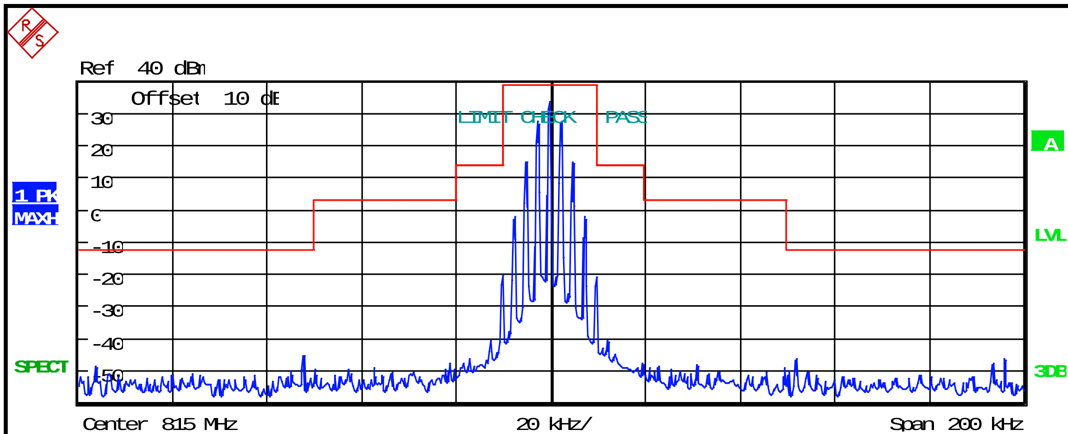
Plot 8-79: Occupied Bandwidth – 815 MHz; Narrowband Analog; Mask B

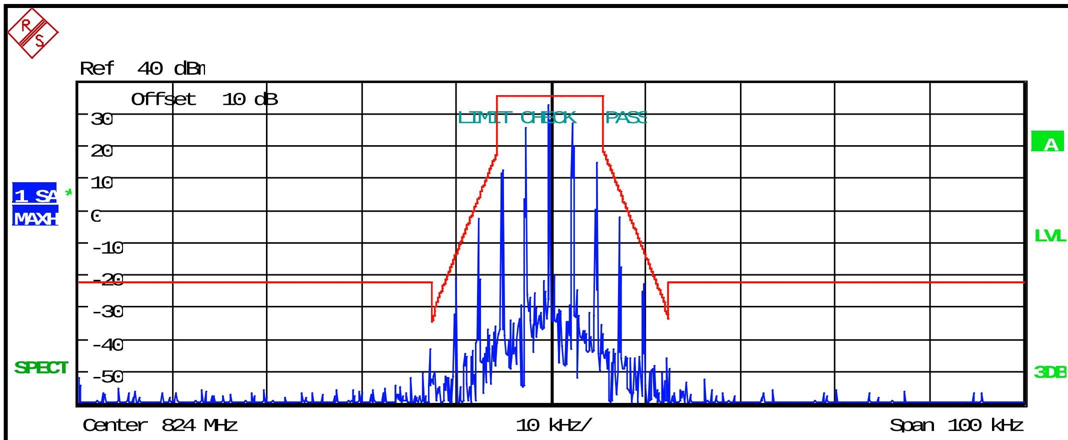


Tx Channel **None**

Bandwidth 300 Hz Peak Power 33.18 dBm

Start [Hz]	Stop [Hz]	RBW [Hz]	Freq [Hz]	PwrAbs [dBm]	PwrRel [dBc]	Δ Limit [dB]
-100.000 k	-50.000 k	300.00	814.947436 M	-45.48	-83.51	-32.48
-50.000 k	-20.000 k	300.00	814.978526 M	-47.89	-85.93	-50.39
-20.000 k	-10.000 k	300.00	814.989744 M	-20.94	-58.98	-34.44
10.000 k	20.000 k	300.00	815.010000 M	-24.49	-62.53	-37.99
20.000 k	50.000 k	300.00	815.030769 M	-48.36	-86.40	-50.86
50.000 k	100.000 k	300.00	815.051923 M	-46.50	-84.54	-33.50

Plot 8-80: Occupied Bandwidth – 824 MHz; Narrowband Analog; Mask D

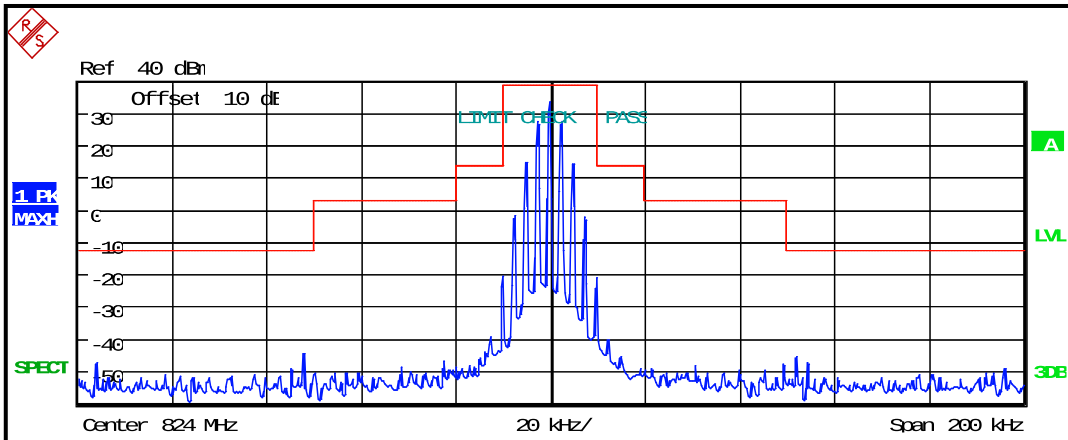


Tx Channel | **None**

Bandwidth 11.25 kHz | Power 35.11 dBm

Start [Hz]	Stop [Hz]	RBW [Hz]	Freq [Hz]	PwrAbs [dBm]	PwrRel [dBc]	Δ Limit [dB]
-50.000 k	-12.500 k	100.00	823.987163 M	-43.20	-78.31	-20.51
-12.490 k	-5.625 k	100.00	823.992358 M	-2.77	-37.88	-5.88
5.625 k	12.500 k	100.00	824.007243 M	-2.40	-37.50	-8.43
12.510 k	50.000 k	100.00	824.016134 M	-52.76	-87.87	-30.07

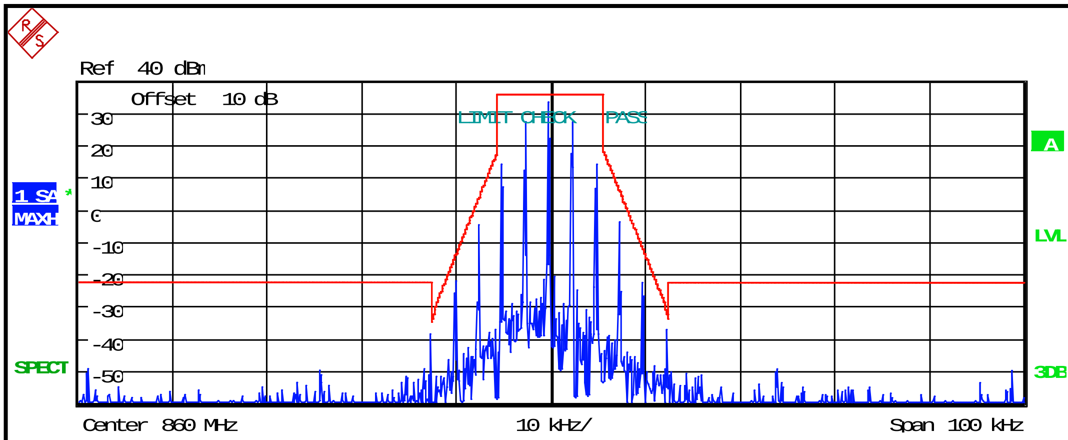
Plot 8-81: Occupied Bandwidth – 824 MHz; Narrowband Analog; Mask B



Tx Channel None
Bandwidth 300 Hz Peak Power 33.09 dBm

Start [Hz]	Stop [Hz]	RBW [Hz]	Freq [Hz]	PwrAbs [dBm]	PwrRel [dBc]	∆ Limit [dB]
-100.000 k	-50.000 k	300.00	823.947436 M	-44.68	-82.56	-31.68
-50.000 k	-20.000 k	300.00	823.977244 M	-47.28	-85.15	-49.78
-20.000 k	-10.000 k	300.00	823.989744 M	-20.86	-58.74	-34.36
10.000 k	20.000 k	300.00	824.010000 M	-24.84	-62.72	-38.34
20.000 k	50.000 k	300.00	824.049038 M	-48.13	-86.00	-50.63
50.000 k	100.000 k	300.00	824.051923 M	-45.61	-83.49	-32.61

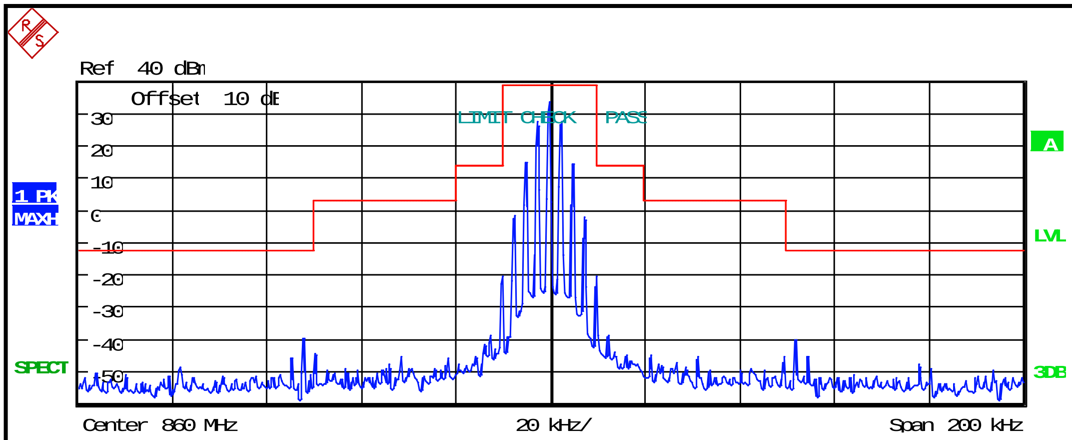
Plot 8-82: Occupied Bandwidth – 860 MHz; Narrowband Analog; Mask D



Tx Channel | **None**
Bandwidth 11.25 kHz | Power 35.34 dBm

Start [Hz]	Stop [Hz]	RBW [Hz]	Freq [Hz]	PwrAbs [dBm]	PwrRel [dBc]	Δ Limit [dB]
-50.000 k	-12.500 k	100.00	859.987163 M	-38.56	-73.89	-16.09
-12.490 k	-5.625 k	100.00	859.992258 M	-4.71	-40.04	-7.09
5.625 k	12.500 k	100.00	860.012138 M	-37.28	-72.61	-7.35
12.510 k	50.000 k	100.00	860.023826 M	-49.22	-84.56	-26.76

Plot 8-83: Occupied Bandwidth – 860 MHz; Narrowband Analog; Mask B

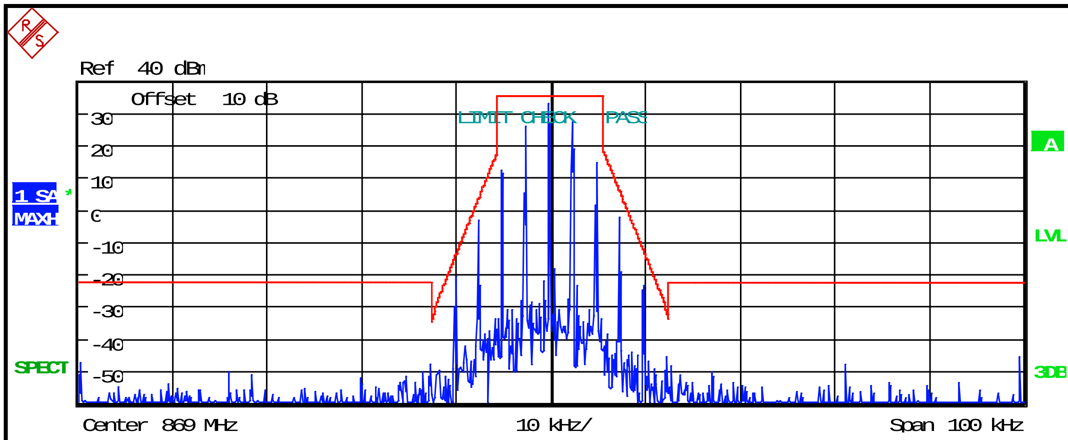


Tx Channel None

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 8-84: Occupied Bandwidth – 869 MHz; Narrowband Analog; Mask D

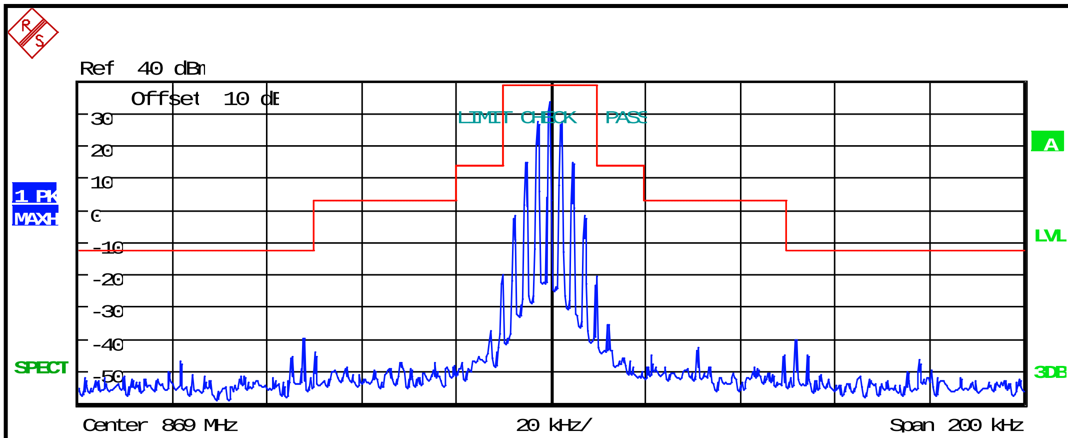


Tx Channel **None**

Bandwidth 11.25 kHz Power 35.26 dBm

Start [Hz]	Stop [Hz]	RBW [Hz]	Freq [Hz]	PwrAbs [dBm]	PwrRel [dBc]	Δ Limit [dB]
-50.000 k	-12.500 k	100.00	868.987163 M	-48.12	-83.38	-25.58
-12.490 k	-5.625 k	100.00	868.989860 M	-20.99	-56.25	-5.90
5.625 k	12.500 k	100.00	869.007243 M	-2.52	-37.78	-8.55
12.510 k	50.000 k	100.00	869.049401 M	-45.90	-81.16	-23.36

Plot 8-85: Occupied Bandwidth – 869 MHz; Narrowband Analog; Mask B

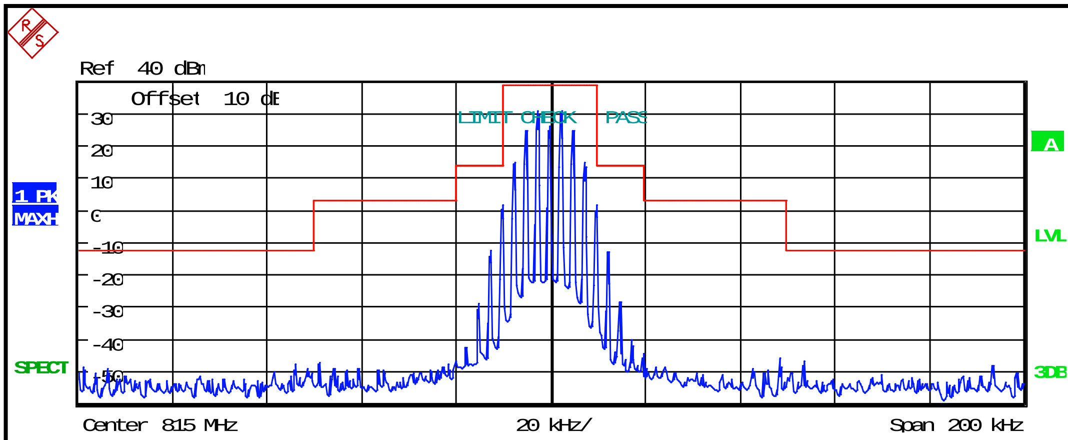


Tx Channel — **None**

Bandwidth 300 Hz — Peak Power 33.10 dBm

Start [Hz]	Stop [Hz]	RBW [Hz]	Freq [Hz]	PwrAbs [dBm]	PwrRel [dBc]	Δ Limit [dB]
-100.000 k	-50.000 k	300.00	868.947436 M	-39.93	-77.83	-26.93
-50.000 k	-20.000 k	300.00	868.950000 M	-44.25	-82.14	-46.75
-20.000 k	-10.000 k	300.00	868.989744 M	-20.34	-58.23	-33.84
10.000 k	20.000 k	300.00	869.010000 M	-24.20	-62.09	-37.70
20.000 k	50.000 k	300.00	869.031090 M	-42.92	-80.81	-45.42
50.000 k	100.000 k	300.00	869.051603 M	-40.39	-78.28	-27.39

Plot 8-86: Occupied Bandwidth – 815 MHz; Wideband Analog; Mask B

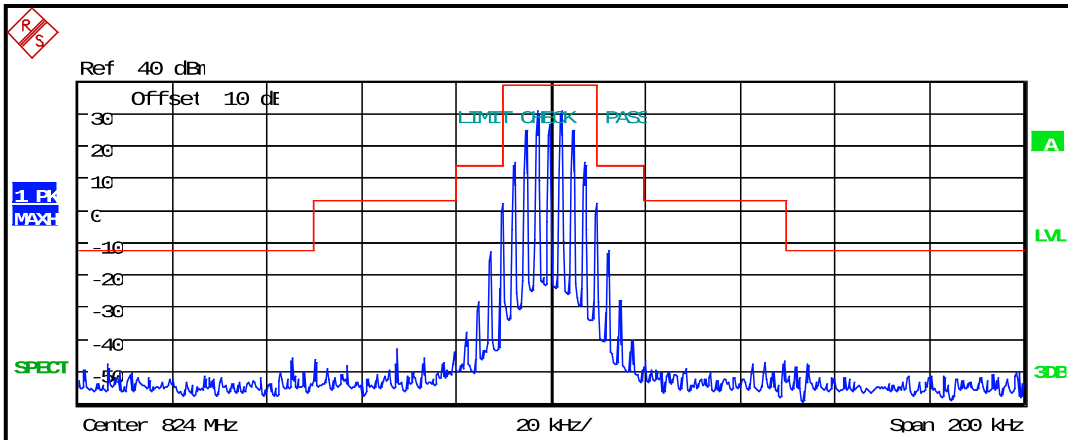


Tx Channel None

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

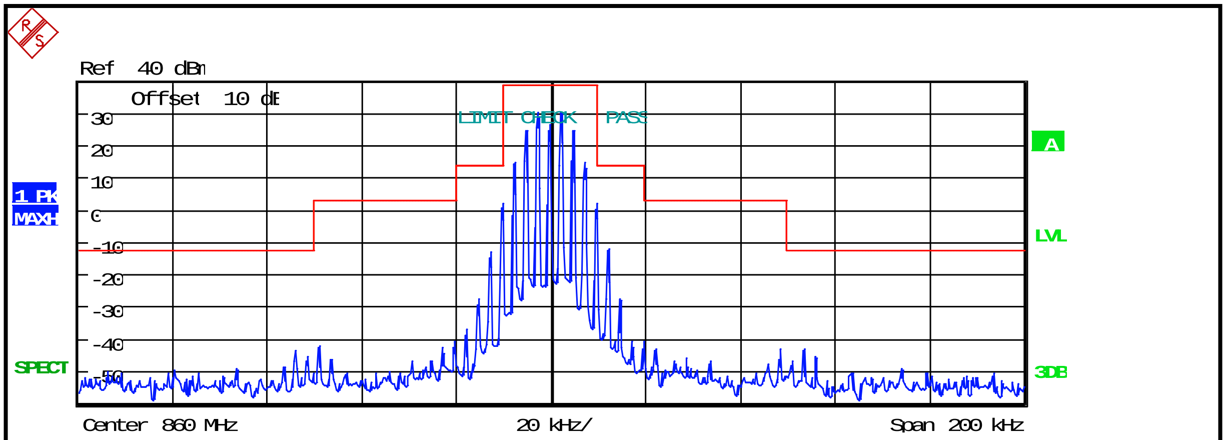
Plot 8-87: Occupied Bandwidth – 824 MHz; Wideband Analog; Mask B



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	823.945192 M	-45.97	-83.97	-32.97
-50.000 k	-20.000 k	300.00	823.967308 M	-43.28	-81.28	-45.78
-20.000 k	-10.000 k	300.00	823.989744 M	1.54	-36.45	-11.96
10.000 k	20.000 k	300.00	824.010000 M	-2.37	-40.36	-15.87
20.000 k	50.000 k	300.00	824.020000 M	-47.28	-85.27	-49.78
50.000 k	100.000 k	300.00	824.054167 M	-48.13	-86.12	-35.13

Plot 8-88: Occupied Bandwidth – 860 MHz; Wideband Analog; Mask B

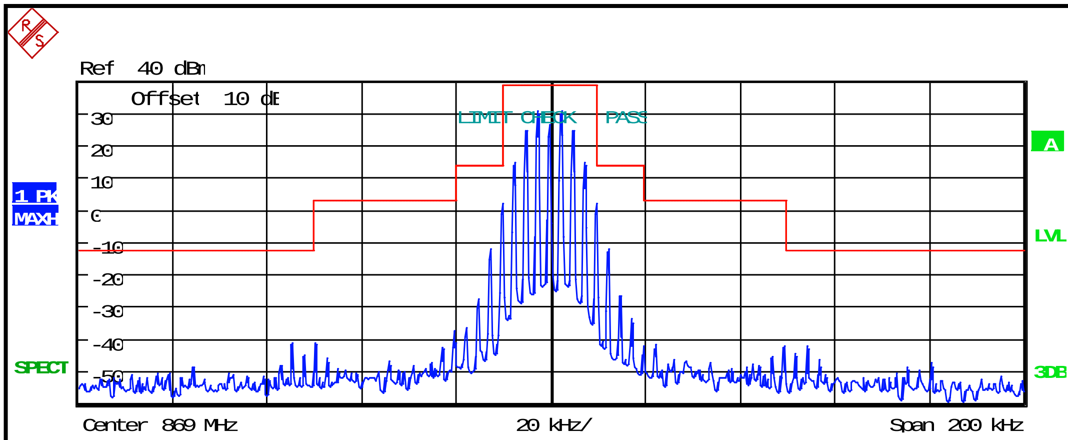


Tx Channel — None

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 8-89: Occupied Bandwidth – 869 MHz; Wideband Analog; Mask B

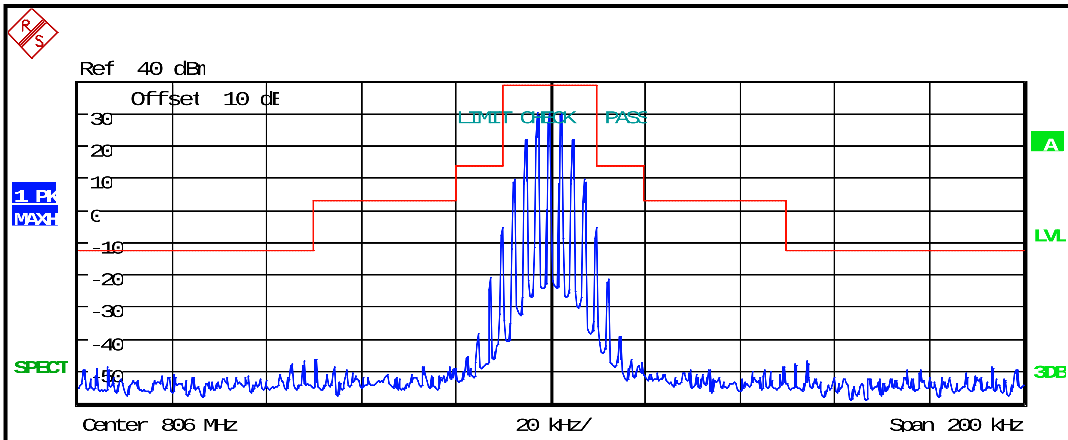


Tx Channel **None**

Bandwidth 300 Hz Peak Power 30.23 dBm

Start [Hz]	Stop [Hz]	RBW [Hz]	Freq [Hz]	PwrAbs [dBm]	PwrRel [dBc]	Δ Limit [dB]
-100.000 k	-50.000 k	300.00	868.945192 M	-41.67	-79.63	-28.67
-50.000 k	-20.000 k	300.00	868.979487 M	-37.86	-75.82	-40.36
-20.000 k	-10.000 k	300.00	868.989744 M	1.88	-36.07	-11.62
10.000 k	20.000 k	300.00	869.010000 M	-1.55	-39.51	-15.05
20.000 k	50.000 k	300.00	869.022115 M	-41.87	-79.83	-44.37
50.000 k	100.000 k	300.00	869.054167 M	-42.44	-80.40	-29.44

Plot 8-90: Occupied Bandwidth – 806 MHz; NPSPAC; Mask B

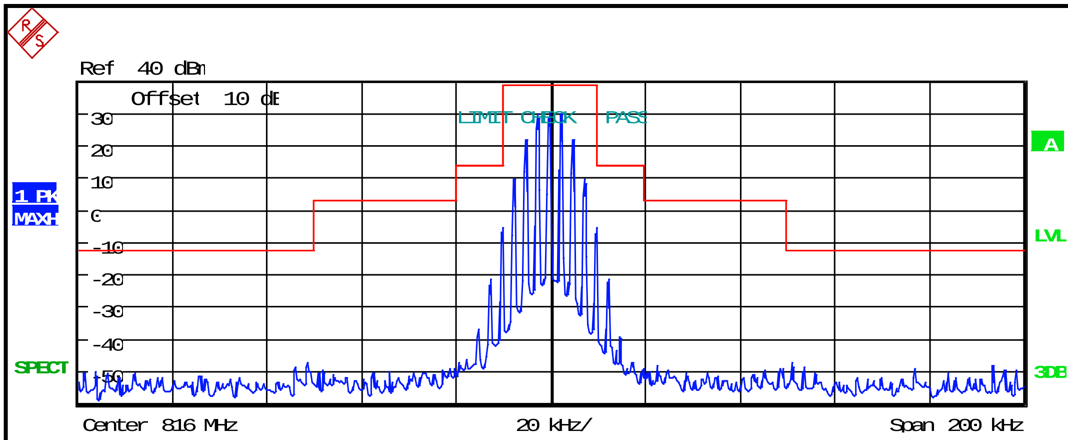


Tx Channel **None**

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 8-91: Occupied Bandwidth – 816 MHz; NPSPAC; Mask B

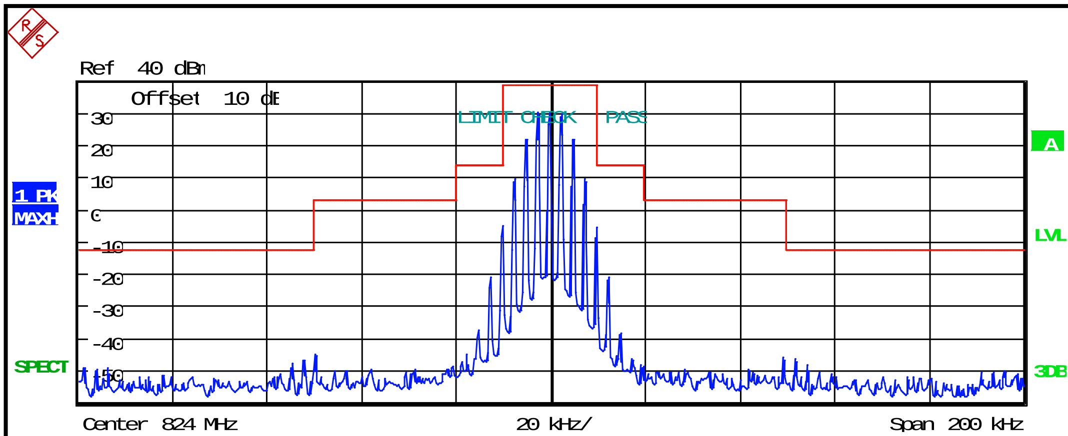


Tx Channel **None**

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 8-92: Occupied Bandwidth – 824 MHz; NPSPAC; Mask B

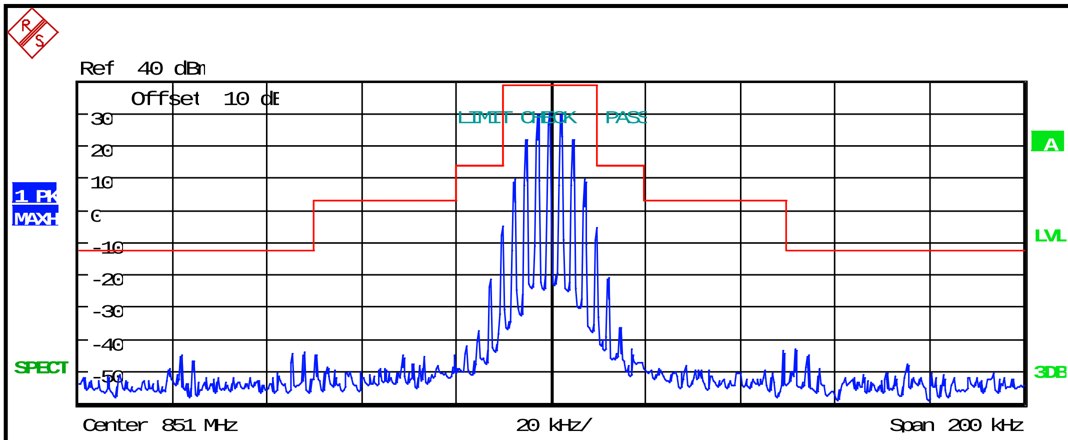


Tx Channel — None

Bandwidth 300 Hz — Peak Power 29.82 dBm

Start [Hz]	Stop [Hz]	RBW [Hz]	Freq [Hz]	PwrAbs [dBm]	PwrRel [dBc]	Δ Limit [dB]
-100.000 k	-50.000 k	300.00	823.947436 M	-47.28	-85.20	-34.28
-50.000 k	-20.000 k	300.00	823.950000 M	-45.30	-83.23	-47.80
-20.000 k	-10.000 k	300.00	823.989744 M	-5.48	-43.41	-18.98
10.000 k	20.000 k	300.00	824.010000 M	-9.38	-47.30	-22.88
20.000 k	50.000 k	300.00	824.049038 M	-46.16	-84.08	-48.66
50.000 k	100.000 k	300.00	824.051603 M	-46.70	-84.62	-33.70

Plot 8-93: Occupied Bandwidth – 851 MHz; NPSPAC; Mask B

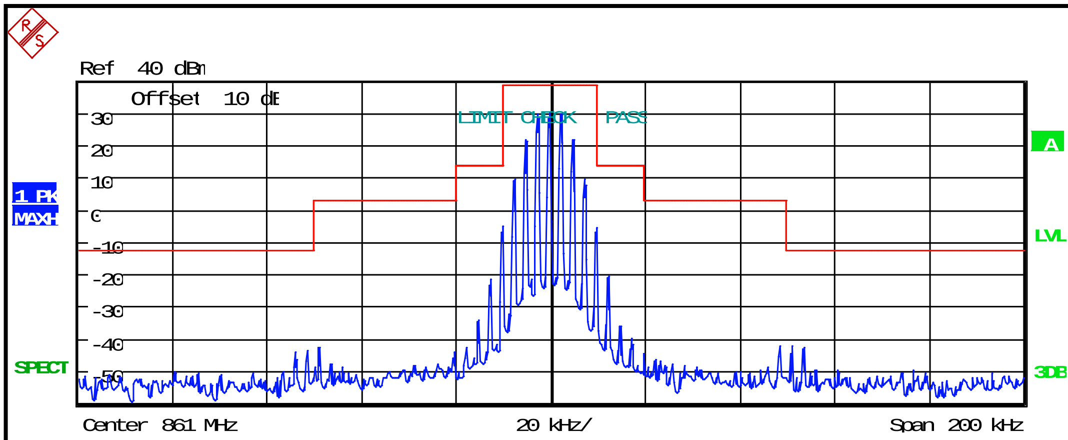


Tx Channel **None**

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 8-94: Occupied Bandwidth – 861 MHz; NPSPAC; Mask B

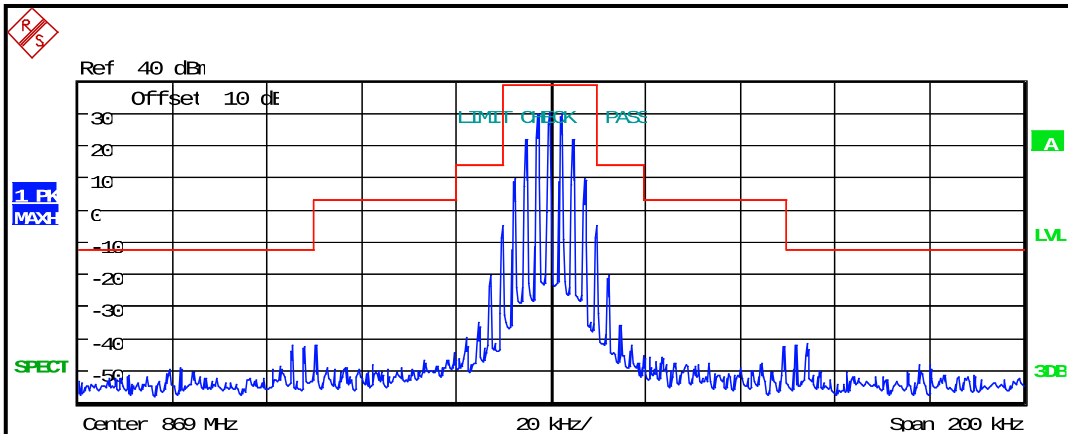


Tx Channel — **None**

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 8-95: Occupied Bandwidth – 869 MHz; NPSPAC; Mask B

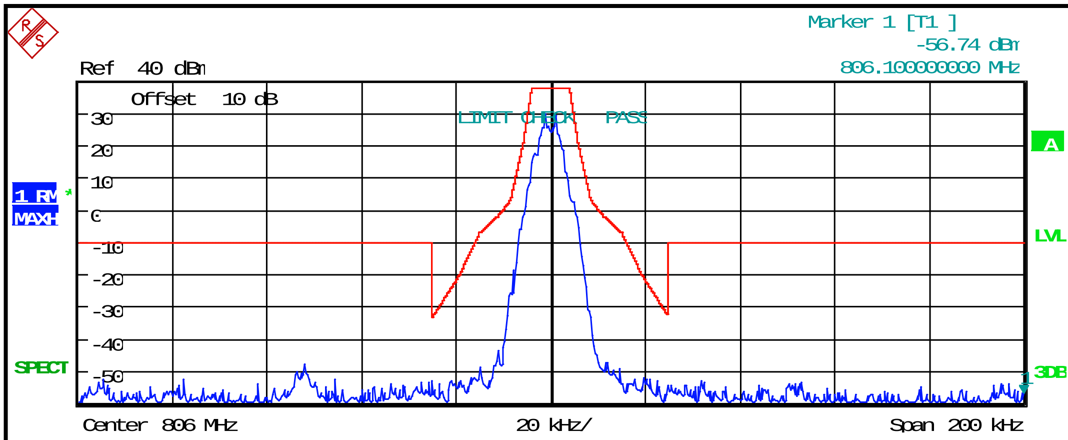


Tx Channel — None

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	868.945192 M	-42.22	-80.12	-29.22
-50.000 k	-20.000 k	300.00	868.950321 M	-42.22	-80.12	-44.72
-20.000 k	-10.000 k	300.00	868.989744 M	-5.12	-43.01	-18.62
10.000 k	20.000 k	300.00	869.010000 M	-8.71	-46.61	-22.21
20.000 k	50.000 k	300.00	869.049038 M	-42.92	-80.81	-45.42
50.000 k	100.000 k	300.00	869.054167 M	-42.10	-80.00	-29.10

Plot 8-96: Occupied Bandwidth – 806 MHz; P25 RND; Mask H

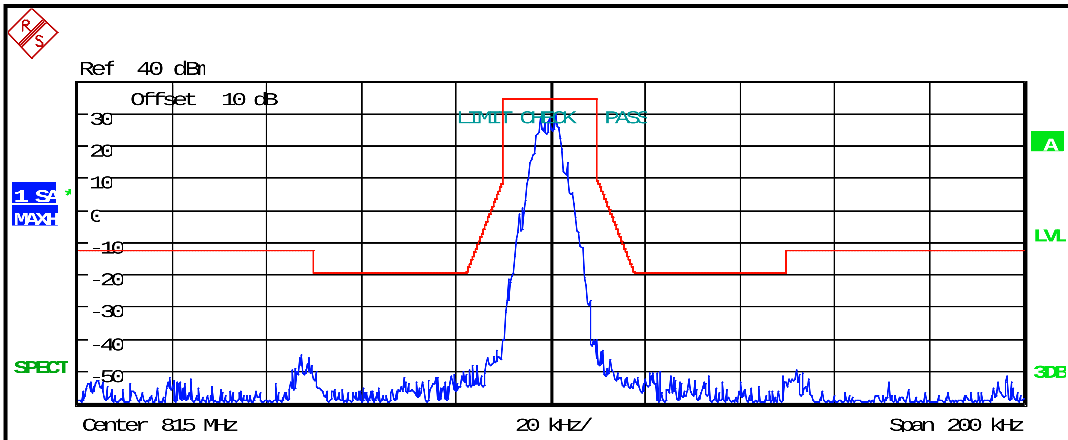


Tx Channel — None

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 8-97: Occupied Bandwidth – 815 MHz; P25 RND; Mask G

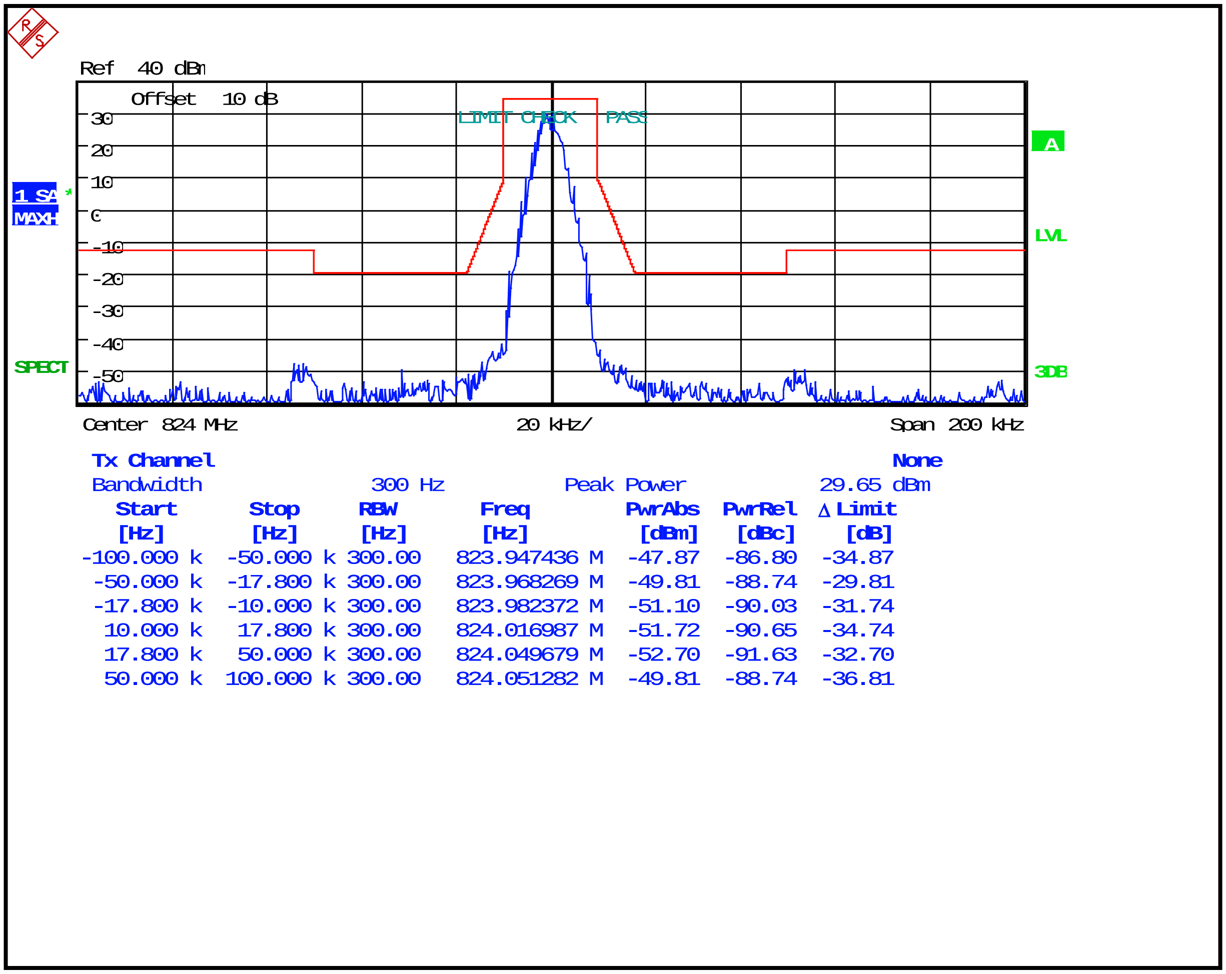


Tx Channel **None**

Bandwidth 300 Hz Peak Power 29.24 dBm

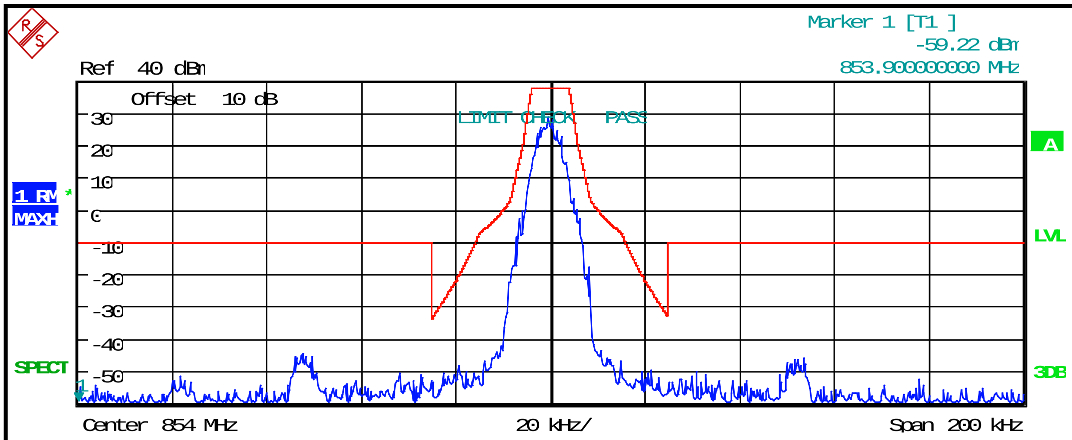
Start [Hz]	Stop [Hz]	RBW [Hz]	Freq [Hz]	PwrAbs [dBm]	PwrRel [dBc]	Δ Limit [dB]
-100.000 k	-50.000 k	300.00	814.947115 M	-45.28	-83.90	-32.28
-50.000 k	-17.800 k	300.00	814.950321 M	-50.40	-89.01	-30.40
-17.800 k	-10.000 k	300.00	814.982200 M	-51.44	-90.05	-31.44
10.000 k	17.800 k	300.00	815.017628 M	-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 8-98: Occupied Bandwidth – 824 MHz; P25 RND; 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	823.947436 M	-47.87	-86.80	-34.87
-50.000 k	-17.800 k	300.00	823.968269 M	-49.81	-88.74	-29.81
-17.800 k	-10.000 k	300.00	823.982372 M	-51.10	-90.03	-31.74
10.000 k	17.800 k	300.00	824.016987 M	-51.72	-90.65	-34.74
17.800 k	50.000 k	300.00	824.049679 M	-52.70	-91.63	-32.70
50.000 k	100.000 k	300.00	824.051282 M	-49.81	-88.74	-36.81

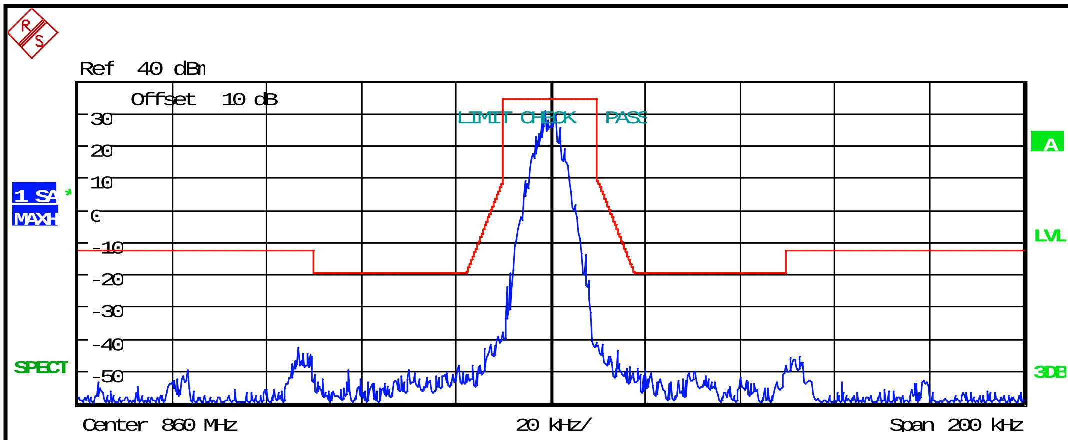
Plot 8-99: Occupied Bandwidth – 854 MHz; P25 RND; Mask H



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 8-100: Occupied Bandwidth – 860 MHz; P25 RND; Mask G

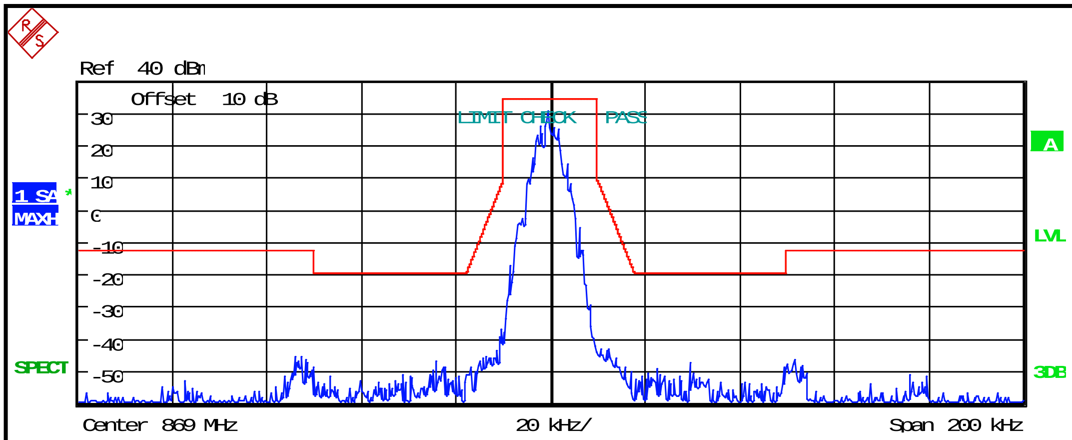


Tx Channel **None**

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 8-101: Occupied Bandwidth – 869 MHz; P25 RND; Mask G

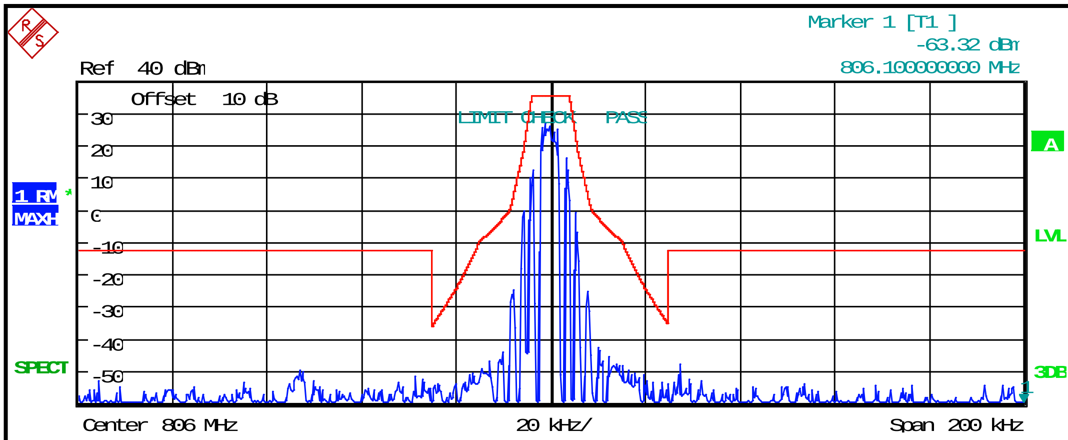


Tx Channel **None**

Bandwidth 300 Hz Peak Power 30.30 dBm

Start [Hz]	Stop [Hz]	RBW [Hz]	Freq [Hz]	PwrAbs [dBm]	PwrRel [dBc]	Δ Limit [dB]
-100.000 k	-50.000 k	300.00	868.947115 M	-46.48	-83.77	-33.48
-50.000 k	-17.800 k	300.00	868.975641 M	-47.04	-84.33	-27.04
-17.800 k	-10.000 k	300.00	868.982200 M	-51.44	-88.72	-31.44
10.000 k	17.800 k	300.00	869.016987 M	-50.22	-87.50	-33.24
17.800 k	50.000 k	300.00	869.029487 M	-47.69	-84.98	-27.69
50.000 k	100.000 k	300.00	869.051603 M	-46.48	-83.77	-33.48

Plot 8-102: Occupied Bandwidth – 806 MHz; CPM TDMA; Mask H

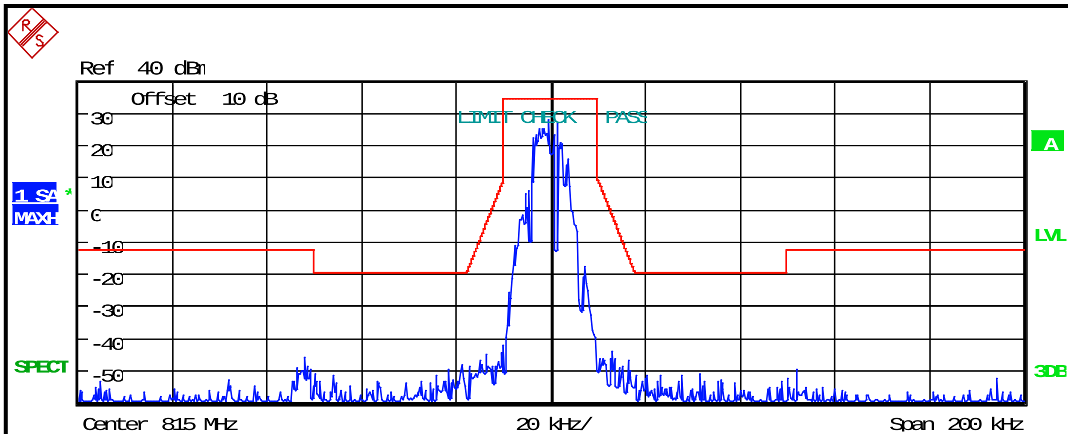


Tx Channel **None**

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 8-103: Occupied Bandwidth – 815 MHz; CPM TDMA; Mask G

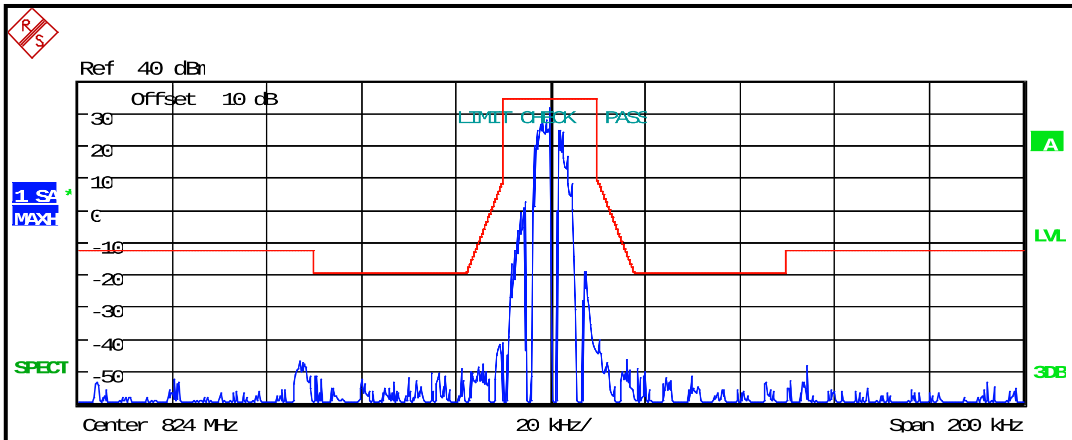


Tx Channel **None**

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 8-104: Occupied Bandwidth – 824 MHz; CPM TDMA; Mask G

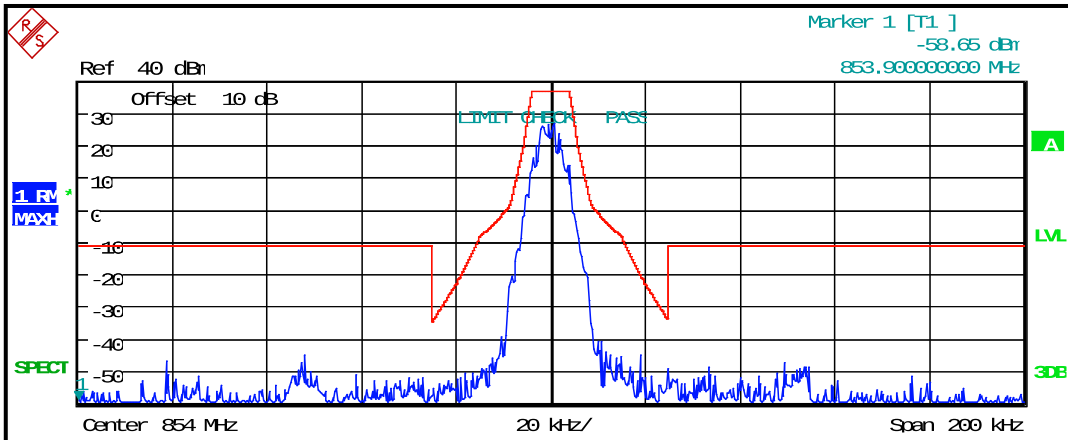


Tx Channel None

Bandwidth 300 Hz Peak Power 31.36 dBm

Start [Hz]	Stop [Hz]	RBW [Hz]	Freq [Hz]	PwrAbs [dBm]	PwrRel [dBc]	Δ Limit [dB]
-100.000 k	-50.000 k	300.00	823.946795 M	-46.88	-84.37	-33.88
-50.000 k	-17.800 k	300.00	823.981090 M	-49.31	-86.81	-29.31
-17.800 k	-10.000 k	300.00	823.983013 M	-50.46	-87.96	-33.48
10.000 k	17.800 k	300.00	824.016026 M	-46.76	-84.25	-33.36
17.800 k	50.000 k	300.00	824.018269 M	-49.58	-87.08	-29.58
50.000 k	100.000 k	300.00	824.054167 M	-48.34	-85.84	-35.34

Plot 8-105: Occupied Bandwidth – 854 MHz; CPM TDMA; Mask H

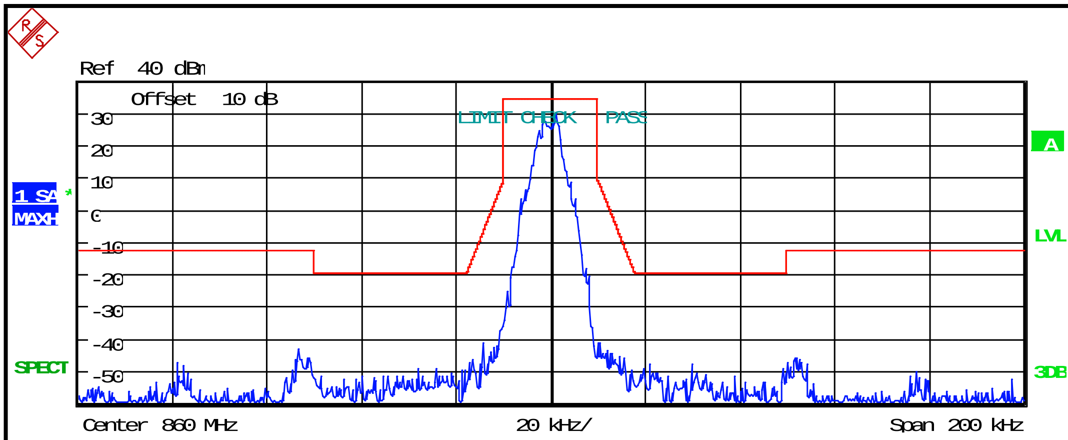


Tx Channel None

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 8-106: Occupied Bandwidth – 860 MHz; CPM TDMA; Mask G

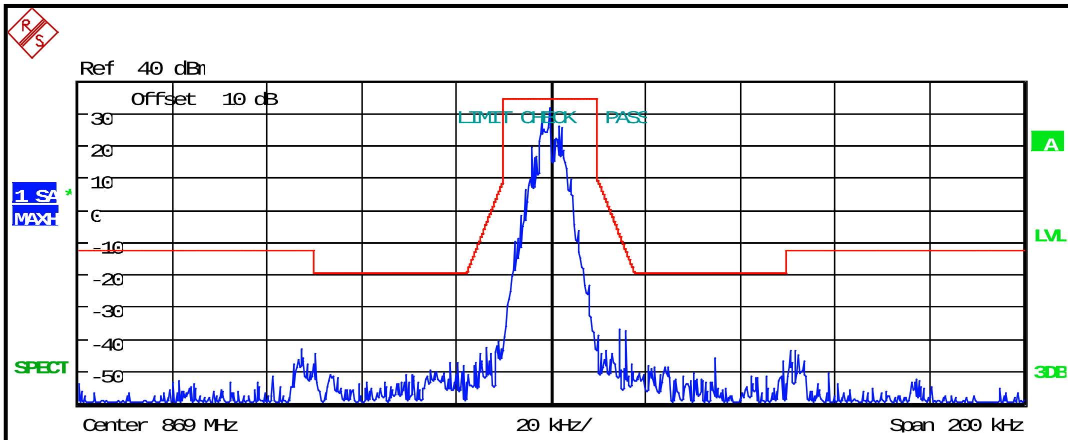


Tx Channel **None**

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 8-107: Occupied Bandwidth – 869 MHz; CPM TDMA; Mask G

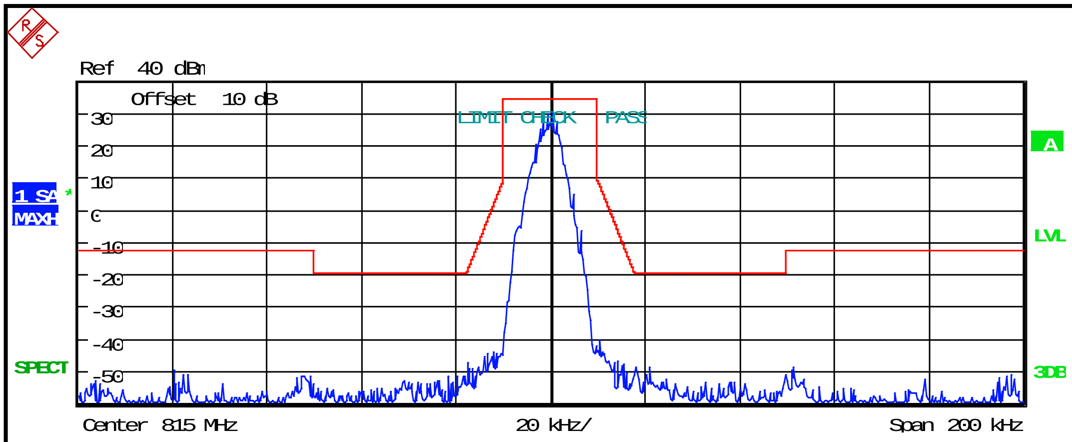


Tx Channel | **None**

Bandwidth 300 Hz | Peak Power 31.25 dBm

Start [Hz]	Stop [Hz]	RBW [Hz]	Freq [Hz]	PwrAbs [dBm]	PwrRel [dBc]	Δ Limit [dB]
-100.000 k	-50.000 k	300.00	868.947115 M	-43.40	-80.76	-30.40
-50.000 k	-17.800 k	300.00	868.950000 M	-44.95	-82.31	-24.95
-17.800 k	-10.000 k	300.00	868.982372 M	-51.44	-88.80	-32.08
10.000 k	17.800 k	300.00	869.015705 M	-37.86	-75.22	-25.64
17.800 k	50.000 k	300.00	869.034615 M	-46.14	-83.50	-26.14
50.000 k	100.000 k	300.00	869.050641 M	-43.68	-81.04	-30.68

Plot 8-108: Occupied Bandwidth – 815 MHz; 4-level FSK Data/Voice; NB OpenSky; Mask G

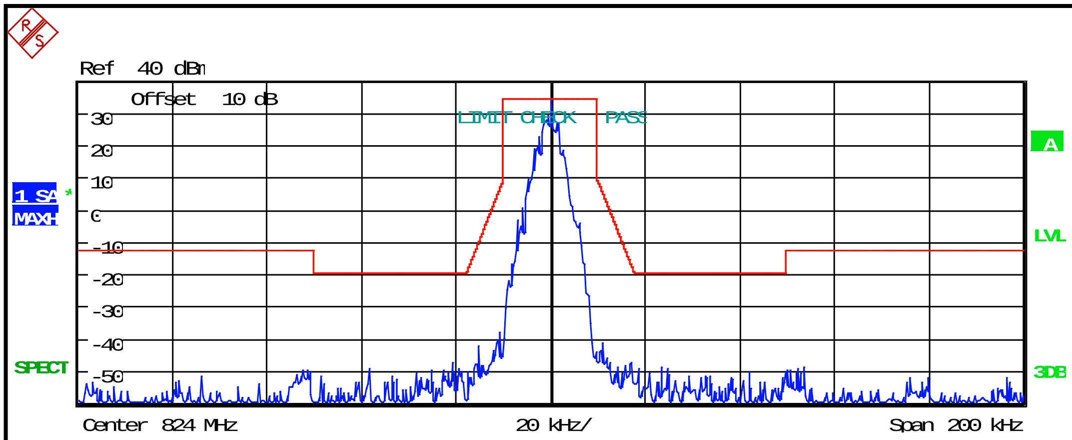


Tx Channel — None

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 8-109: Occupied Bandwidth – 824 MHz; 4-level FSK Data/Voice; NB OpenSky; Mask G

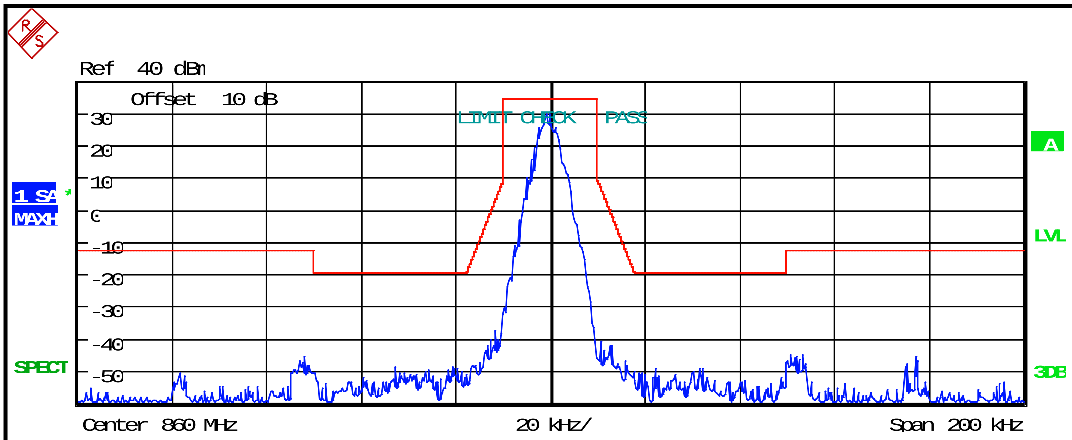


Tx Channel — **None**

Bandwidth 300 Hz — Peak Power 33.49 dBm

Start [Hz]	Stop [Hz]	RBW [Hz]	Freq [Hz]	PwrAbs [dBm]	PwrRel [dBc]	Δ Limit [dB]
-100.000 k	-50.000 k	300.00	823.947436 M	-49.81	-88.93	-36.81
-50.000 k	-17.800 k	300.00	823.979167 M	-47.69	-86.81	-27.69
-17.800 k	-10.000 k	300.00	823.982372 M	-50.46	-89.58	-31.10
10.000 k	17.800 k	300.00	824.017308 M	-48.44	-87.55	-30.27
17.800 k	50.000 k	300.00	824.023397 M	-48.79	-87.90	-28.79
50.000 k	100.000 k	300.00	824.053526 M	-49.04	-88.16	-36.04

Plot 8-110: Occupied Bandwidth – 860 MHz; 4-level FSK Data/Voice; NB OpenSky; Mask G

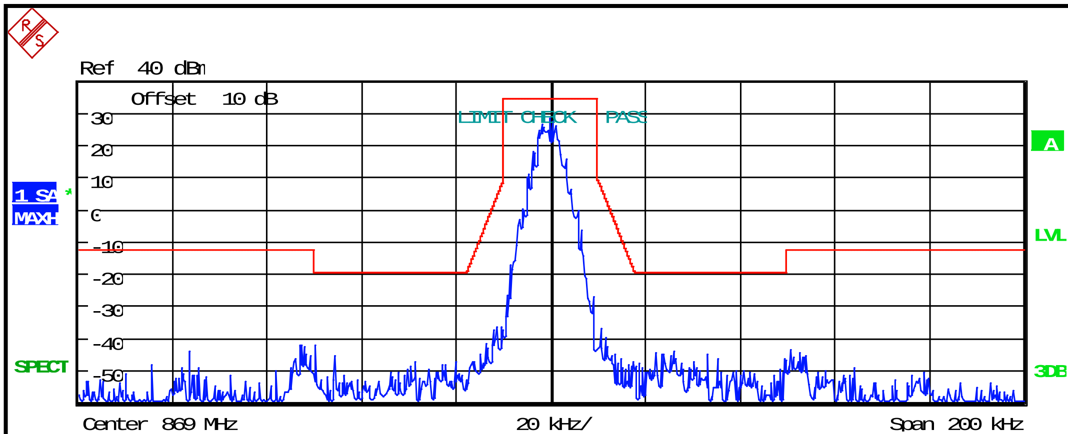


Tx Channel — **None**

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

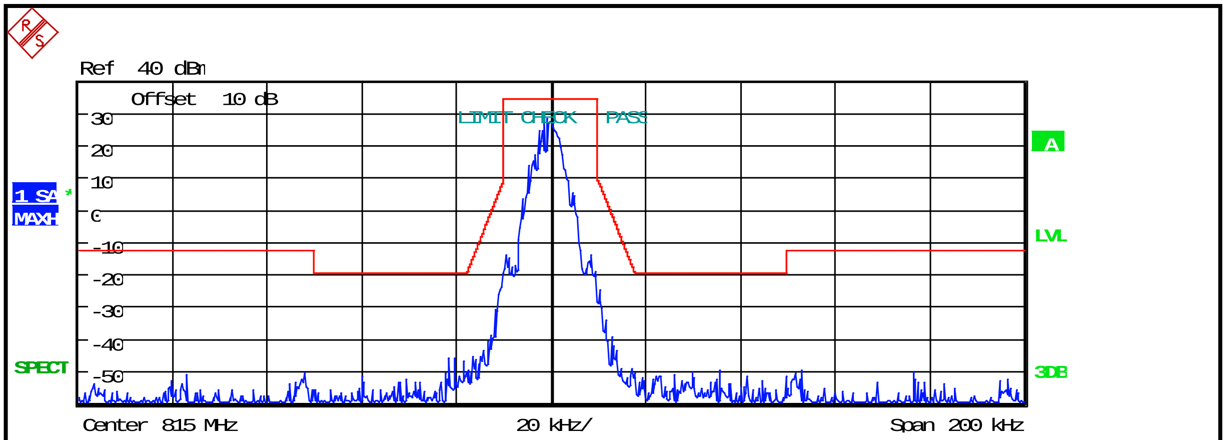
Plot 8-111: Occupied Bandwidth – 869 MHz; 4-level FSK Data/Voice; NB OpenSky; Mask G



Tx Channel None
Bandwidth 300 Hz Peak Power 28.00 dBm

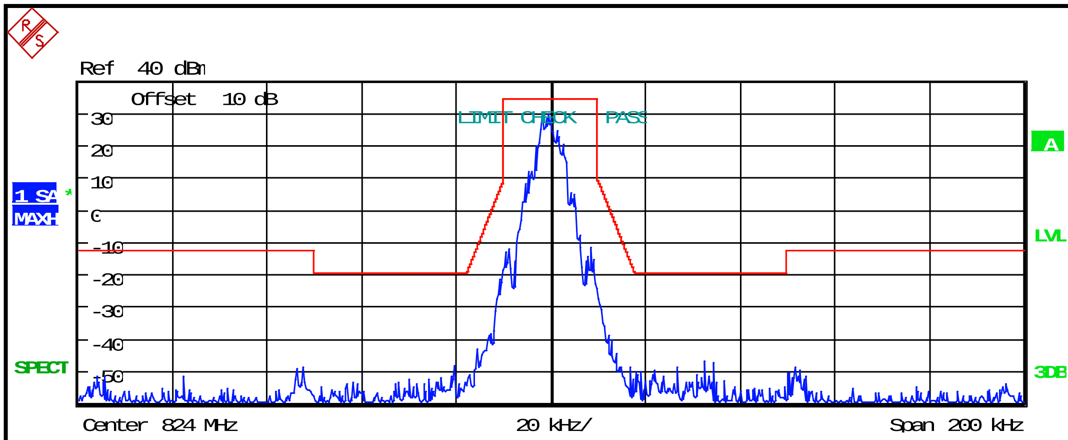
Start [Hz]	Stop [Hz]	RBW [Hz]	Freq [Hz]	PwrAbs [dBm]	PwrRel [dBc]	Δ Limit [dB]
-100.000 k	-50.000 k	300.00	868.946795 M	-42.20	-79.07	-29.20
-50.000 k	-17.800 k	300.00	868.950000 M	-42.54	-79.41	-22.54
-17.800 k	-10.000 k	300.00	868.983013 M	-48.44	-85.31	-31.46
10.000 k	17.800 k	300.00	869.017308 M	-47.34	-84.21	-29.17
17.800 k	50.000 k	300.00	869.025962 M	-44.23	-81.10	-24.23
50.000 k	100.000 k	300.00	869.050641 M	-43.79	-80.66	-30.79

Plot 8-112: Occupied Bandwidth – 815 MHz; 2-level FSK 9600; NB EDACS; 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	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 8-113: Occupied Bandwidth – 824 MHz; 2-level FSK 9600; NB EDACS; Mask G

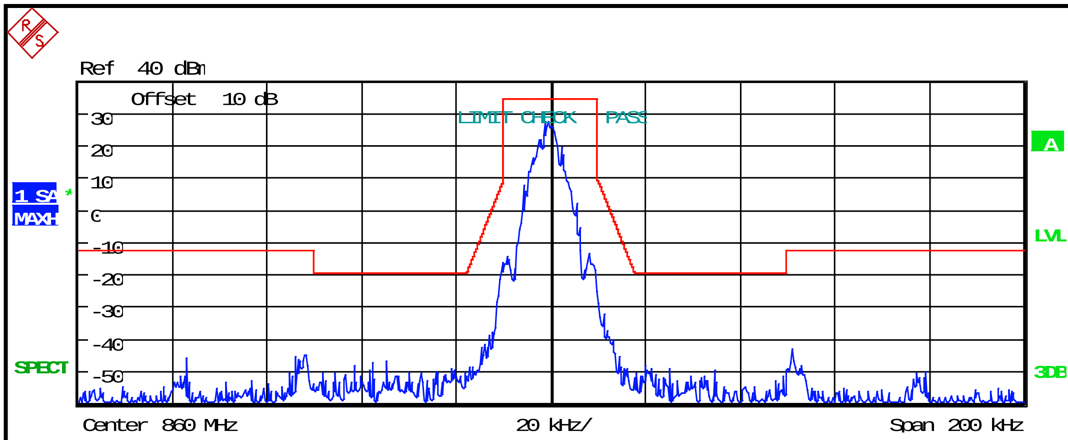


Tx Channel **None**

Bandwidth 300 Hz Peak Power 29.64 dBm

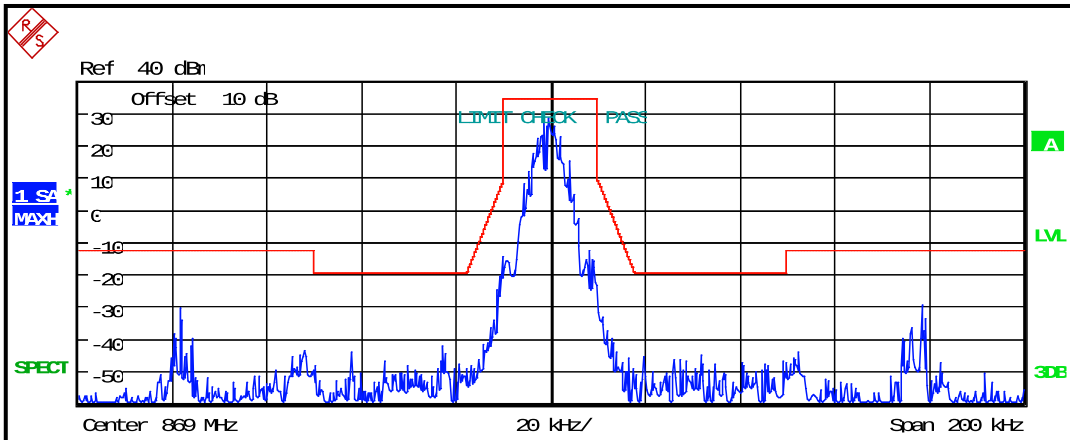
Start [Hz]	Stop [Hz]	RBW [Hz]	Freq [Hz]	PwrAbs [dBm]	PwrRel [dBc]	Δ Limit [dB]
-100.000 k	-50.000 k	300.00	823.947436 M	-49.04	-87.06	-36.04
-50.000 k	-17.800 k	300.00	823.979487 M	-48.59	-86.60	-28.59
-17.800 k	-10.000 k	300.00	823.989744 M	-18.80	-56.81	-26.85
10.000 k	17.800 k	300.00	824.016667 M	-49.15	-87.16	-33.36
17.800 k	50.000 k	300.00	824.032372 M	-47.25	-85.27	-27.25
50.000 k	100.000 k	300.00	824.051603 M	-49.04	-87.06	-36.04

Plot 8-114: 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 8-115: Occupied Bandwidth – 869 MHz; 2-level FSK 9600; NB EDACS; Mask G

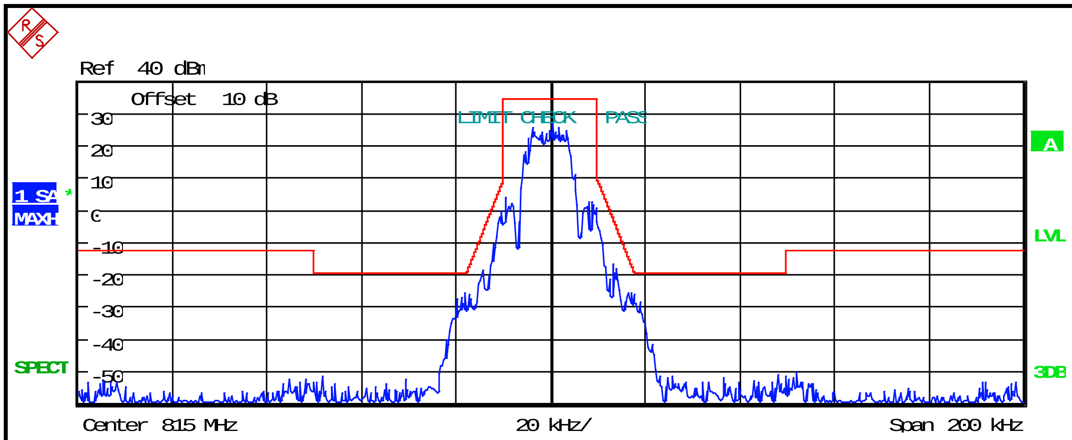


Tx Channel **None**

Bandwidth 300 Hz Peak Power 27.87 dBm

Start [Hz]	Stop [Hz]	RBW [Hz]	Freq [Hz]	PwrAbs [dBm]	PwrRel [dBc]	Δ Limit [dB]
-100.000 k	-50.000 k	300.00	868.947756 M	-43.68	-80.10	-30.68
-50.000 k	-17.800 k	300.00	868.957692 M	-44.50	-80.93	-24.50
-17.800 k	-10.000 k	300.00	868.989744 M	-14.90	-51.32	-22.95
10.000 k	17.800 k	300.00	869.017308 M	-49.64	-86.06	-31.47
17.800 k	50.000 k	300.00	869.031731 M	-45.28	-81.71	-25.28
50.000 k	100.000 k	300.00	869.078526 M	-29.60	-66.02	-16.60

Plot 8-116: Occupied Bandwidth – 815 MHz; 2-level FSK 9600; WB EDACS; Mask G

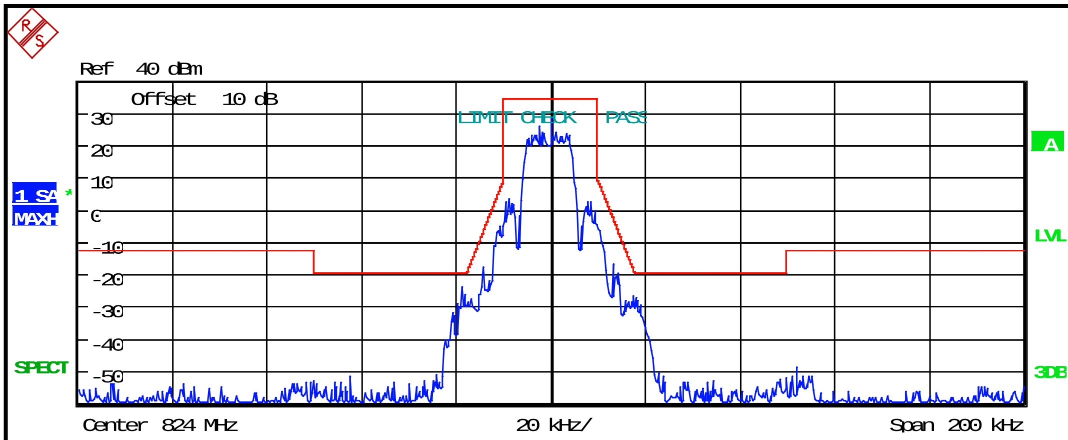


Tx Channel — None

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 8-117: Occupied Bandwidth – 824 MHz; 2-level FSK 9600; WB EDACS; Mask G

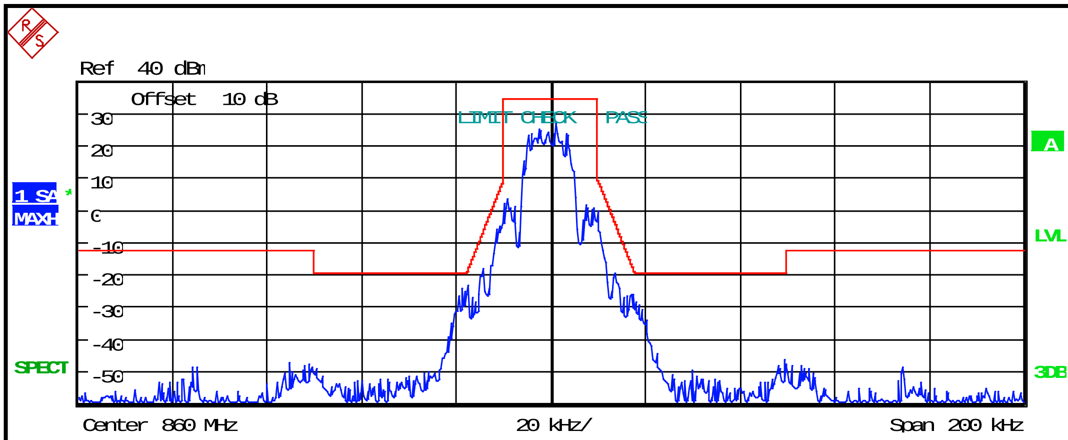


Tx Channel **None**

Bandwidth 300 Hz Peak Power 28.13 dBm

Start [Hz]	Stop [Hz]	RBW [Hz]	Freq [Hz]	PwrAbs [dBm]	PwrRel [dBc]	Δ Limit [dB]
-100.000 k	-50.000 k	300.00	823.949679 M	-53.11	-90.53	-40.11
-50.000 k	-17.800 k	300.00	823.981090 M	-24.24	-61.65	-4.24
-17.800 k	-10.000 k	300.00	823.982372 M	-28.62	-66.04	-9.25
10.000 k	17.800 k	300.00	824.017308 M	-26.77	-64.19	-8.60
17.800 k	50.000 k	300.00	824.017949 M	-27.45	-64.87	-7.45
50.000 k	100.000 k	300.00	824.051923 M	-48.79	-86.21	-35.79

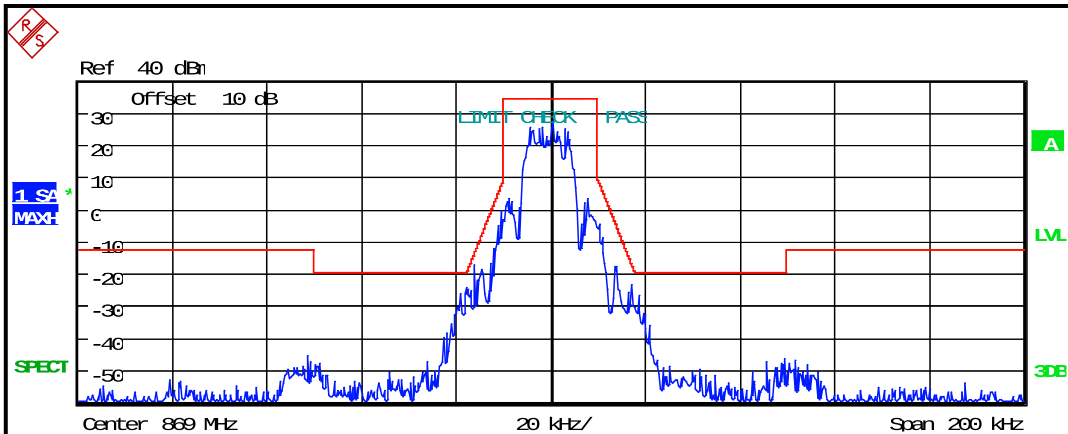
Plot 8-118: Occupied Bandwidth – 860 MHz; 2-level FSK 9600; WB EDACS; Mask G



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 8-119: Occupied Bandwidth – 869 MHz; 2-level FSK 9600; WB EDACS; Mask G

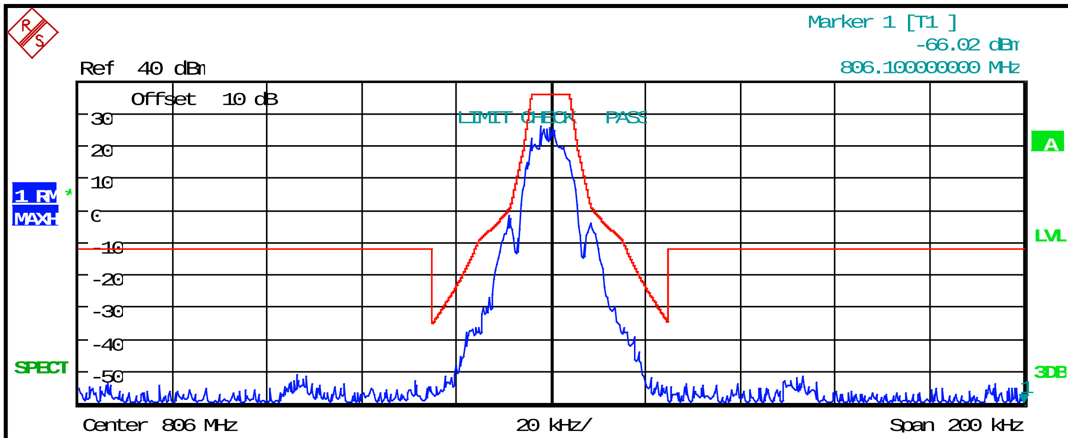


Tx Channel | **None**

Bandwidth 300 Hz | Peak Power 26.87 dBm

Start [Hz]	Stop [Hz]	RBW [Hz]	Freq [Hz]	PwrAbs [dBm]	PwrRel [dBc]	Δ Limit [dB]
-100.000 k	-50.000 k	300.00	868.948397 M	-45.45	-82.87	-32.45
-50.000 k	-17.800 k	300.00	868.981731 M	-28.09	-65.51	-8.09
-17.800 k	-10.000 k	300.00	868.983654 M	-17.73	-55.15	-3.14
10.000 k	17.800 k	300.00	869.016987 M	-23.56	-60.97	-6.58
17.800 k	50.000 k	300.00	869.018590 M	-26.85	-64.26	-6.85
50.000 k	100.000 k	300.00	869.051603 M	-47.04	-84.46	-34.04

Plot 8-120: Occupied Bandwidth – 806 MHz; 4-level FSK Data/Voice; NB NPSPAC EDACS; Mask H

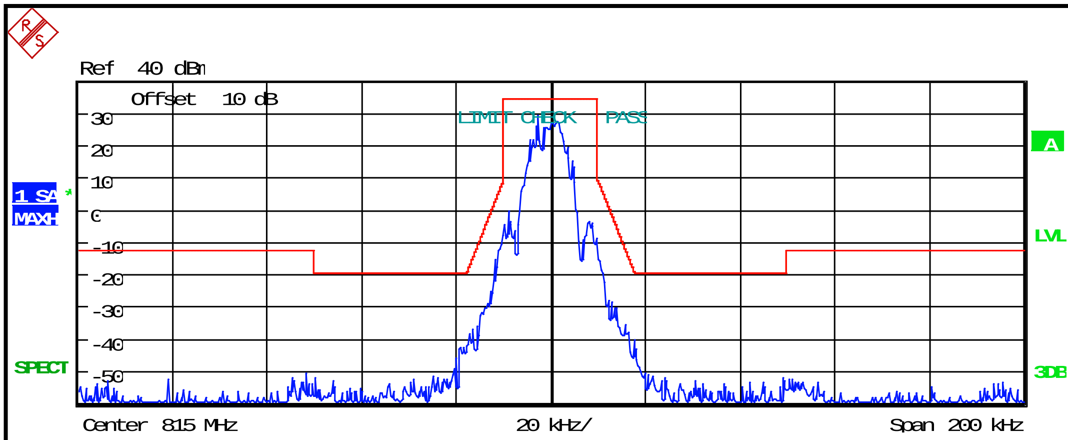


Tx Channel **None**

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 8-121: Occupied Bandwidth – 815 MHz; 4-level FSK Data/Voice; NB NPSPAC EDACS; Mask G

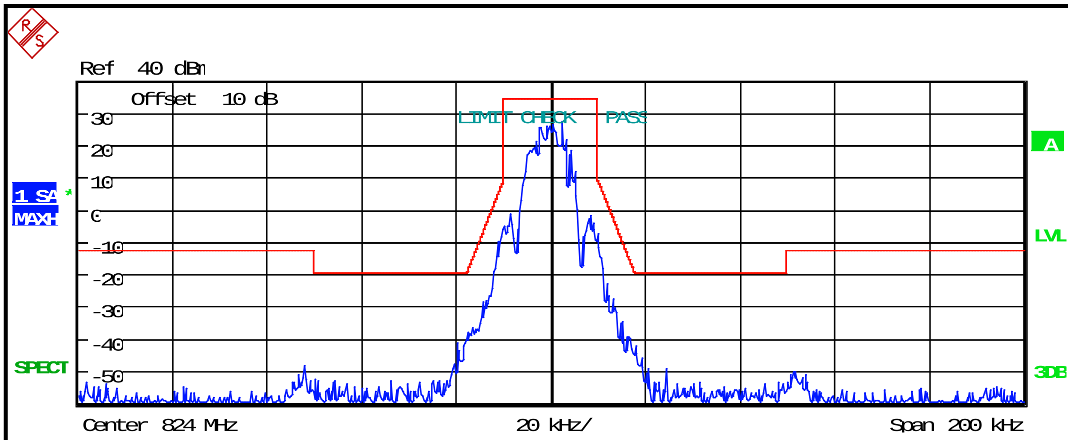


Tx Channel **None**

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

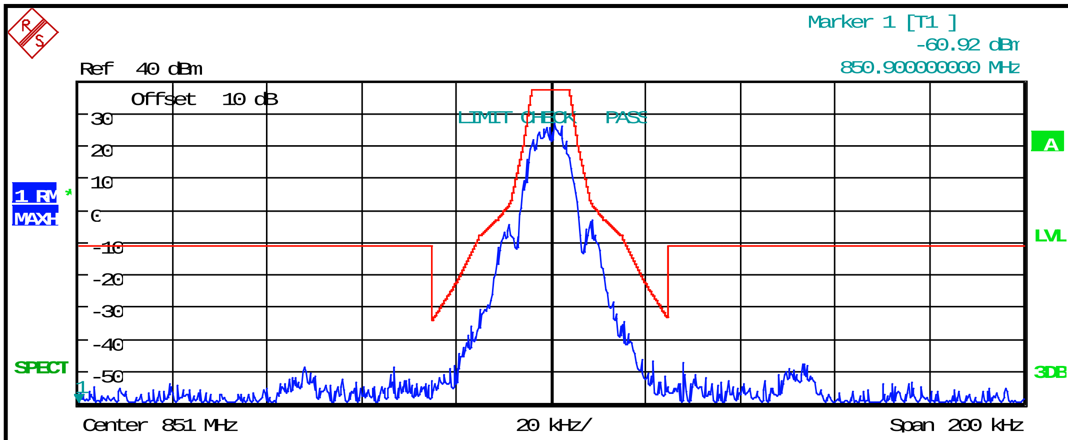
Plot 8-122: Occupied Bandwidth – 824 MHz; 4-level FSK Data/Voice; NB NPSPAC EDACS; Mask G



Tx Channel | **None**
Bandwidth 300 Hz | Peak Power 26.92 dBm

Start [Hz]	Stop [Hz]	RBW [Hz]	Freq [Hz]	PwrAbs [dBm]	PwrRel [dBc]	Δ Limit [dB]
-100.000 k	-50.000 k	300.00	823.947756 M	-48.34	-85.72	-35.34
-50.000 k	-17.800 k	300.00	823.980128 M	-41.34	-78.72	-21.34
-17.800 k	-10.000 k	300.00	823.988782 M	-10.03	-47.41	-14.50
10.000 k	17.800 k	300.00	824.010000 M	-7.82	-45.20	-16.82
17.800 k	50.000 k	300.00	824.017949 M	-42.54	-79.92	-22.54
50.000 k	100.000 k	300.00	824.051282 M	-50.40	-87.78	-37.40

Plot 8-123: Occupied Bandwidth – 851 MHz; 4-level FSK Data/Voice; NB NPSPAC EDACS; Mask H

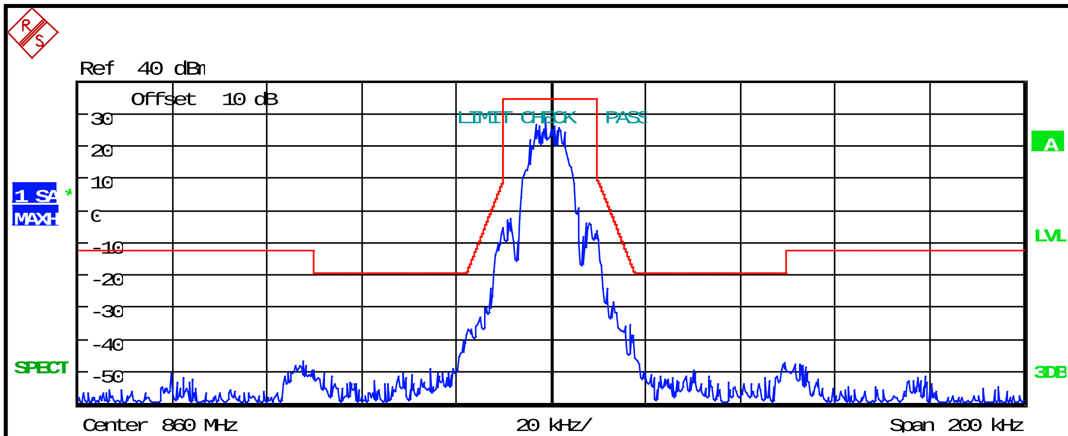


Tx Channel **None**

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 8-124: Occupied Bandwidth – 869 MHz; 4-level FSK Data/Voice; NB NPSPAC EDACS; Mask G

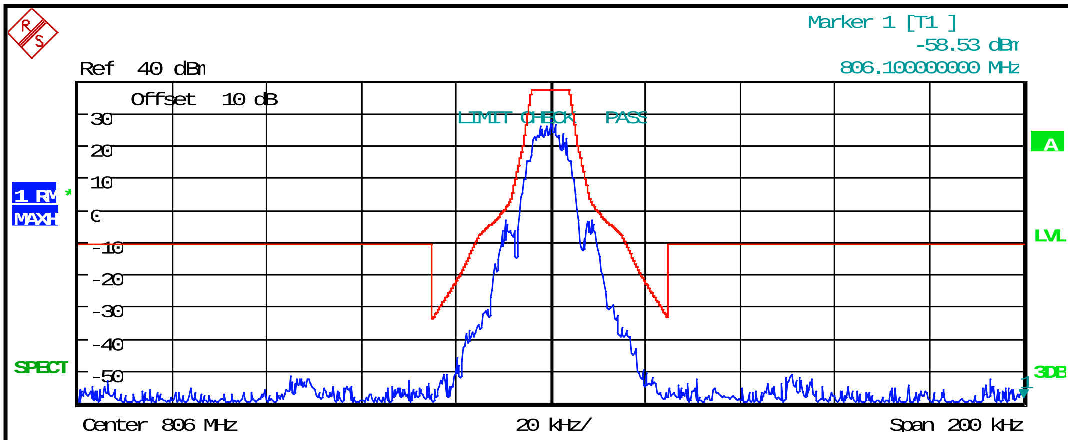


Tx Channel **None**

Bandwidth 300 Hz Peak Power 28.17 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	-46.88	-84.70	-33.88
-50.000 k	-17.800 k	300.00	859.981410 M	-41.13	-78.95	-21.13
-17.800 k	-10.000 k	300.00	859.989744 M	-6.01	-43.83	-14.05
10.000 k	17.800 k	300.00	860.010256 M	-9.42	-47.24	-17.46
17.800 k	50.000 k	300.00	860.018590 M	-46.29	-84.11	-26.29
50.000 k	100.000 k	300.00	860.051603 M	-47.87	-85.70	-34.87

Plot 8-125: Occupied Bandwidth – 806 MHz; 4-level FSK Data/Voice; NPSPAC OpenSky; Mask H

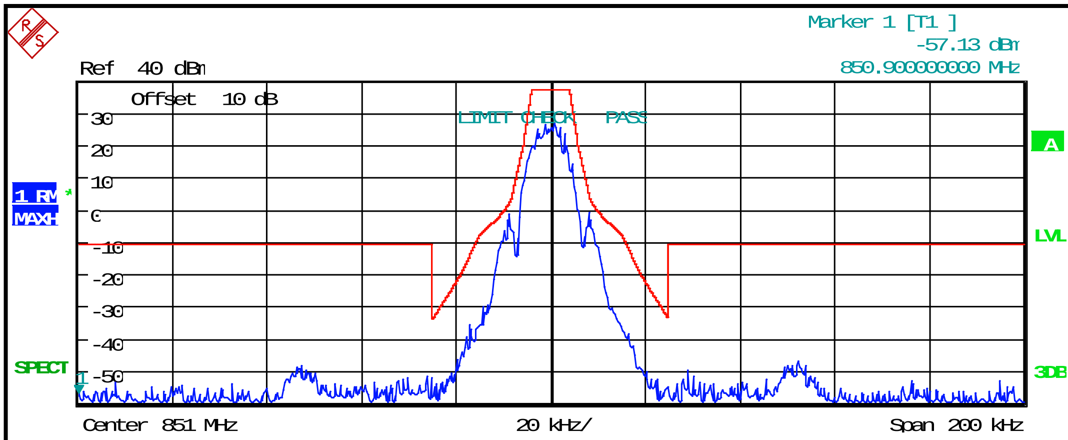


Tx Channel — **None**

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 8-126: Occupied Bandwidth – 851 MHz; 4-level FSK Data/Voice; NPSPAC OpenSky; Mask H

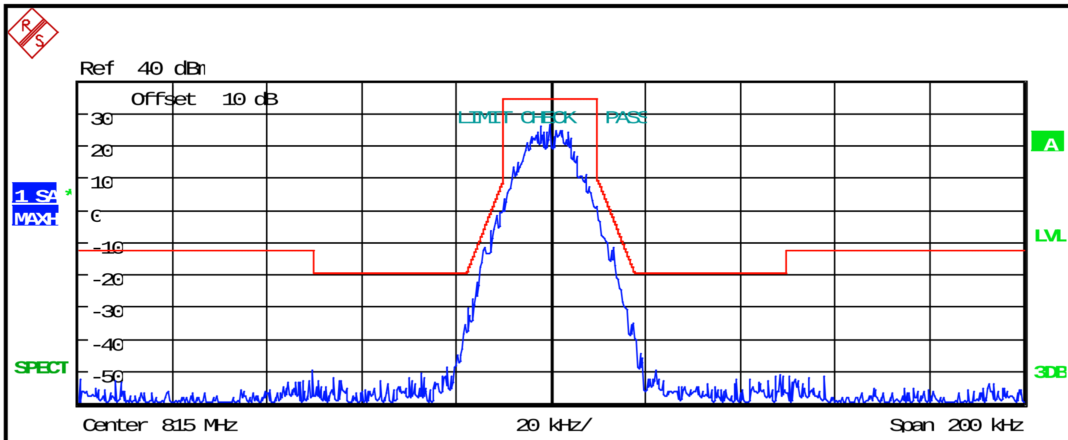


Tx Channel **None**

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 8-127: Occupied Bandwidth – 815 MHz; 4-level FSK Data/Voice; SMR OpenSky; Mask G

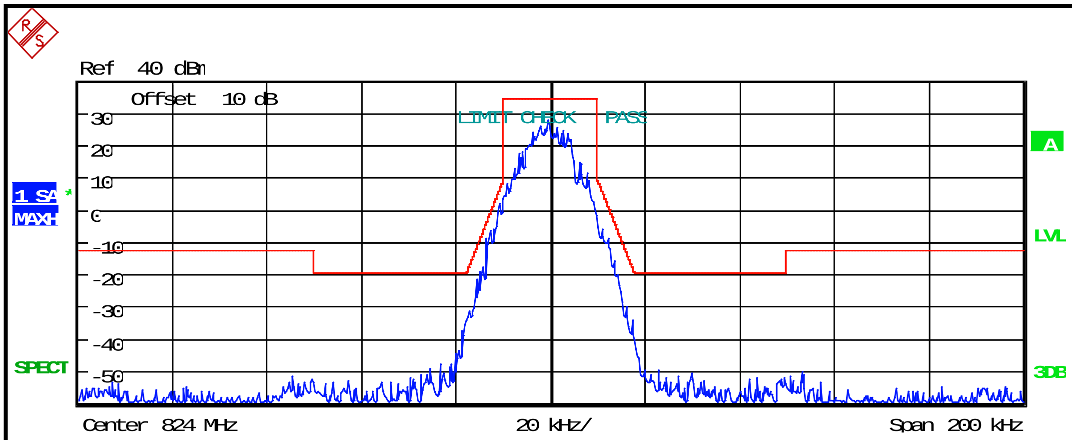


Tx Channel **None**

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 8-128: Occupied Bandwidth – 824 MHz; 4-level FSK Data/Voice; SMR OpenSky; Mask G

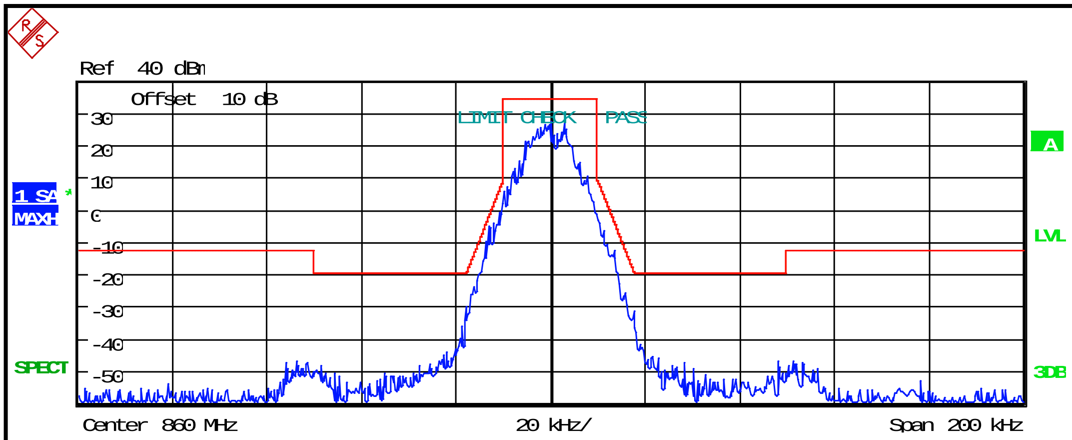


Tx Channel None

Bandwidth 300 Hz Peak Power 27.67 dBm

Start [Hz]	Stop [Hz]	RBW [Hz]	Freq [Hz]	PwrAbs [dBm]	PwrRel [dBc]	Δ Limit [dB]
-100.000 k	-50.000 k	300.00	823.945192 M	-52.01	-90.56	-39.01
-50.000 k	-17.800 k	300.00	823.981731 M	-35.95	-74.50	-15.95
-17.800 k	-10.000 k	300.00	823.989103 M	1.52	-37.03	-4.15
10.000 k	17.800 k	300.00	824.012179 M	-8.97	-47.52	-9.87
17.800 k	50.000 k	300.00	824.017949 M	-41.13	-79.68	-21.13
50.000 k	100.000 k	300.00	824.053205 M	-50.40	-88.95	-37.40

Plot 8-129: Occupied Bandwidth – 860 MHz; 4-level FSK Data/Voice; SMR OpenSky; Mask G

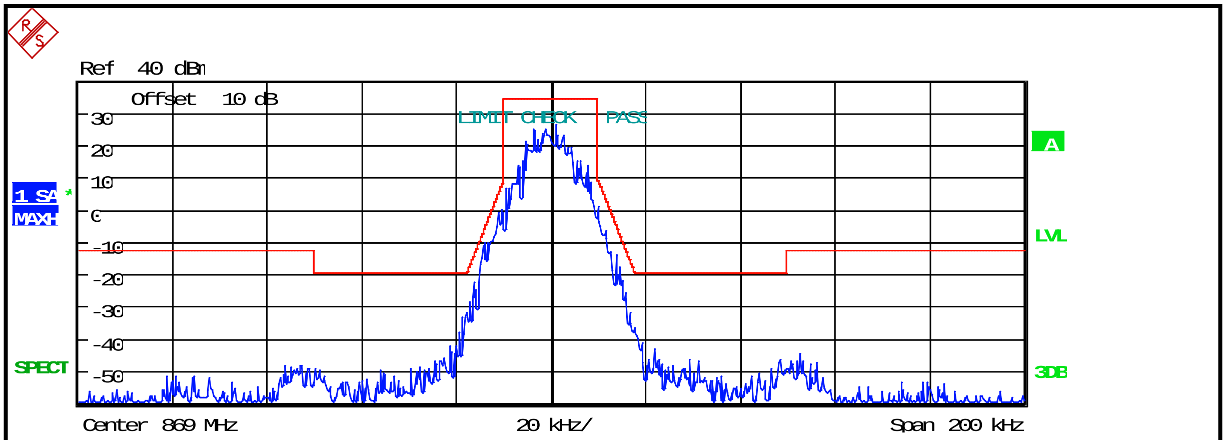


Tx Channel **None**

Bandwidth 300 Hz Peak Power 27.03 dBm

Start [Hz]	Stop [Hz]	RBW [Hz]	Freq [Hz]	PwrAbs [dBm]	PwrRel [dBc]	Δ Limit [dB]
-100.000 k	-50.000 k	300.00	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

Plot 8-130: Occupied Bandwidth – 869 MHz; 4-level FSK Data/Voice; SMR OpenSky; Mask G



Tx Channel None
Bandwidth 300 Hz Peak Power 26.15 dBm

Start [Hz]	Stop [Hz]	RBW [Hz]	Freq [Hz]	PwrAbs [dBm]	PwrRel [dBc]	Δ Limit [dB]
-100.000 k	-50.000 k	300.00	868.947115 M	-48.34	-85.18	-35.34
-50.000 k	-17.800 k	300.00	868.981731 M	-33.64	-70.48	-13.64
-17.800 k	-10.000 k	300.00	868.985577 M	-11.18	-48.02	-3.73
10.000 k	17.800 k	300.00	869.010000 M	0.60	-36.23	-8.40
17.800 k	50.000 k	300.00	869.017949 M	-38.56	-75.40	-18.56
50.000 k	100.000 k	300.00	869.052564 M	-44.66	-81.50	-31.66

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 — Test Engineer

Signature

May 25, 2017 — Date of Tests

9 FCC §2.1055: Frequency Stability; §22.355: Frequency Tolerance; §74.464; Frequency Tolerance; §80.209: 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.

§80.209: 10 ppm. 400-466 MHz 5 ppm

§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	Mobile stations: 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 – 162 MHz

Temperature (°C)	Measured Frequency (Hz)	ppm
-30	161.999938	-0.38
-20	161.999959	-0.25
-10	161.999847	-0.94
0	161.999894	-0.65
10	162.000020	0.12
20 (reference)	162.000000	0.00
30	161.999999	-0.01
40	161.999865	-0.84
50	161.999963	-0.23
55	161.999948	-0.32

Table 9-2: Temperature Frequency Stability – 418 MHz

Temperature (°C)	Measured Frequency (Hz)	ppm
-30	417.999949	-0.12
-20	418.000049	0.12
-10	417.999966	-0.08
0	418.000115	0.27
10	418.000130	0.31
20 (reference)	418.000000	0.00
30	417.999947	-0.13
40	418.000027	0.06
50	417.999959	-0.10
55	417.999956	-0.11

Table 9-3: Temperature Frequency Stability – 470 MHz

Temperature (°C)	Measured Frequency (Hz)	ppm
-30	469.999808	-0.41
-20	469.999781	-0.47
-10	469.999875	-0.27
0	469.999785	-0.46
10	469.999840	-0.34
20 (reference)	470.000000	0.00
30	469.999848	-0.32
40	469.999830	-0.36
50	469.999715	-0.61
55	469.999895	-0.22

Table 9-4: 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 9-5: 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 9-6: 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 9-7: 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 9-8: Frequency Stability/Voltage Variation – 162 MHz

Voltage (VDC)	Measured Frequency (Hz)	ppm
5.75 (Battery End Point)	161.999852	-0.91
6.375	161.999875	-0.77
7.5	162.000000	0.00
8.625	161.999986	-0.08

Table 9-9: Frequency Stability/Voltage Variation – 418 MHz

Voltage (VDC)	Measured Frequency (Hz)	ppm
6.09 (Battery End Point)	418.000030	0.07
6.375	418.000013	0.03
7.5	418.000000	0.00
8.625	417.999963	-0.09

Table 9-10: Frequency Stability/Voltage Variation – 470 MHz

Voltage (VDC)	Measured Frequency (Hz)	ppm
6.01 (Battery End Point)	469.999715	-0.61
6.375	469.999809	-0.41
7.5	470.000000	0.00
8.625	469.999960	-0.08

Table 9-11: 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 9-12: 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 9-13: 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 9-14: 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 9-15: 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	Daniel W. Baltzell	May 10, 2017
EMC Test Engineer	Signature	Date of Test

10 FCC §2.1047(a)(b): Modulation Characteristics; §74.463: Modulation Requirements; §80.213: Modulation Requirements; RSS-119 5.2: Types of Modulation

§80.213 Modulation requirements.

(a)(2) When phase or frequency modulation is used in the 156–162 MHz band, the peak modulation must be maintained between 75 and 100 percent. A frequency deviation of ±5 kHz is defined as 100 percent peak modulation.
(b) Radiotelephone transmitters using A3E, F3E and G3E emission must have a modulation limiter to prevent any modulation over 100 percent. This requirement does not apply to survival craft transmitters, to transmitters that do not require a license, or to transmitters whose output power does not exceed 3 watts.
(d) Ship and coast station transmitters operating in the 156–162 MHz and 216–220 MHz bands must be capable of proper operation with a frequency deviation that does not exceed ±5 kHz when using any emission authorized by §80.207.
(e) Coast station transmitters operating in the 156–162 MHz band must be equipped with an audio low-pass filter. The filter must be installed between the modulation limiter and the modulated radio frequency stage. At frequencies between 3 kHz and 20 kHz it must have an attenuation greater than at 1 kHz by at least 60log10(f/3) dB where ''f'' is the audio frequency in kilohertz. At frequencies above 20 kHz the attenuation must be at least 50 dB greater than at 1 kHz.

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

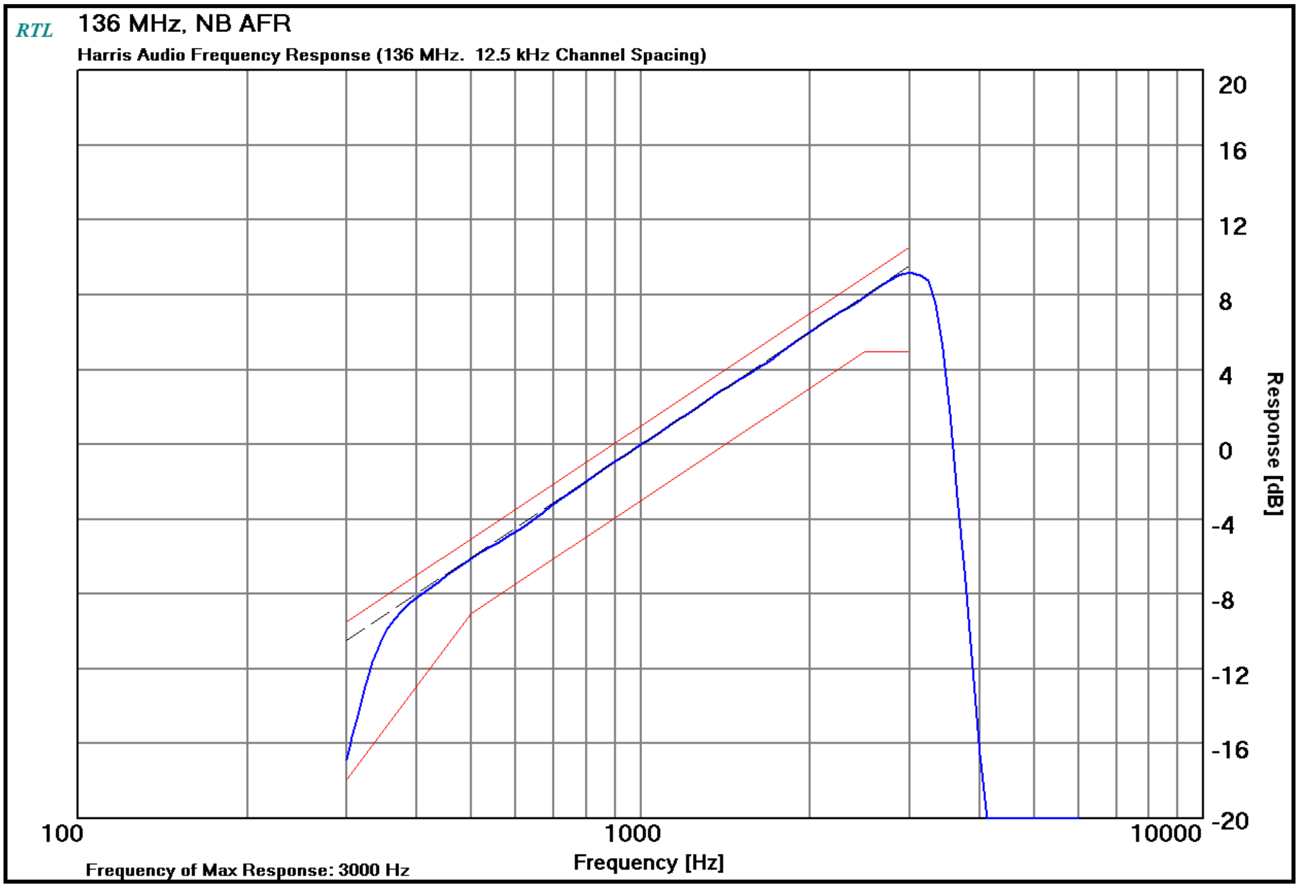
ANSI C63.26 5.3.2

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.

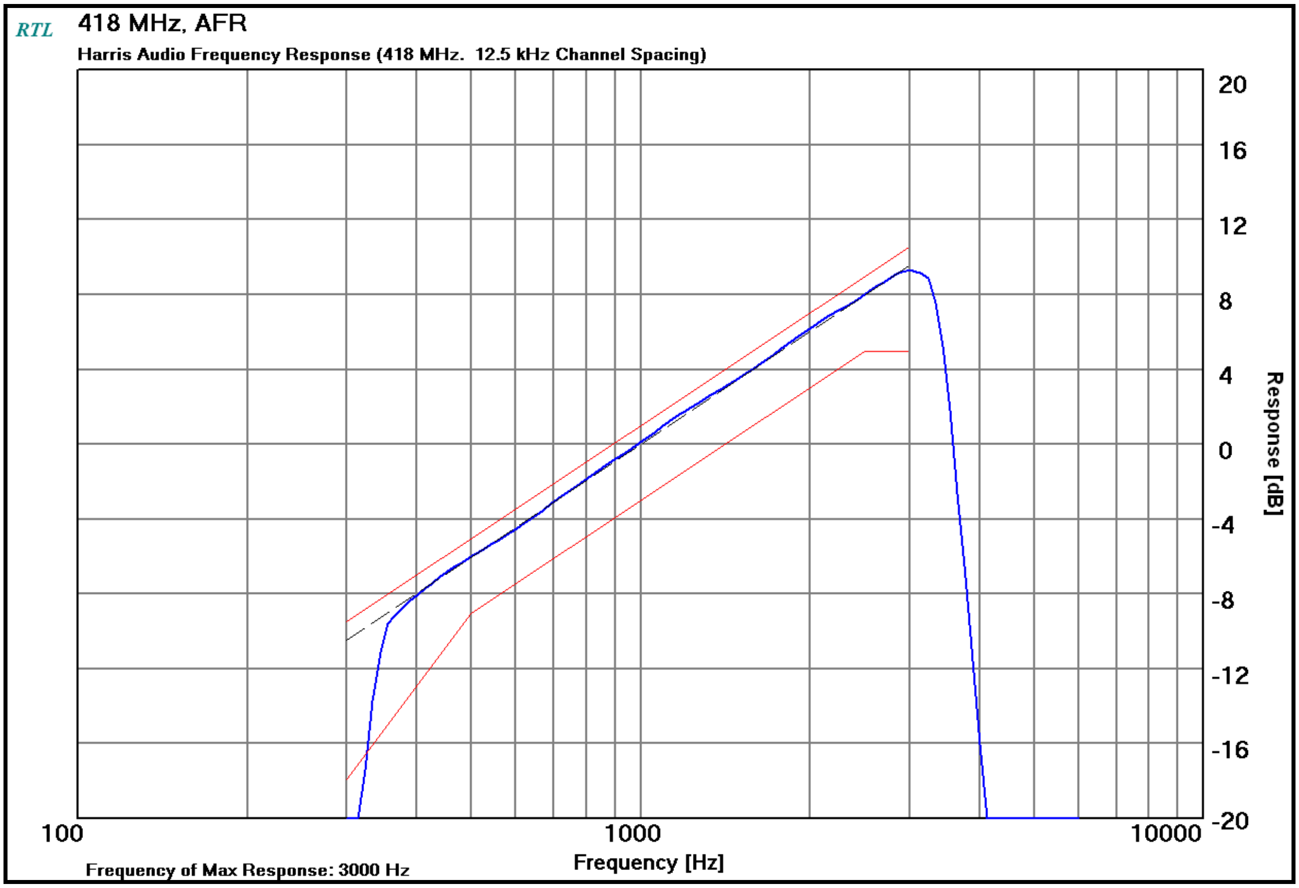
10.2 Test Data

10.2.1 Audio Frequency Response

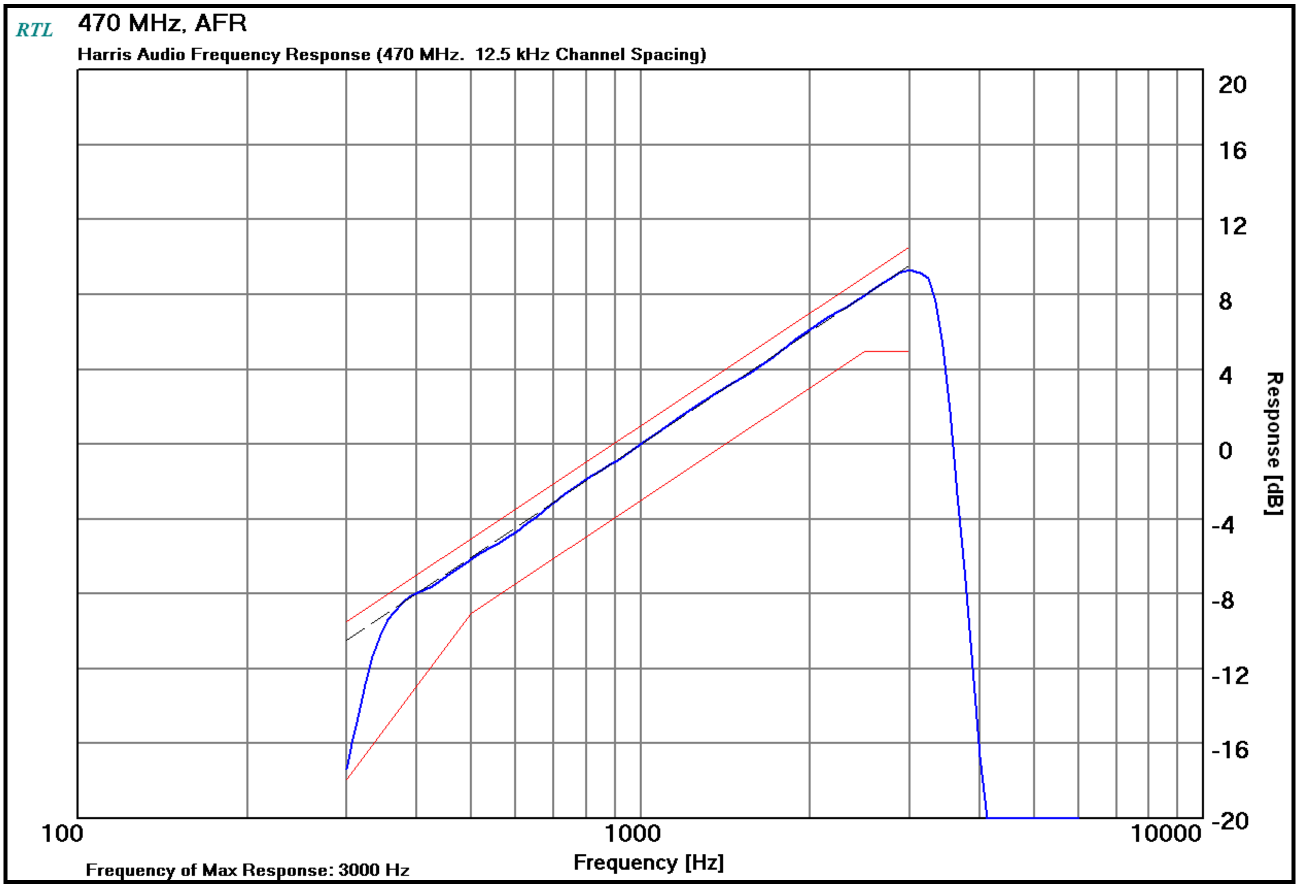
Plot 10-1: Modulation Characteristics - Audio Frequency Response - 136 MHz



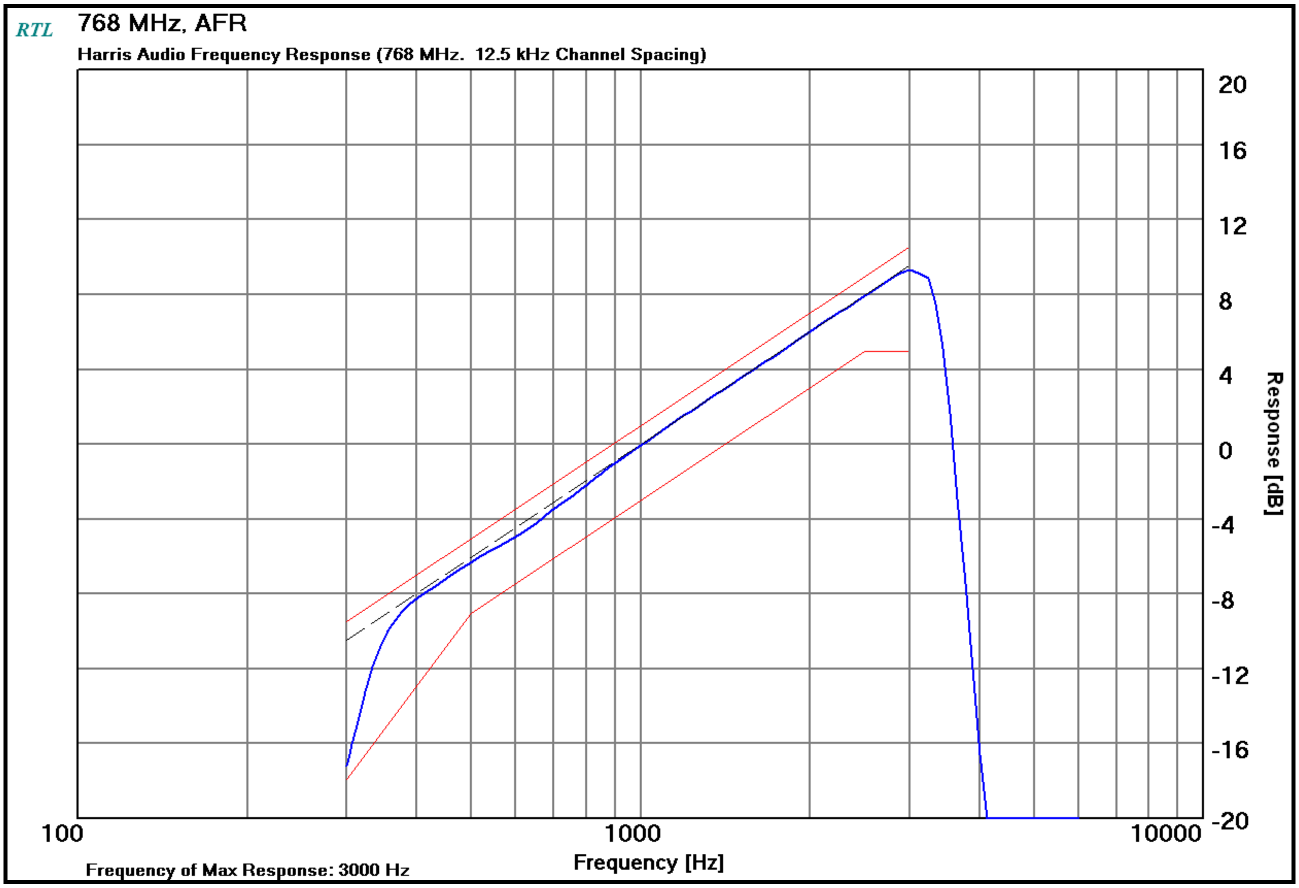
Plot 10-2: Modulation Characteristics - Audio Frequency Response - 418 MHz



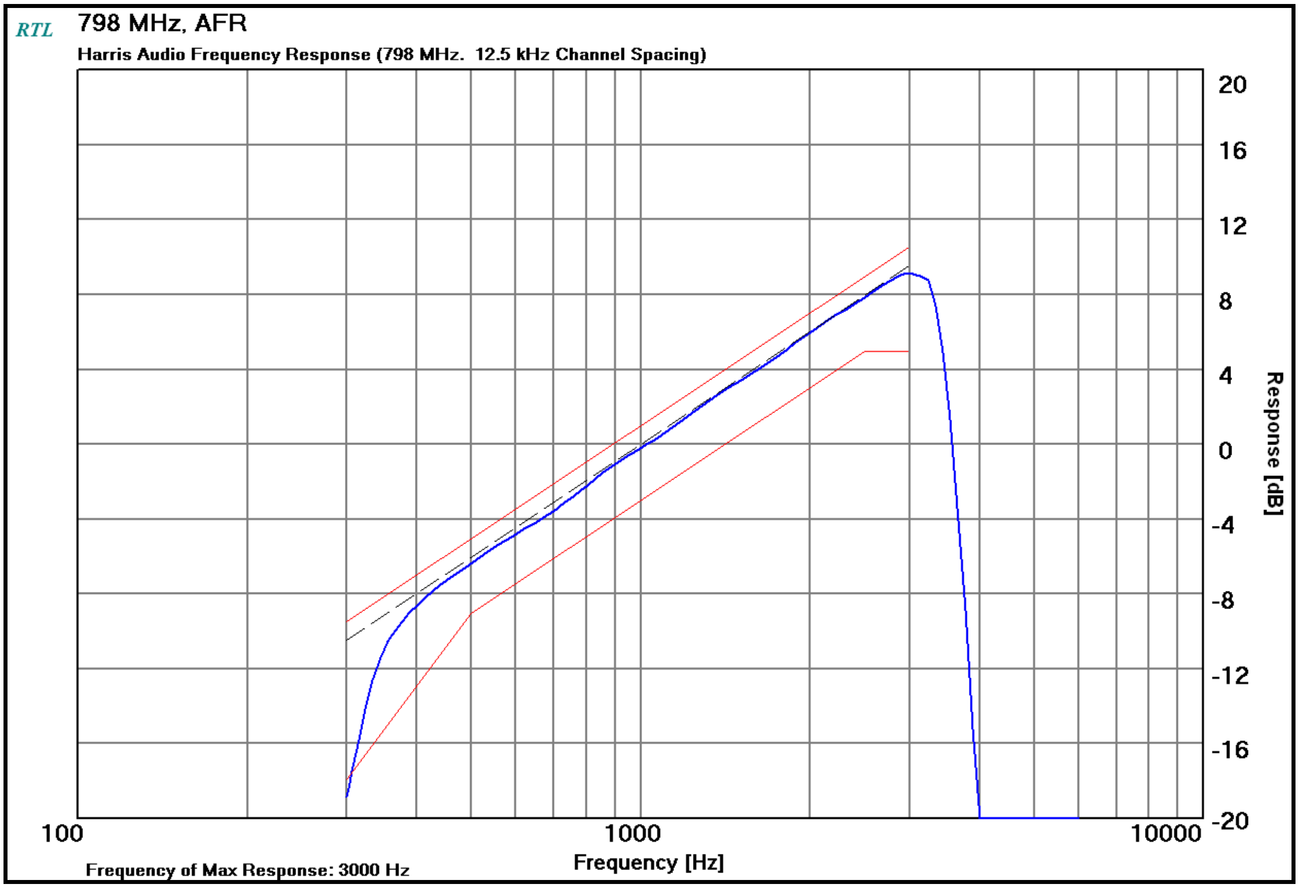
Plot 10-3: Modulation Characteristics - Audio Frequency Response - 470 MHz



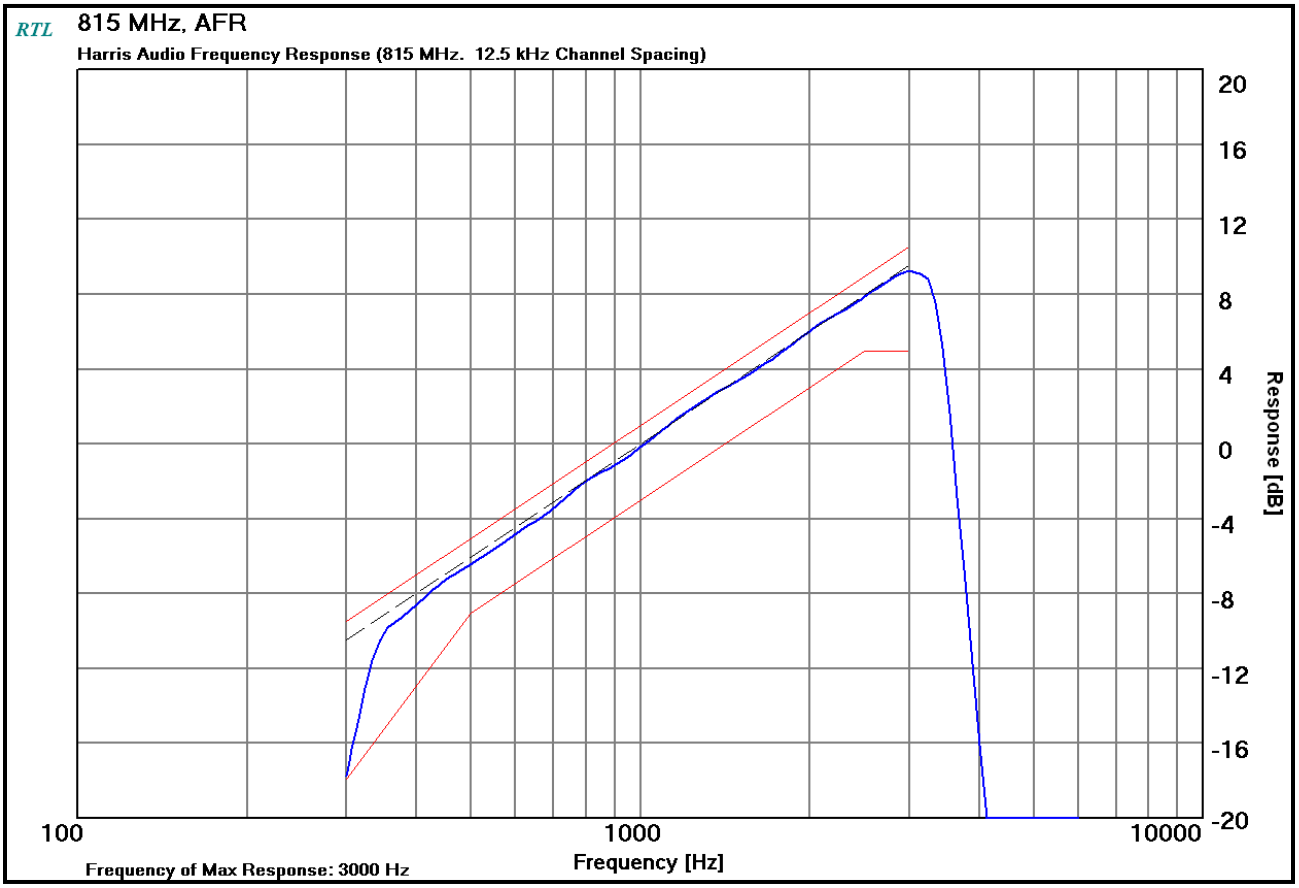
Plot 10-4: Modulation Characteristics - Audio Frequency Response - 768 MHz



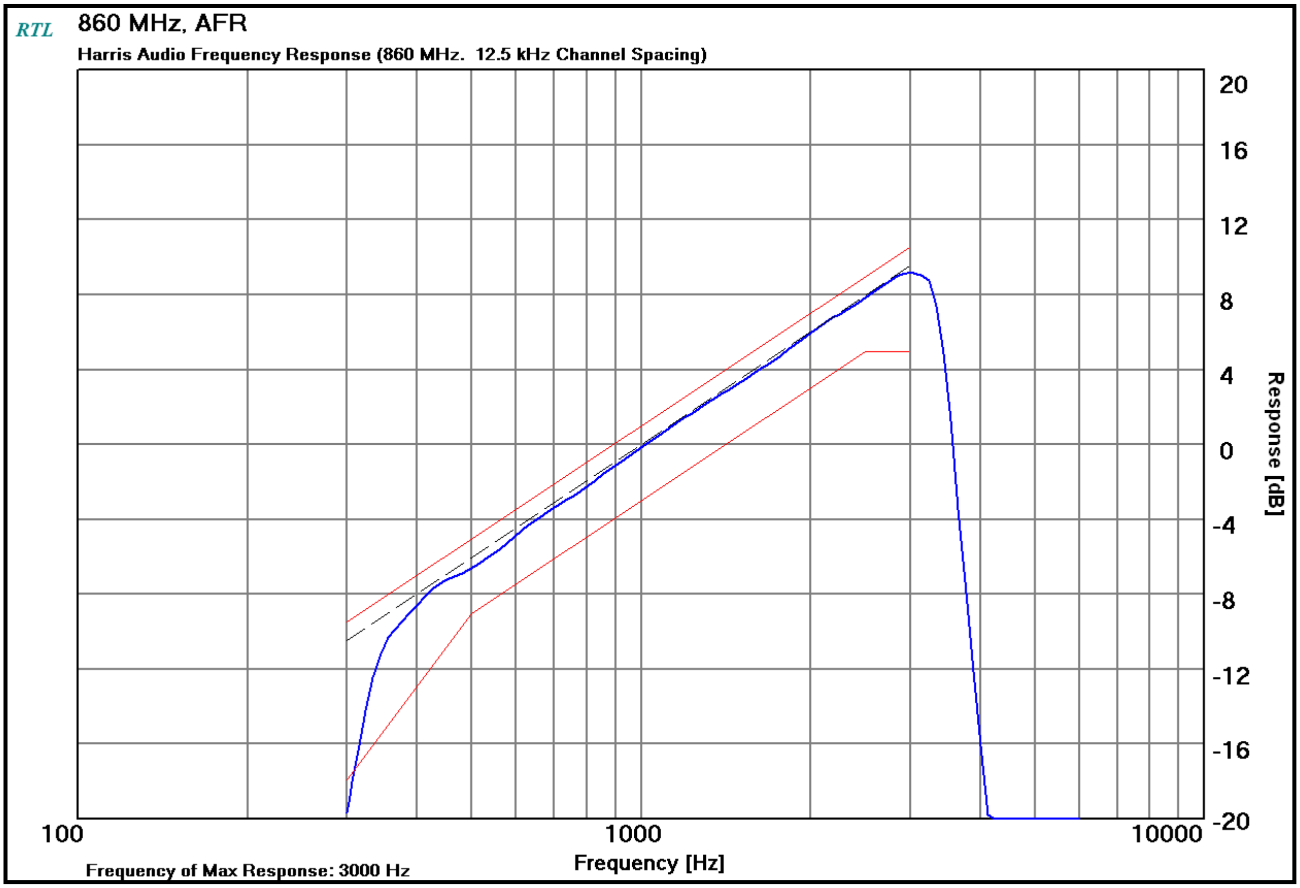
Plot 10-5: Modulation Characteristics - Audio Frequency Response - 798 MHz



Plot 10-6: Modulation Characteristics - Audio Frequency Response - 815 MHz

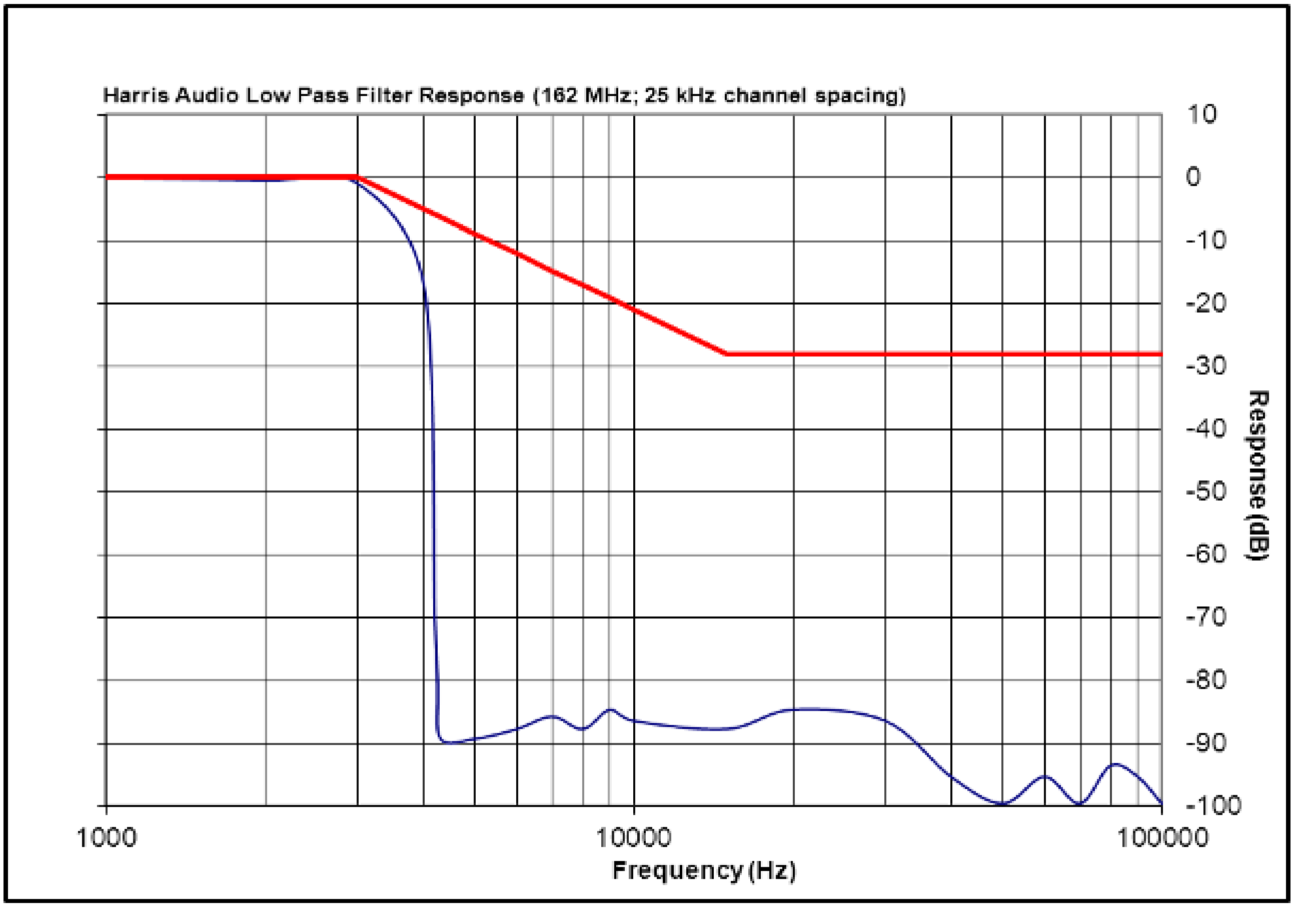


Plot 10-7: Modulation Characteristics - Audio Frequency Response - 860 MHz

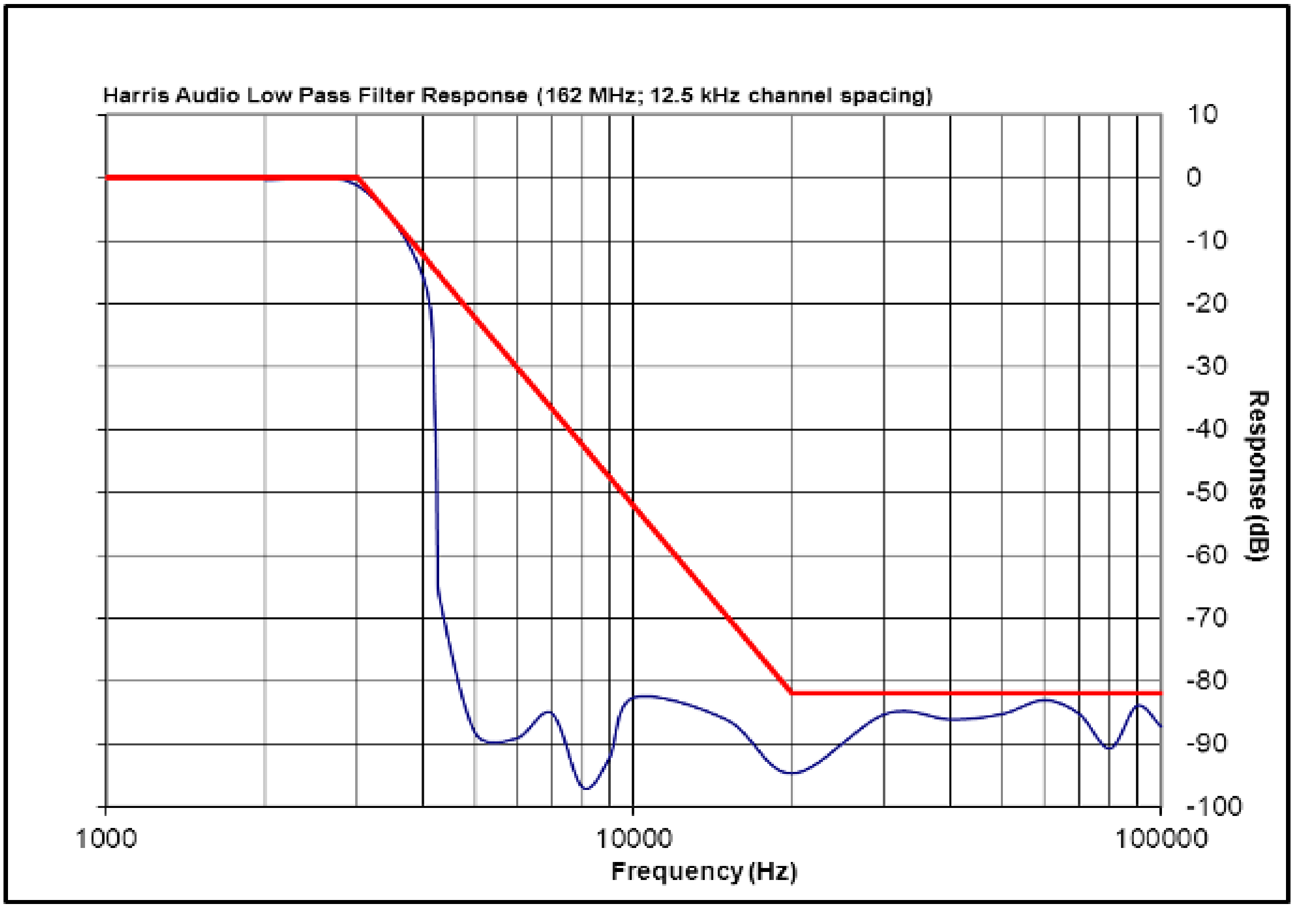


10.2.2 Audio Low Pass Filter Response

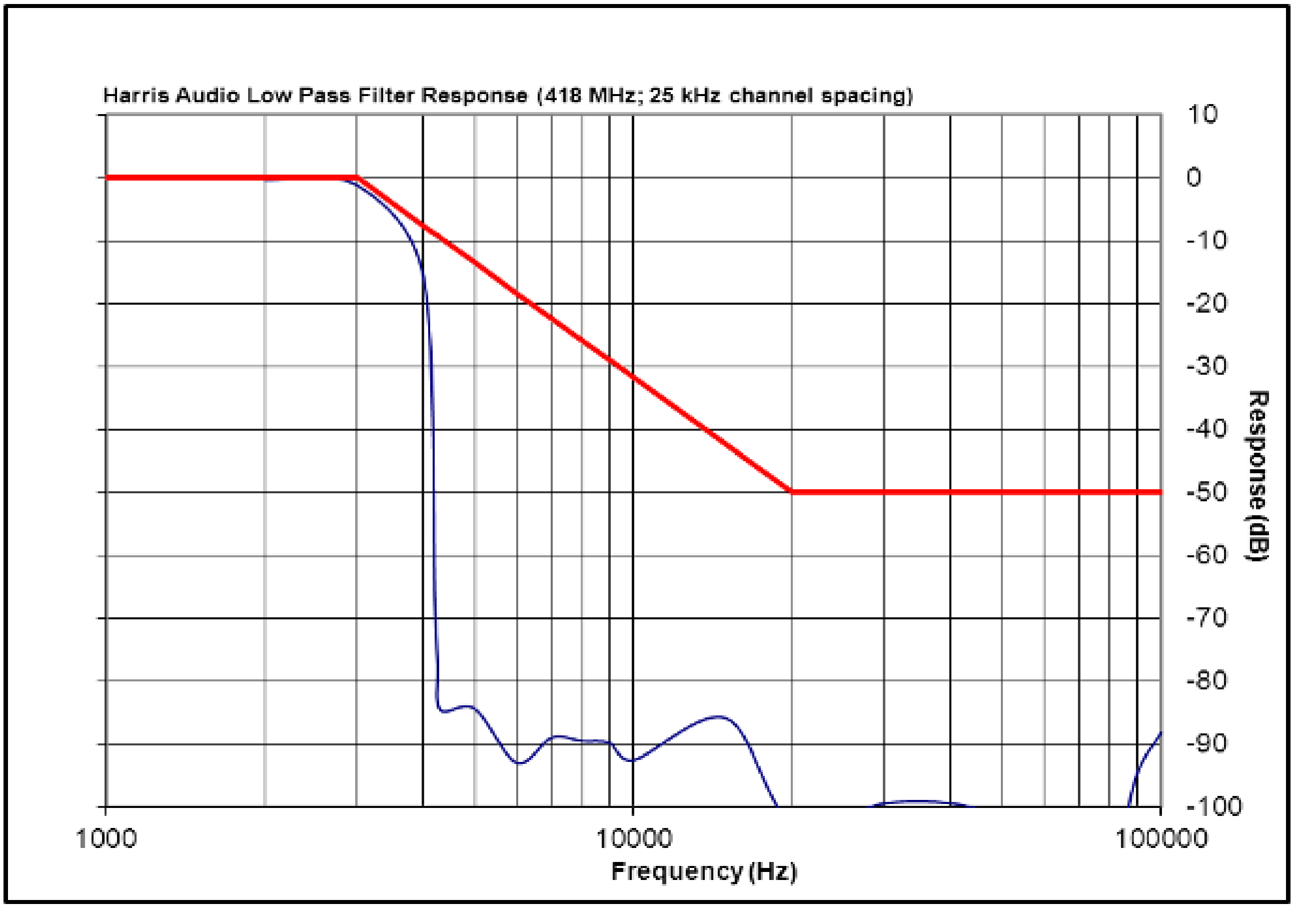
Plot 10-8: Modulation Characteristics – Audio Low Pass Filter - 162 MHz (WB)



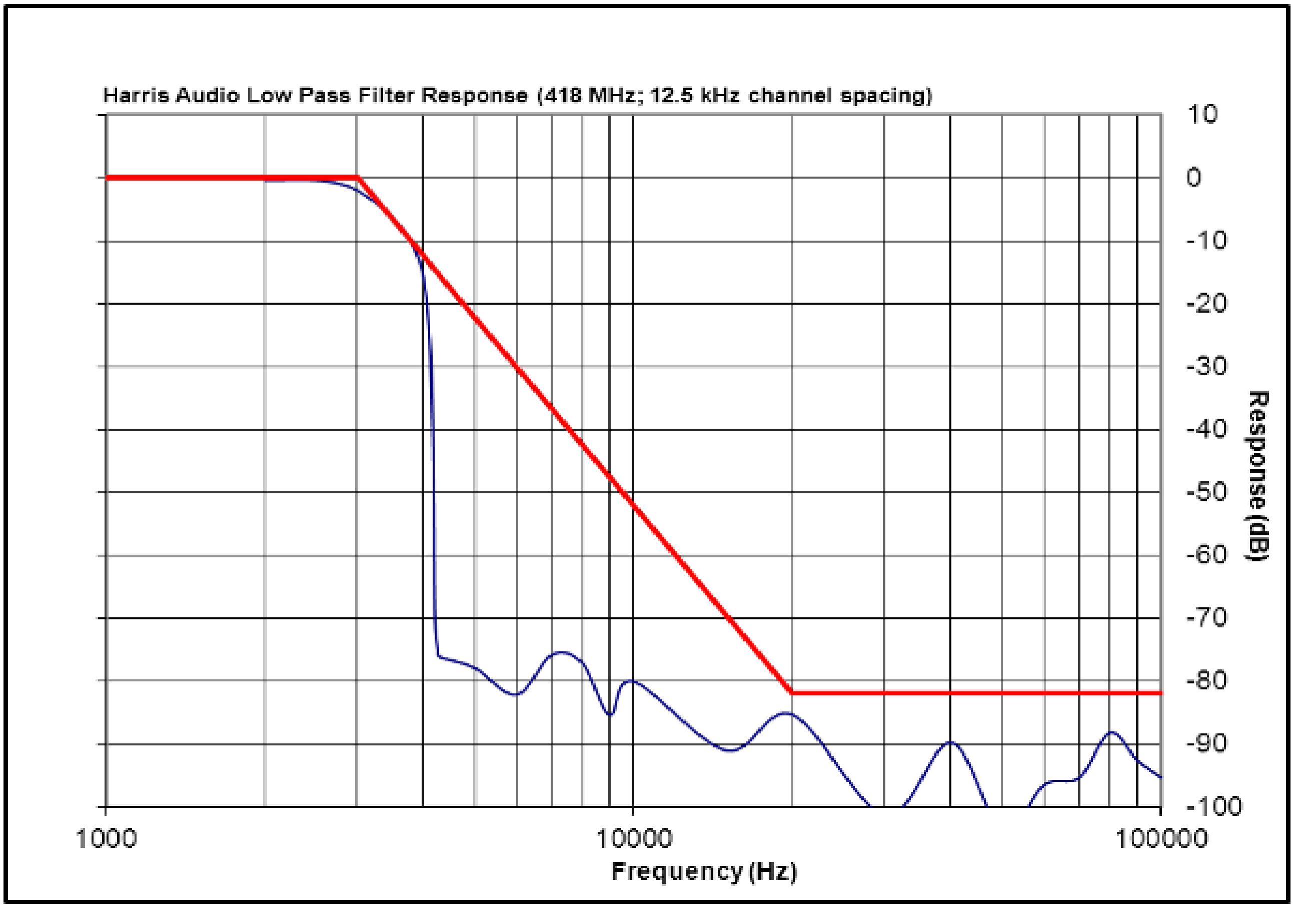
Plot 10-9: Modulation Characteristics – Audio Low Pass Filter - 162 MHz (NB)



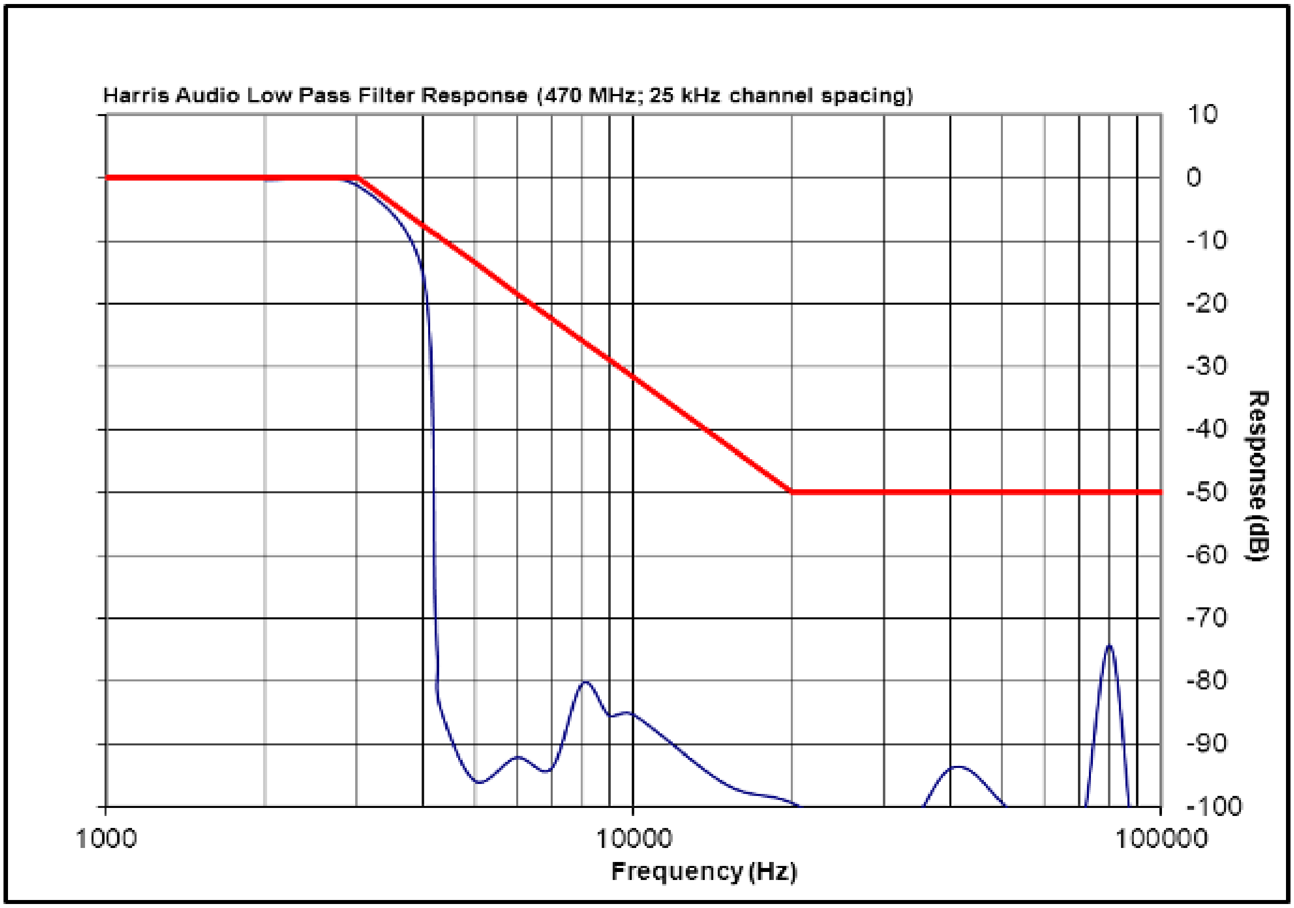
Plot 10-10: Modulation Characteristics – Audio Low Pass Filter - 418 MHz (WB)



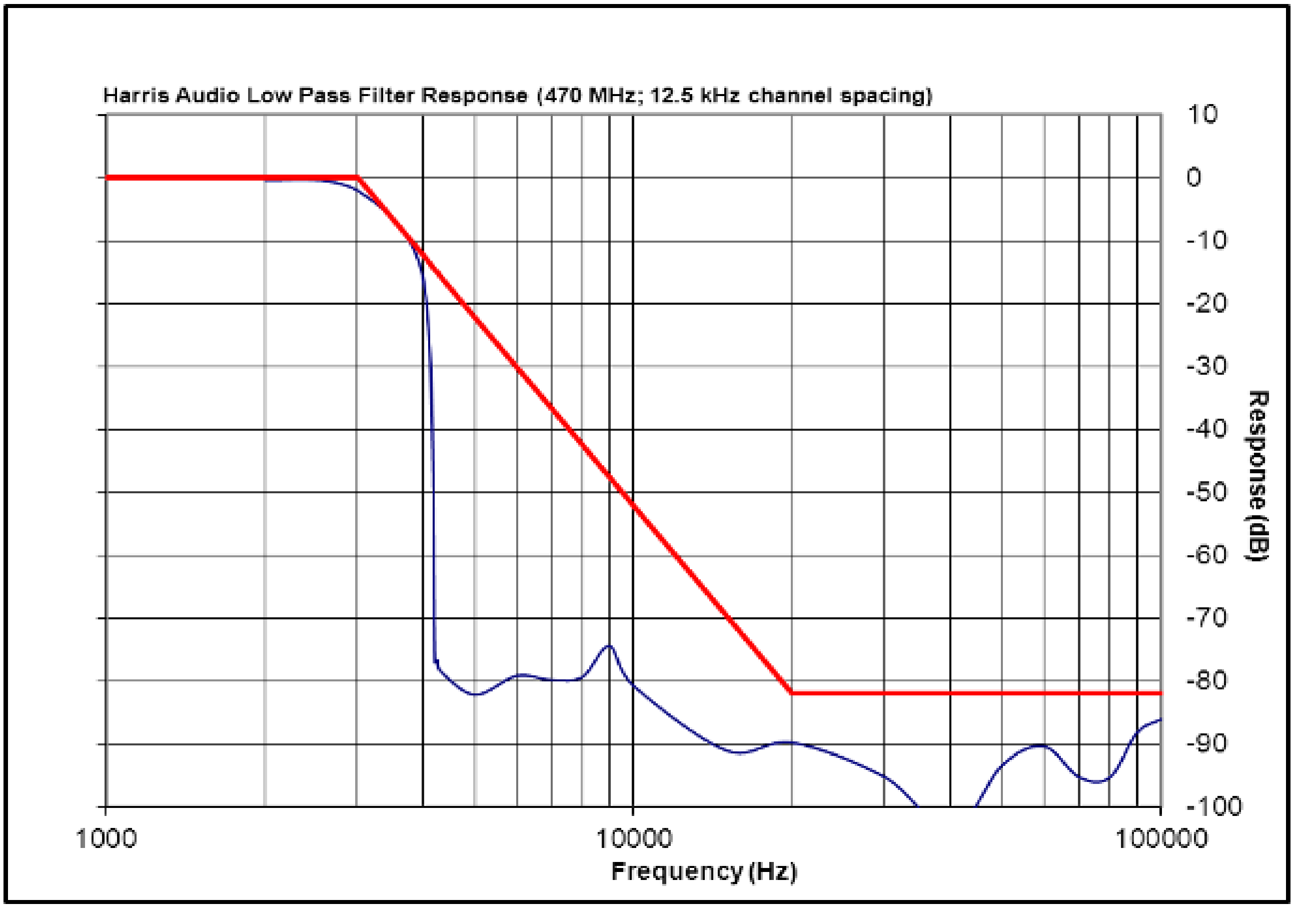
Plot 10-11: Modulation Characteristics – Audio Low Pass Filter - 418 MHz (NB)



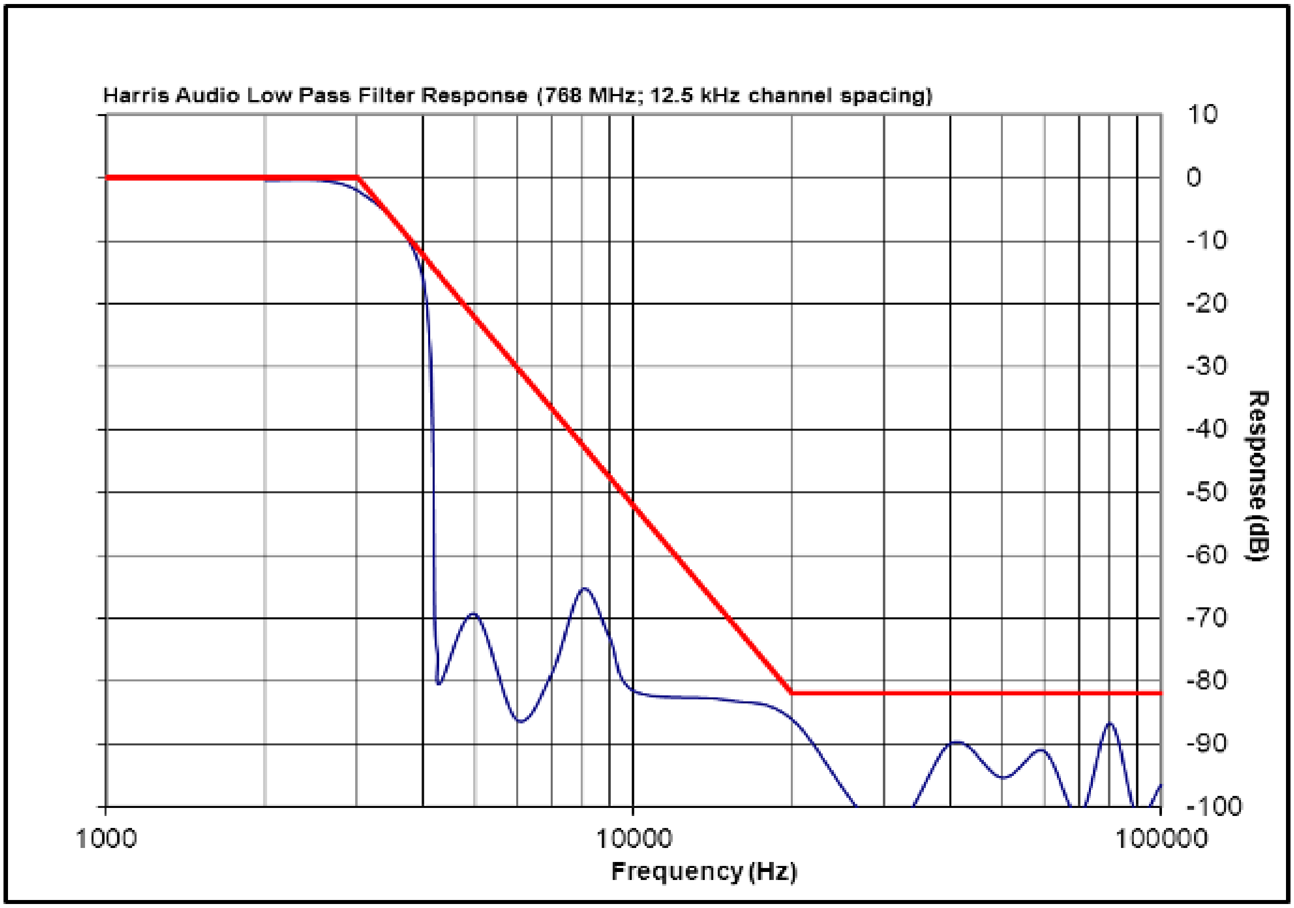
Plot 10-12: Modulation Characteristics – Audio Low Pass Filter - 470 MHz (WB)



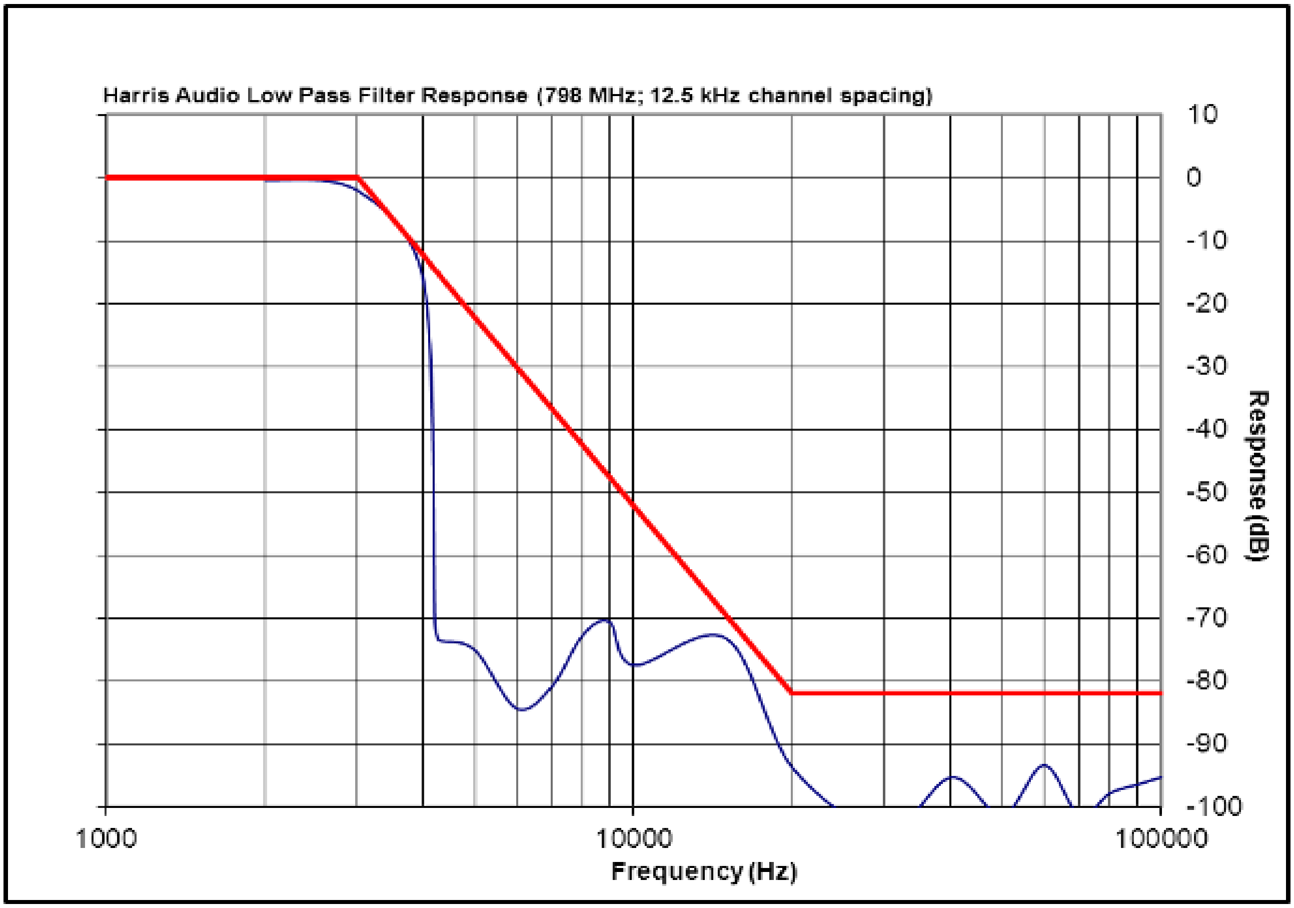
Plot 10-13: Modulation Characteristics – Audio Low Pass Filter - 470 MHz (NB)



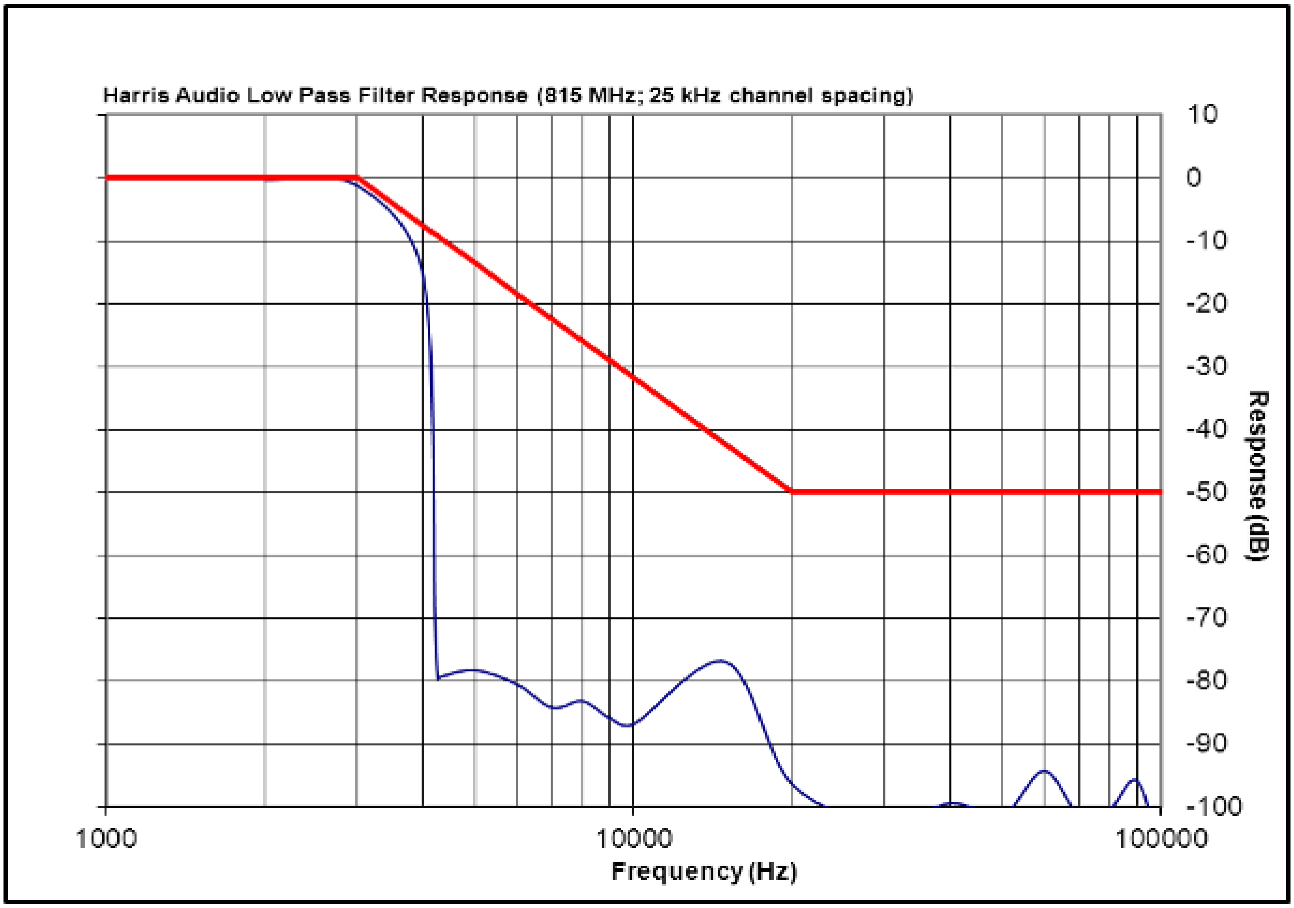
Plot 10-14: Modulation Characteristics – Audio Low Pass Filter – 768 MHz



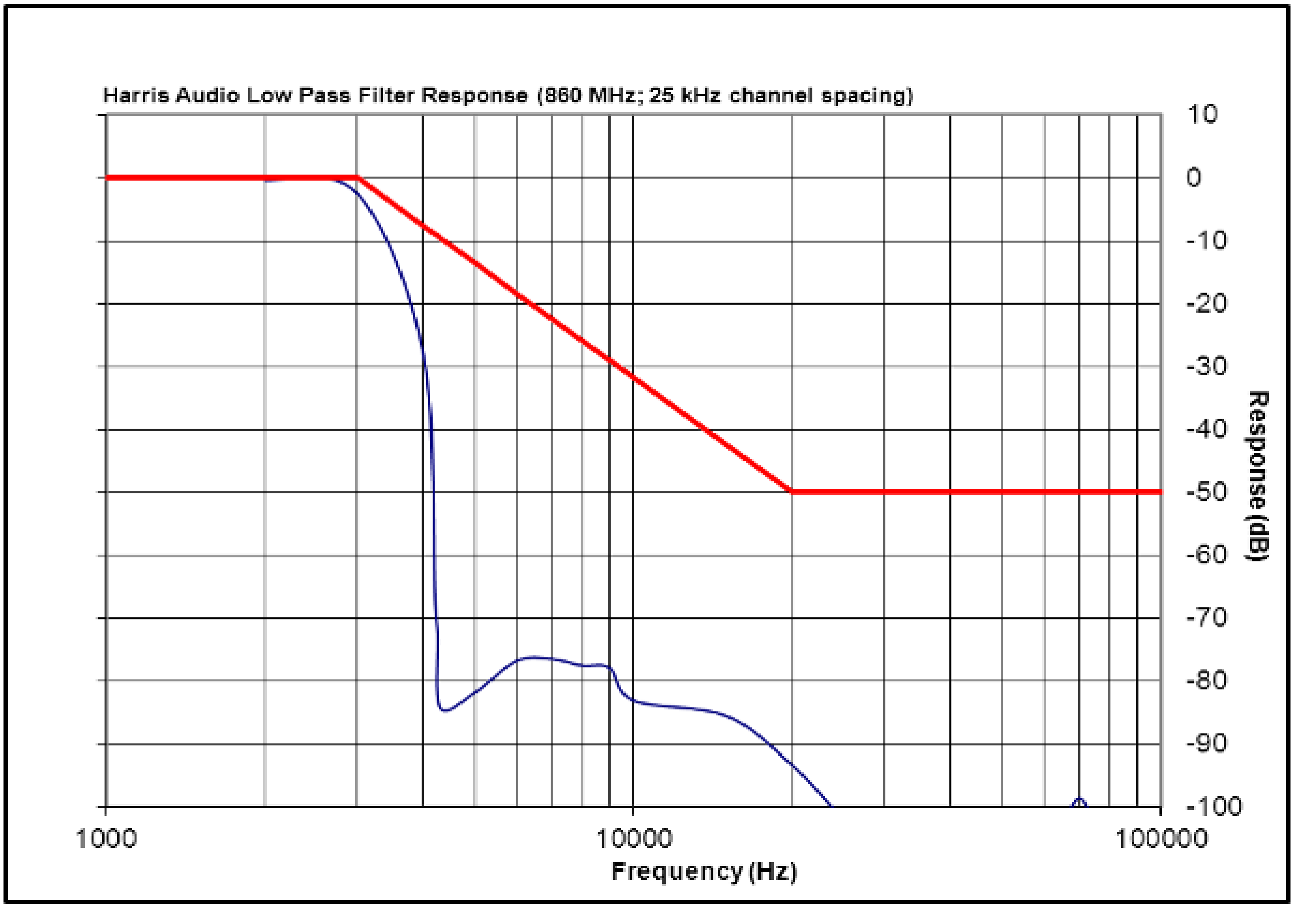
Plot 10-15: Modulation Characteristics – Audio Low Pass Filter - 798 MHz



Plot 10-16: Modulation Characteristics – Audio Low Pass Filter - 815 MHz

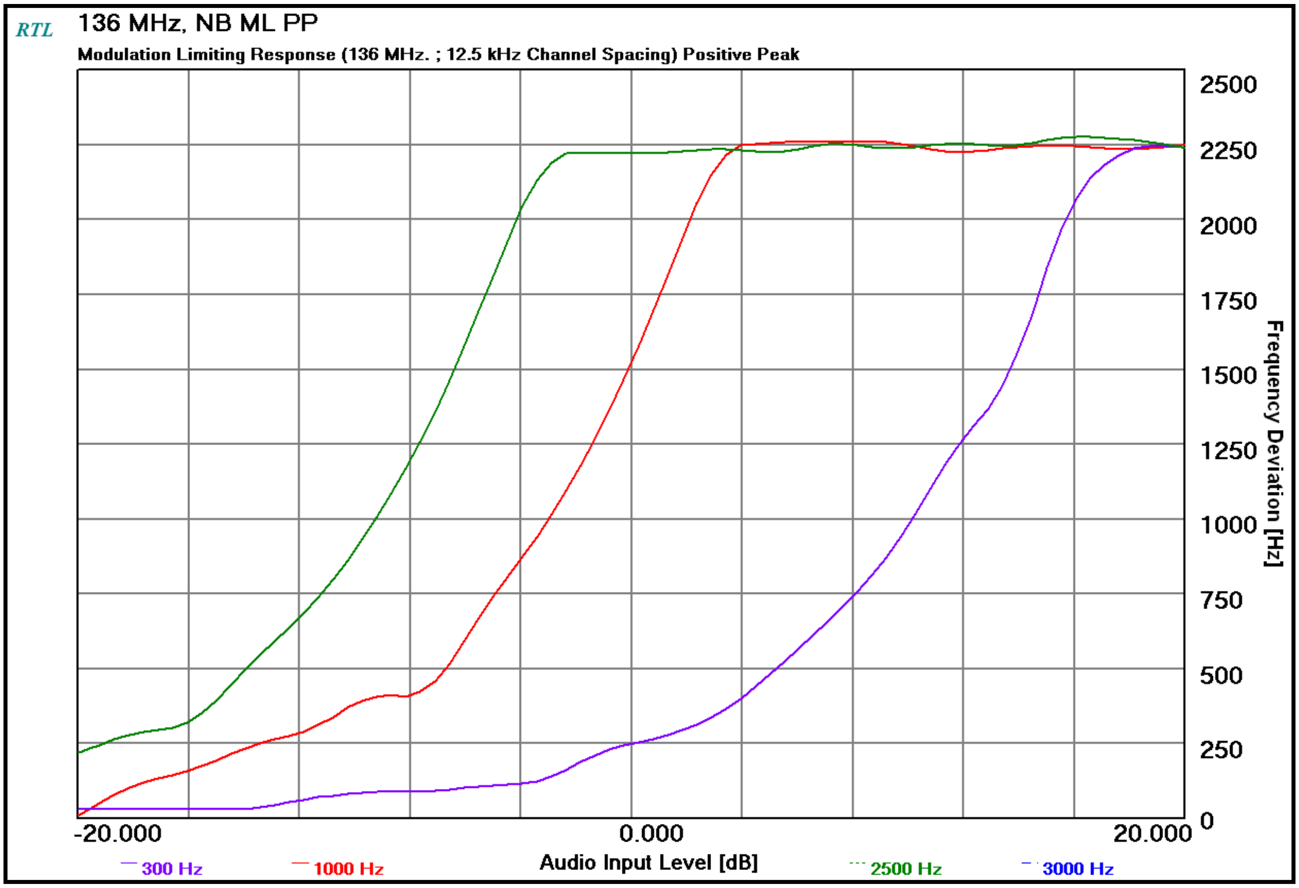


Plot 10-17: Modulation Characteristics – Audio Low Pass Filter - 860 MHz

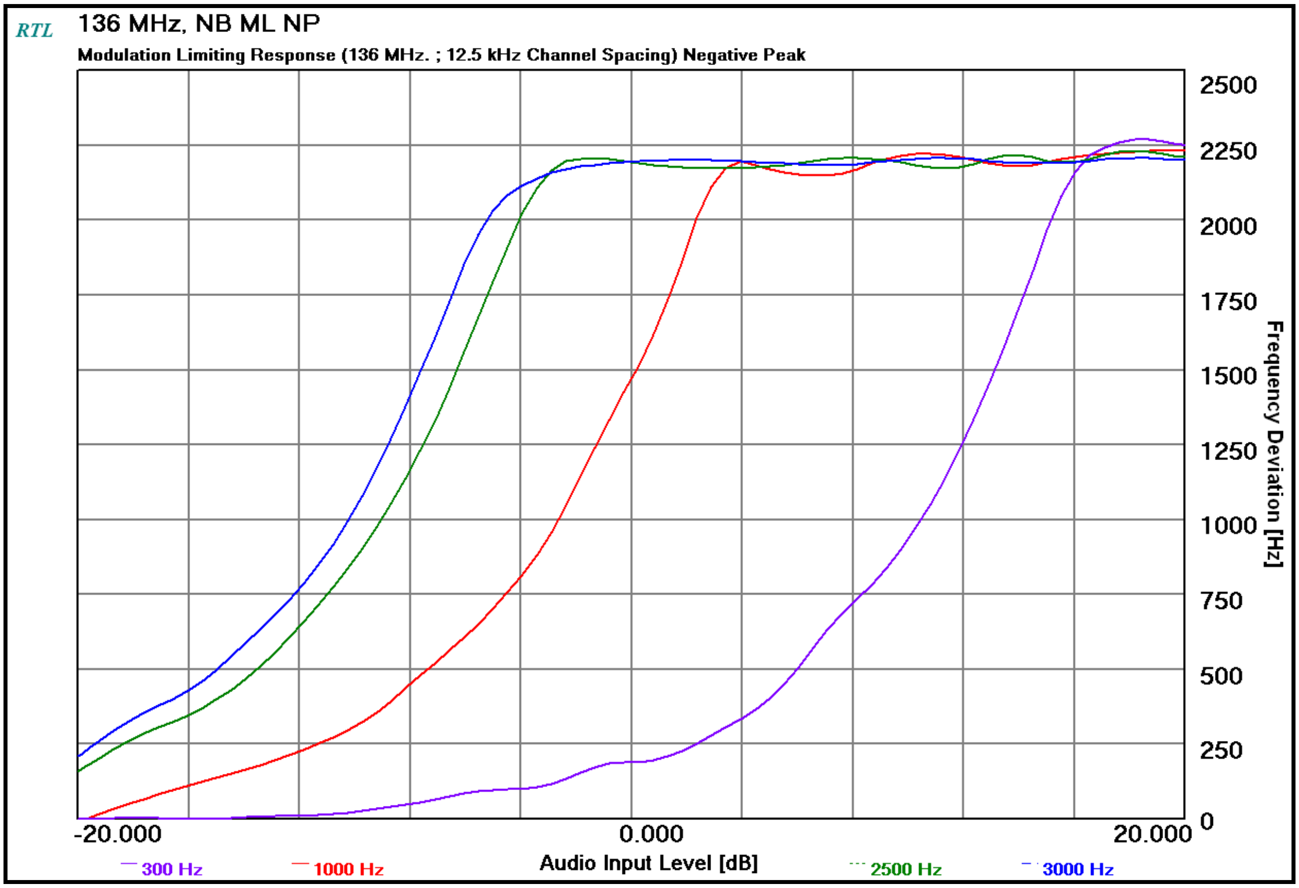


10.2.3 Modulation Limiting

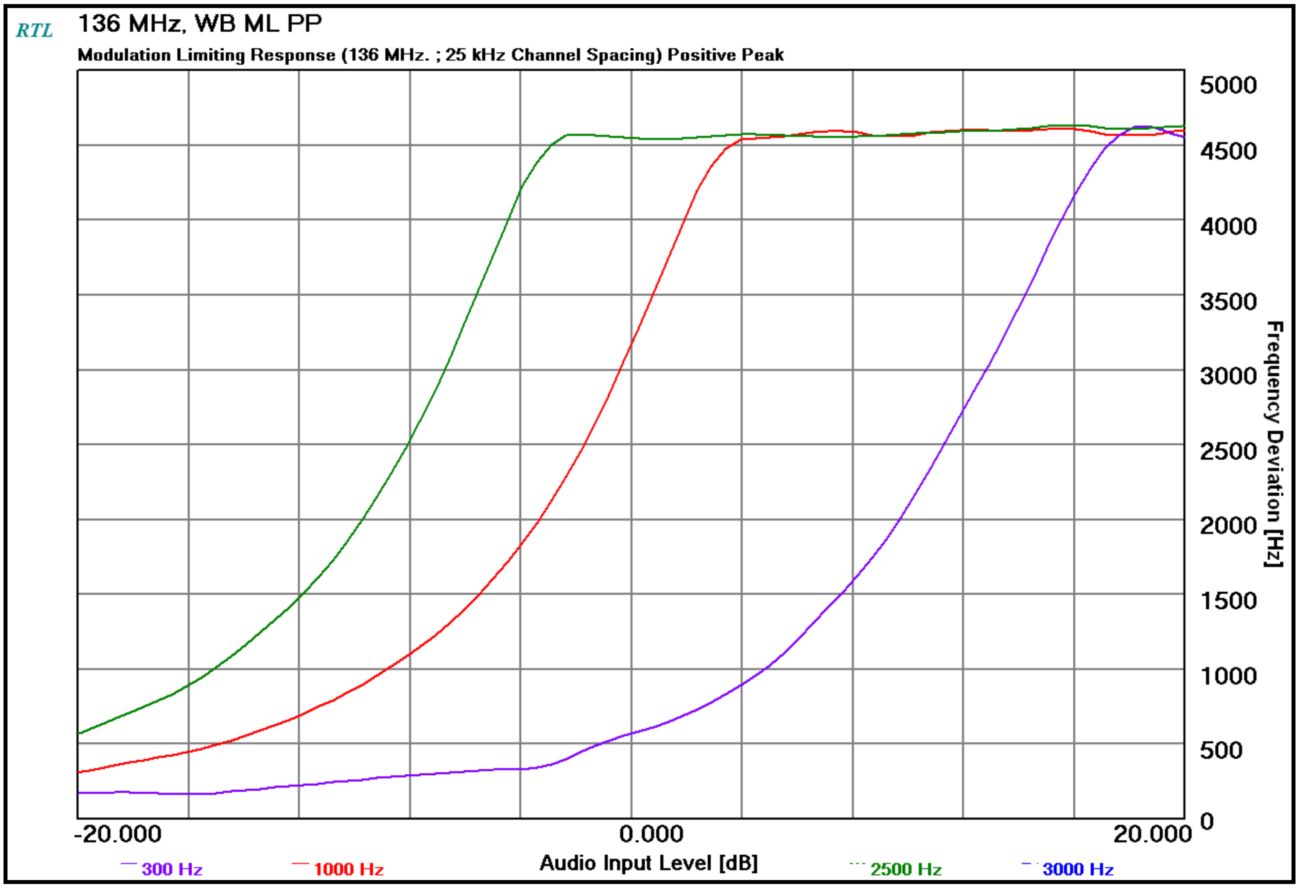
Plot 10-18: Modulation Characteristics – Modulation Limiting - 136 MHz; Positive Peak; NB



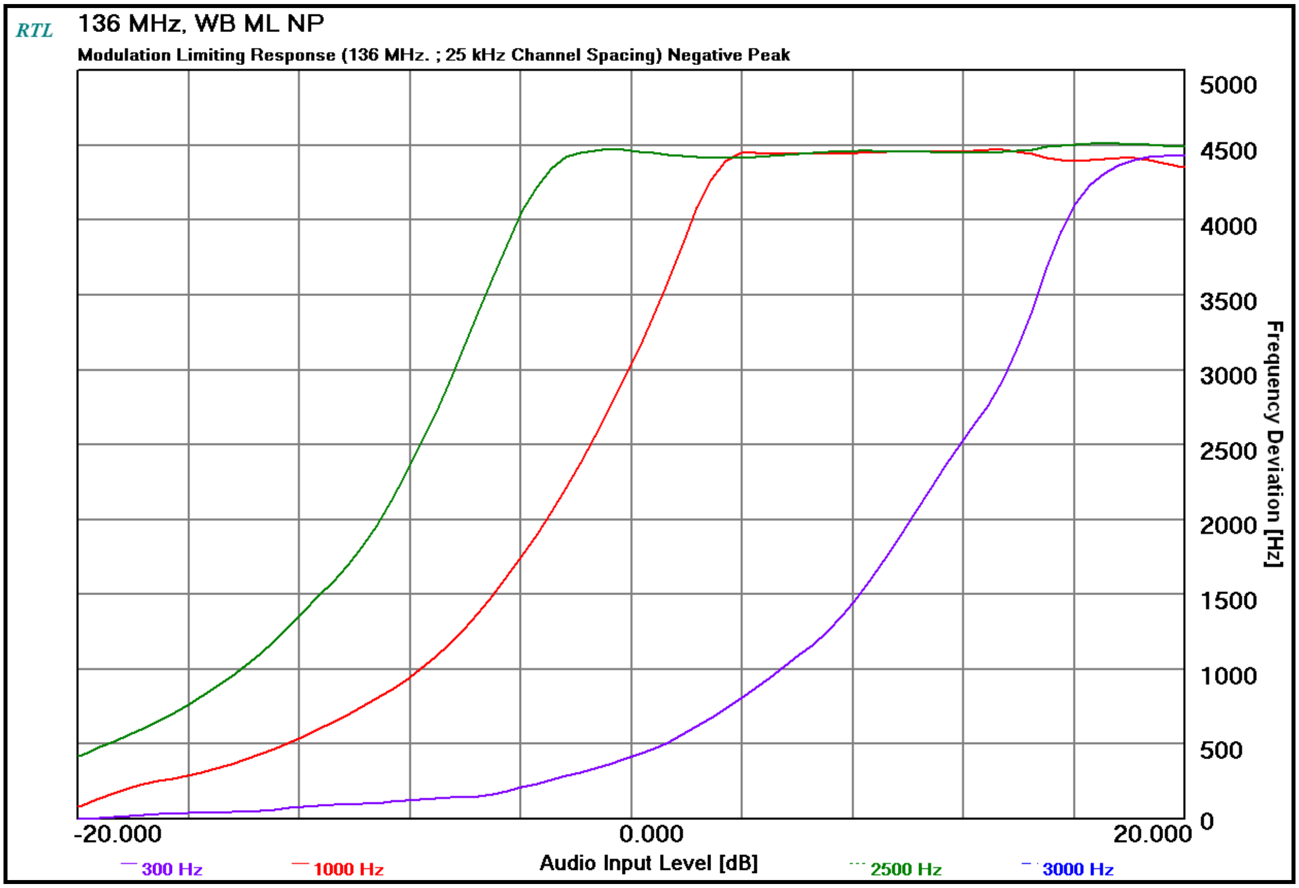
Plot 10-19: Modulation Characteristics – Modulation Limiting - 136 MHz; Negative Peak; NB



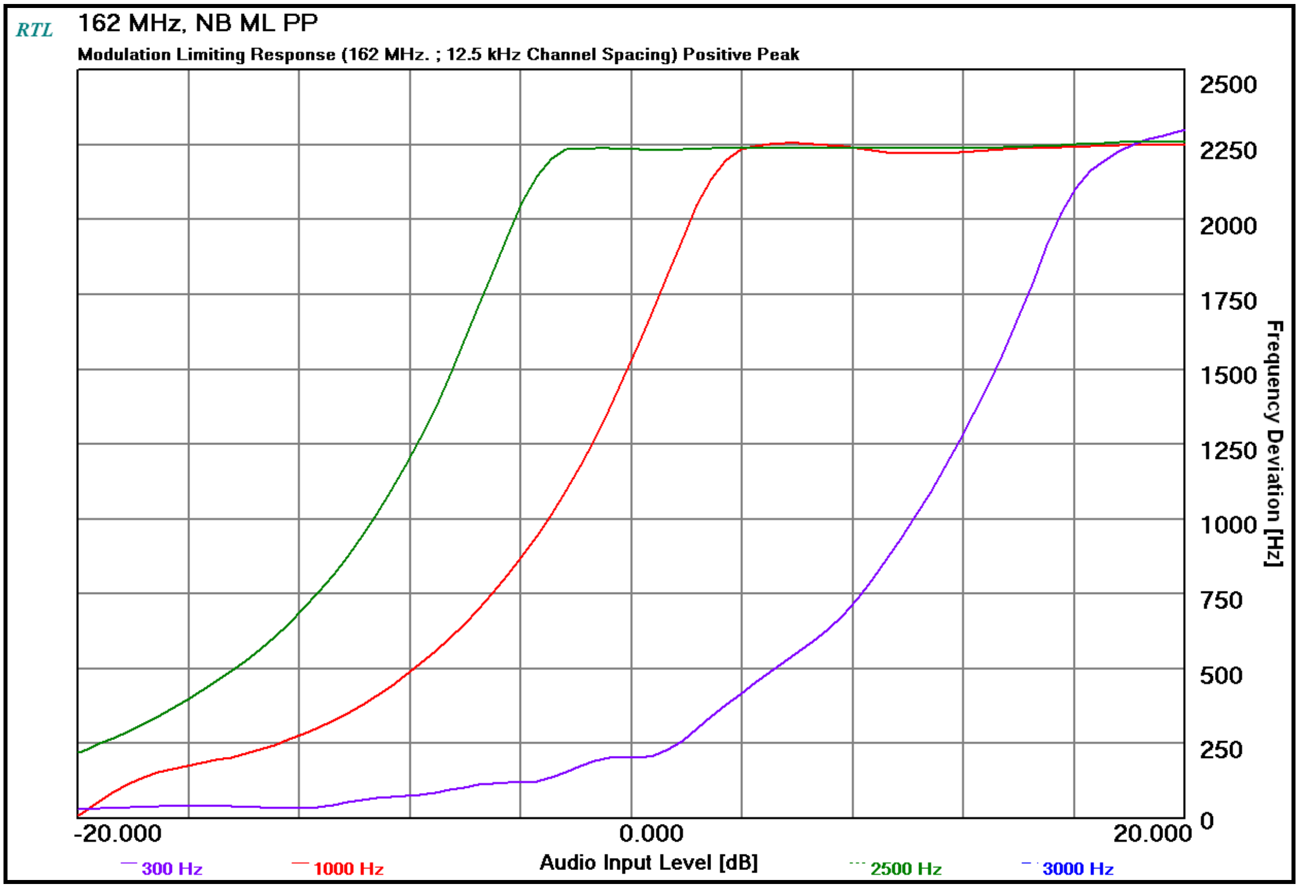
Plot 10-20: Modulation Characteristics – Modulation Limiting - 136 MHz; Positive Peak; WB



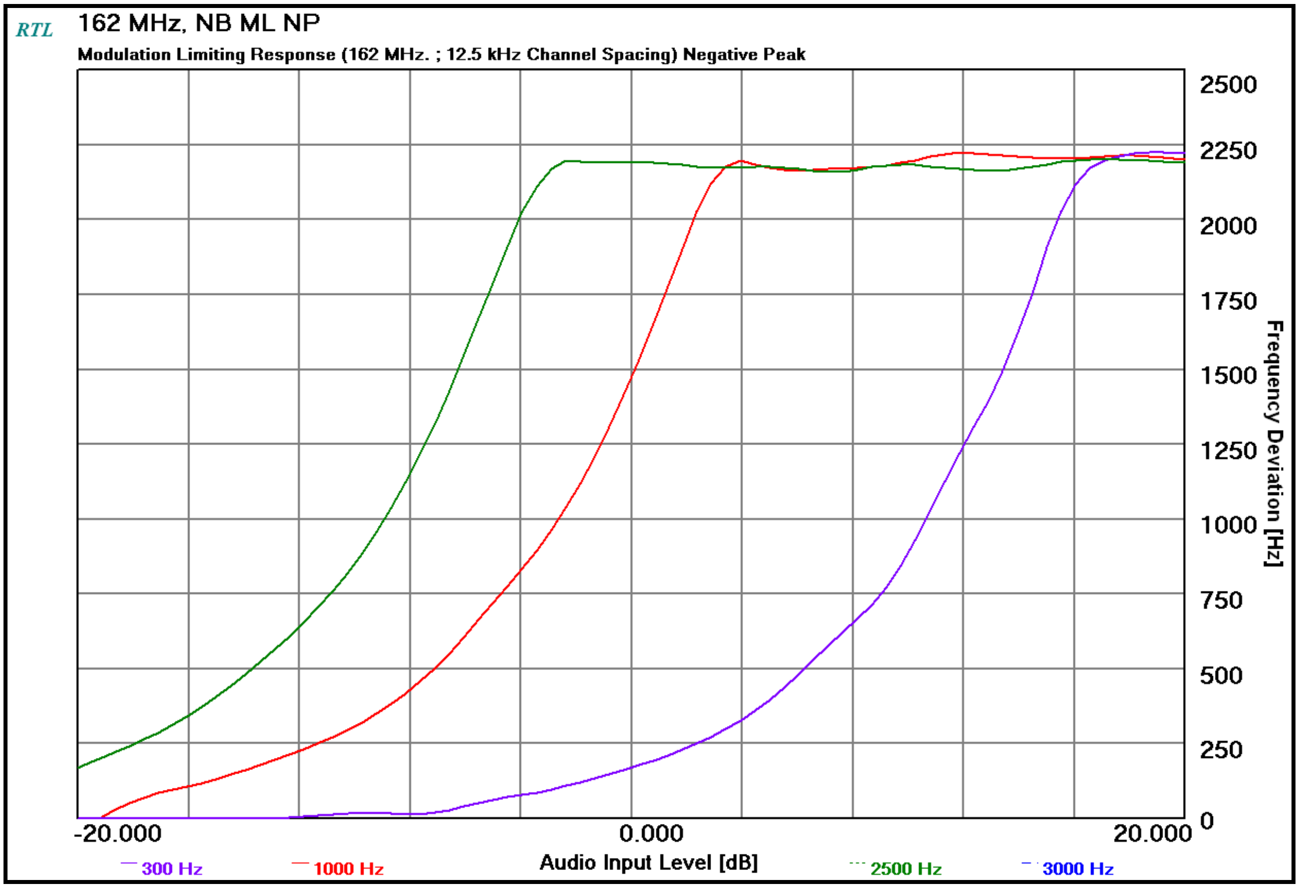
Plot 10-21: Modulation Characteristics – Modulation Limiting - 136 MHz; Negative Peak; WB



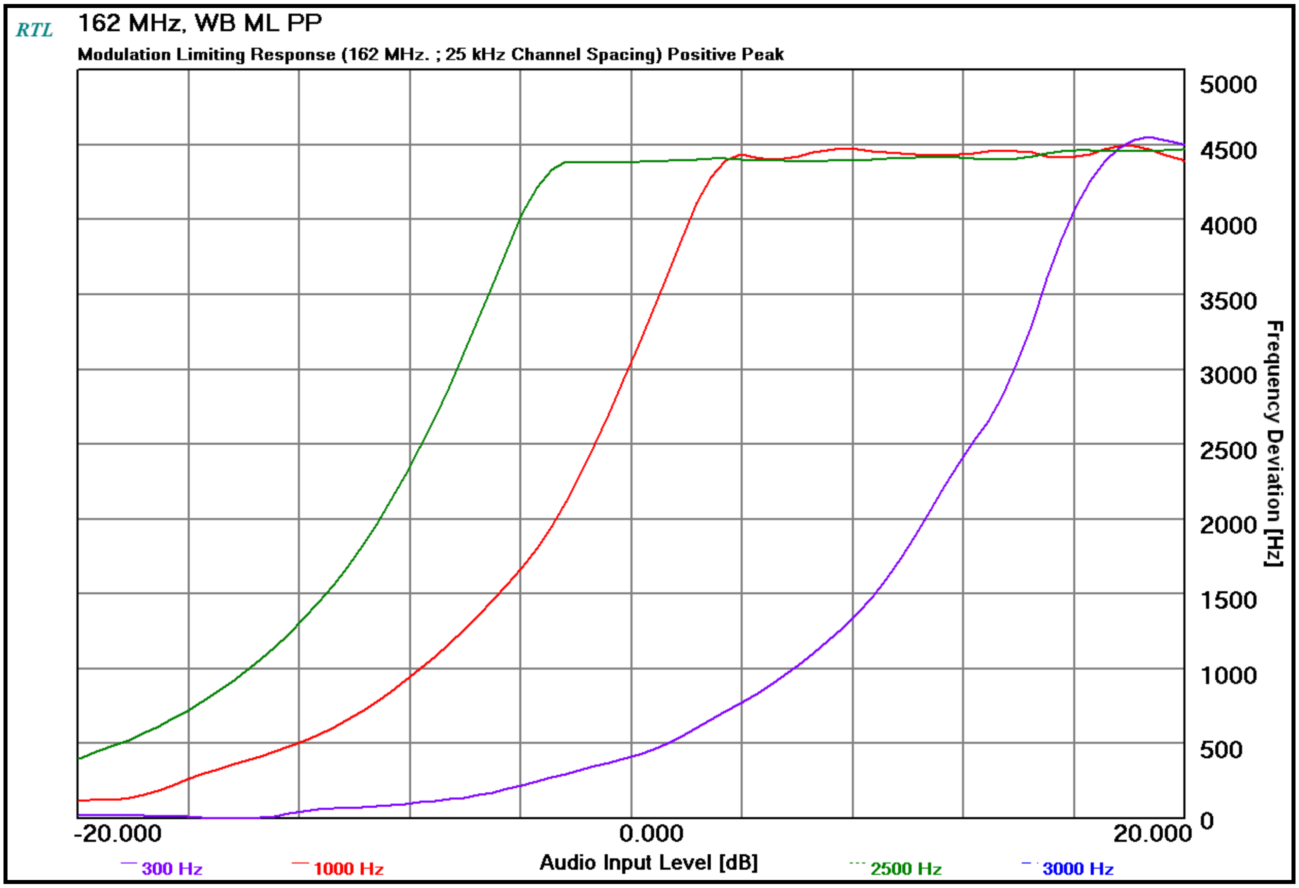
Plot 10-22: Modulation Characteristics – Modulation Limiting - 162 MHz; Positive Peak; NB



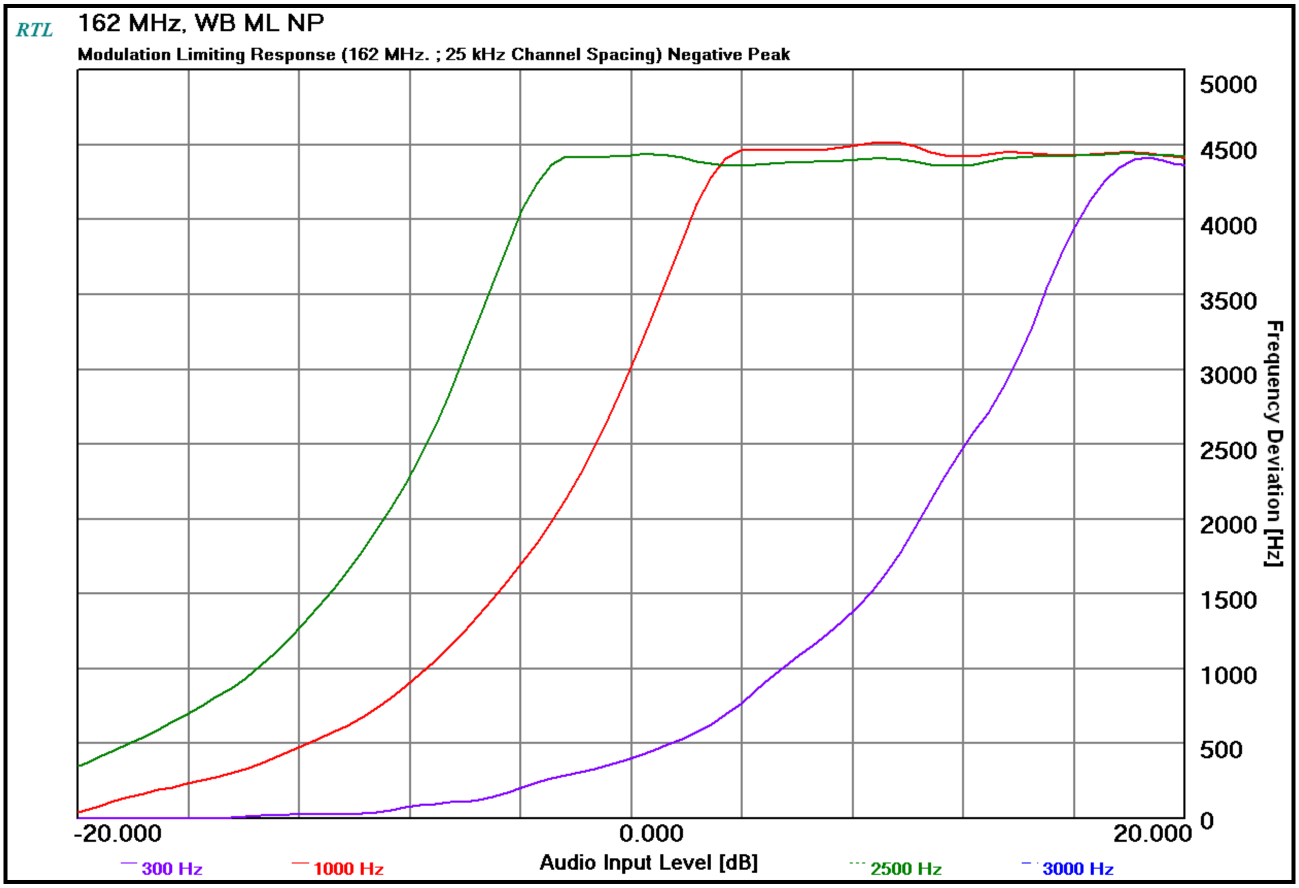
Plot 10-23: Modulation Characteristics – Modulation Limiting - 162 MHz; Negative Peak; NB



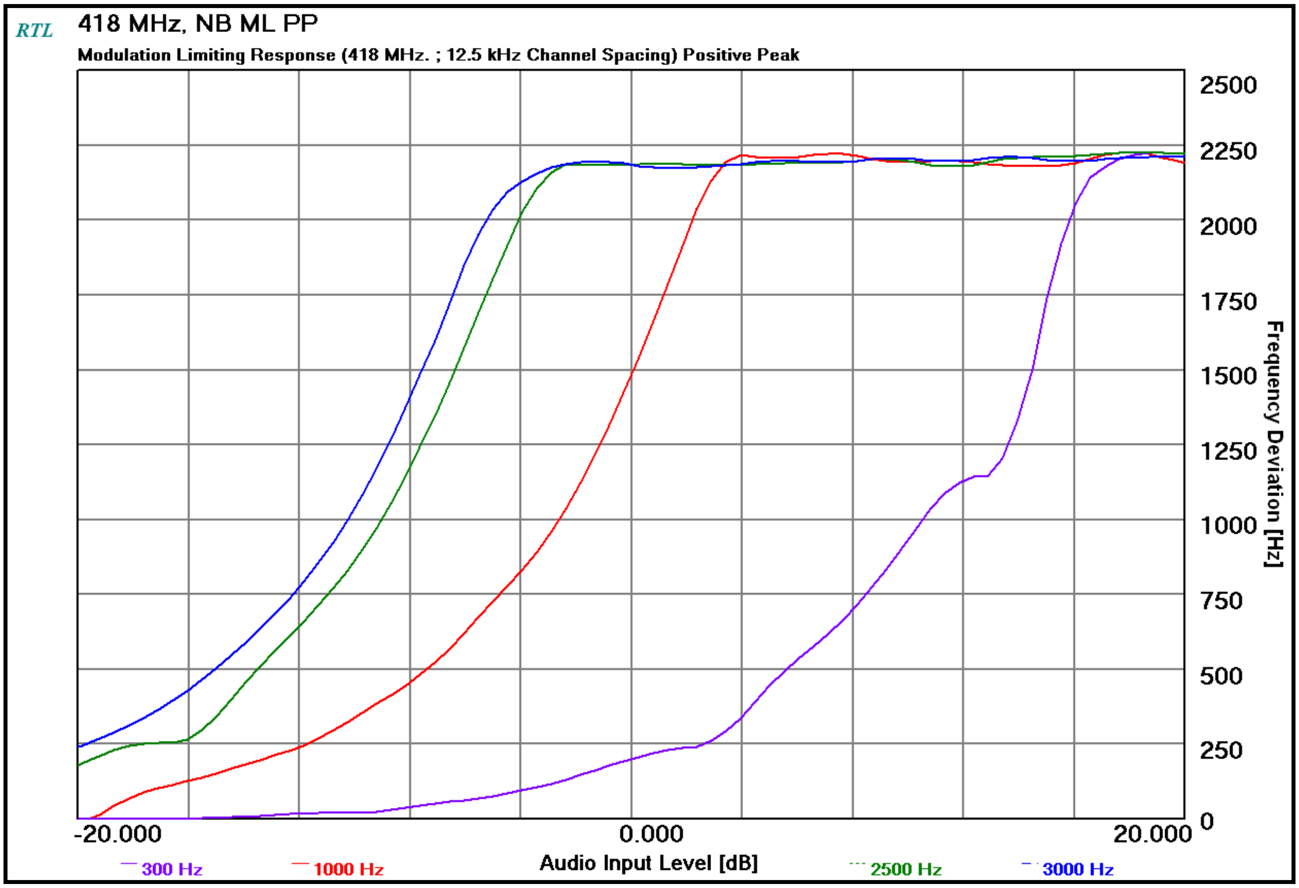
Plot 10-24: Modulation Characteristics – Modulation Limiting - 162 MHz; Positive Peak; WB



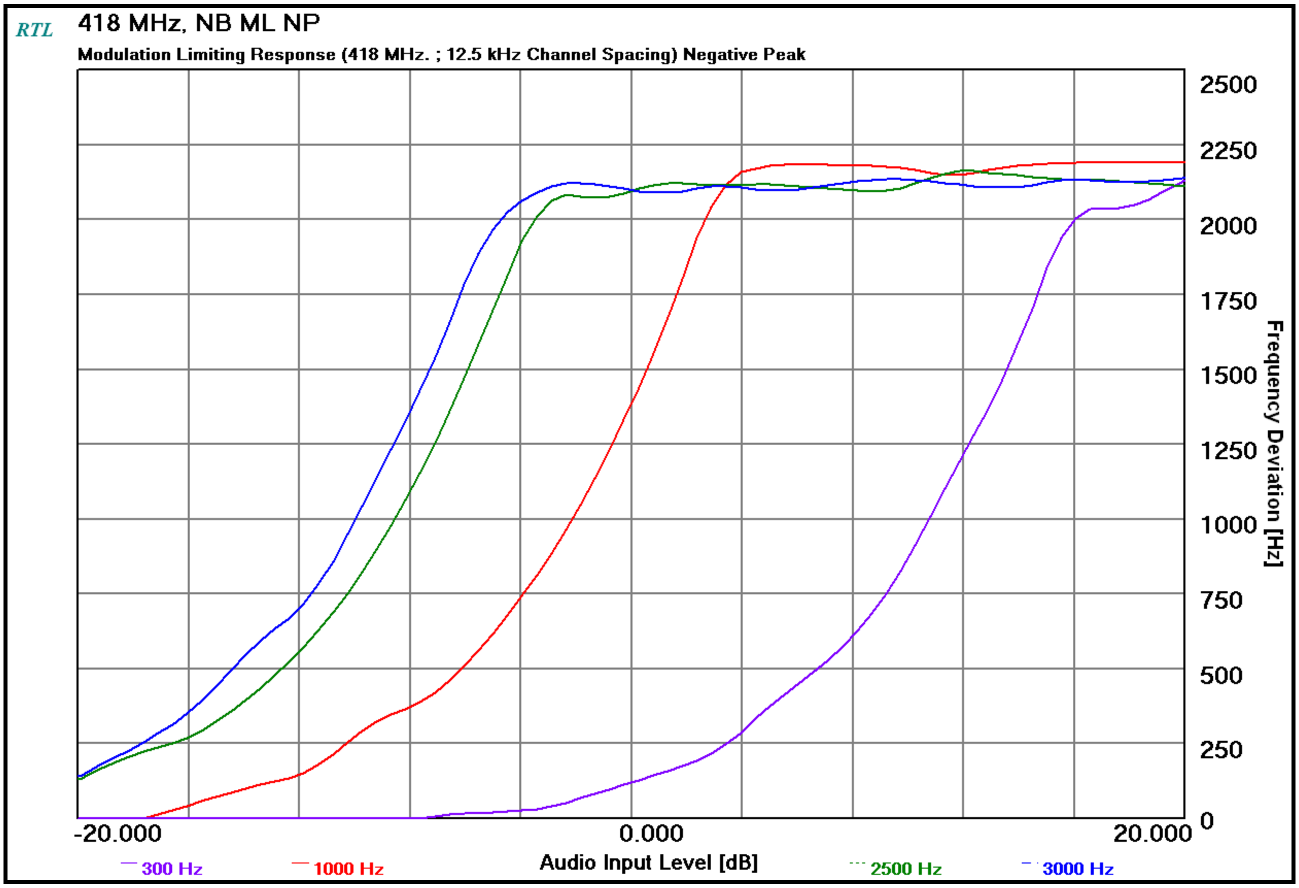
Plot 10-25: Modulation Characteristics – Modulation Limiting - 162 MHz; Negative Peak; WB



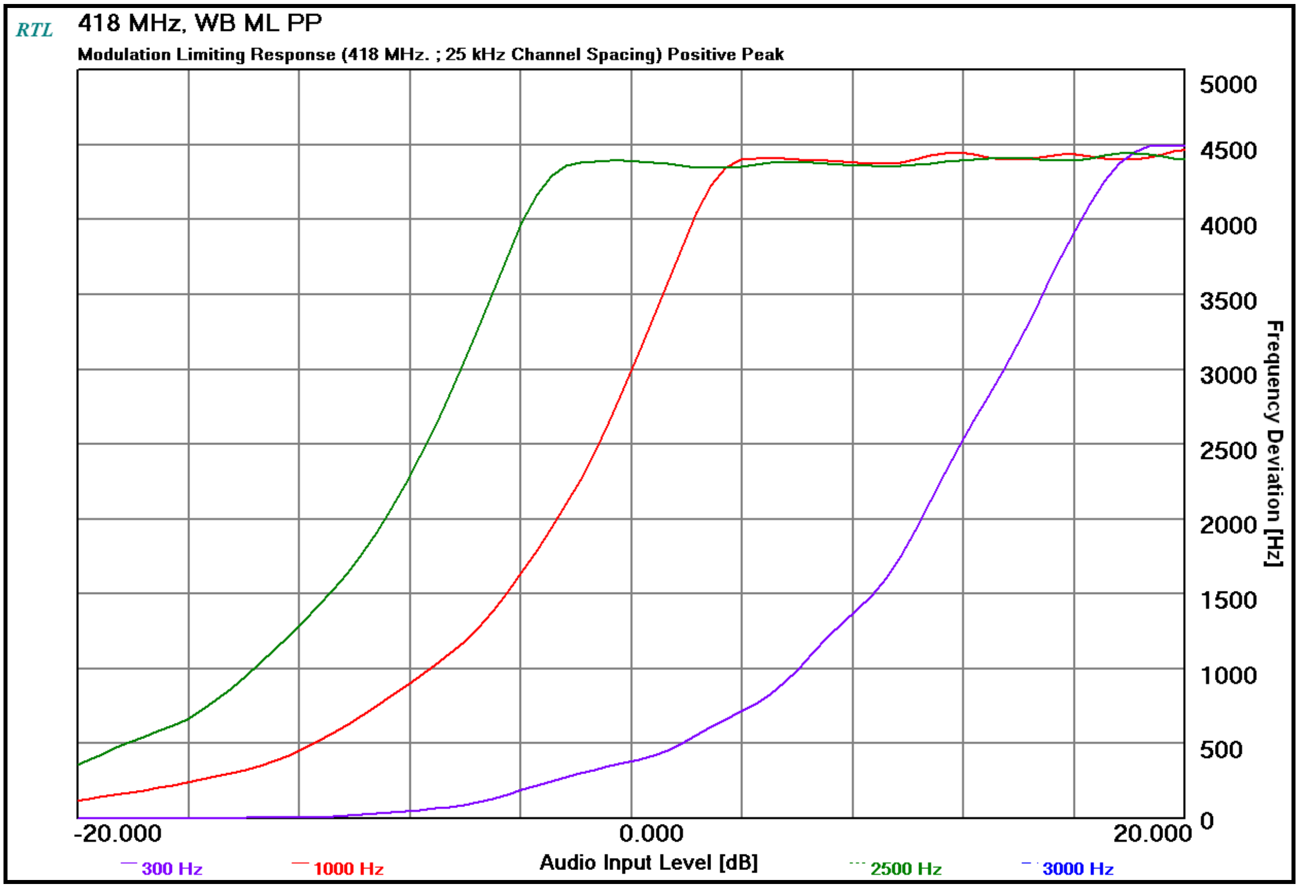
Plot 10-26: Modulation Characteristics – Modulation Limiting - 418 MHz; Positive Peak; NB



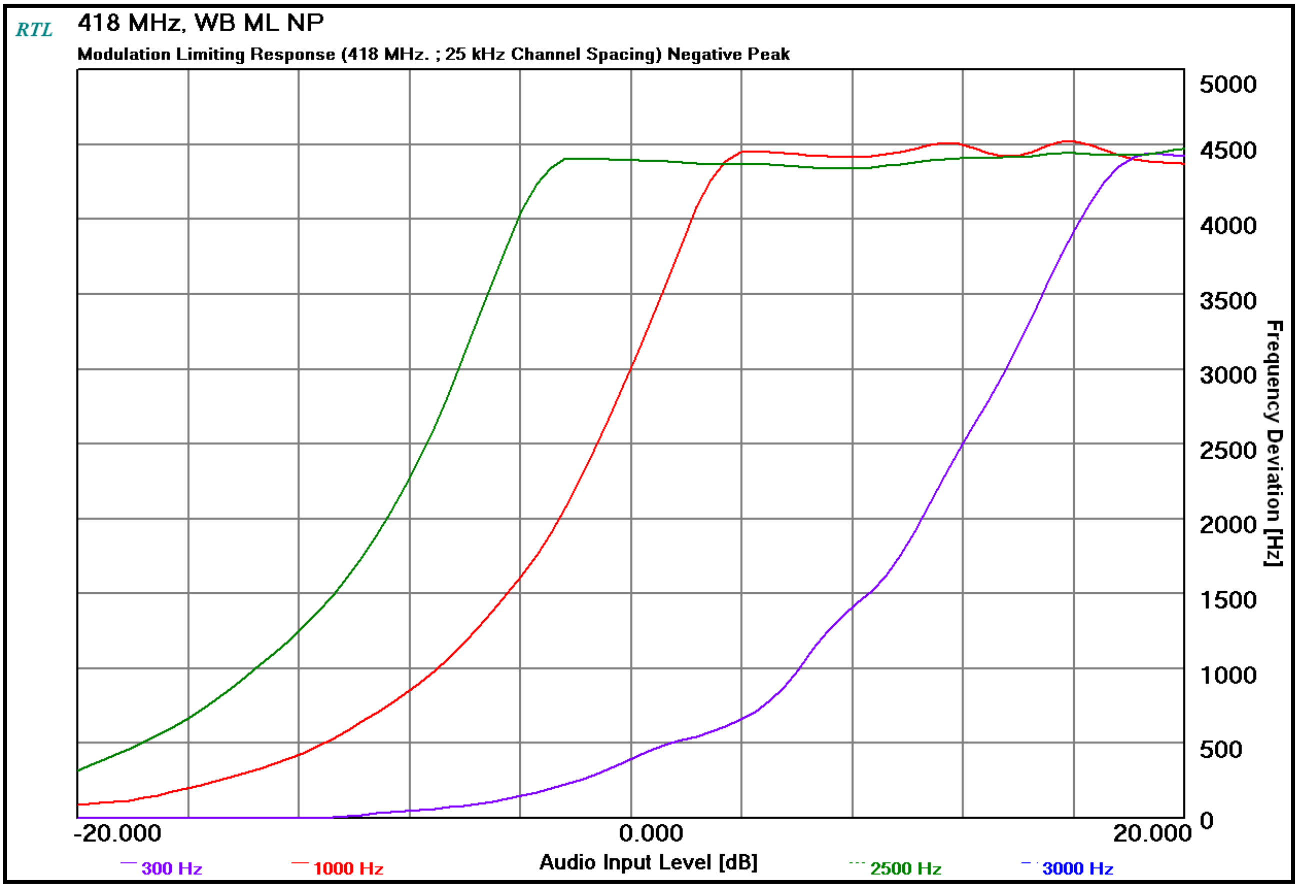
Plot 10-27: Modulation Characteristics – Modulation Limiting - 418 MHz; Negative Peak; NB



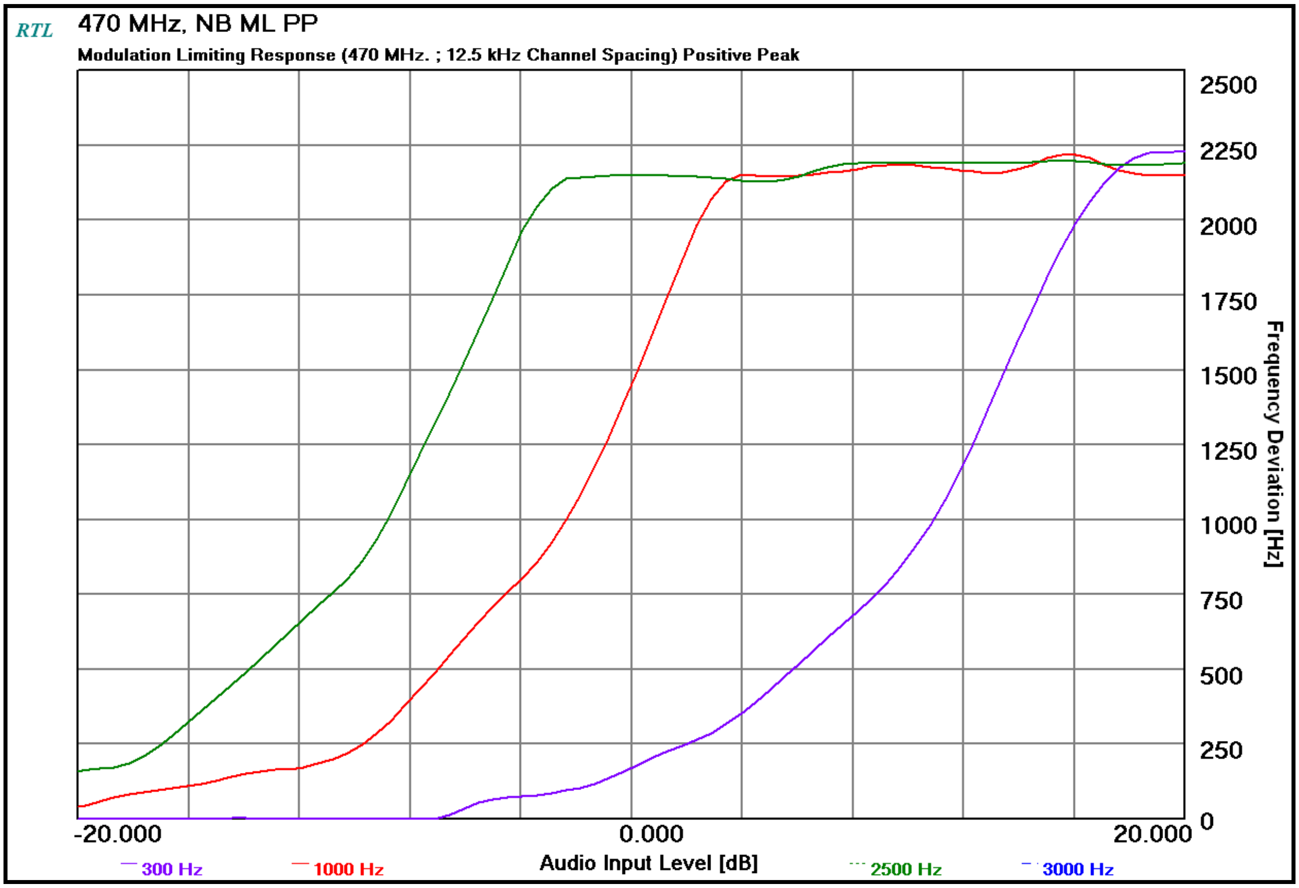
Plot 10-28: Modulation Characteristics – Modulation Limiting - 418 MHz; Positive Peak; WB



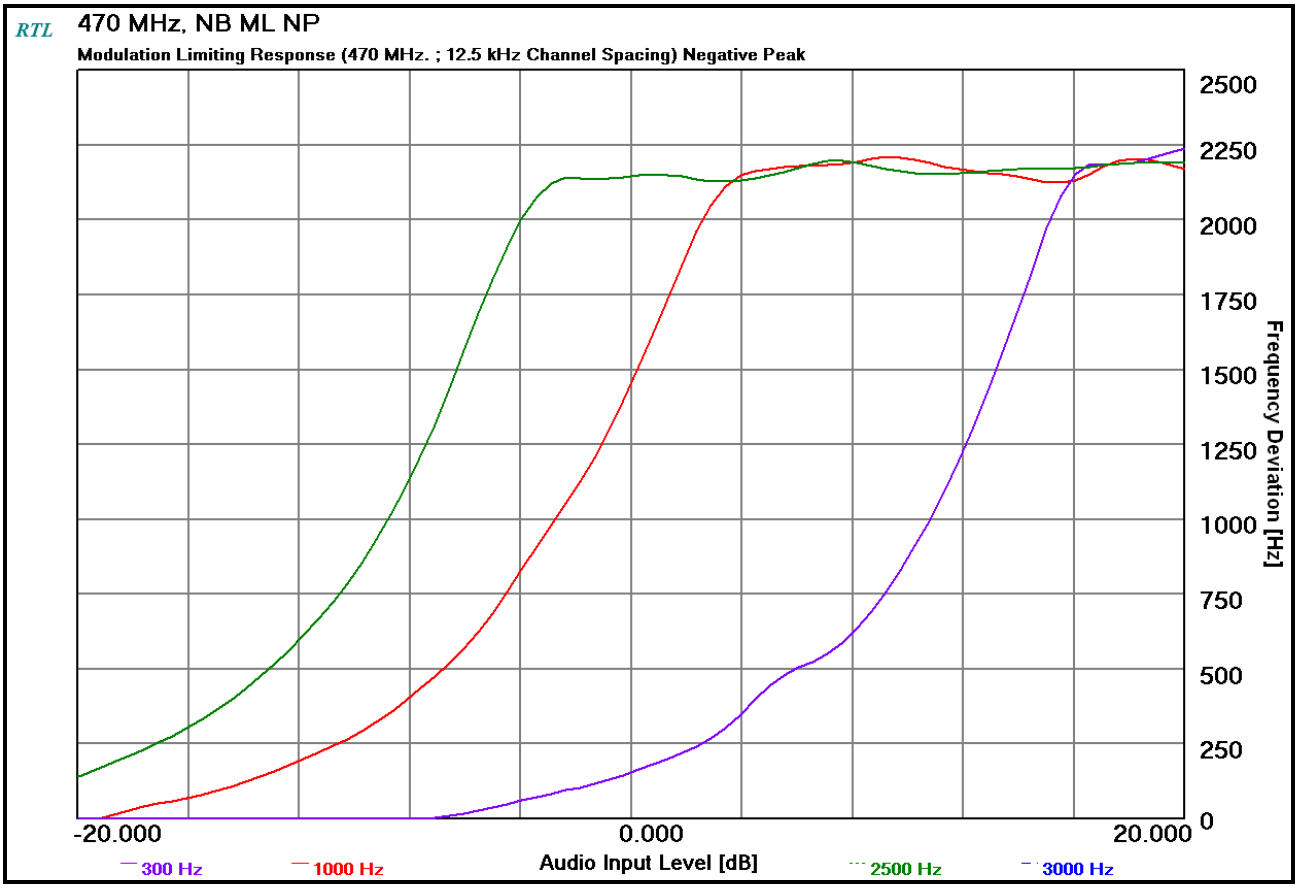
Plot 10-29: Modulation Characteristics – Modulation Limiting - 418 MHz; Negative Peak; WB



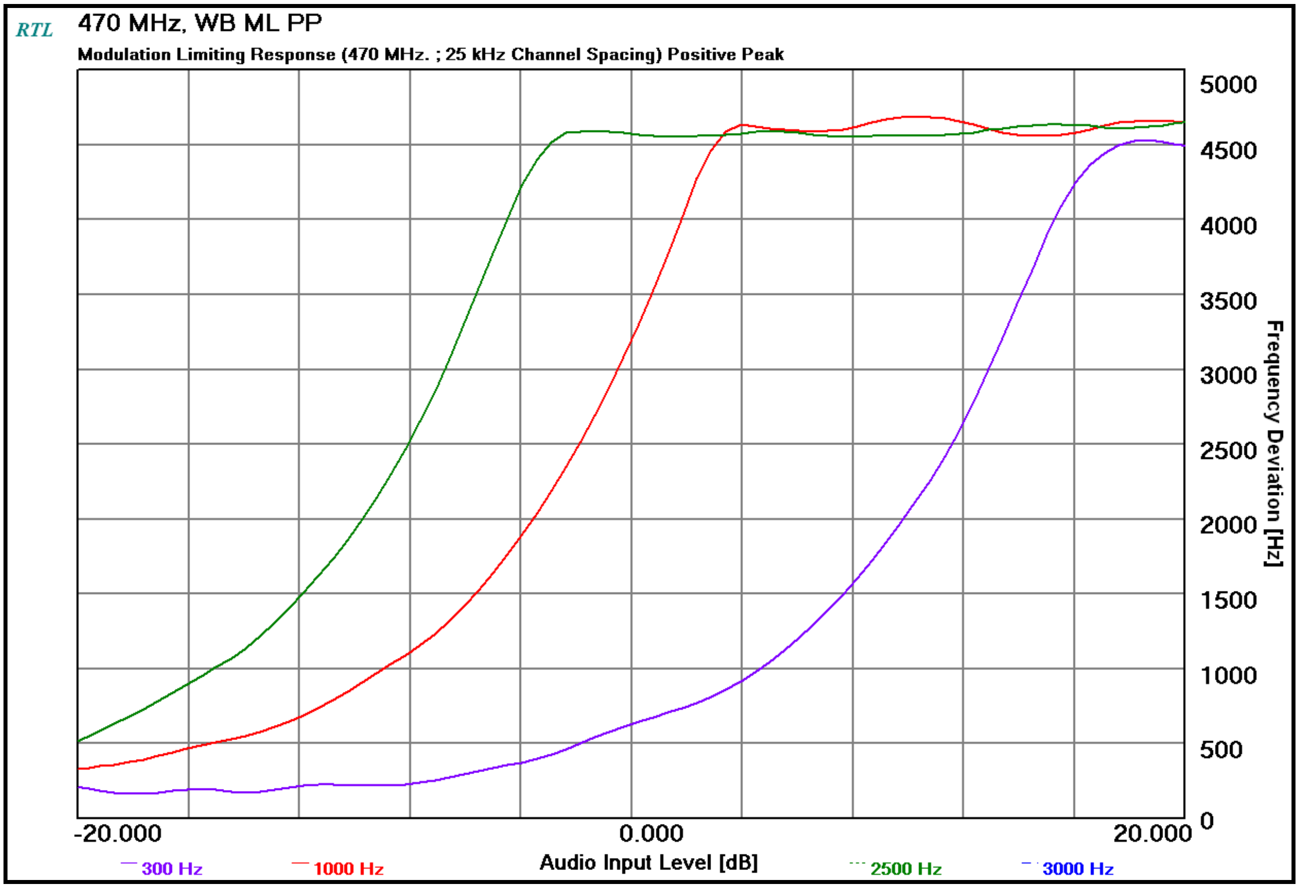
Plot 10-30: Modulation Characteristics – Modulation Limiting - 470 MHz; Positive Peak; NB



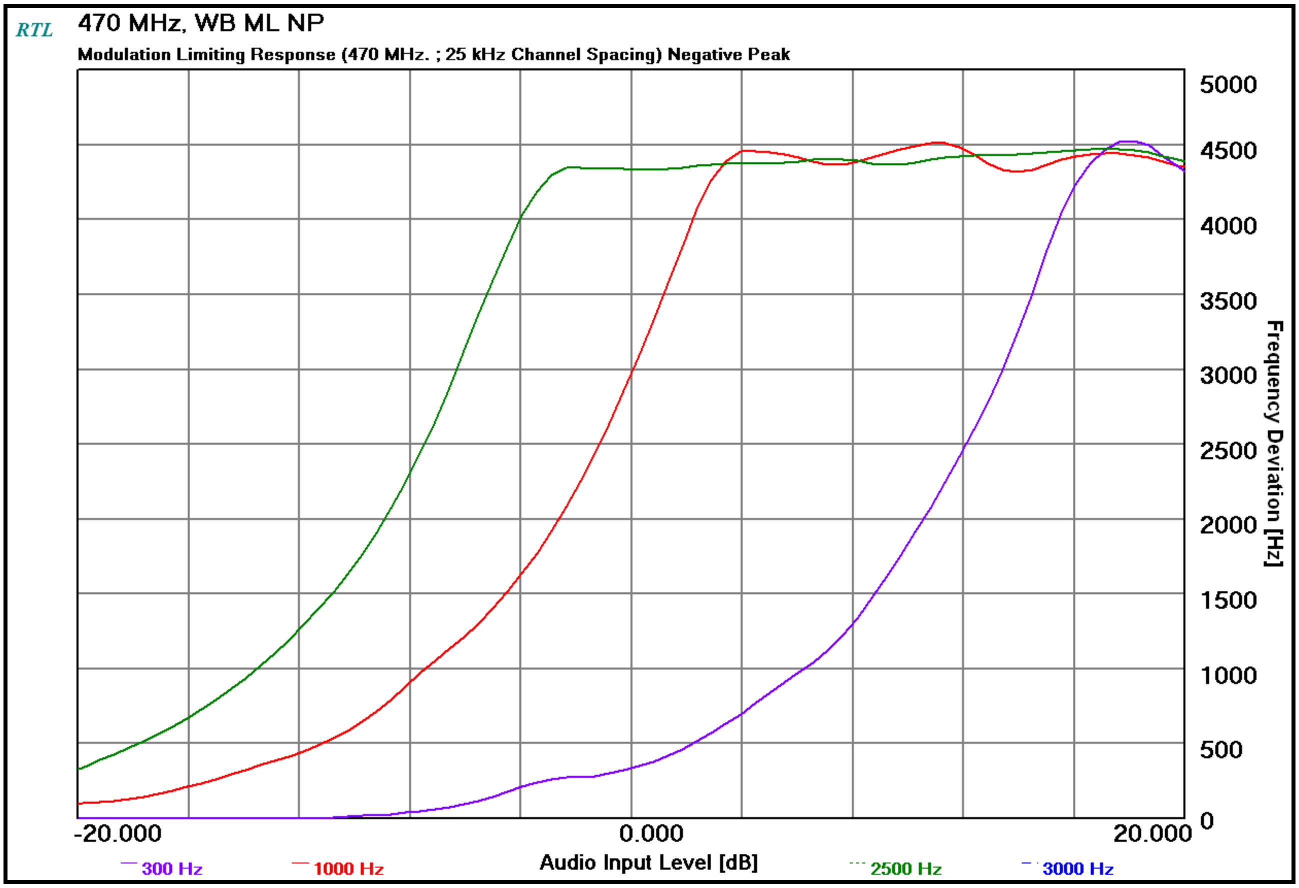
Plot 10-31: Modulation Characteristics – Modulation Limiting - 470 MHz; Negative Peak; NB



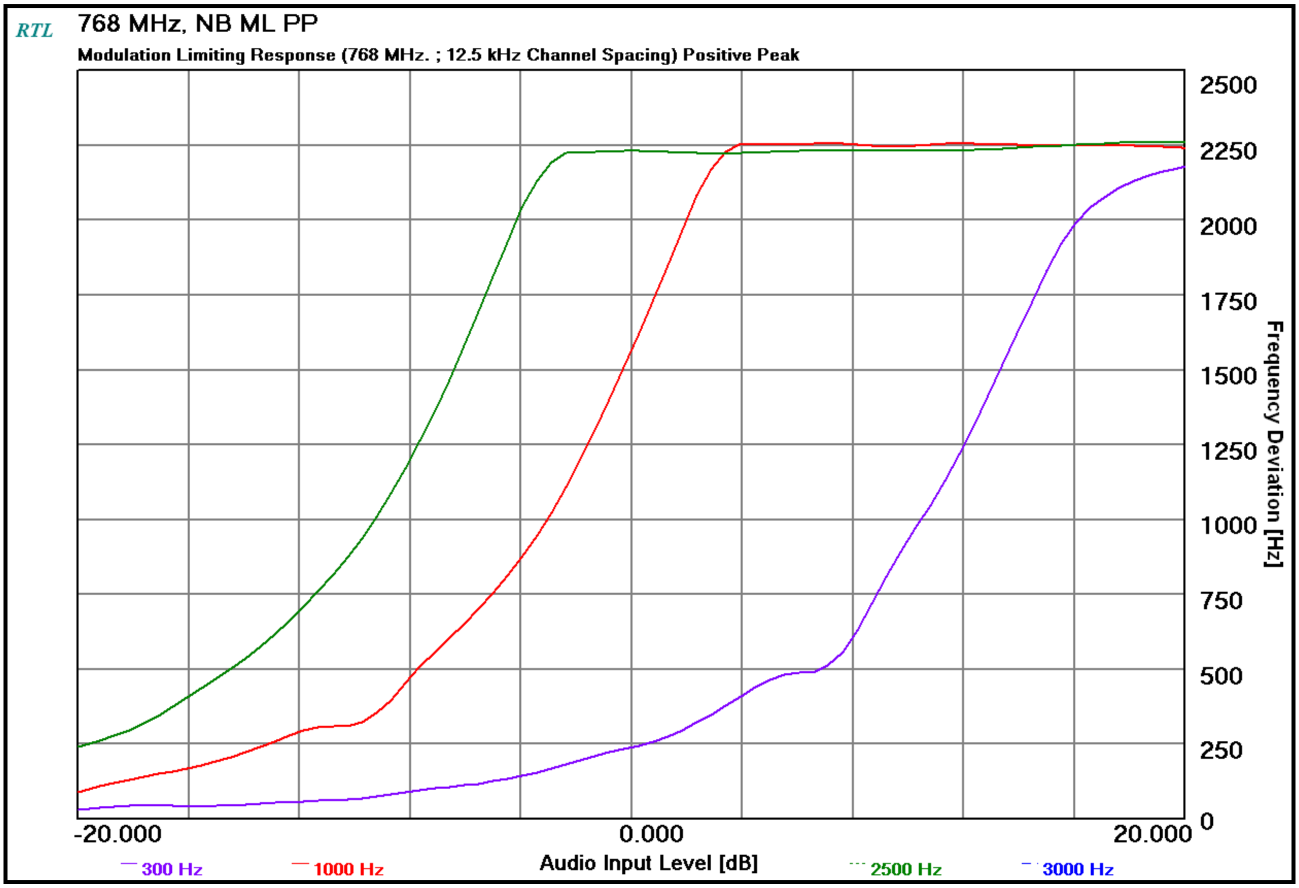
Plot 10-32: Modulation Characteristics – Modulation Limiting - 470 MHz; Positive Peak; WB



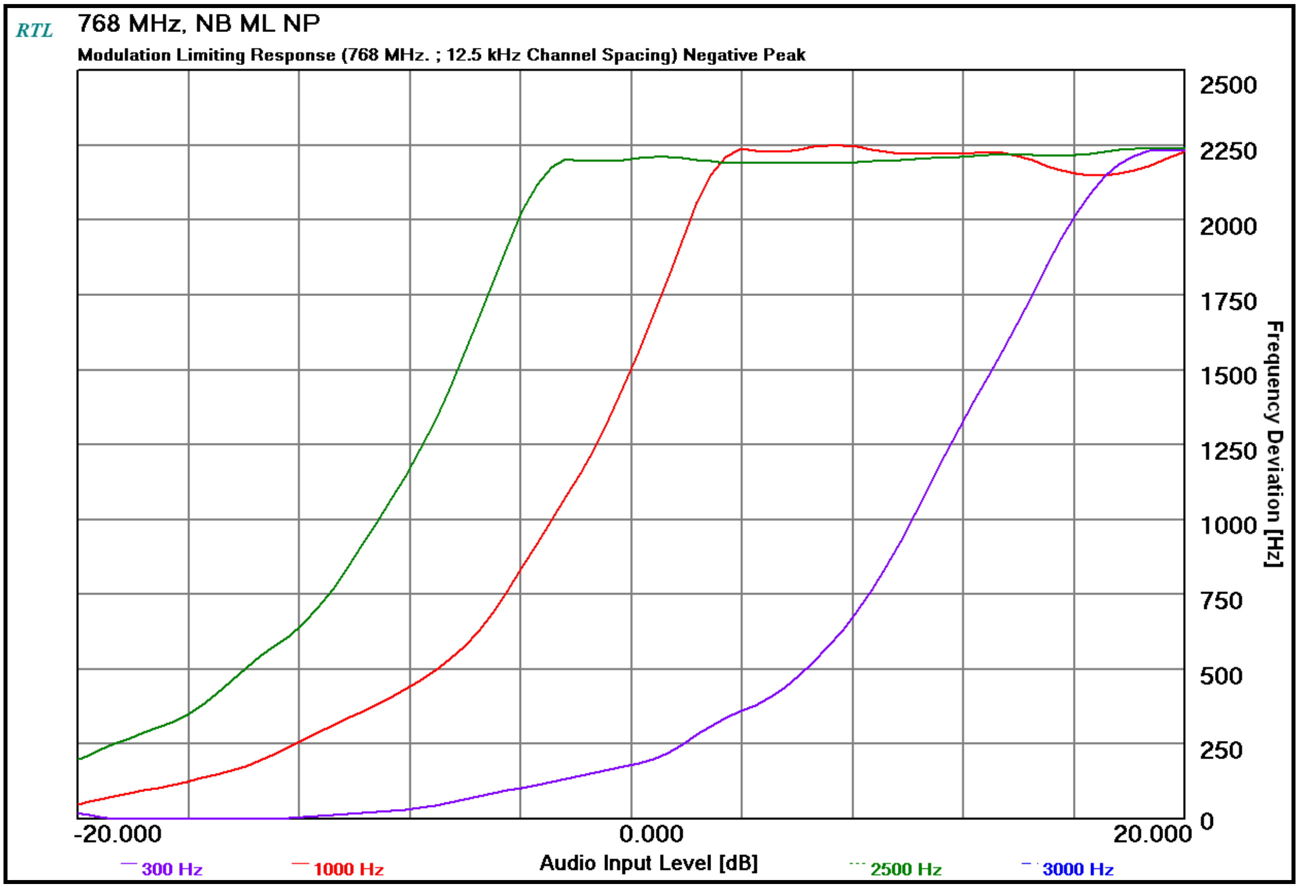
Plot 10-33: Modulation Characteristics – Modulation Limiting - 470 MHz; Negative Peak; WB



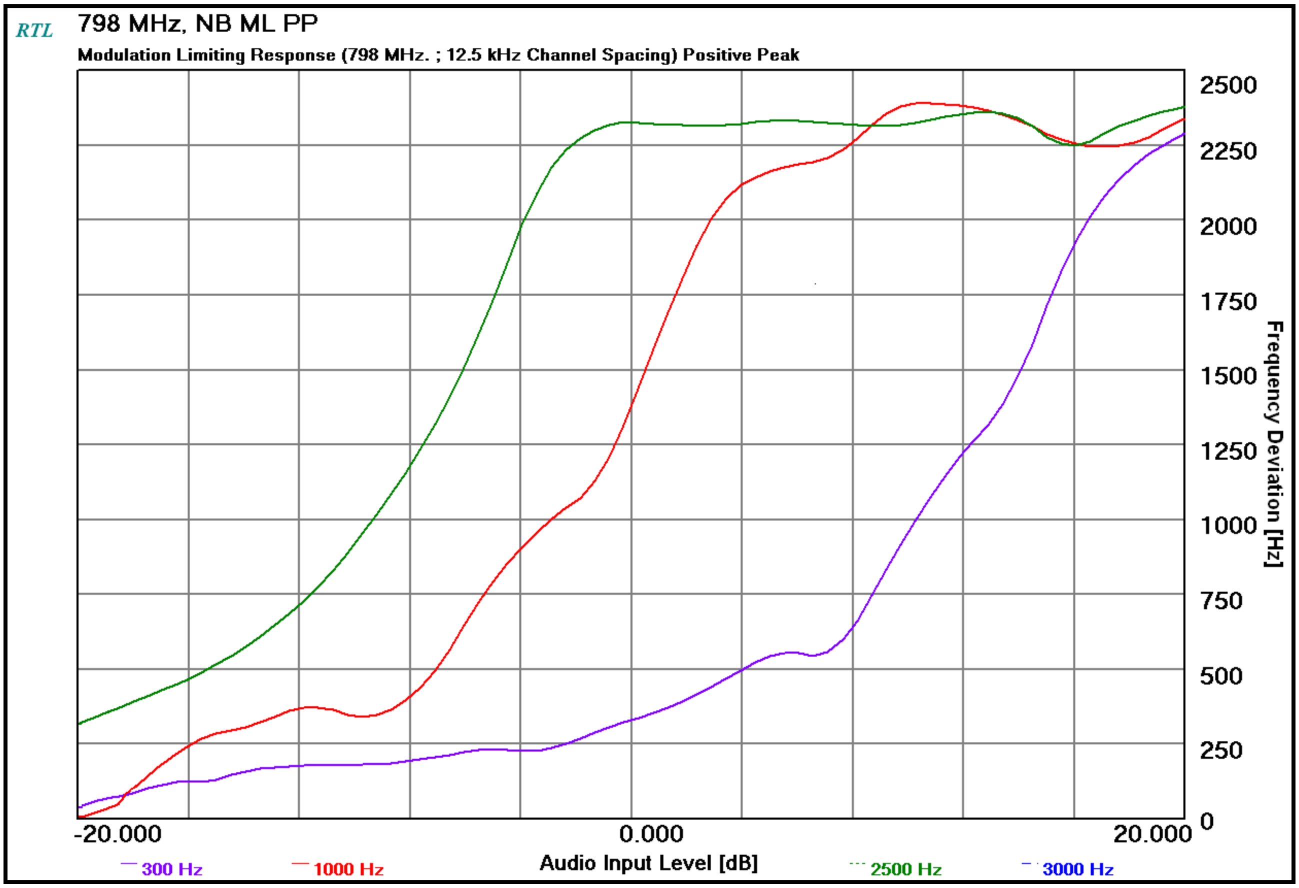
Plot 10-34: Modulation Characteristics – Modulation Limiting - 768 MHz; Positive Peak; NB



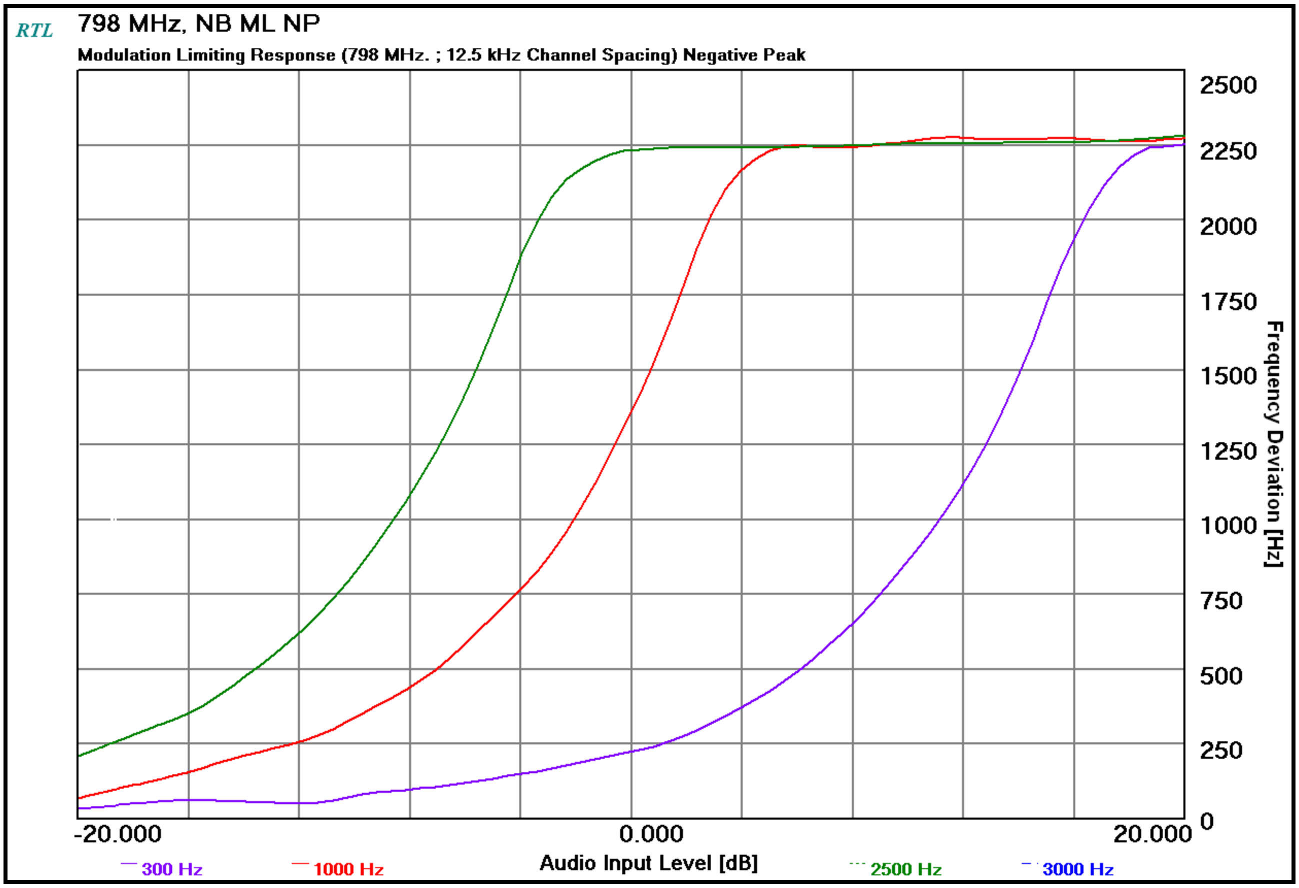
Plot 10-35: Modulation Characteristics – Modulation Limiting - 768 MHz; Negative Peak; NB



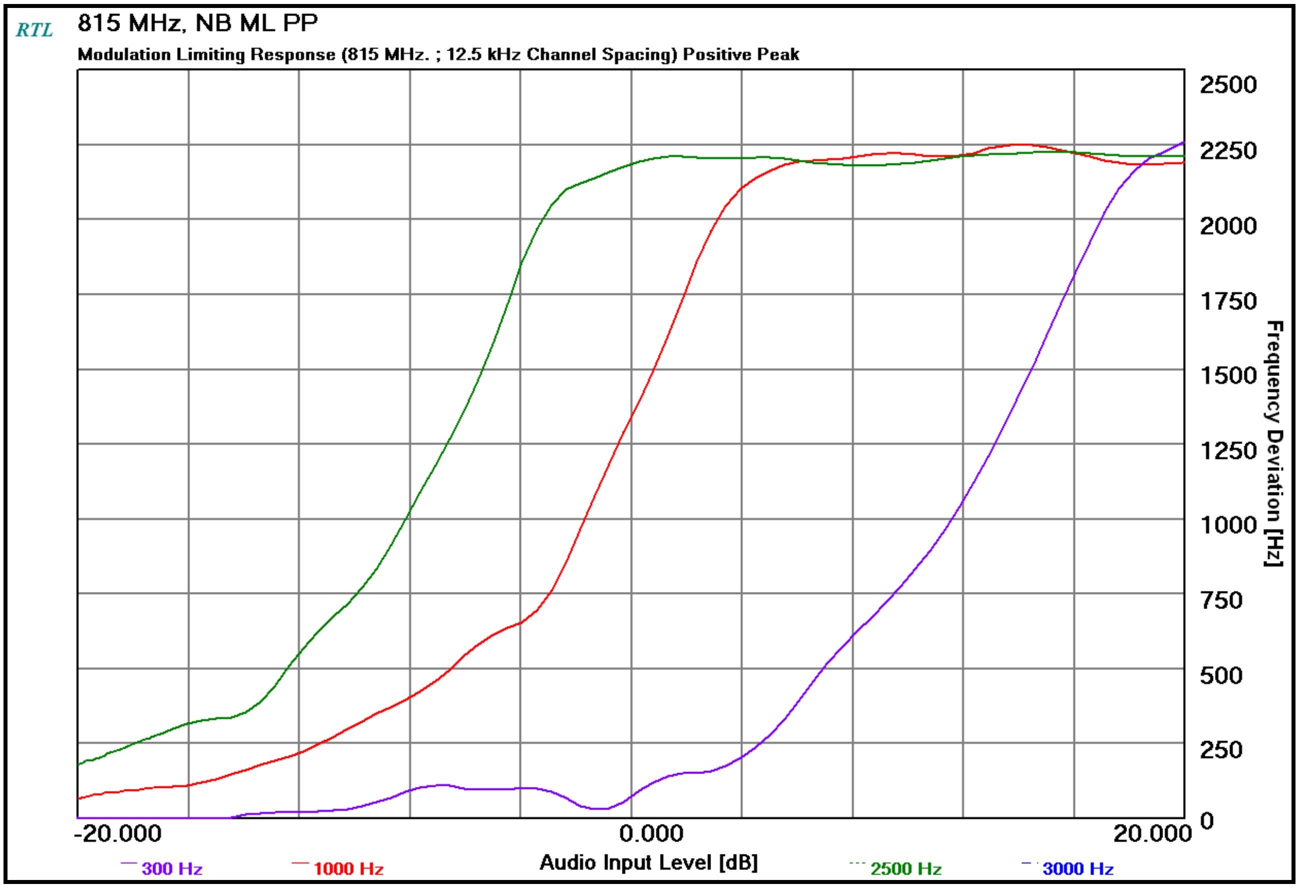
Plot 10-36: Modulation Characteristics – Modulation Limiting - 798 MHz; Positive Peak; NB



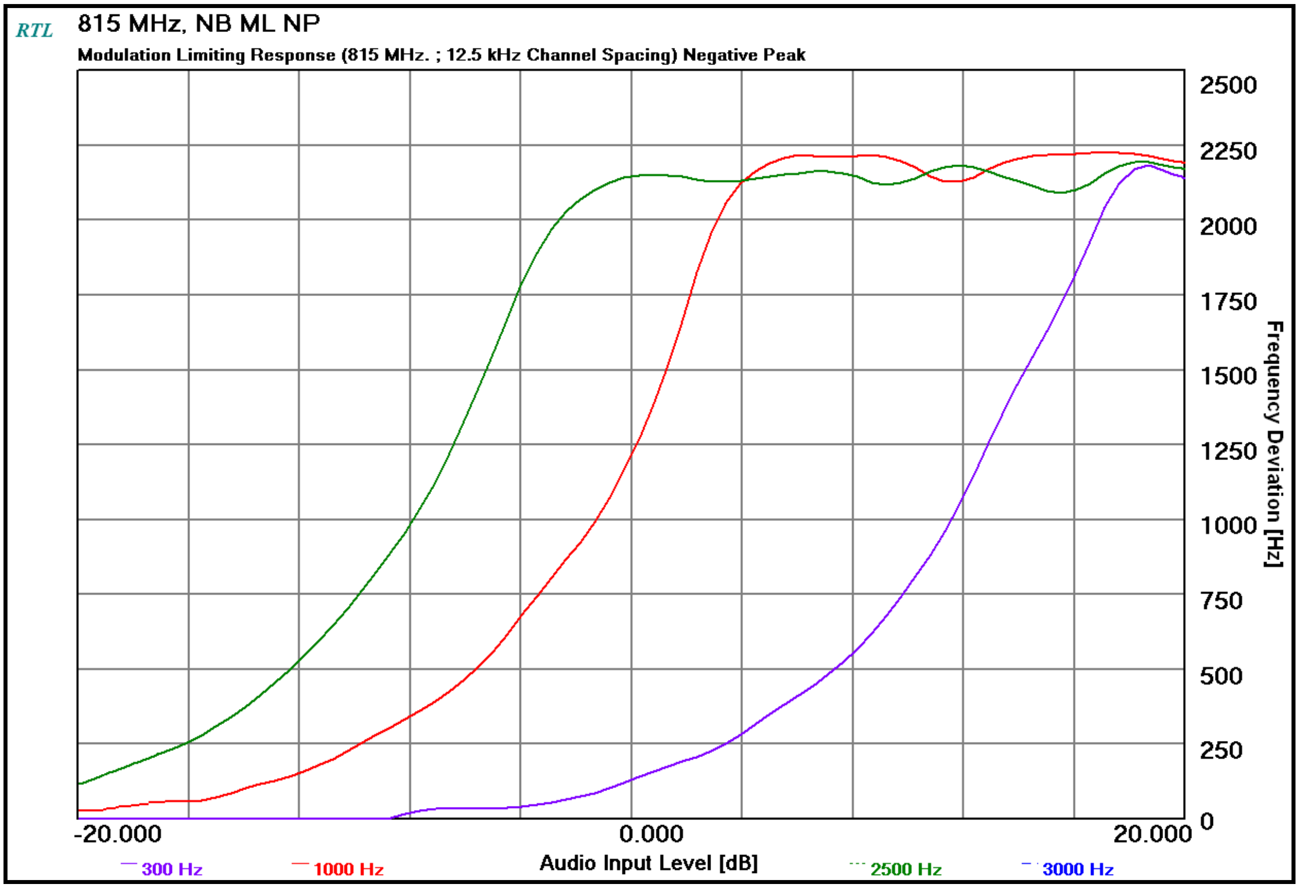
Plot 10-37: Modulation Characteristics – Modulation Limiting - 798 MHz; Negative Peak; NB



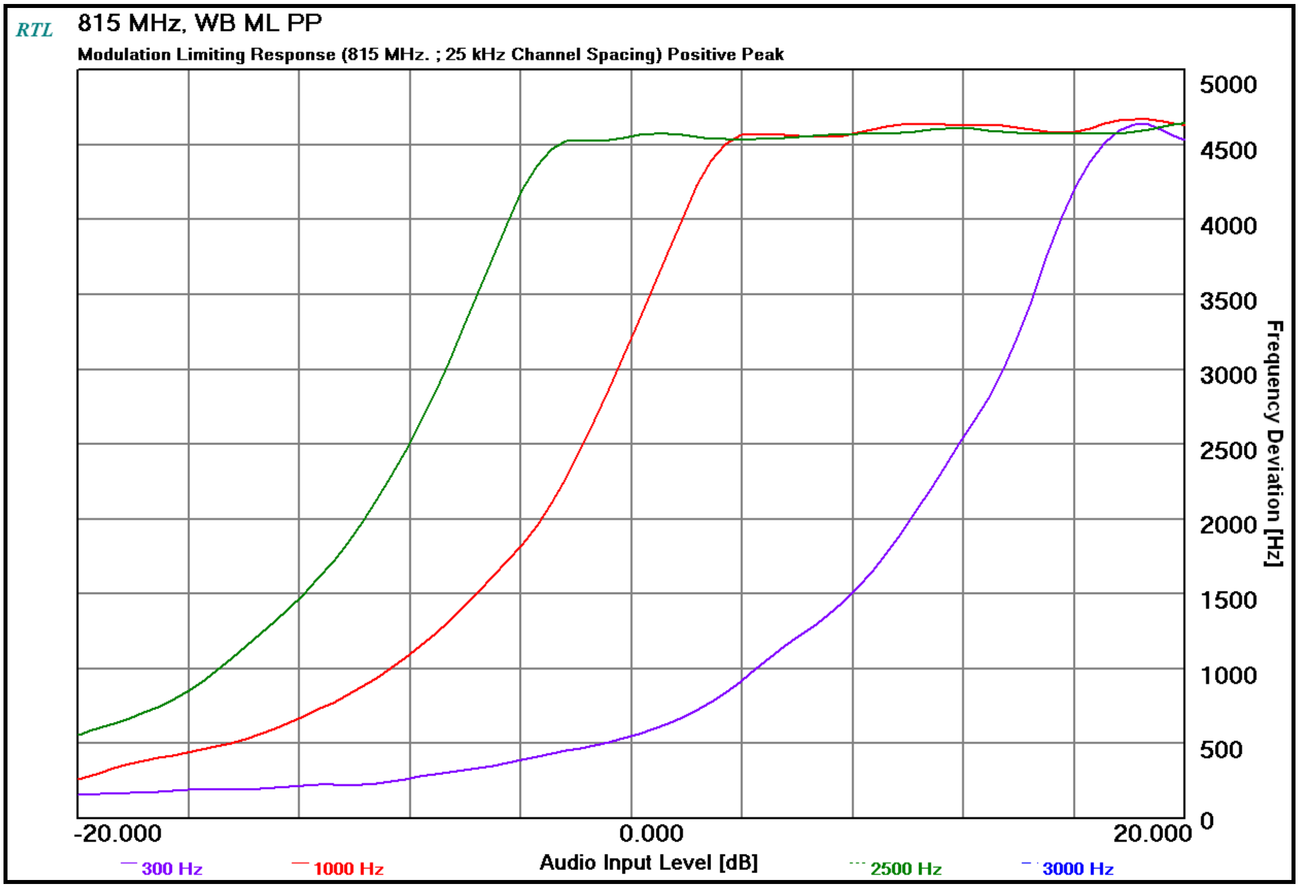
Plot 10-38: Modulation Characteristics – Modulation Limiting - 815 MHz; Positive Peak; NB



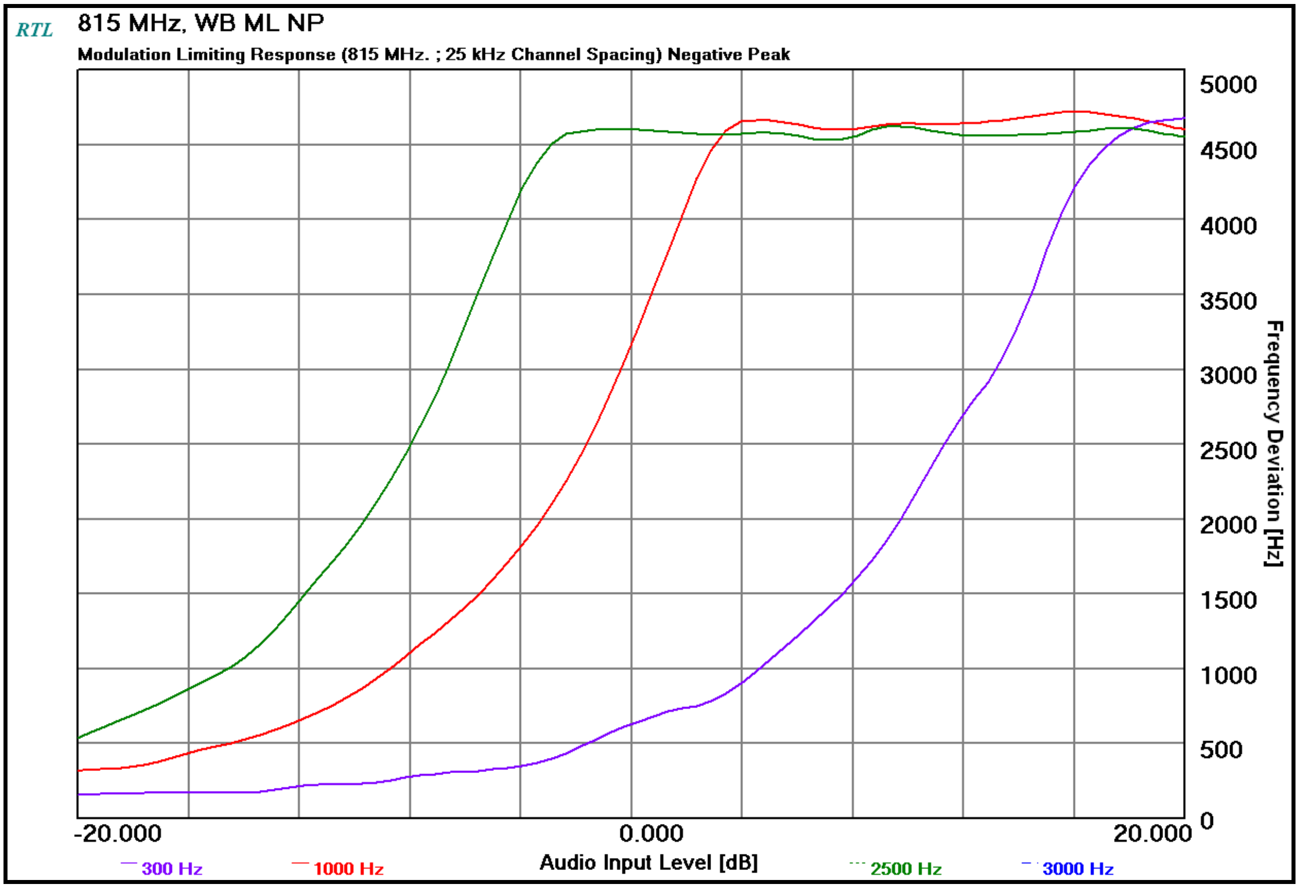
Plot 10-39: Modulation Characteristics – Modulation Limiting - 815 MHz; Negative Peak; NB



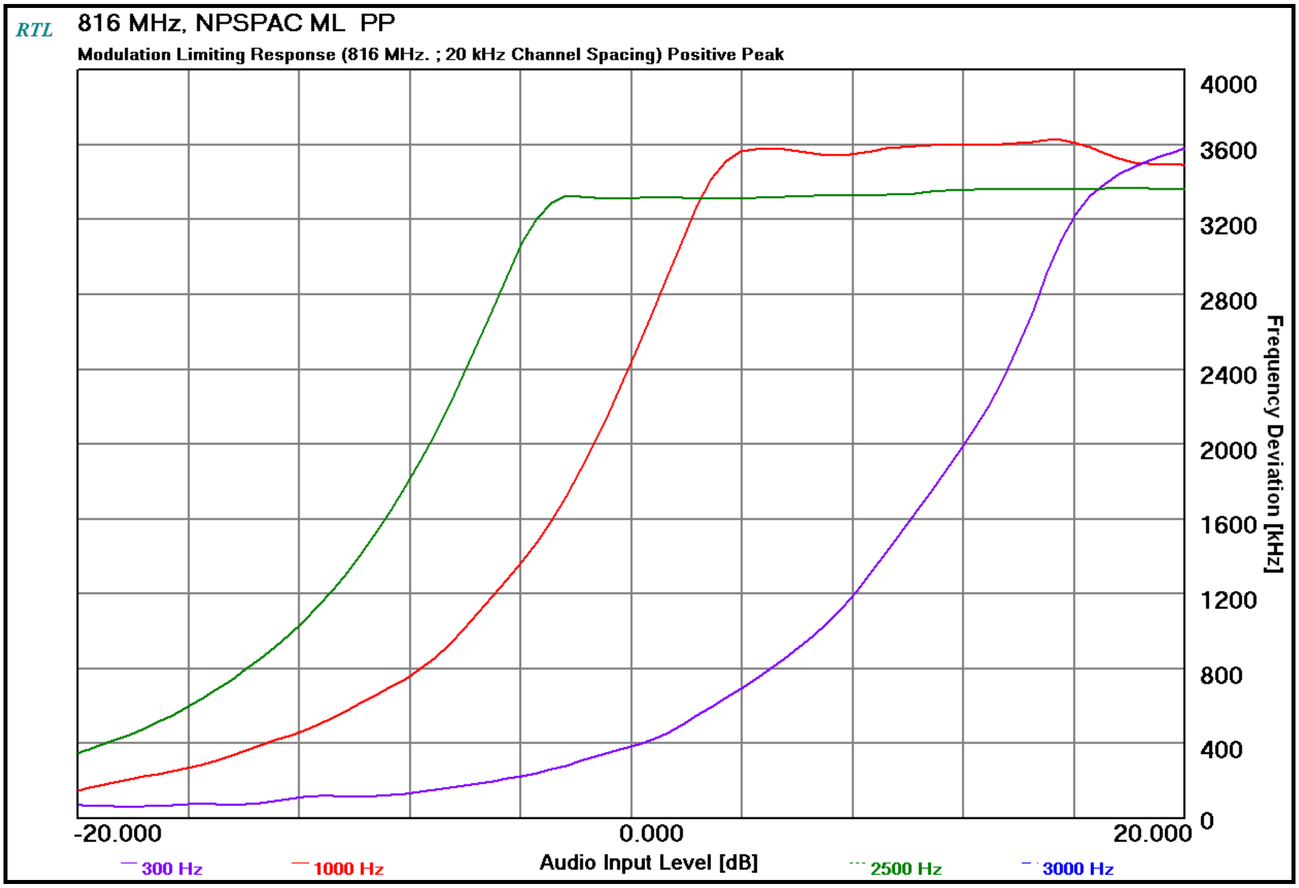
Plot 10-40: Modulation Characteristics – Modulation Limiting - 815 MHz; Positive Peak; WB



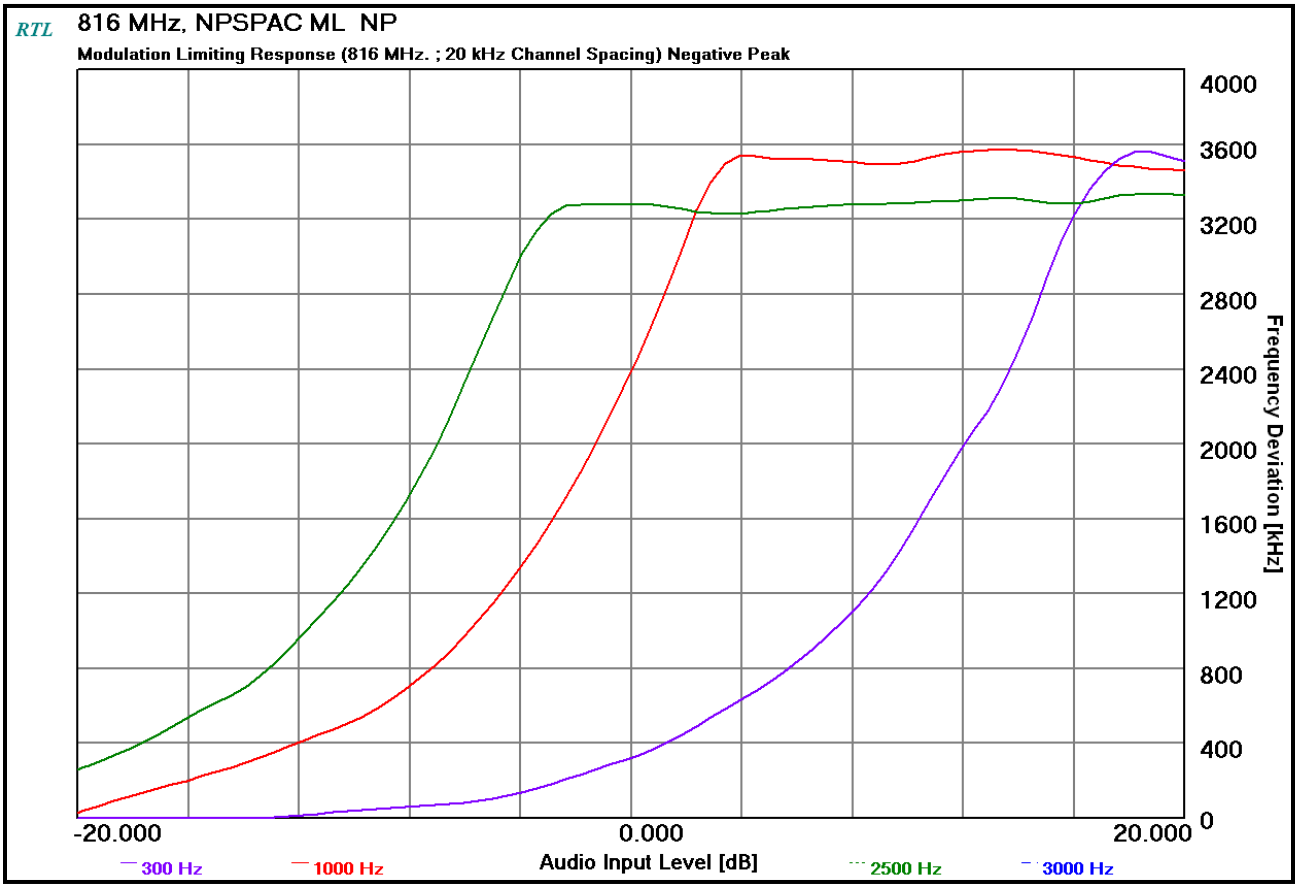
Plot 10-41: Modulation Characteristics – Modulation Limiting - 815 MHz; Negative Peak; WB



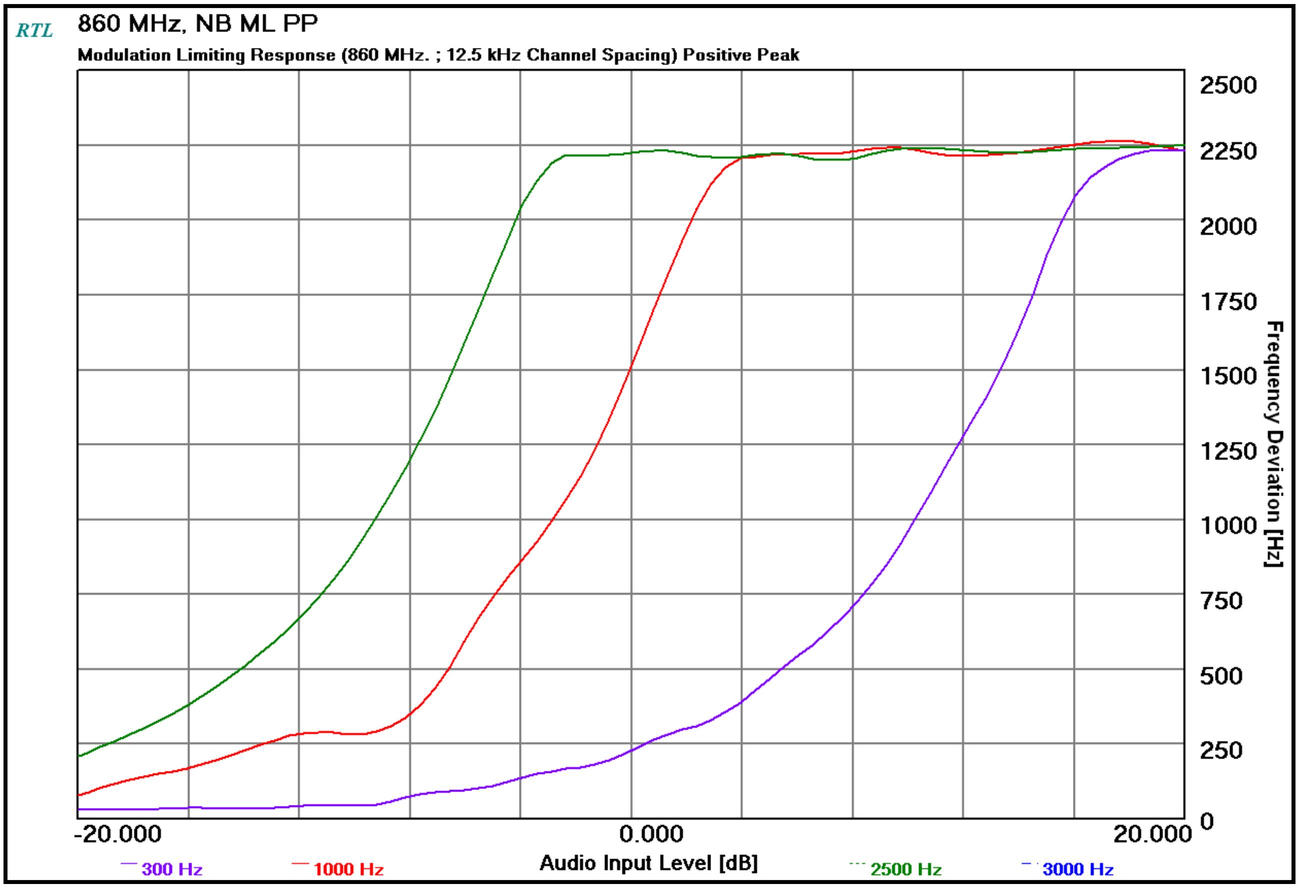
Plot 10-42: Modulation Characteristics – Modulation Limiting - 816 MHz; Positive Peak; NPSPAC



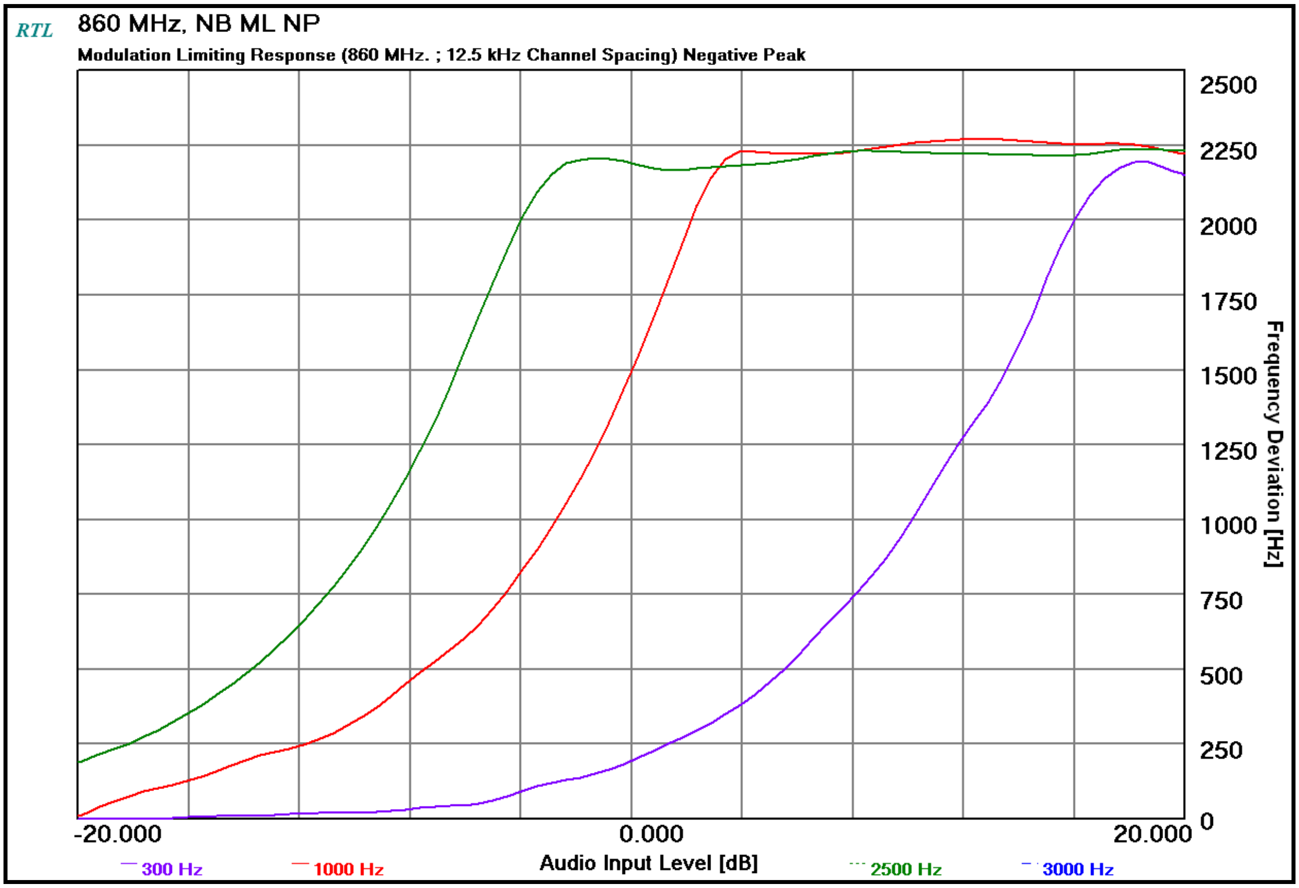
Plot 10-43: Modulation Characteristics – Modulation Limiting - 816 MHz; Negative Peak; NPSPAC



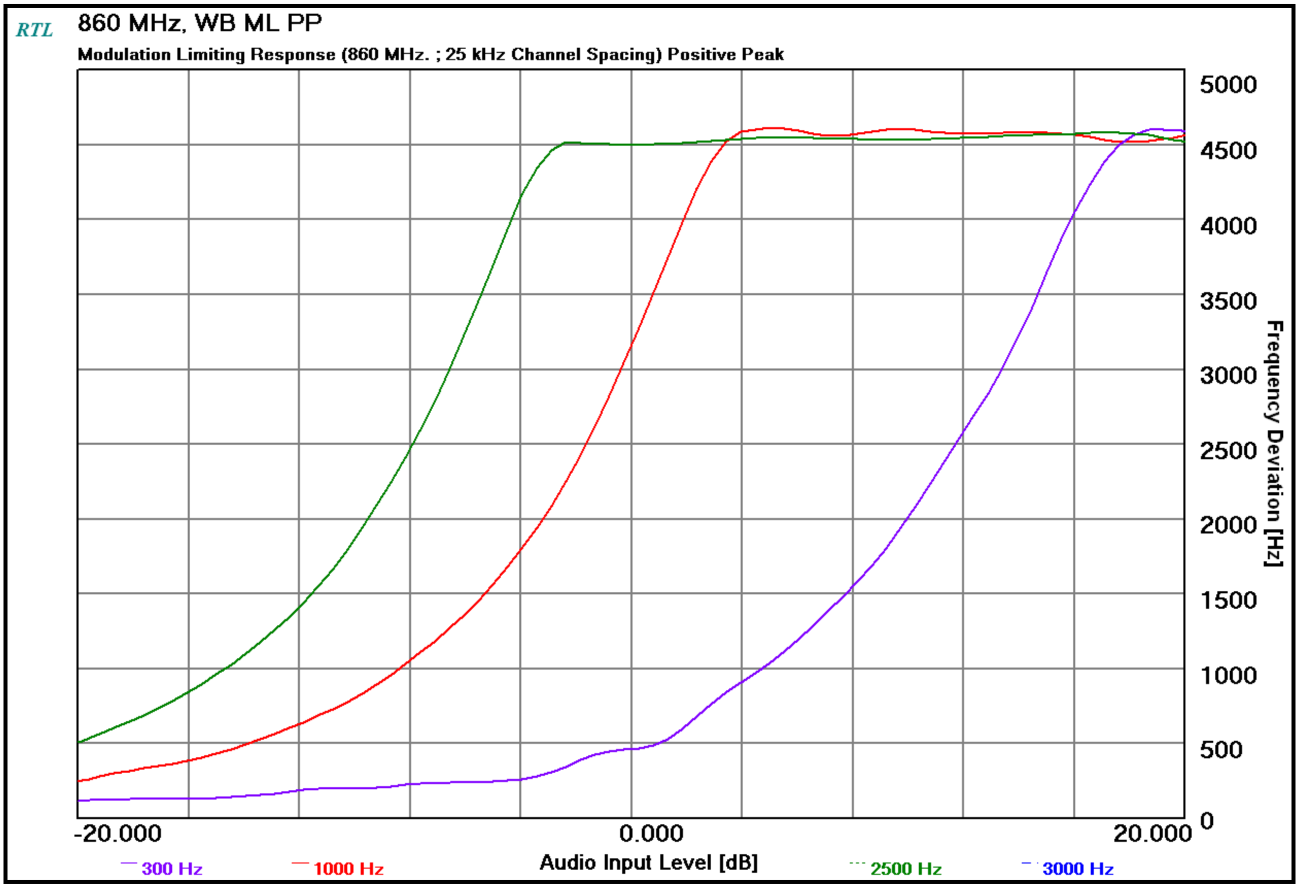
Plot 10-44: Modulation Characteristics – Modulation Limiting - 860 MHz; Positive Peak; NB



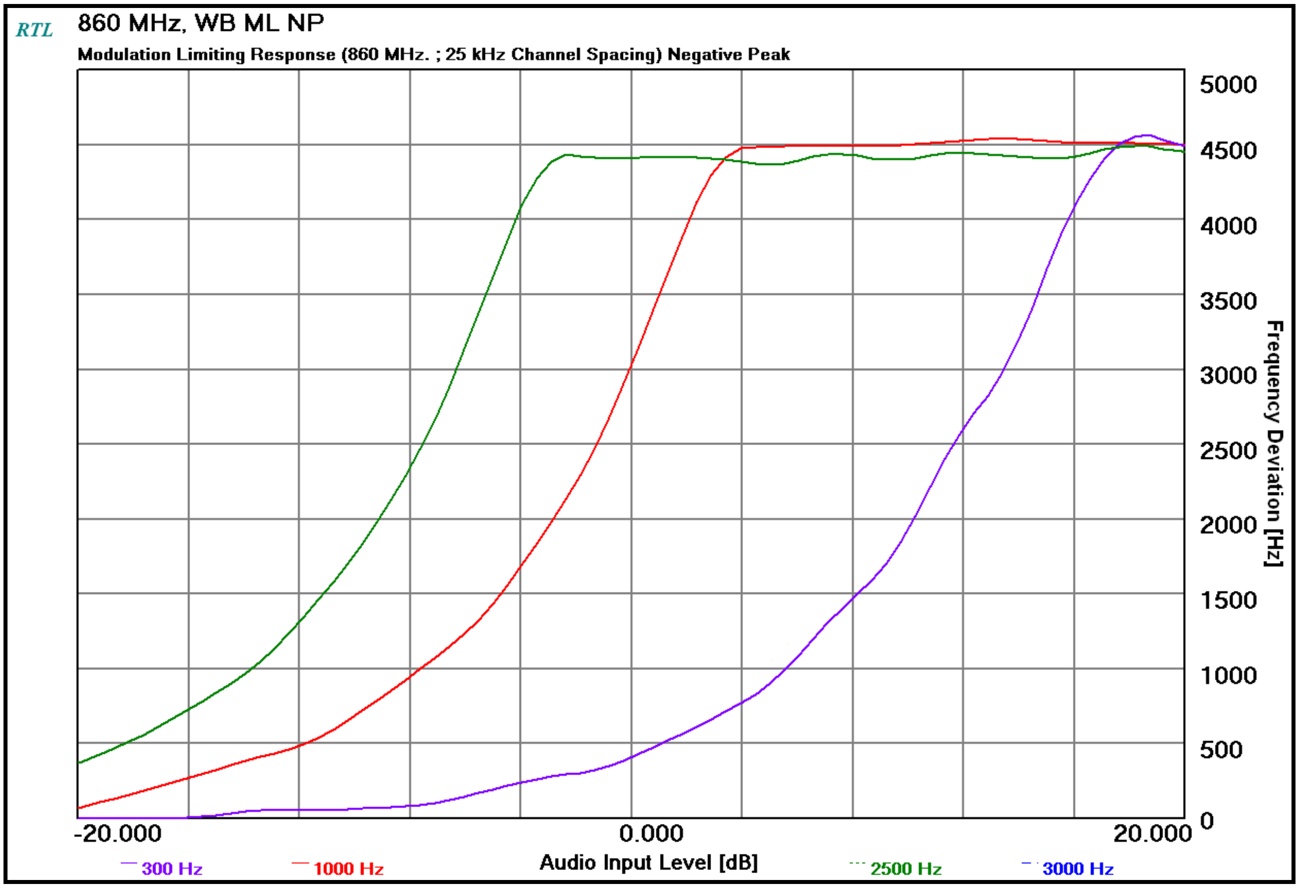
Plot 10-45: Modulation Characteristics – Modulation Limiting - 860 MHz; Negative Peak; NB



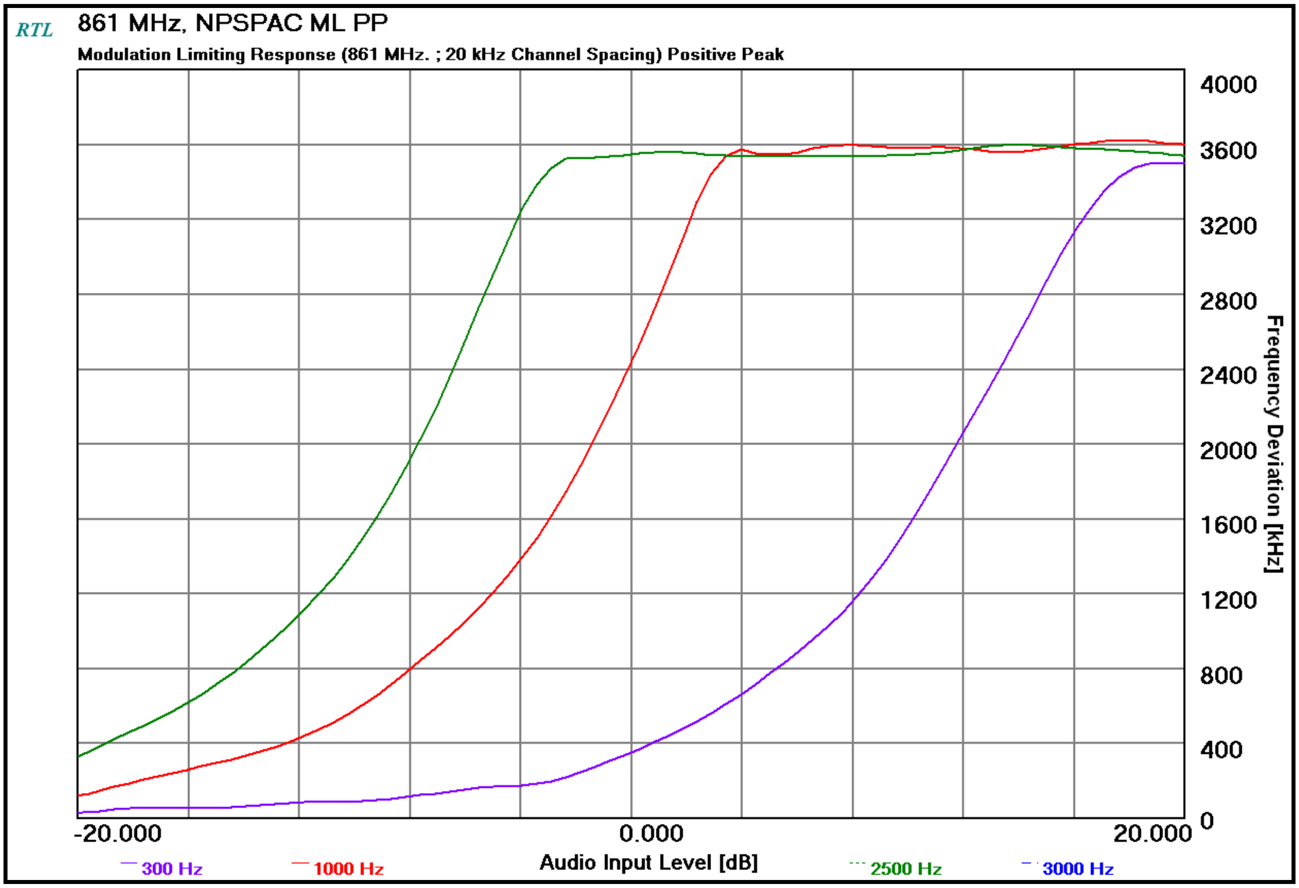
Plot 10-46: Modulation Characteristics – Modulation Limiting - 860 MHz; Positive Peak; WB



Plot 10-47: Modulation Characteristics – Modulation Limiting - 860 MHz; Negative Peak; WB



Plot 10-48: Modulation Characteristics – Modulation Limiting - 861 MHz; Positive Peak; NPSPAC



Plot 10-49: Modulation Characteristics – Modulation Limiting - 861 MHz; Negative Peak; NPSPAC

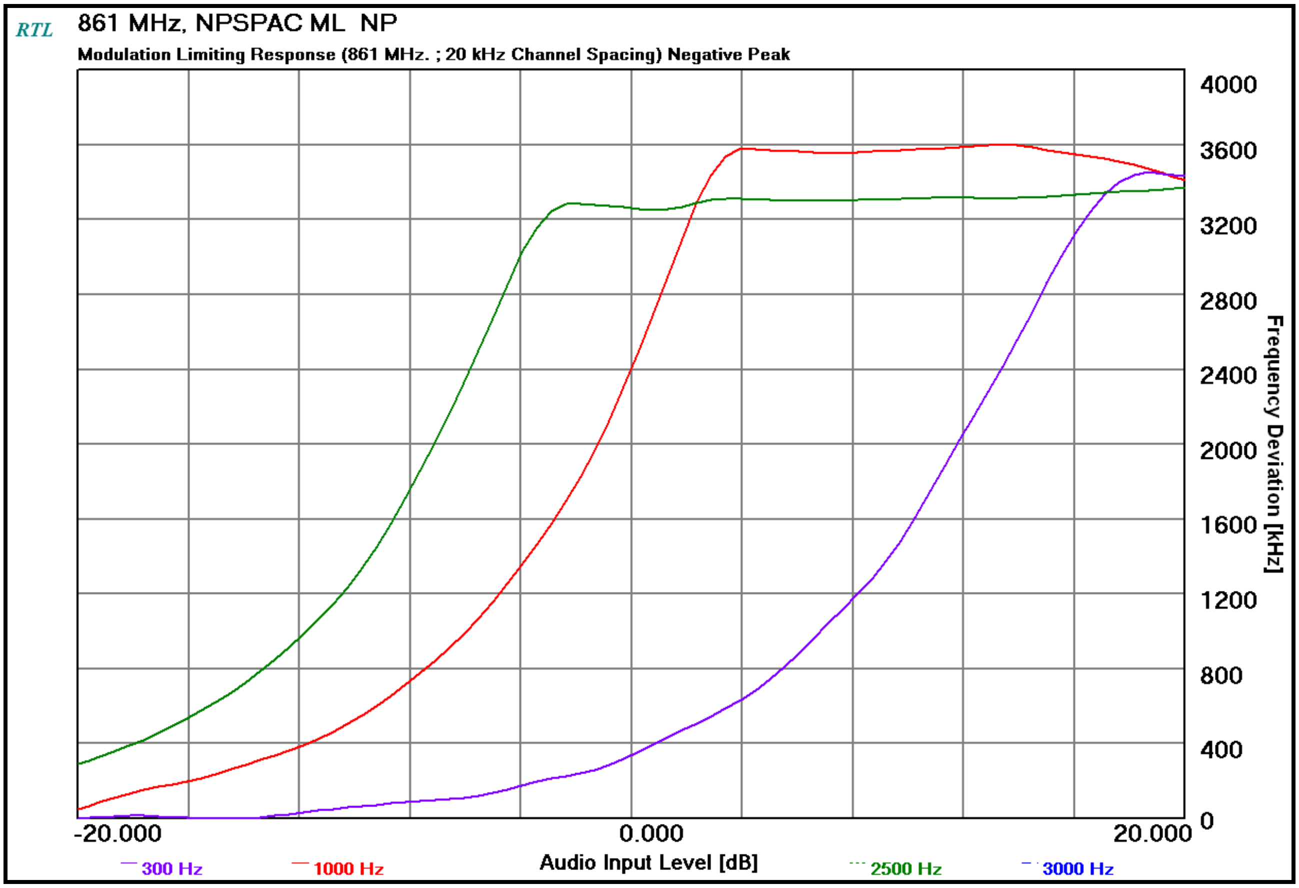


Table 10-1: Test Equipment Used For Modulation Requirements

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

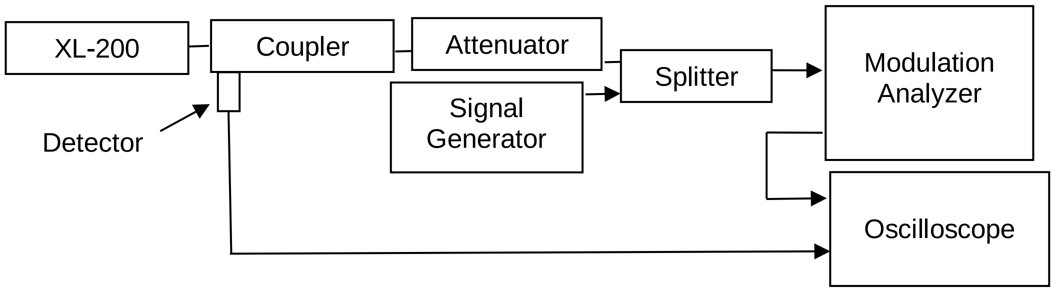
Test Personnel:

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

11 FCC §74.462(c): Authorized Bandwidth and Emissions; §90.214: Transient Frequency Response; RSS-119 5.9: Transient Frequency Behavior

11.1 Test Procedure

ANSI C63-26 6.5.2.2



§90.214 Transient Frequency Behavior

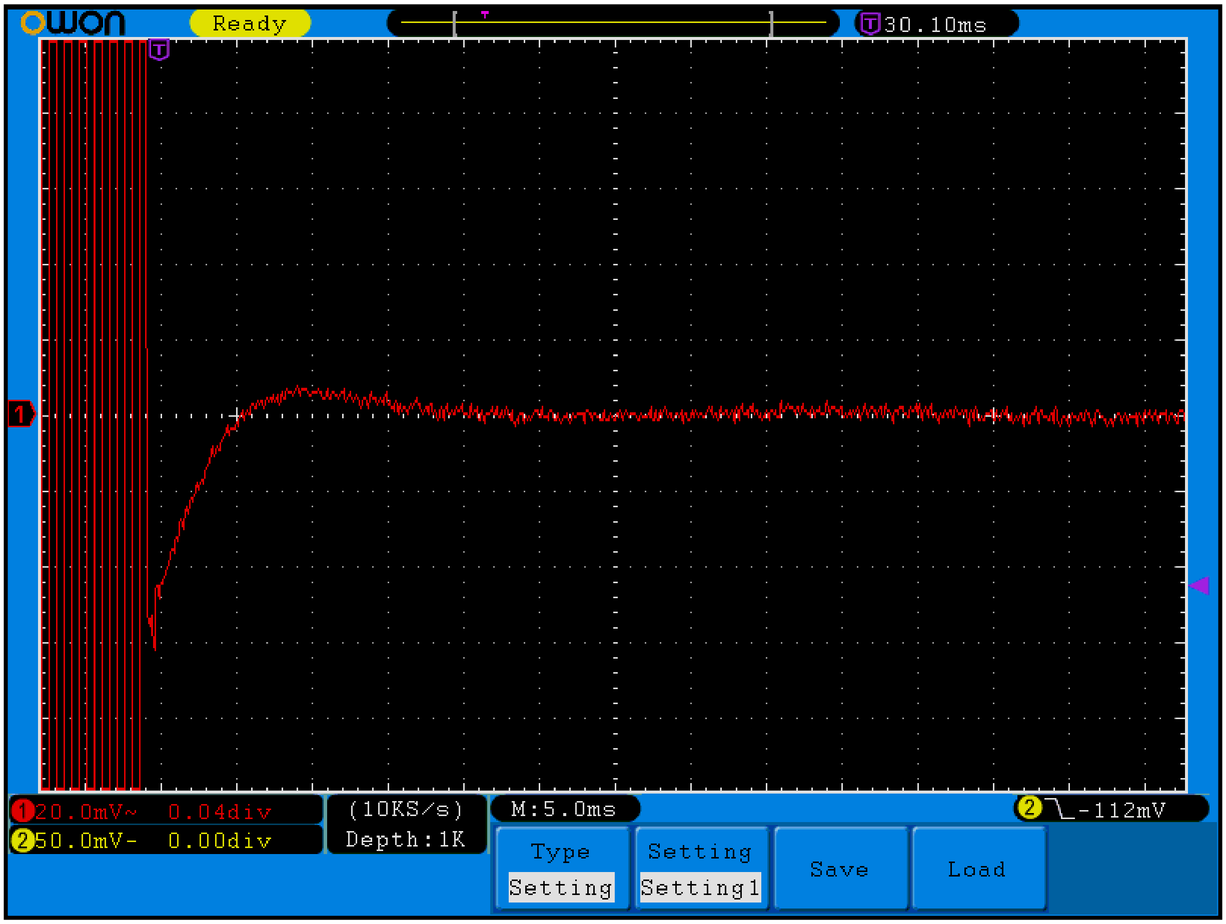
Transmitters designed to operate in the 150–174 MHz and 421–512 MHz frequency bands must maintain transient frequencies within the maximum frequency difference limits during the time intervals indicated:

Time intervals [1,2]	Maximum frequency difference [3]	All equipment	
		150 to 174 MHz	421 to 512 MHz
Transient Frequency Behavior for Equipment Designed to Operate on 25 kHz Channels			
t_1 [4]	±25.0 kHz	5.0 ms	10.0 ms
t_2	±12.5 kHz	20.0 ms	25.0 ms
t_3 [4]	±25.0 kHz	5.0 ms	10.0 ms
Transient Frequency Behavior for Equipment Designed to Operate on 12.5 kHz Channels			
t_1 [4]	±12.5 kHz	5.0 ms	10.0 ms
t_2	±6.25 kHz	20.0 ms	25.0 ms
t_3 [4]	±12.5 kHz	5.0 ms	10.0 ms
Transient Frequency Behavior for Equipment Designed to Operate on 6.25 kHz Channels			
t_1 [4]	±6.25 kHz	5.0 ms	10.0 ms
t_2	±3.125 kHz	20.0 ms	25.0 ms
t_3 [4]	±6.25 kHz	5.0 ms	10.0 ms

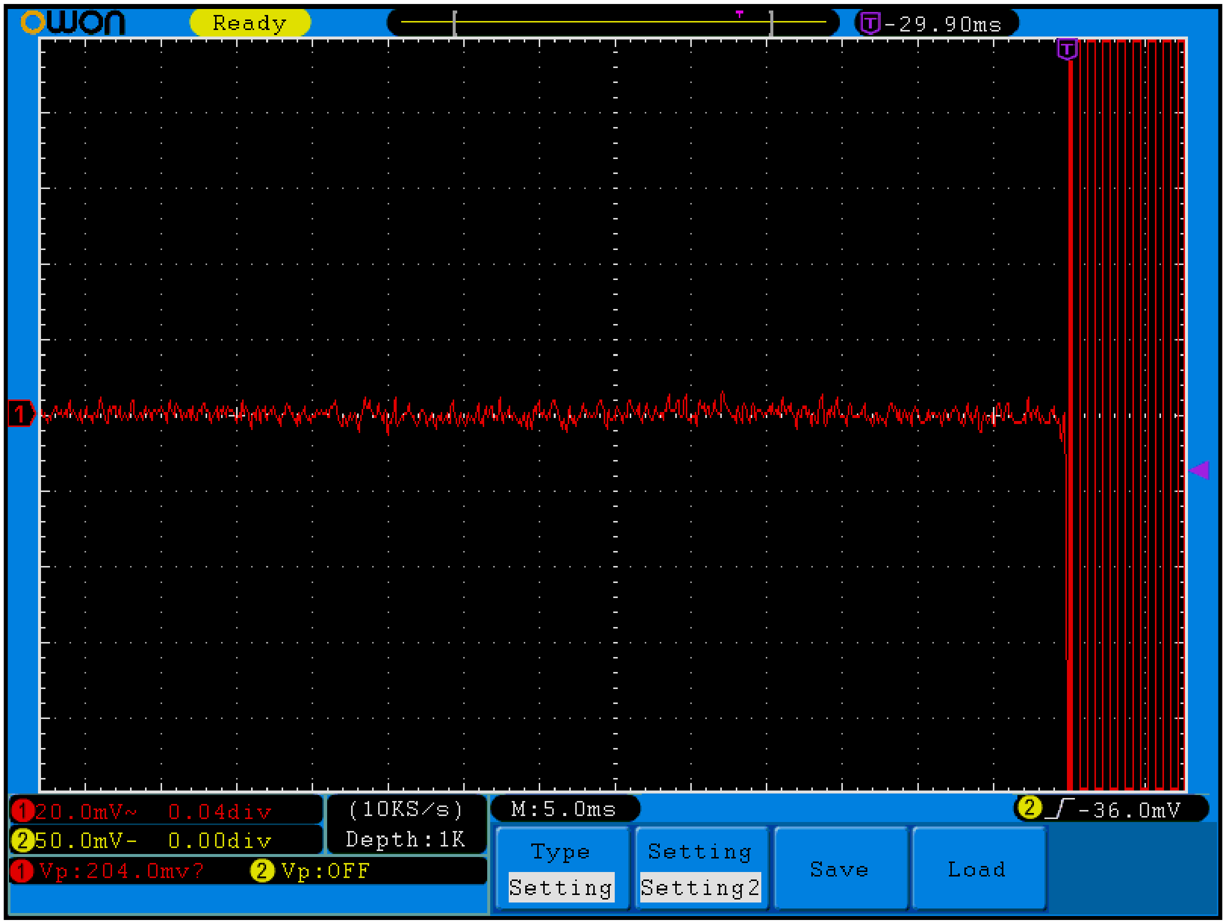
[1] $_{on}$ is the instant when a 1 kHz test signal is completely suppressed, including any capture time due to phasing.
t_1 is the time period immediately following t_{on}.
t_2 is the time period immediately following t_1.
t_3 is the time period from the instant when the transmitter is turned off until t_{off}.
t_{off} is the instant when the 1 kHz test signal starts to rise.
[2] During the time from the end of t_2 to the beginning of t_3, the frequency difference must not exceed the limits specified in §90.213.
[3] Difference between the actual transmitter frequency and the assigned transmitter frequency.
[4] If the transmitter carrier output power rating is 6 watts or less, the frequency difference during this time period may exceed the maximum frequency difference for this time period.

11.2 Test Data

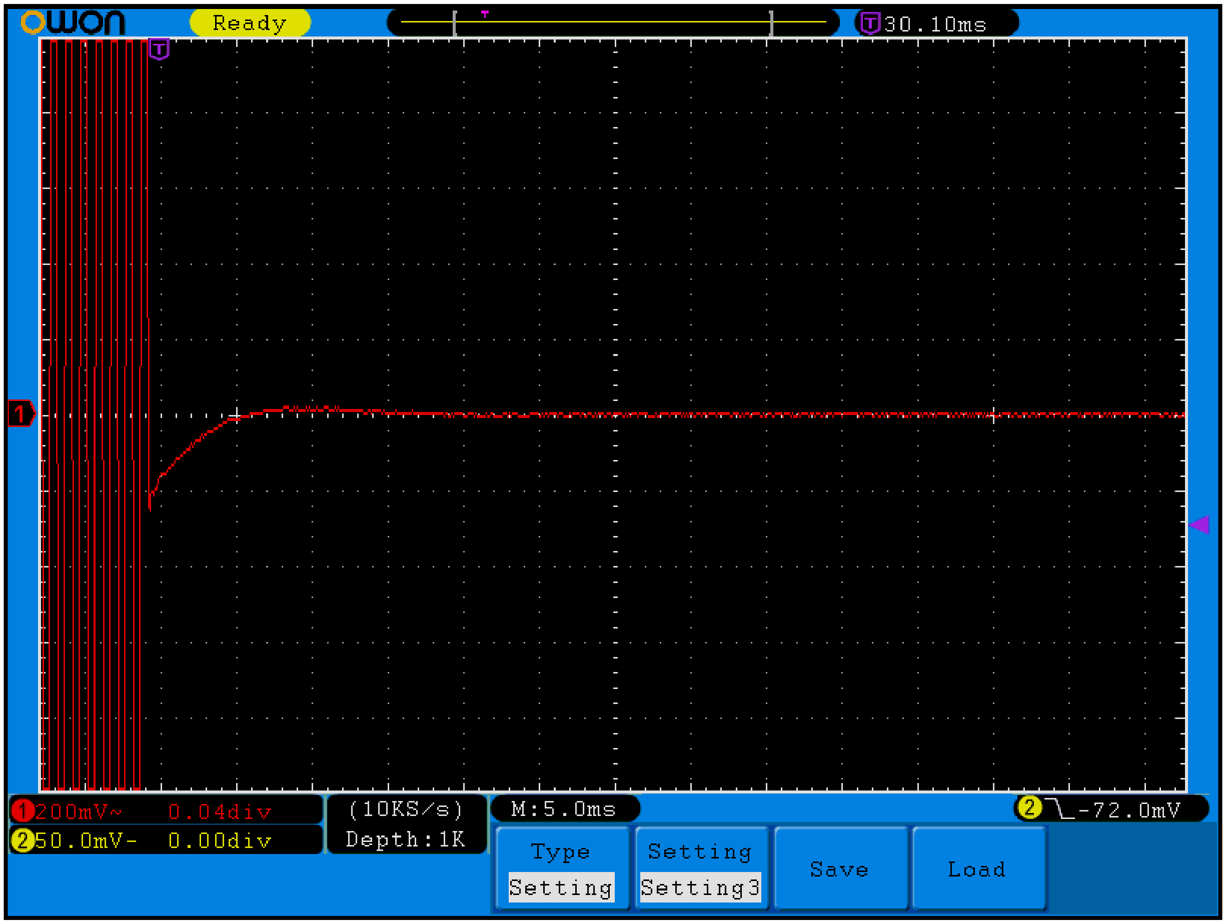
Plot 11-1: Transient Frequency Behavior – 150 MHz; High Power; Narrowband; Carrier ON Time



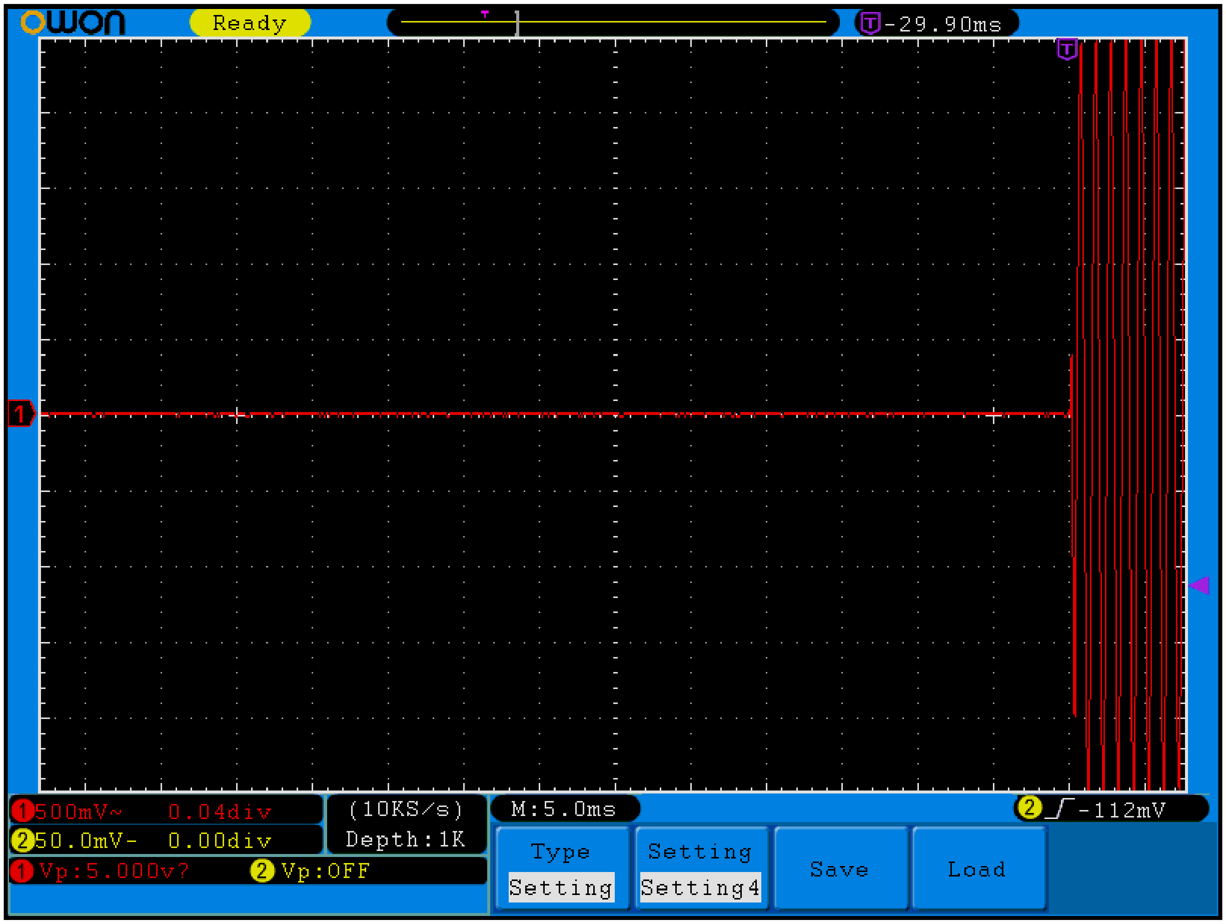
Plot 11-2: Transient Frequency Behavior – 162 MHz; High Power; Narrowband; Carrier OFF Time



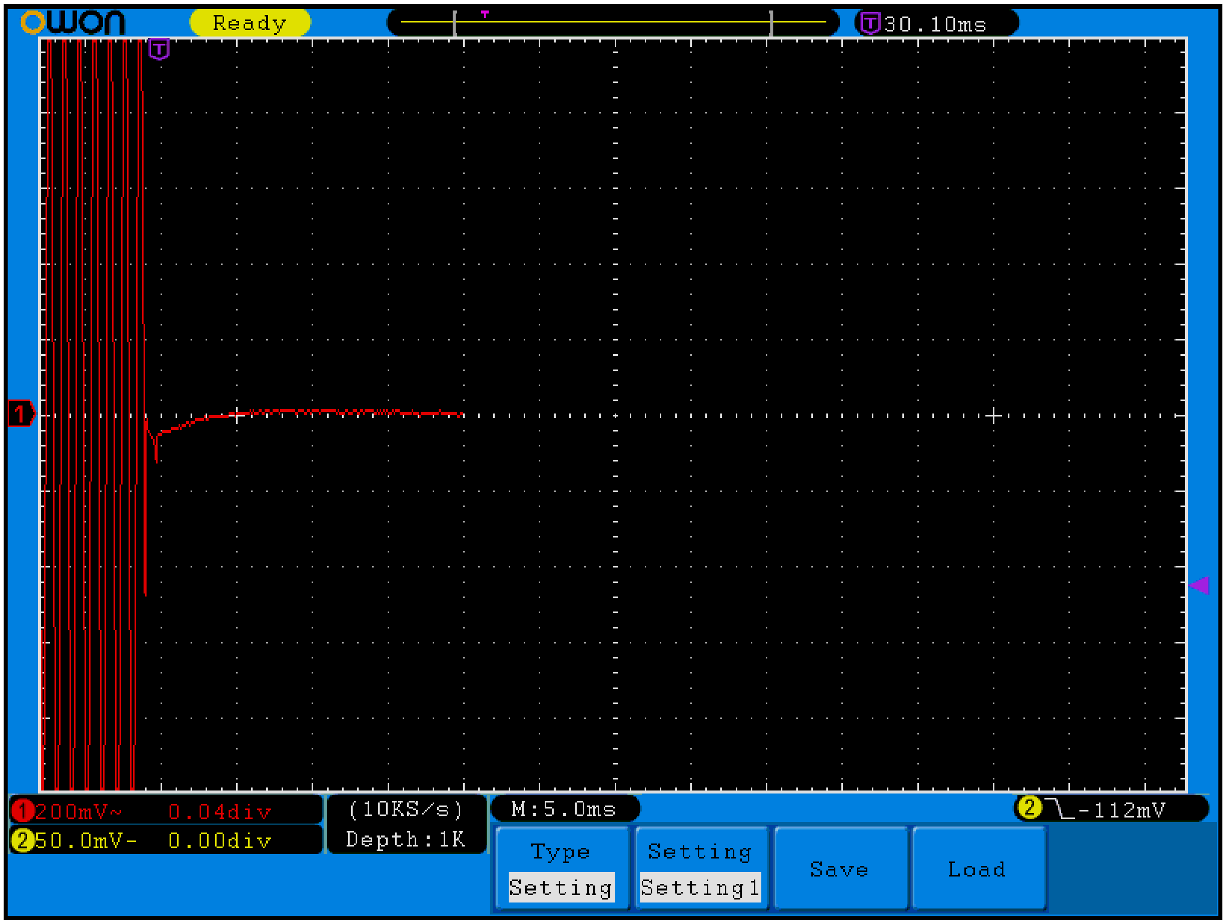
Plot 11-3: Transient Frequency Behavior – 174 MHz; High Power; Wideband; Carrier ON Time



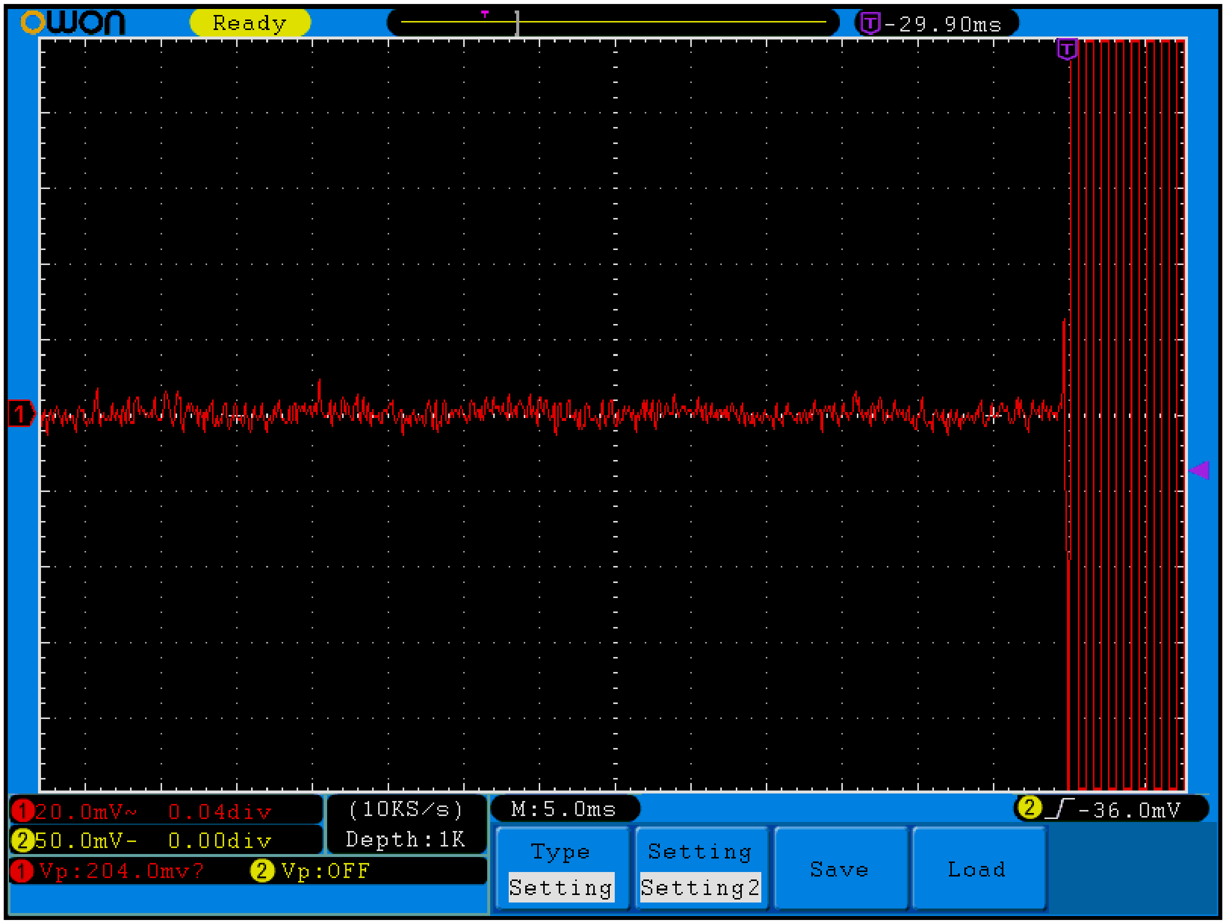
Plot 11-4: Transient Frequency Behavior – 174 MHz; High Power; Wideband; Carrier OFF Time



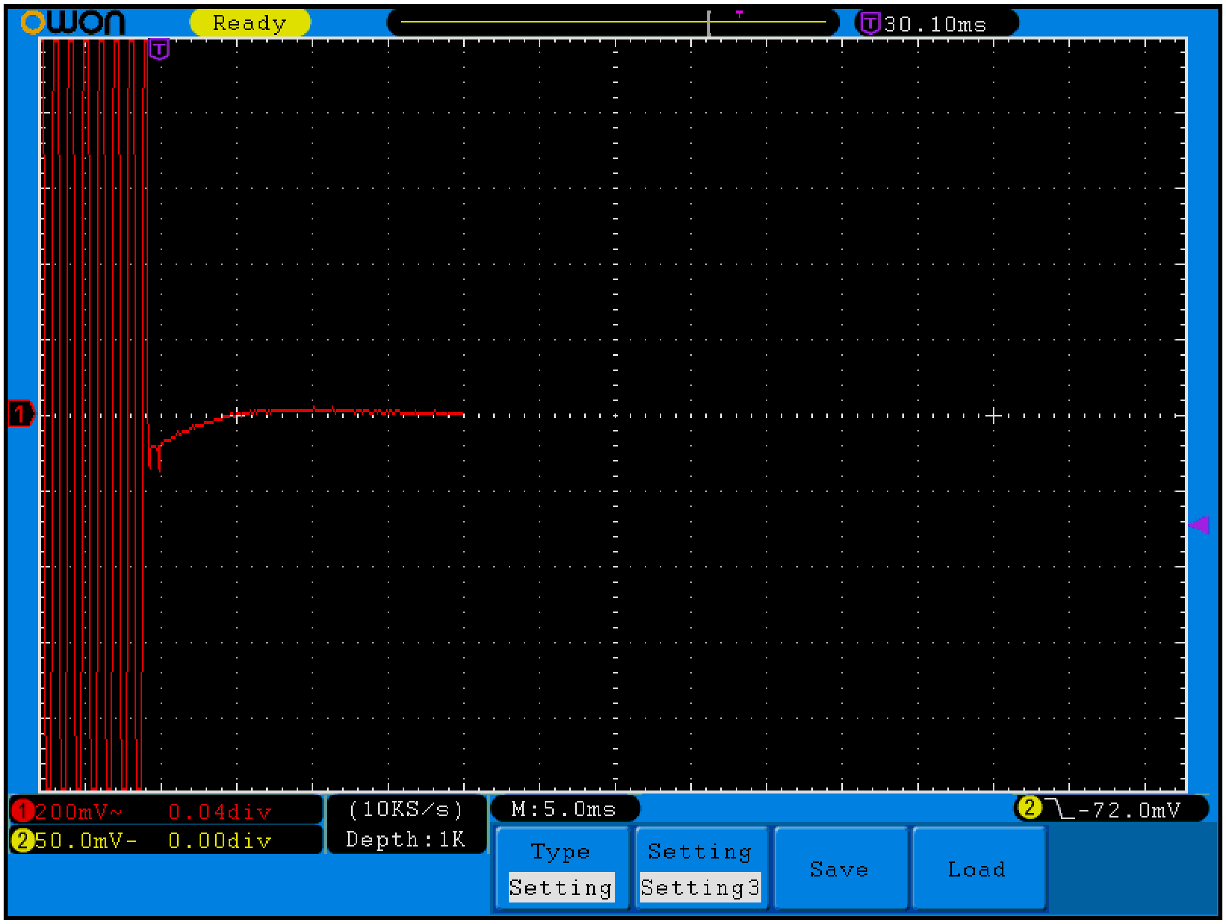
Plot 11-5: Transient Frequency Behavior – 430 MHz; High Power; Narrowband; Carrier ON Time



Plot 11-6: Transient Frequency Behavior – 430 MHz; High Power; Narrowband; Carrier OFF Time



Plot 11-7: Transient Frequency Behavior – 512 MHz; High Power; Wideband; Carrier ON Time



Plot 11-8: Transient Frequency Behavior – 512 MHz; High Power; Wideband; Carrier OFF Time

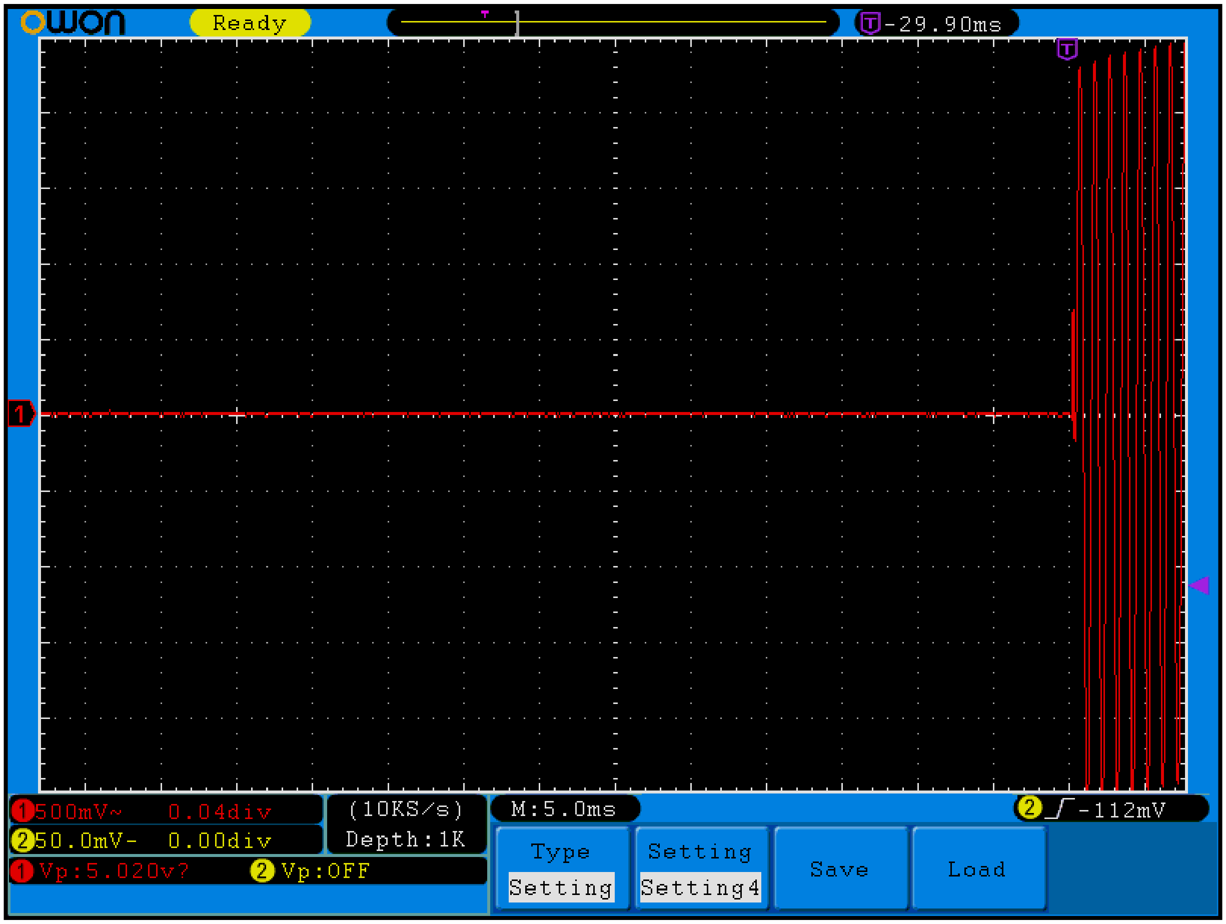


Table 11-1: Test Equipment Used For Testing Transient Frequency Behavior

RTL Asset #	Manufacturer	Model	Part Type	Serial Number	Calibration Due Date
901582	Rohde & Schwarz	1167.0000.02	Signal Generator	101903	3/20/18
901118	Hewlett Packard	HP8901B	Modulation Analyzer 150 kHz-1300 MHz	N/A	4/14/18
901651	OWON	SmartDS7102V	Oscilloscope	SDS71021434850	10/20/17
901463	Werlatone Inc.	C1795	Directional Coupler, 100W, 40 dB, 1-1000 MHz	4067	9/30/17
901263	Agilent	.01-12 GHz	SMA Detector	2936A05505	Not Required
900948	Weinschel Corporation	47-10-43	Attenuator DC-18 GHz 10 dB 50W	BH1487	9/1/18
901511	Pasternack	PE 2003	Power Divider, 10 MHz - 1 GHz	NA	Not Required

Test Personnel:

Daniel W. Baltzell	Daniel W. Baltzell (signature)	May 17, 2017
Test Engineer	Signature	Date of Tests

12 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 4800; XNB) 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: 7K10F1D/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

13 Conclusion

The data in this measurement report shows that the **Harris Corporation** Model **XL-200P C1D1 Non-Rebanded, FCC ID: OWDTR-0146-E, IC: 3636B-0146,** complies with the applicable requirements of FCC Parts 2, 22, 74, 80, and 90 and IC RSS-119.