

**Appendix
for
n5A
(824-849)**

Catalogue

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1. Effective Radiated Power

1.1. Test Results @ Ant0 (Antenna Gain=-4.10dBi)

SCS	Bandwidth	Channel	Modulation	Conducted Result (dBm)			Max ERP (dBm)	Limit (dBm)	Verdict
				Inner_1RB_Left	Inner_1RB_Right	Inner_Full			
15KHz	5MHz	LCH	DFT-Pi2BPSK	23.76	23.69	23.64	17.51	38.45	Pass
15KHz	5MHz	LCH	DFT-QPSK	23.64	23.56	23.70	17.45	38.45	Pass
15KHz	5MHz	LCH	DFT-16QAM	22.60	22.67	22.76	16.51	38.45	Pass
15KHz	5MHz	LCH	DFT-64QAM	21.46	21.41	21.27	15.21	38.45	Pass
15KHz	5MHz	LCH	DFT-256QAM	18.66	18.57	19.09	12.84	38.45	Pass
15KHz	5MHz	LCH	CP-QPSK	22.20	22.18	22.18	15.95	38.45	Pass
15KHz	5MHz	MCH	DFT-Pi2BPSK	23.51	23.46	23.48	17.26	38.45	Pass
15KHz	5MHz	MCH	DFT-QPSK	23.51	23.43	23.48	17.26	38.45	Pass
15KHz	5MHz	MCH	DFT-16QAM	22.50	22.42	22.59	16.34	38.45	Pass
15KHz	5MHz	MCH	DFT-64QAM	21.28	21.24	21.15	15.03	38.45	Pass
15KHz	5MHz	MCH	DFT-256QAM	19.00	19.02	19.12	12.87	38.45	Pass
15KHz	5MHz	MCH	CP-QPSK	22.04	22.03	22.02	15.79	38.45	Pass
15KHz	5MHz	HCH	DFT-Pi2BPSK	23.47	23.42	23.40	17.22	38.45	Pass
15KHz	5MHz	HCH	DFT-QPSK	23.38	23.38	23.43	17.18	38.45	Pass
15KHz	5MHz	HCH	DFT-16QAM	22.41	22.32	22.54	16.29	38.45	Pass
15KHz	5MHz	HCH	DFT-64QAM	21.13	21.18	21.03	14.93	38.45	Pass
15KHz	5MHz	HCH	DFT-256QAM	18.54	18.53	18.97	12.72	38.45	Pass
15KHz	5MHz	HCH	CP-QPSK	22.01	21.96	21.94	15.76	38.45	Pass
15KHz	10MHz	LCH	DFT-Pi2BPSK	23.71	23.56	23.65	17.46	38.45	Pass
15KHz	10MHz	LCH	DFT-QPSK	23.58	23.47	23.70	17.45	38.45	Pass
15KHz	10MHz	LCH	DFT-16QAM	22.58	22.47	22.73	16.48	38.45	Pass
15KHz	10MHz	LCH	DFT-64QAM	21.41	21.27	21.17	15.16	38.45	Pass
15KHz	10MHz	LCH	DFT-256QAM	18.64	18.52	19.08	12.83	38.45	Pass
15KHz	10MHz	LCH	CP-QPSK	22.15	22.00	22.16	15.91	38.45	Pass
15KHz	10MHz	MCH	DFT-Pi2BPSK	23.55	23.39	23.55	17.30	38.45	Pass
15KHz	10MHz	MCH	DFT-QPSK	23.50	23.38	23.53	17.28	38.45	Pass
15KHz	10MHz	MCH	DFT-16QAM	22.51	22.34	22.58	16.33	38.45	Pass
15KHz	10MHz	MCH	DFT-64QAM	21.23	21.22	21.04	14.98	38.45	Pass
15KHz	10MHz	MCH	DFT-256QAM	18.51	18.53	19.04	12.79	38.45	Pass
15KHz	10MHz	MCH	CP-QPSK	22.03	21.95	21.95	15.78	38.45	Pass
15KHz	10MHz	HCH	DFT-Pi2BPSK	23.41	23.38	23.51	17.26	38.45	Pass
15KHz	10MHz	HCH	DFT-QPSK	23.38	23.27	23.47	17.22	38.45	Pass
15KHz	10MHz	HCH	DFT-16QAM	22.34	22.29	22.53	16.28	38.45	Pass
15KHz	10MHz	HCH	DFT-64QAM	21.20	21.12	21.04	14.95	38.45	Pass
15KHz	10MHz	HCH	DFT-256QAM	18.52	18.54	19.00	12.75	38.45	Pass
15KHz	10MHz	HCH	CP-QPSK	21.97	21.86	21.96	15.72	38.45	Pass
15KHz	15MHz	LCH	DFT-Pi2BPSK	23.56	23.34	23.54	17.31	38.45	Pass
15KHz	15MHz	LCH	DFT-QPSK	23.53	23.33	23.59	17.34	38.45	Pass
15KHz	15MHz	LCH	DFT-16QAM	22.50	22.37	22.58	16.33	38.45	Pass
15KHz	15MHz	LCH	DFT-64QAM	21.23	21.08	21.07	14.98	38.45	Pass
15KHz	15MHz	LCH	DFT-256QAM	18.66	18.54	19.04	12.79	38.45	Pass
15KHz	15MHz	LCH	CP-QPSK	22.10	21.90	21.96	15.85	38.45	Pass
15KHz	15MHz	MCH	DFT-Pi2BPSK	23.47	23.29	23.43	17.22	38.45	Pass
15KHz	15MHz	MCH	DFT-QPSK	23.39	23.23	23.46	17.21	38.45	Pass
15KHz	15MHz	MCH	DFT-16QAM	22.44	22.32	22.46	16.21	38.45	Pass
15KHz	15MHz	MCH	DFT-64QAM	21.12	21.04	21.03	14.87	38.45	Pass
15KHz	15MHz	MCH	DFT-256QAM	18.59	18.52	18.98	12.73	38.45	Pass
15KHz	15MHz	MCH	CP-QPSK	21.97	21.85	21.97	15.72	38.45	Pass
15KHz	15MHz	HCH	DFT-Pi2BPSK	23.40	23.30	23.42	17.17	38.45	Pass
15KHz	15MHz	HCH	DFT-QPSK	23.30	23.14	23.39	17.14	38.45	Pass
15KHz	15MHz	HCH	DFT-16QAM	22.30	22.32	22.49	16.24	38.45	Pass
15KHz	15MHz	HCH	DFT-64QAM	21.12	21.04	20.99	14.87	38.45	Pass
15KHz	15MHz	HCH	DFT-256QAM	18.55	18.57	18.89	12.64	38.45	Pass
15KHz	15MHz	HCH	CP-QPSK	21.96	21.91	21.95	15.71	38.45	Pass
15KHz	20MHz	LCH	DFT-Pi2BPSK	23.61	23.38	23.53	17.36	38.45	Pass
15KHz	20MHz	LCH	DFT-QPSK	23.47	23.32	23.52	17.27	38.45	Pass
15KHz	20MHz	LCH	DFT-16QAM	22.48	22.30	22.51	16.26	38.45	Pass
15KHz	20MHz	LCH	DFT-64QAM	21.21	21.02	21.10	14.96	38.45	Pass

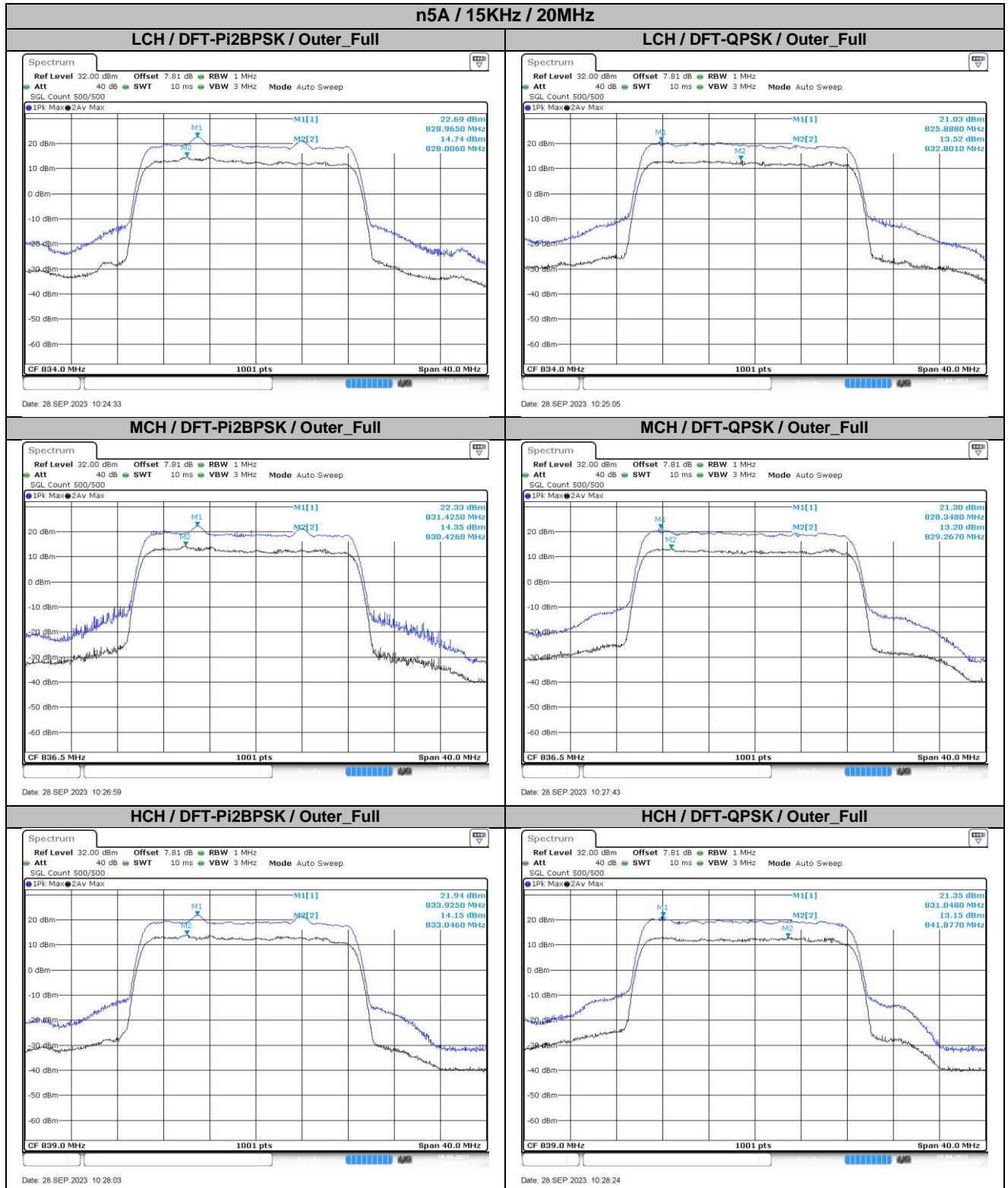
15KHz	20MHz	LCH	DFT-256QAM	18.65	18.54	19.05	12.80	38.45	Pass
15KHz	20MHz	LCH	CP-QPSK	22.07	21.82	21.99	15.82	38.45	Pass
15KHz	20MHz	MCH	DFT-Pi2BPSK	23.47	23.32	23.45	17.22	38.45	Pass
15KHz	20MHz	MCH	DFT-QPSK	23.42	23.29	23.45	17.20	38.45	Pass
15KHz	20MHz	MCH	DFT-16QAM	22.46	22.26	22.51	16.26	38.45	Pass
15KHz	20MHz	MCH	DFT-64QAM	21.19	21.00	21.04	14.94	38.45	Pass
15KHz	20MHz	MCH	DFT-256QAM	18.60	18.51	18.95	12.70	38.45	Pass
15KHz	20MHz	MCH	CP-QPSK	21.98	21.82	21.94	15.73	38.45	Pass
15KHz	20MHz	HCH	DFT-Pi2BPSK	23.41	23.29	23.49	17.24	38.45	Pass
15KHz	20MHz	HCH	DFT-QPSK	23.39	23.22	23.48	17.23	38.45	Pass
15KHz	20MHz	HCH	DFT-16QAM	22.37	22.22	22.48	16.23	38.45	Pass
15KHz	20MHz	HCH	DFT-64QAM	21.15	21.02	21.00	14.90	38.45	Pass
15KHz	20MHz	HCH	DFT-256QAM	18.59	18.58	18.95	12.70	38.45	Pass
15KHz	20MHz	HCH	CP-QPSK	22.00	21.84	21.93	15.75	38.45	Pass

2. Peak-to-Average Ratio

2.1. Test Results

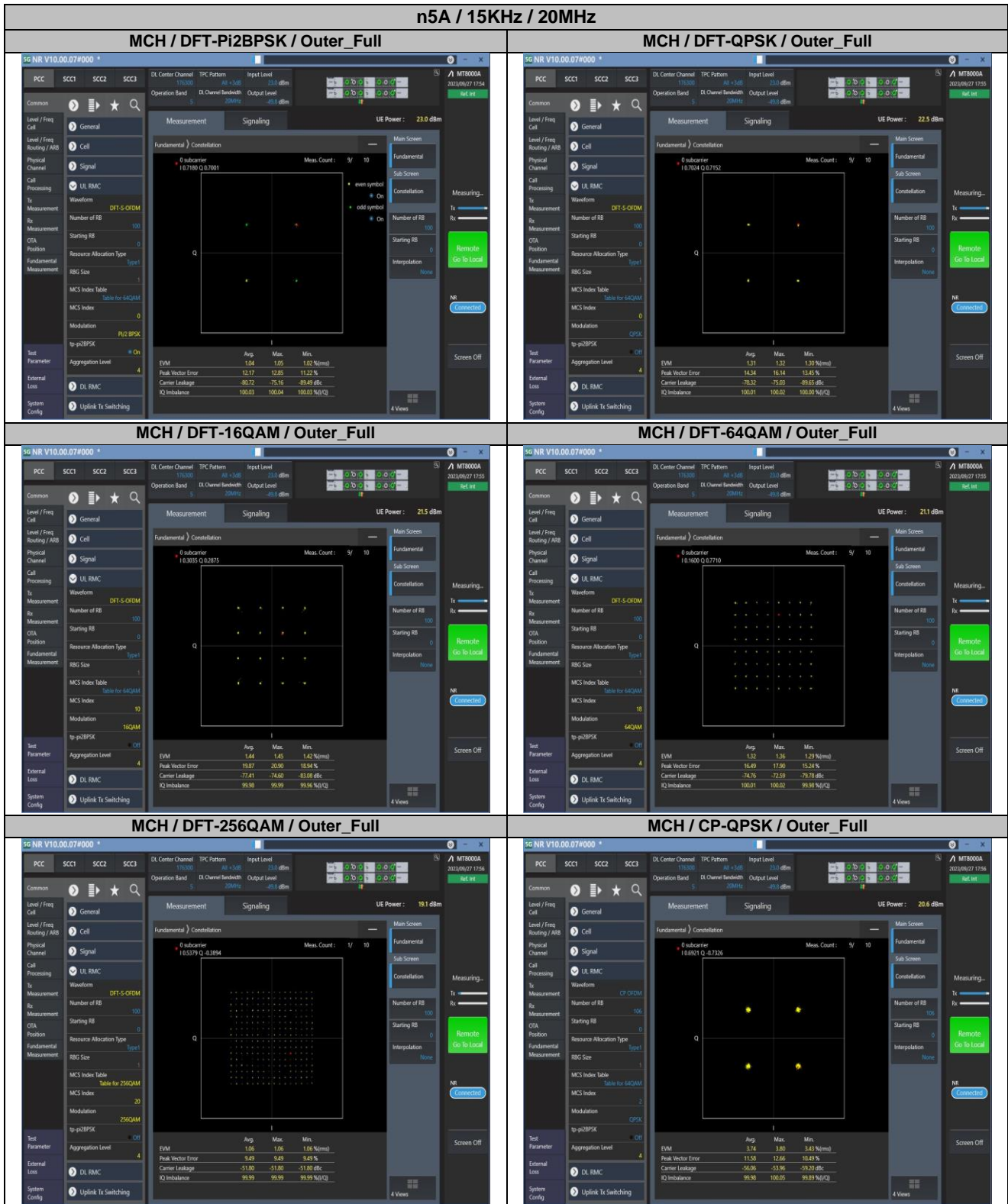
SCS	Bandwidth	Channel	Modulation	Result (dB)		Limit (dB)	Verdict
				DFT-Pi2BPSK	DFT-QPSK		
15KHz	20MHz	LCH	Outer_Full	7.96	7.50	13.00	Pass
15KHz	20MHz	MCH	Outer_Full	7.99	8.10	13.00	Pass
15KHz	20MHz	HCH	Outer_Full	7.78	8.21	13.00	Pass

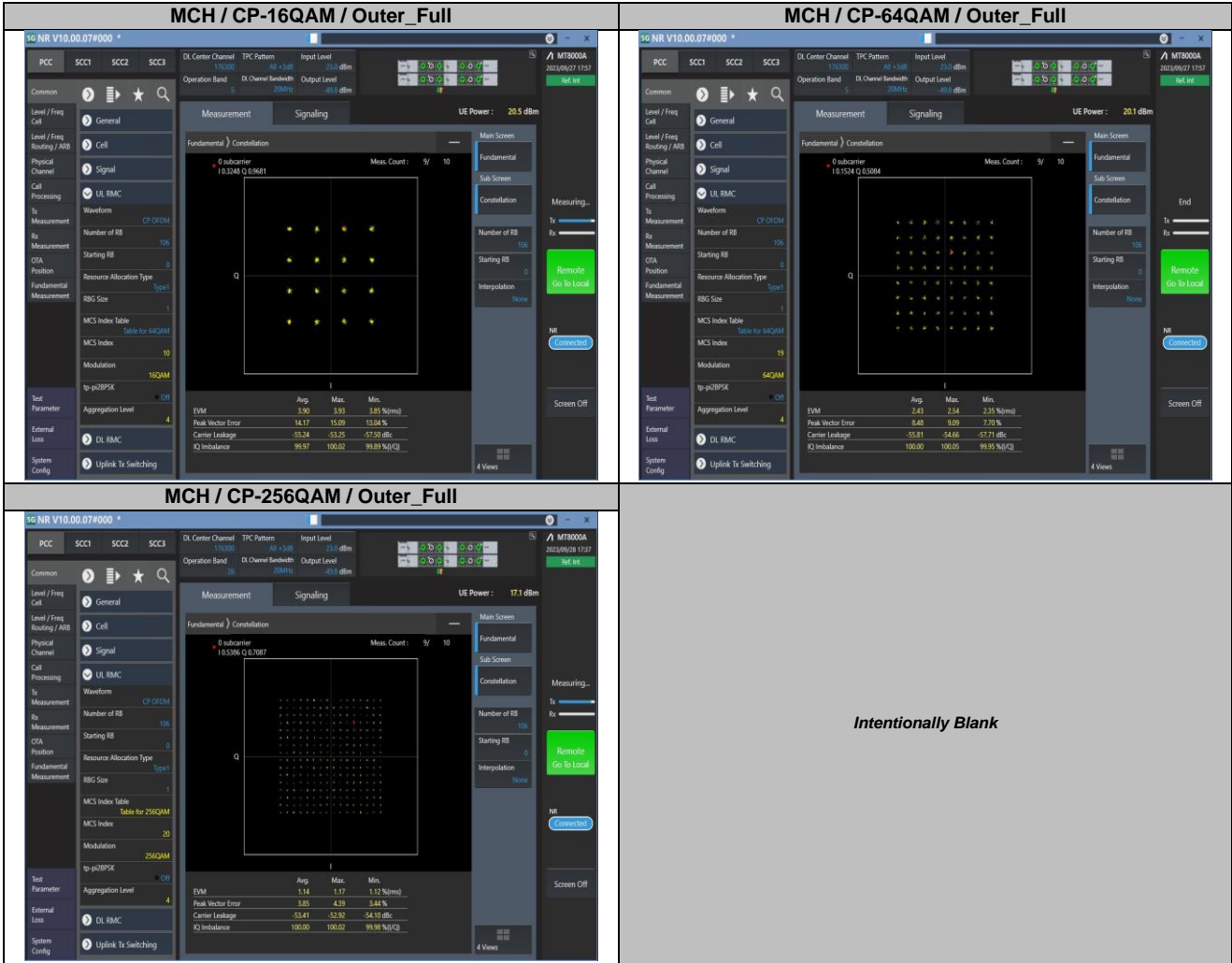
2.2. Test Plots



3. Modulation Characteristics

3.1. Test Plots



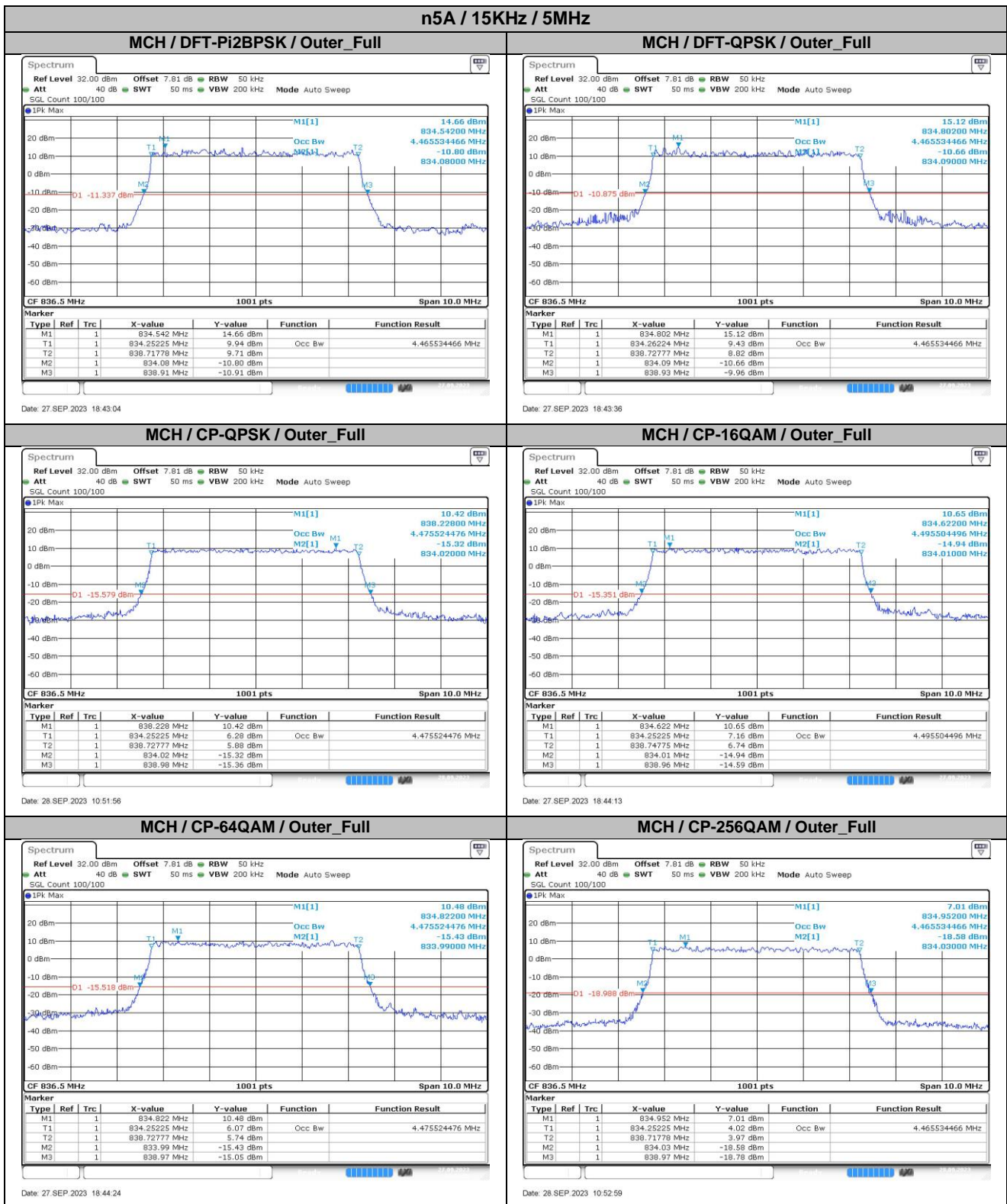


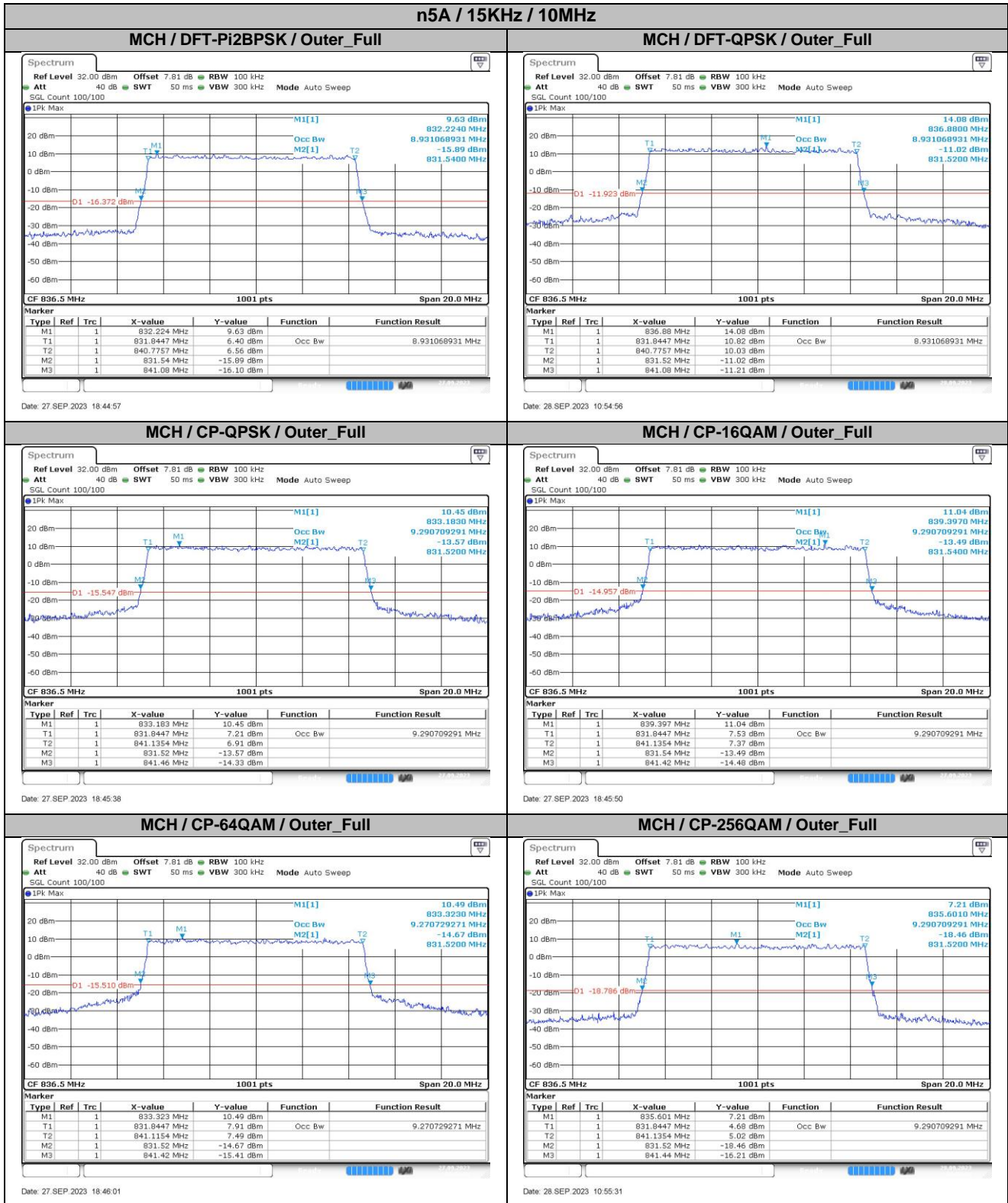
4. 99% Occupied Bandwidth & 26dB Emission Bandwidth

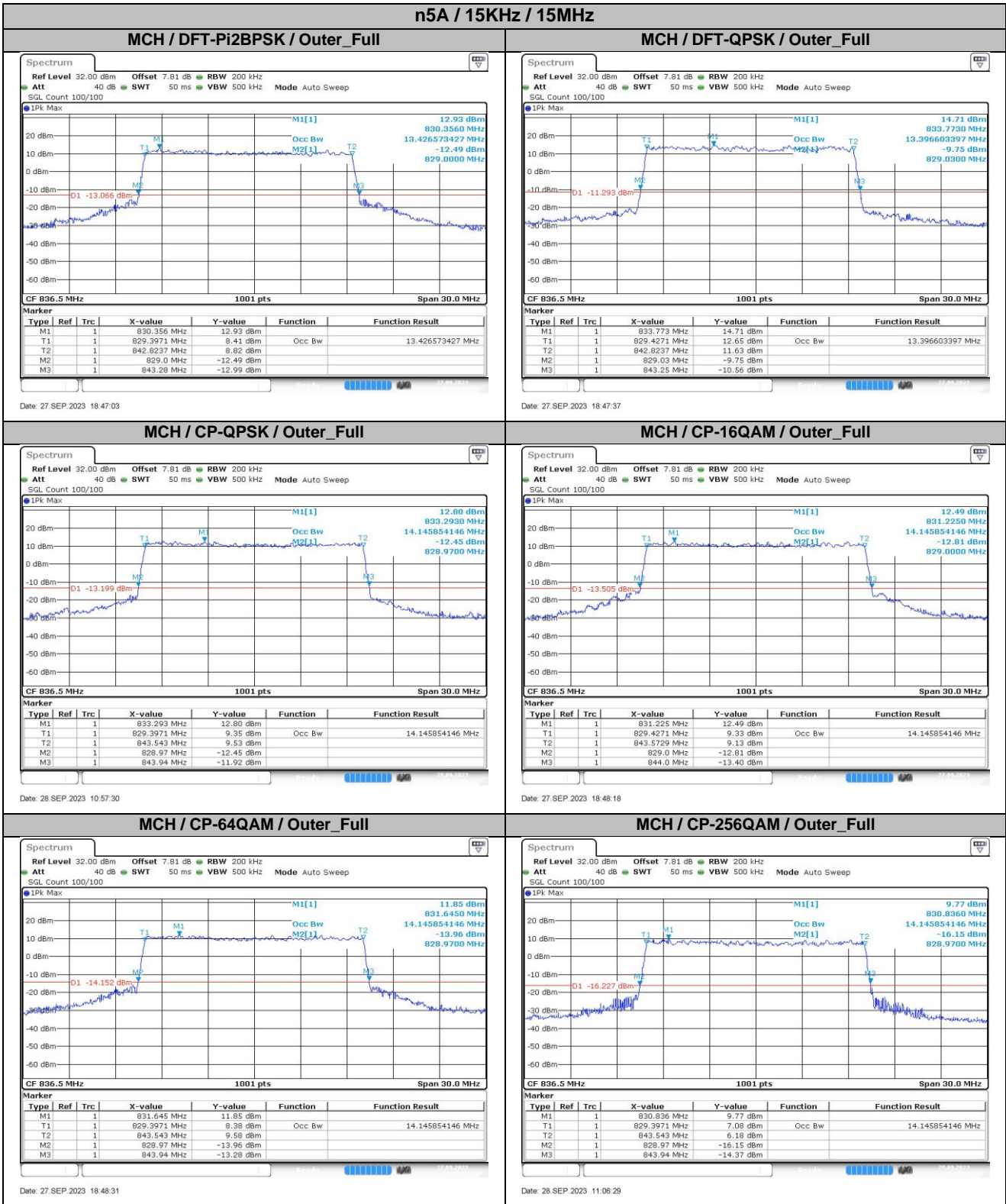
4.1. Test Results

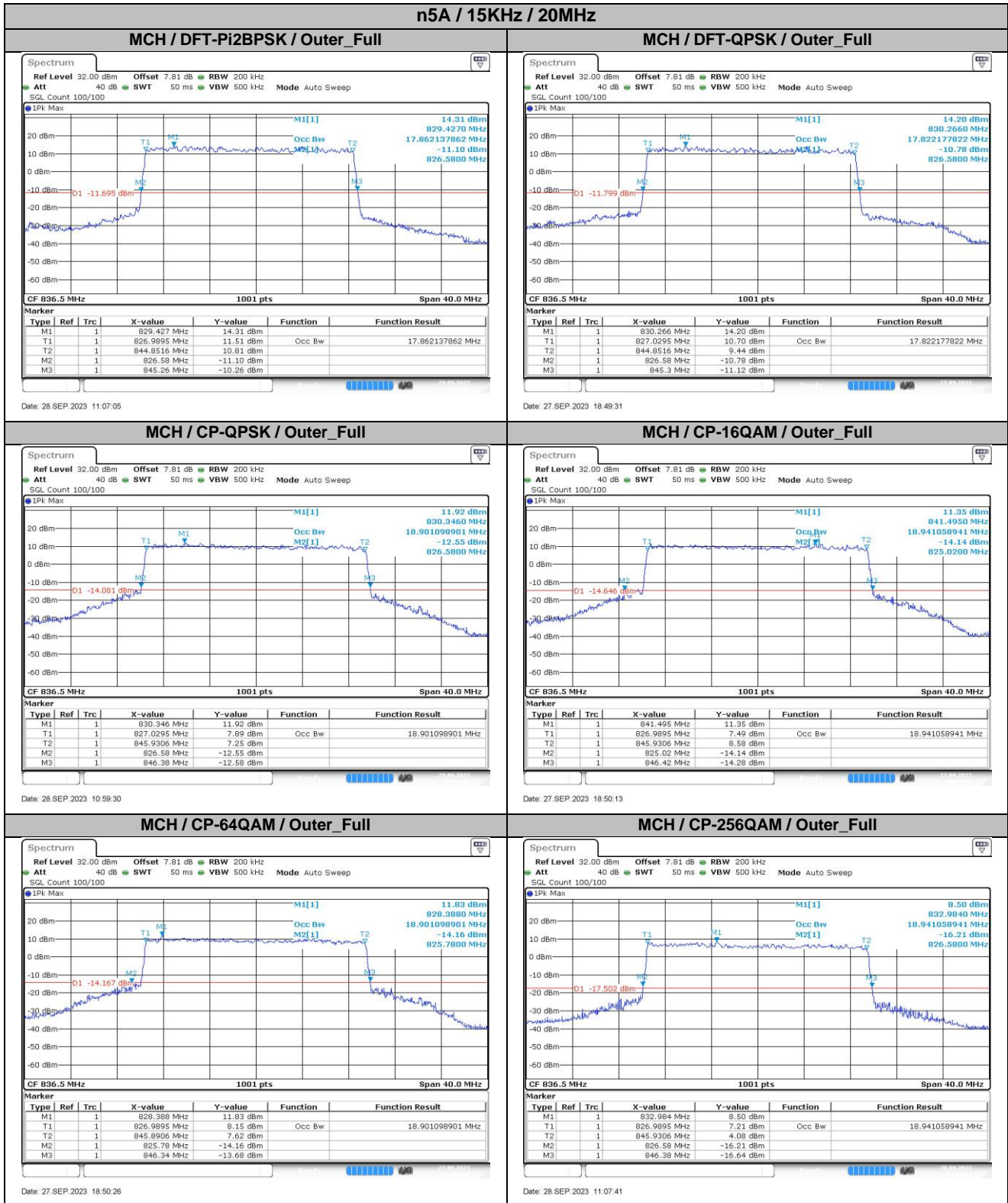
SCS	Bandwidth	Modulation	RB Config	99% Occupied Bandwidth (MHz)	26dB Emission Bandwidth (MHz)	Verdict
15KHz	5MHz	DFT-Pi2BPSK	Outer_Full	4.47	4.83	Pass
15KHz	5MHz	DFT-QPSK	Outer_Full	4.47	4.84	Pass
15KHz	5MHz	CP-QPSK	Outer_Full	4.48	4.96	Pass
15KHz	5MHz	CP-16QAM	Outer_Full	4.50	4.95	Pass
15KHz	5MHz	CP-64QAM	Outer_Full	4.48	4.98	Pass
15KHz	5MHz	CP-256QAM	Outer_Full	4.47	4.94	Pass
15KHz	10MHz	DFT-Pi2BPSK	Outer_Full	8.93	9.54	Pass
15KHz	10MHz	DFT-QPSK	Outer_Full	8.93	9.56	Pass
15KHz	10MHz	CP-QPSK	Outer_Full	9.29	9.94	Pass
15KHz	10MHz	CP-16QAM	Outer_Full	9.29	9.88	Pass
15KHz	10MHz	CP-64QAM	Outer_Full	9.27	9.90	Pass
15KHz	10MHz	CP-256QAM	Outer_Full	9.29	9.92	Pass
15KHz	15MHz	DFT-Pi2BPSK	Outer_Full	13.43	14.28	Pass
15KHz	15MHz	DFT-QPSK	Outer_Full	13.40	14.22	Pass
15KHz	15MHz	CP-QPSK	Outer_Full	14.15	14.97	Pass
15KHz	15MHz	CP-16QAM	Outer_Full	14.15	15.00	Pass
15KHz	15MHz	CP-64QAM	Outer_Full	14.15	14.97	Pass
15KHz	15MHz	CP-256QAM	Outer_Full	14.15	14.97	Pass
15KHz	20MHz	DFT-Pi2BPSK	Outer_Full	17.86	18.68	Pass
15KHz	20MHz	DFT-QPSK	Outer_Full	17.82	18.72	Pass
15KHz	20MHz	CP-QPSK	Outer_Full	18.90	19.80	Pass
15KHz	20MHz	CP-16QAM	Outer_Full	18.94	21.40	Pass
15KHz	20MHz	CP-64QAM	Outer_Full	18.90	20.56	Pass
15KHz	20MHz	CP-256QAM	Outer_Full	18.94	19.80	Pass

4.2. Test Plots



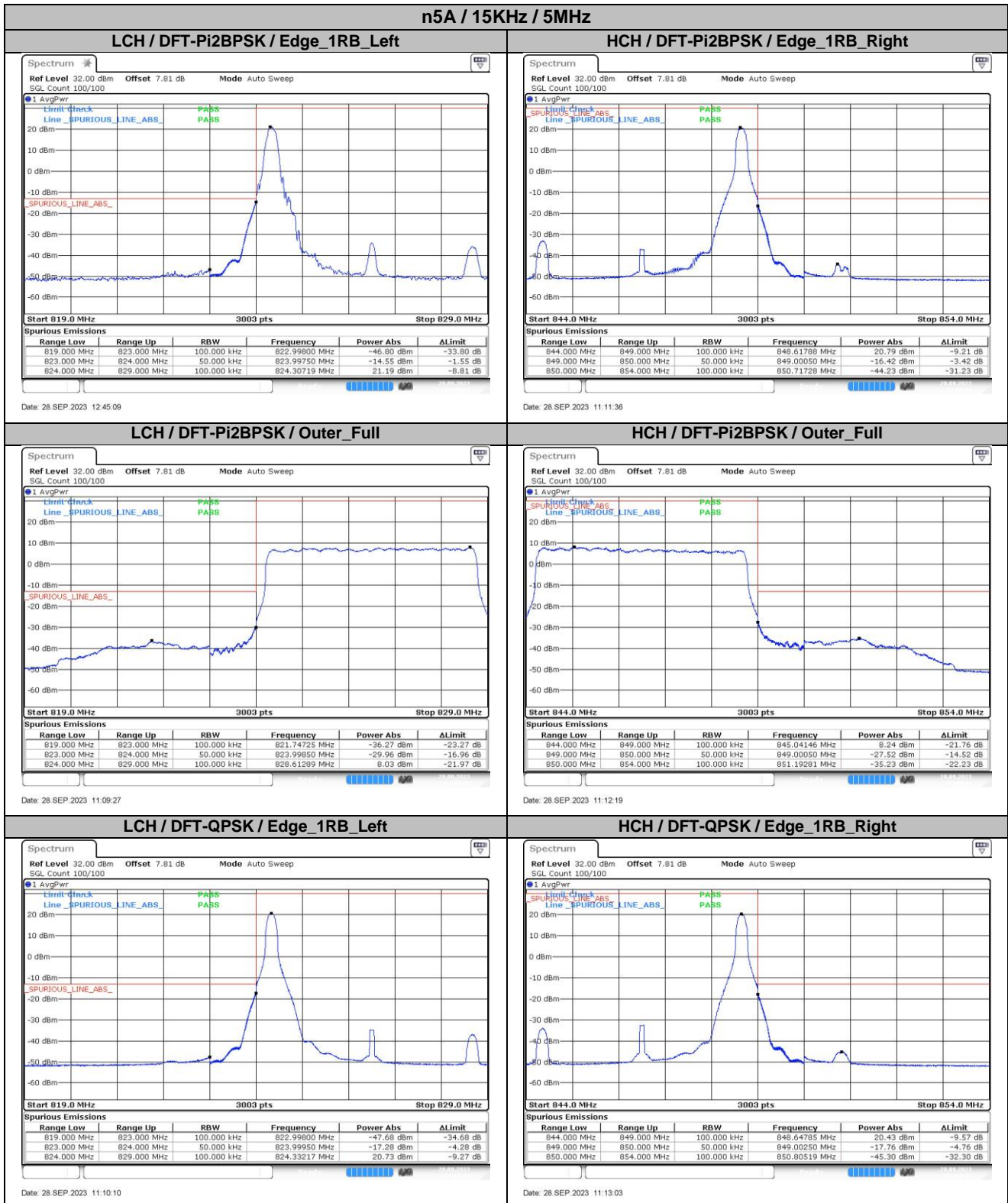


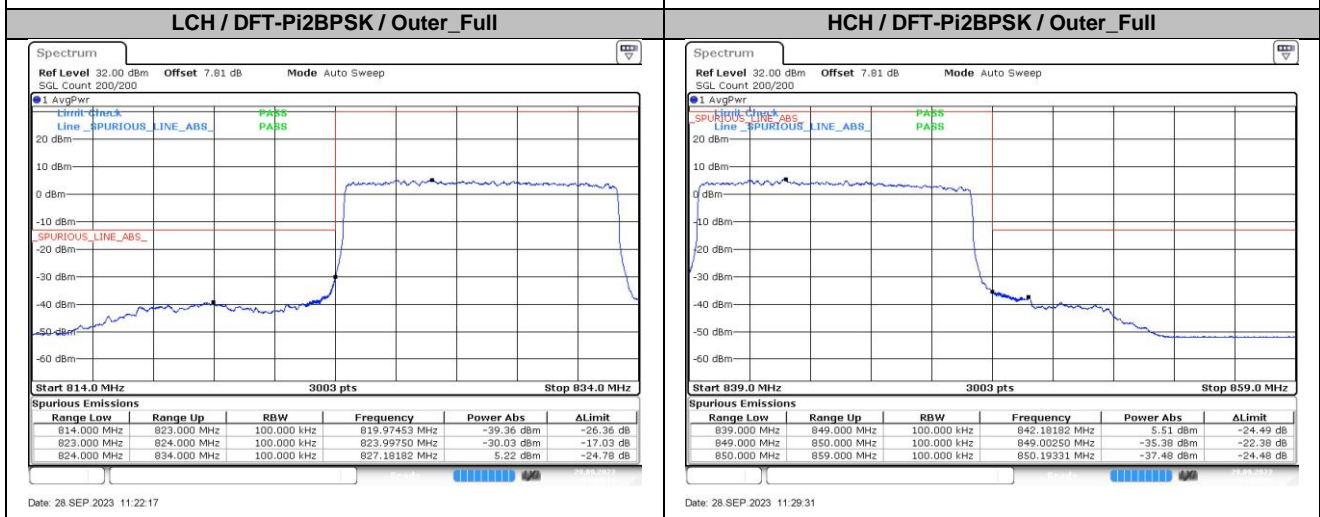
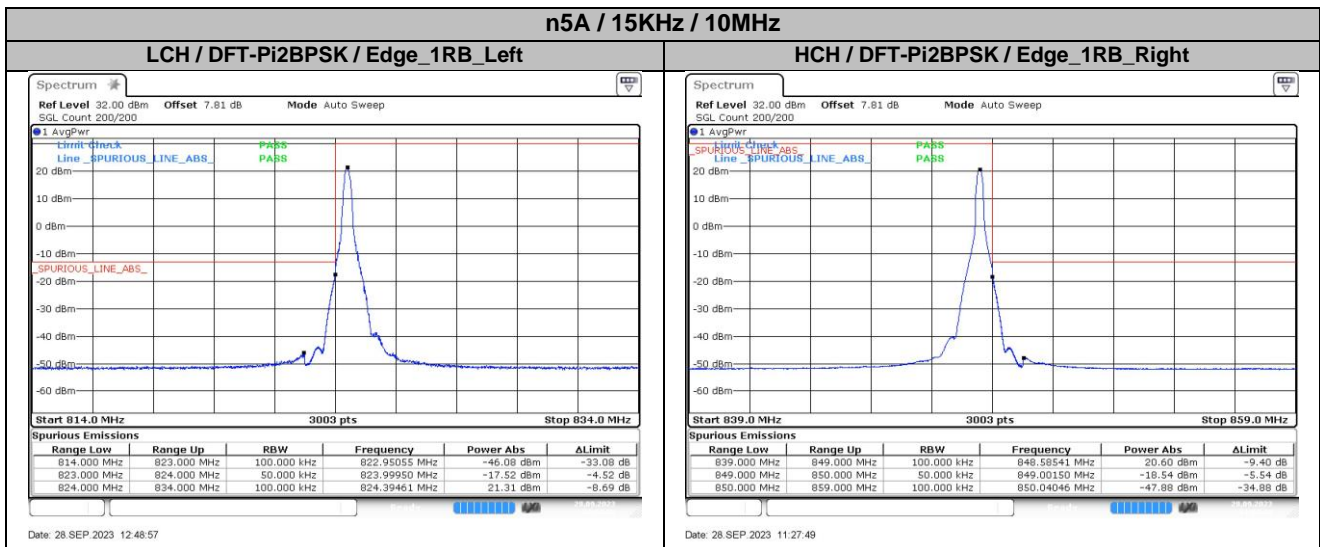
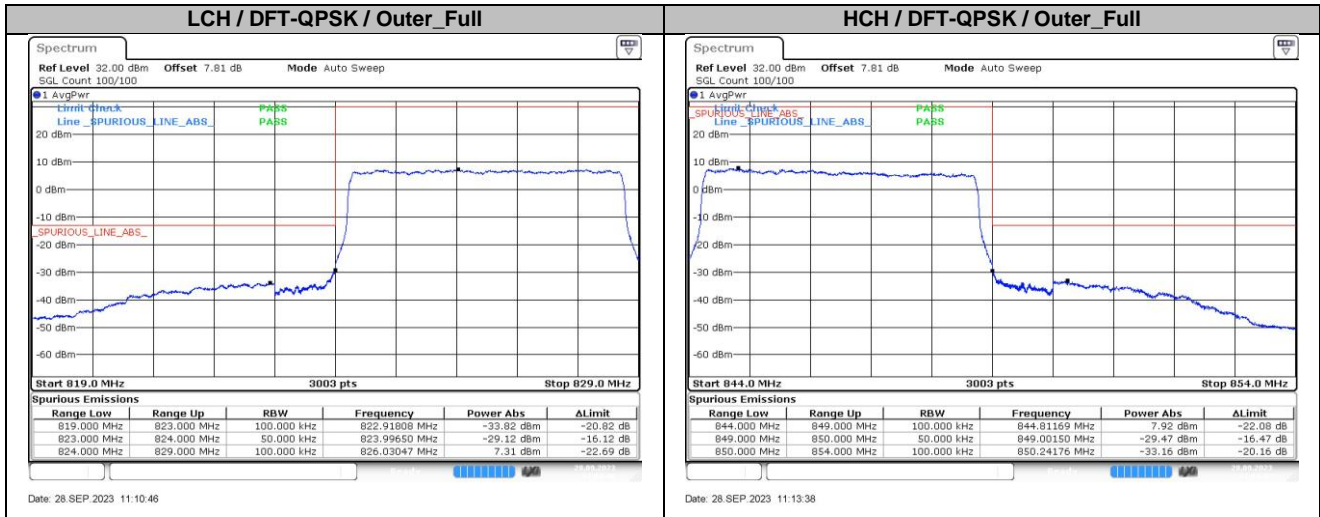


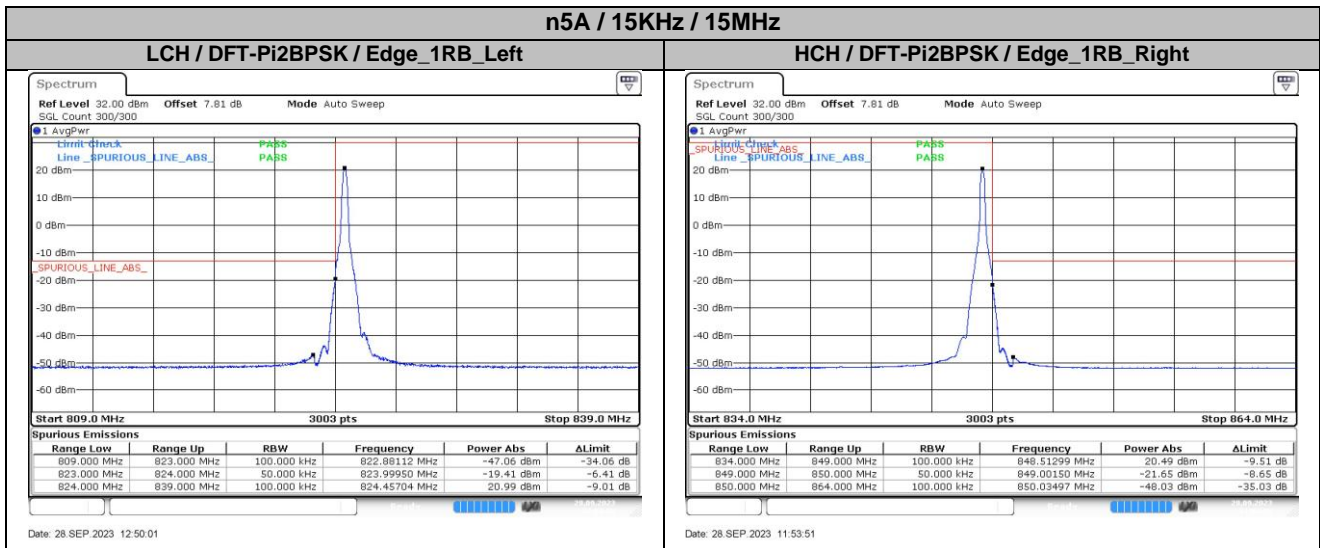
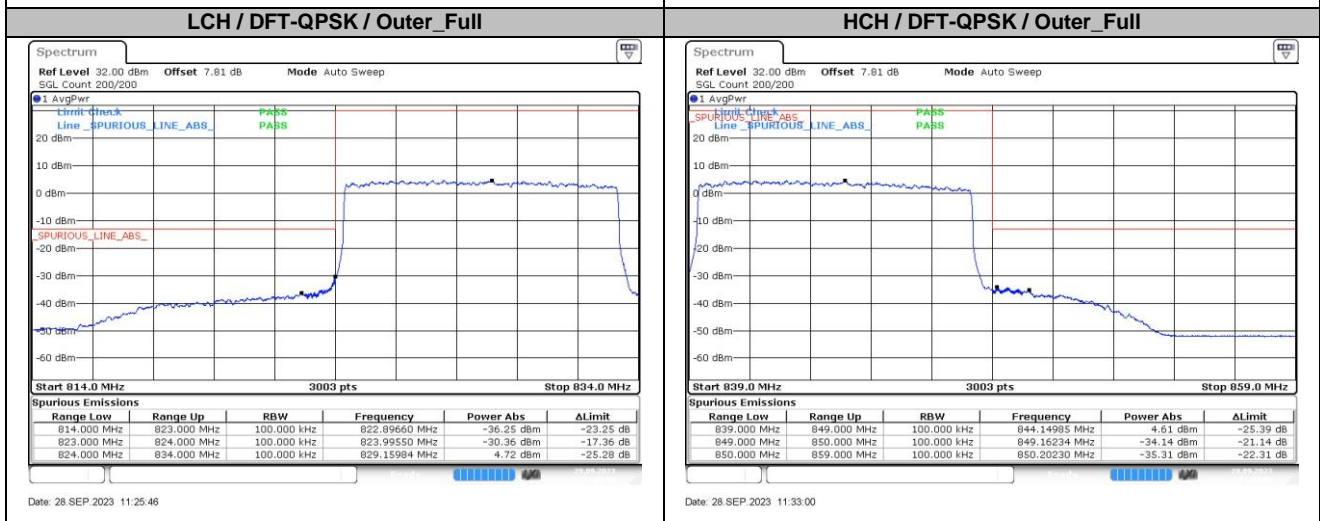
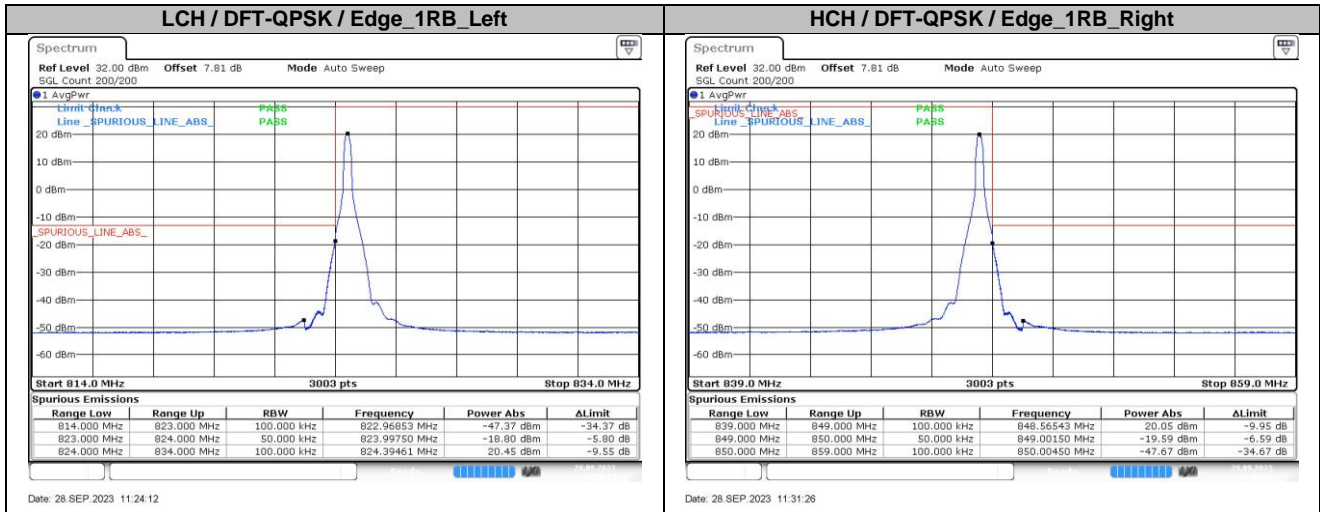


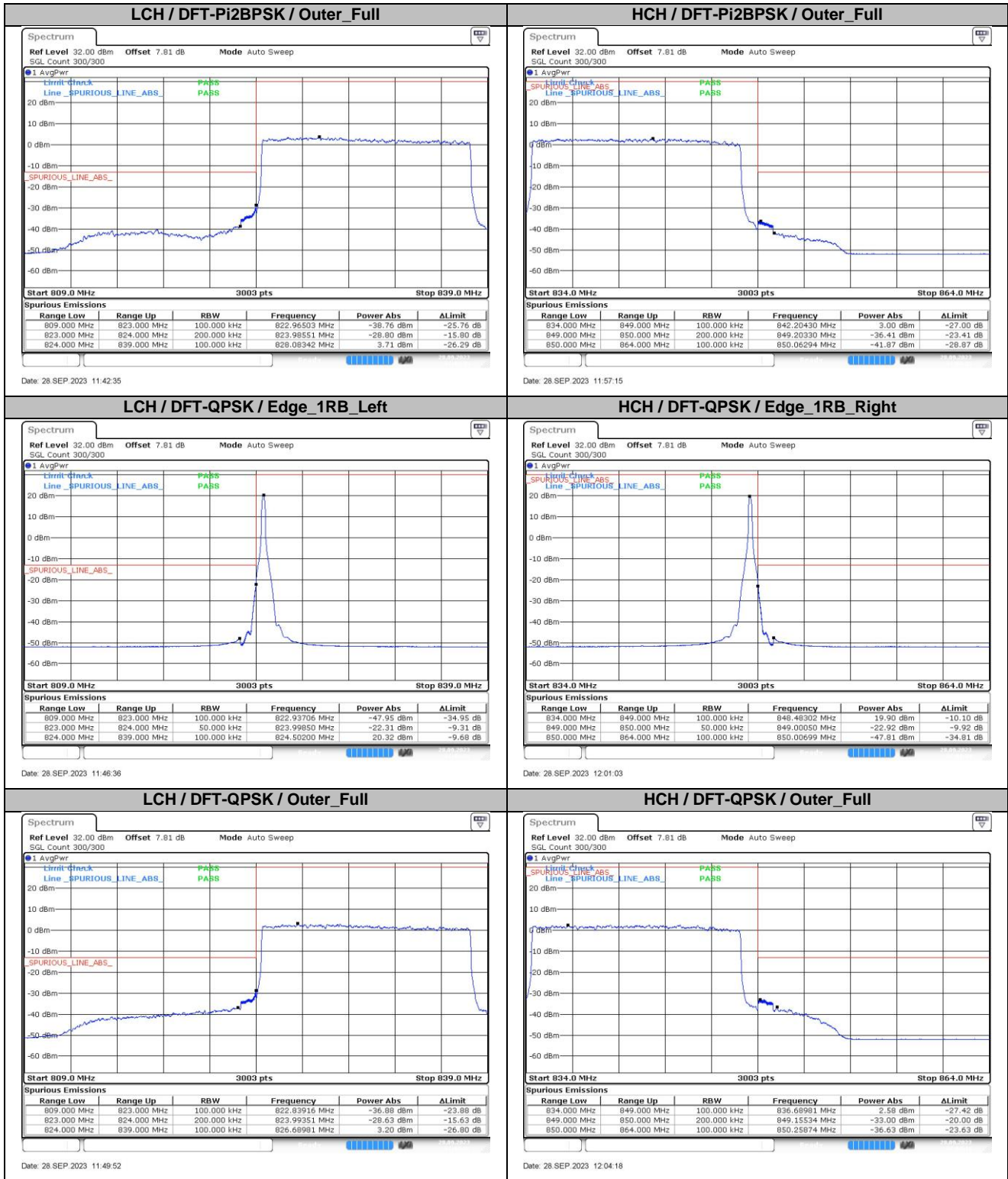
5. Conducted Band Edges

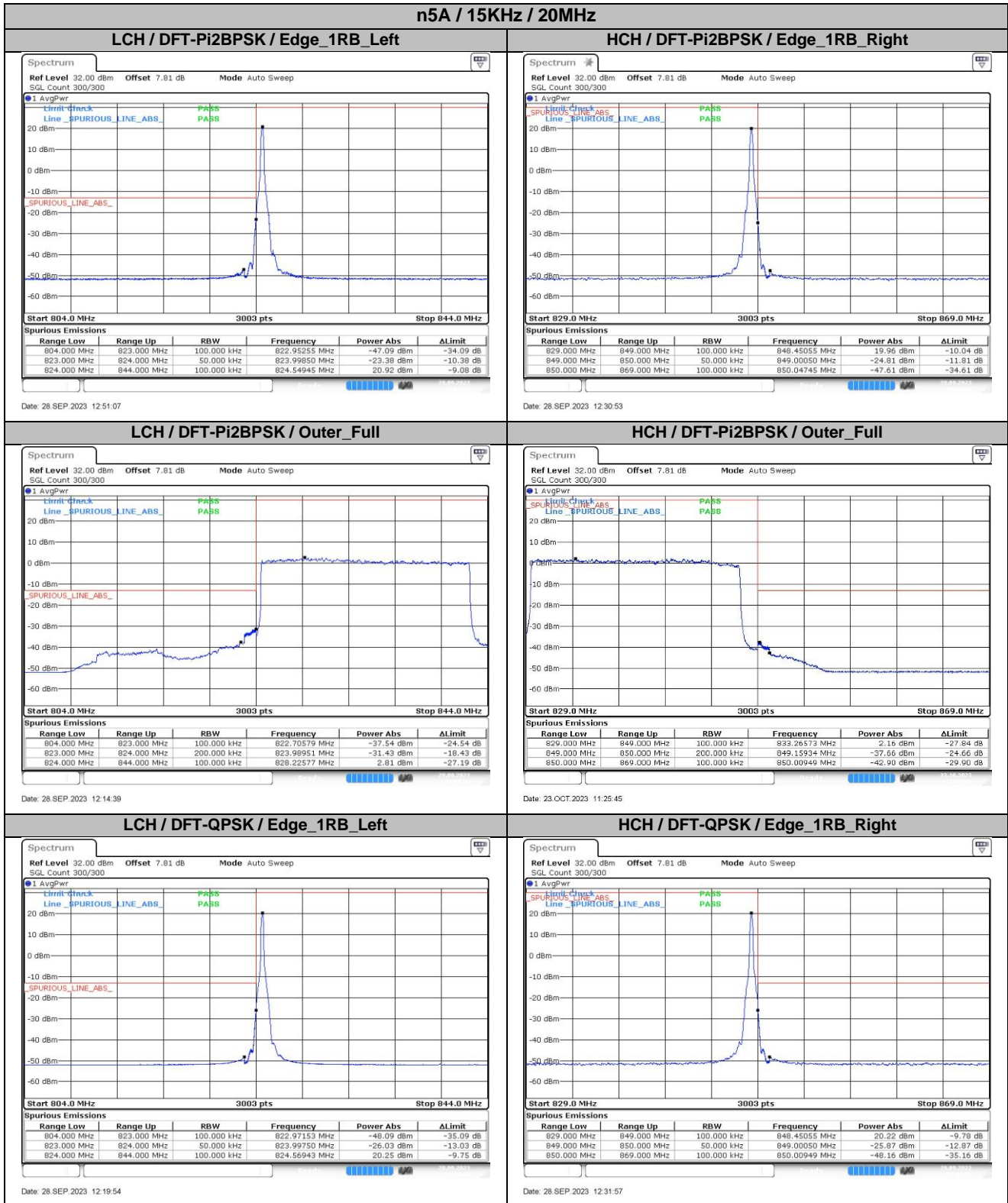
5.1. Test Plots

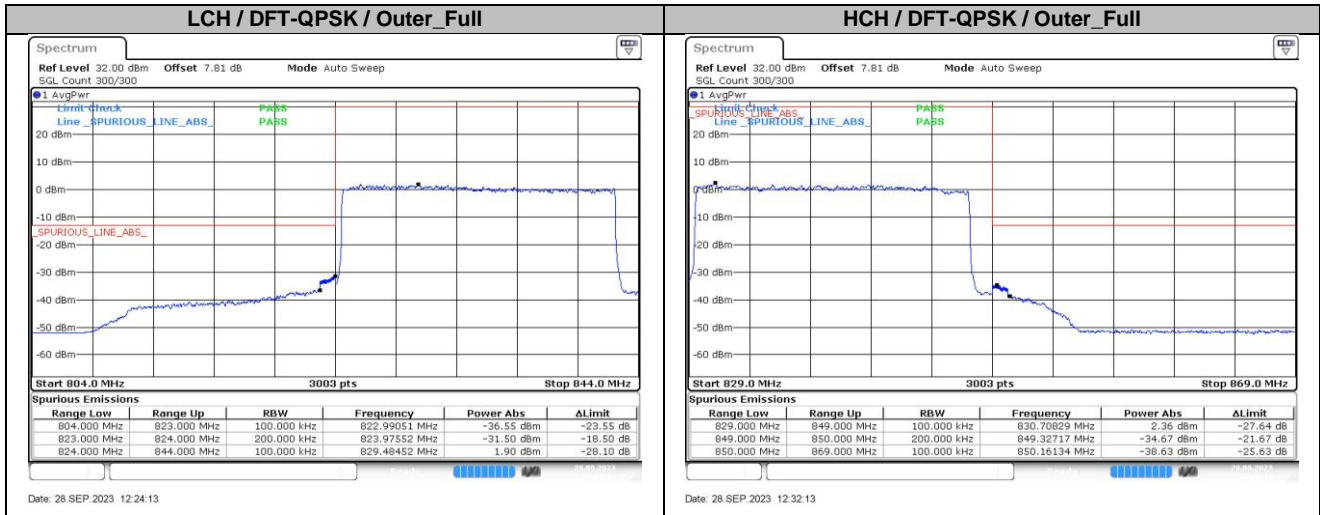






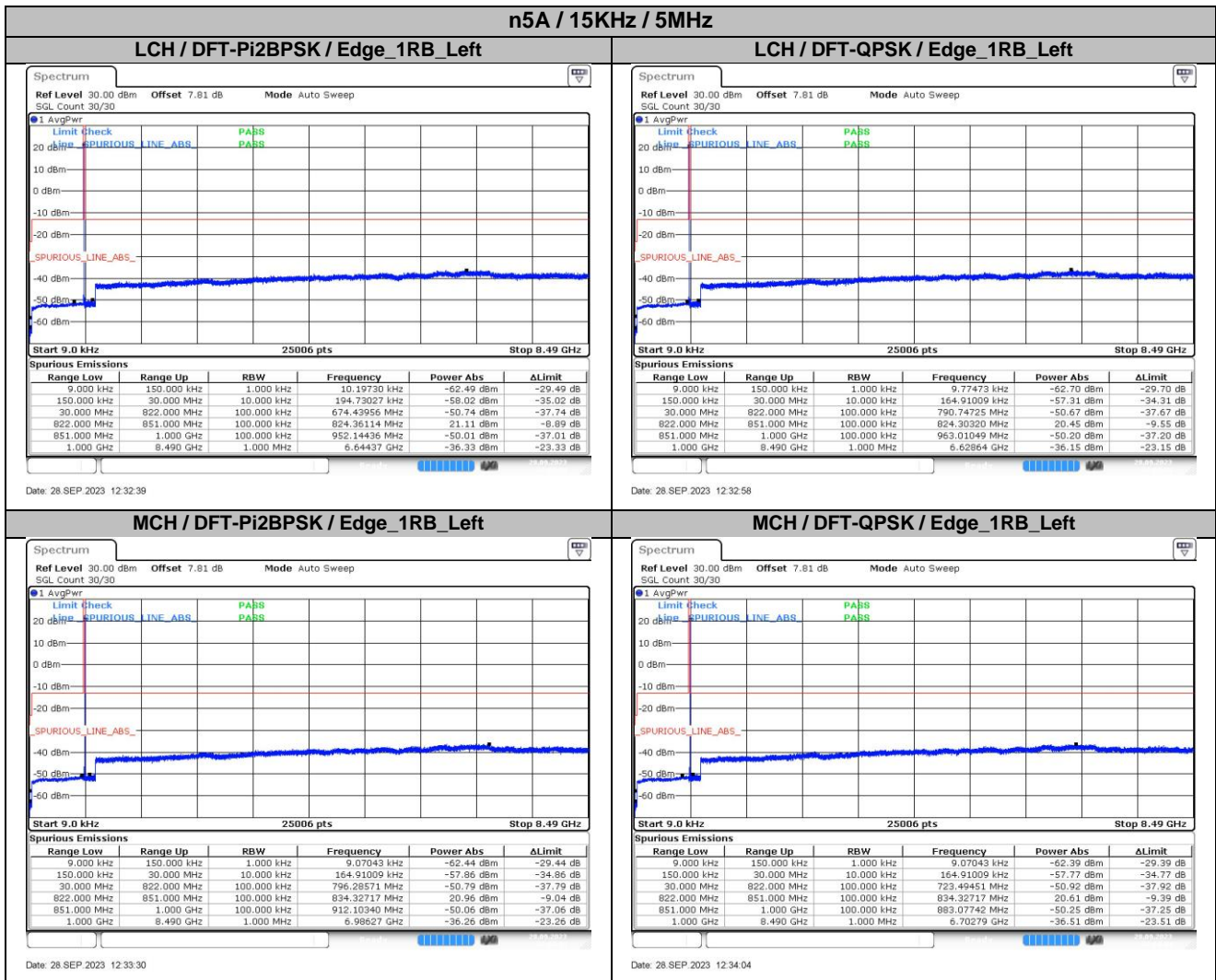


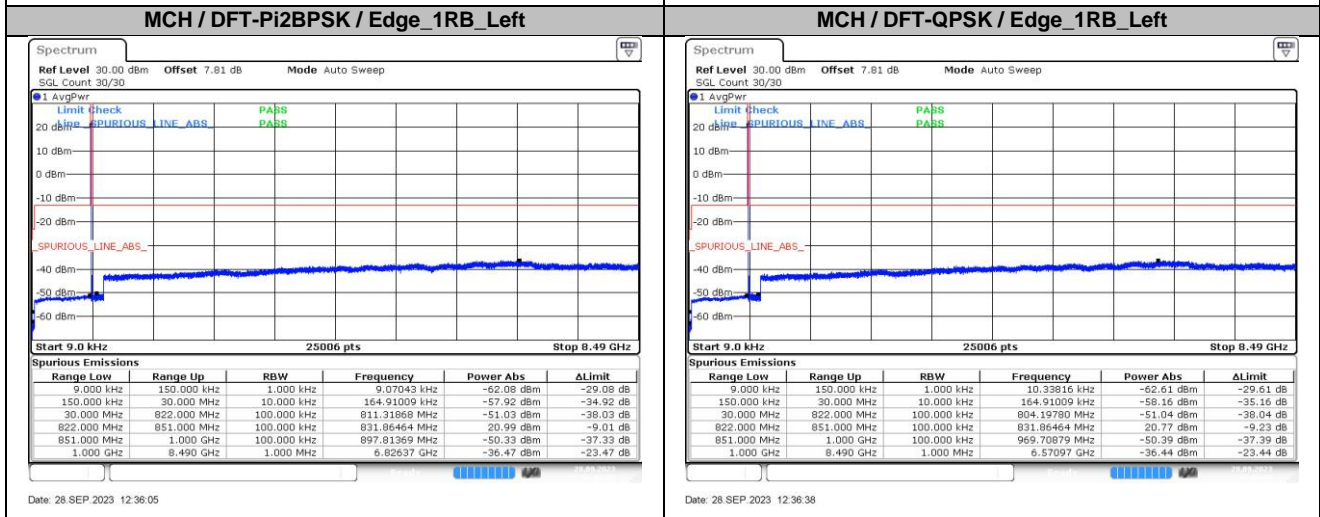
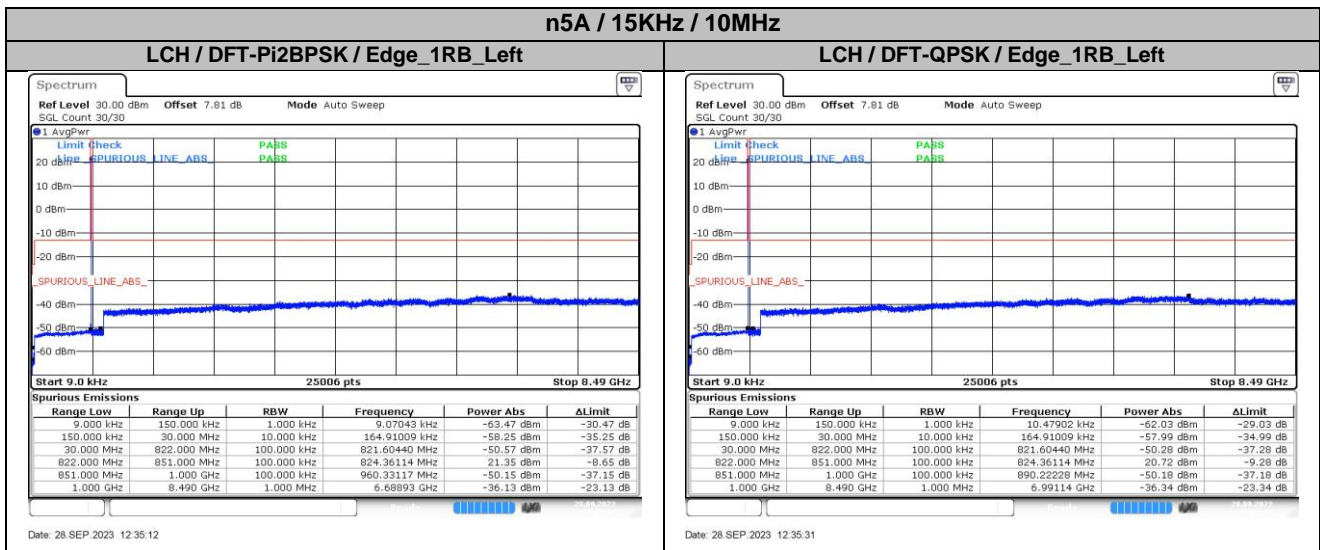
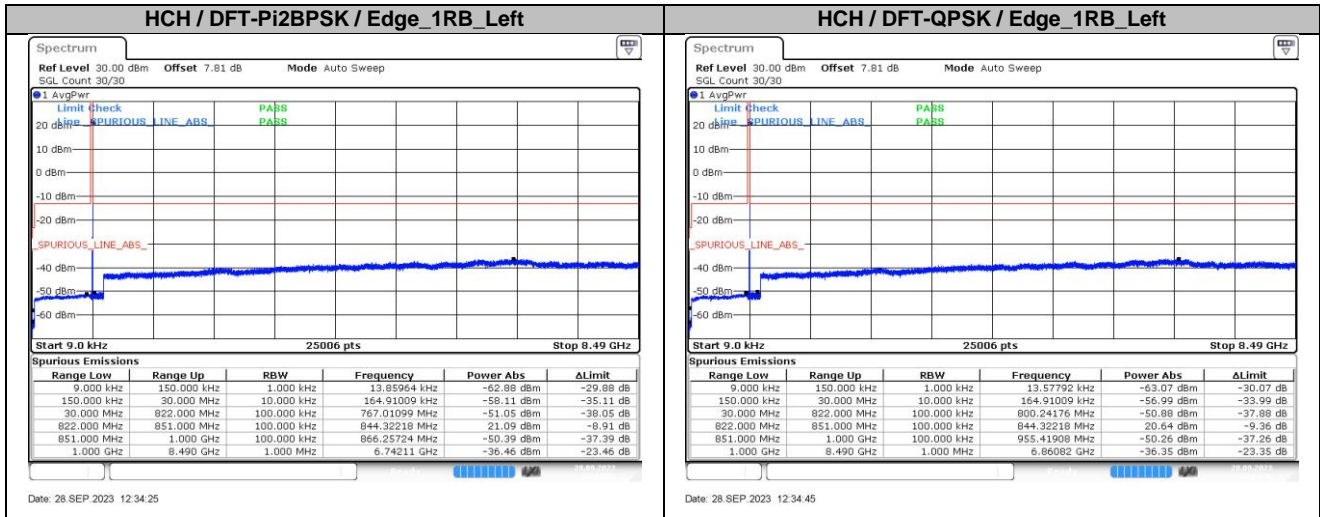


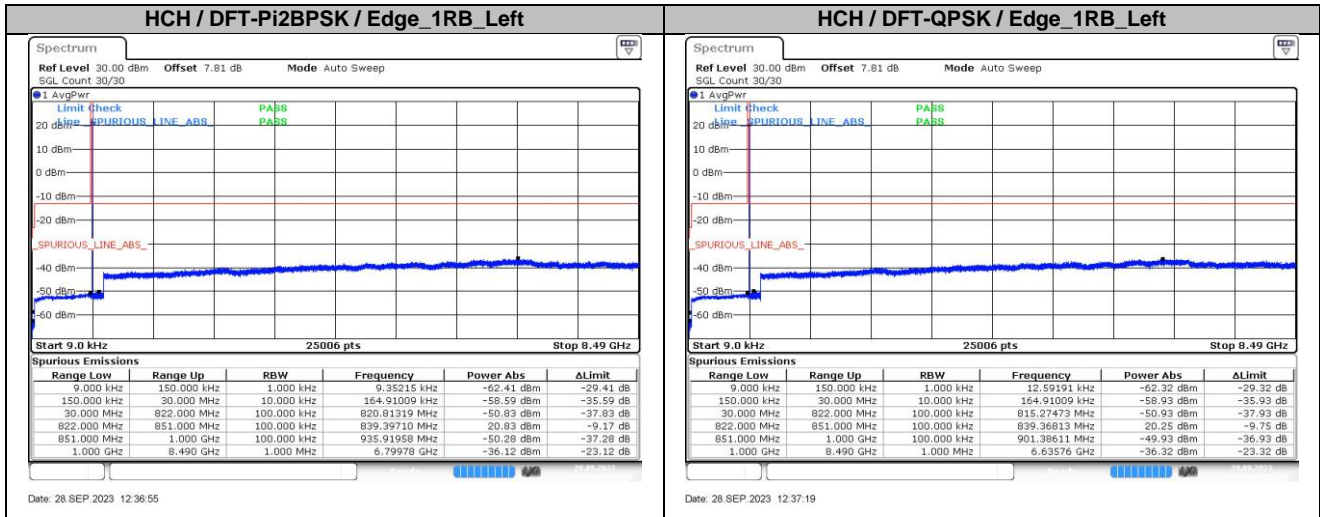


6. Conducted Spurious Emission

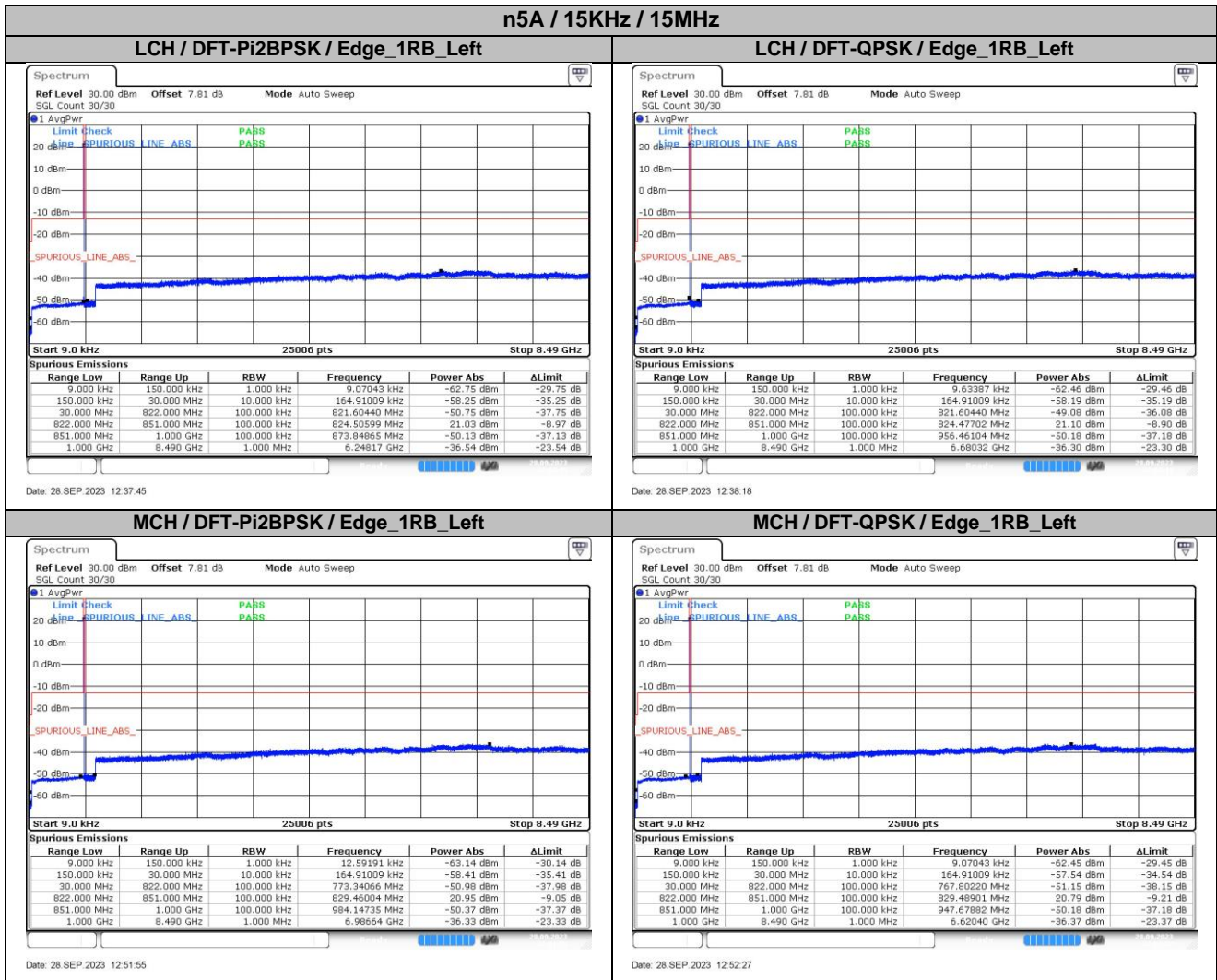
6.1. Test Plots

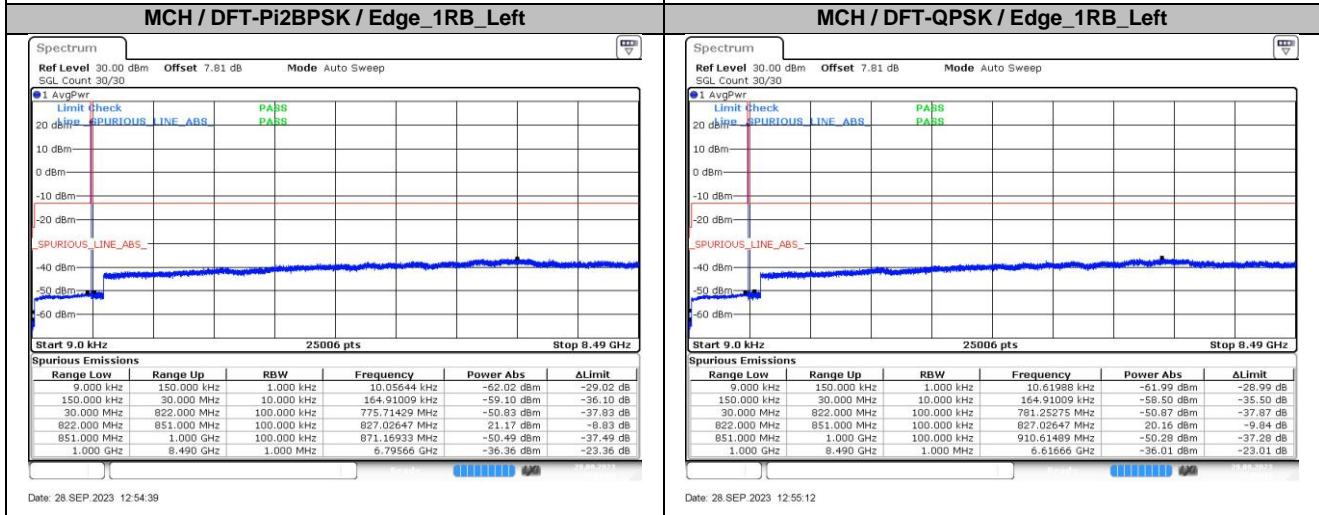
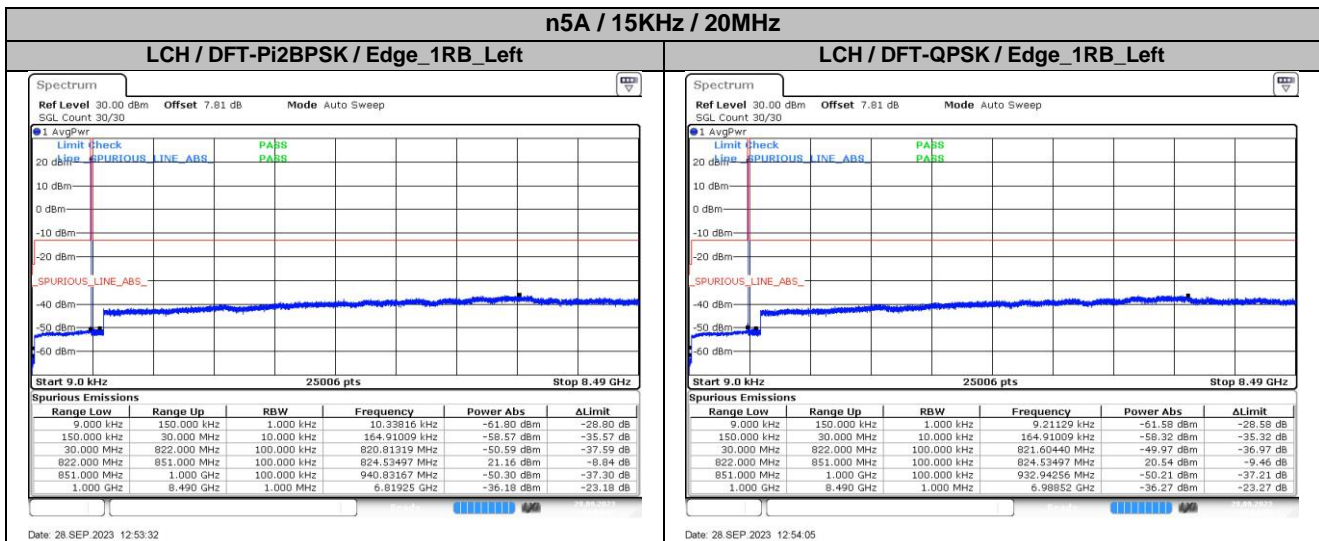
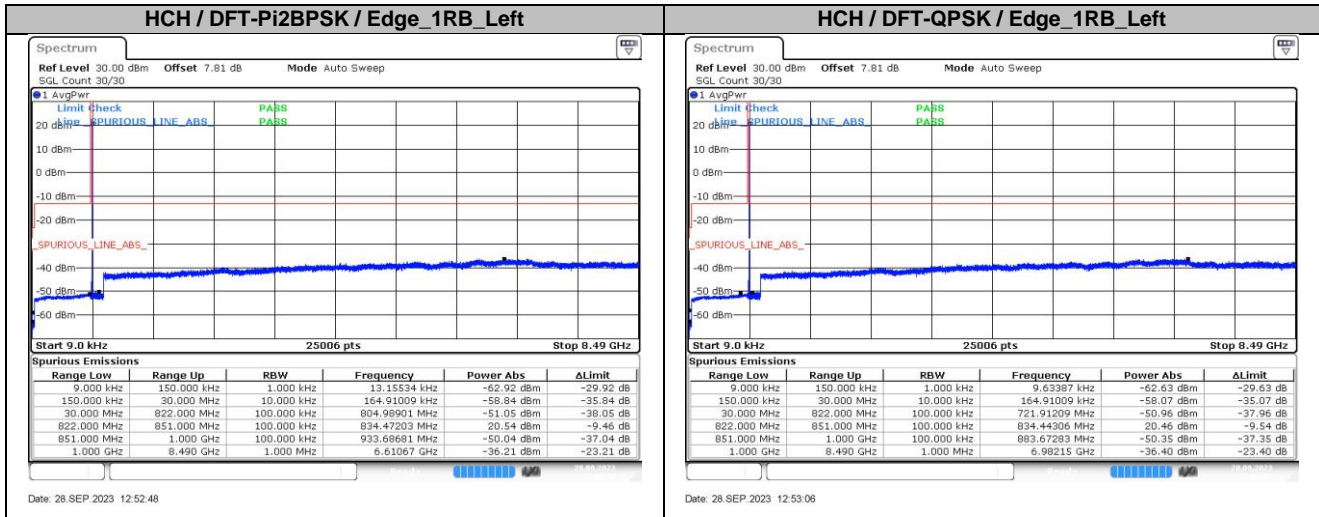


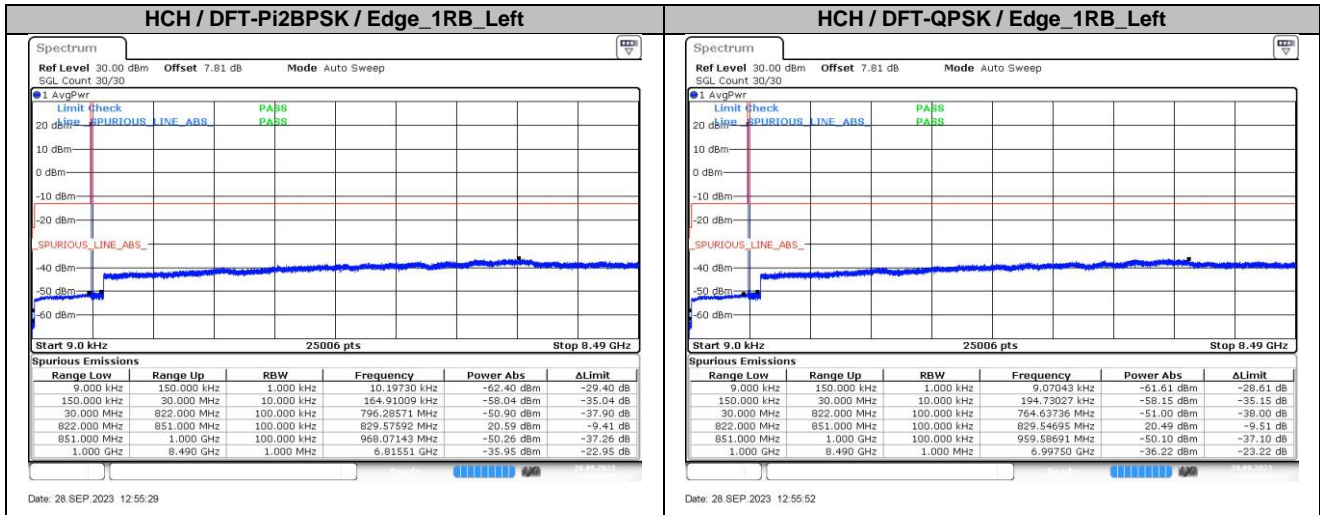




6.1.1. Bandwidth:15MHz







7. Frequency Stability

7.1. Test Results

7.1.1. Frequency Error Vs Voltage

SCS	Bandwidth	Channel	RB Config	Modulation	Temperature	Voltage	Deviation Result		Verdict
							(Hz)	(ppm)	
15KHz	20MHz	MCH	Outer_Full	DFT-QPSK	NT	LV	2.30	0.002750	Pass
15KHz	20MHz	MCH	Outer_Full	DFT-QPSK	NT	NV	3.40	0.004065	Pass
15KHz	20MHz	MCH	Outer_Full	DFT-QPSK	NT	HV	1.30	0.001554	Pass

7.1.2. Frequency Error Vs Temperature

SCS	Bandwidth	Channel	RB Config	Modulation	Temperature	Voltage	Deviation Result		Verdict
							(Hz)	(ppm)	
15KHz	20MHz	MCH	Outer_Full	DFT-QPSK	-30°C	NV	2.50	0.002989	Pass
15KHz	20MHz	MCH	Outer_Full	DFT-QPSK	-20°C	NV	2.10	0.002510	Pass
15KHz	20MHz	MCH	Outer_Full	DFT-QPSK	-10°C	NV	1.90	0.002271	Pass
15KHz	20MHz	MCH	Outer_Full	DFT-QPSK	0°C	NV	-1.80	-0.002152	Pass
15KHz	20MHz	MCH	Outer_Full	DFT-QPSK	10°C	NV	2.30	0.002750	Pass
15KHz	20MHz	MCH	Outer_Full	DFT-QPSK	20°C	NV	1.60	0.001913	Pass
15KHz	20MHz	MCH	Outer_Full	DFT-QPSK	30°C	NV	-2.30	-0.002750	Pass
15KHz	20MHz	MCH	Outer_Full	DFT-QPSK	40°C	NV	-2.30	-0.002750	Pass
15KHz	20MHz	MCH	Outer_Full	DFT-QPSK	50°C	NV	-5.40	-0.006455	Pass

The End