

1. Effective (Isotropic) Radiated Power Output Data

1.1 Test Result

1.1.1 GSM850_ERP

Band: GSM850								
ENV	Mode		Frequency (MHz)	Conducted Power (dBm)	Gain (dBi)	ERP (dBm)		Verdict
	Network	Subset				Result	Limit	
NTNV	GSM	GSM	824.2	33.45	2.53	33.83	<=38.45	Pass
			836.6	33.56	2.53	33.94	<=38.45	Pass
			848.8	33.44	2.53	33.82	<=38.45	Pass
	GPRS	1 TX Slot	824.2	33.47	2.53	33.85	<=38.45	Pass
		2 TX Slots	824.2	32.65	2.53	33.03	<=38.45	Pass
		3 TX Slots	824.2	30.51	2.53	30.89	<=38.45	Pass
		4 TX Slots	824.2	29.35	2.53	29.73	<=38.45	Pass
		1 TX Slot	836.6	33.48	2.53	33.86	<=38.45	Pass
		2 TX Slots	836.6	32.77	2.53	33.15	<=38.45	Pass
		3 TX Slots	836.6	30.70	2.53	31.08	<=38.45	Pass
		4 TX Slots	836.6	29.48	2.53	29.86	<=38.45	Pass
		1 TX Slot	848.8	33.35	2.53	33.73	<=38.45	Pass
		2 TX Slots	848.8	32.56	2.53	32.94	<=38.45	Pass
		3 TX Slots	848.8	30.45	2.53	30.83	<=38.45	Pass
		4 TX Slots	848.8	29.23	2.53	29.61	<=38.45	Pass
	EGPRS	1 TX Slot	824.2	27.34	2.53	27.72	<=38.45	Pass
		2 TX Slots	824.2	26.70	2.53	27.08	<=38.45	Pass
		3 TX Slots	824.2	24.74	2.53	25.12	<=38.45	Pass
		4 TX Slots	824.2	23.52	2.53	23.90	<=38.45	Pass
		1 TX Slot	836.6	27.53	2.53	27.91	<=38.45	Pass
		2 TX Slots	836.6	28.86	2.53	29.24	<=38.45	Pass
		3 TX Slots	836.6	26.81	2.53	27.19	<=38.45	Pass
		4 TX Slots	836.6	23.60	2.53	23.98	<=38.45	Pass
		1 TX Slot	848.8	27.12	2.53	27.50	<=38.45	Pass
		2 TX Slots	848.8	26.62	2.53	27.00	<=38.45	Pass
		3 TX Slots	848.8	24.36	2.53	24.74	<=38.45	Pass
		4 TX Slots	848.8	23.35	2.53	23.73	<=38.45	Pass

Note1: ERP=Conducted Power+Antenna Gain-2.15

2. Frequency Stability

2.1 Test Result

2.1.1 GSM850

Band: GSM850							
Network	Frequency (MHz)	Temp. (°C)	Voltage (VDC)	Freq. Error (Hz)	Freq. vs. Rated (ppm)		Verdict
					Result	Limit	
GSM	824.2	20	3.55	3.545	0.0043	-2.5 to 2.5	Pass
			4	11.226	0.0136	-2.5 to 2.5	Pass
			4.4	11.765	0.0143	-2.5 to 2.5	Pass
		-30	4	12.097	0.0147	-2.5 to 2.5	Pass
		-20	4	11.990	0.0145	-2.5 to 2.5	Pass
		-10	4	11.941	0.0145	-2.5 to 2.5	Pass
		0	4	10.659	0.0129	-2.5 to 2.5	Pass
		10	4	11.779	0.0143	-2.5 to 2.5	Pass
		30	4	12.242	0.0149	-2.5 to 2.5	Pass

		40	4	10.325	0.0125	-2.5 to 2.5	Pass
		50	4	11.301	0.0137	-2.5 to 2.5	Pass
	836.6	20	3.55	13.760	0.0164	-2.5 to 2.5	Pass
			4	13.135	0.0157	-2.5 to 2.5	Pass
			4.4	13.136	0.0157	-2.5 to 2.5	Pass
		-30	4	18.114	0.0217	-2.5 to 2.5	Pass
		-20	4	15.639	0.0187	-2.5 to 2.5	Pass
		-10	4	16.098	0.0192	-2.5 to 2.5	Pass
		0	4	16.522	0.0197	-2.5 to 2.5	Pass
		10	4	15.281	0.0183	-2.5 to 2.5	Pass
		30	4	11.858	0.0142	-2.5 to 2.5	Pass
		40	4	15.039	0.0180	-2.5 to 2.5	Pass
		50	4	14.207	0.0170	-2.5 to 2.5	Pass
	848.8	20	3.55	17.265	0.0203	-2.5 to 2.5	Pass
			4	17.222	0.0203	-2.5 to 2.5	Pass
			4.4	14.186	0.0167	-2.5 to 2.5	Pass
		-30	4	15.577	0.0184	-2.5 to 2.5	Pass
		-20	4	14.794	0.0174	-2.5 to 2.5	Pass
		-10	4	13.243	0.0156	-2.5 to 2.5	Pass
		0	4	16.385	0.0193	-2.5 to 2.5	Pass
		10	4	13.463	0.0159	-2.5 to 2.5	Pass
		30	4	17.717	0.0209	-2.5 to 2.5	Pass
		40	4	14.917	0.0176	-2.5 to 2.5	Pass
		50	4	14.649	0.0173	-2.5 to 2.5	Pass
GPRS	824.2	20	3.55	31.241	0.0379	-2.5 to 2.5	Pass
			4	31.154	0.0378	-2.5 to 2.5	Pass
			4.4	30.559	0.0371	-2.5 to 2.5	Pass
		-30	4	29.477	0.0358	-2.5 to 2.5	Pass
		-20	4	28.964	0.0351	-2.5 to 2.5	Pass
		-10	4	29.963	0.0364	-2.5 to 2.5	Pass
		0	4	31.013	0.0376	-2.5 to 2.5	Pass
		10	4	30.060	0.0365	-2.5 to 2.5	Pass
		30	4	29.664	0.0360	-2.5 to 2.5	Pass
		40	4	28.215	0.0342	-2.5 to 2.5	Pass
		50	4	29.279	0.0355	-2.5 to 2.5	Pass
	836.6	20	3.55	26.259	0.0314	-2.5 to 2.5	Pass
			4	26.875	0.0321	-2.5 to 2.5	Pass
			4.4	28.896	0.0345	-2.5 to 2.5	Pass
		-30	4	28.424	0.0340	-2.5 to 2.5	Pass
		-20	4	28.984	0.0346	-2.5 to 2.5	Pass
		-10	4	27.669	0.0331	-2.5 to 2.5	Pass
		0	4	29.330	0.0351	-2.5 to 2.5	Pass
		10	4	29.461	0.0352	-2.5 to 2.5	Pass
		30	4	27.944	0.0334	-2.5 to 2.5	Pass
		40	4	30.722	0.0367	-2.5 to 2.5	Pass
		50	4	26.656	0.0319	-2.5 to 2.5	Pass
	848.8	20	3.55	29.001	0.0342	-2.5 to 2.5	Pass
			4	27.456	0.0323	-2.5 to 2.5	Pass
			4.4	26.719	0.0315	-2.5 to 2.5	Pass
		-30	4	28.416	0.0335	-2.5 to 2.5	Pass
		-20	4	27.250	0.0321	-2.5 to 2.5	Pass
		-10	4	27.566	0.0325	-2.5 to 2.5	Pass
		0	4	27.963	0.0329	-2.5 to 2.5	Pass
		10	4	26.339	0.0310	-2.5 to 2.5	Pass
		30	4	27.160	0.0320	-2.5 to 2.5	Pass
		40	4	26.376	0.0311	-2.5 to 2.5	Pass
		50	4	26.266	0.0309	-2.5 to 2.5	Pass
EGPRS	824.2	20	3.55	33.128	0.0402	-2.5 to 2.5	Pass
			4	34.721	0.0421	-2.5 to 2.5	Pass

			4.4	36.284	0.0440	-2.5 to 2.5	Pass
		-30	4	37.718	0.0458	-2.5 to 2.5	Pass
		-20	4	36.909	0.0448	-2.5 to 2.5	Pass
		-10	4	40.310	0.0489	-2.5 to 2.5	Pass
		0	4	41.401	0.0502	-2.5 to 2.5	Pass
		10	4	40.418	0.0490	-2.5 to 2.5	Pass
		30	4	42.165	0.0512	-2.5 to 2.5	Pass
		40	4	40.809	0.0495	-2.5 to 2.5	Pass
		50	4	41.765	0.0507	-2.5 to 2.5	Pass
	836.6	20	3.55	28.931	0.0346	-2.5 to 2.5	Pass
			4	26.278	0.0314	-2.5 to 2.5	Pass
			4.4	28.079	0.0336	-2.5 to 2.5	Pass
		-30	4	29.956	0.0358	-2.5 to 2.5	Pass
		-20	4	27.412	0.0328	-2.5 to 2.5	Pass
		-10	4	27.887	0.0333	-2.5 to 2.5	Pass
		0	4	28.587	0.0342	-2.5 to 2.5	Pass
		10	4	29.797	0.0356	-2.5 to 2.5	Pass
		30	4	29.676	0.0355	-2.5 to 2.5	Pass
		40	4	29.171	0.0349	-2.5 to 2.5	Pass
		50	4	29.814	0.0356	-2.5 to 2.5	Pass
	848.8	20	3.55	30.246	0.0356	-2.5 to 2.5	Pass
			4	33.291	0.0392	-2.5 to 2.5	Pass
			4.4	31.015	0.0365	-2.5 to 2.5	Pass
		-30	4	32.619	0.0384	-2.5 to 2.5	Pass
		-20	4	31.657	0.0373	-2.5 to 2.5	Pass
		-10	4	31.897	0.0376	-2.5 to 2.5	Pass
		0	4	30.679	0.0361	-2.5 to 2.5	Pass
		10	4	30.082	0.0354	-2.5 to 2.5	Pass
		30	4	33.162	0.0391	-2.5 to 2.5	Pass
		40	4	29.709	0.0350	-2.5 to 2.5	Pass
		50	4	30.592	0.0360	-2.5 to 2.5	Pass

3. 99% & 26dB Bandwidth

3.1 Test Result

3.1.1 GSM850_OBW

Band: GSM850						
ENV	Mode		Frequency (MHz)	99% Occupied Bandwidth (MHz)		Verdict
	Network	Subset		Result	Limit	
NTNV	GSM	GSM	824.2	0.243	/	Pass
			836.6	0.243	/	Pass
			848.8	0.244	/	Pass
	GPRS	1 TX Slot	824.2	0.249	/	Pass
			836.6	0.244	/	Pass
			848.8	0.248	/	Pass
	EGPRS	1 TX Slot	824.2	0.234	/	Pass
			836.6	0.243	/	Pass
			848.8	0.245	/	Pass

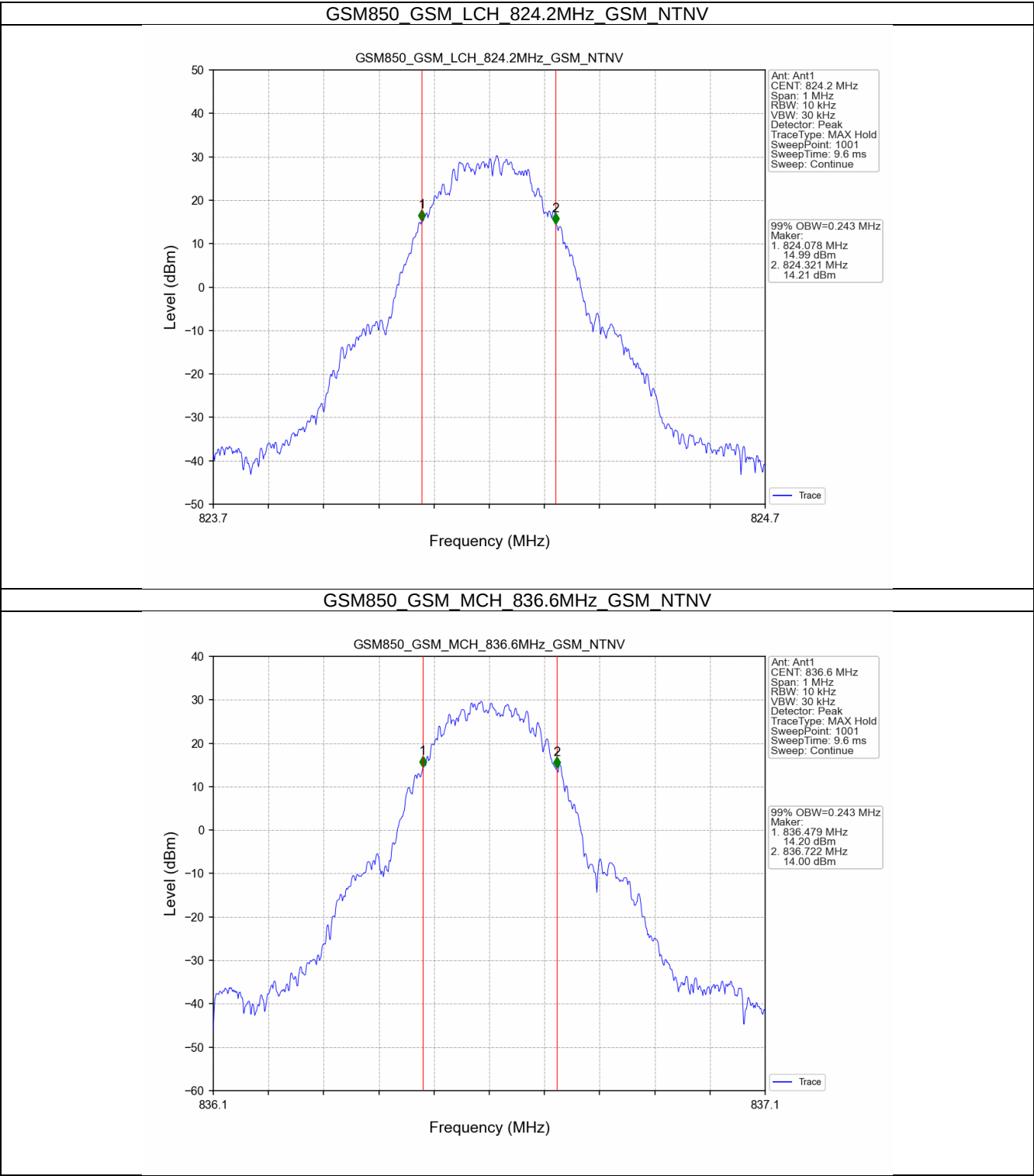
3.1.2 GSM850_XDB

Band: GSM850				
ENV	Mode	Frequency	26dB Bandwidth (MHz)	Verdict

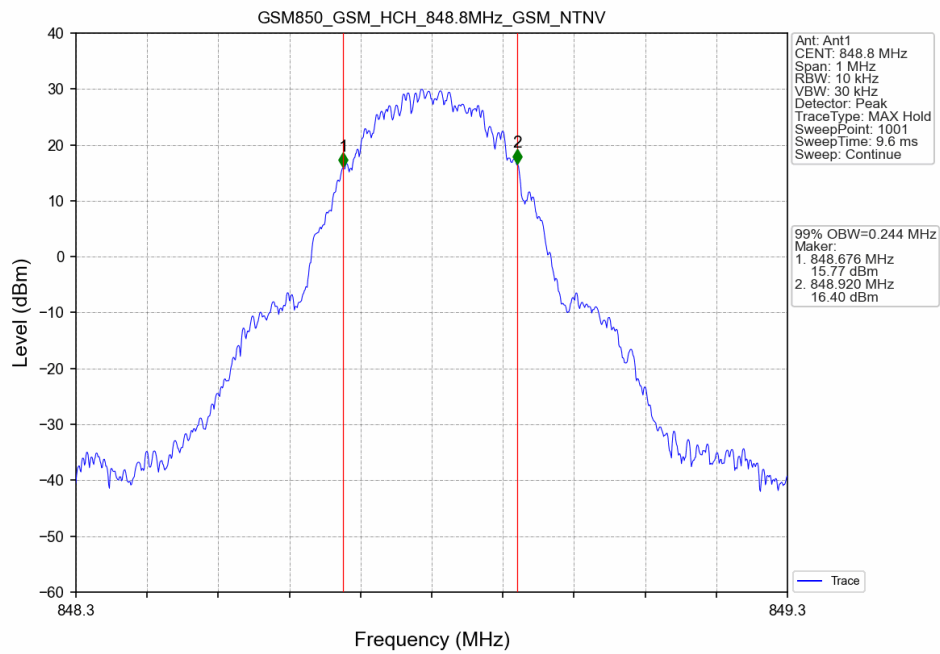
	Network	Subset	(MHz)	Result	Limit	
NTNV	GSM	GSM	824.2	0.312	/	Pass
			836.6	0.317	/	Pass
			848.8	0.323	/	Pass
	GPRS	1 TX Slot	824.2	0.317	/	Pass
			836.6	0.313	/	Pass
			848.8	0.318	/	Pass
	EGPRS	1 TX Slot	824.2	0.289	/	Pass
			836.6	0.294	/	Pass
			848.8	0.327	/	Pass

3.2 Test Graph

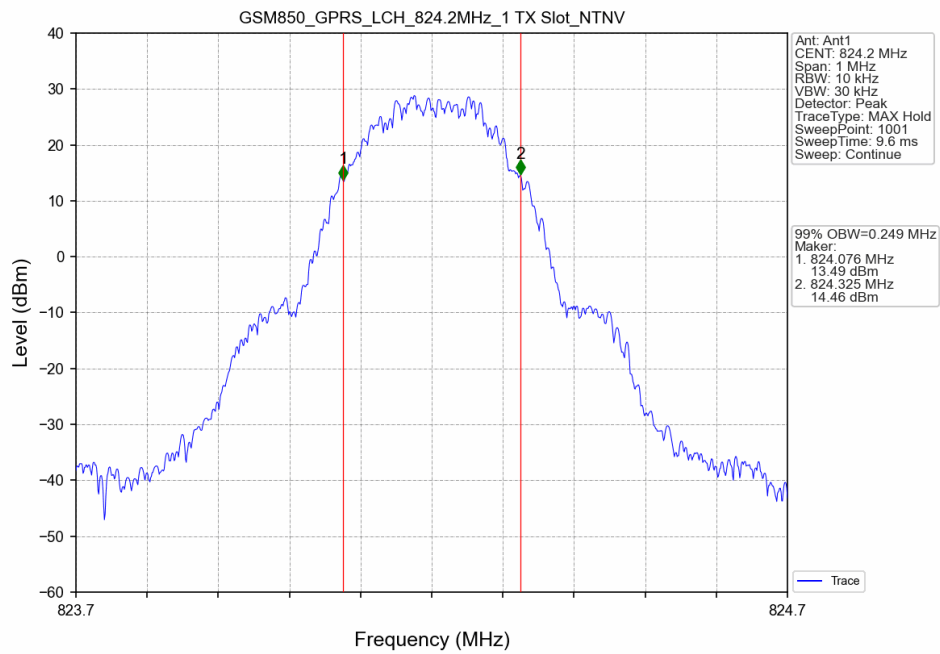
3.2.1 GSM850_OBW



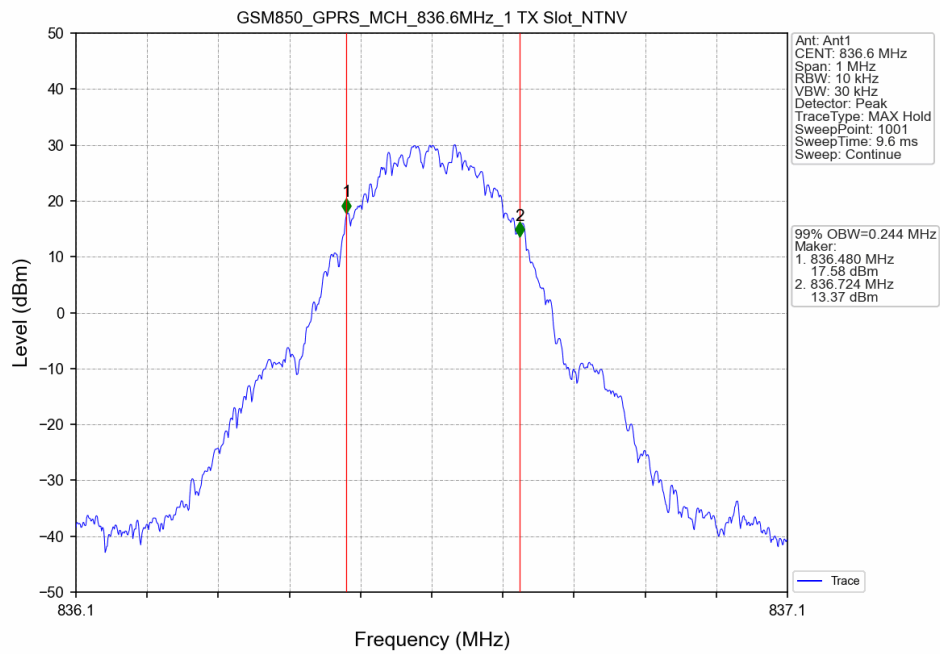
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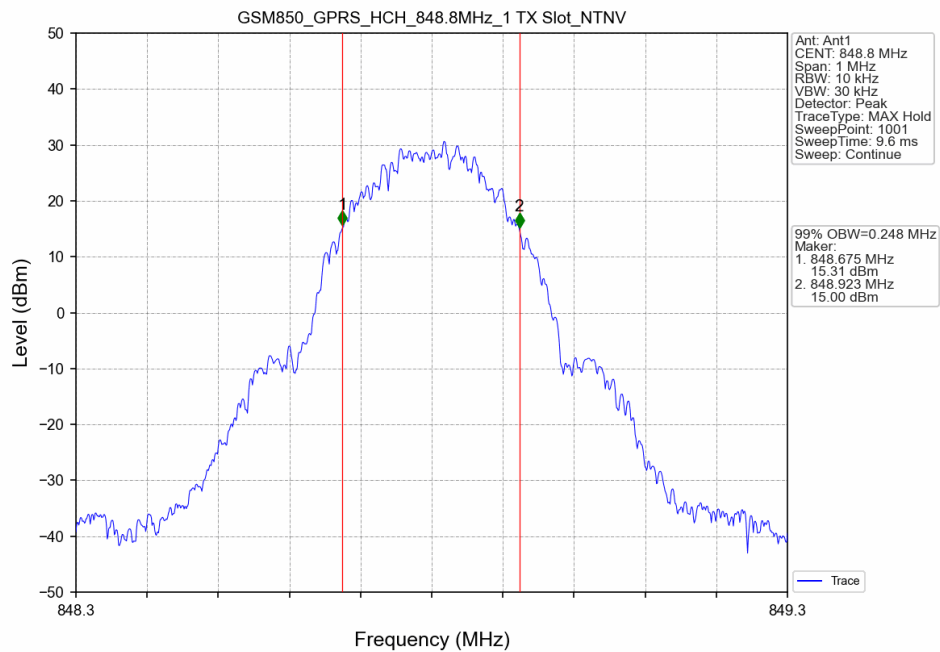
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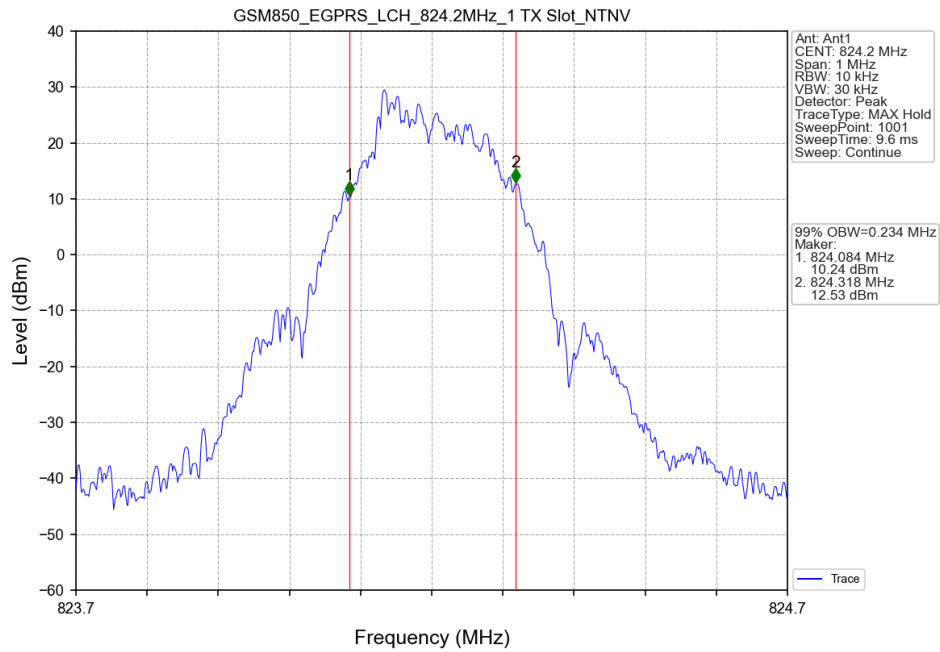
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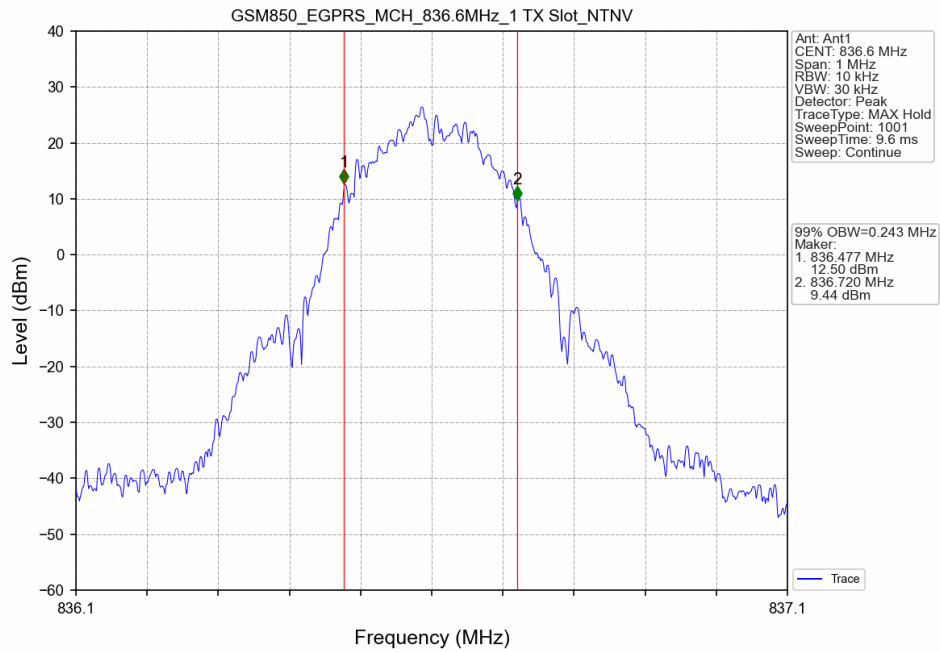
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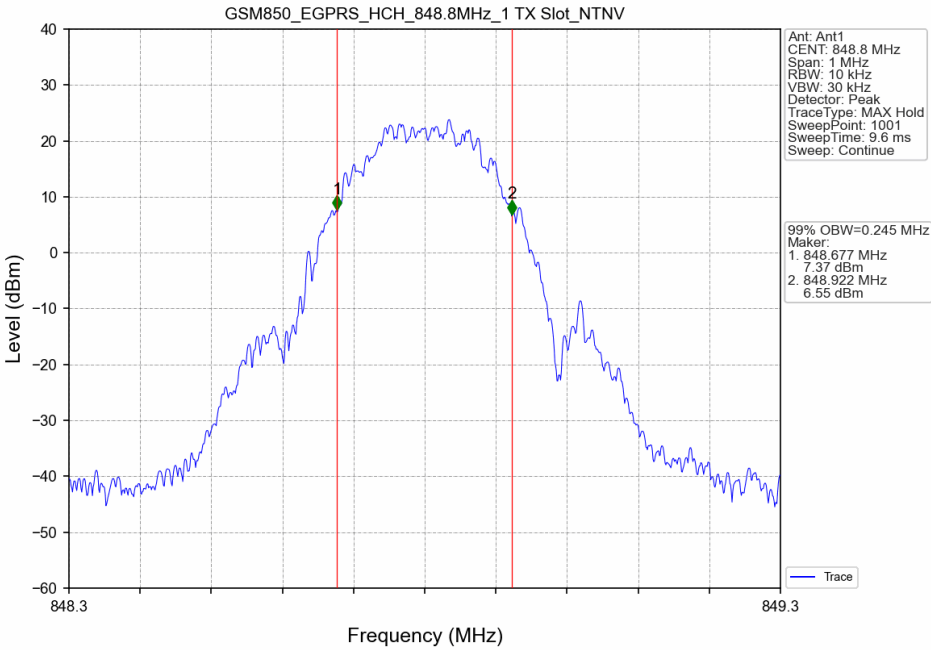
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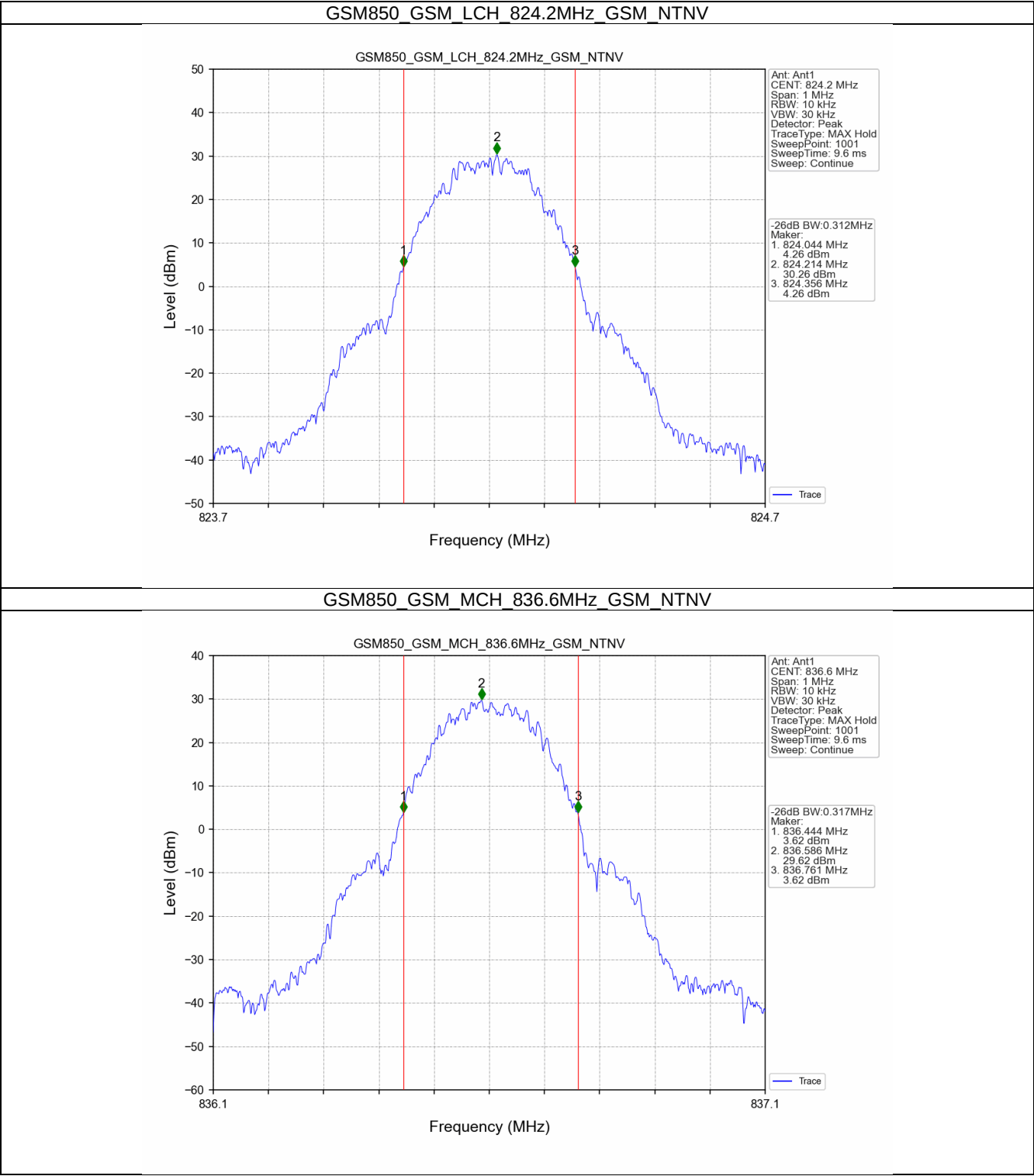
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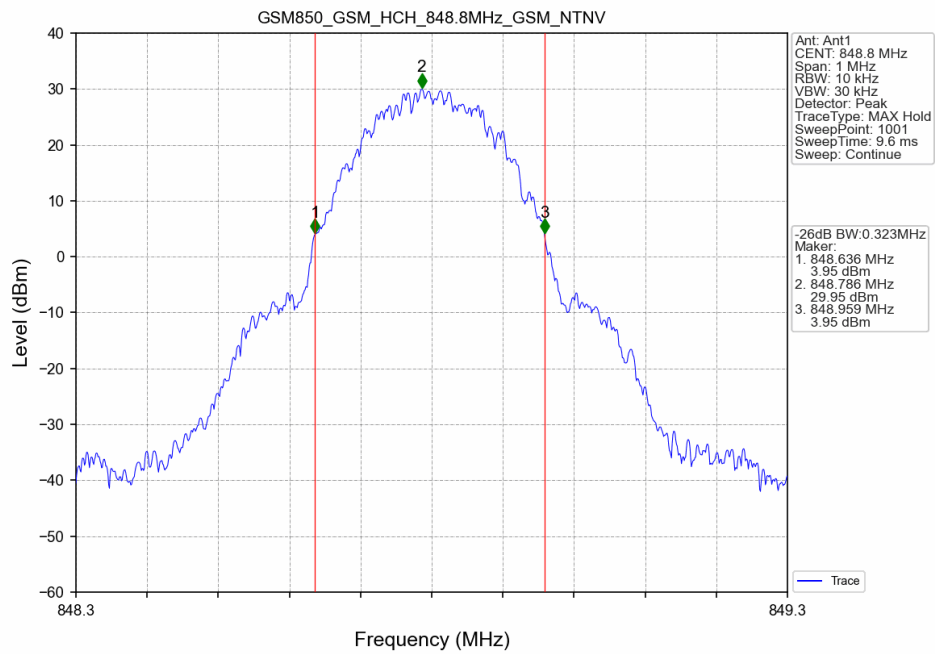
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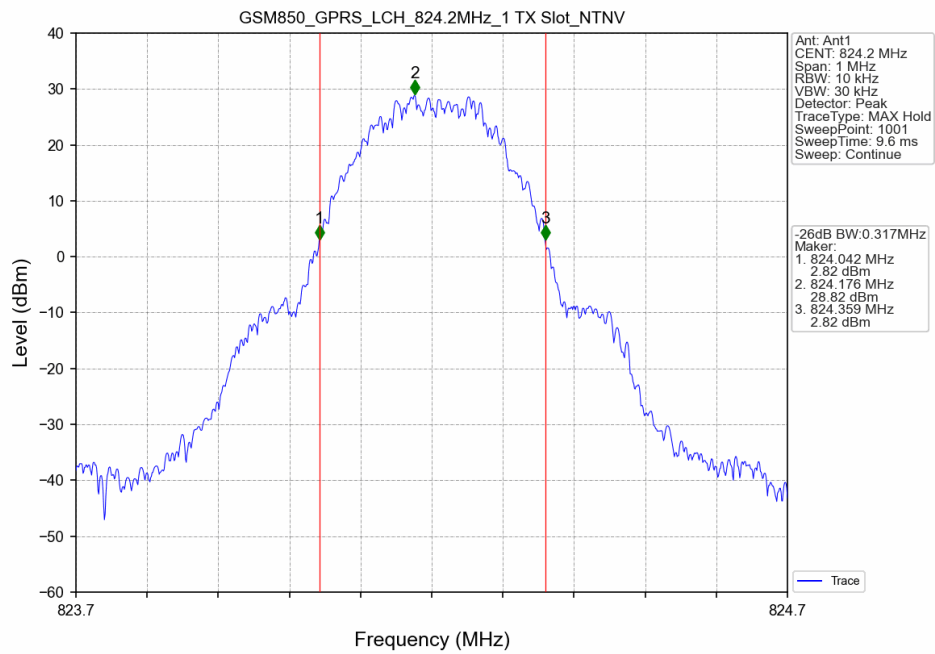
3.2.2 GSM850_XDB



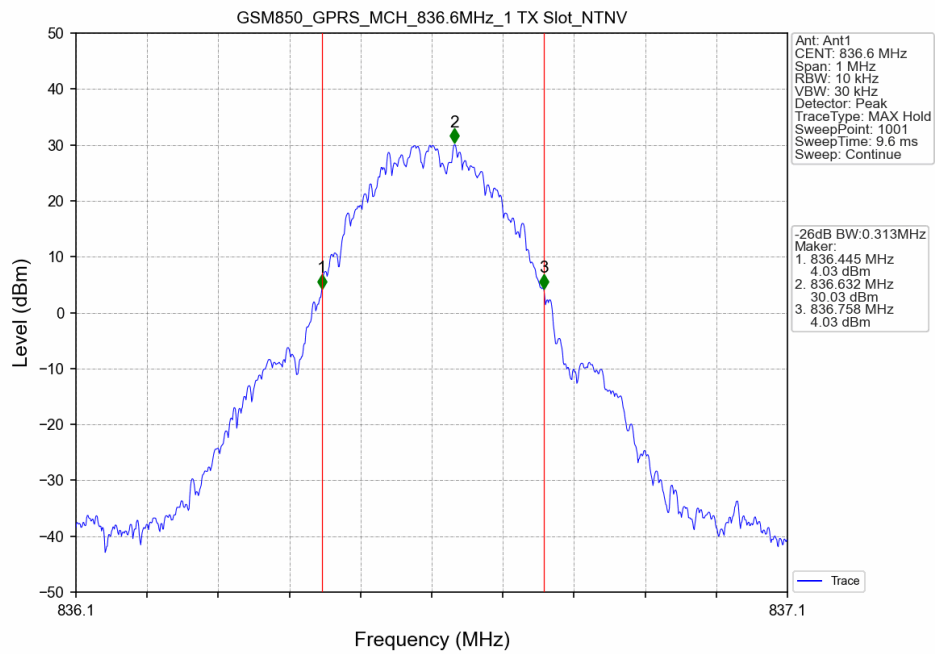
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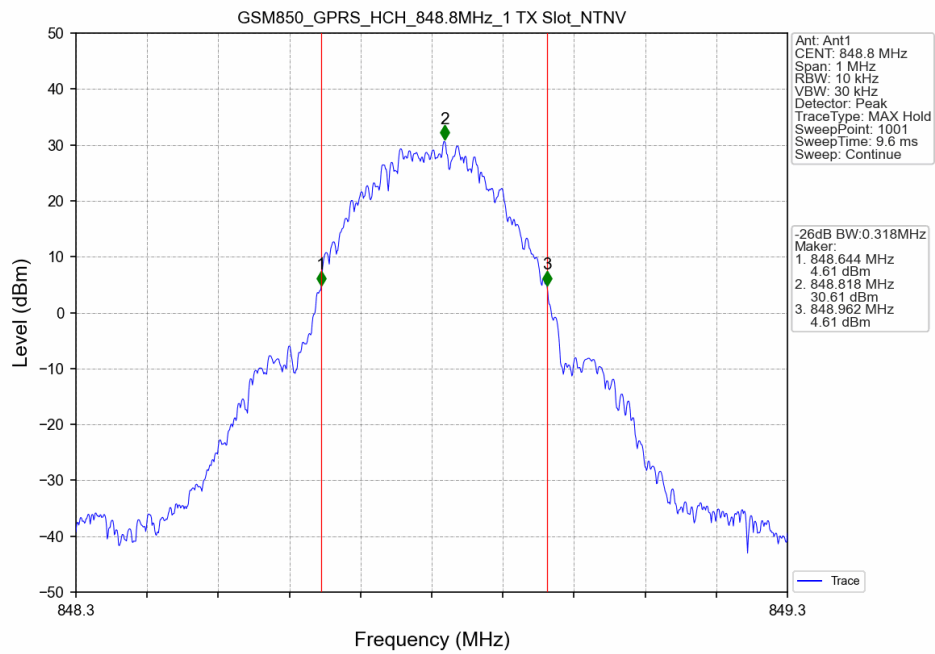
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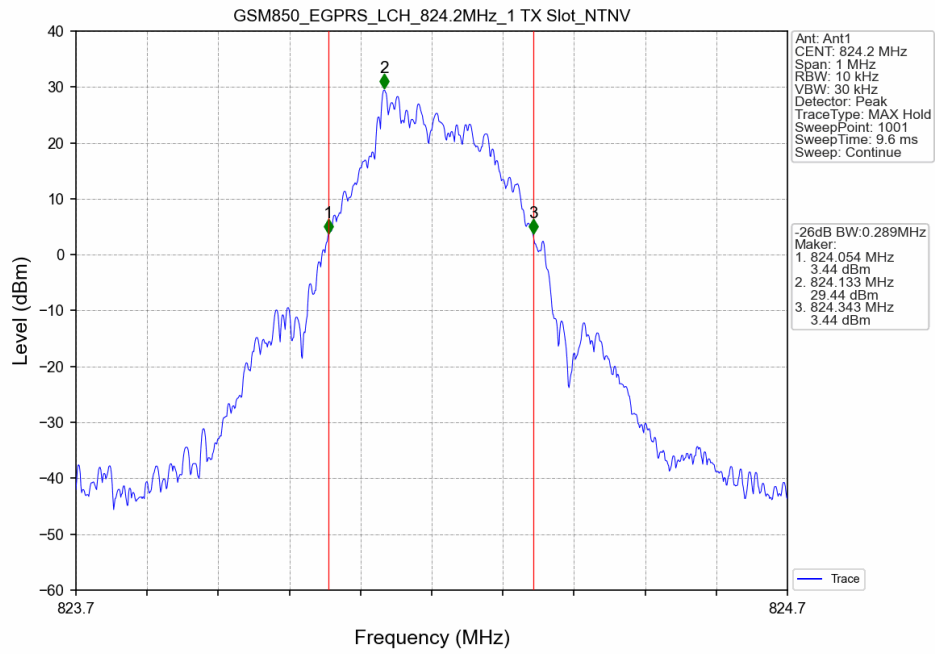
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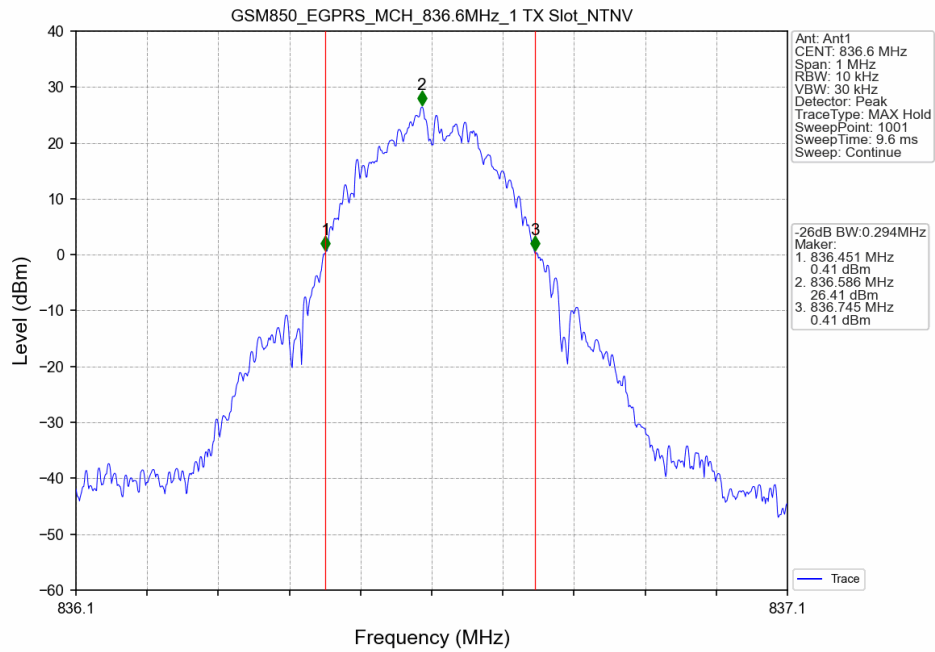
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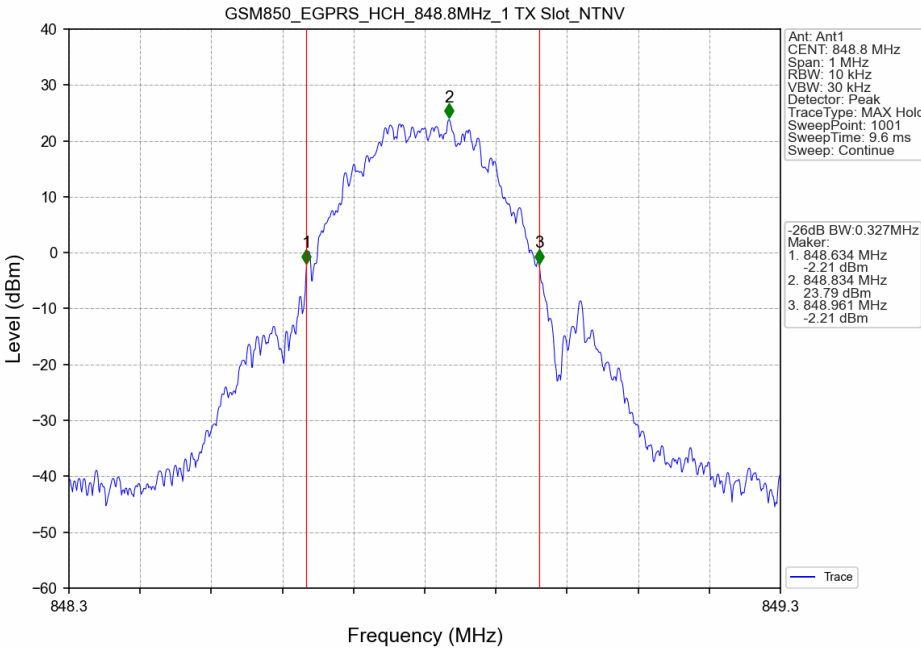
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GSM850_EGPRS_MCH_836.6MHz_1 TX Slot_NTNV



GSM850_EGPRS_HCH_848.8MHz_1 TX Slot_NTNV



4. Peak-Average Ratio

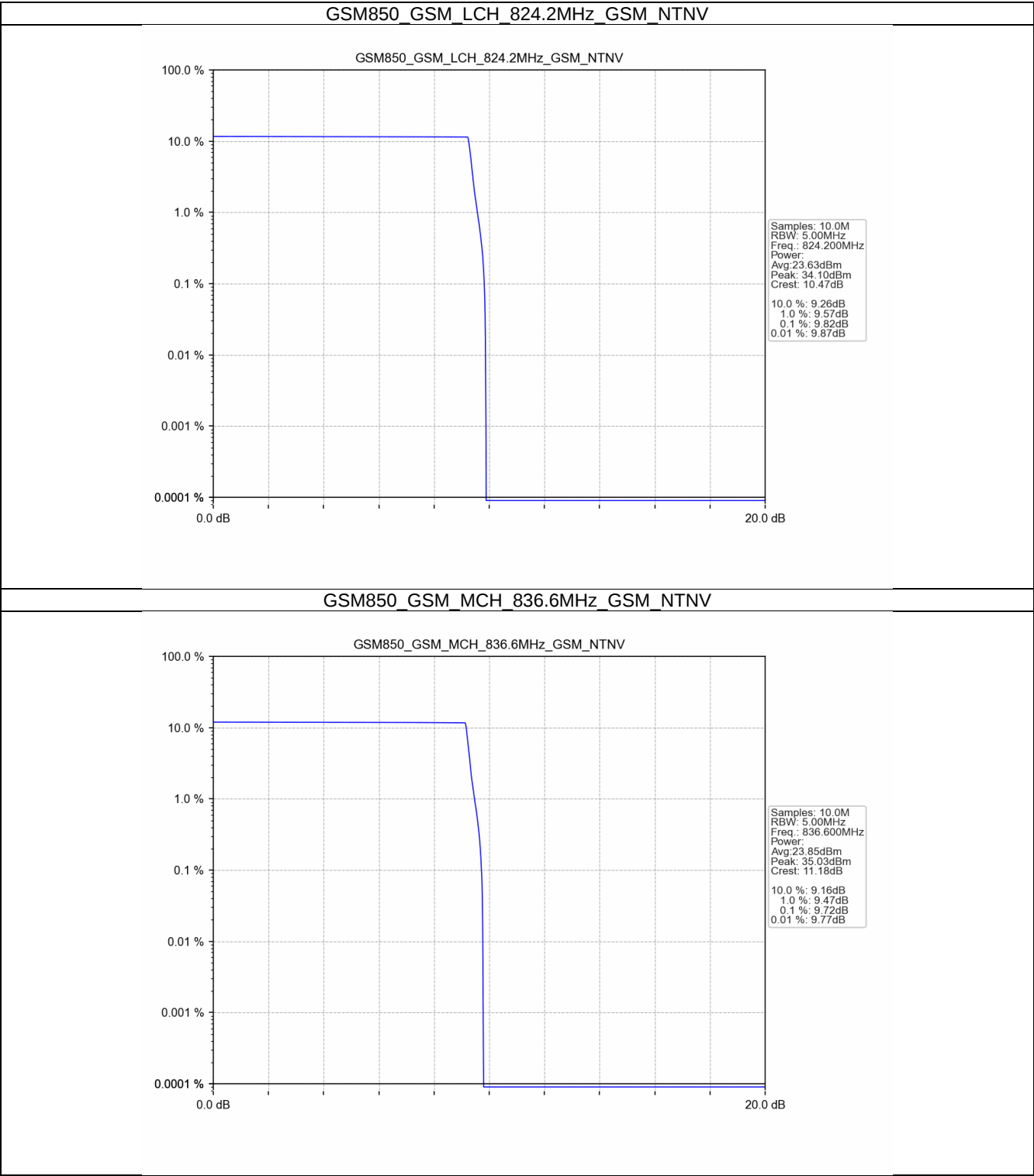
4.1 Test Result

4.1.1 GSM850

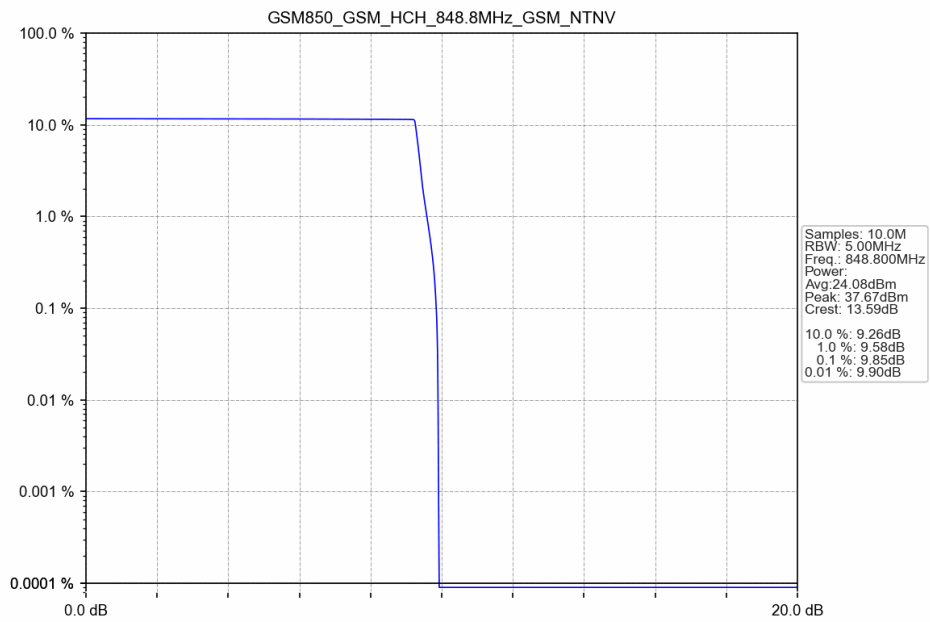
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ENV	Mode		Frequency (MHz)	Peak-Average Ratio (dB)		Verdict
	Network	Subset		Result	Limit	
NTNV	GSM	GSM	824.2	9.82	<=13	Pass
			836.6	9.72	<=13	Pass
			848.8	9.85	<=13	Pass
	GPRS	4 TX Slots	824.2	4.39	<=13	Pass
			836.6	4.39	<=13	Pass
			848.8	4.41	<=13	Pass
	EGPRS	4 TX Slots	824.2	9.80	<=13	Pass
			836.6	9.87	<=13	Pass
			848.8	9.95	<=13	Pass

4.2 Test Graph

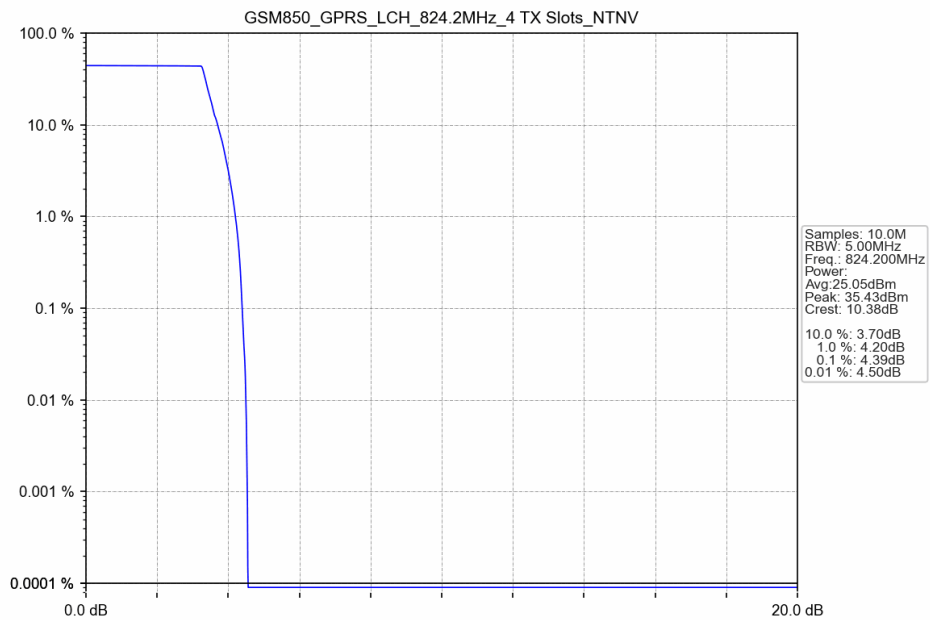
4.2.1 GSM850



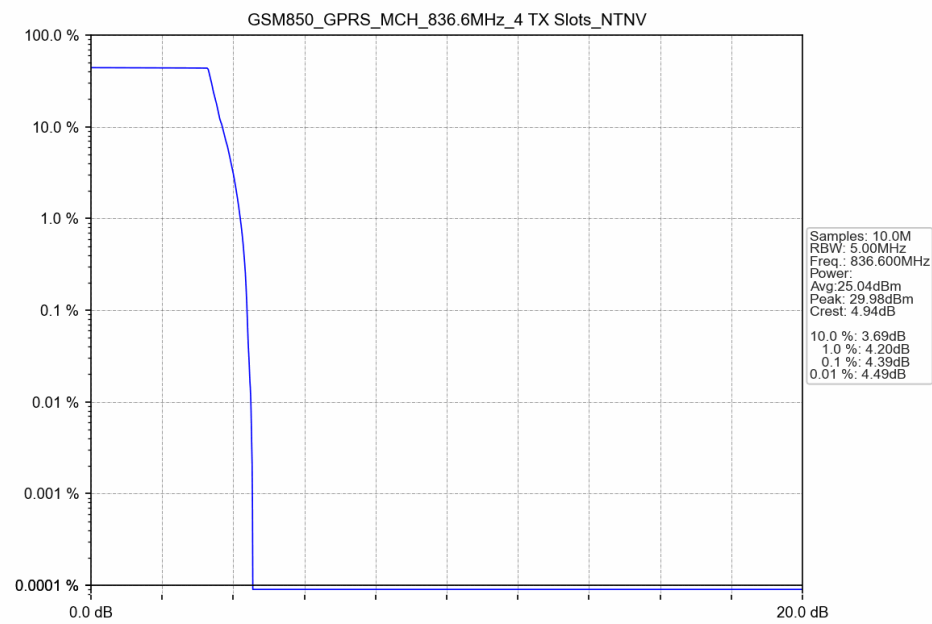
GSM850_GSM_HCH_848.8MHz_GSM_NTNV



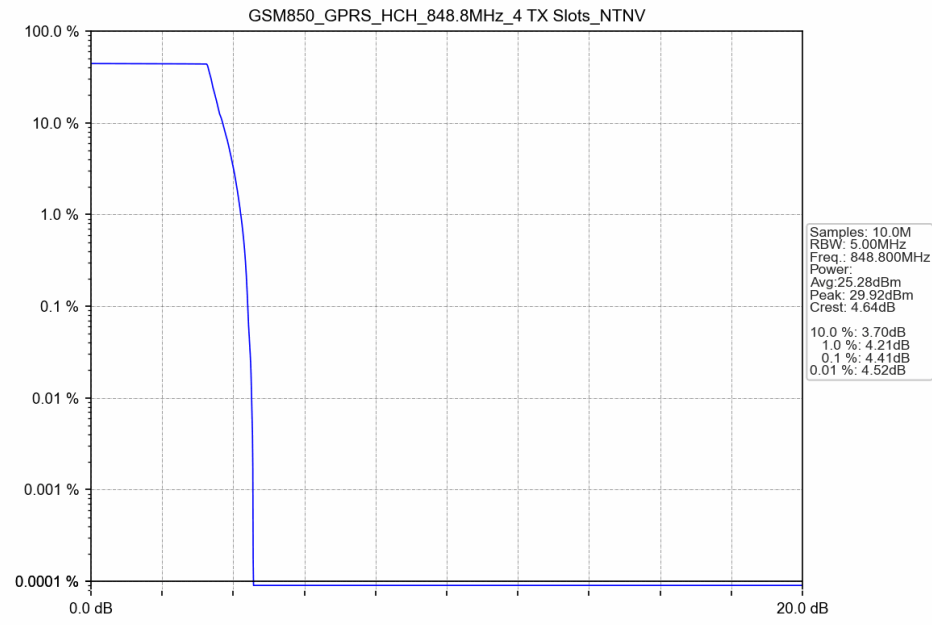
GSM850_GPRS_LCH_824.2MHz_4 TX Slots_NTNV



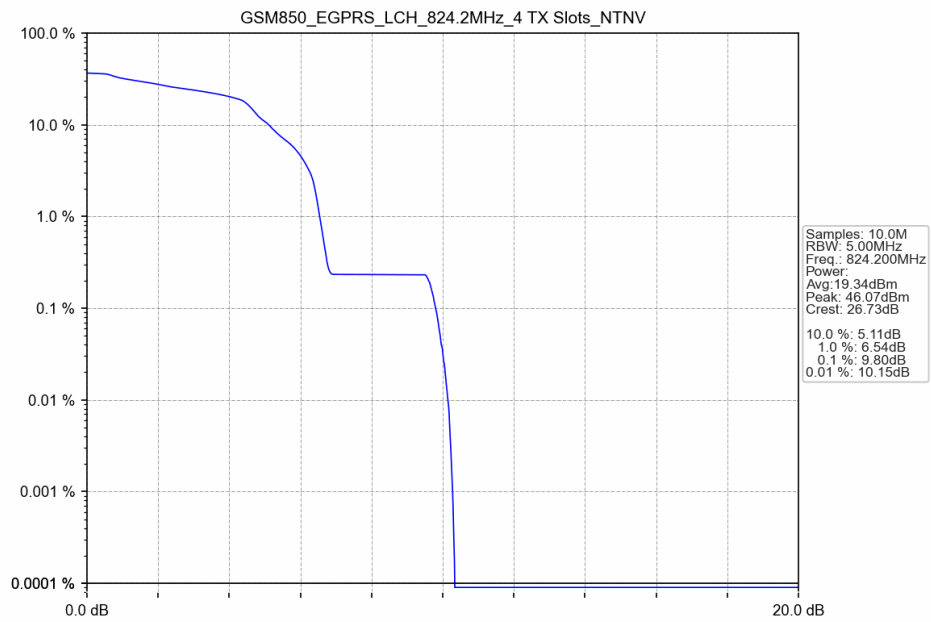
GSM850_GPRS_MCH_836.6MHz_4 TX Slots_NTNV



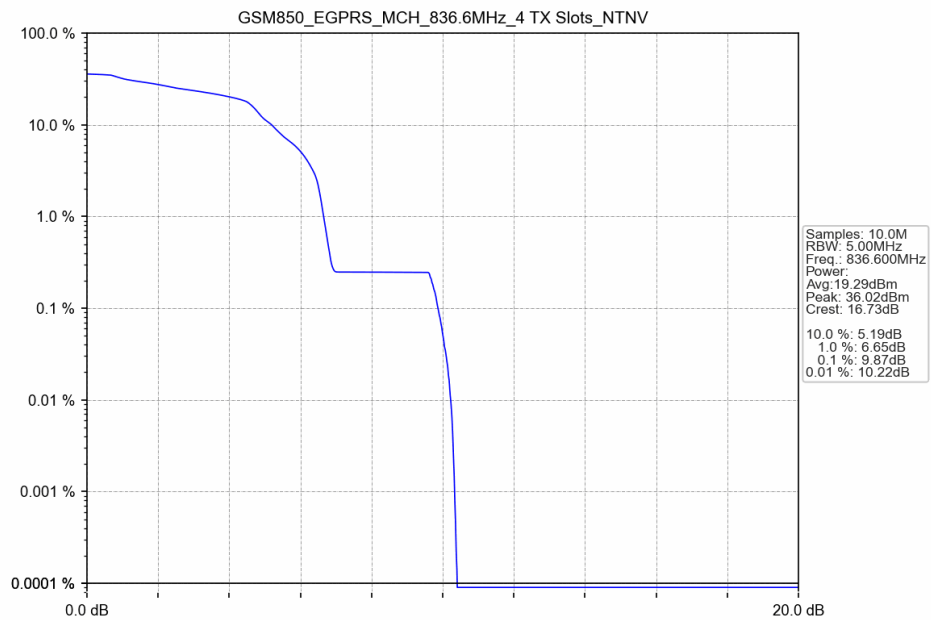
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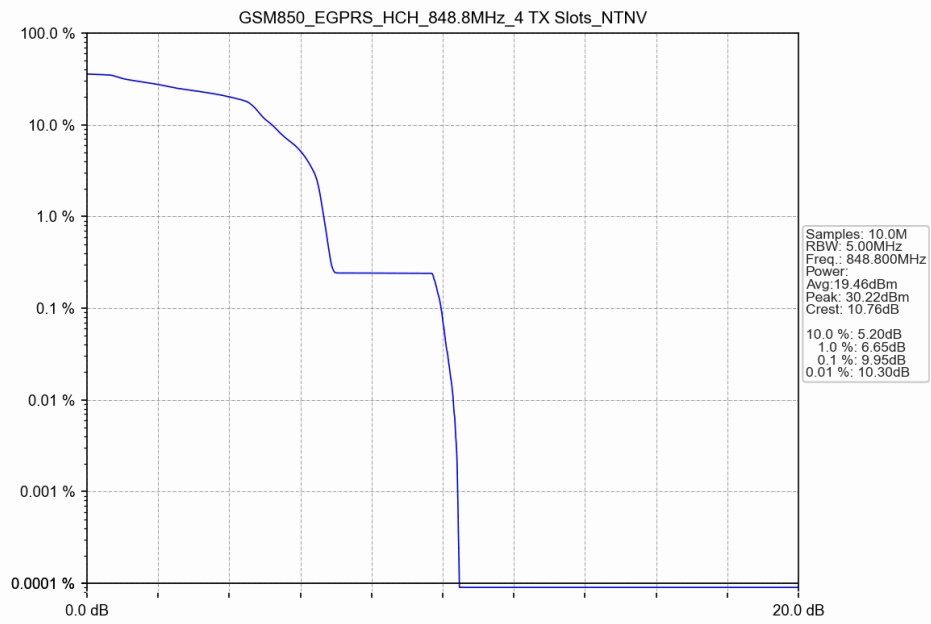
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GSM850_EGPRS_MCH_836.6MHz_4 TX Slots_NTNV



GSM850_EGPRS_HCH_848.8MHz_4 TX Slots_NTNV



5. Spurious Emission & Band Edges

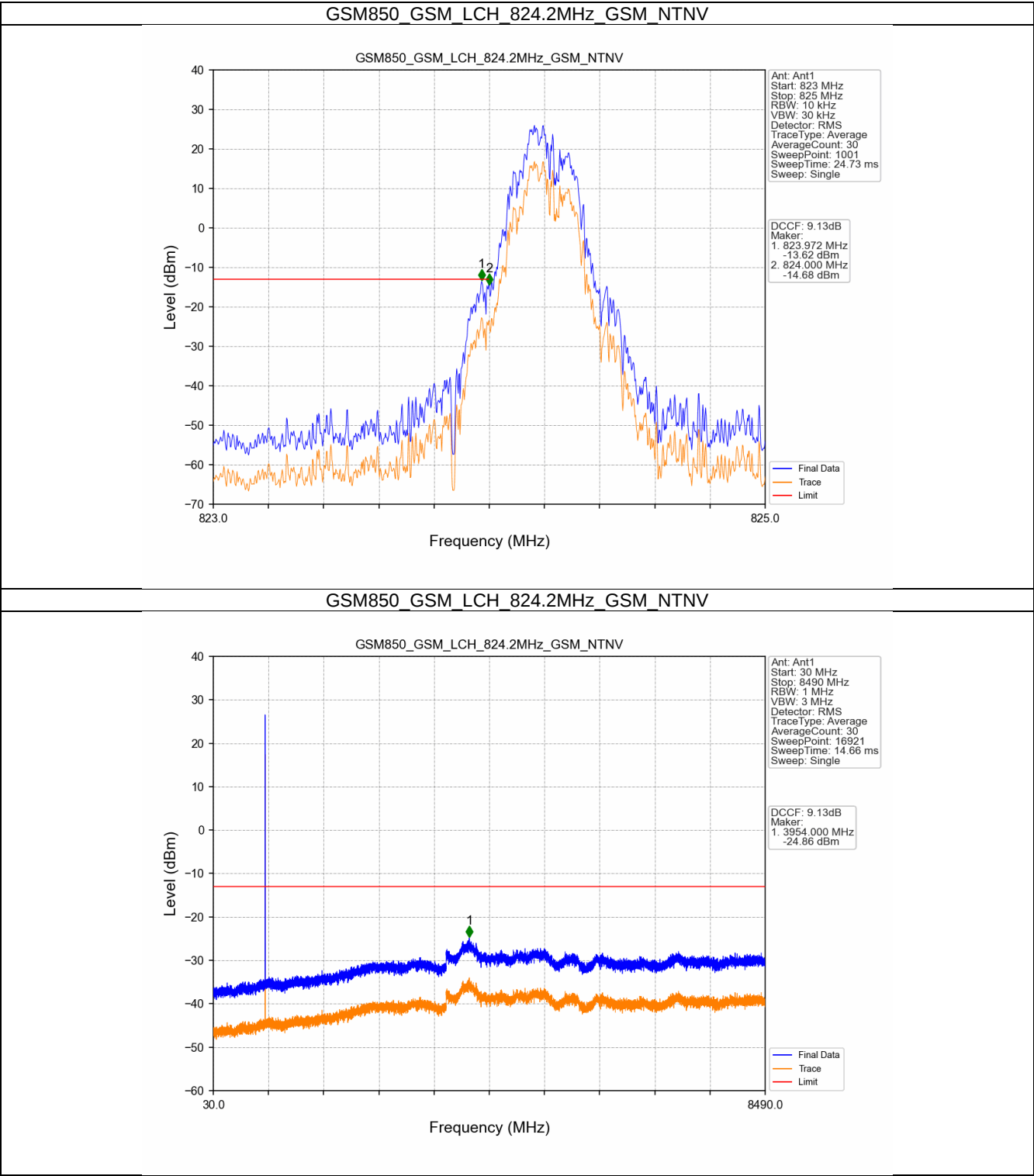
5.1 Test Result

5.1.1 GSM850

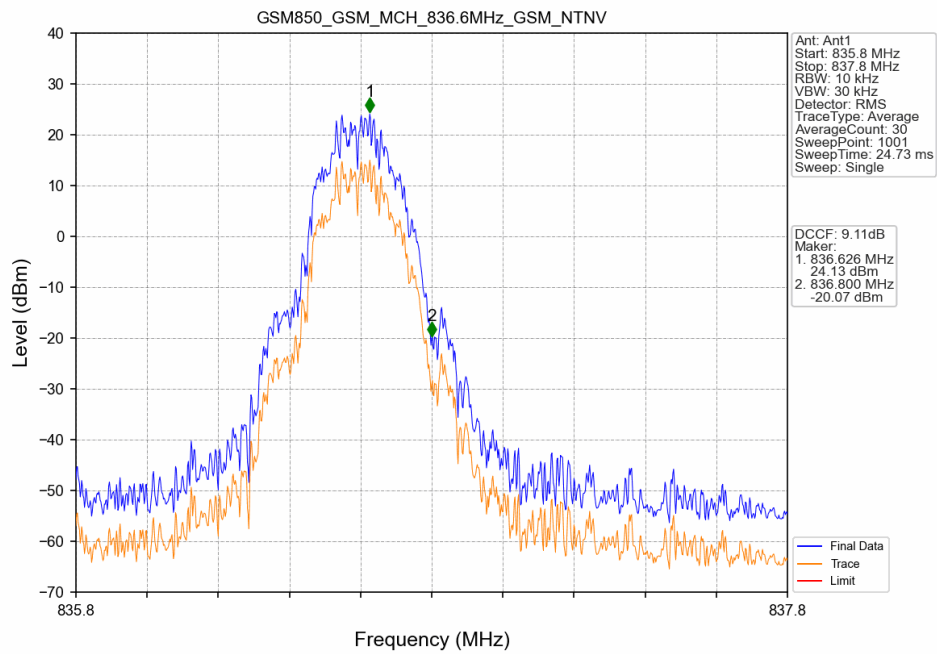
Band: GSM850						
ENV	Mode		Frequency (MHz)	Spurious Emission		Verdict
	Network	Subset		Result	Limit	
NTNV	GSM	GSM	824.2	Refer To Test Graph	Pass	
			836.6	Refer To Test Graph	Pass	
			848.8	Refer To Test Graph	Pass	
	GPRS	1 TX Slot	824.2	Refer To Test Graph	Pass	
			836.6	Refer To Test Graph	Pass	
			848.8	Refer To Test Graph	Pass	
	EGPRS	1 TX Slot	824.2	Refer To Test Graph	Pass	
			836.6	Refer To Test Graph	Pass	
			848.8	Refer To Test Graph	Pass	

5.2 Test Graph

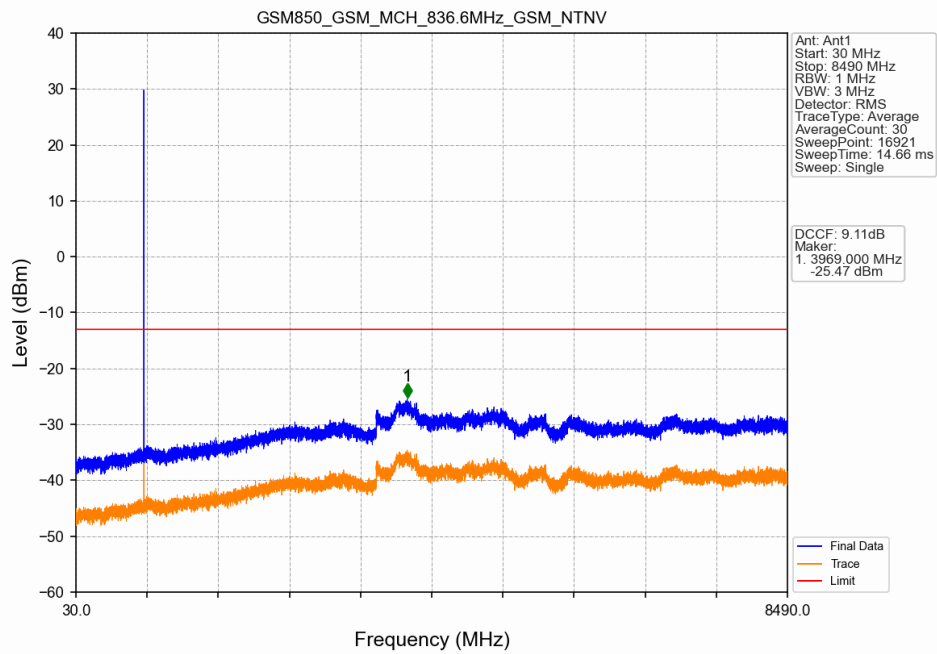
5.2.1 GSM850



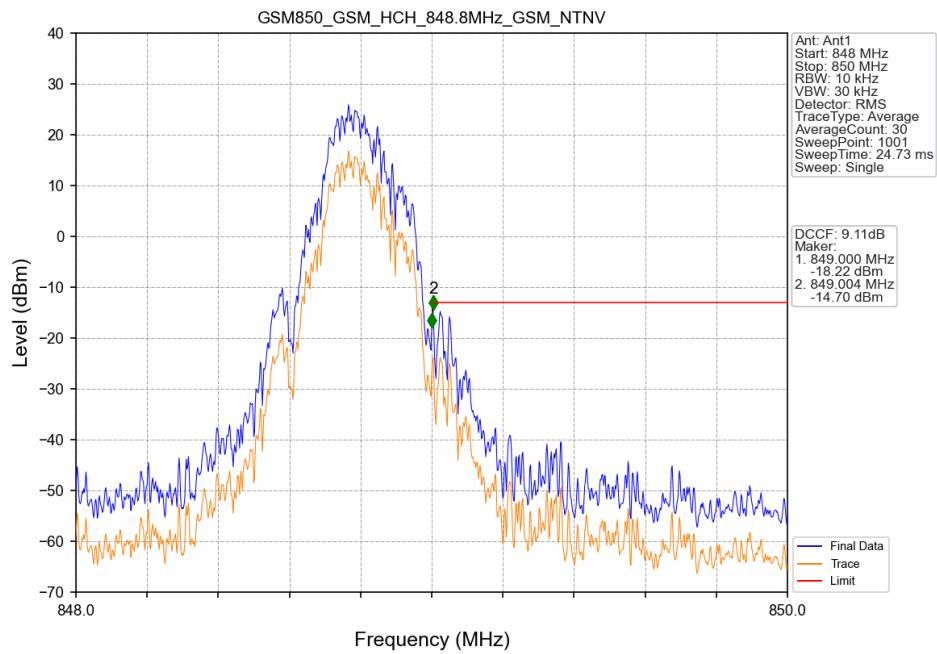
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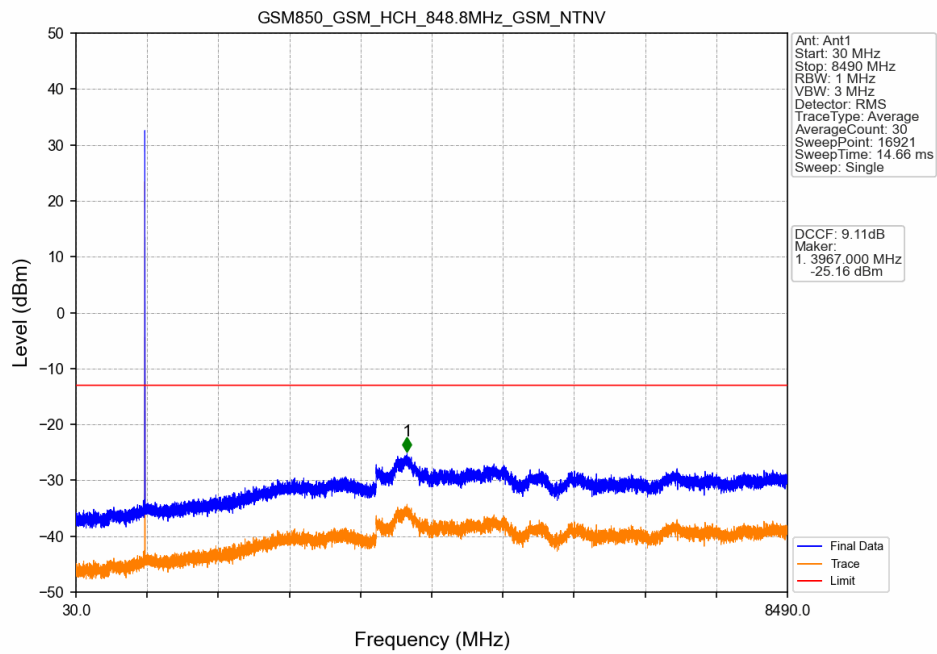
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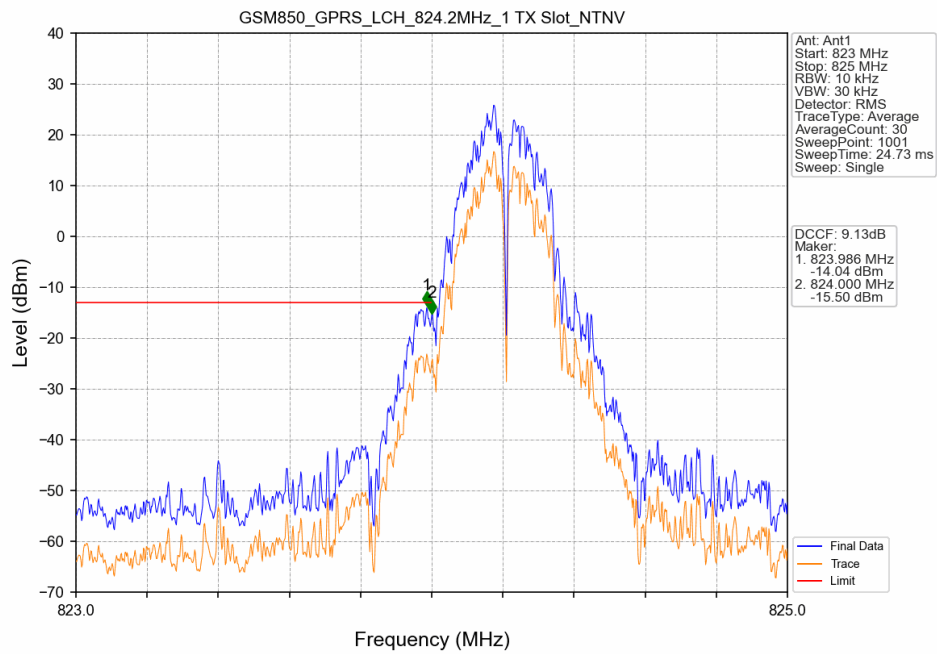
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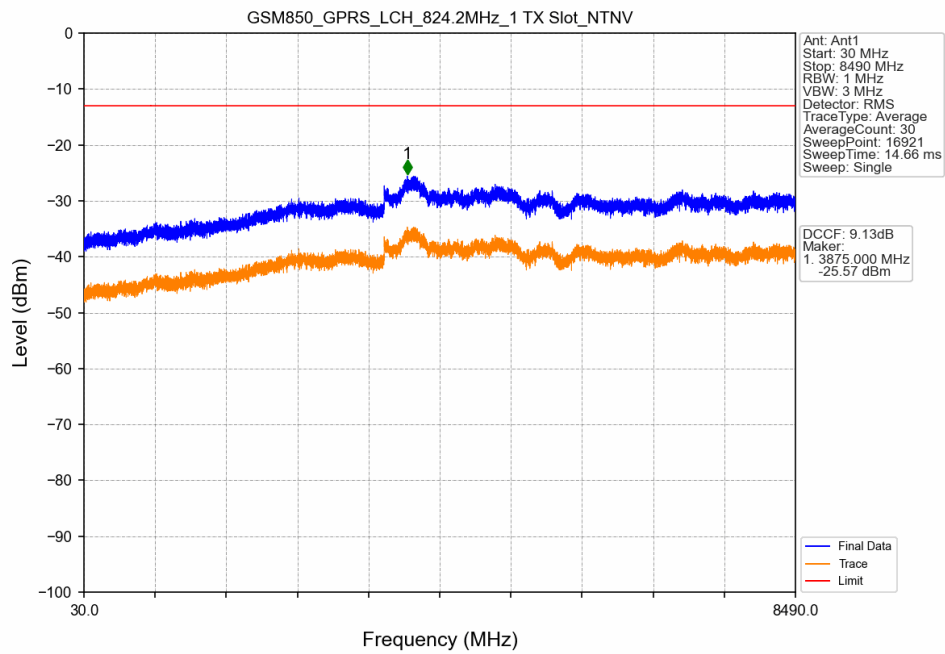
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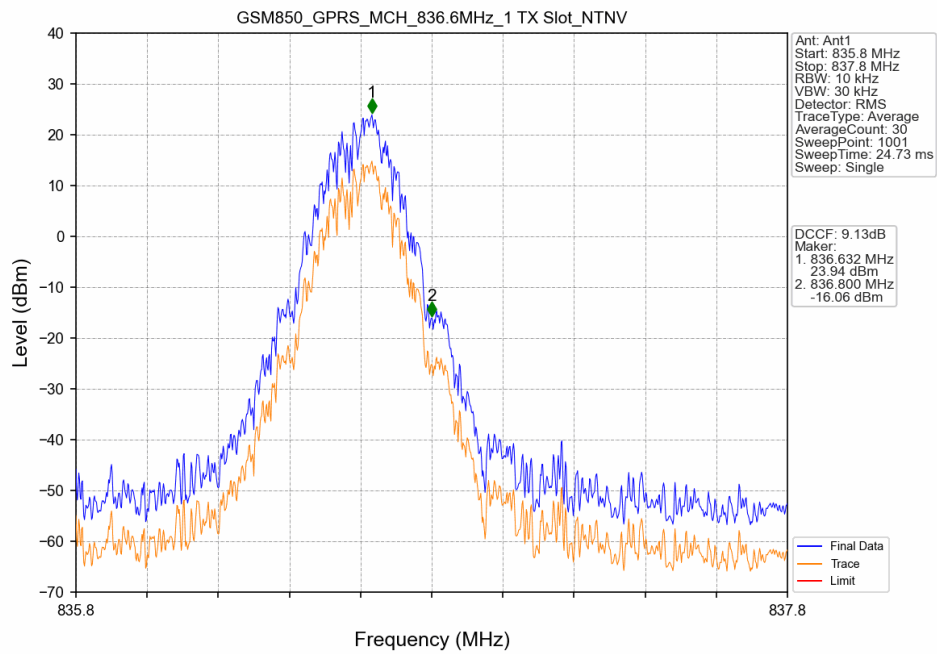
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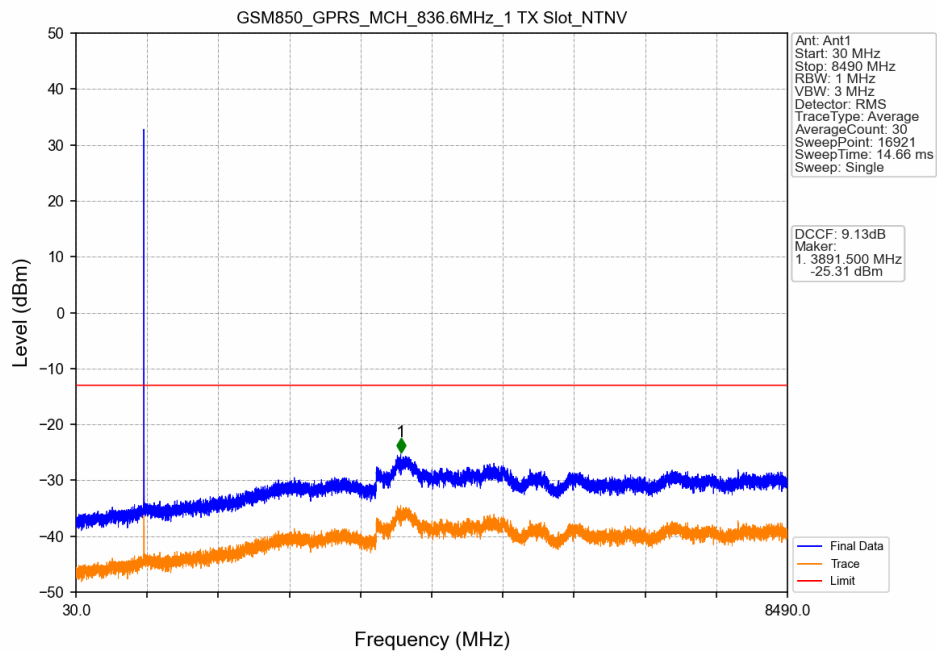
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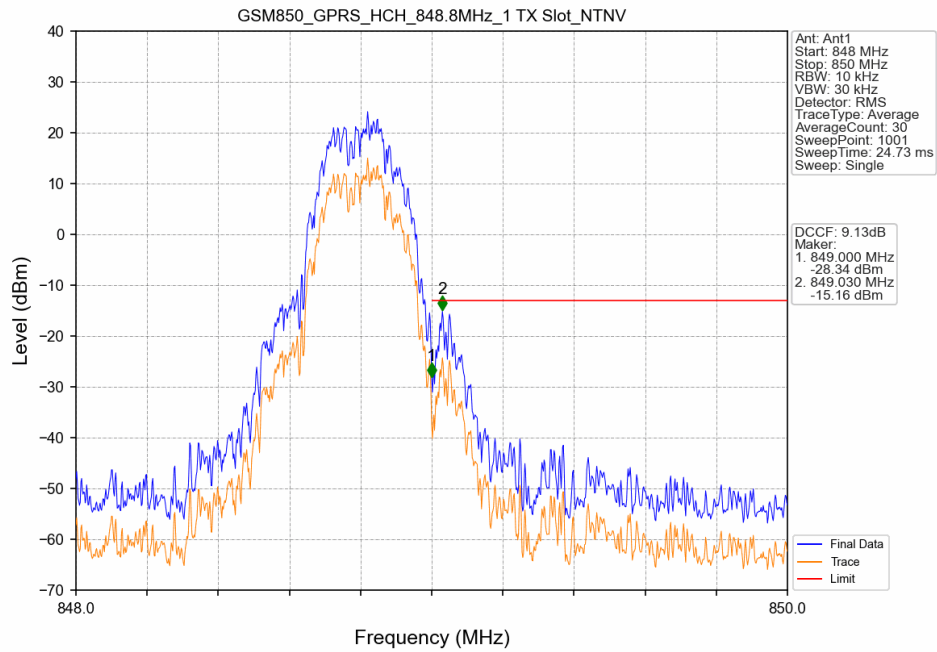
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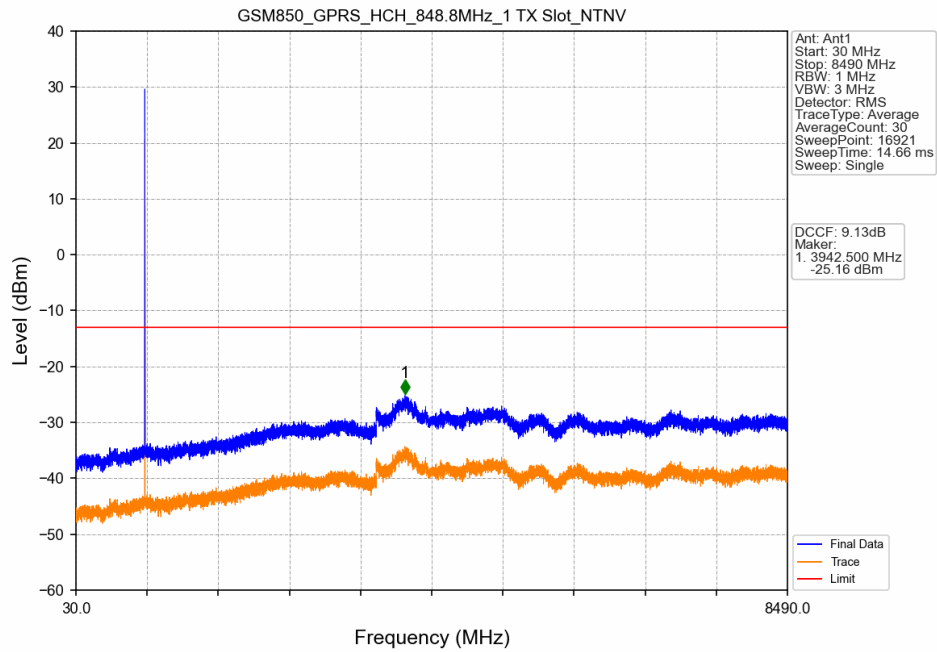
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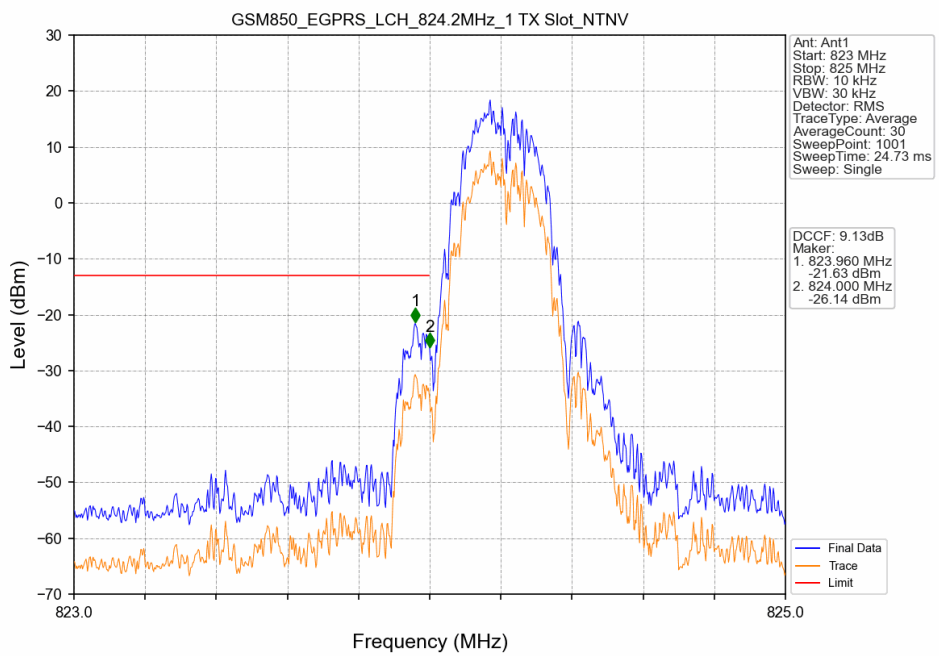
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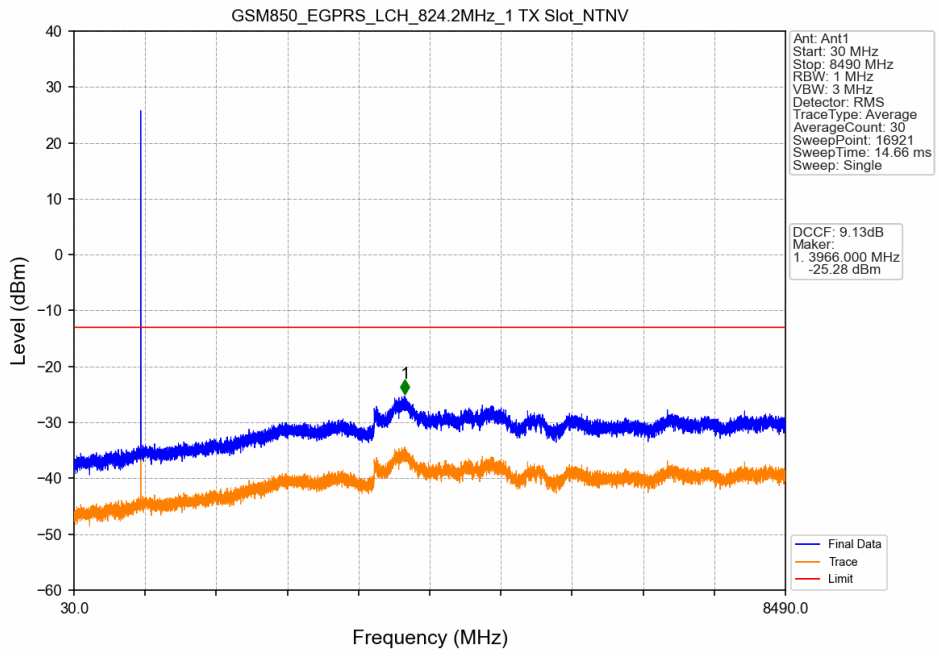
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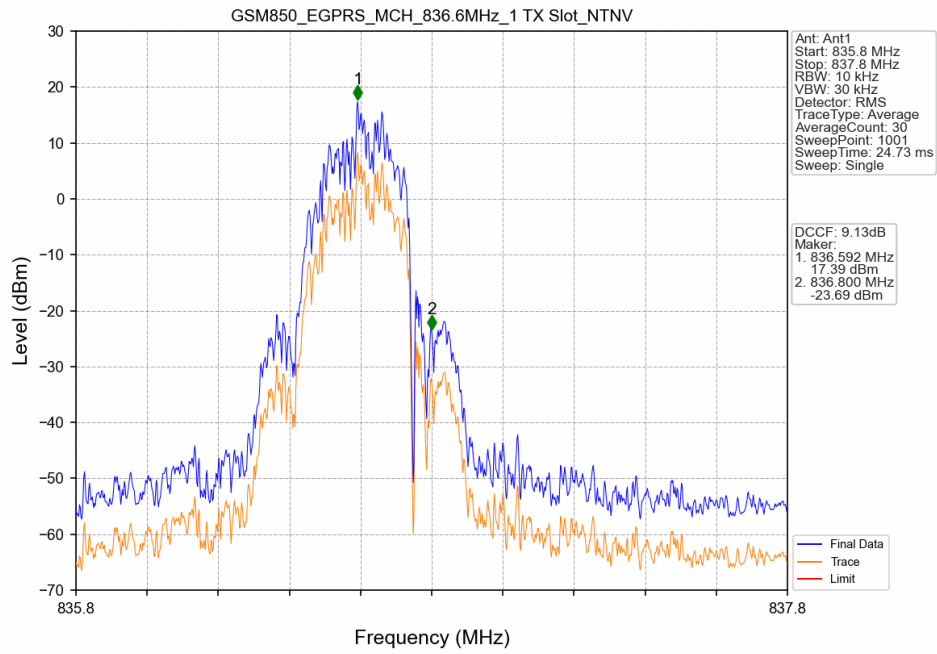
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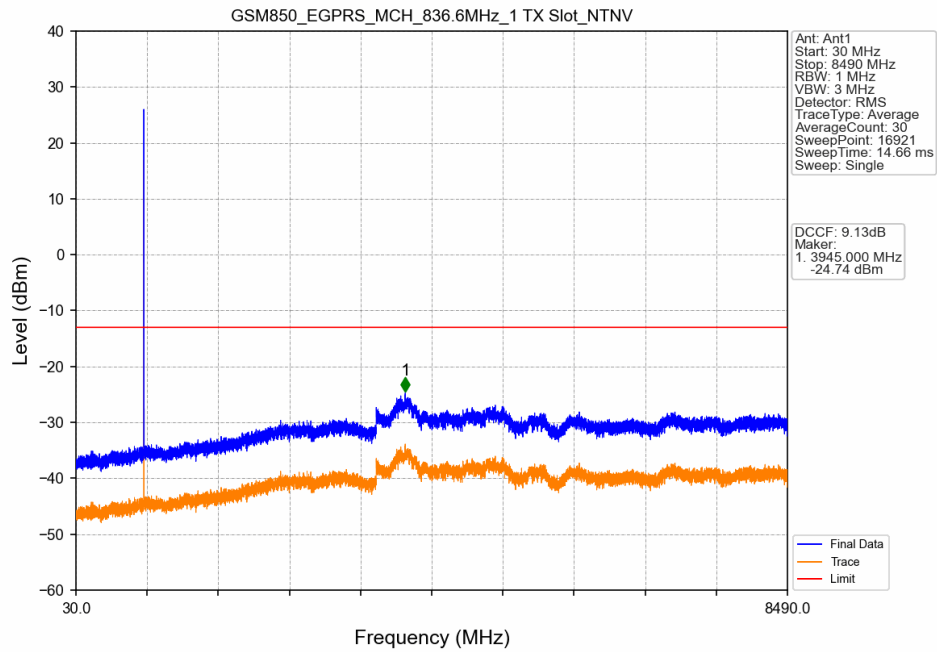
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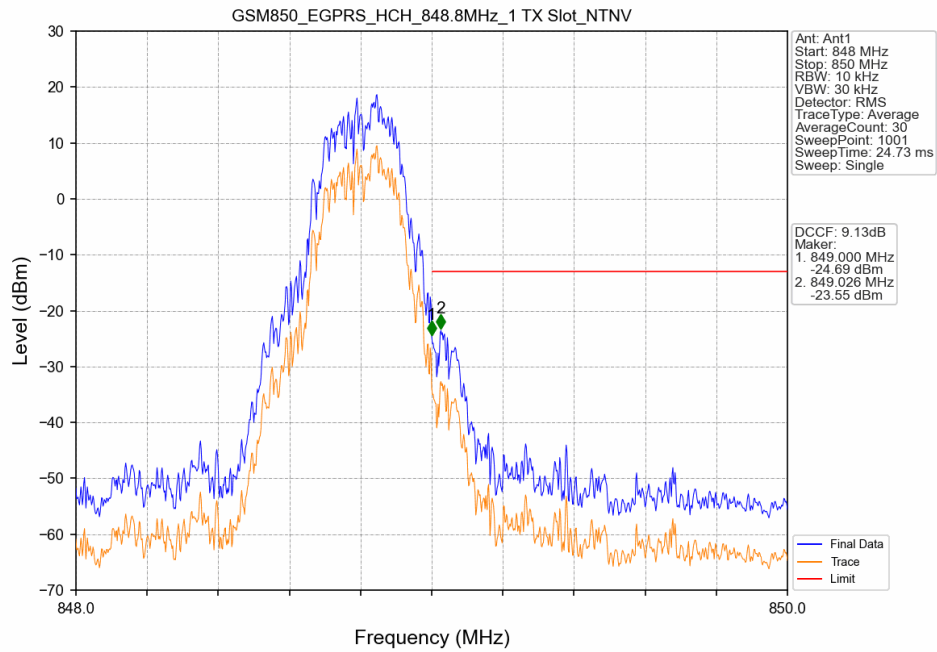
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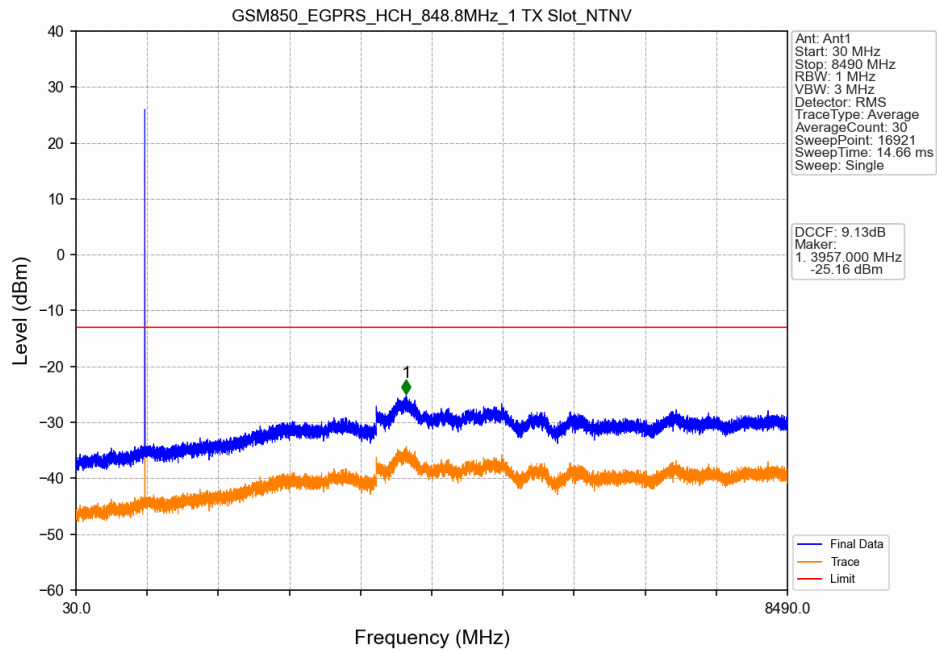
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GSM850_EGPRS_HCH_848.8MHz_1 TX Slot_NTNV



GSM850_EGPRS_HCH_848.8MHz_1 TX Slot_NTNV



6. Field Strength of Spurious Radiation

GSM850-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
1652.8	-44.78	-13	-31.78	-47.65	2.62	5.49	Horizontal	Pass
2479.2	-57.96	-13	-44.96	-60.66	3.07	5.77	Horizontal	Pass
3305.6	-56.58	-13	-43.58	-60.96	3.3	7.68	Horizontal	Pass
1652.8	-48.55	-13	-35.55	-51.42	2.62	5.49	Vertical	Pass
2479.2	-51.76	-13	-38.76	-54.46	3.07	5.77	Vertical	Pass
3305.6	-54.53	-13	-41.53	-58.91	3.3	7.68	Vertical	Pass

GSM850-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
1672.8	-38.14	-13	-25.14	-40.95	2.63	5.44	Horizontal	Pass
2509.2	-48.11	-13	-35.11	-50.87	3.08	5.84	Horizontal	Pass
3345.6	-51.55	-13	-38.55	-56.01	3.32	7.78	Horizontal	Pass
1672.8	-48.97	-13	-35.97	-51.78	2.63	5.44	Vertical	Pass
2509.2	-51.33	-13	-38.33	-54.09	3.08	5.84	Vertical	Pass
3345.6	-51.16	-13	-38.16	-55.62	3.32	7.78	Vertical	Pass

GSM850-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
1697.6	-44.04	-13	-31.04	-46.78	2.64	5.38	Horizontal	Pass
2546.4	-47.71	-13	-34.71	-50.54	3.09	5.92	Horizontal	Pass
3395.2	-53.08	-13	-40.08	-57.64	3.35	7.91	Horizontal	Pass
1697.6	-52.64	-13	-39.64	-55.38	2.64	5.38	Vertical	Pass
2546.4	-51.72	-13	-38.72	-54.55	3.09	5.92	Vertical	Pass
3395.2	-50.55	-13	-37.55	-55.11	3.35	7.91	Vertical	Pass

---End of Attachment---