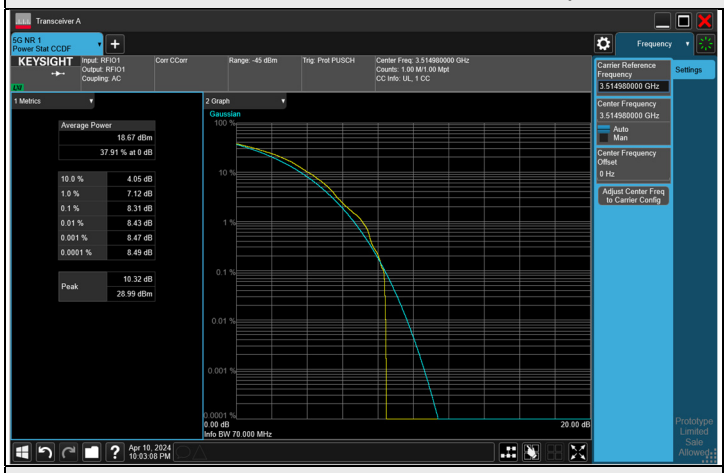
NR n78 SCS 30 kHz (3.45 GHz ~ 3.55 GHz) - MIMO-Ant 7, Channel Bandwidth: 70 MHz

Modulation	RB Size	RB Offset	Peak To Average Ratio (dB)		
			CH 632334	CH 633334	CH 634332
			3485.01 MHz	3500.01 MHz	3514.98 MHz
BPSK	1	188	4.27	4.23	4.53
	1	0	4.47	4.46	4.49
	180	0	4.40	4.42	4.75
QPSK	1	188	7.29	7.45	7.84
	1	0	7.57	7.77	8.31
	189	0	7.22	7.36	7.38
16QAM	1	188	7.98	7.29	7.70
	1	0	7.20	7.13	7.48
	189	0	7.44	7.87	7.57
64QAM	1	188	7.12	7.26	7.53
	1	0	7.26	7.72	7.46
	189	0	7.22	7.34	8.01
256QAM	1	188	7.75	8.00	7.70
	1	0	8.00	7.78	7.78
	189	0	8.29	8.06	8.29

Spectrum Plot of Worst Value

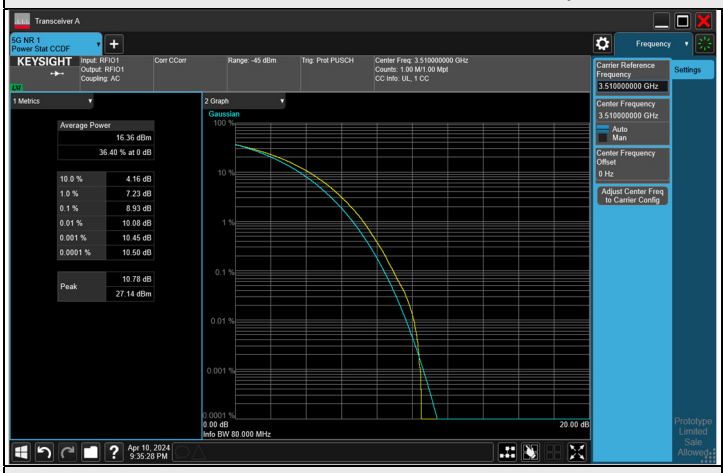


QPSK CH 634332 (3514.98 MHz)

NR n78 SCS 30 kHz (3.45 GHz ~ 3.55 GHz) - MIMO-Ant 7, Channel Bandwidth: 80 MHz

Modulation	RB Size	RB Offset	Peak To Average Ratio (dB)		
			CH 632668	CH 633334	CH 634000
			3490.02 MHz	3500.01 MHz	3510 MHz
BPSK	1	216	4.46	4.22	4.27
	1	0	4.23	4.43	4.21
	216	0	4.54	4.69	4.66
QPSK	1	216	7.44	7.56	7.23
	1	0	7.38	7.59	7.16
	217	0	6.94	7.38	7.07
16QAM	1	216	7.42	7.05	7.35
	1	0	6.98	7.02	7.15
	217	0	7.03	7.22	7.10
64QAM	1	216	7.24	7.54	7.26
	1	0	7.17	7.15	7.18
	217	0	7.77	7.52	7.24
256QAM	1	216	7.47	7.49	8.01
	1	0	8.01	7.54	7.74
	217	0	8.13	8.14	8.93

Spectrum Plot of Worst Value

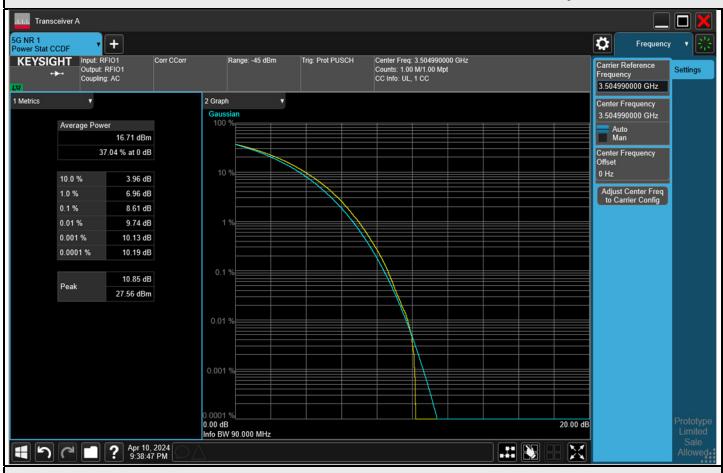


256QAM CH 634000 (3510 MHz)

NR n78 SCS 30 kHz (3.45 GHz ~ 3.55 GHz) - MIMO-Ant 7, Channel Bandwidth: 90 MHz

Modulation	RB Size	RB Offset	Peak To Average Ratio (dB)		
			CH 633000	CH 633334	CH 633666
			3495 MHz	3500.01 MHz	3504.99 MHz
BPSK	1	244	4.18	4.46	4.46
	1	0	4.18	4.44	4.15
	243	0	4.17	4.45	4.48
QPSK	1	244	7.40	7.22	7.49
	1	0	7.24	7.16	7.63
	245	0	6.96	7.94	7.41
16QAM	1	244	6.96	7.00	7.86
	1	0	7.10	7.36	7.82
	245	0	7.04	7.35	7.65
64QAM	1	244	7.04	7.89	7.14
	1	0	7.07	7.11	7.35
	245	0	7.23	7.58	7.28
256QAM	1	244	7.81	7.80	7.77
	1	0	8.15	8.06	8.37
	245	0	8.07	8.34	8.61

Spectrum Plot of Worst Value

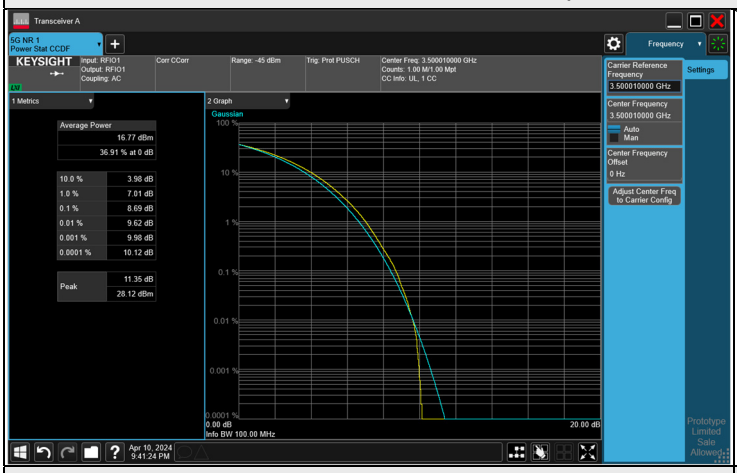


256QAM CH 633666 (3504.99 MHz)

NR n78 SCS 30 kHz (3.45 GHz ~ 3.55 GHz) - MIMO-Ant 7, Channel Bandwidth: 100 MHz

Modulation	RB Size	RB Offset	Peak To Average Ratio (dB)
			CH 633334
			3500.01
BPSK	1	272	4.42
	1	0	4.73
	270	0	4.34
QPSK	1	272	7.13
	1	0	7.43
	273	0	7.44
16QAM	1	272	6.96
	1	0	8.11
	273	0	7.12
64QAM	1	272	7.46
	1	0	7.71
	273	0	7.53
256QAM	1	272	7.71
	1	0	7.88
	273	0	8.69

Spectrum Plot of Worst Value



256QAM CH 633334 (3500.01 MHz)

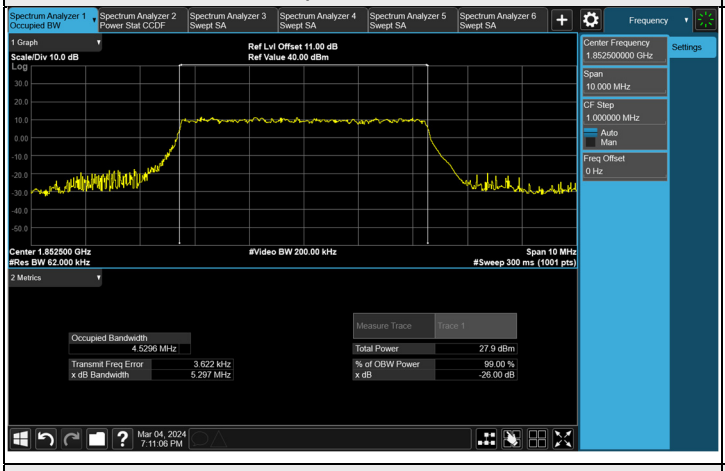
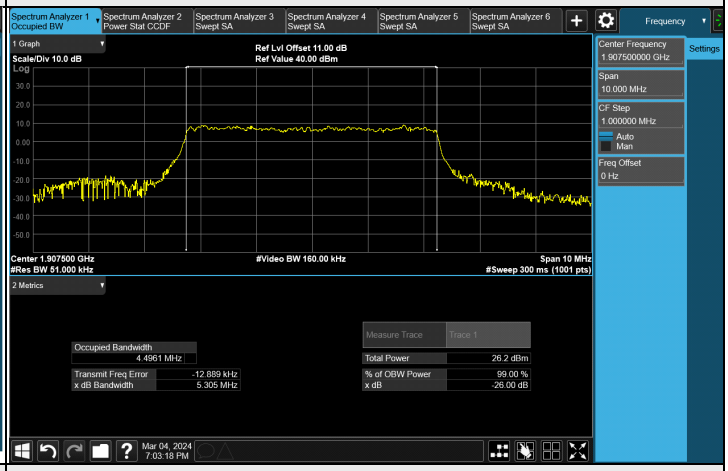
7.4 Bandwidth

Input Power:	3.87 Vdc	Environmental Conditions:	23°C, 71% RH	Tested By:	James Yang

7.4.1 NR n2 SCS 15 kHz

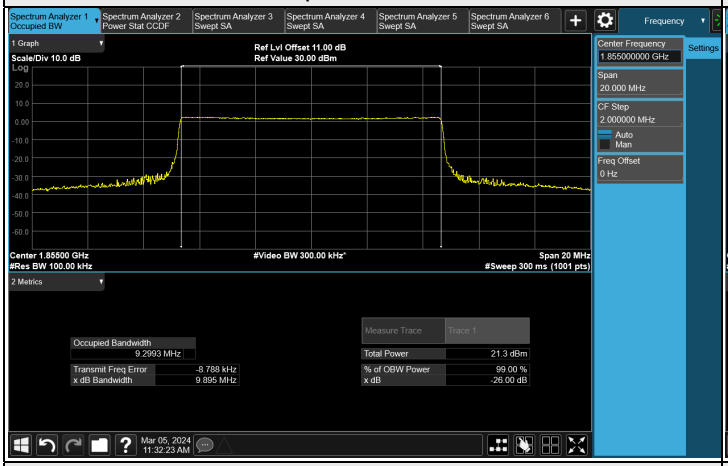
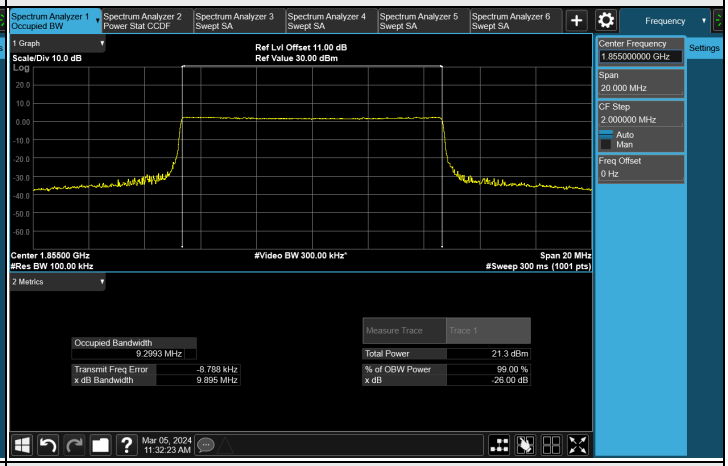
NR n2 SCS 15 kHz - Ant 0, Channel Bandwidth: 5 MHz

Modulation	Channel	Frequency (MHz)	Occupied Bandwidth (MHz)	26 dB Bandwidth (MHz)
BPSK	370500	1852.5	4.4786	5.107
BPSK	376000	1880	4.4674	4.975
BPSK	381500	1907.5	4.4807	5.153
QPSK	370500	1852.5	4.4758	5.14
QPSK	376000	1880	4.4944	5.231
QPSK	381500	1907.5	4.4945	5.104
16QAM	370500	1852.5	4.5296	5.297
16QAM	376000	1880	4.51	5.169
16QAM	381500	1907.5	4.491	5.186
64QAM	370500	1852.5	4.4879	5.174
64QAM	376000	1880	4.4924	5.167
64QAM	381500	1907.5	4.4907	5.267
256QAM	370500	1852.5	4.4984	5.185
256QAM	376000	1880	4.4857	5.095
256QAM	381500	1907.5	4.4961	5.305

Spectrum Plot of Worst Value	
Occupied bandwidth	26 dB Bandwidth
	
16QAM CH 370500 (1852.5 MHz)	256QAM CH 381500 (1907.5 MHz)

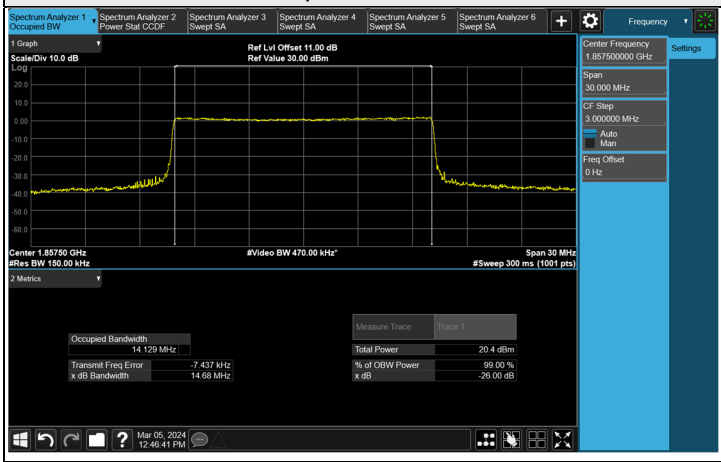
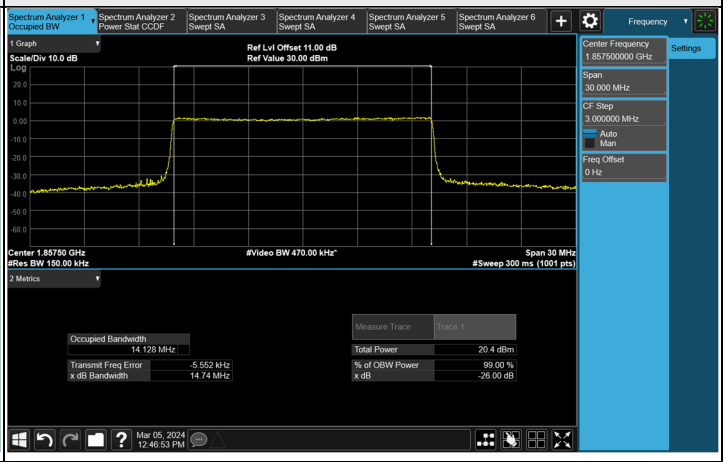
NR n2 SCS 15 kHz - Ant 0, Channel Bandwidth: 10 MHz

Modulation	Channel	Frequency (MHz)	Occupied Bandwidth (MHz)	26 dB Bandwidth (MHz)
BPSK	371000	1855	8.9286	9.37
BPSK	376000	1880	8.9227	9.365
BPSK	381000	1905	8.923	9.362
QPSK	371000	1855	9.2993	9.895
QPSK	376000	1880	9.2887	9.809
QPSK	381000	1905	9.2862	9.82
16QAM	371000	1855	9.2898	9.767
16QAM	376000	1880	9.2843	9.766
16QAM	381000	1905	9.2837	9.735
64QAM	371000	1855	9.2838	9.75
64QAM	376000	1880	9.2796	9.728
64QAM	381000	1905	9.2772	9.738
256QAM	371000	1855	9.2845	9.72
256QAM	376000	1880	9.2754	9.724
256QAM	381000	1905	9.2721	9.7

Spectrum Plot of Worst Value	
Occupied bandwidth	26 dB Bandwidth
	
QPSK CH 371000 (1855 MHz)	QPSK CH 371000 (1855 MHz)

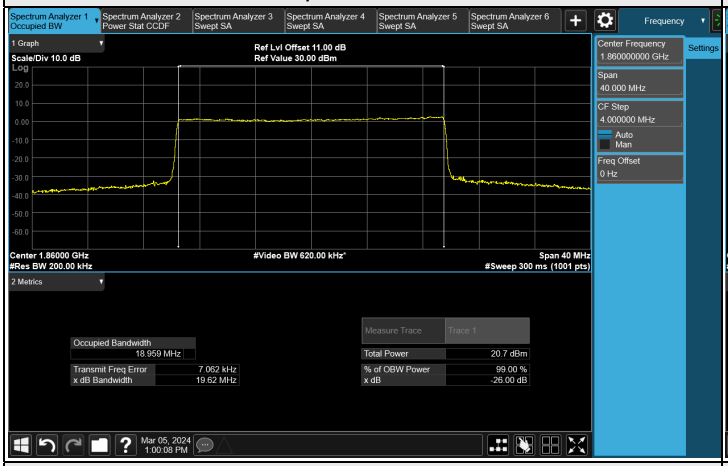
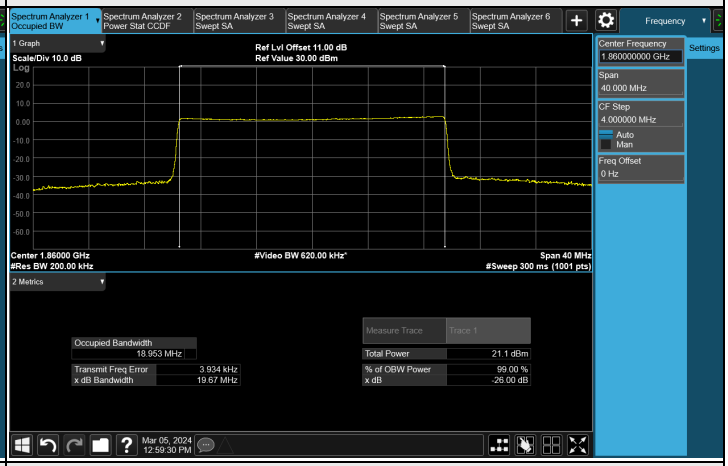
NR n2 SCS 15 kHz - Ant 0, Channel Bandwidth: 15 MHz

Modulation	Channel	Frequency (MHz)	Occupied Bandwidth (MHz)	26 dB Bandwidth (MHz)
BPSK	371500	1857.5	13.414	13.98
BPSK	376000	1880	13.404	13.91
BPSK	380500	1902.5	13.381	13.92
QPSK	371500	1857.5	14.114	14.65
QPSK	376000	1880	14.097	14.69
QPSK	380500	1902.5	14.087	14.63
16QAM	371500	1857.5	14.124	14.68
16QAM	376000	1880	14.102	14.68
16QAM	380500	1902.5	14.096	14.67
64QAM	371500	1857.5	14.129	14.68
64QAM	376000	1880	14.107	14.69
64QAM	380500	1902.5	14.094	14.65
256QAM	371500	1857.5	14.128	14.74
256QAM	376000	1880	14.103	14.65
256QAM	380500	1902.5	14.092	14.7

Spectrum Plot of Worst Value	
Occupied bandwidth	26 dB Bandwidth
	
64QAM CH 371500 (1857.5 MHz)	256QAM CH 371500 (1857.5 MHz)

NR n2 SCS 15 kHz - Ant 0, Channel Bandwidth: 20 MHz

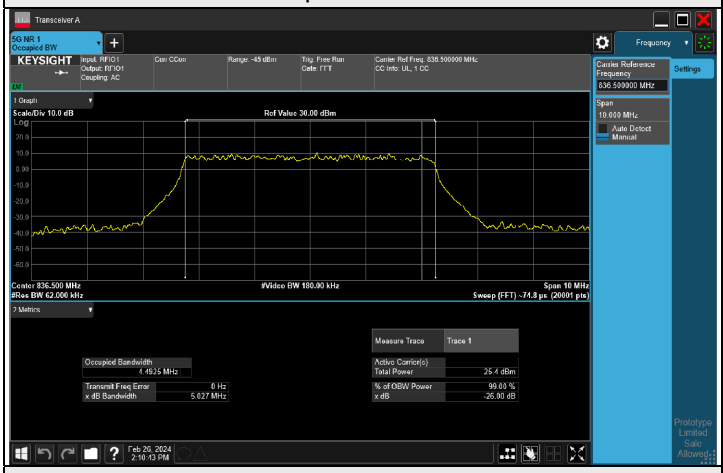
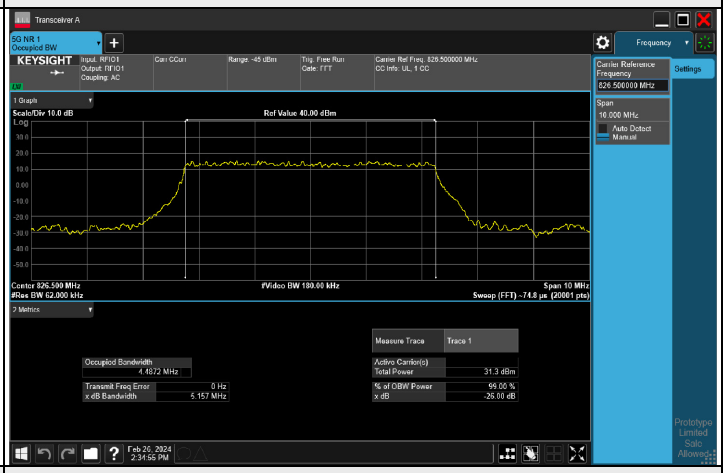
Modulation	Channel	Frequency (MHz)	Occupied Bandwidth (MHz)	26 dB Bandwidth (MHz)
BPSK	372000	1860	17.893	18.55
BPSK	376000	1880	17.857	18.54
BPSK	380000	1900	17.844	18.53
QPSK	372000	1860	18.953	19.67
QPSK	376000	1880	18.915	19.62
QPSK	380000	1900	18.904	19.64
16QAM	372000	1860	18.956	19.62
16QAM	376000	1880	18.919	19.62
16QAM	380000	1900	18.901	19.64
64QAM	372000	1860	18.958	19.63
64QAM	376000	1880	18.921	19.61
64QAM	380000	1900	18.91	19.65
256QAM	372000	1860	18.959	19.62
256QAM	376000	1880	18.918	19.59
256QAM	380000	1900	18.911	19.59

Spectrum Plot of Worst Value	
Occupied bandwidth	26 dB Bandwidth
	
256QAM CH 372000 (1860 MHz)	QPSK CH 372000 (1860 MHz)

7.4.2 NR n5 SCS 15 kHz

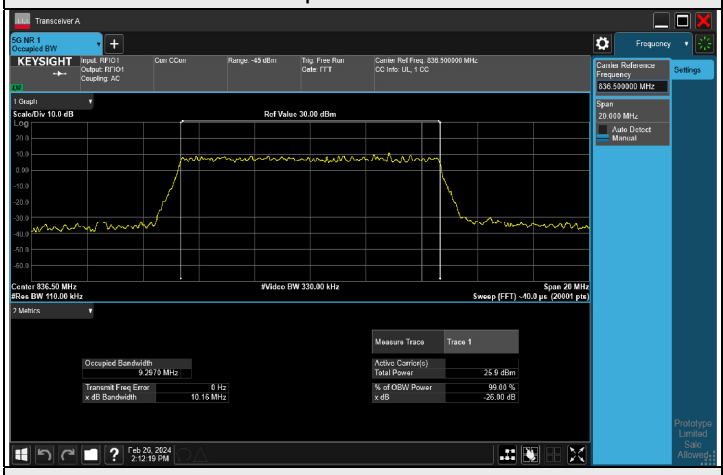
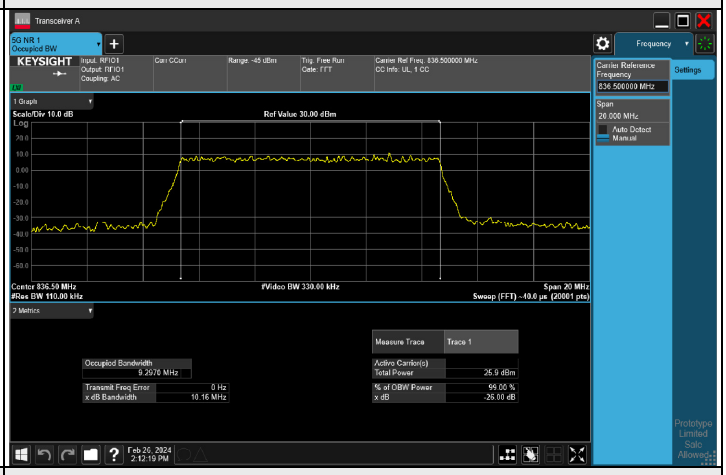
NR n5 SCS 15 kHz - Ant 0, Channel Bandwidth: 5 MHz

Modulation	Channel	Frequency (MHz)	Occupied Bandwidth (MHz)	26 dB Bandwidth (MHz)
BPSK	165300	826.5	4.4872	5.157
BPSK	167300	836.5	4.4804	5.037
BPSK	169300	846.5	4.4813	5.132
QPSK	165300	826.5	4.4894	5.089
QPSK	167300	836.5	4.4624	5.090
QPSK	169300	846.5	4.4824	4.952
16QAM	165300	826.5	4.4762	5.062
16QAM	167300	836.5	4.4670	5.068
16QAM	169300	846.5	4.4702	5.061
64QAM	165300	826.5	4.4644	5.144
64QAM	167300	836.5	4.4622	4.983
64QAM	169300	846.5	4.4601	5.030
256QAM	165300	826.5	4.4801	5.130
256QAM	167300	836.5	4.4925	5.027
256QAM	169300	846.5	4.4885	5.056

Spectrum Plot of Worst Value	
Occupied bandwidth	26 dB Bandwidth
	
256QAM CH 167300 (836.5 MHz)	BPSK CH 165300 (826.5 MHz)

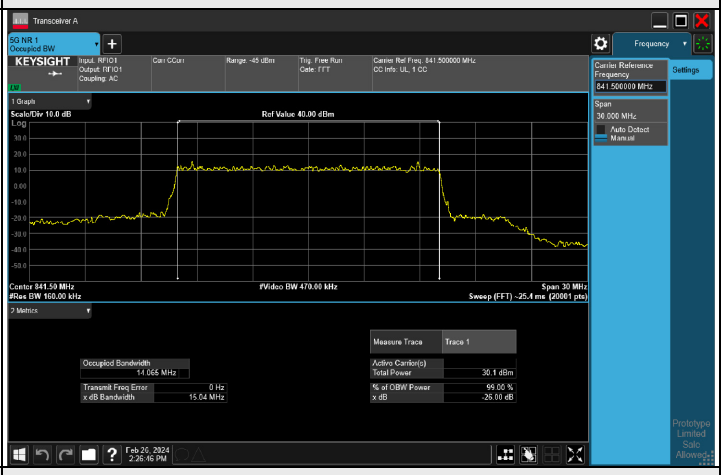
NR n5 SCS 15 kHz - Ant 0, Channel Bandwidth: 10 MHz

Modulation	Channel	Frequency (MHz)	Occupied Bandwidth (MHz)	26 dB Bandwidth (MHz)
BPSK	165800	829	9.1688	9.642
BPSK	167300	836.5	9.2002	9.541
BPSK	168800	844	9.2007	9.563
QPSK	165800	829	9.2744	10.08
QPSK	167300	836.5	9.2741	10.01
QPSK	168800	844	9.2862	10.07
16QAM	165800	829	9.2785	9.955
16QAM	167300	836.5	9.2764	9.898
16QAM	168800	844	9.2802	9.962
64QAM	165800	829	9.2688	10.05
64QAM	167300	836.5	9.2582	10.07
64QAM	168800	844	9.2561	9.934
256QAM	165800	829	9.2907	10.06
256QAM	167300	836.5	9.2970	10.16
256QAM	168800	844	9.2809	10.15

Spectrum Plot of Worst Value	
Occupied bandwidth	26 dB Bandwidth
	
256QAM CH 167300 (836.5 MHz)	256QAM CH 167300 (836.5 MHz)

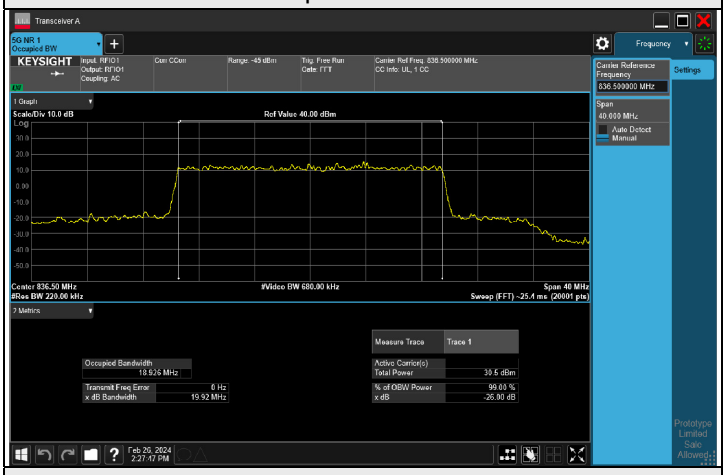
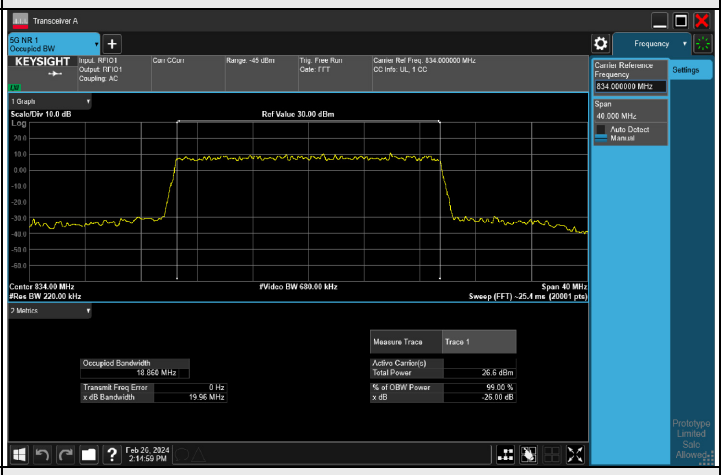
NR n5 SCS 15 kHz - Ant 0, Channel Bandwidth: 15 MHz

Modulation	Channel	Frequency (MHz)	Occupied Bandwidth (MHz)	26 dB Bandwidth (MHz)
BPSK	166300	831.5	14.002	14.41
BPSK	167300	836.5	14.014	14.29
BPSK	168300	841.5	14.017	14.27
QPSK	166300	831.5	14.055	14.83
QPSK	167300	836.5	14.056	14.94
QPSK	168300	841.5	14.061	14.97
16QAM	166300	831.5	14.065	14.88
16QAM	167300	836.5	14.064	14.82
16QAM	168300	841.5	14.065	15.04
64QAM	166300	831.5	14.044	14.89
64QAM	167300	836.5	14.035	14.82
64QAM	168300	841.5	14.023	14.75
256QAM	166300	831.5	14.071	14.92
256QAM	167300	836.5	14.055	14.93
256QAM	168300	841.5	14.061	14.86

Spectrum Plot of Worst Value	
Occupied bandwidth	26 dB Bandwidth
	
256QAM CH 166300 (831.5 MHz)	16QAM CH 168300 (841.5 MHz)

NR n5 SCS 15 kHz - Ant 0, Channel Bandwidth: 20 MHz

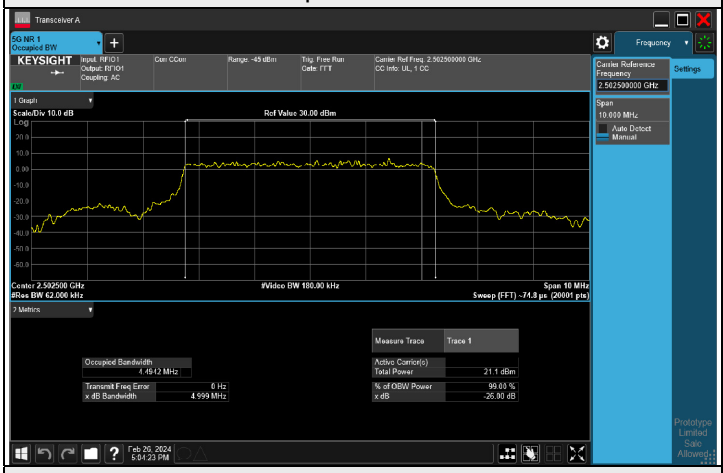
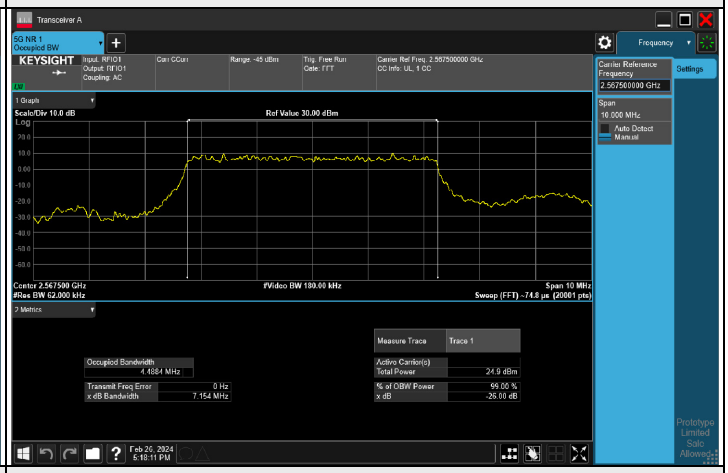
Modulation	Channel	Frequency (MHz)	Occupied Bandwidth (MHz)	26 dB Bandwidth (MHz)
BPSK	166800	834	18.730	18.86
BPSK	167300	836.5	18.717	18.78
BPSK	167800	839	18.726	18.94
QPSK	166800	834	18.833	19.78
QPSK	167300	836.5	18.829	19.95
QPSK	167800	839	18.821	19.87
16QAM	166800	834	18.886	19.84
16QAM	167300	836.5	18.926	19.92
16QAM	167800	839	18.853	19.89
64QAM	166800	834	18.881	19.78
64QAM	167300	836.5	18.866	19.84
64QAM	167800	839	18.881	19.90
256QAM	166800	834	18.860	19.96
256QAM	167300	836.5	18.842	19.85
256QAM	167800	839	18.849	19.89

Spectrum Plot of Worst Value	
Occupied bandwidth	26 dB Bandwidth
	
16QAM CH 167300 (836.5 MHz)	256QAM CH 166800 (834 MHz)

7.4.3 NR n7 SCS 15 kHz

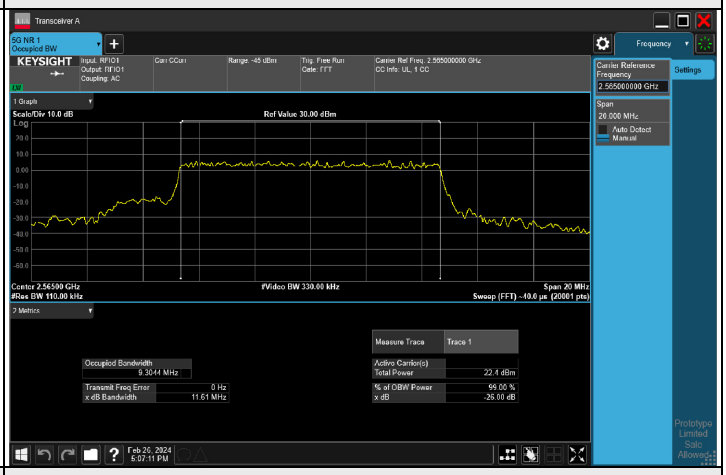
NR n7 SCS 15 kHz - Ant 6, Channel Bandwidth: 5 MHz

Modulation	Channel	Frequency (MHz)	Occupied Bandwidth (MHz)	26 dB Bandwidth (MHz)
BPSK	500500	2502.5	4.4860	5.249
BPSK	507000	2535	4.4741	5.054
BPSK	513500	2567.5	4.4721	5.070
QPSK	500500	2502.5	4.4681	5.026
QPSK	507000	2535	4.4813	5.072
QPSK	513500	2567.5	4.4804	5.075
16QAM	500500	2502.5	4.4701	5.093
16QAM	507000	2535	4.4904	6.855
16QAM	513500	2567.5	4.4884	7.154
64QAM	500500	2502.5	4.4692	5.005
64QAM	507000	2535	4.4733	4.994
64QAM	513500	2567.5	4.4731	4.970
256QAM	500500	2502.5	4.4942	4.999
256QAM	507000	2535	4.4864	5.026
256QAM	513500	2567.5	4.4904	5.036

Spectrum Plot of Worst Value	
Occupied bandwidth	26 dB Bandwidth
	
256QAM CH 500500 (2502.5 MHz)	16QAM CH 513500 (2567.5 MHz)

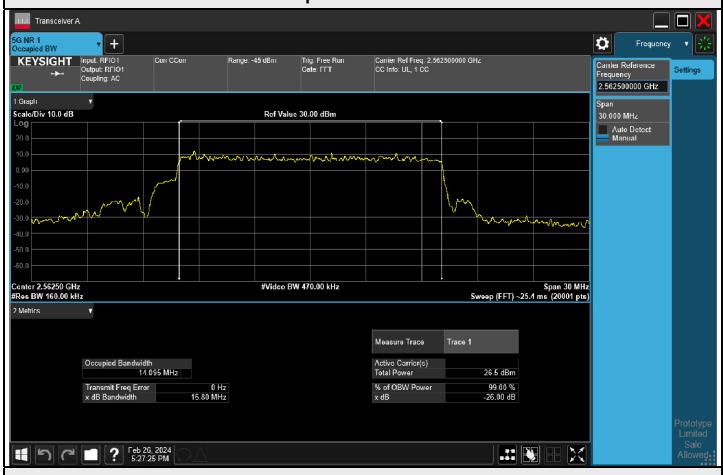
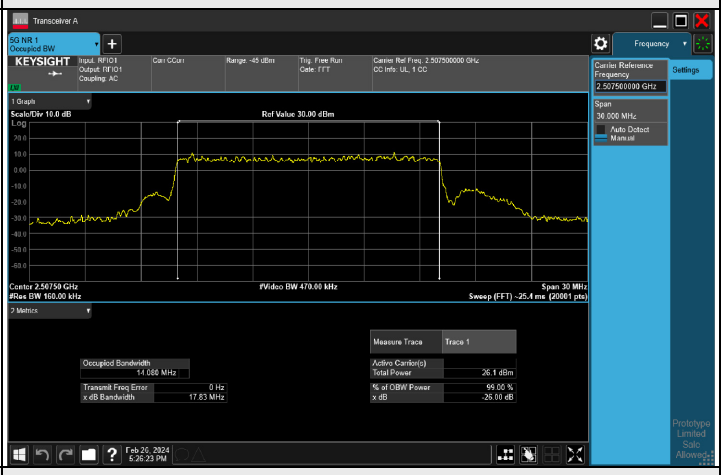
NR n7 SCS 15 kHz - Ant 6, Channel Bandwidth: 10 MHz

Modulation	Channel	Frequency (MHz)	Occupied Bandwidth (MHz)	26 dB Bandwidth (MHz)
BPSK	501000	2505	9.1807	9.605
BPSK	507000	2535	9.1987	9.631
BPSK	513000	2565	9.2260	9.564
QPSK	501000	2505	9.2740	10.12
QPSK	507000	2535	9.2866	10.12
QPSK	513000	2565	9.2742	10.11
16QAM	501000	2505	9.3028	10.09
16QAM	507000	2535	9.2828	9.961
16QAM	513000	2565	9.2924	10.00
64QAM	501000	2505	9.2627	10.02
64QAM	507000	2535	9.2549	9.975
64QAM	513000	2565	9.2709	10.06
256QAM	501000	2505	9.2788	9.945
256QAM	507000	2535	9.3149	10.43
256QAM	513000	2565	9.3044	11.61

Spectrum Plot of Worst Value	
Occupied bandwidth	26 dB Bandwidth
	
256QAM CH 507000 (2535 MHz)	256QAM CH 513000 (2565 MHz)

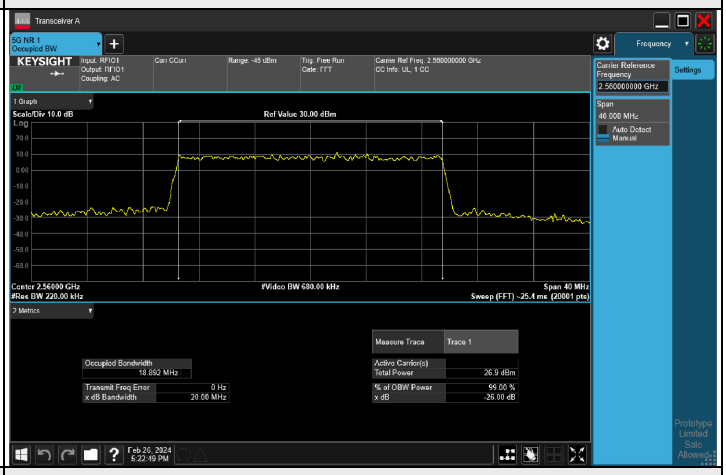
NR n7 SCS 15 kHz - Ant 6, Channel Bandwidth: 15 MHz

Modulation	Channel	Frequency (MHz)	Occupied Bandwidth (MHz)	26 dB Bandwidth (MHz)
BPSK	501500	2507.5	13.927	14.27
BPSK	507000	2535	14.011	14.27
BPSK	512500	2562.5	13.999	14.36
QPSK	501500	2507.5	14.080	15.40
QPSK	507000	2535	14.086	15.02
QPSK	512500	2562.5	14.086	15.03
16QAM	501500	2507.5	14.077	16.14
16QAM	507000	2535	14.076	14.84
16QAM	512500	2562.5	14.077	14.85
64QAM	501500	2507.5	14.080	17.83
64QAM	507000	2535	14.065	14.97
64QAM	512500	2562.5	14.095	15.80
256QAM	501500	2507.5	14.062	14.90
256QAM	507000	2535	14.064	14.96
256QAM	512500	2562.5	14.059	14.99

Spectrum Plot of Worst Value	
Occupied bandwidth	26 dB Bandwidth
	
64QAM CH 512500 (2562.5 MHz)	64QAM CH 501500 (2507.5 MHz)

NR n7 SCS 15 kHz - Ant 6, Channel Bandwidth: 20 MHz

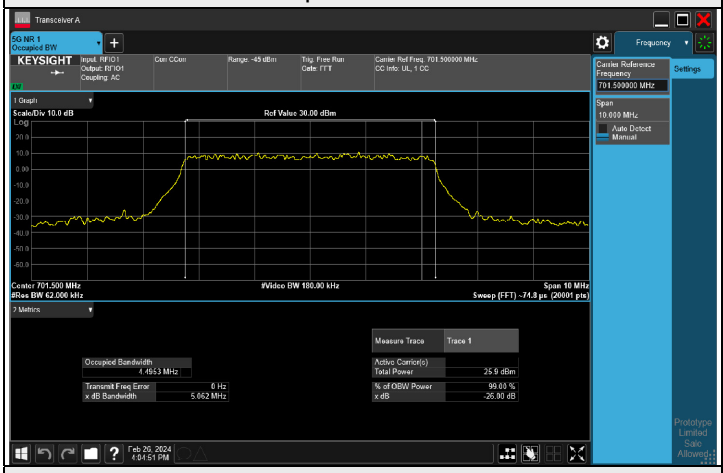
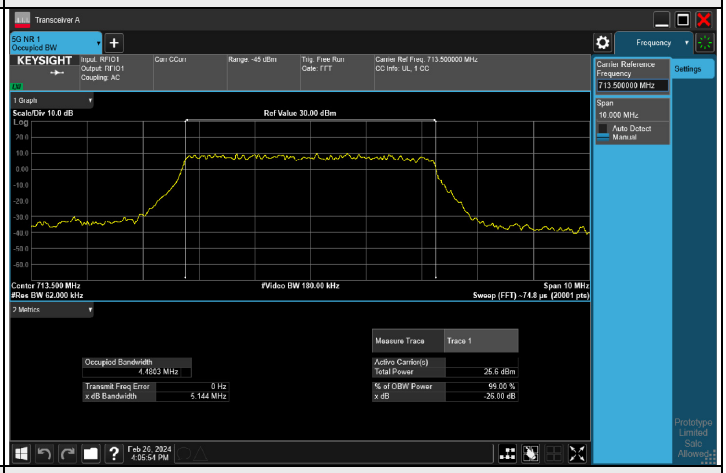
Modulation	Channel	Frequency (MHz)	Occupied Bandwidth (MHz)	26 dB Bandwidth (MHz)
BPSK	502000	2510	18.650	18.91
BPSK	507000	2535	18.736	18.74
BPSK	512000	2560	18.726	18.77
QPSK	502000	2510	18.888	19.84
QPSK	507000	2535	18.862	19.91
QPSK	512000	2560	18.849	19.96
16QAM	502000	2510	18.913	19.83
16QAM	507000	2535	18.916	19.88
16QAM	512000	2560	18.892	20.00
64QAM	502000	2510	18.908	19.99
64QAM	507000	2535	18.909	19.97
64QAM	512000	2560	18.893	19.95
256QAM	502000	2510	18.846	19.84
256QAM	507000	2535	18.864	19.90
256QAM	512000	2560	18.846	19.88

Spectrum Plot of Worst Value	
Occupied bandwidth	26 dB Bandwidth
	
16QAM CH 507000 (2535 MHz)	16QAM CH 512000 (2560 MHz)

7.4.4 NR n12 SCS 15 kHz

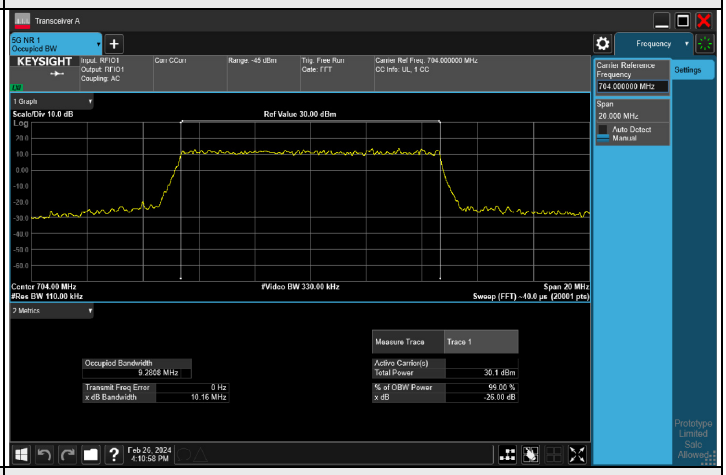
NR n12 SCS 15 kHz - Ant 0, Channel Bandwidth: 5 MHz

Modulation	Channel	Frequency (MHz)	Occupied Bandwidth (MHz)	26 dB Bandwidth (MHz)
BPSK	140300	701.5	4.4750	5.079
BPSK	141500	707.5	4.4804	5.084
BPSK	142700	713.5	4.4813	5.109
QPSK	140300	701.5	4.4661	5.016
QPSK	141500	707.5	4.4845	5.067
QPSK	142700	713.5	4.4854	5.079
16QAM	140300	701.5	4.4602	4.988
16QAM	141500	707.5	4.4620	5.024
16QAM	142700	713.5	4.4655	4.986
64QAM	140300	701.5	4.4705	4.999
64QAM	141500	707.5	4.4665	4.902
64QAM	142700	713.5	4.4663	4.870
256QAM	140300	701.5	4.4953	5.062
256QAM	141500	707.5	4.4931	5.120
256QAM	142700	713.5	4.4803	5.144

Spectrum Plot of Worst Value	
Occupied bandwidth	26 dB Bandwidth
	
256QAM CH 140300 (701.5 MHz)	256QAM CH 142700 (713.5 MHz)

NR n12 SCS 15 kHz - Ant 0, Channel Bandwidth: 10 MHz

Modulation	Channel	Frequency (MHz)	Occupied Bandwidth (MHz)	26 dB Bandwidth (MHz)
BPSK	140800	704	9.1902	9.585
BPSK	141500	707.5	9.1725	9.663
BPSK	142200	711	9.1729	9.651
QPSK	140800	704	9.2808	10.16
QPSK	141500	707.5	9.2841	10.07
QPSK	142200	711	9.2647	9.987
16QAM	140800	704	9.2740	9.993
16QAM	141500	707.5	9.2845	10.04
16QAM	142200	711	9.2763	10.00
64QAM	140800	704	9.2603	9.990
64QAM	141500	707.5	9.2589	9.972
64QAM	142200	711	9.2541	10.04
256QAM	140800	704	9.2748	10.08
256QAM	141500	707.5	9.2708	9.903
256QAM	142200	711	9.2824	10.07

Spectrum Plot of Worst Value	
Occupied bandwidth	26 dB Bandwidth
	
16QAM CH 141500 (707.5 MHz)	QPSK CH 140800 (704 MHz)