

1. Effective (Isotropic) Radiated Power Output Data

1.1 PCS1900_EIRP

1.1.1 Test Result

Band: PCS1900									
ENV	Mode		Frequency (MHz)	Conducted Power (dBm)	Gain (dBi)	EIRP (dBm)		Verdict	
	Network	Subset				Result	Limit		
NTNV	GSM	GSM	1850.2	28.55	0.12	28.67	<=33.01	Pass	
			1880	27.87	0.12	27.99	<=33.01	Pass	
			1909.8	27.35	0.12	27.47	<=33.01	Pass	
	GPRS	1 TX Slot	1850.2	28.58	0.12	28.70	<=33.01	Pass	
			2 TX Slots	1850.2	25.49	0.12	25.61	<=33.01	Pass
			3 TX Slots	1850.2	23.90	0.12	24.02	<=33.01	Pass
			4 TX Slots	1850.2	21.87	0.12	21.99	<=33.01	Pass
		2 TX Slots	1880	27.82	0.12	27.94	<=33.01	Pass	
			1880	24.74	0.12	24.86	<=33.01	Pass	
			1880	23.13	0.12	23.25	<=33.01	Pass	
			1880	21.10	0.12	21.22	<=33.01	Pass	
		3 TX Slots	1909.8	27.29	0.12	27.41	<=33.01	Pass	
			1909.8	24.11	0.12	24.23	<=33.01	Pass	
			1909.8	22.51	0.12	22.63	<=33.01	Pass	
			1909.8	20.53	0.12	20.65	<=33.01	Pass	
	EGPRS	1 TX Slot	1850.2	24.01	0.12	24.13	<=33.01	Pass	
			1850.2	22.17	0.12	22.29	<=33.01	Pass	
			1850.2	19.67	0.12	19.79	<=33.01	Pass	
			1850.2	17.29	0.12	17.41	<=33.01	Pass	
		2 TX Slots	1880	23.60	0.12	23.72	<=33.01	Pass	
			1880	22.01	0.12	22.13	<=33.01	Pass	
			1880	19.87	0.12	19.99	<=33.01	Pass	
			1880	17.58	0.12	17.70	<=33.01	Pass	
		3 TX Slots	1909.8	23.60	0.12	23.72	<=33.01	Pass	
			1909.8	22.04	0.12	22.16	<=33.01	Pass	
			1909.8	19.92	0.12	20.04	<=33.01	Pass	
			1909.8	17.28	0.12	17.40	<=33.01	Pass	

Note1: EIRP=Conducted Power+Antenna Gain

2. Frequency Stability

2.1 PCS1900

2.1.1 Test Result

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	-1.130	-0.0006	-2.5 to 2.5	Pass
			3.85	7.813	0.0042	-2.5 to 2.5	Pass
			4.43	11.332	0.0061	-2.5 to 2.5	Pass
		-30	3.85	7.135	0.0039	-2.5 to 2.5	Pass
			-20	3.85	7.619	0.0041	-2.5 to 2.5
		-10	3.85	9.686	0.0052	-2.5 to 2.5	Pass
		0	3.85	16.208	0.0088	-2.5 to 2.5	Pass
		10	3.85	6.360	0.0034	-2.5 to 2.5	Pass

	1880	30	3.85	6.780	0.0037	-2.5 to 2.5	Pass	
		40	3.85	8.588	0.0046	-2.5 to 2.5	Pass	
		50	3.85	7.555	0.0041	-2.5 to 2.5	Pass	
		20	3.27	14.173	0.0075	-2.5 to 2.5	Pass	
			3.85	4.778	0.0025	-2.5 to 2.5	Pass	
			4.43	11.074	0.0059	-2.5 to 2.5	Pass	
		-30	3.85	3.777	0.0020	-2.5 to 2.5	Pass	
		-20	3.85	-5.682	-0.0030	-2.5 to 2.5	Pass	
		-10	3.85	1.453	0.0008	-2.5 to 2.5	Pass	
		0	3.85	4.197	0.0022	-2.5 to 2.5	Pass	
		10	3.85	-2.389	-0.0013	-2.5 to 2.5	Pass	
		30	3.85	0.743	0.0004	-2.5 to 2.5	Pass	
	40	3.85	15.174	0.0081	-2.5 to 2.5	Pass		
	50	3.85	10.041	0.0053	-2.5 to 2.5	Pass		
	1909.8	20	3.27	1.582	0.0008	-2.5 to 2.5	Pass	
			3.85	6.974	0.0037	-2.5 to 2.5	Pass	
			4.43	2.454	0.0013	-2.5 to 2.5	Pass	
		-30	3.85	1.614	0.0008	-2.5 to 2.5	Pass	
		-20	3.85	9.395	0.0049	-2.5 to 2.5	Pass	
		-10	3.85	8.007	0.0042	-2.5 to 2.5	Pass	
		0	3.85	4.681	0.0025	-2.5 to 2.5	Pass	
10		3.85	12.947	0.0068	-2.5 to 2.5	Pass		
30		3.85	13.108	0.0069	-2.5 to 2.5	Pass		
40		3.85	12.333	0.0065	-2.5 to 2.5	Pass		
50		3.85	11.494	0.0060	-2.5 to 2.5	Pass		
GPRS		1850.2	20	3.27	15.400	0.0083	-2.5 to 2.5	Pass
	3.85			17.499	0.0095	-2.5 to 2.5	Pass	
	4.43			18.597	0.0101	-2.5 to 2.5	Pass	
	-30		3.85	14.722	0.0080	-2.5 to 2.5	Pass	
	-20		3.85	19.242	0.0104	-2.5 to 2.5	Pass	
	-10		3.85	8.201	0.0044	-2.5 to 2.5	Pass	
	0		3.85	11.429	0.0062	-2.5 to 2.5	Pass	
	10		3.85	-16.337	-0.0088	-2.5 to 2.5	Pass	
	30		3.85	14.625	0.0079	-2.5 to 2.5	Pass	
	40		3.85	10.235	0.0055	-2.5 to 2.5	Pass	
	50		3.85	17.402	0.0094	-2.5 to 2.5	Pass	
	1880		20	3.27	13.463	0.0072	-2.5 to 2.5	Pass
		3.85		6.845	0.0036	-2.5 to 2.5	Pass	
		4.43		0.194	0.0001	-2.5 to 2.5	Pass	
		-30	3.85	6.522	0.0035	-2.5 to 2.5	Pass	
		-20	3.85	20.211	0.0108	-2.5 to 2.5	Pass	
		-10	3.85	7.103	0.0038	-2.5 to 2.5	Pass	
		0	3.85	11.784	0.0063	-2.5 to 2.5	Pass	
		10	3.85	13.721	0.0073	-2.5 to 2.5	Pass	
		30	3.85	5.069	0.0027	-2.5 to 2.5	Pass	
		40	3.85	10.945	0.0058	-2.5 to 2.5	Pass	
		50	3.85	17.176	0.0091	-2.5 to 2.5	Pass	
		1909.8	20	3.27	10.364	0.0054	-2.5 to 2.5	Pass
	3.85			9.944	0.0052	-2.5 to 2.5	Pass	
	4.43			17.467	0.0091	-2.5 to 2.5	Pass	
	-30		3.85	27.701	0.0145	-2.5 to 2.5	Pass	
	-20		3.85	26.765	0.0140	-2.5 to 2.5	Pass	
	-10		3.85	5.585	0.0029	-2.5 to 2.5	Pass	
	0		3.85	11.106	0.0058	-2.5 to 2.5	Pass	
	10		3.85	-0.807	-0.0004	-2.5 to 2.5	Pass	
	30		3.85	2.615	0.0014	-2.5 to 2.5	Pass	
	40		3.85	9.815	0.0051	-2.5 to 2.5	Pass	
	50		3.85	11.687	0.0061	-2.5 to 2.5	Pass	
	EGPRS		1850.2	20	3.27	15.691	0.0085	-2.5 to 2.5

			3.85	15.400	0.0083	-2.5 to 2.5	Pass	
			4.43	-1.550	-0.0008	-2.5 to 2.5	Pass	
		-30	3.85	12.398	0.0067	-2.5 to 2.5	Pass	
		-20	3.85	12.333	0.0067	-2.5 to 2.5	Pass	
		-10	3.85	16.304	0.0088	-2.5 to 2.5	Pass	
		0	3.85	2.647	0.0014	-2.5 to 2.5	Pass	
		10	3.85	17.693	0.0096	-2.5 to 2.5	Pass	
		30	3.85	2.421	0.0013	-2.5 to 2.5	Pass	
		40	3.85	-1.711	-0.0009	-2.5 to 2.5	Pass	
		50	3.85	17.338	0.0094	-2.5 to 2.5	Pass	
	1880	20		3.27	10.170	0.0054	-2.5 to 2.5	Pass
				3.85	21.535	0.0115	-2.5 to 2.5	Pass
				4.43	18.209	0.0097	-2.5 to 2.5	Pass
		-30	3.85	9.783	0.0052	-2.5 to 2.5	Pass	
		-20	3.85	18.403	0.0098	-2.5 to 2.5	Pass	
		-10	3.85	2.034	0.0011	-2.5 to 2.5	Pass	
		0	3.85	7.975	0.0042	-2.5 to 2.5	Pass	
		10	3.85	1.840	0.0010	-2.5 to 2.5	Pass	
		30	3.85	11.978	0.0064	-2.5 to 2.5	Pass	
		40	3.85	12.721	0.0068	-2.5 to 2.5	Pass	
	50	3.85	19.178	0.0102	-2.5 to 2.5	Pass		
	1909.8	20		3.27	14.303	0.0075	-2.5 to 2.5	Pass
				3.85	22.213	0.0116	-2.5 to 2.5	Pass
				4.43	27.830	0.0146	-2.5 to 2.5	Pass
		-30	3.85	33.706	0.0176	-2.5 to 2.5	Pass	
		-20	3.85	-0.484	-0.0003	-2.5 to 2.5	Pass	
		-10	3.85	7.006	0.0037	-2.5 to 2.5	Pass	
		0	3.85	13.043	0.0068	-2.5 to 2.5	Pass	
10		3.85	10.590	0.0055	-2.5 to 2.5	Pass		
30		3.85	2.260	0.0012	-2.5 to 2.5	Pass		
40		3.85	13.011	0.0068	-2.5 to 2.5	Pass		
50	3.85	-1.614	-0.0008	-2.5 to 2.5	Pass			

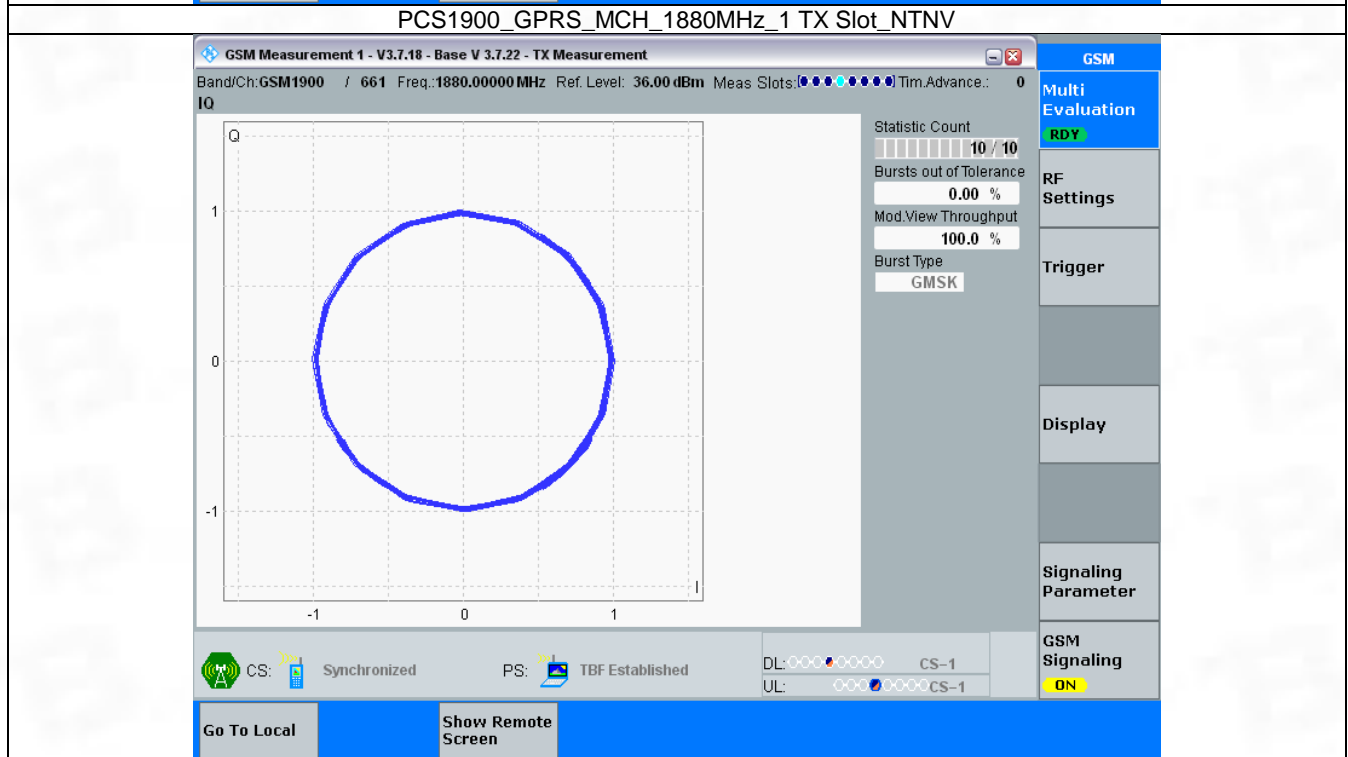
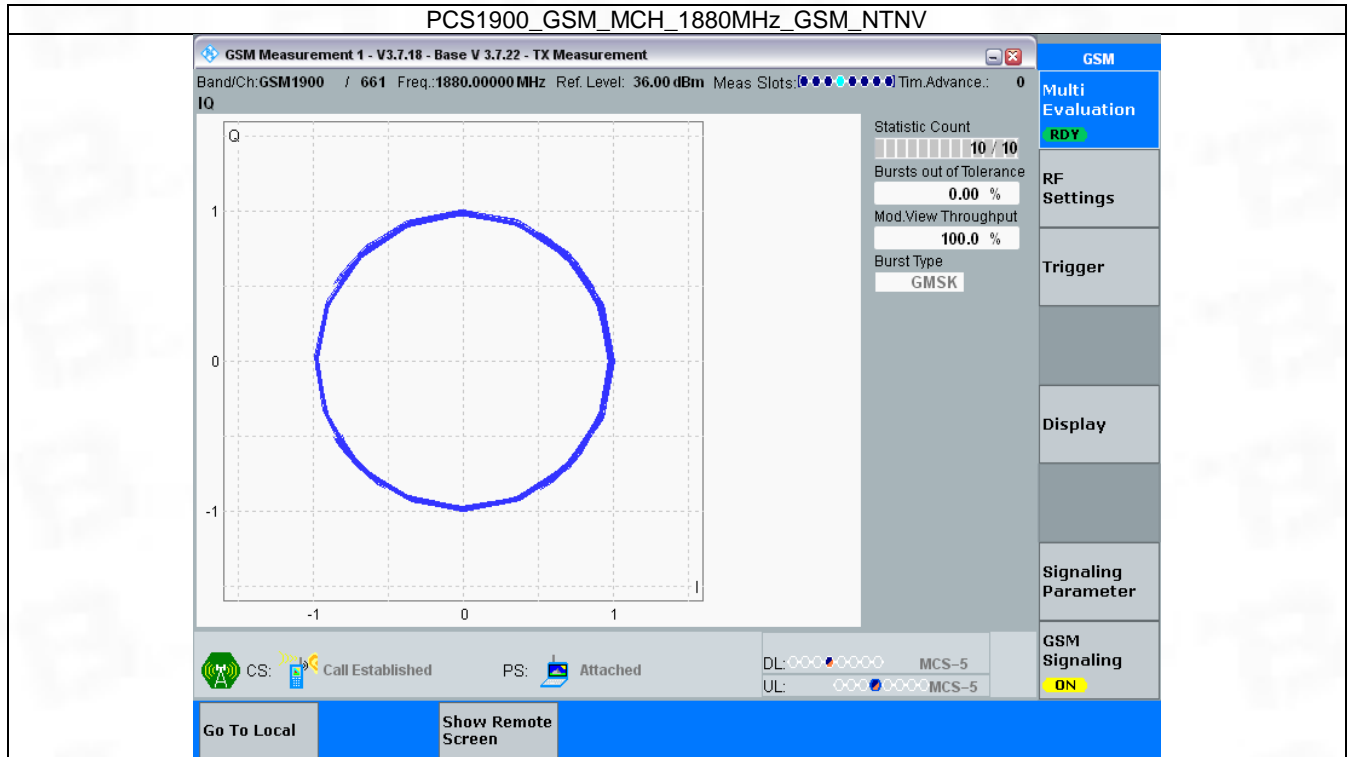
3. Modulation Characteristics

3.1 PCS1900

3.1.1 Test Result

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

3.1.2 Test Graph

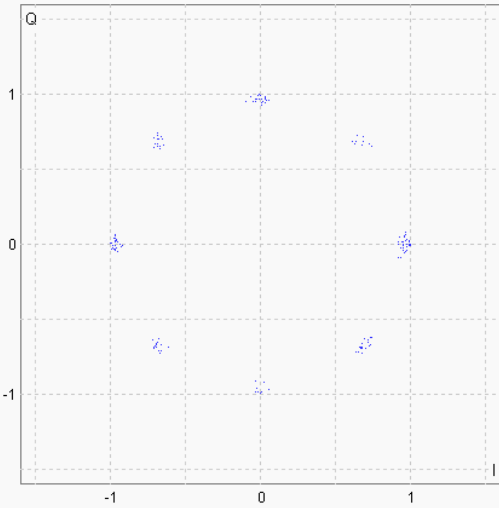


PCS1900_EGPRS_MCH_1880MHz_1 TX Slot_NTNV

GSM Measurement 1 - V3.7.18 - Base V 3.7.22 - TX Measurement

Band/Ch:GSM1900 / 661 Freq.:1880.00000 MHz Ref. Level: 39.23 dBm Meas Slots: [Progress Bar] Tim.Advance.: 0

IQ



Statistic Count: 10 / 10
Bursts out of Tolerance: 0.00 %
Mod.View Throughput: 100.0 %
Burst Type: 8PSK

CS: Synchronized **PS:** TBF Established

DL: [Progress Bar] MCS-5
UL: [Progress Bar] MCS-5

Go To Local **Show Remote Screen**

GSM
Multi Evaluation **RDY**
RF Settings
Trigger
Display
Signaling Parameter
GSM Signaling **ON**

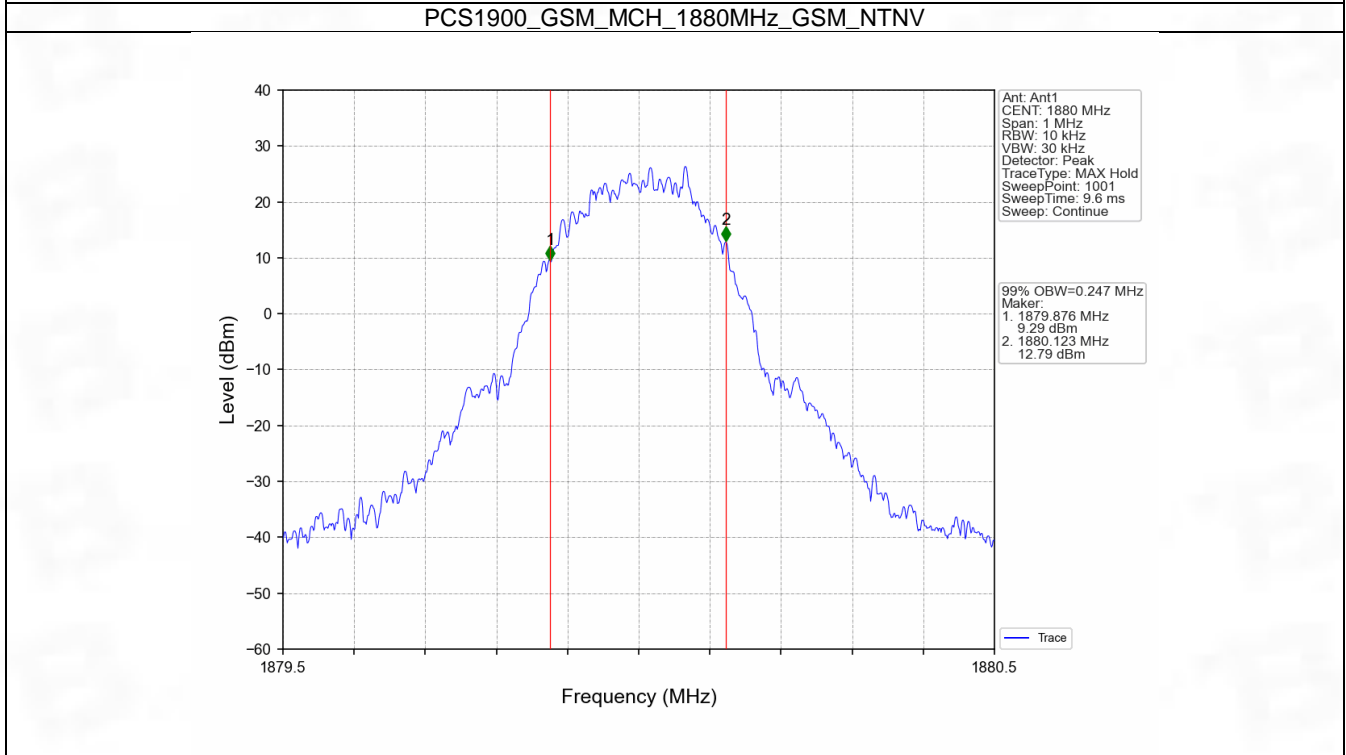
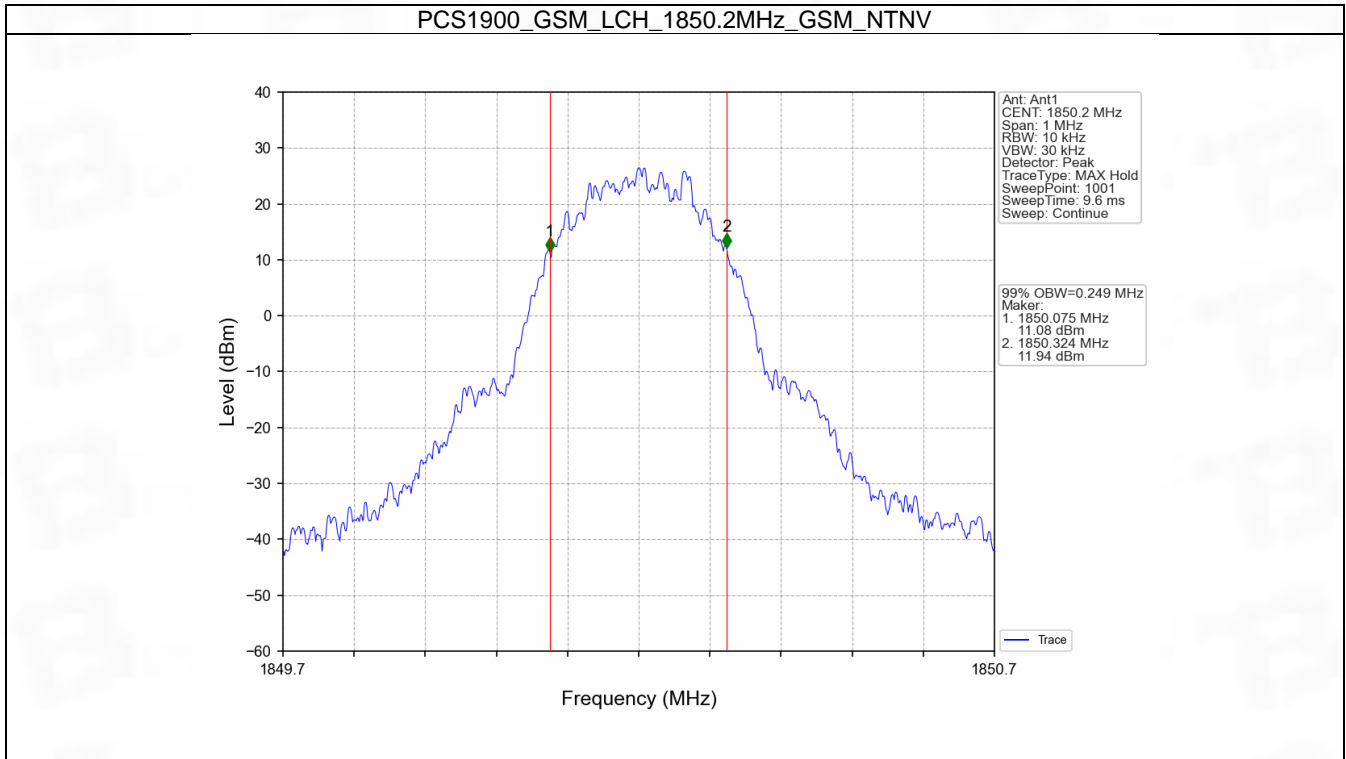
4. 99% & 26dB Bandwidth

4.1 PCS1900_OBW

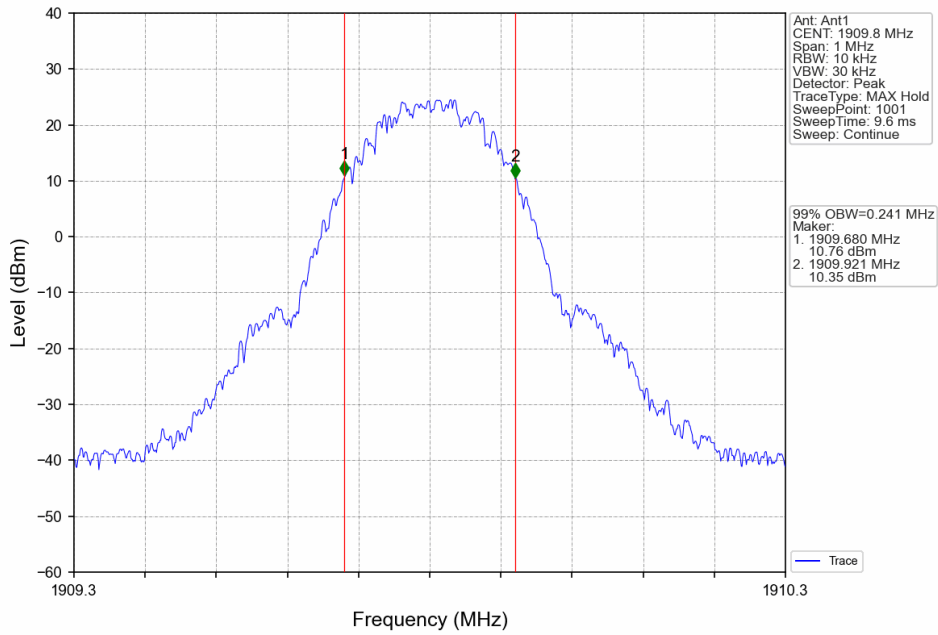
4.1.1 Test Result

Band: PCS1900					
ENV	Mode		Frequency (MHz)	99% Occupied Bandwidth (MHz)	Verdict
	Network	Subset		Result	
NTNV	GSM	GSM	1850.2	0.249	Pass
			1880	0.247	Pass
			1909.8	0.241	Pass
	GPRS	1 TX Slot	1850.2	0.253	Pass
			1880	0.247	Pass
			1909.8	0.247	Pass
	EGPRS	1 TX Slot	1850.2	0.249	Pass
			1880	0.243	Pass
			1909.8	0.237	Pass

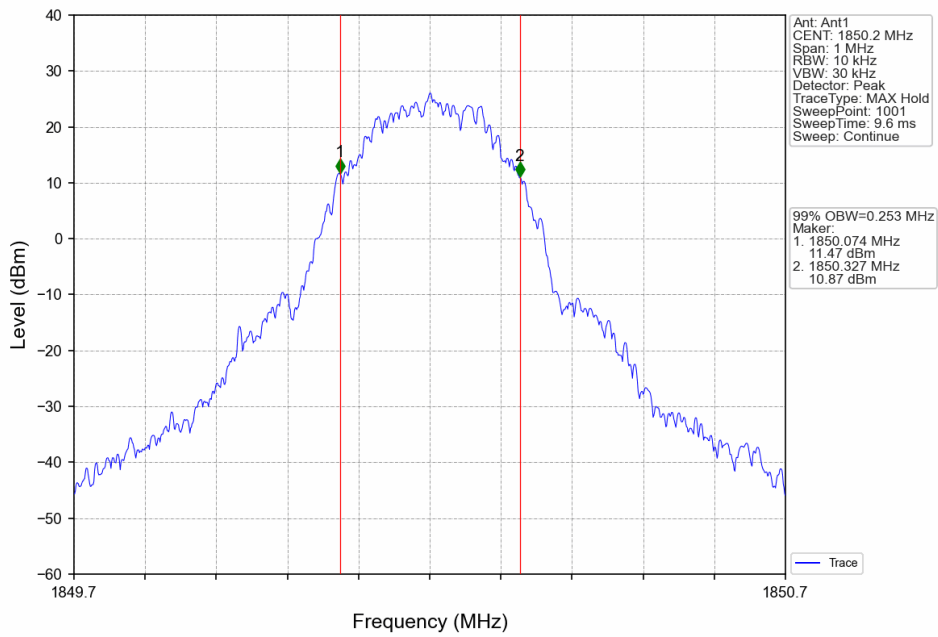
4.1.2 Test Graph



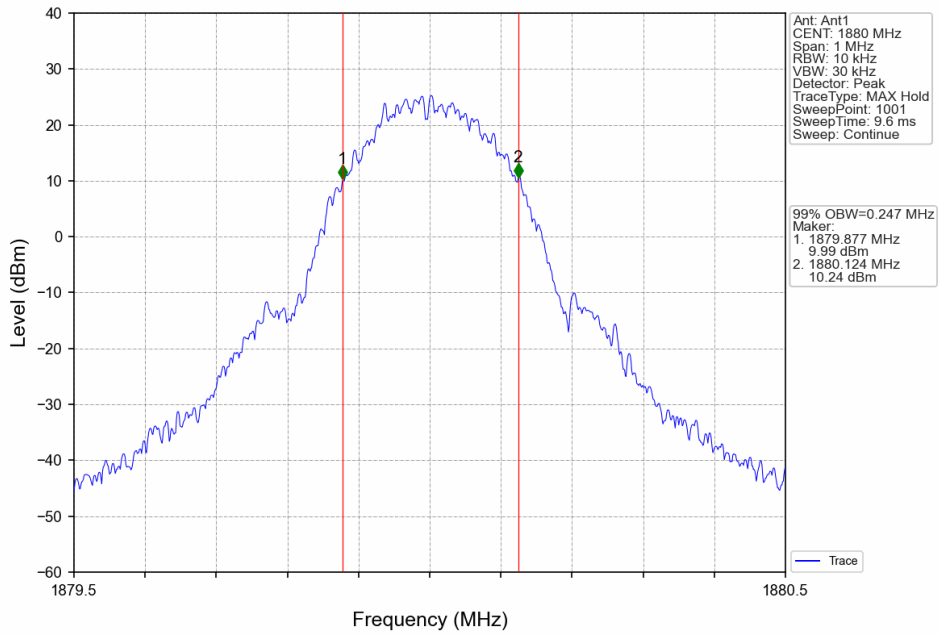
PCS1900_GSM_HCH_1909.8MHz_GSM_NTNV



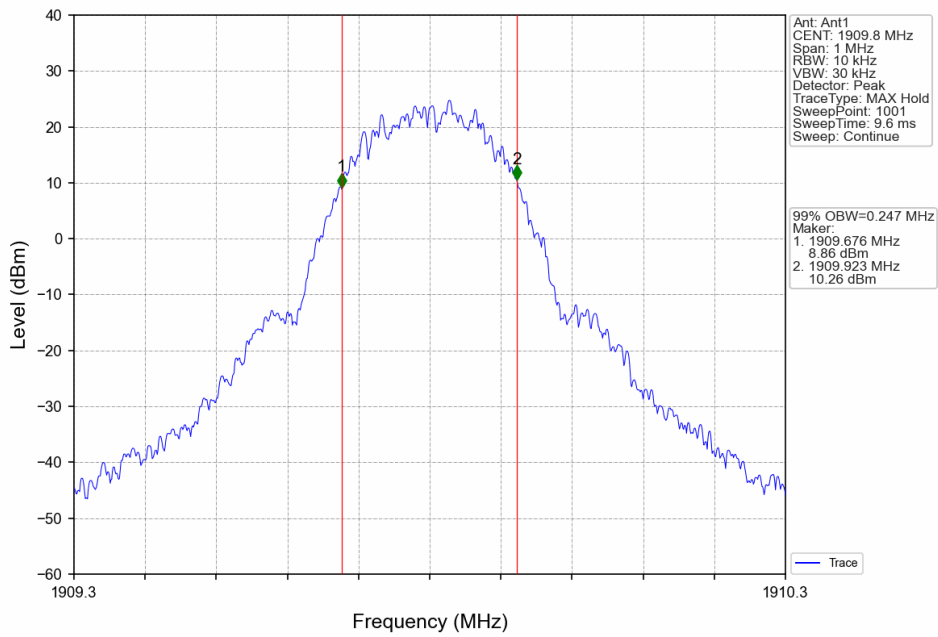
PCS1900_GPRS_LCH_1850.2MHz_1 TX Slot_NTNV



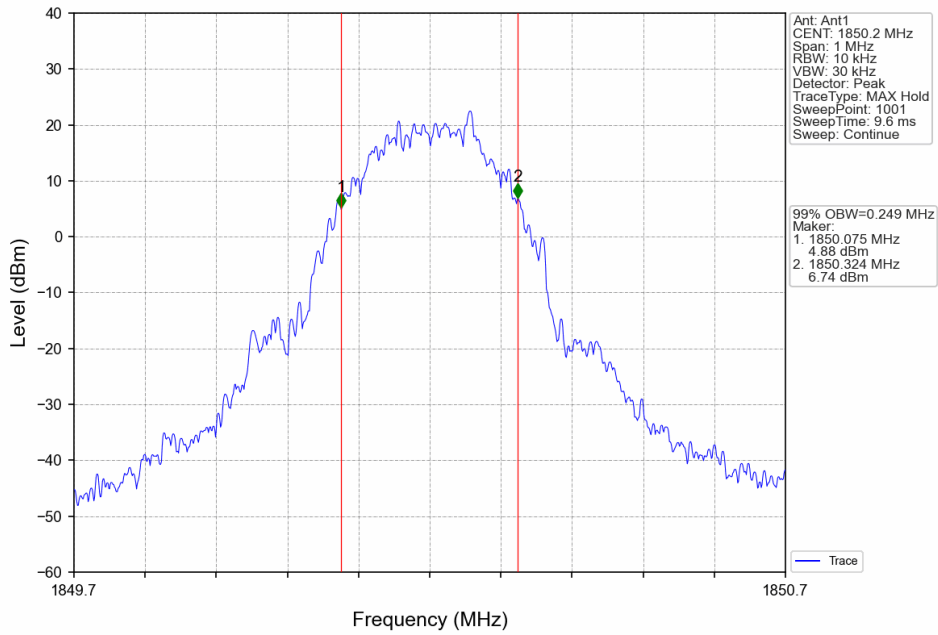
PCS1900_GPRS_MCH_1880MHz_1 TX Slot_NTNV



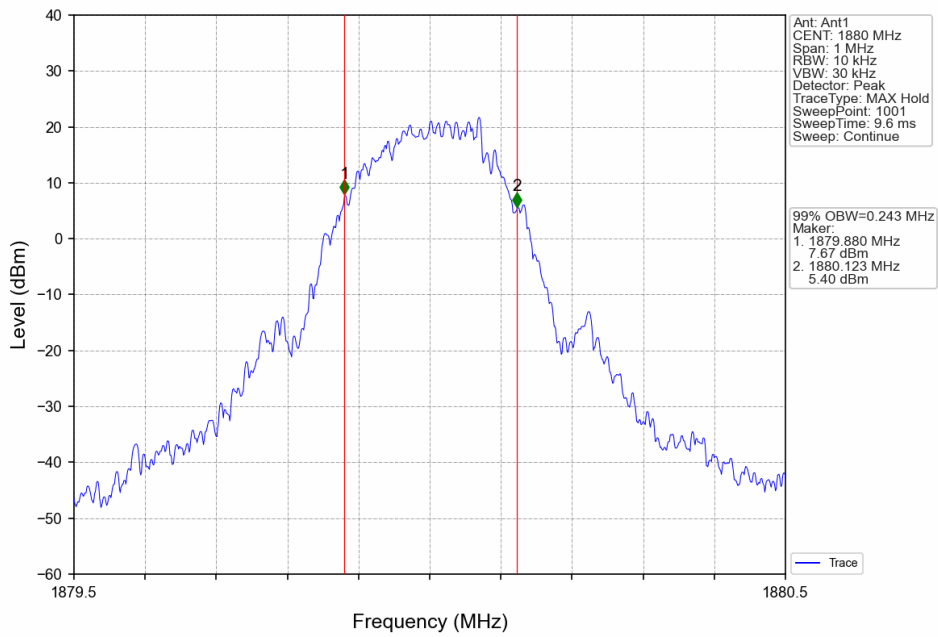
PCS1900_GPRS_HCH_1909.8MHz_1 TX Slot_NTNV



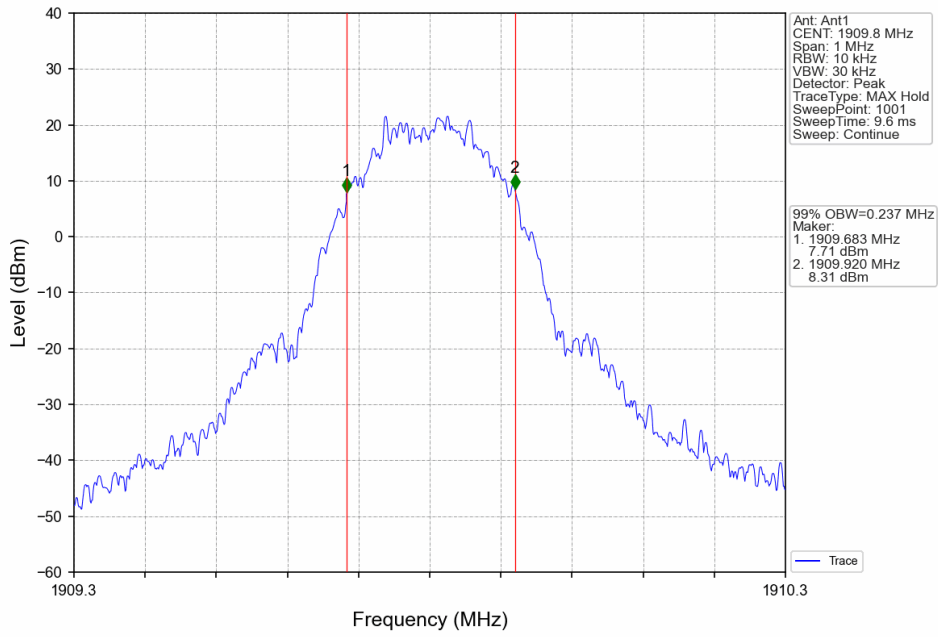
PCS1900_EGPRS_LCH_1850.2MHz_1 TX Slot_NTNV



PCS1900_EGPRS_MCH_1880MHz_1 TX Slot_NTNV



PCS1900_EGPRS_HCH_1909.8MHz_1 TX Slot_NTNV

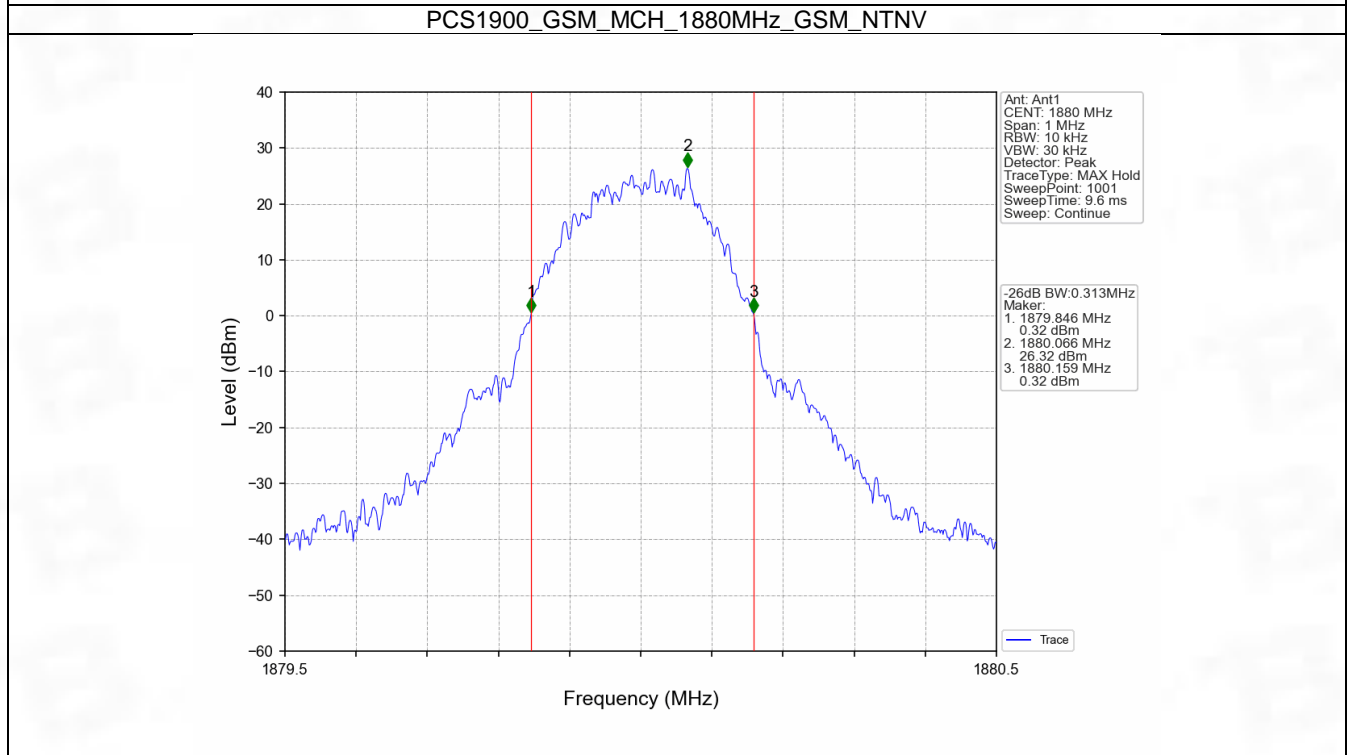
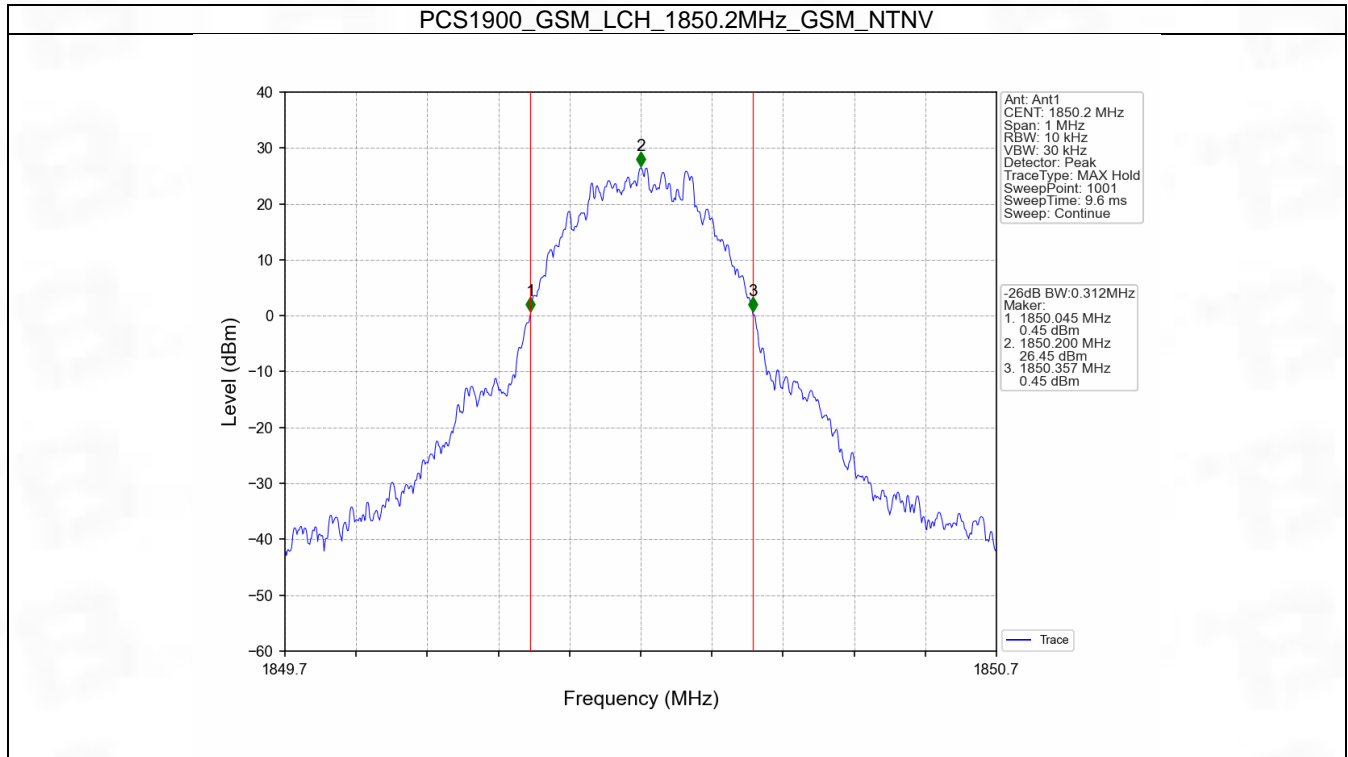


4.2 PCS1900_XDB

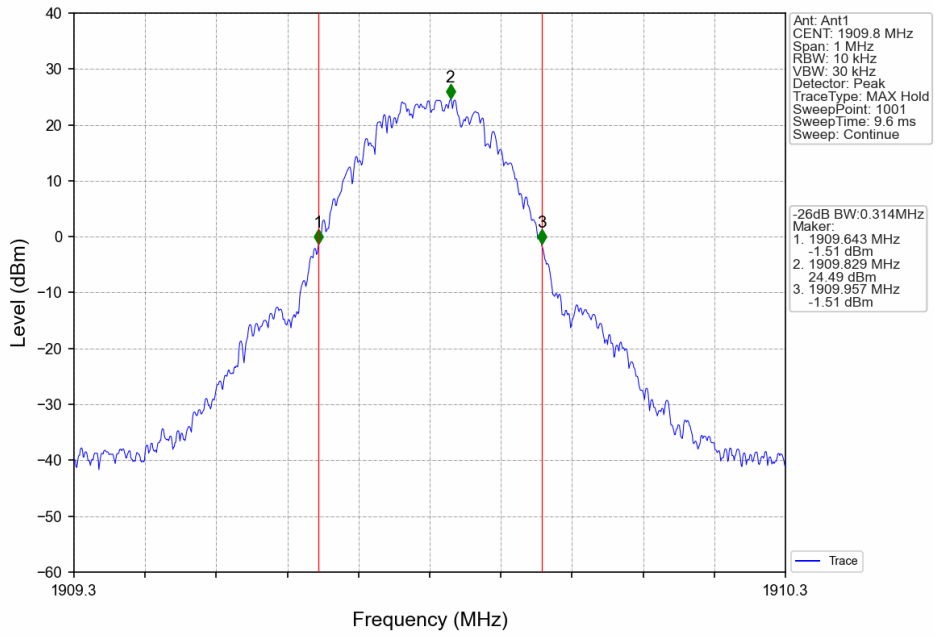
4.2.1 Test Result

Band: PCS1900					
ENV	Mode		Frequency (MHz)	26dB Bandwidth (MHz)	Verdict
	Network	Subset		Result	
NTNV	GSM	GSM	1850.2	0.312	Pass
			1880	0.313	Pass
			1909.8	0.314	Pass
	GPRS	1 TX Slot	1850.2	0.319	Pass
			1880	0.315	Pass
			1909.8	0.323	Pass
	EGPRS	1 TX Slot	1850.2	0.322	Pass
			1880	0.307	Pass
			1909.8	0.312	Pass

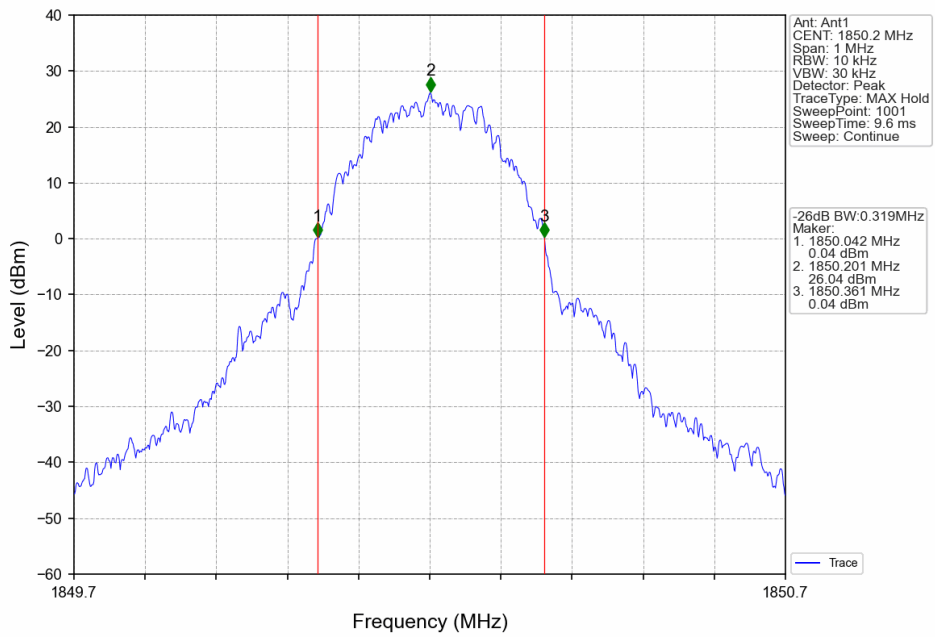
4.2.2 Test Graph



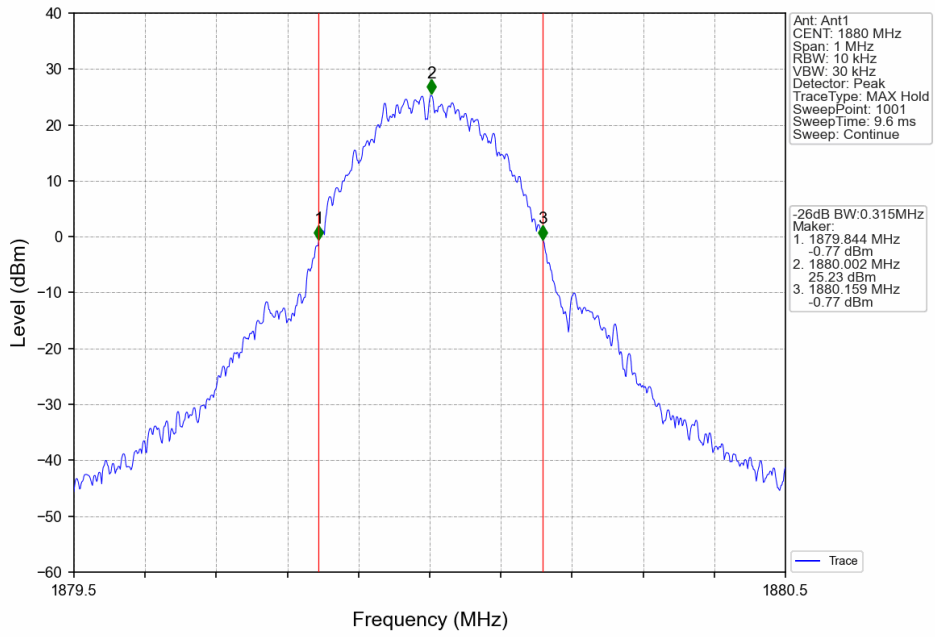
PCS1900_GSM_HCH_1909.8MHz_GSM_NTNV



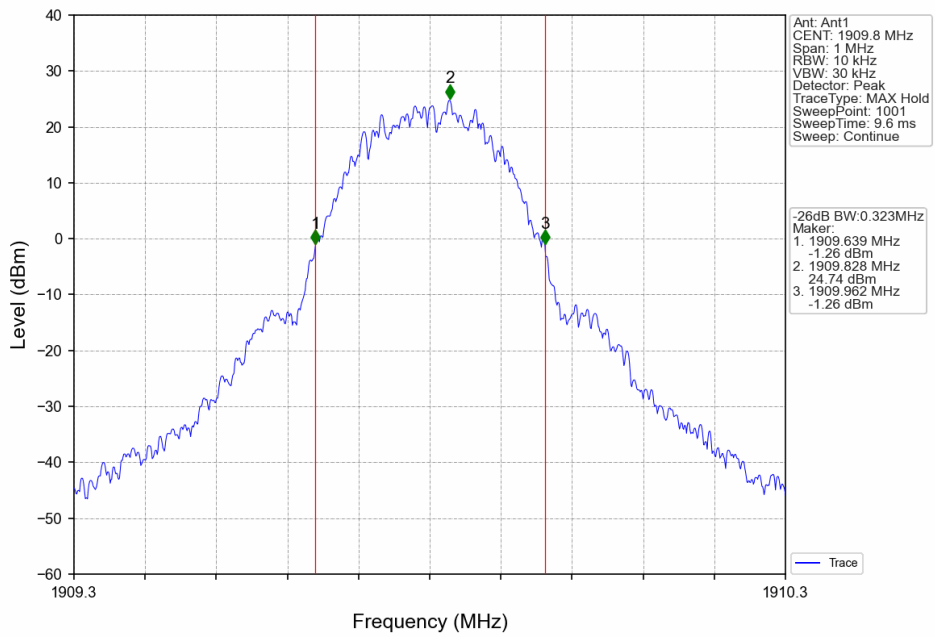
PCS1900_GPRS_LCH_1850.2MHz_1 TX Slot_NTNV



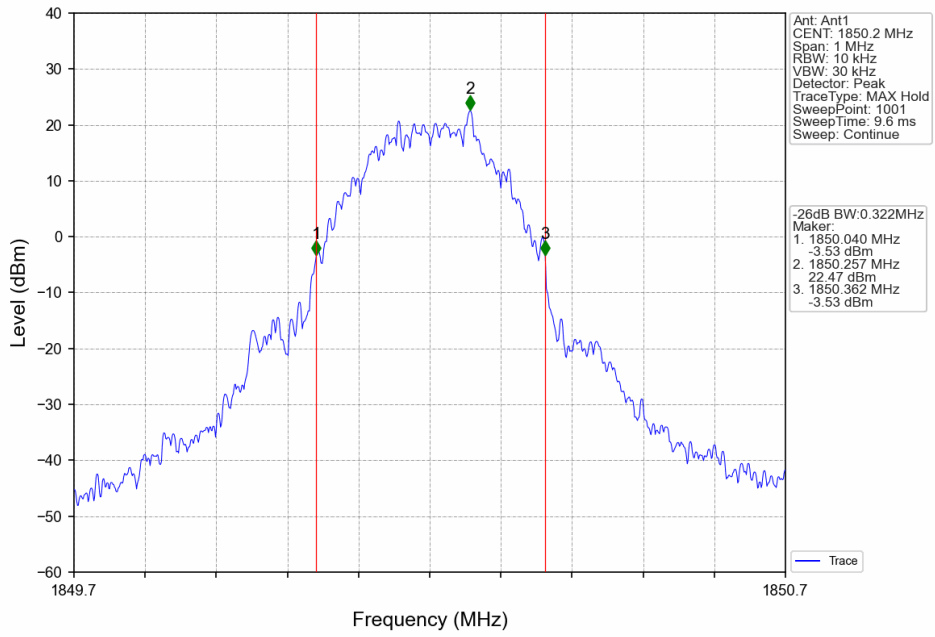
PCS1900_GPRS_MCH_1880MHz_1 TX Slot_NTNV



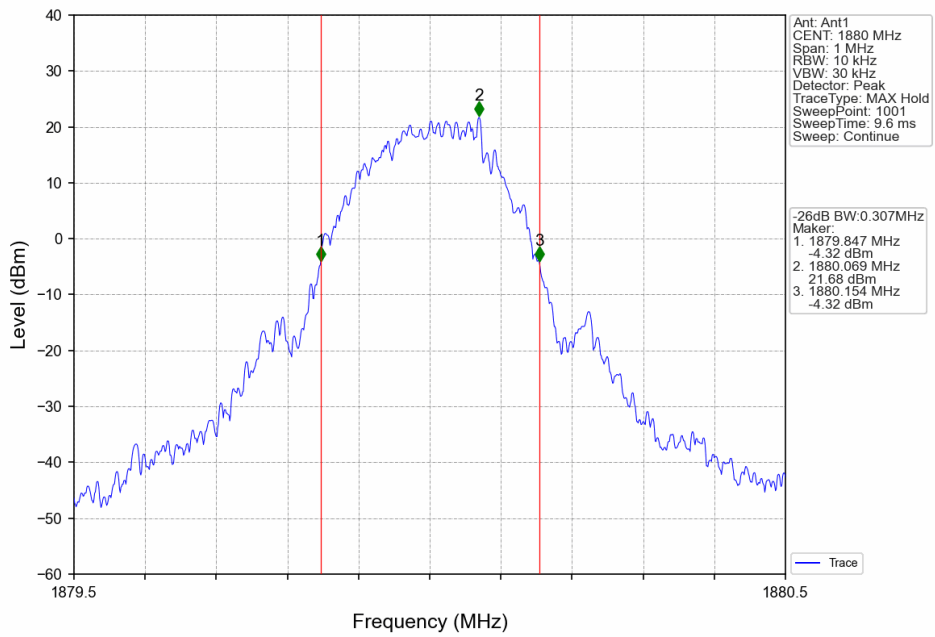
PCS1900_GPRS_HCH_1909.8MHz_1 TX Slot_NTNV



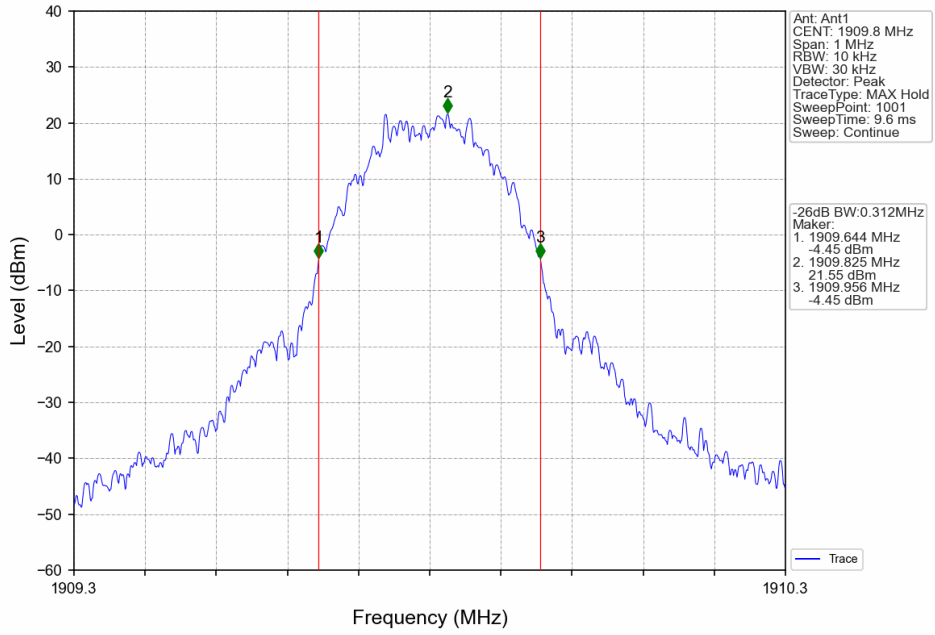
PCS1900_EGPRS_LCH_1850.2MHz_1 TX Slot_NTNV



PCS1900_EGPRS_MCH_1880MHz_1 TX Slot_NTNV



PCS1900_EGPRS_HCH_1909.8MHz_1 TX Slot_NTNV



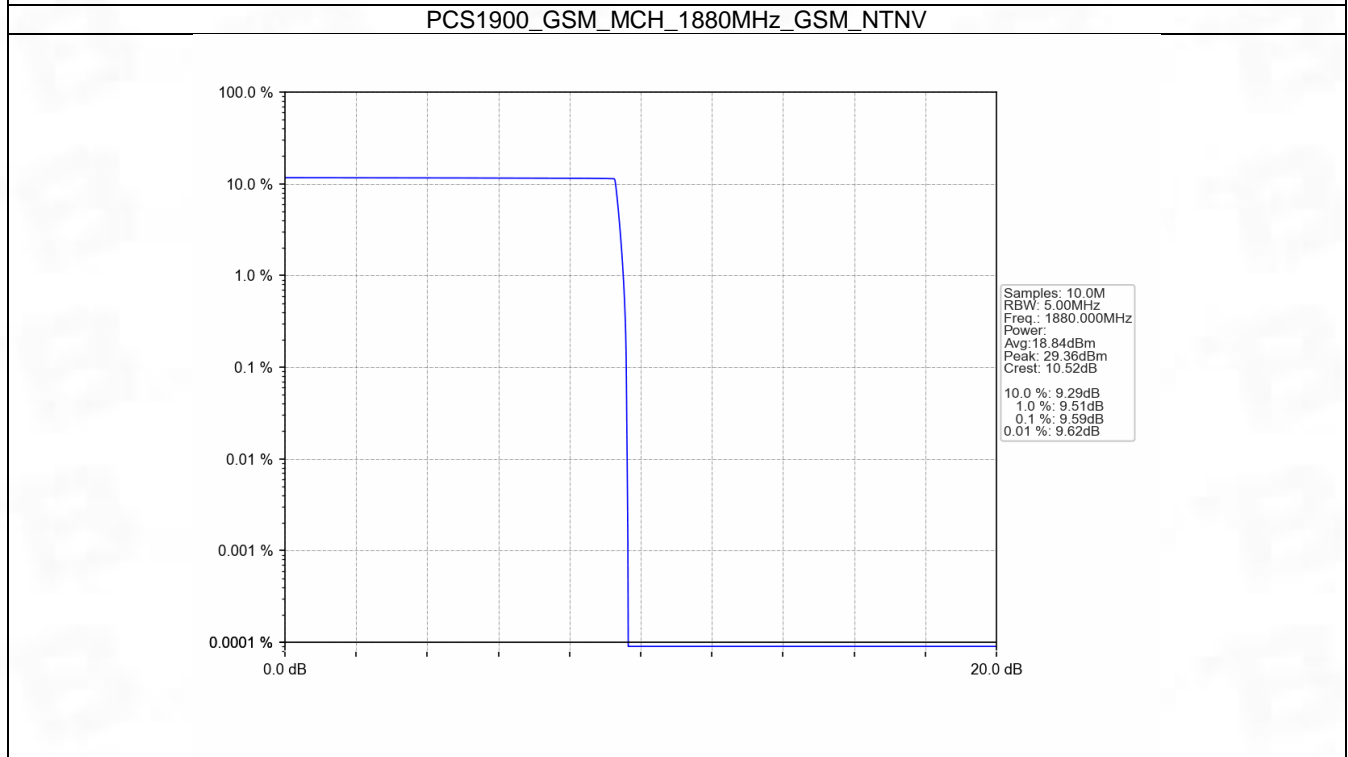
5. Peak-Average Ratio

5.1 PCS1900

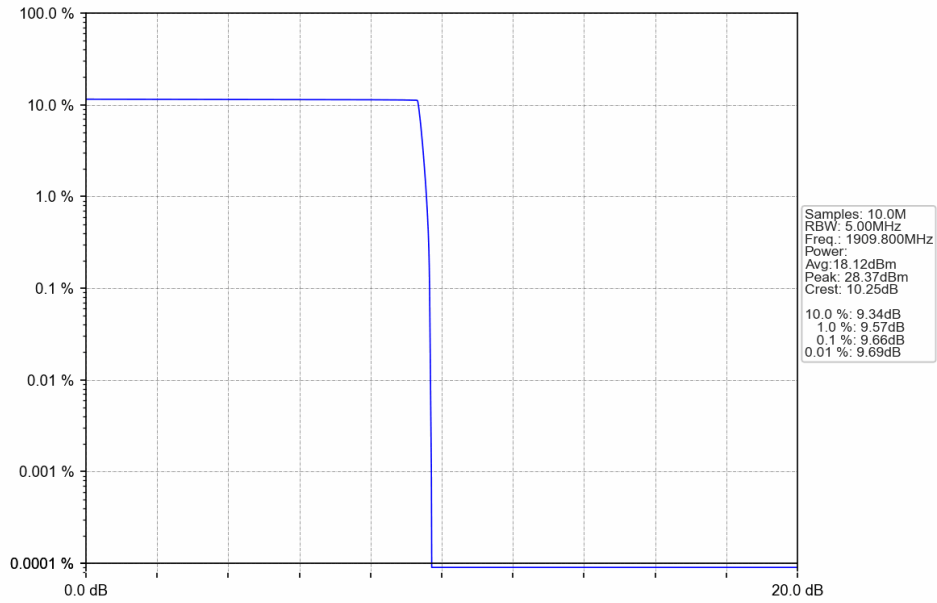
5.1.1 Test Result

Band: PCS1900						
ENV	Mode		Frequency (MHz)	Peak-Average Ratio (dB)		Verdict
	Network	Subset		Result	Limit	
NTNV	GSM	GSM	1850.2	9.61	<=13	Pass
			1880	9.59	<=13	Pass
			1909.8	9.66	<=13	Pass
	GPRS	4 TX Slots	1850.2	3.79	<=13	Pass
			1880	3.69	<=13	Pass
			1909.8	3.62	<=13	Pass
	EGPRS	4 TX Slots	1850.2	7.19	<=13	Pass
			1880	7.04	<=13	Pass
			1909.8	7.15	<=13	Pass

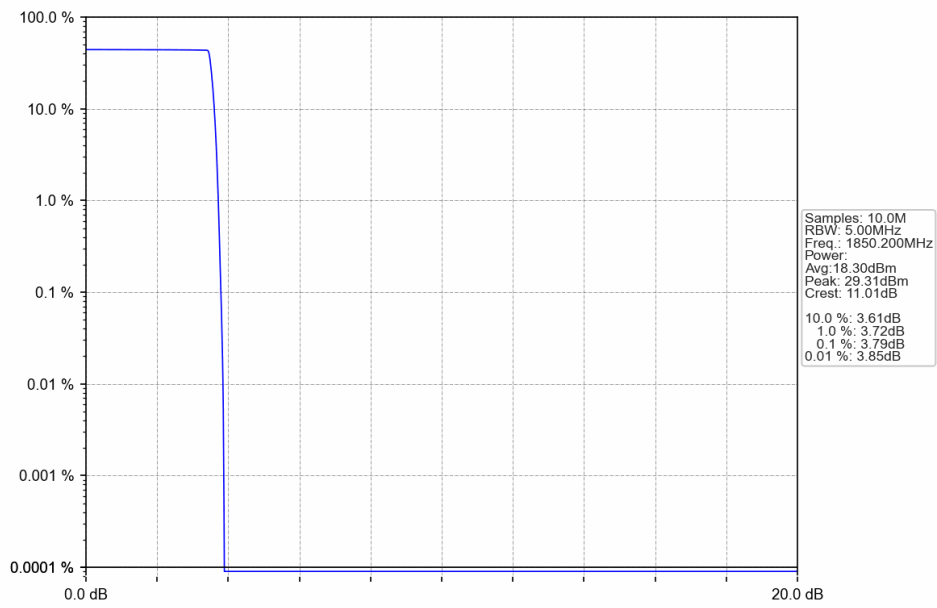
5.1.2 Test Graph



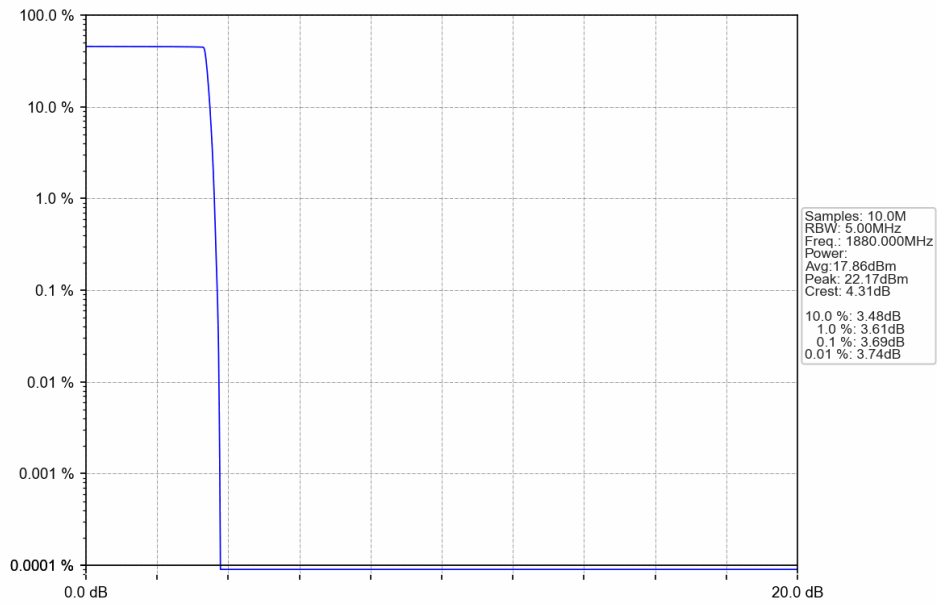
PCS1900_GSM_HCH_1909.8MHz_GSM_NTNV



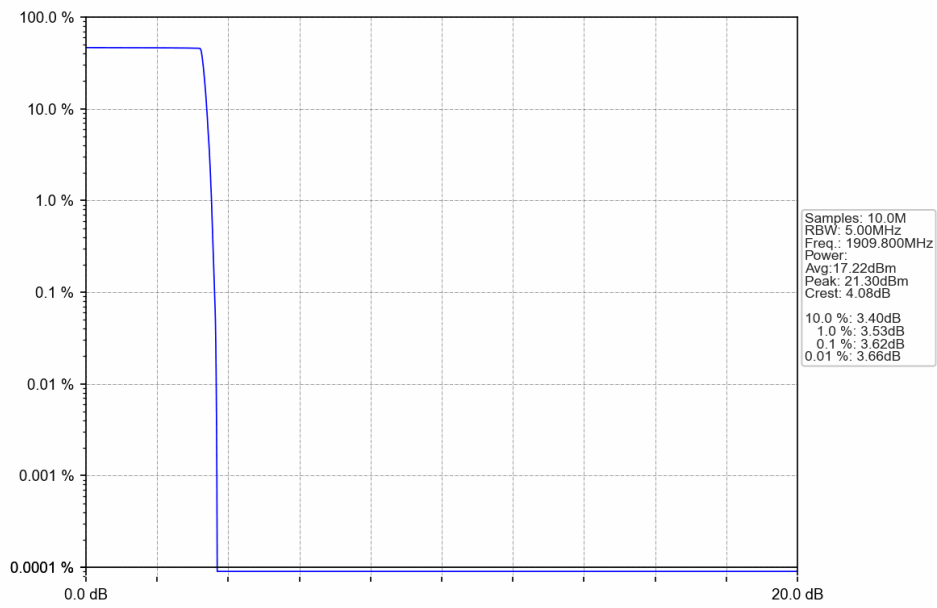
PCS1900_GPRS_LCH_1850.2MHz_4 TX Slots_NTNV



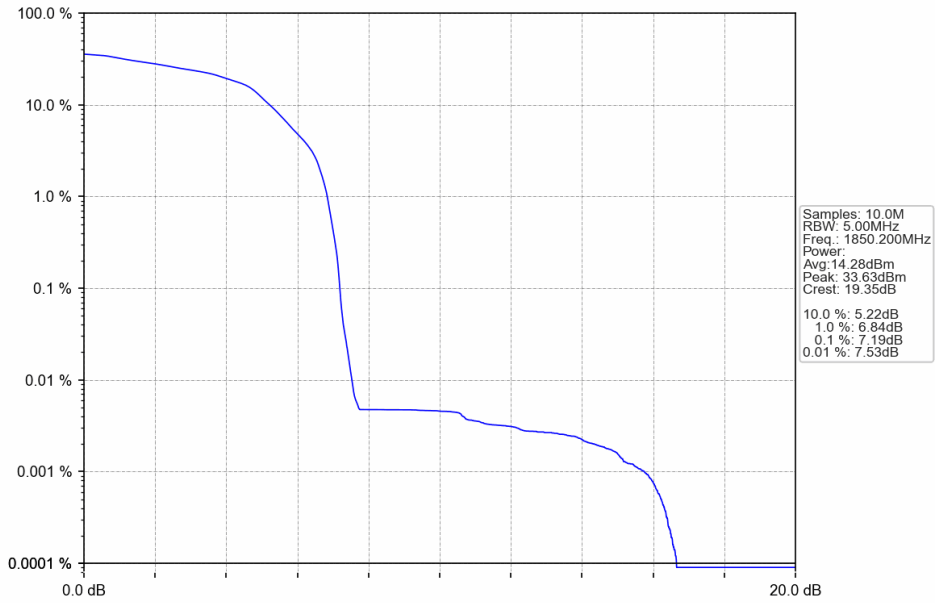
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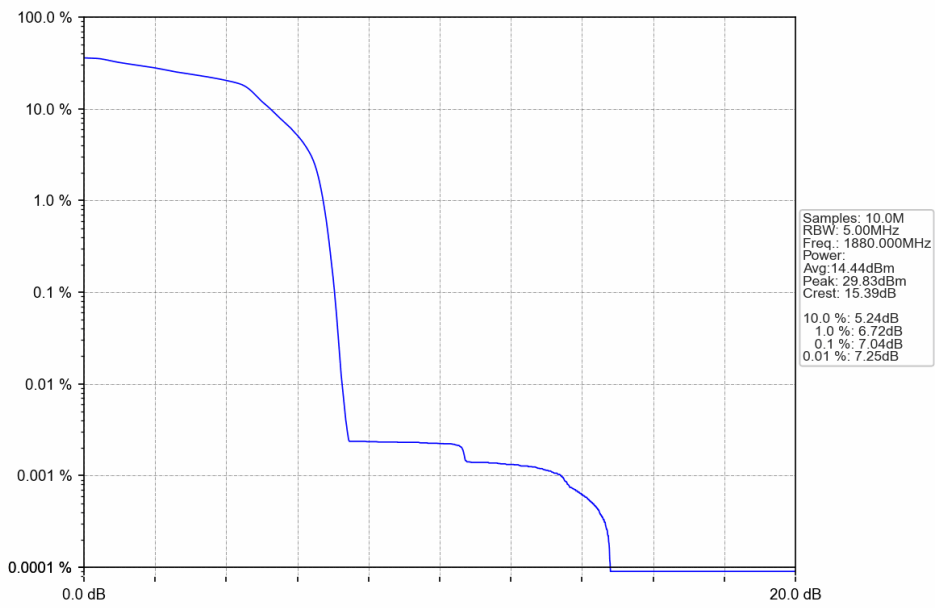
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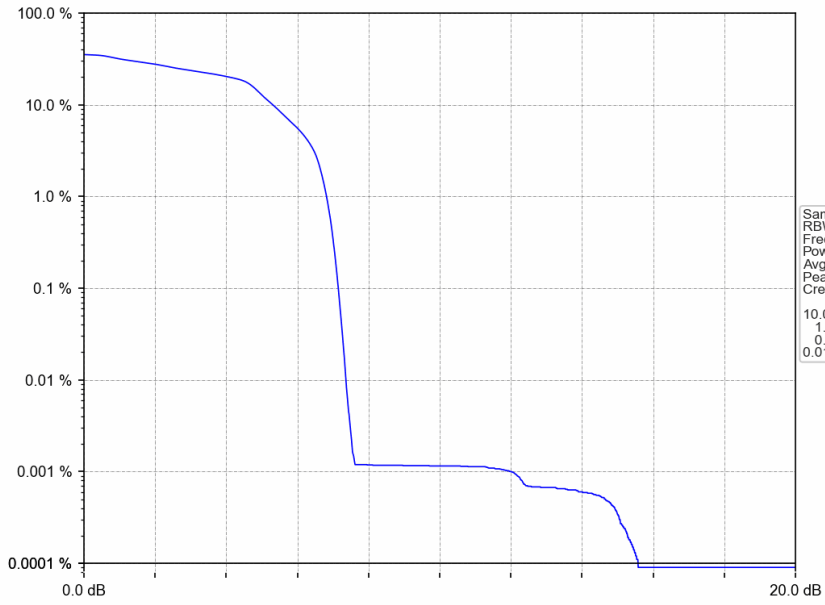
PCS1900_EGPRS_LCH_1850.2MHz_4 TX Slots_NTNV



PCS1900_EGPRS_MCH_1880MHz_4 TX Slots_NTNV



PCS1900_EGPRS_HCH_1909.8MHz_4 TX Slots_NTNV



Samples: 10.0M
RBW: 5.00MHz
Freq.: 1909.800MHz
Power:
Avg: 14.12dBm
Peak: 30.17dBm
Crest: 16.05dB
10.0 %: 5.31dB
1.0 %: 6.82dB
0.1 %: 7.45dB
0.01 %: 7.37dB

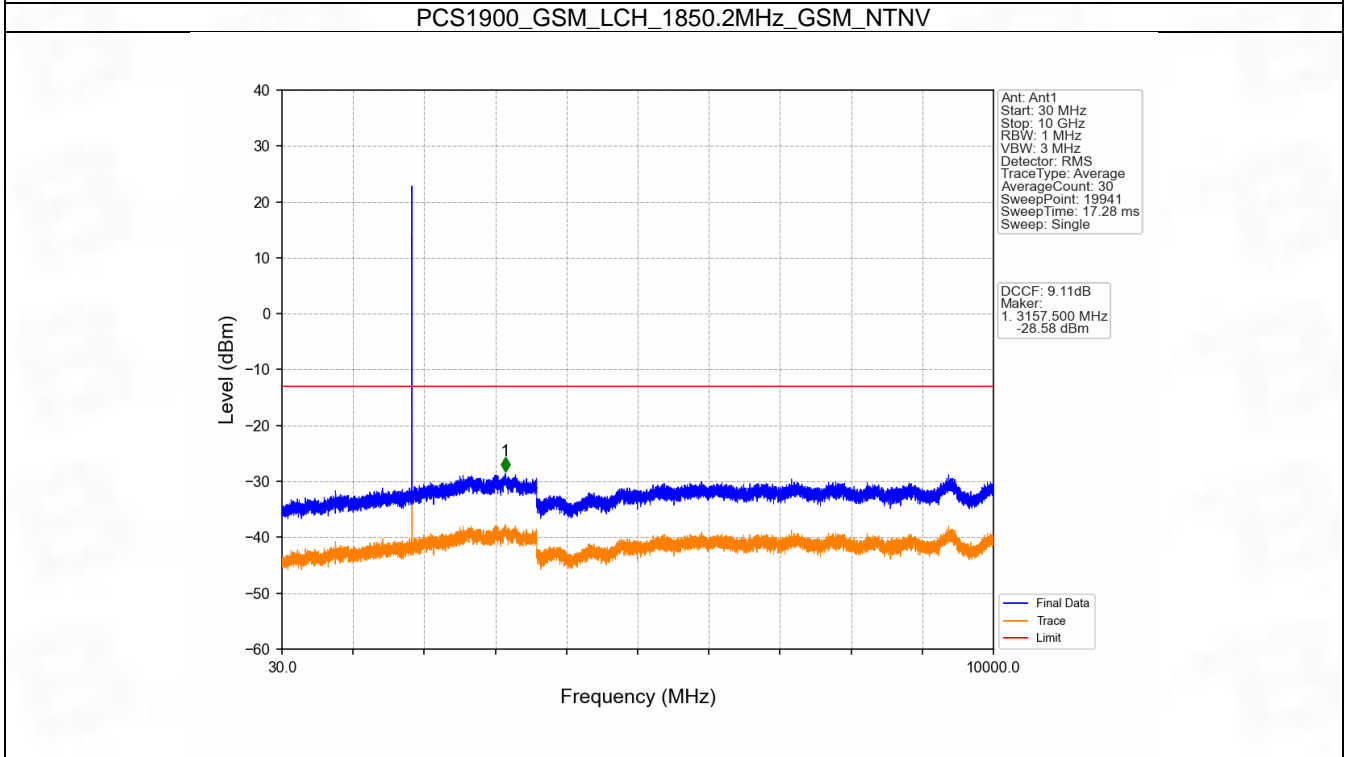
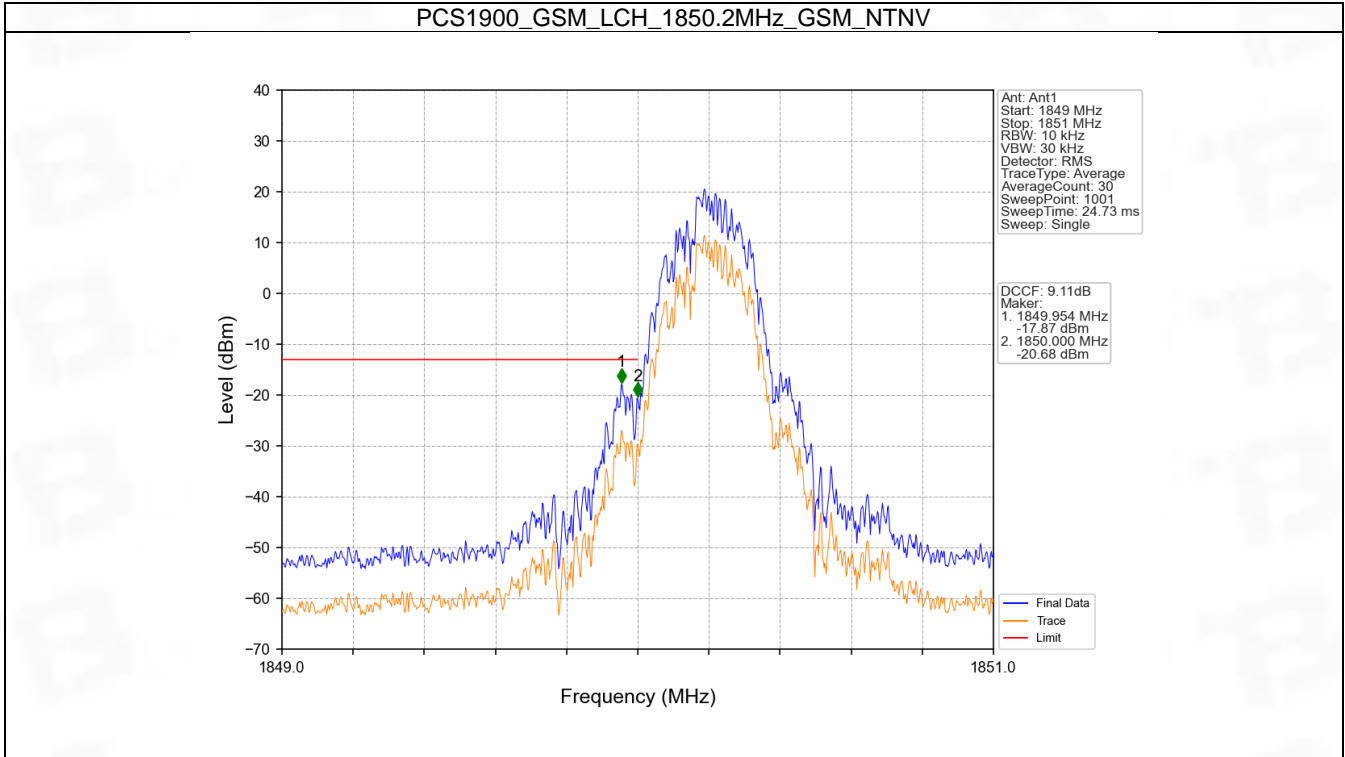
6. Spurious Emission

6.1 PCS1900

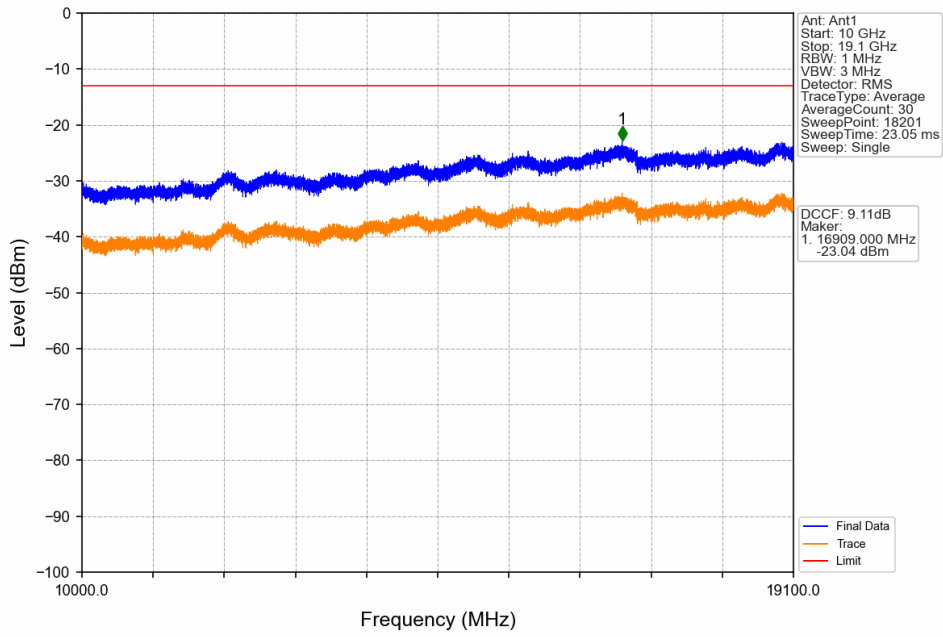
6.1.1 Test Result

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	

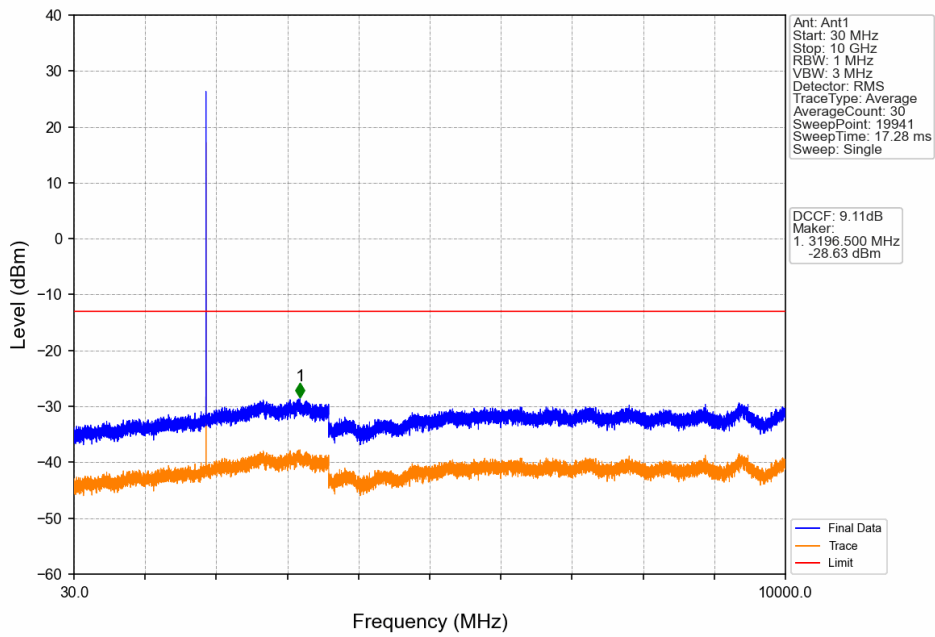
6.1.2 Test Graph



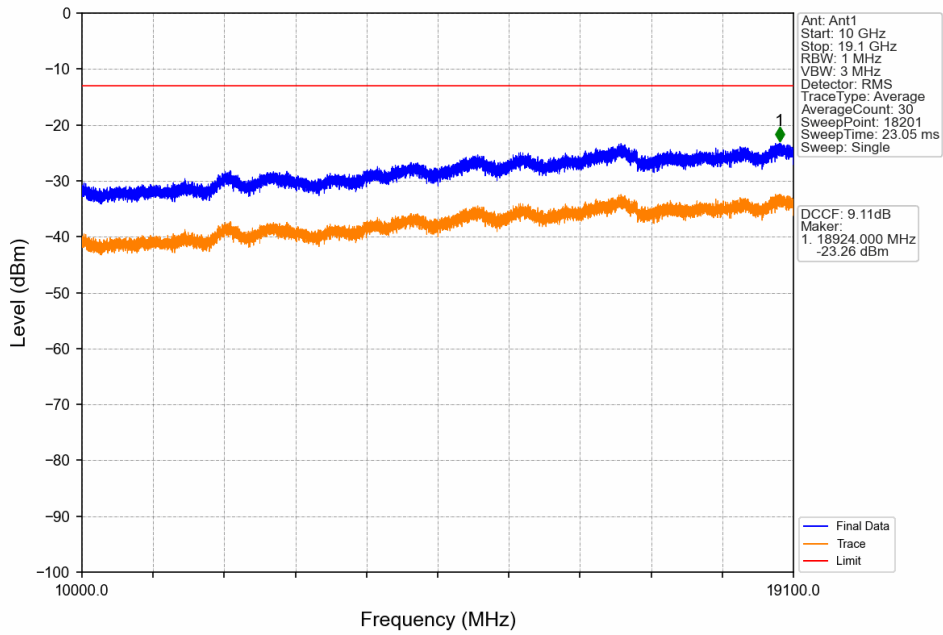
PCS1900_GSM_LCH_1850.2MHz_GSM_NTNV



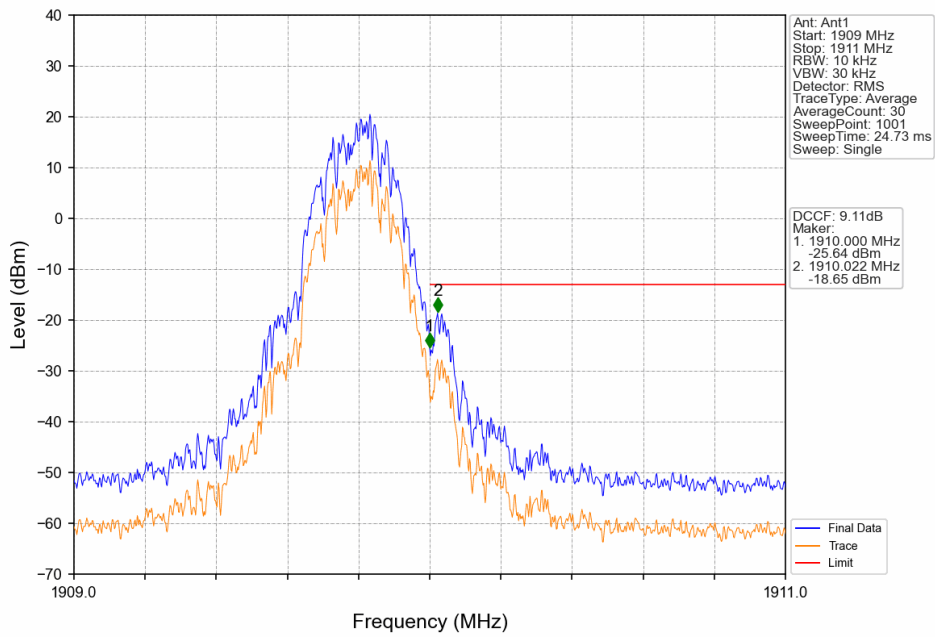
PCS1900_GSM_MCH_1880MHz_GSM_NTNV



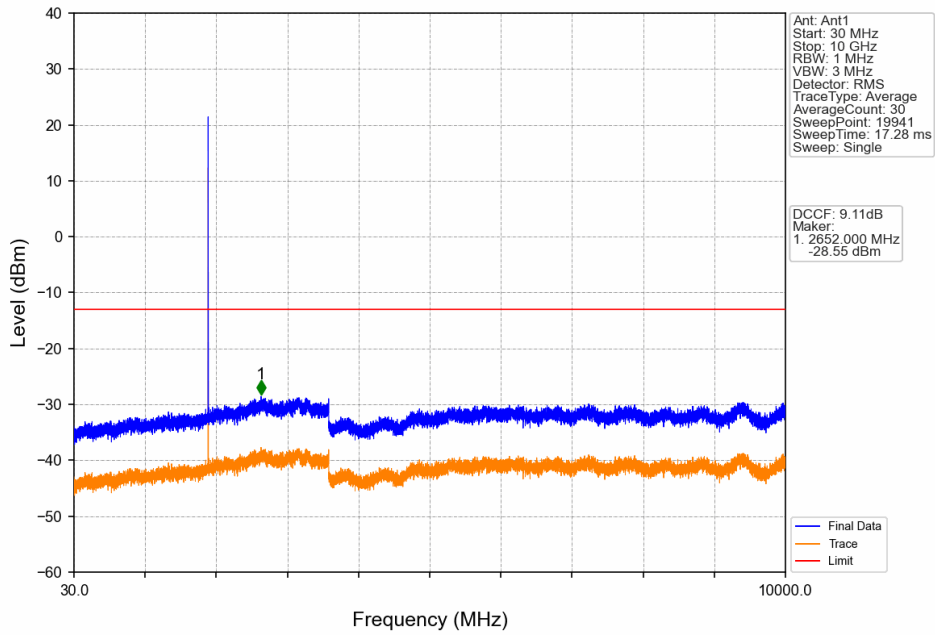
PCS1900_GSM_MCH_1880MHz_GSM_NTNV



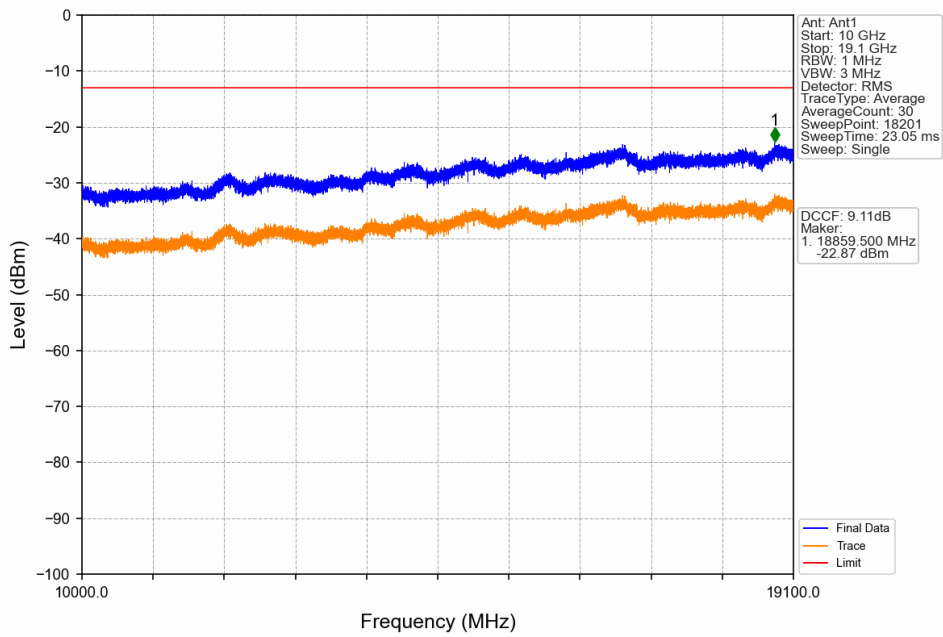
PCS1900_GSM_HCH_1909.8MHz_GSM_NTNV



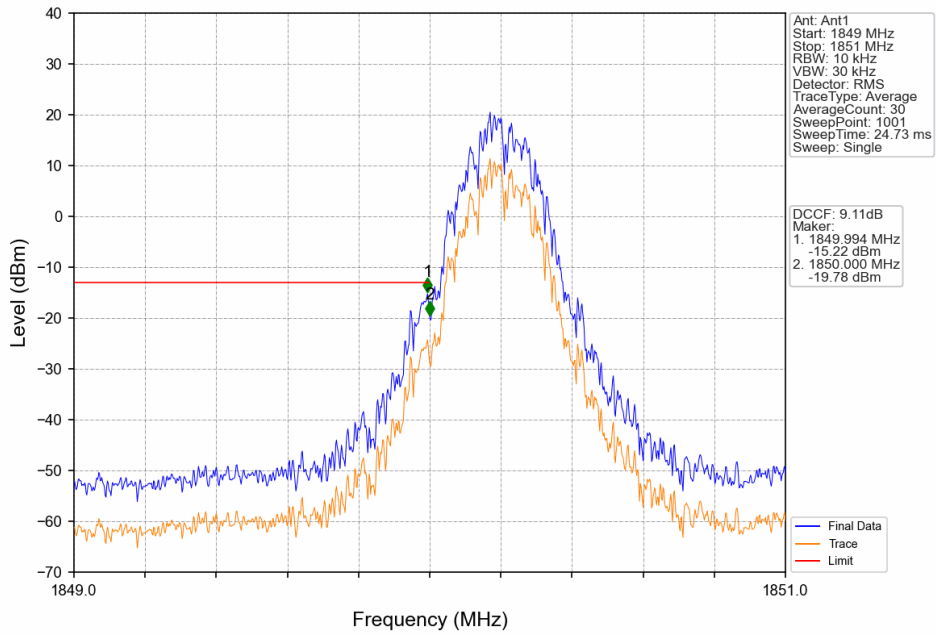
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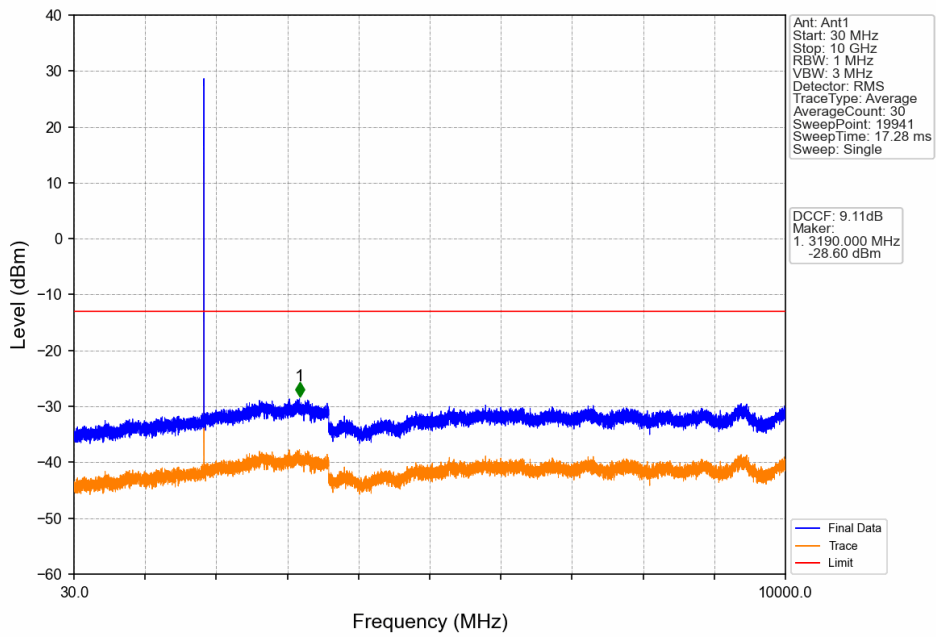
PCS1900_GSM_HCH_1909.8MHz_GSM_NTNV



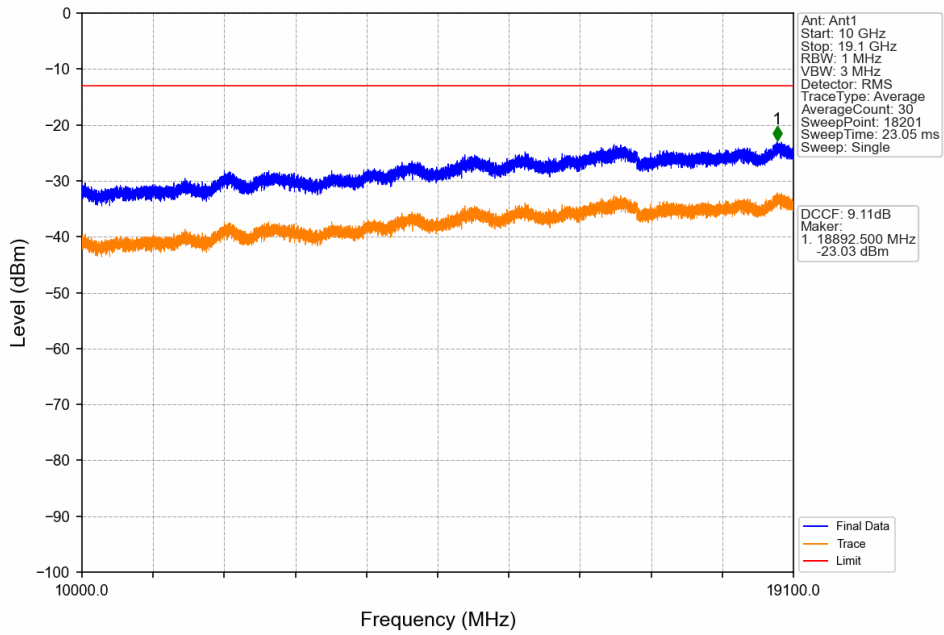
PCS1900_GPRS_LCH_1850.2MHz_1 TX Slot_NTNV



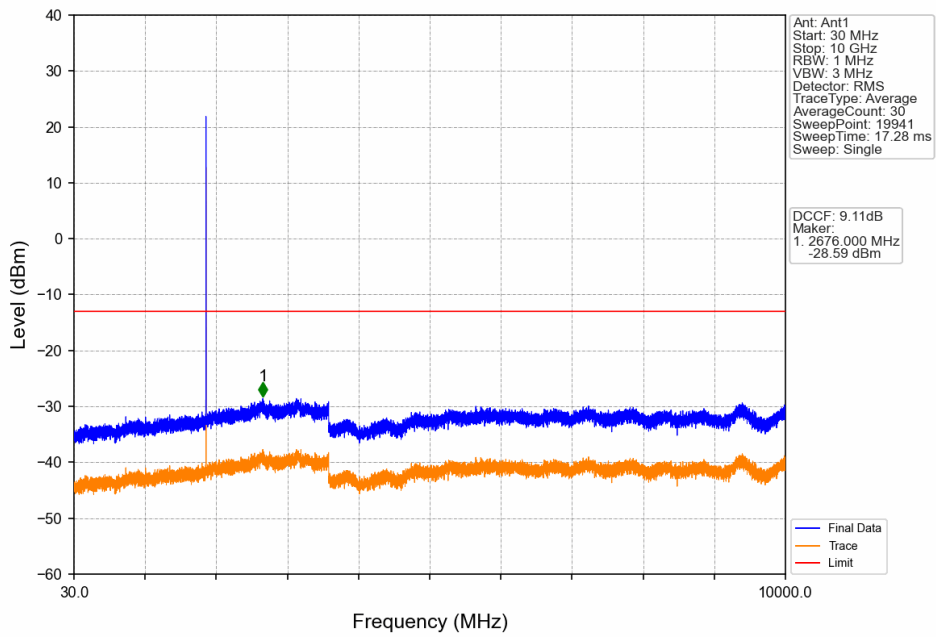
PCS1900_GPRS_LCH_1850.2MHz_1 TX Slot_NTNV



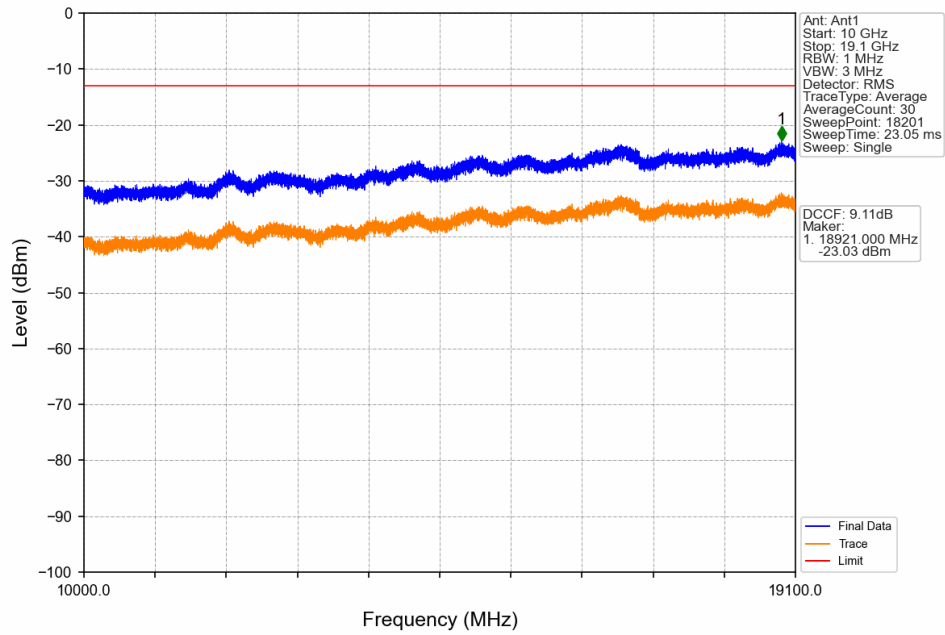
PCS1900_GPRS_LCH_1850.2MHz_1 TX Slot_NTNV



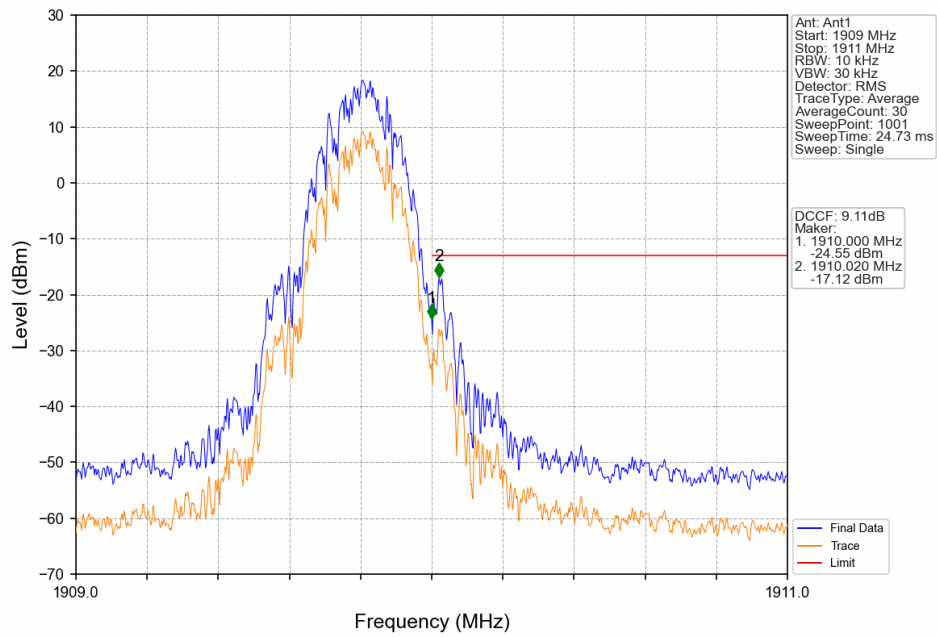
PCS1900_GPRS_MCH_1880MHz_1 TX Slot_NTNV



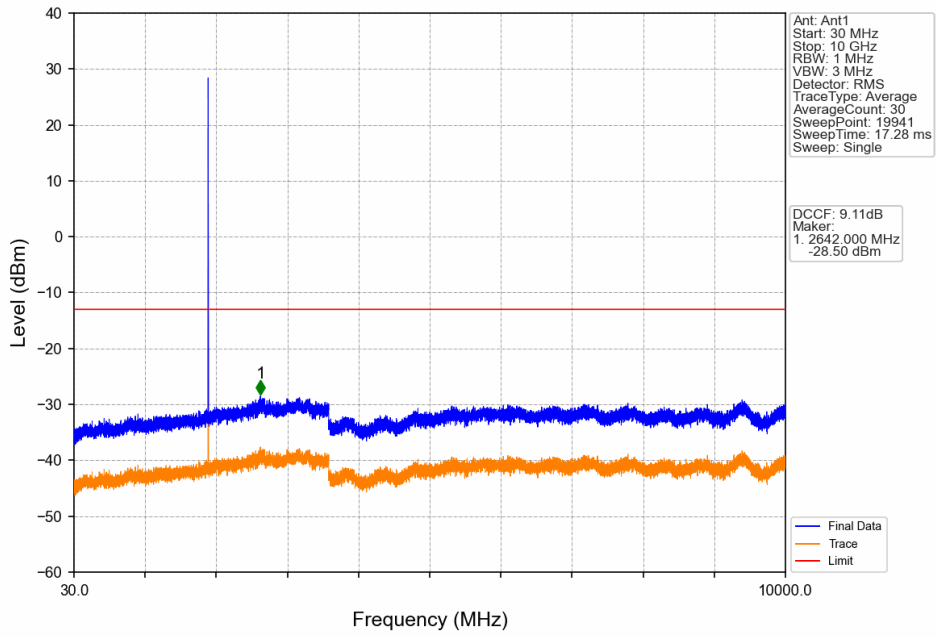
PCS1900_GPRS_MCH_1880MHz_1 TX Slot_NTNV



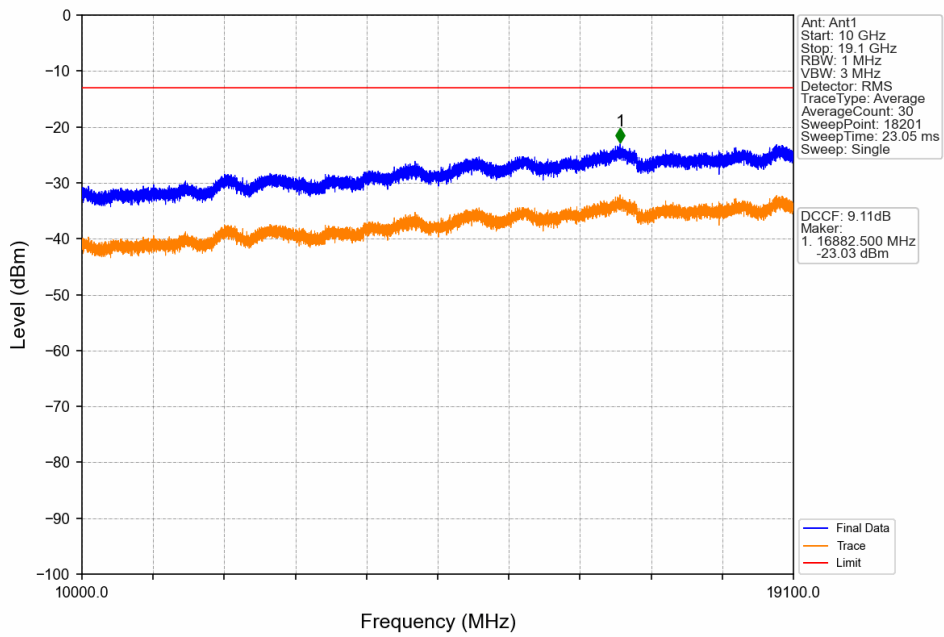
PCS1900_GPRS_HCH_1909.8MHz_1 TX Slot_NTNV



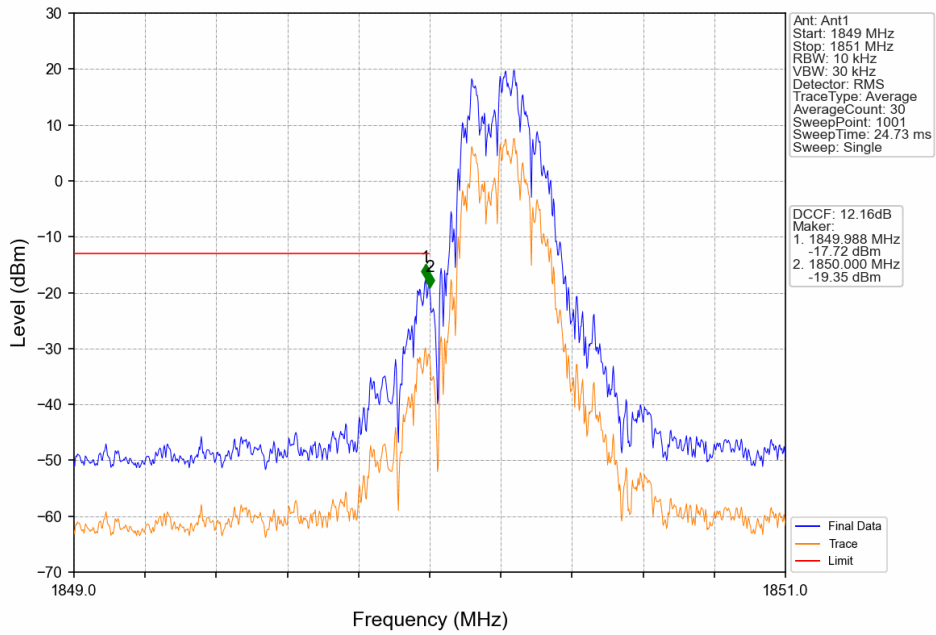
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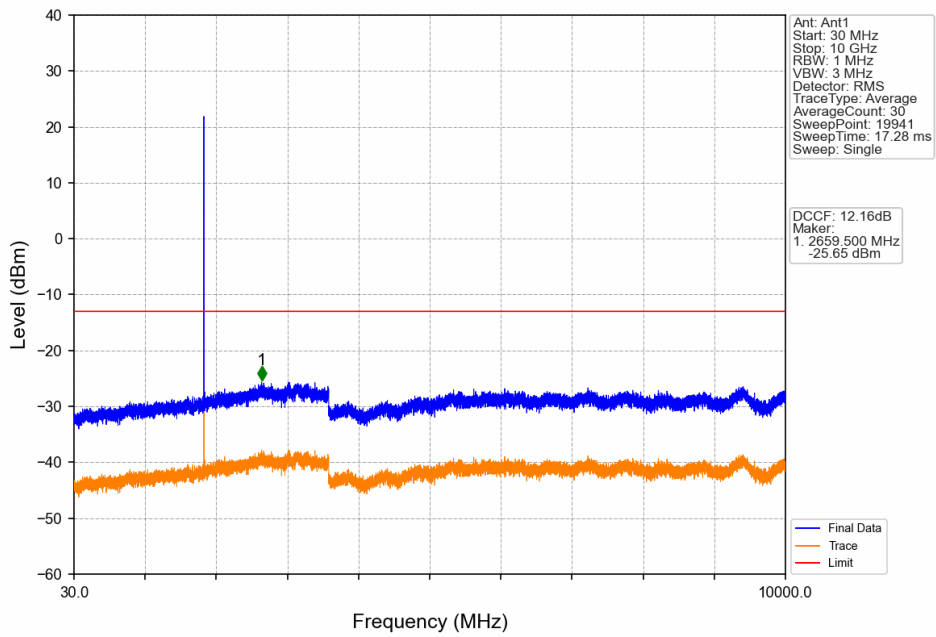
PCS1900_GPRS_HCH_1909.8MHz_1 TX Slot_NTNV



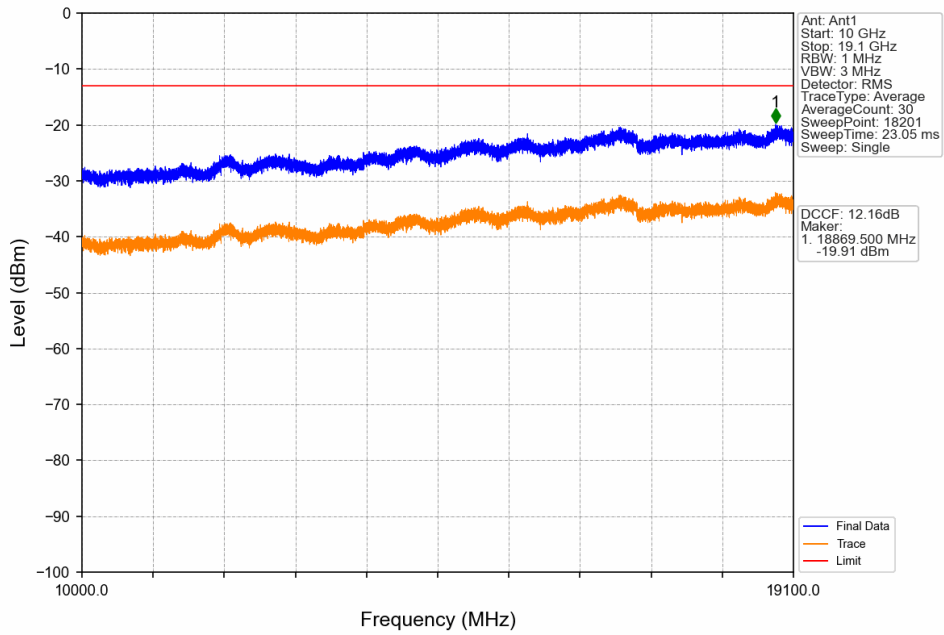
PCS1900_EGPRS_LCH_1850.2MHz_1 TX Slot_NTNV



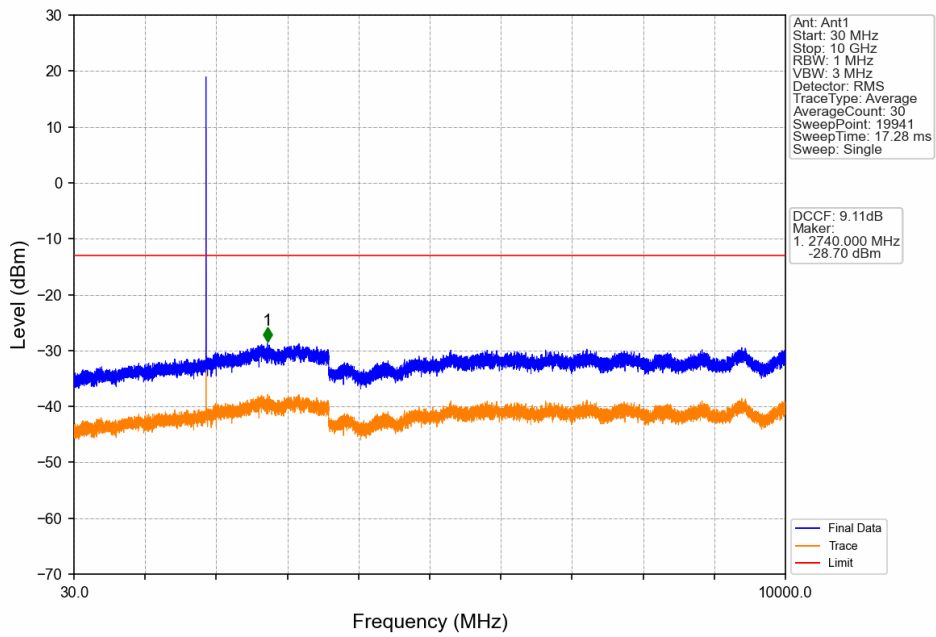
PCS1900_EGPRS_LCH_1850.2MHz_1 TX Slot_NTNV



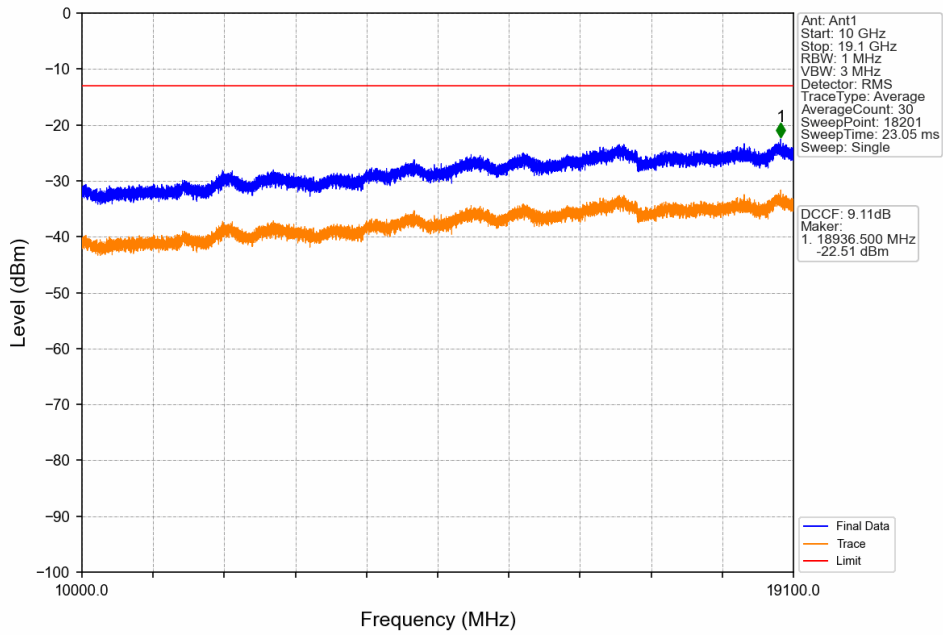
PCS1900_EGPRS_LCH_1850.2MHz_1 TX Slot_NTNV



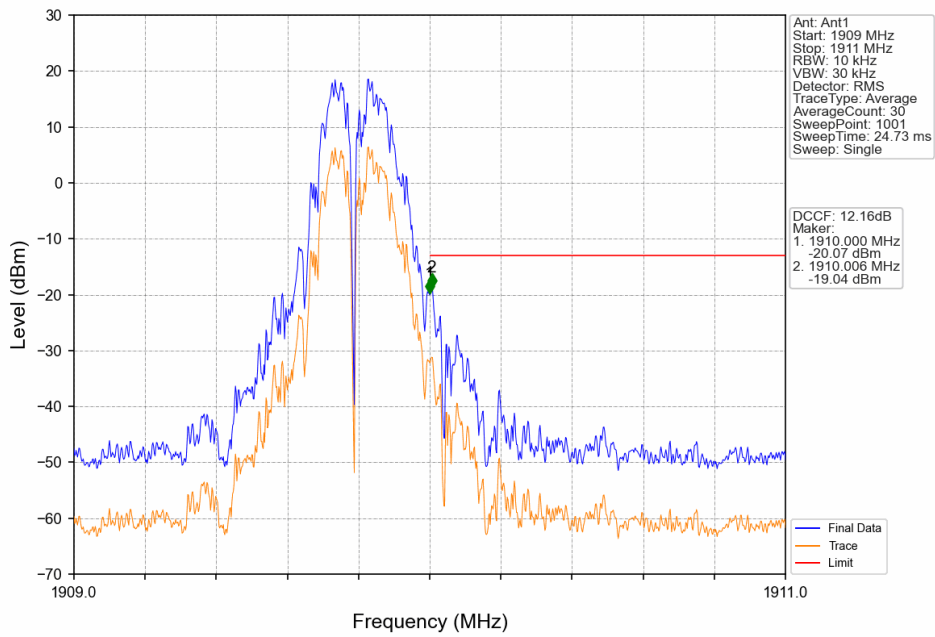
PCS1900_EGPRS_MCH_1880MHz_1 TX Slot_NTNV



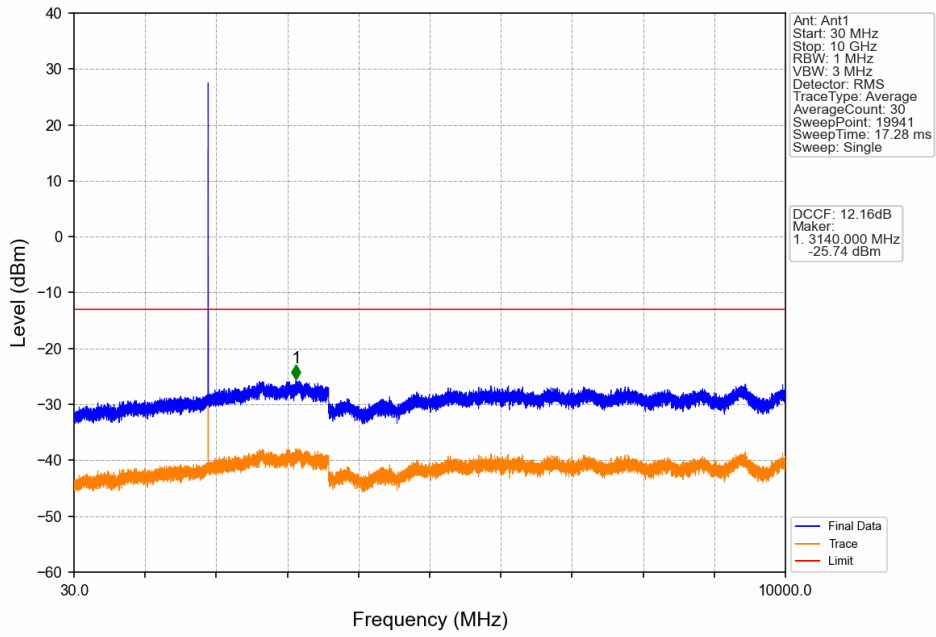
PCS1900_EGPRS_MCH_1880MHz_1 TX Slot_NTNV



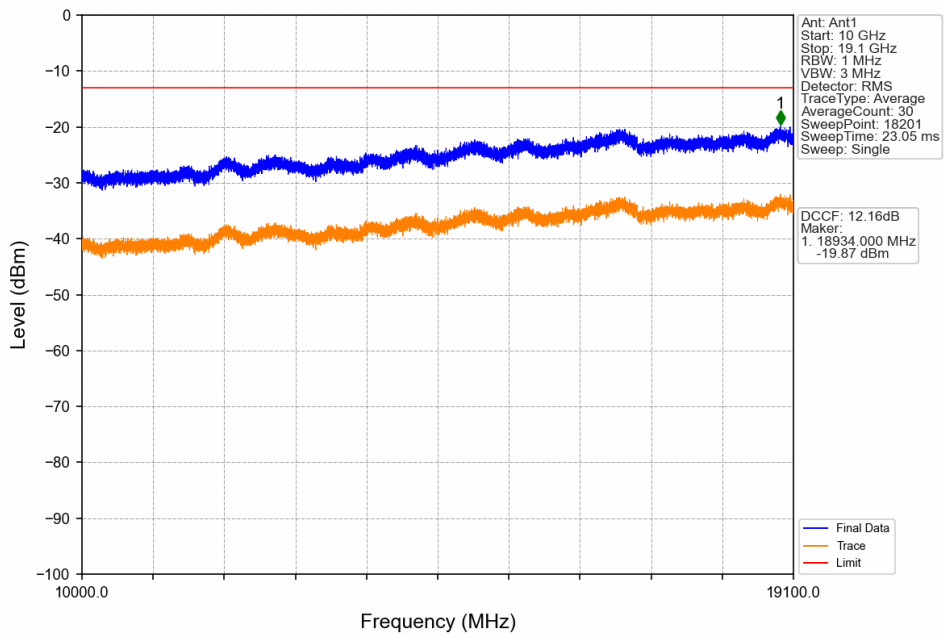
PCS1900_EGPRS_HCH_1909.8MHz_1 TX Slot_NTNV



PCS1900_EGPRS_HCH_1909.8MHz_1 TX Slot_NTNV



PCS1900_EGPRS_HCH_1909.8MHz_1 TX Slot_NTNV



7. Form731

7.1 Form731_Power

7.1.1 Test Result

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	0.7211	0.0145	ppm	253KGXW	24E	28.58
PCS1900	0.2	1850.2	1909.8	0.2518	0.0176	ppm	249KG7W	24E	24.01

7.2 Form731_EIRP

7.2.1 Test Result

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	0.7413	0.0145	ppm	253KGXW	24E	28.70
PCS1900	0.2	1850.2	1909.8	0.2588	0.0176	ppm	249KG7W	24E	24.13