

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	GPRS	1 TX Slot	1850.2	29.52	3	32.52	<=33.01	Pass
		2 TX Slots	1850.2	27.89	3	30.89	<=33.01	Pass
		3 TX Slots	1850.2	26.14	3	29.14	<=33.01	Pass
		4 TX Slots	1850.2	25.14	3	28.14	<=33.01	Pass
		1 TX Slot	1880	29.69	3	32.69	<=33.01	Pass
		2 TX Slots	1880	28.39	3	31.39	<=33.01	Pass
		3 TX Slots	1880	26.46	3	29.46	<=33.01	Pass
		4 TX Slots	1880	24.79	3	27.79	<=33.01	Pass
		1 TX Slot	1909.8	29.48	3	32.48	<=33.01	Pass
		2 TX Slots	1909.8	27.98	3	30.98	<=33.01	Pass
		3 TX Slots	1909.8	25.95	3	28.95	<=33.01	Pass
		4 TX Slots	1909.8	25.03	3	28.03	<=33.01	Pass
	EGPRS	1 TX Slot	1850.2	25.67	3	28.67	<=33.01	Pass
		2 TX Slots	1850.2	24.63	3	27.63	<=33.01	Pass
		3 TX Slots	1850.2	23.62	3	26.62	<=33.01	Pass
		4 TX Slots	1850.2	22.41	3	25.41	<=33.01	Pass
		1 TX Slot	1880	25.60	3	28.60	<=33.01	Pass
		2 TX Slots	1880	24.43	3	27.43	<=33.01	Pass
		3 TX Slots	1880	23.40	3	26.40	<=33.01	Pass
		4 TX Slots	1880	22.46	3	25.46	<=33.01	Pass
		1 TX Slot	1909.8	25.43	3	28.43	<=33.01	Pass
		2 TX Slots	1909.8	24.39	3	27.39	<=33.01	Pass
		3 TX Slots	1909.8	23.30	3	26.30	<=33.01	Pass
		4 TX Slots	1909.8	22.21	3	25.21	<=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	
GPRS	1850.2	20	3.27	38.369	0.0207	-2.5 to 2.5	Pass
			3.85	45.256	0.0245	-2.5 to 2.5	Pass
			4.43	31.492	0.0170	-2.5 to 2.5	Pass
		-30	3.85	41.222	0.0223	-2.5 to 2.5	Pass
		-20	3.85	30.417	0.0164	-2.5 to 2.5	Pass
		-10	3.85	29.412	0.0159	-2.5 to 2.5	Pass
		0	3.85	28.988	0.0157	-2.5 to 2.5	Pass
		10	3.85	33.026	0.0178	-2.5 to 2.5	Pass

		30	3.85	33.495	0.0181	-2.5 to 2.5	Pass
		40	3.85	36.202	0.0196	-2.5 to 2.5	Pass
		50	3.85	37.370	0.0202	-2.5 to 2.5	Pass
	1880	20	3.27	26.719	0.0142	-2.5 to 2.5	Pass
			3.85	21.331	0.0113	-2.5 to 2.5	Pass
			4.43	10.175	0.0054	-2.5 to 2.5	Pass
		-30	3.85	15.500	0.0082	-2.5 to 2.5	Pass
		-20	3.85	23.168	0.0123	-2.5 to 2.5	Pass
		-10	3.85	23.816	0.0127	-2.5 to 2.5	Pass
		0	3.85	16.146	0.0086	-2.5 to 2.5	Pass
		10	3.85	9.716	0.0052	-2.5 to 2.5	Pass
		30	3.85	14.569	0.0077	-2.5 to 2.5	Pass
		40	3.85	17.555	0.0093	-2.5 to 2.5	Pass
		50	3.85	18.037	0.0096	-2.5 to 2.5	Pass
	1909.8	20	3.27	24.745	0.0130	-2.5 to 2.5	Pass
			3.85	21.831	0.0114	-2.5 to 2.5	Pass
			4.43	24.303	0.0127	-2.5 to 2.5	Pass
		-30	3.85	30.166	0.0158	-2.5 to 2.5	Pass
		-20	3.85	17.283	0.0090	-2.5 to 2.5	Pass
		-10	3.85	32.933	0.0172	-2.5 to 2.5	Pass
		0	3.85	32.300	0.0169	-2.5 to 2.5	Pass
		10	3.85	32.386	0.0170	-2.5 to 2.5	Pass
		30	3.85	18.232	0.0095	-2.5 to 2.5	Pass
		40	3.85	21.053	0.0110	-2.5 to 2.5	Pass
		50	3.85	21.628	0.0113	-2.5 to 2.5	Pass
EGPRS	1850.2	20	3.27	23.351	0.0126	-2.5 to 2.5	Pass
			3.85	28.799	0.0156	-2.5 to 2.5	Pass
			4.43	32.311	0.0175	-2.5 to 2.5	Pass
		-30	3.85	30.484	0.0165	-2.5 to 2.5	Pass
		-20	3.85	18.899	0.0102	-2.5 to 2.5	Pass
		-10	3.85	21.682	0.0117	-2.5 to 2.5	Pass
		0	3.85	34.935	0.0189	-2.5 to 2.5	Pass
		10	3.85	20.655	0.0112	-2.5 to 2.5	Pass
		30	3.85	33.623	0.0182	-2.5 to 2.5	Pass
		40	3.85	40.996	0.0222	-2.5 to 2.5	Pass
		50	3.85	28.411	0.0154	-2.5 to 2.5	Pass
	1880	20	3.27	13.651	0.0073	-2.5 to 2.5	Pass
			3.85	19.470	0.0104	-2.5 to 2.5	Pass
			4.43	12.004	0.0064	-2.5 to 2.5	Pass
		-30	3.85	7.991	0.0043	-2.5 to 2.5	Pass
		-20	3.85	22.563	0.0120	-2.5 to 2.5	Pass
		-10	3.85	17.761	0.0094	-2.5 to 2.5	Pass
		0	3.85	10.052	0.0053	-2.5 to 2.5	Pass
		10	3.85	8.377	0.0045	-2.5 to 2.5	Pass
		30	3.85	8.630	0.0046	-2.5 to 2.5	Pass
		40	3.85	6.537	0.0035	-2.5 to 2.5	Pass
		50	3.85	6.366	0.0034	-2.5 to 2.5	Pass
	1909.8	20	3.27	26.099	0.0137	-2.5 to 2.5	Pass
			3.85	19.629	0.0103	-2.5 to 2.5	Pass
			4.43	21.679	0.0114	-2.5 to 2.5	Pass
		-30	3.85	28.727	0.0150	-2.5 to 2.5	Pass
		-20	3.85	21.589	0.0113	-2.5 to 2.5	Pass
		-10	3.85	31.168	0.0163	-2.5 to 2.5	Pass
		0	3.85	23.344	0.0122	-2.5 to 2.5	Pass
		10	3.85	21.659	0.0113	-2.5 to 2.5	Pass
		30	3.85	18.479	0.0097	-2.5 to 2.5	Pass
		40	3.85	27.718	0.0145	-2.5 to 2.5	Pass

		50	3.85	18.742	0.0098	-2.5 to 2.5	Pass
--	--	----	------	--------	--------	-------------	------

3. 99% & 26dB Bandwidth

3.1 Test Result

3.1.1 PCS1900_OBW

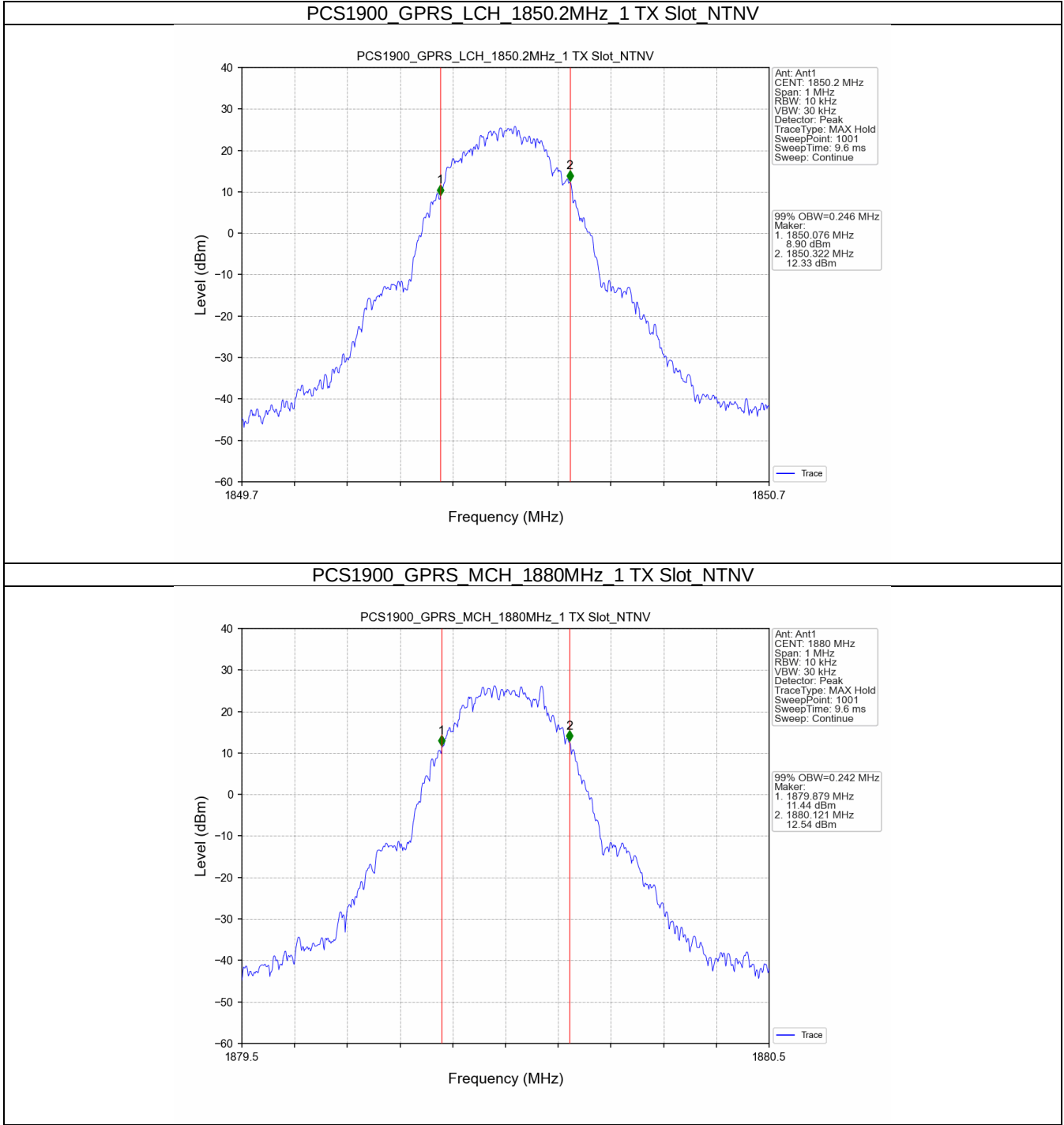
Band: PCS1900						
ENV	Mode		Frequency (MHz)	99% Occupied Bandwidth (MHz)		Verdict
	Network	Subset		Result	Limit	
NTNV	GPRS	1 TX Slot	1850.2	0.246	/	Pass
			1880	0.242	/	Pass
			1909.8	0.246	/	Pass
	EGPRS	1 TX Slot	1850.2	0.242	/	Pass
			1880	0.235	/	Pass
			1909.8	0.243	/	Pass

3.1.2 PCS1900_XDB

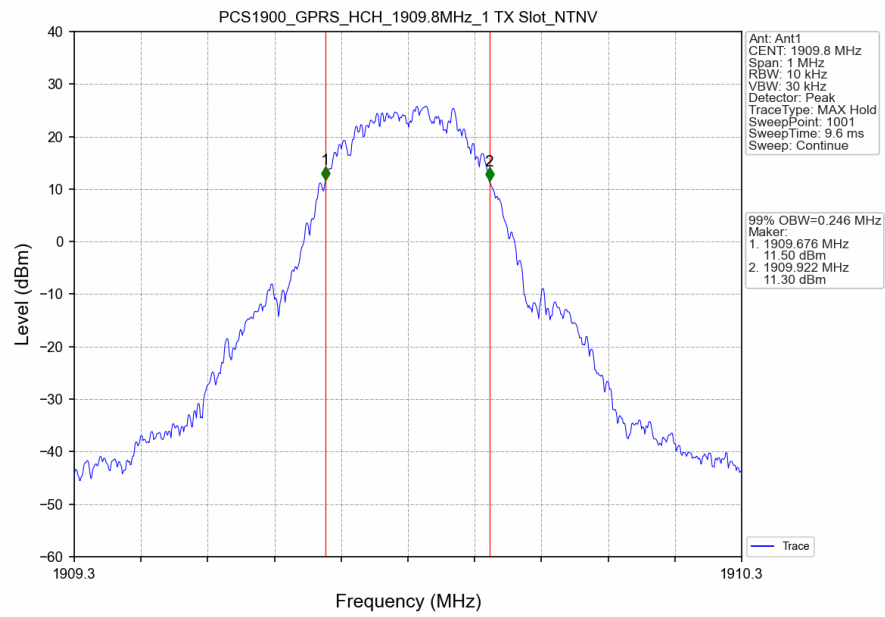
Band: PCS1900						
ENV	Mode		Frequency (MHz)	26dB Bandwidth (MHz)		Verdict
	Network	Subset		Result	Limit	
NTNV	GPRS	1 TX Slot	1850.2	0.320	/	Pass
			1880	0.318	/	Pass
			1909.8	0.316	/	Pass
	EGPRS	1 TX Slot	1850.2	0.316	/	Pass
			1880	0.303	/	Pass
			1909.8	0.315	/	Pass

3.2 Test Graph

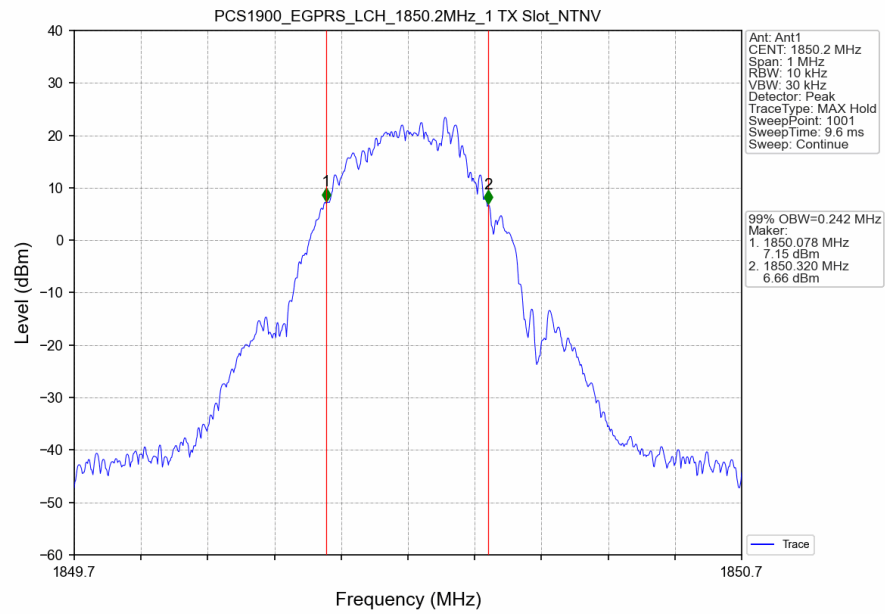
3.2.1 PCS1900_OBW



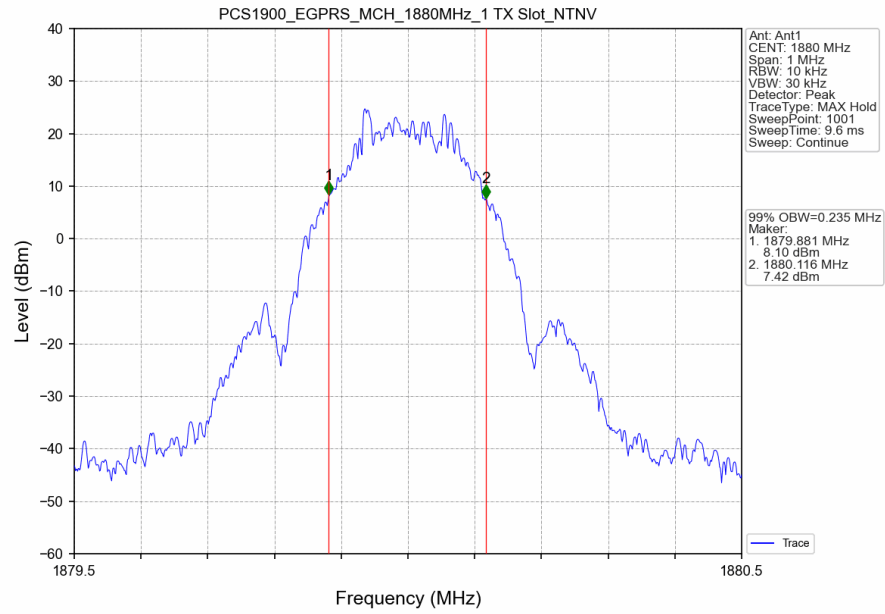
PCS1900_GPRS_HCH_1909.8MHz_1 TX Slot_NTNV



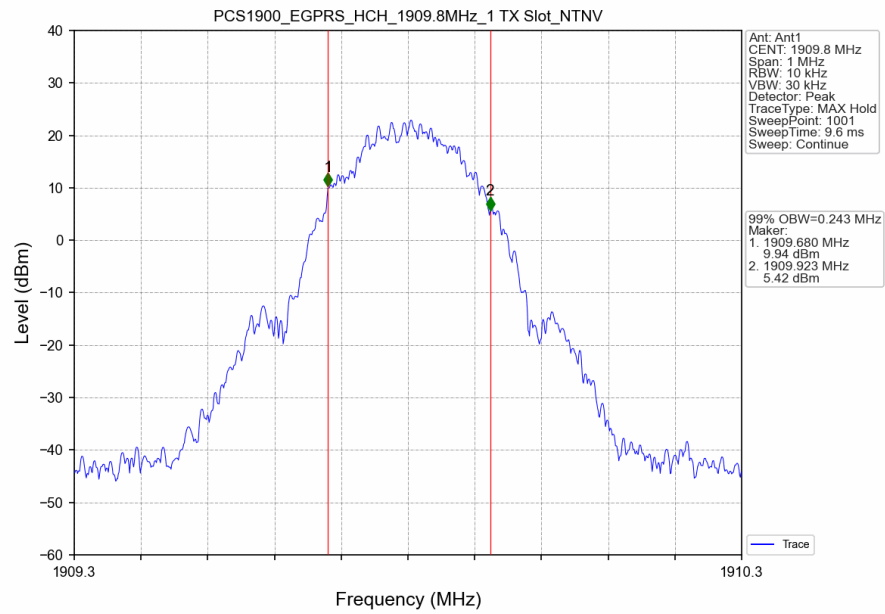
PCS1900_EGPRS_LCH_1850.2MHz_1 TX Slot_NTNV



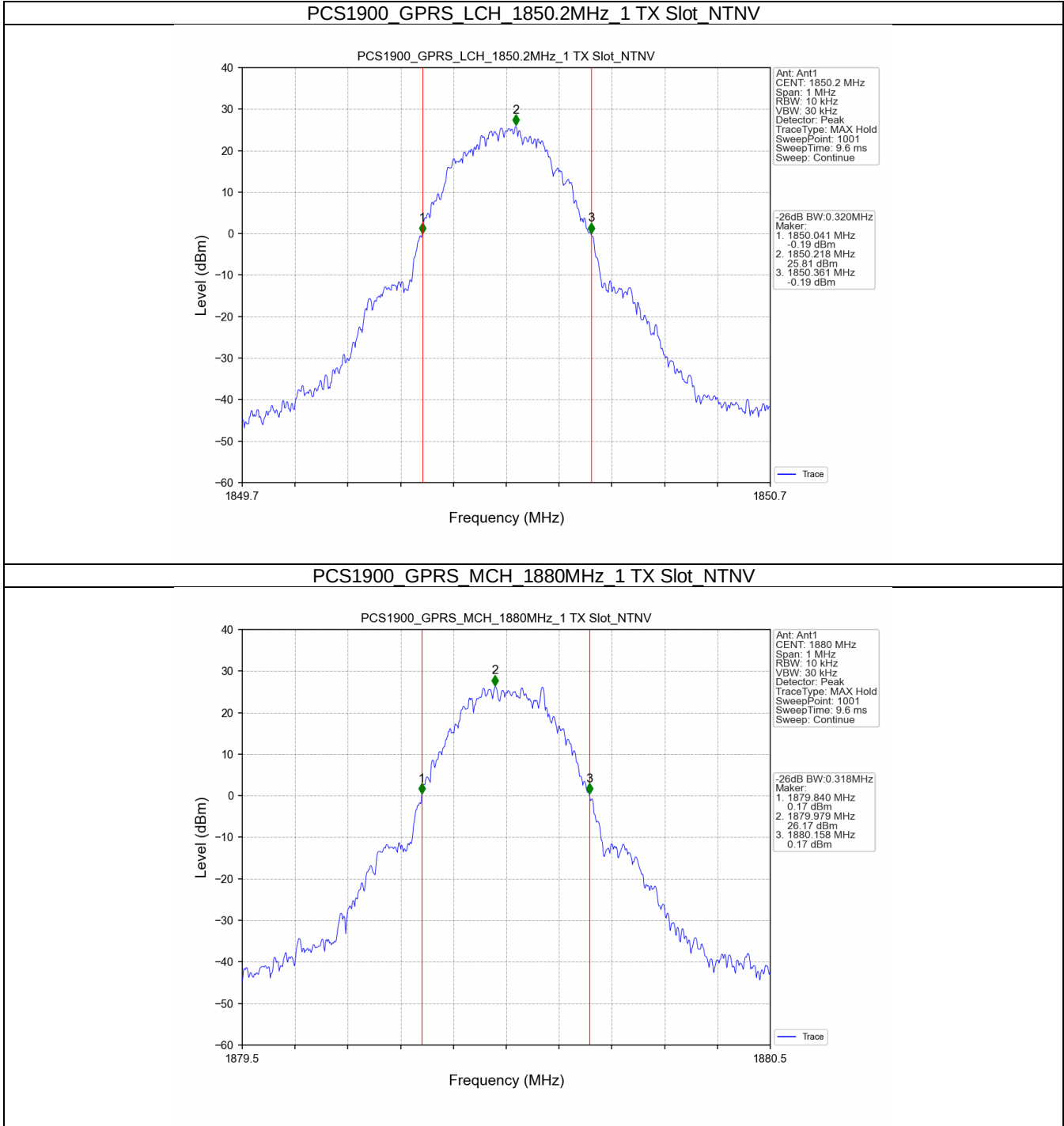
PCS1900_EGPRS_MCH_1880MHz_1 TX Slot_NTNV



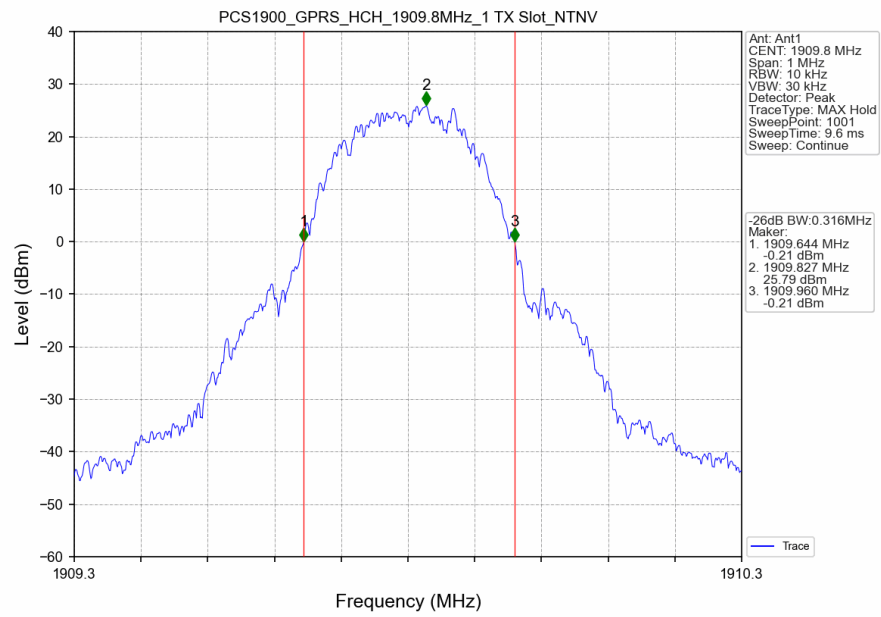
PCS1900_EGPRS_HCH_1909.8MHz_1 TX Slot_NTNV



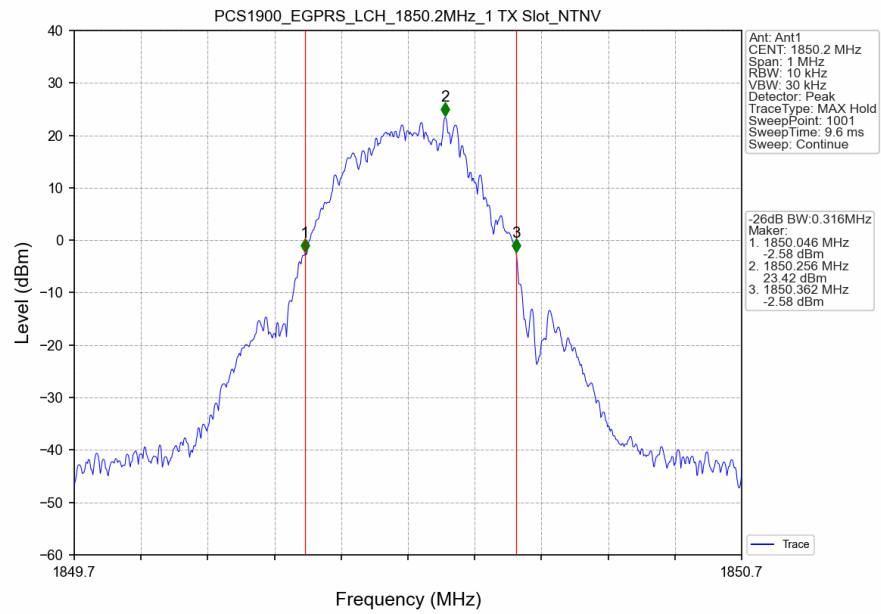
3.2.2 PCS1900_XDB



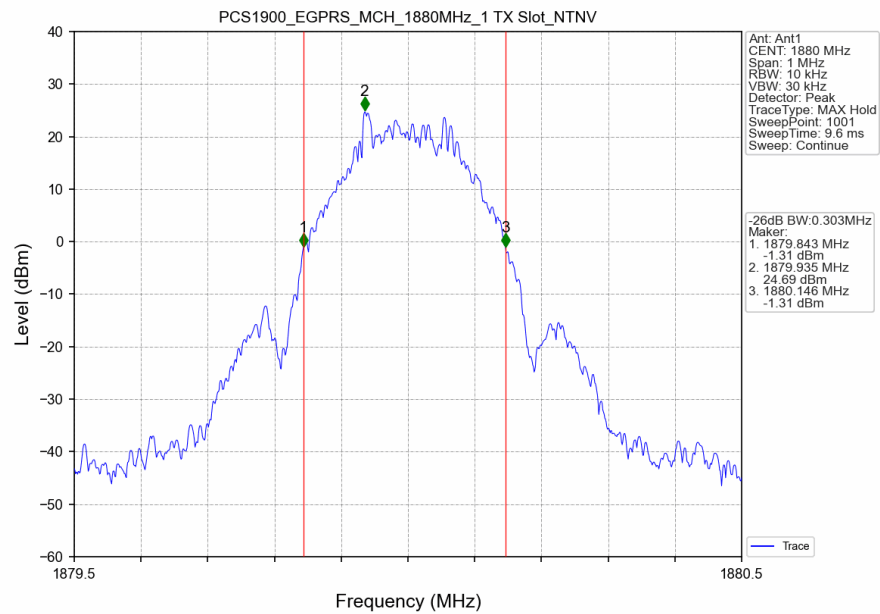
PCS1900_GPRS_HCH_1909.8MHz_1 TX Slot_NTNV



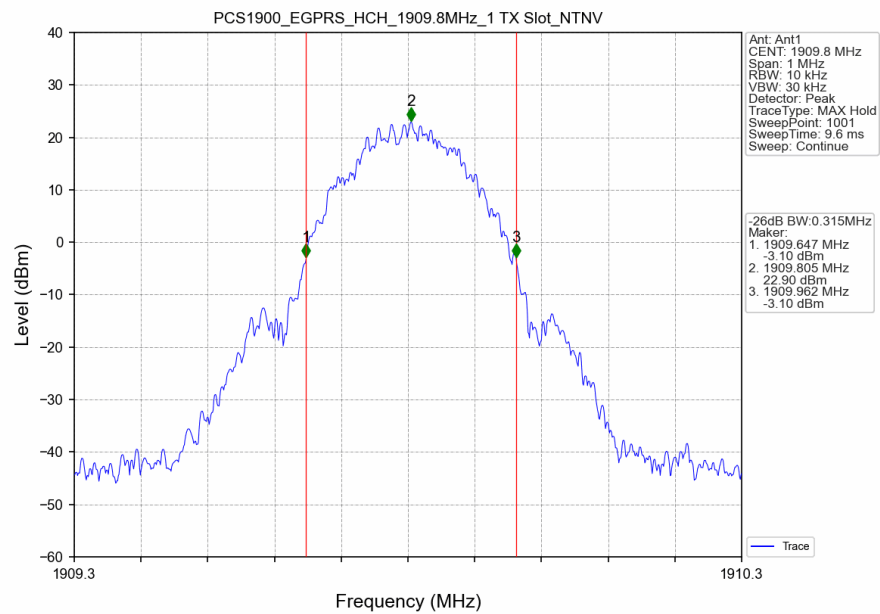
PCS1900_EGPRS_LCH_1850.2MHz_1 TX Slot_NTNV



PCS1900_EGPRS_MCH_1880MHz_1 TX Slot_NTNV



PCS1900_EGPRS_HCH_1909.8MHz_1 TX Slot_NTNV



4. Peak-Average Ratio

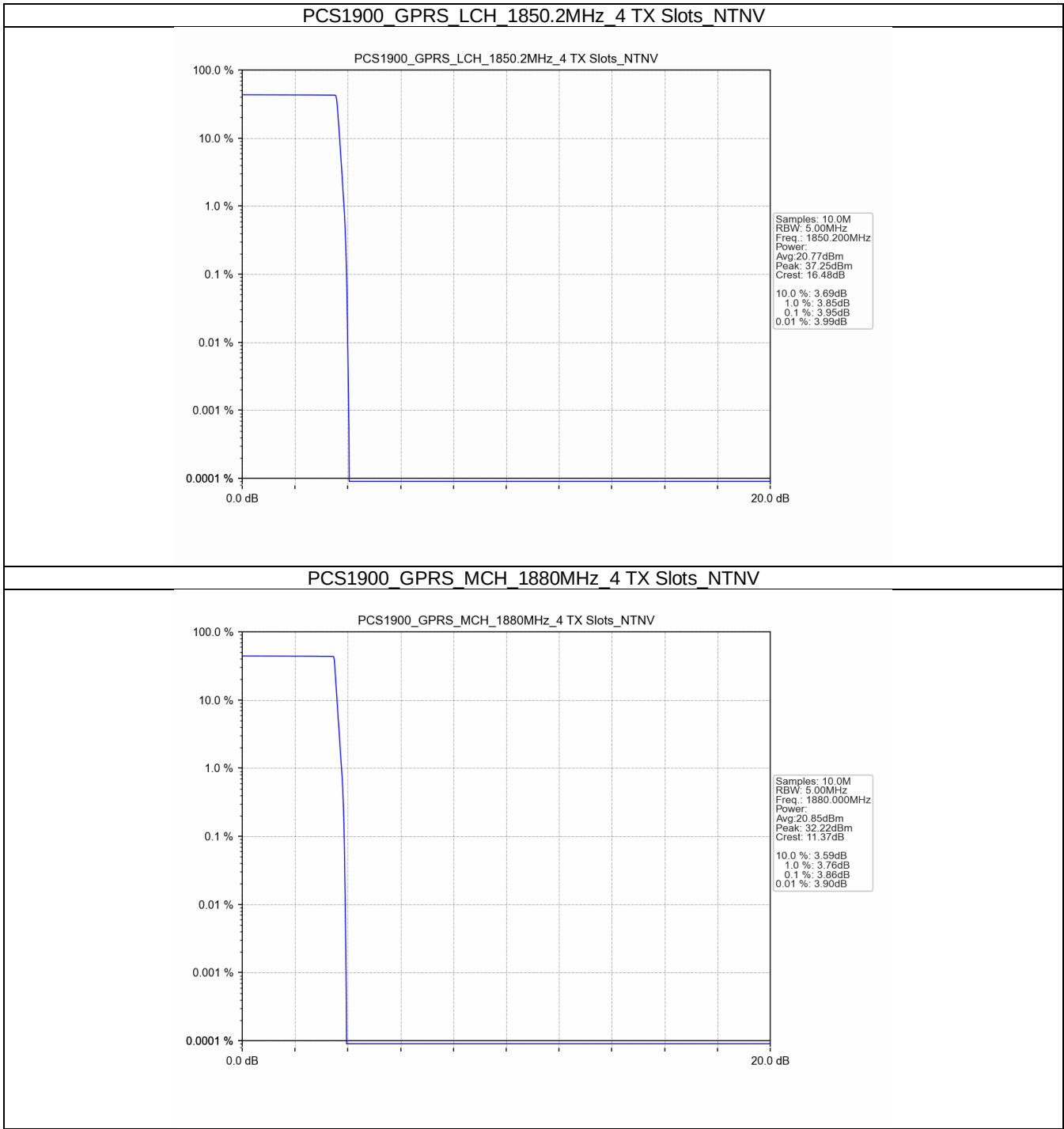
4.1 Test Result

4.1.1 PCS1900

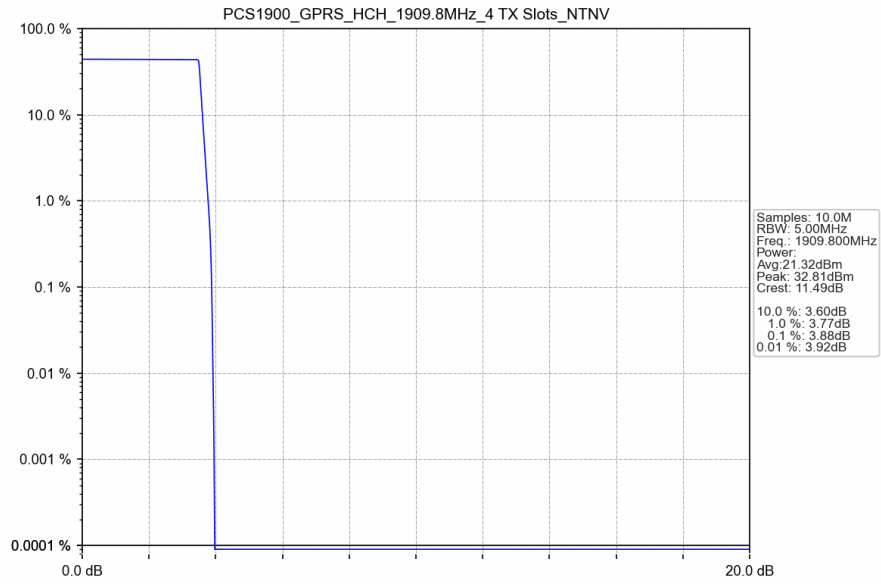
Band: PCS1900						
ENV	Mode		Frequency (MHz)	Peak-Average Ratio (dB)		Verdict
	Network	Subset		Result	Limit	
NTNV	GPRS	4 TX Slots	1850.2	3.95	<=13	Pass
			1880	3.86	<=13	Pass
			1909.8	3.88	<=13	Pass
	EGPRS	4 TX Slots	1850.2	6.81	<=13	Pass
			1880	6.74	<=13	Pass
			1909.8	6.78	<=13	Pass

4.2 Test Graph

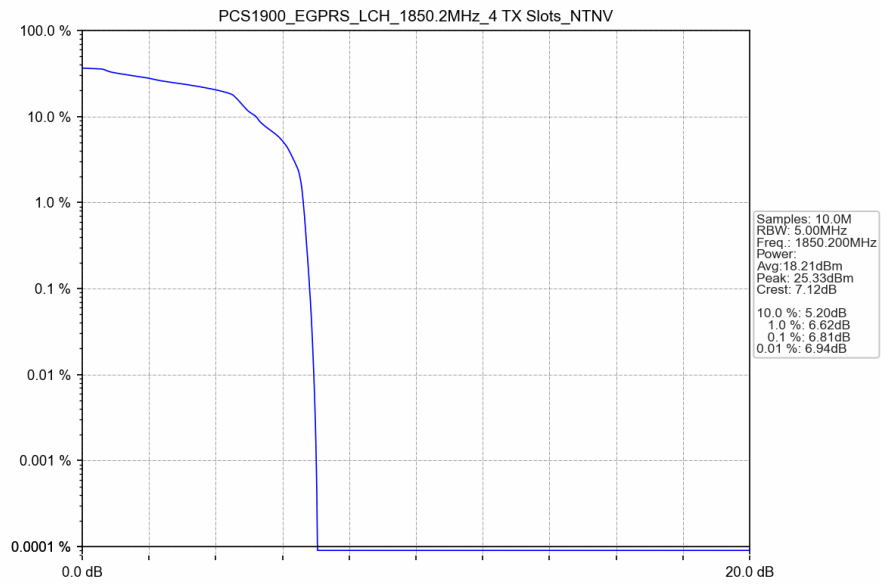
4.2.1 PCS1900



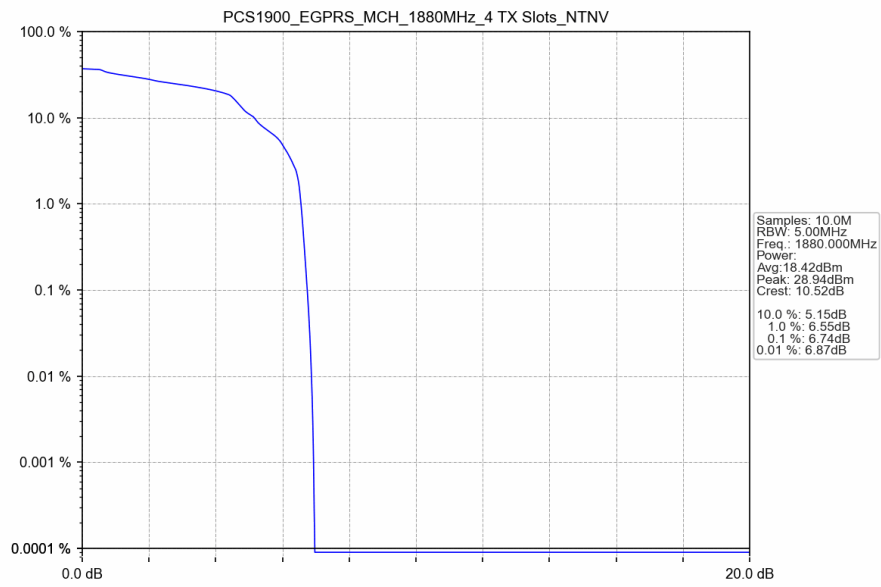
PCS1900_GPRS_HCH_1909.8MHz_4 TX Slots_NTNV



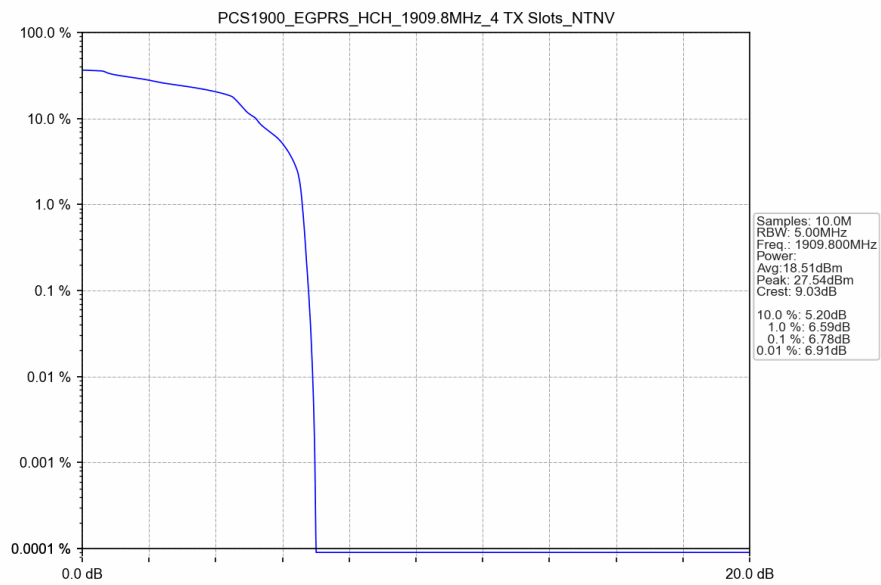
PCS1900_EGPRS_LCH_1850.2MHz_4 TX Slots_NTNV



PCS1900 EGPRS MCH 1880MHz 4 TX Slots_NTNV



PCS1900 EGPRS HCH 1909.8MHz 4 TX Slots_NTNV



5. Spurious Emission

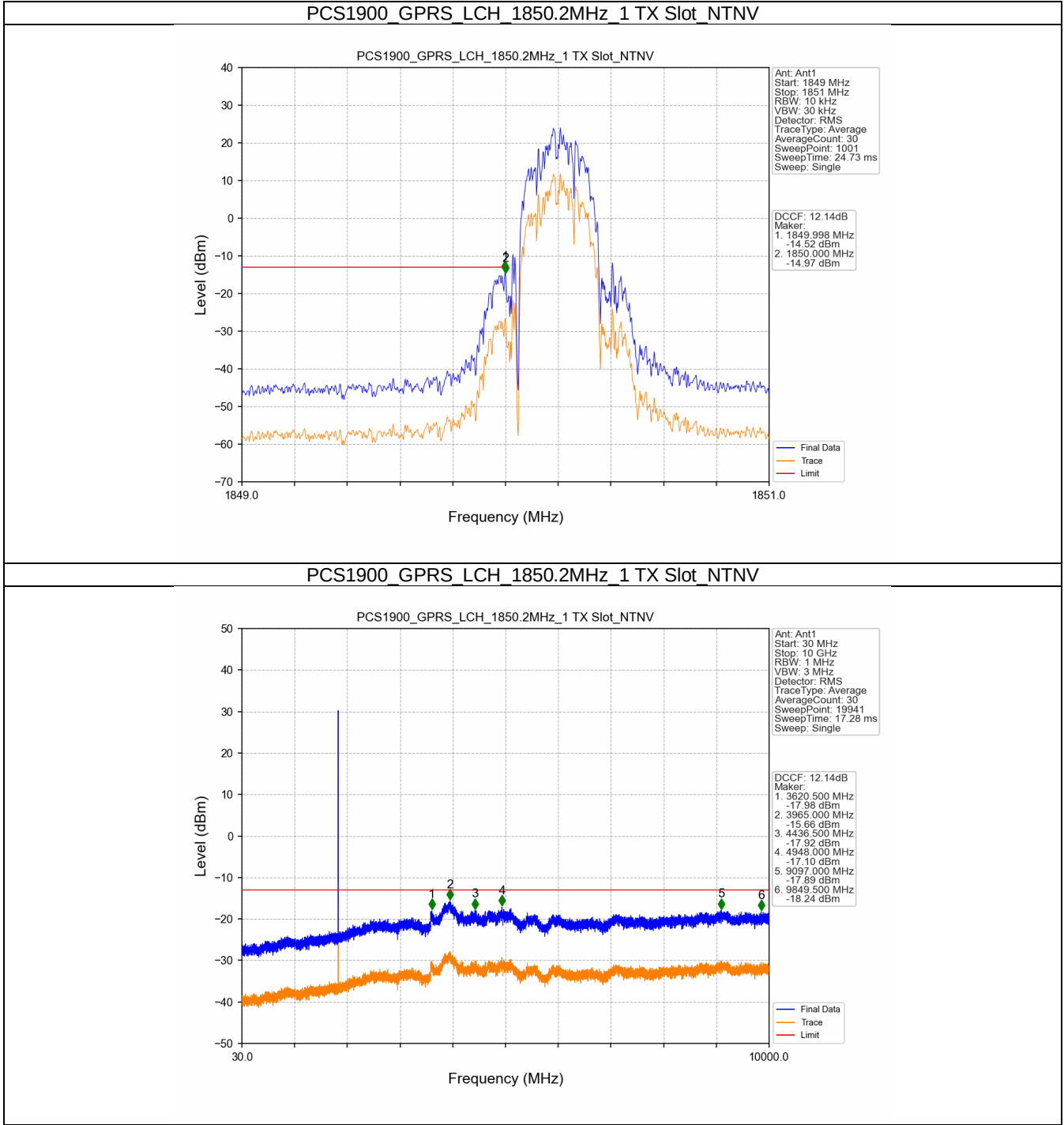
5.1 Test Result

5.1.1 PCS1900

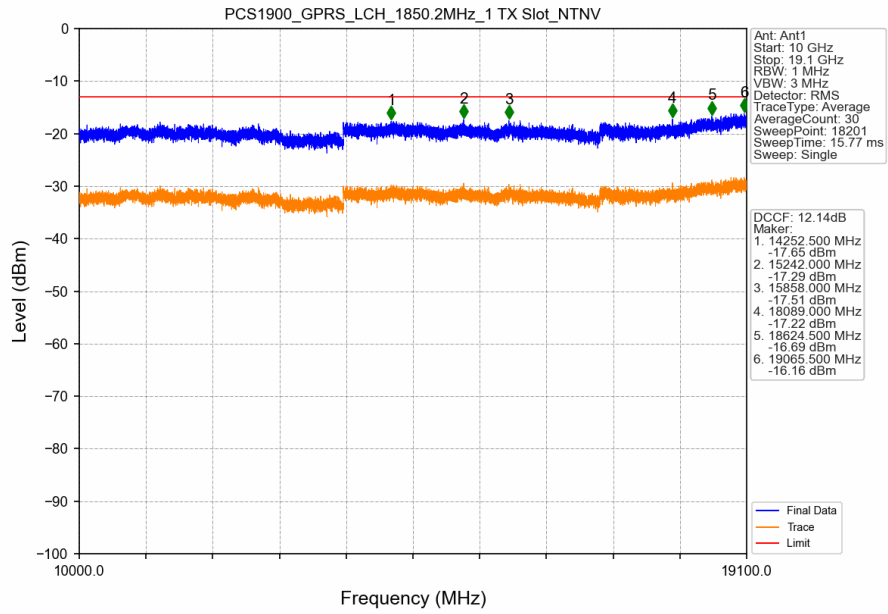
Band: PCS1900						
ENV	Mode		Frequency (MHz)	Spurious Emission		Verdict
	Network	Subset		Result	Limit	
NTNV	GPRS	1 TX Slot	1850.2	Refer To Test Graph		Pass
			1880	Refer To Test Graph		Pass
			1909.8	Refer To Test Graph		Pass
	EGPRS	1 TX Slot	1850.2	Refer To Test Graph		Pass
			1880	Refer To Test Graph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

5.2 Test Graph

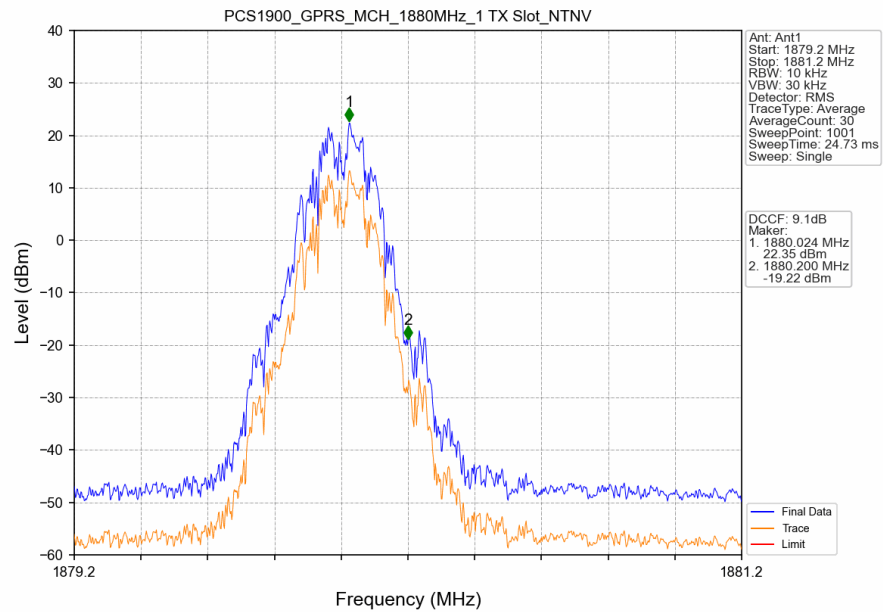
5.2.1 PCS1900



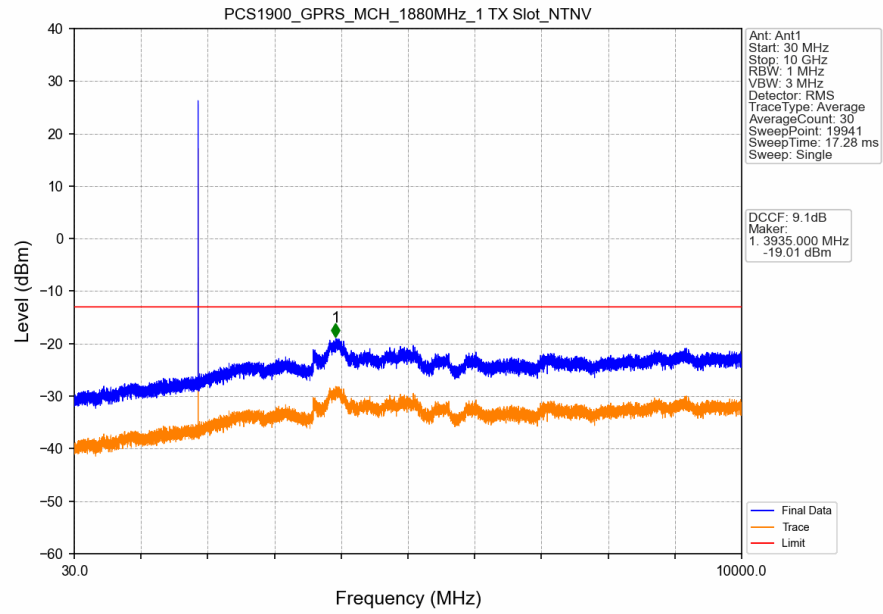
PCS1900_GPRS_LCH_1850.2MHz_1 TX Slot_NTNV



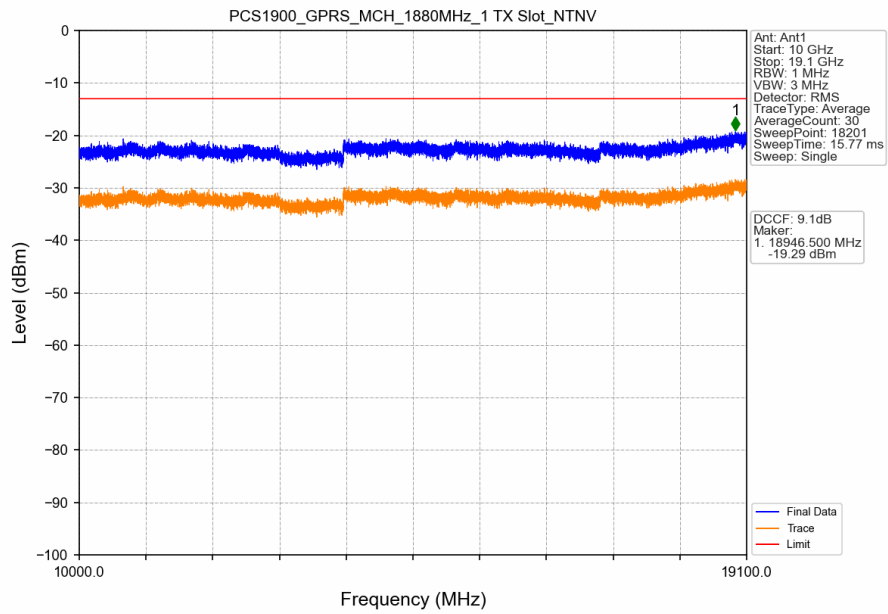
PCS1900_GPRS_MCH_1880MHz_1 TX Slot_NTNV



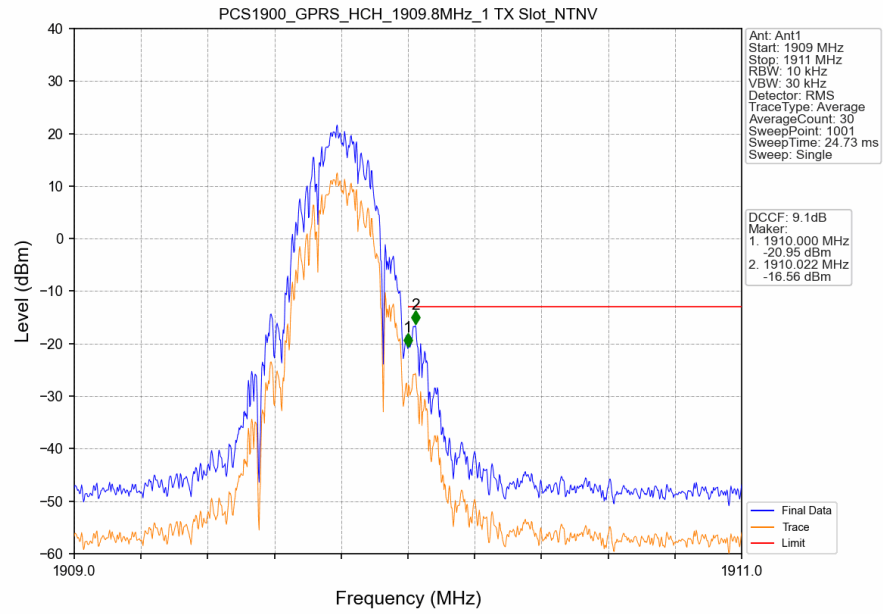
PCS1900_GPRS_MCH_1880MHz_1 TX Slot_NTNV



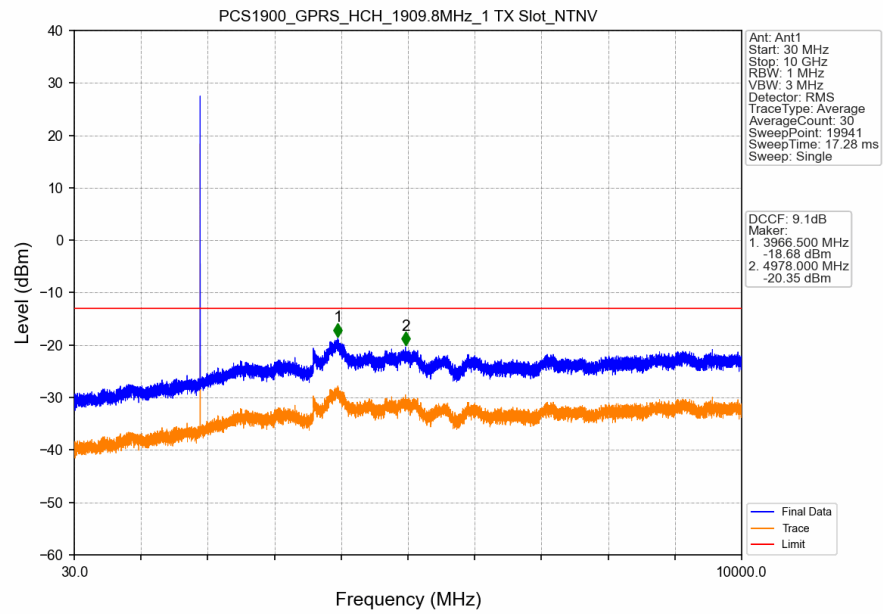
PCS1900_GPRS_MCH_1880MHz_1 TX Slot_NTNV



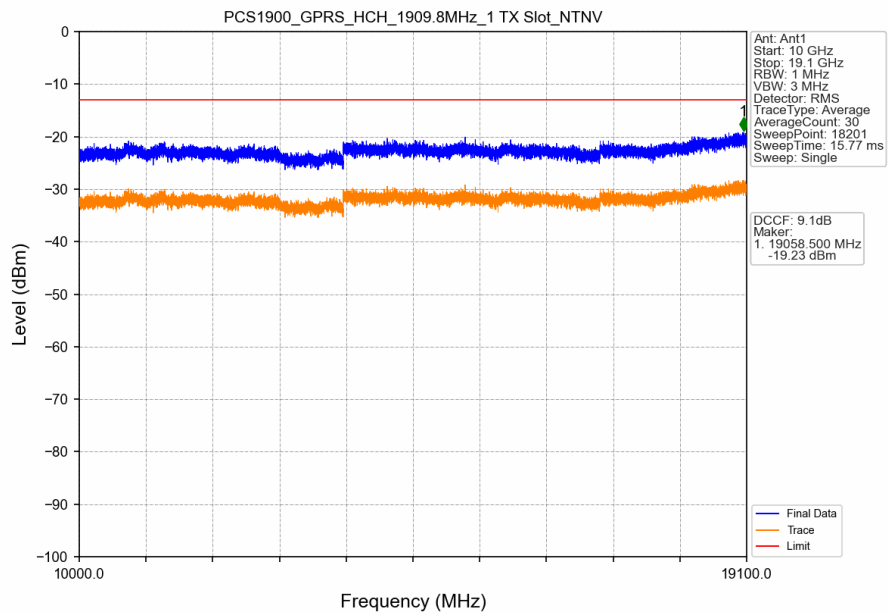
PCS1900_GPRS_HCH_1909.8MHz_1 TX Slot_NTNV



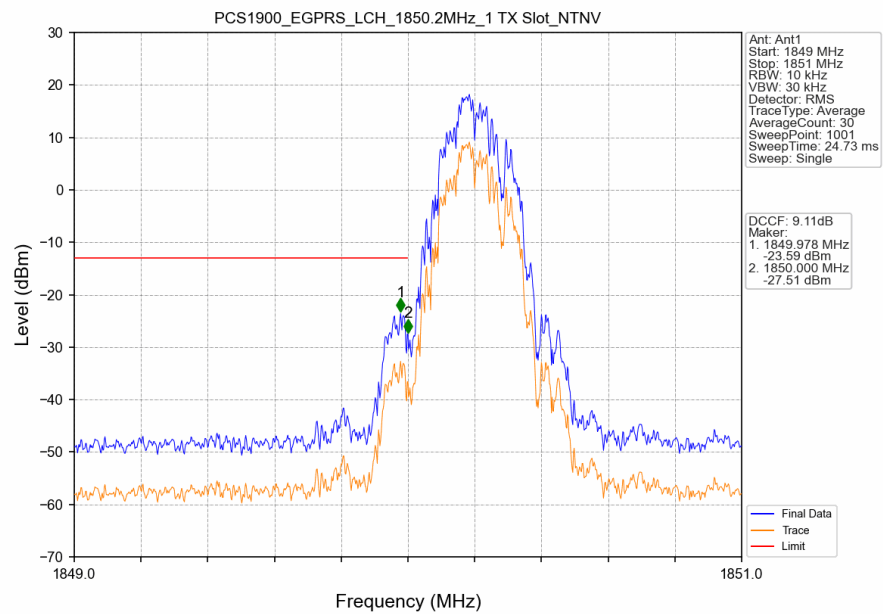
PCS1900_GPRS_HCH_1909.8MHz_1 TX Slot_NTNV



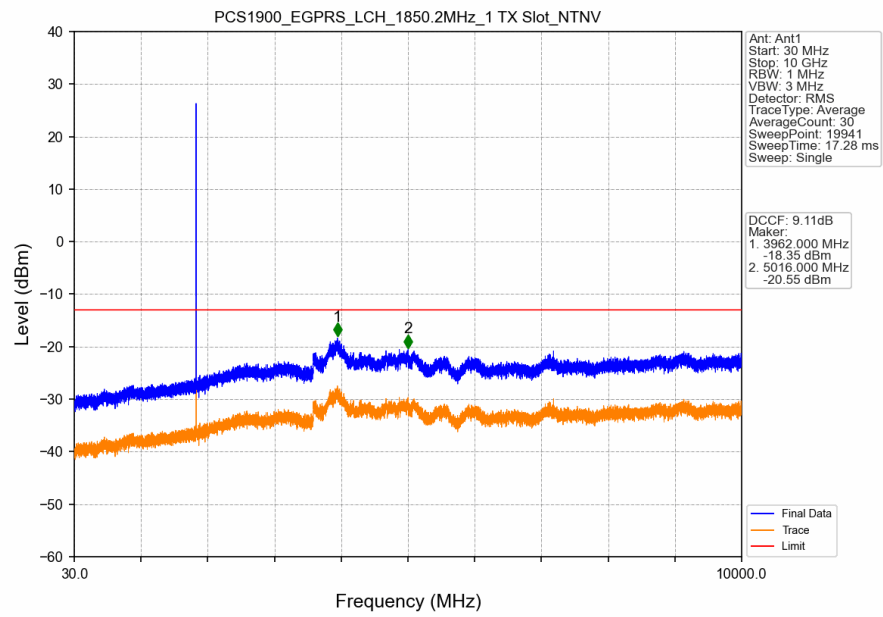
PCS1900_GPRS_HCH_1909.8MHz_1 TX Slot_NTNV



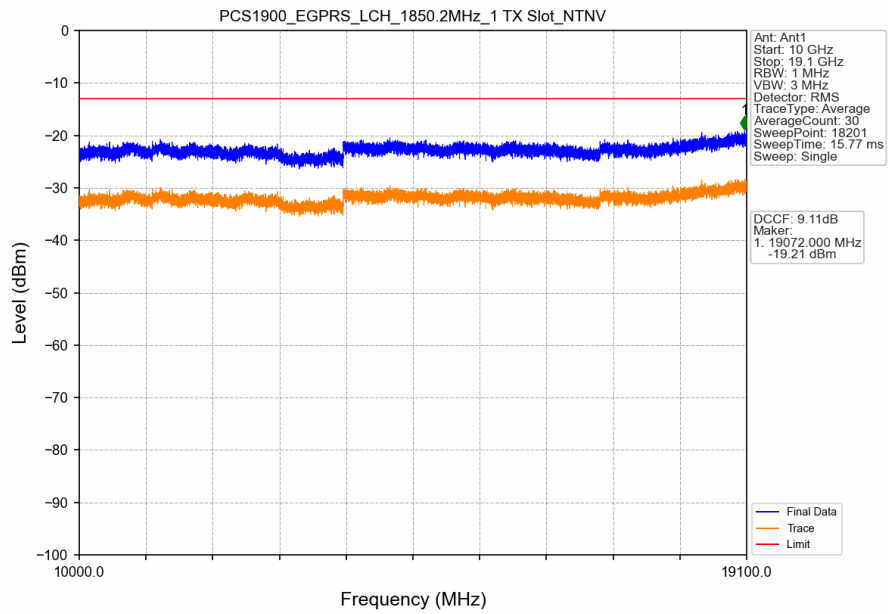
PCS1900_EGPRS_LCH_1850.2MHz_1 TX Slot_NTNV



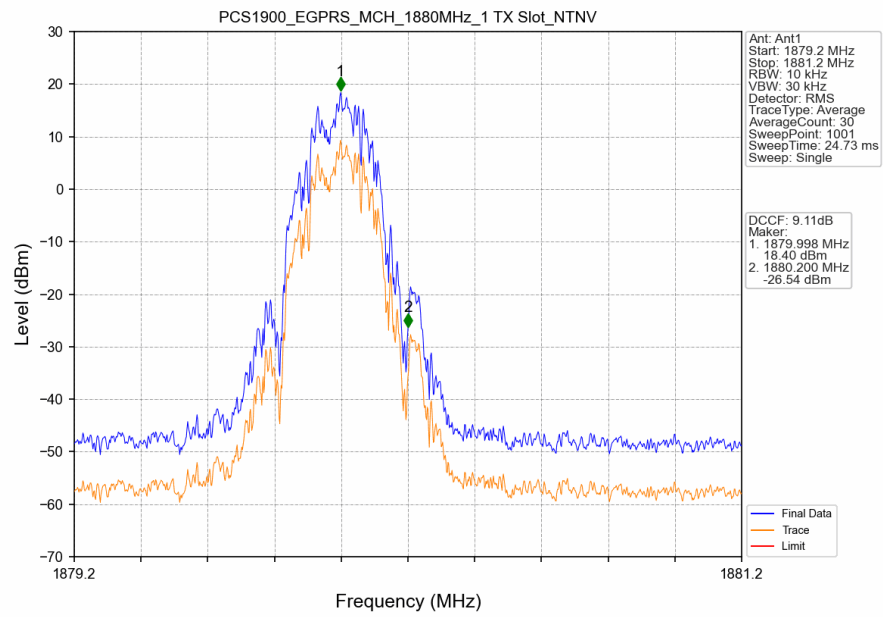
PCS1900 EGPRS LCH 1850.2MHz 1 TX Slot_NTNV



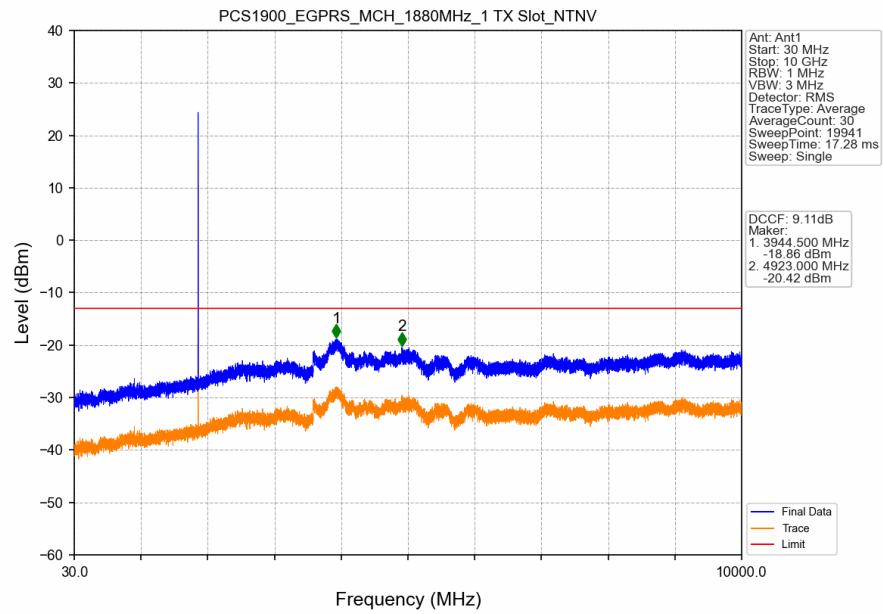
PCS1900 EGPRS LCH 1850.2MHz 1 TX Slot_NTNV



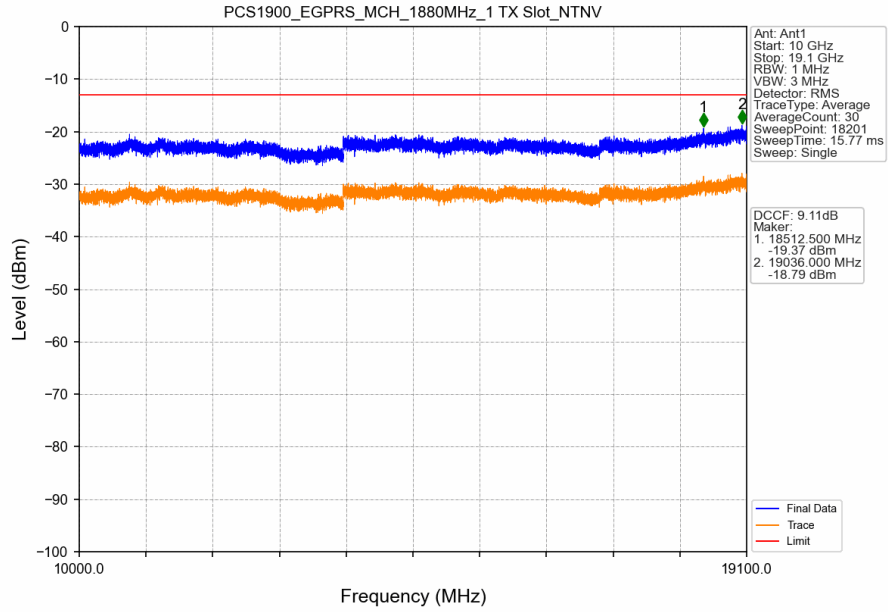
PCS1900_EGPRS_MCH_1880MHz_1 TX Slot_NTNV



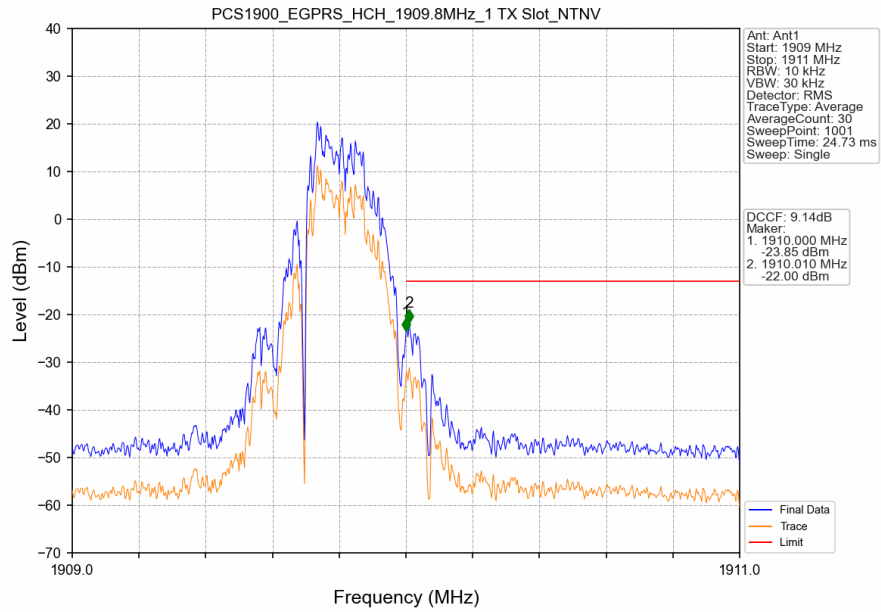
PCS1900_EGPRS_MCH_1880MHz_1 TX Slot_NTNV



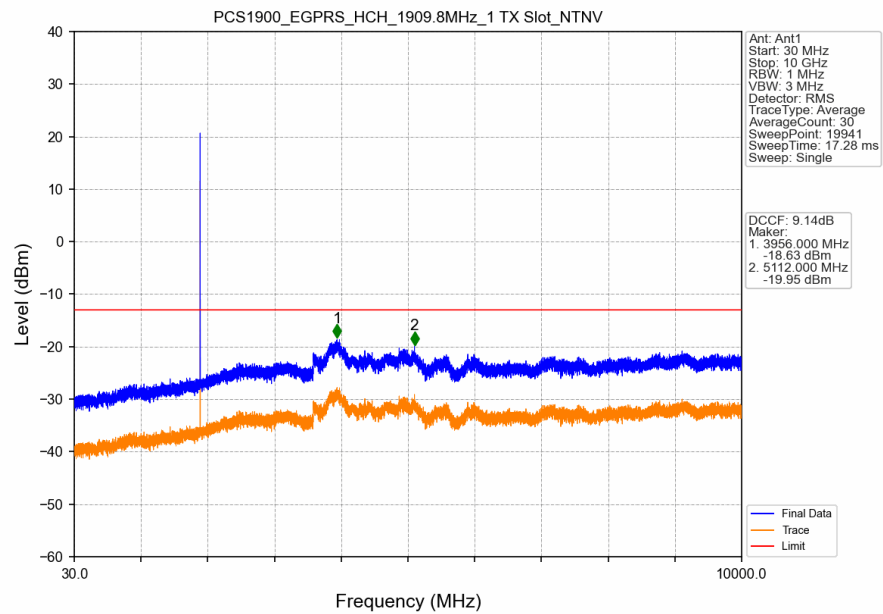
PCS1900_EGPRS_MCH_1880MHz_1 TX Slot_NTNV



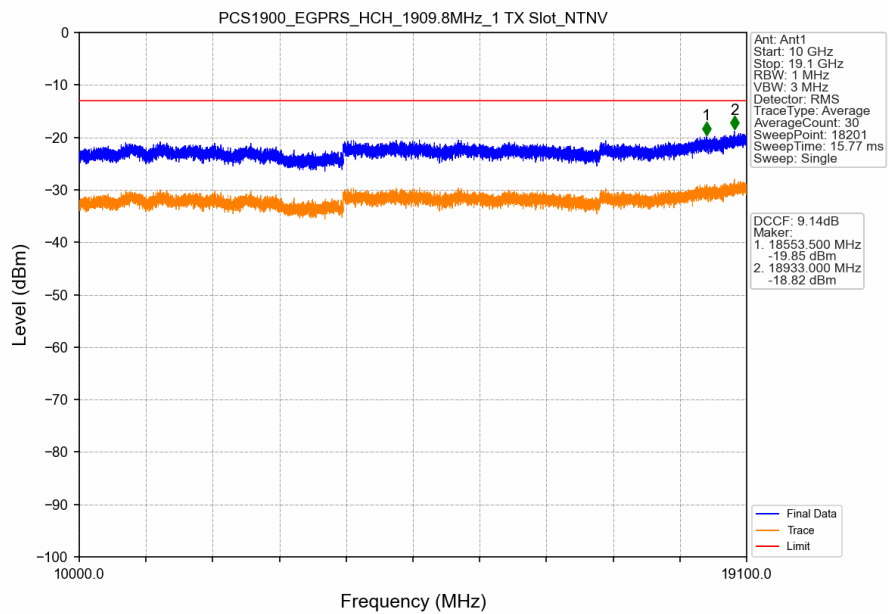
PCS1900_EGPRS_HCH_1909.8MHz_1 TX Slot_NTNV



PCS1900 EGPRS HCH 1909.8MHz 1 TX Slot_NTNV



PCS1900 EGPRS HCH 1909.8MHz 1 TX Slot_NTNV



6. Field Strength of Spurious Radiation

GSM 1900-Low channel								
Frequency (MHz)	EIRP (dBm)	Limit (dBm)	Over Limit (dB)	S.G. Power (dBm)	Cable Loss (dB)	Antenna Gain (dBi)	Polarization (H/V)	Result
3080.601	-54.48	-13	-41.48	-58.41	3.19	7.12	Horizontal	Pass
4996.69	-50.04	-13	-37.04	-55.61	4.57	10.14	Horizontal	Pass
7172.406	-51.96	-13	-38.96	-58.37	4.93	11.34	Horizontal	Pass
3088.453	-54.94	-13	-41.94	-58.89	3.19	7.14	Vertical	Pass
5191.168	-50.94	-13	-37.94	-56.57	4.63	10.26	Vertical	Pass
9441.913	-49.92	-13	-36.92	-57.84	5.32	13.24	Vertical	Pass

GSM 1900-Middle channel								
Frequency (MHz)	EIRP (dBm)	Limit (dBm)	Over Limit (dB)	S.G. Power (dBm)	Cable Loss (dB)	Antenna Gain (dBi)	Polarization (H/V)	Result
1442.758	-62.91	-13	-49.91	-65.91	2.52	5.52	Horizontal	Pass
5009.426	-51.23	-13	-38.23	-56.81	4.57	10.15	Horizontal	Pass
9370.083	-51.0	-13	-38.0	-58.94	5.29	13.23	Horizontal	Pass
5073.591	-50.93	-13	-37.93	-56.53	4.59	10.19	Vertical	Pass
9042.038	-51.02	-13	-38.02	-59.05	5.18	13.21	Vertical	Pass
11283.55	-53.54	-13	-40.54	-60.95	5.84	13.25	Vertical	Pass

GSM 1900-High channel								
Frequency (MHz)	EIRP (dBm)	Limit (dBm)	Over Limit (dB)	S.G. Power (dBm)	Cable Loss (dB)	Antenna Gain (dBi)	Polarization (H/V)	Result
1457.523	-62.83	-13	-49.83	-65.91	2.53	5.61	Horizontal	Pass
5022.194	-51.16	-13	-38.16	-56.73	4.58	10.15	Horizontal	Pass
9441.913	-51.33	-13	-38.33	-59.25	5.32	13.24	Horizontal	Pass
4933.497	-51.64	-13	-38.64	-57.14	4.54	10.04	Vertical	Pass
9251.58	-51.48	-13	-38.48	-59.46	5.25	13.23	Vertical	Pass
10805.68	-53.8	-13	-40.8	-61.32	5.69	13.21	Vertical	Pass