

# 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	25.89	2.60	28.49	<=33.01	Pass
			1880	25.70	2.60	28.30	<=33.01	Pass
			1909.8	25.52	2.60	28.12	<=33.01	Pass
	GPRS	1 TX Slot	1850.2	26.37	2.60	28.97	<=33.01	Pass
		2 TX Slots	1850.2	24.39	2.60	26.99	<=33.01	Pass
		3 TX Slots	1850.2	22.84	2.60	25.44	<=33.01	Pass
		4 TX Slots	1850.2	20.78	2.60	23.38	<=33.01	Pass
		1 TX Slot	1880	26.30	2.60	28.90	<=33.01	Pass
		2 TX Slots	1880	23.96	2.60	26.56	<=33.01	Pass
		3 TX Slots	1880	22.49	2.60	25.09	<=33.01	Pass
		4 TX Slots	1880	20.51	2.60	23.11	<=33.01	Pass
		1 TX Slot	1909.8	26.25	2.60	28.85	<=33.01	Pass
		2 TX Slots	1909.8	23.44	2.60	26.04	<=33.01	Pass
		3 TX Slots	1909.8	22.02	2.60	24.62	<=33.01	Pass
		4 TX Slots	1909.8	20.11	2.60	22.71	<=33.01	Pass
	EGPRS	1 TX Slot	1850.2	20.43	2.60	23.03	<=33.01	Pass
		2 TX Slots	1850.2	19.00	2.60	21.60	<=33.01	Pass
		3 TX Slots	1850.2	16.57	2.60	19.17	<=33.01	Pass
		4 TX Slots	1850.2	14.15	2.60	16.75	<=33.01	Pass
		1 TX Slot	1880	21.47	2.60	24.07	<=33.01	Pass
		2 TX Slots	1880	20.03	2.60	22.63	<=33.01	Pass
		3 TX Slots	1880	17.90	2.60	20.50	<=33.01	Pass
		4 TX Slots	1880	15.30	2.60	17.90	<=33.01	Pass
		1 TX Slot	1909.8	21.56	2.60	24.16	<=33.01	Pass
		2 TX Slots	1909.8	19.99	2.60	22.59	<=33.01	Pass
		3 TX Slots	1909.8	17.87	2.60	20.47	<=33.01	Pass
		4 TX Slots	1909.8	15.22	2.60	17.82	<=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	8.717	0.0047	-2.5 to 2.5	Pass
			3.85	-2.712	-0.0015	-2.5 to 2.5	Pass
			4.43	1.873	0.0010	-2.5 to 2.5	Pass
		-30	3.85	-8.523	-0.0046	-2.5 to 2.5	Pass
		-20	3.85	-15.562	-0.0084	-2.5 to 2.5	Pass
		-10	3.85	-6.909	-0.0037	-2.5 to 2.5	Pass
		0	3.85	-8.620	-0.0047	-2.5 to 2.5	Pass
		10	3.85	-18.790	-0.0102	-2.5 to 2.5	Pass

	1880	30	3.85	-5.263	-0.0028	-2.5 to 2.5	Pass
		40	3.85	-10.138	-0.0055	-2.5 to 2.5	Pass
		50	3.85	-1.130	-0.0006	-2.5 to 2.5	Pass
		20	3.27	6.941	0.0037	-2.5 to 2.5	Pass
			3.85	-14.529	-0.0077	-2.5 to 2.5	Pass
			4.43	7.006	0.0037	-2.5 to 2.5	Pass
		-30	3.85	7.587	0.0040	-2.5 to 2.5	Pass
		-20	3.85	1.905	0.0010	-2.5 to 2.5	Pass
		-10	3.85	4.359	0.0023	-2.5 to 2.5	Pass
	0	3.85	-15.691	-0.0083	-2.5 to 2.5	Pass	
	10	3.85	4.068	0.0022	-2.5 to 2.5	Pass	
	30	3.85	-1.550	-0.0008	-2.5 to 2.5	Pass	
	40	3.85	2.389	0.0013	-2.5 to 2.5	Pass	
	50	3.85	-11.235	-0.0060	-2.5 to 2.5	Pass	
	1909.8	20	3.27	-5.585	-0.0029	-2.5 to 2.5	Pass
			3.85	-1.453	-0.0008	-2.5 to 2.5	Pass
			4.43	5.069	0.0027	-2.5 to 2.5	Pass
		-30	3.85	2.777	0.0015	-2.5 to 2.5	Pass
		-20	3.85	-7.038	-0.0037	-2.5 to 2.5	Pass
		-10	3.85	-1.388	-0.0007	-2.5 to 2.5	Pass
		0	3.85	-5.101	-0.0027	-2.5 to 2.5	Pass
10		3.85	-10.041	-0.0053	-2.5 to 2.5	Pass	
30		3.85	-5.876	-0.0031	-2.5 to 2.5	Pass	
40		3.85	-1.517	-0.0008	-2.5 to 2.5	Pass	
50		3.85	3.551	0.0019	-2.5 to 2.5	Pass	
GPRS		1850.2	20	3.27	-7.200	-0.0039	-2.5 to 2.5
	3.85			-8.491	-0.0046	-2.5 to 2.5	Pass
	4.43			-9.589	-0.0052	-2.5 to 2.5	Pass
	-30		3.85	-8.620	-0.0047	-2.5 to 2.5	Pass
	-20		3.85	-7.006	-0.0038	-2.5 to 2.5	Pass
	-10		3.85	-7.749	-0.0042	-2.5 to 2.5	Pass
	0		3.85	-10.654	-0.0058	-2.5 to 2.5	Pass
	10		3.85	-7.167	-0.0039	-2.5 to 2.5	Pass
	30		3.85	-35.321	-0.0191	-2.5 to 2.5	Pass
	40		3.85	-31.963	-0.0173	-2.5 to 2.5	Pass
	50		3.85	-30.833	-0.0167	-2.5 to 2.5	Pass
	1880		20	3.27	6.296	0.0033	-2.5 to 2.5
		3.85		5.908	0.0031	-2.5 to 2.5	Pass
		4.43		-1.098	-0.0006	-2.5 to 2.5	Pass
		-30	3.85	4.068	0.0022	-2.5 to 2.5	Pass
		-20	3.85	2.228	0.0012	-2.5 to 2.5	Pass
		-10	3.85	10.590	0.0056	-2.5 to 2.5	Pass
		0	3.85	7.523	0.0040	-2.5 to 2.5	Pass
		10	3.85	-16.498	-0.0088	-2.5 to 2.5	Pass
		30	3.85	-20.502	-0.0109	-2.5 to 2.5	Pass
		40	3.85	-15.239	-0.0081	-2.5 to 2.5	Pass
		50	3.85	-13.463	-0.0072	-2.5 to 2.5	Pass
		1909.8	20	3.27	1.033	0.0005	-2.5 to 2.5
	3.85			1.776	0.0009	-2.5 to 2.5	Pass
	4.43			-1.130	-0.0006	-2.5 to 2.5	Pass
	-30		3.85	0.517	0.0003	-2.5 to 2.5	Pass
	-20		3.85	-4.003	-0.0021	-2.5 to 2.5	Pass
	-10		3.85	0.484	0.0003	-2.5 to 2.5	Pass
	0		3.85	1.905	0.0010	-2.5 to 2.5	Pass
	10		3.85	-9.201	-0.0048	-2.5 to 2.5	Pass
30	3.85		-10.880	-0.0057	-2.5 to 2.5	Pass	
40	3.85		-20.082	-0.0105	-2.5 to 2.5	Pass	
50	3.85		-13.528	-0.0071	-2.5 to 2.5	Pass	
EGPRS	1850.2		20	3.27	-3.164	-0.0017	-2.5 to 2.5

			3.85	-0.904	-0.0005	-2.5 to 2.5	Pass	
			4.43	-4.229	-0.0023	-2.5 to 2.5	Pass	
		-30	3.85	-5.811	-0.0031	-2.5 to 2.5	Pass	
		-20	3.85	-7.361	-0.0040	-2.5 to 2.5	Pass	
		-10	3.85	-2.583	-0.0014	-2.5 to 2.5	Pass	
		0	3.85	-9.783	-0.0053	-2.5 to 2.5	Pass	
		10	3.85	-10.525	-0.0057	-2.5 to 2.5	Pass	
		30	3.85	-14.432	-0.0078	-2.5 to 2.5	Pass	
		40	3.85	-15.239	-0.0082	-2.5 to 2.5	Pass	
		50	3.85	-10.073	-0.0054	-2.5 to 2.5	Pass	
	1880	20		3.27	-4.972	-0.0026	-2.5 to 2.5	Pass
				3.85	-0.161	-0.0001	-2.5 to 2.5	Pass
				4.43	0.097	0.0001	-2.5 to 2.5	Pass
		-30	3.85	0.355	0.0002	-2.5 to 2.5	Pass	
		-20	3.85	-0.355	-0.0002	-2.5 to 2.5	Pass	
		-10	3.85	-4.359	-0.0023	-2.5 to 2.5	Pass	
		0	3.85	-2.357	-0.0013	-2.5 to 2.5	Pass	
		10	3.85	-12.527	-0.0067	-2.5 to 2.5	Pass	
		30	3.85	-13.528	-0.0072	-2.5 to 2.5	Pass	
		40	3.85	-14.238	-0.0076	-2.5 to 2.5	Pass	
	50	3.85	-11.235	-0.0060	-2.5 to 2.5	Pass		
	1909.8	20		3.27	-3.777	-0.0020	-2.5 to 2.5	Pass
				3.85	-0.194	-0.0001	-2.5 to 2.5	Pass
				4.43	-2.712	-0.0014	-2.5 to 2.5	Pass
		-30	3.85	-5.198	-0.0027	-2.5 to 2.5	Pass	
		-20	3.85	-3.035	-0.0016	-2.5 to 2.5	Pass	
		-10	3.85	-2.906	-0.0015	-2.5 to 2.5	Pass	
		0	3.85	-2.454	-0.0013	-2.5 to 2.5	Pass	
		10	3.85	-7.619	-0.0040	-2.5 to 2.5	Pass	
		30	3.85	-7.523	-0.0039	-2.5 to 2.5	Pass	
40		3.85	-4.585	-0.0024	-2.5 to 2.5	Pass		
50	3.85	-12.527	-0.0066	-2.5 to 2.5	Pass			

### 3. Modulation Characteristics

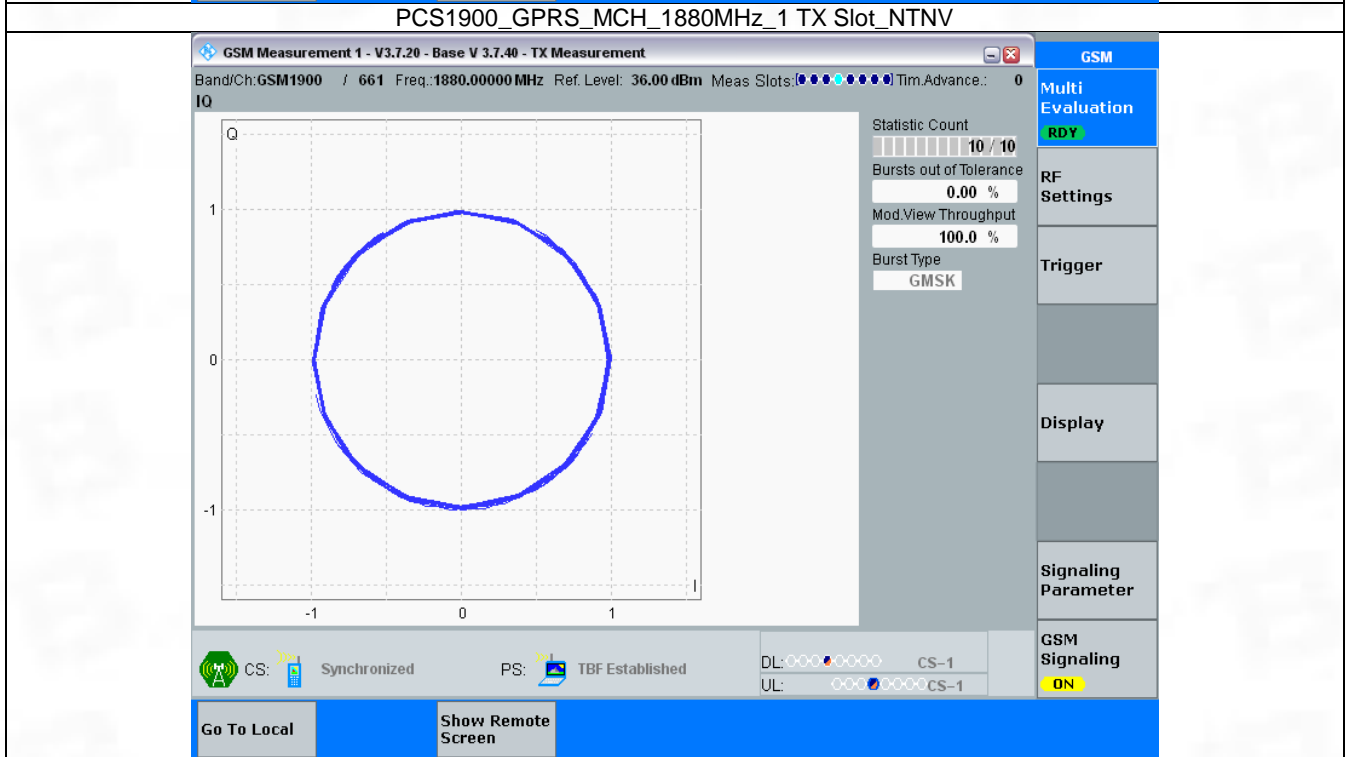
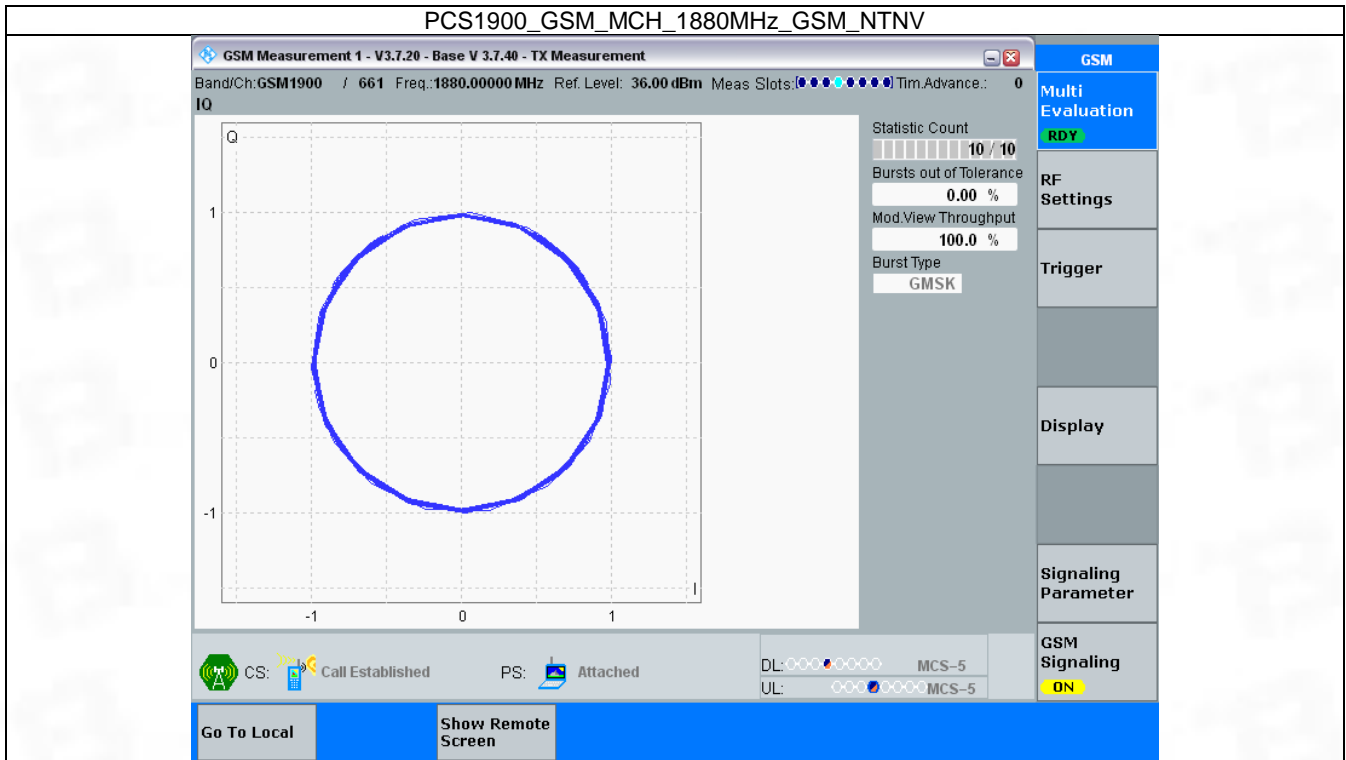
#### 3.1 Test Result

##### 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

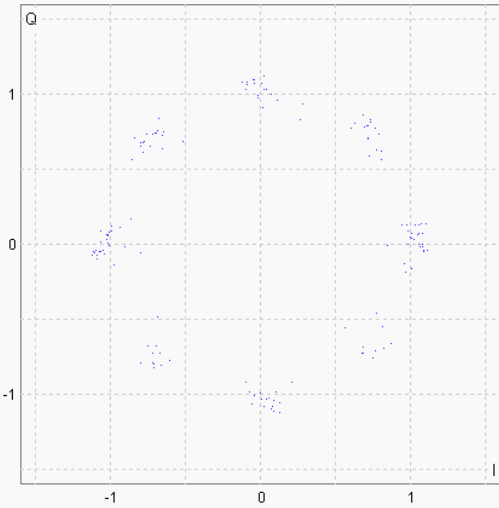


PCS1900\_EGPRS\_MCH\_1880MHz\_1 TX Slot\_NTNV

**GSM Measurement 1 - V3.7.20 - Base V 3.7.40 - 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

**Multi Evaluation**  
RDY

**RF Settings**

**Trigger**

**Display**

**Signaling Parameter**

CS: Synchronized PS: TBF Established DL: MCS-5 UL: MCS-5

**GSM Signaling**  
ON

Go To Local Show Remote Screen

## 4. 99% & 26dB Bandwidth

### 4.1 Test Result

#### 4.1.1 PCS1900\_OBW

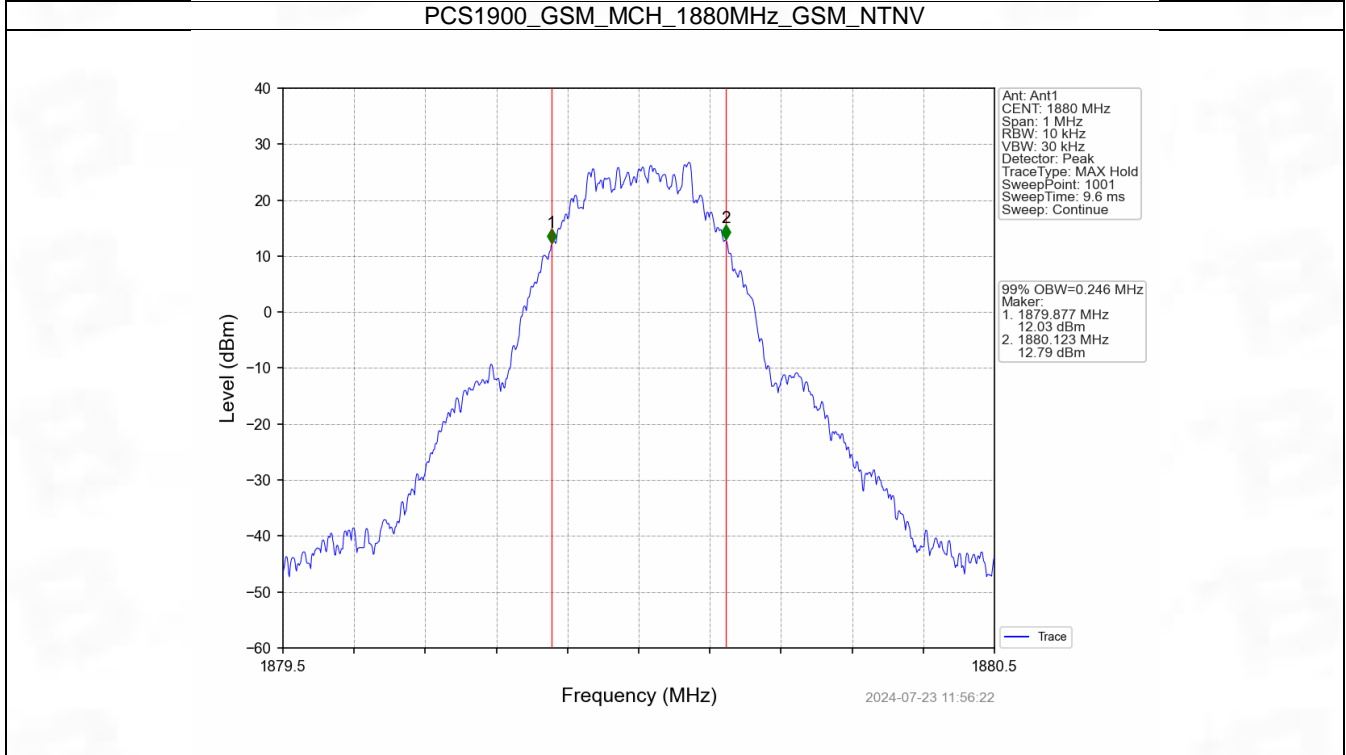
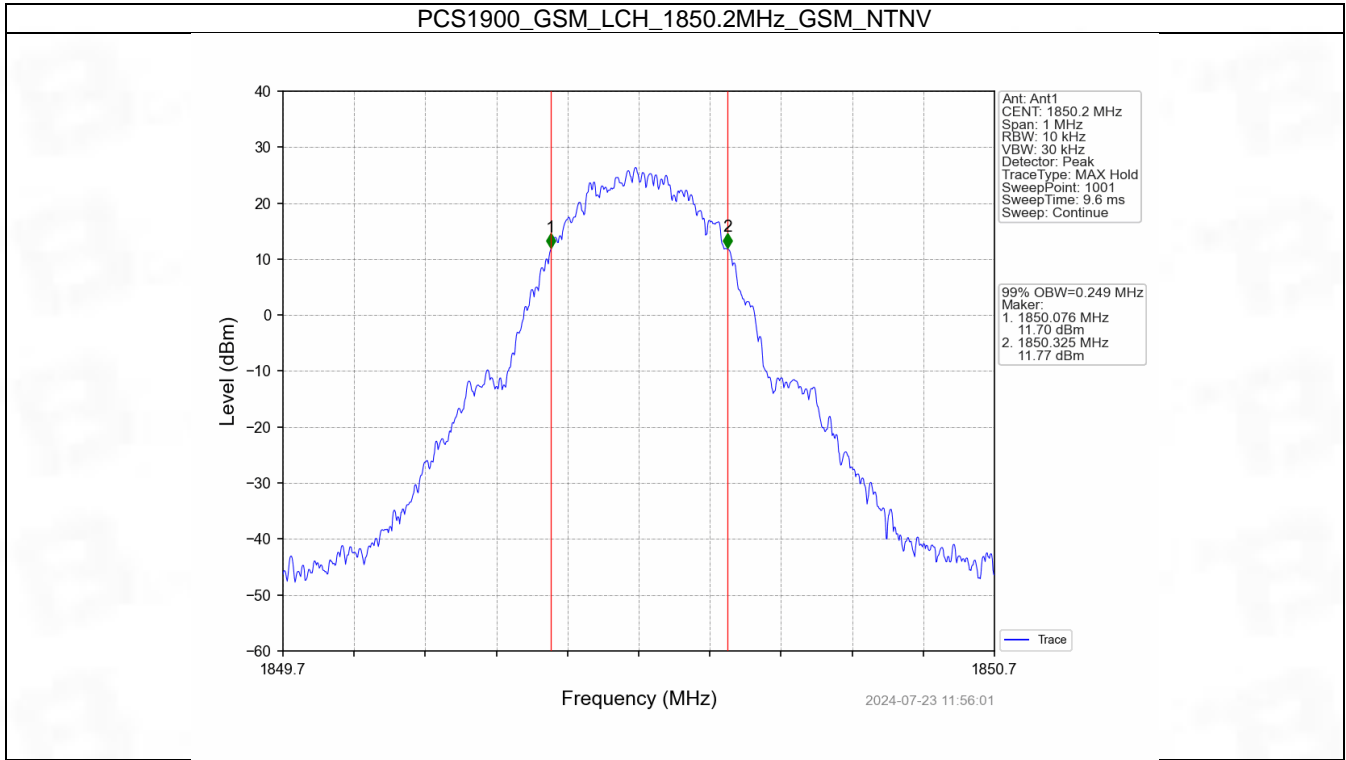
Band: PCS1900						
ENV	Mode		Frequency (MHz)	99% Occupied Bandwidth (MHz)		Verdict
	Network	Subset		Result	Limit	
NTNV	GSM	GSM	1850.2	0.249	/	Pass
			1880	0.246	/	Pass
			1909.8	0.242	/	Pass
	GPRS	1 TX Slot	1850.2	0.245	/	Pass
			1880	0.247	/	Pass
			1909.8	0.247	/	Pass
	EGPRS	1 TX Slot	1850.2	0.259	/	Pass
			1880	0.258	/	Pass
			1909.8	0.252	/	Pass

#### 4.1.2 PCS1900\_XDB

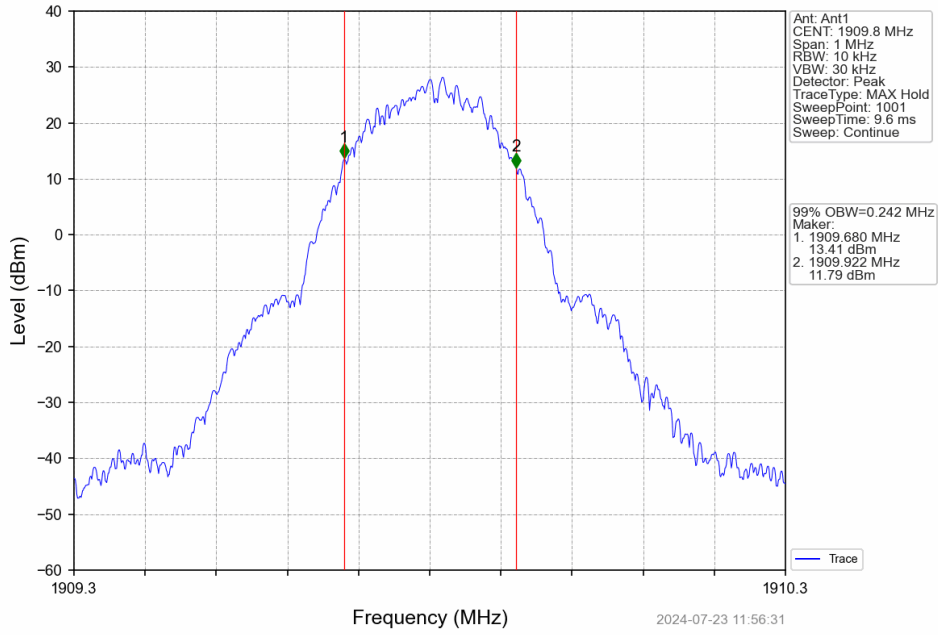
Band: PCS1900						
ENV	Mode		Frequency (MHz)	26dB Bandwidth (MHz)		Verdict
	Network	Subset		Result	Limit	
NTNV	GSM	GSM	1850.2	0.324	/	Pass
			1880	0.325	/	Pass
			1909.8	0.312	/	Pass
	GPRS	1 TX Slot	1850.2	0.319	/	Pass
			1880	0.319	/	Pass
			1909.8	0.313	/	Pass
	EGPRS	1 TX Slot	1850.2	0.322	/	Pass
			1880	0.328	/	Pass
			1909.8	0.319	/	Pass

## 4.2 Test Graph

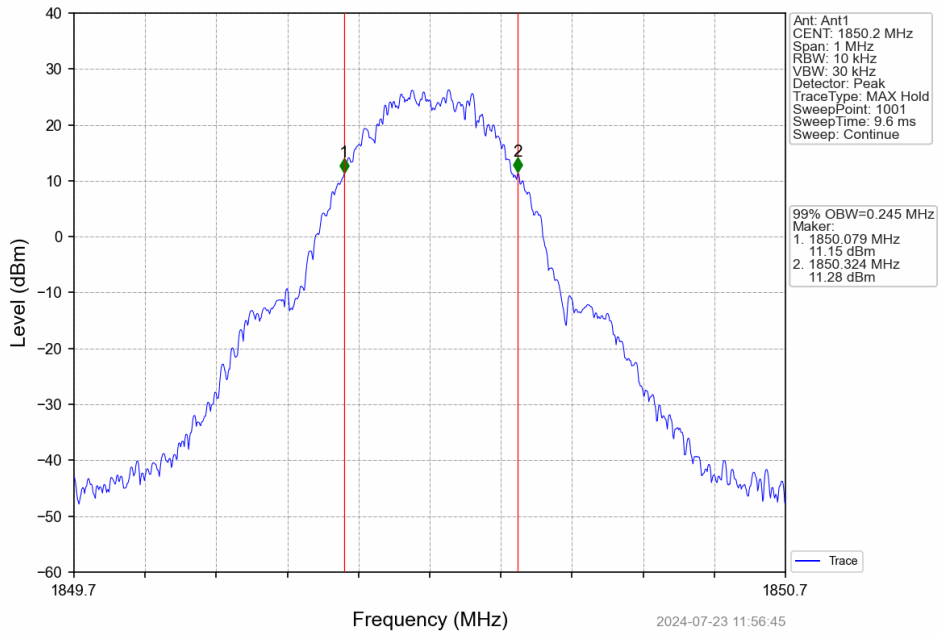
### 4.2.1 PCS1900\_OBW



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

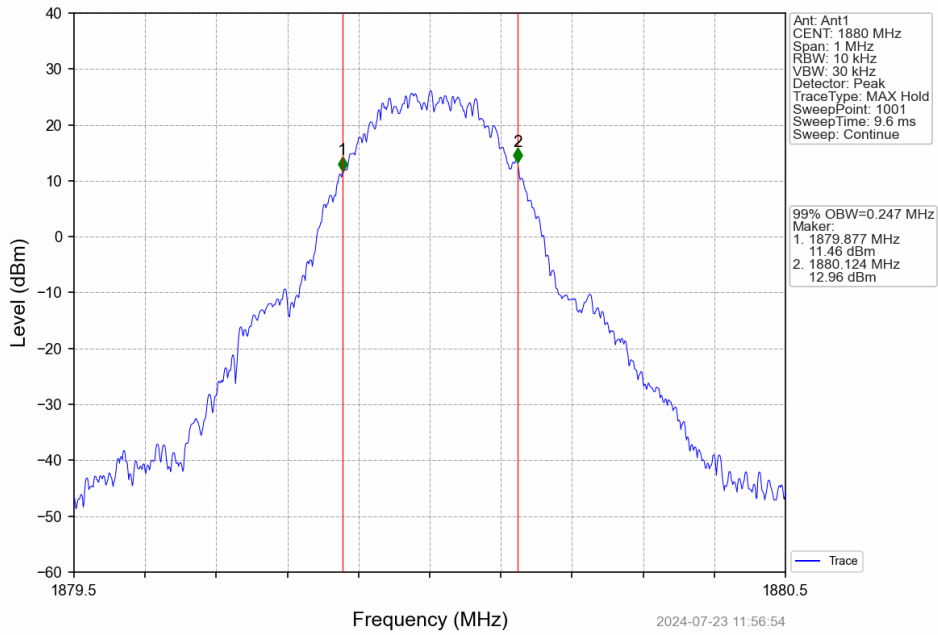


PCS1900\_GPRS\_LCH\_1850.2MHz\_1 TX Slot\_NTNV

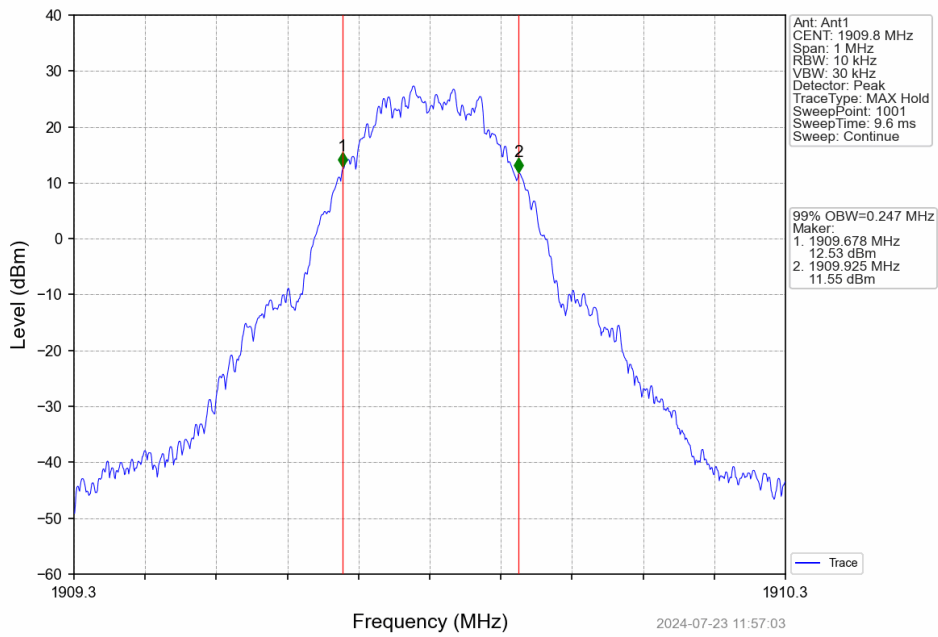




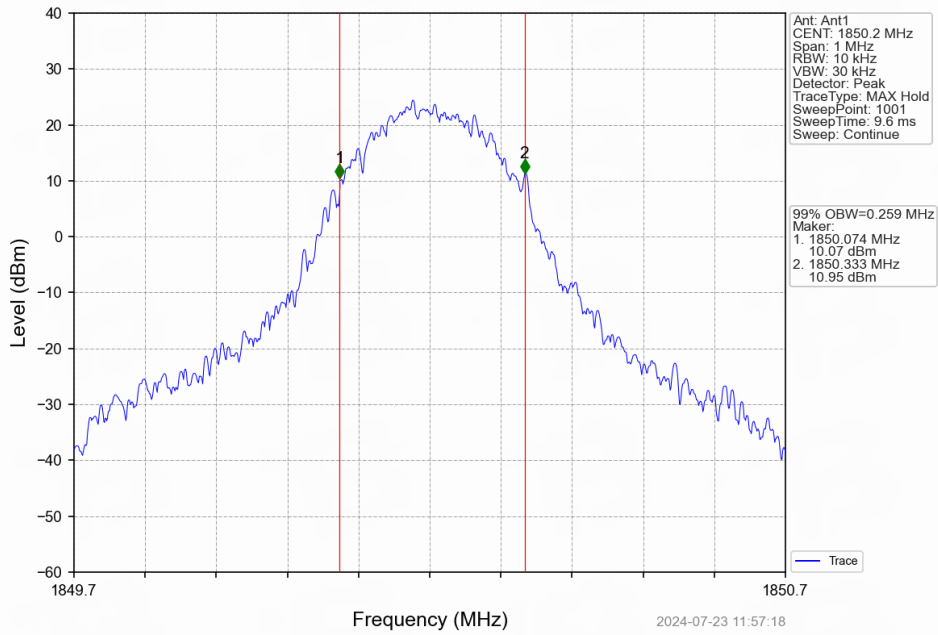
PCS1900\_GPRS\_MCH\_1880MHz\_1 TX Slot\_NTNV



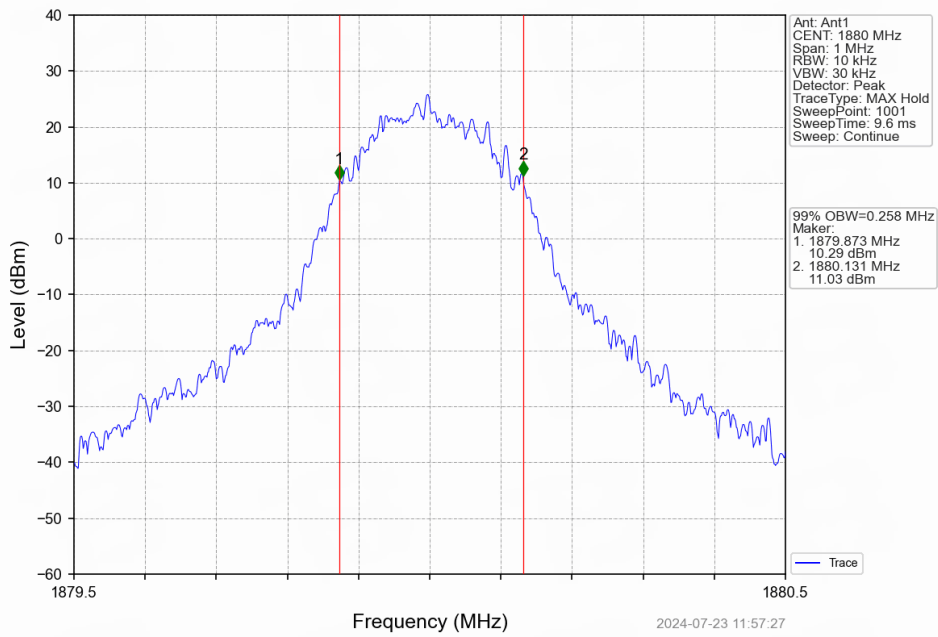
PCS1900\_GPRS\_HCH\_1909.8MHz\_1 TX Slot\_NTNV



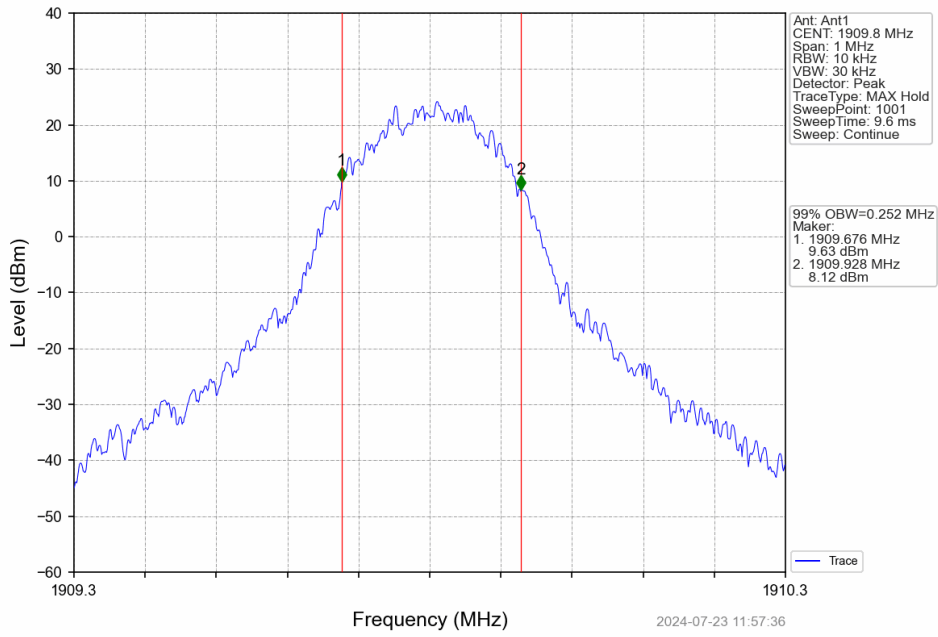
PCS1900\_EGPRS\_LCH\_1850.2MHz\_1 TX Slot\_NTNV



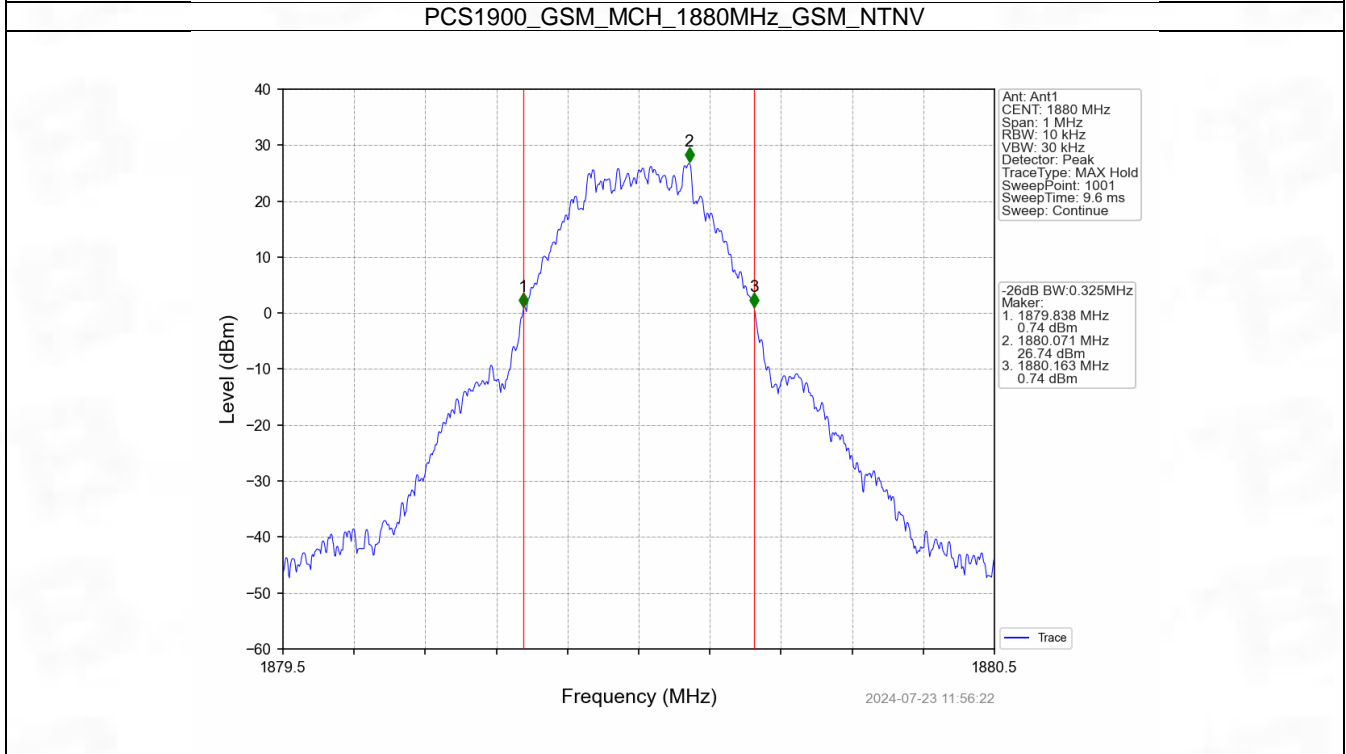
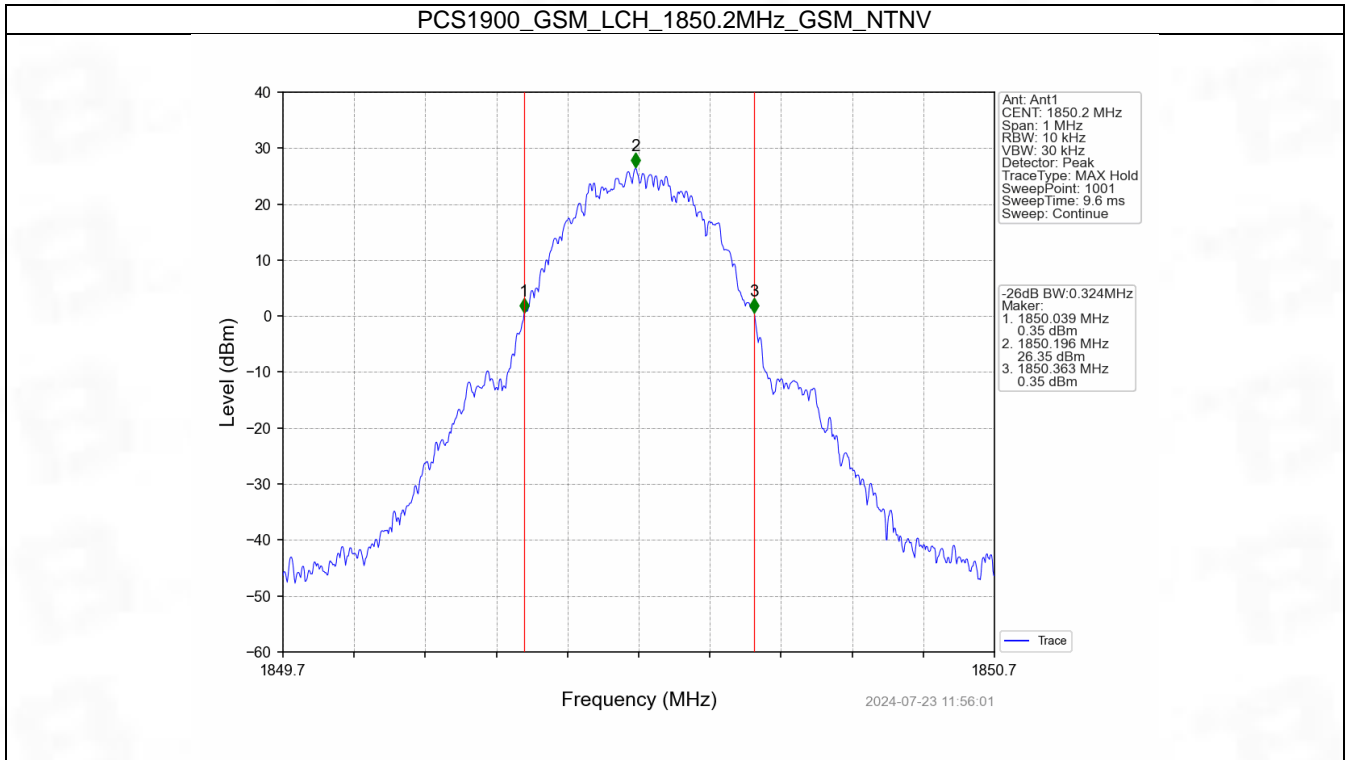
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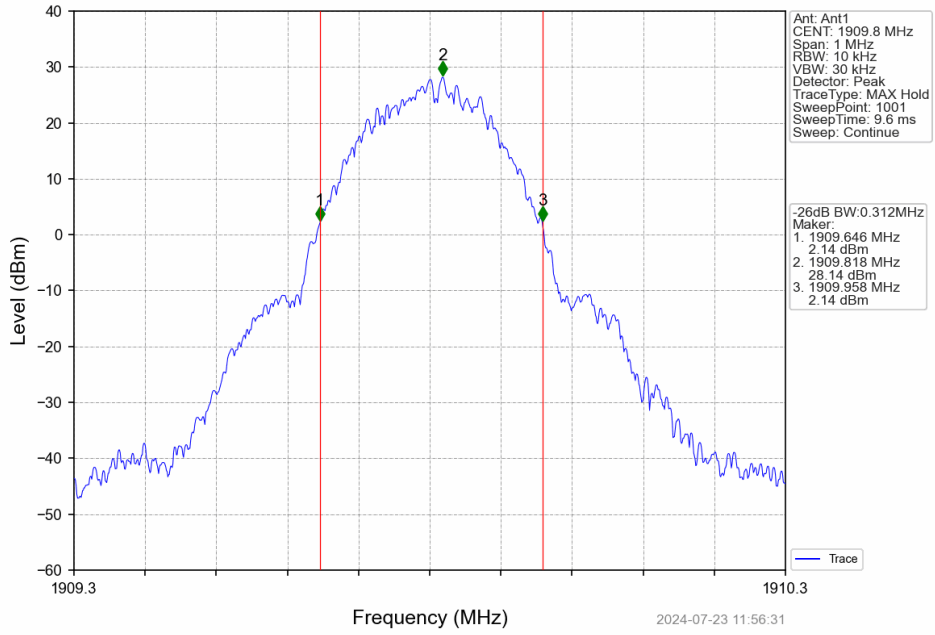
PCS1900\_EGPRS\_HCH\_1909.8MHz\_1 TX Slot\_NTNV



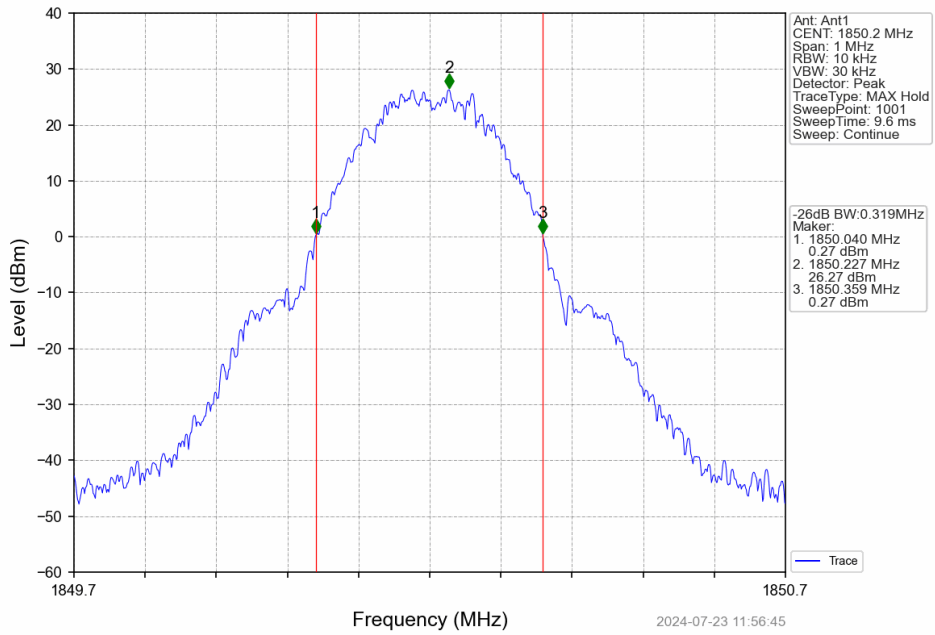
### 4.2.2 PCS1900\_XDB



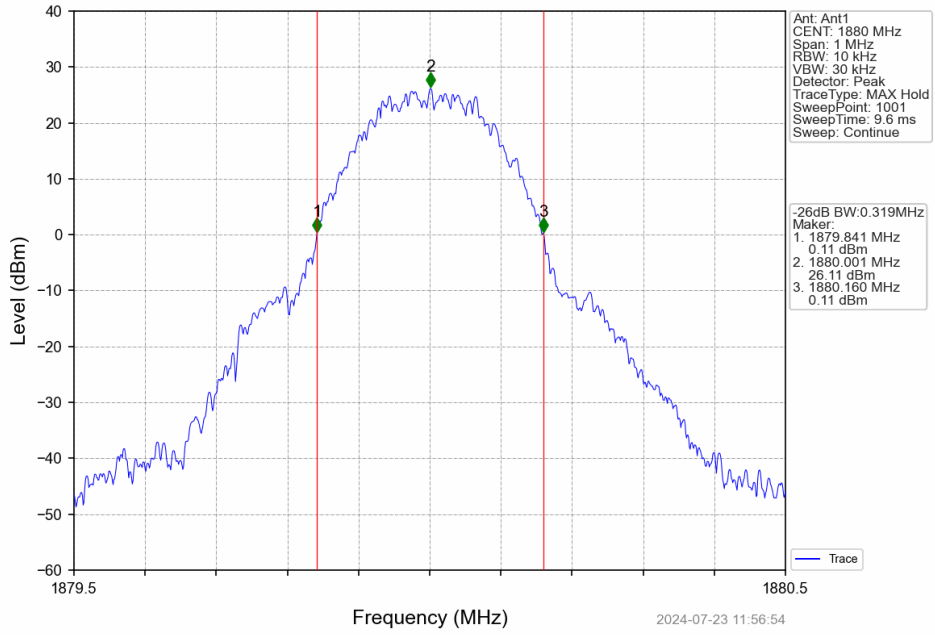
PCS1900\_GSM\_HCH\_1909.8MHz\_GSM\_NTNV



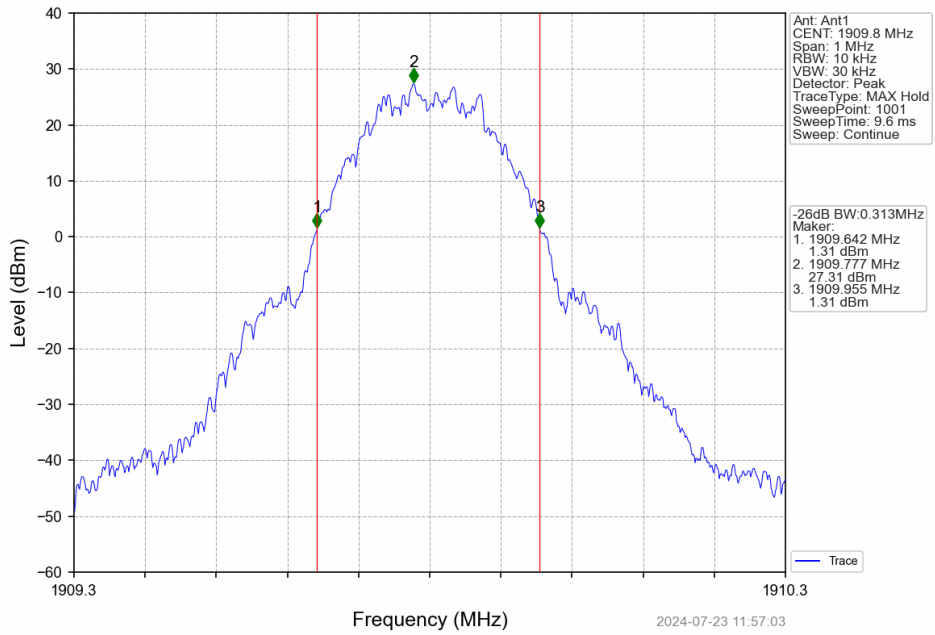
PCS1900\_GPRS\_LCH\_1850.2MHz\_1 TX Slot\_NTNV



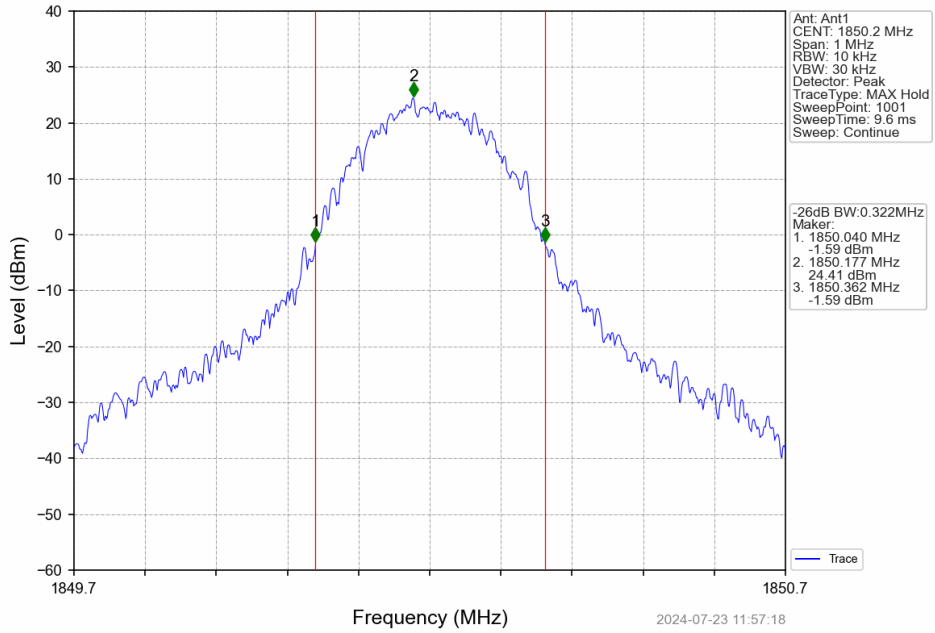
PCS1900\_GPRS\_MCH\_1880MHz\_1 TX Slot\_NTNV



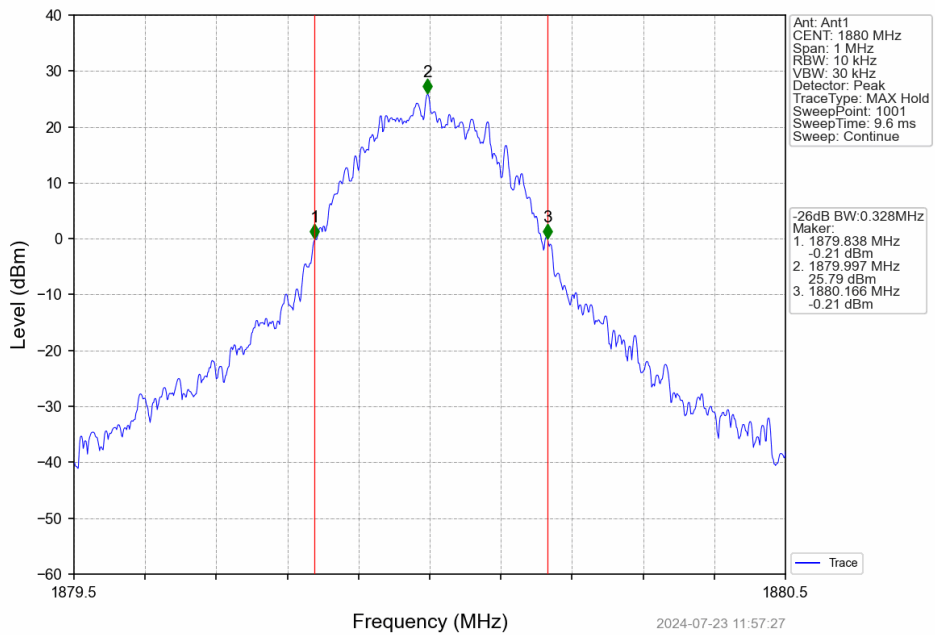
PCS1900\_GPRS\_HCH\_1909.8MHz\_1 TX Slot\_NTNV



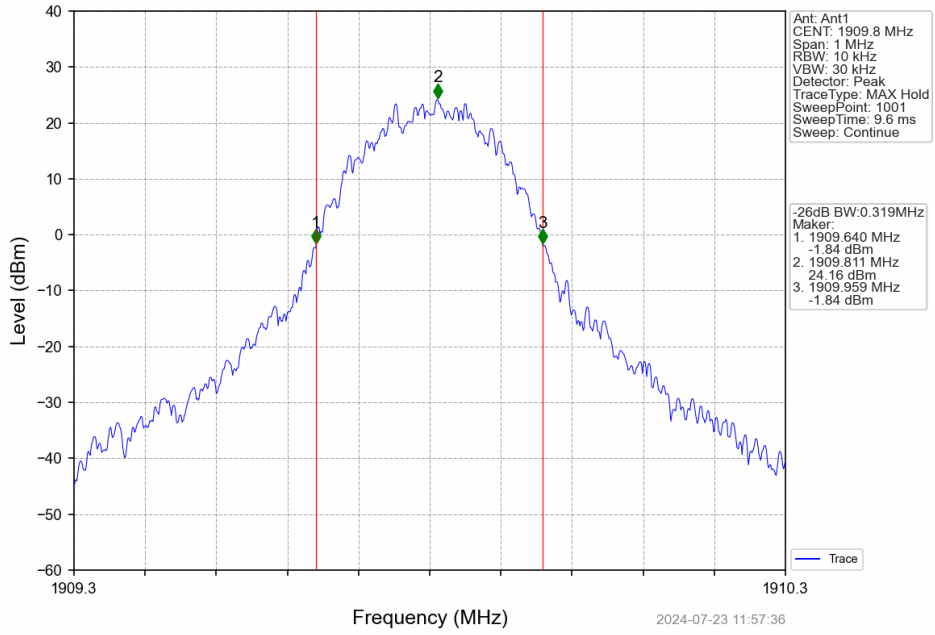
PCS1900\_EGPRS\_LCH\_1850.2MHz\_1 TX Slot\_NTNV



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



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





## 5. Peak-Average Ratio

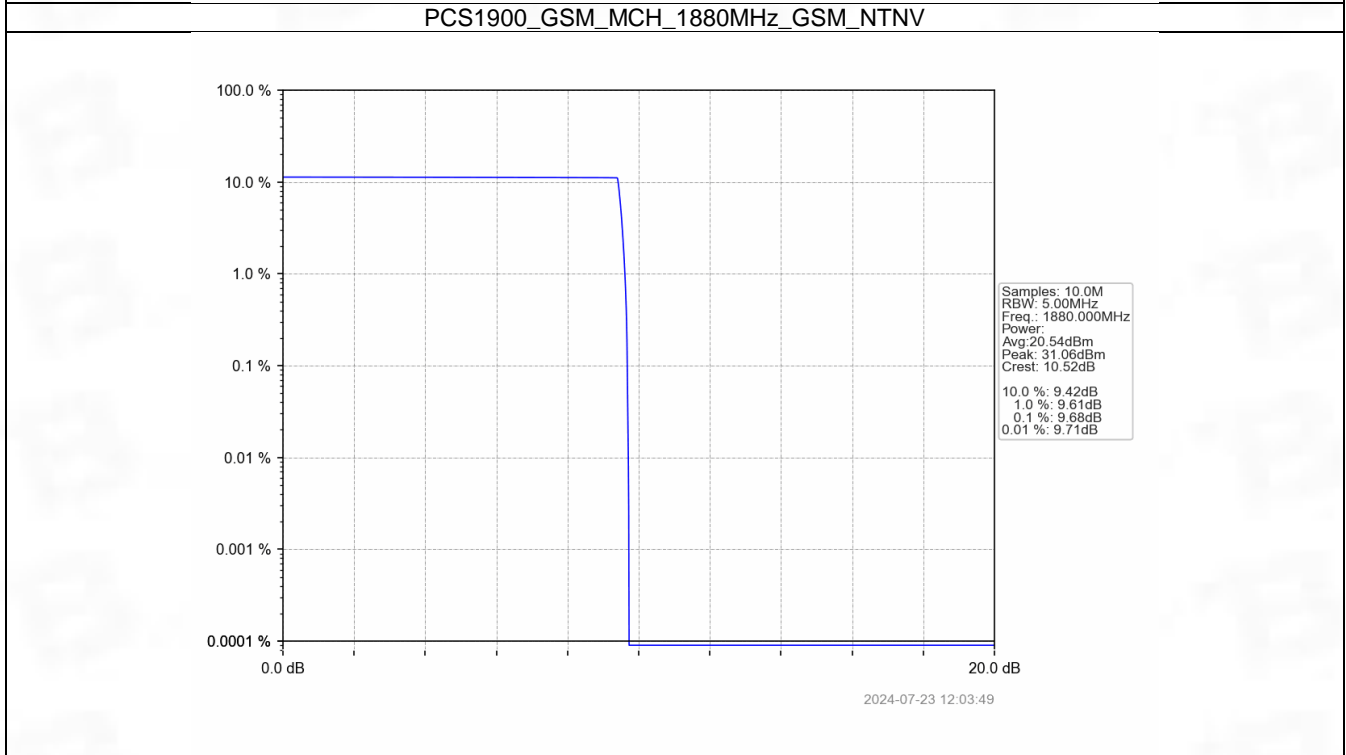
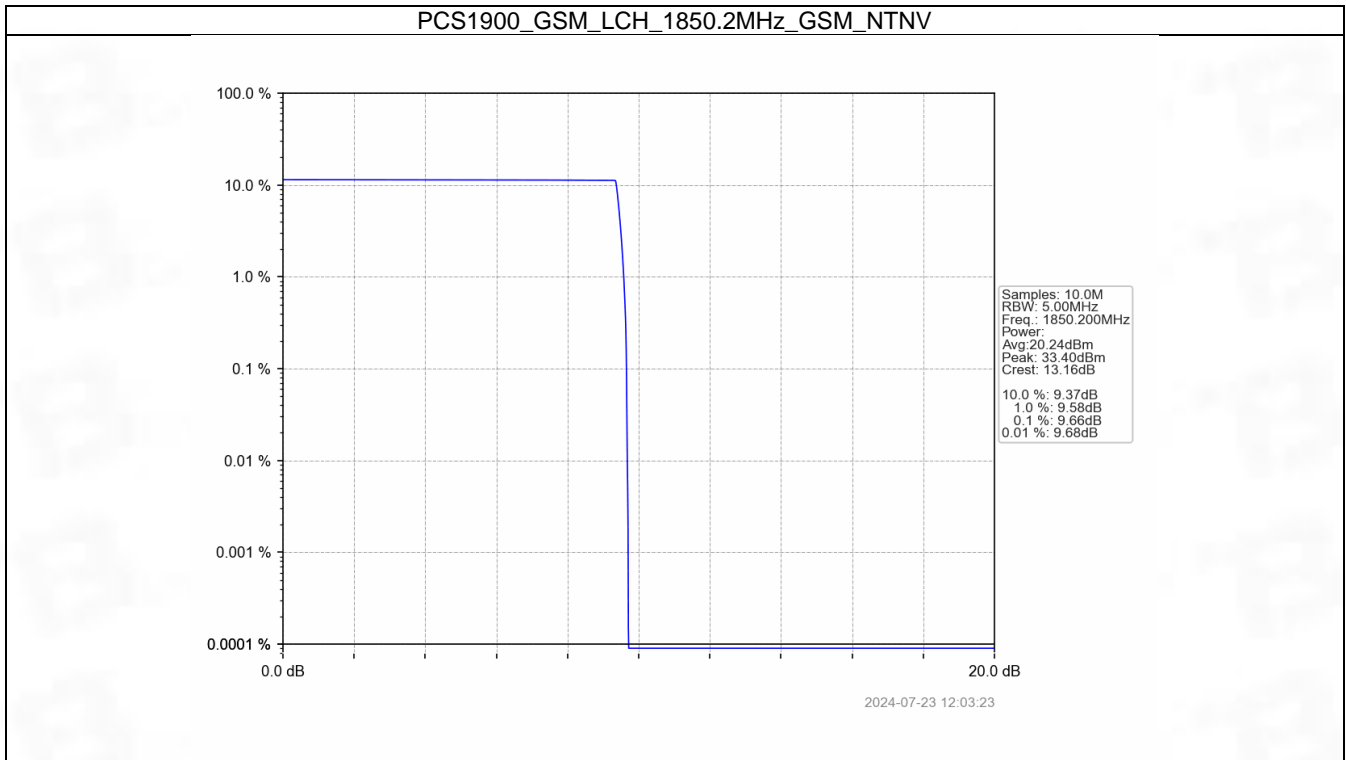
### 5.1 Test Result

#### 5.1.1 PCS1900

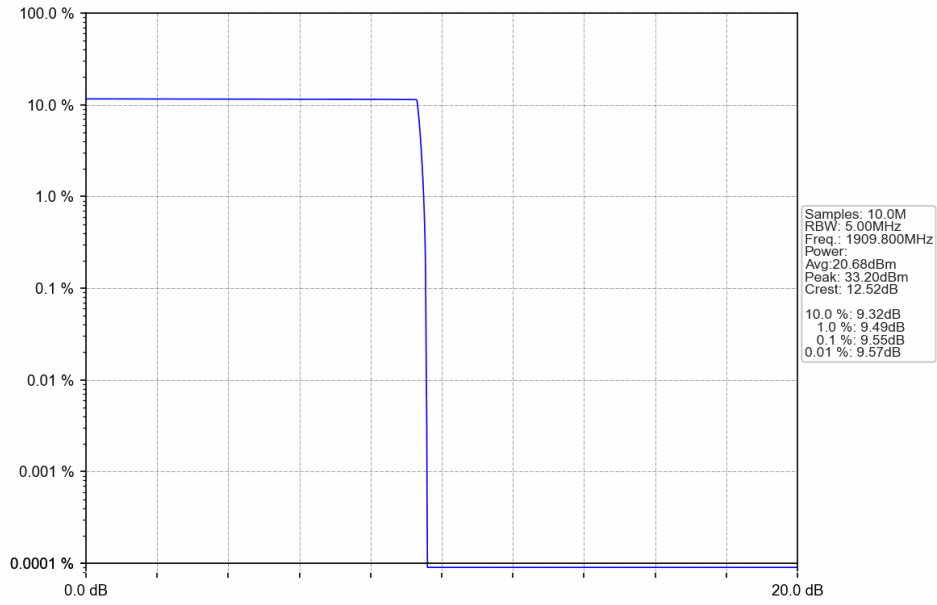
Band: PCS1900						
ENV	Mode		Frequency (MHz)	Peak-Average Ratio (dB)		Verdict
	Network	Subset		Result	Limit	
NTNV	GSM	GSM	1850.2	9.66	<=13	Pass
			1880	9.68	<=13	Pass
			1909.8	9.55	<=13	Pass
	GPRS	4 TX Slots	1850.2	4.05	<=13	Pass
			1880	3.91	<=13	Pass
			1909.8	3.91	<=13	Pass
	EGPRS	4 TX Slots	1850.2	6.66	<=13	Pass
			1880	6.65	<=13	Pass
			1909.8	6.82	<=13	Pass

## 5.2 Test Graph

### 5.2.1 PCS1900

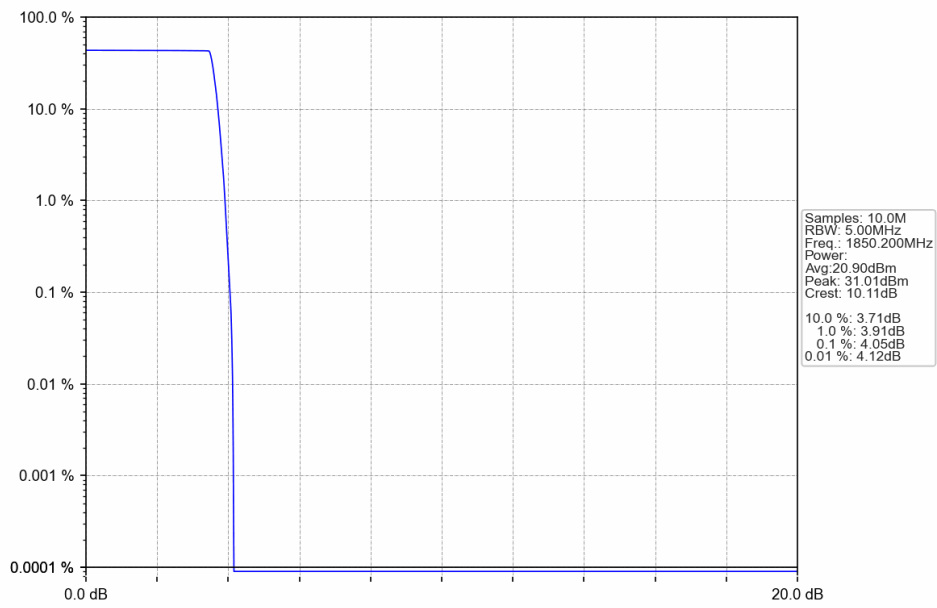


PCS1900\_GSM\_HCH\_1909.8MHz\_GSM\_NTNV



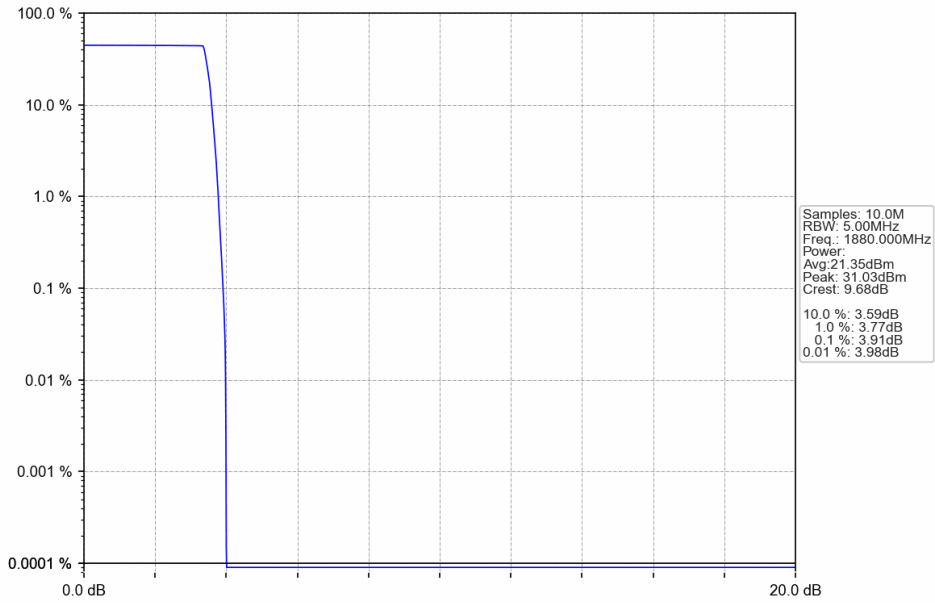
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PCS1900\_GPRS\_LCH\_1850.2MHz\_4 TX Slots\_NTNV



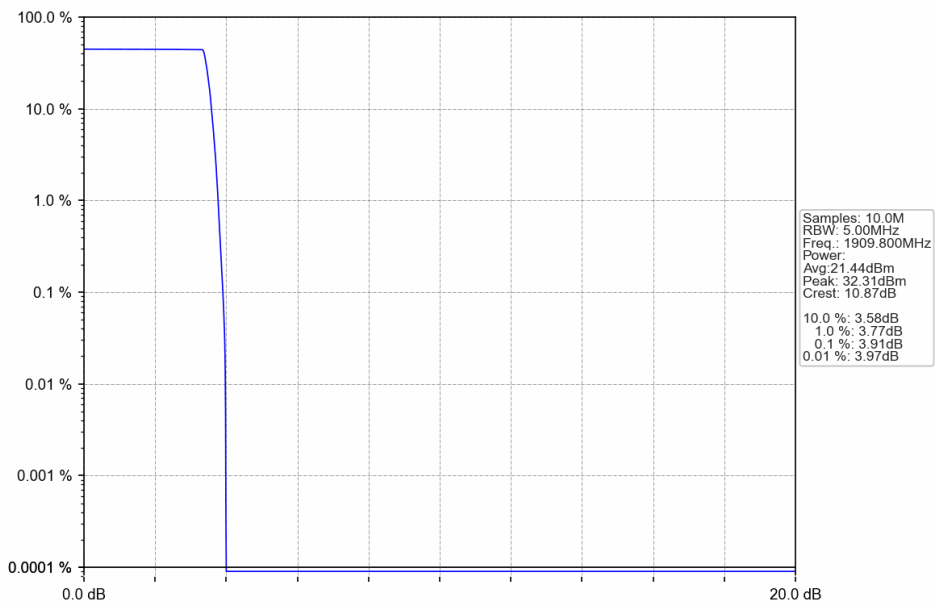
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PCS1900\_GPRS\_MCH\_1880MHz\_4 TX Slots\_NTNV



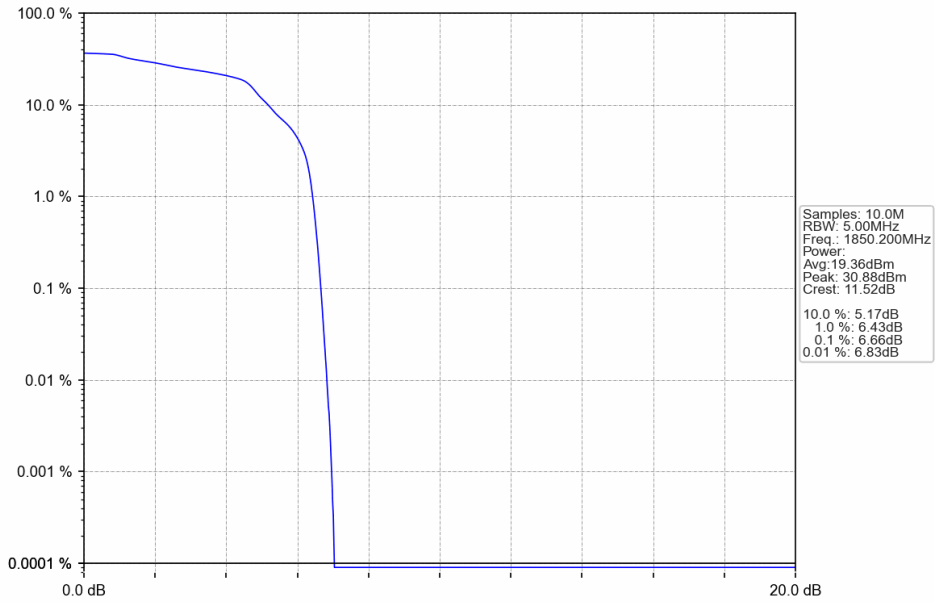
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PCS1900\_GPRS\_HCH\_1909.8MHz\_4 TX Slots\_NTNV



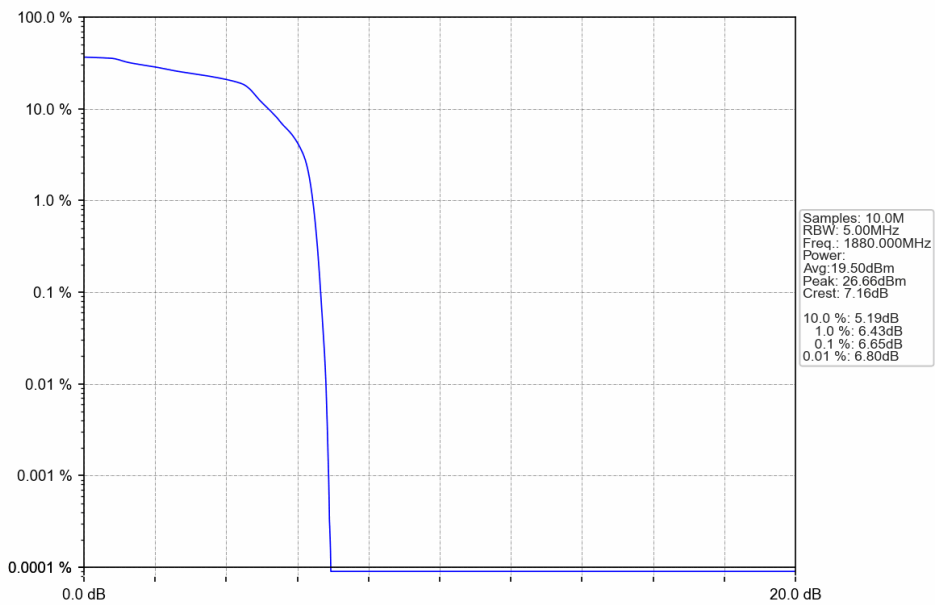
2024-07-23 12:04:38

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



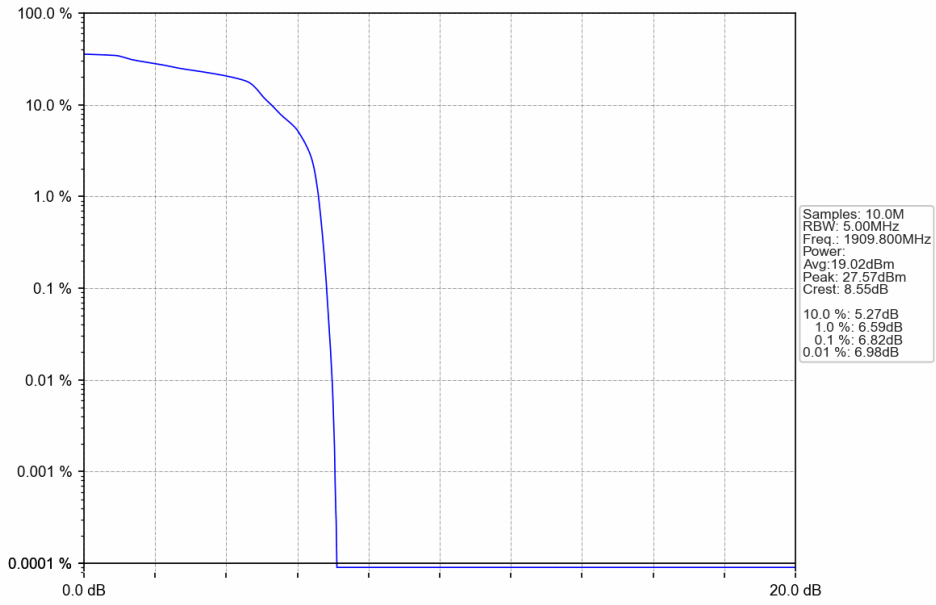
2024-07-23 12:04:56

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



2024-07-23 12:05:07

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



2024-07-23 12:05:19

## 6. Spurious Emission

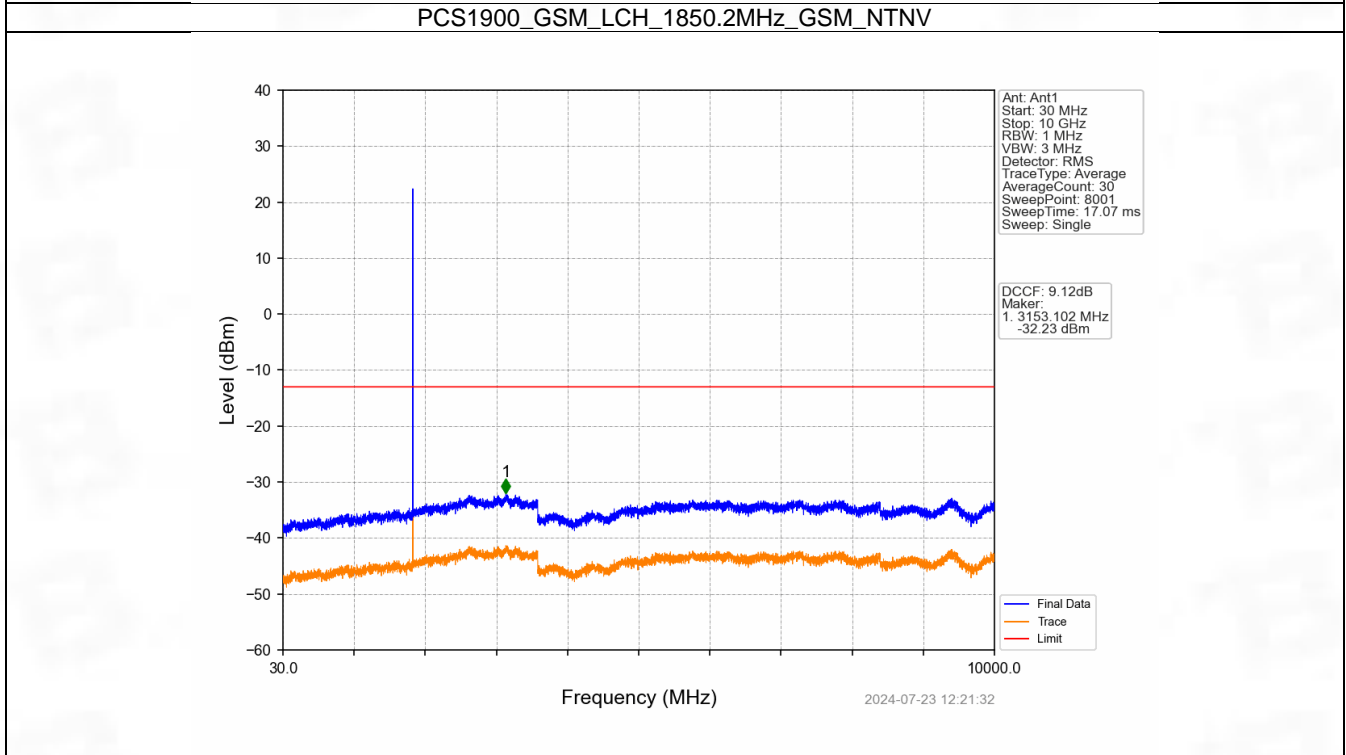
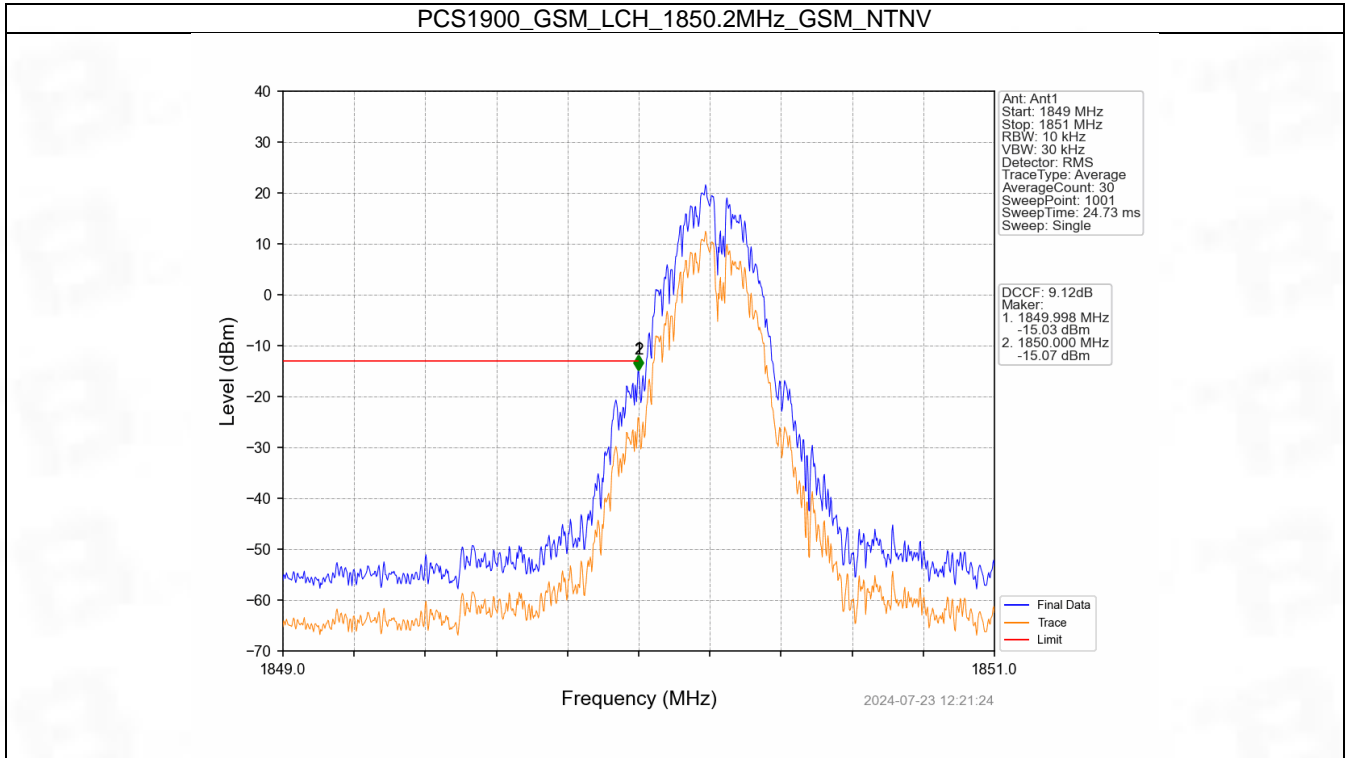
### 6.1 Test Result

#### 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

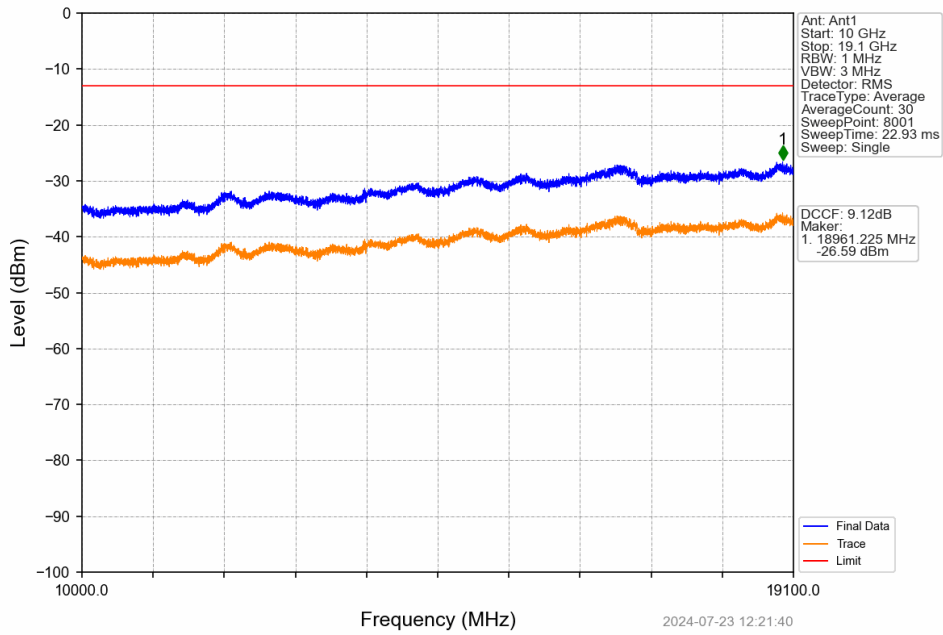
## 6.2 Test Graph

### 6.2.1 PCS1900

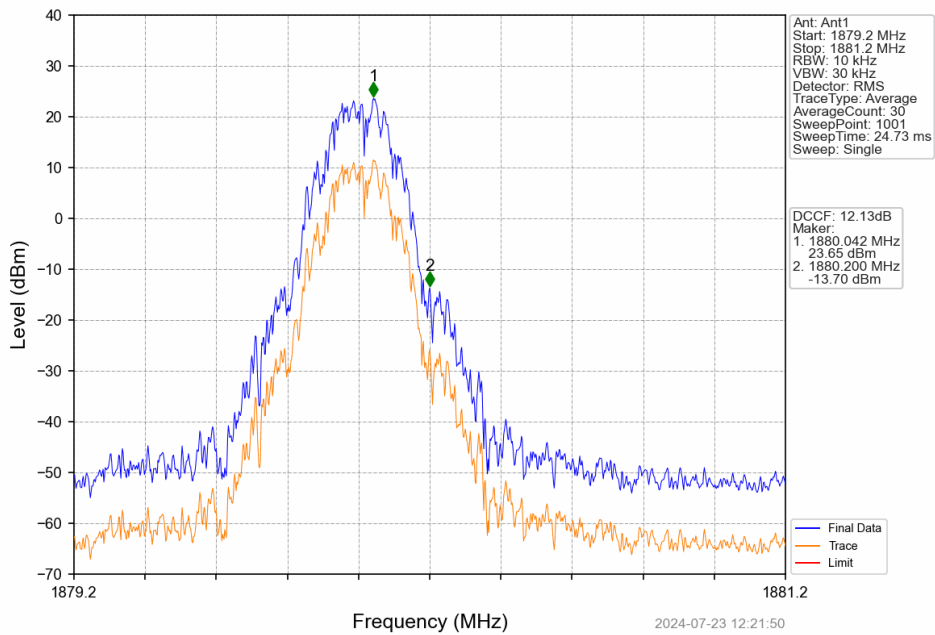




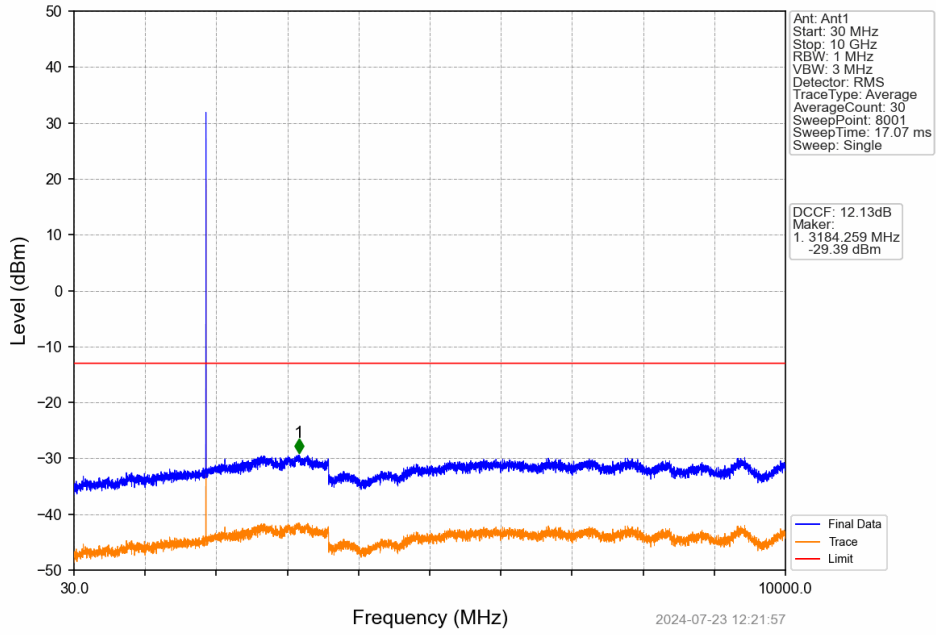
PCS1900\_GSM\_LCH\_1850.2MHz\_GSM\_NTNV



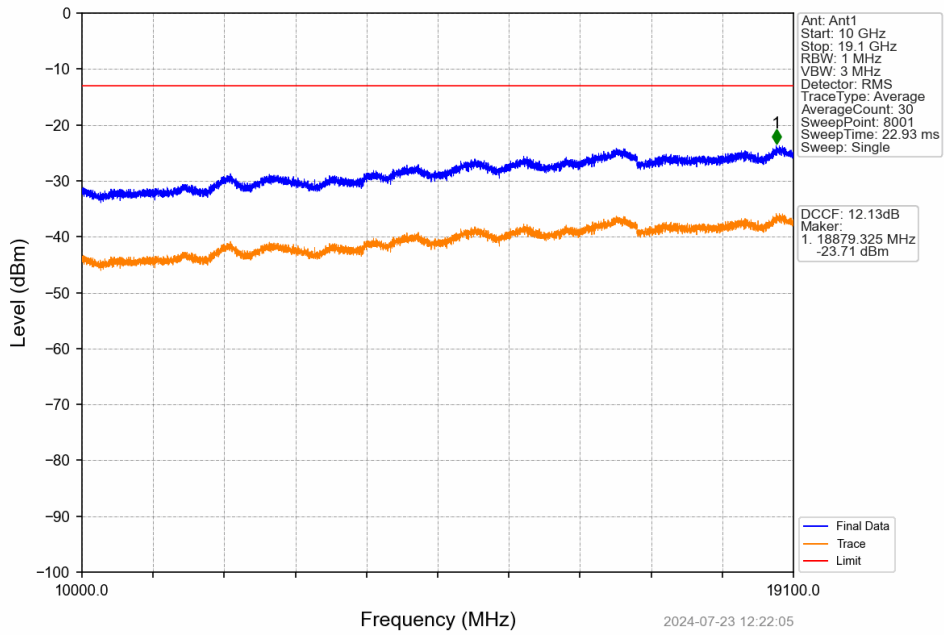
PCS1900\_GSM\_MCH\_1880MHz\_GSM\_NTNV



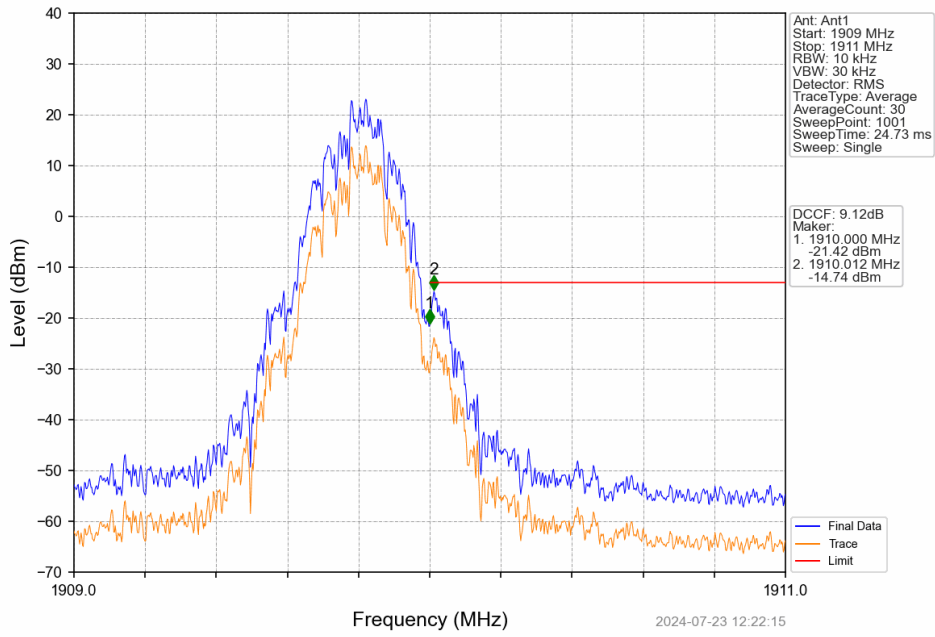
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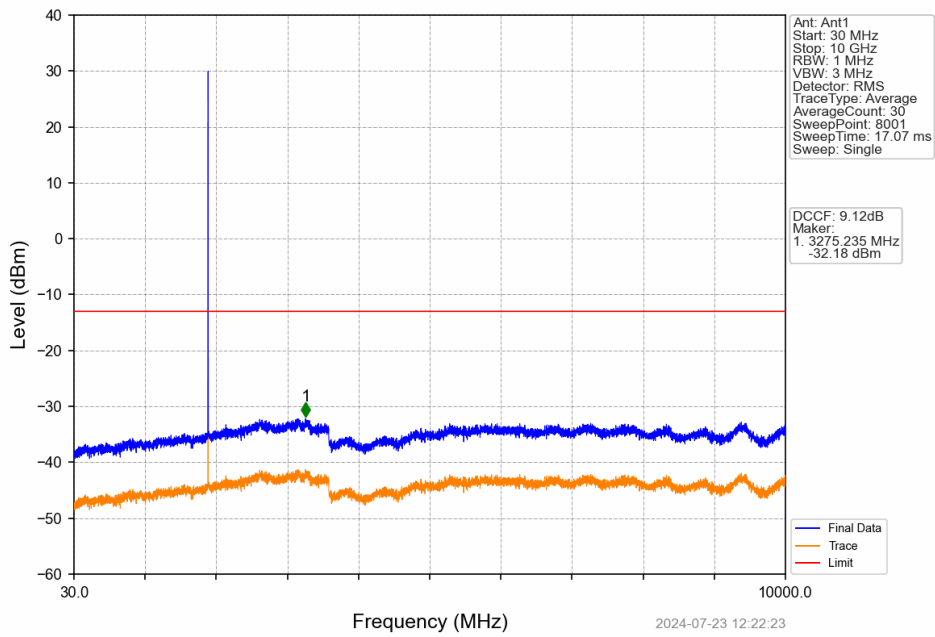
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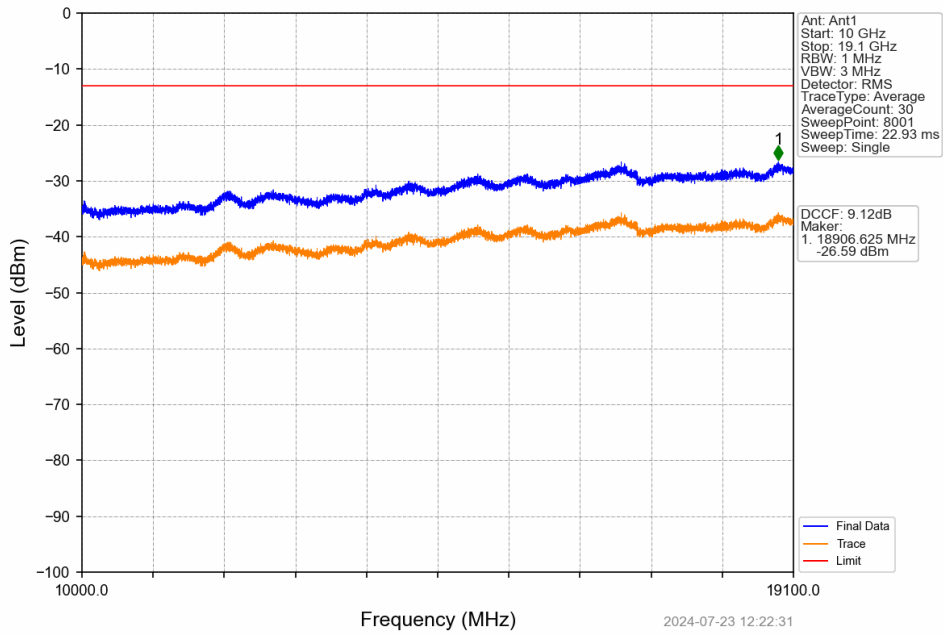
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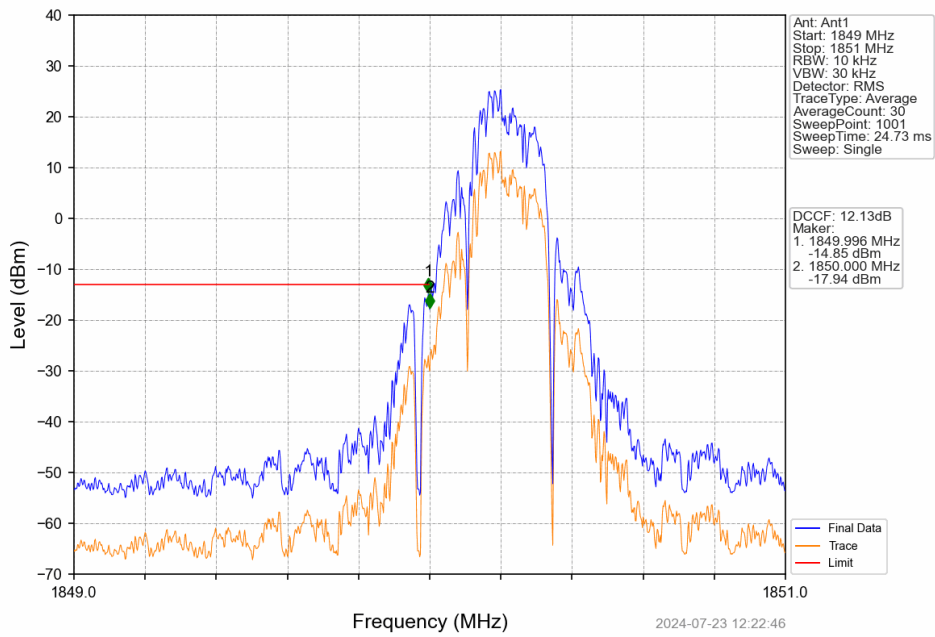
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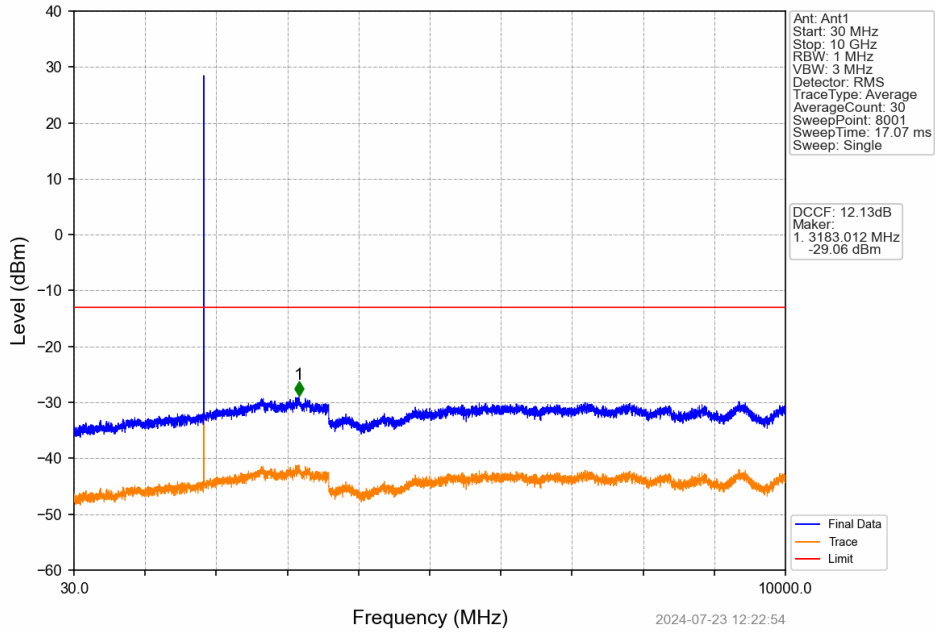
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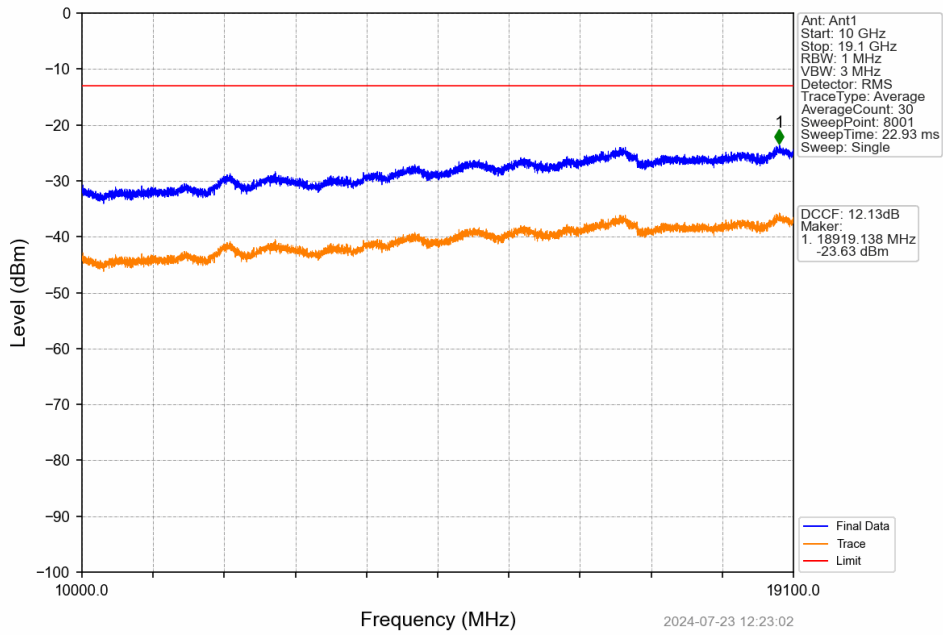
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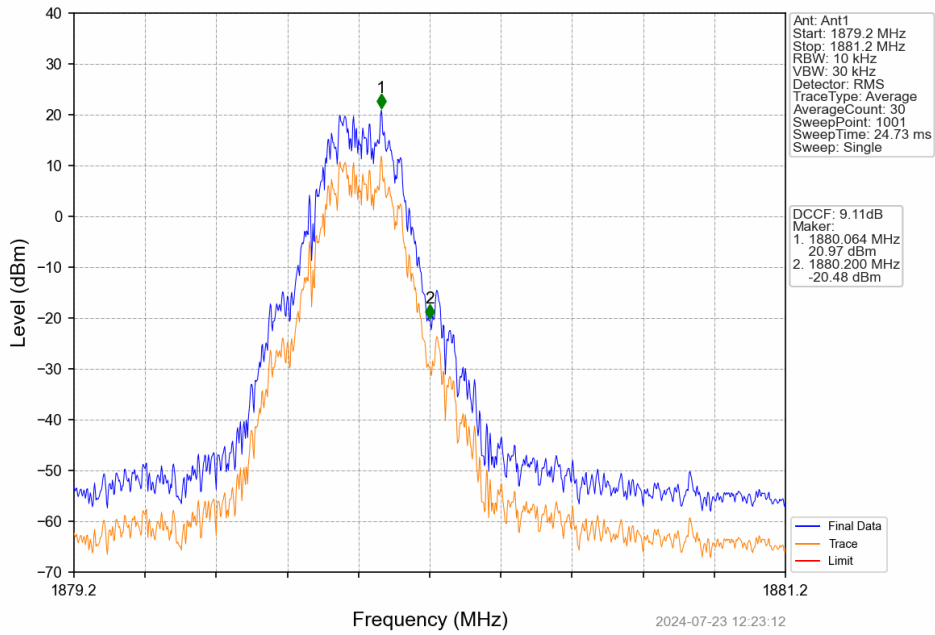
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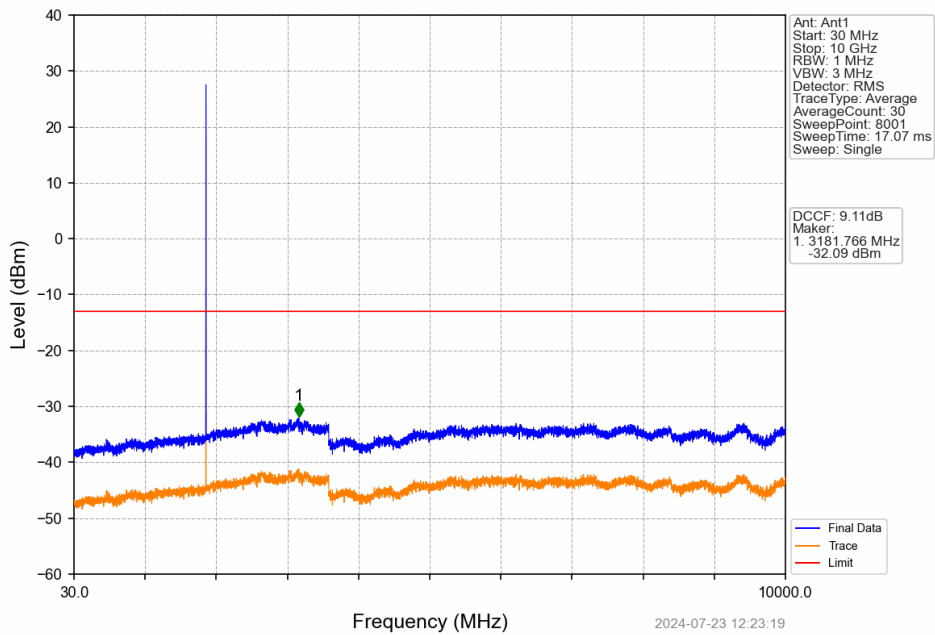
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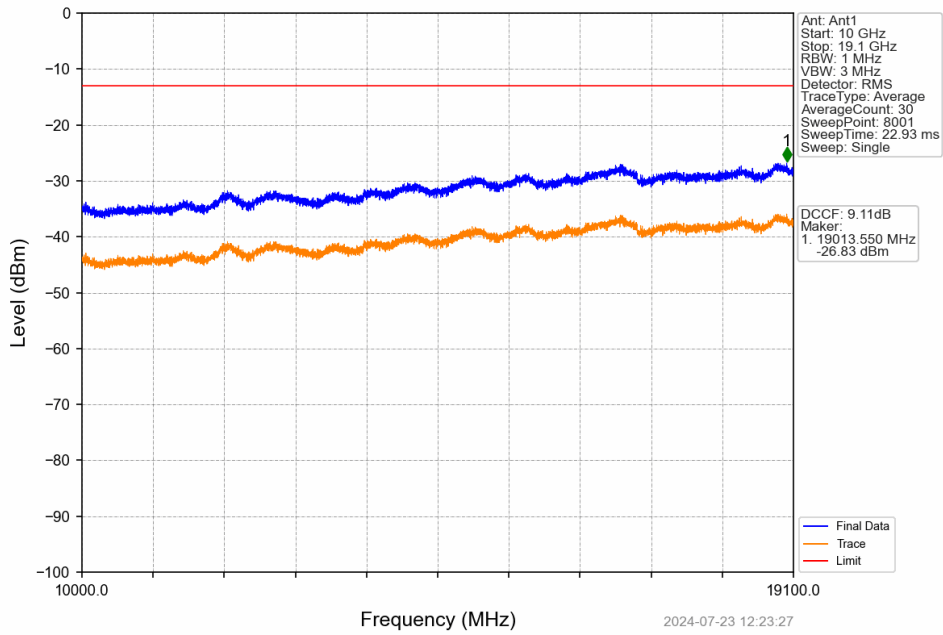
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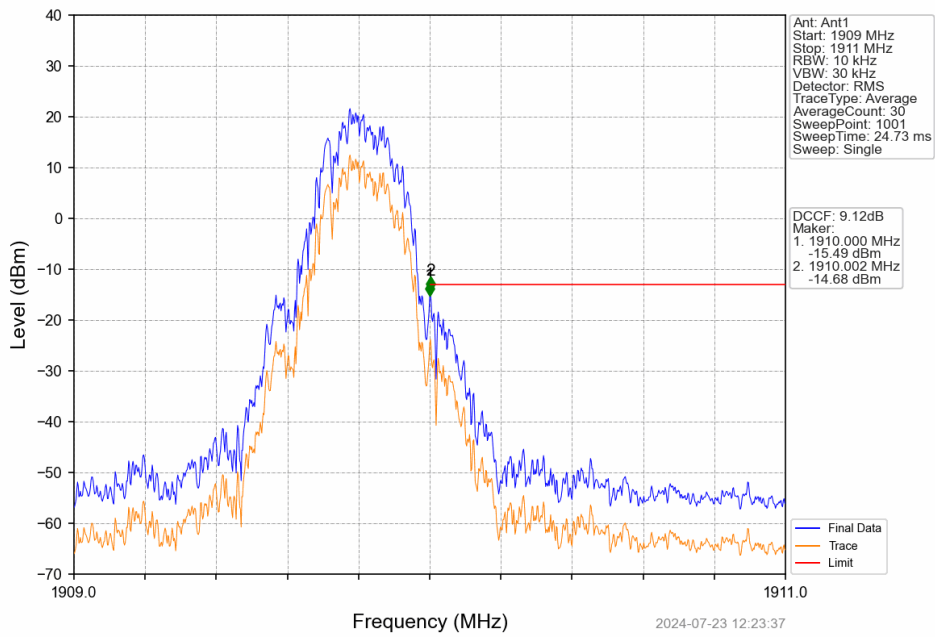
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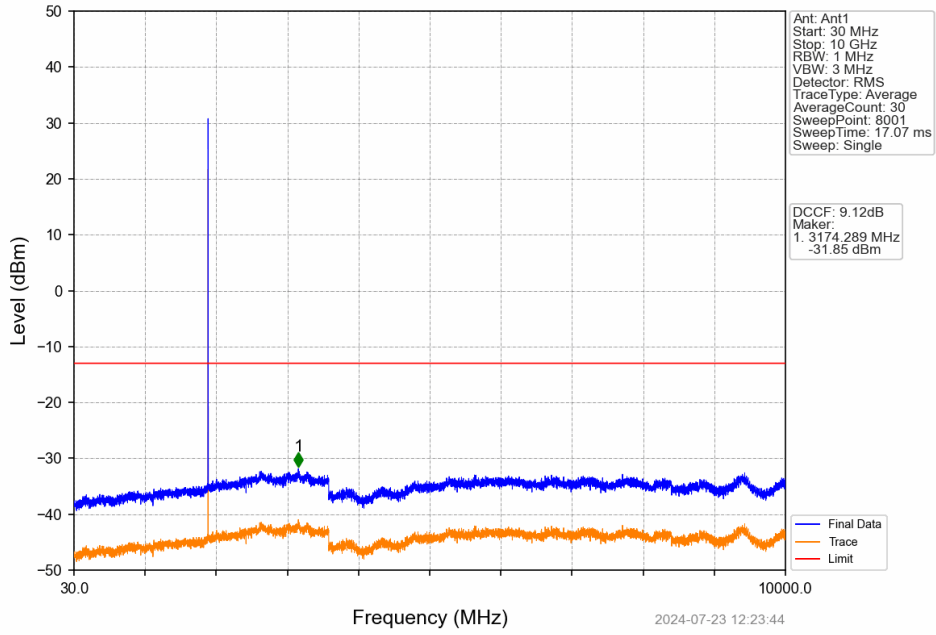
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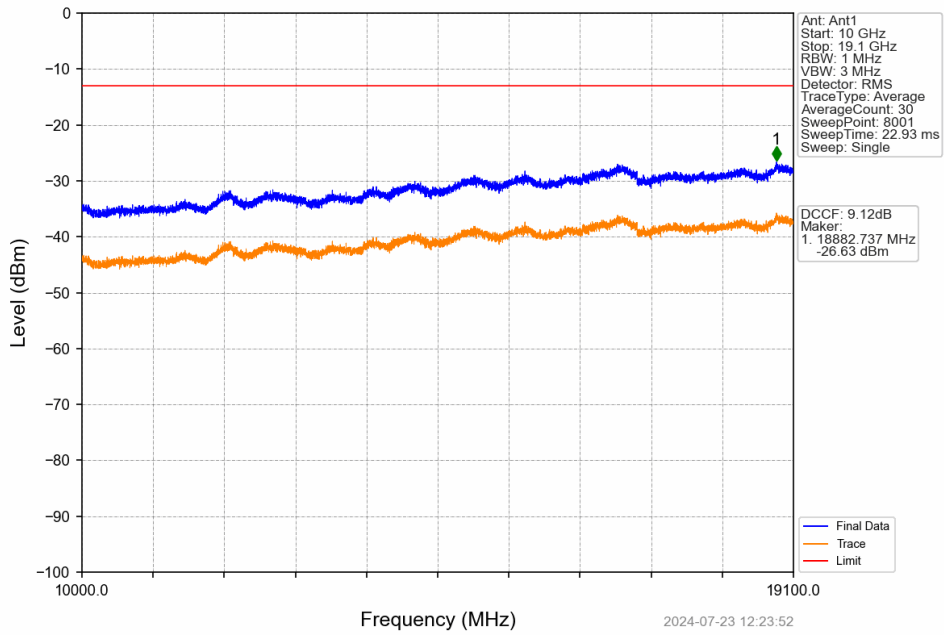
PCS1900\_GPRS\_HCH\_1909.8MHz\_1 TX Slot\_NTNV



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

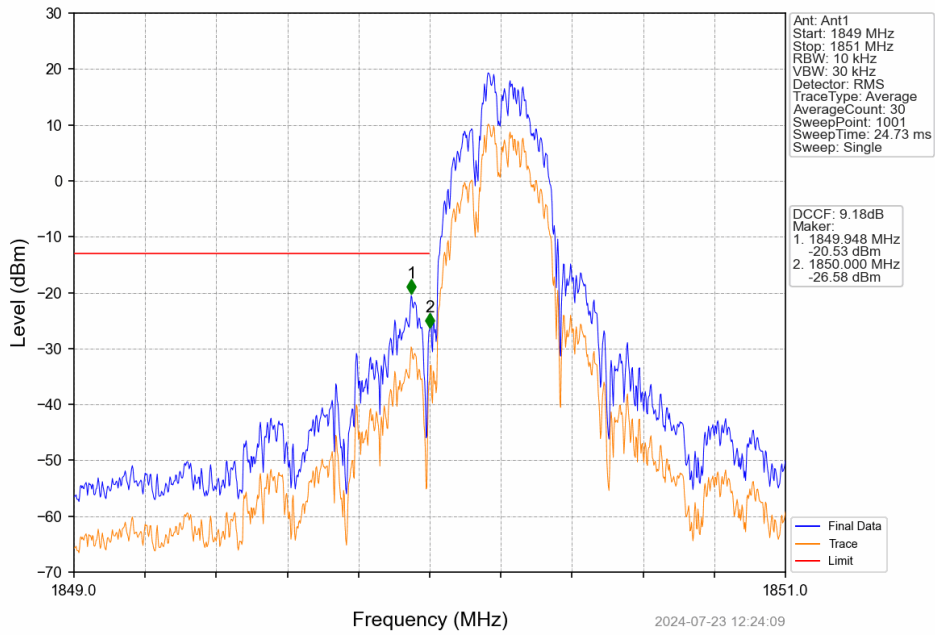


PCS1900\_GPRS\_HCH\_1909.8MHz\_1 TX Slot\_NTNV

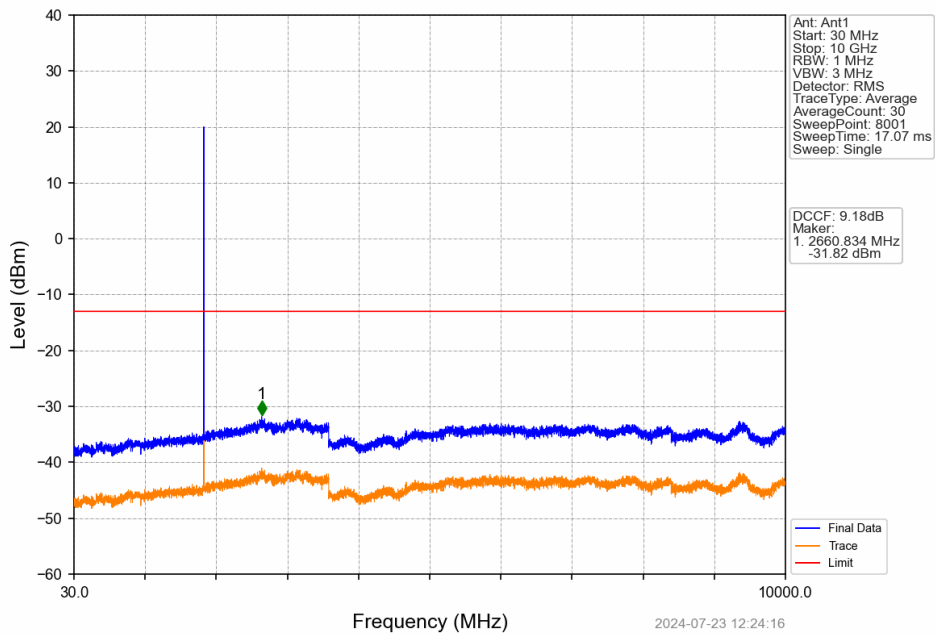




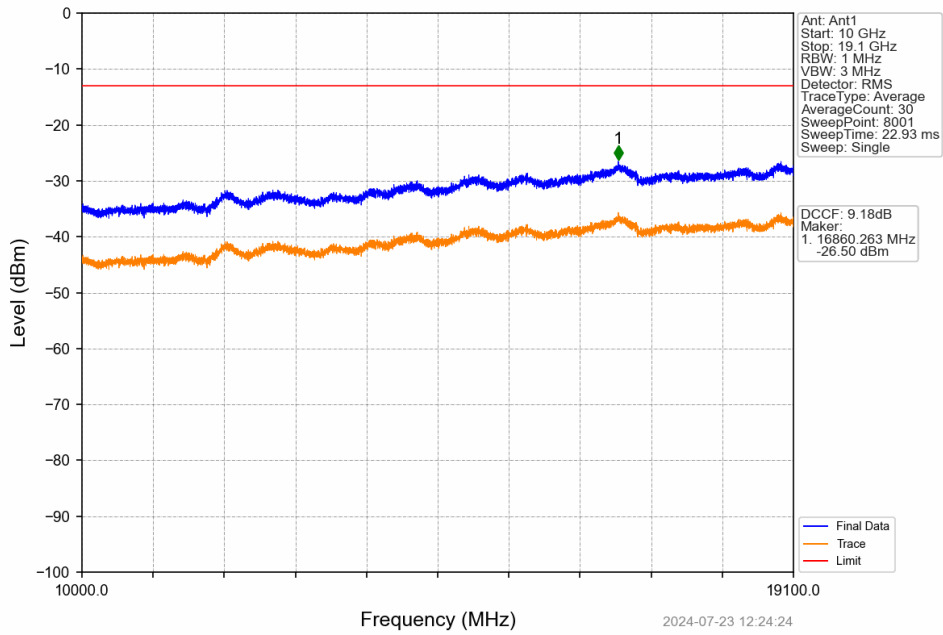
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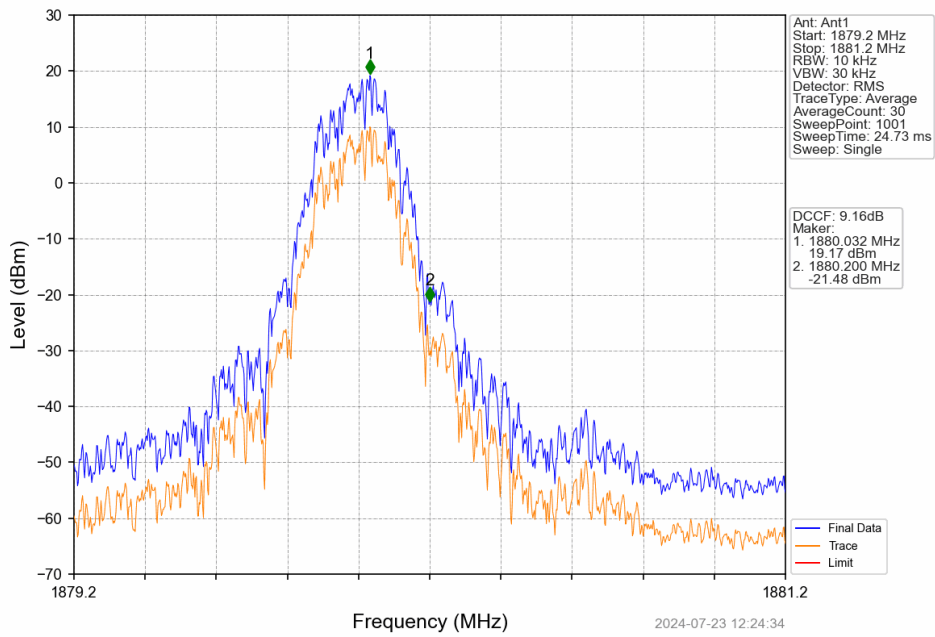
PCS1900\_EGPRS\_LCH\_1850.2MHz\_1 TX Slot\_NTNV



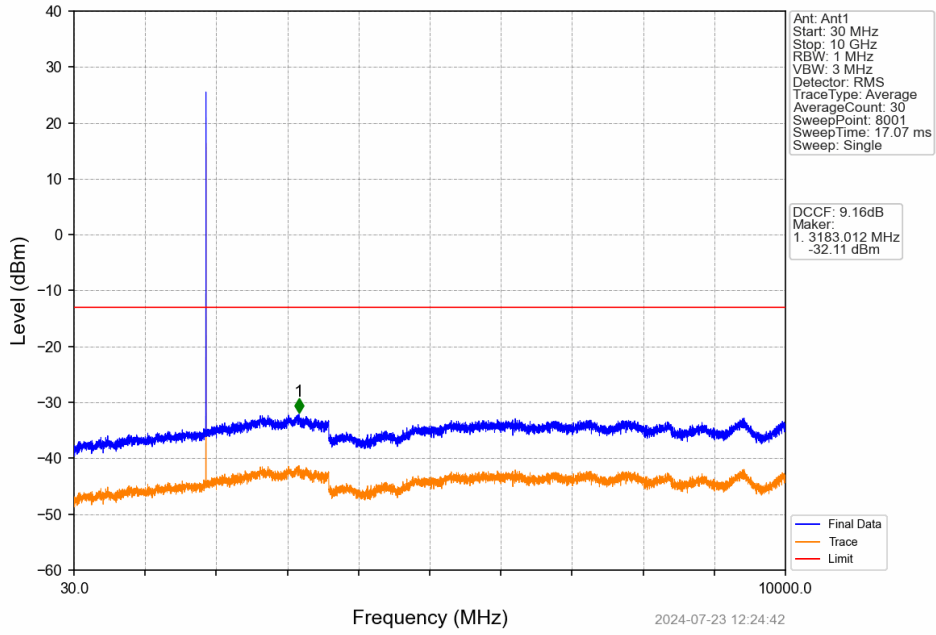
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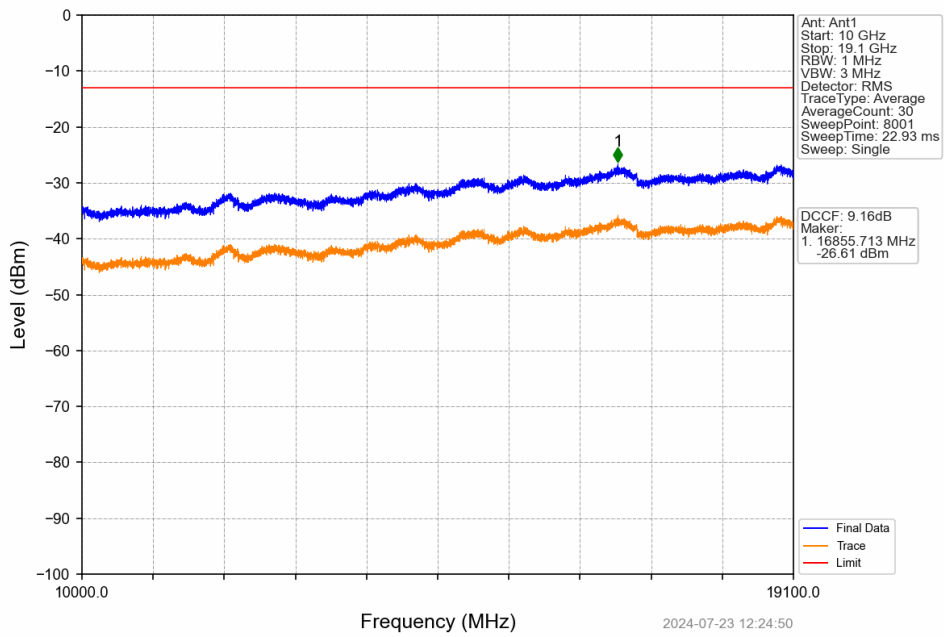
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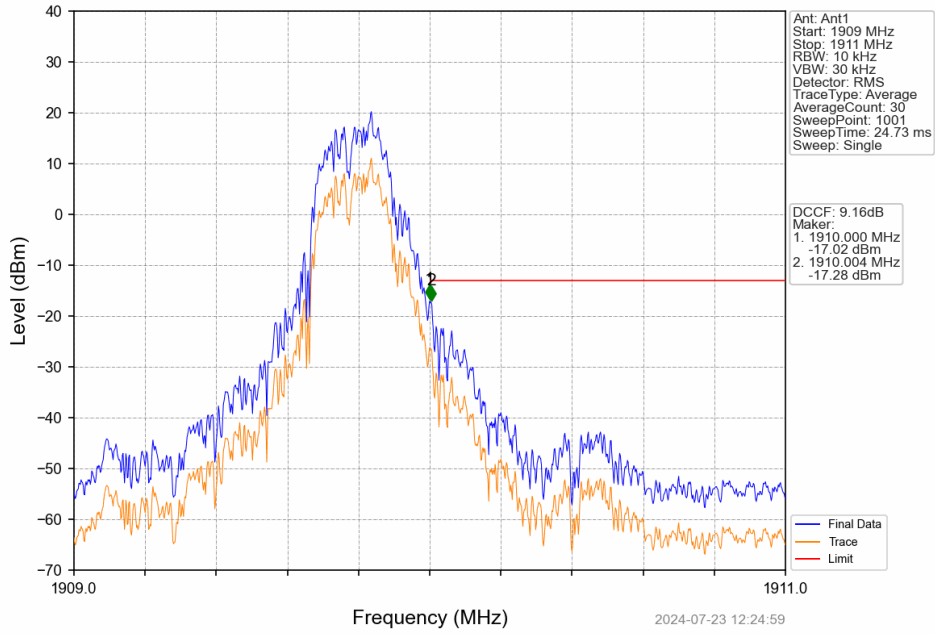
PCS1900\_EGPRS\_MCH\_1880MHz\_1 TX Slot\_NTNV



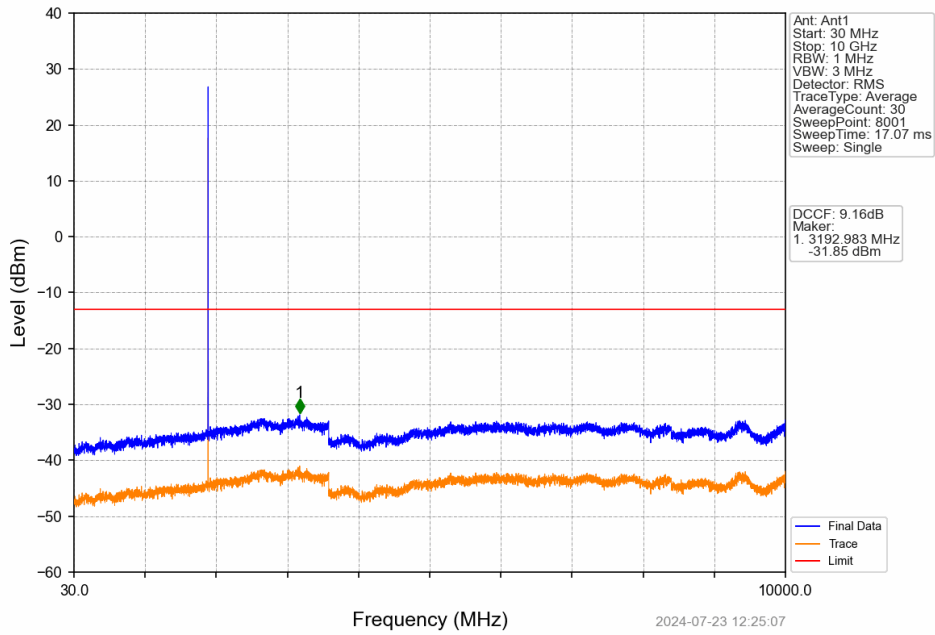
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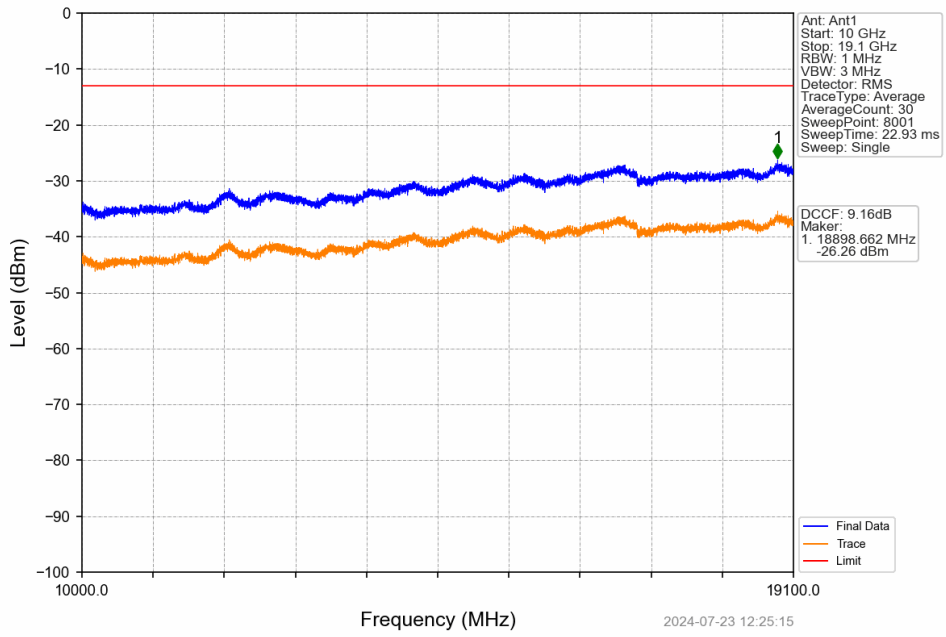
PCS1900\_EGPRS\_HCH\_1909.8MHz\_1 TX Slot\_NTNV



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



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



## 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	0.4335	0.0191	ppm	249KGXW	24E	26.37
PCS1900	0.2	1850.2	1909.8	0.1432	0.0082	ppm	259KG7W	24E	21.56

#### 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	0.7889	0.0191	ppm	249KGXW	24E	28.97
PCS1900	0.2	1850.2	1909.8	0.2606	0.0082	ppm	259KG7W	24E	24.16