

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	30.25	1.20	31.45	<=33.01	Pass
			1880	30.49	1.20	31.69	<=33.01	Pass
			1909.8	30.99	1.20	32.19	<=33.01	Pass
	GPRS	1 TX Slot	1850.2	30.25	1.20	31.45	<=33.01	Pass
		2 TX Slots	1850.2	29.35	1.20	30.55	<=33.01	Pass
		3 TX Slots	1850.2	27.50	1.20	28.70	<=33.01	Pass
		4 TX Slots	1850.2	26.46	1.20	27.66	<=33.01	Pass
		1 TX Slot	1880	30.47	1.20	31.67	<=33.01	Pass
		2 TX Slots	1880	29.52	1.20	30.72	<=33.01	Pass
		3 TX Slots	1880	27.58	1.20	28.78	<=33.01	Pass
		4 TX Slots	1880	26.53	1.20	27.73	<=33.01	Pass
		1 TX Slot	1909.8	30.94	1.20	32.14	<=33.01	Pass
		2 TX Slots	1909.8	29.90	1.20	31.10	<=33.01	Pass
		3 TX Slots	1909.8	27.89	1.20	29.09	<=33.01	Pass
		4 TX Slots	1909.8	26.82	1.20	28.02	<=33.01	Pass
	EGPRS	1 TX Slot	1850.2	25.73	1.20	26.93	<=33.01	Pass
		2 TX Slots	1850.2	24.80	1.20	26.00	<=33.01	Pass
		3 TX Slots	1850.2	23.29	1.20	24.49	<=33.01	Pass
		4 TX Slots	1850.2	22.02	1.20	23.22	<=33.01	Pass
		1 TX Slot	1880	25.81	1.20	27.01	<=33.01	Pass
		2 TX Slots	1880	24.94	1.20	26.14	<=33.01	Pass
		3 TX Slots	1880	23.25	1.20	24.45	<=33.01	Pass
		4 TX Slots	1880	22.21	1.20	23.41	<=33.01	Pass
		1 TX Slot	1909.8	27.59	1.20	28.79	<=33.01	Pass
		2 TX Slots	1909.8	25.46	1.20	26.66	<=33.01	Pass
		3 TX Slots	1909.8	23.61	1.20	24.81	<=33.01	Pass
		4 TX Slots	1909.8	22.65	1.20	23.85	<=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	3.23	-6.037	-0.0033	-2.5 to 2.5	Pass
			3.80	-3.519	-0.0019	-2.5 to 2.5	Pass
			4.37	3.132	0.0017	-2.5 to 2.5	Pass
		-30	3.80	0.032	0.0000	-2.5 to 2.5	Pass
		-20	3.80	-3.681	-0.0020	-2.5 to 2.5	Pass
		-10	3.80	-6.715	-0.0036	-2.5 to 2.5	Pass
		0	3.80	-5.650	-0.0031	-2.5 to 2.5	Pass
		10	3.80	-6.231	-0.0034	-2.5 to 2.5	Pass
		30	3.80	-10.751	-0.0058	-2.5 to 2.5	Pass
		40	3.80	7.135	0.0039	-2.5 to 2.5	Pass
		50	3.80	21.987	0.0119	-2.5 to 2.5	Pass
	1880	20	3.23	-4.488	-0.0024	-2.5 to 2.5	Pass
			3.80	-1.388	-0.0007	-2.5 to 2.5	Pass
			4.37	-4.714	-0.0025	-2.5 to 2.5	Pass
		-30	3.80	-7.006	-0.0037	-2.5 to 2.5	Pass
		-20	3.80	-7.749	-0.0041	-2.5 to 2.5	Pass
		-10	3.80	-3.713	-0.0020	-2.5 to 2.5	Pass
		0	3.80	-4.940	-0.0026	-2.5 to 2.5	Pass
		10	3.80	-0.129	-0.0001	-2.5 to 2.5	Pass
		30	3.80	-4.746	-0.0025	-2.5 to 2.5	Pass
		40	3.80	-4.423	-0.0024	-2.5 to 2.5	Pass
		50	3.80	-2.906	-0.0015	-2.5 to 2.5	Pass
	1909.8	20	3.23	-10.105	-0.0053	-2.5 to 2.5	Pass
			3.80	-5.973	-0.0031	-2.5 to 2.5	Pass
			4.37	-13.721	-0.0072	-2.5 to 2.5	Pass
		-30	3.80	-11.429	-0.0060	-2.5 to 2.5	Pass
		-20	3.80	-8.330	-0.0044	-2.5 to 2.5	Pass
		-10	3.80	-15.885	-0.0083	-2.5 to 2.5	Pass
		0	3.80	-3.939	-0.0021	-2.5 to 2.5	Pass
		10	3.80	-15.368	-0.0080	-2.5 to 2.5	Pass
		30	3.80	-11.235	-0.0059	-2.5 to 2.5	Pass
		40	3.80	-12.398	-0.0065	-2.5 to 2.5	Pass
		50	3.80	-10.331	-0.0054	-2.5 to 2.5	Pass
GPRS	1850.2	20	3.23	-1.033	-0.0006	-2.5 to 2.5	Pass
			3.80	-1.550	-0.0008	-2.5 to 2.5	Pass
			4.37	-0.678	-0.0004	-2.5 to 2.5	Pass
		-30	3.80	-3.487	-0.0019	-2.5 to 2.5	Pass
		-20	3.80	-4.552	-0.0025	-2.5 to 2.5	Pass
		-10	3.80	0.194	0.0001	-2.5 to 2.5	Pass
		0	3.80	-13.592	-0.0073	-2.5 to 2.5	Pass
		10	3.80	-5.327	-0.0029	-2.5 to 2.5	Pass
		30	3.80	-0.452	-0.0002	-2.5 to 2.5	Pass
		40	3.80	3.422	0.0018	-2.5 to 2.5	Pass
		50	3.80	10.525	0.0057	-2.5 to 2.5	Pass
	1880	20	3.23	-8.523	-0.0045	-2.5 to 2.5	Pass
			3.80	-13.302	-0.0071	-2.5 to 2.5	Pass
			4.37	-12.979	-0.0069	-2.5 to 2.5	Pass
		-30	3.80	-14.722	-0.0078	-2.5 to 2.5	Pass
		-20	3.80	-14.432	-0.0077	-2.5 to 2.5	Pass

		-10	3.80	-11.300	-0.0060	-2.5 to 2.5	Pass
		0	3.80	-0.549	-0.0003	-2.5 to 2.5	Pass
		10	3.80	-5.101	-0.0027	-2.5 to 2.5	Pass
		30	3.80	-5.230	-0.0028	-2.5 to 2.5	Pass
		40	3.80	1.001	0.0005	-2.5 to 2.5	Pass
		50	3.80	-6.134	-0.0033	-2.5 to 2.5	Pass
	1909.8	20	3.23	-16.853	-0.0088	-2.5 to 2.5	Pass
			3.80	-13.980	-0.0073	-2.5 to 2.5	Pass
			4.37	-11.268	-0.0059	-2.5 to 2.5	Pass
		-30	3.80	-10.267	-0.0054	-2.5 to 2.5	Pass
		-20	3.80	-10.590	-0.0055	-2.5 to 2.5	Pass
		-10	3.80	-13.334	-0.0070	-2.5 to 2.5	Pass
		0	3.80	-11.429	-0.0060	-2.5 to 2.5	Pass
		10	3.80	-9.976	-0.0052	-2.5 to 2.5	Pass
		30	3.80	-7.458	-0.0039	-2.5 to 2.5	Pass
		40	3.80	-5.198	-0.0027	-2.5 to 2.5	Pass
		50	3.80	-1.195	-0.0006	-2.5 to 2.5	Pass
EGPRS	1850.2	20	3.23	7.523	0.0041	-2.5 to 2.5	Pass
			3.80	16.724	0.0090	-2.5 to 2.5	Pass
			4.37	15.045	0.0081	-2.5 to 2.5	Pass
		-30	3.80	10.654	0.0058	-2.5 to 2.5	Pass
		-20	3.80	16.886	0.0091	-2.5 to 2.5	Pass
		-10	3.80	14.206	0.0077	-2.5 to 2.5	Pass
		0	3.80	14.044	0.0076	-2.5 to 2.5	Pass
		10	3.80	20.340	0.0110	-2.5 to 2.5	Pass
		30	3.80	17.208	0.0093	-2.5 to 2.5	Pass
		40	3.80	17.434	0.0094	-2.5 to 2.5	Pass
		50	3.80	18.403	0.0099	-2.5 to 2.5	Pass
	1880	20	3.23	15.271	0.0081	-2.5 to 2.5	Pass
			3.80	22.632	0.0120	-2.5 to 2.5	Pass
			4.37	22.665	0.0121	-2.5 to 2.5	Pass
		-30	3.80	21.954	0.0117	-2.5 to 2.5	Pass
		-20	3.80	13.818	0.0074	-2.5 to 2.5	Pass
		-10	3.80	8.523	0.0045	-2.5 to 2.5	Pass
		0	3.80	23.536	0.0125	-2.5 to 2.5	Pass
		10	3.80	16.014	0.0085	-2.5 to 2.5	Pass
		30	3.80	28.347	0.0151	-2.5 to 2.5	Pass
		40	3.80	13.689	0.0073	-2.5 to 2.5	Pass
		50	3.80	22.374	0.0119	-2.5 to 2.5	Pass
	1909.8	20	3.23	471.470	0.2469	-2.5 to 2.5	Pass
			3.80	-22.794	-0.0119	-2.5 to 2.5	Pass
			4.37	394.727	0.2067	-2.5 to 2.5	Pass
		-30	3.80	51.496	0.0270	-2.5 to 2.5	Pass
		-20	3.80	-503.724	-0.2638	-2.5 to 2.5	Pass
		-10	3.80	686.365	0.3594	-2.5 to 2.5	Pass
		0	3.80	699.860	0.3665	-2.5 to 2.5	Pass
		10	3.80	-868.296	-0.4547	-2.5 to 2.5	Pass
		30	3.80	148.999	0.0780	-2.5 to 2.5	Pass
		40	3.80	154.746	0.0810	-2.5 to 2.5	Pass
		50	3.80	-654.370	-0.3426	-2.5 to 2.5	Pass

3. Modulation Characteristics

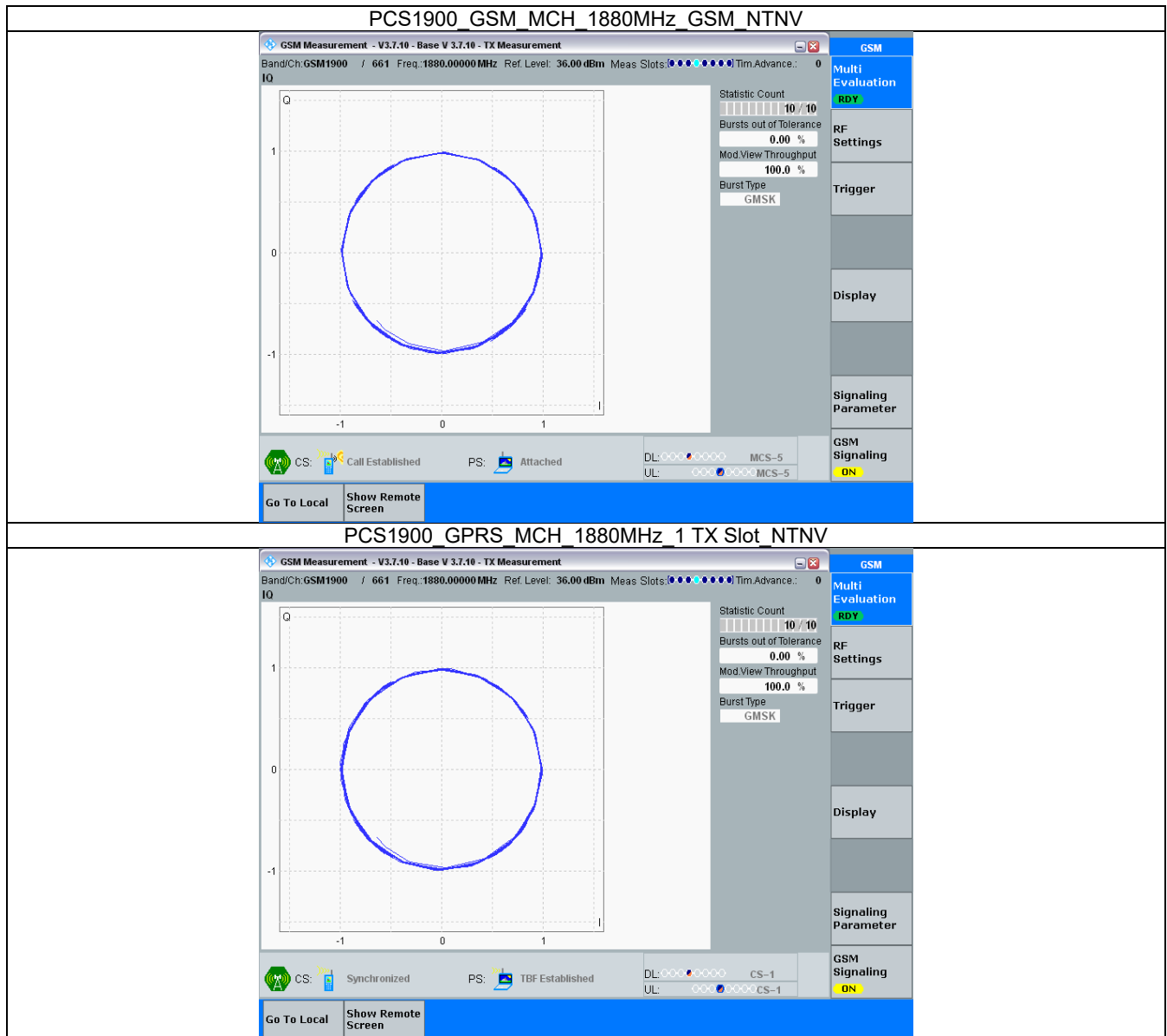
3.1 Test Result

3.1.1 PCS1900

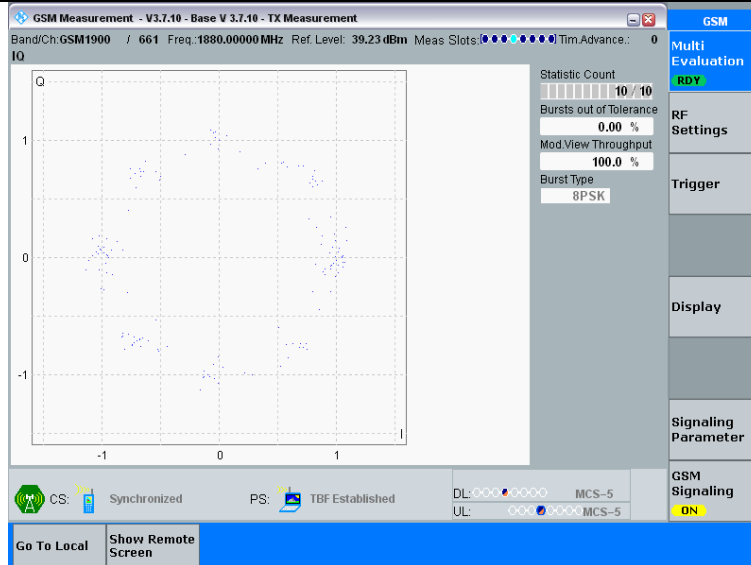
Band: PCS1900						
ENV	Mode		Frequency (MHz)	Modulation Characteristics		Verdict
	Network	Subset		Result	Limit	
NTNV	GSM	GSM	1880	Refer To Test Graph		Pass
	GPRS	1 TX Slot	1880	Refer To Test Graph		Pass
	EGPRS	1 TX Slot	1880	Refer To Test Graph		Pass

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

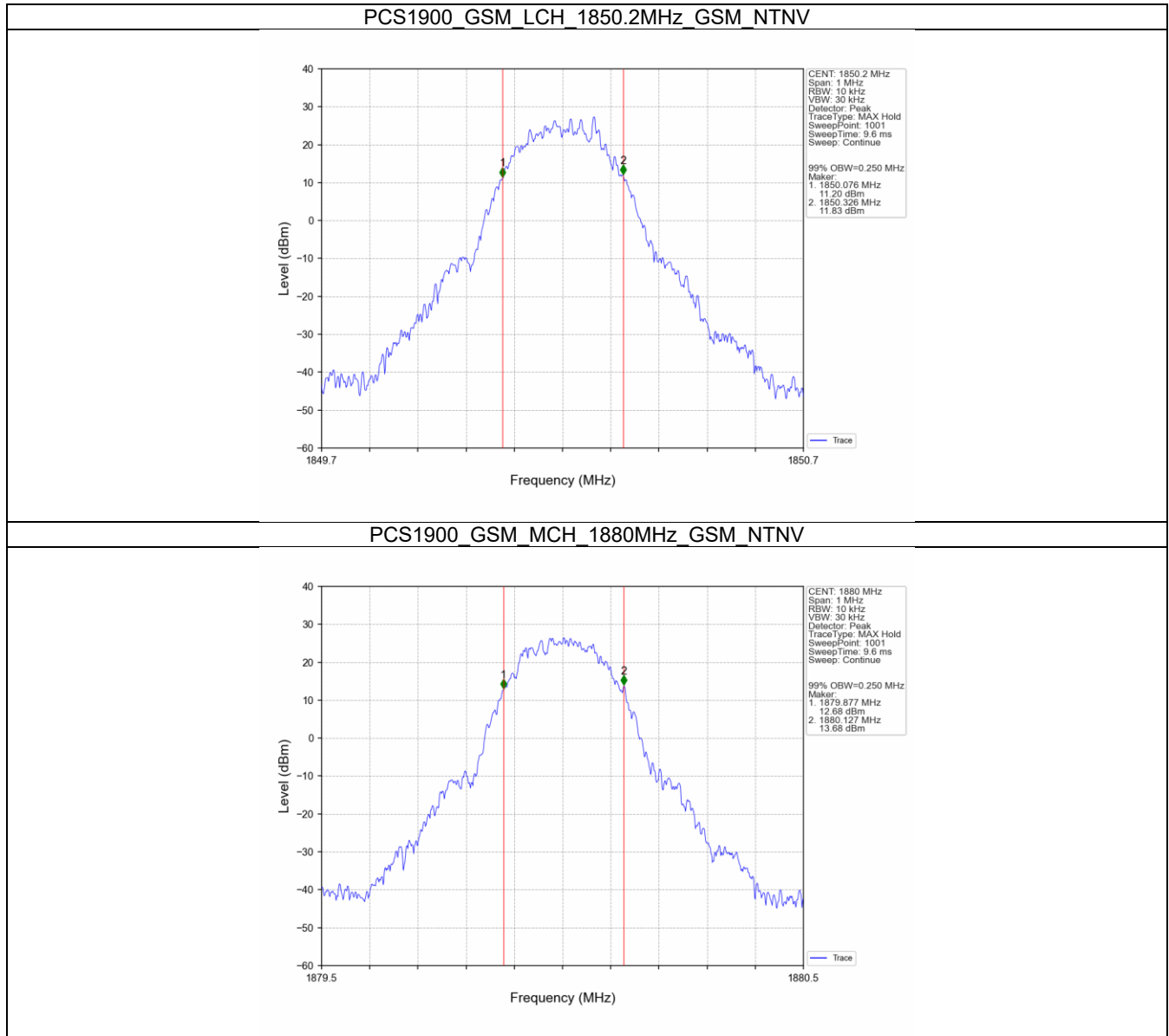
Band: PCS1900						
ENV	Mode		Frequency (MHz)	99% Occupied Bandwidth (MHz)		Verdict
	Network	Subset		Result	Limit	
NTNV	GSM	GSM	1850.2	0.250	/	Pass
			1880	0.250	/	Pass
			1909.8	0.246	/	Pass
	GPRS	1 TX Slot	1850.2	0.242	/	Pass
			1880	0.243	/	Pass
			1909.8	0.248	/	Pass
	EGPRS	1 TX Slot	1850.2	0.254	/	Pass
			1880	0.251	/	Pass
			1909.8	0.277	/	Pass

4.1.2 PCS1900_XDB

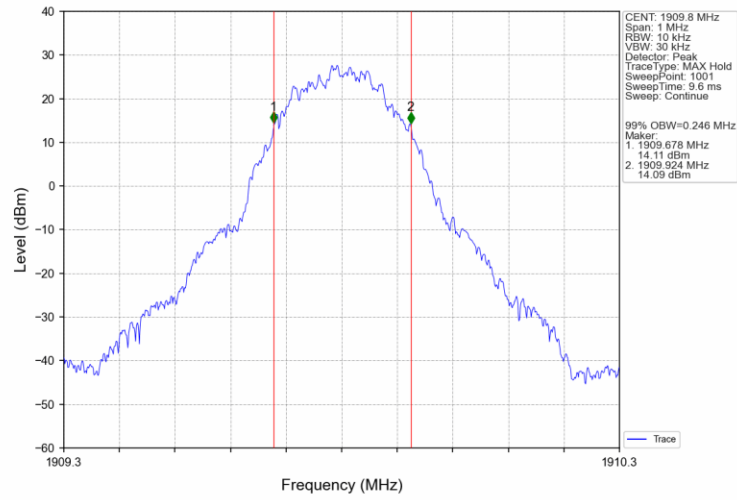
Band: PCS1900						
ENV	Mode		Frequency (MHz)	26dB Bandwidth (MHz)		Verdict
	Network	Subset		Result	Limit	
NTNV	GSM	GSM	1850.2	0.318	/	Pass
			1880	0.320	/	Pass
			1909.8	0.322	/	Pass
	GPRS	1 TX Slot	1850.2	0.312	/	Pass
			1880	0.319	/	Pass
			1909.8	0.318	/	Pass
	EGPRS	1 TX Slot	1850.2	0.319	/	Pass
			1880	0.314	/	Pass
			1909.8	0.368	/	Pass

4.2 Test Graph

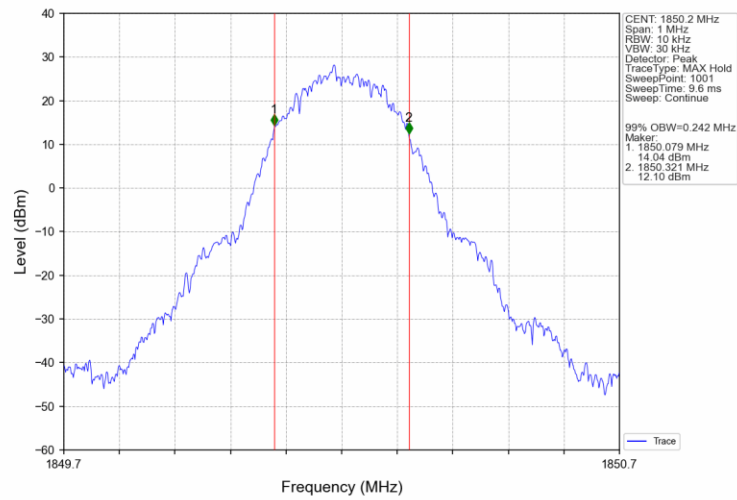
4.2.1 PCS1900_OBW



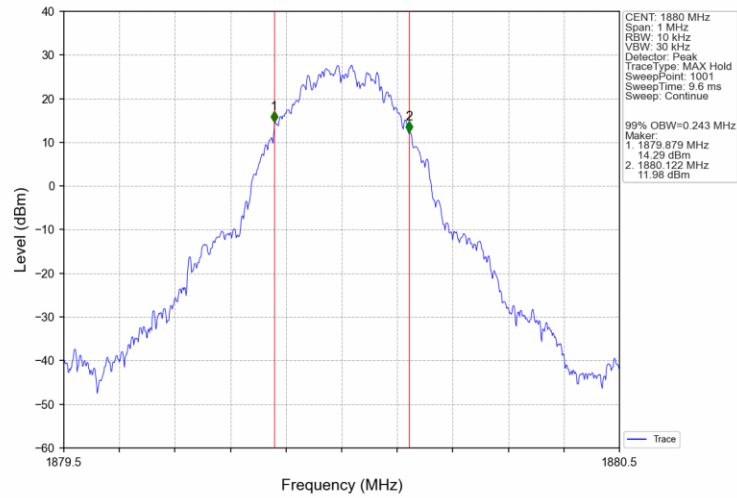
PCS1900 GSM HCH 1909.8MHz GSM NTN



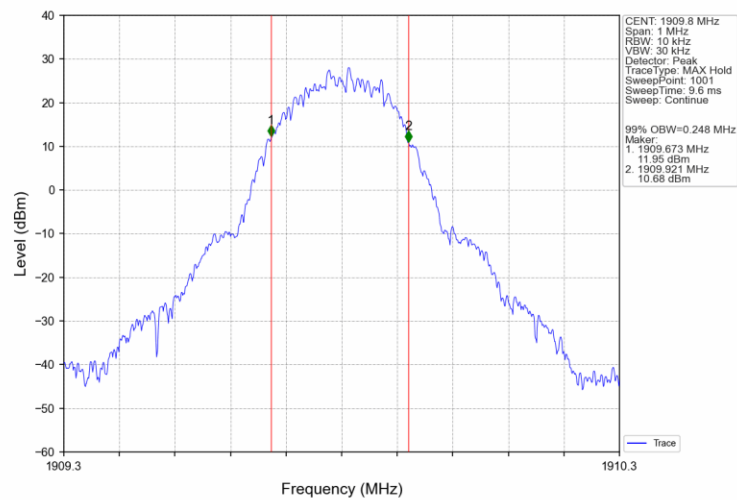
PCS1900 GPRS LCH 1850.2MHz 1 TX Slot NTN



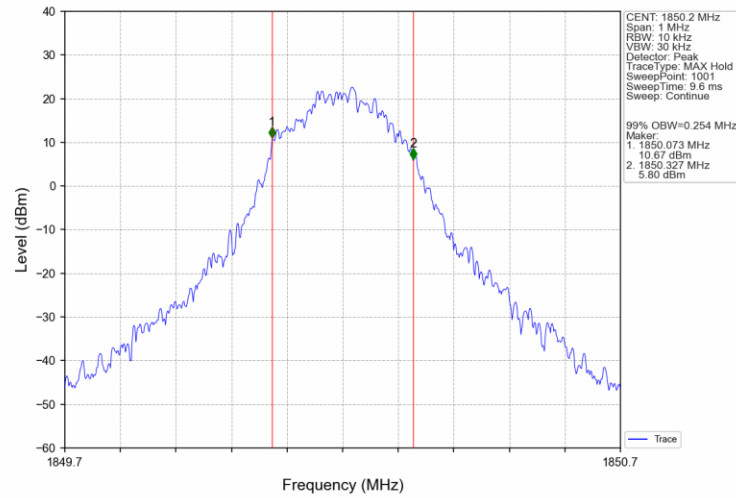
PCS1900 GPRS MCH 1880MHz 1 TX Slot NTNV



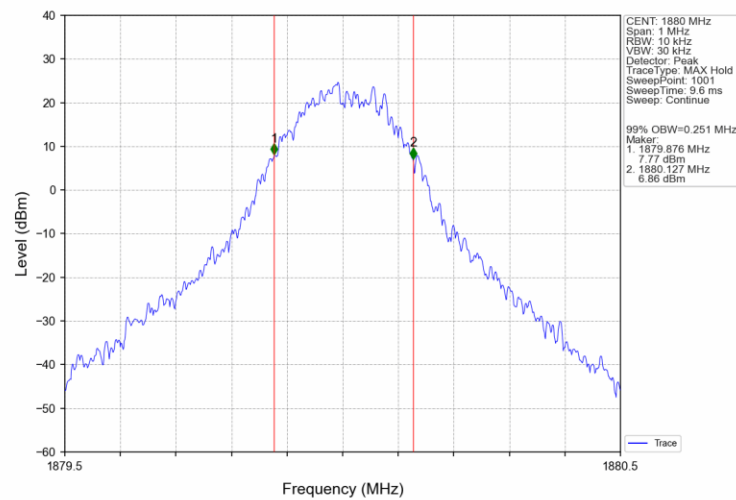
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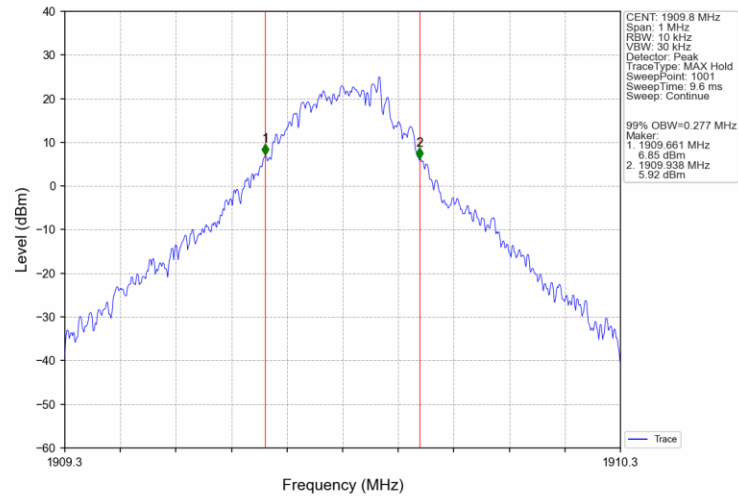
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PCS1900 EGPRS MCH 1880MHz 1 TX Slot NTN

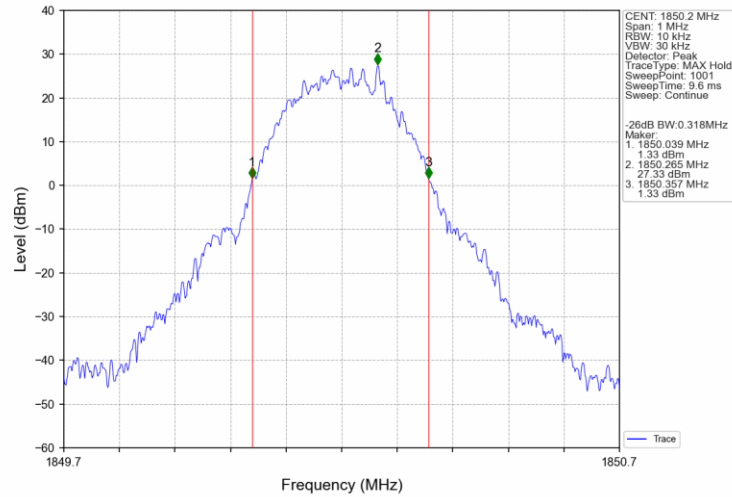


PCS1900 EGPRS HCH 1909.8MHz 1 TX Slot NTN

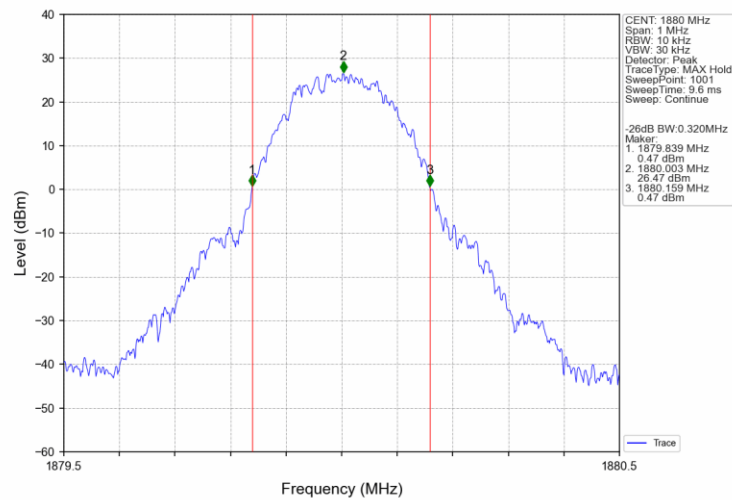


4.2.2 PCS1900_XDB

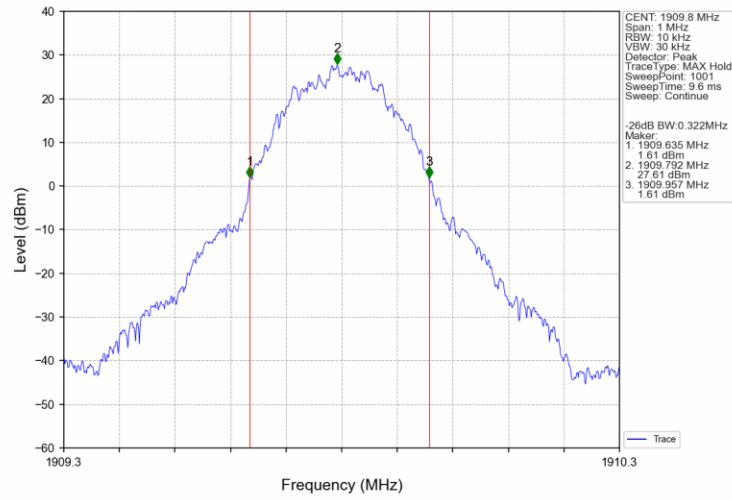
PCS1900_GSM_LCH_1850.2MHz_GSM_NTNV



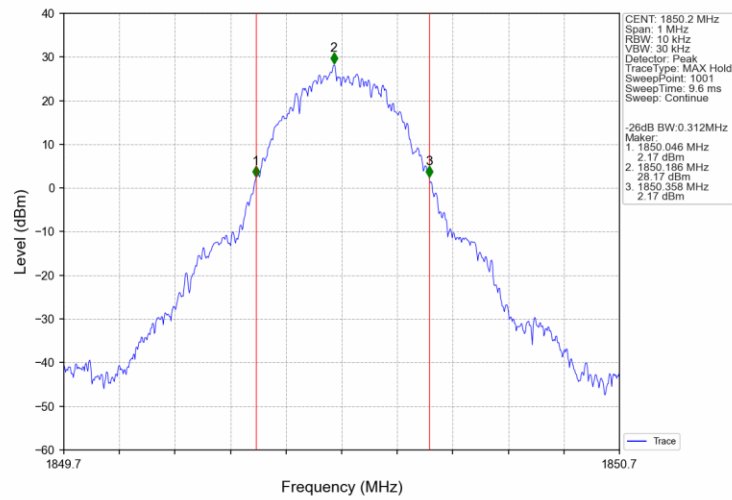
PCS1900_GSM_MCH_1880MHz_GSM_NTNV



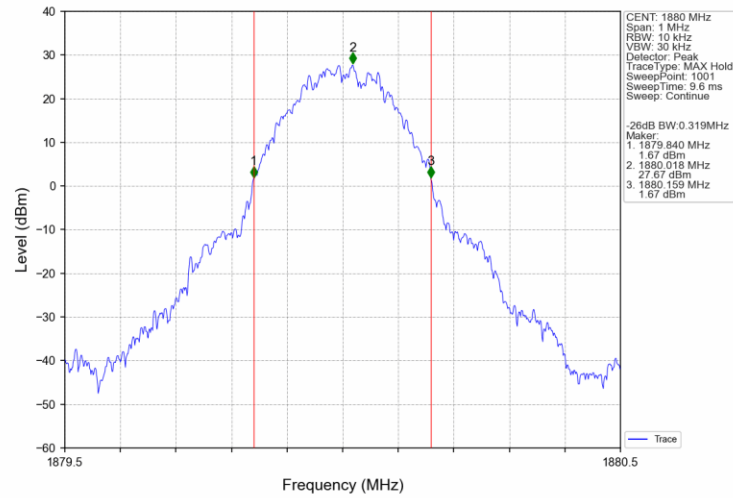
PCS1900 GSM HCH 1909.8MHz GSM NTN



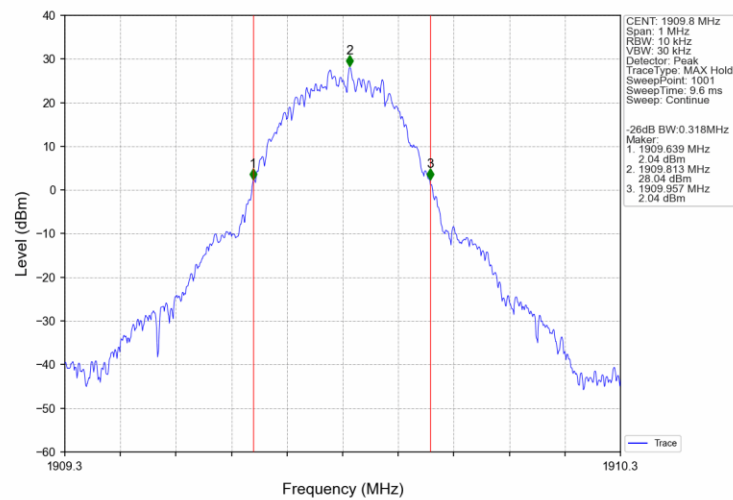
PCS1900 GPRS LCH 1850.2MHz 1 TX Slot NTN



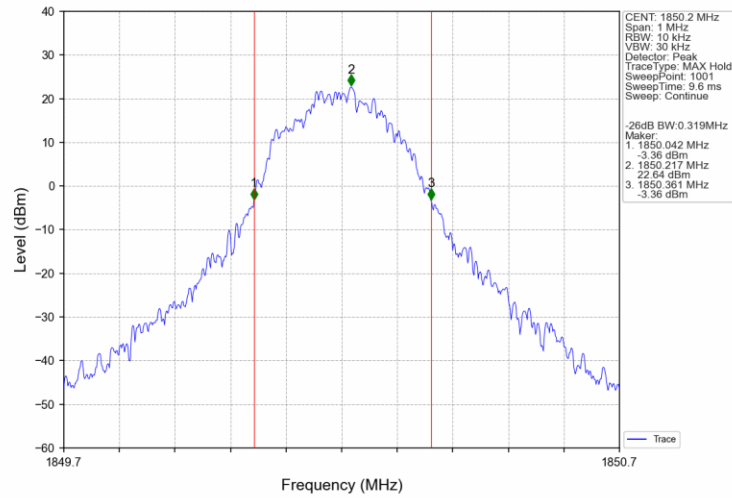
PCS1900 GPRS MCH 1880MHz 1 TX Slot NTNV



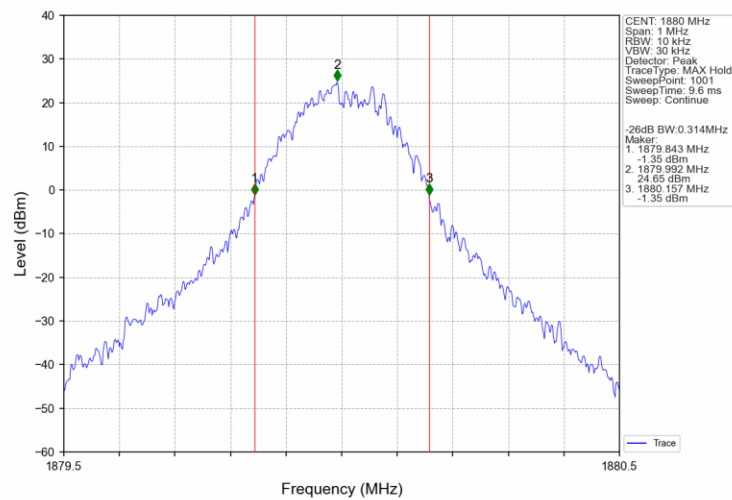
PCS1900 GPRS HCH 1909.8MHz 1 TX Slot NTNV



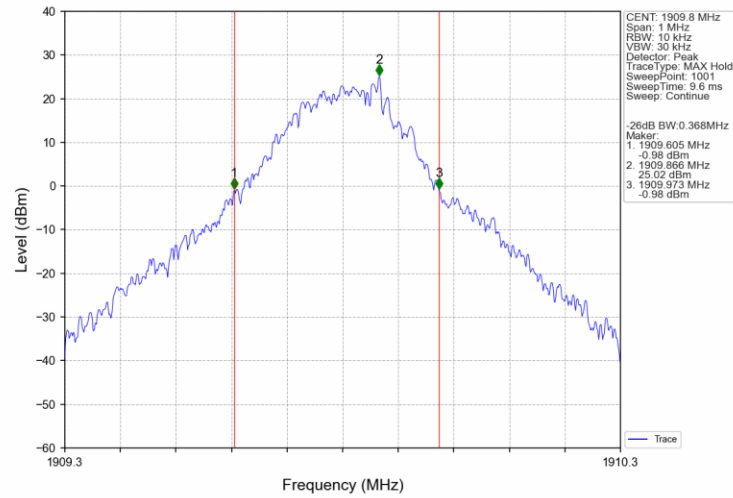
PCS1900 EGPRS LCH 1850.2MHz 1 TX Slot NTN



PCS1900 EGPRS MCH 1880MHz 1 TX Slot NTN



PCS1900 EGPRS HCH 1909.8MHz 1 TX Slot NTN



5. Peak-Average Ratio

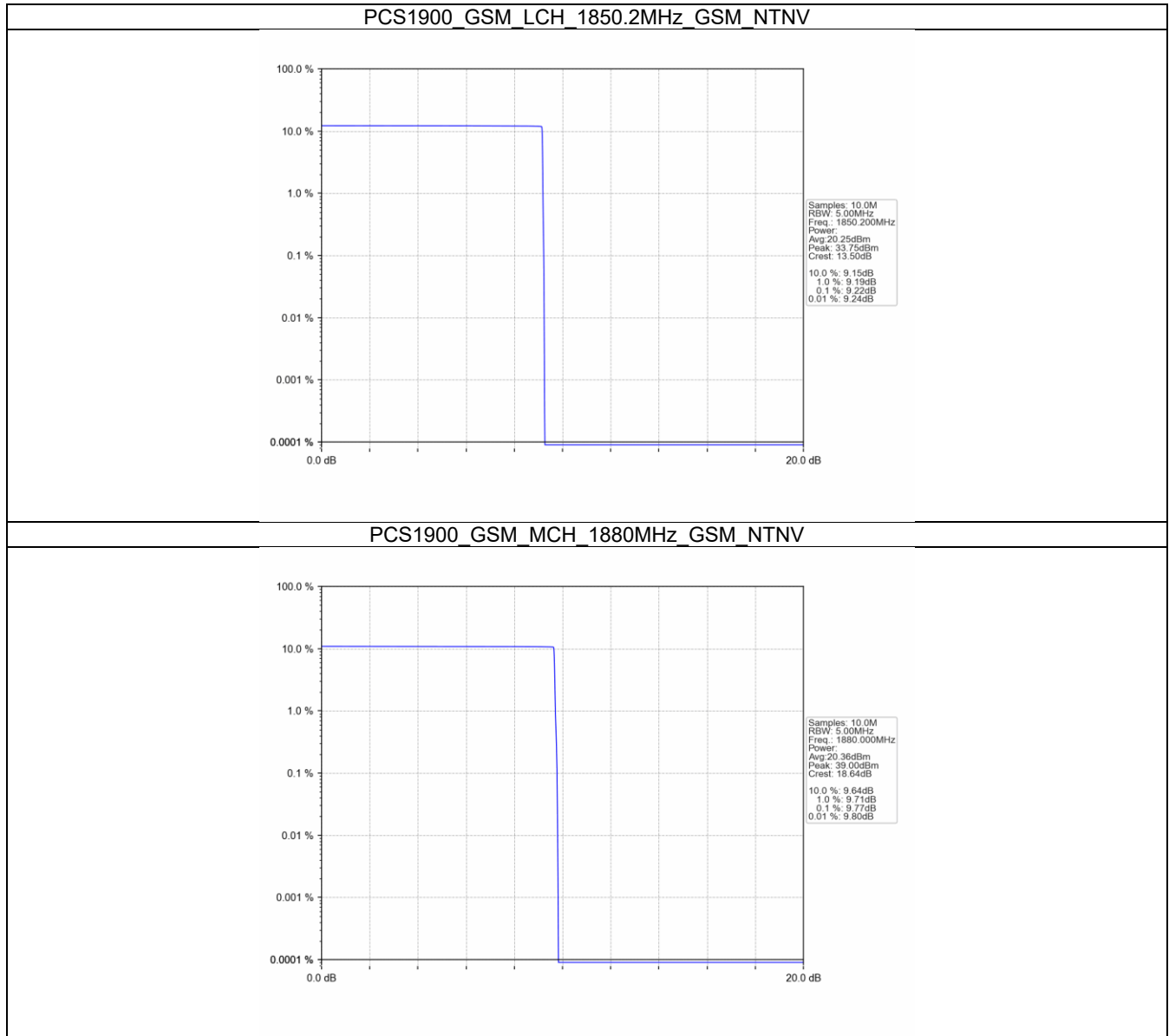
5.1 Test Result

5.1.1 PCS1900

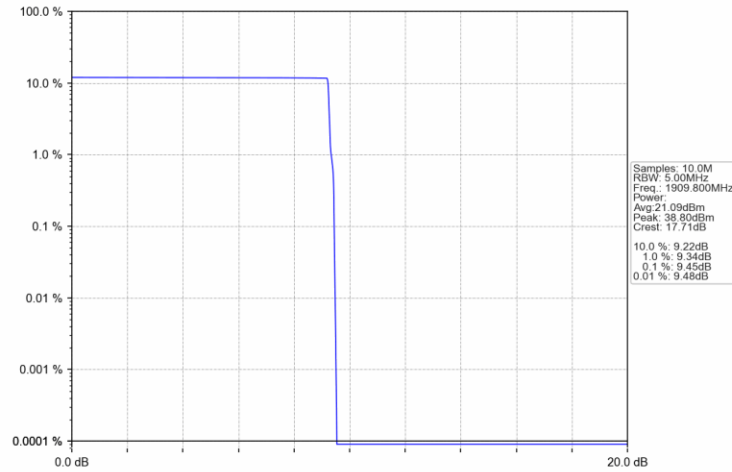
Band: PCS1900						
ENV	Mode		Frequency (MHz)	Peak-Average Ratio (dB)		Verdict
	Network	Subset		Result	Limit	
NTNV	GSM	GSM	1850.2	9.22	<=13	Pass
			1880	9.77	<=13	Pass
			1909.8	9.45	<=13	Pass
	GPRS	4 TX Slots	1850.2	3.55	<=13	Pass
			1880	3.66	<=13	Pass
			1909.8	3.50	<=13	Pass
	EGPRS	4 TX Slots	1850.2	8.35	<=13	Pass
			1880	8.07	<=13	Pass
			1909.8	7.84	<=13	Pass

5.2 Test Graph

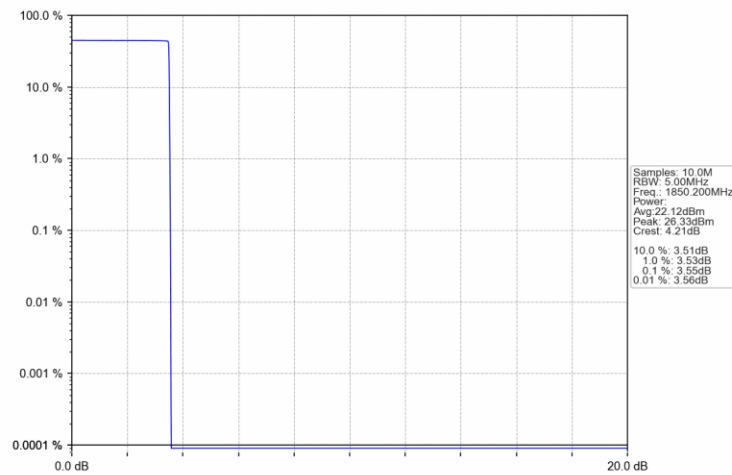
5.2.1 PCS1900



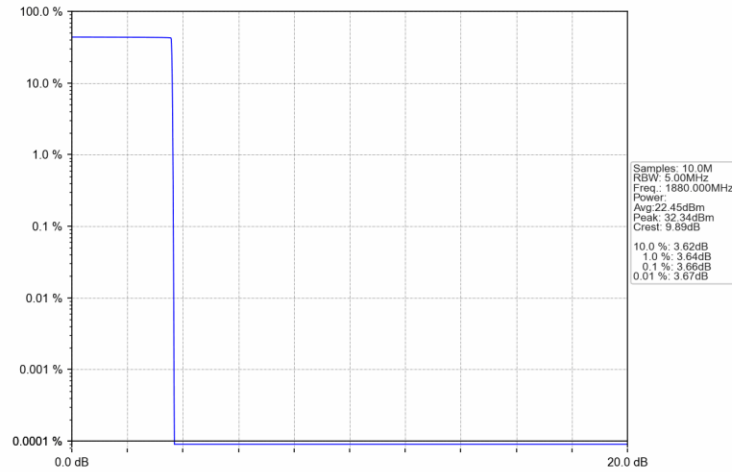
PCS1900 GSM HCH 1909.8MHz GSM NTN



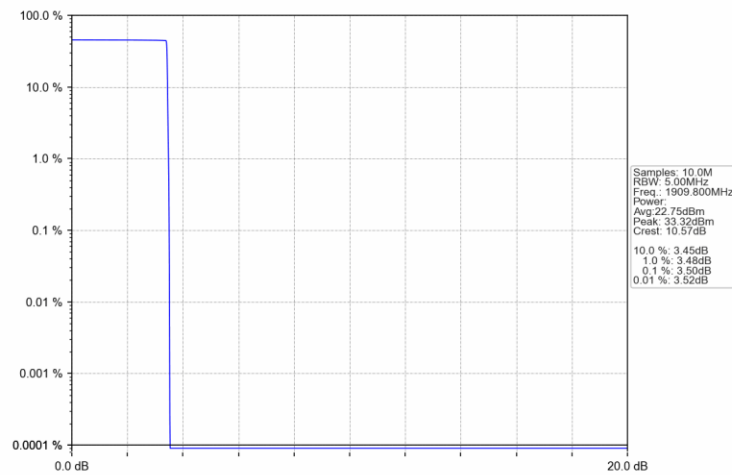
PCS1900 GPRS LCH 1850.2MHz 4 TX Slots NTN



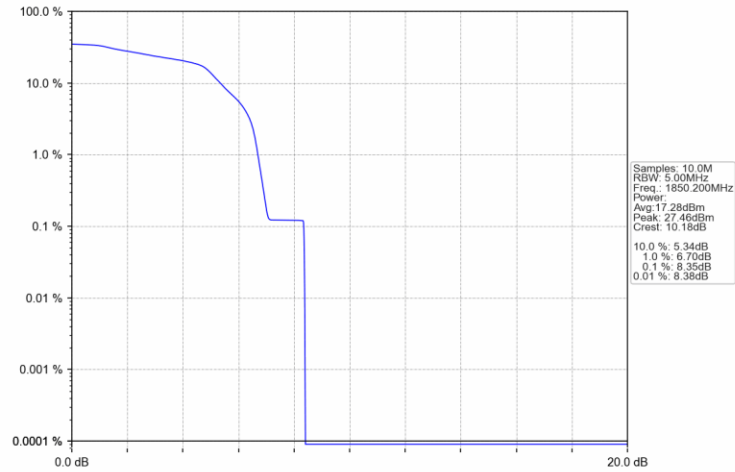
PCS1900 GPRS MCH 1880MHz 4 TX Slots NTNV



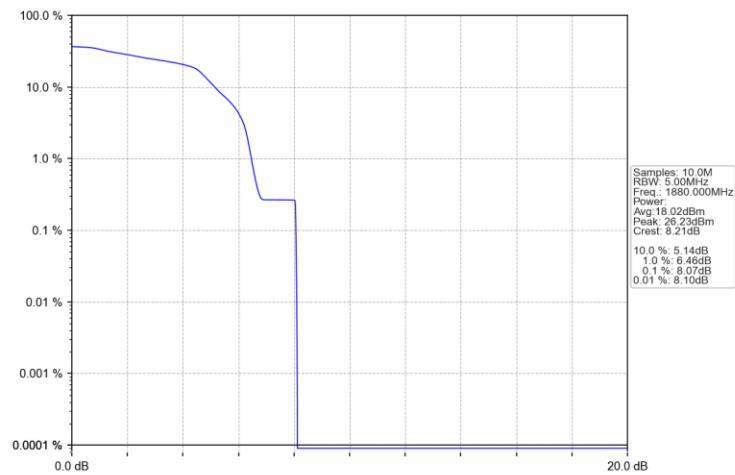
PCS1900 GPRS HCH 1909.8MHz 4 TX Slots NTNV



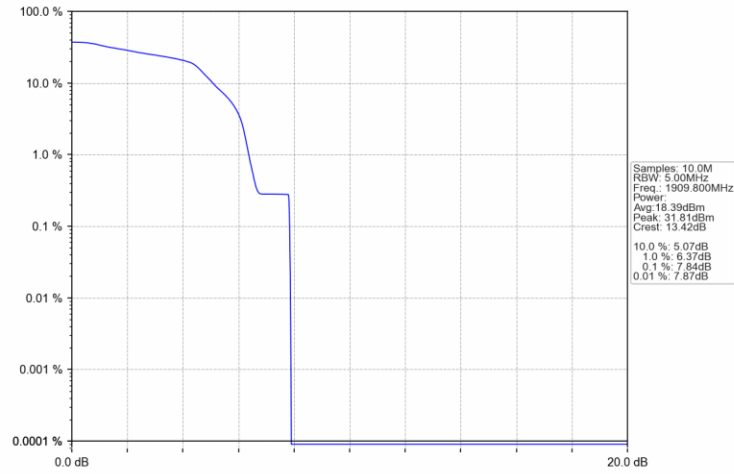
PCS1900 EGPRS LCH 1850.2MHz 4 TX Slots NTN



PCS1900 EGPRS MCH 1880MHz 4 TX Slots NTN



PCS1900 EGPRS HCH 1909.8MHz 4 TX Slots NTNv



6. Spurious Emission

6.1 Test Result

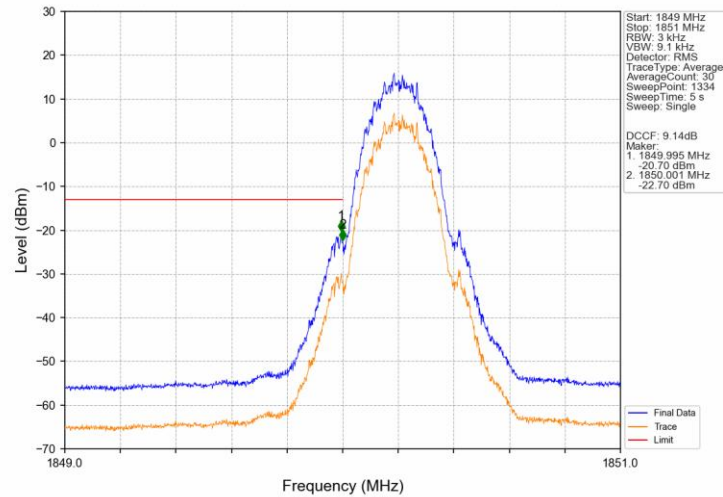
6.1.1 PCS1900

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

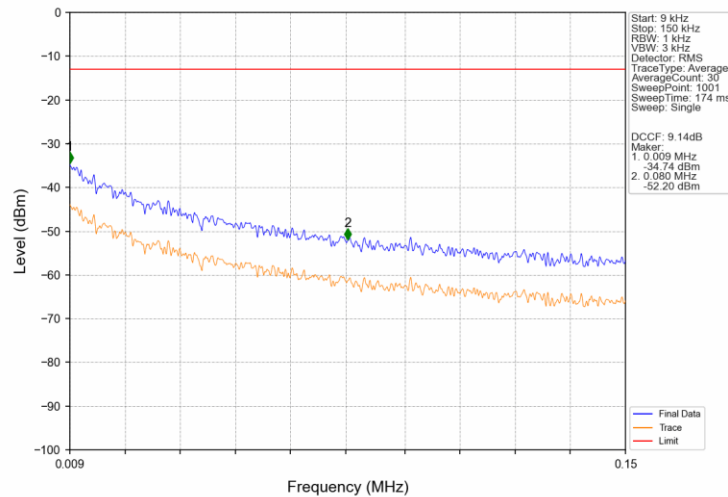
6.2 Test Graph

6.2.1 PCS1900

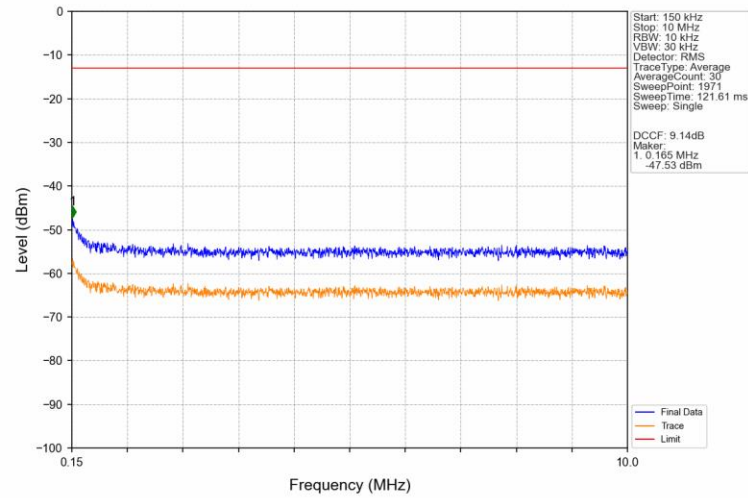
PCS1900_GSM_LCH_1850.2MHz_GSM_NTNV



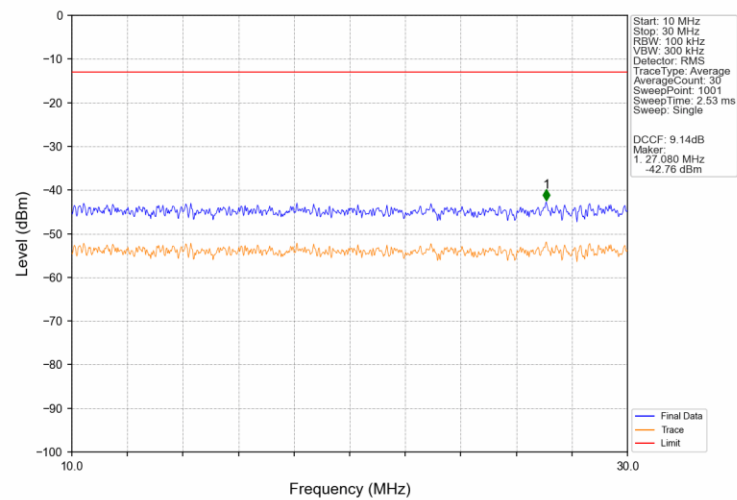
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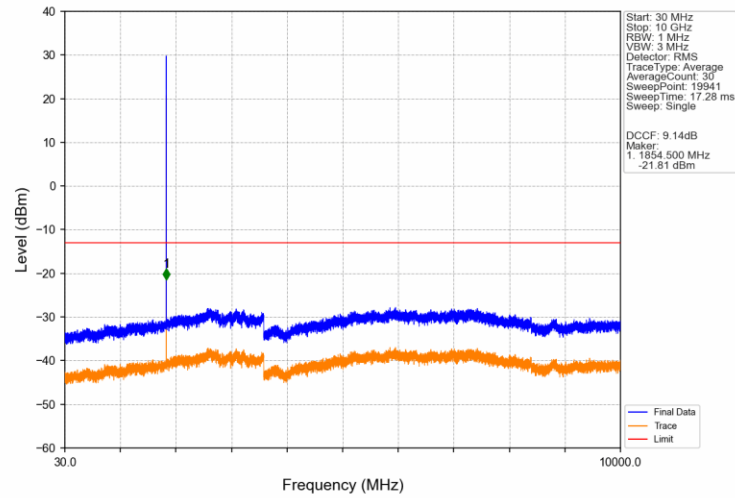
PCS1900 GSM LCH 1850.2MHz GSM NTNV



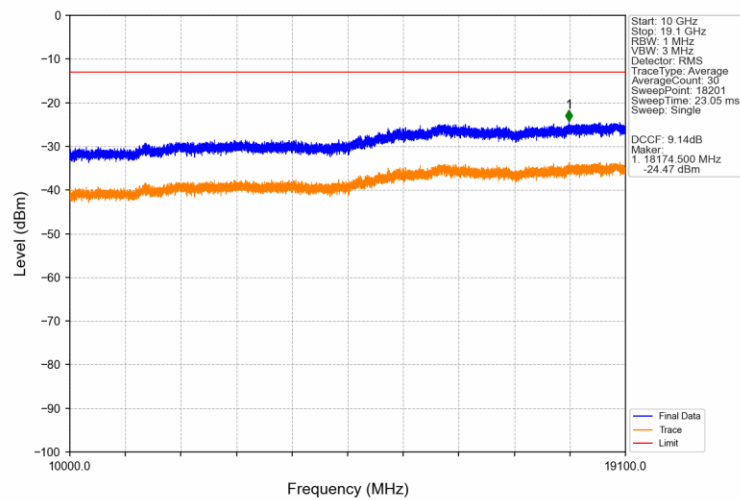
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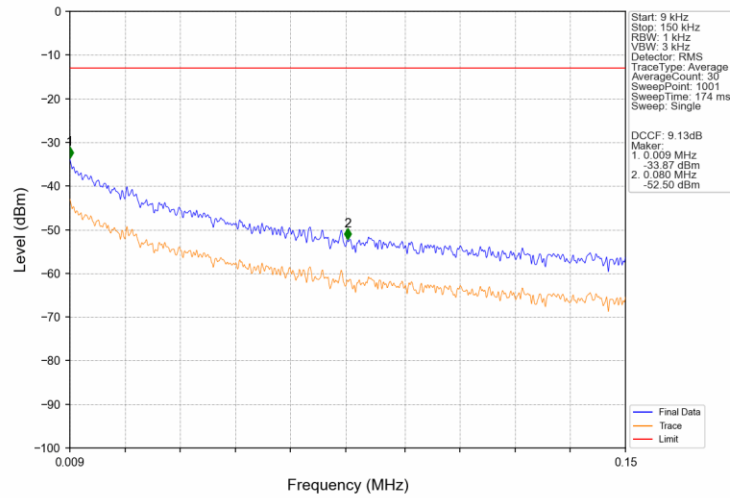
PCS1900 GSM LCH 1850.2MHz GSM NTN



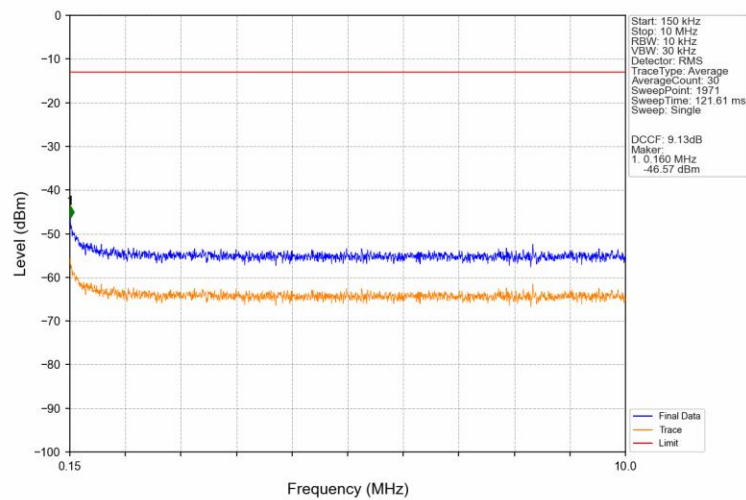
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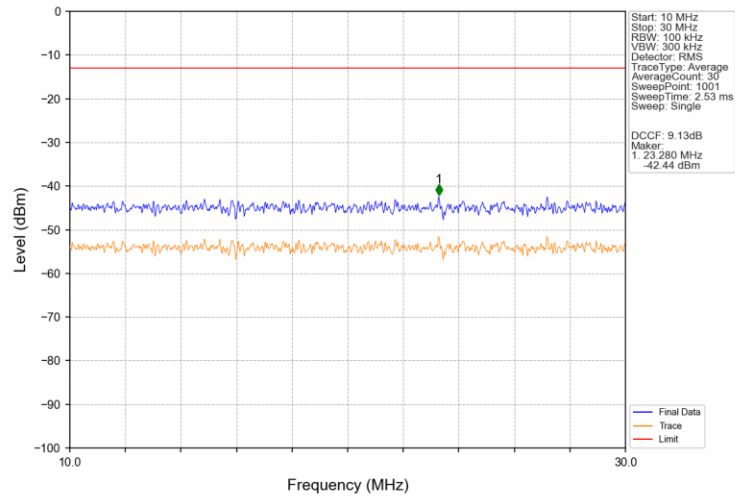
PCS1900 GSM MCH 1880MHz GSM NTNV



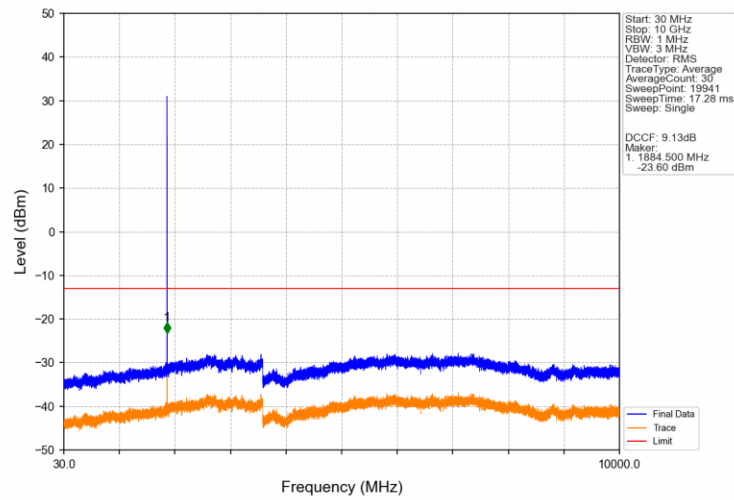
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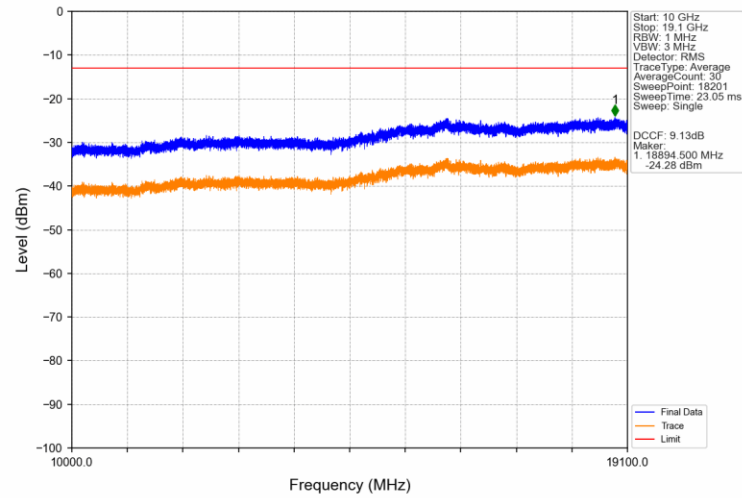
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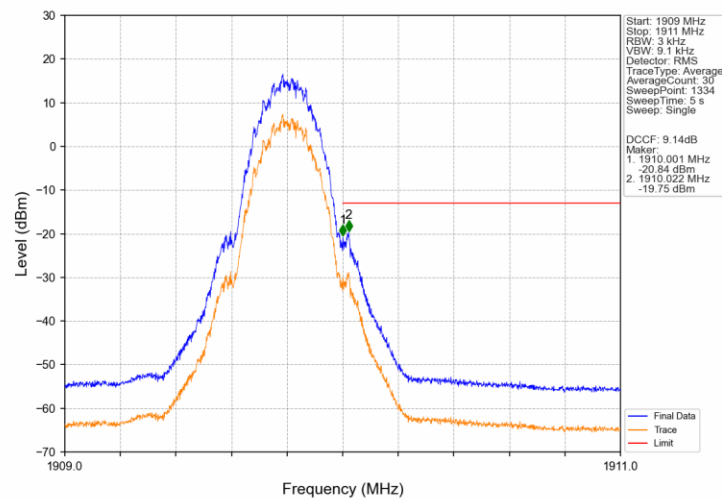
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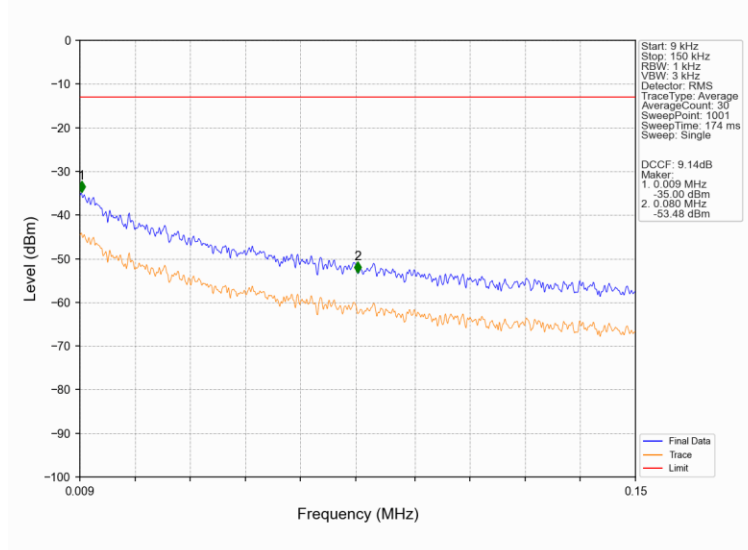
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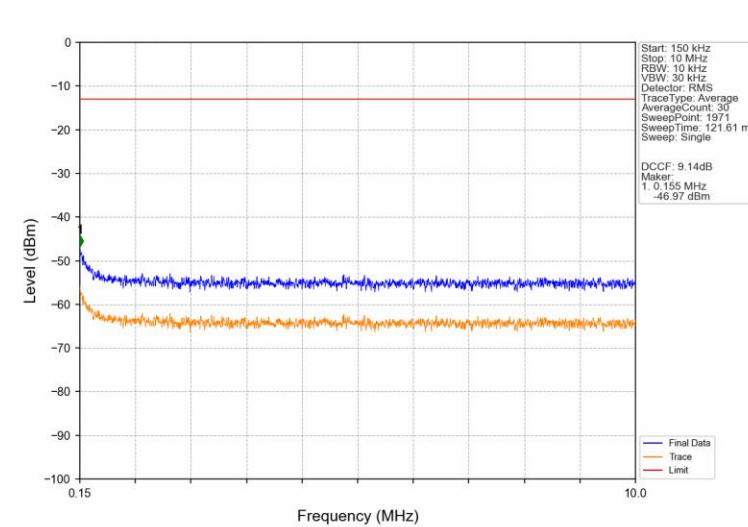
PCS1900 GSM HCH 1909.8MHz GSM NTNV



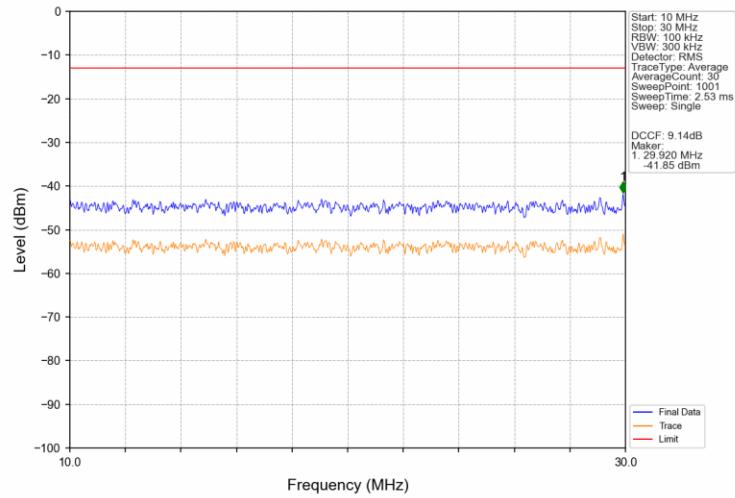
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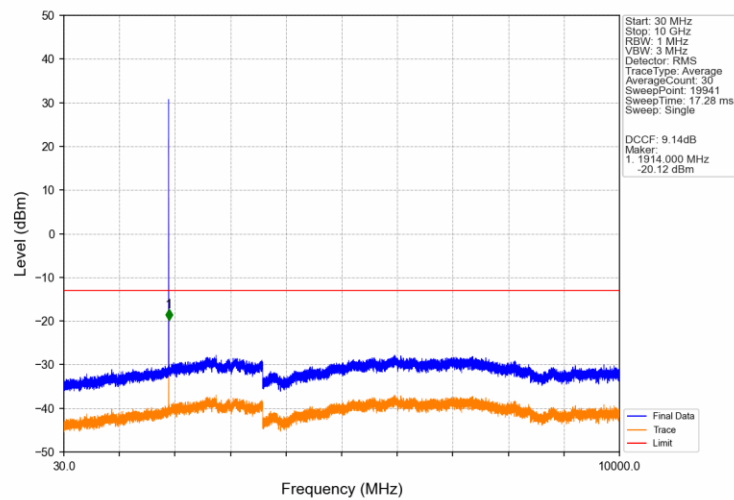
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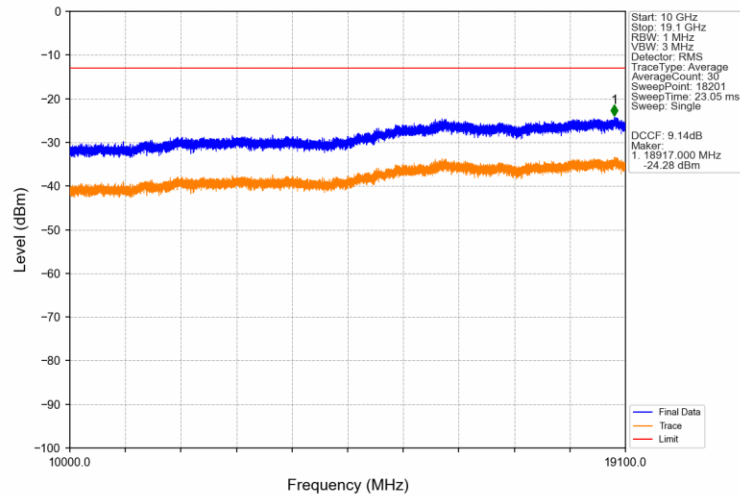
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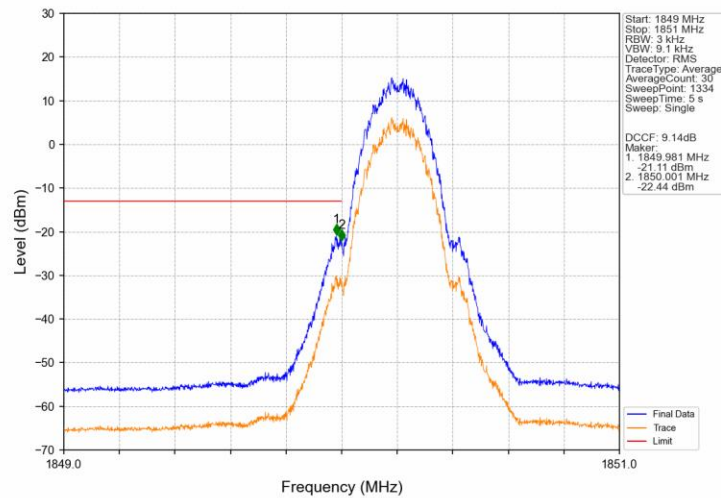
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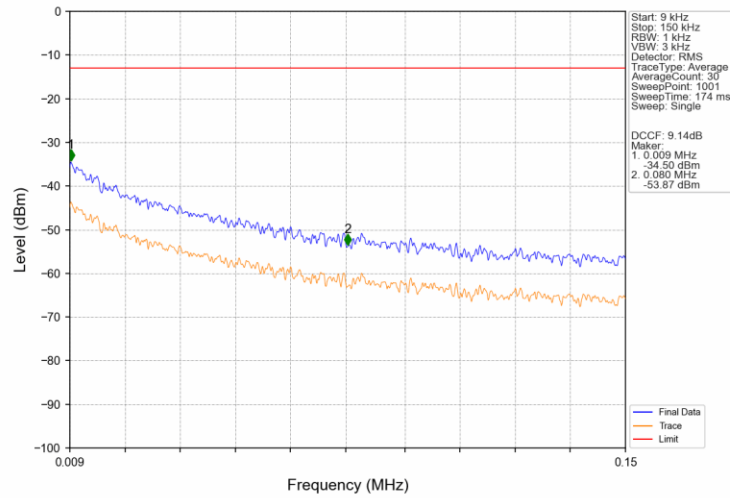
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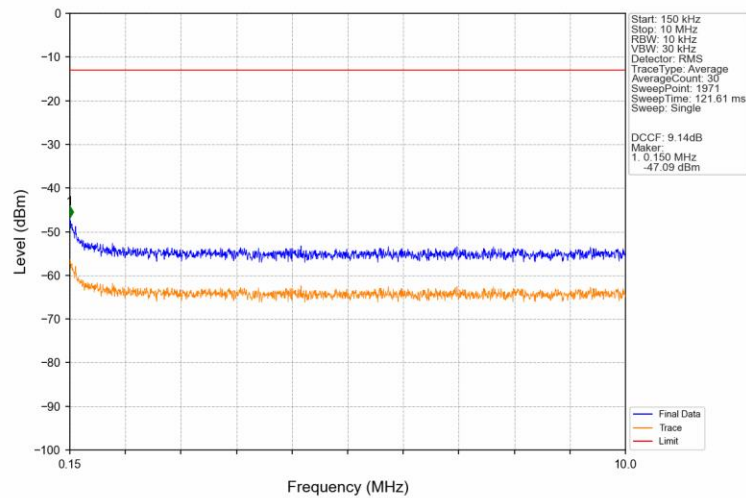
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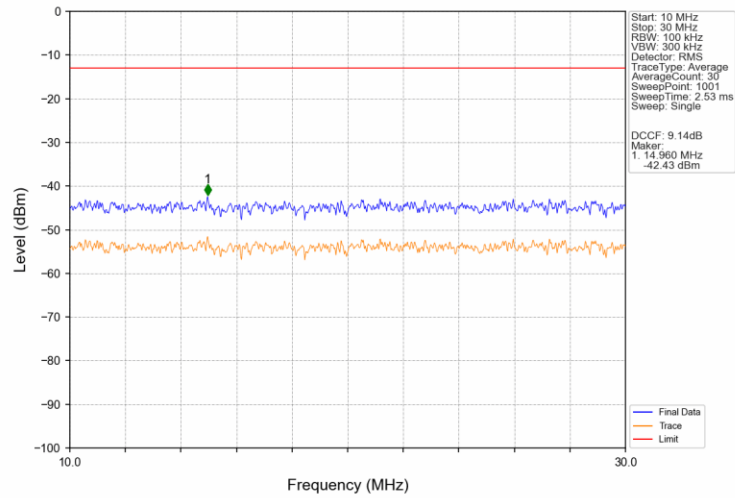
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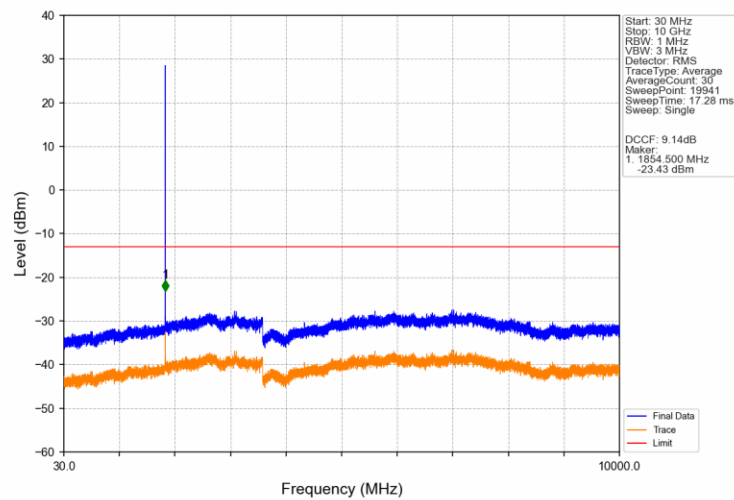
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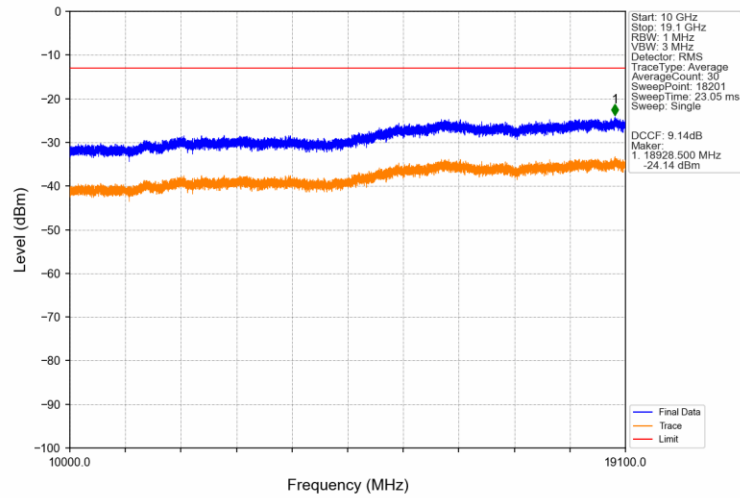
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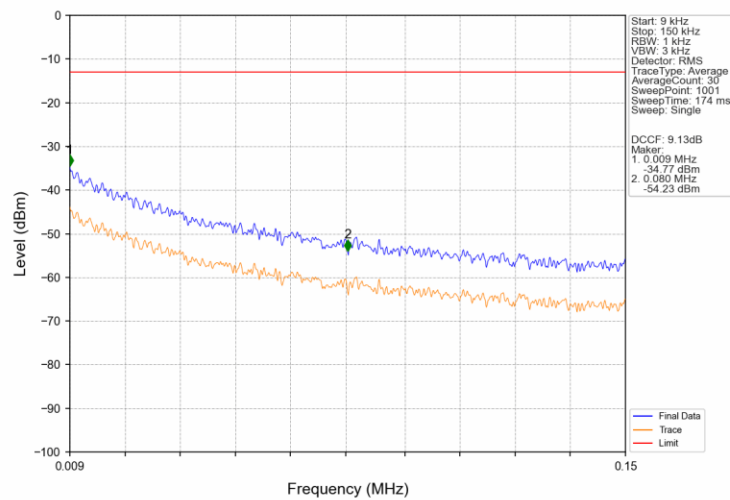
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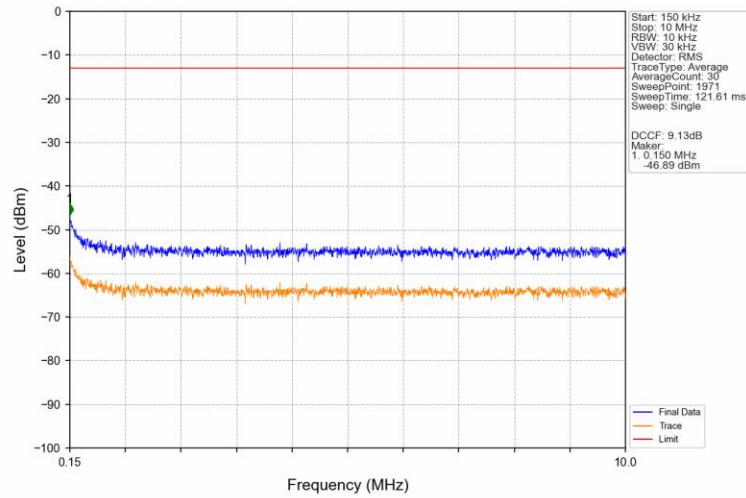
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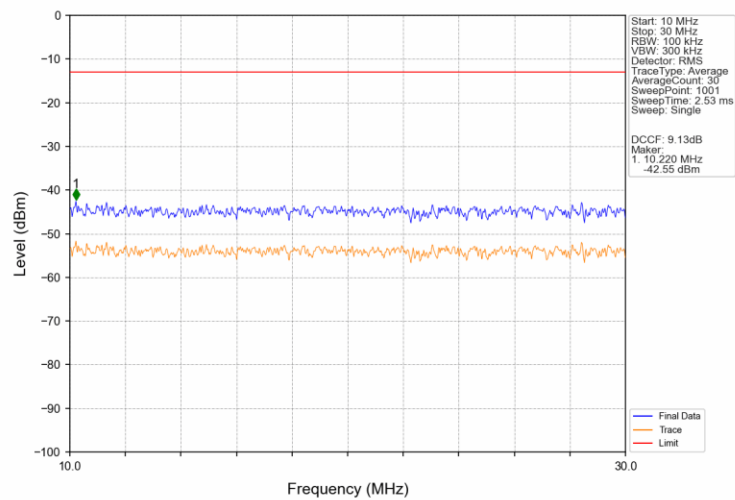
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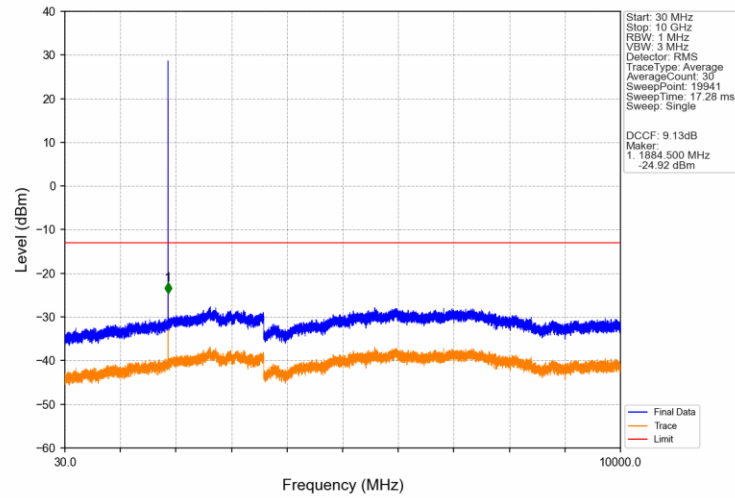
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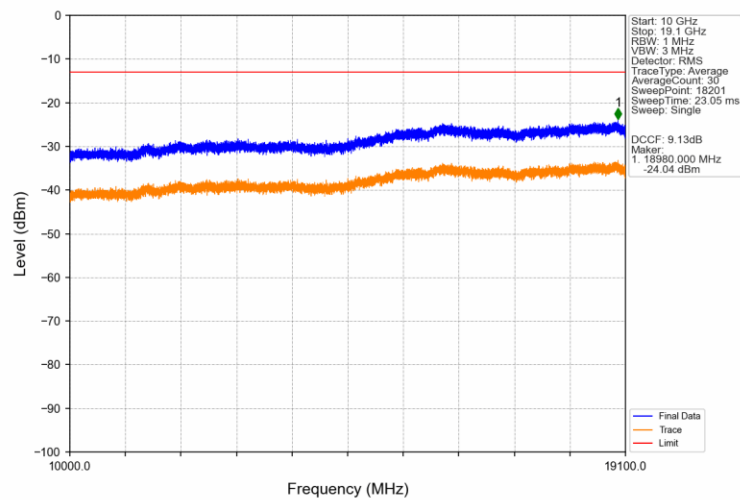
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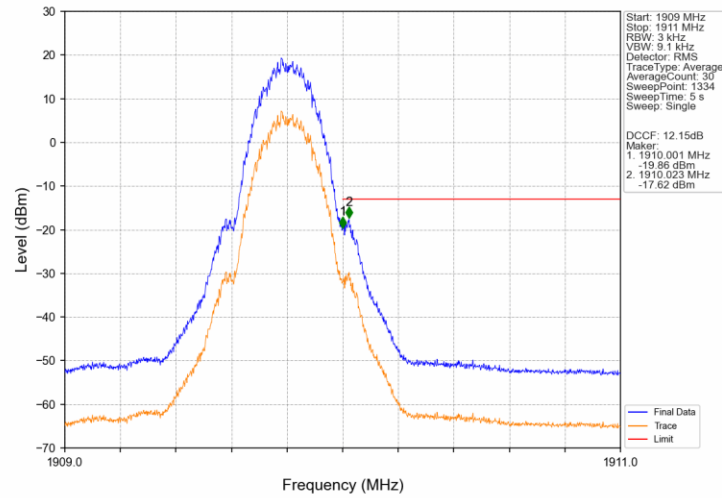
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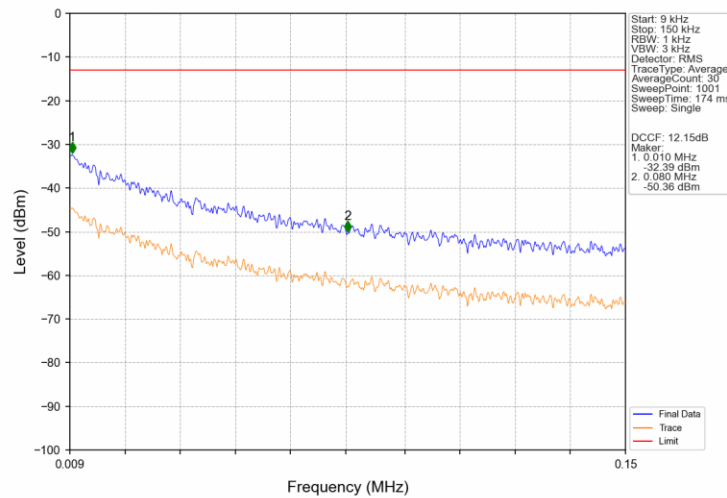
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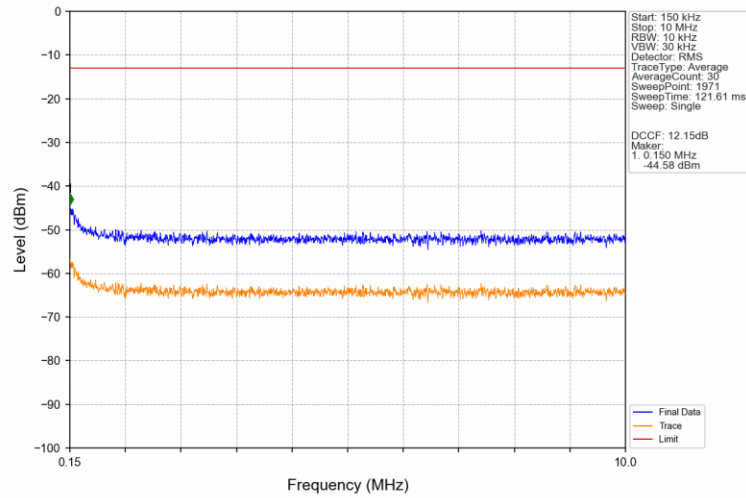
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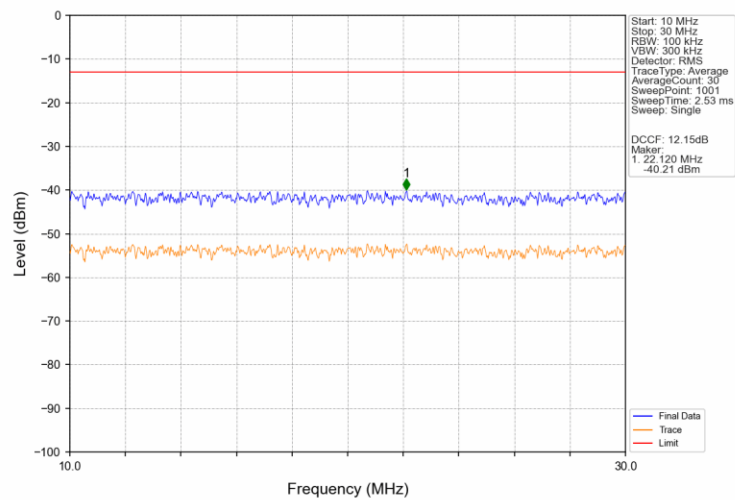
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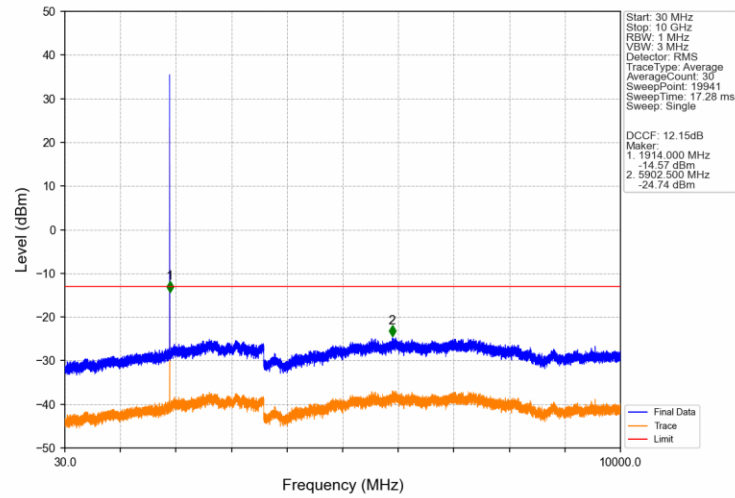
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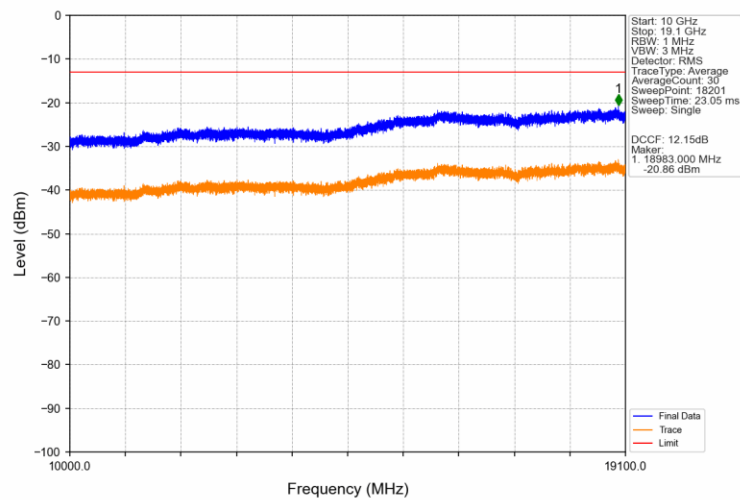
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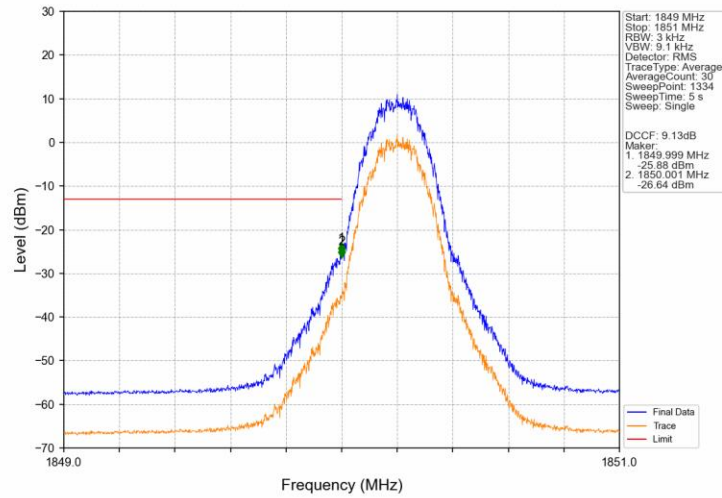
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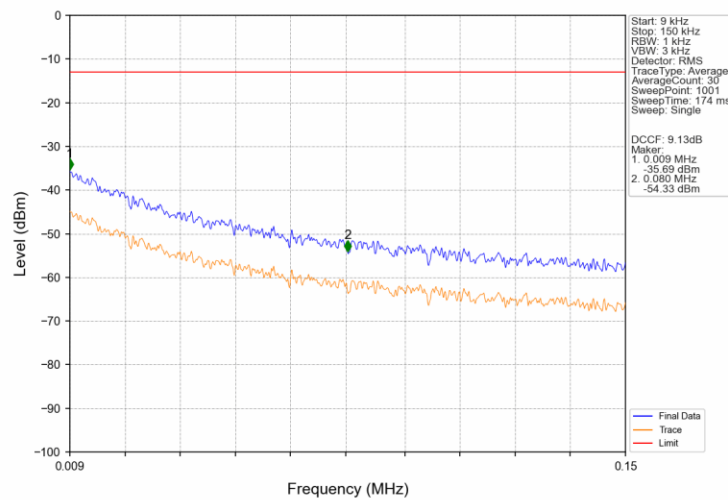
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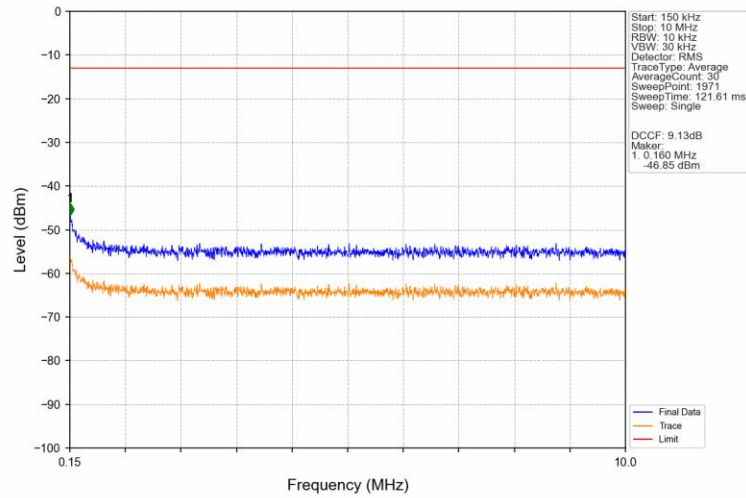
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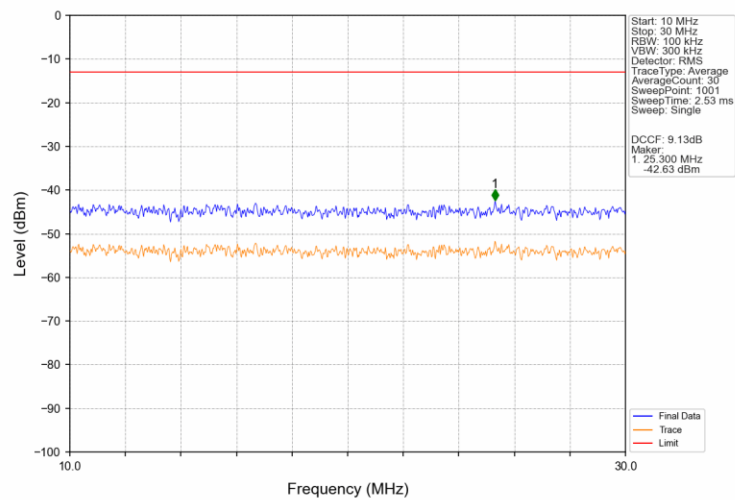
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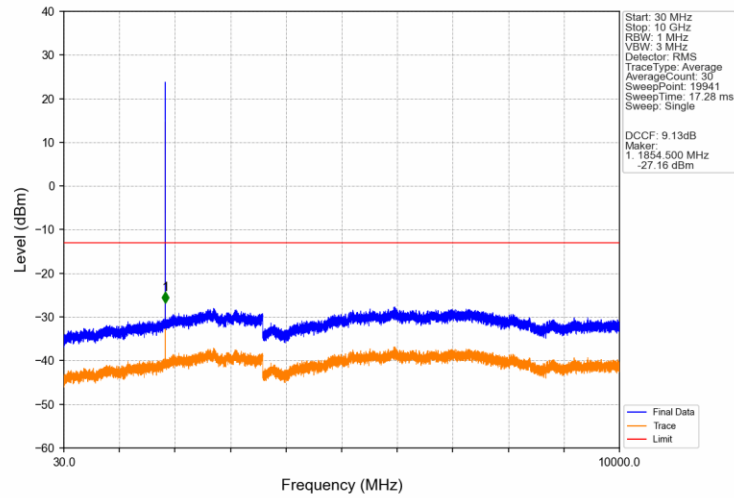
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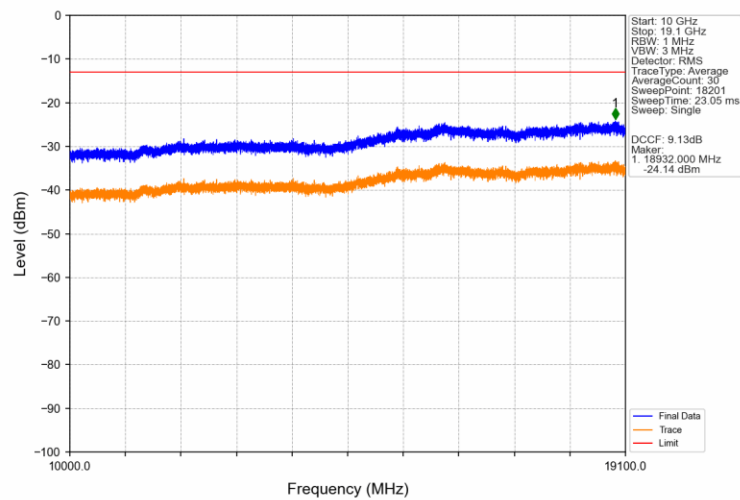
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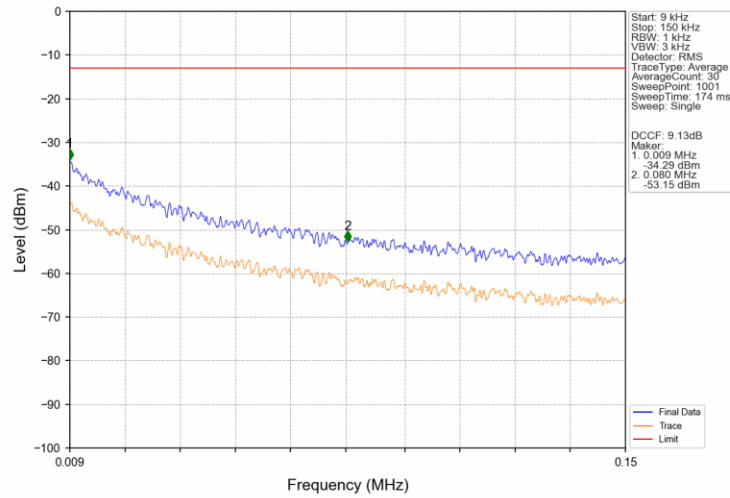
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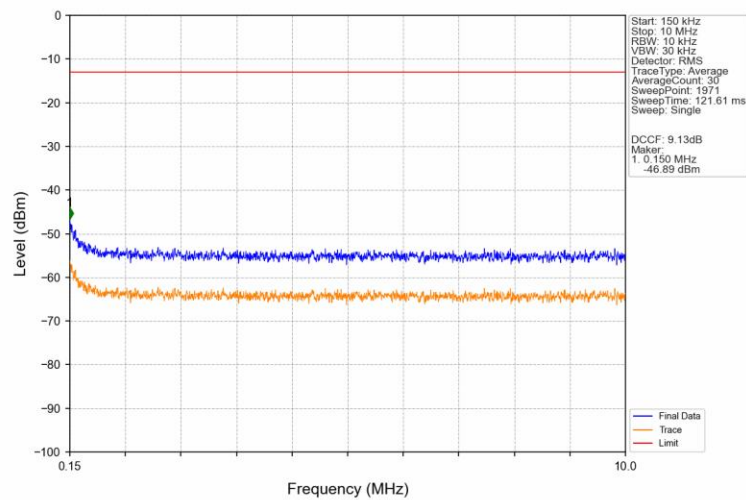
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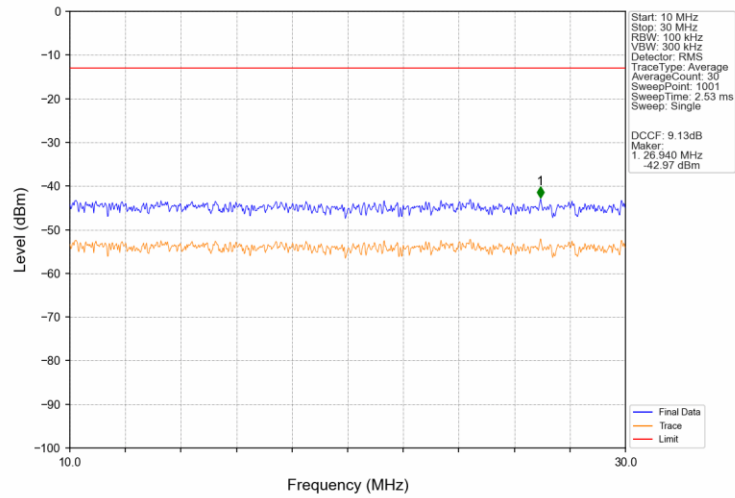
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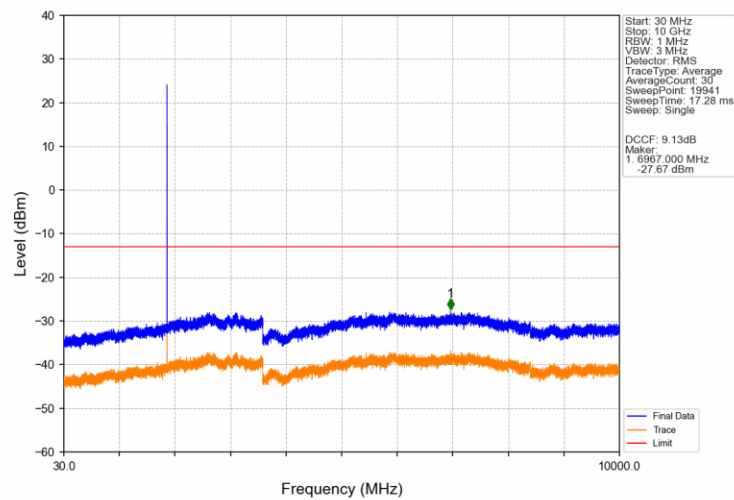
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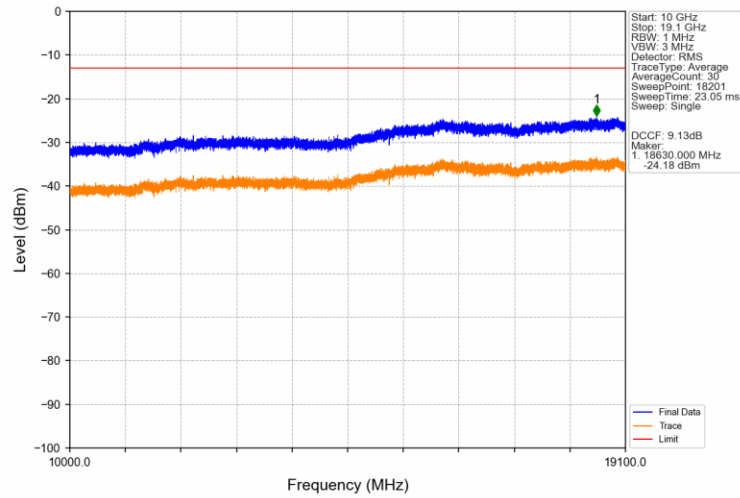
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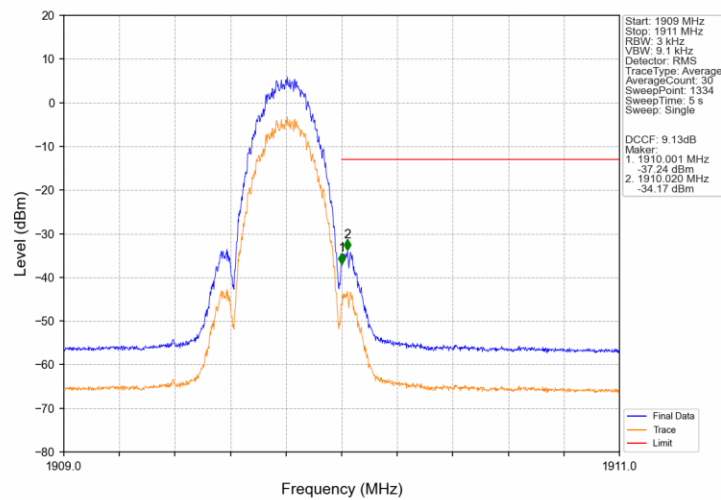
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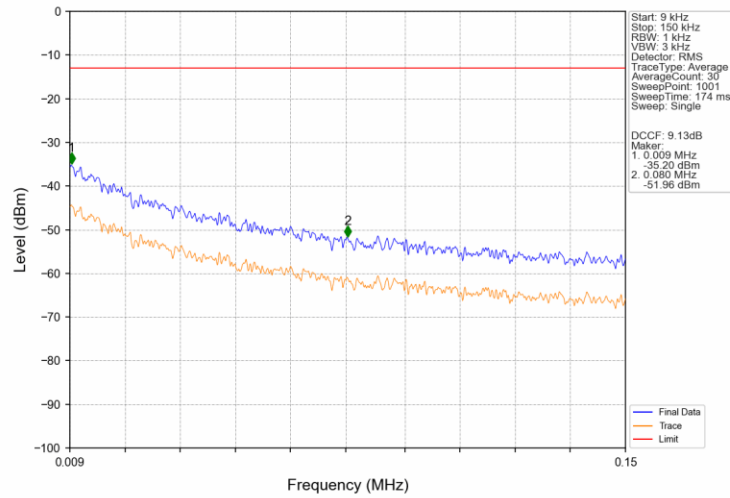
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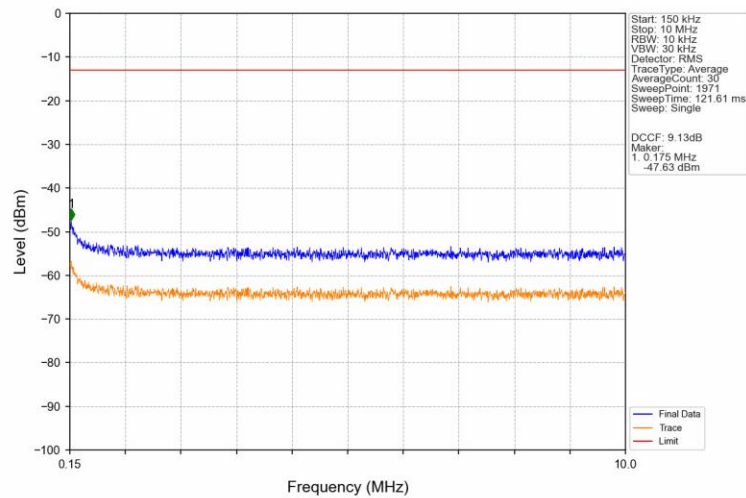
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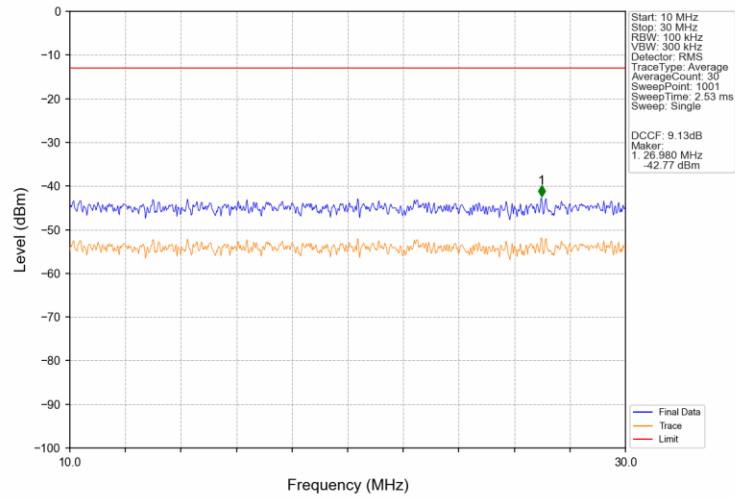
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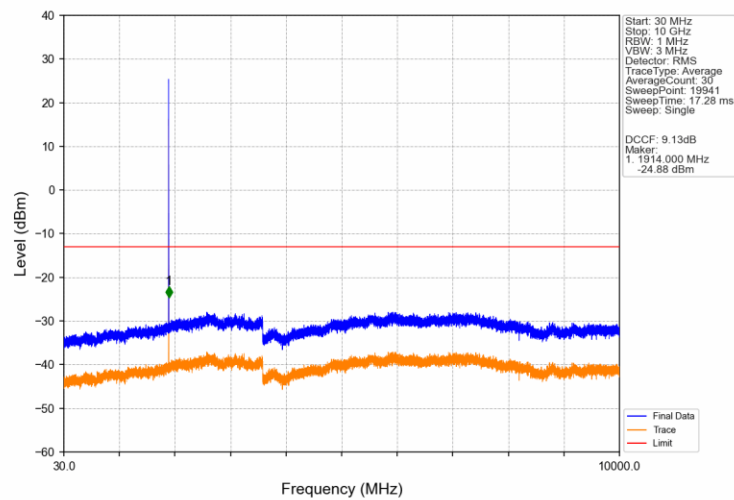
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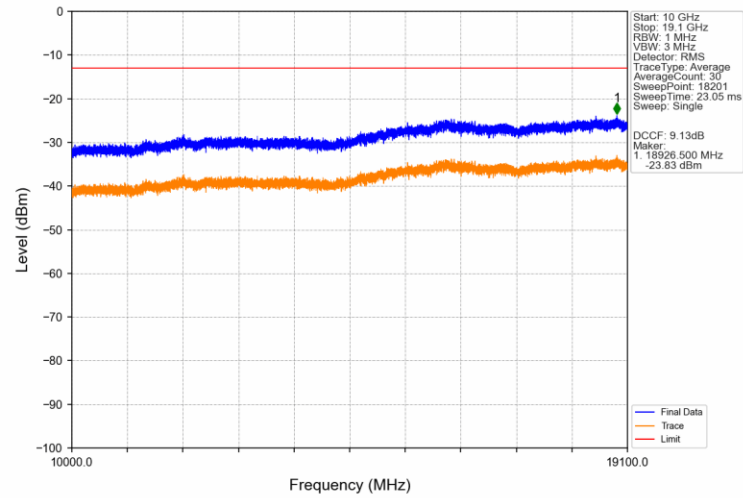
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PCS1900 EGPRS HCH 1909.8MHz 1 TX Slot NTN



PCS1900 EGPRS HCH 1909.8MHz 1 TX Slot NTN





7. Form731

7.1 Test Result

7.1.1 Form731_Power

Band	BW	Lower Freq	High Freq	MAX Power (W)	Value	Hz/ppm	Emission Designator	Rule Parts	MAX Power (dBm)
PCS1900	0.2	1850.2	1909.8	1.2560	0.0119	ppm	250KGXW	24E	30.99
PCS1900	0.2	1850.2	1909.8	0.5741	0.4547	ppm	277KG7W	24E	27.59

7.1.2 Form731_EIRP

Band	BW	Lower Freq	High Freq	MAX Power (W)	Value	Hz/ppm	Emission Designator	Rule Parts	MAX Power (dBm)
PCS1900	0.2	1850.2	1909.8	1.6558	0.0119	ppm	250KGXW	24E	32.19
PCS1900	0.2	1850.2	1909.8	0.7568	0.4547	ppm	277KG7W	24E	28.79

***** End of Report *****