RHEIN TECH LABORATORIES, INC.

Engineering Solutions & Electromagnetic Compatibility Services

FCC & ISED Certification Report

Harris Corporation
221 Jefferson Ridge Parkway
Lynchburg, VA 24501

Model: XL-185M
Multiband Mobile Radio
Model #/HVIN: XT-MPS1M

FCC ID: OWDTR-0160-E
IC: 3636B-0160

September 27, 2018

Standards Referenced for this Report	
Part 2: 2017	Frequency Allocations and Radio Treaty Matters; General Rules and Regulations
Part 90: 2017	Private Land Mobile Radio Services
Part 101: 2017	Fixed Microwave Services
ANSI/TIA-603-D 2010	Land Mobile FM50 or PM Communications Equipment – Measurement and Performance Standards
RSS-119 Issue 12	Land Mobile and Fixed Radio Transmitters and Receivers 27.41 to 960.0 MHz

Report Prepared By: Daniel Baltzell

Document Number: 2018025TNB

These tests are accredited and meet the requirements of ISO/IEC 17025 as verified by ANAB. Refer to certificate and scope of accreditation AT-1445.

FCC Equipment Class: TNB

Grant Note	FCC Rule Part	Frequency Range (MHz)	Rated Conducted Output Power (W)	Frequency Tolerance (ppm)	Emission Designator	Transmit Mode
EF	90	806 – 825	35.0	0.1	16K0F3E	Analog FM (Wideband)
EF	90	851 – 870	35.0	0.1	16K0F3E	
	90	896 – 901	35.0	0.1	16K0F3E	
EF	90, 101	935 – 944	35.0	0.1	16K0F3E	
EF	90	806 – 825	35.0	0.1	16K0F1D/E	2-level FSK 9600 Data/Digital Voice (Wideband)
EF	90	851 – 870	35.0	0.1	16K0F1D/E	
	90	896 – 901	35.0	0.1	16K0F1D/E	
EF	90, 101	935 – 944	35.0	0.1	16K0F1D/E	
EF	90	806 – 825	35.0	0.1	14K0F3E	Analog FM (NPSPAC)
EF	90	851 – 870	35.0	0.1	14K0F3E	
EF	90	806 – 825	35.0	0.1	14K0F1D/E	2-level FSK 9600 Data/Digital Voice (NPSPAC)
EF	90	851 – 870	35.0	0.1	14K0F1D/E	
EF	90	763 – 776	30.0	0.1	11K0F3E	Analog FM (Narrowband)
EF	90	793 – 806	30.0	0.1	11K0F3E	
EF	90	806 – 825	35.0	0.1	11K0F3E	
EF	90	851 – 870	35.0	0.1	11K0F3E	
	90	896 – 901	35.0	0.1	11K0F3E	
EF	90, 101	935 – 944	35.0	0.1	11K0F3E	
EF	90	763 – 776	30.0	0.1	11K7F1D/E	2-level FSK 9600 Data/Digital Voice (Narrowband)
EF	90	793 – 806	30.0	0.1	11K7F1D/E	
EF	90	806 – 825	35.0	0.1	11K7F1D/E	
EF	90	851 – 870	35.0	0.1	11K7F1D/E	
	90	896 – 901	35.0	0.1	11K7F1D/E	
EF	90, 101	935 – 944	35.0	0.1	11K7F1D/E	
	90	896 – 901	35.0	0.1	7K10F1D/E	2-level FSK 4800 Data/Digital Voice (XNarrowband)
EF	90, 101	935 – 944	35.0	0.1	7K10F1D/E	
EF	90	763 – 776	30.0	0.1	8K40F1D/E	C4FM Data/Voice
EF	90	793 – 806	30.0	0.1	8K40F1D/E	
EF	90	851 – 870	35.0	0.1	8K40F1D/E	
	90	896 – 901	35.0	0.1	8K40F1D/E	
EF	90, 101	935 – 944	35.0	0.1	8K40F1D/E	
EF	90	763 – 776	30.0	0.1	8K10DXW	H-CPM (TDMA) Data/Voice
EF	90	793 – 806	30.0	0.1	8K10DXW	
EF	90	851 – 870	35.0	0.1	8K10DXW	
	90	896 – 901	35.0	0.1	8K10DXW	
EF	90, 101	935 – 944	35.0	0.1	8K10DXW	
EF	90	763 – 776	30.0	0.1	18K5F1W	HVD-TDMA SMR
EF	90	793 – 806	30.0	0.1	18K5F1W	
EF	90	851 – 870	35.0	0.1	18K5F1W	

EF	90	806 – 825	35.0	0.1	12K9F1W	HVD-TDMA NPSPAC
EF	90	851 – 870	35.0	0.1	12K9F1W	

** power is conducted*

This device contains functions that are not operational in U.S Territories except as noted in the filing. The grant is requested to list extended frequencies as noted in the filing and Section 2.927(b) applies to this application.

Table of Contents

Table of Figures

Table of Tables

Table of Plots

Table of Appendixes

Table of Photographs

1 Test Result Summary

Test	FCC Reference	ISED Reference	Result
RF Power Output	2.1046(a), 90.541(d), 101.113(a)	RSS-119 4.1, 5.4	Complies
Spurious Emissions at Antenna Terminals	2.1051, 90.210	RSS-119 5.5, 5.8	Complies
Field Strength of Spurious Radiation	2.1053(a), 90.543, 90.210	RSS-119 5.5, 5.8	Complies
Occupied Bandwidth/Emission Masks	2.1049(c)(1), 90.210, 101.109, 101.111	RSS-119 5.5, 5.8	Complies
Adjacent Channel Power	90.543	RSS-119 4.3	Complies
Frequency Stability vs. Temperature and Voltage	2.1055, 90.213, 90.539, 101.107	RSS-119 5.3	Complies
Modulation Characteristics	2.1047(a)(b)	RSS-119 5.2	Complies
Transient Frequency Response	90.214	RSS-119 5.9	N/A

2 General Information

The following Certification Report is prepared on behalf of Harris Corporation in accordance with the Federal Communications Commission and ISED rules and regulations. The Equipment Under Test (EUT) was the XL-185M, Model #/HVIN XT-MPS1M; FCC ID: OWDTR-0160-E, IC: 3636B-0160.

The radio is subject to FCC SDoC. SDoC testing was performed and the data is contained in a separate SDoC report.

All measurements contained in this application were conducted in accordance with the applicable sections of FCC Rules and Regulations CFR 47 Parts 2, 90 and 101. Calibration checks are performed regularly on the instruments, and all accessories including high pass filter, coaxial attenuator, preamplifier and cables.

2.1 Test Facility

The open area test site and conducted measurement facility used to collect the radiated data is located on the parking lot of Rhein Tech Laboratories, Inc. 360 Herndon Parkway, Suite 1400, Herndon, Virginia 20170. This site has been fully described in a report submitted to, and approved by, the Federal Communications Commission to perform AC line conducted and radiated emissions testing.

2.2 Related Submittal(s)/Grant(s)

This is an original certification application for Harris Corporation Model XL-185M, Model #/HVIN XT-MPS1M, FCC ID: OWDTR-0160-E, IC: 3636B-0160.

2.3 Grant Notes

RF power switchable from 2 W to rated power 35 W.

2.4 Tested System Details

The test sample was received on August 24, 2018. Listed below are the identifiers and descriptions of all equipment, cables, and internal devices used with the EUT for this test, as applicable.

The device was programmed for multiple modes of operation and modulation types.

Table 2-1: Equipment Under Test (EUT)

Part	Manufacturer	Model/HVIN	PN/SN	FCC ID	RTL Bar Code
Vehicular Communication Hub (VCH)	Harris Corporation	XL-185M/ XT-MPS1M	14050-1100-11/EVM2 No.25	OWDTR-0160-E	22754
Control Head	Harris Corporation	XL-CH Mobile Control Head/ N/A	14050-1150-01/005	OWDTR-0160-E	22755

Table 2-2: Auxiliary Equipment

Part	Manufacturer	Model	PN/SN	FCC ID	RTL Bar Code
USB Mobile Mic	N/A	USB Mobile Mic	14050-6010-01/V22e	N/A	22756
Remote Speaker	N/A	Remote Speaker	14050-6100-01	N/A	N/A
Analog Deskmic	N/A	Analog Deskmic	MC-014121-003	N/A	N/A
CH Mounting Kit	N/A	CH Mounting Kit	14050-6210-01	N/A	N/A
VCH Mounting Kit	N/A	VCH Mounting Kit	14050-6200-01	N/A	N/A
Antenna, Flex, Heavy-Duty, 136-870 MHz	N/A	XM-AN7G	12099-0300-01	N/A	N/A
Antenna, Element, Multiband, 136-870 MHz, 0 dB	N/A	XMAN6H	12099-0310-01	N/A	N/A
Antenna, Base, Standard Roof Mount Low Loss	N/A	AN-125001-002	AN-125001-002	N/A	N/A
Antenna, Base, Thick Roof Mount Low Loss	N/A	AN-125001-004	AN-125001-004	N/A	N/A
Antenna, Base, Standard Roof Mount Low Loss GPS	N/A	AN-125001-006	AN-125001-006	N/A	N/A
Antenna, Base, Magnetic Mount Low Loss	N/A	AN-125001-008	AN-125001-008	N/A	N/A
Mount, NMO Antenna, Magnetic, Heavy-Duty	N/A	XM-AN7H	12099-0370-01	N/A	N/A
Antenna, Element, 700/800 3db	N/A	AN-225001-001	AN-225001-001	N/A	N/A

Antenna, Element, 900, 3db	N/A	AN-225005-001	AN-225005-001	N/A	N/A
Antenna, GPS, Roof Mount	N/A	AN-025187-001	AN-025187-001	N/A	N/A
Antenna, GPS, Magnet Mount	N/A	AN-025187-003	AN-025187-003	N/A	N/A
Antenna Base, Stnd Roof Mount Low Loss GPS	N/A	AN-125001-006	AN-125001-006	N/A	N/A
Antenna 3dB 700/800/900	N/A	12099-0380-01	12099-0380-01	N/A	N/A
Squid Cable (HD44)	N/A	N/A	14002-0174-50	N/A	N/A
Ethernet Cable, overmold, 45cm	N/A	N/A	14050-6300-01	N/A	N/A
Ethernet Cable, overmold, 9m	N/A	N/A	14050-6300-02	N/A	N/A
DC power cables (CH)	N/A	N/A	CA-012616-001	N/A	N/A
DC power cables (VCH)	N/A	N/A	CA-012365-001	N/A	N/A

2.5 Configuration of Tested System

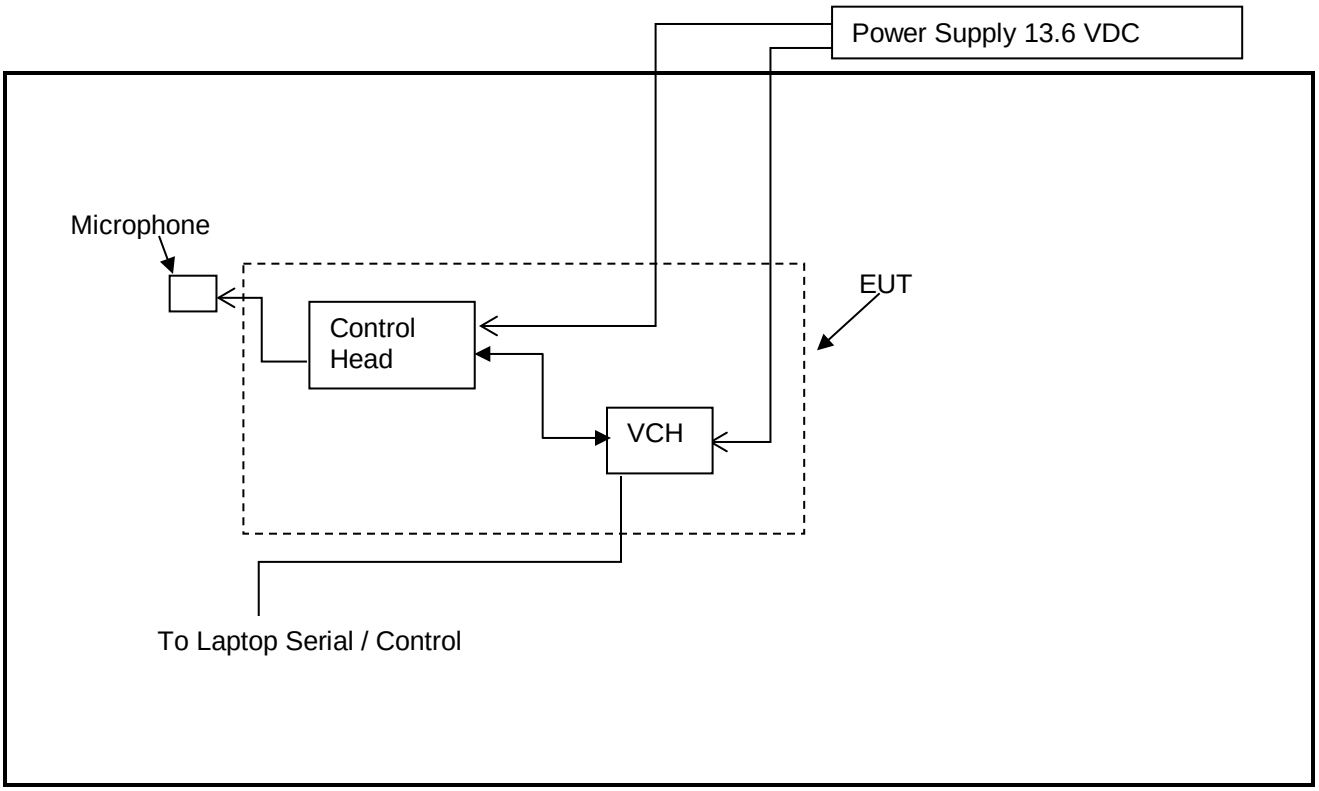


Figure 2-1: Configuration of Tested System

3 FCC Part 2.1033(C)(8): Voltages and Currents through the Final Amplifying Stage

13.6 VDC / 8.6 A

4 FCC Part 2.1046(a): RF power output: Conducted; Part 90.541(d) Transmitting power and antenna height requirements; Part 101.113(a): Transmitter power limitations; ISED RSS-119 4.1: Transmitter Output Power

4.1 Test Procedure

ANSI C63.26, section 5.2

The EUT was connected to a coaxial attenuator having a 50 Ω load impedance. Manufacturer's rated power: 30 W for 700 MHz bands, 35 W for 800 and 900 MHz bands.

4.2 Test Data

Table 4-1: RF Conducted Output Power – Measured

Frequency (MHz)	High Power (dBm)	High Power (W)	Low Power (dBm)	Low Power (W)
763.0125	44.2	26.1	32.8	1.9
768.0125 (ISED)	44.2	26.5	32.8	1.9
769.0125	44.2	26.5	32.8	1.9
772.0000	44.2	26.5	32.7	1.9
774.9875	44.2	26.4	32.7	1.9
775.9875 (ISED)	44.1	25.8	32.7	1.9
793.0125	44.1	25.8	32.6	1.8
798.0125 (ISED)	44.2	26.5	32.7	1.9
799.0125	44.2	26.4	32.7	1.9
802.0000	44.3	26.6	32.7	1.9
804.9875	44.1	25.6	32.7	1.9
805.9875 (ISED)	44.2	26.4	32.7	1.9
806.0125	45.5	35.5	32.9	1.9
815.0000	45.6	36.2	33.0	2.0
823.9875	45.5	35.8	33.0	2.0
824.9875	45.5	35.7	33.0	2.0
851.0125	45.7	37.3	33.0	2.0
860.0000	45.7	37.2	33.0	2.0
868.9875	45.7	36.9	33.0	2.0
869.9875	45.7	36.7	33.1	2.0
896.0125	45.8	38.0	33.1	2.0
898.5000	45.9	38.5	33.2	2.1
900.9875	45.8	38.2	33.2	2.1
935.0125	45.7	37.3	33.2	2.1
937.5000	45.7	37.1	33.2	2.1
939.9875	45.7	37.2	33.2	2.1
941.0125	45.7	37.2	33.2	2.1
942.5000	45.7	37.2	33.2	2.1
943.9875	45.7	37.2	33.2	2.1

Notes: Data presented is for analog mode. All other modes were investigated and found to have equivalent power within measurement tolerances.

Table 4-2: Test Equipment Used For Testing RF Power Output - Conducted

RTL Asset #	Manufacturer	Model	Part Type	Serial Number	Calibration Due Date
901581	Rohde & Schwarz	FSU	Spectrum Analyzer	1166.1660.50	4/26/21
901724	API Weinschel, Inc.	48-40-34	40 dB 100W Attenuator	CJ8921	8/7/19

Measurement uncertainties shown for these tests are expanded uncertainties expressed at the 95% confidence level using a coverage factor K=2. Measurement uncertainty: ±0.5 dB

Results: Pass

Test Personnel:

Daniel Baltzell		August 28, 2018
EMC Test Engineer	Signature	Date of Test

5 FCC Part 2.1051: Spurious Emissions at Antenna Terminals; Part 90.210: Emission Limitations; ISED RSS-119 5.8: Transmitter Unwanted Emissions

5.1 Test Procedure

ANSI C63.26, Section 5.7

The transmitter is terminated with a 50 Ω load and interfaced with a spectrum analyzer.

Device with digital modulation: Modulated to its maximum extent using a pseudo-random data sequence.

5.2 Test Data

Frequency range of measurement per Part 2.1057: 9 kHz to 10 x Fc

Limits: (43+10LOG P(W)) for wideband and 50 + 10 LOG P(W)) for narrowband

The following channels (in MHz) were investigated:

700 MHz	800 MHz	900 MHz
763.0125	806.0125	896.0125
768.0125	815.0000	898.5000
769.0125	823.9875	900.9875
772.0000	824.9875	935.0125
774.9875	851.0125	937.5000
775.9875	860.0000	939.9875
793.0125	868.9875	941.0125
798.0125	869.9875	942.5000
799.0125		943.9875
802.0000		
804.9875		
805.9875		

Both high and low power settings were checked; high power was found to be worst case and is presented. All modes were investigated and no emissions were found within 20 dB below the limit, therefore no data is presented.

Measurement uncertainties shown for these tests are expanded uncertainties expressed at the 95% confidence level using a coverage factor K=2. Measurement uncertainty: ±0.5 dB

Results: Pass

Table 5-1: Test Equipment Used For Testing Spurious Emissions

RTL Asset #	Manufacturer	Model	Part Type	Serial Number	Calibration Due Date
901581	Rohde & Schwarz	FSU	Spectrum Analyzer	1166.1660.50	4/26/21
901724	API Weinschel, Inc.	48-40-34	40 dB 100W Attenuator	CJ8921	8/7/19
901132	Par Electronics	806-902 (25W)	UHF Notch Filter	N/A	8/10/19

Test Personnel:

Daniel Baltzell		August 29, 2018
EMC Test Engineer	Signature	Date of Test

6 FCC Part 90.543(a): Emission Limitations: ACP Requirements; ISED RSS-119 4.3: Adjacent Channel Power (ACP) Measurement for Equipment in the Bands 764-776 MHz and 794-806 MHz

Effective October 23, 2007, transmitters designed to operate in the 769–775 MHz and 799–805 MHz frequency bands must meet the emission limitations in paragraphs (a) through (d) of this section. Transmitters operating in the 763–768 MHz and 793–798 MHz bands must meet the emission limitations in (e) of this section.

6.1 Test Procedure

ANSI C63.26, Section 6.5.2.4

Adjacent channel power measurements for equipment operating in the 769 MHz to 775 MHz and 799 MHz to 805 MHz (public safety) bands.

Device with digital modulation: Modulated to its maximum extent using a pseudo-random data sequence.

For a Mobile transmitter designed to operate with a 12.5 kHz channel bandwidth, the ACP shall be in accordance with the values in the following table:

Offset from Center Frequency (kHz)	Measurement Bandwidth (kHz)	Maximum ACP Relative (dBc)
(+/-)9.375	6.25	-40
(+/-)15.625	6.25	-60
(+/-)21.875	6.25	-60
(+/-)37.5	25	-60
(+/-)62.5	25	-65
(+/-)87.5	25	-65
(+/-)150	100	-65
(+/-)250	100	-65
(+/-)350	100	-65
>400 kHz to 12 MHz	30(s)	-75
12 MHz to paired receive band	30(s)	-75
In the paired receive band	30(s)	-100

For a Mobile transmitter designed to operate with a 25 kHz channel bandwidth, the ACP shall be in accordance with the values in the following table:

Offset from Center Frequency (kHz)	Measurement Bandwidth (kHz)	Maximum ACP Relative (dBc)
(+/-)15.625	6.25	-40
(+/-)21.875	6.25	-60
(+/-)37.5	25	-60
(+/-)62.5	25	-65
(+/-)87.5	25	-65
(+/-)150	100	-65
(+/-)250	100	-65
(+/-)350	100	-65
>400 kHz to 12 MHz	30(s)	-75
12 MHz to paired receive band	30(s)	-75
In the paired receive band	30(s)	-100

FCC Rules and Regulations - 90.543(b)

Setting Reference Level - 90.543(b)(1): Using a spectrum analyzer capable of ACP measurements, set the measurement bandwidth to the channel size. Set the frequency offset of the measurement to zero and adjust the center frequency of the spectrum analyzer to give the power level in the measurement bandwidth. Record this power as the reference power level.

Measuring the power level at the frequency offset <600 kHz - §90.543(b)(2): Using a spectrum analyzer capable of adjacent channel power (ACP) measurements, set the measurement bandwidth as shown in the table. Measure ACP in dBm. These measurements are made at maximum power. Calculate the coupled power by subtracting the measurements made in this step from the reference power level. The absolute ACP values must be less than the values given in the table for each condition.

Measuring the power level at the frequency offset >600 kHz - §90.543(b)(3): Set the spectrum analyzer to 30 kHz resolution bandwidth, 1 MHz video bandwidth and sample detection mode. Sweep +/-6 MHz from the carrier frequency. Set the reference level to the RMS value of the transmitter power and note the power. The response at frequencies >600 kHz must be less than the values listed in the table.

6.2 Test Data

Plot 6-1: Adjacent Channel Power - 768.0125 MHz; NB Analog Mode (9.375 kHz - 350 kHz)

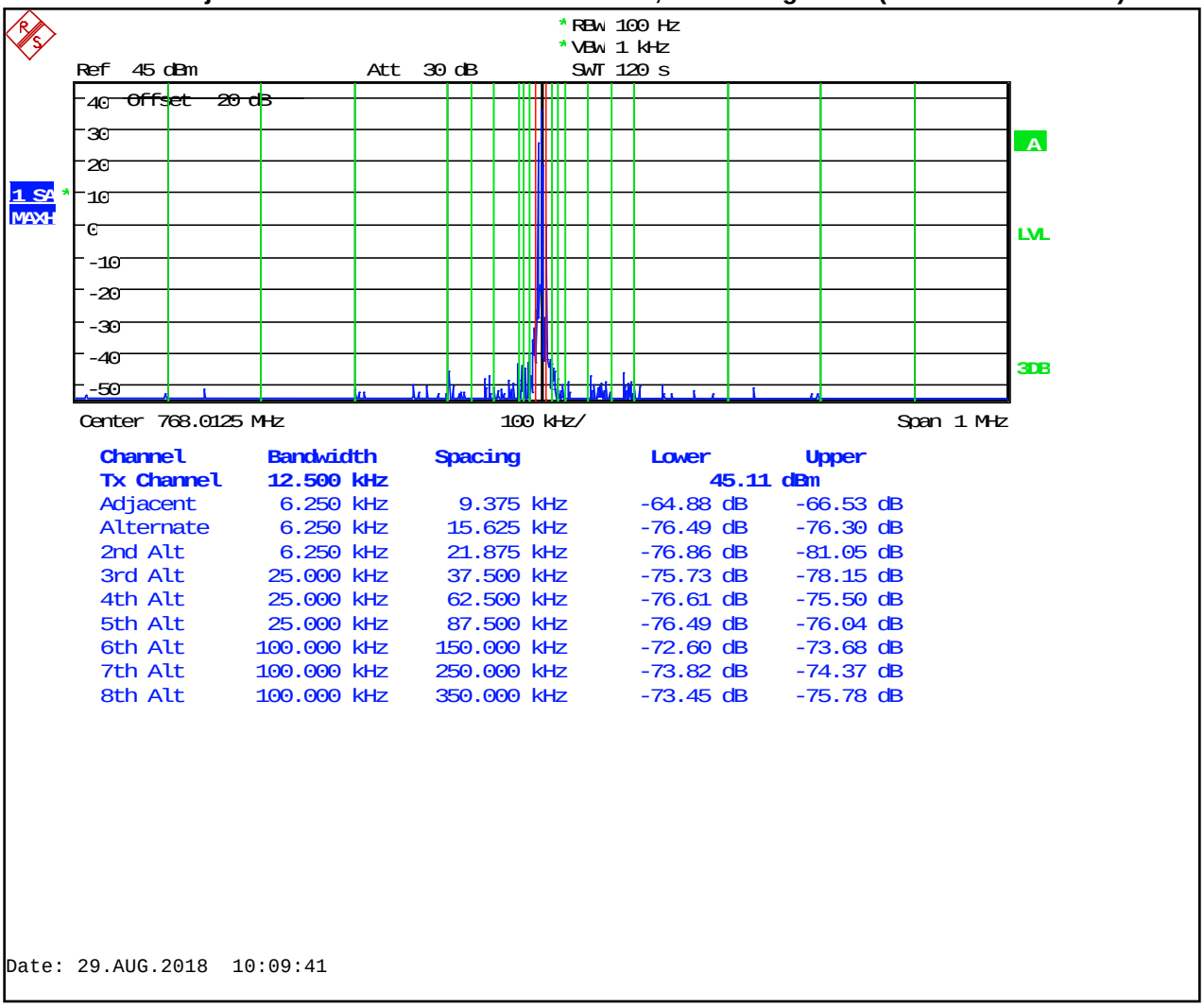


Table 6-1: Adjacent Channel Power - 768.0125 MHz; NB Analog Mode (>400 kHz - RX Band)

Offset from Center Frequency (kHz)	Measurement BW (kHz)	Max ACP (dBc)	Measured ACP (dBc)
>400 to 12 MHz	30(s)	-75	-83.7
12 MHz to receive band	30(s)	-75	-92.1
In receive band	30(s)	-100	-114.2

Plot 6-2: Adjacent Channel Power – 772.0000 MHz; NB Analog Mode (9.375 kHz - 350 kHz)

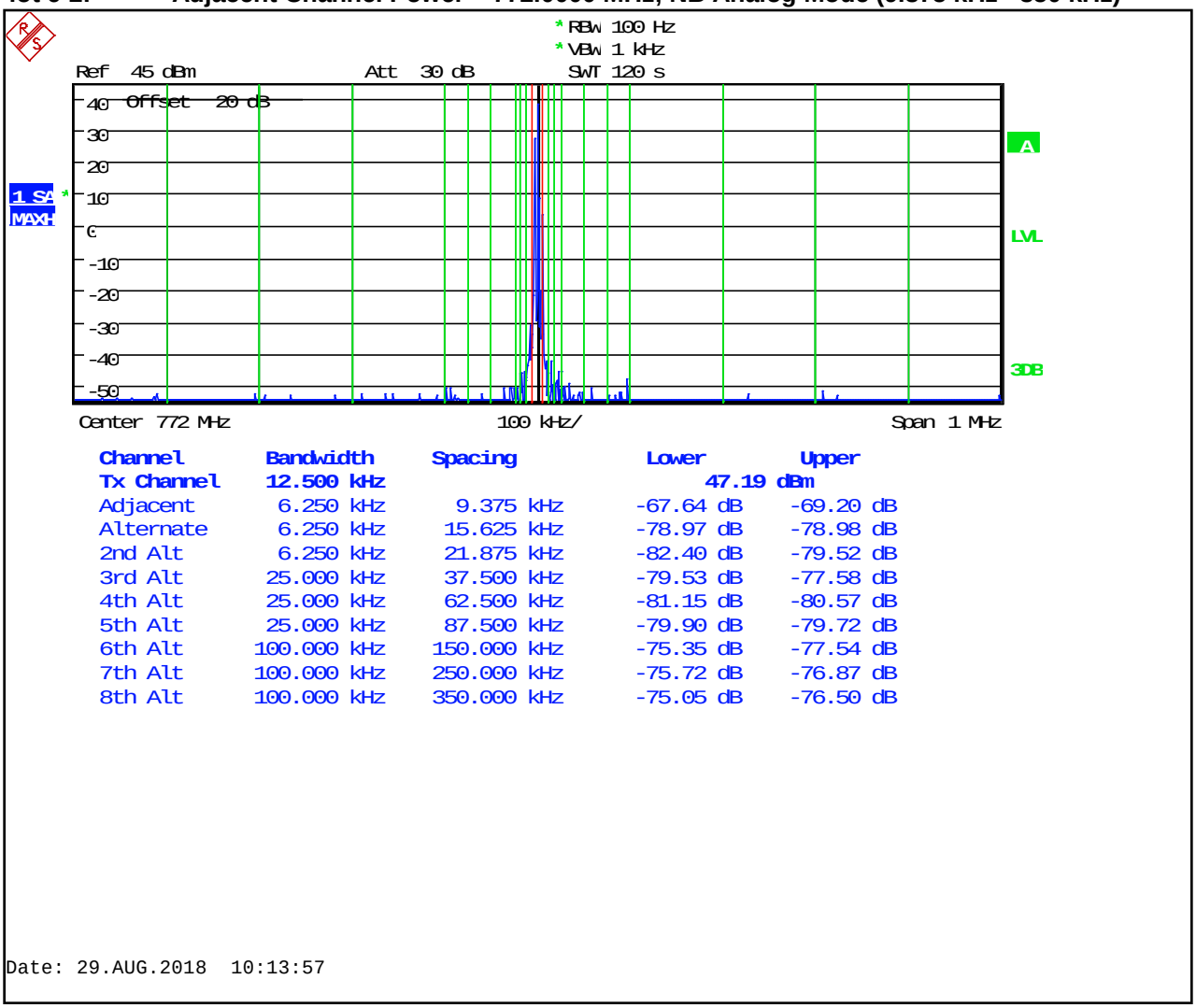


Table 6-2: Adjacent Channel Power – 772.0000 MHz; NB Analog Mode (>400 kHz - RX Band)

Offset from Center Frequency (kHz)	Measurement BW (kHz)	Max ACP (dBc)	Measured ACP (dBc)
>400 to 12 MHz	30(s)	-75	-83.4
12 MHz to receive band	30(s)	-75	-100.6
In receive band	30(s)	-100	-114.9

Plot 6-3: Adjacent Channel Power - 775.9875 MHz; NB Analog Mode (9.375 kHz - 350 kHz)

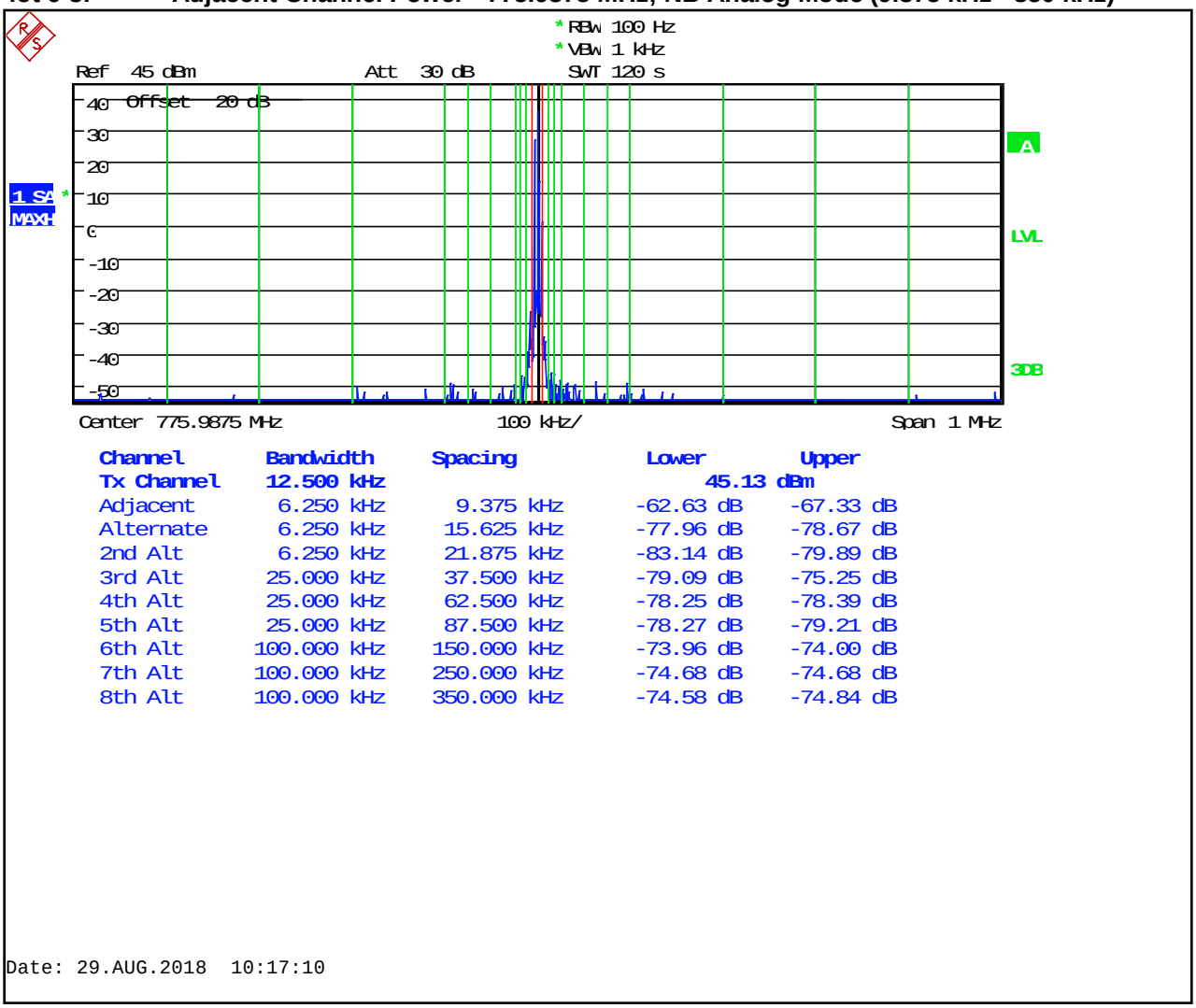


Table 6-3: Adjacent Channel Power - 775.9875 MHz; NB Analog Mode (>400 kHz - RX Band)

Offset from Center Frequency (kHz)	Measurement BW (kHz)	Max ACP (dBc)	Measured ACP (dBc)
>400 to 12 MHz	30(s)	-75	-84.4
12 MHz to receive band	30(s)	-75	-100.6
In receive band	30(s)	-100	-112.2

Plot 6-4: Adjacent Channel Power – 798.0125 MHz; NB Analog Mode; (9.375 kHz - 350 kHz)

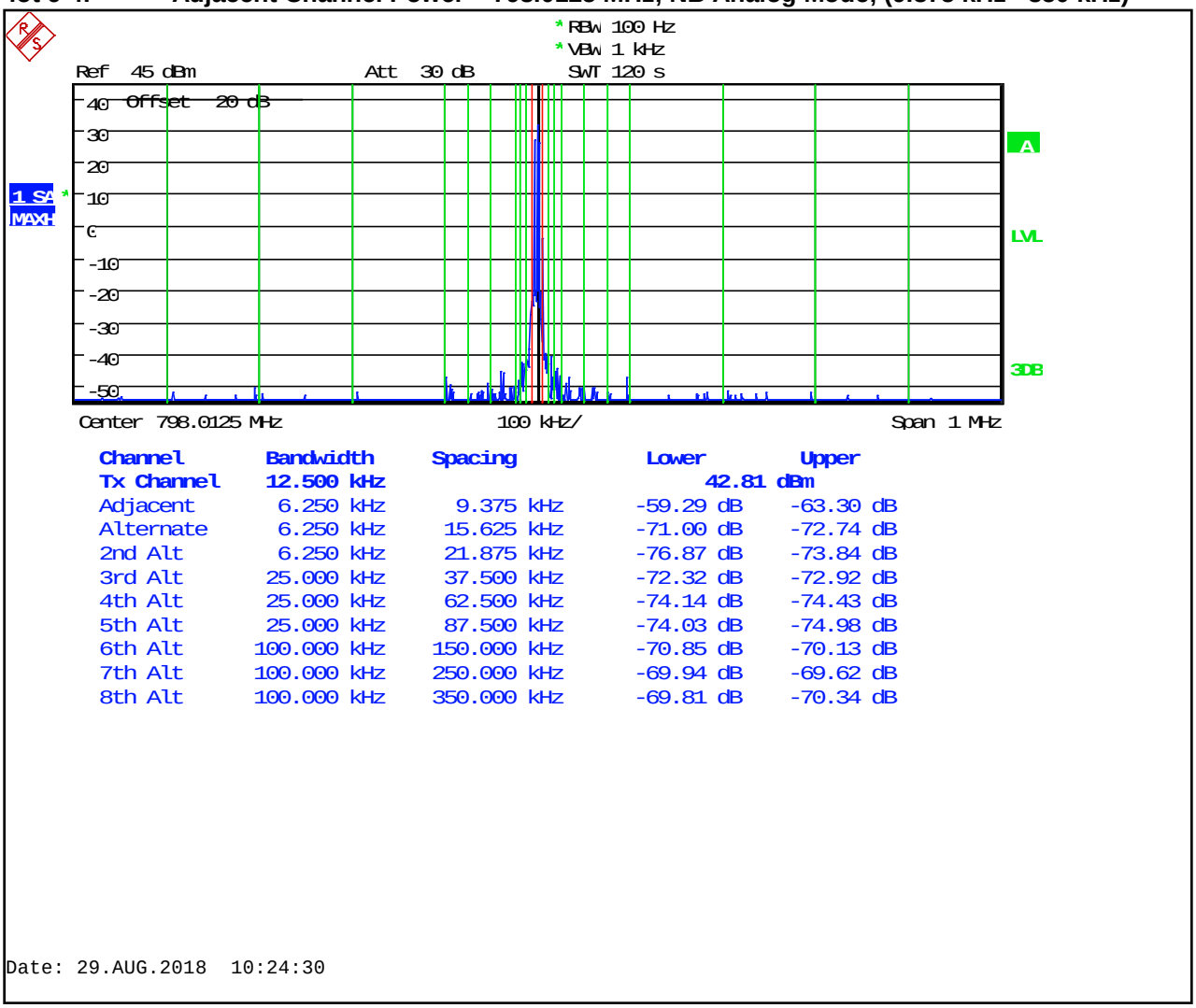


Table 6-4: Adjacent Channel Power – 798.0125 MHz; NB Analog Mode (>400 kHz - RX Band)

Offset from Center Frequency (kHz)	Measurement BW (kHz)	Max ACP (dBc)	Measured ACP (dBc)
>400 to 12 MHz	30(s)	-75	-84.6
12 MHz to receive band	30(s)	-75	-101.2
In receive band	30(s)	-100	-101.8

Plot 6-5: Adjacent Channel Power – 802.0000 MHz; NB Analog Mode; (9.375 kHz - 350 kHz)

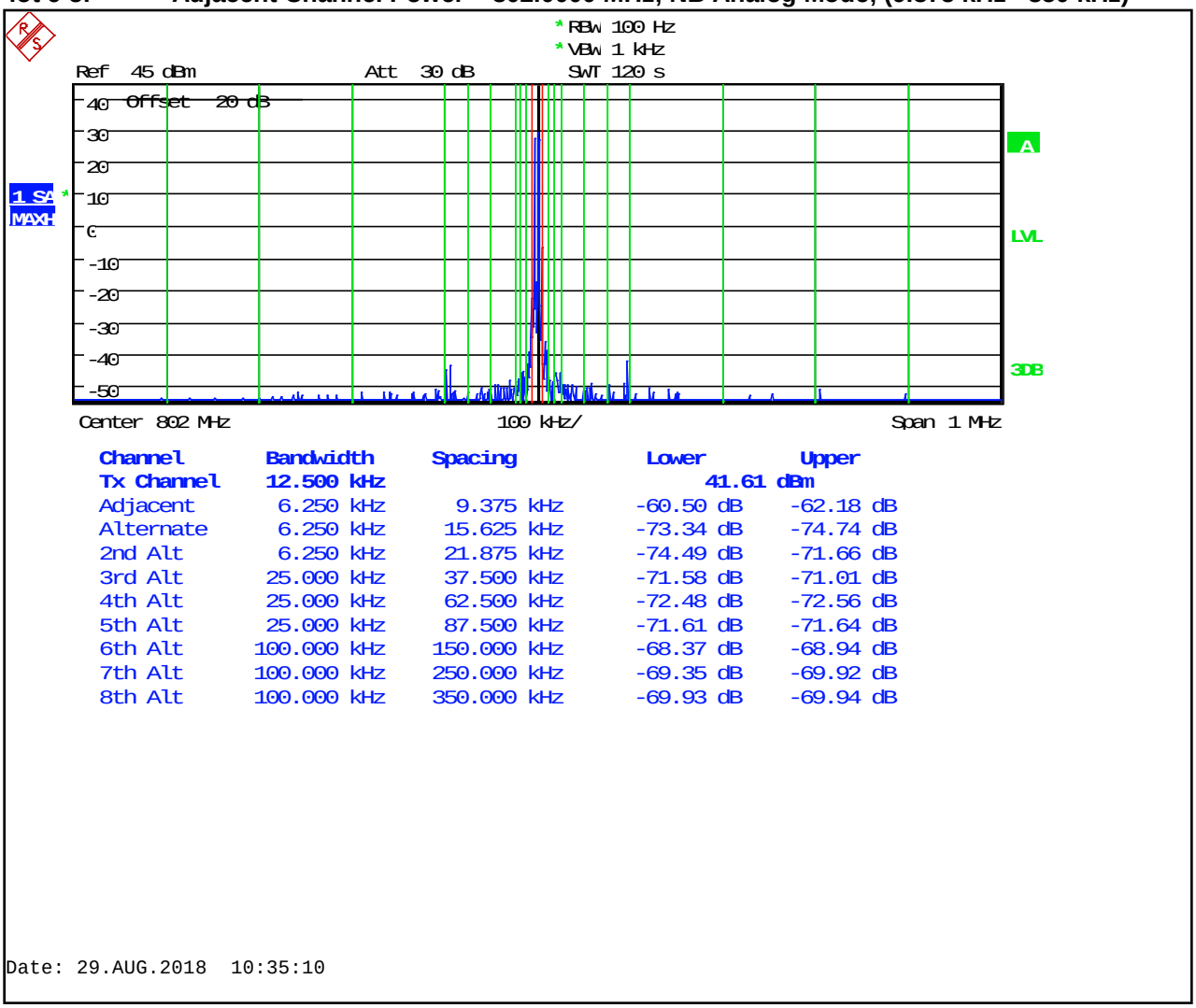


Table 6-5: Adjacent Channel Power – 802.0000 MHz; NB Analog Mode (>400 kHz - RX Band)

Offset from Center Frequency (kHz)	Measurement BW (kHz)	Max ACP (dBc)	Measured ACP (dBc)
>400 to 12 MHz	30(s)	-75	-85.3
12 MHz to receive band	30(s)	-75	-100.5
In receive band	30(s)	-100	-109.0

Plot 6-6: Adjacent Channel Power – 805.9875 MHz; NB Analog Mode; (9.375 kHz - 350 kHz)

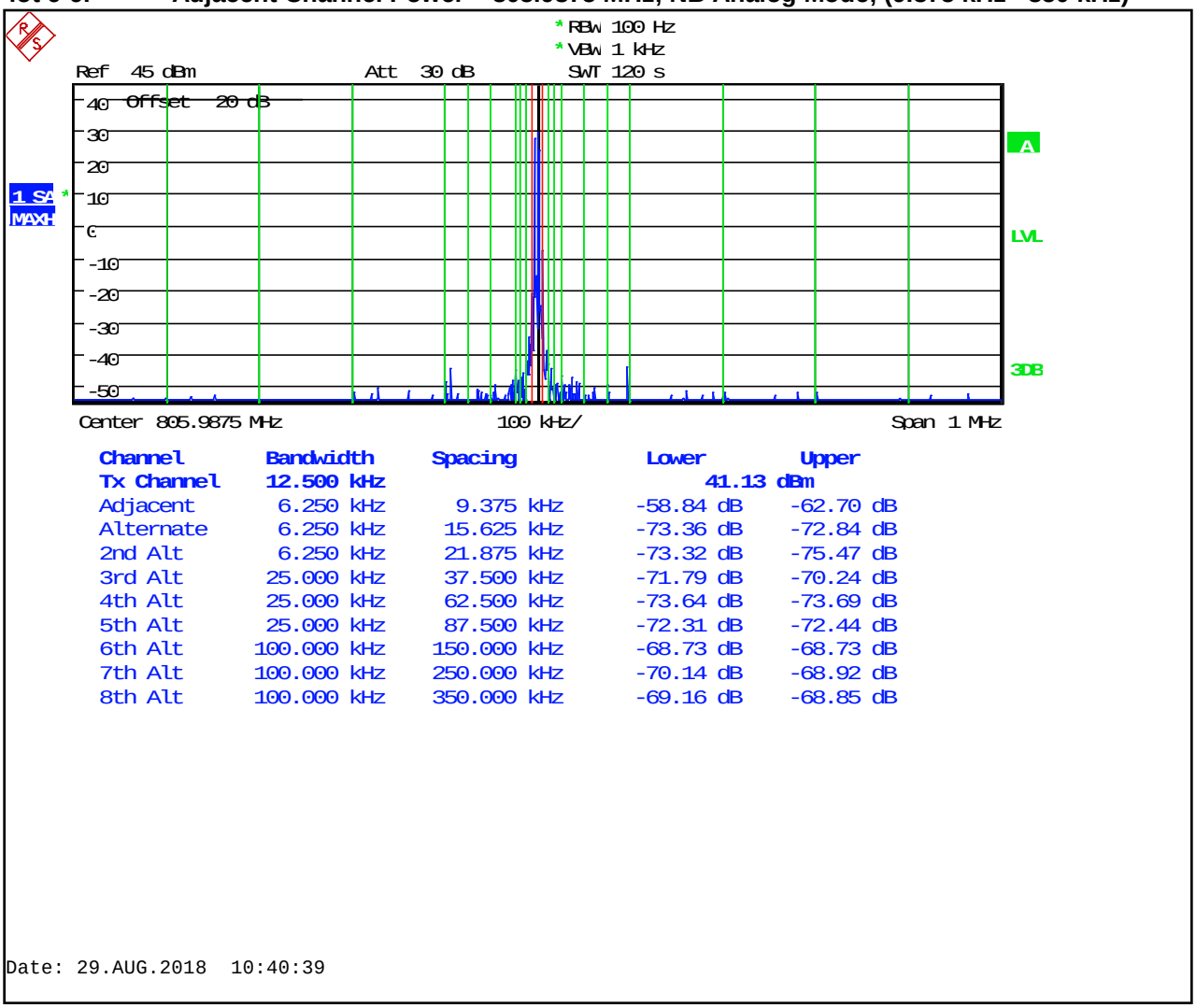
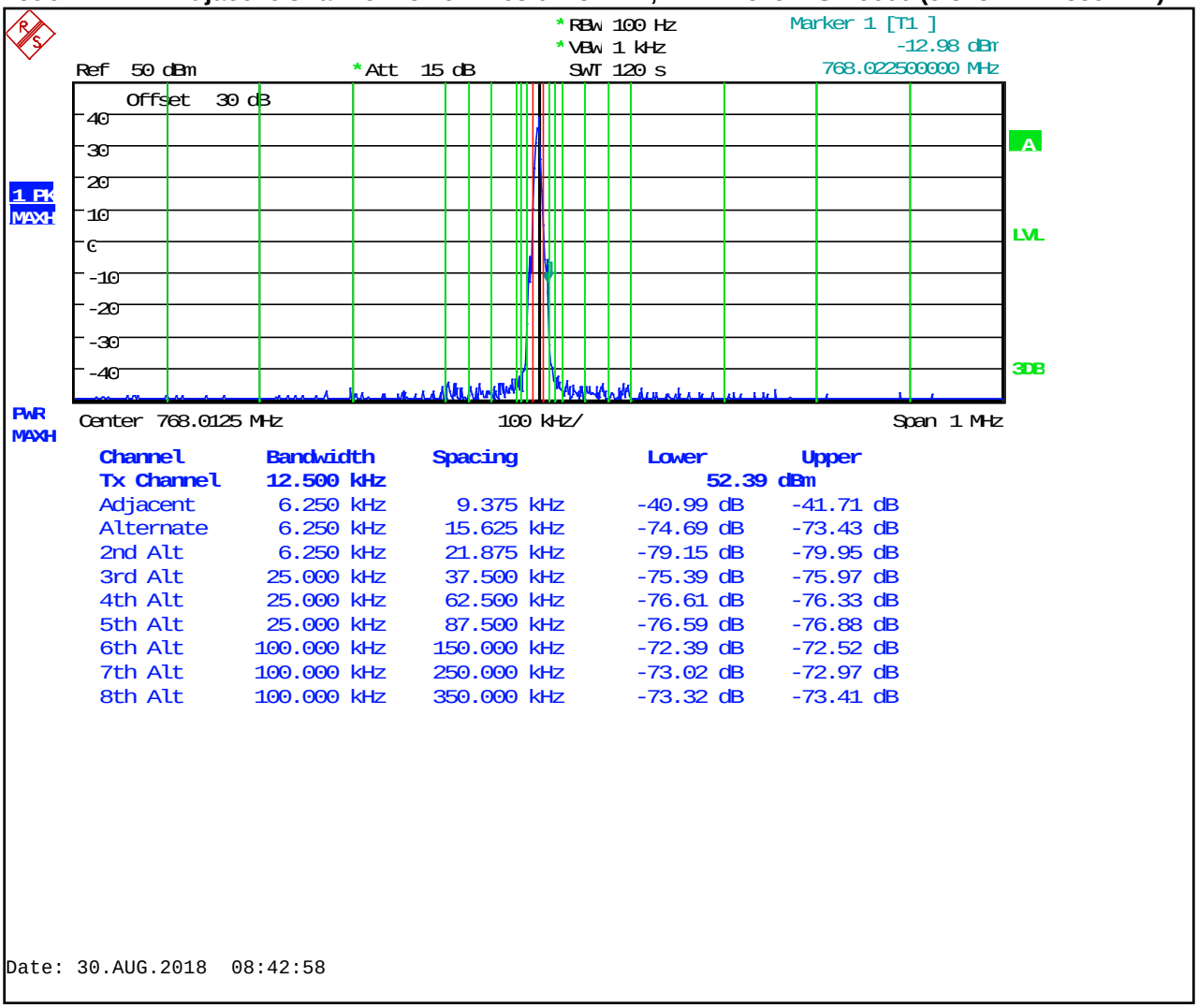


Table 6-6: Adjacent Channel Power – 805.9875 MHz; NB Analog Mode (>400 kHz - RX Band)

Offset from Center Frequency (kHz)	Measurement BW (kHz)	Max ACP (dBc)	Measured ACP (dBc)
>400 to 12 MHz	30(s)	-75	-85.1
12 MHz to receive band	30(s)	-75	-100.2
In receive band	30(s)	-100	-110.9

Plot 6-7: Adjacent Channel Power - 768.0125 MHz; NB 2-Level FSK 9600 (9.375 kHz - 350 kHz)

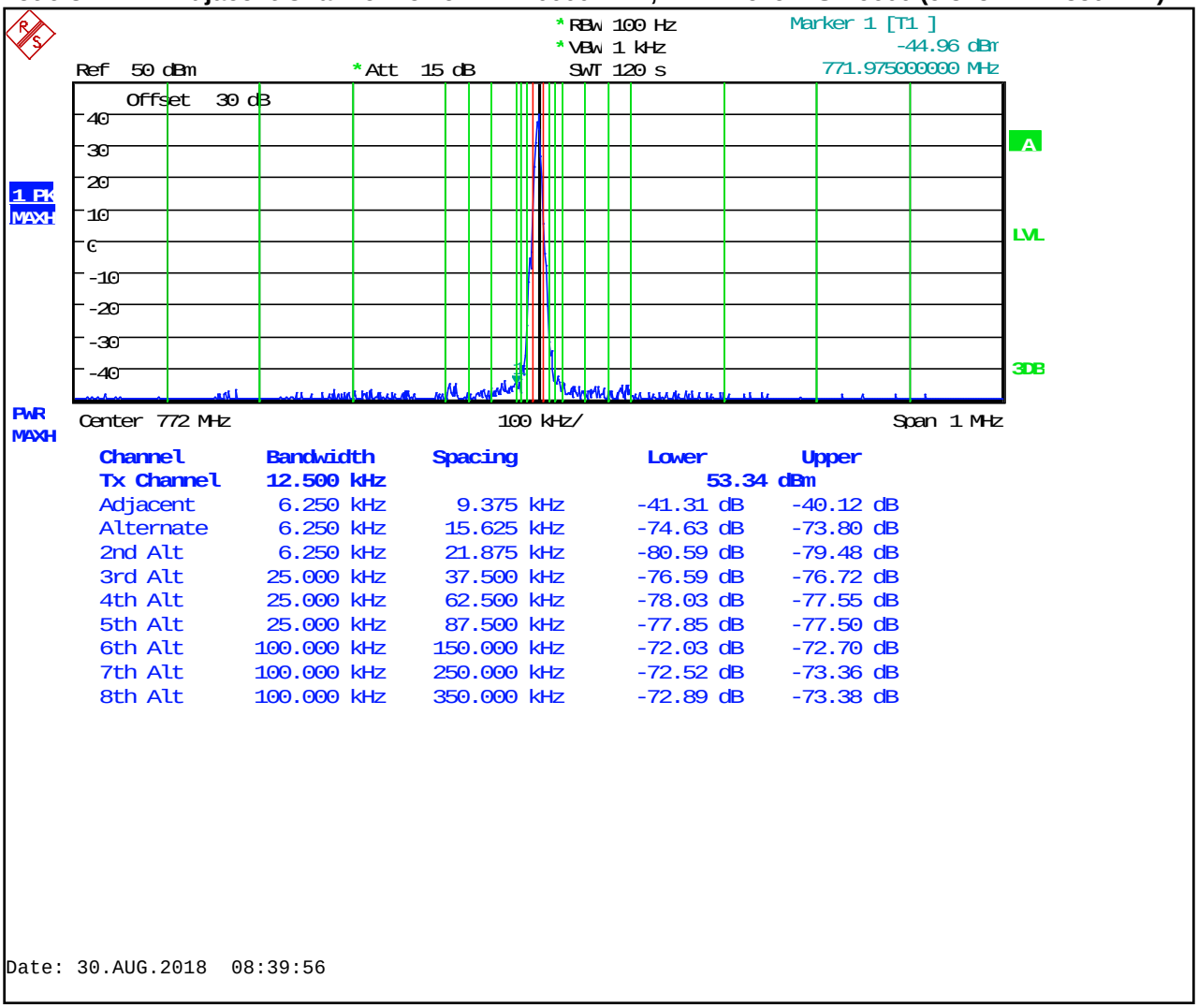


Channel	Bandwidth	Spacing	Lower	Upper
Tx Channel	12.500 kHz		52.39 dBm	
Adjacent	6.250 kHz	9.375 kHz	-40.99 dB	-41.71 dB
Alternate	6.250 kHz	15.625 kHz	-74.69 dB	-73.43 dB
2nd Alt	6.250 kHz	21.875 kHz	-79.15 dB	-79.95 dB
3rd Alt	25.000 kHz	37.500 kHz	-75.39 dB	-75.97 dB
4th Alt	25.000 kHz	62.500 kHz	-76.61 dB	-76.33 dB
5th Alt	25.000 kHz	87.500 kHz	-76.59 dB	-76.88 dB
6th Alt	100.000 kHz	150.000 kHz	-72.39 dB	-72.52 dB
7th Alt	100.000 kHz	250.000 kHz	-73.02 dB	-72.97 dB
8th Alt	100.000 kHz	350.000 kHz	-73.32 dB	-73.41 dB

Table 6-7: Adjacent Channel Power - 768.0125 MHz; NB 2-Level FSK 9600 (>400 kHz - RX Band)

Offset from Center Frequency (kHz)	Measurement BW (kHz)	Max ACP (dBc)	Measured ACP (dBc)
>400 to 12 MHz	30(s)	-75	-80.4
12 MHz to receive band	30(s)	-75	-85.8
In receive band	30(s)	-100	-105.3

Plot 6-8: Adjacent Channel Power - 772.0000 MHz; NB 2-Level FSK 9600 (9.375 kHz - 350 kHz)

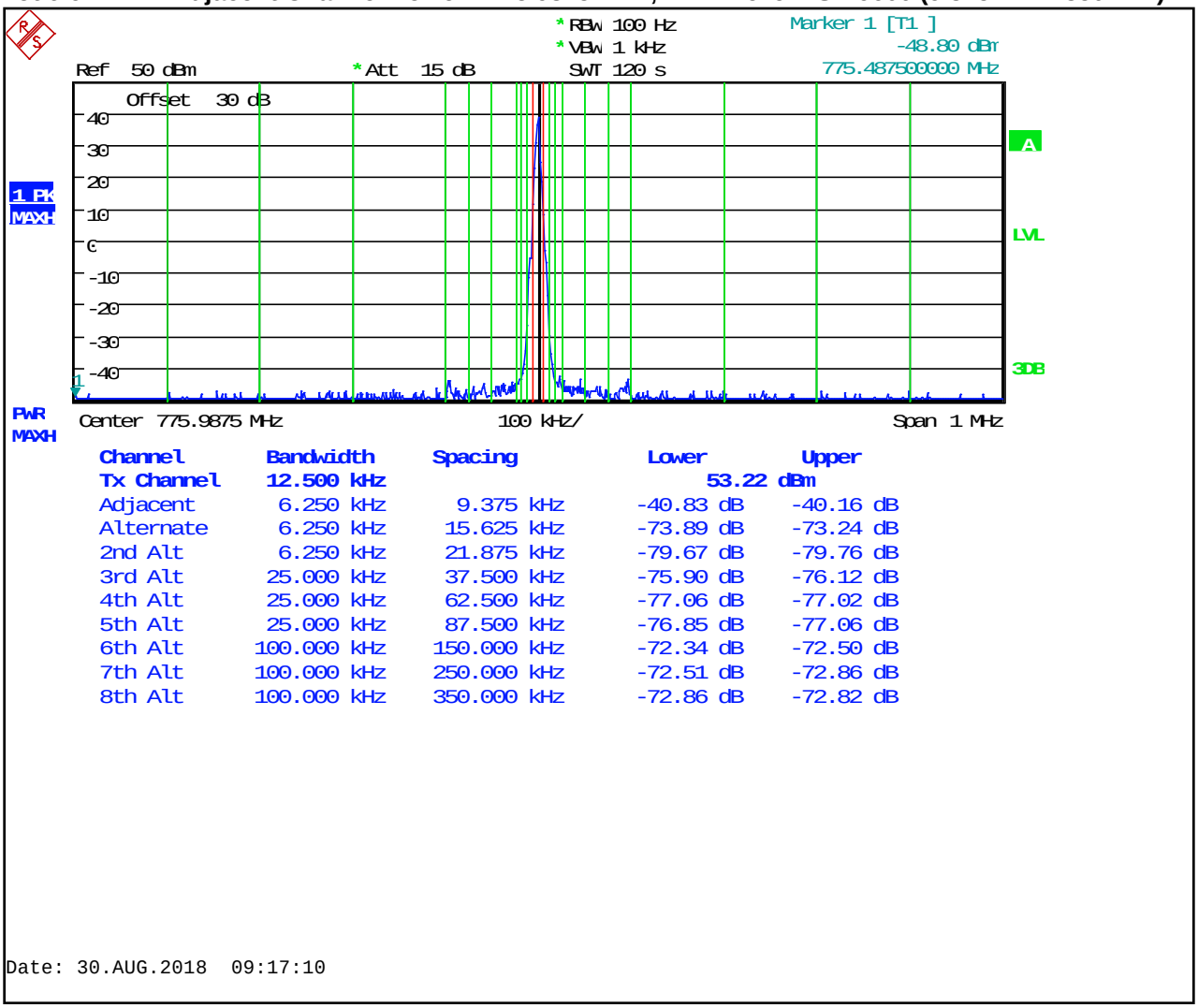


Channel	Bandwidth	Spacing	Lower	Upper
Tx Channel	12.500 kHz		53.34 dBm	
Adjacent	6.250 kHz	9.375 kHz	-41.31 dB	-40.12 dB
Alternate	6.250 kHz	15.625 kHz	-74.63 dB	-73.80 dB
2nd Alt	6.250 kHz	21.875 kHz	-80.59 dB	-79.48 dB
3rd Alt	25.000 kHz	37.500 kHz	-76.59 dB	-76.72 dB
4th Alt	25.000 kHz	62.500 kHz	-78.03 dB	-77.55 dB
5th Alt	25.000 kHz	87.500 kHz	-77.85 dB	-77.50 dB
6th Alt	100.000 kHz	150.000 kHz	-72.03 dB	-72.70 dB
7th Alt	100.000 kHz	250.000 kHz	-72.52 dB	-73.36 dB
8th Alt	100.000 kHz	350.000 kHz	-72.89 dB	-73.38 dB

Table 6-8: Adjacent Channel Power - 772.0000 MHz; NB 2-Level FSK 9600 (>400 kHz - RX Band)

Offset from Center Frequency (kHz)	Measurement BW (kHz)	Max ACP (dBc)	Measured ACP (dBc)
>400 to 12 MHz	30(s)	-75	-84.3
12 MHz to receive band	30(s)	-75	-93.2
In receive band	30(s)	-100	-105.3

Plot 6-9: Adjacent Channel Power - 775.9875 MHz; NB 2-Level FSK 9600 (9.375 kHz - 350 kHz)



Channel	Bandwidth	Spacing	Lower	Upper
Tx Channel	12.500 kHz		53.22 dBm	
Adjacent	6.250 kHz	9.375 kHz	-40.83 dB	-40.16 dB
Alternate	6.250 kHz	15.625 kHz	-73.89 dB	-73.24 dB
2nd Alt	6.250 kHz	21.875 kHz	-79.67 dB	-79.76 dB
3rd Alt	25.000 kHz	37.500 kHz	-75.90 dB	-76.12 dB
4th Alt	25.000 kHz	62.500 kHz	-77.06 dB	-77.02 dB
5th Alt	25.000 kHz	87.500 kHz	-76.85 dB	-77.06 dB
6th Alt	100.000 kHz	150.000 kHz	-72.34 dB	-72.50 dB
7th Alt	100.000 kHz	250.000 kHz	-72.51 dB	-72.86 dB
8th Alt	100.000 kHz	350.000 kHz	-72.86 dB	-72.82 dB

Table 6-9: Adjacent Channel Power - 775.9875 MHz; NB 2-Level FSK 9600 (>400 kHz - RX Band)

Offset from Center Frequency (kHz)	Measurement BW (kHz)	Max ACP (dBc)	Measured ACP (dBc)
>400 to 12 MHz	30(s)	-75	-84.8
12 MHz to receive band	30(s)	-75	-93.1
In receive band	30(s)	-100	-104.2

Plot 6-10: Adjacent Channel Power – 798.0125 MHz; NB 2-Level FSK 9600 (9.375 kHz - 350 kHz)

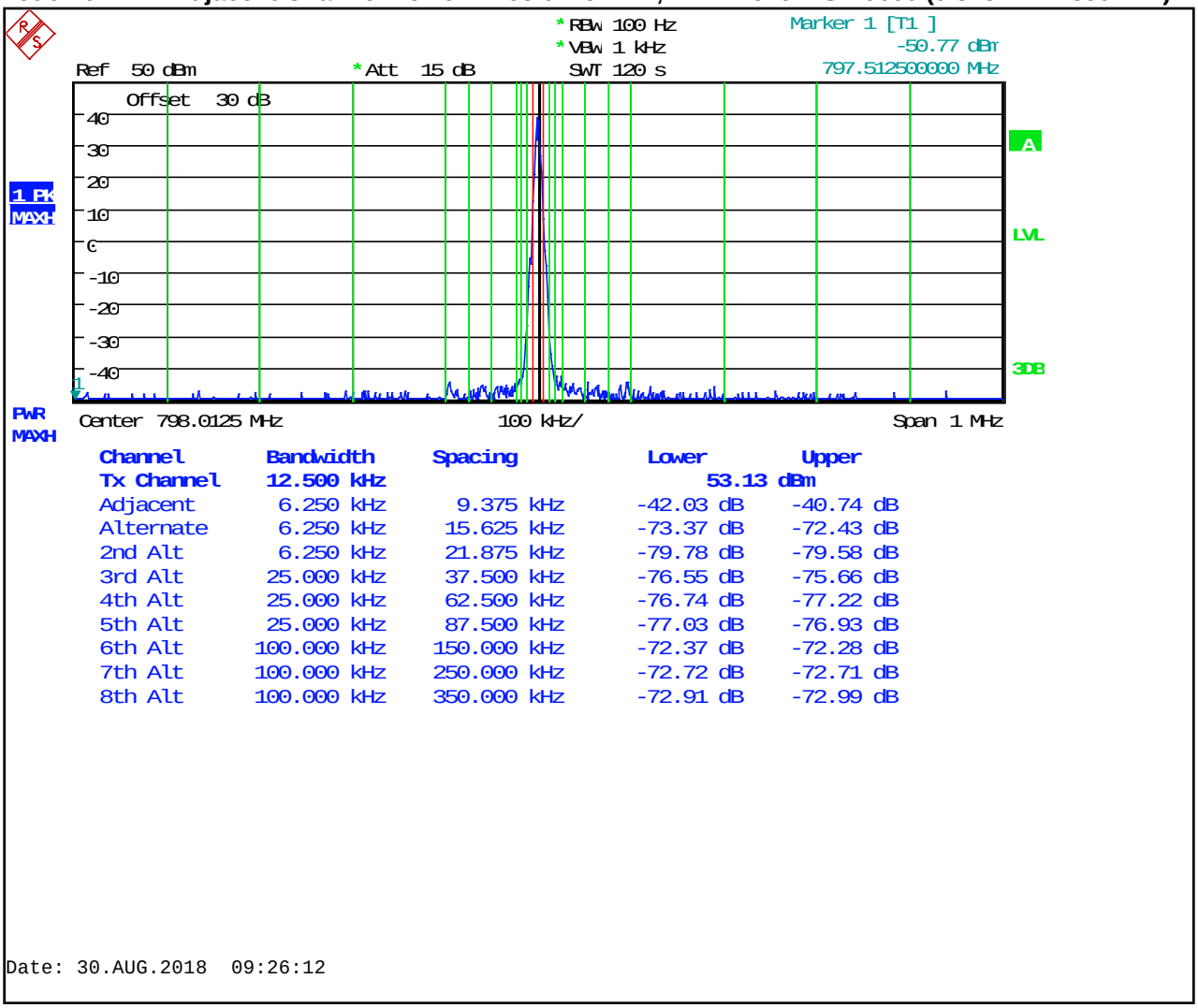
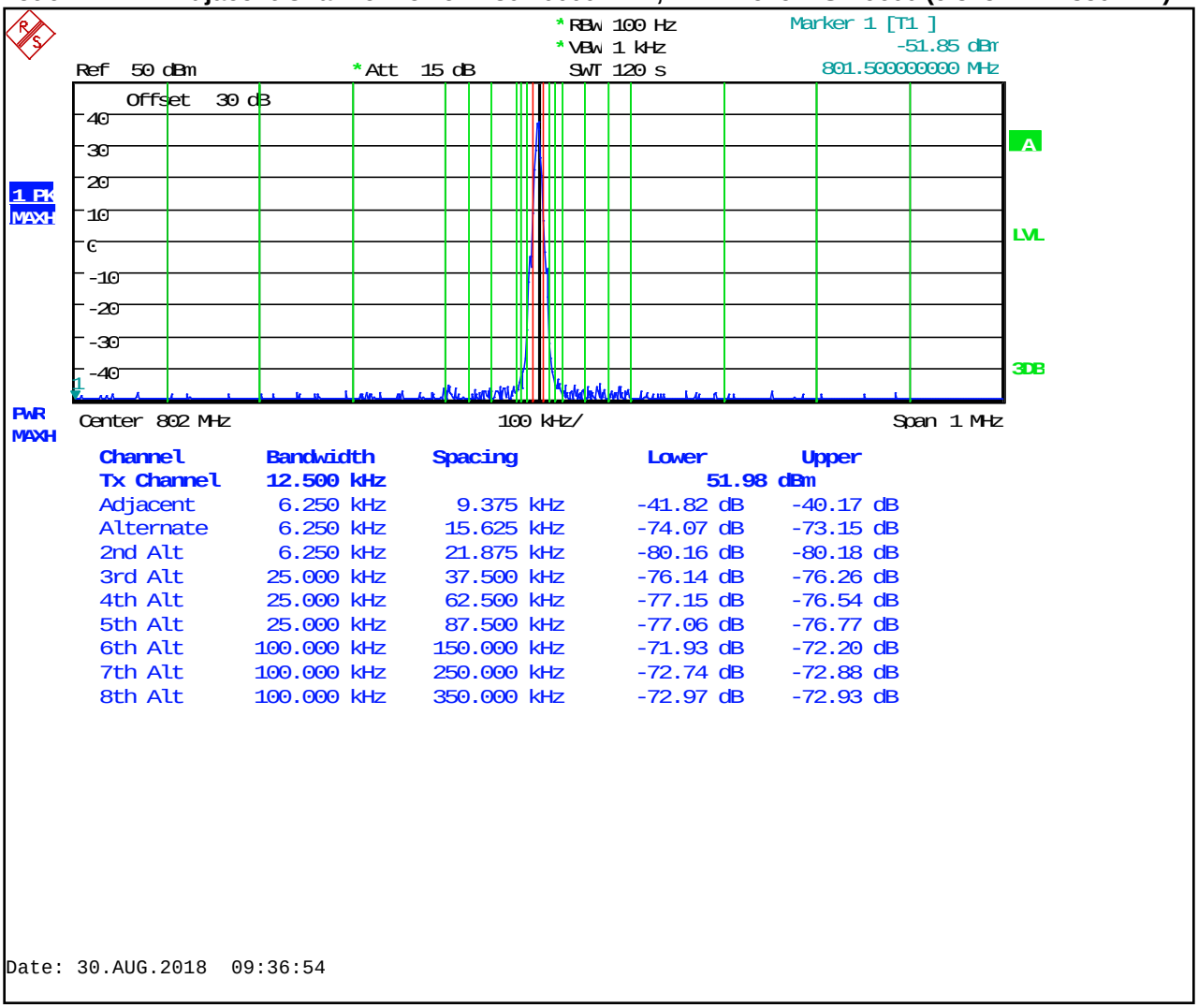


Table 6-10: Adjacent Channel Power – 798.0125 MHz; NB 2-Level FSK 9600 (>400 kHz - RX Band)

Offset from Center Frequency (kHz)	Measurement BW (kHz)	Max ACP (dBc)	Measured ACP (dBc)
>400 to 12 MHz	30(s)	-75	-84.6
12 MHz to receive band	30(s)	-75	-93.3
In receive band	30(s)	-100	-100.7

Plot 6-11: Adjacent Channel Power – 802.0000 MHz; NB 2-Level FSK 9600 (9.375 kHz - 350 kHz)

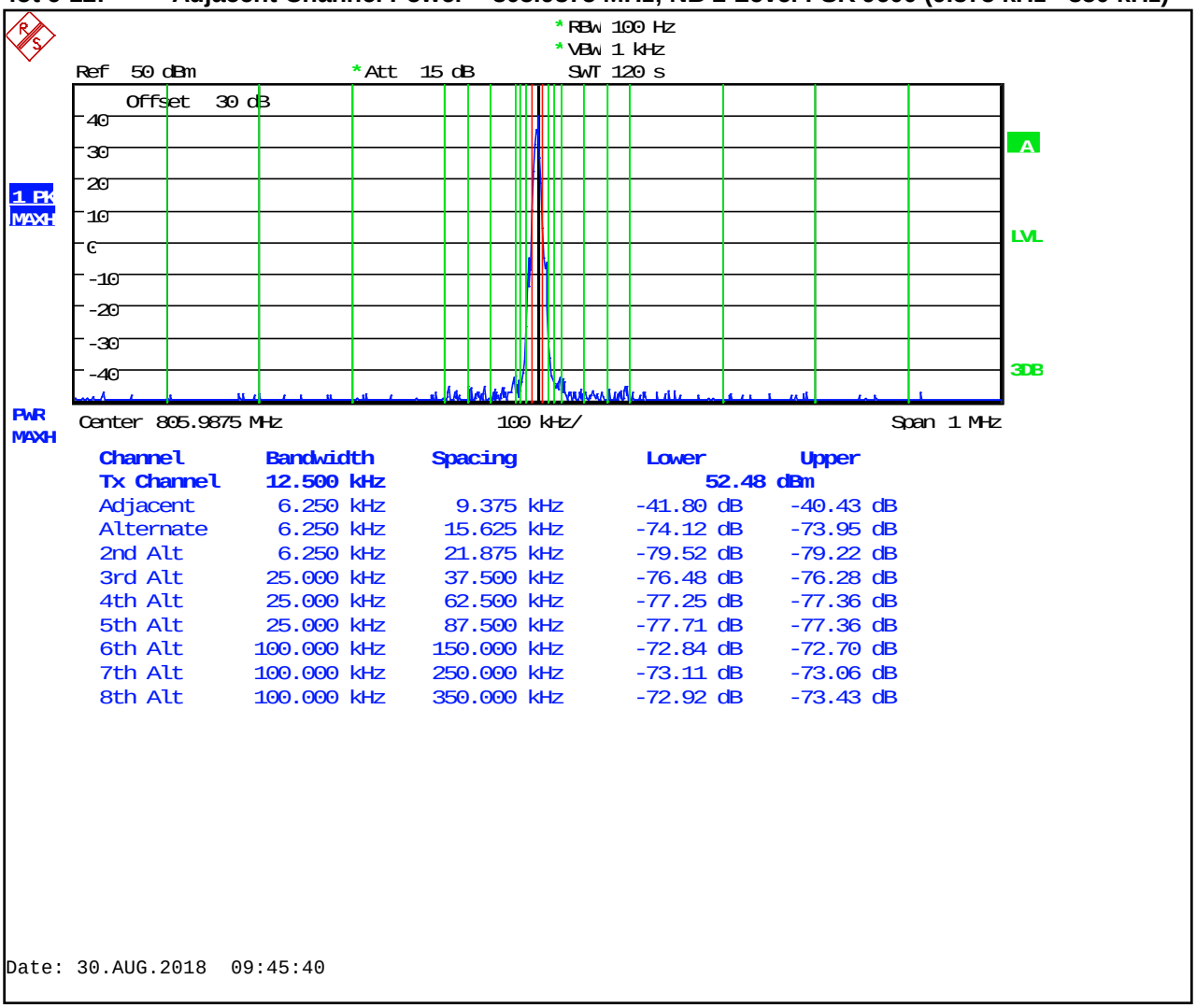


Channel	Bandwidth	Spacing	Lower	Upper
Tx Channel	12.500 kHz		51.98 dBm	
Adjacent	6.250 kHz	9.375 kHz	-41.82 dB	-40.17 dB
Alternate	6.250 kHz	15.625 kHz	-74.07 dB	-73.15 dB
2nd Alt	6.250 kHz	21.875 kHz	-80.16 dB	-80.18 dB
3rd Alt	25.000 kHz	37.500 kHz	-76.14 dB	-76.26 dB
4th Alt	25.000 kHz	62.500 kHz	-77.15 dB	-76.54 dB
5th Alt	25.000 kHz	87.500 kHz	-77.06 dB	-76.77 dB
6th Alt	100.000 kHz	150.000 kHz	-71.93 dB	-72.20 dB
7th Alt	100.000 kHz	250.000 kHz	-72.74 dB	-72.88 dB
8th Alt	100.000 kHz	350.000 kHz	-72.97 dB	-72.93 dB

Table 6-11: Adjacent Channel Power – 802.0000 MHz; NB 2-Level FSK 9600 (>400 kHz - RX Band)

Offset from Center Frequency (kHz)	Measurement BW (kHz)	Max ACP (dBc)	Measured ACP (dBc)
>400 to 12 MHz	30(s)	-75	-85.0
12 MHz to receive band	30(s)	-75	-93.1
In receive band	30(s)	-100	-103.1

Plot 6-12: Adjacent Channel Power – 805.9875 MHz; NB 2-Level FSK 9600 (9.375 kHz - 350 kHz)



Channel	Bandwidth	Spacing	Lower	Upper
Tx Channel	12.500 kHz		52.48 dBm	
Adjacent	6.250 kHz	9.375 kHz	-41.80 dB	-40.43 dB
Alternate	6.250 kHz	15.625 kHz	-74.12 dB	-73.95 dB
2nd Alt	6.250 kHz	21.875 kHz	-79.52 dB	-79.22 dB
3rd Alt	25.000 kHz	37.500 kHz	-76.48 dB	-76.28 dB
4th Alt	25.000 kHz	62.500 kHz	-77.25 dB	-77.36 dB
5th Alt	25.000 kHz	87.500 kHz	-77.71 dB	-77.36 dB
6th Alt	100.000 kHz	150.000 kHz	-72.84 dB	-72.70 dB
7th Alt	100.000 kHz	250.000 kHz	-73.11 dB	-73.06 dB
8th Alt	100.000 kHz	350.000 kHz	-72.92 dB	-73.43 dB

Table 6-12: Adjacent Channel Power – 805.9875 MHz; NB 2-Level FSK 9600 (>400 kHz - RX Band)

Offset from Center Frequency (kHz)	Measurement BW (kHz)	Max ACP (dBc)	Measured ACP (dBc)
>400 to 12 MHz	30(s)	-75	-85.7
12 MHz to receive band	30(s)	-75	-93.1
In receive band	30(s)	-100	-104.8

Plot 6-13: Adjacent Channel Power - 768.0125 MHz; C4FM Mode (9.375 kHz - 350 kHz)

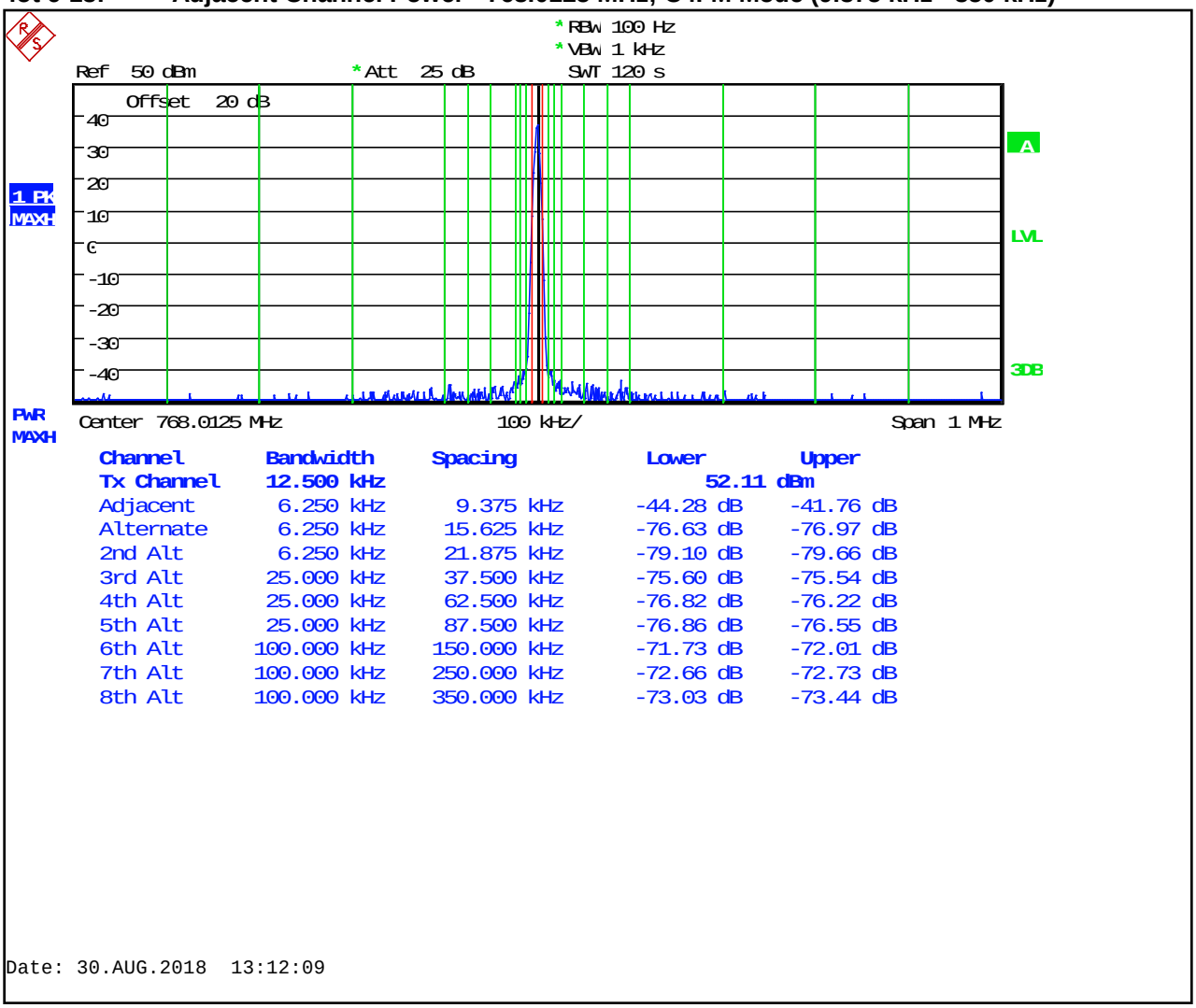


Table 6-13: Adjacent Channel Power - 768.0125 MHz; C4FM Mode (>400 kHz - RX Band)

Offset from Center Frequency (kHz)	Measurement BW (kHz)	Max ACP (dBc)	Measured ACP (dBc)
>400 to 12 MHz	30(s)	-75	-92.0
12 MHz to receive band	30(s)	-75	-97.9
In receive band	30(s)	-100	-108.5

Plot 6-14: Adjacent Channel Power - 772.0000 MHz; C4FM Mode (9.375 kHz - 350 kHz)

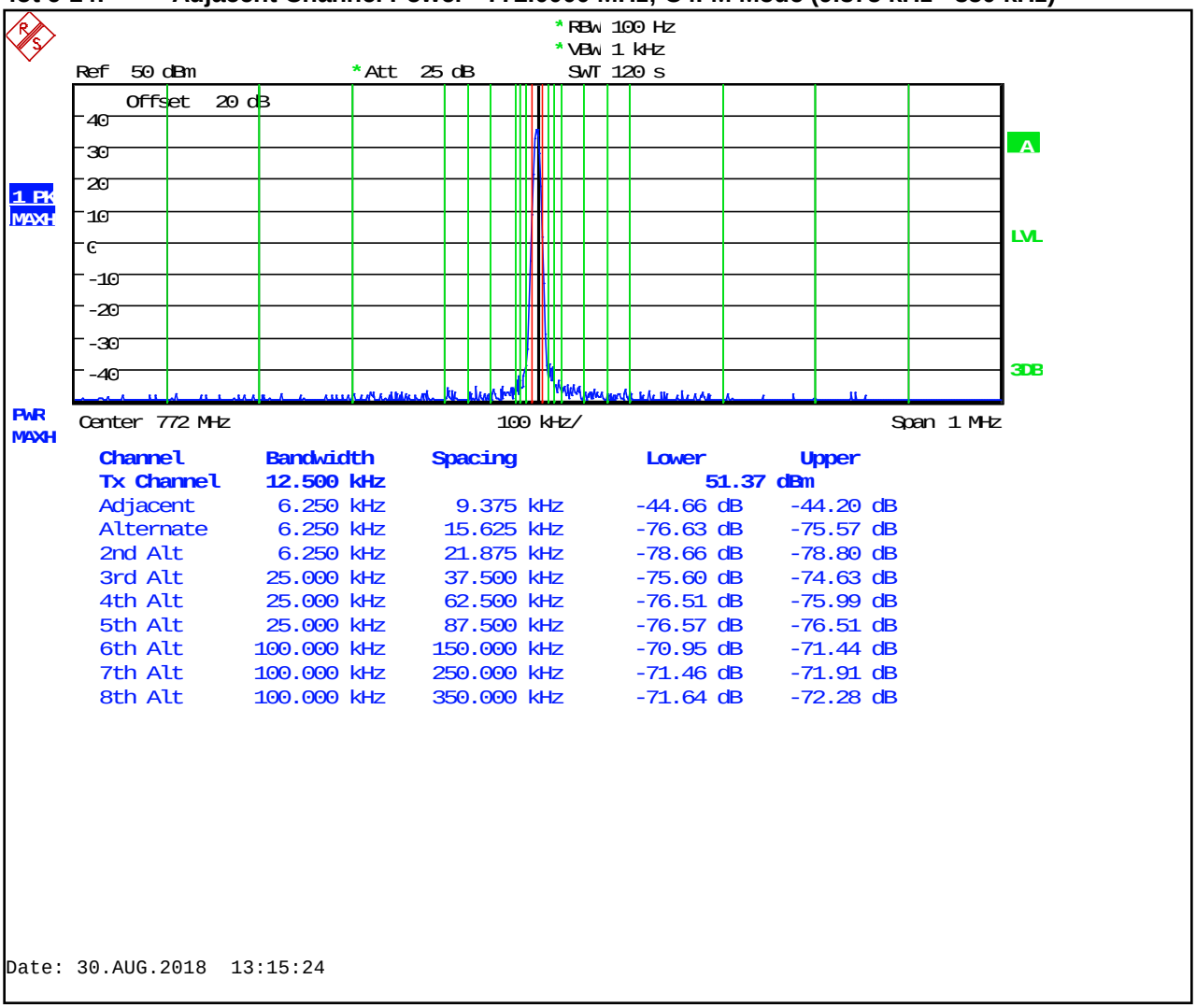


Table 6-14: Adjacent Channel Power - 772.0000 MHz; C4FM Mode (>400 kHz - RX Band)

Offset from Center Frequency (kHz)	Measurement BW (kHz)	Max ACP (dBc)	Measured ACP (dBc)
>400 to 12 MHz	30(s)	-75	-79.8
12 MHz to receive band	30(s)	-75	-97.6
In receive band	30(s)	-100	-115.0

Plot 6-15: Adjacent Channel Power - 775.9875 MHz; C4FM Mode (9.375 kHz - 350 kHz)

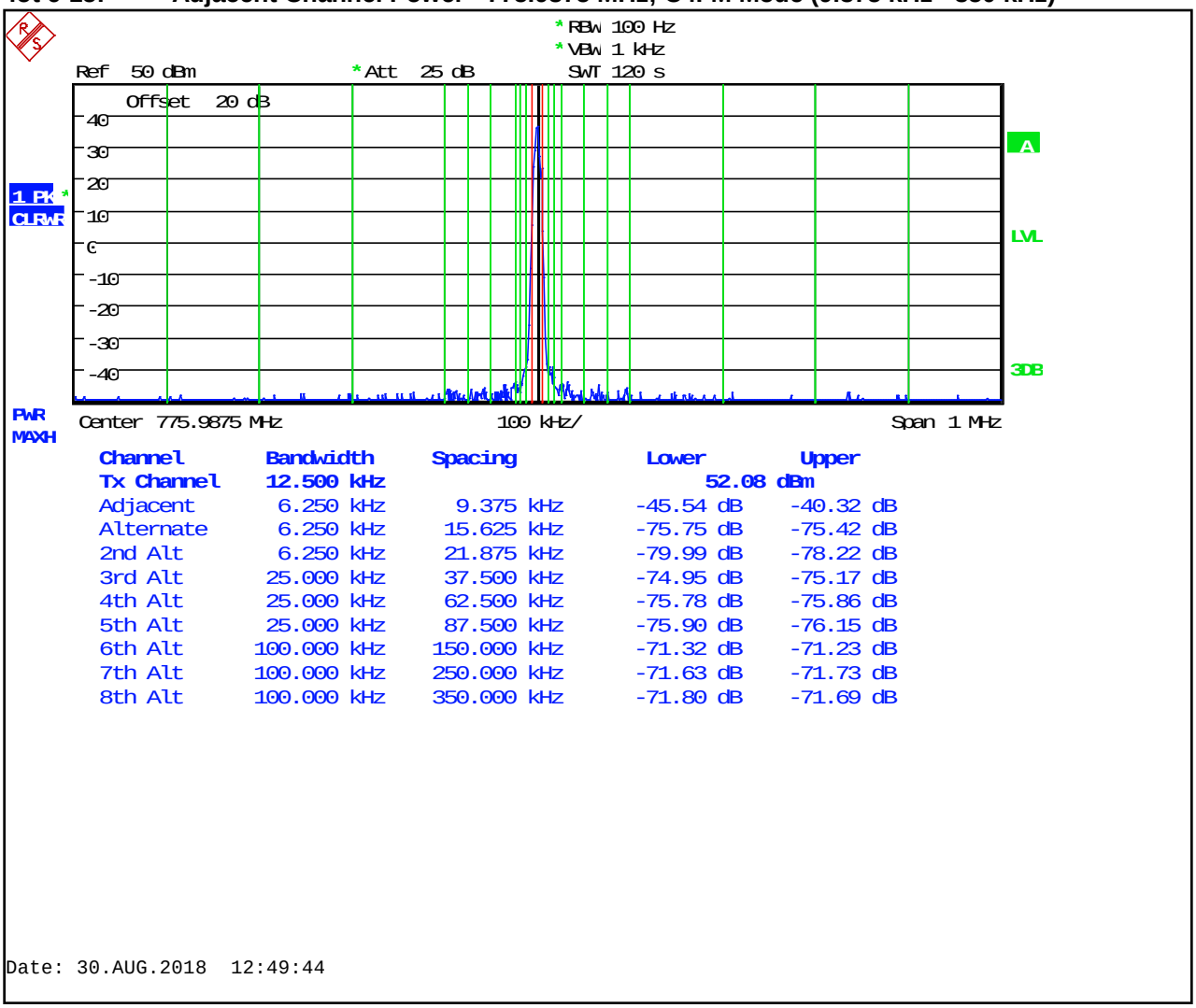


Table 6-15: Adjacent Channel Power - 775.9875 MHz; C4FM Mode (>400 kHz - RX Band)

Offset from Center Frequency (kHz)	Measurement BW (kHz)	Max ACP (dBc)	Measured ACP (dBc)
>400 to 12 MHz	30(s)	-75	-84.3
12 MHz to receive band	30(s)	-75	-101.2
In receive band	30(s)	-100	-112.2

Plot 6-16: Adjacent Channel Power – 798.0125 MHz; C4FM Mode (9.375 kHz - 350 kHz)

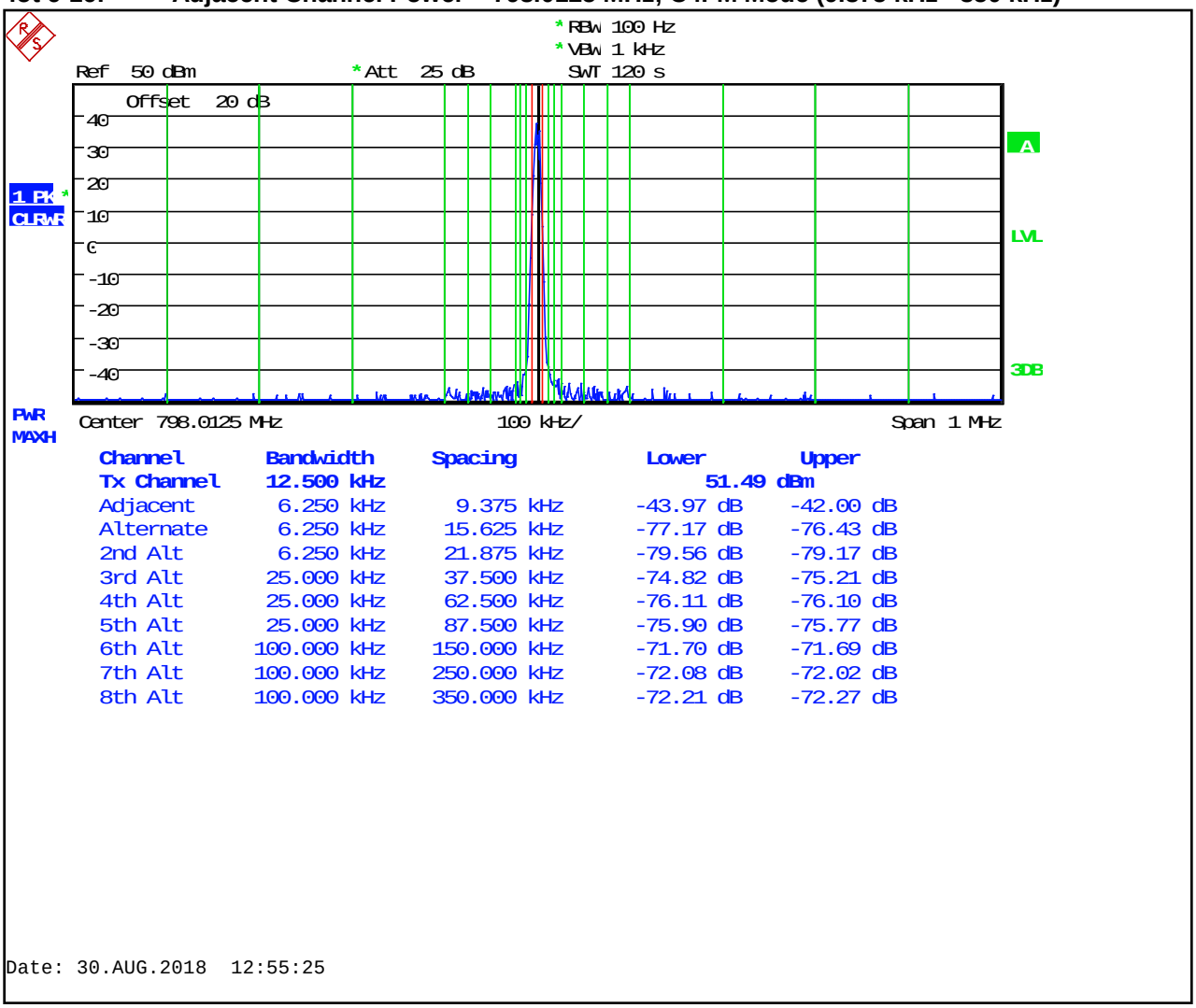


Table 6-16: Adjacent Channel Power – 798.0125 MHz; C4FM Mode (>400 kHz - RX Band)

Offset from Center Frequency (kHz)	Measurement BW (kHz)	Max ACP (dBc)	Measured ACP (dBc)
>400 to 12 MHz	30(s)	-75	-84.4
12 MHz to receive band	30(s)	-75	-101.4
In receive band	30(s)	-100	-100.7

Plot 6-17: Adjacent Channel Power – 802.0000 MHz; C4FM Mode (9.375 kHz - 350 kHz)

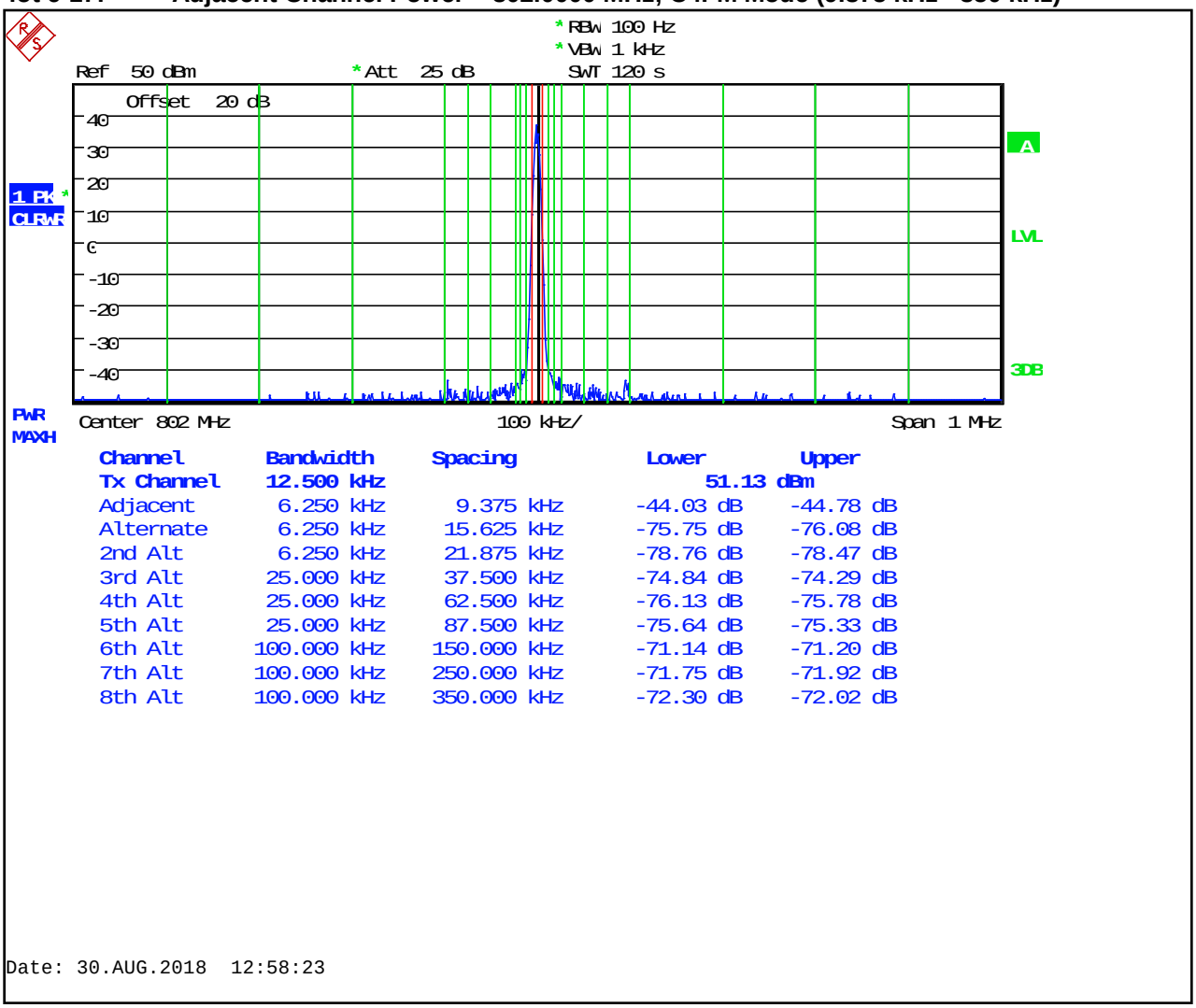


Table 6-17: Adjacent Channel Power – 802.0000 MHz; C4FM Mode (>400 kHz - RX Band)

Offset from Center Frequency (kHz)	Measurement BW (kHz)	Max ACP (dBc)	Measured ACP (dBc)
>400 to 12 MHz	30(s)	-75	-84.8
12 MHz to receive band	30(s)	-75	-100.7
In receive band	30(s)	-100	-107.7

Plot 6-18: Adjacent Channel Power – 805.9875 MHz; C4FM Mode (9.375 kHz - 350 kHz)

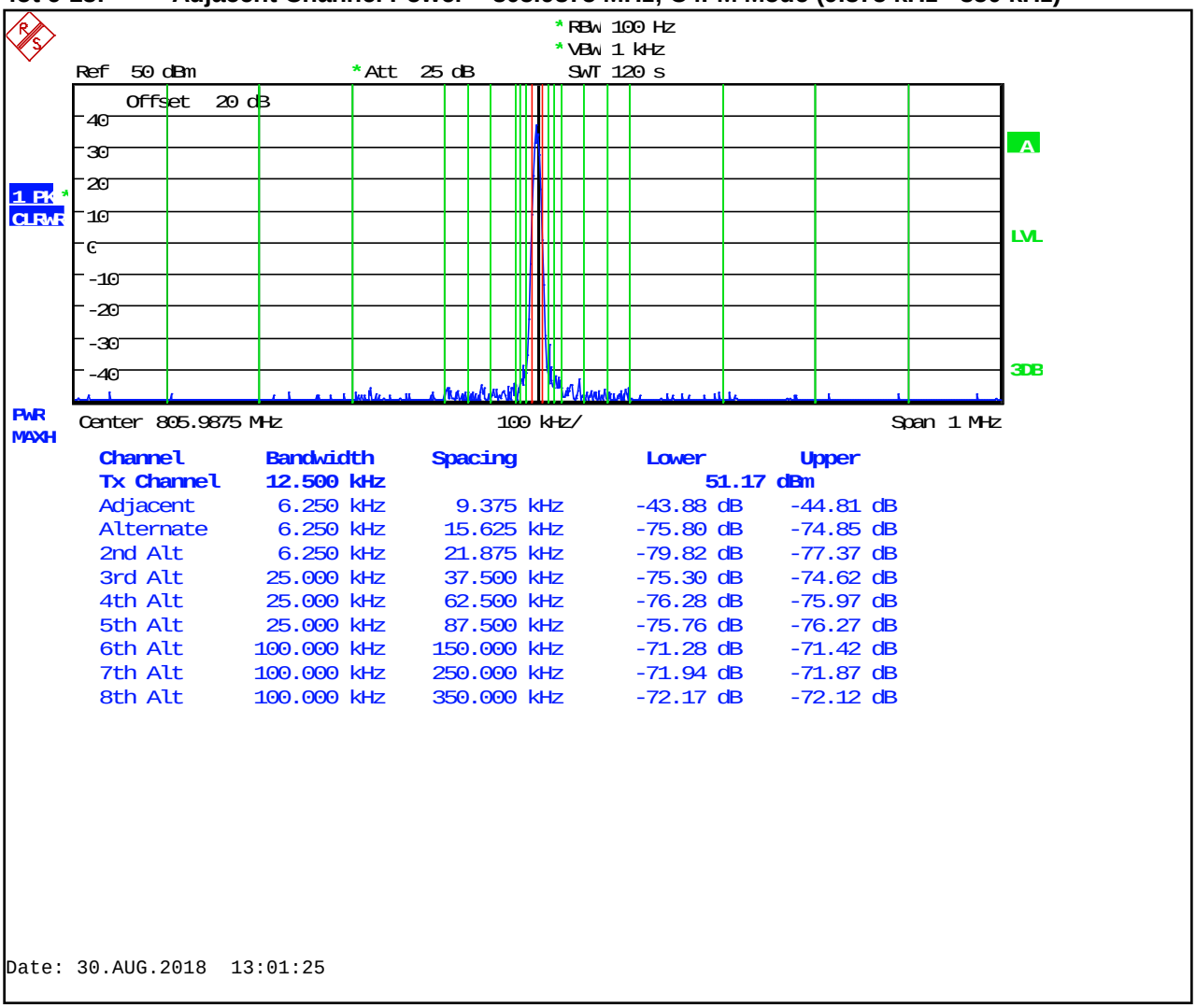


Table 6-18: Adjacent Channel Power – 805.9875 MHz; C4FM Mode (>400 kHz - RX Band)

Offset from Center Frequency (kHz)	Measurement BW (kHz)	Max ACP (dBc)	Measured ACP (dBc)
>400 to 12 MHz	30(s)	-75	-84.8
12 MHz to receive band	30(s)	-75	-99.9
In receive band	30(s)	-100	-110.6

Plot 6-19: Adjacent Channel Power - 768.0125 MHz; H-CPM (TDMA) Mode (9.375 kHz - 350 kHz)

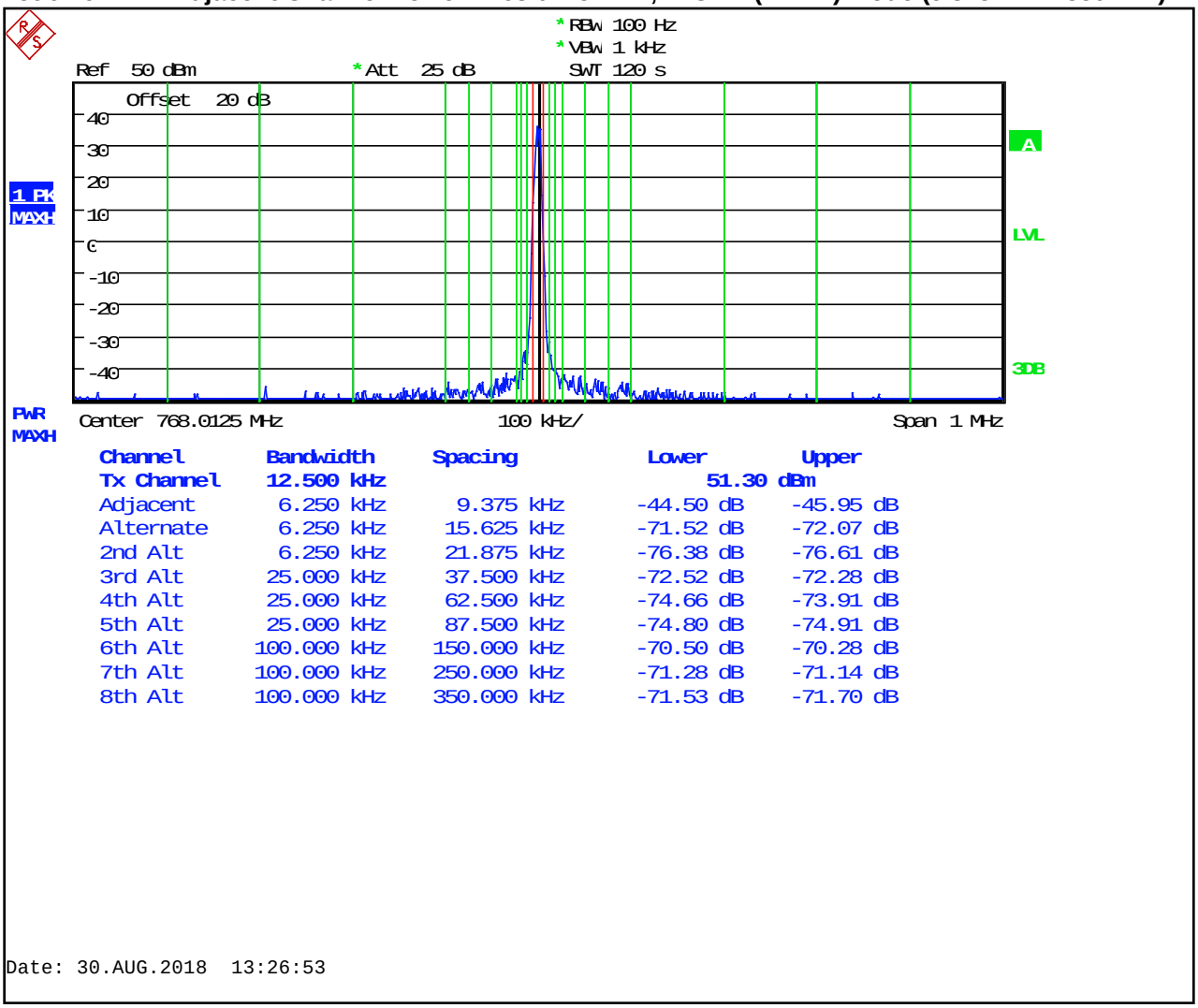


Table 6-19: Adjacent Channel Power - 768.0125 MHz; H-CPM (TDMA) Mode (>400 kHz - RX Band)

Offset from Center Frequency (kHz)	Measurement BW (kHz)	Max ACP (dBc)	Measured ACP (dBc)
>400 to 12 MHz	30(s)	-75	-82.9
12 MHz to receive band	30(s)	-75	-97.5
In receive band	30(s)	-100	-115.2

Plot 6-20: Adjacent Channel Power - 772.0000 MHz; H-CPM (TDMA) Mode (9.375 kHz - 350 kHz)

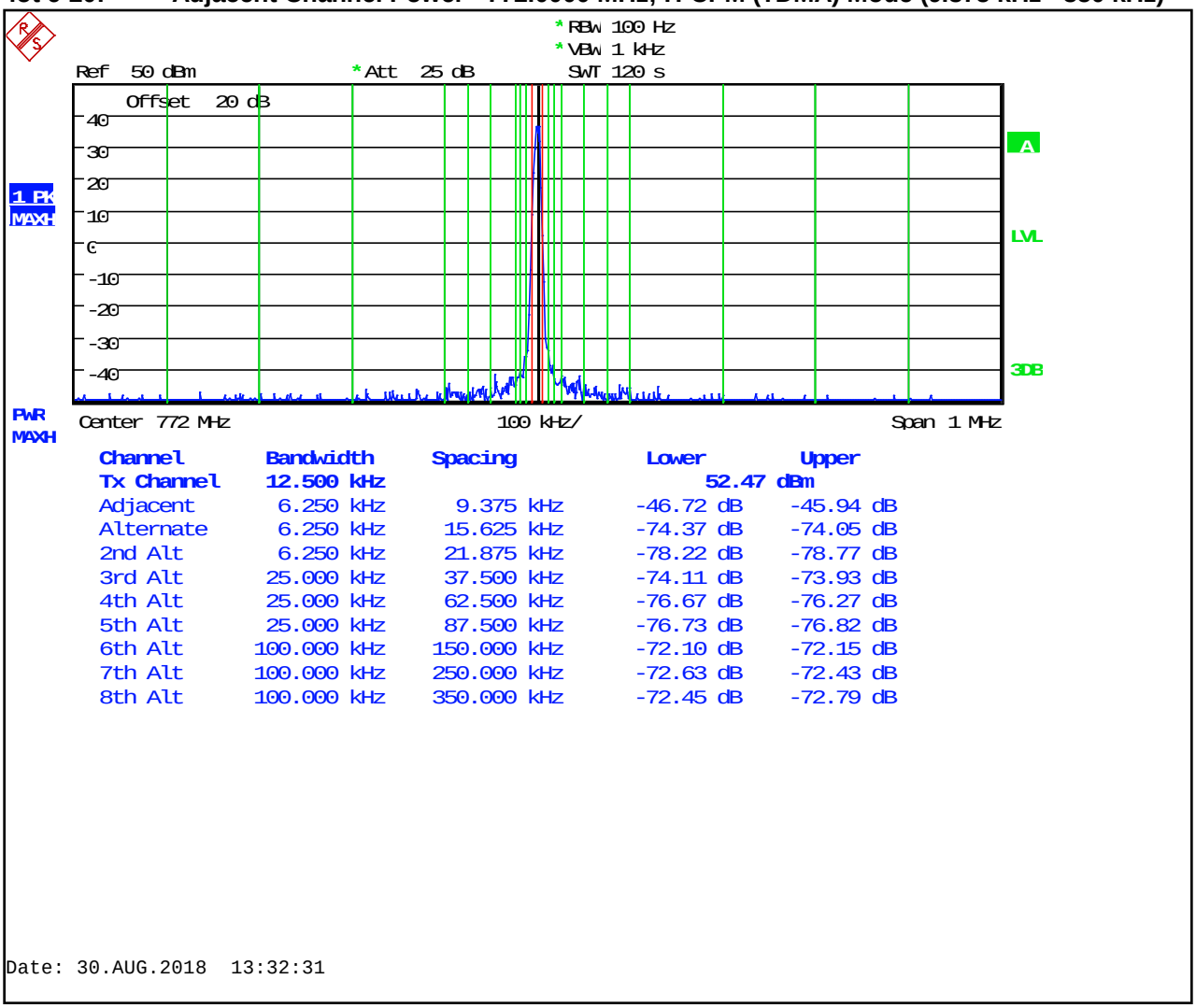


Table 6-20: Adjacent Channel Power - 772.0000 MHz; H-CPM (TDMA) Mode (>400 kHz - RX Band)

Offset from Center Frequency (kHz)	Measurement BW (kHz)	Max ACP (dBc)	Measured ACP (dBc)
>400 to 12 MHz	30(s)	-75	-83.5
12 MHz to receive band	30(s)	-75	-102.2
In receive band	30(s)	-100	-114.5

Plot 6-21: Adjacent Channel Power - 775.9875 MHz; H-CPM (TDMA) Mode (9.375 kHz - 350 kHz)

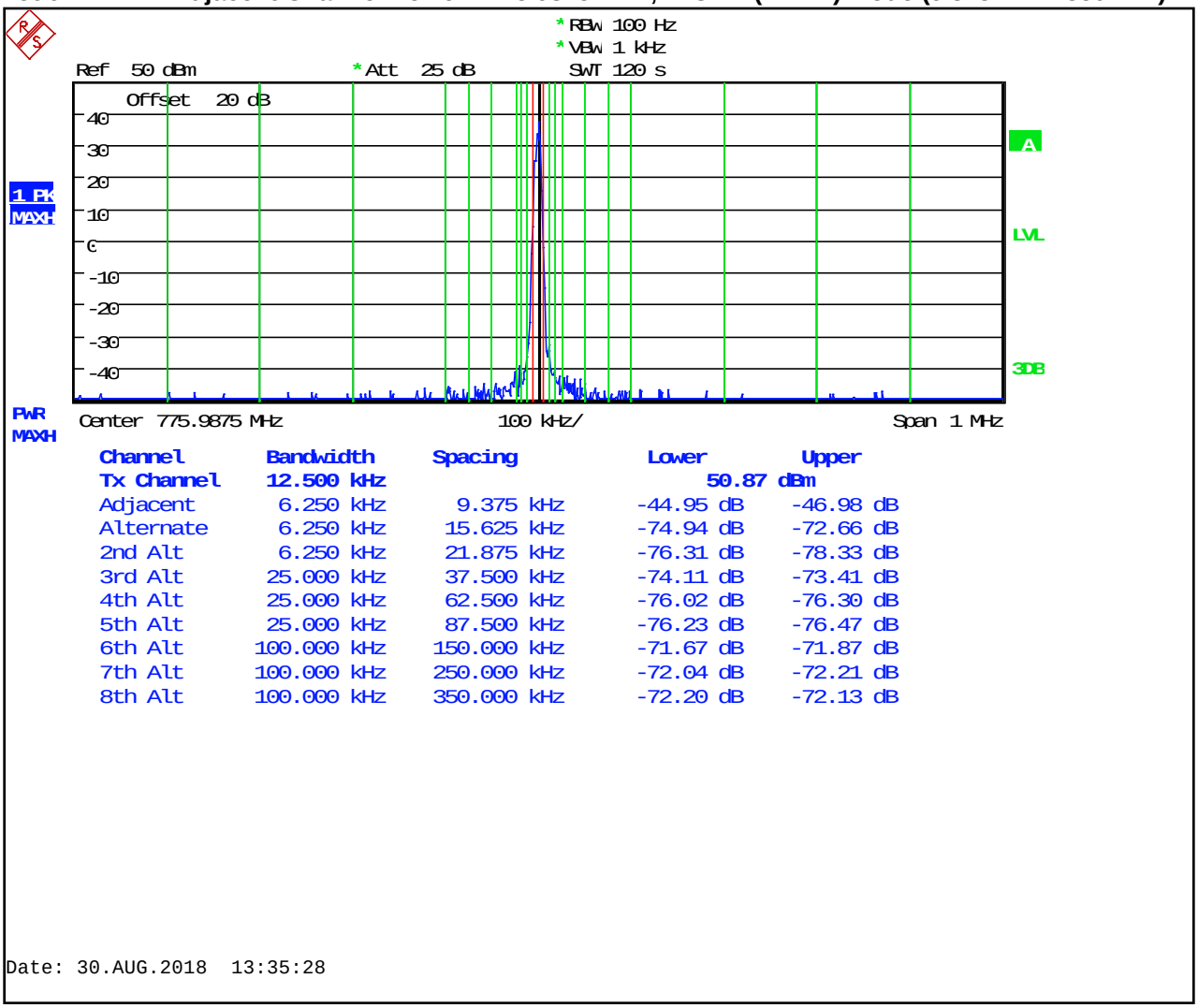
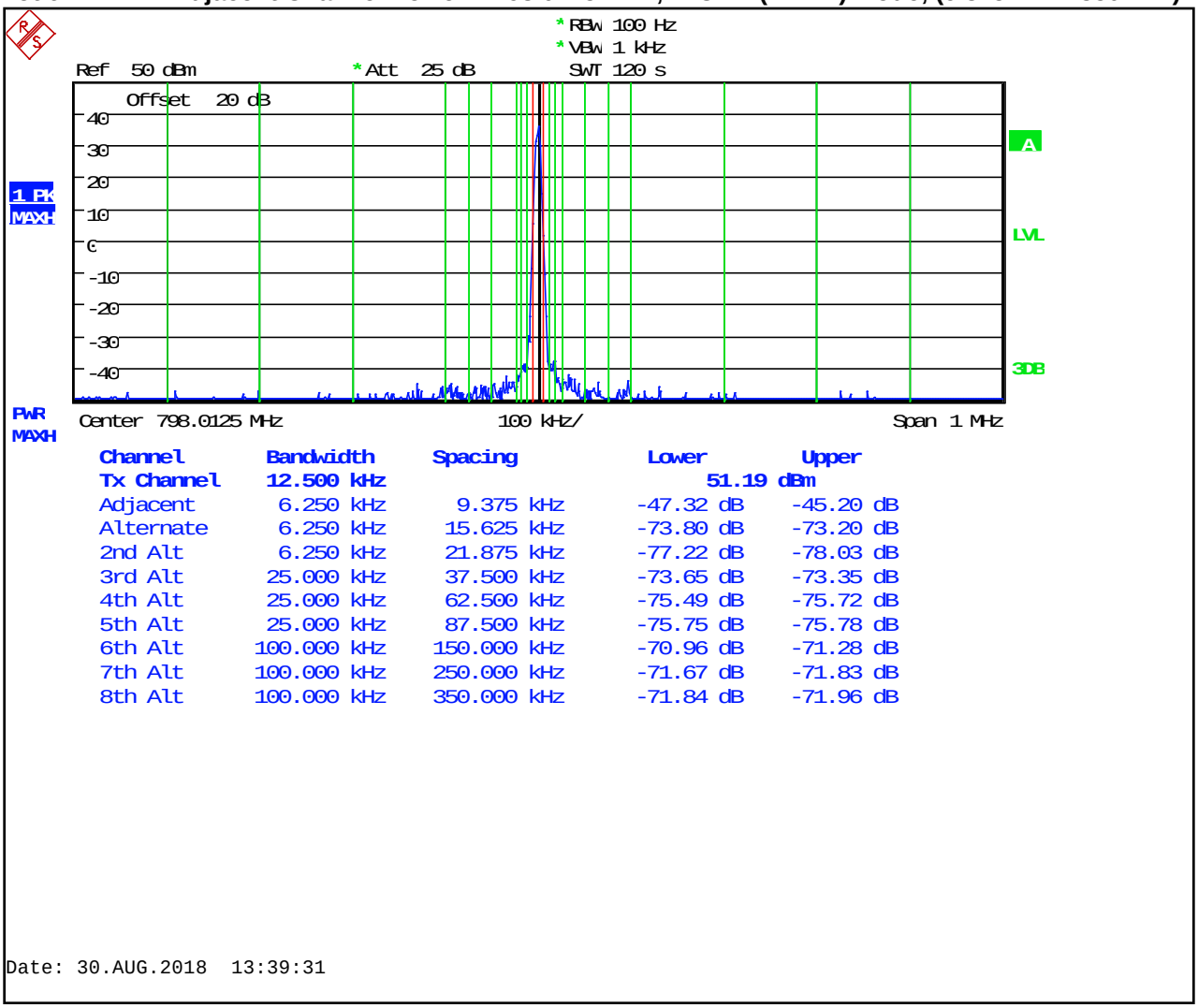


Table 6-21: Adjacent Channel Power - 775.9875 MHz; H-CPM (TDMA) Mode (>400 kHz - RX Band)

Offset from Center Frequency (kHz)	Measurement BW (kHz)	Max ACP (dBc)	Measured ACP (dBc)
>400 to 12 MHz	30(s)	-75	-84.5
12 MHz to receive band	30(s)	-75	-102.1
In receive band	30(s)	-100	-112.2

Plot 6-22: Adjacent Channel Power – 798.0125 MHz; H-CPM (TDMA) Mode; (9.375 kHz - 350 kHz)



Channel	Bandwidth	Spacing	Lower	Upper
Tx Channel	12.500 kHz		51.19 dBm	
Adjacent	6.250 kHz	9.375 kHz	-47.32 dB	-45.20 dB
Alternate	6.250 kHz	15.625 kHz	-73.80 dB	-73.20 dB
2nd Alt	6.250 kHz	21.875 kHz	-77.22 dB	-78.03 dB
3rd Alt	25.000 kHz	37.500 kHz	-73.65 dB	-73.35 dB
4th Alt	25.000 kHz	62.500 kHz	-75.49 dB	-75.72 dB
5th Alt	25.000 kHz	87.500 kHz	-75.75 dB	-75.78 dB
6th Alt	100.000 kHz	150.000 kHz	-70.96 dB	-71.28 dB
7th Alt	100.000 kHz	250.000 kHz	-71.67 dB	-71.83 dB
8th Alt	100.000 kHz	350.000 kHz	-71.84 dB	-71.96 dB

Table 6-22: Adjacent Channel Power – 798.0125 MHz; H-CPM (TDMA) Mode (>400 kHz - RX Band)

Offset from Center Frequency (kHz)	Measurement BW (kHz)	Max ACP (dBc)	Measured ACP (dBc)
>400 to 12 MHz	30(s)	-75	-87.7
12 MHz to receive band	30(s)	-75	-102.9
In receive band	30(s)	-100	-102.1

Plot 6-23: Adjacent Channel Power – 802.0000 MHz; H-CPM (TDMA) Mode; (9.375 kHz - 350 kHz)

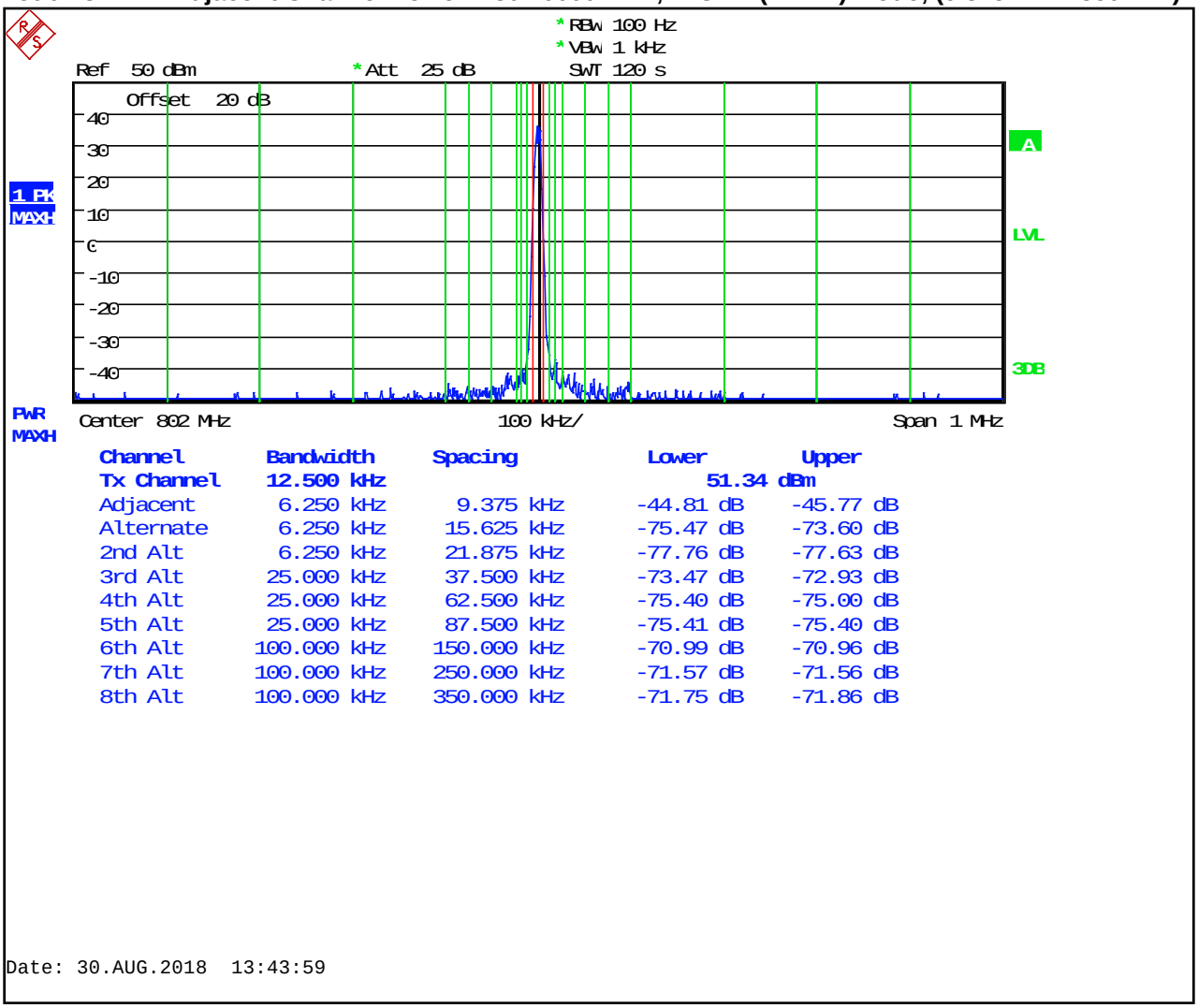
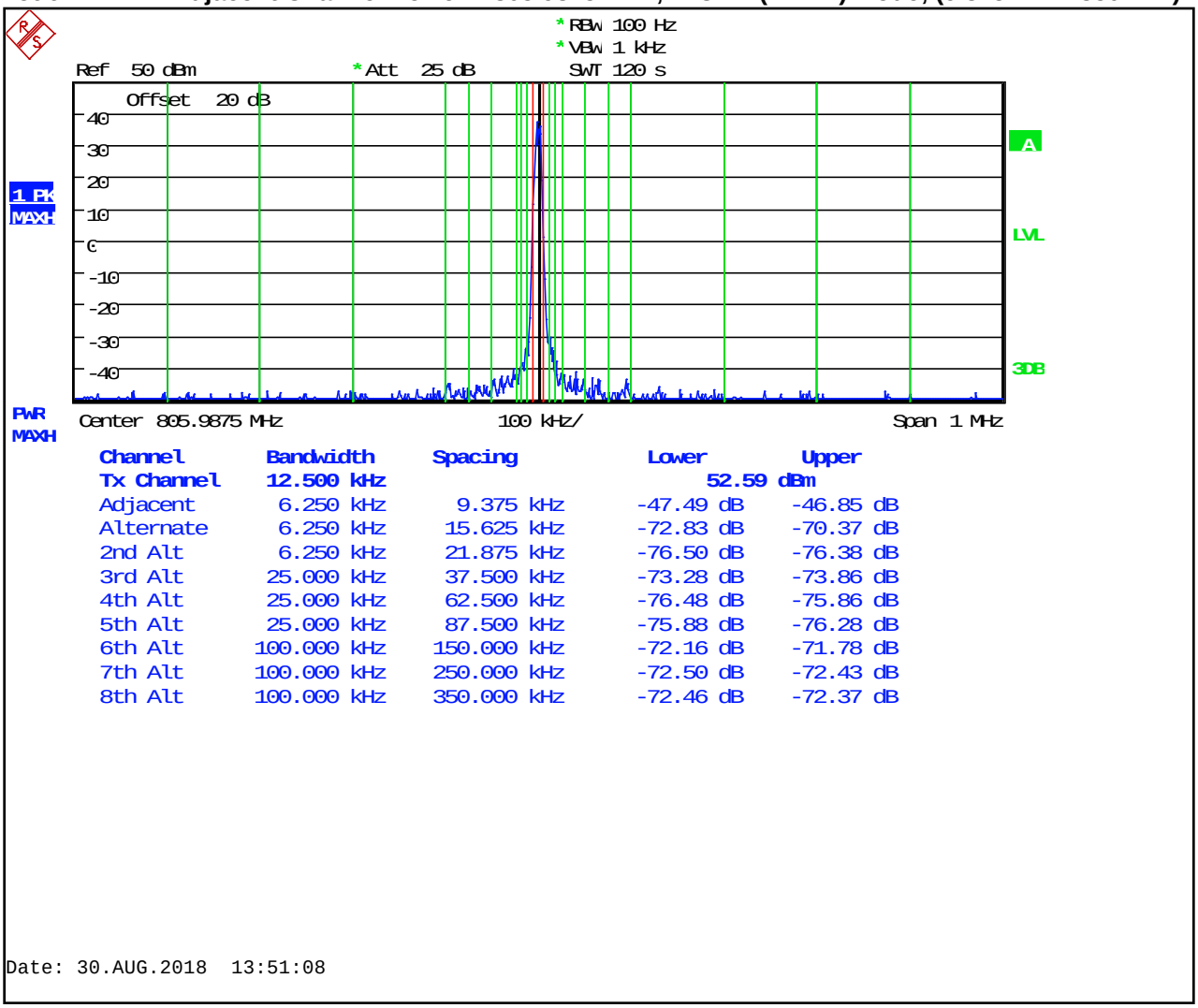


Table 6-23: Adjacent Channel Power – 802.0000 MHz; H-CPM (TDMA) Mode (>400 kHz - RX Band)

Offset from Center Frequency (kHz)	Measurement BW (kHz)	Max ACP (dBc)	Measured ACP (dBc)
>400 to 12 MHz	30(s)	-75	-87.3
12 MHz to receive band	30(s)	-75	-101.9
In receive band	30(s)	-100	-113.5

Plot 6-24: Adjacent Channel Power – 805.9875 MHz; H-CPM (TDMA) Mode; (9.375 kHz - 350 kHz)



Channel	Bandwidth	Spacing	Lower	Upper
Tx Channel	12.500 kHz		52.59 dBm	
Adjacent	6.250 kHz	9.375 kHz	-47.49 dB	-46.85 dB
Alternate	6.250 kHz	15.625 kHz	-72.83 dB	-70.37 dB
2nd Alt	6.250 kHz	21.875 kHz	-76.50 dB	-76.38 dB
3rd Alt	25.000 kHz	37.500 kHz	-73.28 dB	-73.86 dB
4th Alt	25.000 kHz	62.500 kHz	-76.48 dB	-75.86 dB
5th Alt	25.000 kHz	87.500 kHz	-75.88 dB	-76.28 dB
6th Alt	100.000 kHz	150.000 kHz	-72.16 dB	-71.78 dB
7th Alt	100.000 kHz	250.000 kHz	-72.50 dB	-72.43 dB
8th Alt	100.000 kHz	350.000 kHz	-72.46 dB	-72.37 dB

Table 6-24: Adjacent Channel Power – 805.9875 MHz; H-CPM (TDMA) Mode (>400 kHz - RX Band)

Offset from Center Frequency (kHz)	Measurement BW (kHz)	Max ACP (dBc)	Measured ACP (dBc)
>400 to 12 MHz	30(s)	-75	-85.4
12 MHz to receive band	30(s)	-75	-100.8
In receive band	30(s)	-100	-110.1

Plot 6-25: Adjacent Channel Power - 769.0125 MHz; WB HVD SMR Mode (9.375 kHz - 350 kHz)

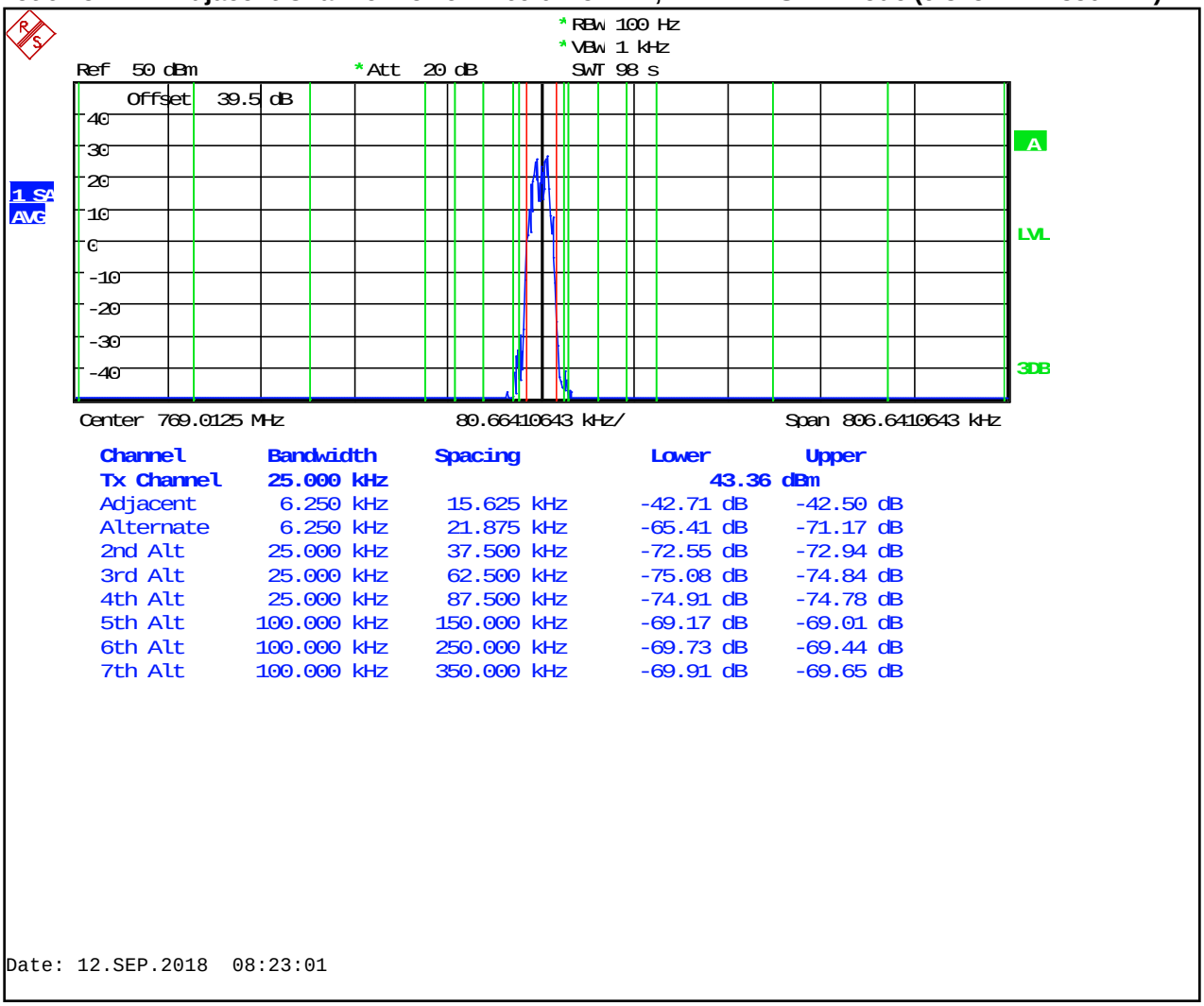


Table 6-25: Adjacent Channel Power - 769.0125 MHz; WB HVD SMR Mode (>400 kHz - RX Band)

Offset from Center Frequency (kHz)	Measurement BW (kHz)	Max ACP (dBc)	Measured ACP (dBc)
>400 to 12 MHz	30(s)	-75	-95.5
12 MHz to receive band	30(s)	-75	-95.6
In receive band	30(s)	-100	-116.1

Plot 6-26: Adjacent Channel Power - 772.0000 MHz; WB HVD SMR Mode (9.375 kHz - 350 kHz)

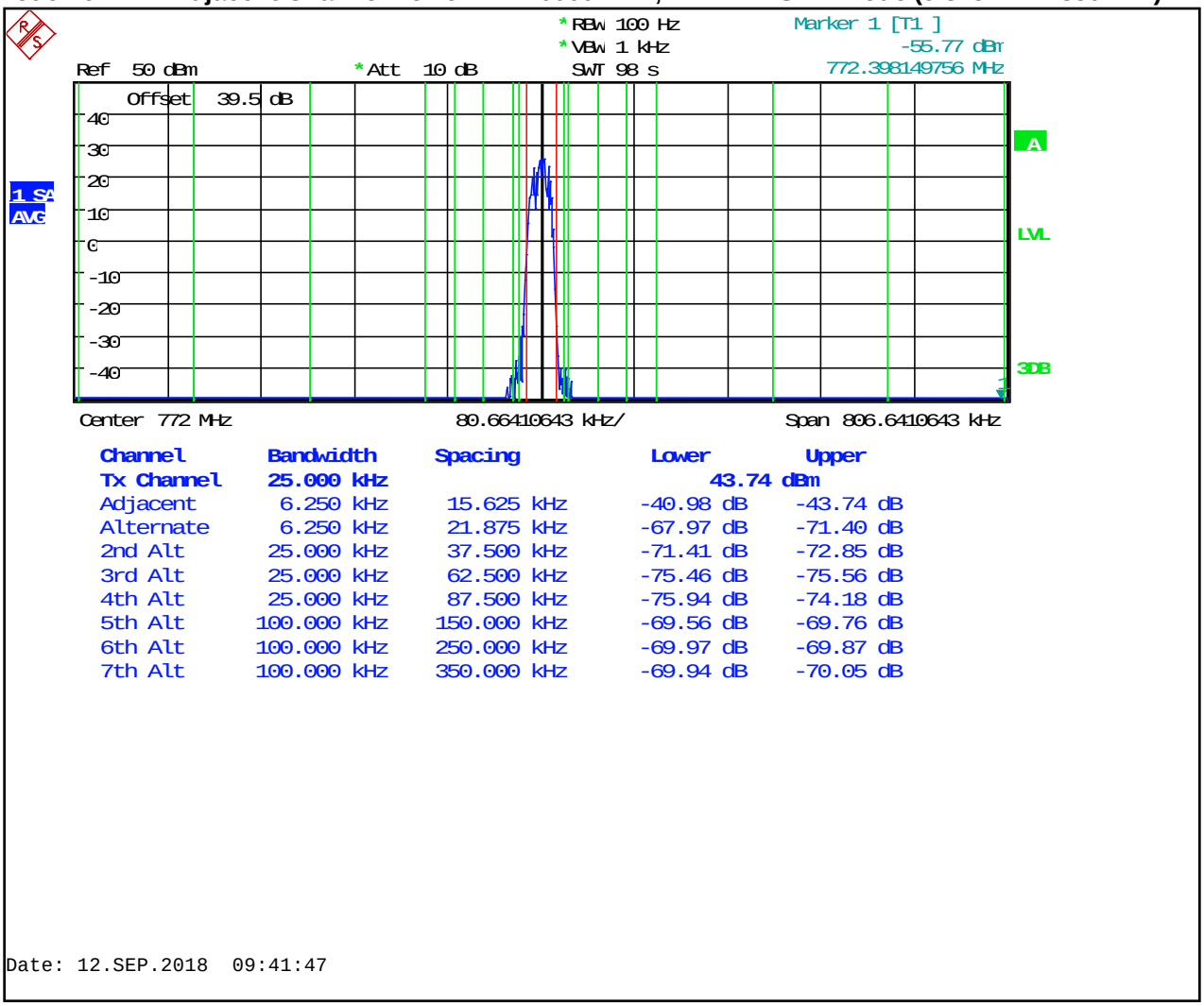


Table 6-26: Adjacent Channel Power - 772.0000 MHz; WB HVD SMR Mode (>400 kHz - RX Band)

Offset from Center Frequency (kHz)	Measurement BW (kHz)	Max ACP (dBc)	Measured ACP (dBc)
>400 to 12 MHz	30(s)	-75	-102.5
12 MHz to receive band	30(s)	-75	-103.3
In receive band	30(s)	-100	-115.8

Plot 6-27: Adjacent Channel Power - 774.9875 MHz; WB HVD SMR Mode (9.375 kHz - 350 kHz)

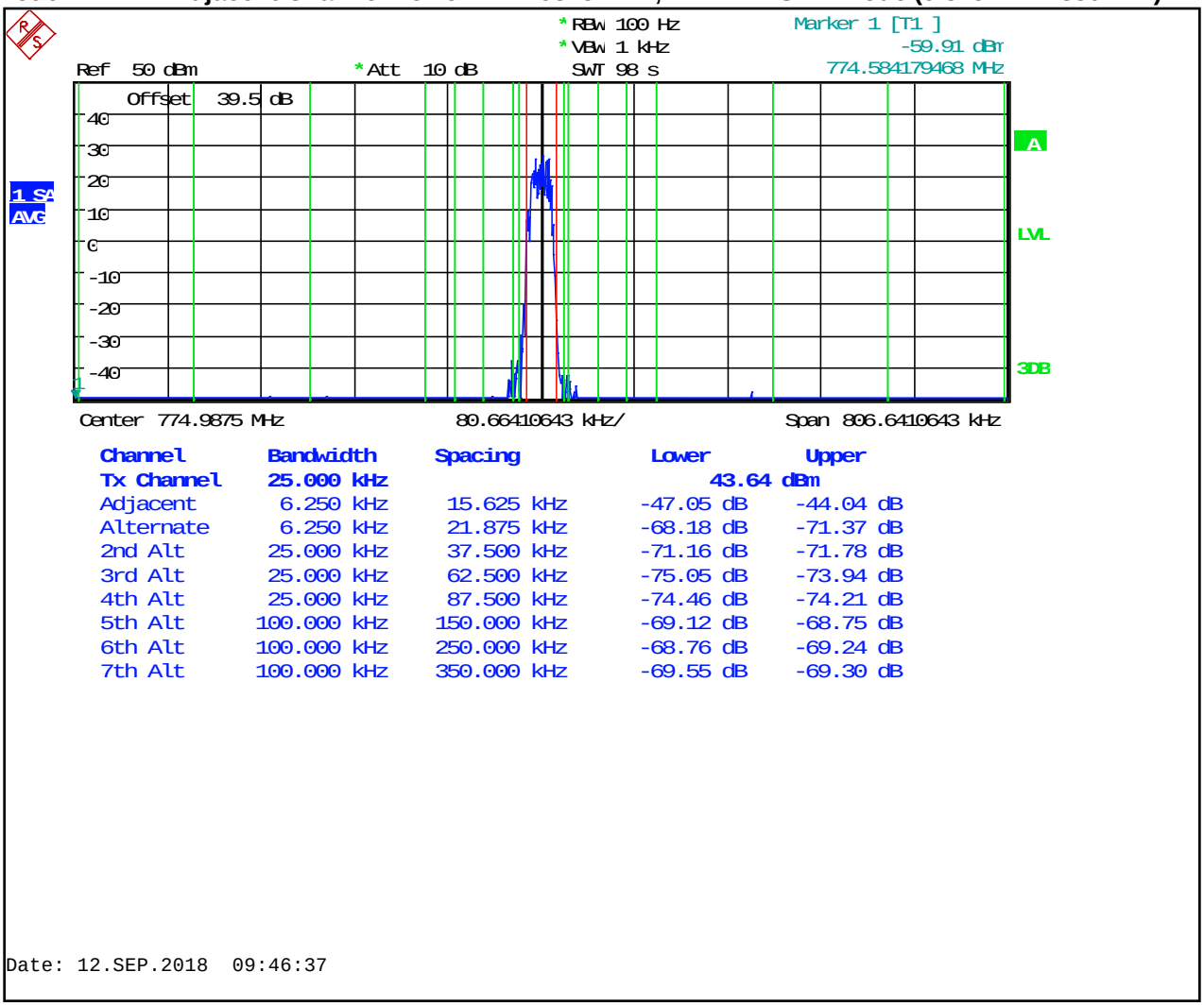


Table 6-27: Adjacent Channel Power - 774.9875 MHz; WB HVD SMR Mode (>400 kHz - RX Band)

Offset from Center Frequency (kHz)	Measurement BW (kHz)	Max ACP (dBc)	Measured ACP (dBc)
>400 to 12 MHz	30(s)	-75	-103.4
12 MHz to receive band	30(s)	-75	-103.8
In receive band	30(s)	-100	-115.9

Plot 6-28: Adjacent Channel Power – 799.0125 MHz; WB HVD SMR Mode (9.375 kHz - 350 kHz)

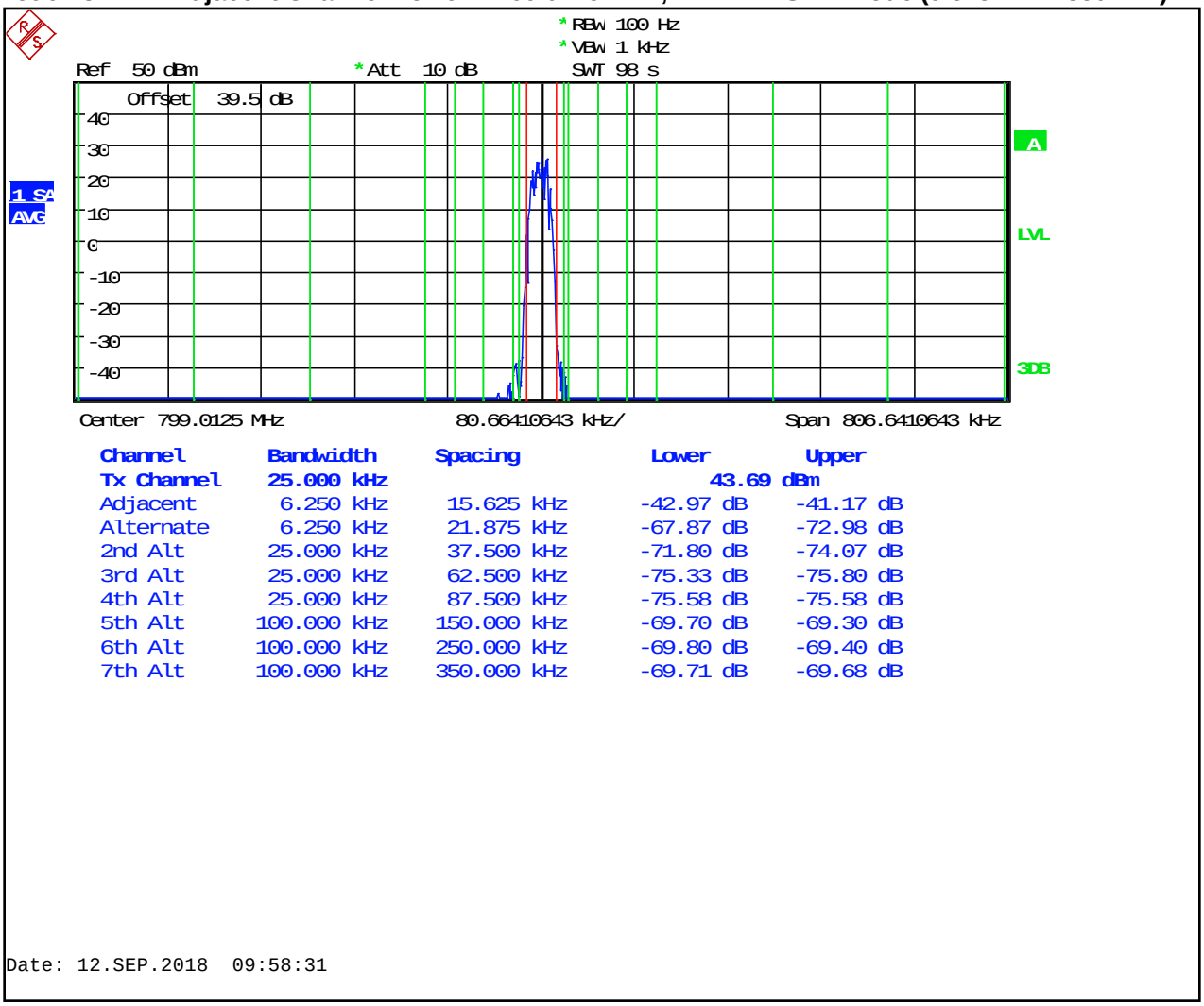


Table 6-28: Adjacent Channel Power – 799.0125 MHz; WB HVD SMR Mode (>400 kHz - RX Band)

Offset from Center Frequency (kHz)	Measurement BW (kHz)	Max ACP (dBc)	Measured ACP (dBc)
>400 to 12 MHz	30(s)	-75	-102.0
12 MHz to receive band	30(s)	-75	-103.8
In receive band	30(s)	-100	-115.9

Plot 6-29: Adjacent Channel Power – 802.0000 MHz; WB HVD SMR Mode (9.375 kHz - 350 kHz)

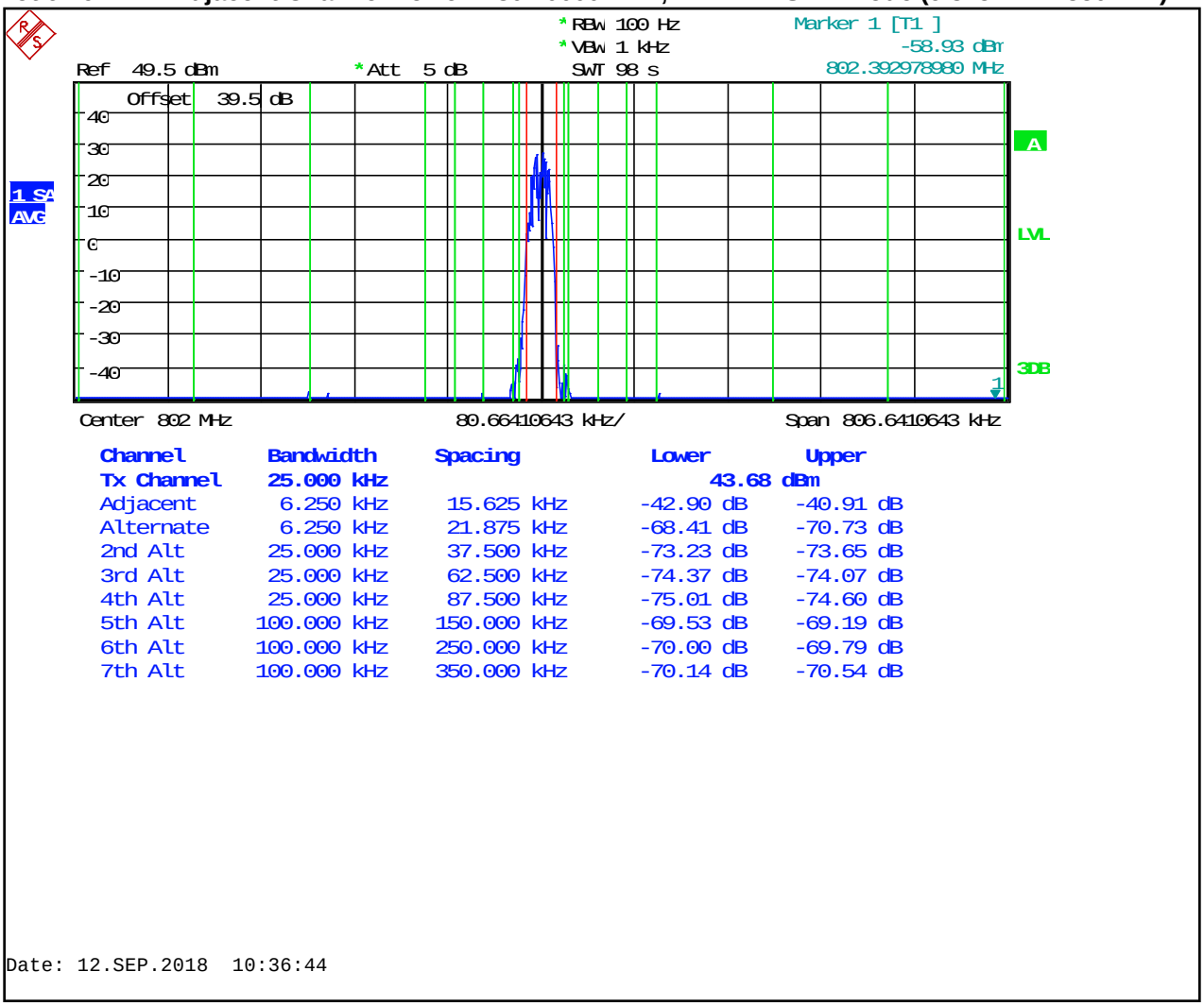


Table 6-29: Adjacent Channel Power – 802.0000 MHz; WB HVD SMR Mode (>400 kHz - RX Band)

Offset from Center Frequency (kHz)	Measurement BW (kHz)	Max ACP (dBc)	Measured ACP (dBc)
>400 to 12 MHz	30(s)	-75	-103.1
12 MHz to receive band	30(s)	-75	-103.6
In receive band	30(s)	-100	-116.0

Plot 6-30: Adjacent Channel Power – 804.9875 MHz; WB HVD SMR Mode (9.375 kHz - 350 kHz)

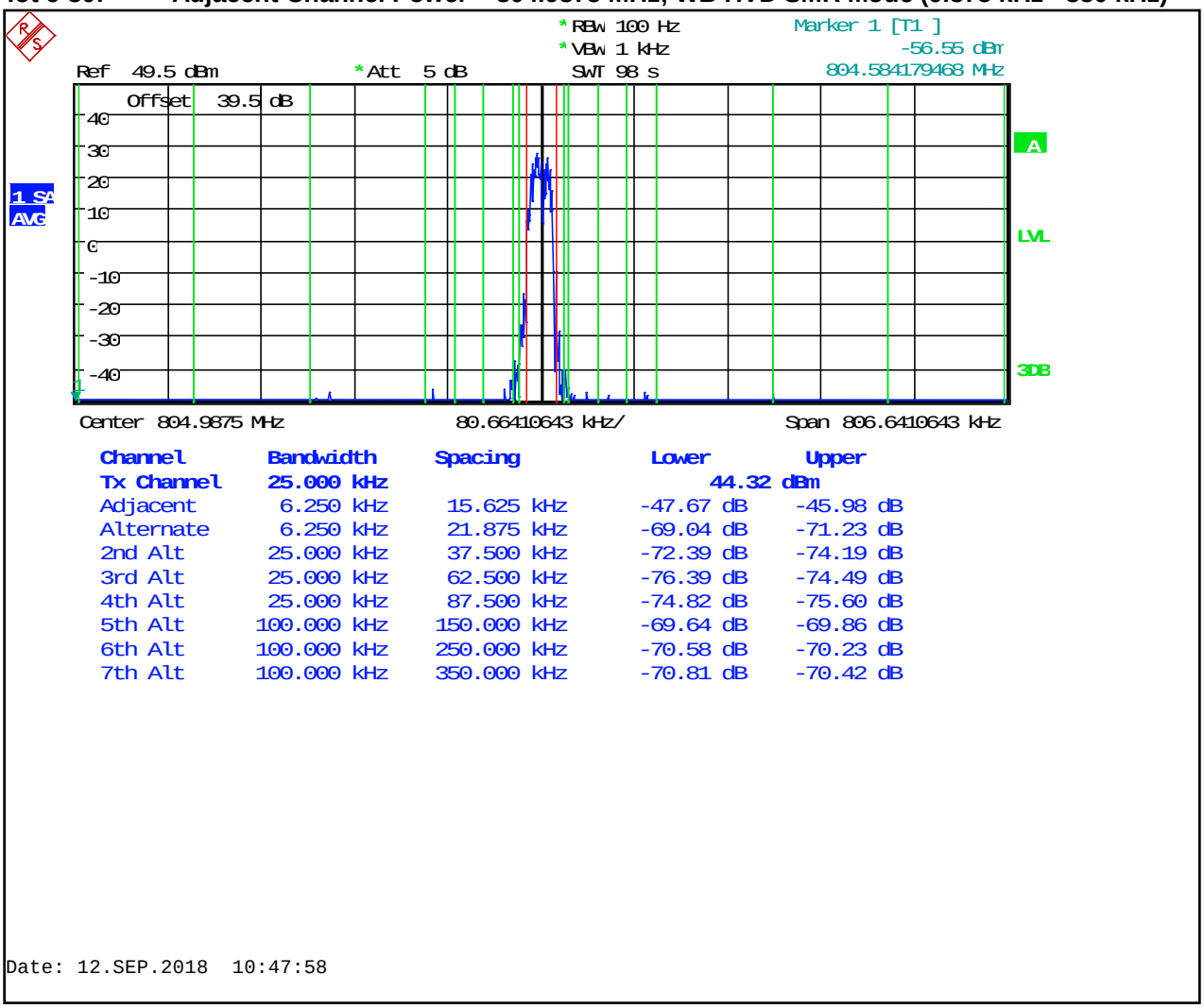


Table 6-30: Adjacent Channel Power – 804.9875 MHz; WB HVD SMR Mode (>400 kHz - RX Band)

Offset from Center Frequency (kHz)	Measurement BW (kHz)	Max ACP (dBc)	Measured ACP (dBc)
>400 to 12 MHz	30(s)	-75	-102.4
12 MHz to receive band	30(s)	-75	-103.8
In receive band	30(s)	-100	-116.0

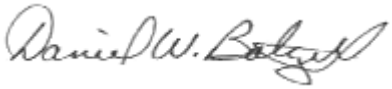
Measurement uncertainties shown for these tests are expanded uncertainties expressed at the 95% confidence level using a coverage factor K=2. Measurement uncertainty: ±0.5 dB

Results: Pass

Table 6-31: Test Equipment Used For Testing ACP Requirements

RTL Asset #	Manufacturer	Model	Part Type	Serial Number	Calibration Due Date
901581	Rohde & Schwarz	FSU	Spectrum Analyzer	1166.1660.50	4/26/21
901139	Weinschel Corporation	48-20-34	Attenuator DC-18 GHz 20 dB 100W	BK5859	4/23/19
900948	Weinschel Corporation	47-10-43	Attenuator DC-18 GHz 10 dB 50W	BH1487	8/7/19

Test Personnel:



Daniel Baltzell		August 29-September 12, 2018
EMC Test Engineer	Signature	Dates of Test

7 FCC Part 90.210 and Part 2.1053(a): Field Strength of Spurious Emissions; Part 90.543: Out of Band Emissions Limit; ISED RSS-119 5.8.9.2: Out-of-band Emission Limit

7.1 Test Procedure

ANSI C63.26 section 5.5

The device uses digital modulation modulated to its maximum extent using a pseudo-random data sequence.

The spurious emissions levels were measured, and the device under test was replaced by a substitution antenna connected to a signal generator. This signal generator level was then corrected by subtracting the cable loss from the substitution antenna to the signal generator, and the gain of the antenna (dBi) was added to achieve the EIRP level, then converted from the corrected signal generator level (dBm) to dBc, or dBW for 700 MHz band, and compared to the limit.

For emissions in the 1559-1610 band, Part 90.543(f) states: "For operations in the 763–775 MHz and 793–805 MHz bands, all emissions including harmonics in the band 1559–1610 MHz shall be limited to -70 dBW/MHz equivalent isotropically radiated power (EIRP) for wideband signals, and -80 dBW EIRP for discrete emissions of less than 700 Hz bandwidth. For the purpose of equipment authorization, a transmitter shall be tested with an antenna that is representative of the type that will be used with the equipment in normal operation."

7.2 Test Data

Table 7-1: Field Strength of Spurious Radiation – 768.0125 MHz
Conducted Power 44.2 dBm; 26.3 W; Limit=43+10 Log P=57.2 dBc

Frequency (MHz)	Spectrum Analyzer Level (dBuV)	Signal Generator Level (dBm)	Cable Loss to Transmit Antenna (dB)	Substitution Antenna Gain (dBi)	Corrected Signal Generator Level (dBc)	Margin (dB)
1536.0250	5.6	-69.7	0.4	8.7	105.6	-48.4
2304.0375	6.9	-71.8	0.5	9.5	107.0	-49.8
3072.0500	5.9	-70.9	0.7	0.0	115.8	-58.6
3840.0625	11.7	-62.0	0.8	9.1	97.9	-40.7
4608.0750	4.9	-66.5	0.9	11.0	100.6	-43.4
5376.0875	-5.3	-76.7	1.0	10.7	111.3	-54.1
6144.1000	1.8	-69.3	1.2	11.3	103.3	-46.1
6912.1125	-4.5	-74.7	1.3	11.6	108.6	-51.4
7680.1250	-5.5	-74.3	1.4	11.4	108.5	-51.3

Table 7-2: Field Strength of Spurious Radiation – 769.0125 MHz
Conducted Power 44.2 dBm; 26.3 W; Limit=43+10 Log P=57.2 dBc

Frequency (MHz)	Spectrum Analyzer Level (dBuV)	Signal Generator Level (dBm)	Cable Loss to Transmit Antenna (dB)	Substitution Antenna Gain (dBi)	Corrected Signal Generator Level (dBc)	Margin (dB)
1538.0250	7.1	-65.9	0.4	8.7	101.8	-44.6
2307.0375	9.4	-69.3	0.5	9.5	104.5	-47.3
3076.0500	5.1	-71.7	0.7	0.0	116.6	-59.4
3845.0625	11.4	-62.3	0.8	9.1	98.2	-41.0
4614.0750	4.9	-66.8	0.9	11.0	100.9	-43.7
5383.0875	-4.6	-76.5	1.0	10.7	111.1	-53.9
6152.1000	0.6	-70.4	1.2	11.3	104.5	-47.3
6921.1125	-5.4	-75.3	1.3	11.6	109.2	-52.0
7690.1250	-5.6	-74.4	1.4	11.4	108.6	-51.4

Table 7-3: Field Strength of Spurious Radiation – 772.0000 MHz
Conducted Power 44.2 dBm; 26.3 W; Limit=43+10 Log P=57.2 dBc

Frequency (MHz)	Spectrum Analyzer Level (dBuV)	Signal Generator Level (dBm)	Cable Loss to Transmit Antenna (dB)	Substitution Antenna Gain (dBi)	Corrected Signal Generator Level (dBc)	Margin (dB)
1544.0000	9.4	-63.5	0.4	8.7	99.4	-42.2
2316.0000	8.4	-70.3	0.5	9.5	105.6	-48.4
3088.0000	5.5	-71.3	0.7	0.0	116.2	-59.0
3860.0000	12.7	-61.0	0.8	9.1	96.9	-39.7
4632.0000	11.4	-60.0	0.9	11.0	94.1	-36.9
5404.0000	-5.8	-77.2	1.0	10.6	111.8	-54.6
6176.0000	-0.5	-71.5	1.2	11.3	105.6	-48.4
6948.0000	-5.2	-75.3	1.3	11.6	109.1	-51.9
7720.0000	-4.8	-73.6	1.4	11.4	107.8	-50.6

Table 7-4: Field Strength of Spurious Radiation – 774.9875 MHz
Conducted Power 44.2 dBm; 26.3 W; Limit=43+10 Log P=57.2 dBc

Frequency (MHz)	Spectrum Analyzer Level (dBuV)	Signal Generator Level (dBm)	Cable Loss to Transmit Antenna (dB)	Substitution Antenna Gain (dBi)	Corrected Signal Generator Level (dBc)	Margin (dB)
1549.9750	11.4	-61.4	0.4	8.7	97.3	-40.1
2324.9625	3.7	-72.9	0.5	9.5	108.2	-51.0
3099.9500	4.0	-71.2	0.7	0.0	116.1	-58.9
3874.9375	13.8	-59.9	0.8	9.1	95.8	-38.6
4649.9250	12.8	-58.6	0.9	11.1	92.7	-35.5
5424.9125	-5.2	-76.6	1.1	10.6	111.2	-54.0
6199.9000	0.8	-69.9	1.2	11.2	104.1	-46.9
6974.8875	-6.2	-76.0	1.3	11.7	109.8	-52.6
7749.8750	-4.9	-74.3	1.4	11.4	108.5	-51.3

Table 7-5: Field Strength of Spurious Radiation – 775.9875 MHz
Conducted Power 44.1 dBm; 25.7 W; Limit=43+10 Log P=57.1 dBc

Frequency (MHz)	Spectrum Analyzer Level (dBuV)	Signal Generator Level (dBm)	Cable Loss to Transmit Antenna (dB)	Substitution Antenna Gain (dBi)	Corrected Signal Generator Level (dBc)	Margin (dB)
1551.9750	9.5	-63.4	0.4	8.7	99.2	-42.1
2327.9625	8.9	-69.7	0.5	9.5	104.9	-47.8
3103.9500	6.4	-70.4	0.7	9.2	106.0	-48.9
3879.9375	14.3	-59.3	0.8	9.1	95.1	-38.0
4655.9250	13.0	-58.7	0.9	11.1	92.7	-35.6
5431.9125	-5.7	-77.5	1.1	10.7	112.0	-54.9
6207.9000	-0.9	-71.5	1.2	11.2	105.5	-48.4
6983.8875	-5.6	-75.7	1.3	11.7	109.4	-52.3
7759.8750	-5.9	-74.7	1.4	11.4	108.8	-51.7

Table 7-6: Field Strength of Spurious Radiation – 798.0125 MHz
Conducted Power 44.2 dBm; 26.3 W; Limit=43+10 Log P=57.2 dBc

Frequency (MHz)	Spectrum Analyzer Level (dBuV)	Signal Generator Level (dBm)	Cable Loss to Transmit Antenna (dB)	Substitution Antenna Gain (dBi)	Corrected Signal Generator Level (dBc)	Margin (dB)
1596.0250	13.1	-59.7	0.4	8.9	95.4	-38.2
2394.0375	9.0	-69.5	0.5	9.4	104.8	-47.6
3192.0500	2.4	-74.1	0.7	9.2	109.8	-52.6
3990.0625	23.6	-49.8	0.8	9.6	85.2	-28.0
4788.0750	-0.1	-71.6	0.9	11.0	105.7	-48.5
5586.0875	-6.0	-77.3	1.1	10.8	111.7	-54.5
6384.1000	7.5	-63.0	1.2	11.7	96.7	-39.5
7182.1125	-5.8	-75.4	1.3	11.4	109.6	-52.4
7980.1250	-4.5	-73.1	1.4	11.4	107.4	-50.2

Table 7-7: Field Strength of Spurious Radiation – 799.0125 MHz
Conducted Power 44.2 dBm; 26.3 W; Limit=43+10 Log P=57.2 dBc

Frequency (MHz)	Spectrum Analyzer Level (dBuV)	Signal Generator Level (dBm)	Cable Loss to Transmit Antenna (dB)	Substitution Antenna Gain (dBi)	Corrected Signal Generator Level (dBc)	Margin (dB)
1598.0250	11.7	-61.0	0.4	8.9	96.7	-39.5
2397.0375	10.6	-67.9	0.5	9.4	103.2	-46.0
3196.0500	1.9	-74.6	0.7	9.2	110.3	-53.1
3995.0625	23.4	-50.0	0.8	9.6	85.4	-28.2
4794.0750	-1.5	-73.0	1.0	11.0	107.1	-49.9
5593.0875	-5.1	-76.8	1.1	10.9	111.2	-54.0
6392.1000	5.7	-64.8	1.2	11.7	98.5	-41.3
7191.1125	-5.9	-75.7	1.3	11.3	109.9	-52.7
7990.1250	-4.6	-74.1	1.4	11.4	108.4	-51.2

Table 7-8: Field Strength of Spurious Radiation – 802.0000 MHz
Conducted Power 44.3 dBm; 26.9 W; Limit=43+10 Log P=57.3 dBc

Frequency (MHz)	Spectrum Analyzer Level (dBuV)	Signal Generator Level (dBm)	Cable Loss to Transmit Antenna (dB)	Substitution Antenna Gain (dBi)	Corrected Signal Generator Level (dBc)	Margin (dB)
1604.0000	12.9	-59.8	0.4	8.9	95.6	-38.3
2406.0000	8.1	-70.4	0.6	0.0	115.3	-58.0
3208.0000	1.1	-73.9	0.7	9.2	109.7	-52.4
4010.0000	19.3	-51.9	0.8	9.7	87.3	-30.0
4812.0000	-2.7	-74.3	1.0	11.0	108.5	-51.2
5614.0000	-5.8	-77.0	1.1	10.9	111.5	-54.2
6416.0000	5.3	-65.4	1.2	11.7	99.2	-41.9
7218.0000	-7.0	-76.8	1.3	11.2	111.2	-53.9
8020.0000	-5.6	-73.4	1.4	11.3	107.8	-50.5

Table 7-9: Field Strength of Spurious Radiation – 804.9875 MHz
Conducted Power 44.1 dBm; 25.7 W; Limit=43+10 Log P=57.1 dBc

Frequency (MHz)	Spectrum Analyzer Level (dBuV)	Signal Generator Level (dBm)	Cable Loss to Transmit Antenna (dB)	Substitution Antenna Gain (dBi)	Corrected Signal Generator Level (dBc)	Margin (dB)
1609.9750	9.0	-63.6	0.4	8.9	99.2	-42.1
2414.9625	14.8	-63.6	0.6	0.0	108.3	-51.2
3219.9500	0.8	-74.2	0.7	9.2	109.8	-52.7
4024.9375	17.8	-53.4	0.8	9.8	88.5	-31.4
4829.9250	-1.1	-72.7	1.0	11.0	106.7	-49.6
5634.9125	-5.9	-77.1	1.1	11.0	111.3	-54.2
6439.9000	4.8	-65.9	1.2	11.8	99.4	-42.3
7244.8875	-5.7	-75.2	1.3	11.1	109.5	-52.4
8049.8750	-4.9	-71.4	1.5	11.3	105.6	-48.5

Table 7-10: Field Strength of Spurious Radiation – 805.9875 MHz
Conducted Power 44.2 dBm; 26.3 W; Limit=43+10 Log P=57.2 dBc

Frequency (MHz)	Spectrum Analyzer Level (dBuV)	Signal Generator Level (dBm)	Cable Loss to Transmit Antenna (dB)	Substitution Antenna Gain (dBi)	Corrected Signal Generator Level (dBc)	Margin (dB)
1611.9750	8.6	-64.2	0.4	8.9	99.9	-42.7
2417.9625	13.3	-65.1	0.6	0.0	109.9	-52.7
3223.9500	1.0	-74.0	0.7	9.2	109.7	-52.5
4029.9375	16.9	-54.3	0.8	9.8	89.5	-32.3
4835.9250	-1.8	-73.4	1.0	11.0	107.6	-50.4
5641.9125	-5.8	-77.4	1.1	11.0	111.7	-54.5
6447.9000	5.6	-65.1	1.2	11.8	98.7	-41.5
7253.8875	-5.9	-75.4	1.3	11.1	109.9	-52.7
8059.8750	-4.1	-70.2	1.5	11.3	104.5	-47.3

Table 7-11: Field Strength of Spurious Radiation – 806.0125 MHz
Conducted Power 45.5 dBm; 35.5 W; Limit=50+10 Log P=65.5 dBc

Frequency (MHz)	Spectrum Analyzer Level (dBuV)	Signal Generator Level (dBm)	Cable Loss to Transmit Antenna (dB)	Substitution Antenna Gain (dBi)	Corrected Signal Generator Level (dBc)	Margin (dB)
1612.0250	11.1	-61.7	0.4	8.9	98.7	-33.2
2418.0375	16.5	-61.9	0.6	0.0	108.0	-42.5
3224.0500	5.4	-69.6	0.7	9.2	106.6	-41.1
4030.0625	19.6	-51.6	0.8	9.8	88.1	-22.6
4836.0750	-1.3	-72.9	1.0	11.0	108.4	-42.9
5642.0875	-5.8	-77.0	1.1	11.0	112.6	-47.1
6448.1000	6.0	-64.7	1.2	11.8	99.6	-34.1
7254.1125	-6.2	-75.7	1.3	11.1	111.5	-46.0
8060.1250	-5.9	-72.0	1.5	11.3	107.6	-42.1

Table 7-12: Field Strength of Spurious Radiation – 815.0000 MHz
Conducted Power 45.6 dBm; 36.3 W; Limit=50+10 Log P=65.6 dBc

Frequency (MHz)	Spectrum Analyzer Level (dBuV)	Signal Generator Level (dBm)	Cable Loss to Transmit Antenna (dB)	Substitution Antenna Gain (dBi)	Corrected Signal Generator Level (dBc)	Margin (dB)
1630.0000	6.6	-68.4	0.4	8.8	105.6	-40.0
2445.0000	17.1	-61.3	0.6	0.0	107.5	-41.9
3260.0000	9.6	-66.8	0.7	9.2	103.9	-38.3
4075.0000	12.5	-58.7	0.8	10.1	95.1	-29.5
4890.0000	3.9	-67.7	1.0	11.0	103.3	-37.7
5705.0000	-5.5	-76.6	1.1	11.1	112.2	-46.6
6520.0000	7.0	-63.3	1.2	11.9	98.3	-32.7
7335.0000	-5.8	-75.2	1.3	10.9	111.3	-45.7
8150.0000	-5.1	-67.5	1.5	11.4	103.2	-37.6

Table 7-13: Field Strength of Spurious Radiation – 823.9875 MHz
Conducted Power 45.5 dBm; 35.5 W; Limit=50+10 Log P=65.5 dBc

Frequency (MHz)	Spectrum Analyzer Level (dBuV)	Signal Generator Level (dBm)	Cable Loss to Transmit Antenna (dB)	Substitution Antenna Gain (dBi)	Corrected Signal Generator Level (dBc)	Margin (dB)
1647.9750	3.0	-69.5	0.4	8.7	106.7	-41.2
2471.9625	20.1	-58.2	0.6	0.0	104.3	-38.8
3295.9500	4.4	-71.9	0.7	9.2	108.9	-43.4
4119.9375	16.4	-54.9	0.8	10.3	91.0	-25.5
4943.9250	7.5	-64.3	1.0	11.0	99.8	-34.3
5767.9125	-3.1	-74.2	1.1	11.4	109.4	-43.9
6591.9000	6.3	-63.9	1.2	11.8	98.8	-33.3
7415.8875	-6.1	-75.2	1.4	10.9	111.2	-45.7
8239.8750	-4.8	-65.2	1.5	11.5	100.7	-35.2

Table 7-14: Field Strength of Spurious Radiation – 824.9875 MHz
Conducted Power 45.5 dBm; 35.5 W; Limit=50+10 Log P=65.5 dBc

Frequency (MHz)	Spectrum Analyzer Level (dBuV)	Signal Generator Level (dBm)	Cable Loss to Transmit Antenna (dB)	Substitution Antenna Gain (dBi)	Corrected Signal Generator Level (dBc)	Margin (dB)
1649.9750	3.6	-69.0	0.4	8.7	106.2	-40.7
2474.9625	29.1	-47.3	0.6	0.0	93.4	-27.9
3299.9500	1.7	-73.1	0.7	9.2	110.1	-44.6
4124.9375	14.2	-56.8	0.8	10.3	92.8	-27.3
4949.9250	7.6	-64.2	1.0	11.0	99.7	-34.2
5774.9125	-1.7	-72.8	1.1	11.4	108.0	-42.5
6599.9000	5.7	-64.5	1.2	11.8	99.4	-33.9
7424.8875	-6.0	-75.0	1.4	10.9	111.0	-45.5
8249.8750	-8.9	-69.3	1.5	11.5	104.9	-39.4

Table 7-15: Field Strength of Spurious Radiation – 851.0125 MHz
Conducted Power 45.7 dBm; 37.2 W; Limit=50+10 Log P=65.7 dBc

Frequency (MHz)	Spectrum Analyzer Level (dBuV)	Signal Generator Level (dBm)	Cable Loss to Transmit Antenna (dB)	Substitution Antenna Gain (dBi)	Corrected Signal Generator Level (dBc)	Margin (dB)
1702.0250	5.7	-66.8	0.4	8.5	104.4	-38.7
2553.0375	19.0	-59.1	0.6	9.5	95.8	-30.1
3404.0500	-5.0	-79.6	0.7	9.7	116.4	-50.7
4255.0625	-0.9	-72.0	0.9	10.8	107.8	-42.1
5106.0750	3.9	-67.8	1.0	10.9	103.6	-37.9
5957.0875	-3.3	-74.2	1.1	11.8	109.3	-43.6
6808.1000	2.9	-67.4	1.3	11.6	102.8	-37.1
7659.1125	-5.9	-74.7	1.4	11.3	110.5	-44.8
8510.1250	-8.6	-69.7	1.5	11.6	105.4	-39.7

Table 7-16: Field Strength of Spurious Radiation – 860.0000 MHz
Conducted Power 45.7 dBm; 37.2 W; Limit=50+10 Log P=65.7 dBc

Frequency (MHz)	Spectrum Analyzer Level (dBuV)	Signal Generator Level (dBm)	Cable Loss to Transmit Antenna (dB)	Substitution Antenna Gain (dBi)	Corrected Signal Generator Level (dBc)	Margin (dB)
1720.0000	-2.3	-74.9	0.4	8.6	112.4	-46.7
2580.0000	17.8	-60.3	0.6	9.6	97.0	-31.3
3440.0000	0.1	-74.5	0.7	9.7	111.3	-45.6
4300.0000	-4.7	-75.8	0.9	10.9	111.5	-45.8
5160.0000	2.4	-69.7	1.0	10.8	105.6	-39.9
6020.0000	-5.3	-76.1	1.1	11.6	111.4	-45.7
6880.0000	2.8	-67.4	1.3	11.6	102.8	-37.1
7740.0000	-3.9	-72.7	1.4	11.4	108.4	-42.7
8600.0000	-9.3	-70.6	1.5	11.7	106.1	-40.4

Table 7-17: Field Strength of Spurious Radiation – 868.9875 MHz
Conducted Power 45.7 dBm; 37.2 W; Limit=50+10 Log P=65.7 dBc

Frequency (MHz)	Spectrum Analyzer Level (dBuV)	Signal Generator Level (dBm)	Cable Loss to Transmit Antenna (dB)	Substitution Antenna Gain (dBi)	Corrected Signal Generator Level (dBc)	Margin (dB)
1737.9750	3.1	-69.0	0.4	8.6	106.5	-40.8
2606.9625	16.5	-61.5	0.6	9.6	98.2	-32.5
3475.9500	3.9	-70.6	0.7	9.7	107.3	-41.6
4344.9375	-5.1	-76.3	0.9	10.9	112.0	-46.3
5213.9250	1.7	-70.4	1.0	10.8	106.4	-40.7
6082.9125	-5.6	-76.4	1.2	11.4	111.8	-46.1
6951.9000	1.9	-68.2	1.3	11.7	103.5	-37.8
7820.8875	-5.3	-74.0	1.4	11.5	109.7	-44.0
8689.8750	-9.8	-71.4	1.5	11.6	107.1	-41.4

Table 7-18: Field Strength of Spurious Radiation – 869.9875 MHz
Conducted Power 45.7 dBm; 37.2 W; Limit=50+10 Log P=65.7 dBc

Frequency (MHz)	Spectrum Analyzer Level (dBuV)	Signal Generator Level (dBm)	Cable Loss to Transmit Antenna (dB)	Substitution Antenna Gain (dBi)	Corrected Signal Generator Level (dBc)	Margin (dB)
1739.9750	2.6	-69.5	0.4	8.6	106.8	-41.3
2609.9625	18.1	-59.9	0.6	9.6	96.4	-30.9
3479.9500	3.4	-71.1	0.7	9.7	107.6	-42.1
4349.9375	-5.7	-76.9	0.9	10.9	112.4	-46.9
5219.9250	-1.4	-73.5	1.0	10.8	109.3	-43.8
6089.9125	-5.7	-76.5	1.2	11.4	111.7	-46.2
6959.9000	2.5	-67.6	1.3	11.7	102.7	-37.2
7829.8875	-5.2	-73.9	1.4	11.5	109.4	-43.9
8699.8750	-10.0	-71.6	1.6	11.6	107.0	-41.5

Table 7-19: Field Strength of Spurious Radiation – 896.0125 MHz
Conducted Power 45.8 dBm; 38.0 W; Limit=50+10 Log P=65.8 dBc

Frequency (MHz)	Spectrum Analyzer Level (dBuV)	Signal Generator Level (dBm)	Cable Loss to Transmit Antenna (dB)	Substitution Antenna Gain (dBi)	Corrected Signal Generator Level (dBc)	Margin (dB)
1792.0250	1.9	-69.9	0.4	8.8	107.3	-41.5
2688.0375	17.5	-60.3	0.6	9.8	96.9	-31.1
3584.0500	6.9	-68.6	0.8	9.7	105.4	-39.6
4480.0625	-4.7	-76.3	0.9	11.0	112.0	-46.2
5376.0750	-1.3	-73.2	1.0	10.7	109.4	-43.6
6272.0875	-4.8	-75.4	1.2	11.3	111.1	-45.3
7168.1000	1.1	-68.8	1.3	11.4	104.5	-38.7
8064.1125	-6.0	-71.9	1.5	11.3	107.8	-42.0
8960.1250	-9.9	-72.2	1.6	11.1	108.5	-42.7

Table 7-20: Field Strength of Spurious Radiation – 898.5000 MHz
Conducted Power 45.9 dBm; 38.9 W; Limit=50+10 Log P=65.9 dBc

Frequency (MHz)	Spectrum Analyzer Level (dBuV)	Signal Generator Level (dBm)	Cable Loss to Transmit Antenna (dB)	Substitution Antenna Gain (dBi)	Corrected Signal Generator Level (dBc)	Margin (dB)
1797.0000	4.9	-69.6	0.4	8.8	107.1	-41.2
2695.5000	27.5	-50.3	0.6	9.8	87.0	-21.1
3594.0000	6.9	-67.3	0.8	9.7	104.2	-38.3
4492.5000	-3.3	-74.9	0.9	11.0	110.7	-44.8
5391.0000	-0.3	-72.2	1.0	10.7	108.5	-42.6
6289.5000	-5.7	-76.3	1.2	11.4	112.0	-46.1
7188.0000	-0.3	-70.1	1.3	11.3	106.0	-40.1
8086.5000	-5.9	-70.9	1.5	11.3	106.9	-41.0
8985.0000	-10.6	-72.9	1.6	11.1	109.3	-43.4

Table 7-21: Field Strength of Spurious Radiation – 900.9875 MHz
Conducted Power 45.8 dBm; 38.0 W; Limit=50+10 Log P=65.8 dBc

Frequency (MHz)	Spectrum Analyzer Level (dBuV)	Signal Generator Level (dBm)	Cable Loss to Transmit Antenna (dB)	Substitution Antenna Gain (dBi)	Corrected Signal Generator Level (dBc)	Margin (dB)
1801.9750	0.3	-71.6	0.4	8.8	109.0	-43.2
2702.9625	10.1	-67.7	0.6	0.0	114.1	-48.3
3603.9500	7.8	-66.4	0.8	9.7	103.2	-37.4
4504.9375	-2.9	-74.5	0.9	11.0	110.2	-44.4
5405.9250	-0.8	-72.7	1.0	10.6	108.9	-43.1
6306.9125	-6.2	-76.7	1.2	11.4	112.3	-46.5
7207.9000	-1.2	-71.0	1.3	11.3	106.9	-41.1
8108.8875	-5.6	-69.7	1.5	11.4	105.6	-39.8
9009.8750	-10.1	-72.5	1.6	11.1	108.8	-43.0

Table 7-22: Field Strength of Spurious Radiation – 935.0125 MHz
Conducted Power 45.7 dBm; 37.2 W; Limit=50+10 Log P=65.7 dBc

Frequency (MHz)	Spectrum Analyzer Level (dBuV)	Signal Generator Level (dBm)	Cable Loss to Transmit Antenna (dB)	Substitution Antenna Gain (dBi)	Corrected Signal Generator Level (dBc)	Margin (dB)
1870.0250	10.1	-61.8	0.5	8.5	99.4	-33.7
2805.0375	11.4	-66.1	0.6	10.1	102.4	-36.7
3740.0500	23.3	-50.6	0.8	9.2	87.9	-22.2
4675.0625	12.2	-59.2	0.9	11.1	94.8	-29.1
5610.0750	6.0	-65.6	1.1	10.9	101.5	-35.8
6545.0875	-4.6	-74.9	1.2	11.8	110.0	-44.3
7480.1000	-3.3	-72.5	1.4	11.0	108.6	-42.9
8415.1125	-8.6	-69.5	1.5	11.5	105.3	-39.6
9350.1250	-10.6	-73.9	1.6	11.5	109.8	-44.1

Table 7-23: Field Strength of Spurious Radiation – 937.500 MHz
Conducted Power 45.7 dBm; 37.2 W; Limit=50+10 Log P=65.7 dBc

Frequency (MHz)	Spectrum Analyzer Level (dBuV)	Signal Generator Level (dBm)	Cable Loss to Transmit Antenna (dB)	Substitution Antenna Gain (dBi)	Corrected Signal Generator Level (dBc)	Margin (dB)
1875.0000	7.7	-64.0	0.5	8.5	101.7	-36.0
2812.5000	12.6	-64.9	0.6	10.0	101.2	-35.5
3750.0000	22.1	-51.8	0.8	9.2	89.1	-23.4
4687.5000	9.4	-62.1	0.9	11.1	97.6	-31.9
5625.0000	5.2	-66.4	1.1	10.9	102.3	-36.6
6562.5000	-5.3	-75.6	1.2	11.8	110.7	-45.0
7500.0000	2.2	-67.0	1.4	11.1	103.0	-37.3
8437.5000	-9.9	-70.8	1.5	11.5	106.6	-40.9
9375.0000	-9.4	-72.7	1.7	11.5	108.6	-42.9

Table 7-24: Field Strength of Spurious Radiation – 939.9875 MHz
Conducted Power 45.7 dBm; 37.2 W; Limit=50+10 Log P=65.7 dBc

Frequency (MHz)	Spectrum Analyzer Level (dBuV)	Signal Generator Level (dBm)	Cable Loss to Transmit Antenna (dB)	Substitution Antenna Gain (dBi)	Corrected Signal Generator Level (dBc)	Margin (dB)
1879.9750	4.5	-67.2	0.5	8.5	104.9	-39.2
2819.9625	11.9	-65.6	0.6	10.0	101.9	-36.2
3759.9500	22.2	-51.7	0.8	9.2	89.0	-23.3
4699.9375	11.2	-60.3	0.9	11.1	95.8	-30.1
5639.9250	3.4	-68.2	1.1	11.0	104.0	-38.3
6579.9125	-5.5	-76.1	1.2	11.8	111.2	-45.5
7519.9000	2.4	-66.8	1.4	11.1	102.8	-37.1
8459.8875	-8.8	-69.8	1.5	11.5	105.5	-39.8
9399.8750	-10.3	-74.8	1.7	11.5	110.6	-44.9

Table 7-25: Field Strength of Spurious Radiation – 941.0125 MHz
Conducted Power 45.7 dBm; 37.2 W; Limit=50+10 Log P=65.7 dBc

Frequency (MHz)	Spectrum Analyzer Level (dBuV)	Signal Generator Level (dBm)	Cable Loss to Transmit Antenna (dB)	Substitution Antenna Gain (dBi)	Corrected Signal Generator Level (dBc)	Margin (dB)
1882.0250	5.0	-68.8	0.5	8.5	106.5	-40.8
2823.0375	3.8	-72.0	0.6	10.0	108.3	-42.6
3764.0500	21.6	-52.3	0.8	9.2	89.6	-23.9
4705.0625	10.9	-60.6	0.9	11.1	96.1	-30.4
5646.0750	4.4	-67.2	1.1	11.0	103.0	-37.3
6587.0875	-4.5	-75.0	1.2	11.8	110.1	-44.4
7528.1000	1.1	-68.1	1.4	11.1	104.1	-38.4
8469.1125	-9.4	-70.4	1.5	11.5	106.1	-40.4
9410.1250	-9.5	-72.9	1.7	11.5	108.8	-43.1

Table 7-26: Field Strength of Spurious Radiation – 942.5000 MHz
Conducted Power 45.7 dBm; 37.2 W; Limit=50+10 Log P=65.7 dBc

Frequency (MHz)	Spectrum Analyzer Level (dBuV)	Signal Generator Level (dBm)	Cable Loss to Transmit Antenna (dB)	Substitution Antenna Gain (dBi)	Corrected Signal Generator Level (dBc)	Margin (dB)
1885.0000	0.0	-71.7	0.5	8.5	109.4	-43.7
2827.5000	21.9	-55.6	0.6	10.0	91.9	-26.2
3770.0000	21.0	-52.9	0.8	9.2	90.2	-24.5
4712.5000	10.5	-61.0	0.9	11.1	96.5	-30.8
5655.0000	4.7	-66.9	1.1	11.0	102.7	-37.0
6597.5000	-5.8	-76.0	1.2	11.8	111.1	-45.4
7540.0000	1.1	-68.1	1.4	11.1	104.0	-38.3
8482.5000	-9.6	-70.6	1.5	11.5	106.3	-40.6
9425.0000	-10.3	-73.8	1.7	11.6	109.6	-43.9

Table 7-27: Field Strength of Spurious Radiation – 943.9875 MHz
Conducted Power 45.7 dBm; 37.2 W; Limit=50+10 Log P=65.7 dBc

Frequency (MHz)	Spectrum Analyzer Level (dBuV)	Signal Generator Level (dBm)	Cable Loss to Transmit Antenna (dB)	Substitution Antenna Gain (dBi)	Corrected Signal Generator Level (dBc)	Margin (dB)
1887.9750	0.0	-71.7	0.5	8.4	109.4	-43.7
2831.9625	20.8	-56.6	0.6	10.0	92.9	-27.2
3775.9500	20.3	-53.6	0.8	9.1	90.9	-25.2
4719.9375	10.0	-61.5	0.9	11.1	97.1	-31.4
5663.9250	6.3	-65.3	1.1	11.0	101.1	-35.4
6607.9125	-5.6	-76.1	1.2	11.8	111.3	-45.6
7551.9000	0.1	-69.2	1.4	11.2	105.1	-39.4
8495.8875	-9.9	-71.0	1.5	11.5	106.7	-41.0
9439.8750	-10.1	-73.6	1.7	11.6	109.4	-43.7

Table 7-28: Part 90.543(f): Out of Band Emissions Limit

Frequency (MHz)	Spectrum Analyzer Level (dBuV)	Signal Generator Level (dBm)	Cable Loss to Transmit Antenna (dB)	Substitution Antenna Gain (dBi)	Corrected Signal Generator Level (dBW)	Limit (dBW)	Margin (dB)
1596.025	13.1	-59.7	0.4	8.9	-81.2	-80.0	-1.2
1598.025	11.7	-61.0	0.4	8.9	-82.5	-80.0	-2.5
1604.0000	12.9	-59.8	0.4	8.9	-81.3	-80.0	-1.3
1609.975	9.0	-63.6	0.4	8.9	-85.1	-80.0	-5.1

Measurement uncertainties shown for these tests are expanded uncertainties expressed at the 95% confidence level using a coverage factor K=2. Measurement uncertainty: ±4.6 dB

Results: Pass

Table 7-29: Test Equipment Used For Testing Field Strength of Spurious Radiation

RTL Asset #	Manufacturer	Model	Part Type	Serial Number	Calibration Due Date
900878	Rhein Tech Laboratories	AM3-1197-0005	3 meter antenna mast, polarizing	OATS1	N/A
901729	Insulated Wire Inc.	KPS-1503-3150-KPR	SMK RF Cables 20'	NA	8/21/19
901128	Par Electronics	806-902 (25W)	UHF Notch Filter	N/A	8/10/19
901727	Insulated Wire Inc.	KPS-1503-360-KPR	SMK RF Cables 36"	NA	8/20/19
901242	Rhein Tech Laboratories	WRT-000-0003	Wood rotating table	N/A	N/A
900791	Chase	CBL6111B	Bilog antenna (30 MHz – 2000 MHz)	N/A	10/4/20
900321	EMCO	3161-03	Horn Antenna 4.0-8.2 GHz	9508-1020	4/9/19
900323	EMCO	3160-07	Horn Antenna 8.2-12.4 GHz	9605-1054	4/9/19
900772	EMCO	3161-02	Horn Antenna 2 - 4 GHz	9804-1044	4/9/19
901581	Rohde & Schwarz	FSU	Spectrum Analyzer	1166.1660.50	4/26/21
901582	Rohde & Schwarz	1167.0000.02	Signal Generator	101903	4/24/21

Test Personnel:

Daniel Baltzell		September 13-17, 2018
Test Engineer	Signature	Dates of Tests

8 FCC Part 2.1049(c)(1): Occupied Bandwidth; Part 90.210 Authorized Bandwidth; Part 101.109, Part 101.111 Bandwidth; ISED RSS-119 5.5: Channel Bandwidth, Authorized Bandwidth, Occupied Bandwidth and Spectrum Masks

Occupied Bandwidth - Compliance with the Emission Masks

8.1 Test Procedure

ANSI C63.26-2015, section 5.4

Device with digital modulation: Modulated to its maximum extent using a pseudo-random data sequence.

Part 90.210 Authorized Bandwidth

Applicable Emission Masks		
Frequency Band (MHz)	**Mask for Equipment With Audio Low Pass Filter**	**Mask for Equipment Without Audio Low Pass Filter**
Below 25 [1]	A or B	A or C
25–50	B	C
72–76	B	C
150–174 [2]	B, D, or E	C, D, or E
150 Paging-only	B	C
220–222	F	F
421–512 [2]	B, D, or E	C, D, or E
450 Paging-only	B	G
806–809/851–854	B	H
809–824/854–869 [3 5]	B	G
896–901/935–940	I	J
902–928	K	K
929–930	B	G
4940–4990 MHz	L or M	L or M
5850–5925 [4]		
All other bands	B	C

[1] Equipment using single sideband J3E emission must meet the requirements of Emission Mask A. Equipment using other emissions must meet the requirements of Emission Mask B or C, as applicable.
[2] Equipment designed to operate with a 25 kHz channel bandwidth must meet the requirements of Emission Mask B or C, as applicable. Equipment designed to operate with a 12.5 kHz channel bandwidth must meet the requirements of Emission Mask D, and equipment designed to operate with a 6.25 kHz channel bandwidth must meet the requirements of Emission Mask E.
[3] Equipment used in this licensed to EA or non-EA systems shall comply with the emission mask provisions of §90.691.
[4] DSRCS Roadside Unit equipment in the 5850–5925 MHz band is governed under subpart M of this part.
[5] Equipment may alternatively meet the Adjacent Channel Power limits of §90.221.

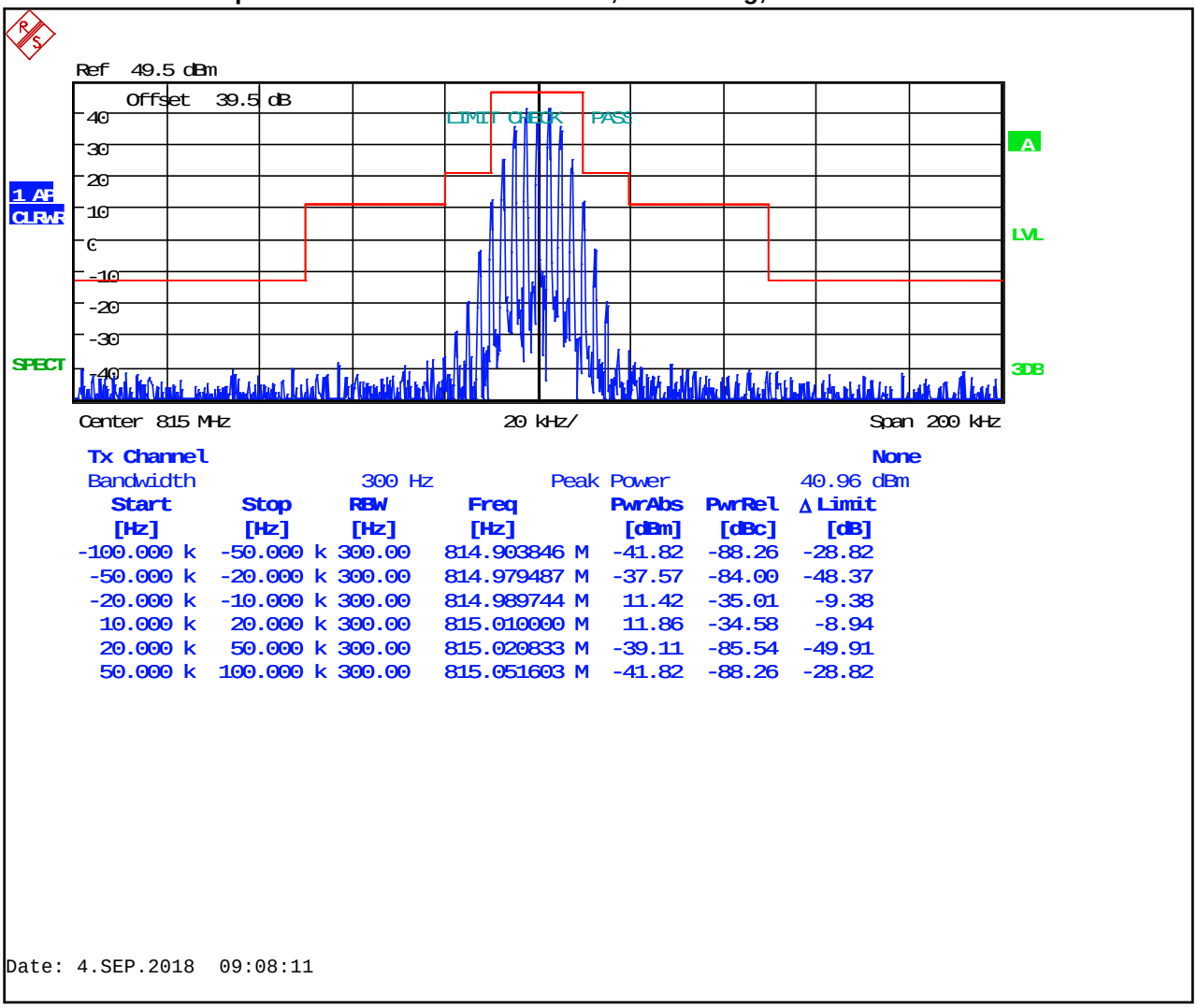
Frequency Band (MHz)	Related SRSP for Channelling Plan and ERP	Channel Bandwidth (kHz)	Authorized Bandwidth (kHz)	Spectrum Masks for Equipment With Audio Filter	Spectrum Masks for Equipment Without Audio Filter
768-776 and 798-806	SRSP-511	6.25 12.5 25 50	(Note 2)	See Section 5.8.9	See Section 5.8.9
806-821/851-866 and 821-824/866-869	SRSP-502	25	20 22	B Y	G Y
		12.5	11.25	D	D
		6.25	6	E	E
896-901/935-940	SRSP-506	12.5	13.6	I	J (G) (Note 3)
929-930 and 931-932	SRSP-504 (for paging)	25	20	B	G
928-929/952-953 and 932-932.5/941-941.5	SRSP-505	25	20	B	G
		12.5	11.25	D	D
932.5-935/941.5-944	SRSP-507	25	20	B	G
		12.5	11.25	D	D

Part 101.109, 101.111 Bandwidth

(1) When using transmissions other than those employing digital modulation techniques:
(i) On any frequency removed from the assigned frequency by more than 50 percent up to and including 100 percent of the authorized bandwidth: At least 25 decibels;
(ii) On any frequency removed from the assigned frequency by more than 100 percent up to and including 250 percent of the authorized bandwidth: At least 35 decibels;
(iii) On any frequency removed from the assigned frequency by more than 250 percent of the authorized bandwidth: At least 43 + 10 Log10 (mean output power in watts) decibels, or 80 decibels, whichever is the lesser attenuation.
(2) When using transmissions employing digital modulation techniques (see §101.141(b)) in situations not covered in this section:
(i) For operating frequencies below 15 GHz, in any 4 KHz band, the center frequency of which is removed from the assigned frequency by more than 50 percent up to and including 250 percent of the authorized bandwidth: As specified by the following equation but in no event less than 50 decibels:
A = 35 + 0.8(P -50) + 10 Log10 B. (Attenuation greater than 80 decibels or to an absolute power of less than -13 dBm/1MHz is not required.) where A = Attenuation (in decibels) below the mean output power level.
P = Percent removed from the center frequency of the transmitter bandwidth. B = Authorized bandwidth in MHz.

8.2 Test Data

Plot 8-1: Occupied Bandwidth – 815.0000 MHz; WB Analog; Mask B

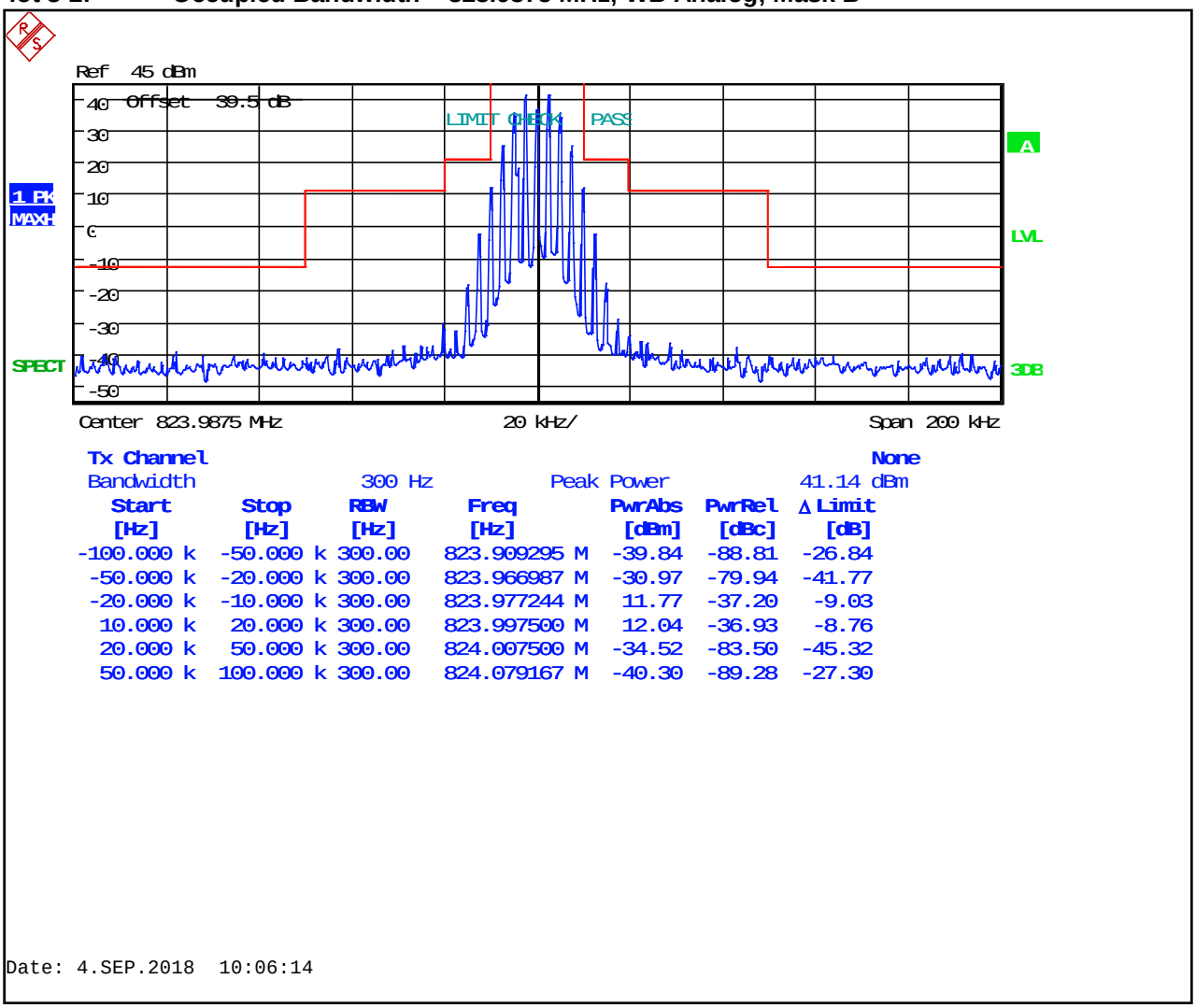


Tx Channel None
Bandwidth 300 Hz Peak Power 40.96 dBm

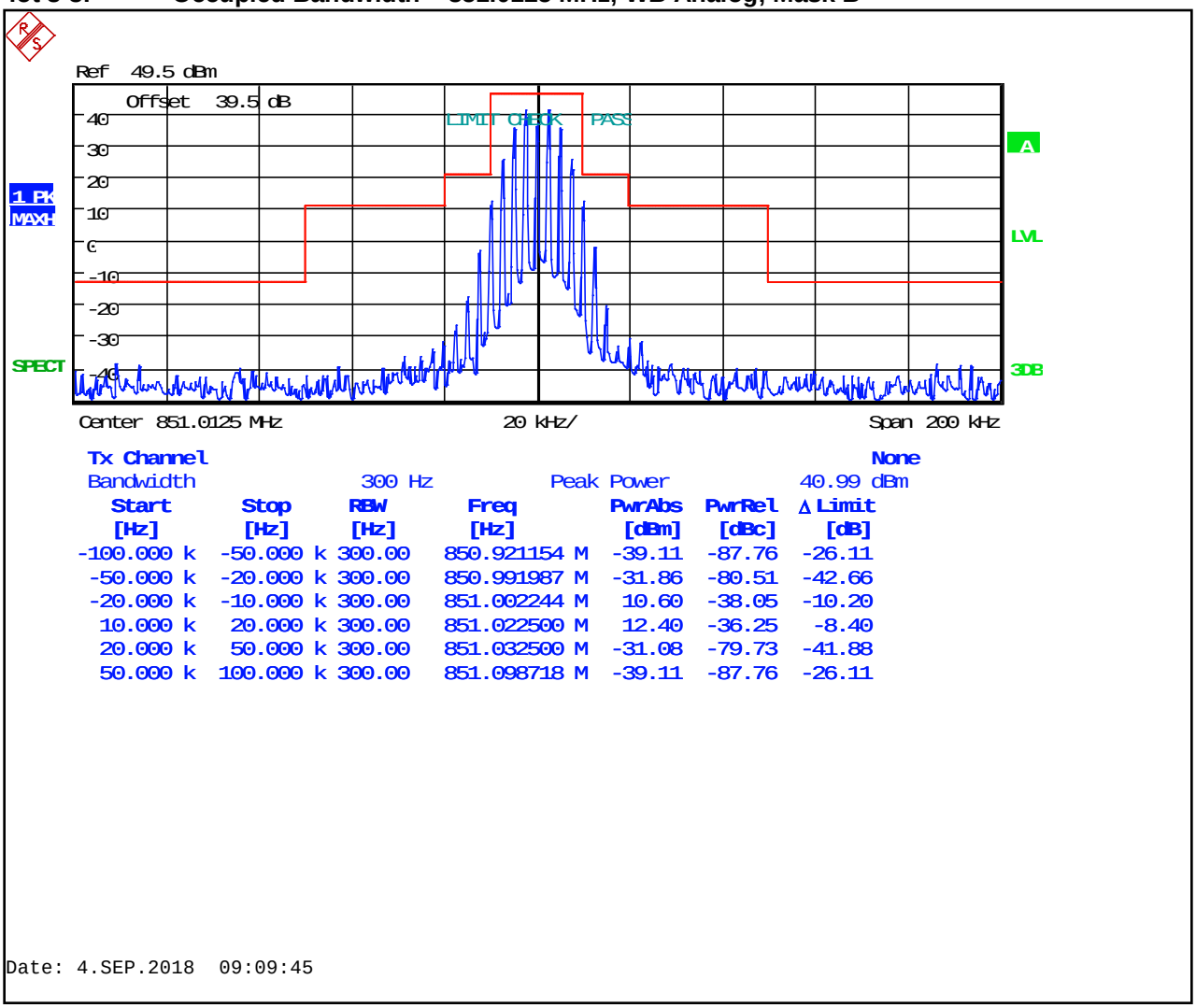
Start [Hz]	Stop [Hz]	RBW [Hz]	Freq [Hz]	PwrAbs [dBm]	PwrRel [dBc]	Δ Limit [dB]
-100.000 k	-50.000 k	300.00	814.903846 M	-41.82	-88.26	-28.82
-50.000 k	-20.000 k	300.00	814.979487 M	-37.57	-84.00	-48.37
-20.000 k	-10.000 k	300.00	814.989744 M	11.42	-35.01	-9.38
10.000 k	20.000 k	300.00	815.010000 M	11.86	-34.58	-8.94
20.000 k	50.000 k	300.00	815.020833 M	-39.11	-85.54	-49.91
50.000 k	100.000 k	300.00	815.051603 M	-41.82	-88.26	-28.82

Date: 4.SEP.2018 09:08:11

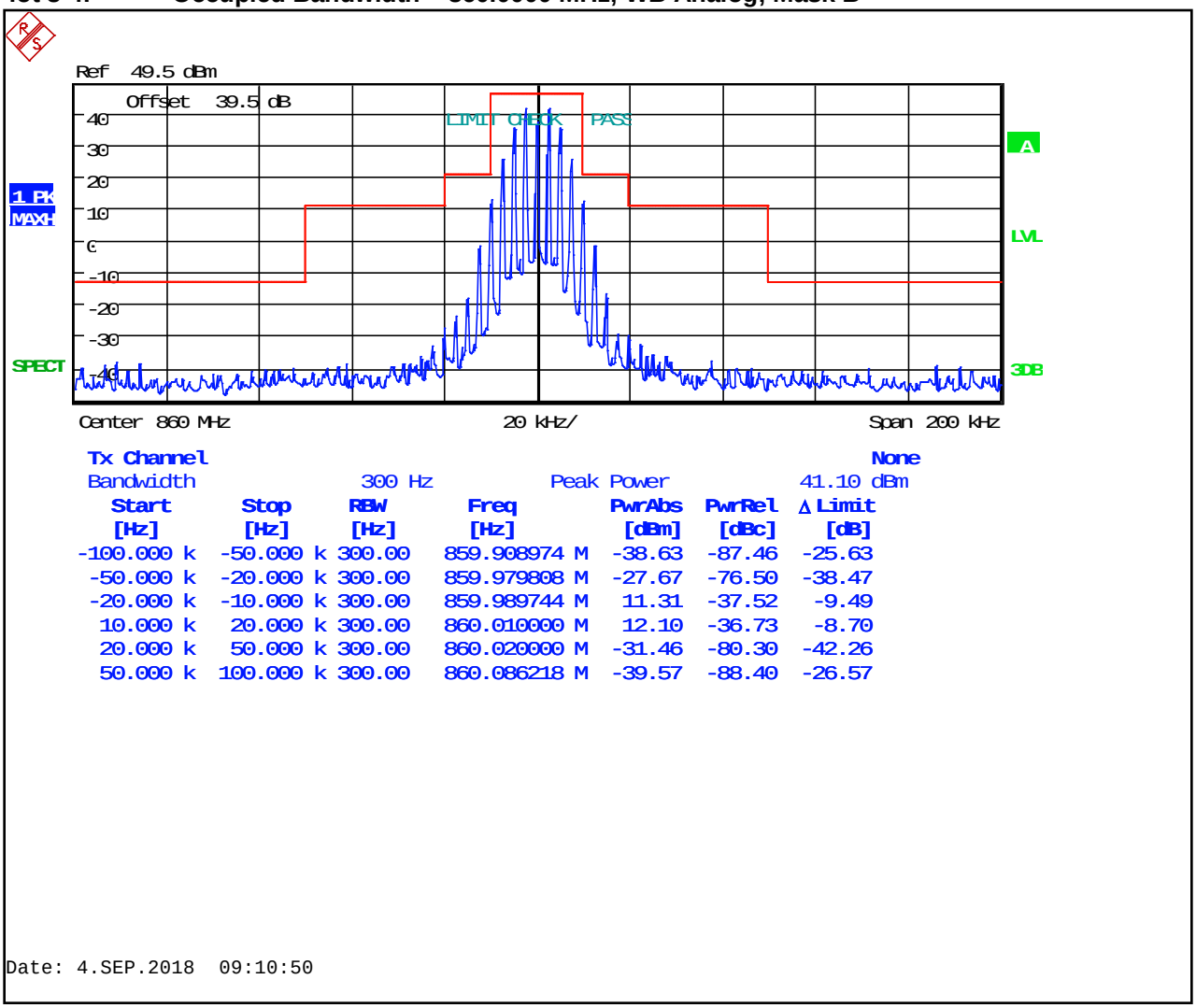
Plot 8-2: Occupied Bandwidth – 823.9875 MHz; WB Analog; Mask B



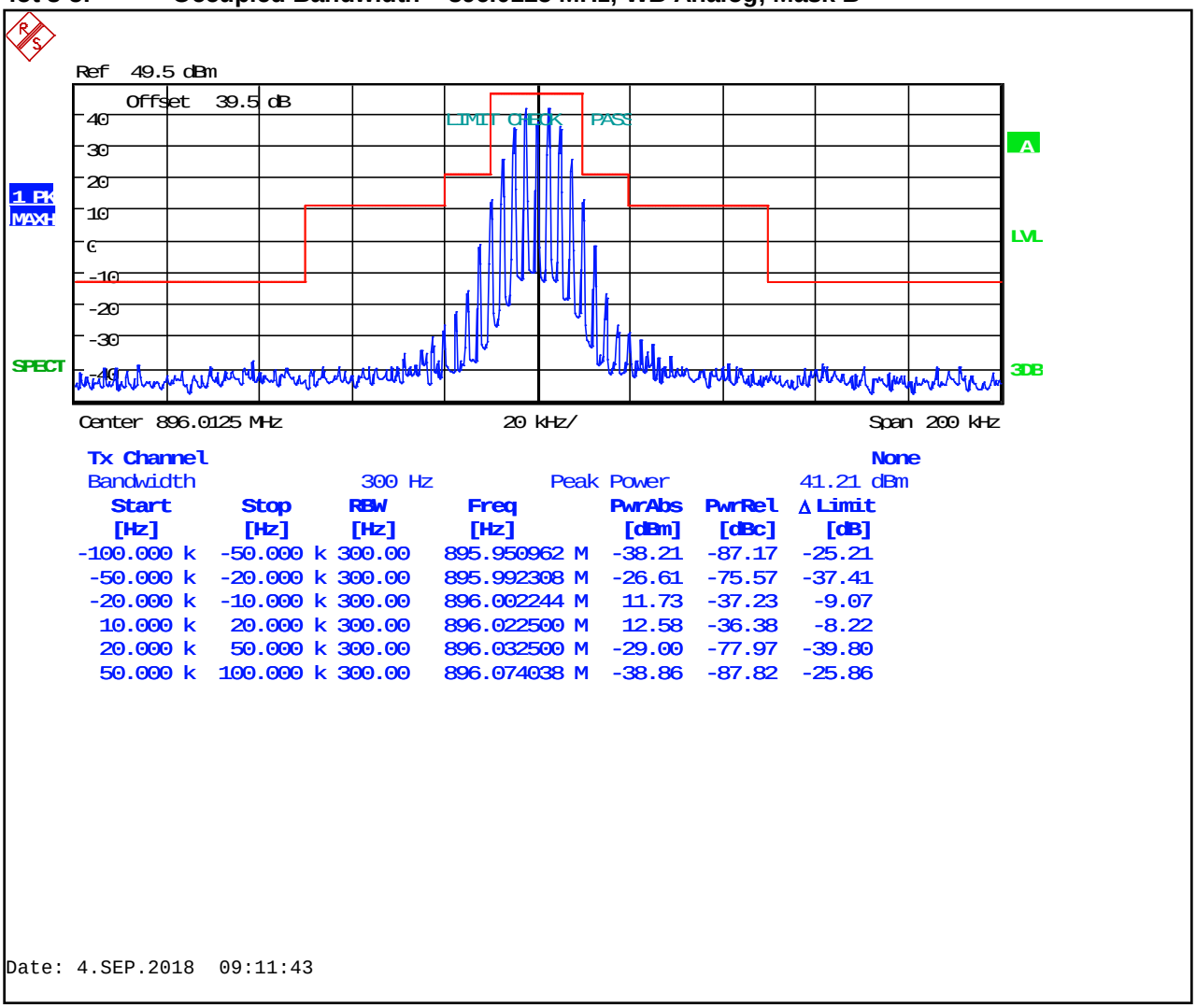
Plot 8-3: Occupied Bandwidth – 851.0125 MHz; WB Analog; Mask B



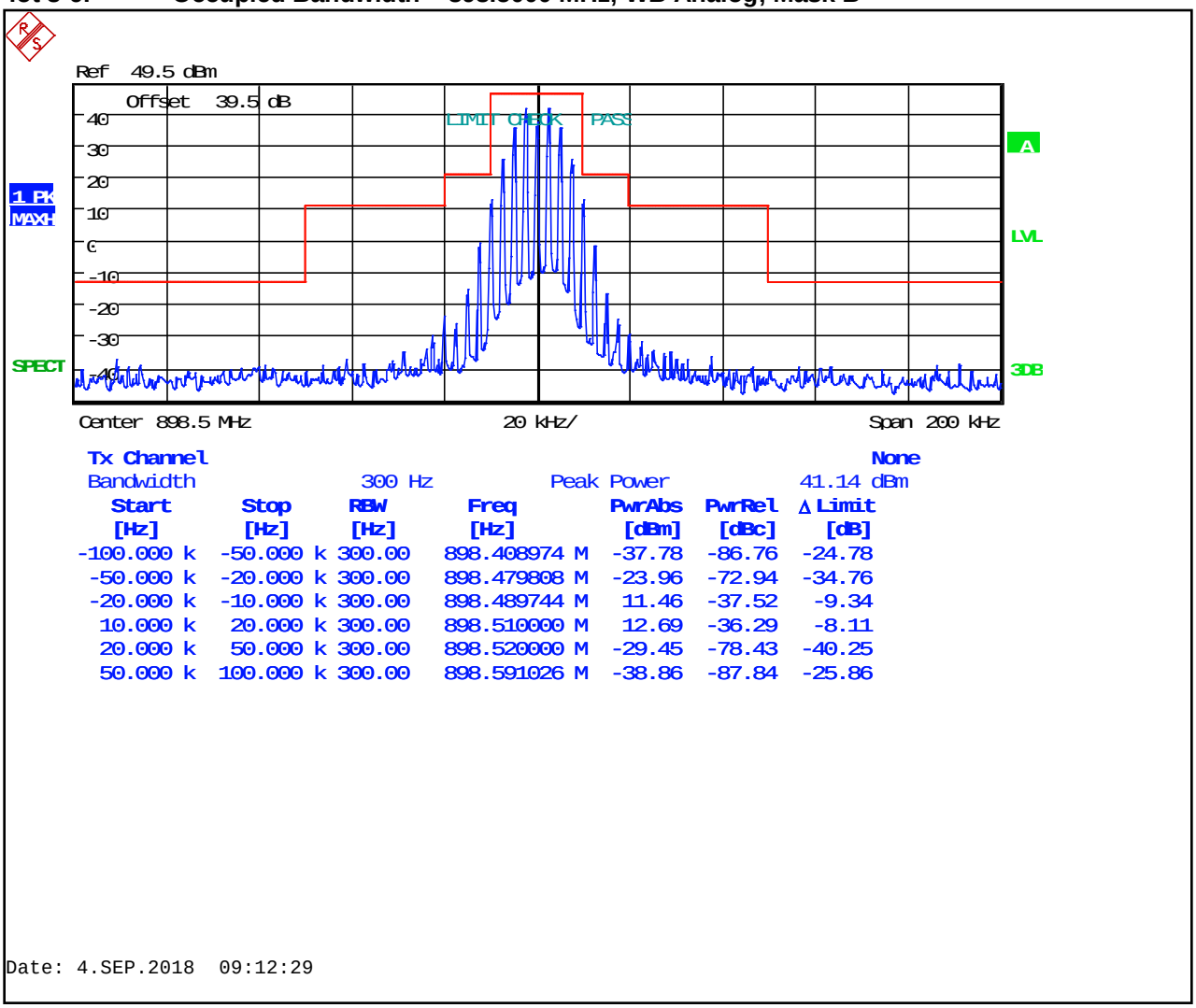
Plot 8-4: Occupied Bandwidth – 860.0000 MHz; WB Analog; Mask B



Plot 8-5: Occupied Bandwidth – 896.0125 MHz; WB Analog; Mask B



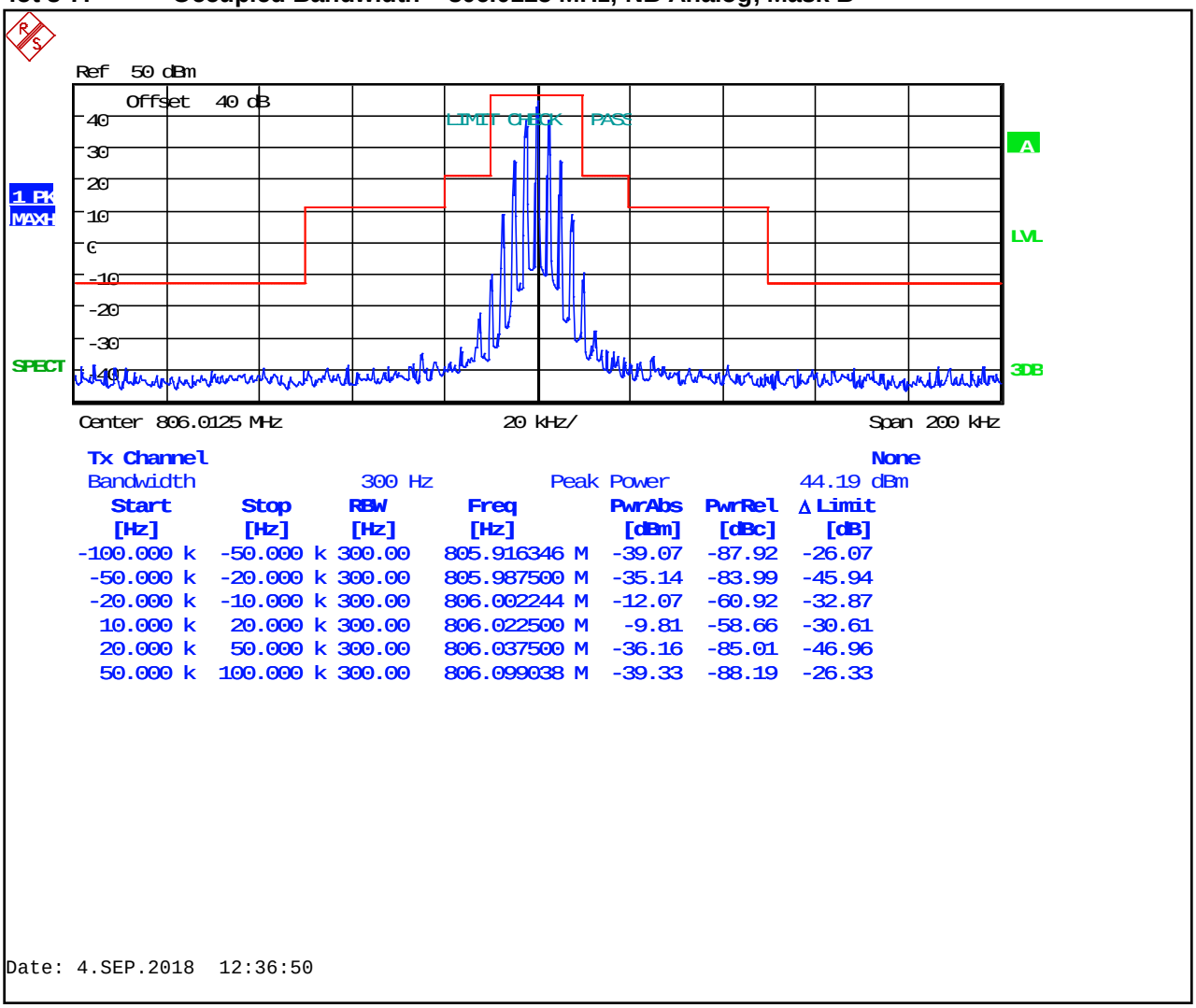
Plot 8-6: Occupied Bandwidth – 898.5000 MHz; WB Analog; Mask B



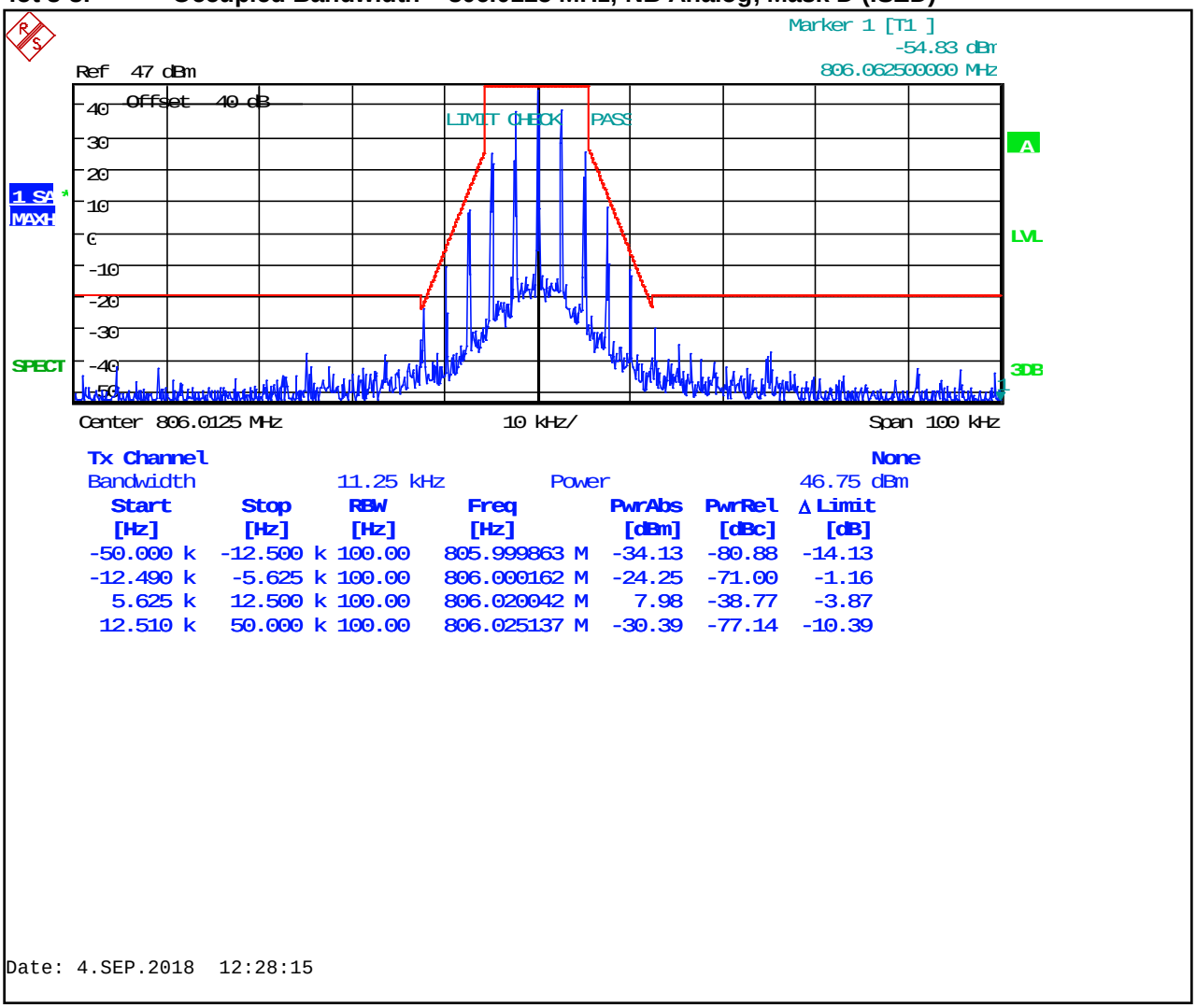
Tx Channel						None
Bandwidth		300 Hz		Peak Power		41.14 dBm
Start [Hz]	Stop [Hz]	RBW [Hz]	Freq [Hz]	PwrAbs [dBm]	PwrRel [dBc]	Δ Limit [dB]
-100.000 k	-50.000 k	300.00	898.408974 M	-37.78	-86.76	-24.78
-50.000 k	-20.000 k	300.00	898.479808 M	-23.96	-72.94	-34.76
-20.000 k	-10.000 k	300.00	898.489744 M	11.46	-37.52	-9.34
10.000 k	20.000 k	300.00	898.510000 M	12.69	-36.29	-8.11
20.000 k	50.000 k	300.00	898.520000 M	-29.45	-78.43	-40.25
50.000 k	100.000 k	300.00	898.591026 M	-38.86	-87.84	-25.86

Date: 4.SEP.2018 09:12:29

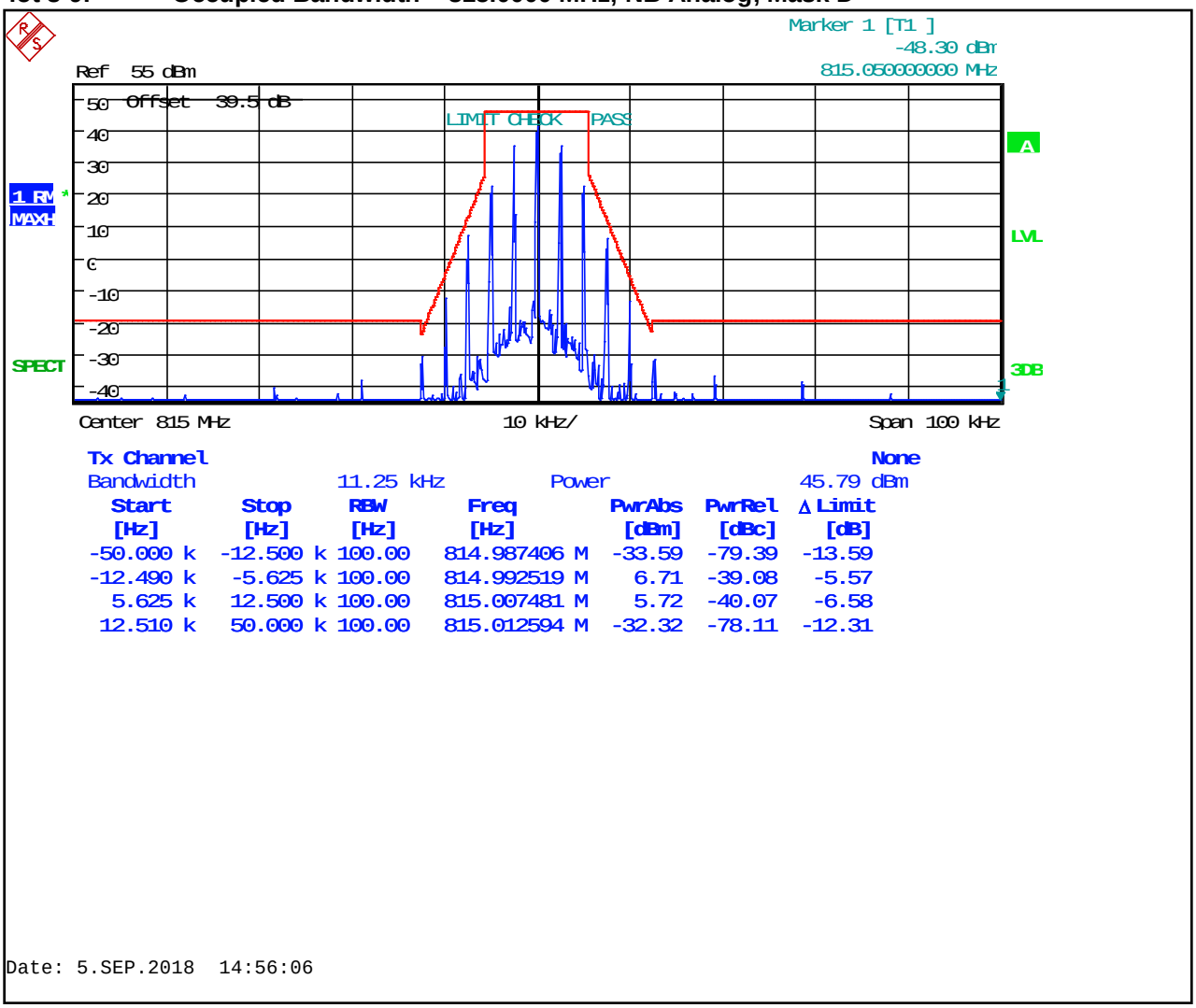
Plot 8-7: Occupied Bandwidth – 806.0125 MHz; NB Analog; Mask B



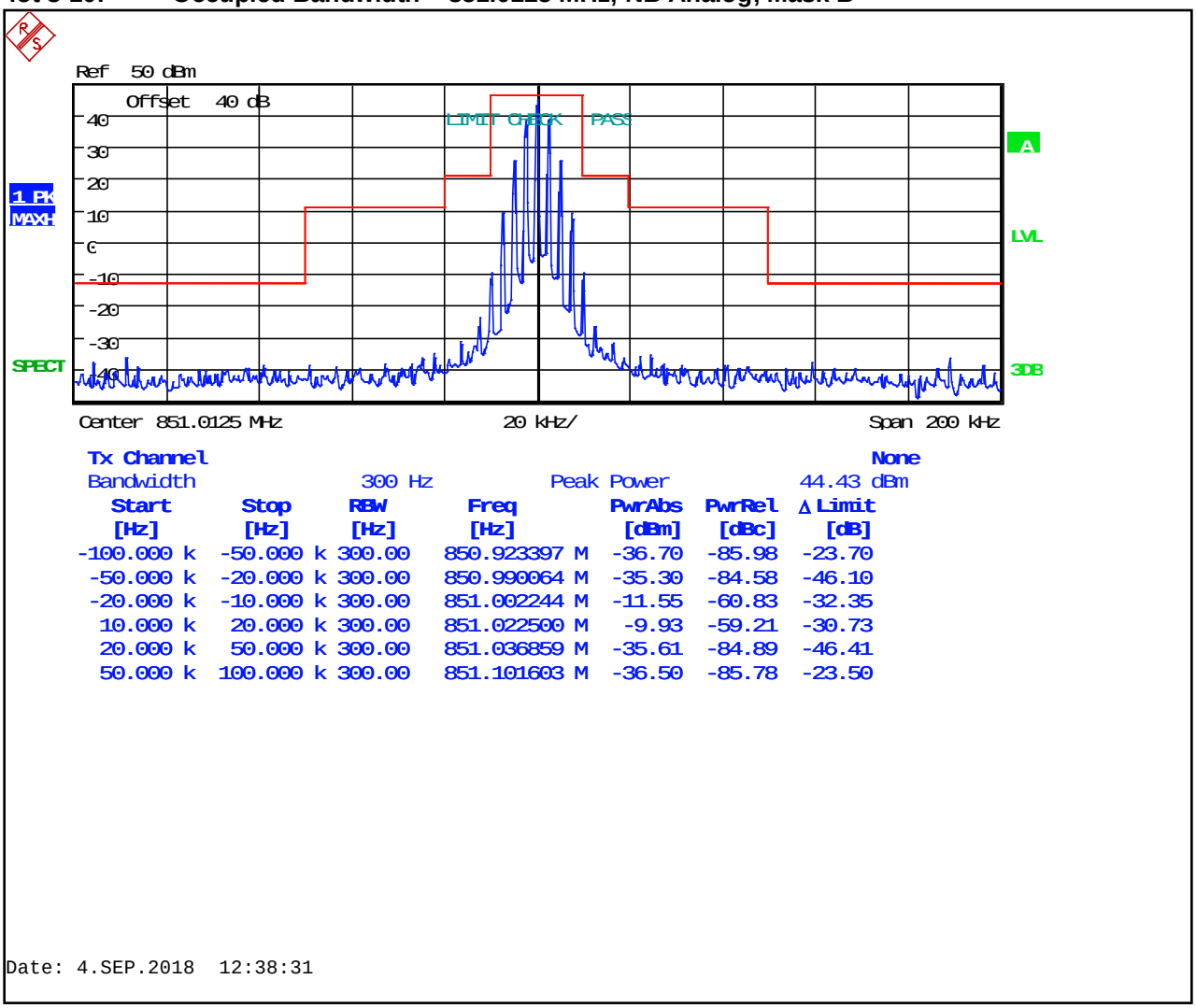
Plot 8-8: Occupied Bandwidth – 806.0125 MHz; NB Analog; Mask D (ISED)



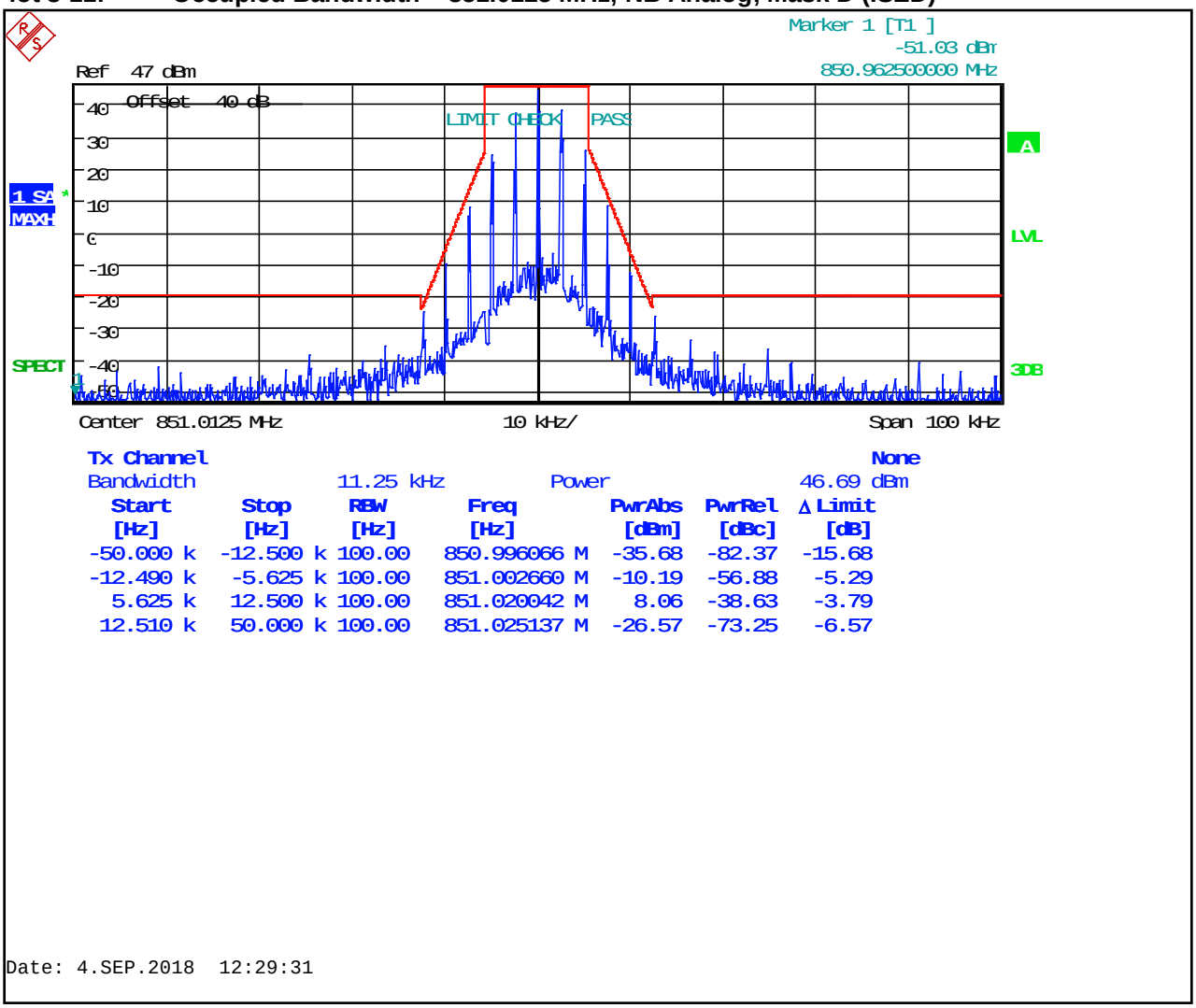
Plot 8-9: Occupied Bandwidth – 815.0000 MHz; NB Analog; Mask D



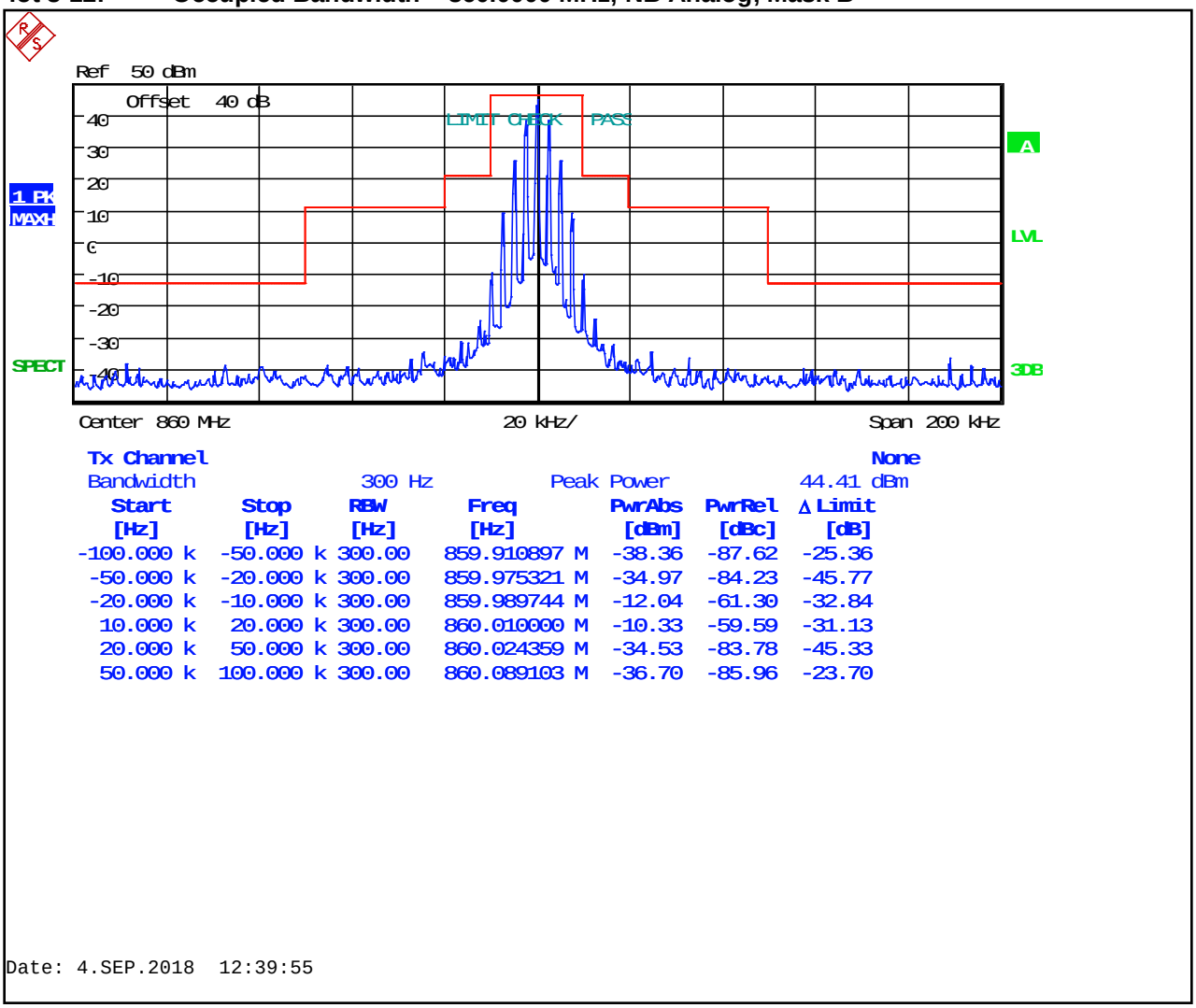
Plot 8-10: Occupied Bandwidth – 851.0125 MHz; NB Analog; Mask B



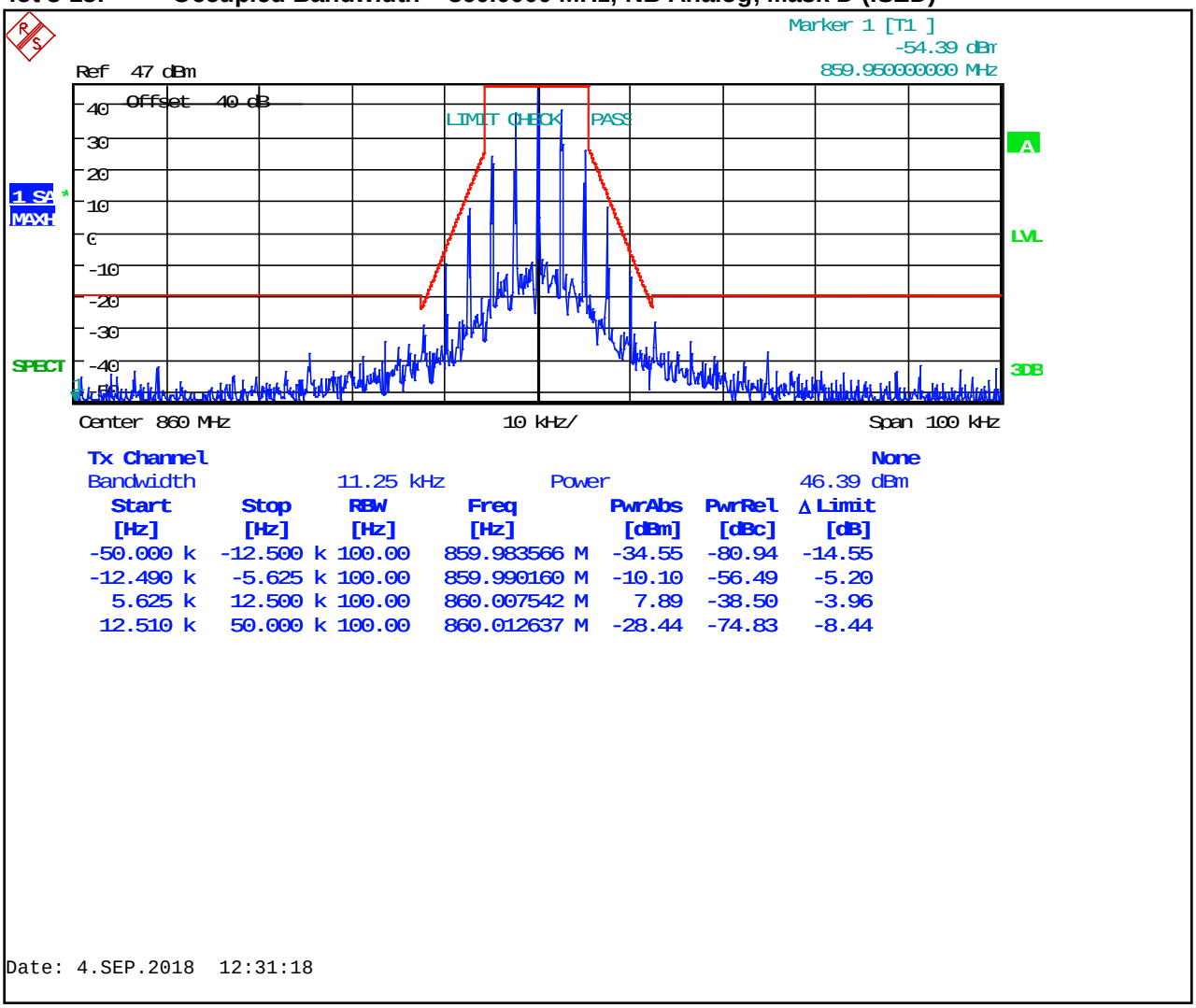
Plot 8-11: Occupied Bandwidth – 851.0125 MHz; NB Analog; Mask D (ISED)



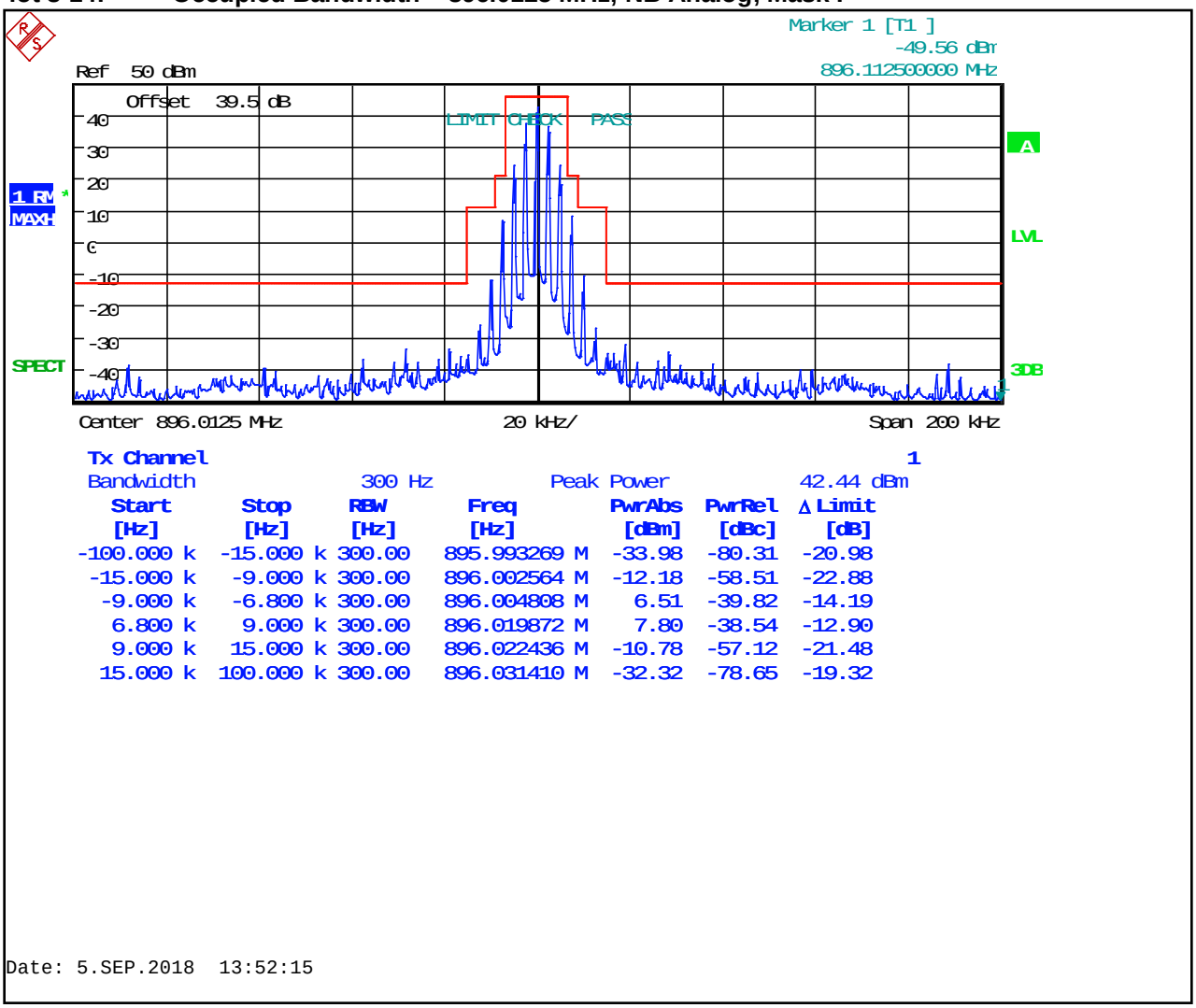
Plot 8-12: Occupied Bandwidth – 860.0000 MHz; NB Analog; Mask B



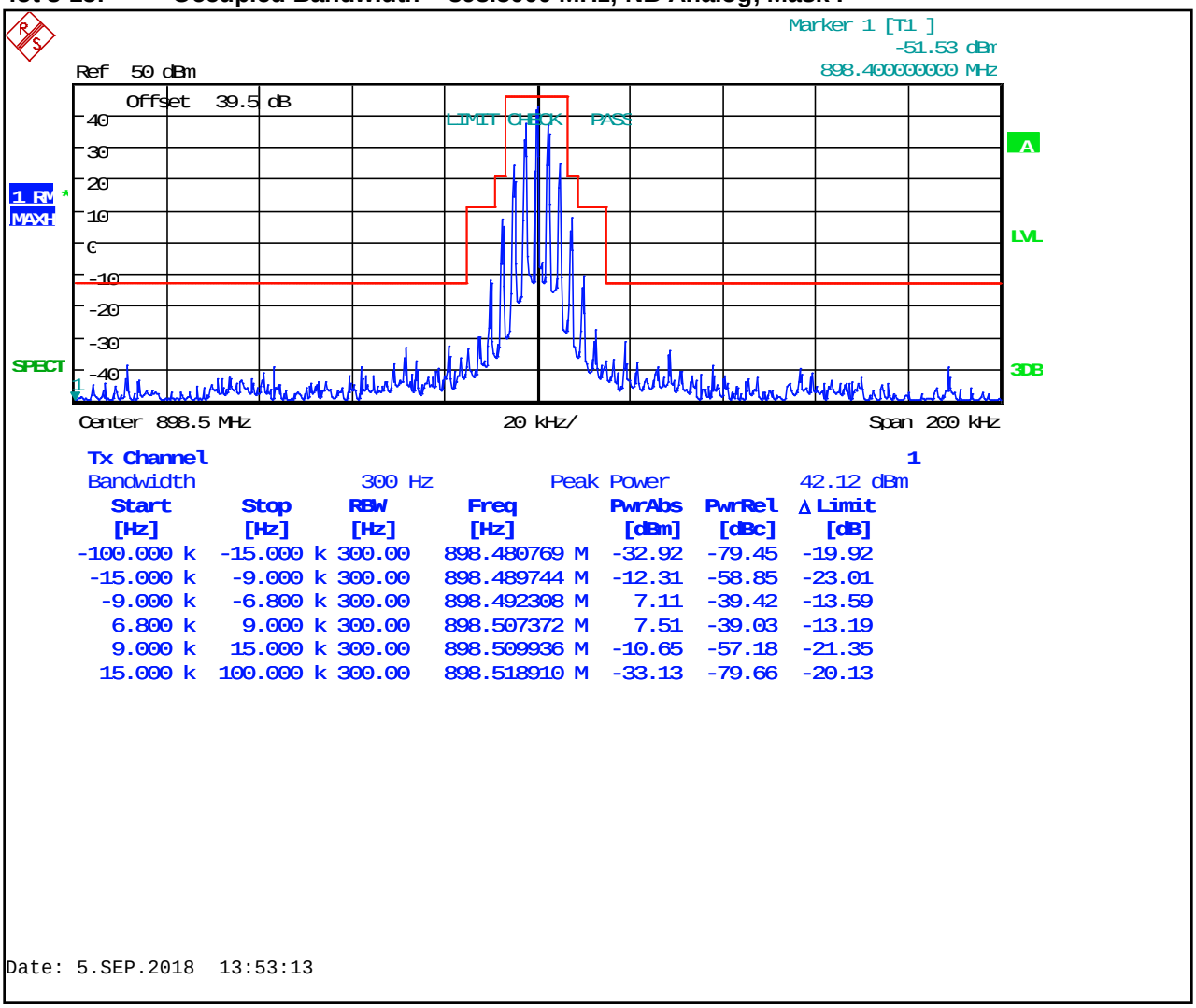
Plot 8-13: Occupied Bandwidth – 860.0000 MHz; NB Analog; Mask D (ISED)



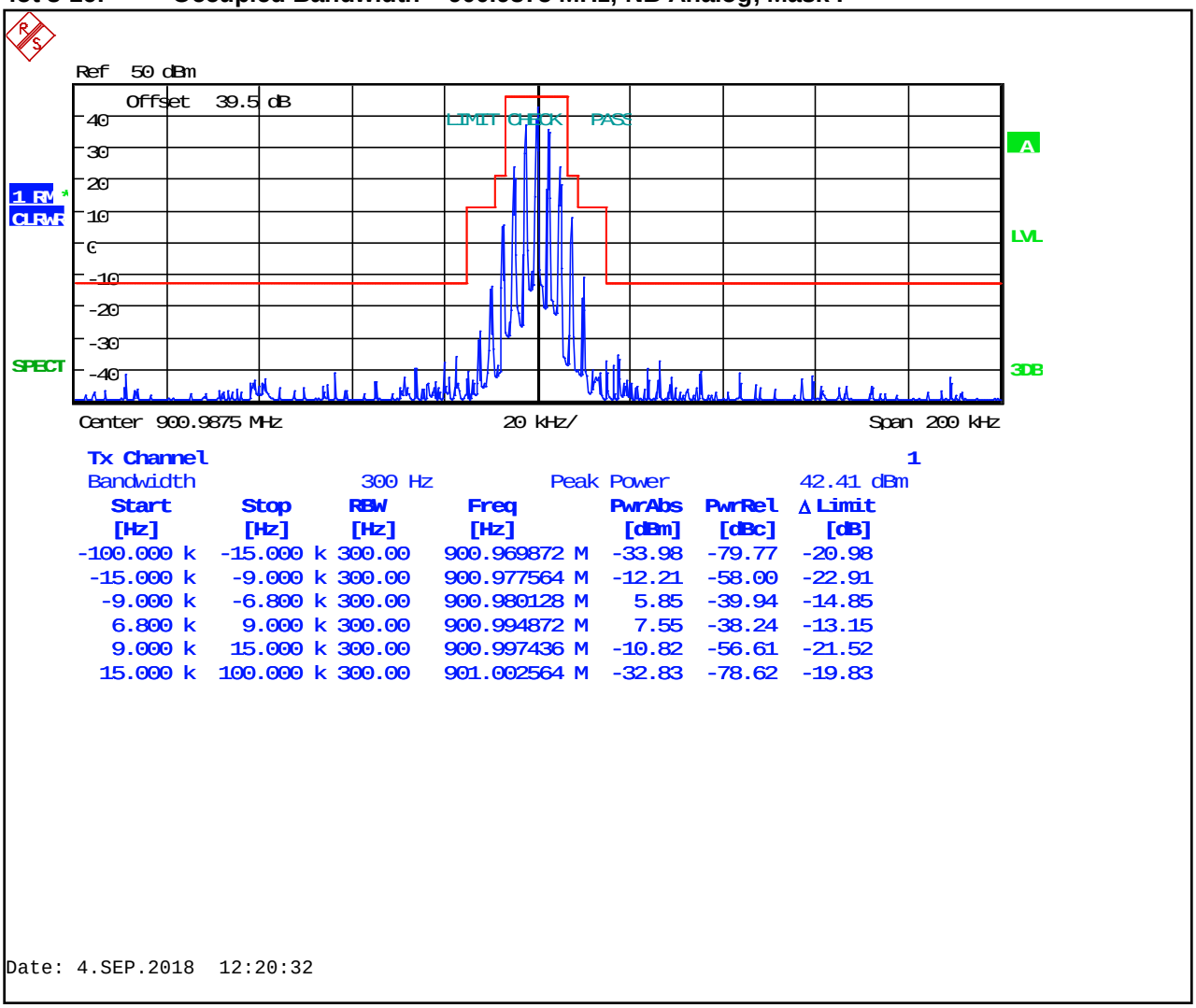
Plot 8-14: Occupied Bandwidth – 896.0125 MHz; NB Analog; Mask I



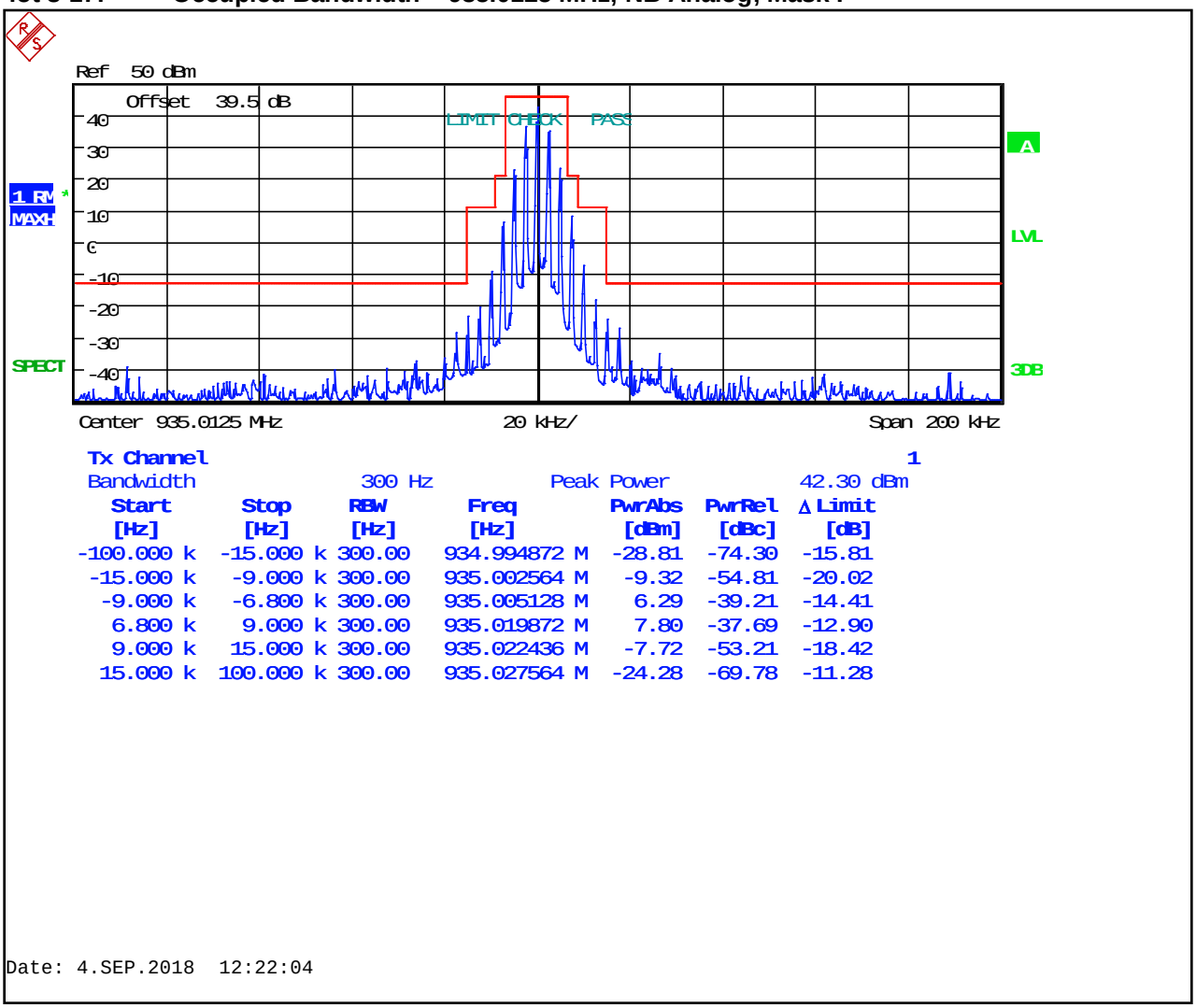
Plot 8-15: Occupied Bandwidth – 898.5000 MHz; NB Analog; Mask I



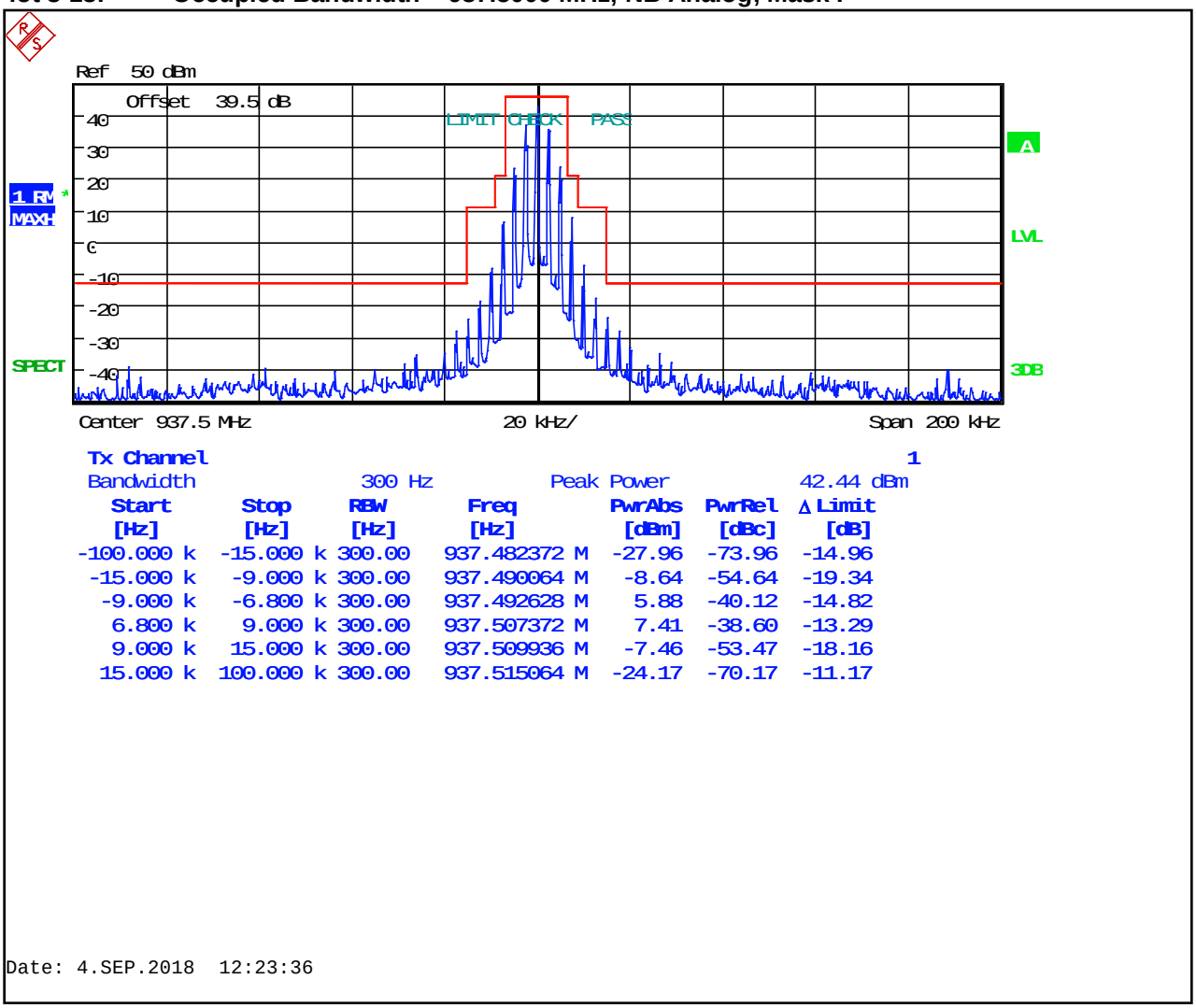
Plot 8-16: Occupied Bandwidth – 900.9875 MHz; NB Analog; Mask I



Plot 8-17: Occupied Bandwidth – 935.0125 MHz; NB Analog; Mask I



Plot 8-18: Occupied Bandwidth – 937.5000 MHz; NB Analog; Mask I



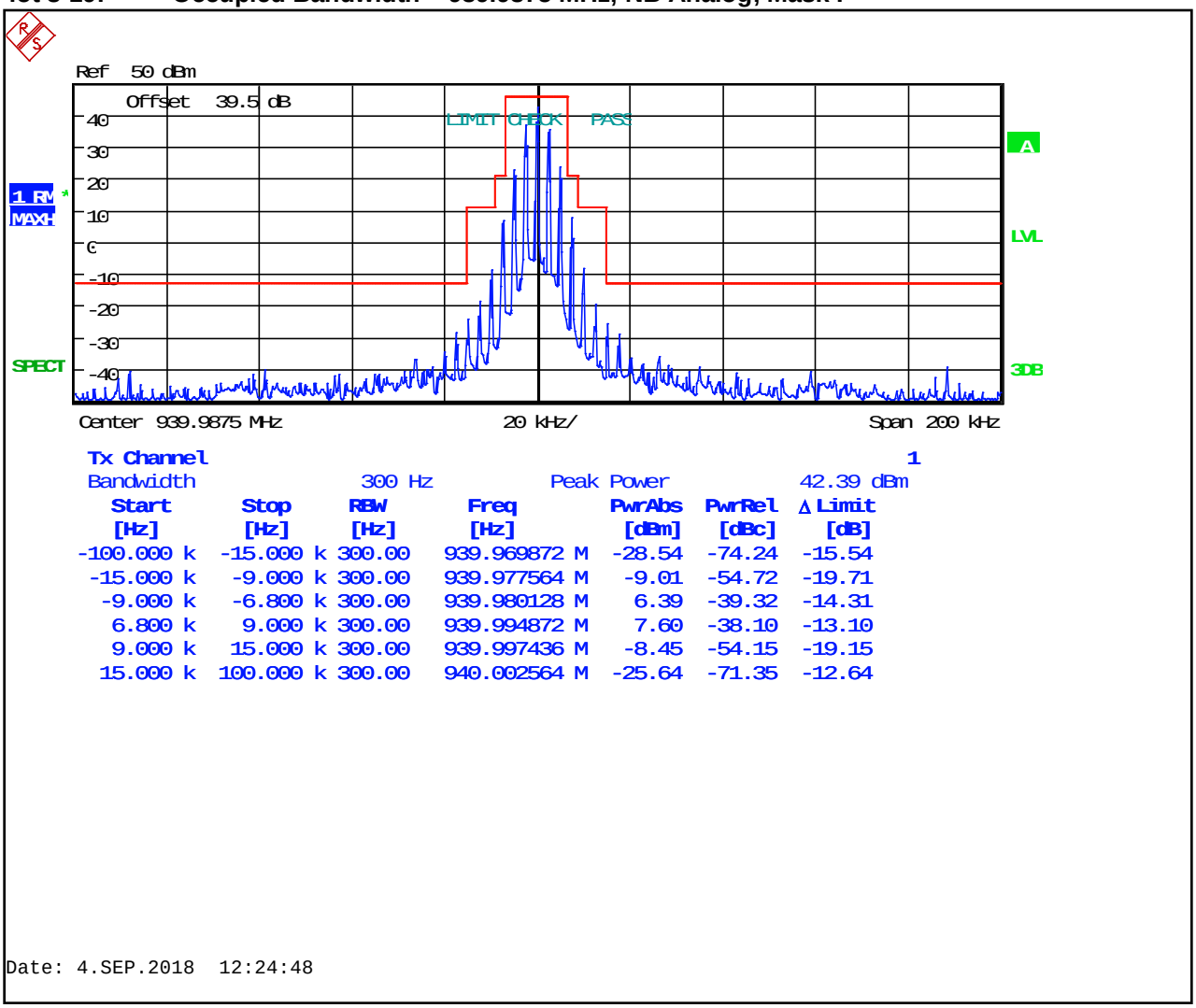
Tx Channel 1

Bandwidth 300 Hz Peak Power 42.44 dBm

Start [Hz]	Stop [Hz]	RBW [Hz]	Freq [Hz]	PwrAbs [dBm]	PwrRel [dBc]	Δ Limit [dB]
-100.000 k	-15.000 k	300.00	937.482372 M	-27.96	-73.96	-14.96
-15.000 k	-9.000 k	300.00	937.490064 M	-8.64	-54.64	-19.34
-9.000 k	-6.800 k	300.00	937.492628 M	5.88	-40.12	-14.82
6.800 k	9.000 k	300.00	937.507372 M	7.41	-38.60	-13.29
9.000 k	15.000 k	300.00	937.509936 M	-7.46	-53.47	-18.16
15.000 k	100.000 k	300.00	937.515064 M	-24.17	-70.17	-11.17

Date: 4.SEP.2018 12:23:36

Plot 8-19: Occupied Bandwidth – 939.9875 MHz; NB Analog; Mask I



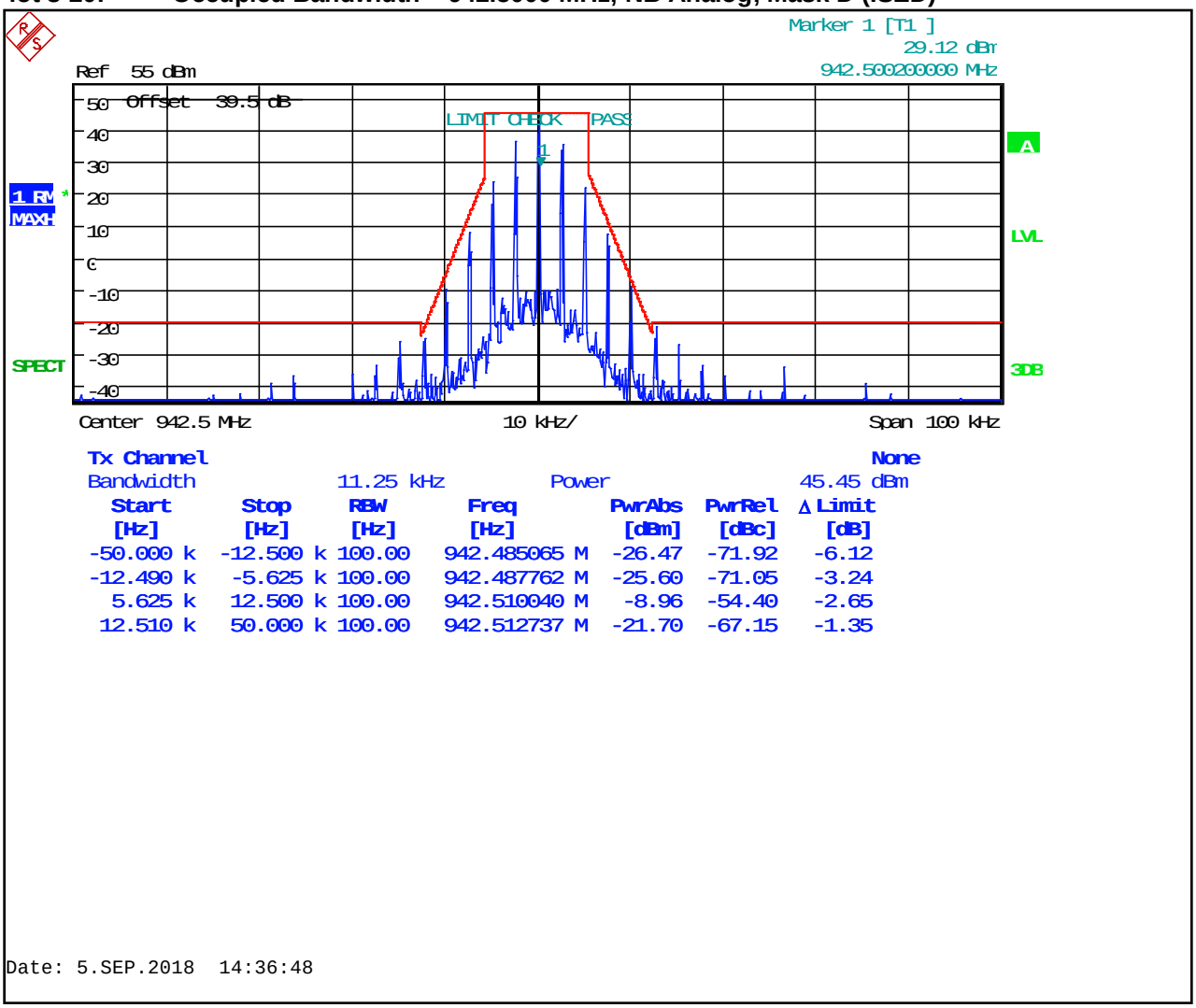
Tx Channel 1

Bandwidth 300 Hz Peak Power 42.39 dBm

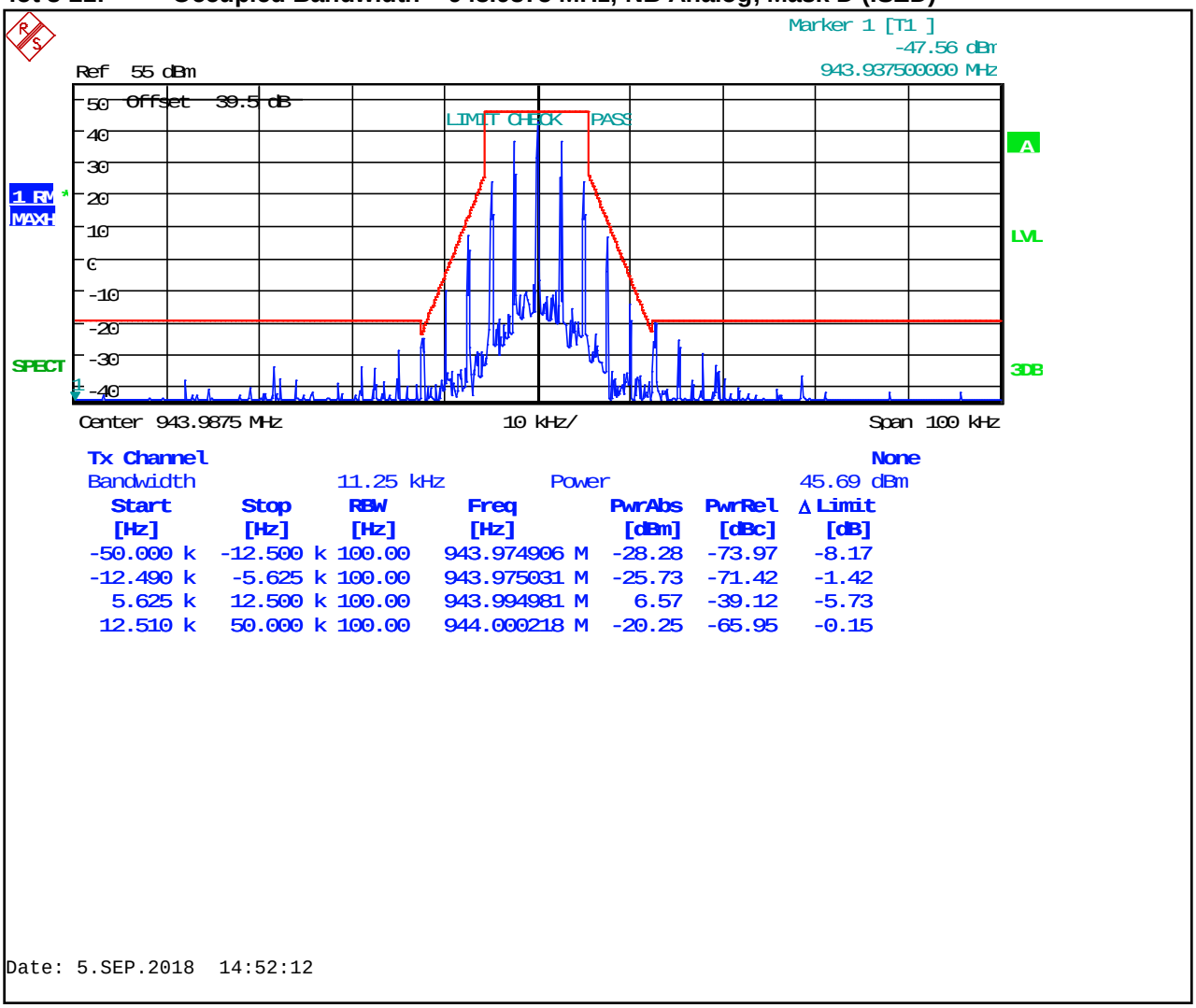
Start [Hz]	Stop [Hz]	RBW [Hz]	Freq [Hz]	PwrAbs [dBm]	PwrRel [dBc]	Δ Limit [dB]
-100.000 k	-15.000 k	300.00	939.969872 M	-28.54	-74.24	-15.54
-15.000 k	-9.000 k	300.00	939.977564 M	-9.01	-54.72	-19.71
-9.000 k	-6.800 k	300.00	939.980128 M	6.39	-39.32	-14.31
6.800 k	9.000 k	300.00	939.994872 M	7.60	-38.10	-13.10
9.000 k	15.000 k	300.00	939.997436 M	-8.45	-54.15	-19.15
15.000 k	100.000 k	300.00	940.002564 M	-25.64	-71.35	-12.64

Date: 4.SEP.2018 12:24:48

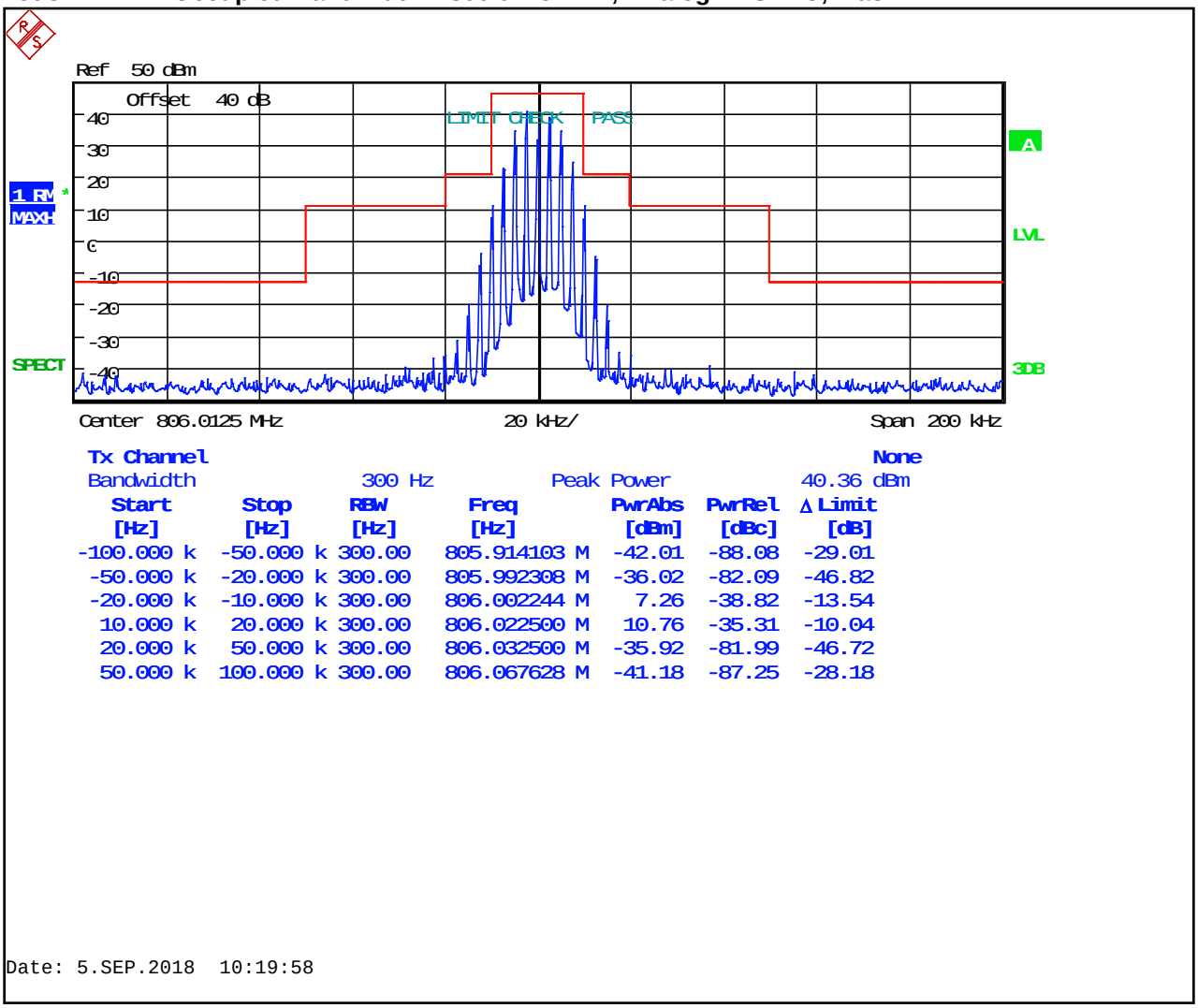
Plot 8-20: Occupied Bandwidth – 942.5000 MHz; NB Analog; Mask D (ISED)



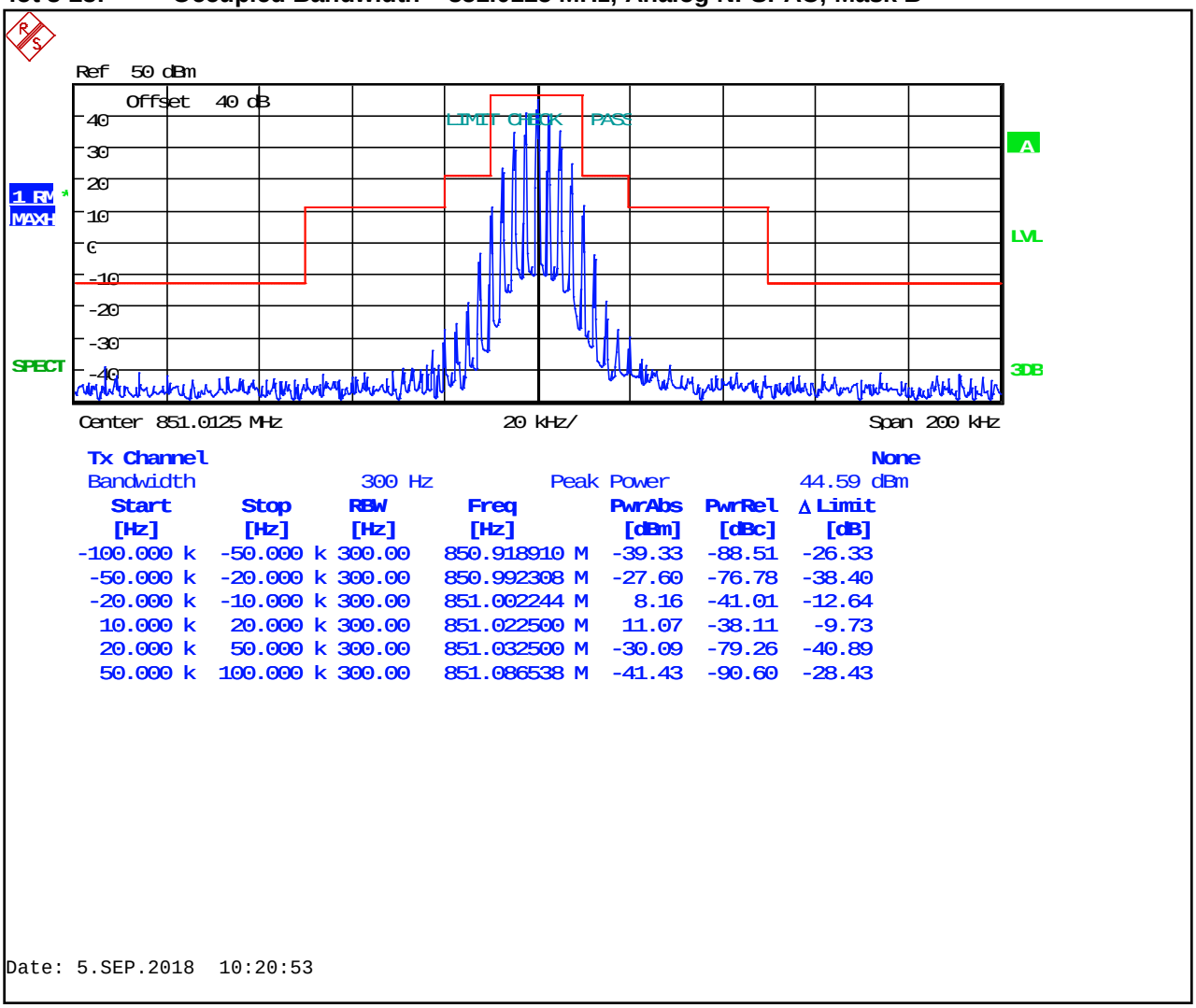
Plot 8-21: Occupied Bandwidth – 943.9875 MHz; NB Analog; Mask D (ISED)



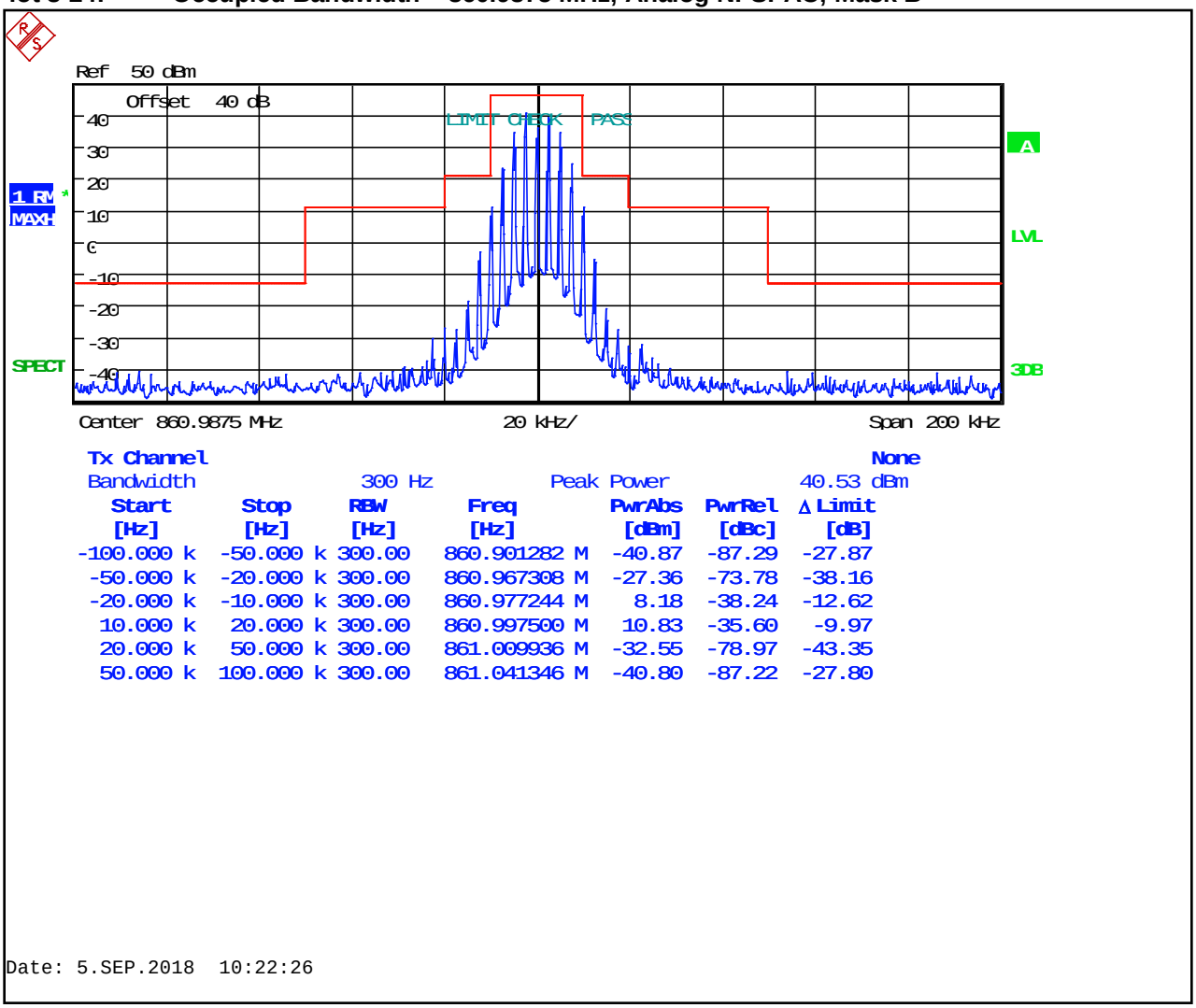
Plot 8-22: Occupied Bandwidth – 806.0125 MHz; Analog NPSPAC; Mask B



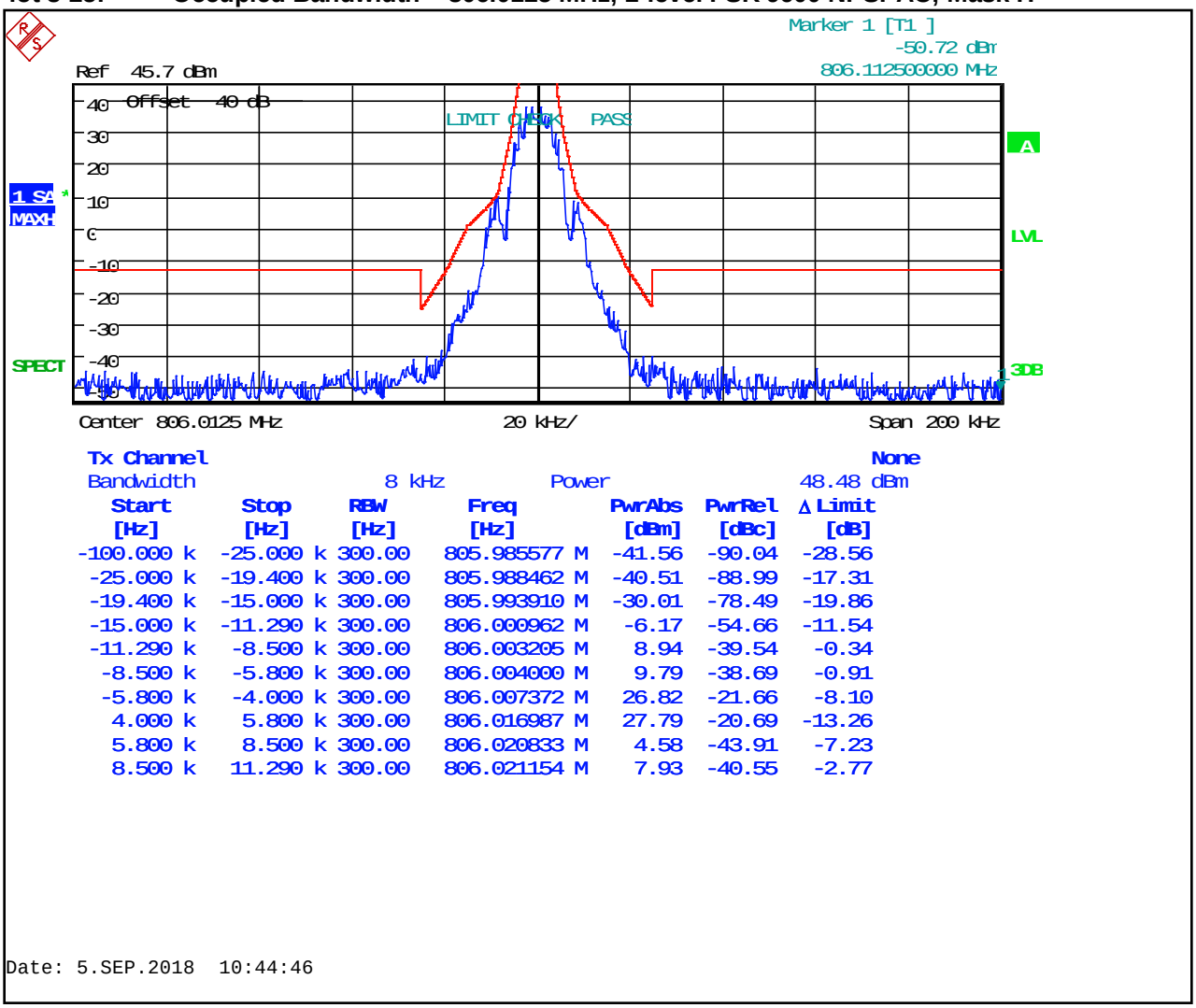
Plot 8-23: Occupied Bandwidth – 851.0125 MHz; Analog NPSPAC; Mask B



Plot 8-24: Occupied Bandwidth – 860.9875 MHz; Analog NPSPAC; Mask B



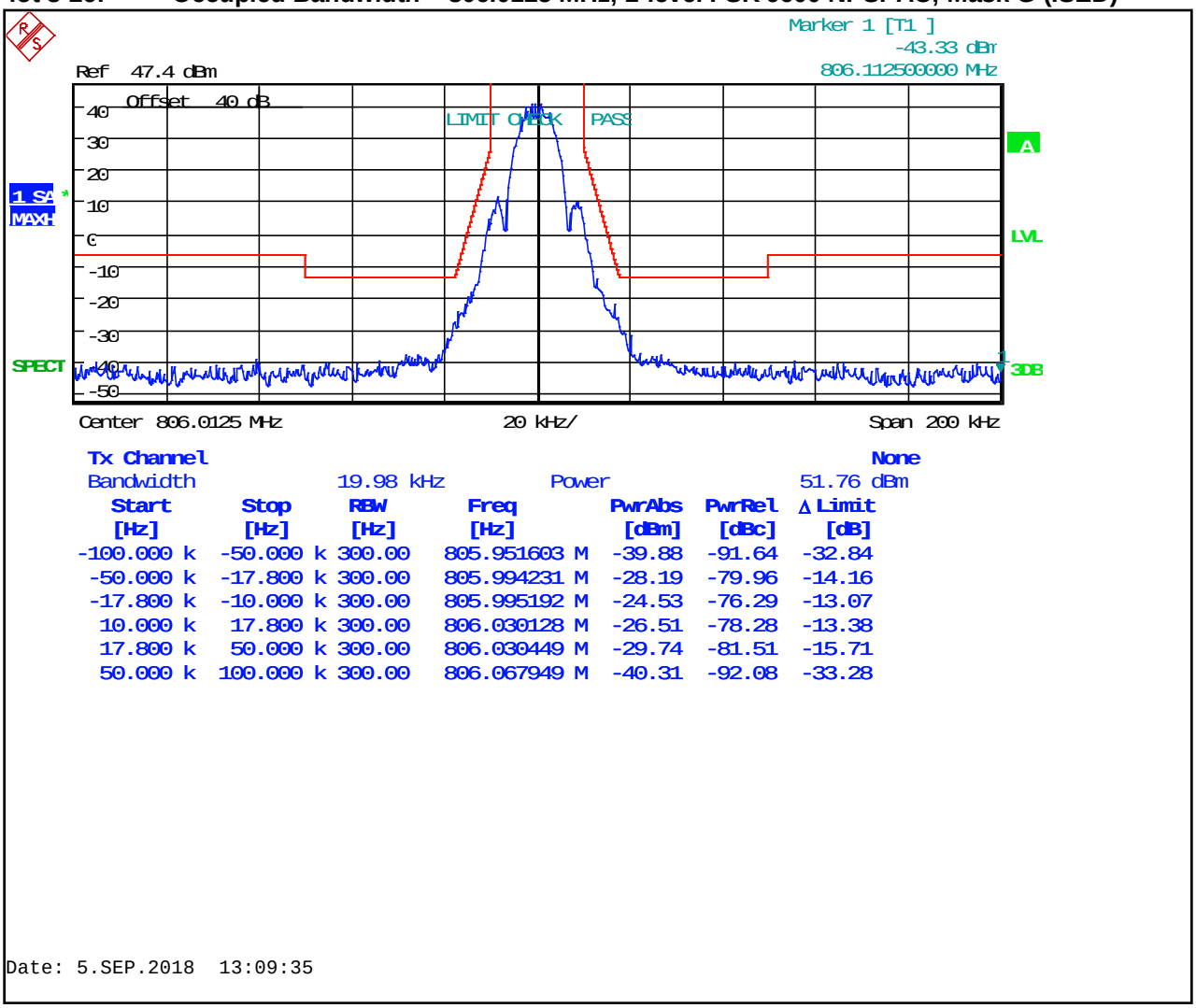
Plot 8-25: Occupied Bandwidth – 806.0125 MHz; 2-level FSK 9600 NPSPAC; Mask H



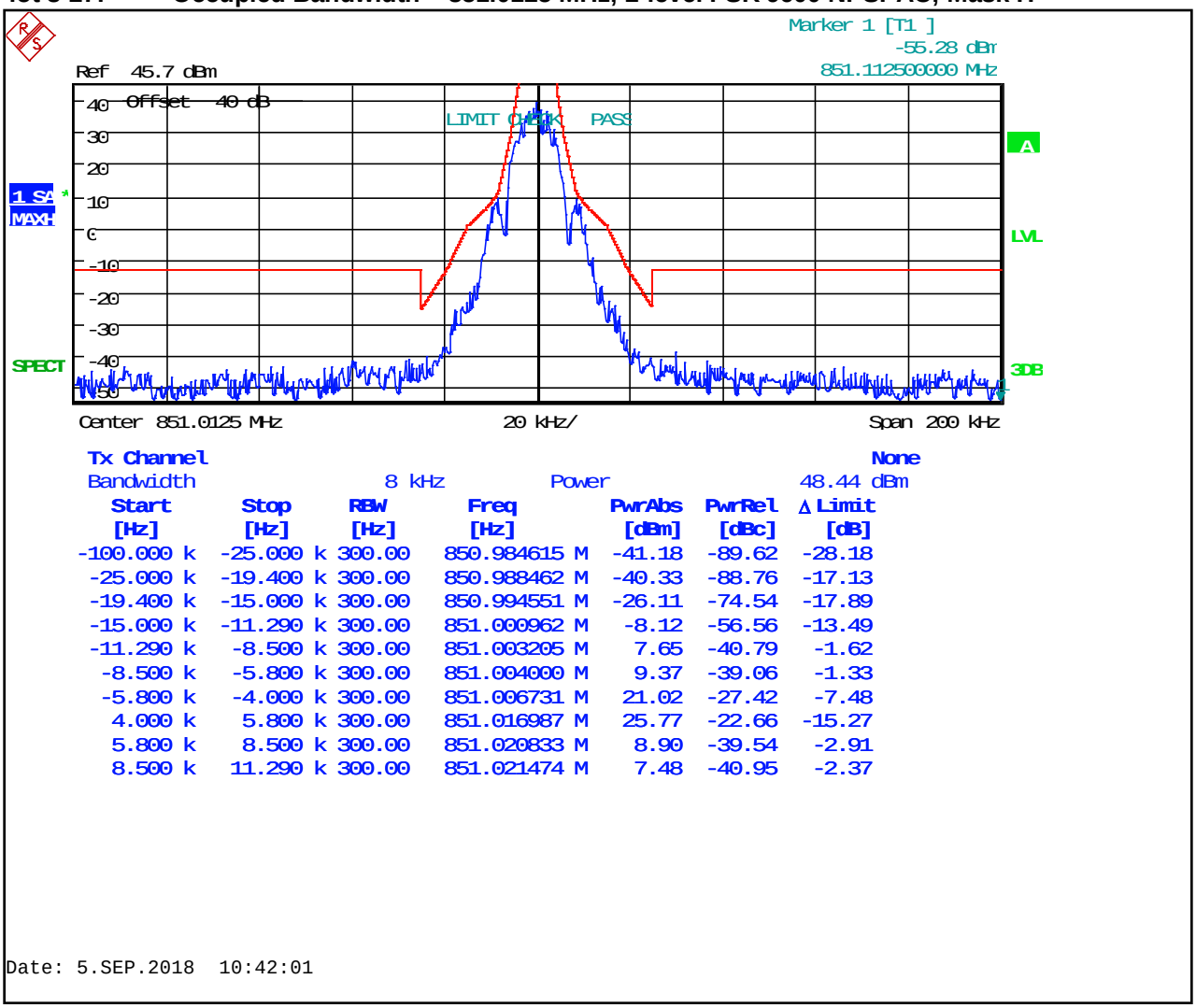
Tx Channel						None
Bandwidth		8 kHz	Power			48.48 dBm
Start [Hz]	Stop [Hz]	RBW [Hz]	Freq [Hz]	PwrAbs [dBm]	PwrRel [dBc]	Δ Limit [dB]
-100.000 k	-25.000 k	300.00	805.985577 M	-41.56	-90.04	-28.56
-25.000 k	-19.400 k	300.00	805.988462 M	-40.51	-88.99	-17.31
-19.400 k	-15.000 k	300.00	805.993910 M	-30.01	-78.49	-19.86
-15.000 k	-11.290 k	300.00	806.000962 M	-6.17	-54.66	-11.54
-11.290 k	-8.500 k	300.00	806.003205 M	8.94	-39.54	-0.34
-8.500 k	-5.800 k	300.00	806.004000 M	9.79	-38.69	-0.91
-5.800 k	-4.000 k	300.00	806.007372 M	26.82	-21.66	-8.10
4.000 k	5.800 k	300.00	806.016987 M	27.79	-20.69	-13.26
5.800 k	8.500 k	300.00	806.020833 M	4.58	-43.91	-7.23
8.500 k	11.290 k	300.00	806.021154 M	7.93	-40.55	-2.77

Date: 5.SEP.2018 10:44:46

Plot 8-26: Occupied Bandwidth – 806.0125 MHz; 2-level FSK 9600 NPSPAC; Mask G (ISED)



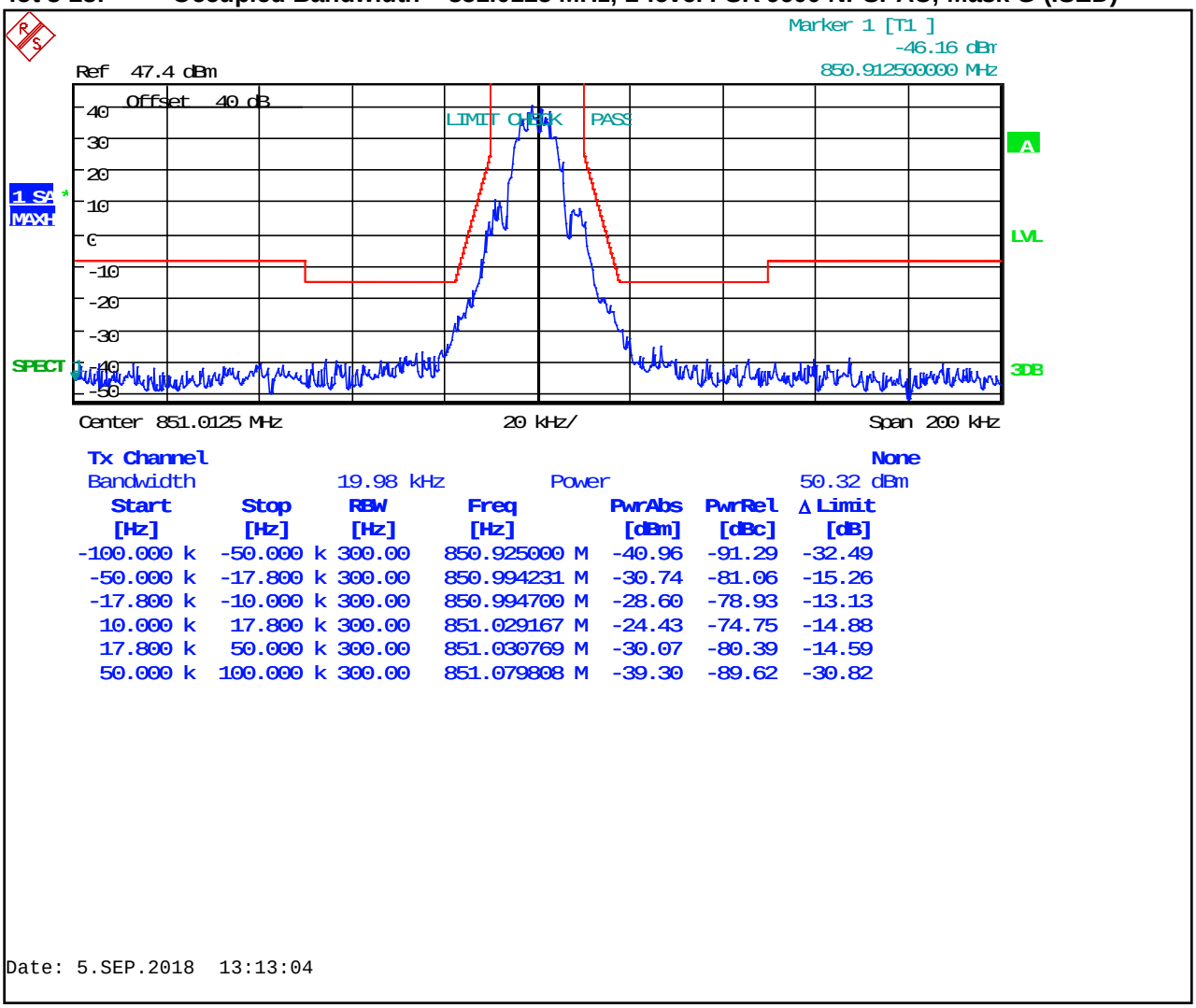
Plot 8-27: Occupied Bandwidth – 851.0125 MHz; 2-level FSK 9600 NPSPAC; Mask H



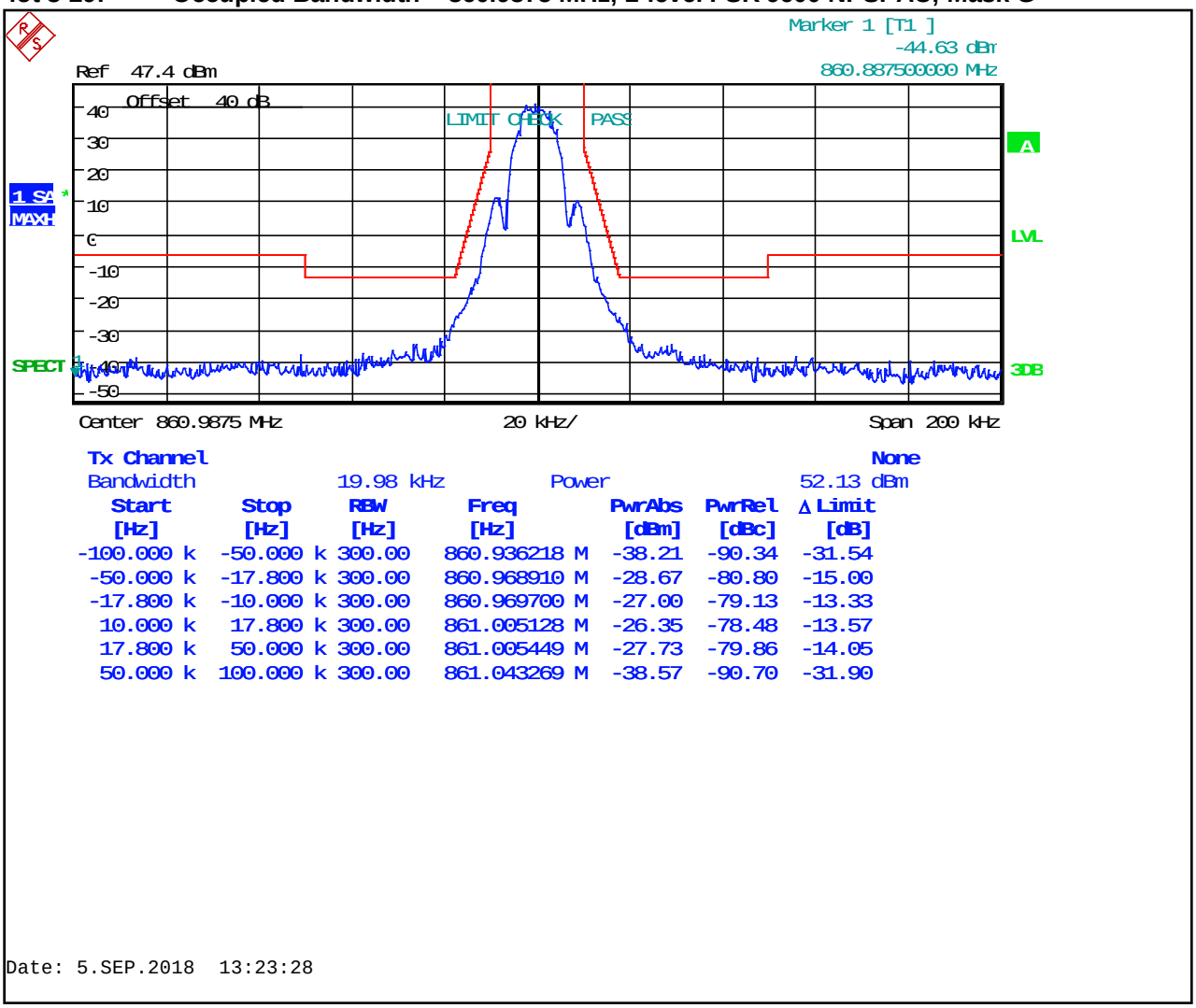
Tx Channel						None
Bandwidth		8 kHz	Power			48.44 dBm
Start [Hz]	Stop [Hz]	RBW [Hz]	Freq [Hz]	PwrAbs [dBm]	PwrRel [dBc]	Δ Limit [dB]
-100.000 k	-25.000 k	300.00	850.984615 M	-41.18	-89.62	-28.18
-25.000 k	-19.400 k	300.00	850.988462 M	-40.33	-88.76	-17.13
-19.400 k	-15.000 k	300.00	850.994551 M	-26.11	-74.54	-17.89
-15.000 k	-11.290 k	300.00	851.000962 M	-8.12	-56.56	-13.49
-11.290 k	-8.500 k	300.00	851.003205 M	7.65	-40.79	-1.62
-8.500 k	-5.800 k	300.00	851.004000 M	9.37	-39.06	-1.33
-5.800 k	-4.000 k	300.00	851.006731 M	21.02	-27.42	-7.48
4.000 k	5.800 k	300.00	851.016987 M	25.77	-22.66	-15.27
5.800 k	8.500 k	300.00	851.020833 M	8.90	-39.54	-2.91
8.500 k	11.290 k	300.00	851.021474 M	7.48	-40.95	-2.37

Date: 5.SEP.2018 10:42:01

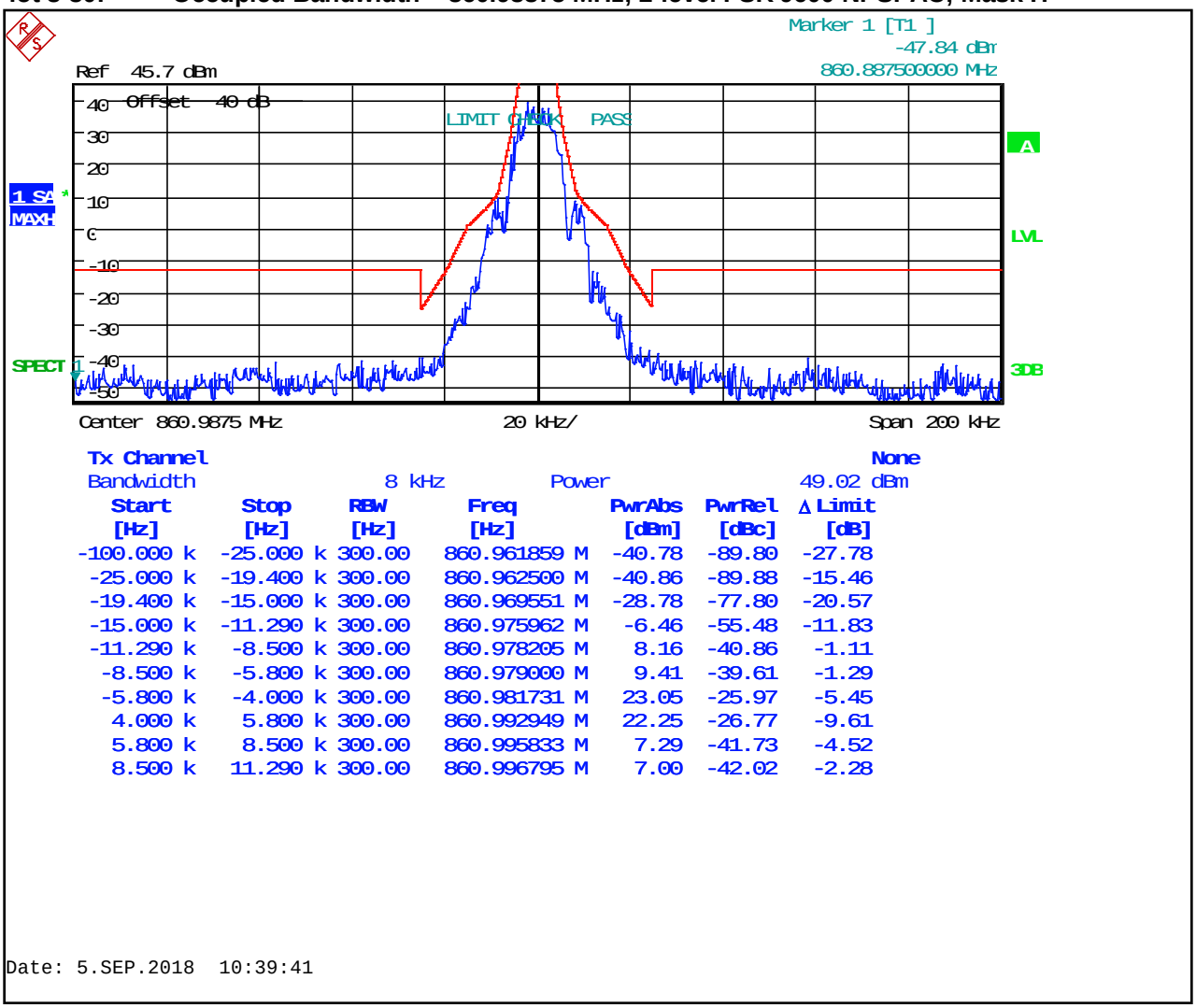
Plot 8-28: Occupied Bandwidth – 851.0125 MHz; 2-level FSK 9600 NPSPAC; Mask G (ISED)



Plot 8-29: Occupied Bandwidth – 860.9875 MHz; 2-level FSK 9600 NPSPAC; Mask G



Plot 8-30: Occupied Bandwidth – 860.98875 MHz; 2-level FSK 9600 NPSPAC; Mask H

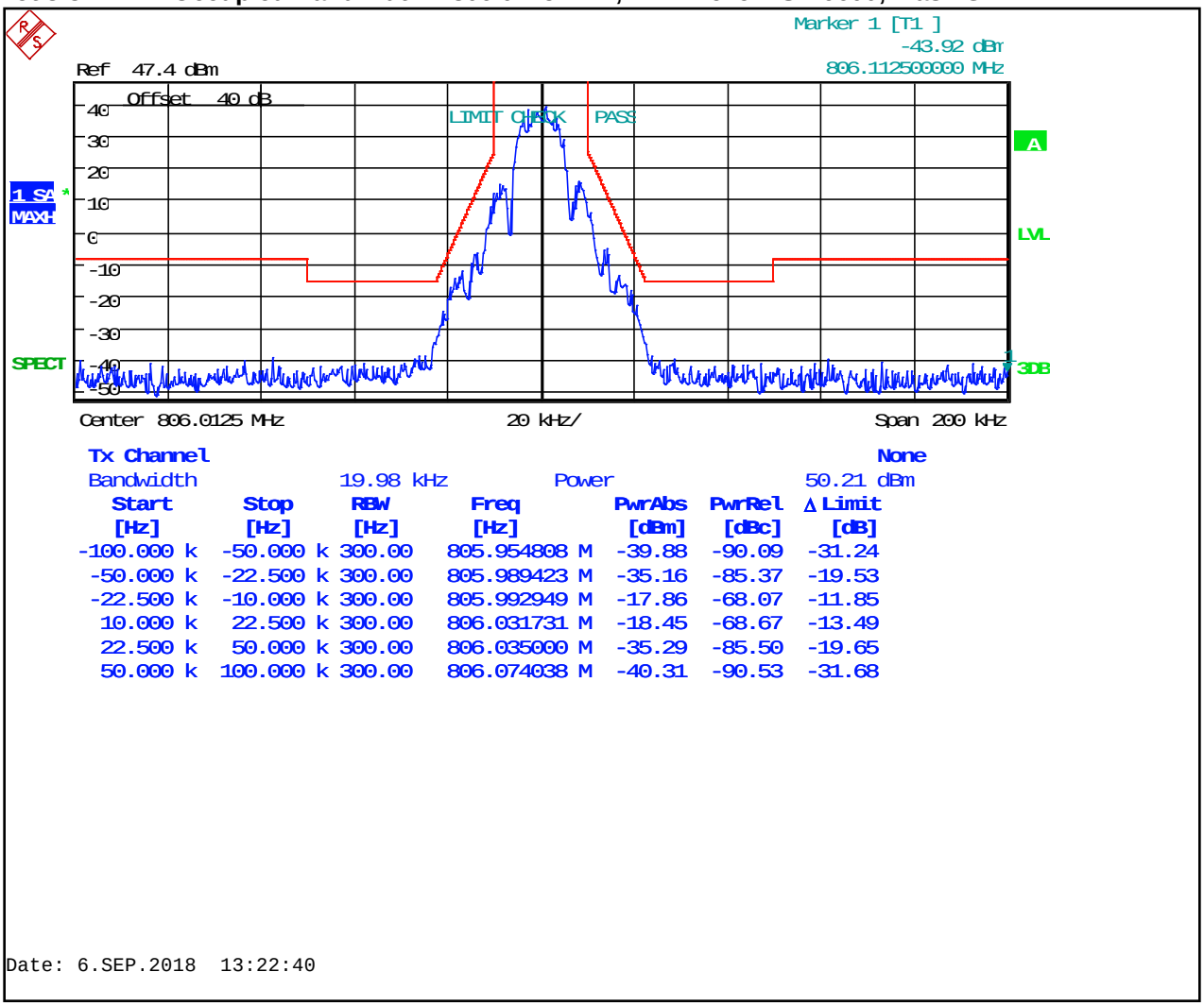


Tx Channel None
Bandwidth 8 kHz Power 49.02 dBm

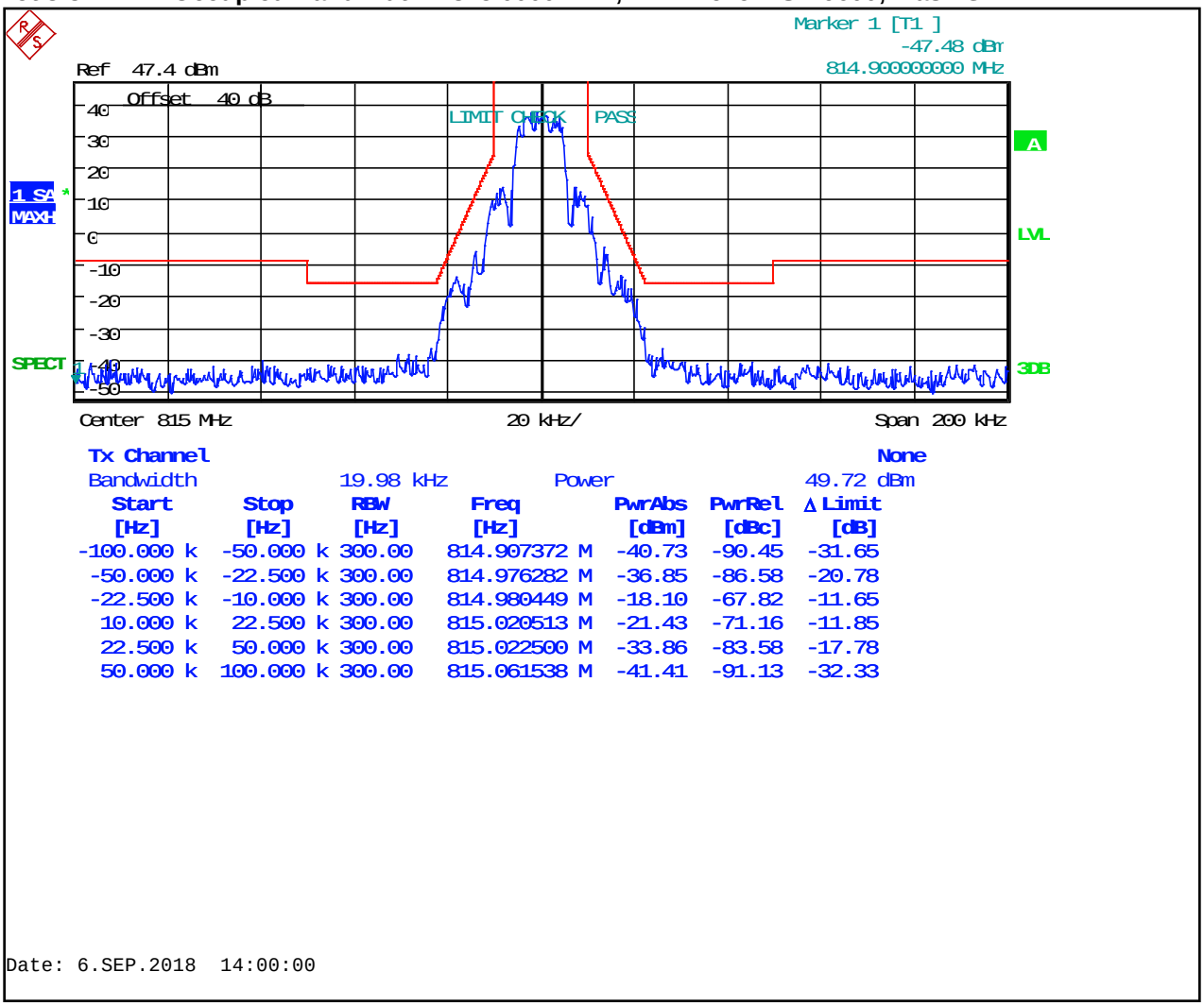
Start [Hz]	Stop [Hz]	RBW [Hz]	Freq [Hz]	PwrAbs [dBm]	PwrRel [dBc]	Δ Limit [dB]
-100.000 k	-25.000 k	300.00	860.961859 M	-40.78	-89.80	-27.78
-25.000 k	-19.400 k	300.00	860.962500 M	-40.86	-89.88	-15.46
-19.400 k	-15.000 k	300.00	860.969551 M	-28.78	-77.80	-20.57
-15.000 k	-11.290 k	300.00	860.975962 M	-6.46	-55.48	-11.83
-11.290 k	-8.500 k	300.00	860.978205 M	8.16	-40.86	-1.11
-8.500 k	-5.800 k	300.00	860.979000 M	9.41	-39.61	-1.29
-5.800 k	-4.000 k	300.00	860.981731 M	23.05	-25.97	-5.45
4.000 k	5.800 k	300.00	860.992949 M	22.25	-26.77	-9.61
5.800 k	8.500 k	300.00	860.995833 M	7.29	-41.73	-4.52
8.500 k	11.290 k	300.00	860.996795 M	7.00	-42.02	-2.28

Date: 5.SEP.2018 10:39:41

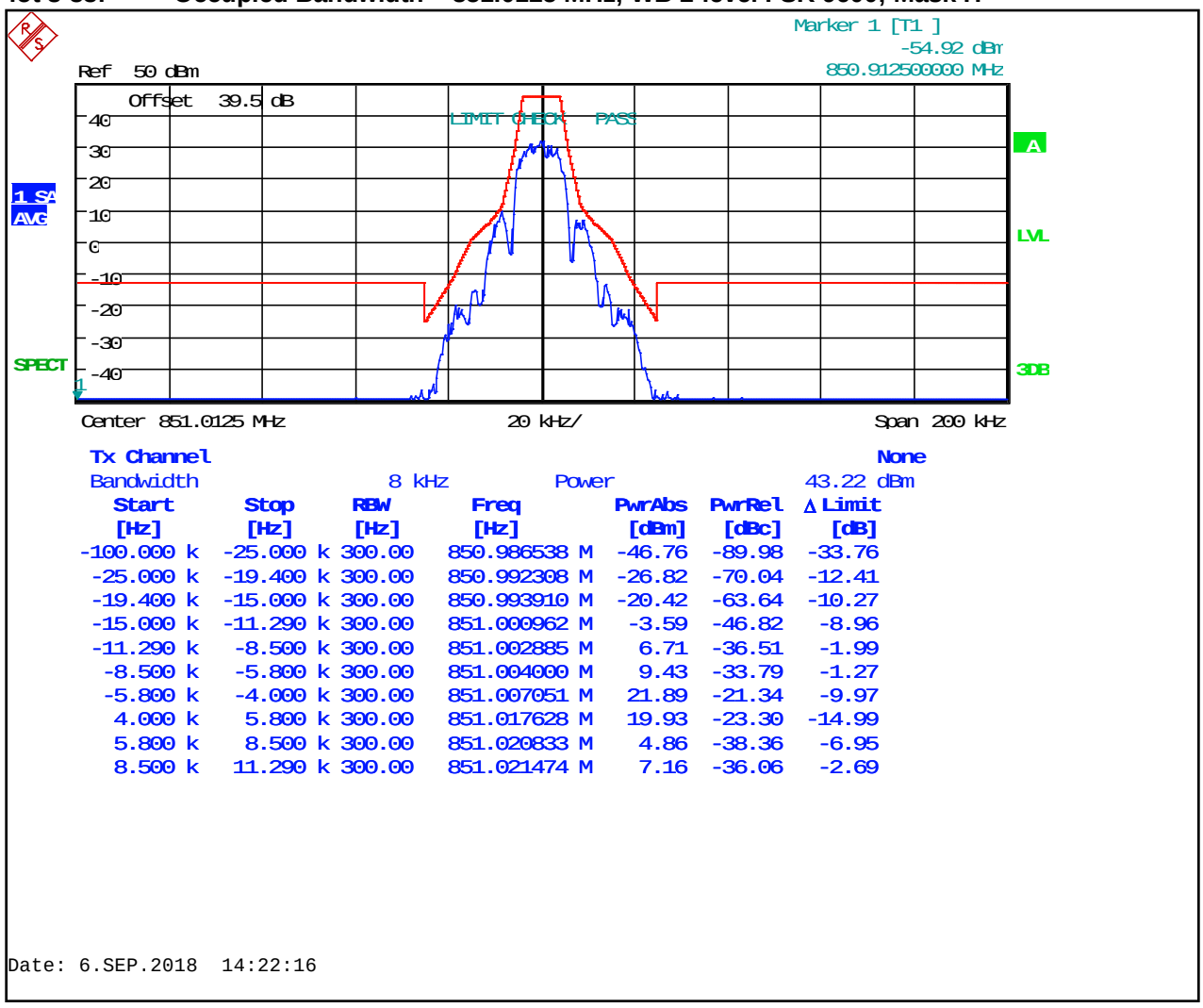
Plot 8-31: Occupied Bandwidth – 806.0125 MHz; WB 2-level FSK 9600; Mask G



Plot 8-32: Occupied Bandwidth – 815.0000 MHz; WB 2-level FSK 9600; Mask G



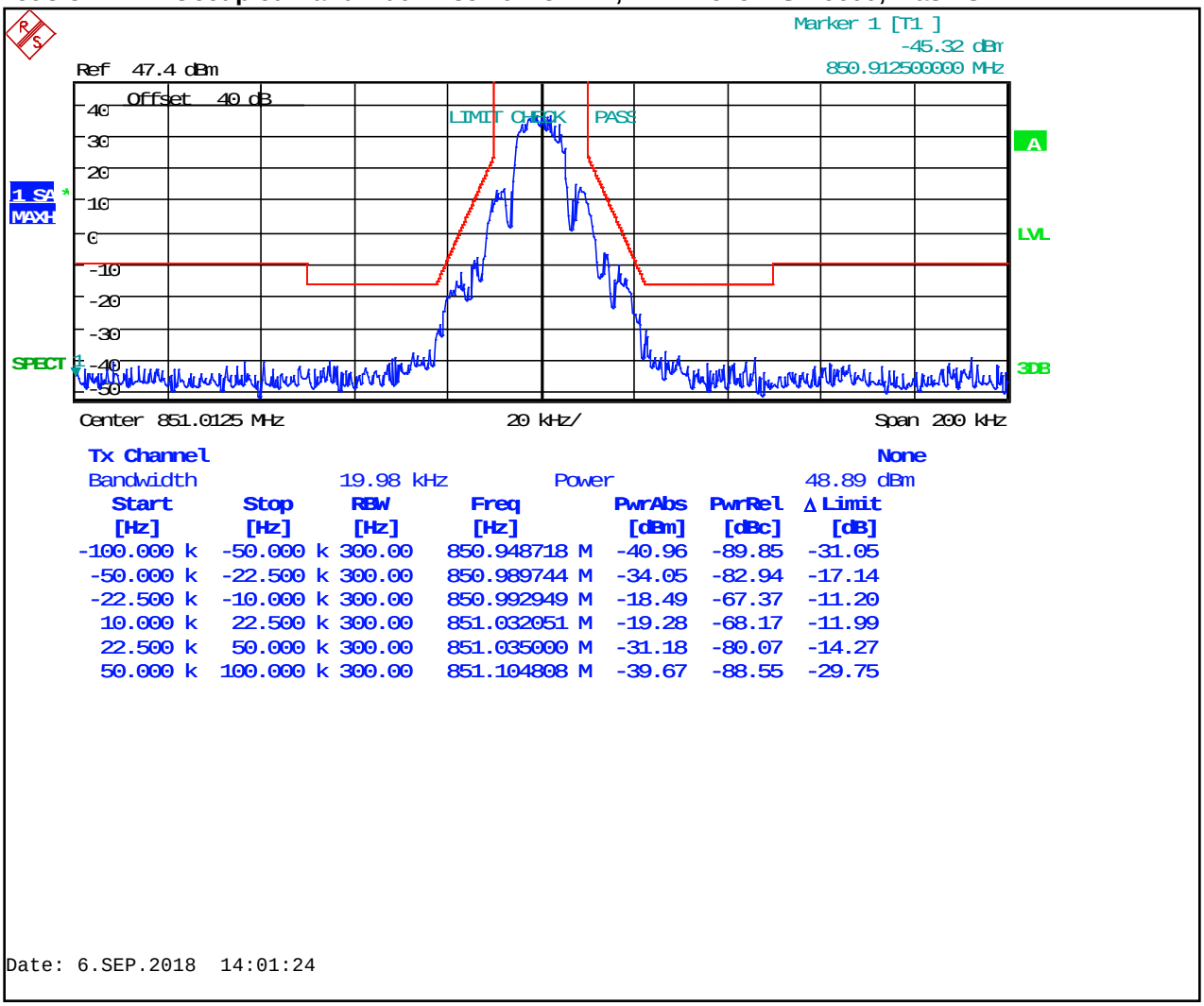
Plot 8-33: Occupied Bandwidth – 851.0125 MHz; WB 2-level FSK 9600; Mask H



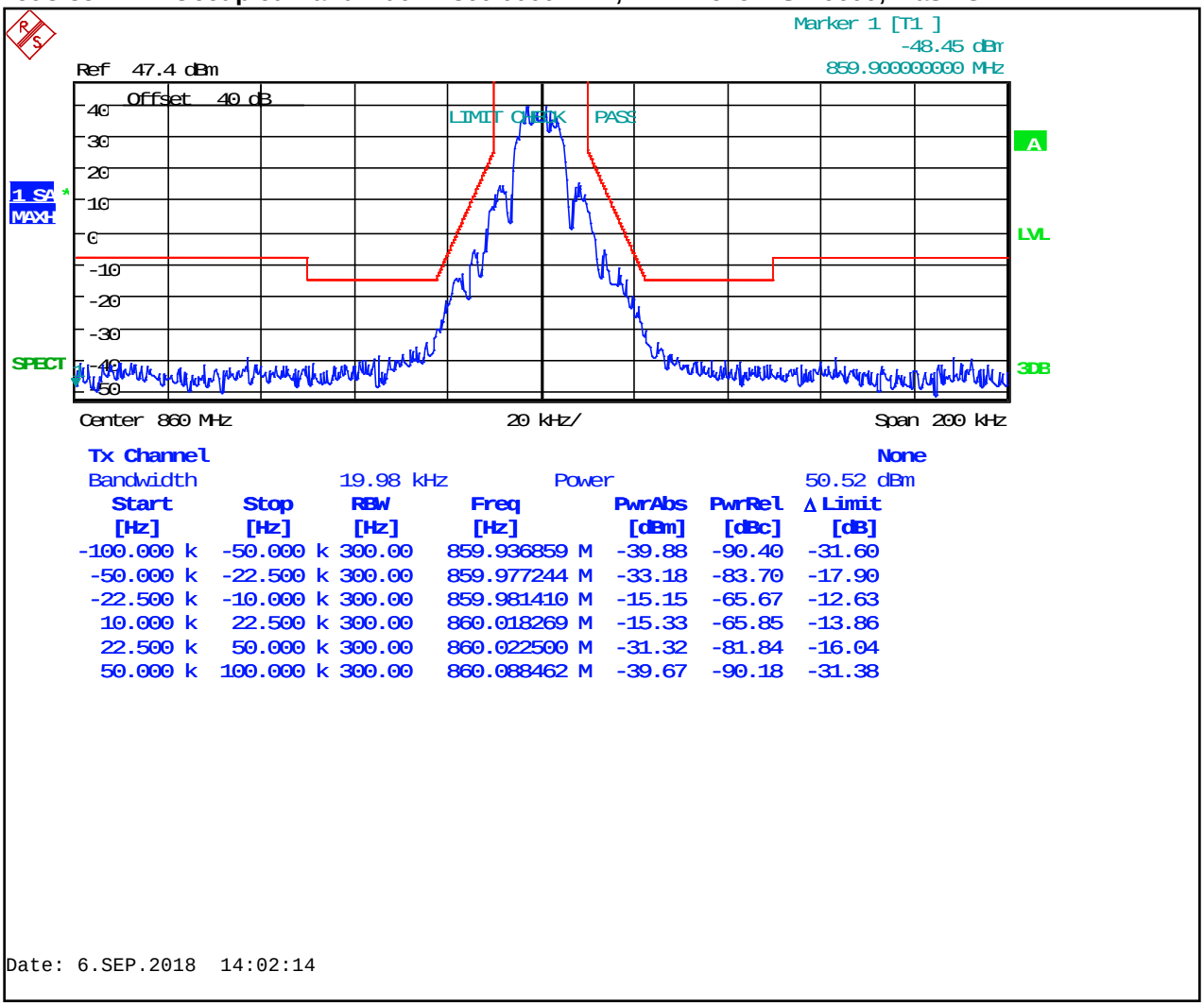
Tx Channel						**None**
Bandwidth		8 kHz	Power			43.22 dBm
Start [Hz]	**Stop [Hz]**	**RBW [Hz]**	**Freq [Hz]**	**PwrAbs [dBm]**	**PwrRel [dBc]**	**Δ Limit [dB]**
-100.000 k	-25.000 k	300.00	850.986538 M	-46.76	-89.98	-33.76
-25.000 k	-19.400 k	300.00	850.992308 M	-26.82	-70.04	-12.41
-19.400 k	-15.000 k	300.00	850.993910 M	-20.42	-63.64	-10.27
-15.000 k	-11.290 k	300.00	851.000962 M	-3.59	-46.82	-8.96
-11.290 k	-8.500 k	300.00	851.002885 M	6.71	-36.51	-1.99
-8.500 k	-5.800 k	300.00	851.004000 M	9.43	-33.79	-1.27
-5.800 k	-4.000 k	300.00	851.007051 M	21.89	-21.34	-9.97
4.000 k	5.800 k	300.00	851.017628 M	19.93	-23.30	-14.99
5.800 k	8.500 k	300.00	851.020833 M	4.86	-38.36	-6.95
8.500 k	11.290 k	300.00	851.021474 M	7.16	-36.06	-2.69

Date: 6.SEP.2018 14:22:16

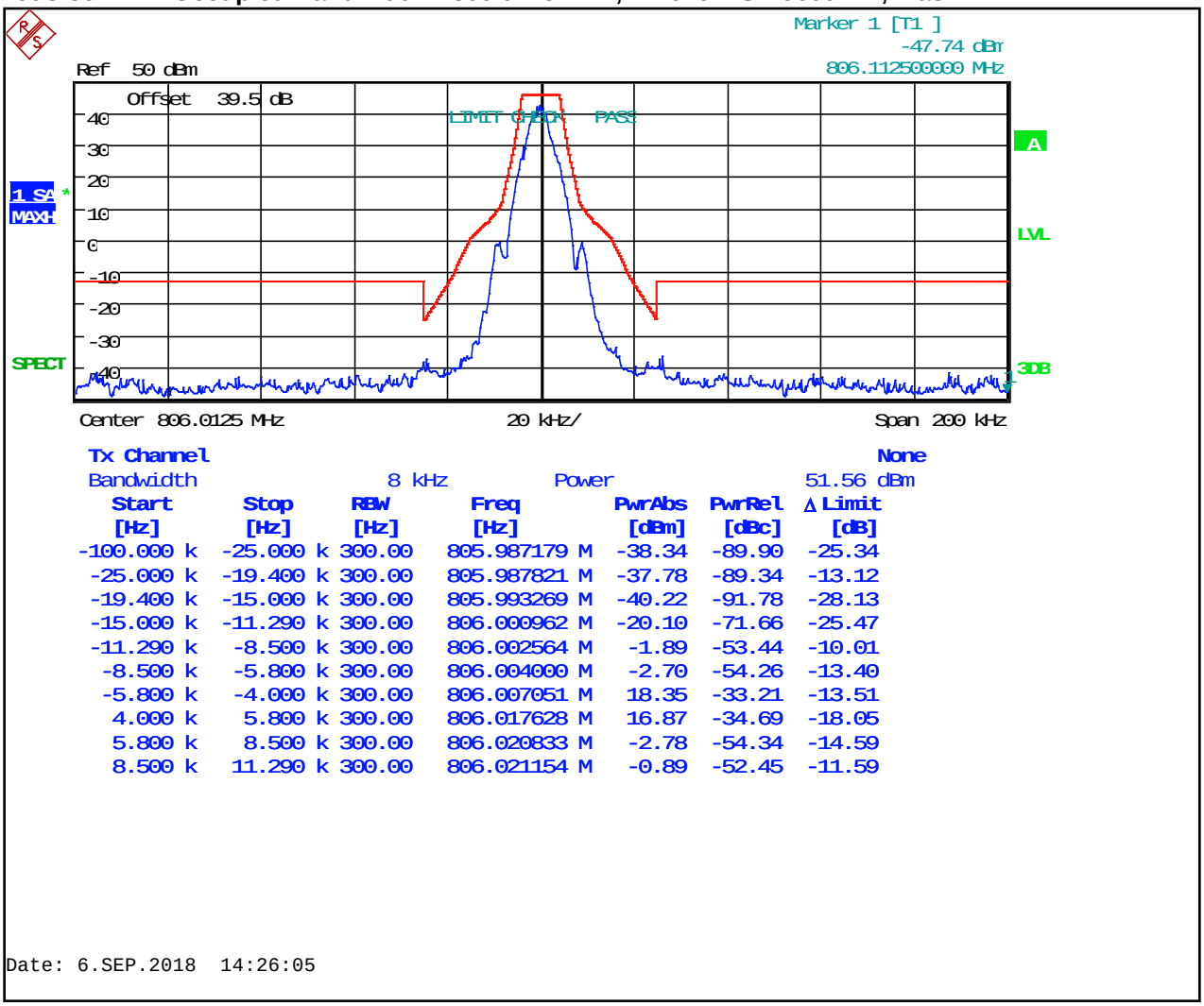
Plot 8-34: Occupied Bandwidth – 851.0125 MHz; WB 2-level FSK 9600; Mask G



Plot 8-35: Occupied Bandwidth – 860.0000 MHz; WB 2-level FSK 9600; Mask G



Plot 8-36: Occupied Bandwidth – 806.0125 MHz; 2-Level FSK 9600 NB; Mask H

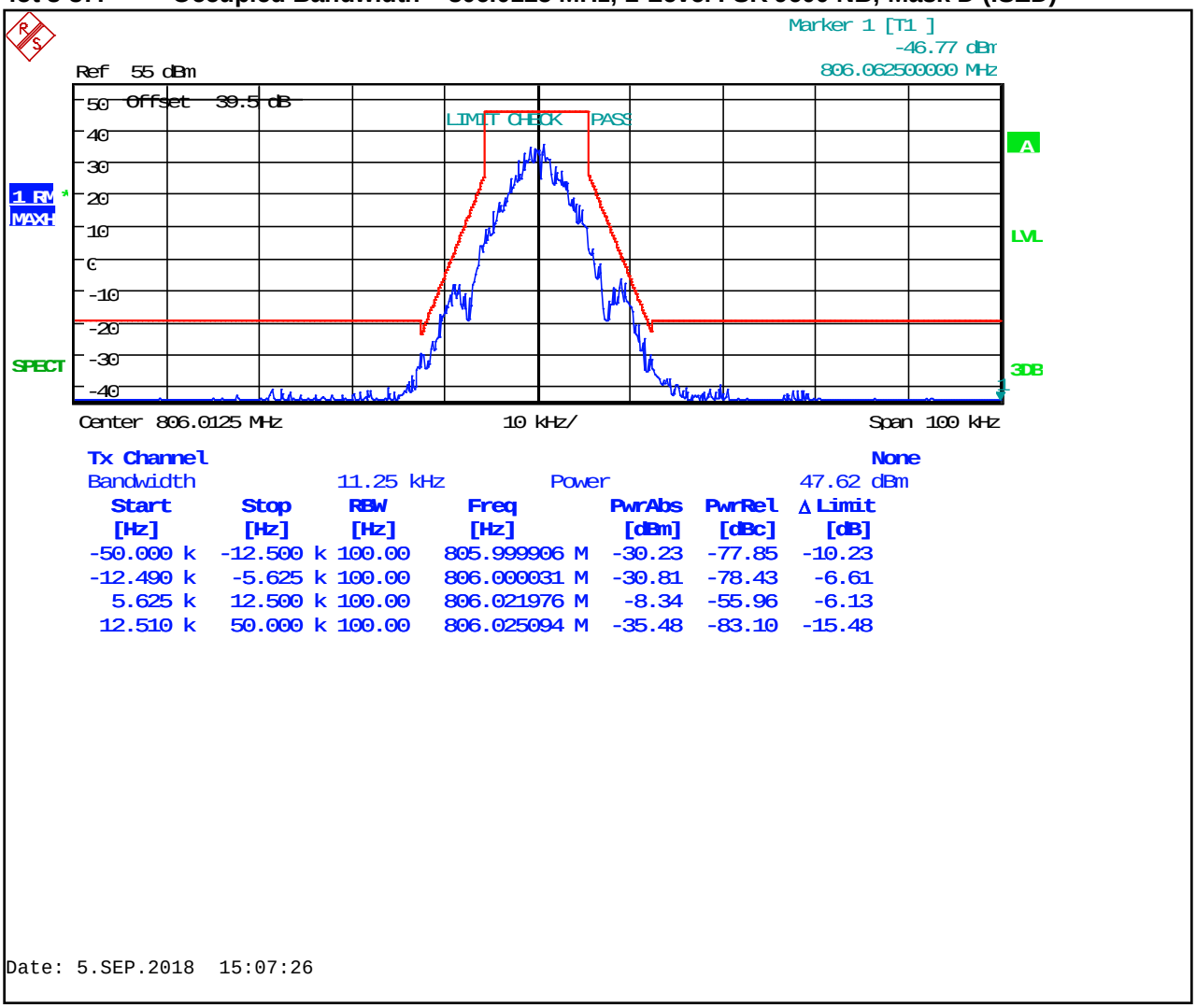


Tx Channel **None**
Bandwidth 8 kHz Power 51.56 dBm

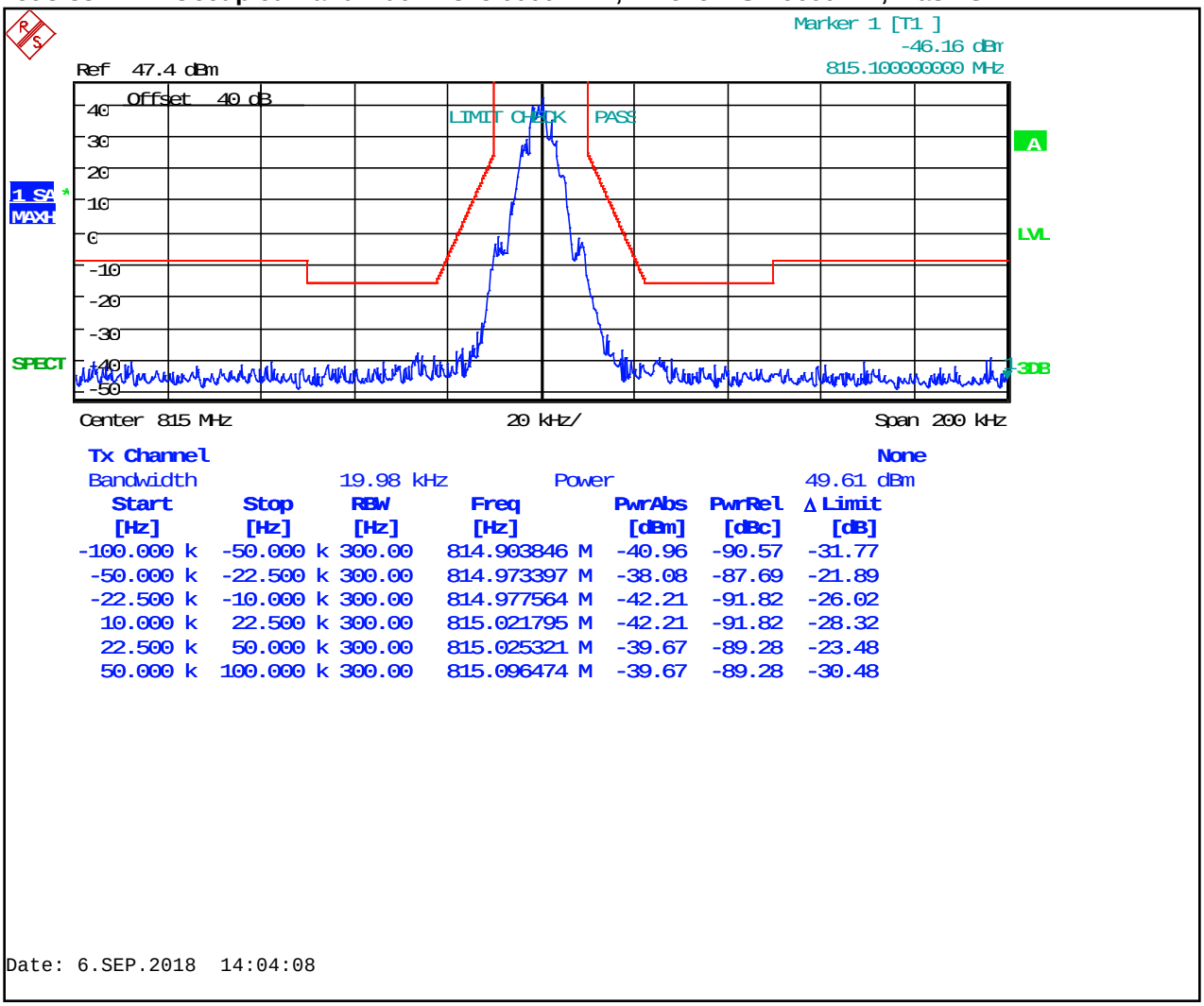
Start [Hz]	Stop [Hz]	RBW [Hz]	Freq [Hz]	PwrAbs [dBm]	PwrRel [dBc]	Δ Limit [dB]
-100.000 k	-25.000 k	300.00	805.987179 M	-38.34	-89.90	-25.34
-25.000 k	-19.400 k	300.00	805.987821 M	-37.78	-89.34	-13.12
-19.400 k	-15.000 k	300.00	805.993269 M	-40.22	-91.78	-28.13
-15.000 k	-11.290 k	300.00	806.000962 M	-20.10	-71.66	-25.47
-11.290 k	-8.500 k	300.00	806.002564 M	-1.89	-53.44	-10.01
-8.500 k	-5.800 k	300.00	806.004000 M	-2.70	-54.26	-13.40
-5.800 k	-4.000 k	300.00	806.007051 M	18.35	-33.21	-13.51
4.000 k	5.800 k	300.00	806.017628 M	16.87	-34.69	-18.05
5.800 k	8.500 k	300.00	806.020833 M	-2.78	-54.34	-14.59
8.500 k	11.290 k	300.00	806.021154 M	-0.89	-52.45	-11.59

Date: 6.SEP.2018 14:26:05

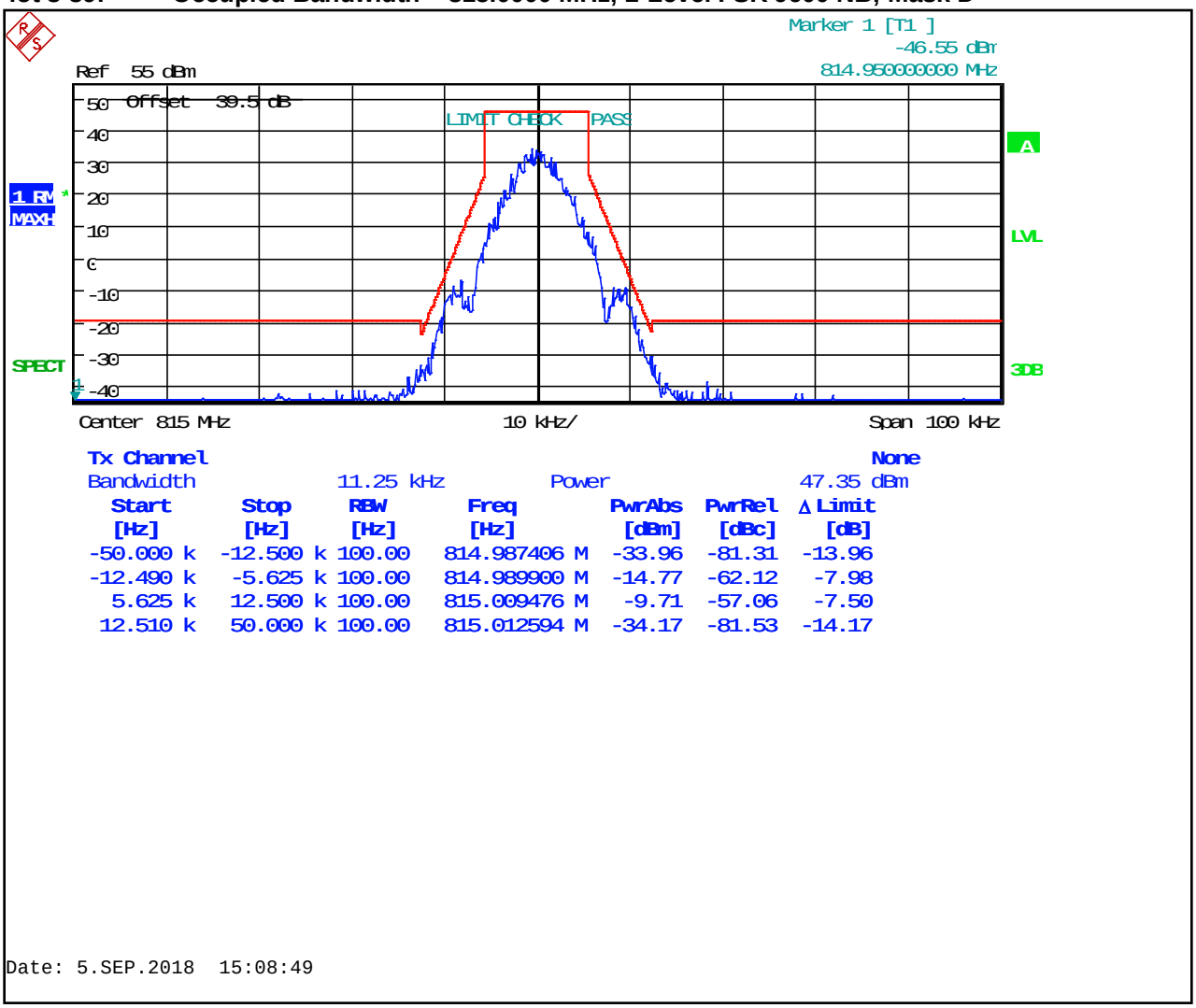
Plot 8-37: Occupied Bandwidth – 806.0125 MHz; 2-Level FSK 9600 NB; Mask D (ISED)



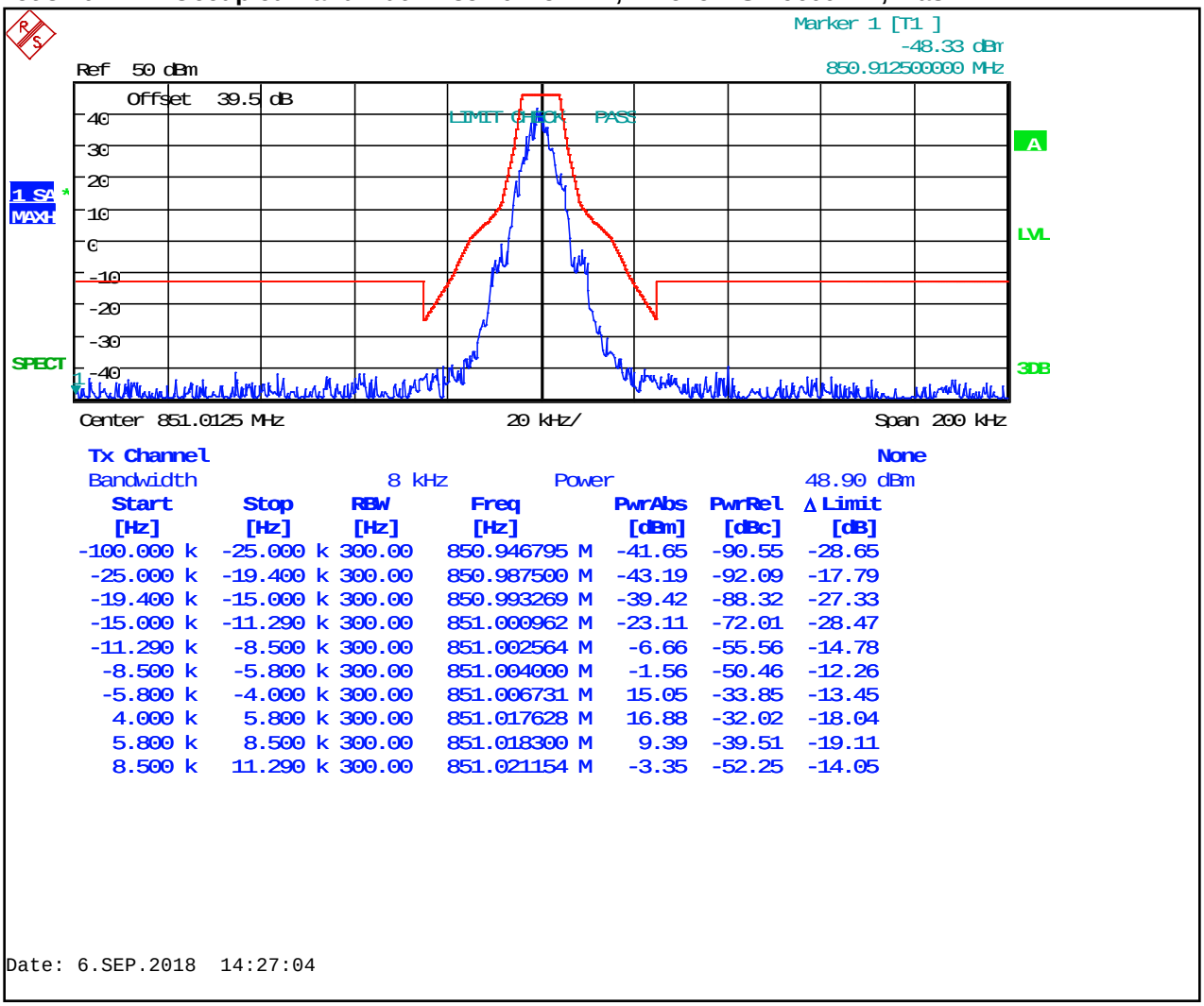
Plot 8-38: Occupied Bandwidth – 815.0000 MHz; 2-Level FSK 9600 NB; Mask G



Plot 8-39: Occupied Bandwidth – 815.0000 MHz; 2-Level FSK 9600 NB; Mask D



Plot 8-40: Occupied Bandwidth – 851.0125 MHz; 2-Level FSK 9600 NB; Mask H

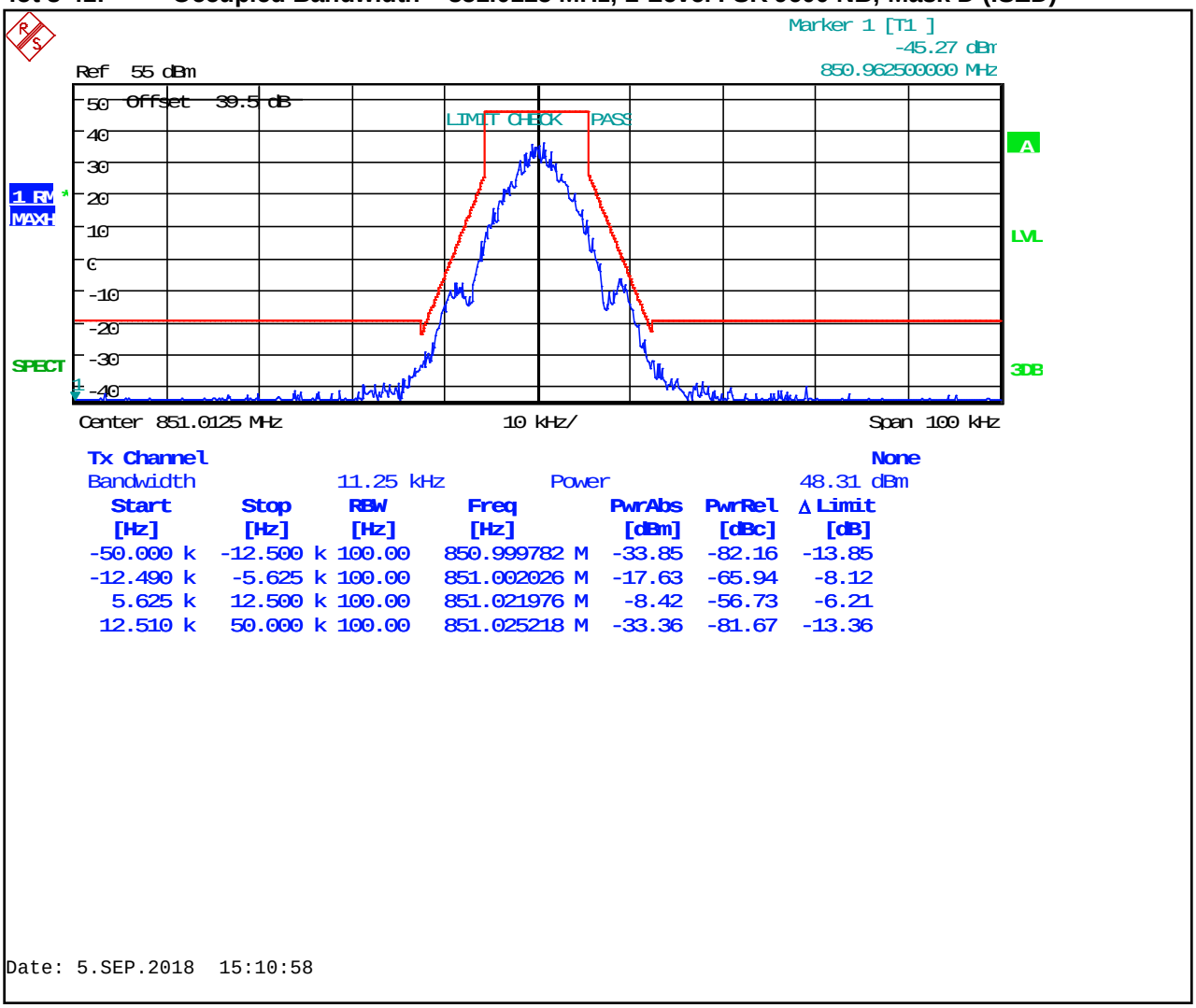


Tx Channel **None**
Bandwidth 8 kHz Power 48.90 dBm

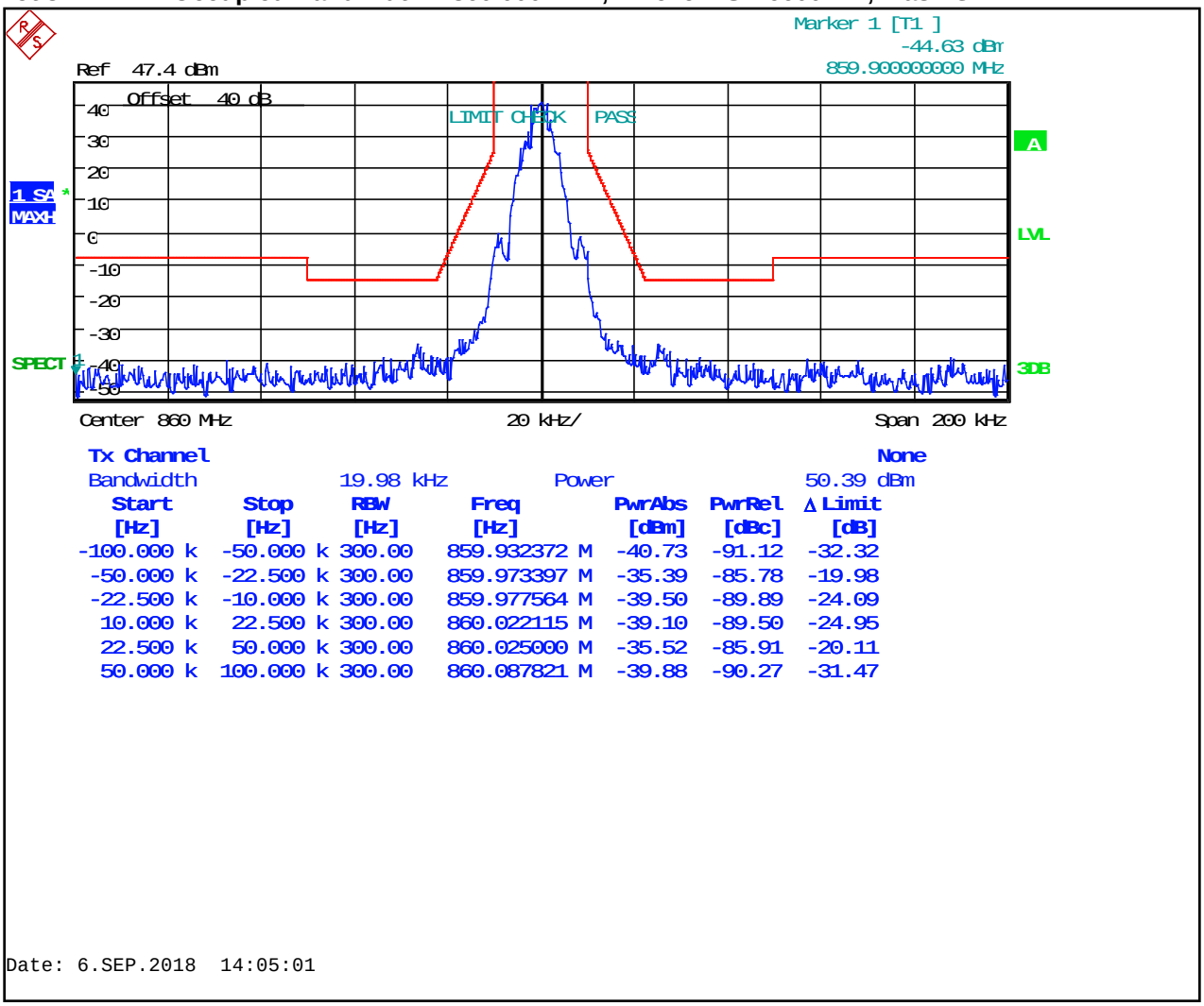
Start [Hz]	Stop [Hz]	RBW [Hz]	Freq [Hz]	PwrAbs [dBm]	PwrRel [dBc]	Δ Limit [dB]
-100.000 k	-25.000 k	300.00	850.946795 M	-41.65	-90.55	-28.65
-25.000 k	-19.400 k	300.00	850.987500 M	-43.19	-92.09	-17.79
-19.400 k	-15.000 k	300.00	850.993269 M	-39.42	-88.32	-27.33
-15.000 k	-11.290 k	300.00	851.000962 M	-23.11	-72.01	-28.47
-11.290 k	-8.500 k	300.00	851.002564 M	-6.66	-55.56	-14.78
-8.500 k	-5.800 k	300.00	851.004000 M	-1.56	-50.46	-12.26
-5.800 k	-4.000 k	300.00	851.006731 M	15.05	-33.85	-13.45
4.000 k	5.800 k	300.00	851.017628 M	16.88	-32.02	-18.04
5.800 k	8.500 k	300.00	851.018300 M	9.39	-39.51	-19.11
8.500 k	11.290 k	300.00	851.021154 M	-3.35	-52.25	-14.05

Date: 6.SEP.2018 14:27:04

Plot 8-41: Occupied Bandwidth – 851.0125 MHz; 2-Level FSK 9600 NB; Mask D (ISED)



Plot 8-42: Occupied Bandwidth – 860.000 MHz; 2-Level FSK 9600 NB; Mask G

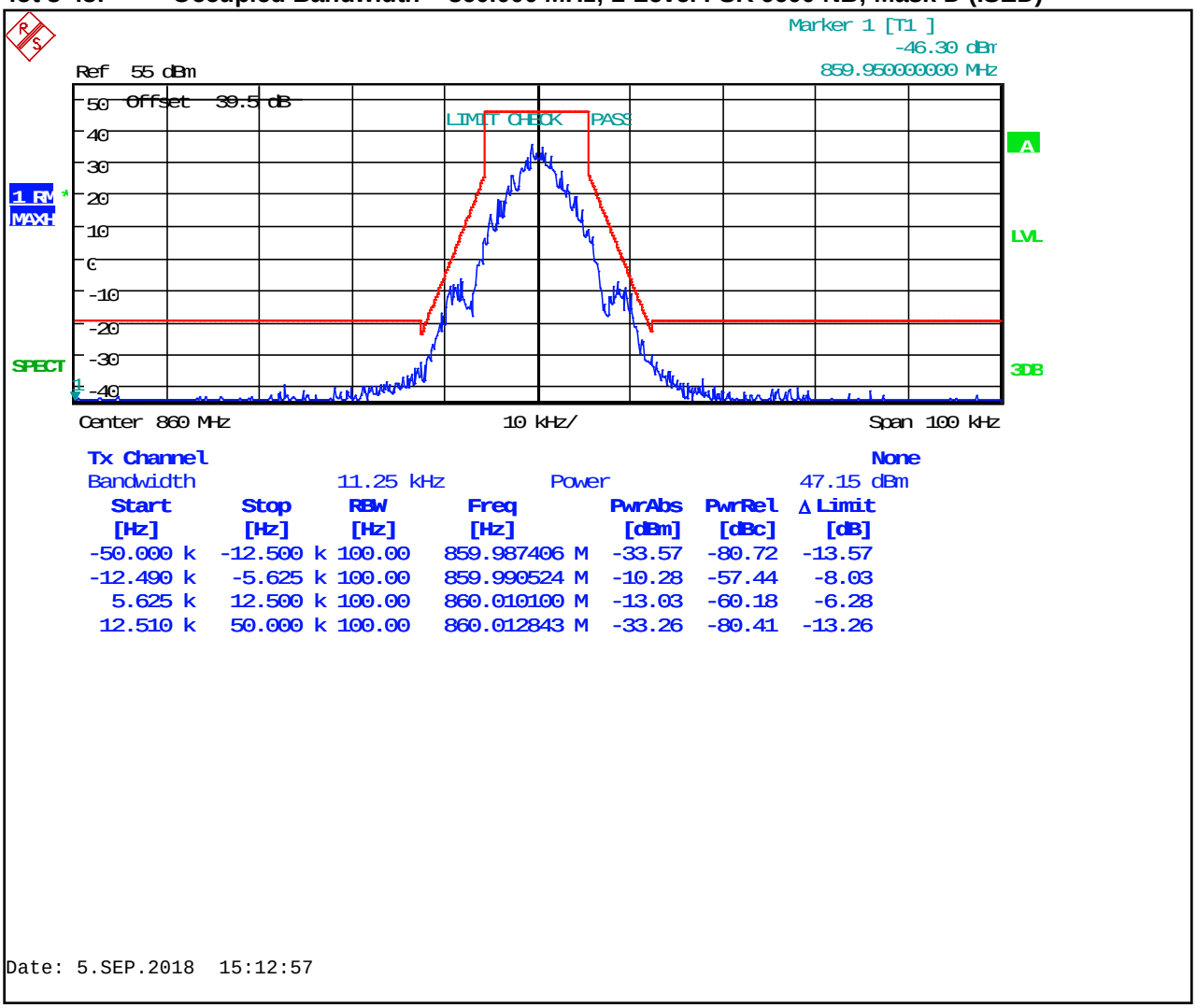


Tx Channel **None**
Bandwidth 19.98 kHz Power 50.39 dBm

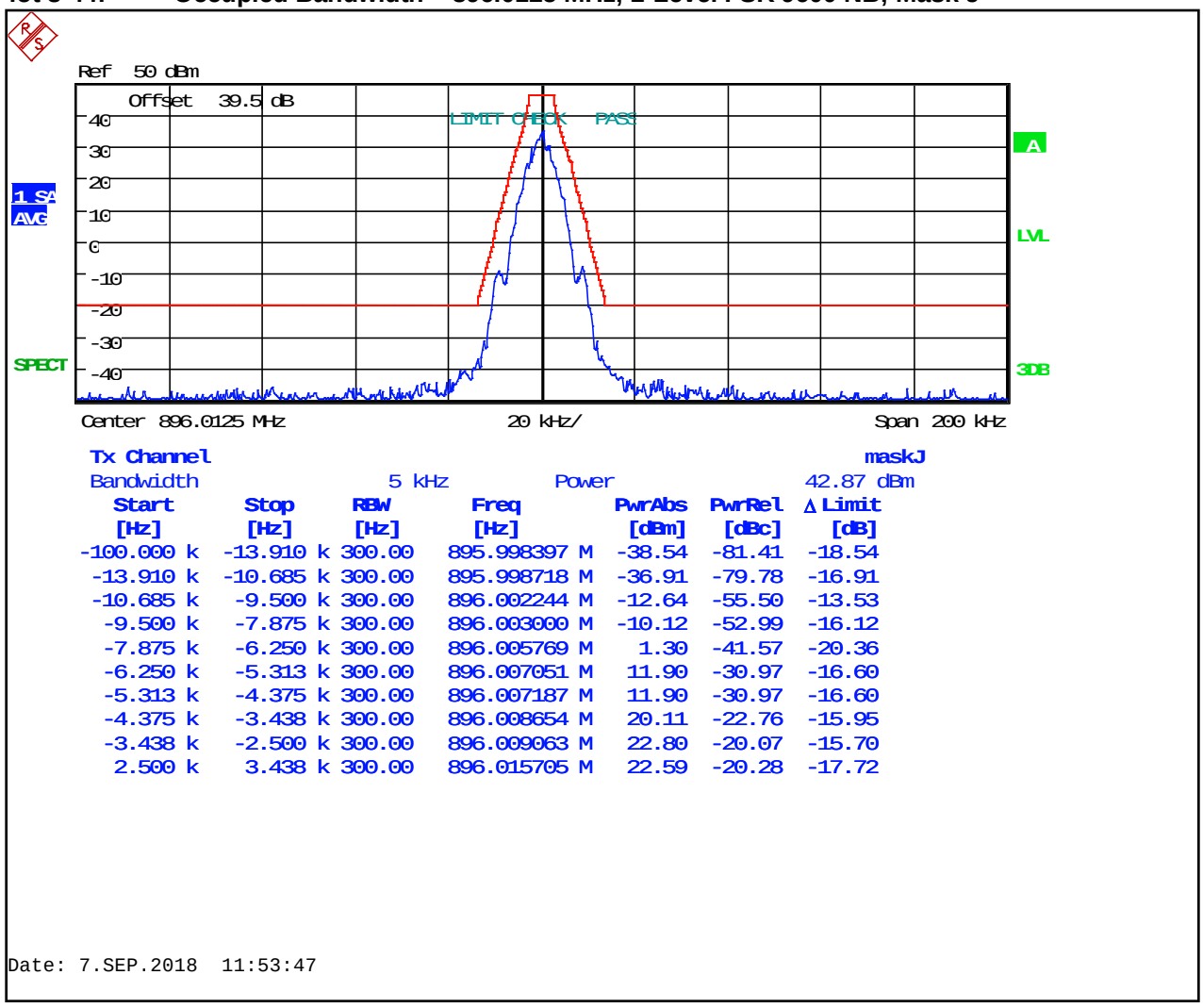
Start [Hz]	Stop [Hz]	RBW [Hz]	Freq [Hz]	PwrAbs [dBm]	PwrRel [dBc]	Δ Limit [dB]
-100.000 k	-50.000 k	300.00	859.932372 M	-40.73	-91.12	-32.32
-50.000 k	-22.500 k	300.00	859.973397 M	-35.39	-85.78	-19.98
-22.500 k	-10.000 k	300.00	859.977564 M	-39.50	-89.89	-24.09
10.000 k	22.500 k	300.00	860.022115 M	-39.10	-89.50	-24.95
22.500 k	50.000 k	300.00	860.025000 M	-35.52	-85.91	-20.11
50.000 k	100.000 k	300.00	860.087821 M	-39.88	-90.27	-31.47

Date: 6.SEP.2018 14:05:01

Plot 8-43: Occupied Bandwidth – 860.000 MHz; 2-Level FSK 9600 NB; Mask D (ISED)



Plot 8-44: Occupied Bandwidth – 896.0125 MHz; 2-Level FSK 9600 NB; Mask J



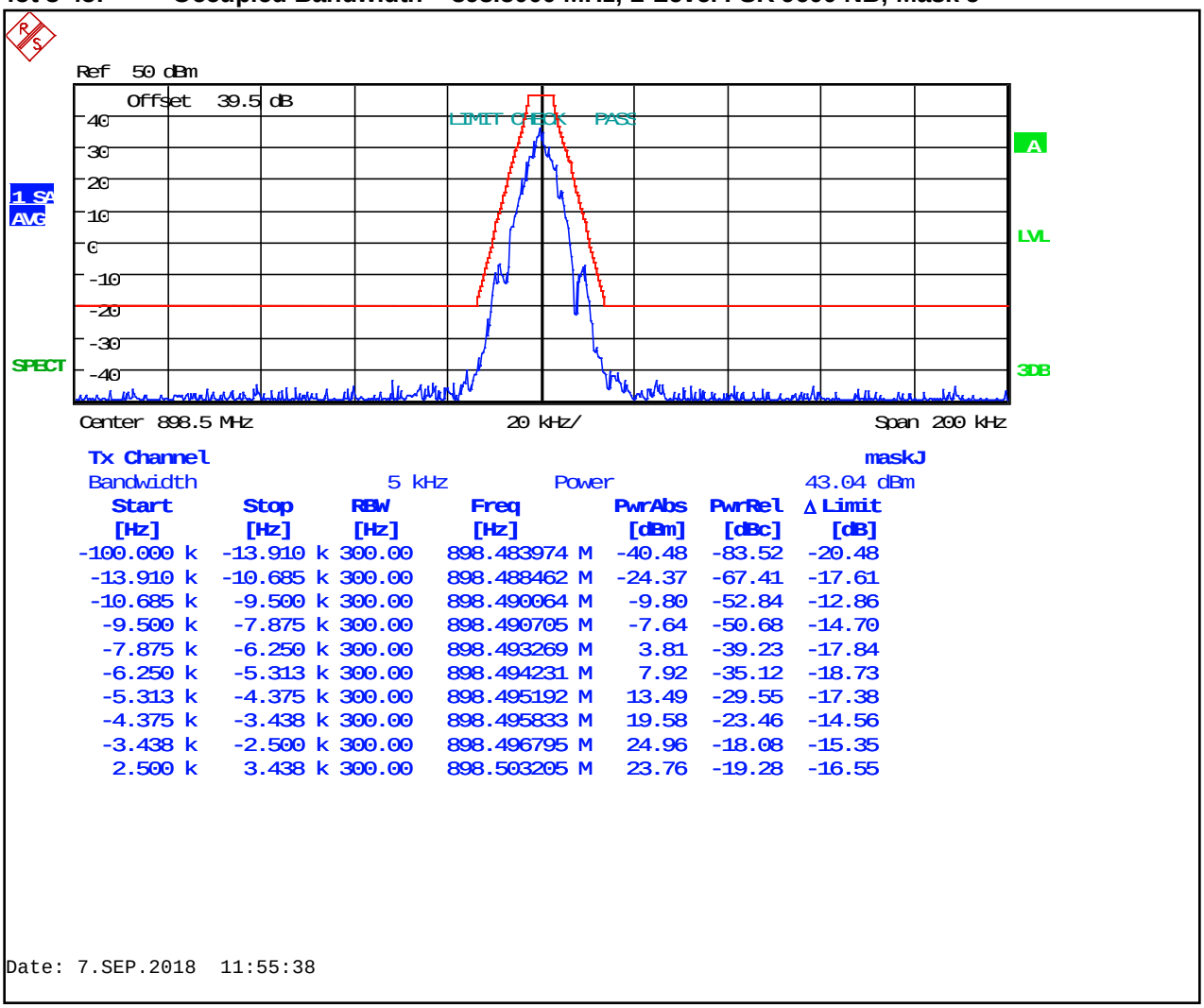
Tx Channel — maskJ

Bandwidth 5 kHz — Power 42.87 dBm

Start [Hz]	Stop [Hz]	RBW [Hz]	Freq [Hz]	PwrAbs [dBm]	PwrRel [dBc]	Δ Limit [dB]
-100.000 k	-13.910 k	300.00	895.998397 M	-38.54	-81.41	-18.54
-13.910 k	-10.685 k	300.00	895.998718 M	-36.91	-79.78	-16.91
-10.685 k	-9.500 k	300.00	896.002244 M	-12.64	-55.50	-13.53
-9.500 k	-7.875 k	300.00	896.003000 M	-10.12	-52.99	-16.12
-7.875 k	-6.250 k	300.00	896.005769 M	1.30	-41.57	-20.36
-6.250 k	-5.313 k	300.00	896.007051 M	11.90	-30.97	-16.60
-5.313 k	-4.375 k	300.00	896.007187 M	11.90	-30.97	-16.60
-4.375 k	-3.438 k	300.00	896.008654 M	20.11	-22.76	-15.95
-3.438 k	-2.500 k	300.00	896.009063 M	22.80	-20.07	-15.70
2.500 k	3.438 k	300.00	896.015705 M	22.59	-20.28	-17.72

Date: 7.SEP.2018 11:53:47

Plot 8-45: Occupied Bandwidth – 898.5000 MHz; 2-Level FSK 9600 NB; Mask J



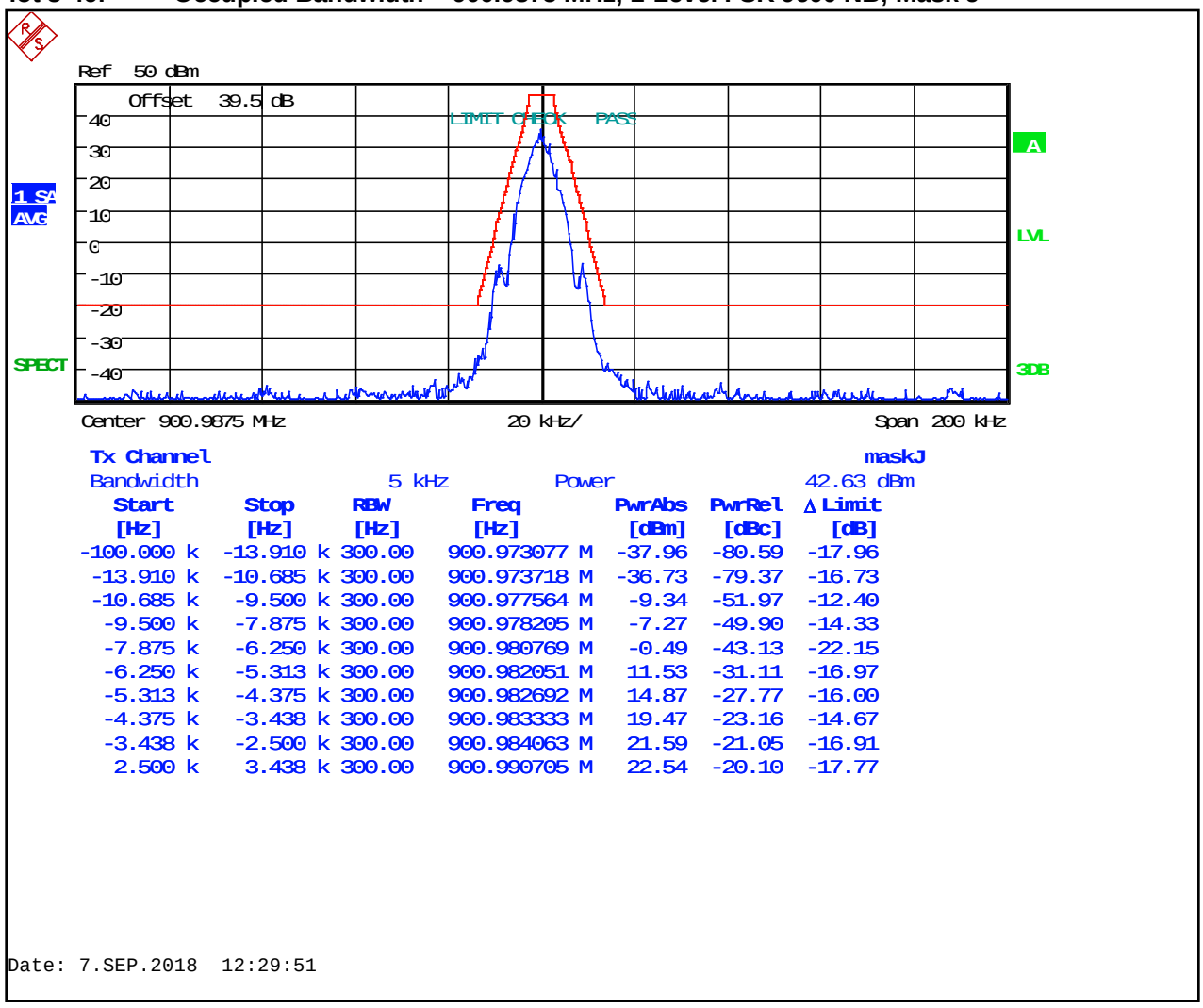
Tx Channel **maskJ**

Bandwidth 5 kHz Power 43.04 dBm

Start [Hz]	Stop [Hz]	RBW [Hz]	Freq [Hz]	PwrAbs [dBm]	PwrRel [dBc]	Δ Limit [dB]
-100.000 k	-13.910 k	300.00	898.483974 M	-40.48	-83.52	-20.48
-13.910 k	-10.685 k	300.00	898.488462 M	-24.37	-67.41	-17.61
-10.685 k	-9.500 k	300.00	898.490064 M	-9.80	-52.84	-12.86
-9.500 k	-7.875 k	300.00	898.490705 M	-7.64	-50.68	-14.70
-7.875 k	-6.250 k	300.00	898.493269 M	3.81	-39.23	-17.84
-6.250 k	-5.313 k	300.00	898.494231 M	7.92	-35.12	-18.73
-5.313 k	-4.375 k	300.00	898.495192 M	13.49	-29.55	-17.38
-4.375 k	-3.438 k	300.00	898.495833 M	19.58	-23.46	-14.56
-3.438 k	-2.500 k	300.00	898.496795 M	24.96	-18.08	-15.35
2.500 k	3.438 k	300.00	898.503205 M	23.76	-19.28	-16.55

Date: 7.SEP.2018 11:55:38

Plot 8-46: Occupied Bandwidth – 900.9875 MHz; 2-Level FSK 9600 NB; Mask J



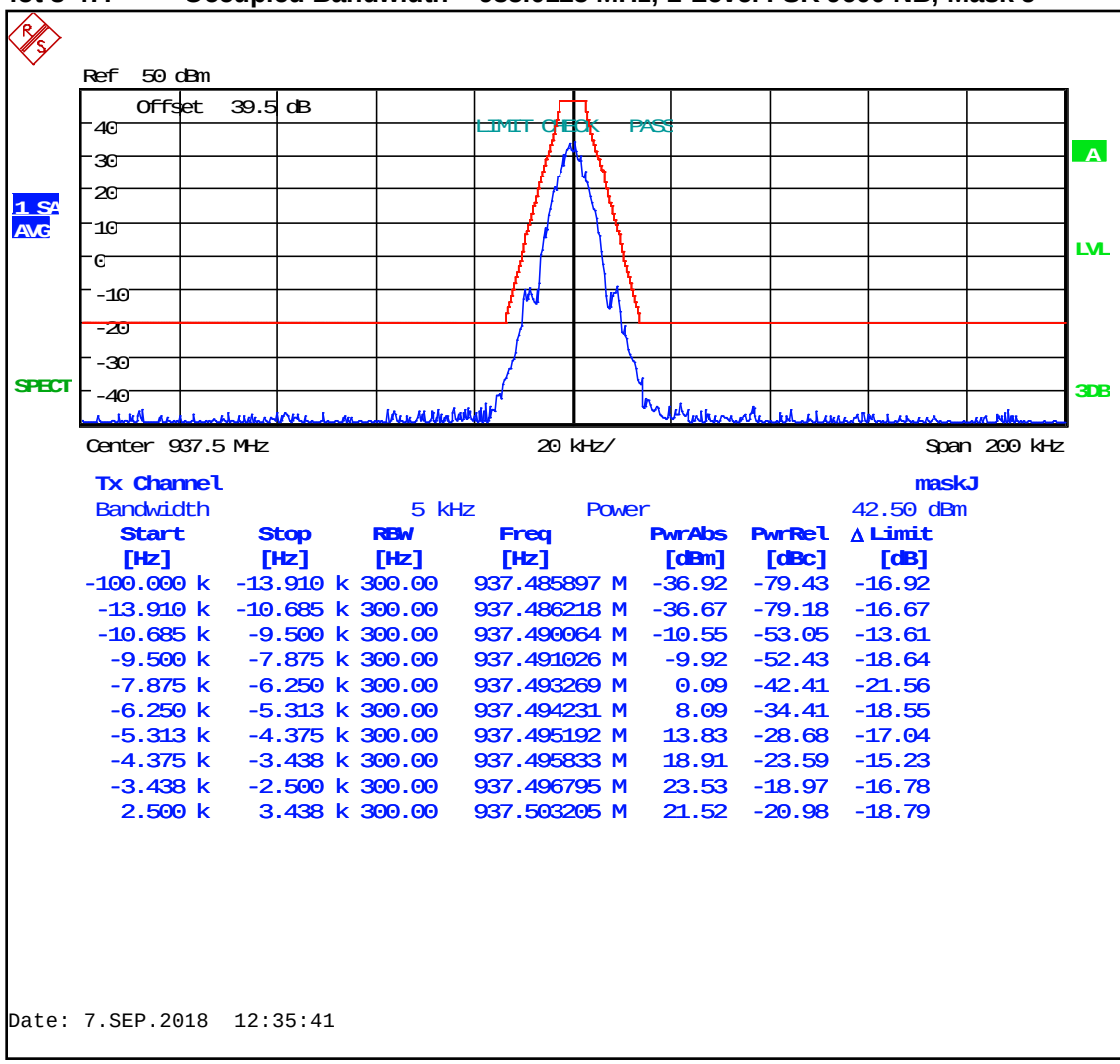
Tx Channel **maskJ**

Bandwidth 5 kHz Power 42.63 dBm

Start [Hz]	Stop [Hz]	RBW [Hz]	Freq [Hz]	PwrAbs [dBm]	PwrRel [dBc]	Δ Limit [dB]
-100.000 k	-13.910 k	300.00	900.973077 M	-37.96	-80.59	-17.96
-13.910 k	-10.685 k	300.00	900.973718 M	-36.73	-79.37	-16.73
-10.685 k	-9.500 k	300.00	900.977564 M	-9.34	-51.97	-12.40
-9.500 k	-7.875 k	300.00	900.978205 M	-7.27	-49.90	-14.33
-7.875 k	-6.250 k	300.00	900.980769 M	-0.49	-43.13	-22.15
-6.250 k	-5.313 k	300.00	900.982051 M	11.53	-31.11	-16.97
-5.313 k	-4.375 k	300.00	900.982692 M	14.87	-27.77	-16.00
-4.375 k	-3.438 k	300.00	900.983333 M	19.47	-23.16	-14.67
-3.438 k	-2.500 k	300.00	900.984063 M	21.59	-21.05	-16.91
2.500 k	3.438 k	300.00	900.990705 M	22.54	-20.10	-17.77

Date: 7.SEP.2018 12:29:51

Plot 8-47: Occupied Bandwidth – 935.0125 MHz; 2-Level FSK 9600 NB; Mask J



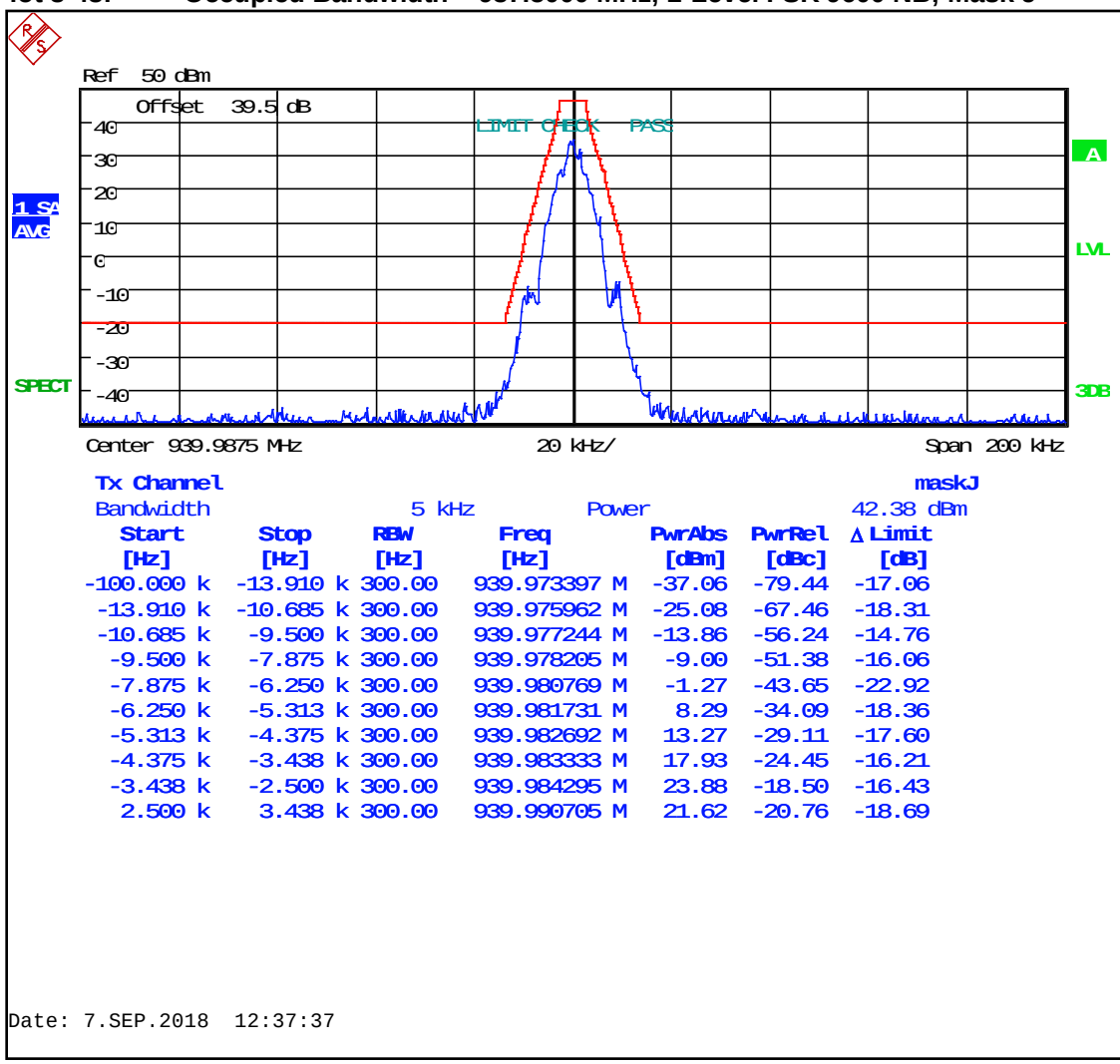
Tx Channel **maskJ**

Bandwidth 5 kHz Power 42.50 dBm

Start [Hz]	Stop [Hz]	RBW [Hz]	Freq [Hz]	PwrAbs [dBm]	PwrRel [dBc]	Δ Limit [dB]
-100.000 k	-13.910 k	300.00	937.485897 M	-36.92	-79.43	-16.92
-13.910 k	-10.685 k	300.00	937.486218 M	-36.67	-79.18	-16.67
-10.685 k	-9.500 k	300.00	937.490064 M	-10.55	-53.05	-13.61
-9.500 k	-7.875 k	300.00	937.491026 M	-9.92	-52.43	-18.64
-7.875 k	-6.250 k	300.00	937.493269 M	0.09	-42.41	-21.56
-6.250 k	-5.313 k	300.00	937.494231 M	8.09	-34.41	-18.55
-5.313 k	-4.375 k	300.00	937.495192 M	13.83	-28.68	-17.04
-4.375 k	-3.438 k	300.00	937.495833 M	18.91	-23.59	-15.23
-3.438 k	-2.500 k	300.00	937.496795 M	23.53	-18.97	-16.78
2.500 k	3.438 k	300.00	937.503205 M	21.52	-20.98	-18.79

Date: 7.SEP.2018 12:35:41

Plot 8-48: Occupied Bandwidth – 937.5000 MHz; 2-Level FSK 9600 NB; Mask J



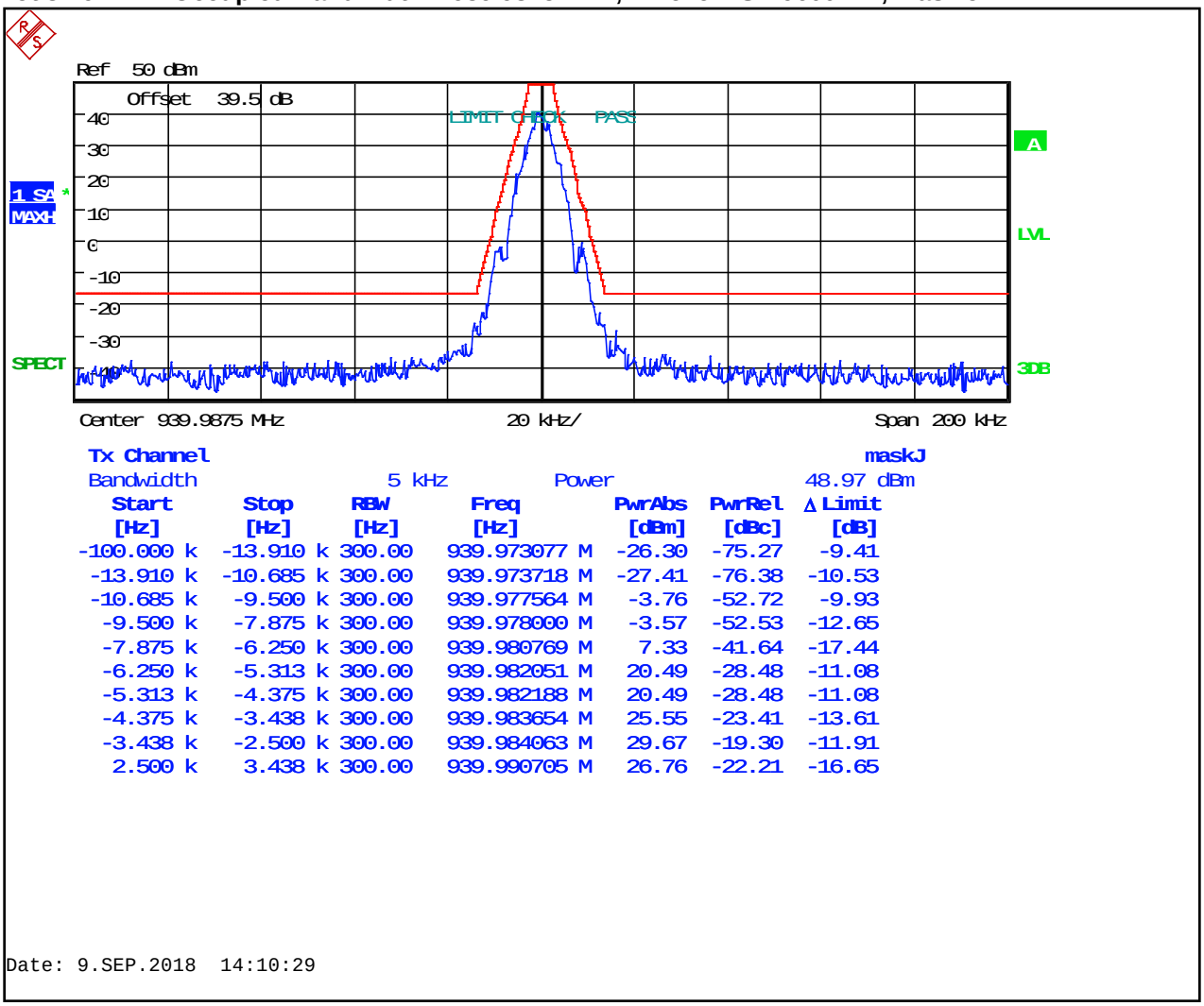
Tx Channel **maskJ**

Bandwidth 5 kHz Power 42.38 dBm

Start [Hz]	Stop [Hz]	RBW [Hz]	Freq [Hz]	PwrAbs [dBm]	PwrRel [dBc]	Δ Limit [dB]
-100.000 k	-13.910 k	300.00	939.973397 M	-37.06	-79.44	-17.06
-13.910 k	-10.685 k	300.00	939.975962 M	-25.08	-67.46	-18.31
-10.685 k	-9.500 k	300.00	939.977244 M	-13.86	-56.24	-14.76
-9.500 k	-7.875 k	300.00	939.978205 M	-9.00	-51.38	-16.06
-7.875 k	-6.250 k	300.00	939.980769 M	-1.27	-43.65	-22.92
-6.250 k	-5.313 k	300.00	939.981731 M	8.29	-34.09	-18.36
-5.313 k	-4.375 k	300.00	939.982692 M	13.27	-29.11	-17.60
-4.375 k	-3.438 k	300.00	939.983333 M	17.93	-24.45	-16.21
-3.438 k	-2.500 k	300.00	939.984295 M	23.88	-18.50	-16.43
2.500 k	3.438 k	300.00	939.990705 M	21.62	-20.76	-18.69

Date: 7.SEP.2018 12:37:37

Plot 8-49: Occupied Bandwidth – 939.9875 MHz; 2-Level FSK 9600 NB; Mask J



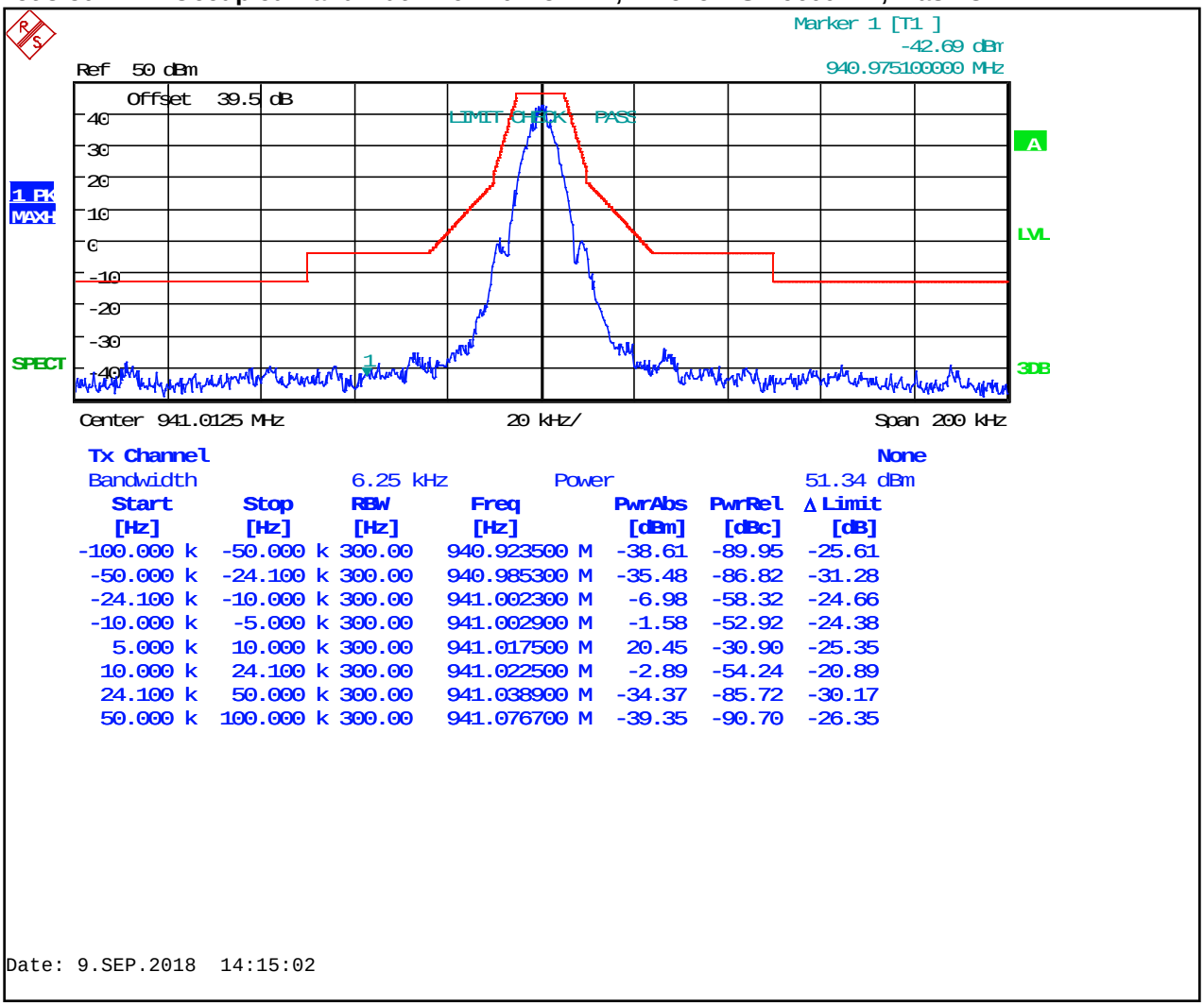
Tx Channel **maskJ**

Bandwidth 5 kHz Power 48.97 dBm

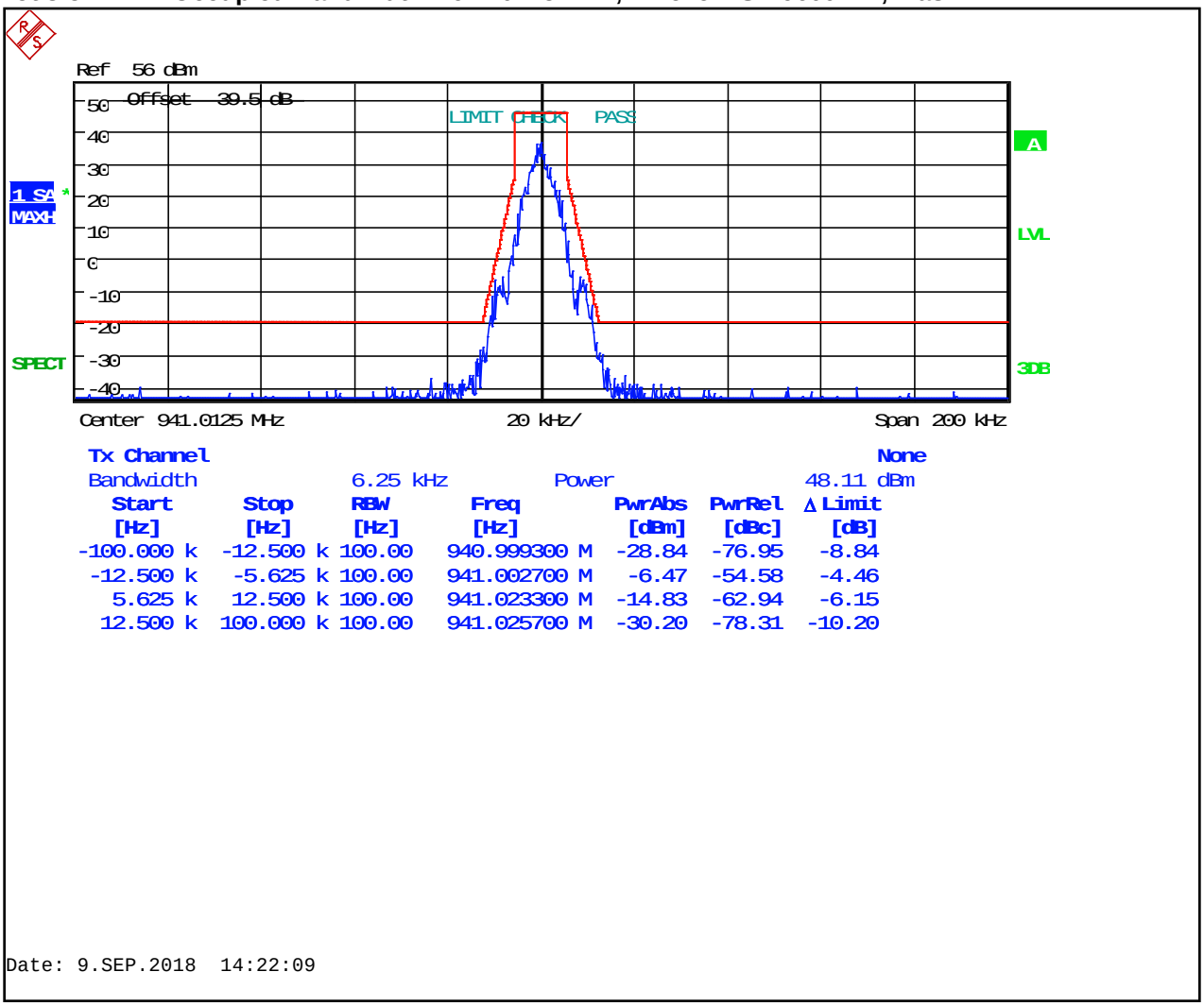
Start [Hz]	Stop [Hz]	RBW [Hz]	Freq [Hz]	PwrAbs [dBm]	PwrRel [dBc]	Δ Limit [dB]
-100.000 k	-13.910 k	300.00	939.973077 M	-26.30	-75.27	-9.41
-13.910 k	-10.685 k	300.00	939.973718 M	-27.41	-76.38	-10.53
-10.685 k	-9.500 k	300.00	939.977564 M	-3.76	-52.72	-9.93
-9.500 k	-7.875 k	300.00	939.978000 M	-3.57	-52.53	-12.65
-7.875 k	-6.250 k	300.00	939.980769 M	7.33	-41.64	-17.44
-6.250 k	-5.313 k	300.00	939.982051 M	20.49	-28.48	-11.08
-5.313 k	-4.375 k	300.00	939.982188 M	20.49	-28.48	-11.08
-4.375 k	-3.438 k	300.00	939.983654 M	25.55	-23.41	-13.61
-3.438 k	-2.500 k	300.00	939.984063 M	29.67	-19.30	-11.91
2.500 k	3.438 k	300.00	939.990705 M	26.76	-22.21	-16.65

Date: 9.SEP.2018 14:10:29

Plot 8-50: Occupied Bandwidth – 941.0125 MHz; 2-Level FSK 9600 NB; Mask C



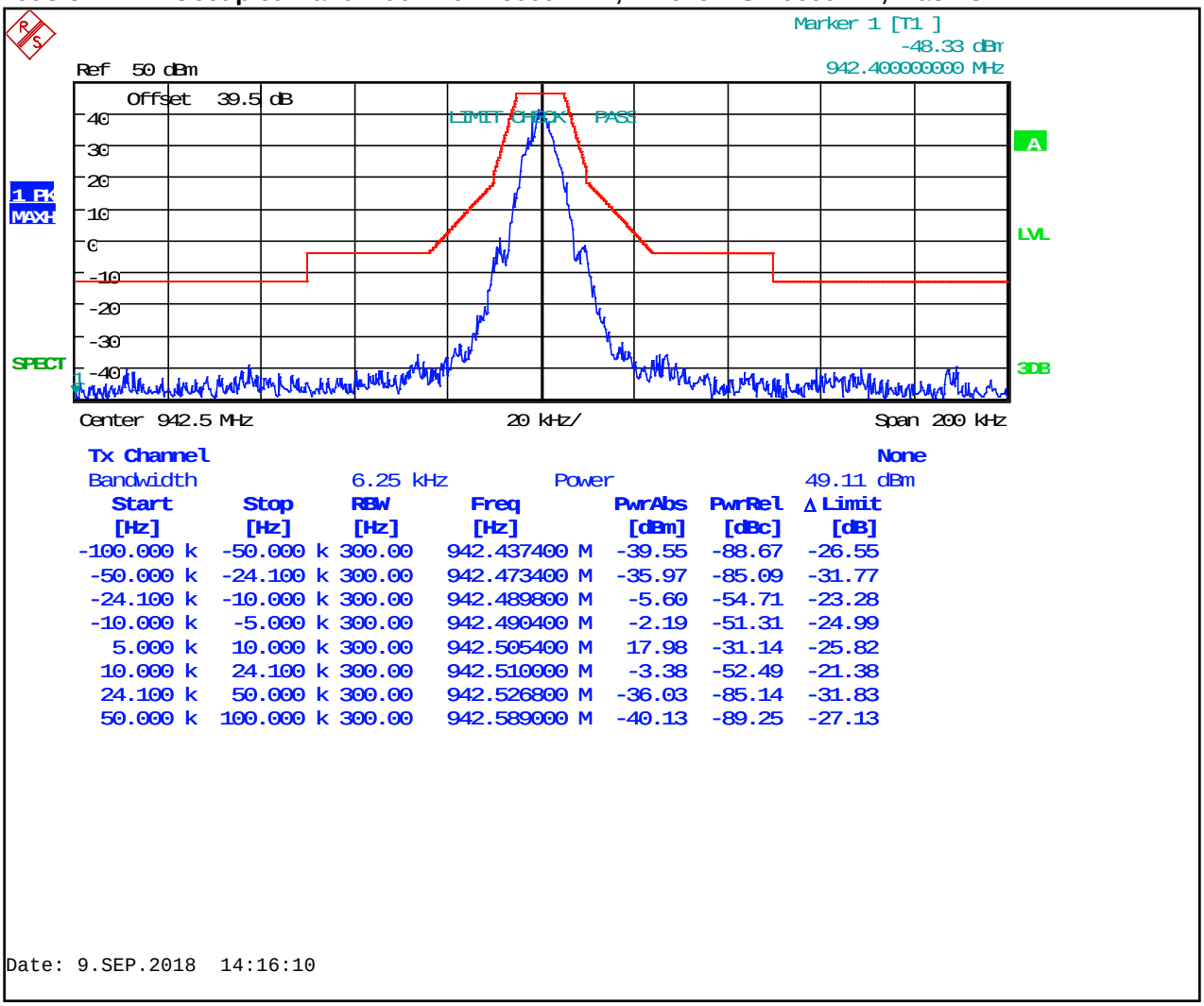
Plot 8-51: Occupied Bandwidth – 941.0125 MHz; 2-Level FSK 9600 NB; Mask D



Tx Channel						None
Bandwidth		6.25 kHz	Power			48.11 dBm
Start [Hz]	Stop [Hz]	RBW [Hz]	Freq [Hz]	PwrAbs [dBm]	PwrRel [dBc]	Δ Limit [dB]
-100.000 k	-12.500 k	100.00	940.999300 M	-28.84	-76.95	-8.84
-12.500 k	-5.625 k	100.00	941.002700 M	-6.47	-54.58	-4.46
5.625 k	12.500 k	100.00	941.023300 M	-14.83	-62.94	-6.15
12.500 k	100.000 k	100.00	941.025700 M	-30.20	-78.31	-10.20

Date: 9.SEP.2018 14:22:09

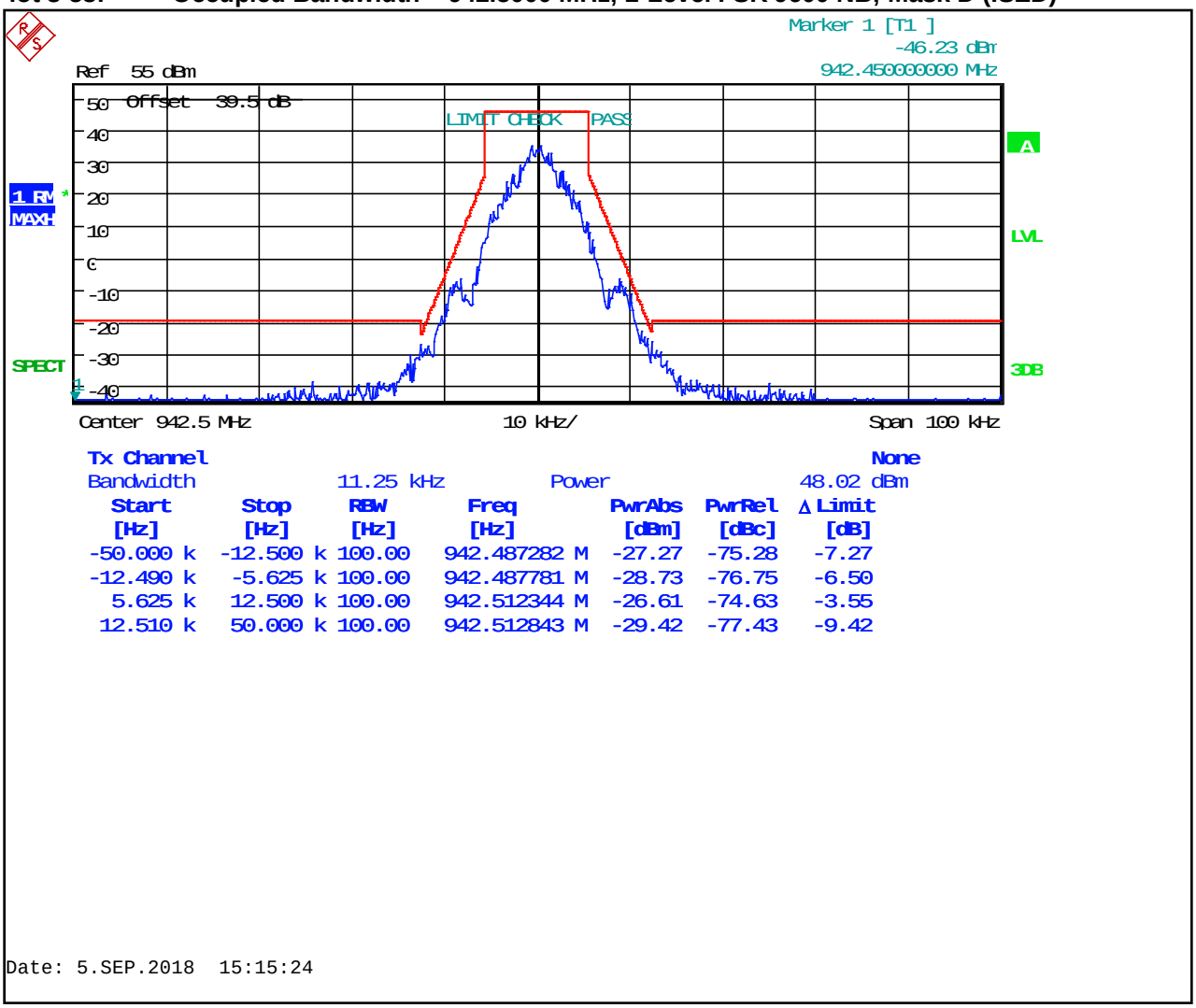
Plot 8-52: Occupied Bandwidth – 942.5000 MHz; 2-Level FSK 9600 NB; Mask C



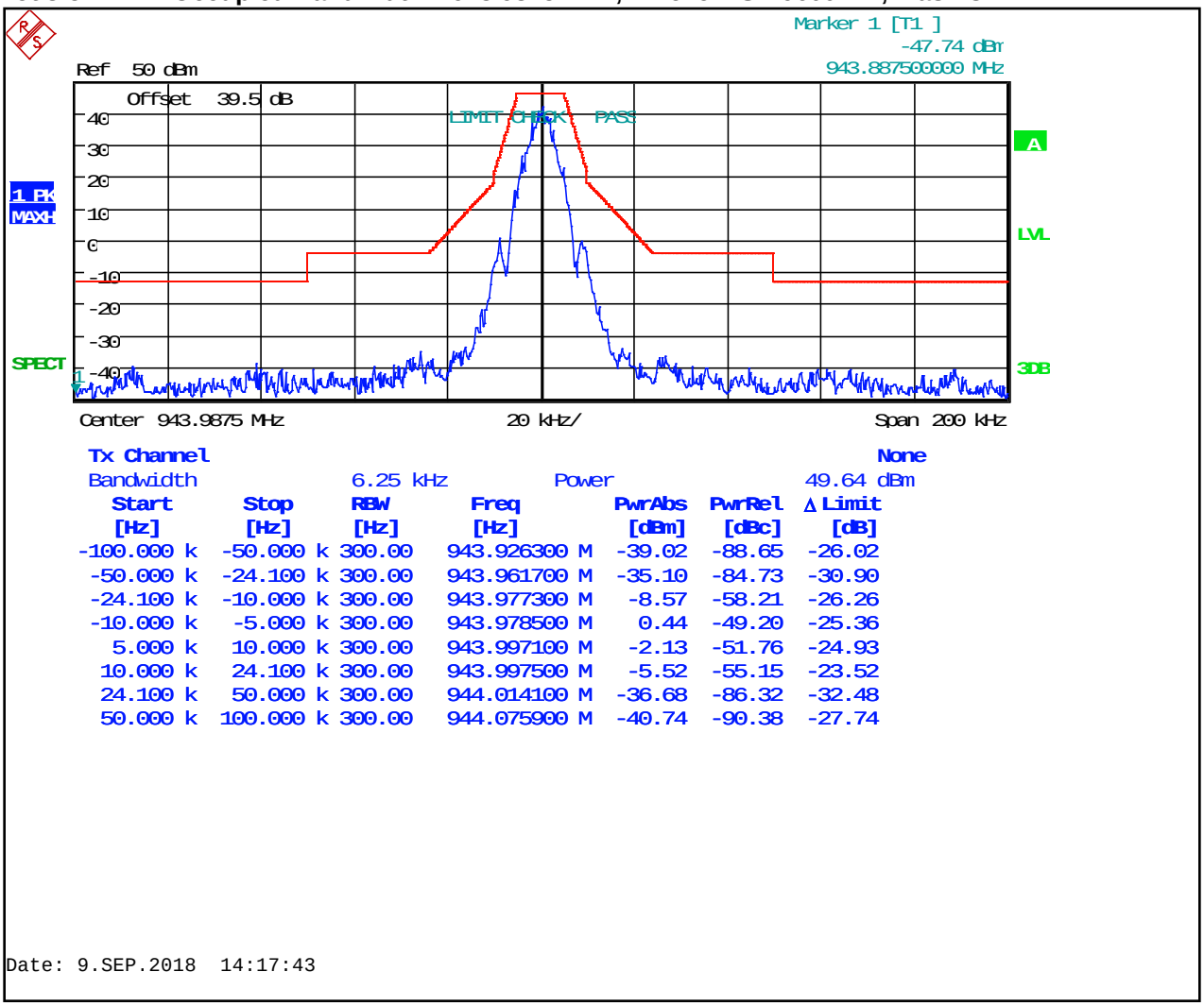
Start [Hz]	Stop [Hz]	RBW [Hz]	Freq [Hz]	PwrAbs [dBm]	PwrRel [dBc]	Δ Limit [dB]
-100.000 k	-50.000 k	300.00	942.437400 M	-39.55	-88.67	-26.55
-50.000 k	-24.100 k	300.00	942.473400 M	-35.97	-85.09	-31.77
-24.100 k	-10.000 k	300.00	942.489800 M	-5.60	-54.71	-23.28
-10.000 k	-5.000 k	300.00	942.490400 M	-2.19	-51.31	-24.99
5.000 k	10.000 k	300.00	942.505400 M	17.98	-31.14	-25.82
10.000 k	24.100 k	300.00	942.510000 M	-3.38	-52.49	-21.38
24.100 k	50.000 k	300.00	942.526800 M	-36.03	-85.14	-31.83
50.000 k	100.000 k	300.00	942.589000 M	-40.13	-89.25	-27.13

Date: 9.SEP.2018 14:16:10

Plot 8-53: Occupied Bandwidth – 942.5000 MHz; 2-Level FSK 9600 NB; Mask D (ISED)



Plot 8-54: Occupied Bandwidth – 943.9875 MHz; 2-Level FSK 9600 NB; Mask C

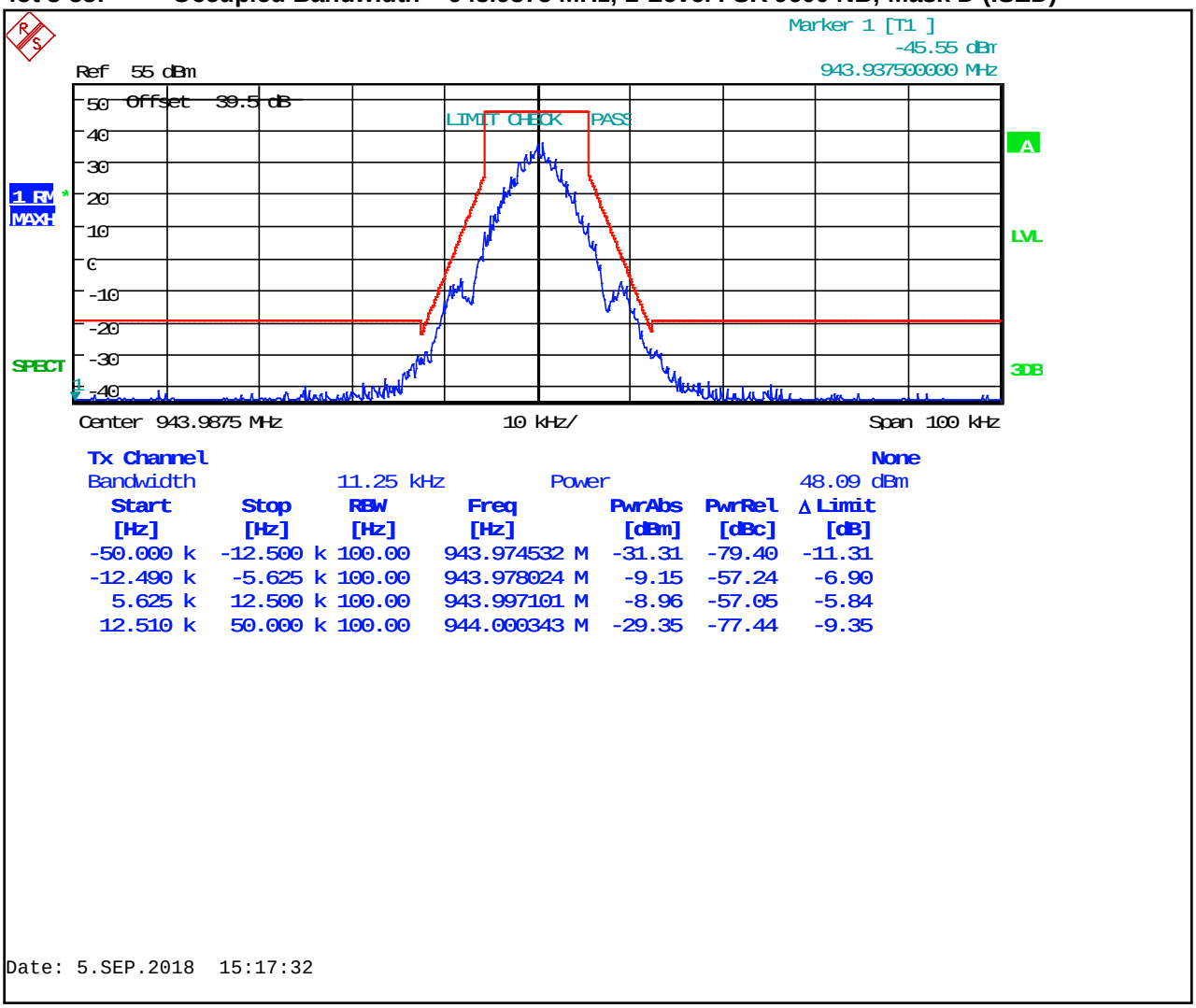


Tx Channel None
Bandwidth 6.25 kHz Power 49.64 dBm

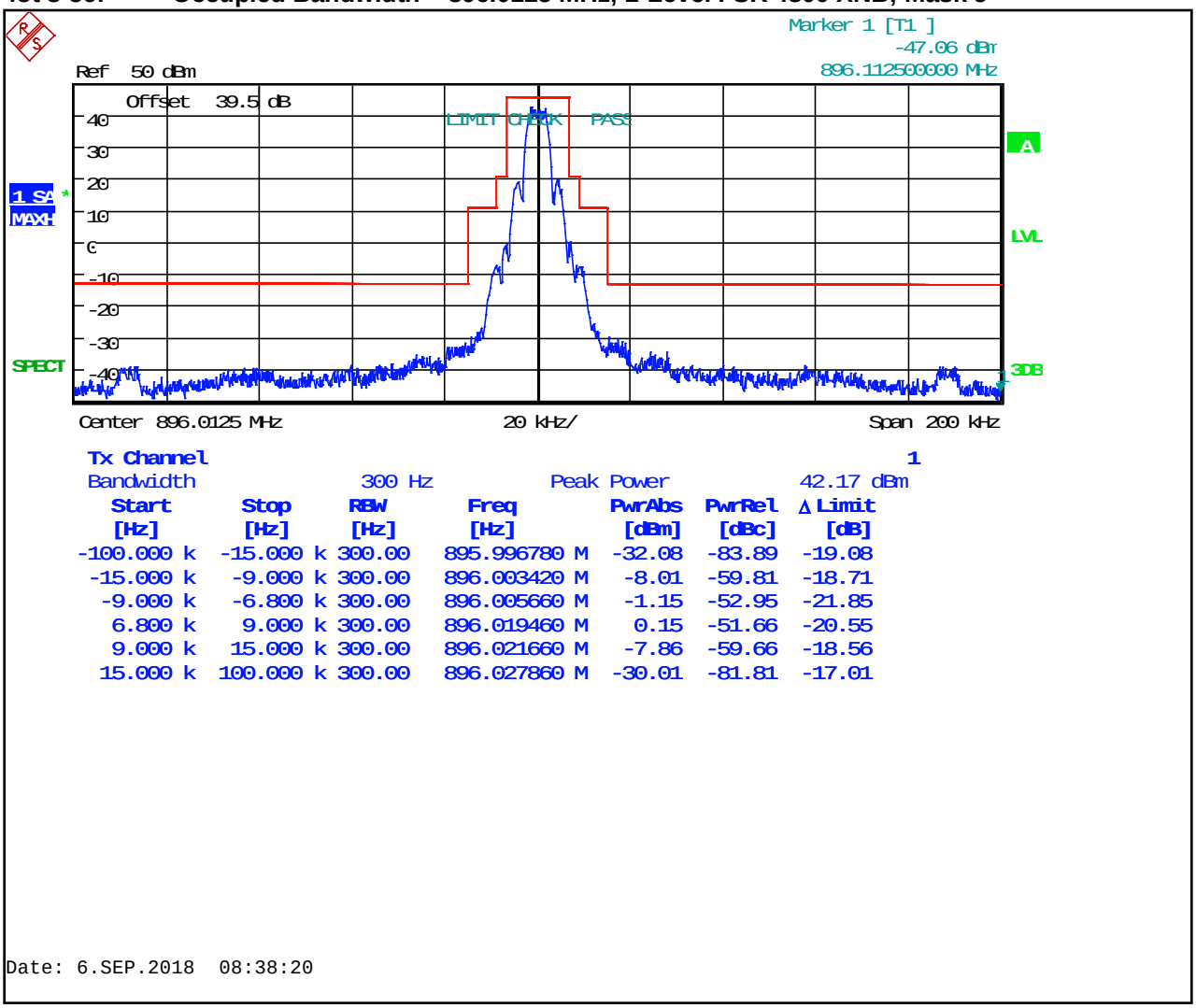
Start [Hz]	Stop [Hz]	RBW [Hz]	Freq [Hz]	PwrAbs [dBm]	PwrRel [dBc]	Δ Limit [dB]
-100.000 k	-50.000 k	300.00	943.926300 M	-39.02	-88.65	-26.02
-50.000 k	-24.100 k	300.00	943.961700 M	-35.10	-84.73	-30.90
-24.100 k	-10.000 k	300.00	943.977300 M	-8.57	-58.21	-26.26
-10.000 k	-5.000 k	300.00	943.978500 M	0.44	-49.20	-25.36
5.000 k	10.000 k	300.00	943.997100 M	-2.13	-51.76	-24.93
10.000 k	24.100 k	300.00	943.997500 M	-5.52	-55.15	-23.52
24.100 k	50.000 k	300.00	944.014100 M	-36.68	-86.32	-32.48
50.000 k	100.000 k	300.00	944.075900 M	-40.74	-90.38	-27.74

Date: 9.SEP.2018 14:17:43

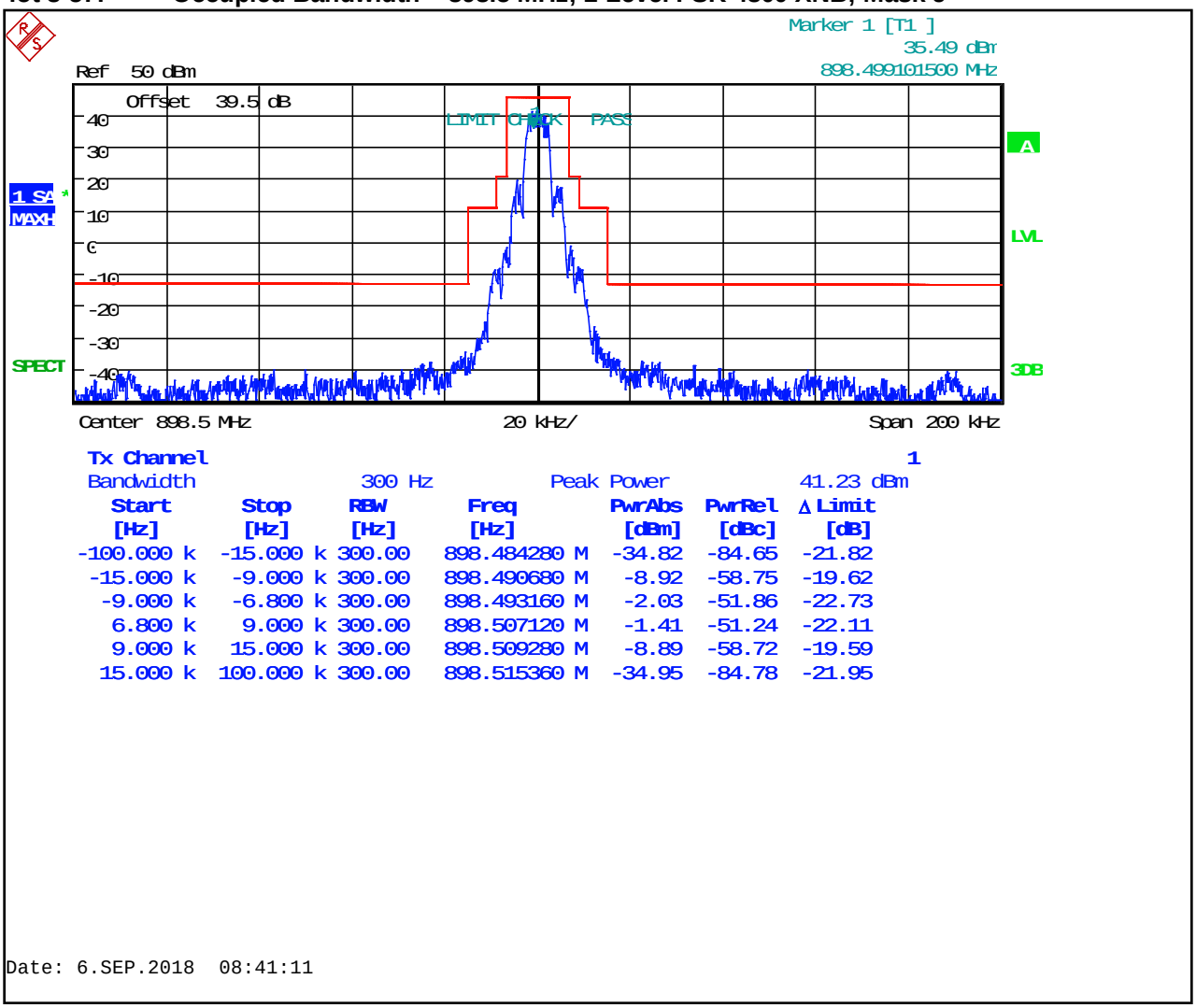
Plot 8-55: Occupied Bandwidth – 943.9875 MHz; 2-Level FSK 9600 NB; Mask D (ISED)



Plot 8-56: Occupied Bandwidth – 896.0125 MHz; 2-Level FSK 4800 XNB; Mask J



Plot 8-57: Occupied Bandwidth – 898.5 MHz; 2-Level FSK 4800 XNB; Mask J

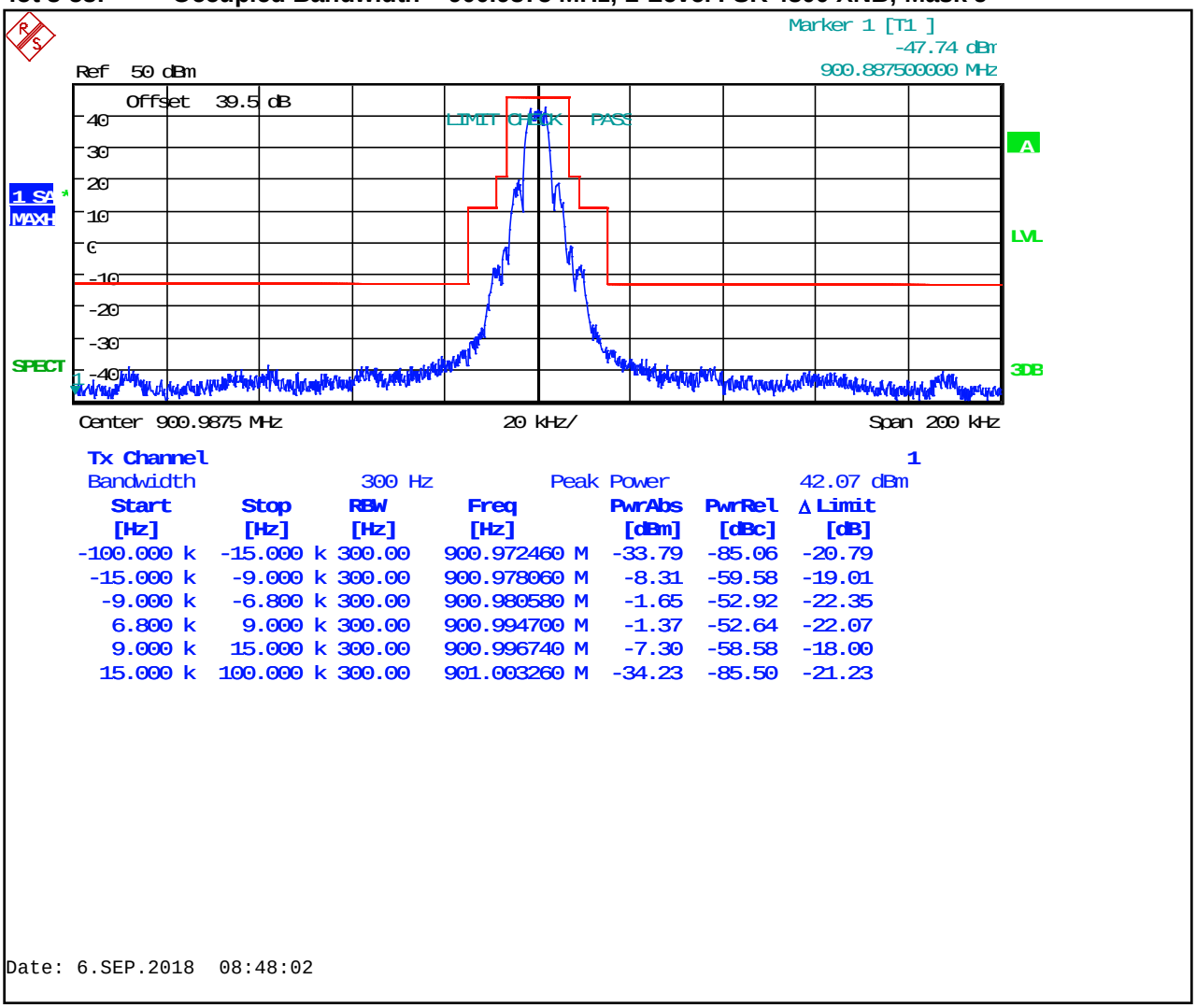


Tx Channel 1
Bandwidth 300 Hz Peak Power 41.23 dBm

Start [Hz]	Stop [Hz]	RBW [Hz]	Freq [Hz]	PwrAbs [dBm]	PwrRel [dBc]	Δ Limit [dB]
-100.000 k	-15.000 k	300.00	898.484280 M	-34.82	-84.65	-21.82
-15.000 k	-9.000 k	300.00	898.490680 M	-8.92	-58.75	-19.62
-9.000 k	-6.800 k	300.00	898.493160 M	-2.03	-51.86	-22.73
6.800 k	9.000 k	300.00	898.507120 M	-1.41	-51.24	-22.11
9.000 k	15.000 k	300.00	898.509280 M	-8.89	-58.72	-19.59
15.000 k	100.000 k	300.00	898.515360 M	-34.95	-84.78	-21.95

Date: 6.SEP.2018 08:41:11

Plot 8-58: Occupied Bandwidth – 900.9875 MHz; 2-Level FSK 4800 XNB; Mask J



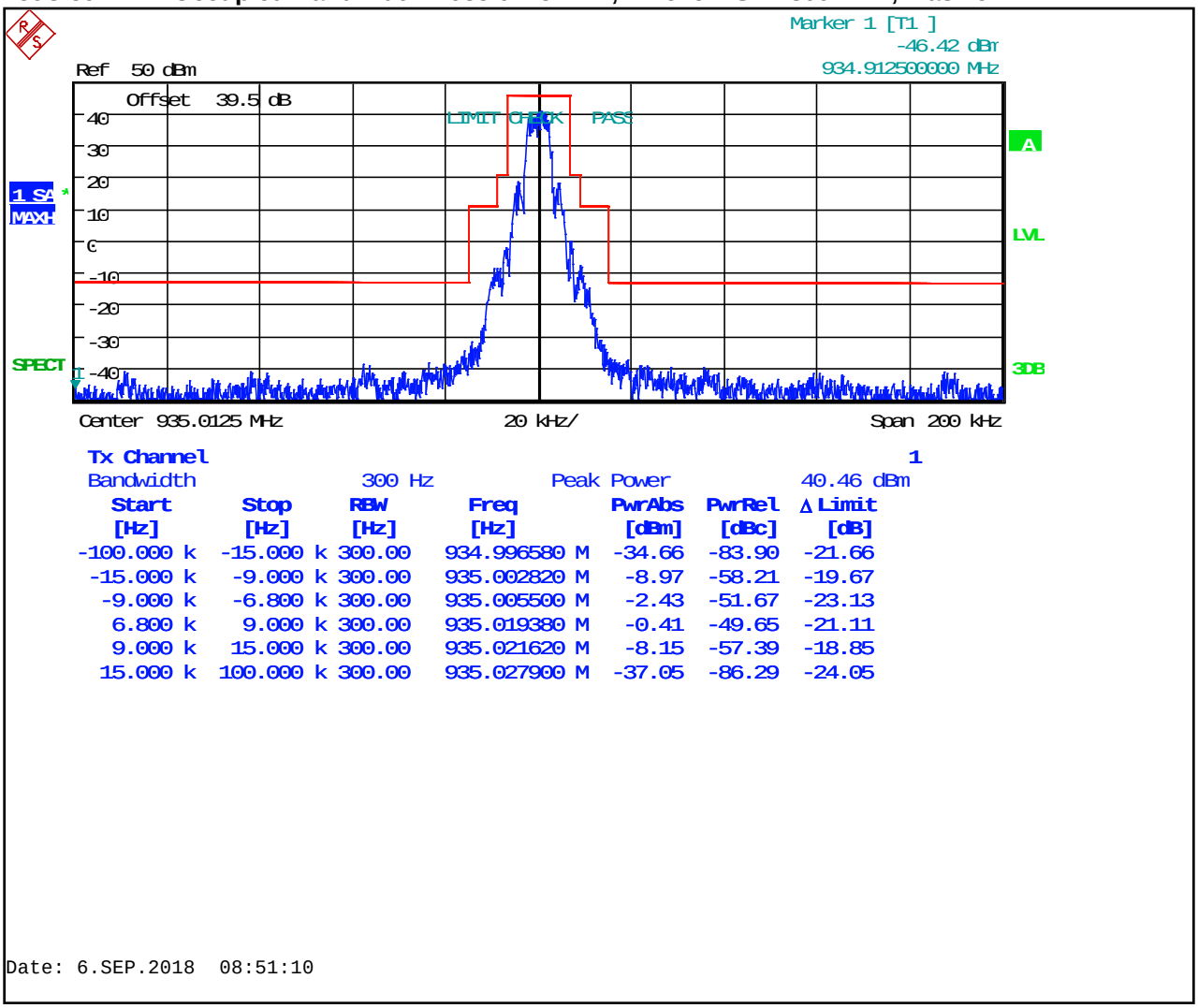
Tx Channel 1

Bandwidth 300 Hz Peak Power 42.07 dBm

Start [Hz]	Stop [Hz]	RBW [Hz]	Freq [Hz]	PwrAbs [dBm]	PwrRel [dBc]	Δ Limit [dB]
-100.000 k	-15.000 k	300.00	900.972460 M	-33.79	-85.06	-20.79
-15.000 k	-9.000 k	300.00	900.978060 M	-8.31	-59.58	-19.01
-9.000 k	-6.800 k	300.00	900.980580 M	-1.65	-52.92	-22.35
6.800 k	9.000 k	300.00	900.994700 M	-1.37	-52.64	-22.07
9.000 k	15.000 k	300.00	900.996740 M	-7.30	-58.58	-18.00
15.000 k	100.000 k	300.00	901.003260 M	-34.23	-85.50	-21.23

Date: 6.SEP.2018 08:48:02

Plot 8-59: Occupied Bandwidth – 935.0125 MHz; 2-Level FSK 4800 XNB; Mask J

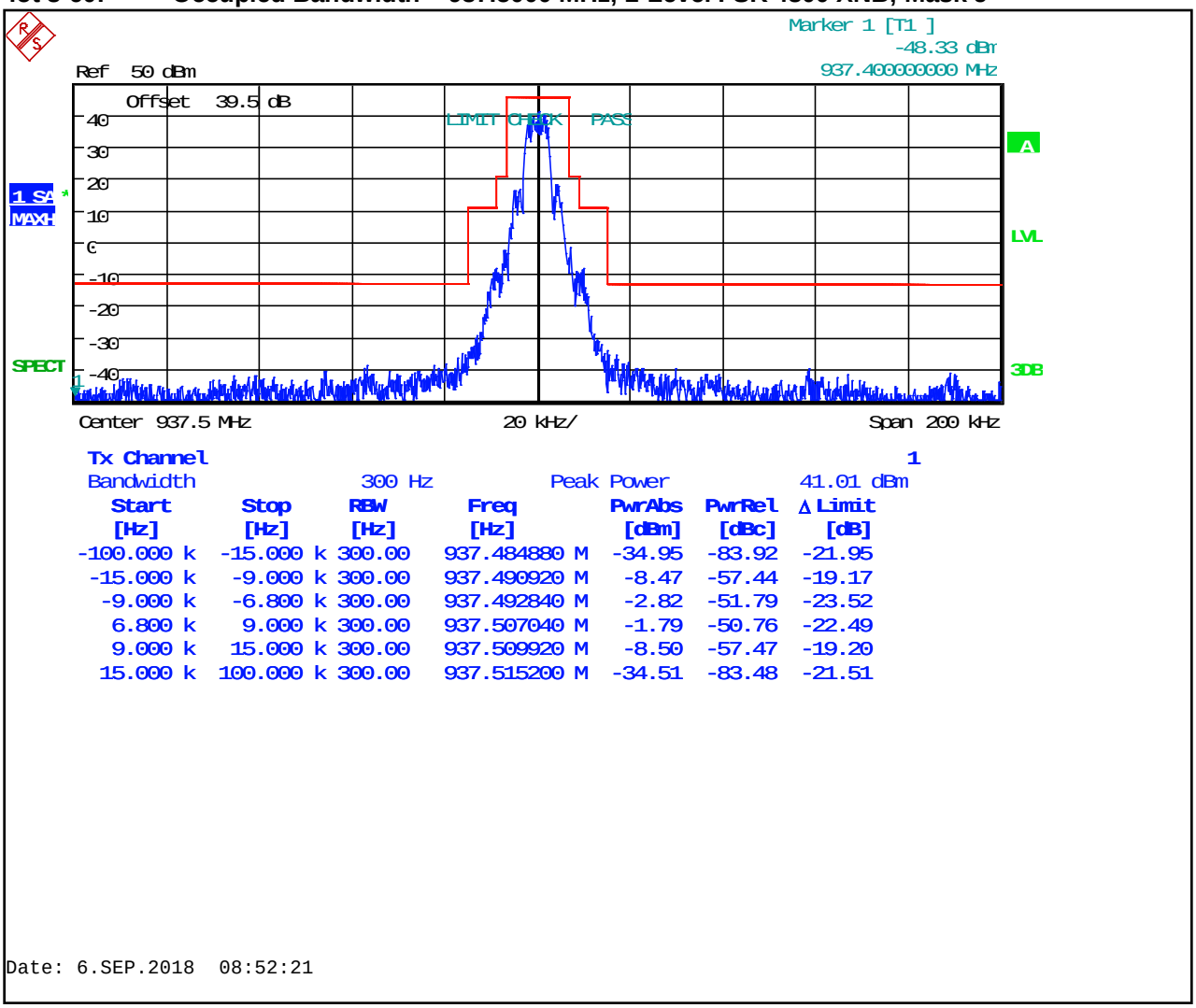


Tx Channel 1
Bandwidth 300 Hz Peak Power 40.46 dBm

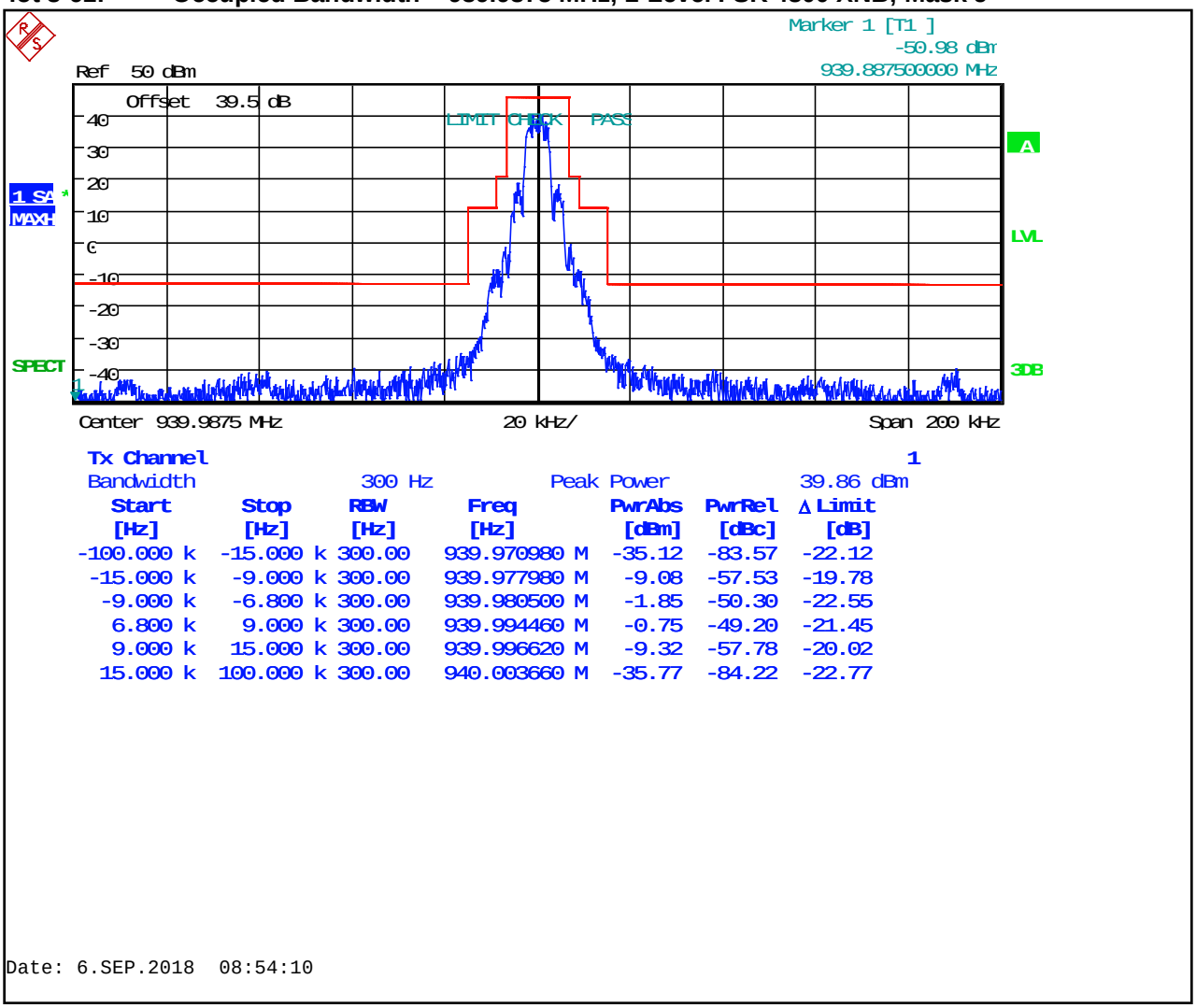
Start [Hz]	Stop [Hz]	RBW [Hz]	Freq [Hz]	PwrAbs [dBm]	PwrRel [dBc]	Δ Limit [dB]
-100.000 k	-15.000 k	300.00	934.996580 M	-34.66	-83.90	-21.66
-15.000 k	-9.000 k	300.00	935.002820 M	-8.97	-58.21	-19.67
-9.000 k	-6.800 k	300.00	935.005500 M	-2.43	-51.67	-23.13
6.800 k	9.000 k	300.00	935.019380 M	-0.41	-49.65	-21.11
9.000 k	15.000 k	300.00	935.021620 M	-8.15	-57.39	-18.85
15.000 k	100.000 k	300.00	935.027900 M	-37.05	-86.29	-24.05

Date: 6.SEP.2018 08:51:10

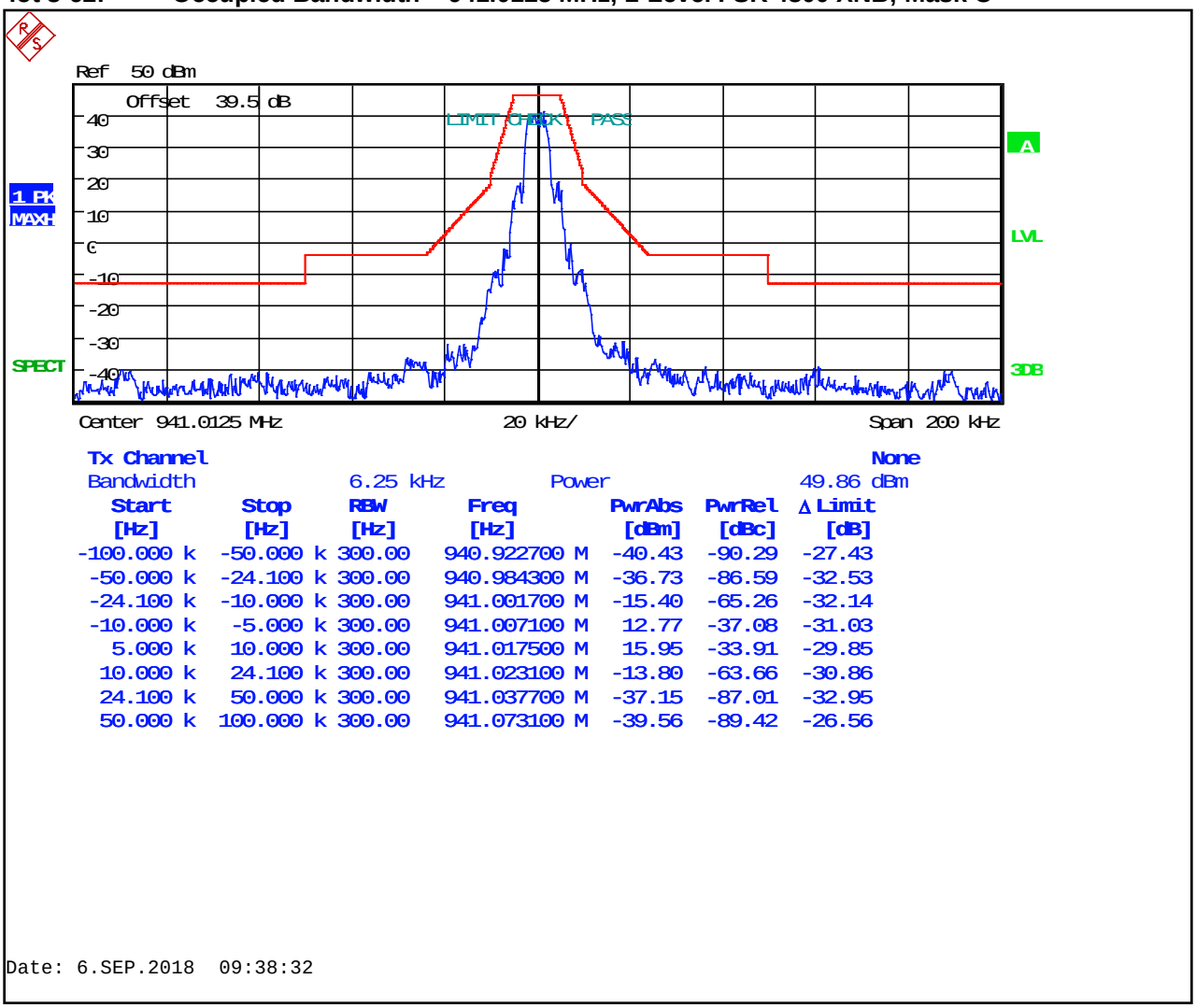
Plot 8-60: Occupied Bandwidth – 937.5000 MHz; 2-Level FSK 4800 XNB; Mask J



Plot 8-61: Occupied Bandwidth – 939.9875 MHz; 2-Level FSK 4800 XNB; Mask J



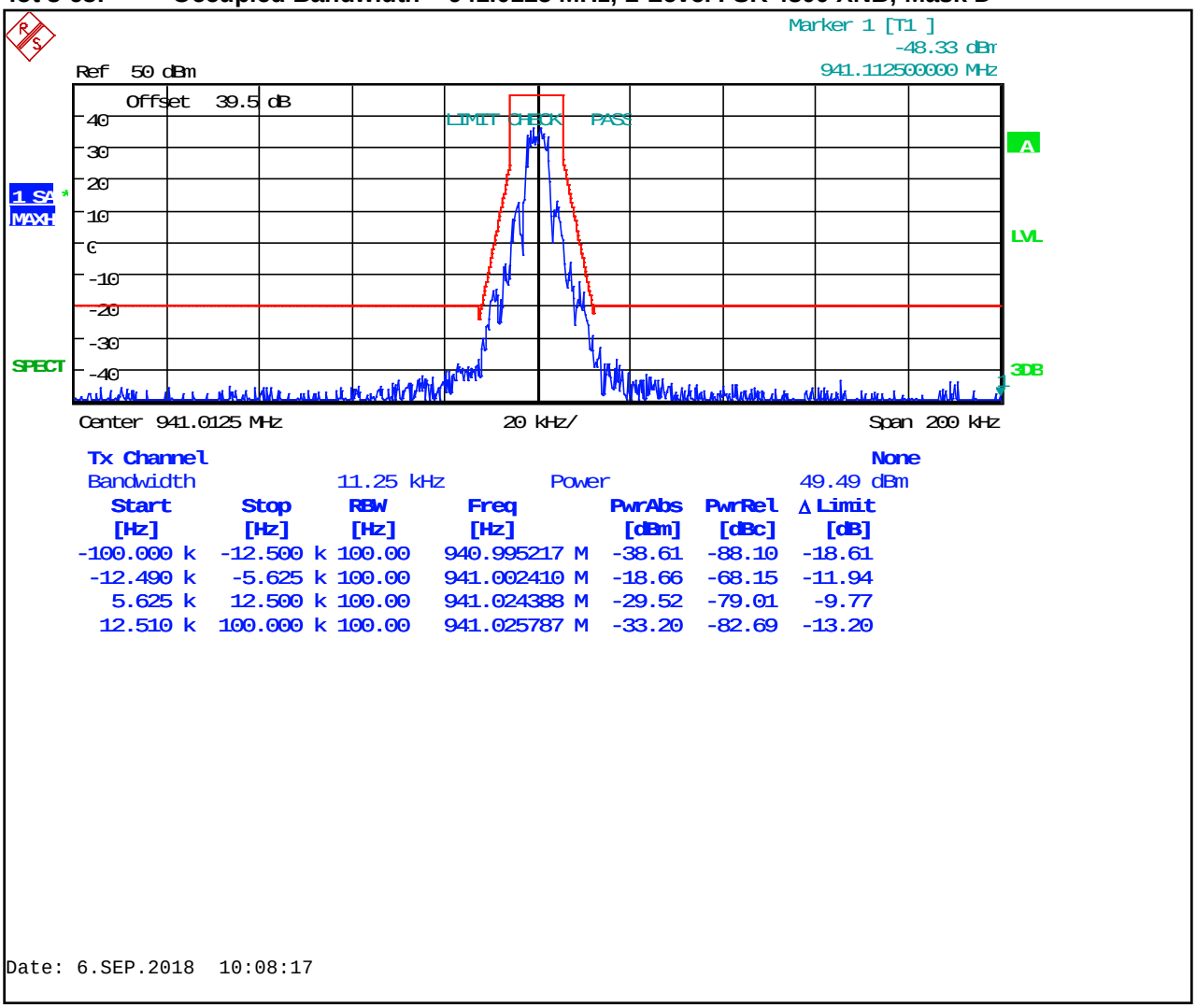
Plot 8-62: Occupied Bandwidth – 941.0125 MHz; 2-Level FSK 4800 XNB; Mask C



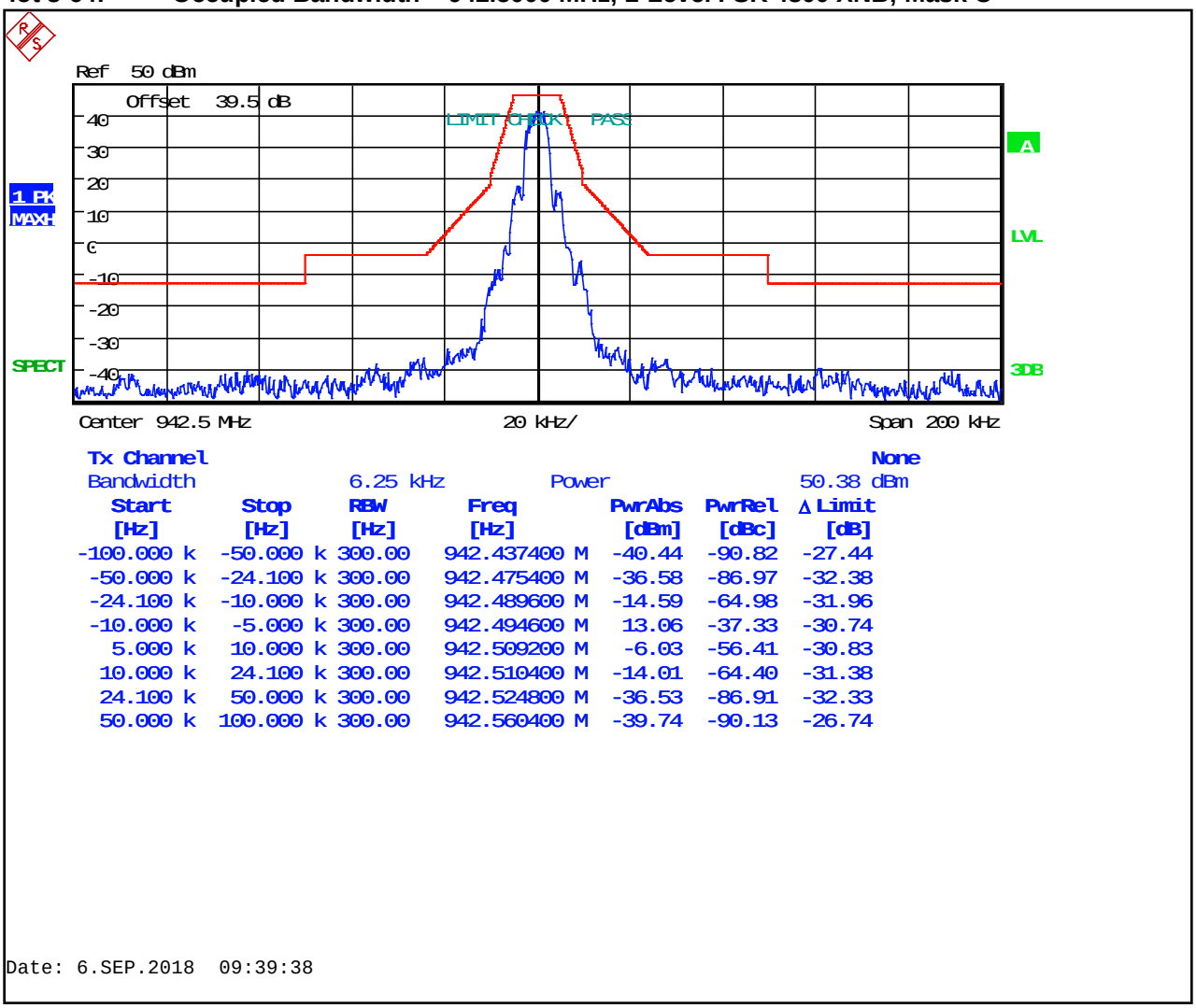
Tx Channel						None
Bandwidth		6.25 kHz	Power			49.86 dBm
Start [Hz]	Stop [Hz]	RBW [Hz]	Freq [Hz]	PwrAbs [dBm]	PwrRel [dBc]	Δ Limit [dB]
-100.000 k	-50.000 k	300.00	940.922700 M	-40.43	-90.29	-27.43
-50.000 k	-24.100 k	300.00	940.984300 M	-36.73	-86.59	-32.53
-24.100 k	-10.000 k	300.00	941.001700 M	-15.40	-65.26	-32.14
-10.000 k	-5.000 k	300.00	941.007100 M	12.77	-37.08	-31.03
5.000 k	10.000 k	300.00	941.017500 M	15.95	-33.91	-29.85
10.000 k	24.100 k	300.00	941.023100 M	-13.80	-63.66	-30.86
24.100 k	50.000 k	300.00	941.037700 M	-37.15	-87.01	-32.95
50.000 k	100.000 k	300.00	941.073100 M	-39.56	-89.42	-26.56

Date: 6.SEP.2018 09:38:32

Plot 8-63: Occupied Bandwidth – 941.0125 MHz; 2-Level FSK 4800 XNB; Mask D



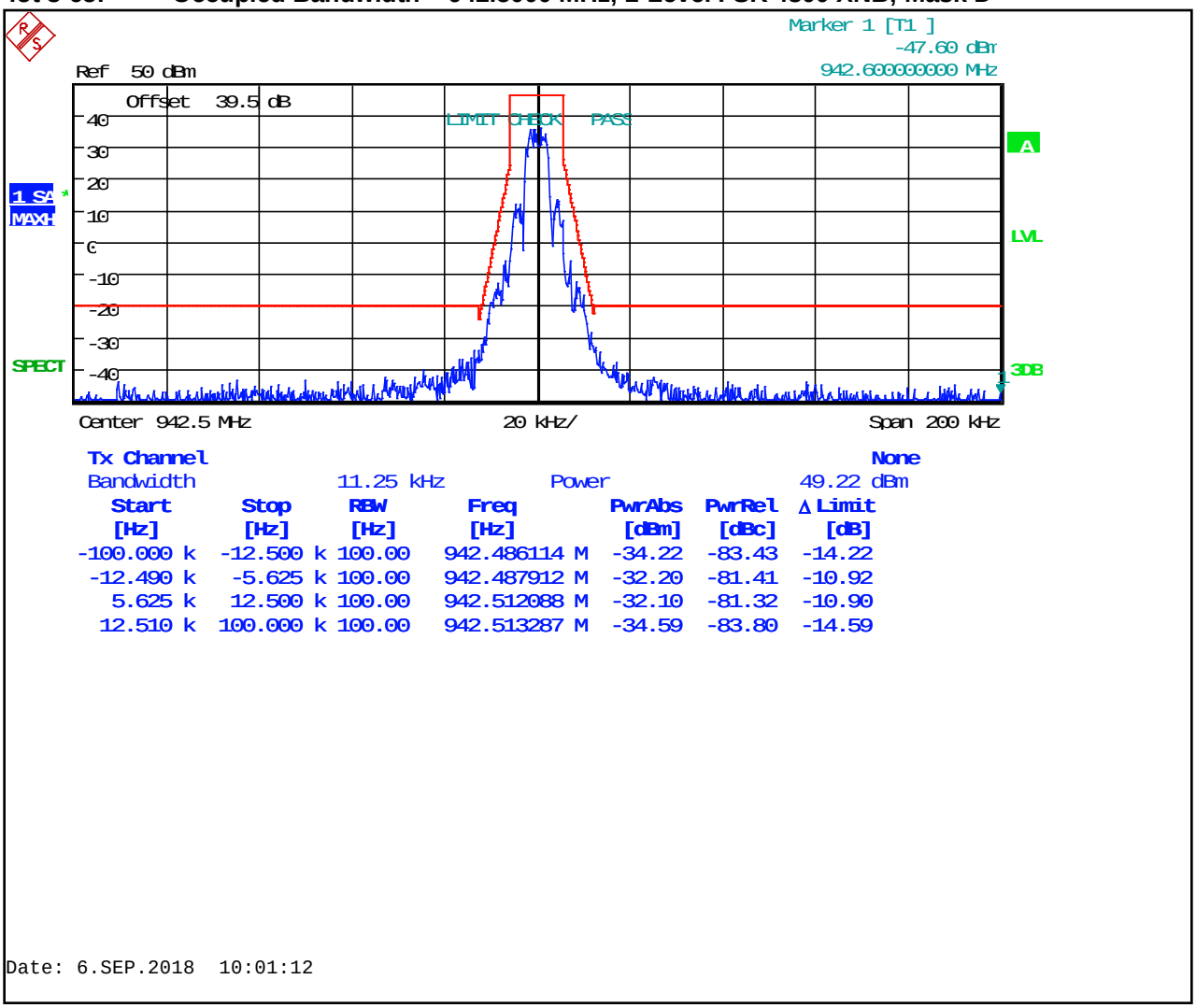
Plot 8-64: Occupied Bandwidth – 942.5000 MHz; 2-Level FSK 4800 XNB; Mask C



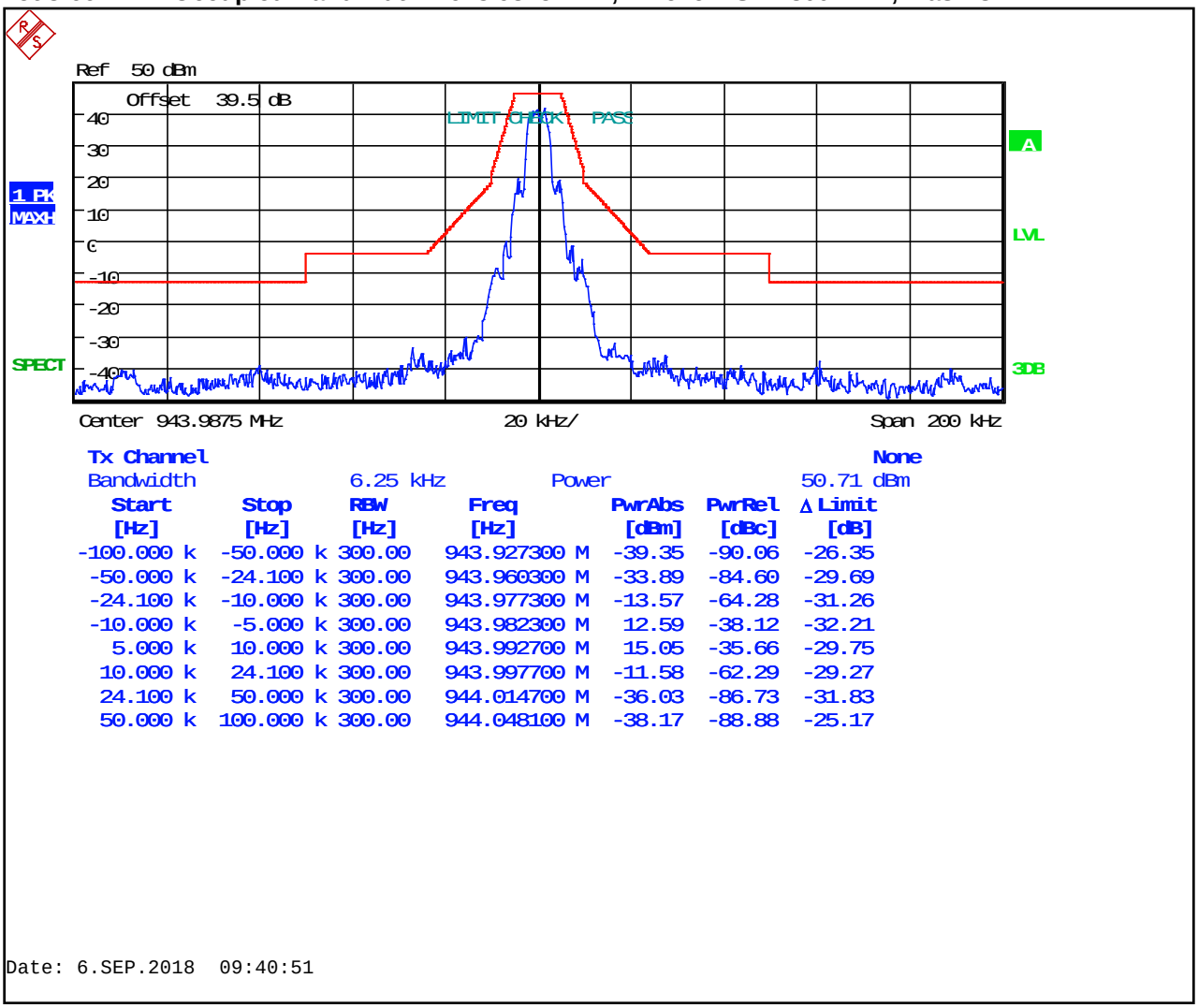
Tx Channel						None
Bandwidth		6.25 kHz	Power			50.38 dBm
Start [Hz]	Stop [Hz]	RBW [Hz]	Freq [Hz]	PwrAbs [dBm]	PwrRel [dBc]	Δ Limit [dB]
-100.000 k	-50.000 k	300.00	942.437400 M	-40.44	-90.82	-27.44
-50.000 k	-24.100 k	300.00	942.475400 M	-36.58	-86.97	-32.38
-24.100 k	-10.000 k	300.00	942.489600 M	-14.59	-64.98	-31.96
-10.000 k	-5.000 k	300.00	942.494600 M	13.06	-37.33	-30.74
5.000 k	10.000 k	300.00	942.509200 M	-6.03	-56.41	-30.83
10.000 k	24.100 k	300.00	942.510400 M	-14.01	-64.40	-31.38
24.100 k	50.000 k	300.00	942.524800 M	-36.53	-86.91	-32.33
50.000 k	100.000 k	300.00	942.560400 M	-39.74	-90.13	-26.74

Date: 6.SEP.2018 09:39:38

Plot 8-65: Occupied Bandwidth – 942.5000 MHz; 2-Level FSK 4800 XNB; Mask D



Plot 8-66: Occupied Bandwidth – 943.9875 MHz; 2-Level FSK 4800 XNB; Mask C



Tx Channel						None
Bandwidth		6.25 kHz	Power			50.71 dBm
Start [Hz]	Stop [Hz]	RBW [Hz]	Freq [Hz]	PwrAbs [dBm]	PwrRel [dBc]	Δ Limit [dB]
-100.000 k	-50.000 k	300.00	943.927300 M	-39.35	-90.06	-26.35
-50.000 k	-24.100 k	300.00	943.960300 M	-33.89	-84.60	-29.69
-24.100 k	-10.000 k	300.00	943.977300 M	-13.57	-64.28	-31.26
-10.000 k	-5.000 k	300.00	943.982300 M	12.59	-38.12	-32.21
5.000 k	10.000 k	300.00	943.992700 M	15.05	-35.66	-29.75
10.000 k	24.100 k	300.00	943.997700 M	-11.58	-62.29	-29.27
24.100 k	50.000 k	300.00	944.014700 M	-36.03	-86.73	-31.83
50.000 k	100.000 k	300.00	944.048100 M	-38.17	-88.88	-25.17

Date: 6.SEP.2018 09:40:51