

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	32.15	-1.15	28.85	<=38.45	Pass
			836.6	32.11	-1.15	28.81	<=38.45	Pass
			848.8	32.06	-1.15	28.76	<=38.45	Pass
	GPRS	1 TX Slot	824.2	32.16	-1.15	28.86	<=38.45	Pass
		2 TX Slots	824.2	30.22	-1.15	26.92	<=38.45	Pass
		3 TX Slots	824.2	28.45	-1.15	25.15	<=38.45	Pass
		4 TX Slots	824.2	26.53	-1.15	23.23	<=38.45	Pass
		1 TX Slot	836.6	32.14	-1.15	28.84	<=38.45	Pass
		2 TX Slots	836.6	30.08	-1.15	26.78	<=38.45	Pass
		3 TX Slots	836.6	28.30	-1.15	25.00	<=38.45	Pass
		4 TX Slots	836.6	26.36	-1.15	23.06	<=38.45	Pass
		1 TX Slot	848.8	32.09	-1.15	28.79	<=38.45	Pass
		2 TX Slots	848.8	30.01	-1.15	26.71	<=38.45	Pass
		3 TX Slots	848.8	28.20	-1.15	24.90	<=38.45	Pass
		4 TX Slots	848.8	26.24	-1.15	22.94	<=38.45	Pass
	EGPRS	1 TX Slot	824.2	24.50	-1.15	21.20	<=38.45	Pass
		2 TX Slots	824.2	24.51	-1.15	21.21	<=38.45	Pass
		3 TX Slots	824.2	23.08	-1.15	19.78	<=38.45	Pass
		4 TX Slots	824.2	20.87	-1.15	17.57	<=38.45	Pass
		1 TX Slot	836.6	27.43	-1.15	24.13	<=38.45	Pass
		2 TX Slots	836.6	24.34	-1.15	21.04	<=38.45	Pass
		3 TX Slots	836.6	23.08	-1.15	19.78	<=38.45	Pass
		4 TX Slots	836.6	21.06	-1.15	17.76	<=38.45	Pass
		1 TX Slot	848.8	27.31	-1.15	24.01	<=38.45	Pass
		2 TX Slots	848.8	24.34	-1.15	21.04	<=38.45	Pass
		3 TX Slots	848.8	22.93	-1.15	19.63	<=38.45	Pass
		4 TX Slots	848.8	21.72	-1.15	18.42	<=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	-6.360	-0.0077	-2.5 to 2.5	Pass
			3.85	-8.201	-0.0100	-2.5 to 2.5	Pass
			4.43	-7.393	-0.0090	-2.5 to 2.5	Pass
		-30	3.85	-6.457	-0.0078	-2.5 to 2.5	Pass
		-20	3.85	-6.393	-0.0078	-2.5 to 2.5	Pass
		-10	3.85	-12.398	-0.0150	-2.5 to 2.5	Pass
		0	3.85	0.710	0.0009	-2.5 to 2.5	Pass
		10	3.85	-1.421	-0.0017	-2.5 to 2.5	Pass

TCT	836.6	30	3.85	-8.297	-0.0101	-2.5 to 2.5	Pass	
		40	3.85	-5.069	-0.0062	-2.5 to 2.5	Pass	
		50	3.85	-7.103	-0.0086	-2.5 to 2.5	Pass	
		20	3.27	-8.523	-0.0102	-2.5 to 2.5	Pass	
			3.85	-4.003	-0.0048	-2.5 to 2.5	Pass	
			4.43	1.033	0.0012	-2.5 to 2.5	Pass	
		-30	3.85	0.710	0.0008	-2.5 to 2.5	Pass	
		-20	3.85	-12.527	-0.0150	-2.5 to 2.5	Pass	
		-10	3.85	-9.395	-0.0112	-2.5 to 2.5	Pass	
	0	3.85	1.937	0.0023	-2.5 to 2.5	Pass		
	10	3.85	-15.368	-0.0184	-2.5 to 2.5	Pass		
	30	3.85	-8.749	-0.0105	-2.5 to 2.5	Pass		
	40	3.85	3.003	0.0036	-2.5 to 2.5	Pass		
	50	3.85	-1.033	-0.0012	-2.5 to 2.5	Pass		
	848.8	20	3.27	-7.910	-0.0093	-2.5 to 2.5	Pass	
			3.85	-6.167	-0.0073	-2.5 to 2.5	Pass	
			4.43	-14.593	-0.0172	-2.5 to 2.5	Pass	
		-30	3.85	-10.138	-0.0119	-2.5 to 2.5	Pass	
		-20	3.85	-14.432	-0.0170	-2.5 to 2.5	Pass	
		-10	3.85	-8.427	-0.0099	-2.5 to 2.5	Pass	
		0	3.85	-1.098	-0.0013	-2.5 to 2.5	Pass	
		10	3.85	0.000	0.0000	-2.5 to 2.5	Pass	
		30	3.85	-12.398	-0.0146	-2.5 to 2.5	Pass	
		40	3.85	-4.746	-0.0056	-2.5 to 2.5	Pass	
		50	3.85	-3.358	-0.0040	-2.5 to 2.5	Pass	
GPRS		824.2	20	3.27	-7.523	-0.0091	-2.5 to 2.5	Pass
				3.85	-7.329	-0.0089	-2.5 to 2.5	Pass
	4.43			-6.941	-0.0084	-2.5 to 2.5	Pass	
	-30		3.85	-7.071	-0.0086	-2.5 to 2.5	Pass	
	-20		3.85	-5.230	-0.0063	-2.5 to 2.5	Pass	
	-10		3.85	-6.231	-0.0076	-2.5 to 2.5	Pass	
	0		3.85	-7.232	-0.0088	-2.5 to 2.5	Pass	
	10		3.85	-8.749	-0.0106	-2.5 to 2.5	Pass	
	30		3.85	-6.812	-0.0083	-2.5 to 2.5	Pass	
	40	3.85	-7.684	-0.0093	-2.5 to 2.5	Pass		
	50	3.85	-5.811	-0.0071	-2.5 to 2.5	Pass		
	836.6	20	3.27	-7.716	-0.0092	-2.5 to 2.5	Pass	
			3.85	-6.845	-0.0082	-2.5 to 2.5	Pass	
			4.43	-6.037	-0.0072	-2.5 to 2.5	Pass	
		-30	3.85	-7.167	-0.0086	-2.5 to 2.5	Pass	
		-20	3.85	-6.651	-0.0080	-2.5 to 2.5	Pass	
		-10	3.85	-4.649	-0.0056	-2.5 to 2.5	Pass	
		0	3.85	-5.166	-0.0062	-2.5 to 2.5	Pass	
		10	3.85	-3.907	-0.0047	-2.5 to 2.5	Pass	
		30	3.85	-4.778	-0.0057	-2.5 to 2.5	Pass	
		40	3.85	-5.908	-0.0071	-2.5 to 2.5	Pass	
		50	3.85	-3.164	-0.0038	-2.5 to 2.5	Pass	
		848.8	20	3.27	0.161	0.0002	-2.5 to 2.5	Pass
				3.85	-1.647	-0.0019	-2.5 to 2.5	Pass
	4.43			-0.678	-0.0008	-2.5 to 2.5	Pass	
-30	3.85		0.484	0.0006	-2.5 to 2.5	Pass		
-20	3.85		0.387	0.0005	-2.5 to 2.5	Pass		
-10	3.85		1.711	0.0020	-2.5 to 2.5	Pass		
0	3.85		1.517	0.0018	-2.5 to 2.5	Pass		
10	3.85		0.839	0.0010	-2.5 to 2.5	Pass		
30	3.85		-0.226	-0.0003	-2.5 to 2.5	Pass		
40	3.85		-3.035	-0.0036	-2.5 to 2.5	Pass		
50	3.85	-0.129	-0.0002	-2.5 to 2.5	Pass			
EGPRS	824.2	20	3.27	-2.260	-0.0027	-2.5 to 2.5	Pass	

TCT			3.85	0.807	0.0010	-2.5 to 2.5	Pass	
			4.43	-1.388	-0.0017	-2.5 to 2.5	Pass	
		-30	3.85	-1.582	-0.0019	-2.5 to 2.5	Pass	
		-20	3.85	-0.129	-0.0002	-2.5 to 2.5	Pass	
		-10	3.85	-0.678	-0.0008	-2.5 to 2.5	Pass	
		0	3.85	-1.130	-0.0014	-2.5 to 2.5	Pass	
		10	3.85	-3.777	-0.0046	-2.5 to 2.5	Pass	
		30	3.85	-0.484	-0.0006	-2.5 to 2.5	Pass	
		40	3.85	0.000	0.0000	-2.5 to 2.5	Pass	
	50	3.85	-1.517	-0.0018	-2.5 to 2.5	Pass		
	836.6	20		3.27	2.099	0.0025	-2.5 to 2.5	Pass
				3.85	-0.355	-0.0004	-2.5 to 2.5	Pass
				4.43	0.291	0.0003	-2.5 to 2.5	Pass
		-30	3.85	1.324	0.0016	-2.5 to 2.5	Pass	
		-20	3.85	1.098	0.0013	-2.5 to 2.5	Pass	
		-10	3.85	4.133	0.0049	-2.5 to 2.5	Pass	
		0	3.85	3.519	0.0042	-2.5 to 2.5	Pass	
		10	3.85	3.939	0.0047	-2.5 to 2.5	Pass	
		30	3.85	4.326	0.0052	-2.5 to 2.5	Pass	
	40	3.85	7.555	0.0090	-2.5 to 2.5	Pass		
	50	3.85	9.750	0.0117	-2.5 to 2.5	Pass		
	848.8	20		3.27	0.807	0.0010	-2.5 to 2.5	Pass
				3.85	4.133	0.0049	-2.5 to 2.5	Pass
				4.43	2.066	0.0024	-2.5 to 2.5	Pass
		-30	3.85	4.359	0.0051	-2.5 to 2.5	Pass	
		-20	3.85	5.908	0.0070	-2.5 to 2.5	Pass	
		-10	3.85	2.357	0.0028	-2.5 to 2.5	Pass	
		0	3.85	4.940	0.0058	-2.5 to 2.5	Pass	
10		3.85	3.907	0.0046	-2.5 to 2.5	Pass		
30		3.85	5.585	0.0066	-2.5 to 2.5	Pass		
40	3.85	5.553	0.0065	-2.5 to 2.5	Pass			
50	3.85	4.262	0.0050	-2.5 to 2.5	Pass			

3. Modulation Characteristics

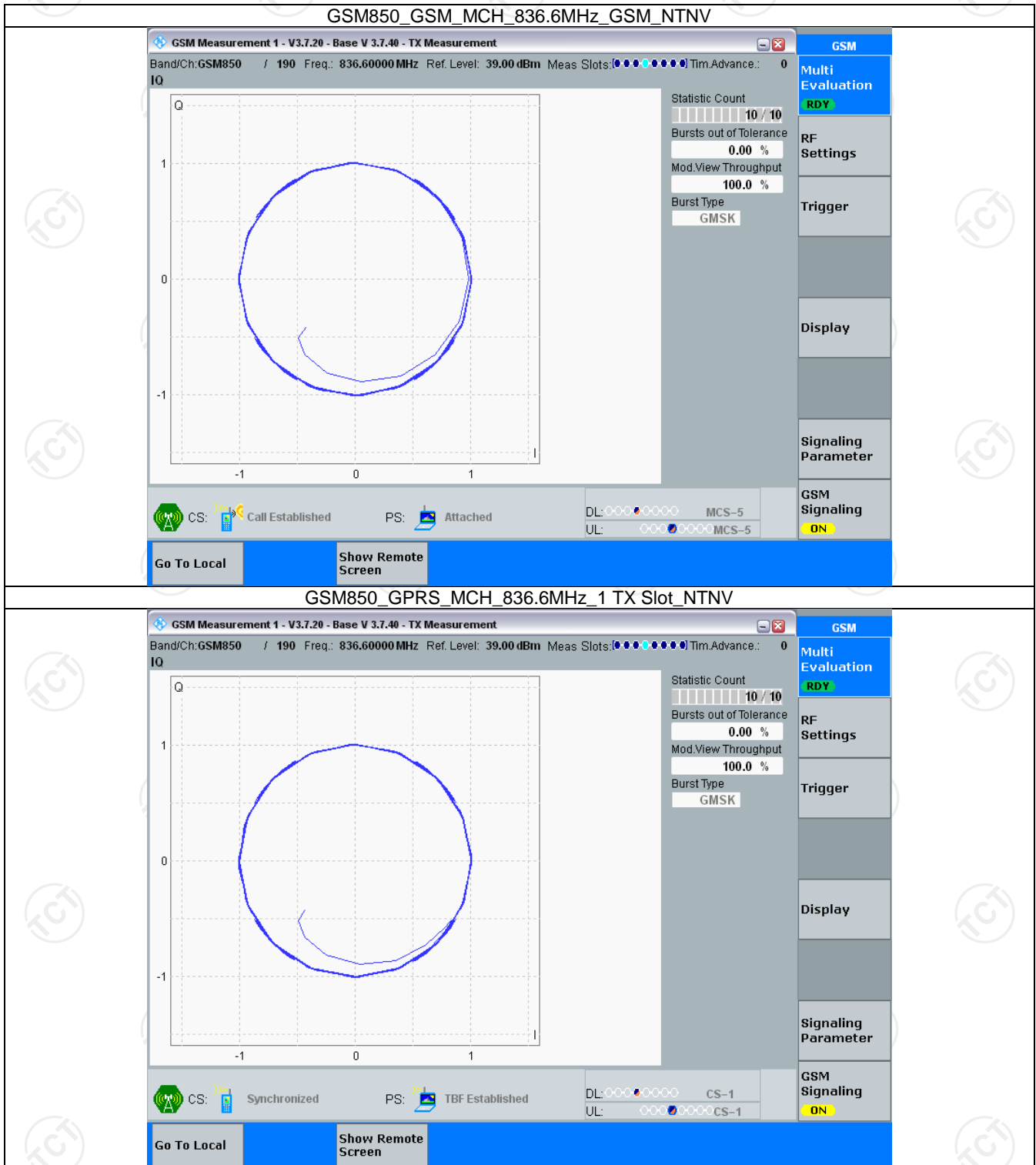
3.1 Test Result

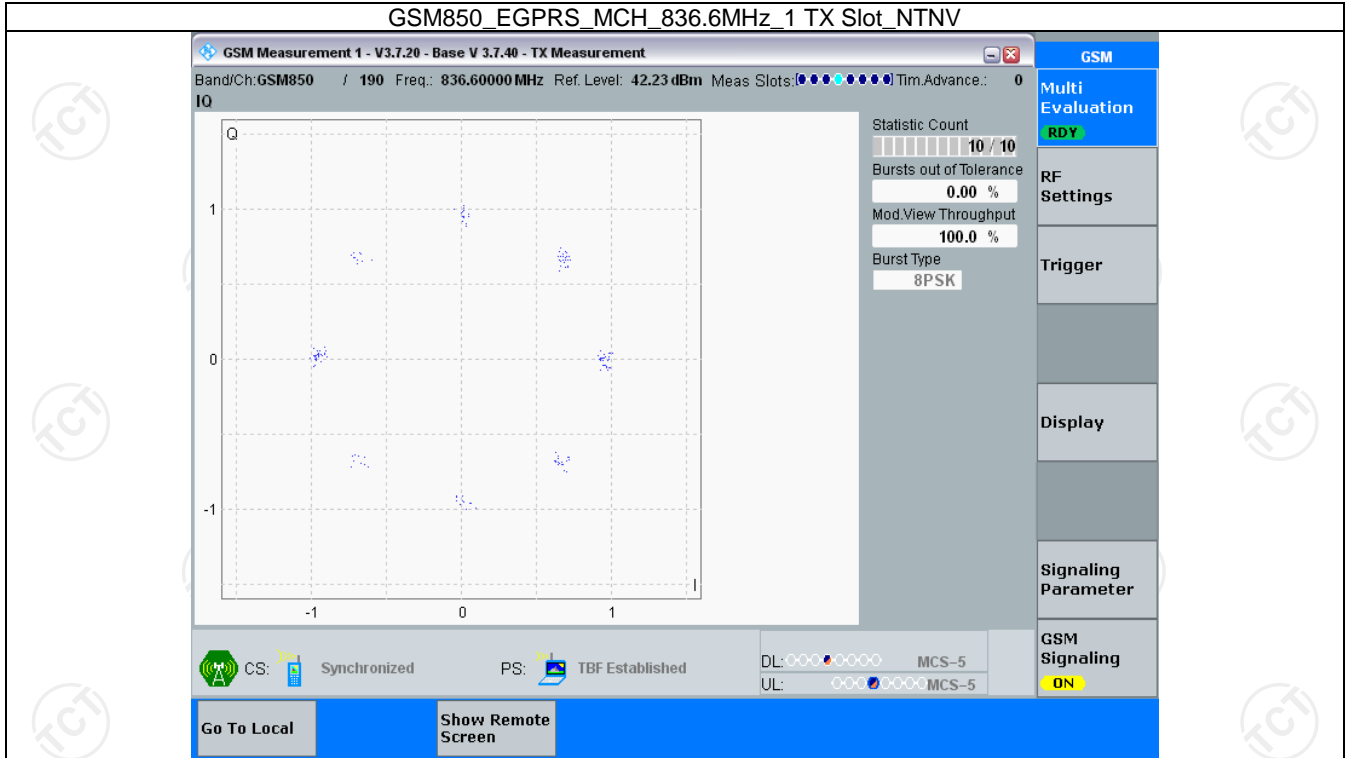
3.1.1 GSM850

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

3.2 Test Graph

3.2.1 GSM850





4. 99% & 26dB Bandwidth

4.1 Test Result

4.1.1 GSM850_OBW

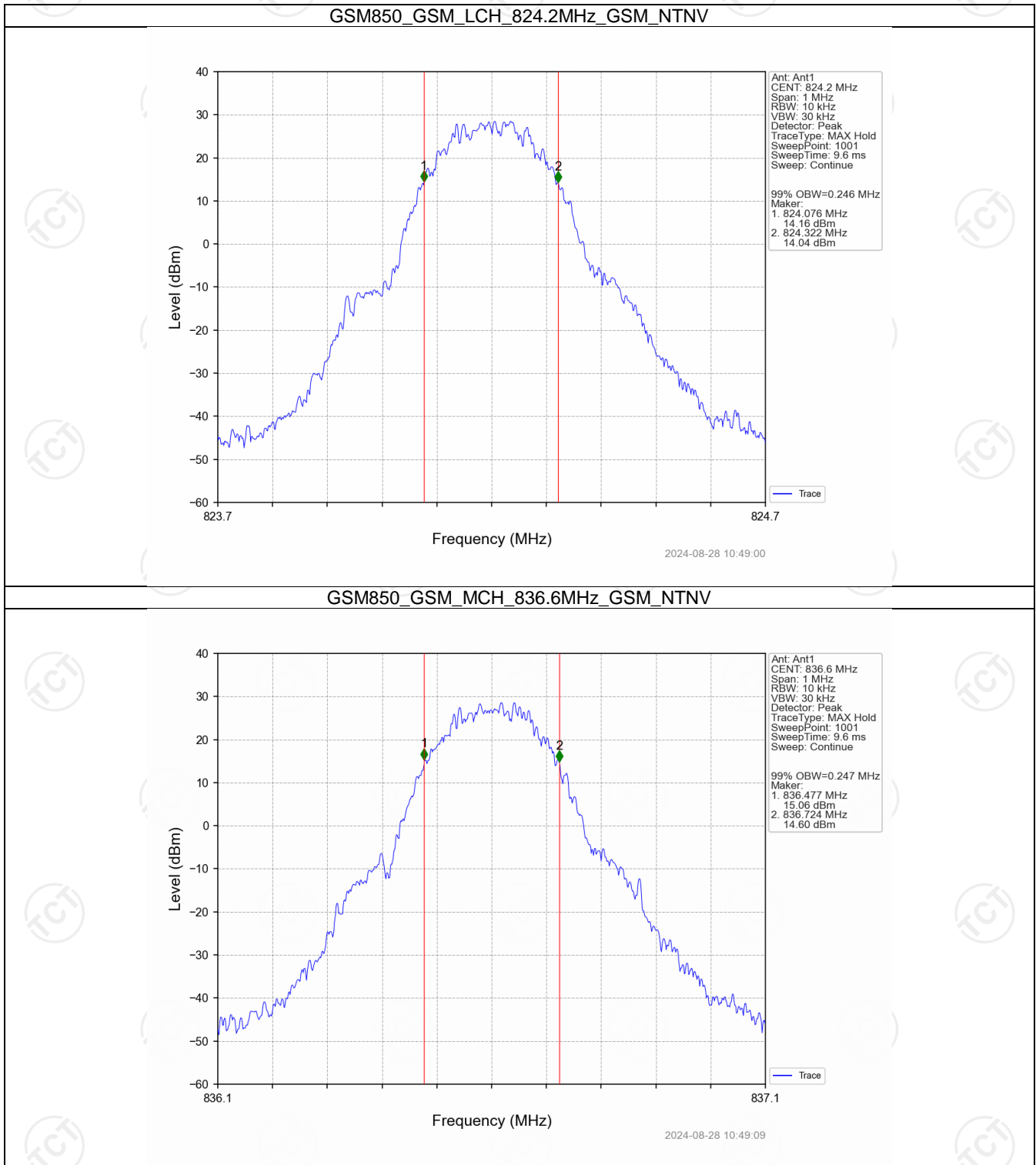
Band: GSM850						
ENV	Mode		Frequency (MHz)	99% Occupied Bandwidth (MHz)		Verdict
	Network	Subset		Result	Limit	
NTNV	GSM	GSM	824.2	0.246	/	Pass
			836.6	0.247	/	Pass
			848.8	0.246	/	Pass
	GPRS	1 TX Slot	824.2	0.248	/	Pass
			836.6	0.243	/	Pass
			848.8	0.244	/	Pass
	EGPRS	1 TX Slot	824.2	0.244	/	Pass
			836.6	0.231	/	Pass
			848.8	0.243	/	Pass

4.1.2 GSM850_XDB

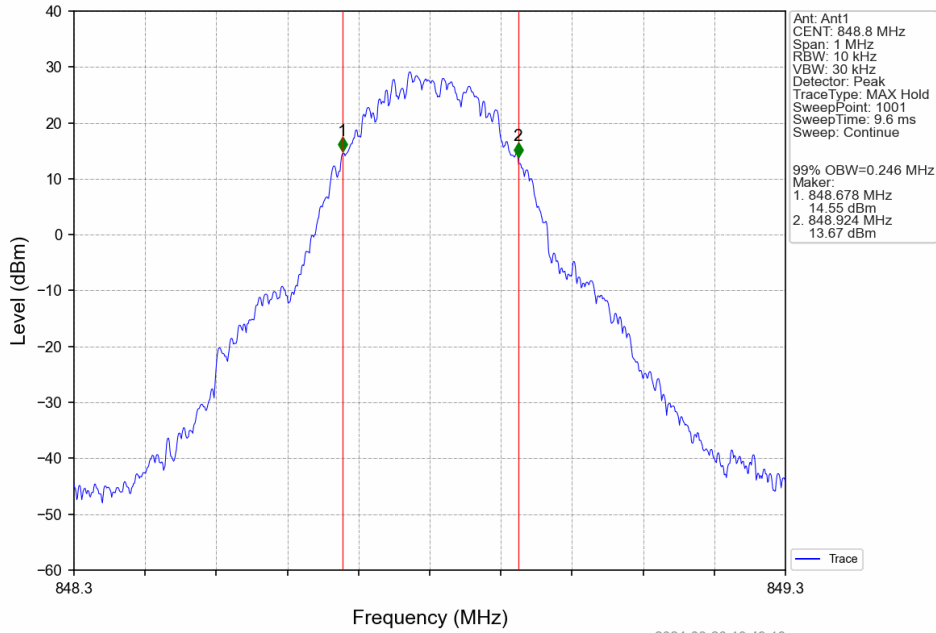
Band: GSM850						
ENV	Mode		Frequency (MHz)	26dB Bandwidth (MHz)		Verdict
	Network	Subset		Result	Limit	
NTNV	GSM	GSM	824.2	0.319	/	Pass
			836.6	0.319	/	Pass
			848.8	0.313	/	Pass
	GPRS	1 TX Slot	824.2	0.317	/	Pass
			836.6	0.319	/	Pass
			848.8	0.306	/	Pass
	EGPRS	1 TX Slot	824.2	0.308	/	Pass
			836.6	0.290	/	Pass
			848.8	0.279	/	Pass

4.2 Test Graph

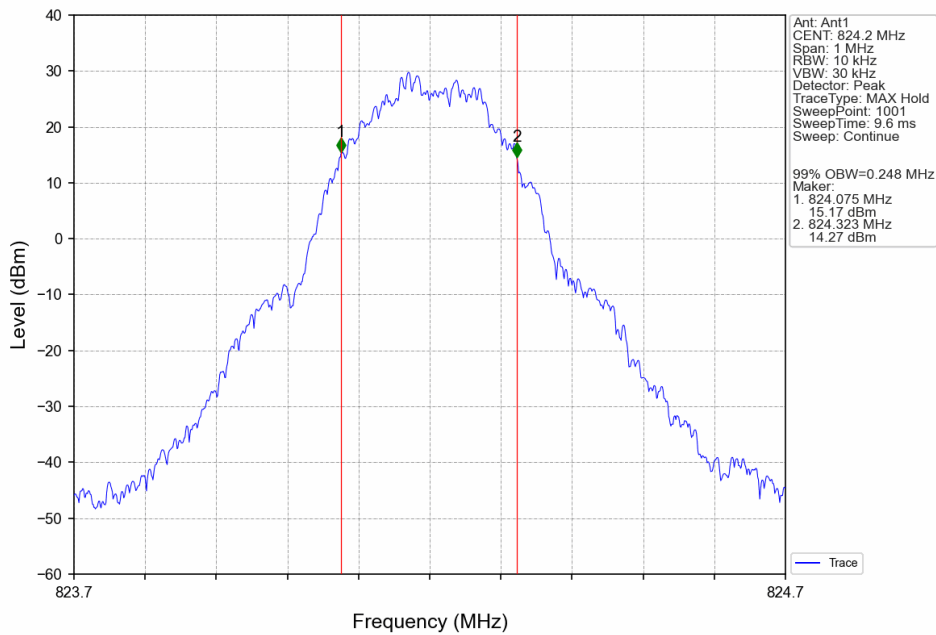
4.2.1 GSM850_OBW



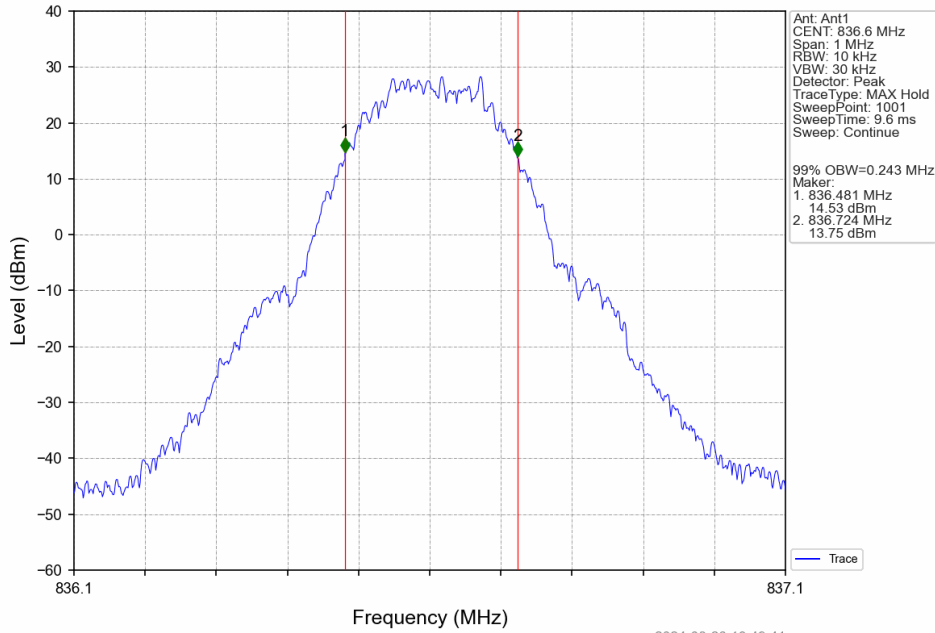
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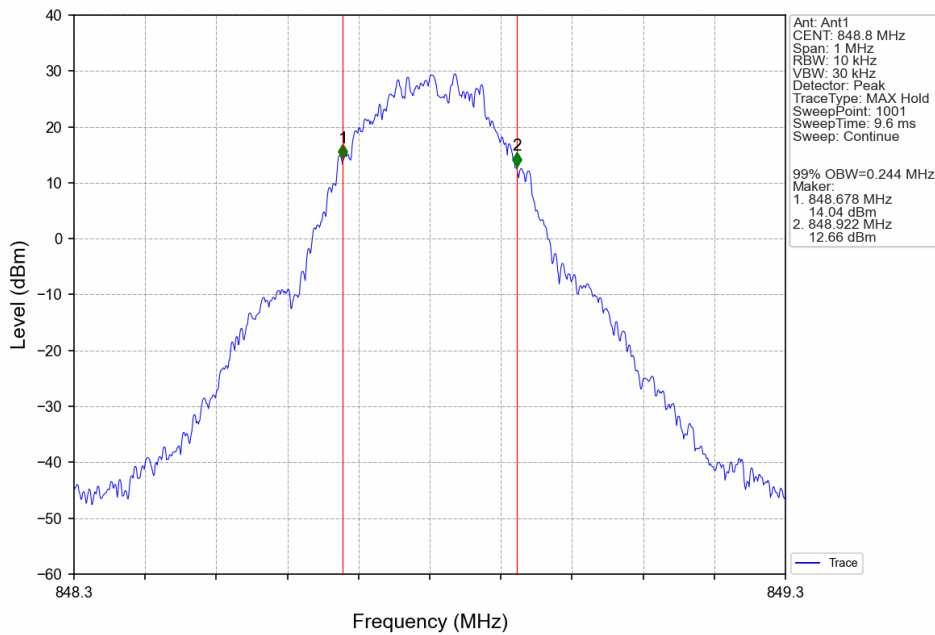
GSM850_GPRS_LCH_824.2MHz_1 TX Slot_NTNV



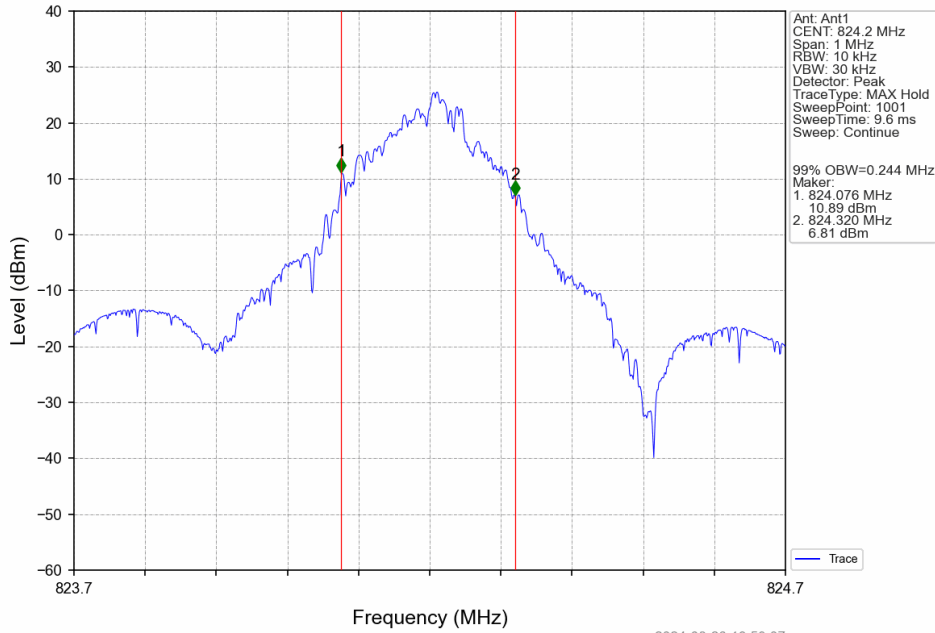
GSM850_GPRS_MCH_836.6MHz_1 TX Slot_NTNV



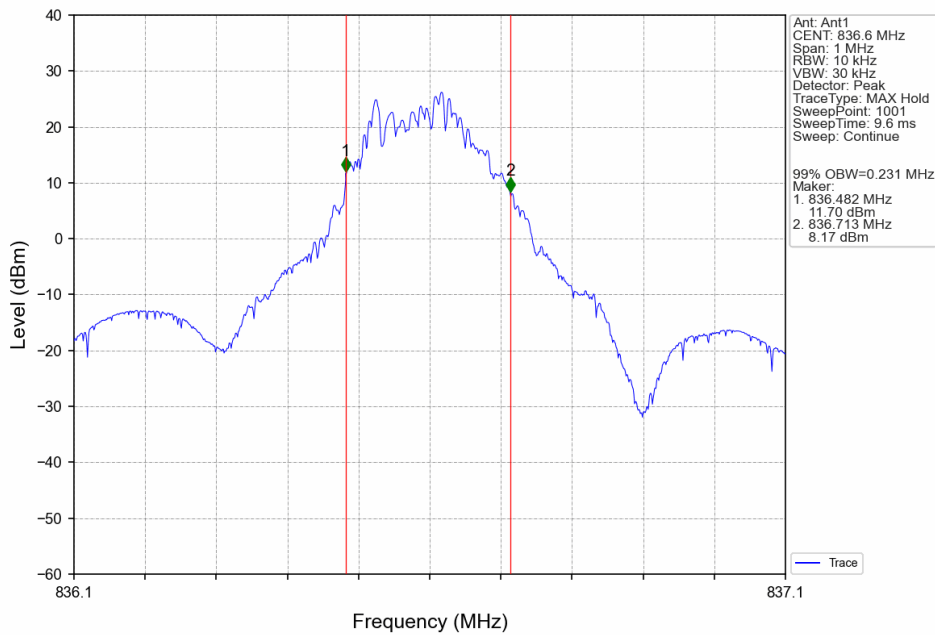
GSM850_GPRS_HCH_848.8MHz_1 TX Slot_NTNV

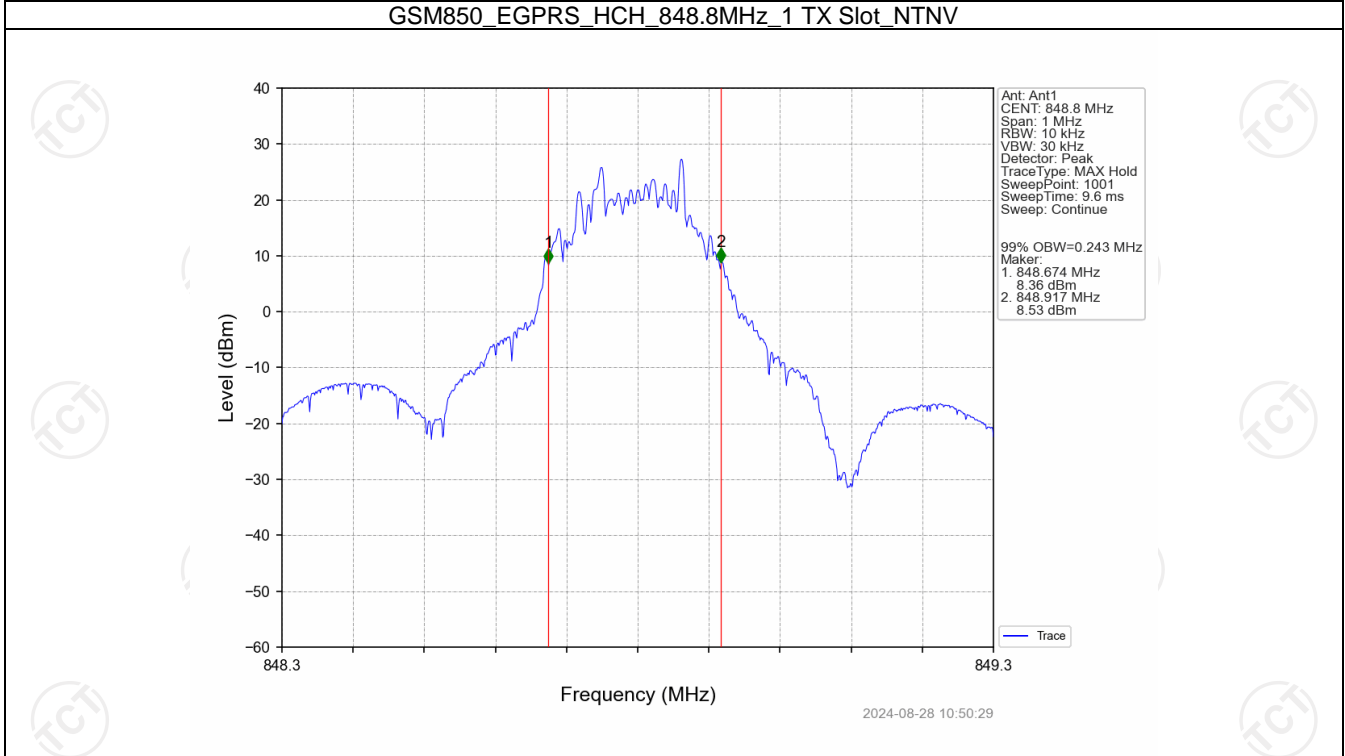


GSM850_EGPRS_LCH_824.2MHz_1 TX Slot_NTNV

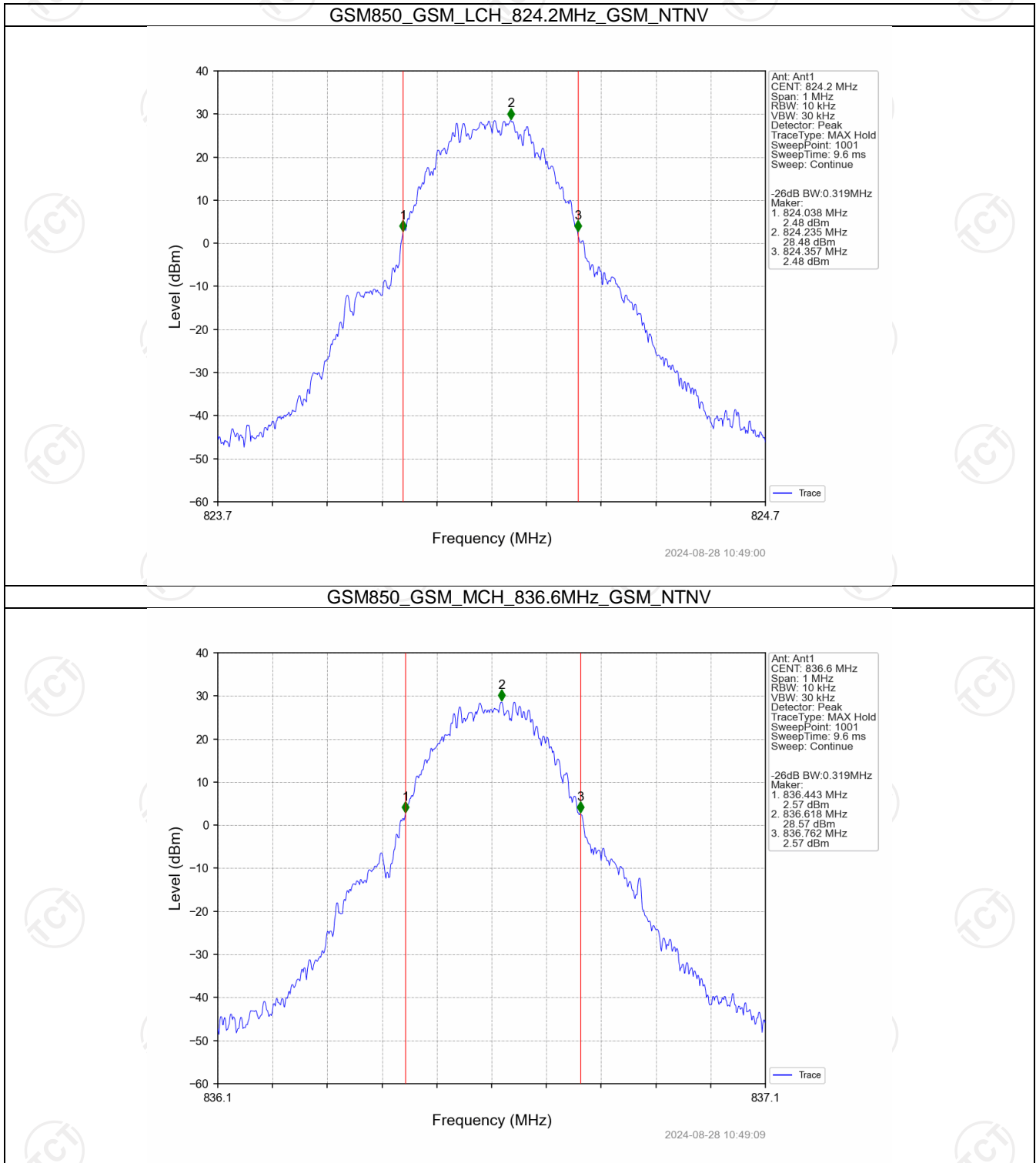


GSM850_EGPRS_MCH_836.6MHz_1 TX Slot_NTNV

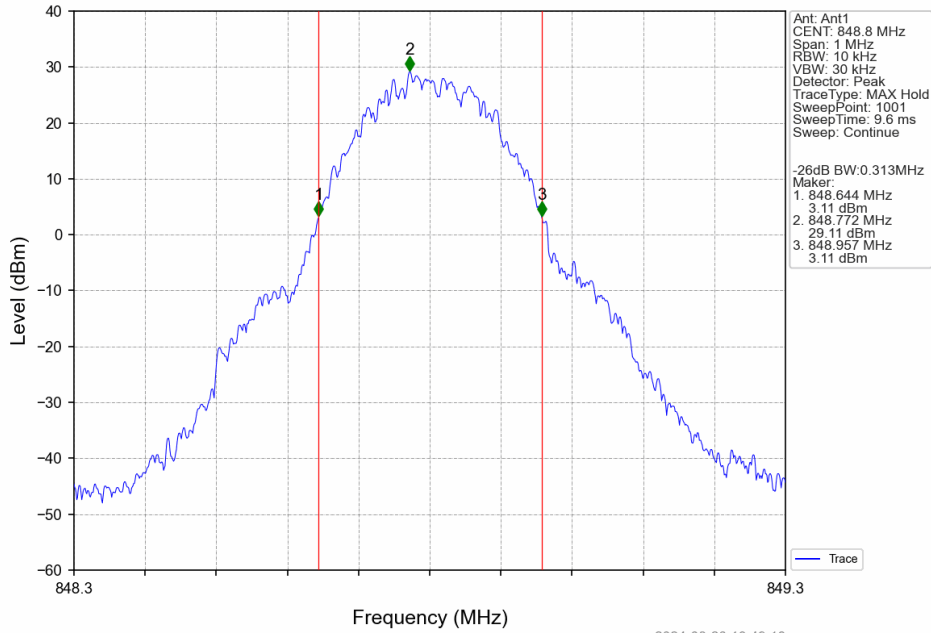




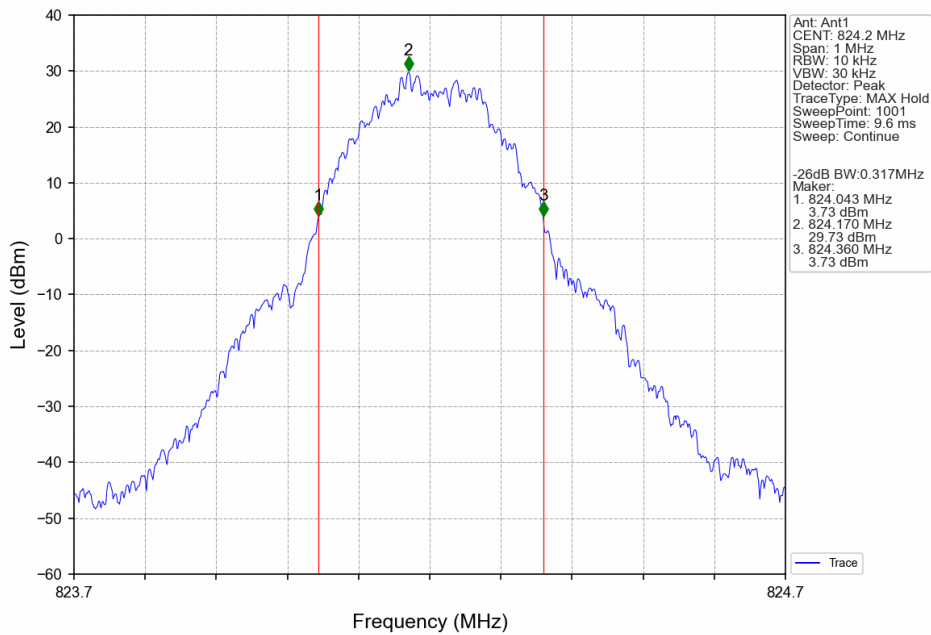
4.2.2 GSM850_XDB



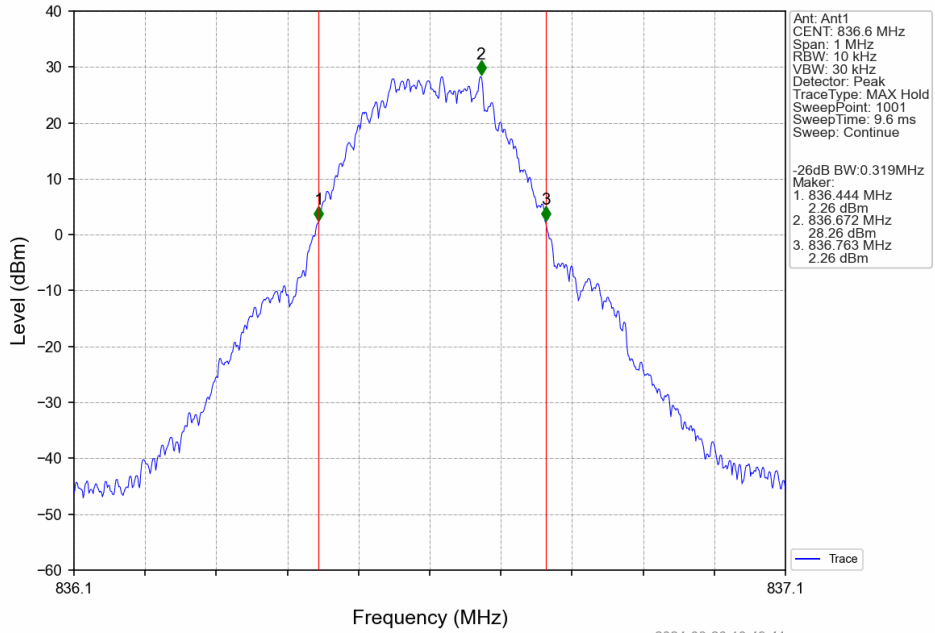
GSM850_GSM_HCH_848.8MHz_GSM_NTNV



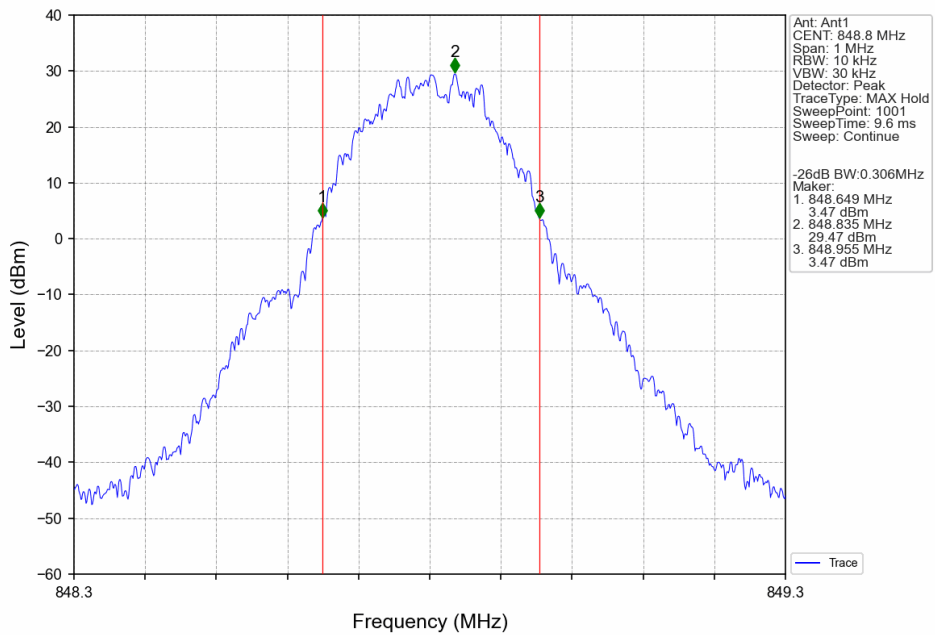
GSM850_GPRS_LCH_824.2MHz_1 TX Slot_NTNV



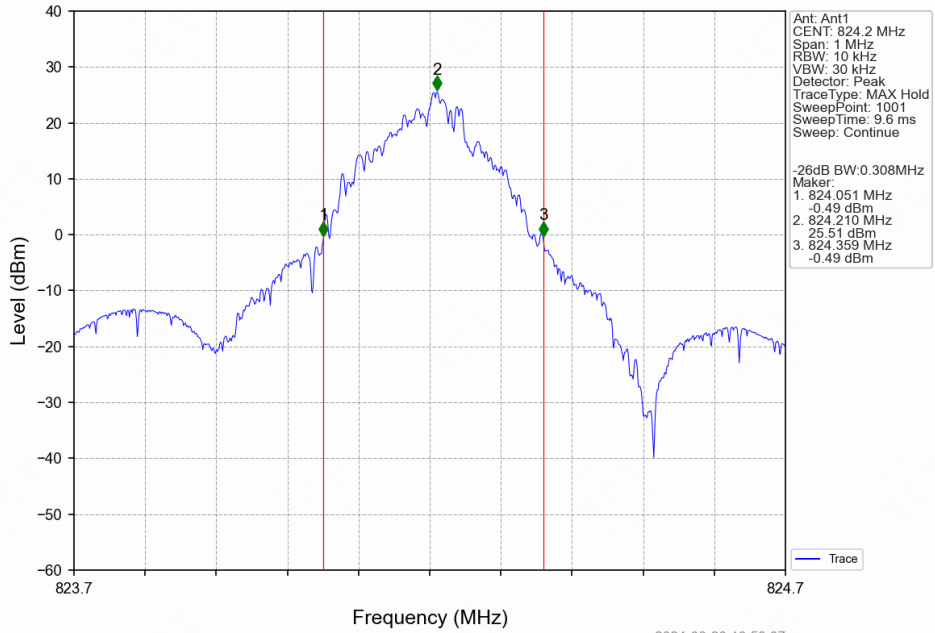
GSM850_GPRS_MCH_836.6MHz_1 TX Slot_NTNV



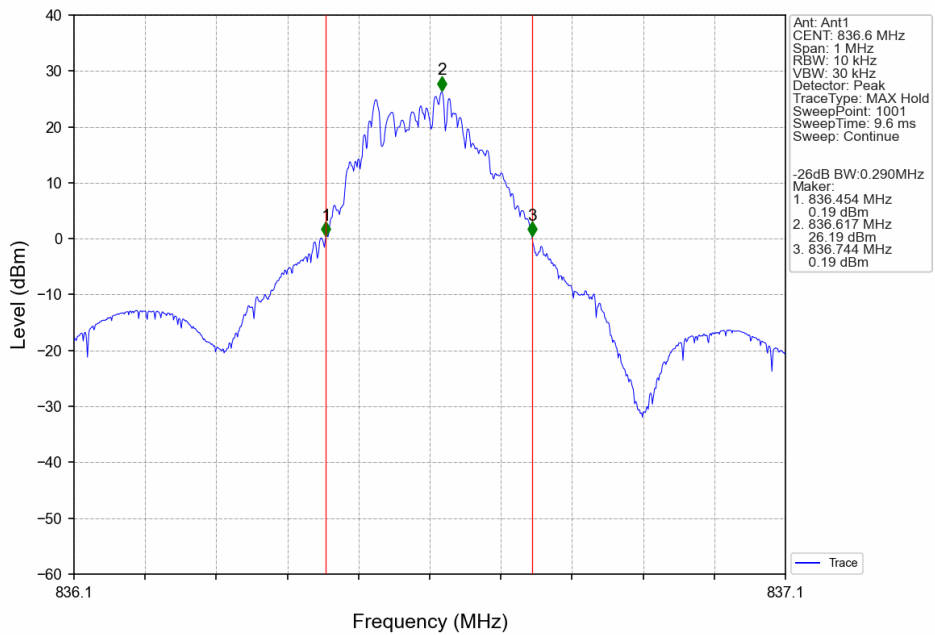
GSM850_GPRS_HCH_848.8MHz_1 TX Slot_NTNV

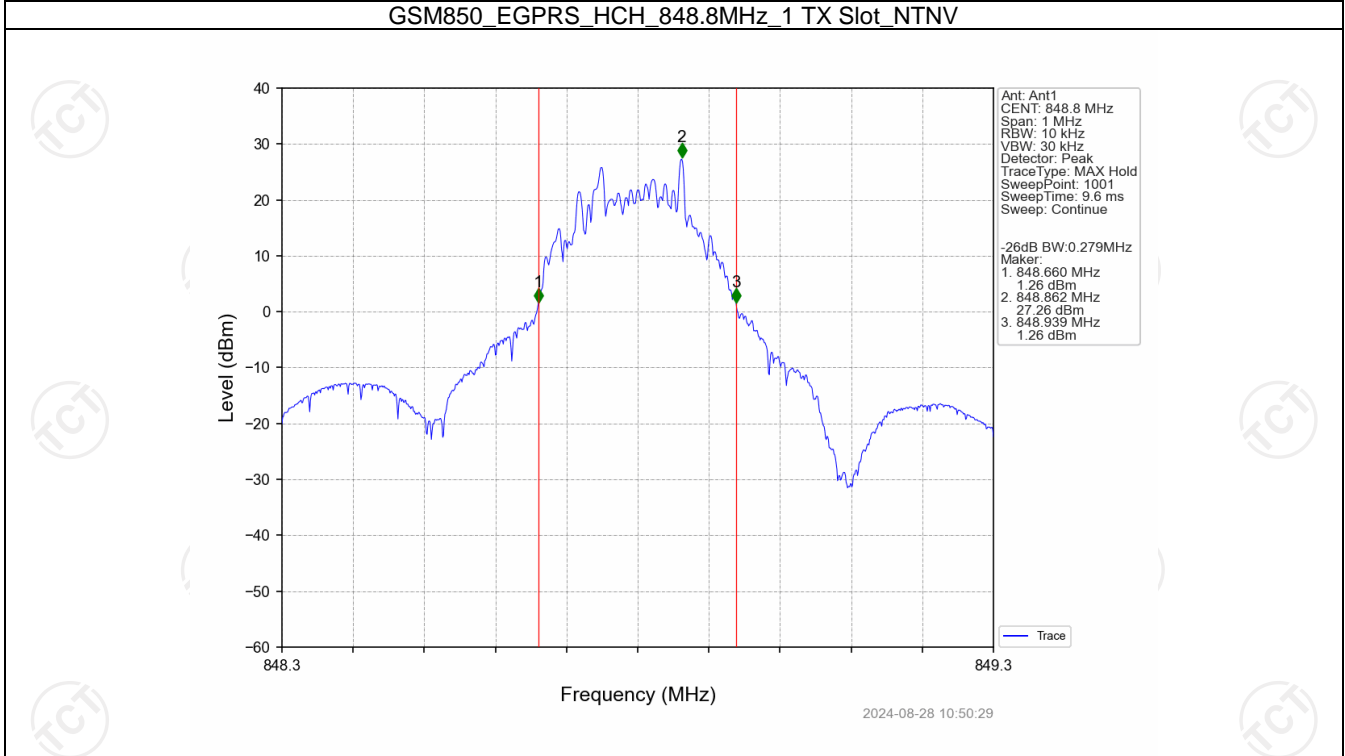


GSM850_EGPRS_LCH_824.2MHz_1 TX Slot_NTNV



GSM850_EGPRS_MCH_836.6MHz_1 TX Slot_NTNV





5. Peak-Average Ratio

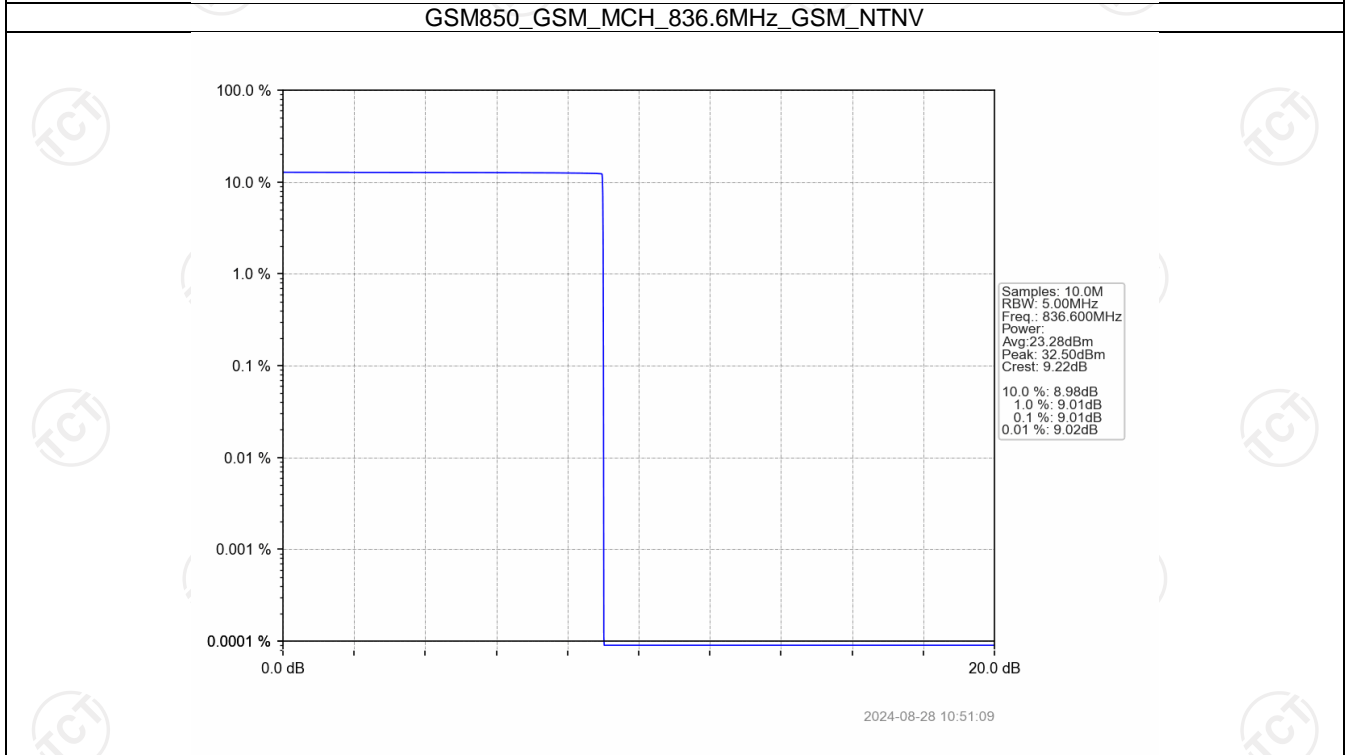
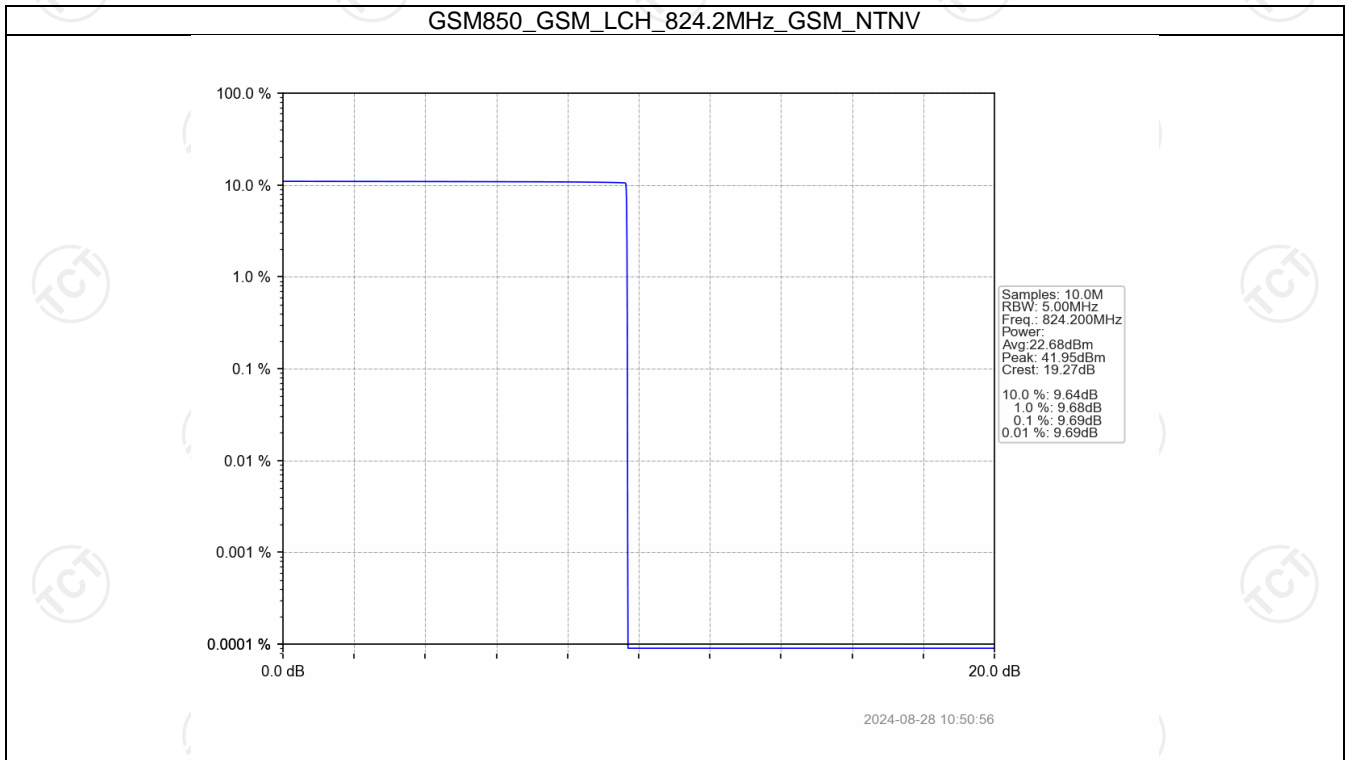
5.1 Test Result

5.1.1 GSM850

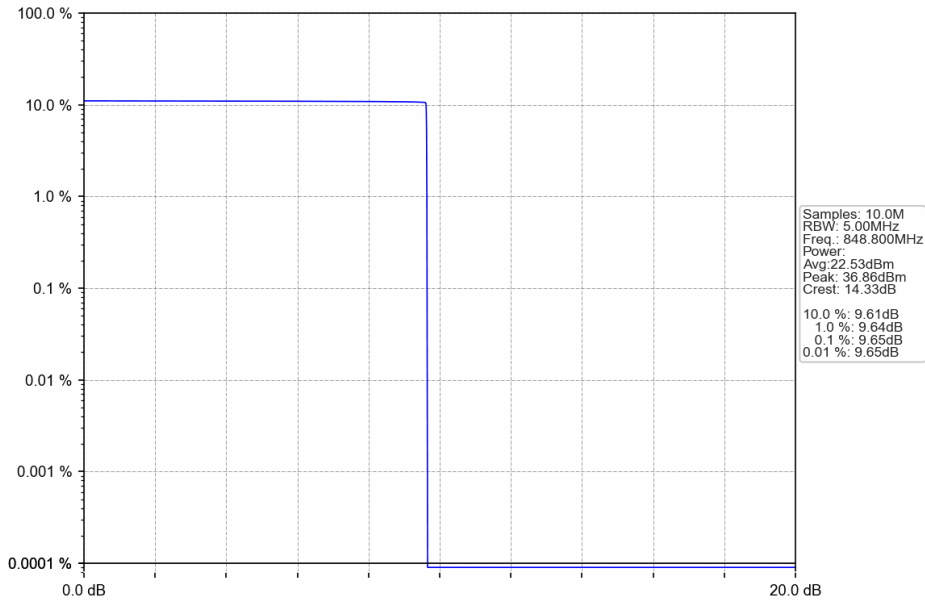
Band: GSM850						
ENV	Mode		Frequency (MHz)	Peak-Average Ratio (dB)		Verdict
	Network	Subset		Result	Limit	
NTNV	GSM	GSM	824.2	9.69	<=13	Pass
			836.6	9.01	<=13	Pass
			848.8	9.65	<=13	Pass
	GPRS	4 TX Slots	824.2	3.64	<=13	Pass
			836.6	3.66	<=13	Pass
			848.8	3.60	<=13	Pass
	EGPRS	4 TX Slots	824.2	6.88	<=13	Pass
			836.6	9.45	<=13	Pass
			848.8	9.15	<=13	Pass

5.2 Test Graph

5.2.1 GSM850

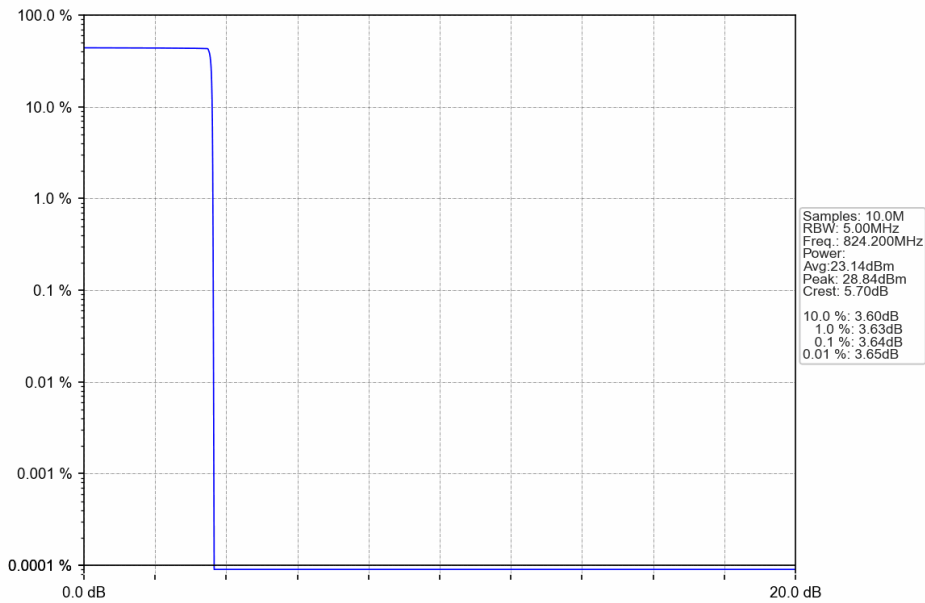


GSM850_GSM_HCH_848.8MHz_GSM_NTNV



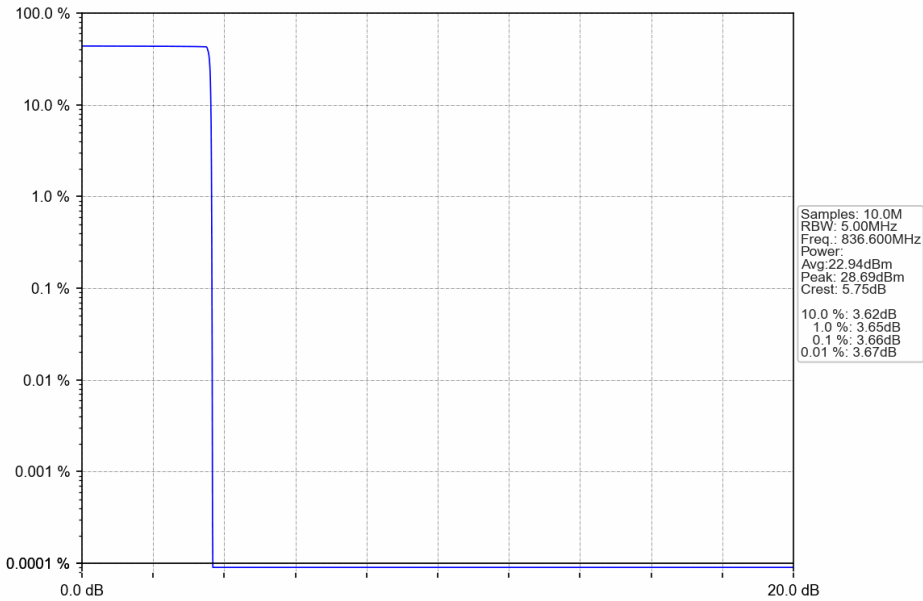
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GSM850_GPRS_LCH_824.2MHz_4 TX Slots_NTNV



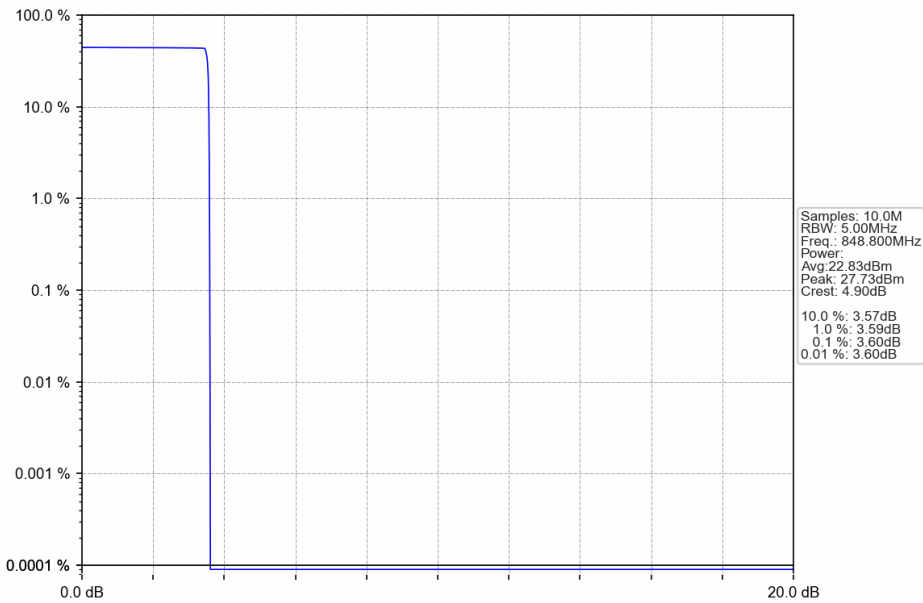
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GSM850_GPRS_MCH_836.6MHz_4 TX Slots_NTNV



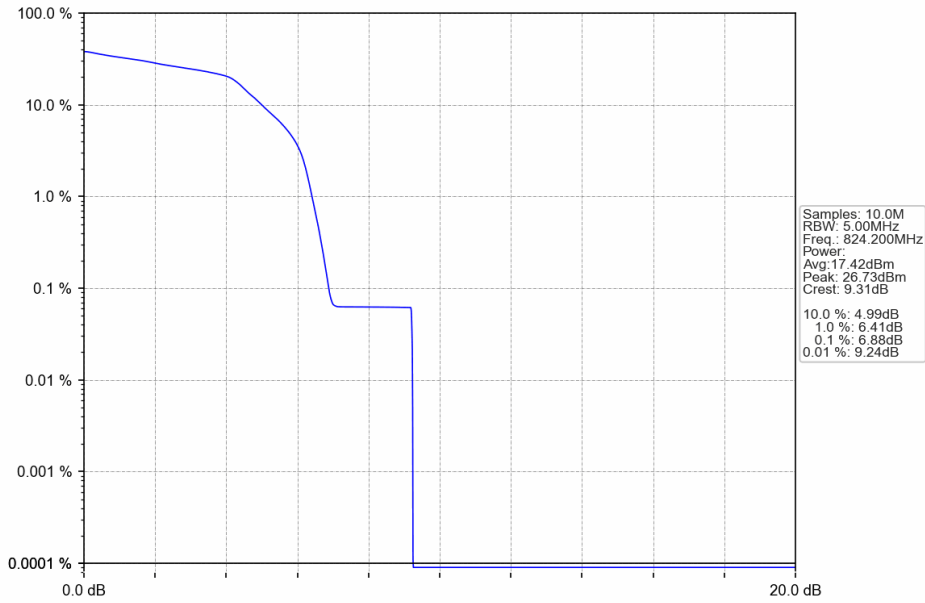
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GSM850_GPRS_HCH_848.8MHz_4 TX Slots_NTNV



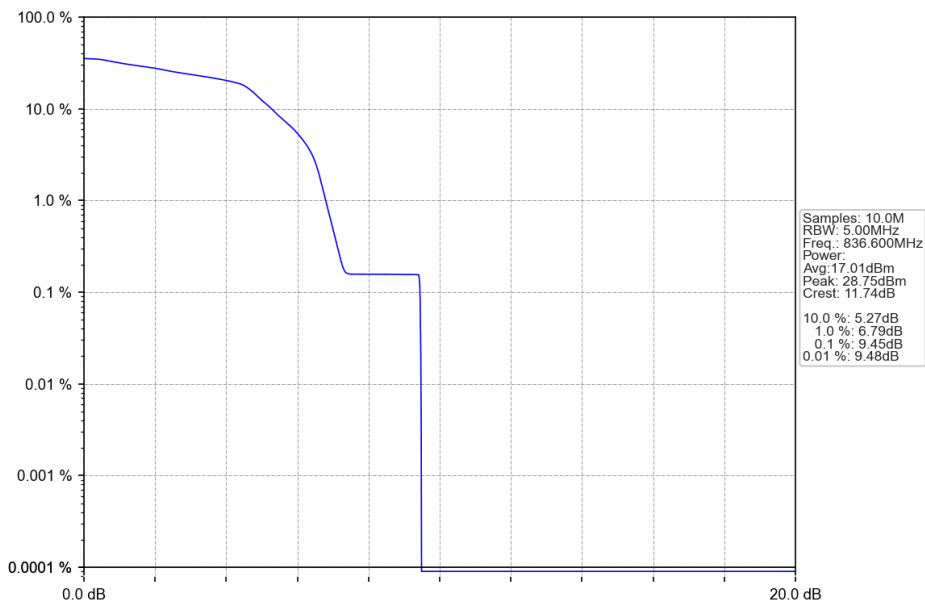
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GSM850_EGPRS_LCH_824.2MHz_4 TX Slots_NTNV



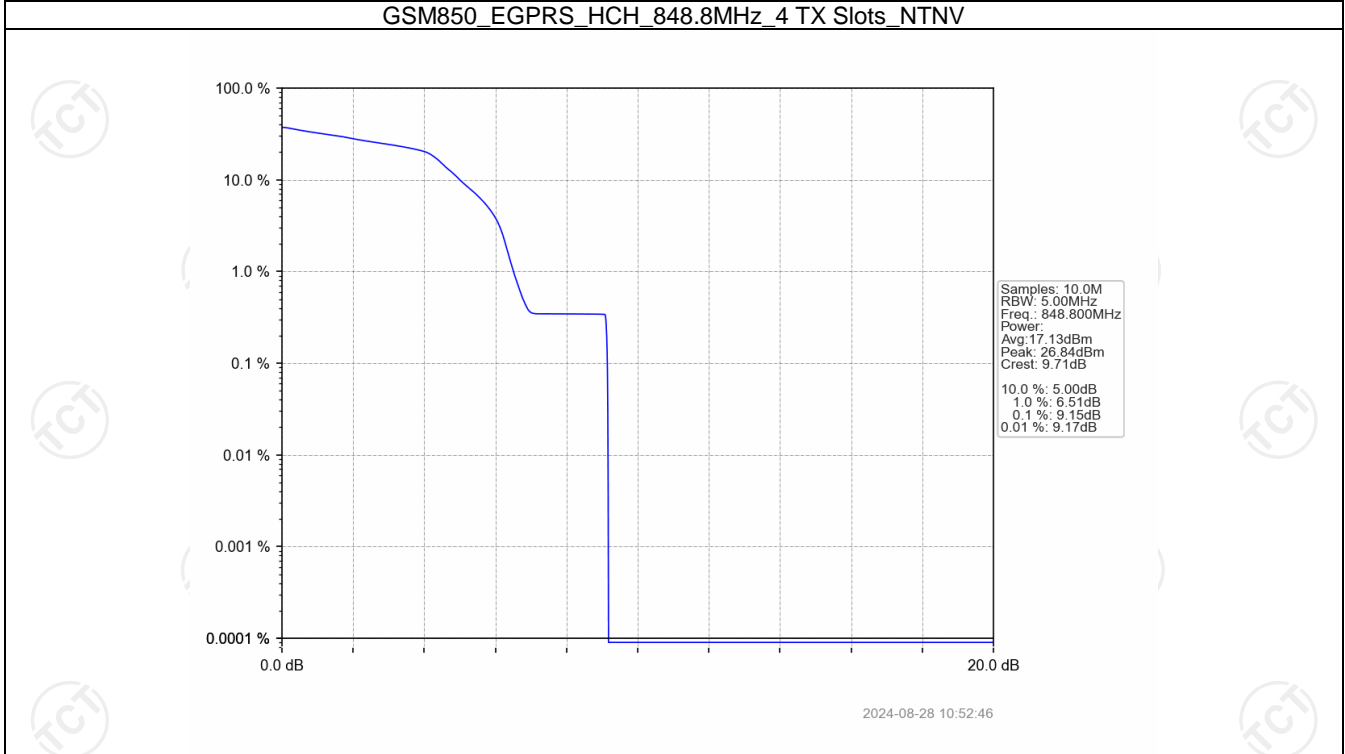
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GSM850_EGPRS_MCH_836.6MHz_4 TX Slots_NTNV



2024-08-28 10:52:32

GSM850_EGPRS_HCH_848.8MHz_4 TX Slots_NTNV



6. Spurious Emission

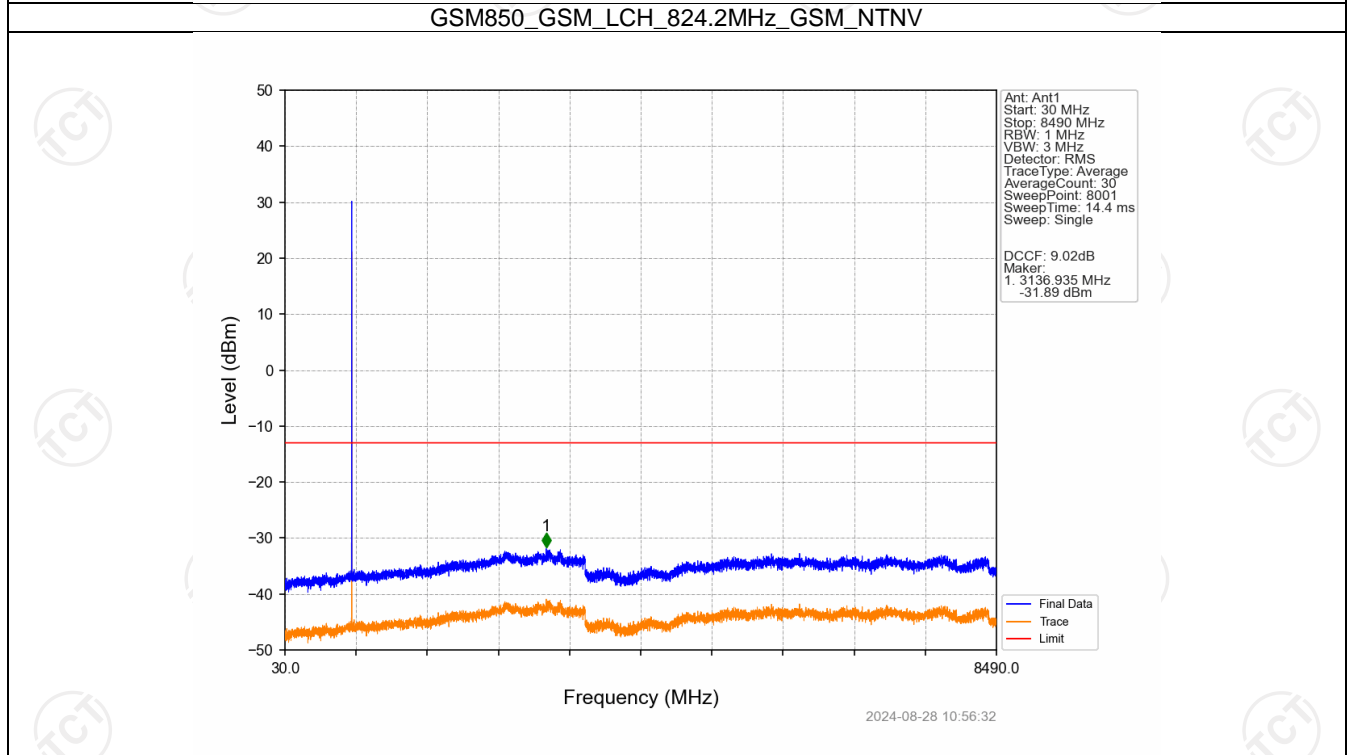
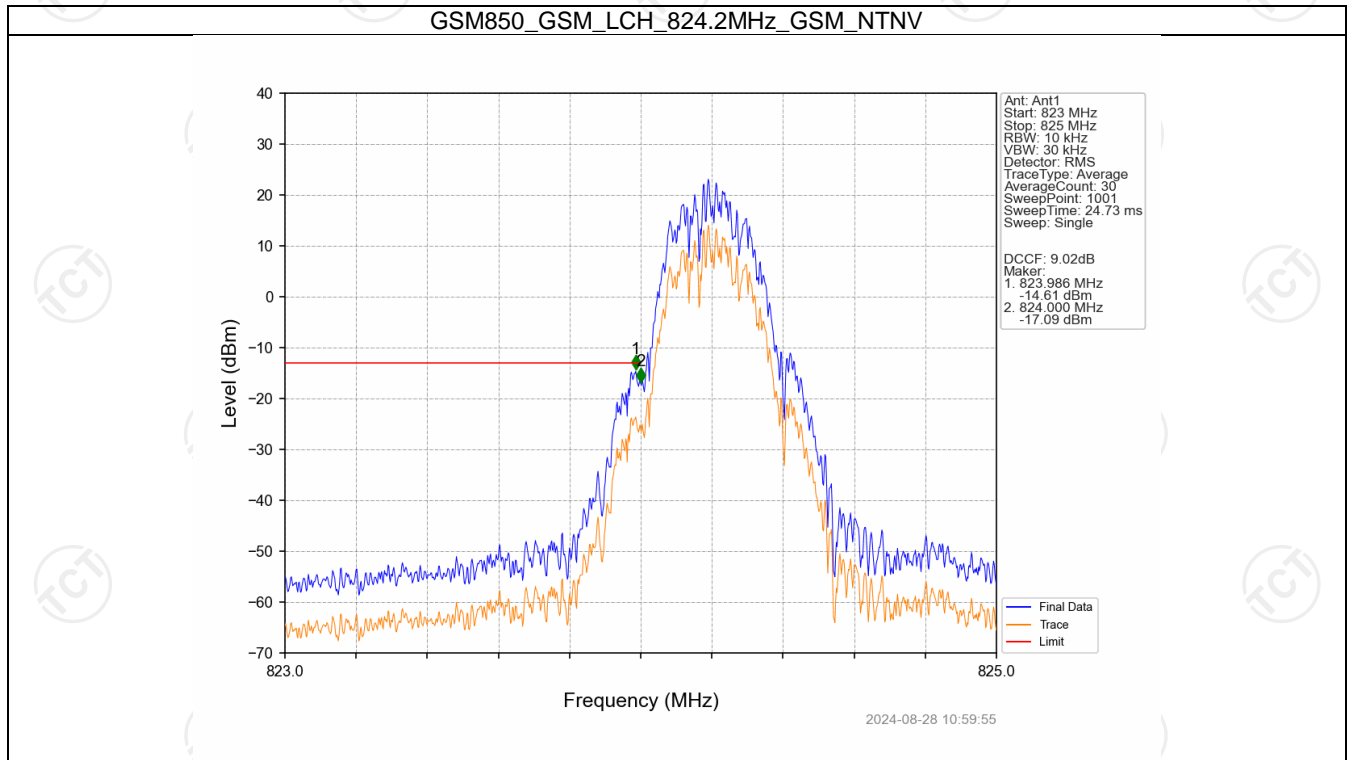
6.1 Test Result

6.1.1 GSM850

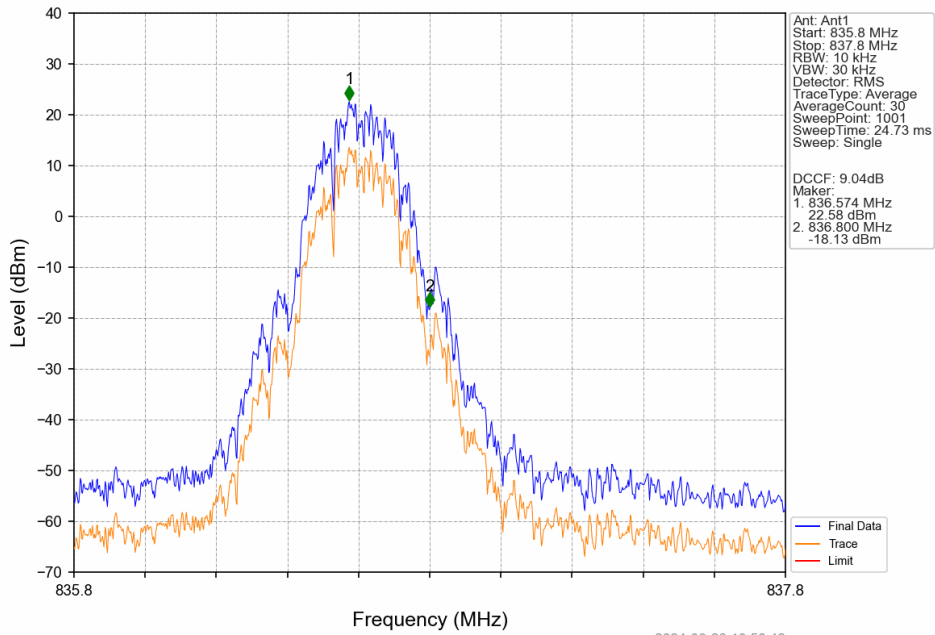
Band: GSM850						
ENV	Mode		Frequency (MHz)	Spurious Emission		Verdict
	Network	Subset		Result	Limit	
NTNV	GSM	GSM	824.2	Refer To Test Graph		Pass
			836.6	Refer To Test Graph		Pass
			848.8	Refer To Test Graph		Pass
	GPRS	1 TX Slot	824.2	Refer To Test Graph		Pass
			836.6	Refer To Test Graph		Pass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

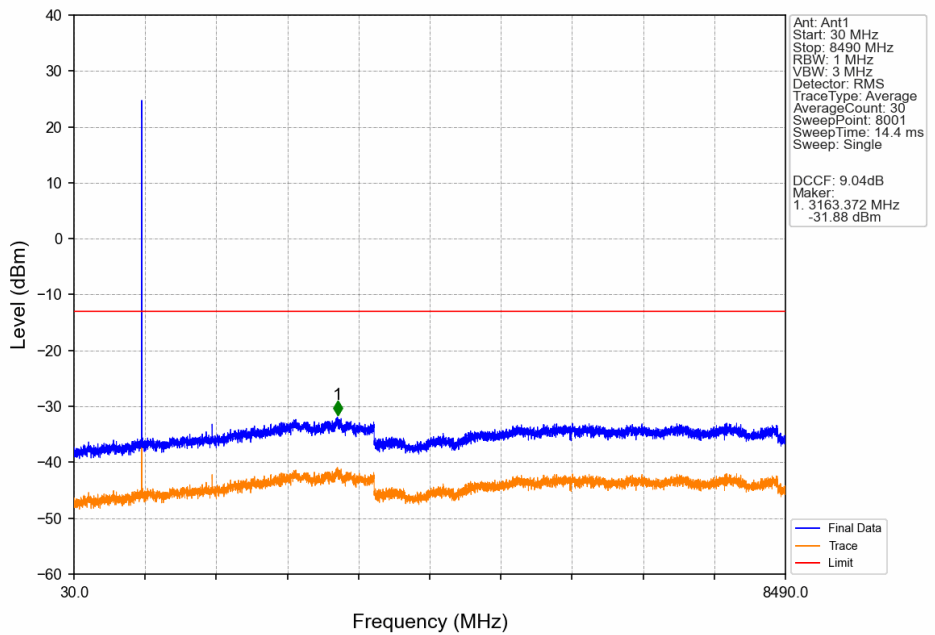
6.2.1 GSM850



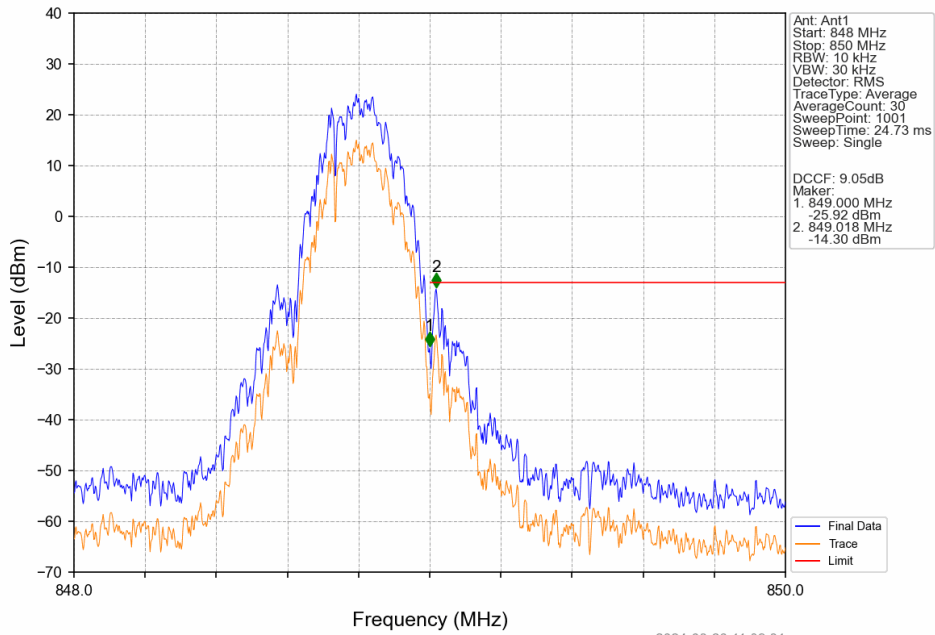
GSM850_GSM_MCH_836.6MHz_GSM_NTNV



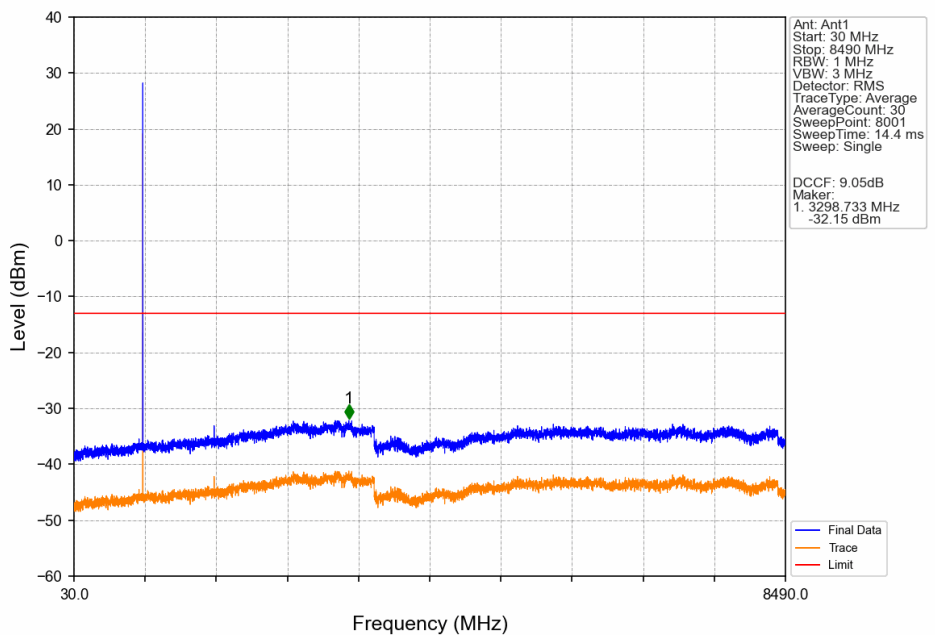
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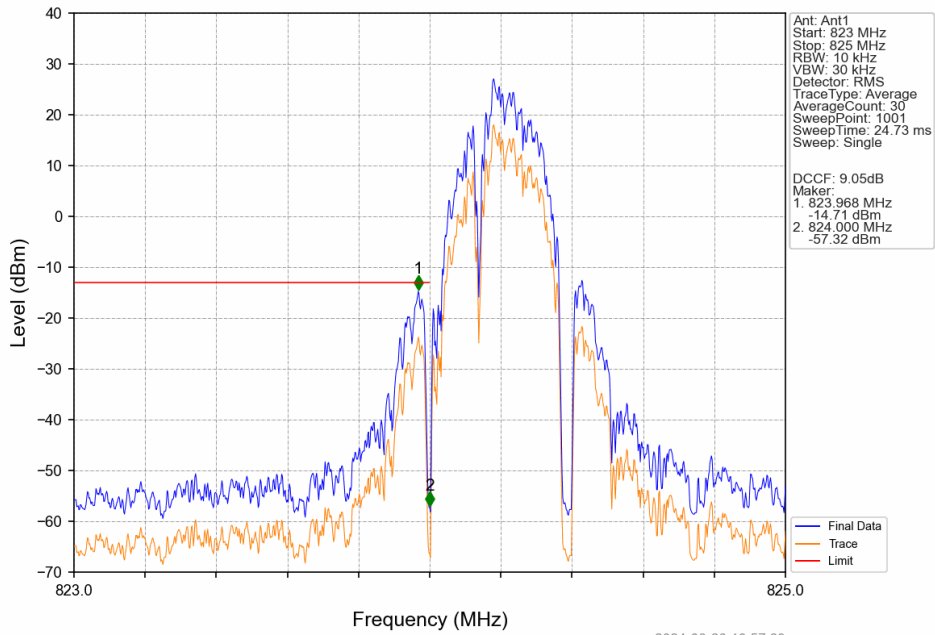
GSM850_GSM_HCH_848.8MHz_GSM_NTNV



GSM850_GSM_HCH_848.8MHz_GSM_NTNV

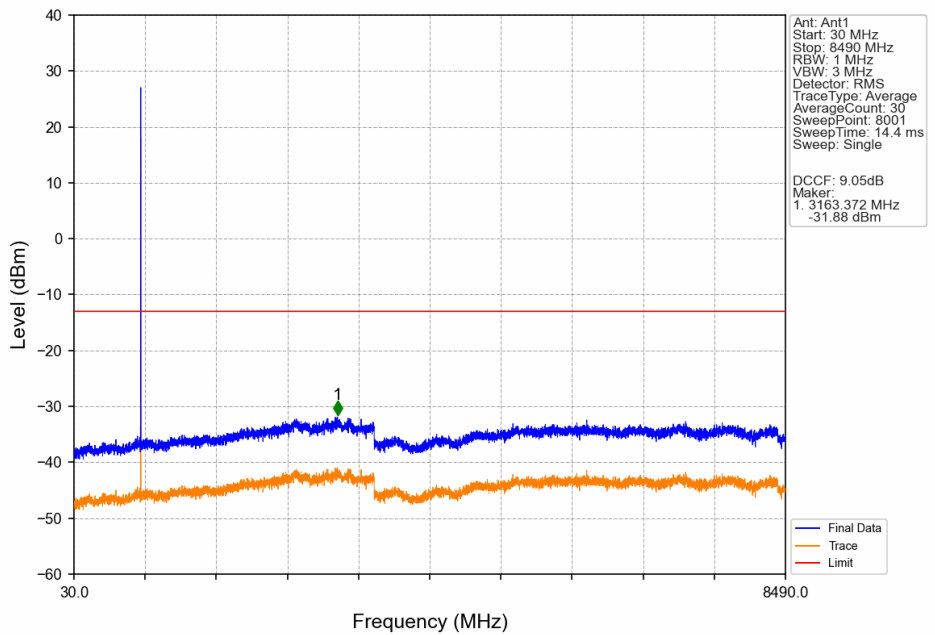


GSM850_GPRS_LCH_824.2MHz_1 TX Slot_NTNV



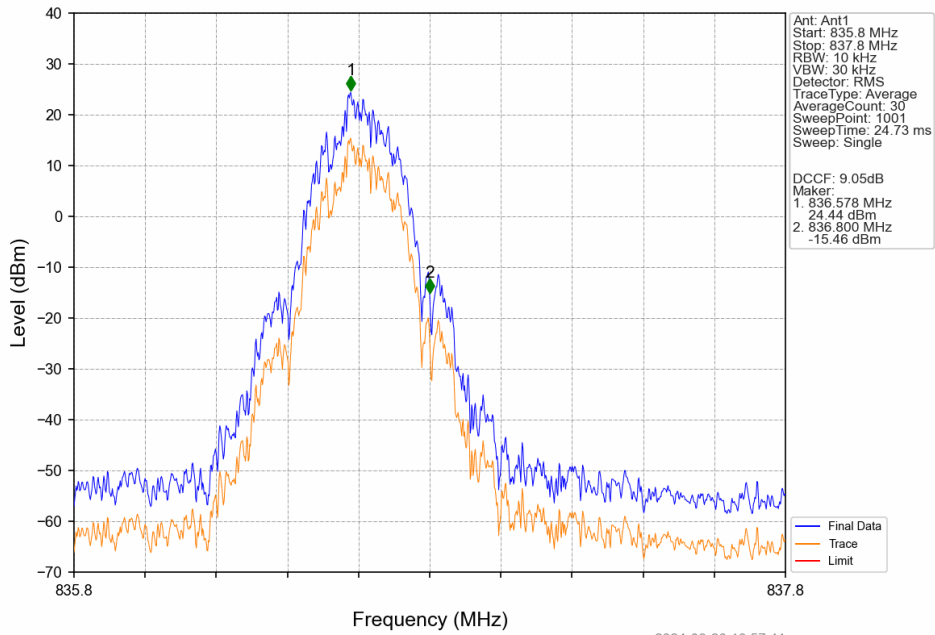
2024-08-28 10:57:23

GSM850_GPRS_LCH_824.2MHz_1 TX Slot_NTNV

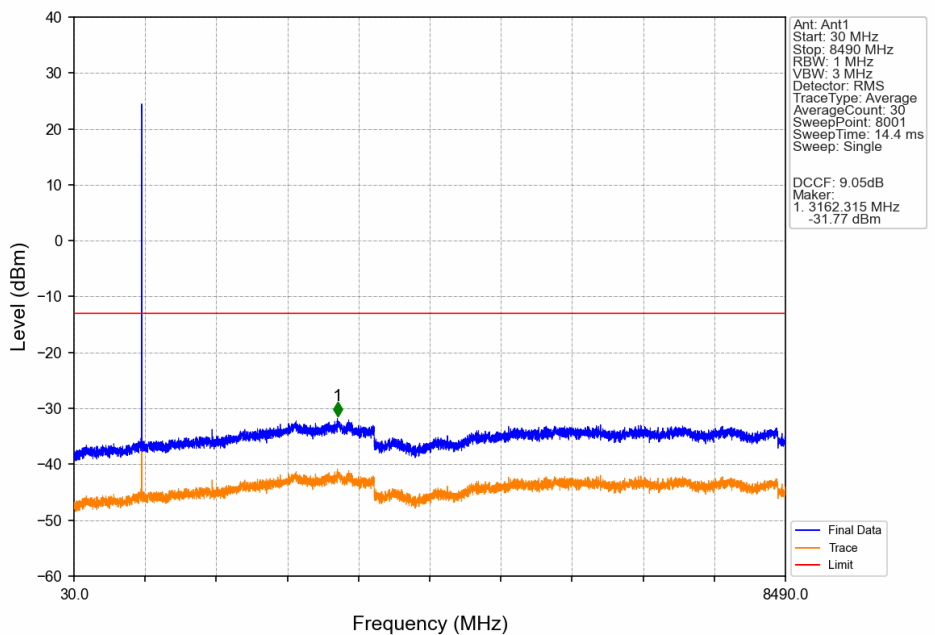


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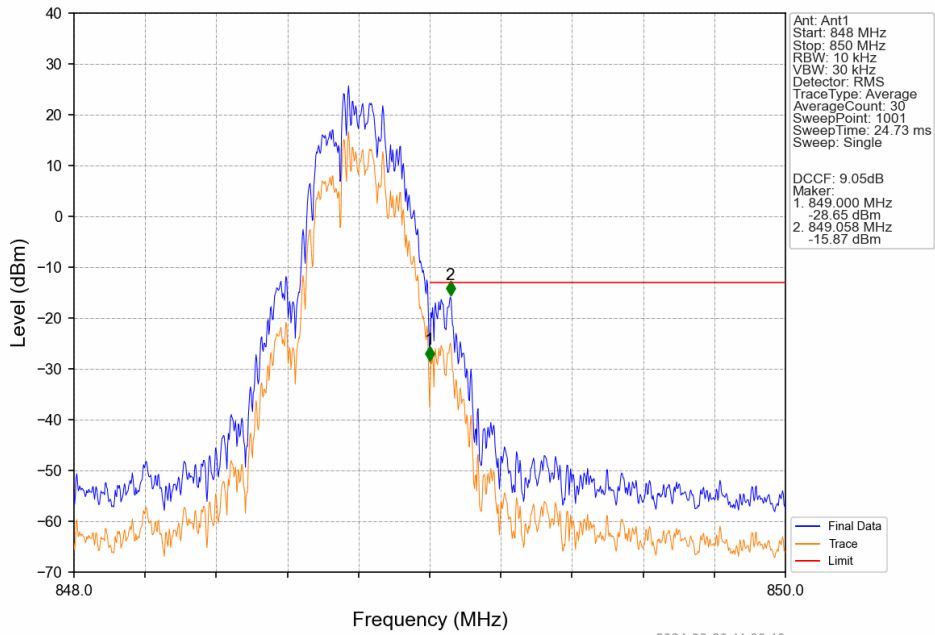
GSM850_GPRS_MCH_836.6MHz_1 TX Slot_NTNV



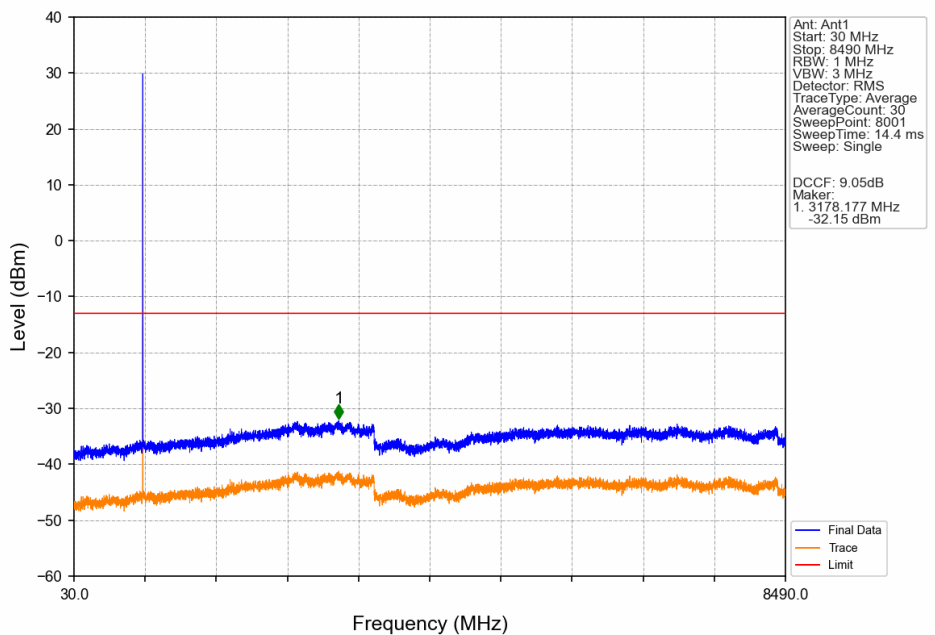
GSM850_GPRS_MCH_836.6MHz_1 TX Slot_NTNV



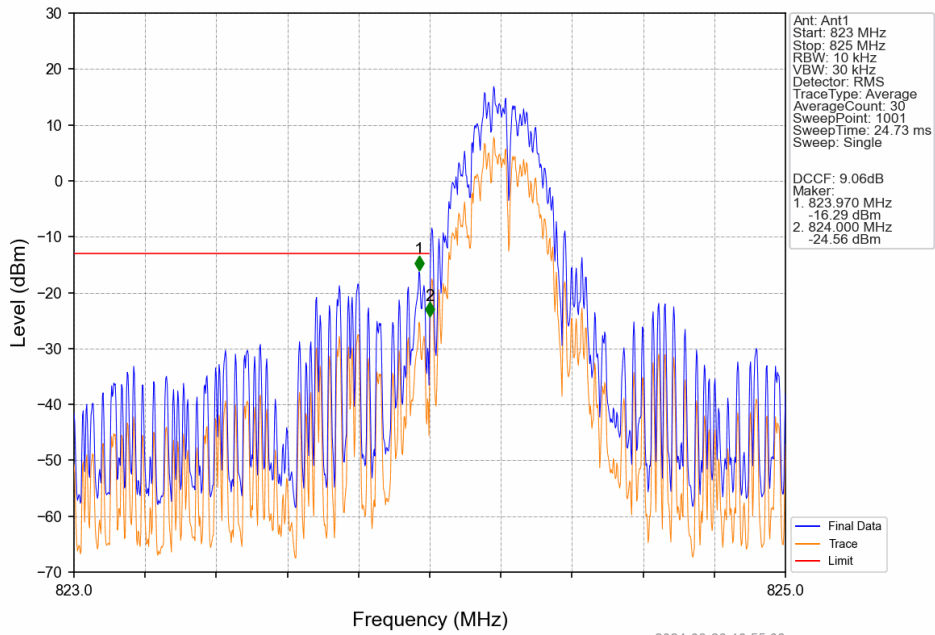
GSM850_GPRS_HCH_848.8MHz_1 TX Slot_NTNV



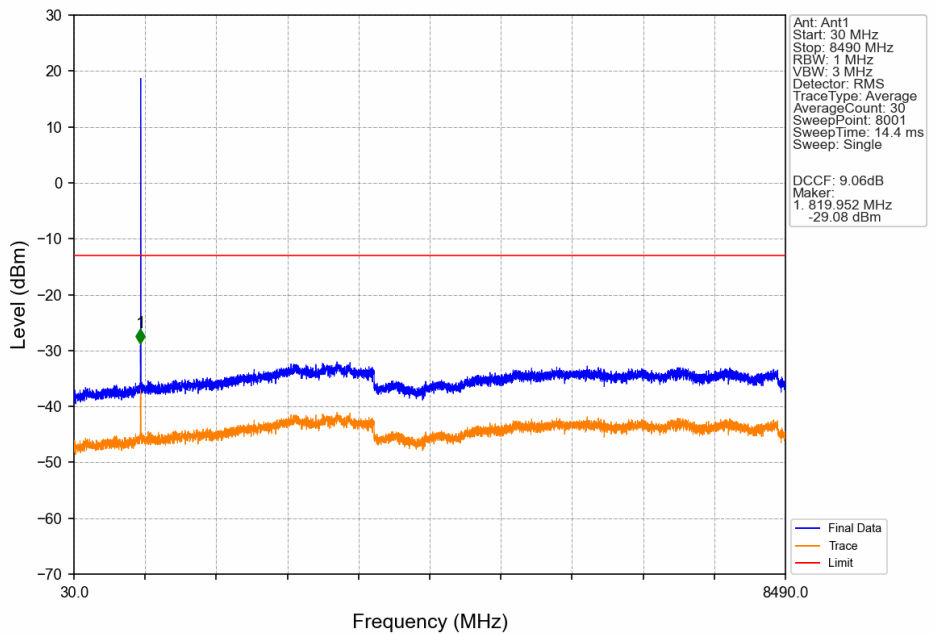
GSM850_GPRS_HCH_848.8MHz_1 TX Slot_NTNV



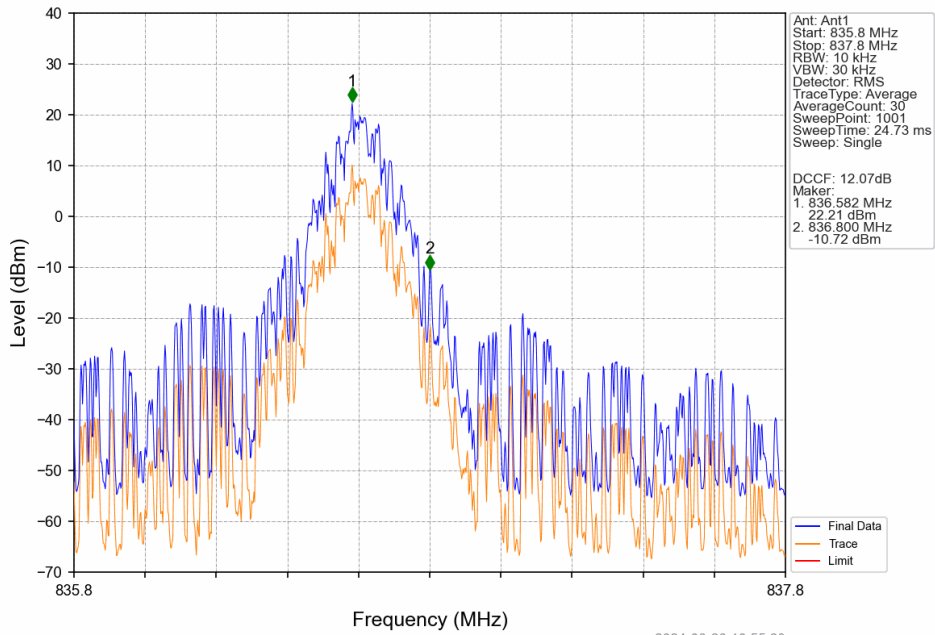
GSM850_EGPRS_LCH_824.2MHz_1 TX Slot_NTNV



GSM850_EGPRS_LCH_824.2MHz_1 TX Slot_NTNV

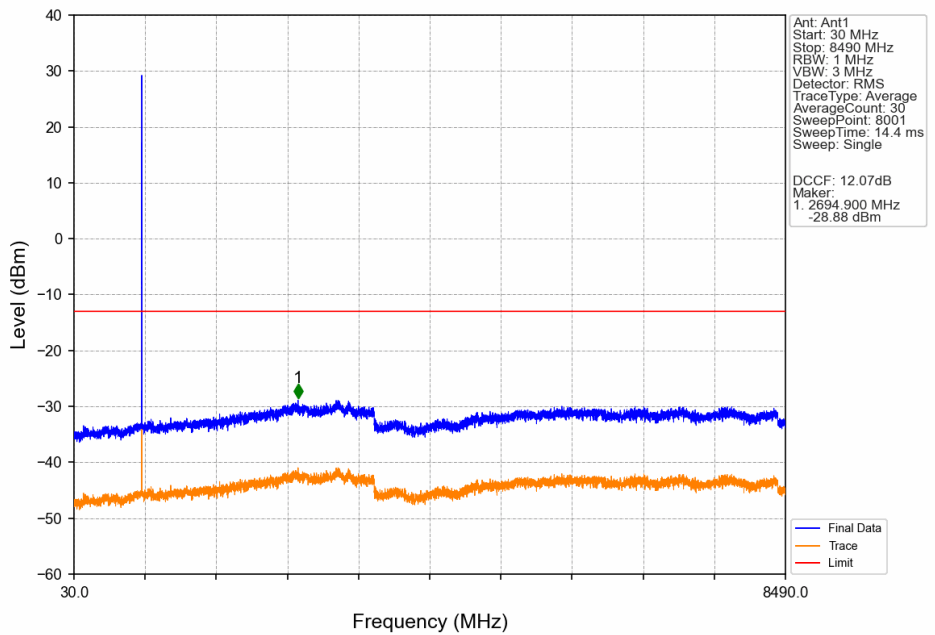


GSM850_EGPRS_MCH_836.6MHz_1 TX Slot_NTNV



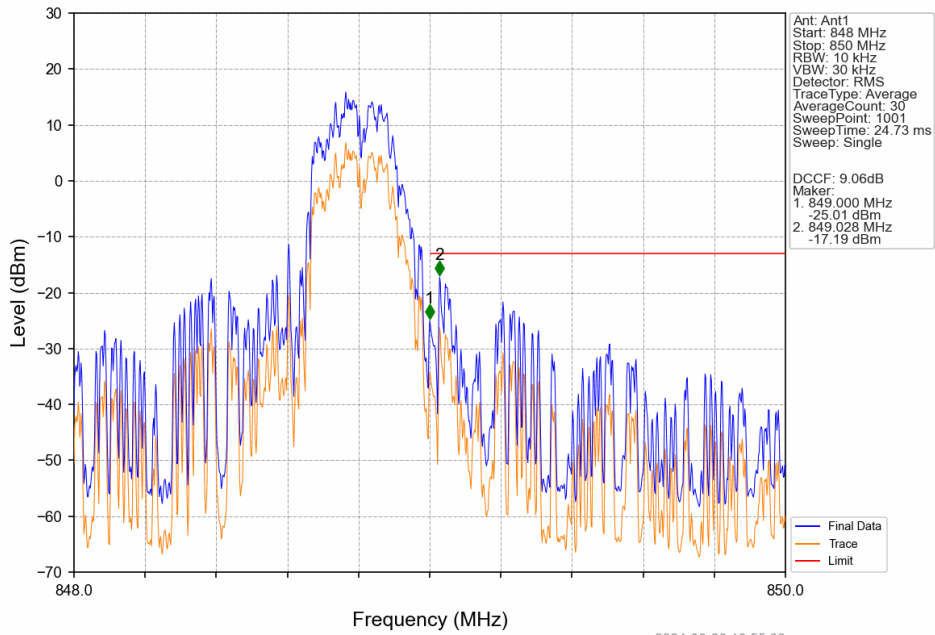
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GSM850_EGPRS_MCH_836.6MHz_1 TX Slot_NTNV

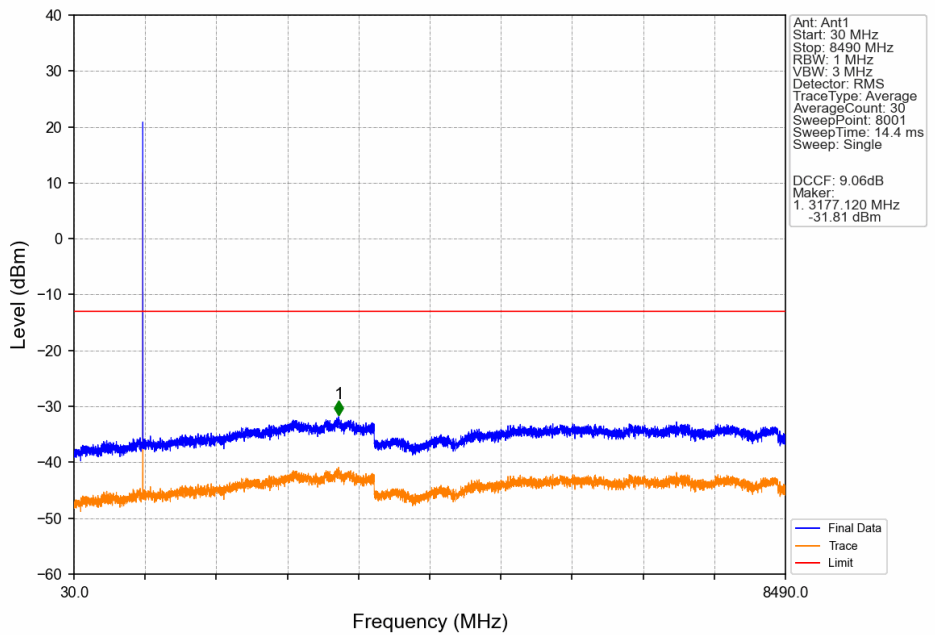


2024-08-28 10:55:28

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	1.6444	0.0184	ppm	248KGXW	22H	32.16
GSM850	0.2	824.2	848.8	0.5534	0.0117	ppm	244KG7W	22H	27.43

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	0.7691	0.0184	ppm	248KGXW	22H	28.86
GSM850	0.2	824.2	848.8	0.2588	0.0117	ppm	244KG7W	22H	24.13