

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	32.93	-0.71	30.07	<=38.45	Pass
			836.6	33.06	-0.71	30.20	<=38.45	Pass
			848.8	33.08	-0.71	30.22	<=38.45	Pass
	GPRS	1 TX Slot	824.2	32.95	-0.71	30.09	<=38.45	Pass
		2 TX Slots	824.2	32.19	-0.71	29.33	<=38.45	Pass
		3 TX Slots	824.2	30.40	-0.71	27.54	<=38.45	Pass
		4 TX Slots	824.2	29.24	-0.71	26.38	<=38.45	Pass
		1 TX Slot	836.6	33.03	-0.71	30.17	<=38.45	Pass
		2 TX Slots	836.6	32.29	-0.71	29.43	<=38.45	Pass
		3 TX Slots	836.6	30.52	-0.71	27.66	<=38.45	Pass
		4 TX Slots	836.6	29.37	-0.71	26.51	<=38.45	Pass
		1 TX Slot	848.8	33.03	-0.71	30.17	<=38.45	Pass
		2 TX Slots	848.8	32.30	-0.71	29.44	<=38.45	Pass
		3 TX Slots	848.8	30.52	-0.71	27.66	<=38.45	Pass
		4 TX Slots	848.8	29.37	-0.71	26.51	<=38.45	Pass
	EGPRS	1 TX Slot	824.2	25.87	-0.71	23.01	<=38.45	Pass
		2 TX Slots	824.2	24.57	-0.71	21.71	<=38.45	Pass
		3 TX Slots	824.2	22.30	-0.71	19.44	<=38.45	Pass
		4 TX Slots	824.2	20.70	-0.71	17.84	<=38.45	Pass
		1 TX Slot	836.6	25.65	-0.71	22.79	<=38.45	Pass
		2 TX Slots	836.6	24.56	-0.71	21.70	<=38.45	Pass
		3 TX Slots	836.6	22.11	-0.71	19.25	<=38.45	Pass
		4 TX Slots	836.6	20.83	-0.71	17.97	<=38.45	Pass
		1 TX Slot	848.8	25.45	-0.71	22.59	<=38.45	Pass
		2 TX Slots	848.8	24.40	-0.71	21.54	<=38.45	Pass
		3 TX Slots	848.8	22.10	-0.71	19.24	<=38.45	Pass
		4 TX Slots	848.8	20.50	-0.71	17.64	<=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	3.27	-11.623	-0.0141	-2.5 to 2.5	Pass
			3.85	-9.234	-0.0112	-2.5 to 2.5	Pass
			4.43	-6.070	-0.0074	-2.5 to 2.5	Pass
		-30	3.85	-10.009	-0.0121	-2.5 to 2.5	Pass
		-20	3.85	-5.133	-0.0062	-2.5 to 2.5	Pass
		-10	3.85	-8.394	-0.0102	-2.5 to 2.5	Pass
		0	3.85	-6.425	-0.0078	-2.5 to 2.5	Pass
		10	3.85	-6.489	-0.0079	-2.5 to 2.5	Pass

		30	3.85	-8.427	-0.0102	-2.5 to 2.5	Pass
		40	3.85	-6.974	-0.0085	-2.5 to 2.5	Pass
		50	3.85	-9.298	-0.0113	-2.5 to 2.5	Pass
	836.6	20	3.27	-8.749	-0.0105	-2.5 to 2.5	Pass
			3.85	-5.166	-0.0062	-2.5 to 2.5	Pass
			4.43	-6.360	-0.0076	-2.5 to 2.5	Pass
		-30	3.85	-7.652	-0.0091	-2.5 to 2.5	Pass
		-20	3.85	-8.297	-0.0099	-2.5 to 2.5	Pass
		-10	3.85	-8.814	-0.0105	-2.5 to 2.5	Pass
		0	3.85	-9.201	-0.0110	-2.5 to 2.5	Pass
		10	3.85	-9.266	-0.0111	-2.5 to 2.5	Pass
		30	3.85	-7.103	-0.0085	-2.5 to 2.5	Pass
		40	3.85	-8.104	-0.0097	-2.5 to 2.5	Pass
		50	3.85	-12.495	-0.0149	-2.5 to 2.5	Pass
	848.8	20	3.27	-9.137	-0.0108	-2.5 to 2.5	Pass
			3.85	-9.524	-0.0112	-2.5 to 2.5	Pass
			4.43	-9.298	-0.0110	-2.5 to 2.5	Pass
		-30	3.85	-6.683	-0.0079	-2.5 to 2.5	Pass
		-20	3.85	-5.941	-0.0070	-2.5 to 2.5	Pass
		-10	3.85	-10.235	-0.0121	-2.5 to 2.5	Pass
		0	3.85	-9.072	-0.0107	-2.5 to 2.5	Pass
		10	3.85	-8.007	-0.0094	-2.5 to 2.5	Pass
		30	3.85	-6.425	-0.0076	-2.5 to 2.5	Pass
		40	3.85	-9.912	-0.0117	-2.5 to 2.5	Pass
		50	3.85	-12.462	-0.0147	-2.5 to 2.5	Pass
GPRS	824.2	20	3.27	-7.458	-0.0090	-2.5 to 2.5	Pass
			3.85	-6.941	-0.0084	-2.5 to 2.5	Pass
			4.43	-10.719	-0.0130	-2.5 to 2.5	Pass
		-30	3.85	-8.071	-0.0098	-2.5 to 2.5	Pass
		-20	3.85	-6.974	-0.0085	-2.5 to 2.5	Pass
		-10	3.85	-9.847	-0.0119	-2.5 to 2.5	Pass
		0	3.85	-8.136	-0.0099	-2.5 to 2.5	Pass
		10	3.85	-9.395	-0.0114	-2.5 to 2.5	Pass
		30	3.85	-11.009	-0.0134	-2.5 to 2.5	Pass
		40	3.85	-8.846	-0.0107	-2.5 to 2.5	Pass
		50	3.85	-10.396	-0.0126	-2.5 to 2.5	Pass
	836.6	20	3.27	-6.877	-0.0082	-2.5 to 2.5	Pass
			3.85	-5.618	-0.0067	-2.5 to 2.5	Pass
			4.43	-7.426	-0.0089	-2.5 to 2.5	Pass
		-30	3.85	-10.170	-0.0122	-2.5 to 2.5	Pass
		-20	3.85	-9.589	-0.0115	-2.5 to 2.5	Pass
		-10	3.85	-7.587	-0.0091	-2.5 to 2.5	Pass
		0	3.85	-10.170	-0.0122	-2.5 to 2.5	Pass
		10	3.85	-9.105	-0.0109	-2.5 to 2.5	Pass
		30	3.85	-10.654	-0.0127	-2.5 to 2.5	Pass
		40	3.85	-12.204	-0.0146	-2.5 to 2.5	Pass
		50	3.85	-16.724	-0.0200	-2.5 to 2.5	Pass
	848.8	20	3.27	-6.619	-0.0078	-2.5 to 2.5	Pass
			3.85	-7.071	-0.0083	-2.5 to 2.5	Pass
			4.43	-6.393	-0.0075	-2.5 to 2.5	Pass
		-30	3.85	-6.909	-0.0081	-2.5 to 2.5	Pass
		-20	3.85	-8.588	-0.0101	-2.5 to 2.5	Pass
		-10	3.85	-13.786	-0.0162	-2.5 to 2.5	Pass
		0	3.85	-8.523	-0.0100	-2.5 to 2.5	Pass
		10	3.85	-9.169	-0.0108	-2.5 to 2.5	Pass
		30	3.85	-8.427	-0.0099	-2.5 to 2.5	Pass
		40	3.85	-11.397	-0.0134	-2.5 to 2.5	Pass
		50	3.85	-12.075	-0.0142	-2.5 to 2.5	Pass
EGPRS	824.2	20	3.27	-2.260	-0.0027	-2.5 to 2.5	Pass

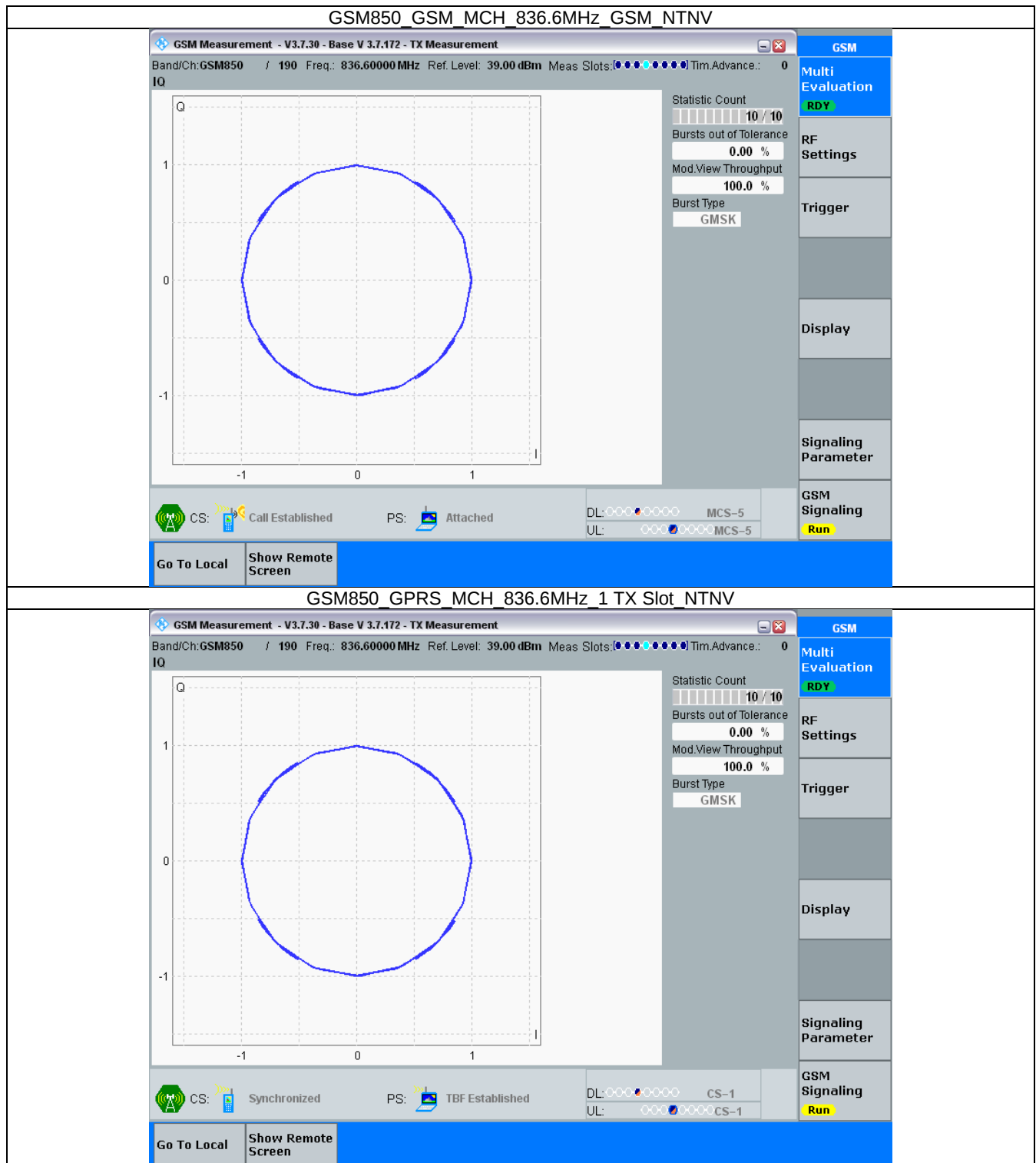
			3.85	-7.200	-0.0087	-2.5 to 2.5	Pass
			4.43	-3.487	-0.0042	-2.5 to 2.5	Pass
		-30	3.85	-5.359	-0.0065	-2.5 to 2.5	Pass
		-20	3.85	-6.683	-0.0081	-2.5 to 2.5	Pass
		-10	3.85	-4.455	-0.0054	-2.5 to 2.5	Pass
		0	3.85	-2.389	-0.0029	-2.5 to 2.5	Pass
		10	3.85	-5.004	-0.0061	-2.5 to 2.5	Pass
		30	3.85	-5.876	-0.0071	-2.5 to 2.5	Pass
		40	3.85	-2.518	-0.0031	-2.5 to 2.5	Pass
		50	3.85	-4.585	-0.0056	-2.5 to 2.5	Pass
	836.6	20	3.27	-4.229	-0.0051	-2.5 to 2.5	Pass
			3.85	-6.134	-0.0073	-2.5 to 2.5	Pass
			4.43	-3.293	-0.0039	-2.5 to 2.5	Pass
		-30	3.85	-2.034	-0.0024	-2.5 to 2.5	Pass
		-20	3.85	-7.135	-0.0085	-2.5 to 2.5	Pass
		-10	3.85	-5.489	-0.0066	-2.5 to 2.5	Pass
		0	3.85	-4.907	-0.0059	-2.5 to 2.5	Pass
		10	3.85	-4.746	-0.0057	-2.5 to 2.5	Pass
		30	3.85	-4.165	-0.0050	-2.5 to 2.5	Pass
		40	3.85	-4.003	-0.0048	-2.5 to 2.5	Pass
		50	3.85	-4.778	-0.0057	-2.5 to 2.5	Pass
	848.8	20	3.27	-5.650	-0.0067	-2.5 to 2.5	Pass
			3.85	-6.134	-0.0072	-2.5 to 2.5	Pass
			4.43	-7.103	-0.0084	-2.5 to 2.5	Pass
		-30	3.85	-6.263	-0.0074	-2.5 to 2.5	Pass
		-20	3.85	-4.520	-0.0053	-2.5 to 2.5	Pass
		-10	3.85	-3.067	-0.0036	-2.5 to 2.5	Pass
		0	3.85	-4.229	-0.0050	-2.5 to 2.5	Pass
		10	3.85	-5.973	-0.0070	-2.5 to 2.5	Pass
		30	3.85	-5.844	-0.0069	-2.5 to 2.5	Pass
		40	3.85	-4.326	-0.0051	-2.5 to 2.5	Pass
		50	3.85	-4.229	-0.0050	-2.5 to 2.5	Pass

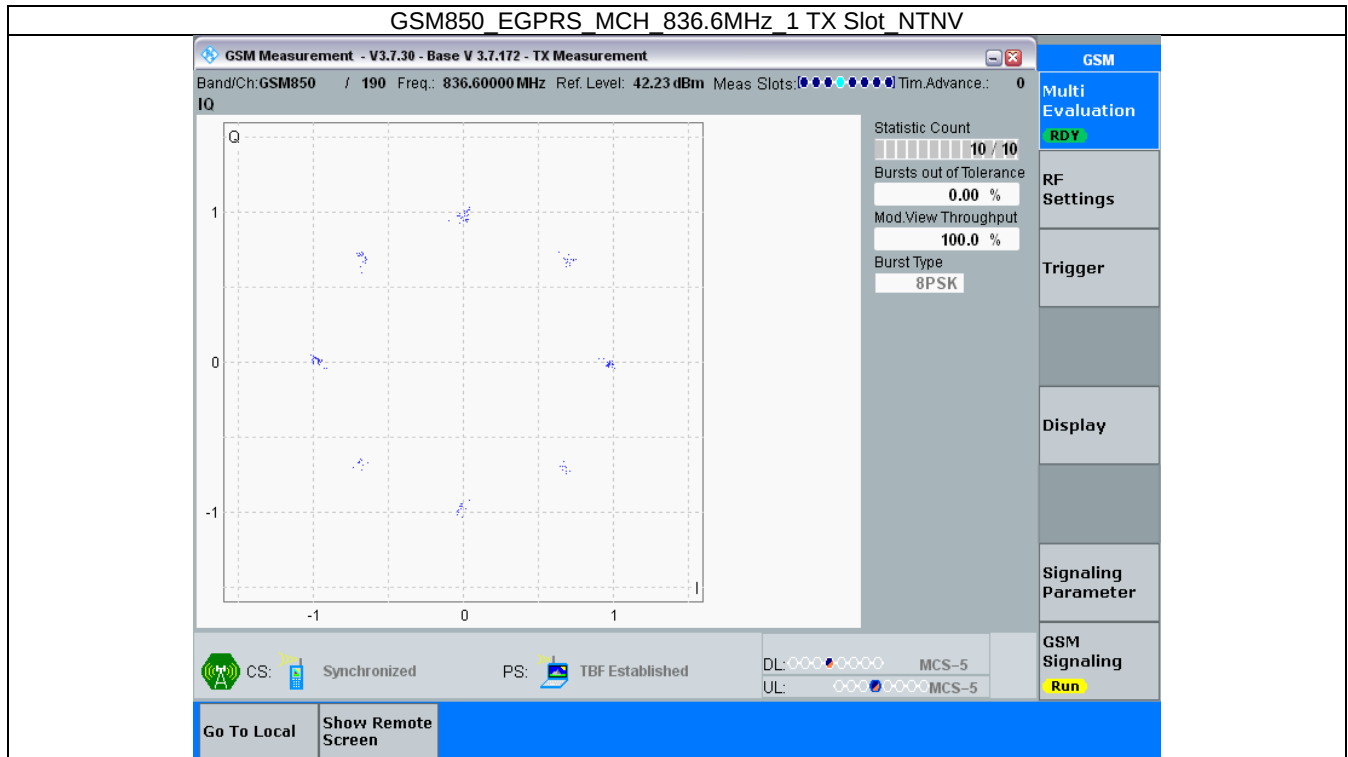
3. Modulation Characteristics

3.1 Test Result

3.1.1 GSM850

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





4. 99% & 26dB Bandwidth

4.1 Test Result

4.1.1 GSM850_OBW

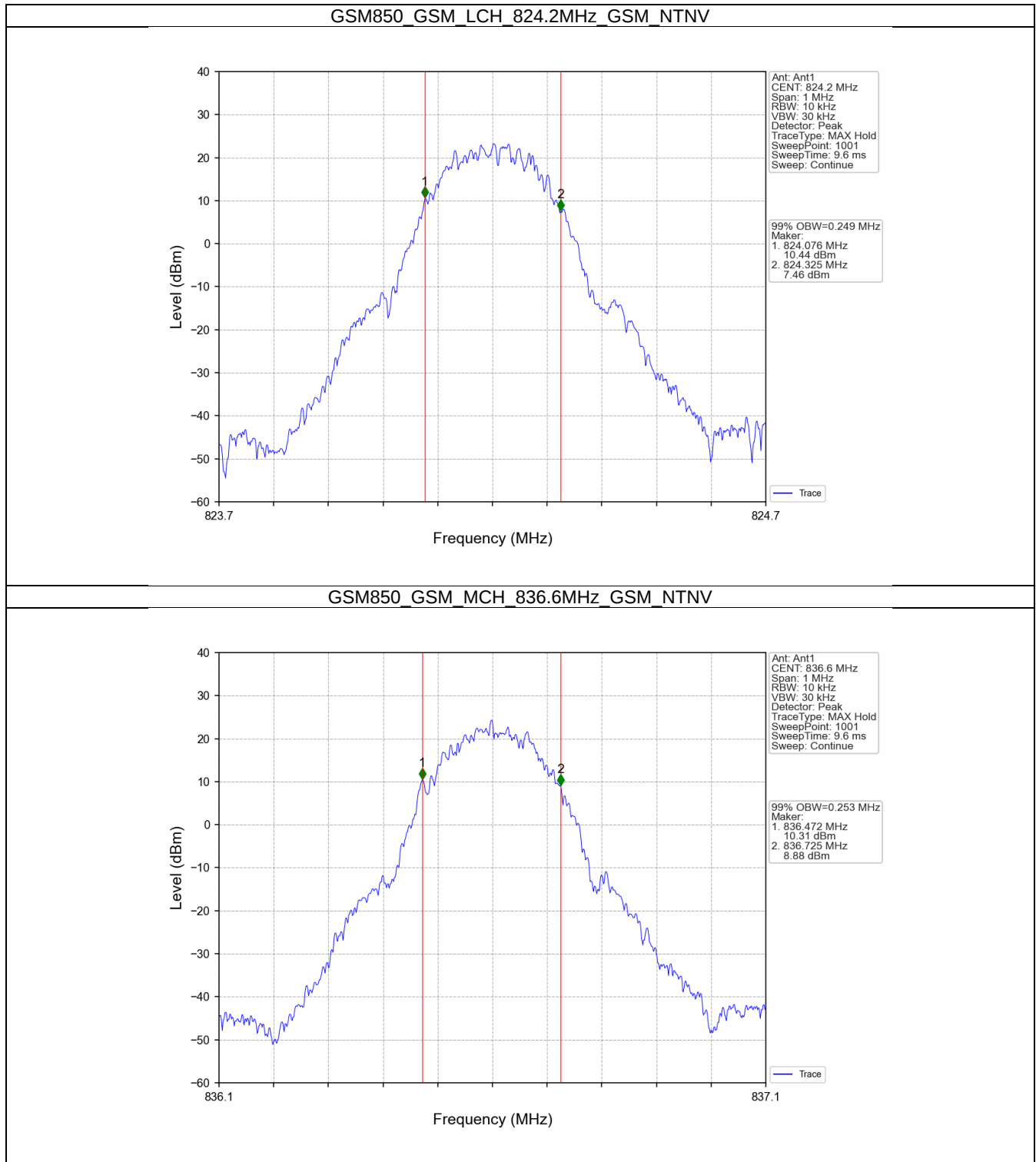
Band: GSM850						
ENV	Mode		Frequency (MHz)	99% Occupied Bandwidth (MHz)		Verdict
	Network	Subset		Result	Limit	
NTNV	GSM	GSM	824.2	0.249	/	Pass
			836.6	0.253	/	Pass
			848.8	0.247	/	Pass
	GPRS	1 TX Slot	824.2	0.248	/	Pass
			836.6	0.247	/	Pass
			848.8	0.249	/	Pass
	EGPRS	1 TX Slot	824.2	0.241	/	Pass
			836.6	0.249	/	Pass
			848.8	0.243	/	Pass

4.1.2 GSM850_XDB

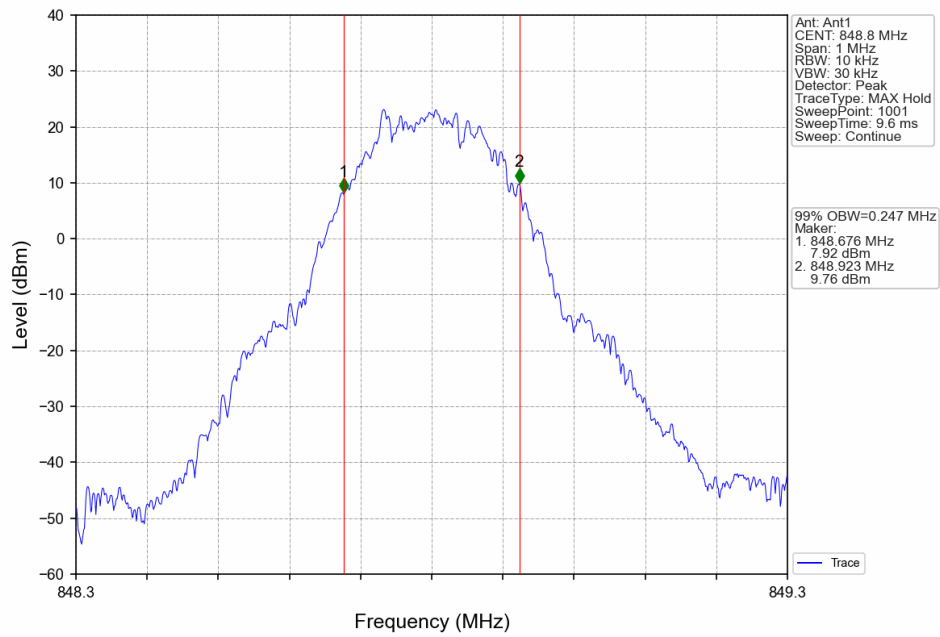
Band: GSM850						
ENV	Mode		Frequency (MHz)	26dB Bandwidth (MHz)		Verdict
	Network	Subset		Result	Limit	
NTNV	GSM	GSM	824.2	0.320	/	Pass
			836.6	0.317	/	Pass
			848.8	0.322	/	Pass
	GPRS	1 TX Slot	824.2	0.321	/	Pass
			836.6	0.309	/	Pass
			848.8	0.317	/	Pass
	EGPRS	1 TX Slot	824.2	0.315	/	Pass
			836.6	0.330	/	Pass
			848.8	0.303	/	Pass

4.2 Test Graph

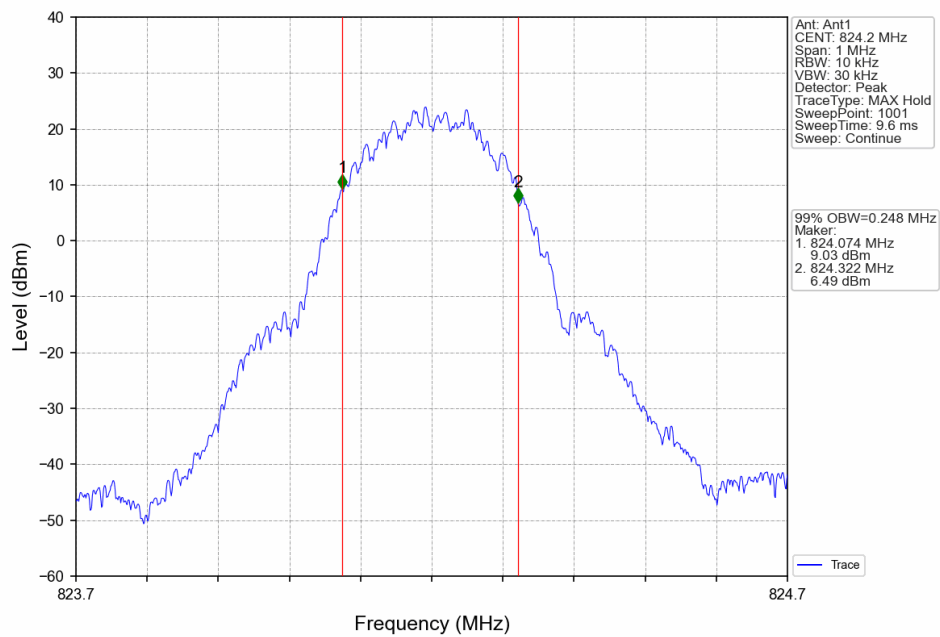
4.2.1 GSM850_OBW



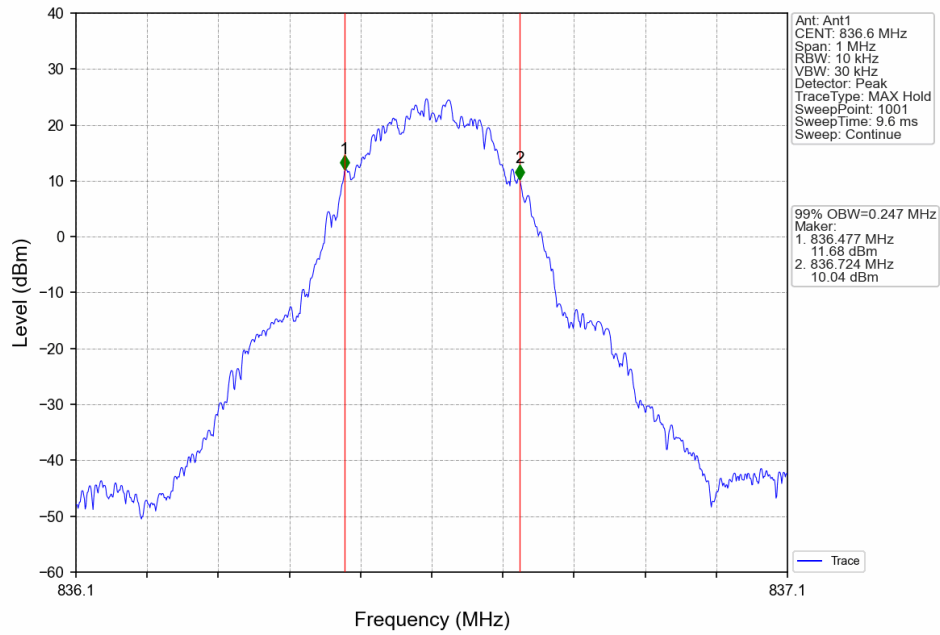
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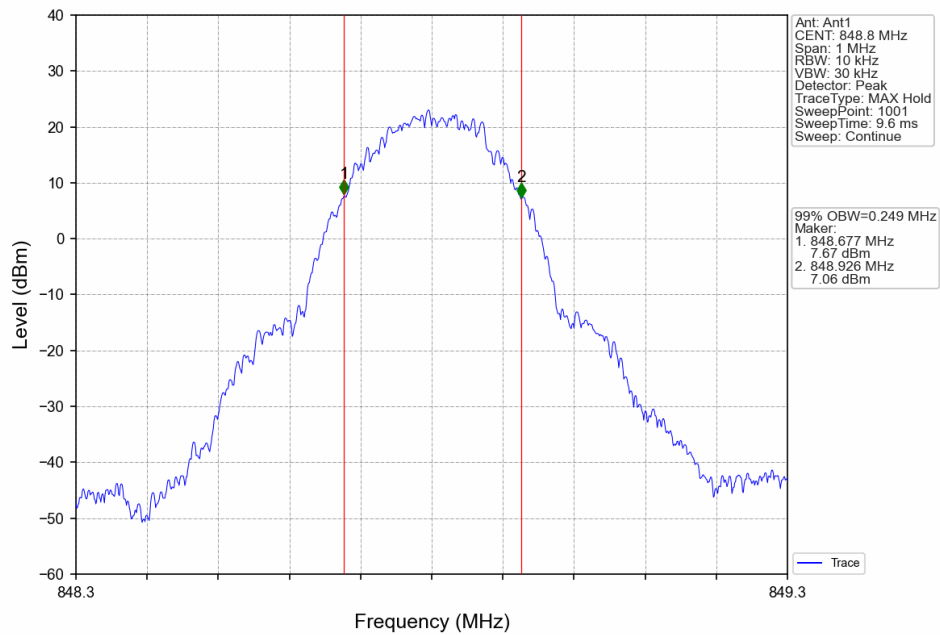
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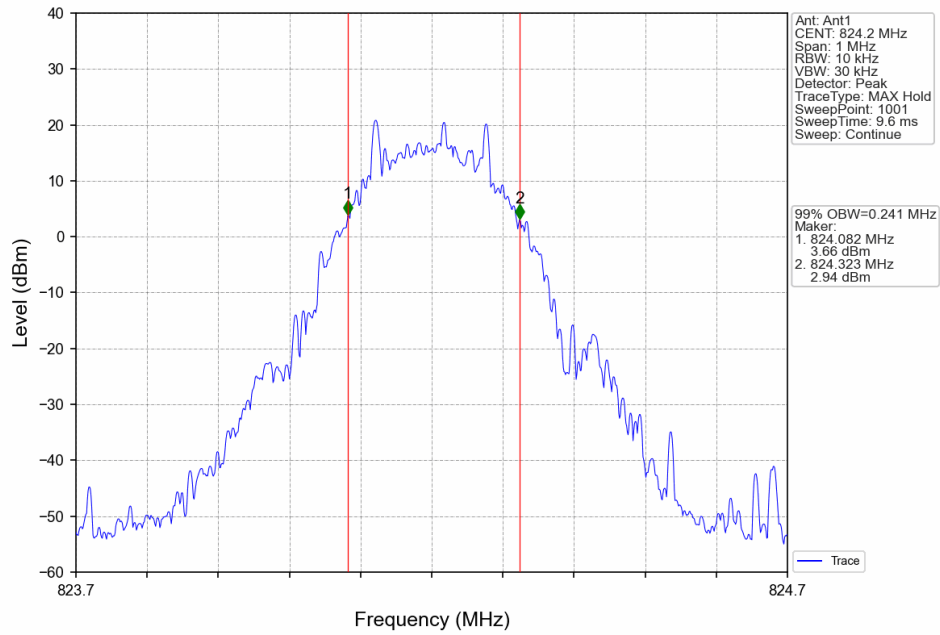
GSM850_GPRS_MCH_836.6MHz_1 TX Slot_NTNV



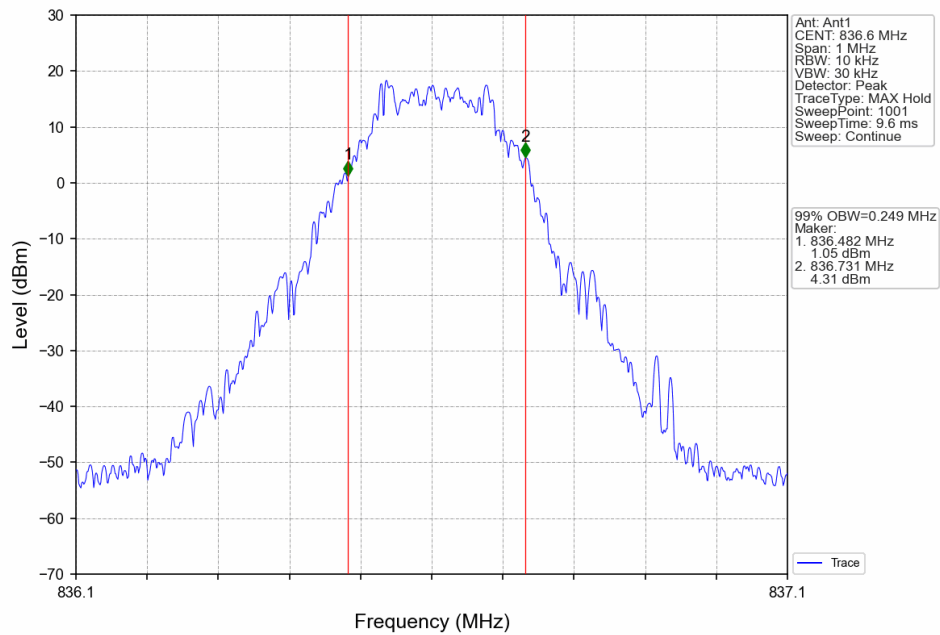
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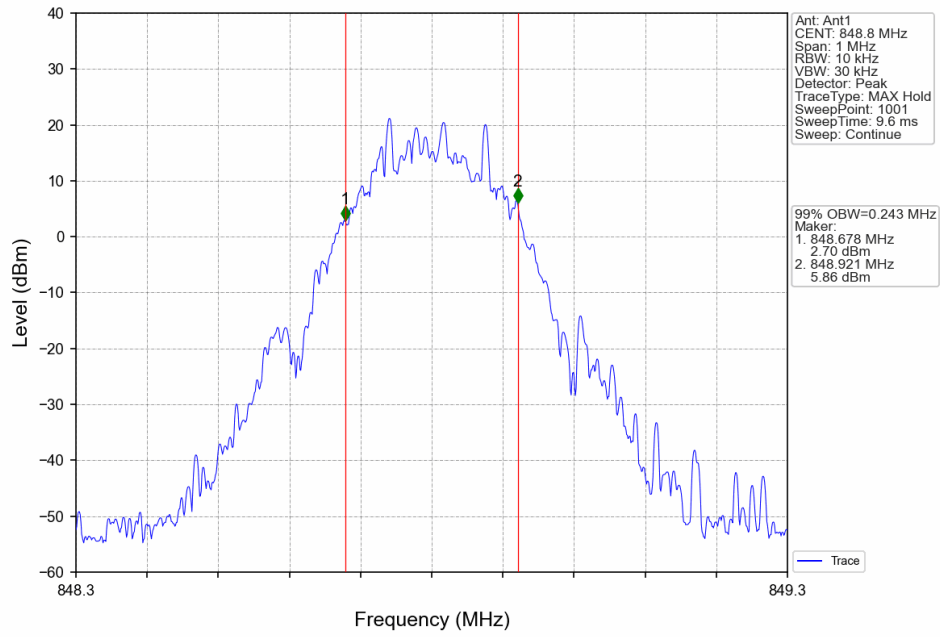
GSM850 EGPRS LCH 824.2MHz 1 TX Slot NTNV



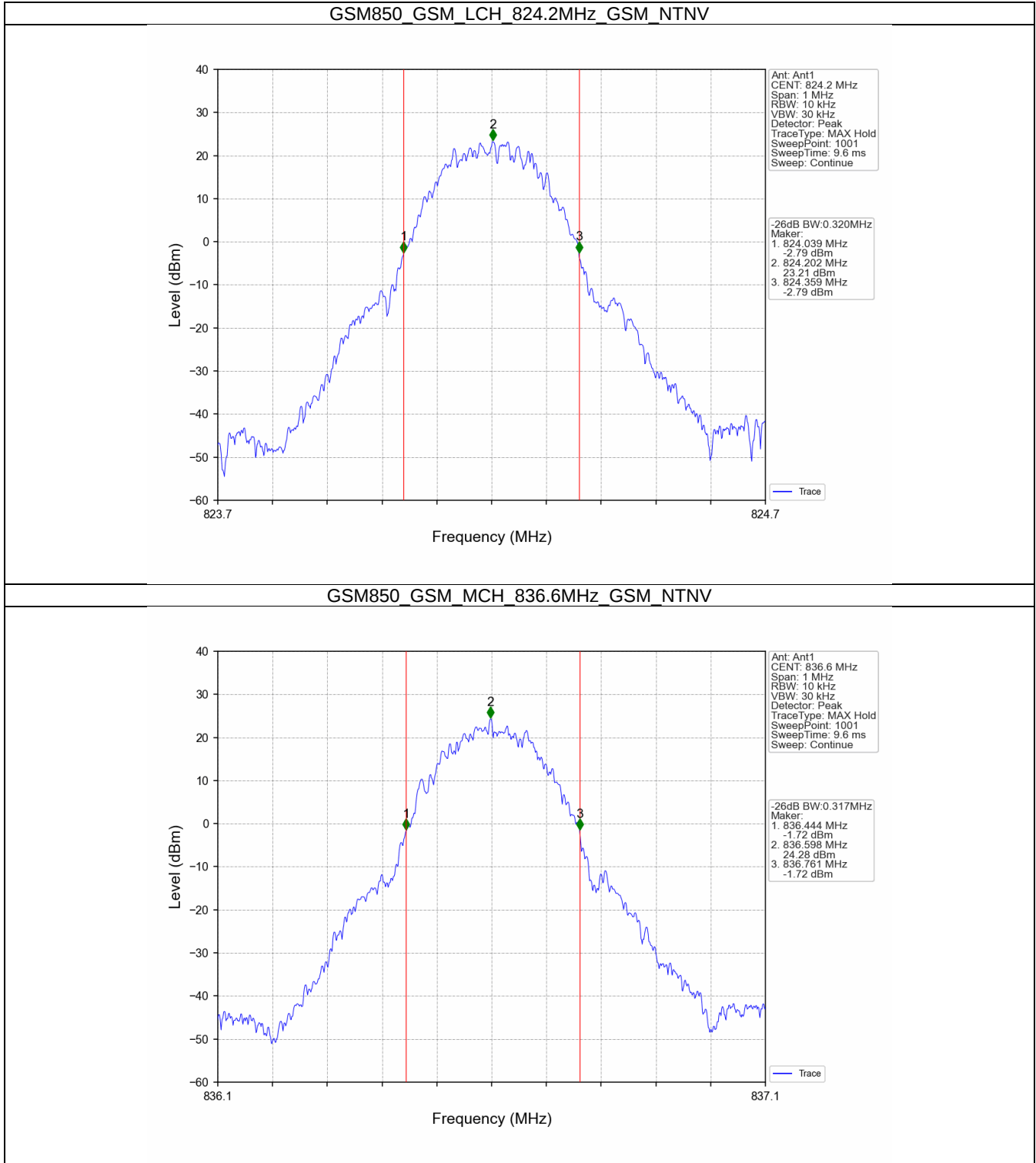
GSM850 EGPRS MCH 836.6MHz 1 TX Slot NTNV



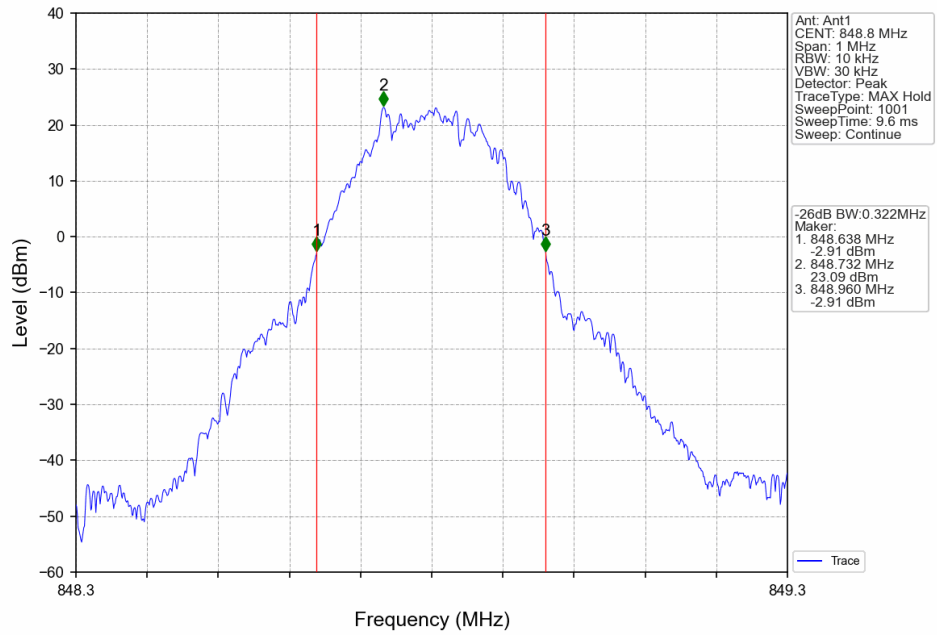
GSM850_EGPRS_HCH_848.8MHz_1 TX Slot_NTNV



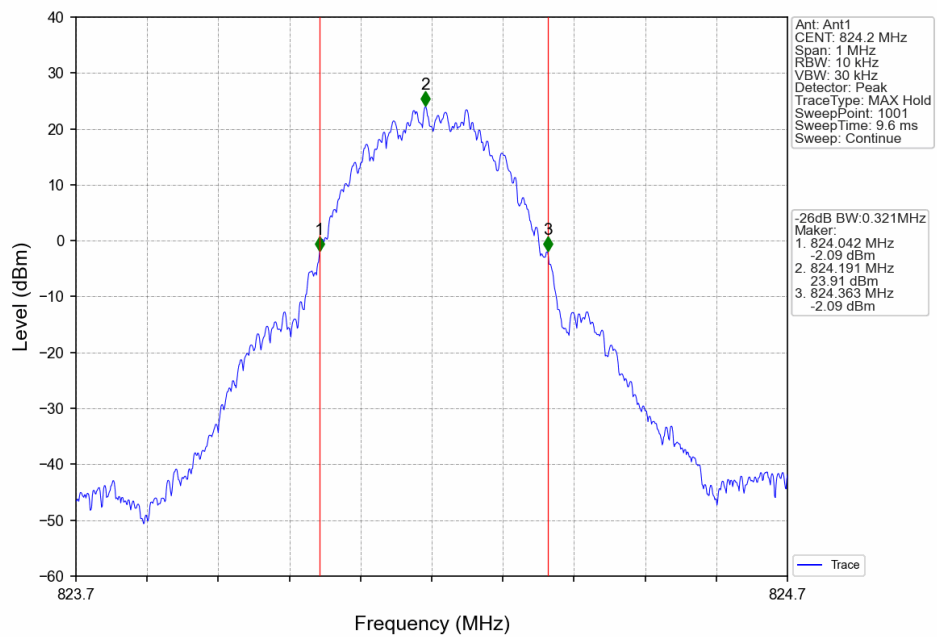
4.2.2 GSM850_XDB



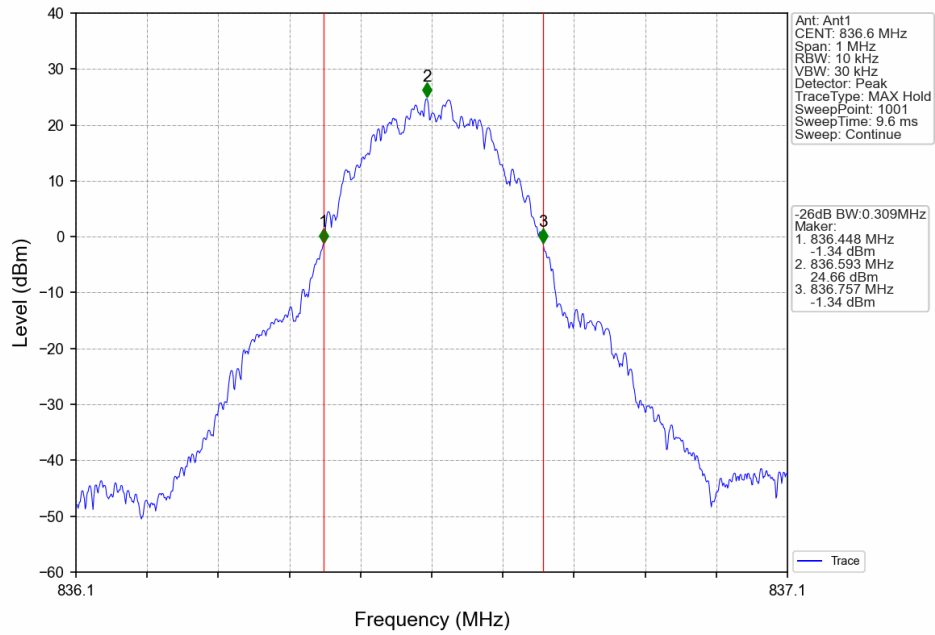
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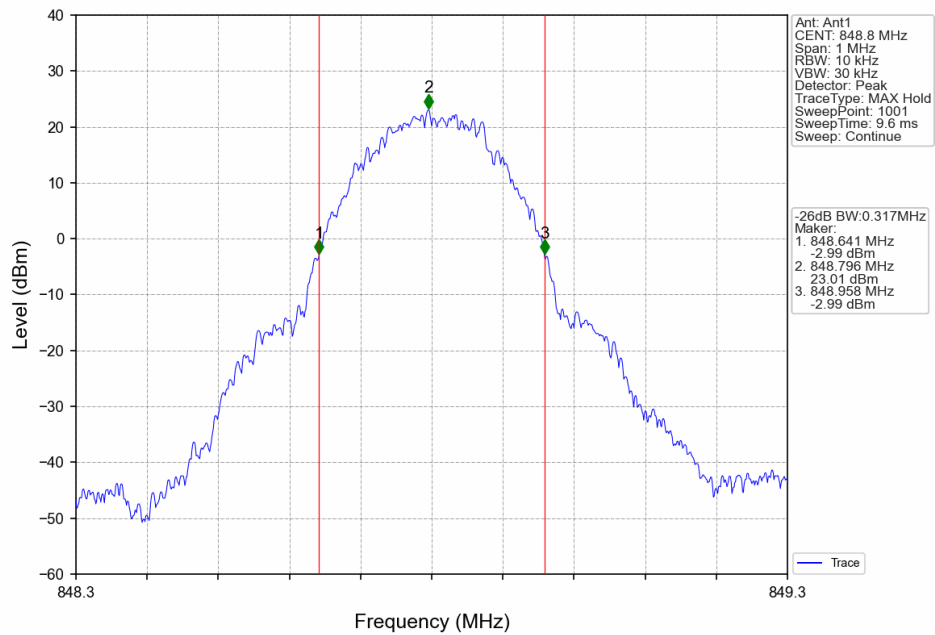
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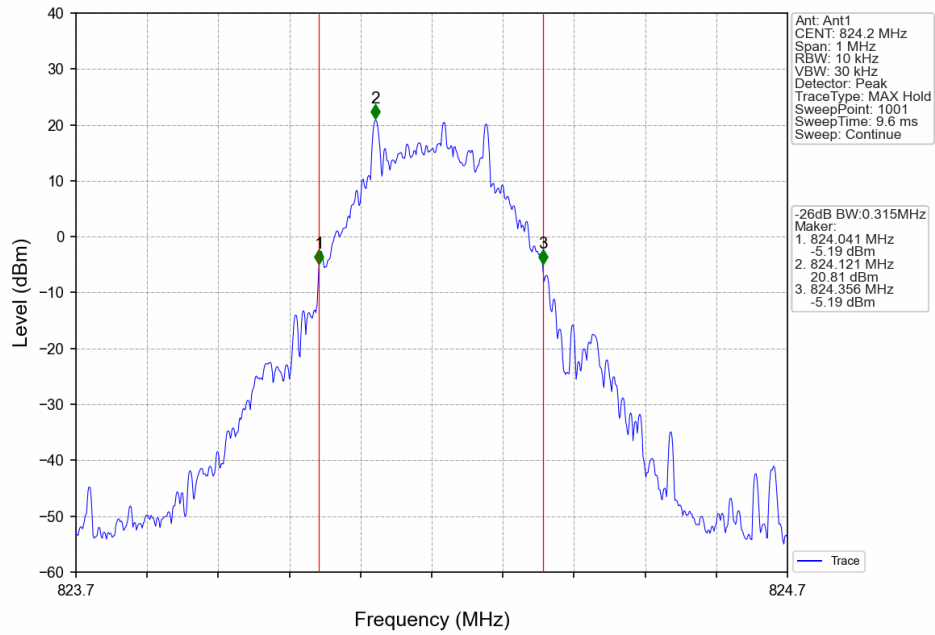
GSM850_GPRS_MCH_836.6MHz_1 TX Slot_NTNV



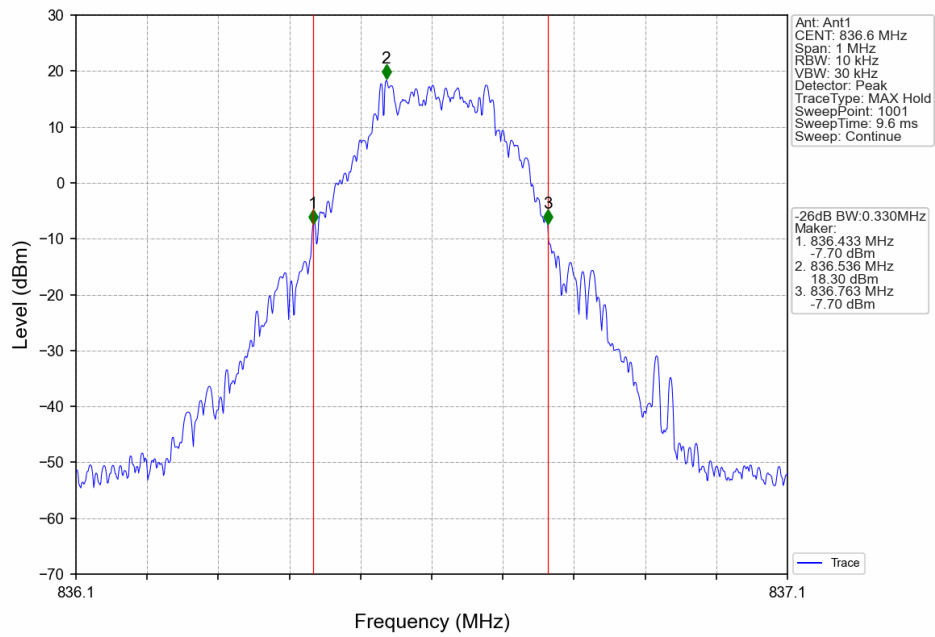
GSM850_GPRS_HCH_848.8MHz_1 TX Slot_NTNV



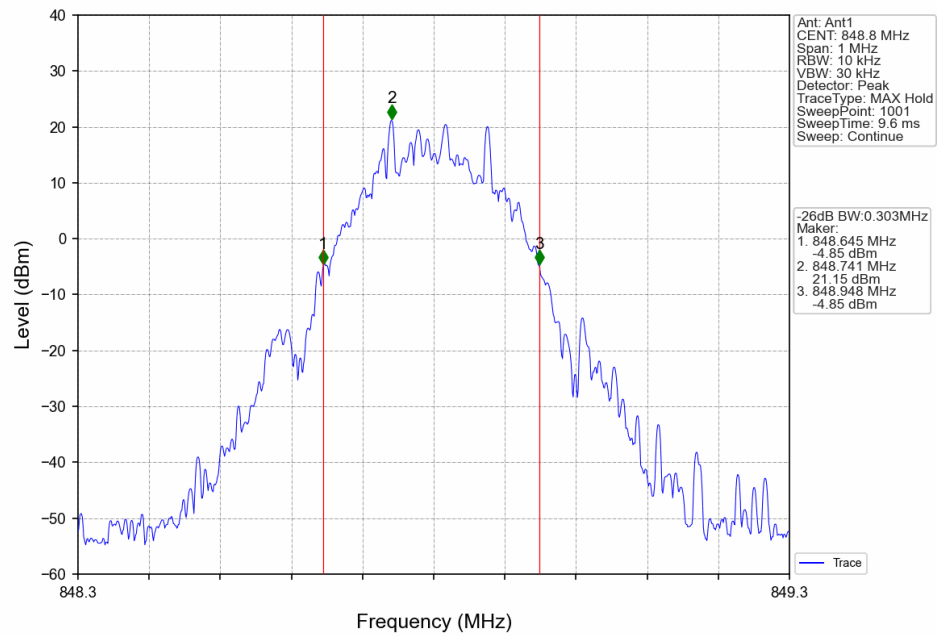
GSM850 EGPRS LCH 824.2MHz 1 TX Slot NTNV



GSM850 EGPRS MCH 836.6MHz 1 TX Slot NTNV



GSM850_EGPRS_HCH_848.8MHz_1 TX Slot_NTNV



5. Peak-Average Ratio

5.1 Test Result

5.1.1 GSM850

Band: GSM850						
ENV	Mode		Frequency (MHz)	Peak-Average Ratio (dB)		Verdict
	Network	Subset		Result	Limit	
NTNV	GSM	GSM	824.2	0.36	<=13	Pass
			836.6	0.28	<=13	Pass
			848.8	0.54	<=13	Pass
	GPRS	4 TX Slots	824.2	0.60	<=13	Pass
			836.6	0.66	<=13	Pass
			848.8	0.48	<=13	Pass
	EGPRS	4 TX Slots	824.2	0.36	<=13	Pass
			836.6	0.60	<=13	Pass
			848.8	0.64	<=13	Pass

6. Spurious Emission

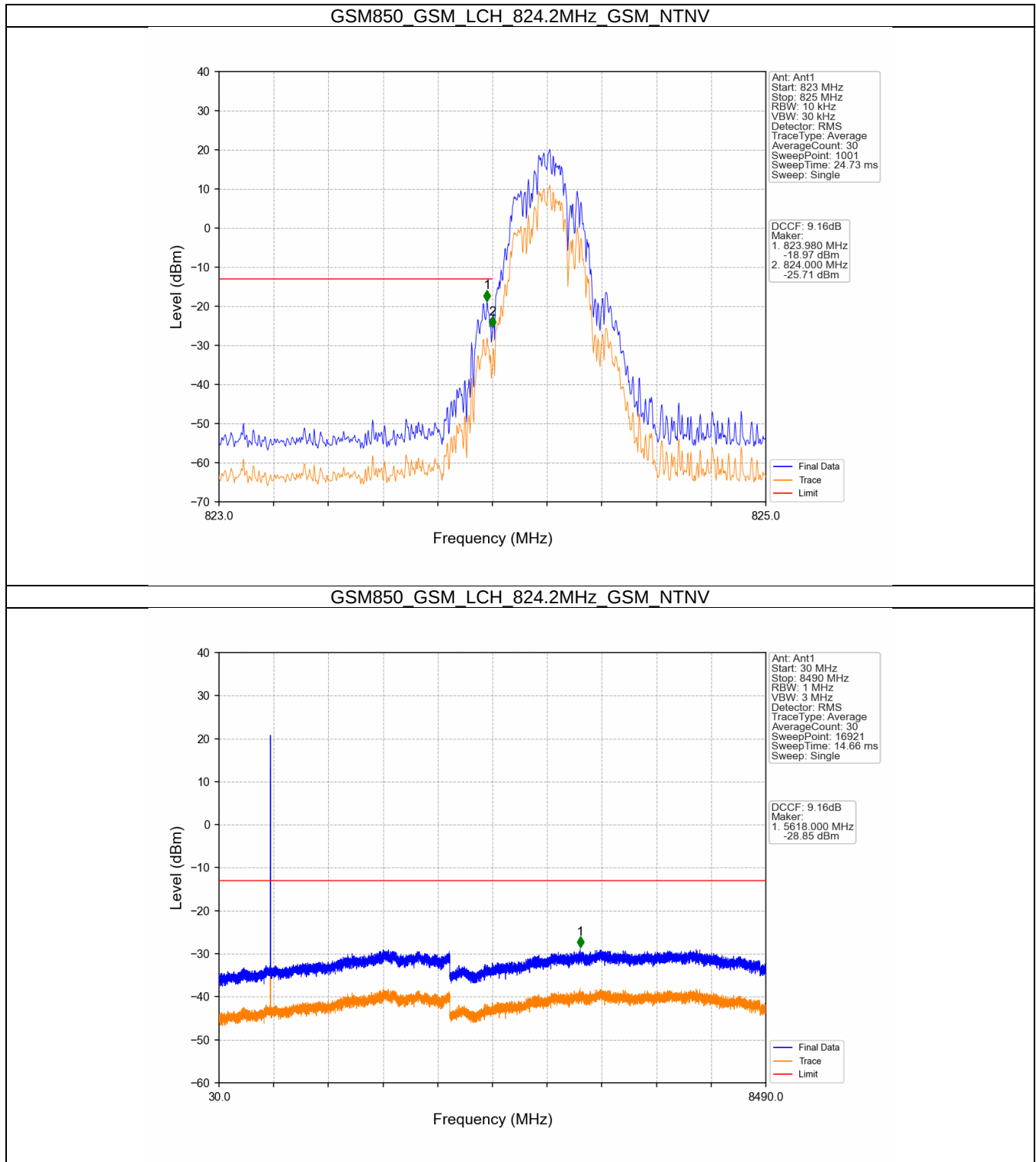
6.1 Test Result

6.1.1 GSM850

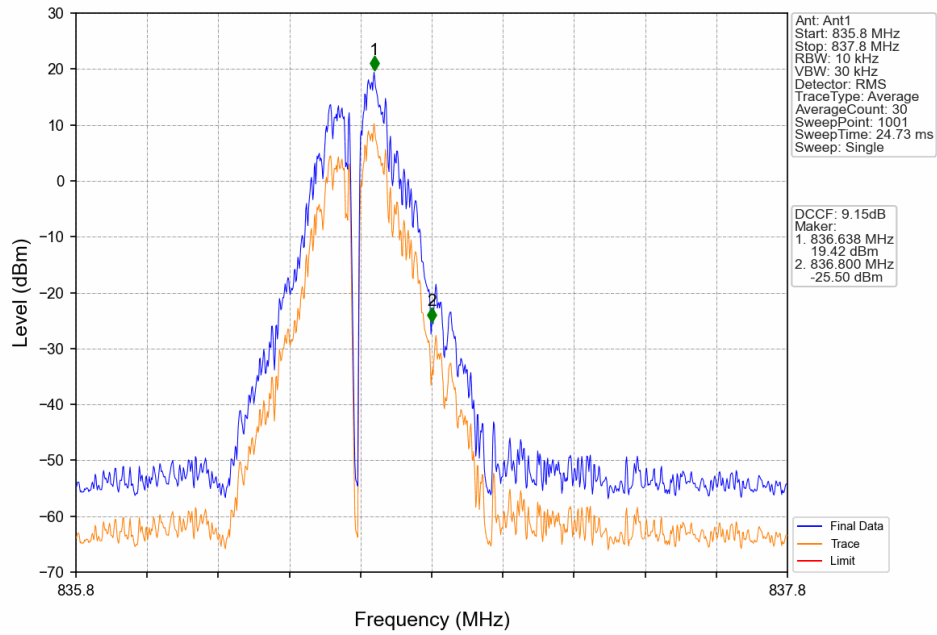
Band: GSM850						
ENV	Mode		Frequency (MHz)	Spurious Emission		Verdict
	Network	Subset		Result	Limit	
NTNV	GSM	GSM	824.2	Refer To Test Graph	Pass	
			836.6	Refer To Test Graph	Pass	
			848.8	Refer To Test Graph	Pass	
	GPRS	1 TX Slot	824.2	Refer To Test Graph	Pass	
			836.6	Refer To Test Graph	Pass	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

6.2 Test Graph

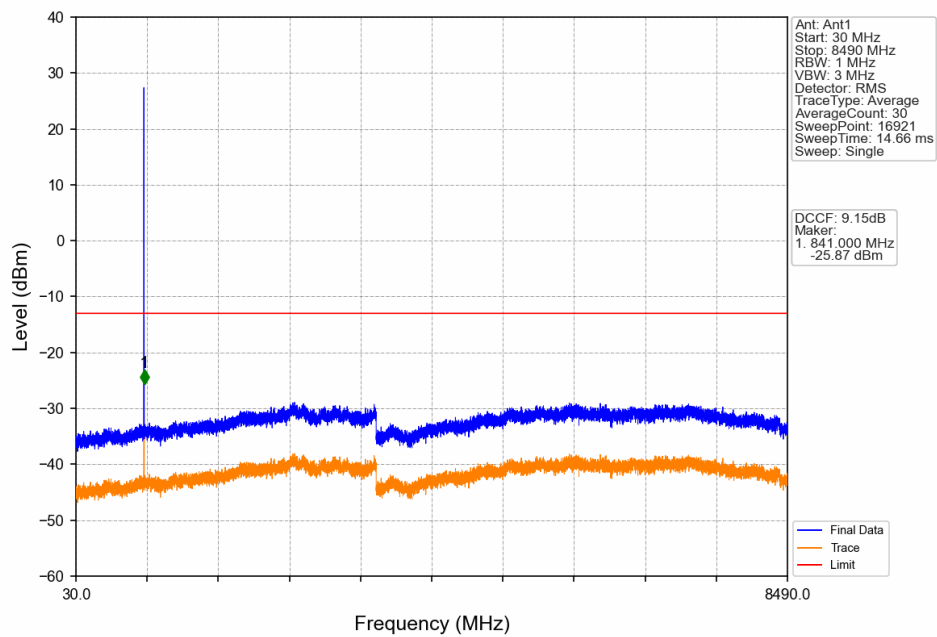
6.2.1 GSM850



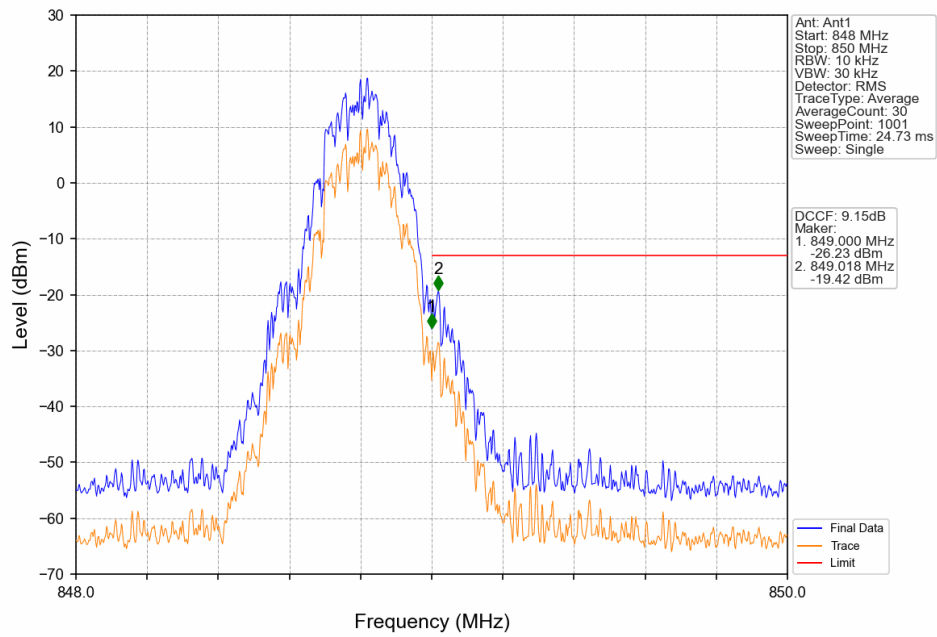
GSM850 GSM MCH 836.6MHz GSM NTNV



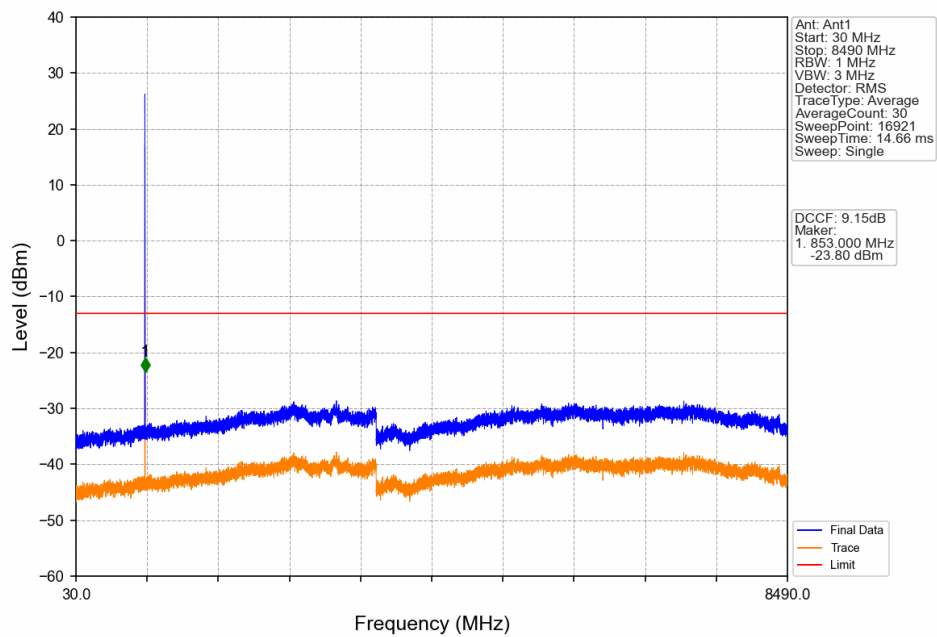
GSM850 GSM MCH 836.6MHz GSM NTNV



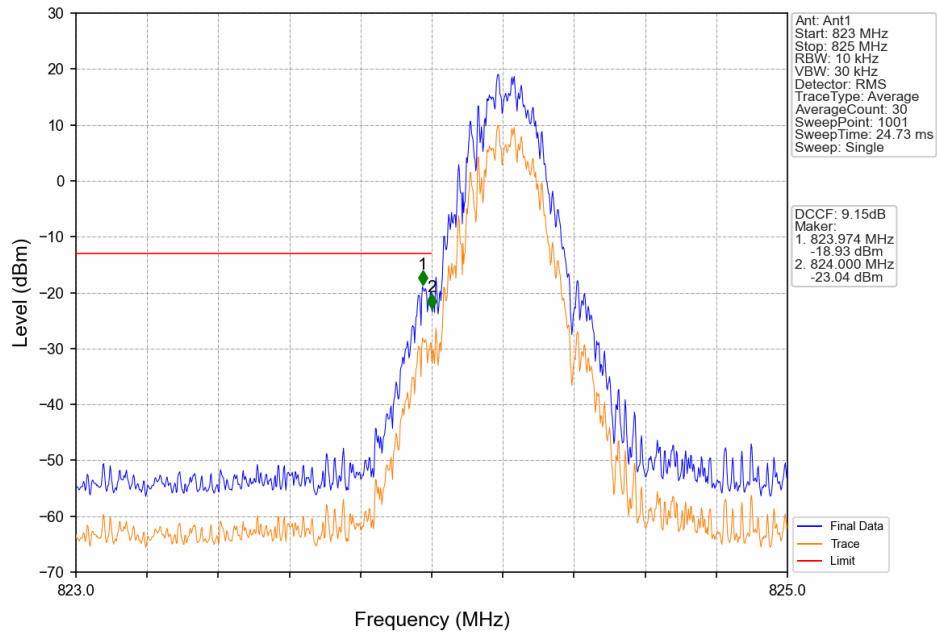
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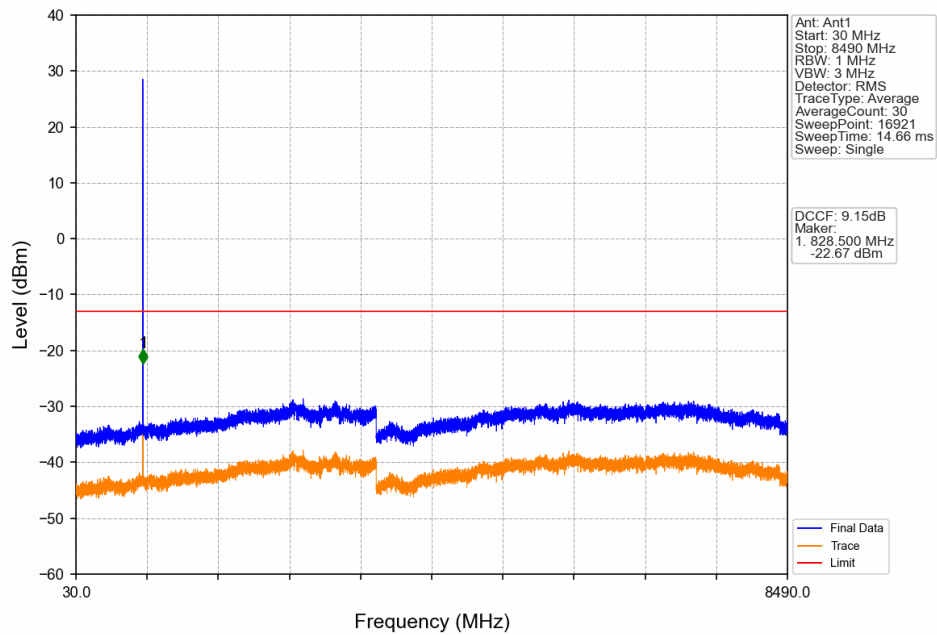
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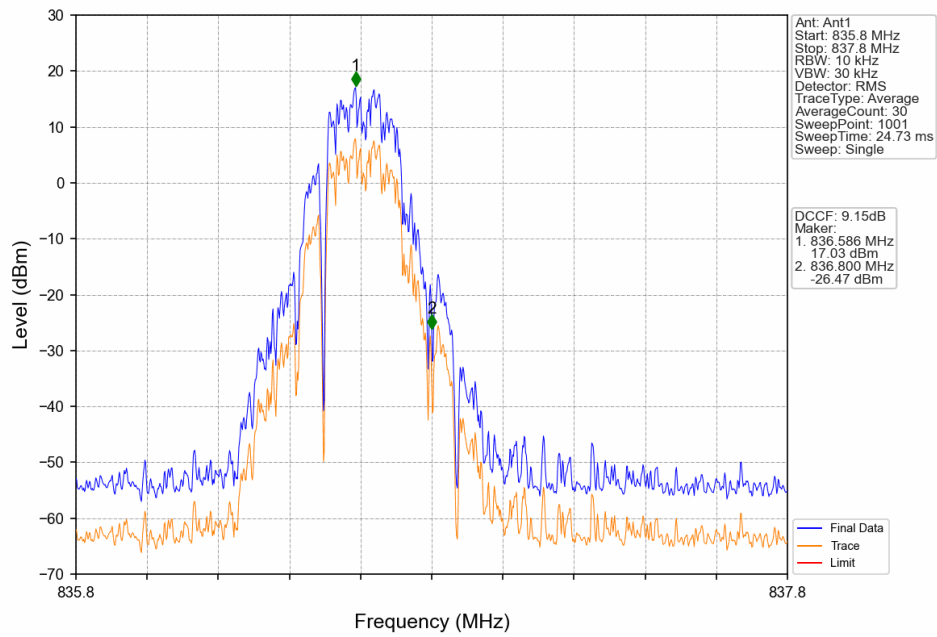
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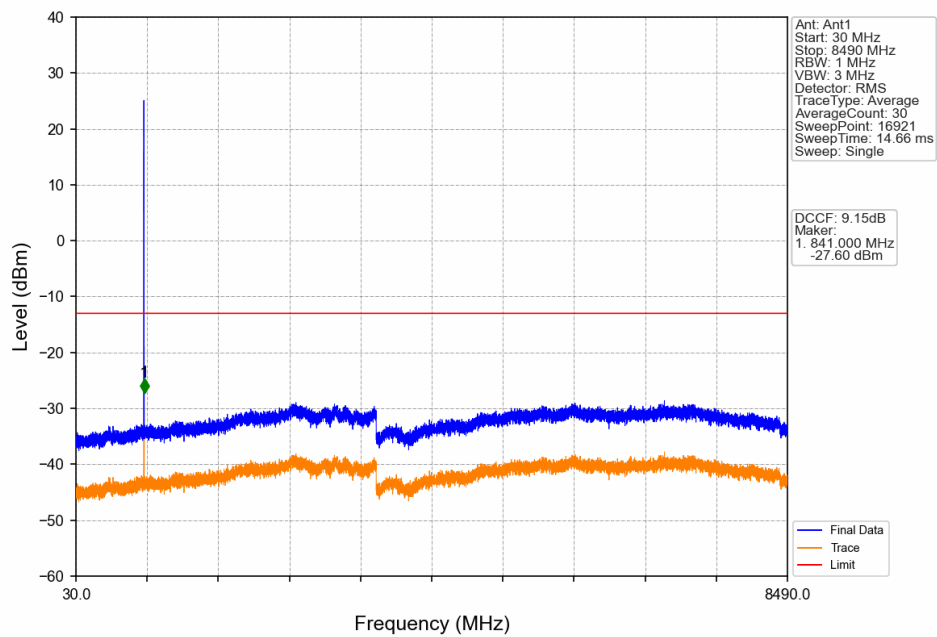
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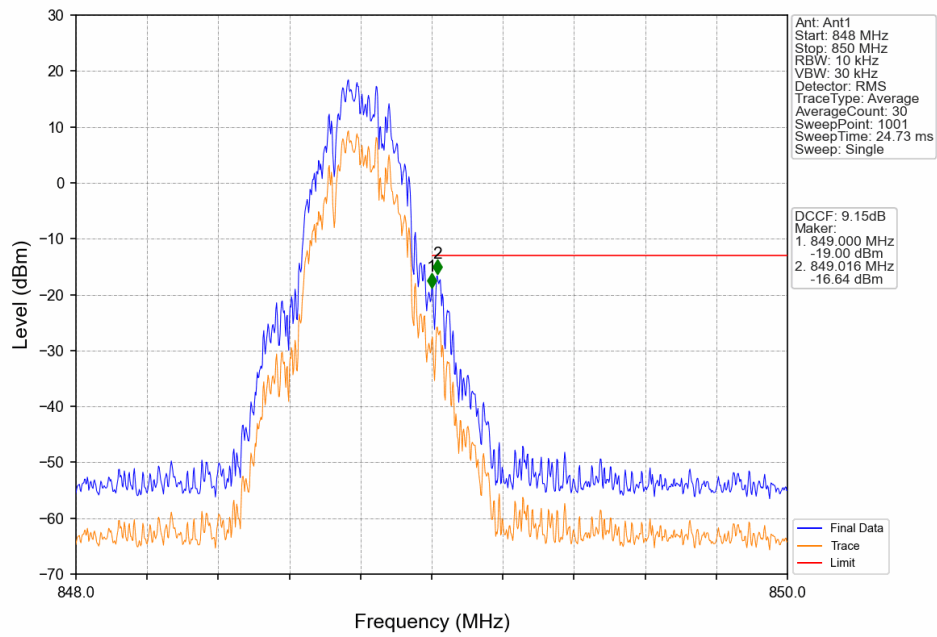
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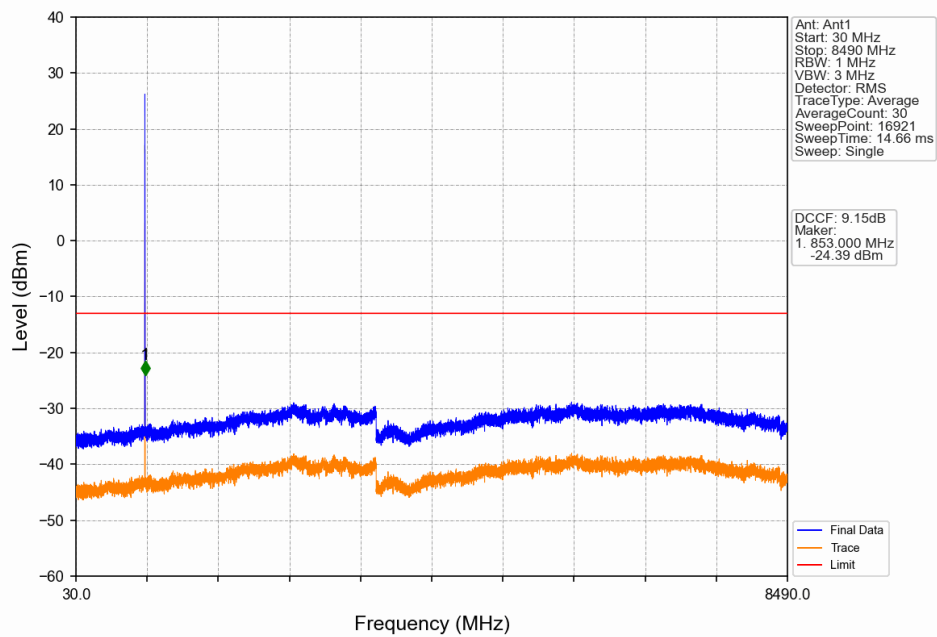
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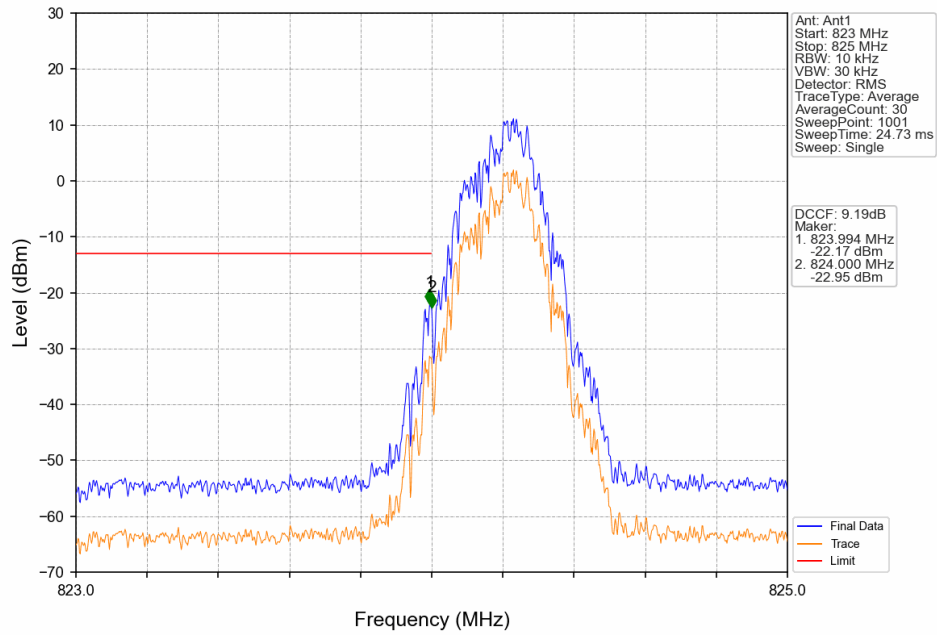
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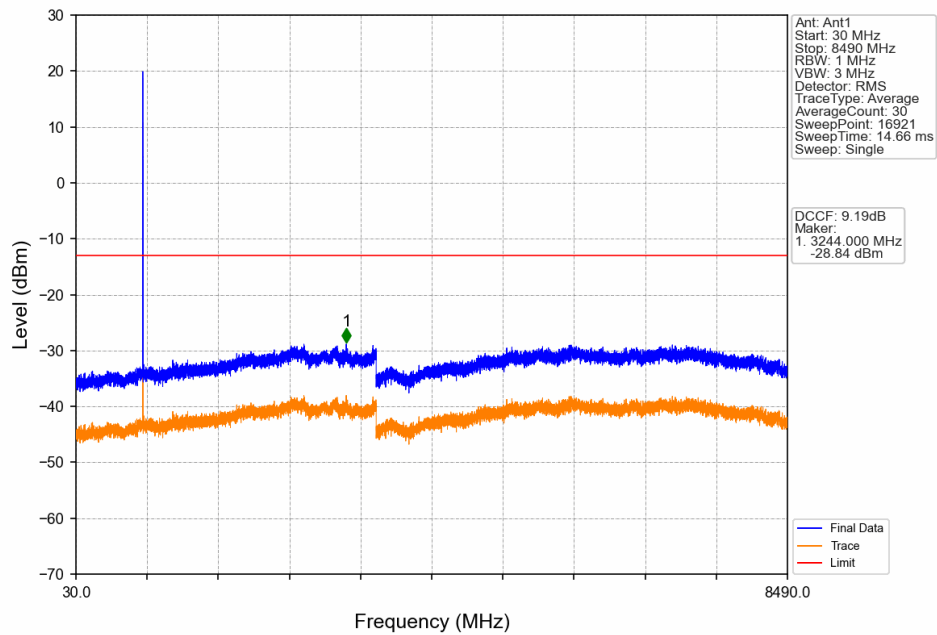
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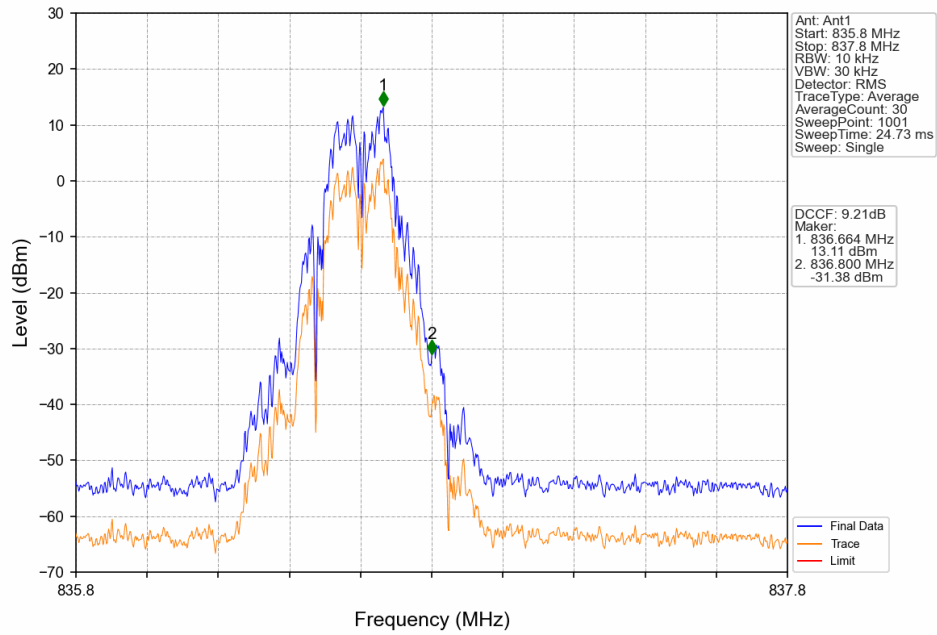
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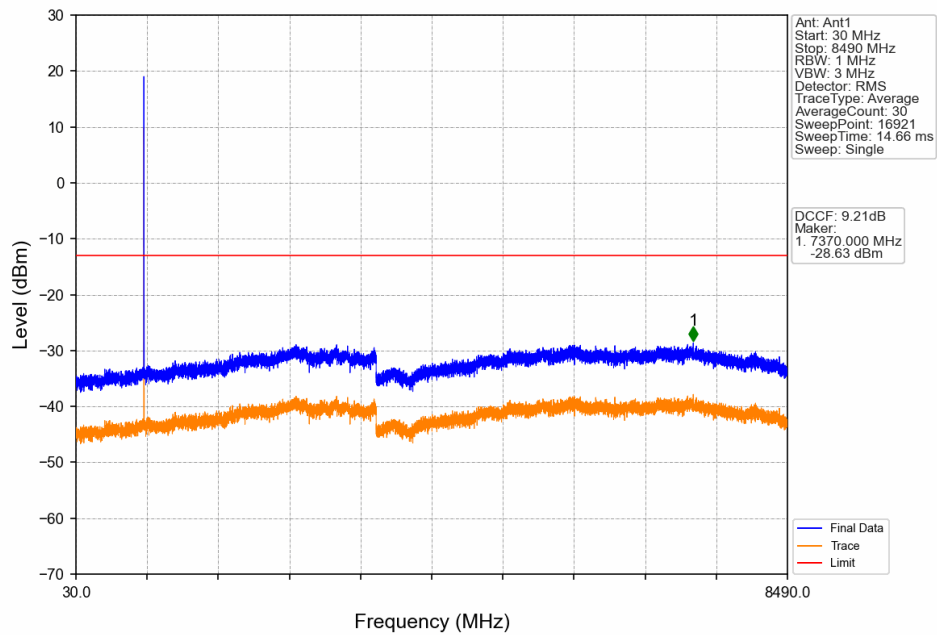
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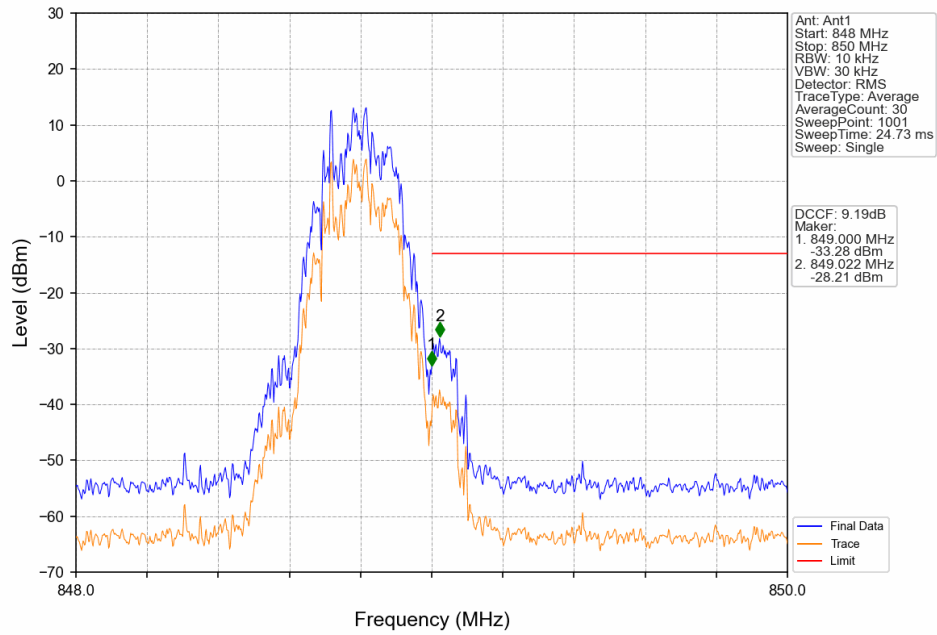
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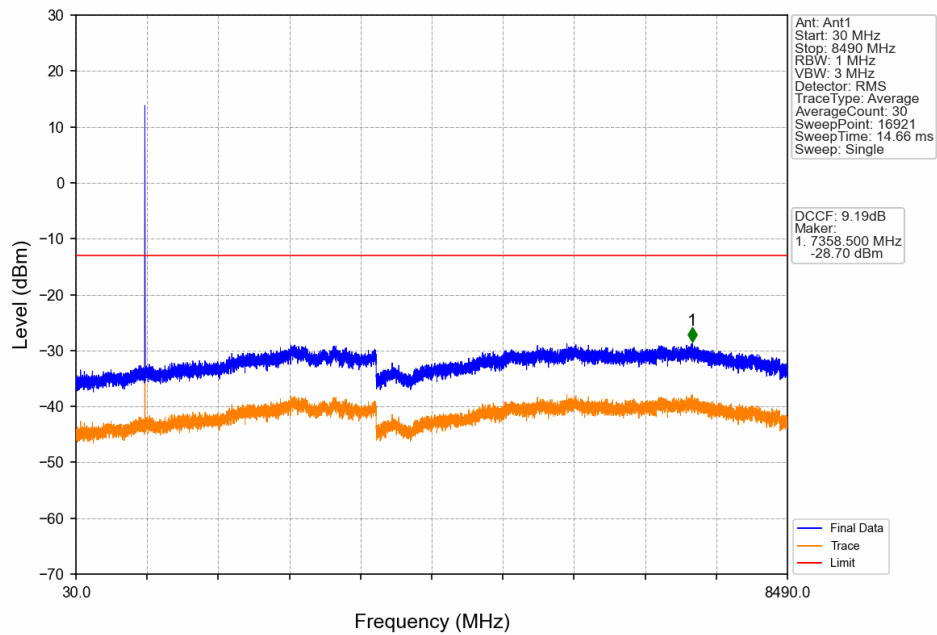
GSM850 EGPRS MCH_836.6MHz_1 TX Slot_NTNV



GSM850 EGPRS HCH 848.8MHz 1 TX Slot NTNV



GSM850 EGPRS HCH 848.8MHz 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)
GSM850	0.2	824.2	848.8	2.0324	0.0200	ppm	253KGXW	22H	33.08
GSM850	0.2	824.2	848.8	0.3864	0.0087	ppm	249KG7W	22H	25.87

7.1.2 Form731_ERP

Band	BW	Lower Freq	High Freq	MAX Power (W)	Value	Hz/ppm	Emission Designator	Rule Parts	MAX Power (dBm)
GSM850	0.2	824.2	848.8	1.0520	0.0200	ppm	253KGXW	22H	30.22
GSM850	0.2	824.2	848.8	0.2000	0.0087	ppm	249KG7W	22H	23.01