.0	11.26
2.180	45.45	56.0	10.55	2.180	34.91	46.0	11.09
2.490	45.01	56.000	10.990	2.490	34.82	46.000	11.180
4.994	47.76	56.000	8.240	4.994	35.34	46.000	10.660
5.465	48.18	60.000	11.820	5.465	36.3	50.000	13.700
5.726	49.77	60.000	10.230	5.726	39.46	50.000	10.540
5.937	52.82	60.000	7.180	5.937	40.56	50.000	9.440
6.173	48.91	60.000	11.090	6.173	40.58	50.000	9.420
6.694	45.43	60.000	14.570	6.694	37.01	50.000	12.990
7.766	46.34	60.000	13.660	7.766	34.24	50.000	15.760
8.026	44.58	60.000	15.420	8.026	34.28	50.000	15.720

Table N° 16: 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)
0.155	50.04	65.7	15.69	0.155	38.21	55.7	17.52
0.617	49.45	56.0	6.55	0.617	40.07	46.0	5.93
0.923	38.64	56.0	17.36	0.923	39.65	46.0	6.35
1.680	39.79	56.0	16.21	1.680	33.56	46.0	12.44
1.943	40.94	56.0	15.06	1.943	34.58	46.0	11.42
2.210	41.44	56.0	14.56	2.210	34.73	46.0	11.27
2.466	40.4	56.000	15.600	2.466	34.39	46.000	11.610
4.968	44.06	56.000	11.940	4.968	35.54	46.000	10.460
5.464	43.67	60.000	16.330	5.464	36.91	50.000	13.090
5.703	45.06	60.000	14.940	5.703	36.91	50.000	13.090
5.987	50.27	60.000	9.730	5.987	42.66	50.000	7.340
6.224	45.18	60.000	14.820	6.224	42.75	50.000	7.250
6.748	40.71	60.000	19.290	6.748	38.03	50.000	11.970
7.845	42.47	60.000	17.530	7.845	34.04	50.000	15.960

Test conclusion:

RESPECTED STANDARD

9. ADDITIONAL PROVISIONS TO THE GENERAL RADIATED EMISSION LIMITATIONS

Temperature (°C) : 20 to 22 **Humidity (%HR):** 32 to 36 **Date :** April 1, 2019 and April 2, 2019

Technician : T. LEDRESSEUR

Standard: FCC Part 15

Test procedure: Paragraph 15.215

Test set up:

The measure is realized in conducted mode with an analyser.

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. The measure is repeated for each Module, output and Spread Factor.

Power source: 120 Vac through a variac
Percentage of voltage variation during the test (%): ± 1

Results:

Lower Band Edge: From 900 MHz to 902 MHz
Upper Band Edge: From 928 MHz to 930 MHz

Sample N° 1

Output power 30dBm

Module 1

RF OUTPUT 1

SPREAD FACTOR 7

Fundamental frequency (MHz)	RBW (kHz)	Detector (Peak or Average)	Frequency of maximum Band-edges Emission (MHz)	Delta Marker (dB) (1)	Limit (dBc)	Margin (dB)
923.3	100	Peak	900.055	56.98	30	26.98
927.5	100	Peak	928	37.9	30	7.9

(1) Marker-Delta method

band-edge curves are given in appendix 6.

SPREAD FACTOR 12

Fundamental frequency (MHz)	RBW (kHz)	Detector (Peak or Average)	Frequency of maximum Band-edges Emission (MHz)	Delta Marker (dB) (1)	Limit (dBc)	Margin (dB)
923.3	100	Peak	901.61	58.13	30	28.13
927.5	100	Peak	928	37.99	30	7.99

(1) Marker-Delta method

band-edge curves are given in appendix 6.

RF OUTPUT 2

SPREAD FACTOR 7

Fundamental frequency (MHz)	RBW (kHz)	Detector (Peak or Average)	Frequency of maximum Band-edges Emission (MHz)	Delta Marker (dB) (1)	Limit (dBc)	Margin (dB)
923.3	100	Peak	901.719	58.96	30	28.96
927.5	100	Peak	928	38.02	30	8.02

(1) Marker-Delta method

band-edge curves are given in appendix 6.

SPREAD FACTOR 12

Fundamental frequency (MHz)	RBW (kHz)	Detector (Peak or Average)	Frequency of maximum Band-edges Emission (MHz)	Delta Marker (dB) (1)	Limit (dBc)	Margin (dB)
923.3	100	Peak	900.236	57.81	30	27.81
927.5	100	Peak	928	36.79	30	6.79

(1) Marker-Delta method

band-edge curves are given in appendix 6.

Module 2

RF OUTPUT 1

SPREAD FACTOR 7

Fundamental frequency (MHz)	RBW (kHz)	Detector (Peak or Average)	Frequency of maximum Band-edges Emission (MHz)	Delta Marker (dB) (1)	Limit (dBc)	Margin (dB)
923.3	100	Peak	900.814	58.26	30	28.26
927.5	100	Peak	928	38.67	30	8.67

(1) Marker-Delta method

band-edge curves are given in appendix 6.

SPREAD FACTOR 12

Fundamental frequency (MHz)	RBW (kHz)	Detector (Peak or Average)	Frequency of maximum Band-edges Emission (MHz)	Delta Marker (dB) (1)	Limit (dBc)	Margin (dB)
923.3	100	Peak	58.26	57.14	30	27.14
927.5	100	Peak	928	38.52	30	8.52

(1) Marker-Delta method

band-edge curves are given in appendix 6.

RF OUTPUT 2

SPREAD FACTOR 7

Fundamental frequency (MHz)	RBW (kHz)	Detector (Peak or Average)	Frequency of maximum Band-edges Emission (MHz)	Delta Marker (dB) (1)	Limit (dBc)	Margin (dB)
923.3	100	Peak	901.827	58.12	30	28.12
927.5	100	Peak	928	37.36	30	7.36

(1) Marker-Delta method

band-edge curves are given in appendix 6.

SPREAD FACTOR 12

Fundamental frequency (MHz)	RBW (kHz)	Detector (Peak or Average)	Frequency of maximum Band-edges Emission (MHz)	Delta Marker (dB) (1)	Limit (dBc)	Margin (dB)
923.3	100	Peak	900.851	57.58	30	27.58
927.5	100	Peak	928	36.54	30	6.54

(1) Marker-Delta method

band-edge curves are given in appendix 6.

Module 3

RF OUTPUT 1

SPREAD FACTOR 7

Fundamental frequency (MHz)	RBW (kHz)	Detector (Peak or Average)	Frequency of maximum Band-edges Emission (MHz)	Delta Marker (dB) (1)	Limit (dBc)	Margin (dB)
923.3	100	Peak	901.14	59.26	30	29.26
927.5	100	Peak	928	37.88	30	7.88

(1) Marker-Delta method

band-edge curves are given in appendix 6.

SPREAD FACTOR 12

Fundamental frequency (MHz)	RBW (kHz)	Detector (Peak or Average)	Frequency of maximum Band-edges Emission (MHz)	Delta Marker (dB) (1)	Limit (dBc)	Margin (dB)
923.3	100	Peak	900.561	58.34	30	28.34
927.5	100	Peak	928	37.14	30	7.14

(1) Marker-Delta method

band-edge curves are given in appendix 6.

RF OUTPUT 2

SPREAD FACTOR 7

Fundamental frequency (MHz)	RBW (kHz)	Detector (Peak or Average)	Frequency of maximum Band-edges Emission (MHz)	Delta Marker (dB) (1)	Limit (dBc)	Margin (dB)
923.3	100	Peak	900.127	57.2	30	27.2
927.5	100	Peak	928	36.89	30	6.89

(1) Marker-Delta method

band-edge curves are given in appendix 6.

SPREAD FACTOR 12

Fundamental frequency (MHz)	RBW (kHz)	Detector (Peak or Average)	Frequency of maximum Band-edges Emission (MHz)	Delta Marker (dB) (1)	Limit (dBc)	Margin (dB)
923.3	100	Peak	901.14	58.17	30	28.17
927.5	100	Peak	928	37.17	30	7.17

(1) Marker-Delta method

band-edge curves are given in appendix 6.

Module 4

RF OUTPUT 1

SPREAD FACTOR 7

Fundamental frequency (MHz)	RBW (kHz)	Detector (Peak or Average)	Frequency of maximum Band-edges Emission (MHz)	Delta Marker (dB) (1)	Limit (dBc)	Margin (dB)
923.3	100	Peak	901.285	59.18	30	29.18
927.5	100	Peak	928	38.07	30	8.07

(1) Marker-Delta method

band-edge curves are given in appendix 6.

SPREAD FACTOR 12

Fundamental frequency (MHz)	RBW (kHz)	Detector (Peak or Average)	Frequency of maximum Band-edges Emission (MHz)	Delta Marker (dB) (1)	Limit (dBc)	Margin (dB)
923.3	100	Peak	901.176	58.16	30	28.16
927.5	100	Peak	928	37.68	30	7.68

(1) Marker-Delta method

band-edge curves are given in appendix 6.

RF OUTPUT 2

SPREAD FACTOR 7

Fundamental frequency (MHz)	RBW (kHz)	Detector (Peak or Average)	Frequency of maximum Band-edges Emission (MHz)	Delta Marker (dB) (1)	Limit (dBc)	Margin (dB)
923.3	100	Peak	901.538	57.38	30	27.38
927.5	100	Peak	928	37.46	30	7.46

(1) Marker-Delta method

band-edge curves are given in appendix 6.

SPREAD FACTOR 12

Fundamental frequency (MHz)	RBW (kHz)	Detector (Peak or Average)	Frequency of maximum Band-edges Emission (MHz)	Delta Marker (dB) (1)	Limit (dBc)	Margin (dB)
923.3	100	Peak	901.936	57.92	30	27.92
927.5	100	Peak	928	36.28	30	6.28

(1) Marker-Delta method

band-edge curves are given in appendix 6.

Test conclusion:

RESPECTED STANDARD

10. MAXIMUM CONDUCTED (AVERAGE) OUTPUT POWER

Temperature (°C) : 20 to 22 **Humidity (%HR):** 32 to 36 **Date :** April 1, 2019 and April 2, 2019

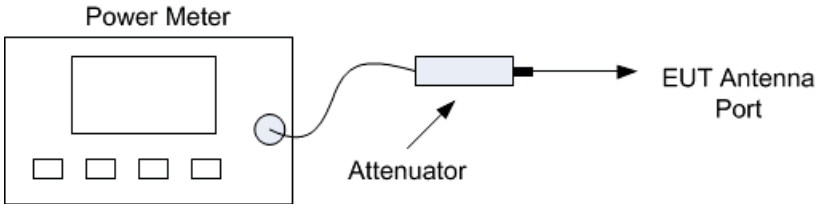
Technician : T. LEDRESSEUR

Standard: FCC Part 15

Test procedure: paragraph 15.247 (b)
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:

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



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. The measure is repeated for each Module, output and Spread Factor.

Then all the measure are repeated with the output power at 24dBm

Power source: 120 Vac through a variac
Percentage of voltage variation during the test (%): ± 1

Results:

Output power 30dBm

Module 1

RF OUTPUT 1

SPREAD FACTOR 7

Frequency 923.3 MHz

Maximum Peak conducted output power		Limit
(dBm)	(W)	(W)
27.66	0.583	1

Declared maximum antenna gain: 6 dBi

Frequency 925.7 MHz

Maximum Peak conducted output power		Limit
(dBm)	(W)	(W)
28.28	0.673	1

Declared maximum antenna gain: 6 dBi

Frequency 927.5 MHz

Maximum Peak conducted output power		Limit
(dBm)	(W)	(W)
28.12	0.649	1

Declared maximum antenna gain: 6 dBi

SPREAD FACTOR 12

Frequency 923.3 MHz

Maximum Peak conducted output power		Limit
(dBm)	(W)	(W)
27.61	0.577	1

Declared maximum antenna gain: 6 dBi

Frequency 925.7 MHz

Maximum Peak conducted output power		Limit
(dBm)	(W)	(W)
28.28	0.673	1

Declared maximum antenna gain: 6 dBi

Frequency 927.5 MHz

Maximum Peak conducted output power		Limit
(dBm)	(W)	(W)
28.04	0.637	1

Declared maximum antenna gain: 6 dBi

RF OUTPUT 2

SPREAD FACTOR 7

Frequency 923.3 MHz

Maximum Peak conducted output power		Limit
(dBm)	(W)	(W)
27.24	0.530	1

Declared maximum antenna gain: 6 dBi

Frequency 925.7 MHz

Maximum Peak conducted output power		Limit
(dBm)	(W)	(W)
27.71	0.590	1

Declared maximum antenna gain: 6 dBi

Frequency 927.5 MHz

Maximum Peak conducted output power		Limit
(dBm)	(W)	(W)
27.57	0.571	1

Declared maximum antenna gain: 6 dBi

SPREAD FACTOR 12

Frequency 923.3 MHz

Maximum Peak conducted output power		Limit
(dBm)	(W)	(W)
27.18	0.522	1

Declared maximum antenna gain: 6 dBi

Frequency 925.7 MHz

Maximum Peak conducted output power		Limit
(dBm)	(W)	(W)
27.83	0.607	1

Declared maximum antenna gain: 6 dBi

Frequency 927.5 MHz

Maximum Peak conducted output power		Limit
(dBm)	(W)	(W)
27.43	0.553	1

Declared maximum antenna gain: 6 dBi

Module 2

RF OUTPUT 1

SPREAD FACTOR 7

Frequency 923.3 MHz

Maximum Peak conducted output power		Limit
(dBm)	(W)	(W)
27.13	0.516	1

Declared maximum antenna gain: 6 dBi

Frequency 925.7 MHz

Maximum Peak conducted output power		Limit
(dBm)	(W)	(W)
27.91	0.618	1

Declared maximum antenna gain: 6 dBi

Frequency 927.5 MHz

Maximum Peak conducted output power		Limit
(dBm)	(W)	(W)
27.9	0.617	1

Declared maximum antenna gain: 6 dBi

SPREAD FACTOR 12

Frequency 923.3 MHz

Maximum Peak conducted output power		Limit
(dBm)	(W)	(W)
27.36	0.545	1

Declared maximum antenna gain: 6 dBi

Frequency 925.7 MHz

Maximum Peak conducted output power		Limit
(dBm)	(W)	(W)
28.15	0.653	1

Declared maximum antenna gain: 6 dBi

Frequency 927.5 MHz

Maximum Peak conducted output power		Limit
(dBm)	(W)	(W)
28.03	0.635	1

Declared maximum antenna gain: 6 dBi

RF OUTPUT 2

SPREAD FACTOR 7

Frequency 923.3 MHz

Maximum Peak conducted output power		Limit
(dBm)	(W)	(W)
26.7	0.468	1

Declared maximum antenna gain: 6 dBi

Frequency 925.7 MHz

Maximum Peak conducted output power		Limit
(dBm)	(W)	(W)
27.26	0.532	1

Declared maximum antenna gain: 6 dBi

Frequency 927.5 MHz

Maximum Peak conducted output power		Limit
(dBm)	(W)	(W)
26.93	0.493	1

Declared maximum antenna gain: 6 dBi

SPREAD FACTOR 12

Frequency 923.3 MHz

Maximum Peak conducted output power		Limit
(dBm)	(W)	(W)
26.68	0.466	1

Declared maximum antenna gain: 6 dBi

Frequency 925.7 MHz

Maximum Peak conducted output power		Limit
(dBm)	(W)	(W)
27.18	0.522	1

Declared maximum antenna gain: 6 dBi

Frequency 927.5 MHz

Maximum Peak conducted output power		Limit
(dBm)	(W)	(W)
26.98	0.499	1

Declared maximum antenna gain: 6 dBi

Module 3

RF OUTPUT 1

SPREAD FACTOR 7

Frequency 923.3 MHz

Maximum Peak conducted output power		Limit
(dBm)	(W)	(W)
27.68	0.586	1

Declared maximum antenna gain: 6 dBi

Frequency 925.7 MHz

Maximum Peak conducted output power		Limit
(dBm)	(W)	(W)
28.31	0.678	1

Declared maximum antenna gain: 6 dBi

Frequency 927.5 MHz

Maximum Peak conducted output power		Limit
(dBm)	(W)	(W)
27.99	0.630	1

Declared maximum antenna gain: 6 dBi

SPREAD FACTOR 12

Frequency 923.3 MHz

Maximum Peak conducted output power		Limit
(dBm)	(W)	(W)
27.39	0.548	1

Declared maximum antenna gain: 6 dBi

Frequency 925.7 MHz

Maximum Peak conducted output power		Limit
(dBm)	(W)	(W)
28.35	0.684	1

Declared maximum antenna gain: 6 dBi

Frequency 927.5 MHz

Maximum Peak conducted output power		Limit
(dBm)	(W)	(W)
28.12	0.649	1

Declared maximum antenna gain: 6 dBi

RF OUTPUT 2

SPREAD FACTOR 7

Frequency 923.3 MHz

Maximum Peak conducted output power		Limit
(dBm)	(W)	(W)
26.43	0.440	1

Declared maximum antenna gain: 6 dBi

Frequency 925.7 MHz

Maximum Peak conducted output power		Limit
(dBm)	(W)	(W)
26.92	0.492	1

Declared maximum antenna gain: 6 dBi

Frequency 927.5 MHz

Maximum Peak conducted output power		Limit
(dBm)	(W)	(W)
26.71	0.469	1

Declared maximum antenna gain: 6 dBi

SPREAD FACTOR 12

Frequency 923.3 MHz

Maximum Peak conducted output power		Limit
(dBm)	(W)	(W)
26.16	0.413	1

Declared maximum antenna gain: 6 dBi

Frequency 925.7 MHz

Maximum Peak conducted output power		Limit
(dBm)	(W)	(W)
27	0.501	1

Declared maximum antenna gain: 6 dBi

Frequency 927.5 MHz

Maximum Peak conducted output power		Limit
(dBm)	(W)	(W)
26.55	0.452	1

Declared maximum antenna gain: 6 dBi

Module 4

RF OUTPUT 1

SPREAD FACTOR 7

Frequency 923.3 MHz

Maximum Peak conducted output power		Limit
(dBm)	(W)	(W)
27.59	0.574	1

Declared maximum antenna gain: 6 dBi

Frequency 925.7 MHz

Maximum Peak conducted output power		Limit
(dBm)	(W)	(W)
28.32	0.679	1

Declared maximum antenna gain: 6 dBi

Frequency 927.5 MHz

Maximum Peak conducted output power		Limit
(dBm)	(W)	(W)
28.12	0.649	1

Declared maximum antenna gain: 6 dBi

SPREAD FACTOR 12

Frequency 923.3 MHz

Maximum Peak conducted output power		Limit
(dBm)	(W)	(W)
27.44	0.555	1

Declared maximum antenna gain: 6 dBi

Frequency 925.7 MHz

Maximum Peak conducted output power		Limit
(dBm)	(W)	(W)
28.28	0.673	1

Declared maximum antenna gain: 6 dBi

Frequency 927.5 MHz

Maximum Peak conducted output power		Limit
(dBm)	(W)	(W)
28.15	0.653	1

Declared maximum antenna gain: 6 dBi

RF OUTPUT 2

SPREAD FACTOR 7

Frequency 923.3 MHz

Maximum Peak conducted output power		Limit
(dBm)	(W)	(W)
26.8	0.479	1

Declared maximum antenna gain: 6 dBi

Frequency 925.7 MHz

Maximum Peak conducted output power		Limit
(dBm)	(W)	(W)
27.38	0.547	1

Declared maximum antenna gain: 6 dBi

Frequency 927.5 MHz

Maximum Peak conducted output power		Limit
(dBm)	(W)	(W)
27.05	0.507	1

Declared maximum antenna gain: 6 dBi

SPREAD FACTOR 12

Frequency 923.3 MHz

Maximum Peak conducted output power		Limit
(dBm)	(W)	(W)
26.79	0.478	1

Declared maximum antenna gain: 6 dBi

Frequency 925.7 MHz

Maximum Peak conducted output power		Limit
(dBm)	(W)	(W)
27.28	0.535	1

Declared maximum antenna gain: 6 dBi

Frequency 927.5 MHz

Maximum Peak conducted output power		Limit
(dBm)	(W)	(W)
27.09	0.512	1

Declared maximum antenna gain: 6 dBi

Output power 24dBm

Module 1

RF OUTPUT 1

SPREAD FACTOR 7

Frequency 923.3 MHz

Maximum Peak conducted output power		Limit
(dBm)	(W)	(W)
21.5	0.141	1

Declared maximum antenna gain: 6 dBi

Frequency 925.7 MHz

Maximum Peak conducted output power		Limit
(dBm)	(W)	(W)
22.34	0.171	1

Declared maximum antenna gain: 6 dBi

Frequency 927.5 MHz

Maximum Peak conducted output power		Limit
(dBm)	(W)	(W)
22.2	0.166	1

Declared maximum antenna gain: 6 dBi

SPREAD FACTOR 12

Frequency 923.3 MHz

Maximum Peak conducted output power		Limit
(dBm)	(W)	(W)
21.63	0.146	1

Declared maximum antenna gain: 6 dBi

Frequency 925.7 MHz

Maximum Peak conducted output power		Limit
(dBm)	(W)	(W)
22.26	0.168	1

Declared maximum antenna gain: 6 dBi

Frequency 927.5 MHz

Maximum Peak conducted output power		Limit
(dBm)	(W)	(W)
22.33	0.171	1

Declared maximum antenna gain: 6 dBi

RF OUTPUT 2

SPREAD FACTOR 7

Frequency 923.3 MHz

Maximum Peak conducted output power		Limit
(dBm)	(W)	(W)
20.78	0.120	1

Declared maximum antenna gain: 6 dBi

Frequency 925.7 MHz

Maximum Peak conducted output power		Limit
(dBm)	(W)	(W)
21.7	0.148	1

Declared maximum antenna gain: 6 dBi

Frequency 927.5 MHz

Maximum Peak conducted output power		Limit
(dBm)	(W)	(W)
21.34	0.136	1

Declared maximum antenna gain: 6 dBi

SPREAD FACTOR 12

Frequency 923.3 MHz

Maximum Peak conducted output power		Limit
(dBm)	(W)	(W)
21.01	0.126	1

Declared maximum antenna gain: 6 dBi

Frequency 925.7 MHz

Maximum Peak conducted output power		Limit
(dBm)	(W)	(W)
21.62	0.145	1

Declared maximum antenna gain: 6 dBi

Frequency 927.5 MHz

Maximum Peak conducted output power		Limit
(dBm)	(W)	(W)
21.4	0.138	1

Declared maximum antenna gain: 6 dBi

Module 2

RF OUTPUT 1

SPREAD FACTOR 7

Frequency 923.3 MHz

Maximum Peak conducted output power		Limit
(dBm)	(W)	(W)
21.24	0.133	1

Declared maximum antenna gain: 6 dBi

Frequency 925.7 MHz

Maximum Peak conducted output power		Limit
(dBm)	(W)	(W)
21.9	0.155	1

Declared maximum antenna gain: 6 dBi

Frequency 927.5 MHz

Maximum Peak conducted output power		Limit
(dBm)	(W)	(W)
21.87	0.154	1

Declared maximum antenna gain: 6 dBi

SPREAD FACTOR 12

Frequency 923.3 MHz

Maximum Peak conducted output power		Limit
(dBm)	(W)	(W)
20.98	0.125	1

Declared maximum antenna gain: 6 dBi

Frequency 925.7 MHz

Maximum Peak conducted output power		Limit
(dBm)	(W)	(W)
21.99	0.158	1

Declared maximum antenna gain: 6 dBi

Frequency 927.5 MHz

Maximum Peak conducted output power		Limit
(dBm)	(W)	(W)
21.82	0.152	1

Declared maximum antenna gain: 6 dBi

RF OUTPUT 2

SPREAD FACTOR 7

Frequency 923.3 MHz

Maximum Peak conducted output power		Limit
(dBm)	(W)	(W)
20.27	0.106	1

Declared maximum antenna gain: 6 dBi

Frequency 925.7 MHz

Maximum Peak conducted output power		Limit
(dBm)	(W)	(W)
20.82	0.121	1

Declared maximum antenna gain: 6 dBi

Frequency 927.5 MHz

Maximum Peak conducted output power		Limit
(dBm)	(W)	(W)
20.6	0.115	1

Declared maximum antenna gain: 6 dBi

SPREAD FACTOR 12

Frequency 923.3 MHz

Maximum Peak conducted output power		Limit
(dBm)	(W)	(W)
20.25	0.106	1

Declared maximum antenna gain: 6 dBi

Frequency 925.7 MHz

Maximum Peak conducted output power		Limit
(dBm)	(W)	(W)
20.92	0.124	1

Declared maximum antenna gain: 6 dBi

Frequency 927.5 MHz

Maximum Peak conducted output power		Limit
(dBm)	(W)	(W)
20.35	0.108	1

Declared maximum antenna gain: 6 dBi

Module 3

RF OUTPUT 1

SPREAD FACTOR 7

Frequency 923.3 MHz

Maximum Peak conducted output power		Limit
(dBm)	(W)	(W)
21.51	0.142	1

Declared maximum antenna gain: 6 dBi

Frequency 925.7 MHz

Maximum Peak conducted output power		Limit
(dBm)	(W)	(W)
22.34	0.171	1

Declared maximum antenna gain: 6 dBi

Frequency 927.5 MHz

Maximum Peak conducted output power		Limit
(dBm)	(W)	(W)
22.01	0.159	1

Declared maximum antenna gain: 6 dBi

SPREAD FACTOR 12

Frequency 923.3 MHz

Maximum Peak conducted output power		Limit
(dBm)	(W)	(W)
21.6	0.145	1

Declared maximum antenna gain: 6 dBi

Frequency 925.7 MHz

Maximum Peak conducted output power		Limit
(dBm)	(W)	(W)
22.21	0.166	1

Declared maximum antenna gain: 6 dBi

Frequency 927.5 MHz

Maximum Peak conducted output power		Limit
(dBm)	(W)	(W)
22.24	0.167	1

Declared maximum antenna gain: 6 dBi

RF OUTPUT 2

SPREAD FACTOR 7

Frequency 923.3 MHz

Maximum Peak conducted output power		Limit
(dBm)	(W)	(W)
19.7	0.093	1

Declared maximum antenna gain: 6 dBi

Frequency 925.7 MHz

Maximum Peak conducted output power		Limit
(dBm)	(W)	(W)
20.61	0.115	1

Declared maximum antenna gain: 6 dBi

Frequency 927.5 MHz

Maximum Peak conducted output power		Limit
(dBm)	(W)	(W)
20.22	0.105	1

Declared maximum antenna gain: 6 dBi

SPREAD FACTOR 12

Frequency 923.3 MHz

Maximum Peak conducted output power		Limit
(dBm)	(W)	(W)
19.97	0.099	1

Declared maximum antenna gain: 6 dBi

Frequency 925.7 MHz

Maximum Peak conducted output power		Limit
(dBm)	(W)	(W)
20.47	0.111	1

Declared maximum antenna gain: 6 dBi

Frequency 927.5 MHz

Maximum Peak conducted output power		Limit
(dBm)	(W)	(W)
20.33	0.108	1

Declared maximum antenna gain: 6 dBi

Module 4

RF OUTPUT 1

SPREAD FACTOR 7

Frequency 923.3 MHz

Maximum Peak conducted output power		Limit
(dBm)	(W)	(W)
21.44	0.139	1

Declared maximum antenna gain: 6 dBi

Frequency 925.7 MHz

Maximum Peak conducted output power		Limit
(dBm)	(W)	(W)
22.42	0.175	1

Declared maximum antenna gain: 6 dBi

Frequency 927.5 MHz

Maximum Peak conducted output power		Limit
(dBm)	(W)	(W)
22.31	0.170	1

Declared maximum antenna gain: 6 dBi

SPREAD FACTOR 12

Frequency 923.3 MHz

Maximum Peak conducted output power		Limit
(dBm)	(W)	(W)
21.59	0.144	1

Declared maximum antenna gain: 6 dBi

Frequency 925.7 MHz

Maximum Peak conducted output power		Limit
(dBm)	(W)	(W)
22.35	0.172	1

Declared maximum antenna gain: 6 dBi

Frequency 927.5 MHz

Maximum Peak conducted output power		Limit
(dBm)	(W)	(W)
22.33	0.171	1

Declared maximum antenna gain: 6 dBi

RF OUTPUT 2

SPREAD FACTOR 7

Frequency 923.3 MHz

Maximum Peak conducted output power		Limit
(dBm)	(W)	(W)
20.79	0.120	1

Declared maximum antenna gain: 6 dBi

Frequency 925.7 MHz

Maximum Peak conducted output power		Limit
(dBm)	(W)	(W)
21.47	0.140	1

Declared maximum antenna gain: 6 dBi

Frequency 927.5 MHz

Maximum Peak conducted output power		Limit
(dBm)	(W)	(W)
21.1	0.129	1

Declared maximum antenna gain: 6 dBi

SPREAD FACTOR 12

Frequency 923.3 MHz

Maximum Peak conducted output power		Limit
(dBm)	(W)	(W)
20.82	0.121	1

Declared maximum antenna gain: 6 dBi

Frequency 925.7 MHz

Maximum Peak conducted output power		Limit
(dBm)	(W)	(W)
21.43	0.139	1

Declared maximum antenna gain: 6 dBi

Frequency 927.5 MHz

Maximum Peak conducted output power		Limit
(dBm)	(W)	(W)
21.12	0.129	1

Declared maximum antenna gain: 6 dBi

Test conclusion:

RESPECTED STANDARD

11. INTENTIONAL RADIATOR

Temperature (°C) : 20 to 23 **Humidity (%HR):** 31 to 37 **Date :** April 8, 2019 and April 10, 2019

Technician : T. LEDRESSEUR

Standard: FCC Part 15

Test procedure: 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:

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 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 photos in appendix 2.

Frequency range: From 9 kHz to 10th harmonic of the highest fundamental frequency 10 GHz

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: 10 meters (in open area test site) / 3 meters (in anechoic room)

Antenna height: 1 to 4 meters (in open area test site) / 1.5 meter (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. The measure is repeated for each Module, output and Spread Factor.

The measure are repeated with the 2 antennas

Power source: 120 Vac through a variac
Percentage of voltage variation during the test (%): ± 1

Results:

Antenna 6dBi

Module 1

RF OUTPUT 1

SPREAD FACTOR 7

Frequency 923.3 MHz

Frequencies (MHz)	Detector P QP Av	RBW (kHz)	Polarization H: Horizontal V: Vertical	Field strength Measured at 3 m (dBµV/m)	Limits (dBm)	Margin (dB)
1846.6 (1)	P	100	H	44.56	96	51.44
2769.9	P	1000	V	44.6 (2)	74	29.4

P= Peak, QP=Quasi-peak, Av=Average
(1) Restricted bands of operation in 15.205
(2) The peak level is lower than the average limit (54 dBµV/m)

Frequency 925.7 MHz

Frequencies (MHz)	Detector P QP Av	RBW (kHz)	Polarization H: Horizontal V: Vertical	Field strength Measured at 3 m (dBµV/m)	Limits (dBm)	Margin (dB)
1851.4 (1)	P	100	H	45.96	96	50.04
2777.1	P	1000	V	46.5 (2)	74	27.5

P= Peak, QP=Quasi-peak, Av=Average
(1) Restricted bands of operation in 15.205
(2) The peak level is lower than the average limit (54 dBµV/m)

Frequency 927.5 MHz

Frequencies (MHz)	Detector P QP Av	RBW (kHz)	Polarization H: Horizontal V: Vertical	Field strength Measured at 3 m (dBµV/m)	Limits (dBm)	Margin (dB)
1855 (1)	P	100	H	47.06	96	48.94
2782.5	P	1000	V	44.32 (2)	74	29.68

P= Peak, QP=Quasi-peak, Av=Average
(1) Restricted bands of operation in 15.205
(2) The peak level is lower than the average limit (54 dBµV/m)

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 126 dBµV/m.

So the applicable limit is 96 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)).

SPREAD FACTOR 12

Frequency 923.3 MHz

Frequencies (MHz)	Detector P QP Av	RBW (kHz)	Polarization H: Horizontal V: Vertical	Field strength Measured at 3 m (dBµV/m)	Limits (dBm)	Margin (dB)
1846.6 (1)	P	100	H	45.69	96	50.31
2769.9	P	1000	V	43.05 (2)	74	30.95

P= Peak, QP=Quasi-peak, Av=Average
(1) Restricted bands of operation in 15.205
(2) The peak level is lower than the average limit (54 dBµV/m)

Frequency 925.7 MHz

Frequencies (MHz)	Detector P QP Av	RBW (kHz)	Polarization H: Horizontal V: Vertical	Field strength Measured at 3 m (dBµV/m)	Limits (dBm)	Margin (dB)
1851.4 (1)	P	100	H	47.41	96	48.59
2777.1	P	1000	V	44.94 (2)	74	29.06

P= Peak, QP=Quasi-peak, Av=Average
(1) Restricted bands of operation in 15.205
(2) The peak level is lower than the average limit (54 dBµV/m)

Frequency 927.5 MHz

Frequencies (MHz)	Detector P QP Av	RBW (kHz)	Polarization H: Horizontal V: Vertical	Field strength Measured at 3 m (dBµV/m)	Limits (dBm)	Margin (dB)
1855 (1)	P	100	H	47.11	96	48.89
2782.5	P	1000	V	44.89 (2)	74	29.11

P= Peak, QP=Quasi-peak, Av=Average
(1) Restricted bands of operation in 15.205
(2) The peak level is lower than the average limit (54 dBµV/m)

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 126 dBµV/m.

So the applicable limit is 96 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)).

RF OUTPUT 2

SPREAD FACTOR 7

Frequency 923.3 MHz

Frequencies (MHz)	Detector P QP Av	RBW (kHz)	Polarization H: Horizontal V: Vertical	Field strength Measured at 3 m (dBµV/m)	Limits (dBm)	Margin (dB)
1846.6	P (1)	100	V	40.96	96	55.04
2769.9	P	1000	H	42.2 (2)	74	31.8
4616.5	P	1000	H	42.86 (2)	74	31.14

P= Peak, QP=Quasi-peak, Av=Average
(1) Restricted bands of operation in 15.205
(2) The peak level is lower than the average limit (54 dBµV/m)

Frequency 925.7 MHz

Frequencies (MHz)	Detector P QP Av	RBW (kHz)	Polarization H: Horizontal V: Vertical	Field strength Measured at 3 m (dBµV/m)	Limits (dBm)	Margin (dB)
1851.4 (1)	P (1)	100	V	44.61	96	51.39
2777.1	P	1000	H	44.78 (2)	74	29.22
4628.5	P	1000	H	45.04 (2)	74	28.96

P= Peak, QP=Quasi-peak, Av=Average
(1) Restricted bands of operation in 15.205
(2) The peak level is lower than the average limit (54 dBµV/m)

Frequency 927.5 MHz

Frequencies (MHz)	Detector P QP Av	RBW (kHz)	Polarization H: Horizontal V: Vertical	Field strength Measured at 3 m (dBµV/m)	Limits (dBm)	Margin (dB)
1855	P (1)	100	V	44.34	96	51.66
2782.5	P	1000	H	41.87 (2)	74	32.13
3710	P	1000	V	42.59 (2)	74	31.41
4637.5	P	1000	H	43.63 (2)	74	30.37

P= Peak, QP=Quasi-peak, Av=Average
(1) Restricted bands of operation in 15.205
(2) The peak level is lower than the average limit (54 dBµV/m)

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 126 dBµV/m.

So the applicable limit is 96 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)).

SPREAD FACTOR 12

Frequency 923.3 MHz

Frequencies (MHz)	Detector P QP Av	RBW (kHz)	Polarization H: Horizontal V: Vertical	Field strength Measured at 3 m (dBµV/m)	Limits (dBm)	Margin (dB)
1846.6 (1)	P	100	V	42.02	96	53.98
2769.9	P	1000	V	42.71 (2)	74	31.29

P= Peak, QP=Quasi-peak, Av=Average
(1) Restricted bands of operation in 15.205
(2) The peak level is lower than the average limit (54 dBµV/m)

Frequency 925.7 MHz

Frequencies (MHz)	Detector P QP Av	RBW (kHz)	Polarization H: Horizontal V: Vertical	Field strength Measured at 3 m (dBµV/m)	Limits (dBm)	Margin (dB)
1851.4 (1)	P	100	V	44.41	96	51.59
2777.1	P	1000	V	43.6 (2)	74	30.37
3702.8	P	1000	V	42.95 (2)	74	31.05

P= Peak, QP=Quasi-peak, Av=Average
(1) Restricted bands of operation in 15.205
(2) The peak level is lower than the average limit (54 dBµV/m)

Frequency 927.5 MHz

Frequencies (MHz)	Detector P QP Av	RBW (kHz)	Polarization H: Horizontal V: Vertical	Field strength Measured at 3 m (dBµV/m)	Limits (dBm)	Margin (dB)
1855 (1)	P	100	V	44.2	96	51.8
2782.5	P	1000	V	41.85 (2)	74	32.15

P= Peak, QP=Quasi-peak, Av=Average
(1) Restricted bands of operation in 15.205
(2) The peak level is lower than the average limit (54 dBµV/m)

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 126 dBµV/m.

So the applicable limit is 96 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)).

Module 2

RF OUTPUT 1

SPREAD FACTOR 7

Frequency 923.3 MHz

Frequencies (MHz)	Detector P QP Av	RBW (kHz)	Polarization H: Horizontal V: Vertical	Field strength Measured at 3 m (dBµV/m)	Limits (dBm)	Margin (dB)
1846.6 (1)	P	100	H	46.53	96	49.47
2769.9	P	1000	V	43.11 (2)	74	30.89

P= Peak, QP=Quasi-peak, Av=Average
(1) Restricted bands of operation in 15.205
(2) The peak level is lower than the average limit (54 dBµV/m)

Frequency 925.7 MHz

Frequencies (MHz)	Detector P QP Av	RBW (kHz)	Polarization H: Horizontal V: Vertical	Field strength Measured at 3 m (dBµV/m)	Limits (dBm)	Margin (dB)
1851.4 (1)	P	100	H	47.96	96	48.04
2777.1	P	1000	V	44.7 (2)	74	29.3

P= Peak, QP=Quasi-peak, Av=Average
(1) Restricted bands of operation in 15.205
(2) The peak level is lower than the average limit (54 dBµV/m)

Frequency 927.5 MHz

Frequencies (MHz)	Detector P QP Av	RBW (kHz)	Polarization H: Horizontal V: Vertical	Field strength Measured at 3 m (dBµV/m)	Limits (dBm)	Margin (dB)
1855 (1)	P	100	H	46.29	96	49.71
2782.5	P	1000	V	43.98 (2)	74	30.02
3710	P	1000	H	42.26 (2)	74	31.74

P= Peak, QP=Quasi-peak, Av=Average
(1) Restricted bands of operation in 15.205
(2) The peak level is lower than the average limit (54 dBµV/m)

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 126 dBµV/m.

So the applicable limit is 96 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)).

SPREAD FACTOR 12

Frequency 923.3 MHz

Frequencies (MHz)	Detector P QP Av	RBW (kHz)	Polarization H: Horizontal V: Vertical	Field strength Measured at 3 m (dBµV/m)	Limits (dBm)	Margin (dB)
1846.6 (1)	P	100	H	46.49	96	49.51
2769.9	P	1000	V	41.9 (2)	74	32.1
4616.5	P	1000	V	43.54 (2)	74	30.46

P= Peak, QP=Quasi-peak, Av=Average
(1) Restricted bands of operation in 15.205
(2) The peak level is lower than the average limit (54 dBµV/m)

Frequency 925.7 MHz

Frequencies (MHz)	Detector P QP Av	RBW (kHz)	Polarization H: Horizontal V: Vertical	Field strength Measured at 3 m (dBµV/m)	Limits (dBm)	Margin (dB)
1851.4 (1)	P	100	H	47.71	96	48.29
2777.1	P	1000	V	44.14 (2)	74	29.86
3702.8	P	1000	H	42.13 (2)	74	31.87

P= Peak, QP=Quasi-peak, Av=Average
(1) Restricted bands of operation in 15.205
(2) The peak level is lower than the average limit (54 dBµV/m)

Frequency 927.5 MHz

Frequencies (MHz)	Detector P QP Av	RBW (kHz)	Polarization H: Horizontal V: Vertical	Field strength Measured at 3 m (dBµV/m)	Limits (dBm)	Margin (dB)
1855 (1)	P	100	V	46.26	96	49.74
2782.5	P	1000	V	44 (2)	74	30
3710	P	1000	H	42.12 (2)	74	31.88

P= Peak, QP=Quasi-peak, Av=Average
(1) Restricted bands of operation in 15.205
(2) The peak level is lower than the average limit (54 dBµV/m)

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 126 dBµV/m.

So the applicable limit is 96 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)).

RF OUTPUT 2

SPREAD FACTOR 7

Frequency 923.3 MHz

Frequencies (MHz)	Detector P QP Av	RBW (kHz)	Polarization H: Horizontal V: Vertical	Field strength Measured at 3 m (dBµV/m)	Limits (dBm)	Margin (dB)
1846.6 (1)	P	100	V	40.85	96	55.15

P= Peak, QP=Quasi-peak, Av=Average
(1) Restricted bands of operation in 15.205

Frequency 925.7 MHz

Frequencies (MHz)	Detector P QP Av	RBW (kHz)	Polarization H: Horizontal V: Vertical	Field strength Measured at 3 m (dBµV/m)	Limits (dBm)	Margin (dB)
1851.4 (1)	P	100	V	43.53	96	52.47
2777.1	P	1000	H	41.53 (2)	74	32.47

P= Peak, QP=Quasi-peak, Av=Average
(1) Restricted bands of operation in 15.205
(2) The peak level is lower than the average limit (54 dBµV/m)

Frequency 927.5 MHz

Frequencies (MHz)	Detector P QP Av	RBW (kHz)	Polarization H: Horizontal V: Vertical	Field strength Measured at 3 m (dBµV/m)	Limits (dBm)	Margin (dB)
1855 (1)	P	100	V	41.69	96	54.31
2782.5	P	1000	V	39.33 (2)	74	34.67

P= Peak, QP=Quasi-peak, Av=Average
(1) Restricted bands of operation in 15.205
(2) The peak level is lower than the average limit (54 dBµV/m)

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 126 dBµV/m.

So the applicable limit is 96 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)).

SPREAD FACTOR 12

Frequency 923.3 MHz

Frequencies (MHz)	Detector P QP Av	RBW (kHz)	Polarization H: Horizontal V: Vertical	Field strength Measured at 3 m (dBµV/m)	Limits (dBm)	Margin (dB)
1846.6 (1)	P	100	V	41.87	96	54.13

P= Peak, QP=Quasi-peak, Av=Average
(1) Restricted bands of operation in 15.205

Frequency 925.7 MHz

Frequencies (MHz)	Detector P QP Av	RBW (kHz)	Polarization H: Horizontal V: Vertical	Field strength Measured at 3 m (dBµV/m)	Limits (dBm)	Margin (dB)
1851.4 (1)	P	100	V	43.8	96	52.2
2777.1	P	1000	V	41.13 (2)	74	32.87

P= Peak, QP=Quasi-peak, Av=Average
(1) Restricted bands of operation in 15.205
(2) The peak level is lower than the average limit (54 dBµV/m)

Frequency 927.5 MHz

Frequencies (MHz)	Detector P QP Av	RBW (kHz)	Polarization H: Horizontal V: Vertical	Field strength Measured at 3 m (dBµV/m)	Limits (dBm)	Margin (dB)
1855 (1)	P	100	V	42.86	96	53.14

P= Peak, QP=Quasi-peak, Av=Average
(1) 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.

The highest level recorded in a 100 kHz bandwidth is 126 dBµV/m.

So the applicable limit is 96 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)).

Module 3

RF OUTPUT 1

SPREAD FACTOR 7

Frequency 923.3 MHz

Frequencies (MHz)	Detector P QP Av	RBW (kHz)	Polarization H: Horizontal V: Vertical	Field strength Measured at 3 m (dBµV/m)	Limits (dBm)	Margin (dB)
1846.6 (1)	P	100	H	47.96	96	48.04
2769.9	P	1000	V	41.91 (2)	74	32.09

P= Peak, QP=Quasi-peak, Av=Average
(1) Restricted bands of operation in 15.205
(2) The peak level is lower than the average limit (54 dBµV/m)

Frequency 925.7 MHz

Frequencies (MHz)	Detector P QP Av	RBW (kHz)	Polarization H: Horizontal V: Vertical	Field strength Measured at 3 m (dBµV/m)	Limits (dBm)	Margin (dB)
1851.4 (1)	P	100	H	48.02	96	47.98
2777.1	P	1000	V	45.375 (2)	74	28.625
3702.8	P	1000	H	43.79 (2)	74	30.21

P= Peak, QP=Quasi-peak, Av=Average
(1) Restricted bands of operation in 15.205
(2) The peak level is lower than the average limit (54 dBµV/m)

Frequency 927.5 MHz

Frequencies (MHz)	Detector P QP Av	RBW (kHz)	Polarization H: Horizontal V: Vertical	Field strength Measured at 3 m (dBµV/m)	Limits (dBm)	Margin (dB)
1855 (1)	P	100	H	47.47	96	48.53
2782.5	P	1000	V	43.83 (2)	74	30.17
3710	P	1000	V	44.62 (2)	74	29.38
4637.5	P	1000	V	42.69 (2)	74	31.31

P= Peak, QP=Quasi-peak, Av=Average
(1) Restricted bands of operation in 15.205
(2) The peak level is lower than the average limit (54 dBµV/m)

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 126 dBµV/m.

So the applicable limit is 96 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)).

SPREAD FACTOR 12

Frequency 923.3 MHz

Frequencies (MHz)	Detector P QP Av	RBW (kHz)	Polarization H: Horizontal V: Vertical	Field strength Measured at 3 m (dBµV/m)	Limits (dBm)	Margin (dB)
1846.6 (1)	P	100	H	46.5	96	49.5
2769.9	P	1000	V	43.03 (2)	74	30.97
3693.2	P	1000	H	42.72 (2)	74	31.28

P= Peak, QP=Quasi-peak, Av=Average
(1) Restricted bands of operation in 15.205
(2) The peak level is lower than the average limit (54 dBµV/m)

Frequency 925.7 MHz

Frequencies (MHz)	Detector P QP Av	RBW (kHz)	Polarization H: Horizontal V: Vertical	Field strength Measured at 3 m (dBµV/m)	Limits (dBm)	Margin (dB)
1851.4 (1)	P	100	H	47.42	96	48.58
2777.1	P	1000	V	45.98 (2)	74	28.02
3702.8	P	1000	H	44.24 (2)	74	29.76
4628.5	P	1000	V	43.78 (2)	74	30.22

P= Peak, QP=Quasi-peak, Av=Average
(1) Restricted bands of operation in 15.205
(2) The peak level is lower than the average limit (54 dBµV/m)

Frequency 927.5 MHz

Frequencies (MHz)	Detector P QP Av	RBW (kHz)	Polarization H: Horizontal V: Vertical	Field strength Measured at 3 m (dBµV/m)	Limits (dBm)	Margin (dB)
1855 (1)	P	100	V	47.42	96	48.58
2782.5	P	1000	V	44.27 (2)	74	29.73
3710	P	1000	H	44.25 (2)	74	29.75

P= Peak, QP=Quasi-peak, Av=Average
(1) Restricted bands of operation in 15.205
(2) The peak level is lower than the average limit (54 dBµV/m)

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 126 dBµV/m.

So the applicable limit is 96 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)).

RF OUTPUT 2

SPREAD FACTOR 7

Frequency 923.3 MHz

Frequencies (MHz)	Detector P QP Av	RBW (kHz)	Polarization H: Horizontal V: Vertical	Field strength Measured at 3 m (dBµV/m)	Limits (dBm)	Margin (dB)
1846.6 (1)	P	100	V	40.31	96	55.69
2769.9	P	1000	V	40.76 (2)	74	33.24
3693.2	P	1000	H	41.78 (2)	74	32.22

P= Peak, QP=Quasi-peak, Av=Average
(1) Restricted bands of operation in 15.205
(2) The peak level is lower than the average limit (54 dBµV/m)

Frequency 925.7 MHz

Frequencies (MHz)	Detector P QP Av	RBW (kHz)	Polarization H: Horizontal V: Vertical	Field strength Measured at 3 m (dBµV/m)	Limits (dBm)	Margin (dB)
1851.4 (1)	P	100	V	41.93	96	54.07
2777.1	P	1000	H	43.01 (2)	74	30.99
3702.8	P	1000	V	43.15 (2)	74	30.85
4628.5	P	1000	H	43.59 (2)	74	30.41

P= Peak, QP=Quasi-peak, Av=Average
(1) Restricted bands of operation in 15.205
(2) The peak level is lower than the average limit (54 dBµV/m)

Frequency 927.5 MHz

Frequencies (MHz)	Detector P QP Av	RBW (kHz)	Polarization H: Horizontal V: Vertical	Field strength Measured at 3 m (dBµV/m)	Limits (dBm)	Margin (dB)
1855.4 (1)	P	100	V	42.66 (2)	96	53.34
2782.5	P	1000	H	41.6 (2)	74	32.4
3710	P	1000	V	43.06 (2)	74	30.94

P= Peak, QP=Quasi-peak, Av=Average
(1) Restricted bands of operation in 15.205
(2) The peak level is lower than the average limit (54 dBµV/m)

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 126 dBµV/m.

So the applicable limit is 96 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)).

SPREAD FACTOR 12

Frequency 923.3 MHz

Frequencies (MHz)	Detector P QP Av	RBW (kHz)	Polarization H: Horizontal V: Vertical	Field strength Measured at 3 m (dBµV/m)	Limits (dBm)	Margin (dB)
1846.6 (1)	P	100	V	40.82	96	55.18
2769.9	P	1000	H	41.23 (2)	74	32.77
3693.2	P	1000	V	43.1 (2)	74	30.9

P= Peak, QP=Quasi-peak, Av=Average
(1) Restricted bands of operation in 15.205
(2) The peak level is lower than the average limit (54 dBµV/m)

Frequency 925.7 MHz

Frequencies (MHz)	Detector P QP Av	RBW (kHz)	Polarization H: Horizontal V: Vertical	Field strength Measured at 3 m (dBµV/m)	Limits (dBm)	Margin (dB)
1851.4 (1)	P	100	V	44.63	96	51.37
2777.1	P	1000	H	43.73 (2)	74	30.27
3702.8	P	1000	V	42.7 (2)	74	31.3

P= Peak, QP=Quasi-peak, Av=Average
(1) Restricted bands of operation in 15.205
(2) The peak level is lower than the average limit (54 dBµV/m)

Frequency 927.5 MHz

Frequencies (MHz)	Detector P QP Av	RBW (kHz)	Polarization H: Horizontal V: Vertical	Field strength Measured at 3 m (dBµV/m)	Limits (dBm)	Margin (dB)
1855.4 (1)	P	100	V	42.6	96	53.4
2782.5	P	1000	V	40.74 (2)	74	33.26
3710	P	1000	H	43.34 (2)	74	30.66
4637.5	P	1000	H	42.78 (2)	74	31.22

P= Peak, QP=Quasi-peak, Av=Average
(1) Restricted bands of operation in 15.205
(2) The peak level is lower than the average limit (54 dBµV/m)

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 126 dBµV/m.

So the applicable limit is 96 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)).

Module 4

RF OUTPUT 1

Frequency 923.3 MHz

Frequencies (MHz)	Detector P QP Av	RBW (kHz)	Polarization H: Horizontal V: Vertical	Field strength Measured at 3 m (dBµV/m)	Limits (dBm)	Margin (dB)
1846.6 (1)	P	100	H	46.77	96	49.23
2769.9	P	1000	V	44.07 (2)	74	29.93
3693.2	P	1000	V	42.34 (2)	74	31.66

P= Peak, QP=Quasi-peak, Av=Average
(1) Restricted bands of operation in 15.205
(2) The peak level is lower than the average limit (54 dBµV/m)

Frequency 925.7 MHz

Frequencies (MHz)	Detector P QP Av	RBW (kHz)	Polarization H: Horizontal V: Vertical	Field strength Measured at 3 m (dBµV/m)	Limits (dBm)	Margin (dB)
1851.4 (1)	P	100	H	48.44	96	47.56
2777.1	P	1000	V	45.35 (2)	74	28.65
3702.8	P	1000	H	43.59 (2)	74	30.41

P= Peak, QP=Quasi-peak, Av=Average
(1) Restricted bands of operation in 15.205
(2) The peak level is lower than the average limit (54 dBµV/m)

Frequency 927.5 MHz

Frequencies (MHz)	Detector P QP Av	RBW (kHz)	Polarization H: Horizontal V: Vertical	Field strength Measured at 3 m (dBµV/m)	Limits (dBm)	Margin (dB)
1855.4 (1)	P	100	V	46.73	96	49.27
2782.5	P	1000	V	43.99 (2)	74	30.01
3710	P	1000	H	44.36 (2)	74	29.64
4637.5	P	1000	V	43.73 (2)	74	30.27

P= Peak, QP=Quasi-peak, Av=Average
(1) Restricted bands of operation in 15.205
(2) The peak level is lower than the average limit (54 dBµV/m)

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 126 dBµV/m.

So the applicable limit is 96 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)).

Frequency 923.3 MHz

Frequencies (MHz)	Detector P QP Av	RBW (kHz)	Polarization H: Horizontal V: Vertical	Field strength Measured at 3 m (dBµV/m)	Limits (dBm)	Margin (dB)
1846.6 (1)	P	100	H	46.56	96	49.44
2769.9	P	1000	V	42.64 (2)	74	31.36
3693.2	P	1000	H	43.4 (2)	74	30.6
4616.5	P	1000	V	42.6 (2)	74	31.4

P= Peak, QP=Quasi-peak, Av=Average
(1) Restricted bands of operation in 15.205
(2) The peak level is lower than the average limit (54 dBµV/m)

Frequency 925.7 MHz

Frequencies (MHz)	Detector P QP Av	RBW (kHz)	Polarization H: Horizontal V: Vertical	Field strength Measured at 3 m (dBµV/m)	Limits (dBm)	Margin (dB)
1851.4 (1)	P	100	H	47.74	96	48.26
2777.1	P	1000	V	46.33 (2)	74	27.67
3702.8	P	1000	H	43.69 (2)	74	30.31

P= Peak, QP=Quasi-peak, Av=Average
(1) Restricted bands of operation in 15.205
(2) The peak level is lower than the average limit (54 dBµV/m)

Frequency 927.5 MHz

Frequencies (MHz)	Detector P QP Av	RBW (kHz)	Polarization H: Horizontal V: Vertical	Field strength Measured at 3 m (dBµV/m)	Limits (dBm)	Margin (dB)
1855.4 (1)	P	100	V	47.35	96	48.65
2782.5	P	1000	V	45.1 (2)	74	28.9
3710	P	1000	H	43.91 (2)	74	30.09

P= Peak, QP=Quasi-peak, Av=Average
(1) Restricted bands of operation in 15.205
(2) The peak level is lower than the average limit (54 dBµV/m)

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 126 dBµV/m.

So the applicable limit is 96 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)).

RF OUTPUT 2

SPREAD FACTOR 7

Frequency 923.3 MHz

Frequencies (MHz)	Detector P QP Av	RBW (kHz)	Polarization H: Horizontal V: Vertical	Field strength Measured at 3 m (dBµV/m)	Limits (dBm)	Margin (dB)
1846.6 (1)	P	100	V	40.7	96	55.3
2769.9	P	1000	V	40.86 (2)	74	33.14
3693.2	P	1000	H	44.27 (2)	74	29.73
4616.5	P	1000	H	46.89 (2)	74	27.11

P= Peak, QP=Quasi-peak, Av=Average
(1) Restricted bands of operation in 15.205
(2) The peak level is lower than the average limit (54 dBµV/m)

Frequency 925.7 MHz

Frequencies (MHz)	Detector P QP Av	RBW (kHz)	Polarization H: Horizontal V: Vertical	Field strength Measured at 3 m (dBµV/m)	Limits (dBm)	Margin (dB)
1851.4 (1)	P	100	V	44.15	96	51.85
2777.1	P	1000	H	42.26 (2)	74	31.74
3702.8	P	1000	V	45.2 (2)	74	28.8
4628.5	P	1000	V	45.95 (2)	74	28.05

P= Peak, QP=Quasi-peak, Av=Average
(1) Restricted bands of operation in 15.205
(2) The peak level is lower than the average limit (54 dBµV/m)

Frequency 927.5 MHz

Frequencies (MHz)	Detector P QP Av	RBW (kHz)	Polarization H: Horizontal V: Vertical	Field strength Measured at 3 m (dBµV/m)	Limits (dBm)	Margin (dB)
1855.4 (1)	P	100	V	42.71	96	53.29
2782.5	P	1000	H	39.94 (2)	74	34.06
3710	P	1000	V	45.39 (2)	74	28.61
4637.5	P	1000	H	45.56 (2)	74	28.44

P= Peak, QP=Quasi-peak, Av=Average
(1) Restricted bands of operation in 15.205
(2) The peak level is lower than the average limit (54 dBµV/m)

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 126 dBµV/m.

So the applicable limit is 96 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)).

SPREAD FACTOR 12

Frequency 923.3 MHz

Frequencies (MHz)	Detector P QP Av	RBW (kHz)	Polarization H: Horizontal V: Vertical	Field strength Measured at 3 m (dBµV/m)	Limits (dBm)	Margin (dB)
1846.6 (1)	P	100	V	40.85	96	55.15
2769.9	P	1000	V	41.18 (2)	74	32.82
3693.2	P	1000	H	45.22 (2)	74	28.78
4616.5	P	1000	H	47.2 (2)	74	26.8

P= Peak, QP=Quasi-peak, Av=Average
(1) Restricted bands of operation in 15.205
(2) The peak level is lower than the average limit (54 dBµV/m)

Frequency 925.7 MHz

Frequencies (MHz)	Detector P QP Av	RBW (kHz)	Polarization H: Horizontal V: Vertical	Field strength Measured at 3 m (dBµV/m)	Limits (dBm)	Margin (dB)
1851.4 (1)	P	100	V	44.18	96	51.82
2777.1	P	1000	H	42.46 (2)	74	31.54
3702.8	P	1000	H	45.36 (2)	74	28.64
4628.5	P	1000	H	45.45 (2)	74	28.55

P= Peak, QP=Quasi-peak, Av=Average
(1) Restricted bands of operation in 15.205
(2) The peak level is lower than the average limit (54 dBµV/m)

Frequency 927.5 MHz

Frequencies (MHz)	Detector P QP Av	RBW (kHz)	Polarization H: Horizontal V: Vertical	Field strength Measured at 3 m (dBµV/m)	Limits (dBm)	Margin (dB)
1855.4 (1)	P	100	V	42.64	96	53.36
2782.5	P	1000	H	40.71 (2)	74	33.29
3710	P	1000	H	45.48 (2)	74	28.52
4637.5	P	1000	H	45.31 (2)	74	28.69

P= Peak, QP=Quasi-peak, Av=Average
(1) Restricted bands of operation in 15.205
(2) The peak level is lower than the average limit (54 dBµV/m)

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 126 dBµV/m.

So the applicable limit is 96 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)).

Antenna 3dBi

Module 1

RF OUTPUT 1

SPREAD FACTOR 7

Frequency 923.3 MHz

Frequencies (MHz)	Detector P QP Av	RBW (kHz)	Polarization H: Horizontal V: Vertical	Field strength Measured at 3 m (dBµV/m)	Limits (dBm)	Margin (dB)
1846.6 (1)	P	100	V	44.97	93	48.03
2769.9	P	1000	V	43.97 (2)	74	30.03

P= Peak, QP=Quasi-peak, Av=Average
(1) Restricted bands of operation in 15.205
(2) The peak level is lower than the average limit (54 dBµV/m)

Frequency 925.7 MHz

Frequencies (MHz)	Detector P QP Av	RBW (kHz)	Polarization H: Horizontal V: Vertical	Field strength Measured at 3 m (dBµV/m)	Limits (dBm)	Margin (dB)
1851.4 (1)	P	100	V	47.92	93	45.08
2777.1	P	1000	V	43.93 (2)	74	30.07

P= Peak, QP=Quasi-peak, Av=Average
(1) Restricted bands of operation in 15.205
(2) The peak level is lower than the average limit (54 dBµV/m)

Frequency 927.5 MHz

Frequencies (MHz)	Detector P QP Av	RBW (kHz)	Polarization H: Horizontal V: Vertical	Field strength Measured at 3 m (dBµV/m)	Limits (dBm)	Margin (dB)
1855 (1)	P	100	V	45.85	93	47.15
2782.5	P	1000	V	43.65 (2)	74	30.35

P= Peak, QP=Quasi-peak, Av=Average
(1) Restricted bands of operation in 15.205
(2) The peak level is lower than the average limit (54 dBµV/m)

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 123 dBµV/m.

So the applicable limit is 93 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)).

SPREAD FACTOR 12

Frequency 923.3 MHz

Frequencies (MHz)	Detector P QP Av	RBW (kHz)	Polarization H: Horizontal V: Vertical	Field strength Measured at 3 m (dBµV/m)	Limits (dBm)	Margin (dB)
1846.6 (1)	P	100	V	44.94	93	48.06
2769.9	P	1000	V	44.82 (2)	74	29.18

P= Peak, QP=Quasi-peak, Av=Average
(1) Restricted bands of operation in 15.205
(2) The peak level is lower than the average limit (54 dBµV/m)

Frequency 925.7 MHz

Frequencies (MHz)	Detector P QP Av	RBW (kHz)	Polarization H: Horizontal V: Vertical	Field strength Measured at 3 m (dBµV/m)	Limits (dBm)	Margin (dB)
1851.4 (1)	P	100	V	47.93	93	45.07
2777.1	P	1000	V	45.15 (2)	74	28.85
6479.9 (1)	P	100	V	47.35	93	45.65

P= Peak, QP=Quasi-peak, Av=Average
(1) Restricted bands of operation in 15.205
(2) The peak level is lower than the average limit (54 dBµV/m)

Frequency 927.5 MHz

Frequencies (MHz)	Detector P QP Av	RBW (kHz)	Polarization H: Horizontal V: Vertical	Field strength Measured at 3 m (dBµV/m)	Limits (dBm)	Margin (dB)
1855.4 (1)	P	100	V	45.59	93	47.41
2782.5	P	1000	V	44.22 (2)	74	29.78

P= Peak, QP=Quasi-peak, Av=Average
(1) Restricted bands of operation in 15.205
(2) The peak level is lower than the average limit (54 dBµV/m)

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 123 dBµV/m.

So the applicable limit is 93 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)).

RF OUTPUT 2

SPREAD FACTOR 7

Frequency 923.3 MHz

Frequencies (MHz)	Detector P QP Av	RBW (kHz)	Polarization H: Horizontal V: Vertical	Field strength Measured at 3 m (dBµV/m)	Limits (dBm)	Margin (dB)
1846.6 (1)	P	100	V	42.1	93	50.9
2769.9	P	1000	V	42.79 (2)	74	31.21

P= Peak, QP=Quasi-peak, Av=Average
(1) Restricted bands of operation in 15.205
(2) The peak level is lower than the average limit (54 dBµV/m)

Frequency 925.7 MHz

Frequencies (MHz)	Detector P QP Av	RBW (kHz)	Polarization H: Horizontal V: Vertical	Field strength Measured at 3 m (dBµV/m)	Limits (dBm)	Margin (dB)
1851.4 (1)	P	100	V	45.13	93	47.87
2777.1	P	1000	V	46 (2)	74	28
3702.8	P	1000	V	43.53 (2)	74	30.47
6479.9 (1)	P	100	V	46.21	93	46.79

P= Peak, QP=Quasi-peak, Av=Average
(1) Restricted bands of operation in 15.205
(2) The peak level is lower than the average limit (54 dBµV/m)

Frequency 927.5 MHz

Frequencies (MHz)	Detector P QP Av	RBW (kHz)	Polarization H: Horizontal V: Vertical	Field strength Measured at 3 m (dBµV/m)	Limits (dBm)	Margin (dB)
1855.4 (1)	P	100	V	44.32	93	48.68
2782.5	P	1000	V	45.53 (2)	74	28.47
3710	P	1000	V	44.31 (2)	74	29.69

P= Peak, QP=Quasi-peak, Av=Average
(1) Restricted bands of operation in 15.205
(2) The peak level is lower than the average limit (54 dBµV/m)

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 123 dBµV/m.

So the applicable limit is 93 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)).

SPREAD FACTOR 12

Frequency 923.3 MHz

Frequencies (MHz)	Detector P QP Av	RBW (kHz)	Polarization H: Horizontal V: Vertical	Field strength Measured at 3 m (dBµV/m)	Limits (dBm)	Margin (dB)
1846.6 (1)	P	100	V	42.05	93	50.95
2769.9	P	1000	V	43.68 (2)	74	30.32
3693.2	P	1000	V	42.69 (2)	74	31.31

P= Peak, QP=Quasi-peak, Av=Average
(1) Restricted bands of operation in 15.205
(2) The peak level is lower than the average limit (54 dBµV/m)

Frequency 925.7 MHz

Frequencies (MHz)	Detector P QP Av	RBW (kHz)	Polarization H: Horizontal V: Vertical	Field strength Measured at 3 m (dBµV/m)	Limits (dBm)	Margin (dB)
1851.4 (1)	P	100	V	44.23	93	48.77
2777.1	P	1000	V	45.68 (2)	74	28.32
3702.8	P	1000	V	43.4 (2)	74	30.6
6479.9 (1)	P	100	V	46.35	93	46.65

P= Peak, QP=Quasi-peak, Av=Average
(1) Restricted bands of operation in 15.205
(2) The peak level is lower than the average limit (54 dBµV/m)

Frequency 927.5 MHz

Frequencies (MHz)	Detector P QP Av	RBW (kHz)	Polarization H: Horizontal V: Vertical	Field strength Measured at 3 m (dBµV/m)	Limits (dBm)	Margin (dB)
1855.4 (1)	P	100	V	44.58	93	48.42
2782.5	P	1000	V	43.97 (2)	74	30.03
3710	P	1000	V	43.46 (2)	74	30.54

P= Peak, QP=Quasi-peak, Av=Average
(1) Restricted bands of operation in 15.205
(2) The peak level is lower than the average limit (54 dBµV/m)

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 123 dBµV/m.

So the applicable limit is 93 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)).

Module 2

RF OUTPUT 1

SPREAD FACTOR 7

Frequency 923.3 MHz

Frequencies (MHz)	Detector P QP Av	RBW (kHz)	Polarization H: Horizontal V: Vertical	Field strength Measured at 3 m (dBµV/m)	Limits (dBm)	Margin (dB)
1846.6 (1)	P	100	V	43.99	93	49.01
2769.9	P	1000	V	44.31 (2)	74	29.69
3693.2	P	1000	H	42.59 (2)	74	31.41

P= Peak, QP=Quasi-peak, Av=Average
(1) Restricted bands of operation in 15.205
(2) The peak level is lower than the average limit (54 dBµV/m)

Frequency 925.7 MHz

Frequencies (MHz)	Detector P QP Av	RBW (kHz)	Polarization H: Horizontal V: Vertical	Field strength Measured at 3 m (dBµV/m)	Limits (dBm)	Margin (dB)
1851.4 (1)	P	100	V	47.2	93	45.8
2777.1	P	1000	V	44.39 (2)	74	29.61
6479.9 (1)	P	100	V	47.2	93	45.8

P= Peak, QP=Quasi-peak, Av=Average
(1) Restricted bands of operation in 15.205
(2) The peak level is lower than the average limit (54 dBµV/m)

Frequency 927.5 MHz

Frequencies (MHz)	Detector P QP Av	RBW (kHz)	Polarization H: Horizontal V: Vertical	Field strength Measured at 3 m (dBµV/m)	Limits (dBm)	Margin (dB)
1855.4 (1)	P	100	V	46.01	93	46.99
2782.5	P	1000	V	42.84 (2)	74	31.16
3710	P	1000	V	43.23 (2)	74	30.77

P= Peak, QP=Quasi-peak, Av=Average
(1) Restricted bands of operation in 15.205
(2) The peak level is lower than the average limit (54 dBµV/m)

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 123 dBµV/m.

So the applicable limit is 93 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)).

SPREAD FACTOR 12

Frequency 923.3 MHz

Frequencies (MHz)	Detector P QP Av	RBW (kHz)	Polarization H: Horizontal V: Vertical	Field strength Measured at 3 m (dBµV/m)	Limits (dBm)	Margin (dB)
1846.6 (1)	P	100	V	44.15	93	48.85
2769.9	P	1000	V	43.7 (2)	74	30.3

P= Peak, QP=Quasi-peak, Av=Average
(1) Restricted bands of operation in 15.205
(2) The peak level is lower than the average limit (54 dBµV/m)

Frequency 925.7 MHz

Frequencies (MHz)	Detector P QP Av	RBW (kHz)	Polarization H: Horizontal V: Vertical	Field strength Measured at 3 m (dBµV/m)	Limits (dBm)	Margin (dB)
1851.4 (1)	P	100	V	47.73	93	45.27
2777.1	P	1000	V	44.3 (2)	74	29.7
3702.8	P	1000	H	43.5 (2)	74	30.5
6479.9 (1)	P	100	V	47.09	93	45.91

P= Peak, QP=Quasi-peak, Av=Average
(1) Restricted bands of operation in 15.205
(2) The peak level is lower than the average limit (54 dBµV/m)

Frequency 927.5 MHz

Frequencies (MHz)	Detector P QP Av	RBW (kHz)	Polarization H: Horizontal V: Vertical	Field strength Measured at 3 m (dBµV/m)	Limits (dBm)	Margin (dB)
1855.4 (1)	P	100	V	45.03	93	47.97
2782.5	P	1000	V	42.46 (2)	74	31.54
3710	P	1000	V	42.17 (2)	74	31.83

P= Peak, QP=Quasi-peak, Av=Average
(1) Restricted bands of operation in 15.205
(2) The peak level is lower than the average limit (54 dBµV/m)

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 123 dBµV/m.

So the applicable limit is 93 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)).

RF OUTPUT 2

SPREAD FACTOR 7

Frequency 923.3 MHz

Frequencies (MHz)	Detector P QP Av	RBW (kHz)	Polarization H: Horizontal V: Vertical	Field strength Measured at 3 m (dBµV/m)	Limits (dBm)	Margin (dB)
1846.6 (1)	P	100	V	41.45	93	51.55
2769.9	P	1000	V	42.03 (2)	74	31.97
3693.2	P	1000	V	42.29 (2)	74	31.71

P= Peak, QP=Quasi-peak, Av=Average
(1) Restricted bands of operation in 15.205
(2) The peak level is lower than the average limit (54 dBµV/m)

Frequency 925.7 MHz

Frequencies (MHz)	Detector P QP Av	RBW (kHz)	Polarization H: Horizontal V: Vertical	Field strength Measured at 3 m (dBµV/m)	Limits (dBm)	Margin (dB)
1851.4 (1)	P	100	V	45.08	93	47.92
2777.1	P	1000	V	44.01 (2)	74	29.99
3702.8	P	1000	H	44.19 (2)	74	29.81
6479.9 (1)	P	100	V	46.76	93	46.24

P= Peak, QP=Quasi-peak, Av=Average
(1) Restricted bands of operation in 15.205
(2) The peak level is lower than the average limit (54 dBµV/m)

Frequency 927.5 MHz

Frequencies (MHz)	Detector P QP Av	RBW (kHz)	Polarization H: Horizontal V: Vertical	Field strength Measured at 3 m (dBµV/m)	Limits (dBm)	Margin (dB)
1855.4 (1)	P	100	V	44.41	93	48.59
2782.5	P	1000	V	42.95 (2)	74	31.05
3710	P	1000	V	41.97 (2)	74	32.03

P= Peak, QP=Quasi-peak, Av=Average
(1) Restricted bands of operation in 15.205
(2) The peak level is lower than the average limit (54 dBµV/m)

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 123 dBµV/m.

So the applicable limit is 93 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)).

SPREAD FACTOR 12

Frequency 923.3 MHz

Frequencies (MHz)	Detector P QP Av	RBW (kHz)	Polarization H: Horizontal V: Vertical	Field strength Measured at 3 m (dBµV/m)	Limits (dBm)	Margin (dB)
1846.6 (1)	P	100	V	42.29	93	50.71
2769.9	P	1000	V	41.94 (2)	74	32.06
3693.2	P	1000	H	42.65 (2)	74	31.35

P= Peak, QP=Quasi-peak, Av=Average
(1) Restricted bands of operation in 15.205
(2) The peak level is lower than the average limit (54 dBµV/m)

Frequency 925.7 MHz

Frequencies (MHz)	Detector P QP Av	RBW (kHz)	Polarization H: Horizontal V: Vertical	Field strength Measured at 3 m (dBµV/m)	Limits (dBm)	Margin (dB)
1851.4 (1)	P	100	V	43.56	93	49.44
2777.1	P	1000	V	43.81 (2)	74	30.19
3702.8	P	1000	V	47.89 (2)	74	26.11

P= Peak, QP=Quasi-peak, Av=Average
(1) Restricted bands of operation in 15.205
(2) The peak level is lower than the average limit (54 dBµV/m)

Frequency 927.5 MHz

Frequencies (MHz)	Detector P QP Av	RBW (kHz)	Polarization H: Horizontal V: Vertical	Field strength Measured at 3 m (dBµV/m)	Limits (dBm)	Margin (dB)
1855.4 (1)	P	100	V	43.6	93	49.4
2782.5	P	1000	V	41.97 (2)	74	32.03
6492.5 (1)	P	100	V	47.51 (2)	93	45.49

P= Peak, QP=Quasi-peak, Av=Average
(1) Restricted bands of operation in 15.205
(2) The peak level is lower than the average limit (54 dBµV/m)

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 123 dBµV/m.

So the applicable limit is 93 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)).

Module 3

RF OUTPUT 1

SPREAD FACTOR 7

Frequency 923.3 MHz

Frequencies (MHz)	Detector P QP Av	RBW (kHz)	Polarization H: Horizontal V: Vertical	Field strength Measured at 3 m (dBµV/m)	Limits (dBm)	Margin (dB)
1846.6 (1)	P	100	V	45.63	93	47.37
2769.9	P	1000	V	42.76 (2)	74	31.24
3693.2	P	1000	V	43.26 (2)	74	30.74

P= Peak, QP=Quasi-peak, Av=Average
(1) Restricted bands of operation in 15.205
(2) The peak level is lower than the average limit (54 dBµV/m)

Frequency 925.7 MHz

Frequencies (MHz)	Detector P QP Av	RBW (kHz)	Polarization H: Horizontal V: Vertical	Field strength Measured at 3 m (dBµV/m)	Limits (dBm)	Margin (dB)
1851.4 (1)	P	100	V	47.35	93	45.65
2777.1	P	1000	V	43.81 (2)	74	30.19
3702.8	P	1000	V	42.77 (2)	74	31.23
6479.9 (1)	P	100	V	46.86	93	46.14

P= Peak, QP=Quasi-peak, Av=Average
(1) Restricted bands of operation in 15.205
(2) The peak level is lower than the average limit (54 dBµV/m)

Frequency 927.5 MHz

Frequencies (MHz)	Detector P QP Av	RBW (kHz)	Polarization H: Horizontal V: Vertical	Field strength Measured at 3 m (dBµV/m)	Limits (dBm)	Margin (dB)
1855.4 (1)	P	100	V	45.91	93	47.09
2782.5	P	1000	V	42.26 (2)	74	31.74
3710	P	1000	V	42.8 (2)	74	31.2

P= Peak, QP=Quasi-peak, Av=Average
(1) Restricted bands of operation in 15.205
(2) The peak level is lower than the average limit (54 dBµV/m)

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 123 dBµV/m.

So the applicable limit is 93 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)).

SPREAD FACTOR 12

Frequency 923.3 MHz

Frequencies (MHz)	Detector P QP Av	RBW (kHz)	Polarization H: Horizontal V: Vertical	Field strength Measured at 3 m (dBµV/m)	Limits (dBm)	Margin (dB)
1846.6 (1)	P	100	V	44.67	93	48.33
2769.9	P	1000	V	42.97 (2)	74	31.03
3693.2	P	1000	V	43.77 (2)	74	30.23

P= Peak, QP=Quasi-peak, Av=Average
(1) Restricted bands of operation in 15.205
(2) The peak level is lower than the average limit (54 dBµV/m)

Frequency 925.7 MHz

Frequencies (MHz)	Detector P QP Av	RBW (kHz)	Polarization H: Horizontal V: Vertical	Field strength Measured at 3 m (dBµV/m)	Limits (dBm)	Margin (dB)
1851.4 (1)	P	100	V	47.66	93	45.34
2777.1	P	1000	V	43.64 (2)	74	30.36
3702.8	P	1000	V	42.94 (2)	74	31.06
6479.9 (1)	P	100	V	47.62	93	45.38

P= Peak, QP=Quasi-peak, Av=Average
(1) Restricted bands of operation in 15.205
(2) The peak level is lower than the average limit (54 dBµV/m)

Frequency 927.5 MHz

Frequencies (MHz)	Detector P QP Av	RBW (kHz)	Polarization H: Horizontal V: Vertical	Field strength Measured at 3 m (dBµV/m)	Limits (dBm)	Margin (dB)
1855.4 (1)	P	100	V	45.56	93	47.44
2782.5	P	1000	V	43.22 (2)	74	30.78
3710	P	1000	V	43.88 (2)	74	30.12

P= Peak, QP=Quasi-peak, Av=Average
(1) Restricted bands of operation in 15.205
(2) The peak level is lower than the average limit (54 dBµV/m)

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 123 dBµV/m.

So the applicable limit is 93 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)).

RF OUTPUT 2

SPREAD FACTOR 7

Frequency 923.3 MHz

Frequencies (MHz)	Detector P QP Av	RBW (kHz)	Polarization H: Horizontal V: Vertical	Field strength Measured at 3 m (dBµV/m)	Limits (dBm)	Margin (dB)
1846.6 (1)	P	100	V	42.18	93	50.82
2769.9	P	1000	V	44.23 (2)	74	29.77
3693.2	P	1000	H	43.73 (2)	74	30.27

P= Peak, QP=Quasi-peak, Av=Average
(1) Restricted bands of operation in 15.205
(2) The peak level is lower than the average limit (54 dBµV/m)

Frequency 925.7 MHz

Frequencies (MHz)	Detector P QP Av	RBW (kHz)	Polarization H: Horizontal V: Vertical	Field strength Measured at 3 m (dBµV/m)	Limits (dBm)	Margin (dB)
1851.4 (1)	P	100	V	43.6	93	49.4
2777.1	P	1000	V	46.12 (2)	74	27.88
3702.8	P	1000	V	43.60 (2)	74	30.4

P= Peak, QP=Quasi-peak, Av=Average
(1) Restricted bands of operation in 15.205
(2) The peak level is lower than the average limit (54 dBµV/m)

Frequency 927.5 MHz

Frequencies (MHz)	Detector P QP Av	RBW (kHz)	Polarization H: Horizontal V: Vertical	Field strength Measured at 3 m (dBµV/m)	Limits (dBm)	Margin (dB)
1855.4 (1)	P	100	V	43.68	93	49.32
2782.5	P	1000	V	43.89 (2)	74	30.11
3710	P	1000	H	44.37 (2)	74	29.63

P= Peak, QP=Quasi-peak, Av=Average
(1) Restricted bands of operation in 15.205
(2) The peak level is lower than the average limit (54 dBµV/m)

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 123 dBµV/m.

So the applicable limit is 93 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)).

SPREAD FACTOR 12

Frequency 923.3 MHz

Frequencies (MHz)	Detector P QP Av	RBW (kHz)	Polarization H: Horizontal V: Vertical	Field strength Measured at 3 m (dBµV/m)	Limits (dBm)	Margin (dB)
1846.6 (1)	P	100	V	41.49	93	51.51
2769.9	P	1000	V	43.16 (2)	74	30.84
3693.2	P	1000	H	44.6 (2)	74	29.4

P= Peak, QP=Quasi-peak, Av=Average
(1) Restricted bands of operation in 15.205
(2) The peak level is lower than the average limit (54 dBµV/m)

Frequency 925.7 MHz

Frequencies (MHz)	Detector P QP Av	RBW (kHz)	Polarization H: Horizontal V: Vertical	Field strength Measured at 3 m (dBµV/m)	Limits (dBm)	Margin (dB)
1851.4 (1)	P	100	V	43.04	93	49.96
2777.1	P	1000	V	44.96 (2)	74	29.04
3702.8	P	1000	V	42.58 (2)	74	31.42

P= Peak, QP=Quasi-peak, Av=Average
(1) Restricted bands of operation in 15.205
(2) The peak level is lower than the average limit (54 dBµV/m)

Frequency 927.5 MHz

Frequencies (MHz)	Detector P QP Av	RBW (kHz)	Polarization H: Horizontal V: Vertical	Field strength Measured at 3 m (dBµV/m)	Limits (dBm)	Margin (dB)
1855.4 (1)	P	100	V	42.86	93	50.14
2782.5	P	1000	V	43.05 (2)	74	30.95
3710	P	1000	H	43.34 (2)	74	30.66

P= Peak, QP=Quasi-peak, Av=Average
(1) Restricted bands of operation in 15.205
(2) The peak level is lower than the average limit (54 dBµV/m)

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 123 dBµV/m.

So the applicable limit is 93 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)).

Module 4

RF OUTPUT 1

SPREAD FACTOR 7

Frequency 923.3 MHz

Frequencies (MHz)	Detector P QP Av	RBW (kHz)	Polarization H: Horizontal V: Vertical	Field strength Measured at 3 m (dBµV/m)	Limits (dBm)	Margin (dB)
1846.6 (1)	P	100	V	45.23	93	47.77
2769.9	P	1000	V	43.77 (2)	74	30.23
3693.2	P	1000	H	45.32 (2)	74	28.68

P= Peak, QP=Quasi-peak, Av=Average
(1) Restricted bands of operation in 15.205
(2) The peak level is lower than the average limit (54 dBµV/m)

Frequency 925.7 MHz

Frequencies (MHz)	Detector P QP Av	RBW (kHz)	Polarization H: Horizontal V: Vertical	Field strength Measured at 3 m (dBµV/m)	Limits (dBm)	Margin (dB)
1851.4 (1)	P	100	V	47.53	93	45.47
2777.1	P	1000	V	45.22 (2)	74	28.78
3702.8	P	1000	H	44.94 (2)	74	29.06
6479.9 (1)	P	100	V	48.11	93	44.89

P= Peak, QP=Quasi-peak, Av=Average
(1) Restricted bands of operation in 15.205
(2) The peak level is lower than the average limit (54 dBµV/m)

Frequency 927.5 MHz

Frequencies (MHz)	Detector P QP Av	RBW (kHz)	Polarization H: Horizontal V: Vertical	Field strength Measured at 3 m (dBµV/m)	Limits (dBm)	Margin (dB)
1855.4 (1)	P	100	V	45.94	93	47.06
2782.5	P	1000	V	44.35 (2)	74	29.65
3710	P	1000	H	44.98 (2)	74	29.02
6492.5 (1)	P	100	V	45.45	93	47.55

P= Peak, QP=Quasi-peak, Av=Average
(1) Restricted bands of operation in 15.205
(2) The peak level is lower than the average limit (54 dBµV/m)

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 123 dBµV/m.

So the applicable limit is 93 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)).

SPREAD FACTOR 12

Frequency 923.3 MHz

Frequencies (MHz)	Detector P QP Av	RBW (kHz)	Polarization H: Horizontal V: Vertical	Field strength Measured at 3 m (dBµV/m)	Limits (dBm)	Margin (dB)
1846.6 (1)	P	100	V	44.84	93	48.16
2769.9	P	1000	V	44.92 (2)	74	29.08
3693.2	P	1000	H	45.47 (2)	74	28.53

P= Peak, QP=Quasi-peak, Av=Average
(1) Restricted bands of operation in 15.205
(2) The peak level is lower than the average limit (54 dBµV/m)

Frequency 925.7 MHz

Frequencies (MHz)	Detector P QP Av	RBW (kHz)	Polarization H: Horizontal V: Vertical	Field strength Measured at 3 m (dBµV/m)	Limits (dBm)	Margin (dB)
1851.4 (1)	P	100	V	47.72	93	45.28
2777.1	P	1000	V	45.12 (2)	74	28.88
3702.8	P	1000	H	45.05 (2)	74	28.95
6479.9 (1)	P	100	V	46.85	93	46.15

P= Peak, QP=Quasi-peak, Av=Average
(1) Restricted bands of operation in 15.205
(2) The peak level is lower than the average limit (54 dBµV/m)

Frequency 927.5 MHz

Frequencies (MHz)	Detector P QP Av	RBW (kHz)	Polarization H: Horizontal V: Vertical	Field strength Measured at 3 m (dBµV/m)	Limits (dBm)	Margin (dB)
1855.4 (1)	P	100	V	45.36	93	47.64
2782.5	P	1000	V	43.18 (2)	74	30.82
3710	P	1000	H	44.3 (2)	74	29.7

P= Peak, QP=Quasi-peak, Av=Average
(1) Restricted bands of operation in 15.205
(2) The peak level is lower than the average limit (54 dBµV/m)

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 123 dBµV/m.

So the applicable limit is 93 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)).

RF OUTPUT 2

SPREAD FACTOR 7

Frequency 923.3 MHz

Frequencies (MHz)	Detector P QP Av	RBW (kHz)	Polarization H: Horizontal V: Vertical	Field strength Measured at 3 m (dBµV/m)	Limits (dBm)	Margin (dB)
1846.6 (1)	P	100	V	40.48	93	52.52
2769.9	P	1000	V	44.07 (2)	74	29.93
3693.2	P	1000	H	46.67 (2)	74	27.33
4616.5	P	1000	V	46.52	74	27.48

P= Peak, QP=Quasi-peak, Av=Average
(1) Restricted bands of operation in 15.205
(2) The peak level is lower than the average limit (54 dBµV/m)

Frequency 925.7 MHz

Frequencies (MHz)	Detector P QP Av	RBW (kHz)	Polarization H: Horizontal V: Vertical	Field strength Measured at 3 m (dBµV/m)	Limits (dBm)	Margin (dB)
1851.4 (1)	P	100	V	43.89	93	49.11
2777.1	P	1000	V	43.74 (2)	74	30.26
3702.8	P	1000	H	47.9 (2)	74	26.1
4628.5	P	1000	H	46.94 (2)	74	27.06
6479.9 (1)	P	100	V	47.44	93	45.56

P= Peak, QP=Quasi-peak, Av=Average
(1) Restricted bands of operation in 15.205
(2) The peak level is lower than the average limit (54 dBµV/m)

Frequency 927.5 MHz

Frequencies (MHz)	Detector P QP Av	RBW (kHz)	Polarization H: Horizontal V: Vertical	Field strength Measured at 3 m (dBµV/m)	Limits (dBm)	Margin (dB)
1855.4 (1)	P	100	V	42.77	93	50.23
2782.5	P	1000	V	42.85 (2)	74	31.15
3710	P	1000	H	48.31 (2)	74	25.69
4637.5	P	1000	H	45.72 (2)	74	28.28

P= Peak, QP=Quasi-peak, Av=Average
(1) Restricted bands of operation in 15.205
(2) The peak level is lower than the average limit (54 dBµV/m)

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 123 dBµV/m.

So the applicable limit is 93 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)).

SPREAD FACTOR 12

Frequency 923.3 MHz

Frequencies (MHz)	Detector P QP Av	RBW (kHz)	Polarization H: Horizontal V: Vertical	Field strength Measured at 3 m (dBµV/m)	Limits (dBm)	Margin (dB)
1846.6 (1)	P	100	V	40.255	93	52.745
2769.9	P	1000	V	44 (2)	74	30
3693.2	P	1000	H	47.04 (2)	74	26.96
4616.5	P	1000	H	47.93 (2)	74	26.07

P= Peak, QP=Quasi-peak, Av=Average
(1) Restricted bands of operation in 15.205
(2) The peak level is lower than the average limit (54 dBµV/m)

Frequency 925.7 MHz

Frequencies (MHz)	Detector P QP Av	RBW (kHz)	Polarization H: Horizontal V: Vertical	Field strength Measured at 3 m (dBµV/m)	Limits (dBm)	Margin (dB)
1851.4 (1)	P	100	V	43.97	93	49.03
2777.1	P	1000	V	43.95 (2)	74	30.05
3702.8	P	1000	H	47.44 (2)	74	26.56
4628.5	P	1000	H	47.49 (2)	74	26.51
6479.9 (1)	P	100	V	47.38	93	45.62

P= Peak, QP=Quasi-peak, Av=Average
(1) Restricted bands of operation in 15.205
(2) The peak level is lower than the average limit (54 dBµV/m)

Frequency 927.5 MHz

Frequencies (MHz)	Detector P QP Av	RBW (kHz)	Polarization H: Horizontal V: Vertical	Field strength Measured at 3 m (dBµV/m)	Limits (dBm)	Margin (dB)
1855.4 (1)	P	100	V	42.61	93	50.39
2782.5	P	1000	V	42.13 (2)	74	31.87
3710	P	1000	H	47.91 (2)	74	26.09
4637.5	P	1000	H	45.46 (2)	74	28.54

P= Peak, QP=Quasi-peak, Av=Average
(1) Restricted bands of operation in 15.205
(2) The peak level is lower than the average limit (54 dBµV/m)

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 123 dBµV/m.

So the applicable limit is 93 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. MAXIMUM CONDUCTED POWER DENSITY

Temperature (°C) : 20 to 22 **Humidity (%HR):** 31to 36 **Date :** April 1, 2019 and April 2, 2019

Technician : T. LEDRESSEUR

Standard: FCC Part 15

Test procedure: paragraph 15.247 (e)

AVGPSD-1 of paragraph 11.10.3 of ANSI C63.10

Test set up:

The measure is realized in conducted mode with an analyser.

Span: 2 MHz
Resolution bandwidth: 3kHz
Video bandwidth: 10 kHz
Detector: RMS
Number of points: 1400
Sweep time: 22.3ms
Trace mode: Avg (Power)

Then the peak marker function is used.

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. The measure is repeated for each Module, output and Spread Factor.

Then all the measure are repeated with the output power at 24dBm

Power source: 120 Vac through a variac
Percentage of voltage variation during the test (%): ± 1

Results:

Output power 30dBm

Module 1

RF OUTPUT 1

SPREAD FACTOR 7

Frequency 923.3 MHz

Maximum conducted power density (dBm / 3 kHz)	Limit (dBm / 3 kHz)
8	8

Declared maximum antenna gain: 6 dBi
See curve in appendix 7

Frequency 925.7 MHz

Maximum conducted power density (dBm / 3 kHz)	Limit (dBm / 3 kHz)
7.75	8

Declared maximum antenna gain: 6 dBi
See curve in appendix 7

Frequency 927.5 MHz

Maximum conducted power density (dBm / 3 kHz)	Limit (dBm / 3 kHz)
7.9	8

Declared maximum antenna gain: 6 dBi
See curve in appendix 7

SPREAD FACTOR 12

Frequency 923.3 MHz

Maximum conducted power density (dBm / 3 kHz)	Limit (dBm / 3 kHz)
7.19	8

Declared maximum antenna gain: 6 dBi
See curve in appendix 7

Frequency 925.7 MHz

Maximum conducted power density (dBm / 3 kHz)	Limit (dBm / 3 kHz)
7.68	8

Declared maximum antenna gain: 6 dBi
See curve in appendix 7

Frequency 927.5 MHz

Maximum conducted power density (dBm / 3 kHz)	Limit (dBm / 3 kHz)
7.55	8

Declared maximum antenna gain: 6 dBi
See curve in appendix 7

RF OUTPUT 2

SPREAD FACTOR 7

Frequency 923.3 MHz

Maximum conducted power density (dBm / 3 kHz)	Limit (dBm / 3 kHz)
7.43	8

Declared maximum antenna gain: 6 dBi
See curve in appendix 7

Frequency 925.7 MHz

Maximum conducted power density (dBm / 3 kHz)	Limit (dBm / 3 kHz)
7.81	8

Declared maximum antenna gain: 6 dBi
See curve in appendix 7

Frequency 927.5 MHz

Maximum conducted power density (dBm / 3 kHz)	Limit (dBm / 3 kHz)
7.49	8

Declared maximum antenna gain: 6 dBi
See curve in appendix 7

SPREAD FACTOR 12

Frequency 923.3 MHz

Maximum conducted power density (dBm / 3 kHz)	Limit (dBm / 3 kHz)
6.98	8

Declared maximum antenna gain: 6 dBi
See curve in appendix 7

Frequency 925.7 MHz

Maximum conducted power density (dBm / 3 kHz)	Limit (dBm / 3 kHz)
7.67	8

Declared maximum antenna gain: 6 dBi
See curve in appendix 7

Frequency 927.5 MHz

Maximum conducted power density (dBm / 3 kHz)	Limit (dBm / 3 kHz)
6.89	8

Declared maximum antenna gain: 6 dBi
See curve in appendix 7

Module 2

RF OUTPUT 1

SPREAD FACTOR 7

Frequency 923.3 MHz

Maximum conducted power density (dBm / 3 kHz)	Limit (dBm / 3 kHz)
7.7	8

Declared maximum antenna gain: 6 dBi
See curve in appendix 7

Frequency 925.7 MHz

Maximum conducted power density (dBm / 3 kHz)	Limit (dBm / 3 kHz)
7.86	8

Declared maximum antenna gain: 6 dBi
See curve in appendix 7

Frequency 927.5 MHz

Maximum conducted power density (dBm / 3 kHz)	Limit (dBm / 3 kHz)
7.91	8

Declared maximum antenna gain: 6 dBi
See curve in appendix 7

SPREAD FACTOR 12

Frequency 923.3 MHz

Maximum conducted power density (dBm / 3 kHz)	Limit (dBm / 3 kHz)
7.5	8

Declared maximum antenna gain: 6 dBi
See curve in appendix 7

Frequency 925.7 MHz

Maximum conducted power density (dBm / 3 kHz)	Limit (dBm / 3 kHz)
7.87	8

Declared maximum antenna gain: 6 dBi
See curve in appendix 7

Frequency 927.5 MHz

Maximum conducted power density (dBm / 3 kHz)	Limit (dBm / 3 kHz)
7.32	8

Declared maximum antenna gain: 6 dBi
See curve in appendix 7

RF OUTPUT 2

SPREAD FACTOR 7

Frequency 923.3 MHz

Maximum conducted power density (dBm / 3 kHz)	Limit (dBm / 3 kHz)
6.99	8

Declared maximum antenna gain: 6 dBi
See curve in appendix 7

Frequency 925.7 MHz

Maximum conducted power density (dBm / 3 kHz)	Limit (dBm / 3 kHz)
7.46	8

Declared maximum antenna gain: 6 dBi
See curve in appendix 7

Frequency 927.5 MHz

Maximum conducted power density (dBm / 3 kHz)	Limit (dBm / 3 kHz)
7.17	8

Declared maximum antenna gain: 6 dBi
See curve in appendix 7

SPREAD FACTOR 12

Frequency 923.3 MHz

Maximum conducted power density (dBm / 3 kHz)	Limit (dBm / 3 kHz)
6.66	8

Declared maximum antenna gain: 6 dBi
See curve in appendix 7

Frequency 925.7 MHz

Maximum conducted power density (dBm / 3 kHz)	Limit (dBm / 3 kHz)
7.18	8

Declared maximum antenna gain: 6 dBi
See curve in appendix 7

Frequency 927.5 MHz

Maximum conducted power density (dBm / 3 kHz)	Limit (dBm / 3 kHz)
6.97	8

Declared maximum antenna gain: 6 dBi
See curve in appendix 7

Module 3

RF OUTPUT 1

SPREAD FACTOR 7

Frequency 923.3 MHz

Maximum conducted power density (dBm / 3 kHz)	Limit (dBm / 3 kHz)
7.69	8

Declared maximum antenna gain: 6 dBi
See curve in appendix 7

Frequency 925.7 MHz

Maximum conducted power density (dBm / 3 kHz)	Limit (dBm / 3 kHz)
7.79	8

Declared maximum antenna gain: 6 dBi
See curve in appendix 7

Frequency 927.5 MHz

Maximum conducted power density (dBm / 3 kHz)	Limit (dBm / 3 kHz)
7.81	8

Declared maximum antenna gain: 6 dBi
See curve in appendix 7

SPREAD FACTOR 12

Frequency 923.3 MHz

Maximum conducted power density (dBm / 3 kHz)	Limit (dBm / 3 kHz)
7.46	8

Declared maximum antenna gain: 6 dBi
See curve in appendix 7

Frequency 925.7 MHz

Maximum conducted power density (dBm / 3 kHz)	Limit (dBm / 3 kHz)
7.69	8

Declared maximum antenna gain: 6 dBi
See curve in appendix 7

Frequency 927.5 MHz

Maximum conducted power density (dBm / 3 kHz)	Limit (dBm / 3 kHz)
7.75	8

Declared maximum antenna gain: 6 dBi
See curve in appendix 7

RF OUTPUT 2

SPREAD FACTOR 7

Frequency 923.3 MHz

Maximum conducted power density (dBm / 3 kHz)	Limit (dBm / 3 kHz)
6.56	8

Declared maximum antenna gain: 6 dBi
See curve in appendix 7

Frequency 925.7 MHz

Maximum conducted power density (dBm / 3 kHz)	Limit (dBm / 3 kHz)
7.21	8

Declared maximum antenna gain: 6 dBi
See curve in appendix 7

Frequency 927.5 MHz

Maximum conducted power density (dBm / 3 kHz)	Limit (dBm / 3 kHz)
6.96	8

Declared maximum antenna gain: 6 dBi
See curve in appendix 7

SPREAD FACTOR 12

Frequency 923.3 MHz

Maximum conducted power density (dBm / 3 kHz)	Limit (dBm / 3 kHz)
6.23	8

Declared maximum antenna gain: 6 dBi
See curve in appendix 7

Frequency 925.7 MHz

Maximum conducted power density (dBm / 3 kHz)	Limit (dBm / 3 kHz)
7.52	8

Declared maximum antenna gain: 6 dBi
See curve in appendix 7

Frequency 927.5 MHz

Maximum conducted power density (dBm / 3 kHz)	Limit (dBm / 3 kHz)
6.28	8

Declared maximum antenna gain: 6 dBi
See curve in appendix 7

Module 4

RF OUTPUT 1

SPREAD FACTOR 7

Frequency 923.3 MHz

Maximum conducted power density (dBm / 3 kHz)	Limit (dBm / 3 kHz)
7.76	8

Declared maximum antenna gain: 6 dBi
See curve in appendix 7

Frequency 925.7 MHz

Maximum conducted power density (dBm / 3 kHz)	Limit (dBm / 3 kHz)
8	8

Declared maximum antenna gain: 6 dBi
See curve in appendix 7

Frequency 927.5 MHz

Maximum conducted power density (dBm / 3 kHz)	Limit (dBm / 3 kHz)
7.86	8

Declared maximum antenna gain: 6 dBi
See curve in appendix 7

SPREAD FACTOR 12

Frequency 923.3 MHz

Maximum conducted power density (dBm / 3 kHz)	Limit (dBm / 3 kHz)
7.73	8

Declared maximum antenna gain: 6 dBi
See curve in appendix 7

Frequency 925.7 MHz

Maximum conducted power density (dBm / 3 kHz)	Limit (dBm / 3 kHz)
7.59	8

Declared maximum antenna gain: 6 dBi
See curve in appendix 7

Frequency 927.5 MHz

Maximum conducted power density (dBm / 3 kHz)	Limit (dBm / 3 kHz)
7.6	8

Declared maximum antenna gain: 6 dBi
See curve in appendix 7

RF OUTPUT 2

SPREAD FACTOR 7

Frequency 923.3 MHz

Maximum conducted power density (dBm / 3 kHz)	Limit (dBm / 3 kHz)
7.11	8

Declared maximum antenna gain: 6 dBi
See curve in appendix 7

Frequency 925.7 MHz

Maximum conducted power density (dBm / 3 kHz)	Limit (dBm / 3 kHz)
7.67	8

Declared maximum antenna gain: 6 dBi
See curve in appendix 7

Frequency 927.5 MHz

Maximum conducted power density (dBm / 3 kHz)	Limit (dBm / 3 kHz)
7.31	8

Declared maximum antenna gain: 6 dBi
See curve in appendix 7

SPREAD FACTOR 12

Frequency 923.3 MHz

Maximum conducted power density (dBm / 3 kHz)	Limit (dBm / 3 kHz)
6.6	8

Declared maximum antenna gain: 6 dBi
See curve in appendix 7

Frequency 925.7 MHz

Maximum conducted power density (dBm / 3 kHz)	Limit (dBm / 3 kHz)
7.25	8

Declared maximum antenna gain: 6 dBi
See curve in appendix 7

Frequency 927.5 MHz

Maximum conducted power density (dBm / 3 kHz)	Limit (dBm / 3 kHz)
6.94	8

Declared maximum antenna gain: 6 dBi
See curve in appendix 7

Output power 24dBm

Module 1

RF OUTPUT 1

SPREAD FACTOR 7

Frequency 923.3 MHz

Maximum conducted power density (dBm / 3 kHz)	Limit (dBm / 3 kHz)
1.98	8

Declared maximum antenna gain: 6 dBi
See curve in appendix 7

Frequency 925.7 MHz

Maximum conducted power density (dBm / 3 kHz)	Limit (dBm / 3 kHz)
2.7	8

Declared maximum antenna gain: 6 dBi
See curve in appendix 7

Frequency 927.5 MHz

Maximum conducted power density (dBm / 3 kHz)	Limit (dBm / 3 kHz)
2.7	8

Declared maximum antenna gain: 6 dBi
See curve in appendix 7

SPREAD FACTOR 12

Frequency 923.3 MHz

Maximum conducted power density (dBm / 3 kHz)	Limit (dBm / 3 kHz)
2.07	8

Declared maximum antenna gain: 6 dBi
See curve in appendix 7

Frequency 925.7 MHz

Maximum conducted power density (dBm / 3 kHz)	Limit (dBm / 3 kHz)
2.48	8

Declared maximum antenna gain: 6 dBi
See curve in appendix 7

Frequency 927.5 MHz

Maximum conducted power density (dBm / 3 kHz)	Limit (dBm / 3 kHz)
2.7	8

Declared maximum antenna gain: 6 dBi
See curve in appendix 7

RF OUTPUT 2

SPREAD FACTOR 7

Frequency 923.3 MHz

Maximum conducted power density (dBm / 3 kHz)	Limit (dBm / 3 kHz)
1.05	8

Declared maximum antenna gain: 6 dBi
See curve in appendix 7

Frequency 925.7 MHz

Maximum conducted power density (dBm / 3 kHz)	Limit (dBm / 3 kHz)
2	8

Declared maximum antenna gain: 6 dBi
See curve in appendix 7

Frequency 927.5 MHz

Maximum conducted power density (dBm / 3 kHz)	Limit (dBm / 3 kHz)
1.65	8

Declared maximum antenna gain: 6 dBi
See curve in appendix 7

SPREAD FACTOR 12

Frequency 923.3 MHz

Maximum conducted power density (dBm / 3 kHz)	Limit (dBm / 3 kHz)
1.48	8

Declared maximum antenna gain: 6 dBi
See curve in appendix 7

Frequency 925.7 MHz

Maximum conducted power density (dBm / 3 kHz)	Limit (dBm / 3 kHz)
1.99	8

Declared maximum antenna gain: 6 dBi
See curve in appendix 7

Frequency 927.5 MHz

Maximum conducted power density (dBm / 3 kHz)	Limit (dBm / 3 kHz)
1.28	8

Declared maximum antenna gain: 6 dBi
See curve in appendix 7

Module 2

RF OUTPUT 1

SPREAD FACTOR 7

Frequency 923.3 MHz

Maximum conducted power density (dBm / 3 kHz)	Limit (dBm / 3 kHz)
1.51	8

Declared maximum antenna gain: 6 dBi
See curve in appendix 7

Frequency 925.7 MHz

Maximum conducted power density (dBm / 3 kHz)	Limit (dBm / 3 kHz)
2.35	8

Declared maximum antenna gain: 6 dBi
See curve in appendix 7

Frequency 927.5 MHz

Maximum conducted power density (dBm / 3 kHz)	Limit (dBm / 3 kHz)
2.21	8

Declared maximum antenna gain: 6 dBi
See curve in appendix 7

SPREAD FACTOR 12

Frequency 923.3 MHz

Maximum conducted power density (dBm / 3 kHz)	Limit (dBm / 3 kHz)
1.95	8

Declared maximum antenna gain: 6 dBi
See curve in appendix 7

Frequency 925.7 MHz

Maximum conducted power density (dBm / 3 kHz)	Limit (dBm / 3 kHz)
1.78	8

Declared maximum antenna gain: 6 dBi
See curve in appendix 7

Frequency 927.5 MHz

Maximum conducted power density (dBm / 3 kHz)	Limit (dBm / 3 kHz)
2.05	8

Declared maximum antenna gain: 6 dBi
See curve in appendix 7

RF OUTPUT 2

SPREAD FACTOR 7

Frequency 923.3 MHz

Maximum conducted power density (dBm / 3 kHz)	Limit (dBm / 3 kHz)
0.52	8

Declared maximum antenna gain: 6 dBi
See curve in appendix 7

Frequency 925.7 MHz

Maximum conducted power density (dBm / 3 kHz)	Limit (dBm / 3 kHz)
1.15	8

Declared maximum antenna gain: 6 dBi
See curve in appendix 7

Frequency 927.5 MHz

Maximum conducted power density (dBm / 3 kHz)	Limit (dBm / 3 kHz)
0.79	8

Declared maximum antenna gain: 6 dBi
See curve in appendix 7

SPREAD FACTOR 12

Frequency 923.3 MHz

Maximum conducted power density (dBm / 3 kHz)	Limit (dBm / 3 kHz)
0.31	8

Declared maximum antenna gain: 6 dBi
See curve in appendix 7

Frequency 925.7 MHz

Maximum conducted power density (dBm / 3 kHz)	Limit (dBm / 3 kHz)
1.06	8

Declared maximum antenna gain: 6 dBi
See curve in appendix 7

Frequency 927.5 MHz

Maximum conducted power density (dBm / 3 kHz)	Limit (dBm / 3 kHz)
0.02	8

Declared maximum antenna gain: 6 dBi
See curve in appendix 7

Module 3

RF OUTPUT 1

SPREAD FACTOR 7

Frequency 923.3 MHz

Maximum conducted power density (dBm / 3 kHz)	Limit (dBm / 3 kHz)
1.89	8

Declared maximum antenna gain: 6 dBi
See curve in appendix 7

Frequency 925.7 MHz

Maximum conducted power density (dBm / 3 kHz)	Limit (dBm / 3 kHz)
2.71	8

Declared maximum antenna gain: 6 dBi
See curve in appendix 7

Frequency 927.5 MHz

Maximum conducted power density (dBm / 3 kHz)	Limit (dBm / 3 kHz)
2.44	8

Declared maximum antenna gain: 6 dBi
See curve in appendix 7

SPREAD FACTOR 12

Frequency 923.3 MHz

Maximum conducted power density (dBm / 3 kHz)	Limit (dBm / 3 kHz)
2.34	8

Declared maximum antenna gain: 6 dBi
See curve in appendix 7

Frequency 925.7 MHz

Maximum conducted power density (dBm / 3 kHz)	Limit (dBm / 3 kHz)
2.38	8

Declared maximum antenna gain: 6 dBi
See curve in appendix 7

Frequency 927.5 MHz

Maximum conducted power density (dBm / 3 kHz)	Limit (dBm / 3 kHz)
1.97	8

Declared maximum antenna gain: 6 dBi
See curve in appendix 7

RF OUTPUT 2

SPREAD FACTOR 7

Frequency 923.3 MHz

Maximum conducted power density (dBm / 3 kHz)	Limit (dBm / 3 kHz)
0.02	8

Declared maximum antenna gain: 6 dBi
See curve in appendix 7

Frequency 925.7 MHz

Maximum conducted power density (dBm / 3 kHz)	Limit (dBm / 3 kHz)
0.88	8

Declared maximum antenna gain: 6 dBi
See curve in appendix 7

Frequency 927.5 MHz

Maximum conducted power density (dBm / 3 kHz)	Limit (dBm / 3 kHz)
0.65	8

Declared maximum antenna gain: 6 dBi
See curve in appendix 7

SPREAD FACTOR 12

Frequency 923.3 MHz

Maximum conducted power density (dBm / 3 kHz)	Limit (dBm / 3 kHz)
0.57	8

Declared maximum antenna gain: 6 dBi
See curve in appendix 7

Frequency 925.7 MHz

Maximum conducted power density (dBm / 3 kHz)	Limit (dBm / 3 kHz)
0.87	8

Declared maximum antenna gain: 6 dBi
See curve in appendix 7

Frequency 927.5 MHz

Maximum conducted power density (dBm / 3 kHz)	Limit (dBm / 3 kHz)
0.31	8

Declared maximum antenna gain: 6 dBi
See curve in appendix 7

Module 4

RF OUTPUT 1

SPREAD FACTOR 7

Frequency 923.3 MHz

Maximum conducted power density (dBm / 3 kHz)	Limit (dBm / 3 kHz)
1.86	8

Declared maximum antenna gain: 6 dBi
See curve in appendix 7

Frequency 925.7 MHz

Maximum conducted power density (dBm / 3 kHz)	Limit (dBm / 3 kHz)
2.76	8

Declared maximum antenna gain: 6 dBi
See curve in appendix 7

Frequency 927.5 MHz

Maximum conducted power density (dBm / 3 kHz)	Limit (dBm / 3 kHz)
2.76	8

Declared maximum antenna gain: 6 dBi
See curve in appendix 7

SPREAD FACTOR 12

Frequency 923.3 MHz

Maximum conducted power density (dBm / 3 kHz)	Limit (dBm / 3 kHz)
2.1	8

Declared maximum antenna gain: 6 dBi
See curve in appendix 7

Frequency 925.7 MHz

Maximum conducted power density (dBm / 3 kHz)	Limit (dBm / 3 kHz)
1.91	8

Declared maximum antenna gain: 6 dBi
See curve in appendix 7

Frequency 927.5 MHz

Maximum conducted power density (dBm / 3 kHz)	Limit (dBm / 3 kHz)
2.2	8

Declared maximum antenna gain: 6 dBi
See curve in appendix 7

RF OUTPUT 2

SPREAD FACTOR 7

Frequency 923.3 MHz

Maximum conducted power density (dBm / 3 kHz)	Limit (dBm / 3 kHz)
1.12	8

Declared maximum antenna gain: 6 dBi
See curve in appendix 7

Frequency 925.7 MHz

Maximum conducted power density (dBm / 3 kHz)	Limit (dBm / 3 kHz)
2.03	8

Declared maximum antenna gain: 6 dBi
See curve in appendix 7

Frequency 927.5 MHz

Maximum conducted power density (dBm / 3 kHz)	Limit (dBm / 3 kHz)
1.65	8

Declared maximum antenna gain: 6 dBi
See curve in appendix 7

SPREAD FACTOR 12

Frequency 923.3 MHz

Maximum conducted power density (dBm / 3 kHz)	Limit (dBm / 3 kHz)
0.65	8

Declared maximum antenna gain: 6 dBi
See curve in appendix 7

Frequency 925.7 MHz

Maximum conducted power density (dBm / 3 kHz)	Limit (dBm / 3 kHz)
1.52	8

Declared maximum antenna gain: 6 dBi
See curve in appendix 7

Frequency 927.5 MHz

Maximum conducted power density (dBm / 3 kHz)	Limit (dBm / 3 kHz)
1.71	8

Declared maximum antenna gain: 6 dBi
See curve in appendix 7

Test conclusion:

RESPECTED STANDARD

□□□ End of report, 7 appendixes to be forwarded □□□

APPENDIX 1: Photos of the equipment under test

APPENDIX 2: Test set up

Conducted setup

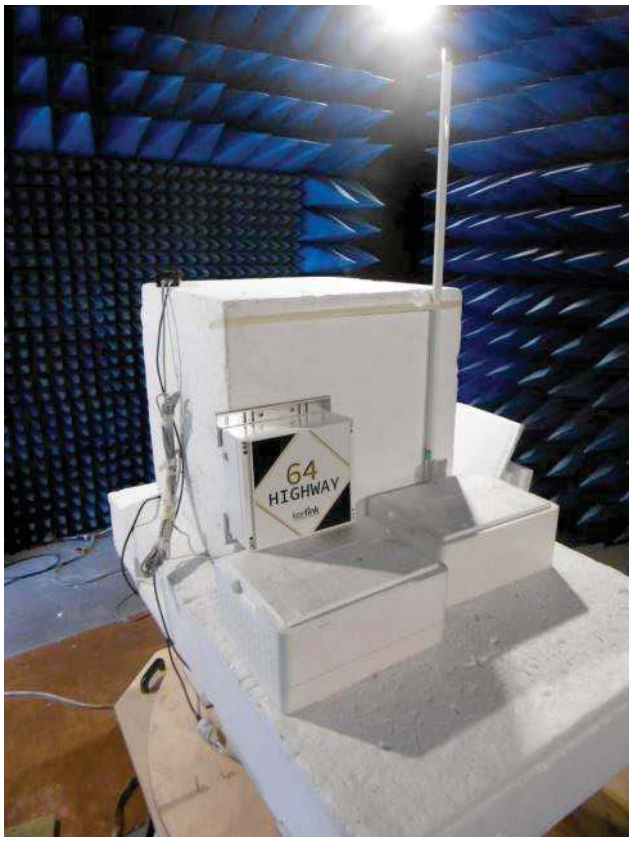
Antenna 3dBi

Antenna 6dBi

Anechoic chamber

Antenna 3dBi

Antenna 6dBi



APPENDIX 3: Test equipment list

Conducted limits

TYPE	MANUFACTURER	EMITECH NUMBER
Outside room Site	EMITECH	10788
Cable RG214 N	EMITECH	8590
Spectrum Analyzer ESI 7	Rohde & Schwarz	8707
LISN ESH3-Z5	Rohde & Schwarz	8720
Absorber sheath current	EMITECH	10523
Power source 1251RP	California instruments	8508
Multimeter 177	Fluke	14831
High pass filter EZ-25	Rohde & Schwarz	11535
Software	BAT-EMC V3.17.0.25	0000

Additional provisions to the general radiated emission limitations

TYPE	MANUFACTURER	EMITECH NUMBER
Satellite synchronized frequency standard GPS8	ACQUISYS	8896
Spectrum Analyzer FSV40	Rohde & Schwarz	15666
Attenuator 30dB 25W	Aéroflex	8552
Power source 1251RP	California instruments	8508
Multimeter 177	Fluke	14831
Meteo station WS-9232	La Crosse Technology	8750

Maximum conducted (average) output power

TYPE	MANUFACTURER	EMITECH NUMBER
Satellite synchronized frequency standard GPS8	ACQUISYS	8896
Spectrum Analyzer FSV40	Rohde & Schwarz	15666
Wideband sensor Z86	Rohde & Schwarz	11592
Attenuator 30dB 25W	Aéroflex	8552
Multimeter 177	Fluke	14831
Power source 1251RP	California instruments	8508
Meteo station WS-9232	La Crosse Technology	8750

Intentional radiator

TYPE	MANUFACTURER	EMITECH NUMBER
Anechoic Chamber	EMITECH	8593
Turntable controller MCU	MATURO	14736
Satellite synchronized frequency standard GPS8	ACQUISYS	8896
Cable N-5m	Huber + Suhner	12911
Cable N-1m	Huber + Suhner	15882
Cable N-1.5m	Suhner	6884
Spectrum Analyzer FSV40	Rohde & Schwarz	15666
Biconical antenna VHBB 9124	Schwarzbeck	8526
Log periodic antenna UHALP 9108A	Schwarzbeck	8543
Antenna 3115	EMCO	8535
Low-noise amplifier 8447D	Hewlett Packard	8511
Low-noise amplifier PAM-118A	COM-POWER	15812
Low pass filter HP12/1200-5AA	Filtek	7310
Multimeter 177	Fluke	14831
Meteo station WS-9232	La Crosse Technology	8750
Power source 1251RP	California instruments	8508
Software	BAT-EMC V3.17.0.25	0000

Maximum conducted power density

TYPE	MANUFACTURER	EMITECH NUMBER
Satellite synchronized frequency standard GPS8	ACQUISYS	8896
Spectrum Analyzer FSV40	Rohde & Schwarz	15666
Attenuator 30dB 25W	Aéroflex	8552
Power source 1251RP	California instruments	8508
Multimeter 177	Fluke	14831
Meteo station WS-9232	La Crosse Technology	8750

APPENDIX 4: 6 dB bandwidth

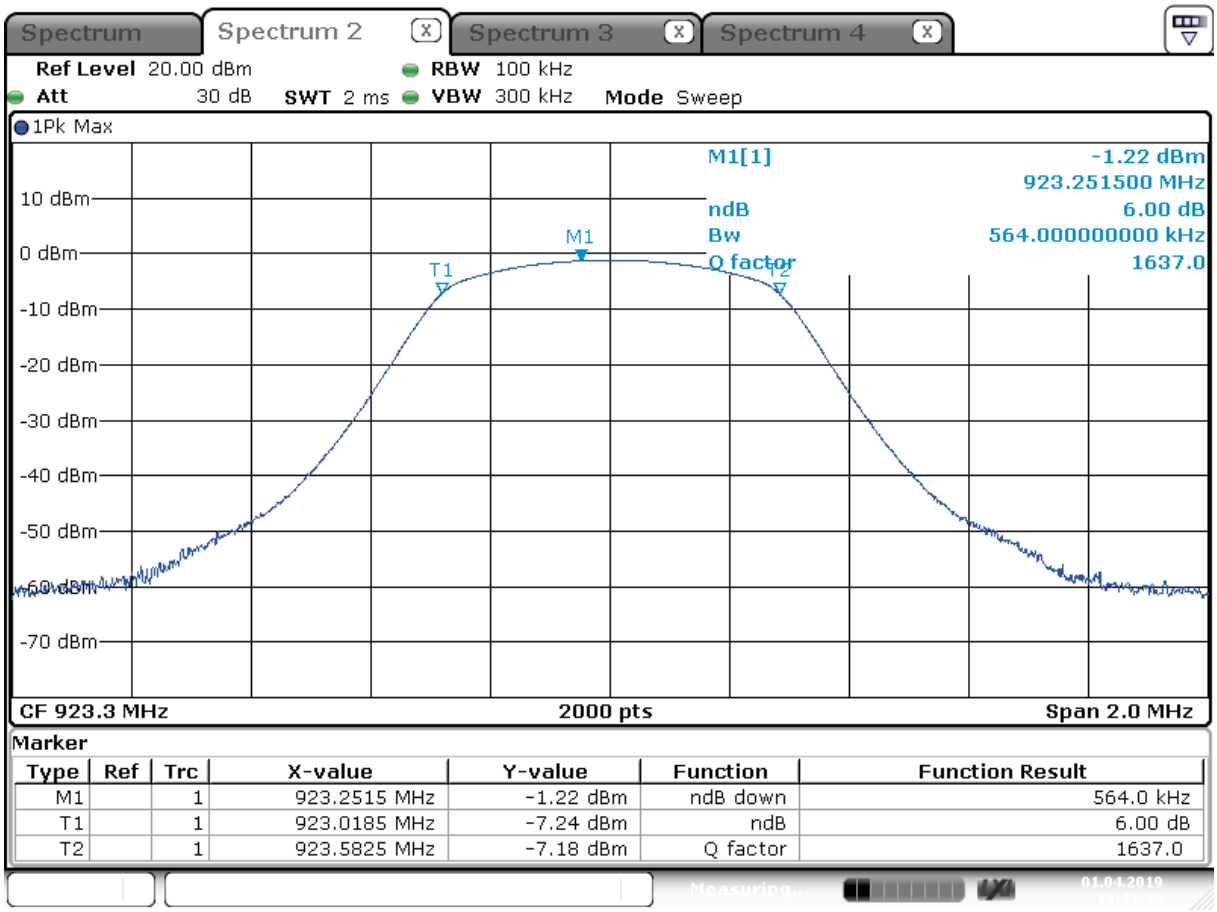
All measurement are realized with 30dBm

Module 1

RF OUTPUT 1

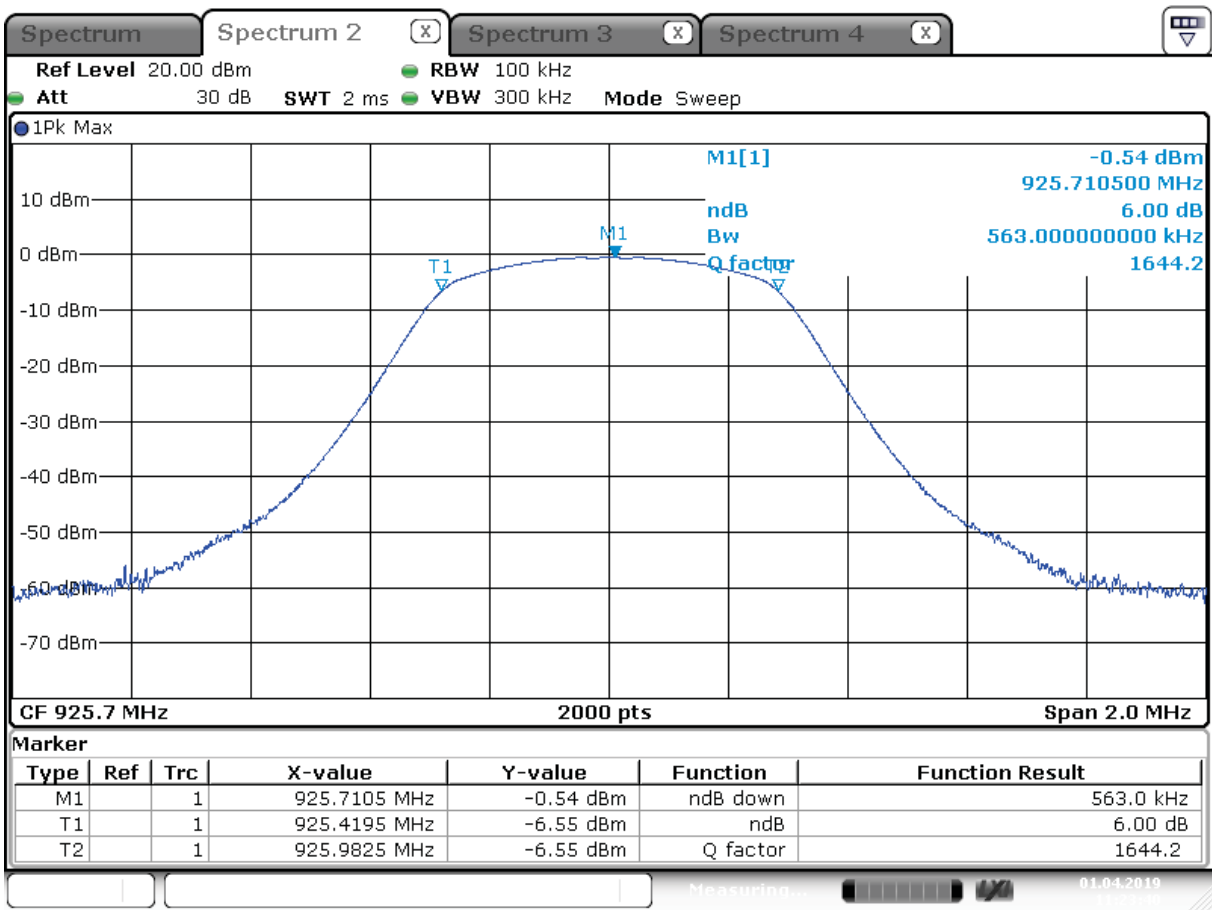
SPREAD FACTOR 7

Frequency 923.3 MHz



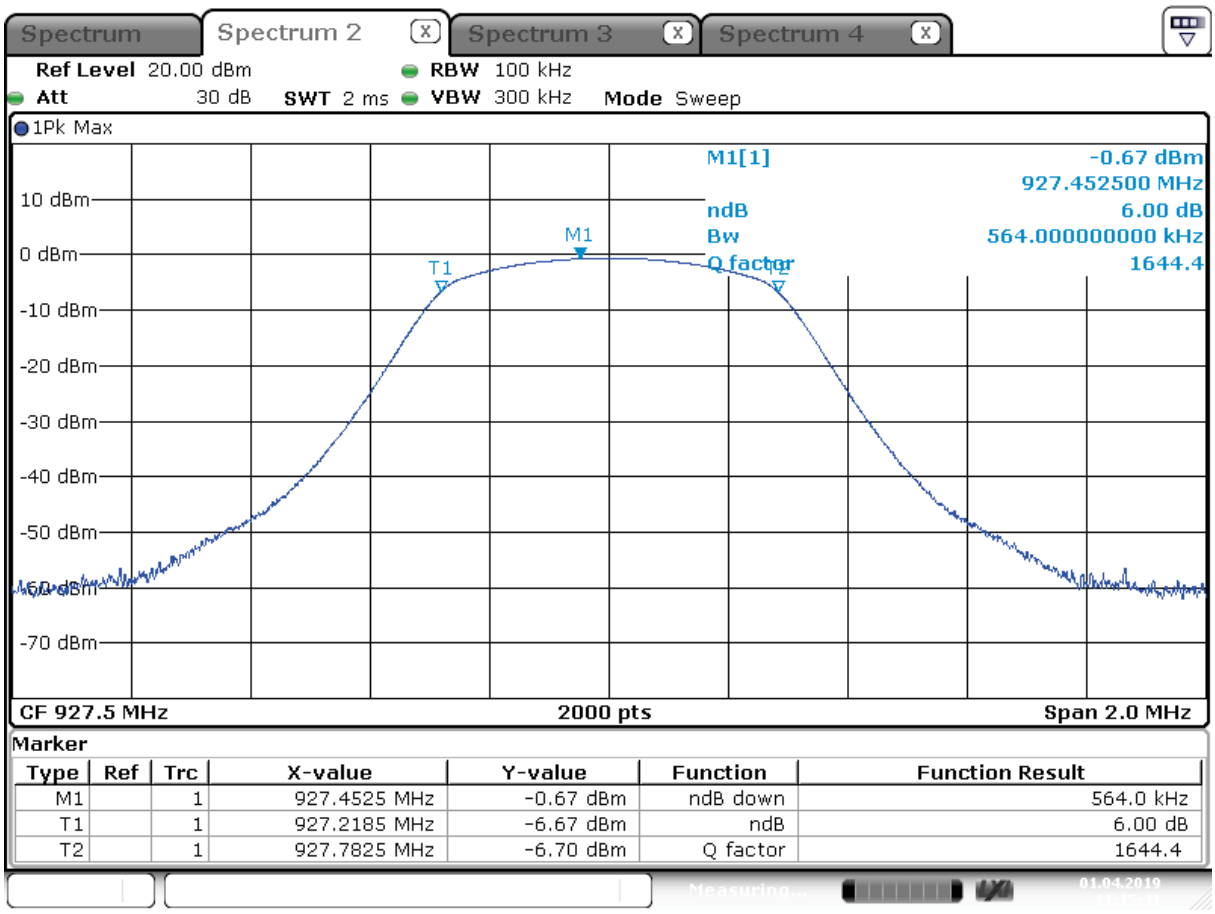
Date: 1.APR.2019 10:41:55

Frequency 925.7 MHz



Date: 1.APR.2019 11:23:41

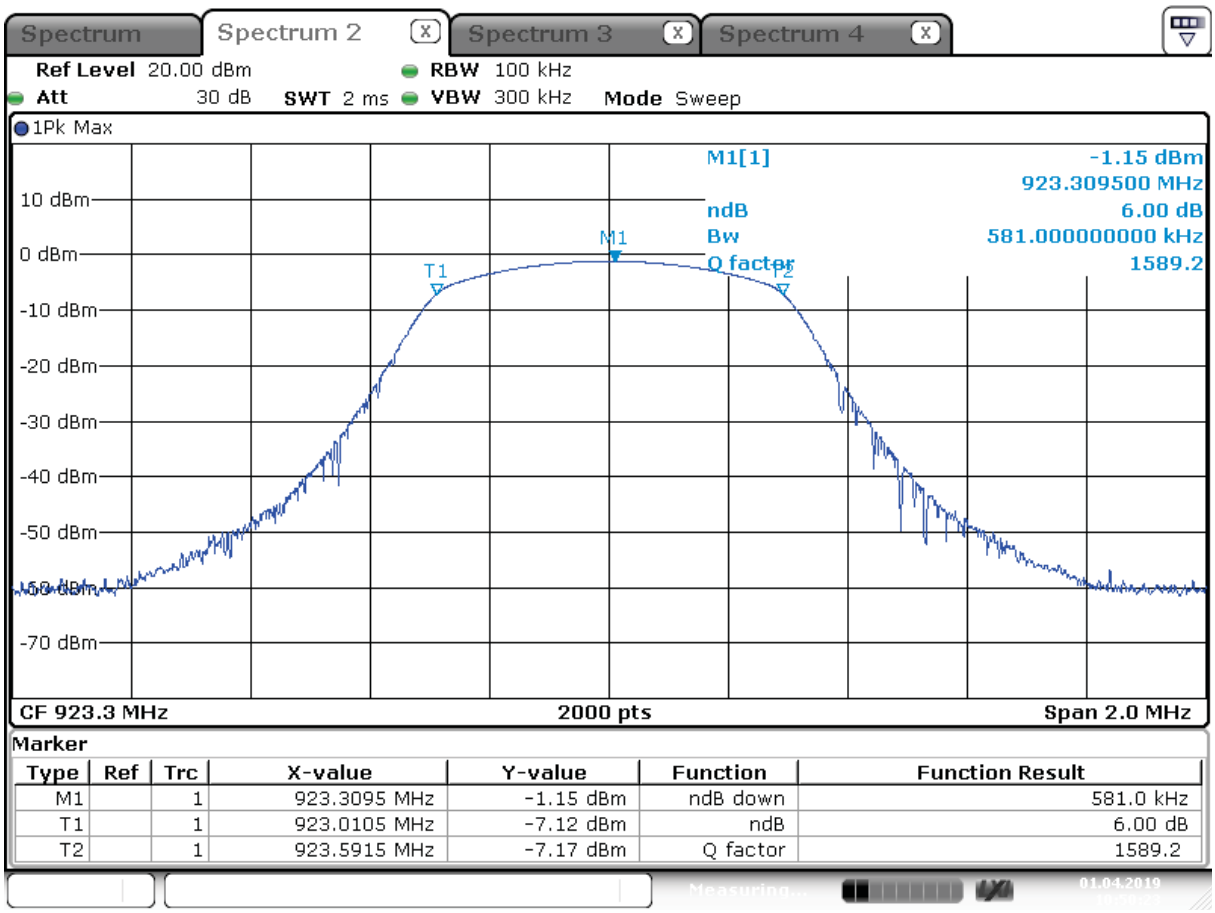
Frequency 927.5 MHz



Date: 1.APR.2019 11:15:41

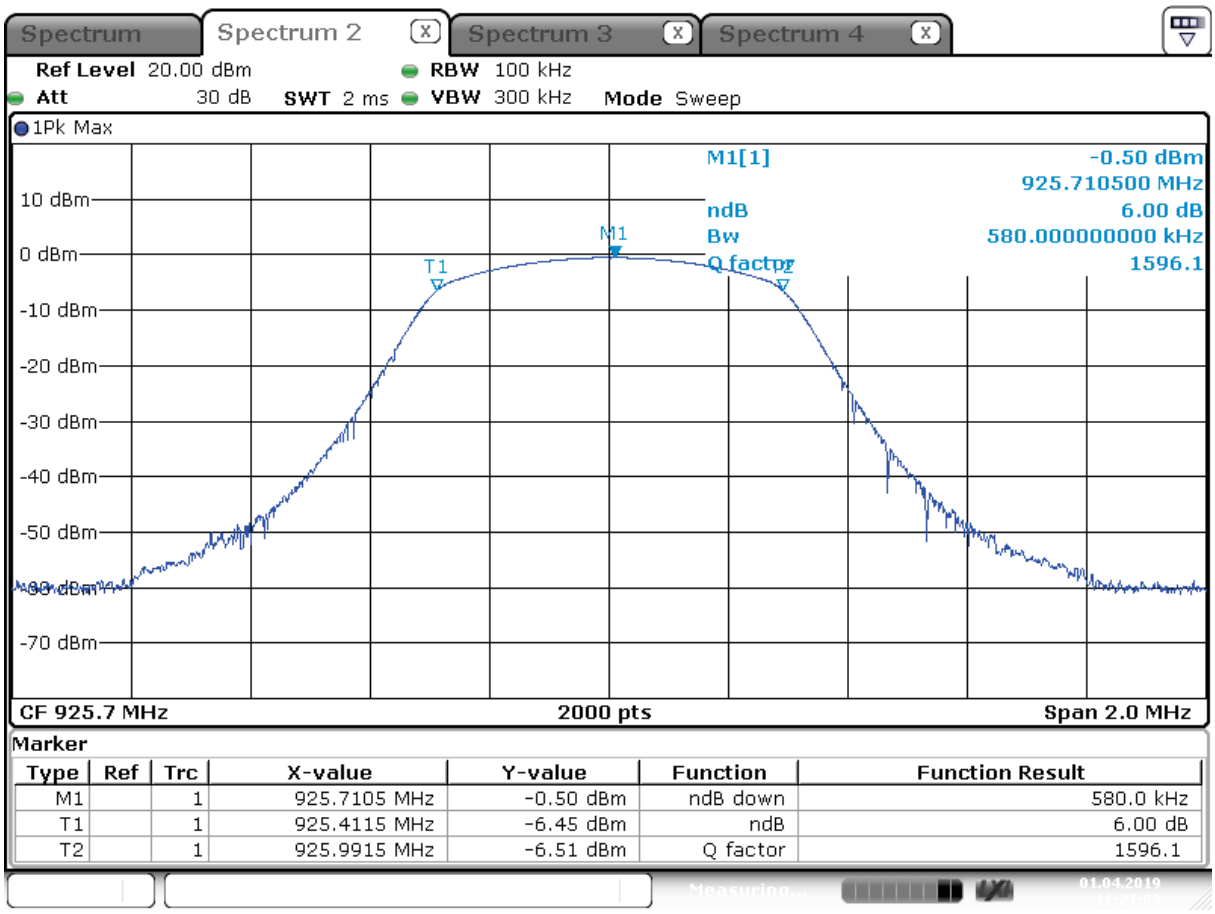
SPREAD FACTOR 12

Frequency 923.3 MHz



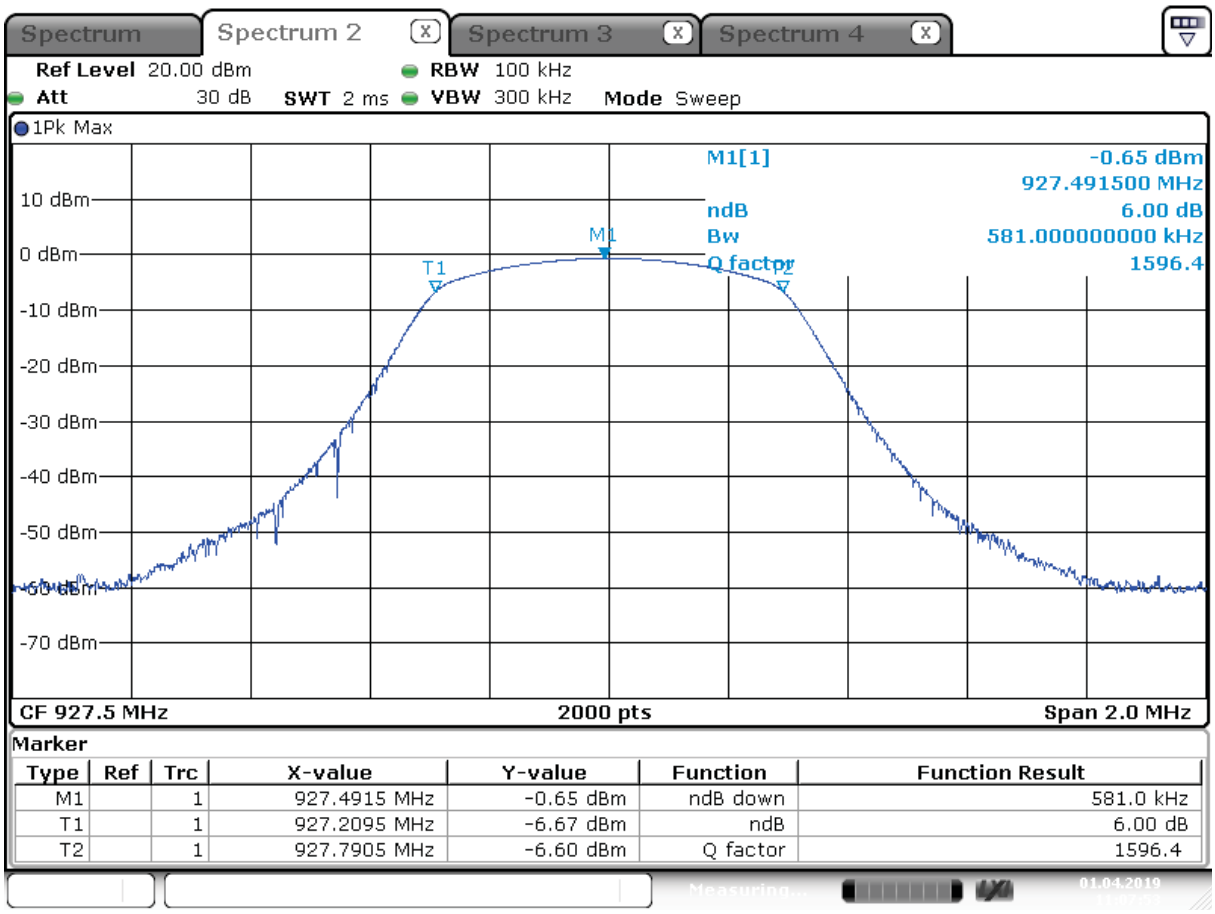
Date: 1.APR.2019 10:50:23

Frequency 925.7 MHz



Date: 1.APR.2019 11:21:03

Frequency 927.5 MHz

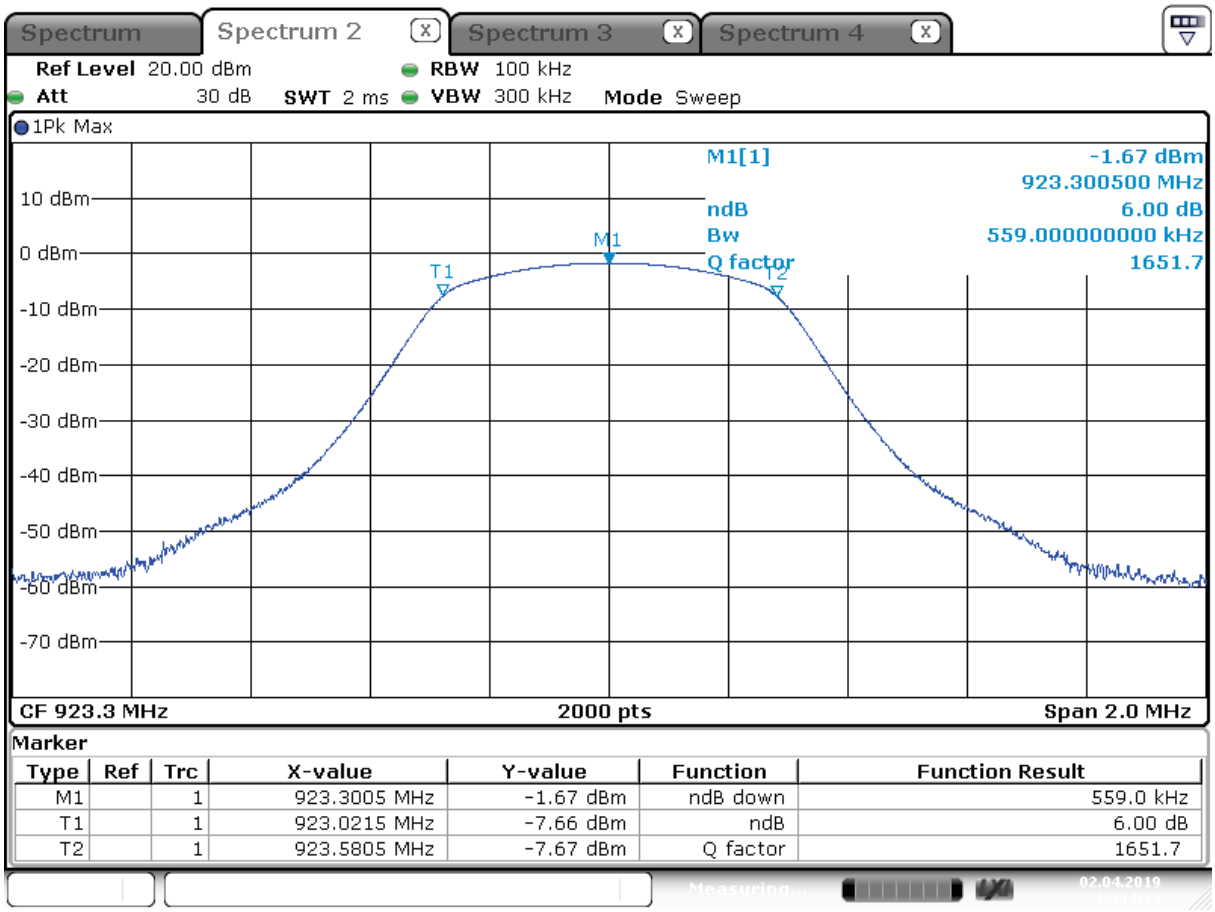


Date: 1.APR.2019 11:07:53

RF OUTPUT 2

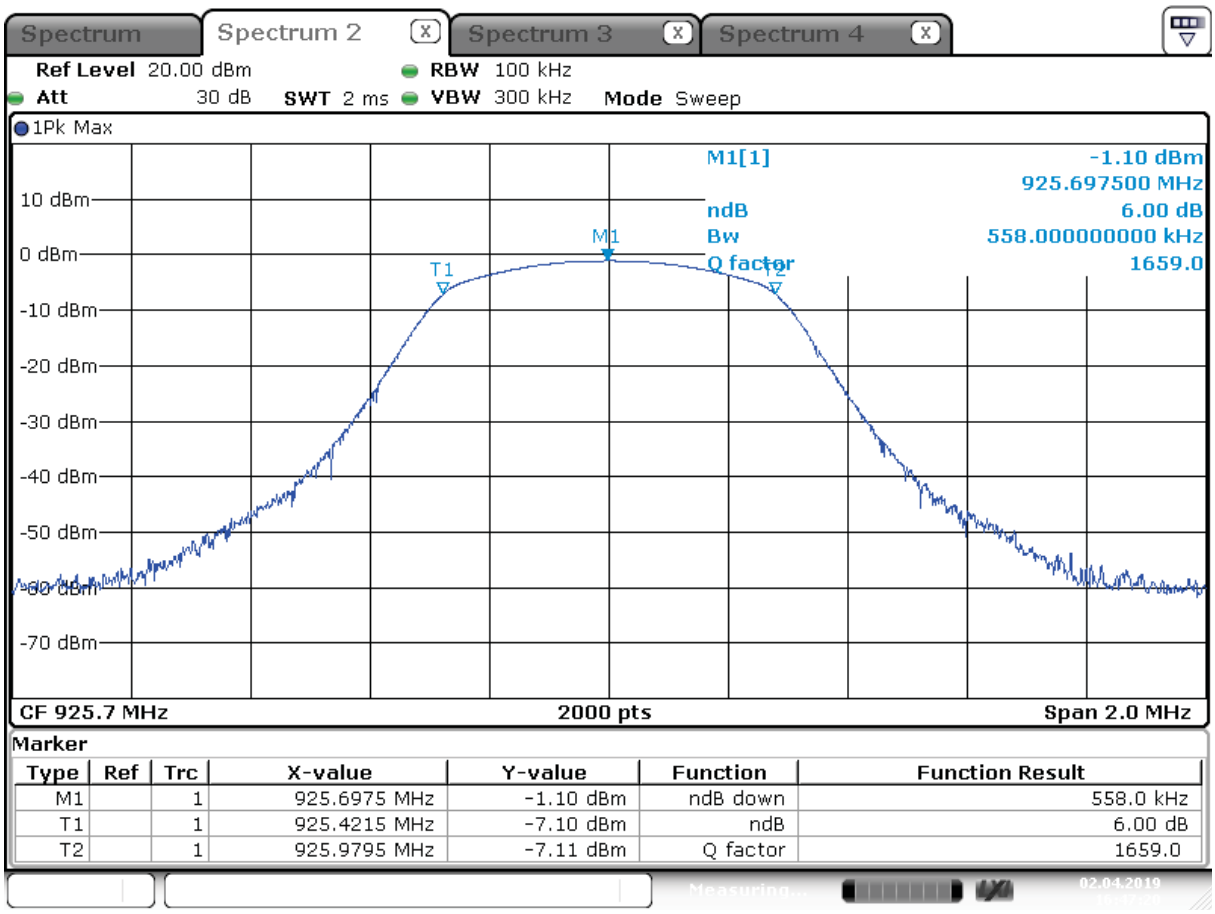
SPREAD FACTOR 7

Frequency 923.3 MHz



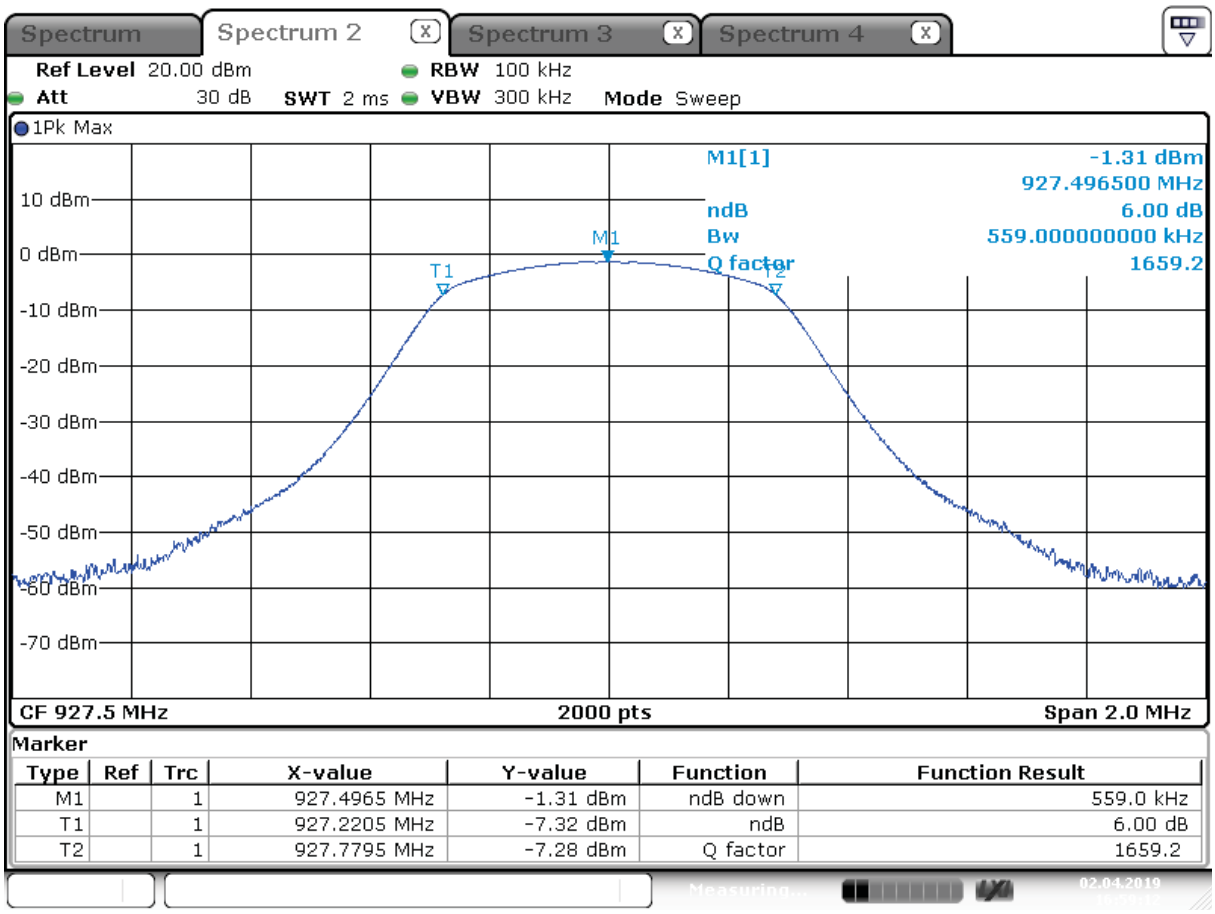
Date: 2.APR.2019 16:44:34

Frequency 925.7 MHz



Date: 2.APR.2019 16:47:20

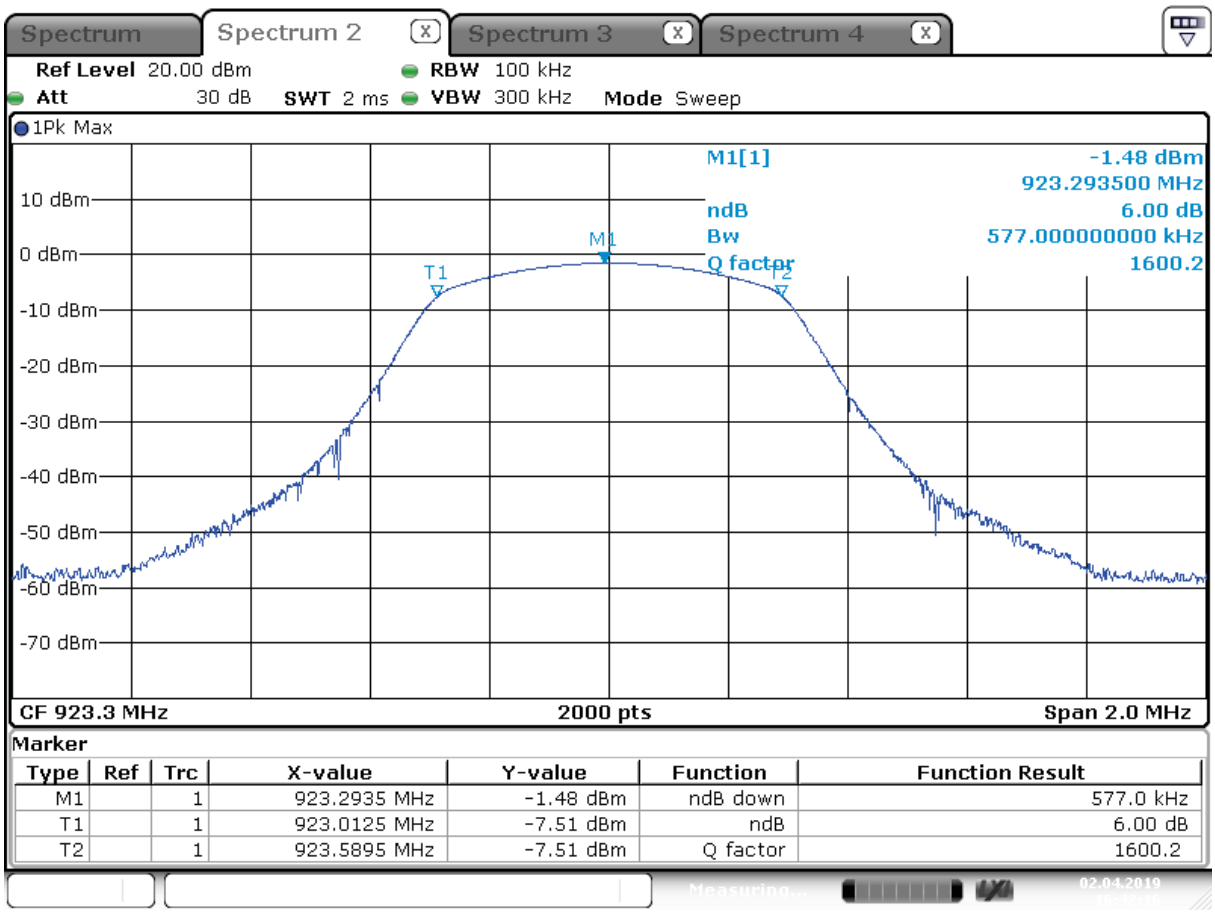
Frequency 927.5 MHz



Date: 2.APR.2019 16:59:13

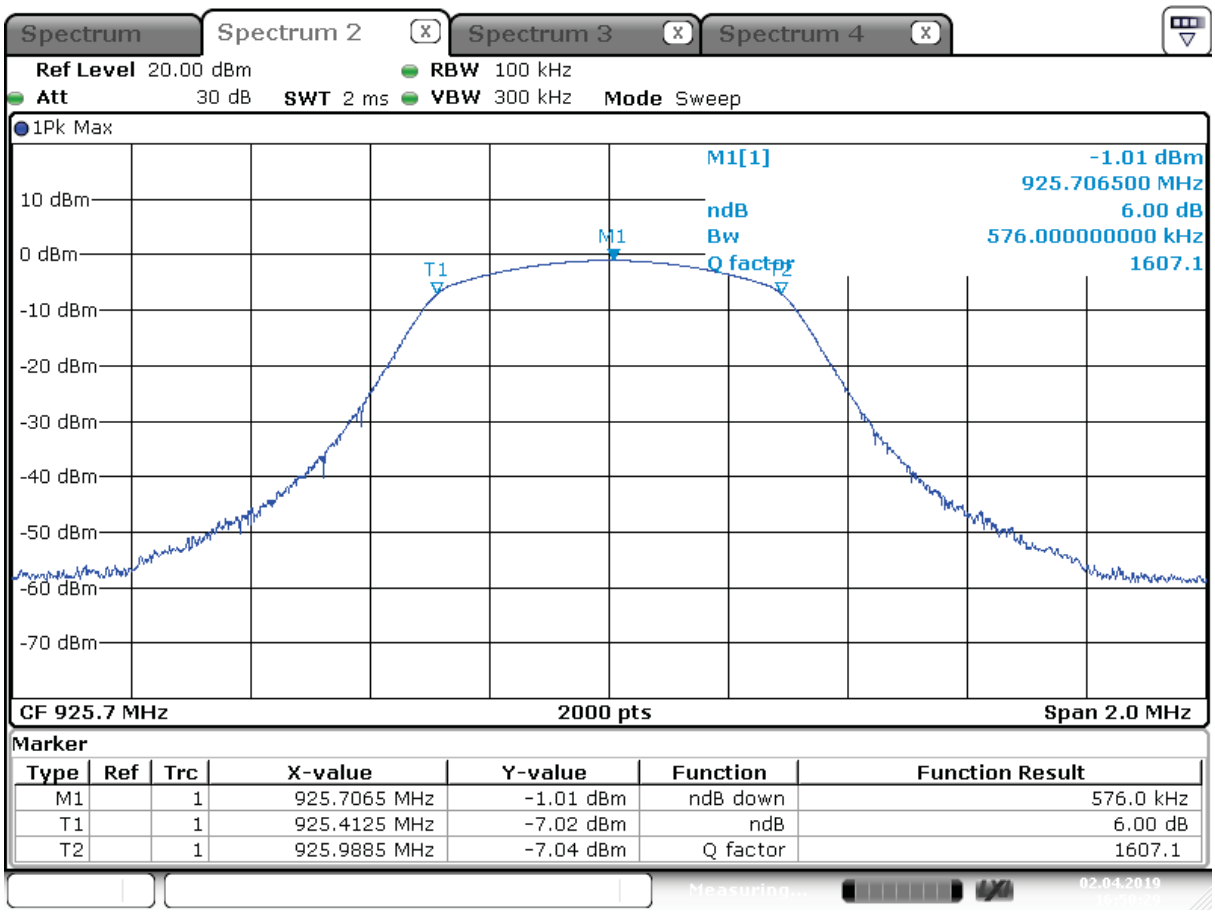
SPREAD FACTOR 12

Frequency 923.3 MHz



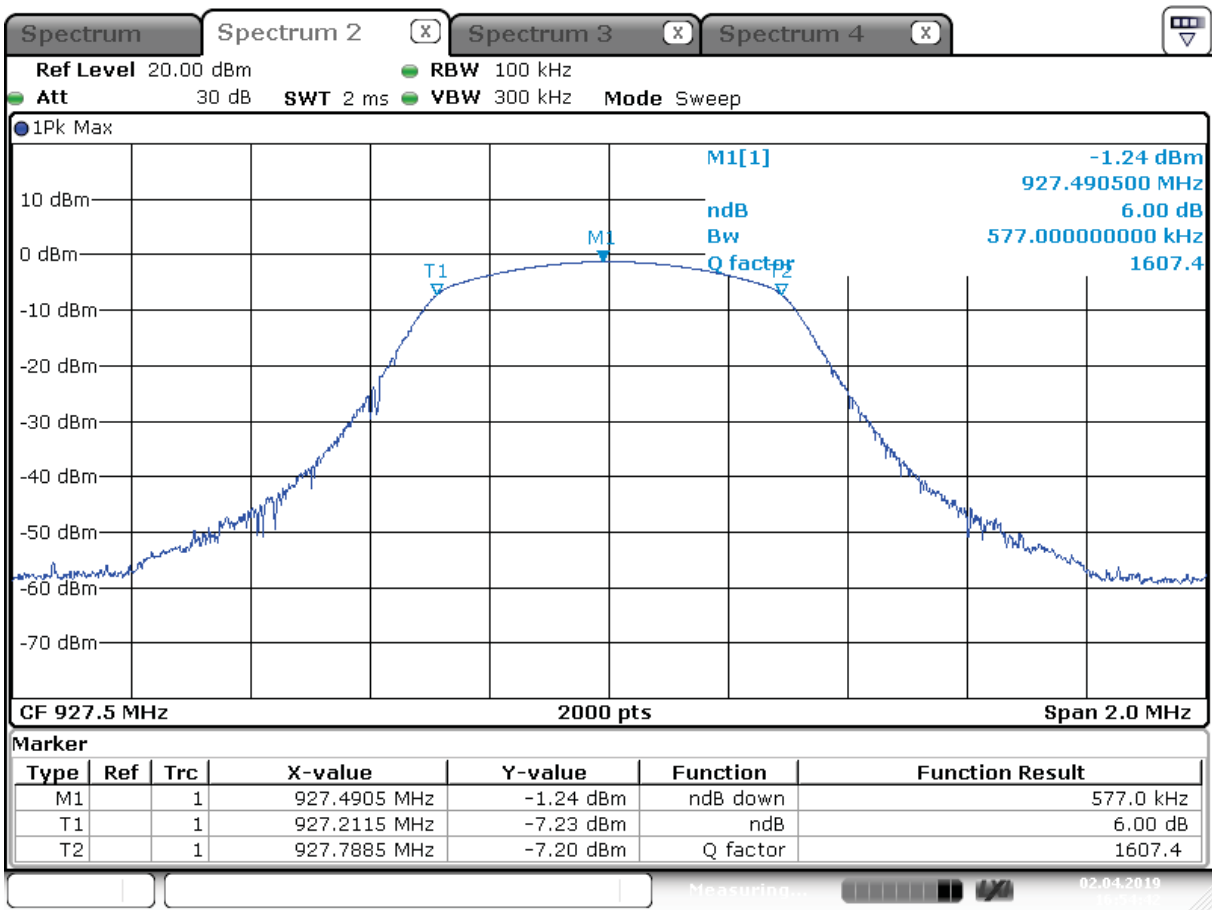
Date: 2.APR.2019 16:42:16

Frequency 925.7 MHz



Date: 2.APR.2019 16:50:29

Frequency 927.5 MHz



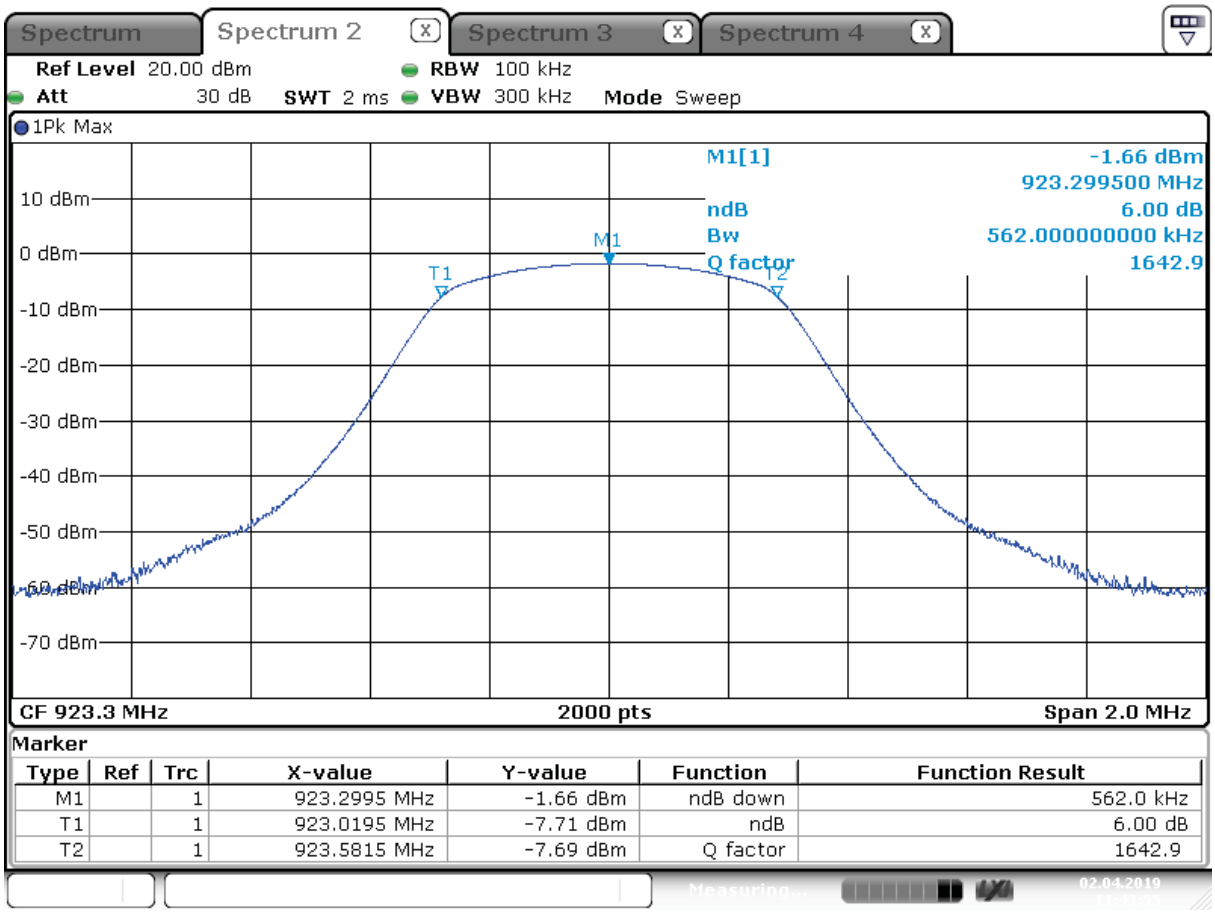
Date: 2.APR.2019 16:54:42

Module 2

RF OUTPUT 1

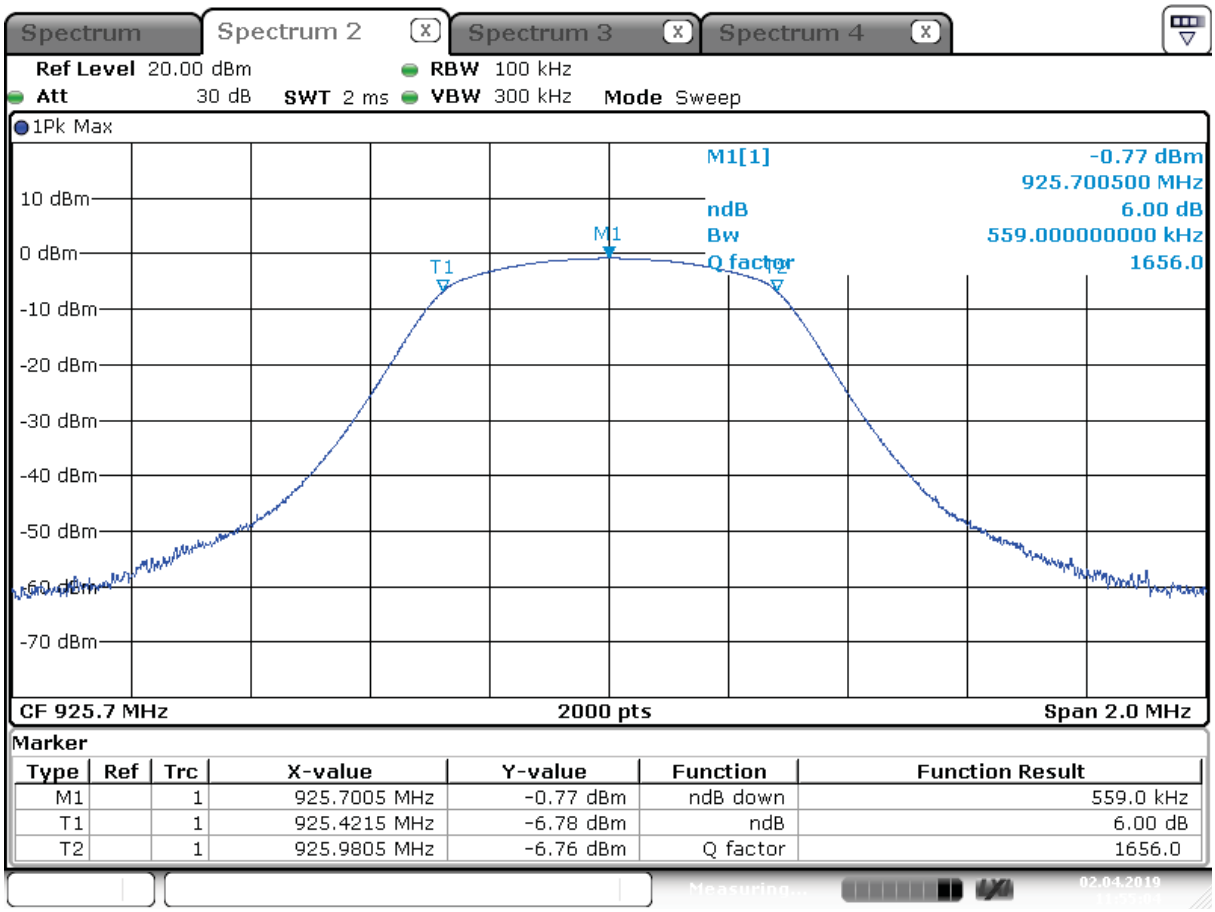
SPREAD FACTOR 7

Frequency 923.3 MHz



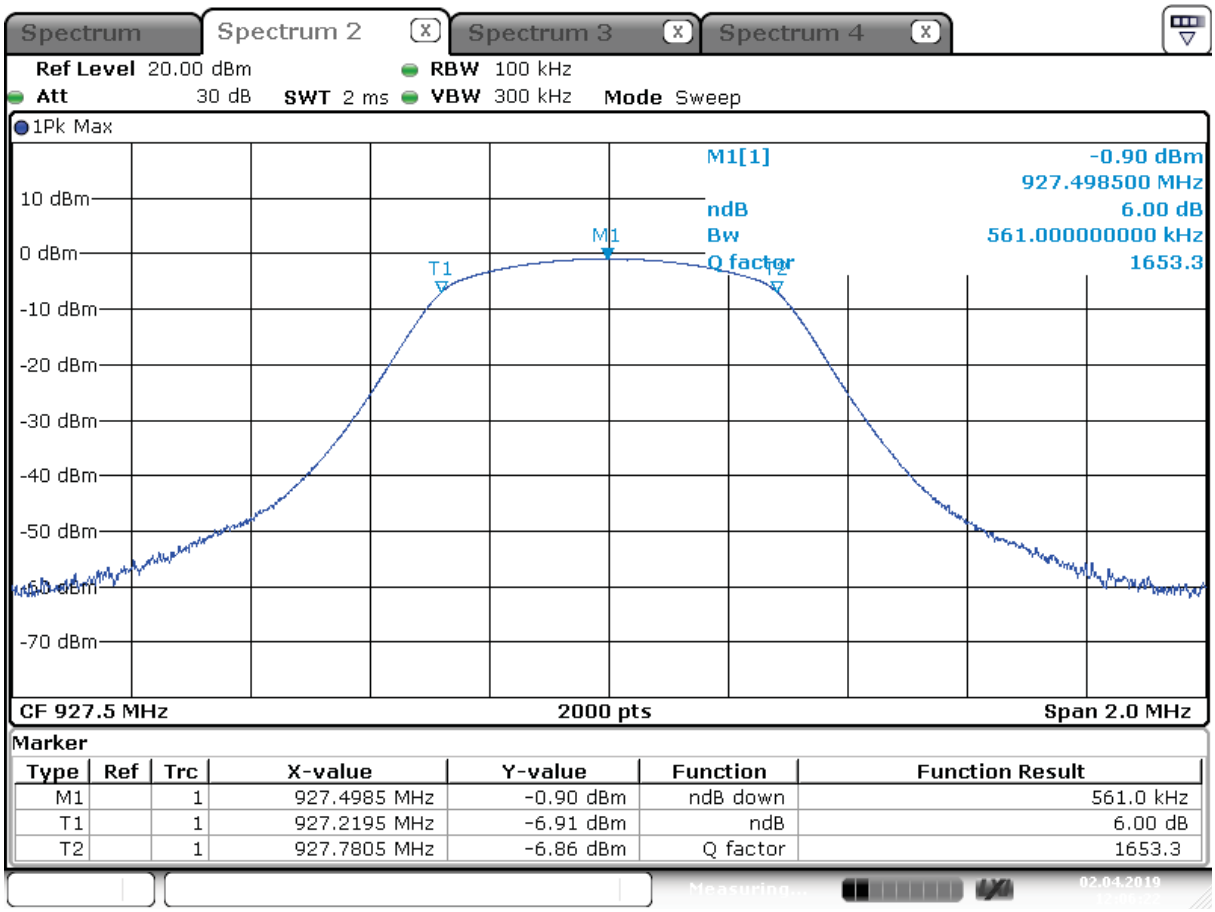
Date: 2.APR.2019 11:43:55

Frequency 925.7 MHz



Date: 2.APR.2019 11:55:04

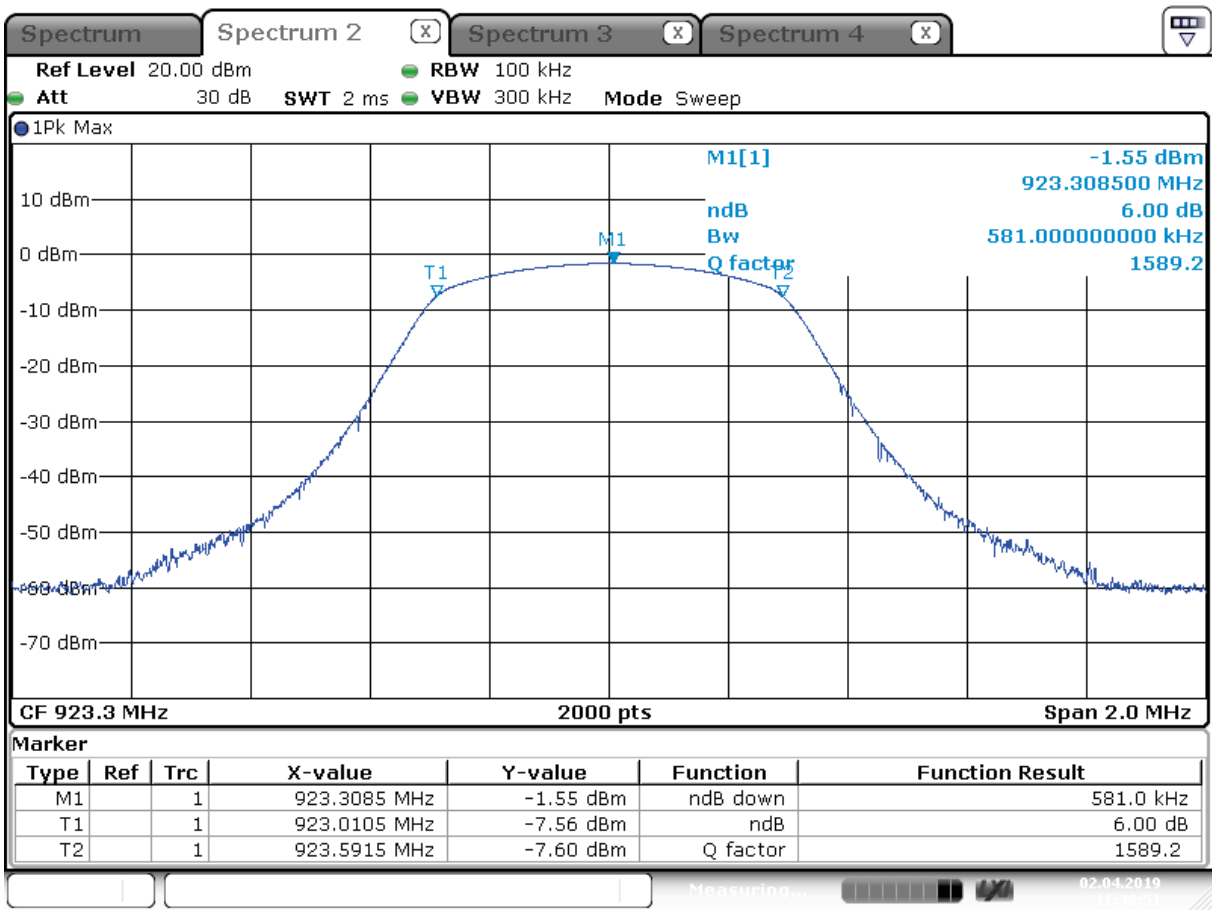
Frequency 927.5 MHz



Date: 2.APR.2019 12:06:22

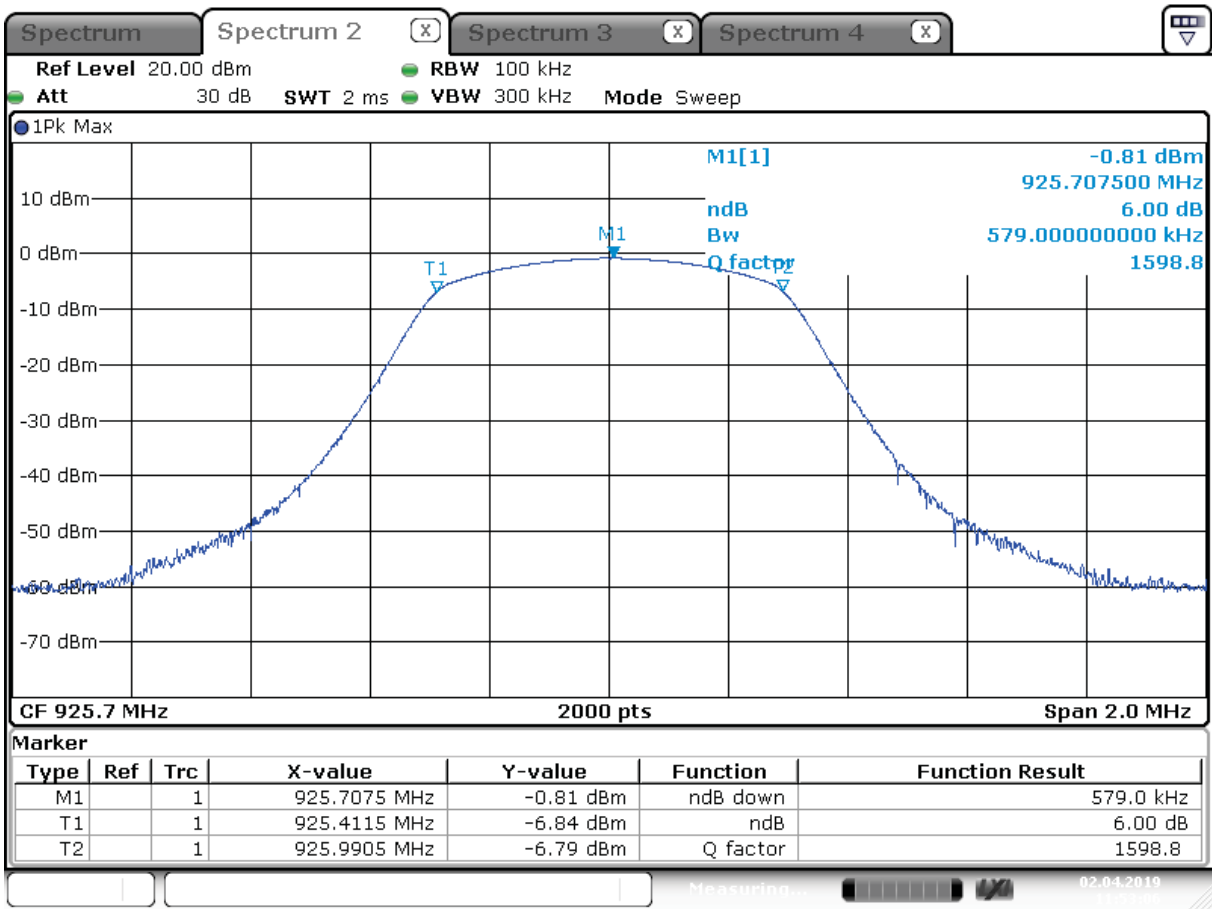
SPREAD FACTOR 12

Frequency 923.3 MHz



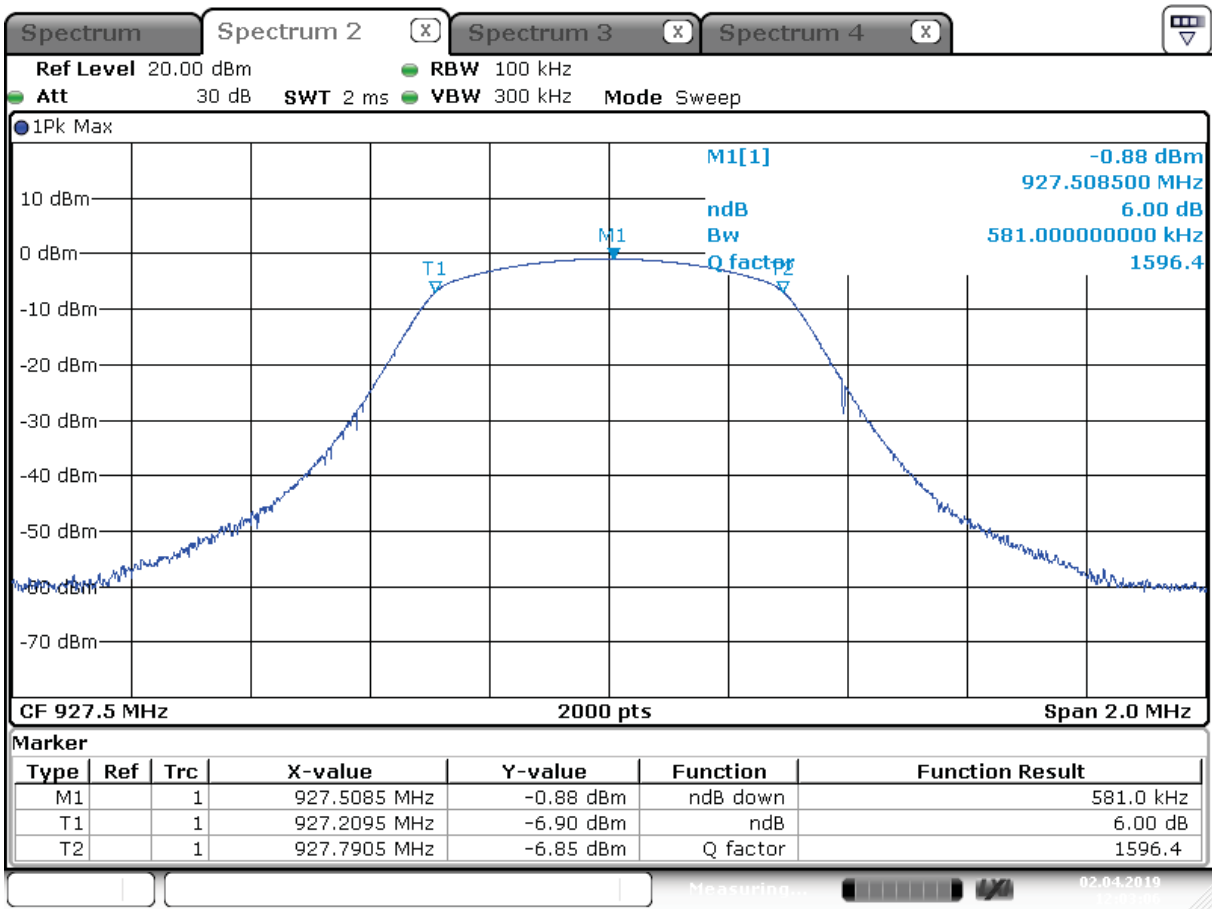
Date: 2.APR.2019 11:48:52

Frequency 925.7 MHz



Date: 2.APR.2019 11:53:06

Frequency 927.5 MHz

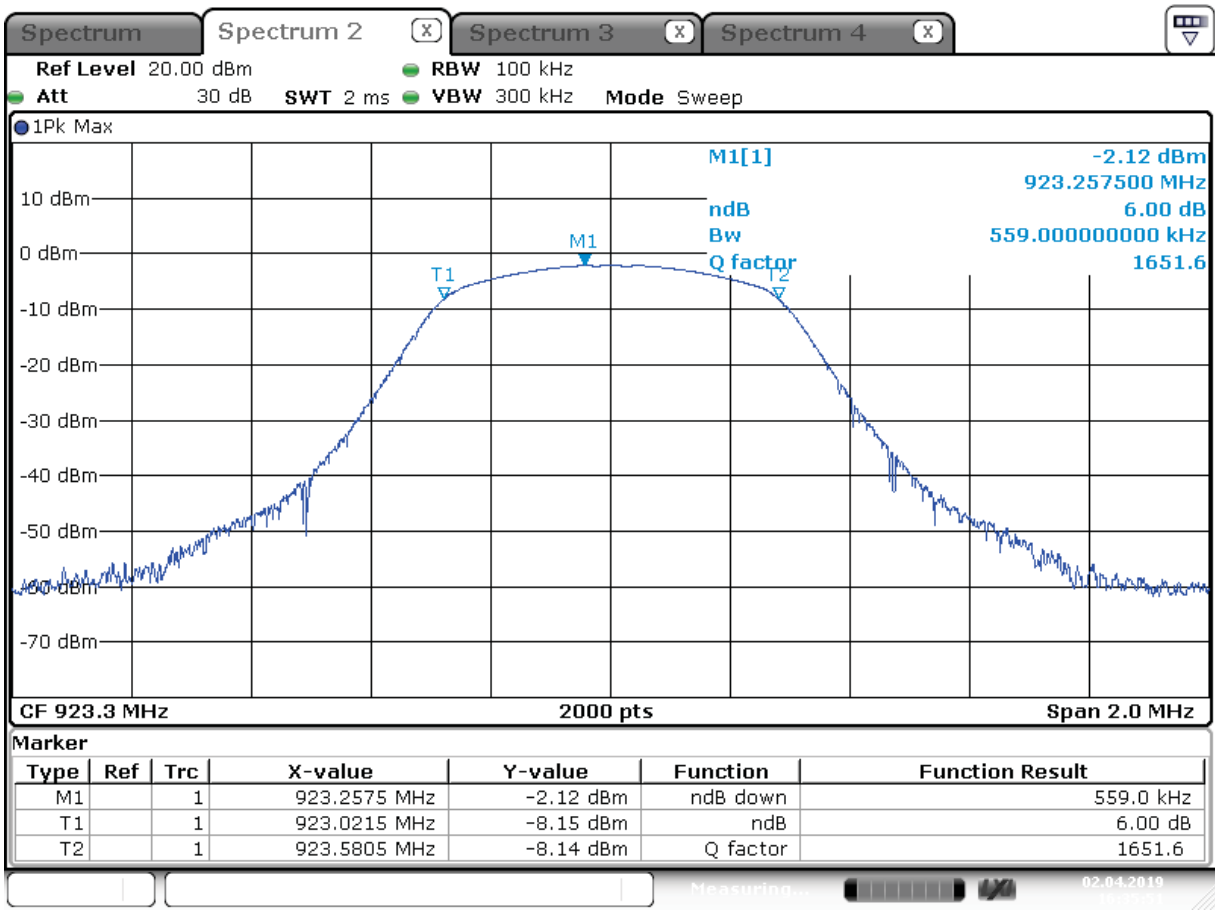


Date: 2.APR.2019 12:03:06

RF OUTPUT 2

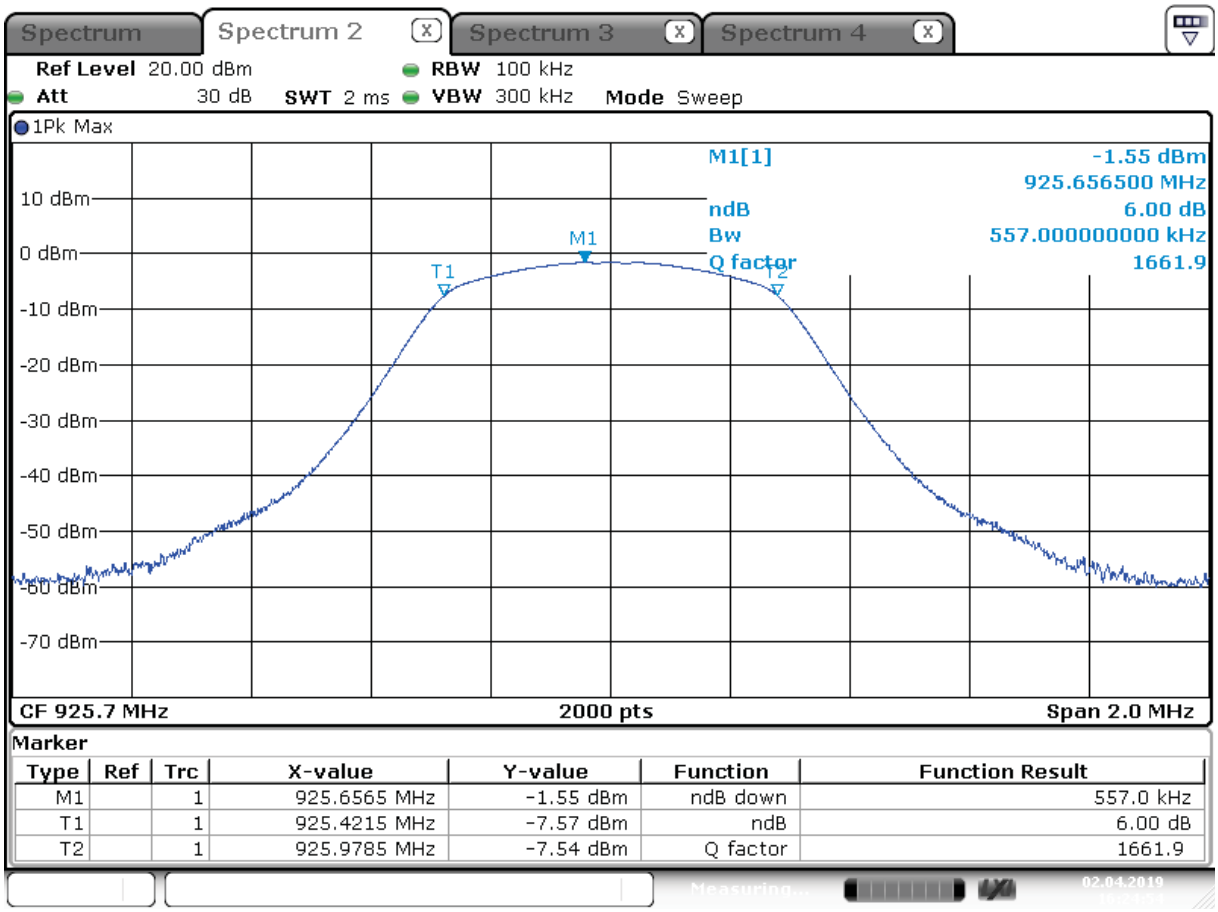
SPREAD FACTOR 7

Frequency 923.3 MHz



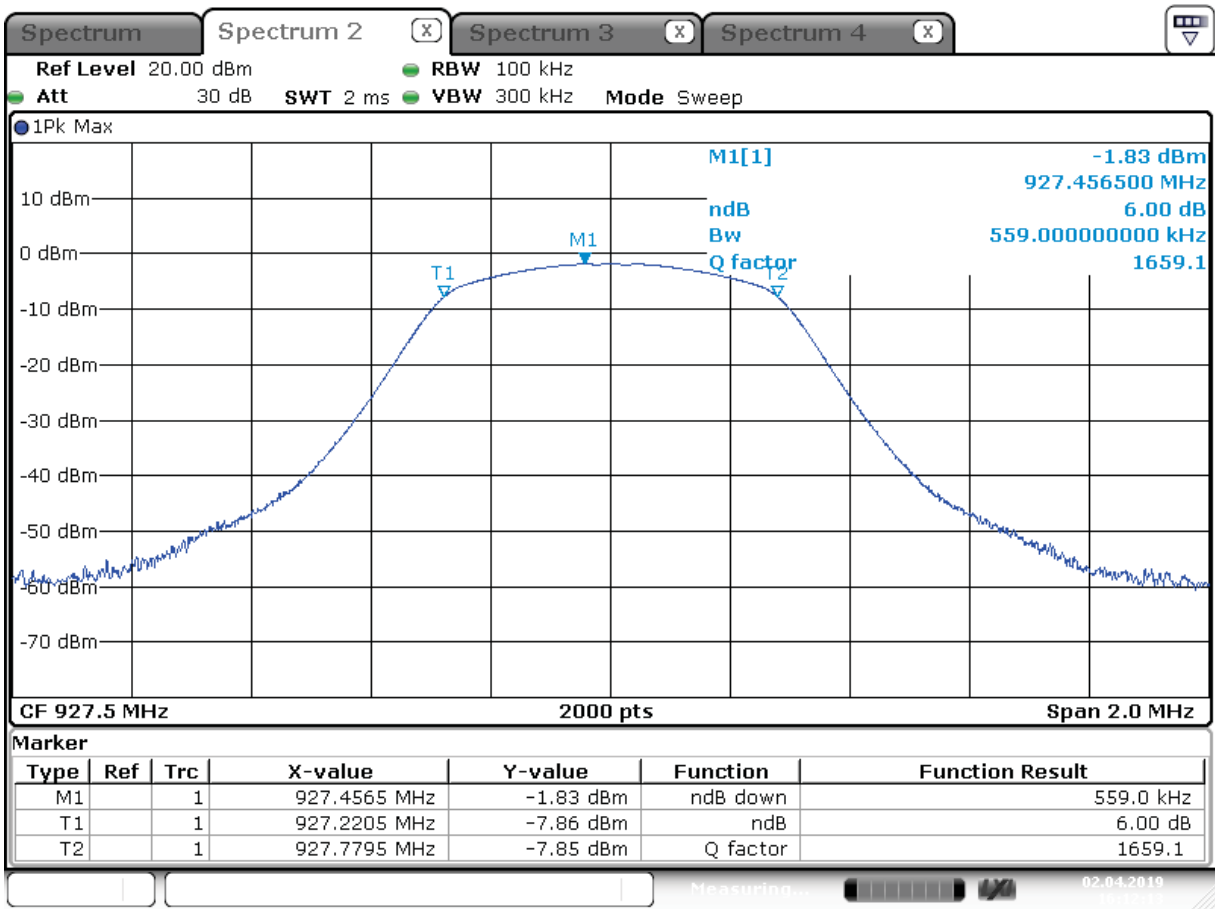
Date: 2.APR.2019 16:35:51

Frequency 925.7 MHz



Date: 2.APR.2019 16:24:54

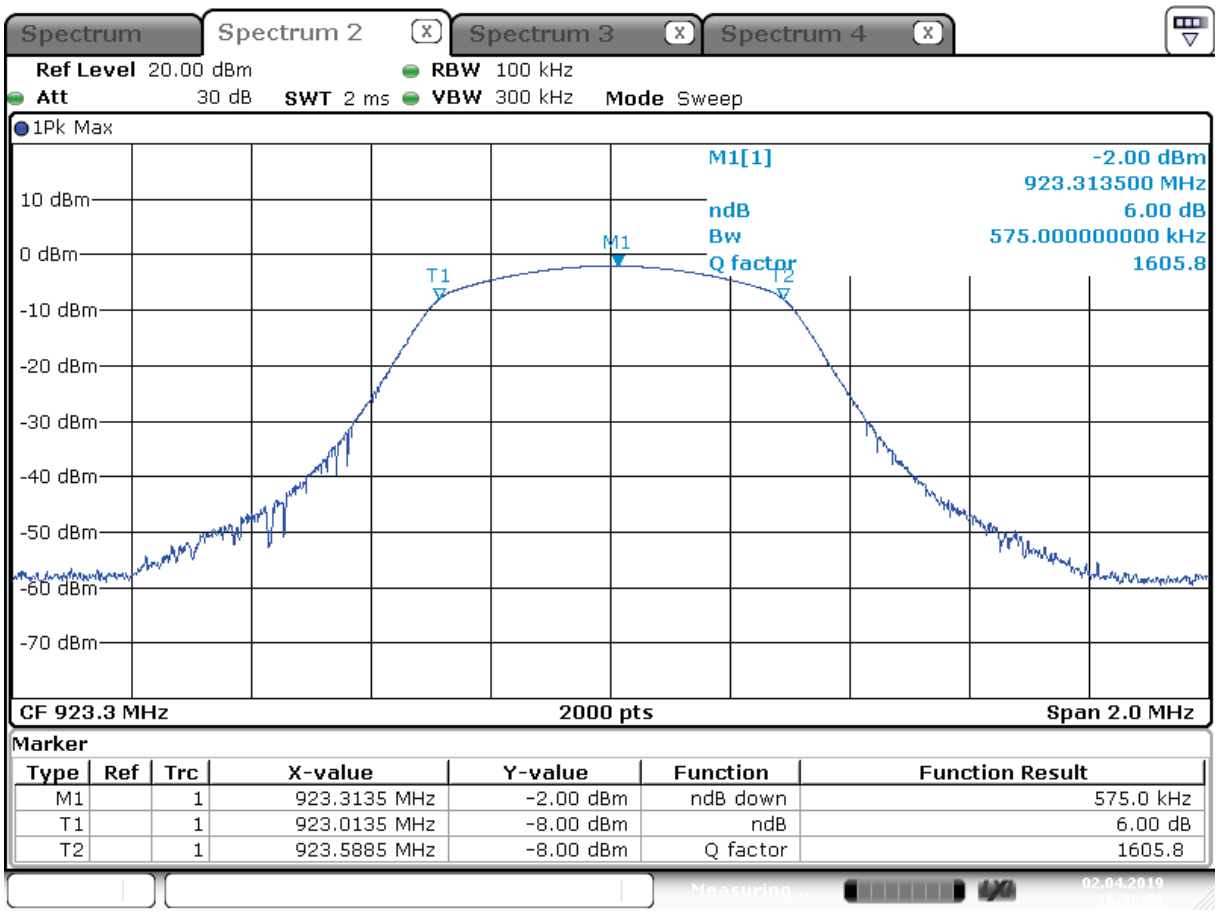
Frequency 927.5 MHz



Date: 2.APR.2019 16:12:14

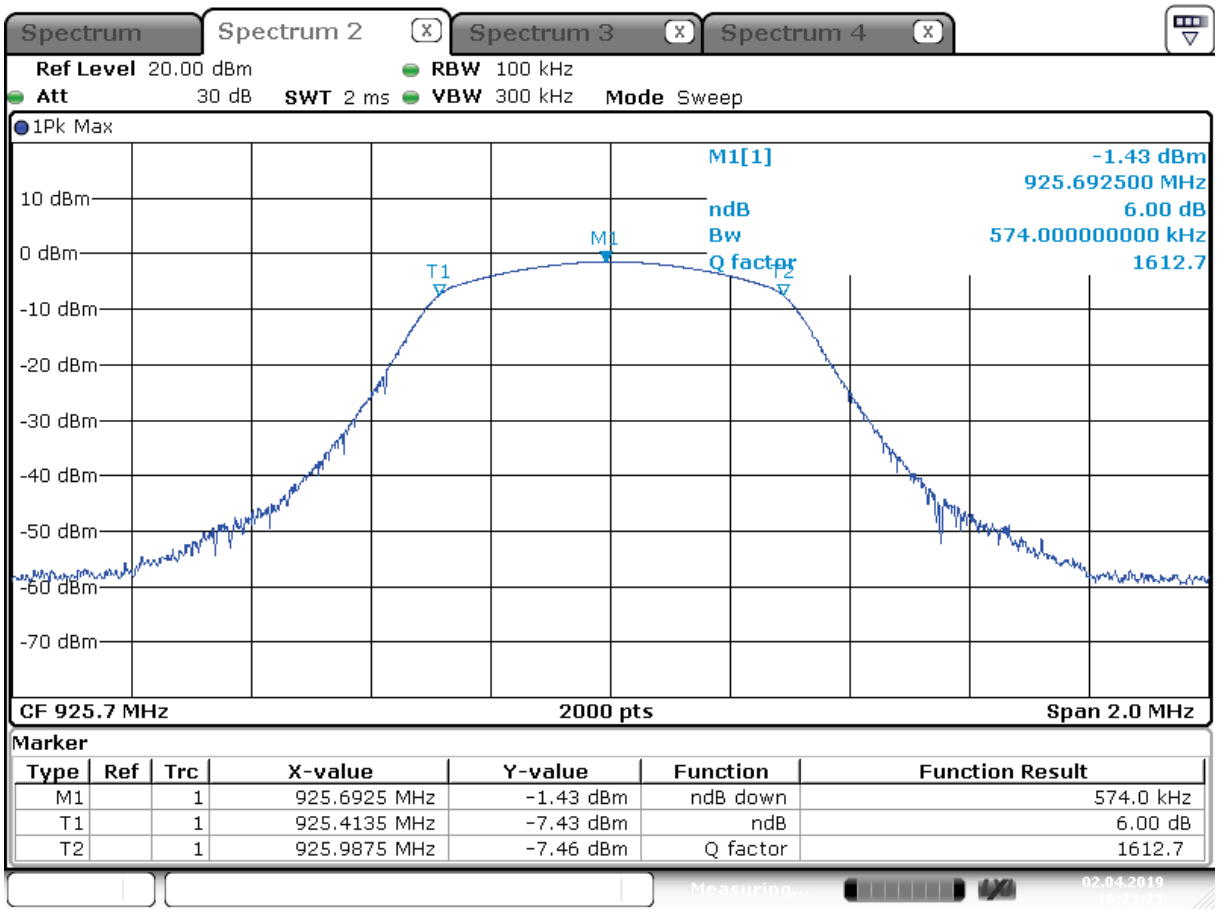
SPREAD FACTOR 12

Frequency 923.3 MHz



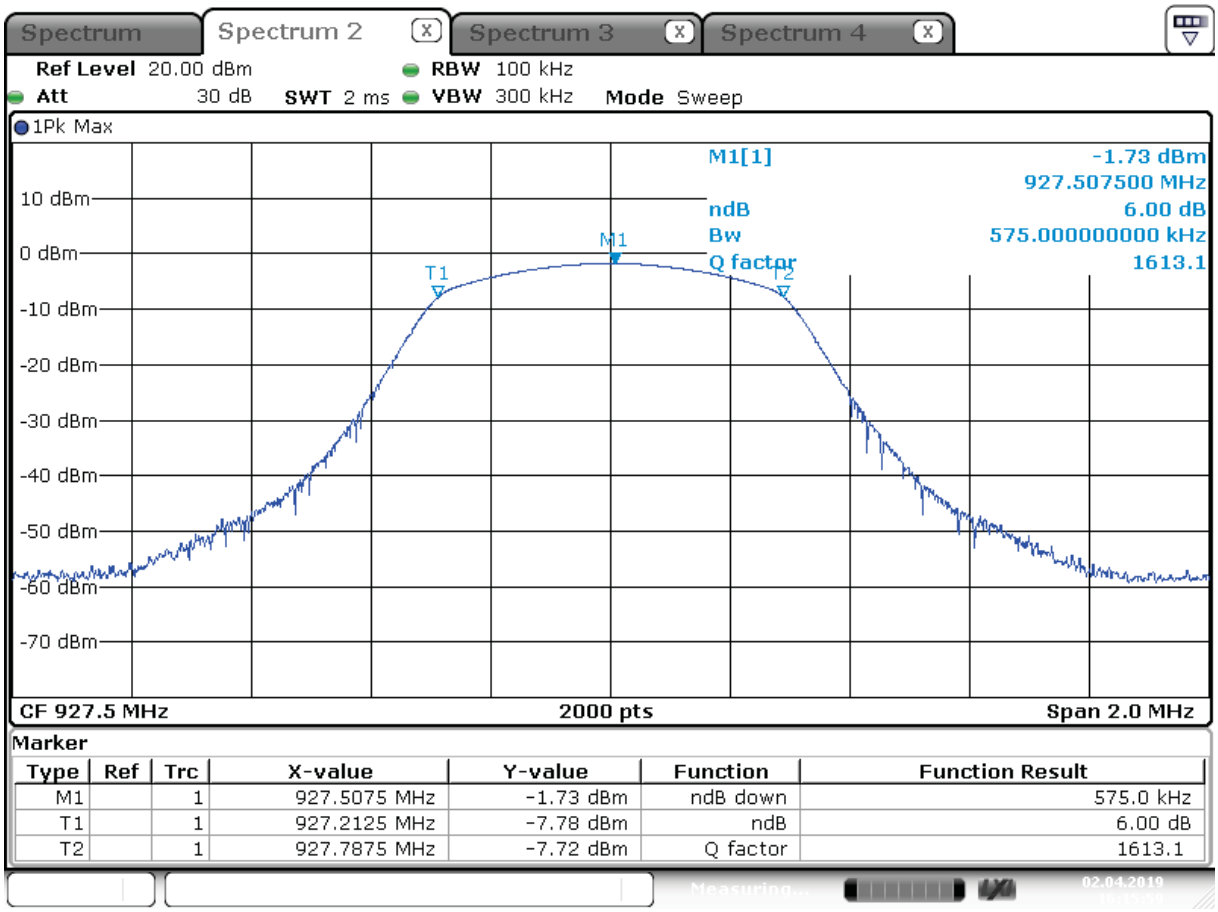
Date: 2.APR.2019 16:38:54

Frequency 925.7 MHz



Date: 2.APR.2019 16:21:21

Frequency 927.5 MHz



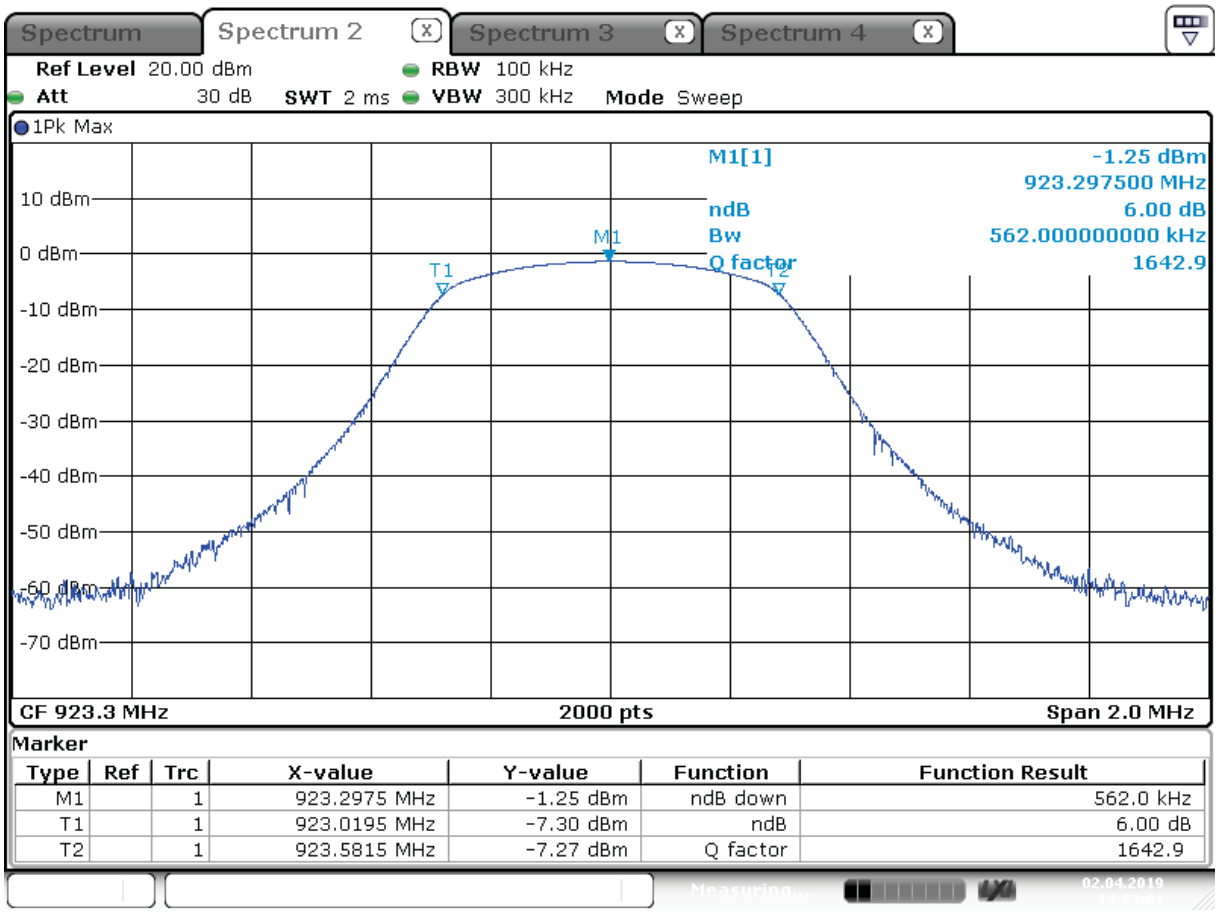
Date: 2.APR.2019 16:16:00

Module 3

RF OUTPUT 1

SPREAD FACTOR 7

Frequency 923.3 MHz



Date: 2.APR.2019 14:03:01