RHEIN TECH LABORATORIES, INC.

Engineering Solutions & Electromagnetic Compatibility Services

FCC/IC Certification Report

Harris Corporation
221 Jefferson Ridge Parkway
Lynchburg, VA 24501
Paresh Chauhan
Phone: (434) 455-9290

Model: XL-185P UHF C1D2
Portable Land Mobile Radio

FCC ID: OWDTR-0149-E
IC: 3636B-0149

July 27, 2017

Standards Referenced for this Report	
Part 2: 2016	Frequency Allocations and Radio Treaty Matters; General Rules and Regulations
Part 15: 2016	Radio Frequency Devices
Part 22: 2016	Public Mobile Services
Part 74: 2016	Experimental Radio, Auxiliary, Special Broadcast and Other Program Distributional Services
Part 80: 2016	Stations in the Maritime Services
Part 90: 2016	Private Land Mobile Radio Services
ANSI/TIA-603-D 2010	Land Mobile FM or PM Communications Equipment Measurement and Performance Standards
Industry Canada RSS-119 Issue 12	Land Mobile and Fixed Radio Transmitters and Receivers Operating in the Frequency Range 27.41- 960 MHz

Report Prepared By: Daniel Baltzell

Document Number: 207071TNF

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.

Frequency Range (MHz)	Rated Transmit Power (W) (Conducted)	Frequency Tolerance (ppm)	Transmit Mode	Emission Designator
378 – 406.0 406.1 – 522	1-5	0.7	Analog Voice; WB	16K0F3E
378 – 406.0 406.1 – 522	1-5	0.7	EDACS 2-Level FSK 9600 Data/Digital Voice; WB	16K0F1D/E
378 – 406.0 406.1 – 522	1-5	0.7	Analog Voice; NB	11K0F3E
378 – 406.0 406.1 – 522	1-5	0.7	EDACS 2-Level FSK 9600 Data/Digital Voice; NB	11K7F1D/E
378 – 406.0 406.1 – 522	1-5	0.7	EDACS 2-level FSK 4800; Data/Digital Voice	7K10F1D/E
378 – 406.0 406.1 – 522	1-5	0.7	4-level C4FM Data/Voice; P25 Phase 1	8K40F1D/E
378 – 406.0 406.1 – 522	1-5	0.7	4-level H-CPM (TDMA) Data/Voice; P25 Phase 2	8K10DXW

Note: As this is a combined FCC and ISED test report, there is test data for frequencies that are only authorized for use in the United States; that is, any test data in the aforementioned frequency ranges is not applicable for Canada, nor authorized for use in Canada.

Table of Contents

Table of Figures

Table of Tables

Table of Plots

Table of Appendixes

Table of Photographs

1 Test Result Summary

Test	FCC & IC References	Result
RF Power Output	2.1046(a), 80.215, 74.461 IC RSS-119 5.4	Compliant
Spurious Emissions at Antenna Terminals	2.1051, 90.210, 80.217, IC RSS-119 5.8:	Compliant
Field Strength of Spurious Radiation	2.1053(a) IC RSS-119 5.8, IC RSS-119 5.11	Compliant
Occupied Bandwidth/Emission Masks	2.1049(c)(1), 22.359(b), 80.205, 90.210, 74.462 IC RSS-119 5.8	Compliant
Frequency Stability vs. Temperature and Voltage	2.1055, 90.213, 80.209, 74.464 IC RSS-119 5.3	Compliant
Modulation Characteristics	2.1047(a)(b), 80.213, 74.463	Compliant
Transient Frequency Response	90.214, 74.462(c) IC RSS-119 5.9	Compliant
Unintentional Digital/Receive Emissions	15B	Compliant

2 General Information

The following Certification Report is prepared on behalf of **Harris Corporation** in accordance with the Federal Communications Commission and Industry Canada Rules and Regulations. The Equipment Under Test (EUT) was the **XL-185P UHF Portable Land Mobile Radio; FCC ID: OWDTR-0149-E, IC: 3636B-0149.**

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

All measurements contained in this application were conducted in accordance with the applicable sections of FCC Rules and Regulations CFR 47 §2, 15, 22, 74, 80, and 90. 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 FCC and IC application includes an Industry Canada Family Certification application, which includes 4 model numbers under IC: 3636B-0149:

XS-PFSUM, XS-PFSUY, XS-PPSUM, XS-PPSUY

2.3 Grant Notes

Manufacturer’s Rated Power is 5W for UHF.

2.4 Tested System Details

The test sample was received on December 12, 2014. Listed below are the identifiers and descriptions of all equipment, cables, and internal devices used with the EUT for this test, as applicable.

The EUT includes a System model and a Scan model, the difference being that the System model has a DTMF keypad. The System model is considered to be representative of the radio family and to have the worst case emissions, and was therefore used for testing.

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

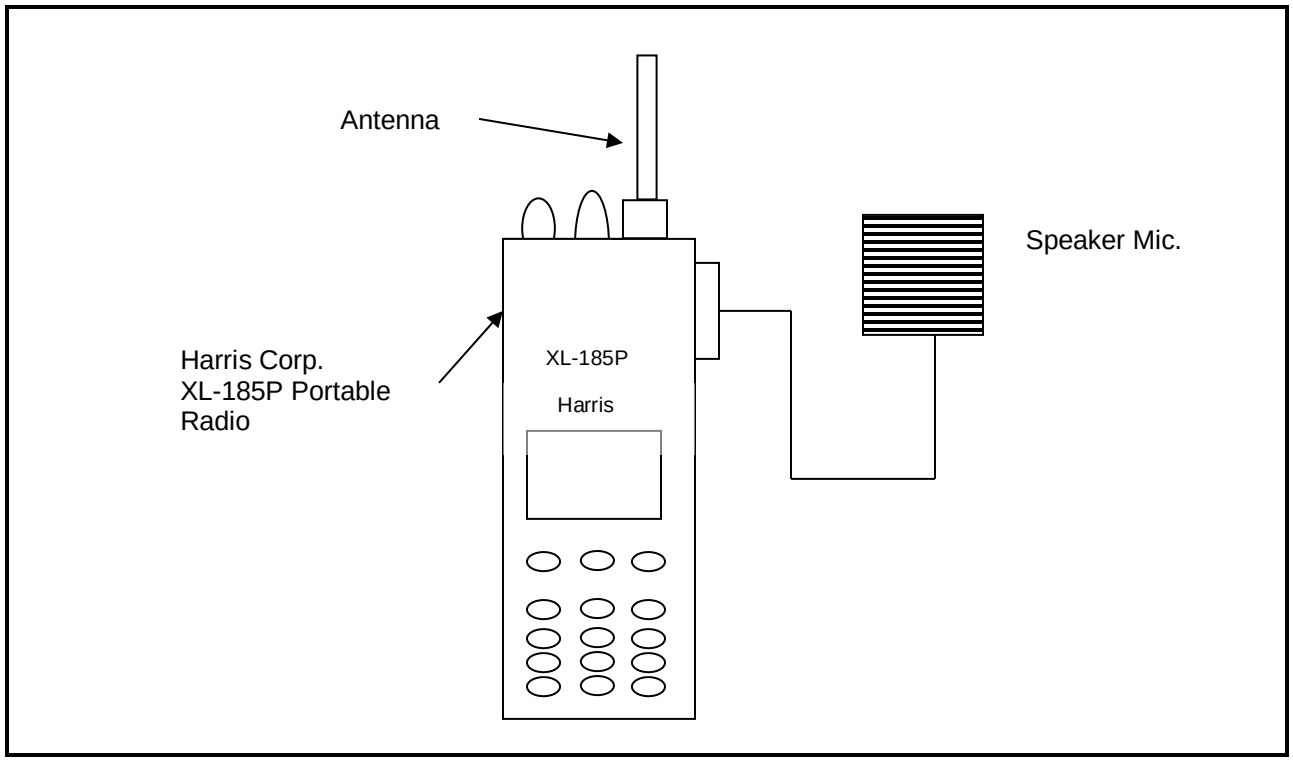
Table 2-1: Equipment Under Test (EUT)

Part	Manufacturer	Model	PN/SN	FCC ID	RTL Bar Code
Radio	Harris Corporation	XL-200P (System)	A-40188xxxxxx	OWDTR-0149-E	21612
Radio	Harris Corporation	XL-200P (Scan)	A-40189xxxxxx	OWDTR-0149-E	21613
Radio	Harris Corporation	XL-200P (System)	A-40188xxxxxx	OWDTR-0149-E	21564

Table 2-2: Auxiliary Equipment

Part	Manufacturer	Model	PN/SN	FCC ID	RTL Bar Code
AC Adapter	FP	FWA020012A	002844	N/A	21549
Charger	Harris Corporation	Single Bay Charger	14035-1800-01/00060	N/A	21550
Speaker/ Microphone	Harris Corporation	EM105	N/A	N/A	21563
Full-Spectrum Multiband Antenna	Harris Corporation	14035-4000-01	T1-11	N/A	21556
7.2V Li-Ion Battery	Harris Corporation	Li-Ion	22	N/A	21551
7.2V Li-Ion Battery	Harris Corporation	BAT	L-CASE-R-HR003	N/A	21552
Battery Eliminator	Harris Corporation	N/A	14035-4300-01	N/A	21553
Power Supply	Alinco	DM-33MVT 32A	1638	N/A	901124

Figure 2-1: Configuration of Tested System



3 FCC Rules and Regulations Part 2.1033(C)(8): Voltages and Currents Through The Final Amplifying Stage

UHF: 7.4 V / 1.94 A

4 FCC Rules and Regulations Part 2.1046(a): RF Power Output: Conducted; Part 80.215: Transmitter Power; Part 74.461: Transmitter Power

4.1 Test Procedure

ANSI/TIA-603-D 2010, section 2.2.1

The EUT was connected to a coaxial attenuator having a 50 Ω load impedance.

§74.461 Transmitter Power

(a) Transmitter power is the power at the transmitter output terminals and delivered to the antenna, antenna transmission line, or any other impedance-matched, radio frequency load. For the purpose of this Subpart, the transmitter power is the carrier power.
(b) The authorized transmitter power for a remote pickup broadcast station shall be limited to that necessary for satisfactory service and, in any event, shall not be greater than 100 watts, except that a station to be operated aboard an aircraft shall normally be limited to a maximum authorized power of 15 watts. Specific authorization to operate stations on board aircraft with an output power exceeding 15 watts will be issued only upon an adequate engineering showing of need, and of the procedures that will be taken to avoid harmful interference to other licensees.

§80.215 Transmitter Power

(a) Transmitter power shown on the radio station authorization is the maximum power the licensee is authorized to use. Power is expressed in the following terms:
(5) For all other emissions: the carrier power multiplied by 1.67.

(e) Ship stations frequencies above 27500 kHz:
The maximum power must not exceed the values listed below.
(1) Ship stations 156–162 MHz: 25W
(2) Marine utility stations and hand-held portable transmitters: 156–162 MHz: 10W

Maximum Power Authorized to use: 8.35W for UHF

Manufacturer's Rated Power:

UHF: 5W

4.2 Test Data

Table 4-1: RF Conducted Output Power - Measured

Frequency (MHz)	Power (dBm)	Power (W)
378.0125	37.5	5.6
406.1000	37.4	5.5
418.0125	37.3	5.4
430.0125	37.3	5.4
450.0125	37.4	5.5
454.0125	37.4	5.5
456.0125	37.4	5.5
459.0250	37.3	5.4
459.9750	37.3	5.4
470.0125	37.4	5.5
511.9875	37.3	5.4
521.9875	37.3	5.4

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	11/13/15
900948	Weinschel Corporation	47-10-43	Attenuator DC-18 GHz 10 dB 50W	BH1487	6/16/15

Test Personnel:

Daniel Baltzell		December 13, 2014
EMC Test Engineer	Signature	Date of Test

5 FCC Rules and Regulations Part 2.1051: Spurious Emissions at Antenna Terminals; Part 90.210: Emission Limitations; Part 80.217: Suppression of Interference aboard Ships

5.1 Test Procedure

ANSI/TIA-603-D 2010, Section 2.2.13

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.

§80.217 Suppression of Interference aboard Ships

(a) A voluntarily equipped ship station receiver must not cause harmful interference to any receiver required by statute or treaty.
(b) The electromagnetic field from receivers required by statute or treaty must not exceed the following value at a distance over sea water of one nautical mile from the receiver:

Frequency of Interfering Emissions	Power to Artificial Antenna in Microwatts
Below 30 MHz	0.1
30 to 100 MHz	3
100 to 300 MHz	1.0
Over 300 MHz	3.0

or

Deliver not more than the following amounts of power, to an artificial antenna having electrical characteristics equivalent to those of the average receiving antenna(s) use on shipboard:

Frequency of Interfering Emissions	Power to Artificial Antenna in Microwatts
Below 30 MHz	400 (4 dBm)
30 to 100 MHz	4,000 (6 dBm)
100 to 300 MHz	40,000 (16 dBm)
Over 300 MHz	400,000 (26 dBm)

5.2 Test Data

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

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

The following channels (in MHz) were investigated:

UHF: 378.0125, 406.1000, 418.0125, 430.0125, 450.0125, 454.0125, 456.0125, 459.0250, 459.9750, 470.0125, 511.9875, and 521.9875

Both high and low power settings were checked; high power was found to be worst case. All modes were investigated and analog mode is presented as representative data.

All frequencies were found to be greater than 20 dB below the limit except 430.0125 MHz, Narrowband, 1-4 GHz, shown in Plot 5-1.

Plot 5-1: Spurious Emissions at Antenna Terminals – 430.0125 MHz; Narrowband; 1-4 GHz

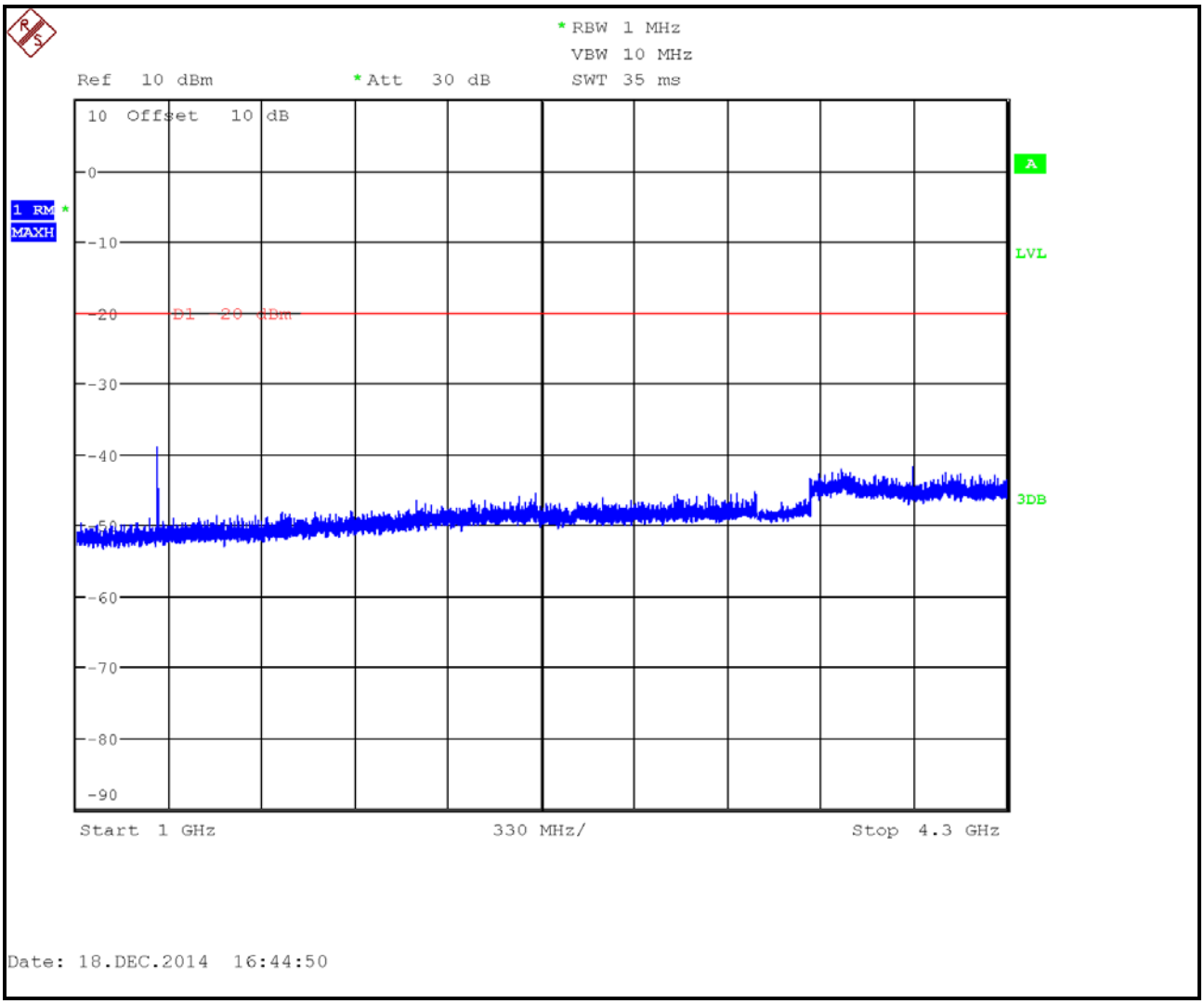


Table 5-1: Test Equipment Used For Testing Spurious Emissions

RTL Asset #	Manufacturer	Model	Part Type	Serial Number	Calibration Due Date
901129	Par Electronics	188-174 (25W)	VHF Notch Filters	N/A	7/1/15
901135	Par Electronics	400-512 (25W)	UHF Notch Filter	N/A	7/1/15
901128	Par Electronics	806-902 (25W)	UHF Notch Filter	N/A	7/1/15
901581	Rohde & Schwarz	FSU	Spectrum Analyzer	1166.1660.50	11/13/15
900948	Weinschel Corporation	47-10-43	Attenuator DC-18 GHz 10 dB 50W	BH1487	6/16/15
900819	Weinschel Corporation	2	10 dB Attenuator; 5 W	BF0830	7/1/15

Test Personnel:

Daniel Baltzell		December 18, 2014
EMC Test Engineer	Signature	Date of Test

6 FCC Rules and Regulations Part 90.210(g) and Part 2.1053(a): Field Strength of Spurious Radiation

6.1 Test Procedure

ANSI/TIA-603-D 2010, section 2.2.12

Analog Modulation: The transmitter is terminated with a 50 Ω load and is modulated with a 2,500 Hz sine wave at an input level 16 dB greater than that required to produce 50% of the rated system deviation at 1,000 Hz.

Device with digital modulation: Modulated to its maximum extent using a pseudo-random data sequence – 19,200 bps for OTP and 9,600 bps for P25 and EDACS modes.

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.

6.2 Test Data

6.2.1 CFR 47 Part 90.210 Requirements

The magnitude of emissions attenuated more than 20 dB below the FCC limit need not be recorded.

The following emissions were found to be within a 20 dB margin of the limit. All other emissions are not listed.

Table 6-1: Field Strength of Spurious Radiation - 378.0125 MHz

Frequency (MHz)	Spectrum Analyzer Level (dBuV)	Signal Generator Level (dBm)	Cable Loss (dB)	Antenna Gain (dBd)	Corrected Signal Generator Level (dBc)	Margin (dB)
756.025	41.5	-31.4	0.2	0.9	68.3	-10.8

Table 6-2: Field Strength of Spurious Radiation - 406.1000 MHz

Frequency (MHz)	Spectrum Analyzer Level (dBuV)	Signal Generator Level (dBm)	Cable Loss (dB)	Antenna Gain (dBd)	Corrected Signal Generator Level (dBc)	Margin (dB)
812.2	38.2	-35.9	0.3	0.6	73.1	-15.6
1218.3	43.2	-30.3	0.3	6.6	61.5	-4.0

Table 6-3: Field Strength of Spurious Radiation - 418.0125 MHz

Frequency (MHz)	Spectrum Analyzer Level (dBuV)	Signal Generator Level (dBm)	Cable Loss (dB)	Antenna Gain (dBd)	Corrected Signal Generator Level (dBc)	Margin (dB)
836.025	47.3	-27.3	0.3	0.7	64.4	-6.9

Table 6-4: Field Strength of Spurious Radiation - 430.0125 MHz

Frequency (MHz)	Spectrum Analyzer Level (dBuV)	Signal Generator Level (dBm)	Cable Loss (dB)	Antenna Gain (dBd)	Corrected Signal Generator Level (dBc)	Margin (dB)
860.025	42.1	-32.4	0.3	0.0	70.1	-12.6

Table 6-5: Field Strength of Spurious Radiation - 450.0125 MHz

Frequency (MHz)	Spectrum Analyzer Level (dBuV)	Signal Generator Level (dBm)	Cable Loss (dB)	Antenna Gain (dBd)	Corrected Signal Generator Level (dBc)	Margin (dB)
900.025	45.4	-28.7	0.3	0.7	65.8	-8.3

Table 6-6: Field Strength of Spurious Radiation - 454.0125 MHz

Frequency (MHz)	Spectrum Analyzer Level (dBuV)	Signal Generator Level (dBm)	Cable Loss (dB)	Antenna Gain (dBd)	Corrected Signal Generator Level (dBc)	Margin (dB)
908.025	43.9	-30.0	0.3	0.9	66.9	-9.4

Table 6-7: Field Strength of Spurious Radiation - 456.0125 MHz

Frequency (MHz)	Spectrum Analyzer Level (dBuV)	Signal Generator Level (dBm)	Cable Loss (dB)	Antenna Gain (dBd)	Corrected Signal Generator Level (dBc)	Margin (dB)
912.025	45.4	-28.6	0.3	0.9	65.5	-8.0

Table 6-8: Field Strength of Spurious Radiation - 459.0250 MHz

Frequency (MHz)	Spectrum Analyzer Level (dBuV)	Signal Generator Level (dBm)	Cable Loss (dB)	Antenna Gain (dBd)	Corrected Signal Generator Level (dBc)	Margin (dB)
918.05	42.8	-31.3	0.3	1.0	68.1	-10.6

Table 6-9: Field Strength of Spurious Radiation - 459.9750 MHz

Frequency (MHz)	Spectrum Analyzer Level (dBuV)	Signal Generator Level (dBm)	Cable Loss (dB)	Antenna Gain (dBd)	Corrected Signal Generator Level (dBc)	Margin (dB)
919.95	44.5	-29.6	0.3	1.0	66.4	-8.9

Table 6-10: Field Strength of Spurious Radiation - 470.0125 MHz

Frequency (MHz)	Spectrum Analyzer Level (dBuV)	Signal Generator Level (dBm)	Cable Loss (dB)	Antenna Gain (dBd)	Corrected Signal Generator Level (dBc)	Margin (dB)
940.025	43.0	-30.8	0.3	1.1	67.5	-10.0

Table 6-11: Test Equipment Used For Testing Field Strength of Spurious Radiation

RTL Asset #	Manufacturer	Model	Part Type	Serial Number	Calibration Due Date
900932	Hewlett Packard	8449B OPT H02	Preamplifier (1 - 26.5 GHz)	3008A00505	9/5/15
900878	Rhein Tech Laboratories	AM3-1197-0005	3 meter antenna mast, polarizing	OATS1	N/A
901592	Insulated Wire Inc.	KPS-1503-3600-KPR	SMK RF Cables 20’	NA	9/3/15
901593	Insulated Wire Inc.	KPS-1503-360-KPR	SMK RF Cables 36”	NA	9/3/15
901594	Insulated Wire Inc.	KPS-1503-360-KPR	SMK RF Cables 36”	NA	9/3/15
901242	Rhein Tech Laboratories	WRT-000-0003	Wood rotating table	N/A	N/A
901581	Rohde & Schwarz	FSU	Spectrum Analyzer	1166.1660.50	11/13/15
901582	Rohde & Schwarz	1167.0000.02	Signal Generator	101903	11/14/15
900791	Chase	CBL6111B	Bilog Antenna (30 MHz – 2000 MHz)	N/A	6/11/17
900321	EMCO	3161-03	Horn Antennas (4 – 8 GHz)	9508-1020	4/20/15
900323	EMCO	3160-07	Horn Antennas (8.2 – 12 GHz)	9605-1054	4/20/15
900772	EMCO	3161-02	Horn Antenna (2 - 4 GHz)	9804-1044	4/20/15
901132	Par Electronics	806-902 (25W)	UHF Notch Filter	N/A	7/1/15
901133	Par Electronics	806-902 (25W)	UHF Notch Filter	N/A	7/1/15

Test Personnel:

Daniel Baltzell		January 13-February 9, 2015
Test Engineer	Signature	Dates of Tests

7 FCC Rules and Regulations Part 2.1049(c)(1): Occupied Bandwidth; Part 90.210: Authorized Bandwidth; Part 74.462: Authorized Bandwidth and Emissions

Occupied Bandwidth - Compliance with the Emission Masks

7.1 Test Procedure

ANSI/TIA-603-D 2010, section 2.2.11 and TIA/EIA-102.CAAA-2002 section 2.2.5

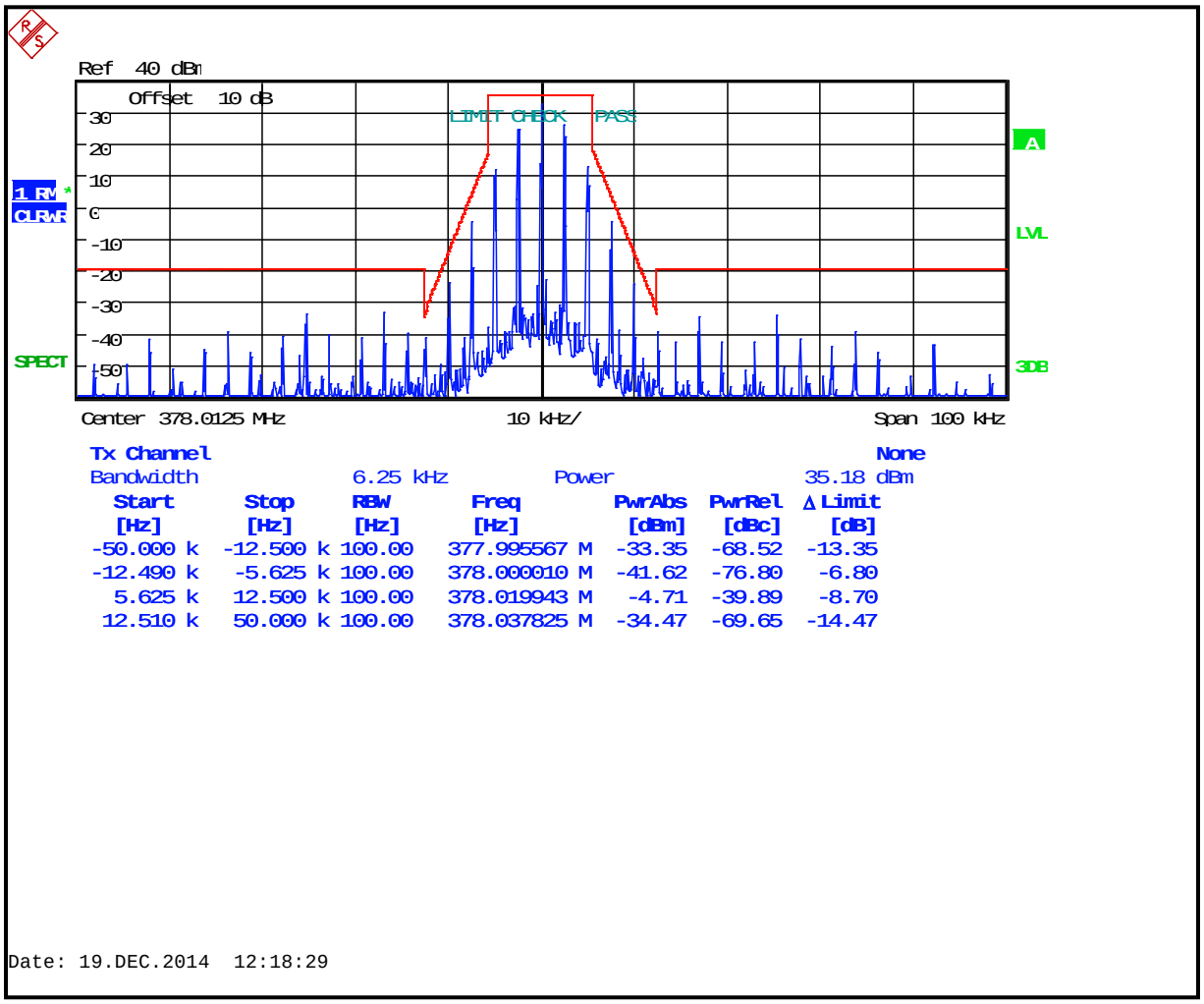
Device with digital modulation: Modulated to its maximum extent using a pseudo-random data sequence.

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]	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

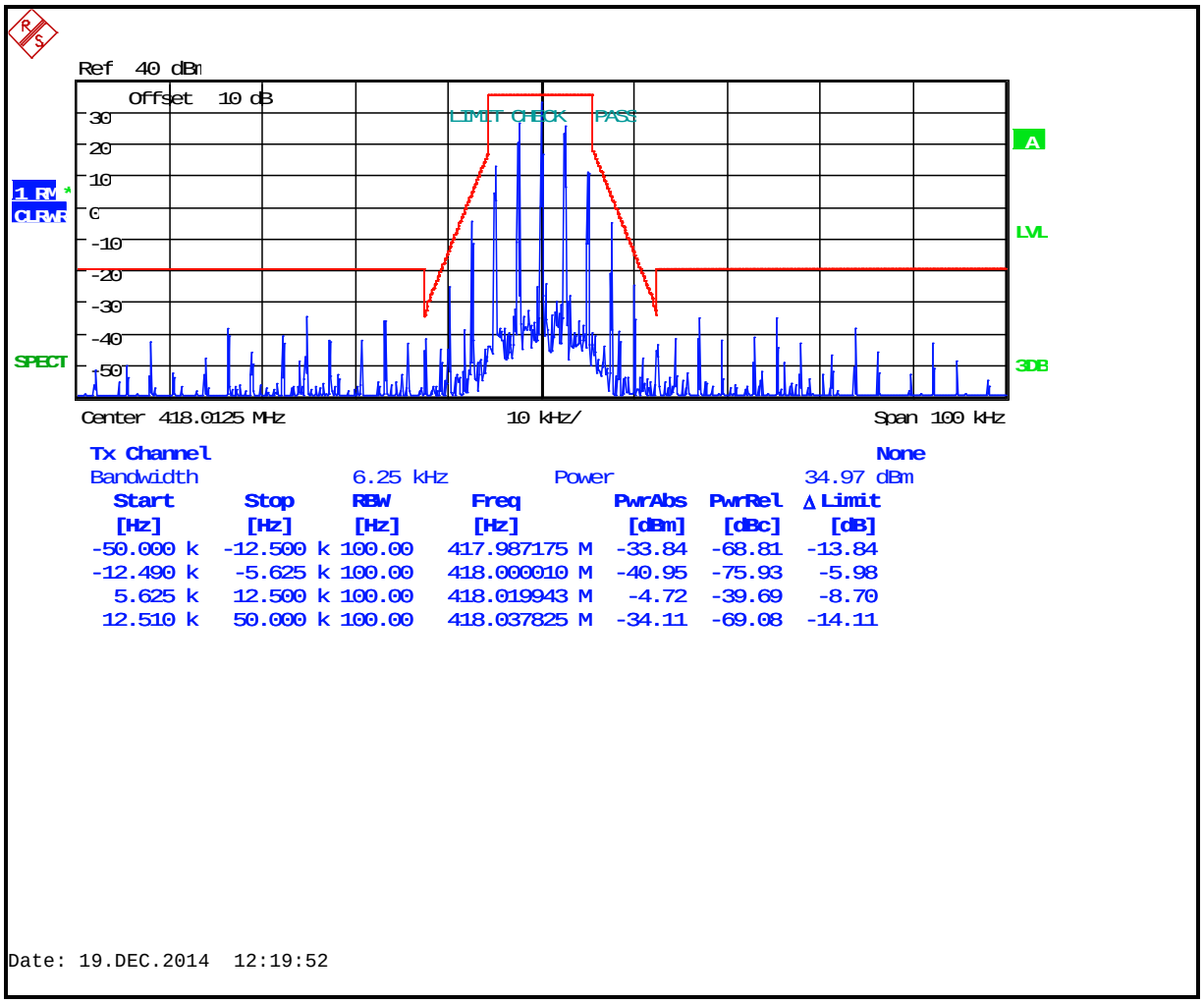
1 Equipment using single sideband J3E emission must meet the requirements of Emission Mask A. Equipment using other emissions must meet the requirements of Emission Mask B or C, as applicable.
2 Equipment designed to operate with a 25 kHz channel bandwidth must meet the requirements of Emission Mask 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 Units equipment in the 5850–5925 MHz band is governed under subpart M of this part.

7.2 Test Data

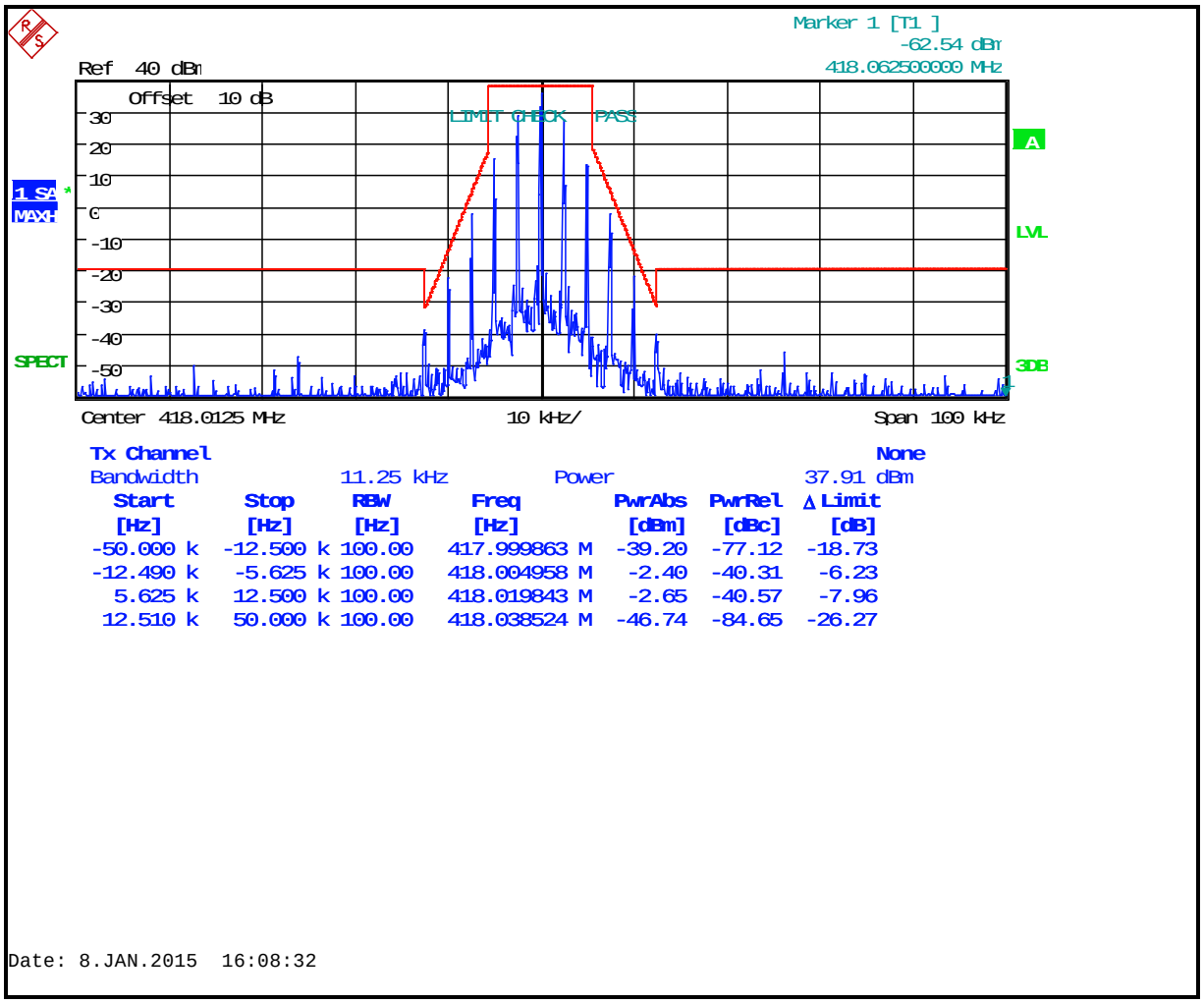
Plot 7-1: Occupied Bandwidth – 378.0125 MHz; Narrowband Analog (Mask D)



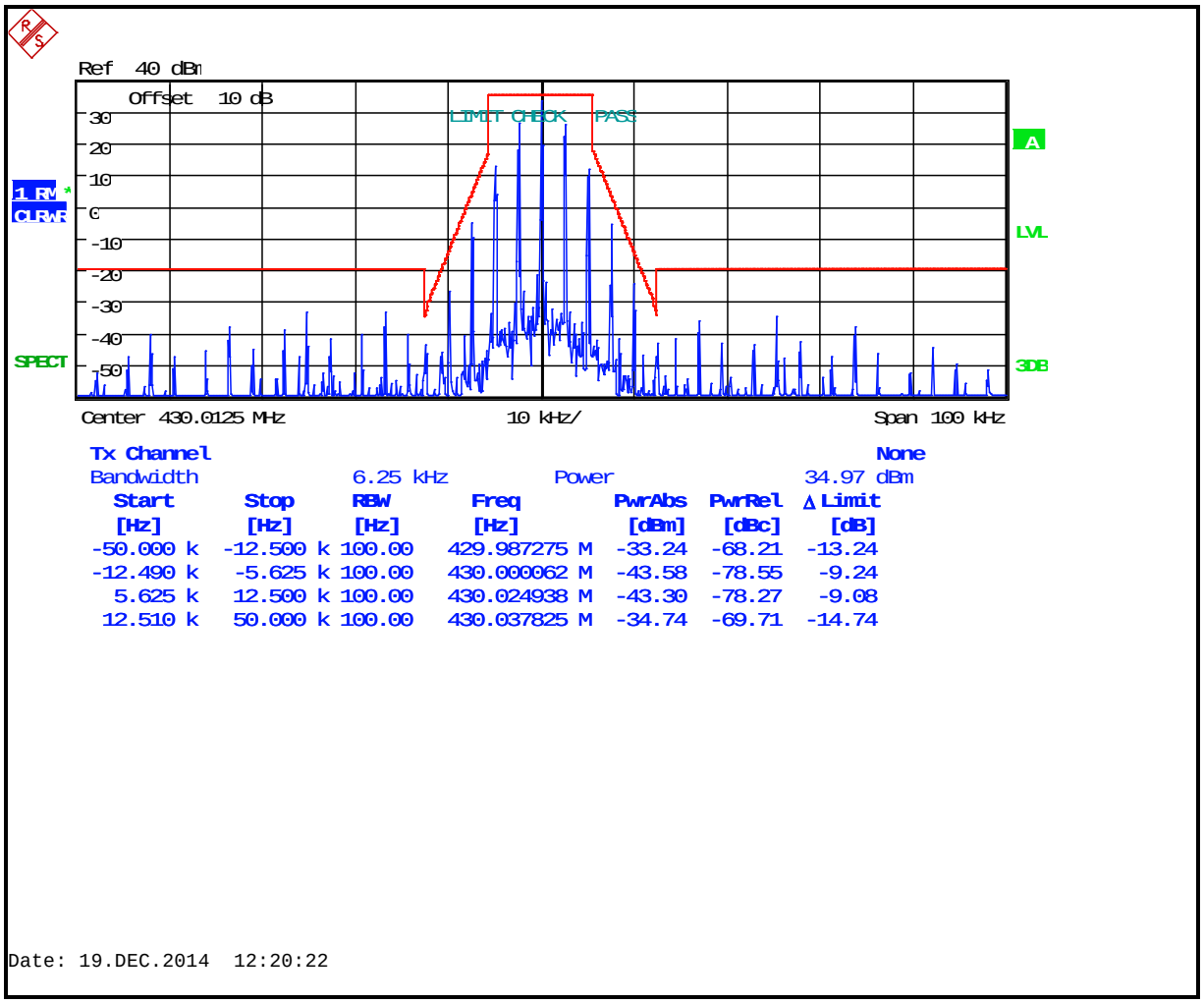
Plot 7-2: Occupied Bandwidth – 406.1000 MHz; Narrowband Analog (Mask D)



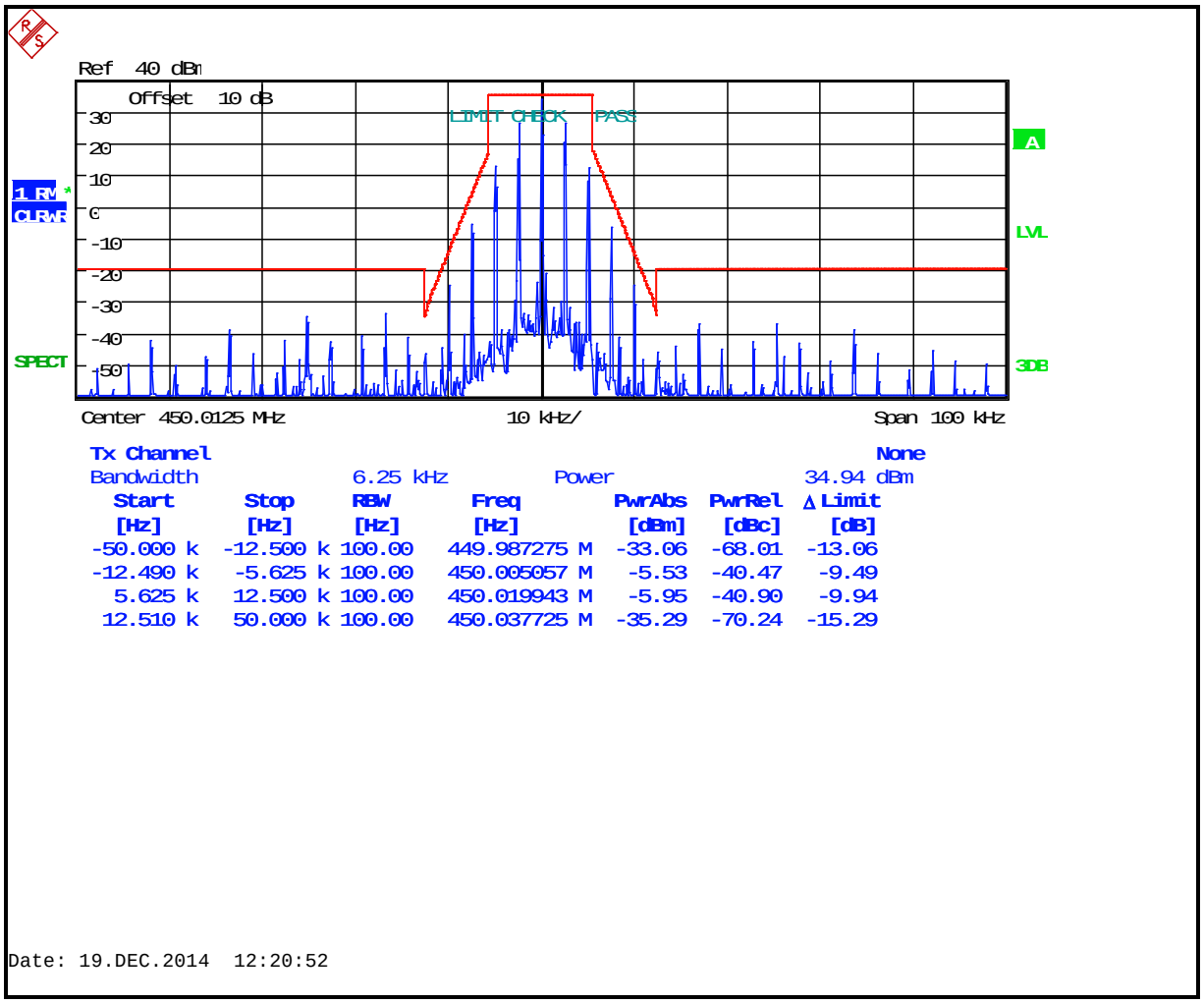
Plot 7-3: Occupied Bandwidth – 418.0125 MHz; Narrowband Analog (Mask D)



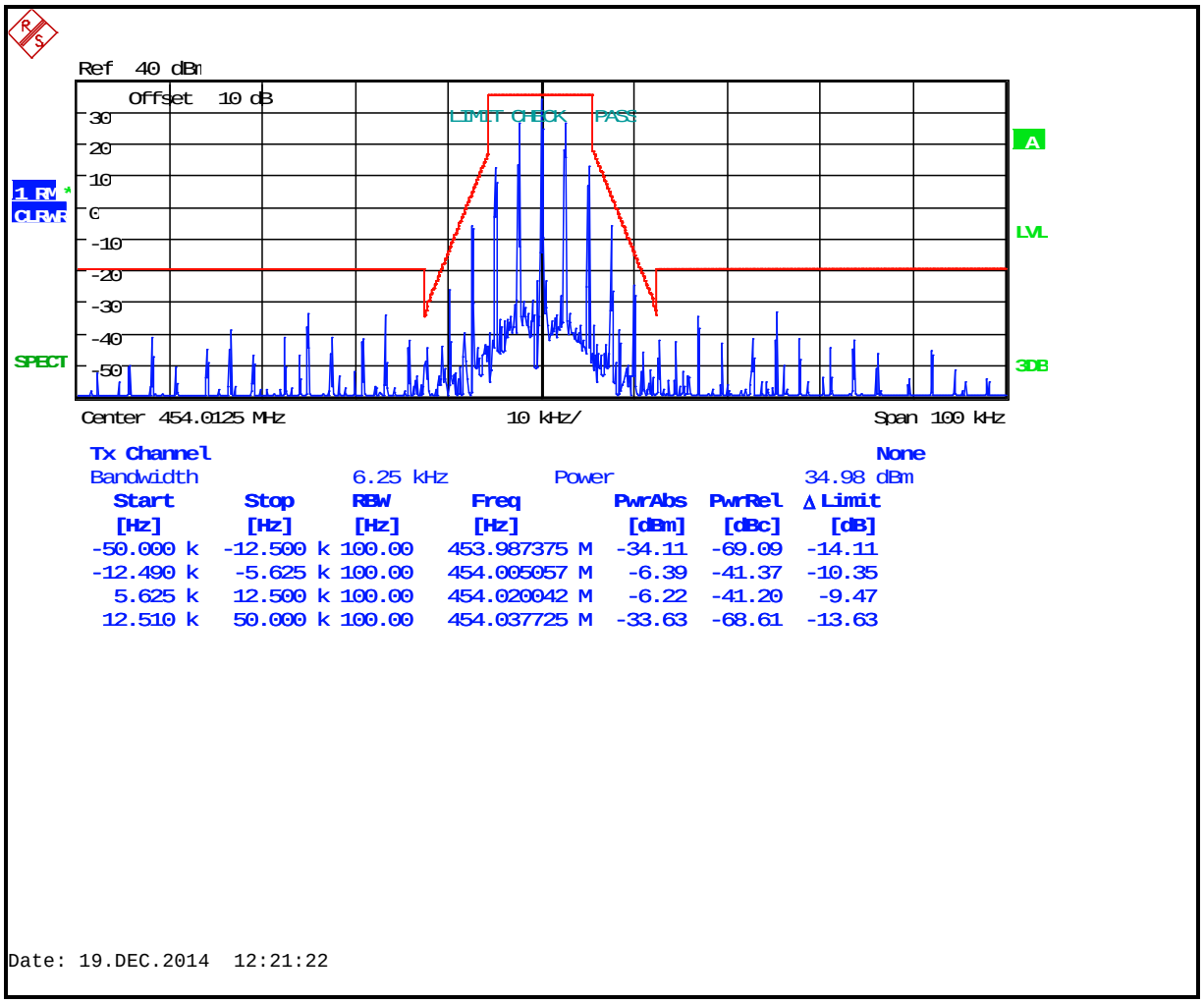
Plot 7-4: Occupied Bandwidth – 430.0125 MHz; Narrowband Analog (Mask D)



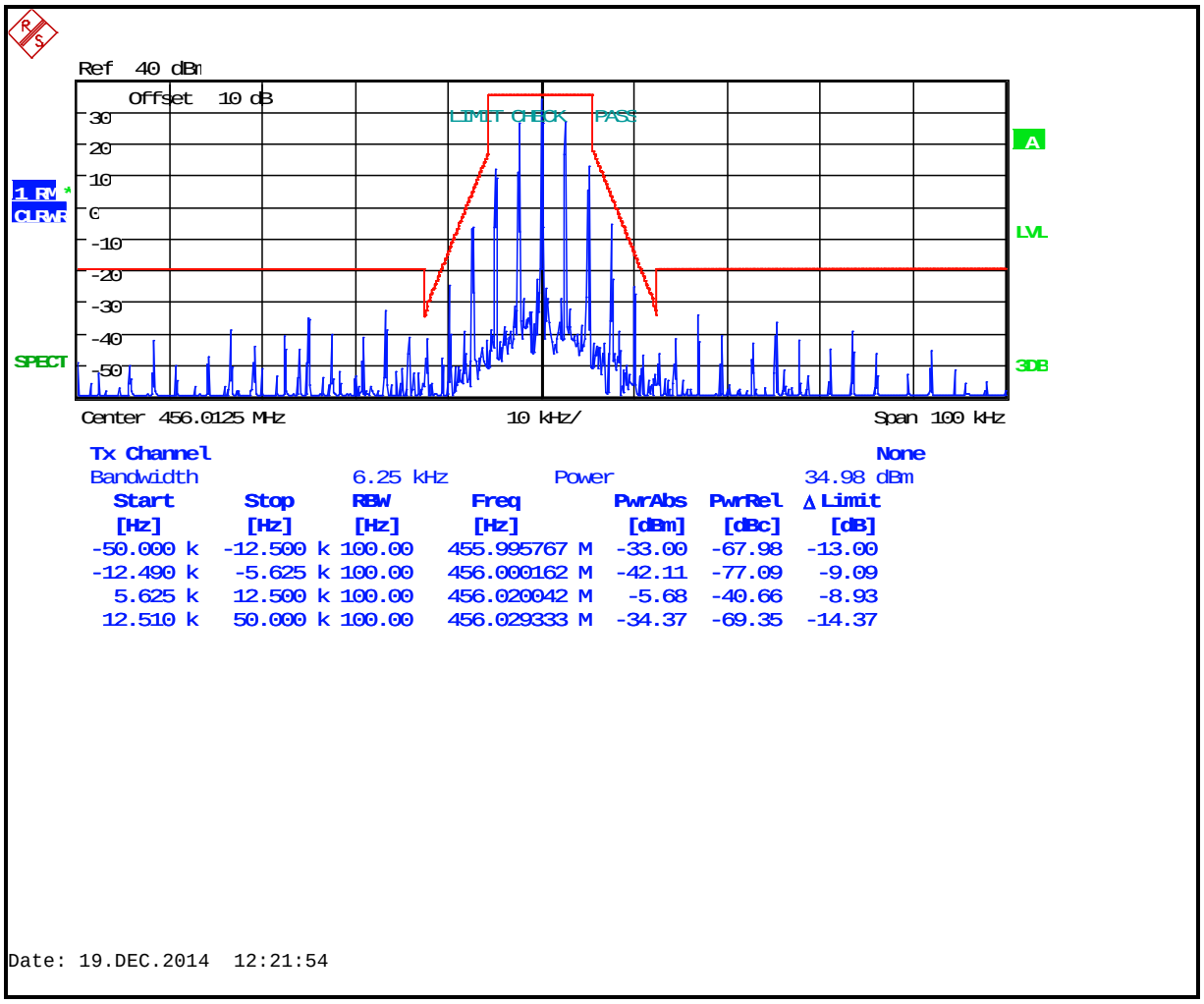
Plot 7-5: Occupied Bandwidth – 450.0125 MHz; Narrowband Analog (Mask D)



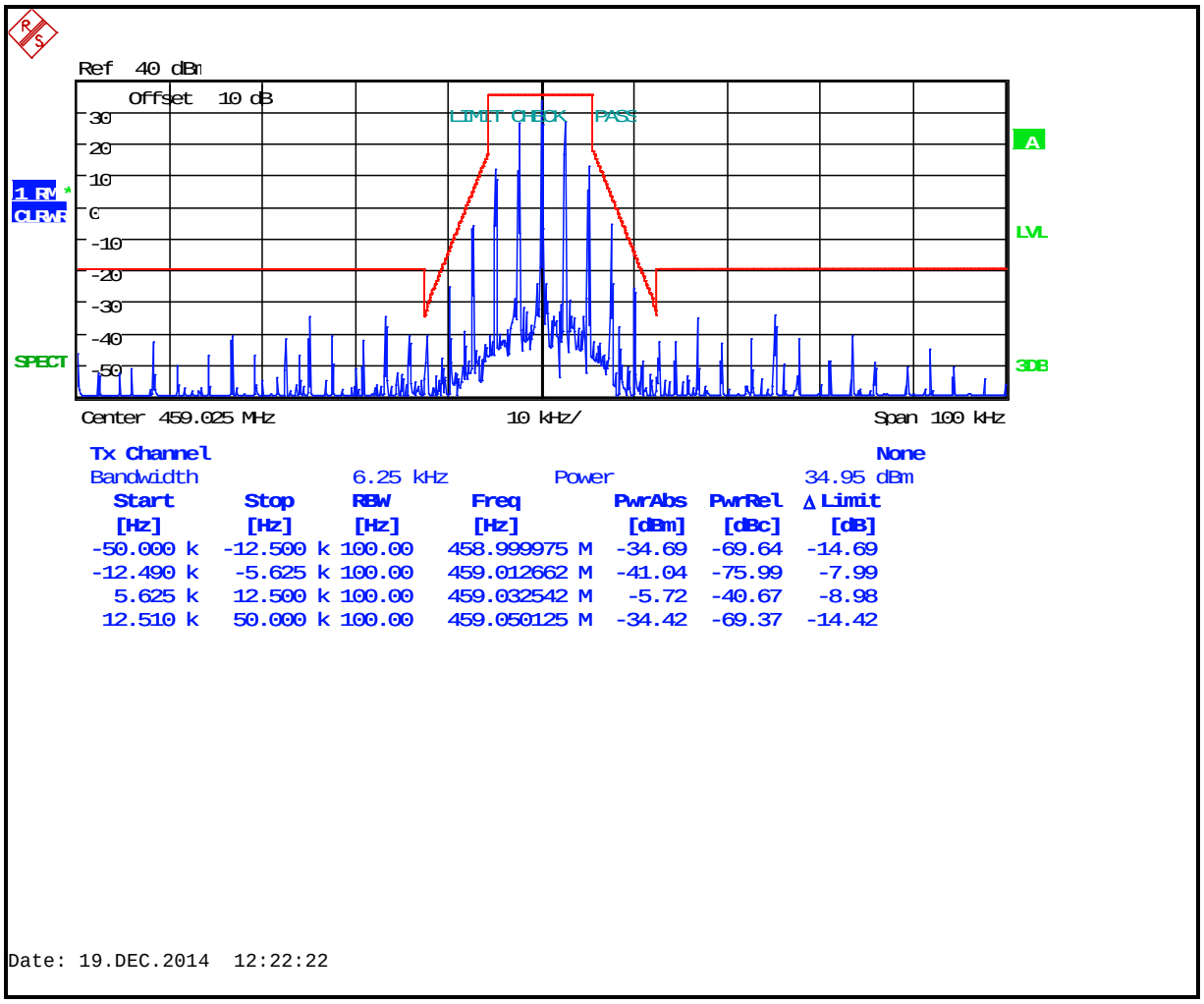
Plot 7-6: Occupied Bandwidth – 454.0125 MHz; Narrowband Analog (Mask D)



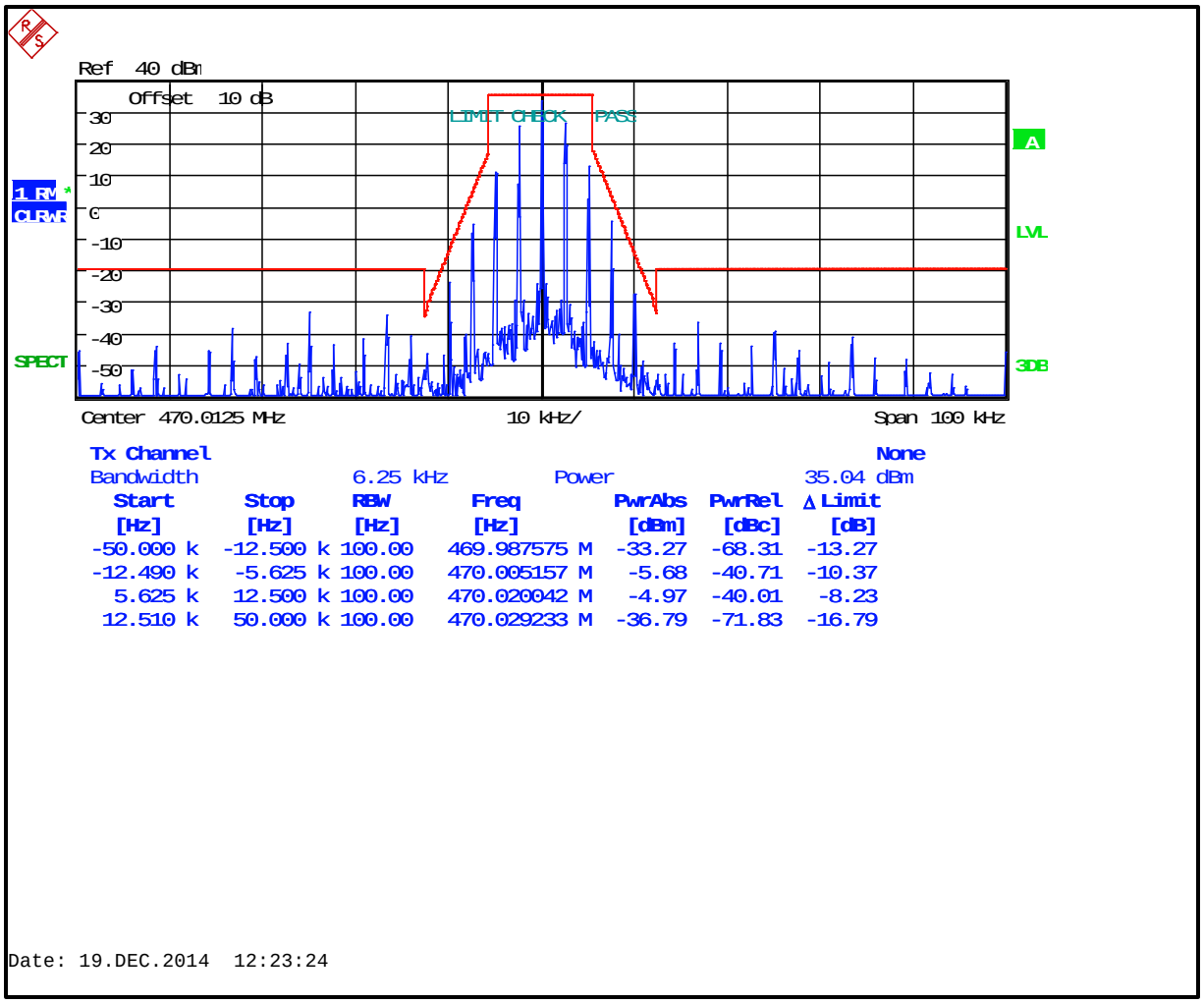
Plot 7-7: Occupied Bandwidth – 456.0125 MHz; Narrowband Analog (Mask D)



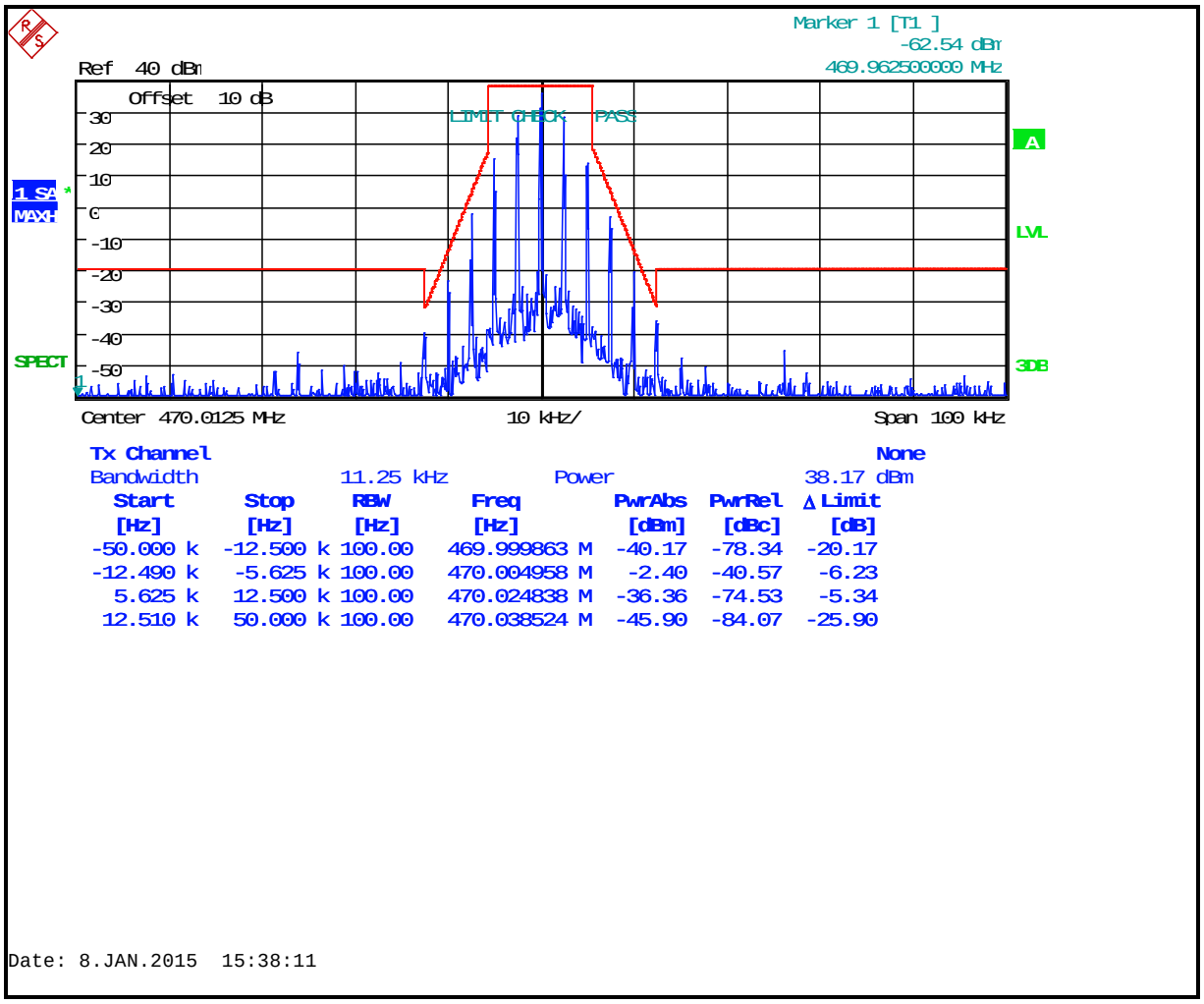
Plot 7-8: Occupied Bandwidth – 459.0250 MHz; Narrowband Analog (Mask D)



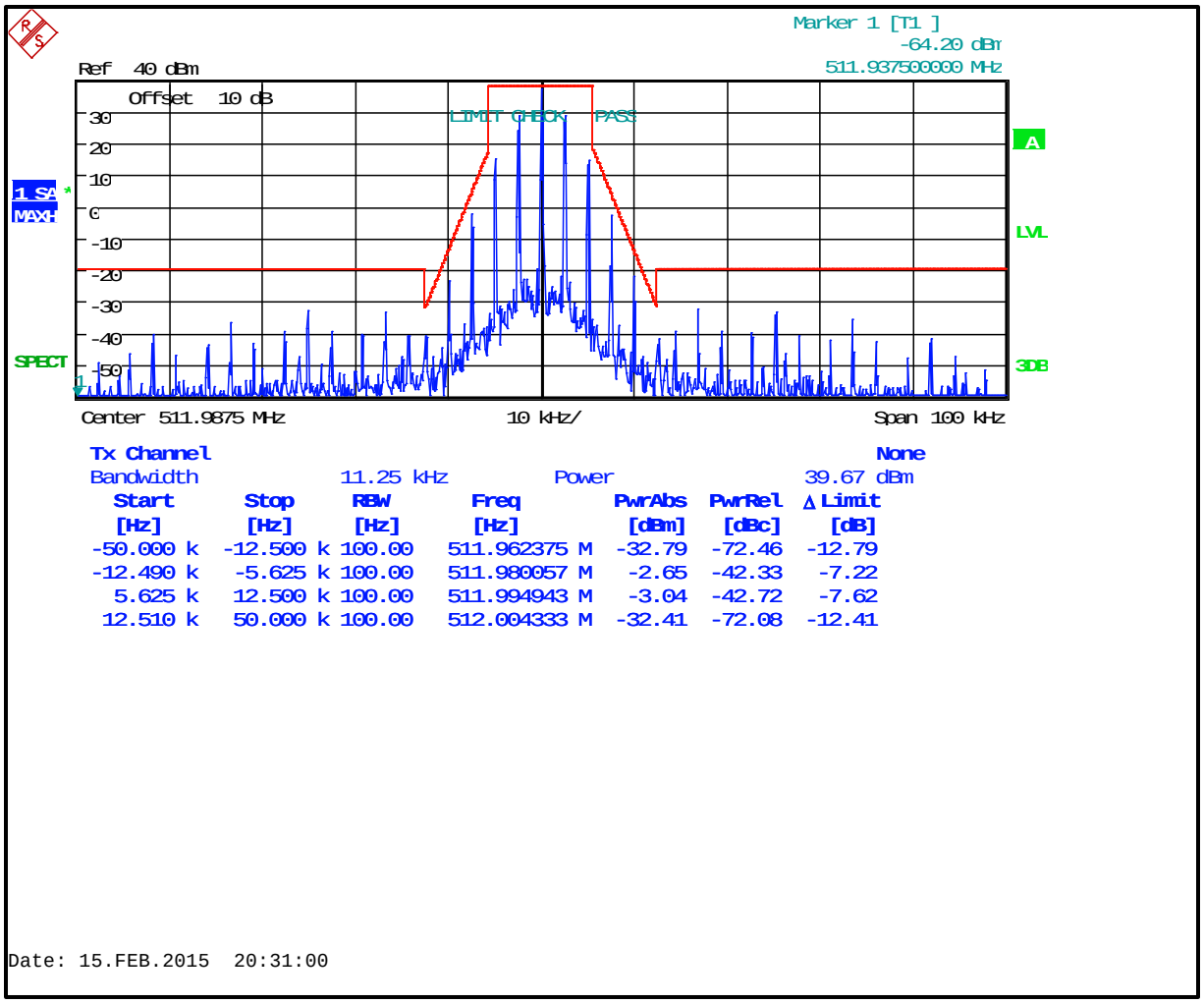
Plot 7-9: Occupied Bandwidth – 459.9750 MHz; Narrowband Analog (Mask D)



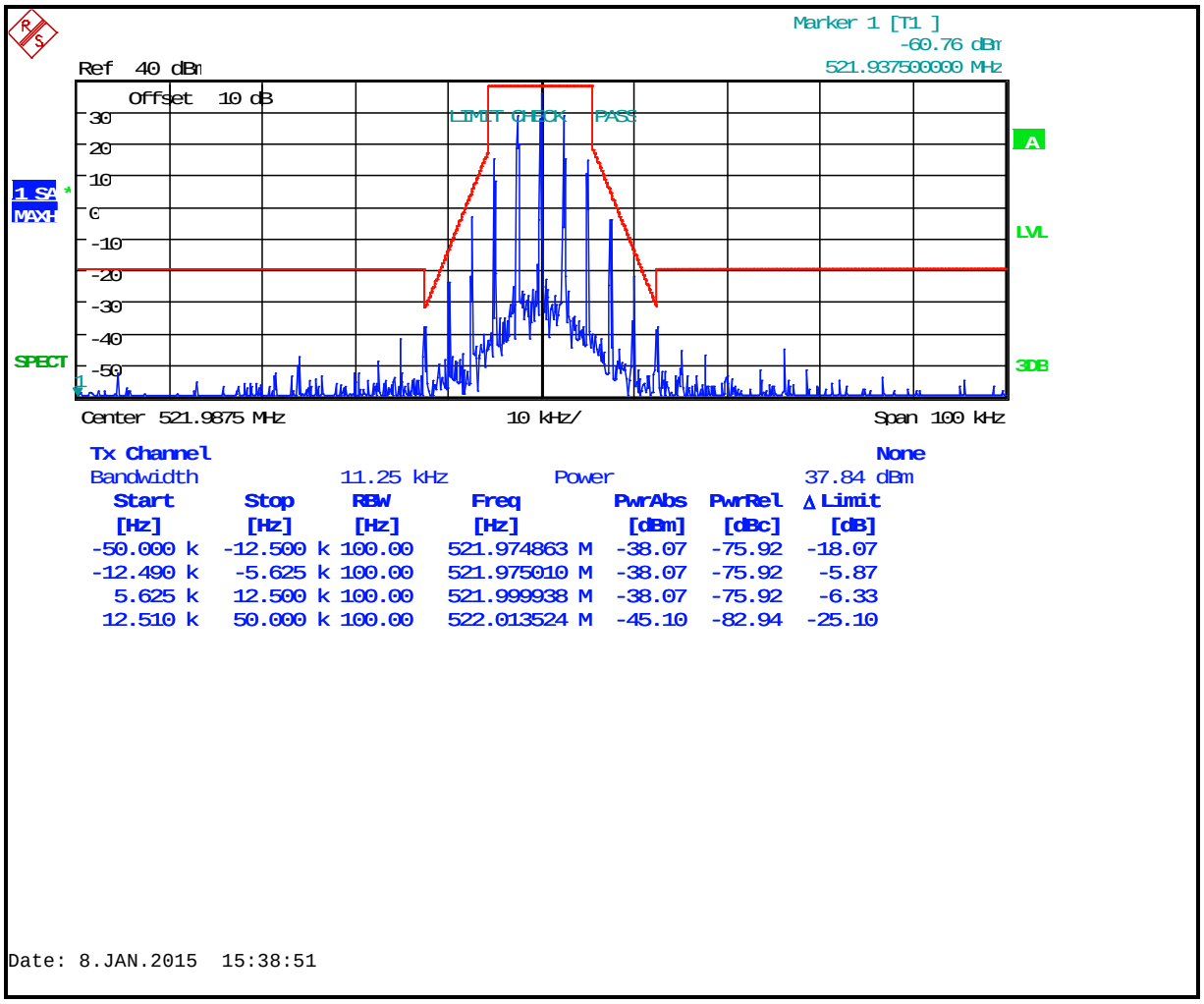
Plot 7-10: Occupied Bandwidth – 470.0125 MHz; Narrowband Analog (Mask D)



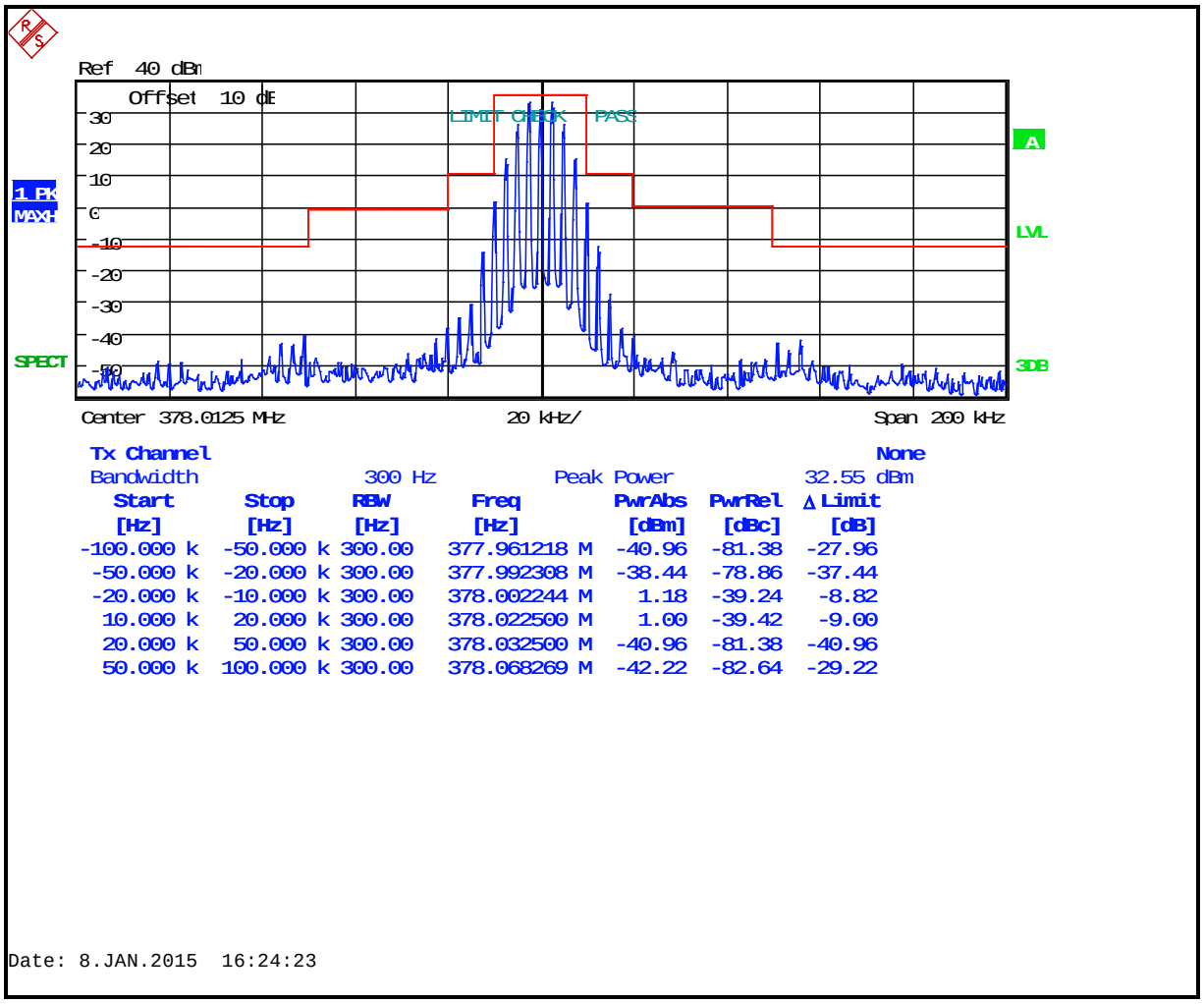
Plot 7-11: Occupied Bandwidth – 511.9875 MHz; Narrowband Analog (Mask D)



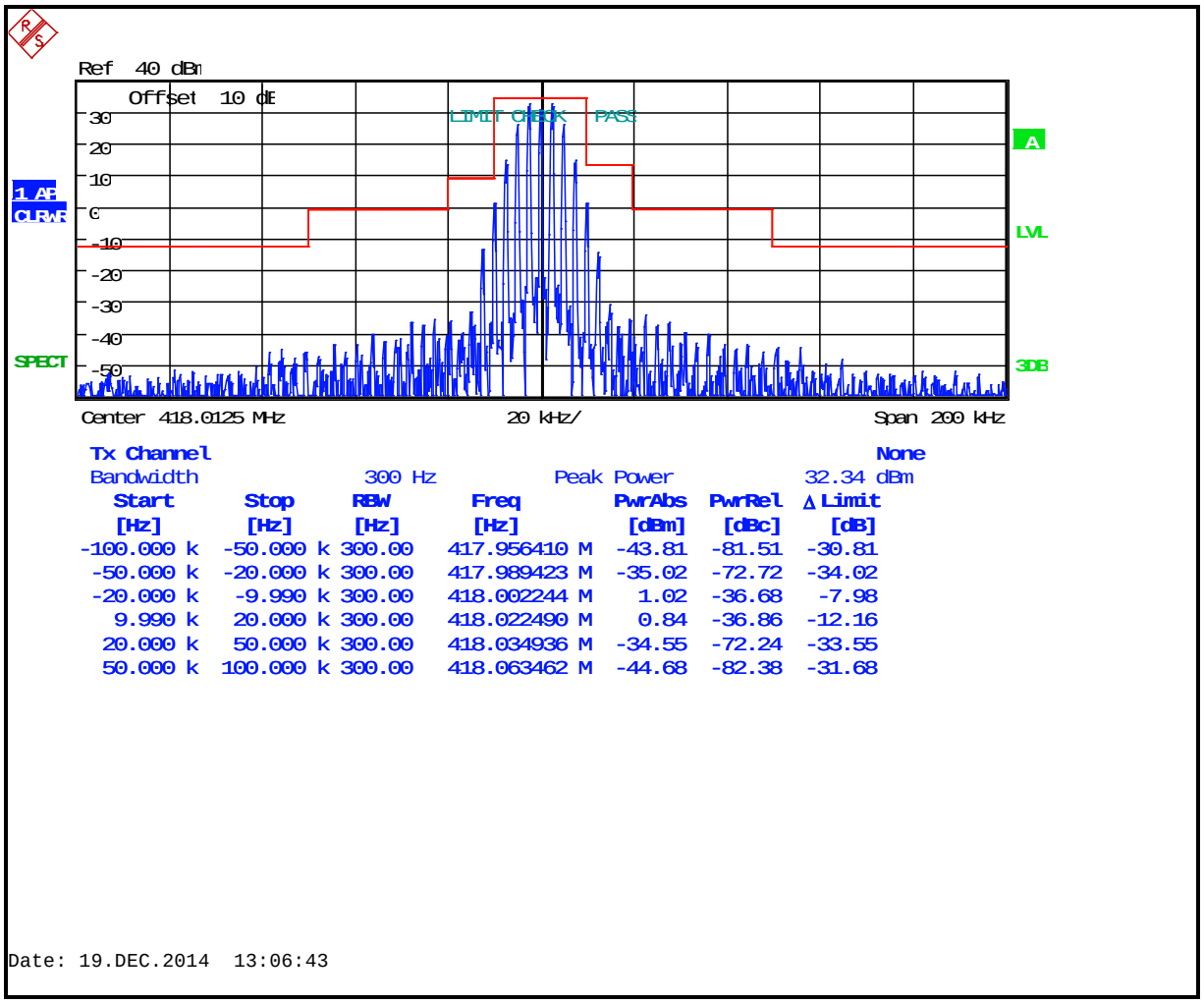
Plot 7-12: Occupied Bandwidth – 521.9875 MHz; Narrowband Analog (Mask D)



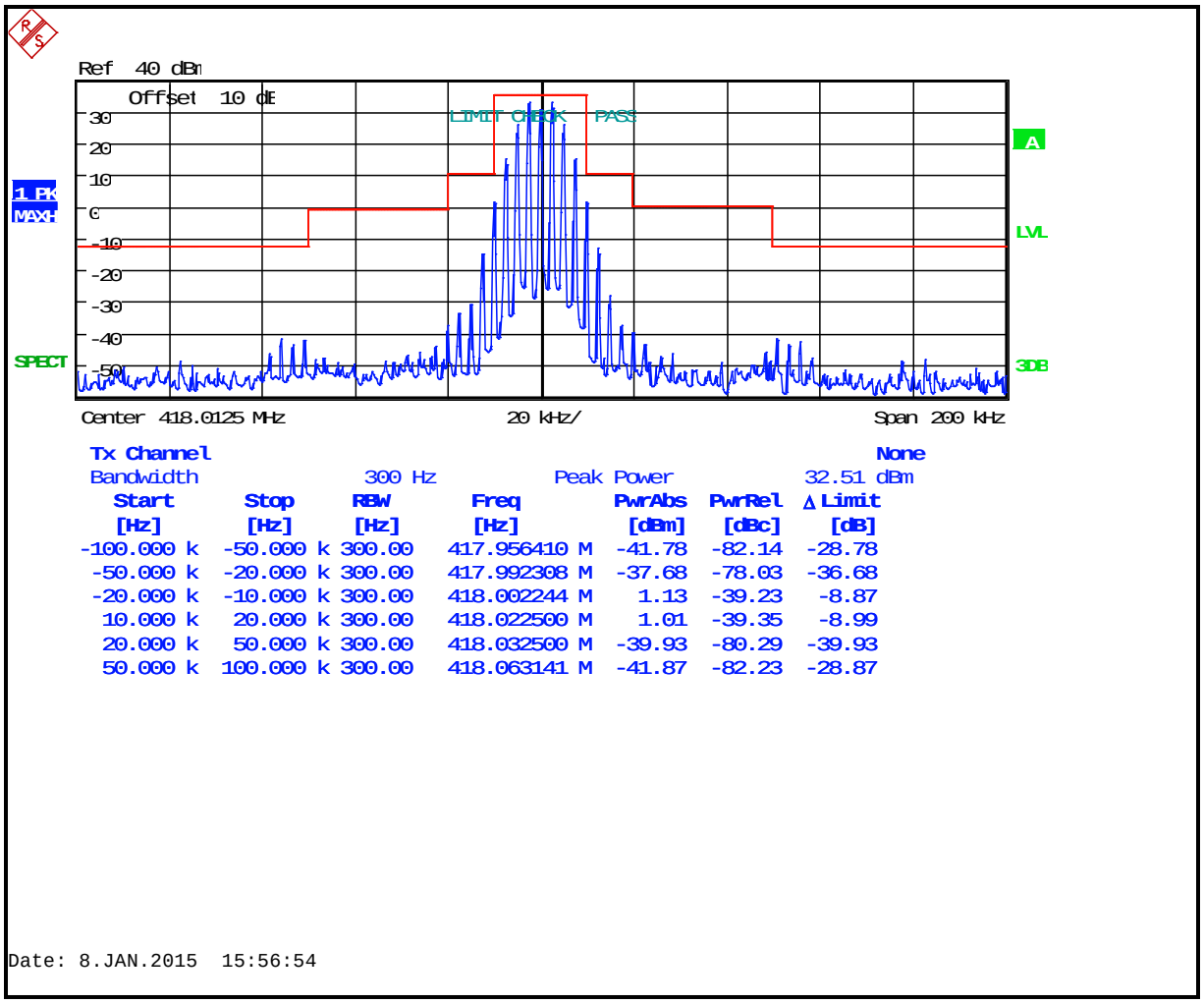
Plot 7-13: Occupied Bandwidth – 378.0125 MHz; Wideband Analog (Mask B)



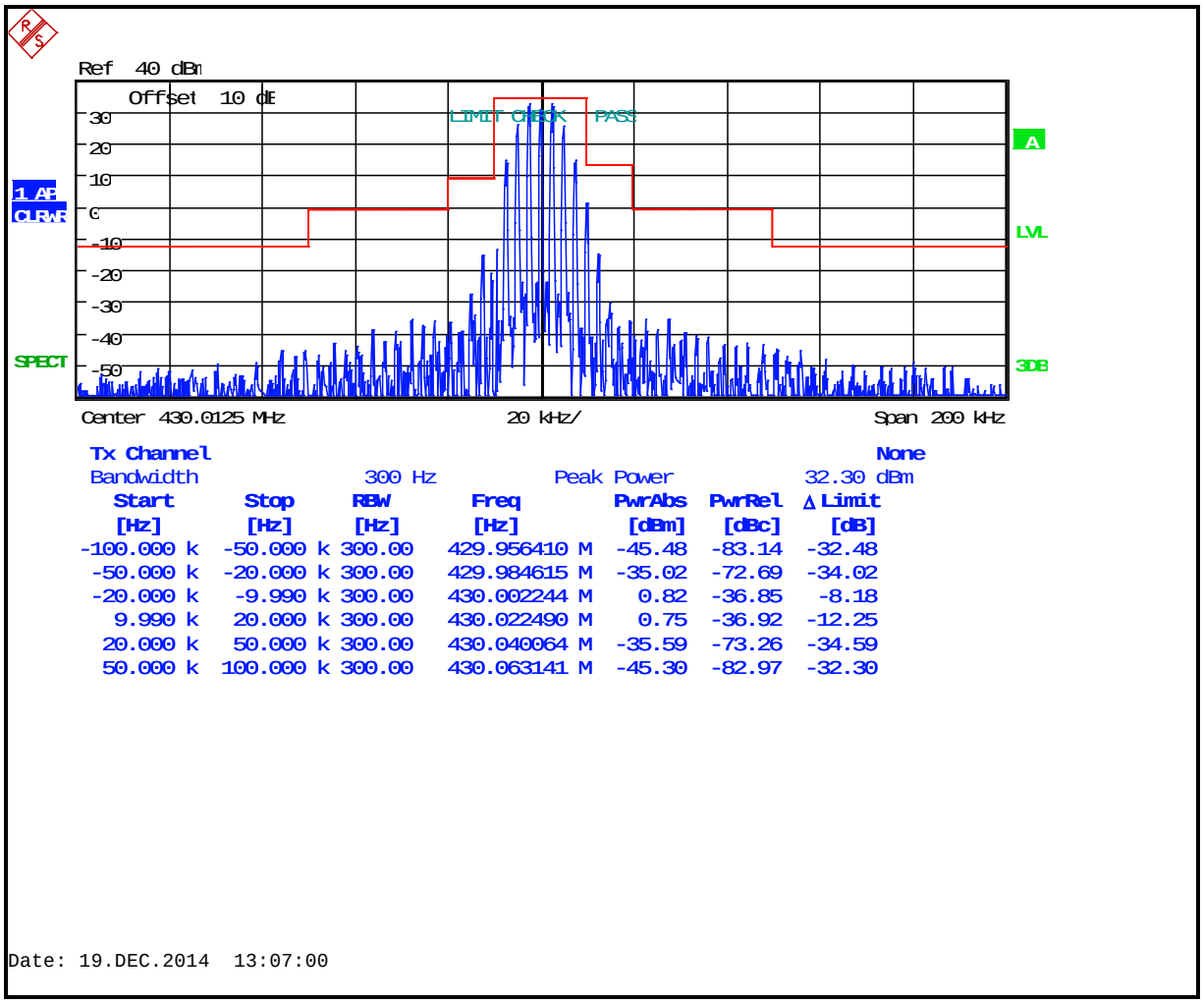
Plot 7-14: Occupied Bandwidth – 406.1000 MHz; Wideband Analog (Mask B)



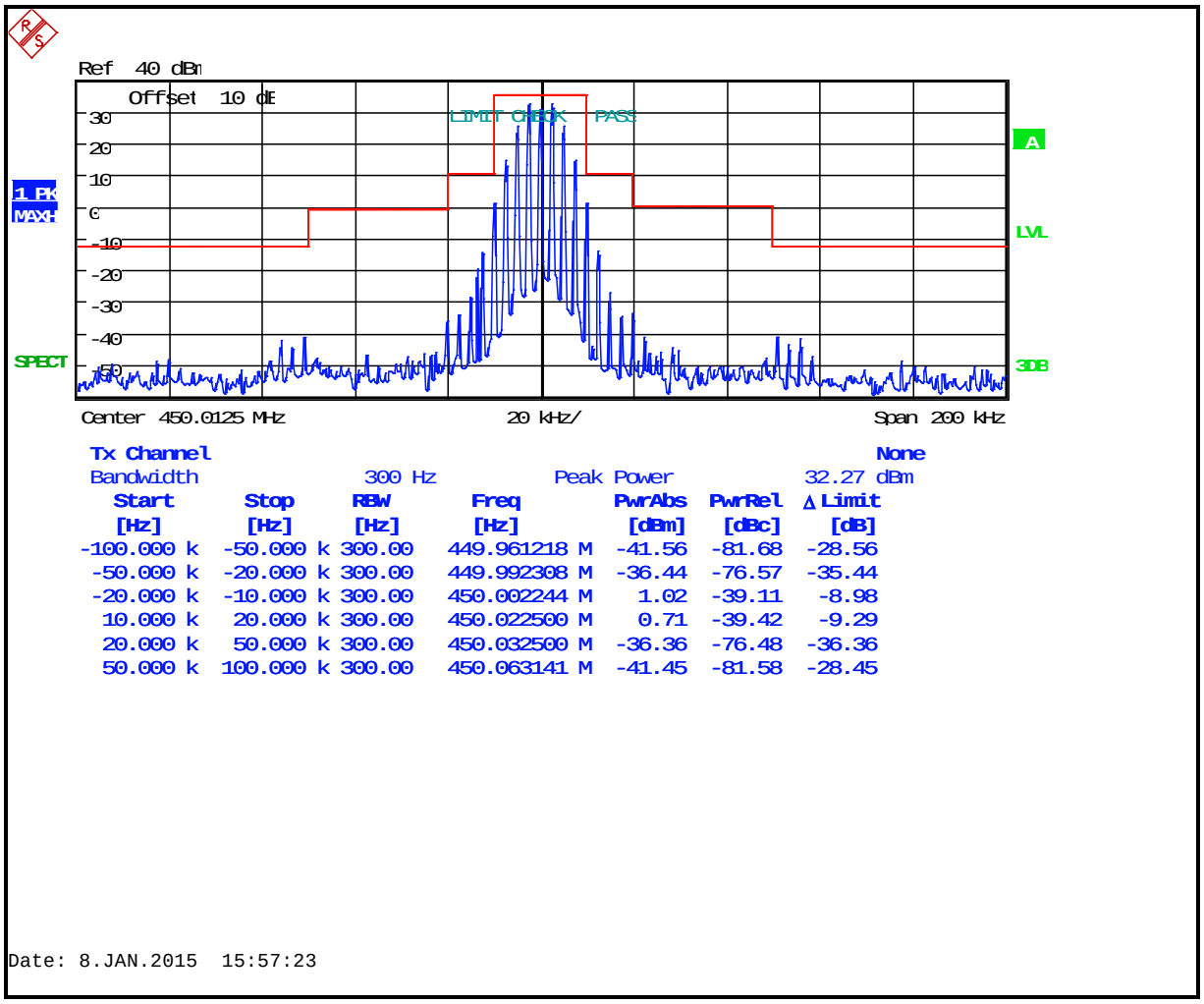
Plot 7-15: Occupied Bandwidth – 418.0125 MHz; Wideband Analog (Mask B)



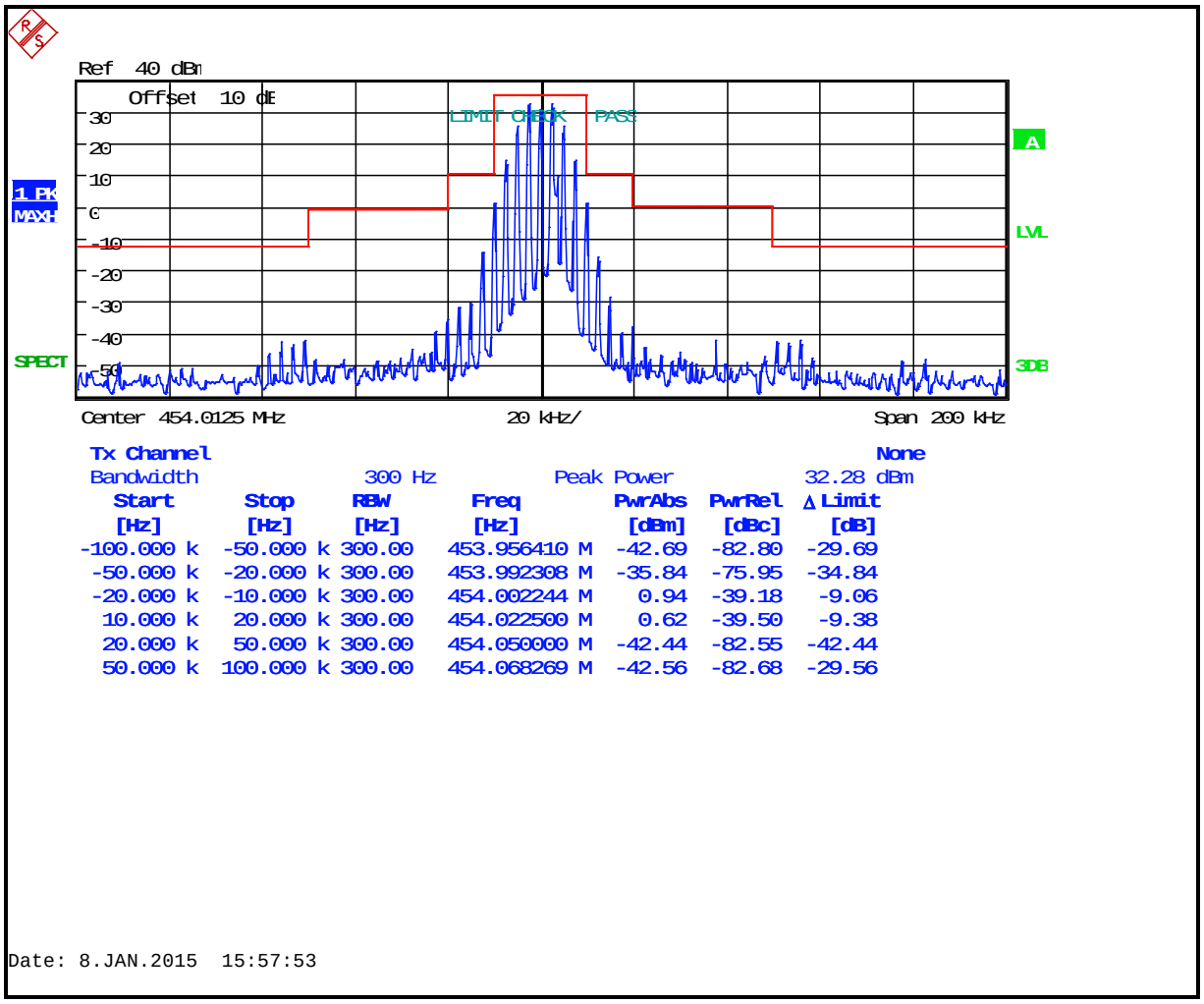
Plot 7-16: Occupied Bandwidth – 430.0125 MHz; Wideband Analog (Mask B)



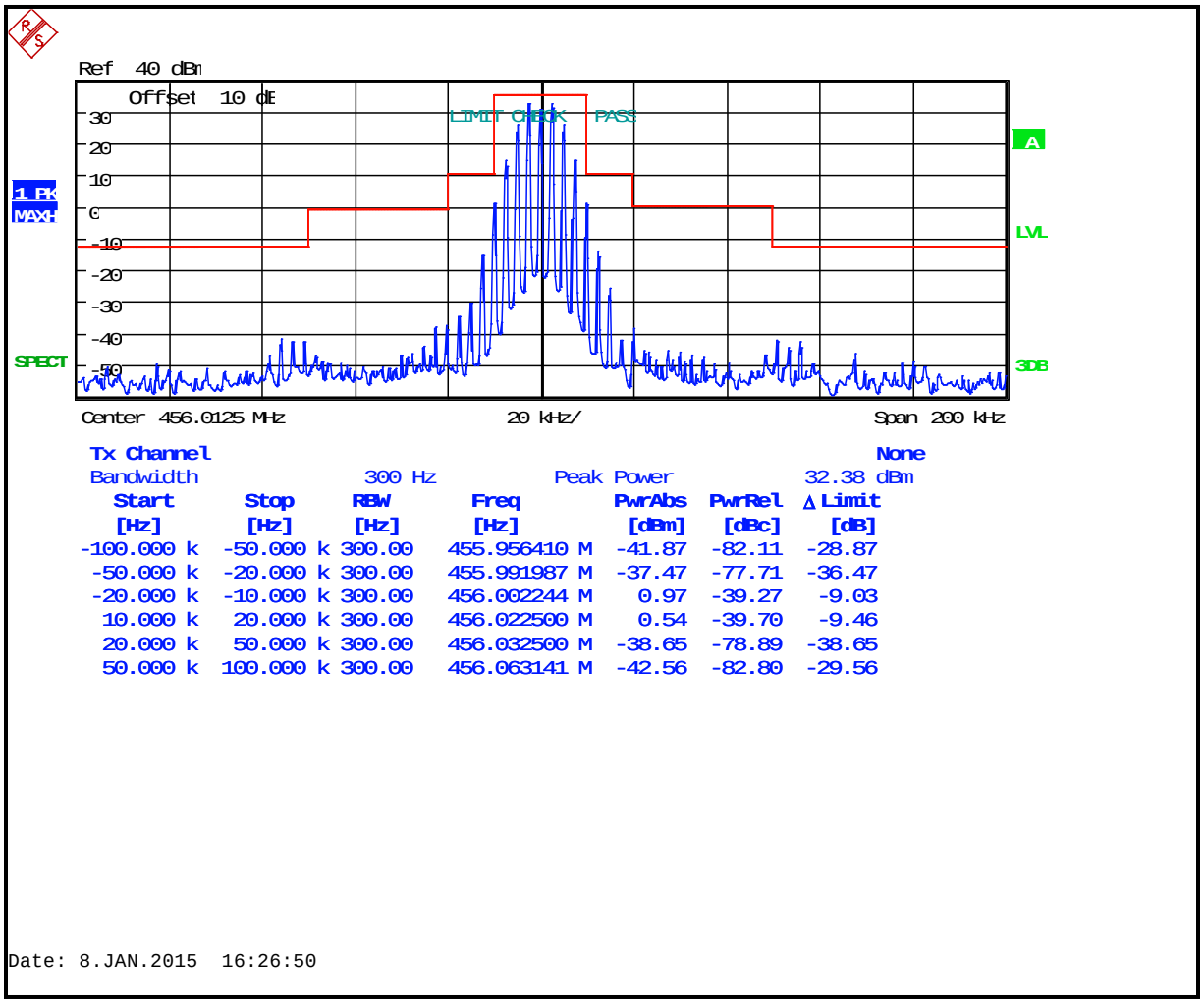
Plot 7-17: Occupied Bandwidth – 450.0125 MHz; Wideband Analog (Mask B)



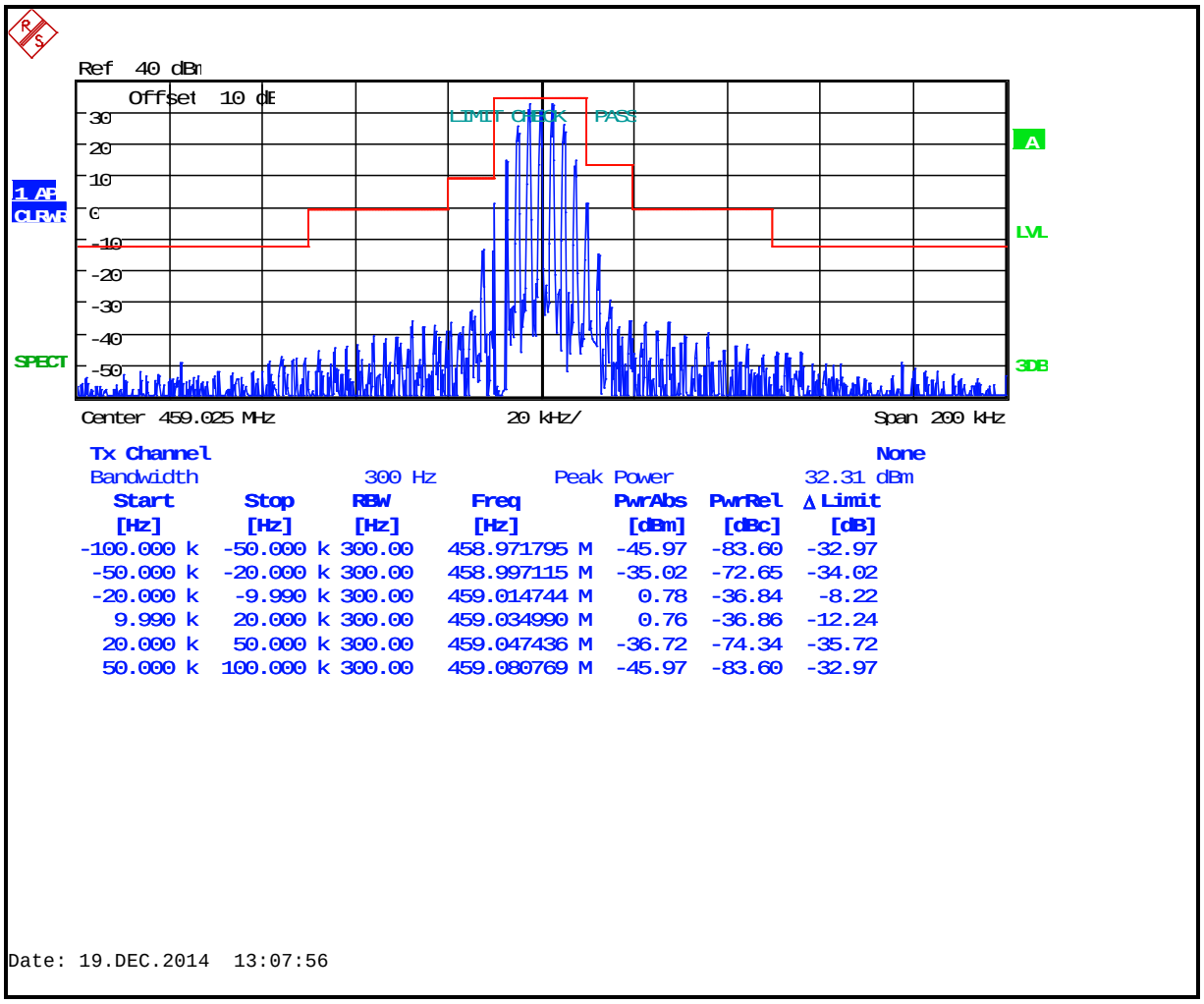
Plot 7-18: Occupied Bandwidth – 454.0125 MHz; Wideband Analog (Mask B)



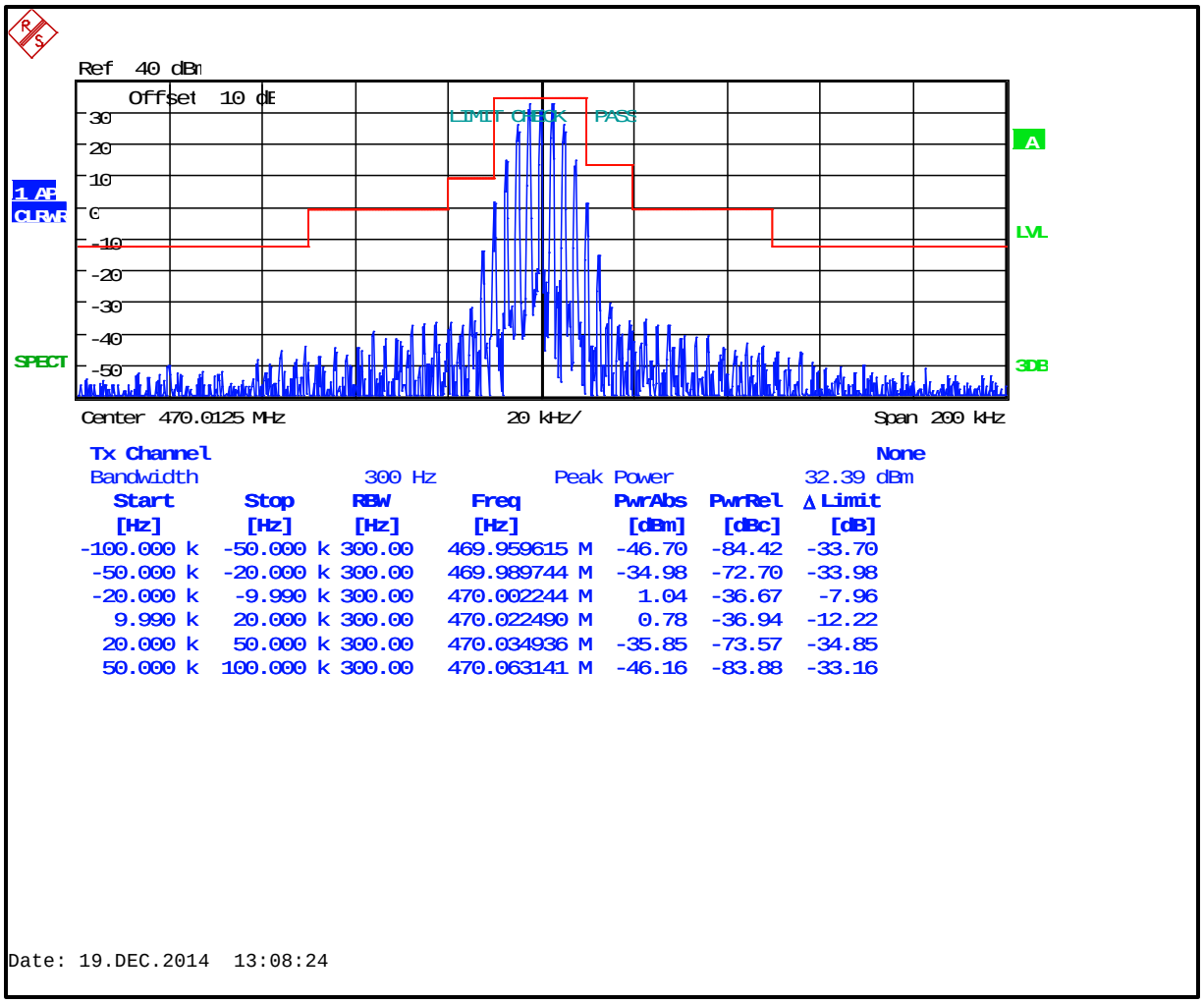
Plot 7-19: Occupied Bandwidth – 456.0125 MHz; Wideband Analog (Mask B)



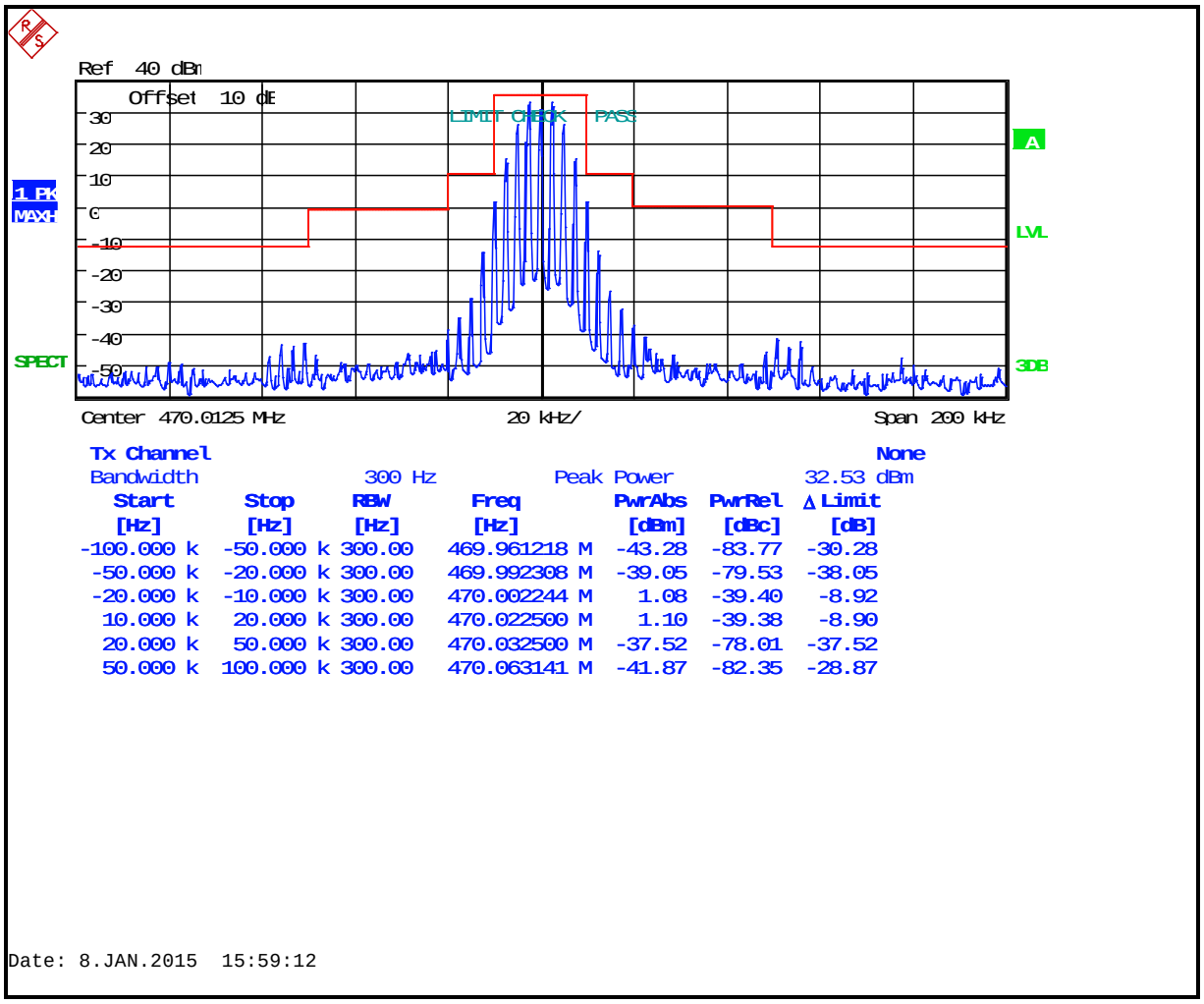
Plot 7-20: Occupied Bandwidth – 459.0250 MHz; Wideband Analog (Mask B)



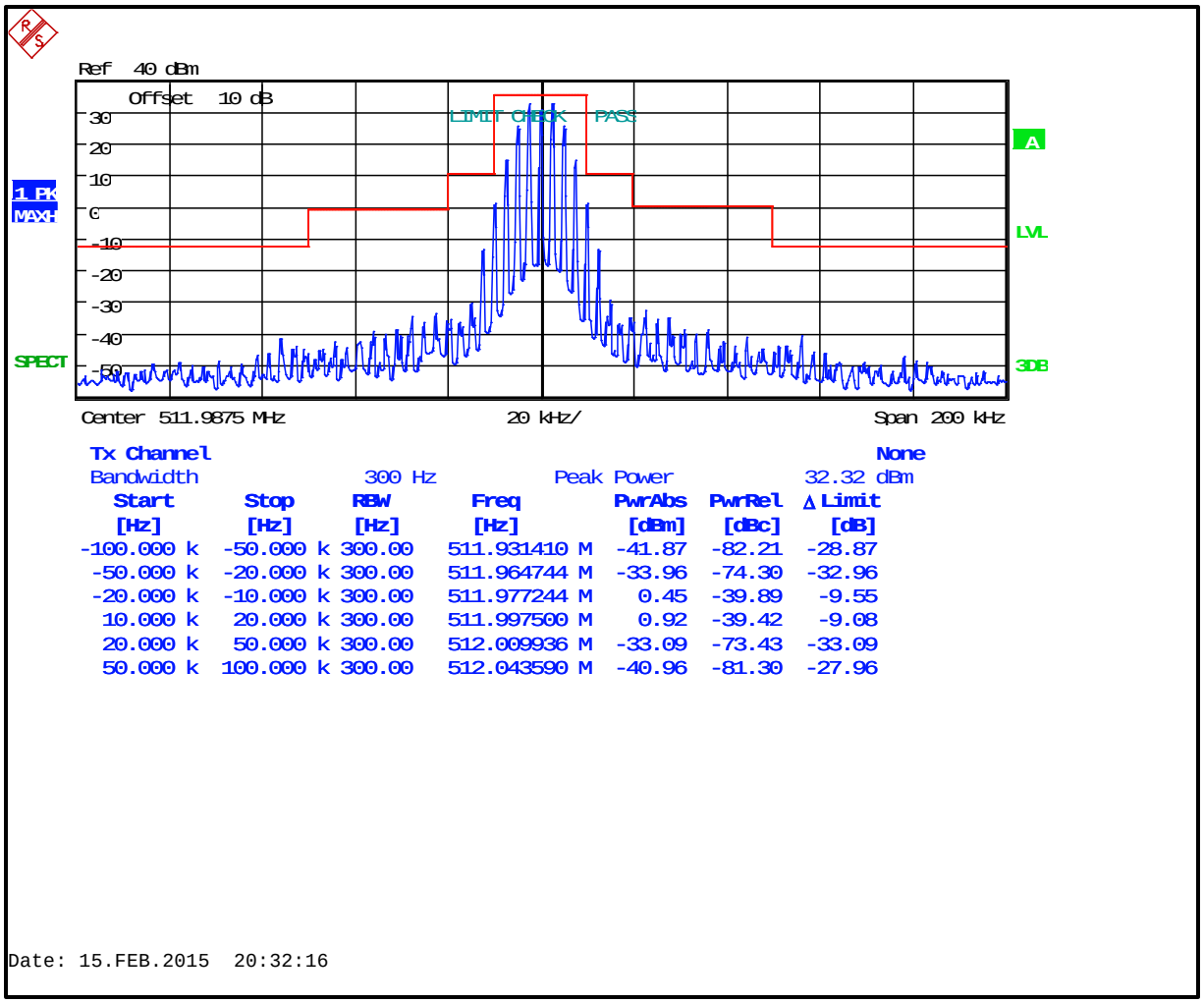
Plot 7-21: Occupied Bandwidth – 459.9750 MHz; Wideband Analog (Mask B)



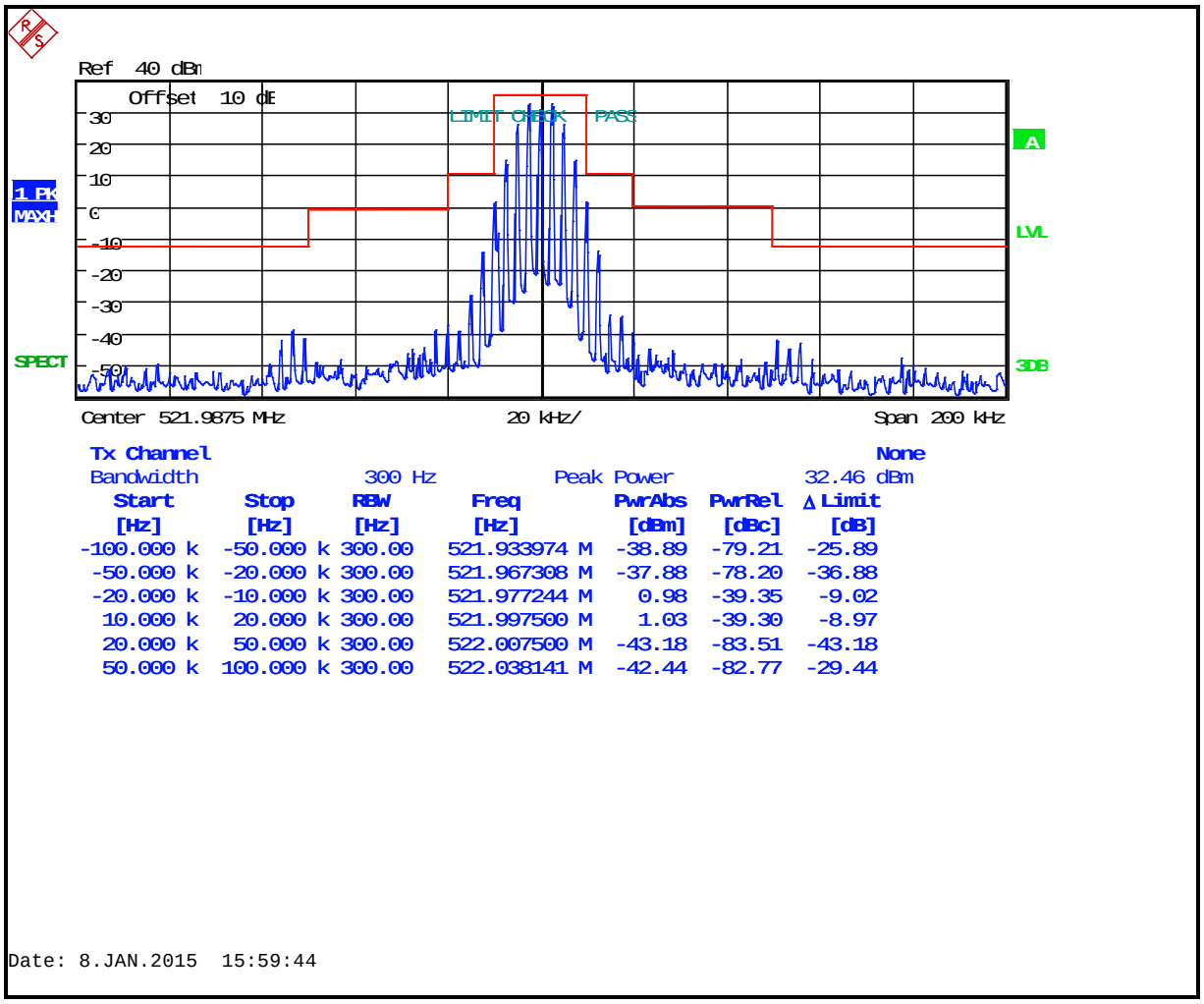
Plot 7-22: Occupied Bandwidth – 470.0125 MHz; Wideband Analog (Mask B)



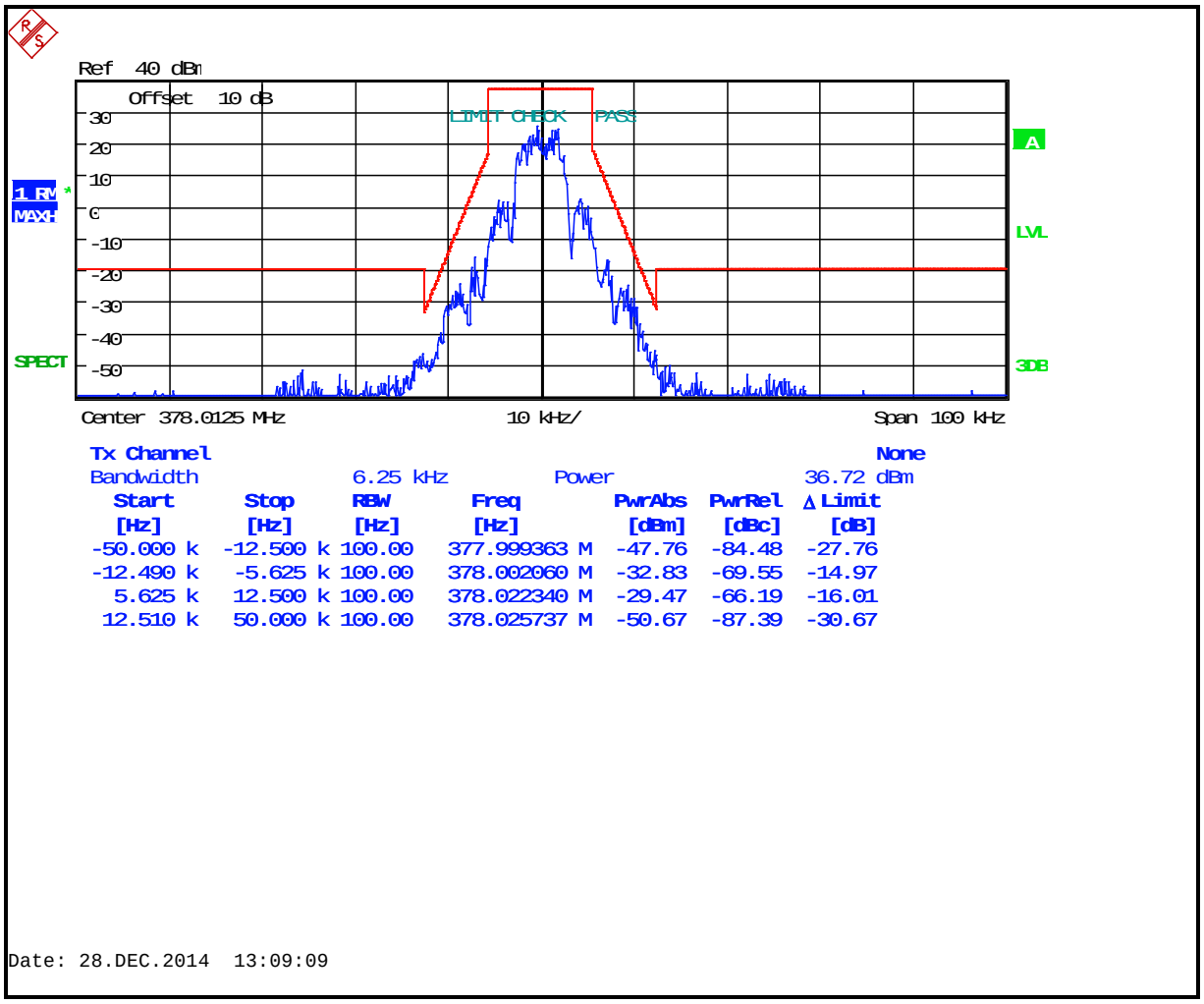
Plot 7-23: Occupied Bandwidth – 511.9875 MHz; Wideband Analog (Mask B)



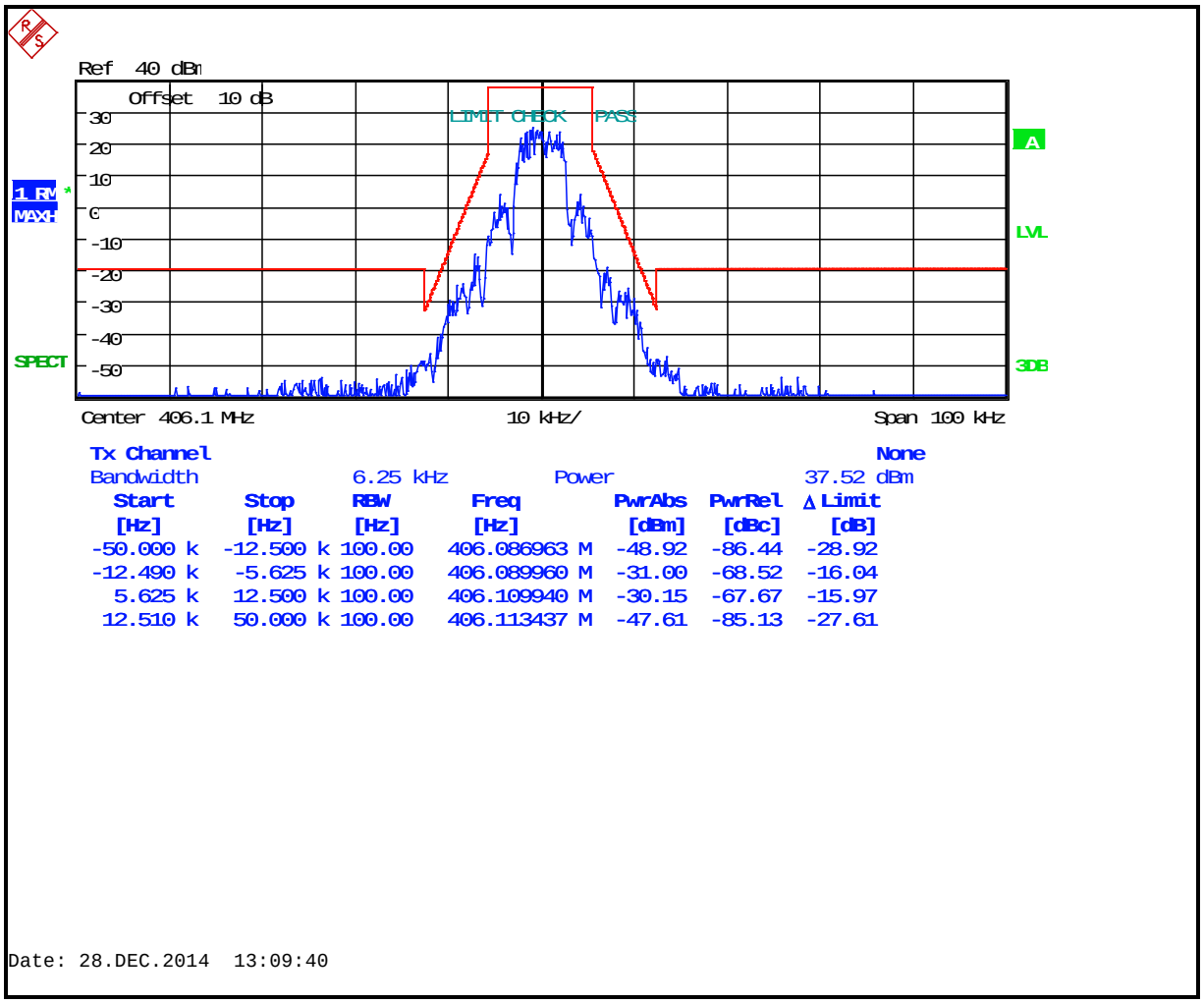
Plot 7-24: Occupied Bandwidth – 521.9875 MHz; Wideband Analog (Mask B)



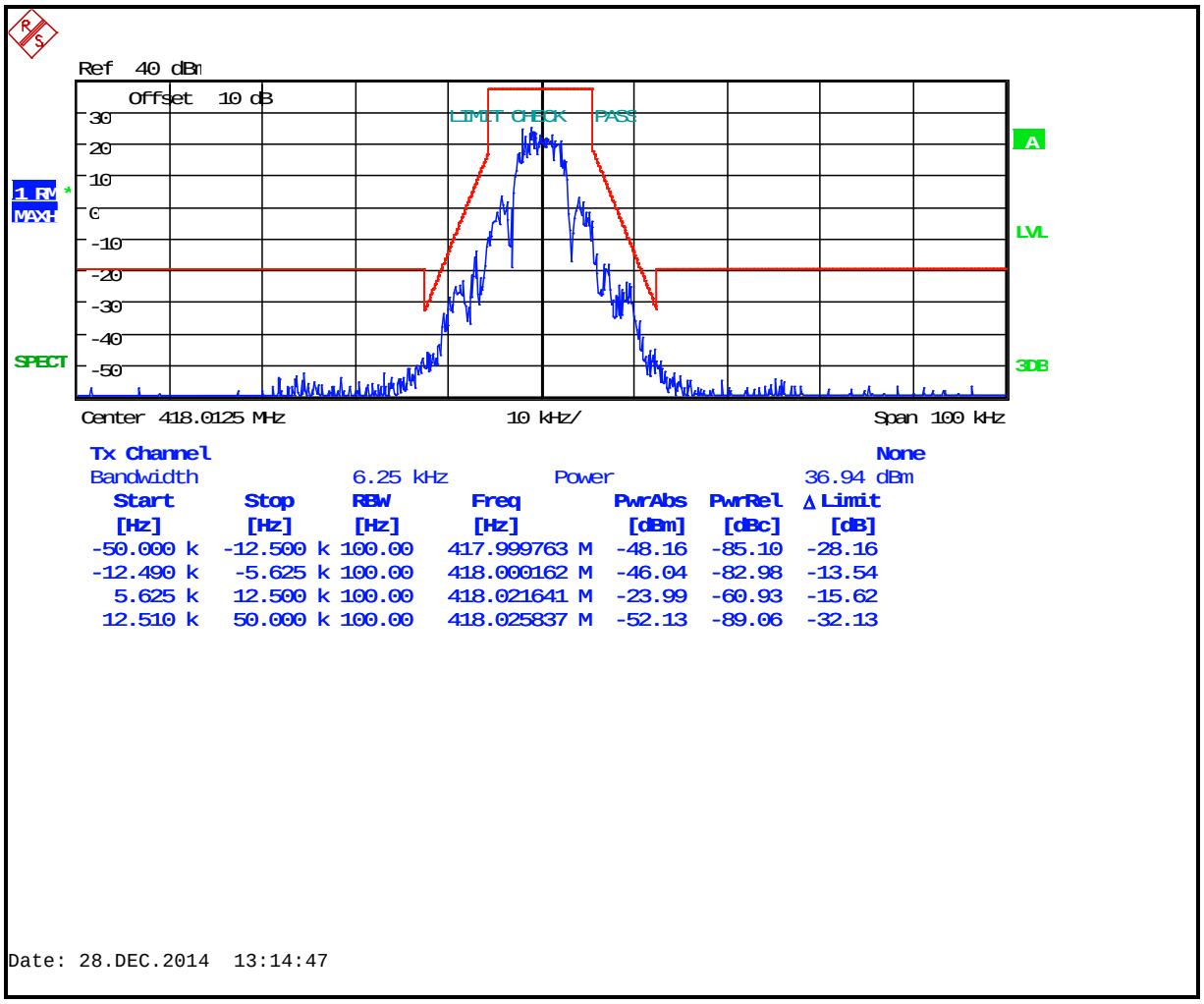
Plot 7-25: Occupied Bandwidth – 378.0125 MHz; EDACS Narrowband 2-level FSK 4800 (Mask D)



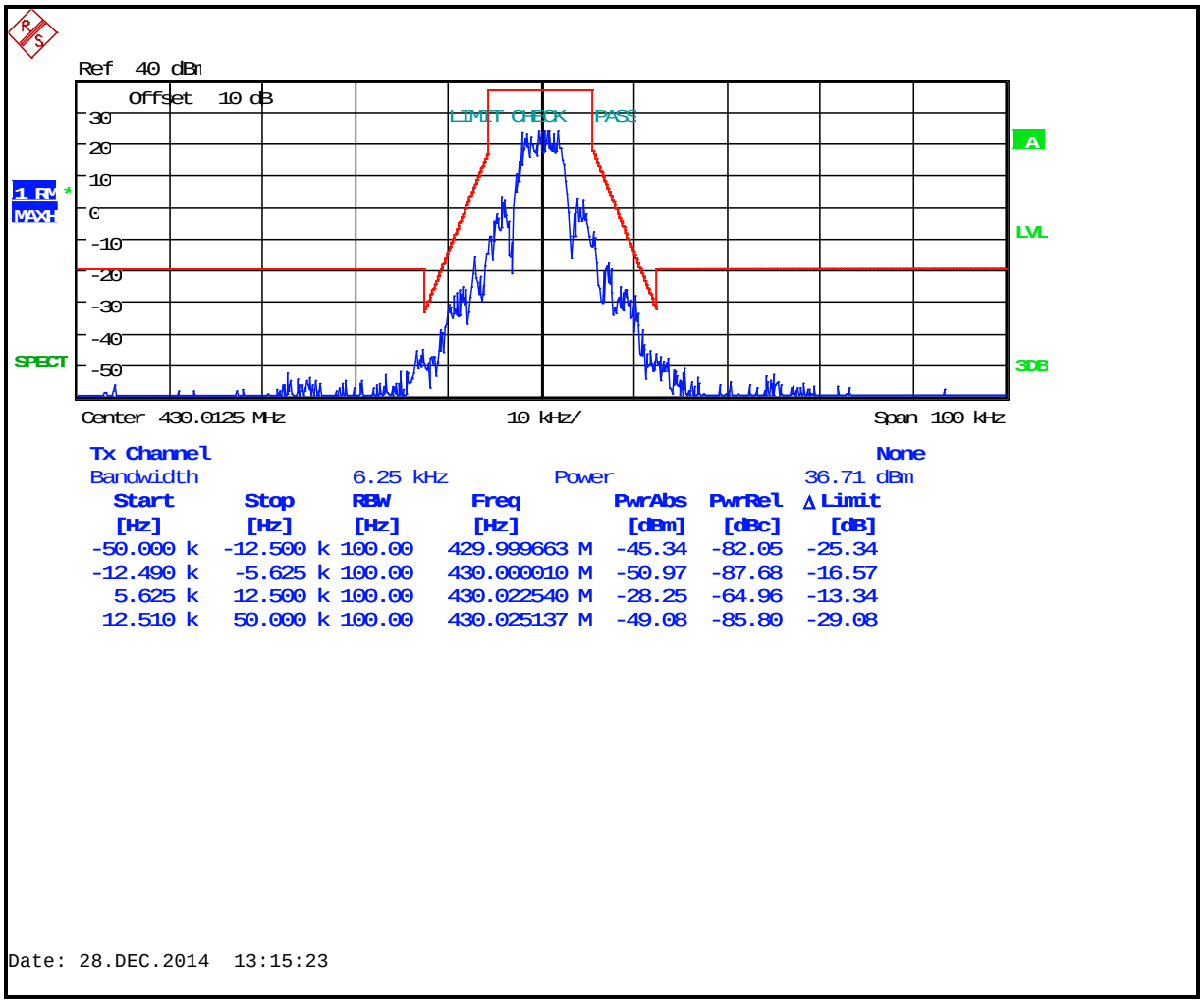
Plot 7-26: Occupied Bandwidth – 406.1000 MHz; EDACS Narrowband 2-level FSK 4800 (Mask D)



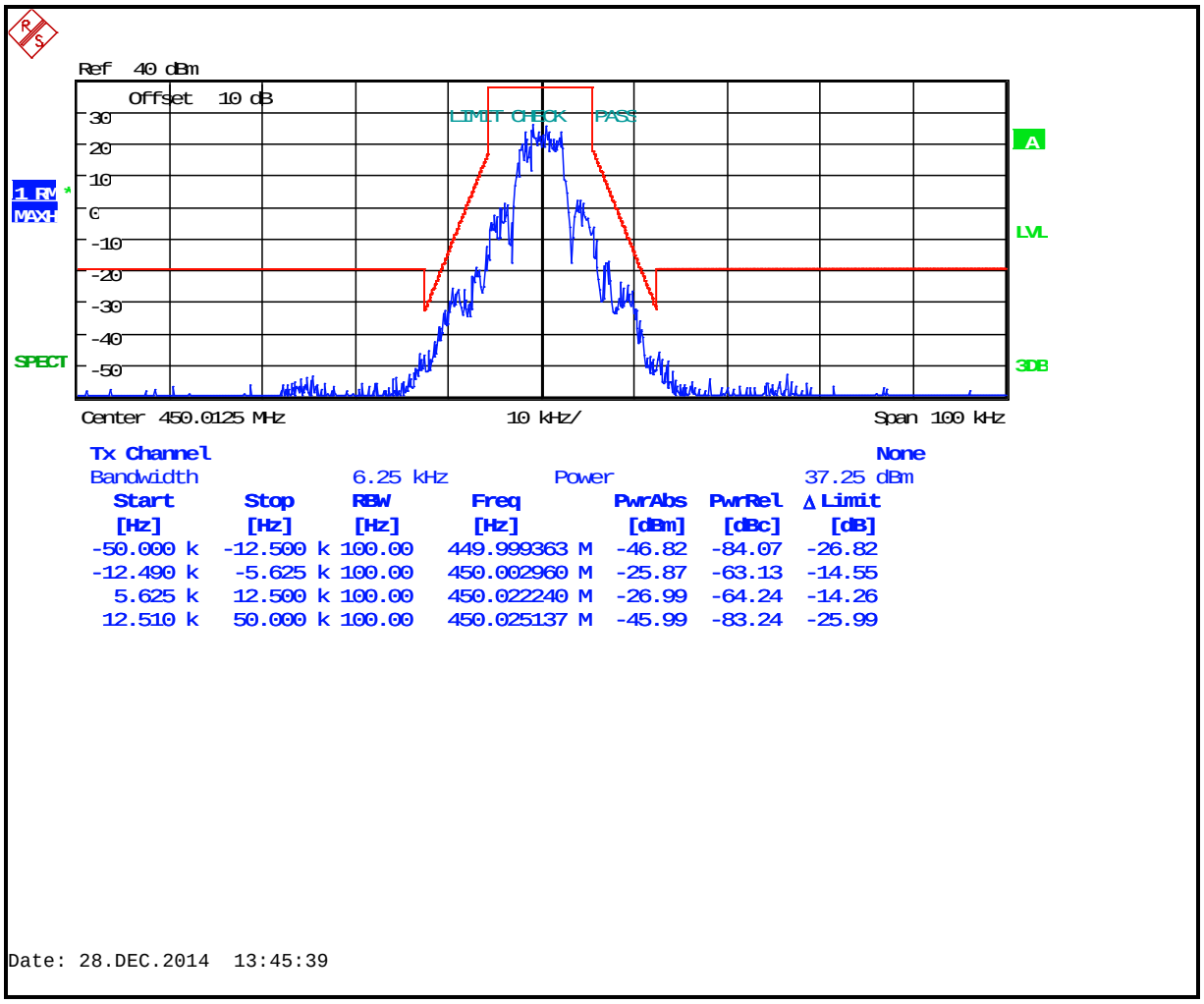
Plot 7-27: Occupied Bandwidth – 418.0125 MHz; EDACS Narrowband 2-level FSK 4800 (Mask D)



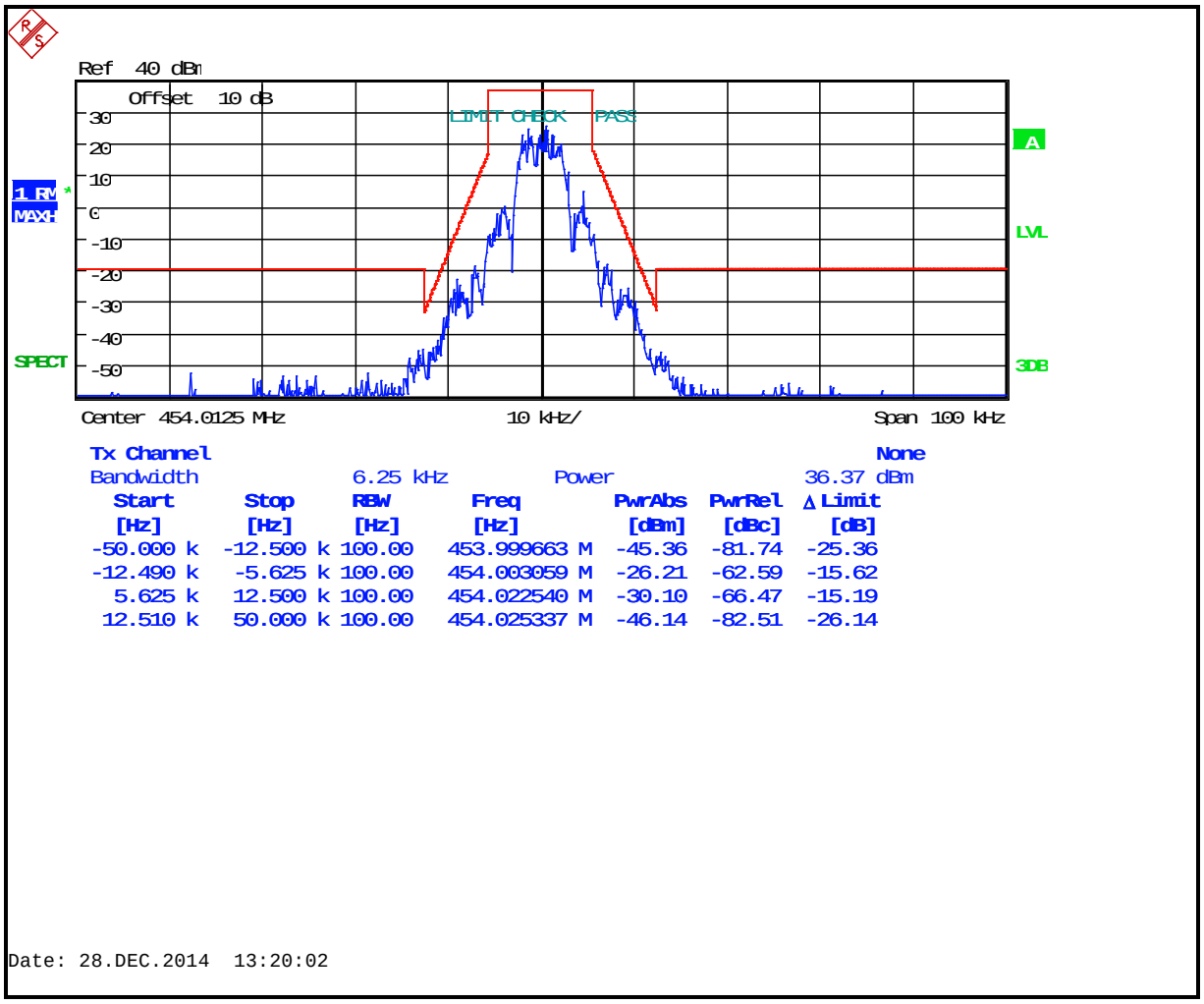
Plot 7-28: Occupied Bandwidth – 430.0125 MHz; EDACS Narrowband 2-level FSK 4800 (Mask D)



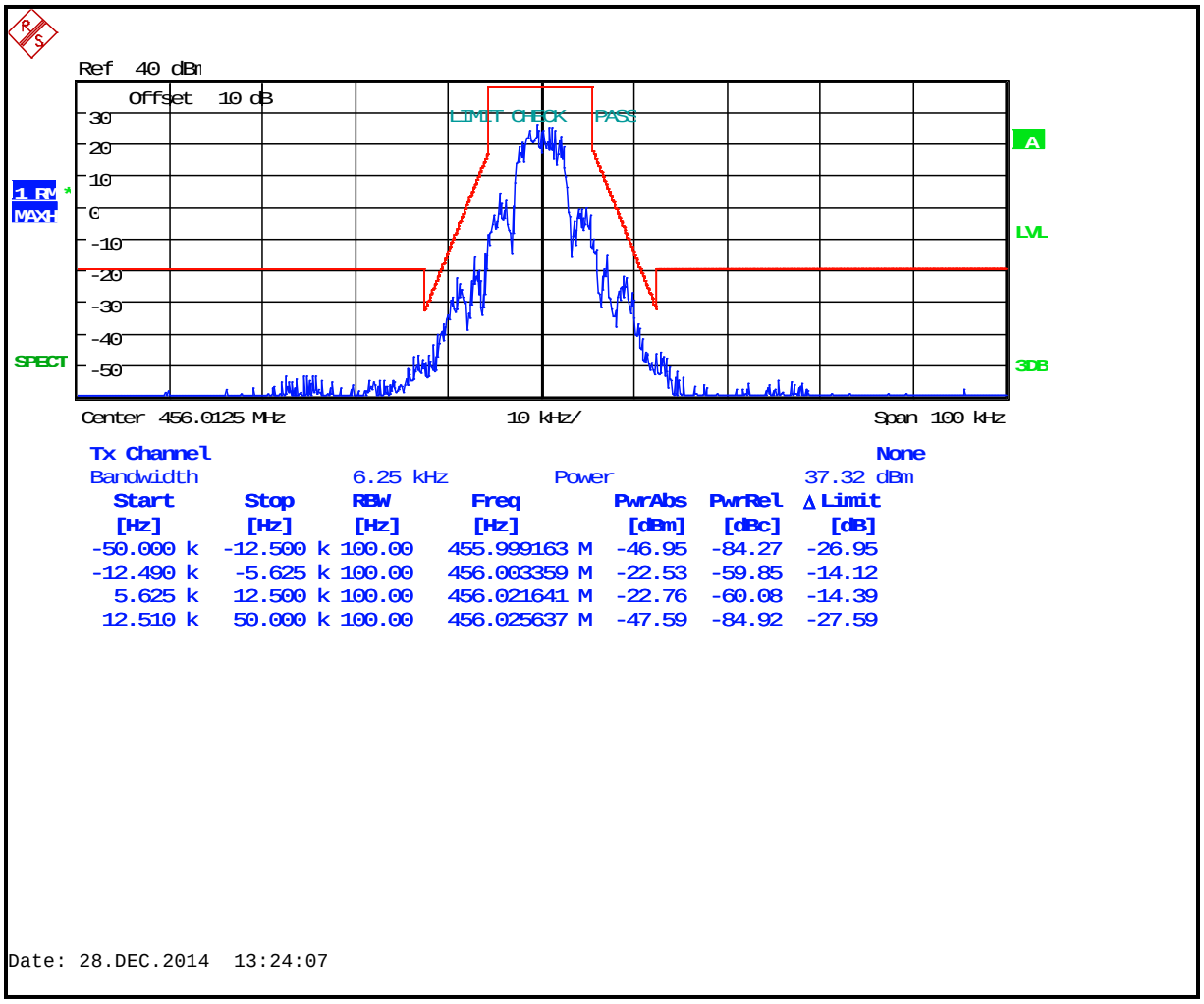
Plot 7-29: Occupied Bandwidth – 450.0125 MHz; EDACS Narrowband 2-level FSK 4800 (Mask D)



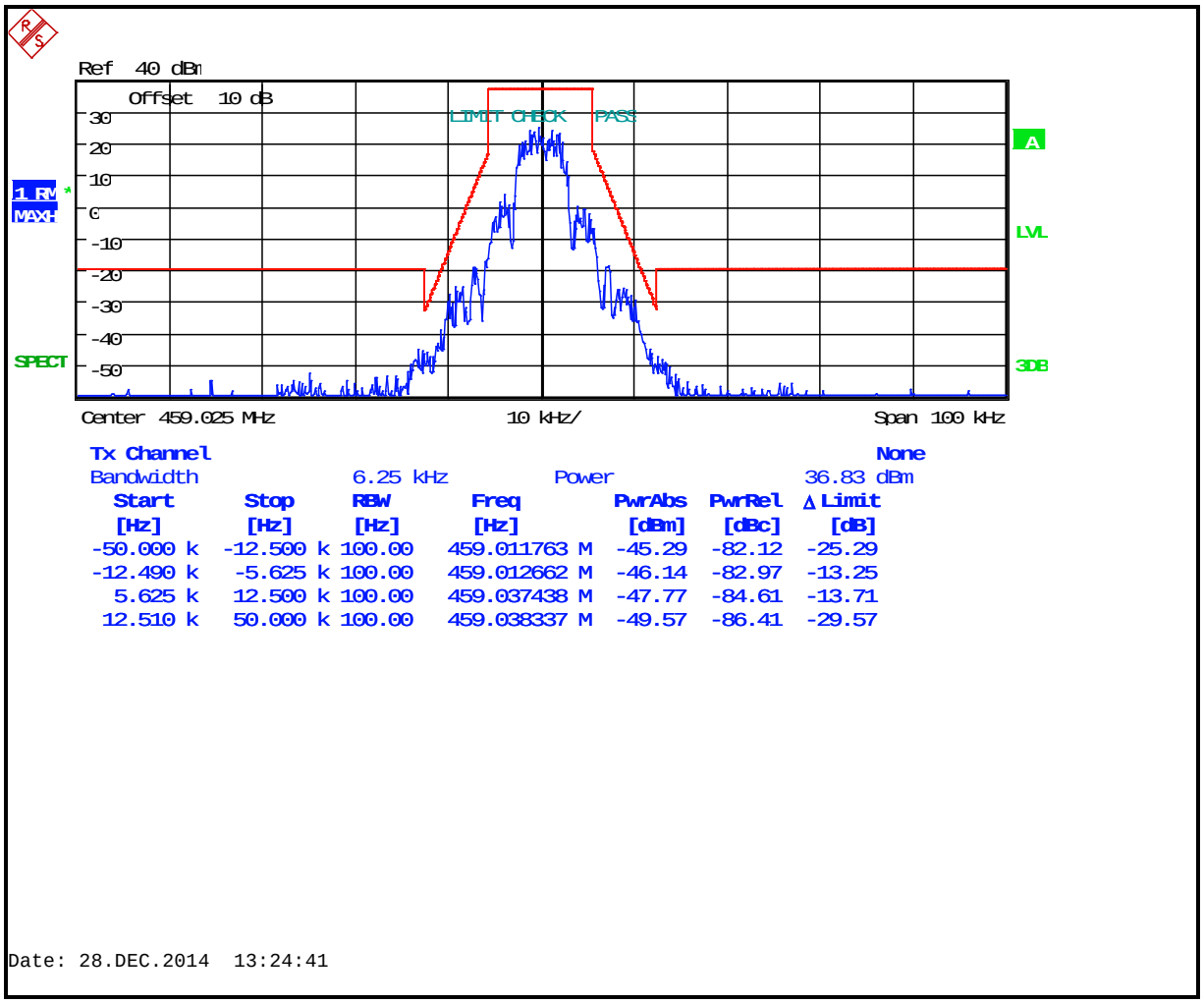
Plot 7-30: Occupied Bandwidth – 454.0125 MHz; EDACS Narrowband 2-level FSK 4800 (Mask D)



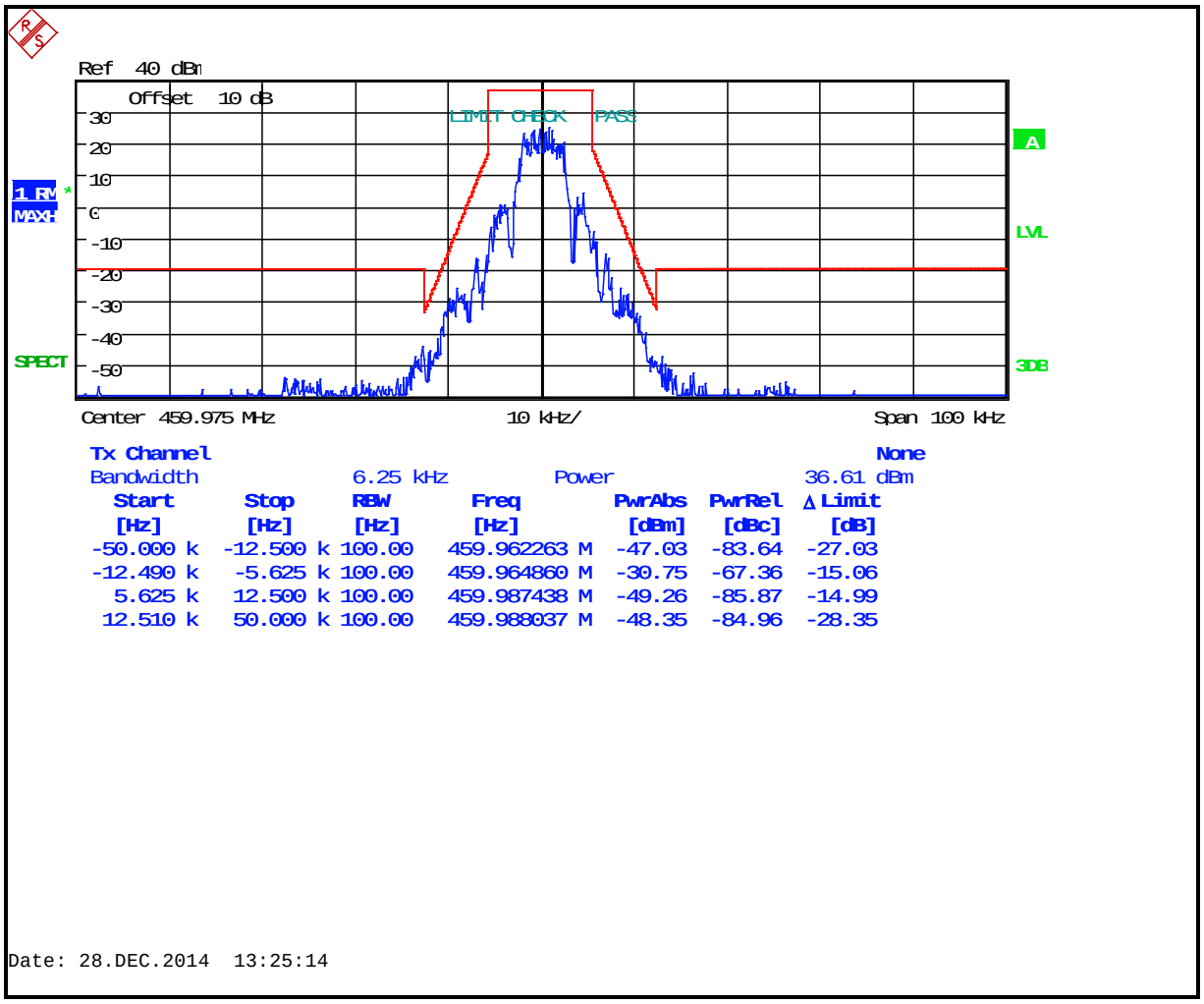
Plot 7-31: Occupied Bandwidth – 456.0125 MHz; EDACS Narrowband 2-level FSK 4800 (Mask D)



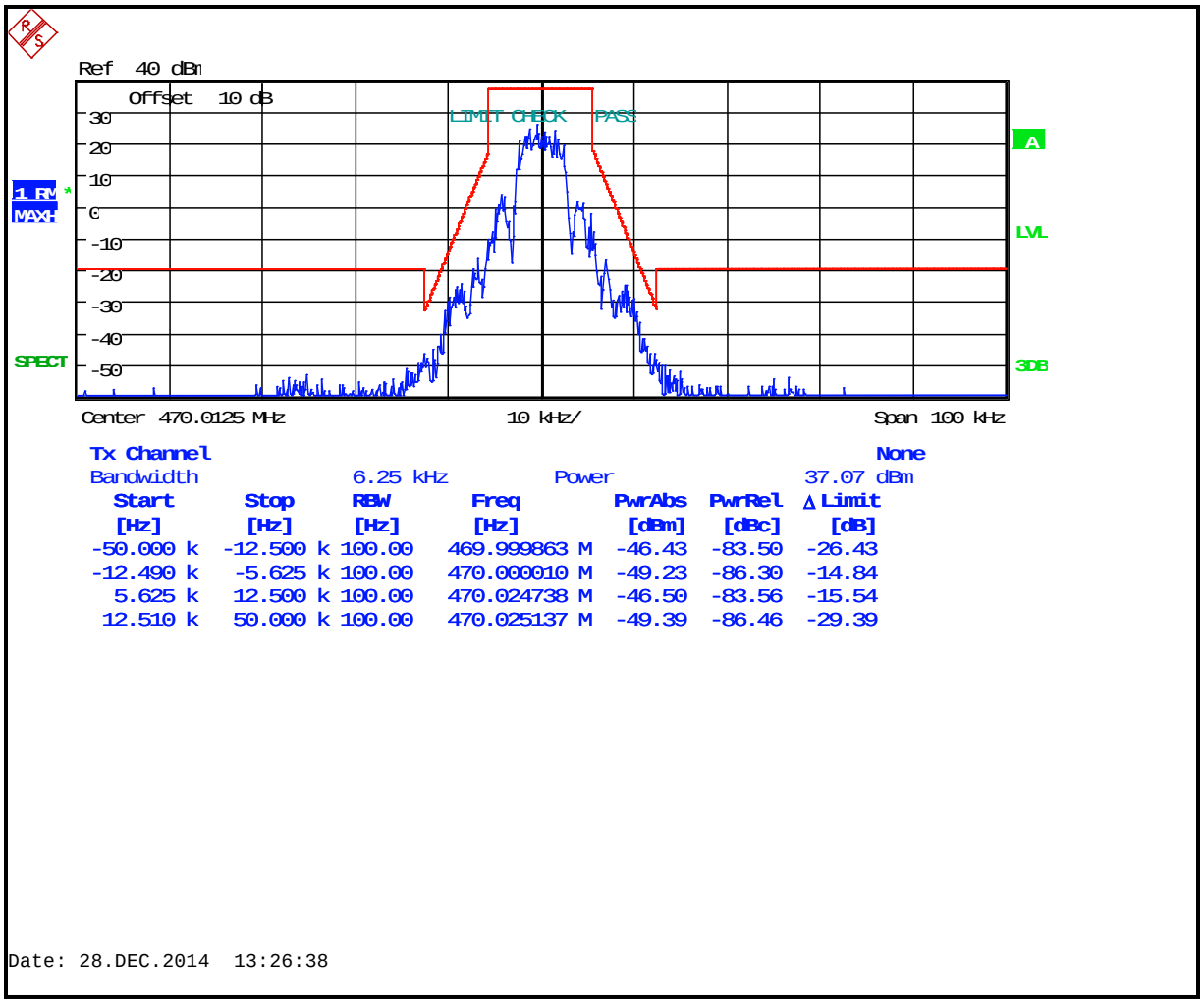
Plot 7-32: Occupied Bandwidth – 459.0250 MHz; EDACS Narrowband 2-level FSK 4800 (Mask D)



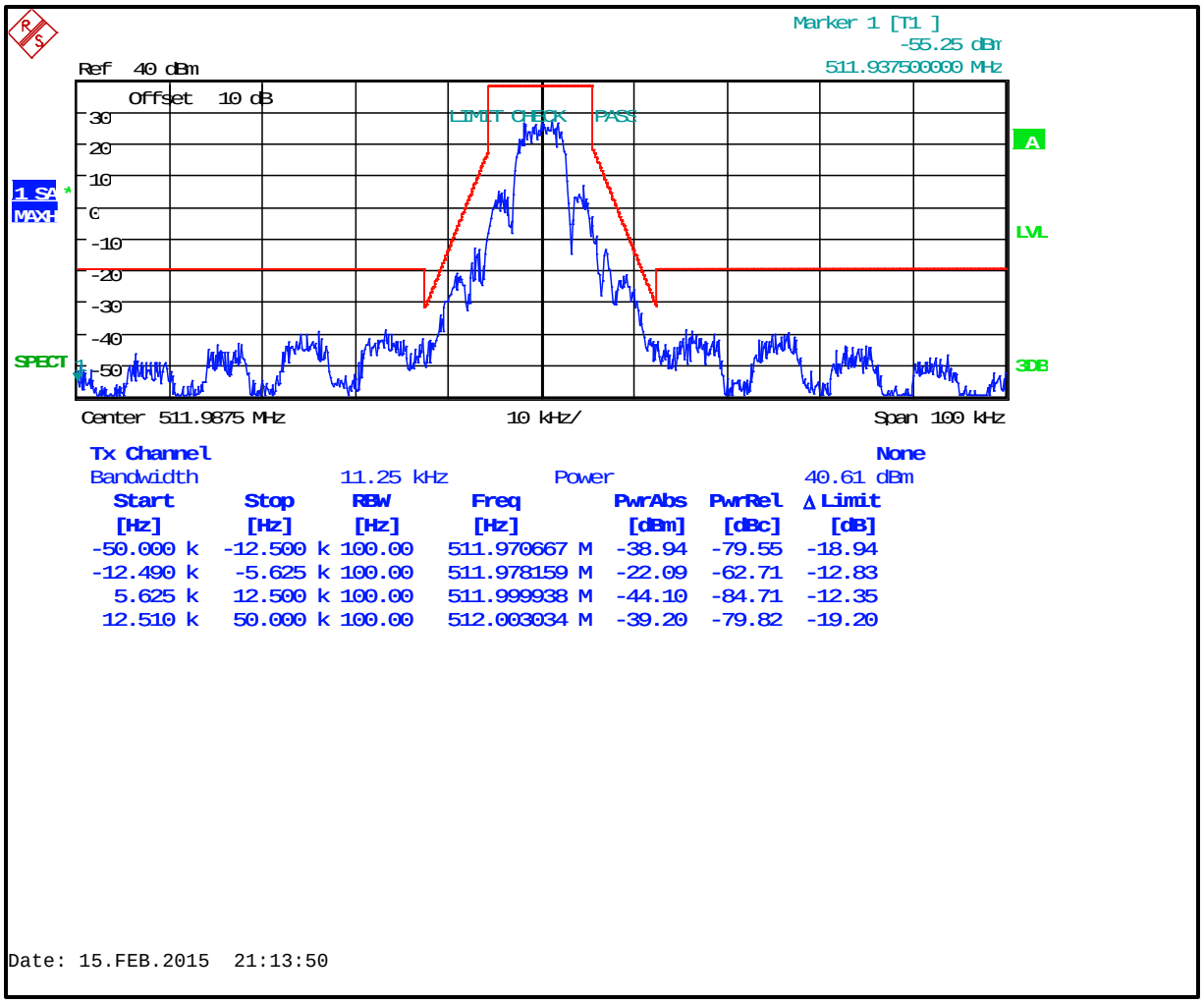
Plot 7-33: Occupied Bandwidth – 459.9750 MHz; EDACS Narrowband 2-level FSK 4800 (Mask D)



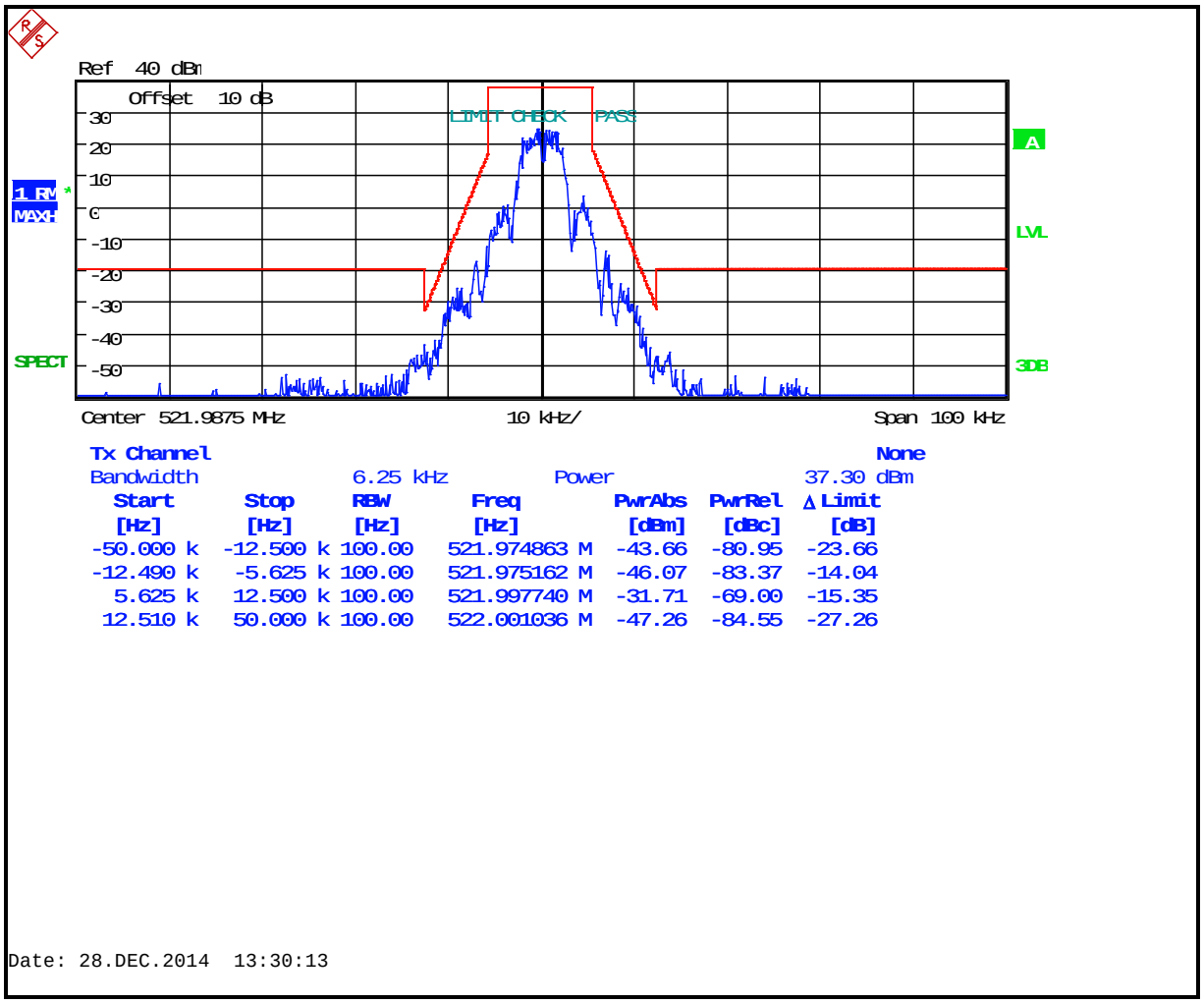
Plot 7-34: Occupied Bandwidth – 470.0125 MHz; EDACS Narrowband 2-level FSK 4800 (Mask D)



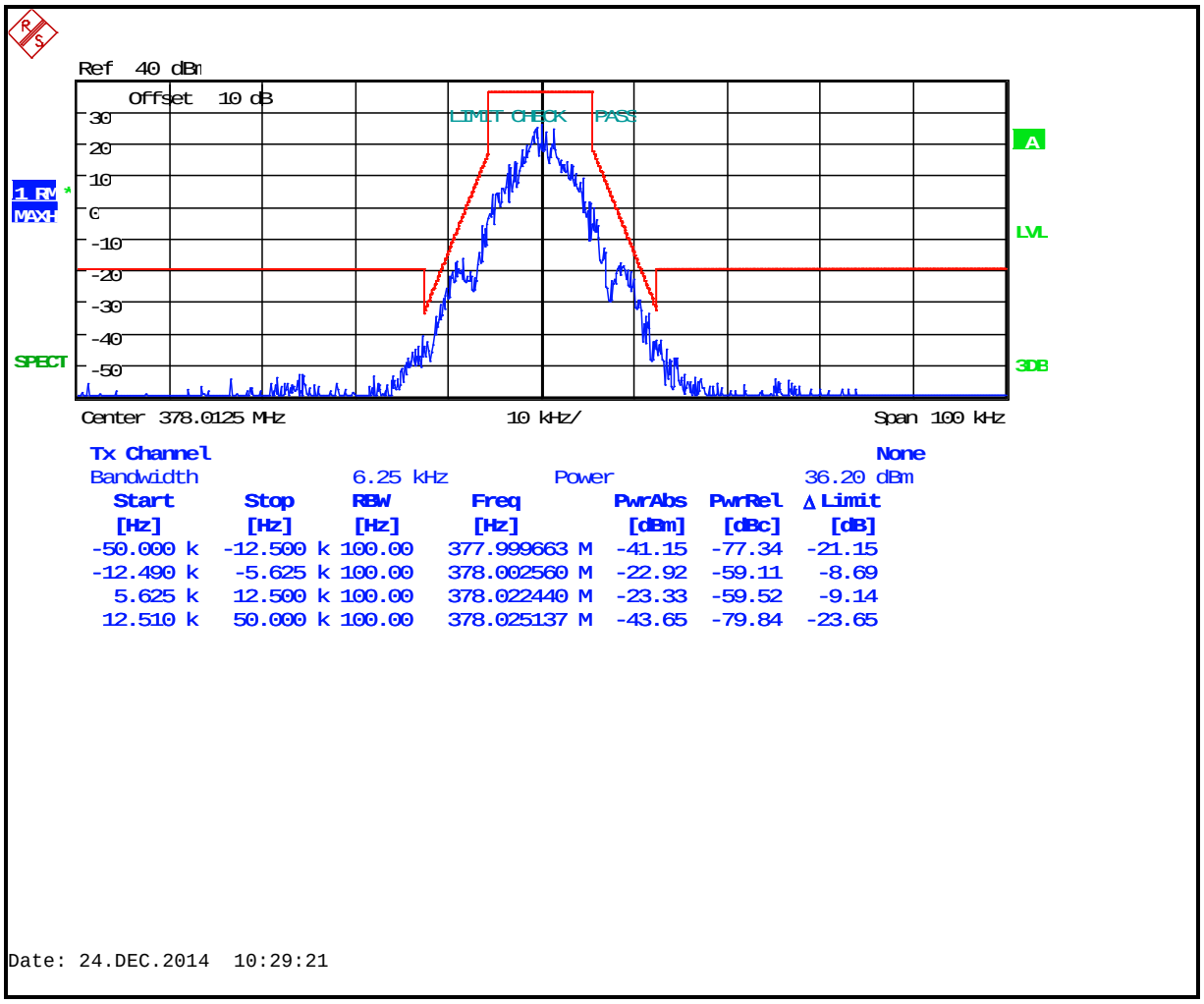
Plot 7-35: Occupied Bandwidth – 511.9875 MHz; EDACS Narrowband 2-level FSK 4800 (Mask D)



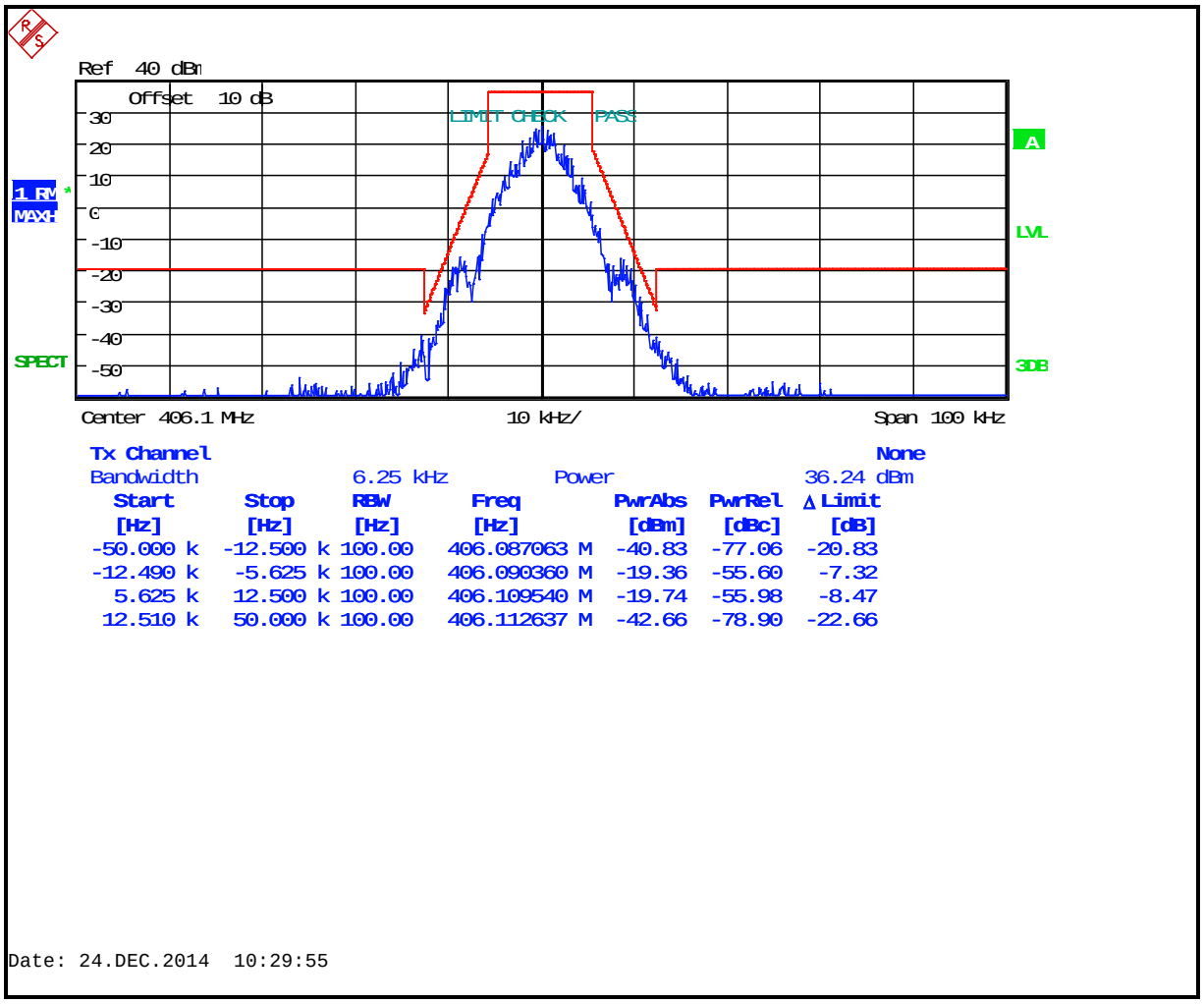
Plot 7-36: Occupied Bandwidth – 521.9875 MHz; EDACS Narrowband 2-level FSK 4800 (Mask D)



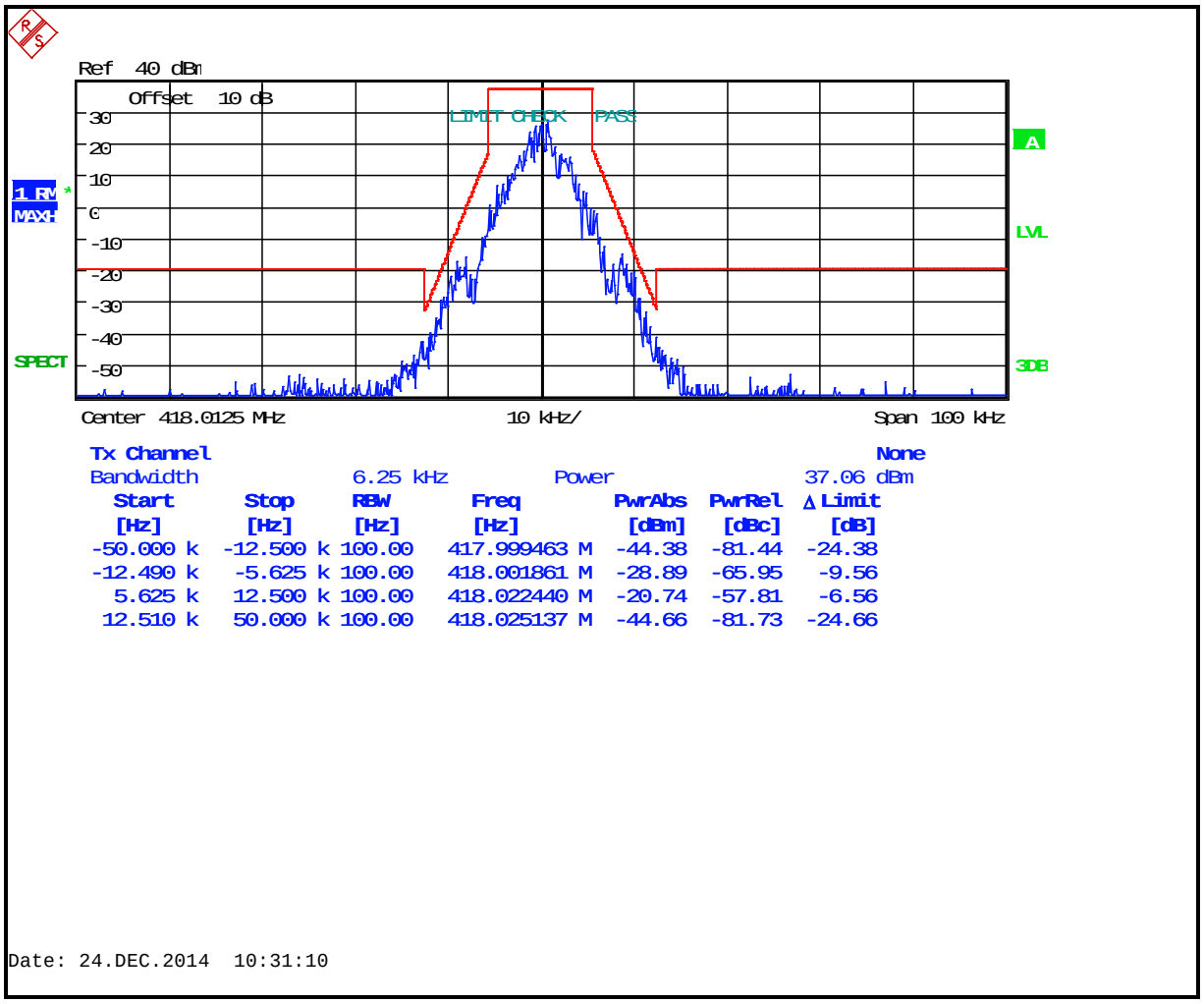
Plot 7-37: Occupied Bandwidth – 378.0125 MHz; EDACS Narrowband 2-level FSK 9600 (Mask D)



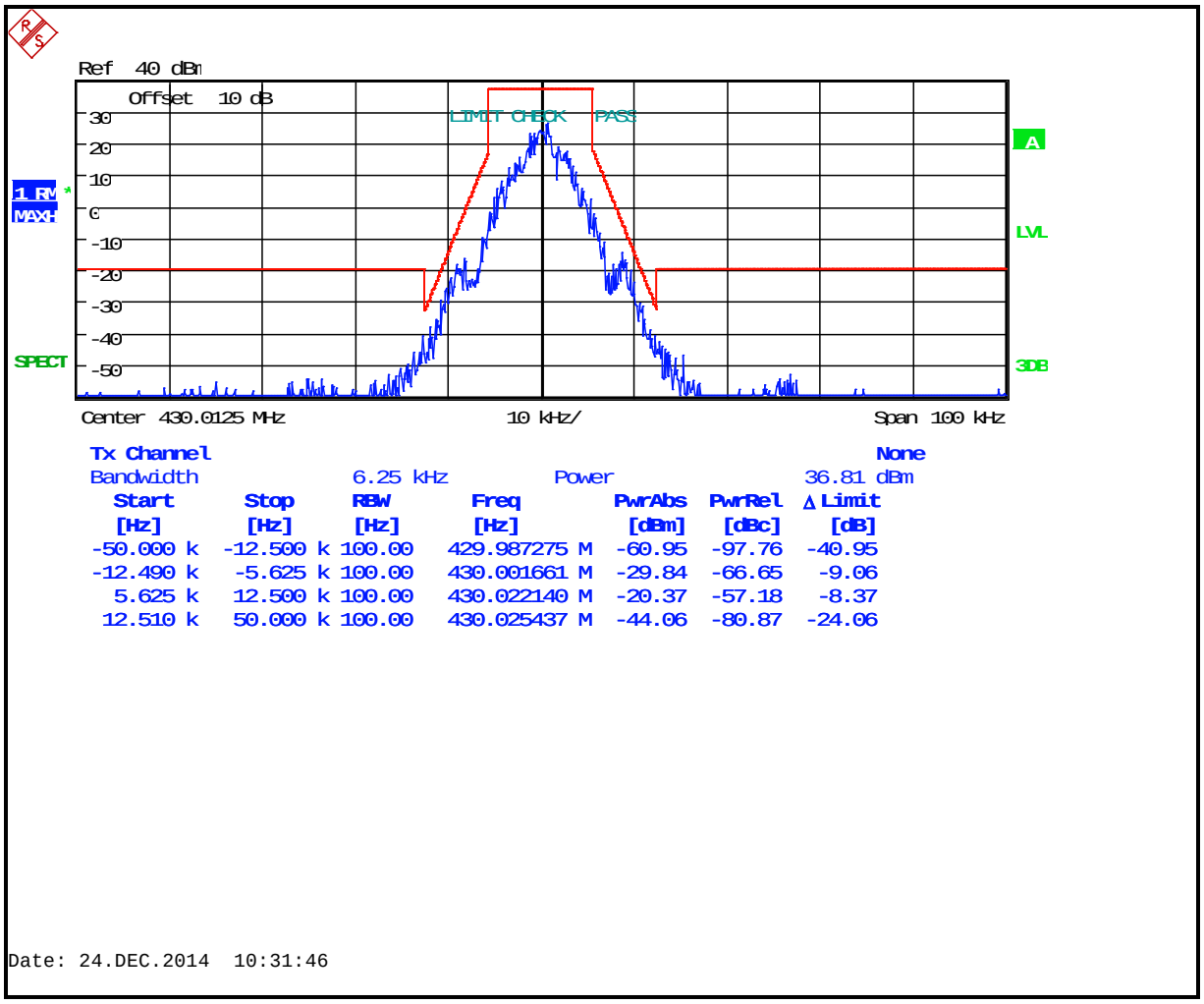
Plot 7-38: Occupied Bandwidth – 406.1000 MHz; EDACS Narrowband 2-level FSK 9600 (Mask D)



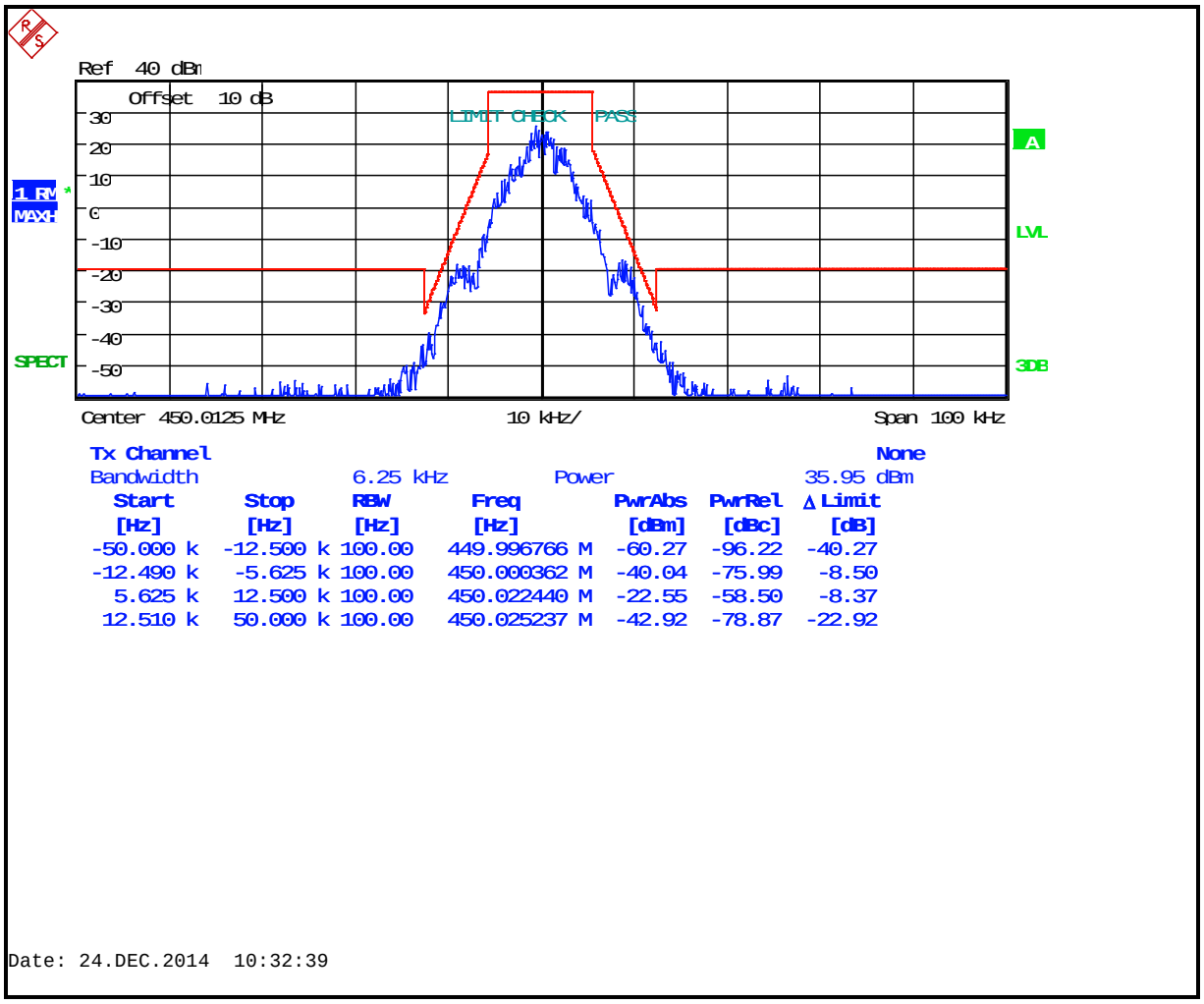
Plot 7-39: Occupied Bandwidth – 418.0125 MHz; EDACS Narrowband 2-level FSK 9600 (Mask D)



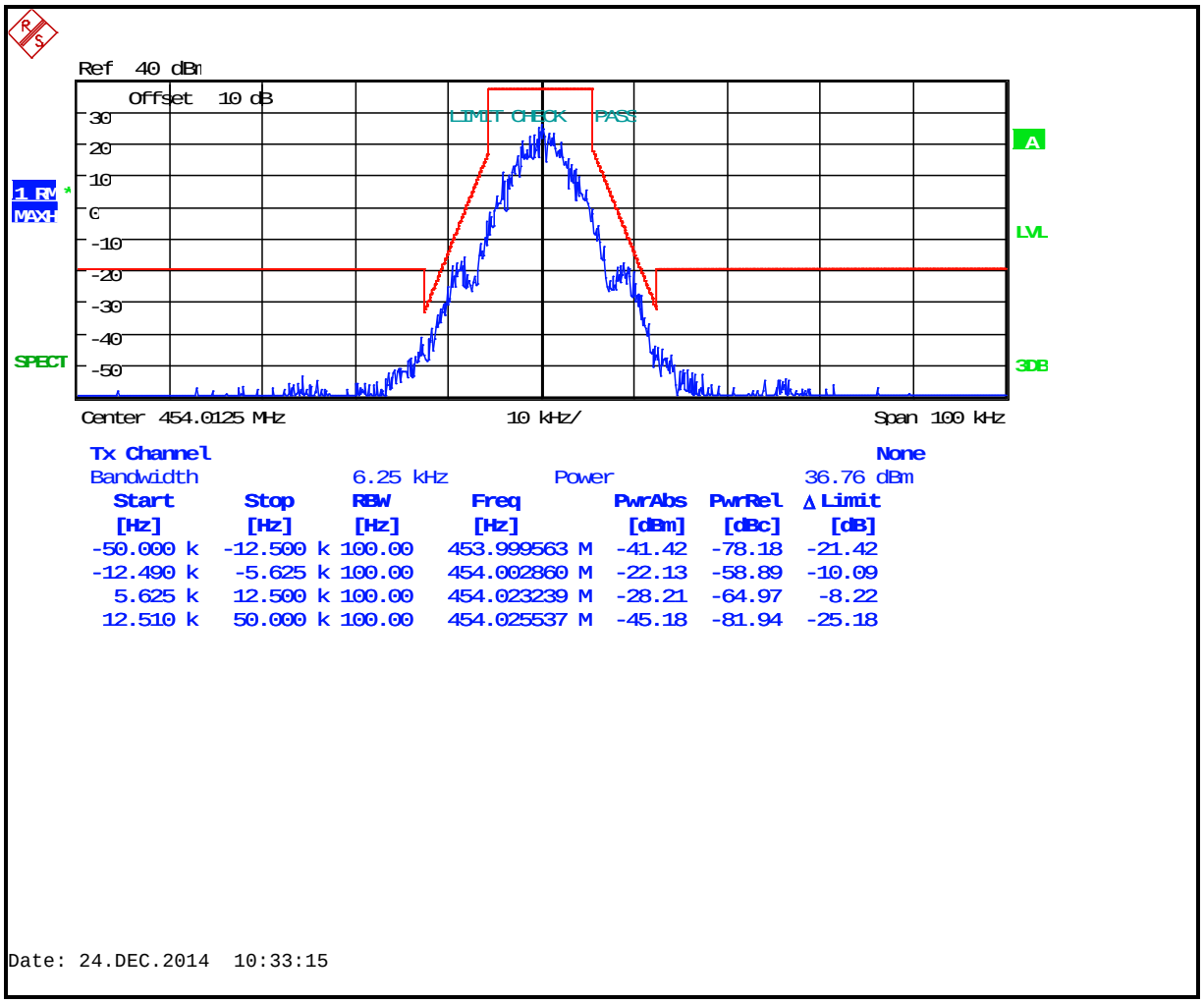
Plot 7-40: Occupied Bandwidth – 430.0125 MHz; EDACS Narrowband 2-level FSK 9600 (Mask D)



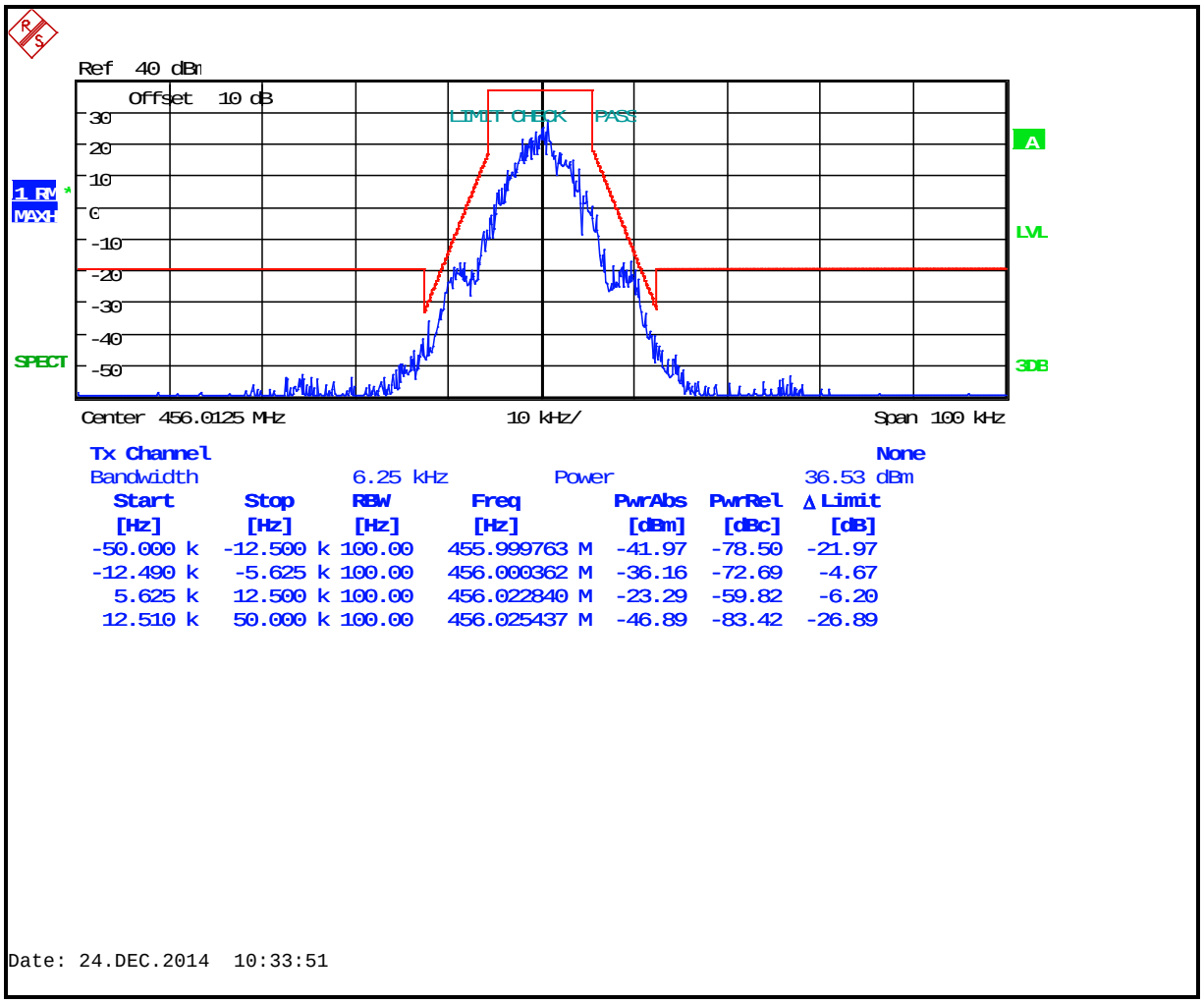
Plot 7-41: Occupied Bandwidth – 450.0125 MHz; EDACS Narrowband 2-level FSK 9600 (Mask D)



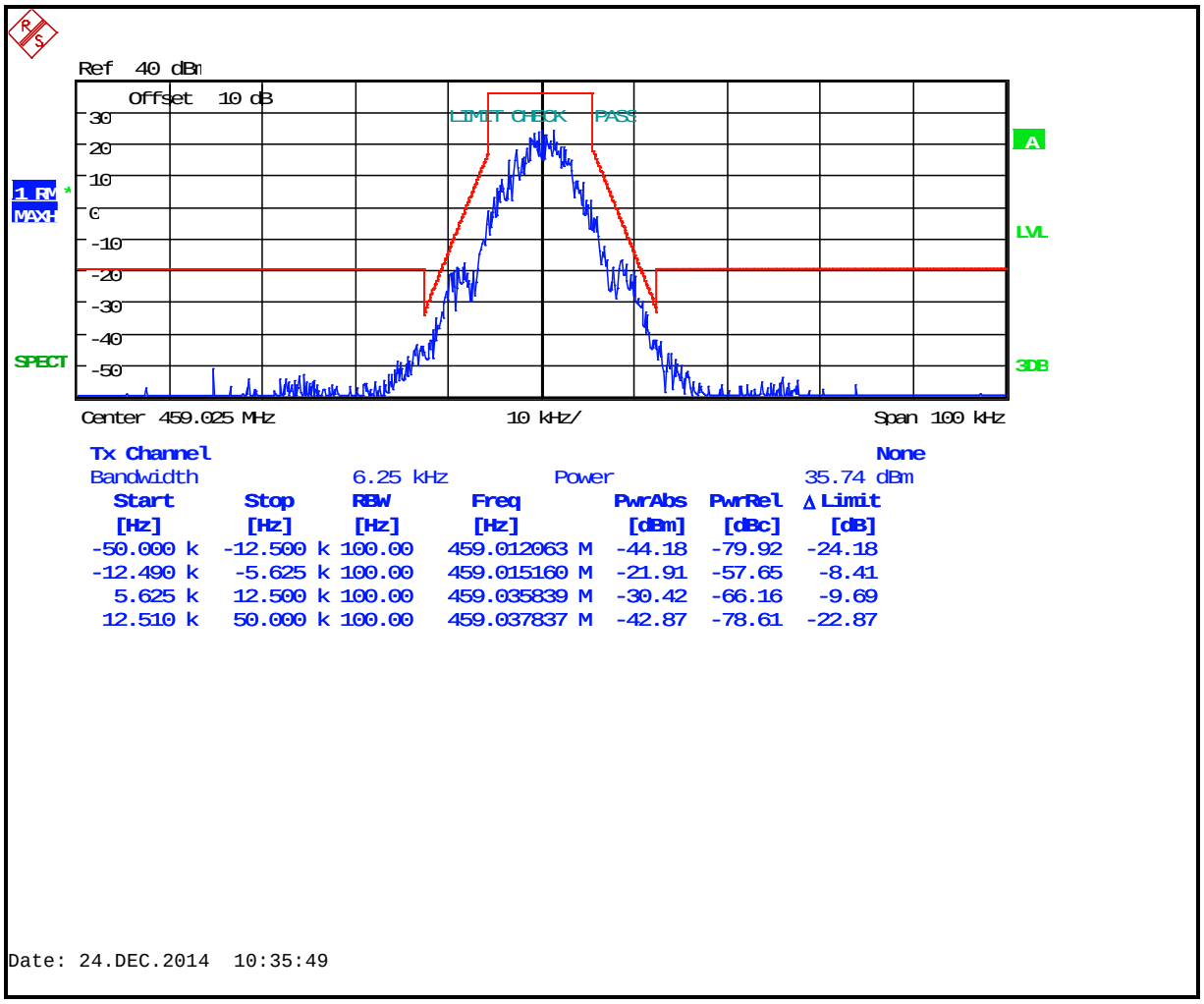
Plot 7-42: Occupied Bandwidth – 454.0125 MHz; EDACS Narrowband 2-level FSK 9600 (Mask D)



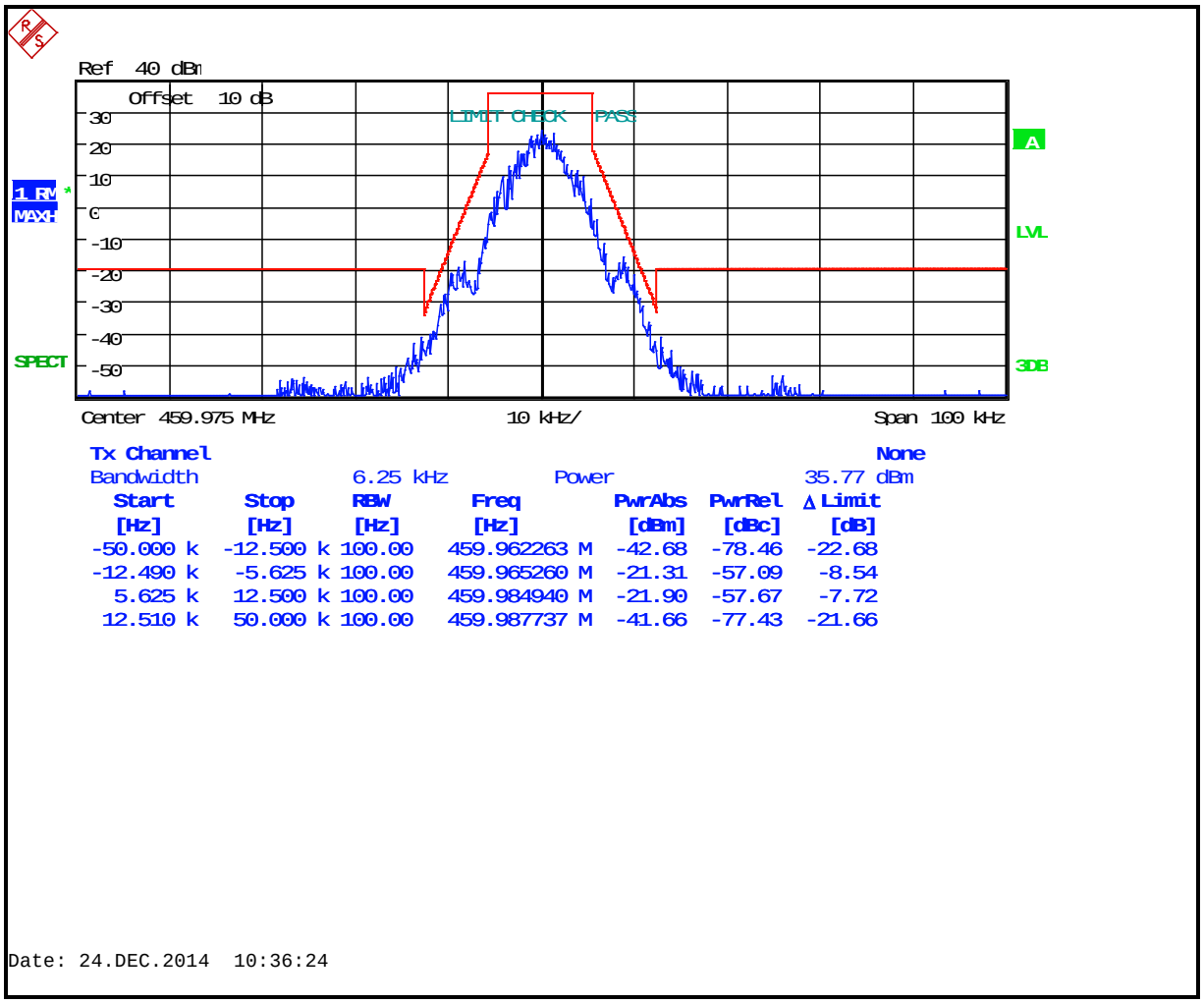
Plot 7-43: Occupied Bandwidth – 456.0125 MHz; EDACS Narrowband 2-level FSK 9600 (Mask D)



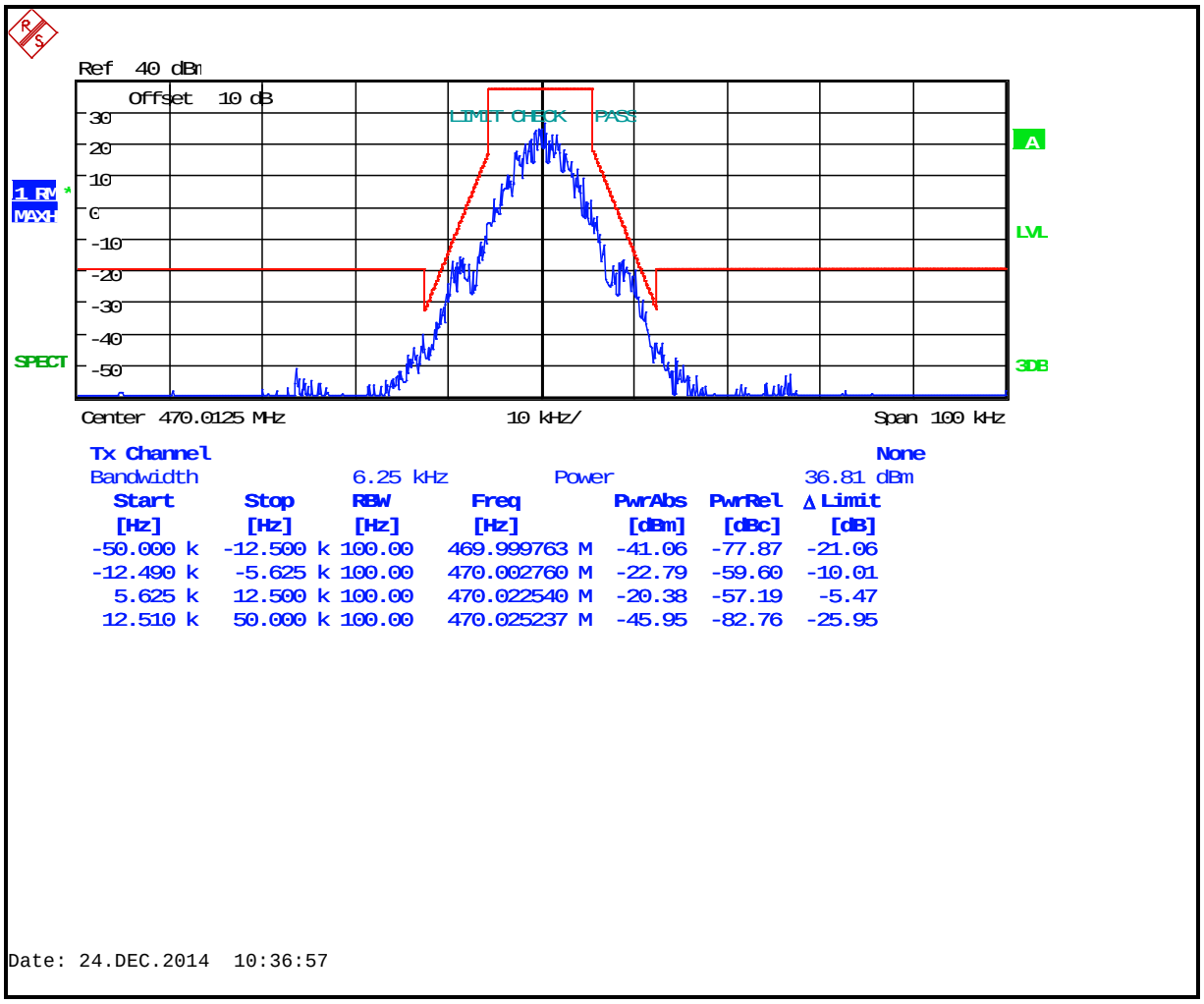
Plot 7-44: Occupied Bandwidth – 459.0250 MHz; EDACS Narrowband 2-level FSK 9600 (Mask D)



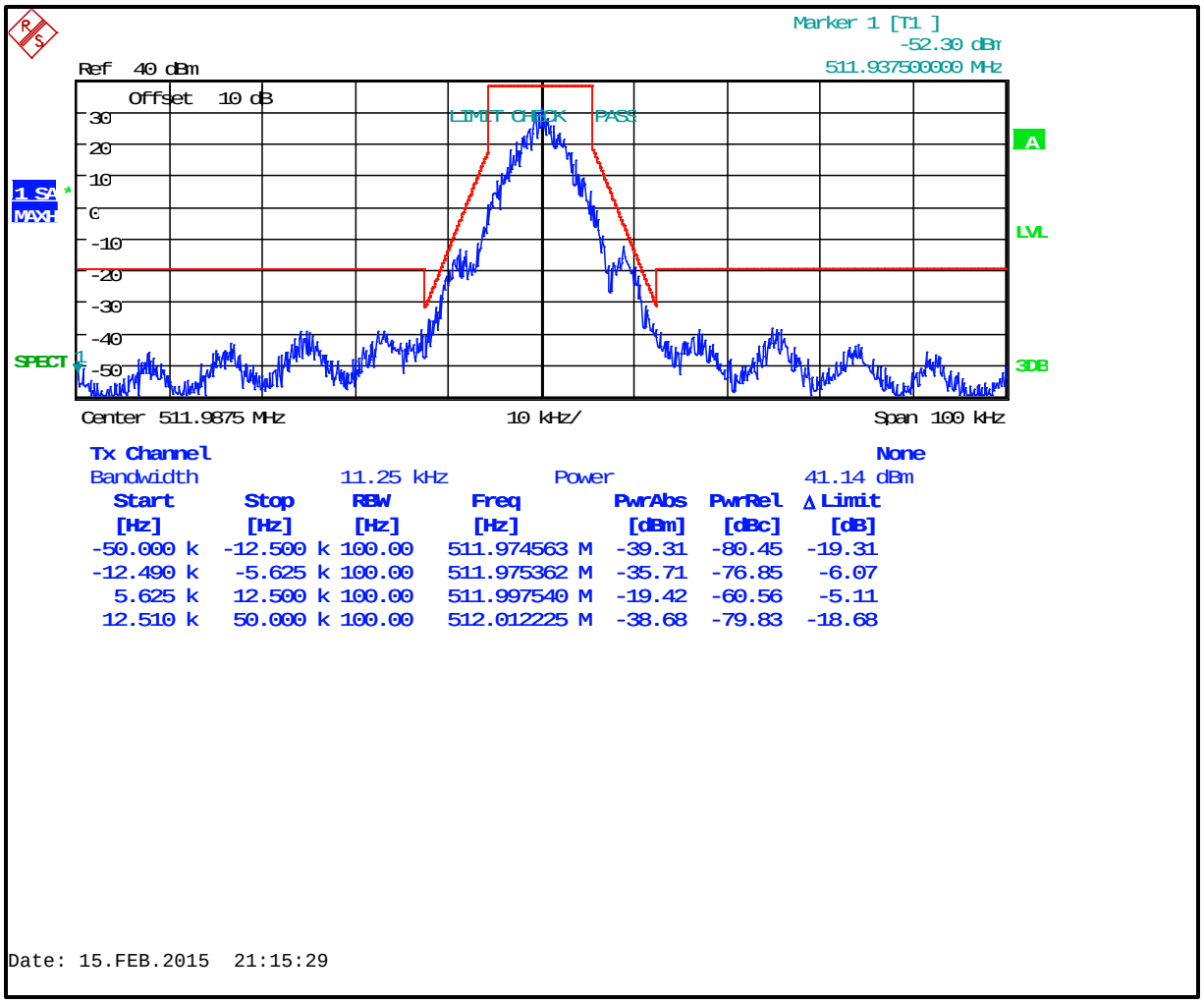
Plot 7-45: Occupied Bandwidth – 459.9750 MHz; EDACS Narrowband 2-level FSK 9600 (Mask D)



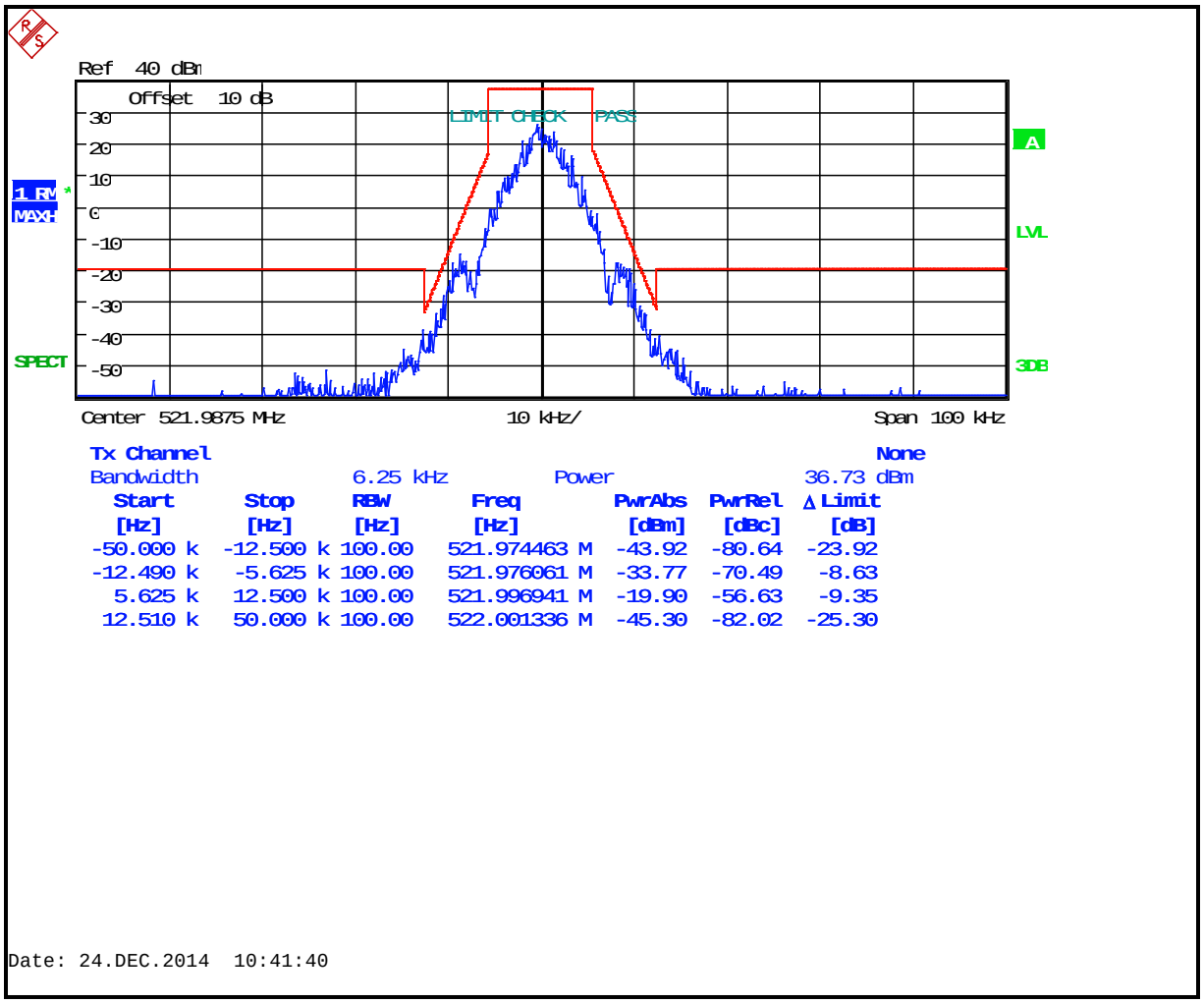
Plot 7-46: Occupied Bandwidth – 470.0125 MHz; EDACS Narrowband 2-level FSK 9600 (Mask D)



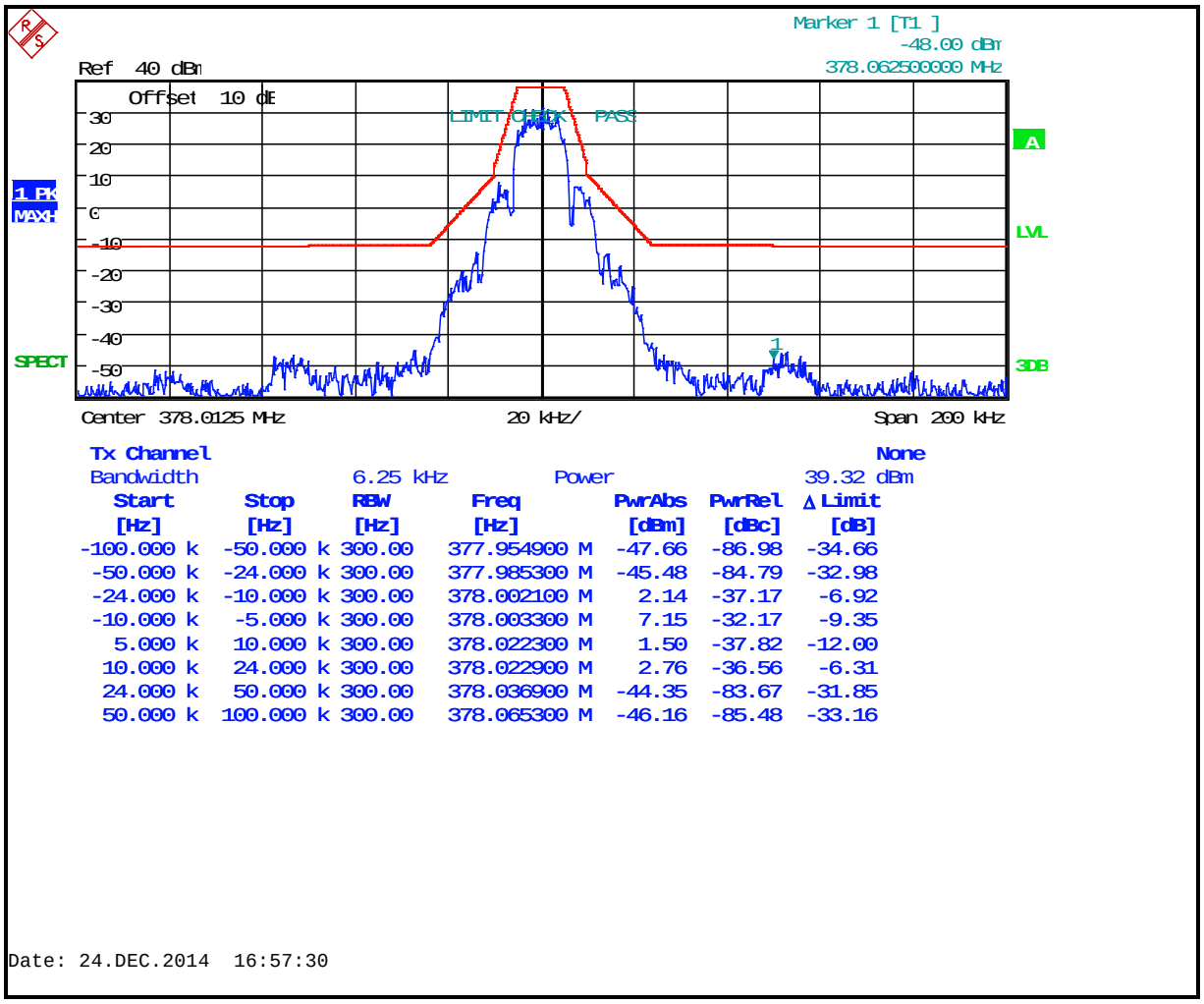
Plot 7-47: Occupied Bandwidth – 511.9875 MHz; EDACS Narrowband 2-level FSK 9600 (Mask D)



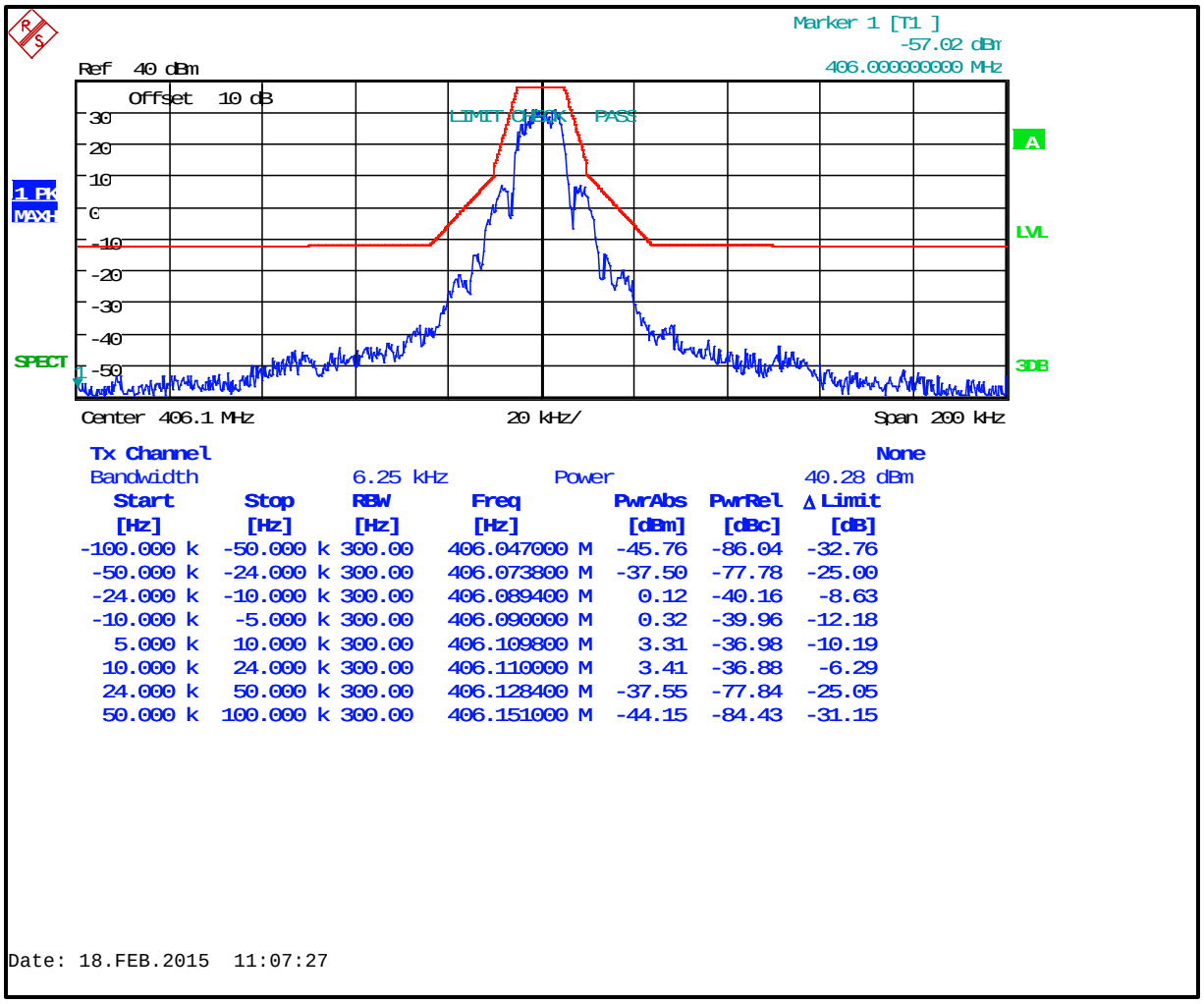
Plot 7-48: Occupied Bandwidth – 521.9875 MHz; EDACS Narrowband 2-level FSK 9600 (Mask D)



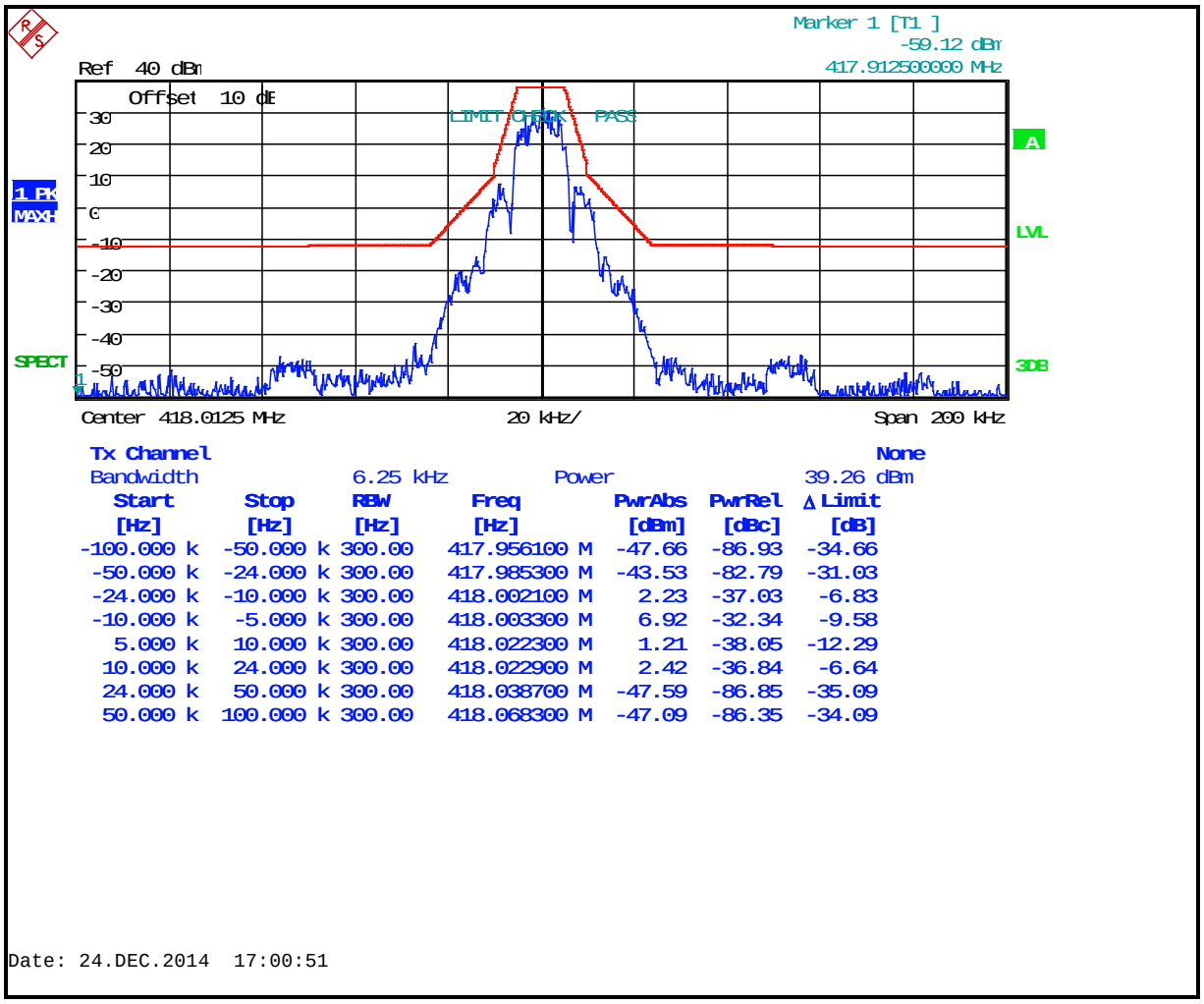
Plot 7-49: Occupied Bandwidth – 378.0125 MHz; EDACS Wideband 2-level FSK 9600 (Mask C)



Plot 7-50: Occupied Bandwidth – 406.1000 MHz; EDACS Wideband 2-level FSK 9600 (Mask C)



Plot 7-51: Occupied Bandwidth – 418.0125 MHz; EDACS Wideband 2-level FSK 9600 (Mask C)

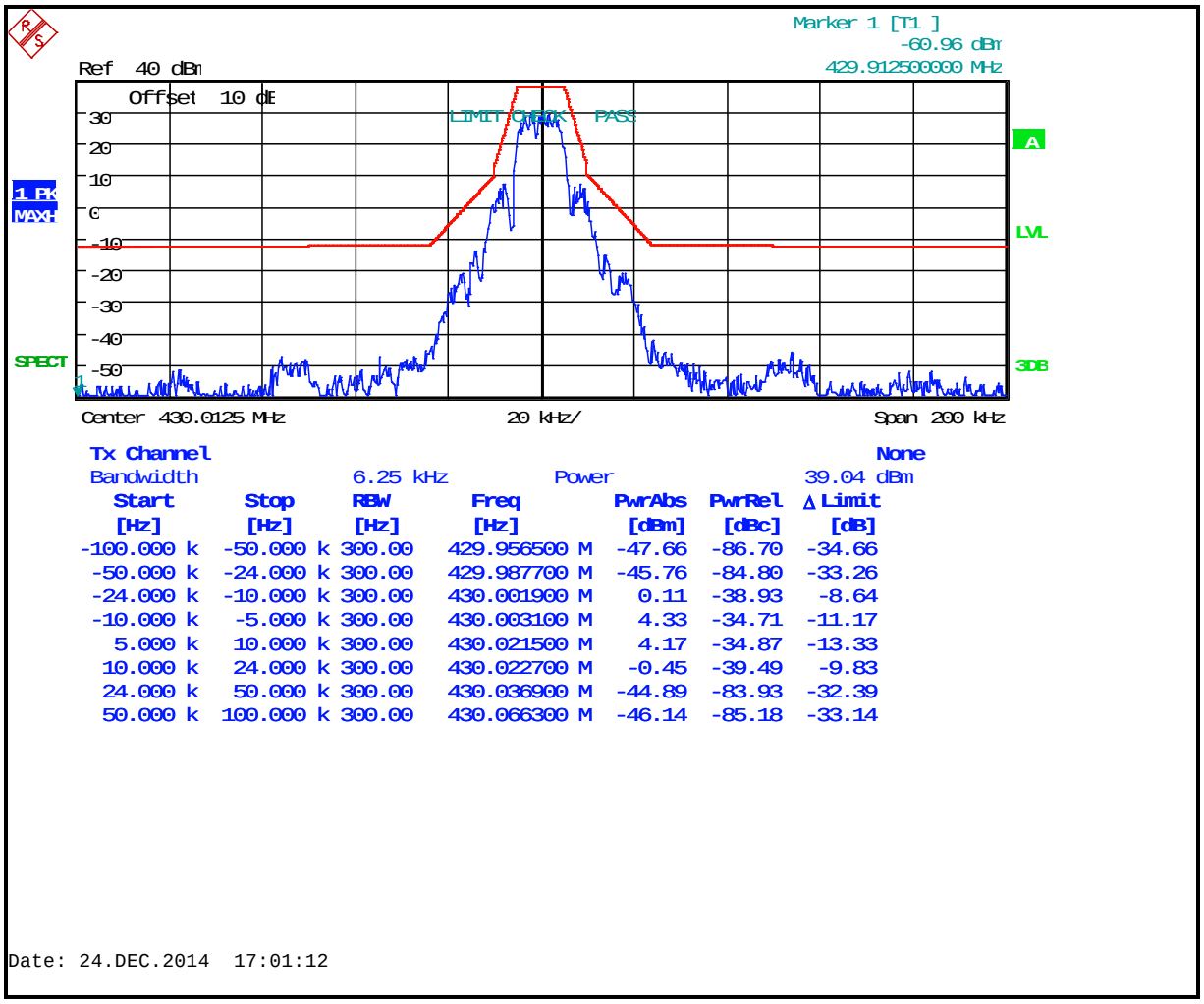


Tx Channel **None**
Bandwidth 6.25 kHz Power 39.26 dBm

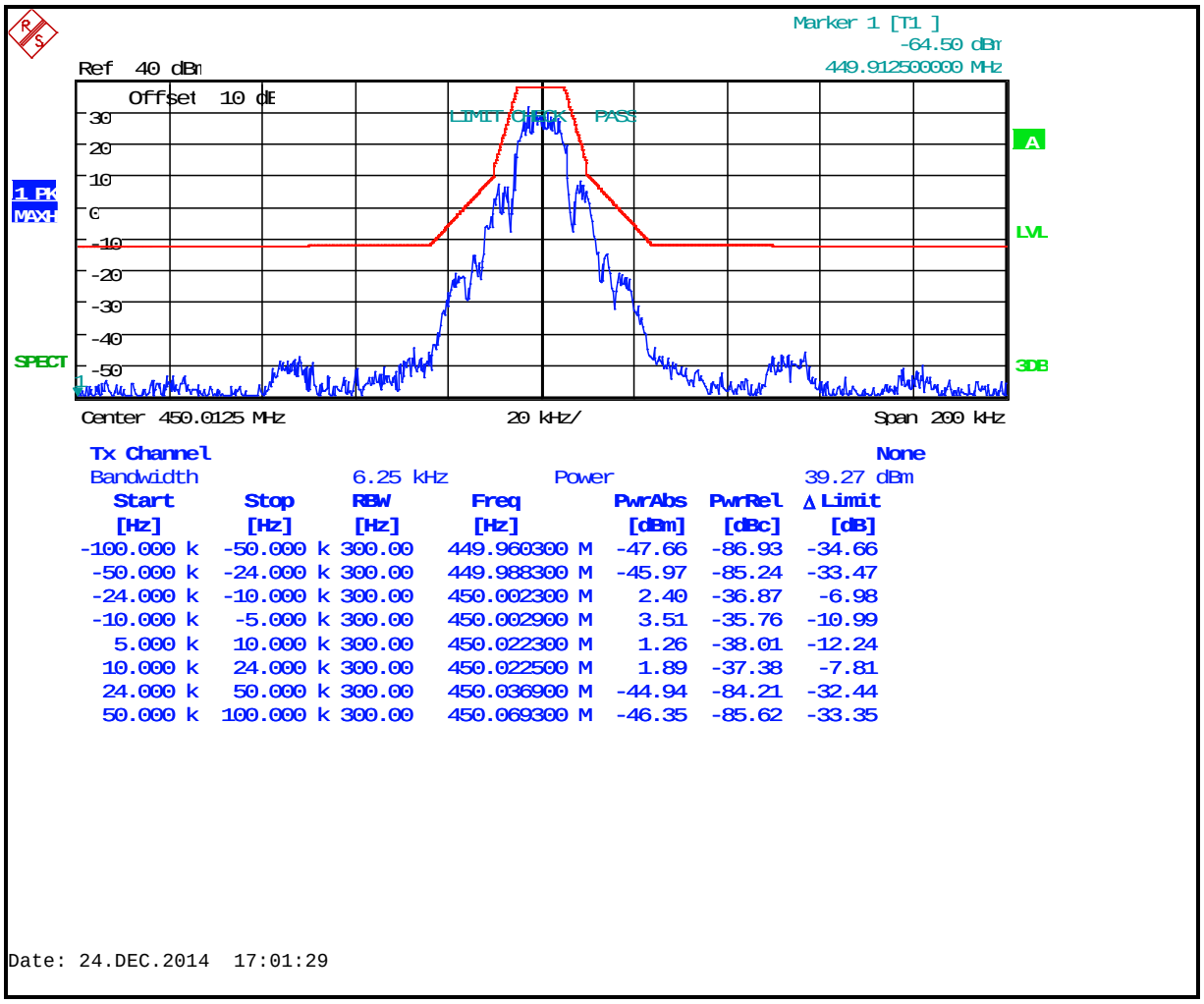
Start [Hz]	Stop [Hz]	RBW [Hz]	Freq [Hz]	PwrAbs [dBm]	PwrRel [dBc]	Δ Limit [dB]
-100.000 k	-50.000 k	300.00	417.956100 M	-47.66	-86.93	-34.66
-50.000 k	-24.000 k	300.00	417.985300 M	-43.53	-82.79	-31.03
-24.000 k	-10.000 k	300.00	418.002100 M	2.23	-37.03	-6.83
-10.000 k	-5.000 k	300.00	418.003300 M	6.92	-32.34	-9.58
5.000 k	10.000 k	300.00	418.022300 M	1.21	-38.05	-12.29
10.000 k	24.000 k	300.00	418.022900 M	2.42	-36.84	-6.64
24.000 k	50.000 k	300.00	418.038700 M	-47.59	-86.85	-35.09
50.000 k	100.000 k	300.00	418.068300 M	-47.09	-86.35	-34.09

Date: 24.DEC.2014 17:00:51

Plot 7-52: Occupied Bandwidth – 430.0125 MHz; EDACS Wideband 2-level FSK 9600 (Mask C)



Plot 7-53: Occupied Bandwidth – 450.0125 MHz; EDACS Wideband 2-level FSK 9600 (Mask C)



Tx Channel						None
Bandwidth		6.25 kHz		Power		39.27 dBm
Start [Hz]	Stop [Hz]	RBW [Hz]	Freq [Hz]	PwrAbs [dBm]	PwrRel [dBc]	Δ Limit [dB]
-100.000 k	-50.000 k	300.00	449.960300 M	-47.66	-86.93	-34.66
-50.000 k	-24.000 k	300.00	449.988300 M	-45.97	-85.24	-33.47
-24.000 k	-10.000 k	300.00	450.002300 M	2.40	-36.87	-6.98
-10.000 k	-5.000 k	300.00	450.002900 M	3.51	-35.76	-10.99
5.000 k	10.000 k	300.00	450.022300 M	1.26	-38.01	-12.24
10.000 k	24.000 k	300.00	450.022500 M	1.89	-37.38	-7.81
24.000 k	50.000 k	300.00	450.036900 M	-44.94	-84.21	-32.44
50.000 k	100.000 k	300.00	450.069300 M	-46.35	-85.62	-33.35

Date: 24.DEC.2014 17:01:29