

Appendix Test Data for GSM_band_PCS1900

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	29.47	0.88	30.35	<=33.01	Pass
			1880	29.67	0.88	30.55	<=33.01	Pass
			1909.8	29.42	0.88	30.30	<=33.01	Pass
	GPRS	1 TX Slot	1850.2	29.47	0.88	30.35	<=33.01	Pass
		2 TX Slots	1850.2	28.59	0.88	29.47	<=33.01	Pass
		3 TX Slots	1850.2	26.23	0.88	27.11	<=33.01	Pass
		4 TX Slots	1850.2	25.13	0.88	26.01	<=33.01	Pass
		1 TX Slot	1880	29.62	0.88	30.50	<=33.01	Pass
		2 TX Slots	1880	28.83	0.88	29.71	<=33.01	Pass
		3 TX Slots	1880	26.49	0.88	27.37	<=33.01	Pass
		4 TX Slots	1880	25.41	0.88	26.29	<=33.01	Pass
		1 TX Slot	1909.8	29.35	0.88	30.23	<=33.01	Pass
		2 TX Slots	1909.8	28.68	0.88	29.56	<=33.01	Pass
		3 TX Slots	1909.8	26.66	0.88	27.54	<=33.01	Pass
		4 TX Slots	1909.8	25.64	0.88	26.52	<=33.01	Pass
	EGPRS	1 TX Slot	1850.2	24.81	0.88	25.69	<=33.01	Pass
		2 TX Slots	1850.2	23.58	0.88	24.46	<=33.01	Pass
		3 TX Slots	1850.2	21.60	0.88	22.48	<=33.01	Pass
		4 TX Slots	1850.2	21.74	0.88	22.62	<=33.01	Pass
		1 TX Slot	1880	24.67	0.88	25.55	<=33.01	Pass
		2 TX Slots	1880	23.65	0.88	24.53	<=33.01	Pass
		3 TX Slots	1880	21.48	0.88	22.36	<=33.01	Pass
		4 TX Slots	1880	20.28	0.88	21.16	<=33.01	Pass
		1 TX Slot	1909.8	24.48	0.88	25.36	<=33.01	Pass
		2 TX Slots	1909.8	23.35	0.88	24.23	<=33.01	Pass
		3 TX Slots	1909.8	21.31	0.88	22.19	<=33.01	Pass
		4 TX Slots	1909.8	20.00	0.88	20.88	<=33.01	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	3.15	-9.847	-0.0053	-2.5 to 2.5	Pass
			3.80	-10.331	-0.0056	-2.5 to 2.5	Pass
			4.26	-10.073	-0.0054	-2.5 to 2.5	Pass
		-30	3.80	-12.850	-0.0069	-2.5 to 2.5	Pass
		-20	3.80	-10.880	-0.0059	-2.5 to 2.5	Pass
		-10	3.80	-11.881	-0.0064	-2.5 to 2.5	Pass
		0	3.80	-9.718	-0.0053	-2.5 to 2.5	Pass
		10	3.80	-13.689	-0.0074	-2.5 to 2.5	Pass
		30	3.80	-17.983	-0.0097	-2.5 to 2.5	Pass
		40	3.80	-23.795	-0.0129	-2.5 to 2.5	Pass
		50	3.80	-20.211	-0.0109	-2.5 to 2.5	Pass
	1880	20	3.15	-12.753	-0.0068	-2.5 to 2.5	Pass
			3.80	-8.814	-0.0047	-2.5 to 2.5	Pass
			4.26	-9.072	-0.0048	-2.5 to 2.5	Pass
		-30	3.80	-12.269	-0.0065	-2.5 to 2.5	Pass
		-20	3.80	-10.364	-0.0055	-2.5 to 2.5	Pass
		-10	3.80	-7.490	-0.0040	-2.5 to 2.5	Pass
		0	3.80	-8.911	-0.0047	-2.5 to 2.5	Pass
		10	3.80	-35.418	-0.0188	-2.5 to 2.5	Pass
		30	3.80	-24.085	-0.0128	-2.5 to 2.5	Pass
		40	3.80	-21.244	-0.0113	-2.5 to 2.5	Pass
		50	3.80	-18.016	-0.0096	-2.5 to 2.5	Pass
	1909.8	20	3.15	-10.364	-0.0054	-2.5 to 2.5	Pass
			3.80	-9.976	-0.0052	-2.5 to 2.5	Pass
			4.26	-12.333	-0.0065	-2.5 to 2.5	Pass
		-30	3.80	-13.140	-0.0069	-2.5 to 2.5	Pass
		-20	3.80	-8.201	-0.0043	-2.5 to 2.5	Pass
		-10	3.80	-9.137	-0.0048	-2.5 to 2.5	Pass
		0	3.80	-11.300	-0.0059	-2.5 to 2.5	Pass
		10	3.80	-19.210	-0.0101	-2.5 to 2.5	Pass
		30	3.80	-23.924	-0.0125	-2.5 to 2.5	Pass
		40	3.80	-15.788	-0.0083	-2.5 to 2.5	Pass
GPRS	1850.2	20	3.15	-12.236	-0.0066	-2.5 to 2.5	Pass
			3.80	-13.625	-0.0074	-2.5 to 2.5	Pass
			4.26	-10.364	-0.0056	-2.5 to 2.5	Pass
		-30	3.80	-12.430	-0.0067	-2.5 to 2.5	Pass
		-20	3.80	-14.593	-0.0079	-2.5 to 2.5	Pass
		-10	3.80	-17.499	-0.0095	-2.5 to 2.5	Pass
		0	3.80	-13.366	-0.0072	-2.5 to 2.5	Pass
		10	3.80	-11.397	-0.0062	-2.5 to 2.5	Pass
		30	3.80	-6.263	-0.0034	-2.5 to 2.5	Pass
		40	3.80	-13.043	-0.0070	-2.5 to 2.5	Pass
		50	3.80	-19.630	-0.0106	-2.5 to 2.5	Pass
	1880	20	3.15	-10.816	-0.0058	-2.5 to 2.5	Pass
			3.80	-13.528	-0.0072	-2.5 to 2.5	Pass
			4.26	-13.947	-0.0074	-2.5 to 2.5	Pass
		-30	3.80	-8.879	-0.0047	-2.5 to 2.5	Pass
		-20	3.80	-11.268	-0.0060	-2.5 to 2.5	Pass
		-10	3.80	-14.141	-0.0075	-2.5 to 2.5	Pass

		0	3.80	-5.263	-0.0028	-2.5 to 2.5	Pass
		10	3.80	-11.235	-0.0060	-2.5 to 2.5	Pass
		30	3.80	-11.752	-0.0063	-2.5 to 2.5	Pass
		40	3.80	-8.136	-0.0043	-2.5 to 2.5	Pass
		50	3.80	-11.139	-0.0059	-2.5 to 2.5	Pass
	1909.8	20	3.15	-12.107	-0.0063	-2.5 to 2.5	Pass
			3.80	-14.432	-0.0076	-2.5 to 2.5	Pass
			4.26	-14.625	-0.0077	-2.5 to 2.5	Pass
		-30	3.80	-12.204	-0.0064	-2.5 to 2.5	Pass
		-20	3.80	-11.332	-0.0059	-2.5 to 2.5	Pass
		-10	3.80	-11.009	-0.0058	-2.5 to 2.5	Pass
		0	3.80	-10.622	-0.0056	-2.5 to 2.5	Pass
		10	3.80	-6.651	-0.0035	-2.5 to 2.5	Pass
		30	3.80	-19.307	-0.0101	-2.5 to 2.5	Pass
		40	3.80	-16.143	-0.0085	-2.5 to 2.5	Pass
		50	3.80	-17.822	-0.0093	-2.5 to 2.5	Pass
EGPRS	1850.2	20	3.15	-25.474	-0.0138	-2.5 to 2.5	Pass
			3.80	-27.314	-0.0148	-2.5 to 2.5	Pass
			4.26	-24.021	-0.0130	-2.5 to 2.5	Pass
		-30	3.80	-26.087	-0.0141	-2.5 to 2.5	Pass
		-20	3.80	-26.830	-0.0145	-2.5 to 2.5	Pass
		-10	3.80	-26.571	-0.0144	-2.5 to 2.5	Pass
		0	3.80	-25.796	-0.0139	-2.5 to 2.5	Pass
		10	3.80	-23.633	-0.0128	-2.5 to 2.5	Pass
		30	3.80	-18.532	-0.0100	-2.5 to 2.5	Pass
		40	3.80	-16.918	-0.0091	-2.5 to 2.5	Pass
		50	3.80	-17.693	-0.0096	-2.5 to 2.5	Pass
	1880	20	3.15	-22.084	-0.0117	-2.5 to 2.5	Pass
			3.80	-21.470	-0.0114	-2.5 to 2.5	Pass
			4.26	-31.511	-0.0168	-2.5 to 2.5	Pass
		-30	3.80	-28.121	-0.0150	-2.5 to 2.5	Pass
		-20	3.80	-21.987	-0.0117	-2.5 to 2.5	Pass
		-10	3.80	-23.052	-0.0123	-2.5 to 2.5	Pass
		0	3.80	-26.184	-0.0139	-2.5 to 2.5	Pass
		10	3.80	-23.440	-0.0125	-2.5 to 2.5	Pass
		30	3.80	-18.855	-0.0100	-2.5 to 2.5	Pass
		40	3.80	-28.444	-0.0151	-2.5 to 2.5	Pass
		50	3.80	-26.700	-0.0142	-2.5 to 2.5	Pass
	1909.8	20	3.15	-26.700	-0.0140	-2.5 to 2.5	Pass
			3.80	-26.313	-0.0138	-2.5 to 2.5	Pass
			4.26	-20.437	-0.0107	-2.5 to 2.5	Pass
		-30	3.80	-23.666	-0.0124	-2.5 to 2.5	Pass
		-20	3.80	-23.149	-0.0121	-2.5 to 2.5	Pass
		-10	3.80	-19.598	-0.0103	-2.5 to 2.5	Pass
		0	3.80	-17.854	-0.0093	-2.5 to 2.5	Pass
		10	3.80	-23.698	-0.0124	-2.5 to 2.5	Pass
		30	3.80	-22.632	-0.0119	-2.5 to 2.5	Pass
		40	3.80	-15.207	-0.0080	-2.5 to 2.5	Pass
		50	3.80	-16.950	-0.0089	-2.5 to 2.5	Pass

3. Modulation Characteristics

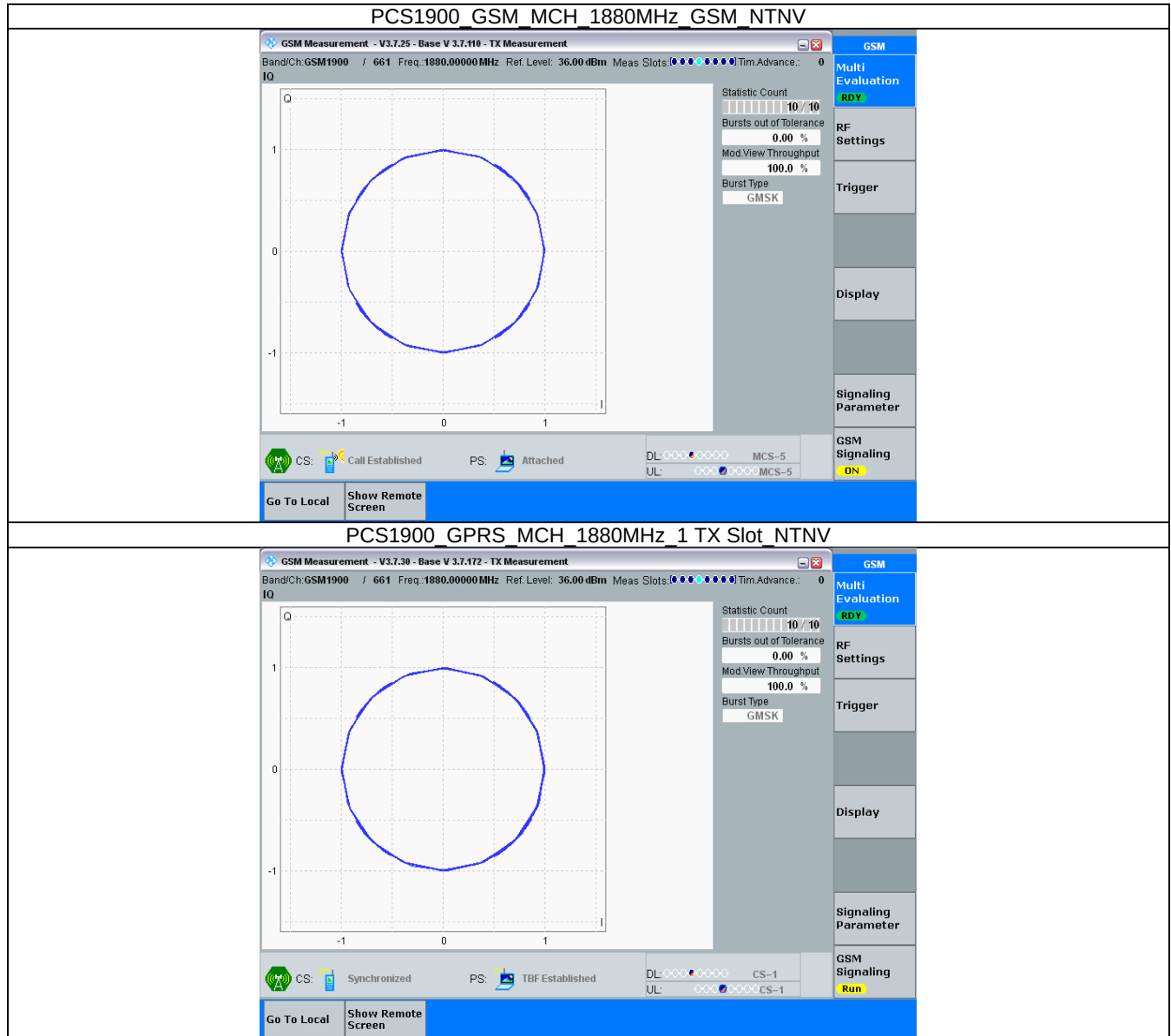
3.1 Test Result

3.1.1 PCS1900

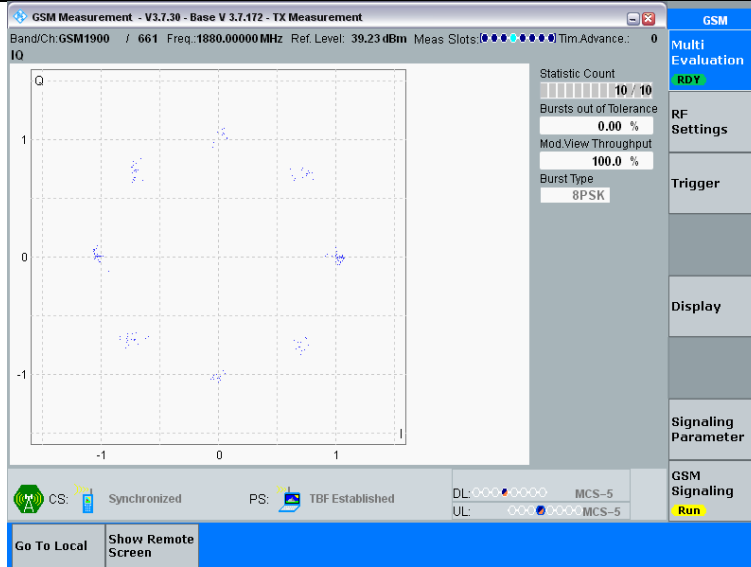
Band: PCS1900						
ENV	Mode		Frequency (MHz)	Modulation Characteristics		Verdict
	Network	Subset		Result	Limit	
NTNV	GSM	GSM	1880	Refer To Test Graph		Pass
	GPRS	1 TX Slot	1880	Refer To Test Graph		Pass
	EGPRS	1 TX Slot	1880	Refer To Test Graph		Pass

3.2 Test Graph

3.2.1 PCS1900



PCS1900_EGPRS_MCH_1880MHz_1 TX Slot_NTNV



4. 99% & 26dB Bandwidth

4.1 Test Result

4.1.1 PCS1900_OBW

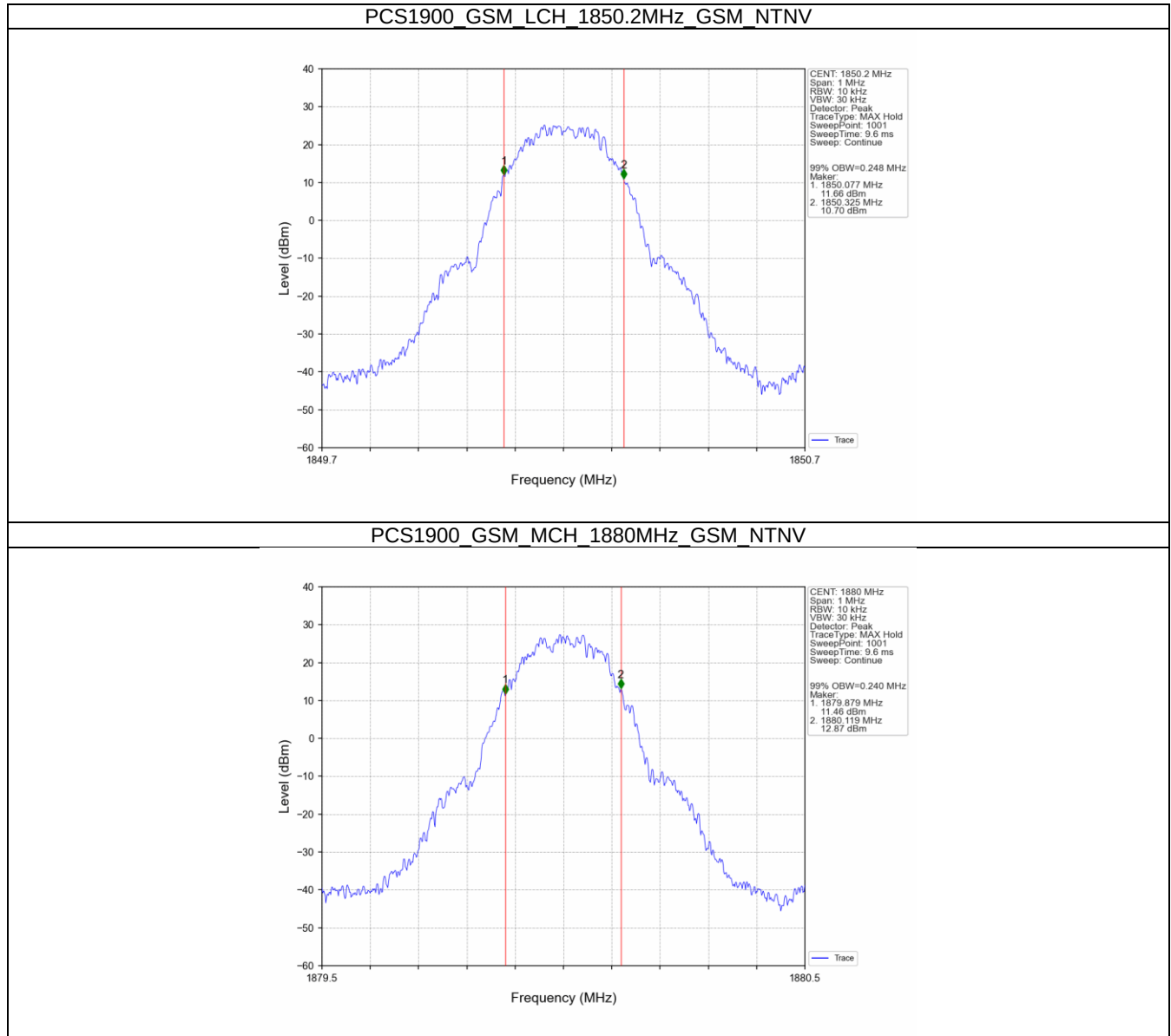
Band: PCS1900						
ENV	Mode		Frequency (MHz)	99% Occupied Bandwidth (MHz)		Verdict
	Network	Subset		Result	Limit	
NTNV	GSM	GSM	1850.2	0.248	/	Pass
			1880	0.240	/	Pass
			1909.8	0.247	/	Pass
	GPRS	1 TX Slot	1850.2	0.246	/	Pass
			1880	0.245	/	Pass
			1909.8	0.248	/	Pass
	EGPRS	1 TX Slot	1850.2	0.253	/	Pass
			1880	0.247	/	Pass
			1909.8	0.244	/	Pass

4.1.2 PCS1900_XDB

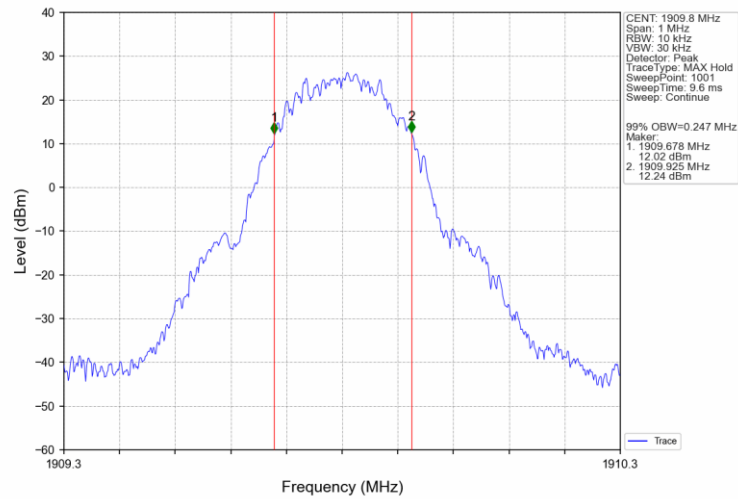
Band: PCS1900						
ENV	Mode		Frequency (MHz)	26dB Bandwidth (MHz)		Verdict
	Network	Subset		Result	Limit	
NTNV	GSM	GSM	1850.2	0.323	/	Pass
			1880	0.313	/	Pass
			1909.8	0.316	/	Pass
	GPRS	1 TX Slot	1850.2	0.315	/	Pass
			1880	0.315	/	Pass
			1909.8	0.317	/	Pass
	EGPRS	1 TX Slot	1850.2	0.321	/	Pass
			1880	0.314	/	Pass
			1909.8	0.311	/	Pass

4.2 Test Graph

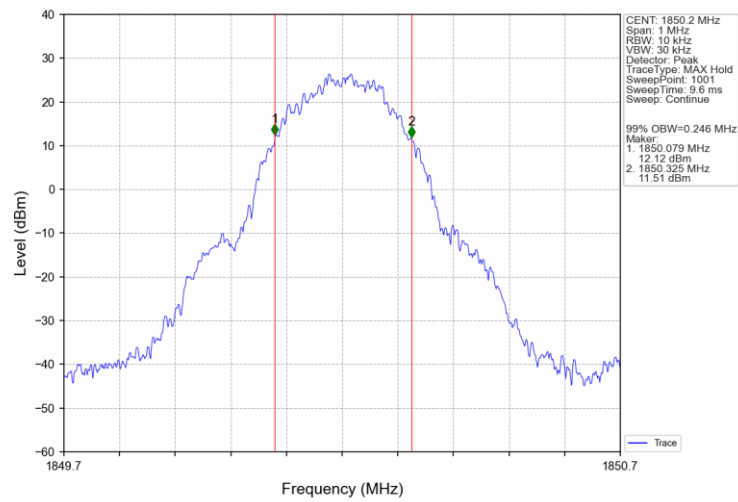
4.2.1 PCS1900_OBW



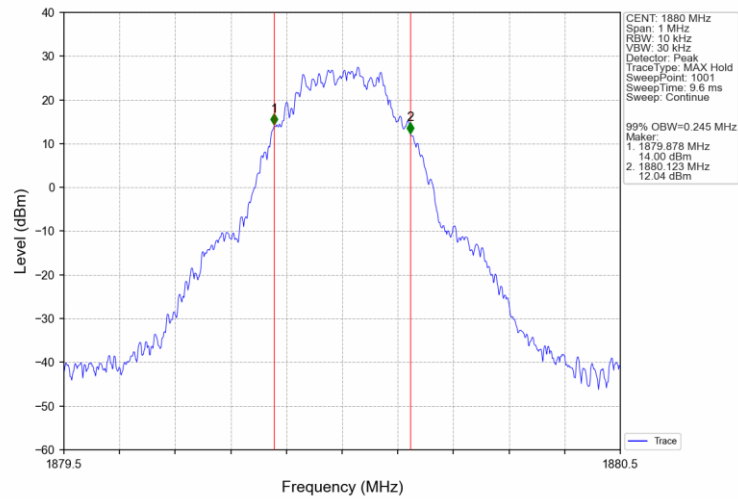
PCS1900_GSM_HCH_1909.8MHz_GSM_NTNV



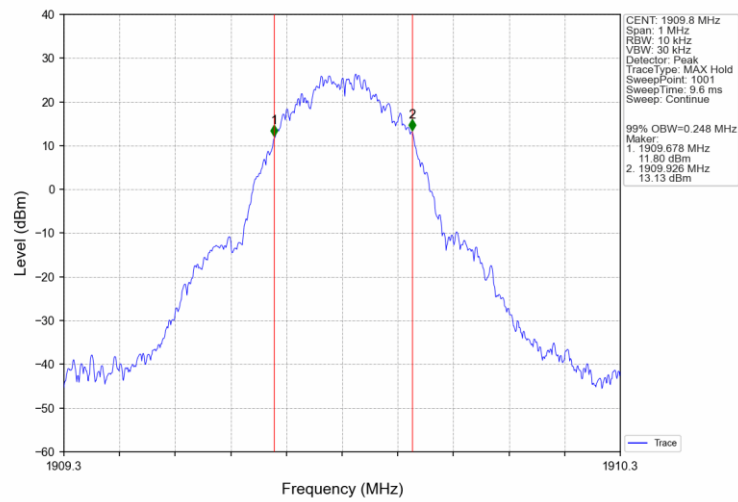
PCS1900_GPRS_LCH_1850.2MHz_1 TX Slot_NTNV



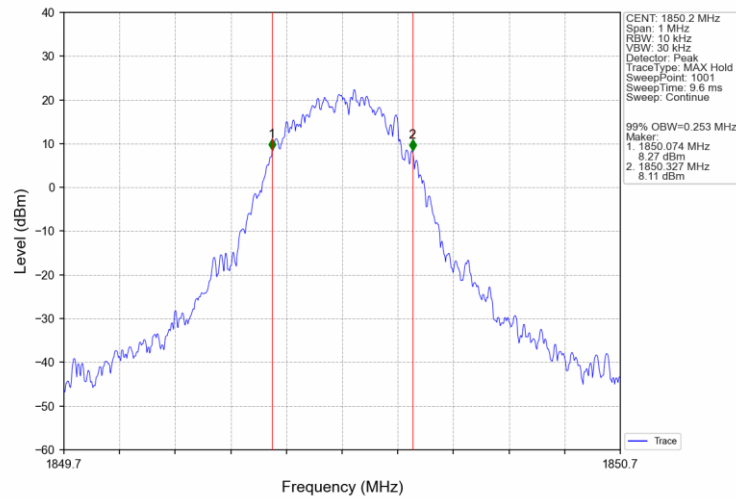
PCS1900_GPRS_MCH_1880MHz_1 TX Slot_NTNV



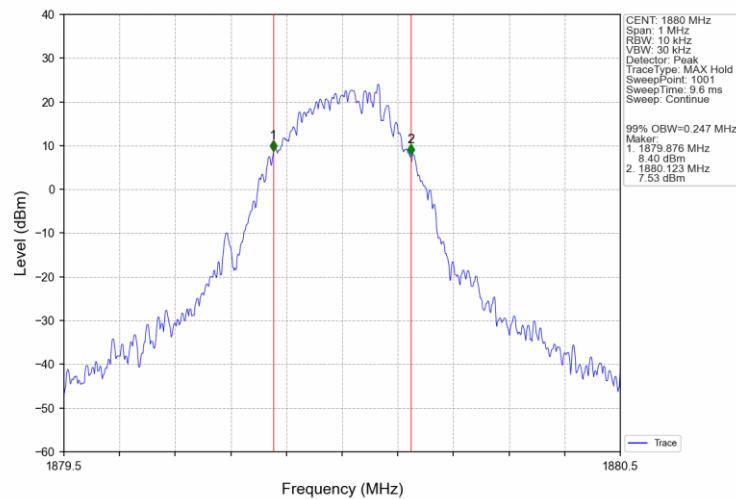
PCS1900_GPRS_HCH_1909.8MHz_1 TX Slot_NTNV



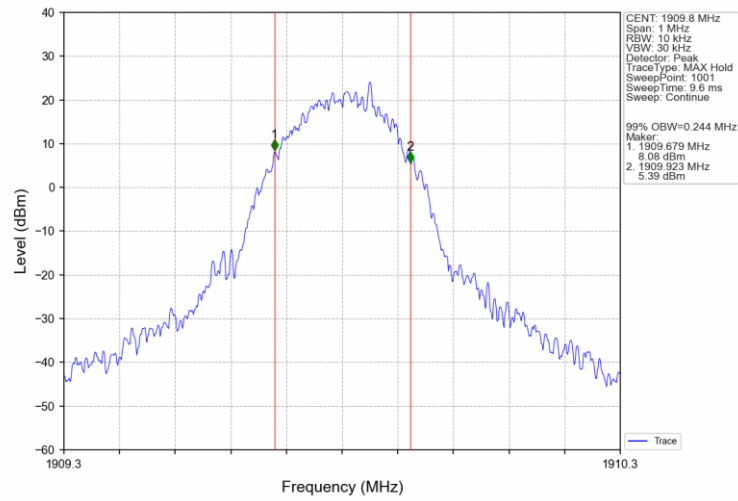
PCS1900_EGPRS_LCH_1850.2MHz_1 TX Slot_NTNV



PCS1900_EGPRS_MCH_1880MHz_1 TX Slot_NTNV

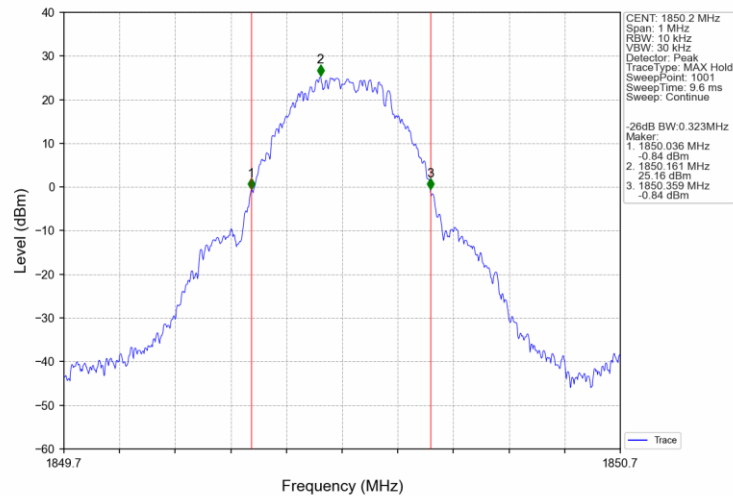


PCS1900_EGPRS_HCH_1909.8MHz_1 TX Slot_NTNV

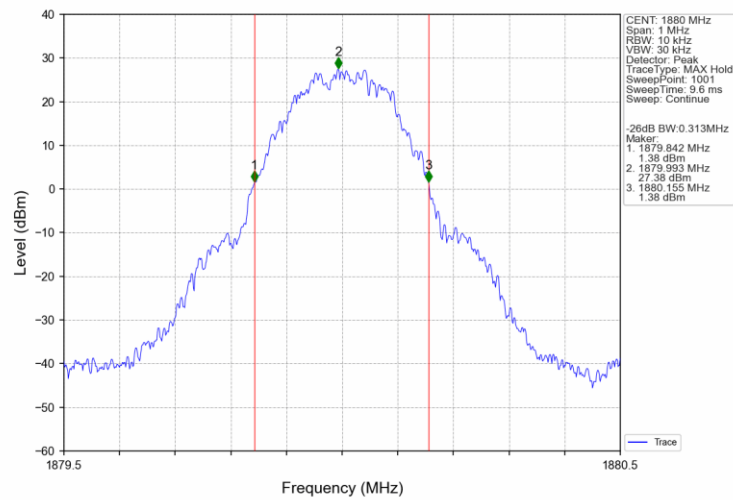


4.2.2 PCS1900_XDB

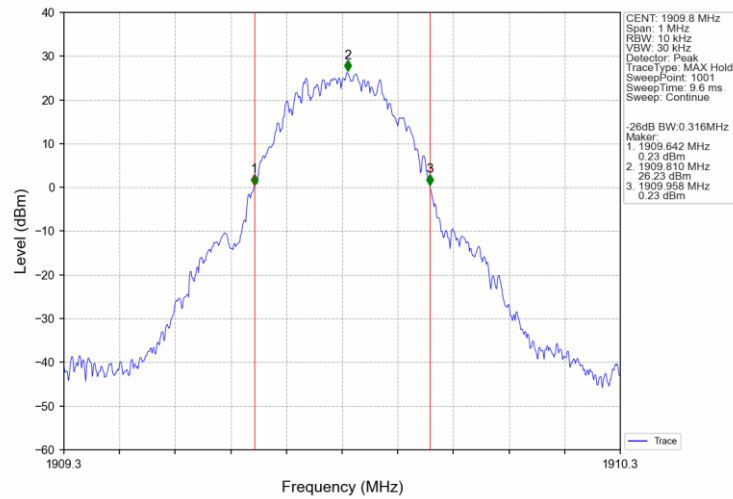
PCS1900_GSM_LCH_1850.2MHz_GSM_NTNV



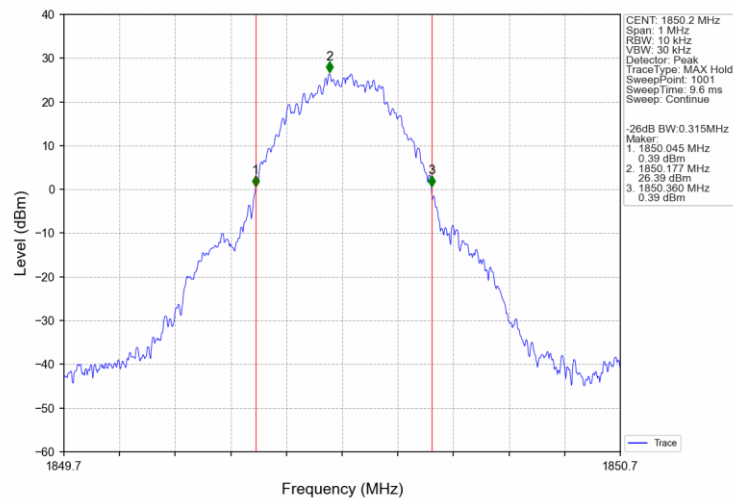
PCS1900_GSM_MCH_1880MHz_GSM_NTNV



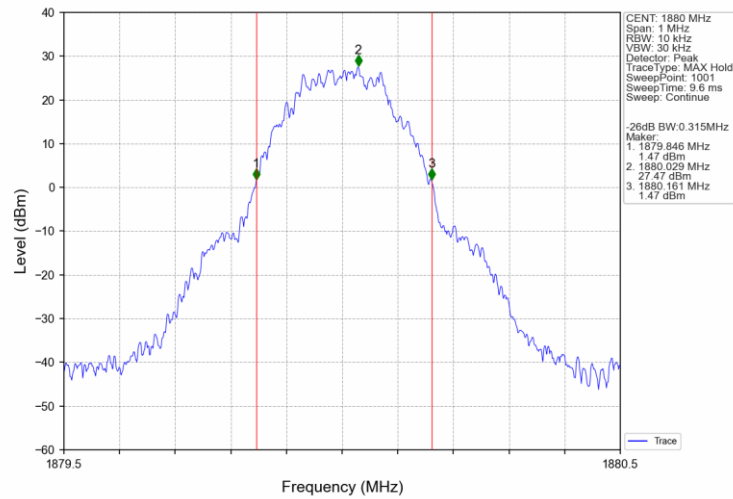
PCS1900_GSM_HCH_1909.8MHz_GSM_NTNV



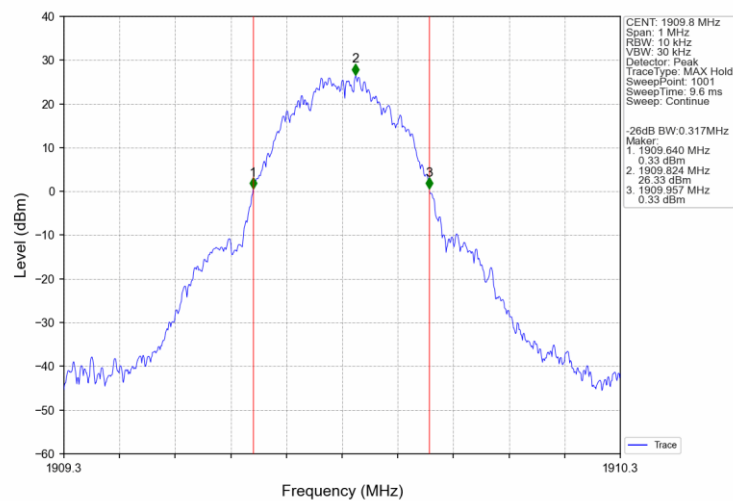
PCS1900_GPRS_LCH_1850.2MHz_1 TX Slot_NTNV



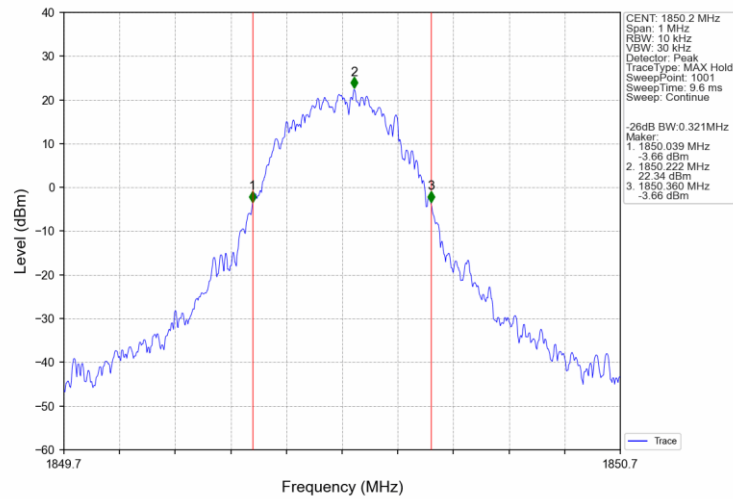
PCS1900_GPRS_MCH_1880MHz_1 TX Slot_NTNV



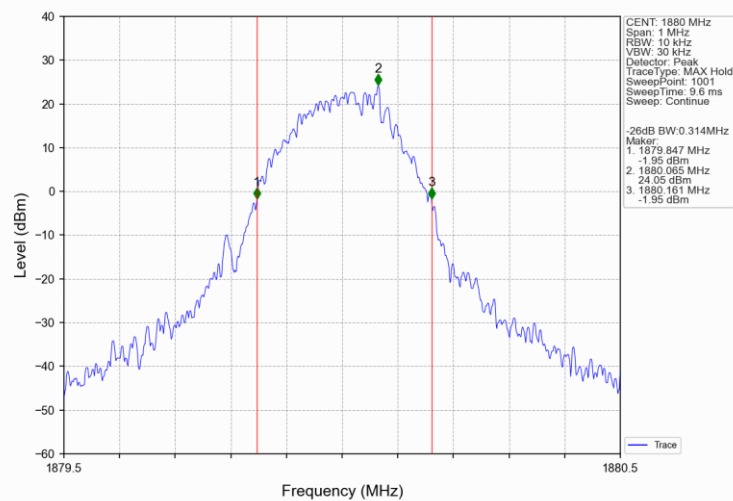
PCS1900_GPRS_HCH_1909.8MHz_1 TX Slot_NTNV



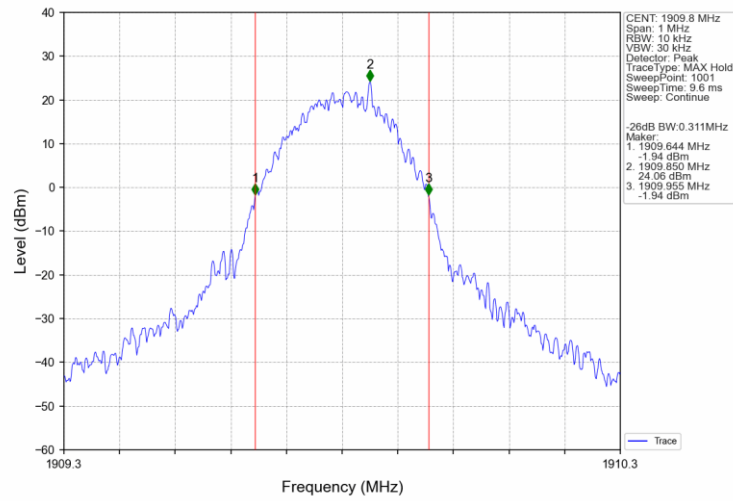
PCS1900_EGPRS_LCH_1850.2MHz_1 TX Slot_NTNV



PCS1900_EGPRS_MCH_1880MHz_1 TX Slot_NTNV



PCS1900_EGPRS_HCH_1909.8MHz_1 TX Slot_NTNV



5. Peak-Average Ratio

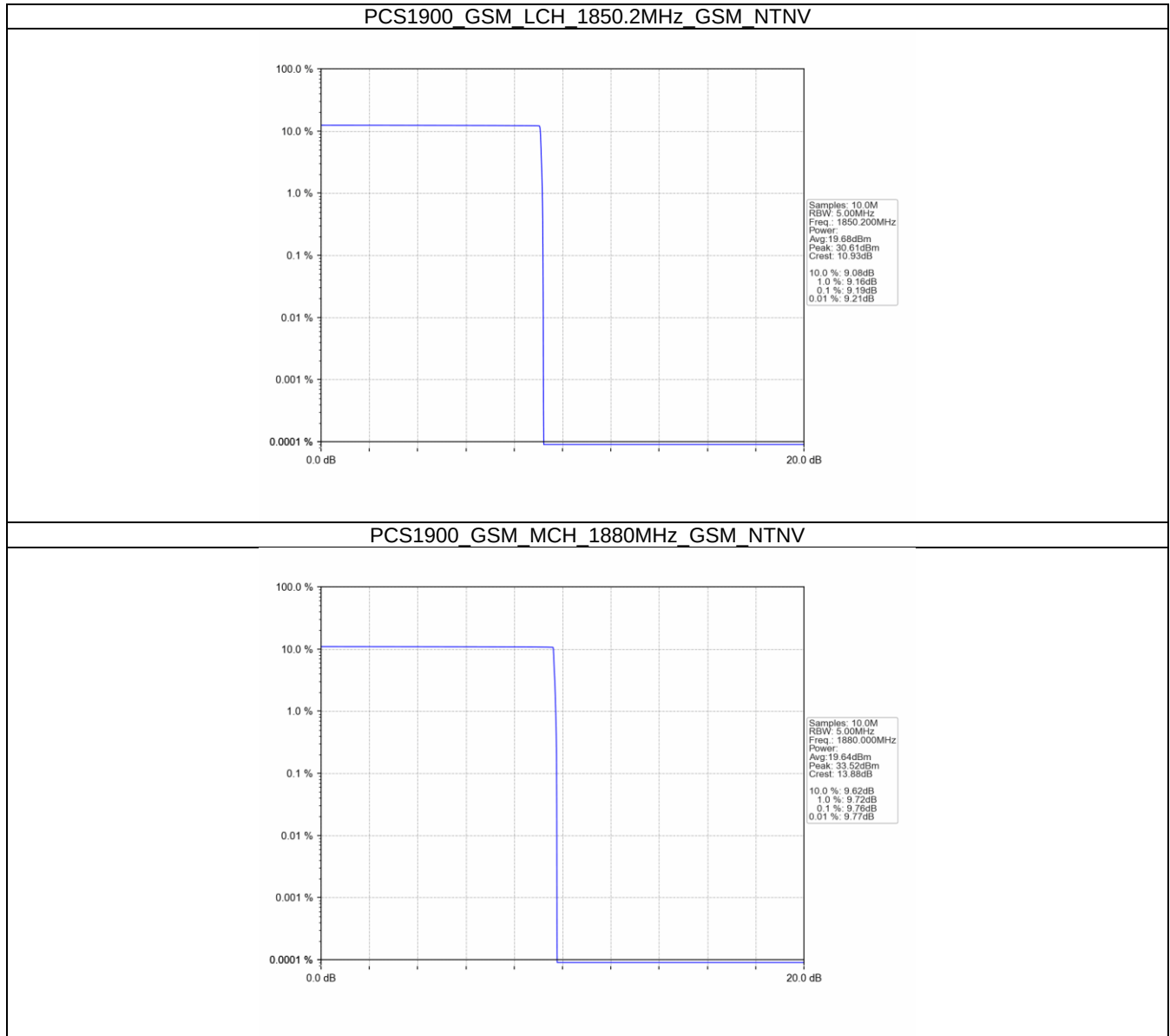
5.1 Test Result

5.1.1 PCS1900

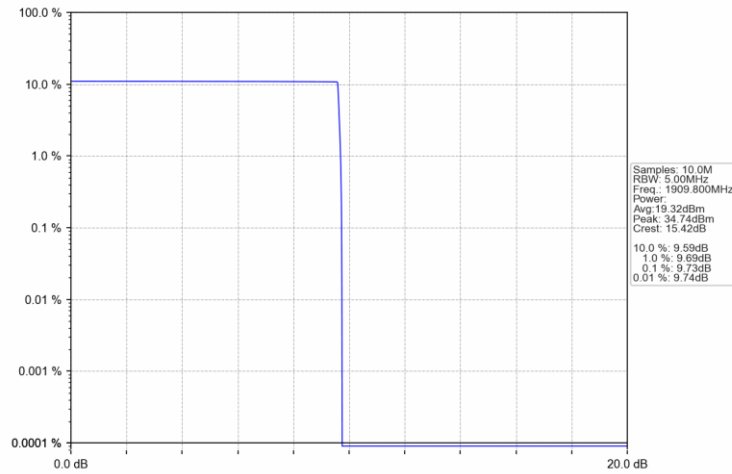
Band: PCS1900						
ENV	Mode		Frequency (MHz)	Peak-Average Ratio (dB)		Verdict
	Network	Subset		Result	Limit	
NTNV	GSM	GSM	1850.2	9.19	<=13	Pass
			1880	9.76	<=13	Pass
			1909.8	9.73	<=13	Pass
	GPRS	4 TX Slots	1850.2	3.70	<=13	Pass
			1880	3.76	<=13	Pass
			1909.8	3.70	<=13	Pass
	EGPRS	4 TX Slots	1850.2	9.25	<=13	Pass
			1880	9.46	<=13	Pass
			1909.8	9.65	<=13	Pass

5.2 Test Graph

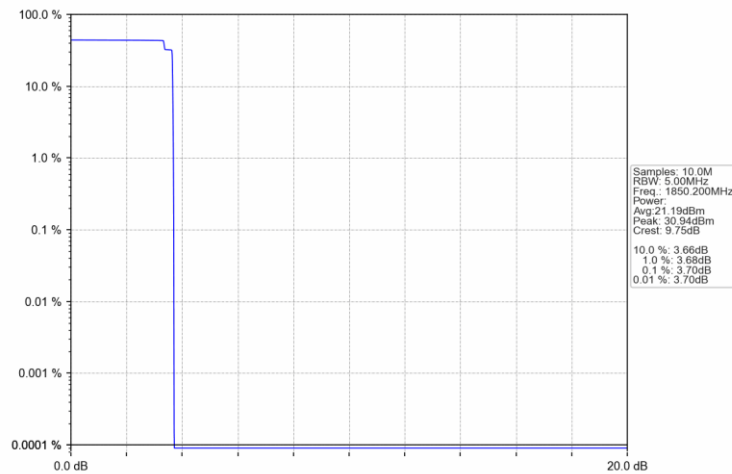
5.2.1 PCS1900



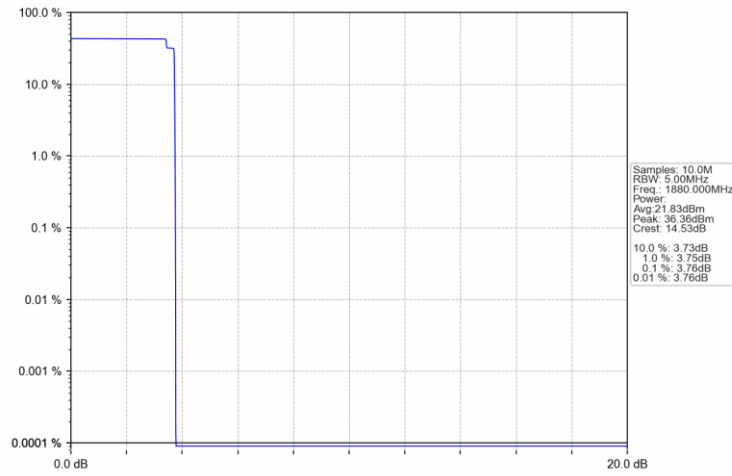
PCS1900 GSM_HCH_1909.8MHz_GSM_NTNV



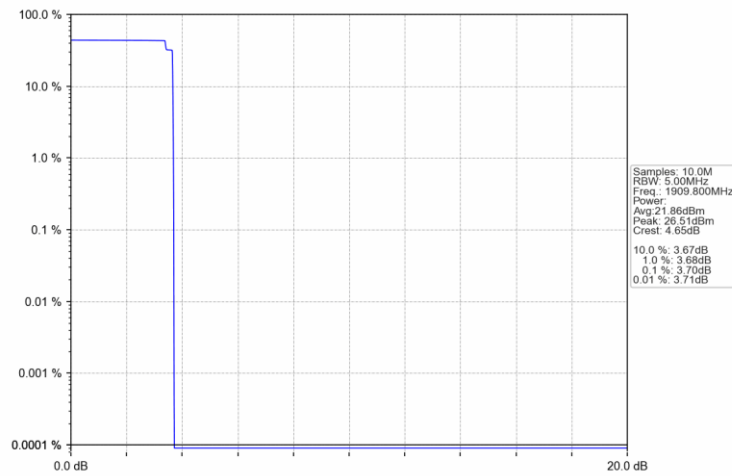
PCS1900 GPRS_LCH_1850.2MHz_4 TX Slots_NTNV



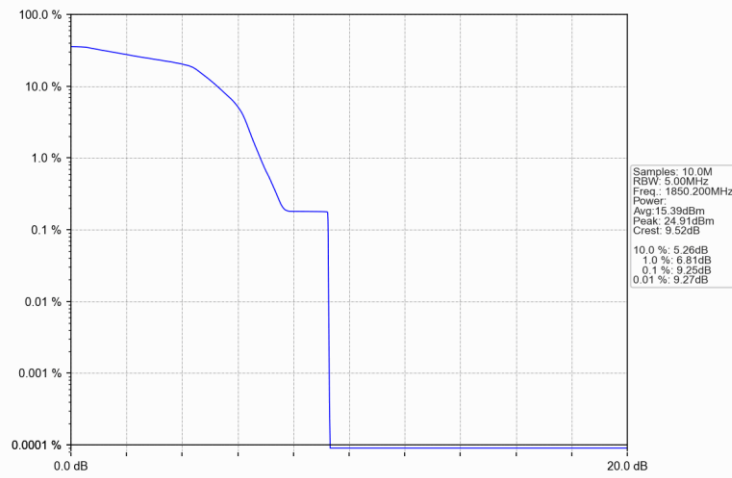
PCS1900_GPRS_MCH_1880MHz_4 TX Slots_NTNV



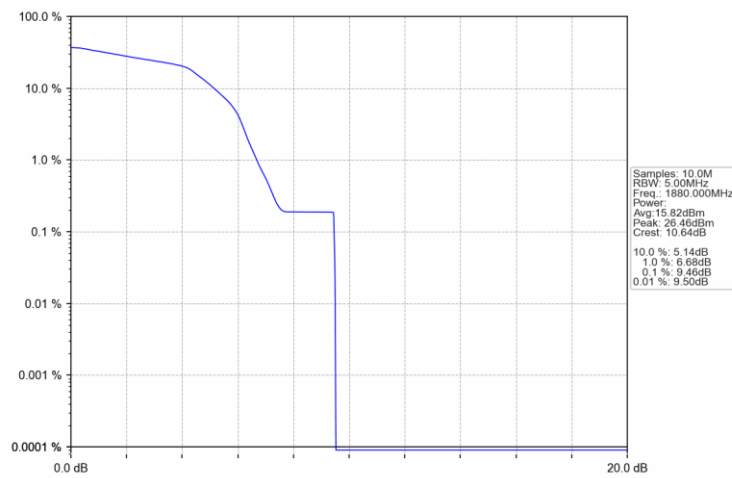
PCS1900_GPRS_HCH_1909.8MHz_4 TX Slots_NTNV



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

