

Appendix for PCS 1900

Model: LGE-NX9

BTL-FCCP-2-2203G019

Table of Contents	Page
1 . APPENDIX A - EFFECTIVE (ISOTROPIC) RADIATED POWER OF TRANSMITTER	4
1.1 TEST RESULTS	4
2 . APPENDIX B - PEAK-TO-AVERAGE RATIO	5
2.1 TEST RESULTS	5
3 . APPENDIX C - MODULATION CHARACTERISTICS	6
3.1 TEST PLOTS	6
3.1.1 PCS1900_TM1_MCH	6
3.1.2 PCS1900_TM2_MCH	6
3.1.3 PCS1900_TM3_MCH	7
4 . APPENDIX D - OCCUPIED BANDWIDTH	8
4.1 TEST RESULTS	8
4.2 TEST PLOTS	9
4.2.1 PCS1900_TM1_LCH	9
4.2.2 PCS1900_TM1_MCH	10
4.2.3 PCS1900_TM1_HCH	11
4.2.4 PCS1900_TM2_LCH	12
4.2.5 PCS1900_TM2_MCH	13
4.2.6 PCS1900_TM2_HCH	14
4.2.7 PCS1900_TM3_LCH	15
4.2.8 PCS1900_TM3_MCH	16
4.2.9 PCS1900_TM3_HCH	17
5 . APPENDIX E - BAND EDGES COMPLIANCE	18
5.1 TEST RESULTS	18
5.2 TEST PLOTS	19
5.2.1 PCS1900_TM1_LCH	19
5.2.2 PCS1900_TM1_HCH	19
5.2.3 PCS1900_TM2_LCH	20
5.2.4 PCS1900_TM2_HCH	20
5.2.5 PCS1900_TM3_LCH	21
5.2.6 PCS1900_TM3_HCH	21
6 . APPENDIX F - SPURIOUS EMISSION AT ANTENNA TERMINAL	22
6.1 TEST RESULTS	22
6.2 TEST PLOTS	23
6.2.1 PCS1900_TM1_LCH	23
6.2.2 PCS1900_TM1_MCH	25
6.2.3 PCS1900_TM1_HCH	27
6.2.4 PCS1900_TM2_LCH	29

Table of Contents	Page
6.2.5 PCS1900_TM2_MCH	31
6.2.6 PCS1900_TM2_HCH	33
6.2.7 PCS1900_TM3_LCH	35
6.2.8 PCS1900_TM3_MCH	37
6.2.9 PCS1900_TM3_HCH	39
7 . APPENDIX G - FREQUENCY STABILITY	41
7.1 TEST RESULTS	41
7.1.1 FREQUENCY ERROR VS. VOLTAGE	41
7.1.2 FREQUENCY ERROR VS. TEMPERATURE	42

1. APPENDIX A - EFFECTIVE (ISOTROPIC) RADIATED POWER OF TRANSMITTER

1.1 TEST RESULTS

Effective (Isotropic) Radiated Power of Transmitter							
Test Band	Test Mode	Test Channel	Conducted Power [dBm]	Gain [dBi]	EIRP [dBm]	Limit [dBm]	Verdict
PCS1900	TM1	LCH	28.38	-1.6	26.28	33	PASS
		MCH	28.11	-1.6	26.01	33	PASS
		HCH	28.46	-1.6	26.36	33	PASS
	TM2	LCH	28.28	-1.6	26.18	33	PASS
		MCH	28.24	-1.6	26.14	33	PASS
		HCH	28.42	-1.6	26.32	33	PASS
	TM3	LCH	23.74	-1.6	21.64	33	PASS
		MCH	24.26	-1.6	22.16	33	PASS
		HCH	24.36	-1.6	22.26	33	PASS

2. APPENDIX B - PEAK-TO-AVERAGE RATIO

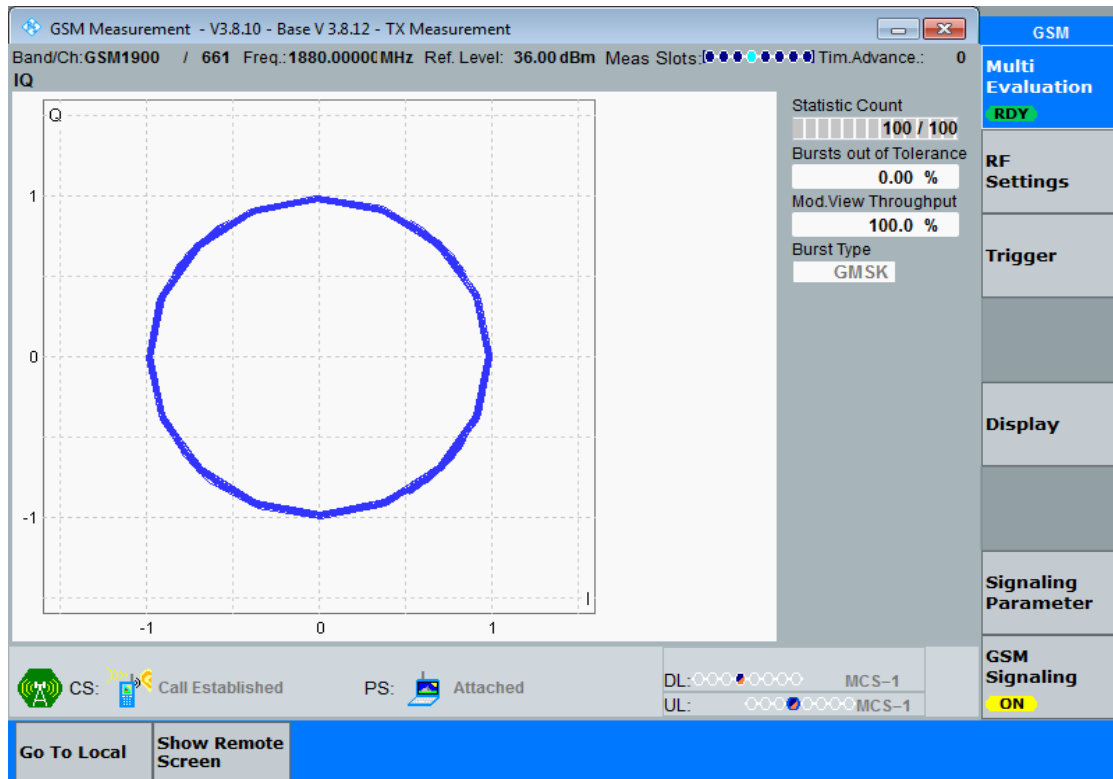
2.1 TEST RESULTS

Peak-to-Average Ratio					
Test Band	Test Mode	Test Channel	Measured[dB]	Limit [dBm]	Verdict
PCS1900	TM1	LCH	2.97	13	PASS
		MCH	-7.26	13	PASS
		HCH	-7.27	13	PASS
	TM2	LCH	-7.05	13	PASS
		MCH	-7.14	13	PASS
		HCH	-7.58	13	PASS
	TM3	LCH	-4.13	13	PASS
		MCH	-4.05	13	PASS
		HCH	-4.19	13	PASS

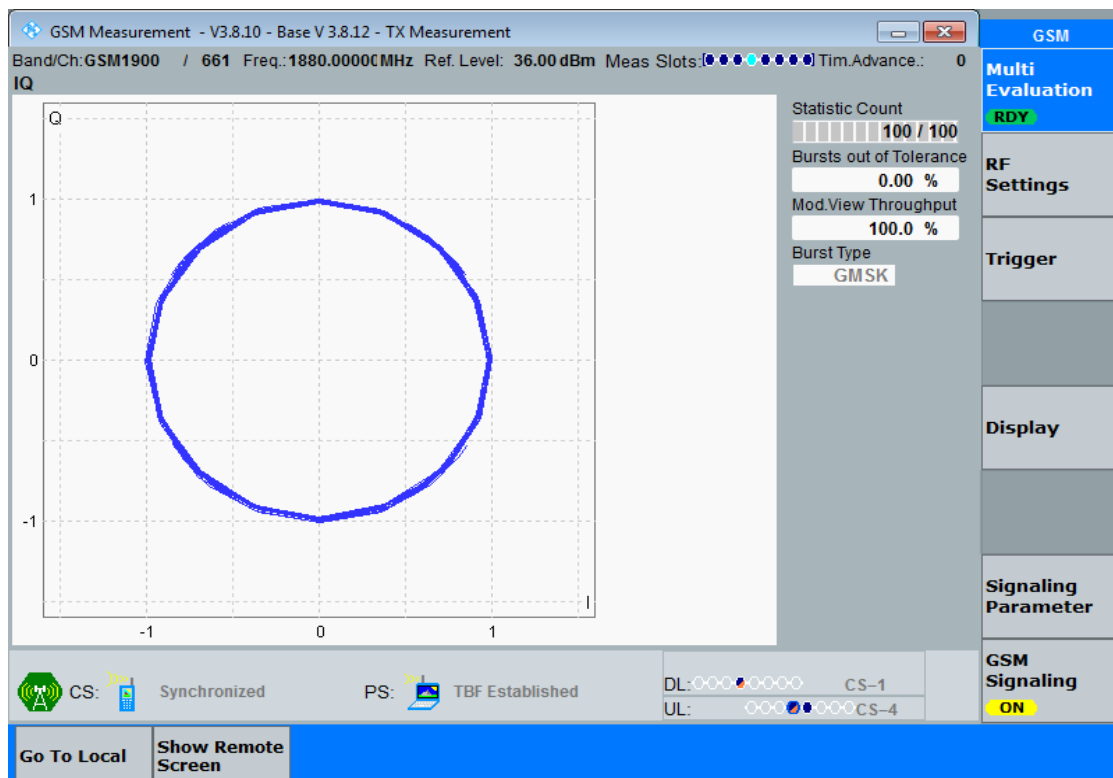
3. APPENDIX C - MODULATION CHARACTERISTICS

3.1 TEST PLOTS

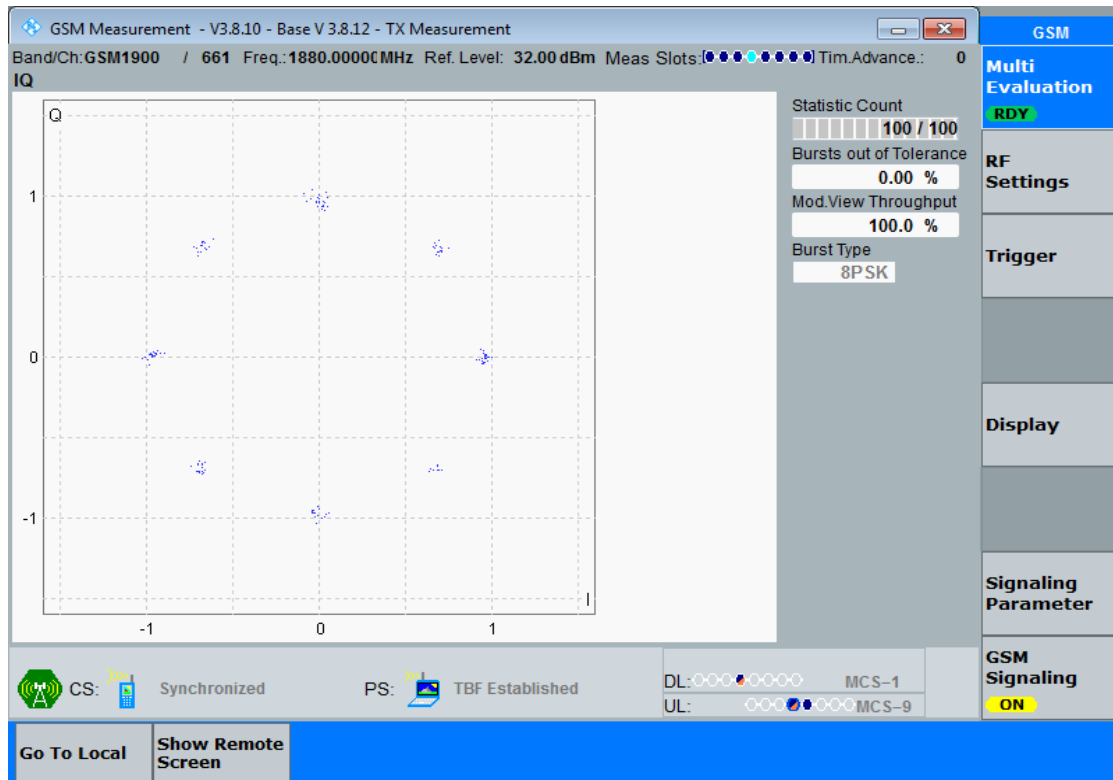
3.1.1 PCS1900_TM1_MCH



3.1.2 PCS1900_TM2_MCH



3.1.3 PCS1900_TM3_MCH



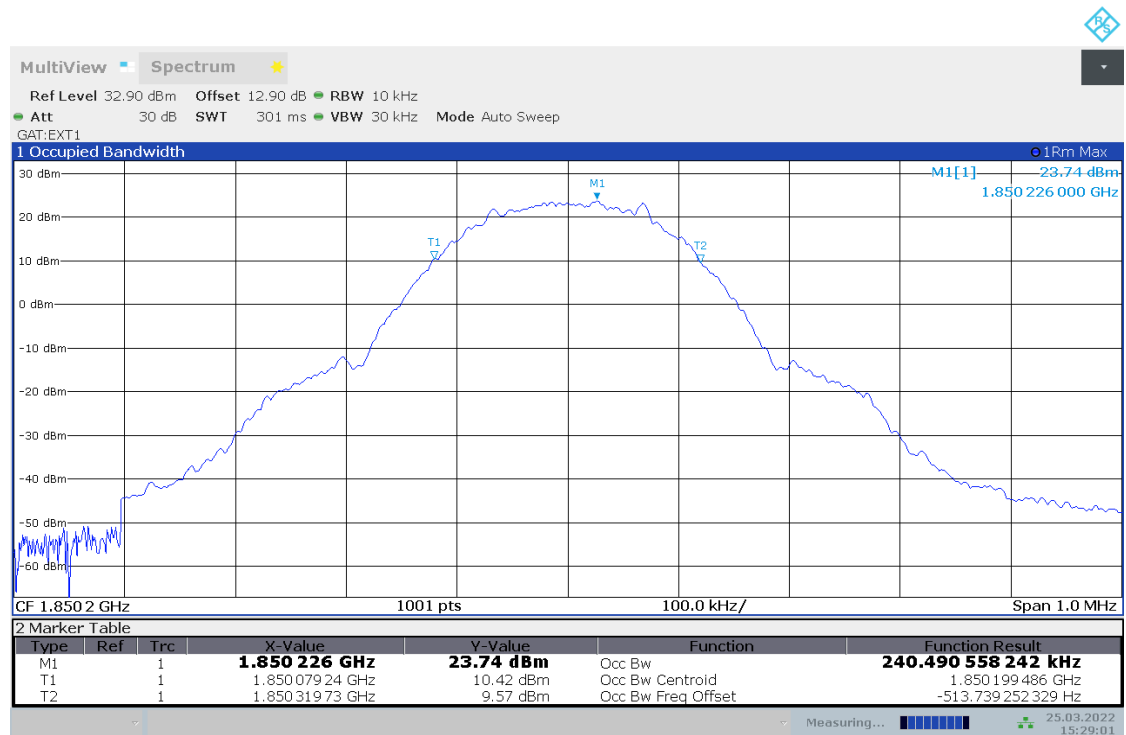
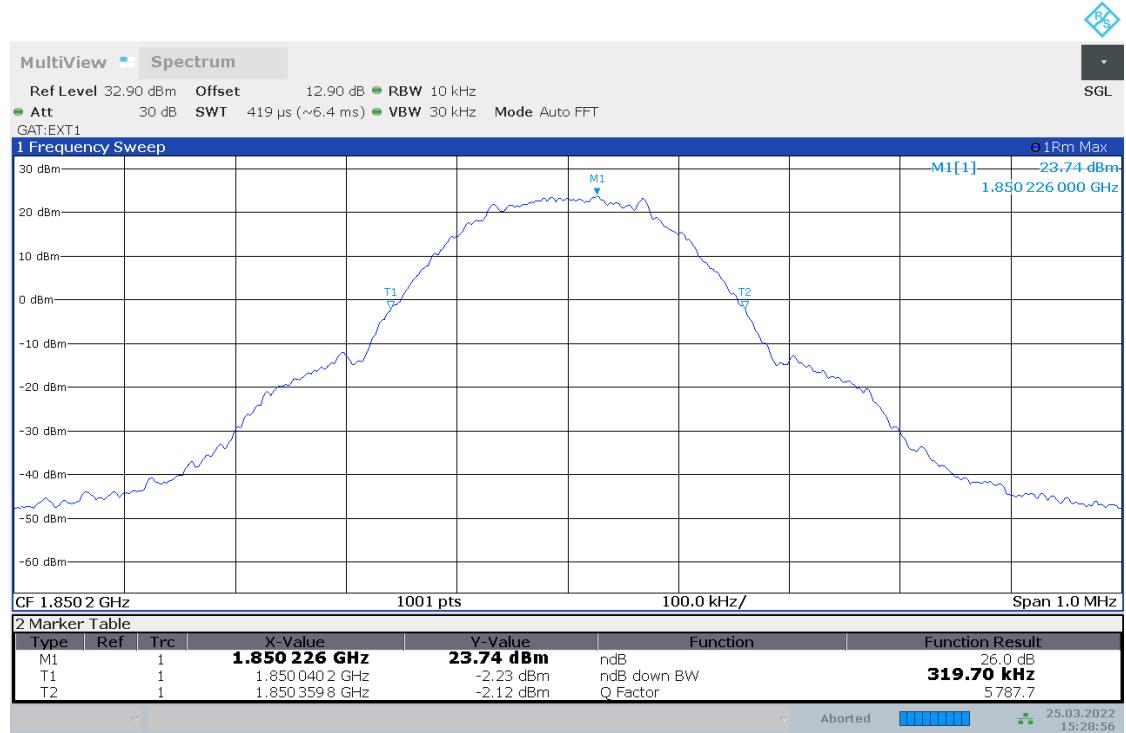
4. APPENDIX D - OCCUPIED BANDWIDTH

4.1 TEST RESULTS

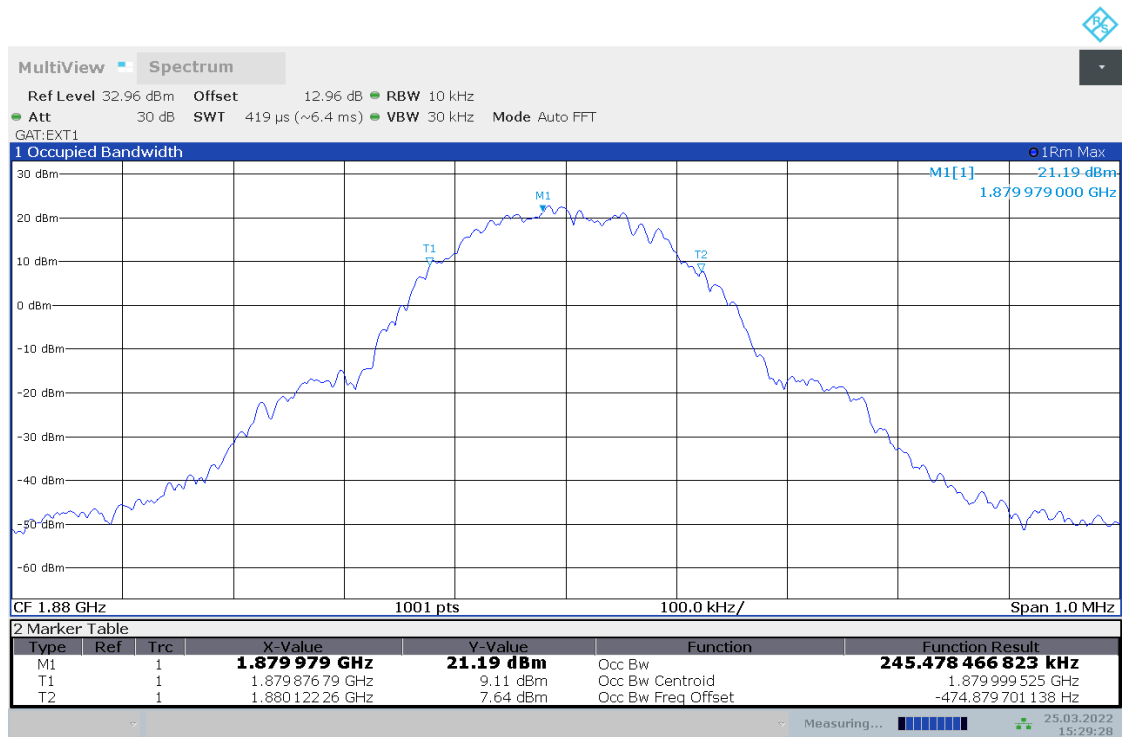
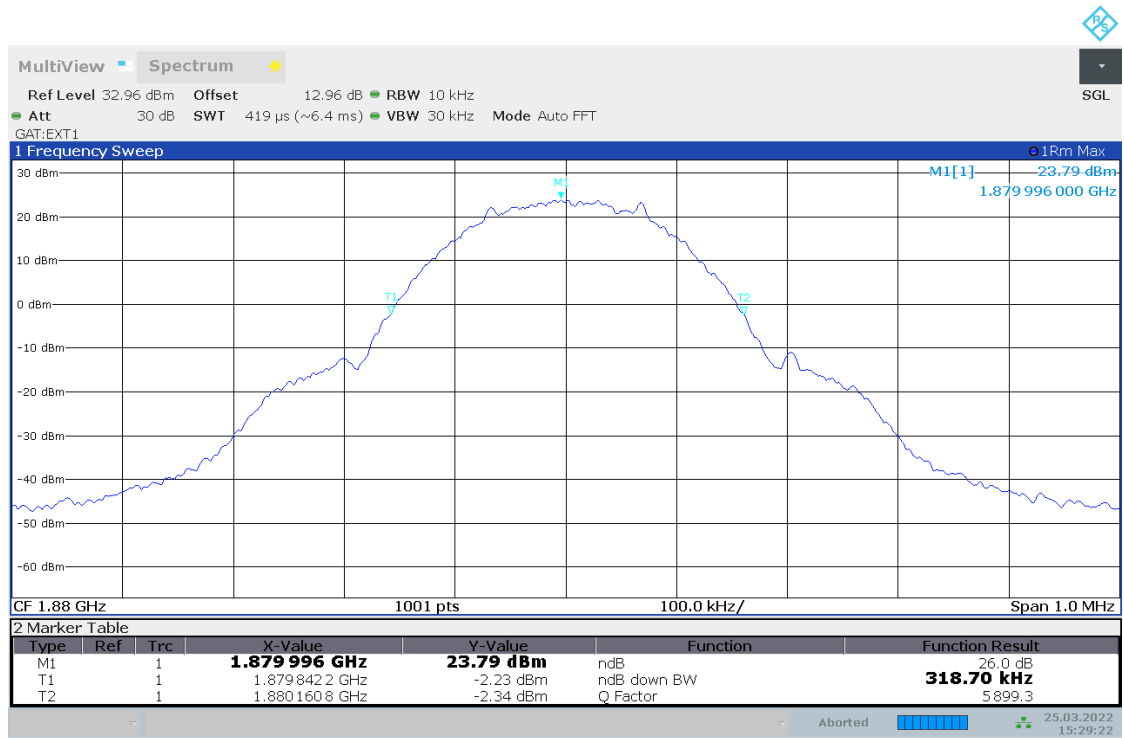
Occupied Bandwidth					
Test Band	Test Mode	Test Channel	Occupied Bandwidth [kHz]	Emission Bandwidth [KHz]	Verdict
PCS1900	TM1	LCH	240.49	319.70	PASS
		MCH	242.79	318.70	PASS
		HCH	241.64	321.70	PASS
	TM2	LCH	244.95	320.70	PASS
		MCH	243.14	318.70	PASS
		HCH	243.95	320.70	PASS
	TM3	LCH	246.50	314.70	PASS
		MCH	248.95	319.70	PASS
		HCH	250.91	321.70	PASS

4.2 TEST PLOTS

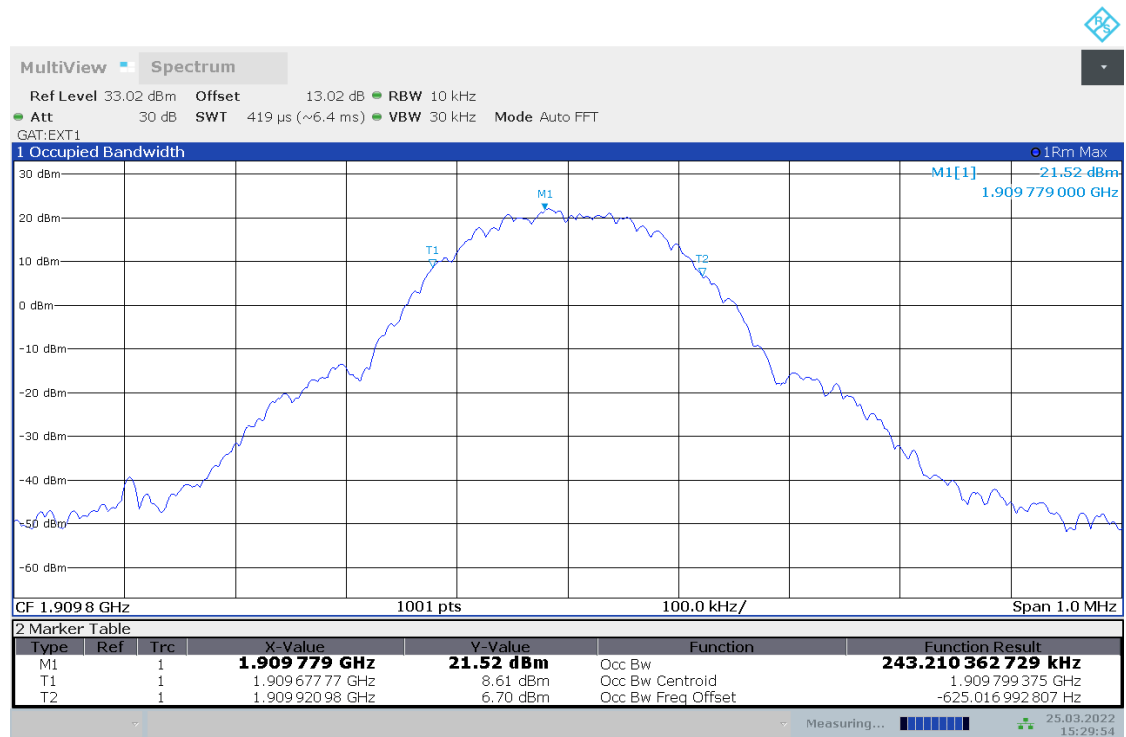
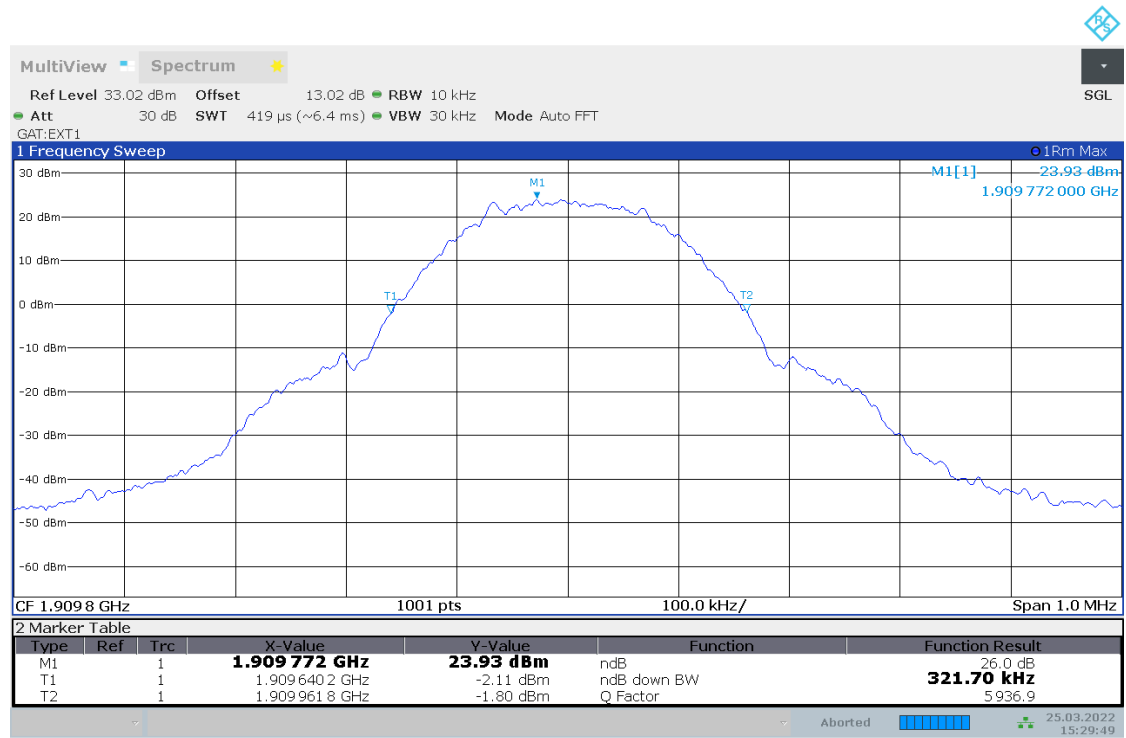
4.2.1 PCS1900_TM1_LCH



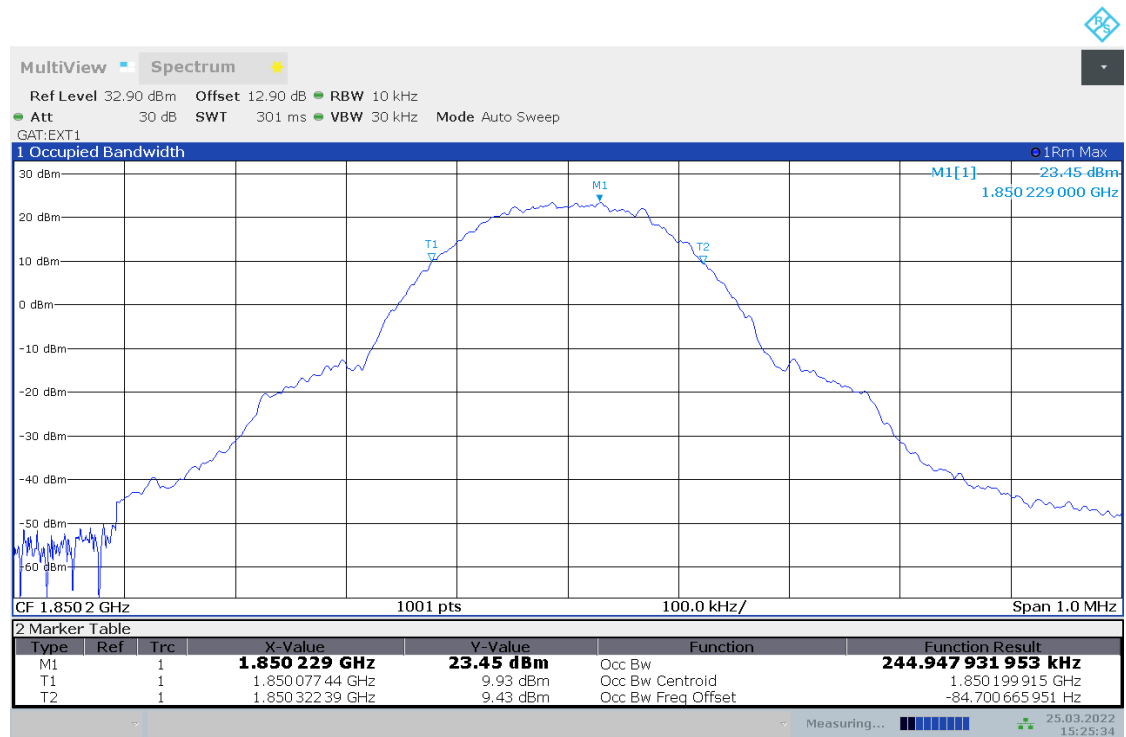
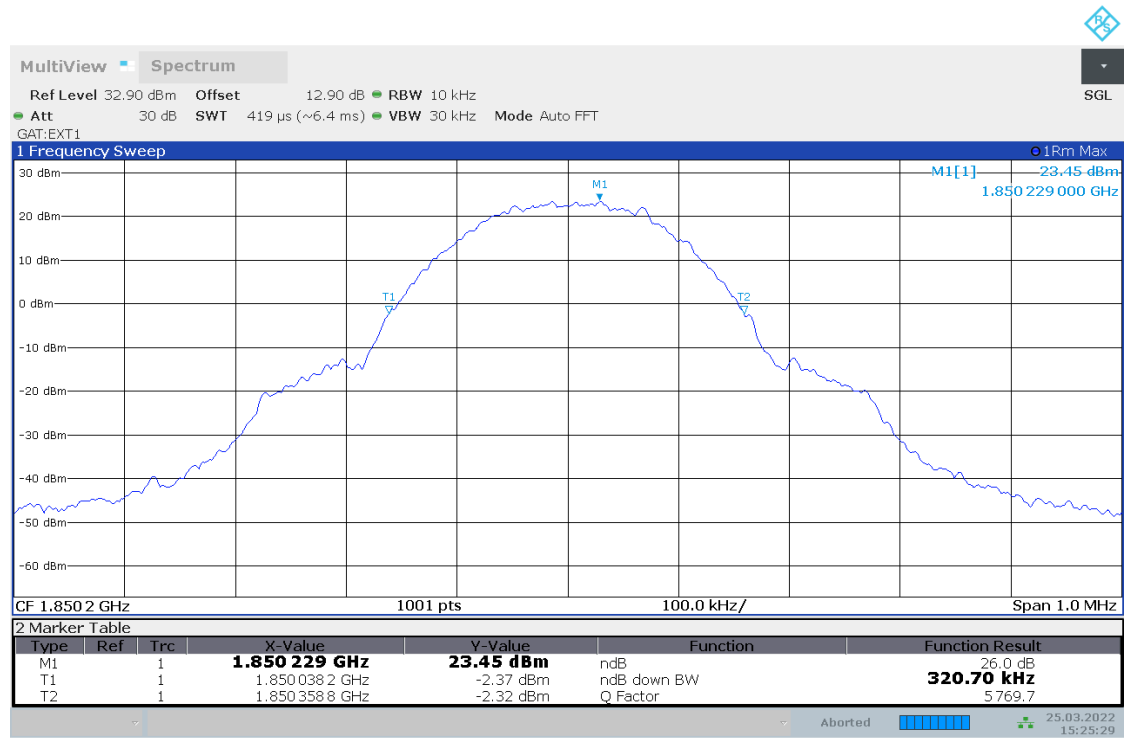
4.2.2 PCS1900_TM1_MCH



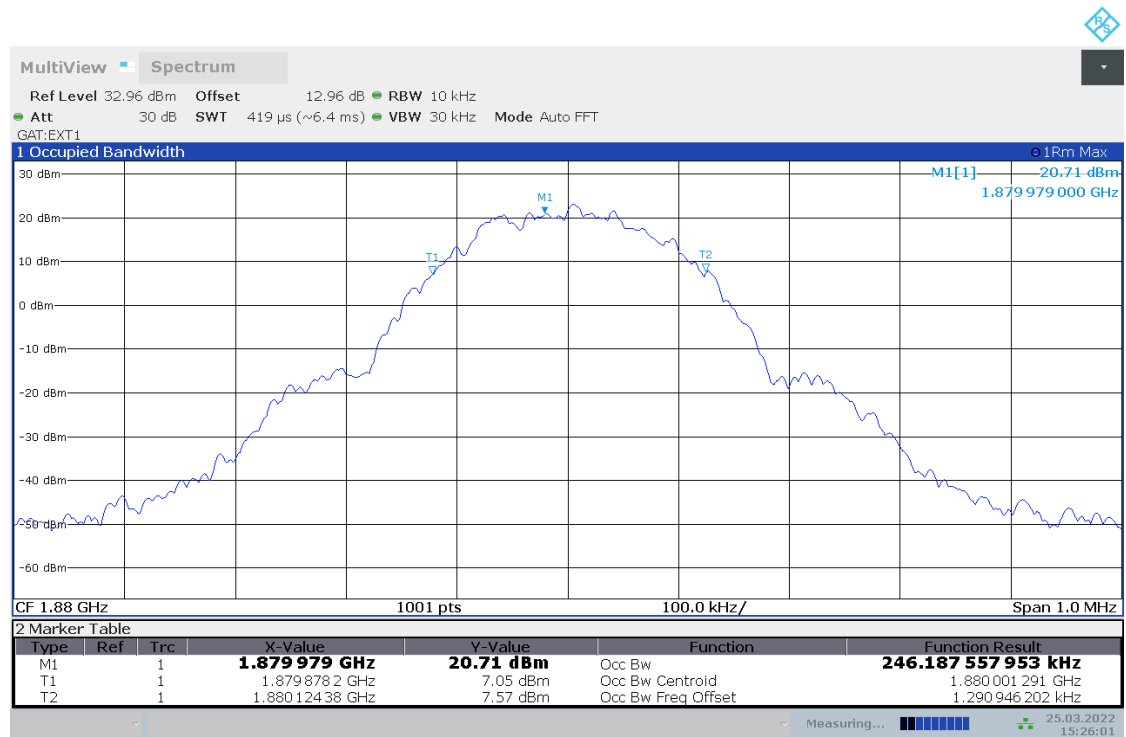
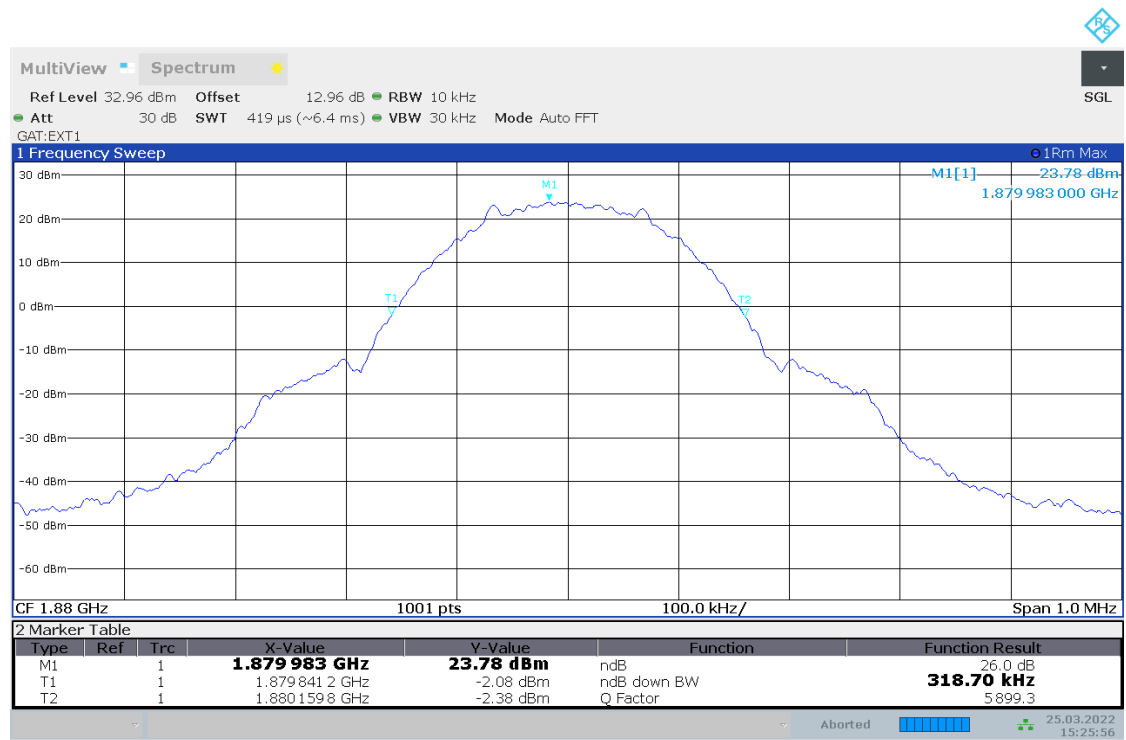
4.2.3 PCS1900_TM1_HCH



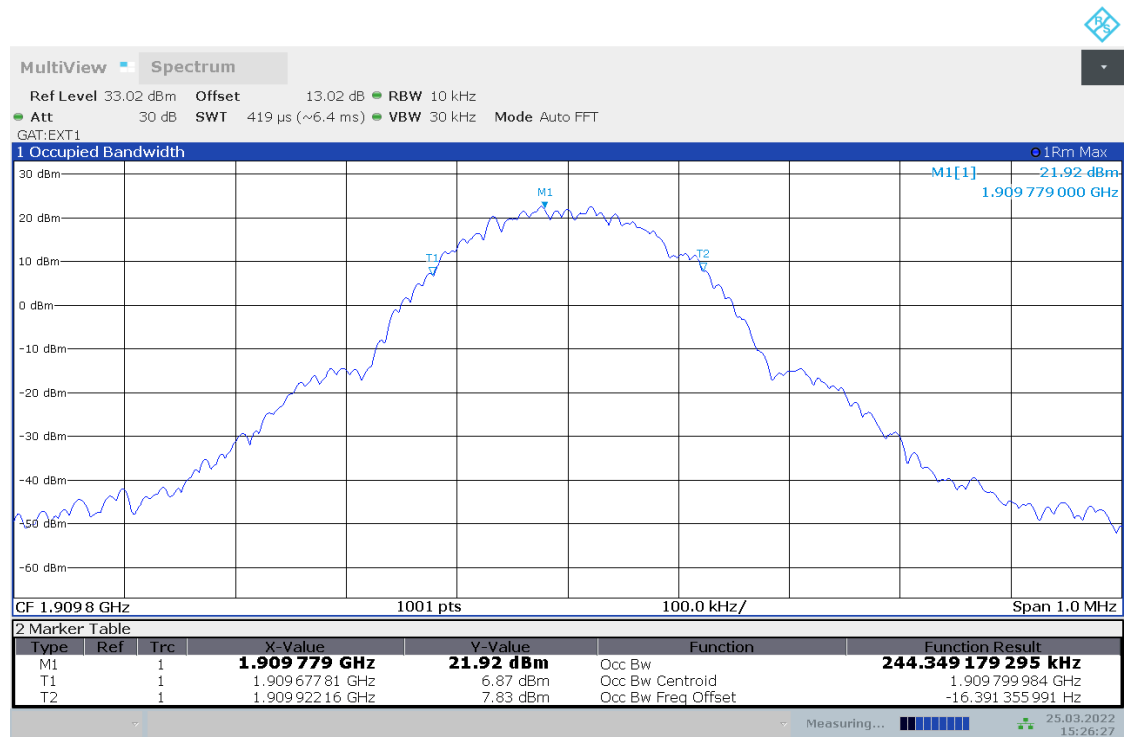
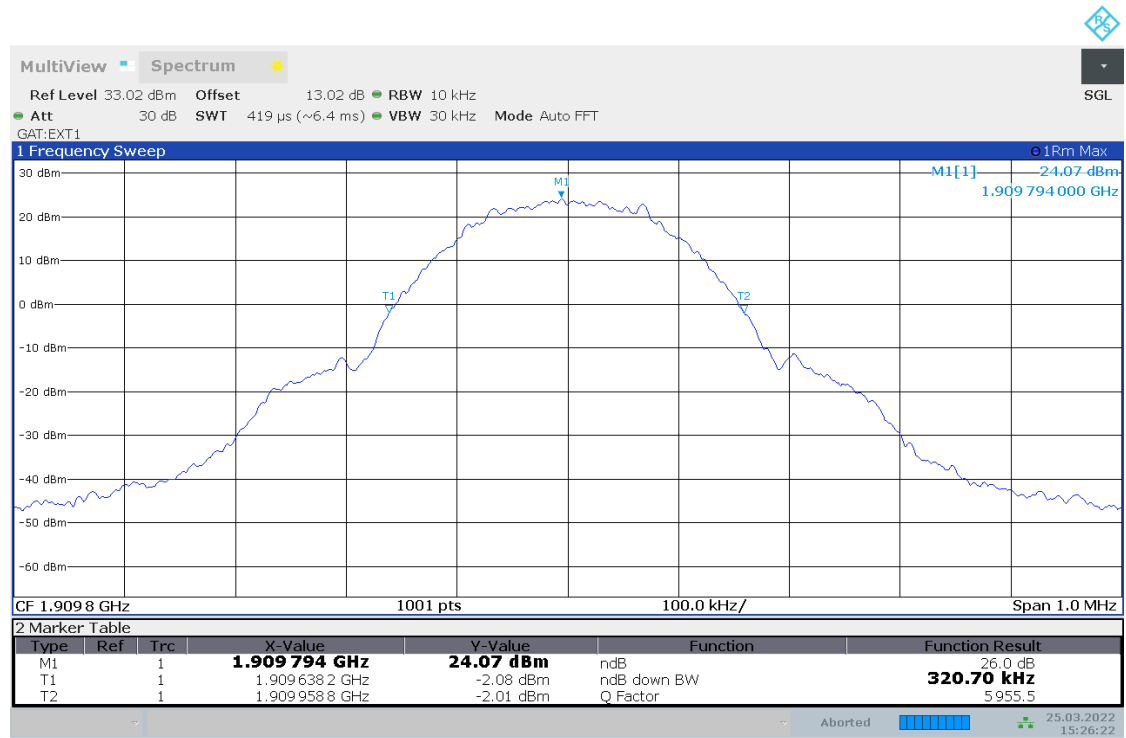
4.2.4 PCS1900_TM2_LCH



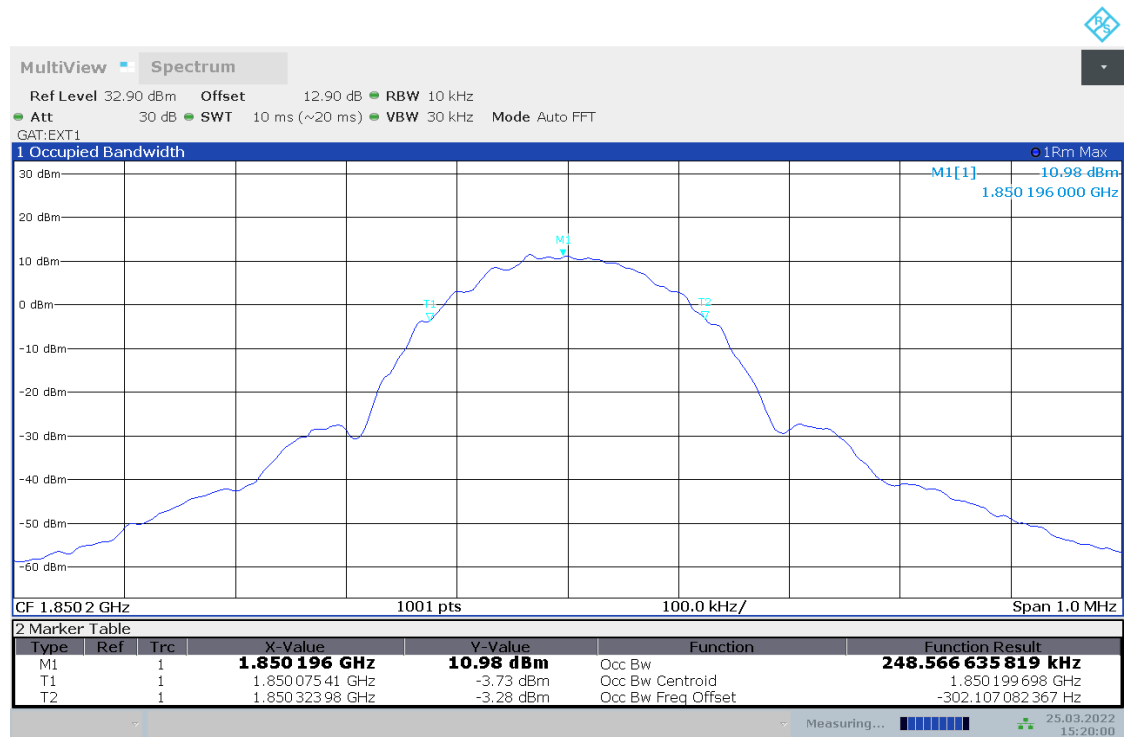
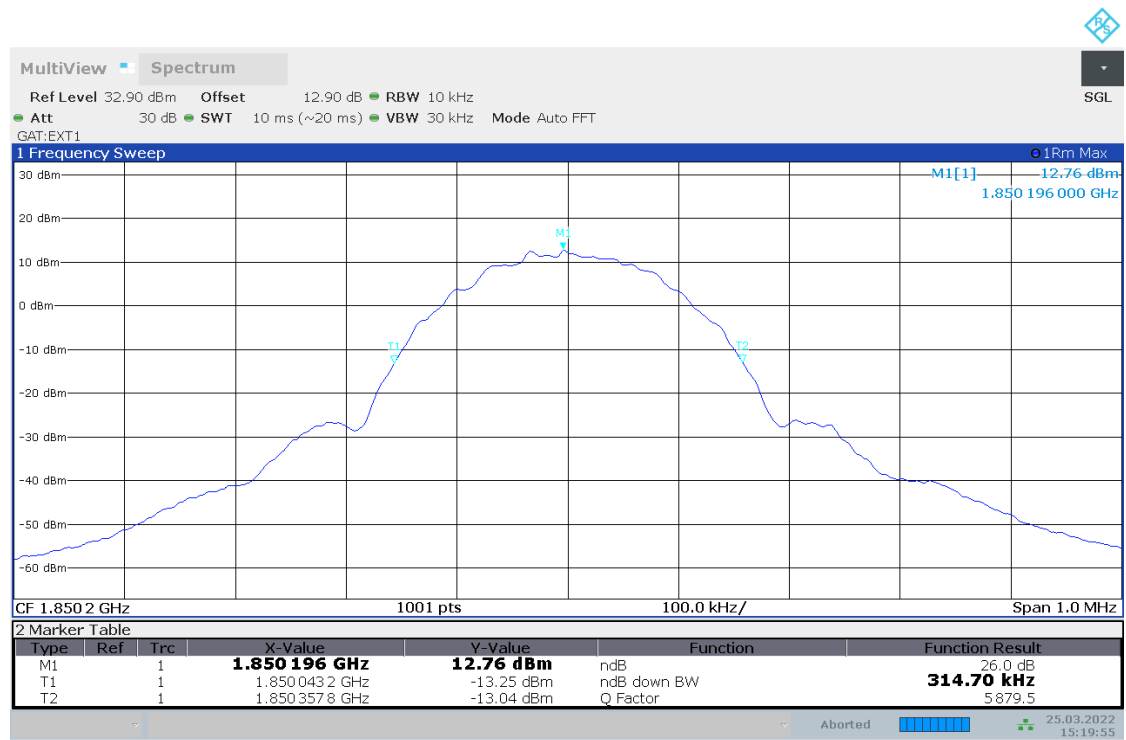
4.2.5 PCS1900_TM2_MCH



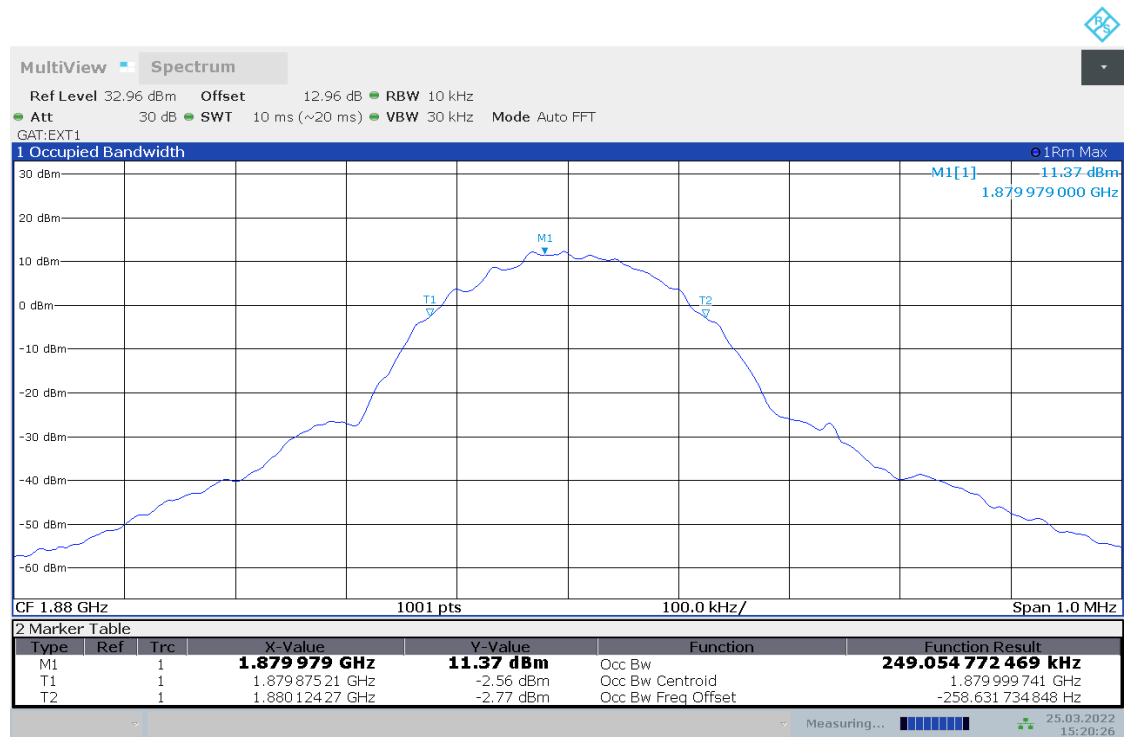
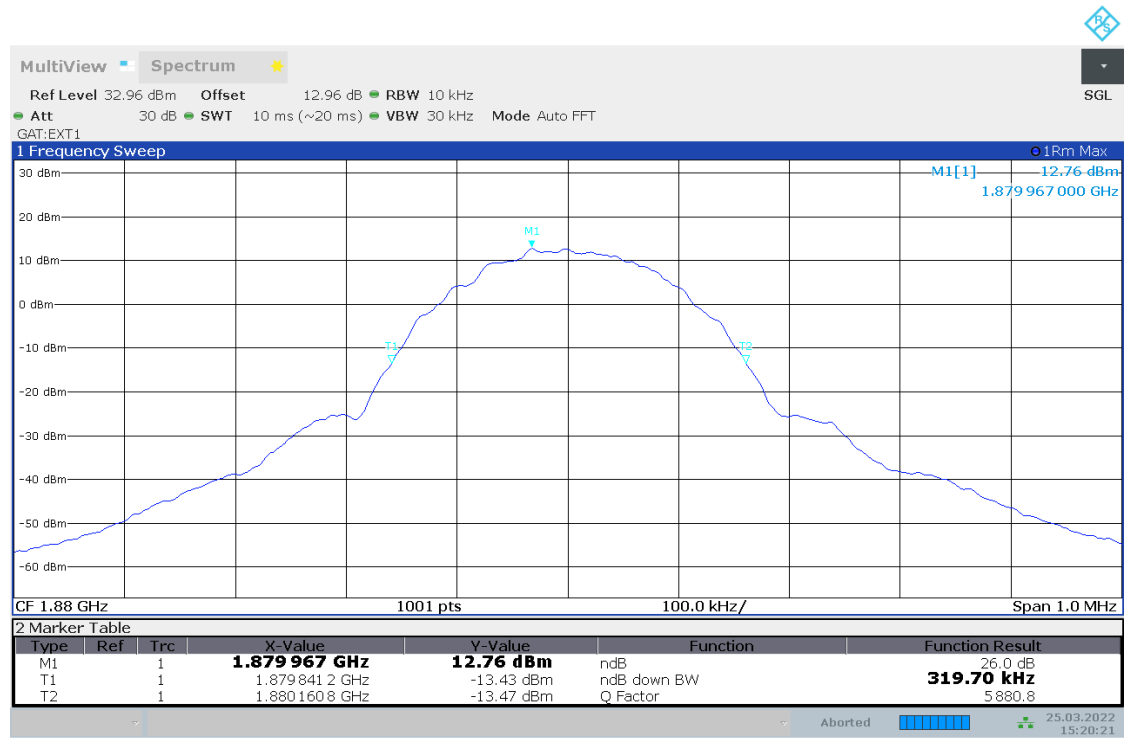
4.2.6 PCS1900_TM2_HCH



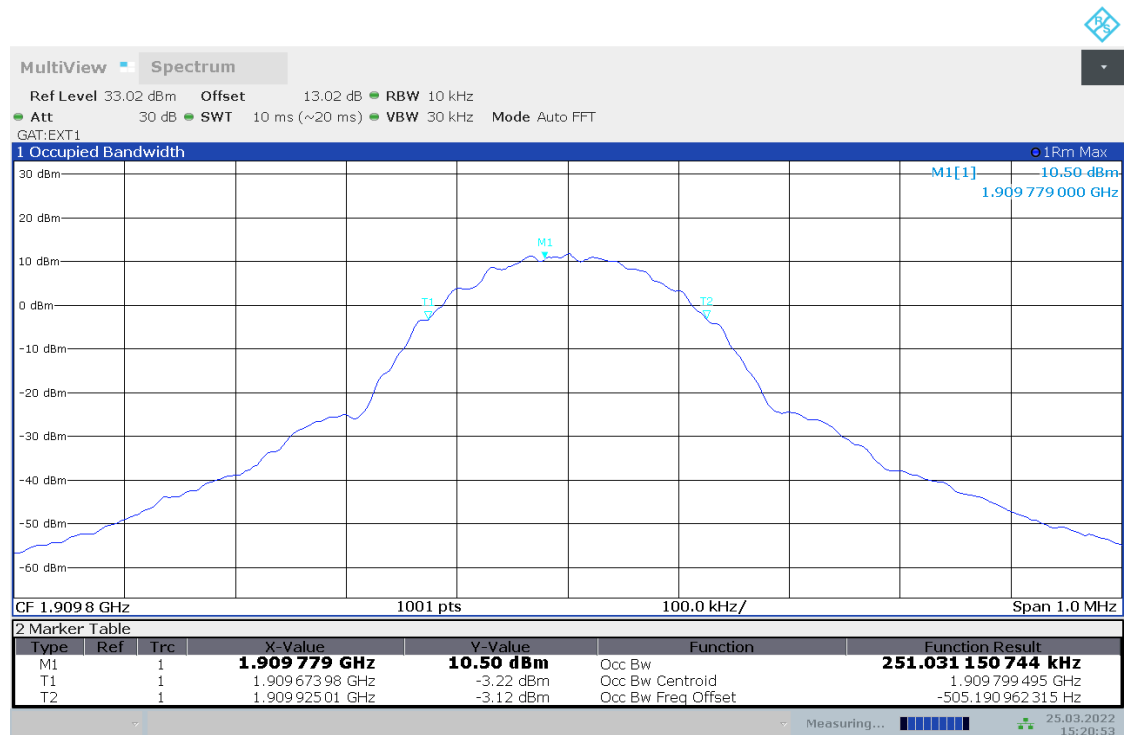
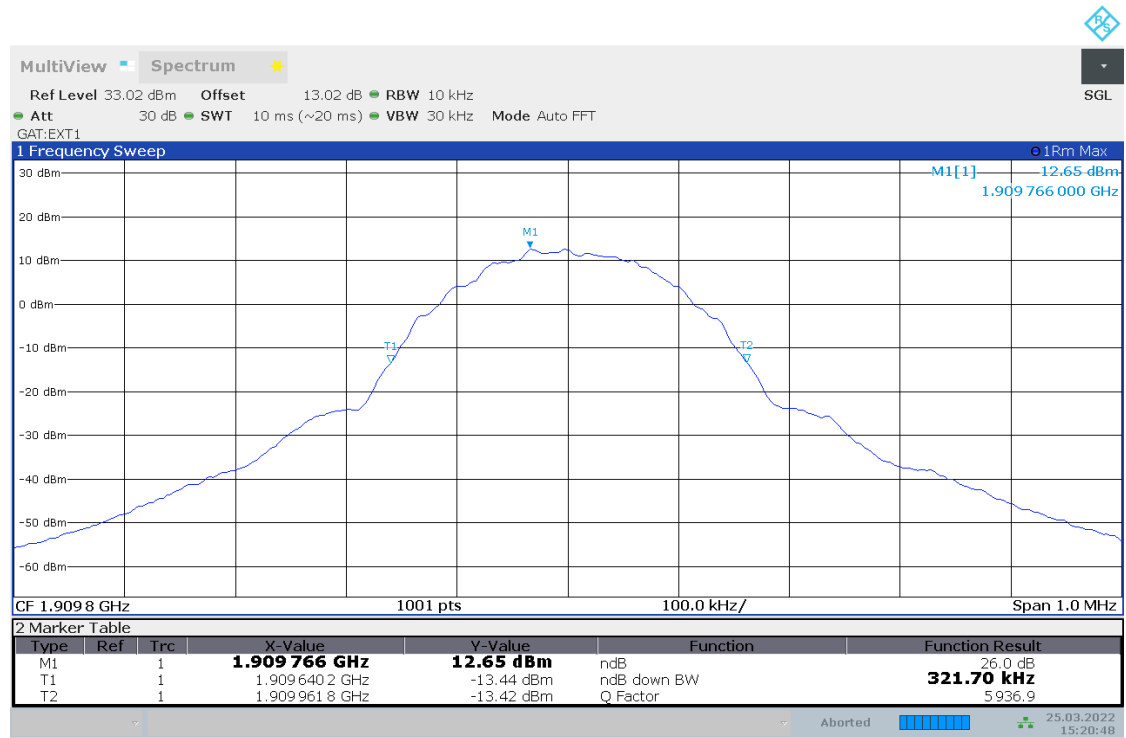
4.2.7 PCS1900_TM3_LCH



4.2.8 PCS1900_TM3_MCH



4.2.9 PCS1900_TM3_HCH

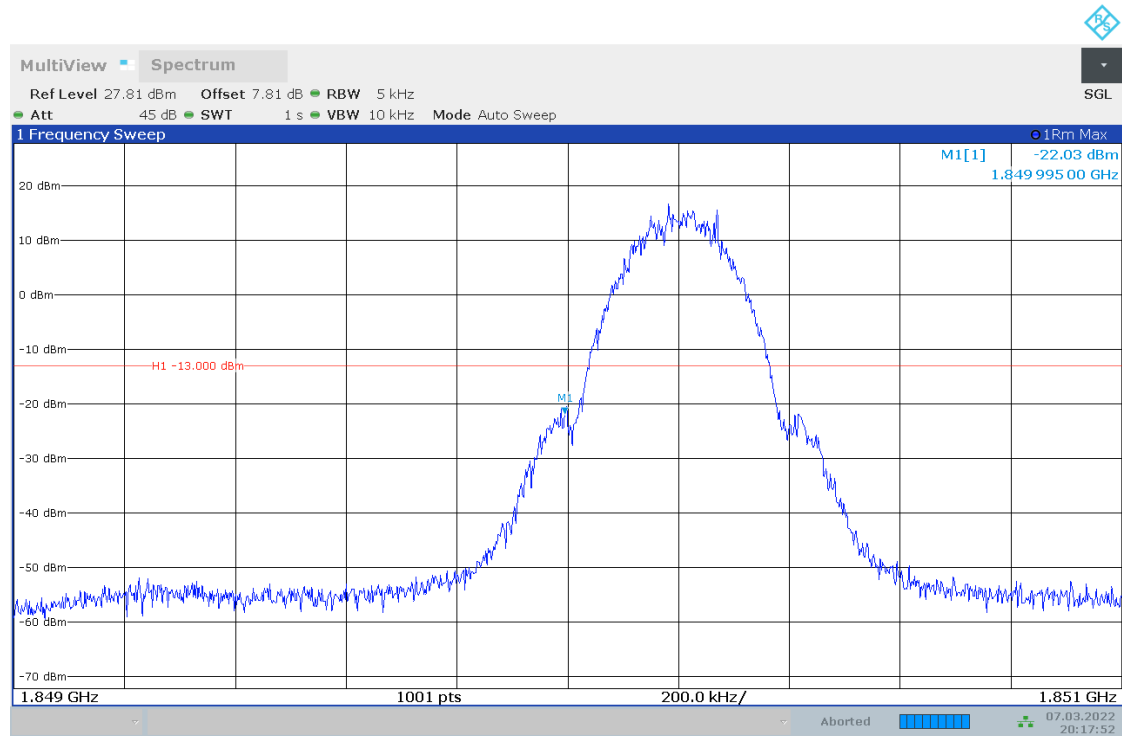


5. APPENDIX E - BAND EDGES COMPLIANCE**5.1 TEST RESULTS**

Band Edges Compliance						
Test Band	Test Mode	Test Channel	Frequency [MHz]	Power [dBm]	Limit [dBm]	Verdict
PCS1900	TM1	LCH	1849.995	-22.03	-13	PASS
		HCH	1910.02	-21.47	-13	PASS
	TM2	LCH	1849.995	-22.49	-13	PASS
		HCH	1910.02	-21.28	-13	PASS
	TM3	LCH	1850	-27.03	-13	PASS
		HCH	1910.01	-27.39	-13	PASS

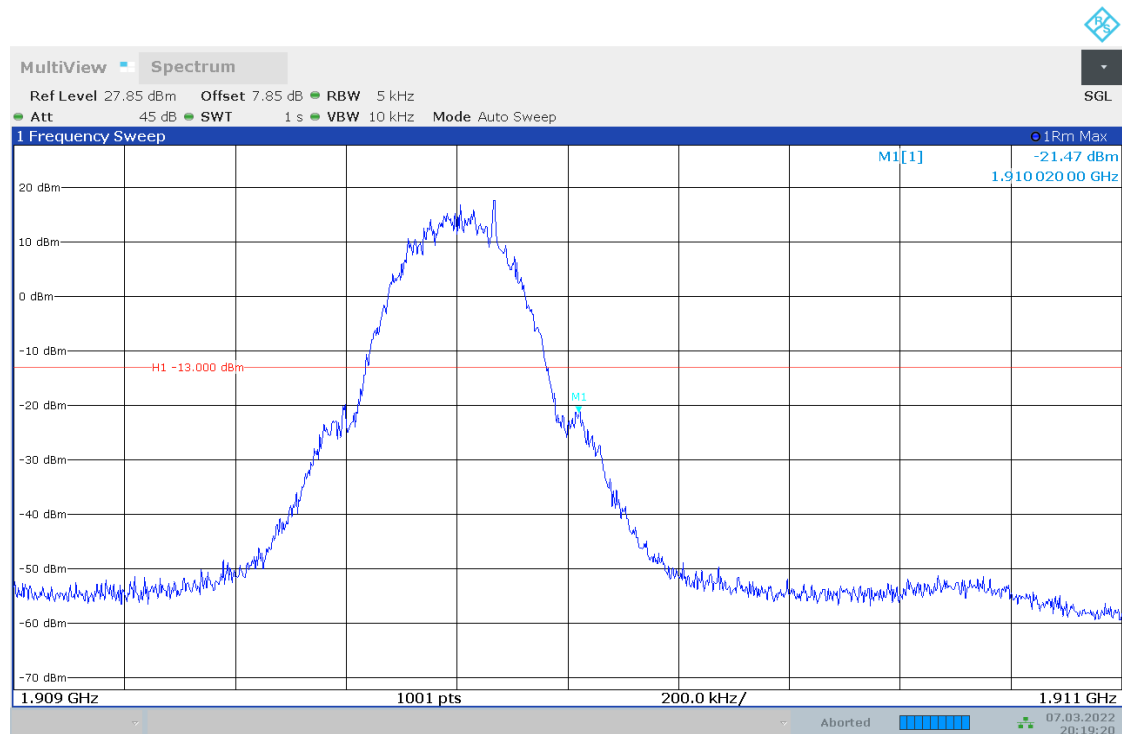
5.2 TEST PLOTS

5.2.1 PCS1900_TM1_LCH



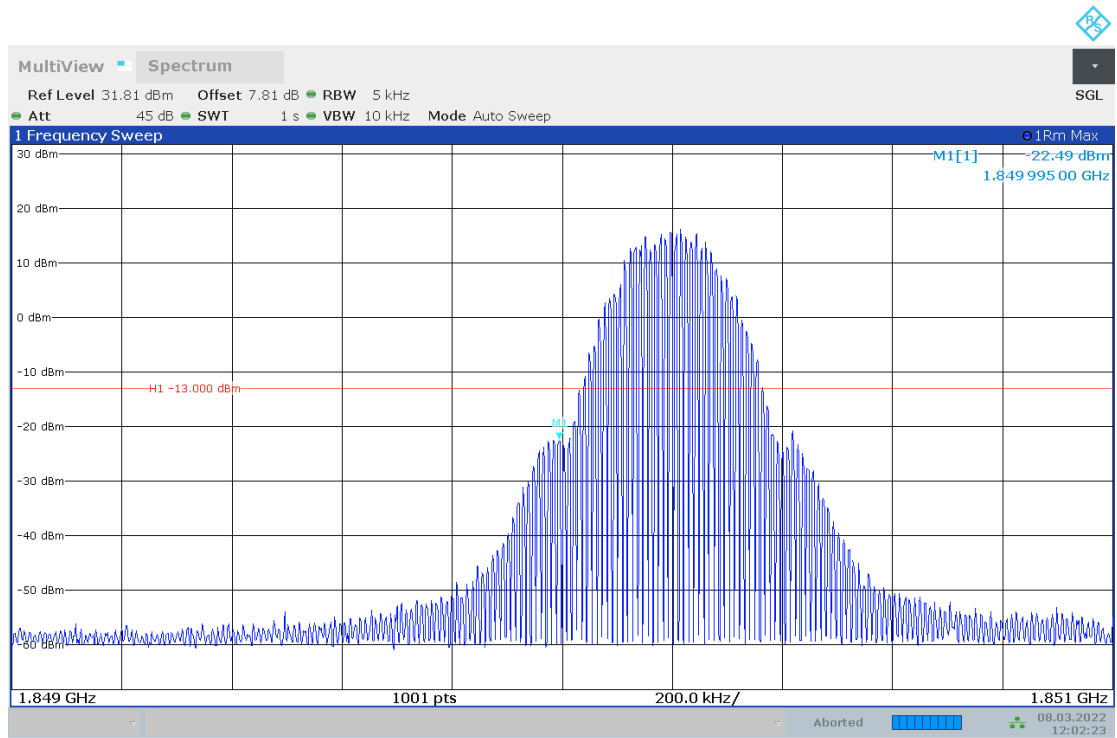
20:17:53 07.03.2022

5.2.2 PCS1900_TM1_HCH

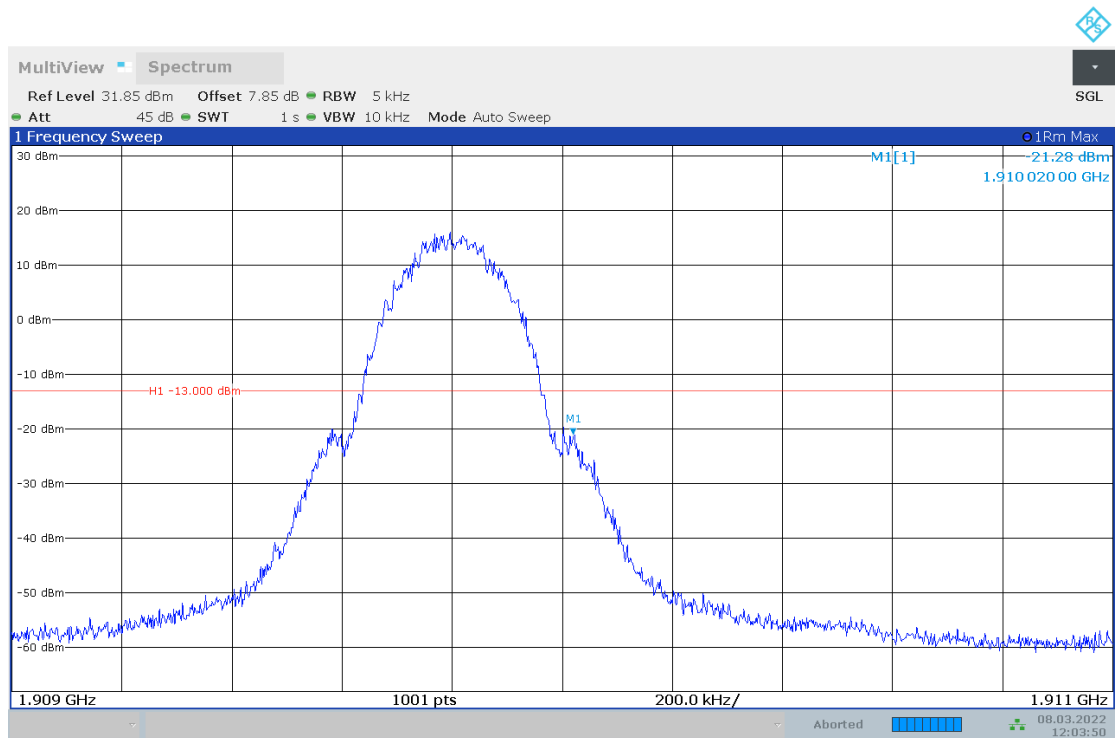


20:19:21 07.03.2022

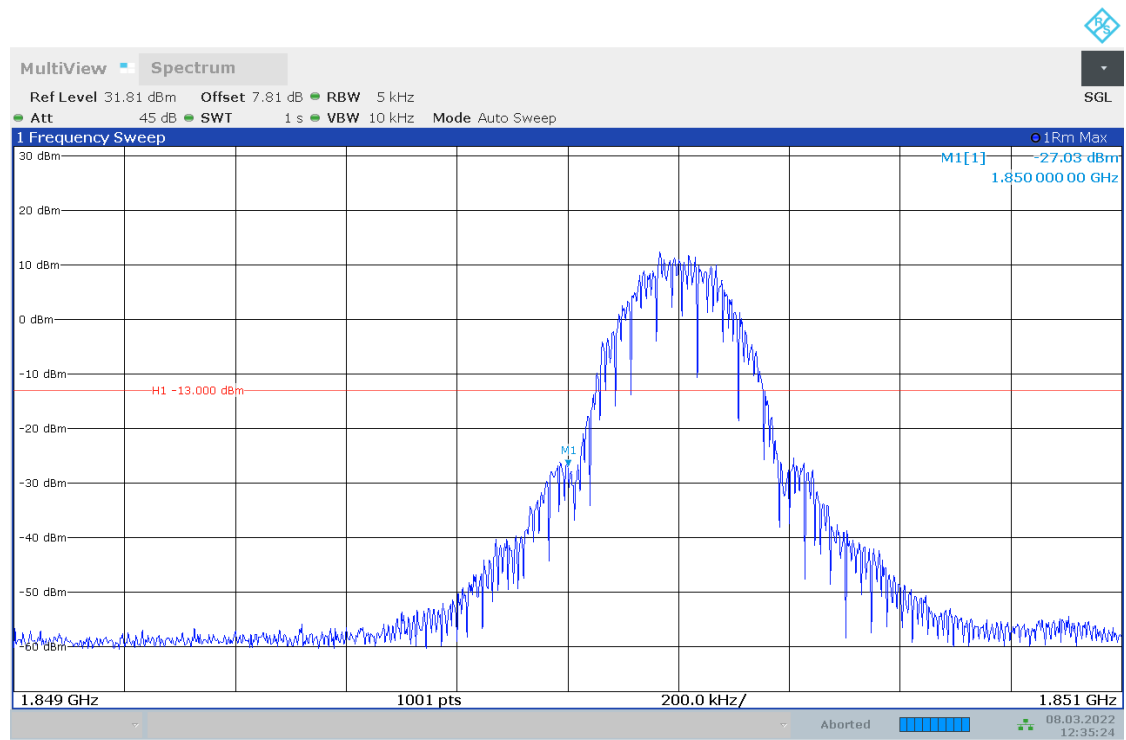
5.2.3 PCS1900_TM2_LCH



5.2.4 PCS1900_TM2_HCH

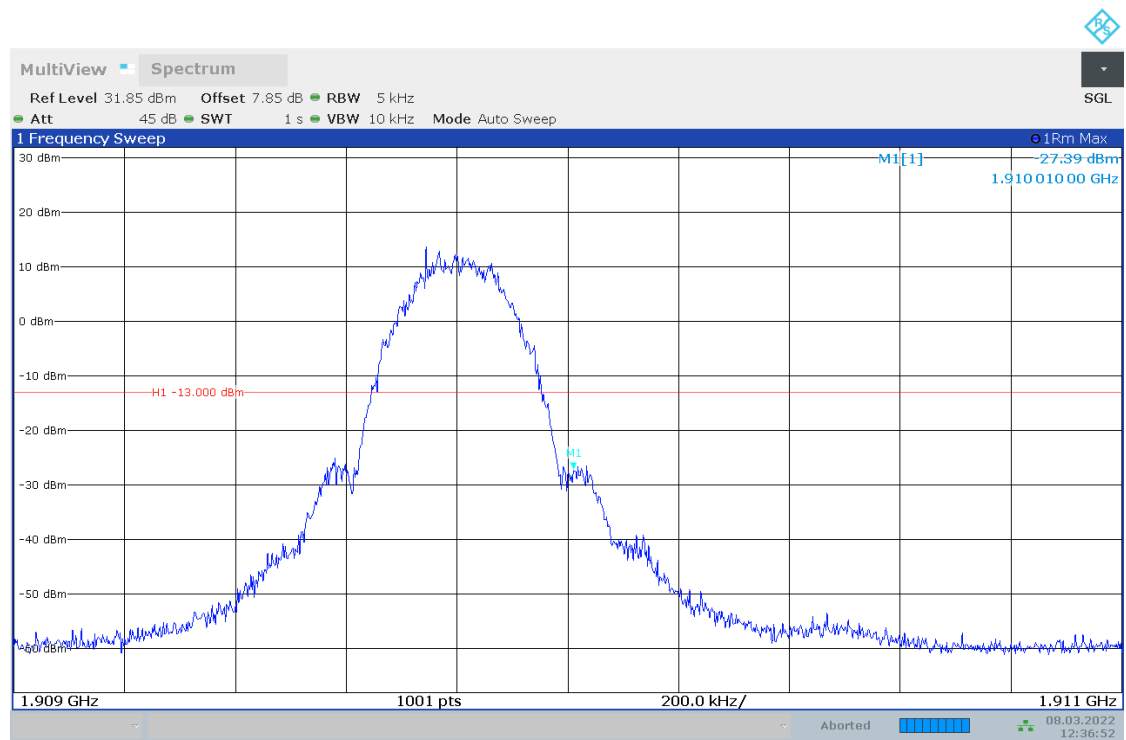


5.2.5 PCS1900_TM3_LCH



12:35:25 08.03.2022

5.2.6 PCS1900_TM3_HCH



12:36:52 08.03.2022

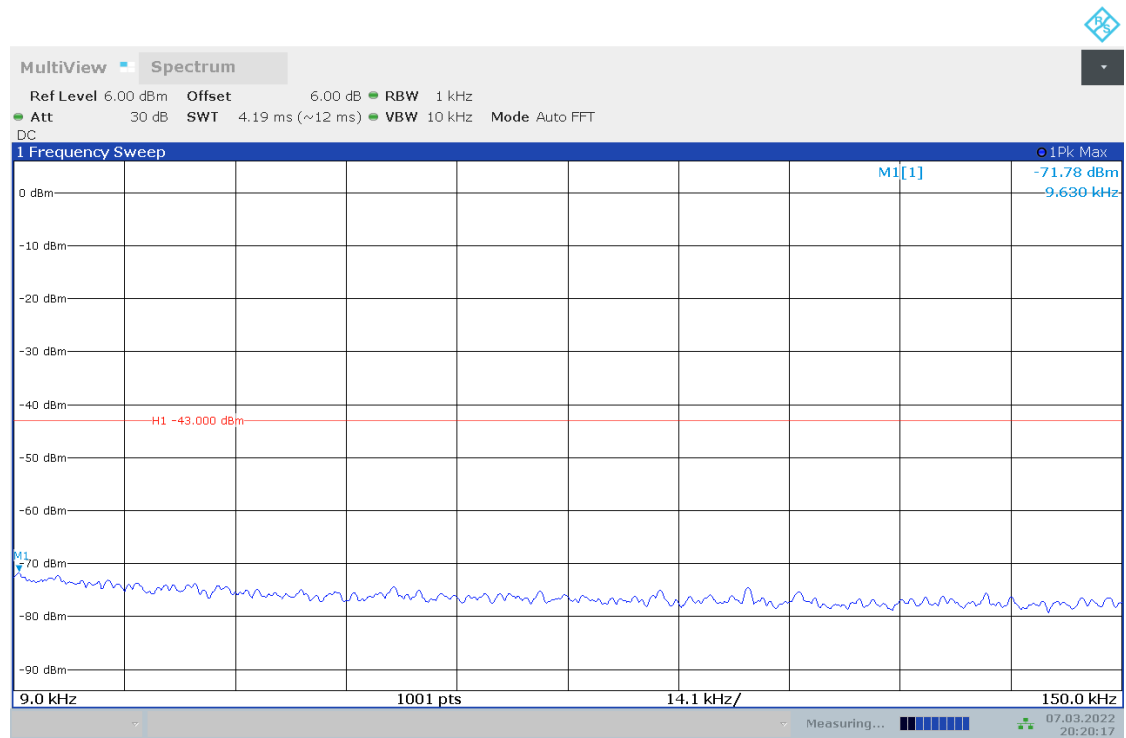
6. APPENDIX F - SPURIOUS EMISSION AT ANTENNA TERMINAL

6.1 TEST RESULTS

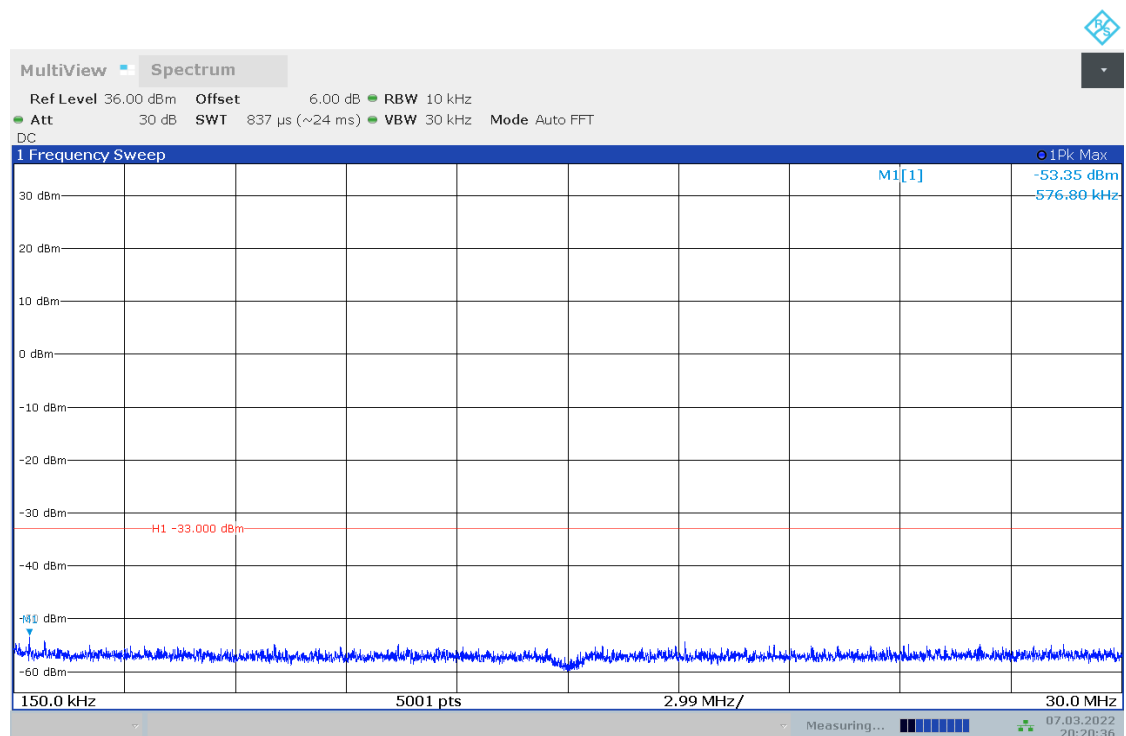
Spurious Emission at Antenna Terminal								
Test Band	Test Mode	Test Channel	Start Freq. [MHz]	Stop Freq. [MHz]	Measured Freq. [MHz]	Measured Power [dBm]	Limit [dBm]	Verdict
PCS1900	TM1	LCH	0.009	0.15	0.01	-71.78	-43	PASS
			0.15	30	0.58	-53.35	-33	PASS
			30	20000	17075.72	-37.15	-13	PASS
		MCH	0.009	0.15	0.01	-71.82	-43	PASS
			0.15	30	0.15	-53.91	-33	PASS
			30	20000	7981.11	-37.44	-13	PASS
		HCH	0.009	0.15	0.01	-70.8	-43	PASS
			0.15	30	0.19	-53.91	-33	PASS
			30	20000	18822.55	-37.56	-13	PASS
	TM2	LCH	0.009	0.15	0.01	-71.85	-43	PASS
			0.15	30	0.15	-54.24	-33	PASS
			30	20000	7992.59	-37.2	-13	PASS
		MCH	0.009	0.15	0.01	-70.6	-43	PASS
			0.15	30	3.38	-54.34	-33	PASS
			30	20000	17081.21	-36.97	-13	PASS
		HCH	0.009	0.15	0.01	-70.21	-43	PASS
			0.15	30	26.51	-53.95	-33	PASS
			30	20000	17459.13	-37.26	-13	PASS
	TM3	LCH	0.009	0.15	0.01	-70	-43	PASS
			0.15	30	18.17	-54.46	-33	PASS
			30	20000	17574.95	-36.47	-13	PASS
		MCH	0.009	0.15	0.02	-72.24	-43	PASS
			0.15	30	0.33	-54.09	-33	PASS
			30	20000	17543	-37.55	-13	PASS
		HCH	0.009	0.15	0.01	-71.78	-43	PASS
			0.15	30	0.67	-54.1	-33	PASS
			30	20000	18243.93	-37.25	-13	PASS

6.2 TEST PLOTS

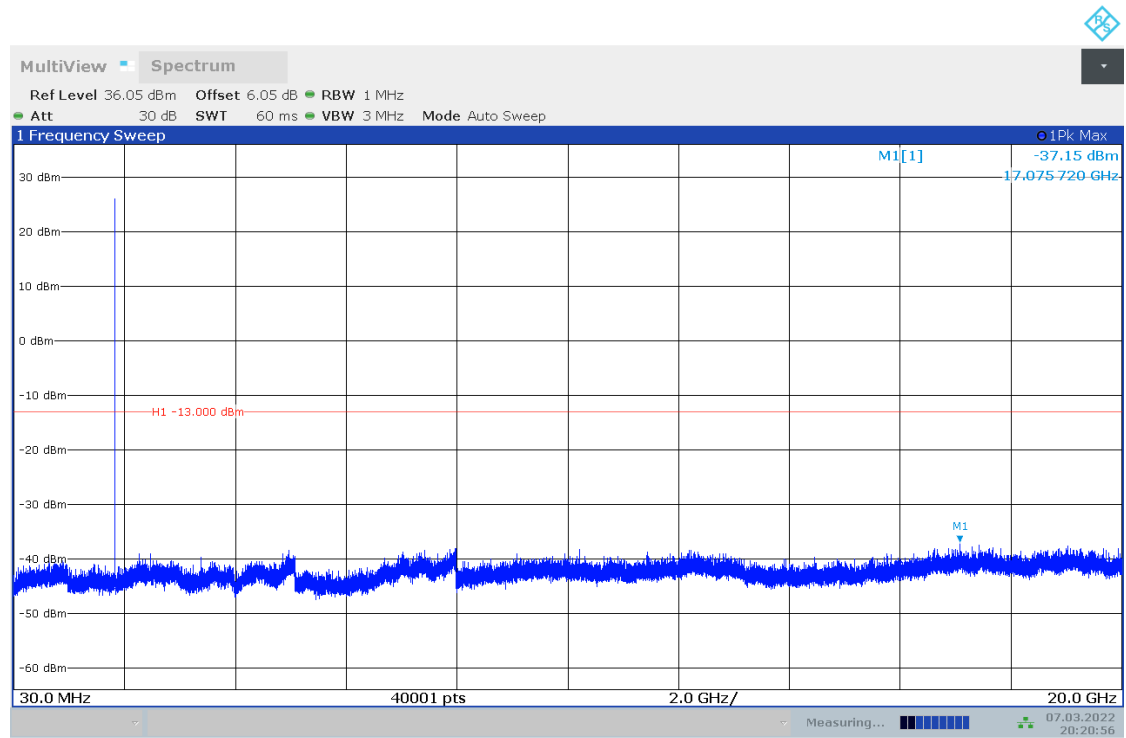
6.2.1 PCS1900_TM1_LCH



20:20:18 07.03.2022

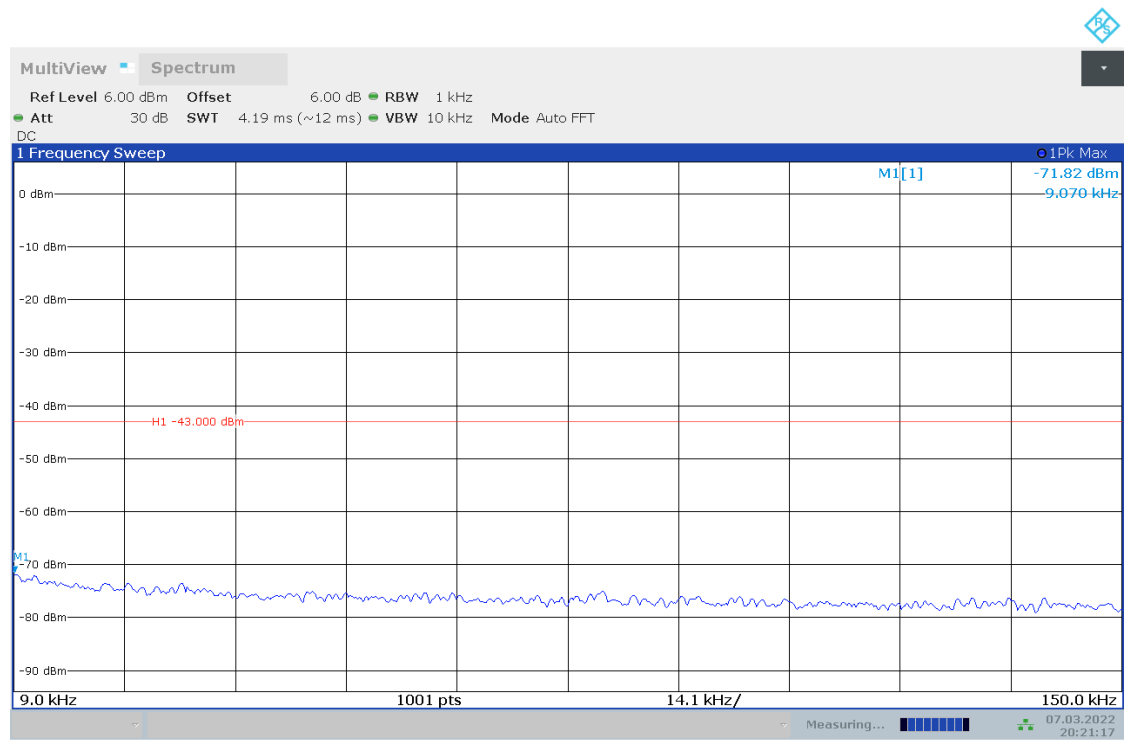


20:20:37 07.03.2022

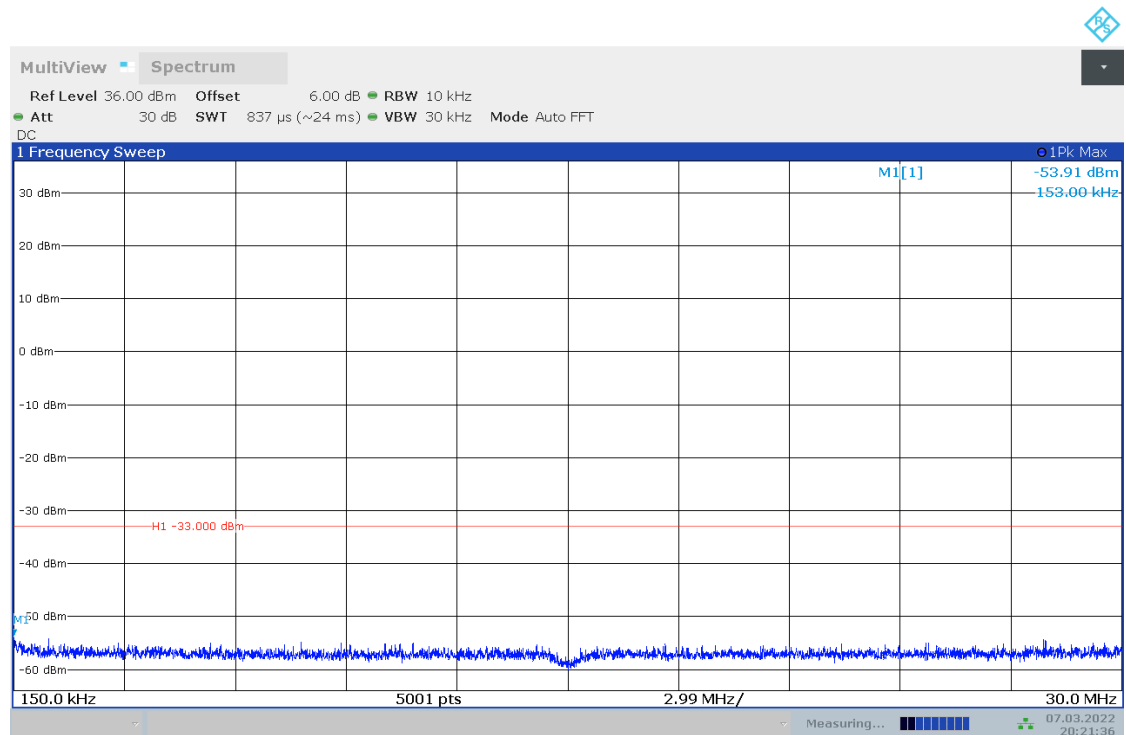


20:20:57 07.03.2022

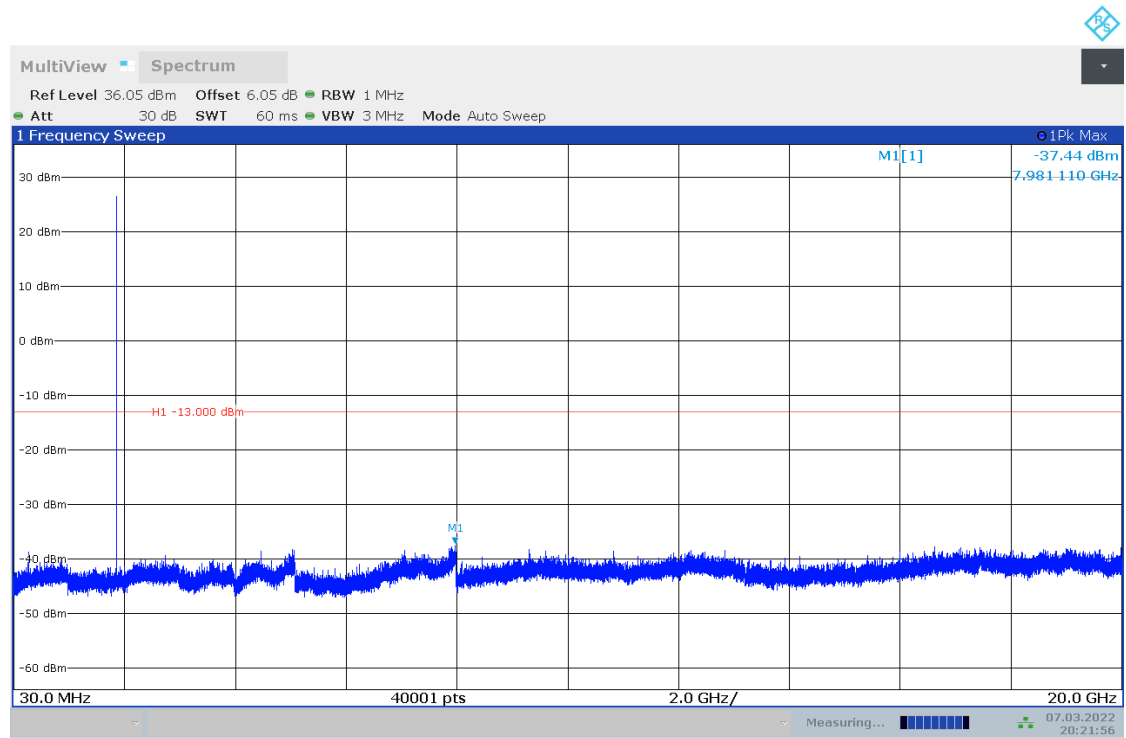
6.2.2 PCS1900_TM1_MCH



20:21:17 07.03.2022

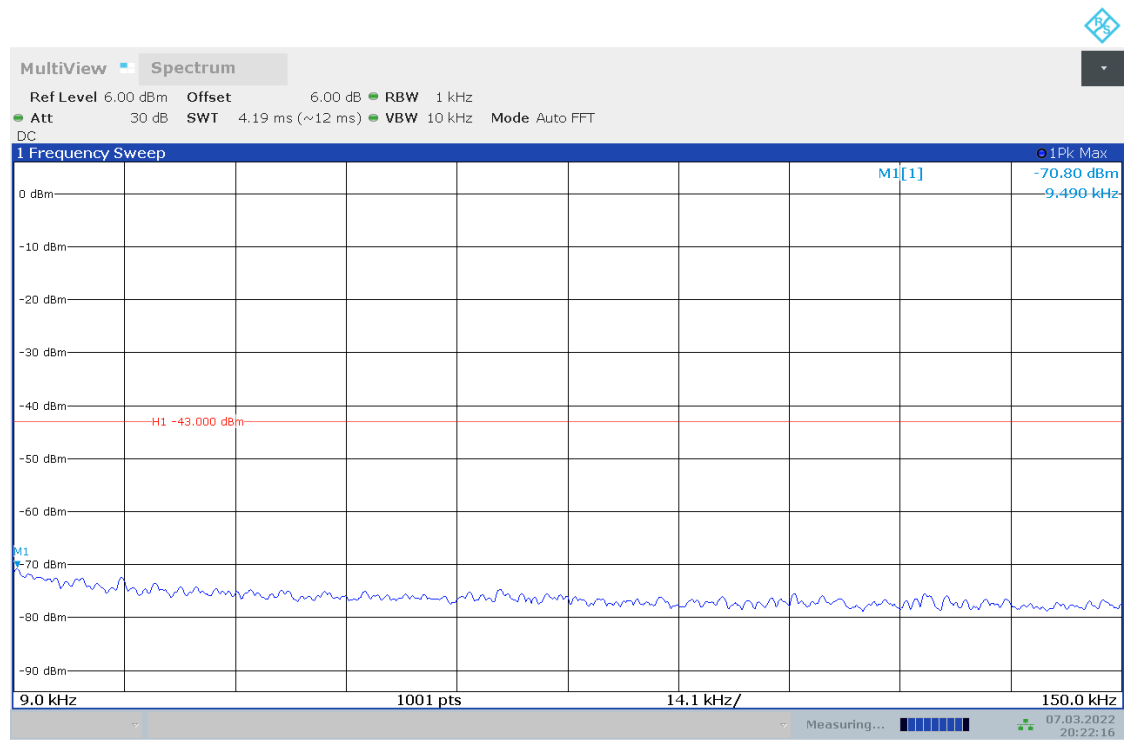


20:21:36 07.03.2022

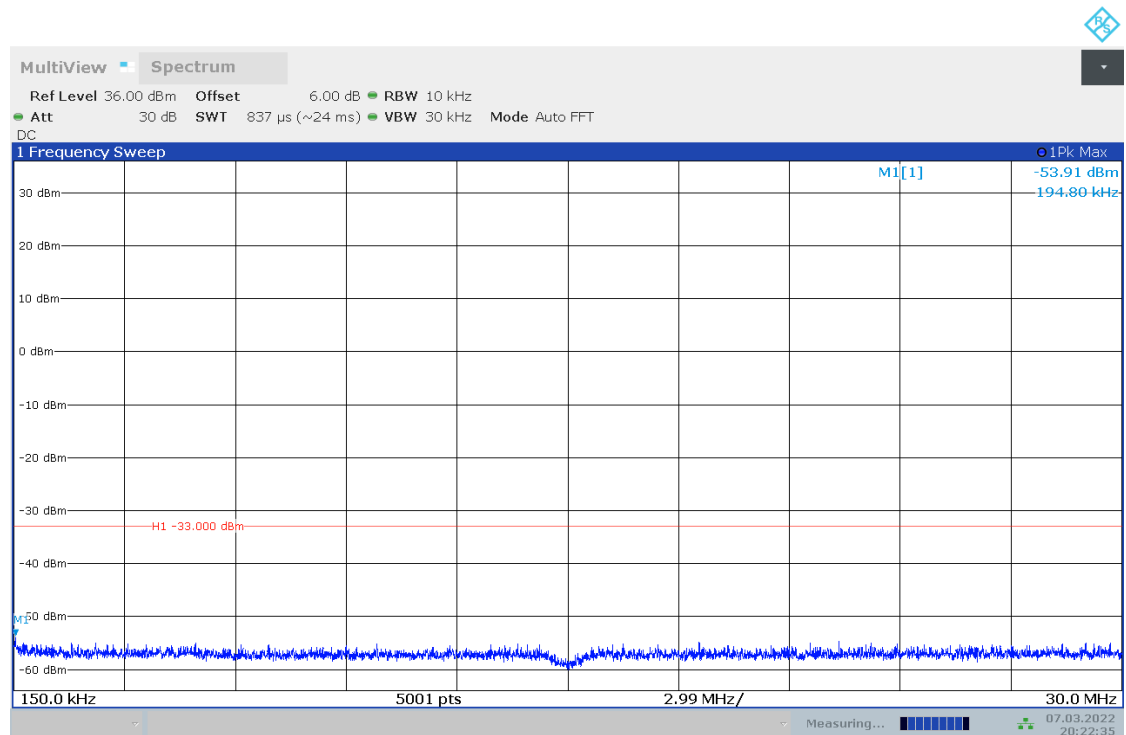


20:21:56 07.03.2022

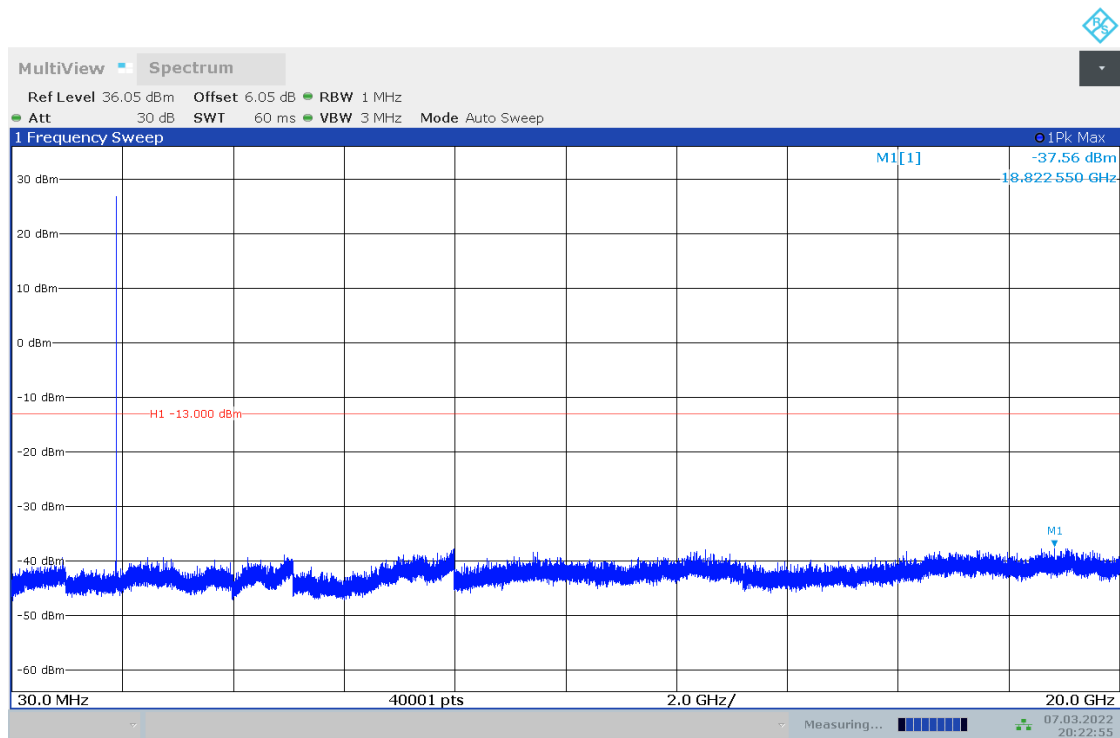
6.2.3 PCS1900_TM1_HCH



20:22:16 07.03.2022

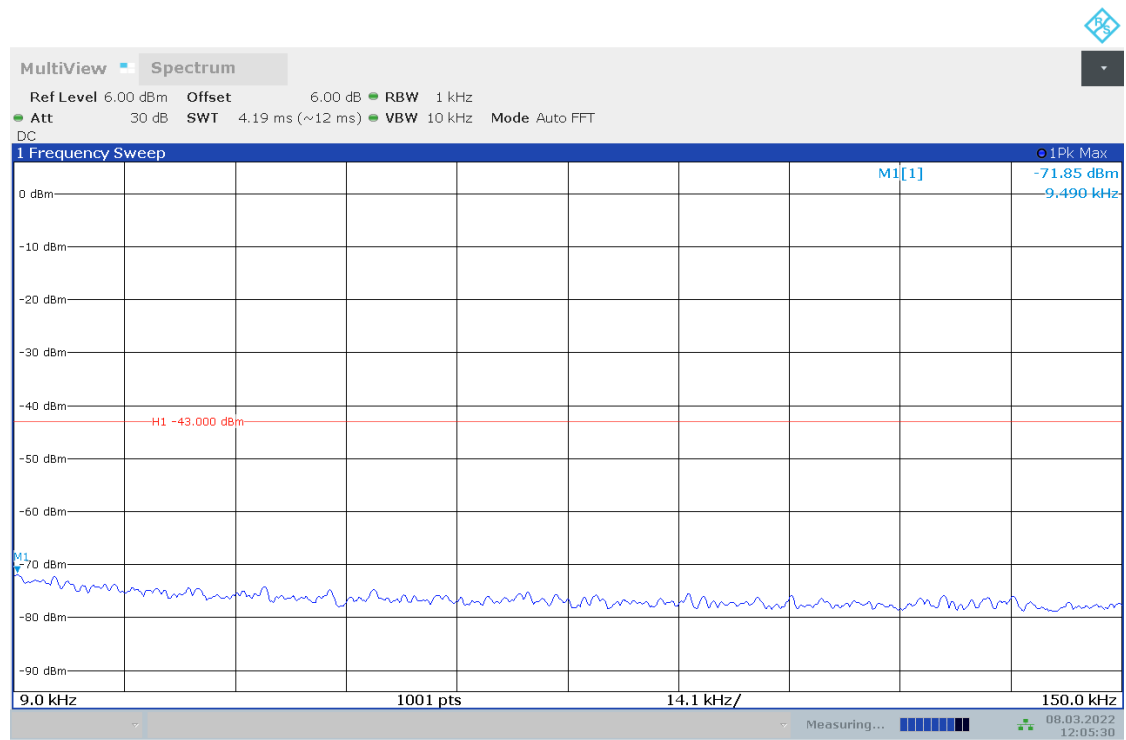


20:22:35 07.03.2022

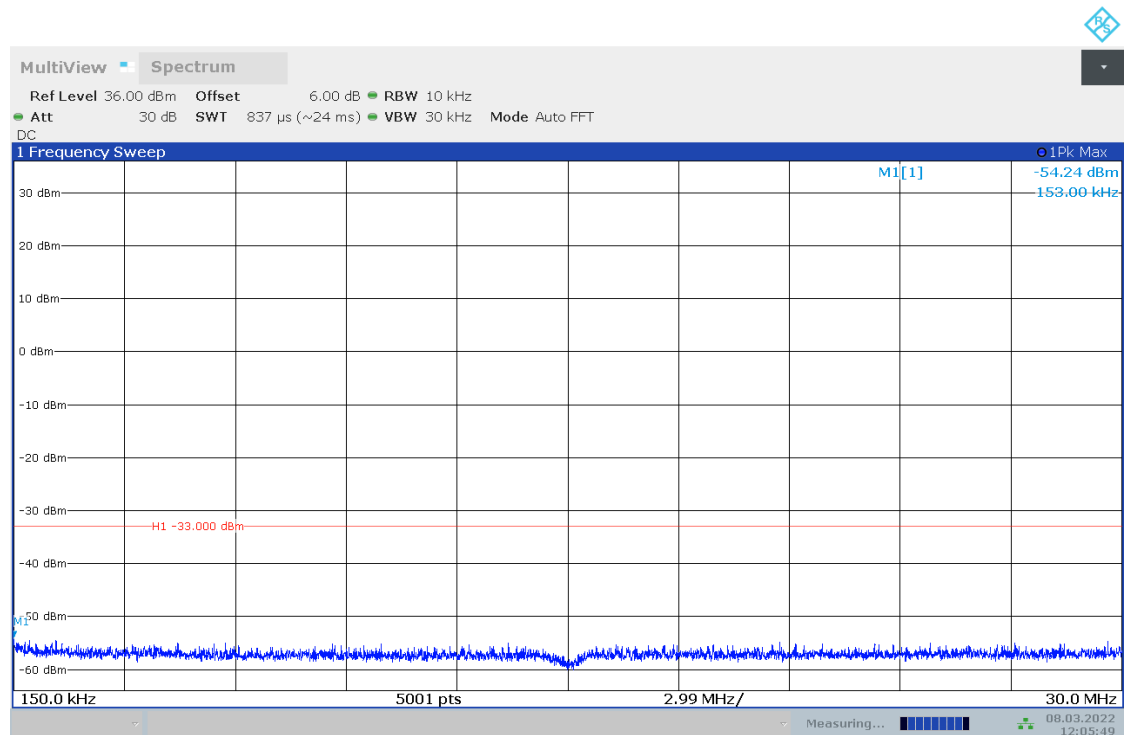


20:22:55 07.03.2022

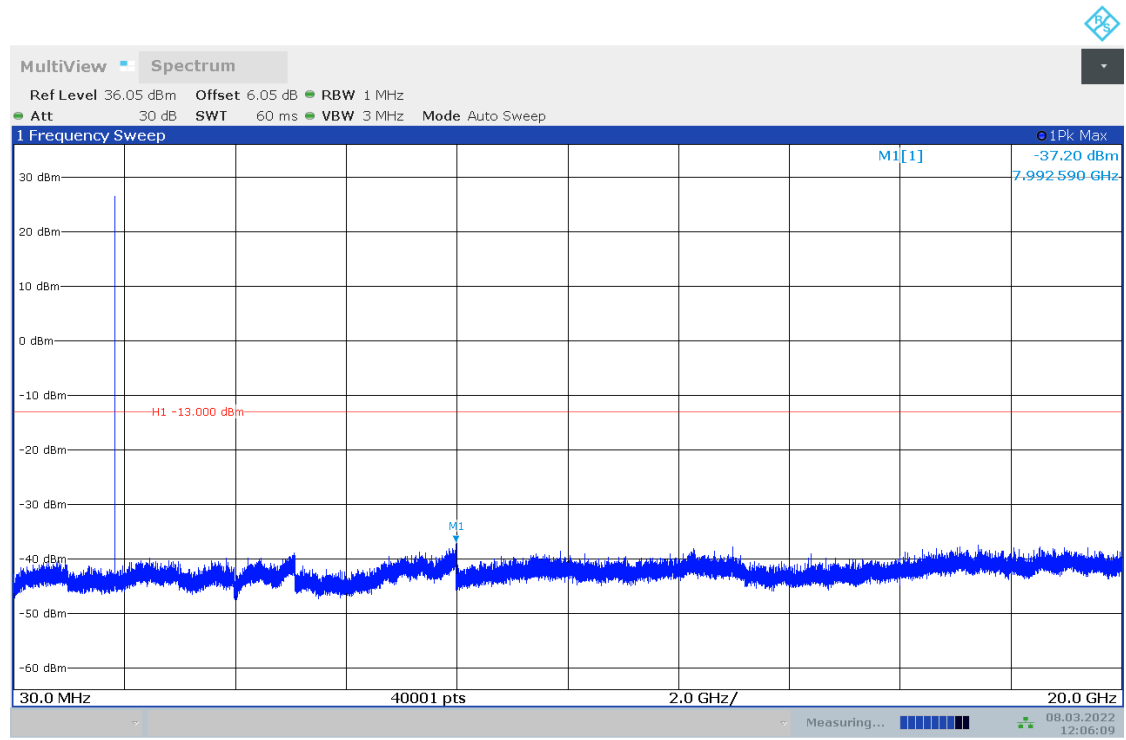
6.2.4 PCS1900_TM2_LCH



12:05:31 08.03.2022

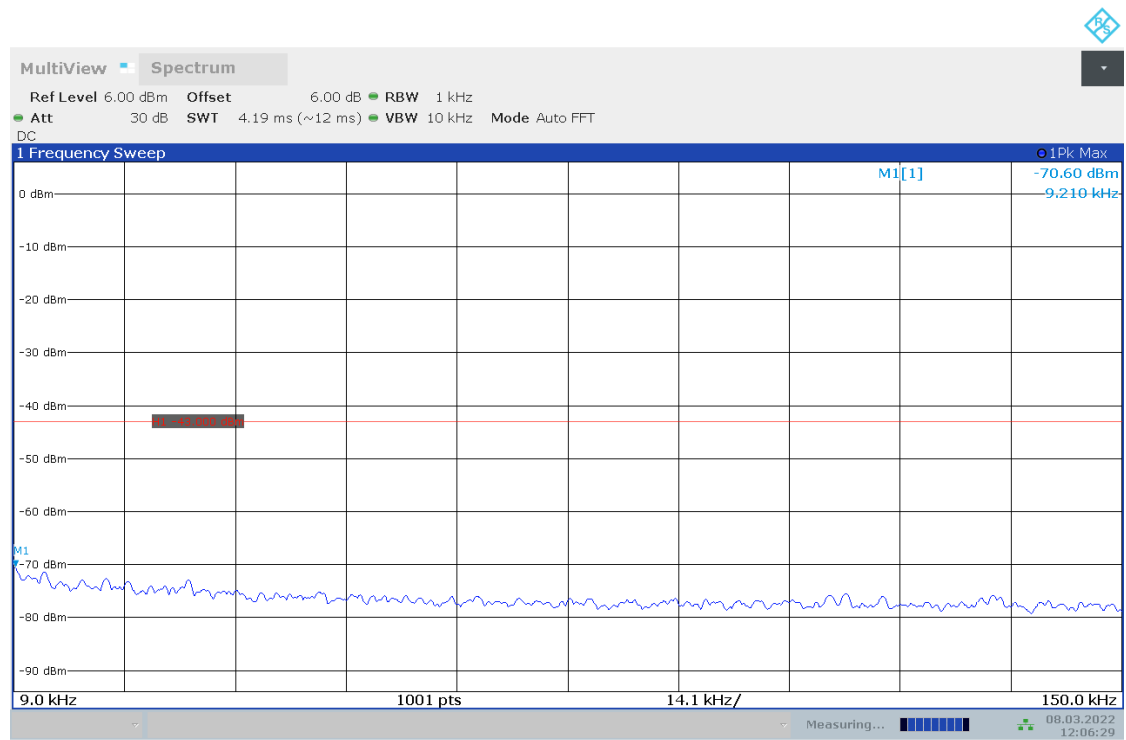


12:05:50 08.03.2022

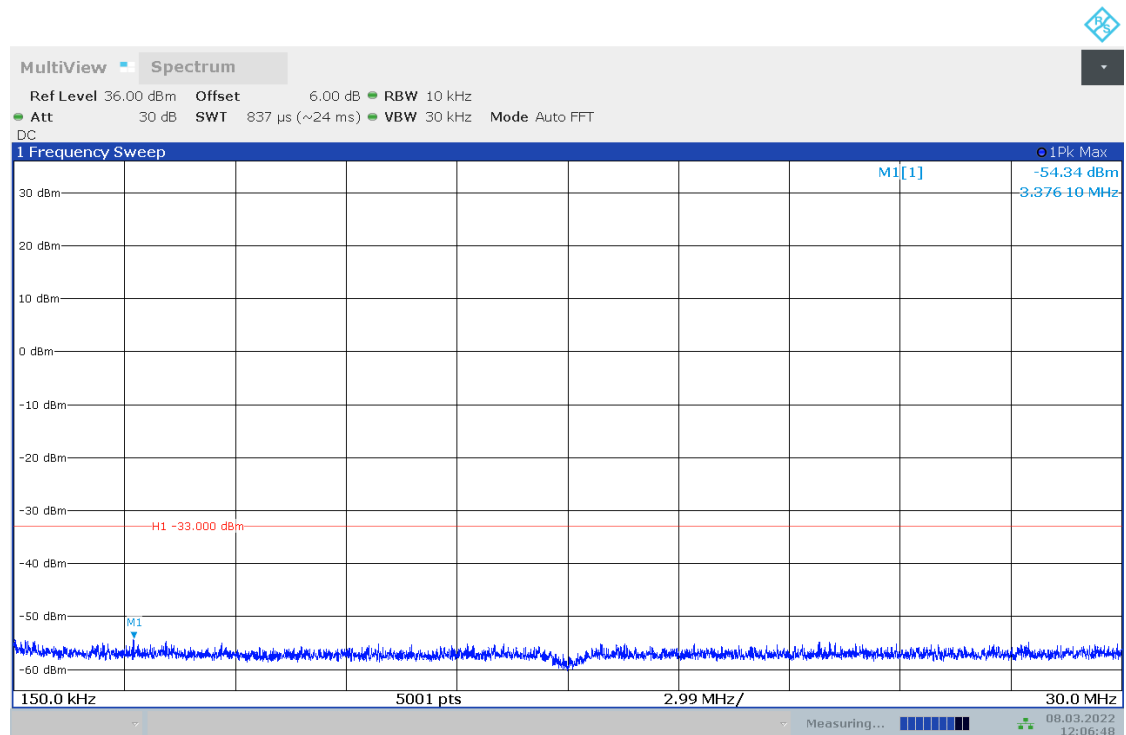


12:06:10 08.03.2022

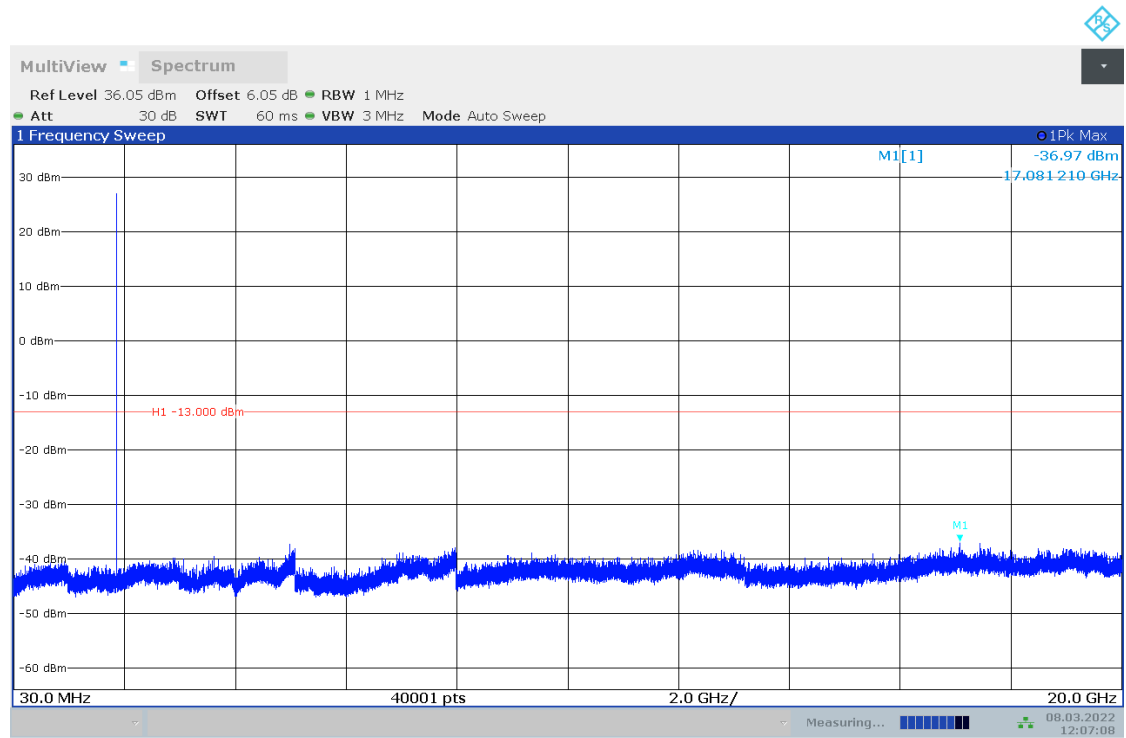
6.2.5 PCS1900_TM2_MCH



12:06:30 08.03.2022

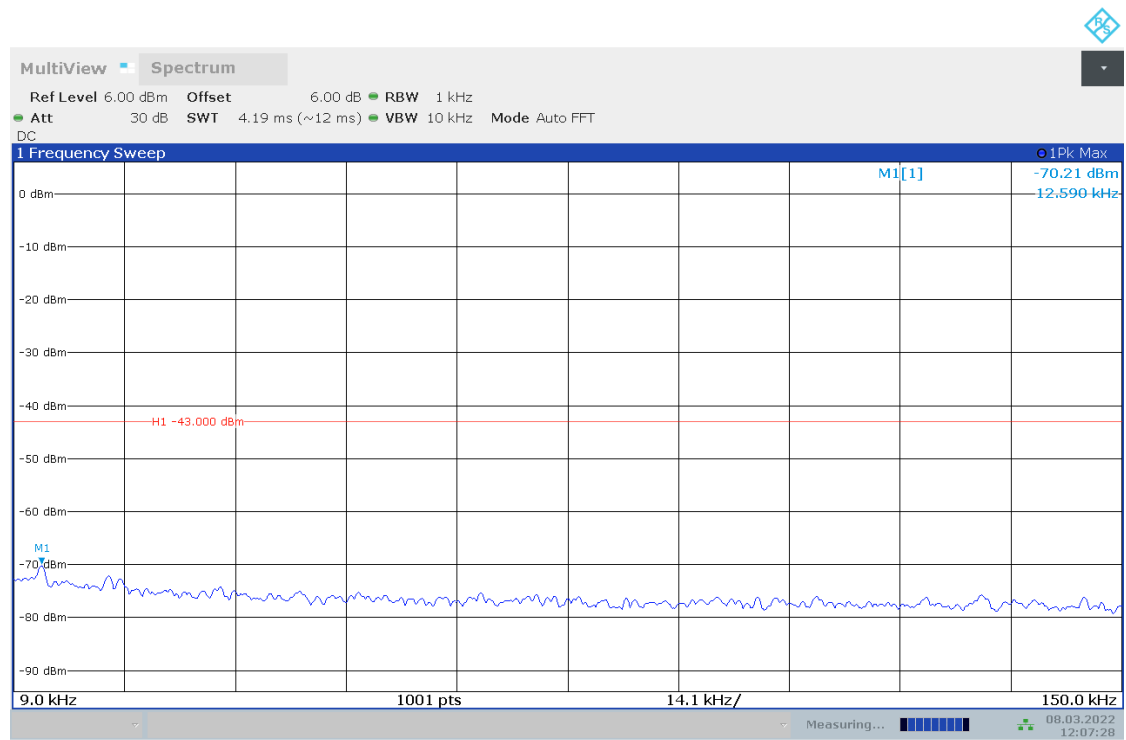


12:06:49 08.03.2022

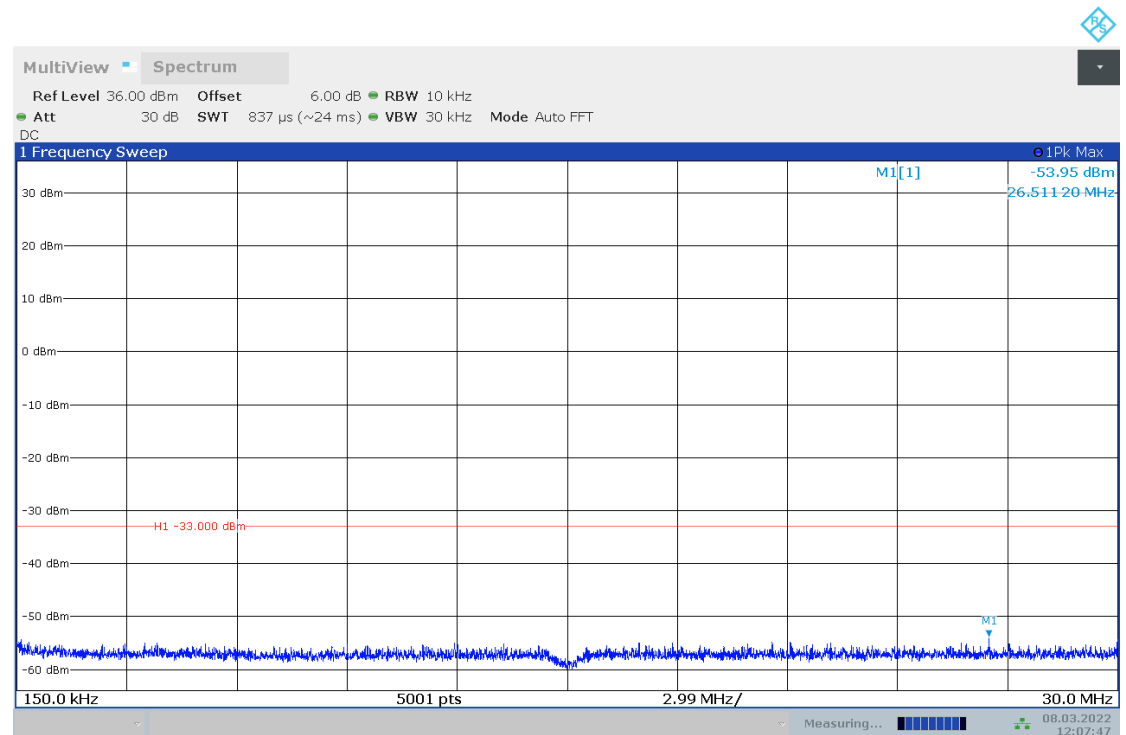


12:07:09 08.03.2022

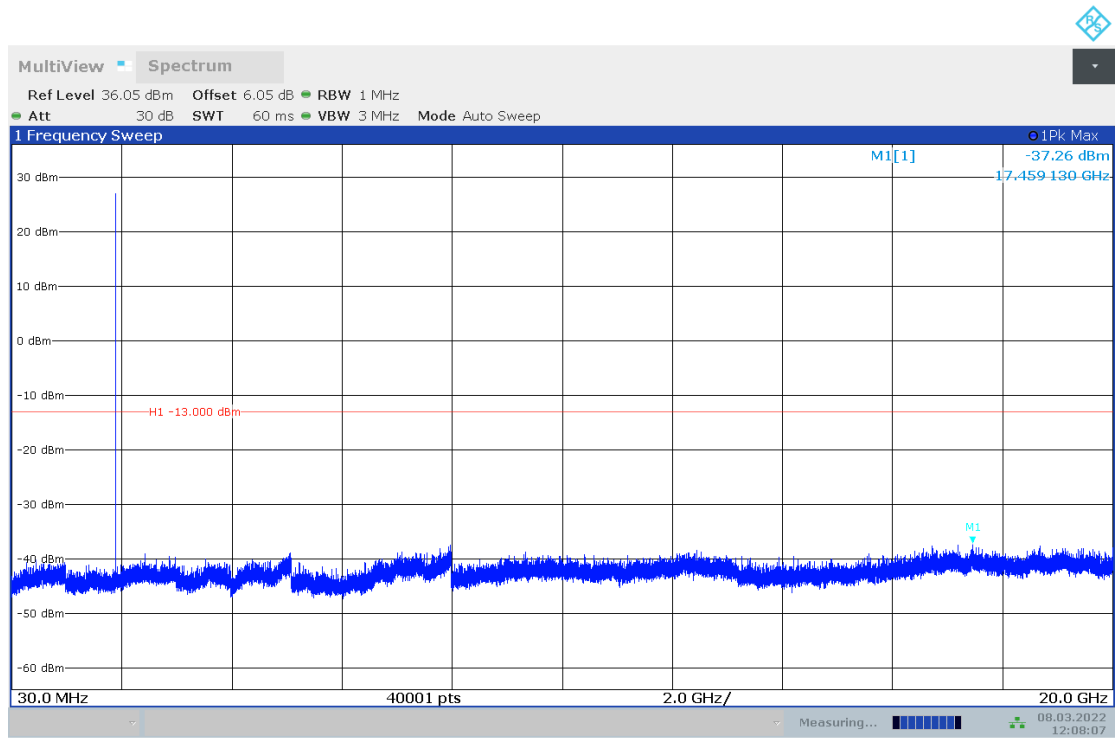
6.2.6 PCS1900_TM2_HCH



12:07:29 08.03.2022

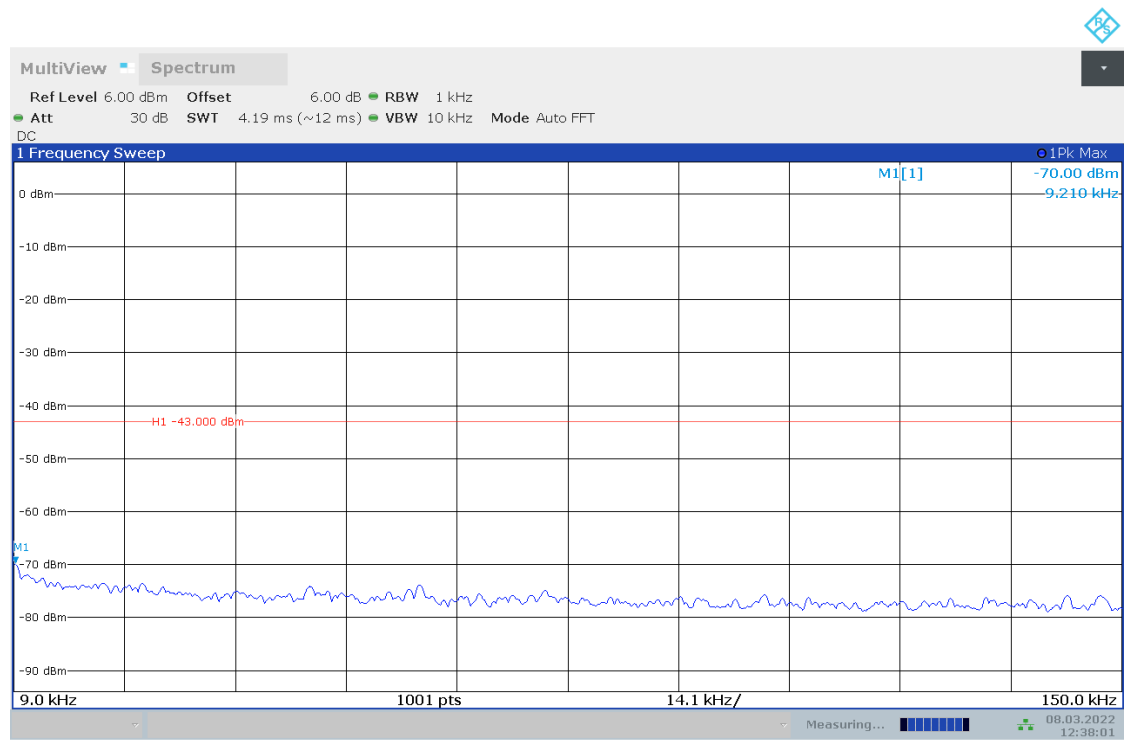


12:07:48 08.03.2022

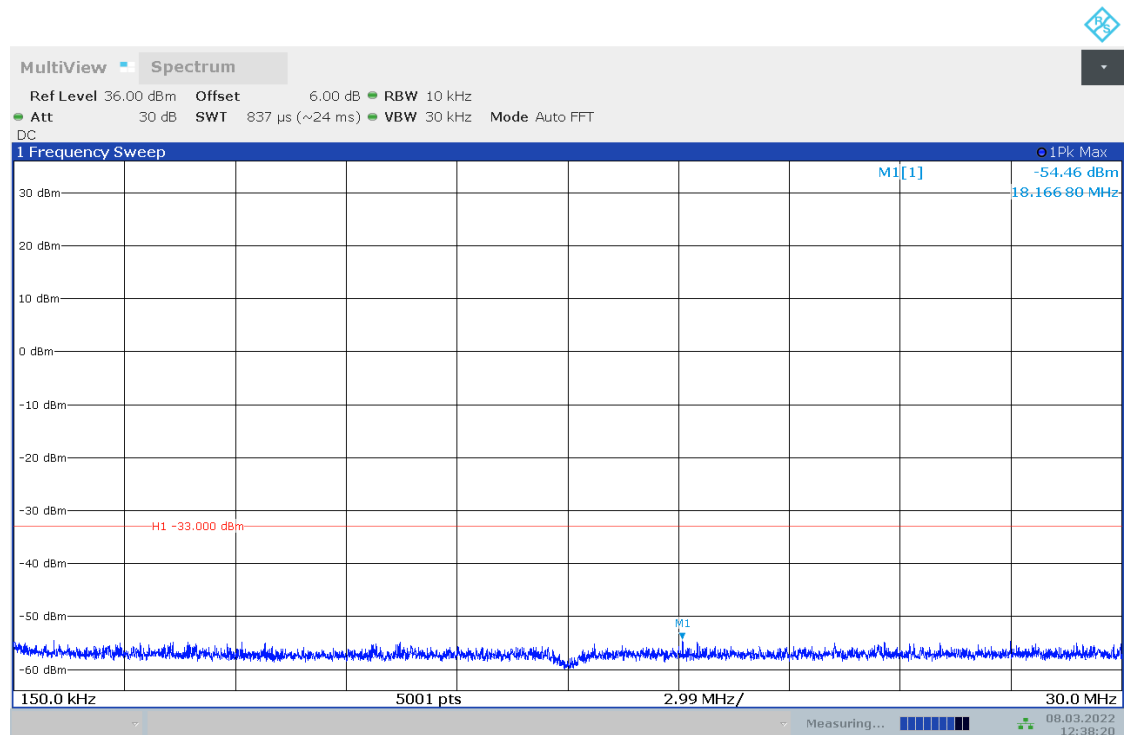


12:08:08 08.03.2022

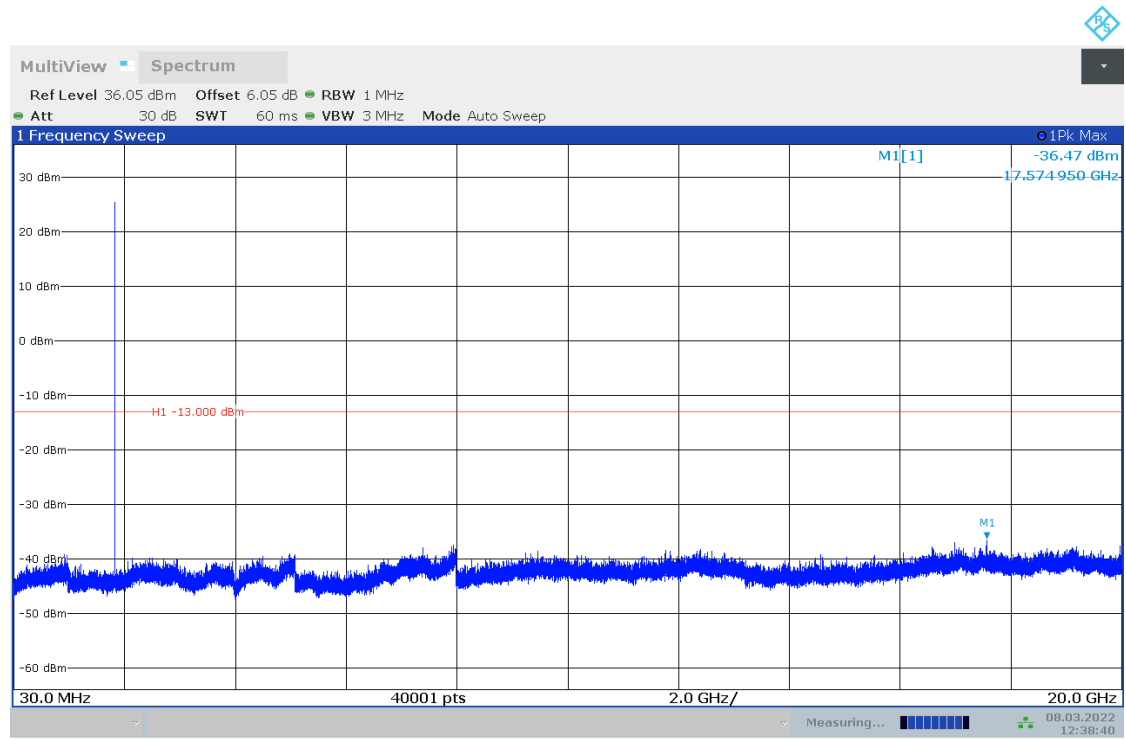
6.2.7 PCS1900_TM3_LCH



12:38:01 08.03.2022

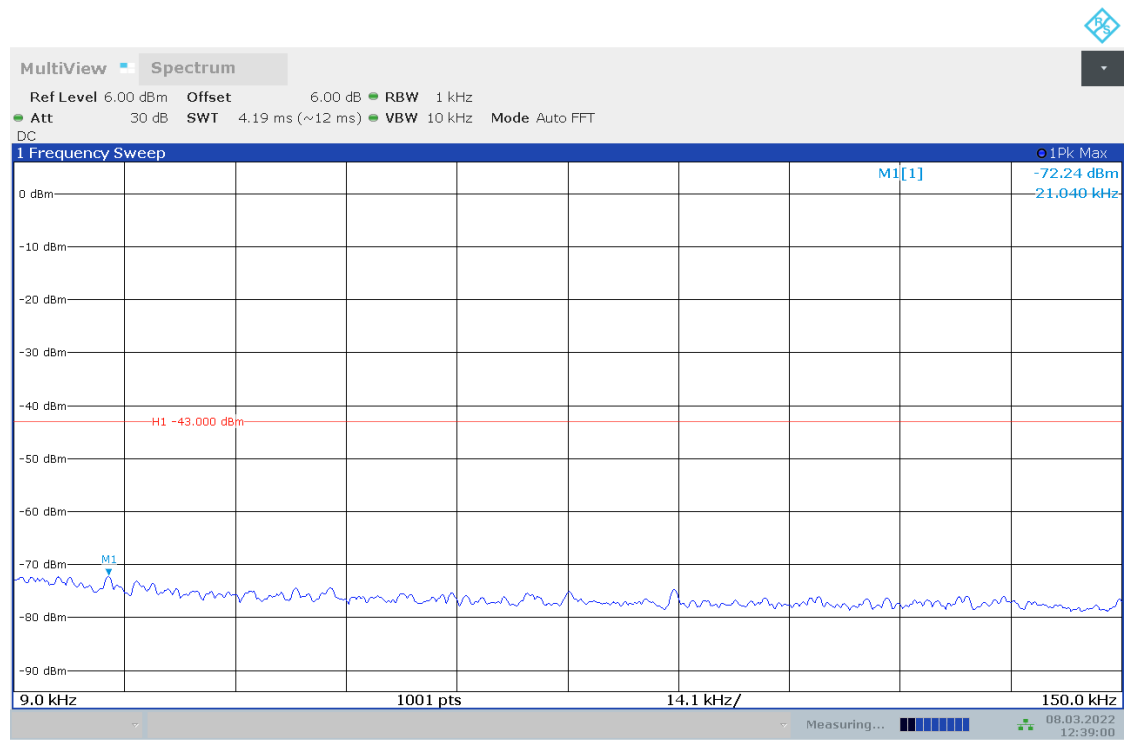


12:38:20 08.03.2022

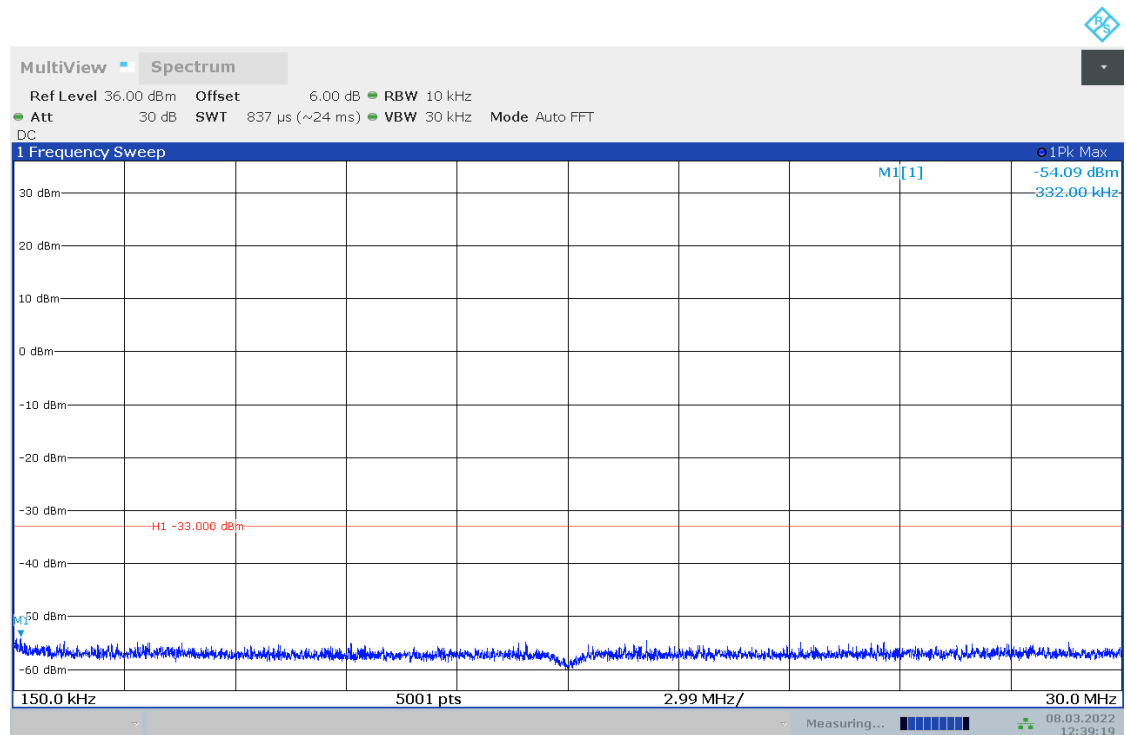


12:38:40 08.03.2022

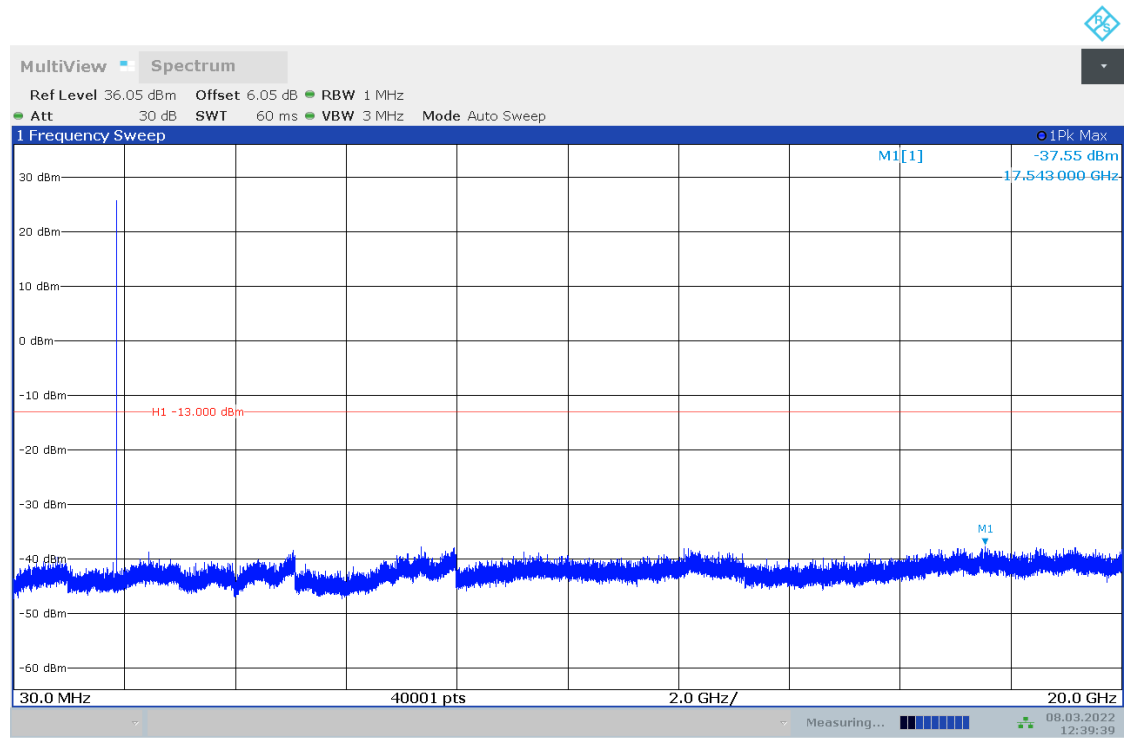
6.2.8 PCS1900_TM3_MCH



12:39:01 08.03.2022

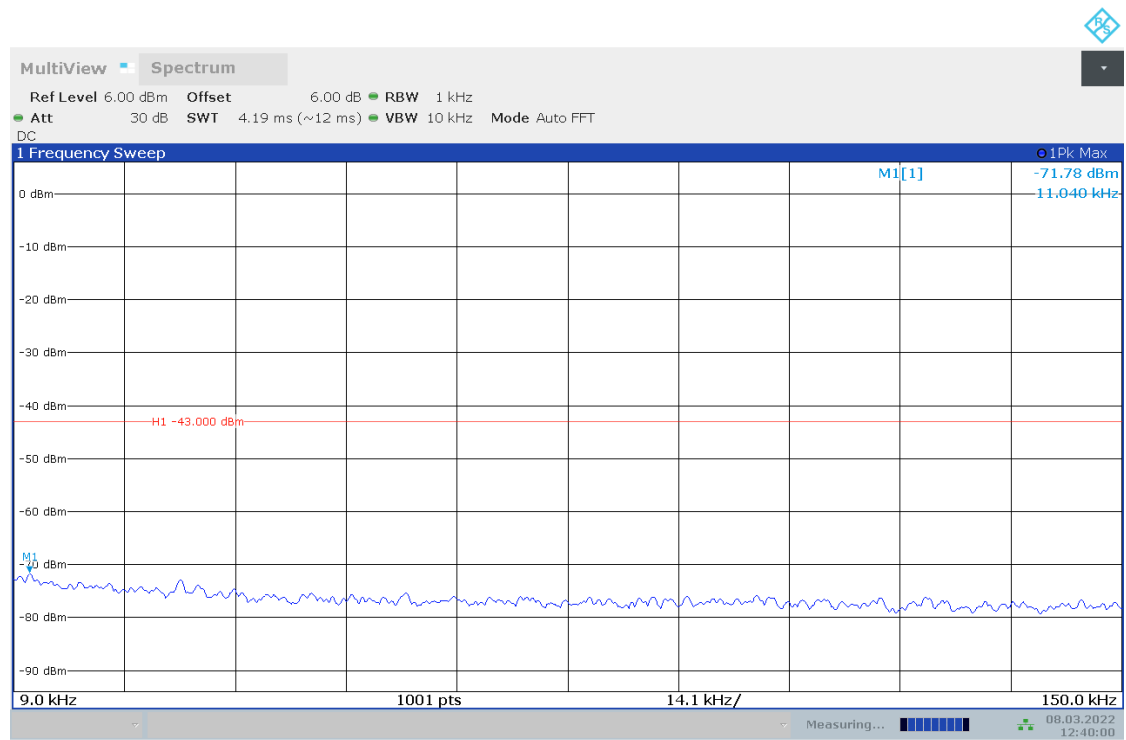


12:39:20 08.03.2022

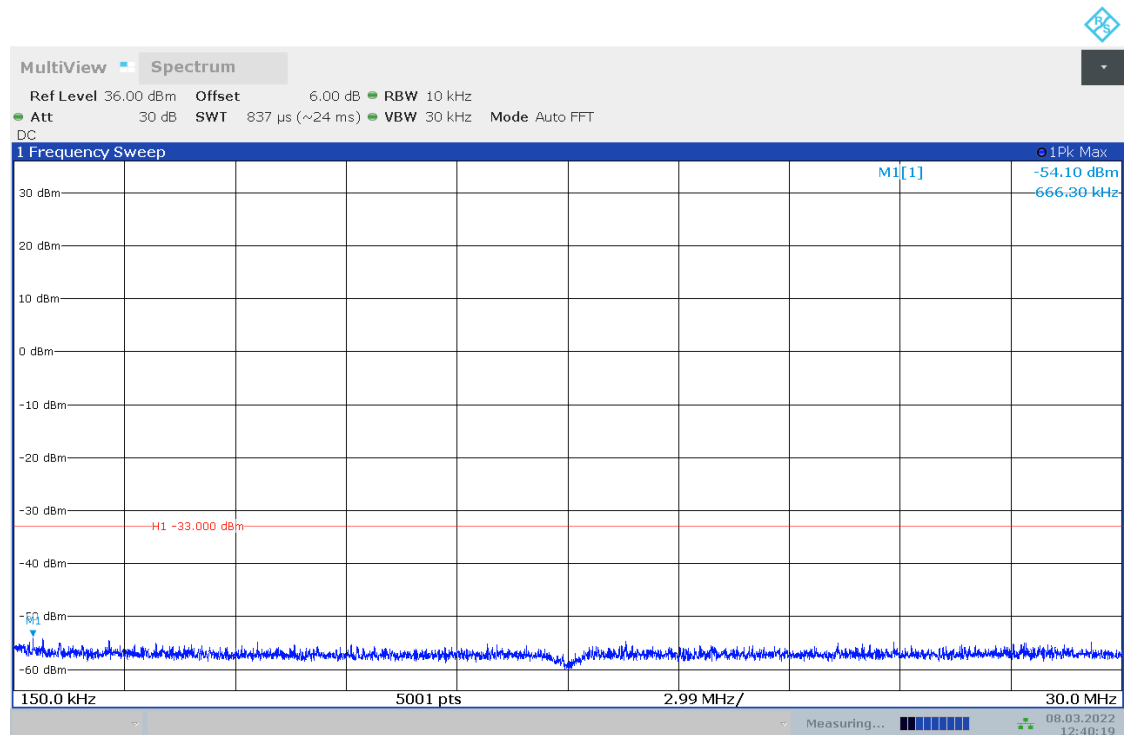


12:39:40 08.03.2022

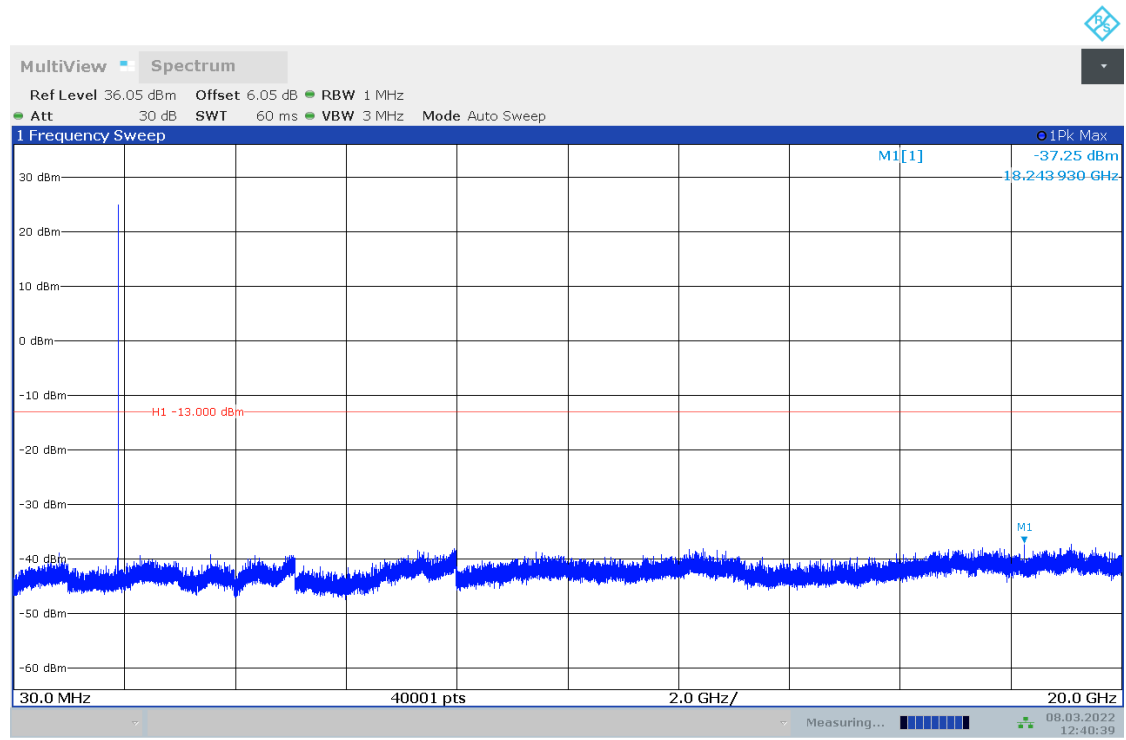
6.2.9 PCS1900_TM3_HCH



12:40:00 08.03.2022



12:40:19 08.03.2022



12:40:39 08.03.2022

7. APPENDIX G - FREQUENCY STABILITY

7.1 TEST RESULTS

7.1.1 FREQUENCY ERROR VS. VOLTAGE

Frequency Error vs. Voltage							
Test Band	Test Mode	Test Channel	Test Temp.	Test Volt.	Freq. Error [Hz]	Freq. vs. rated [ppm]	Verdict
PCS1900	TM1	LCH	TN	VH	12.51	0.01	PASS
			TN	VN	11.55	0.01	PASS
			TN	VL	12.20	0.01	PASS
		MCH	TN	VH	20.86	0.01	PASS
			TN	VN	17.36	0.01	PASS
			TN	VL	20.00	0.01	PASS
		HCH	TN	VH	21.24	0.01	PASS
			TN	VN	18.20	0.01	PASS
			TN	VL	18.47	0.01	PASS
	TM2	LCH	TN	VH	33.12	0.02	PASS
			TN	VN	31.25	0.02	PASS
			TN	VL	31.06	0.02	PASS
		MCH	TN	VH	32.38	0.02	PASS
			TN	VN	32.19	0.02	PASS
			TN	VL	31.38	0.02	PASS
		HCH	TN	VH	33.01	0.02	PASS
			TN	VN	30.82	0.02	PASS
			TN	VL	32.22	0.02	PASS
	TM3	LCH	TN	VH	27.82	0.02	PASS
			TN	VN	27.94	0.02	PASS
			TN	VL	27.29	0.01	PASS
		MCH	TN	VH	30.45	0.02	PASS
			TN	VN	29.29	0.02	PASS
			TN	VL	30.32	0.02	PASS
		HCH	TN	VH	31.63	0.02	PASS
			TN	VN	32.74	0.02	PASS
			TN	VL	31.76	0.02	PASS

7.1.2 FREQUENCY ERROR VS. TEMPERATURE

Frequency Error vs. Temperature							
Test Band	Test Mode	Test Channel	Test Temp.	Test Volt.	Freq. Error [Hz]	Freq. vs. rated [ppm]	Verdict
PCS1900	TM1	LCH	VN	-30	9.83	0.01	PASS
			VN	-20	11.11	0.01	PASS
			VN	-10	11.41	0.01	PASS
			VN	0	14.27	0.01	PASS
			VN	10	11.91	0.01	PASS
			VN	20	13.69	0.01	PASS
			VN	30	13.06	0.01	PASS
			VN	40	15.63	0.01	PASS
			VN	50	14.51	0.01	PASS
		MCH	VN	-30	24.81	0.01	PASS
			VN	-20	22.36	0.01	PASS
			VN	-10	23.20	0.01	PASS
			VN	0	23.86	0.01	PASS
			VN	10	24.06	0.01	PASS
			VN	20	24.63	0.01	PASS
			VN	30	23.70	0.01	PASS
			VN	40	23.02	0.01	PASS
			VN	50	21.30	0.01	PASS
		HCH	VN	-30	23.26	0.01	PASS
			VN	-20	23.83	0.01	PASS
			VN	-10	18.82	0.01	PASS
			VN	0	19.80	0.01	PASS
			VN	10	22.21	0.01	PASS
			VN	20	21.96	0.01	PASS
			VN	30	21.61	0.01	PASS
			VN	40	22.04	0.01	PASS
			VN	50	21.42	0.01	PASS

Frequency Error vs. Temperature							
Test Band	Test Mode	Test Channel	Test Temp.	Test Volt.	Freq. Error [Hz]	Freq. vs. rated [ppm]	Verdict
PCS1900	TM2	LCH	VN	-30	35.46	0.02	PASS
			VN	-20	33.85	0.02	PASS
			VN	-10	34.59	0.02	PASS
			VN	0	32.90	0.02	PASS
			VN	10	32.13	0.02	PASS
			VN	20	31.87	0.02	PASS
			VN	30	29.85	0.02	PASS
			VN	40	29.78	0.02	PASS
			VN	50	30.94	0.02	PASS
		MCH	VN	-30	31.82	0.02	PASS
			VN	-20	31.89	0.02	PASS
			VN	-10	32.46	0.02	PASS
			VN	0	32.87	0.02	PASS
			VN	10	32.66	0.02	PASS
			VN	20	33.09	0.02	PASS
			VN	30	32.82	0.02	PASS
			VN	40	32.11	0.02	PASS
			VN	50	31.18	0.02	PASS
		HCH	VN	-30	30.73	0.02	PASS
			VN	-20	33.34	0.02	PASS
			VN	-10	30.02	0.02	PASS
			VN	0	32.15	0.02	PASS
			VN	10	32.54	0.02	PASS
			VN	20	30.80	0.02	PASS
			VN	30	31.29	0.02	PASS
			VN	40	31.68	0.02	PASS
			VN	50	33.40	0.02	PASS

Frequency Error vs. Temperature							
Test Band	Test Mode	Test Channel	Test Temp.	Test Volt.	Freq. Error [Hz]	Freq. vs. rated [ppm]	Verdict
PCS1900	TM3	LCH	VN	-30	26.47	0.01	PASS
			VN	-20	25.98	0.01	PASS
			VN	-10	24.45	0.01	PASS
			VN	0	25.58	0.01	PASS
			VN	10	25.53	0.01	PASS
			VN	20	25.17	0.01	PASS
			VN	30	24.55	0.01	PASS
			VN	40	26.18	0.01	PASS
			VN	50	25.83	0.01	PASS
		MCH	VN	-30	28.24	0.02	PASS
			VN	-20	30.02	0.02	PASS
			VN	-10	29.01	0.02	PASS
			VN	0	30.48	0.02	PASS
			VN	10	27.53	0.01	PASS
			VN	20	28.56	0.02	PASS
			VN	30	27.55	0.01	PASS
			VN	40	28.19	0.01	PASS
			VN	50	26.19	0.01	PASS
		HCH	VN	-30	26.73	0.01	PASS
			VN	-20	28.23	0.01	PASS
			VN	-10	27.98	0.01	PASS
			VN	0	28.93	0.02	PASS
			VN	10	27.94	0.01	PASS
			VN	20	27.94	0.01	PASS
			VN	30	28.12	0.01	PASS
			VN	40	27.58	0.01	PASS
			VN	50	27.44	0.01	PASS

End of Test Report