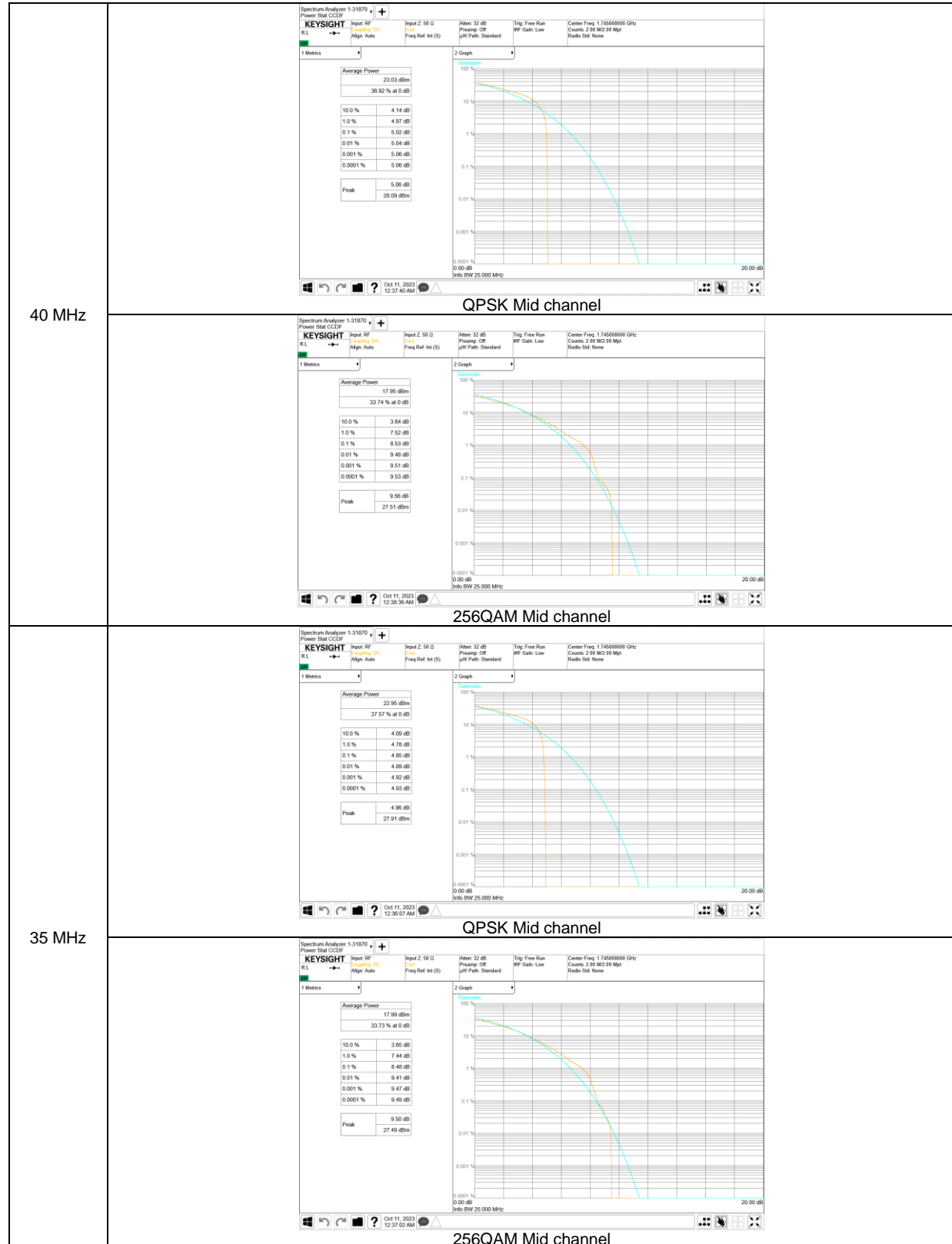
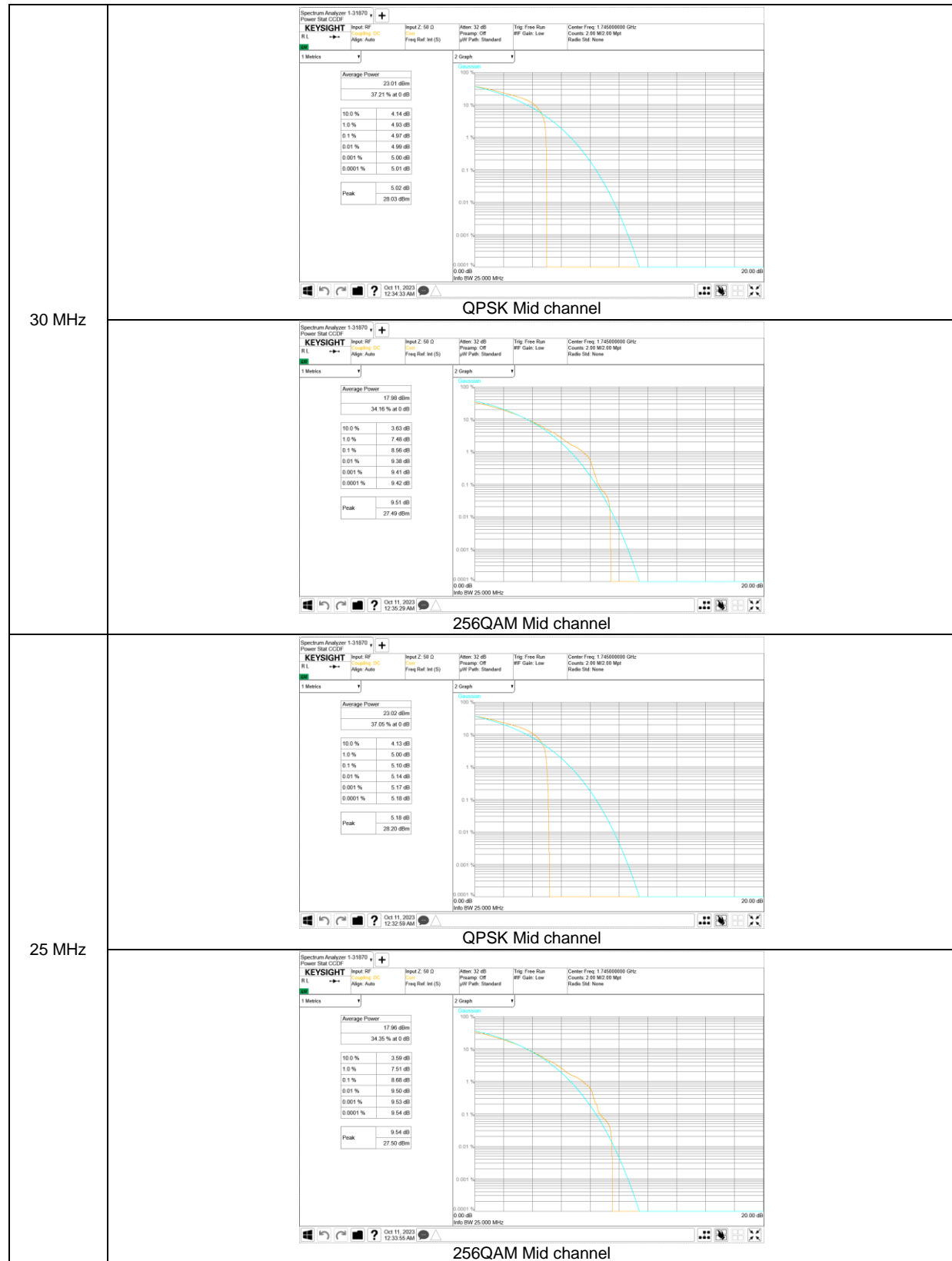
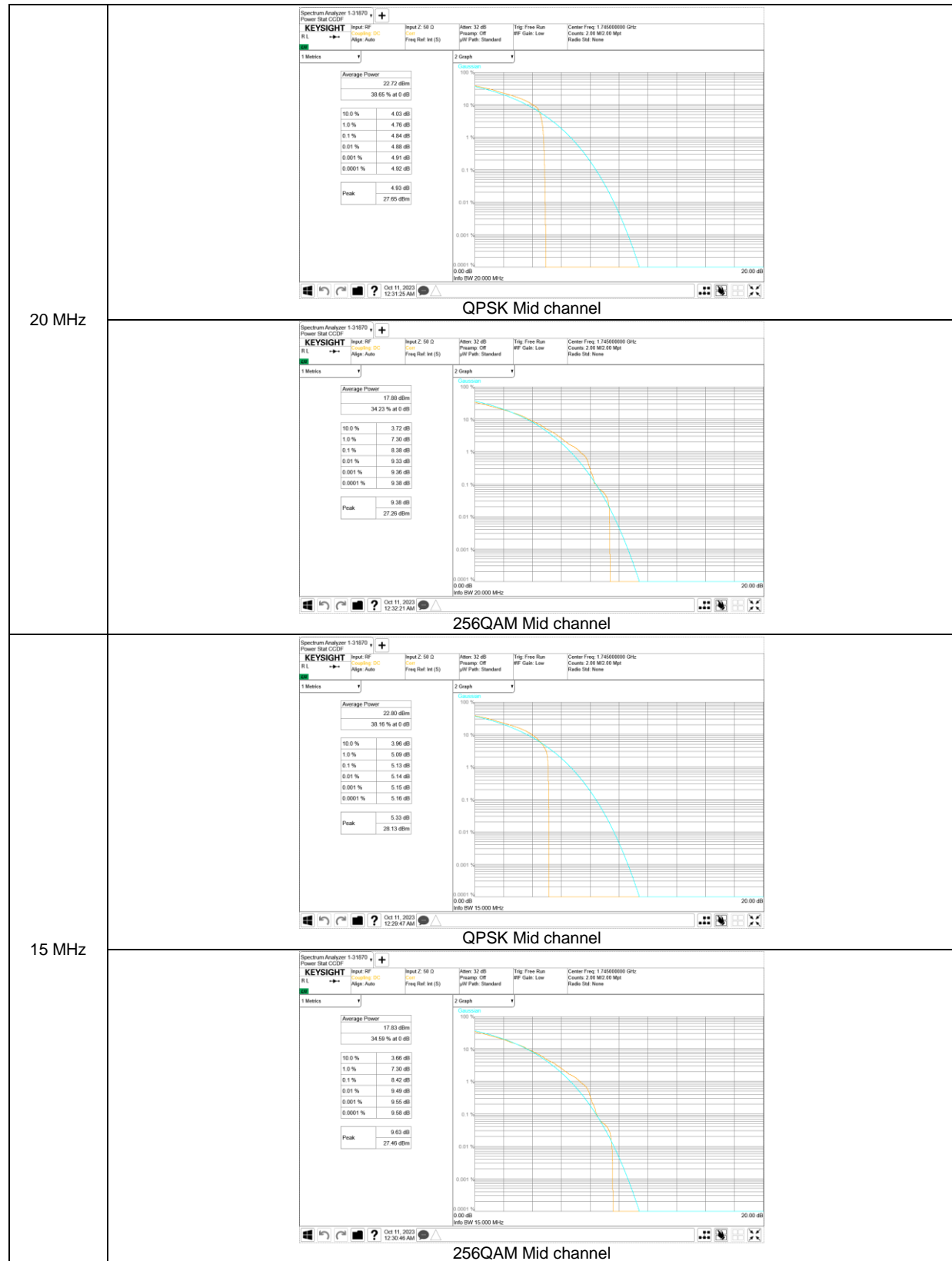
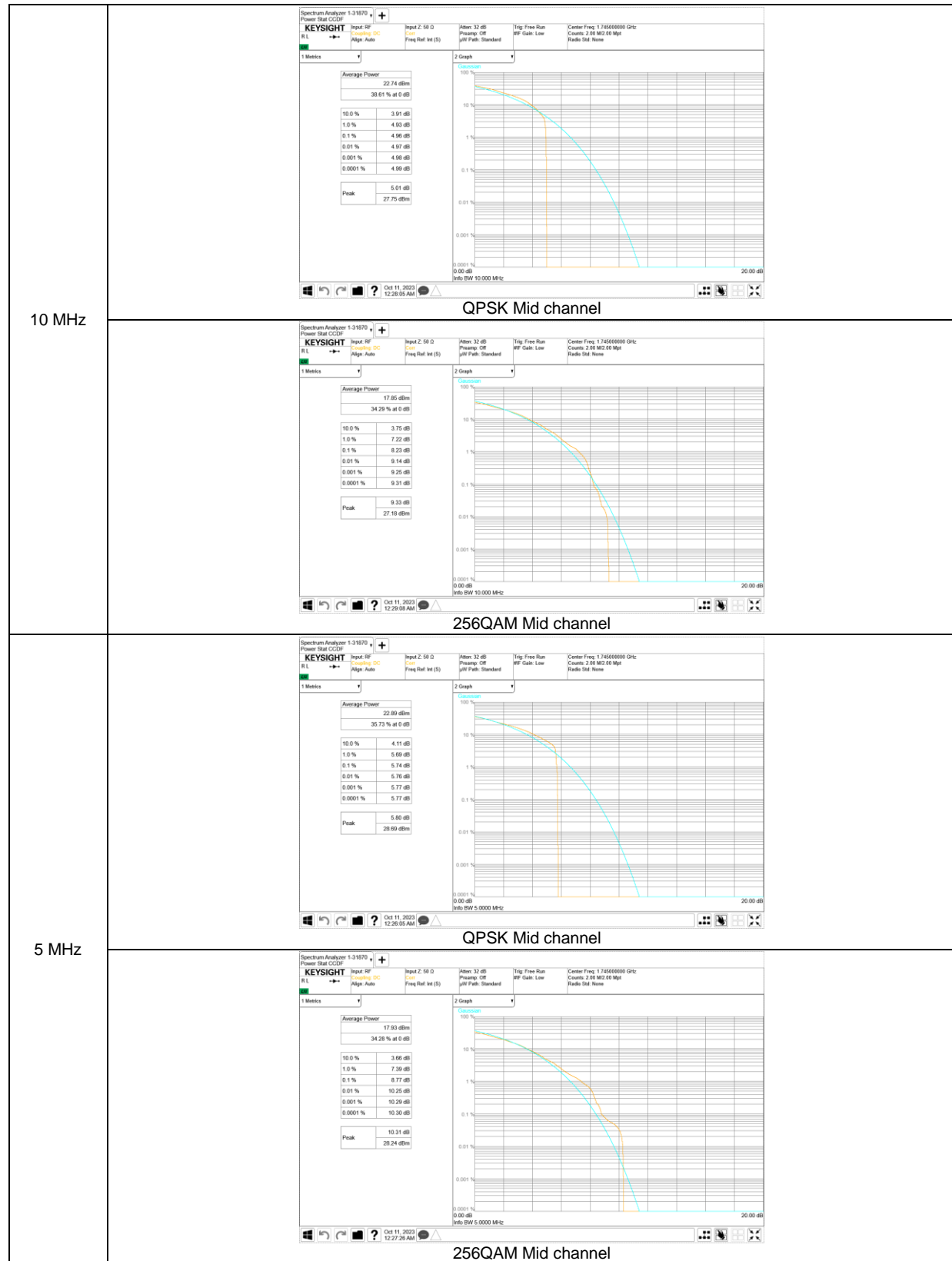


NR Band n66 CP-OFDM

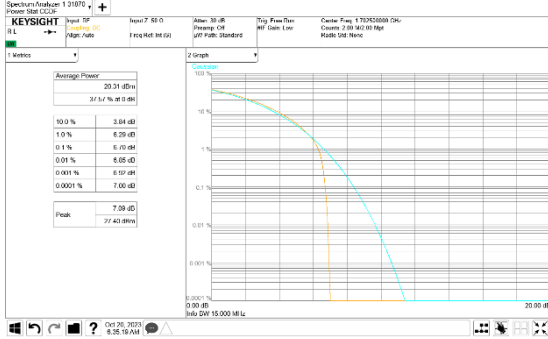
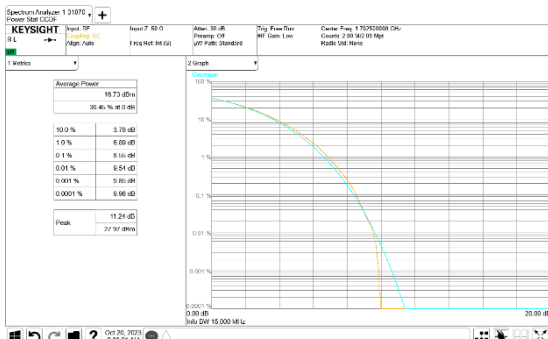
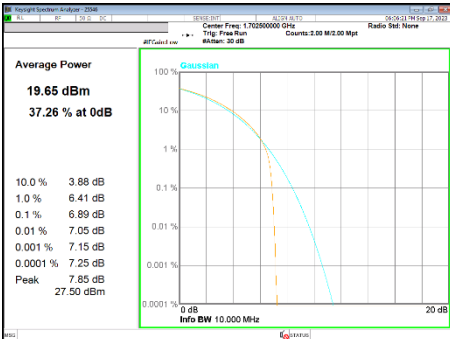
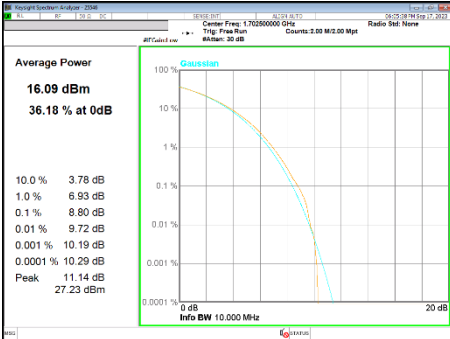


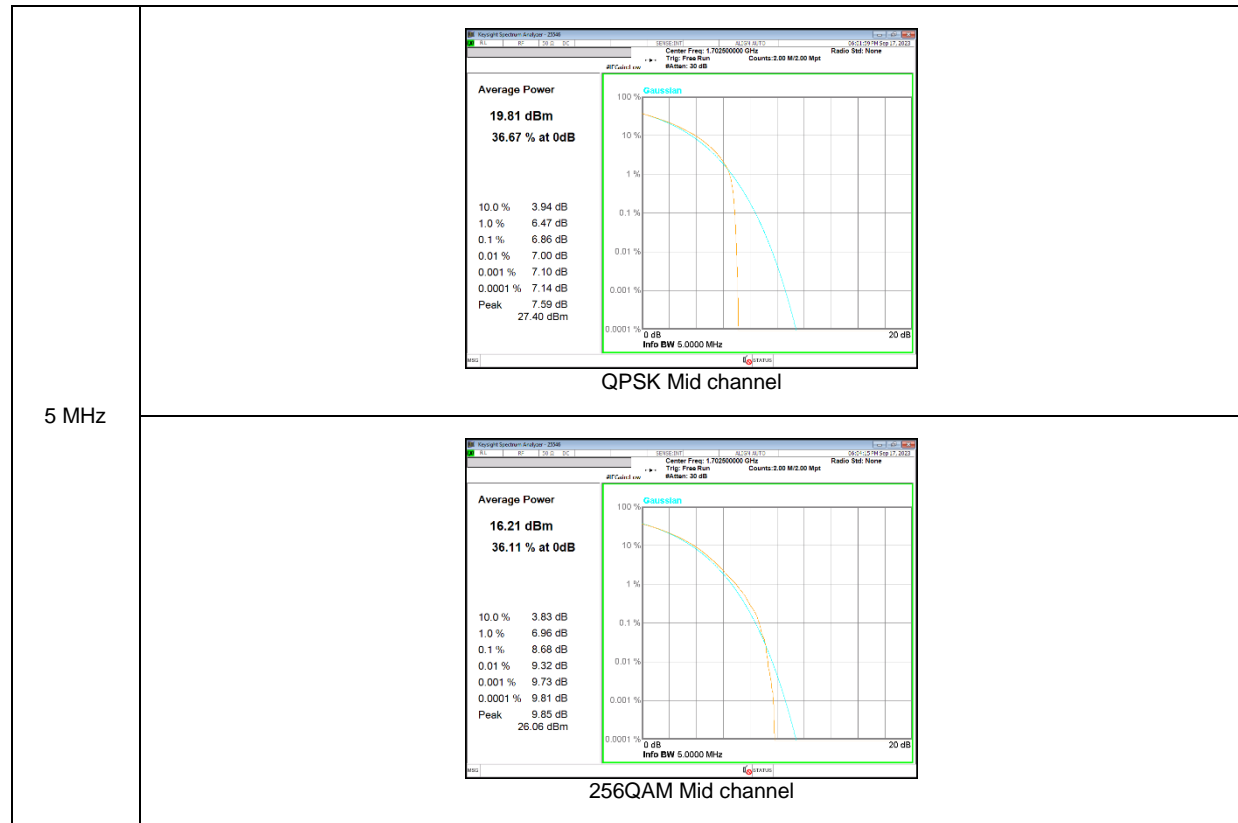




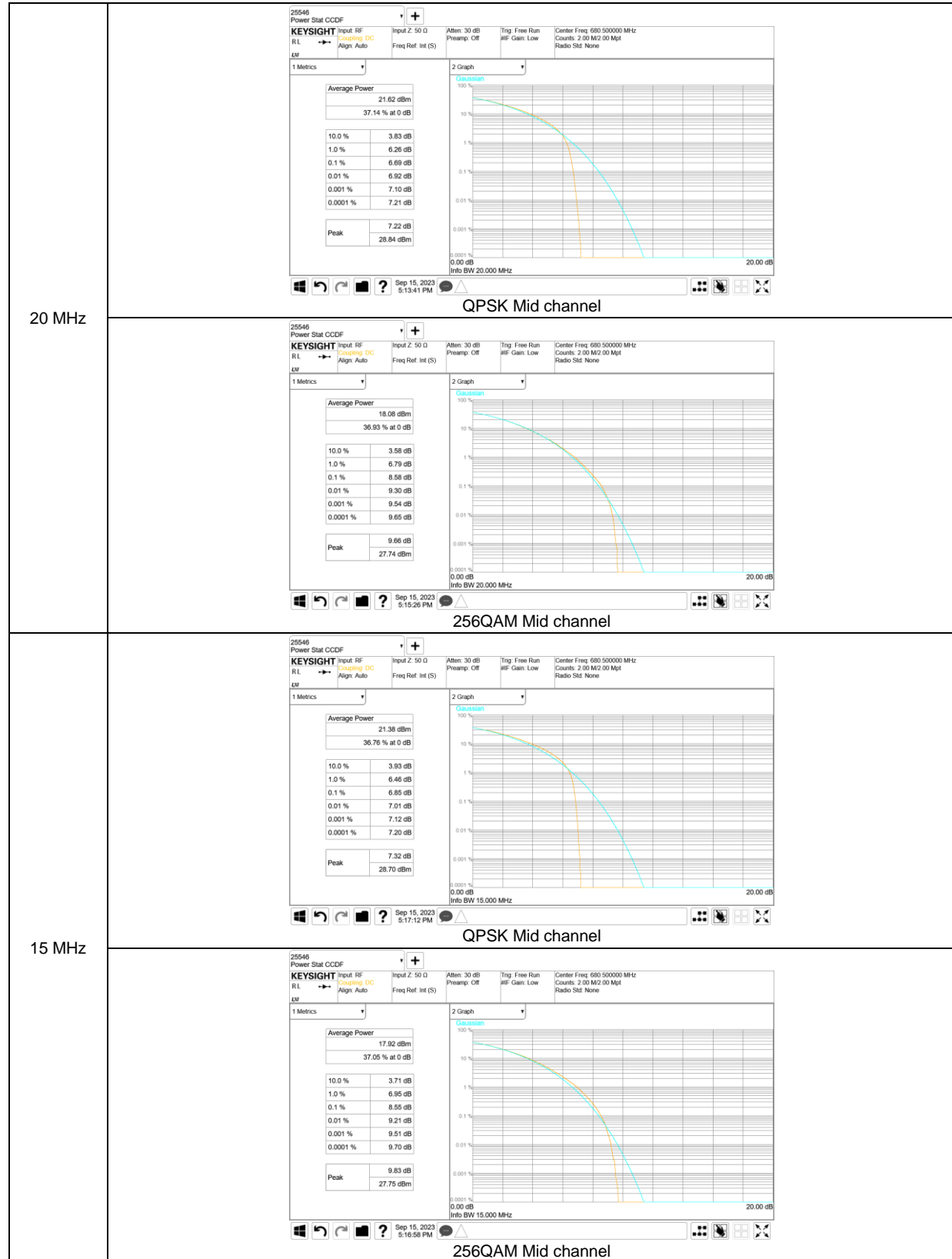


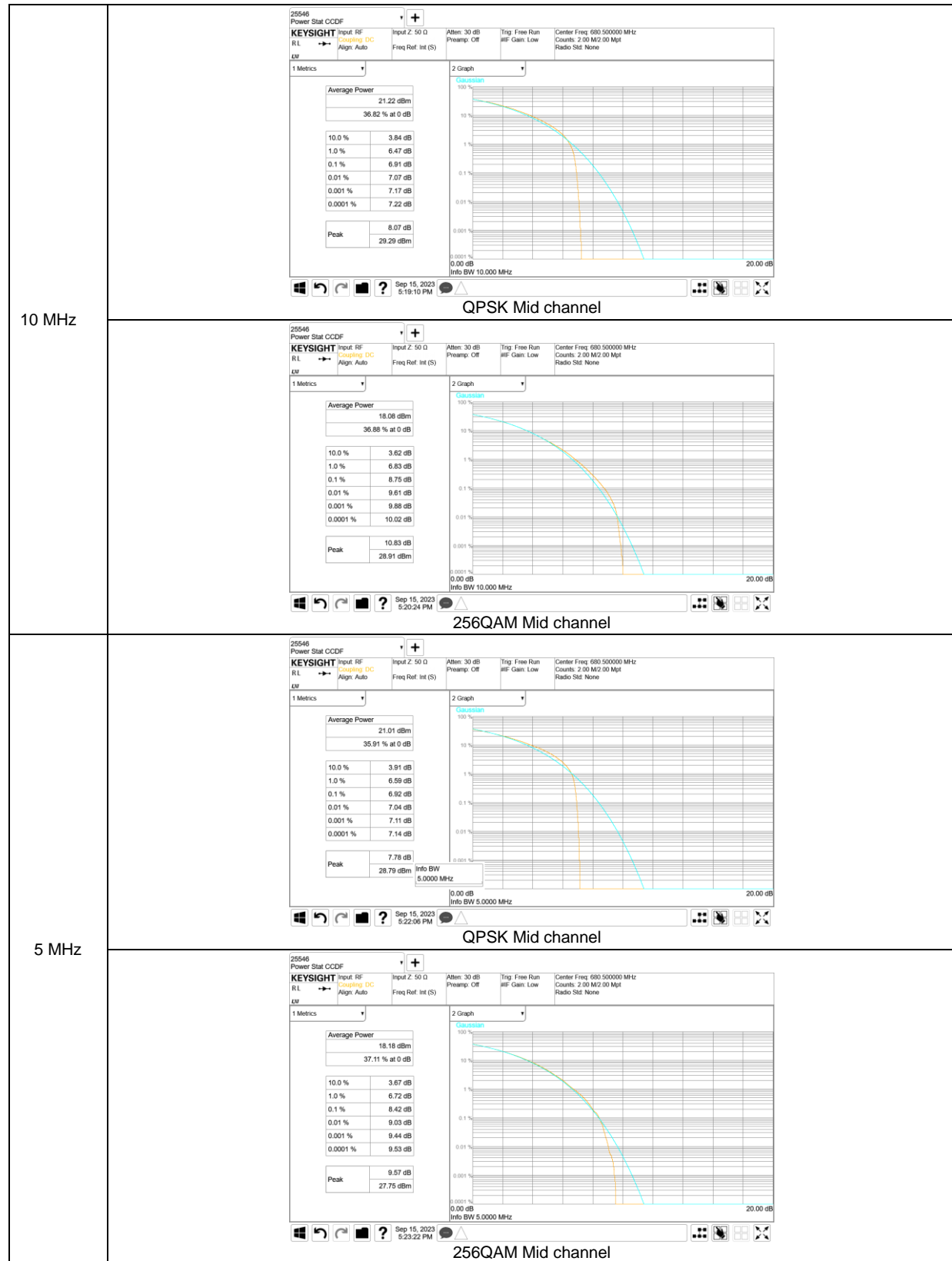
NR Band n70 CP-OFDM

<p>15 MHz</p>	 <p>QPSK Mid channel</p>
<p>15 MHz</p>	 <p>256QAM Mid channel</p>
<p>10 MHz</p>	 <p>QPSK Mid channel</p>
<p>10 MHz</p>	 <p>256QAM Mid channel</p>

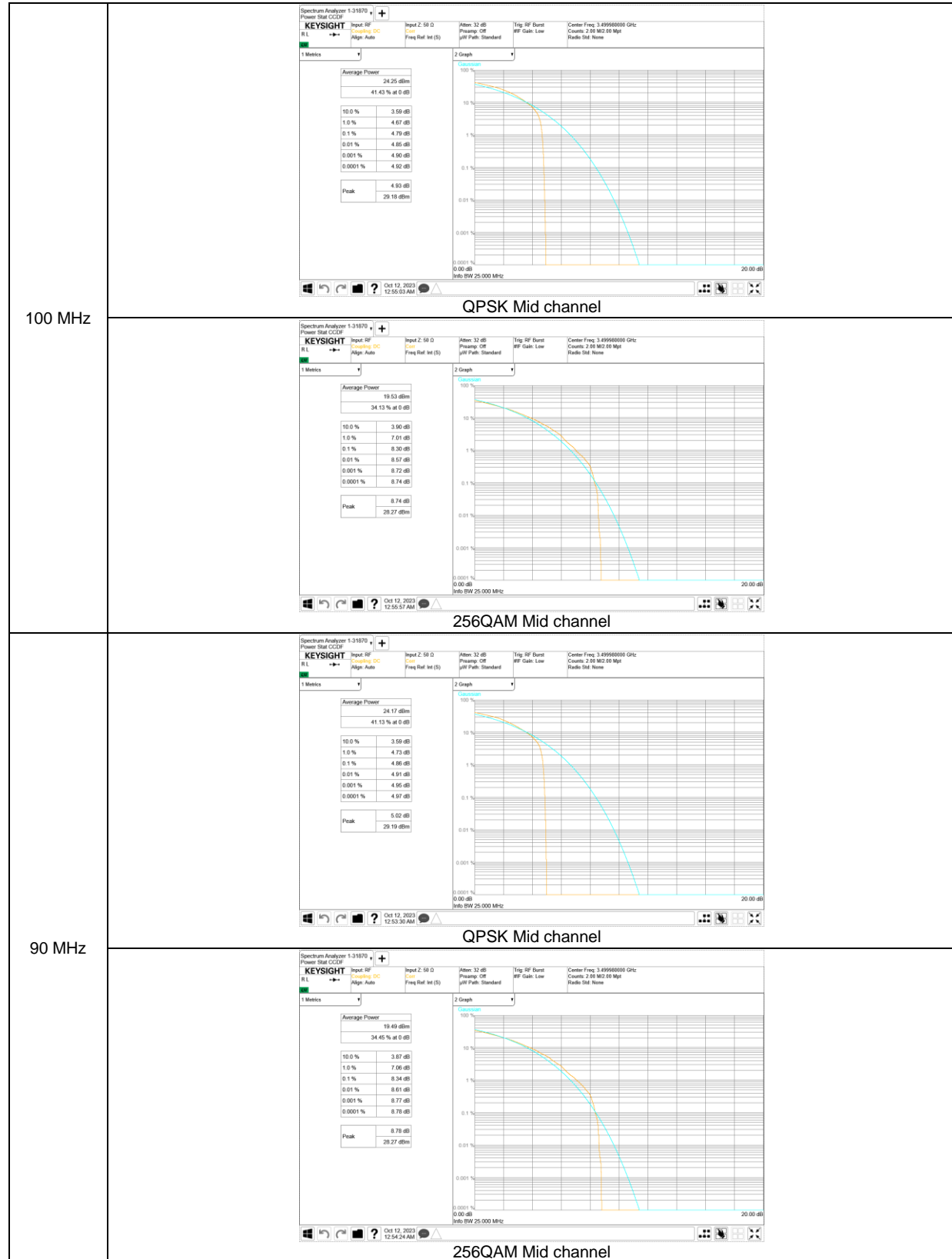


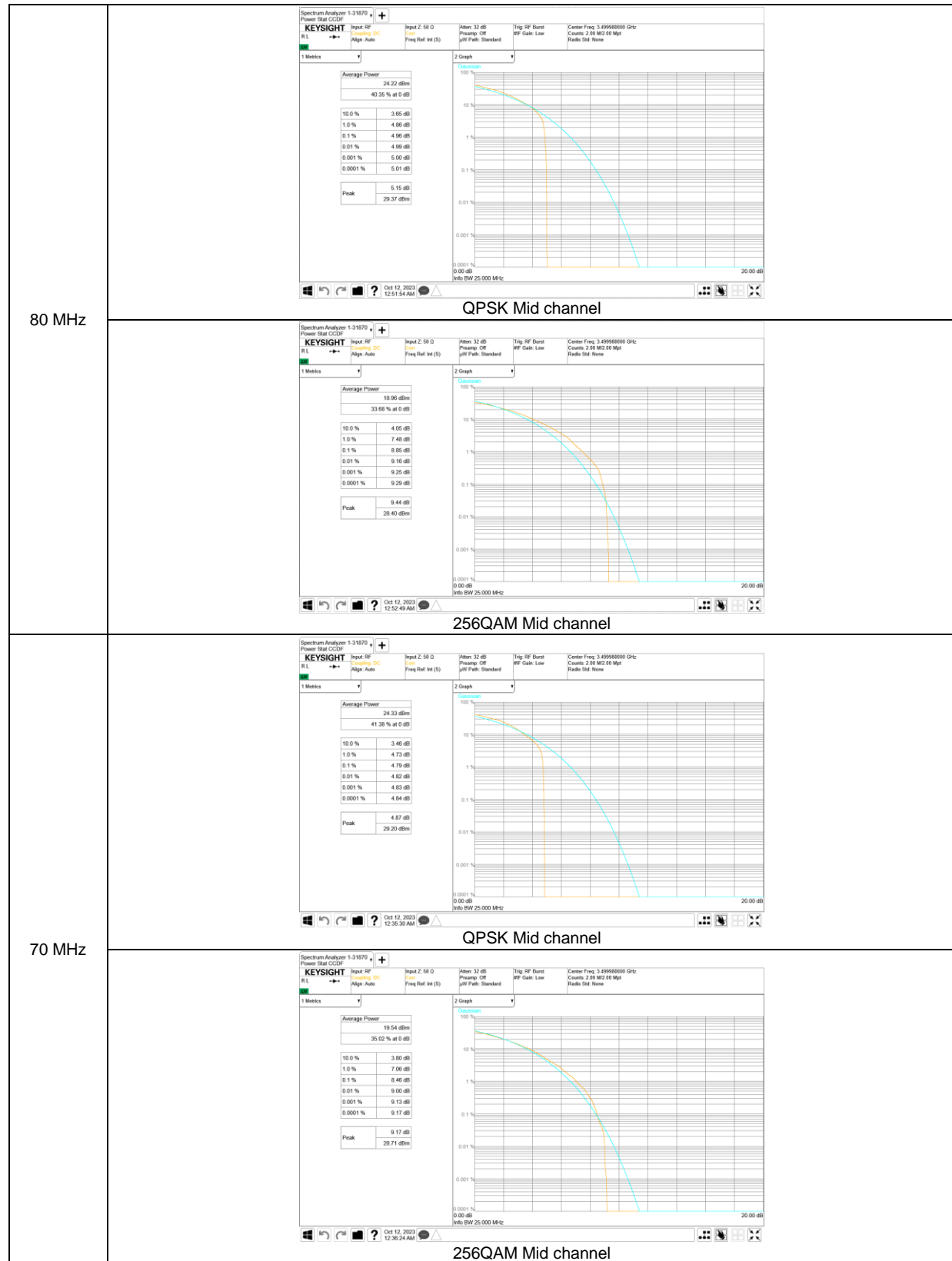
NR Band n71 CP-OFDM

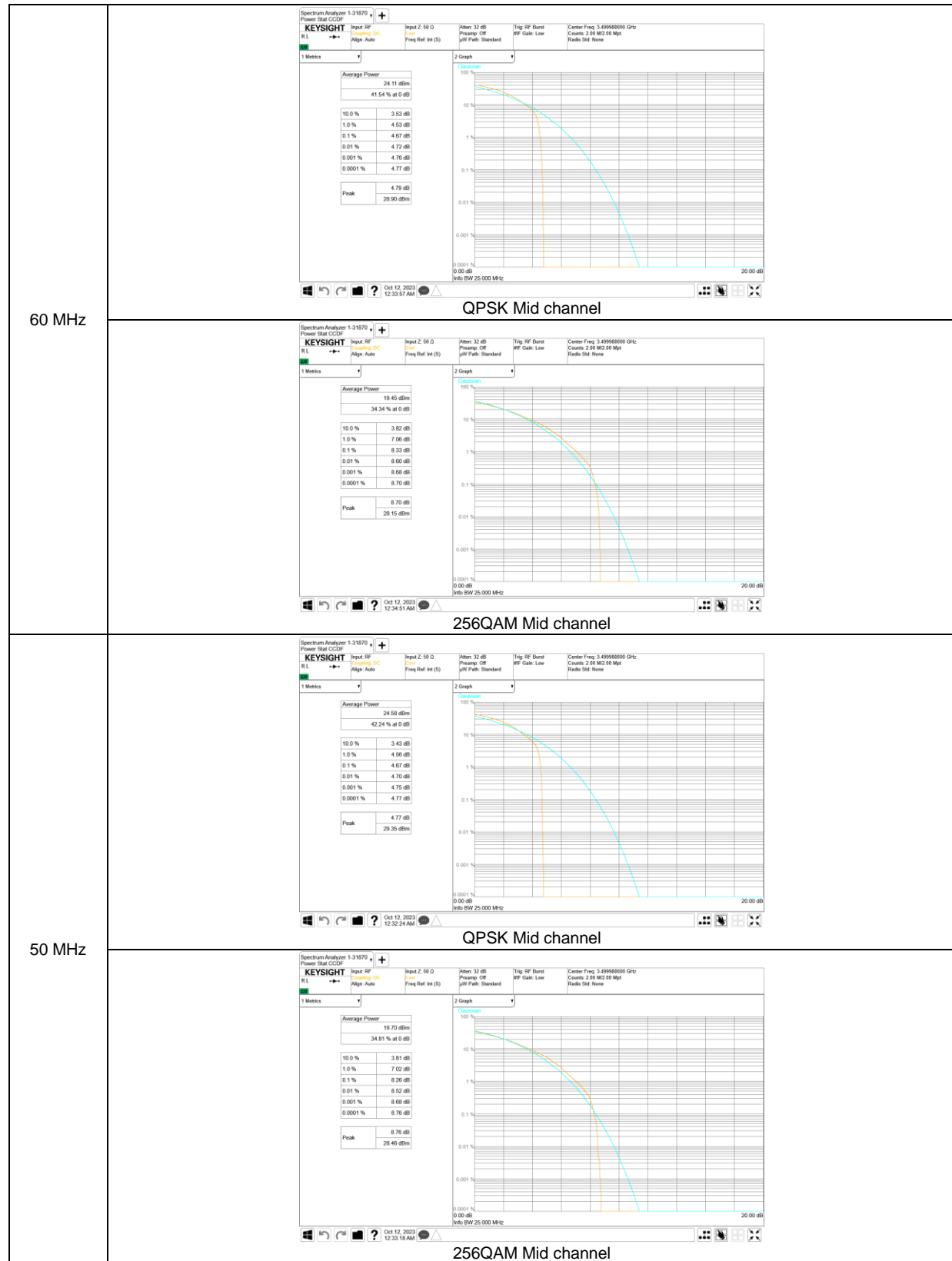


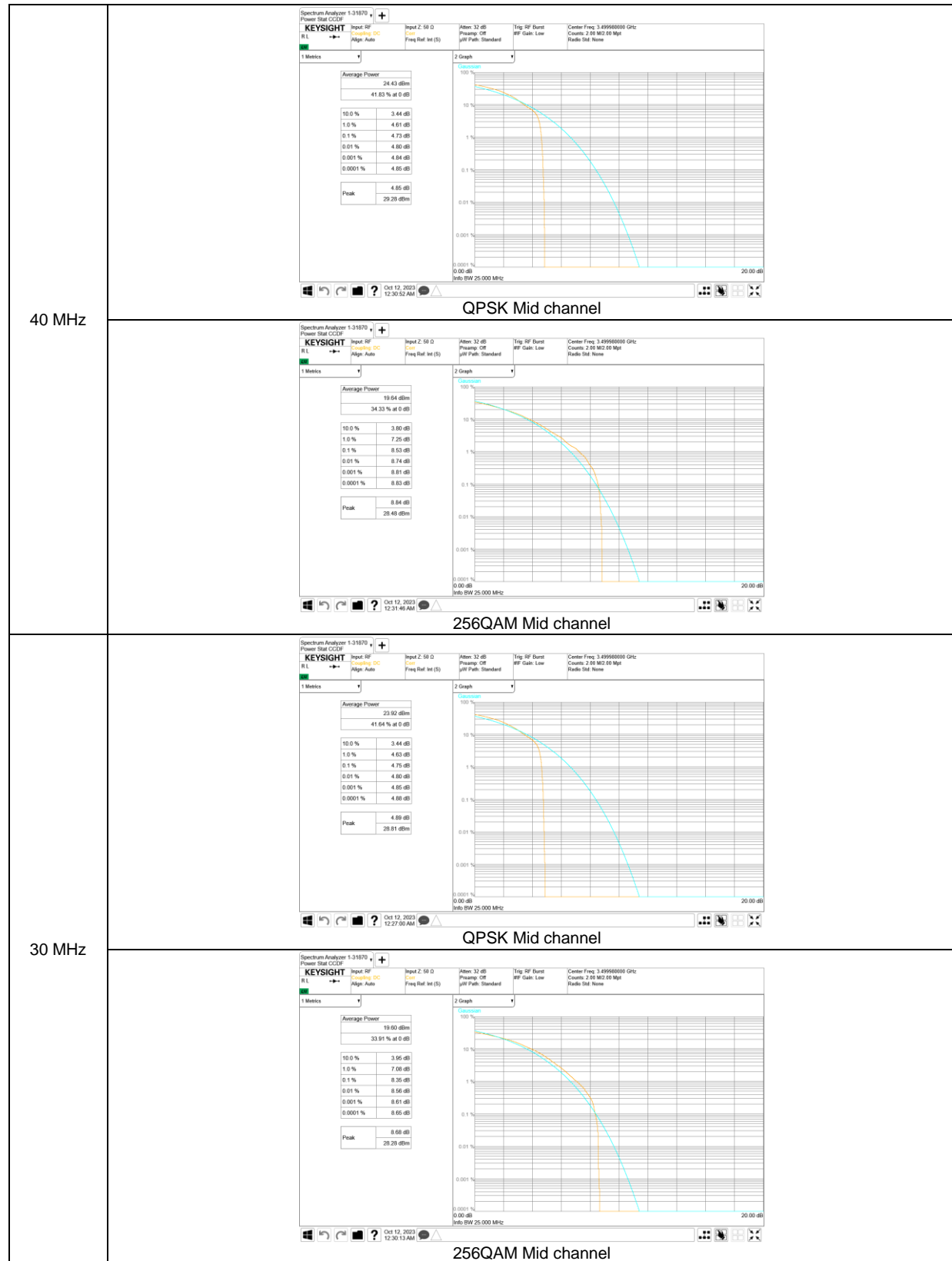


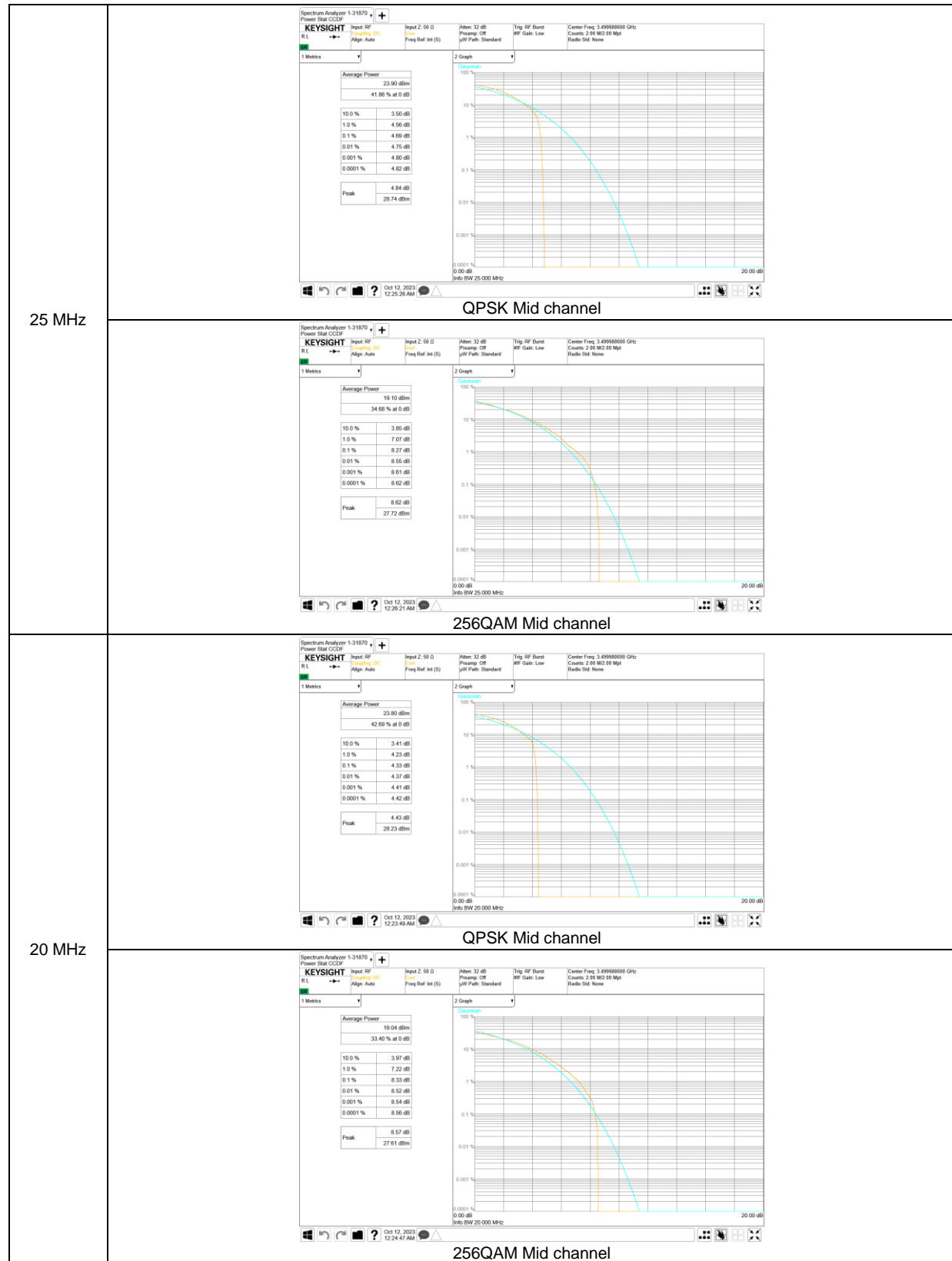
NR Band n77(PC2) CP-OFDM (3450-3550 MHz)

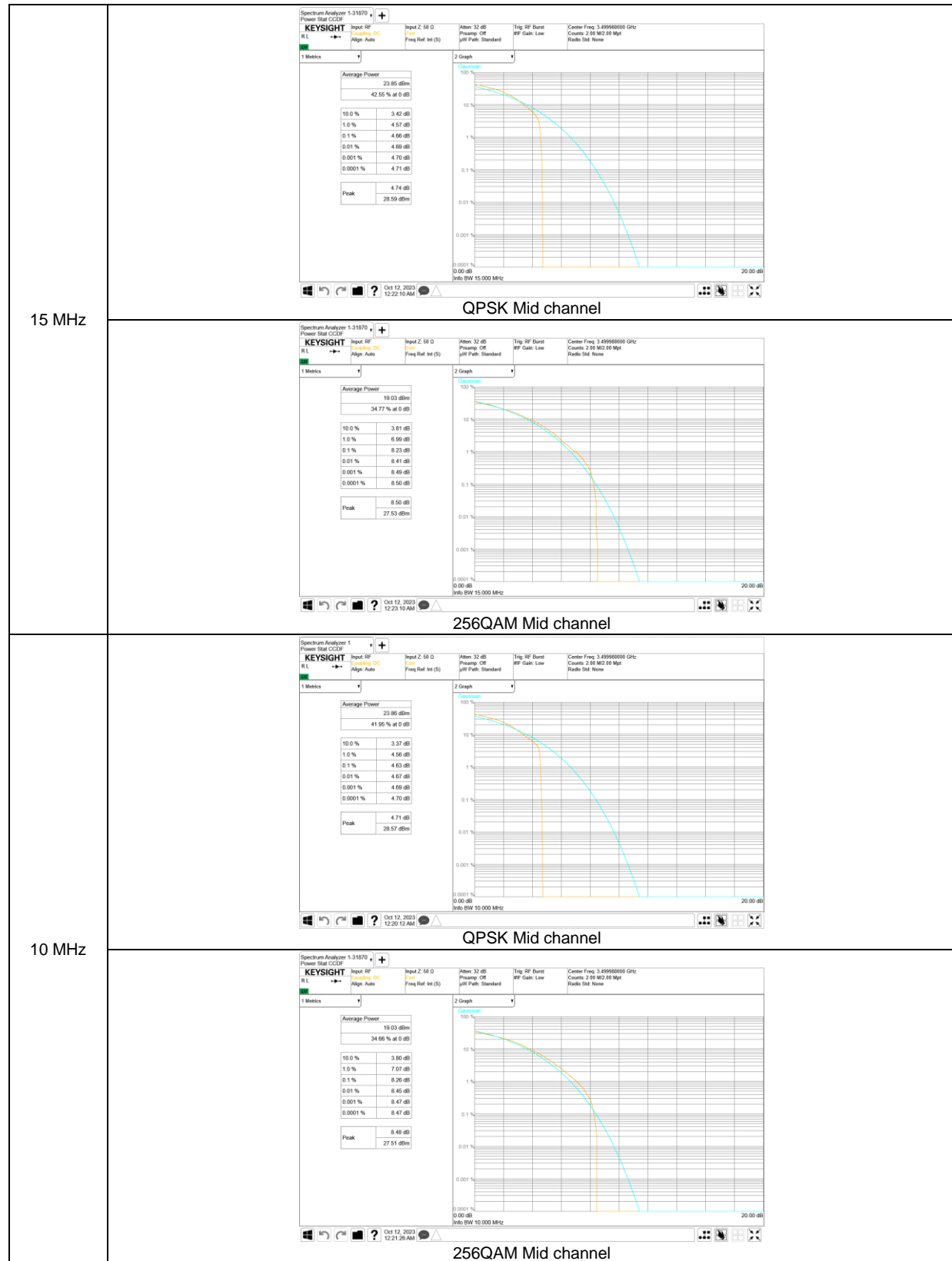




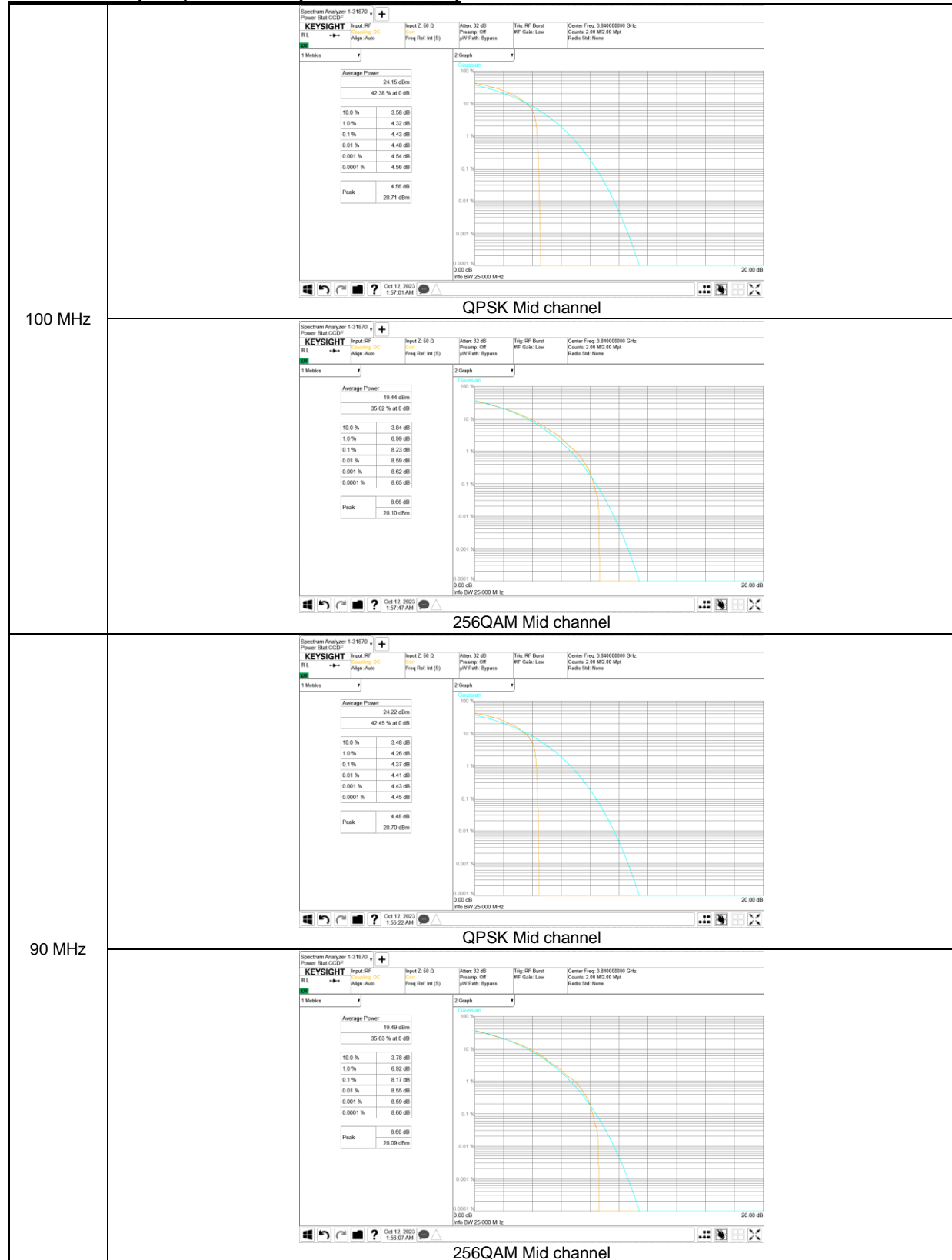


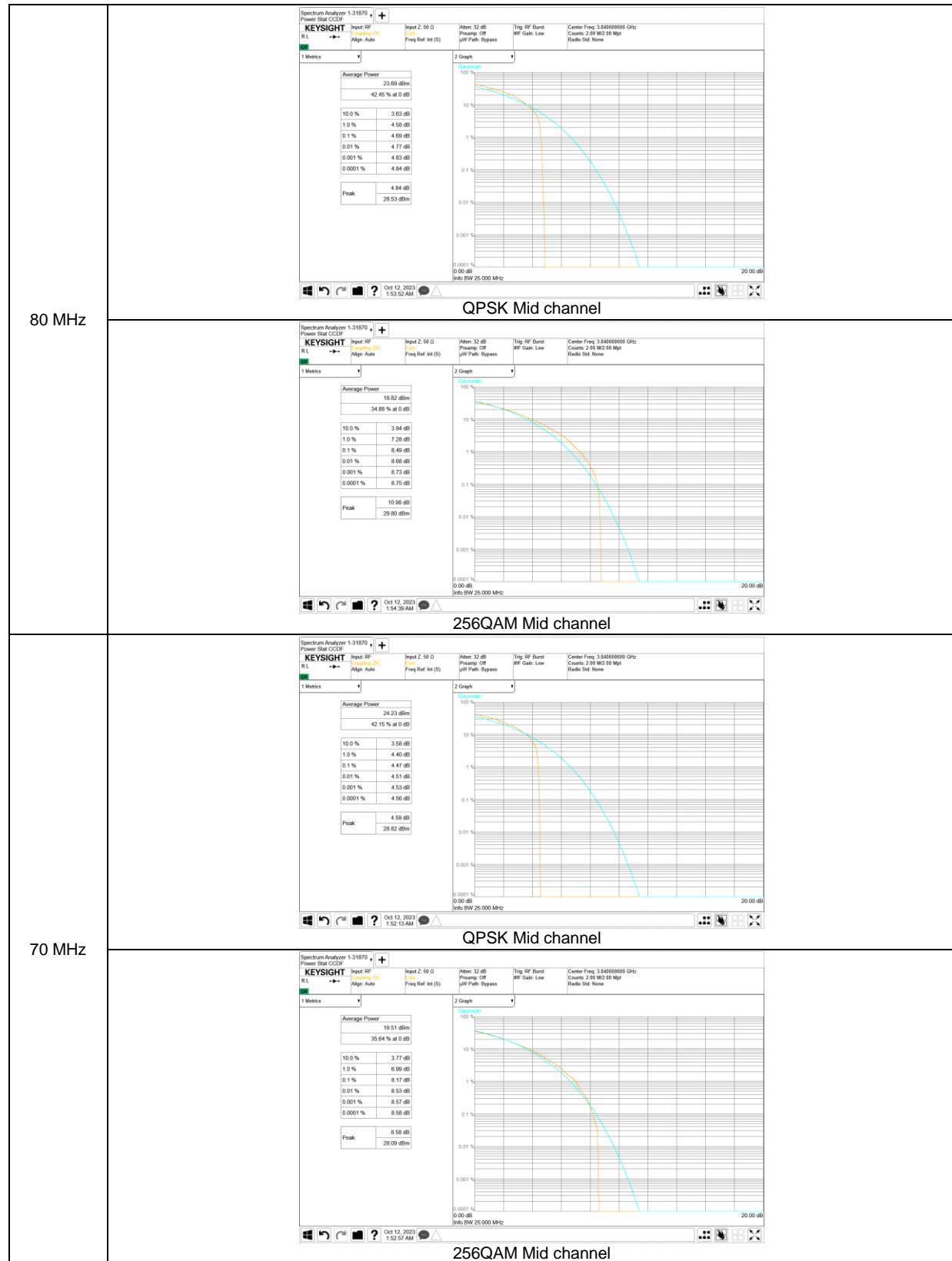


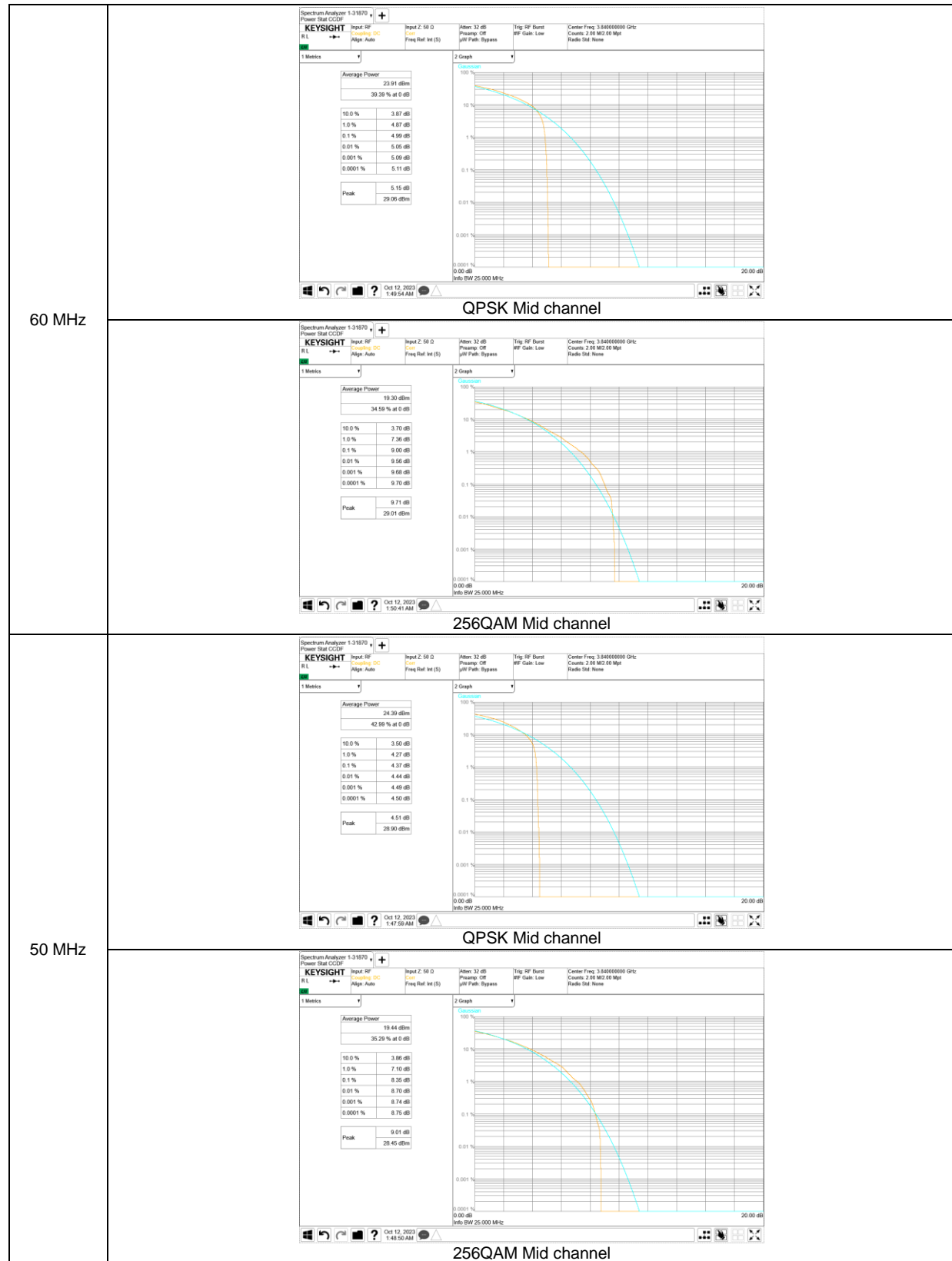


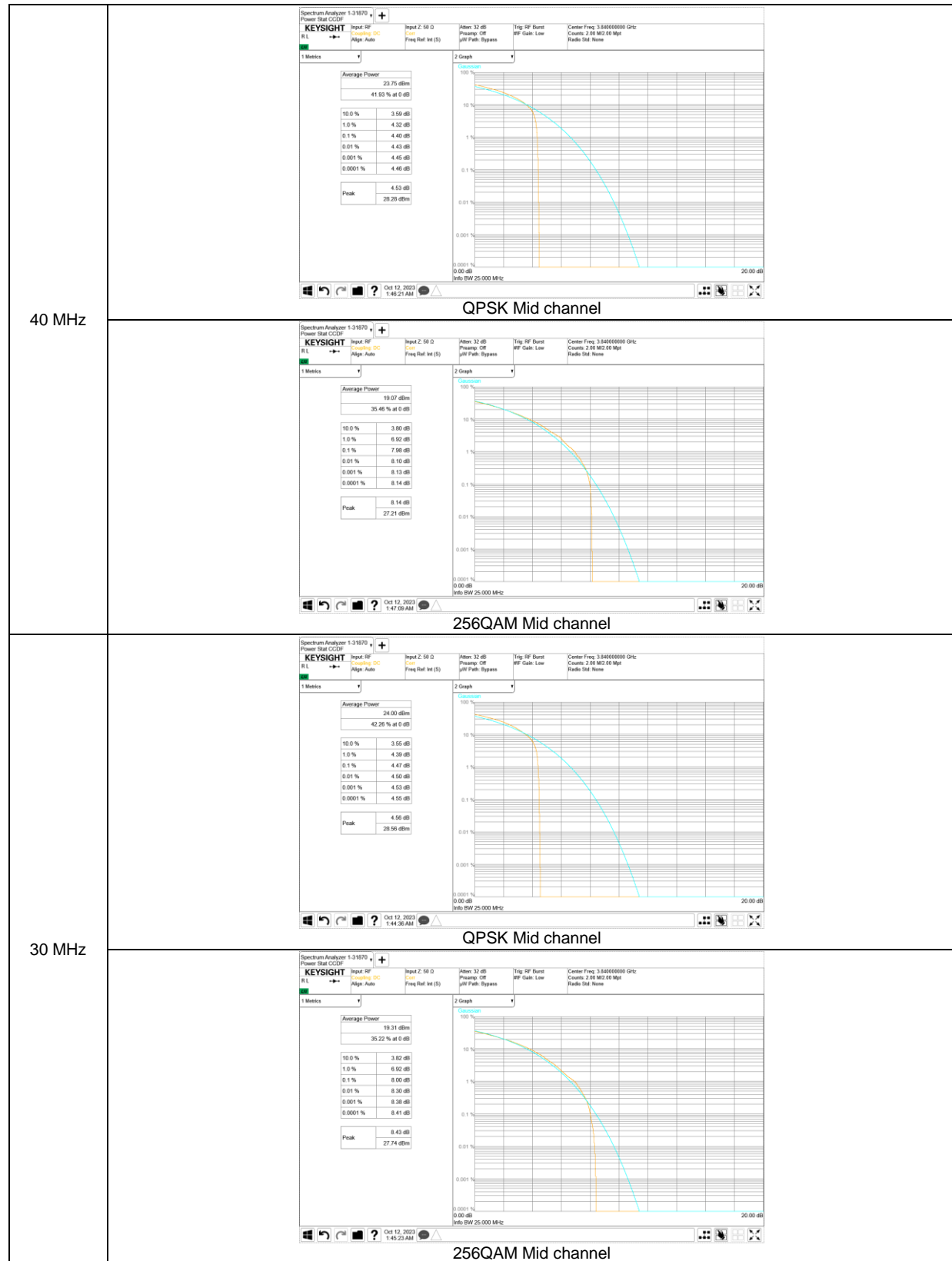


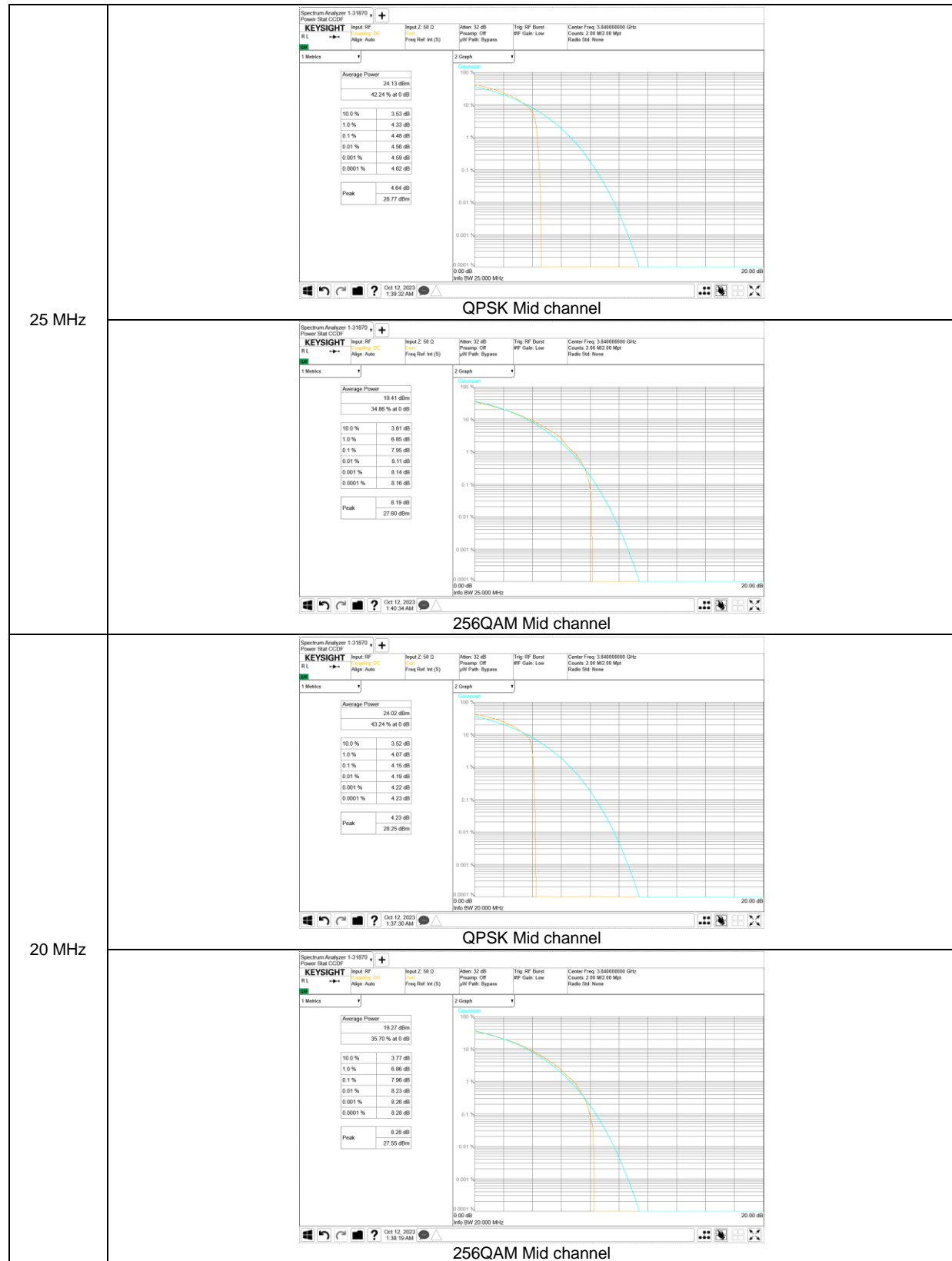
NR Band n77(PC2) CP-OFDM (3700–3980 MHz)

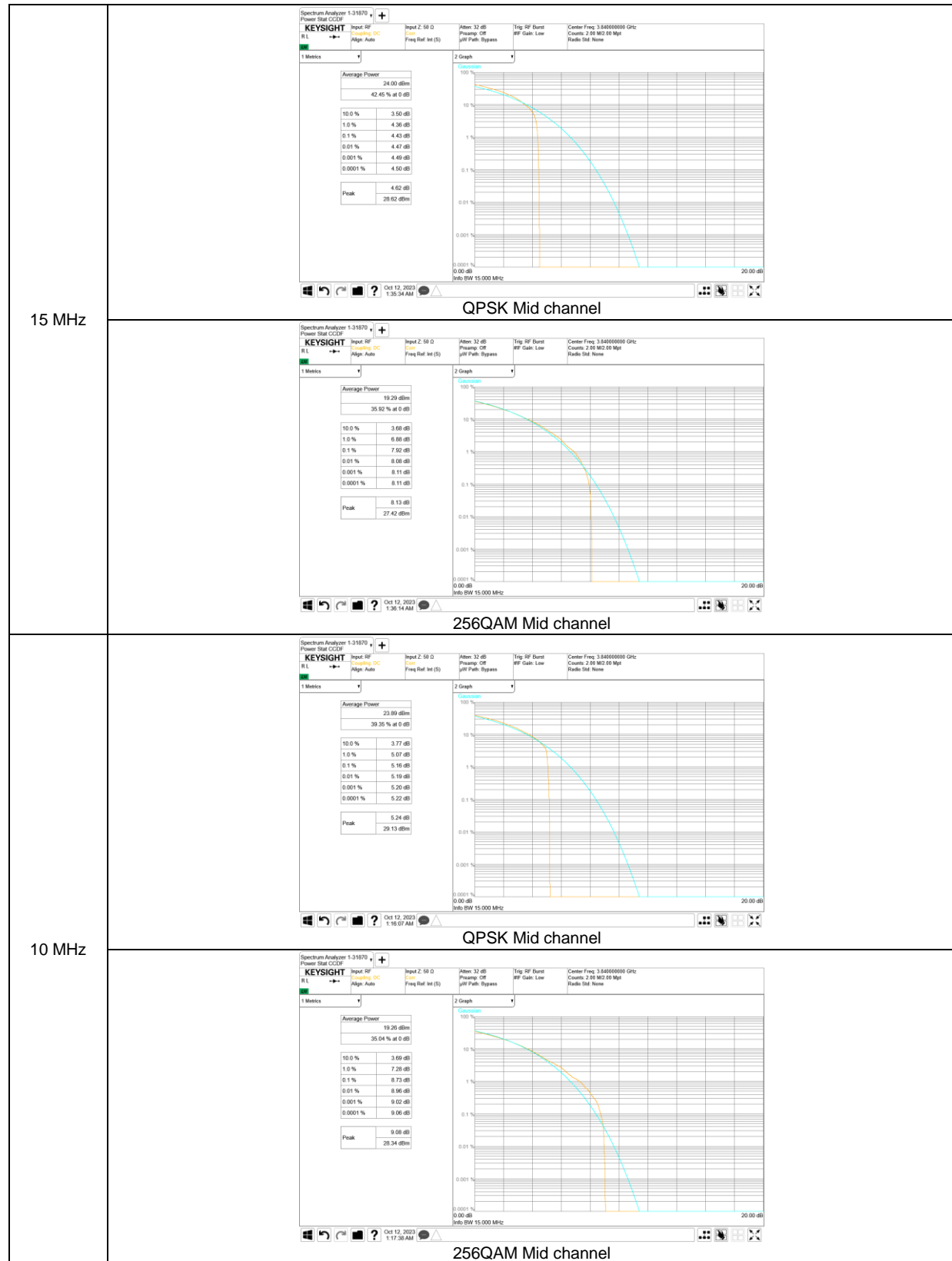












8.3. OCCUPIED BANDWIDTH

RULE PART(S)

FCC: §2.1049

LIMITS

For reporting purposes only

TEST PROCEDURE

The transmitter output was connected to a calibrated coaxial cable and coupler, the other end of which was connected to a spectrum analyzer. The occupied bandwidth was measured with the spectrum analyzer at middle channel in each band. The -26dB bandwidth was also measured and recorded.

(KDB 971168 D01 Power Meas License Digital Systems v03r01)

RESULTS

See the following pages.

- WCDMA

Band	Modulation	f [MHz]	99% BW (MHz)	-26dB BW (MHz)
B4	Rel.99	1732.6	4.150	4.697
	HSDPA		4.157	4.696

- LTE Band 7

Band	BW	Modulation	f [MHz]	99% BW (MHz)	-26dB BW (MHz)
LTE B7	20M	QPSK	2535.0	17.908	19.530
		16QAM		17.917	19.530
	15M	QPSK		13.468	14.730
		16QAM		13.468	14.830
	10M	QPSK		8.986	9.939
		16QAM		8.965	9.963
	5M	QPSK		4.498	5.122
		16QAM		4.504	5.085

- LTE Band 12

Band	BW	Modulation	f [MHz]	99% BW (MHz)	-26dB BW (MHz)
LTE B12	10M	QPSK	707.5	8.982	10.070
		16QAM		8.991	9.824
	5M	QPSK		4.494	5.033
		16QAM		4.495	5.111
	3M	QPSK		2.700	3.127
		16QAM		2.702	3.059
	1.4M	QPSK		1.094	1.352
		16QAM		1.093	1.411

- LTE Band 13

Band	BW	Modulation	f [MHz]	99% BW (MHz)	-26dB BW (MHz)
LTE B13	10M	QPSK	782.0	8.965	9.877
		16QAM		8.963	9.888
	5M	QPSK		4.497	5.044
		16QAM		4.497	4.998

- LTE Band 30

Band	BW	Modulation	f [MHz]	99% BW (MHz)	-26dB BW (MHz)
LTE B30	10M	QPSK	2310.0	8.995	9.937
		16QAM		8.967	9.943
	5M	QPSK		4.499	5.128
		16QAM		4.501	5.125

- LTE Band 41 (PC2)

Band	BW	Modulation	f [MHz]	99% BW (MHz)	-26dB BW (MHz)
LTE B41(PC2)	20M	QPSK	2593.0	17.916	19.850
		16QAM		17.919	20.960
	15M	QPSK		13.441	14.880
		16QAM		13.467	15.260
	10M	QPSK		8.990	10.450
		16QAM		8.966	10.360
	5M	QPSK		4.492	5.056
		16QAM		4.487	5.069

- LTE Band 41C (PC2, UL CA)

Band	BW	Modulation	f [MHz]	99% BW (MHz)	-26dB BW (MHz)
LTE B41C	20+20M	QPSK	2593.0	37.506	39.350
		16QAM		37.606	39.930
	15+20M	QPSK		32.650	35.410
		16QAM		32.577	34.000
	15+15M	QPSK		28.350	29.590
		16QAM		28.337	30.040
	5+20M	QPSK		22.882	23.970
		16QAM		22.844	23.870

- LTE Band 66

Band	BW	Modulation	f [MHz]	99% BW (MHz)	-26dB BW (MHz)
LTE B66	20M	QPSK	1745.0	17.886	19.380
		16QAM		17.928	19.420
	15M	QPSK		13.437	14.800
		16QAM		13.447	14.610
	10M	QPSK		8.973	9.930
		16QAM		8.961	9.849
	5M	QPSK		4.497	5.043
		16QAM		4.487	5.037
	3M	QPSK		2.702	3.069
		16QAM		2.696	3.039
	1.4M	QPSK		1.093	1.357
		16QAM		1.097	1.442

- LTE Band 66B (UL CA)

Band	BW	Modulation	f [MHz]	99% BW (MHz)	-26dB BW (MHz)
LTE B66B	10+10M	QPSK	1745.0	18.830	19.970
		16QAM		18.790	19.970
	5+10M	QPSK		13.916	14.730
		16QAM		13.926	14.830
	5+5M	QPSK		9.245	9.937
		16QAM		9.234	9.946

- LTE Band 66C (UL CA)

Band	BW	Modulation	f [MHz]	99% BW (MHz)	-26dB BW (MHz)
LTE B66C	20+20M	QPSK	1745.0	37.542	39.500
		16QAM		37.547	39.370
	15+20M	QPSK		32.621	34.640
		16QAM		32.618	34.480
	15+15M	QPSK		28.388	30.210
		16QAM		28.293	30.000
	5+20M	QPSK		22.890	24.200
		16QAM		22.878	24.010

- LTE Band 71

Band	BW	Modulation	f [MHz]	99% BW (MHz)	-26dB BW (MHz)
LTE B71	20M	QPSK	683.0	17.890	20.850
		16QAM		17.914	19.710
	15M	QPSK	680.5	13.415	14.730
		16QAM		13.460	14.680
	10M	QPSK	683.0	8.967	9.950
		16QAM		8.974	9.952
	5M	QPSK	680.5	4.497	5.092
		16QAM		4.493	5.098

- NR Band n7 CP-OFDM

Band	BW	Modulation	f [MHz]	99% BW (MHz)	-26dB BW (MHz)
NR n7	40M	QPSK	2535.0	38.642	40.140
		16QAM		38.596	40.260
	35M	QPSK		33.622	35.090
		16QAM		33.601	36.460
	30M	QPSK		28.585	29.900
		16QAM		28.621	29.970
	25M	QPSK		23.730	25.050
		16QAM		23.745	24.900
	20M	QPSK		18.960	20.500
		16QAM		18.938	19.940
	15M	QPSK		14.116	15.750
		16QAM		14.099	15.010
	10M	QPSK		9.298	11.140
		16QAM		9.285	10.250
	5M	QPSK		4.480	5.208
		16QAM		4.472	5.170

- NR Band n12 CP-OFDM

Band	BW	Modulation	f [MHz]	99% BW (MHz)	-26dB BW (MHz)
NR n12	15M	QPSK	707.5	14.100	15.150
		16QAM		14.149	15.120
	10M	QPSK		9.300	10.110
		16QAM		9.281	10.100
	5M	QPSK		4.502	5.268
		16QAM		4.491	5.163

- NR Band n30 CP-OFDM

Band	BW	Modulation	f [MHz]	99% BW (MHz)	-26dB BW (MHz)
NR n30	10M	QPSK	2310.0	9.310	10.250
		16QAM		9.295	10.040
	5M	QPSK		4.487	5.154
		16QAM		4.464	5.110

- NR Band n41(PC2) CP-OFDM

Band	BW	Modulation	f [MHz]	99% BW (MHz)	-26dB BW (MHz)
NR n41	100M	QPSK	2593.0	97.474	101.400
		16QAM		97.647	101.600
	90M	QPSK		87.395	91.320
		16QAM		87.605	91.430
	80M	QPSK		77.511	80.860
		16QAM		77.613	80.640
	70M	QPSK		67.559	70.170
		16QAM		67.521	70.090
	60M	QPSK		57.756	60.370
		16QAM		57.879	60.430
	50M	QPSK		47.502	49.850
		16QAM		47.526	49.990
	40M	QPSK		37.843	39.670
		16QAM		37.853	39.870
	30M	QPSK		27.959	29.330
		16QAM		27.961	29.710
	25M	QPSK		23.170	24.720
		16QAM		23.261	24.720
20M	QPSK	18.209	19.520		
	16QAM	18.267	19.870		
15M	QPSK	13.590	14.800		
	16QAM	13.596	14.660		
10M	QPSK	8.621	9.464		
	16QAM	8.627	10.280		

- NR Band n66 CP-OFDM

Band	BW	Modulation	f [MHz]	99% BW (MHz)	-26dB BW (MHz)
NR n66	40M	QPSK	1745.0	38.711	40.370
		16QAM		38.610	40.250
	35M	QPSK		33.637	34.940
		16QAM		33.643	35.060
	30M	QPSK		28.675	30.070
		16QAM		28.662	29.950
	25M	QPSK		23.806	24.990
		16QAM		23.800	24.920
	20M	QPSK		18.947	20.020
		16QAM		18.993	19.810
	15M	QPSK		14.128	15.020
		16QAM		14.144	15.020
	10M	QPSK		9.305	10.070
		16QAM		9.278	10.060
5M	QPSK	4.489	5.098		
	16QAM	4.475	5.183		

- NR Band n70 CP-DOFDM

Band	BW	Modulation	f [MHz]	99% BW (MHz)	-26dB BW (MHz)
NR n70	15M	QPSK	1702.5	14.128	15.070
		16QAM		14.095	14.960
	10M	QPSK		9.286	10.050
		16QAM		9.295	10.030
	5M	QPSK		4.502	5.136
		16QAM		4.490	5.131

- NR Band n71 CP-OFDM

Band	BW	Modulation	f [MHz]	99% BW (MHz)	-26dB BW (MHz)
NR n71	20M	QPSK	680.5	18.931	19.930
		16QAM		18.924	20.090
	15M	QPSK		14.110	15.060
		16QAM		14.105	15.040
	10M	QPSK		9.310	10.140
		16QAM		9.286	9.961
	5M	QPSK		4.478	5.137
		16QAM		4.498	5.076

- NR Band n77(PC2) CP-OFDM (3450 - 3550 MHz)

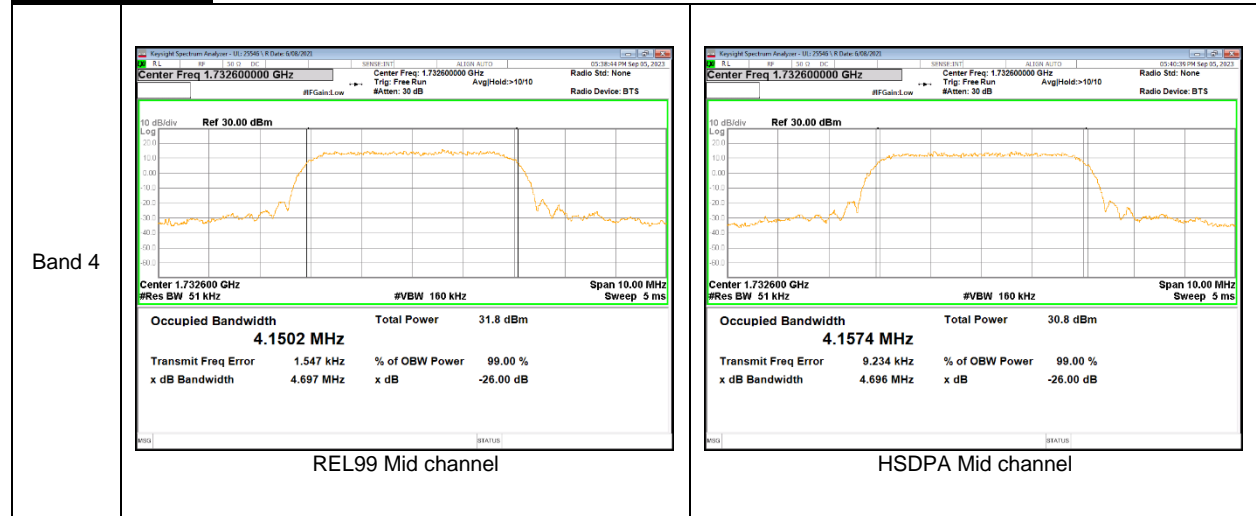
Band	BW	Modulation	f [MHz]	99% BW (MHz)	-26dB BW (MHz)
NR n77(PC2)	100M	QPSK	3500.0	97.553	102.100
		16QAM		97.674	101.600
	90M	QPSK		87.531	91.310
		16QAM		87.535	91.350
	80M	QPSK		77.390	81.250
		16QAM		77.605	80.680
	70M	QPSK		67.618	70.600
		16QAM		67.536	70.360
	60M	QPSK		57.775	61.600
		16QAM		57.843	60.770
	50M	QPSK		47.501	52.280
		16QAM		47.476	50.400
	40M	QPSK		37.936	40.050
		16QAM		37.946	40.210
	30M	QPSK		27.928	30.350
		16QAM		27.897	29.730
	25M	QPSK		23.261	25.990
		16QAM		23.275	24.850
	20M	QPSK		18.296	20.340
		16QAM		18.244	19.930
	15M	QPSK		13.625	14.720
		16QAM		13.600	15.150
	10M	QPSK		8.595	9.796
		16QAM		8.612	9.756

- NR Band n77(PC2) CP-OFDM (3700 - 3980 MHz)

Band	BW	Modulation	f [MHz]	99% BW (MHz)	-26dB BW (MHz)
NR n77(PC2)	100M	QPSK	3840.0	97.482	101.600
		16QAM		97.363	101.800
	90M	QPSK		87.440	91.080
		16QAM		87.636	90.930
	80M	QPSK		77.661	80.810
		16QAM		77.489	80.700
	70M	QPSK		67.475	70.450
		16QAM		67.506	70.380
	60M	QPSK		57.934	60.270
		16QAM		58.003	60.790
	50M	QPSK		47.824	49.780
		16QAM		47.460	49.890
	40M	QPSK		37.856	41.130
		16QAM		37.806	40.870
	30M	QPSK		27.876	31.980
		16QAM		27.923	29.660
	25M	QPSK		23.197	24.670
		16QAM		23.209	24.680
	20M	QPSK		18.250	19.600
		16QAM		18.258	19.780
15M	QPSK	13.597	15.320		
	16QAM	13.681	15.040		
10M	QPSK	8.576	9.552		
	16QAM	8.616	9.717		

8.3.1. OCCUPIED BANDWIDTH RESULTS

WCDMA Band 4



LTE Band 7



LTE Band 12



LTE Band 13



LTE Band 30



LTE Band 41(PC2)

