RHEIN TECH LABORATORIES, INC.

Engineering Solutions & Electromagnetic Compatibility Services

FCC & IC Certification Report

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XL-185P
7/800 MHz C1D1 Rebanded

FCC ID: OWDTR-0154-E
IC: 3636B-0154

October 2, 2017

Standards Referenced for this Report	
Part 2: 2016	Frequency Allocations and Radio Treaty Matters; General Rules and Regulations
Part 90: 2016	Private Land Mobile Radio Services
RSS-119 Issue 12	Land Mobile and Fixed Radio Transmitters and Receivers 27.41 to 960.0 MHz
ANSI C63.26: 2015	American National Standard for Compliance Testing of Transmitters Used in Licensed Radio Services

Report Prepared By: Daniel W. Baltzell

Document Number: 2017076TNF

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 Conducted Output Power (W)	Frequency Tolerance (ppm)	Transmit Mode	Emission Designator
769 – 775 (FCC) 768 – 776 (ISED) 799 – 805 (FCC) 798 – 806 (ISED) 806 – 816 851 – 861	0.5 - 3	0.2	C4FM Data/Voice / P25 Phase 1	8K40F1D/E
769 – 775 (FCC) 768 – 776 (ISED) 799 – 805 (FCC) 798 – 806 (ISED) 806 – 816 851 – 861	0.5 - 3	0.2	H-CPM (TDMA) Data/Voice / P25 Phase 2	8K10DXW
806 – 816 851 – 861	0.5 - 3	0.2	Analog FM (Wideband) / EDACS/CONV	16K0F3E
806 – 816 851 – 861	0.5 - 3	0.2	2-level FSK 9600 Data/Digital Voice (Wideband) / EDACS	16K0F1D/E
769 – 775 (FCC) 768 – 776 (ISED) 799 – 805 (FCC) 798 – 806 (ISED) 806 – 816 851 – 861	0.5 - 3	0.2	Analog FM (Narrowband) / EDACS/CONV	11K0F3E
769 – 775 (FCC) 768 – 776 (ISED) 799 – 805 (FCC) 798 – 806 (ISED) 806 – 816 851 – 861	0.5 - 3	0.2	2-level FSK 9600 Data/Digital Voice (Narrowband) / EDACS	11K7F1D/E
769 – 775 (FCC) 768 – 776 (ISED) 799 – 805 (FCC) 798 – 806 (ISED) 806 – 816 851 – 861	0.5 - 3	0.2	4-level FSK Data/Voice (Narrowband) / OpenSky	8K40F9W
769 – 775 (FCC) 768 – 776 (ISED) 799 – 805 (FCC) 798 – 806 (ISED) 806 – 816 851 – 861	0.5 - 3	0.2	4-level FSK Data/Voice (SMR) / OpenSky	15K4F9W
806 – 809 851 – 854	0.5 - 3	0.2	Analog FM (NPSPAC) / EDACS	14K0F3E
806 – 809 851 – 854	0.5 – 3	0.2	2-level FSK 9600 Data/Digital Voice (NPSPAC) / EDACS	14K0F1D/E
806 – 809 851 – 854	0.5 - 3	0.2	4-level FSK Data/Voice (NPSPAC) / OpenSky	12K1F9W

Note: As this is a combined FCC and ISED test report, there is test data between 768 – 769 MHz, 775 – 776 MHz, 798 – 799 MHz and 805 – 806 MHz for frequencies that are only authorized for use in Canada; that is, any test data in the aforementioned frequency ranges is not applicable for the FCC, nor authorized for use in the United States.

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1 Test Result Summary

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

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; FCC ID: OWDTR-0154-E, IC: 3636B-0154.**

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 Parts 2 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)

N/A

2.3 Grant Notes

Power is continuously variable from 0.5 – 3 W for 700 and 800 MHz bands.

2.4 Tested System Details

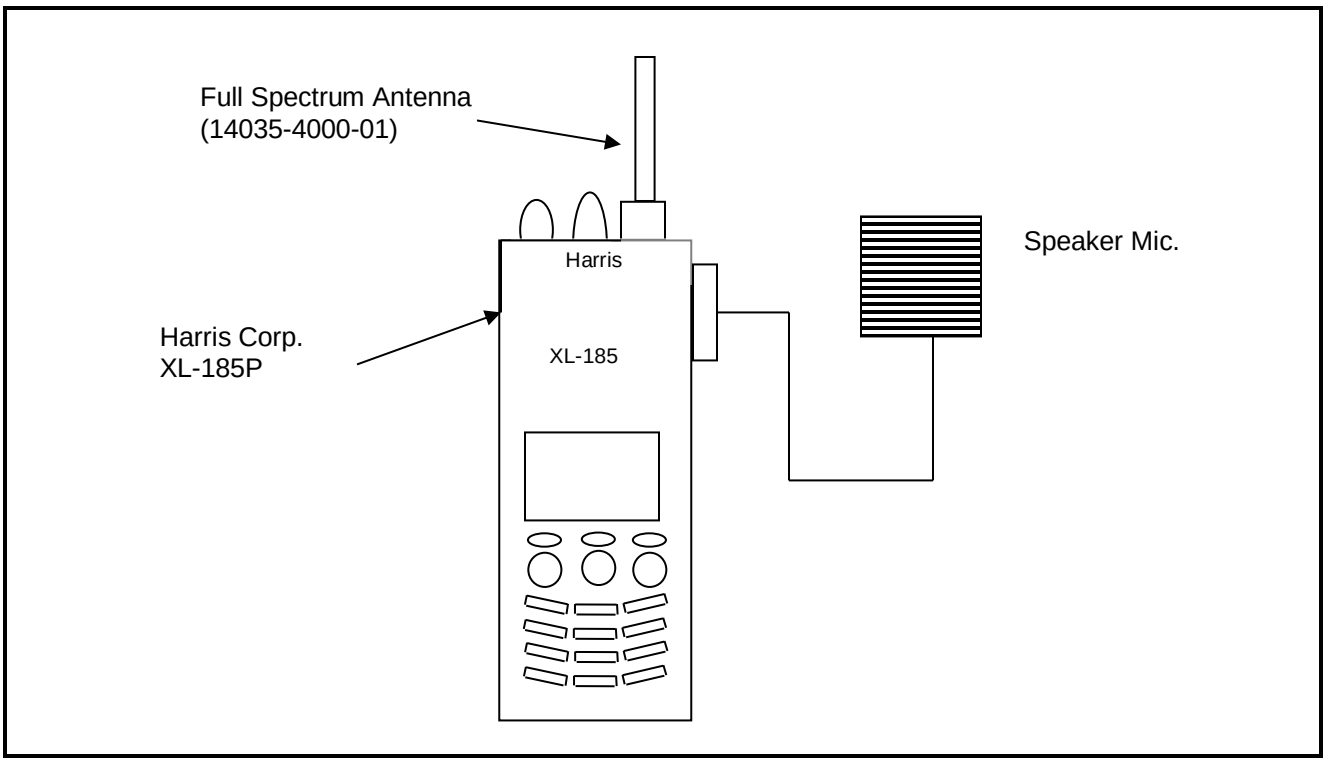
The test sample was received on May 4, 2017. Listed below are the identifiers and descriptions of all equipment, cables, and internal devices used with the EUT for this test, as applicable.

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

Table 2-1: Equipment Under Test (EUT)

Part	Manufacturer	Model	PN/SN	FCC ID	RTL Bar Code
Radio	Harris Corporation	XL-185P	C1D1/E00009	OWDTR-0154-E	22518
Speaker/ Microphone	Harris Corporation	EM105	N/A	N/A	21563
Full-Spectrum Multiband Antenna	Harris Corporation	14035-4000-01	N/A	N/A	22519
Li-Ion Rechargeable Battery	Harris Corporation	N/A	BAT-L-CASE-R-HR003	N/A	21552

Figure 2-1: Configuration of Tested System



3 FCC §2.1033(C)(8) Voltages and Currents Through The Final Amplifying Stage

7.4 V / 2.7 A 700 MHz
7.4 V / 2.3 A 800 MHz

4 FCC §2.1046(a): RF Power Output: Conducted, §90.541: Transmitting Power Limits; RSS-119 5.4: Transmitter 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: 3.0 W for 700 band, and 3.0 W for 800 band

4.2 Test Data

Table 4-1: RF Conducted Output Power - Measured

Frequency (MHz)	Power (dBm)	Power (W)
768	34.2	2.7
769	34.3	2.7
771	34.1	2.6
774.9875	34.4	2.7
776	34.4	2.7
798	34.1	2.6
801	34.1	2.5
805.9875	34.0	2.5
806	34.8	3.0
815	34.8	3.0
851	35.0	3.2
860	35.0	3.2

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	3/22/18
901139	MCE Weinschel	48-20-34	Attenuator, 20 dB, DC-18 GHz, 100 W	BK5859	3/30/18

Test Personnel:

Daniel W. Baltzell — EMC Test Engineer — Signature — May 5, 2017 — Date of Test

5 FCC §2.1051: Spurious Emissions at Antenna Terminals; §90.210: Emission Limitations; RSS-119 5.8.9.2: Out-of-band Emission Limit

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 §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:

700 MHz: 768, 769, 771, 774.9875, 776, 798, 801, and 805.9875
800 MHz: 806, 815, 851, and 860

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, no data is shown.

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	3/22/18
900948	Weinschel Corp	47-10-43	10 dB Attenuator; 50 W	BH1481	9/1/18
901129	Par Electronics	188-174 (25W)	VHF Notch Filters	N/A	9/26/17
901135	Par Electronics	400-512 (25W)	UHF Notch Filter	N/A	9/26/17
901128	Par Electronics	806-902 (25W)	UHF Notch Filter	N/A	9/26/17

Test Personnel:

Daniel W. Baltzell		May 9, 2017
EMC Test Engineer	Signature	Date of Test

6 FCC §90.543(a): Emission Limitations: ACP Requirements; RSS-119 4.3: Adjacent Channel Power (ACP) Measurement for Equipment in the Bands 768-776 MHz and 798-806 MHz

Effective October 23, 2007, transmitters designed to operate in the 769–774.9875 MHz and 799–805.9875 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

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

For a Portable 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 Portable 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 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 - 775.9875 MHz; P25 Mode; 12.5 kHz Channel Spacing

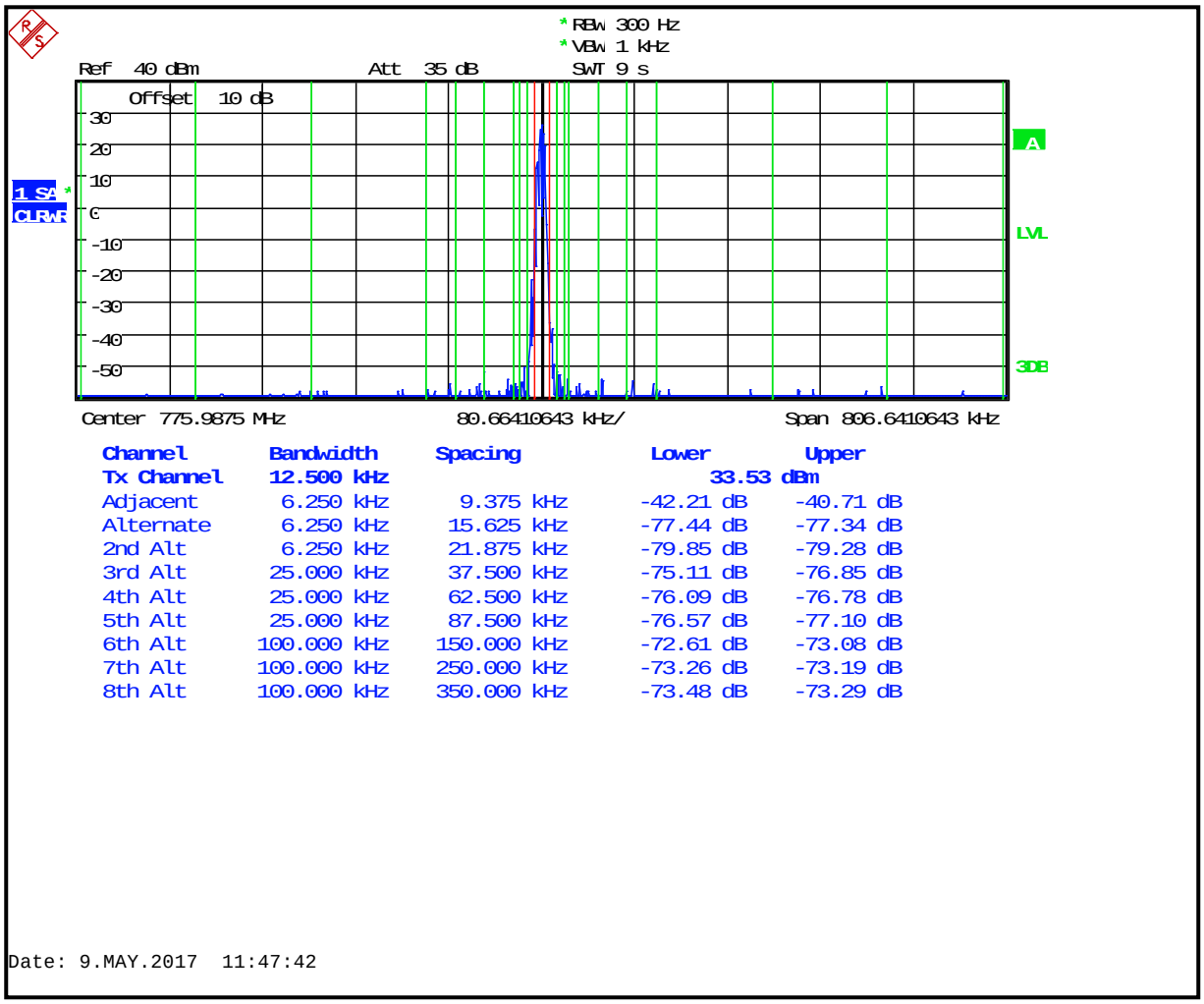


Table 6-1: Adjacent Channel Power - 775.9875 MHz; P25 Mode; 12.5 kHz Channel Spacing

Offset from Center Frequency (kHz)	Measurement BW (kHz)	Max ACP (dBc)	Max ACP (dBc)
>400 to 12 MHz	30(s)	-75	-100.2
12 MHz to receive band	30(s)	-75	-96.9
In receive band	30(s)	-100	-121.0

Plot 6-2: Adjacent Channel Power - 804.9875 MHz; P25 Mode; 12.5 kHz Channel Spacing

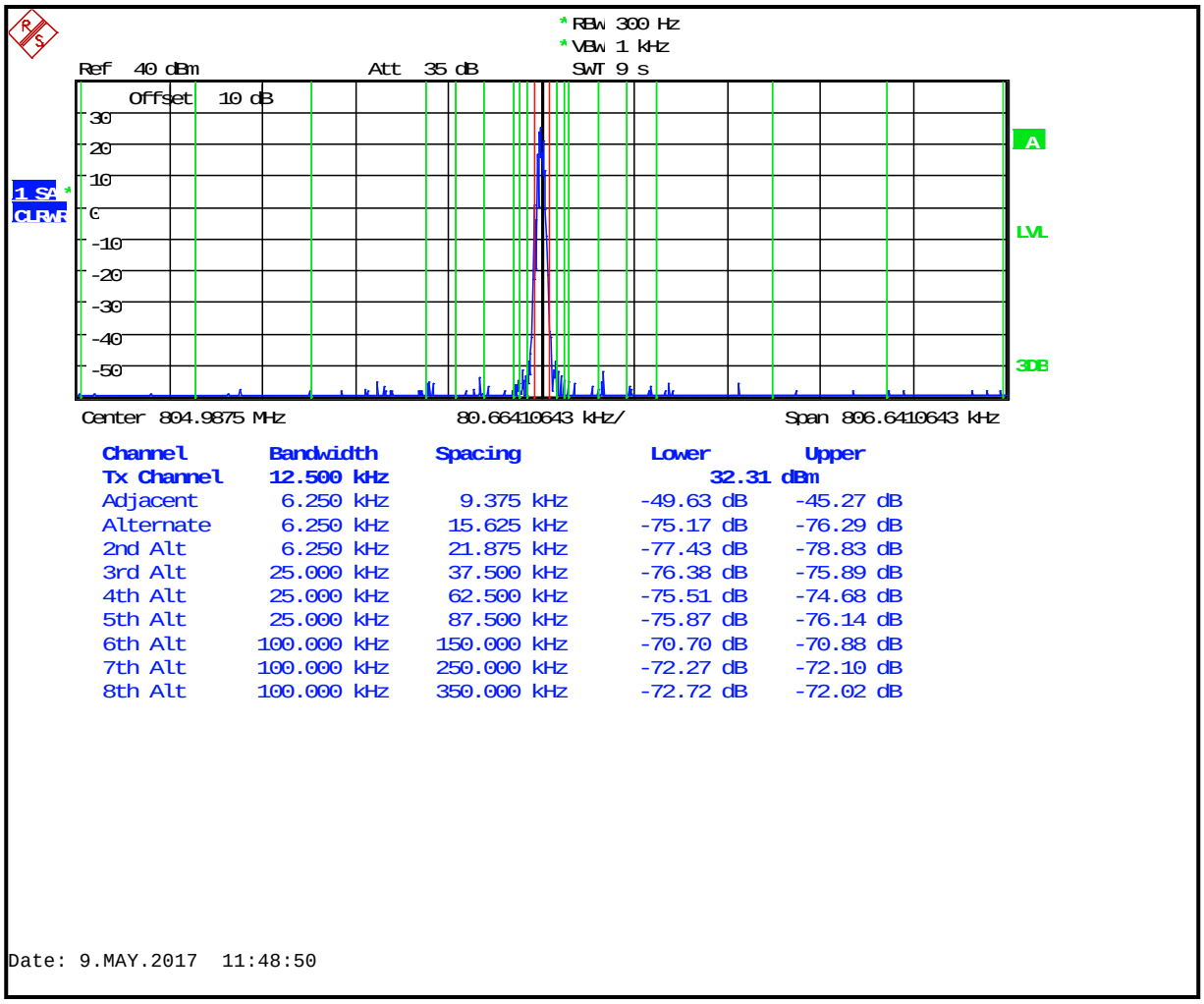


Table 6-2: Adjacent Channel Power - 804.9875 MHz; P25 Mode; 12.5 kHz Channel Spacing

Offset from Center Frequency (kHz)	Measurement BW (kHz)	Max ACP (dBc)	Max ACP (dBc)
>400 to 12 MHz	30(s)	-75	-103.6
12 MHz to receive band	30(s)	-75	-102.8
In receive band	30(s)	-100	-120.8

Plot 6-3: Adjacent Channel Power - 775.9875MHz; C4FM TDMA Phase 2 Mode; 12.5 kHz Channel Spacing

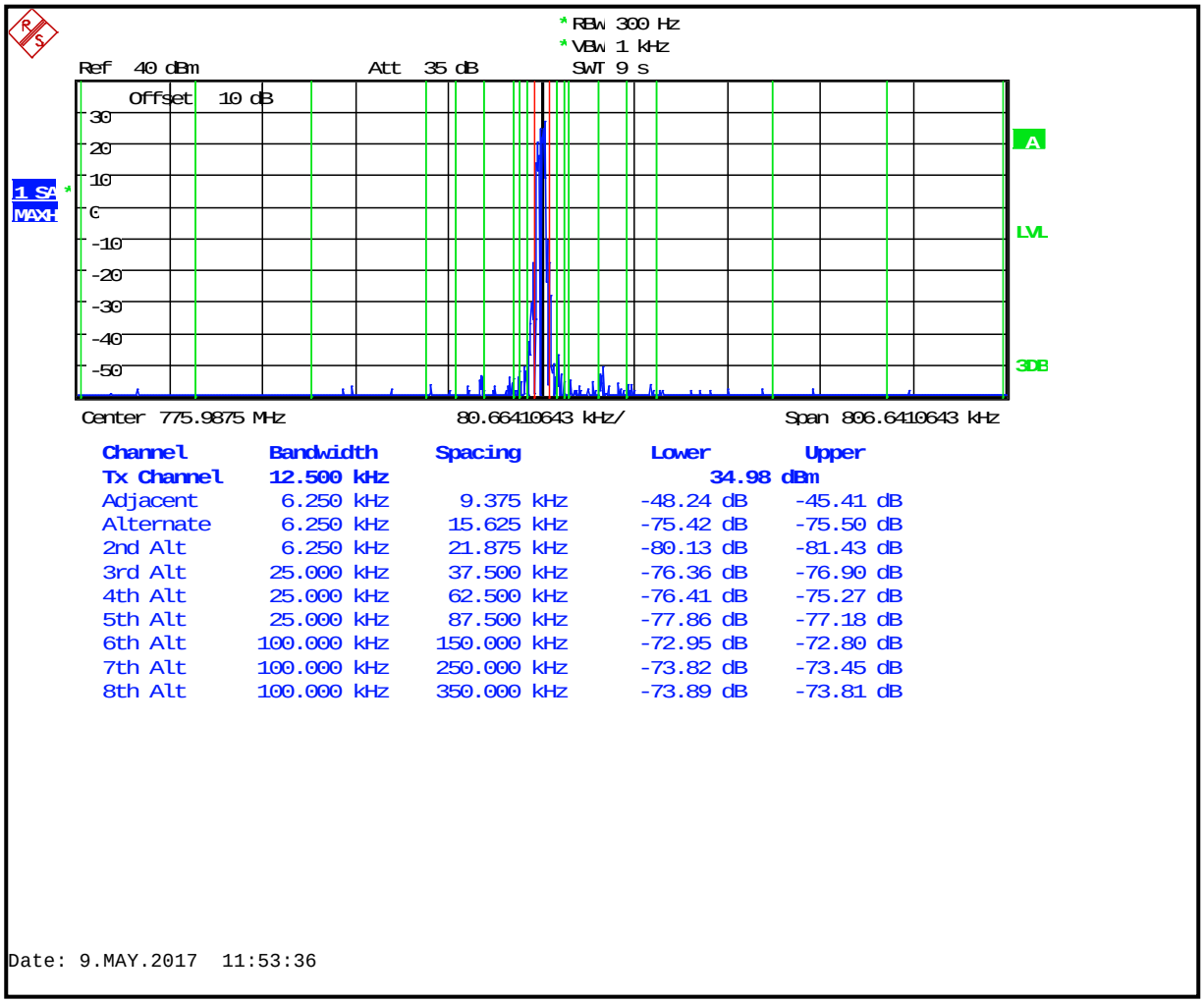


Table 6-3: Adjacent Channel Power - 775.9875MHz; C4FM TDMA Phase 2 Mode; 12.5 kHz Channel Spacing

Offset from Center Frequency (kHz)	Measurement BW (kHz)	Max ACP (dBc)	Max ACP (dBc)
>400 to 12 MHz	30(s)	-75	-99.4
12 MHz to receive band	30(s)	-75	-101.9
In receive band	30(s)	-100	-103.2

Plot 6-4: Adjacent Channel Power - 804.9875 MHz; C4FM TDMA Phase 2 Mode; 12.5 kHz Channel Spacing

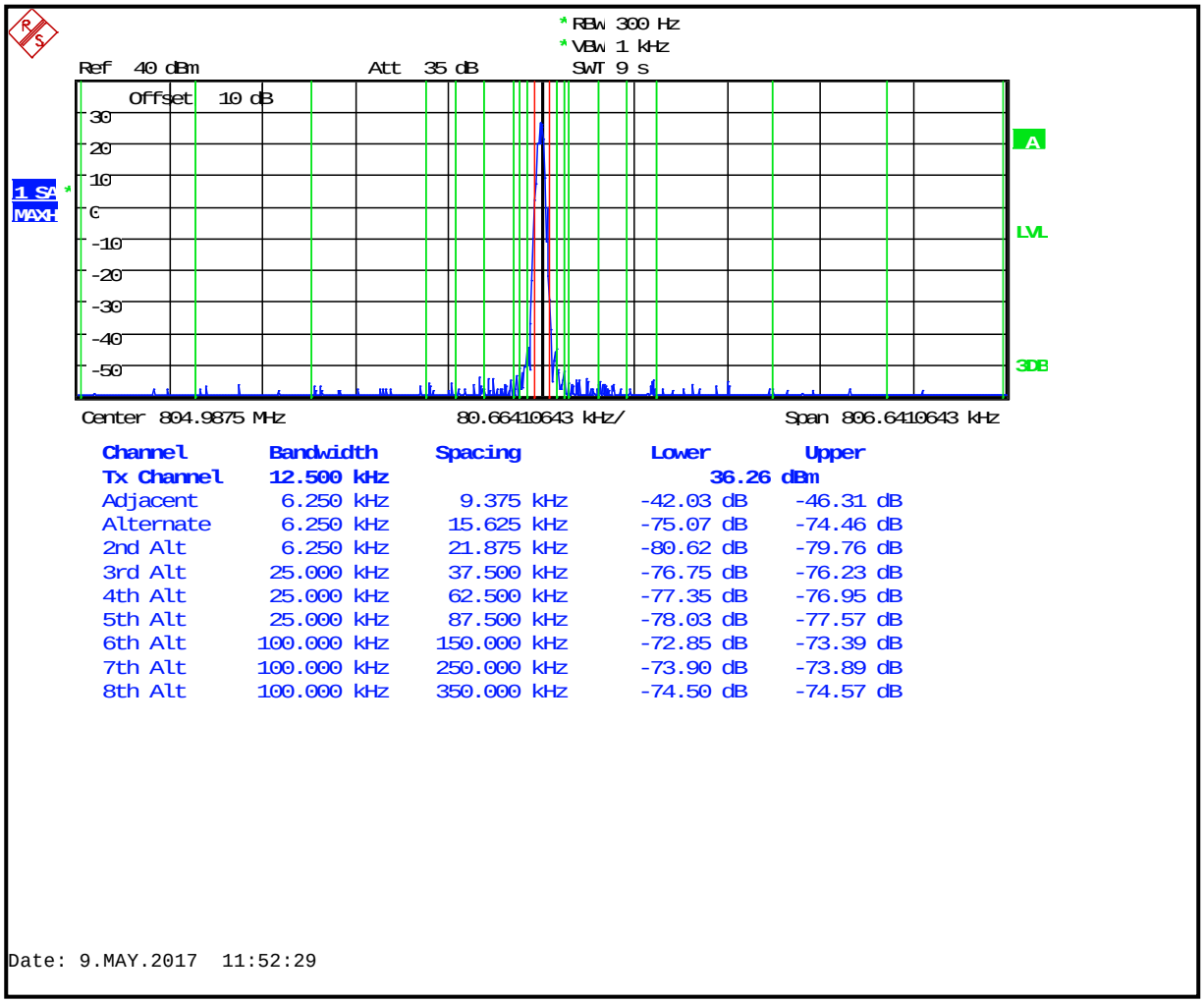


Table 6-4: Adjacent Channel Power - 804.9875 MHz; C4FM TDMA Phase 2 Mode; 12.5 kHz Channel Spacing

Offset from Center Frequency (kHz)	Measurement BW (kHz)	Max ACP (dBc)	Max ACP (dBc)
>400 to 12 MHz	30(s)	-75	-101.9
12 MHz to receive band	30(s)	-75	-103.8
In receive band	30(s)	-100	-102.8

Plot 6-5: Adjacent Channel Power - 775.9875 MHz; Analog Mode; 12.5 kHz Channel Spacing

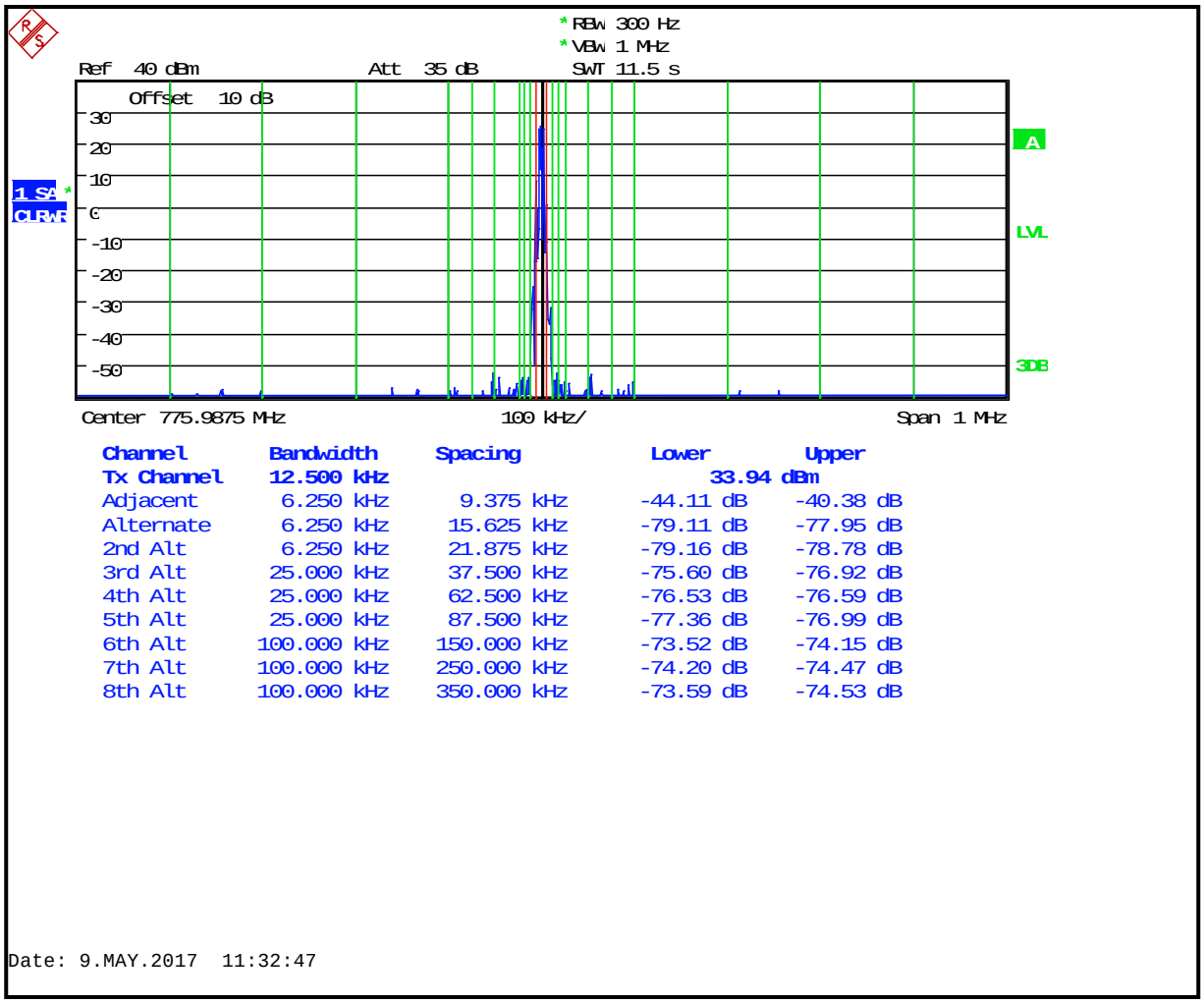


Table 6-5: Adjacent Channel Power - 775.9875 MHz; Analog Mode; 12.5 kHz Channel Spacing

Offset from Center Frequency (kHz)	Measurement BW (kHz)	Max ACP (dBc)	Max ACP (dBc)
>400 to 12 MHz	30(s)	-75	-101.5
12 MHz to receive band	30(s)	-75	-102.7
In receive band	30(s)	-100	-102.0

Plot 6-6: Adjacent Channel Power - 804.9875 MHz; Analog Mode; 12.5 kHz Channel Spacing

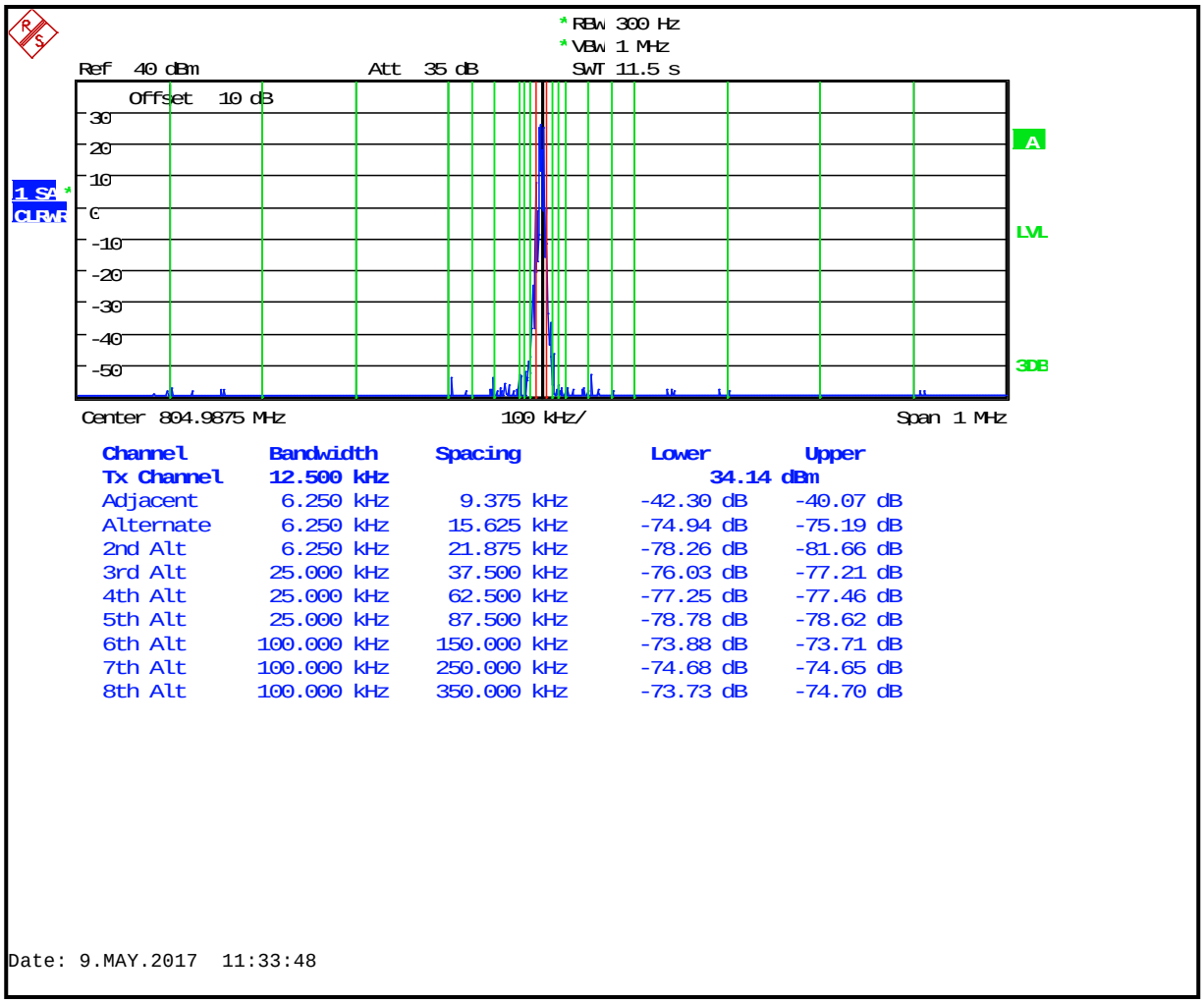


Table 6-6: Adjacent Channel Power - 804.9875 MHz; Analog Mode; 12.5 kHz Channel Spacing

Offset from Center Frequency (kHz)	Measurement BW (kHz)	Max ACP (dBc)	Max ACP (dBc)
>400 to 12 MHz	30(s)	-75	-100.8
12 MHz to receive band	30(s)	-75	-103.1
In receive band	30(s)	-100	-102.0

Plot 6-7: Adjacent Channel Power - 775.9875 MHz; 2 Level FSK 9600 Mode; 12.5 kHz Channel Spacing

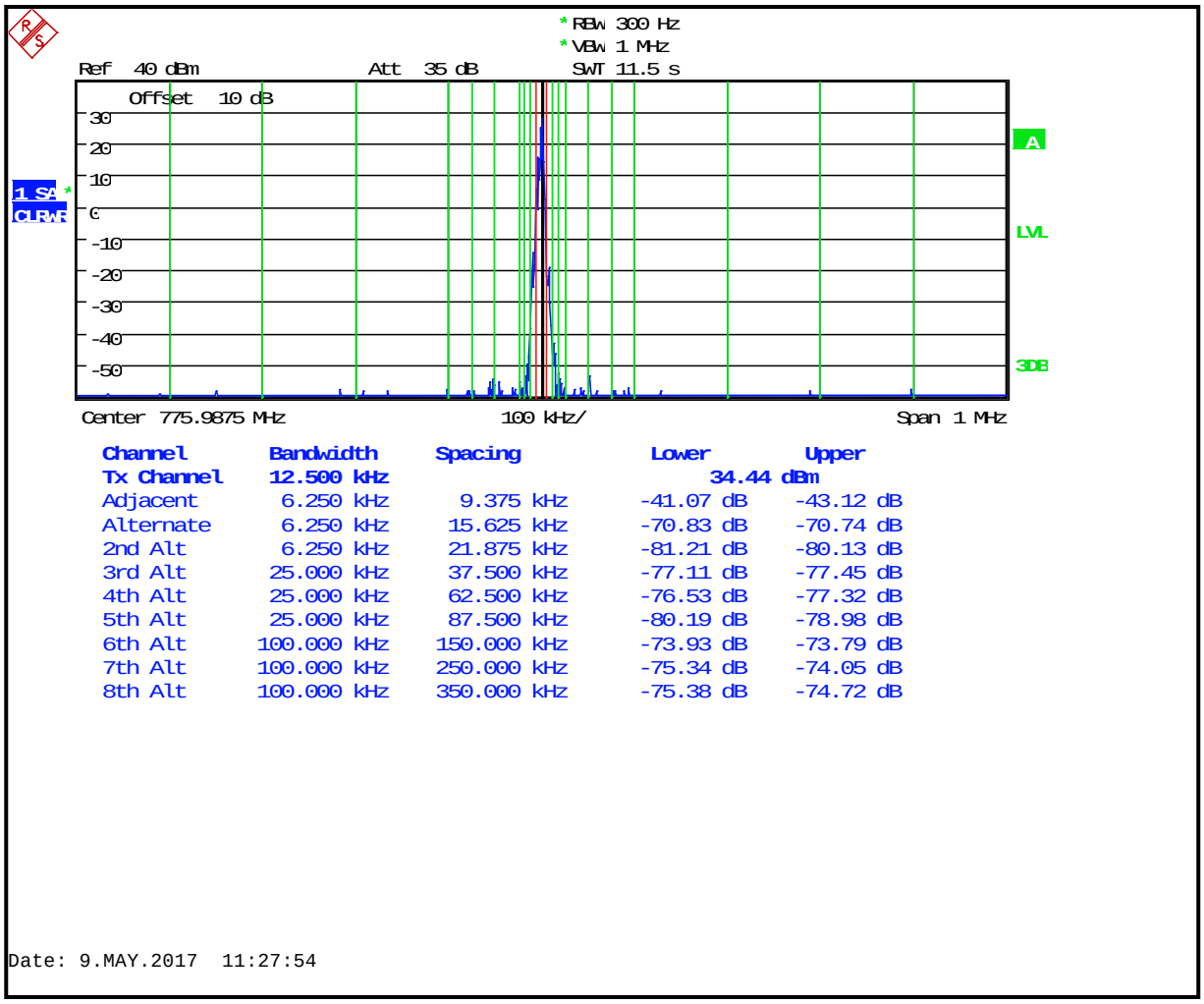


Table 6-7: Adjacent Channel Power - 775.9875 MHz; 2 Level FSK 9600 Mode; 12.5 kHz Channel Spacing

Offset from Center Frequency (kHz)	Measurement BW (kHz)	Max ACP (dBc)	Max ACP (dBc)
>400 to 12 MHz	30(s)	-75	-83.4
12 MHz to receive band	30(s)	-75	-102.3
In receive band	30(s)	-100	-121.0

Plot 6-8: Adjacent Channel Power - 804.9875 MHz; 2 Level FSK 9600 Mode; 12.5 kHz Channel Spacing

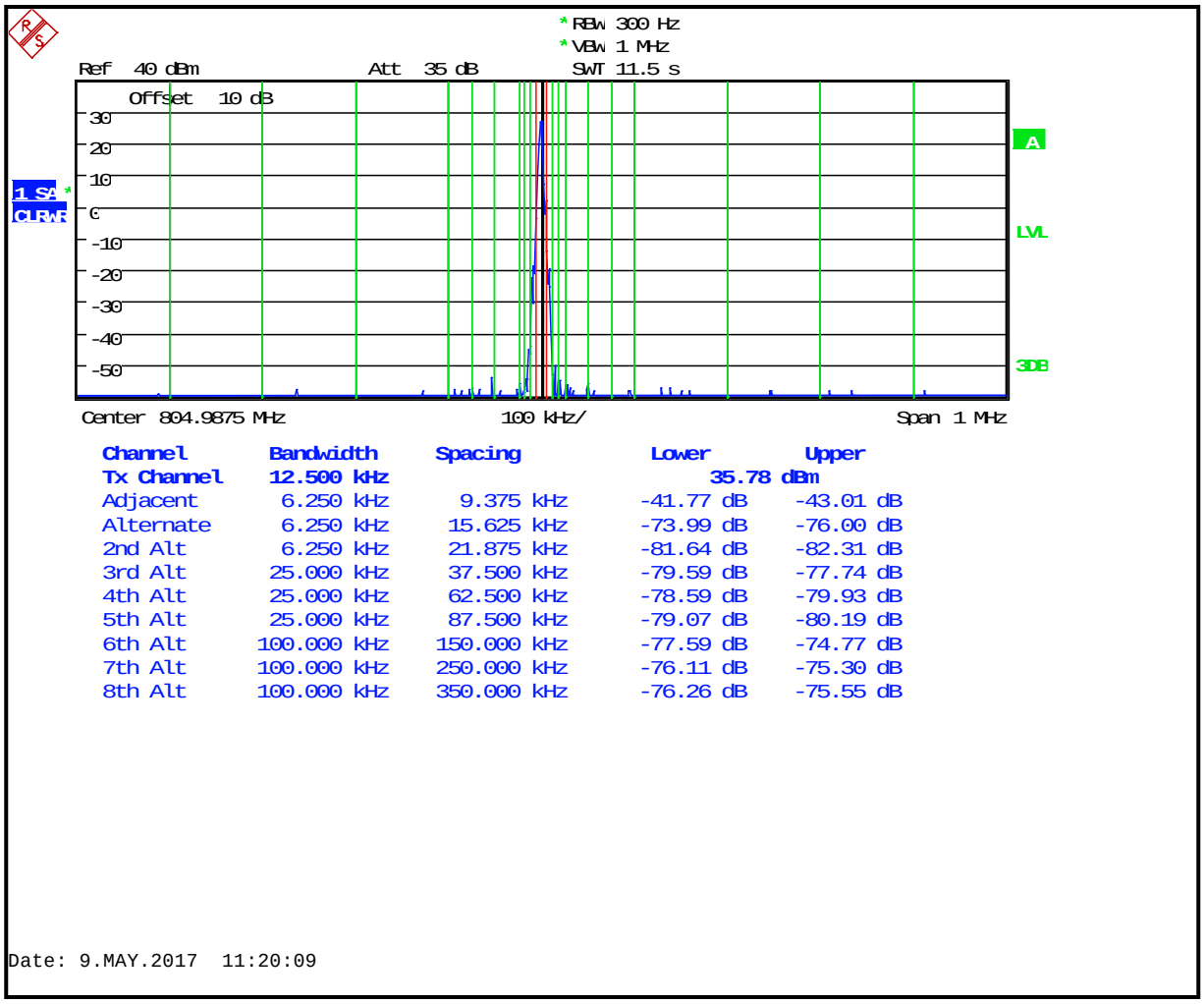


Table 6-8: Adjacent Channel Power - 804.9875 MHz; 2 Level FSK 9600 Mode; 12.5 kHz Channel Spacing

Offset from Center Frequency (kHz)	Measurement BW (kHz)	Max ACP (dBc)	Max ACP (dBc)
>400 to 12 MHz	30(s)	-75	-101.6
12 MHz to receive band	30(s)	-75	-104.6
In receive band	30(s)	-100	-119.7

Plot 6-9: Adjacent Channel Power - 775.9875 MHz; 4 Level FSK OTP Mode; 12.5 kHz Channel Spacing

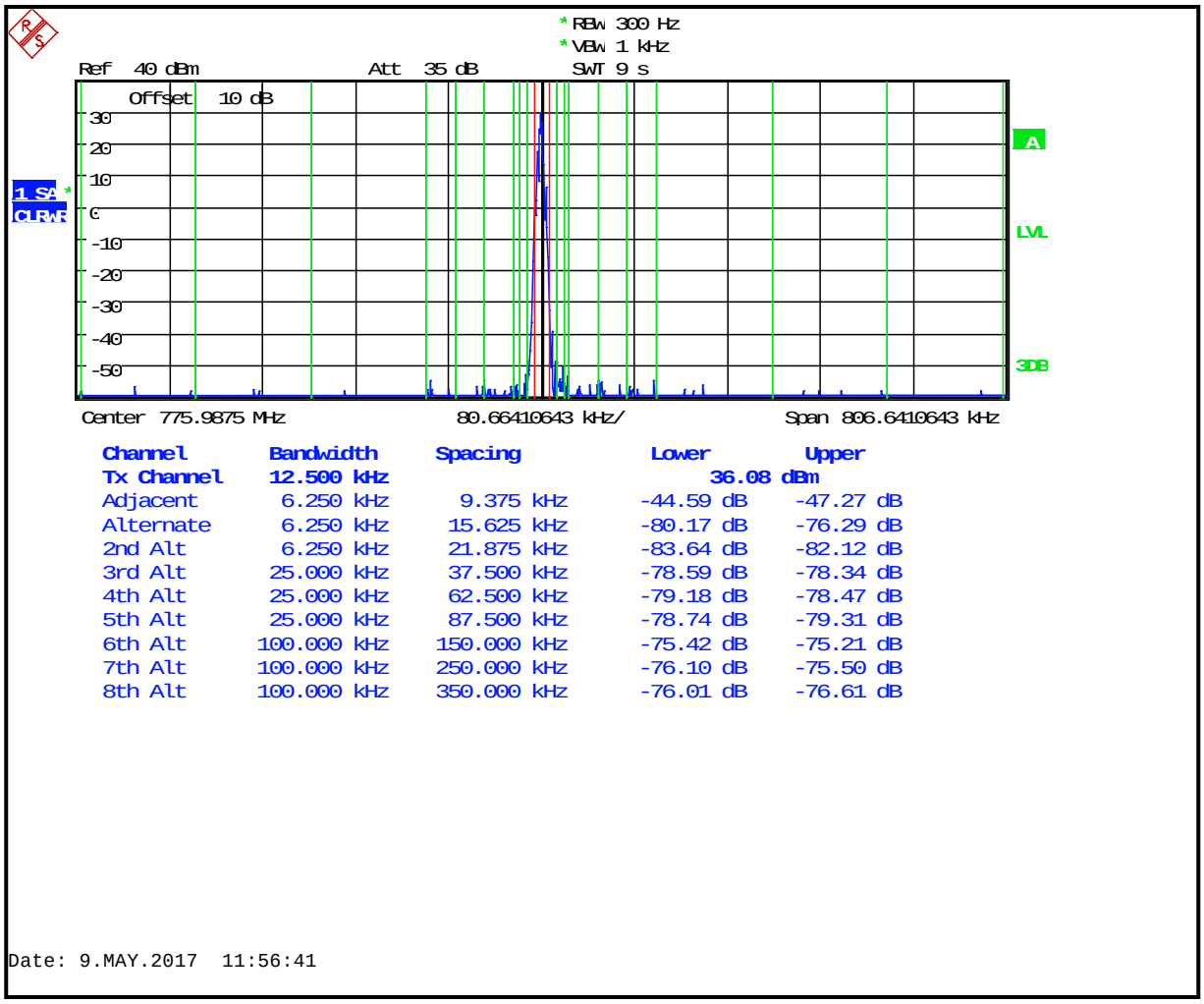


Table 6-9: Adjacent Channel Power - 775.9875 MHz; 4 Level FSK OTP Mode; 12.5 kHz Channel Spacing

Offset from Center Frequency (kHz)	Measurement BW (kHz)	Max ACP (dBc)	Max ACP (dBc)
>400 to 12 MHz	30(s)	-75	-82.7
12 MHz to receive band	30(s)	-75	-104.8
In receive band	30(s)	-100	-121.2

Plot 6-10: Adjacent Channel Power - 804.9875 MHz; 4 Level FSK OTP Mode; 12.5 kHz Channel Spacing

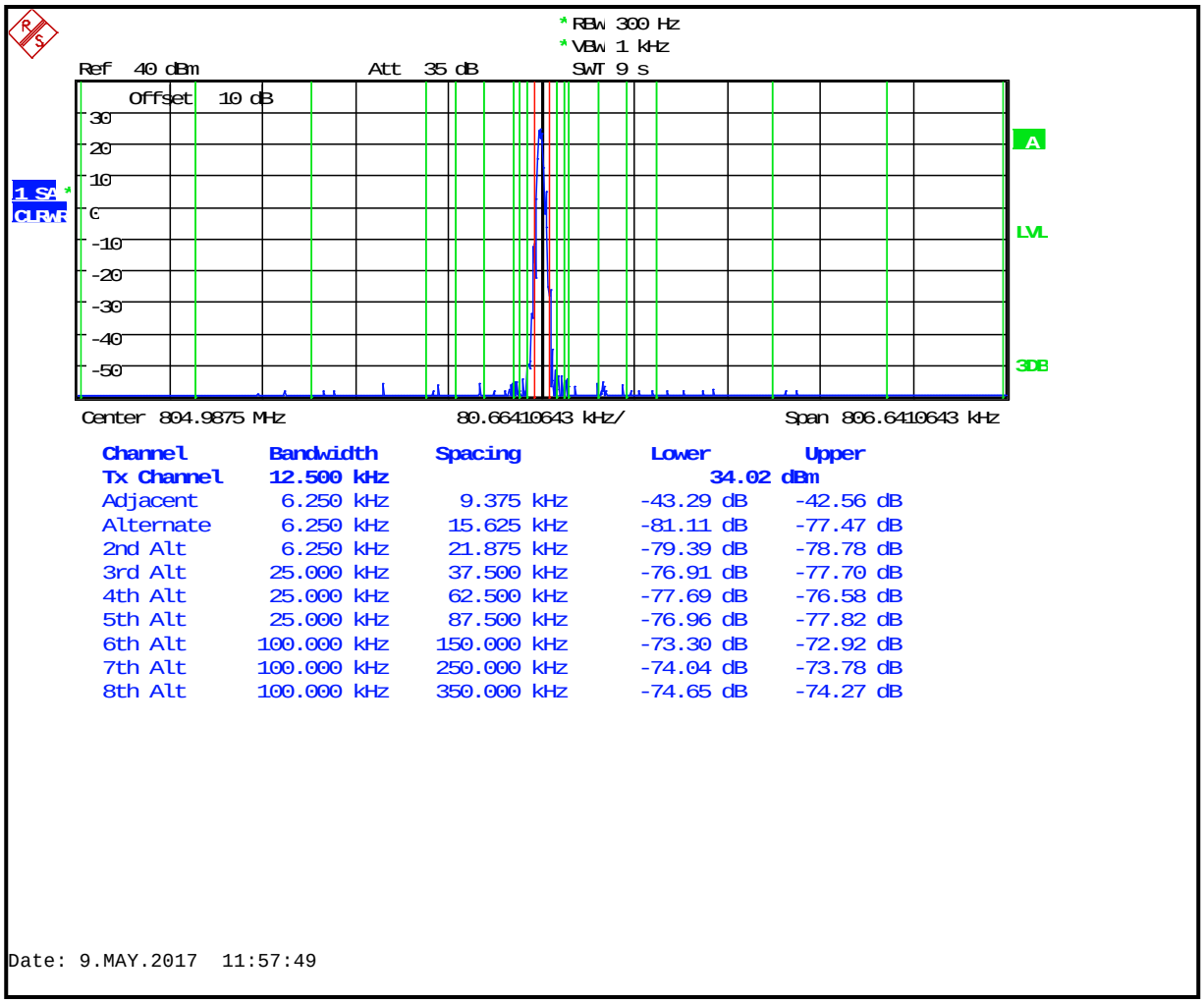


Table 6-10: Adjacent Channel Power - 804.9875 MHz; 4 Level FSK OTP Mode; 12.5 kHz Channel Spacing

Offset from Center Frequency (kHz)	Measurement BW (kHz)	Max ACP (dBc)	Max ACP (dBc)
>400 to 12 MHz	30(s)	-75	-103.8
12 MHz to receive band	30(s)	-75	-102.4
In receive band	30(s)	-100	-121.5

Plot 6-11: Adjacent Channel Power - 775.9875 MHz; 4 Level FSK SMR Mode; 25 kHz Channel Spacing

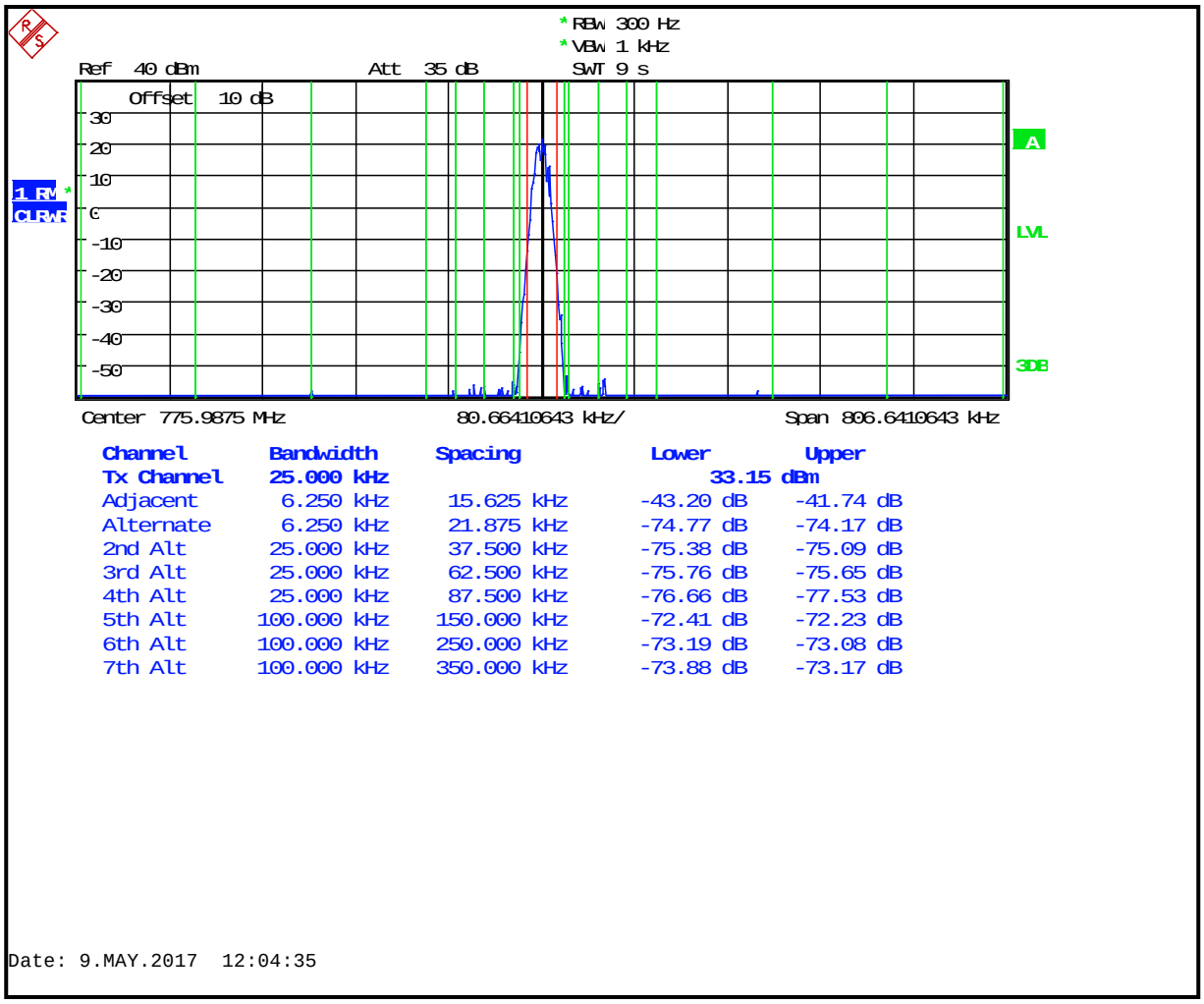


Table 6-11: Adjacent Channel Power - 775.9875 MHz; 4 Level FSK SMR Mode; 25 kHz Channel Spacing

Offset from Center Frequency (kHz)	Measurement BW (kHz)	Max ACP (dBc)	Max ACP (dBc)
>400 to 12 MHz	30(s)	-75	-83.7
12 MHz to receive band	30(s)	-75	-104.7
In receive band	30(s)	-100	-121.1

Plot 6-12: Adjacent Channel Power - 804.9875 MHz; 4 Level FSK SMR Mode; 25 kHz Channel Spacing

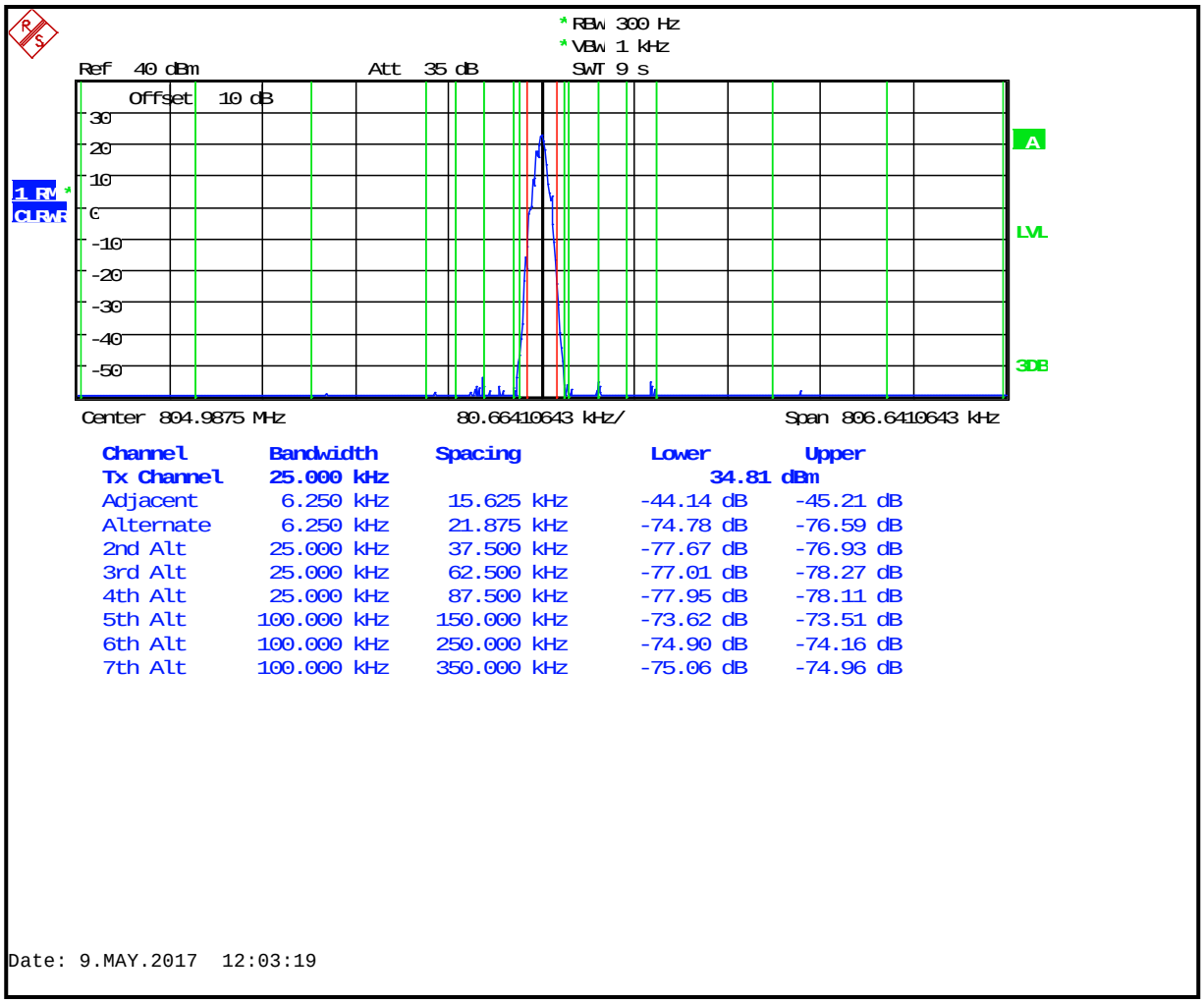


Table 6-12: Adjacent Channel Power - 804.9875 MHz; 4 Level FSK SMR Mode; 25 kHz Channel Spacing

Offset from Center Frequency (kHz)	Measurement BW (kHz)	Max ACP (dBc)	Max ACP (dBc)
>400 to 12 MHz	30(s)	-75	-103.7
12 MHz to receive band	30(s)	-75	-104.3
In receive band	30(s)	-100	-114.8

Table 6-13: 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	3/22/18
900948	Weinschel Corp	47-10-43	10 dB Attenuator; 50 W	BH1481	9/1/18

Test Personnel:

Daniel W. Baltzell		May 9, 2017
EMC Test Engineer	Signature	Date of Tests

7 FCC §90.210(g) and §2.1053(a): Field Strength of Spurious Radiation; §90.210, §90.543(f)(3): Out of Band Emissions Limit; RSS-119 5.8.9.2: Out-of-band Emission Limit

7.1 Test Procedure

ANSI C63-26, section 5.5.3

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, then converted from the corrected signal generator level (dBm) to dBW and compared to the limit.

For emissions in the 1559-1610 band, §15.543(f) states: "For operations in the 763–774.9875 MHz and 793–805.9875 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

7.2.1 §90.210 Requirements

The magnitude of emissions attenuated more than 20 dB below the FCC limit need not be recorded.
The following measurements were attenuated less than 20 dB below the FCC limit and presented as worst case measurements, all others were more than 20 dB below the FCC narrowband limit.

Table 7-1: Field Strength of Spurious Radiation; 768 MHz

Frequency (MHz)	Spectrum Analyzer Level (dBuV)	Signal Generator Level (dBm)	Cable Loss to Transmit Antenna (dB)	Antenna Gain (dBi)	Corrected Signal Generator Level (dBc)	Margin (dB)
6144.000	19.2	-51.9	1.2	13.5	73.8	-19.5

Table 7-2: Field Strength of Spurious Radiation; 769 MHz

Frequency (MHz)	Spectrum Analyzer Level (dBuV)	Signal Generator Level (dBm)	Cable Loss to Transmit Antenna (dB)	Antenna Gain (dBi)	Corrected Signal Generator Level (dBc)	Margin (dB)
6152.000	20.0	-51.0	1.2	13.5	72.9	-18.7

Table 7-3: Field Strength of Spurious Radiation; 771 MHz

Frequency (MHz)	Spectrum Analyzer Level (dBuV)	Signal Generator Level (dBm)	Cable Loss to Transmit Antenna (dB)	Antenna Gain (dBi)	Corrected Signal Generator Level (dBc)	Margin (dB)
6168.000	19.3	-51.7	1.2	13.4	73.6	-19.5

7.2.2 §90.543(f) Requirements

The worst-case emissions test data are shown.

Limit: -70 dBW EIRP

Table 7-4: Field Strength of Spurious Radiation

Frequency (MHz)	Spectrum Analyzer Level (dBuV)	Signal Generator Level (dBm)	Cable Loss to Transmit Antenna (dB)	Antenna Gain (dBi)	Corrected Signal Generator Level (dBW)	Margin (dB)
1586.0	46.8	-49.8	0.4	7.7	-72.5	-2.5
1596.0	33.1	-54.7	0.4	7.7	-77.4	-7.4
1598.0	38.6	-60.3	0.4	7.7	-83.0	-13.0
1602.0	42.5	-51.4	0.4	7.7	-74.1	-4.1
1610.0	45.1	-48.9	0.4	7.7	-71.6	-1.6
1586.0	46.8	-49.8	0.4	7.7	-72.5	-2.5

Table 7-5: 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
901592	Insulated Wire Inc.	KPS-1503-3600-KPR	SMK RF Cables 20'	NA	8/3/17
901593	Insulated Wire Inc.	KPS-1503-360-KPR	SMK RF Cables 36"	NA	8/1/17
901242	Rhein Tech Laboratories	WRT-000-0003	Wood rotating table	N/A	N/A
901581	Rohde & Schwarz	FSU	Spectrum Analyzer	1166.1660.50	3/22/18
901582	Rohde & Schwarz	1167.0000.02	Signal Generator	101903	3/20/18
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	4/9/18
900323	EMCO	3160-07	Horn Antennas (8.2 – 12 GHz)	9605-1054	4/9/18
900772	EMCO	3161-02	Horn Antenna (2 - 4 GHz)	9804-1044	4/9/18
901128	Par Electronics	806-902 (25W)	UHF Notch Filter	N/A	9/26/17
901129	Par Electronics	188-174 (25W)	VHF Notch Filters	N/A	9/26/17
901135	Par Electronics	400-512 (25W)	UHF Notch Filter	N/A	9/26/17

Test Personnel:

Daniel W. Baltzell		May 5-23, 2017
Test Engineer	Signature	Dates of Tests

8 FCC §2.1049(c)(1): Occupied Bandwidth; §90.543(d), §90.210 Authorized Bandwidth; 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 5.4

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

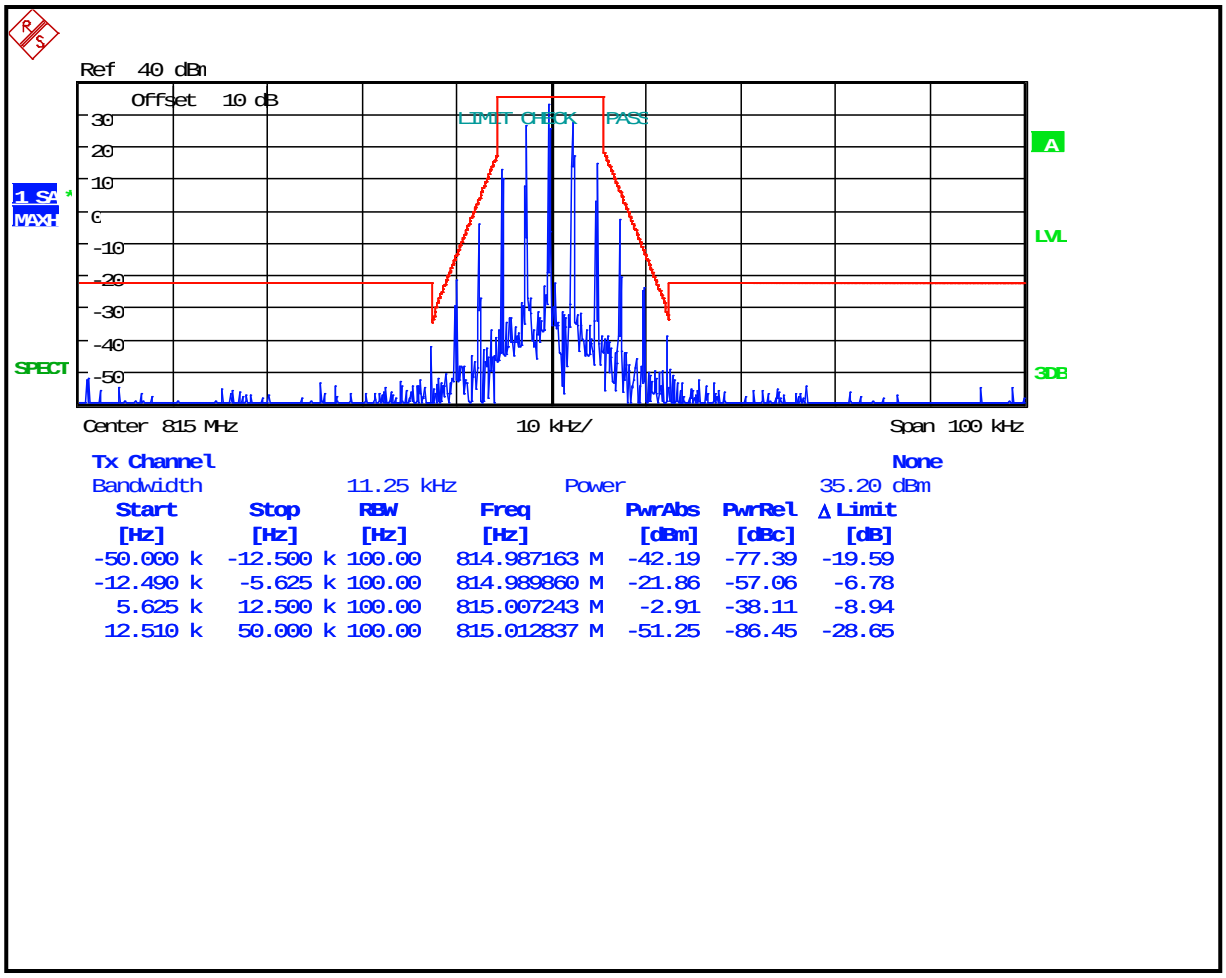
Applicable FCC Emission Masks		
Frequency Band (MHz)	**Mask for Equipment with Audio Low Pass Filter**	**Mask for Equipment Without Audio Low Pass Filter**
Below 25 [1]	A or B	A or C
25–50.....	B	C
72–76.....	B	C
150–174 [2]	B, D, or E	C, D, or E
150 Paging-only	B	C
220–222	F	F
421–512 [2]	B, D, or E	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.

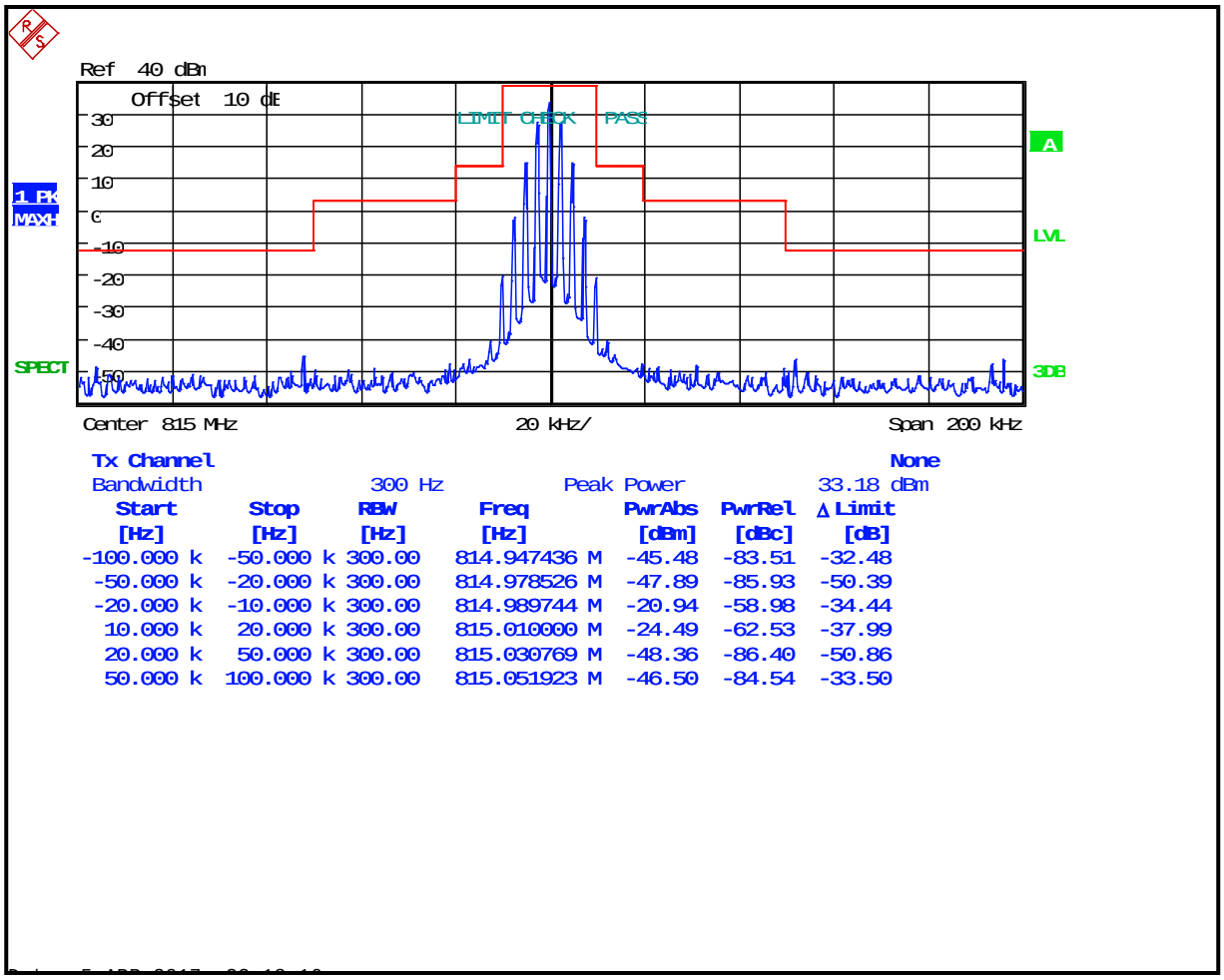
Applicable IC Emission Masks					
Frequency Band (MHz)	**Related SRSP for Channeling Plan and ERP**	**Channel Bandwidth (kHz)**	**Authorized Bandwidth (kHz)**	**Masks for Equipment With Audio Filter**	**Masks for Equipment Without Audio Filter**
806-821/851-866, 821-824/866-869	SRSP-502	25	20 22	B Y	G Y
		12.5	11.25	D	D
		6.25	6	E	E

8.2 Test Data

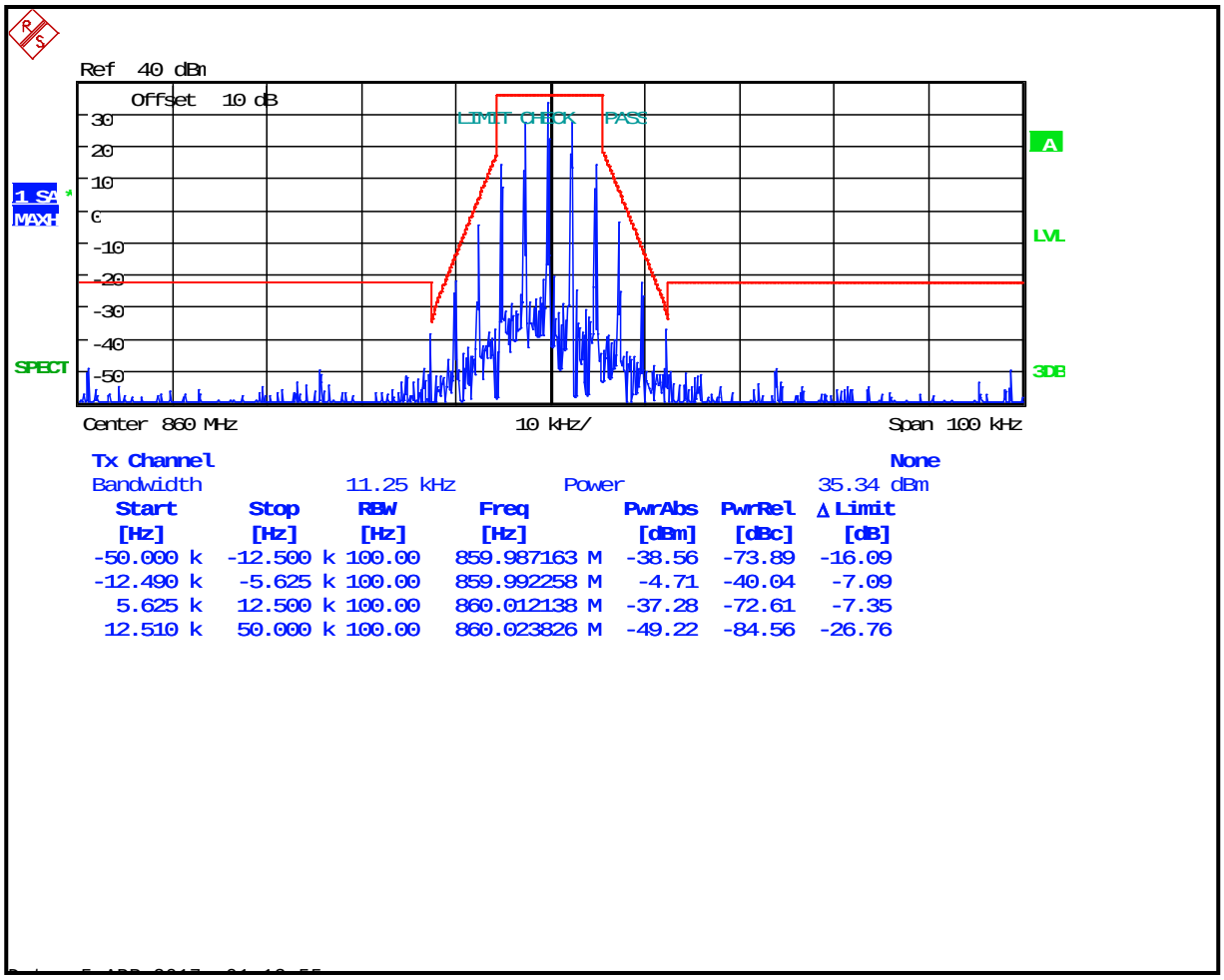
Plot 8-1: Occupied Bandwidth – 815 MHz; Narrowband Analog; Mask D



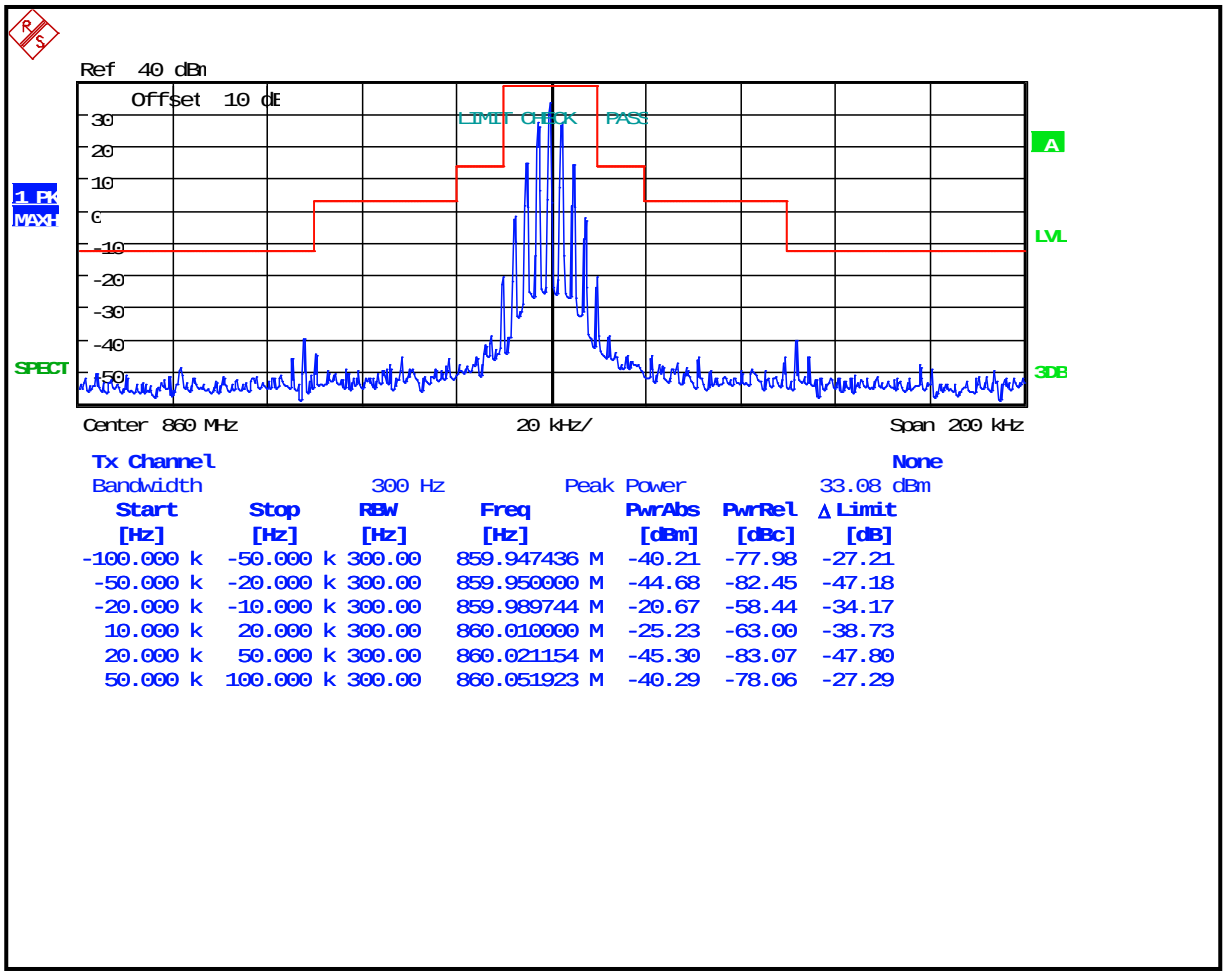
Plot 8-2: Occupied Bandwidth – 815 MHz; Narrowband Analog; Mask B



Plot 8-3: Occupied Bandwidth – 860 MHz; Narrowband Analog; Mask D



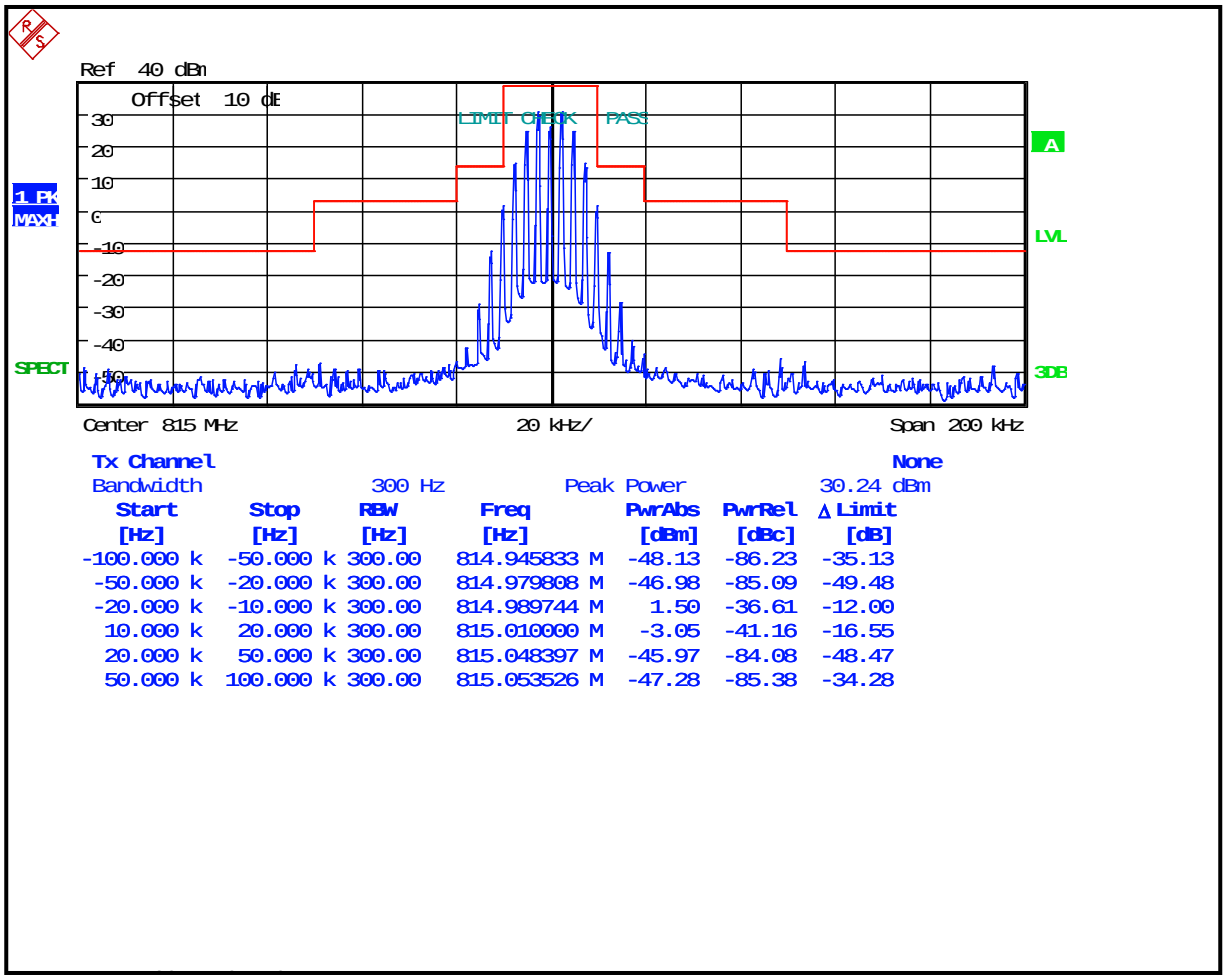
Plot 8-4: Occupied Bandwidth – 860 MHz; Narrowband Analog; Mask B



Tx Channel — None
Bandwidth 300 Hz — Peak Power 33.08 dBm

Start [Hz]	Stop [Hz]	RBW [Hz]	Freq [Hz]	PwrAbs [dBm]	PwrRel [dBc]	Δ Limit [dB]
-100.000 k	-50.000 k	300.00	859.947436 M	-40.21	-77.98	-27.21
-50.000 k	-20.000 k	300.00	859.950000 M	-44.68	-82.45	-47.18
-20.000 k	-10.000 k	300.00	859.989744 M	-20.67	-58.44	-34.17
10.000 k	20.000 k	300.00	860.010000 M	-25.23	-63.00	-38.73
20.000 k	50.000 k	300.00	860.021154 M	-45.30	-83.07	-47.80
50.000 k	100.000 k	300.00	860.051923 M	-40.29	-78.06	-27.29

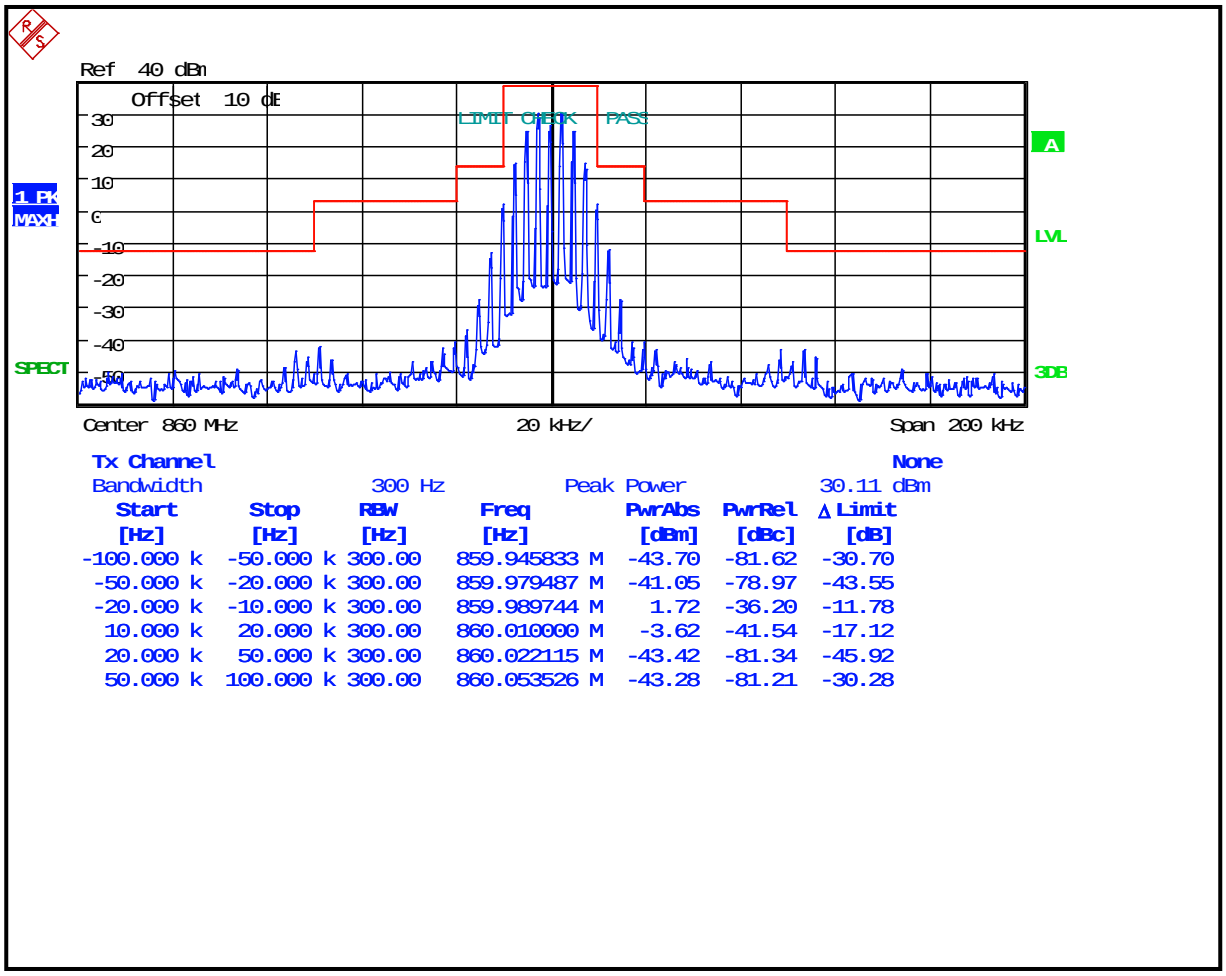
Plot 8-5: Occupied Bandwidth – 815 MHz; Wideband Analog; Mask B



Tx Channel: None
Bandwidth: 300 Hz
Peak Power: 30.24 dBm

Start [Hz]	Stop [Hz]	RBW [Hz]	Freq [Hz]	PwrAbs [dBm]	PwrRel [dBc]	Δ Limit [dB]
-100.000 k	-50.000 k	300.00	814.945833 M	-48.13	-86.23	-35.13
-50.000 k	-20.000 k	300.00	814.979808 M	-46.98	-85.09	-49.48
-20.000 k	-10.000 k	300.00	814.989744 M	1.50	-36.61	-12.00
10.000 k	20.000 k	300.00	815.010000 M	-3.05	-41.16	-16.55
20.000 k	50.000 k	300.00	815.048397 M	-45.97	-84.08	-48.47
50.000 k	100.000 k	300.00	815.053526 M	-47.28	-85.38	-34.28

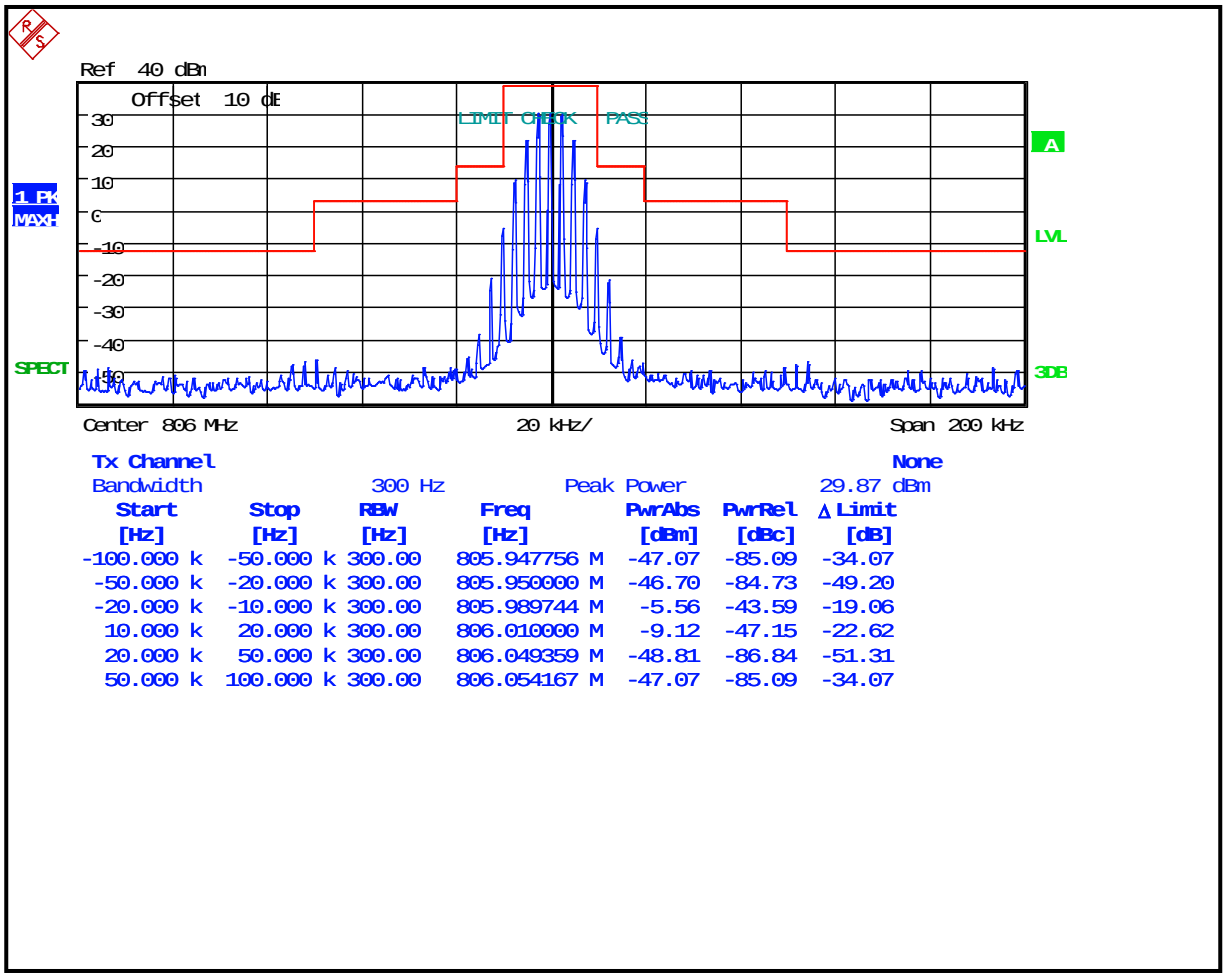
Plot 8-6: Occupied Bandwidth – 860 MHz; Wideband Analog; Mask B



Tx Channel: None
Bandwidth: 300 Hz
Peak Power: 30.11 dBm

Start [Hz]	Stop [Hz]	RBW [Hz]	Freq [Hz]	PwrAbs [dBm]	PwrRel [dBc]	Δ Limit [dB]
-100.000 k	-50.000 k	300.00	859.945833 M	-43.70	-81.62	-30.70
-50.000 k	-20.000 k	300.00	859.979487 M	-41.05	-78.97	-43.55
-20.000 k	-10.000 k	300.00	859.989744 M	1.72	-36.20	-11.78
10.000 k	20.000 k	300.00	860.010000 M	-3.62	-41.54	-17.12
20.000 k	50.000 k	300.00	860.022115 M	-43.42	-81.34	-45.92
50.000 k	100.000 k	300.00	860.053526 M	-43.28	-81.21	-30.28

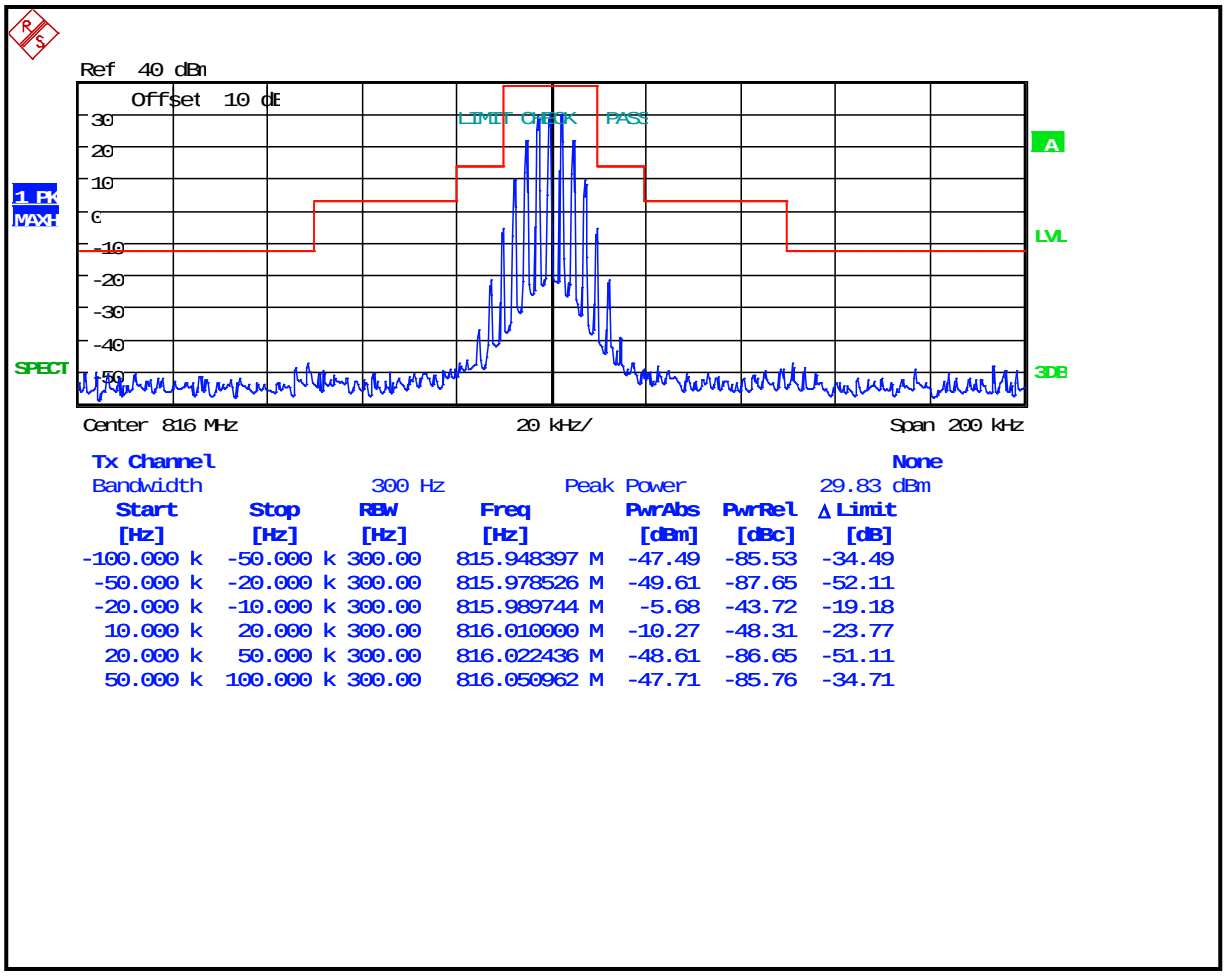
Plot 8-7: Occupied Bandwidth – 806 MHz; NPSPAC; Mask B



Tx Channel: None
Bandwidth: 300 Hz
Peak Power: 29.87 dBm

Start [Hz]	Stop [Hz]	RBW [Hz]	Freq [Hz]	PwrAbs [dBm]	PwrRel [dBc]	Δ Limit [dB]
-100.000 k	-50.000 k	300.00	805.947756 M	-47.07	-85.09	-34.07
-50.000 k	-20.000 k	300.00	805.950000 M	-46.70	-84.73	-49.20
-20.000 k	-10.000 k	300.00	805.989744 M	-5.56	-43.59	-19.06
10.000 k	20.000 k	300.00	806.010000 M	-9.12	-47.15	-22.62
20.000 k	50.000 k	300.00	806.049359 M	-48.81	-86.84	-51.31
50.000 k	100.000 k	300.00	806.054167 M	-47.07	-85.09	-34.07

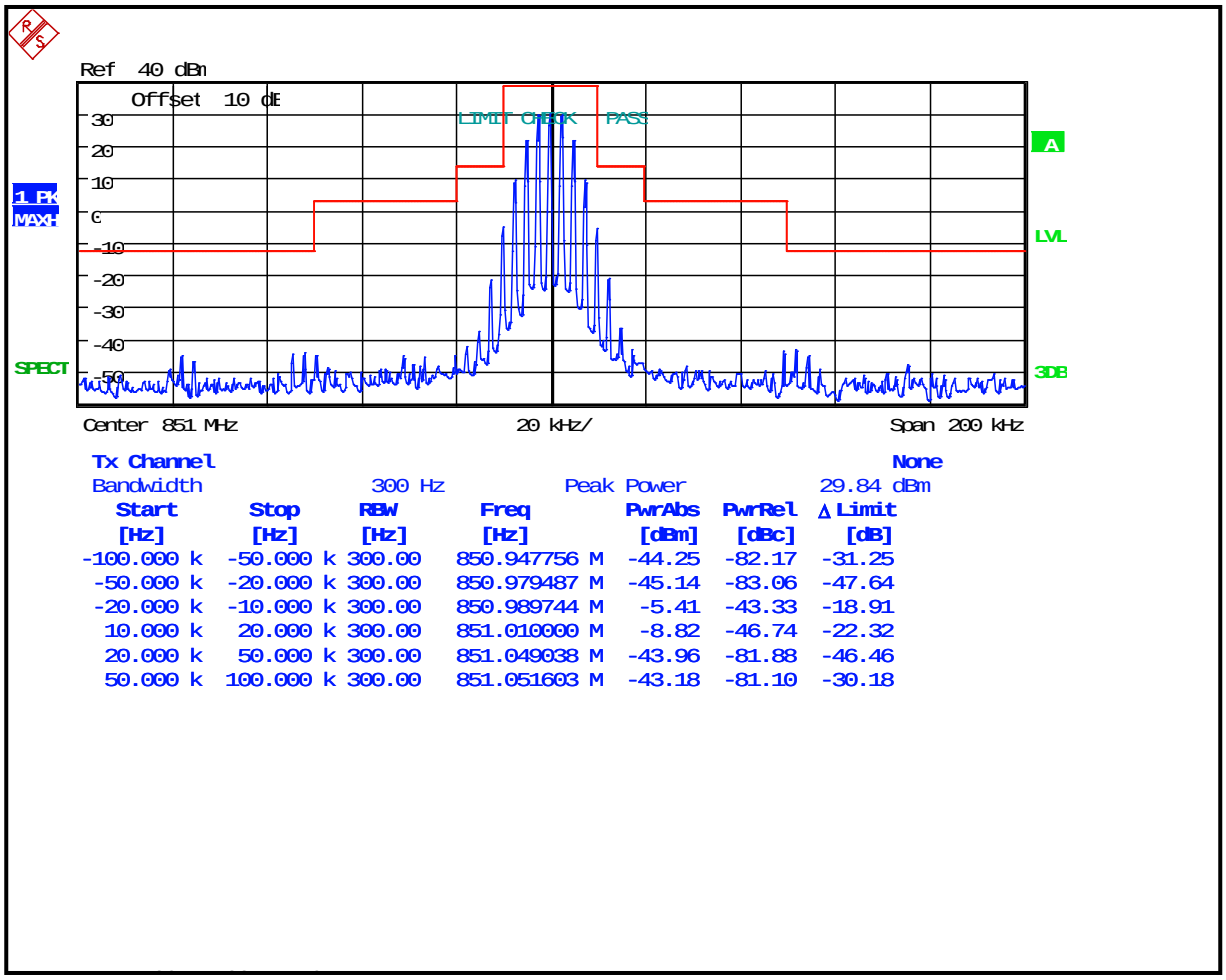
Plot 8-8: Occupied Bandwidth – 816 MHz; NPSPAC; Mask B



Tx Channel: None
Bandwidth: 300 Hz
Peak Power: 29.83 dBm

Start [Hz]	Stop [Hz]	RBW [Hz]	Freq [Hz]	PwrAbs [dBm]	PwrRel [dBc]	Δ Limit [dB]
-100.000 k	-50.000 k	300.00	815.948397 M	-47.49	-85.53	-34.49
-50.000 k	-20.000 k	300.00	815.978526 M	-49.61	-87.65	-52.11
-20.000 k	-10.000 k	300.00	815.989744 M	-5.68	-43.72	-19.18
10.000 k	20.000 k	300.00	816.010000 M	-10.27	-48.31	-23.77
20.000 k	50.000 k	300.00	816.022436 M	-48.61	-86.65	-51.11
50.000 k	100.000 k	300.00	816.050962 M	-47.71	-85.76	-34.71

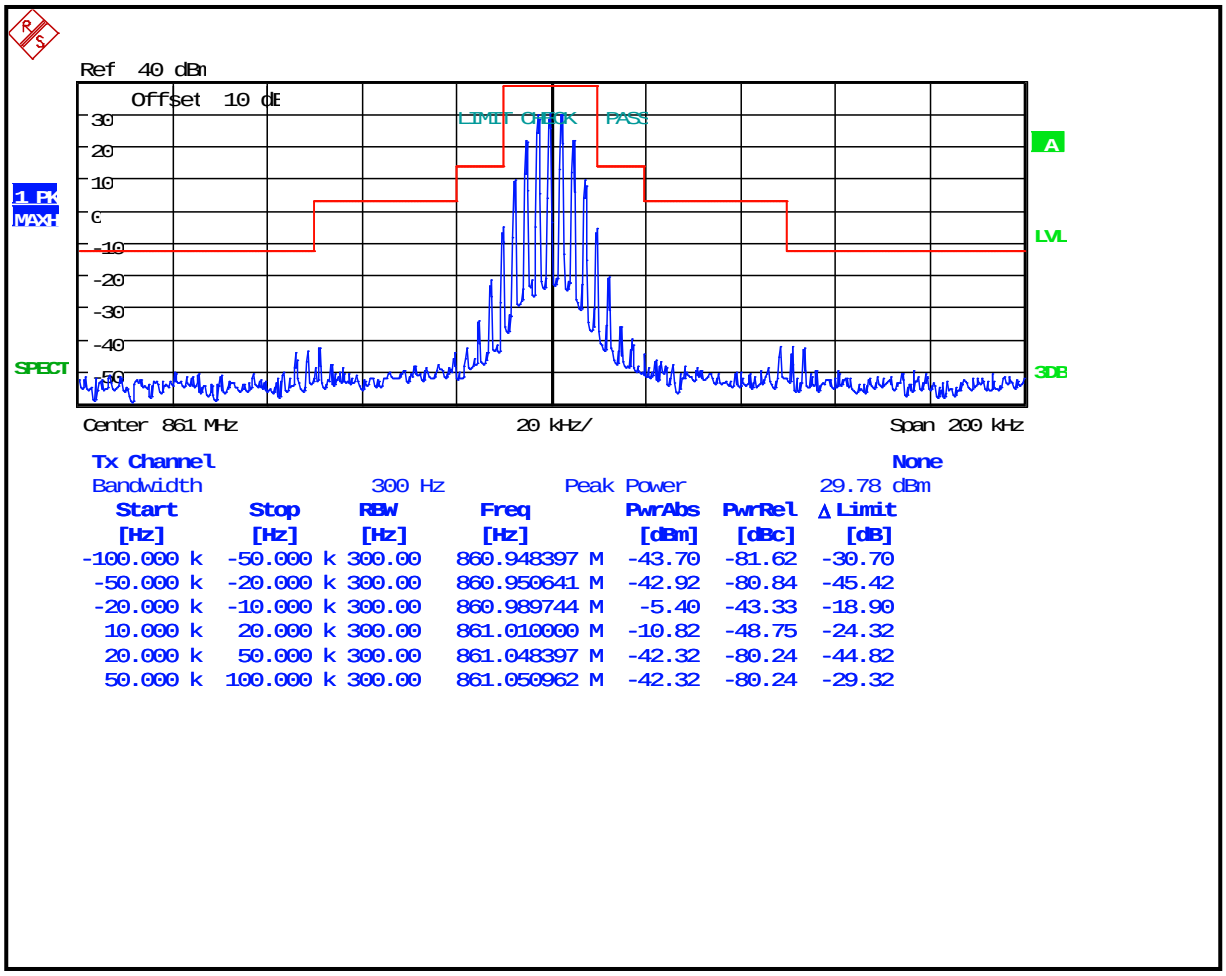
Plot 8-9: Occupied Bandwidth – 851 MHz; NPSPAC; Mask B



Tx Channel: None
Bandwidth: 300 Hz
Peak Power: 29.84 dBm

Start [Hz]	Stop [Hz]	RBW [Hz]	Freq [Hz]	PwrAbs [dBm]	PwrRel [dBc]	Δ Limit [dB]
-100.000 k	-50.000 k	300.00	850.947756 M	-44.25	-82.17	-31.25
-50.000 k	-20.000 k	300.00	850.979487 M	-45.14	-83.06	-47.64
-20.000 k	-10.000 k	300.00	850.989744 M	-5.41	-43.33	-18.91
10.000 k	20.000 k	300.00	851.010000 M	-8.82	-46.74	-22.32
20.000 k	50.000 k	300.00	851.049038 M	-43.96	-81.88	-46.46
50.000 k	100.000 k	300.00	851.051603 M	-43.18	-81.10	-30.18

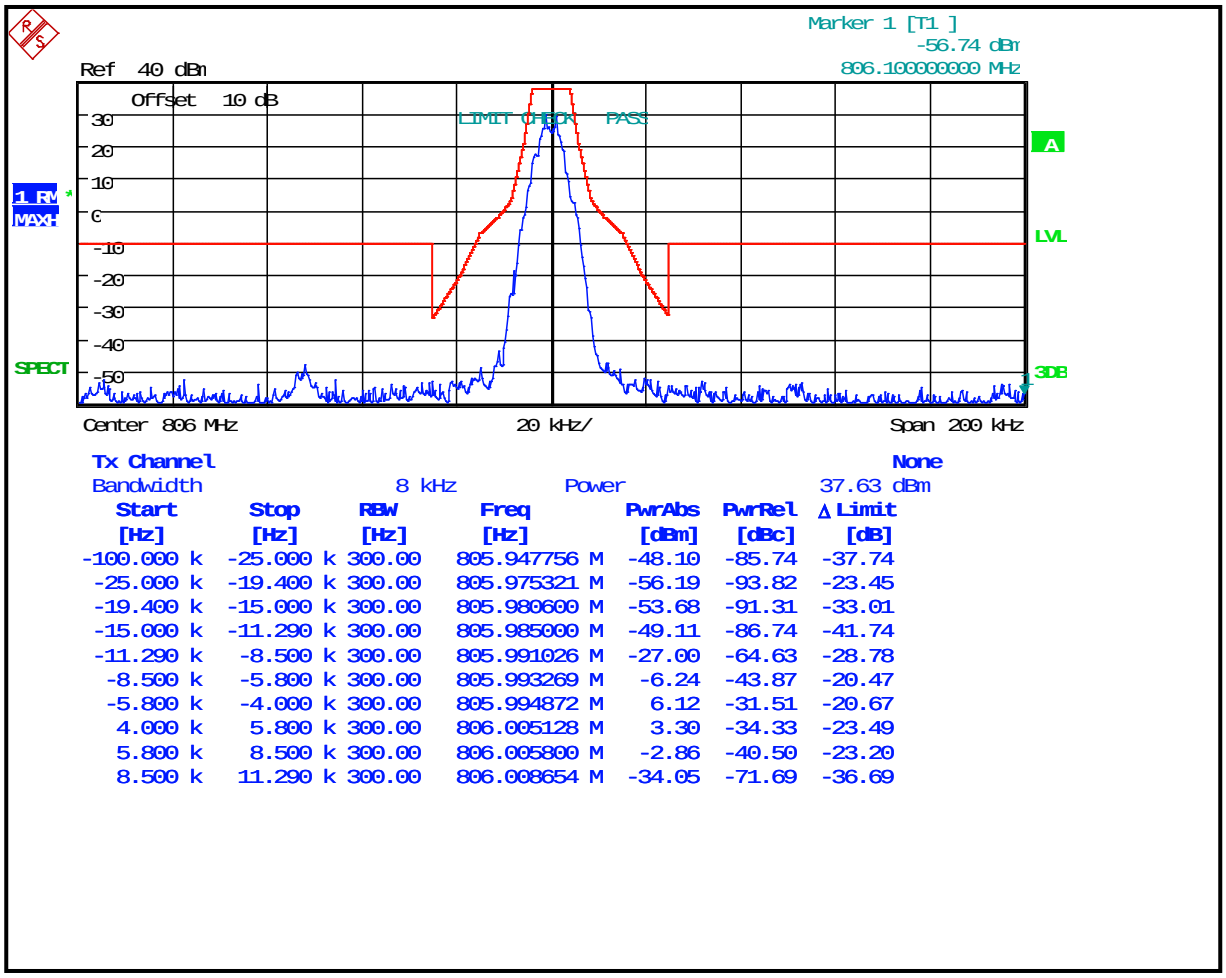
Plot 8-10: Occupied Bandwidth – 861 MHz; NPSPAC; Mask B



Tx Channel — None
Bandwidth 300 Hz — Peak Power 29.78 dBm

Start [Hz]	Stop [Hz]	RBW [Hz]	Freq [Hz]	PwrAbs [dBm]	PwrRel [dBc]	Δ Limit [dB]
-100.000 k	-50.000 k	300.00	860.948397 M	-43.70	-81.62	-30.70
-50.000 k	-20.000 k	300.00	860.950641 M	-42.92	-80.84	-45.42
-20.000 k	-10.000 k	300.00	860.989744 M	-5.40	-43.33	-18.90
10.000 k	20.000 k	300.00	861.010000 M	-10.82	-48.75	-24.32
20.000 k	50.000 k	300.00	861.048397 M	-42.32	-80.24	-44.82
50.000 k	100.000 k	300.00	861.050962 M	-42.32	-80.24	-29.32

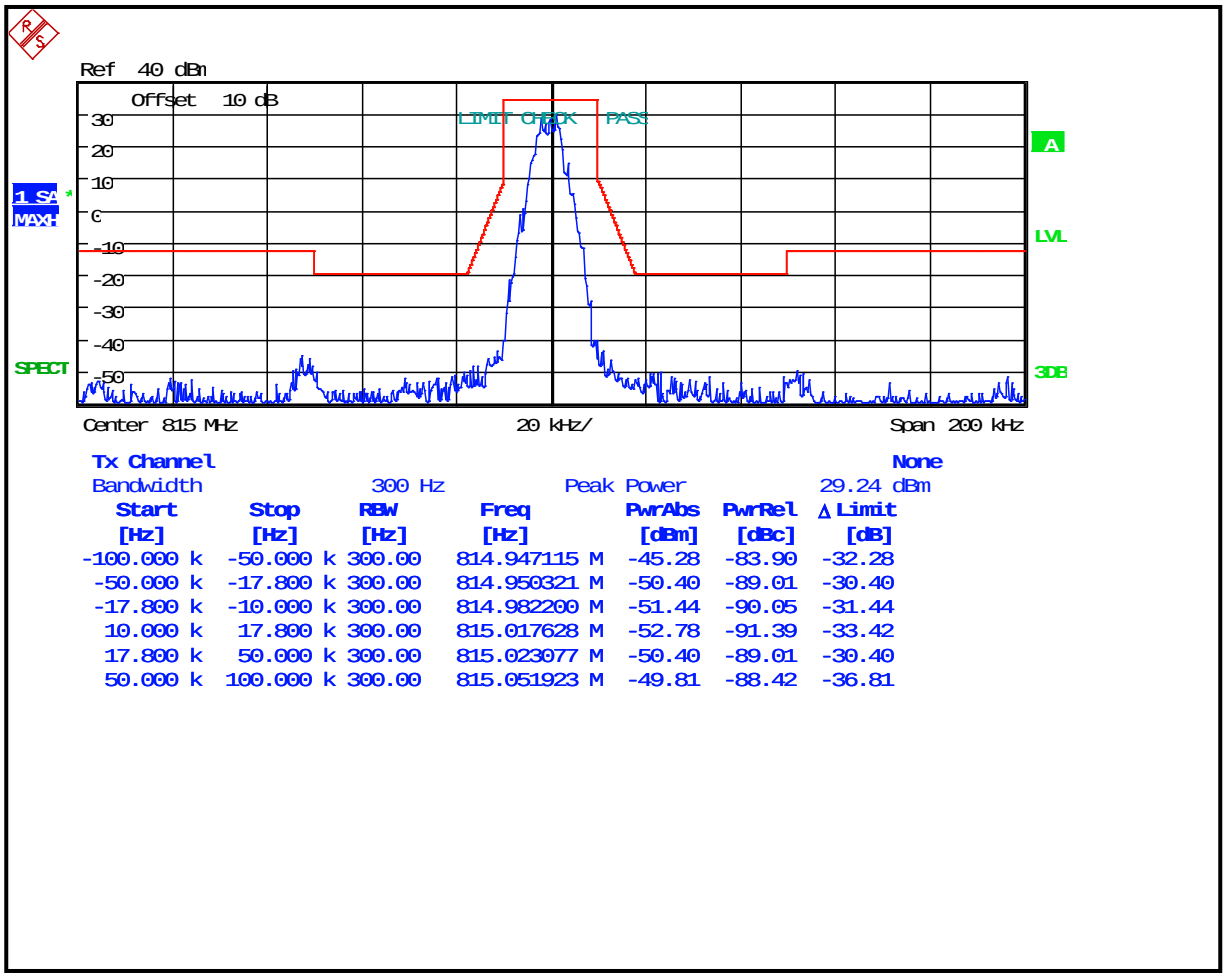
Plot 8-11: Occupied Bandwidth – 806 MHz; P25 RND; Mask H



Tx Channel **None**
Bandwidth 8 kHz Power 37.63 dBm

Start [Hz]	Stop [Hz]	RBW [Hz]	Freq [Hz]	PwrAbs [dBm]	PwrRel [dBc]	Δ Limit [dB]
-100.000 k	-25.000 k	300.00	805.947756 M	-48.10	-85.74	-37.74
-25.000 k	-19.400 k	300.00	805.975321 M	-56.19	-93.82	-23.45
-19.400 k	-15.000 k	300.00	805.980600 M	-53.68	-91.31	-33.01
-15.000 k	-11.290 k	300.00	805.985000 M	-49.11	-86.74	-41.74
-11.290 k	-8.500 k	300.00	805.991026 M	-27.00	-64.63	-28.78
-8.500 k	-5.800 k	300.00	805.993269 M	-6.24	-43.87	-20.47
-5.800 k	-4.000 k	300.00	805.994872 M	6.12	-31.51	-20.67
4.000 k	5.800 k	300.00	806.005128 M	3.30	-34.33	-23.49
5.800 k	8.500 k	300.00	806.005800 M	-2.86	-40.50	-23.20
8.500 k	11.290 k	300.00	806.008654 M	-34.05	-71.69	-36.69

Plot 8-12: Occupied Bandwidth – 815 MHz; P25 RND; Mask G

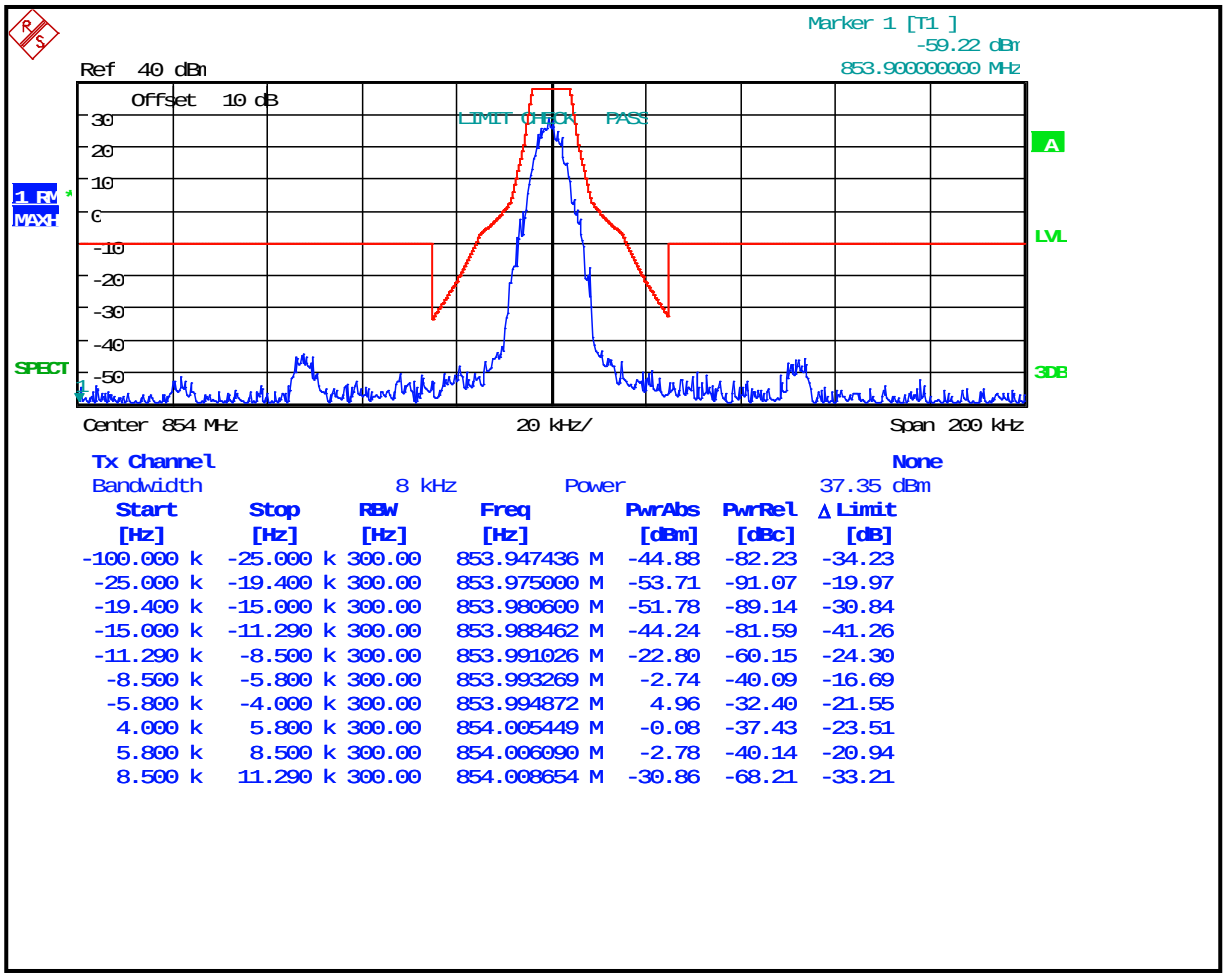


Tx Channel **None**

Bandwidth 300 Hz Peak Power 29.24 dBm

Start [Hz]	Stop [Hz]	RBW [Hz]	Freq [Hz]	PwrAbs [dBm]	PwrRel [dBc]	Δ Limit [dB]
-100.000 k	-50.000 k	300.00	814.947115 M	-45.28	-83.90	-32.28
-50.000 k	-17.800 k	300.00	814.950321 M	-50.40	-89.01	-30.40
-17.800 k	-10.000 k	300.00	814.982200 M	-51.44	-90.05	-31.44
10.000 k	17.800 k	300.00	815.017628 M	-52.78	-91.39	-33.42
17.800 k	50.000 k	300.00	815.023077 M	-50.40	-89.01	-30.40
50.000 k	100.000 k	300.00	815.051923 M	-49.81	-88.42	-36.81

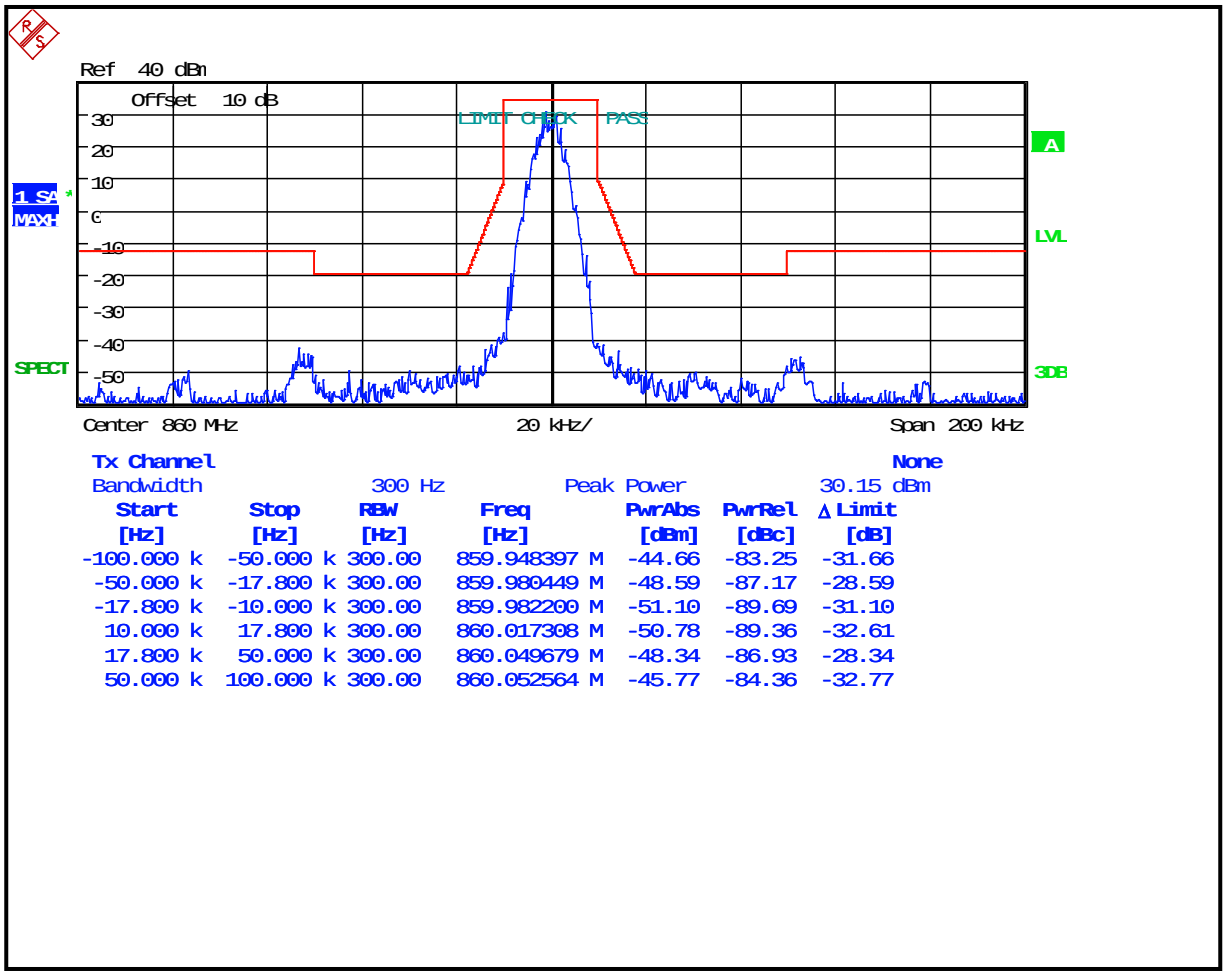
Plot 8-13: Occupied Bandwidth – 854 MHz; P25 RND; Mask H



Tx Channel None
Bandwidth 8 kHz Power 37.35 dBm

Start [Hz]	Stop [Hz]	RBW [Hz]	Freq [Hz]	PwrAbs [dBm]	PwrRel [dBc]	Δ Limit [dB]
-100.000 k	-25.000 k	300.00	853.947436 M	-44.88	-82.23	-34.23
-25.000 k	-19.400 k	300.00	853.975000 M	-53.71	-91.07	-19.97
-19.400 k	-15.000 k	300.00	853.980600 M	-51.78	-89.14	-30.84
-15.000 k	-11.290 k	300.00	853.988462 M	-44.24	-81.59	-41.26
-11.290 k	-8.500 k	300.00	853.991026 M	-22.80	-60.15	-24.30
-8.500 k	-5.800 k	300.00	853.993269 M	-2.74	-40.09	-16.69
-5.800 k	-4.000 k	300.00	853.994872 M	4.96	-32.40	-21.55
4.000 k	5.800 k	300.00	854.005449 M	-0.08	-37.43	-23.51
5.800 k	8.500 k	300.00	854.006090 M	-2.78	-40.14	-20.94
8.500 k	11.290 k	300.00	854.008654 M	-30.86	-68.21	-33.21

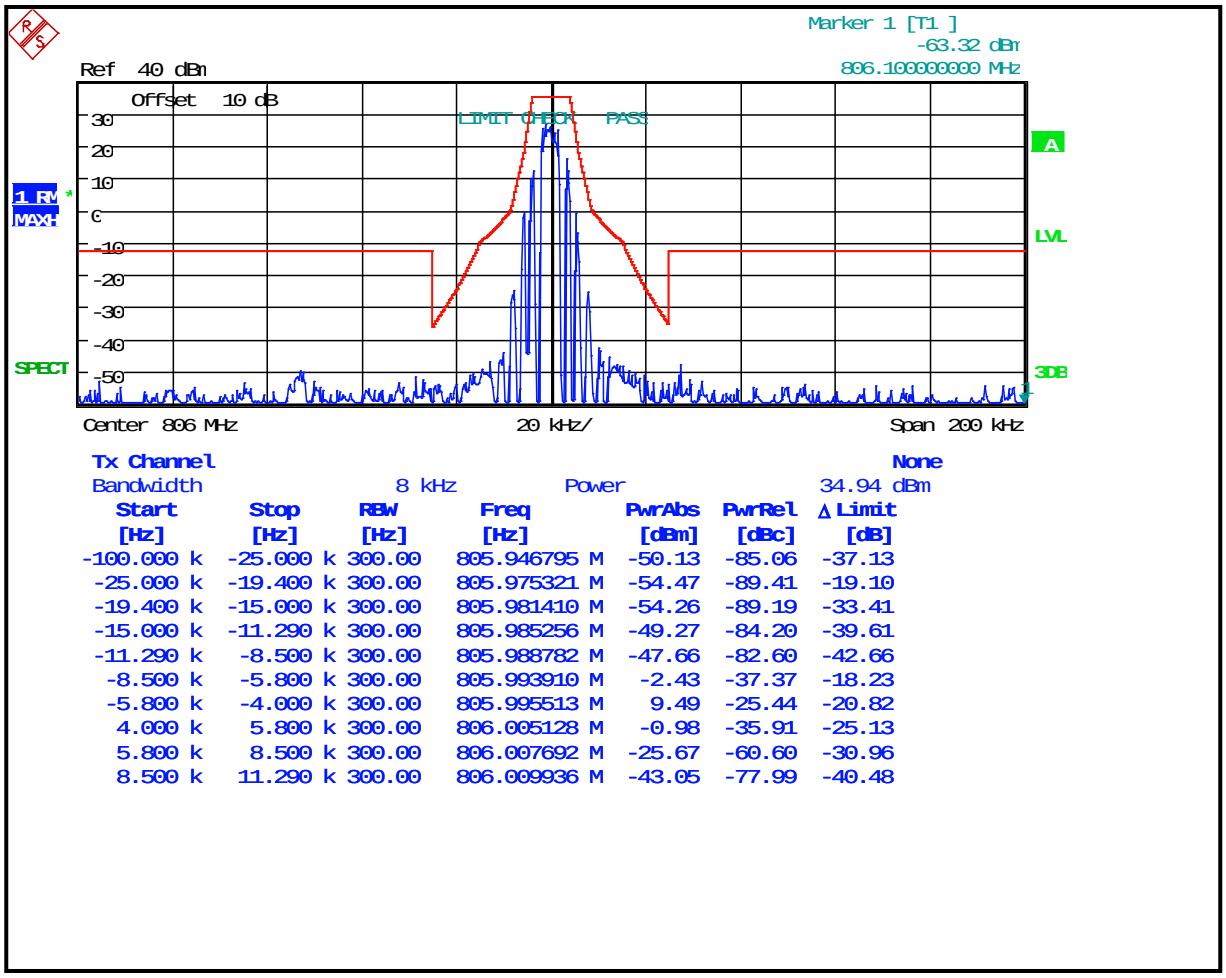
Plot 8-14: Occupied Bandwidth – 860 MHz; P25 RND; Mask G



Tx Channel: None
Bandwidth: 300 Hz
Peak Power: 30.15 dBm

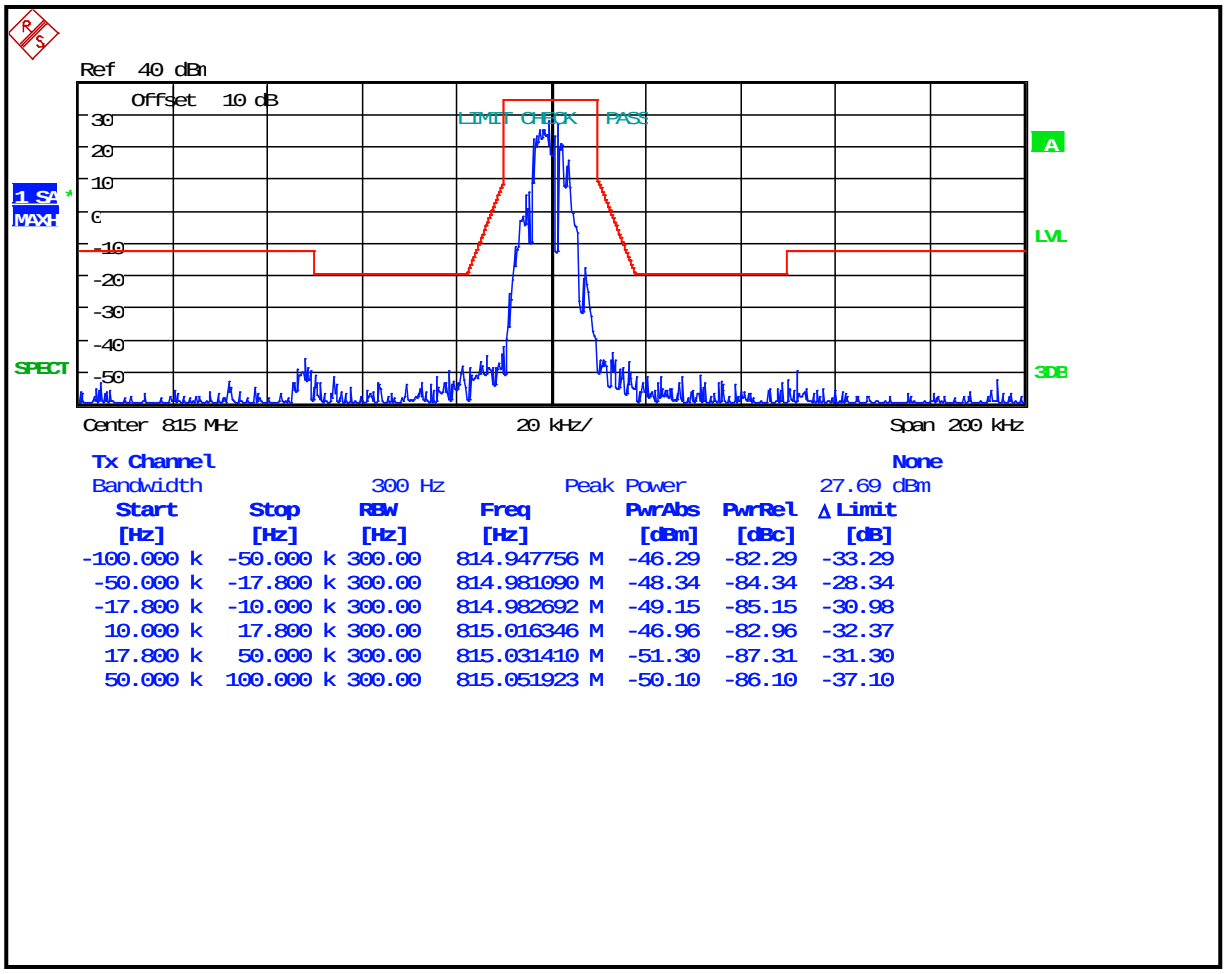
Start [Hz]	Stop [Hz]	RBW [Hz]	Freq [Hz]	PwrAbs [dBm]	PwrRel [dBc]	Δ Limit [dB]
-100.000 k	-50.000 k	300.00	859.948397 M	-44.66	-83.25	-31.66
-50.000 k	-17.800 k	300.00	859.980449 M	-48.59	-87.17	-28.59
-17.800 k	-10.000 k	300.00	859.982200 M	-51.10	-89.69	-31.10
10.000 k	17.800 k	300.00	860.017308 M	-50.78	-89.36	-32.61
17.800 k	50.000 k	300.00	860.049679 M	-48.34	-86.93	-28.34
50.000 k	100.000 k	300.00	860.052564 M	-45.77	-84.36	-32.77

Plot 8-15: Occupied Bandwidth – 806 MHz; CPM TDMA; Mask H



Tx Channel				None		
Bandwidth		8 kHz	Power		34.94 dBm	
Start [Hz]	Stop [Hz]	RBW [Hz]	Freq [Hz]	PwrAbs [dBm]	PwrRel [dBc]	Δ Limit [dB]
-100.000 k	-25.000 k	300.00	805.946795 M	-50.13	-85.06	-37.13
-25.000 k	-19.400 k	300.00	805.975321 M	-54.47	-89.41	-19.10
-19.400 k	-15.000 k	300.00	805.981410 M	-54.26	-89.19	-33.41
-15.000 k	-11.290 k	300.00	805.985256 M	-49.27	-84.20	-39.61
-11.290 k	-8.500 k	300.00	805.988782 M	-47.66	-82.60	-42.66
-8.500 k	-5.800 k	300.00	805.993910 M	-2.43	-37.37	-18.23
-5.800 k	-4.000 k	300.00	805.995513 M	9.49	-25.44	-20.82
4.000 k	5.800 k	300.00	806.005128 M	-0.98	-35.91	-25.13
5.800 k	8.500 k	300.00	806.007692 M	-25.67	-60.60	-30.96
8.500 k	11.290 k	300.00	806.009936 M	-43.05	-77.99	-40.48

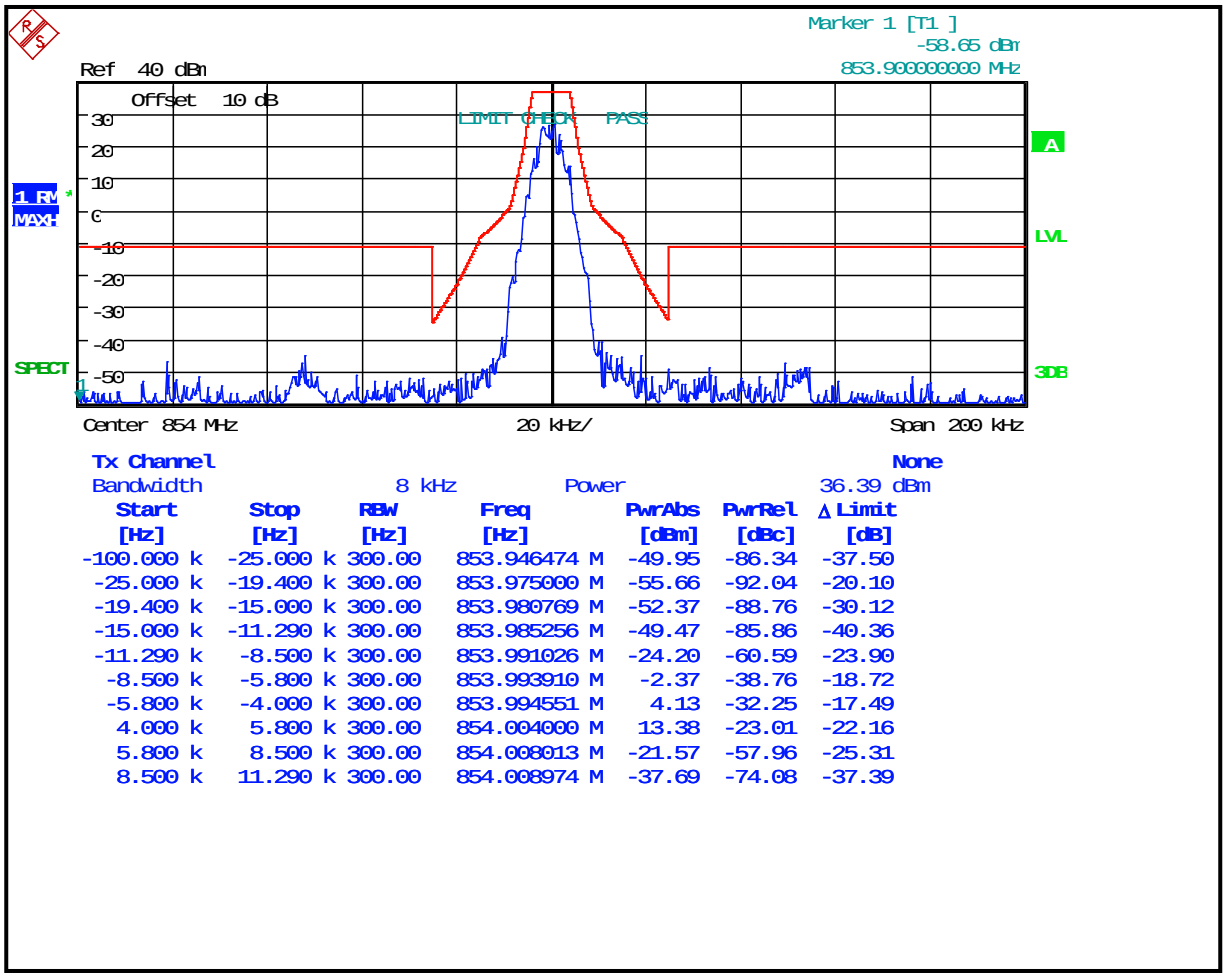
Plot 8-16: Occupied Bandwidth – 815 MHz; CPM TDMA; Mask G



Tx Channel: None
Bandwidth: 300 Hz
Peak Power: 27.69 dBm

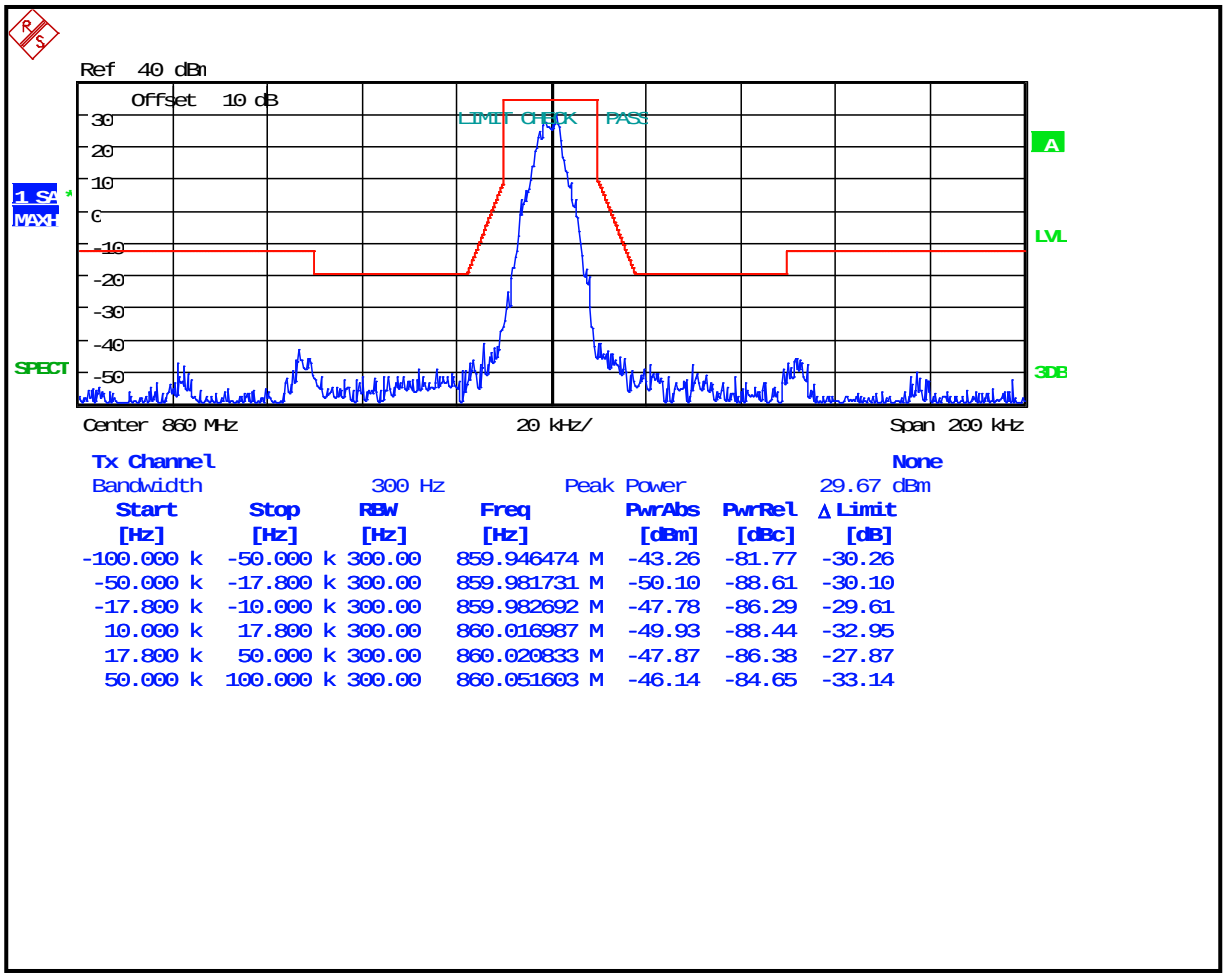
Start [Hz]	Stop [Hz]	RBW [Hz]	Freq [Hz]	PwrAbs [dBm]	PwrRel [dBc]	Δ Limit [dB]
-100.000 k	-50.000 k	300.00	814.947756 M	-46.29	-82.29	-33.29
-50.000 k	-17.800 k	300.00	814.981090 M	-48.34	-84.34	-28.34
-17.800 k	-10.000 k	300.00	814.982692 M	-49.15	-85.15	-30.98
10.000 k	17.800 k	300.00	815.016346 M	-46.96	-82.96	-32.37
17.800 k	50.000 k	300.00	815.031410 M	-51.30	-87.31	-31.30
50.000 k	100.000 k	300.00	815.051923 M	-50.10	-86.10	-37.10

Plot 8-17: Occupied Bandwidth – 854 MHz; CPM TDMA; Mask H



Tx Channel						None
Bandwidth		8 kHz	Power			36.39 dBm
Start [Hz]	Stop [Hz]	RBW [Hz]	Freq [Hz]	PwrAbs [dBm]	PwrRel [dBc]	Δ Limit [dB]
-100.000 k	-25.000 k	300.00	853.946474 M	-49.95	-86.34	-37.50
-25.000 k	-19.400 k	300.00	853.975000 M	-55.66	-92.04	-20.10
-19.400 k	-15.000 k	300.00	853.980769 M	-52.37	-88.76	-30.12
-15.000 k	-11.290 k	300.00	853.985256 M	-49.47	-85.86	-40.36
-11.290 k	-8.500 k	300.00	853.991026 M	-24.20	-60.59	-23.90
-8.500 k	-5.800 k	300.00	853.993910 M	-2.37	-38.76	-18.72
-5.800 k	-4.000 k	300.00	853.994551 M	4.13	-32.25	-17.49
4.000 k	5.800 k	300.00	854.004000 M	13.38	-23.01	-22.16
5.800 k	8.500 k	300.00	854.008013 M	-21.57	-57.96	-25.31
8.500 k	11.290 k	300.00	854.008974 M	-37.69	-74.08	-37.39

Plot 8-18: Occupied Bandwidth – 860 MHz; CPM TDMA; Mask G

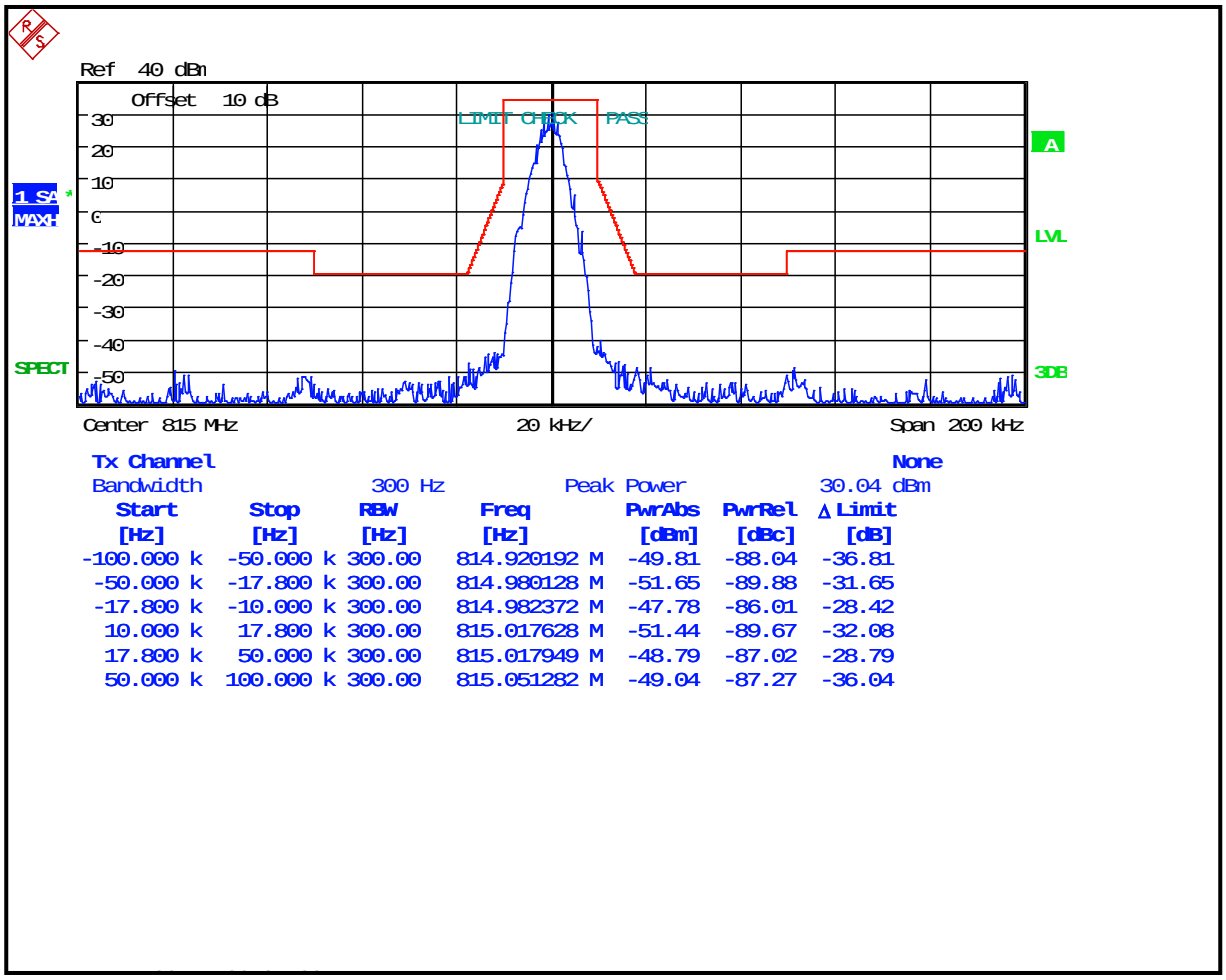


Tx Channel **None**

Bandwidth 300 Hz Peak Power 29.67 dBm

Start [Hz]	Stop [Hz]	RBW [Hz]	Freq [Hz]	PwrAbs [dBm]	PwrRel [dBc]	Δ Limit [dB]
-100.000 k	-50.000 k	300.00	859.946474 M	-43.26	-81.77	-30.26
-50.000 k	-17.800 k	300.00	859.981731 M	-50.10	-88.61	-30.10
-17.800 k	-10.000 k	300.00	859.982692 M	-47.78	-86.29	-29.61
10.000 k	17.800 k	300.00	860.016987 M	-49.93	-88.44	-32.95
17.800 k	50.000 k	300.00	860.020833 M	-47.87	-86.38	-27.87
50.000 k	100.000 k	300.00	860.051603 M	-46.14	-84.65	-33.14

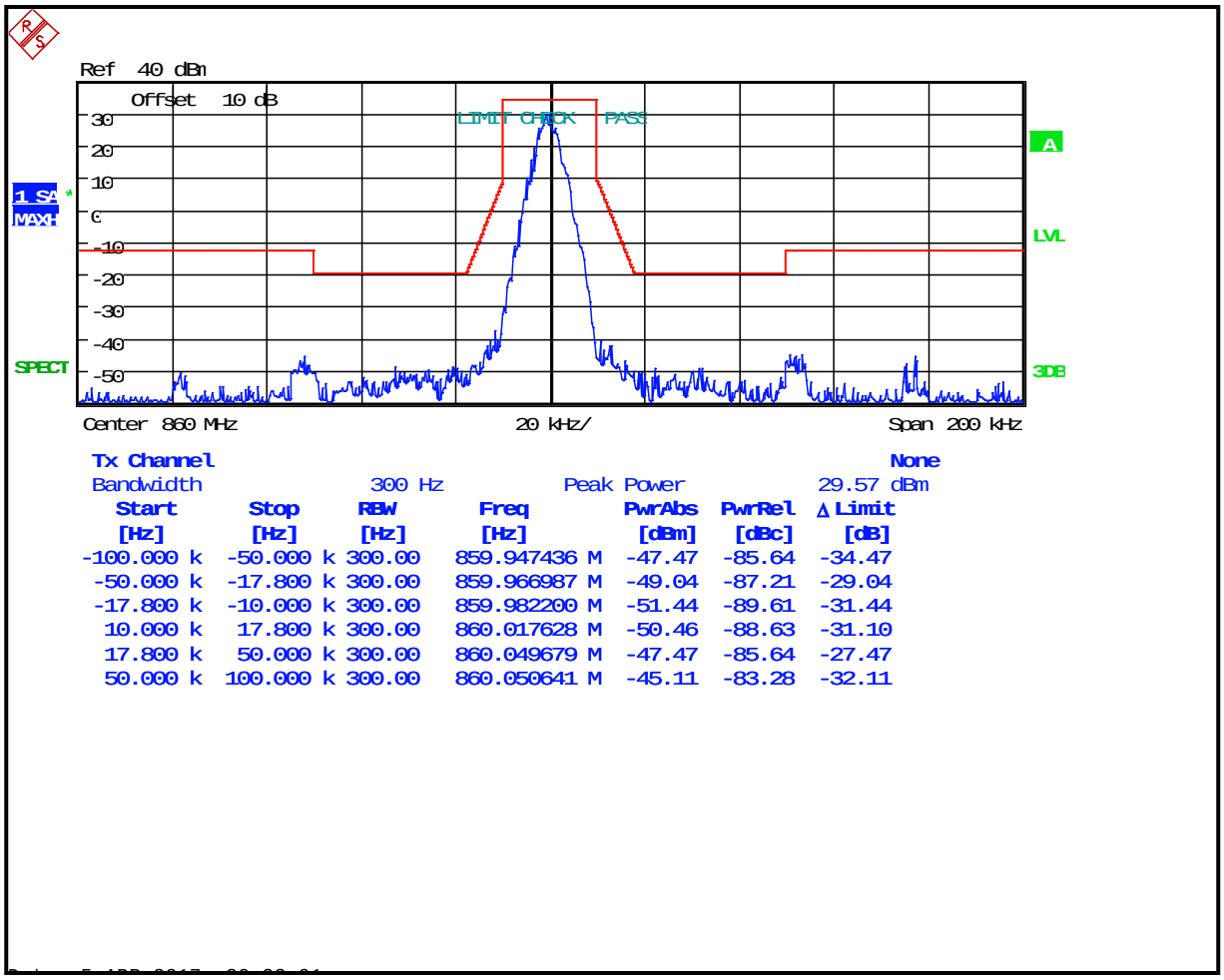
Plot 8-19: Occupied Bandwidth – 815 MHz; 4-level FSK Data/Voice; NB OpenSky; Mask G



Tx Channel: None
Bandwidth: 300 Hz
Peak Power: 30.04 dBm

Start [Hz]	Stop [Hz]	RBW [Hz]	Freq [Hz]	PwrAbs [dBm]	PwrRel [dBc]	Δ Limit [dB]
-100.000 k	-50.000 k	300.00	814.920192 M	-49.81	-88.04	-36.81
-50.000 k	-17.800 k	300.00	814.980128 M	-51.65	-89.88	-31.65
-17.800 k	-10.000 k	300.00	814.982372 M	-47.78	-86.01	-28.42
10.000 k	17.800 k	300.00	815.017628 M	-51.44	-89.67	-32.08
17.800 k	50.000 k	300.00	815.017949 M	-48.79	-87.02	-28.79
50.000 k	100.000 k	300.00	815.051282 M	-49.04	-87.27	-36.04

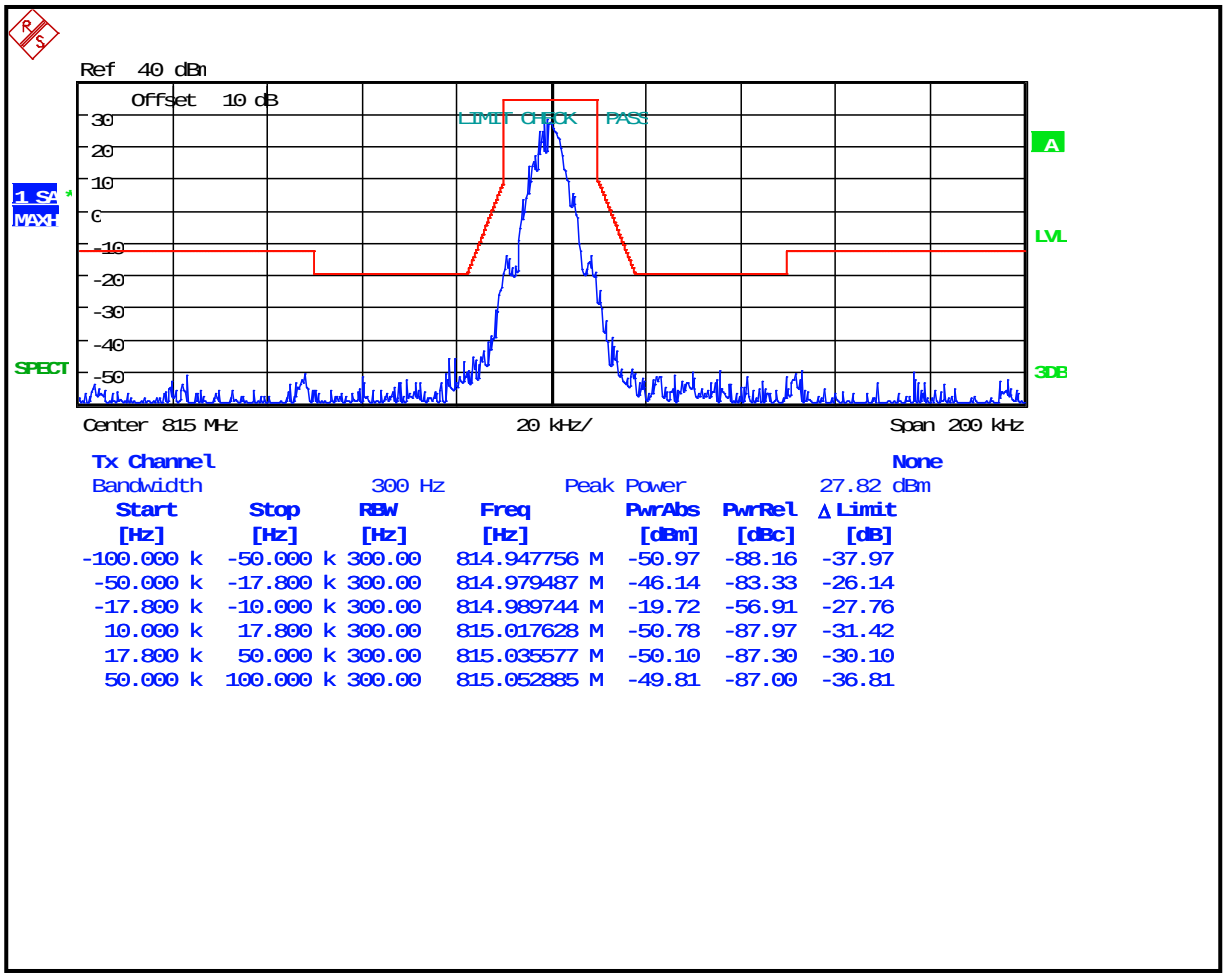
Plot 8-20: Occupied Bandwidth – 860 MHz; 4-level FSK Data/Voice; NB OpenSky; Mask G



Tx Channel **None**
Bandwidth 300 Hz Peak Power 29.57 dBm

Start [Hz]	Stop [Hz]	RBW [Hz]	Freq [Hz]	PwrAbs [dBm]	PwrRel [dBc]	Δ Limit [dB]
-100.000 k	-50.000 k	300.00	859.947436 M	-47.47	-85.64	-34.47
-50.000 k	-17.800 k	300.00	859.966987 M	-49.04	-87.21	-29.04
-17.800 k	-10.000 k	300.00	859.982200 M	-51.44	-89.61	-31.44
10.000 k	17.800 k	300.00	860.017628 M	-50.46	-88.63	-31.10
17.800 k	50.000 k	300.00	860.049679 M	-47.47	-85.64	-27.47
50.000 k	100.000 k	300.00	860.050641 M	-45.11	-83.28	-32.11

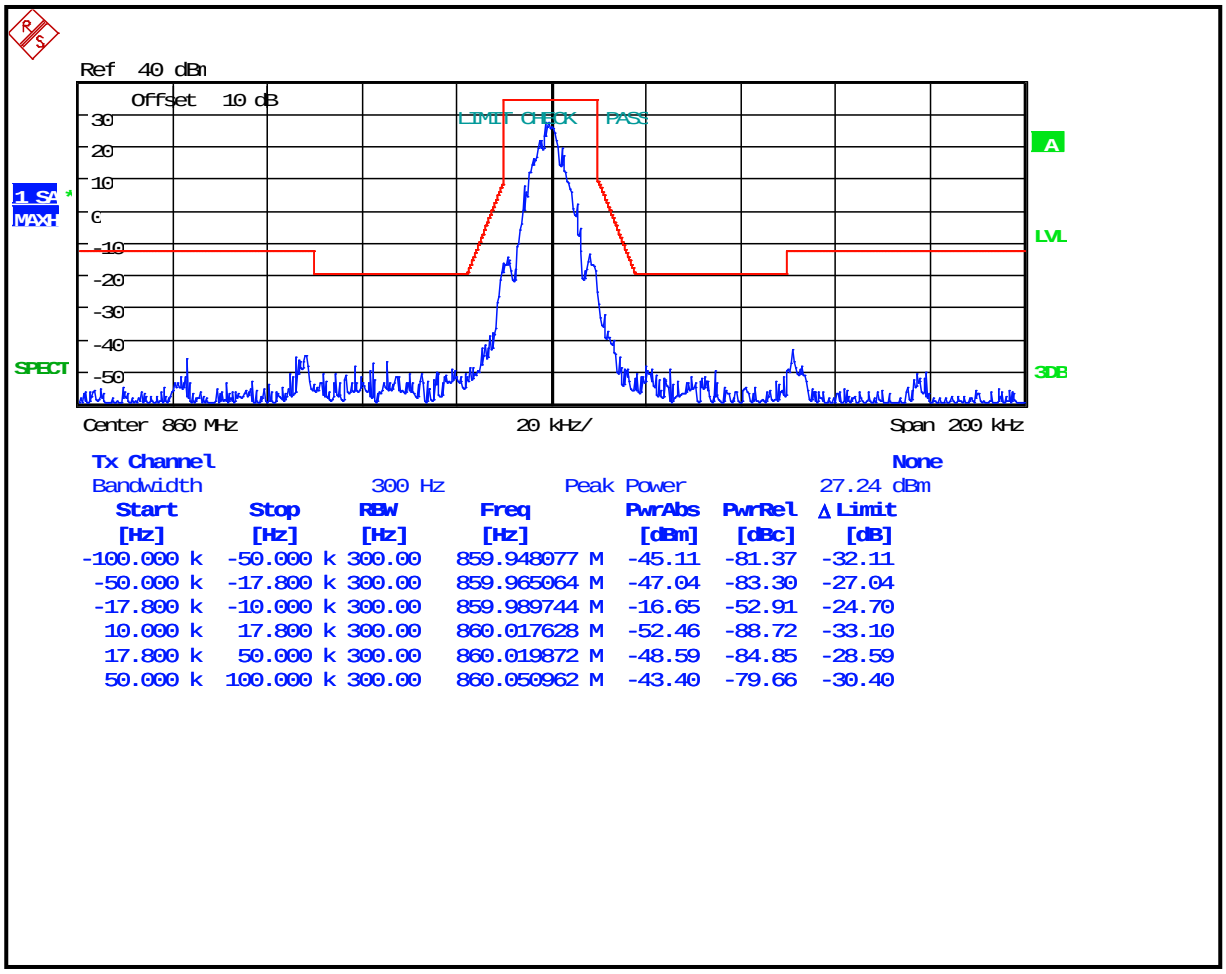
Plot 8-21: Occupied Bandwidth – 815 MHz; 2-level FSK 9600; NB EDACS; Mask G



Tx Channel: None
Bandwidth: 300 Hz
Peak Power: 27.82 dBm

Start [Hz]	Stop [Hz]	RBW [Hz]	Freq [Hz]	PwrAbs [dBm]	PwrRel [dBc]	Δ Limit [dB]
-100.000 k	-50.000 k	300.00	814.947756 M	-50.97	-88.16	-37.97
-50.000 k	-17.800 k	300.00	814.979487 M	-46.14	-83.33	-26.14
-17.800 k	-10.000 k	300.00	814.989744 M	-19.72	-56.91	-27.76
10.000 k	17.800 k	300.00	815.017628 M	-50.78	-87.97	-31.42
17.800 k	50.000 k	300.00	815.035577 M	-50.10	-87.30	-30.10
50.000 k	100.000 k	300.00	815.052885 M	-49.81	-87.00	-36.81

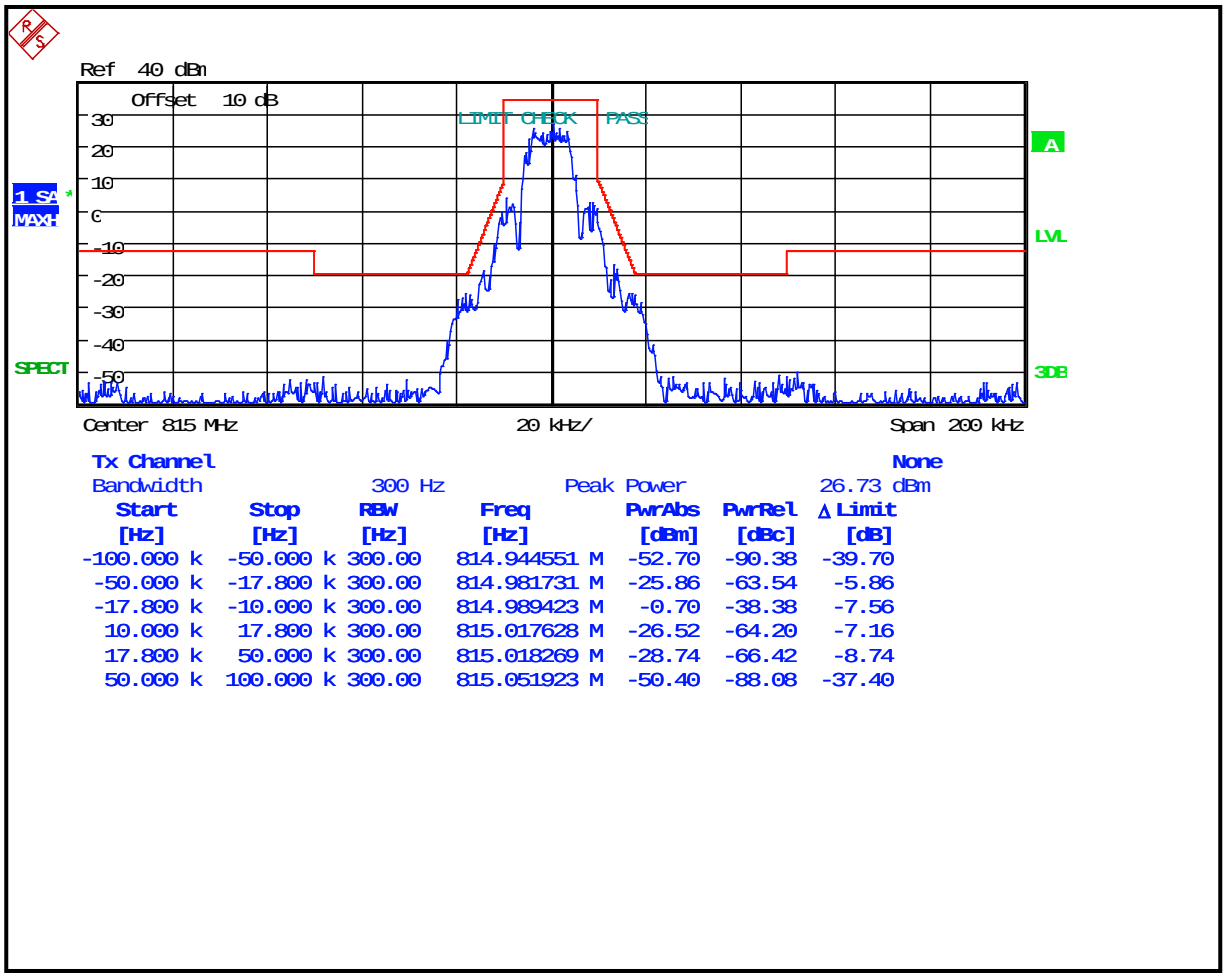
Plot 8-22: Occupied Bandwidth – 860 MHz; 2-level FSK 9600; NB EDACS; Mask G



Tx Channel: None
Bandwidth: 300 Hz
Peak Power: 27.24 dBm

Start [Hz]	Stop [Hz]	RBW [Hz]	Freq [Hz]	PwrAbs [dBm]	PwrRel [dBc]	Δ Limit [dB]
-100.000 k	-50.000 k	300.00	859.948077 M	-45.11	-81.37	-32.11
-50.000 k	-17.800 k	300.00	859.965064 M	-47.04	-83.30	-27.04
-17.800 k	-10.000 k	300.00	859.989744 M	-16.65	-52.91	-24.70
10.000 k	17.800 k	300.00	860.017628 M	-52.46	-88.72	-33.10
17.800 k	50.000 k	300.00	860.019872 M	-48.59	-84.85	-28.59
50.000 k	100.000 k	300.00	860.050962 M	-43.40	-79.66	-30.40

Plot 8-23: Occupied Bandwidth – 815 MHz; 2-level FSK 9600; WB EDACS; Mask G

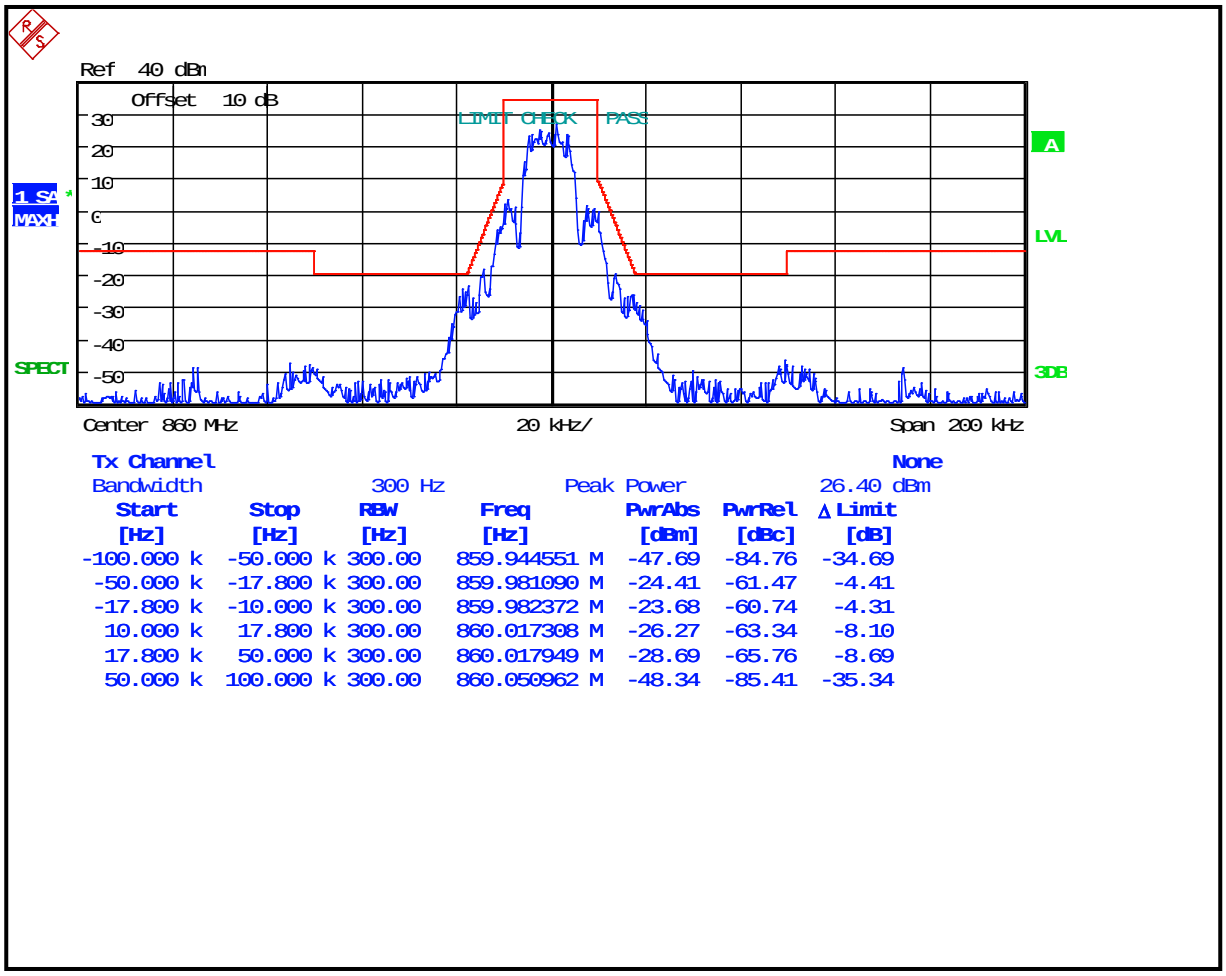


Tx Channel **None**

Bandwidth 300 Hz Peak Power 26.73 dBm

Start [Hz]	Stop [Hz]	RBW [Hz]	Freq [Hz]	PwrAbs [dBm]	PwrRel [dBc]	Δ Limit [dB]
-100.000 k	-50.000 k	300.00	814.944551 M	-52.70	-90.38	-39.70
-50.000 k	-17.800 k	300.00	814.981731 M	-25.86	-63.54	-5.86
-17.800 k	-10.000 k	300.00	814.989423 M	-0.70	-38.38	-7.56
10.000 k	17.800 k	300.00	815.017628 M	-26.52	-64.20	-7.16
17.800 k	50.000 k	300.00	815.018269 M	-28.74	-66.42	-8.74
50.000 k	100.000 k	300.00	815.051923 M	-50.40	-88.08	-37.40

Plot 8-24: Occupied Bandwidth – 860 MHz; 2-level FSK 9600; WB EDACS; Mask G

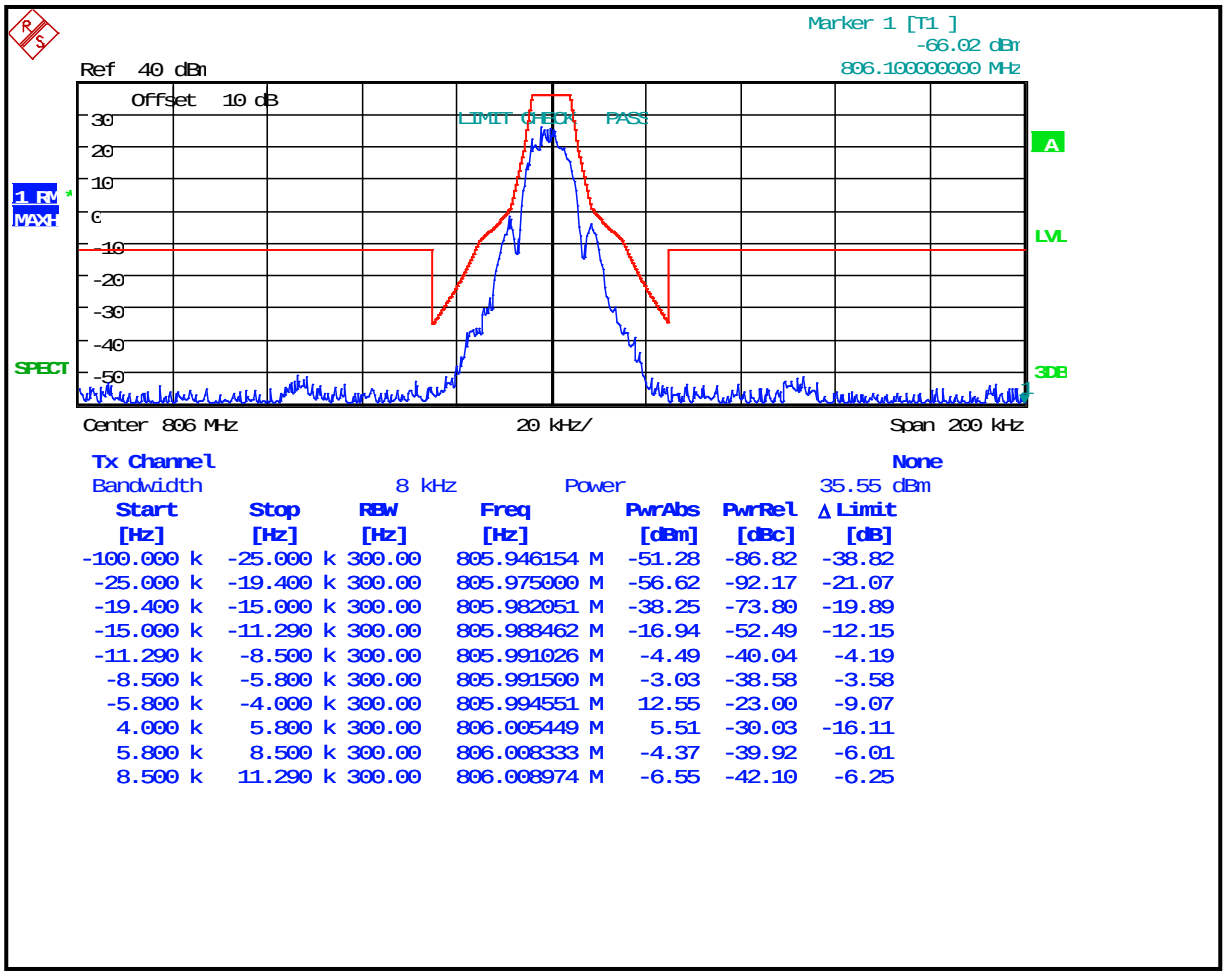


Tx Channel **None**

Bandwidth 300 Hz Peak Power 26.40 dBm

Start [Hz]	Stop [Hz]	RBW [Hz]	Freq [Hz]	PwrAbs [dBm]	PwrRel [dBc]	Δ Limit [dB]
-100.000 k	-50.000 k	300.00	859.944551 M	-47.69	-84.76	-34.69
-50.000 k	-17.800 k	300.00	859.981090 M	-24.41	-61.47	-4.41
-17.800 k	-10.000 k	300.00	859.982372 M	-23.68	-60.74	-4.31
10.000 k	17.800 k	300.00	860.017308 M	-26.27	-63.34	-8.10
17.800 k	50.000 k	300.00	860.017949 M	-28.69	-65.76	-8.69
50.000 k	100.000 k	300.00	860.050962 M	-48.34	-85.41	-35.34

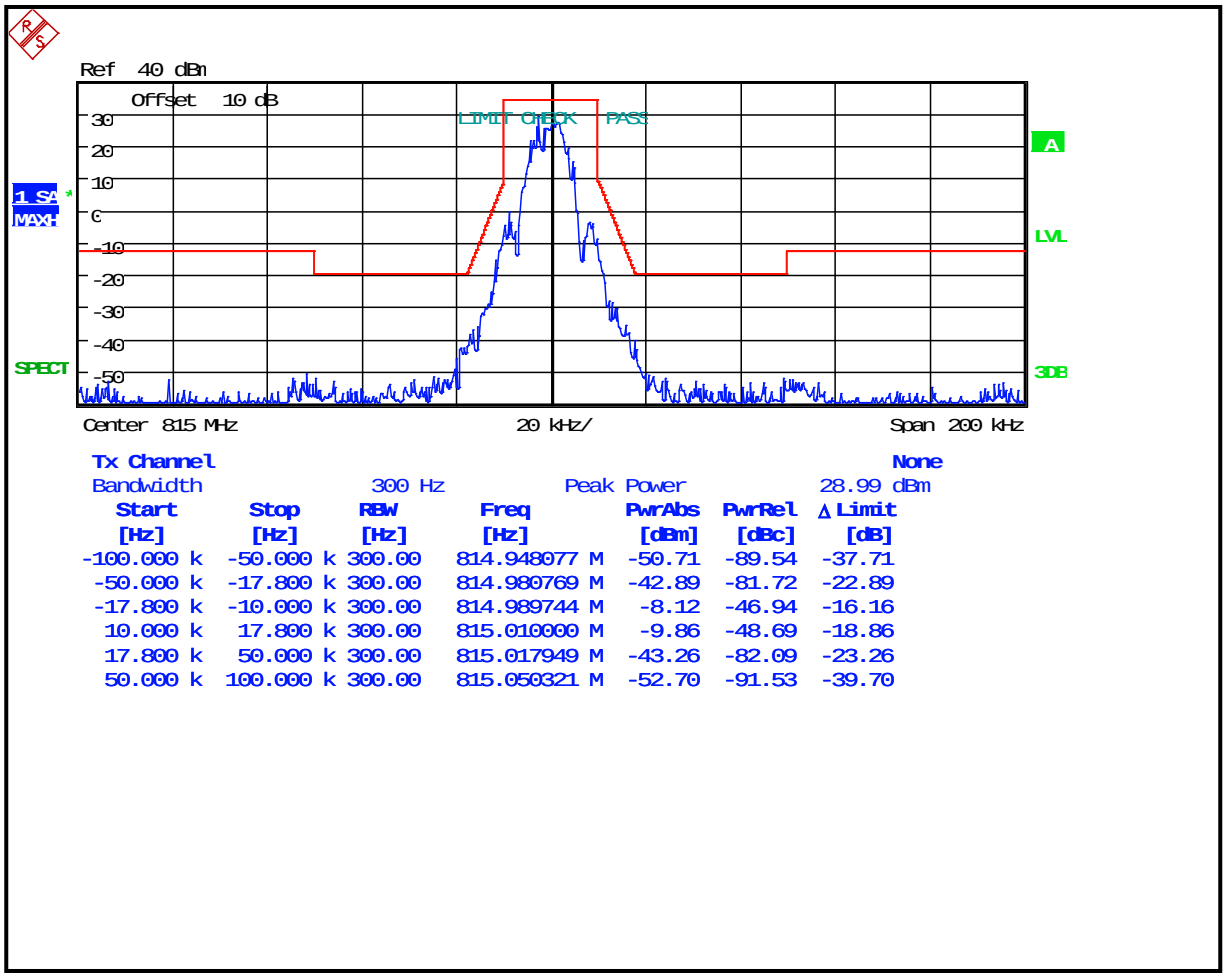
Plot 8-25: Occupied Bandwidth – 806 MHz; 4-level FSK Data/Voice; NB NPSPAC EDACS; Mask H



Tx Channel **None**
Bandwidth 8 kHz Power 35.55 dBm

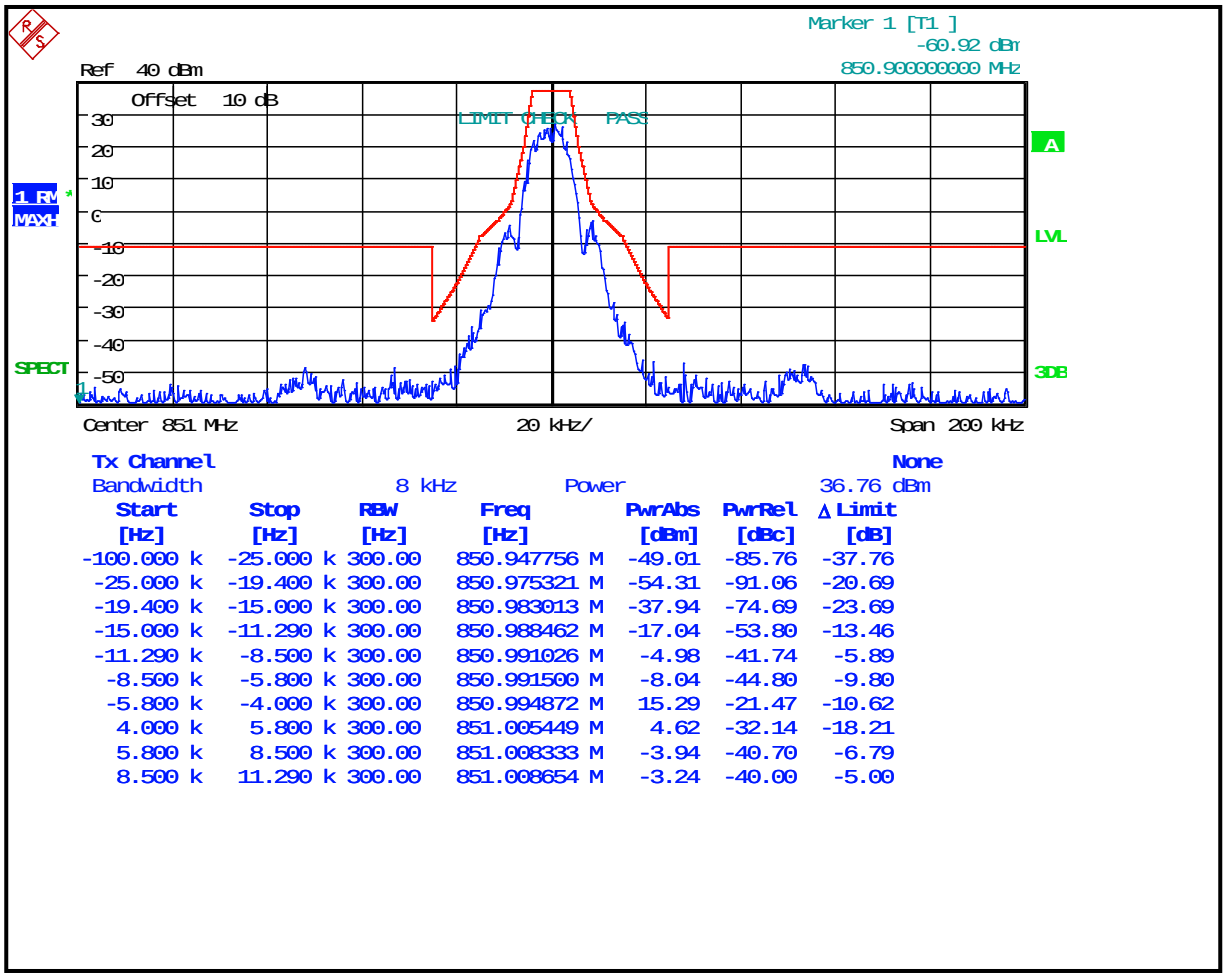
Start [Hz]	Stop [Hz]	RBW [Hz]	Freq [Hz]	PwrAbs [dBm]	PwrRel [dBc]	Δ Limit [dB]
-100.000 k	-25.000 k	300.00	805.946154 M	-51.28	-86.82	-38.82
-25.000 k	-19.400 k	300.00	805.975000 M	-56.62	-92.17	-21.07
-19.400 k	-15.000 k	300.00	805.982051 M	-38.25	-73.80	-19.89
-15.000 k	-11.290 k	300.00	805.988462 M	-16.94	-52.49	-12.15
-11.290 k	-8.500 k	300.00	805.991026 M	-4.49	-40.04	-4.19
-8.500 k	-5.800 k	300.00	805.991500 M	-3.03	-38.58	-3.58
-5.800 k	-4.000 k	300.00	805.994551 M	12.55	-23.00	-9.07
4.000 k	5.800 k	300.00	806.005449 M	5.51	-30.03	-16.11
5.800 k	8.500 k	300.00	806.008333 M	-4.37	-39.92	-6.01
8.500 k	11.290 k	300.00	806.008974 M	-6.55	-42.10	-6.25

Plot 8-26: Occupied Bandwidth – 815 MHz; 4-level FSK Data/Voice; NB NPSPAC EDACS; Mask G



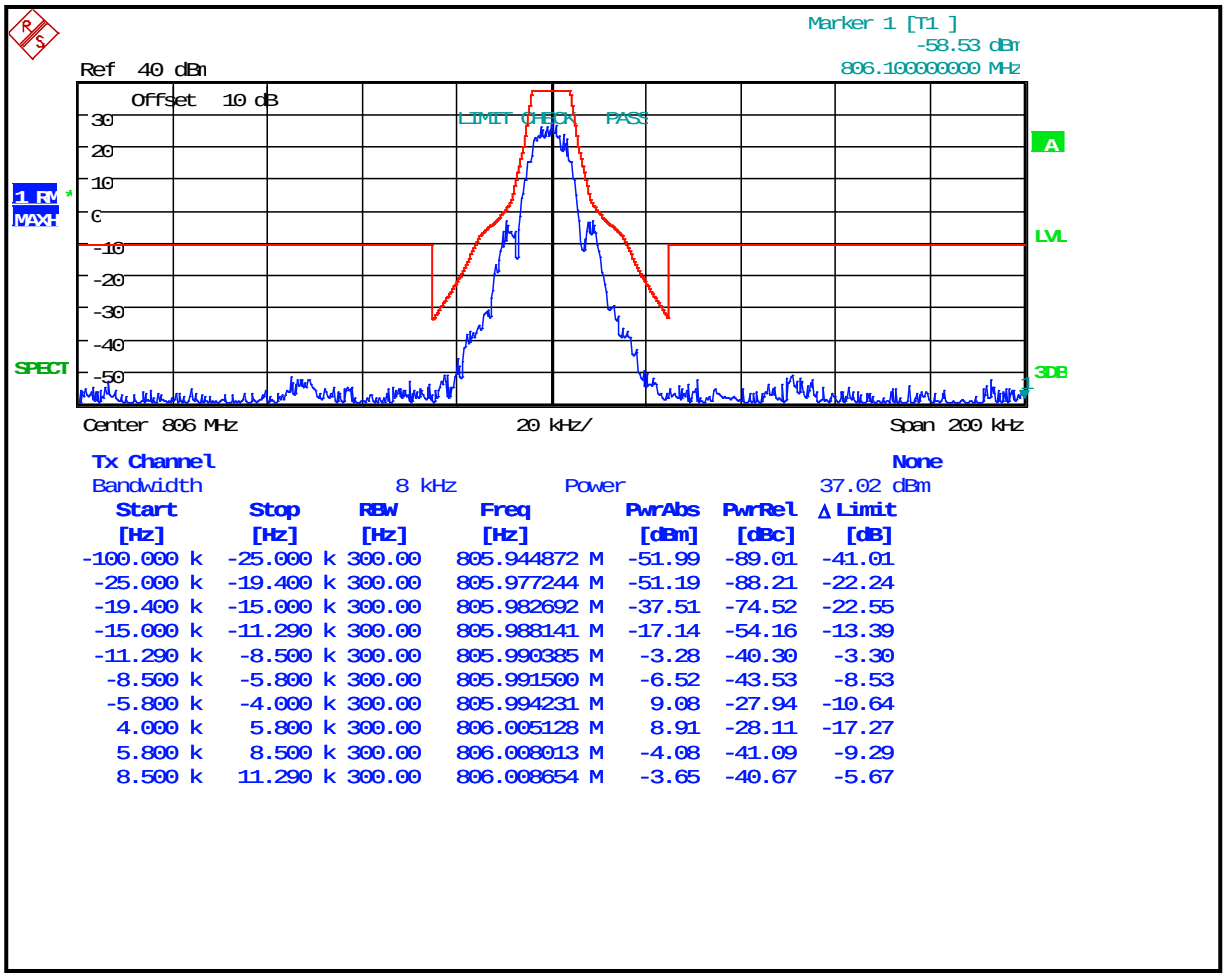
Tx Channel						None
Bandwidth		300 Hz	Peak Power			28.99 dBm
Start [Hz]	Stop [Hz]	RBW [Hz]	Freq [Hz]	PwrAbs [dBm]	PwrRel [dBc]	Δ Limit [dB]
-100.000 k	-50.000 k	300.00	814.948077 M	-50.71	-89.54	-37.71
-50.000 k	-17.800 k	300.00	814.980769 M	-42.89	-81.72	-22.89
-17.800 k	-10.000 k	300.00	814.989744 M	-8.12	-46.94	-16.16
10.000 k	17.800 k	300.00	815.010000 M	-9.86	-48.69	-18.86
17.800 k	50.000 k	300.00	815.017949 M	-43.26	-82.09	-23.26
50.000 k	100.000 k	300.00	815.050321 M	-52.70	-91.53	-39.70

Plot 8-27: Occupied Bandwidth – 851 MHz; 4-level FSK Data/Voice; NB NPSPAC EDACS; Mask H



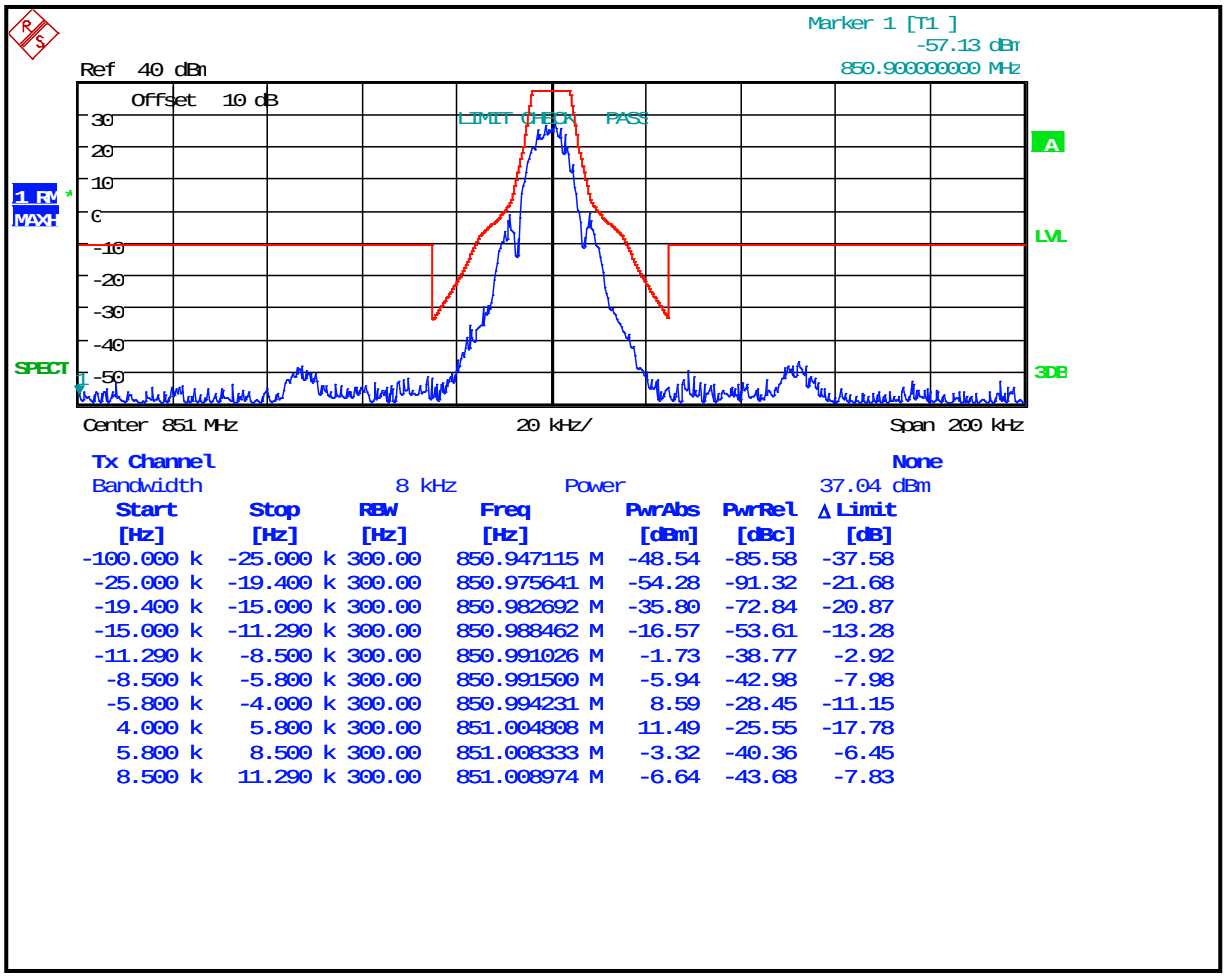
Tx Channel						None
Bandwidth		8 kHz	Power			36.76 dBm
Start [Hz]	Stop [Hz]	RBW [Hz]	Freq [Hz]	PwrAbs [dBm]	PwrRel [dBc]	Δ Limit [dB]
-100.000 k	-25.000 k	300.00	850.947756 M	-49.01	-85.76	-37.76
-25.000 k	-19.400 k	300.00	850.975321 M	-54.31	-91.06	-20.69
-19.400 k	-15.000 k	300.00	850.983013 M	-37.94	-74.69	-23.69
-15.000 k	-11.290 k	300.00	850.988462 M	-17.04	-53.80	-13.46
-11.290 k	-8.500 k	300.00	850.991026 M	-4.98	-41.74	-5.89
-8.500 k	-5.800 k	300.00	850.991500 M	-8.04	-44.80	-9.80
-5.800 k	-4.000 k	300.00	850.994872 M	15.29	-21.47	-10.62
4.000 k	5.800 k	300.00	851.005449 M	4.62	-32.14	-18.21
5.800 k	8.500 k	300.00	851.008333 M	-3.94	-40.70	-6.79
8.500 k	11.290 k	300.00	851.008654 M	-3.24	-40.00	-5.00

Plot 8-28: Occupied Bandwidth – 806 MHz; 4-level FSK Data/Voice; NPSPAC OpenSky; Mask H



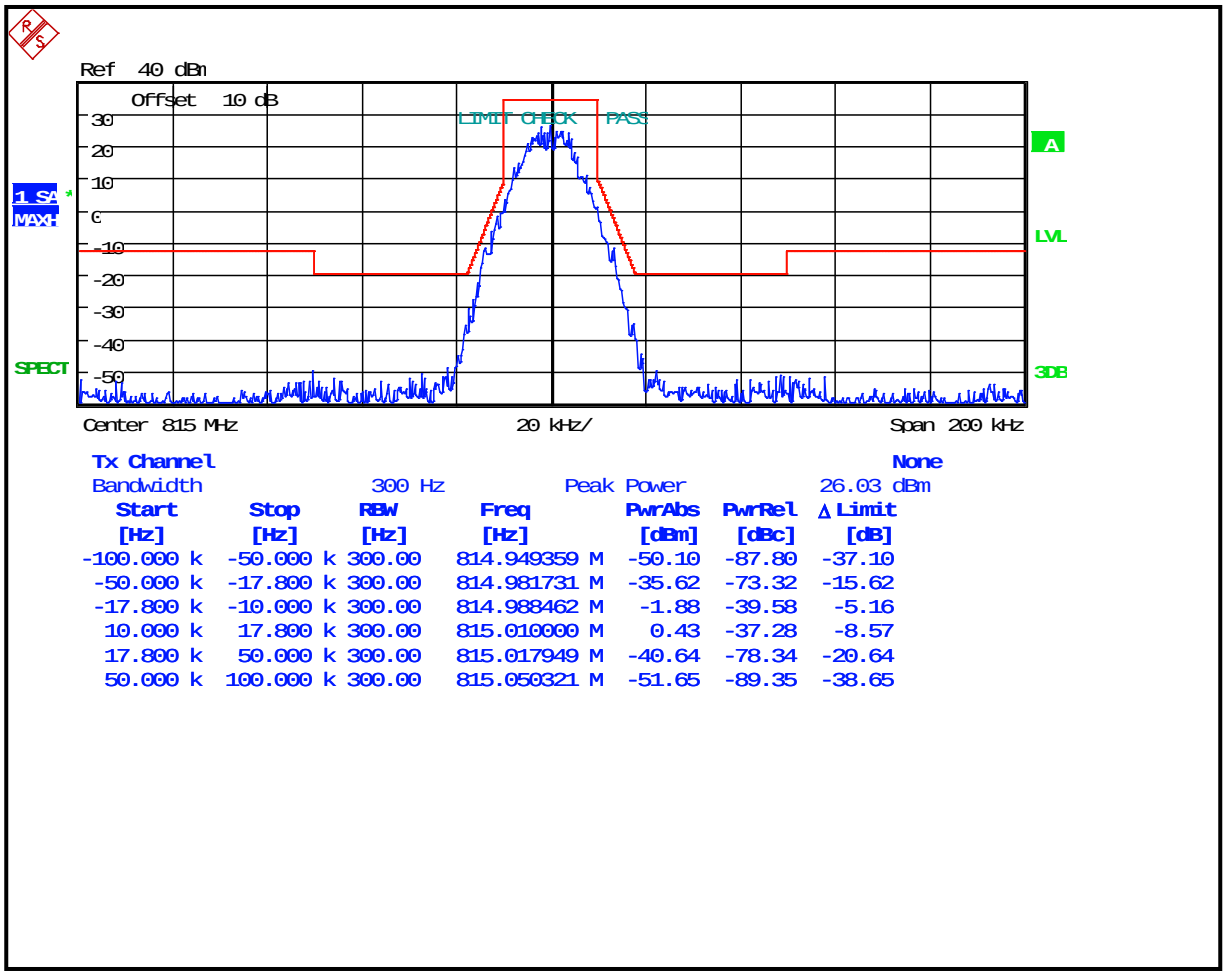
Tx Channel				None		
Bandwidth	8 kHz		Power	37.02 dBm		
Start [Hz]	Stop [Hz]	RBW [Hz]	Freq [Hz]	PwrAbs [dBm]	PwrRel [dBc]	Δ Limit [dB]
-100.000 k	-25.000 k	300.00	805.944872 M	-51.99	-89.01	-41.01
-25.000 k	-19.400 k	300.00	805.977244 M	-51.19	-88.21	-22.24
-19.400 k	-15.000 k	300.00	805.982692 M	-37.51	-74.52	-22.55
-15.000 k	-11.290 k	300.00	805.988141 M	-17.14	-54.16	-13.39
-11.290 k	-8.500 k	300.00	805.990385 M	-3.28	-40.30	-3.30
-8.500 k	-5.800 k	300.00	805.991500 M	-6.52	-43.53	-8.53
-5.800 k	-4.000 k	300.00	805.994231 M	9.08	-27.94	-10.64
4.000 k	5.800 k	300.00	806.005128 M	8.91	-28.11	-17.27
5.800 k	8.500 k	300.00	806.008013 M	-4.08	-41.09	-9.29
8.500 k	11.290 k	300.00	806.008654 M	-3.65	-40.67	-5.67

Plot 8-29: Occupied Bandwidth – 851 MHz; 4-level FSK Data/Voice; NPSPAC OpenSky; Mask H



Tx Channel				None		
Bandwidth	8 kHz		Power	37.04 dBm		
Start [Hz]	Stop [Hz]	RBW [Hz]	Freq [Hz]	PwrAbs [dBm]	PwrRel [dBc]	Δ Limit [dB]
-100.000 k	-25.000 k	300.00	850.947115 M	-48.54	-85.58	-37.58
-25.000 k	-19.400 k	300.00	850.975641 M	-54.28	-91.32	-21.68
-19.400 k	-15.000 k	300.00	850.982692 M	-35.80	-72.84	-20.87
-15.000 k	-11.290 k	300.00	850.988462 M	-16.57	-53.61	-13.28
-11.290 k	-8.500 k	300.00	850.991026 M	-1.73	-38.77	-2.92
-8.500 k	-5.800 k	300.00	850.991500 M	-5.94	-42.98	-7.98
-5.800 k	-4.000 k	300.00	850.994231 M	8.59	-28.45	-11.15
4.000 k	5.800 k	300.00	851.004808 M	11.49	-25.55	-17.78
5.800 k	8.500 k	300.00	851.008333 M	-3.32	-40.36	-6.45
8.500 k	11.290 k	300.00	851.008974 M	-6.64	-43.68	-7.83

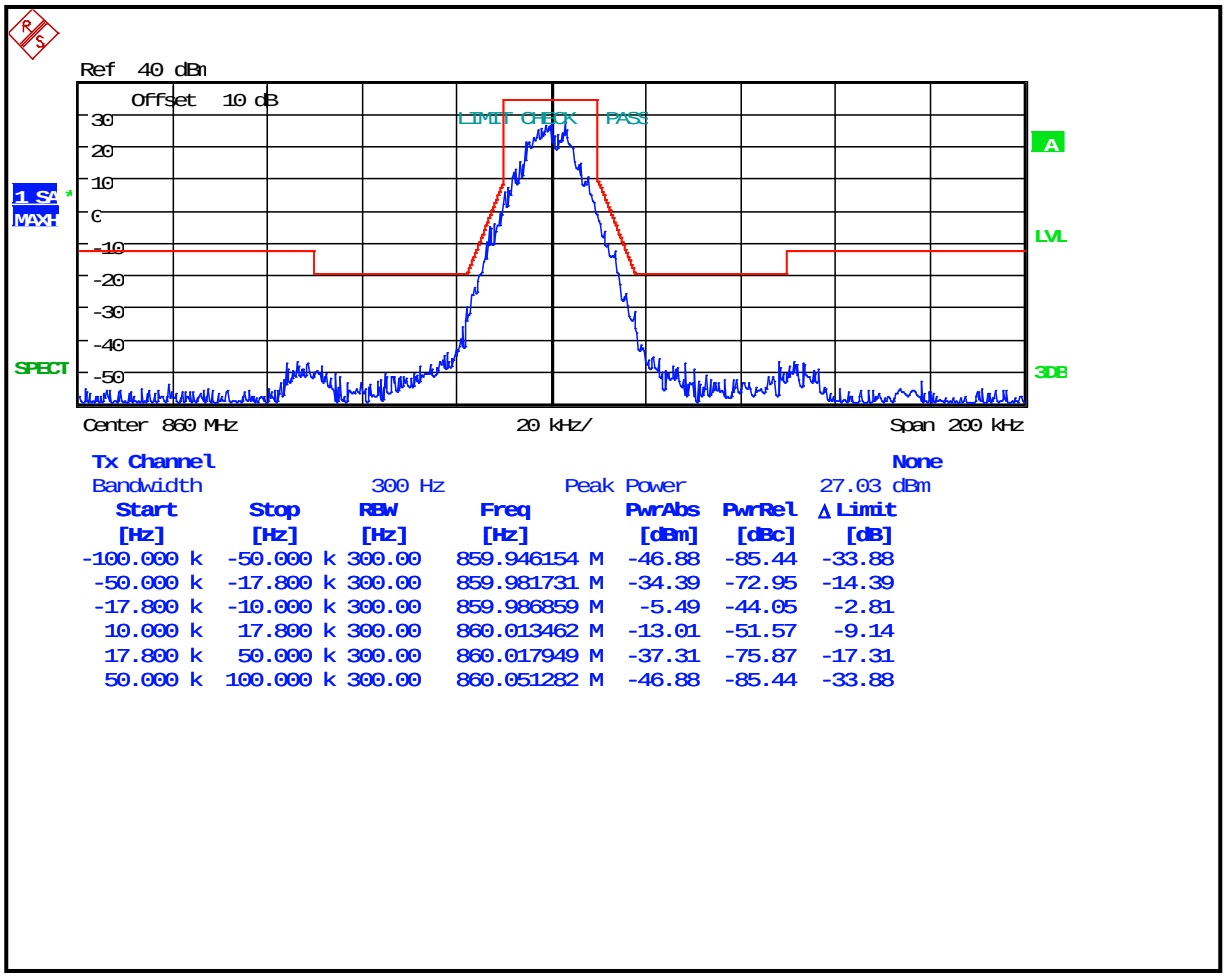
Plot 8-30: Occupied Bandwidth – 815 MHz; 4-level FSK Data/Voice; SMR OpenSky; Mask G



Tx Channel: None
Bandwidth: 300 Hz
Peak Power: 26.03 dBm

Start [Hz]	Stop [Hz]	RBW [Hz]	Freq [Hz]	PwrAbs [dBm]	PwrRel [dBc]	Δ Limit [dB]
-100.000 k	-50.000 k	300.00	814.949359 M	-50.10	-87.80	-37.10
-50.000 k	-17.800 k	300.00	814.981731 M	-35.62	-73.32	-15.62
-17.800 k	-10.000 k	300.00	814.988462 M	-1.88	-39.58	-5.16
10.000 k	17.800 k	300.00	815.010000 M	0.43	-37.28	-8.57
17.800 k	50.000 k	300.00	815.017949 M	-40.64	-78.34	-20.64
50.000 k	100.000 k	300.00	815.050321 M	-51.65	-89.35	-38.65

Plot 8-31: Occupied Bandwidth – 860 MHz; 4-level FSK Data/Voice; SMR OpenSky; Mask G



Start [Hz]	Stop [Hz]	RBW [Hz]	Freq [Hz]	PwrAbs [dBm]	PwrRel [dBc]	Δ Limit [dB]
-100.000 k	-50.000 k	300.00	859.946154 M	-46.88	-85.44	-33.88
-50.000 k	-17.800 k	300.00	859.981731 M	-34.39	-72.95	-14.39
-17.800 k	-10.000 k	300.00	859.986859 M	-5.49	-44.05	-2.81
10.000 k	17.800 k	300.00	860.013462 M	-13.01	-51.57	-9.14
17.800 k	50.000 k	300.00	860.017949 M	-37.31	-75.87	-17.31
50.000 k	100.000 k	300.00	860.051282 M	-46.88	-85.44	-33.88

Table 8-1: Test Equipment Used For Testing Occupied Bandwidth

RTL Asset #	Manufacturer	Model	Part Type	Serial Number	Calibration Due Date
901581	Rohde & Schwarz	FSU	Spectrum Analyzer	1166.1660.50	3/22/18
900948	Weinschel Corporation	47-10-43	Attenuator DC-18 GHz 10 dB 50W	BH1487	9/1/18
901057	Hewlett Packard	3336B	Synthesizer/ Level Generator	2514A02585	4/13/18

Test Personnel:

Daniel Baltzell		May 25 and July 21, 2017
Test Engineer	Signature	Dates of Tests

9 FCC §2.1055: Frequency Stability; §90.213, §90.539: Frequency Stability; RSS-119 5.3 Transmitter Frequency Stability

9.1 Test Procedure

ANSI C63.26 5.6

The carrier frequency stability is the ability of the transmitter to maintain an assigned carrier frequency.

The EUT was evaluated over the temperature range -30°C to +55°C.

The temperature was initially set to -30°C and a 1-hour period was observed for stabilization of the EUT. The frequency stability was measured within one minute after application of primary power to the transmitter. The temperature was raised at intervals of 10 degrees centigrade through the range. A ½-hour period was observed to stabilize the EUT at each measurement step and the frequency stability was measured within one minute after application of primary power to the transmitter. Additionally, the power supply voltage of the EUT was varied +/-15% nominal input voltage.

§90.213: Mobile stations over 2 W operating power - 1.5 ppm.

§90.213 Frequency Stability
(a) Unless noted elsewhere, transmitters used in the services governed by this part must have a minimum frequency stability as specified in the following table.

MINIMUM FREQUENCY STABILITY
[Parts per million (ppm)]

Frequency range (MHz)	Fixed and base stations	Mobile stations	
		Over 2 watts output power	2 watts or less output power
Below 25	[1,2,3] 100	100	200
25–50	20	20	50
72–76	5	.....	50
150–174	[5,11] 5	[6] 5	[4,6] 50
216–220	1.0	.....	1.0
220–222 [12]	0.1	1.5	1.5
421–512	[7,11,14] 2.5	[8] 5	[8] 5
806–809	[14] 1.0	1.5	1.5
809–824	[14] 1.5	2.5	2.5
851–854	1.0	1.5	1.5
854–869	1.5	2.5	2.5
896–901	[14] 0.1	1.5	1.5
902–928	2.5	2.5	2.5
902–928 [13]	2.5	2.5	2.5
929–930	1.5	.....	.....
935–940	0.1	1.5	1.5
1427–1435	[9] 300	300	300
Above 2450 [10]	.....	.....	.....

§90.539 Frequency Stability

Transmitters designed to operate in 769–774.9875 MHz and 799–805.9875 MHz frequency bands must meet the frequency stability requirements in this section.
(a) Mobile, portable and control transmitters must normally use automatic frequency control (AFC) to lock on to the base station signal.
(b) The frequency stability of base transmitters operating in the narrowband segment must be 100 parts per billion or better.
(c) The frequency stability of mobile, portable, and control transmitters operating in the narrowband segment must be 400 parts per billion or better when AFC is locked to the base station. When AFC is not locked to the base station, the frequency stability must be at least 1.0 ppm for 6.25 kHz, 1.5 ppm for 12.5 kHz (2 channel aggregate), and 2.5 ppm for 25 kHz (4 channel aggregate).
(d) The frequency stability of base transmitters operating in the wideband segment must be 1 part per million or better.
(e) The frequency stability of mobile, portable and control transmitters operating in the wideband segment must be 1.25 parts per million or better when AFC is locked to a base station, and 5 parts per million or better when AFC is not locked.

The EUT was tested while the AFC was not locked, therefore, the limit is 1.5 ppm. The worst-case deviation was found to be 0.9 ppm.

9.2 Test Data

Table 9-1: Temperature Frequency Stability – 768 MHz

Temperature (°C)	Measured Frequency (Hz)	ppm
-30	768.000061	0.08
-20	767.999903	-0.13
-10	768.000055	0.07
0	768.000075	0.10
10	768.000178	0.23
20 (reference)	768.000000	0.00
30	767.999906	-0.12
40	768.000137	0.18
50	767.999932	-0.09
60	767.999896	-0.14

Table 9-2: Temperature Frequency Stability – 798 MHz

Temperature (°C)	Measured Frequency (Hz)	ppm
-30	798.000098	0.12
-20	798.000026	0.03
-10	798.000039	0.05
0	798.000085	0.11
10	798.000023	0.03
20 (reference)	798.000000	0.00
30	798.000013	0.02
40	798.000040	0.05
50	798.000030	0.04
55	797.999944	-0.07

Table 9-3: Temperature Frequency Stability – 815 MHz

Temperature (°C)	Measured Frequency (Hz)	ppm
-30	815.000000	0.00
-20	815.000020	0.02
-10	815.000141	0.17
0	815.000122	0.15
10	815.000032	0.04
20 (reference)	815.000000	0.00
30	815.000039	0.05
40	814.999865	-0.17
50	815.000010	0.01
55	815.000015	0.02

Table 9-4: Temperature Frequency Stability – 860 MHz

Temperature (°C)	Measured Frequency (Hz)	ppm
-30	860.000059	0.07
-20	859.999882	-0.14
-10	859.999955	-0.05
0	859.999949	-0.06
10	860.000023	0.03
20 (reference)	860.000000	0.00
30	859.999932	-0.08
40	859.999836	-0.19
50	859.999929	-0.08
55	859.999876	-0.14

Result: The EUT is compliant.

9.2.1 Frequency Stability/Voltage Variation

Table 9-5: Frequency Stability/Voltage Variation – 768 MHz

Voltage (VDC)	Measured Frequency (Hz)	ppm
5.59 (Battery End Point)	768.000050	0.06
6.375	768.000094	0.12
7.5	768.000000	0.00
8.625	768.000105	0.14

Table 9-6: Frequency Stability/Voltage Variation – 798 MHz

Voltage (VDC)	Measured Frequency (Hz)	ppm
5.87 (Battery End Point)	798.000148	0.19
6.375	798.000050	0.06
7.5	798.000000	0.00
8.625	798.000043	0.05

Table 9-7: Frequency Stability/Voltage Variation – 815 MHz

Voltage (VDC)	Measured Frequency (Hz)	ppm
5.87 (Battery End Point)	814.999924	-0.09
6.375	815.000137	0.17
7.5	815.000000	0.00
8.625	814.999960	-0.05

Table 9-8: Frequency Stability/Voltage Variation – 860 MHz

Voltage (VDC)	Measured Frequency (Hz)	ppm
5.85 (Battery End Point)	860.000005	0.01
6.375	860.000028	0.03
7.5	860.000000	0.00
8.625	859.999972	-0.03

Table 9-9: Test Equipment Used For Testing Frequency Stability

RTL Asset #	Manufacturer	Model	Part Type	Serial Number	Calibration Due Date
900946	Tenney Engineering, Inc.	TH65	Temperature Chamber with Humidity	11380	3/26/18
901300	Agilent Technologies	53131A	Frequency Counter	MY40001345	4/26/18
901338	Weinschel Corp	46-40-34	40 dB Attenuator; 25 W	BM0556	9/1/18
901350	Meterman	33XR	Digital Multimeter	N/A	4/26/19

Test Personnel:

Daniel W. Baltzell		May 10, 2017
EMC Test Engineer	Signature	Date of Test

10 FCC §2.1047(a)(b): Modulation Characteristics; RSS-119 5.2: Types of Modulation

10.1 Test Procedures

10.1.1 Audio Frequency Response

ANSI C63.26 5.3.3

The audio frequency response is the degree of closeness to which the frequency deviation of the transmitter follows a prescribed characteristic.

The input audio level at 1000 Hz was set to produce 20% of the rated system deviation. This point is shown as the 0 dB reference level, noted DEVref. The audio signal generator was varied from 100 Hz to 5 kHz with the input level held constant. The deviation in kHz was recorded using a modulation analyzer as DEVfreq. The response in dB relative to 1 kHz was calculated as follows:

Audio Frequency Response = 20 LOG (DEVfreq/DEVref)

10.1.2 Audio Low Pass Filter Response

ANSI C63.26 5.3

The Audio Low Pass Filter Response is the frequency response of the post limiter low pass filter circuit above 3000 Hz.

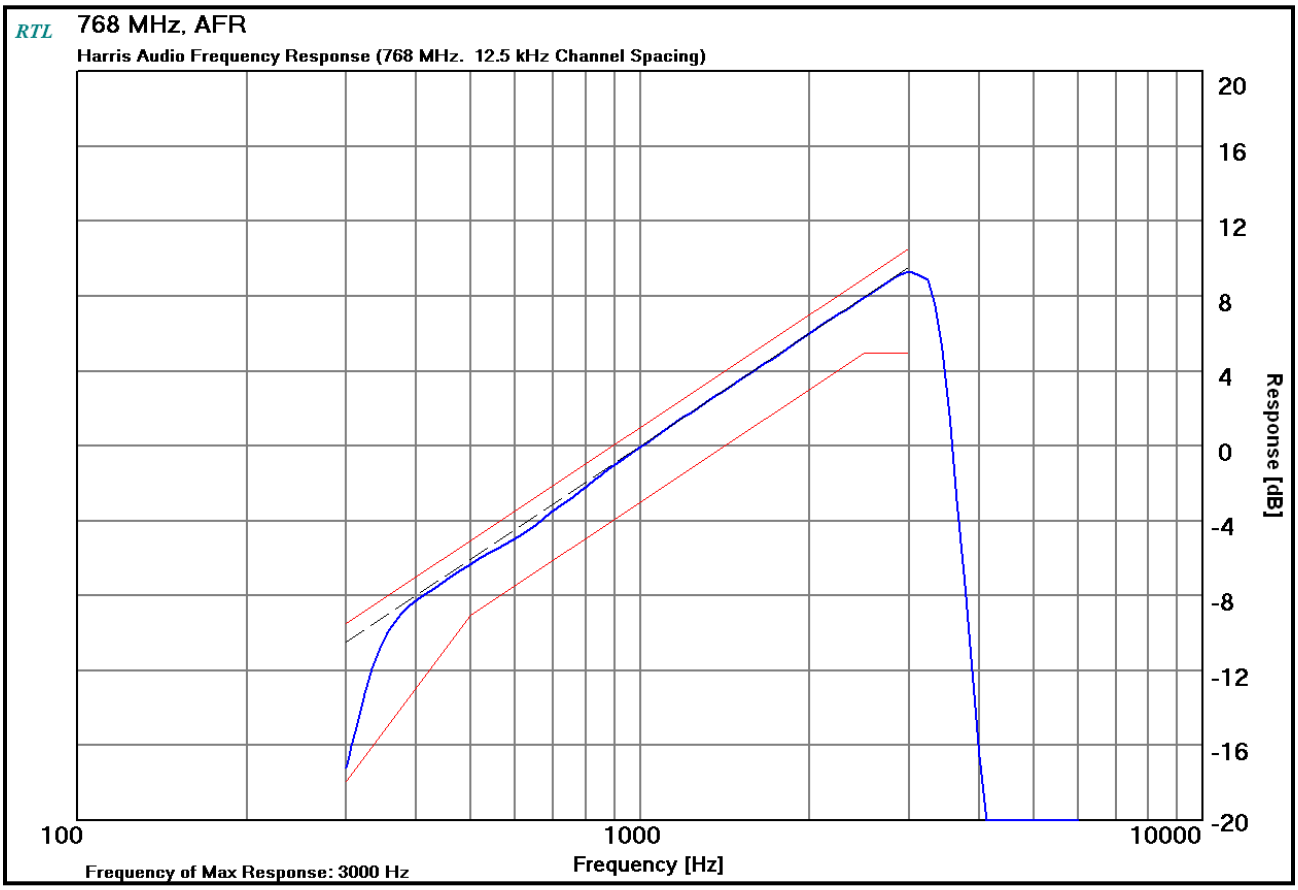
10.1.3 Modulation Limiting

ANSI C63.26 5.3.2

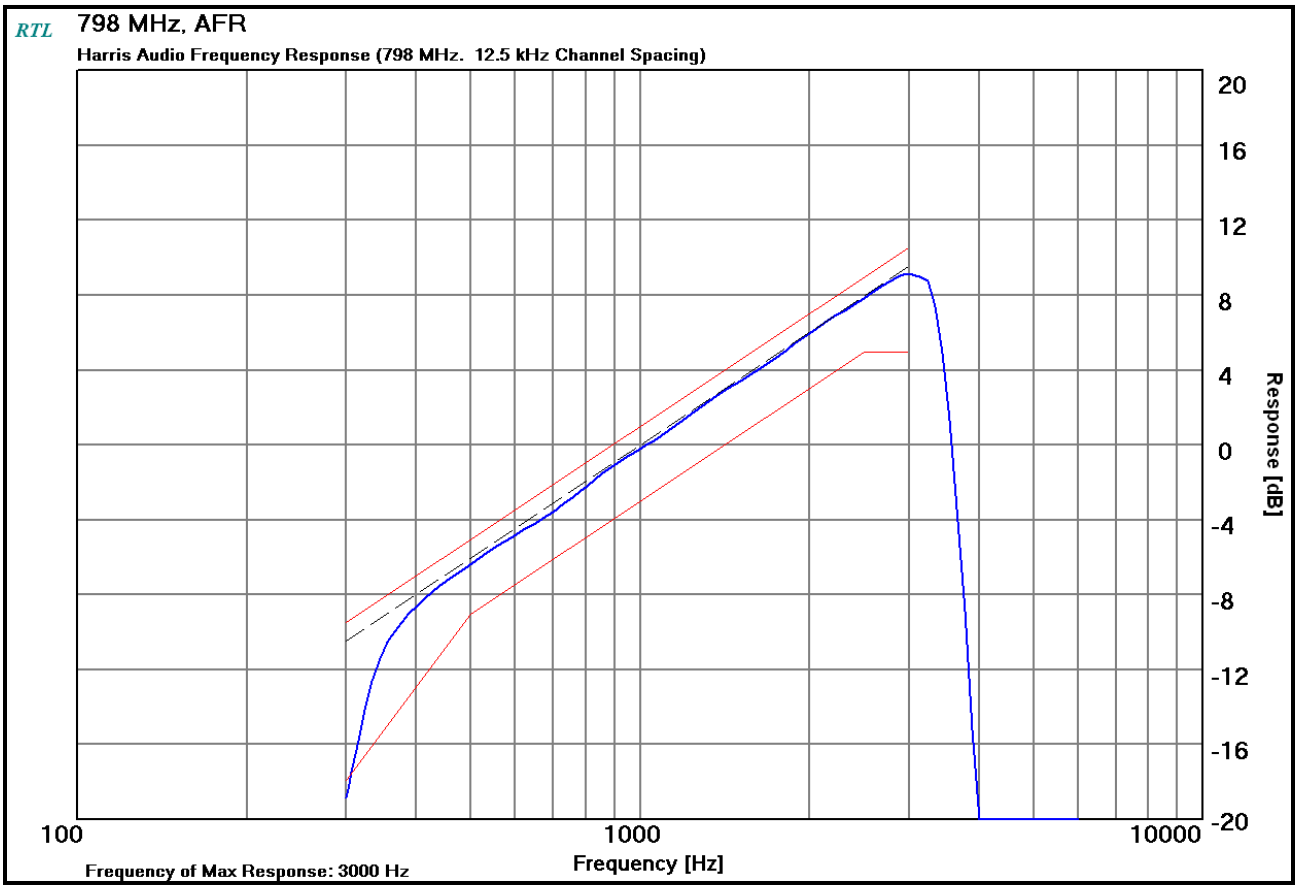
The transmitter was adjusted for full rated system deviation. The audio input level was adjusted for 60% of rated system deviation at 1000 Hz. Using this level (0 dB) as a reference, the audio input level was varied from the reference +/-20 dB for modulation frequencies of 300 Hz, 1,000 Hz, and 2,500 Hz. The system deviation obtained as a function of the input level was recorded. Both positive and negative peak deviations were recorded.

10.2 Test Data

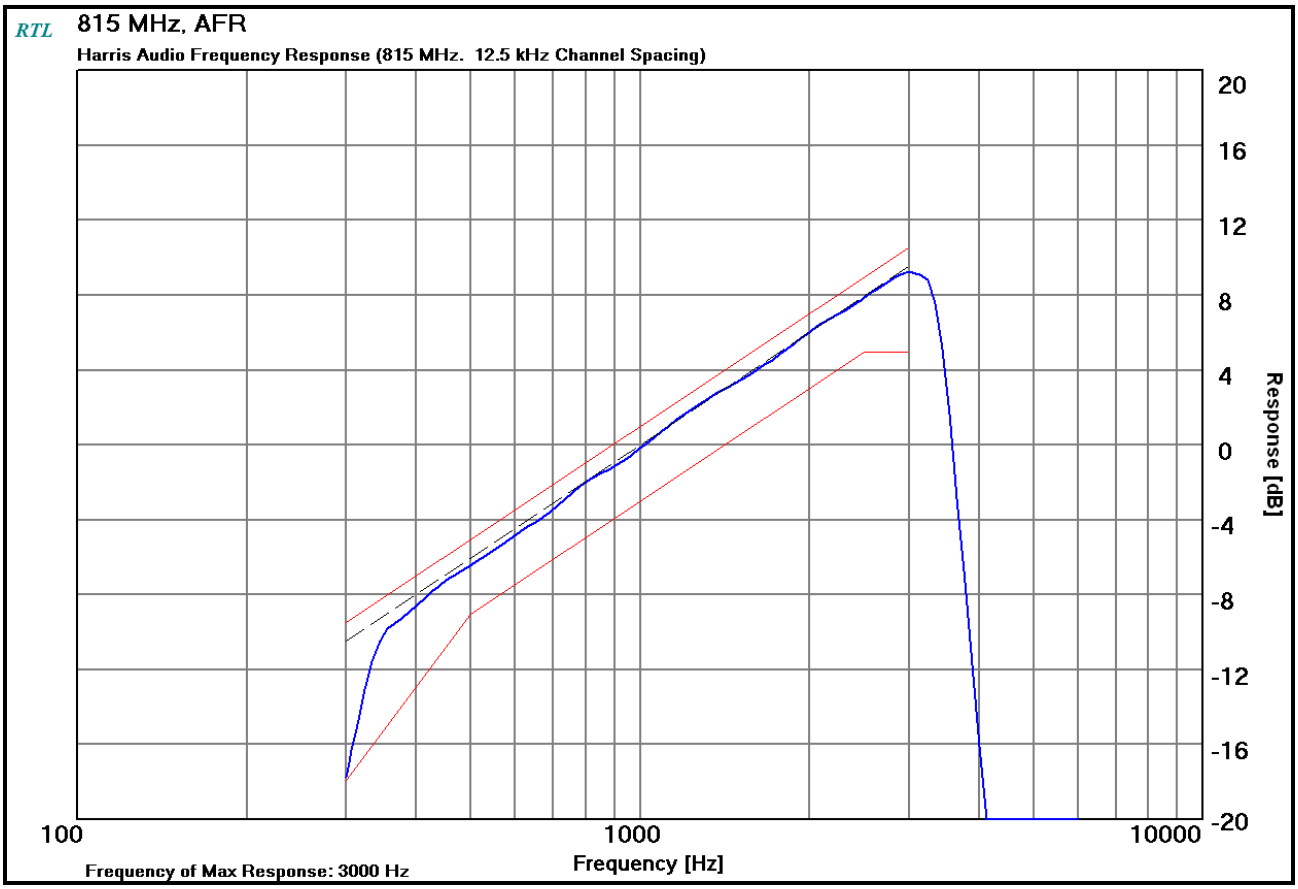
Plot 10-1: Modulation Characteristics - Audio Frequency Response - 768 MHz



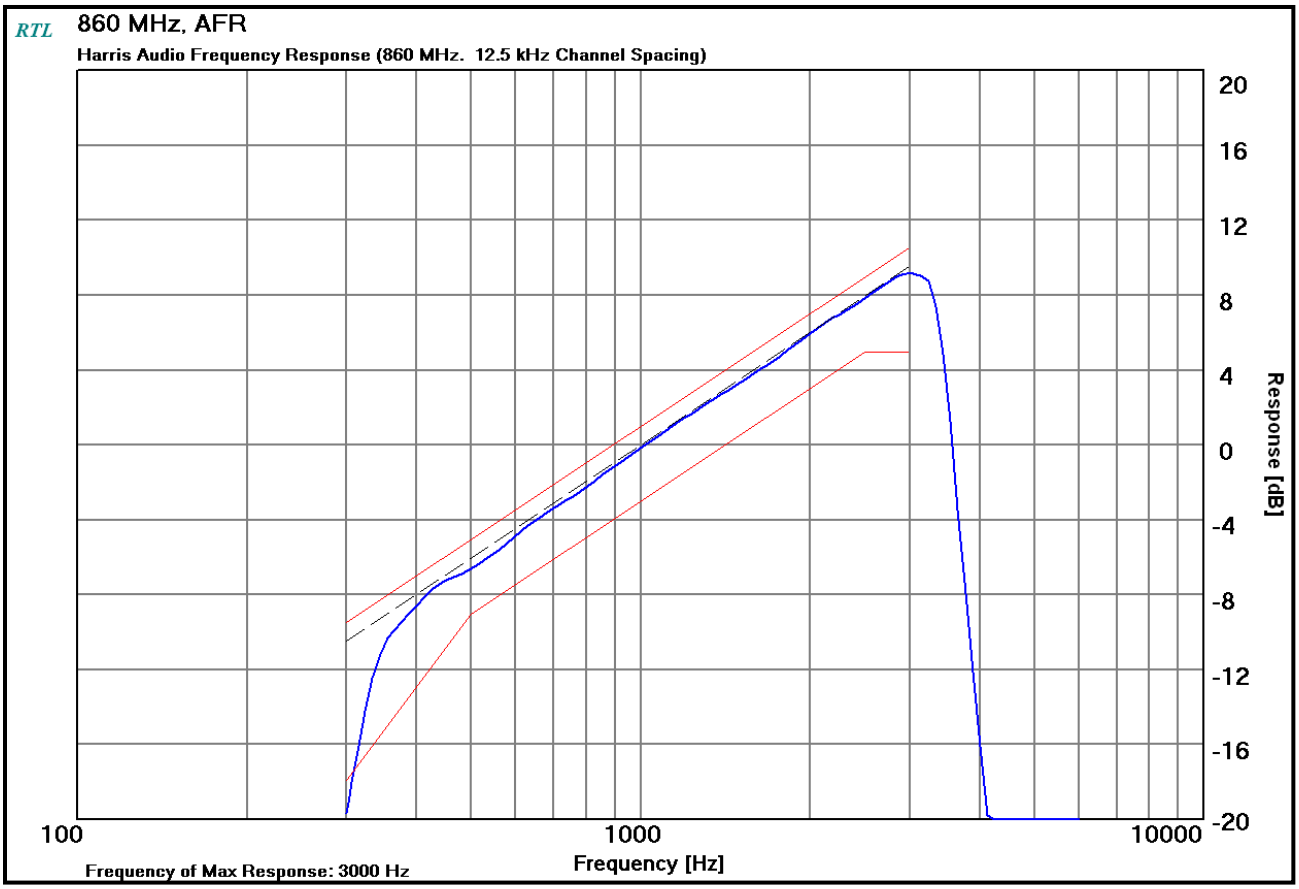
Plot 10-2: Modulation Characteristics - Audio Frequency Response - 798 MHz



Plot 10-3: Modulation Characteristics - Audio Frequency Response - 815 MHz

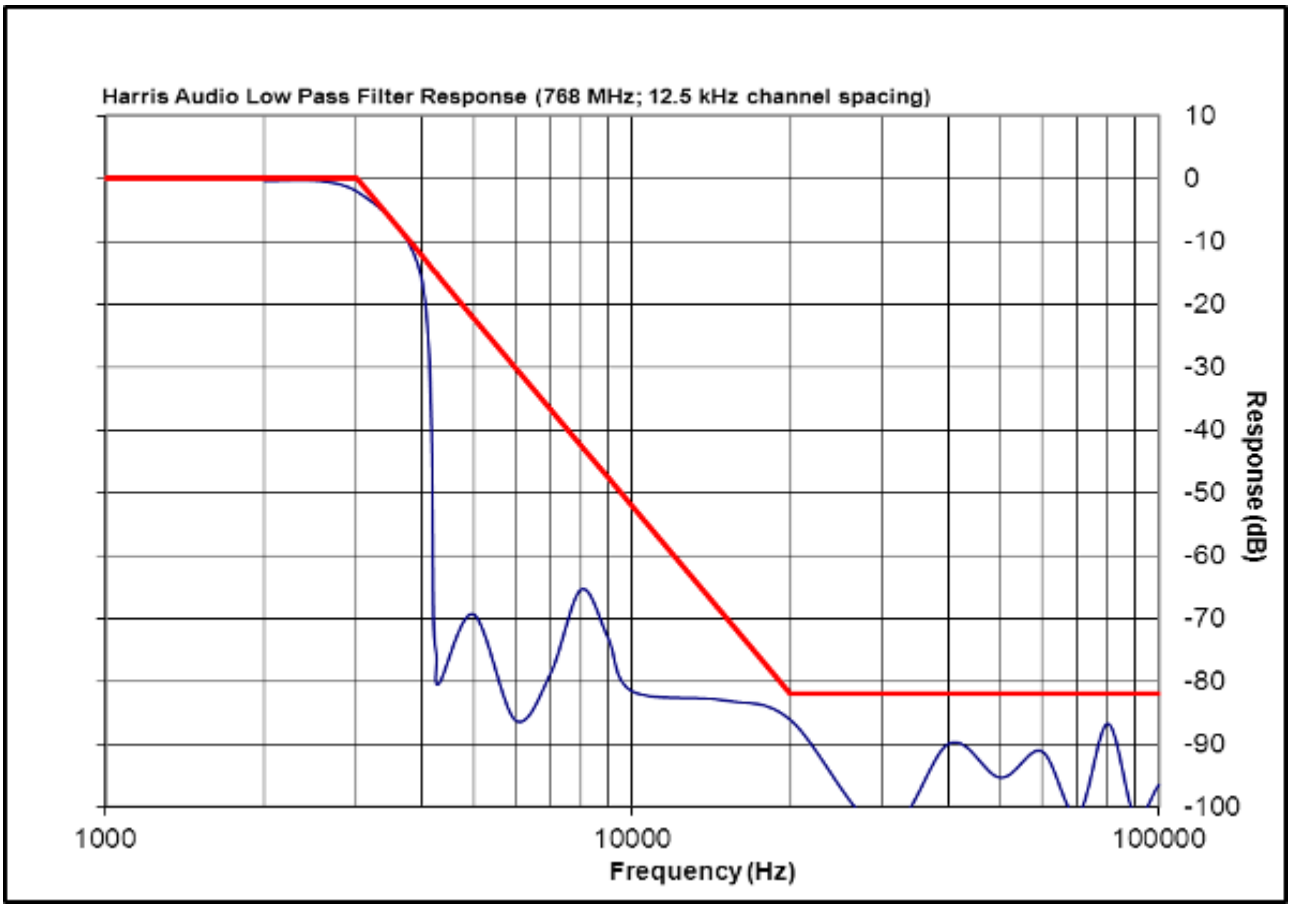


Plot 10-4: Modulation Characteristics - Audio Frequency Response - 860 MHz

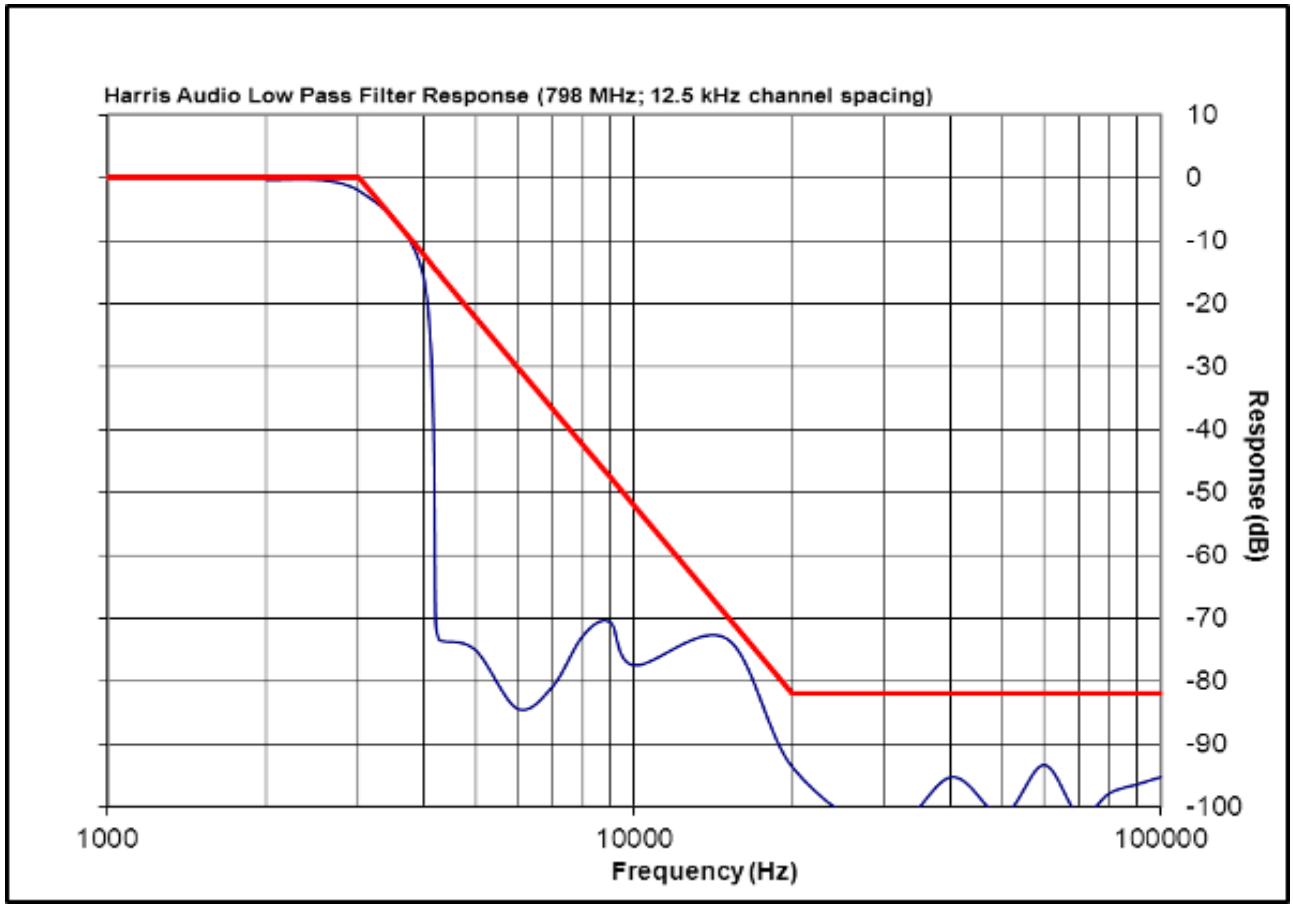


10.2.1 Audio Low Pass Filter Response

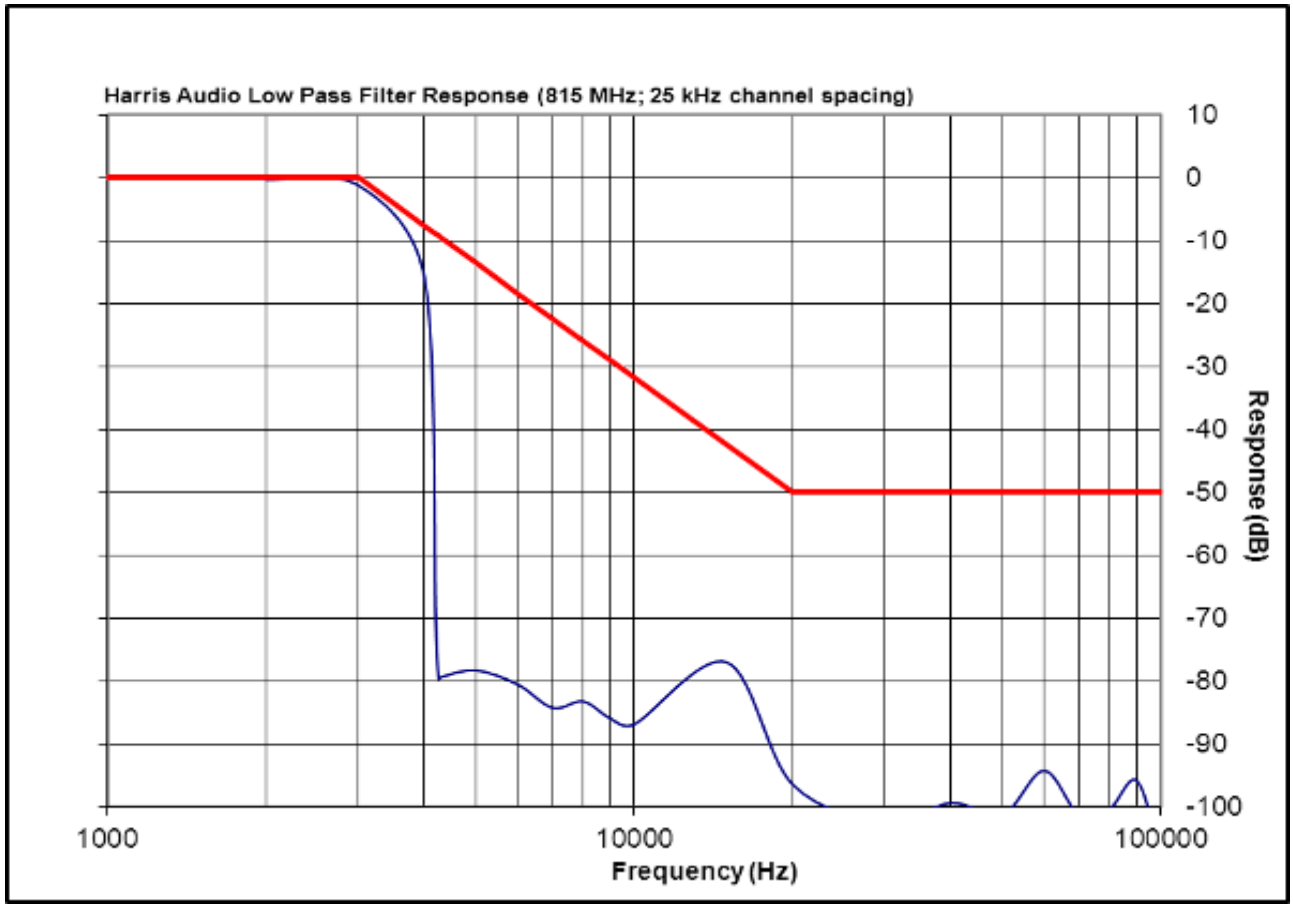
Plot 10-5: Modulation Characteristics – Audio Low Pass Filter – 768 MHz



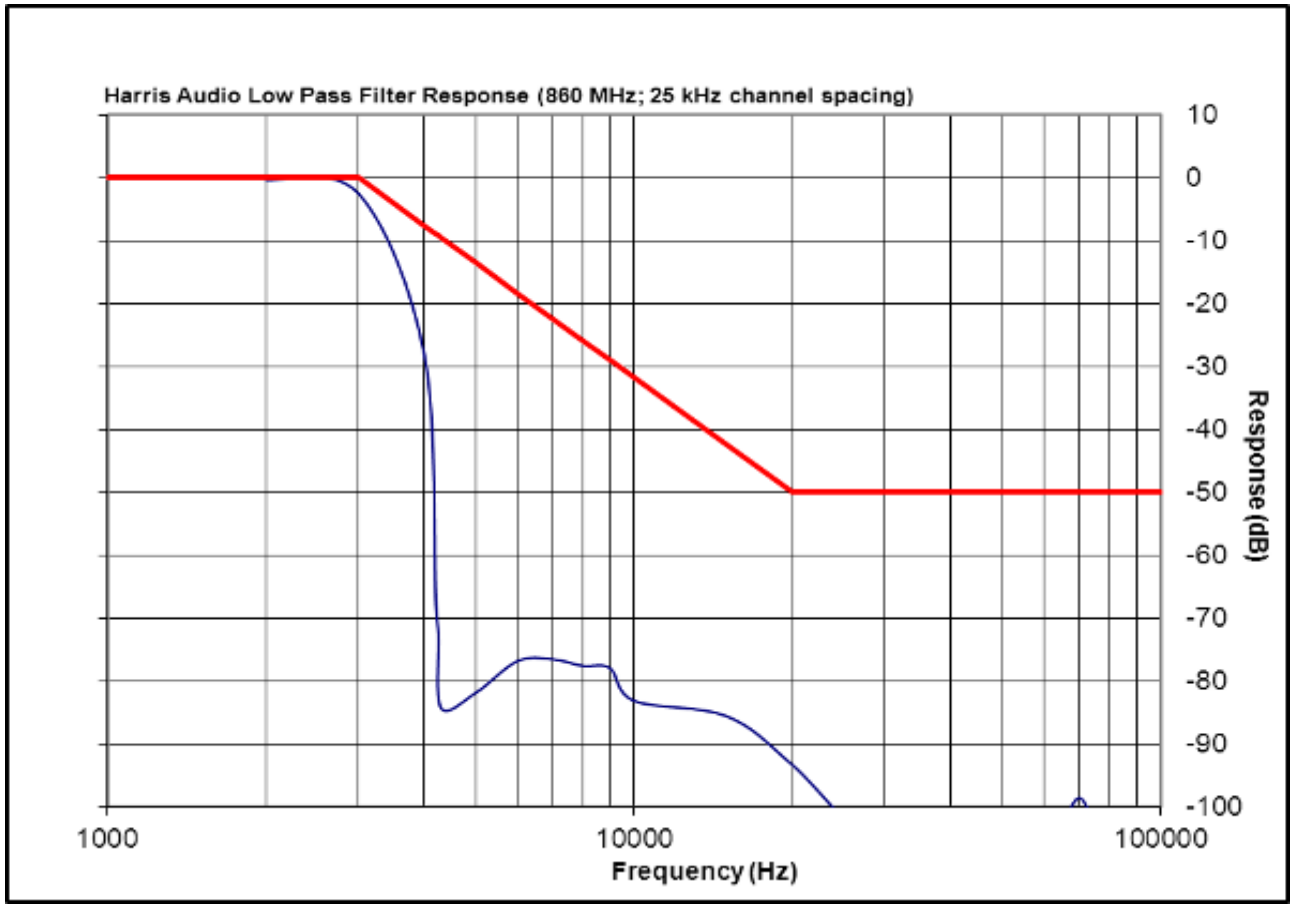
Plot 10-6: Modulation Characteristics – Audio Low Pass Filter - 798 MHz



Plot 10-7: Modulation Characteristics – Audio Low Pass Filter - 815 MHz

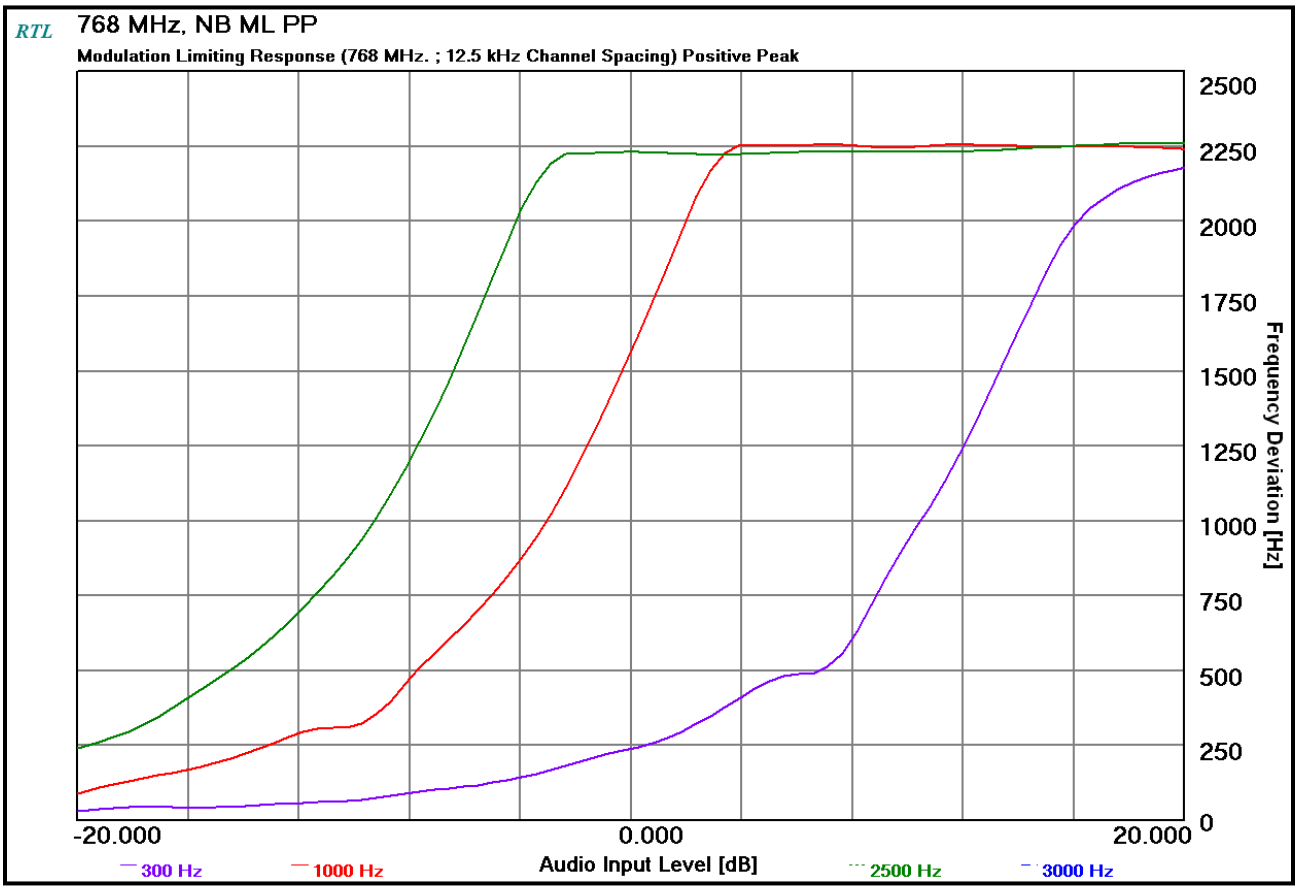


Plot 10-8: Modulation Characteristics – Audio Low Pass Filter - 860 MHz

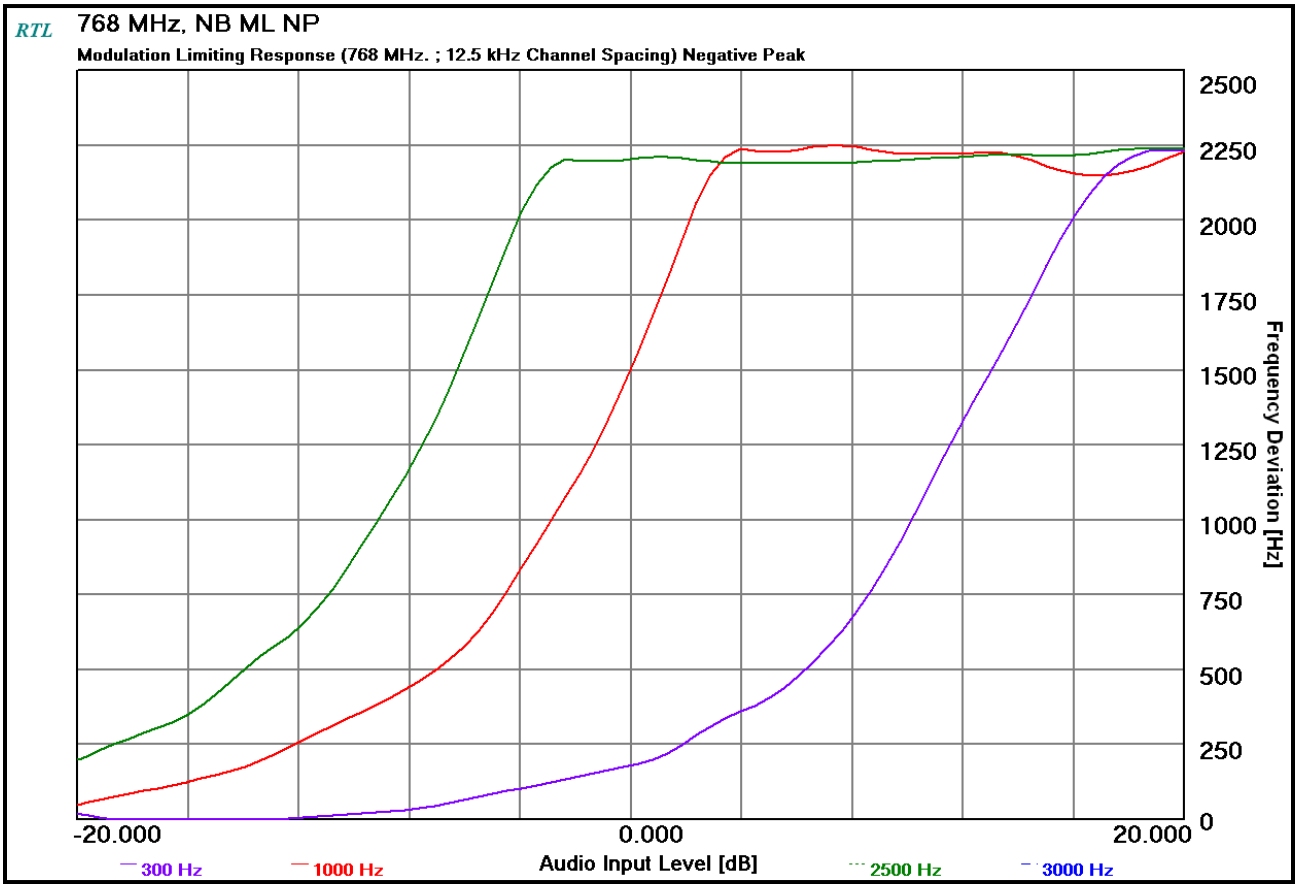


10.2.2 Modulation Limiting

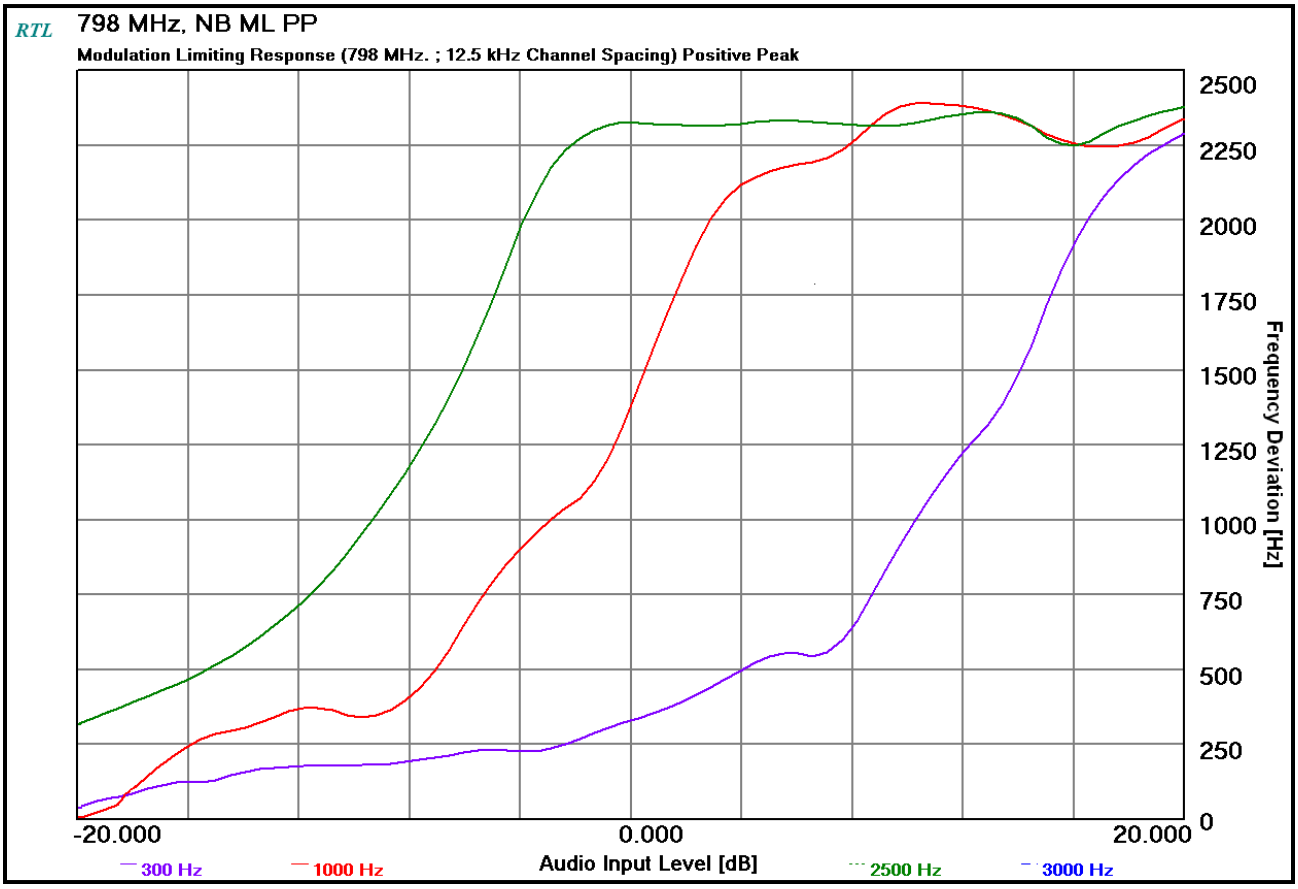
Plot 10-9: Modulation Characteristics – Modulation Limiting - 768 MHz; Positive Peak; NB



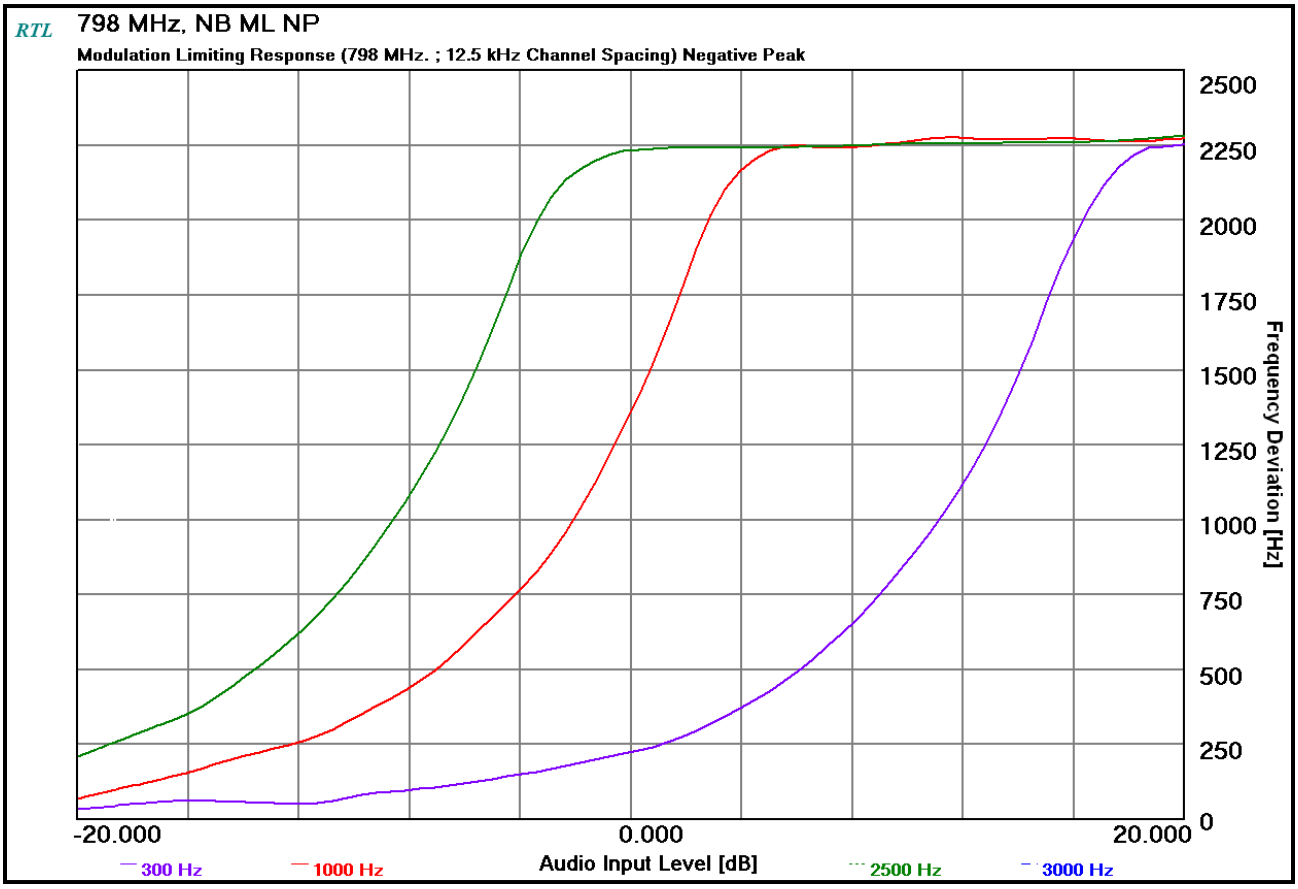
Plot 10-10: Modulation Characteristics – Modulation Limiting - 768 MHz; Negative Peak; NB



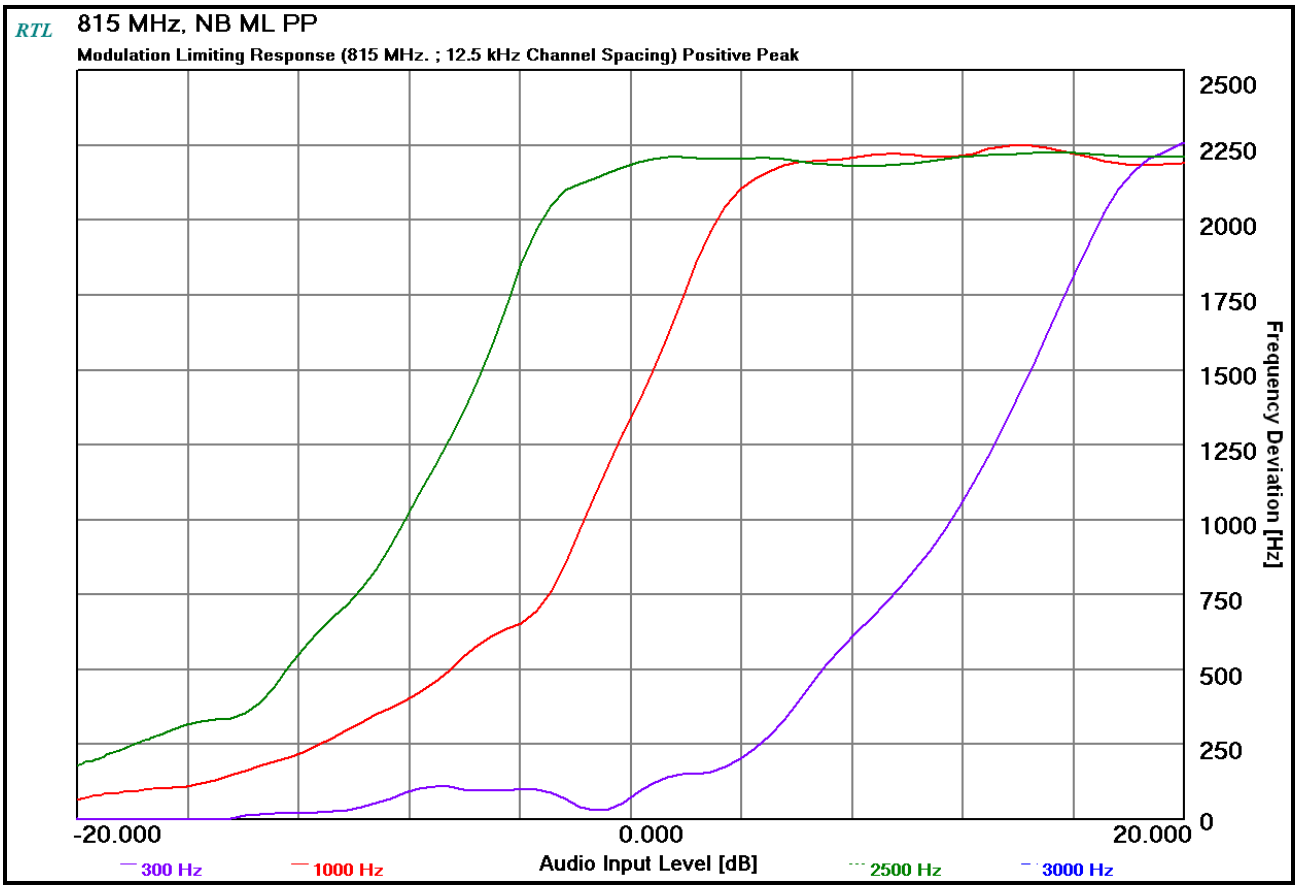
Plot 10-11: Modulation Characteristics – Modulation Limiting - 798 MHz; Positive Peak; NB



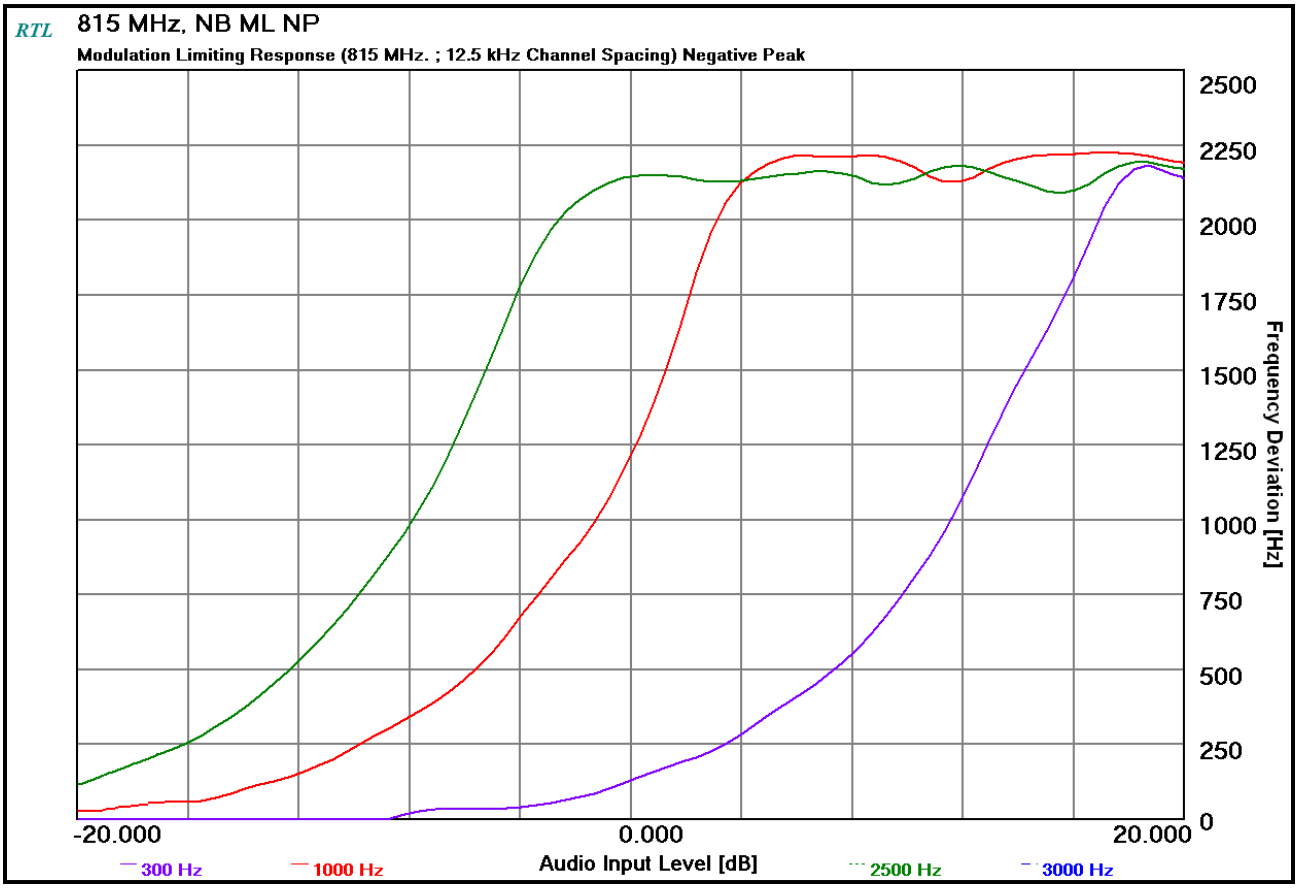
Plot 10-12: Modulation Characteristics – Modulation Limiting - 798 MHz; Negative Peak; NB



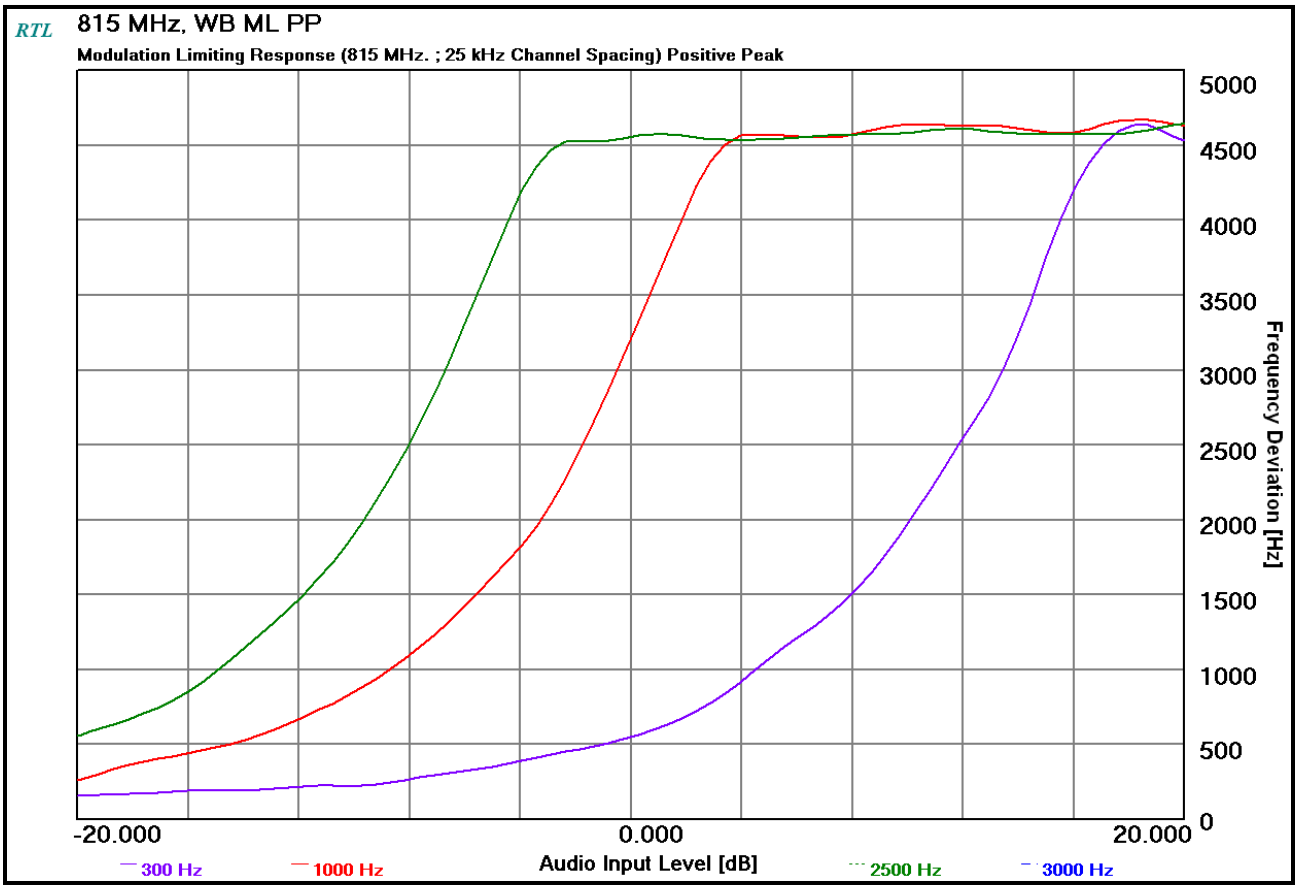
Plot 10-13: Modulation Characteristics – Modulation Limiting - 815 MHz; Positive Peak; NB



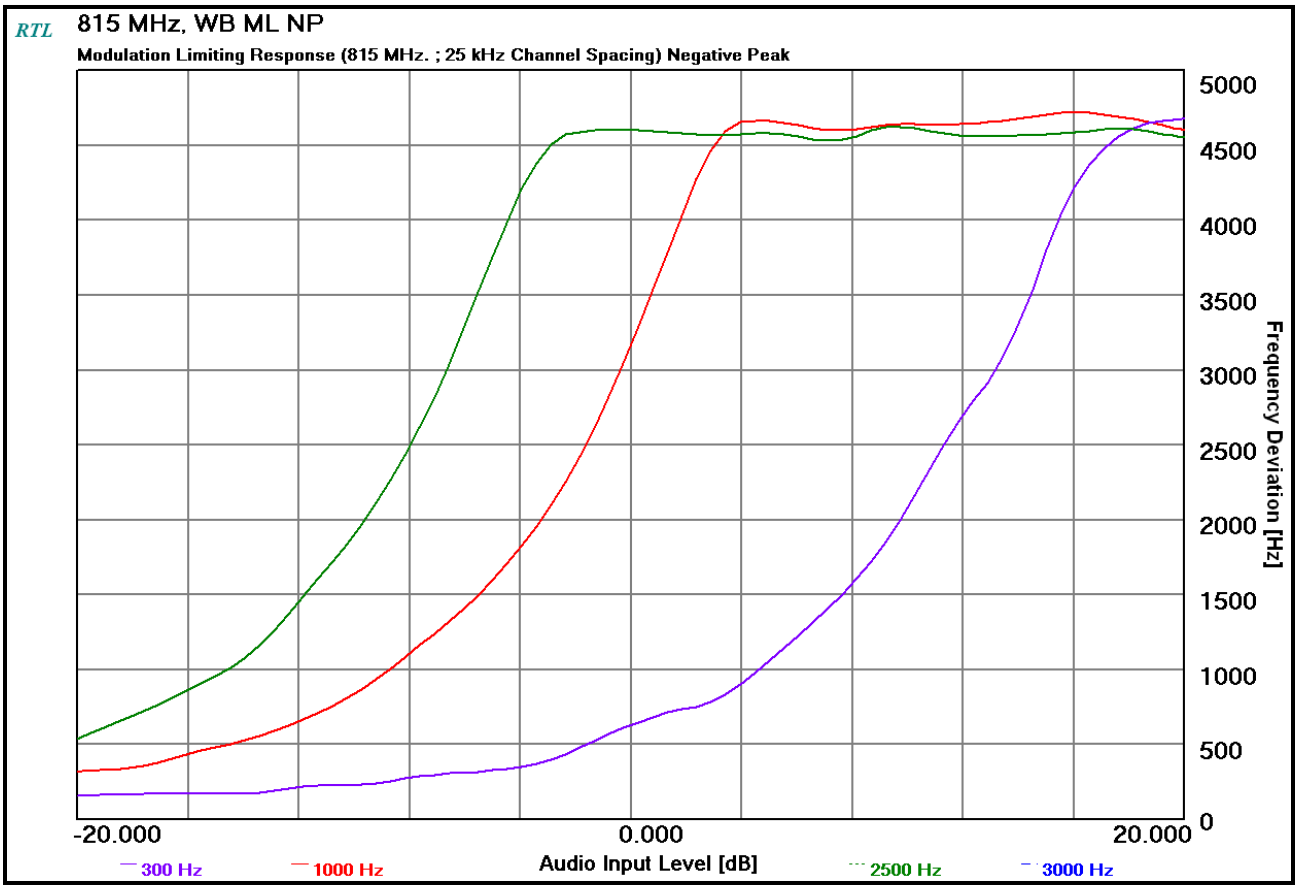
Plot 10-14: Modulation Characteristics – Modulation Limiting - 815 MHz; Negative Peak; NB



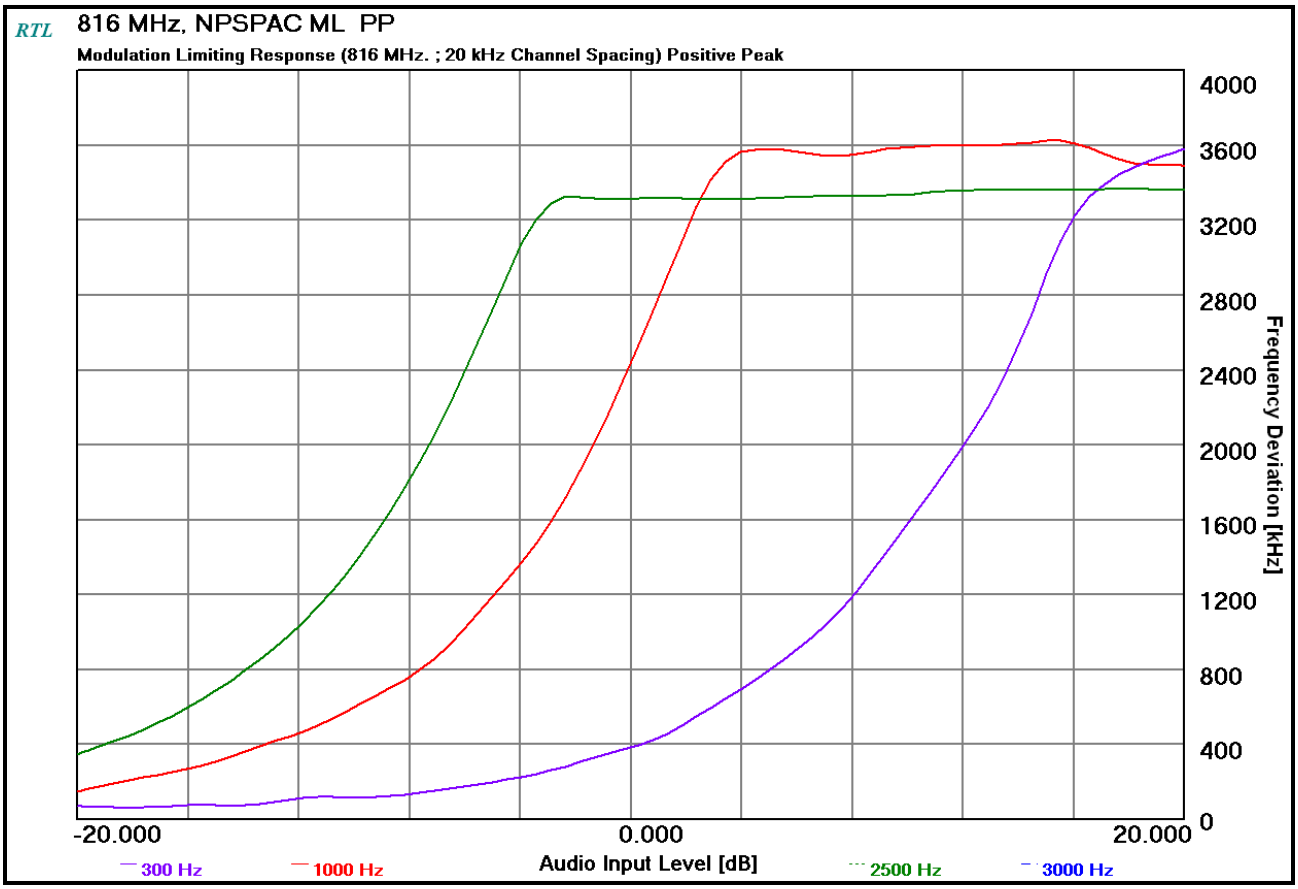
Plot 10-15: Modulation Characteristics – Modulation Limiting - 815 MHz; Positive Peak; WB



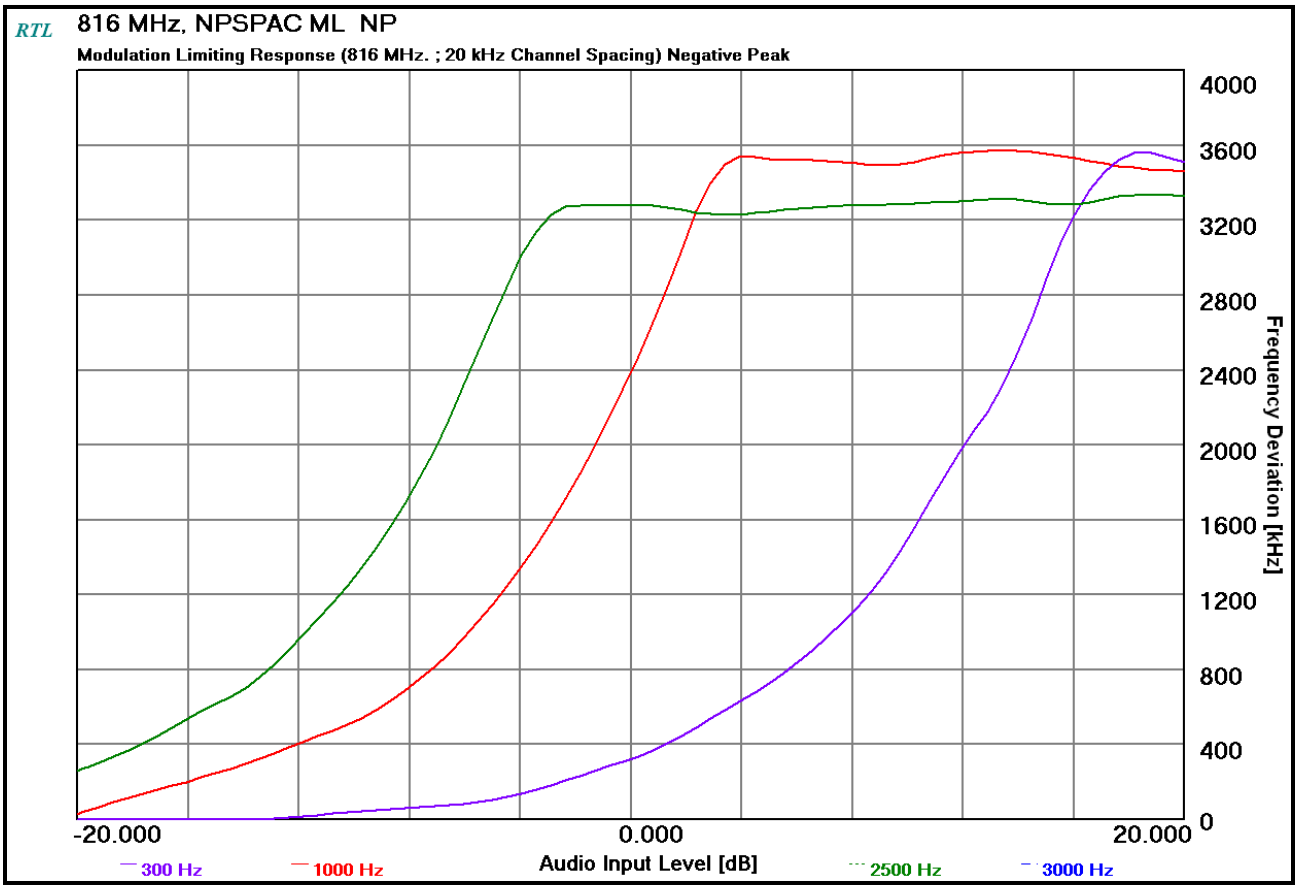
Plot 10-16: Modulation Characteristics – Modulation Limiting - 815 MHz; Negative Peak; WB



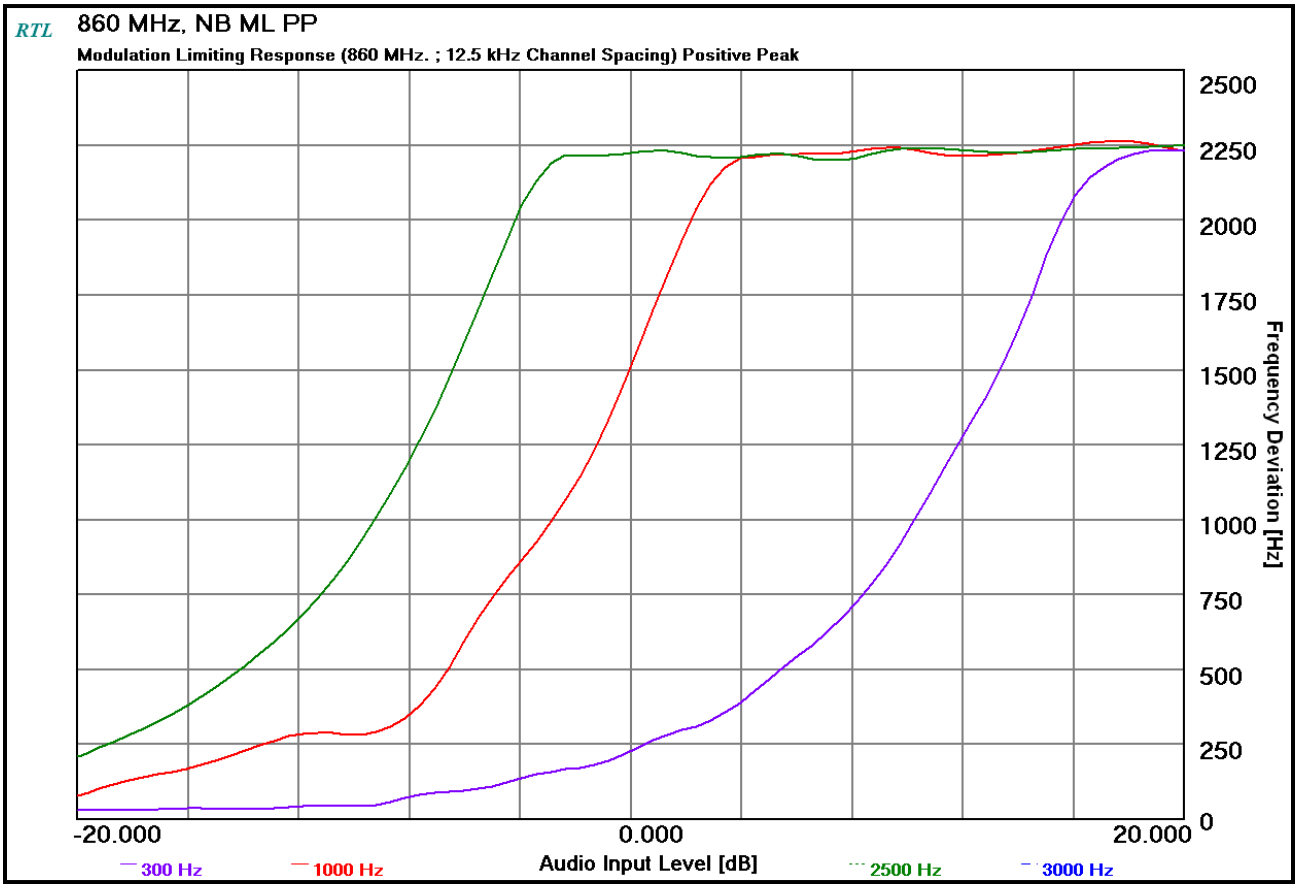
Plot 10-17: Modulation Characteristics – Modulation Limiting - 816 MHz; Positive Peak; NPSPAC



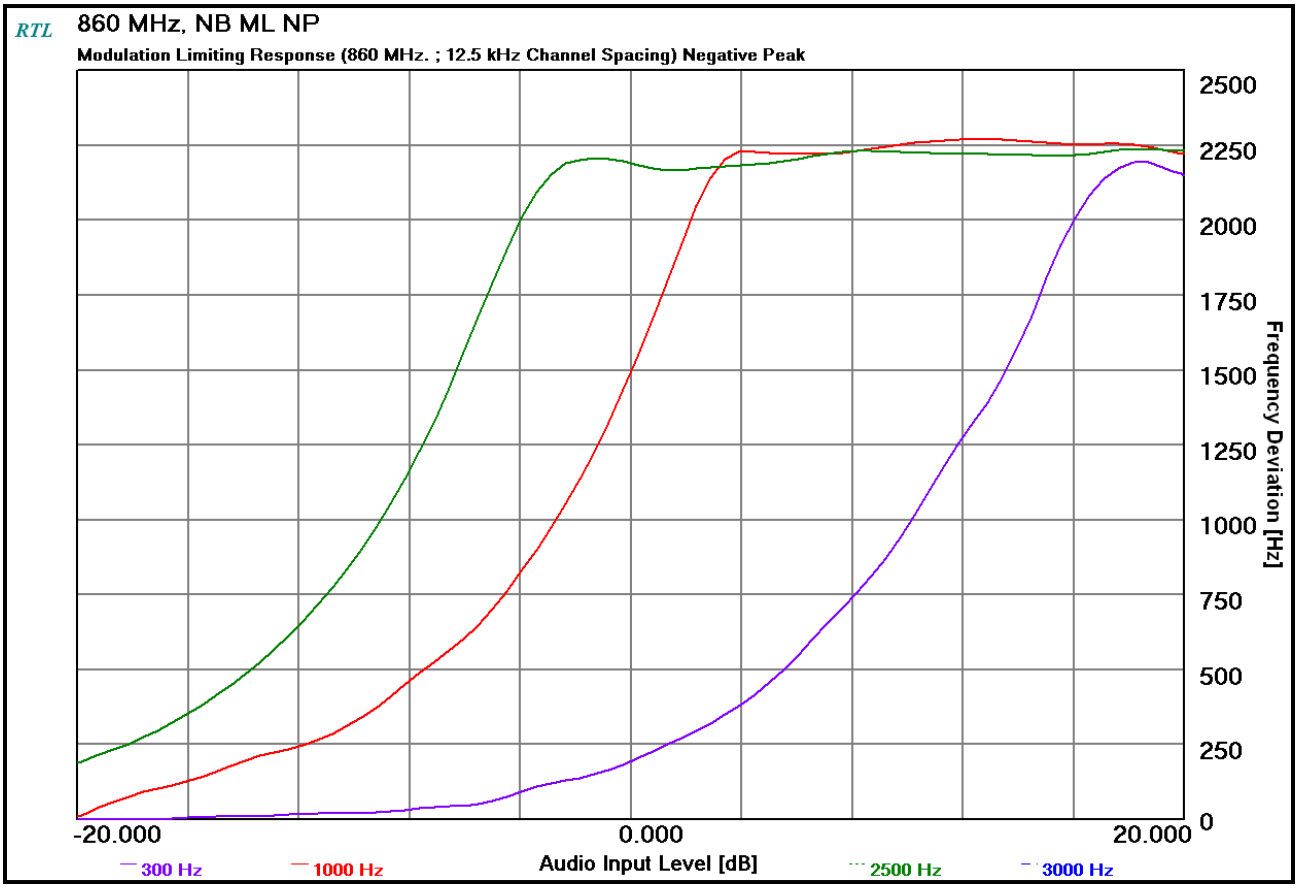
Plot 10-18: Modulation Characteristics – Modulation Limiting - 816 MHz; Negative Peak; NPSPAC



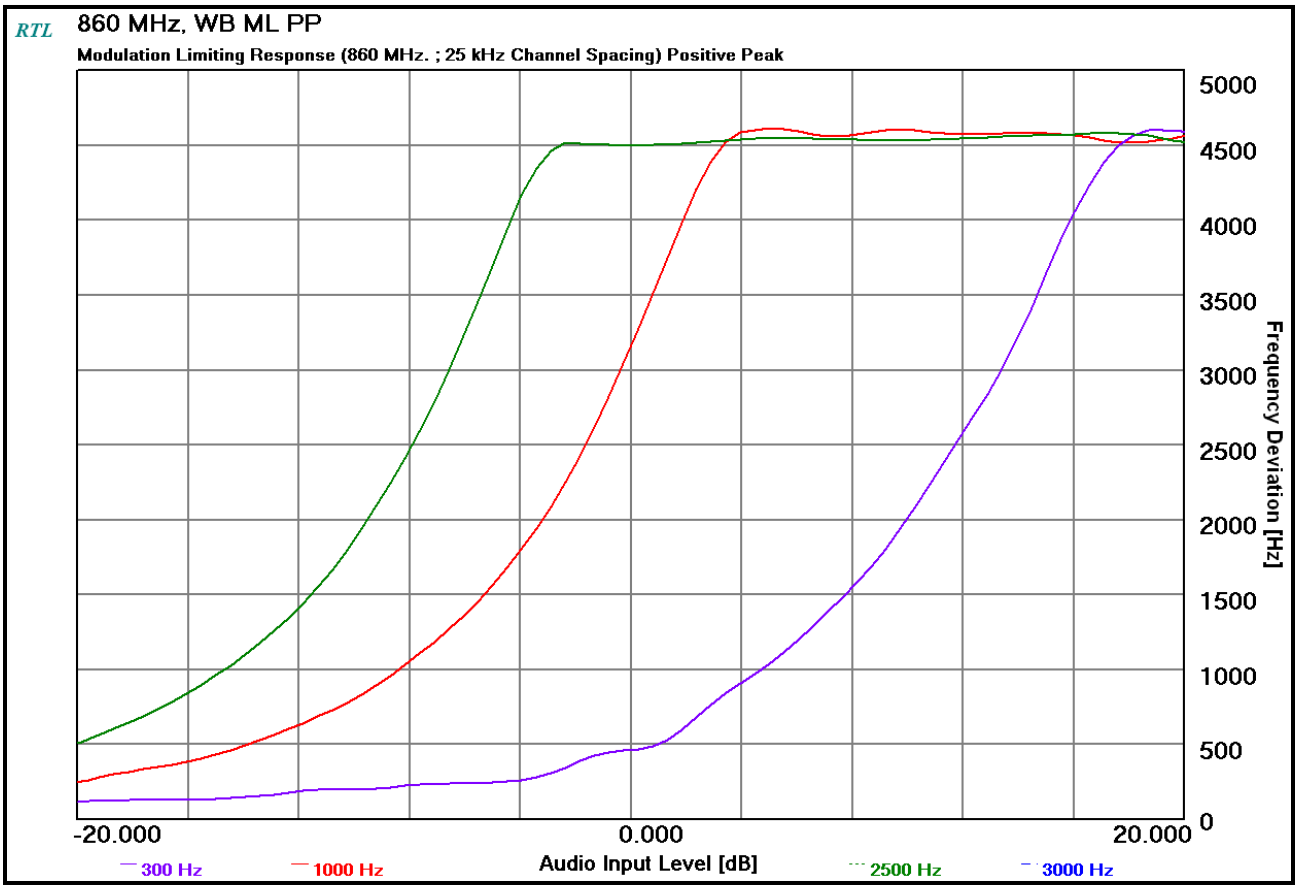
Plot 10-19: Modulation Characteristics – Modulation Limiting - 860 MHz; Positive Peak; NB



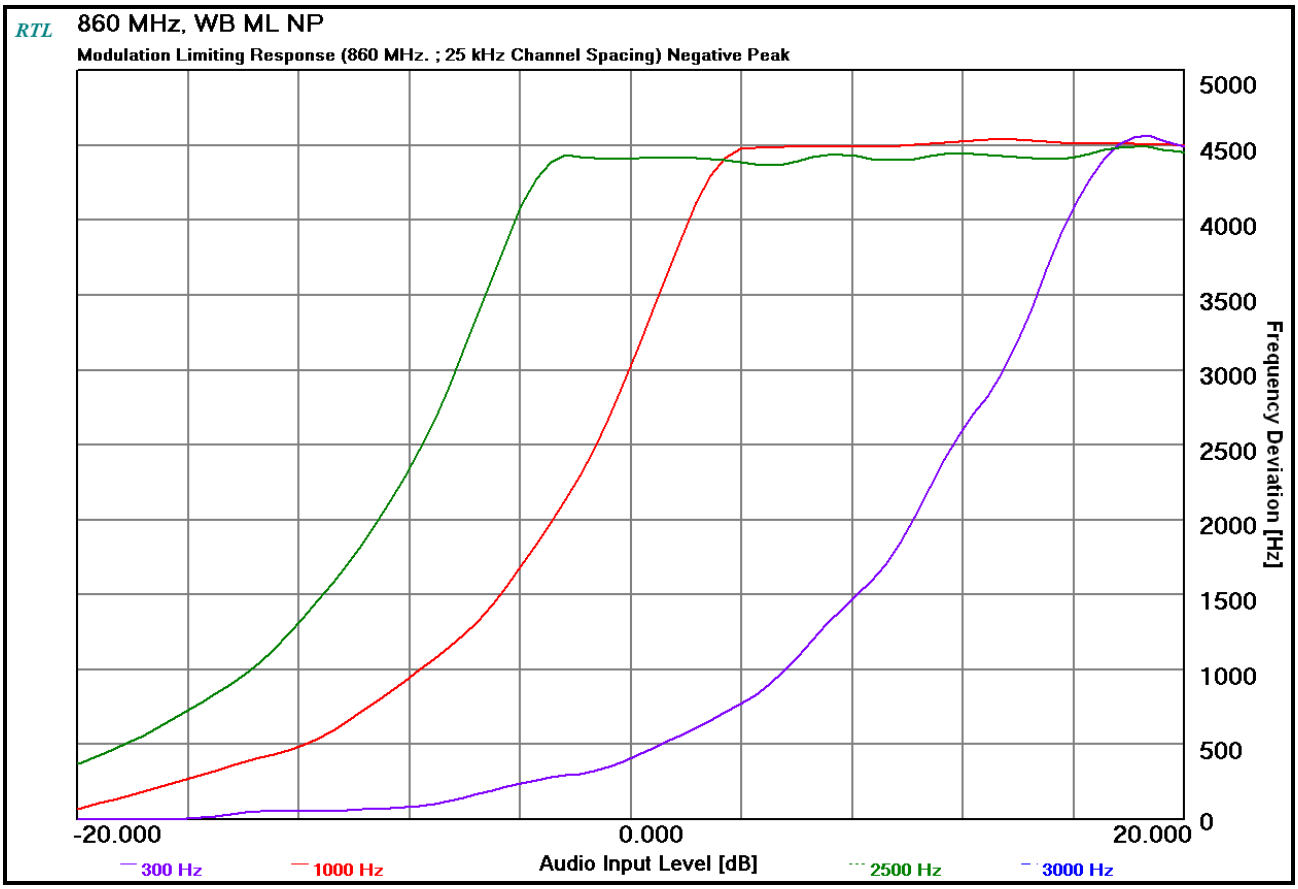
Plot 10-20: Modulation Characteristics – Modulation Limiting - 860 MHz; Negative Peak; NB



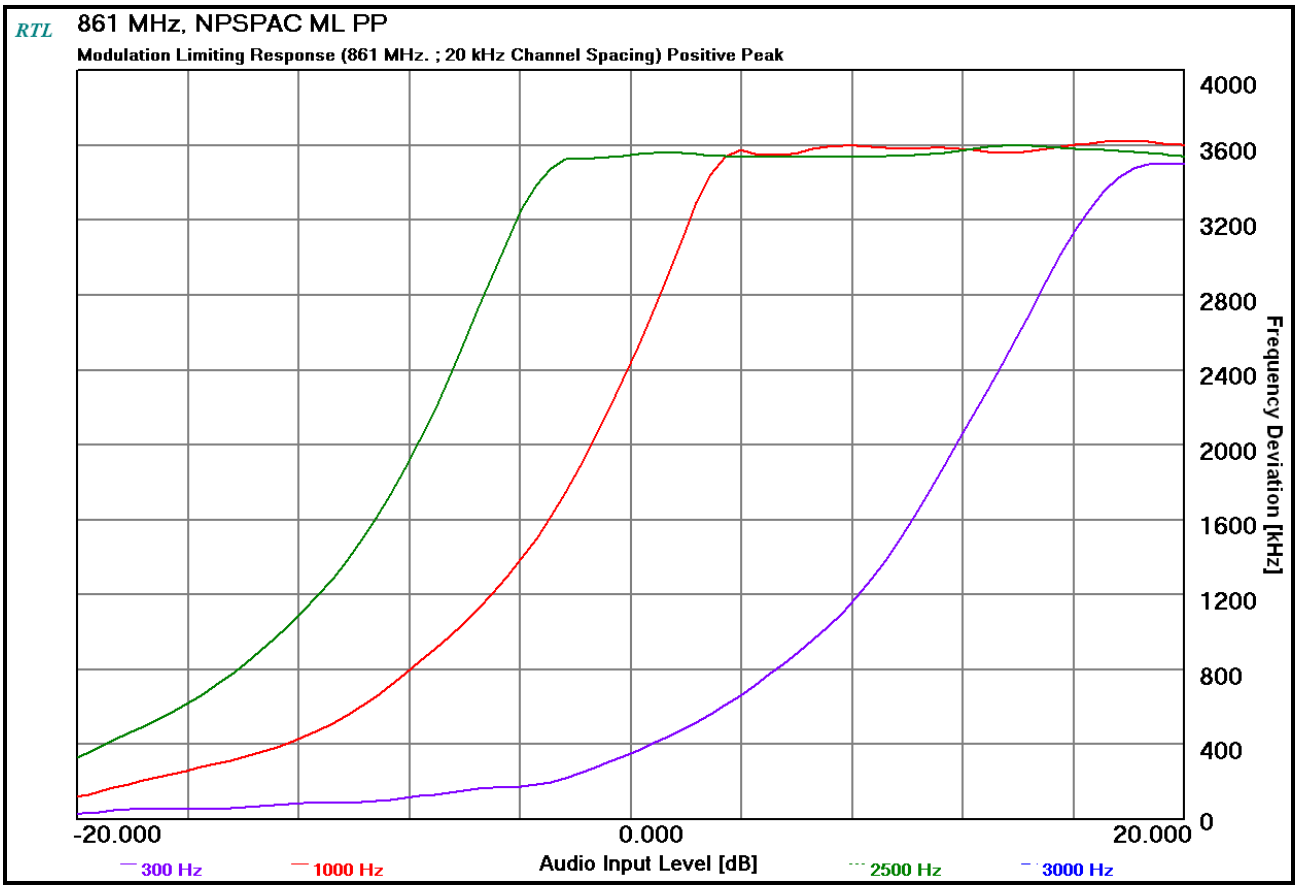
Plot 10-21: Modulation Characteristics – Modulation Limiting - 860 MHz; Positive Peak; WB



Plot 10-22: Modulation Characteristics – Modulation Limiting - 860 MHz; Negative Peak; WB



Plot 10-23: Modulation Characteristics – Modulation Limiting - 861 MHz; Positive Peak; NPSPAC



Plot 10-24: Modulation Characteristics – Modulation Limiting - 861 MHz; Negative Peak; NPSPAC

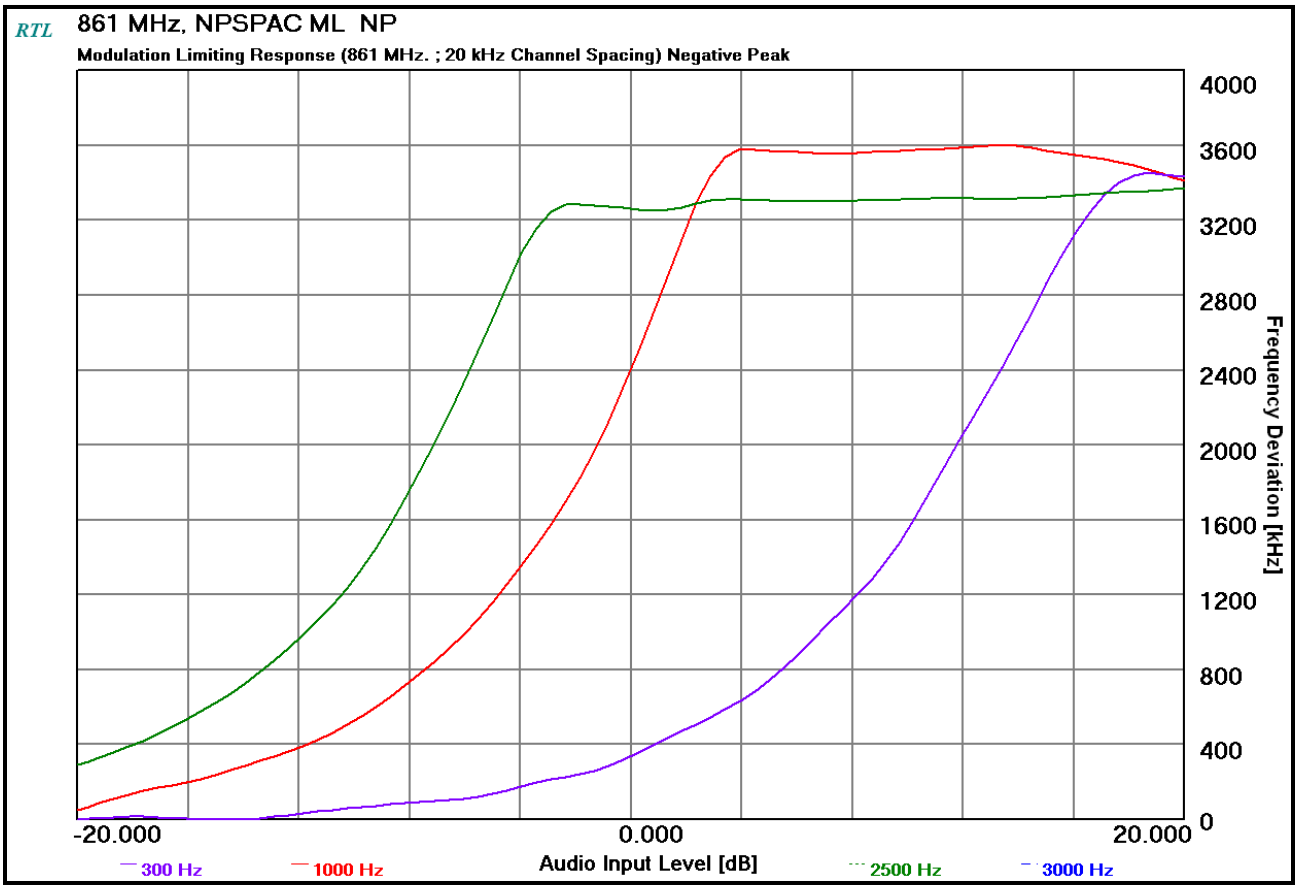


Table 10-1: Test Equipment Used For Modulation Requirements

RTL Asset #	Manufacturer	Model	Part Type	Serial Number	Calibration Due Date
901057	Hewlett Packard	3336B	Synthesizer/ Level Generator	2514A02585	4/13/18
901118	Hewlett Packard	HP8901B	Modulation Analyzer 150 kHz-1300 MHz	N/A	4/14/18
901581	Rohde & Schwarz	FSU	Spectrum Analyzer	1166.1660.50	3/22/18
900948	Weinschel Corporation	47-10-43	Attenuator DC-18 GHz 10 dB 50W	BH1487	9/1/18

Test Personnel:

Daniel W. Baltzell	Daniel W. Baltzell	May 17-25, 2017
EMC Test Engineer	Signature	Dates of Tests

11 FCC §2.202: Necessary Bandwidth and Emission Bandwidth

Type of Emissions: F3E, F1D, F1E

Voice – 25 kHz channel separation
Calculation:
Max modulation (M) in kHz: 3.0
Max deviation (D) in kHz: 5
Constant factor (K): 1 (assumed)
Bn = 2xM+2xDK = 16.0 kHz
Emission designator: 16K0F3E

Voice – 20 kHz channel separation (NPSPAC)
Calculation:
Max modulation (M) in kHz: 3.0
Max deviation (D) in kHz: 4
Constant factor (K): 1 (assumed)
Bn = 2xM+2xDK = 14.0 kHz
Emission designator: 14K0F3E

Voice – 12.5 kHz channel separation
Calculation:
Max modulation (M) in kHz: 3.0
Max deviation (D) in kHz: 2.5
Constant factor (K): 1 (assumed)
Bn = 2xM+2xDK = 11.0 kHz
Emission designator: 11K0F3E

P25 – Phase 1 Data/Voice
Calculation:
Data rate in bps (R) = 9600
Peak deviation of carrier (D) = 1800
Bn = $[9600/\log_2(4) + 2\ (1800)\ (1) = 8.400$ kHz
Emission designator: 8K40F1D, 8K40F1E

P25 Phase 2 Data/Voice (H-CPM TDMA)
Calculation:
Data rate in bps (R) =12000
Peak deviation of carrier (D) = 1050
Bn = $[12000/\log_2(4) + 2\ (1050)\ (1) = 8.1$ kHz
Emission designator: 8K10DXW

(2-level FSK 9600; NB NPSPAC) EDACS
Calculation:
Max modulation (M) in kHz: 3.0
Max deviation (D) in kHz: 4.0
Constant factor (K): 1 (default)
Bn = 2xM+2xDK = 14.0 kHz
Emission designator: 14K0F1D/E

(2-level FSK 9600; NB) OpenSky
Calculation:
Max modulation (M) in kHz: 3.0
Max deviation (D) in kHz: 4.0
Constant factor (K): 1 (default)
Bn = 2xM+2xDK = 14.0 kHz
Emission designator: 8K40F9W

(2-level FSK 9600; NB) EDACS
Calculation:
Max modulation (M) in kHz: 3.0
Max deviation (D) in kHz: 4.0
Constant factor (K): 1 (default)
Bn = 2xM+2xDK = 14.0 kHz
Emission designator: 11K7F1D/E

(4-level FSK Data/Voice; NPSPAC) OpenSky
Calculation:
Max modulation (M) in kHz: 3.0
Max deviation (D) in kHz: 4.0
Constant factor (K): 1 (default)
Bn = 2xM+2xDK = 14.0 kHz
Emission designator: 12K1F9W

(4-level FSK Data/Voice; SMR) OpenSky
Calculation:
Max modulation (M) in kHz: 3.0
Max deviation (D) in kHz: 4.0
Constant factor (K): 1 (default)
Bn = 2xM+2xDK = 14.0 kHz
Emission designator: 15K4F9W

(2-level FSK 9600; WB) EDACS
Calculation:
Max modulation (M) in kHz: 3.0
Max deviation (D) in kHz: 4.0
Constant factor (K): 1 (default)
Bn = 2xM+2xDK = 14.0 kHz
Emission designator: 16K0F1D/E

12 Conclusion

The data in this measurement report shows that the **Harris Corporation** Model **XL-185P, FCC ID: OWDTR-0154-E, IC: 3636B-0154,** complies with the applicable requirements of FCC Parts 2 and 90 and IC RSS-119.