

# RADIO TEST REPORT

Report ID

REP020724

Project ID

PRJ0042470

Type of assessment:

Final product testing

Applicant:

EXFO Oy

Product:

Transportable Base Station System

Model:

FXm-Bmax

FCC ID:

2A7IGEXCBTSBMAX

IC Registration number:

28799-EXCBTSBMAX

Specifications:

- ◆ FCC 47 CFR Part 22, Subpart H
- ◆ FCC 47 CFR Part 24, Subpart E
- ◆ FCC 47 CFR Part 27, Subpart C
- ◆ ISED RSS -130 Issue 2
- ◆ ISED RSS -132 Issue 4
- ◆ ISED RSS -133 Issue 6
- ◆ ISED RSS -139 Issue 4
- ◆ ISED RSS -192 Issue 5
- ◆ ISED RSS -198 Issue 1
- ◆ ISED RSS -199 Issue 4

Date of issue: April 25, 2024

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ANAB File Number: AT-3195 (Ottawa); AT-3193 (Pointe-Claire); AT-3194 (Cambridge)

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**Lab locations**

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Test site registration	<b>Organization</b>	<b>Recognition numbers and location</b>	
Website	<a href="http://www.nemko.com">www.nemko.com</a>		

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**Limits of responsibility**

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Note that the results contained in this report relate only to the items tested and were obtained in the period between the date of initial receipt of samples and the date of issue of the report.

This test report has been completed in accordance with the requirements of ISO/IEC 17025. All results contained in this report are within Nemko Canada's ISO/IEC 17025 accreditation.

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## Section 1 Report summary

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### 1.1 Test specifications

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FCC 47 CFR Part 22, Subpart H	Public Mobile Services - Cellular Radiotelephone Service
FCC 47 CFR Part 24, Subpart E	Personal Communications Services - Broadband PCS
FCC 47 CFR Part 27, Subpart C	Miscellaneous wireless communications services – Technical Standards
ISED RSS -130 Issue 2, Feb 2019	Equipment Operating in the Frequency Bands 617-652 MHz, 663-698 MHz, 698-756 MHz and 777-787 MHz
ISED RSS -132 Issue 4, Jan 2023	Cellular Systems Operating in the Bands 824-849 MHz and 869-894 MHz
ISED RSS -133 Issue 6, Jan 2018	2 GHz Personal Communications Services
ISED RSS -139 Issue 4, Sep 2022	Advanced Wireless Services Equipment Operating in the Bands 1710-1780 MHz and 2110-2200 MHz
ISED RSS -192 Issue 5, July 2023	Flexible Use Broadband Equipment Operating in the Band 3450-3900 MHz
ISED RSS -198 Issue 1, Aug 2023	Flexible Use Broadband Equipment Operating in the Band 3900-3980 MHz
ISED RSS -199 Issue 4, July 2023	Broadband Radio Service (BRS) Equipment Operating in the Band 2500-2690 MHz

### 1.2 Test methods

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ANSI C63.26-2015	American National Standard for Compliance Testing of Transmitters Used in Licensed Radio Services
FCC 47 CFR Part 2, Subpart J	Equipment authorization procedures
RSS-Gen Issue 5, March 2019	General Requirements for Compliance of Radio Apparatus

### 1.3 Exclusions

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None

### 1.4 Statement of compliance

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In the configuration tested, the EUT was found compliant.

Testing was performed against all relevant requirements of the test standard except as noted in section 1.3 above. Results obtained indicate that the product under test complies in full with the requirements tested. The test results relate only to the items tested.

See "Summary of test results" for full details.

### 1.5 Test report revision history

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**Table 1.5-1: Test report revision history**

Revision #	Date of issue	Details of changes made to test report
REP020724	April 25, 2024	Original report issued

## **Section 2 Engineering considerations**

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### **2.1 Modifications incorporated in the EUT for compliance**

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There were no modifications performed to the EUT during this assessment.

### **2.2 Technical judgment**

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As per the applicant's test plan the power limits of the Base stations and Repeaters are applied, not the power limits of the Mobile and Portable Stations.

### **2.3 Deviations from laboratory tests procedures**

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No deviations were made from laboratory procedures.

## Section 3 Test conditions

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### 3.1 Atmospheric conditions

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Temperature	15 °C – 35 °C
Relative humidity	20 % – 75 %
Air pressure	86 kPa (860 mbar) – 106 kPa (1060 mbar)

When it is impracticable to carry out tests under these conditions, a note to this effect stating the ambient temperature and relative humidity during the tests shall be recorded and stated.

### 3.2 Power supply range

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The normal test voltage for equipment to be connected to the mains shall be the nominal mains voltage. For the purpose of the present document, the nominal voltage shall be the declared voltage, or any of the declared voltages  $\pm 5\%$ , for which the equipment was designed.

## Section 4 Information provided by the applicant

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### 4.1 Disclaimer

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This section contains information provided by the applicant and has been utilized to support the test plan. Inaccurate information provided by the applicant can affect the validity of the results contained within this test report. Nemko accepts no responsibility for the information contained within this section and the impact it may have on the test plan and resulting measurements.

### 4.2 Applicant/Manufacturer

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Applicant name	EXFO Oy
Applicant address	Elektroniikkatie 2, Oulu, FI-90590, Finland
Manufacturer name	EXFO Oy
Manufacturer address	Elektroniikkatie 2, Oulu, FI-90590, Finland

### 4.3 EUT information

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Product	Transportable Base Station System								
Model	FXm-Bmax								
Serial number	6675-01-001								
Power requirements	100-240 V <sub>AC</sub> , 50/60 Hz								
Description/theory of operation	The device is a Transportable Base Station System for wireless applications. It consists of control unit, transmitter units and amplifier unit.								
Operational frequencies	<table><tr><td>CPU</td><td>4.1 GHz</td></tr><tr><td>Oscillators</td><td>12 MHz</td></tr><tr><td></td><td>25 MHz</td></tr><tr><td></td><td>100 MHz</td></tr></table>	CPU	4.1 GHz	Oscillators	12 MHz		25 MHz		100 MHz
CPU	4.1 GHz								
Oscillators	12 MHz								
	25 MHz								
	100 MHz								
Software details	v1.3.19-1929addc								

### 4.4 Technical information, New Radio

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RF power Max (W), Conducted	38 W and (45.8 dBm), n66, channel 431000
Measured BW (kHz), 99% OBW	8.9 MHz
Type of modulation	QPSK
Antenna information	Manufacturer: Huber+Suhner, MN: SENCITY® Rail MIMO Antenna, PN: 1399.17.0222, Gain: 5-7.5 dBi Manufacturer: Cojot, MN: WB525W, Gain: 1-7 dBi

## Technical information, New Radio, continued

Band	Downlink block	Downlink Channel	Frequency (MHz)	PWR level	FCC Part	RSS Part
n2	1930 – 1990	387100	1935.5	34	24E	RSS-133
		387500	1937.5	38		
		392000	1960	44		
		397000	1985	31		
n5	869 – 894	174800	874	31	22H	RSS-132
		176300	881.5	44		
		177800	889	32		
n12	729 – 746	146800	734	33	27C	RSS-130
		147500	737.5	44		
		148200	741	32		
n25	1930 – 1995	387000	1935	31	24E	RSS-133
		392500	1962.5	44		
		398000	1990	31		
n41 BRS/EBS	2496 – 2690 *	510000	2550	44	27C	RSS-199
		518598	2592.99	44		
		525000	2625	44		
n66	2110 – 2180	423020	2115.1	32	27C	RSS-139
		423040	2115.2	34		
		431000	2155	44		
		434940	2174.7	35		
		435000	2175	31		
n71	617 – 652	124400	622	32	27N	RSS-130
		126800	634	40		
		129400	647	32		
n77	3450 – 3900* 3900 – 3980*	630334	3455.01	41	27C (3450-3550)	RSS-192, RSS-198
		633333	3499.995	43		
		636333	3544.995	40 (FCC)		
		636333	3544.995	43		
		647000	3705	43		
		650000	3750	43		
		656000	3840	43		
		659666	3894.99	41		
		660334	3905.01	30		
		664800	3972	30		
		664900	3973.5	30		
		665000	3975	30		
n77	3700 – 3980*	647000	3705	40	27C	
		650000	3750	43		
		656000	3840	43		
		664800	3972	43		
		664900	3973.5	43		
		665000	3975	41		
n78	3450 – 3800 *	63380	3455.7	41	27C (3450-3550)	RSS-192
		636666	3549.99	43		
		653000	3795	43		

**Note:** \* Refers to TDD bands.

## 4.5 EUT setup details

### Radio exercise details

Operating conditions	The EUT consists of 2G/3G/4G radio module, 5G NR radio module and control module. RF radio module RF output is feed to the RF amplifier input. A laptop loaded with control SW was used to control the RAT, modes, bandwidths, bands, channels number and power levels during the test.
Transmitter state	Continuous transmission
Receiver state	Standby mode

### EUT setup configuration

**Table 4.5-1: EUT sub-assemblies**

Description	Brand name	Serial number, Part number, Model, Revision level
GSM/WCDMA/LTE radio module	EXFO	SN: 1370858, MN: FXm-XG, Rev. 4.1
5G NR radio module	EXFO	SN: 0000001, MN: FXm-NR, Rev. 1.0
Control unit	EXFO	SN: 1331134, MN: FXm-C, Rev. 3.0
AC/DC power adapter	TDK-Lambda	SN: 180900249, MN: DTM300PW240D1

**Table 4.5-2: EUT interface ports**

Description	Qty.
DC power input	1
Ethernet ports	3
USB-A port	1
External I/O port	1
RF Tx port	2
GPS ports	2
RF Rx ports	2
RF SMA ports	6
RF Pre out port	1

**Table 4.5-3: Support equipment**

Description	Brand name	Serial number, Part number, Model, Revision level
RF amplifier	EXFO	SN: 6675-01-001, MN: FXm-Bmax, Rev. 2.0
AC/DC adapter	Mean Well	SN: TC12016470, MN: RSP1500-24
Laptop	Lenovo	SN: R9-0WMCGA 19/11, MN: ThinkPad X390Yoga

**Table 4.5-4: Inter-connection cables**

Cable description	From	To	Length (m)
SMB RF cable	GSM/WCDMA/LTE radio module	RF amplifier Tx 1	0.4
SMB RF cable	5G NR radio module	RF amplifier Tx 2	0.4
DC power input	Control unit	AC/DC power adapter	1
Ethernet control cable	Control unit Eth-1 port	Laptop	3
Ethernet control cable	Control unit Eth-2 port	RF amplifier ethernet port	3

EUT test configuration continued

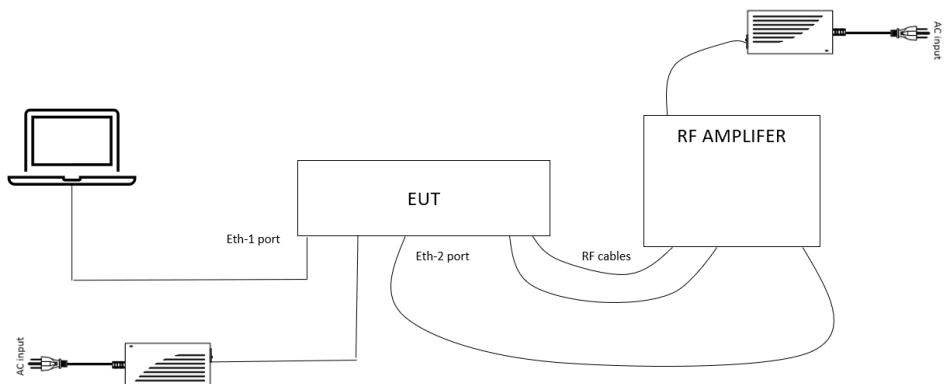


Figure 4.5-1: Block diagram

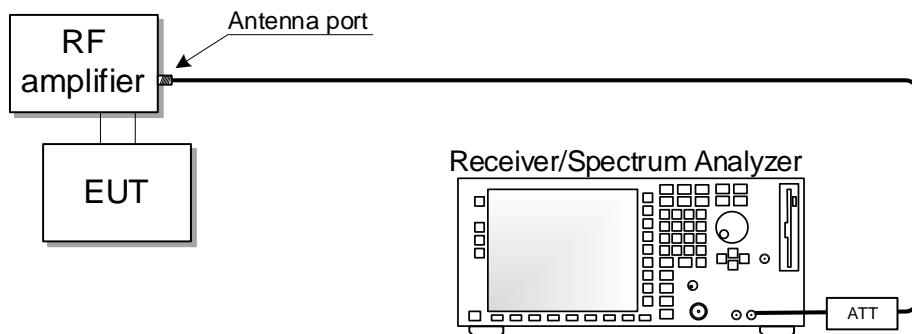


Figure 4.5-2: Antenna port testing block diagram

## Section 5 Summary of test results

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### 5.1 Testing location

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Test location (s)	Cambridge
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### 5.2 Testing period

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Test start date	December 5, 2023	Test end date	January 4, 2024
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### 5.3 Sample information

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Receipt date	November 8, 2023	Nemko sample ID number(s)	PRJ00424710001, PRJ00424710002, PRJ00424710003, PRJ00424710004
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### 5.4 FCC Part 2, 22, 24 and 27 test requirements results

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**Table 5.4-1: FCC requirements results**

Part	Test description	Verdict
§2.1049	Occupied bandwidth	Pass
§22.913	Effective radiated power limits	Pass
§24.232	Power and antenna height limits	Pass
§27.50	Power limits and duty cycle	Pass
§2.1047	Modulation Characteristics	Pass
§22.917	Emission limitations for cellular equipment	Pass
§24.238	Emission limitations for Broadband PCS equipment	Pass
§27.53	Emission limits	Pass
§2.1053	Measurements required: Field strength of spurious radiation	Pass
§2.1055	Measurements required: Frequency stability	Pass

Notes: - 5G New Radio employs QPSK modulation, signal bandwidth of 10 MHz.

## 5.5 ISED RSS-130, RSS-132, RSS-133, RSS-139, RSS-192, RSS-198, RSS-199 and RSS-Gen test requirements results

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**Table 5.5-1: ISED requirements results**

Clause	Test description	Verdict
RSS-Gen, 6.7	Occupied bandwidth	Pass
RSS-130, 4.6	Transmitter output power and effective radiated power (e.r.p.)	Pass
RSS-132, 5.4	Transmitter output power and equivalent radiated power	Pass
RSS-133, 6.4	Transmitter Output Power and Equivalent Isotropically Radiated Power	Pass
RSS-139, 5.5	Transmitter output power	Pass
RSS-192, 5.5	Transmitter output power	Pass
RSS-198, 5.5	Transmitter output power	Pass
RSS-199, 5.5	Transmitter power	Pass
RSS-130, 4.7	Transmitter unwanted emissions	Pass
RSS-132, 5.5	Transmitter unwanted emissions	Pass
RSS-133, 6.5	Transmitter Unwanted Emissions	Pass
RSS-139, 5.6	Unwanted emission limits	Pass
RSS-192, 5.6	Transmitter unwanted emissions	Pass
RSS-198, 5.6	Transmitter unwanted emissions	Pass
RSS-199, 5.6	Unwanted emissions limits	Pass
RSS-Gen, 6.11	Transmitter Frequency Stability	Pass

Notes: - 5G New Radio employs QPSK modulation, signal bandwidth of 10 MHz.

## Section 6 Test equipment

### 6.1 Test equipment list

**Table 6.1-1: Equipment list**

Equipment	Manufacturer	Model no.	Asset no.	Cal cycle	Next cal.
3 m EMI test chamber	TDK	SAC-3	FA003012	1 year	January 31, 2024
Flush mount turntable	SUNAR	FM2022	FA003006	—	NCR
Controller	SUNAR	SC110V	FA002976	—	NCR
Antenna mast	SUNAR	TLT2	FA003007	—	NCR
Receiver/spectrum analyzer	Rohde & Schwarz	ESR26	FA002969	1 year	February 10, 2024
Bilog antenna (30–2000 MHz)	SUNAR	JB1	FA003010	1 year	July 14, 2024
Horn antenna (1–18 GHz)	ETS Lindgren	3117	FA002911	1 year	May 31, 2024
Preamp (1–18 GHz)	ETS Lindgren	124334	FA002956	1 year	March 27, 2024
Horn antenna (18–40 GHz)	EMCO	3116B	FA002948	1 year	March 27, 2024
Preamp 18-40 GHz	None	PA1840	FA003323	1 year	March 27, 2024
50 Ω coax cable	Huber + Suhner	None	FA003047	1 year	July 27, 2024
50 Ω coax cable	Huber + Suhner	None	FA003402	1 year	July 27, 2024
Vector signal generator	Rohde & Schwarz	SMW200A	FA002970	1 Year	December 8, 2024
Spectrum analyzer	Rohde & Schwarz	FSW43	FA002971	1 year	November 30, 2024
Temperature Chamber	Espec	EPX-4H	FA003033	1 year	March 8, 2024

Notes: NCR - no calibration required

**Table 6.1-2: Automation software details**

Test description	Manufacturer of Software	Details
Software for Radio/EMC Measurements	Rohde & Schwarz	EMC32, Software for EMC Measurements, Version 10.60.00

**Table 6.1-3: Measurement uncertainty calculations based on equipment list**

Measurement	Measurement uncertainty, ±dB
Radiated spurious emissions (30 MHz to 1 GHz)	4.27
Radiated spurious emissions (1 GHz to 6 GHz)	4.74
Radiated spurious emissions (6 GHz to 18 GHz)	5.04
Radiated spurious emissions (18 GHz to 26 GHz)	4.47
Radiated spurious emissions (26 GHz to 40 GHz)	4.78
RF Output power measurement using Spectrum Analyzer	0.71
Conducted spurious emissions	0.90
Other antenna port measurements	0.81

Notes: UKAS Lab 34, TIA-603 and ETSI TR 100 028-1&2 have been used as guidance for measurement uncertainty reasonable estimations with regards to previous experience and validation of data. Nemko Canada Inc. follows these test methods in order to satisfy ISO/IEC 17025 requirements for estimation of uncertainty of measurement for wireless products. Measurement uncertainty calculations assume a coverage factor of K = 2 with 95% certainty.

Section 7	Testing data
Test name	Maximum output power at RF antenna connector and Occupied bandwidth
Specification	FCC 47 CFR Part 22, Subpart H, FCC 47 CFR Part 24, Subpart E, FCC 47 CFR Part 27, Subpart C, ISED RSS-130 Issue 2, ISED RSS-132 Issue 4, ISED RSS-133 Issue 6, ISED RSS-139 Issue 4, ISED RSS-192 Issue 5, ISED RSS-198 Issue 1, ISED RSS-199 Issue 4

## Section 7 Testing data

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### 7.1 Maximum output power at RF antenna connector and Occupied bandwidth

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References, definitions and limits

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**FCC §22.913:**

(a) (1) Base station and repeaters :500 Watts (57 dBm)  
Maximum Peak-Average ratio, 0.1% (dB) must not exceed 13 dB.

**FCC §24.232:**

Base station:1640 Watts/MHz (62.1 dBm/MHz)  
Maximum Peak-Average ratio, 0.1% (dB) must not exceed 13 dB.

**FCC §27.50:**

Power limits and duty cycle.

(d) The following power and antenna height requirements apply to stations transmitting in the 1695–1710 MHz, 1710–1755 MHz, 1755–1780 MHz, 1915–1920 MHz, 1995–2000 MHz, 2000–2020 MHz, 2110–2155 MHz, 2155–2180 MHz and 2180–2200 MHz bands:

(1) The power of each fixed or base station transmitting in the 1995–2000 MHz, 2110–2155 MHz, 2155–2180 MHz or 2180–2200 MHz band and located in any county with population density of 100 or fewer persons per square mile, based upon the most recently available population statistics from the Bureau of the Census, is limited to:

(i) An equivalent isotropically radiated power (EIRP) of 3280 watts when transmitting with an emission bandwidth of 1 MHz or less;

(ii) An EIRP of 3280 watts/MHz when transmitting with an emission bandwidth greater than 1 MHz.

(2) The power of each fixed or base station transmitting in the 1995–2000 MHz, the 2110–2155 MHz 2155–2180 MHz band, or 2180–2200 MHz band and situated in any geographic location other than that described in paragraph (d)(1) of this section is limited to:

(i) An equivalent isotropically radiated power (EIRP) of 1640 watts when transmitting with an emission bandwidth of 1 MHz or less;

(ii) An EIRP of 1640 watts/MHz when transmitting with an emission bandwidth greater than 1 MHz.

(3) A licensee operating a base or fixed station in the 2110–2155 MHz band utilizing a power greater than 1640 watts EIRP and greater than 1640 watts/MHz EIRP must coordinate such operations in advance with all Government and non-Government satellite entities in the 2025–2110 MHz band. A licensee operating a base or fixed station in the 2110–2180 MHz band utilizing power greater than 1640 watts EIRP and greater than 1640 watts/MHz EIRP must be coordinated in advance with the following licensees authorized to operate within 120 kilometers (75 miles) of the base or fixed station operating in this band: All Broadband Radio Service (BRS) licensees authorized under this part in the 2155–2160 MHz band and all advanced wireless services (AWS) licensees authorized to operate on adjacent frequency blocks in the 2110–2180 MHz band.

(5) Equipment employed must be authorized in accordance with the provisions of §24.51. Power measurements for transmissions by stations authorized under this section may be made either in accordance with a Commission-approved average power technique or in compliance with paragraph (d)(6) of this section. In measuring transmissions in this band using an average power technique, the peak-to-average ratio (PAR) of the transmission may not exceed 13 dB.

(6) Peak transmit power must be measured over any interval of continuous transmission using instrumentation calibrated in terms of an rms-equivalent voltage. The measurement results shall be properly adjusted for any instrument limitations, such as detector response times, limited resolution bandwidth capability when compared to the emission bandwidth, sensitivity, etc., so as to obtain a true peak measurement for the emission in question over the full bandwidth of the channel.

<b>Section 7</b>	<i>Testing data</i>
<b>Test name</b>	<i>Maximum output power at RF antenna connector and Occupied bandwidth</i>
<b>Specification</b>	<i>FCC 47 CFR Part 22, Subpart H, FCC 47 CFR Part 24, Subpart E, FCC 47 CFR Part 27, Subpart C, ISED RSS-130 Issue 2, ISED RSS-132 Issue 4, ISED RSS-133 Issue 6, ISED RSS-139 Issue 4, ISED RSS-192 Issue 5, ISED RSS-198 Issue 1, ISED RSS-199 Issue 4</i>

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## References, definitions and limits, continued

### **RSS-130, Clause 4.6:**

The transmitter output power shall be measured in terms of average power. In addition, the peak-to-average power ratio (PAPR) of the transmitter shall not exceed 13 dB for more than 0.1% of the time and shall use a signal corresponding to the highest PAPR during periods of continuous transmission.

Frequency bands 617-652 MHz and 663-698 MHz

The e.r.p. shall not exceed 3 watts for mobile equipment, fixed subscriber equipment and portable equipment.

For base and fixed equipment other than fixed subscriber equipment, refer to SRSP-518 for the equivalent isotropically radiated power (e.i.r.p.) limits.

Frequency bands 698-756 MHz and 777-787 MHz

The e.r.p. shall not exceed 30 watts for mobile equipment and outdoor fixed subscriber equipment. The e.r.p. shall not exceed 3 watts for portable equipment and indoor fixed subscriber equipment.

For base and fixed equipment other than fixed subscriber equipment, refer to SRSP-518 for the e.i.r.p. limits.

### **RSS-132, Clause 5.4:**

Base station and Repeaters e.i.r.p.: 820 Watts/5 MHz (59.1 dBm/5 MHz)

Maximum Peak-Average ratio, 0.1% (dB) must not exceed 13 dB.

### **RSS-133, Clause 6.4:**

Base station: 1640 Watts/MHz (62.1 dBm/MHz)

Maximum Peak-Average ratio, 0.1% (dB) must not exceed 13 dB.

### **RSS-139, Clause 5.5:**

Base station e.i.r.p. :65 dBm/MHz

Maximum Peak-Average ratio, 0.1% (dB) must not exceed 13 dB.

### **RSS-192, Clause 5.5:**

Base station e.i.r.p. :68 dBm/5 MHz

Maximum Peak-Average ratio, 0.1% (dB) must not exceed 13 dB.

### **RSS-198, Clause 5.5:**

Base station e.i.r.p. :37 dBm/MHz

Maximum Peak-Average ratio, 0.1% (dB) must not exceed 13 dB.

### **RSS-199, Clause 5.5:**

Base stations and fixed stations:

2500-2690 MHz: 1640 Watts (62.1 dBm)

746-757 MHz and 776-788 MHz: 1000 Watts/MHz (60 dBm/MHz)

600 MHz and 698-746 MHz: 1000 Watts (60 dBm)

Maximum Peak-Average ratio, 0.1% (dB) must not exceed 13 dB.

## **Bandwidth**

### **FCC §2.1049: Measurements required: Occupied bandwidth.**

The occupied bandwidth, that is the frequency bandwidth such that, below its lower and above its upper frequency limits, the mean powers radiated are each equal to 0.5 percent of the total mean power radiated by a given emission shall be measured under the following conditions as applicable:

### **RSS-Gen, Clause 6.7:**

Occupied bandwidth (or 99% emission bandwidth) and x dB bandwidth

The occupied bandwidth or the "99% emission bandwidth" is defined as the frequency range between two points, one above and the other below the carrier frequency, within which 99% of the total transmitted power of the fundamental transmitted emission is contained. The occupied bandwidth shall be reported for all equipment in addition to the specified bandwidth required in the applicable RSSs.



Section 7	Testing data
Test name	Maximum output power at RF antenna connector and Occupied bandwidth
Specification	FCC 47 CFR Part 22, Subpart H, FCC 47 CFR Part 24, Subpart E, FCC 47 CFR Part 27, Subpart C, ISED RSS-130 Issue 2, ISED RSS-132 Issue 4, ISED RSS-133 Issue 6, ISED RSS-139 Issue 4, ISED RSS-192 Issue 5, ISED RSS-198 Issue 1, ISED RSS-199 Issue 4

## Test summary

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Verdict	Pass	Temperature	22 °C
Test date	December 5, 2023	Air pressure	974 mbar
Tested by	Tarek Elkholly	Relative humidity	33 %
Test location	Cambridge		

## Observations, settings and special notes

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- Output power was measured utilizing CCDF method per ANSI C63.26 Paragraph 5.2.3.4, Analyzing bandwidth is equal or larger than the signal bandwidth.
- PSD was measured using method described in per ANSI C63.26 Paragraph 5.2

Spectrum analyzer settings for PSD, the test was performed as per ANSI C63.26, subclause 5.2

Detector mode	RMS
Resolution bandwidth	1 MHz
Video bandwidth	>RBW
Trace mode	Averaging/Max Hold
Measurement time	Auto

Occupied bandwidth and Emission bandwidth tests were performed as per ANSI C63.26, subclause 5.4

Spectrum analyser settings:

Resolution bandwidth	1–5% of OBW
Video bandwidth	$\geq 3 \times$ RBW
Frequency span	1.5 $\times$ OBW
Detector mode	Peak
Trace mode	Max Hold

Test data, continued

NR									
Band	Channel	Tx freq. (MHz)	Power level setting	Average power (dBm)	Peak power (dBm)	Peak-Average ratio 0.1% (dB)	Average power (dBm/MHz)	99% OBW (MHz)	26 dB EBW (MHz)
n2	387100	1935.5	34	34.0	45.7	8.8	34.9	8.7	11.4
	387500	1937.5	38	37.9	49.2	8.7			
	392000	1960	44	44.0	54.2	8.5	44.2	8.7	11.5
	397000	1985	31	31.0	42.1	8.5	30.7	8.8	11.4
n5	174800	874	31	30.1	43.0	8.7	30.7	8.8	11.5
	176300	881.5	44	42.8	55.0	8.5	43.1	8.7	11.4
	177800	889	32	31.5	44.7	8.4	32.3	8.8	11.4
n12	146800	734	33	29.2	43.4	8.5	29.4	8.8	11.5
	147500	737.5	44	40.0	52.4	8.5	41.2	8.8	11.5
	148200	741	32	28.3	39.4	8.4	29.1	8.9	11.5
n25	387000	1935	31	30.3	41.5	8.5	30.7	8.7	11.3
	392500	1962.5	44	44.4	54.5	8.3	44.0	8.7	11.5
	398000	1990	31	30.6	42.3	8.6	31.0	8.7	11.5
n41	510000	2550	44	41.6	52.9	9.1	43.4	8.6	9.5
	518598	2592.99	44	43.1	53.7	9.0	44.8	8.7	9.7
	525000	2625	44	43.6	53.9	8.8	44.5	8.6	9.9
n66	423020	2115.1	32	31.1	42.2	8.4	32.1	8.8	11.4
	423040	2115.2	34	33.3	45.0	8.4			
	431000	2155	44	45.8	56.5	8.5	44.9	8.7	11.4
	434940	2174.7	35	33.3	46.8	8.5			
	435000	2175	31	29.6	41.7	8.4	29.8	8.8	11.5
n71	124400	622	32	29.2	42.3	8.6	29.5	8.7	11.3
	126800	634	40	37.1	49.6	8.5	37.8	8.7	11.4
	129400	647	32	30.1	43.6	8.6	31.0	8.8	11.4
n77	630334	3455.01	41	39.8	51.0	9.5	41.1	8.7	10.0
	633333	3499.995	43	41.6	51.6	8.8	43.2	8.7	9.5
	636333	3544.995	40 (FCC)	39.4	51.0	9.5	40.6	8.6	9.5
	636333	3544.995	43	40.4	50.9	9.2	42.3	8.6	9.9
	647000	3705	43	40.6	51.3	9.4	42.3	8.6	9.5
	659666	3894.99	41	38.5	50.2	9.5	40.0	8.6	9.5
	660334	3905.01	30	39.3	50.5	9.4	30.2	8.6	9.5
	664800	3972	30	39.2	50.3	9.3	30.2	8.6	9.5
	664900	3973.5	30	39.0	50.1	9.3	30.1	8.6	9.4
	665000	3975	30	39.0	50.2	9.3	30.1	8.6	9.4
	647000	3705	40	37.9	49.8	9.7	39.3	8.6	10.4
	650000	3750	43	40.1	50.9	9.5	42.3	8.6	9.5
	656000	3840	43	41.1	51.2	8.9	42.1	8.7	10.3
	664800	3972	43	41.0	51.2	9.0	42.0	8.6	9.9
n78	664900	3973.5	43	40.2	50.8	9.2	41.5	8.6	9.6
	665000	3975	41	38.6	49.8	9.3	40.1	8.6	9.4
	630380	3455.7	41	39.6	51.7	9.6	40.7	8.6	9.2
	636666	3549.99	43	41.3	51.4	8.9	42.9	8.7	11.0
	653000	3795	43	40.5	51.1	9.2	42.3	8.6	9.3

**Test data, CCDF**

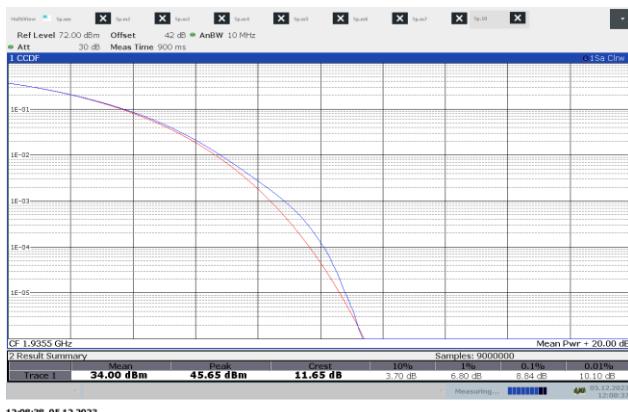


Figure 7.1-1: CCDF, n2, ch 387100

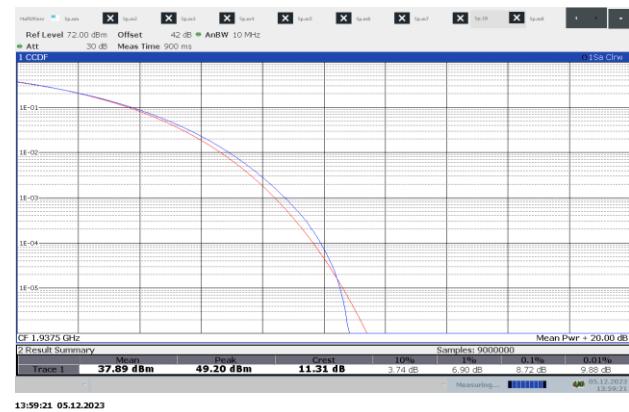


Figure 7.1-2: CCDF, n2, ch 387500

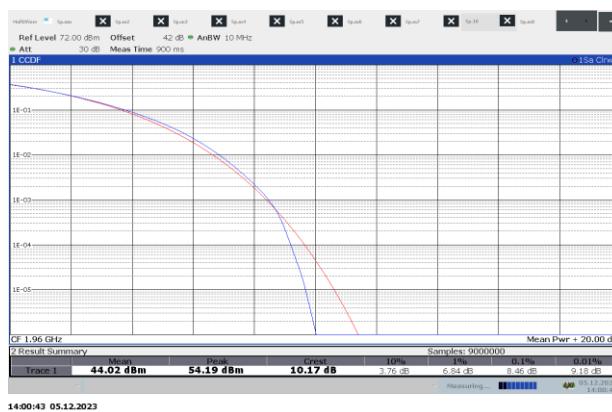


Figure 7.1-3: CCDF, n2, ch 392000

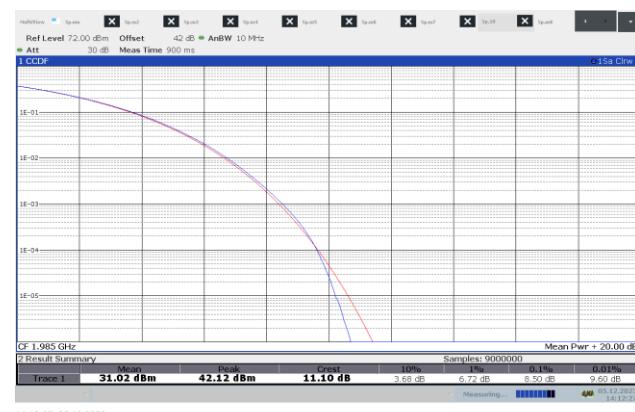


Figure 7.1-4: CCDF, n2, ch 397000

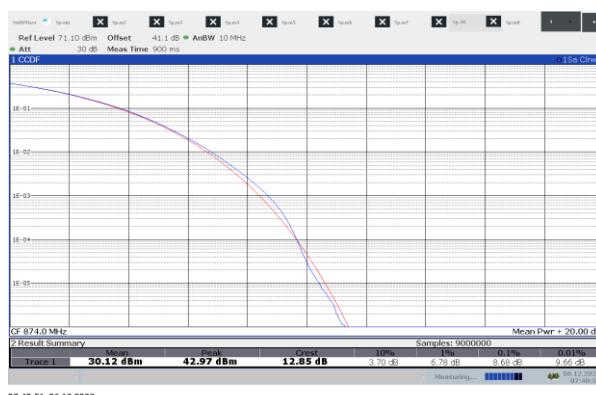


Figure 7.1-5: CCDF, n5, ch 174800

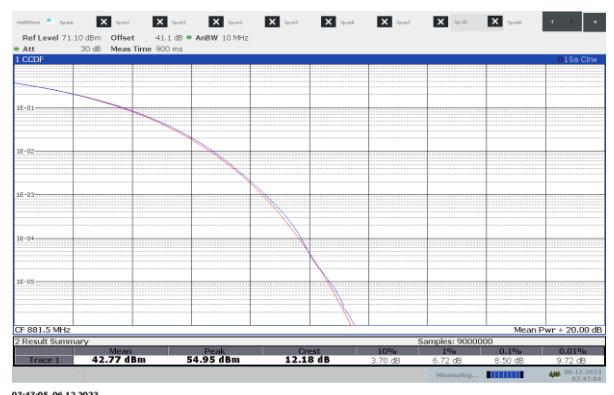
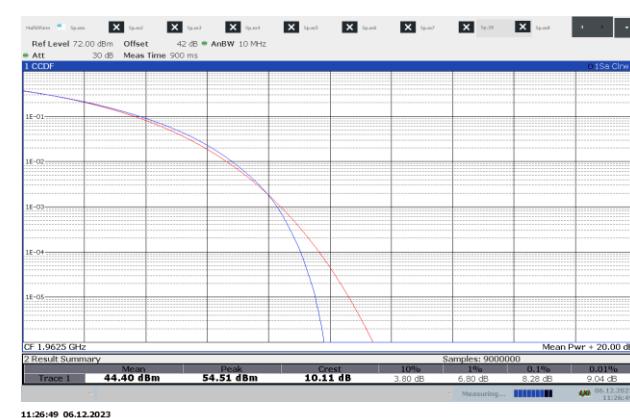
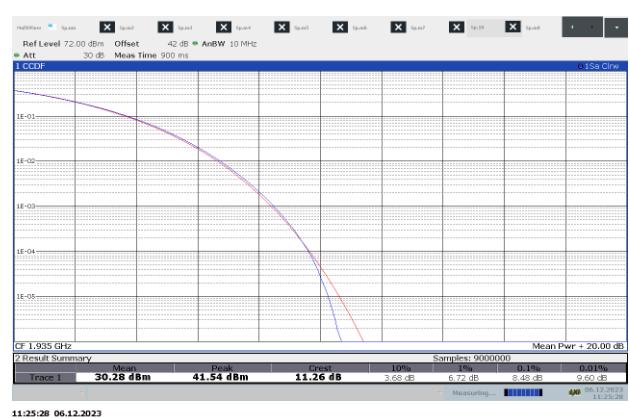
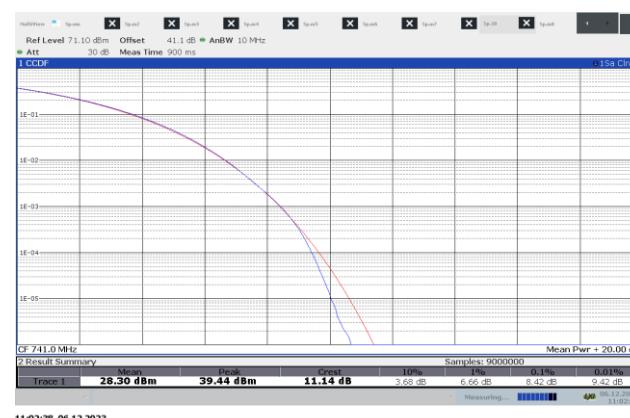
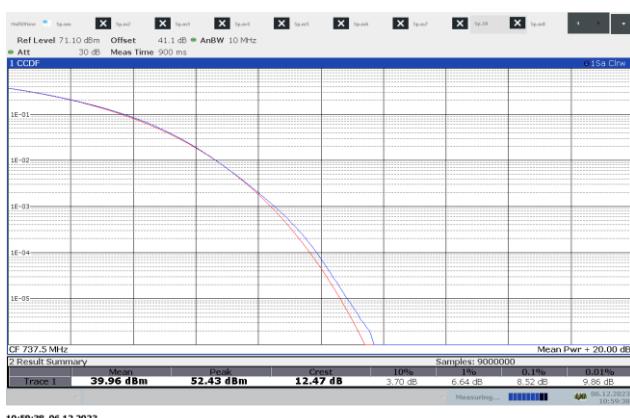
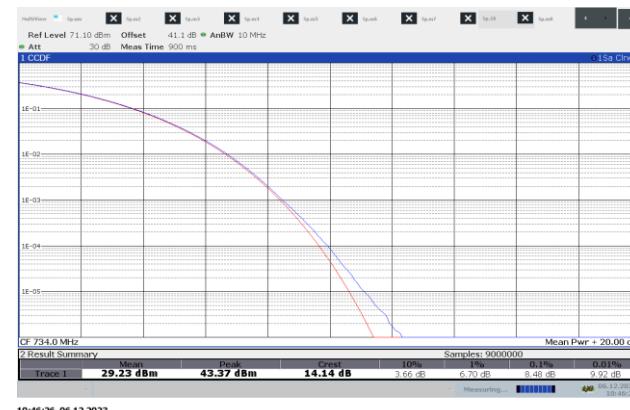
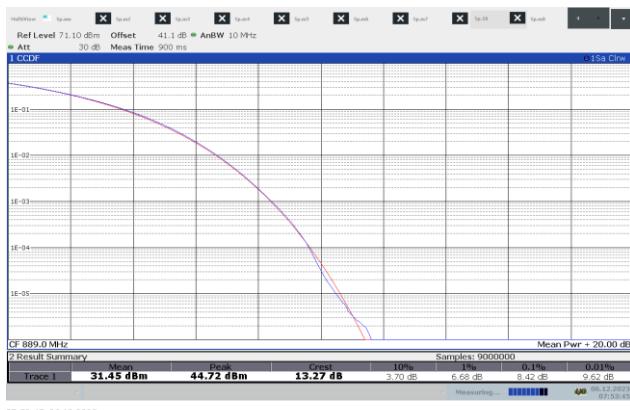
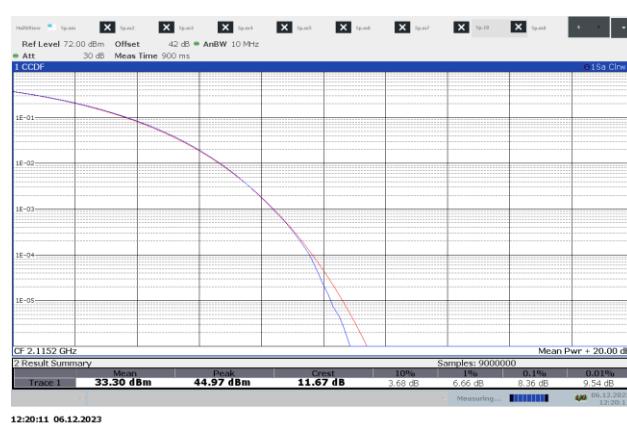
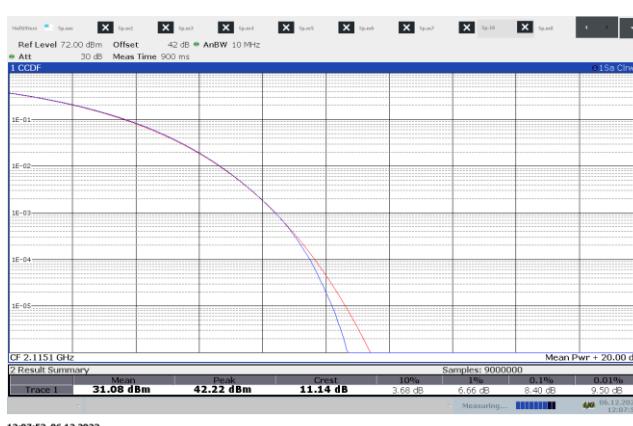
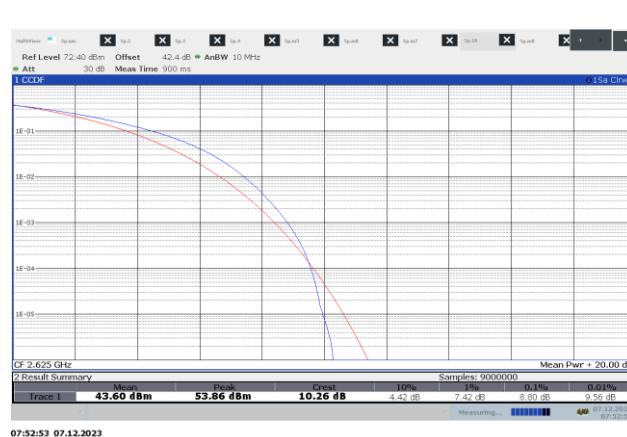
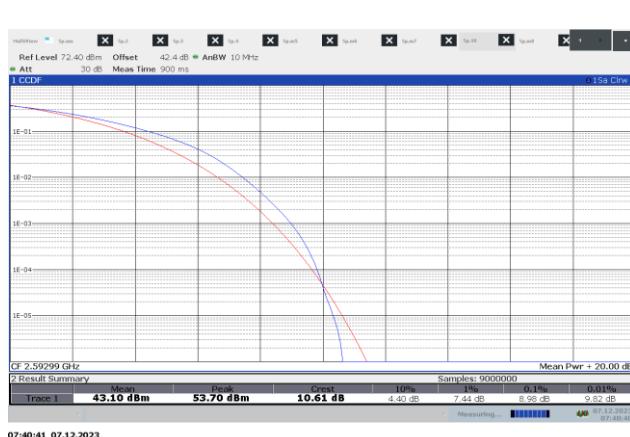
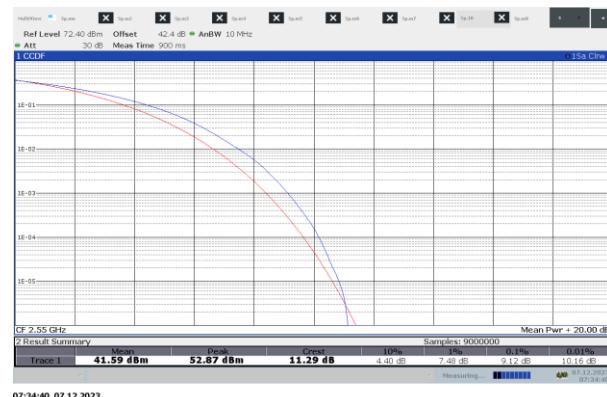
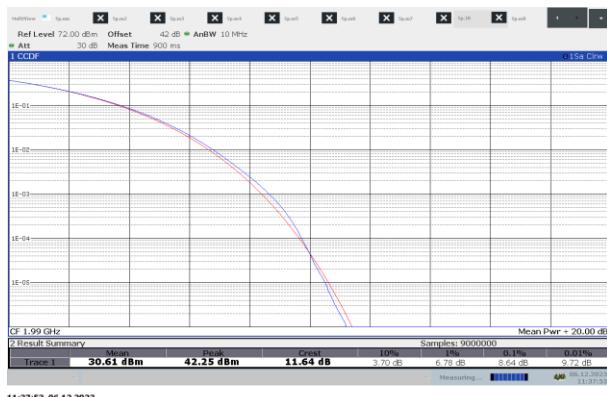


Figure 7.1-6: CCDF, n5, ch 176300

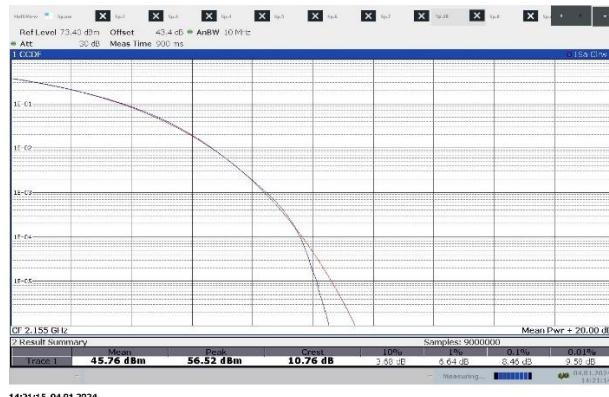
Test data, CCDF, continued



Test data, CCDF, continued



Test data, CCDF, continued



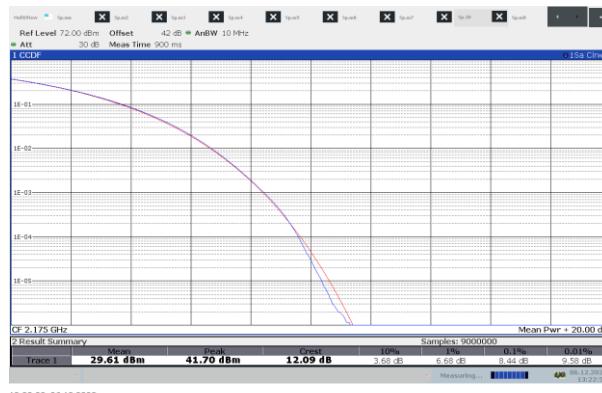
14:21:15 04.12.2024

**Figure 7.1-19: CCDF, n66, ch 431000**



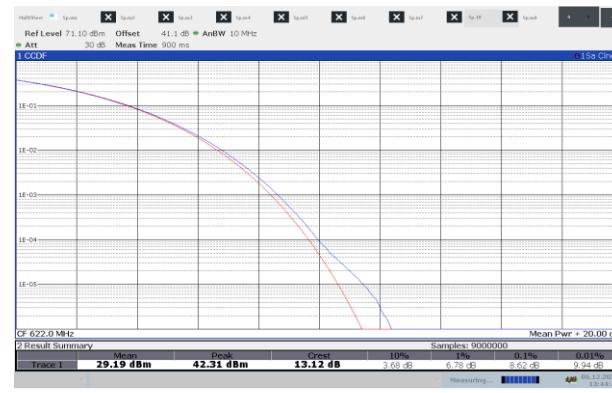
13:29:02 06.12.2023

**Figure 7.1-20: CCDF, n66, ch 434940**



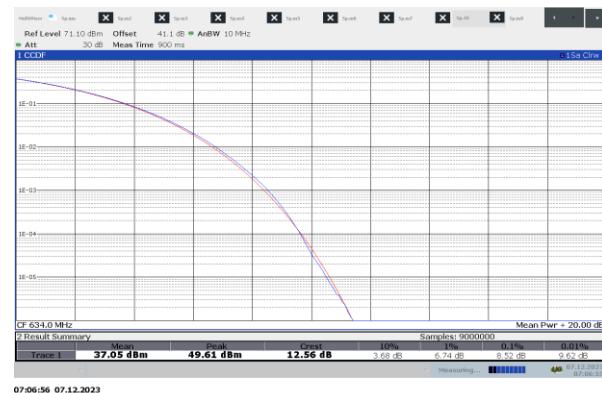
13:23:00 06.12.2023

**Figure 7.1-21: CCDF, n66, ch 435000**



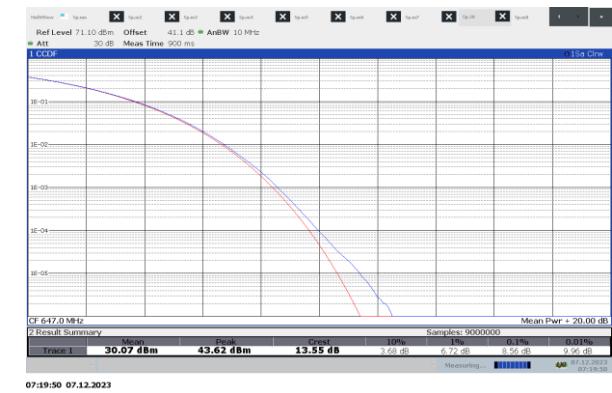
13:44:45 06.12.2023

**Figure 7.1-22: CCDF, n71, ch 124400**



07:06:56 07.12.2023

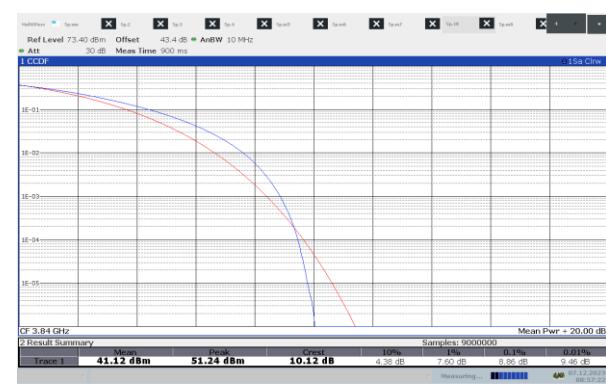
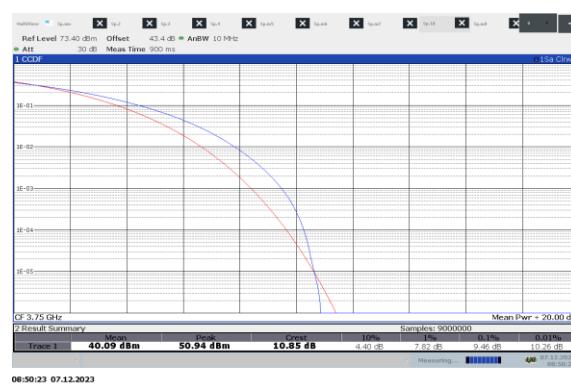
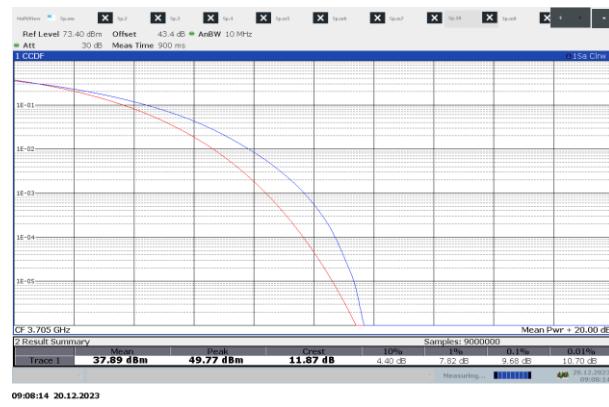
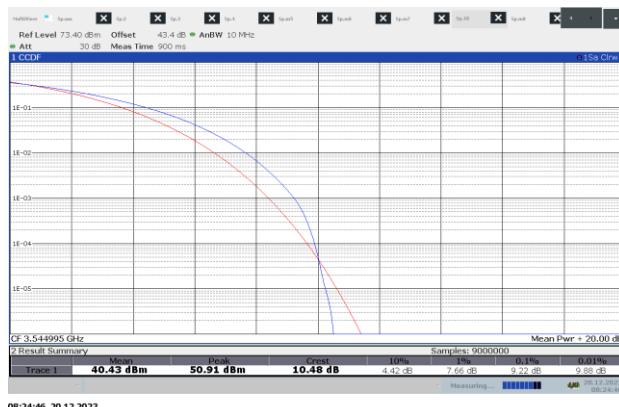
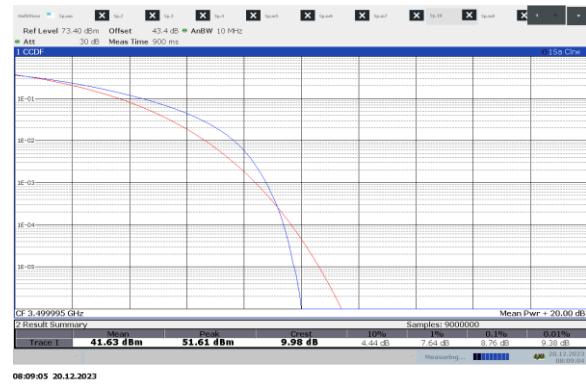
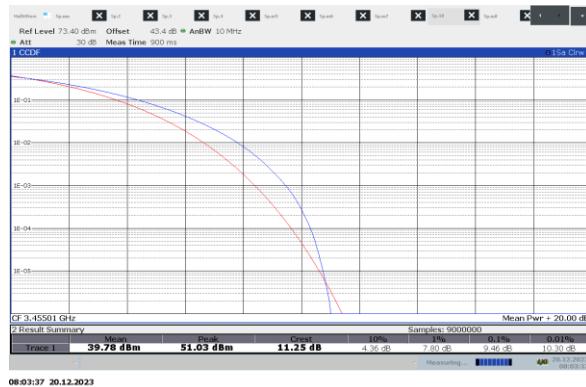
**Figure 7.1-23: CCDF, n71, ch 126800**



07:19:50 07.12.2023

**Figure 7.1-24: CCDF, n71, ch 129400**

Test data, CCDF, continued



Test data, CCDF, continued

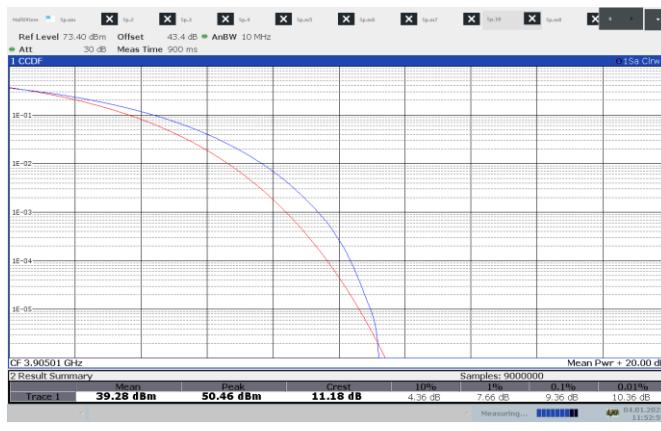


Figure 7.1-31: CCDF, n77, ch 660334

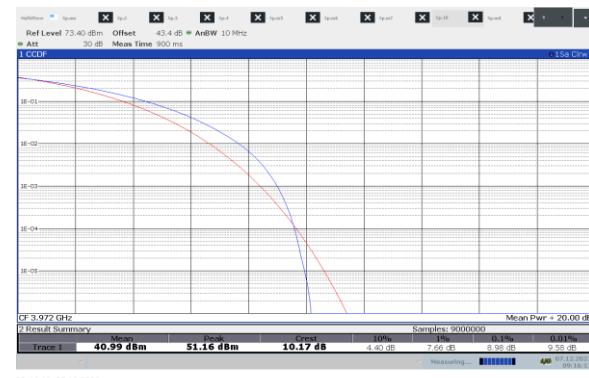


Figure 7.1-32: CCDF, n77, ch 664800

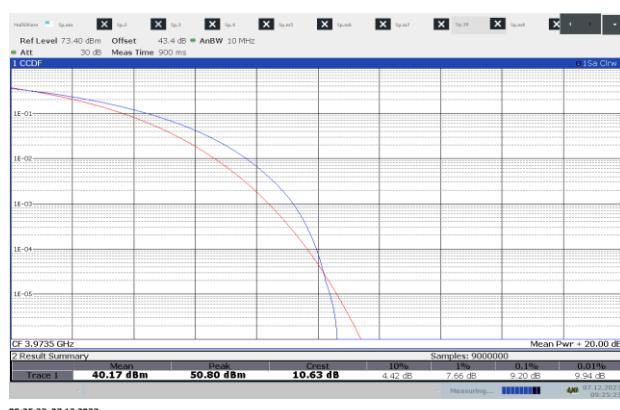


Figure 7.1-33: CCDF, n77, ch 664900

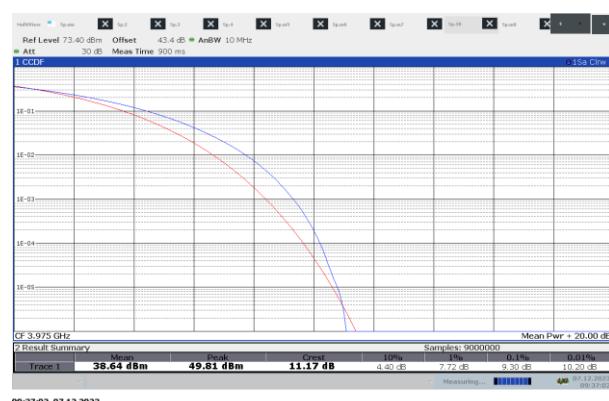


Figure 7.1-34: CCDF, n77, ch 665000

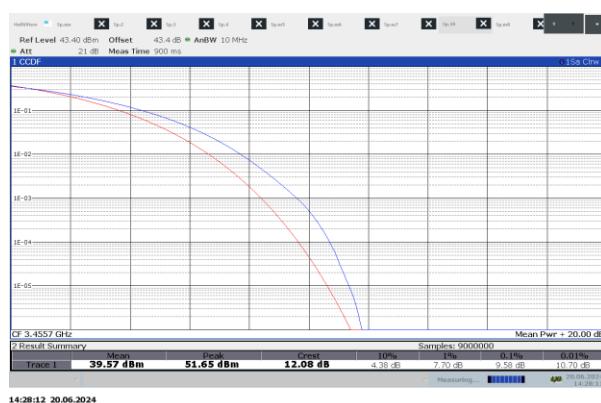
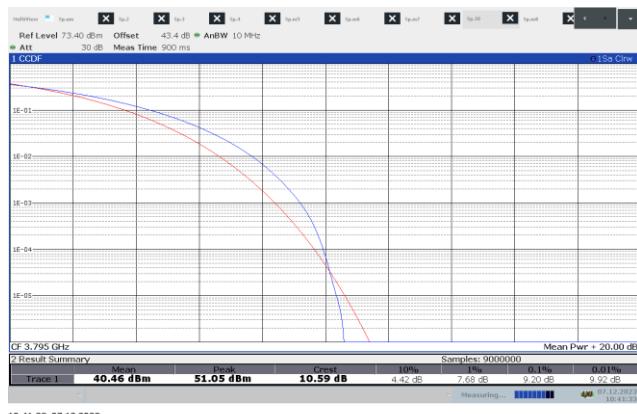


Figure 7.1-35: CCDF, n78, ch 630380

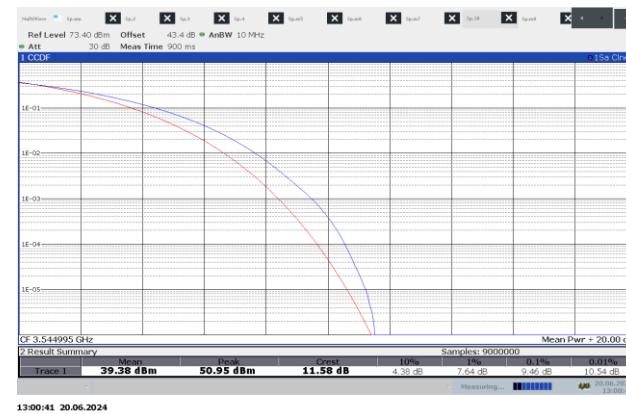


Figure 7.1-36: CCDF, n78, ch 636666

Test data, CCDF, continued

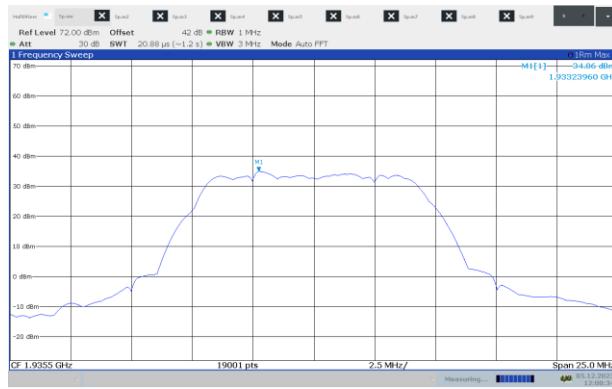


**Figure 7.1-37: CCDF, n78, ch 653000**



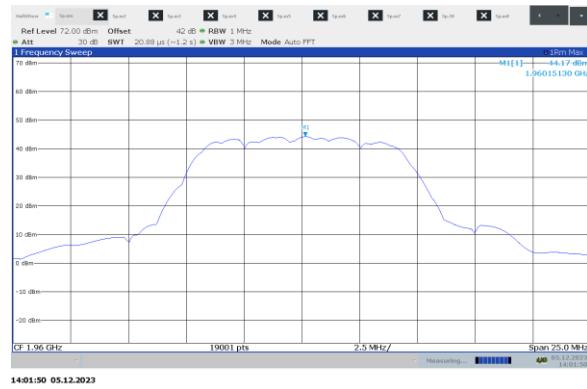
**Figure 7.1-38: CCDF, n77, ch 63666 (FCC)**

Test data, PSD



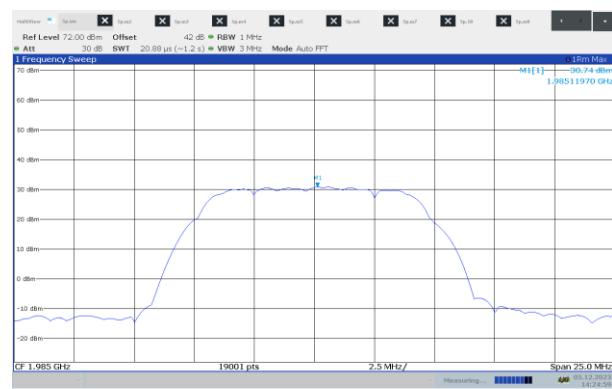
12:00:35 05.12.2023

Figure 7.1-38: PSD, n2, ch 387100



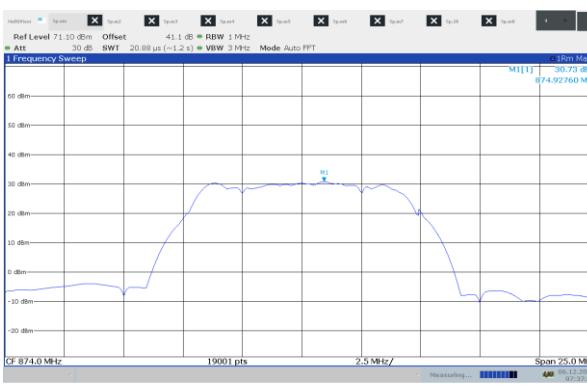
14:01:50 05.12.2023

Figure 7.1-39: PSD, n2, ch 392000



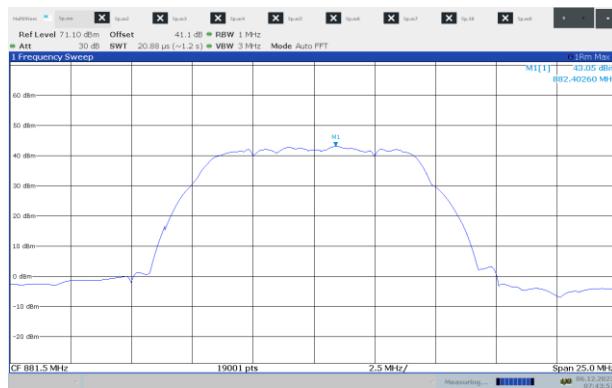
14:24:59 05.12.2023

Figure 7.1-40: PSD, n2, ch 397000



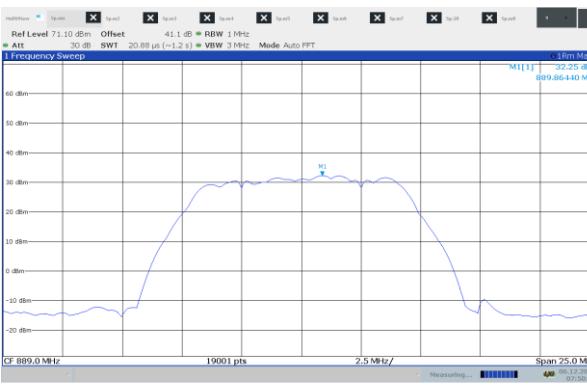
07:37:40 06.12.2023

Figure 7.1-41: PSD, n5, ch 174800



07:43:58 06.12.2023

Figure 7.1-42: PSD, n5, ch 176300



07:50:32 06.12.2023

Figure 7.1-43: PSD, n5, ch 177800

Test data, PSD, continued

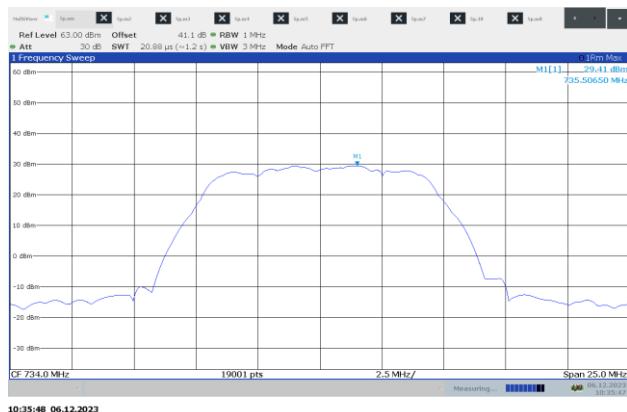


Figure 7.1-44: PSD, n12, ch 146800

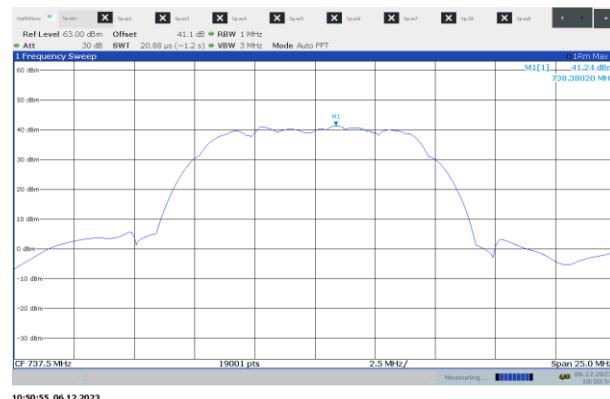


Figure 7.1-45: PSD, n12, ch 147500

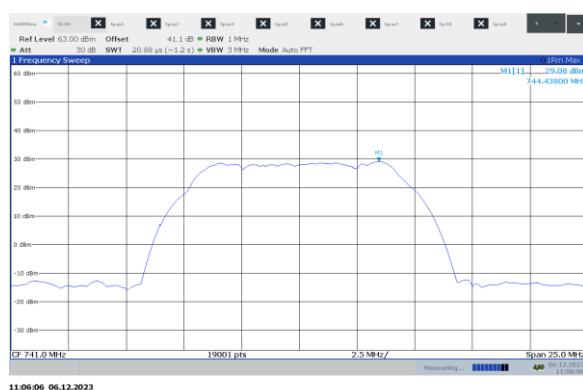


Figure 7.1-46: PSD, n12, ch 148200

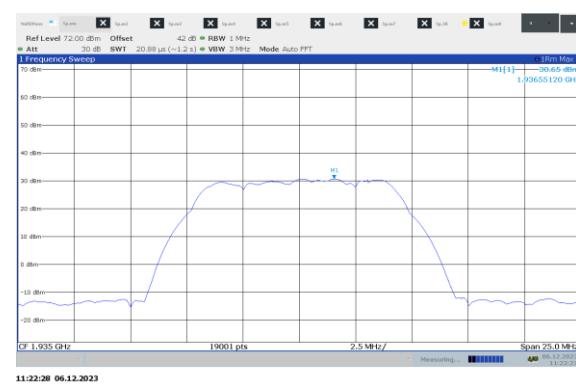


Figure 7.1-47: PSD, n25, ch 387000

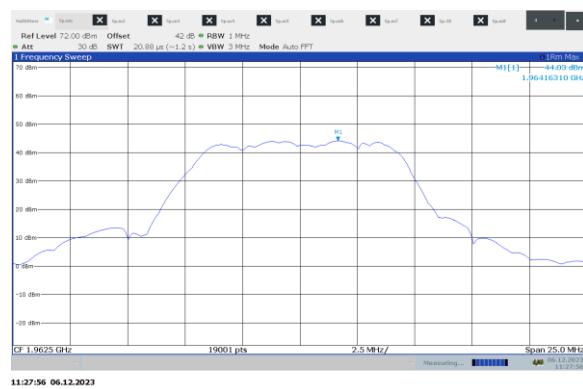


Figure 7.1-48: PSD, n25, ch 392500

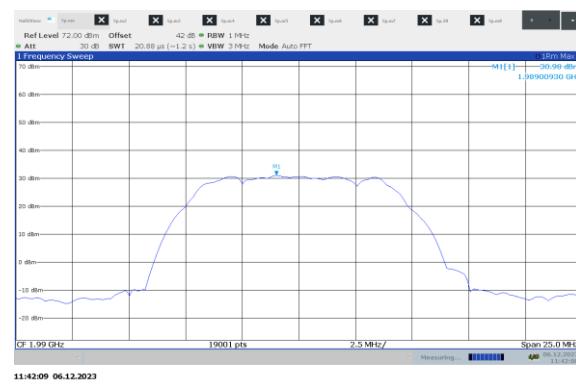
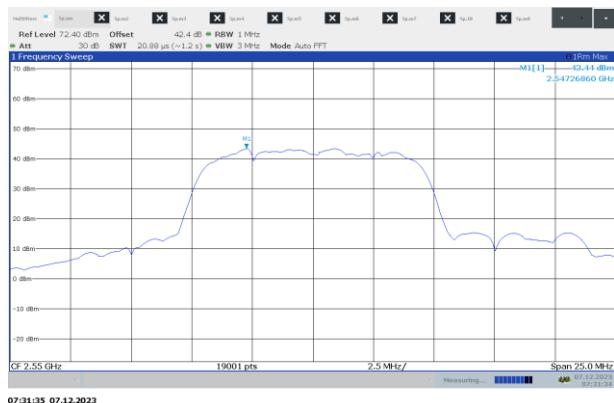
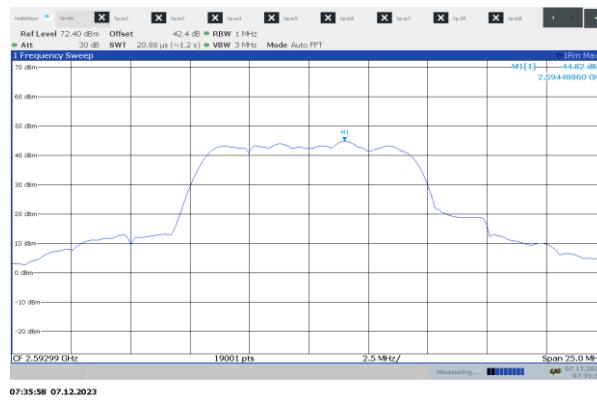


Figure 7.1-49: PSD, n25, ch 398000

Test data, PSD, continued



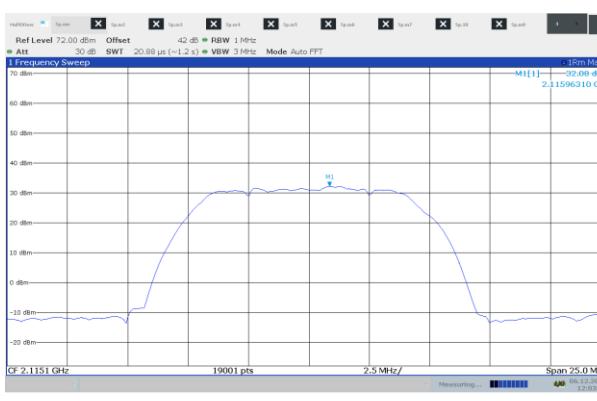
07:31:35 07.12.2023



07:35:58 07.12.2023



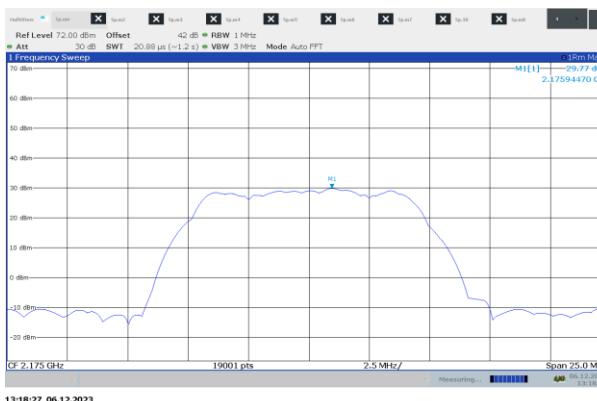
07:48:17 07.12.2023



12:03:31 06.12.2023



12:35:34 06.12.2023



13:18:27 06.12.2023

Test data, PSD, continued



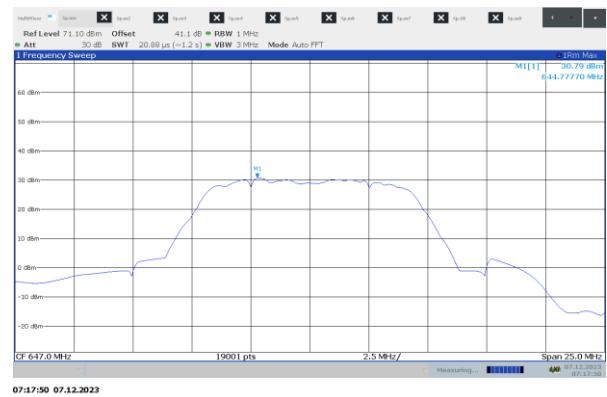
13:41:32 06.12.2023

Figure 7.1-56: PSD, n71, ch 124400



07:03:13 07.12.2023

Figure 7.1-57: PSD, n71, ch 126800



07:17:50 07.12.2023

Figure 7.1-58: PSD, n71, ch 129400



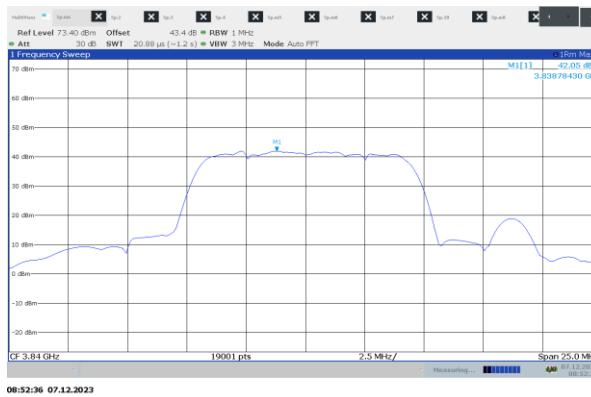
07:36:15 07.12.2023

Figure 7.1-59: PSD, n77, ch 630334



08:05:36 07.12.2023

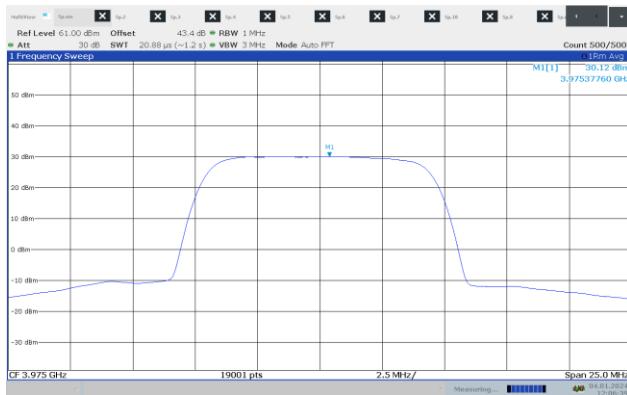
Figure 7.1-60: PSD, n77, ch 633333



08:52:36 07.12.2023

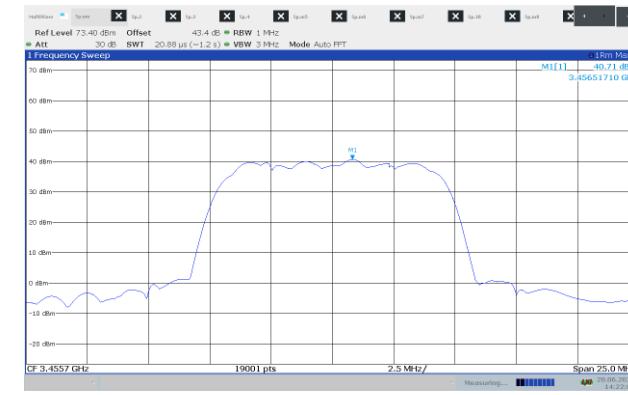
Figure 7.1-61: PSD, n77, ch 656000

Test data, PSD, continued



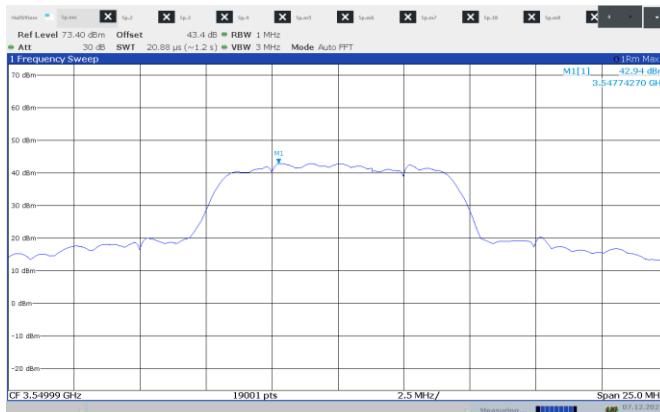
12:06:39 04.01.2024

Figure 7.1-62: PSD, n77, ch 665000



14:22:06 20.06.2024

Figure 7.1-63: PSD, n78, ch 630830



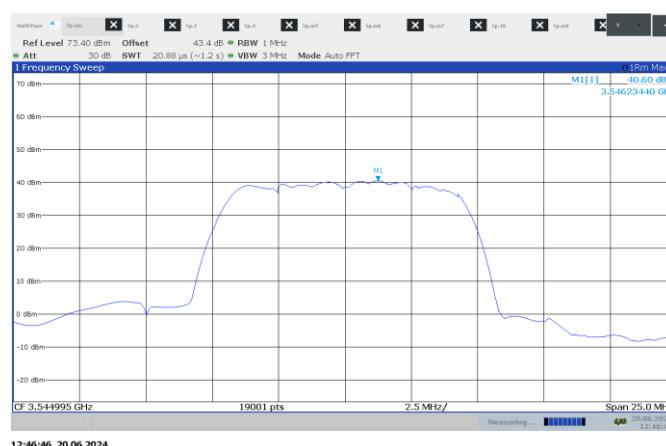
10:16:15 07.12.2023

Figure 7.1-64: PSD, n78, ch 636666



10:34:34 07.12.2023

Figure 7.1-65: PSD, n78, ch 653000



12:46:46 20.06.2024

Figure 7.1-66: PSD, n77, ch 636333 (FCC)

**Test data, Bandwidth**



Figure 7.1-66: OBW, n2, ch 387100



Figure 7.1-67: EBW, n2, ch 387100



Figure 7.1-68: OBW, n2, ch 392000



Figure 7.1-69: EBW, n2, ch 392000



Figure 7.1-70: OBW, n2, ch 397000

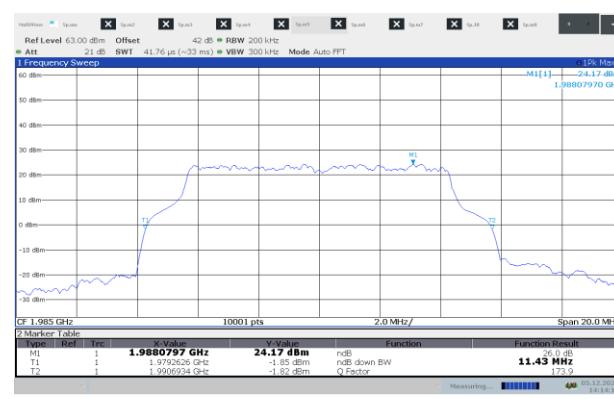


Figure 7.1-71: EBW, n2, ch 397000

Test data, Bandwidth, continued



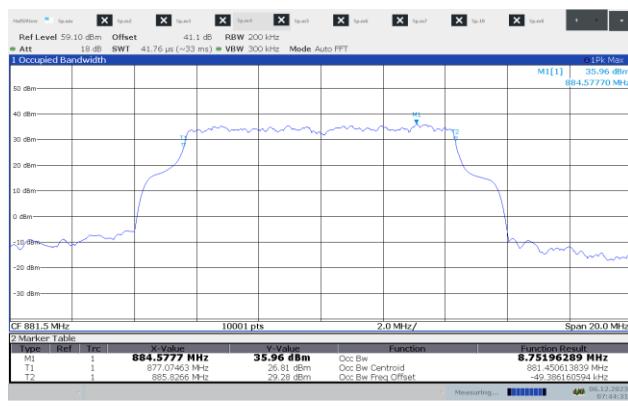
07:38:07 06.12.2023

**Figure 7.1-72: OBW, n5, ch 174800**



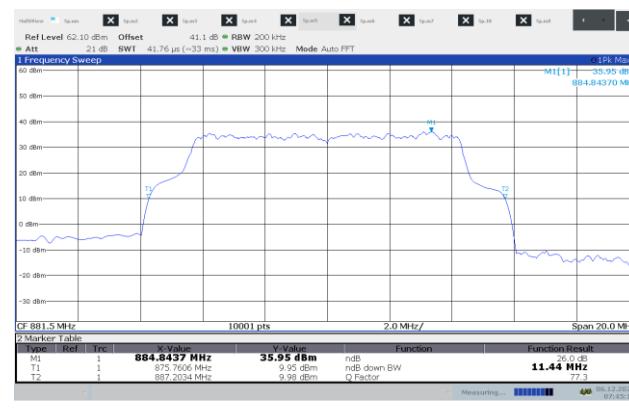
07:38:40 06.12.2023

**Figure 7.1-73: EBW, n5, ch 174800**



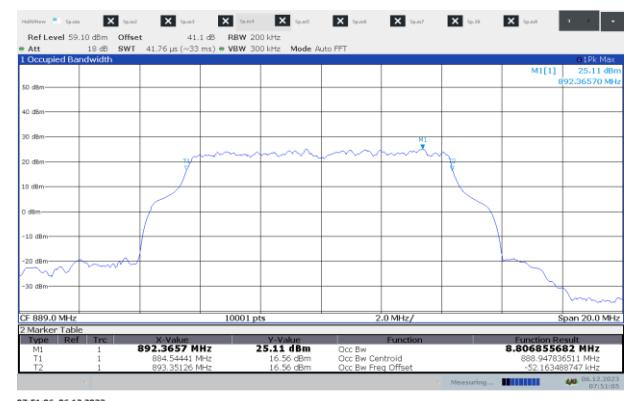
07:44:31 06.12.2023

**Figure 7.1-74: OBW, n5, ch 176300**



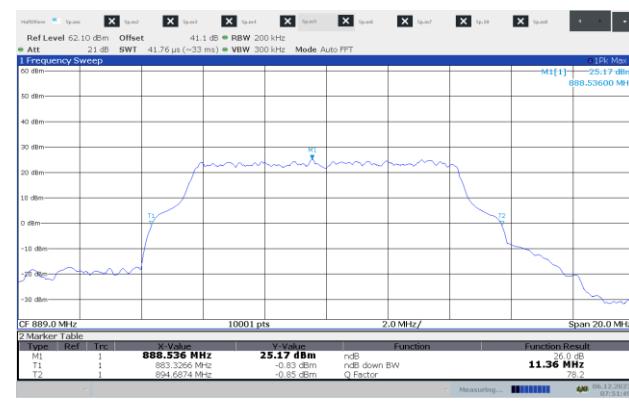
07:45:12 06.12.2023

**Figure 7.1-75: EBW, n5, ch 176300**



07:51:06 06.12.2023

**Figure 7.1-76: OBW, n5, ch 177800**



07:51:49 06.12.2023

**Figure 7.1-77: EBW, n5, ch 177800**

Test data, Bandwidth, continued



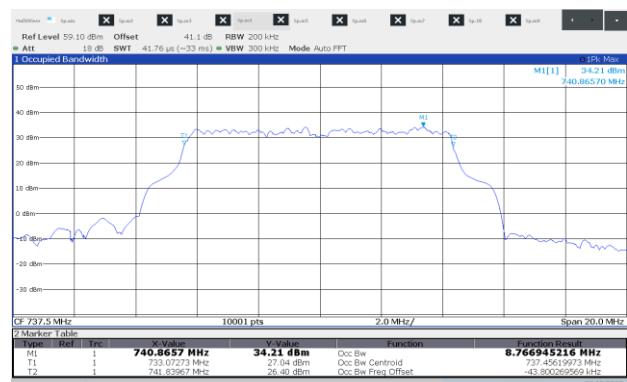
10:36:19 06.12.2023

Figure 7.1-78: OBW, n12, ch 146800



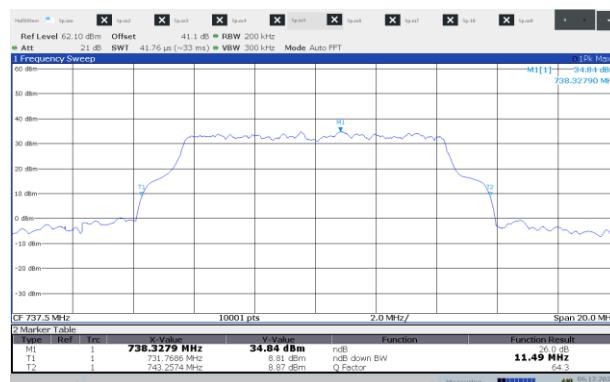
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Figure 7.1-79: EBW, n12, ch 146800



10:51:30 06.12.2023

Figure 7.1-80: OBW, n12, ch 147500



10:54:38 06.12.2023

Figure 7.1-81: EBW, n12, ch 147500



11:13:39 06.12.2023

Figure 7.1-82: OBW, n12, ch 148200



11:14:13 06.12.2023

Figure 7.1-83: EBW, n12, ch 148200

Test data, Bandwidth, continued

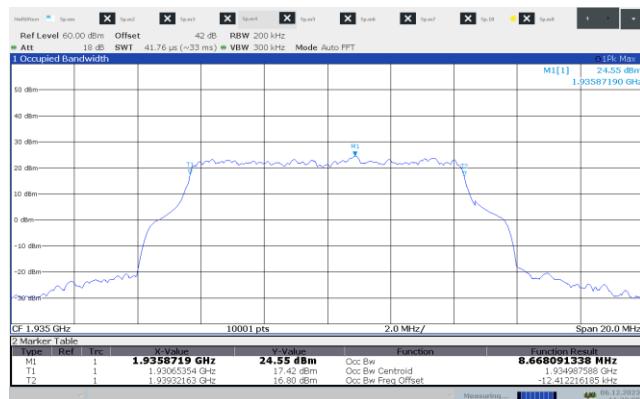


Figure 7.1-84: OBW, n25, ch 387000



Figure 7.1-85: EBW, n25, ch 387000



Figure 7.1-86: OBW, n25, ch 392500



Figure 7.1-87: EBW, n25, ch 392500



Figure 7.1-88: OBW, n25, ch 398000

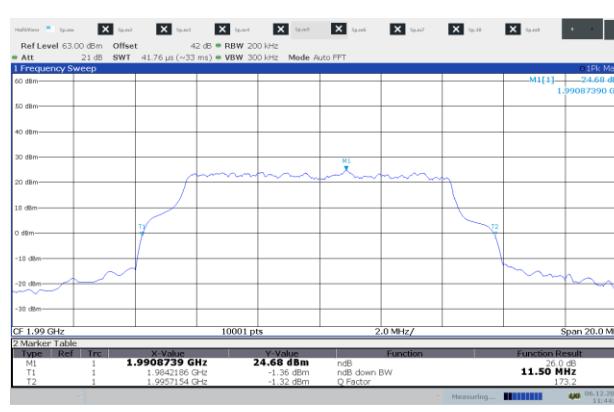


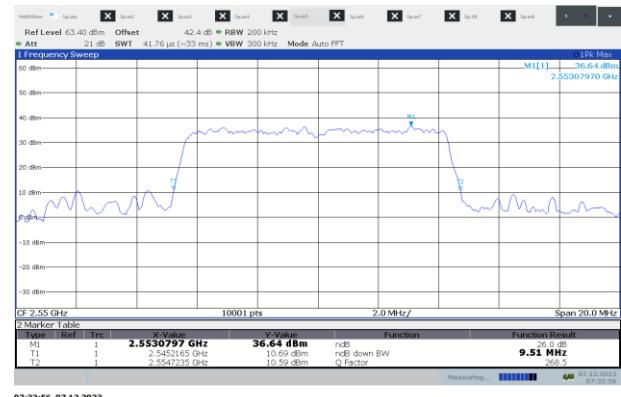
Figure 7.1-89: EBW, n25, ch 398000

Test data, Bandwidth, continued



07:32:28 07.12.2023

Figure 7.1-90: OBW, n41, ch 510000



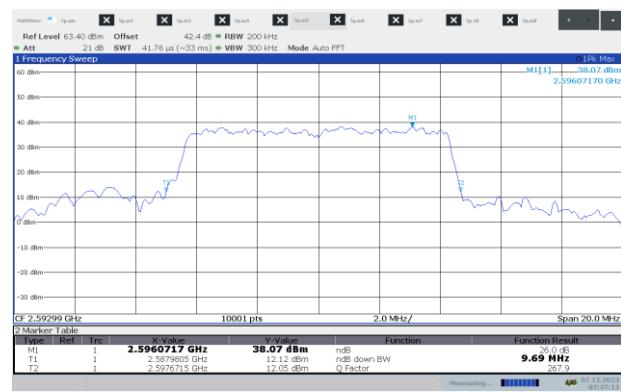
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Figure 7.1-91: EBW, n41, ch 510000



07:36:36 07.12.2023

Figure 7.1-92: OBW, n41, ch 518598



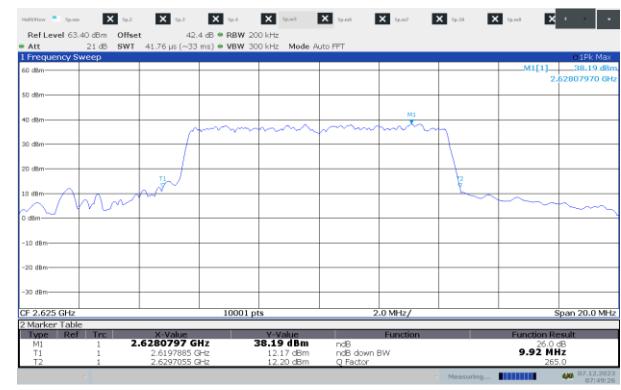
07:37:13 07.12.2023

Figure 7.1-93: EBW, n41, ch 518598



07:48:54 07.12.2023

Figure 7.1-94: OBW, n41, ch 525000



07:49:27 07.12.2023

Figure 7.1-95: EBW, n41, ch 525000

Test data, Bandwidth, continued



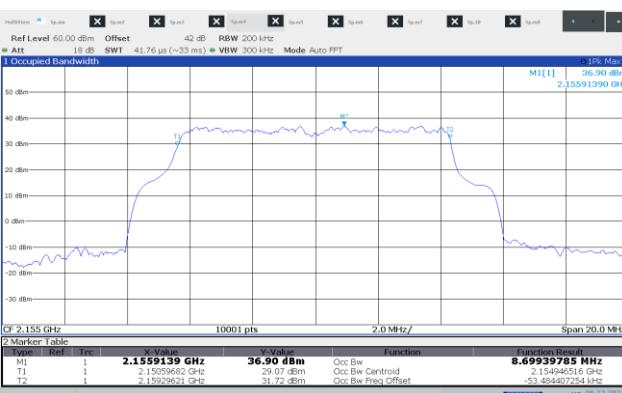
12:04:15 06.12.2023

Figure 7.1-96: OBW, n66, ch 423020



12:05:03 06.12.2023

Figure 7.1-97: EBW, n66, ch 423020



12:36:22 06.12.2023

Figure 7.1-98: OBW, n66, ch 431000



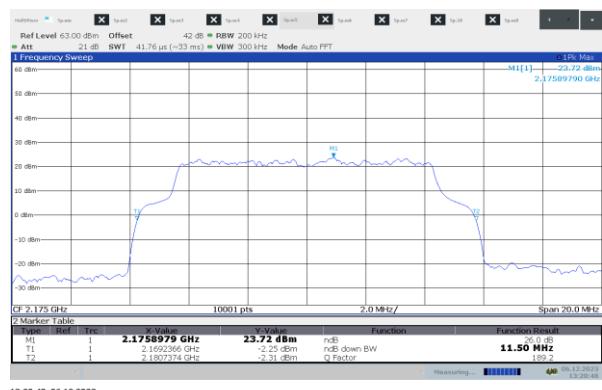
12:42:19 06.12.2023

Figure 7.1-99: EBW, n66, ch 431000



13:20:08 06.12.2023

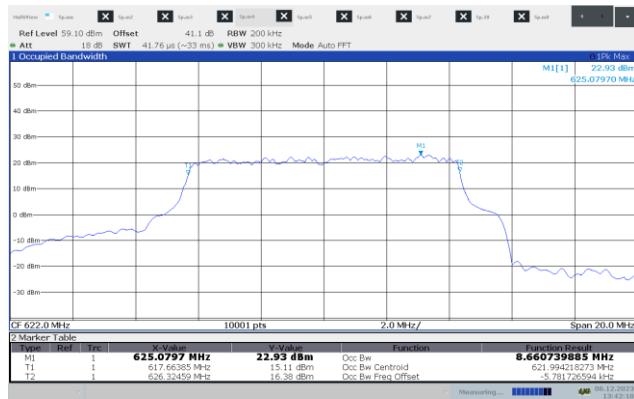
Figure 7.1-100: OBW, n66, ch 435000



13:20:49 06.12.2023

Figure 7.1-101 : EBW, n66, ch 435000

Test data, Bandwidth, continued



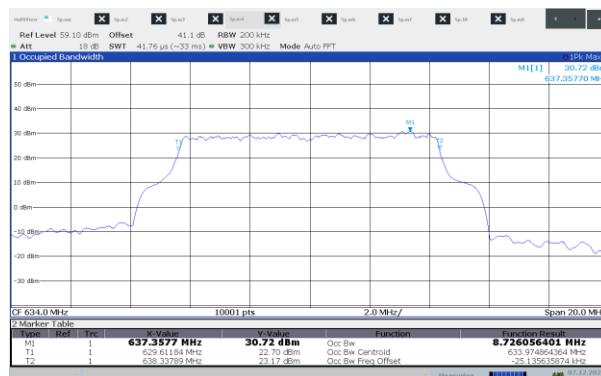
13:42:18 06.12.2023

Figure 7.1-102: OBW, n71, ch 124400



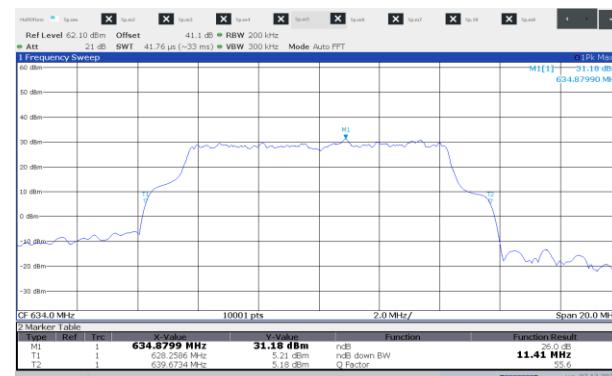
13:42:50 06.12.2023

Figure 7.1-103: EBW, n71, ch 124400



07:05:28 07.12.2023

Figure 7.1-104: OBW, n71, ch 126800



07:05:53 07.12.2023

Figure 7.1-105 : EBW, n71, ch 126800



07:18:37 07.12.2023

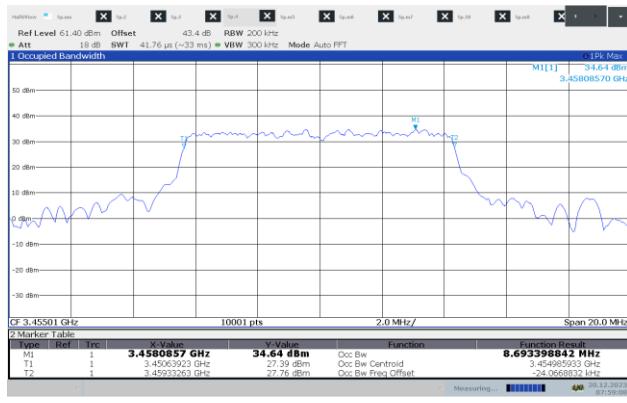
Figure 7.1-106: OBW, n71, ch 129400



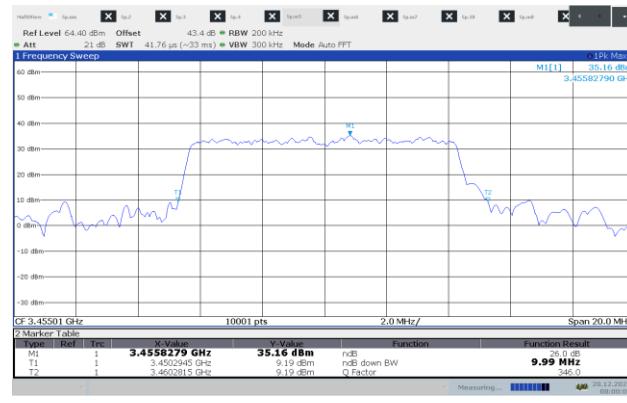
07:19:09 07.12.2023

Figure 7.1-107 : EBW, n71, ch 129400

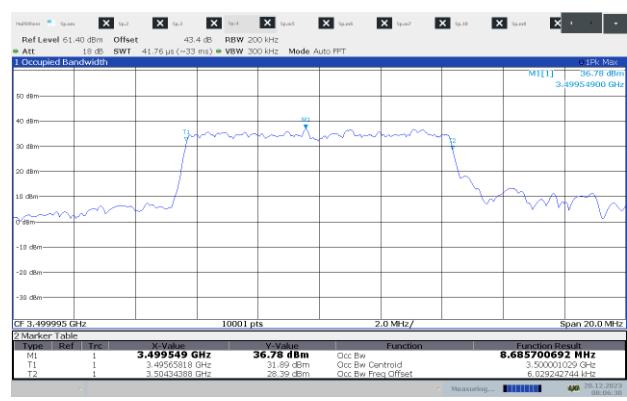
Test data, Bandwidth, continued



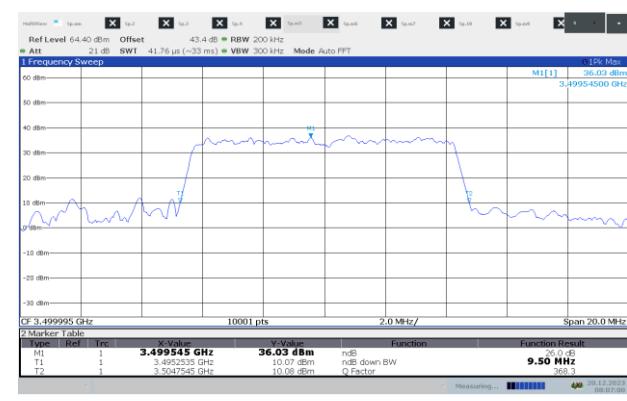
07:59:09 20.12.2023



08:00:08 20.12.2023



08:06:31 20.12.2023



08:07:01 20.12.2023



08:54:50 07.12.2023



Test data, Bandwidth, continued



09:33:09 07.12.2023

Figure 7.1-114: OBW, n77, ch 665000



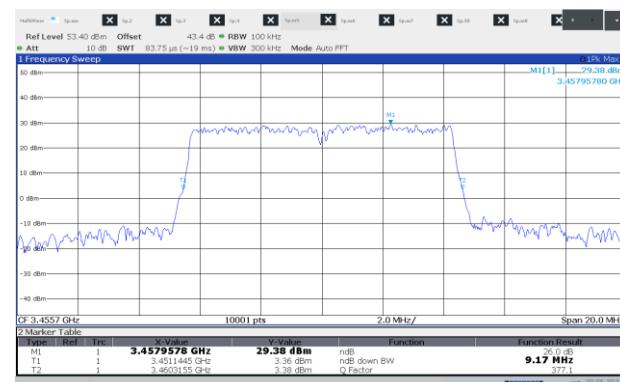
09:33:41 07.12.2023

Figure 7.1-115 : EBW, n77, ch 665000



14:22:35 20.06.2024

Figure 7.1-116: OBW, n78, ch 630380



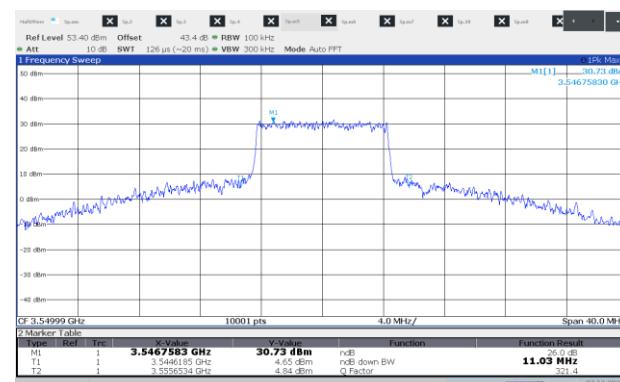
14:22:30 20.06.2024

Figure 7.1-117 : EBW, n78, ch 630380



10:16:51 07.12.2023

Figure 7.1-118: OBW, n78, ch 636666



10:18:12 07.12.2023

Figure 7.1-119 : EBW, n78, ch 636666