

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)

Lab locations

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Test site registration	Organization	Recognition numbers and location	
	FCC/ISED	FCC: CA2040; IC: 2040A-4 (Ottawa); FCC: CA2041; IC: 2040G-5 (Montreal); CA0101 (Cambridge)	
Website	www.nemko.com		

Limits of responsibility

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

1.1 Test specifications

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

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

None

1.4 Statement of compliance

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

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

2.1 Modifications incorporated in the EUT for compliance

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

2.2 Technical judgment

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

No deviations were made from laboratory procedures.

Section 3 Test conditions

3.1 Atmospheric conditions

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

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

4.1 Disclaimer

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

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

Product	Transportable Base Station System		
Model	FXm-Bmax		
Serial number	6675-01-001		
Power requirements	100-240 V _{AC} , 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	CPU	4.1 GHz	
	Oscillators	12 MHz	
		25 MHz	
		100 MHz	
Software details	v1.3.19-1929addc		

4.4 Technical information, New Radio

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: * Referrers 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

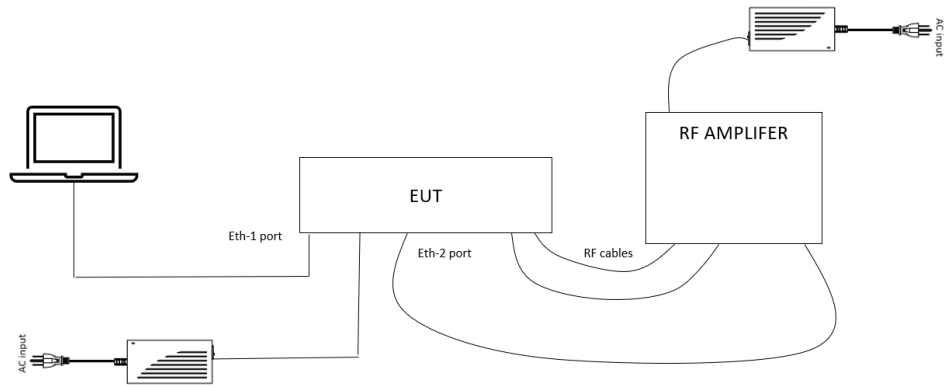


Figure 4.5-1: Block diagram

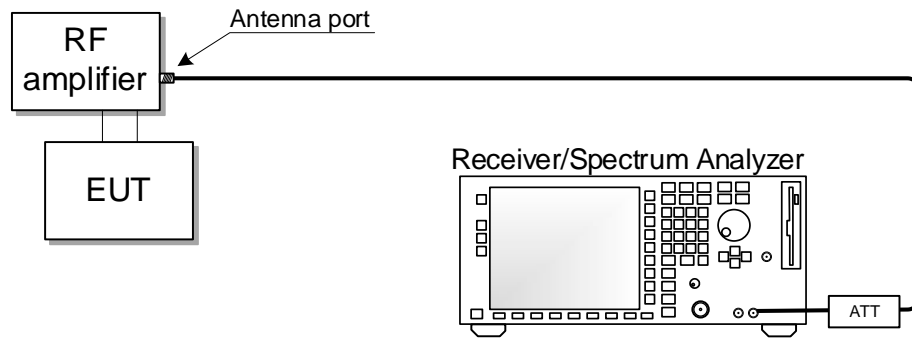


Figure 4.5-2: Antenna port testing block diagram

Section 5 Summary of test results

5.1 Testing location

Test location (s)	Cambridge
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5.2 Testing period

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

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

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

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, \pm 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

7.1 Maximum output power at RF antenna connector and Occupied bandwidth

References, definitions and limits

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.

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.

Test summary

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

Observations, settings and special notes

- 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	$\geq 3 \times \text{RBW}$
Frequency span	$1.5 \times \text{OBW}$
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
	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
n78	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

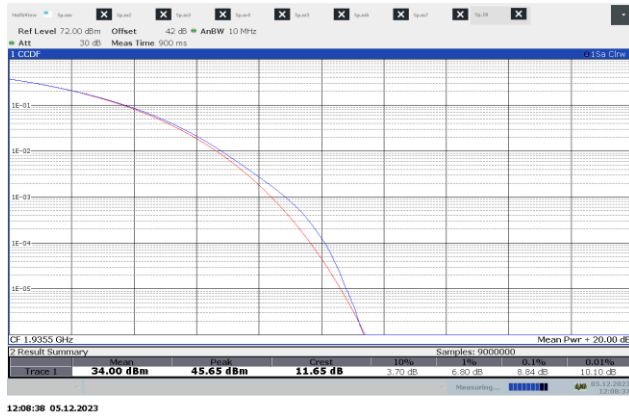


Figure 7.1-1: CCDF, n2, ch 387100

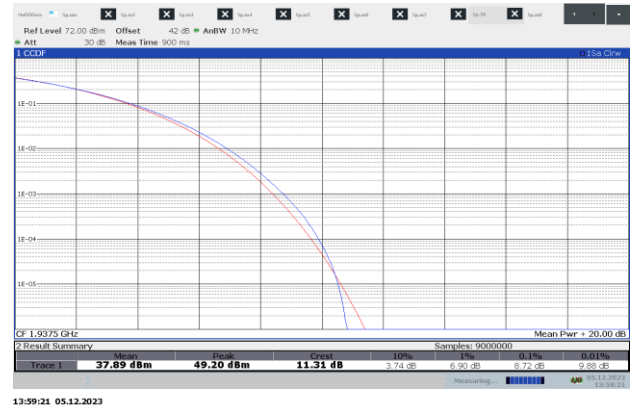


Figure 7.1-2: CCDF, n2, ch 387500

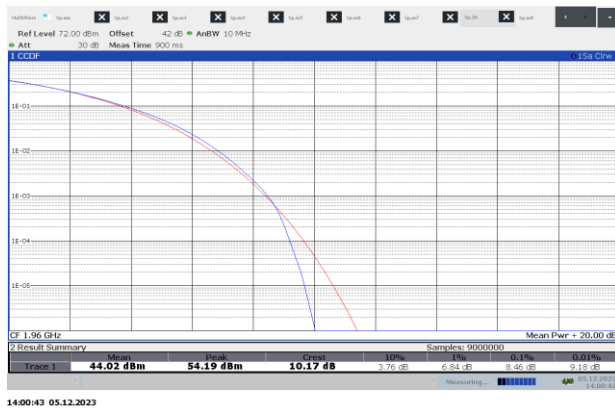


Figure 7.1-3: CCDF, n2, ch 392000

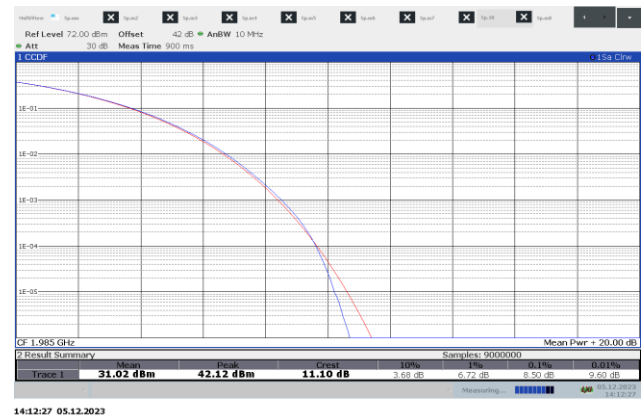


Figure 7.1-4: CCDF, n2, ch 397000

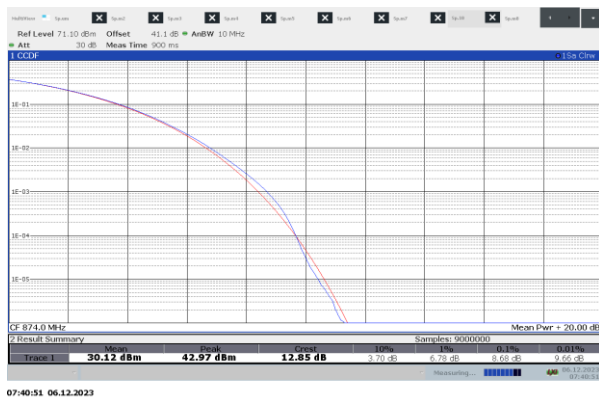


Figure 7.1-5: CCDF, n5, ch 174800

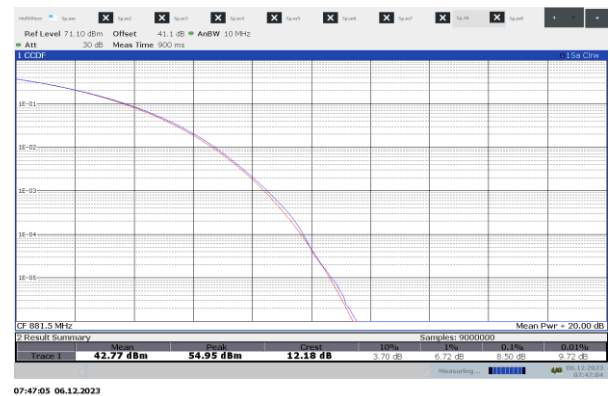


Figure 7.1-6: CCDF, n5, ch 176300

Test data, CCDF, continued

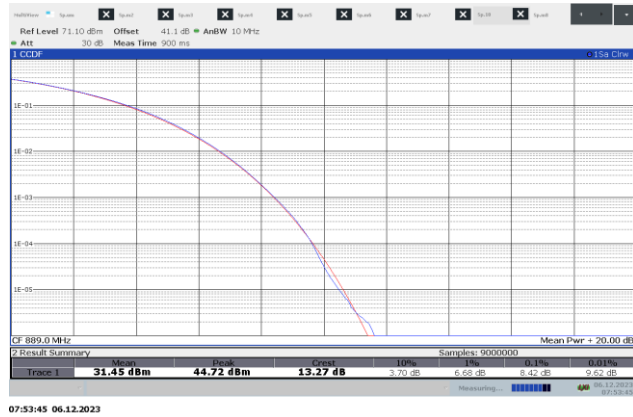


Figure 7.1-7: CCDF, n5, ch 177800

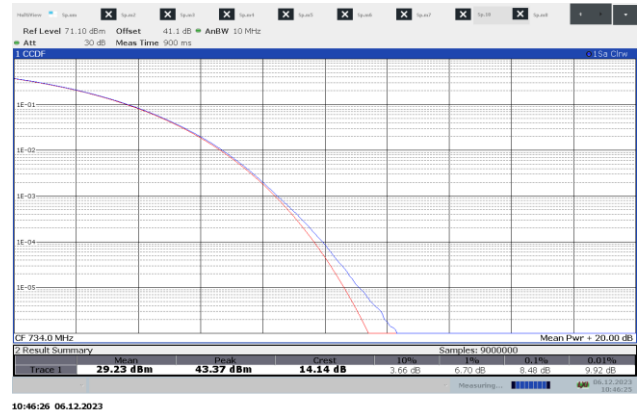


Figure 7.1-8: CCDF, n12, ch 146800

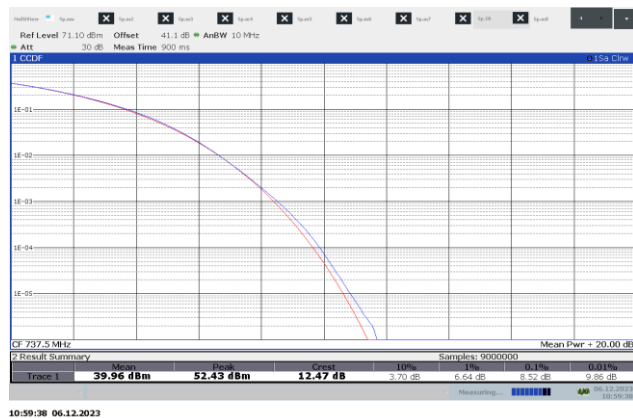


Figure 7.1-9: CCDF, n12, ch 147500

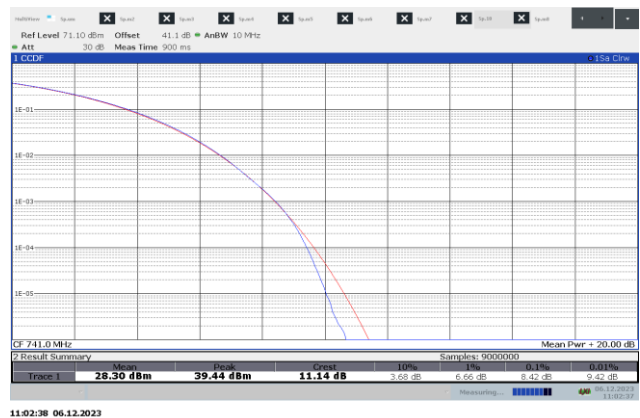


Figure 7.1-10: CCDF, n12, ch 148200

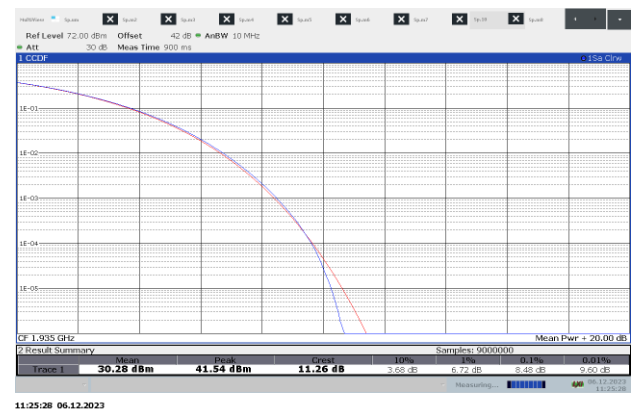


Figure 7.1-11: CCDF, n25, ch 387000

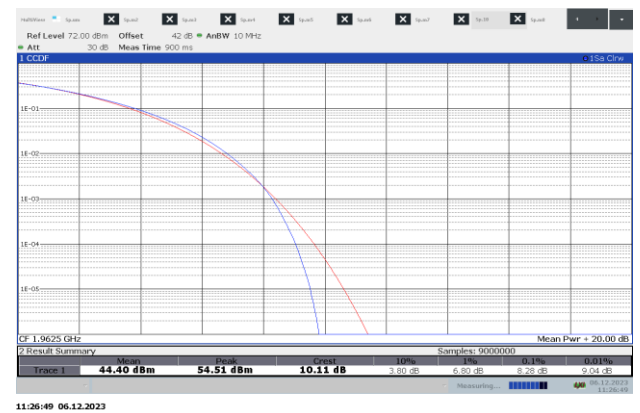


Figure 7.1-12: CCDF, n25, ch 392500

Test data, CCDF, continued

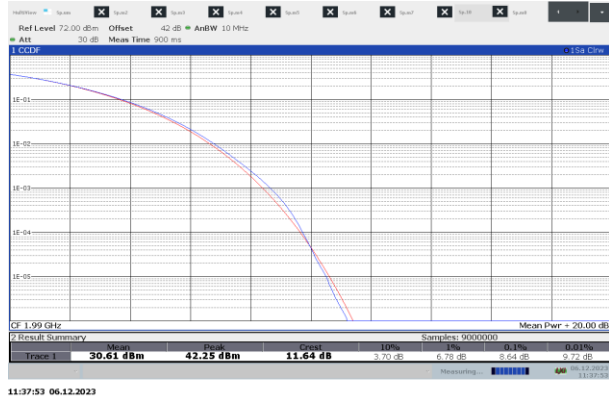


Figure 7.1-13: CCDF, n25, ch 398000

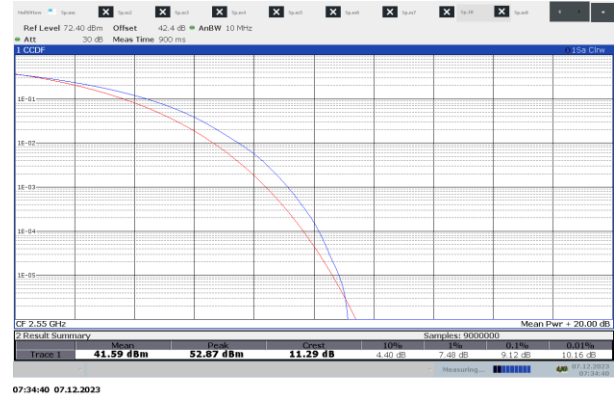


Figure 7.1-14: CCDF, n41, ch 510000

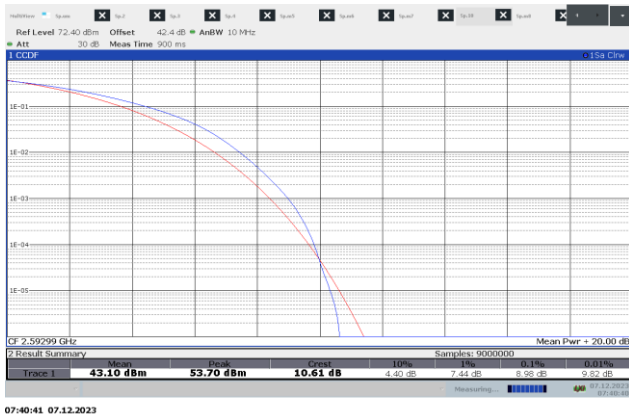


Figure 7.1-15: CCDF, n41, ch 518598

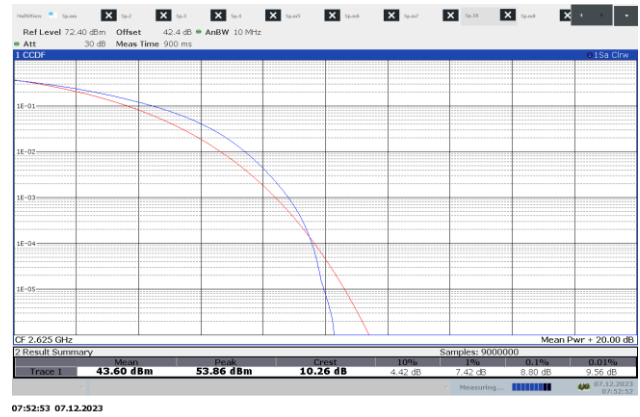


Figure 7.1-16: CCDF, n41, ch 525000

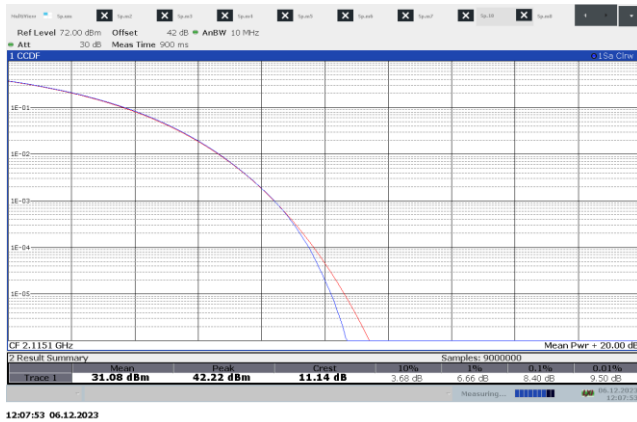


Figure 7.1-17: CCDF, n66, ch 423020

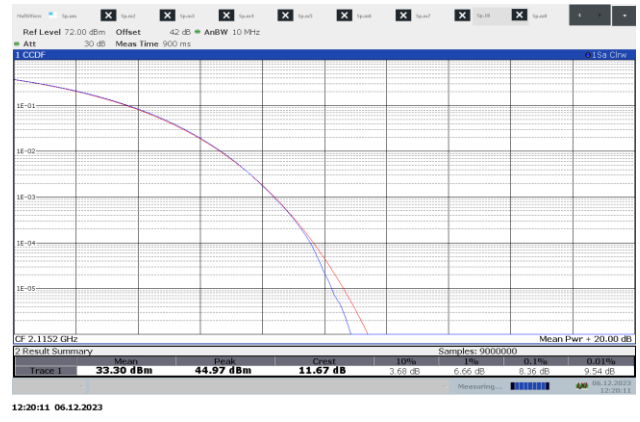


Figure 7.1-18: CCDF, n66, ch 423040

Test data, CCDF, continued



Figure 7.1-19: CCDF, n66, ch 431000

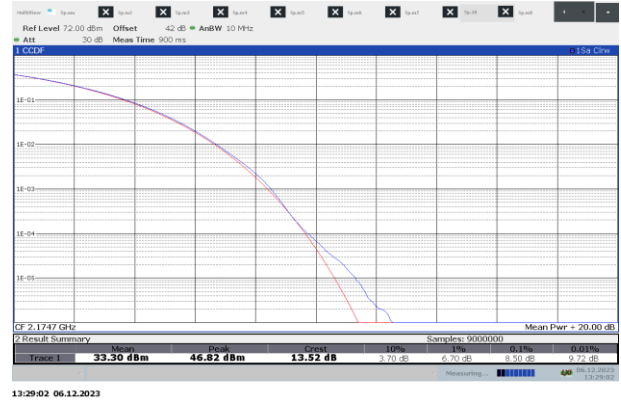


Figure 7.1-20: CCDF, n66, ch 434940



Figure 7.1-21: CCDF, n66, ch 435000

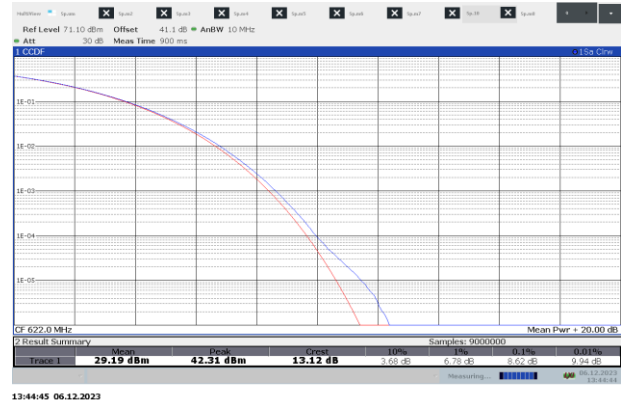


Figure 7.1-22: CCDF, n71, ch 124400

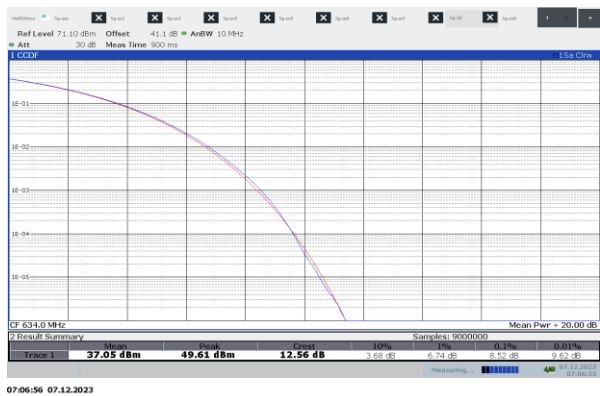


Figure 7.1-23: CCDF, n71, ch 126800

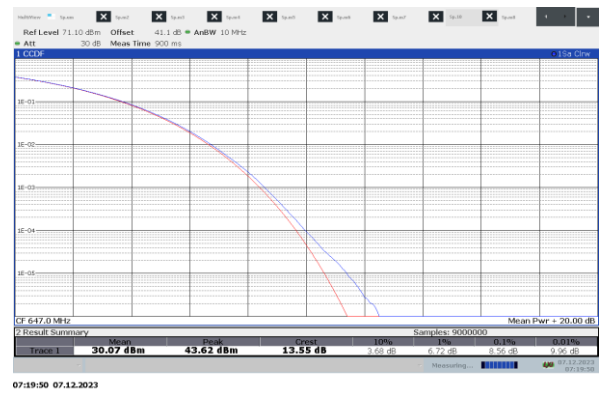


Figure 7.1-24: CCDF, n71, ch 129400

Test data, CCDF, continued

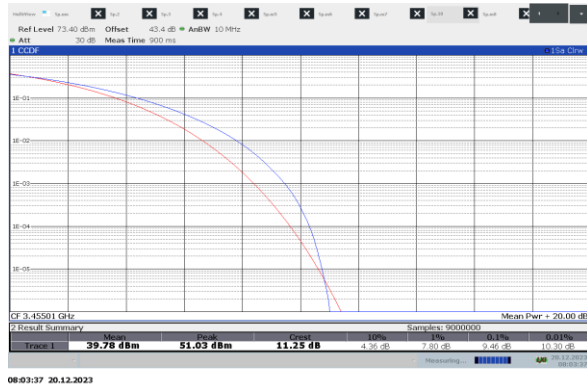


Figure 7.1-25: CCDF, n77, ch 630334

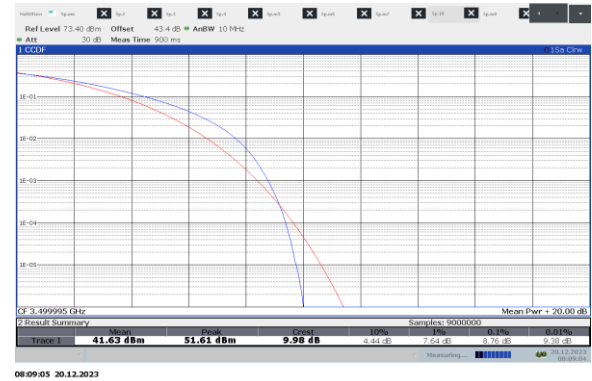


Figure 7.1-26: CCDF, n77, ch 633333

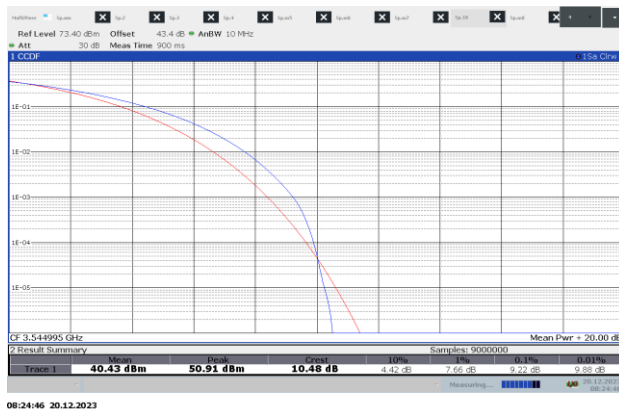


Figure 7.1-27: CCDF, n77, ch 636333

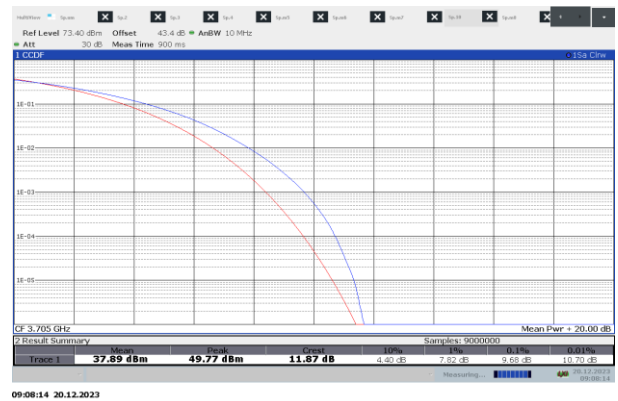


Figure 7.1-28: CCDF, n77, ch 647000

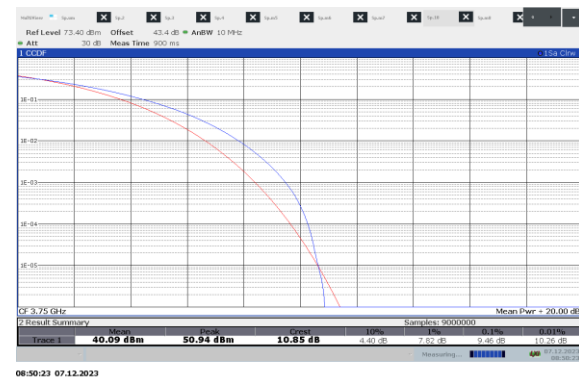


Figure 7.1-29: CCDF, n77, ch 650000

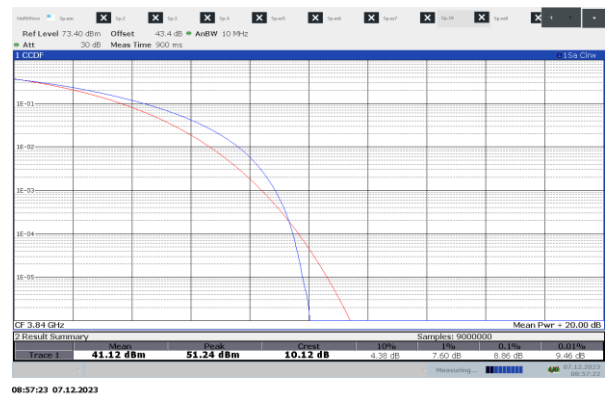


Figure 7.1-30: CCDF, n77, ch 656000

Test data, CCDF, continued

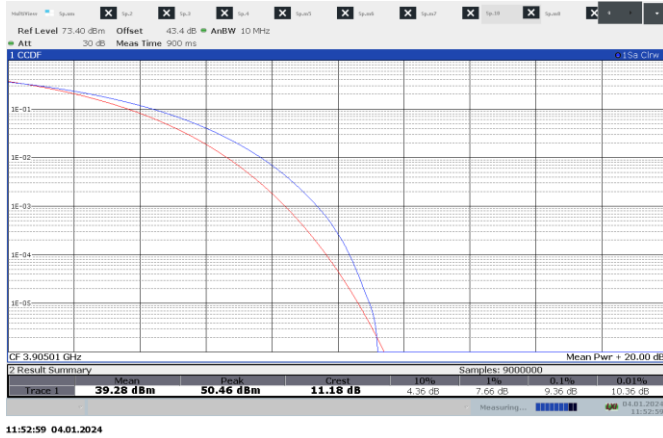


Figure 7.1-31: CCDF, n77, ch 660334

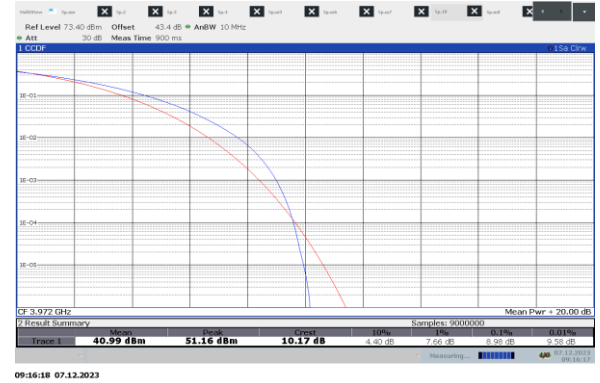


Figure 7.1-32: CCDF, n77, ch 664800

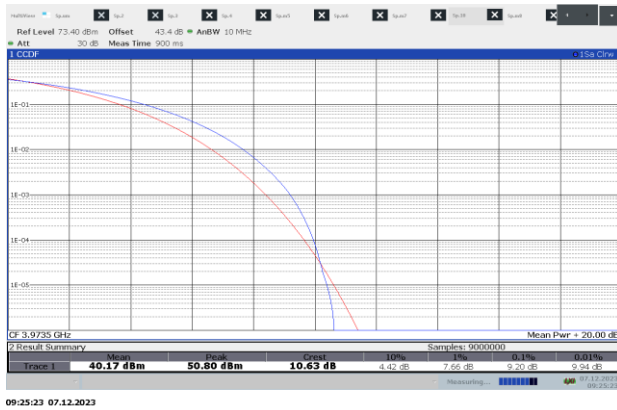


Figure 7.1-33: CCDF, n77, ch 664900

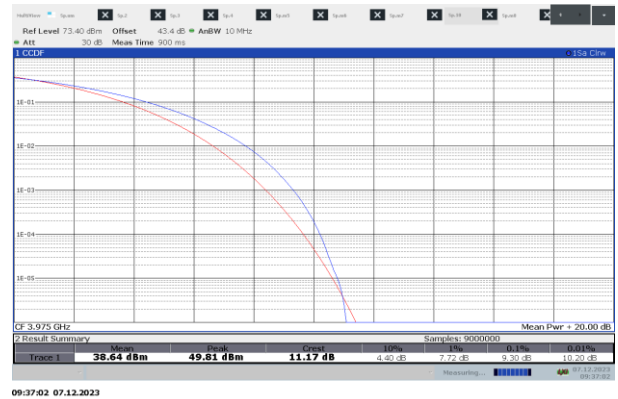


Figure 7.1-34: CCDF, n77, ch 665000

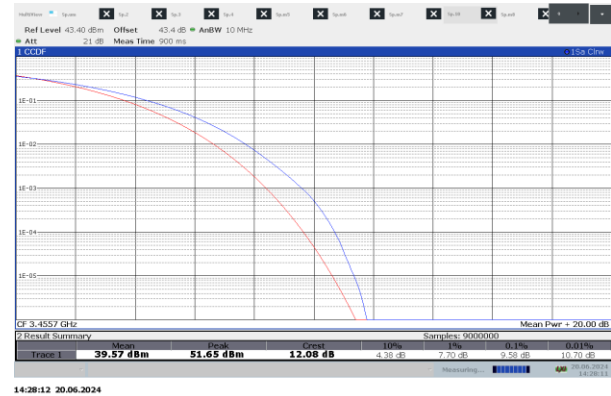


Figure 7.1-35: CCDF, n78, ch 630380

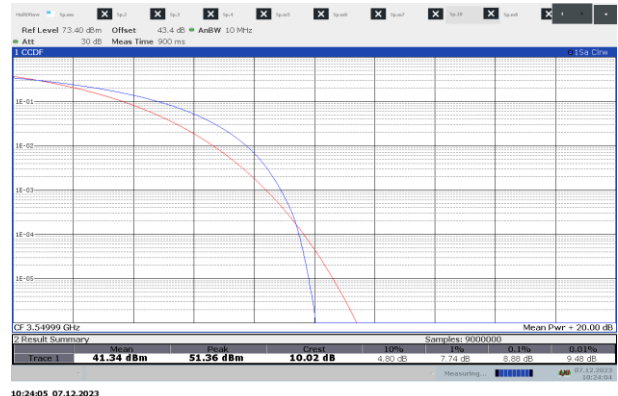


Figure 7.1-36: CCDF, n78, ch 636666

Test data, CCDF, continued

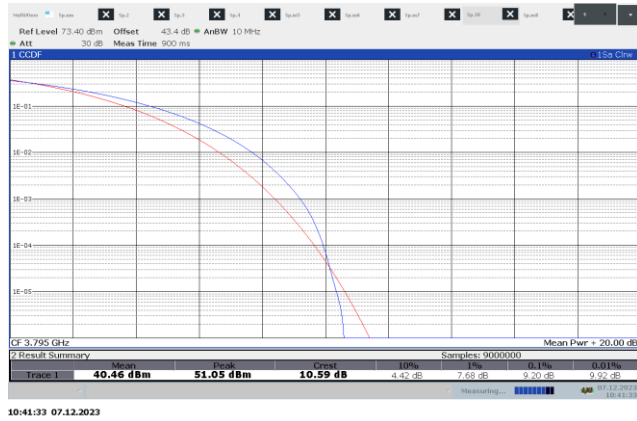


Figure 7.1-37: CCDF, n78, ch 653000

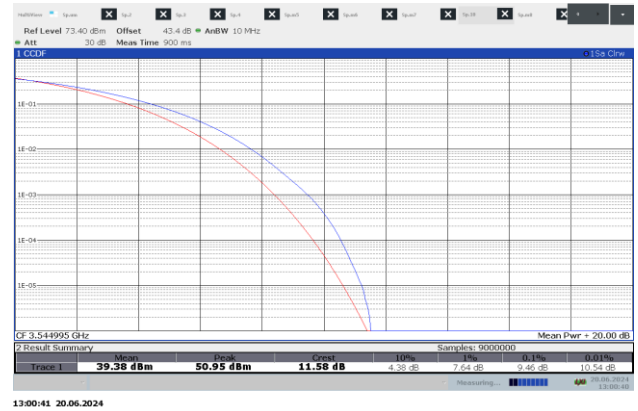


Figure 7.1-38: CCDF, n77, ch 63666 (FCC)

Test data, PSD



Figure 7.1-38: PSD, n2, ch 387100

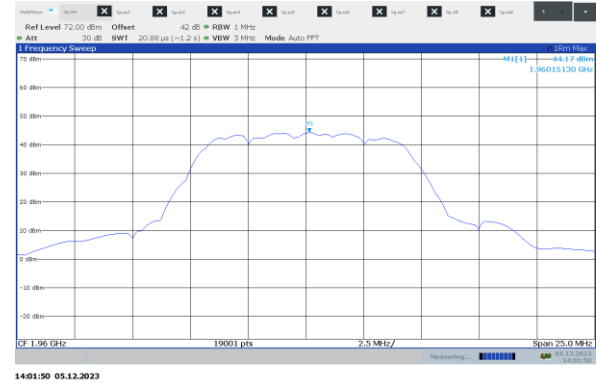


Figure 7.1-39: PSD, n2, ch 392000

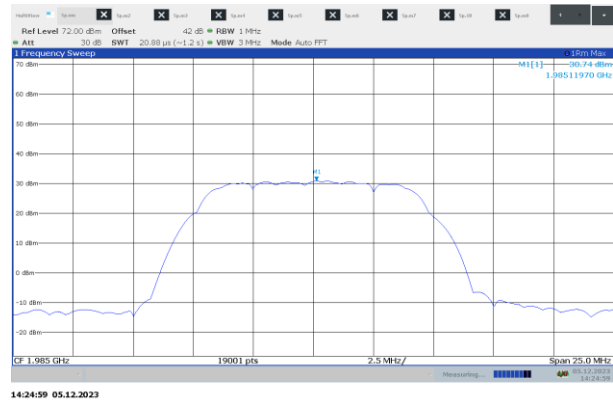


Figure 7.1-40: PSD, n2, ch 397000



Figure 7.1-41: PSD, n5, ch 174800

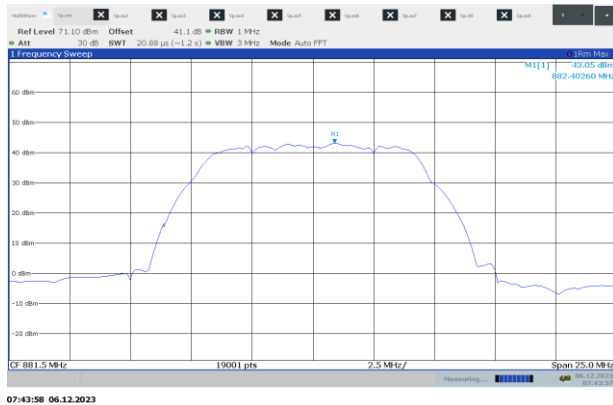


Figure 7.1-42: PSD, n5, ch 176300

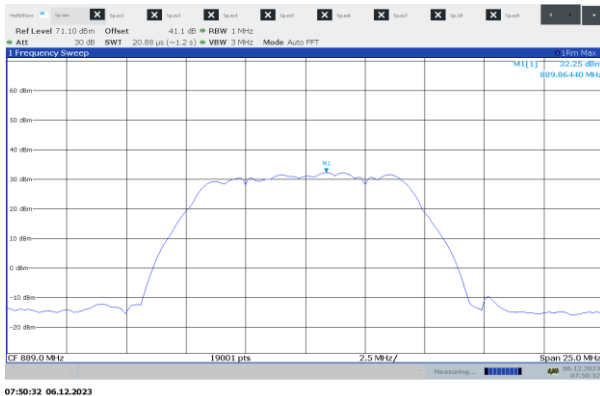


Figure 7.1-43: PSD, n5, ch 177800

Test data, PSD, continued

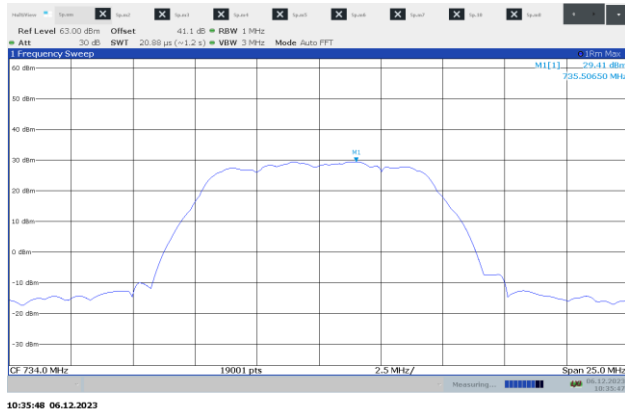


Figure 7.1-44: PSD, n12, ch 146800

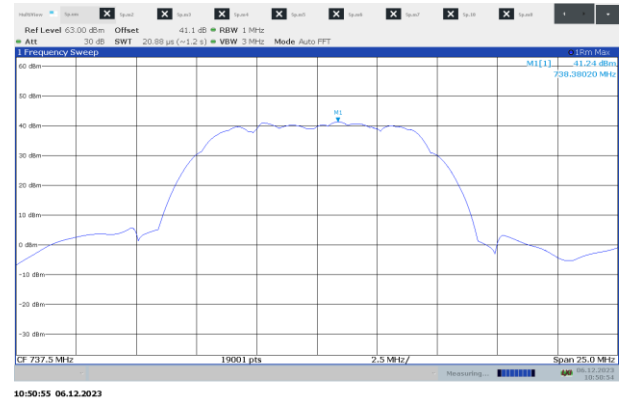


Figure 7.1-45: PSD, n12, ch 147500

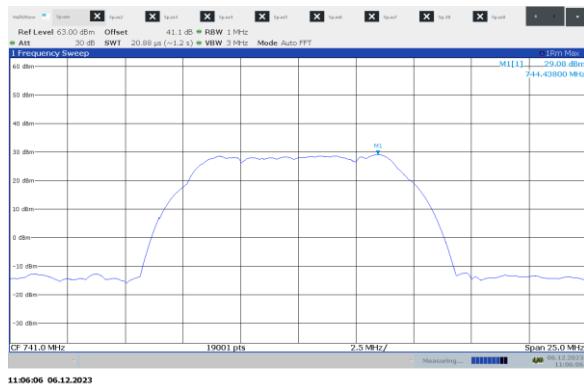


Figure 7.1-46: PSD, n12, ch 148200

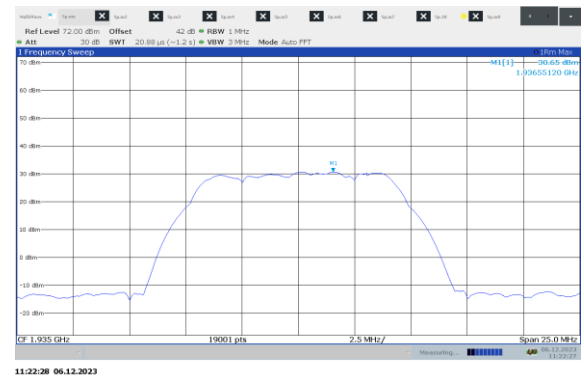


Figure 7.1-47: PSD, n25, ch 387000

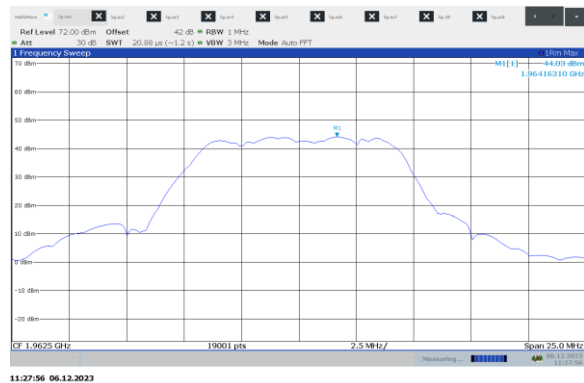


Figure 7.1-48: PSD, n25, ch 392500

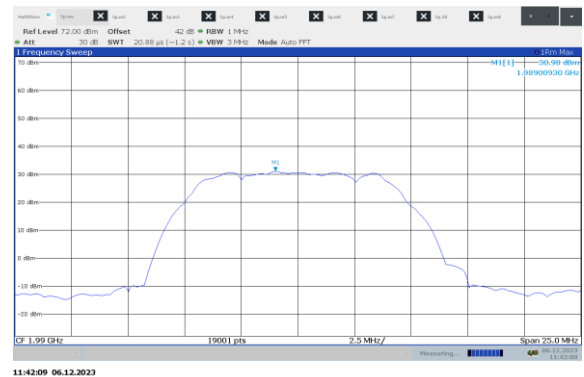


Figure 7.1-49: PSD, n25, ch 398000

Test data, PSD, continued

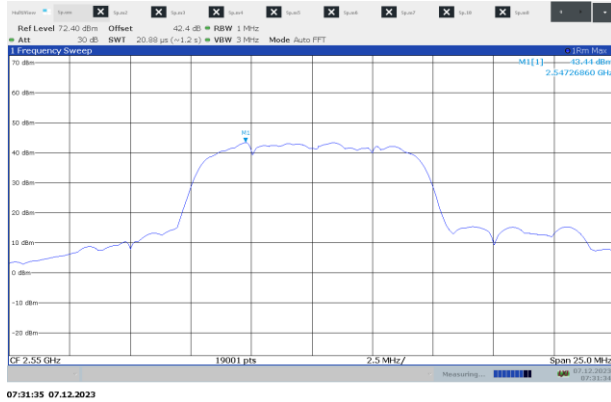


Figure 7.1-50: PSD, n41, ch 510000



Figure 7.1-51: PSD, n41, ch 518598

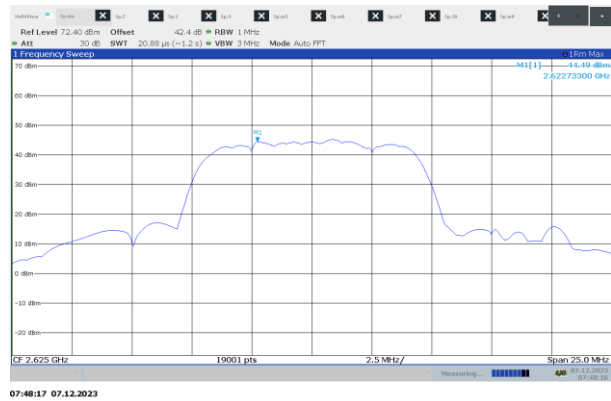


Figure 7.1-52: PSD, n41, ch 525000

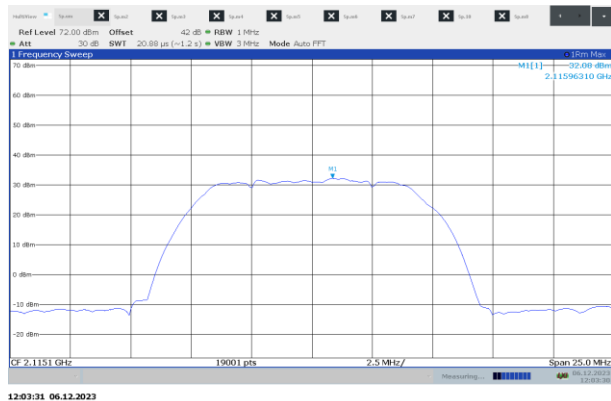


Figure 7.1-53: PSD, n66, ch 423020

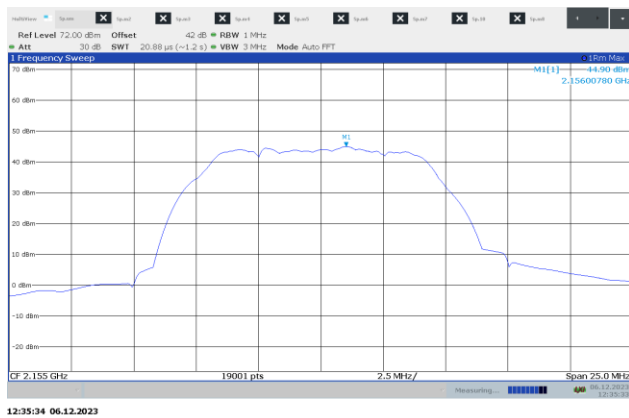


Figure 7.1-54: PSD, n66, ch 431000

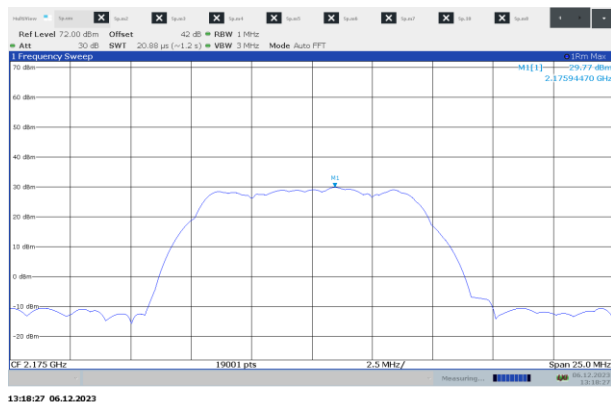


Figure 7.1-55: PSD, n66, ch 435000

Test data, PSD, continued

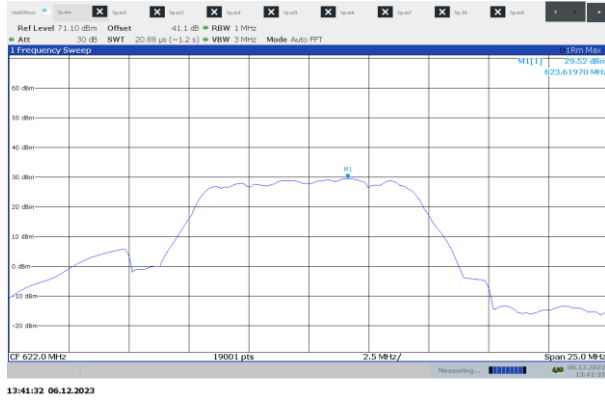


Figure 7.1-56: PSD, n71, ch 124400



Figure 7.1-57: PSD, n71, ch 126800



Figure 7.1-58: PSD, n71, ch 129400

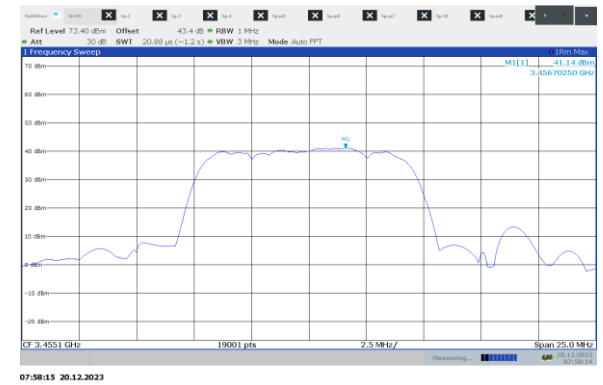


Figure 7.1-59: PSD, n77, ch 630334

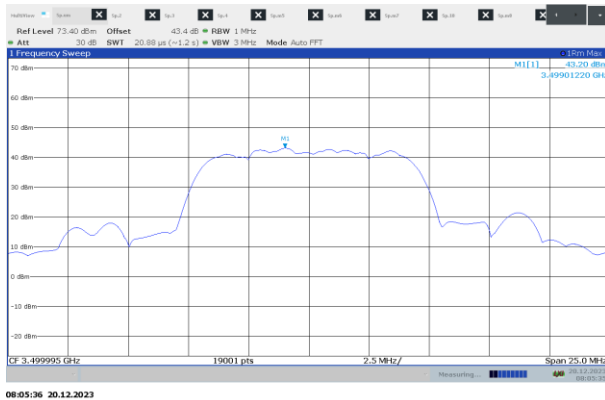


Figure 7.1-60: PSD, n77, ch 633333

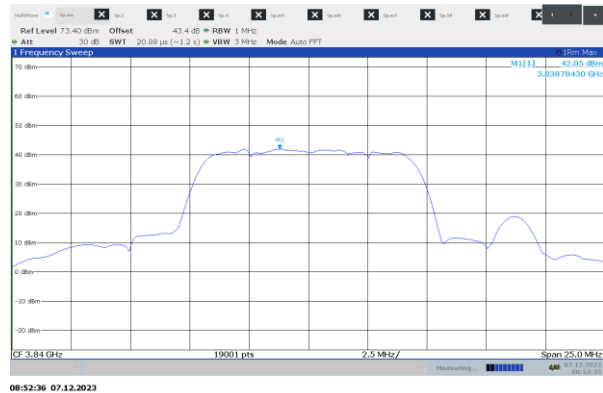
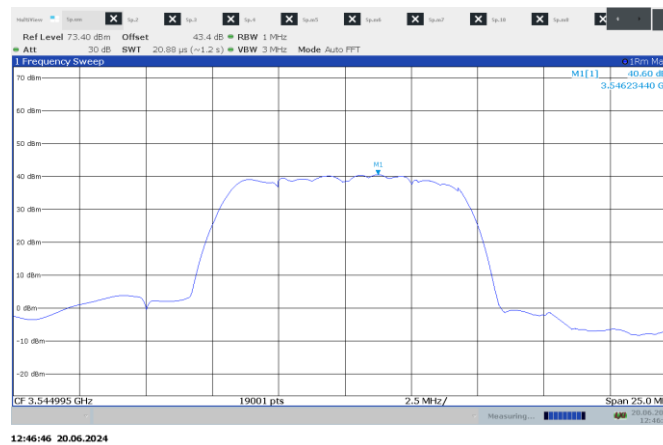
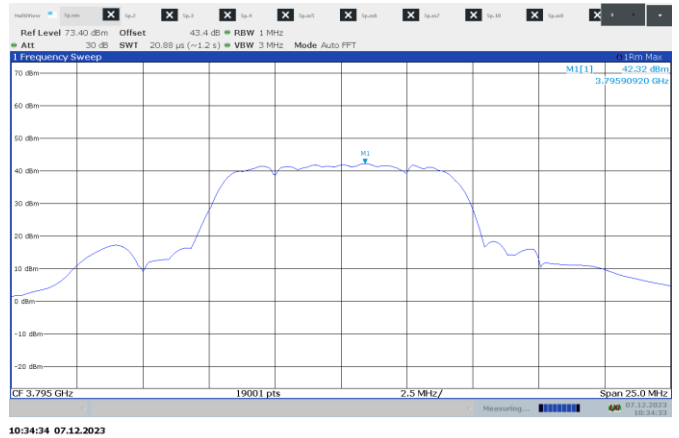
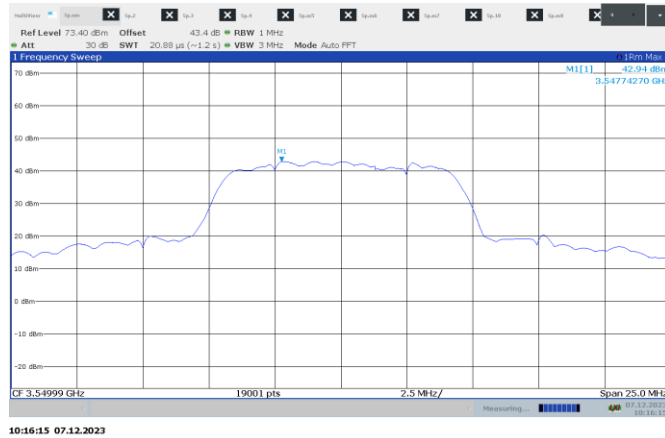
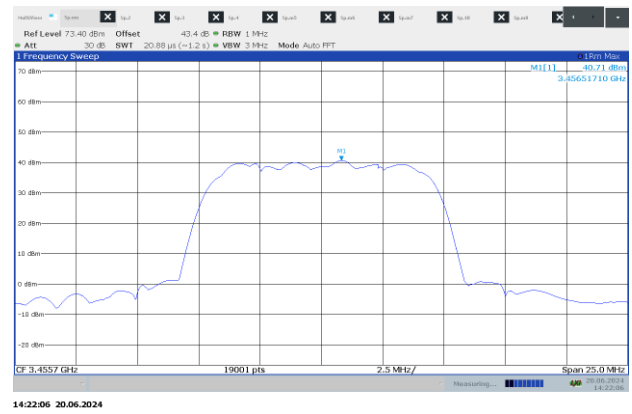
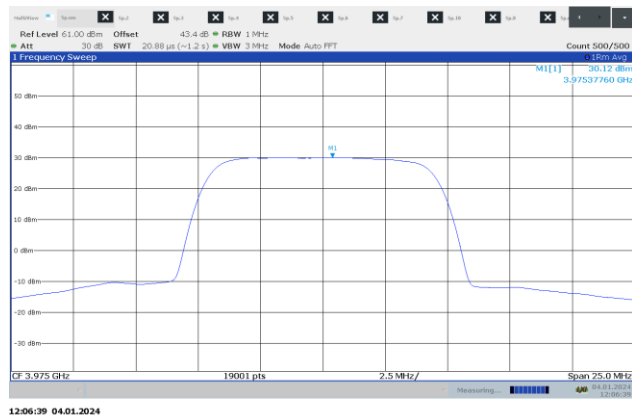
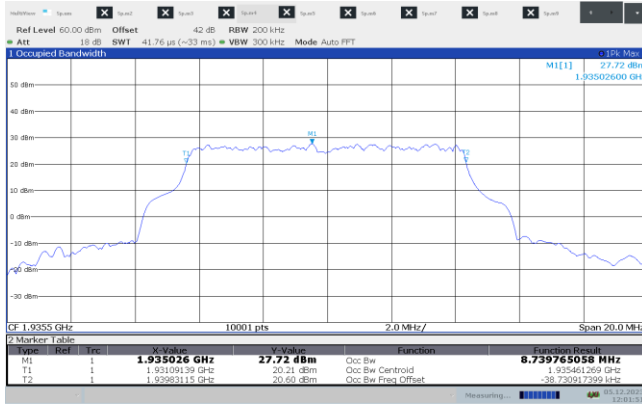


Figure 7.1-61: PSD, n77, ch 656000

Test data, PSD, continued

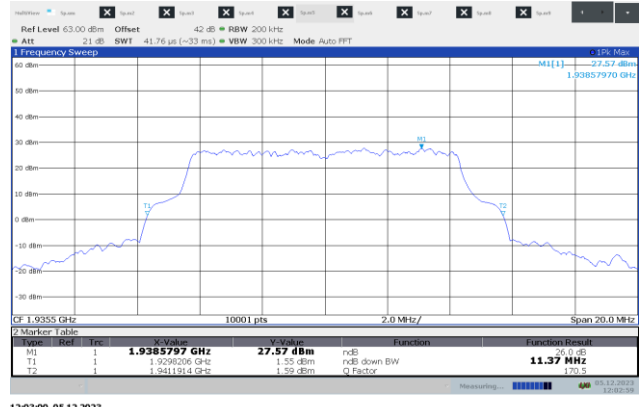


Test data, Bandwidth



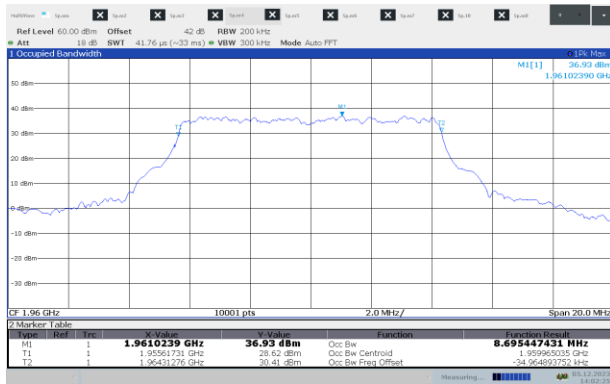
12:01:52 05.12.2023

Figure 7.1-66: OBW, n2, ch 387100



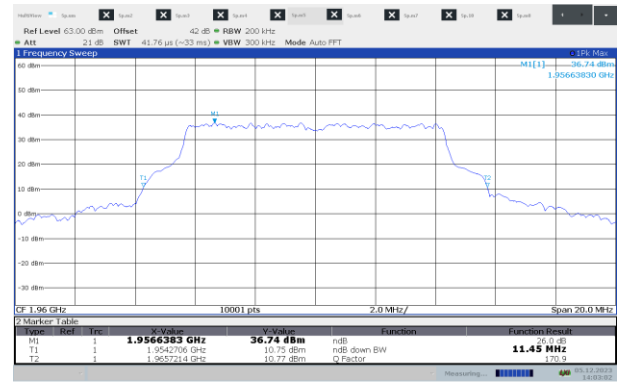
12:03:00 05.12.2023

Figure 7.1-67: EBW, n2, ch 387100



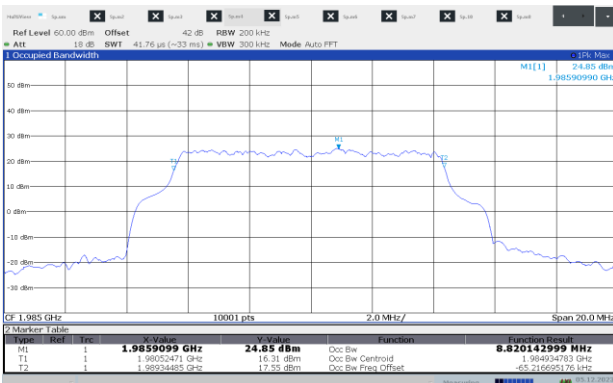
14:02:26 05.12.2023

Figure 7.1-68: OBW, n2, ch 392000



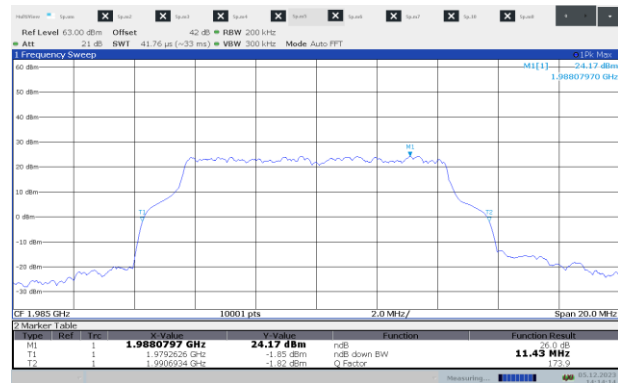
14:03:03 05.12.2023

Figure 7.1-69: EBW, n2, ch 392000



14:19:55 05.12.2023

Figure 7.1-70: OBW, n2, ch 397000



14:14:14 05.12.2023

Figure 7.1-71: EBW, n2, ch 397000

Test data, Bandwidth, continued

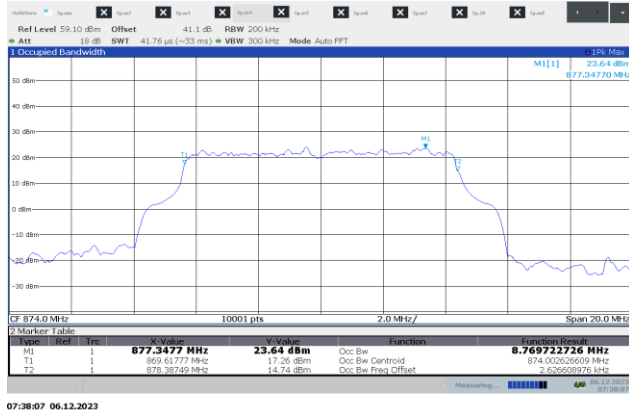


Figure 7.1-72: OBW, n5, ch 174800

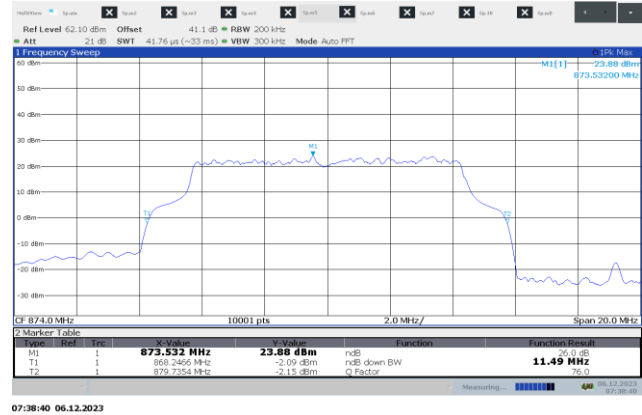


Figure 7.1-73: EBW, n5, ch 174800

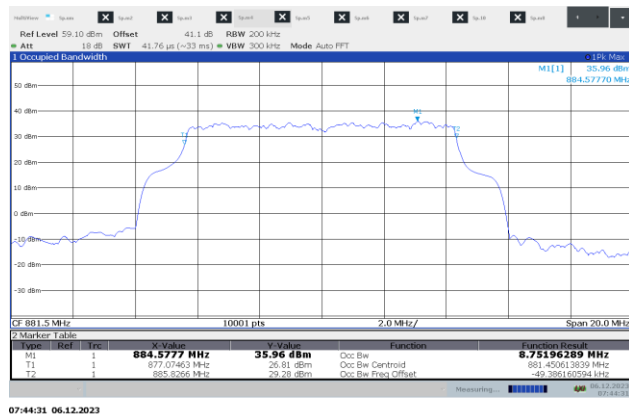


Figure 7.1-74: OBW, n5, ch 176300

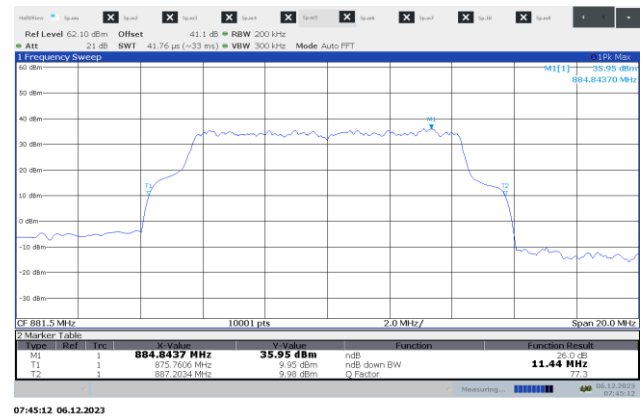


Figure 7.1-75: EBW, n5, ch 176300

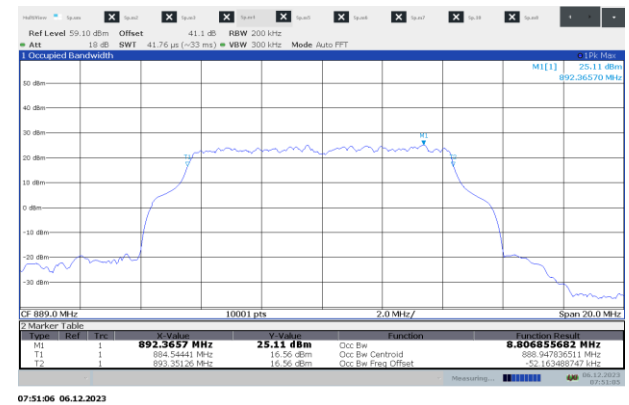


Figure 7.1-76: OBW, n5, ch 177800

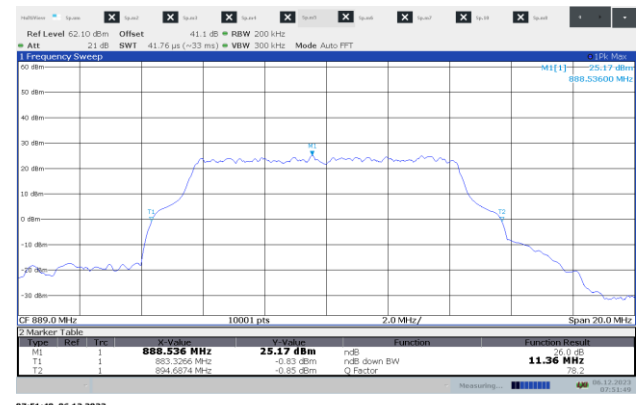


Figure 7.1-77: EBW, n5, ch 177800

Test data, Bandwidth, continued

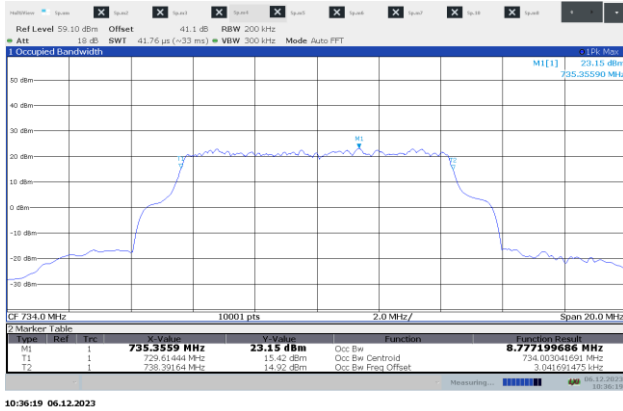


Figure 7.1-78: OBW, n12, ch 146800

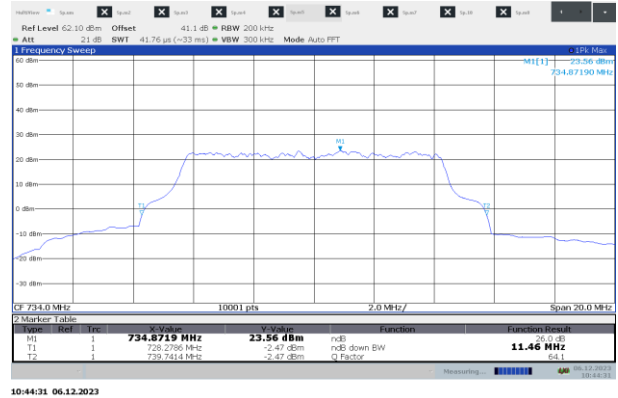


Figure 7.1-79: EBW, n12, ch 146800

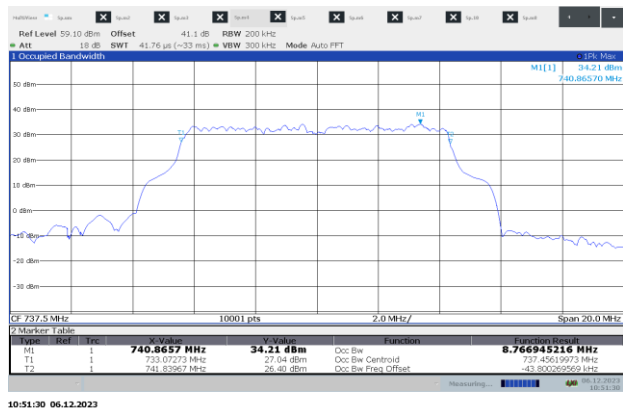


Figure 7.1-80: OBW, n12, ch 147500

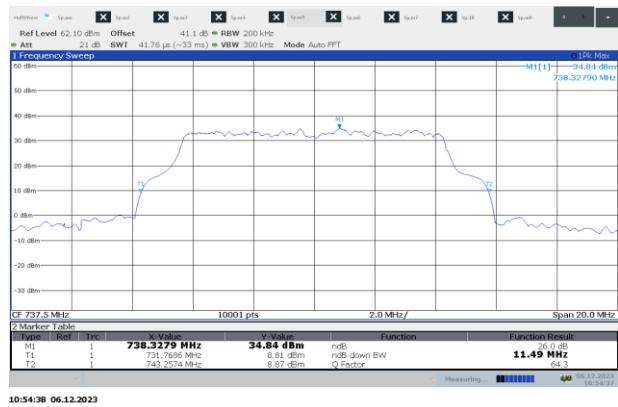


Figure 7.1-81: EBW, n12, ch 147500

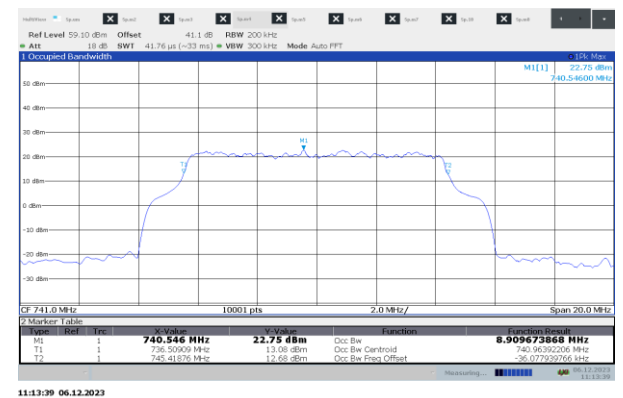


Figure 7.1-82: OBW, n12, ch 148200

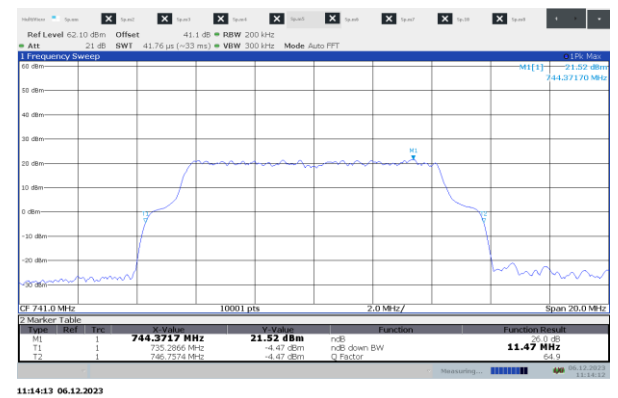


Figure 7.1-83: EBW, n12, ch 148200

Test data, Bandwidth, continued

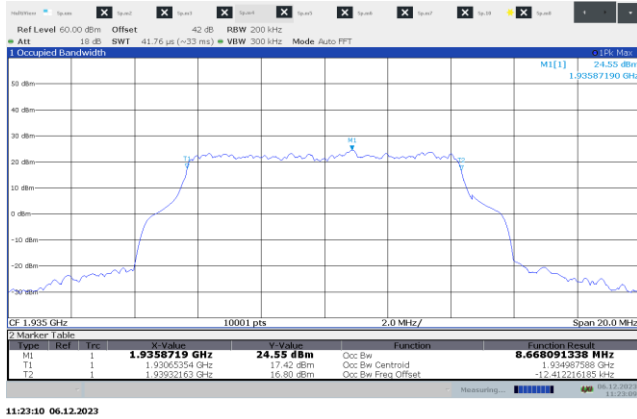


Figure 7.1-84: OBW, n25, ch 387000

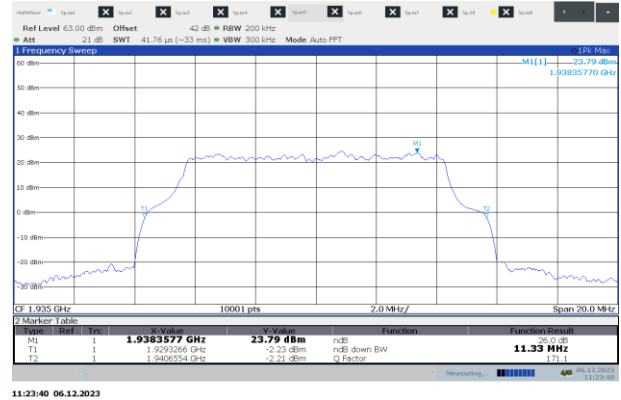


Figure 7.1-85: EBW, n25, ch 387000

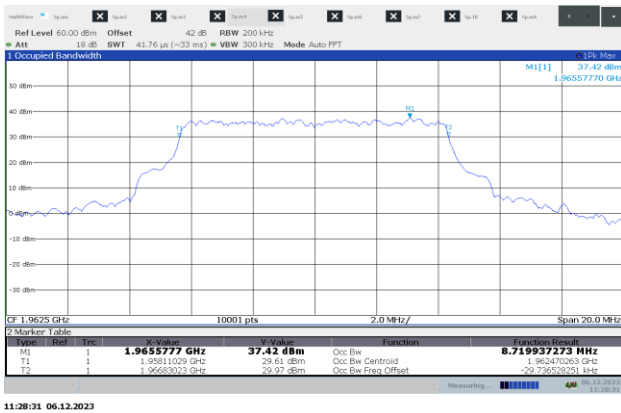


Figure 7.1-86: OBW, n25, ch 392500

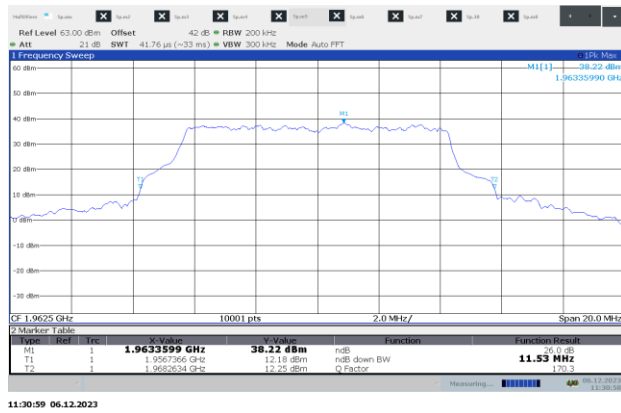


Figure 7.1-87: EBW, n25, ch 392500

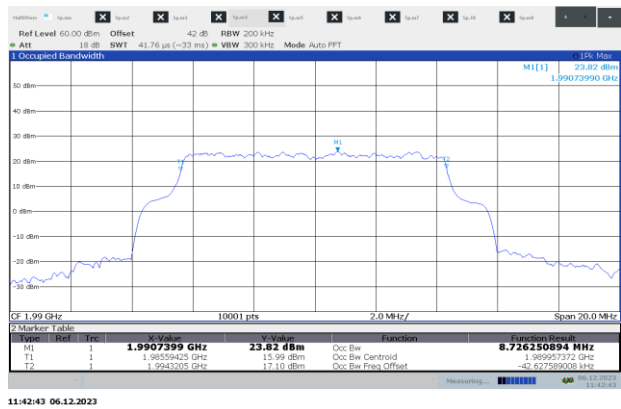


Figure 7.1-88: OBW, n25, ch 398000



Figure 7.1-89: EBW, n25, ch 398000



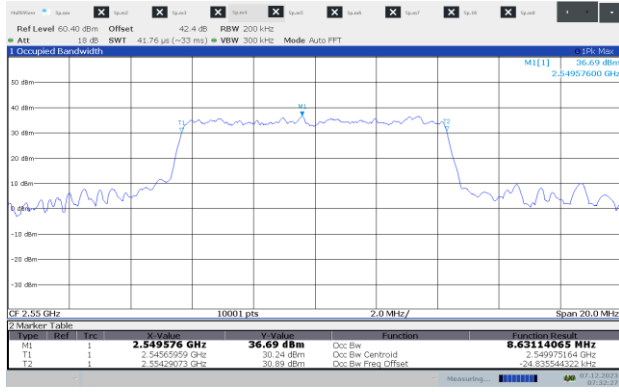
Section 7
Test name
Specification

Testing data

Maximum output power at RF antenna connector and Occupied bandwidth

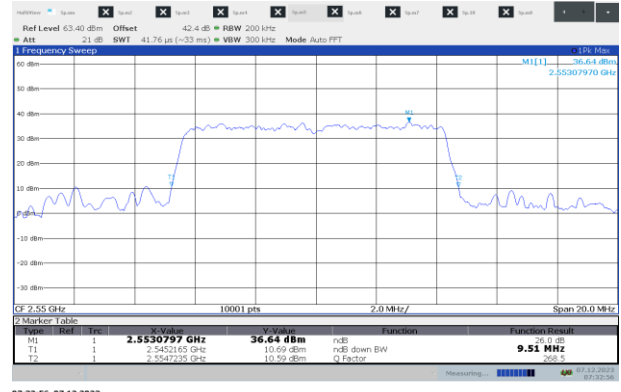
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Test data, Bandwidth, continued



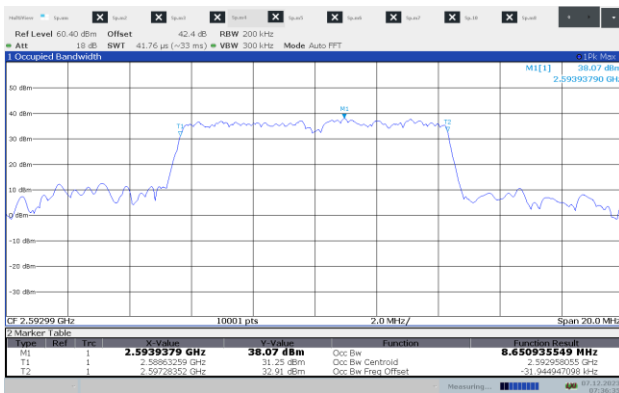
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Figure 7.1-90: OBW, n41, ch 510000



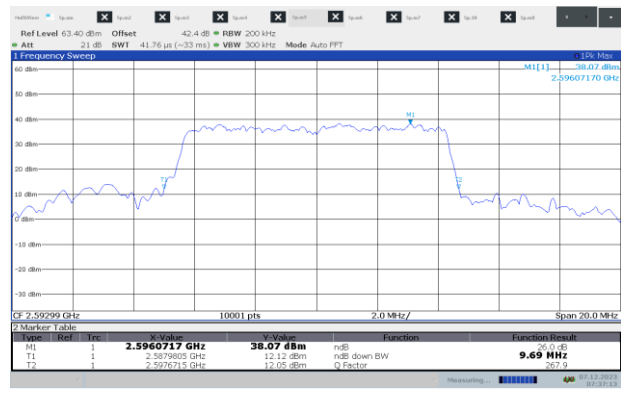
07:32:56 07.12.2023

Figure 7.1-91: EBW, n41, ch 510000



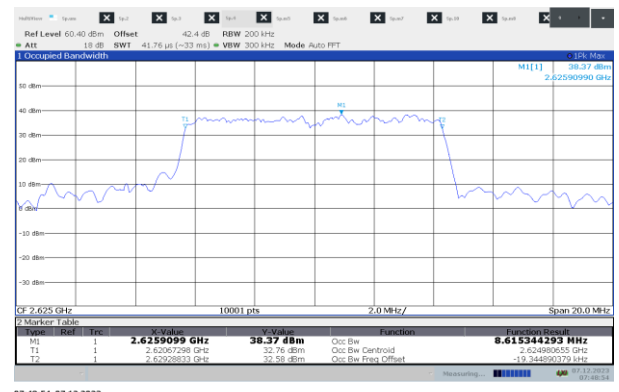
07:36:36 07.12.2023

Figure 7.1-92: OBW, n41, ch 518598



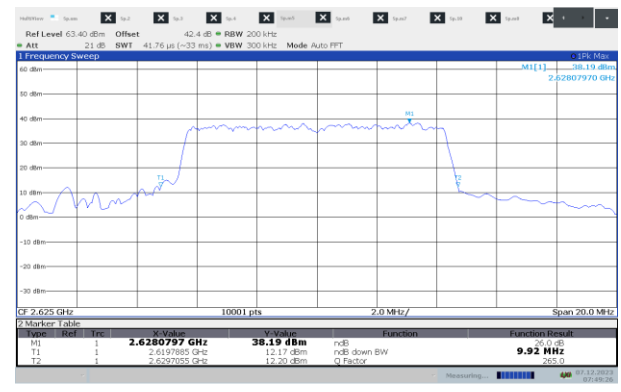
07:37:13 07.12.2023

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

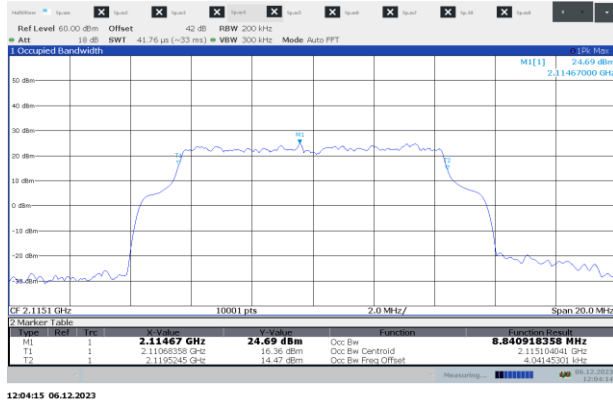


Figure 7.1-96: OBW, n66, ch 423020

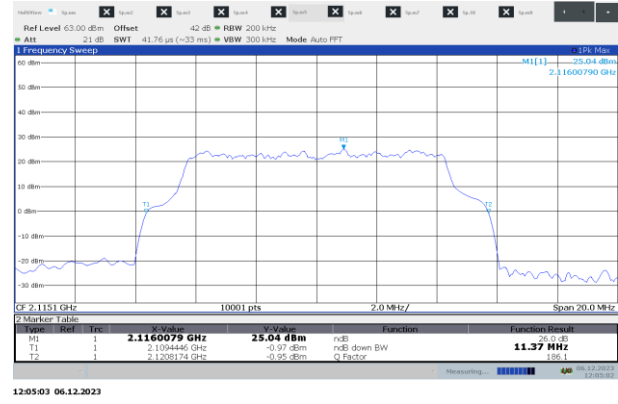


Figure 7.1-97: EBW, n66, ch 423020

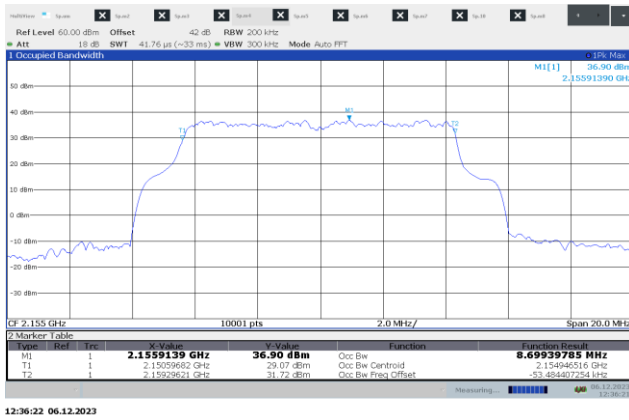


Figure 7.1-98: OBW, n66, ch 431000



Figure 7.1-99: EBW, n66, ch 431000

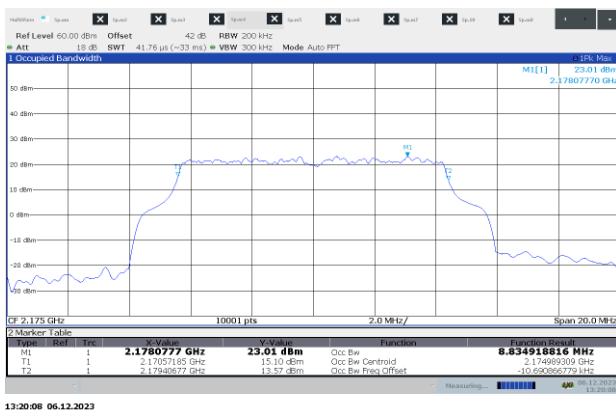


Figure 7.1-100: OBW, n66, ch 435000

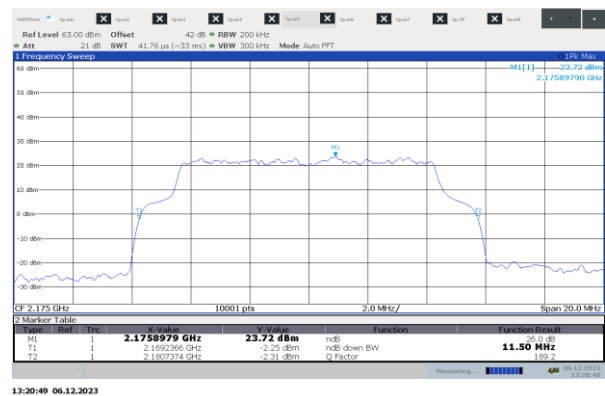


Figure 7.1-101 : EBW, n66, ch 435000

Test data, Bandwidth, continued

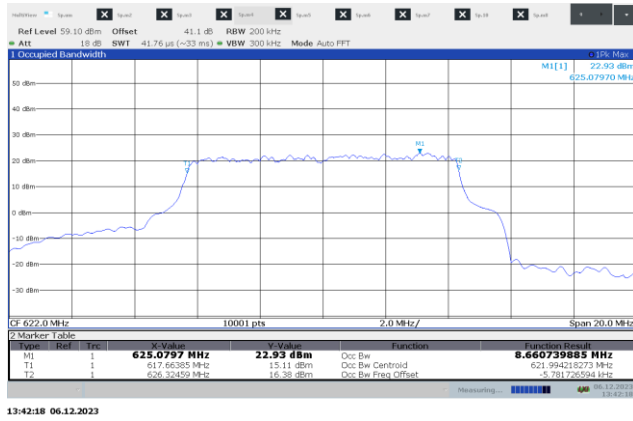


Figure 7.1-102: OBW, n71, ch 124400



Figure 7.1-103: EBW, n71, ch 124400

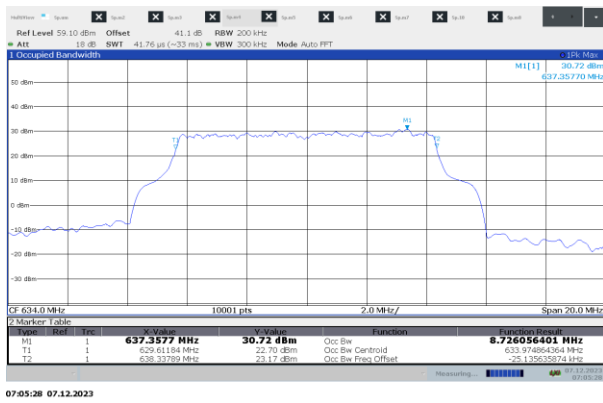


Figure 7.1-104: OBW, n71, ch 126800

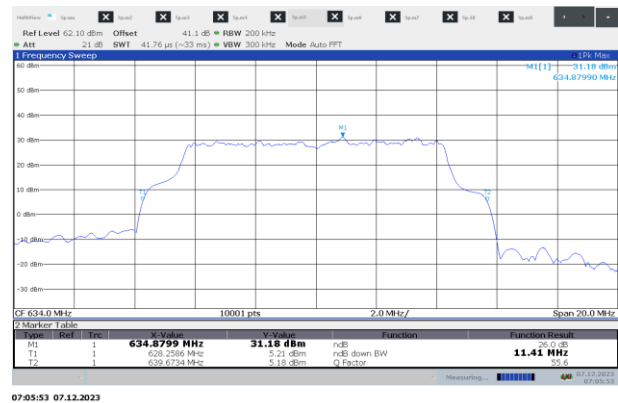


Figure 7.1-105: EBW, n71, ch 126800

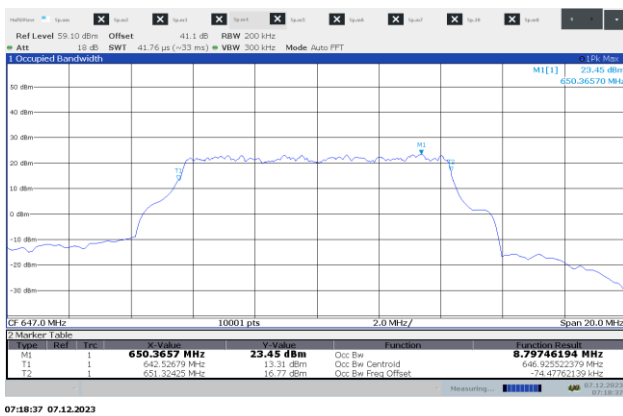


Figure 7.1-106: OBW, n71, ch 129400

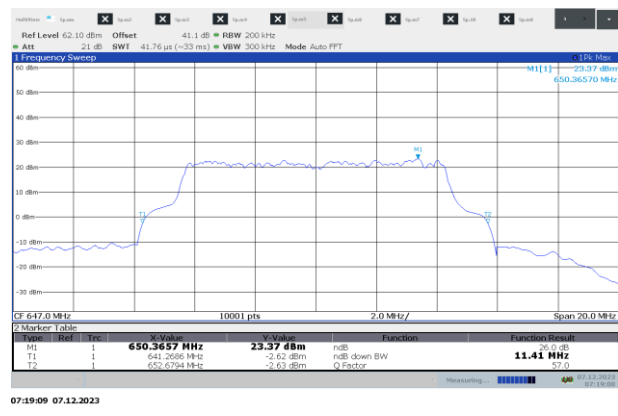


Figure 7.1-107: EBW, n71, ch 129400

Test data, Bandwidth, continued

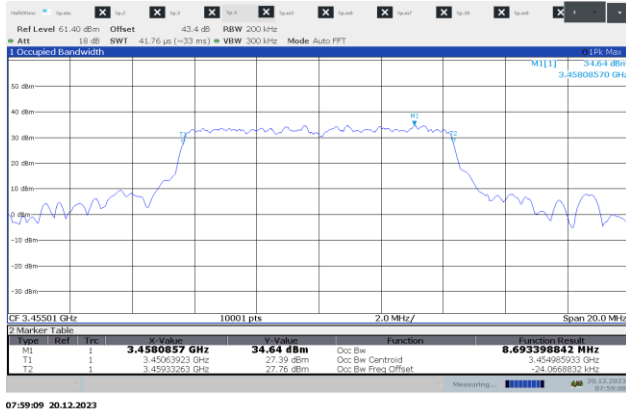


Figure 7.1-108: OBW, n77, ch 630334

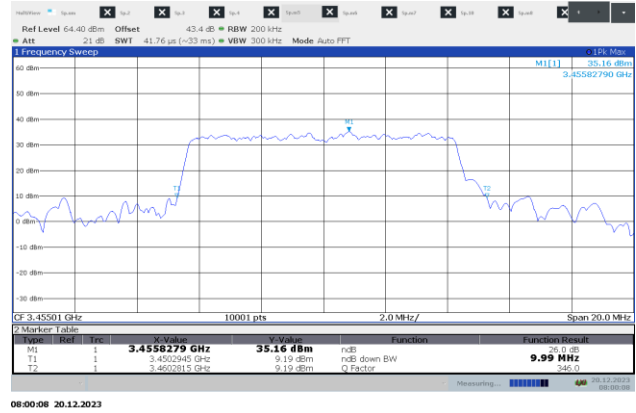


Figure 7.1-109 : EBW, n77, ch 630334

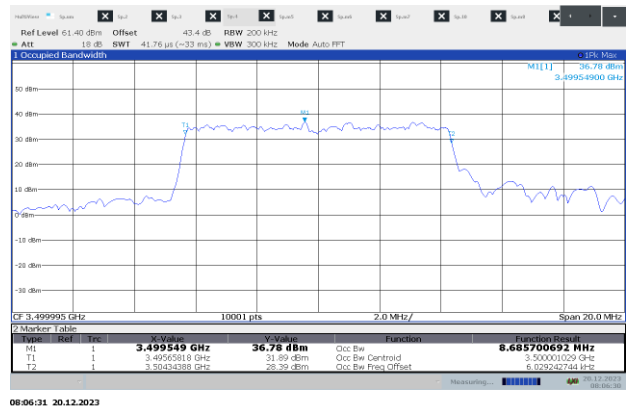


Figure 7.1-110: OBW, n77, ch 633333

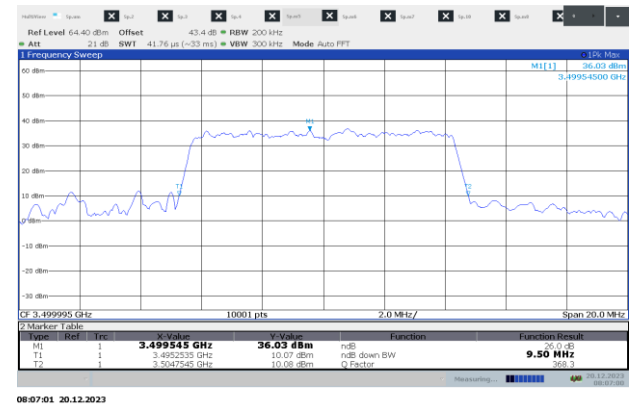


Figure 7.1-111 : EBW, n77, ch 633333

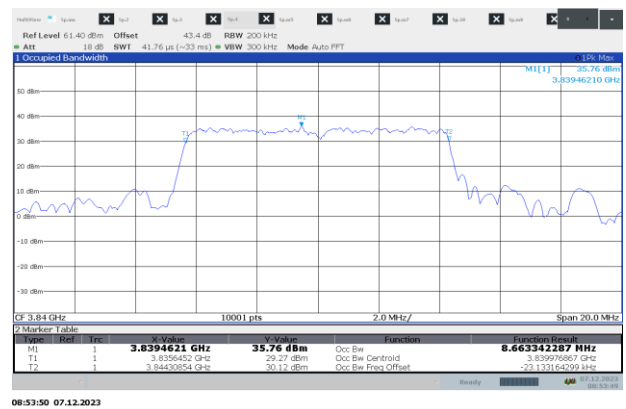


Figure 7.1-112: OBW, n77, ch 656000

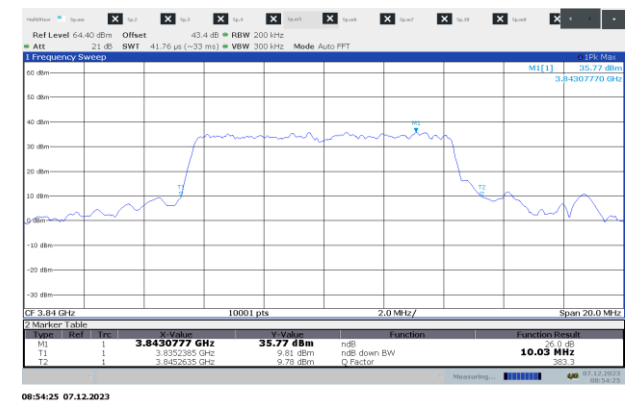


Figure 7.1-113 : EBW, n77, ch 656000

Test data, Bandwidth, continued

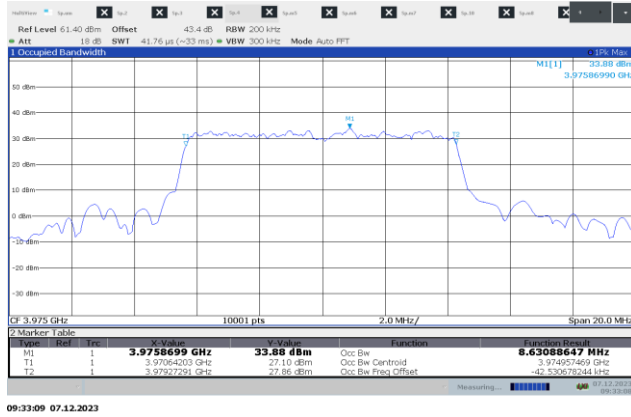


Figure 7.1-114: OBW, n77, ch 665000

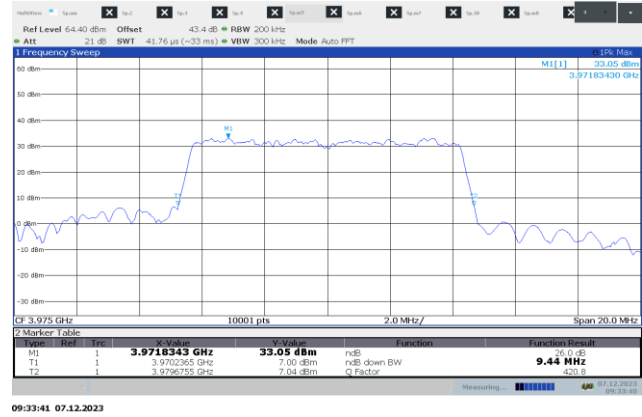


Figure 7.1-115 : EBW, n77, ch 665000

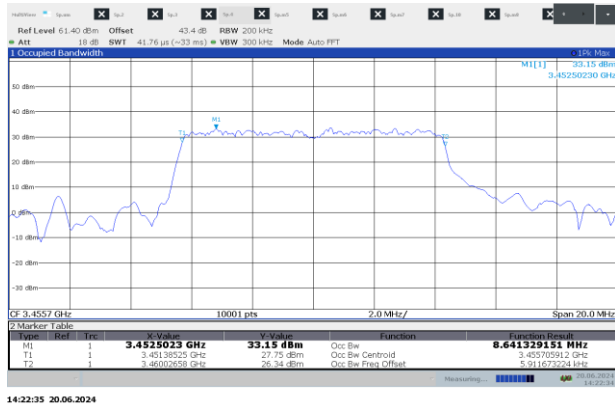


Figure 7.1-116: OBW, n78, ch 630380

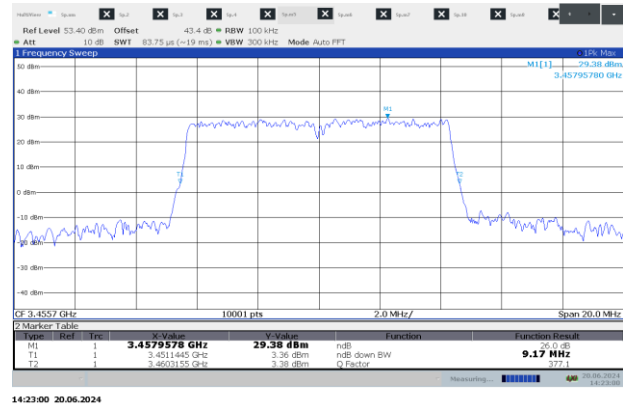


Figure 7.1-117 : EBW, n78, ch 630380

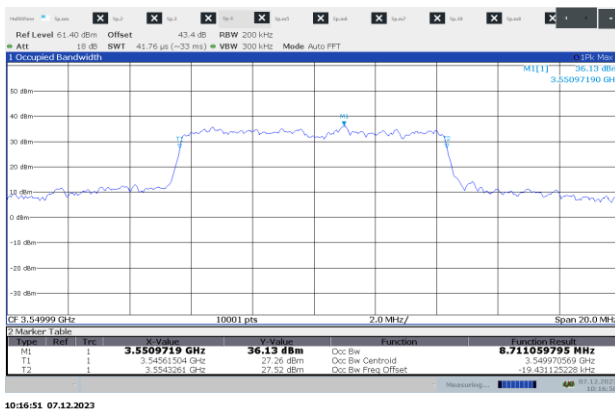


Figure 7.1-118: OBW, n78, ch 636666

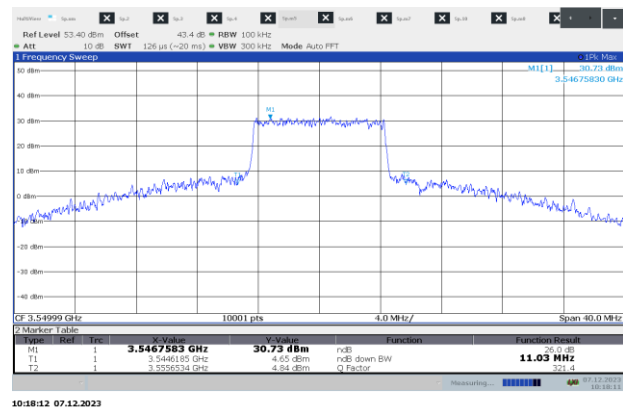


Figure 7.1-119 : EBW, n78, ch 636666