

**Appendix
for
n2A
(1850-1910)**

Catalogue

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1. Effective Isotropic Radiated Power

1.1. Test Results @ Ant0 (Antenna Gain=-0.70dBi)

SCS	Bandwidth	Channel	Modulation	Conducted Result (dBm)			Max EIRP (dBm)	Limit (dBm)	Verdict
				Inner_1RB_Left	Inner_1RB_Right	Inner_Full			
15KHz	5MHz	LCH	DFT-Pi2BPSK	22.59	22.61	22.59	21.91	30.00	Pass
15KHz	5MHz	LCH	DFT-QPSK	22.50	22.55	22.49	21.85	30.00	Pass
15KHz	5MHz	LCH	DFT-16QAM	21.50	21.67	21.64	20.97	30.00	Pass
15KHz	5MHz	LCH	DFT-64QAM	20.07	20.13	20.12	19.43	30.00	Pass
15KHz	5MHz	LCH	DFT-256QAM	17.56	17.56	18.04	17.34	30.00	Pass
15KHz	5MHz	LCH	CP-QPSK	20.94	21.06	21.00	20.36	30.00	Pass
15KHz	5MHz	MCH	DFT-Pi2BPSK	22.66	22.69	22.72	22.02	30.00	Pass
15KHz	5MHz	MCH	DFT-QPSK	22.56	22.61	23.01	22.31	30.00	Pass
15KHz	5MHz	MCH	DFT-16QAM	21.65	21.75	21.85	21.15	30.00	Pass
15KHz	5MHz	MCH	DFT-64QAM	20.33	20.45	20.26	19.75	30.00	Pass
15KHz	5MHz	MCH	DFT-256QAM	17.52	17.70	18.15	17.45	30.00	Pass
15KHz	5MHz	MCH	CP-QPSK	21.13	21.18	21.13	20.48	30.00	Pass
15KHz	5MHz	HCH	DFT-Pi2BPSK	22.44	22.50	22.52	21.82	30.00	Pass
15KHz	5MHz	HCH	DFT-QPSK	22.39	22.51	22.52	21.82	30.00	Pass
15KHz	5MHz	HCH	DFT-16QAM	21.50	21.62	21.56	20.92	30.00	Pass
15KHz	5MHz	HCH	DFT-64QAM	20.07	20.15	20.14	19.45	30.00	Pass
15KHz	5MHz	HCH	DFT-256QAM	17.52	17.53	17.92	17.22	30.00	Pass
15KHz	5MHz	HCH	CP-QPSK	20.90	21.04	20.97	20.34	30.00	Pass
15KHz	10MHz	LCH	DFT-Pi2BPSK	22.57	22.65	22.62	21.95	30.00	Pass
15KHz	10MHz	LCH	DFT-QPSK	22.60	22.64	22.56	21.94	30.00	Pass
15KHz	10MHz	LCH	DFT-16QAM	21.60	21.67	21.51	20.97	30.00	Pass
15KHz	10MHz	LCH	DFT-64QAM	20.06	20.16	20.00	19.46	30.00	Pass
15KHz	10MHz	LCH	DFT-256QAM	17.62	17.59	17.99	17.29	30.00	Pass
15KHz	10MHz	LCH	CP-QPSK	21.01	21.08	21.06	20.38	30.00	Pass
15KHz	10MHz	MCH	DFT-Pi2BPSK	22.66	22.70	22.68	22.00	30.00	Pass
15KHz	10MHz	MCH	DFT-QPSK	22.58	22.61	22.67	21.97	30.00	Pass
15KHz	10MHz	MCH	DFT-16QAM	21.71	21.75	21.72	21.05	30.00	Pass
15KHz	10MHz	MCH	DFT-64QAM	20.30	20.35	20.25	19.65	30.00	Pass
15KHz	10MHz	MCH	DFT-256QAM	17.54	17.65	18.12	17.42	30.00	Pass
15KHz	10MHz	MCH	CP-QPSK	21.05	21.18	21.24	20.54	30.00	Pass
15KHz	10MHz	HCH	DFT-Pi2BPSK	22.57	22.46	22.53	21.87	30.00	Pass
15KHz	10MHz	HCH	DFT-QPSK	22.43	22.44	22.53	21.83	30.00	Pass
15KHz	10MHz	HCH	DFT-16QAM	21.59	21.57	21.51	20.89	30.00	Pass
15KHz	10MHz	HCH	DFT-64QAM	20.16	20.15	20.04	19.46	30.00	Pass
15KHz	10MHz	HCH	DFT-256QAM	17.65	17.58	17.87	17.17	30.00	Pass
15KHz	10MHz	HCH	CP-QPSK	21.02	20.94	21.01	20.32	30.00	Pass
15KHz	15MHz	LCH	DFT-Pi2BPSK	22.58	22.74	22.48	22.04	30.00	Pass
15KHz	15MHz	LCH	DFT-QPSK	22.40	22.59	22.54	21.89	30.00	Pass
15KHz	15MHz	LCH	DFT-16QAM	21.46	21.68	21.51	20.98	30.00	Pass
15KHz	15MHz	LCH	DFT-64QAM	20.13	20.20	20.05	19.50	30.00	Pass
15KHz	15MHz	LCH	DFT-256QAM	17.55	17.61	17.86	17.16	30.00	Pass
15KHz	15MHz	LCH	CP-QPSK	20.89	21.18	21.06	20.48	30.00	Pass
15KHz	15MHz	MCH	DFT-Pi2BPSK	22.67	22.59	22.67	21.97	30.00	Pass
15KHz	15MHz	MCH	DFT-QPSK	22.57	22.55	22.65	21.95	30.00	Pass
15KHz	15MHz	MCH	DFT-16QAM	21.56	21.62	21.68	20.98	30.00	Pass
15KHz	15MHz	MCH	DFT-64QAM	20.28	20.24	20.16	19.58	30.00	Pass
15KHz	15MHz	MCH	DFT-256QAM	17.52	17.55	18.05	17.35	30.00	Pass
15KHz	15MHz	MCH	CP-QPSK	21.10	21.12	21.14	20.44	30.00	Pass
15KHz	15MHz	HCH	DFT-Pi2BPSK	22.55	22.42	22.48	21.85	30.00	Pass
15KHz	15MHz	HCH	DFT-QPSK	22.46	22.33	22.52	21.82	30.00	Pass
15KHz	15MHz	HCH	DFT-16QAM	21.44	21.44	21.48	20.78	30.00	Pass
15KHz	15MHz	HCH	DFT-64QAM	20.19	20.10	19.98	19.49	30.00	Pass
15KHz	15MHz	HCH	DFT-256QAM	17.57	17.55	17.88	17.18	30.00	Pass
15KHz	15MHz	HCH	CP-QPSK	21.02	20.95	20.94	20.32	30.00	Pass
15KHz	20MHz	LCH	DFT-Pi2BPSK	22.60	22.67	22.60	21.97	30.00	Pass
15KHz	20MHz	LCH	DFT-QPSK	22.52	22.55	22.52	21.85	30.00	Pass
15KHz	20MHz	LCH	DFT-16QAM	21.56	21.63	21.57	20.93	30.00	Pass
15KHz	20MHz	LCH	DFT-64QAM	20.13	20.30	20.05	19.60	30.00	Pass

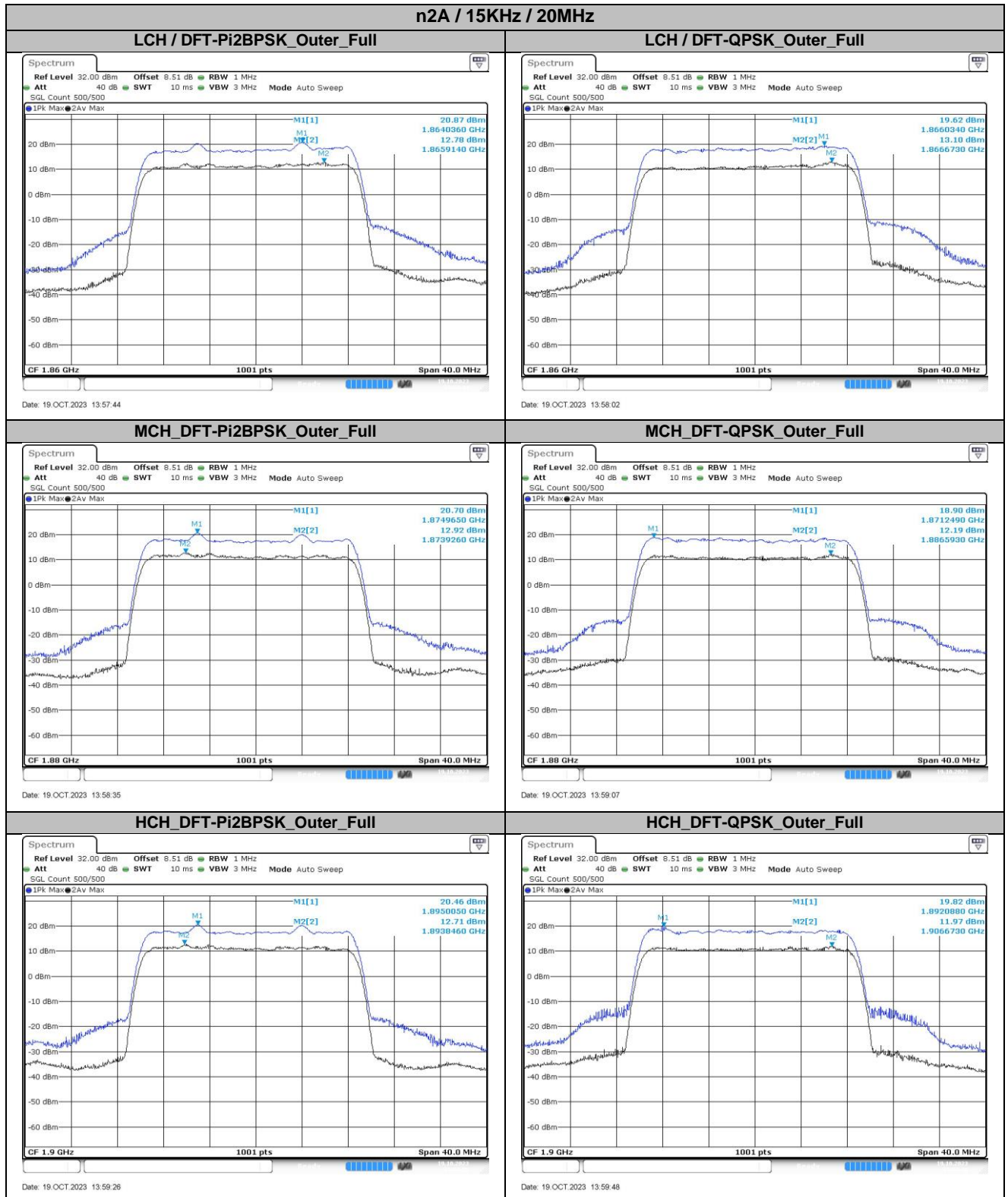
15KHz	20MHz	LCH	DFT-256QAM	17.57	17.51	17.99	17.29	30.00	Pass
15KHz	20MHz	LCH	CP-QPSK	21.05	21.04	21.07	20.37	30.00	Pass
15KHz	20MHz	MCH	DFT-Pi2BPSK	22.63	22.59	22.66	21.96	30.00	Pass
15KHz	20MHz	MCH	DFT-QPSK	22.57	22.48	22.62	21.92	30.00	Pass
15KHz	20MHz	MCH	DFT-16QAM	21.61	21.61	21.64	20.94	30.00	Pass
15KHz	20MHz	MCH	DFT-64QAM	20.29	20.19	20.20	19.59	30.00	Pass
15KHz	20MHz	MCH	DFT-256QAM	17.59	17.54	18.04	17.34	30.00	Pass
15KHz	20MHz	MCH	CP-QPSK	21.10	20.99	21.16	20.46	30.00	Pass
15KHz	20MHz	HCH	DFT-Pi2BPSK	22.52	22.44	22.41	21.82	30.00	Pass
15KHz	20MHz	HCH	DFT-QPSK	22.47	22.33	22.48	21.78	30.00	Pass
15KHz	20MHz	HCH	DFT-16QAM	21.52	21.36	21.47	20.82	30.00	Pass
15KHz	20MHz	HCH	DFT-64QAM	20.11	20.06	20.05	19.41	30.00	Pass
15KHz	20MHz	HCH	DFT-256QAM	17.58	17.61	17.90	17.20	30.00	Pass
15KHz	20MHz	HCH	CP-QPSK	21.05	20.92	20.95	20.35	30.00	Pass

2. Peak-to-Average Ratio

2.1. Test Results

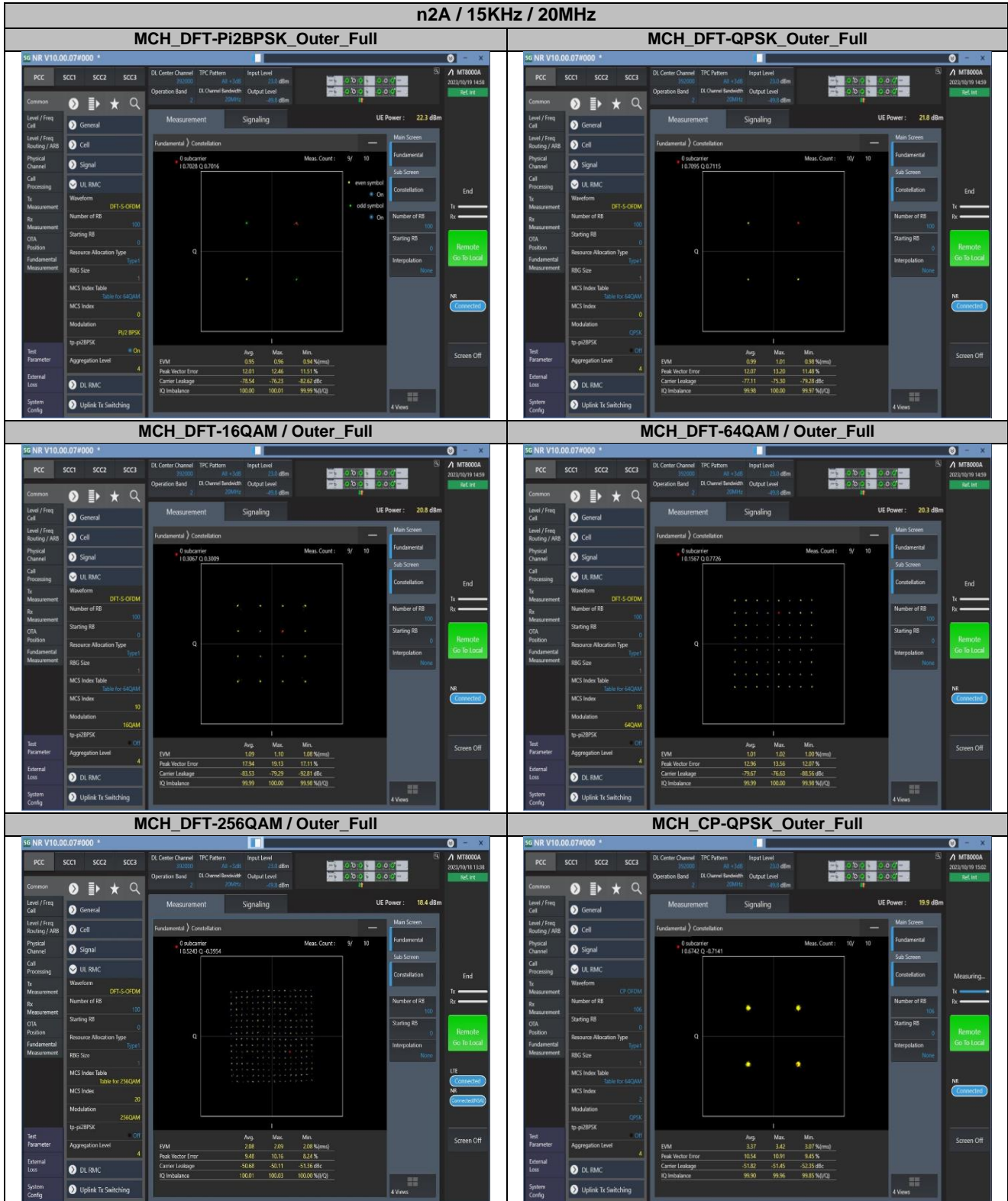
SCS	Bandwidth	Channel	Modulation	Result (dB)		Limit (dB)	Verdict
				DFT-Pi2BPSK	DFT-QPSK		
15KHz	20MHz	LCH	Outer_Full	8.09	6.52	13.00	Pass
15KHz	20MHz	MCH	Outer_Full	7.78	6.71	13.00	Pass
15KHz	20MHz	HCH	Outer_Full	7.74	7.85	13.00	Pass

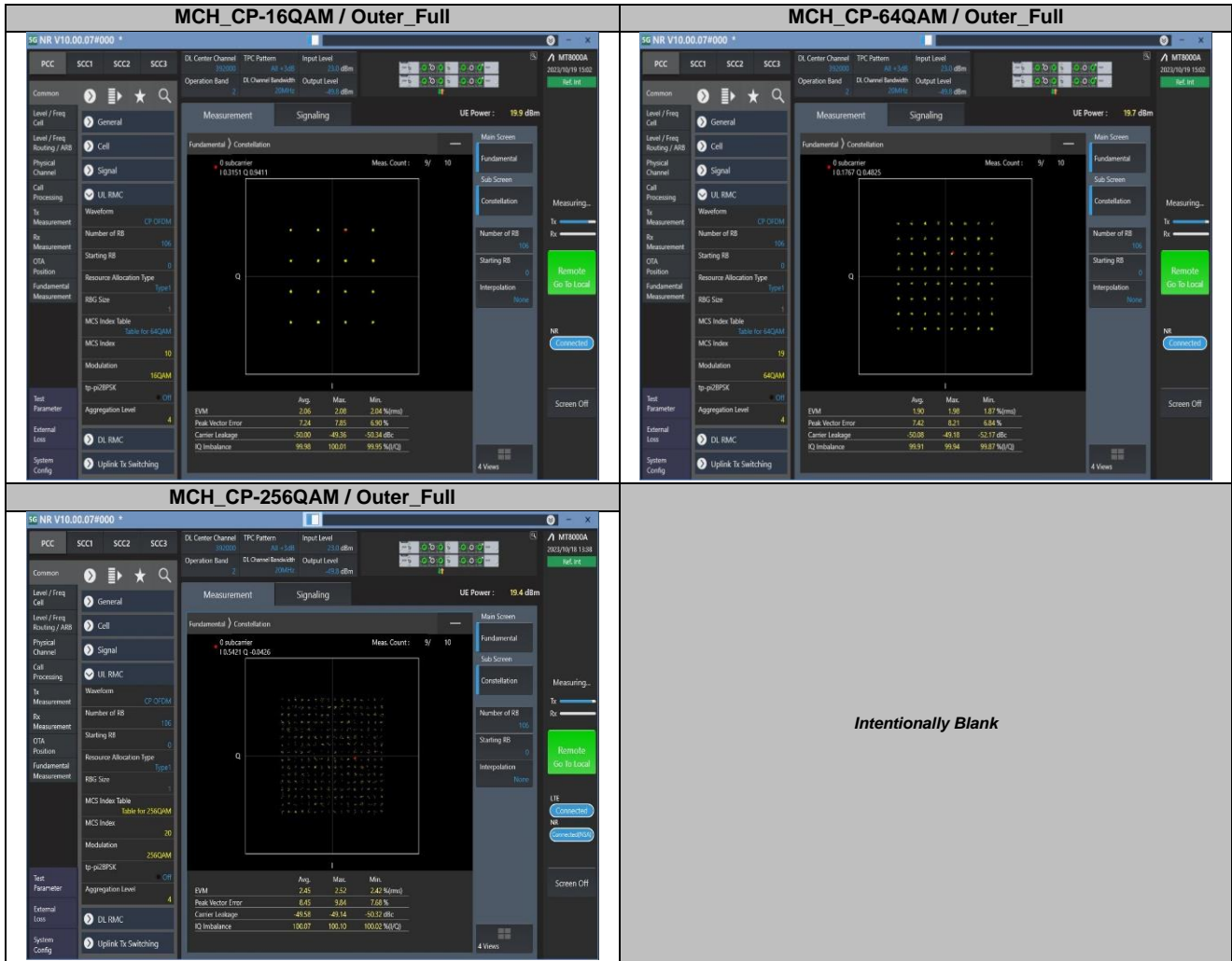
2.2. Test Plots



3. Modulation Characteristics

3.1. Test Plots



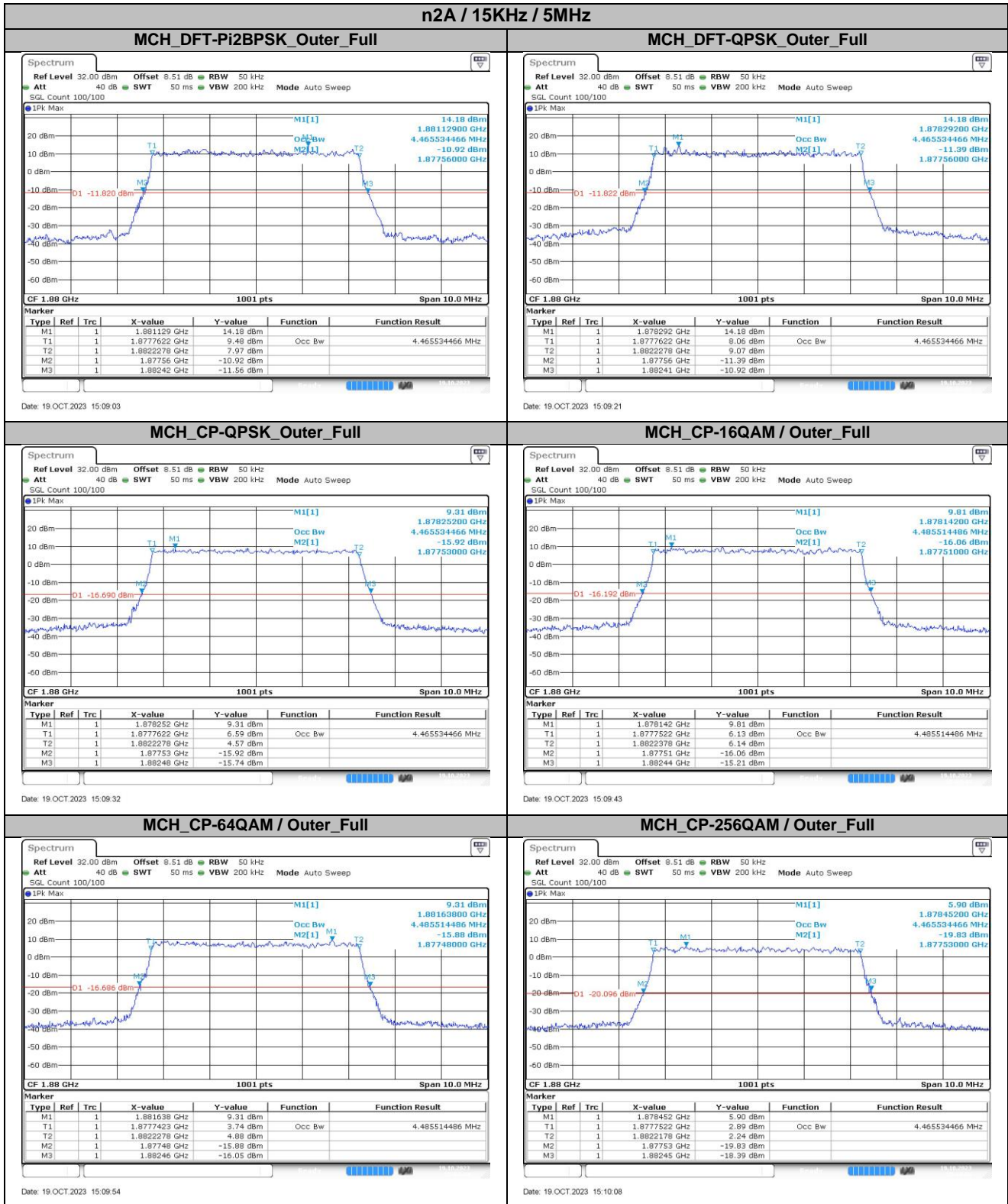


4. 99% Occupied Bandwidth & 26dB Emission Bandwidth

4.1. Test Results

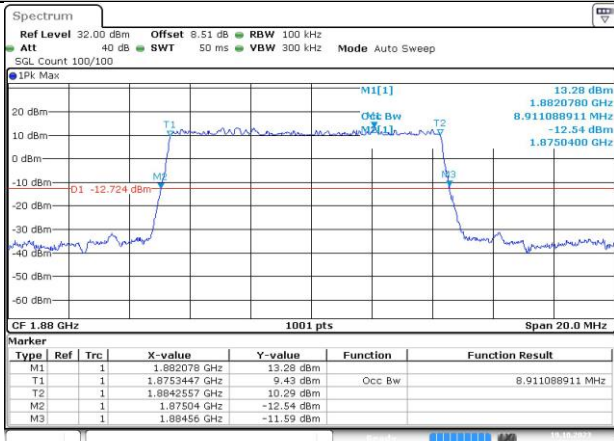
SCS	Bandwidth	Modulation	RB Config	99% Occupied Bandwidth (MHz)	26dB Emission Bandwidth (MHz)	Verdict
15KHz	5MHz	DFT-Pi2BPSK	Outer_Full	4.47	4.86	Pass
15KHz	5MHz	DFT-QPSK	Outer_Full	4.47	4.85	Pass
15KHz	5MHz	CP-QPSK	Outer_Full	4.47	4.95	Pass
15KHz	5MHz	CP-16QAM	Outer_Full	4.49	4.93	Pass
15KHz	5MHz	CP-64QAM	Outer_Full	4.49	4.98	Pass
15KHz	5MHz	CP-256QAM	Outer_Full	4.47	4.92	Pass
15KHz	10MHz	DFT-Pi2BPSK	Outer_Full	8.91	9.52	Pass
15KHz	10MHz	DFT-QPSK	Outer_Full	8.93	9.54	Pass
15KHz	10MHz	CP-QPSK	Outer_Full	9.29	9.98	Pass
15KHz	10MHz	CP-16QAM	Outer_Full	9.29	9.92	Pass
15KHz	10MHz	CP-64QAM	Outer_Full	9.27	9.92	Pass
15KHz	10MHz	CP-256QAM	Outer_Full	9.31	9.98	Pass
15KHz	15MHz	DFT-Pi2BPSK	Outer_Full	13.43	14.19	Pass
15KHz	15MHz	DFT-QPSK	Outer_Full	13.46	14.25	Pass
15KHz	15MHz	CP-QPSK	Outer_Full	14.12	15.00	Pass
15KHz	15MHz	CP-16QAM	Outer_Full	14.15	14.97	Pass
15KHz	15MHz	CP-64QAM	Outer_Full	14.15	14.97	Pass
15KHz	15MHz	CP-256QAM	Outer_Full	14.12	14.94	Pass
15KHz	20MHz	DFT-Pi2BPSK	Outer_Full	17.90	18.76	Pass
15KHz	20MHz	DFT-QPSK	Outer_Full	17.86	18.76	Pass
15KHz	20MHz	CP-QPSK	Outer_Full	18.94	19.84	Pass
15KHz	20MHz	CP-16QAM	Outer_Full	18.98	19.96	Pass
15KHz	20MHz	CP-64QAM	Outer_Full	18.94	19.84	Pass
15KHz	20MHz	CP-256QAM	Outer_Full	18.90	19.84	Pass

4.2. Test Plots



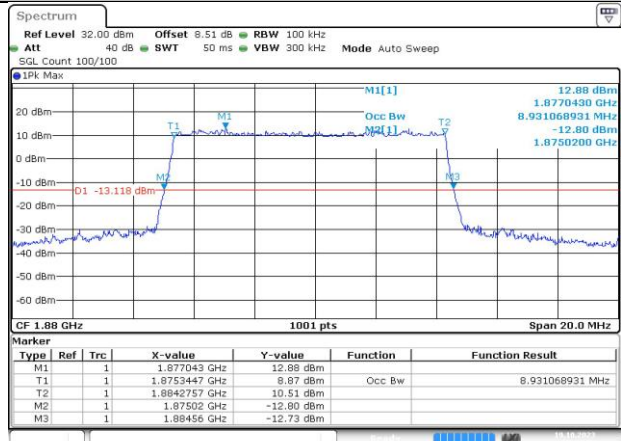
n2A / 15KHz / 10MHz

MCH_DFT-Pi2BPSK_Outer_Full



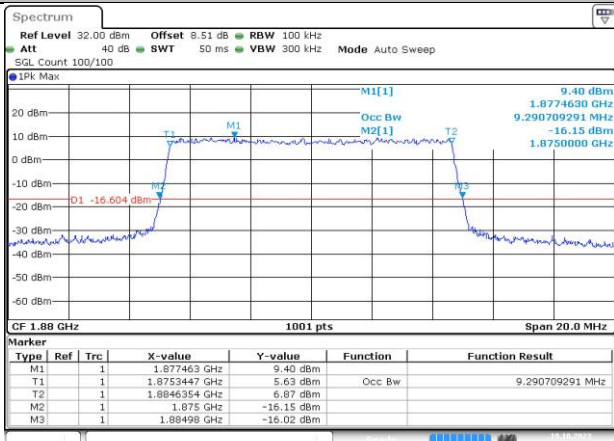
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MCH_DFT-QPSK_Outer_Full



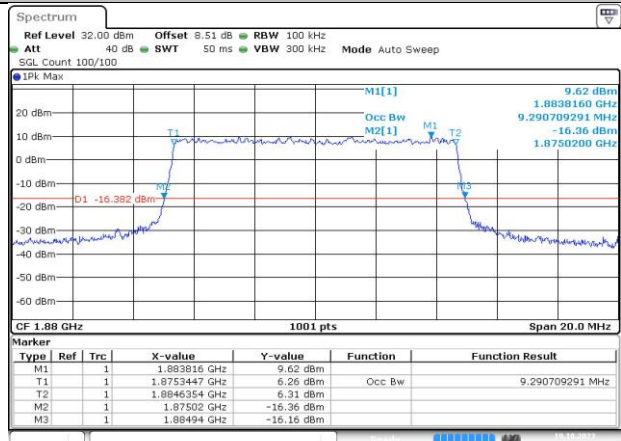
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MCH_CP-QPSK_Outer_Full



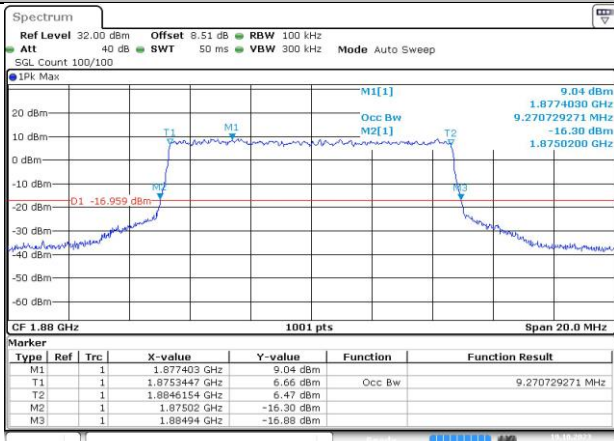
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MCH_CP-16QAM / Outer_Full



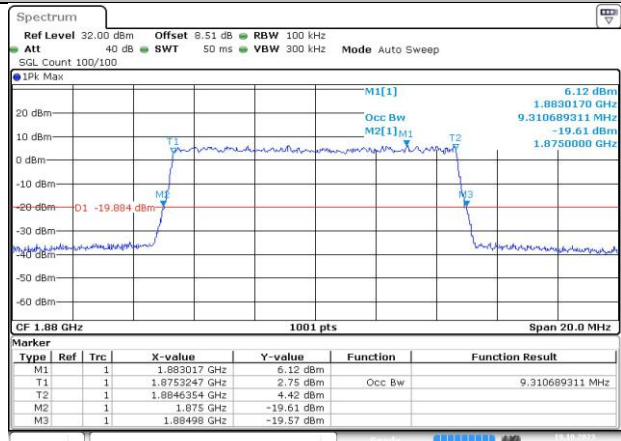
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MCH_CP-64QAM / Outer_Full



Date: 19.OCT.2023 15:11:33

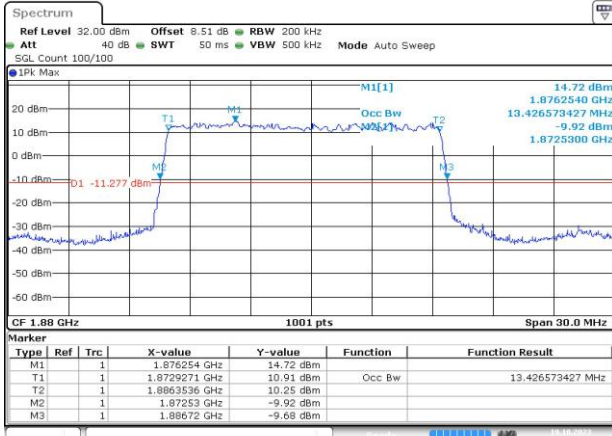
MCH_CP-256QAM / Outer_Full



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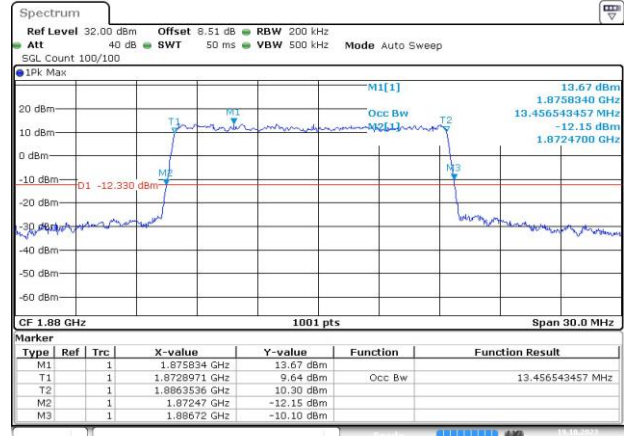
n2A / 15KHz / 15MHz

MCH_DFT-Pi2BPSK_Outer_Full



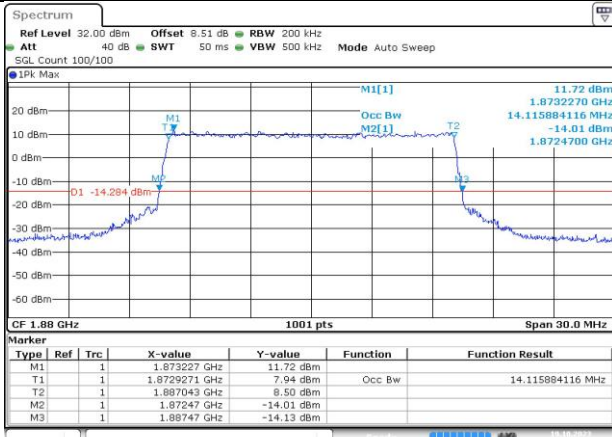
Date: 19.OCT.2023 15:12:25

MCH_DFT-QPSK_Outer_Full



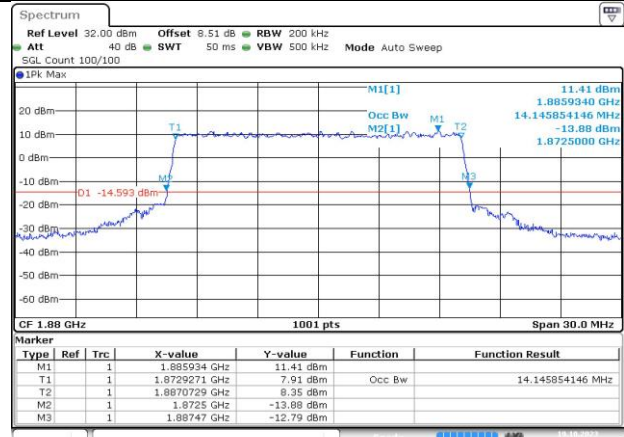
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MCH_CP-QPSK_Outer_Full



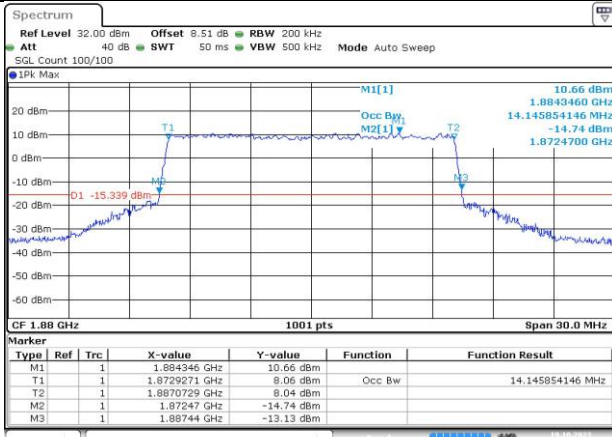
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MCH_CP-16QAM / Outer_Full



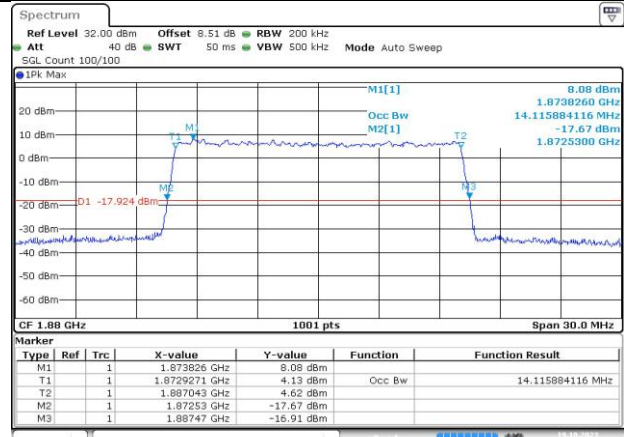
Date: 19.OCT.2023 15:13:52

MCH_CP-64QAM / Outer_Full



Date: 19.OCT.2023 15:14:06

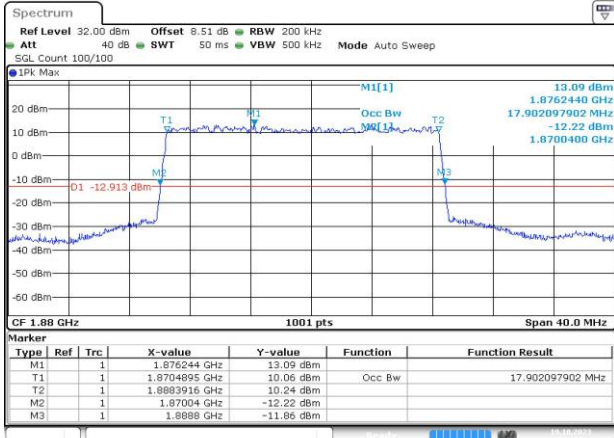
MCH_CP-256QAM / Outer_Full



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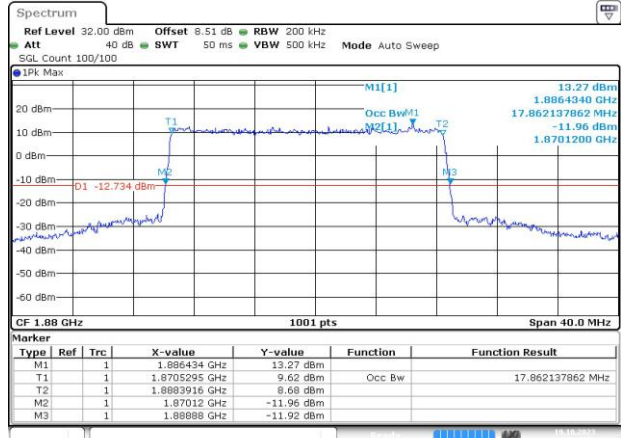
n2A / 15KHz / 20MHz

MCH_DFT-Pi2BPSK_Outer_Full



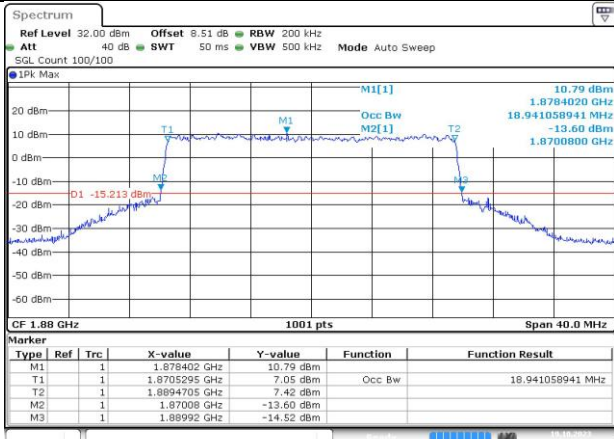
Date: 19.OCT.2023 15:15:23

MCH_DFT-QPSK_Outer_Full



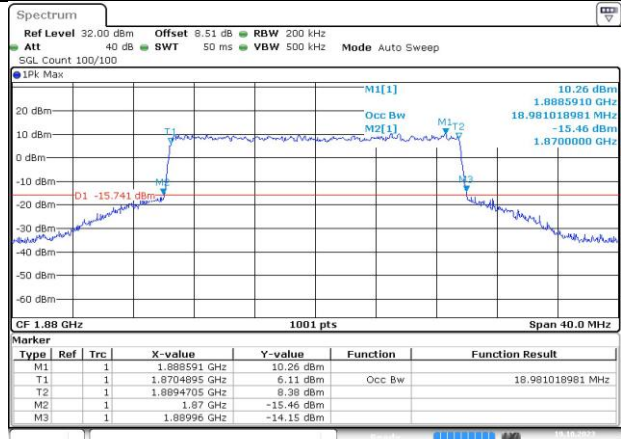
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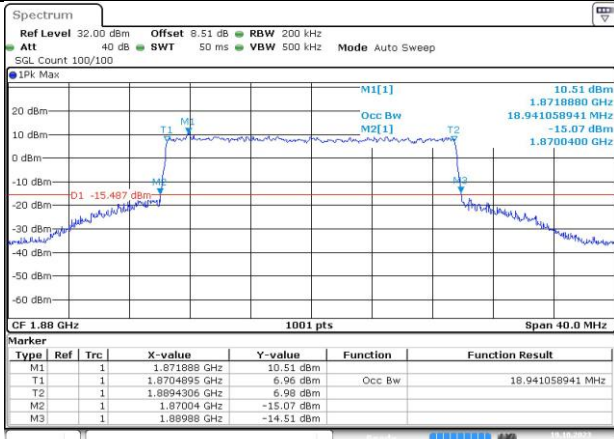
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MCH_CP-16QAM / Outer_Full



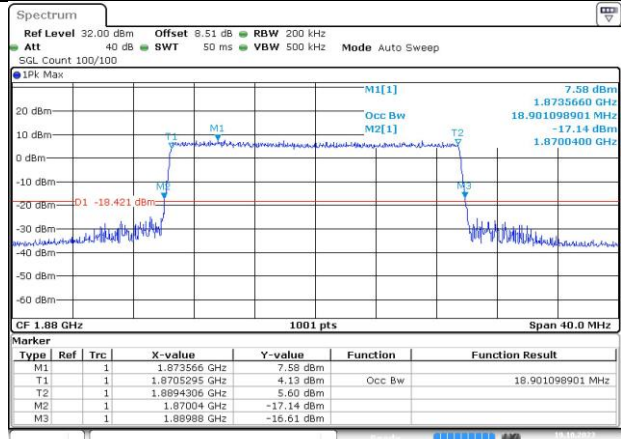
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MCH_CP-64QAM / Outer_Full



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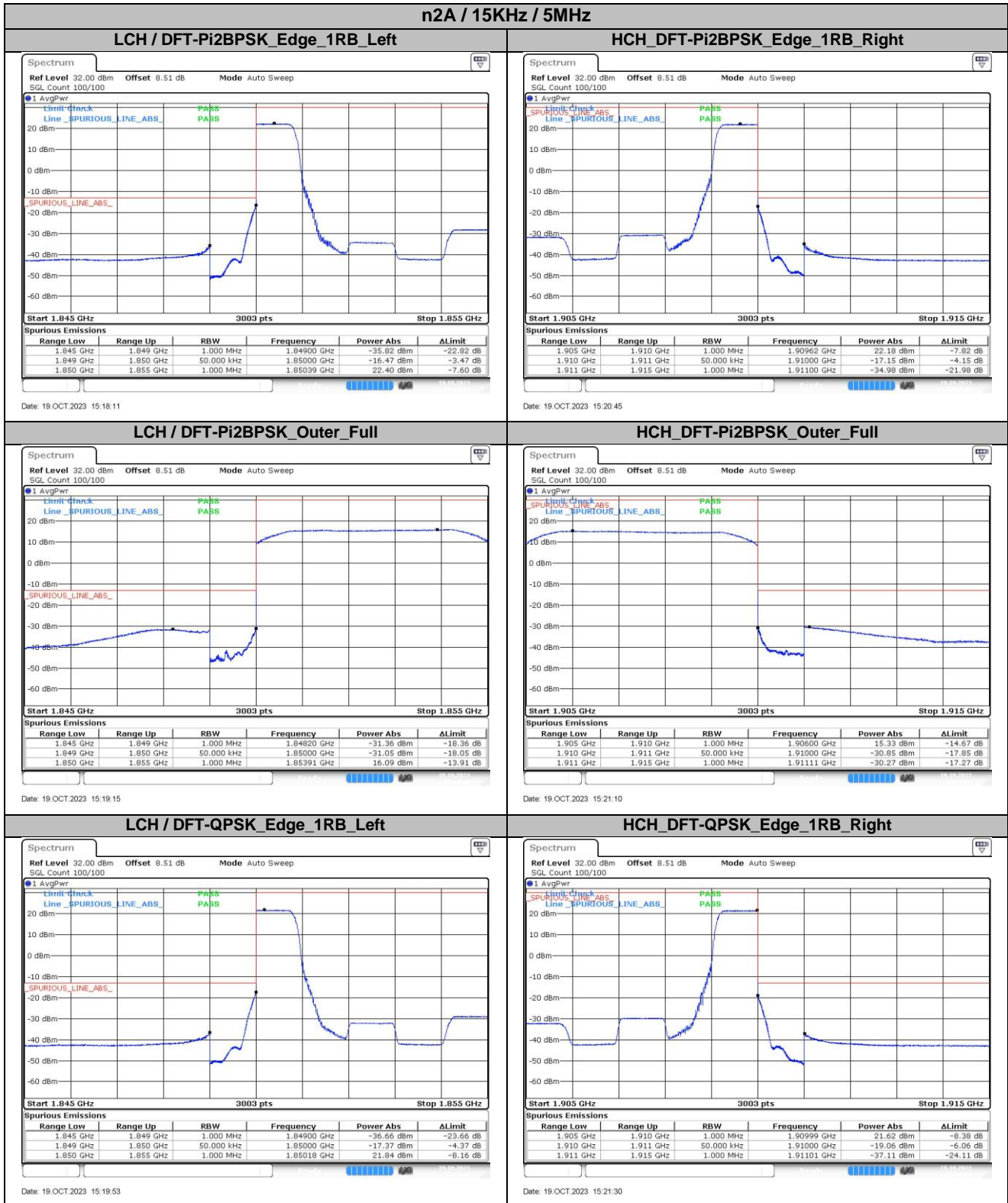
MCH_CP-256QAM / Outer_Full

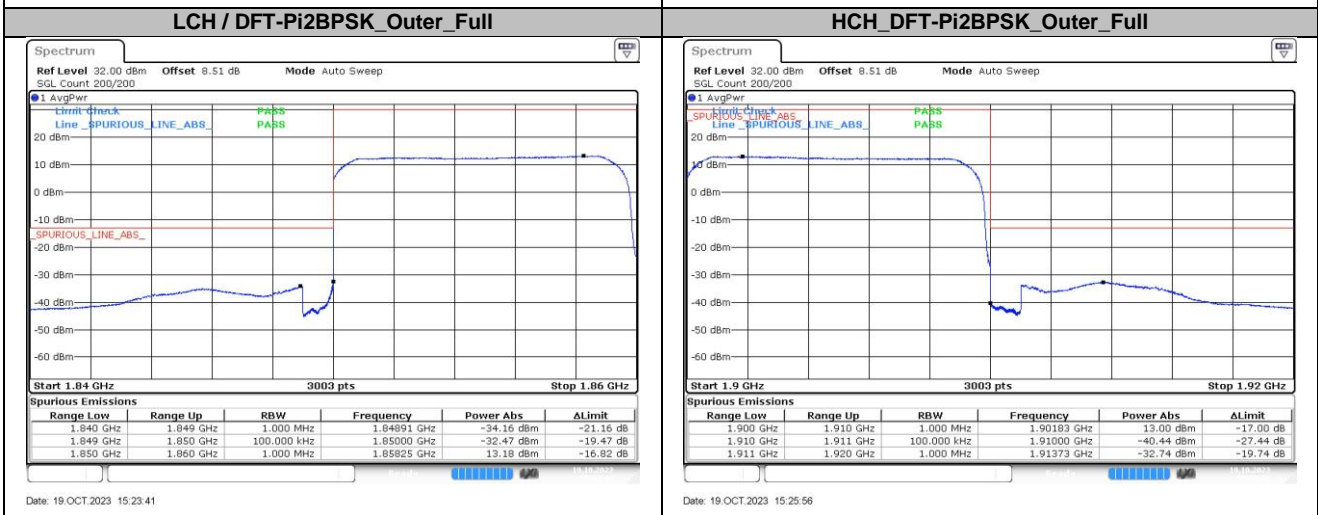
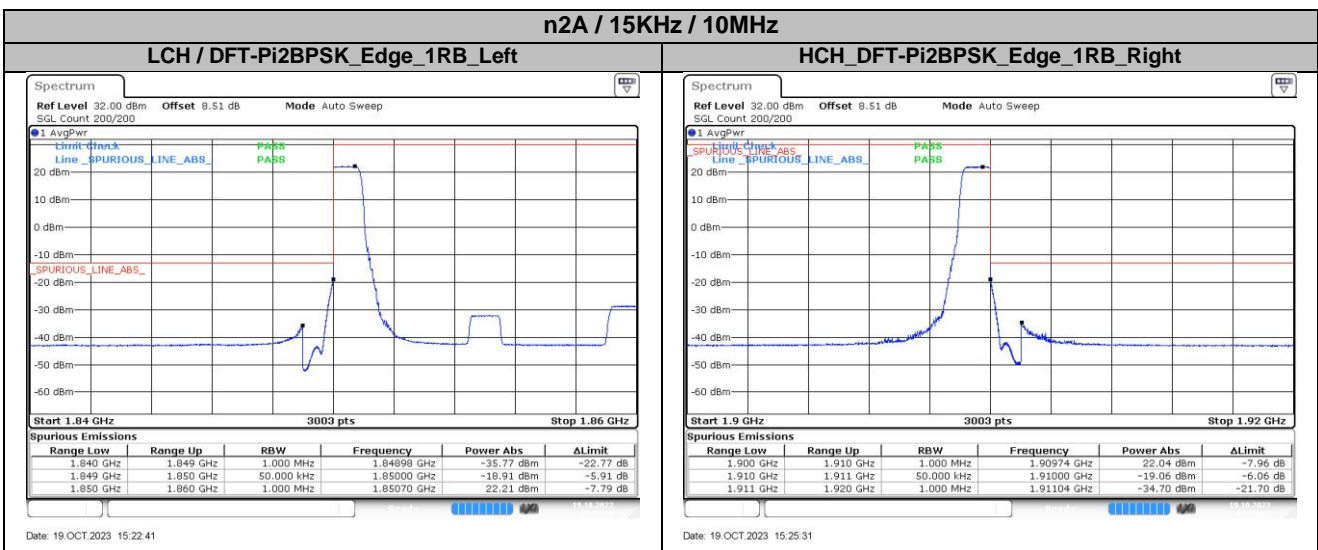
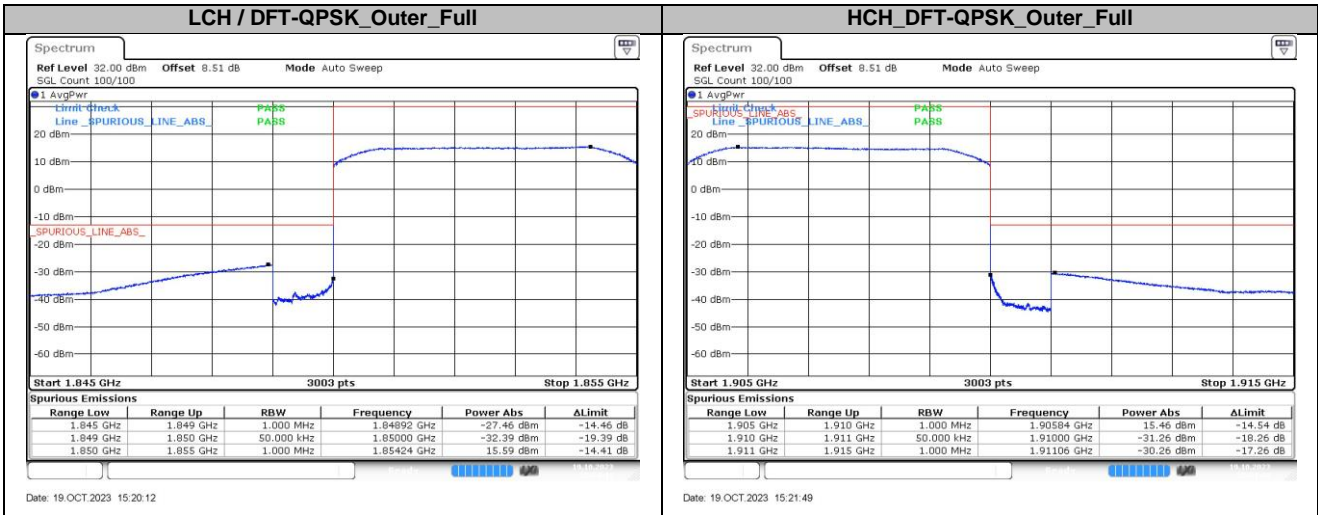


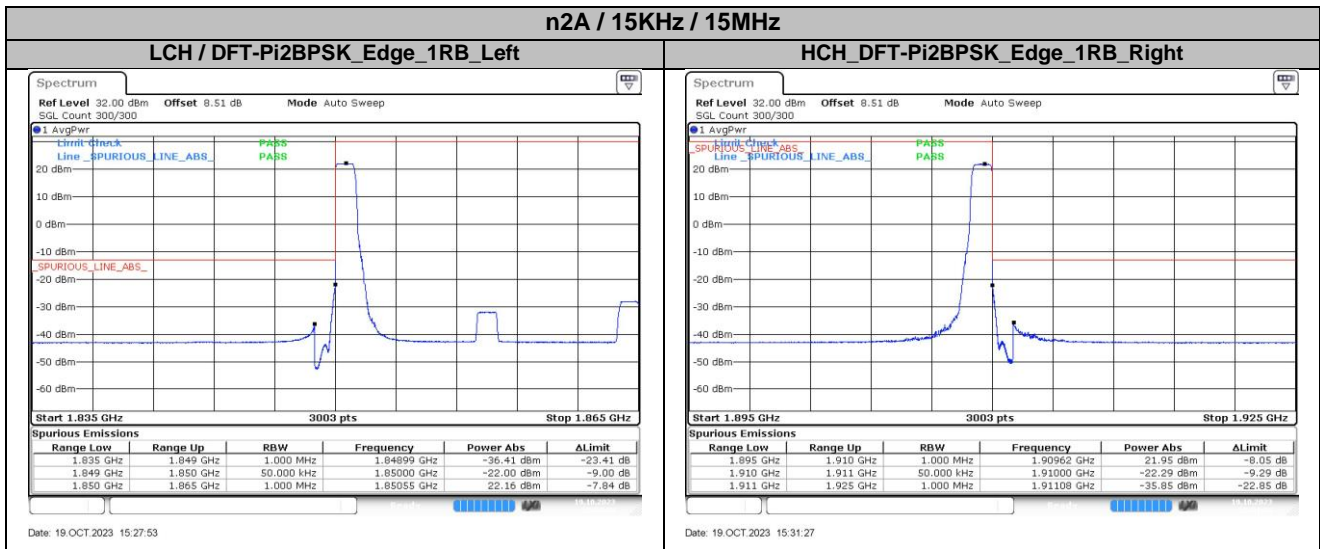
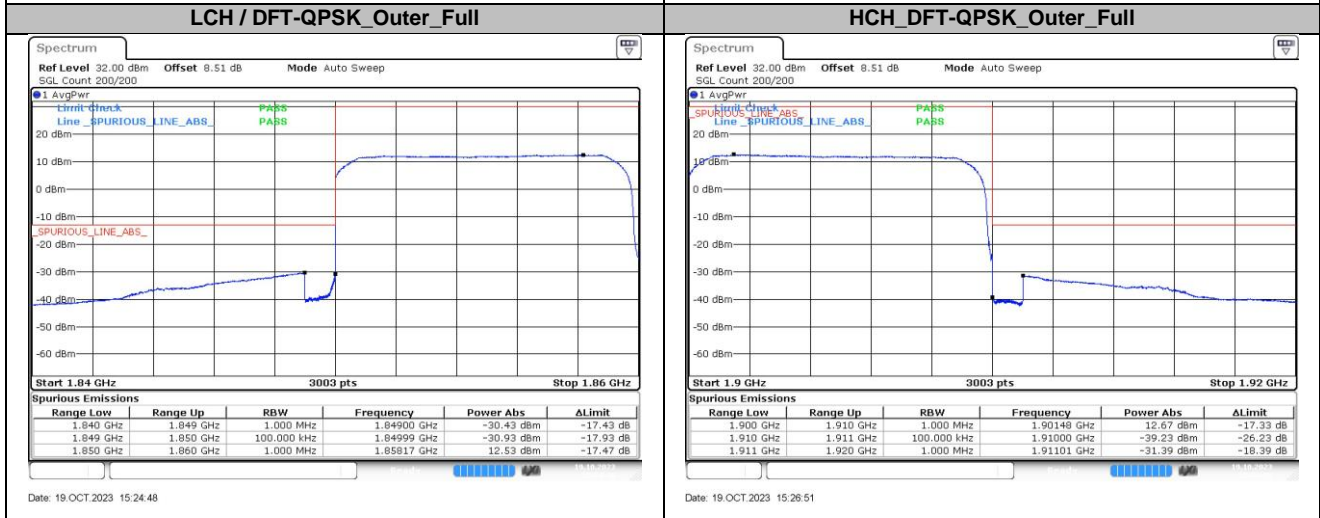
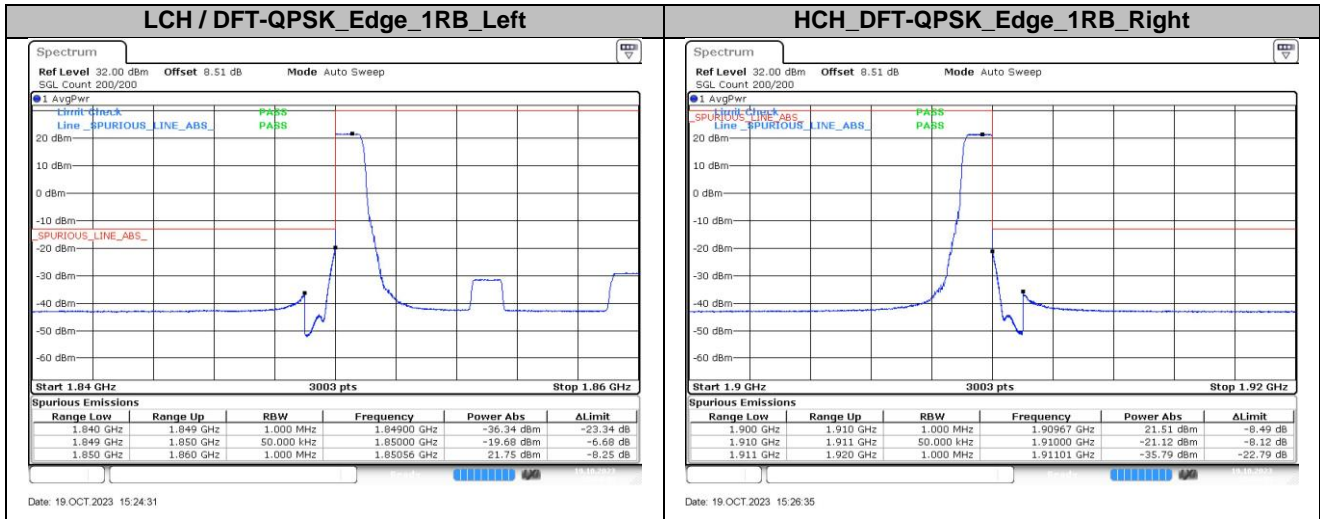
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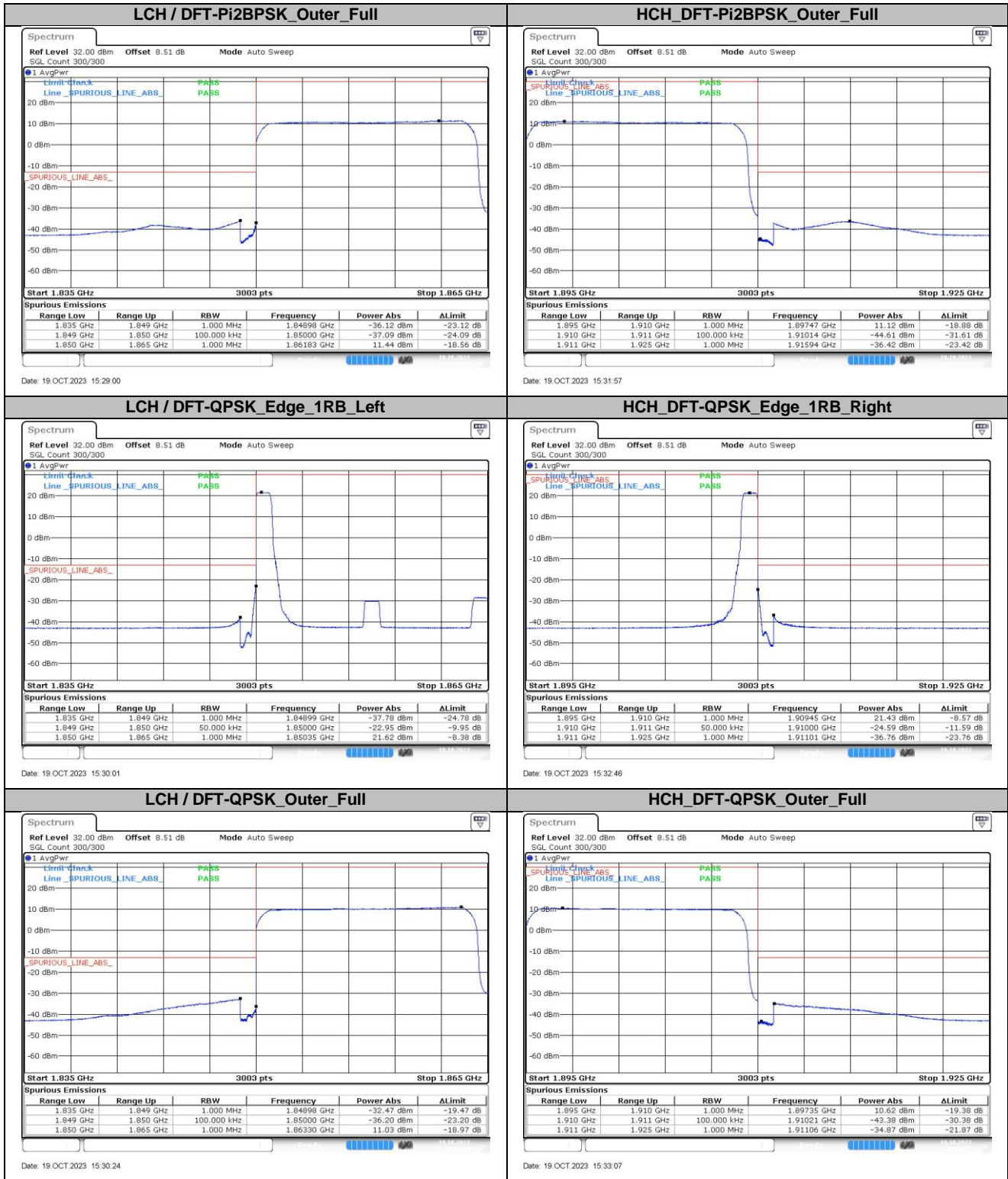
5. Conducted Band Edges

5.1. Test Plots



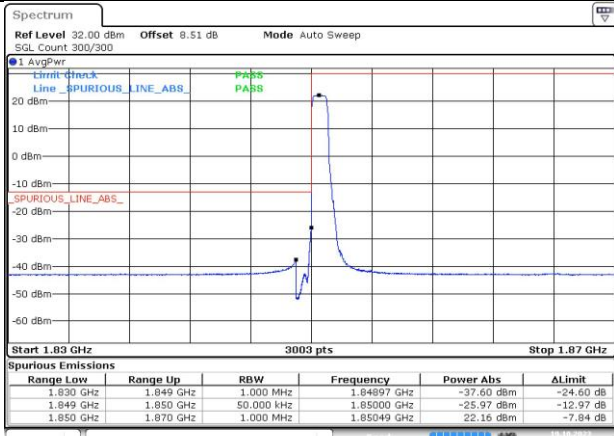






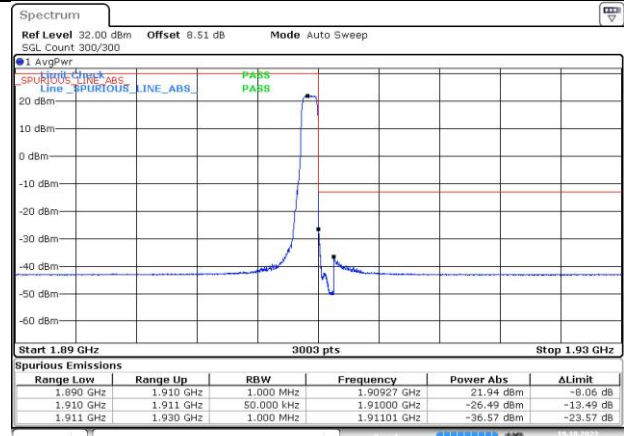
n2A / 15KHz / 20MHz

LCH / DFT-Pi2BPSK_Edge_1RB_Left



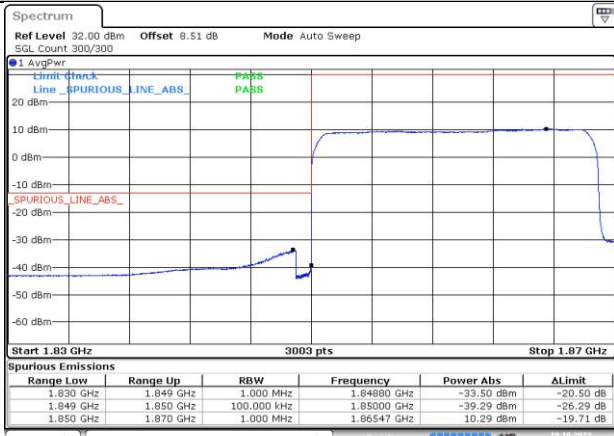
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HCH_DFT-Pi2BPSK_Edge_1RB_Right



Date: 19.OCT.2023 15:36:58

LCH / DFT-Pi2BPSK_Outer_Full



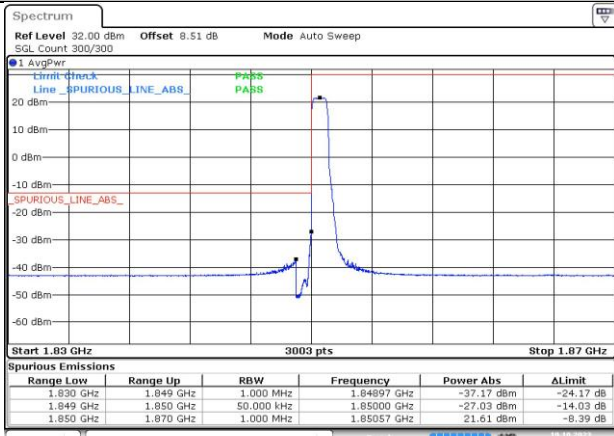
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HCH_DFT-Pi2BPSK_Outer_Full



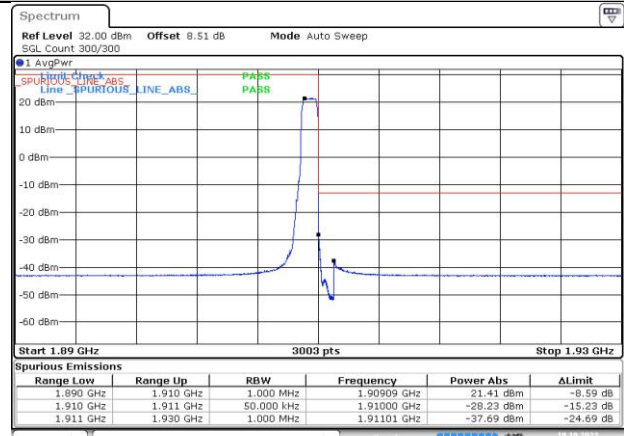
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LCH / DFT-QPSK_Edge_1RB_Left

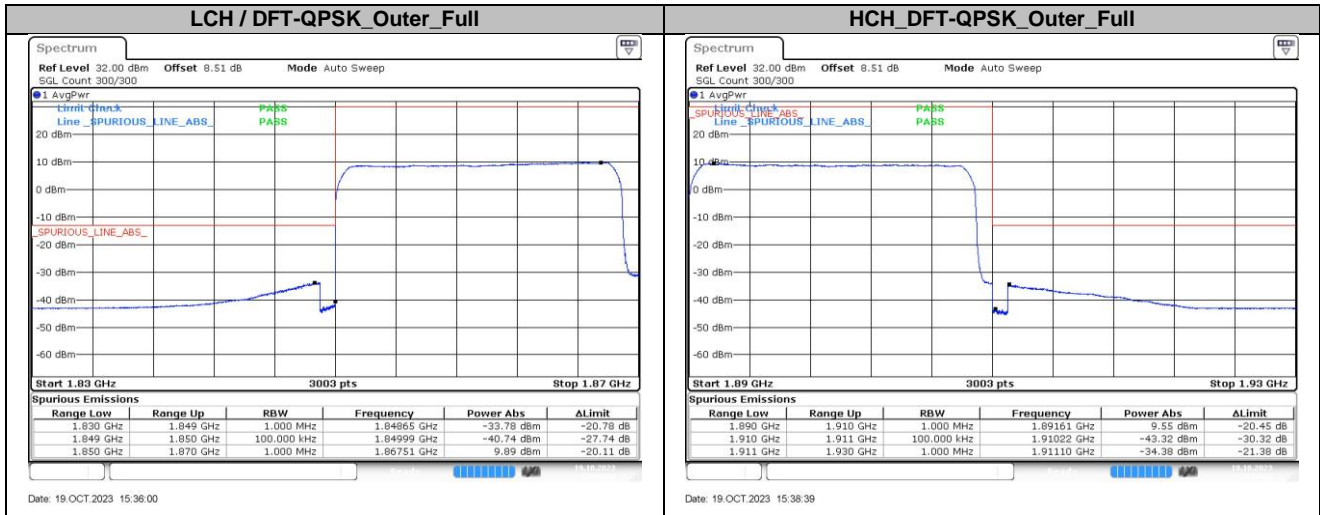


Date: 19.OCT.2023 15:35:38

HCH_DFT-QPSK_Edge_1RB_Right

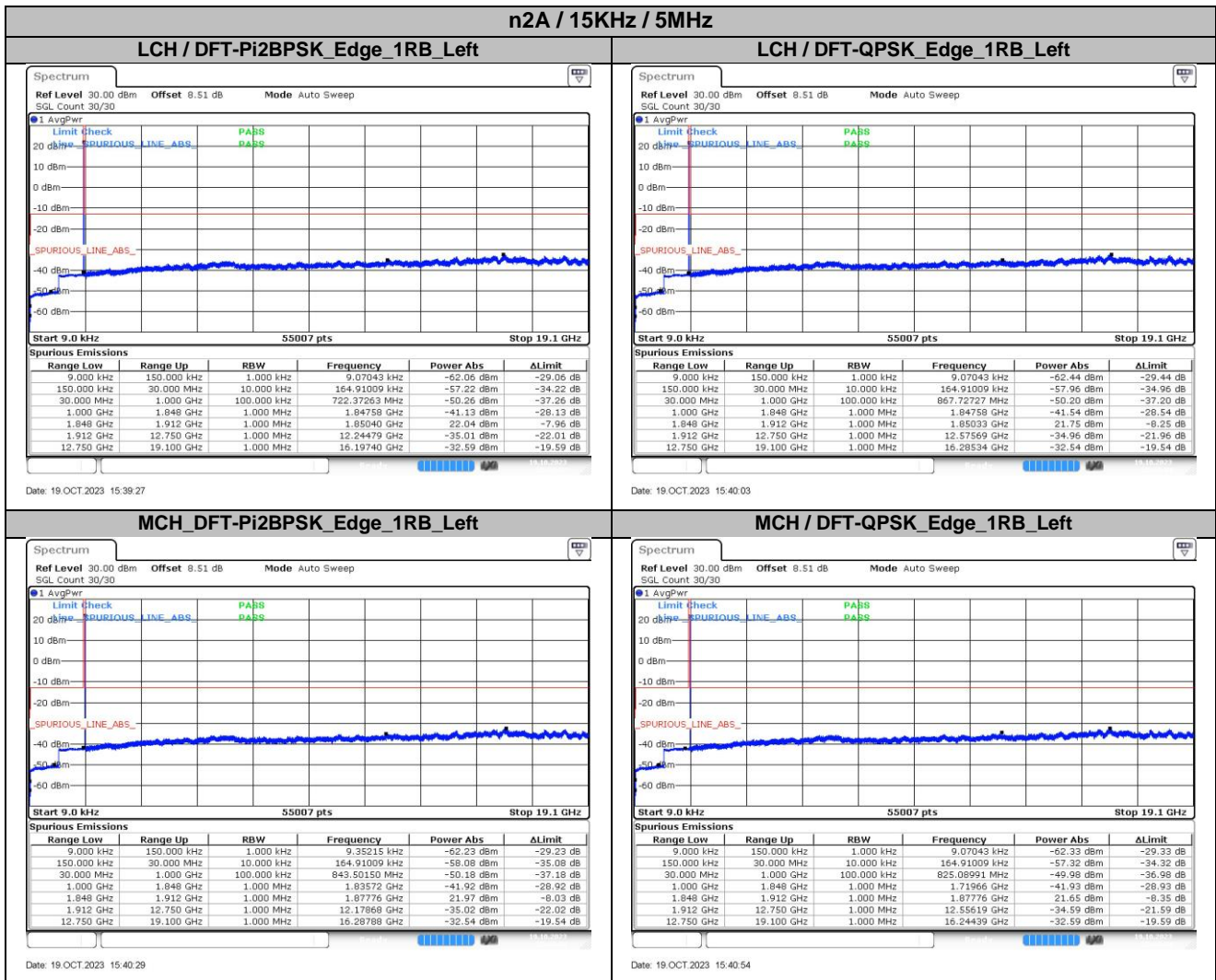


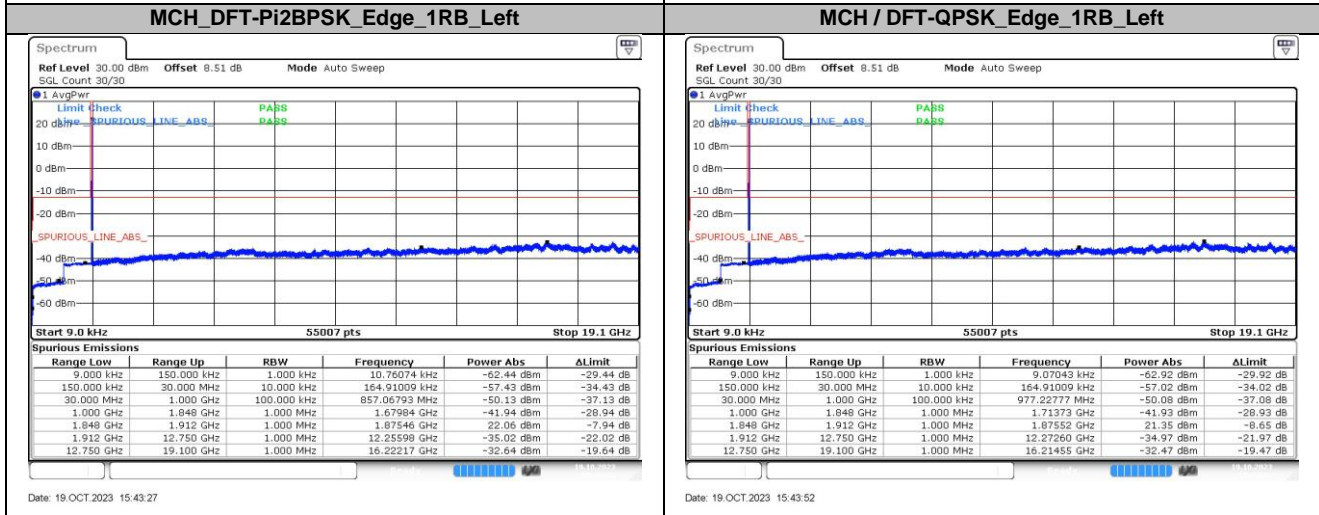
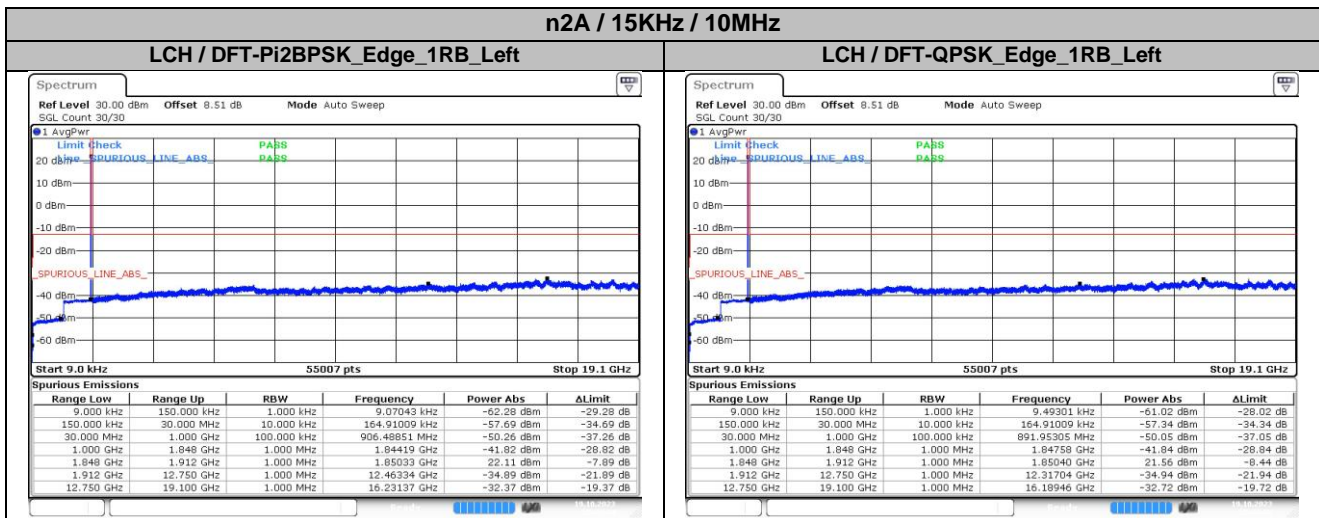
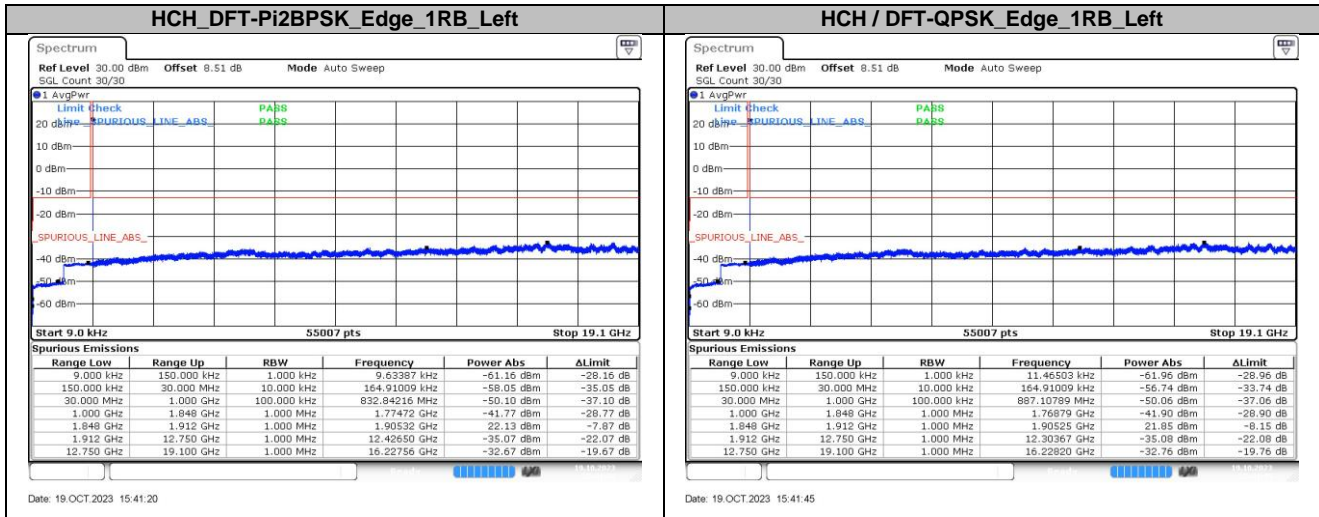
Date: 19.OCT.2023 15:38:17

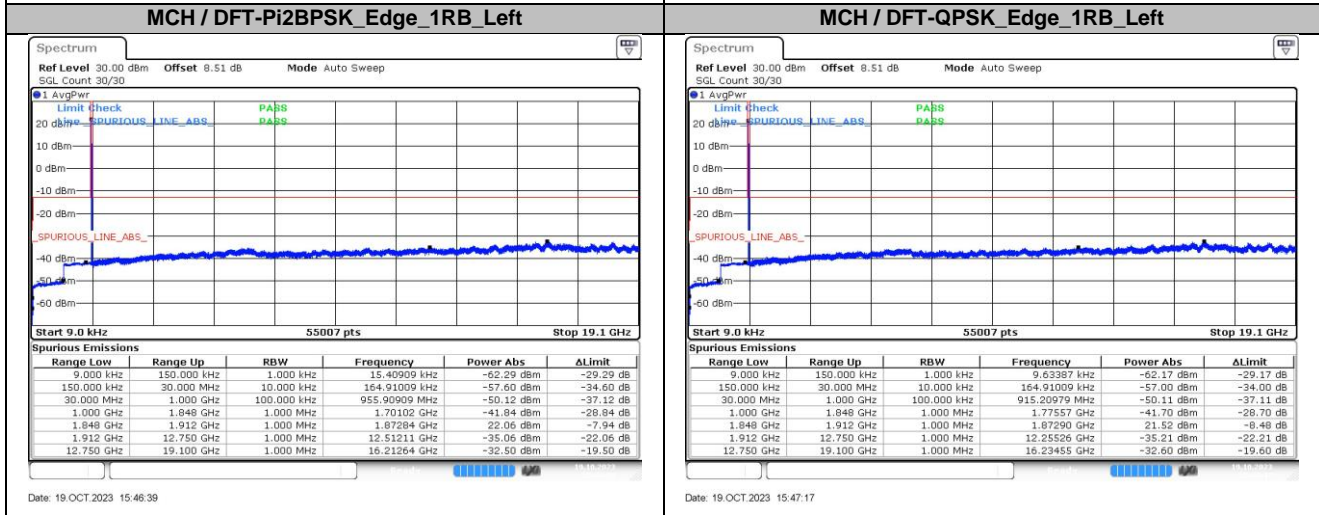
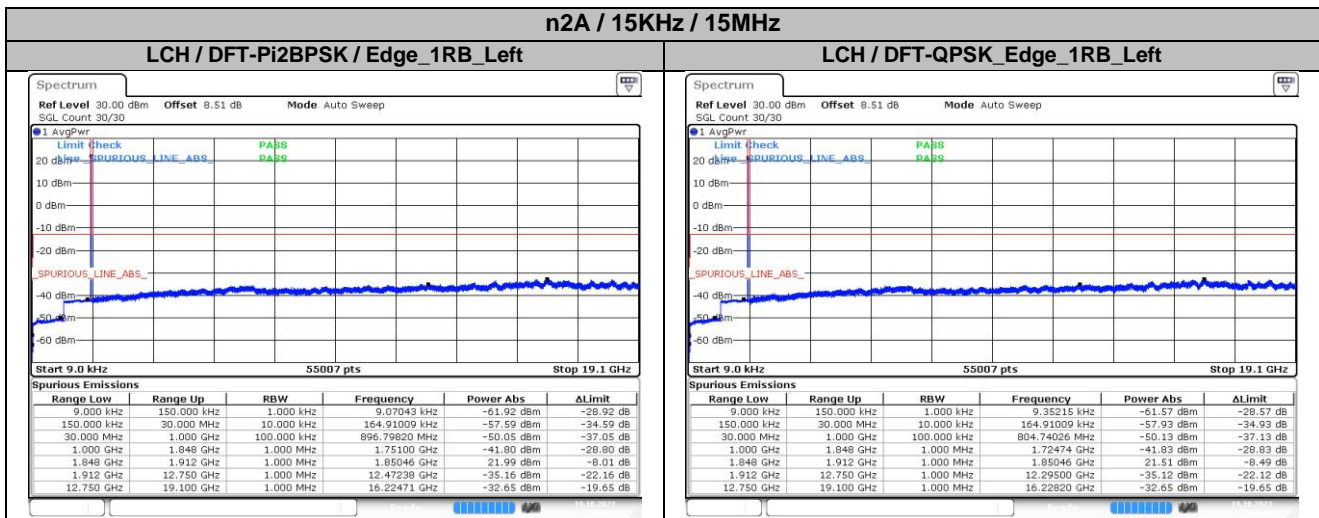
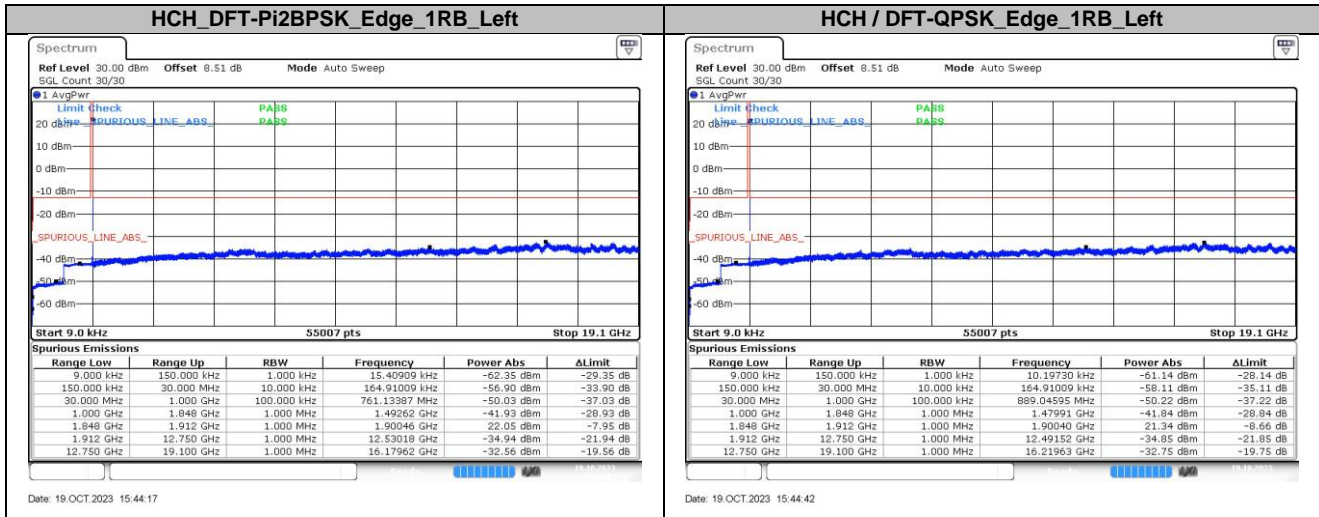


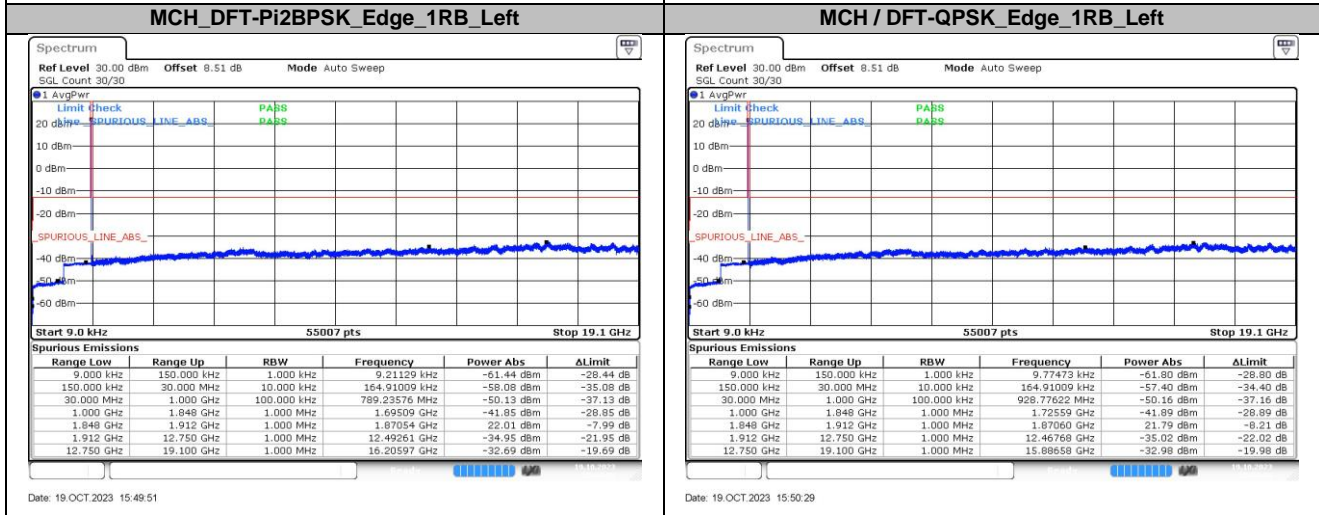
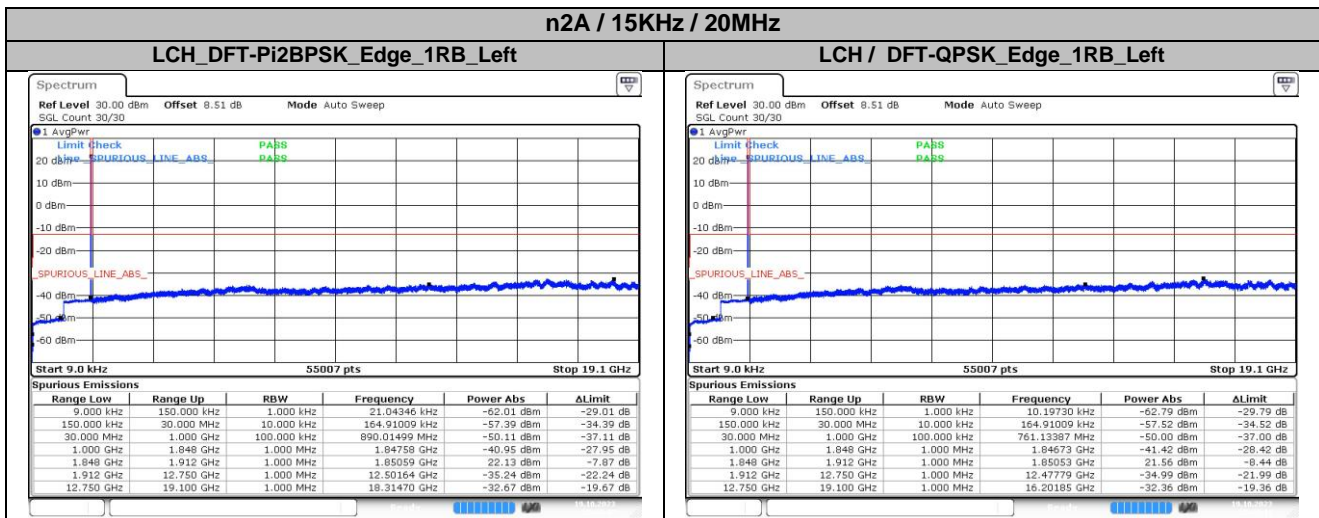
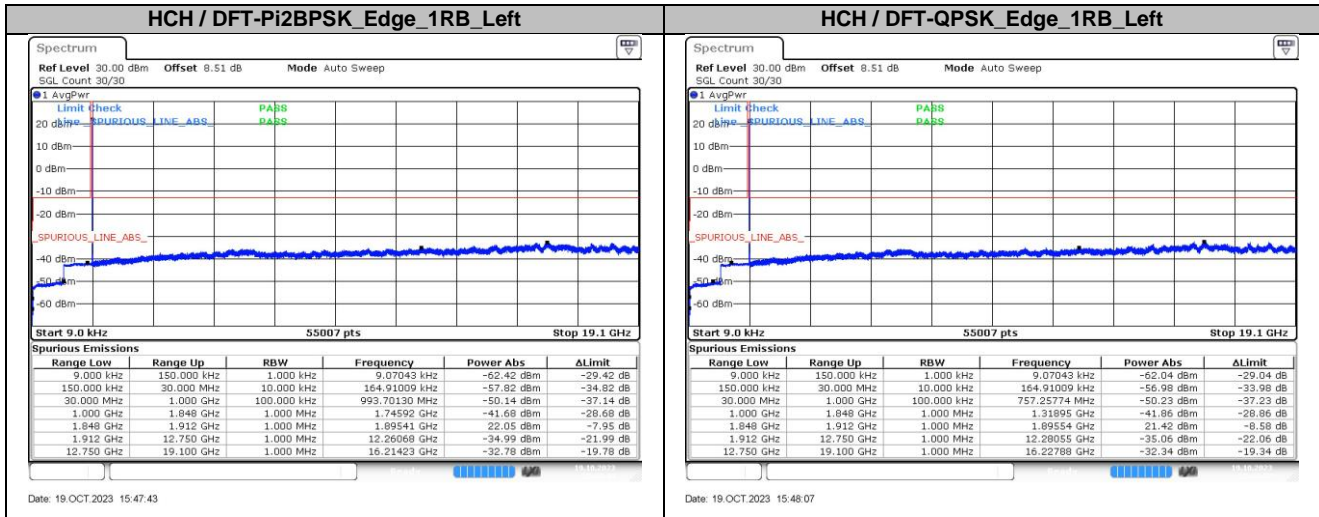
6. Conducted Spurious Emission

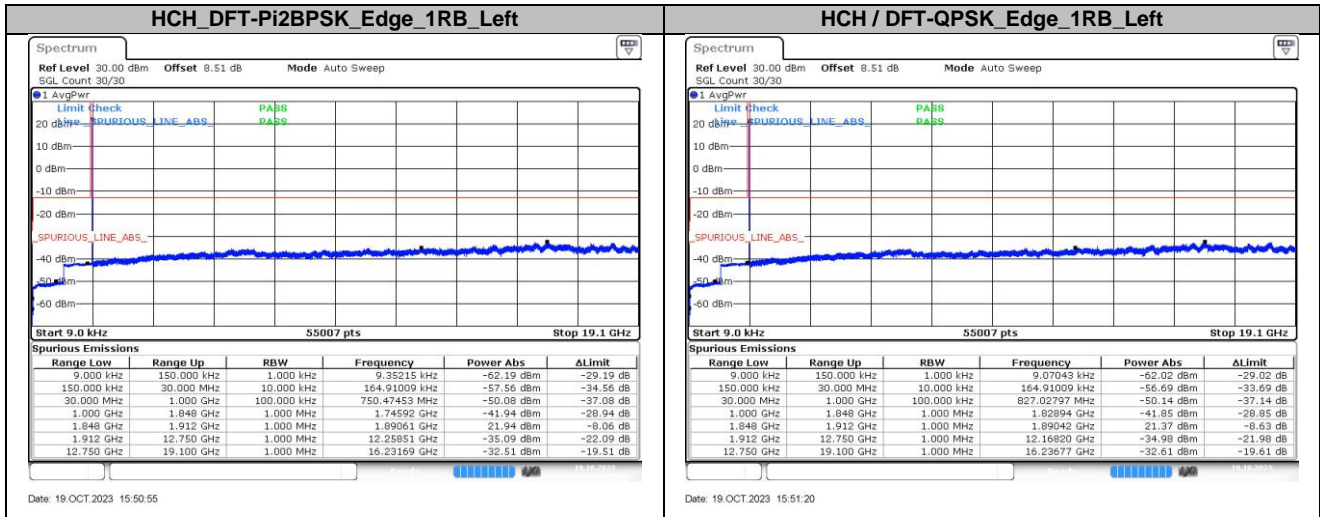
6.1. Test Plots











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	-2.70	-0.001436	Pass
15KHz	20MHz	MCH	Outer_Full	DFT-QPSK	NT	NV	4.90	0.002606	Pass
15KHz	20MHz	MCH	Outer_Full	DFT-QPSK	NT	HV	4.30	0.002287	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	2.60	0.001383	Pass
15KHz	20MHz	MCH	Outer_Full	DFT-QPSK	-20°C	NV	5.10	0.002713	Pass
15KHz	20MHz	MCH	Outer_Full	DFT-QPSK	-10°C	NV	-1.60	-0.000851	Pass
15KHz	20MHz	MCH	Outer_Full	DFT-QPSK	0°C	NV	7.40	0.003936	Pass
15KHz	20MHz	MCH	Outer_Full	DFT-QPSK	10°C	NV	4.40	0.002340	Pass
15KHz	20MHz	MCH	Outer_Full	DFT-QPSK	20°C	NV	3.70	0.001968	Pass
15KHz	20MHz	MCH	Outer_Full	DFT-QPSK	30°C	NV	4.60	0.002447	Pass
15KHz	20MHz	MCH	Outer_Full	DFT-QPSK	40°C	NV	5.40	0.002872	Pass
15KHz	20MHz	MCH	Outer_Full	DFT-QPSK	50°C	NV	5.70	0.003032	Pass

The End