

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	28.09	1.55	29.64	<=33.01	Pass	
			1880	28.39	1.55	29.94	<=33.01	Pass	
			1909.8	28.30	1.55	29.85	<=33.01	Pass	
	GPRS	1 TX Slot	1850.2	28.08	1.55	29.63	<=33.01	Pass	
		2 TX Slots	1850.2	25.63	1.55	27.18	<=33.01	Pass	
		3 TX Slots	1850.2	24.06	1.55	25.61	<=33.01	Pass	
		4 TX Slots	1850.2	22.14	1.55	23.69	<=33.01	Pass	
		1 TX Slot	1880	28.37	1.55	29.92	<=33.01	Pass	
		2 TX Slots	1880	26.07	1.55	27.62	<=33.01	Pass	
		3 TX Slots	1880	24.52	1.55	26.07	<=33.01	Pass	
		4 TX Slots	1880	22.61	1.55	24.16	<=33.01	Pass	
		1 TX Slot	1909.8	28.27	1.55	29.82	<=33.01	Pass	
		2 TX Slots	1909.8	26.22	1.55	27.77	<=33.01	Pass	
		3 TX Slots	1909.8	24.71	1.55	26.26	<=33.01	Pass	
		4 TX Slots	1909.8	22.83	1.55	24.38	<=33.01	Pass	
		EGPRS	1 TX Slot	1850.2	22.32	1.55	23.87	<=33.01	Pass
			2 TX Slots	1850.2	22.03	1.55	23.58	<=33.01	Pass
			3 TX Slots	1850.2	20.50	1.55	22.05	<=33.01	Pass
			4 TX Slots	1850.2	18.25	1.55	19.80	<=33.01	Pass
	1 TX Slot		1880	23.07	1.55	24.62	<=33.01	Pass	
	2 TX Slots		1880	22.83	1.55	24.38	<=33.01	Pass	
	3 TX Slots		1880	20.93	1.55	22.48	<=33.01	Pass	
	4 TX Slots		1880	18.99	1.55	20.54	<=33.01	Pass	
	1 TX Slot		1909.8	22.52	1.55	24.07	<=33.01	Pass	
	2 TX Slots		1909.8	22.29	1.55	23.84	<=33.01	Pass	
	3 TX Slots		1909.8	20.59	1.55	22.14	<=33.01	Pass	
	4 TX Slots		1909.8	18.37	1.55	19.92	<=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	3.27	-24.602	-0.0133	-2.5 to 2.5	Pass
			3.85	-17.467	-0.0094	-2.5 to 2.5	Pass
			4.43	-24.344	-0.0132	-2.5 to 2.5	Pass
		-30	3.85	-22.084	-0.0119	-2.5 to 2.5	Pass
		-20	3.85	-20.405	-0.0110	-2.5 to 2.5	Pass
		-10	3.85	-18.371	-0.0099	-2.5 to 2.5	Pass
		0	3.85	-22.600	-0.0122	-2.5 to 2.5	Pass

		10	3.85	-22.277	-0.0120	-2.5 to 2.5	Pass
		30	3.85	-19.791	-0.0107	-2.5 to 2.5	Pass
		40	3.85	-25.990	-0.0140	-2.5 to 2.5	Pass
		50	3.85	-19.468	-0.0105	-2.5 to 2.5	Pass
	1880	20	3.27	-21.276	-0.0113	-2.5 to 2.5	Pass
			3.85	-16.692	-0.0089	-2.5 to 2.5	Pass
			4.43	-12.656	-0.0067	-2.5 to 2.5	Pass
		-30	3.85	-16.853	-0.0090	-2.5 to 2.5	Pass
		-20	3.85	-14.173	-0.0075	-2.5 to 2.5	Pass
		-10	3.85	-16.078	-0.0086	-2.5 to 2.5	Pass
		0	3.85	-12.075	-0.0064	-2.5 to 2.5	Pass
		10	3.85	-25.054	-0.0133	-2.5 to 2.5	Pass
		30	3.85	-17.983	-0.0096	-2.5 to 2.5	Pass
		40	3.85	-14.884	-0.0079	-2.5 to 2.5	Pass
		50	3.85	-12.398	-0.0066	-2.5 to 2.5	Pass
	1909.8	20	3.27	-20.211	-0.0106	-2.5 to 2.5	Pass
			3.85	-15.271	-0.0080	-2.5 to 2.5	Pass
			4.43	-13.947	-0.0073	-2.5 to 2.5	Pass
		-30	3.85	-13.140	-0.0069	-2.5 to 2.5	Pass
		-20	3.85	-16.918	-0.0089	-2.5 to 2.5	Pass
		-10	3.85	-12.236	-0.0064	-2.5 to 2.5	Pass
		0	3.85	-18.338	-0.0096	-2.5 to 2.5	Pass
		10	3.85	-11.268	-0.0059	-2.5 to 2.5	Pass
		30	3.85	-12.785	-0.0067	-2.5 to 2.5	Pass
		40	3.85	-8.201	-0.0043	-2.5 to 2.5	Pass
		50	3.85	-14.335	-0.0075	-2.5 to 2.5	Pass
GPRS	1850.2	20	3.27	-15.013	-0.0081	-2.5 to 2.5	Pass
			3.85	-13.560	-0.0073	-2.5 to 2.5	Pass
			4.43	-14.303	-0.0077	-2.5 to 2.5	Pass
		-30	3.85	-17.919	-0.0097	-2.5 to 2.5	Pass
		-20	3.85	-19.856	-0.0107	-2.5 to 2.5	Pass
		-10	3.85	-18.920	-0.0102	-2.5 to 2.5	Pass
		0	3.85	-17.402	-0.0094	-2.5 to 2.5	Pass
		10	3.85	-15.691	-0.0085	-2.5 to 2.5	Pass
		30	3.85	-15.820	-0.0086	-2.5 to 2.5	Pass
		40	3.85	-17.854	-0.0096	-2.5 to 2.5	Pass
		50	3.85	-19.404	-0.0105	-2.5 to 2.5	Pass
	1880	20	3.27	-11.558	-0.0061	-2.5 to 2.5	Pass
			3.85	-13.625	-0.0072	-2.5 to 2.5	Pass
			4.43	-13.076	-0.0070	-2.5 to 2.5	Pass
		-30	3.85	-14.529	-0.0077	-2.5 to 2.5	Pass
		-20	3.85	-15.207	-0.0081	-2.5 to 2.5	Pass
		-10	3.85	-12.204	-0.0065	-2.5 to 2.5	Pass
		0	3.85	-13.237	-0.0070	-2.5 to 2.5	Pass
		10	3.85	-16.272	-0.0087	-2.5 to 2.5	Pass
		30	3.85	-12.721	-0.0068	-2.5 to 2.5	Pass
		40	3.85	-10.590	-0.0056	-2.5 to 2.5	Pass
		50	3.85	-11.946	-0.0064	-2.5 to 2.5	Pass
	1909.8	20	3.27	-9.783	-0.0051	-2.5 to 2.5	Pass
			3.85	-8.588	-0.0045	-2.5 to 2.5	Pass
			4.43	-10.751	-0.0056	-2.5 to 2.5	Pass
		-30	3.85	-8.168	-0.0043	-2.5 to 2.5	Pass
		-20	3.85	-10.783	-0.0056	-2.5 to 2.5	Pass
		-10	3.85	-11.429	-0.0060	-2.5 to 2.5	Pass
		0	3.85	-10.687	-0.0056	-2.5 to 2.5	Pass
		10	3.85	-10.557	-0.0055	-2.5 to 2.5	Pass
		30	3.85	-7.910	-0.0041	-2.5 to 2.5	Pass
		40	3.85	-9.363	-0.0049	-2.5 to 2.5	Pass
		50	3.85	-8.653	-0.0045	-2.5 to 2.5	Pass

EGPRS	1850.2	20	3.27	-8.297	-0.0045	-2.5 to 2.5	Pass
			3.85	-8.233	-0.0044	-2.5 to 2.5	Pass
			4.43	-2.906	-0.0016	-2.5 to 2.5	Pass
		-30	3.85	-6.167	-0.0033	-2.5 to 2.5	Pass
		-20	3.85	-5.553	-0.0030	-2.5 to 2.5	Pass
		-10	3.85	-9.686	-0.0052	-2.5 to 2.5	Pass
		0	3.85	-8.911	-0.0048	-2.5 to 2.5	Pass
		10	3.85	-3.713	-0.0020	-2.5 to 2.5	Pass
		30	3.85	-3.745	-0.0020	-2.5 to 2.5	Pass
		40	3.85	-4.391	-0.0024	-2.5 to 2.5	Pass
		50	3.85	-7.878	-0.0043	-2.5 to 2.5	Pass
	1880	20	3.27	-4.940	-0.0026	-2.5 to 2.5	Pass
			3.85	-8.104	-0.0043	-2.5 to 2.5	Pass
			4.43	-4.520	-0.0024	-2.5 to 2.5	Pass
		-30	3.85	-3.745	-0.0020	-2.5 to 2.5	Pass
		-20	3.85	-8.071	-0.0043	-2.5 to 2.5	Pass
		-10	3.85	-4.391	-0.0023	-2.5 to 2.5	Pass
		0	3.85	-1.873	-0.0010	-2.5 to 2.5	Pass
		10	3.85	-3.584	-0.0019	-2.5 to 2.5	Pass
		30	3.85	-6.167	-0.0033	-2.5 to 2.5	Pass
		40	3.85	-4.133	-0.0022	-2.5 to 2.5	Pass
		50	3.85	-3.810	-0.0020	-2.5 to 2.5	Pass
	1909.8	20	3.27	-2.066	-0.0011	-2.5 to 2.5	Pass
			3.85	-3.487	-0.0018	-2.5 to 2.5	Pass
			4.43	-3.196	-0.0017	-2.5 to 2.5	Pass
		-30	3.85	-3.745	-0.0020	-2.5 to 2.5	Pass
		-20	3.85	-6.296	-0.0033	-2.5 to 2.5	Pass
		-10	3.85	-5.230	-0.0027	-2.5 to 2.5	Pass
		0	3.85	-3.519	-0.0018	-2.5 to 2.5	Pass
		10	3.85	-4.068	-0.0021	-2.5 to 2.5	Pass
		30	3.85	-10.816	-0.0057	-2.5 to 2.5	Pass
		40	3.85	-4.843	-0.0025	-2.5 to 2.5	Pass
		50	3.85	-6.780	-0.0036	-2.5 to 2.5	Pass

3. Modulation Characteristics

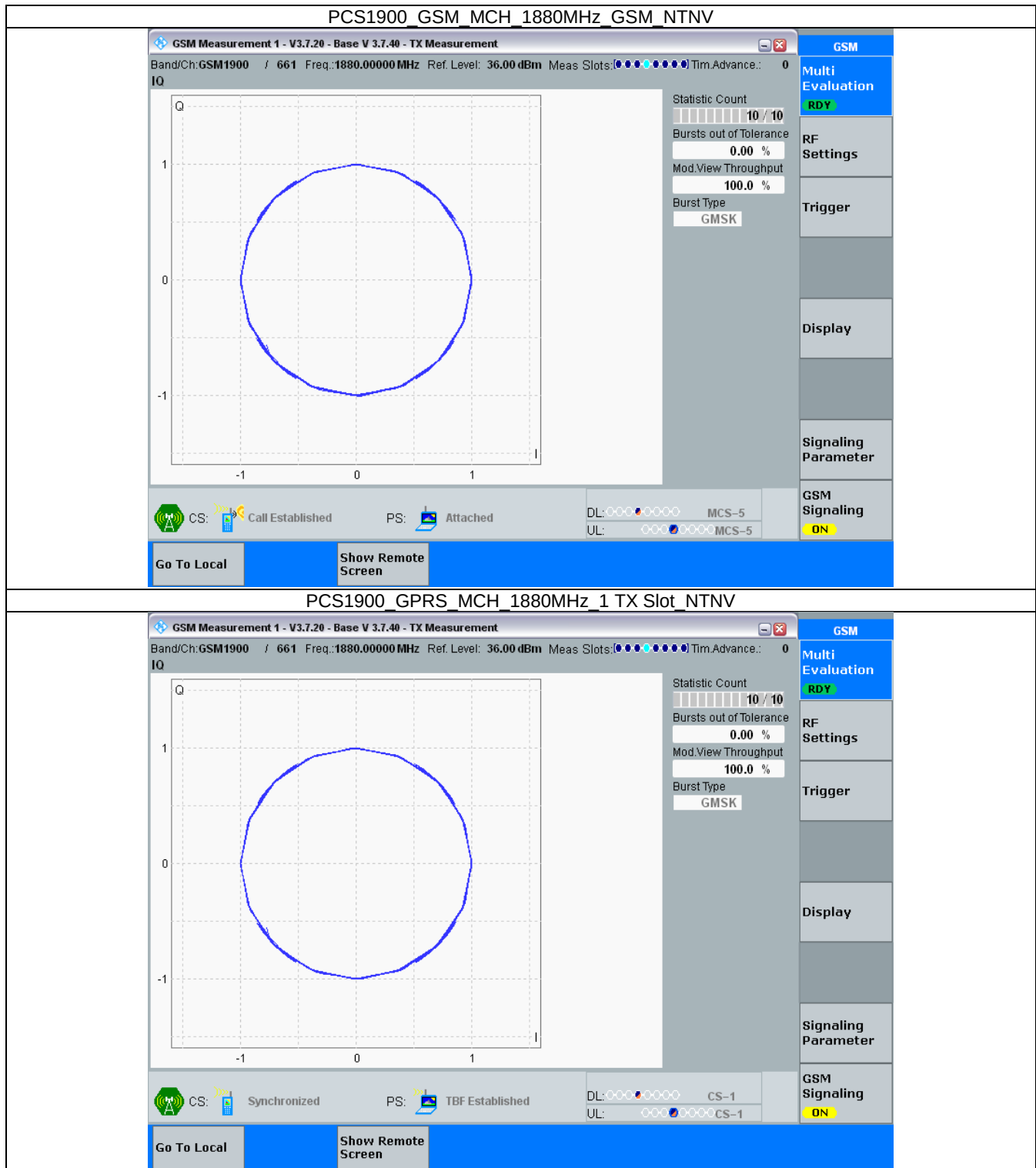
3.1 Test Result

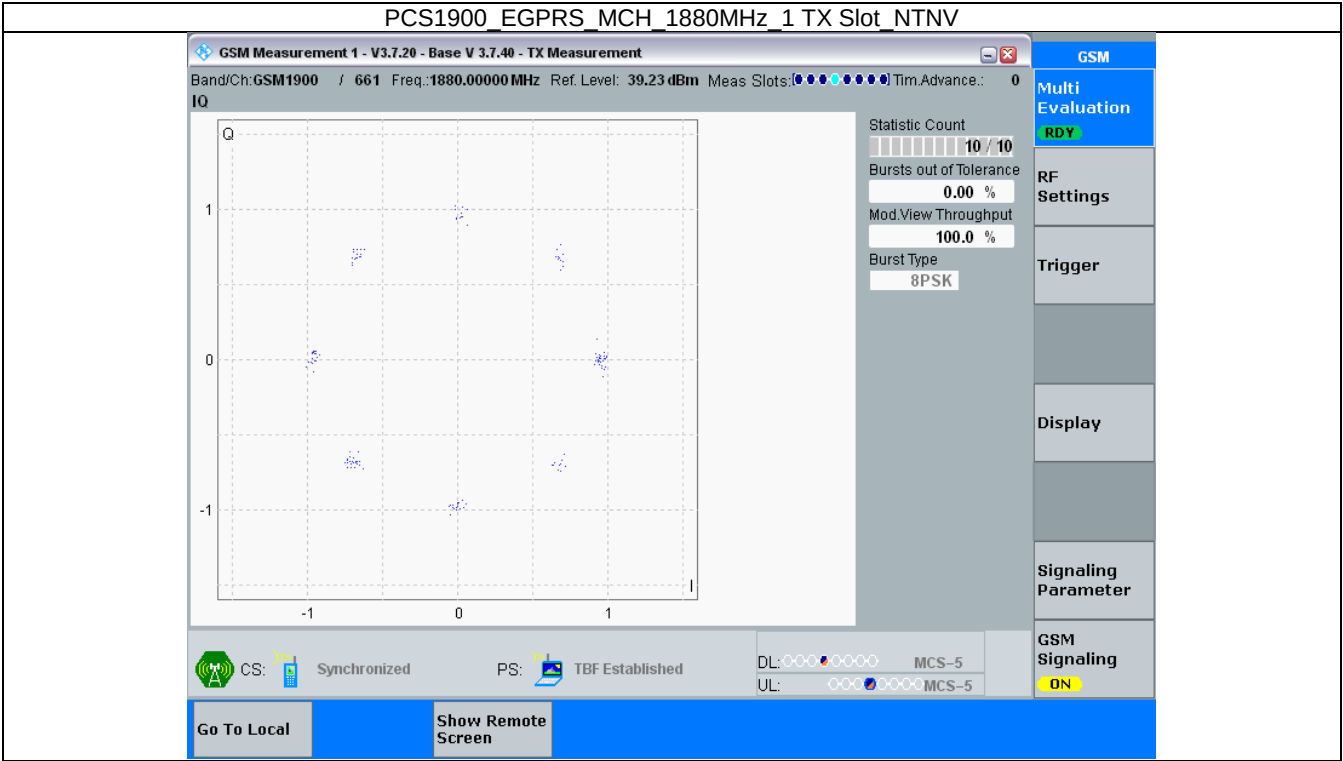
3.1.1 PCS1900

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





4. 99% & 26dB Bandwidth

4.1 Test Result

4.1.1 PCS1900_OBW

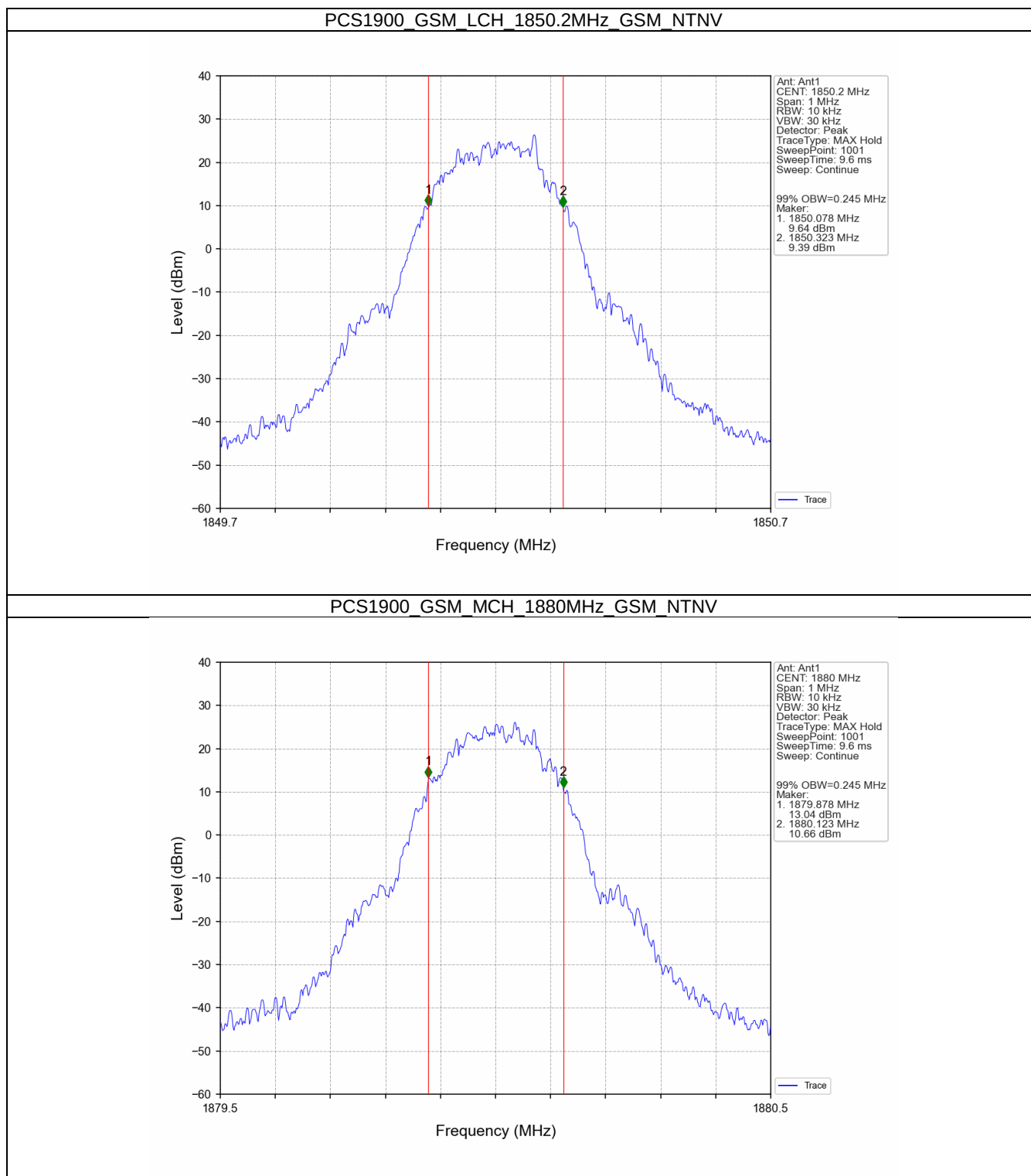
Band: PCS1900						
ENV	Mode		Frequency (MHz)	99% Occupied Bandwidth (MHz)		Verdict
	Network	Subset		Result	Limit	
NTNV	GSM	GSM	1850.2	0.245	/	Pass
			1880	0.245	/	Pass
			1909.8	0.241	/	Pass
	GPRS	1 TX Slot	1850.2	0.241	/	Pass
			1880	0.242	/	Pass
			1909.8	0.238	/	Pass
	EGPRS	1 TX Slot	1850.2	0.251	/	Pass
			1880	0.244	/	Pass
			1909.8	0.245	/	Pass

4.1.2 PCS1900_XDB

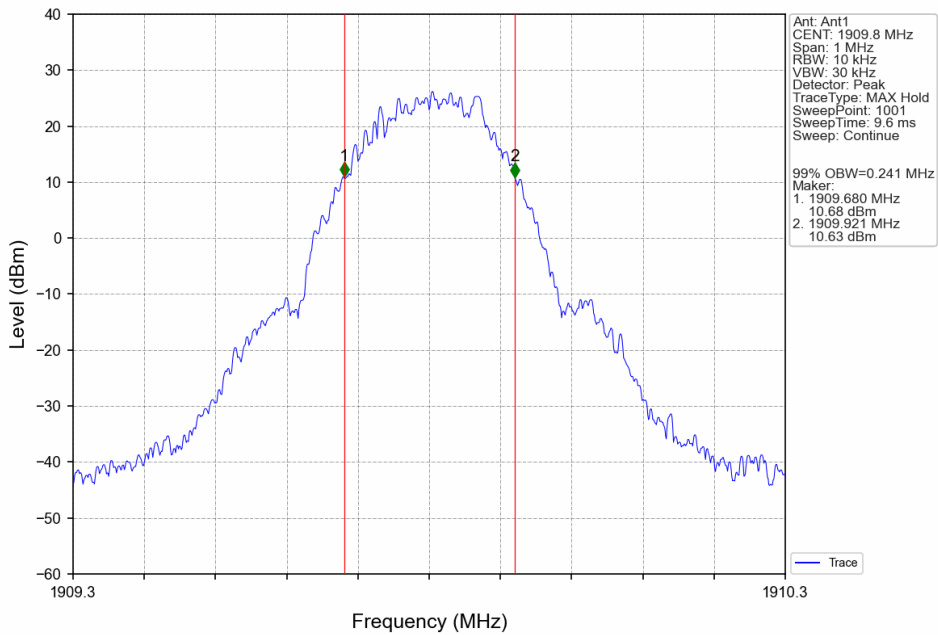
Band: PCS1900						
ENV	Mode		Frequency (MHz)	26dB Bandwidth (MHz)		Verdict
	Network	Subset		Result	Limit	
NTNV	GSM	GSM	1850.2	0.311	/	Pass
			1880	0.316	/	Pass
			1909.8	0.318	/	Pass
	GPRS	1 TX Slot	1850.2	0.306	/	Pass
			1880	0.319	/	Pass
			1909.8	0.310	/	Pass
	EGPRS	1 TX Slot	1850.2	0.304	/	Pass
			1880	0.291	/	Pass
			1909.8	0.311	/	Pass

4.2 Test Graph

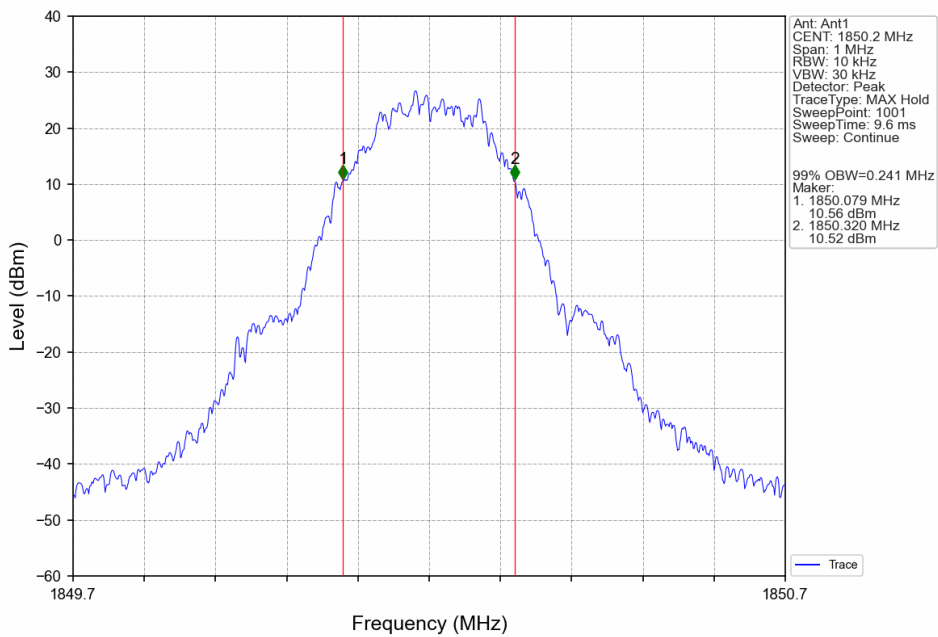
4.2.1 PCS1900_OBW



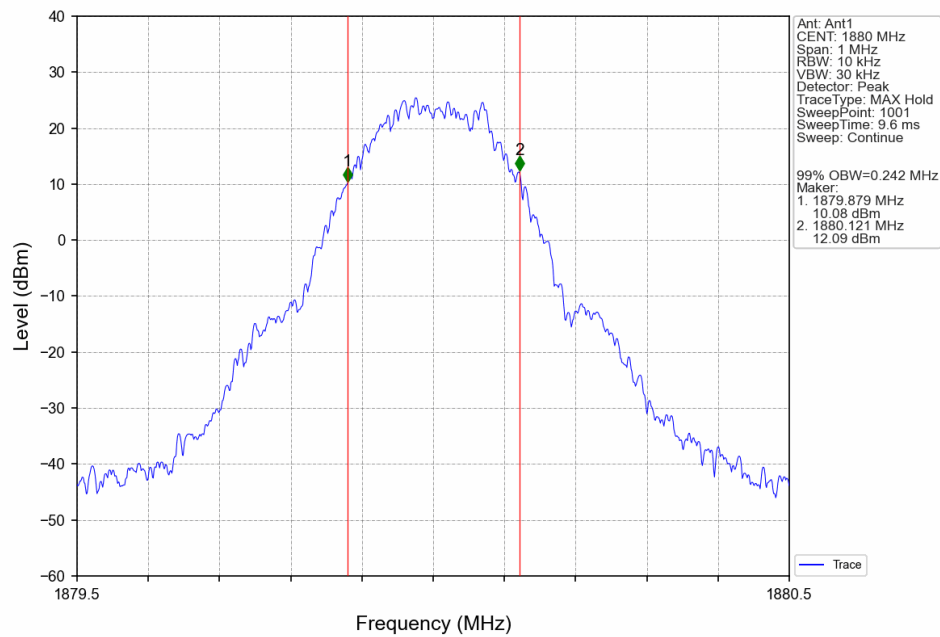
PCS1900_GSM_HCH_1909.8MHz_GSM_NTNV



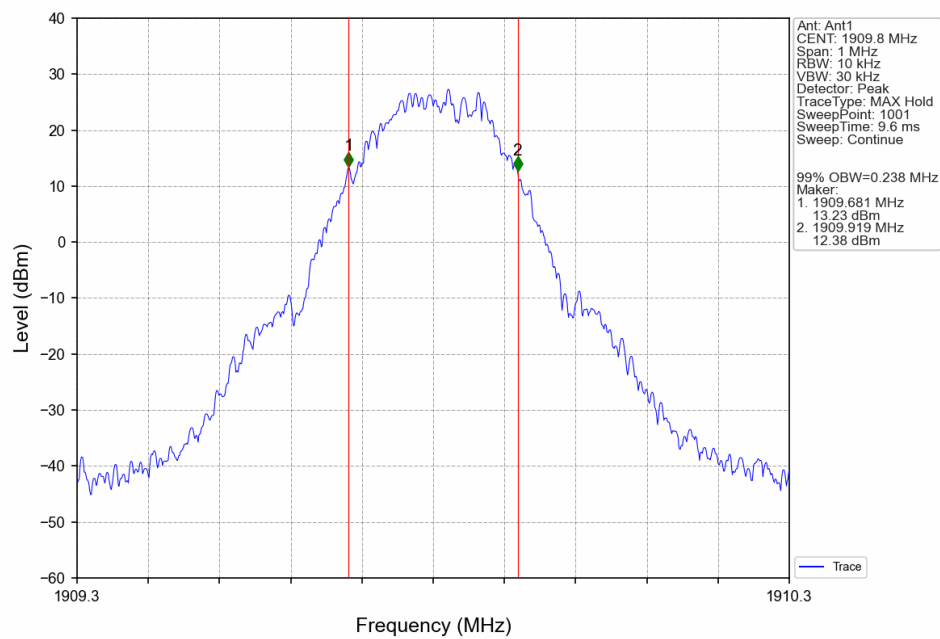
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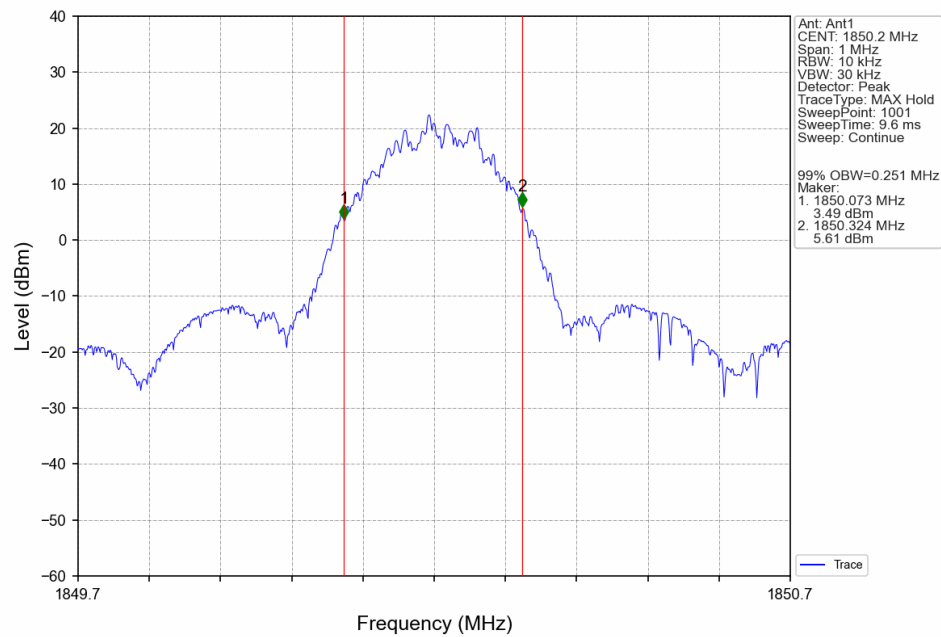
PCS1900_GPRS_MCH_1880MHz_1 TX Slot_NTNV



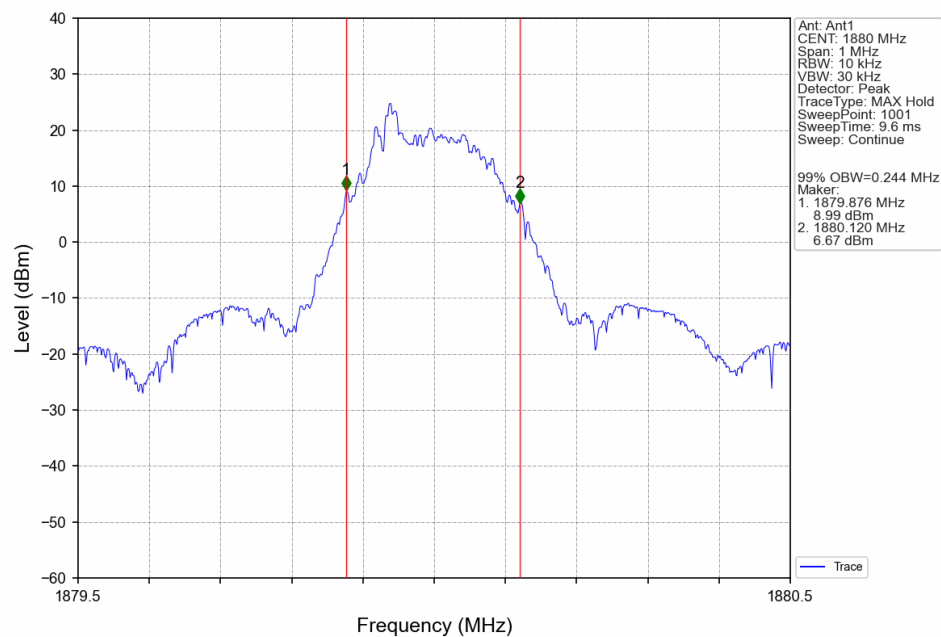
PCS1900_GPRS_HCH_1909.8MHz_1 TX Slot_NTNV

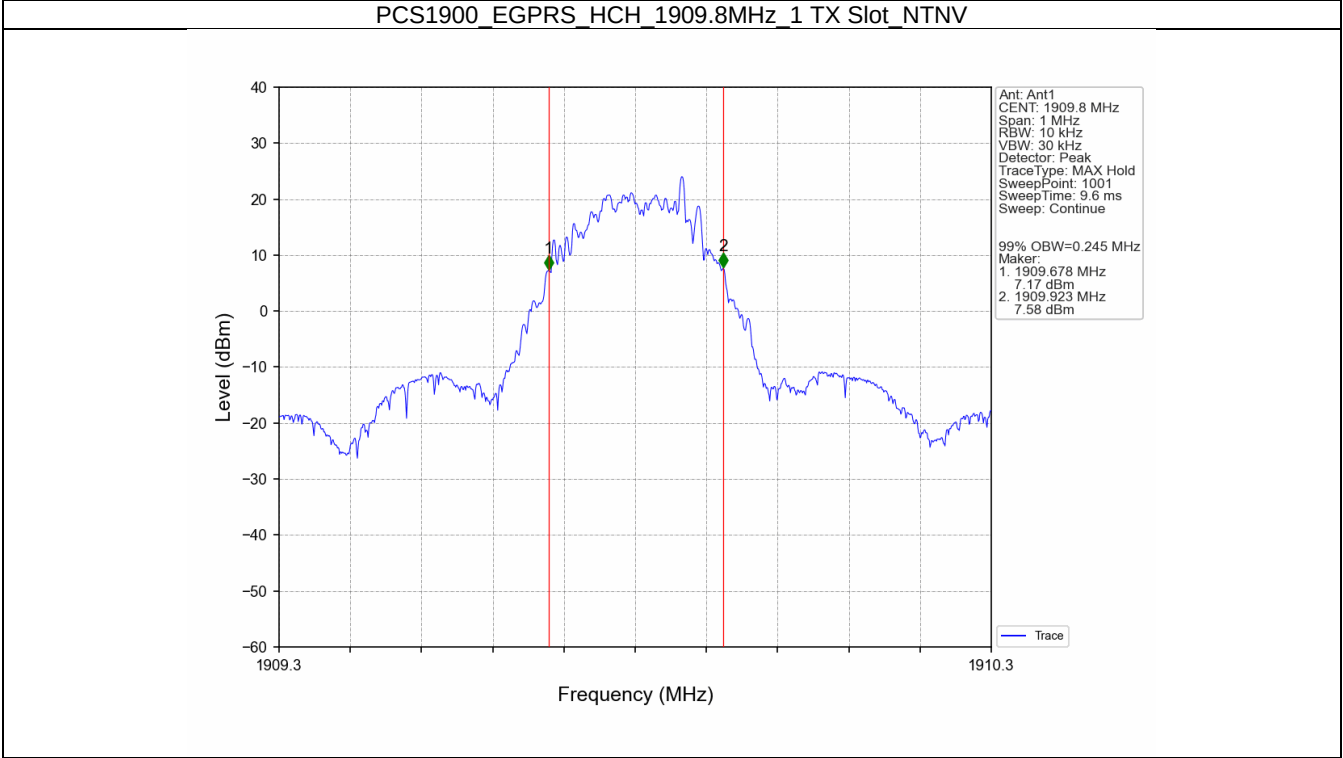


PCS1900_EGPRS_LCH_1850.2MHz_1 TX Slot_NTNV

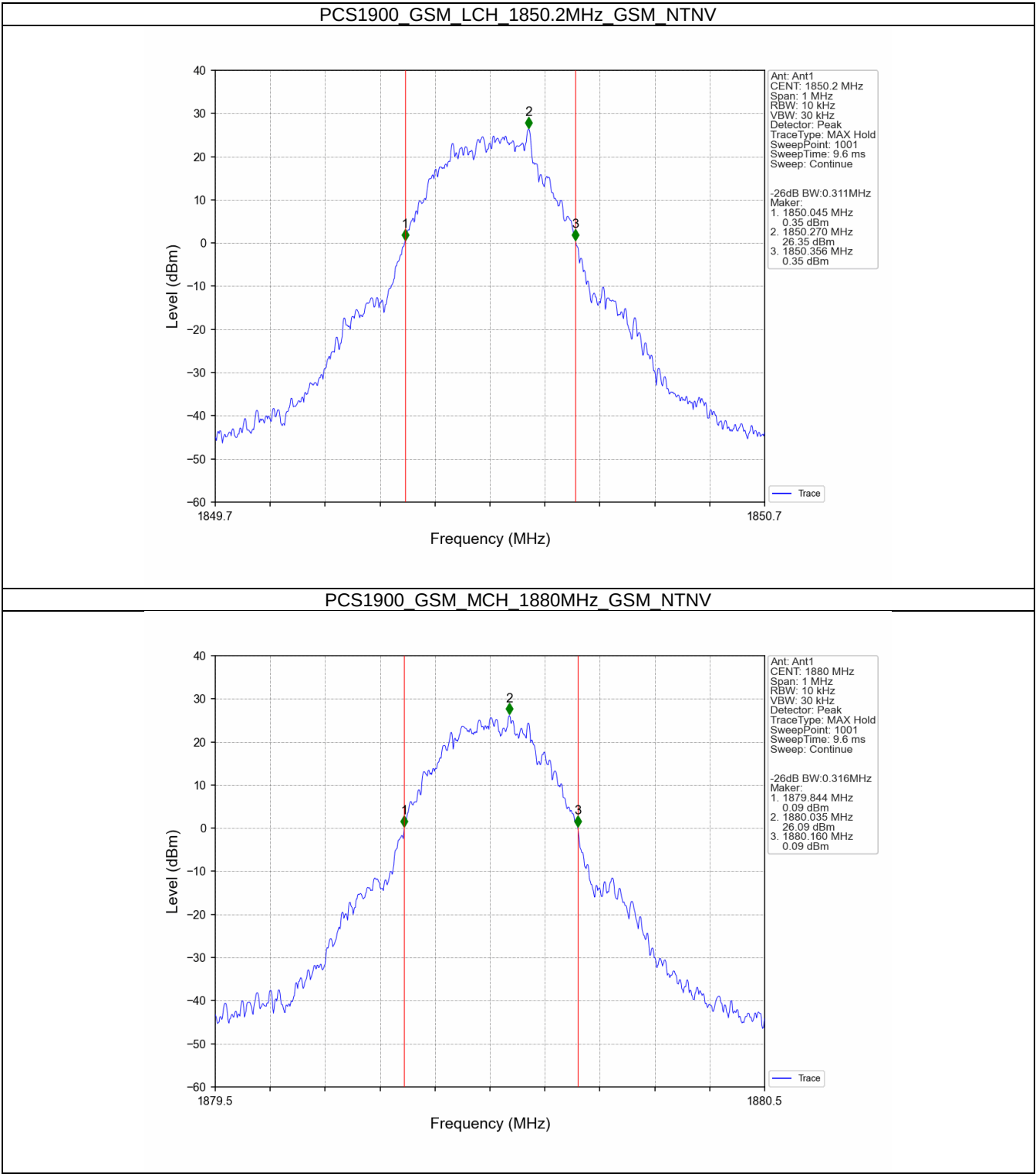


PCS1900_EGPRS_MCH_1880MHz_1 TX Slot_NTNV

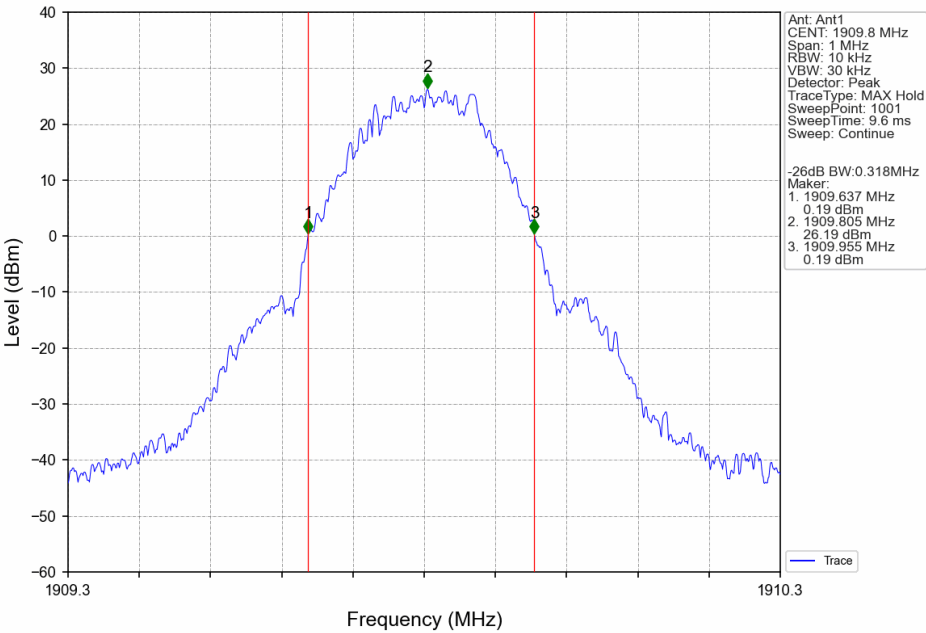




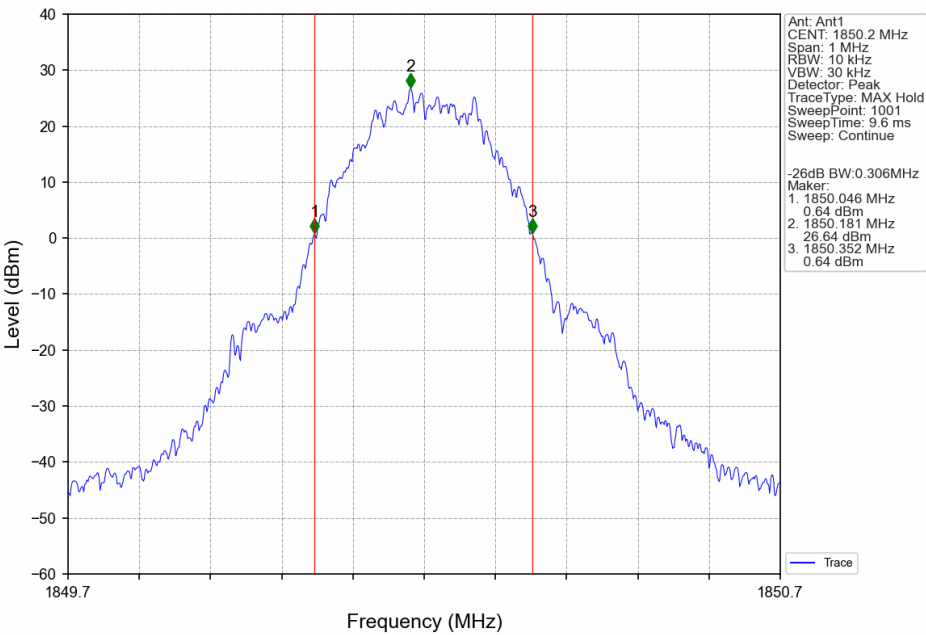
4.2.2 PCS1900_XDB



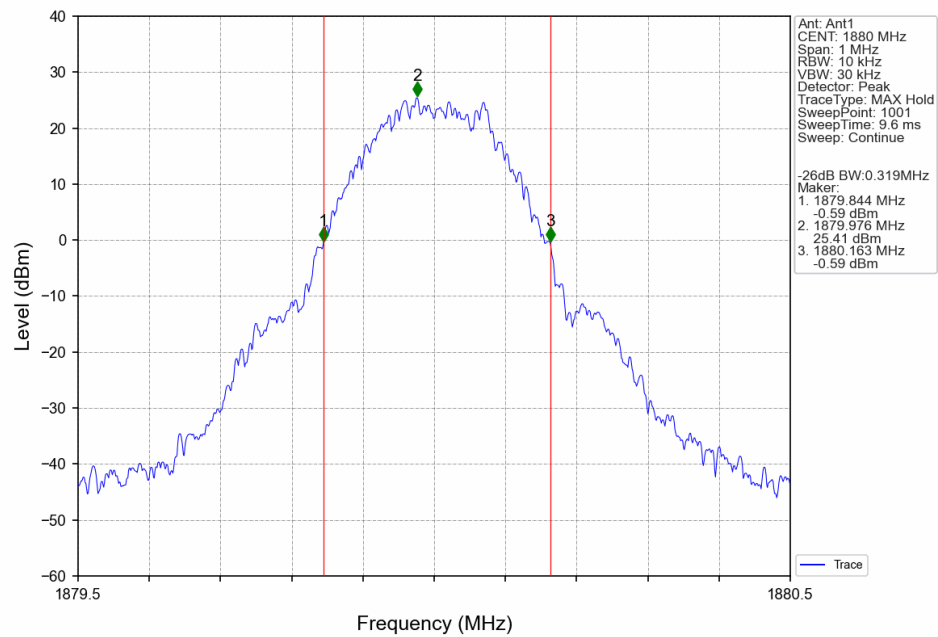
PCS1900 GSM_HCH_1909.8MHz GSM_NTNV



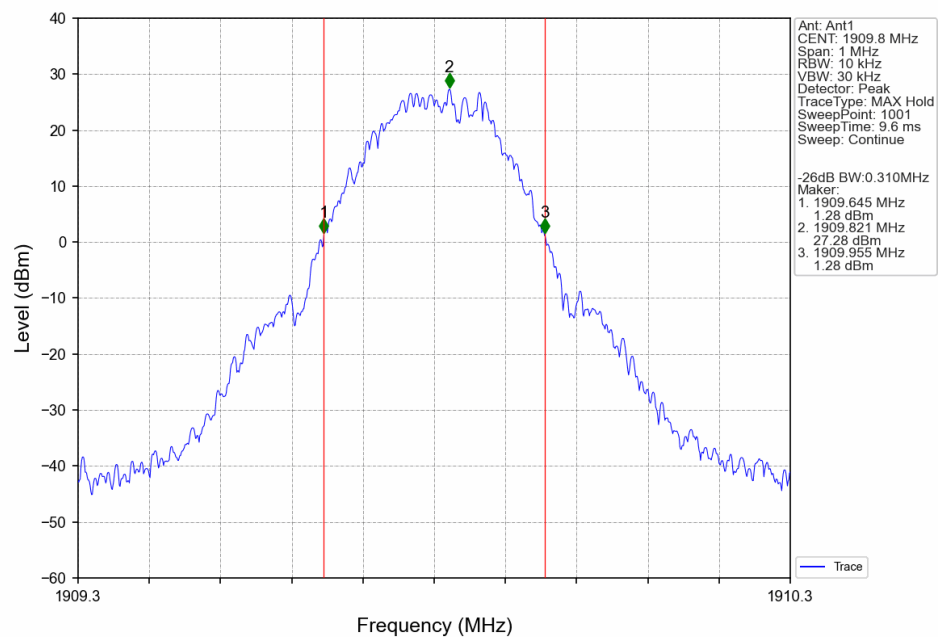
PCS1900 GPRS_LCH_1850.2MHz_1 TX Slot_NTNV



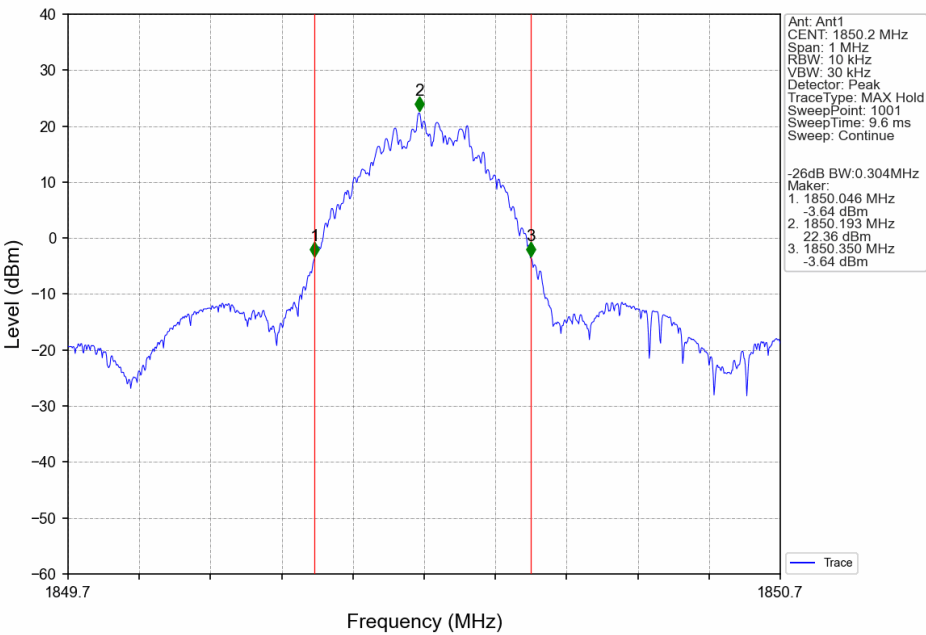
PCS1900_GPRS_MCH_1880MHz_1 TX Slot_NTNV



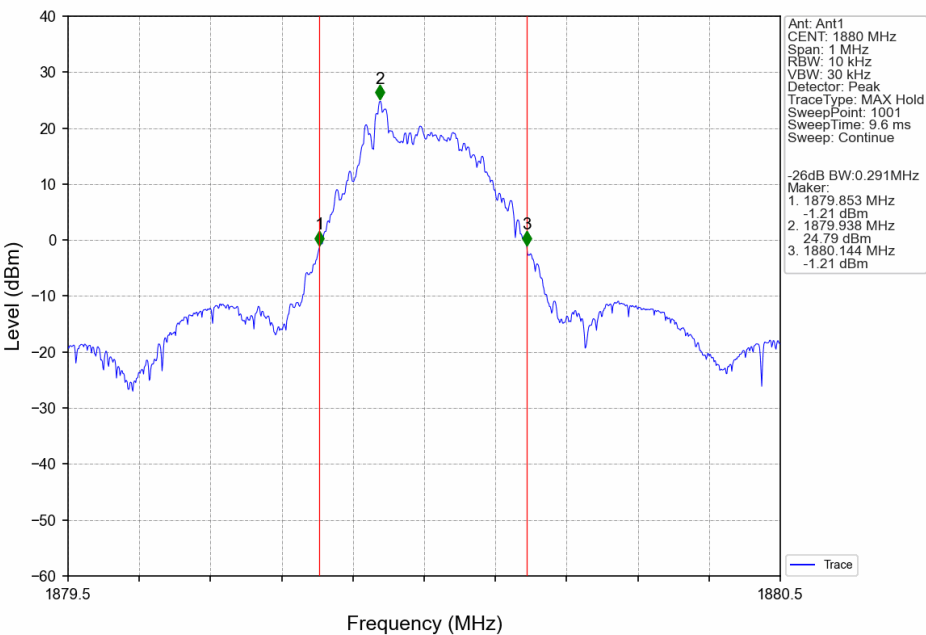
PCS1900_GPRS_HCH_1909.8MHz_1 TX Slot_NTNV

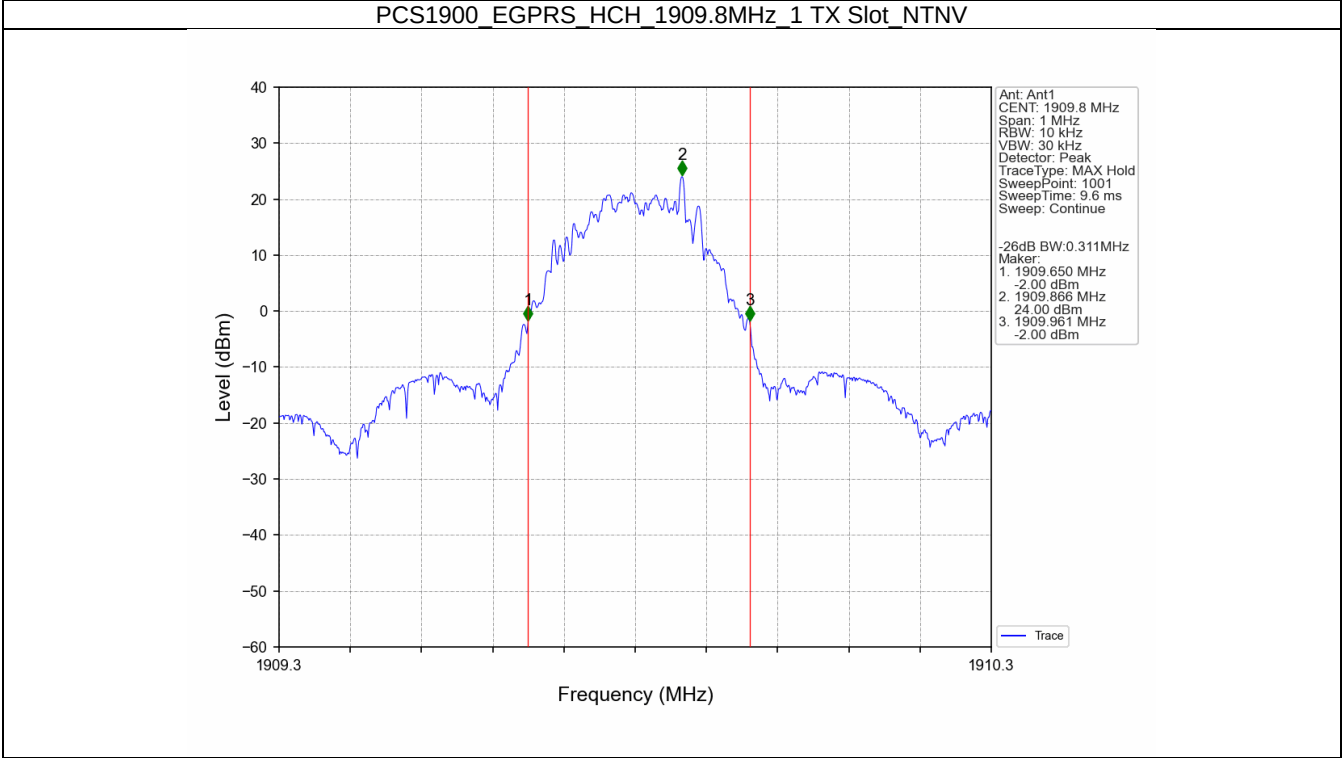


PCS1900_EGPRS_LCH_1850.2MHz_1 TX Slot_NTNV



PCS1900_EGPRS_MCH_1880MHz_1 TX Slot_NTNV





5. Peak-Average Ratio

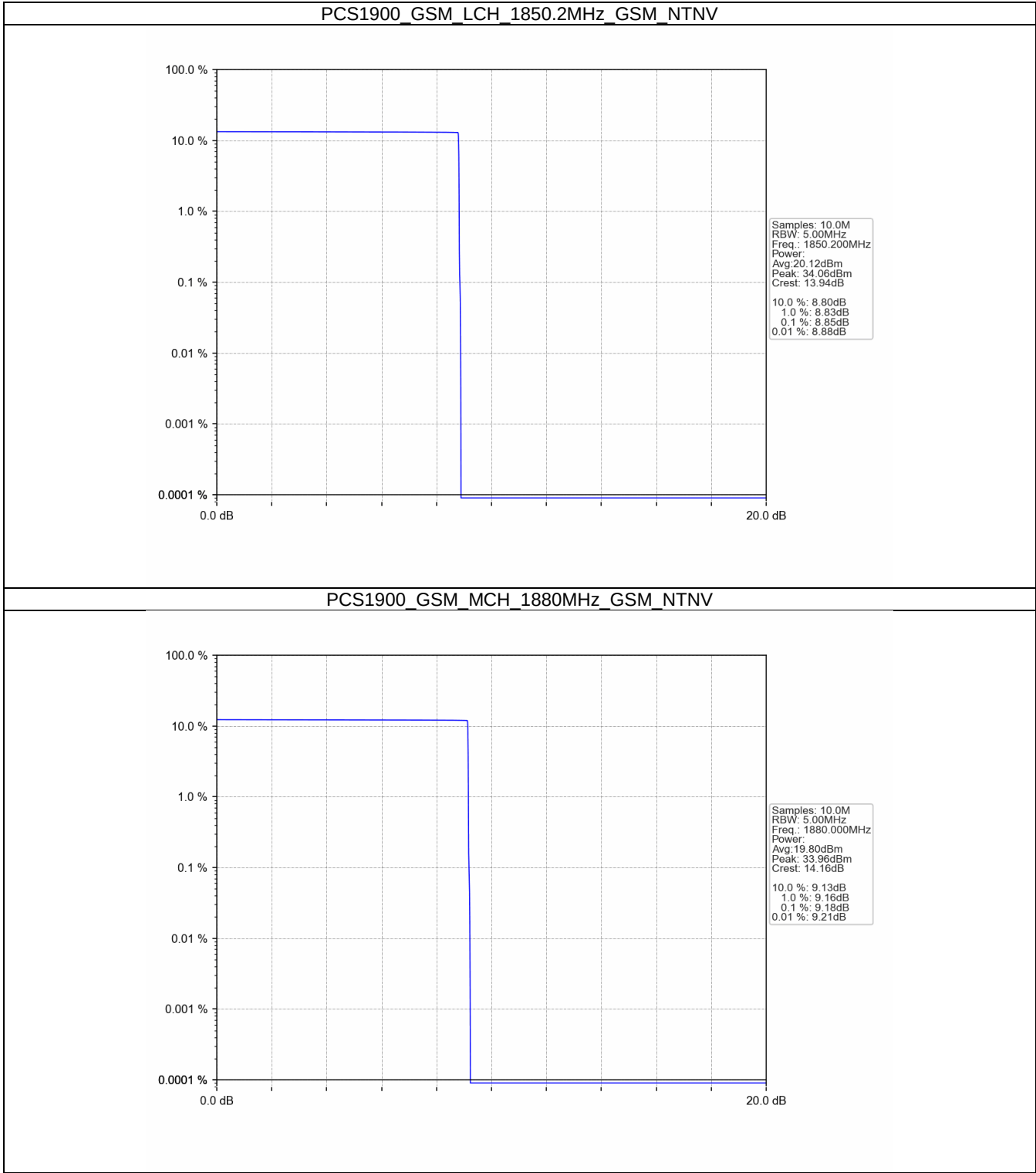
5.1 Test Result

5.1.1 PCS1900

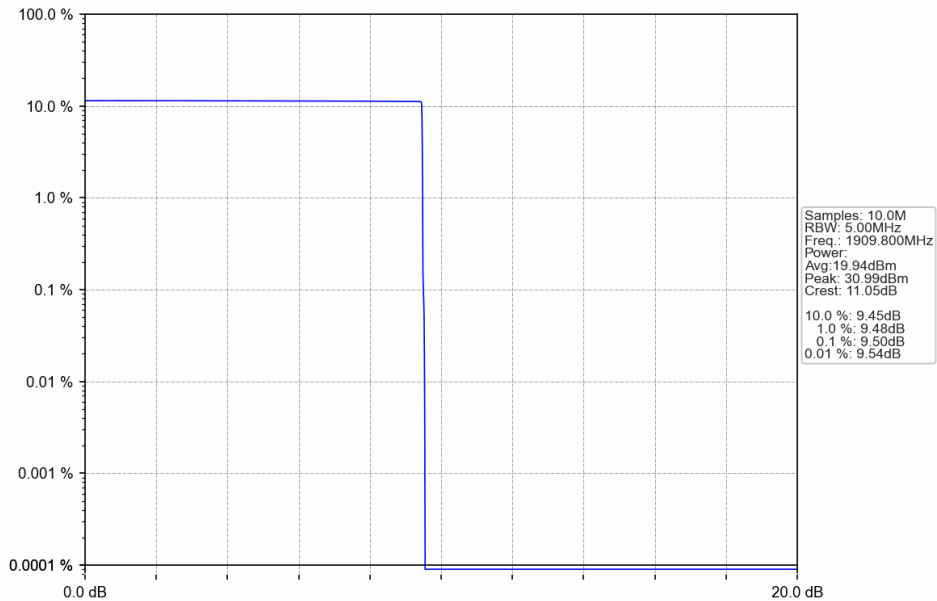
Band: PCS1900						
ENV	Mode		Frequency (MHz)	Peak-Average Ratio (dB)		Verdict
	Network	Subset		Result	Limit	
NTNV	GSM	GSM	1850.2	8.85	<=13	Pass
			1880	9.18	<=13	Pass
			1909.8	9.50	<=13	Pass
	GPRS	4 TX Slots	1850.2	3.65	<=13	Pass
			1880	3.67	<=13	Pass
			1909.8	3.71	<=13	Pass
	EGPRS	4 TX Slots	1850.2	7.68	<=13	Pass
			1880	7.36	<=13	Pass
			1909.8	8.20	<=13	Pass

5.2 Test Graph

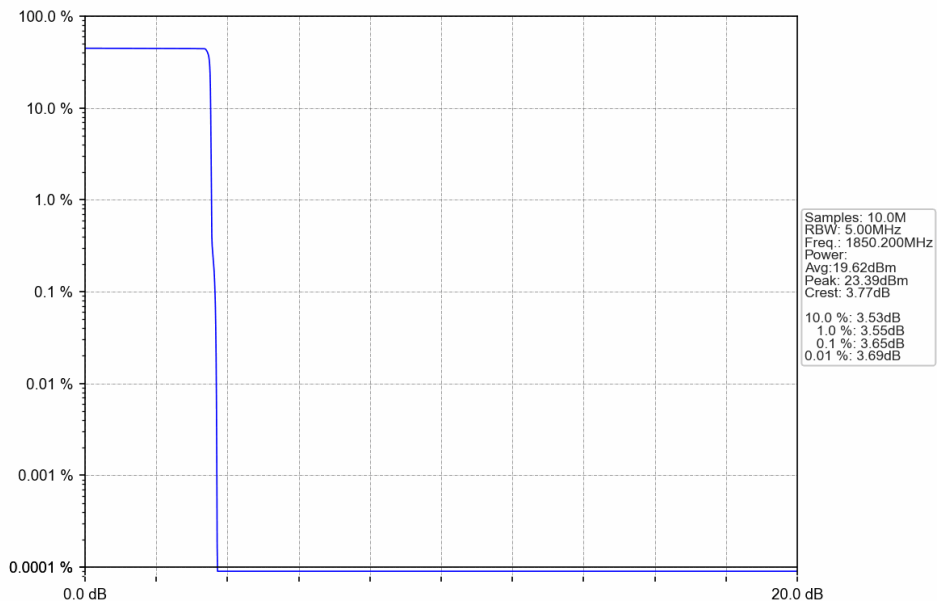
5.2.1 PCS1900



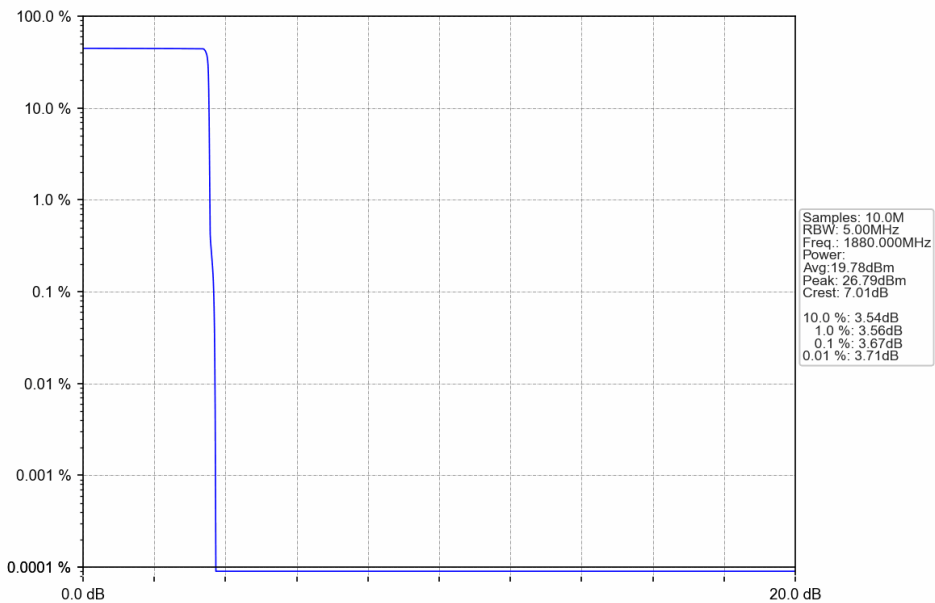
PCS1900 GSM_HCH_1909.8MHz GSM_NTNV



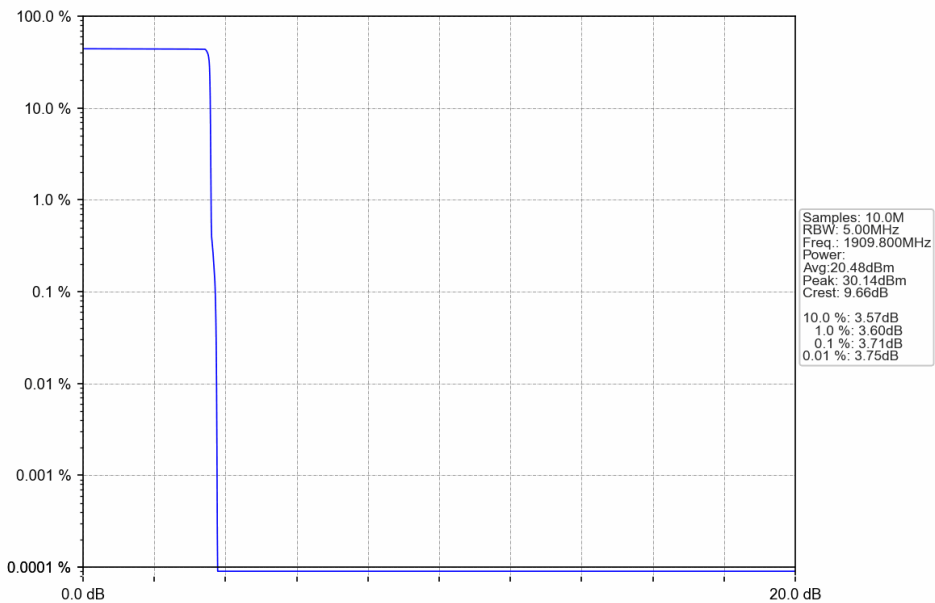
PCS1900 GPRS_LCH_1850.2MHz_4 TX Slots_NTNV



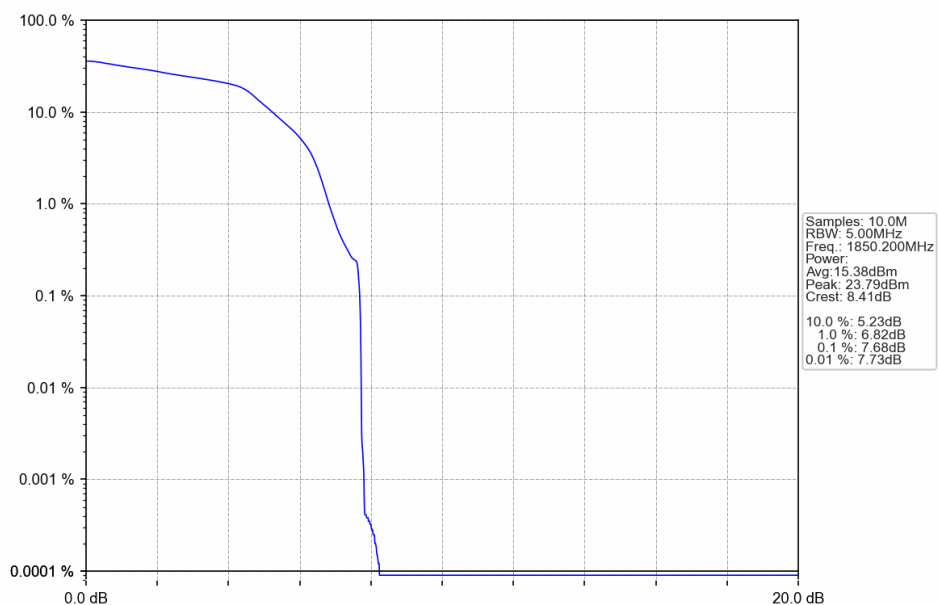
PCS1900_GPRS_MCH_1880MHz_4 TX Slots_NTNV



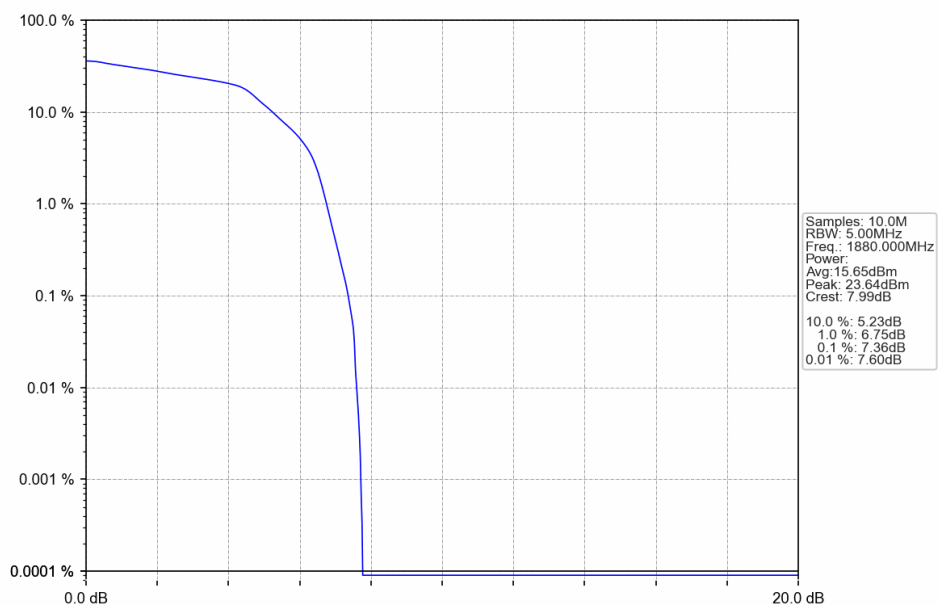
PCS1900_GPRS_HCH_1909.8MHz_4 TX Slots_NTNV

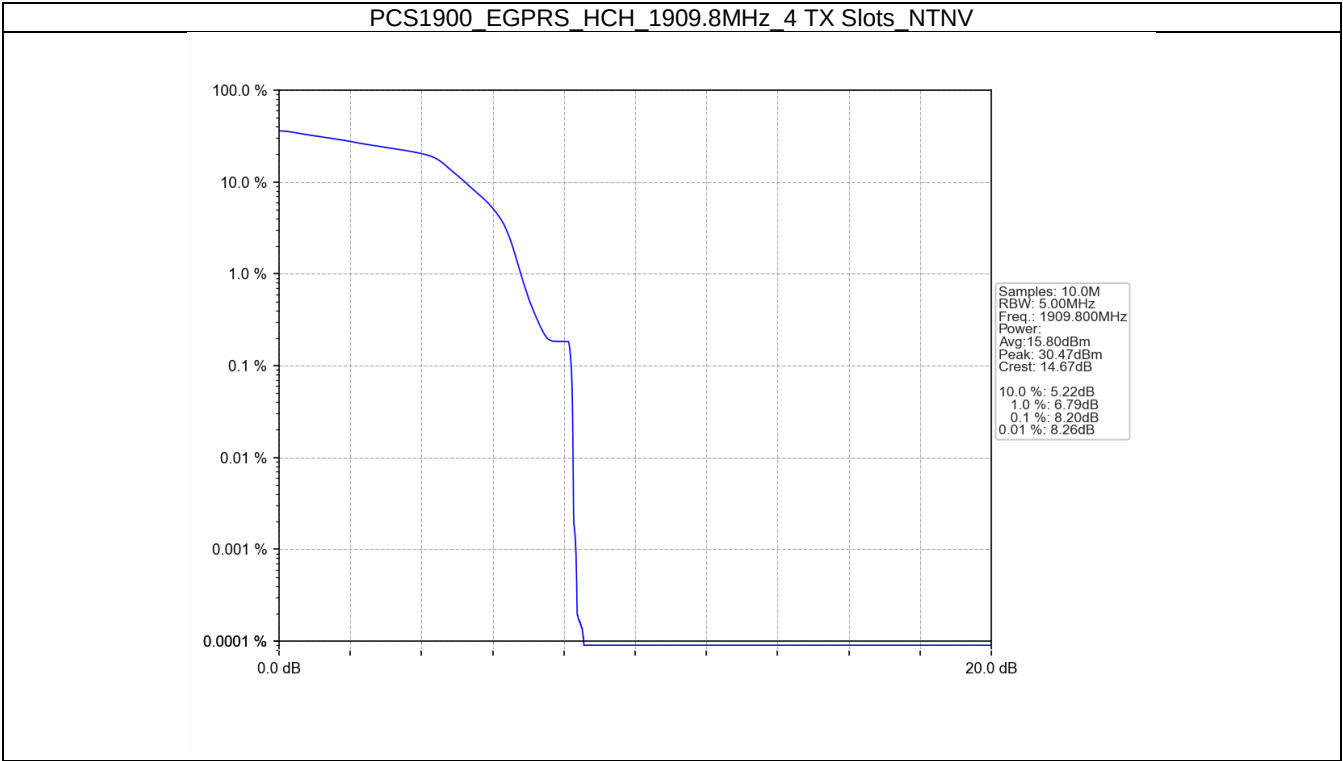


PCS1900_EGPRS_LCH_1850.2MHz_4 TX Slots_NTNV



PCS1900_EGPRS_MCH_1880MHz_4 TX Slots_NTNV





6. Spurious Emission

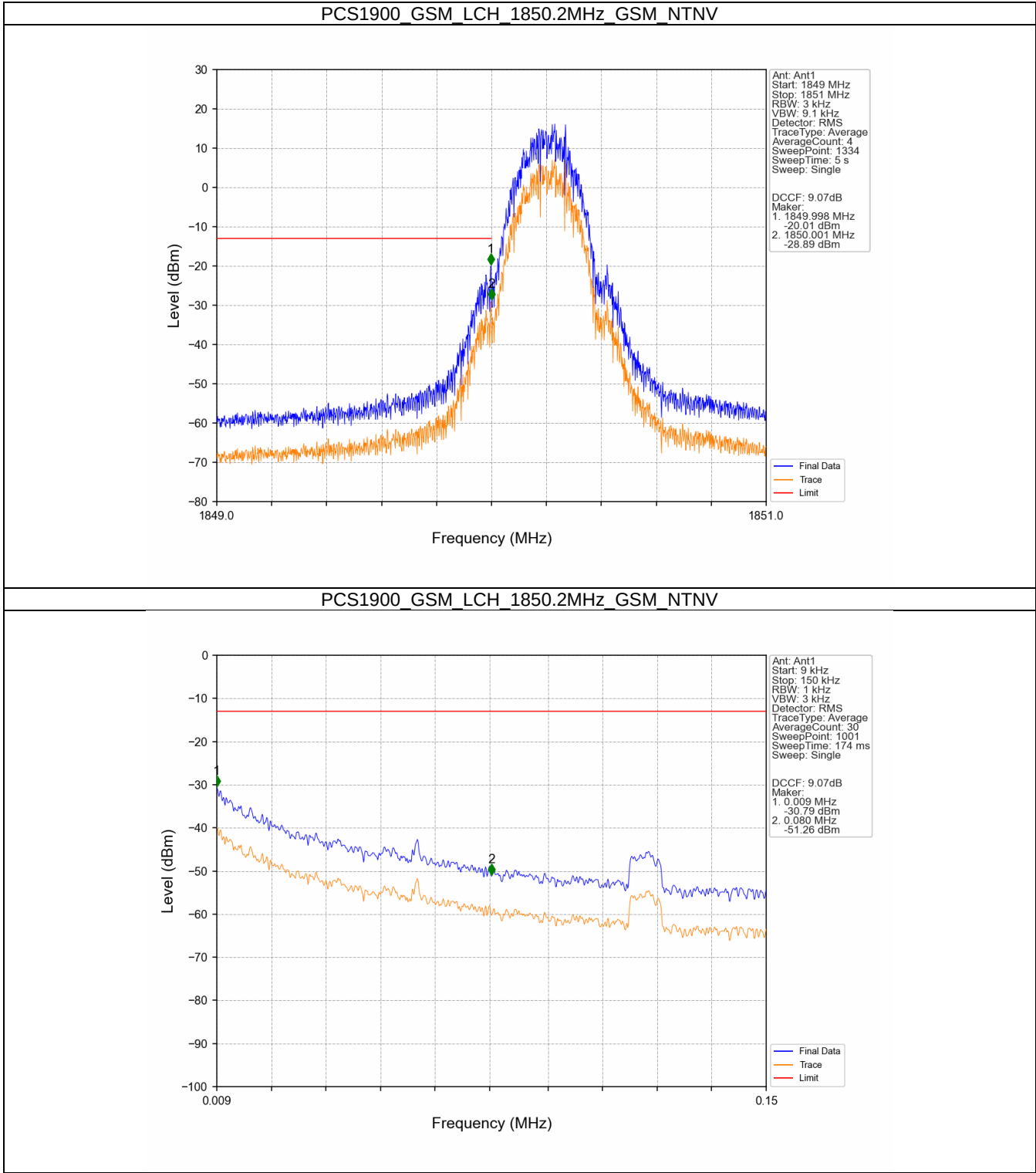
6.1 Test Result

6.1.1 PCS1900

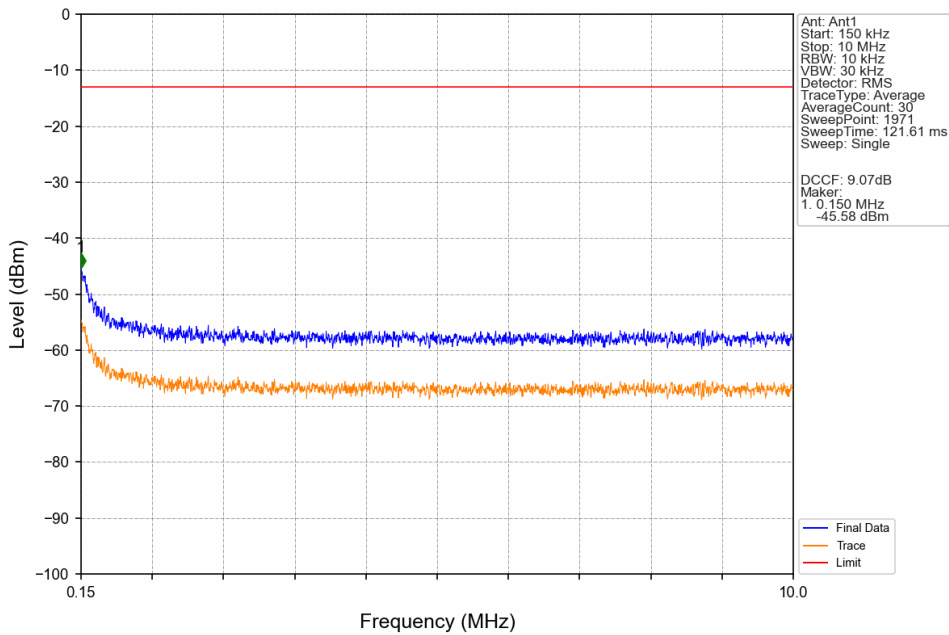
Band: PCS1900						
ENV	Mode		Frequency (MHz)	Spurious Emission		Verdict
	Network	Subset		Result	Limit	
NTNV	GSM	GSM	1850.2	Refer To Test Graph		Pass
			1880	Refer To Test Graph		Pass
			1909.8	Refer To Test Graph		Pass
	GPRS	1 TX Slot	1850.2	Refer To Test Graph		Pass
			1880	Refer To Test Graph		Pass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

6.2 Test Graph

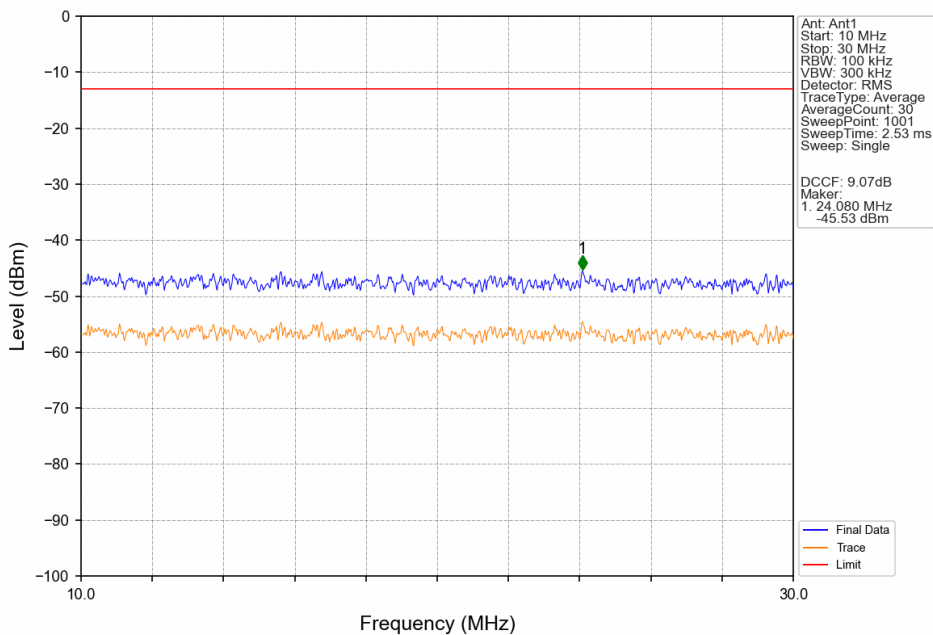
6.2.1 PCS1900



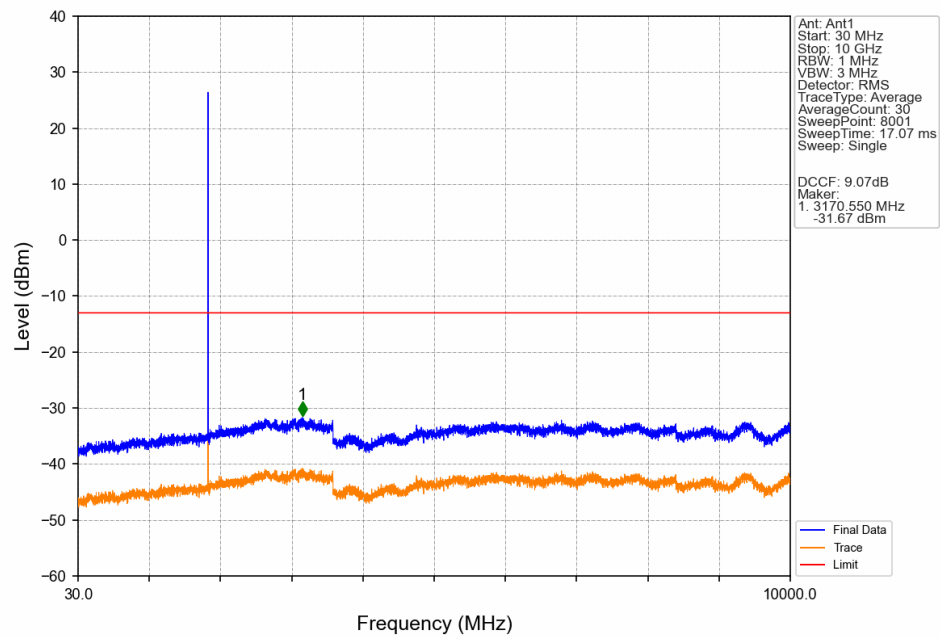
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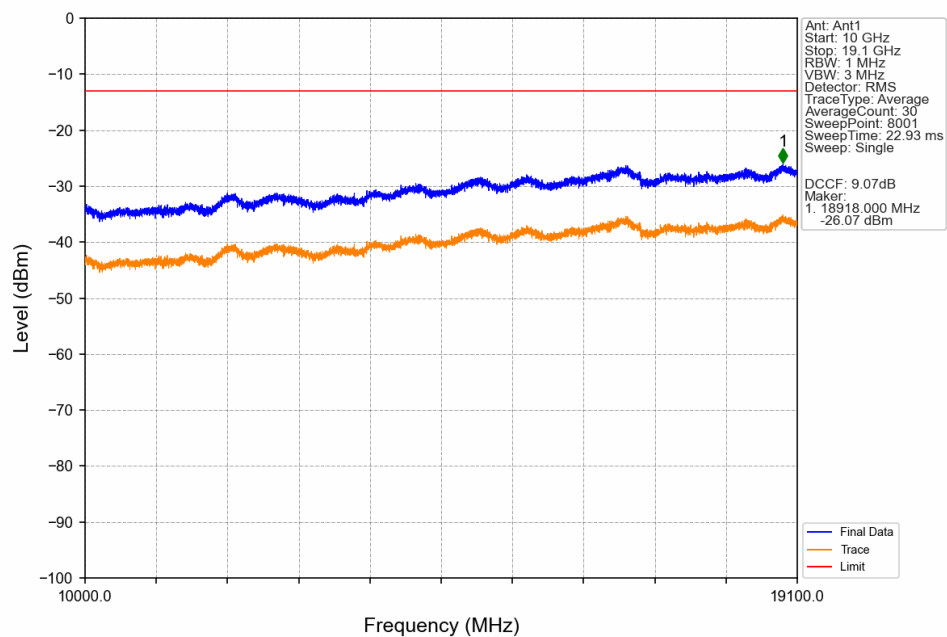
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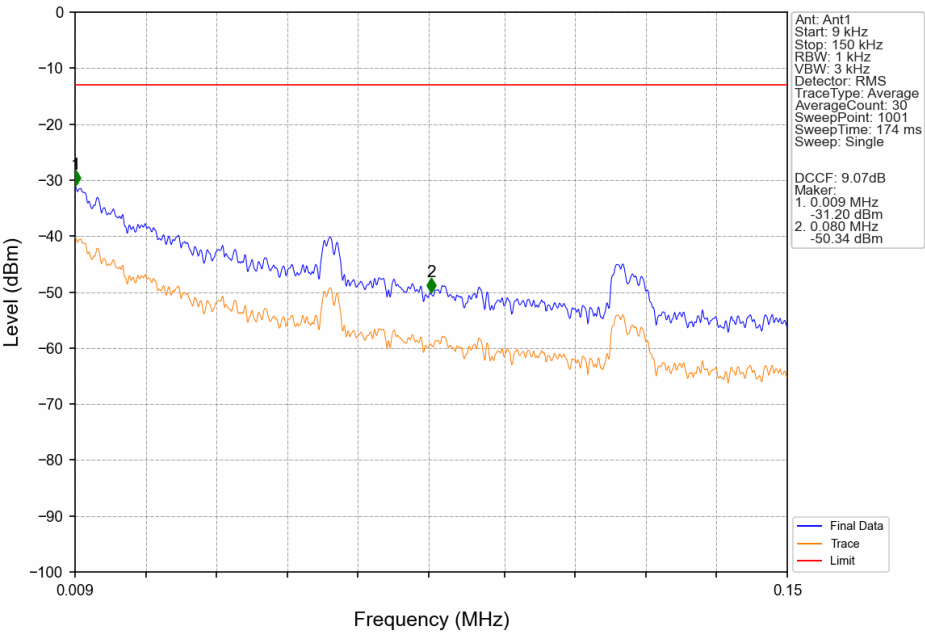
PCS1900 GSM LCH 1850.2MHz GSM NTN



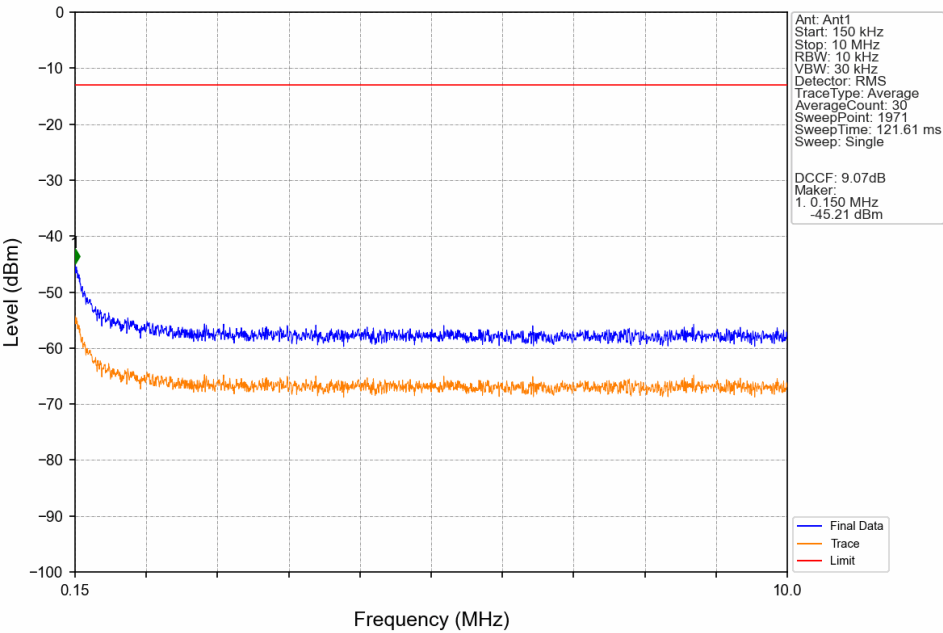
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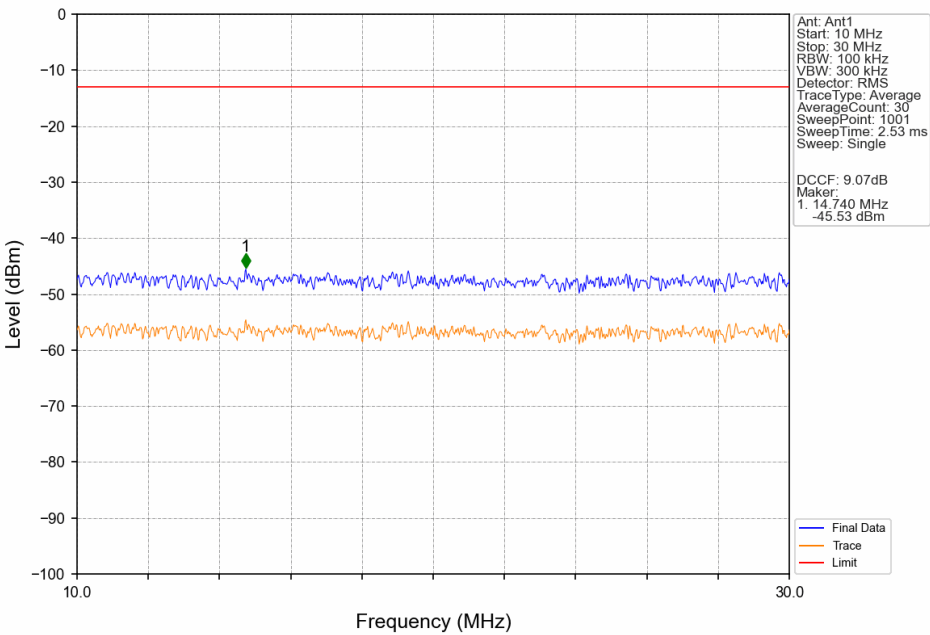
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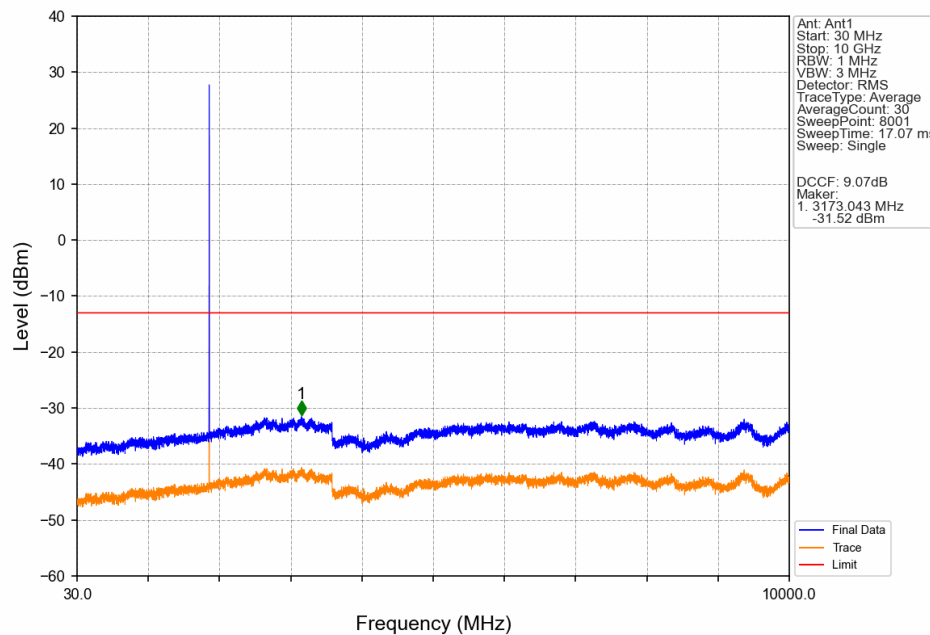
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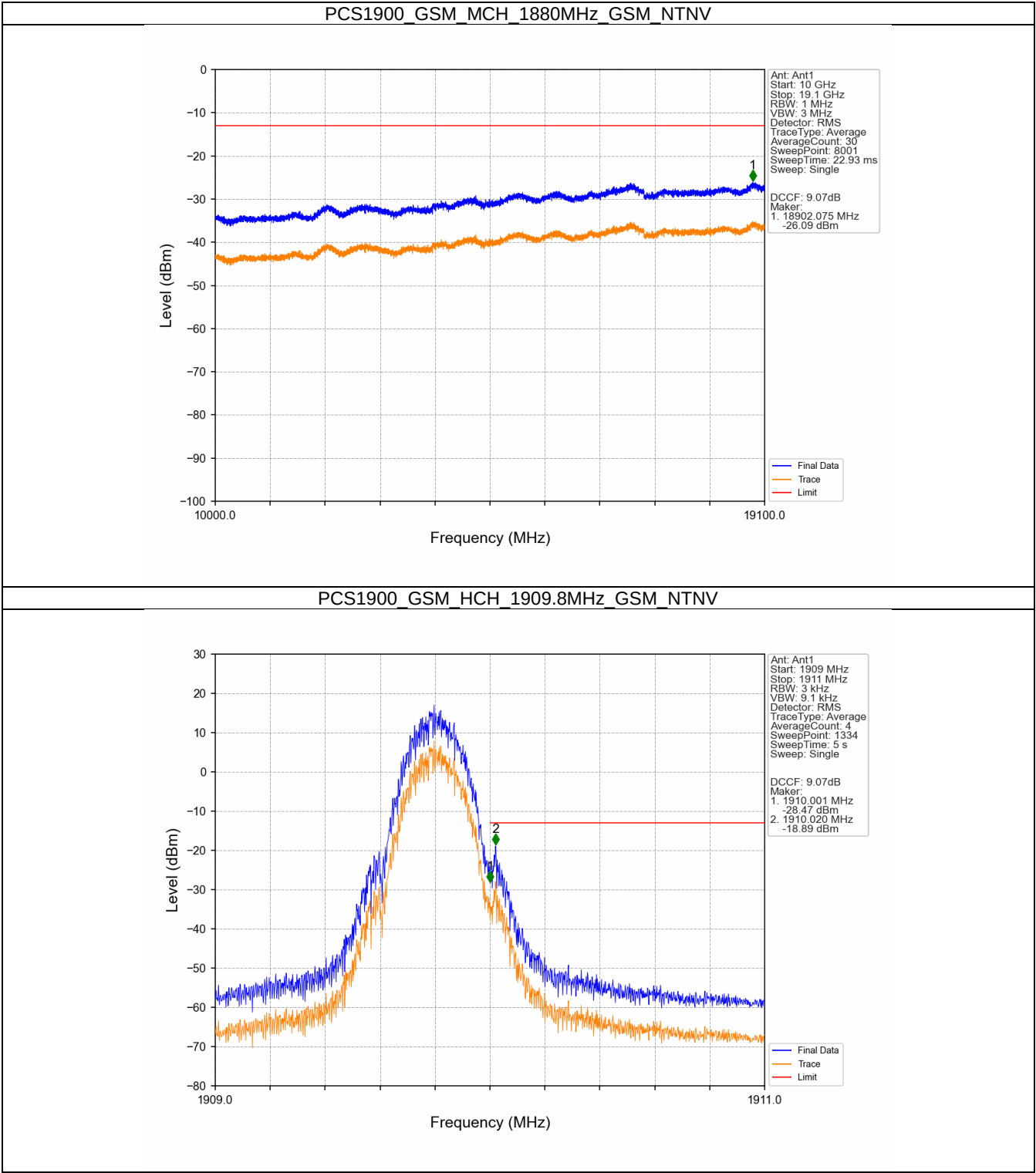


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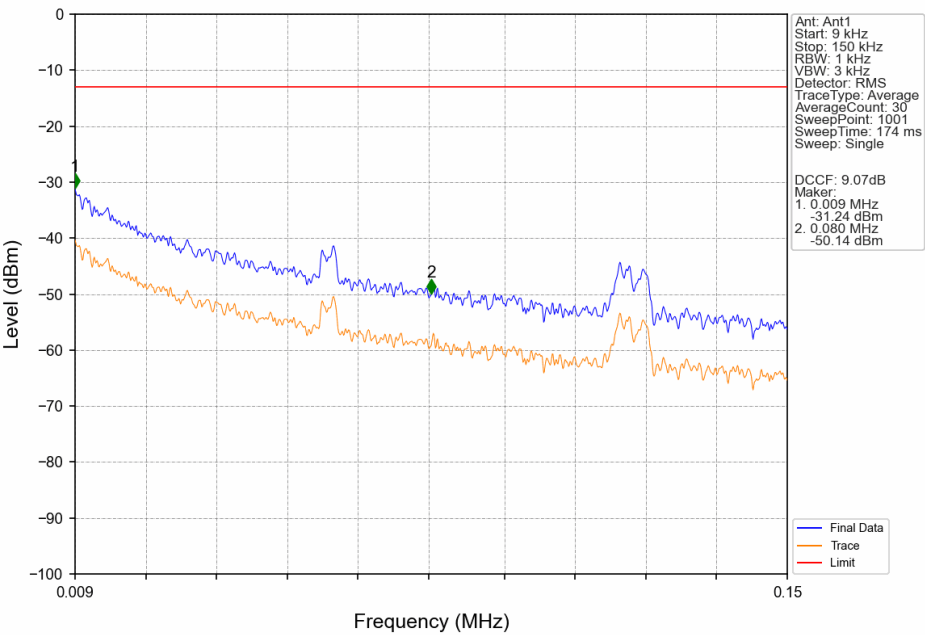


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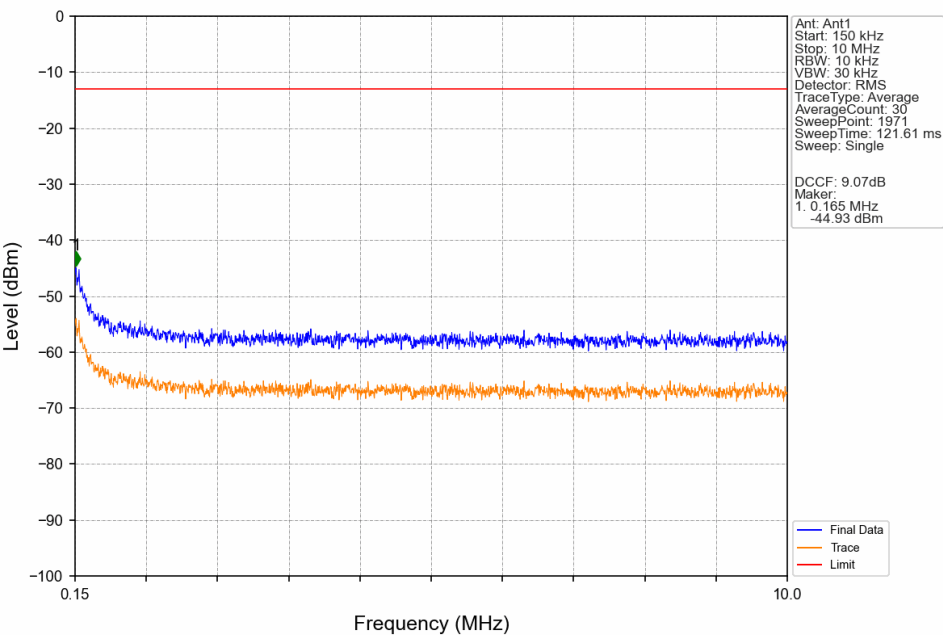




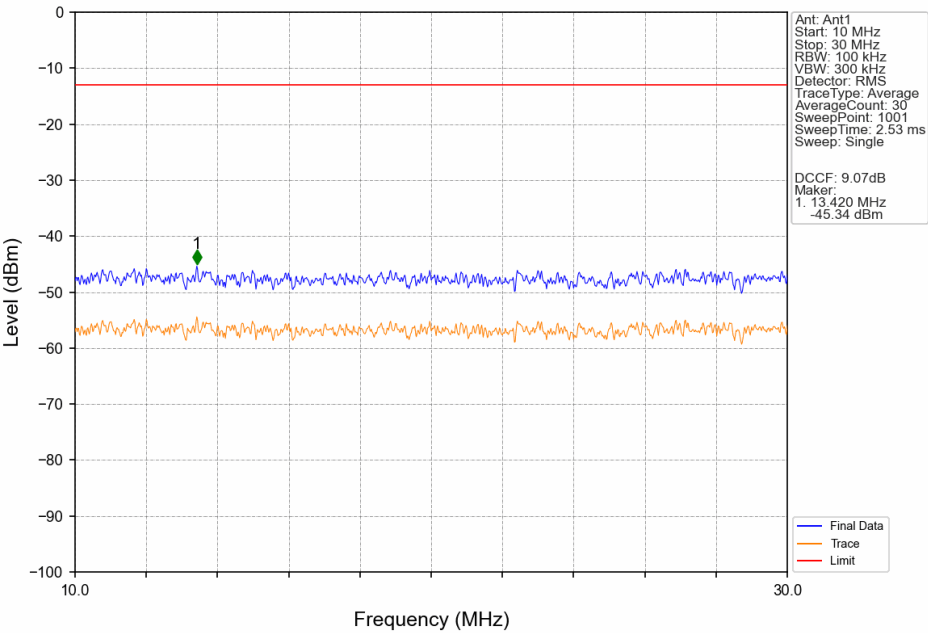
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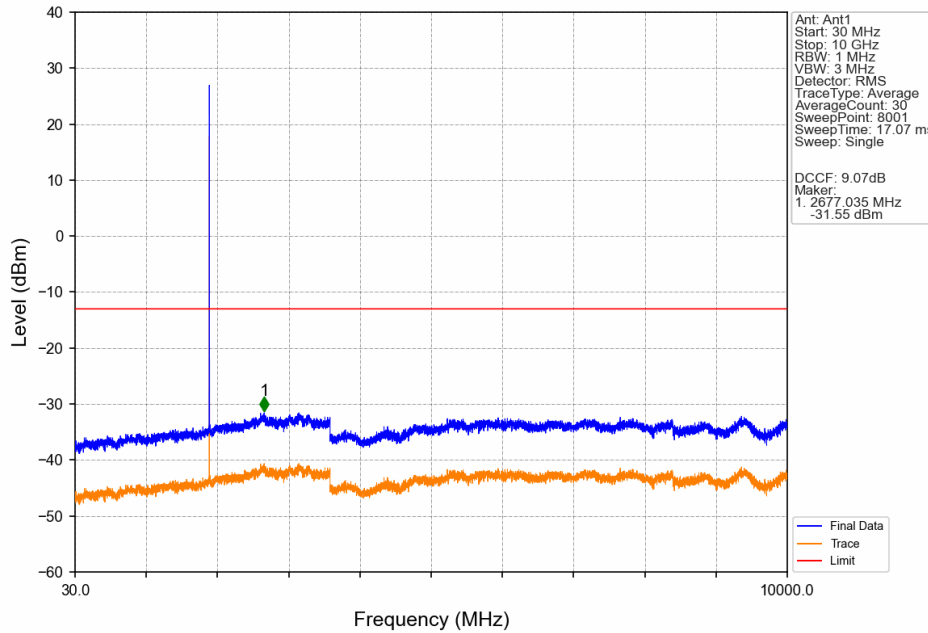
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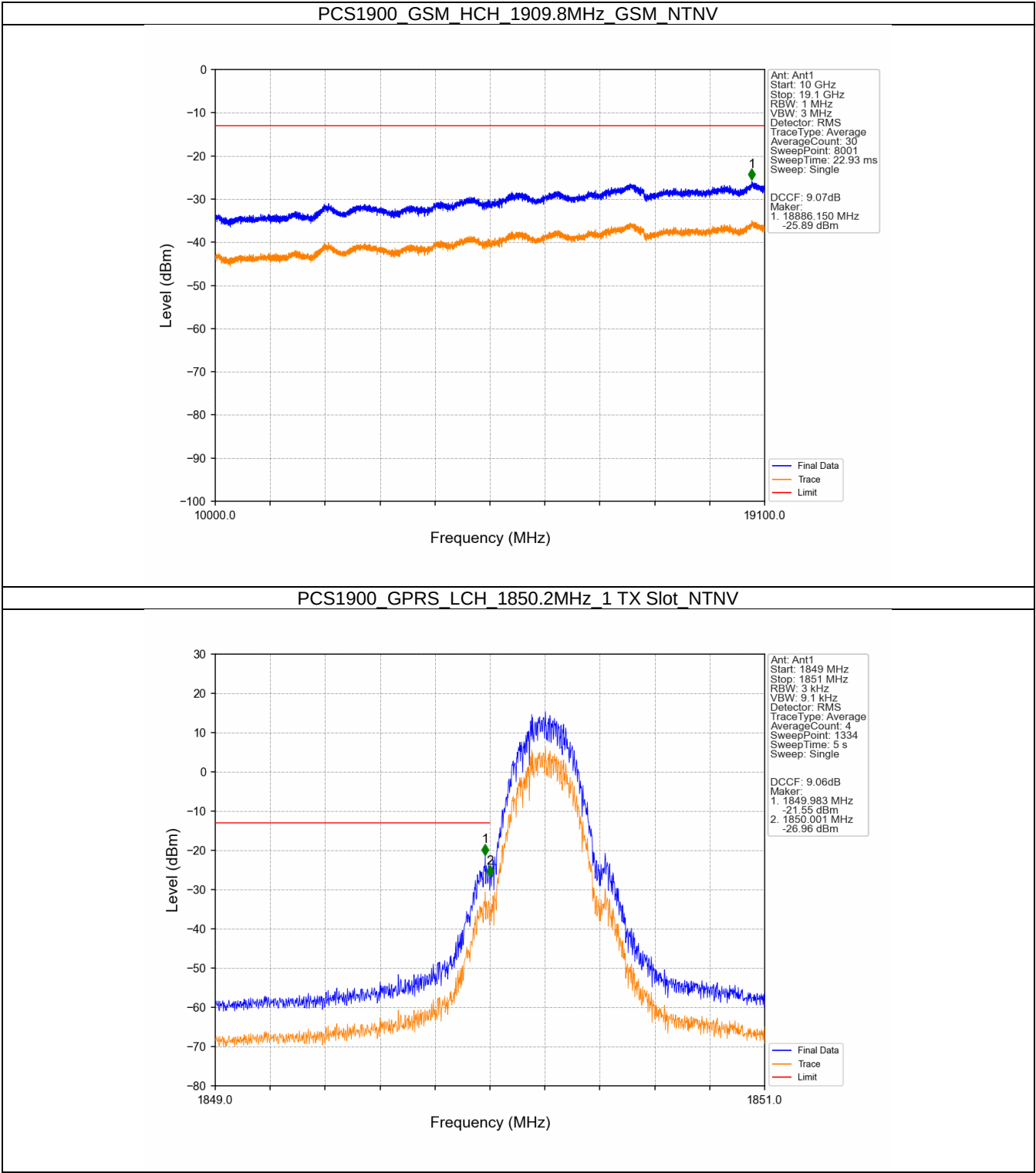


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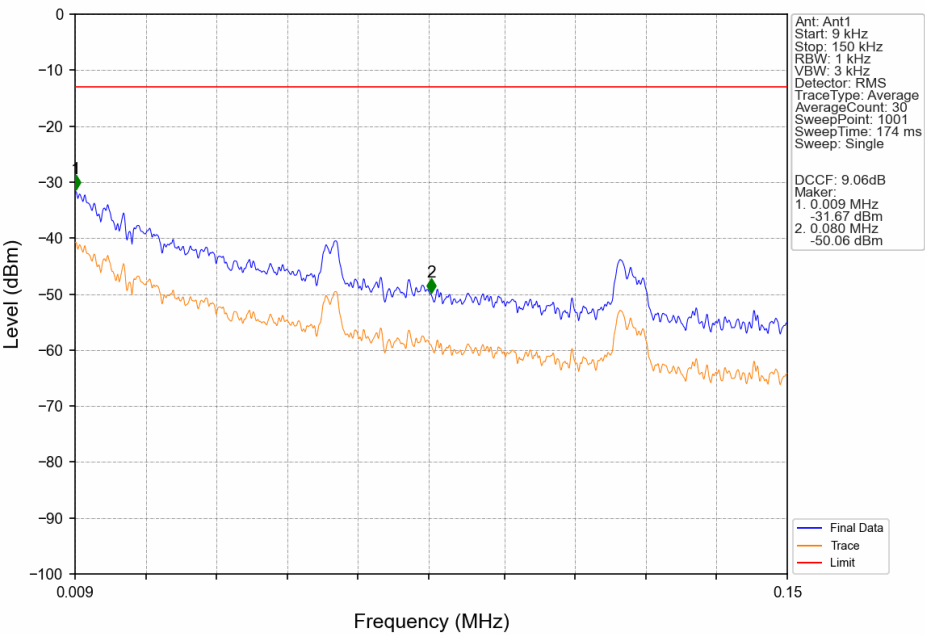


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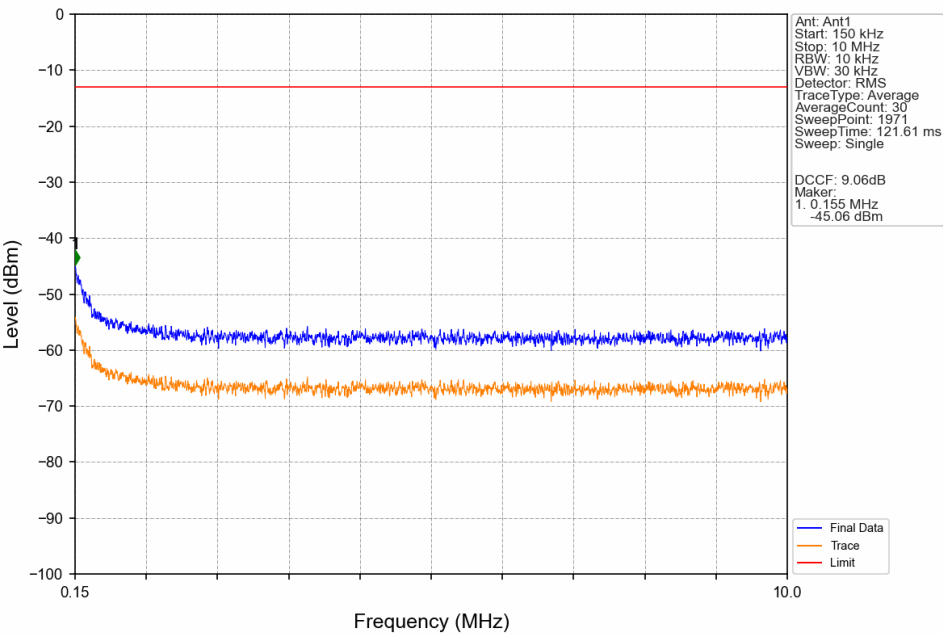


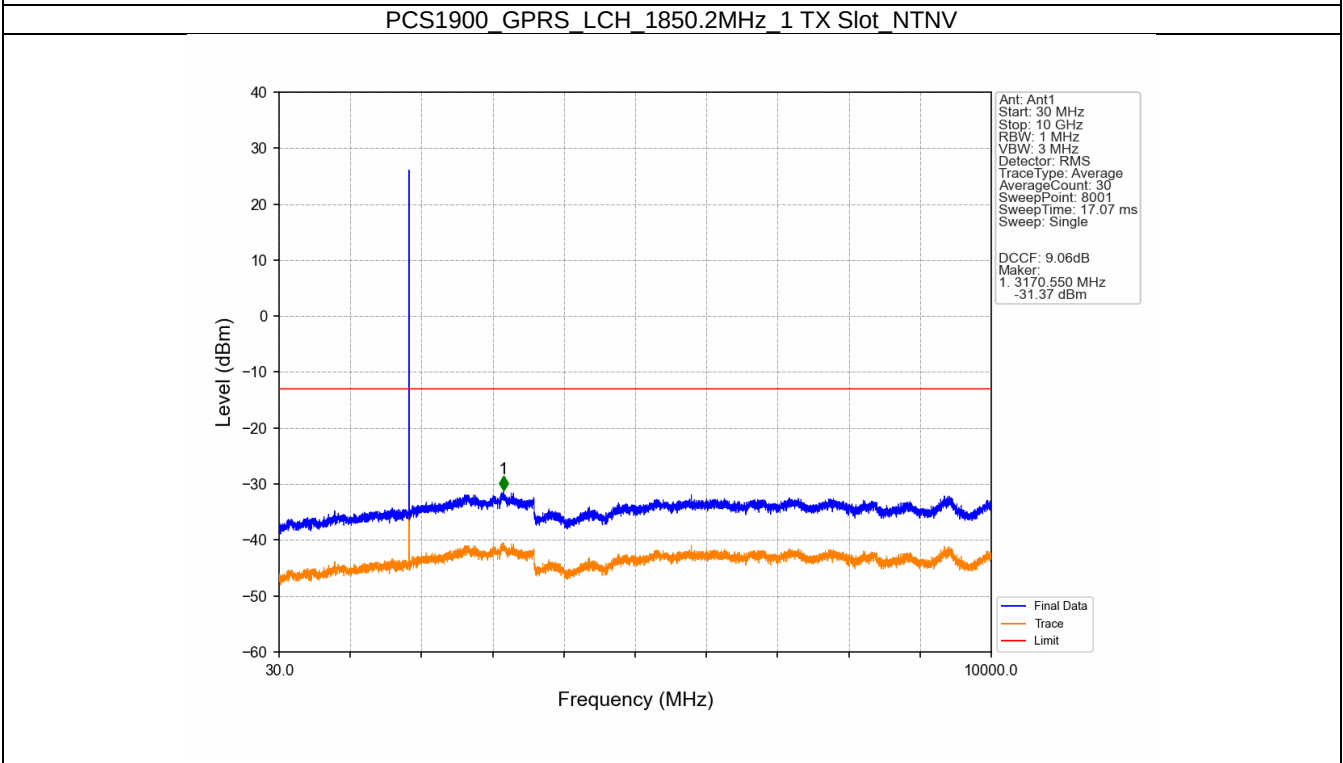
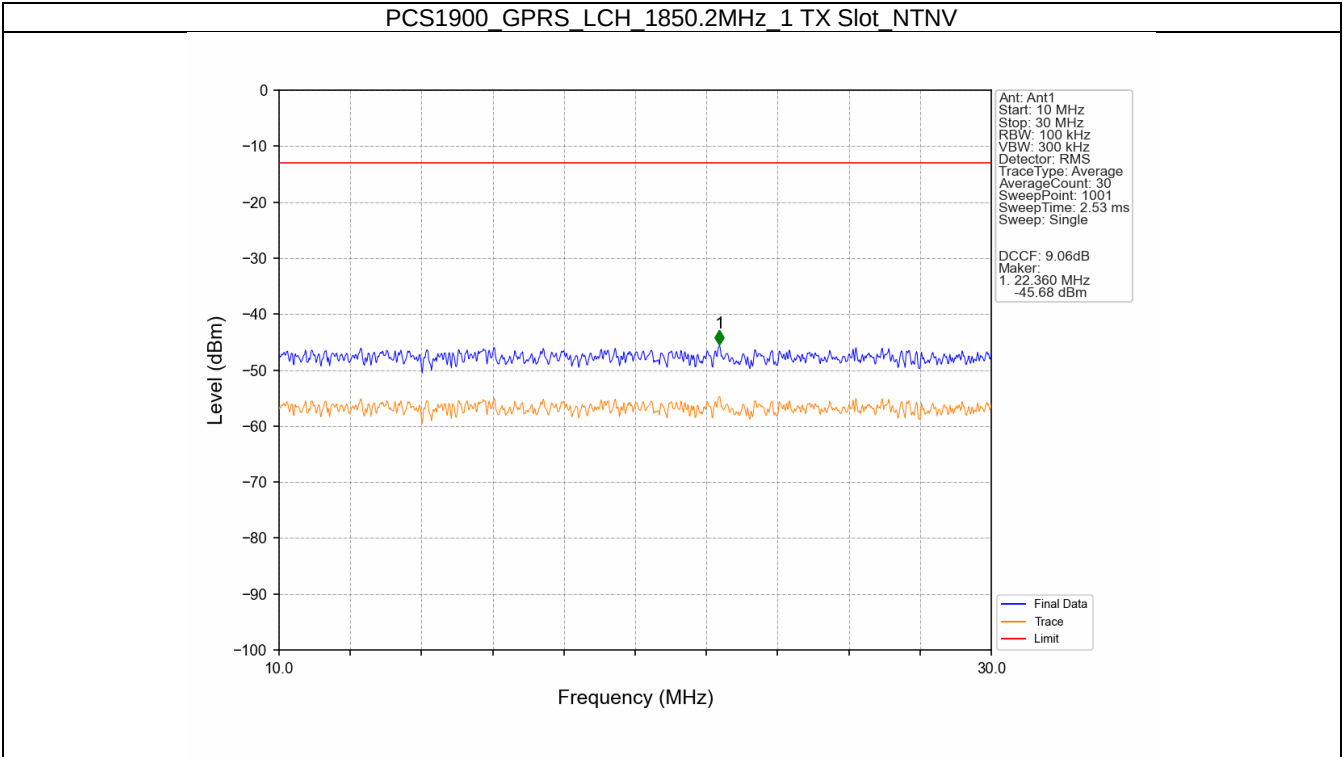


PCS1900_GPRS_LCH_1850.2MHz_1 TX Slot_NTNV

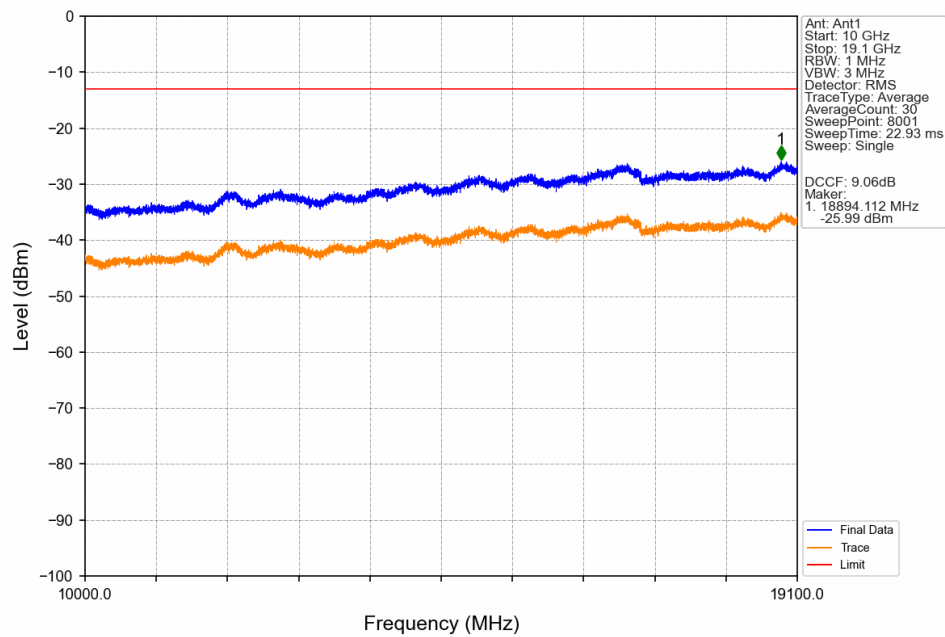


PCS1900_GPRS_LCH_1850.2MHz_1 TX Slot_NTNV

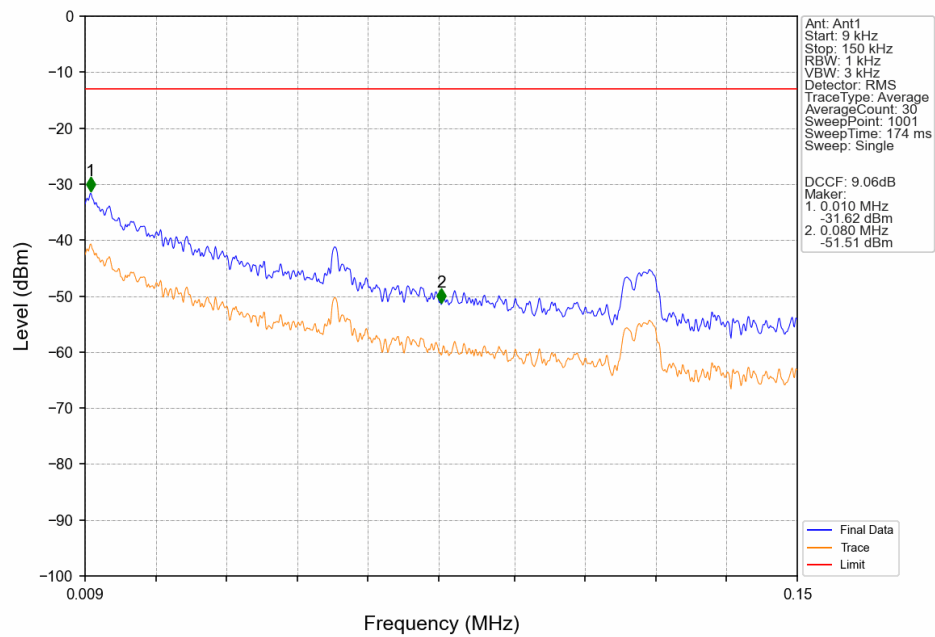




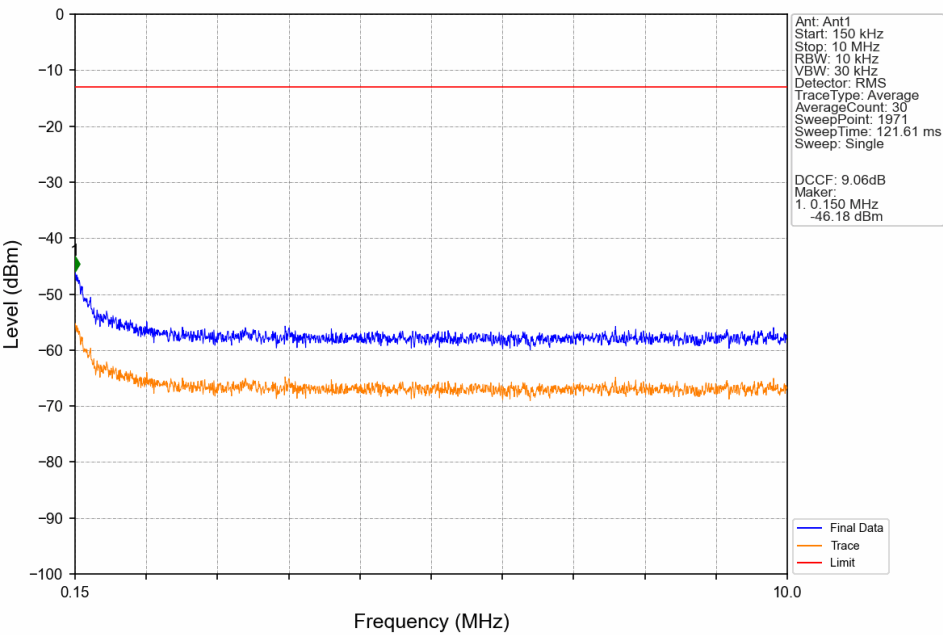
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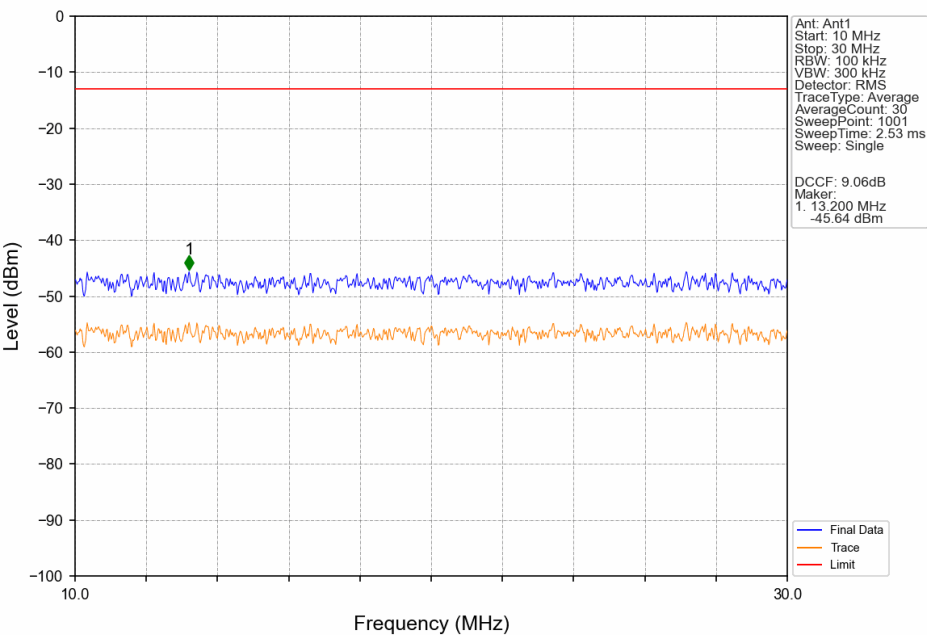
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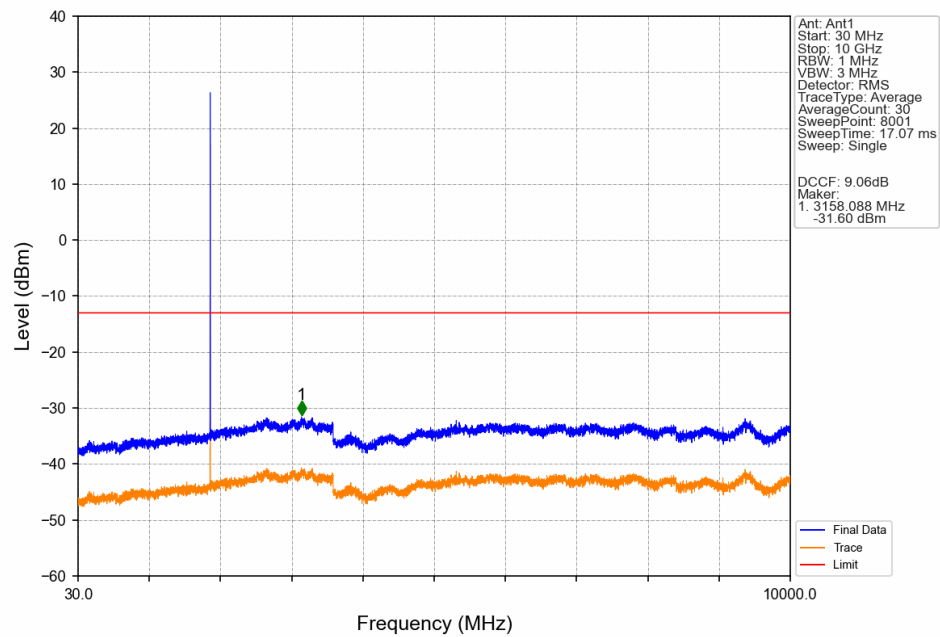
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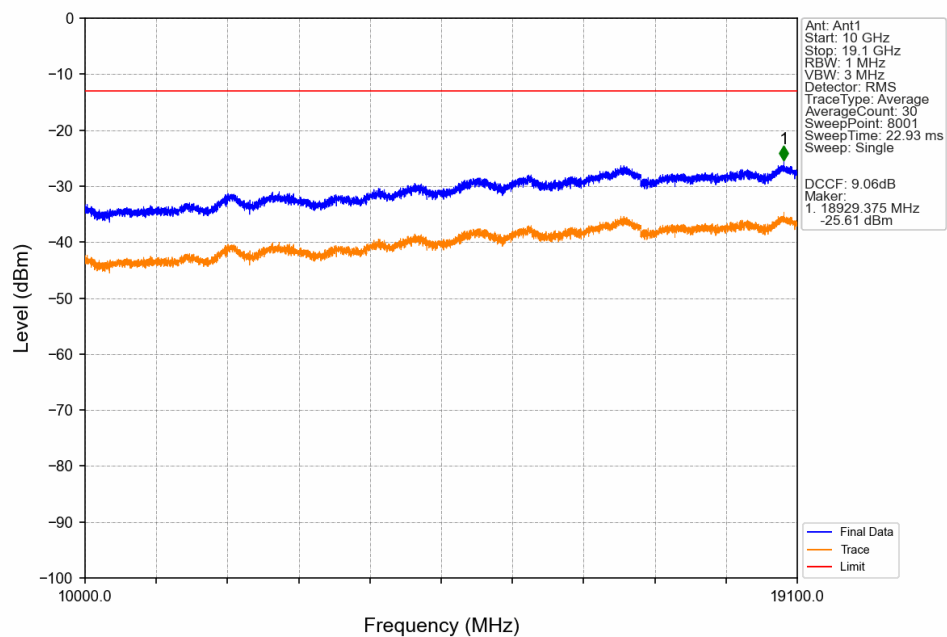
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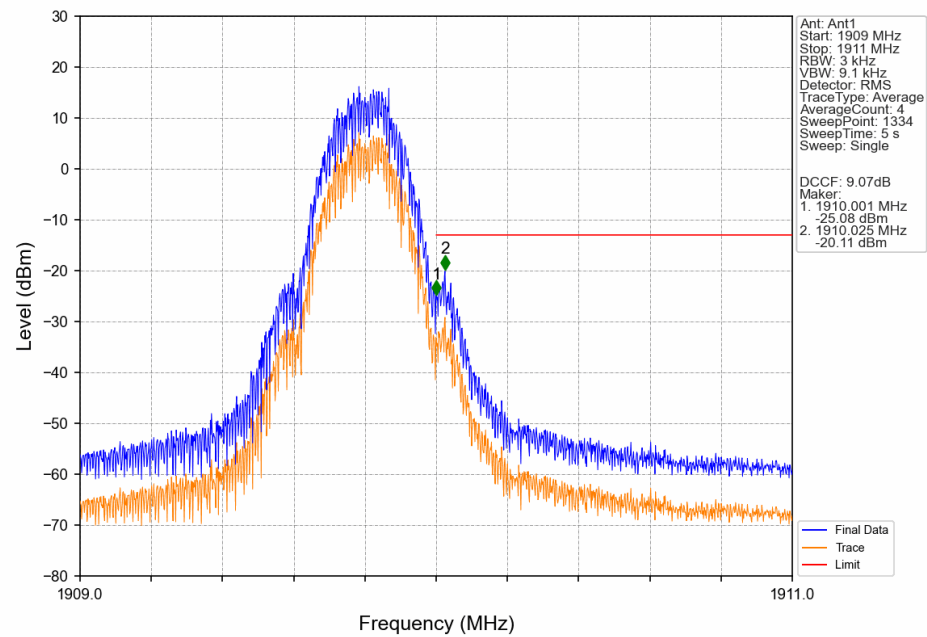
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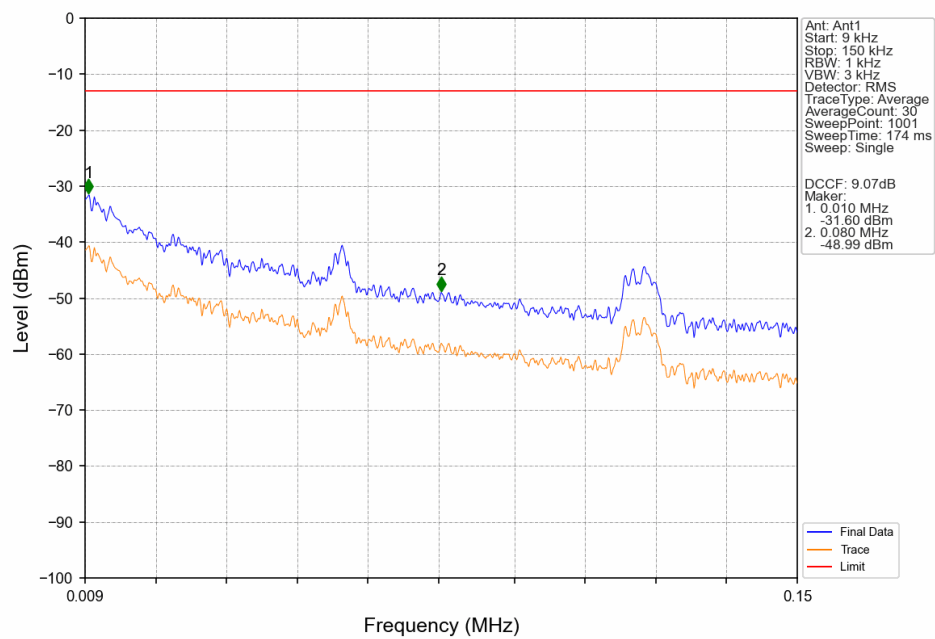
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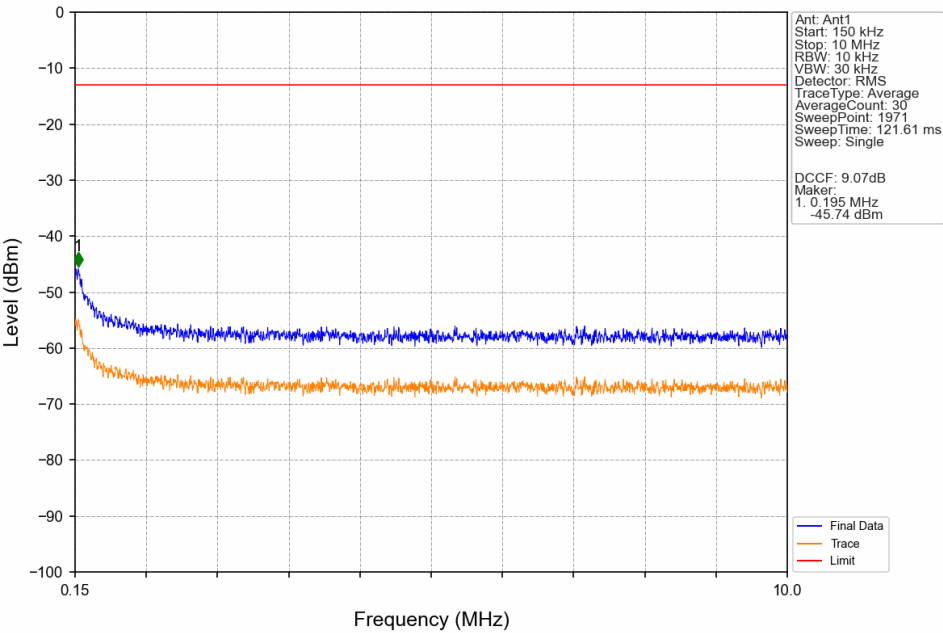
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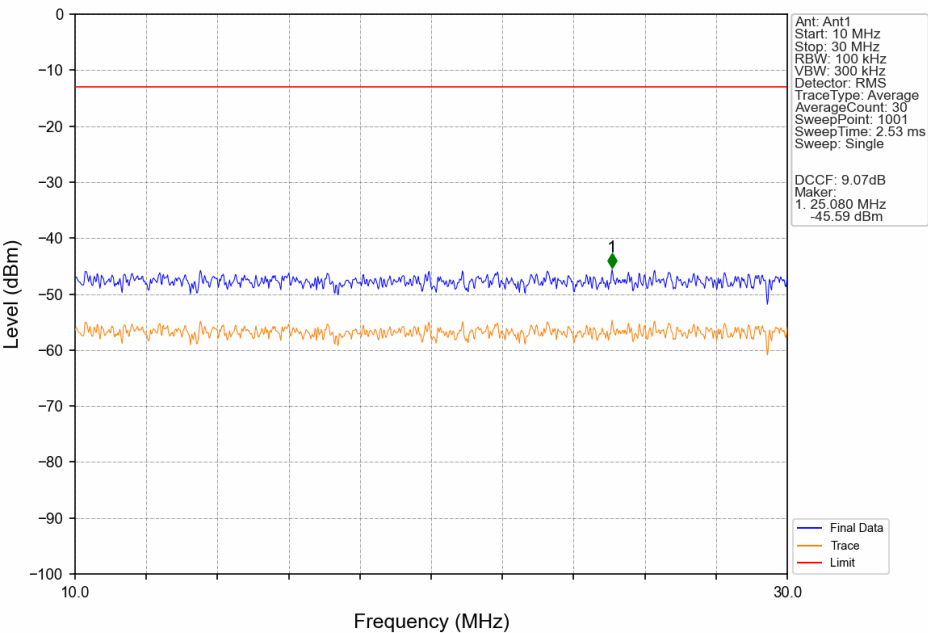
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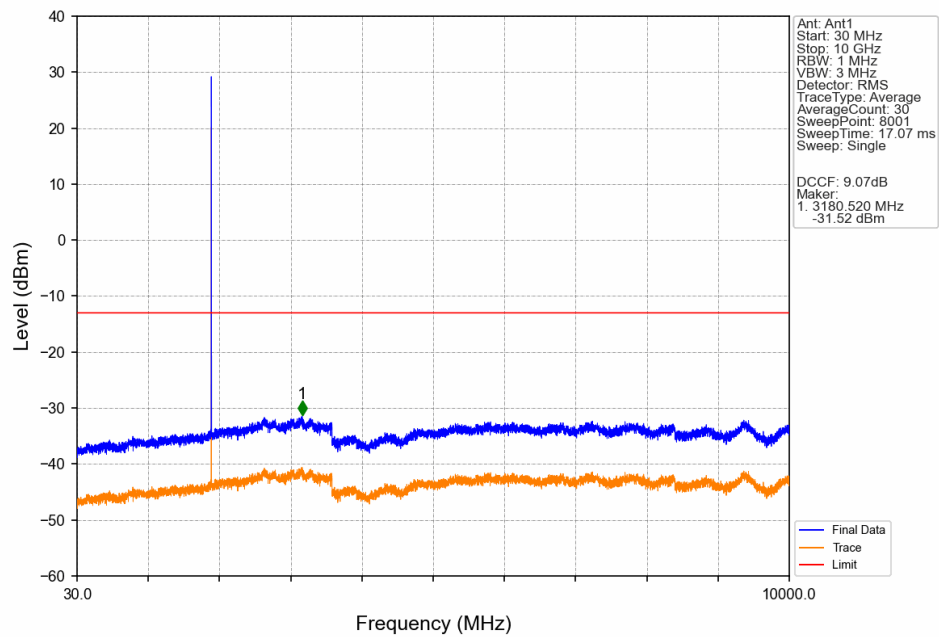
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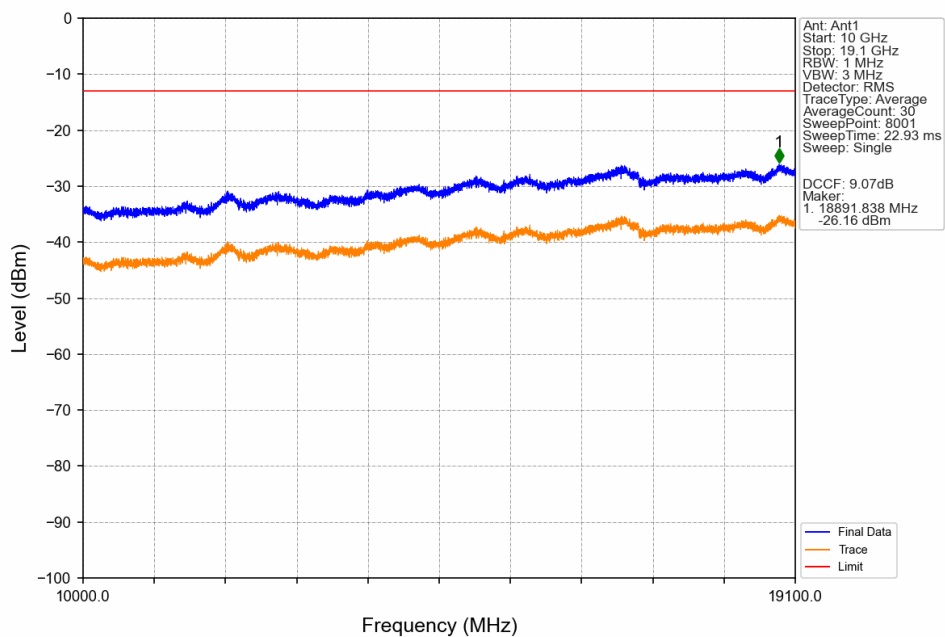
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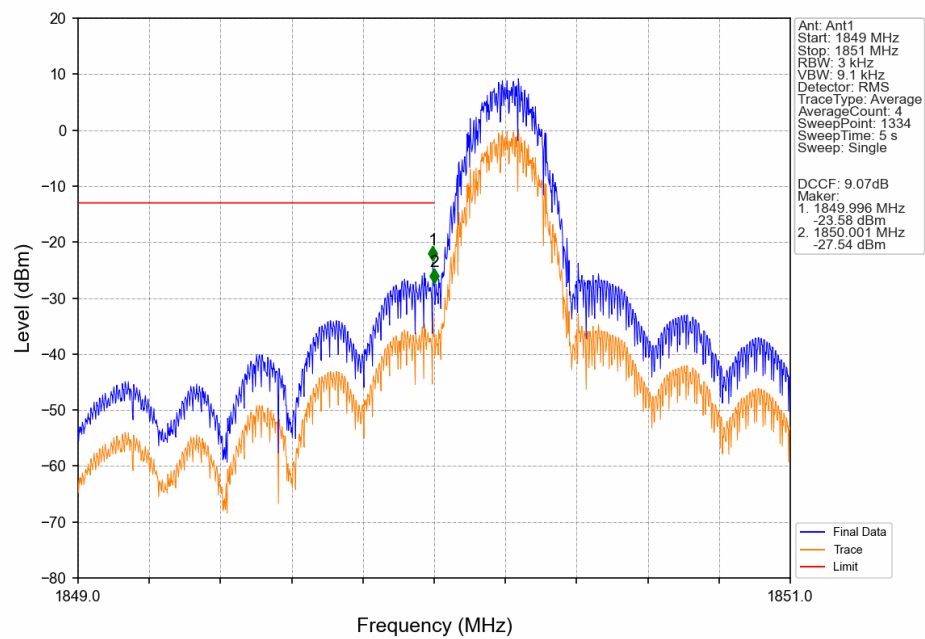
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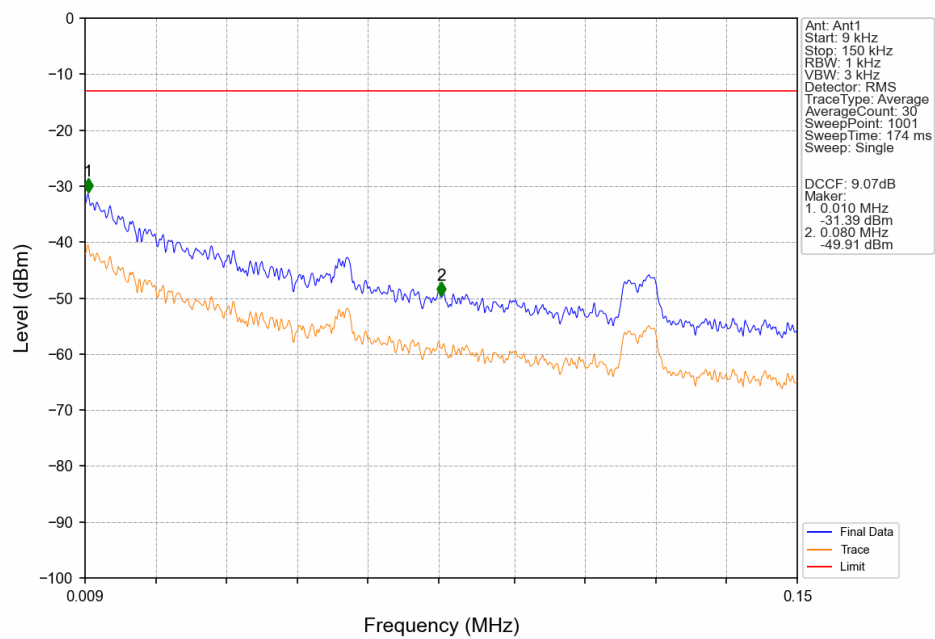
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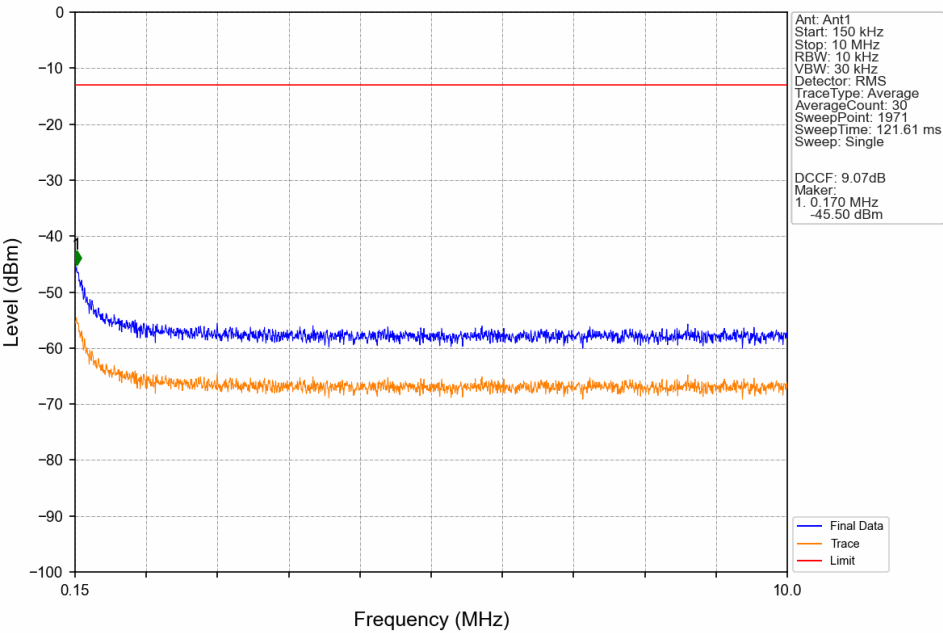
PCS1900_EGPRS_LCH_1850.2MHz_1 TX Slot_NTNV



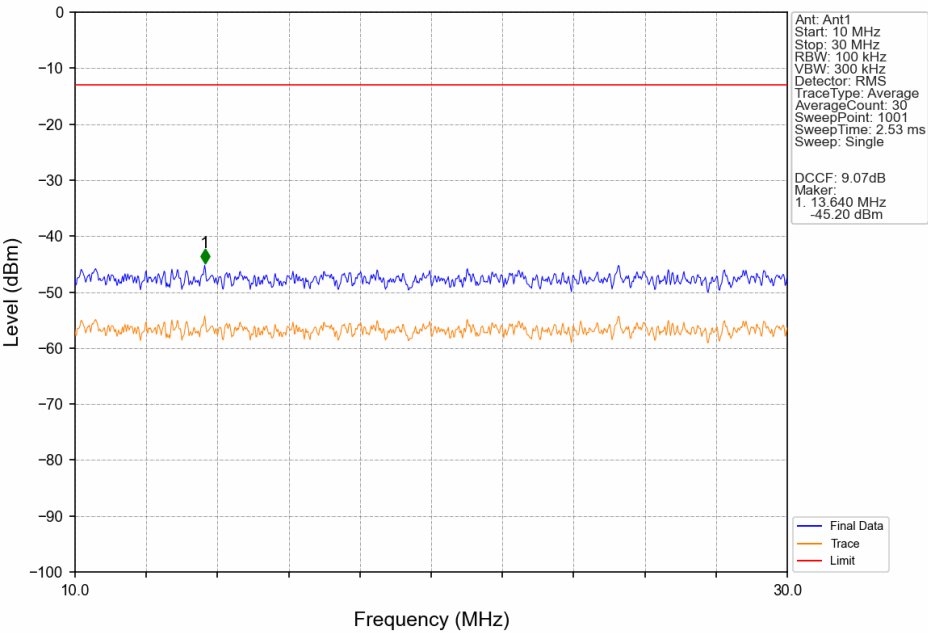
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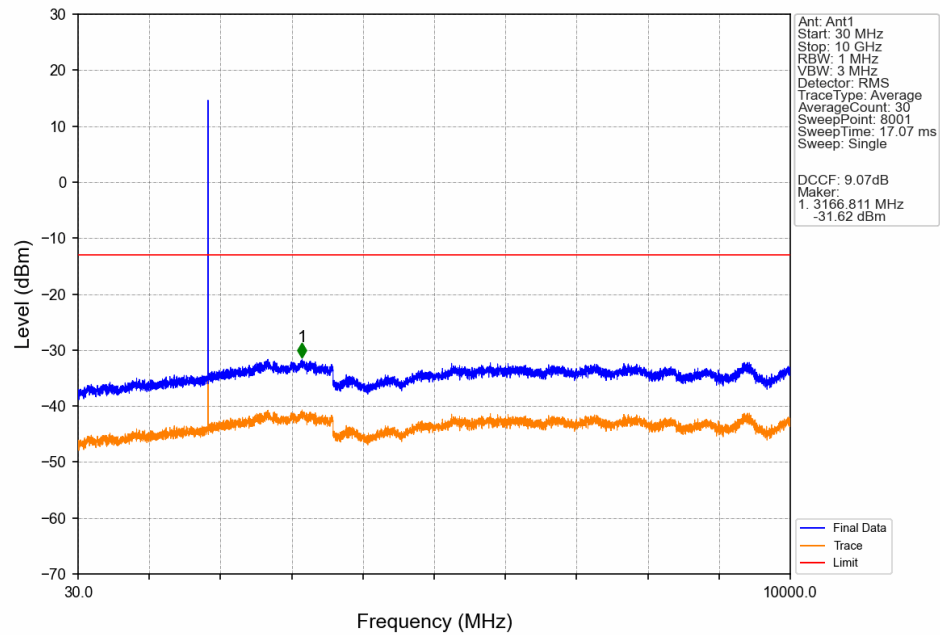
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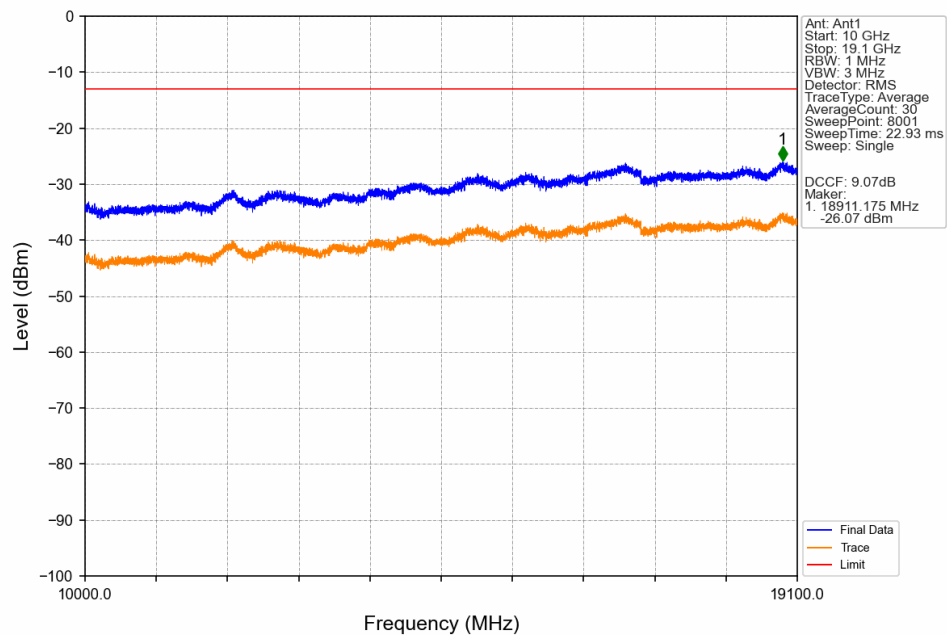
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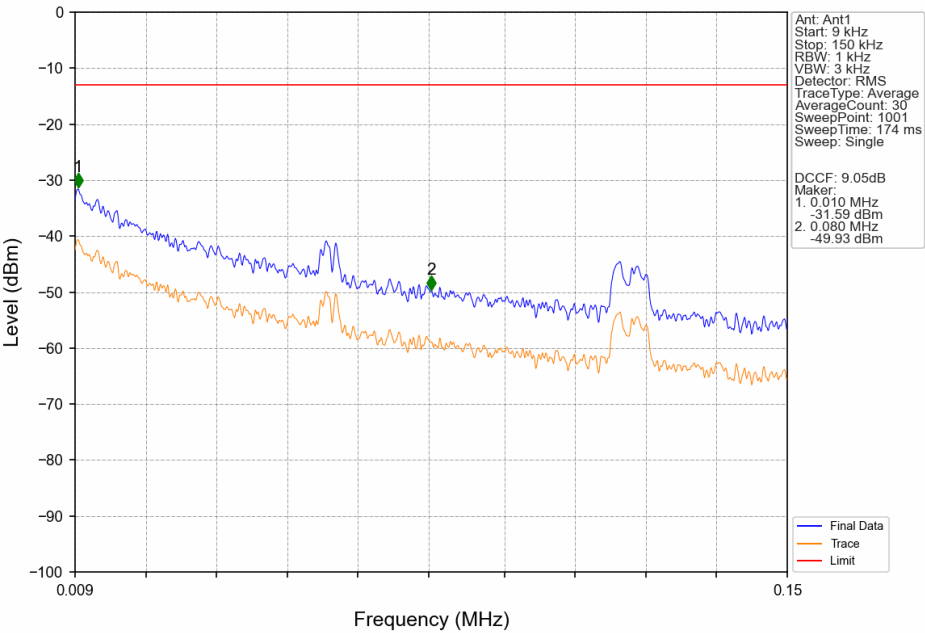
PCS1900 EGPRS LCH 1850.2MHz_1 TX Slot_NTNV



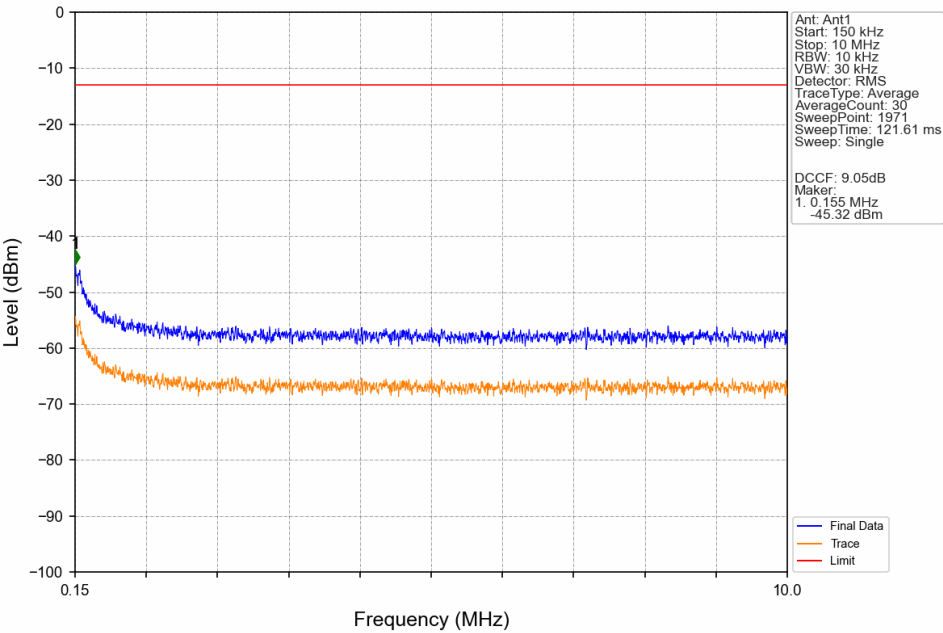
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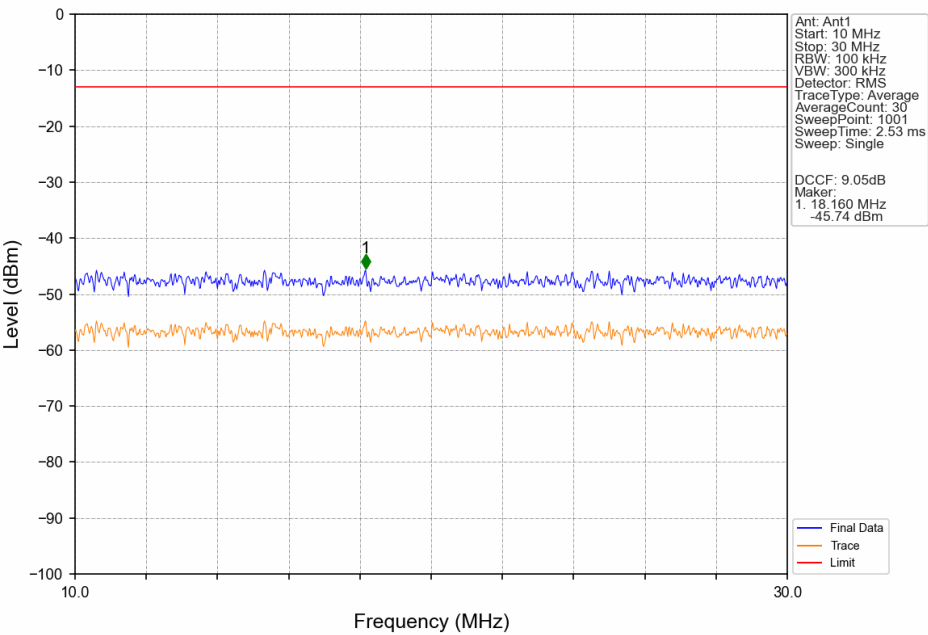
PCS1900_EGPRS_MCH_1880MHz_1 TX Slot_NTNV



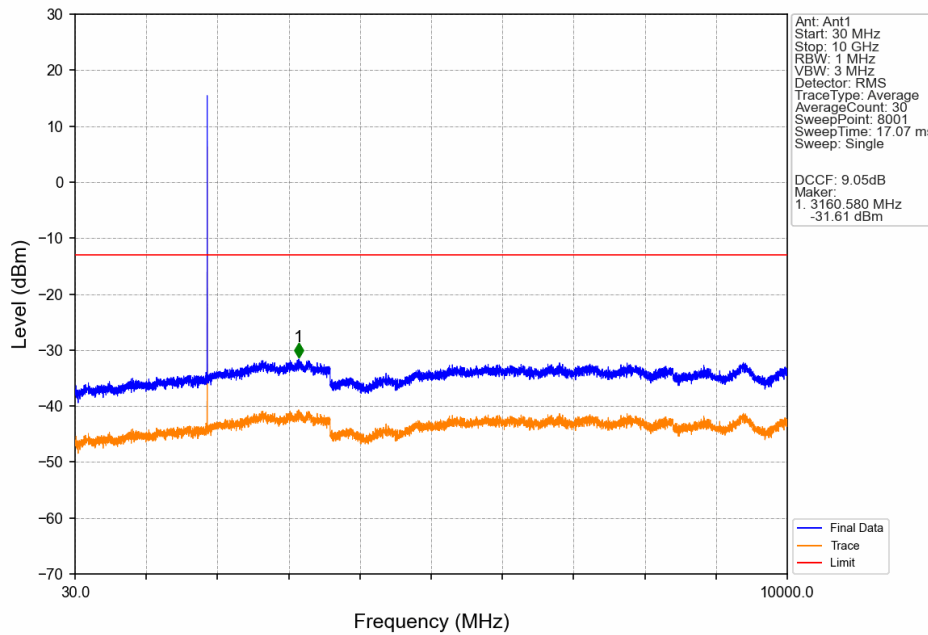
PCS1900_EGPRS_MCH_1880MHz_1 TX Slot_NTNV

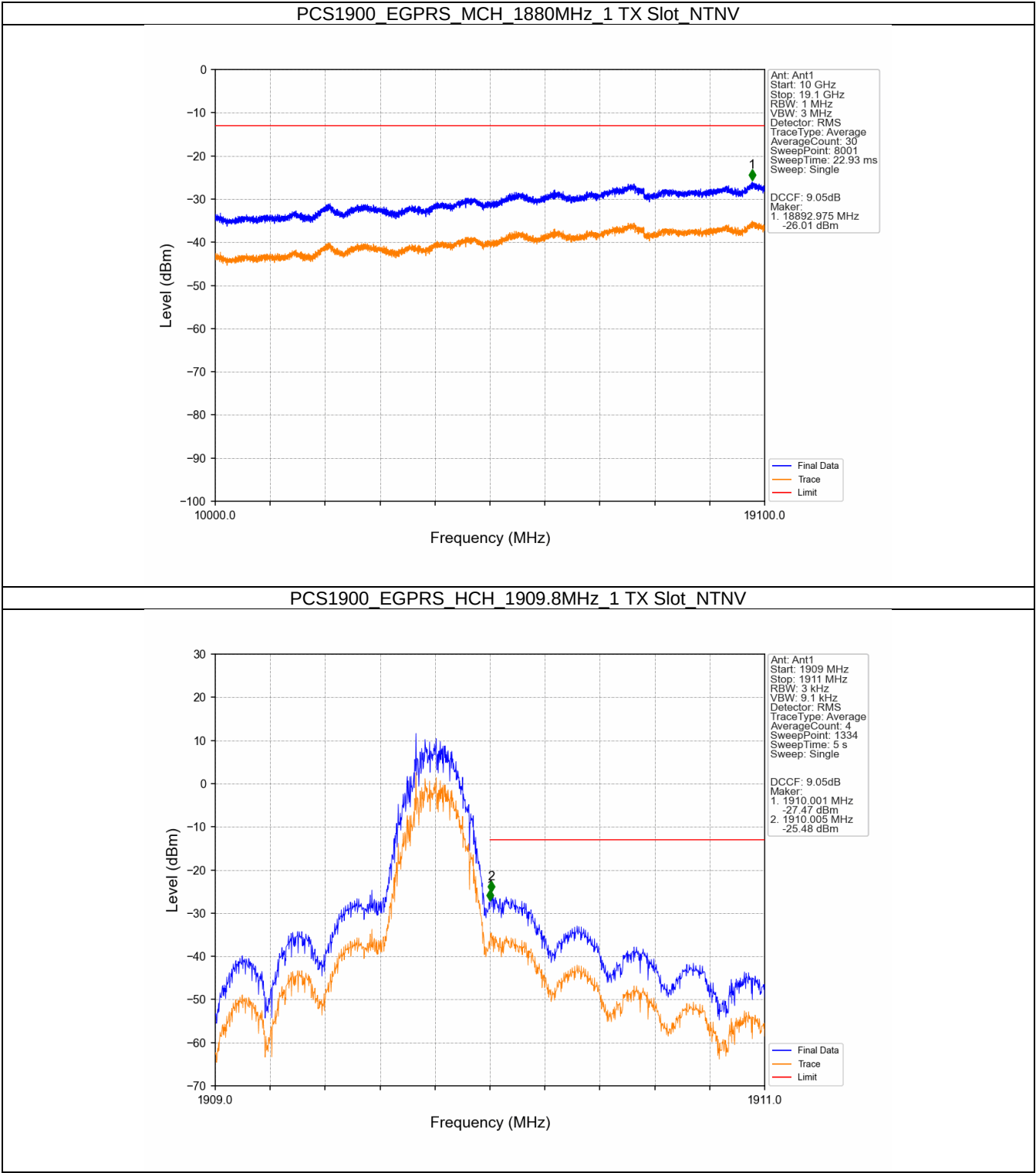


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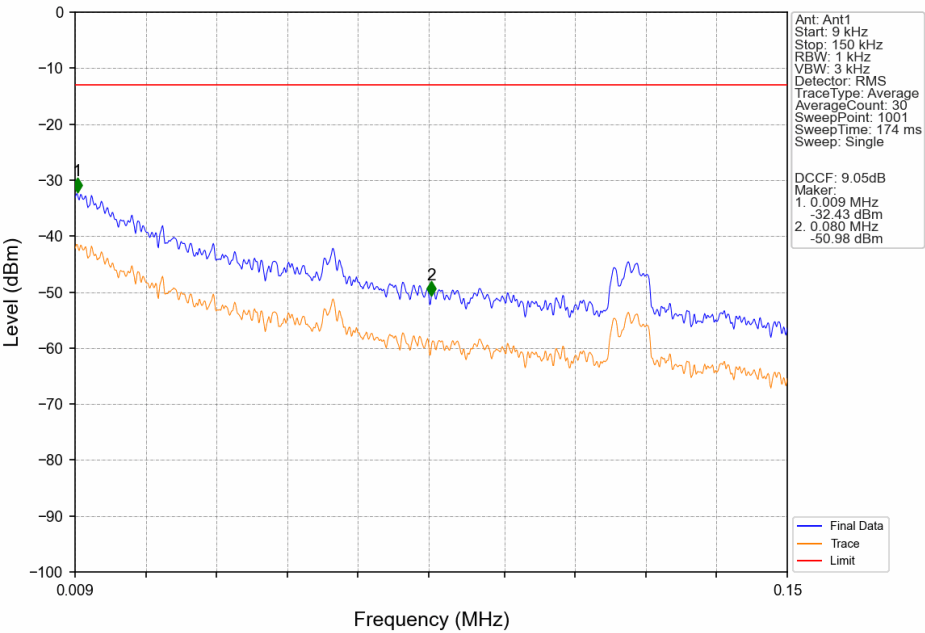


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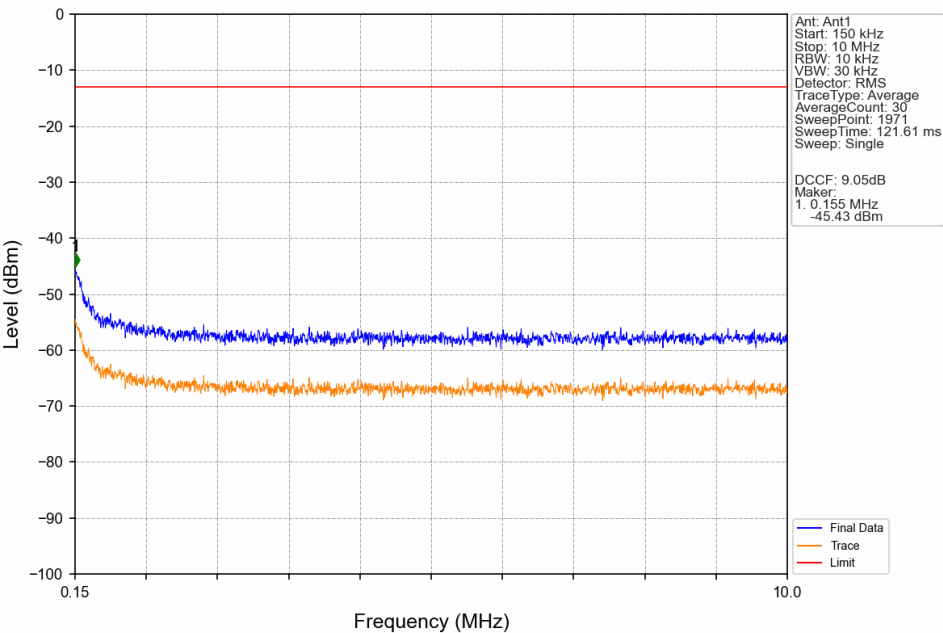




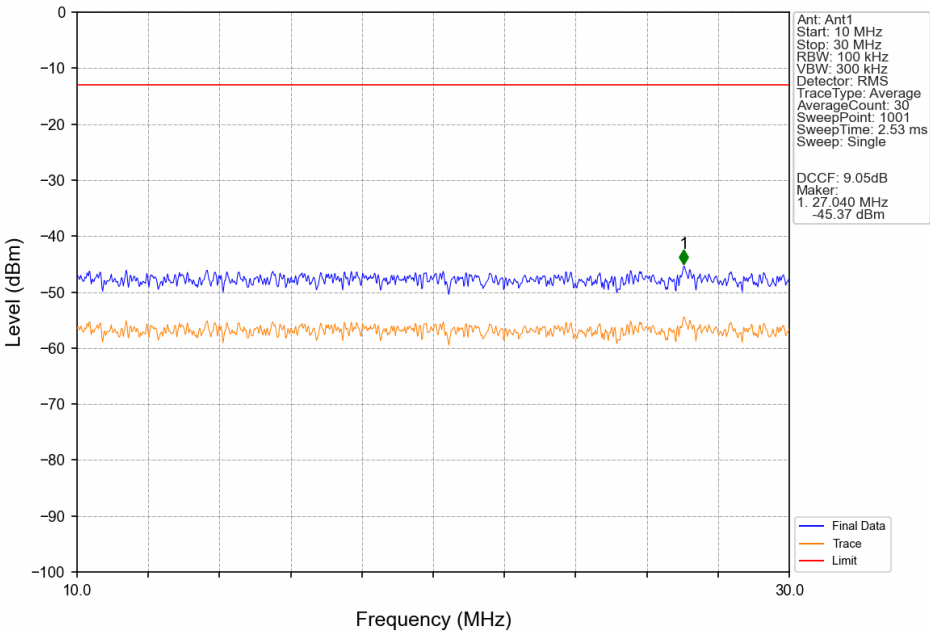
PCS1900_EGPRS_HCH_1909.8MHz_1 TX Slot_NTNV



PCS1900_EGPRS_HCH_1909.8MHz_1 TX Slot_NTNV



PCS1900_EGPRS_HCH_1909.8MHz_1 TX Slot_NTNV



PCS1900_EGPRS_HCH_1909.8MHz_1 TX Slot_NTNV

