

1. Effective (Isotropic) Radiated Power Output Data

1.1 Test Result

1.1.1 PCS1900_EIRP

Band: PCS1900								
ENV	Mode		Frequency (MHz)	Conducted Power (dBm)	Gain (dBi)	EIRP (dBm)		Verdict
	Network	Subset				Result	Limit	
NTNV	GSM	GSM	1850.2	28.91	2.66	31.57	<=33.00	Pass
			1880	29.31	2.66	31.97	<=33.00	Pass
			1909.8	29.35	2.66	32.01	<=33.00	Pass
	EGPRS	1 TX Slot	1850.2	23.74	2.66	26.40	<=33.00	Pass
		2 TX Slots	1850.2	21.05	2.66	23.71	<=33.00	Pass
		3 TX Slots	1850.2	19.03	2.66	21.69	<=33.00	Pass
		4 TX Slots	1850.2	17.69	2.66	20.35	<=33.00	Pass
		1 TX Slot	1880	25.68	2.66	28.34	<=33.00	Pass
		2 TX Slots	1880	21.47	2.66	24.13	<=33.00	Pass
		3 TX Slots	1880	19.55	2.66	22.21	<=33.00	Pass
		4 TX Slots	1880	18.56	2.66	21.22	<=33.00	Pass
		1 TX Slot	1909.8	23.59	2.66	26.25	<=33.00	Pass
		2 TX Slots	1909.8	21.11	2.66	23.77	<=33.00	Pass
		3 TX Slots	1909.8	19.09	2.66	21.75	<=33.00	Pass
		4 TX Slots	1909.8	17.91	2.66	20.57	<=33.00	Pass
Note1: EIRP=Conducted Power+Antenna Gain								

2. Frequency Stability

2.1 Test Result

2.1.1 PCS1900

Band: PCS1900							
Network	Frequency (MHz)	Temp. (°C)	Voltage (VDC)	Freq. Error (Hz)	Freq. vs. Rated (ppm)		Verdict
					Result	Limit	
GSM	1850.2	20	3.5	-51.882	-0.0280	-2.5 to 2.5	Pass
			3.87	-23.013	-0.0124	-2.5 to 2.5	Pass
			4.4	-13.950	-0.0075	-2.5 to 2.5	Pass
		-30	3.87	-10.449	-0.0056	-2.5 to 2.5	Pass
		-20	3.87	-6.697	-0.0036	-2.5 to 2.5	Pass
		-10	3.87	-10.148	-0.0055	-2.5 to 2.5	Pass
		0	3.87	-9.711	-0.0052	-2.5 to 2.5	Pass
		10	3.87	-10.548	-0.0057	-2.5 to 2.5	Pass
		30	3.87	-5.288	-0.0029	-2.5 to 2.5	Pass
		40	3.87	-10.591	-0.0057	-2.5 to 2.5	Pass
		50	3.87	-11.615	-0.0063	-2.5 to 2.5	Pass
	1880	20	3.5	-1.847	-0.0010	-2.5 to 2.5	Pass
			3.87	0.135	0.0001	-2.5 to 2.5	Pass
			4.4	-4.506	-0.0024	-2.5 to 2.5	Pass
		-30	3.87	-1.549	-0.0008	-2.5 to 2.5	Pass
		-20	3.87	-3.006	-0.0016	-2.5 to 2.5	Pass
		-10	3.87	-3.585	-0.0019	-2.5 to 2.5	Pass
		0	3.87	-3.301	-0.0018	-2.5 to 2.5	Pass
		10	3.87	-6.881	-0.0037	-2.5 to 2.5	Pass
		30	3.87	-6.304	-0.0034	-2.5 to 2.5	Pass
		40	3.87	-7.947	-0.0042	-2.5 to 2.5	Pass

	1909.8	50	3.87	-9.273	-0.0049	-2.5 to 2.5	Pass
		20	3.5	-6.760	-0.0035	-2.5 to 2.5	Pass
			3.87	-8.611	-0.0045	-2.5 to 2.5	Pass
			4.4	-6.581	-0.0034	-2.5 to 2.5	Pass
		-30	3.87	-6.493	-0.0034	-2.5 to 2.5	Pass
		-20	3.87	-11.794	-0.0062	-2.5 to 2.5	Pass
		-10	3.87	-9.786	-0.0051	-2.5 to 2.5	Pass
		0	3.87	-10.720	-0.0056	-2.5 to 2.5	Pass
		10	3.87	-11.245	-0.0059	-2.5 to 2.5	Pass
		30	3.87	-10.721	-0.0056	-2.5 to 2.5	Pass
		40	3.87	-13.758	-0.0072	-2.5 to 2.5	Pass
		50	3.87	-11.652	-0.0061	-2.5 to 2.5	Pass
EGPRS	1850.2	20	3.5	9.603	0.0052	-2.5 to 2.5	Pass
			3.87	7.517	0.0041	-2.5 to 2.5	Pass
			4.4	6.286	0.0034	-2.5 to 2.5	Pass
		-30	3.87	8.525	0.0046	-2.5 to 2.5	Pass
		-20	3.87	6.973	0.0038	-2.5 to 2.5	Pass
		-10	3.87	9.947	0.0054	-2.5 to 2.5	Pass
		0	3.87	5.529	0.0030	-2.5 to 2.5	Pass
		10	3.87	10.006	0.0054	-2.5 to 2.5	Pass
		30	3.87	5.512	0.0030	-2.5 to 2.5	Pass
		40	3.87	1.810	0.0010	-2.5 to 2.5	Pass
		50	3.87	7.283	0.0039	-2.5 to 2.5	Pass
	1880	20	3.5	3.993	0.0021	-2.5 to 2.5	Pass
			3.87	3.397	0.0018	-2.5 to 2.5	Pass
			4.4	5.330	0.0028	-2.5 to 2.5	Pass
		-30	3.87	10.330	0.0055	-2.5 to 2.5	Pass
		-20	3.87	4.800	0.0026	-2.5 to 2.5	Pass
		-10	3.87	5.555	0.0030	-2.5 to 2.5	Pass
		0	3.87	5.554	0.0030	-2.5 to 2.5	Pass
		10	3.87	4.470	0.0024	-2.5 to 2.5	Pass
		30	3.87	4.098	0.0022	-2.5 to 2.5	Pass
		40	3.87	3.609	0.0019	-2.5 to 2.5	Pass
		50	3.87	0.771	0.0004	-2.5 to 2.5	Pass
	1909.8	20	3.5	2.258	0.0012	-2.5 to 2.5	Pass
			3.87	-0.025	0.0000	-2.5 to 2.5	Pass
			4.4	0.263	0.0001	-2.5 to 2.5	Pass
		-30	3.87	-1.191	-0.0006	-2.5 to 2.5	Pass
		-20	3.87	-3.448	-0.0018	-2.5 to 2.5	Pass
		-10	3.87	-0.442	-0.0002	-2.5 to 2.5	Pass
		0	3.87	0.448	0.0002	-2.5 to 2.5	Pass
		10	3.87	0.666	0.0003	-2.5 to 2.5	Pass
		30	3.87	-2.276	-0.0012	-2.5 to 2.5	Pass
		40	3.87	1.686	0.0009	-2.5 to 2.5	Pass
		50	3.87	-0.602	-0.0003	-2.5 to 2.5	Pass

3. 99% & 26dB Bandwidth

3.1 Test Result

3.1.1 PCS1900_OBW

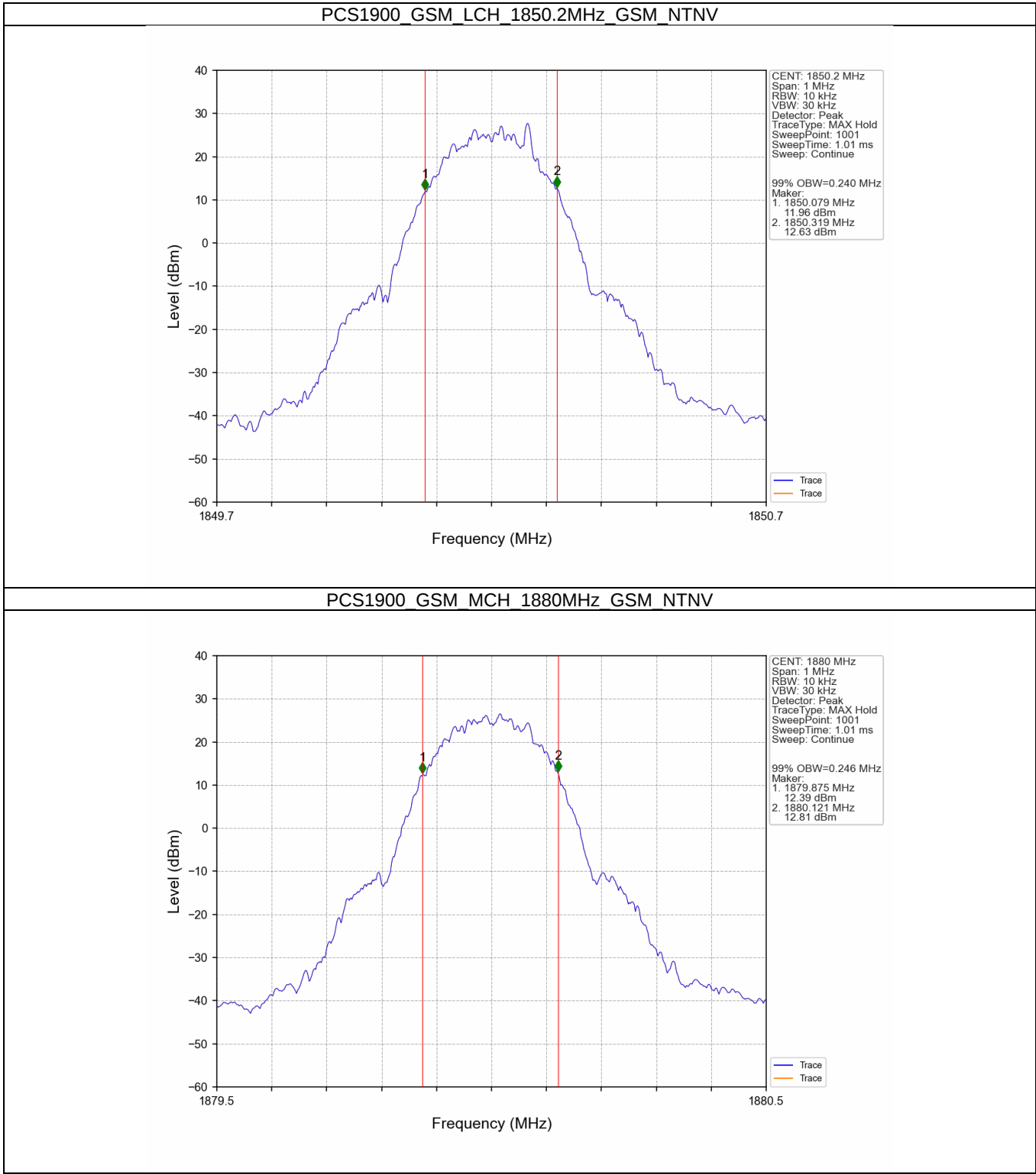
Band: PCS1900						
ENV	Mode		Frequency (MHz)	99% Occupied Bandwidth (MHz)		Verdict
	Network	Subset		Result	Limit	
NTNV	GSM	GSM	1850.2	0.240	/	Pass
			1880	0.246	/	Pass
			1909.8	0.249	/	Pass
	EGPRS	1 TX Slot	1850.2	0.246	/	Pass
			1880	0.238	/	Pass
			1909.8	0.241	/	Pass

3.1.2 PCS1900_XDB

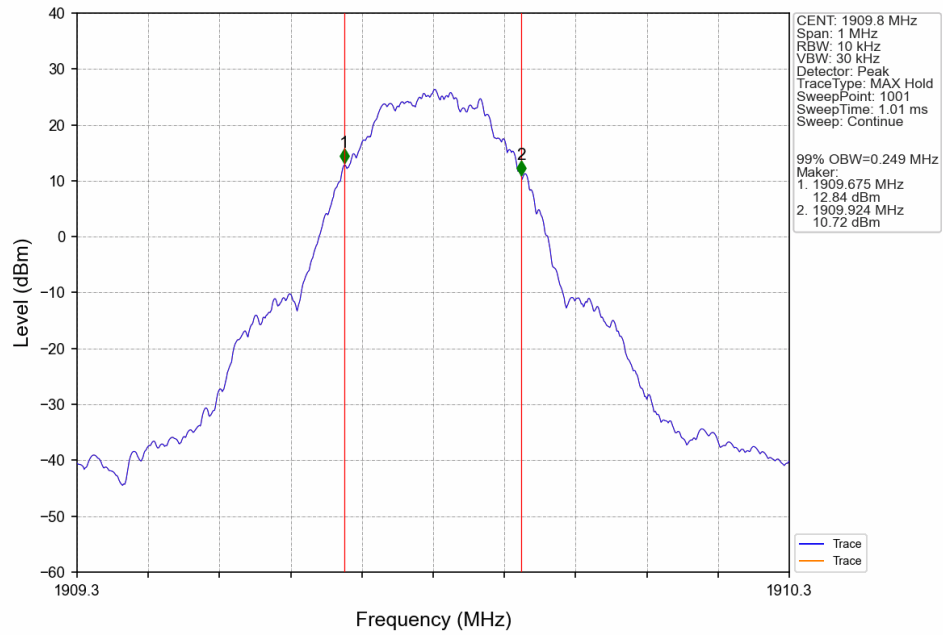
Band: PCS1900						
ENV	Mode		Frequency (MHz)	26dB Bandwidth (MHz)		Verdict
	Network	Subset		Result	Limit	
NTNV	GSM	GSM	1850.2	0.312	/	Pass
			1880	0.321	/	Pass
			1909.8	0.317	/	Pass
	EGPRS	1 TX Slot	1850.2	0.311	/	Pass
			1880	0.307	/	Pass
			1909.8	0.316	/	Pass

3.2 Test Graph

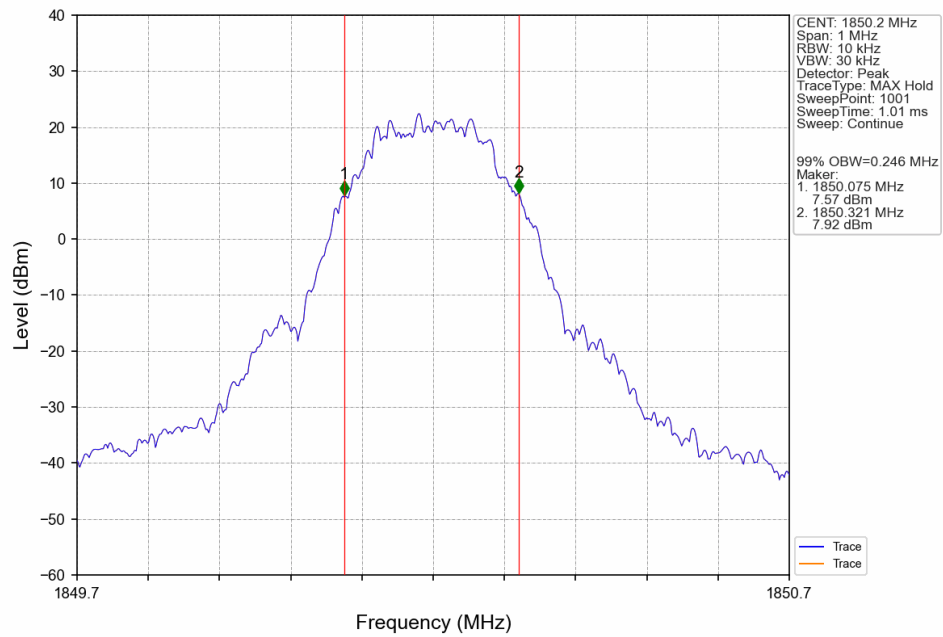
3.2.1 PCS1900_OBW



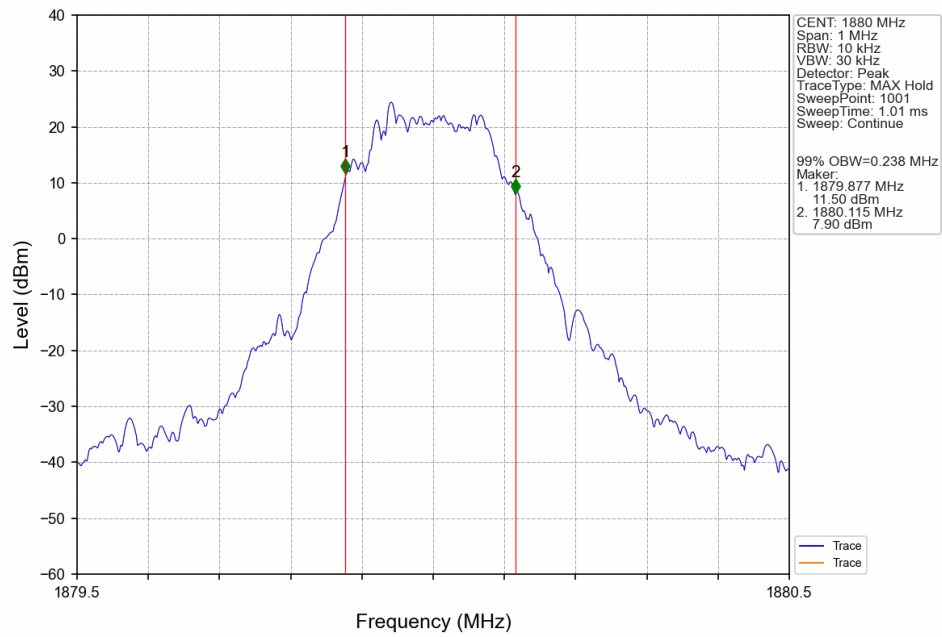
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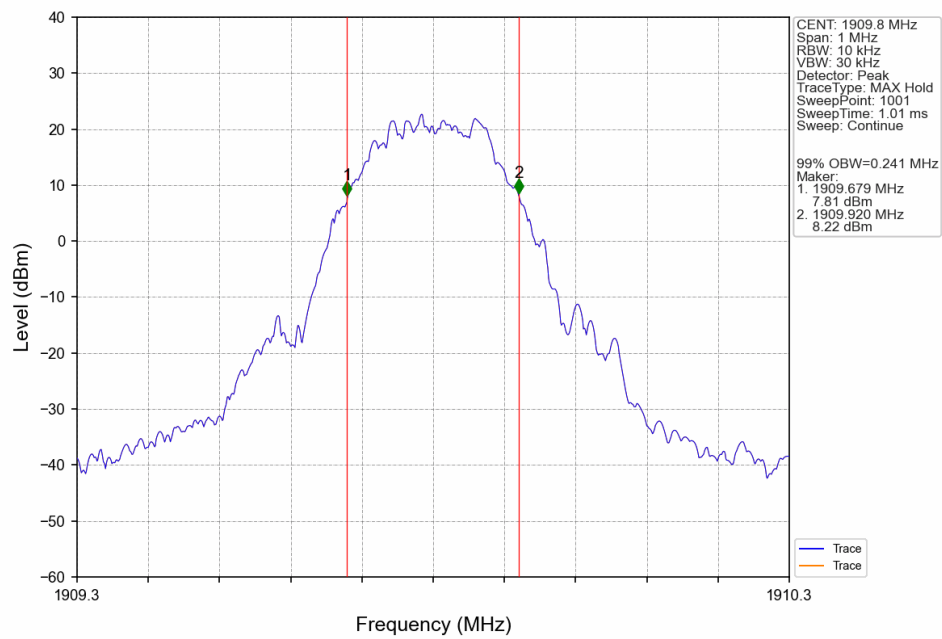
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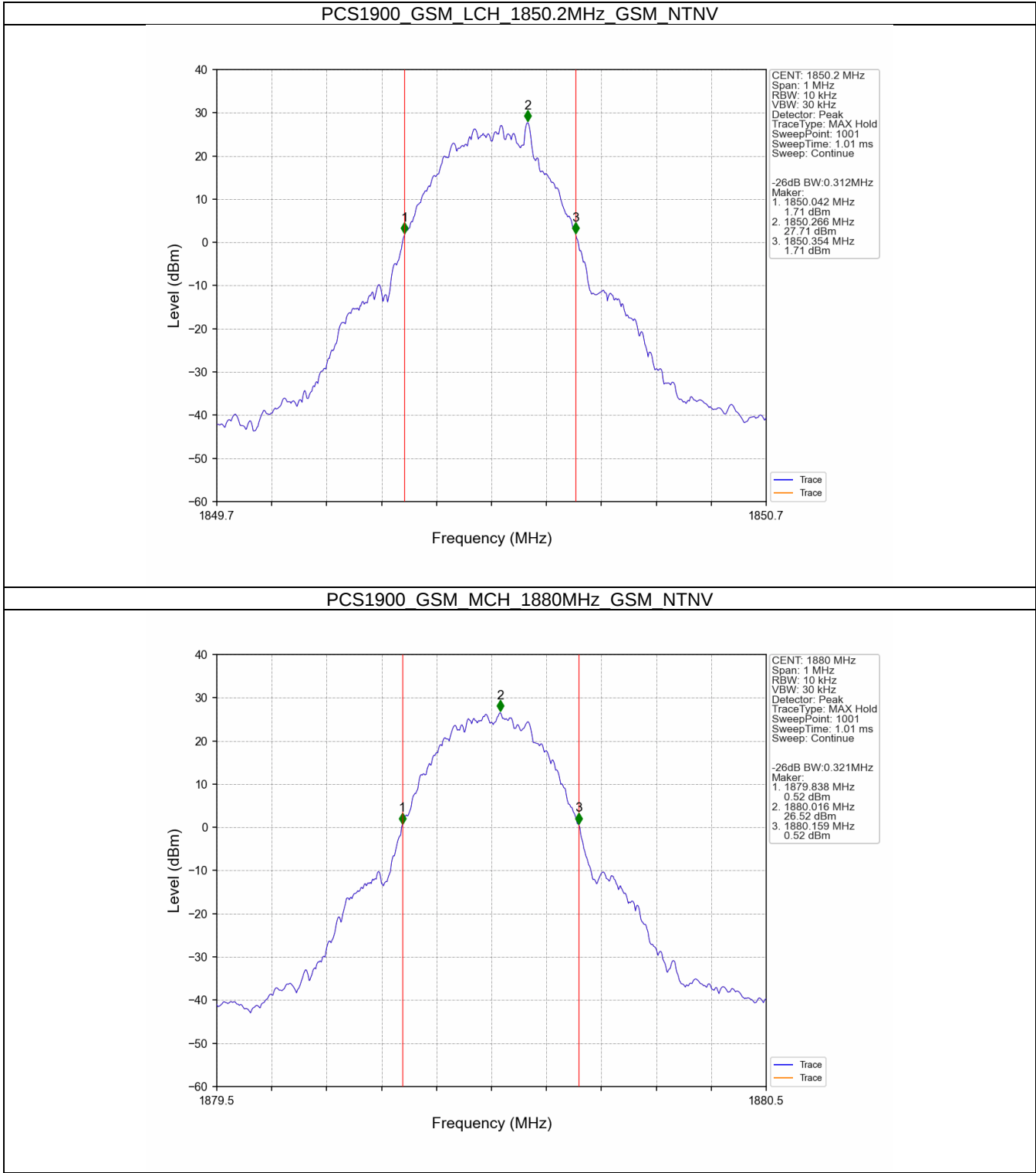
PCS1900_EGPRS_MCH_1880MHz_1 TX Slot_NTNV



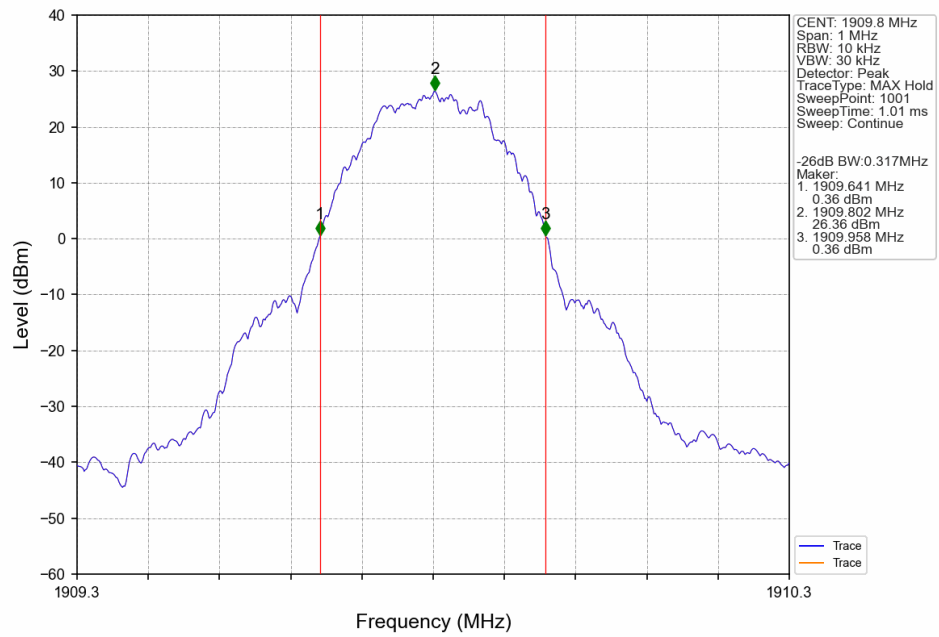
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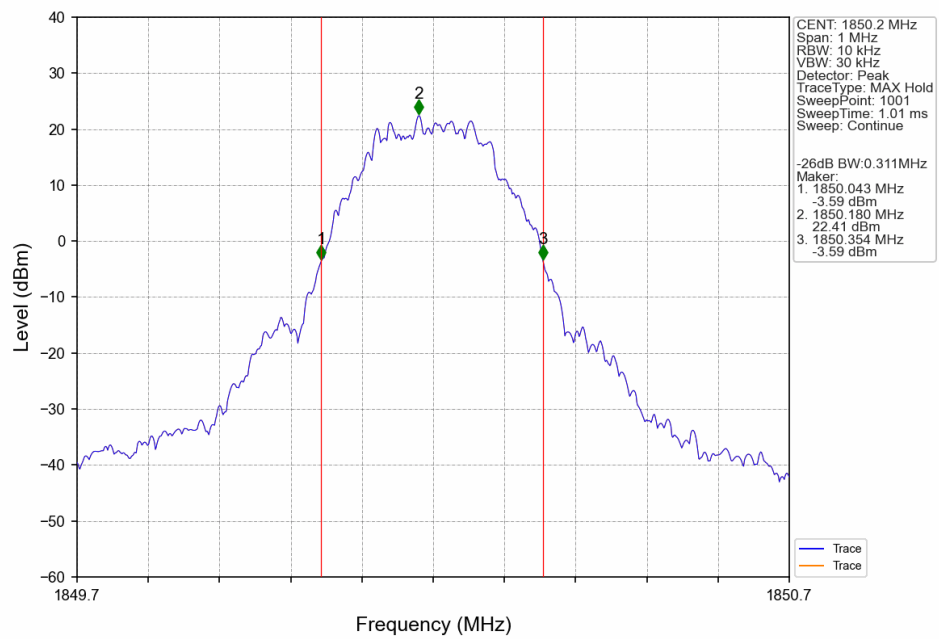
3.2.2 PCS1900_XDB



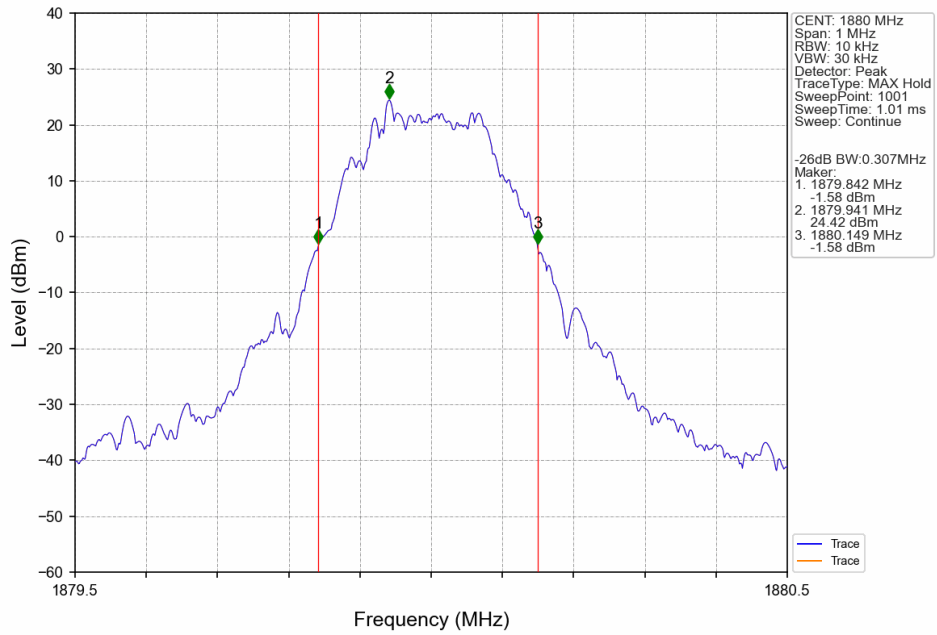
PCS1900_GSM_HCH_1909.8MHz_GSM_NTNV



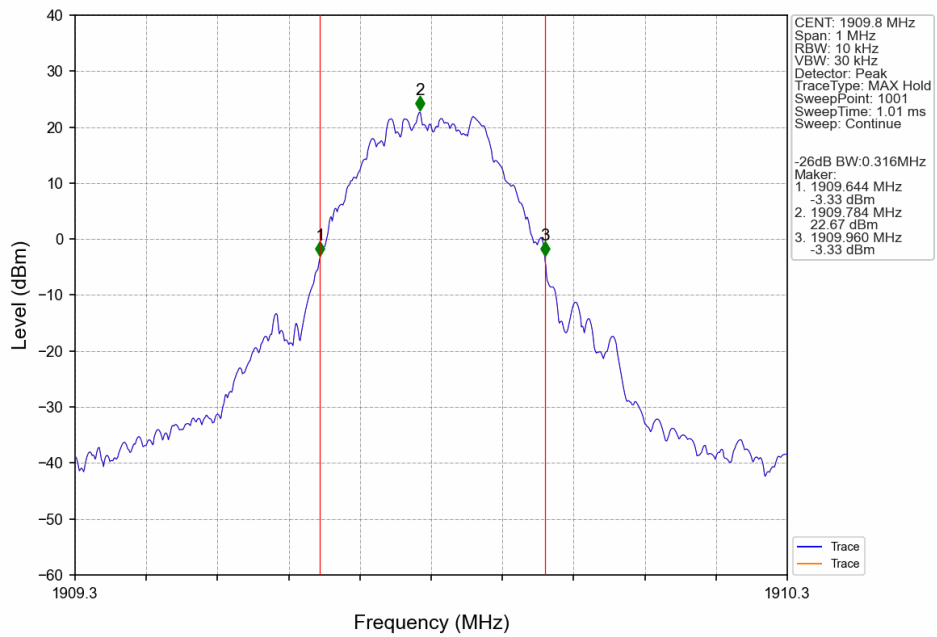
PCS1900_EGPRS_LCH_1850.2MHz_1 TX Slot_NTNV



PCS1900_EGPRS_MCH_1880MHz_1 TX Slot_NTNV



PCS1900_EGPRS_HCH_1909.8MHz_1 TX Slot_NTNV



4. Peak-Average Ratio

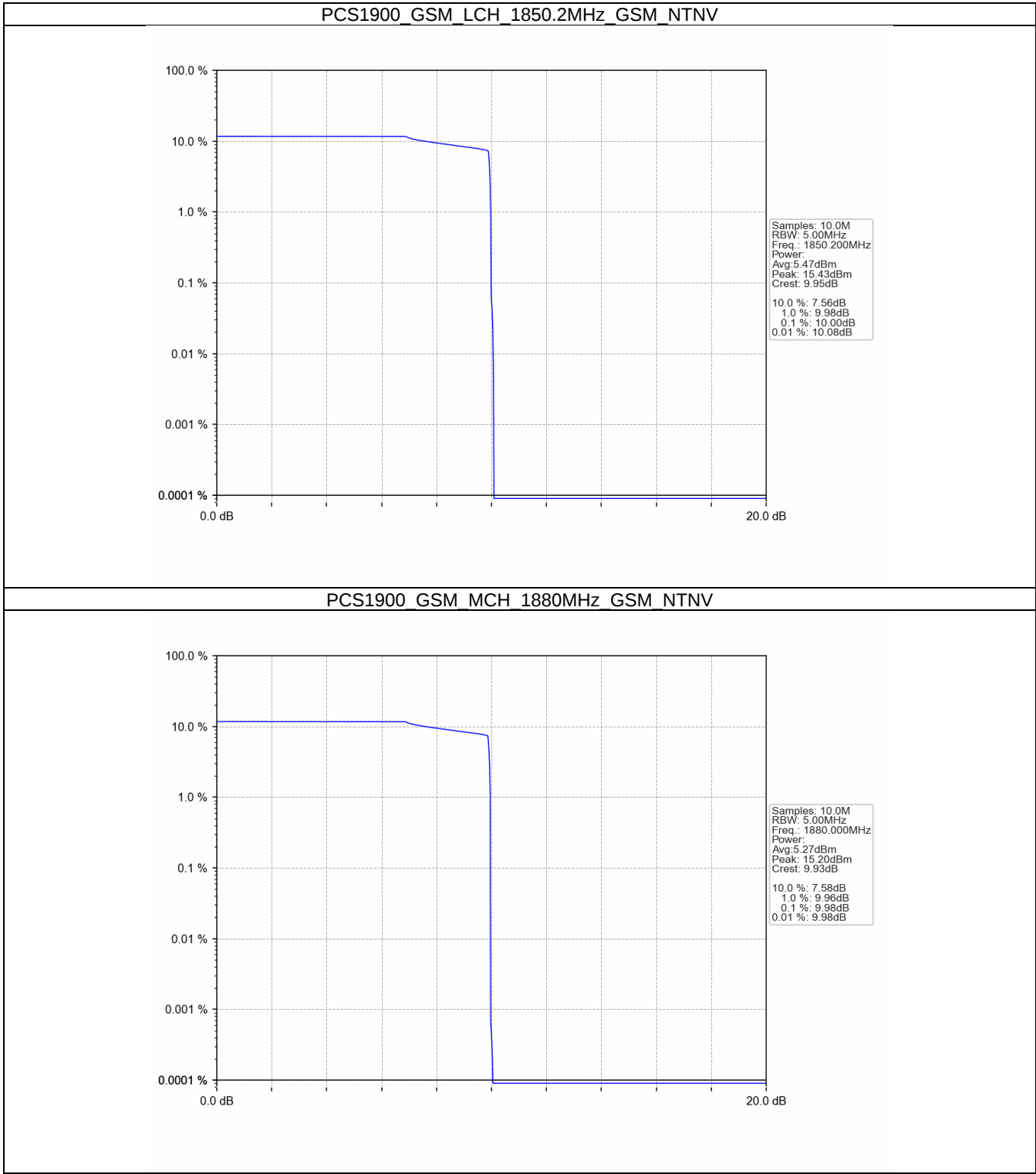
4.1 Test Result

4.1.1 PCS1900

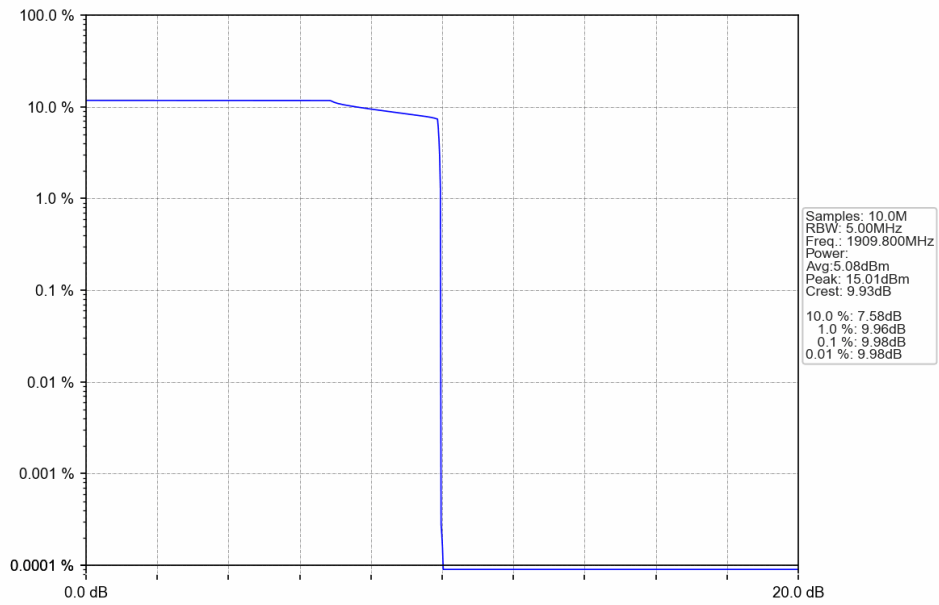
Band: PCS1900						
ENV	Mode		Frequency (MHz)	Peak-Average Ratio (dB)		Verdict
	Network	Subset		Result	Limit	
NTNV	GSM	GSM	1850.2	10.00	<=13	Pass
			1880	9.98	<=13	Pass
			1909.8	9.98	<=13	Pass
	EGPRS	4 TX Slots	1850.2	5.28	<=13	Pass
			1880	5.06	<=13	Pass
			1909.8	5.08	<=13	Pass

4.2 Test Graph

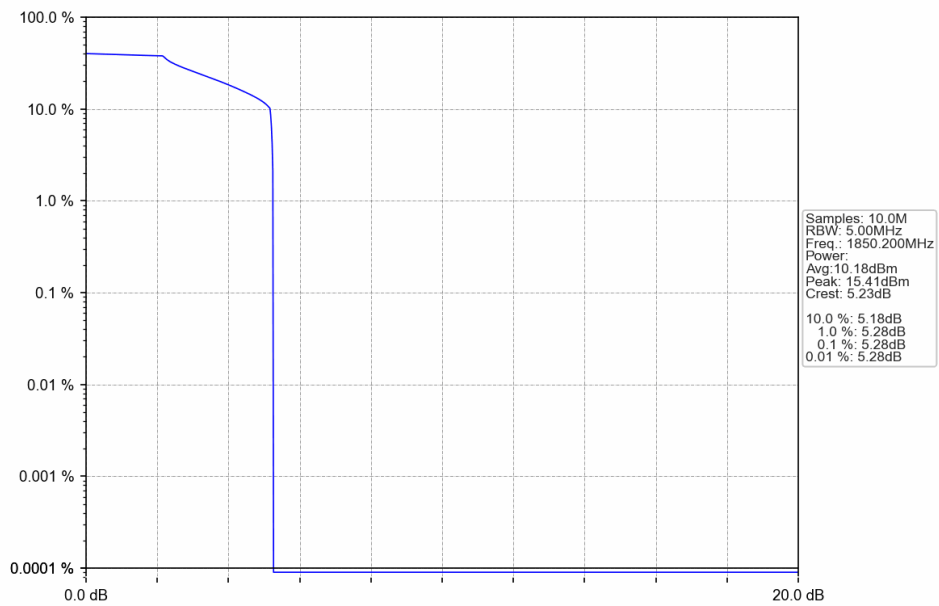
4.2.1 PCS1900



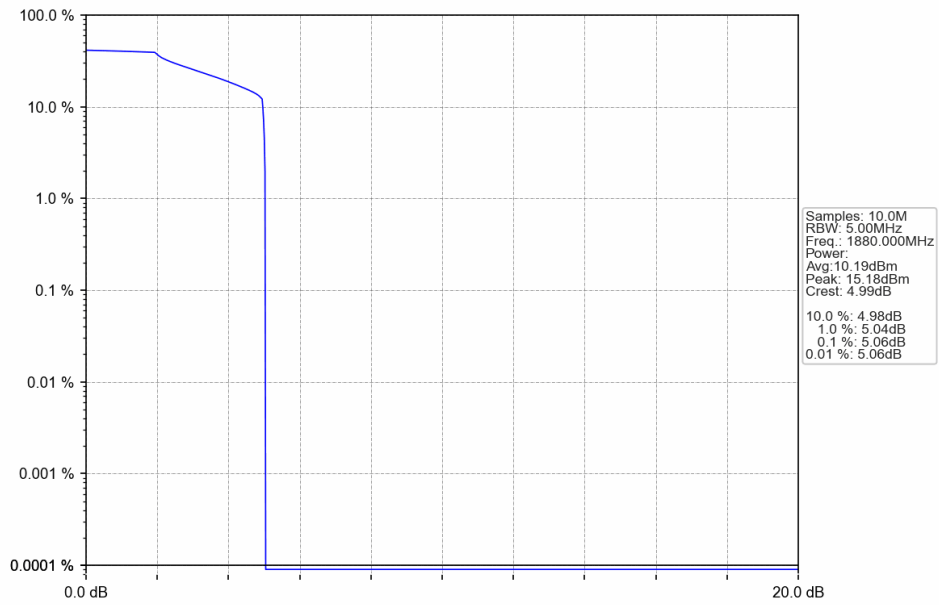
PCS1900 GSM_HCH_1909.8MHz_GSM_NTNV



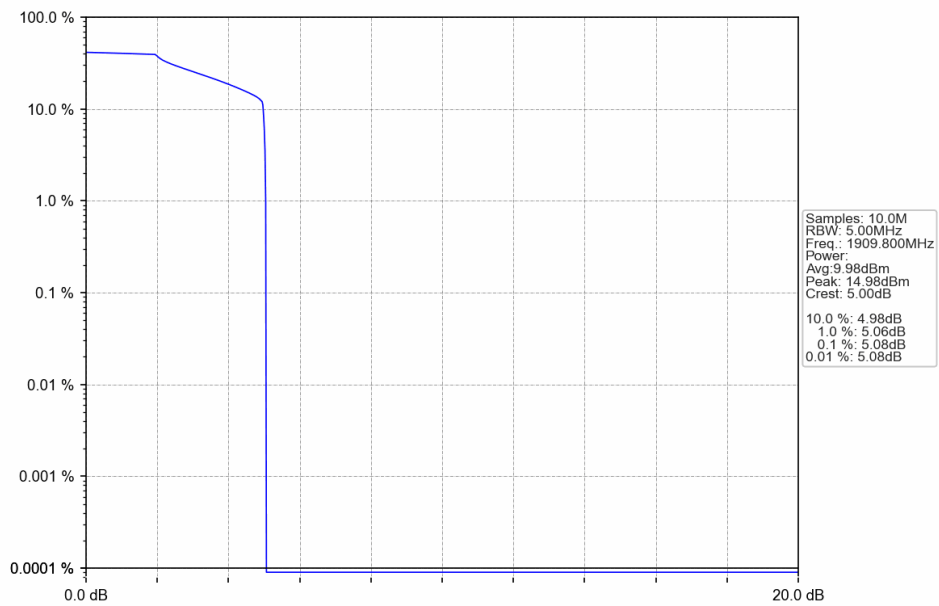
PCS1900 EGPRS_LCH_1850.2MHz_4 TX Slots_NTNV



PCS1900 EGPRS_MCH_1880MHz_4 TX Slots_NTNV



PCS1900 EGPRS_HCH_1909.8MHz_4 TX Slots_NTNV



5. Spurious Emission

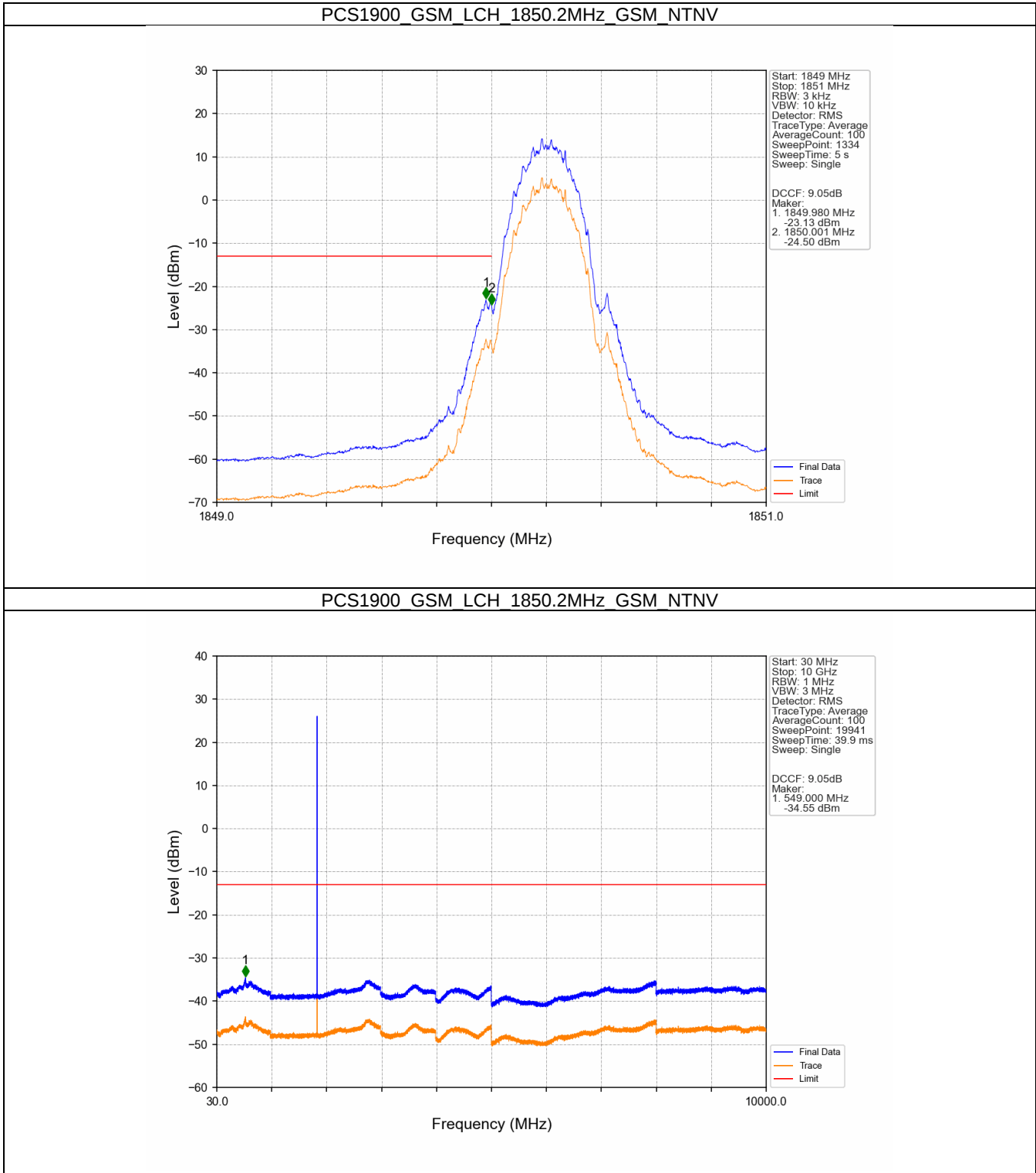
5.1 Test Result

5.1.1 PCS1900

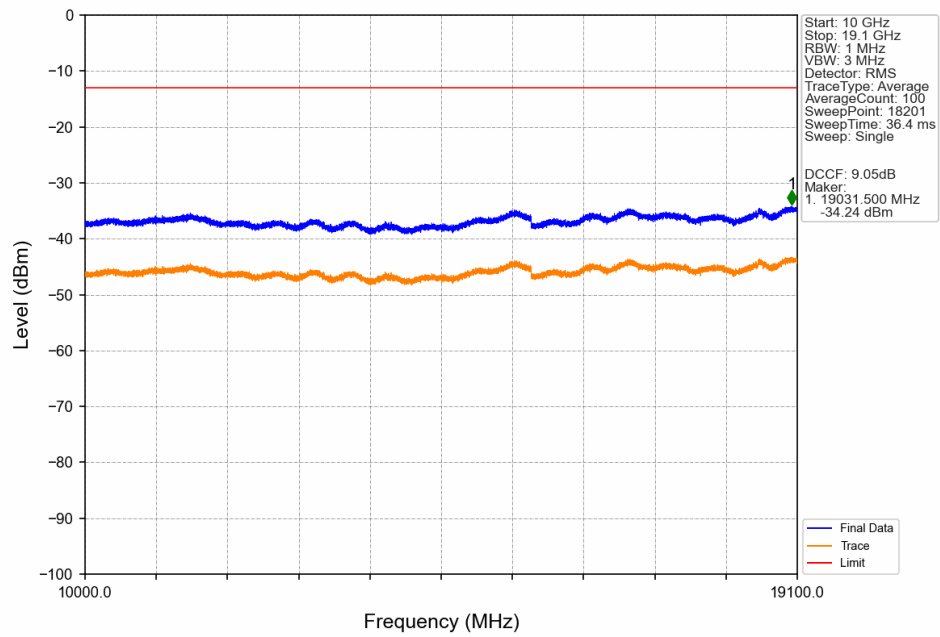
Band: PCS1900						
ENV	Mode		Frequency (MHz)	Spurious Emission		Verdict
	Network	Subset		Result	Limit	
NTNV	GSM	GSM	1850.2	Refer To Test Graph		Pass
			1880	Refer To Test Graph		Pass
			1909.8	Refer To Test Graph		Pass
	EGPRS	1 TX Slot	1850.2	Refer To Test Graph		Pass
			1880	Refer To Test Graph		Pass
			1909.8	Refer To Test Graph		Pass

5.2 Test Graph

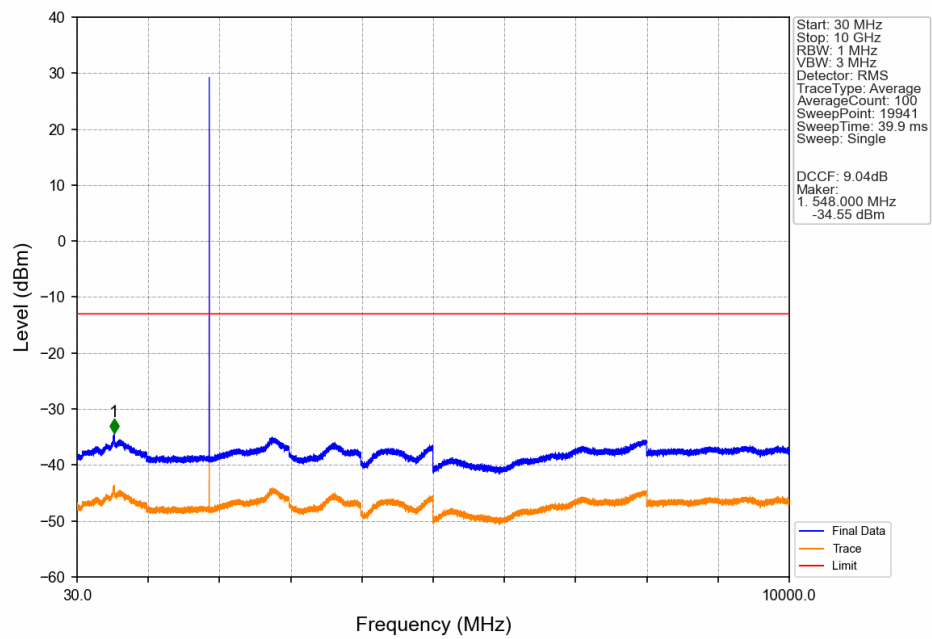
5.2.1 PCS1900



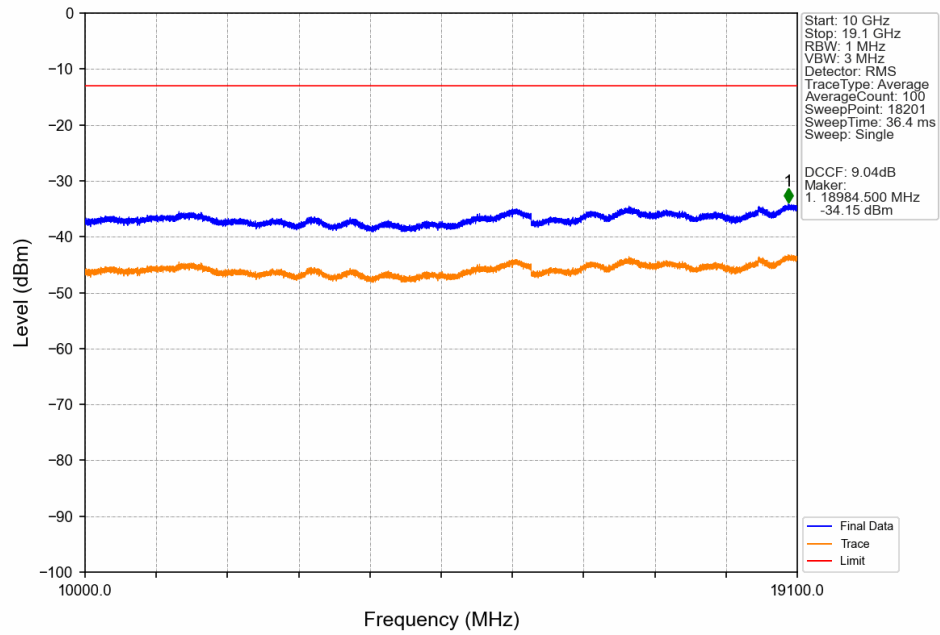
PCS1900_GSM_LCH_1850.2MHz_GSM_NTNV



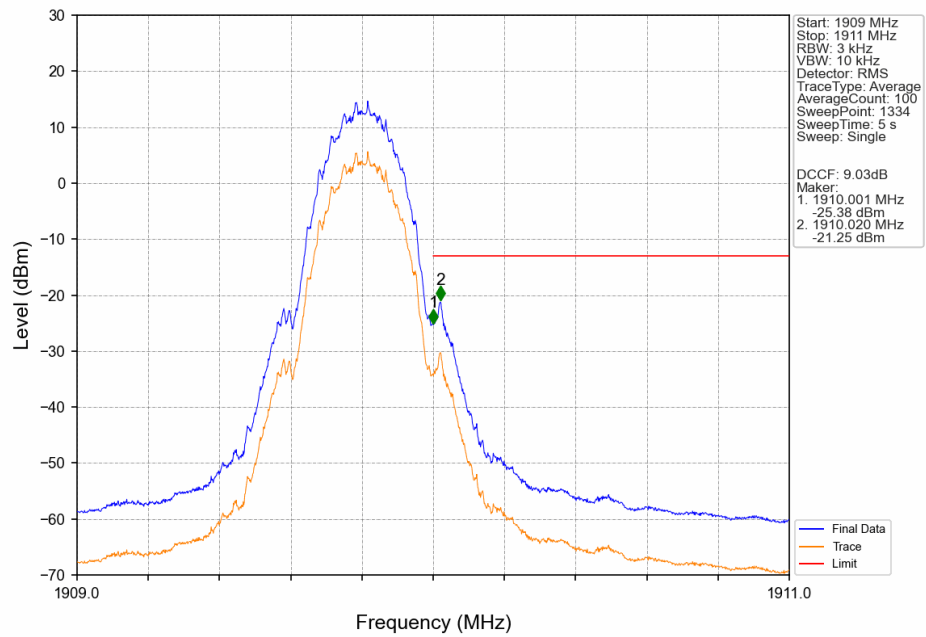
PCS1900_GSM_MCH_1880MHz_GSM_NTNV



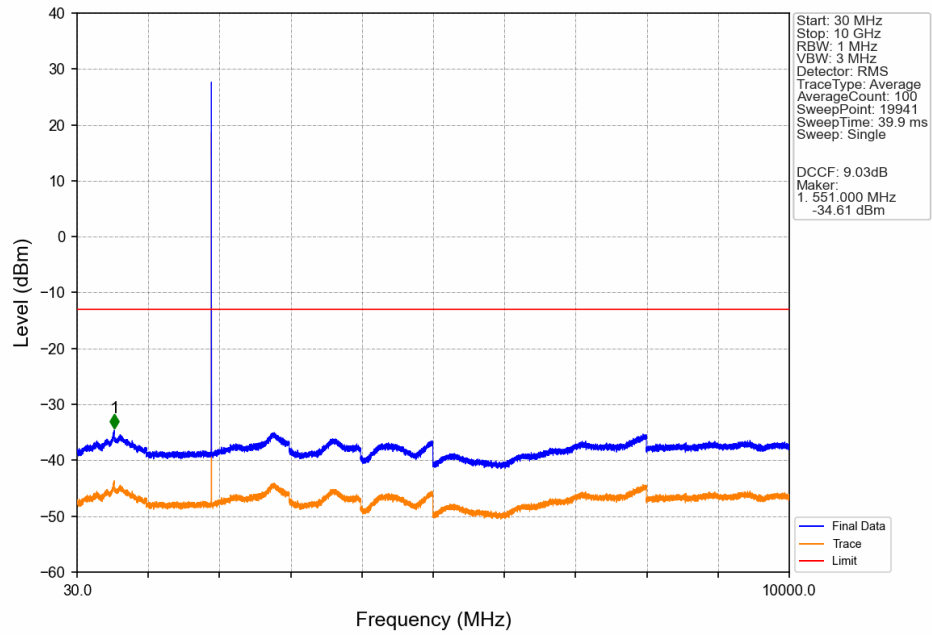
PCS1900_GSM_MCH_1880MHz_GSM_NTNV



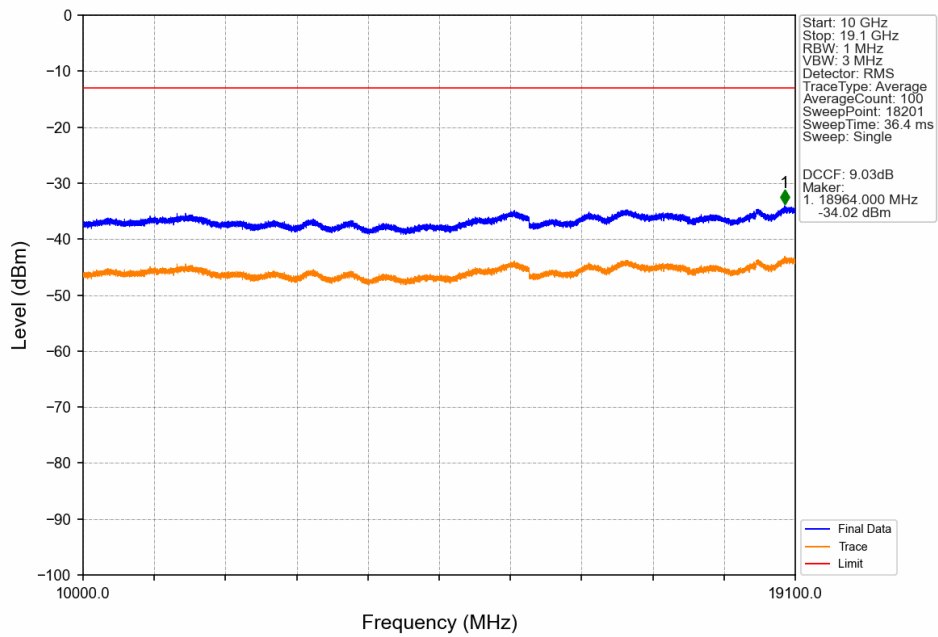
PCS1900_GSM_HCH_1909.8MHz_GSM_NTNV



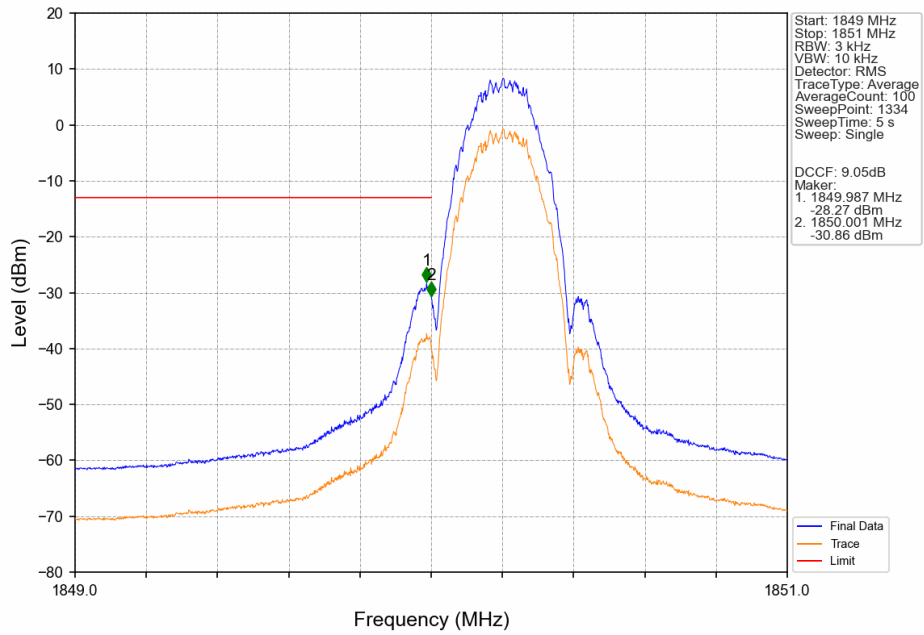
PCS1900 GSM_HCH_1909.8MHz_GSM_NTNV



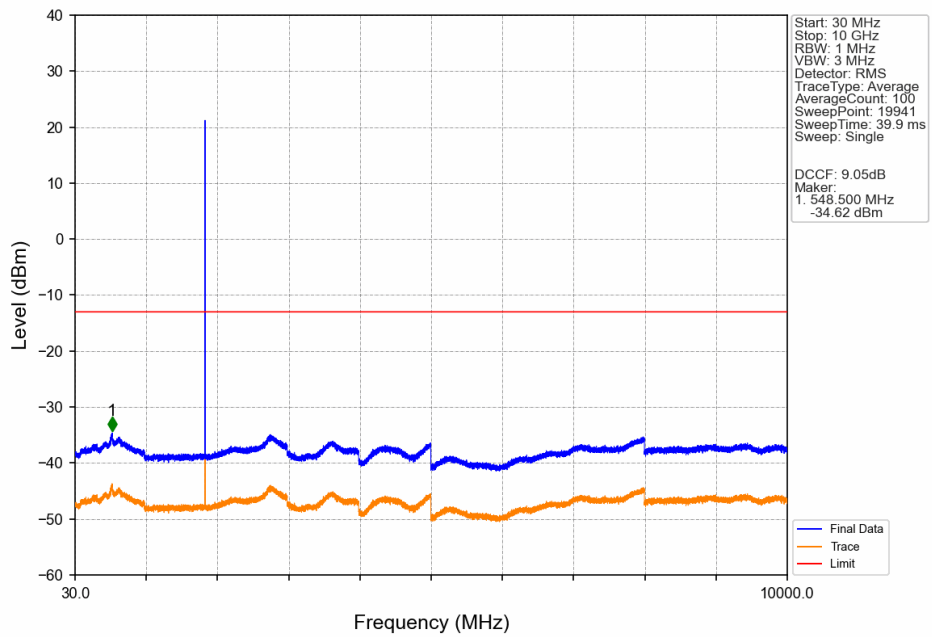
PCS1900 GSM_HCH_1909.8MHz_GSM_NTNV



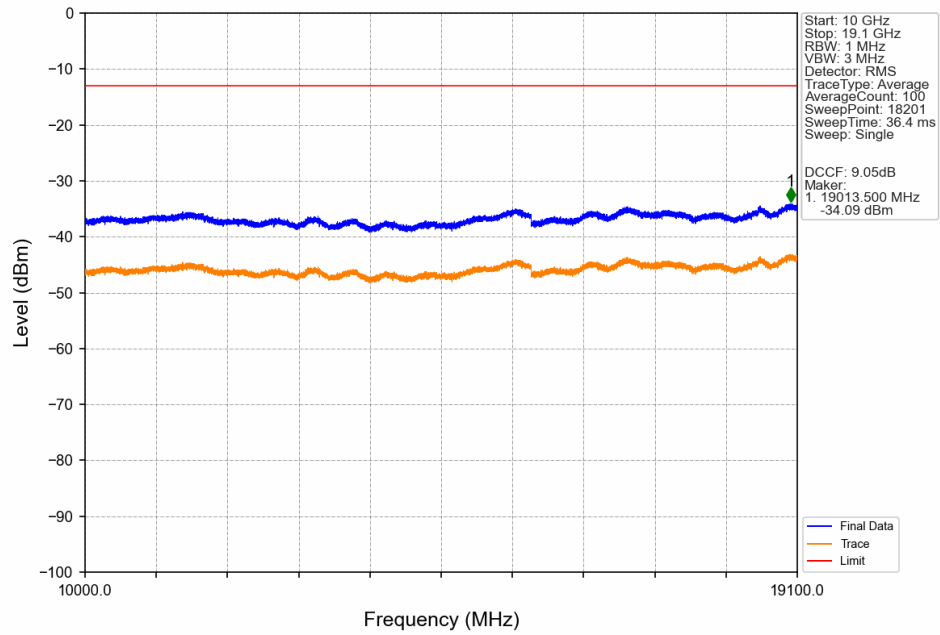
PCS1900_EGPRS_LCH_1850.2MHz_1 TX Slot_NTNV



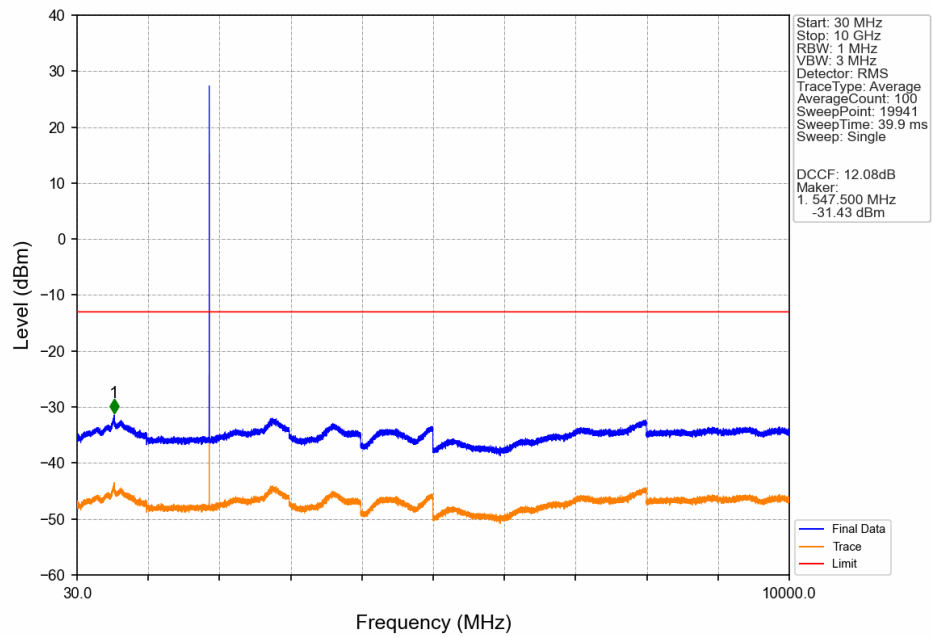
PCS1900_EGPRS_LCH_1850.2MHz_1 TX Slot_NTNV



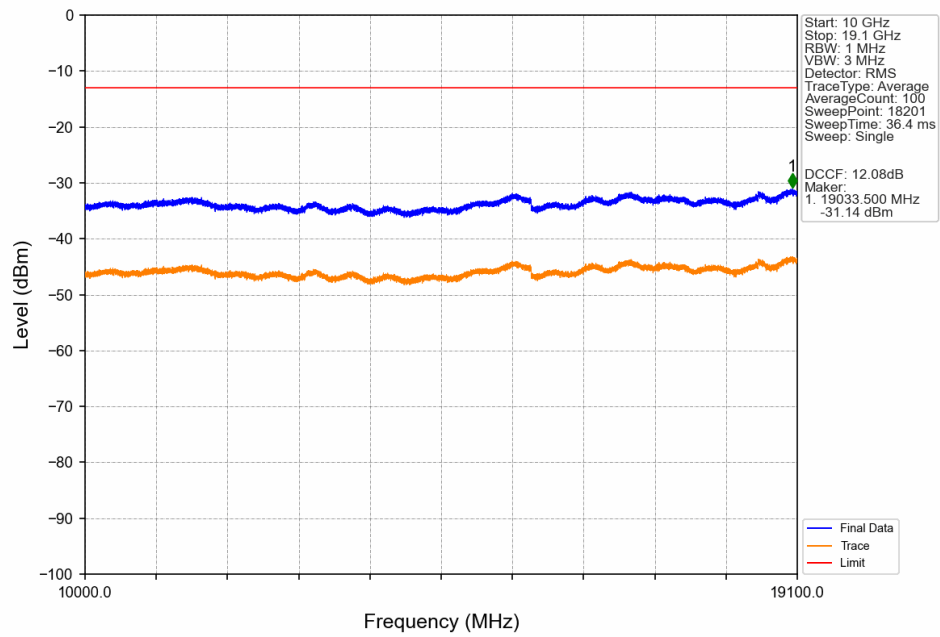
PCS1900 EGPRS LCH 1850.2MHz 1 TX Slot_NTNV



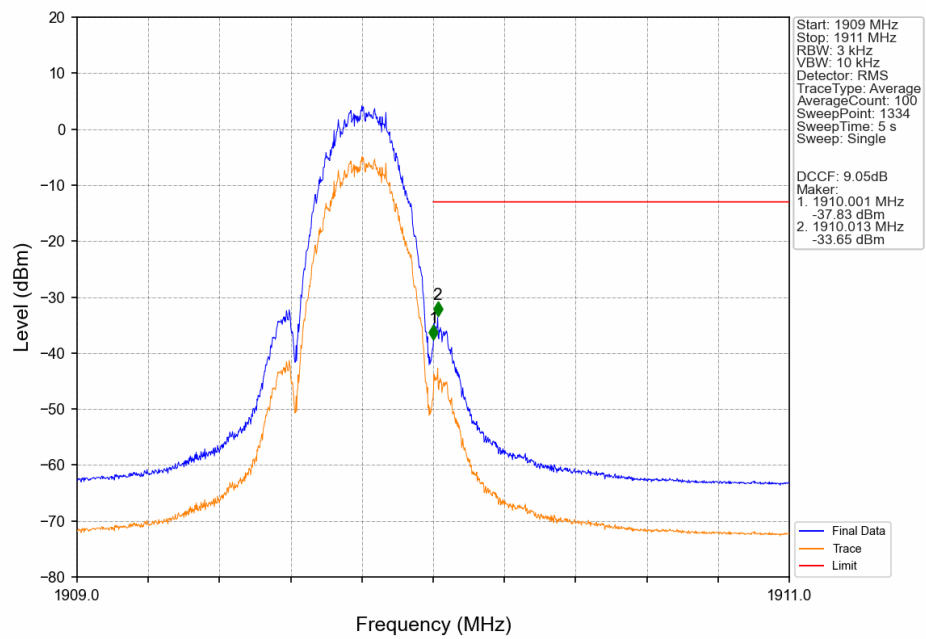
PCS1900 EGPRS MCH 1880MHz 1 TX Slot_NTNV



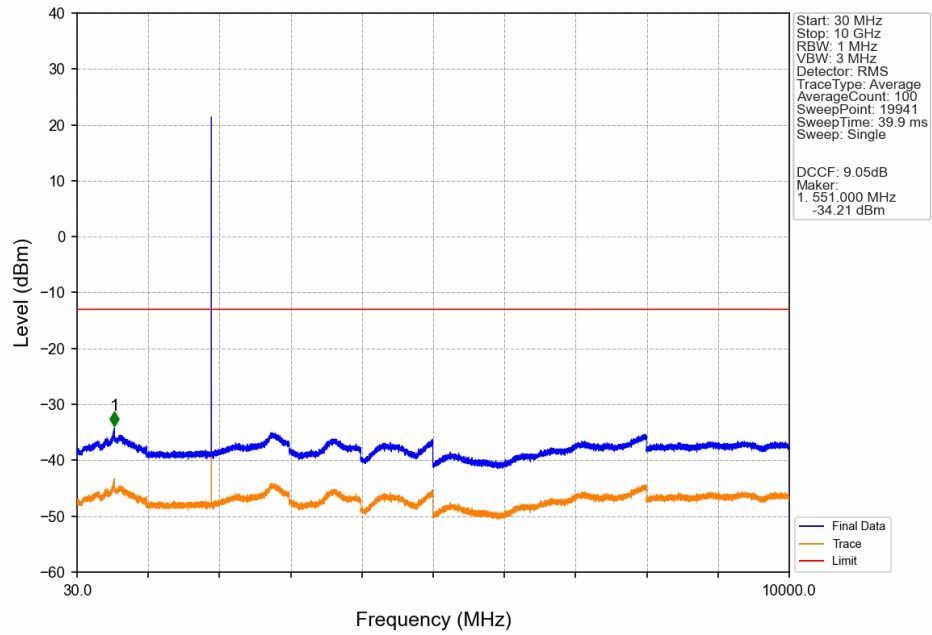
PCS1900_EGPRS_MCH_1880MHz_1 TX Slot_NTNV



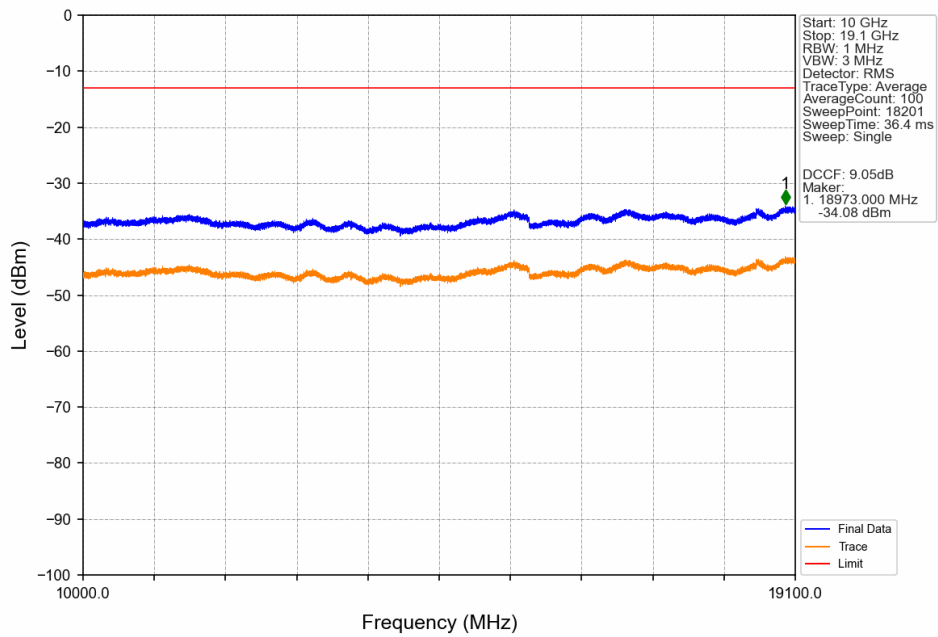
PCS1900_EGPRS_HCH_1909.8MHz_1 TX Slot_NTNV



PCS1900_EGPRS_HCH_1909.8MHz_1 TX Slot_NTNV



PCS1900_EGPRS_HCH_1909.8MHz_1 TX Slot_NTNV



6. Field Strength of Spurious Radiation

Test Band = GSM 1900_

Test Channel = Low Channel

Data List								
NO.	Frequency [MHz]	Reading [dBμV]	Factor [dB]	AF [dB/m]	Level [dBm]	Limit [dBm]	Margin [dB]	Polarity
1	3700.4	64.35	-48.51	28.82	-50.60	-13.00	37.60	Horizontal
2	5550.6	55.90	-47.66	32.62	-54.40	-13.00	41.40	Horizontal
3	7400.8	50.12	-46.17	36.22	-55.09	-13.00	42.09	Horizontal
4	9251	47.20	-43.20	37.75	-53.51	-13.00	40.51	Horizontal
5	11101.2	47.09	-40.36	39.49	-49.04	-13.00	36.04	Horizontal
6	12951.4	49.05	-39.41	38.83	-46.79	-13.00	33.79	Horizontal

Data List								
NO.	Frequency [MHz]	Reading [dBμV]	Factor [dB]	AF [dB/m]	Level [dBm]	Limit [dBm]	Margin [dB]	Polarity
1	3700.4	60.66	-48.51	28.82	-54.29	-13.00	41.29	Vertical
2	5550.6	54.12	-47.66	32.62	-56.18	-13.00	43.18	Vertical
3	7400.8	51.34	-46.17	36.22	-53.87	-13.00	40.87	Vertical
4	9251	47.32	-43.20	37.75	-53.39	-13.00	40.39	Vertical
5	11101.2	48.07	-40.36	39.49	-48.06	-13.00	35.06	Vertical
6	12951.4	48.68	-39.41	38.83	-47.16	-13.00	34.16	Vertical

Test Band = GSM 1900_
Test Channel = Mid Channel

Data List								
NO.	Frequency [MHz]	Reading [dBμV]	Factor [dB]	AF [dB/m]	Level [dBm]	Limit [dBm]	Margin [dB]	Polarity
1	3759.75	62.30	-48.31	28.92	-52.36	-13.00	39.36	Horizontal
2	5640	54.56	-47.62	32.66	-55.66	-13.00	42.66	Horizontal
3	7520	49.49	-45.85	36.40	-55.22	-13.00	42.22	Horizontal
4	9400	47.43	-43.05	37.96	-52.92	-13.00	39.92	Horizontal
5	11280	47.37	-40.44	39.47	-48.85	-13.00	35.85	Horizontal
6	13160	48.60	-38.58	39.04	-46.20	-13.00	33.20	Horizontal

Data List								
NO.	Frequency [MHz]	Reading [dBμV]	Factor [dB]	AF [dB/m]	Level [dBm]	Limit [dBm]	Margin [dB]	Polarity
1	3759.75	61.27	-48.31	28.92	-53.39	-13.00	40.39	Vertical
2	5640	62.44	-47.62	32.66	-47.78	-13.00	34.78	Vertical
3	7520	50.69	-45.85	36.40	-54.02	-13.00	41.02	Vertical
4	9400	47.27	-43.05	37.96	-53.08	-13.00	40.08	Vertical
5	11280	48.09	-40.44	39.47	-48.13	-13.00	35.13	Vertical
6	13160	49.12	-38.58	39.04	-45.68	-13.00	32.68	Vertical

Test Band = GSM 1900_
Test Channel = High Channel

Data List								
NO.	Frequency [MHz]	Reading [dBμV]	Factor [dB]	AF [dB/m]	Level [dBm]	Limit [dBm]	Margin [dB]	Polarity
1	3819.6	63.68	-48.20	29.01	-50.77	-13.00	37.77	Horizontal
2	5729.5	52.46	-47.54	32.69	-57.65	-13.00	44.65	Horizontal
3	7639.2	49.39	-44.82	36.37	-54.32	-13.00	41.32	Horizontal
4	9549	47.99	-42.31	38.17	-51.41	-13.00	38.41	Horizontal
5	11458.8	49.20	-40.07	39.45	-46.67	-13.00	33.67	Horizontal
6	13368.6	48.88	-39.15	39.35	-46.17	-13.00	33.17	Horizontal

Data List								
NO.	Frequency [MHz]	Reading [dBμV]	Factor [dB]	AF [dB/m]	Level [dBm]	Limit [dBm]	Margin [dB]	Polarity
1	5729.25	55.07	-47.54	32.69	-55.04	-13.00	42.04	Vertical
2	3819.6	58.19	-48.20	29.01	-56.26	-13.00	43.26	Vertical
3	7639.2	49.56	-44.82	36.37	-54.15	-13.00	41.15	Vertical
4	9549	48.57	-42.31	38.17	-50.83	-13.00	37.83	Vertical
5	11458.8	49.25	-40.07	39.45	-46.62	-13.00	33.62	Vertical
6	13368.6	48.77	-39.15	39.35	-46.28	-13.00	33.28	Vertical