

# 1. Effective (Isotropic) Radiated Power Output Data

## 1.1 PCS1900\_EIRP(ANT31)

### 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	29.38	-0.90	28.48	<=33.01	Pass
			1880	29.27	-0.90	28.37	<=33.01	Pass
			1909.8	29.38	-0.90	28.48	<=33.01	Pass
	GPRS	1 TX Slot	1850.2	29.36	-0.90	28.46	<=33.01	Pass
		2 TX Slots	1850.2	28.61	-0.90	27.71	<=33.01	Pass
		3 TX Slots	1850.2	26.80	-0.90	25.90	<=33.01	Pass
		4 TX Slots	1850.2	25.68	-0.90	24.78	<=33.01	Pass
		1 TX Slot	1880	29.42	-0.90	28.52	<=33.01	Pass
		2 TX Slots	1880	29.43	-0.90	28.53	<=33.01	Pass
		3 TX Slots	1880	26.94	-0.90	26.04	<=33.01	Pass
		4 TX Slots	1880	25.79	-0.90	24.89	<=33.01	Pass
		1 TX Slot	1909.8	29.31	-0.90	28.41	<=33.01	Pass
		2 TX Slots	1909.8	28.62	-0.90	27.72	<=33.01	Pass
		3 TX Slots	1909.8	26.94	-0.90	26.04	<=33.01	Pass
		4 TX Slots	1909.8	25.83	-0.90	24.93	<=33.01	Pass
	EGPRS	1 TX Slot	1850.2	26.12	-0.90	25.22	<=33.01	Pass
		2 TX Slots	1850.2	25.05	-0.90	24.15	<=33.01	Pass
		3 TX Slots	1850.2	23.17	-0.90	22.27	<=33.01	Pass
		4 TX Slots	1850.2	22.04	-0.90	21.14	<=33.01	Pass
		1 TX Slot	1880	26.03	-0.90	25.13	<=33.01	Pass
		2 TX Slots	1880	25.67	-0.90	24.77	<=33.01	Pass
		3 TX Slots	1880	23.02	-0.90	22.12	<=33.01	Pass
		4 TX Slots	1880	22.24	-0.90	21.34	<=33.01	Pass
		1 TX Slot	1909.8	26.31	-0.90	25.41	<=33.01	Pass
		2 TX Slots	1909.8	25.44	-0.90	24.54	<=33.01	Pass
		3 TX Slots	1909.8	23.23	-0.90	22.33	<=33.01	Pass
		4 TX Slots	1909.8	21.70	-0.90	20.80	<=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	3.7	1.874	0.0010	/	Pass
			3.91	0.076	0.0000	/	Pass
			4.4	-2.224	-0.0012	/	Pass
		-30	3.91	-1.198	-0.0006	/	Pass
		-20	3.91	15.130	0.0082	/	Pass
		-10	3.91	11.689	0.0063	/	Pass
		0	3.91	13.311	0.0072	/	Pass
		10	3.91	8.342	0.0045	/	Pass

		30	3.91	7.037	0.0038	/	Pass	
		40	3.91	12.215	0.0066	/	Pass	
		50	3.91	4.192	0.0023	/	Pass	
	1880	20	3.7	-3.216	-0.0017	/	Pass	
			3.91	-5.838	-0.0031	/	Pass	
			4.4	-6.290	-0.0033	/	Pass	
		-30	3.91	-3.222	-0.0017	/	Pass	
		-20	3.91	-6.575	-0.0035	/	Pass	
		-10	3.91	-1.311	-0.0007	/	Pass	
		0	3.91	-2.230	-0.0012	/	Pass	
		10	3.91	-0.252	-0.0001	/	Pass	
		30	3.91	-12.819	-0.0068	/	Pass	
		40	3.91	12.240	0.0065	/	Pass	
		50	3.91	6.405	0.0034	/	Pass	
	1909.8	20	3.7	-0.718	-0.0004	/	Pass	
			3.91	-1.697	-0.0009	/	Pass	
			4.4	-1.811	-0.0009	/	Pass	
		-30	3.91	-0.643	-0.0003	/	Pass	
		-20	3.91	-7.142	-0.0037	/	Pass	
		-10	3.91	-6.804	-0.0036	/	Pass	
		0	3.91	-3.325	-0.0017	/	Pass	
10		3.91	-9.581	-0.0050	/	Pass		
30		3.91	9.718	0.0051	/	Pass		
40		3.91	9.100	0.0048	/	Pass		
50	3.91	7.807	0.0041	/	Pass			
GPRS	1850.2	20	3.7	-11.003	-0.0059	/	Pass	
			3.91	-8.037	-0.0043	/	Pass	
			4.4	-7.929	-0.0043	/	Pass	
		-30	3.91	-5.752	-0.0031	/	Pass	
		-20	3.91	-6.461	-0.0035	/	Pass	
		-10	3.91	-4.270	-0.0023	/	Pass	
		0	3.91	-2.293	-0.0012	/	Pass	
		10	3.91	-2.743	-0.0015	/	Pass	
		30	3.91	16.538	0.0089	/	Pass	
		40	3.91	9.452	0.0051	/	Pass	
		50	3.91	11.524	0.0062	/	Pass	
	1880	20	3.7	-6.580	-0.0035	/	Pass	
			3.91	-5.166	-0.0027	/	Pass	
			4.4	-9.803	-0.0052	/	Pass	
		-30	3.91	-5.964	-0.0032	/	Pass	
		-20	3.91	-2.359	-0.0013	/	Pass	
		-10	3.91	-5.113	-0.0027	/	Pass	
		0	3.91	-9.884	-0.0053	/	Pass	
		10	3.91	-7.796	-0.0041	/	Pass	
		30	3.91	-6.266	-0.0033	/	Pass	
		40	3.91	-6.277	-0.0033	/	Pass	
	50	3.91	-7.379	-0.0039	/	Pass		
	1909.8	20	3.7	-5.521	-0.0029	/	Pass	
			3.91	-4.470	-0.0023	/	Pass	
			4.4	-7.488	-0.0039	/	Pass	
		-30	3.91	-6.574	-0.0034	/	Pass	
		-20	3.91	-8.089	-0.0042	/	Pass	
		-10	3.91	-11.493	-0.0060	/	Pass	
		0	3.91	-5.153	-0.0027	/	Pass	
		10	3.91	-12.887	-0.0067	/	Pass	
		30	3.91	-2.984	-0.0016	/	Pass	
		40	3.91	-5.842	-0.0031	/	Pass	
		50	3.91	-11.881	-0.0062	/	Pass	
	EGPRS	1850.2	20	3.7	-20.269	-0.0110	/	Pass

			3.91	-15.794	-0.0085	/	Pass	
			4.4	-12.457	-0.0067	/	Pass	
		-30	3.91	-14.947	-0.0081	/	Pass	
		-20	3.91	-9.208	-0.0050	/	Pass	
		-10	3.91	-12.162	-0.0066	/	Pass	
		0	3.91	-13.909	-0.0075	/	Pass	
		10	3.91	-11.268	-0.0061	/	Pass	
		30	3.91	4.013	0.0022	/	Pass	
		40	3.91	4.567	0.0025	/	Pass	
	50	3.91	3.639	0.0020	/	Pass		
	1880	20		3.7	-11.237	-0.0060	/	Pass
				3.91	-16.008	-0.0085	/	Pass
				4.4	-12.295	-0.0065	/	Pass
		-30	3.91	-12.422	-0.0066	/	Pass	
		-20	3.91	-9.851	-0.0052	/	Pass	
		-10	3.91	-11.772	-0.0063	/	Pass	
		0	3.91	-12.607	-0.0067	/	Pass	
		10	3.91	-14.453	-0.0077	/	Pass	
		30	3.91	-14.845	-0.0079	/	Pass	
	40	3.91	0.392	0.0002	/	Pass		
	50	3.91	-2.185	-0.0012	/	Pass		
	1909.8	20		3.7	-15.606	-0.0082	/	Pass
				3.91	-17.767	-0.0093	/	Pass
				4.4	-14.785	-0.0077	/	Pass
		-30	3.91	-16.005	-0.0084	/	Pass	
		-20	3.91	-12.766	-0.0067	/	Pass	
		-10	3.91	-13.455	-0.0070	/	Pass	
		0	3.91	-14.265	-0.0075	/	Pass	
10		3.91	-15.496	-0.0081	/	Pass		
30		3.91	-7.864	-0.0041	/	Pass		
40	3.91	-15.375	-0.0081	/	Pass			
50	3.91	-15.115	-0.0079	/	Pass			

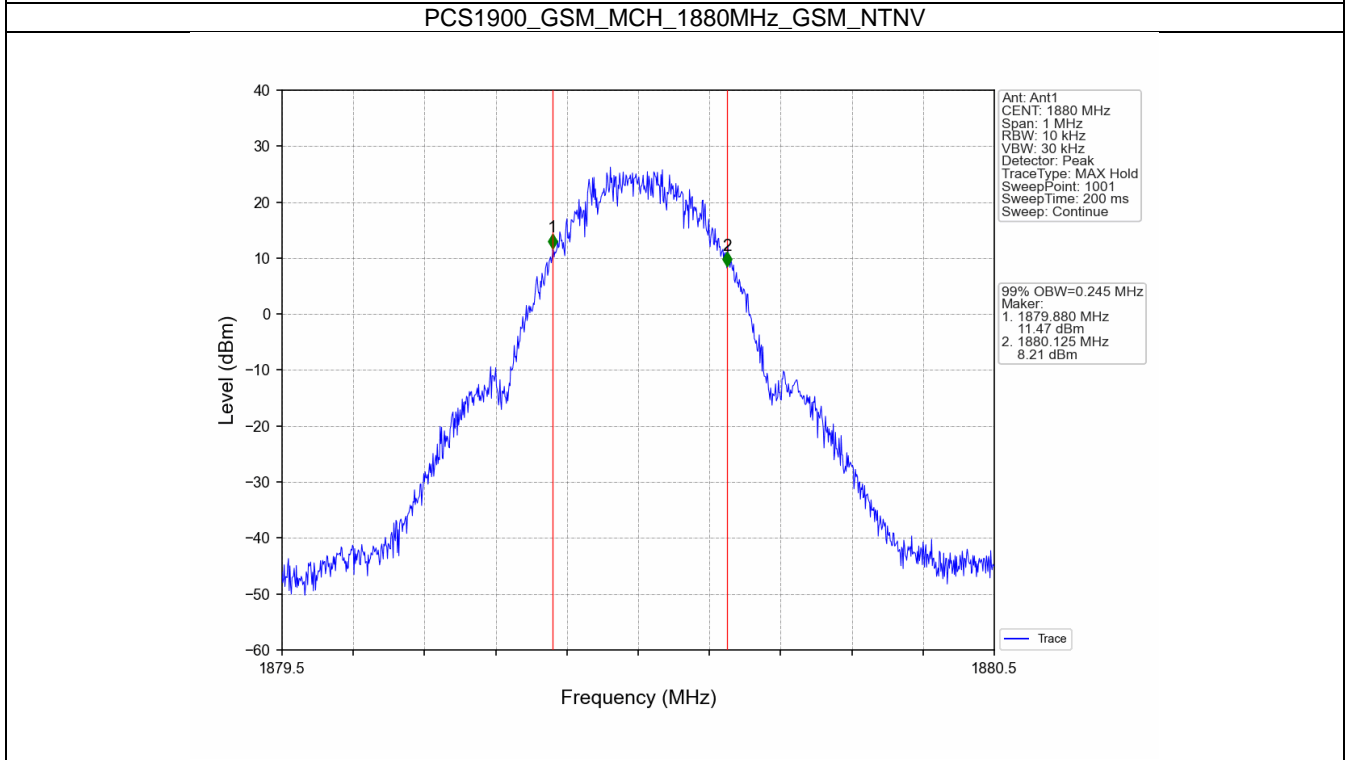
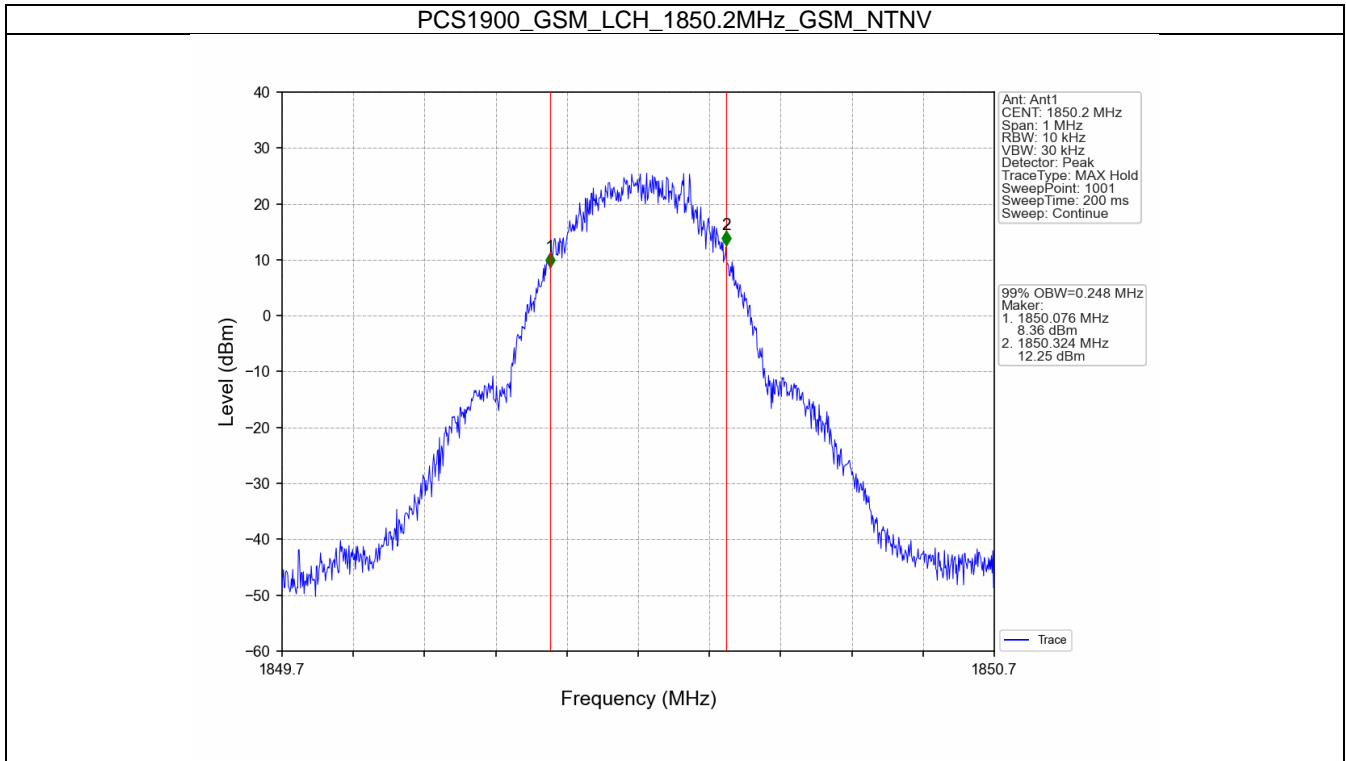
### 3. 99% & 26dB Bandwidth

#### 3.1 PCS1900\_OBW

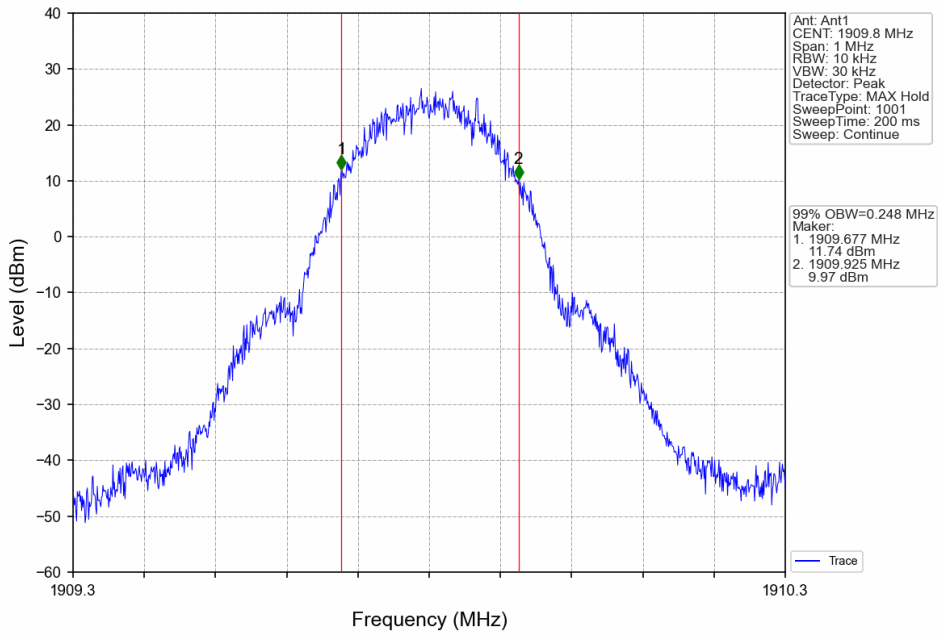
##### 3.1.1 Test Result

Band: PCS1900						
ENV	Mode		Frequency (MHz)	99% Occupied Bandwidth (MHz)		Verdict
	Network	Subset		Result	Limit	
NTNV	GSM	GSM	1850.2	0.248	/	Pass
			1880	0.245	/	Pass
			1909.8	0.248	/	Pass
	GPRS	1 TX Slot	1850.2	0.247	/	Pass
			1880	0.244	/	Pass
			1909.8	0.245	/	Pass
	EGPRS	1 TX Slot	1850.2	0.250	/	Pass
			1880	0.245	/	Pass
			1909.8	0.252	/	Pass

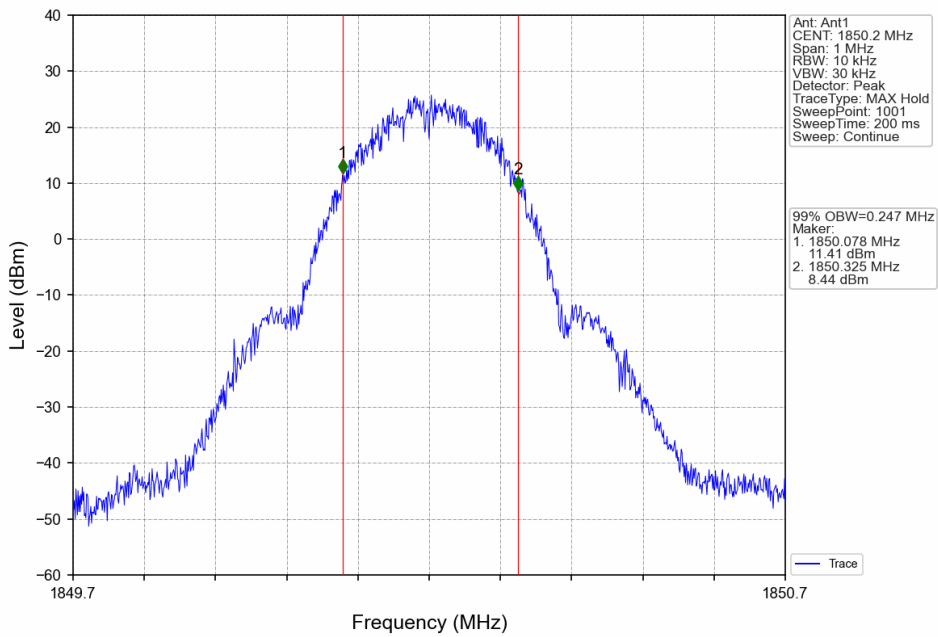
### 3.1.2 Test Graph



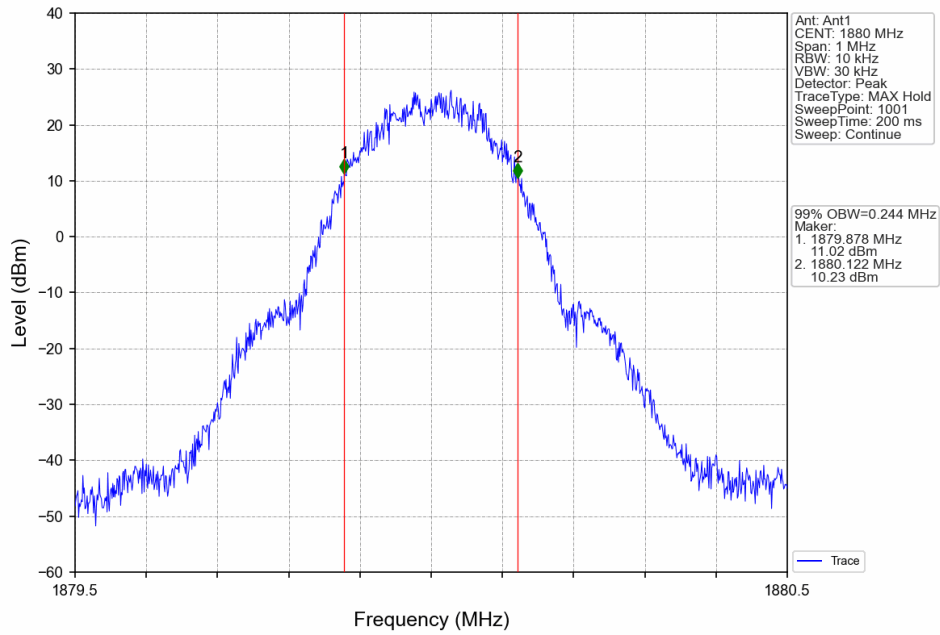
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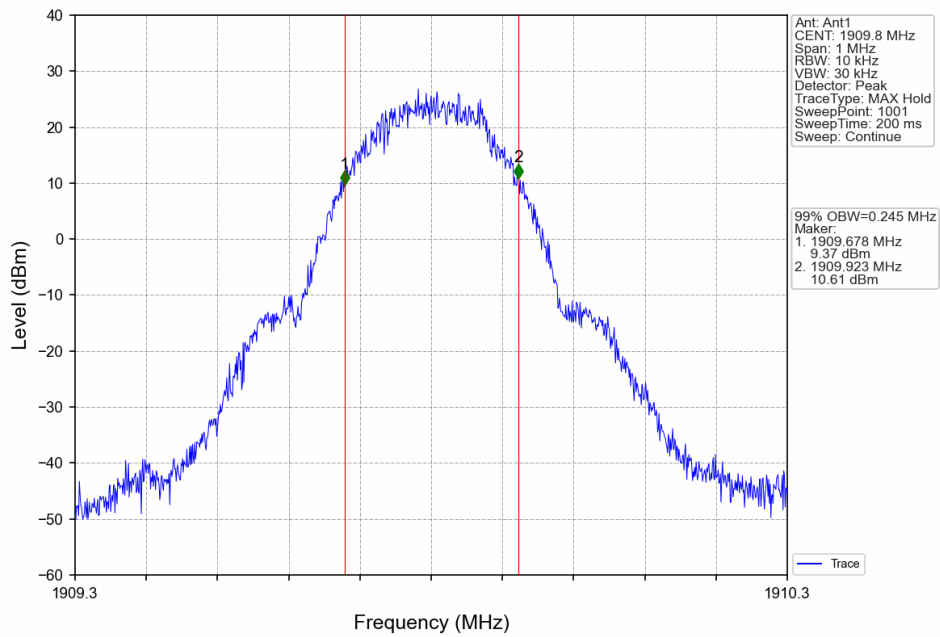
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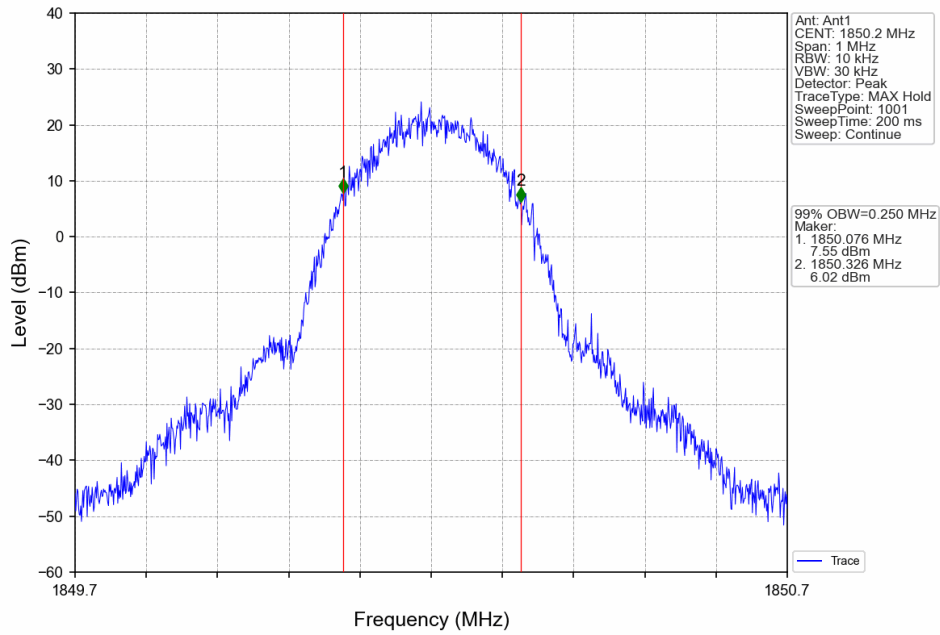
PCS1900\_GPRS\_MCH\_1880MHz\_1 TX Slot\_NTNV



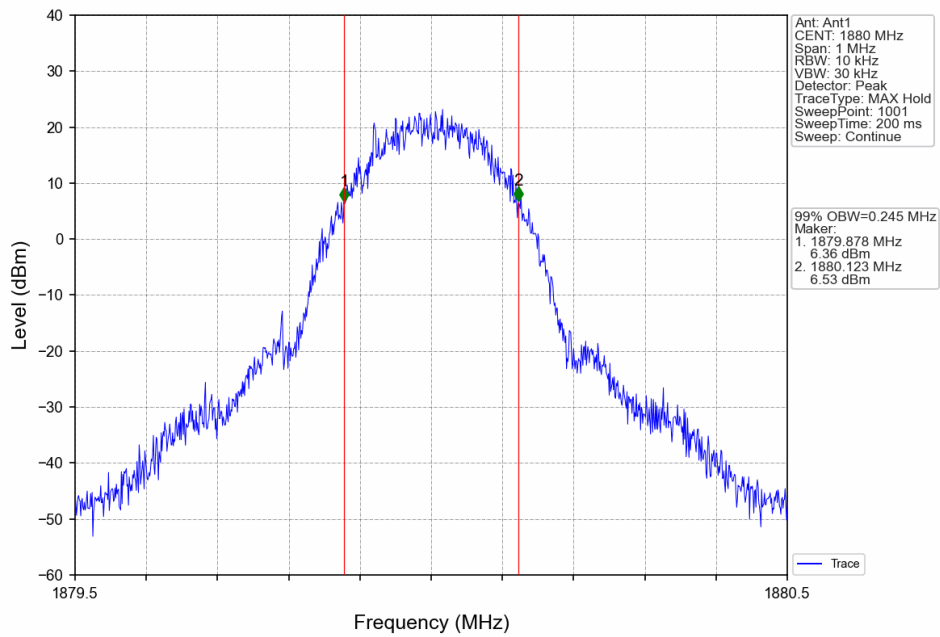
PCS1900\_GPRS\_HCH\_1909.8MHz\_1 TX Slot\_NTNV



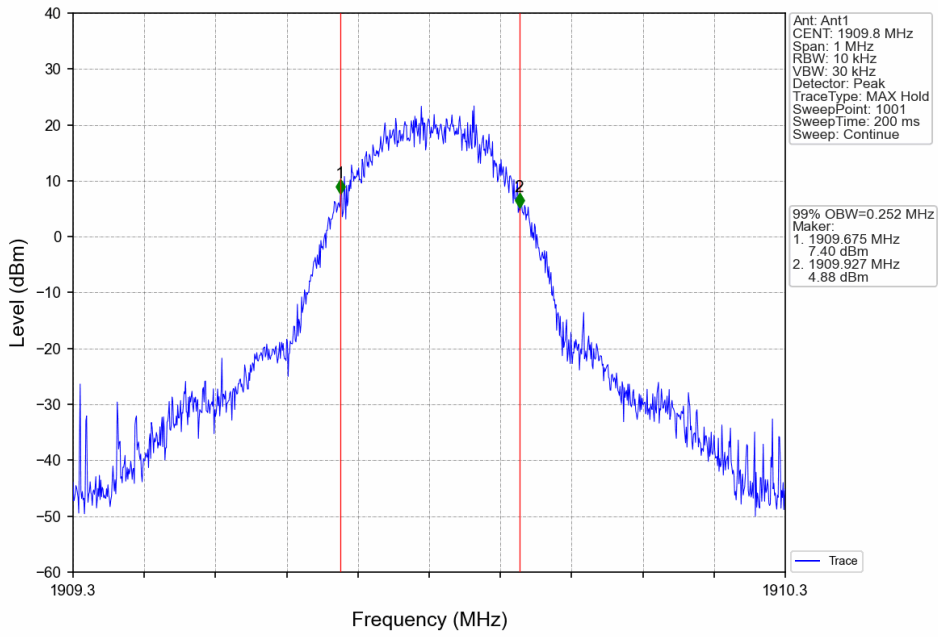
PCS1900\_EGPRS\_LCH\_1850.2MHz\_1 TX Slot\_NTNV



PCS1900\_EGPRS\_MCH\_1880MHz\_1 TX Slot\_NTNV



PCS1900\_EGPRS\_HCH\_1909.8MHz\_1 TX Slot\_NTNV



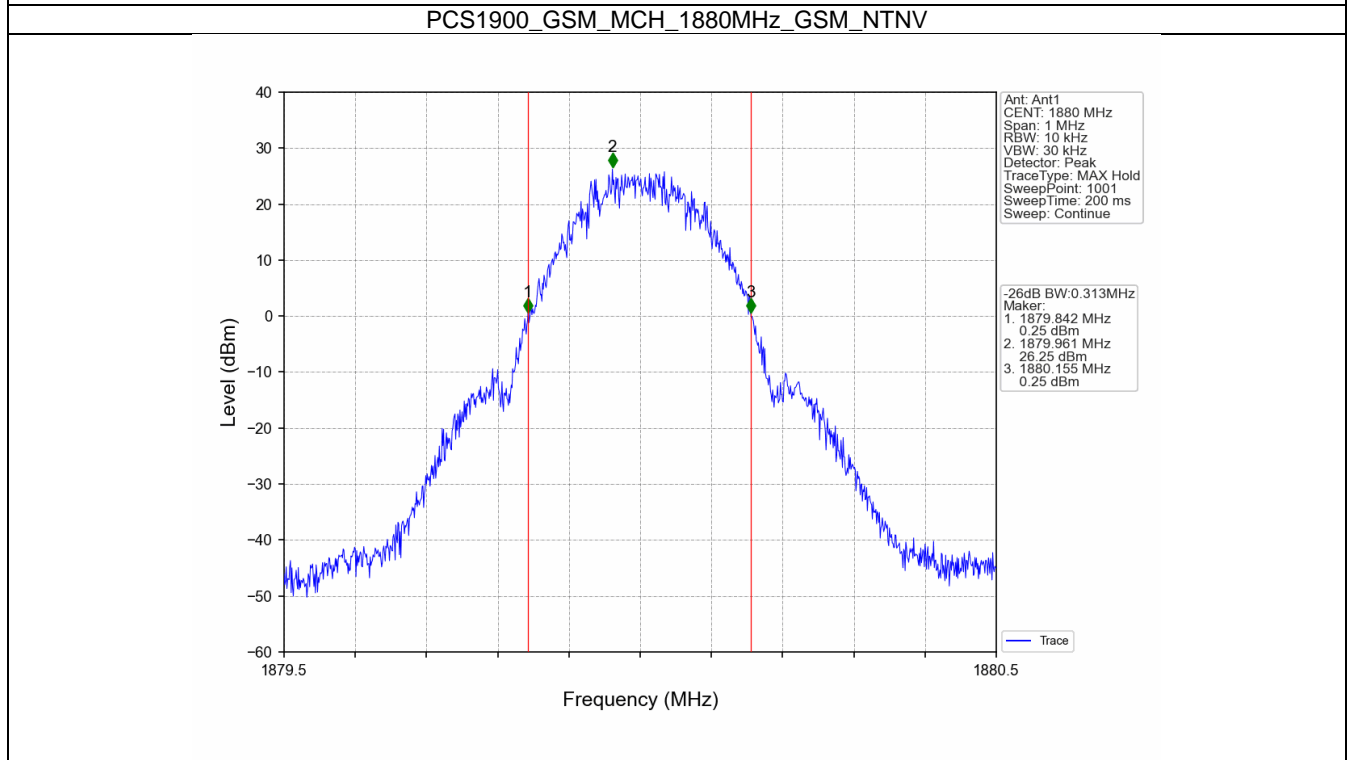
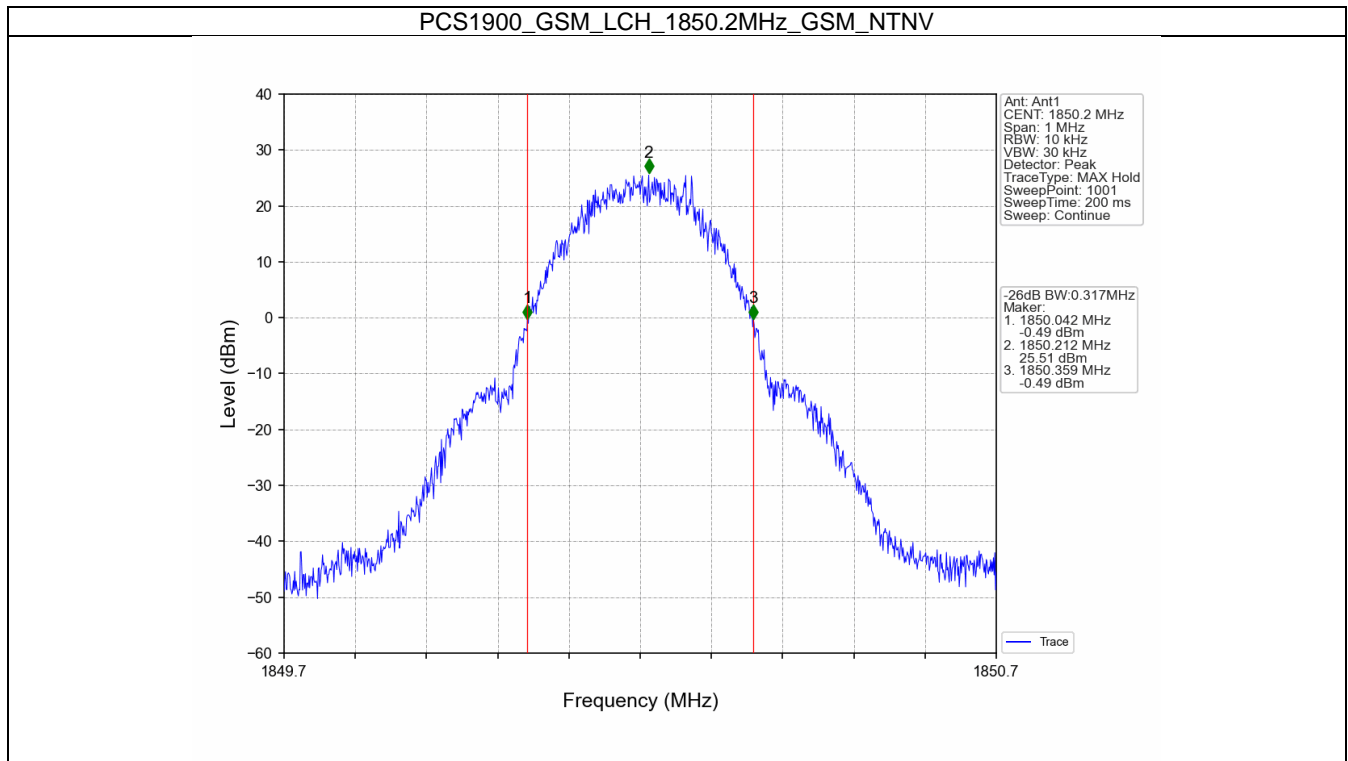


## 3.2 PCS1900\_XDB

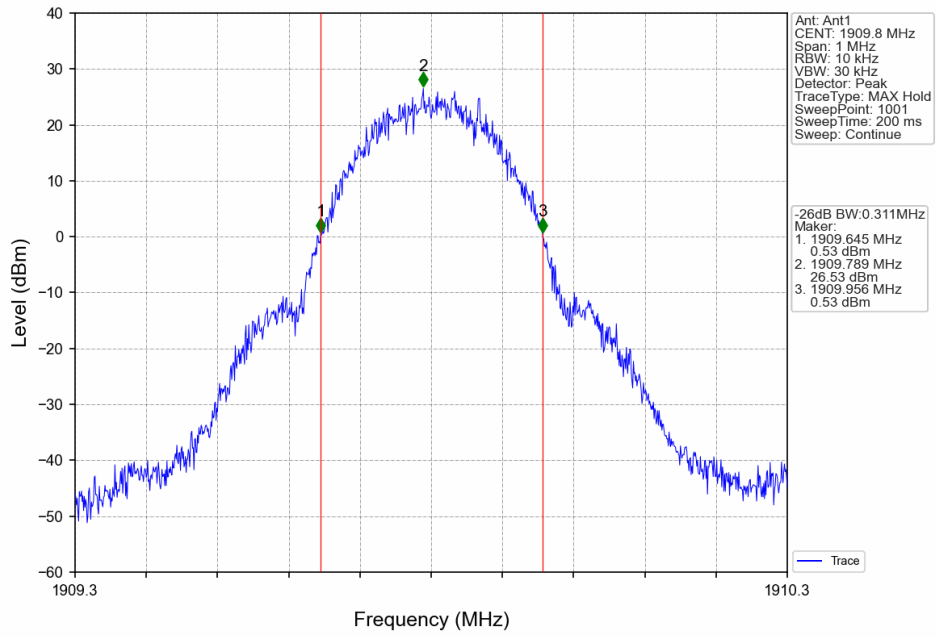
### 3.2.1 Test Result

Band: PCS1900						
ENV	Mode		Frequency (MHz)	26dB Bandwidth (MHz)		Verdict
	Network	Subset		Result	Limit	
NTNV	GSM	GSM	1850.2	0.317	/	Pass
			1880	0.313	/	Pass
			1909.8	0.311	/	Pass
	GPRS	1 TX Slot	1850.2	0.317	/	Pass
			1880	0.316	/	Pass
			1909.8	0.305	/	Pass
	EGPRS	1 TX Slot	1850.2	0.307	/	Pass
			1880	0.317	/	Pass
			1909.8	0.316	/	Pass

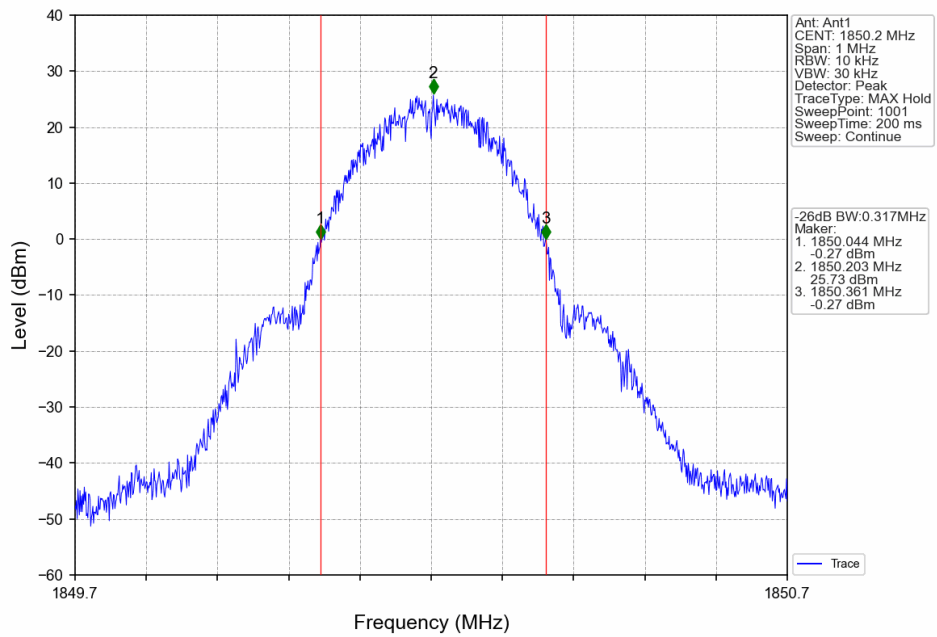
### 3.2.2 Test Graph



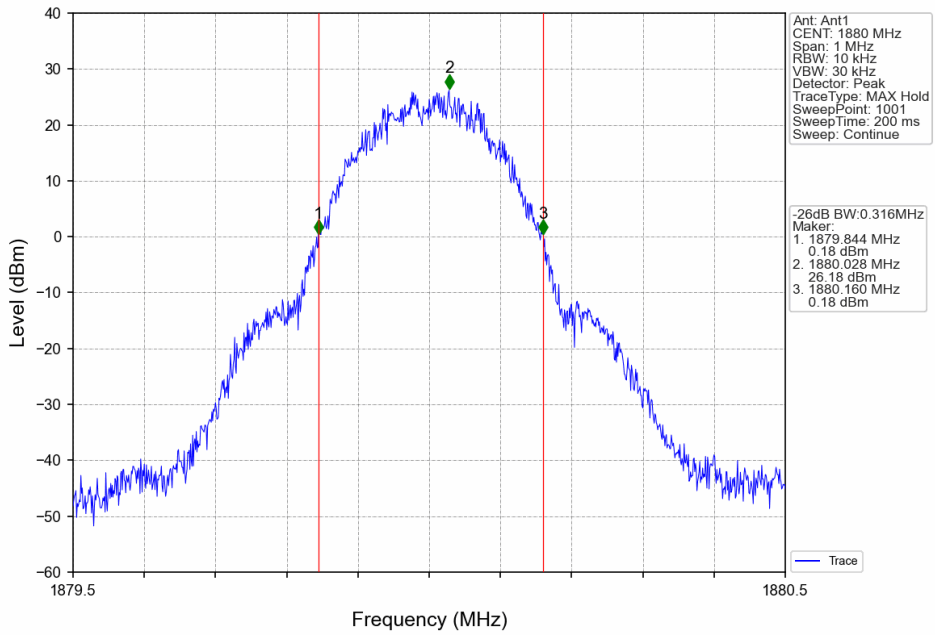
PCS1900\_GSM\_HCH\_1909.8MHz\_GSM\_NTNV



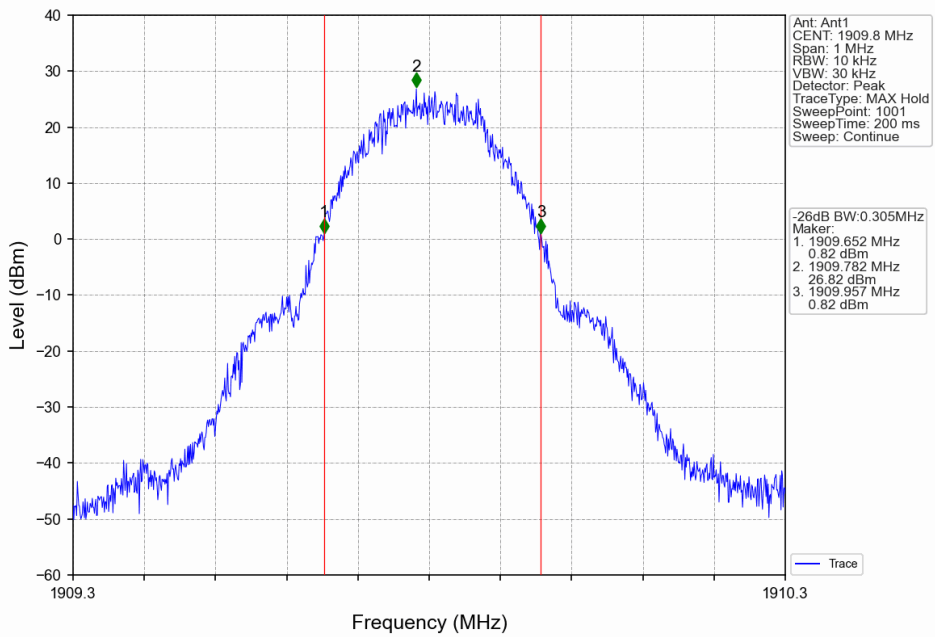
PCS1900\_GPRS\_LCH\_1850.2MHz\_1 TX Slot\_NTNV



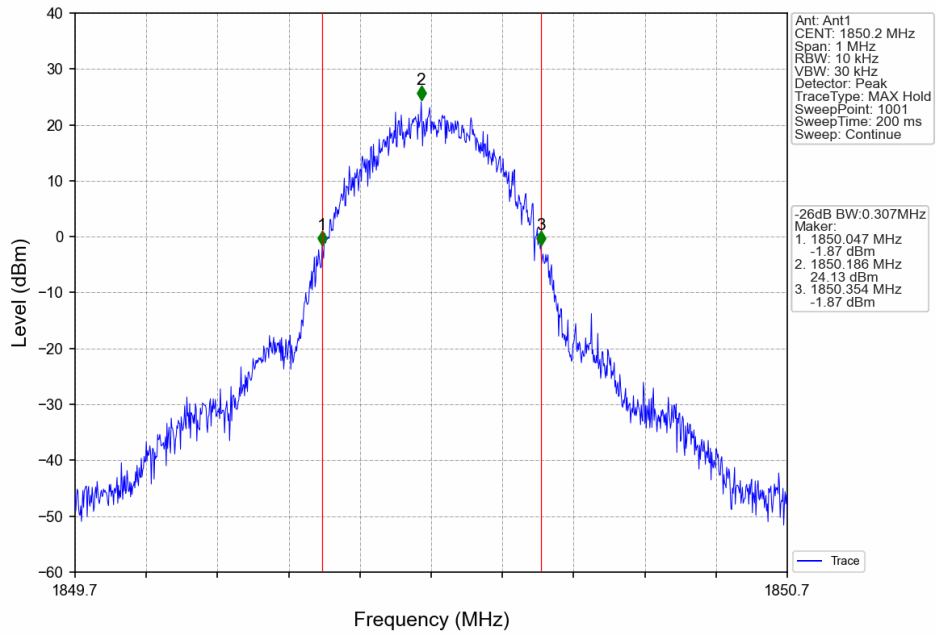
PCS1900\_GPRS\_MCH\_1880MHz\_1 TX Slot\_NTNV



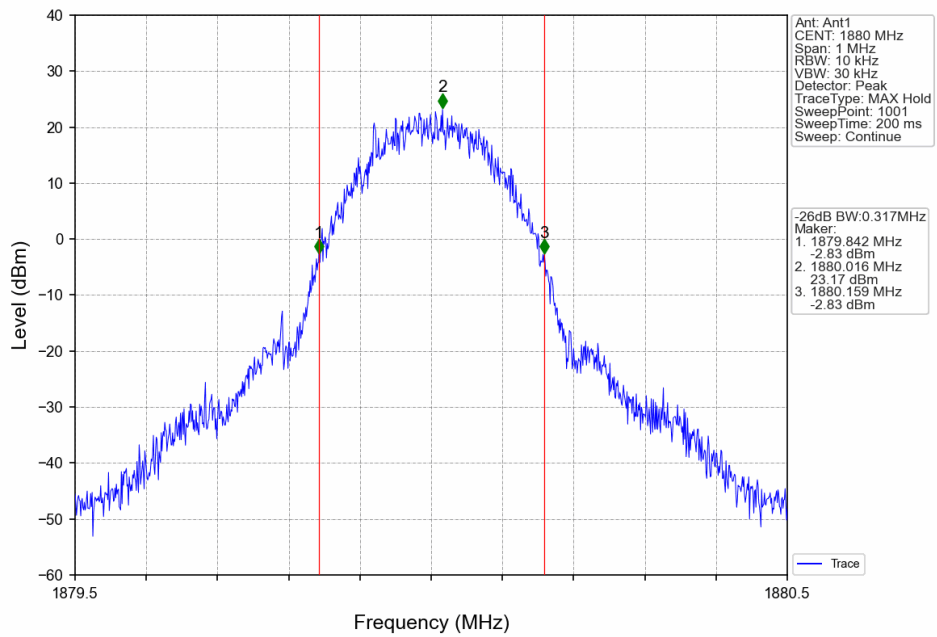
PCS1900\_GPRS\_HCH\_1909.8MHz\_1 TX Slot\_NTNV



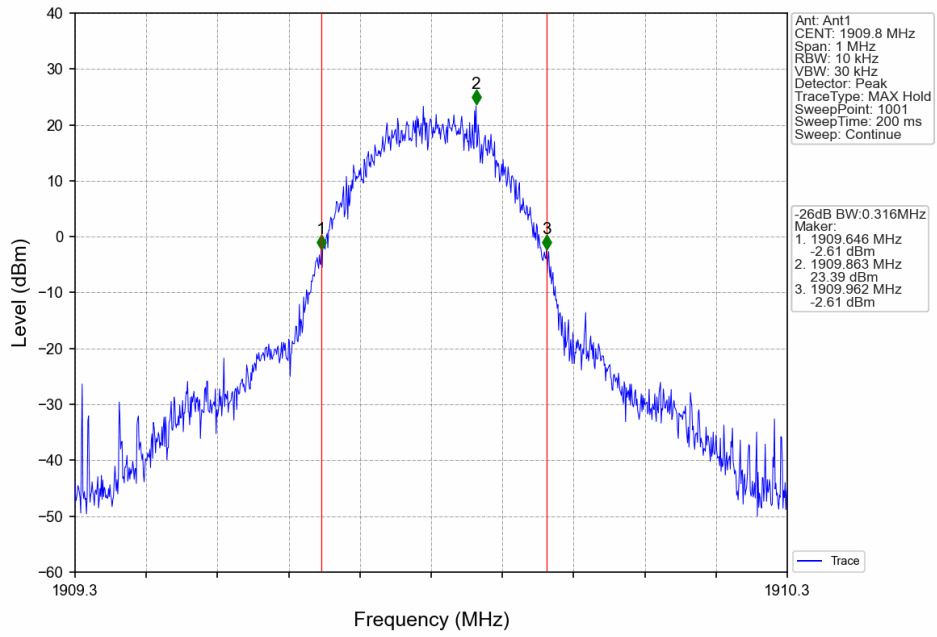
PCS1900\_EGPRS\_LCH\_1850.2MHz\_1 TX Slot\_NTNV



PCS1900\_EGPRS\_MCH\_1880MHz\_1 TX Slot\_NTNV



PCS1900\_EGPRS\_HCH\_1909.8MHz\_1 TX Slot\_NTNV



## 4. Peak-Average Ratio

### 4.1 PCS1900

#### 4.1.1 Test Result

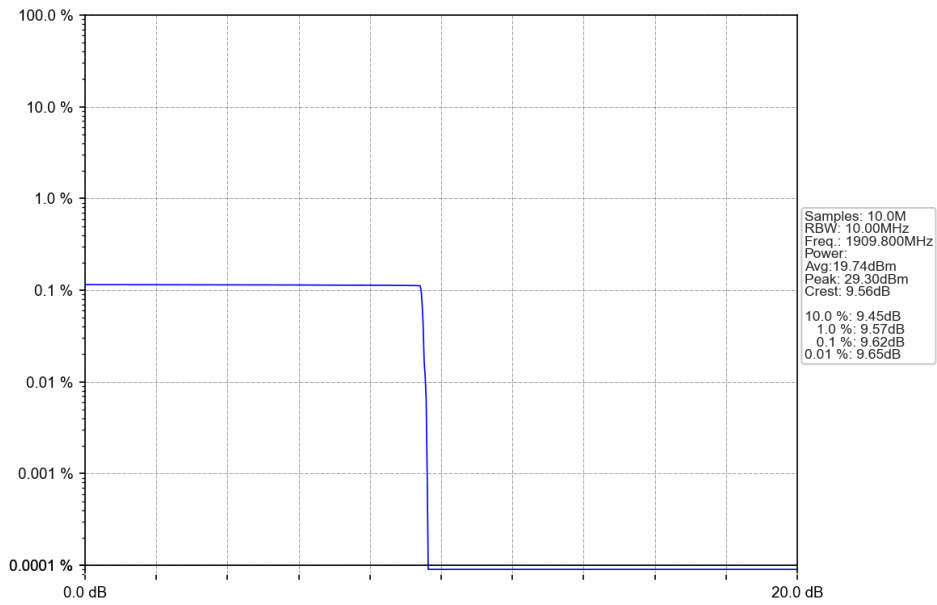
Band: PCS1900						
ENV	Mode		Frequency (MHz)	Peak-Average Ratio (dB)		Verdict
	Network	Subset		Result	Limit	
NTNV	GSM	GSM	1850.2	9.42	<=13	Pass
			1880	9.59	<=13	Pass
			1909.8	9.62	<=13	Pass
	GPRS	4 TX Slots	1850.2	3.62	<=13	Pass
			1880	3.57	<=13	Pass
			1909.8	3.74	<=13	Pass
	EGPRS	4 TX Slots	1850.2	7.01	<=13	Pass
			1880	6.99	<=13	Pass
			1909.8	7.97	<=13	Pass

## 4.1.2 Test Graph

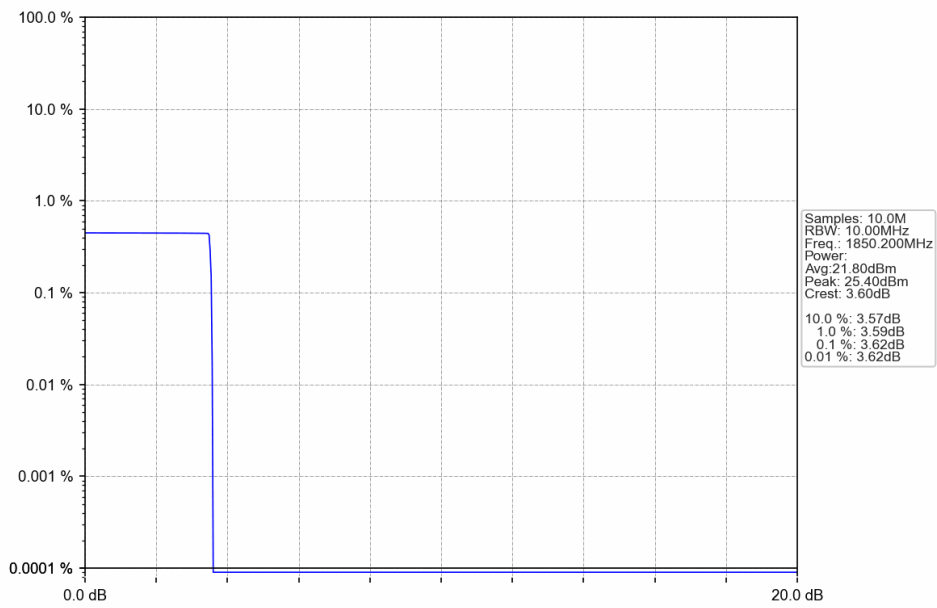




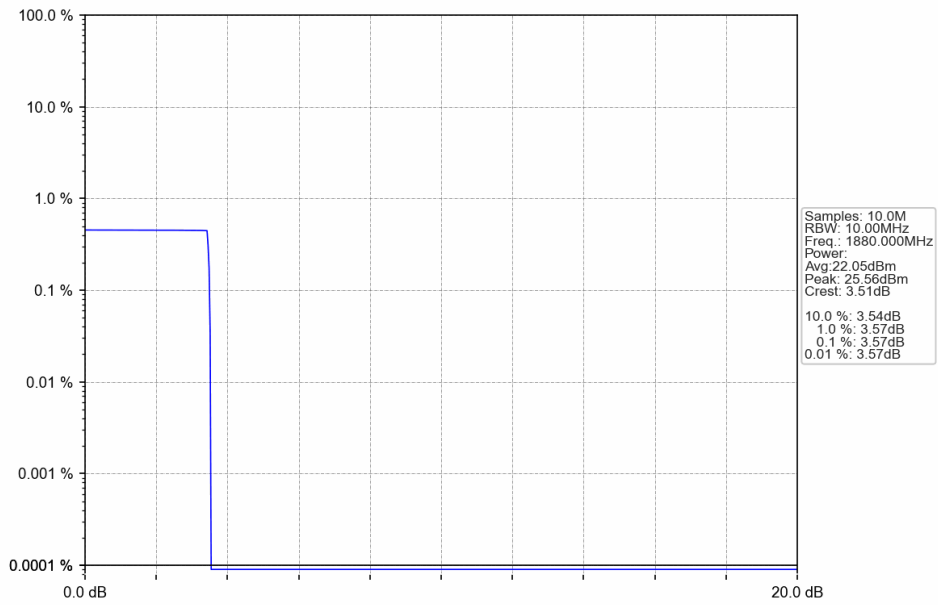
PCS1900\_GSM\_HCH\_1909.8MHz\_GSM\_NTNV



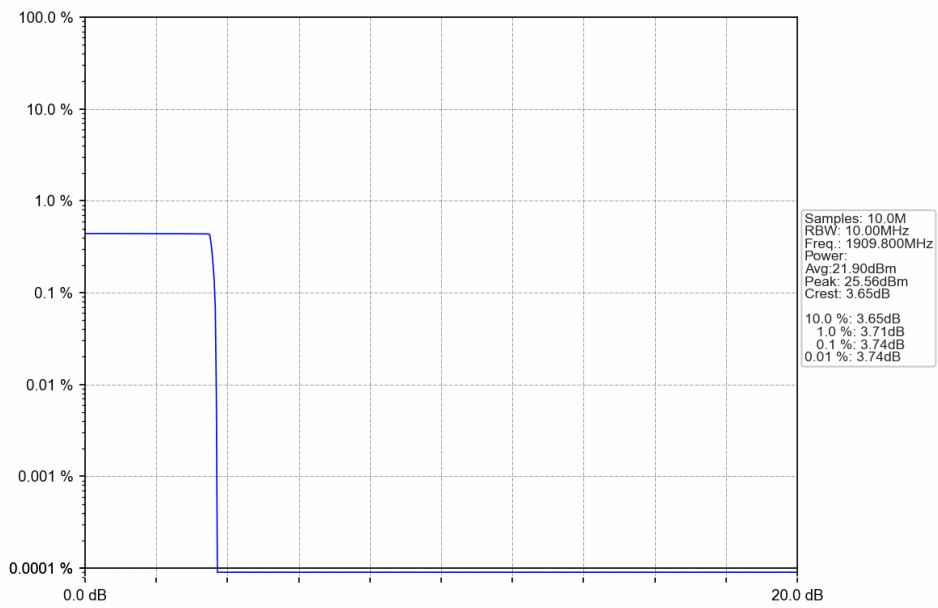
PCS1900\_GPRS\_LCH\_1850.2MHz\_4 TX Slots\_NTNV



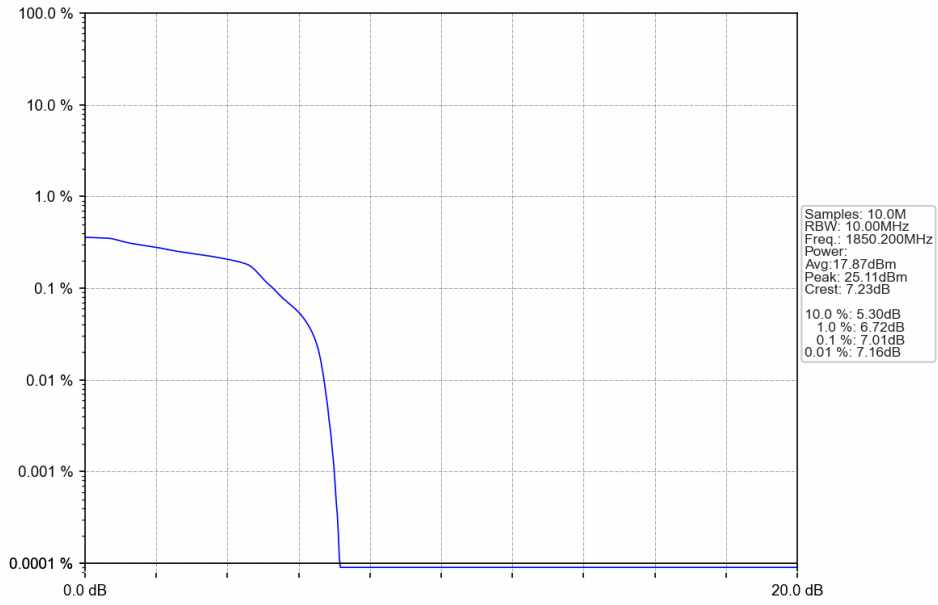
PCS1900\_GPRS\_MCH\_1880MHz\_4 TX Slots\_NTNV



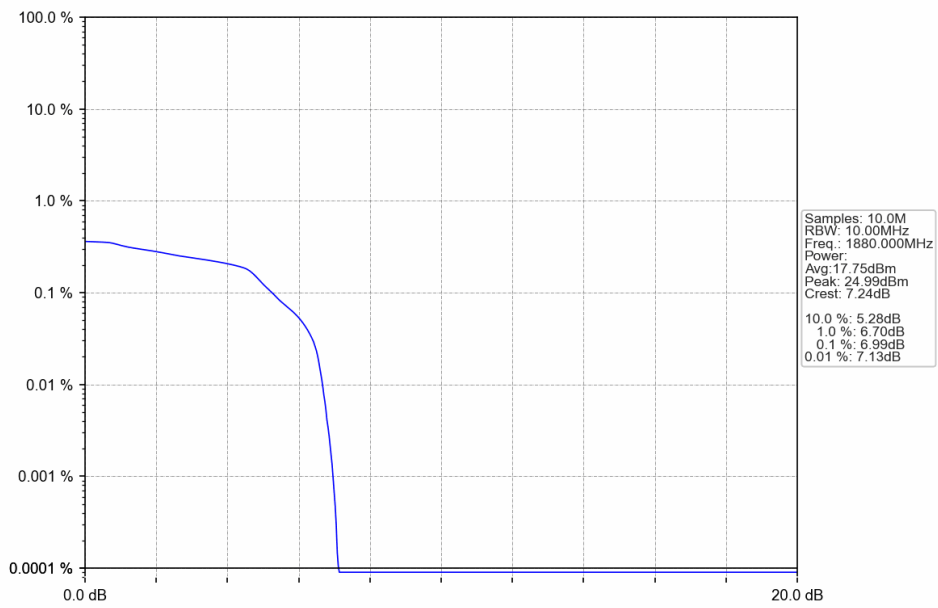
PCS1900\_GPRS\_HCH\_1909.8MHz\_4 TX Slots\_NTNV



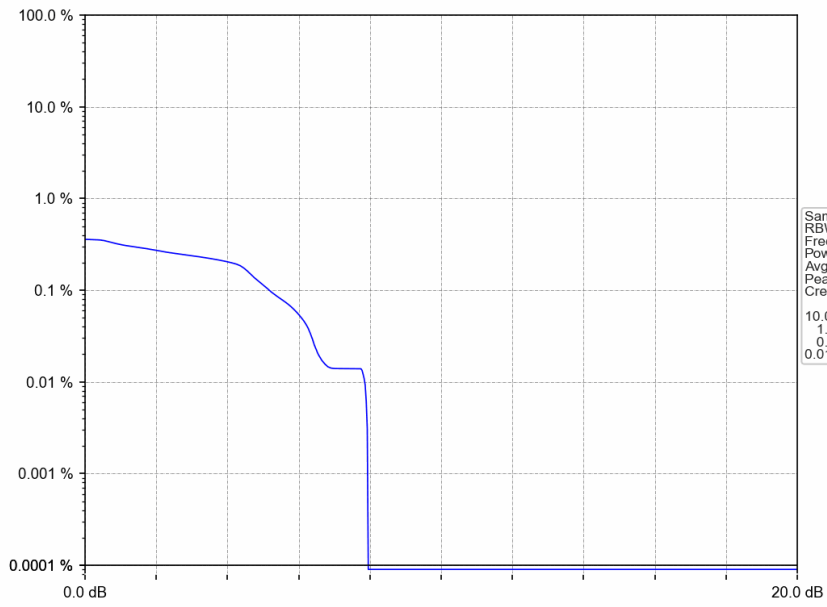
PCS1900\_EGPRS\_LCH\_1850.2MHz\_4 TX Slots\_NTNV



PCS1900\_EGPRS\_MCH\_1880MHz\_4 TX Slots\_NTNV



PCS1900\_EGPRS\_HCH\_1909.8MHz\_4 TX Slots\_NTNV



Samples: 10.0M  
RBW: 10.00MHz  
Freq.: 1909.800MHz  
Power:  
Avg: 17.65dBm  
Peak: 26.57dBm  
Crest: 7.92dB  
10.0 %: 5.19dB  
1.0 %: 7.88dB  
0.1 %: 7.97dB  
0.01 %: 7.97dB

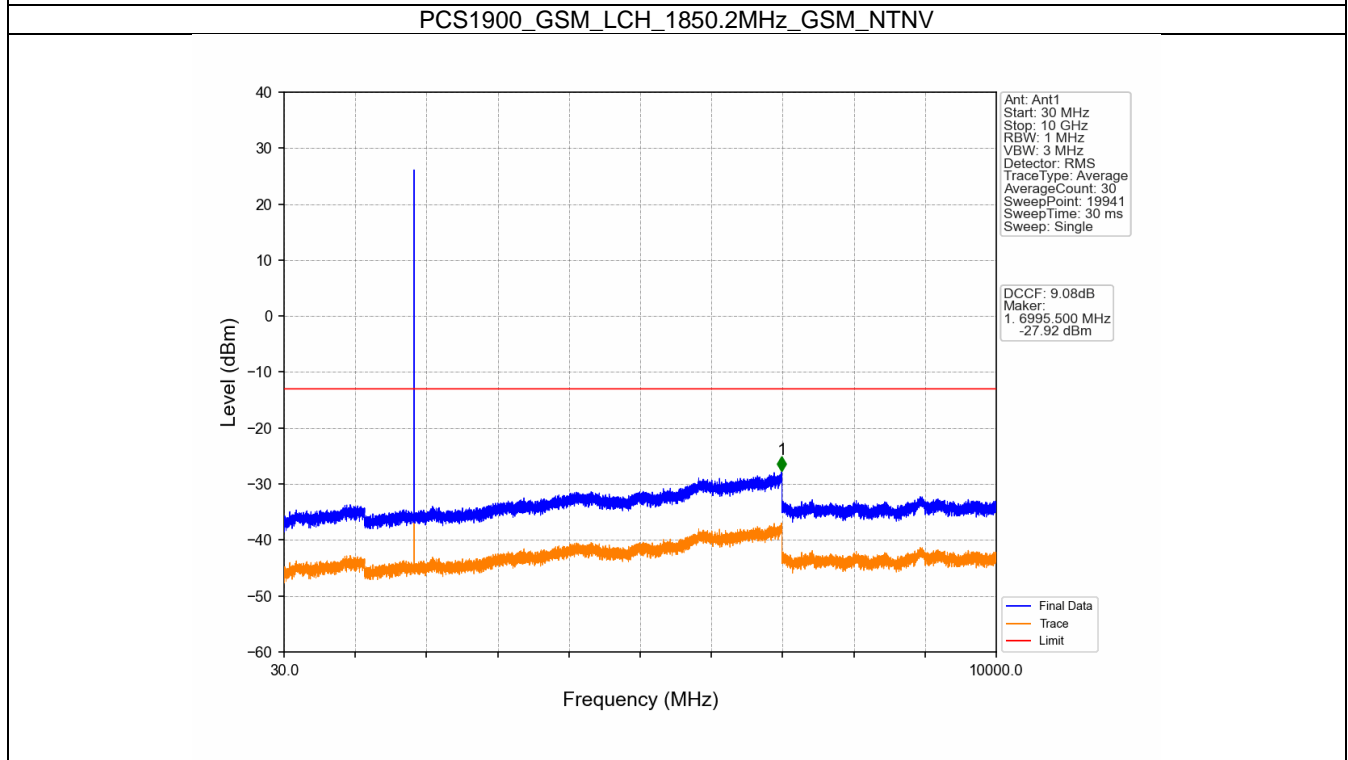
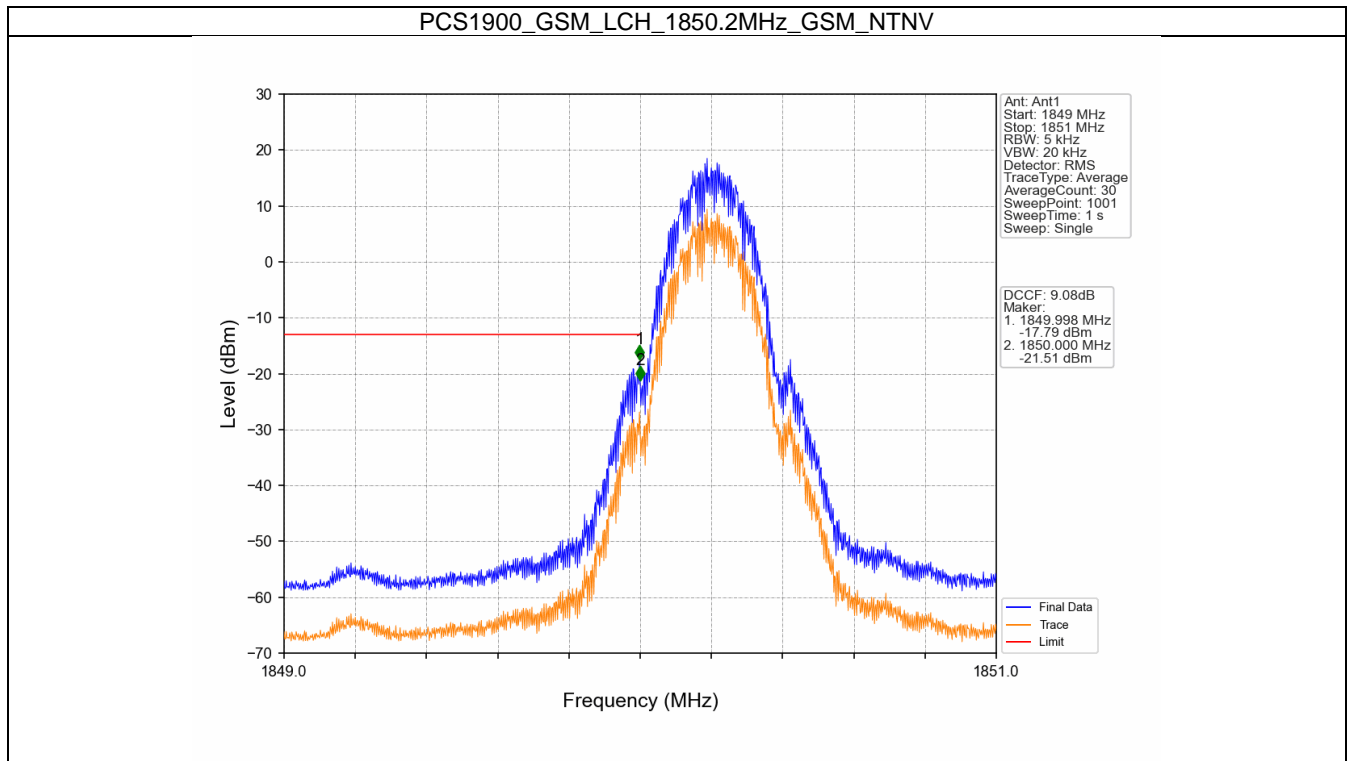
## 5. Spurious Emission & Band Edges

### 5.1 PCS1900

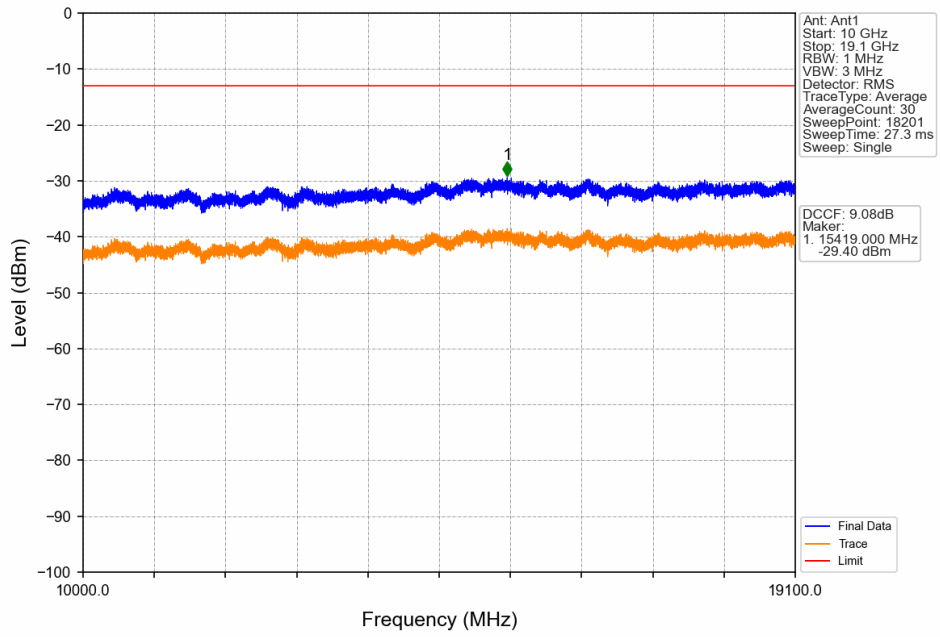
#### 5.1.1 Test Result

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

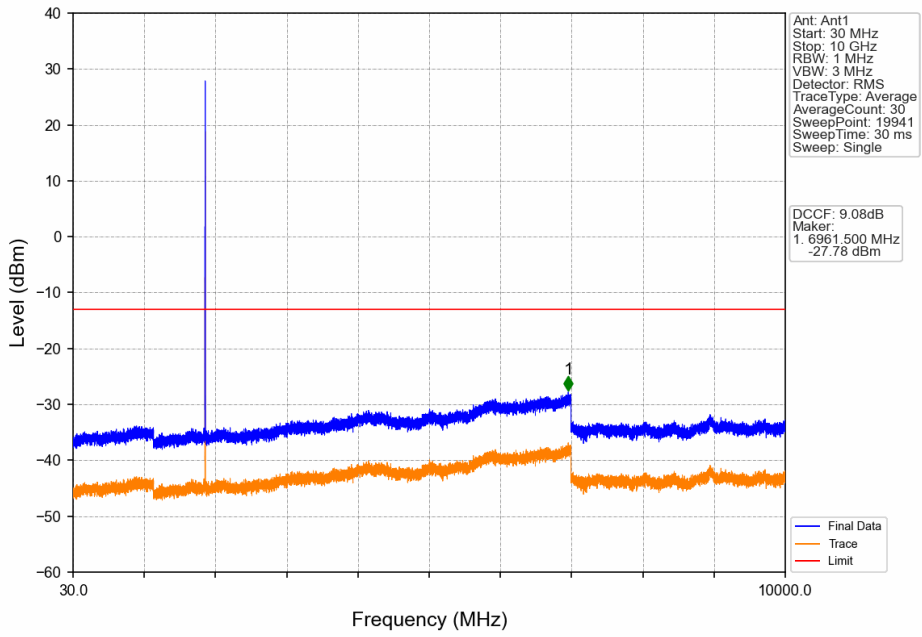
### 5.1.2 Test Graph



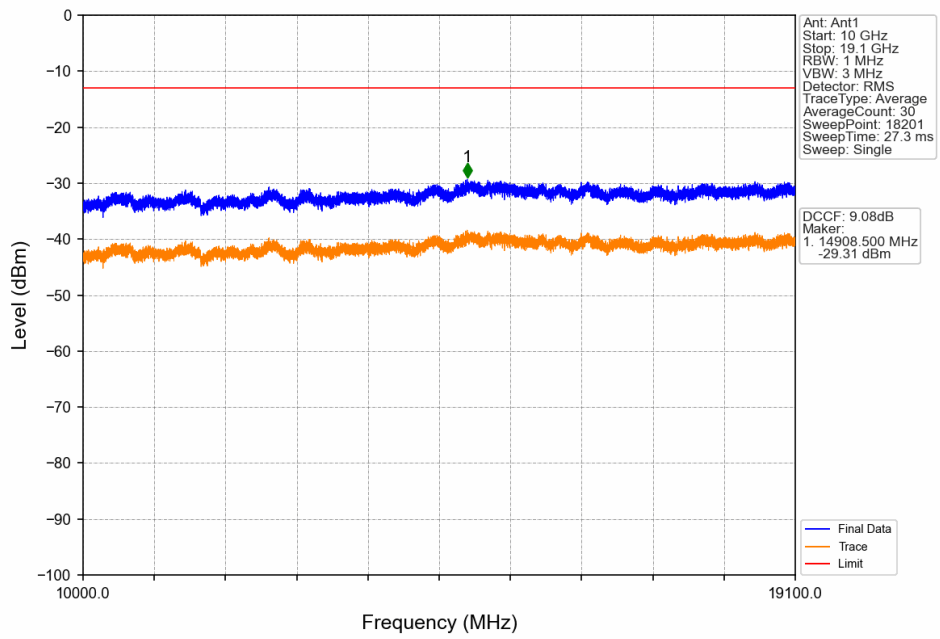
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PCS1900\_GSM\_MCH\_1880MHz\_GSM\_NTNV

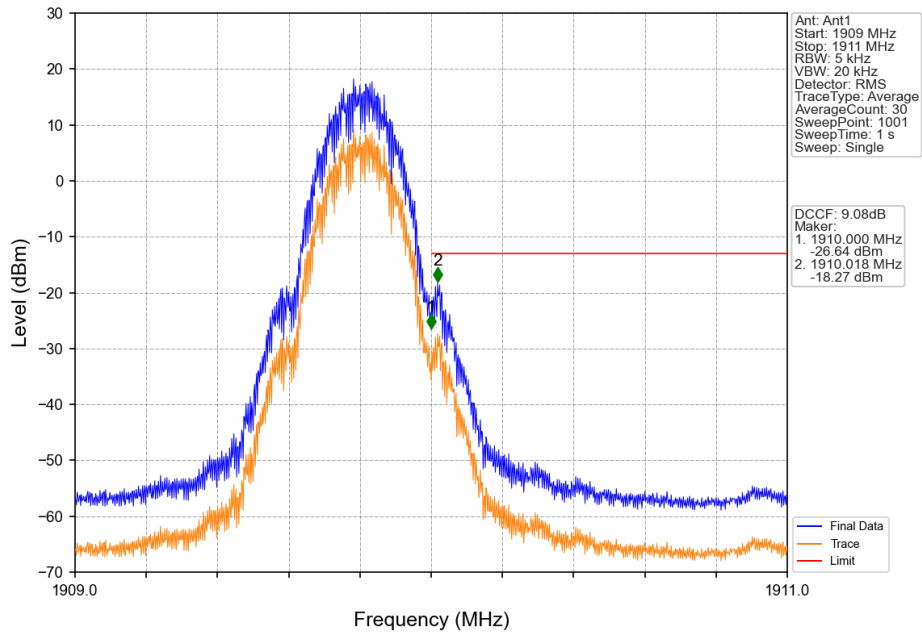


PCS1900\_GSM\_MCH\_1880MHz\_GSM\_NTNV

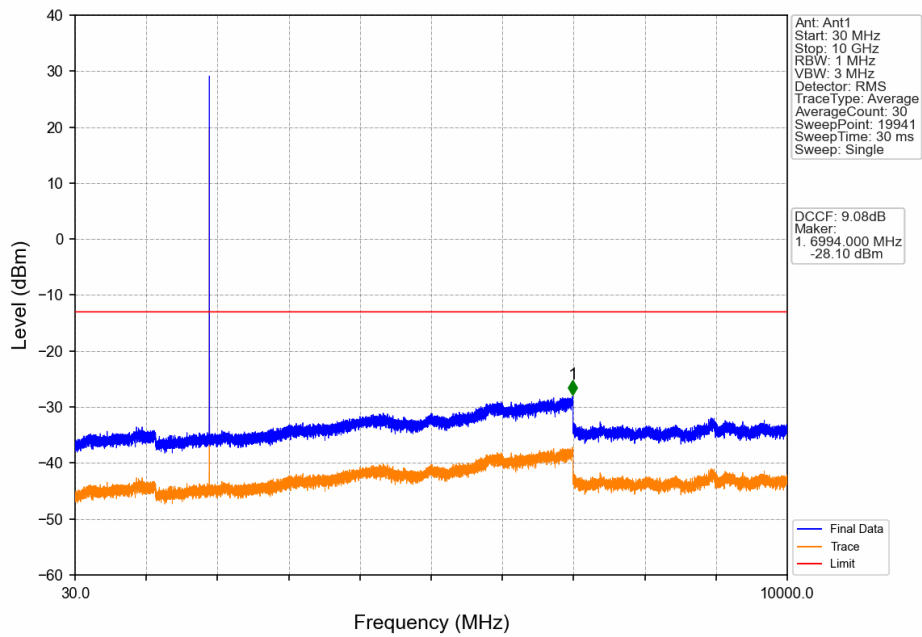




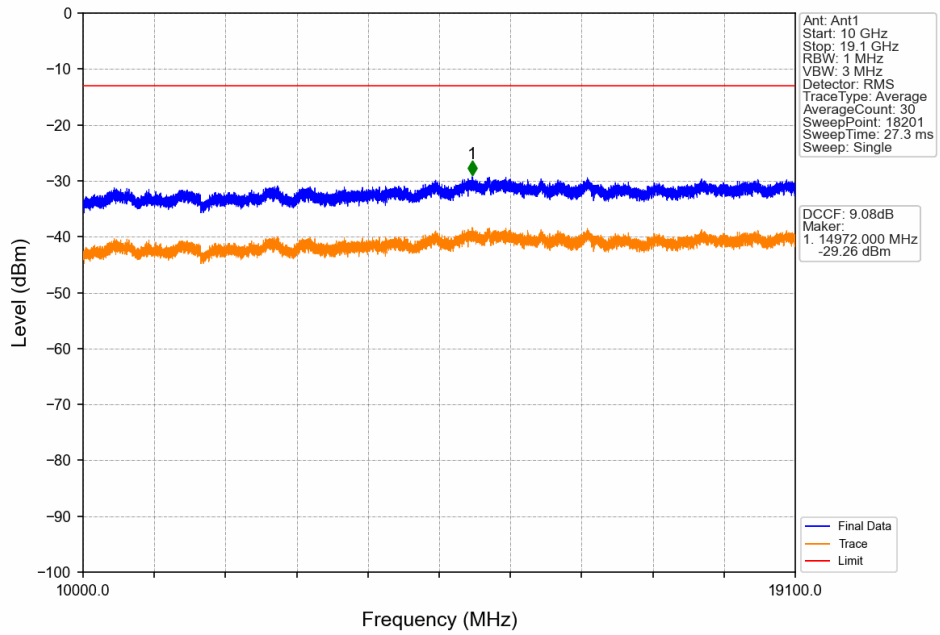
PCS1900\_GSM\_HCH\_1909.8MHz\_GSM\_NTNV



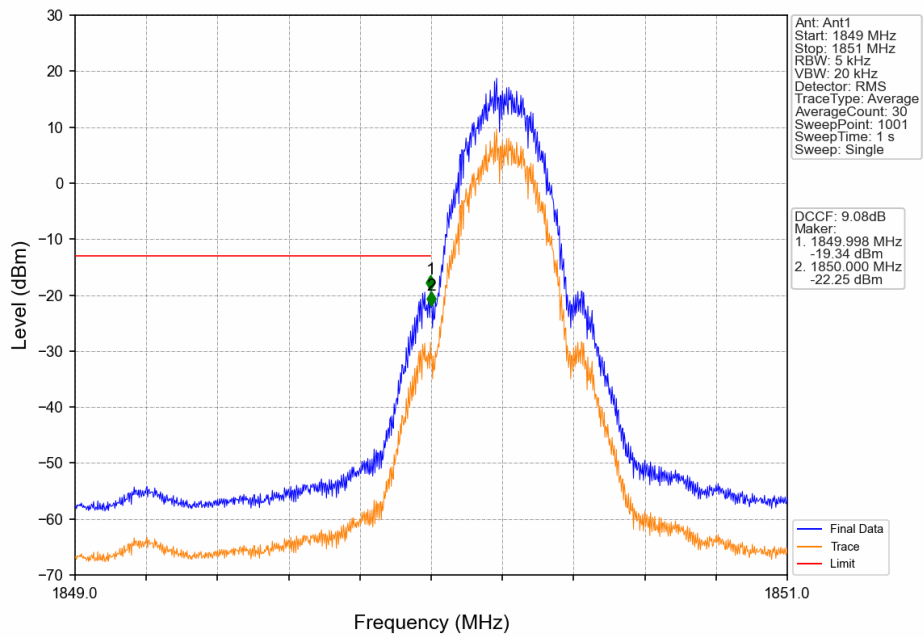
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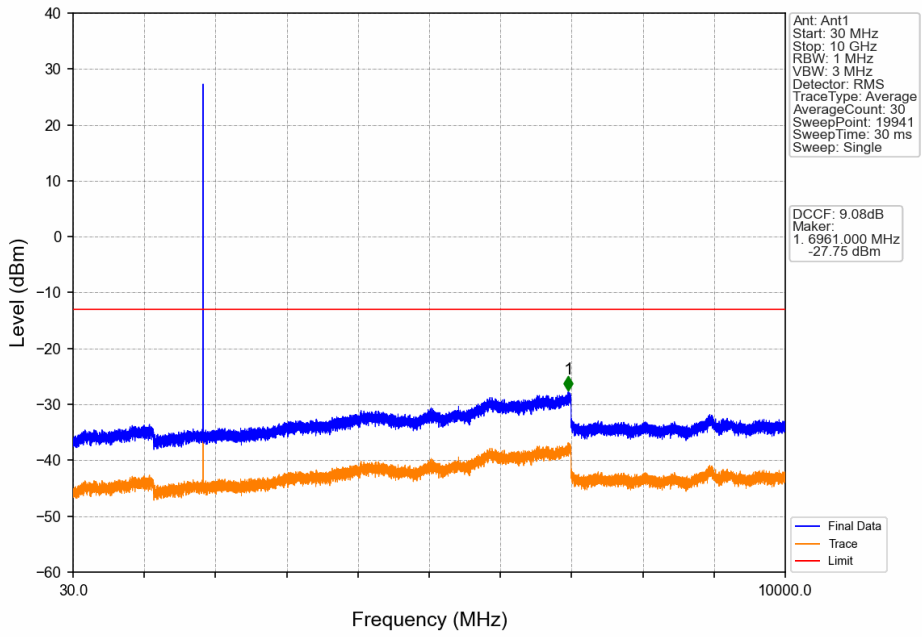
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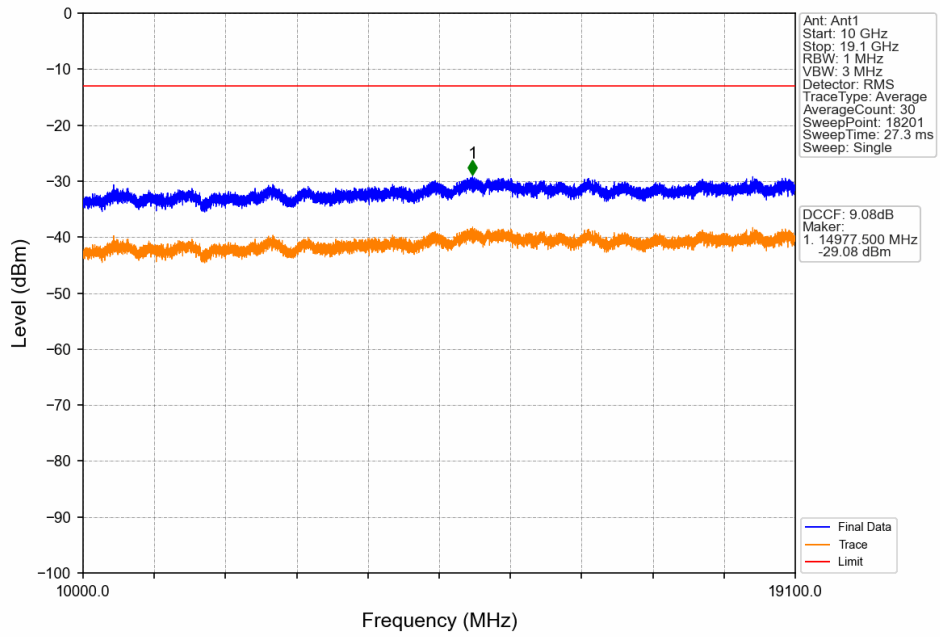
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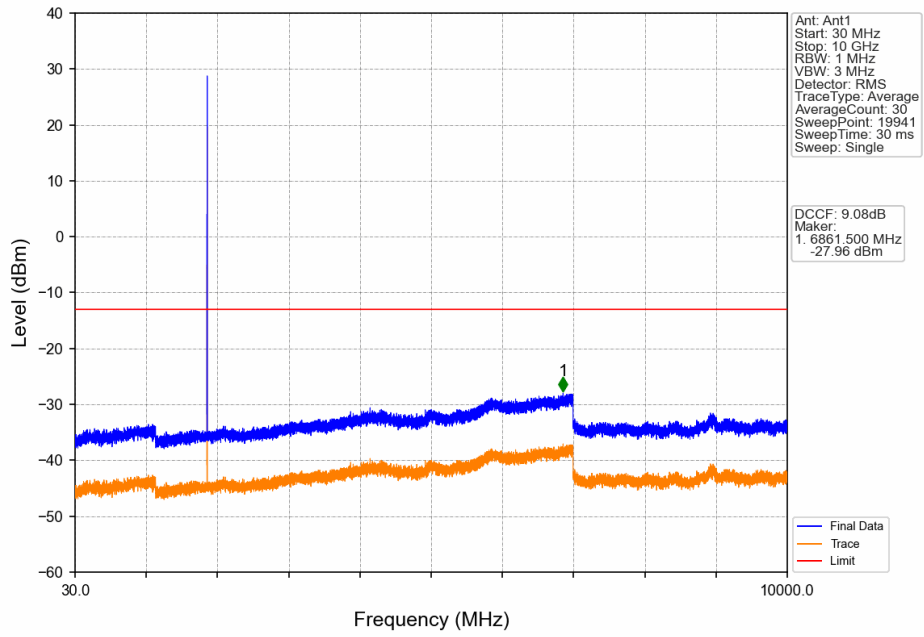
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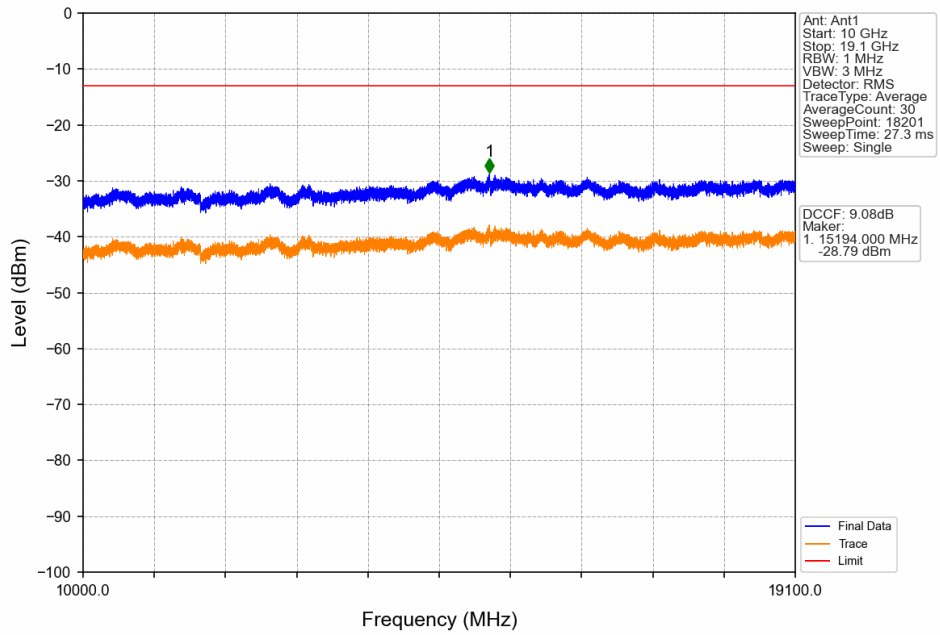
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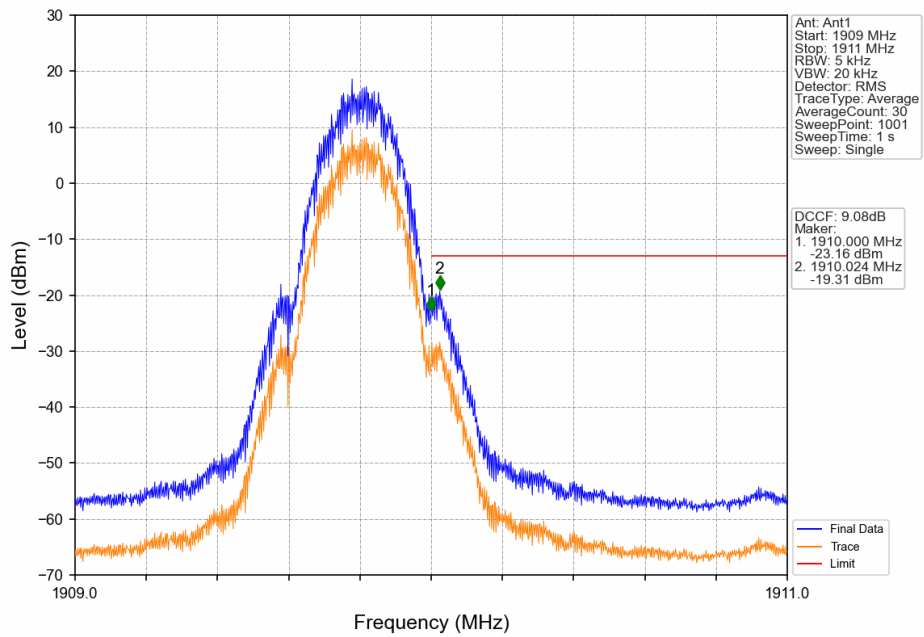
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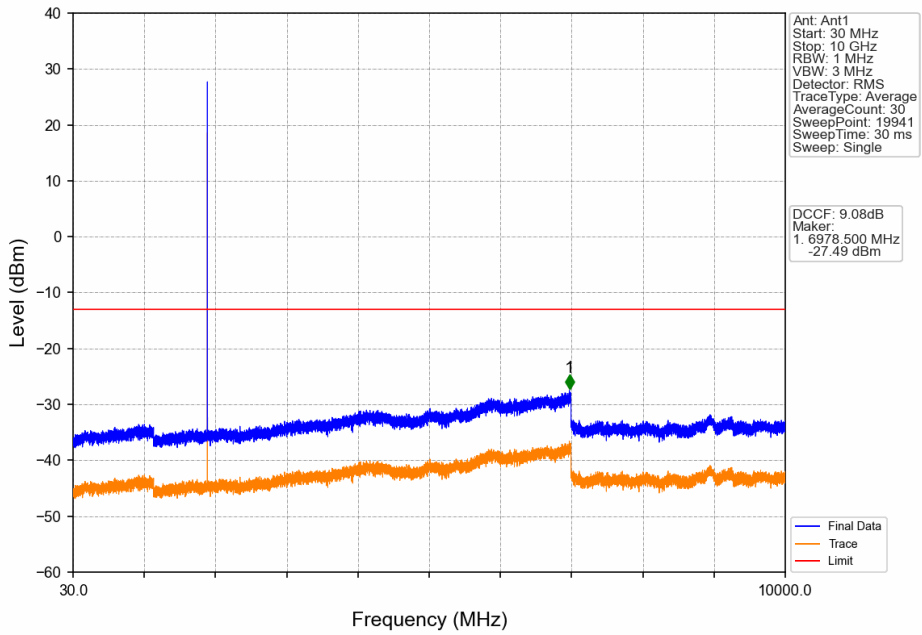
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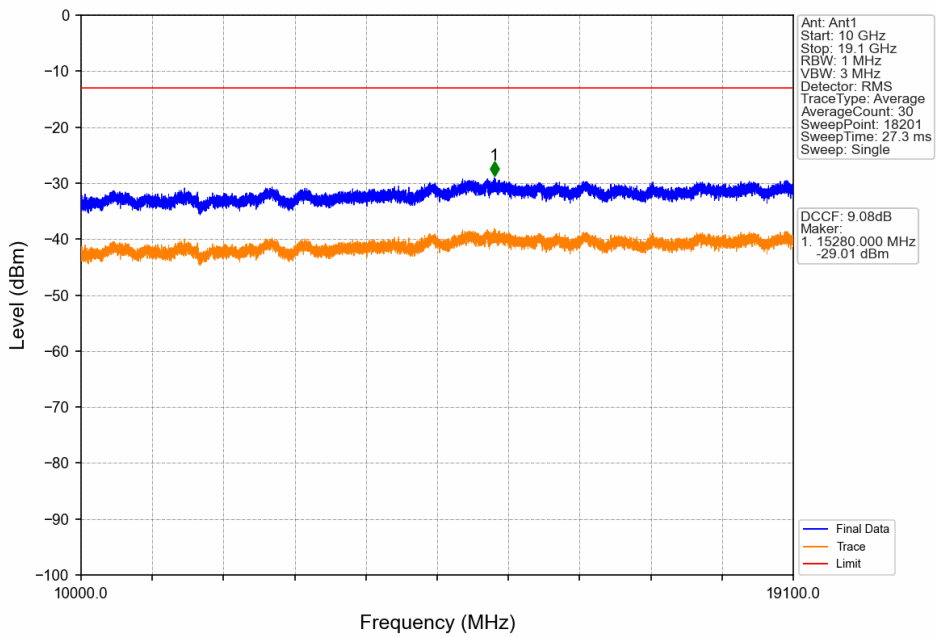
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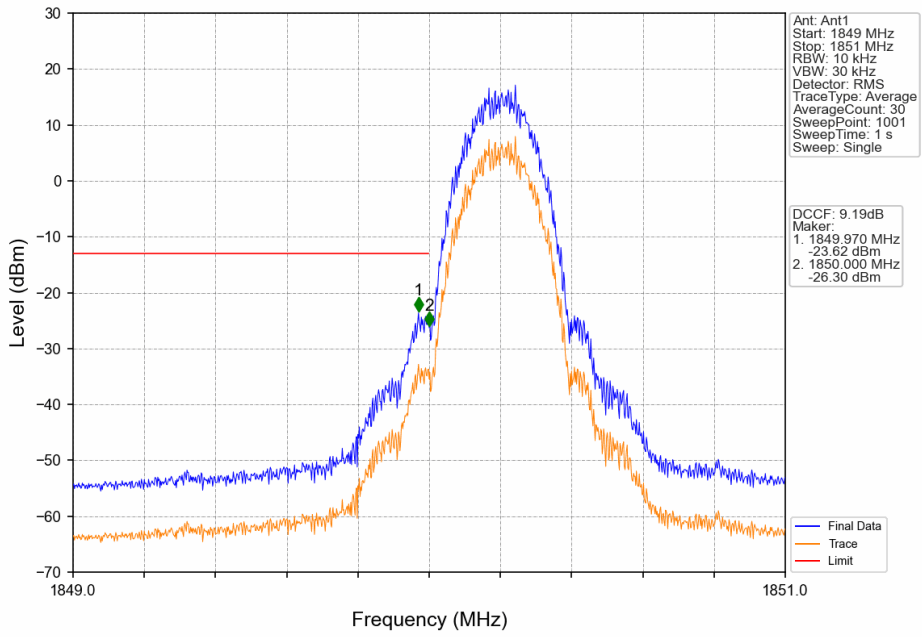
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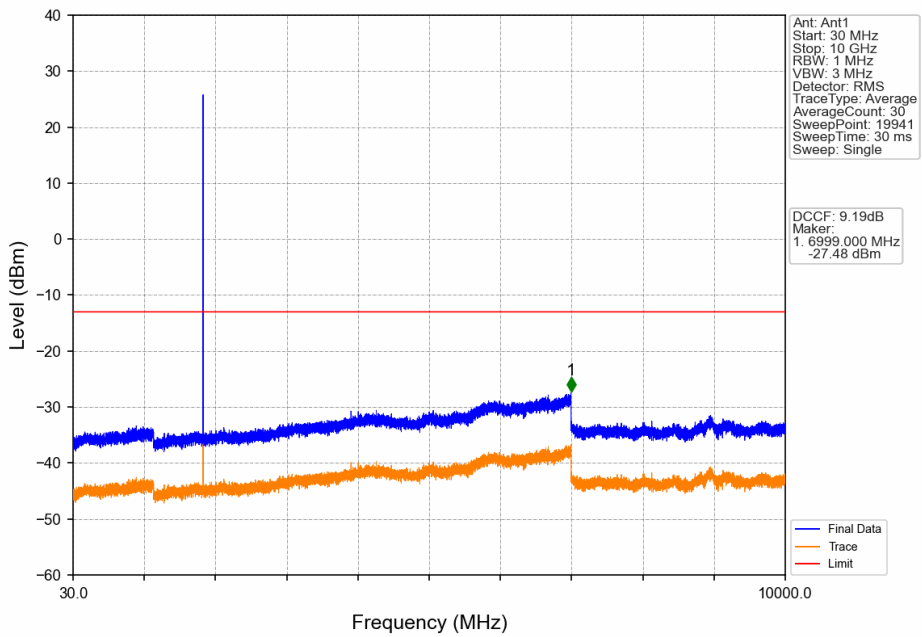
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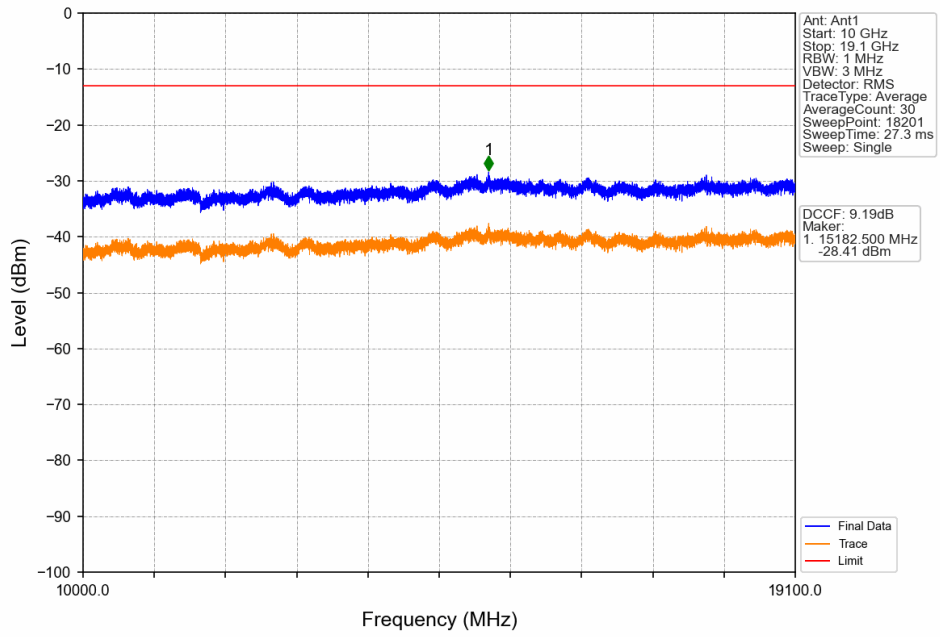
PCS1900\_EGPRS\_LCH\_1850.2MHz\_1 TX Slot\_NTNV



PCS1900\_EGPRS\_LCH\_1850.2MHz\_1 TX Slot\_NTNV

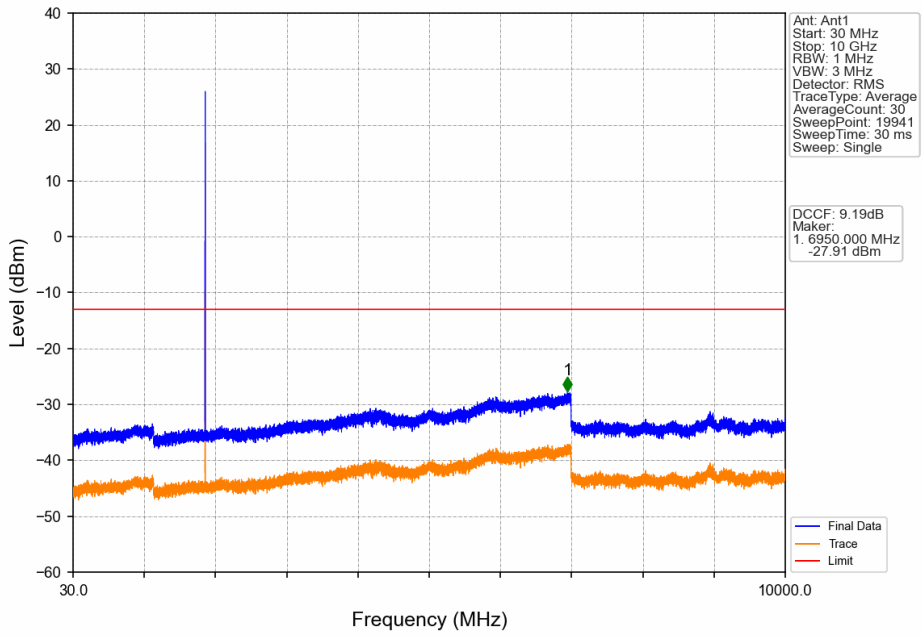


PCS1900\_EGPRS\_LCH\_1850.2MHz\_1 TX Slot\_NTNV

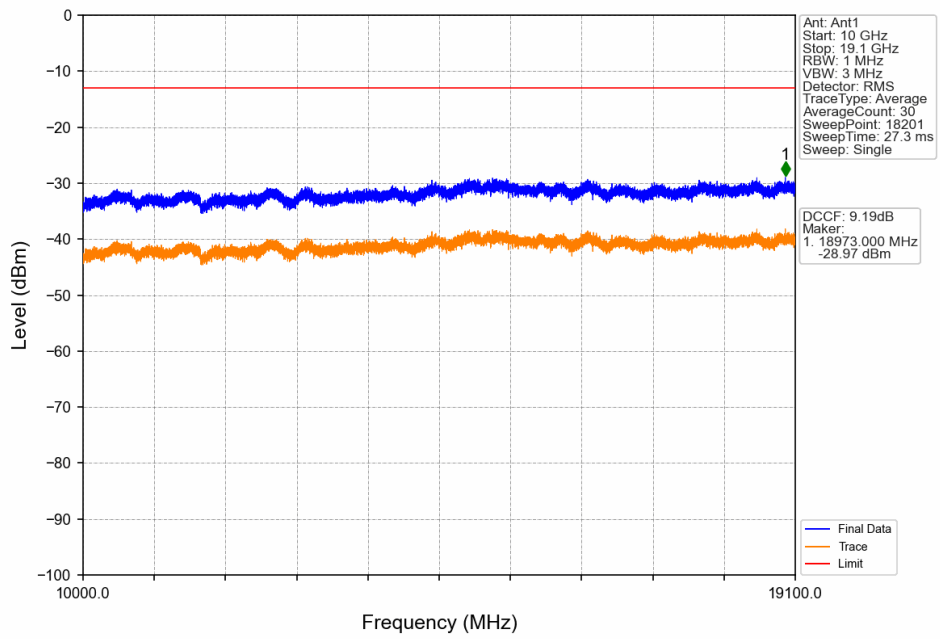




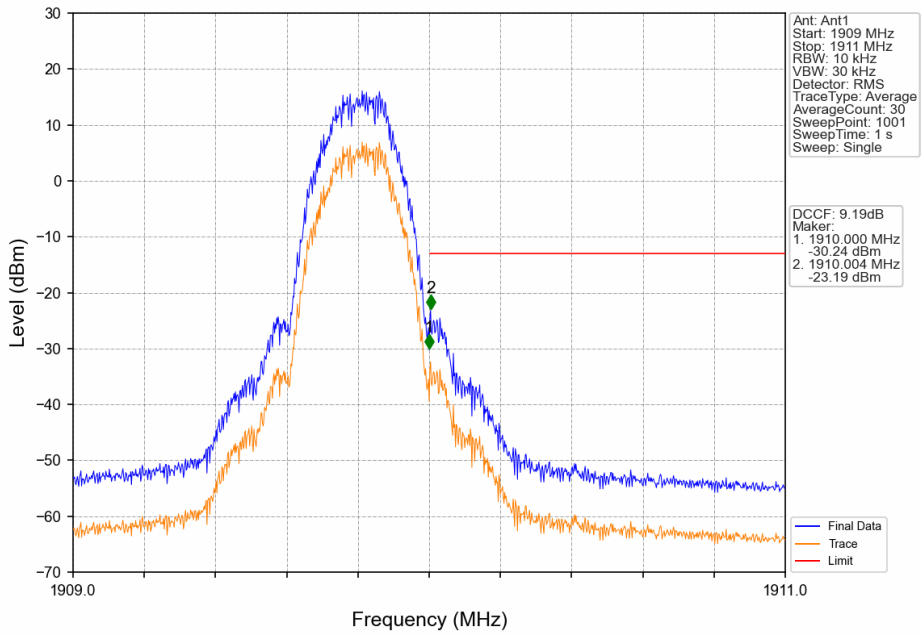
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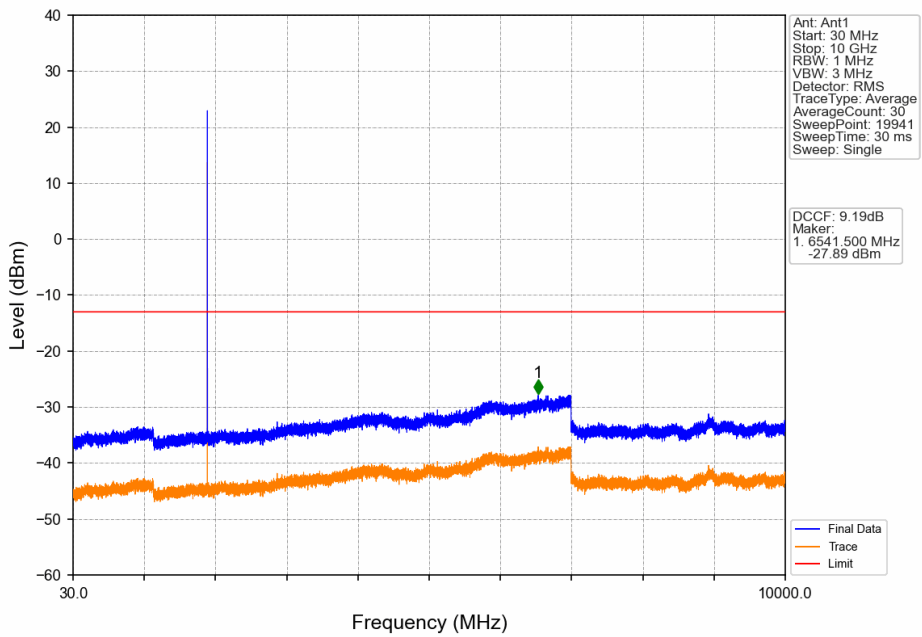
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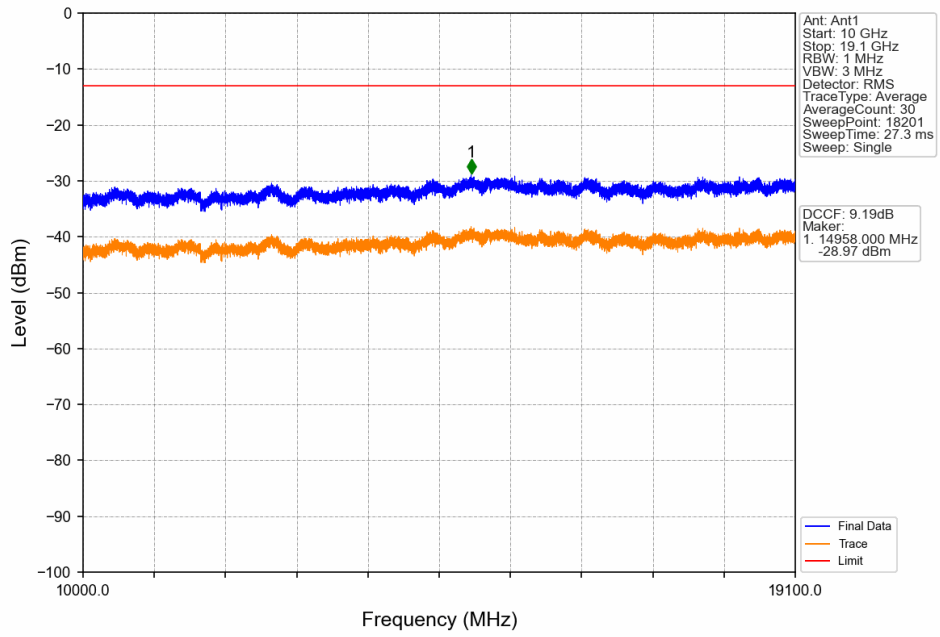
PCS1900\_EGPRS\_HCH\_1909.8MHz\_1 TX Slot\_NTNV



PCS1900\_EGPRS\_HCH\_1909.8MHz\_1 TX Slot\_NTNV



PCS1900\_EGPRS\_HCH\_1909.8MHz\_1 TX Slot\_NTNV



## 6. Field Strength of Spurious Radiation

GSM1900 ANT13-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
3700.4	-57.38	-13	-44.38	-62.24	3.58	8.44	Horizontal	Pass
5550.6	-63.08	-13	-50.08	-68.79	4.74	10.45	Horizontal	Pass
7400.8	-60.77	-13	-47.77	-67.45	4.94	11.62	Horizontal	Pass
3700.4	-54.59	-13	-41.59	-59.45	3.58	8.44	Vertical	Pass
5550.6	-62.27	-13	-49.27	-67.98	4.74	10.45	Vertical	Pass
7400.8	-60.45	-13	-47.45	-67.13	4.94	11.62	Vertical	Pass

GSM1900 ANT13-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
3760.0	-56.25	-13	-43.25	-61.14	3.63	8.52	Horizontal	Pass
5640.0	-62.81	-13	-49.81	-68.51	4.75	10.45	Horizontal	Pass
7520.0	-61.1	-13	-48.1	-67.92	4.94	11.76	Horizontal	Pass
3760.0	-53.6	-13	-40.6	-58.49	3.63	8.52	Vertical	Pass
5640.0	-62.51	-13	-49.51	-68.21	4.75	10.45	Vertical	Pass
7520.0	-60.99	-13	-47.99	-67.81	4.94	11.76	Vertical	Pass

GSM1900 ANT13-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
3819.6	-63.6	-13	-50.6	-68.52	3.68	8.6	Horizontal	Pass
5729.4	-62.52	-13	-49.52	-68.21	4.76	10.45	Horizontal	Pass
7639.2	-59.81	-13	-46.81	-66.76	4.95	11.9	Horizontal	Pass
3819.6	-59.93	-13	-46.93	-64.85	3.68	8.6	Vertical	Pass
5729.4	-62.2	-13	-49.2	-67.89	4.76	10.45	Vertical	Pass
7639.2	-59.77	-13	-46.77	-66.72	4.95	11.9	Vertical	Pass

1) All antennas of RSE are tested, and only the worst data is presented.

---End of Attachment---