

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	31.46	-0.18	29.13	<=38.45	Pass
			836.6	31.37	-0.18	29.04	<=38.45	Pass
			848.8	31.34	-0.18	29.01	<=38.45	Pass
	GPRS	1 TX Slot	824.2	31.58	-0.18	29.25	<=38.45	Pass
		2 TX Slots	824.2	29.52	-0.18	27.19	<=38.45	Pass
		3 TX Slots	824.2	27.51	-0.18	25.18	<=38.45	Pass
		4 TX Slots	824.2	25.41	-0.18	23.08	<=38.45	Pass
		1 TX Slot	836.6	31.41	-0.18	29.08	<=38.45	Pass
		2 TX Slots	836.6	29.34	-0.18	27.01	<=38.45	Pass
		3 TX Slots	836.6	27.40	-0.18	25.07	<=38.45	Pass
		4 TX Slots	836.6	25.32	-0.18	22.99	<=38.45	Pass
		1 TX Slot	848.8	31.31	-0.18	28.98	<=38.45	Pass
		2 TX Slots	848.8	29.25	-0.18	26.92	<=38.45	Pass
		3 TX Slots	848.8	27.38	-0.18	25.05	<=38.45	Pass
		4 TX Slots	848.8	25.34	-0.18	23.01	<=38.45	Pass
	EGPRS	1 TX Slot	824.2	23.61	-0.18	21.28	<=38.45	Pass
		2 TX Slots	824.2	22.23	-0.18	19.90	<=38.45	Pass
		3 TX Slots	824.2	19.94	-0.18	17.61	<=38.45	Pass
		4 TX Slots	824.2	17.71	-0.18	15.38	<=38.45	Pass
		1 TX Slot	836.6	23.56	-0.18	21.23	<=38.45	Pass
		2 TX Slots	836.6	22.26	-0.18	19.93	<=38.45	Pass
		3 TX Slots	836.6	19.98	-0.18	17.65	<=38.45	Pass
		4 TX Slots	836.6	17.80	-0.18	15.47	<=38.45	Pass
		1 TX Slot	848.8	23.31	-0.18	20.98	<=38.45	Pass
		2 TX Slots	848.8	22.23	-0.18	19.90	<=38.45	Pass
		3 TX Slots	848.8	19.97	-0.18	17.64	<=38.45	Pass
		4 TX Slots	848.8	17.48	-0.18	15.15	<=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	-2.712	-0.0033	-2.5 to 2.5	Pass
			3.85	-17.983	-0.0218	-2.5 to 2.5	Pass
			4.43	-11.268	-0.0137	-2.5 to 2.5	Pass
		-30	3.85	-6.296	-0.0076	-2.5 to 2.5	Pass
		-20	3.85	-11.720	-0.0142	-2.5 to 2.5	Pass
		-10	3.85	-6.393	-0.0078	-2.5 to 2.5	Pass
		0	3.85	-7.975	-0.0097	-2.5 to 2.5	Pass
		10	3.85	-7.975	-0.0097	-2.5 to 2.5	Pass

	836.6	30	3.85	-7.749	-0.0094	-2.5 to 2.5	Pass	
		40	3.85	-3.164	-0.0038	-2.5 to 2.5	Pass	
		50	3.85	-13.108	-0.0159	-2.5 to 2.5	Pass	
		20	3.27	-6.715	-0.0080	-2.5 to 2.5	Pass	
			3.85	-3.358	-0.0040	-2.5 to 2.5	Pass	
			4.43	-1.227	-0.0015	-2.5 to 2.5	Pass	
		-30	3.85	1.905	0.0023	-2.5 to 2.5	Pass	
		-20	3.85	3.487	0.0042	-2.5 to 2.5	Pass	
		-10	3.85	-4.003	-0.0048	-2.5 to 2.5	Pass	
		0	3.85	1.162	0.0014	-2.5 to 2.5	Pass	
		10	3.85	-7.426	-0.0089	-2.5 to 2.5	Pass	
		30	3.85	-6.134	-0.0073	-2.5 to 2.5	Pass	
	40	3.85	-3.487	-0.0042	-2.5 to 2.5	Pass		
	50	3.85	3.455	0.0041	-2.5 to 2.5	Pass		
	848.8	20	3.27	5.715	0.0067	-2.5 to 2.5	Pass	
			3.85	-0.581	-0.0007	-2.5 to 2.5	Pass	
			4.43	-3.842	-0.0045	-2.5 to 2.5	Pass	
		-30	3.85	0.129	0.0002	-2.5 to 2.5	Pass	
		-20	3.85	-2.228	-0.0026	-2.5 to 2.5	Pass	
		-10	3.85	-3.648	-0.0043	-2.5 to 2.5	Pass	
		0	3.85	7.103	0.0084	-2.5 to 2.5	Pass	
		10	3.85	1.259	0.0015	-2.5 to 2.5	Pass	
		30	3.85	3.584	0.0042	-2.5 to 2.5	Pass	
		40	3.85	-3.196	-0.0038	-2.5 to 2.5	Pass	
		50	3.85	-0.065	-0.0001	-2.5 to 2.5	Pass	
GPRS		824.2	20	3.27	-7.200	-0.0087	-2.5 to 2.5	Pass
				3.85	-3.777	-0.0046	-2.5 to 2.5	Pass
	4.43			-6.522	-0.0079	-2.5 to 2.5	Pass	
	-30		3.85	-6.845	-0.0083	-2.5 to 2.5	Pass	
	-20		3.85	-1.388	-0.0017	-2.5 to 2.5	Pass	
	-10		3.85	1.485	0.0018	-2.5 to 2.5	Pass	
	0		3.85	-2.551	-0.0031	-2.5 to 2.5	Pass	
	10		3.85	-1.582	-0.0019	-2.5 to 2.5	Pass	
	30		3.85	-8.104	-0.0098	-2.5 to 2.5	Pass	
	40		3.85	-10.396	-0.0126	-2.5 to 2.5	Pass	
	836.6	20	3.27	19.662	0.0235	-2.5 to 2.5	Pass	
			3.85	11.106	0.0133	-2.5 to 2.5	Pass	
			4.43	5.811	0.0069	-2.5 to 2.5	Pass	
		-30	3.85	9.266	0.0111	-2.5 to 2.5	Pass	
		-20	3.85	4.875	0.0058	-2.5 to 2.5	Pass	
		-10	3.85	5.908	0.0071	-2.5 to 2.5	Pass	
		0	3.85	8.749	0.0105	-2.5 to 2.5	Pass	
		10	3.85	4.714	0.0056	-2.5 to 2.5	Pass	
		30	3.85	1.130	0.0014	-2.5 to 2.5	Pass	
		40	3.85	5.811	0.0069	-2.5 to 2.5	Pass	
	848.8	20	3.27	6.941	0.0082	-2.5 to 2.5	Pass	
			3.85	9.105	0.0107	-2.5 to 2.5	Pass	
			4.43	2.841	0.0033	-2.5 to 2.5	Pass	
		-30	3.85	10.461	0.0123	-2.5 to 2.5	Pass	
		-20	3.85	9.298	0.0110	-2.5 to 2.5	Pass	
		-10	3.85	6.812	0.0080	-2.5 to 2.5	Pass	
		0	3.85	8.007	0.0094	-2.5 to 2.5	Pass	
		10	3.85	14.012	0.0165	-2.5 to 2.5	Pass	
		30	3.85	11.687	0.0138	-2.5 to 2.5	Pass	
		40	3.85	8.943	0.0105	-2.5 to 2.5	Pass	
50	3.85	4.552	0.0054	-2.5 to 2.5	Pass			
EGPRS	824.2	20	3.27	-0.291	-0.0004	-2.5 to 2.5	Pass	

TCT			3.85	6.167	0.0075	-2.5 to 2.5	Pass
			4.43	0.839	0.0010	-2.5 to 2.5	Pass
		-30	3.85	8.459	0.0103	-2.5 to 2.5	Pass
		-20	3.85	7.652	0.0093	-2.5 to 2.5	Pass
		-10	3.85	5.424	0.0066	-2.5 to 2.5	Pass
		0	3.85	8.071	0.0098	-2.5 to 2.5	Pass
		10	3.85	8.846	0.0107	-2.5 to 2.5	Pass
		30	3.85	5.844	0.0071	-2.5 to 2.5	Pass
		40	3.85	10.364	0.0126	-2.5 to 2.5	Pass
		50	3.85	3.325	0.0040	-2.5 to 2.5	Pass
	836.6	20	3.27	8.007	0.0096	-2.5 to 2.5	Pass
			3.85	4.229	0.0051	-2.5 to 2.5	Pass
			4.43	14.206	0.0170	-2.5 to 2.5	Pass
		-30	3.85	5.973	0.0071	-2.5 to 2.5	Pass
		-20	3.85	6.812	0.0081	-2.5 to 2.5	Pass
		-10	3.85	10.235	0.0122	-2.5 to 2.5	Pass
		0	3.85	7.587	0.0091	-2.5 to 2.5	Pass
		10	3.85	11.526	0.0138	-2.5 to 2.5	Pass
		30	3.85	10.331	0.0123	-2.5 to 2.5	Pass
		40	3.85	10.751	0.0129	-2.5 to 2.5	Pass
		50	3.85	9.847	0.0118	-2.5 to 2.5	Pass
	848.8	20	3.27	13.043	0.0154	-2.5 to 2.5	Pass
			3.85	13.495	0.0159	-2.5 to 2.5	Pass
			4.43	11.106	0.0131	-2.5 to 2.5	Pass
		-30	3.85	14.561	0.0172	-2.5 to 2.5	Pass
		-20	3.85	11.784	0.0139	-2.5 to 2.5	Pass
		-10	3.85	9.815	0.0116	-2.5 to 2.5	Pass
		0	3.85	14.464	0.0170	-2.5 to 2.5	Pass
		10	3.85	8.749	0.0103	-2.5 to 2.5	Pass
		30	3.85	8.459	0.0100	-2.5 to 2.5	Pass
		40	3.85	11.881	0.0140	-2.5 to 2.5	Pass
		50	3.85	14.464	0.0170	-2.5 to 2.5	Pass

3. Modulation Characteristics

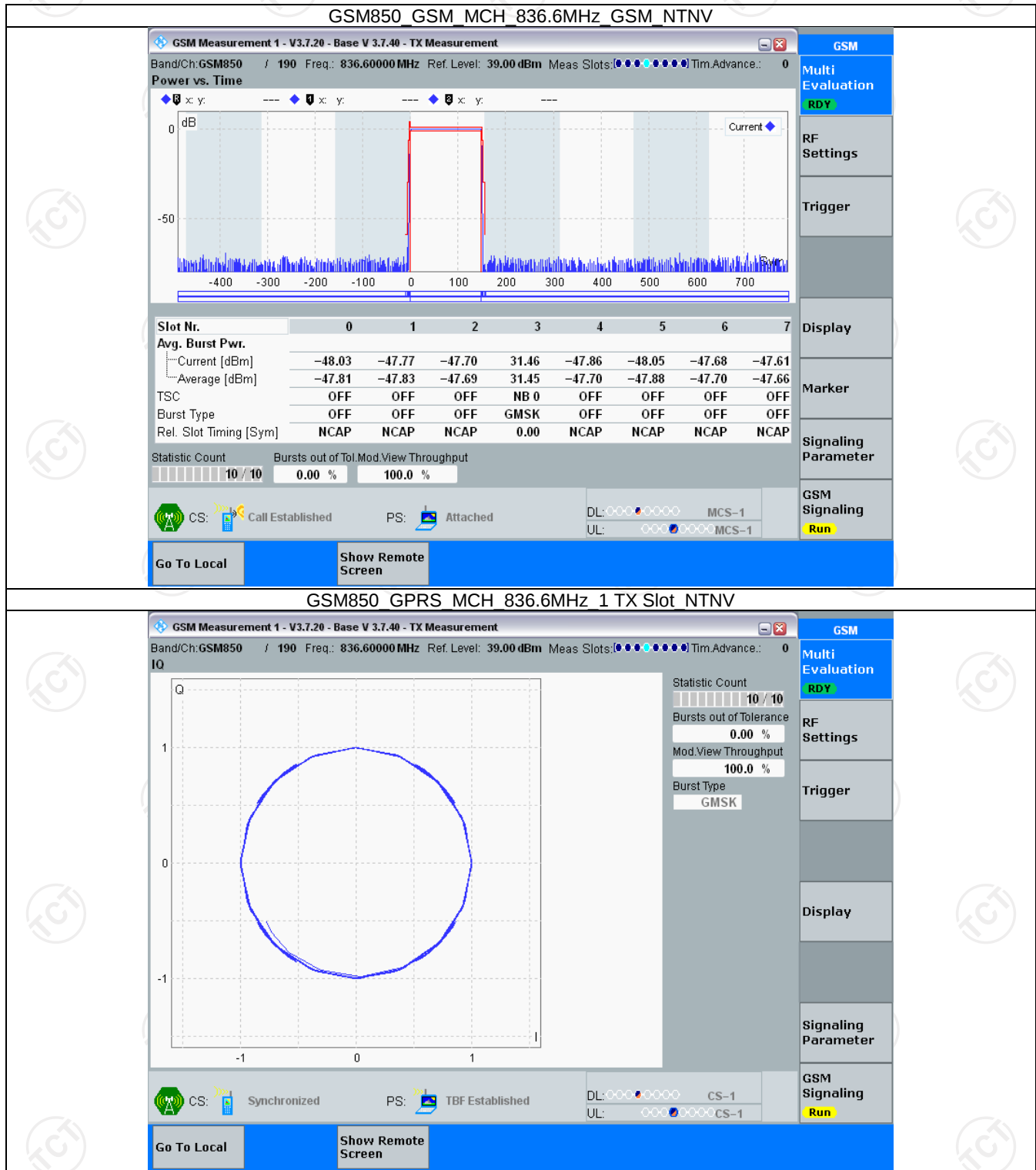
3.1 Test Result

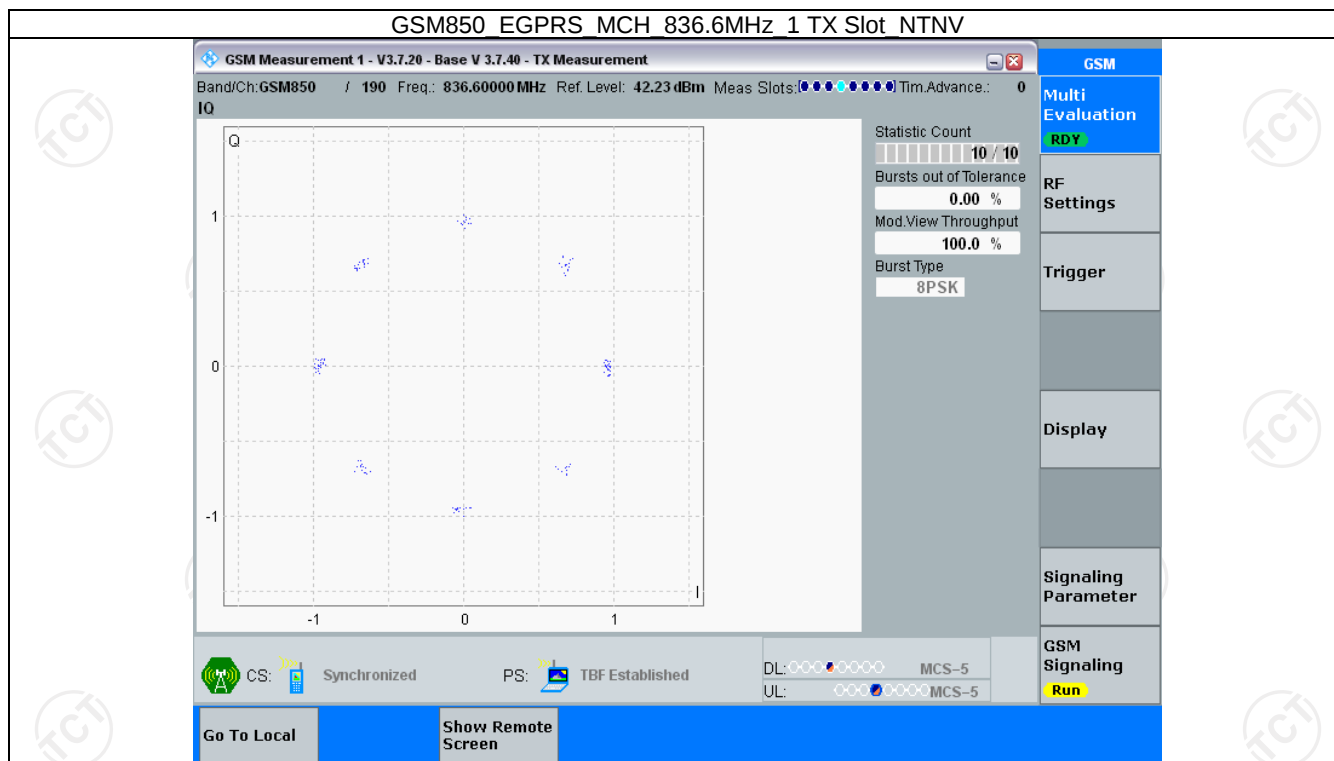
3.1.1 GSM850

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

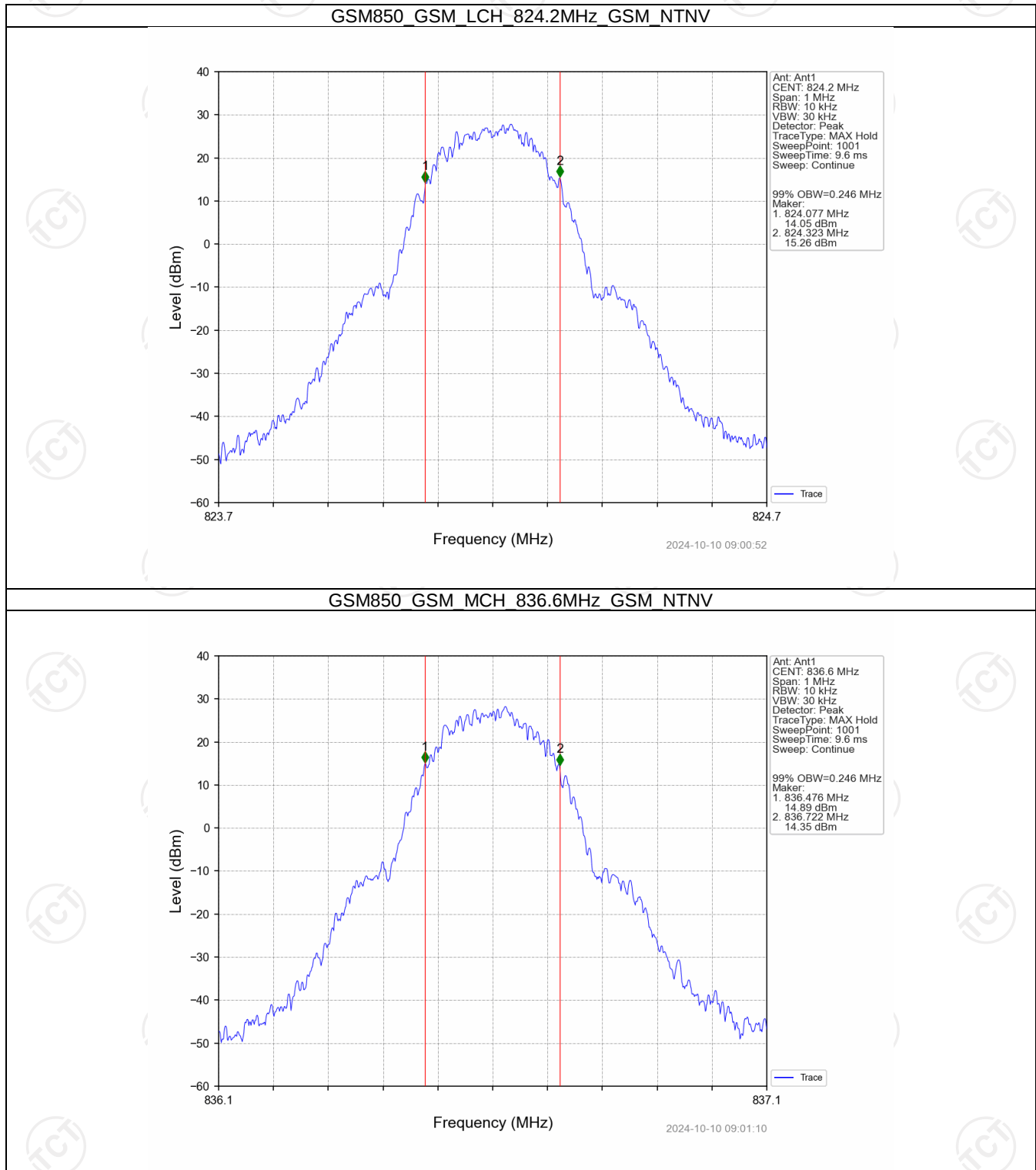
Band: GSM850						
ENV	Mode		Frequency (MHz)	99% Occupied Bandwidth (MHz)		Verdict
	Network	Subset		Result	Limit	
NTNV	GSM	GSM	824.2	0.246	/	Pass
			836.6	0.246	/	Pass
			848.8	0.244	/	Pass
	GPRS	1 TX Slot	824.2	0.246	/	Pass
			836.6	0.244	/	Pass
			848.8	0.240	/	Pass
	EGPRS	1 TX Slot	824.2	0.230	/	Pass
			836.6	0.243	/	Pass
			848.8	0.234	/	Pass

4.1.2 GSM850_XDB

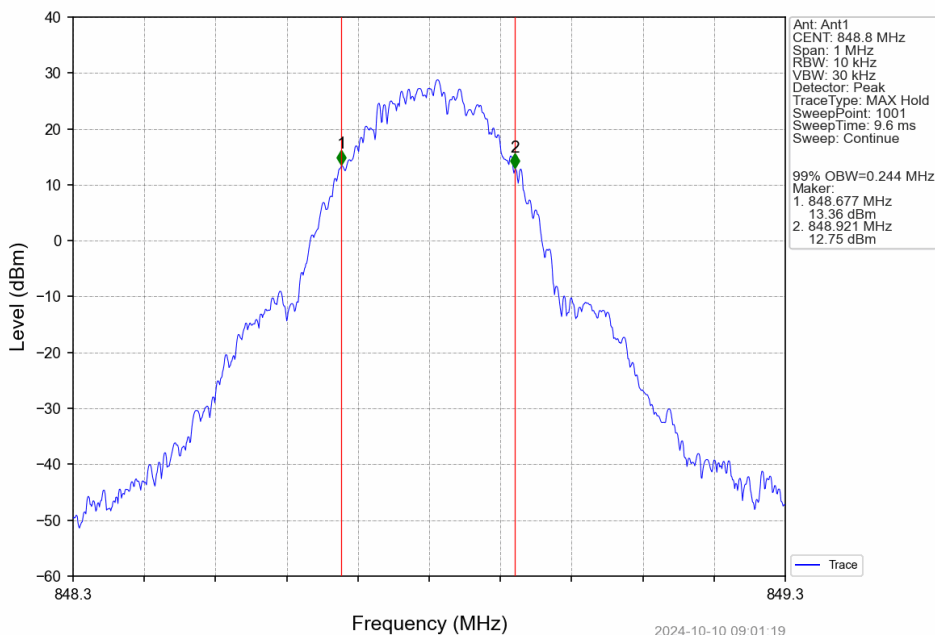
Band: GSM850						
ENV	Mode		Frequency (MHz)	26dB Bandwidth (MHz)		Verdict
	Network	Subset		Result	Limit	
NTNV	GSM	GSM	824.2	0.318	/	Pass
			836.6	0.323	/	Pass
			848.8	0.311	/	Pass
	GPRS	1 TX Slot	824.2	0.319	/	Pass
			836.6	0.314	/	Pass
			848.8	0.318	/	Pass
	EGPRS	1 TX Slot	824.2	0.286	/	Pass
			836.6	0.323	/	Pass
			848.8	0.284	/	Pass

4.2 Test Graph

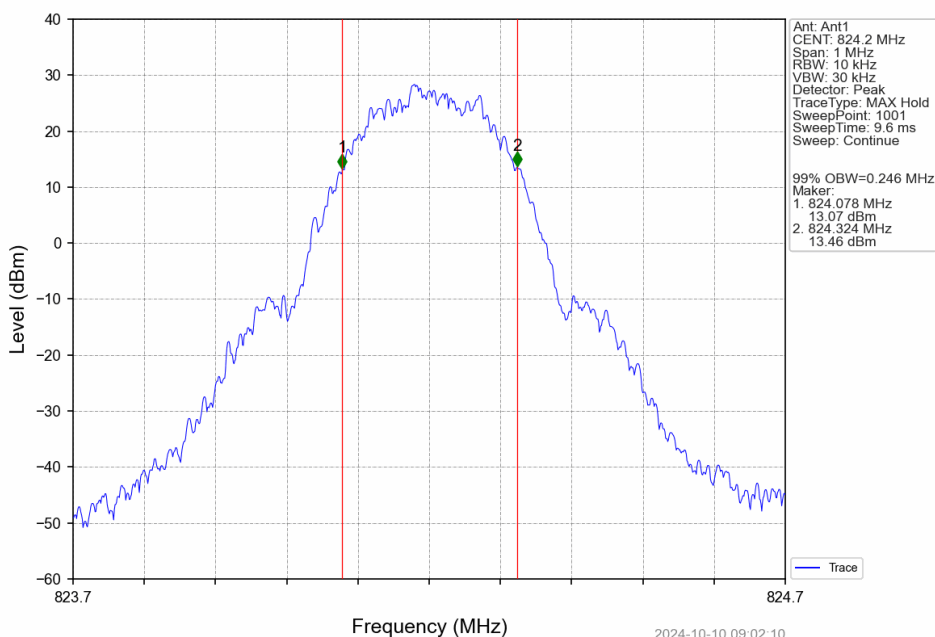
4.2.1 GSM850_OBW



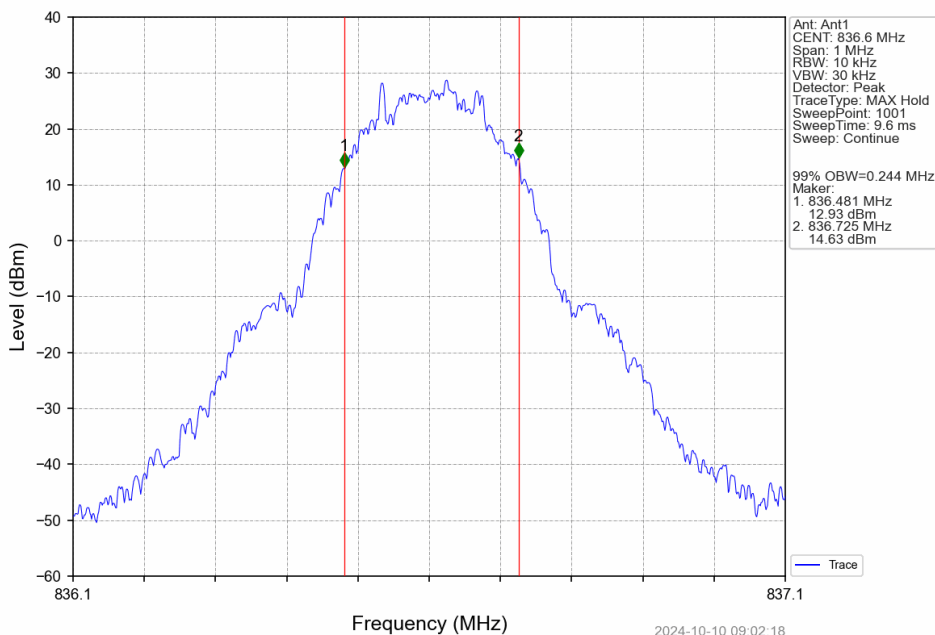
GSM850 GSM HCH 848.8MHz GSM NTNV



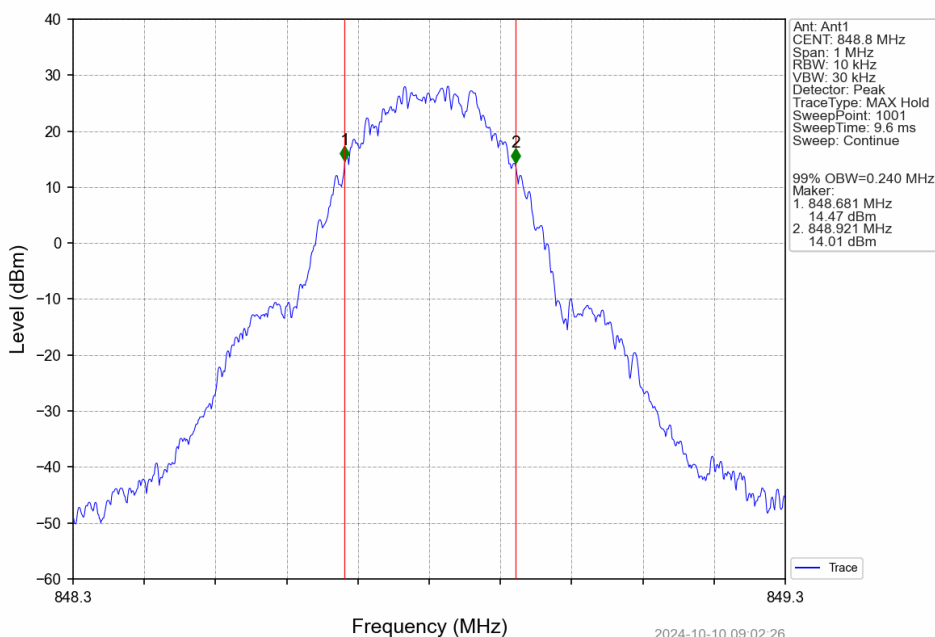
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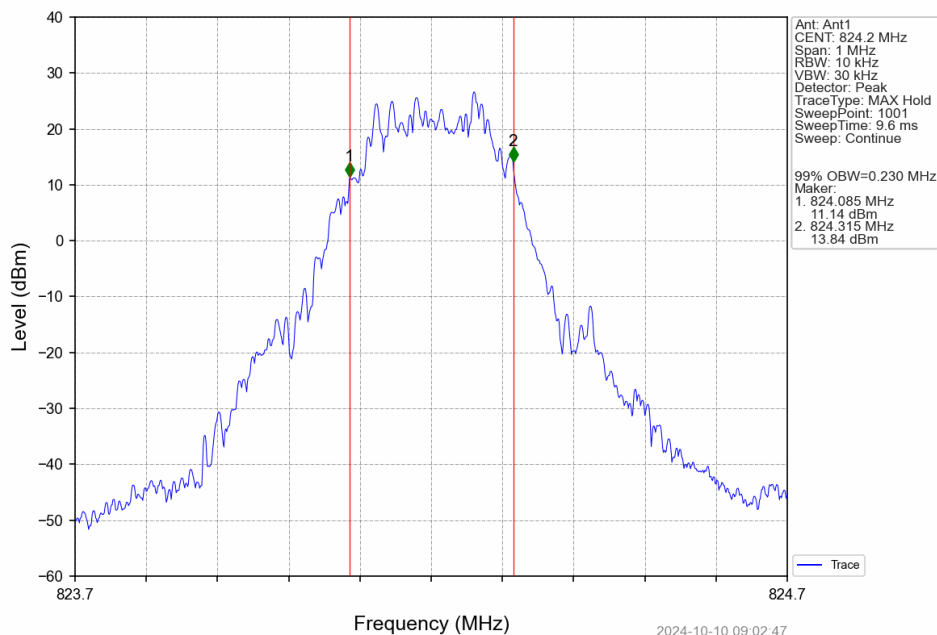
GSM850 GPRS MCH 836.6MHz 1 TX Slot NTN



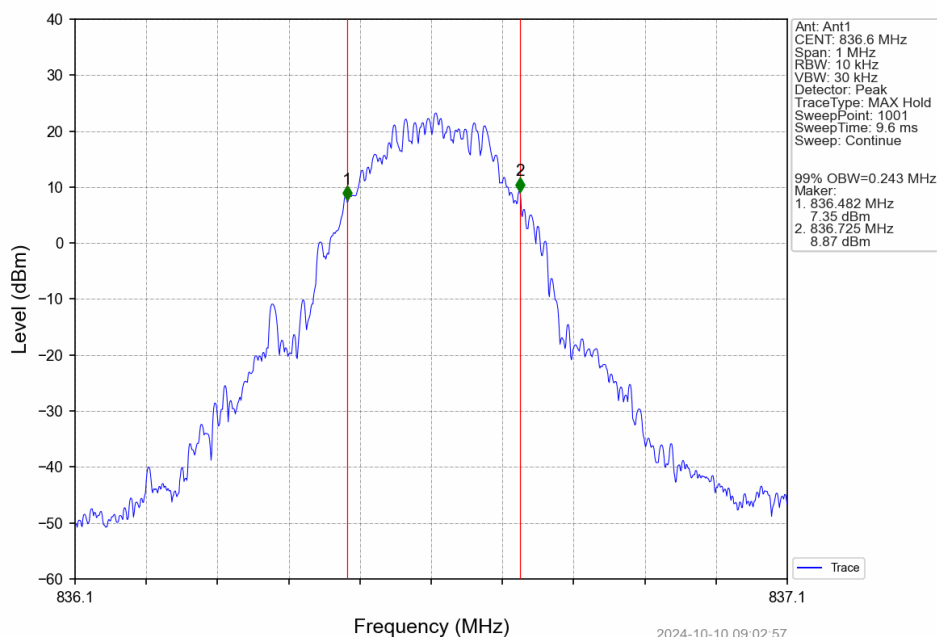
GSM850 GPRS HCH 848.8MHz 1 TX Slot NTN



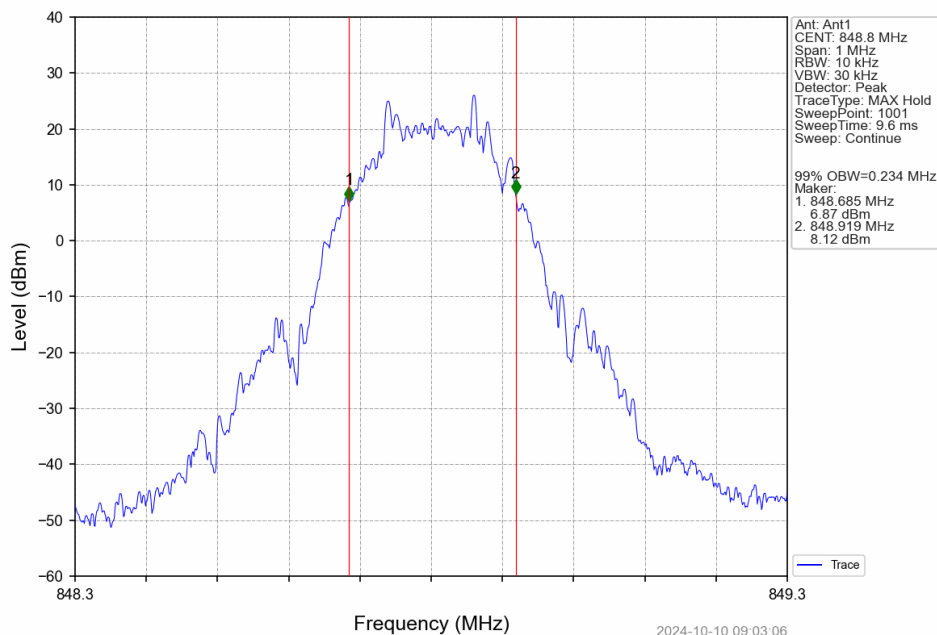
GSM850 EGPRS LCH 824.2MHz 1 TX Slot NTNV



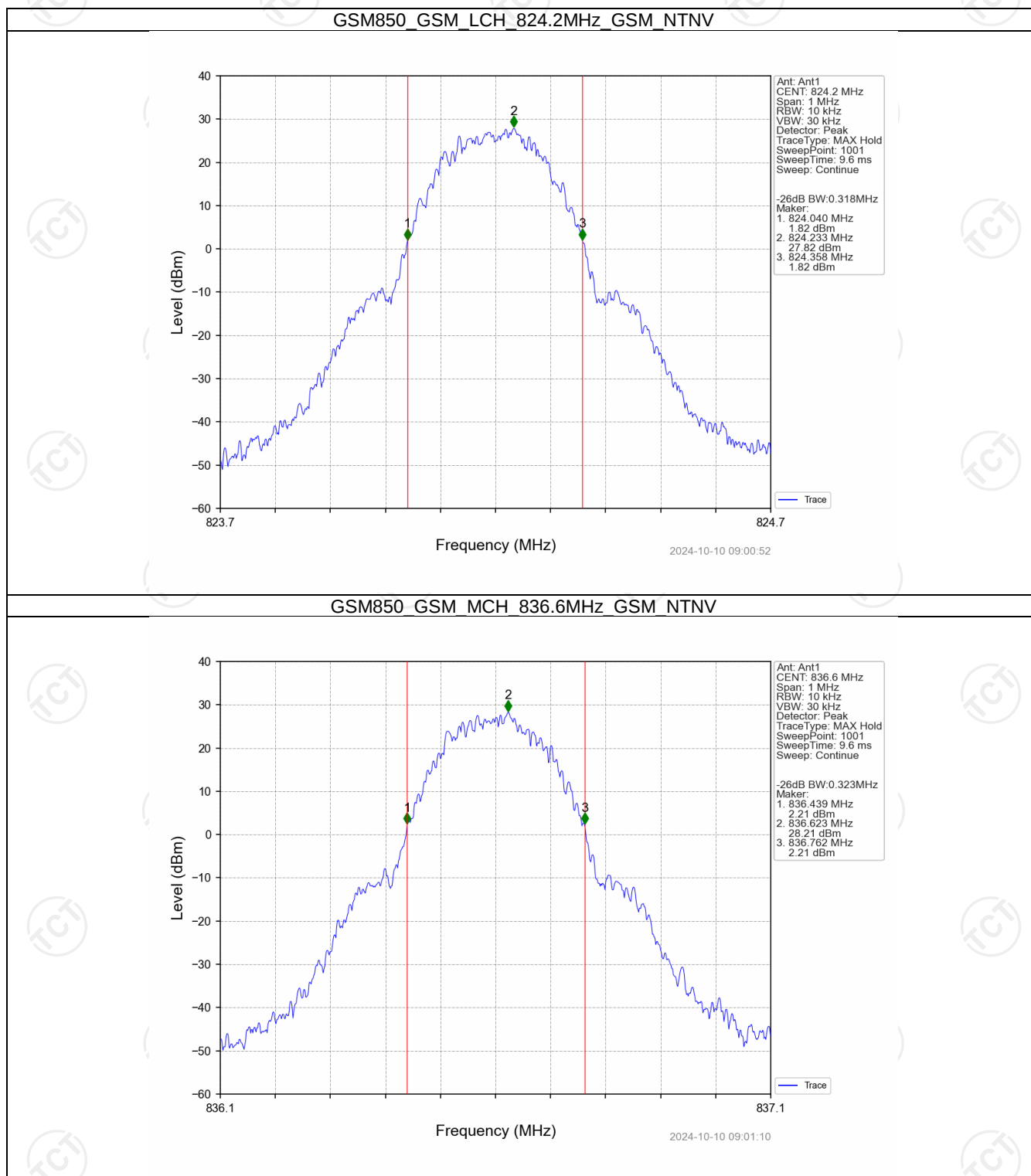
GSM850 EGPRS MCH 836.6MHz 1 TX Slot NTNV



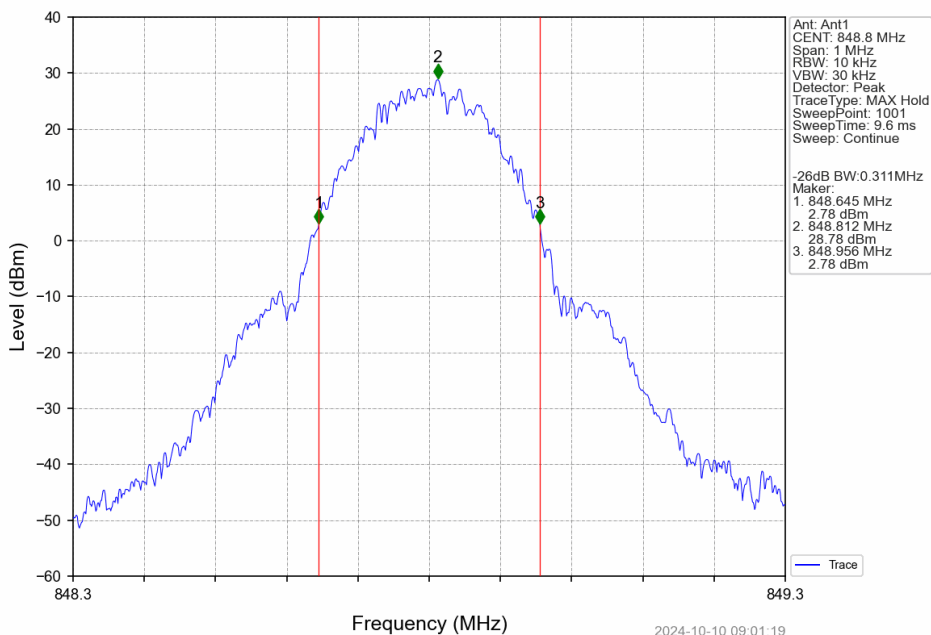
GSM850 EGPRS HCH 848.8MHz 1 TX Slot NTNV



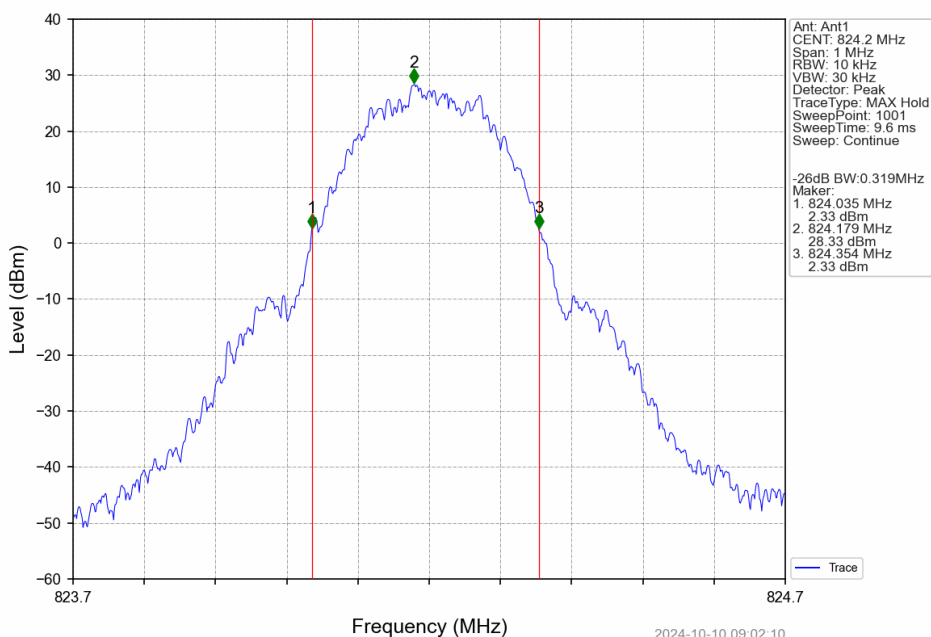
4.2.2 GSM850_XDB



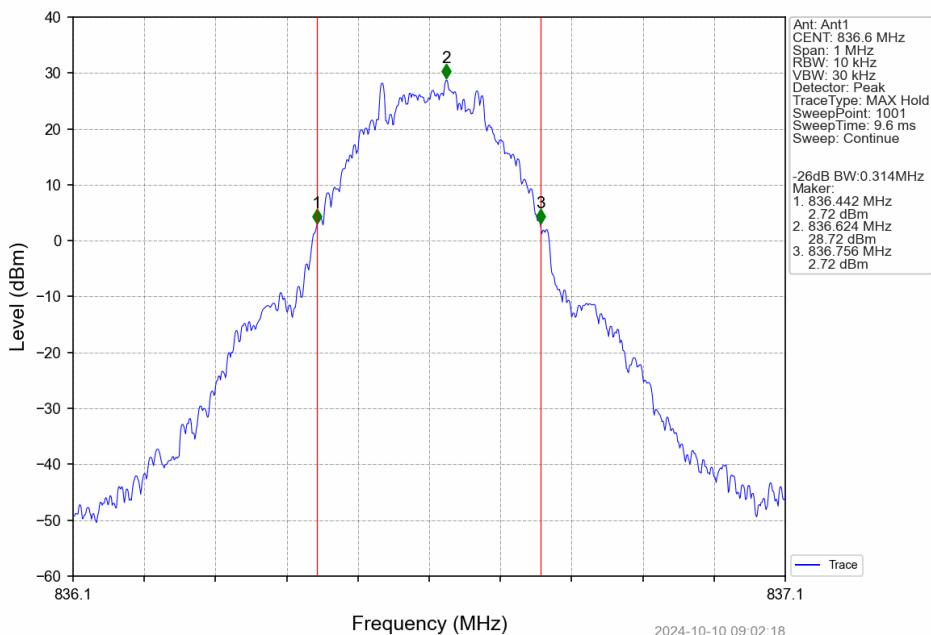
GSM850 GSM HCH 848.8MHz GSM NTN



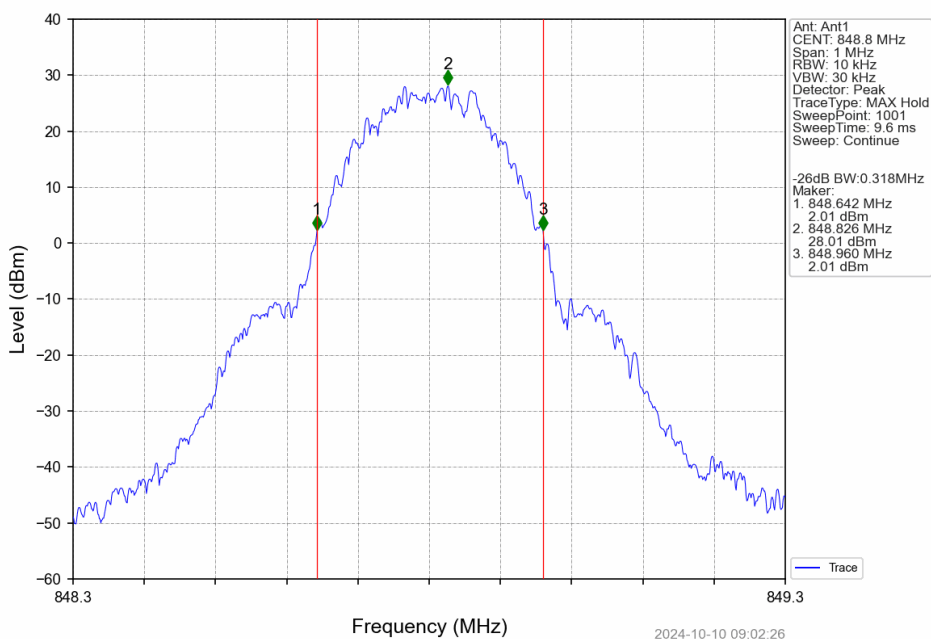
GSM850_GPRS_LCH_824.2MHz_1 TX Slot_NT



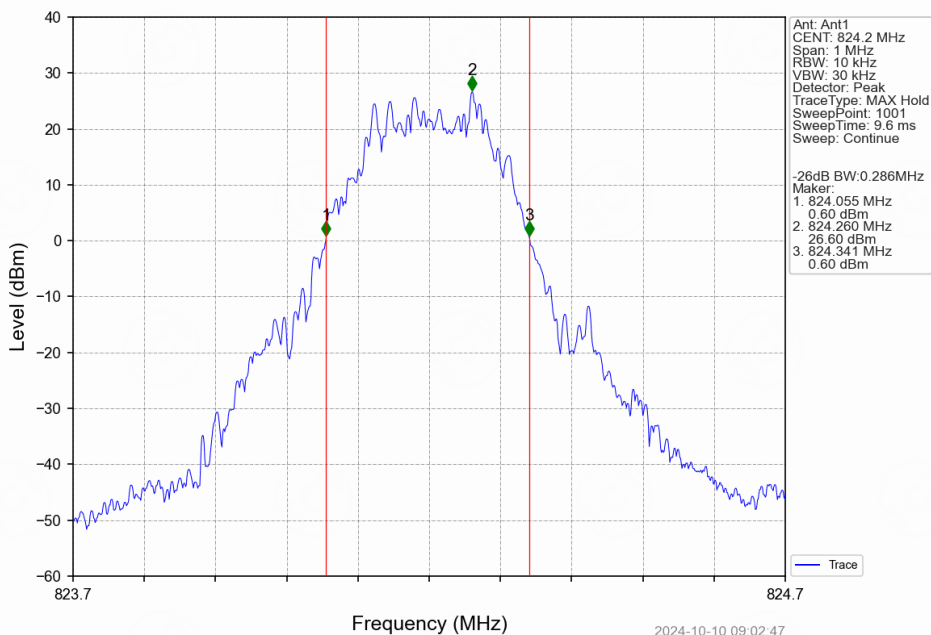
GSM850 GPRS MCH 836.6MHz 1 TX Slot NTNV



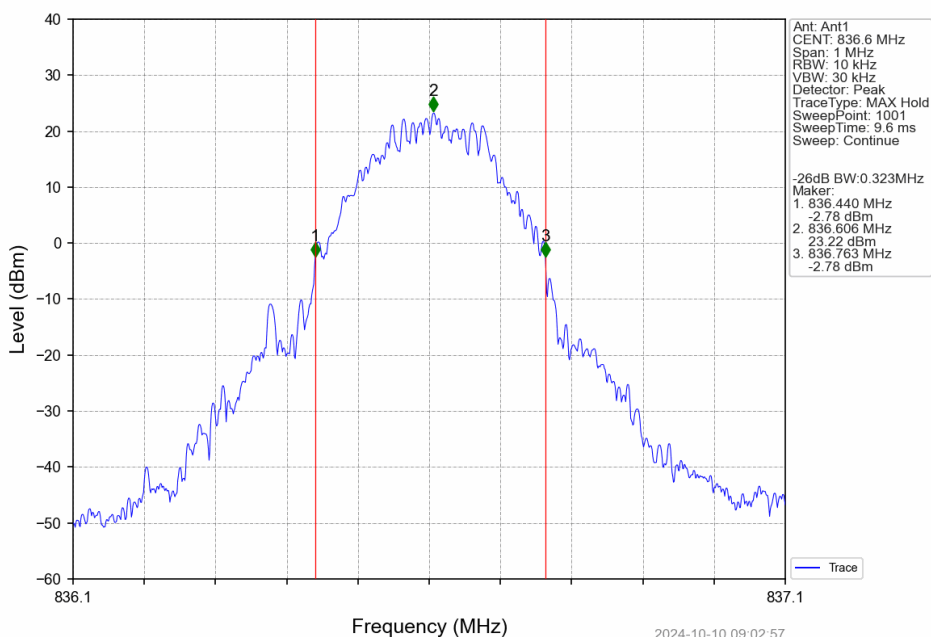
GSM850 GPRS HCH 848.8MHz 1 TX Slot NTNV



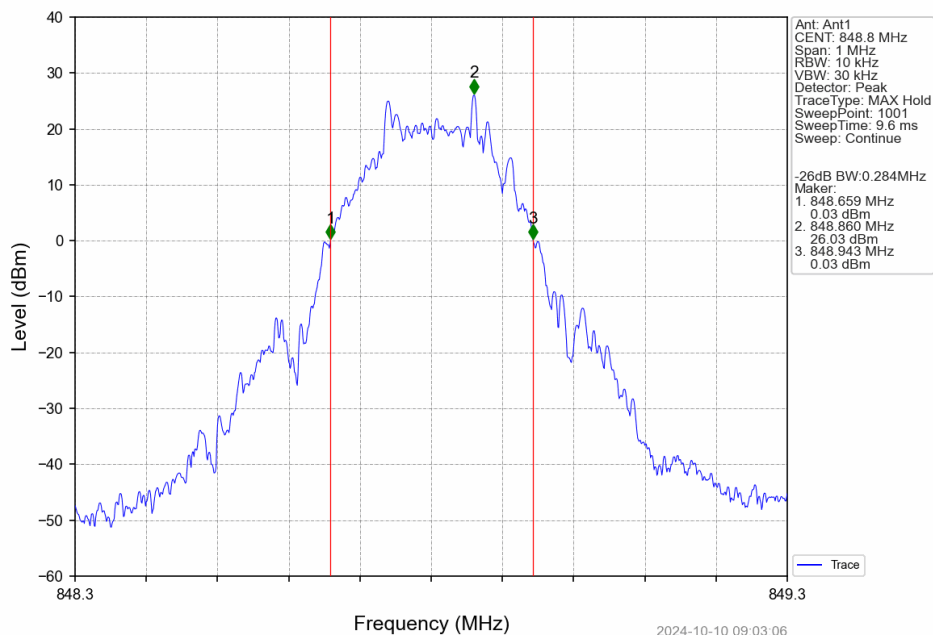
GSM850 EGPRS LCH 824.2MHz 1 TX Slot NTNV



GSM850 EGPRS MCH 836.6MHz 1 TX Slot NTNV



GSM850 EGPRS HCH 848.8MHz 1 TX Slot NTNV



5. Peak-Average Ratio

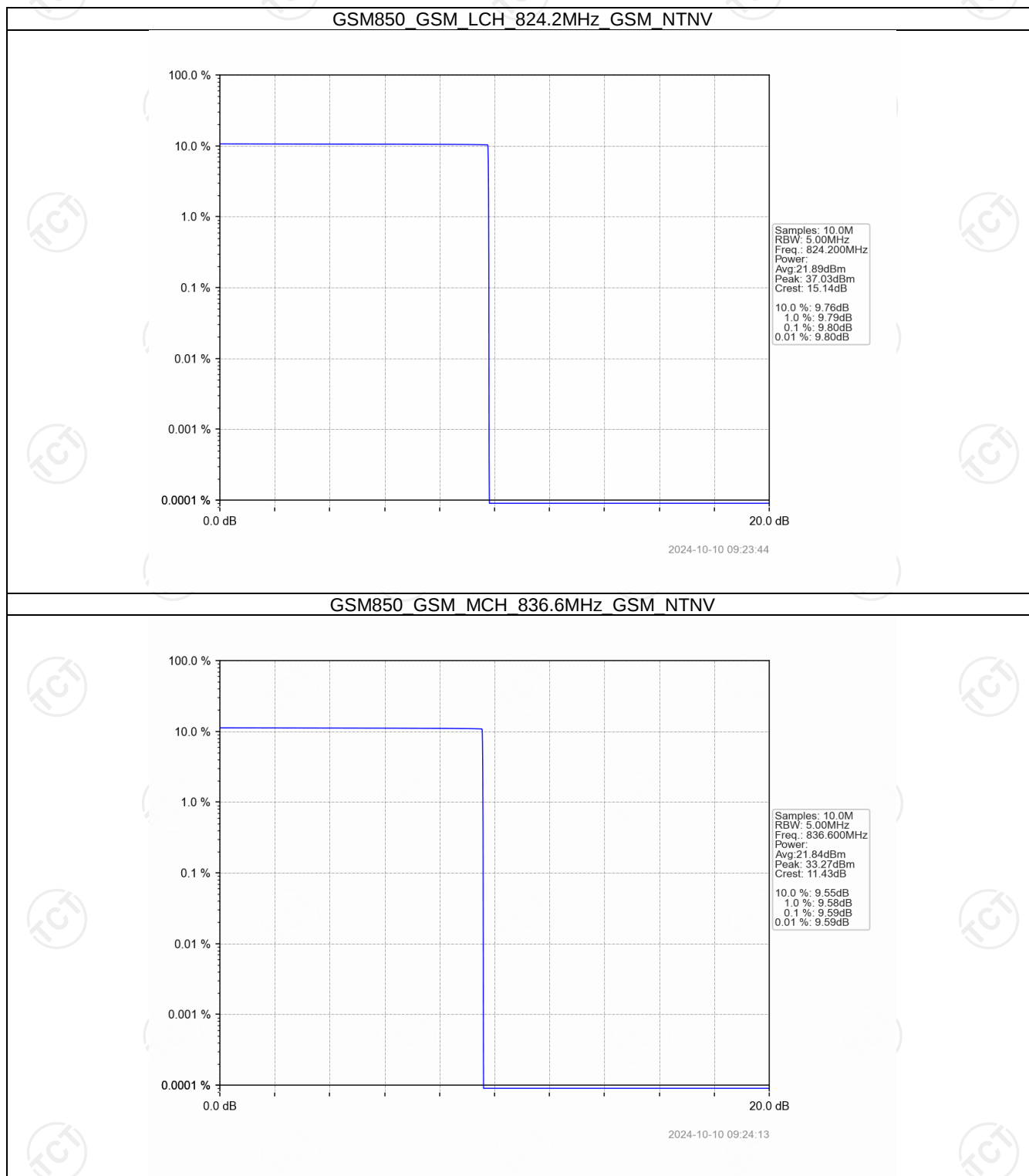
5.1 Test Result

5.1.1 GSM850

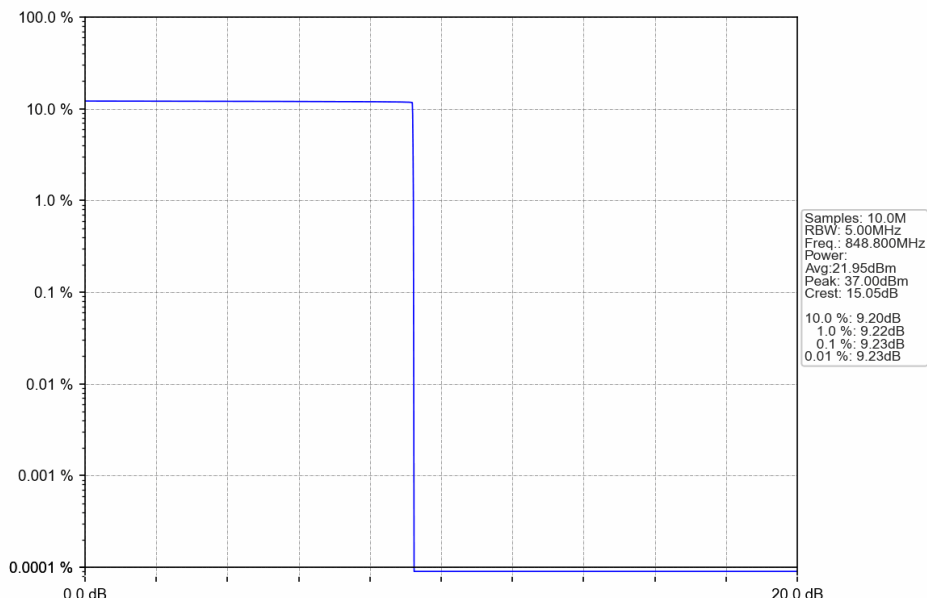
Band: GSM850						
ENV	Mode		Frequency (MHz)	Peak-Average Ratio (dB)		Verdict
	Network	Subset		Result	Limit	
NTNV	GSM	GSM	824.2	9.80	<=13	Pass
			836.6	9.59	<=13	Pass
			848.8	9.23	<=13	Pass
	GPRS	4 TX Slots	824.2	3.68	<=13	Pass
			836.6	3.44	<=13	Pass
			848.8	3.58	<=13	Pass
	EGPRS	4 TX Slots	824.2	11.40	<=13	Pass
			836.6	11.05	<=13	Pass
			848.8	11.63	<=13	Pass

5.2 Test Graph

5.2.1 GSM850

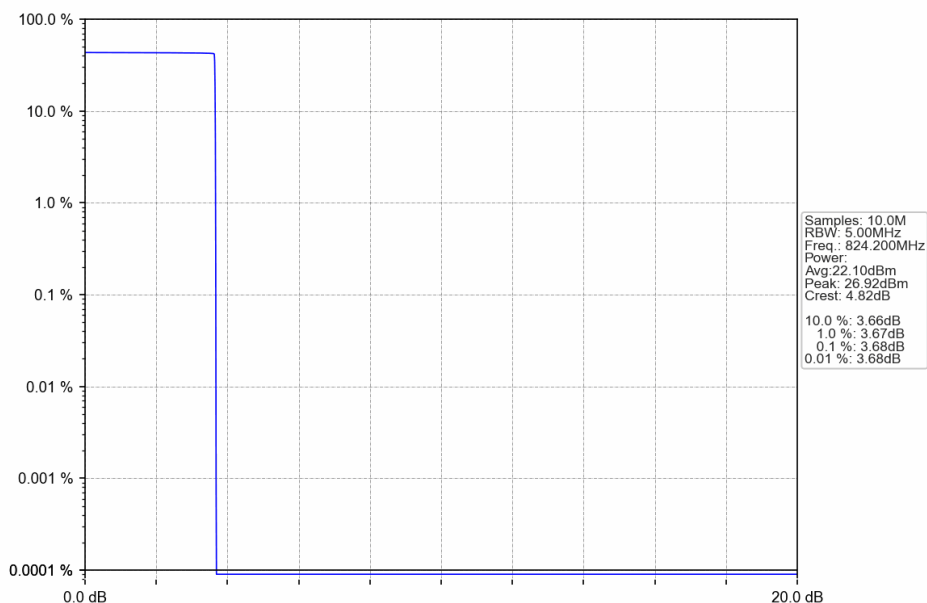


GSM850 GSM HCH 848.8MHz GSM NTN



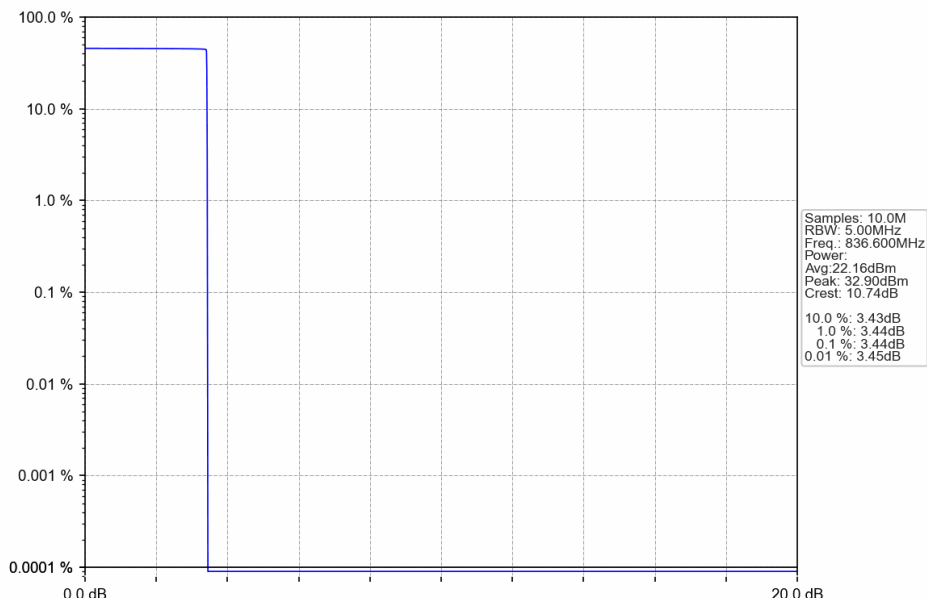
2024-10-10 09:24:28

GSM850_GPRS_LCH_824.2MHz_4 TX Slots_NTN



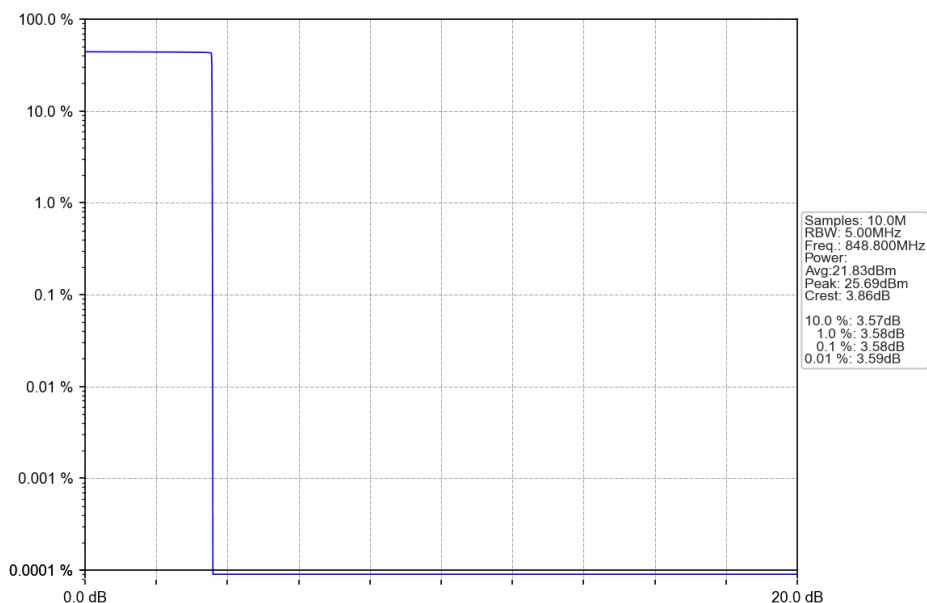
2024-10-10 09:24:43

GSM850 GPRS MCH 836.6MHz 4 TX Slots NTNV



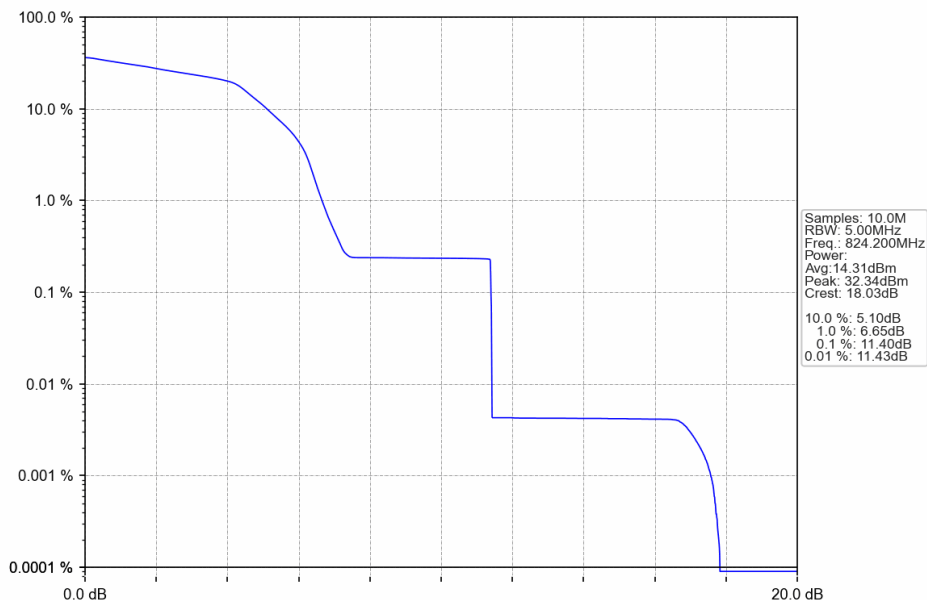
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GSM850 GPRS HCH 848.8MHz 4 TX Slots NTNV



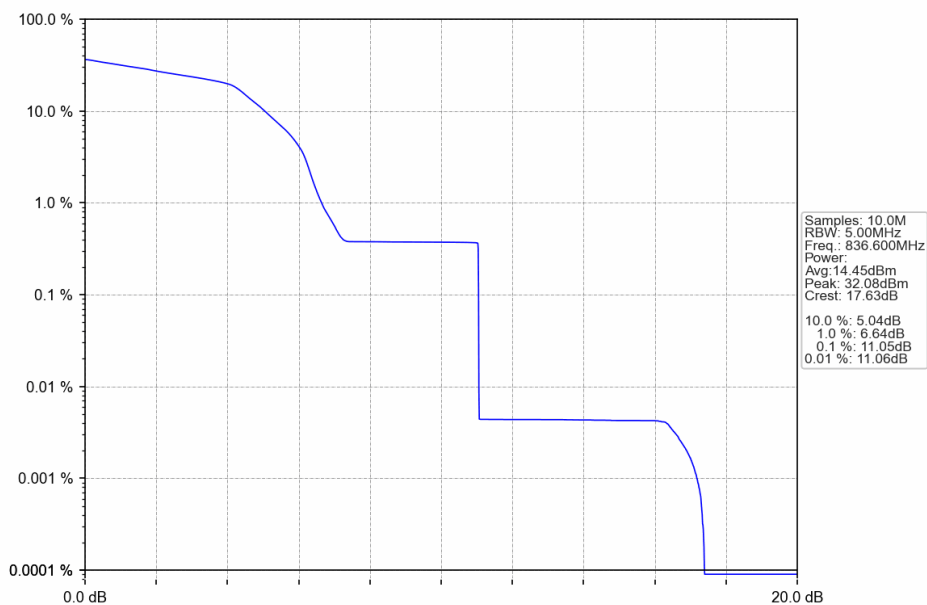
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GSM850 EGPRS LCH 824.2MHz 4 TX Slots NTN



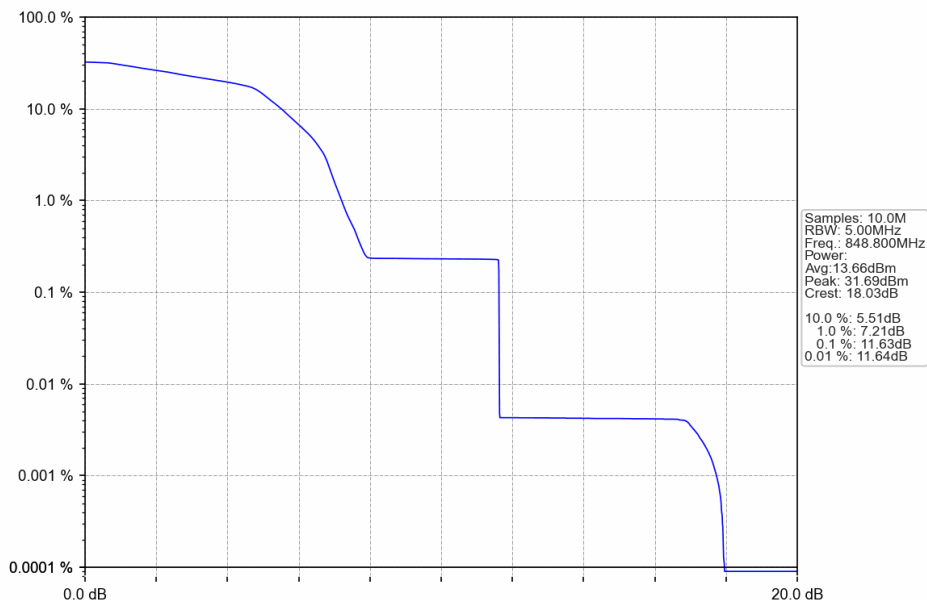
2024-10-10 09:25:35

GSM850 EGPRS MCH 836.6MHz 4 TX Slots NTN



2024-10-10 09:26:04

GSM850 EGPRS HCH 848.8MHz 4 TX Slots NTNV



2024-10-10 09:26:33

6. Spurious Emission

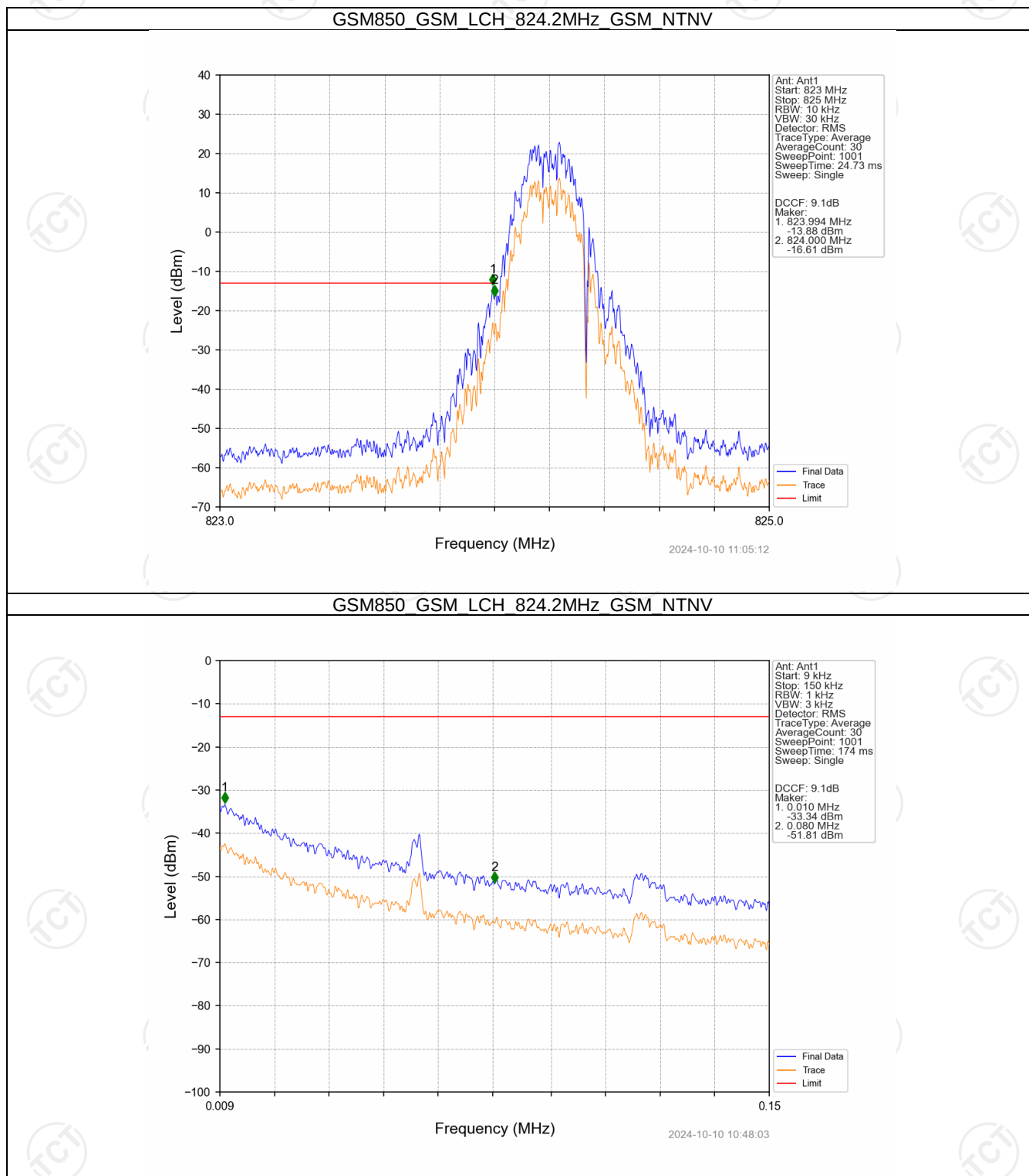
6.1 Test Result

6.1.1 GSM850

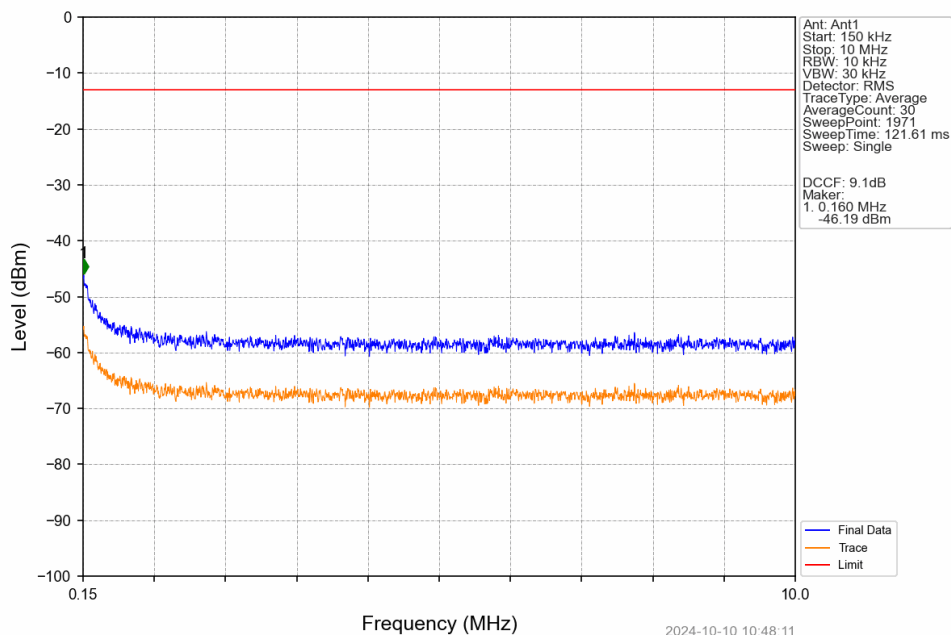
Band: GSM850						
ENV	Mode		Frequency (MHz)	Spurious Emission		Verdict
	Network	Subset		Result	Limit	
NTNV	GSM	GSM	824.2	Refer To Test Graph	Pass	
			836.6	Refer To Test Graph	Pass	
			848.8	Refer To Test Graph	Pass	
	GPRS	1 TX Slot	824.2	Refer To Test Graph	Pass	
			836.6	Refer To Test Graph	Pass	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

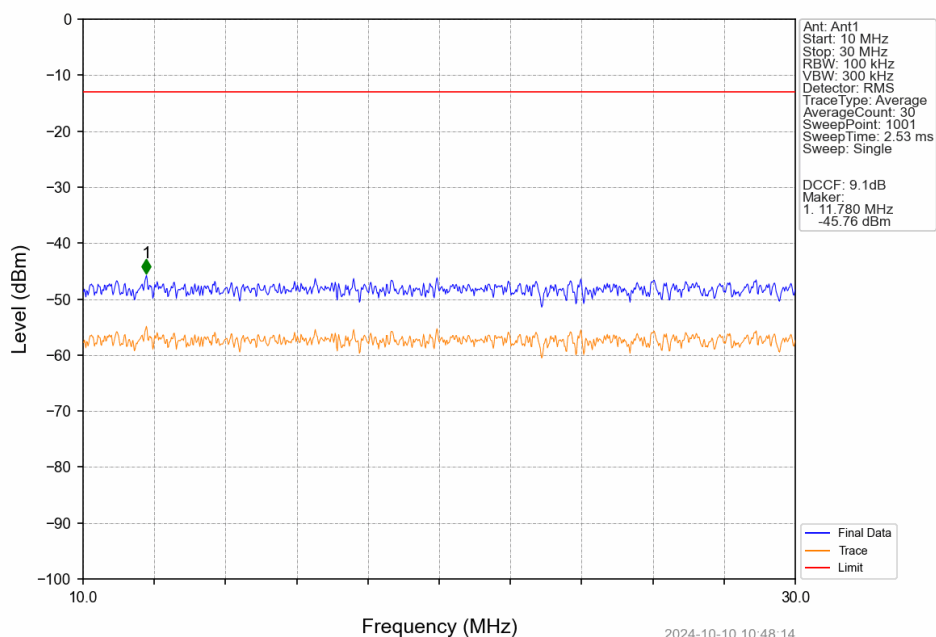
6.2.1 GSM850



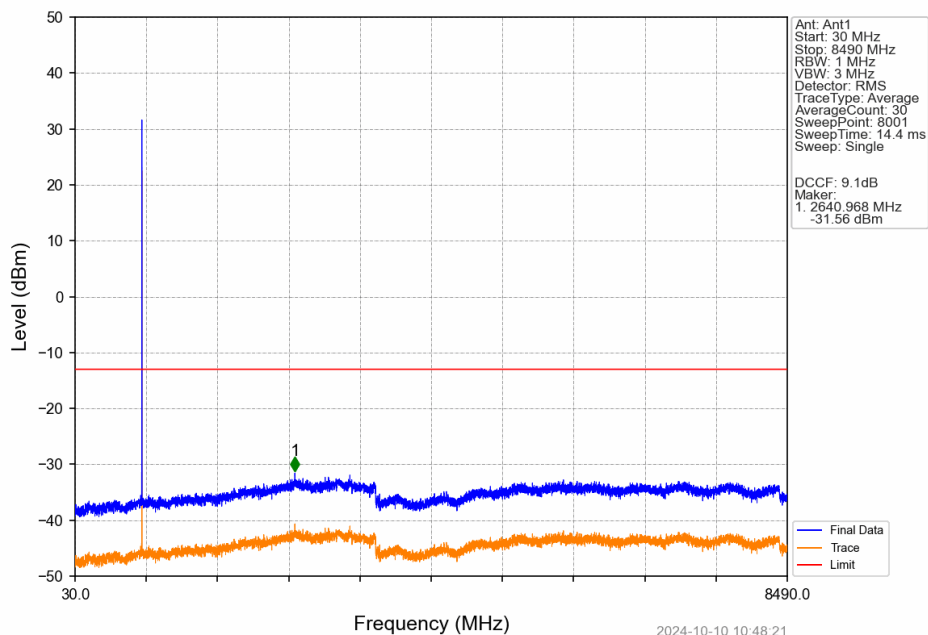
GSM850 GSM LCH 824.2MHz GSM NTN



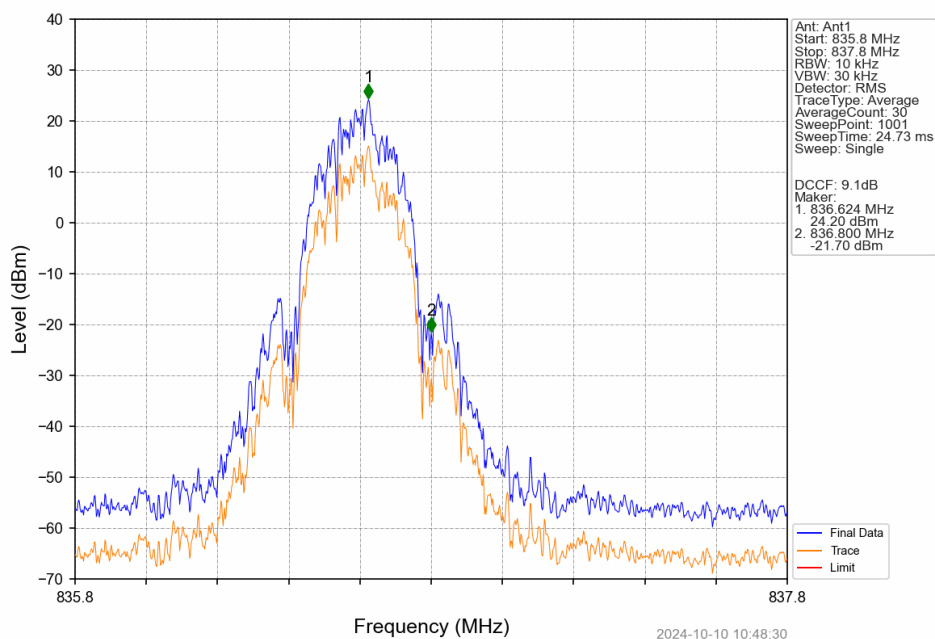
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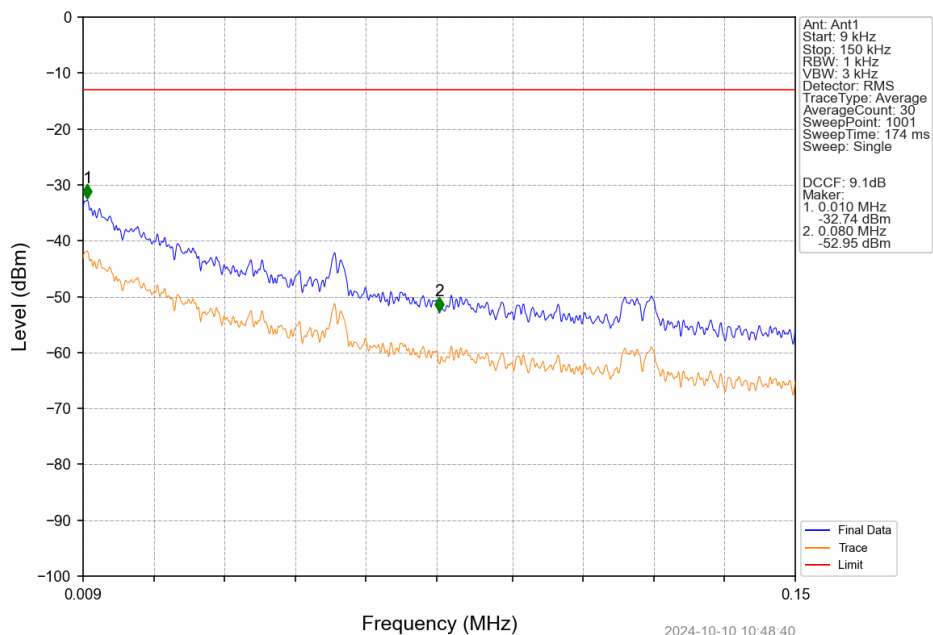
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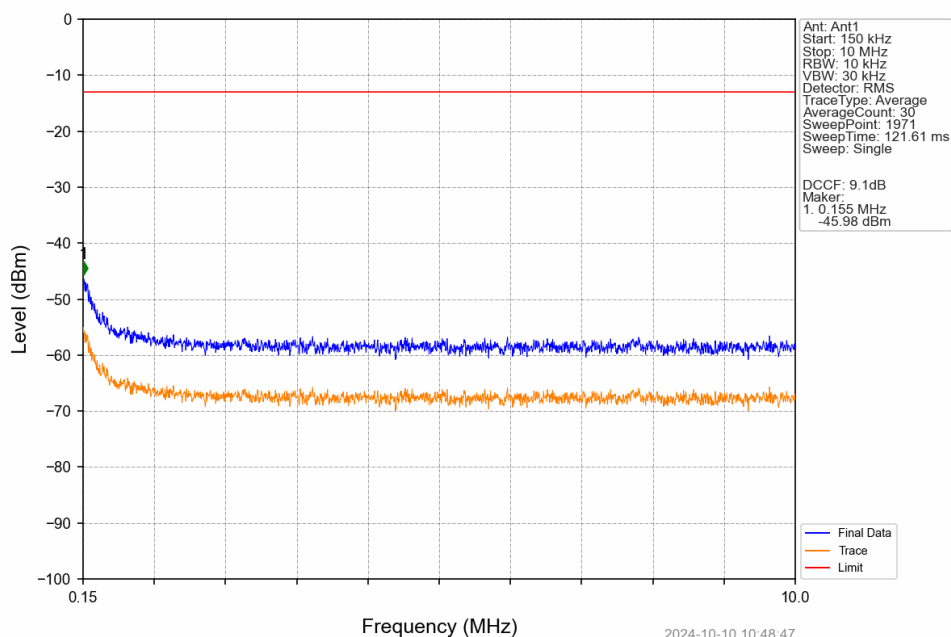
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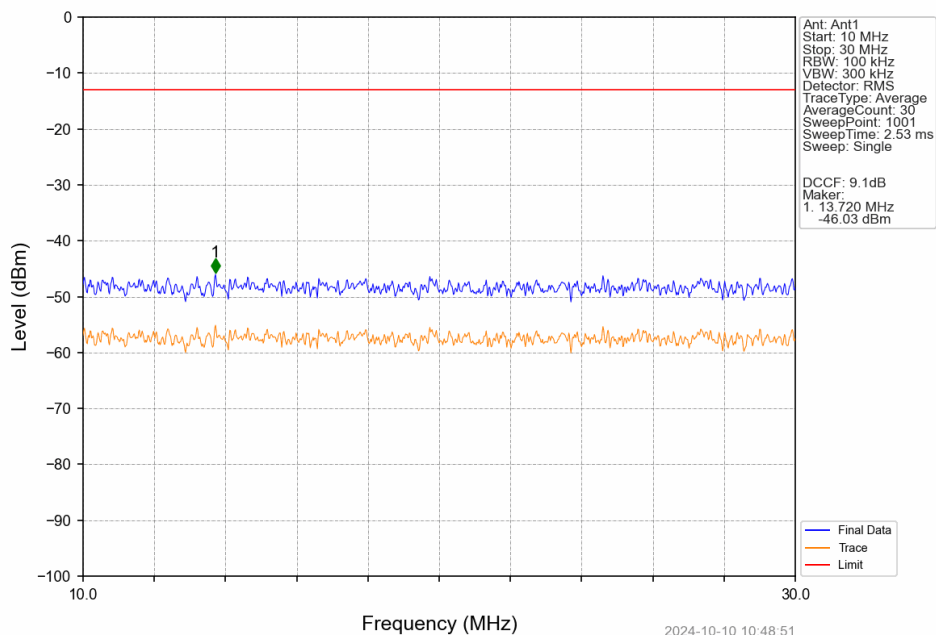
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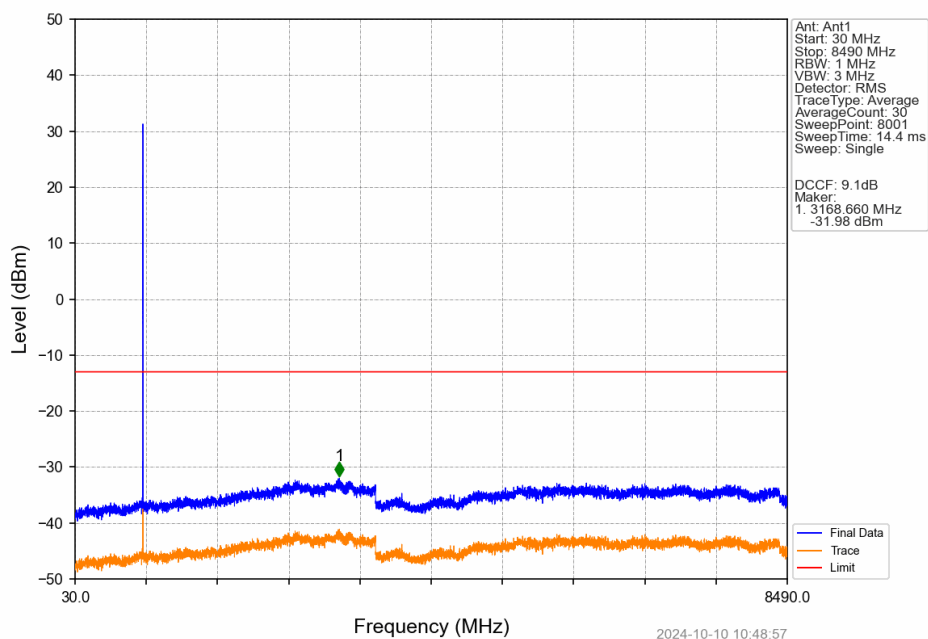
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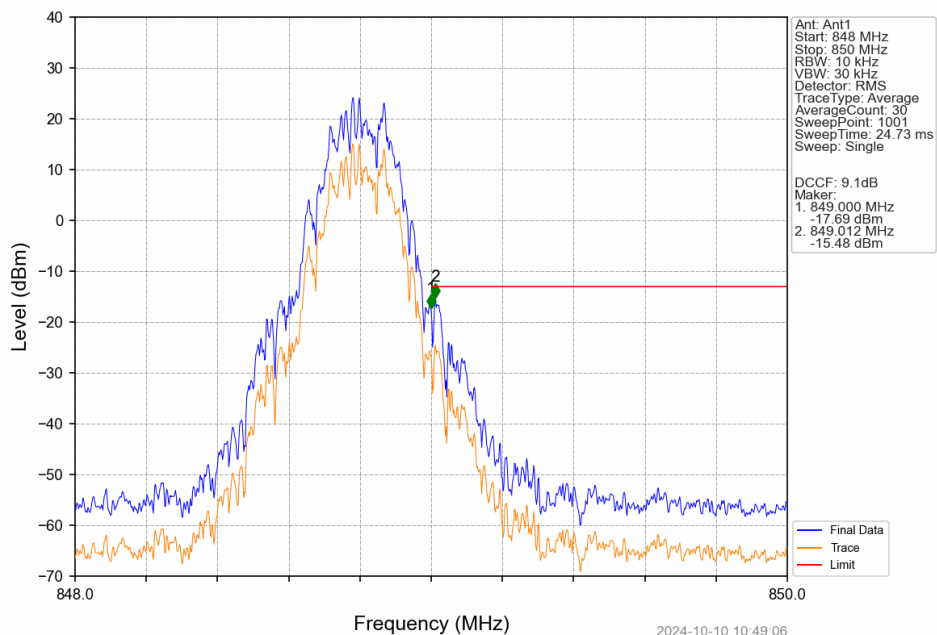
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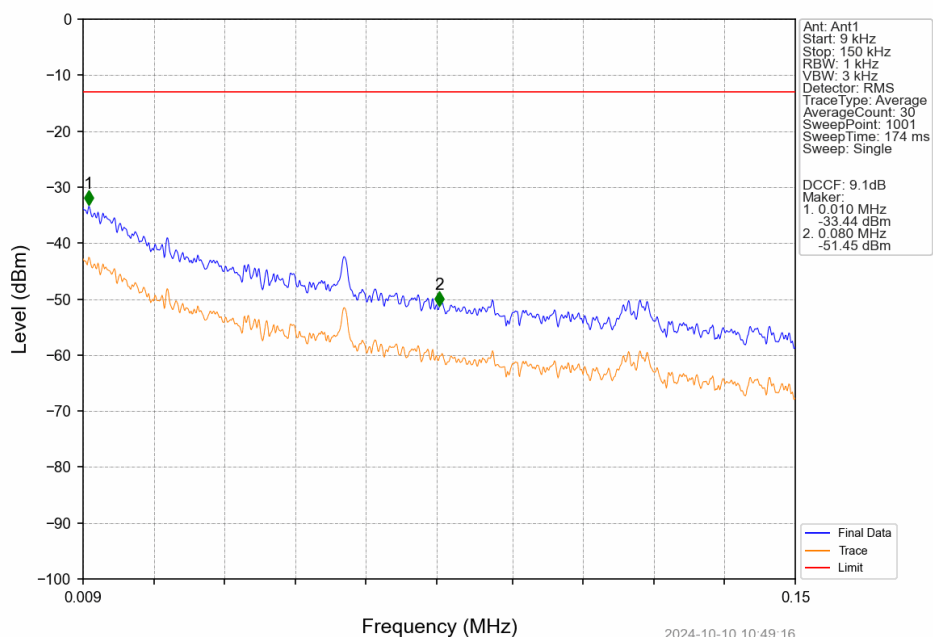
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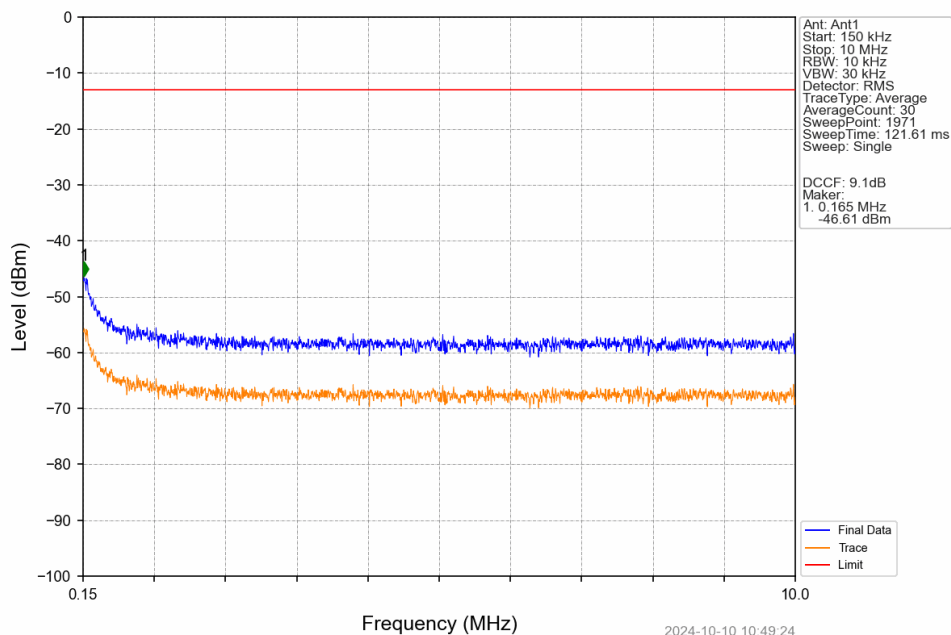
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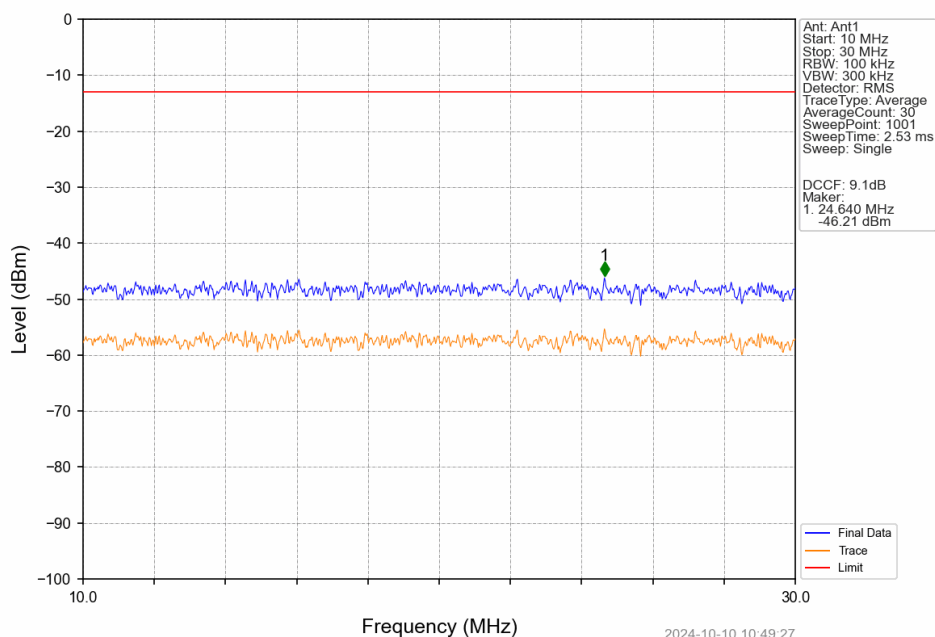
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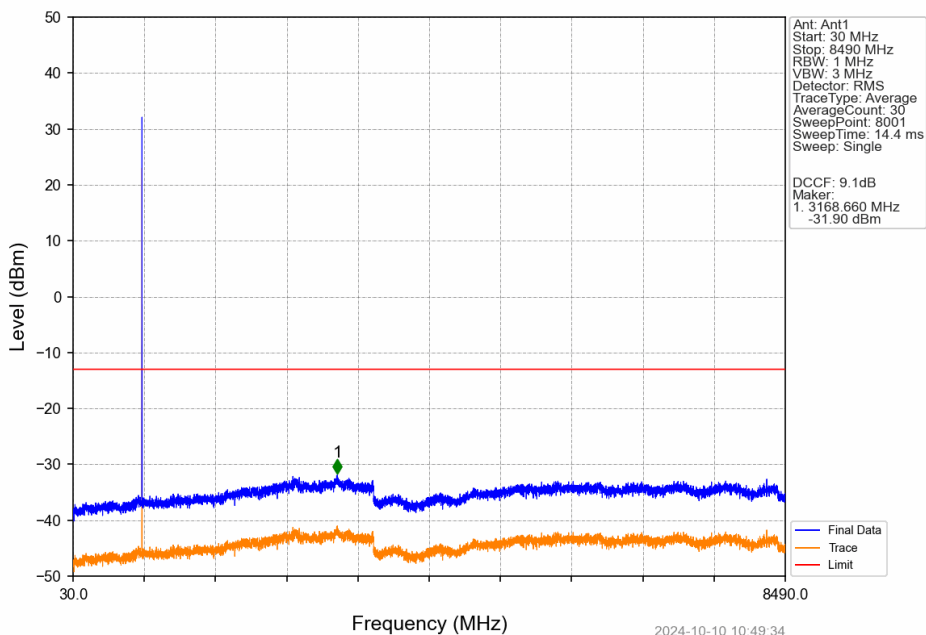
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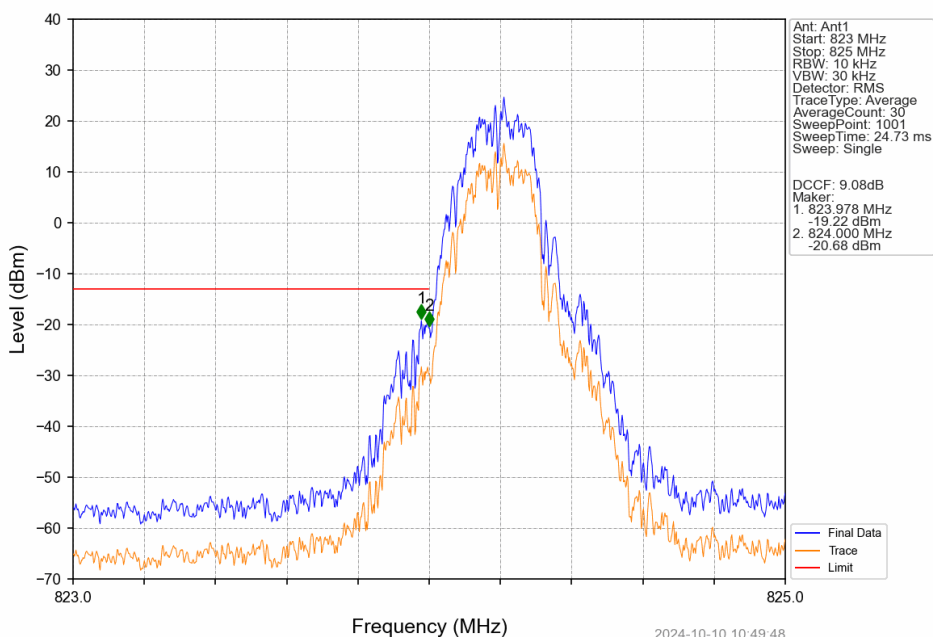
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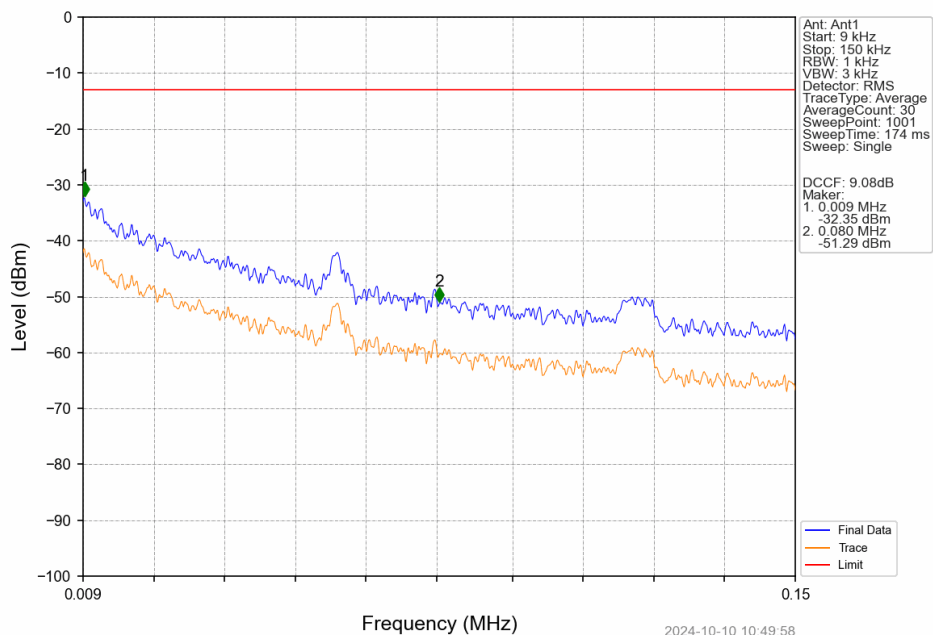
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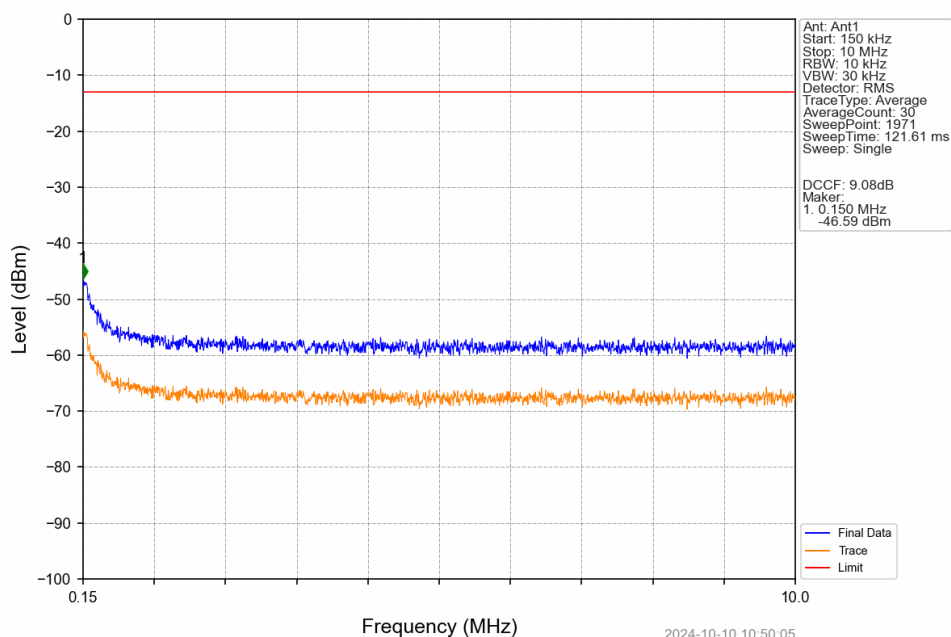
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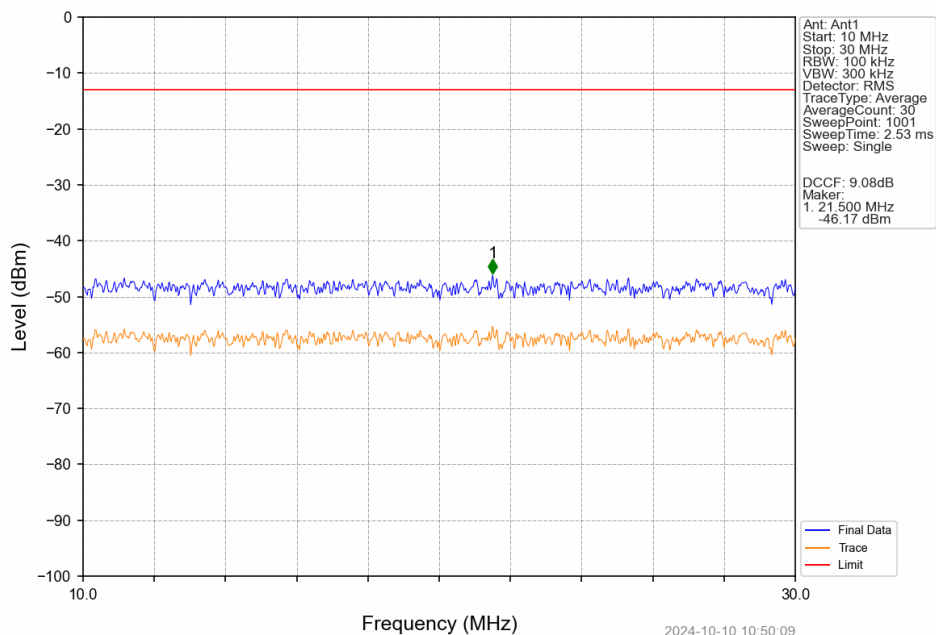
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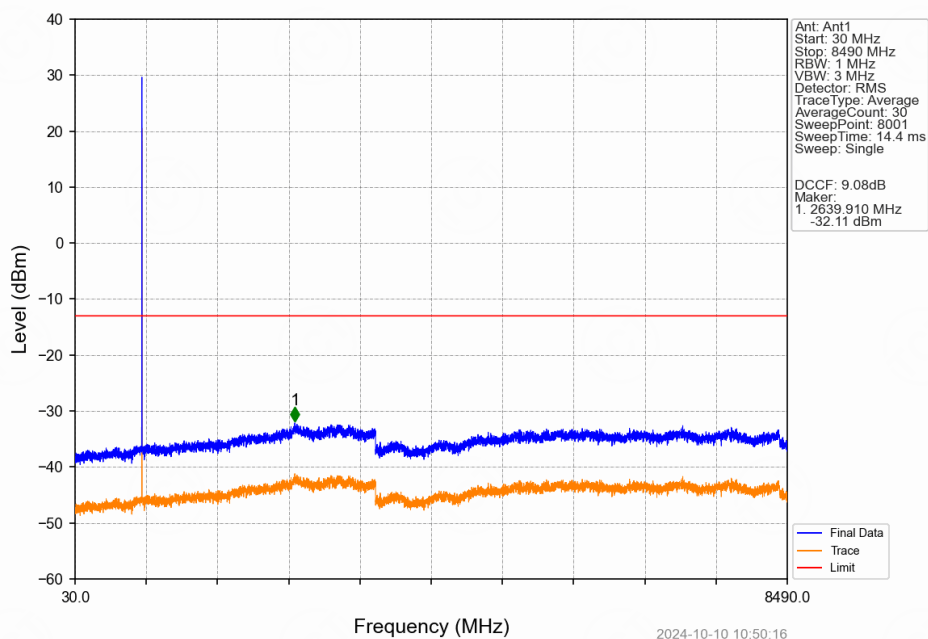
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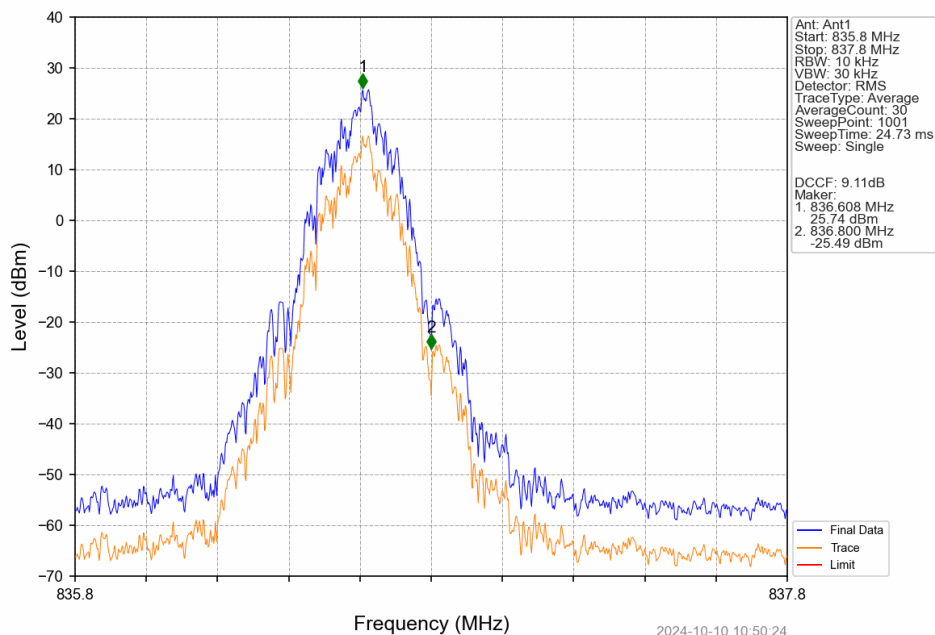
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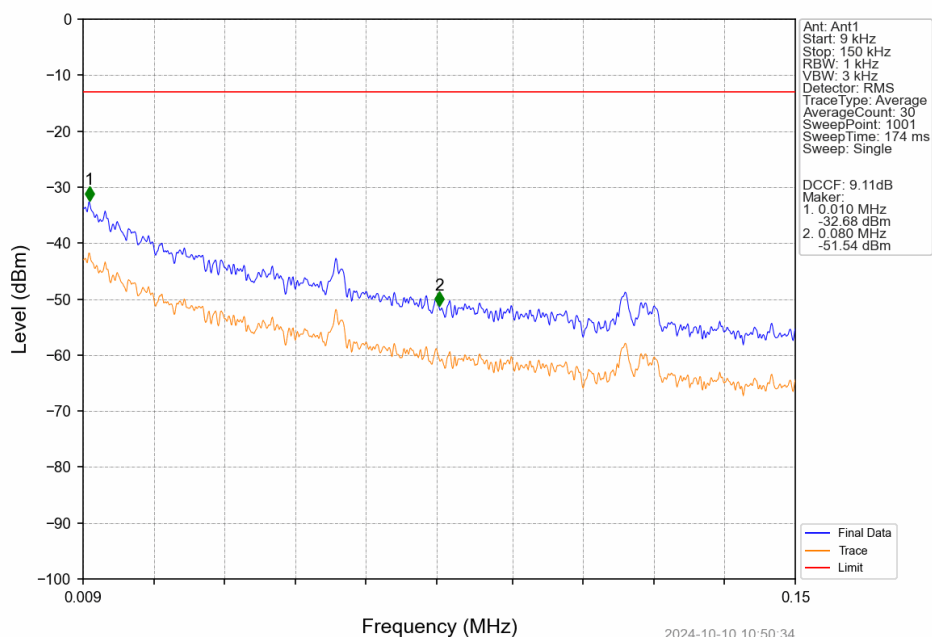
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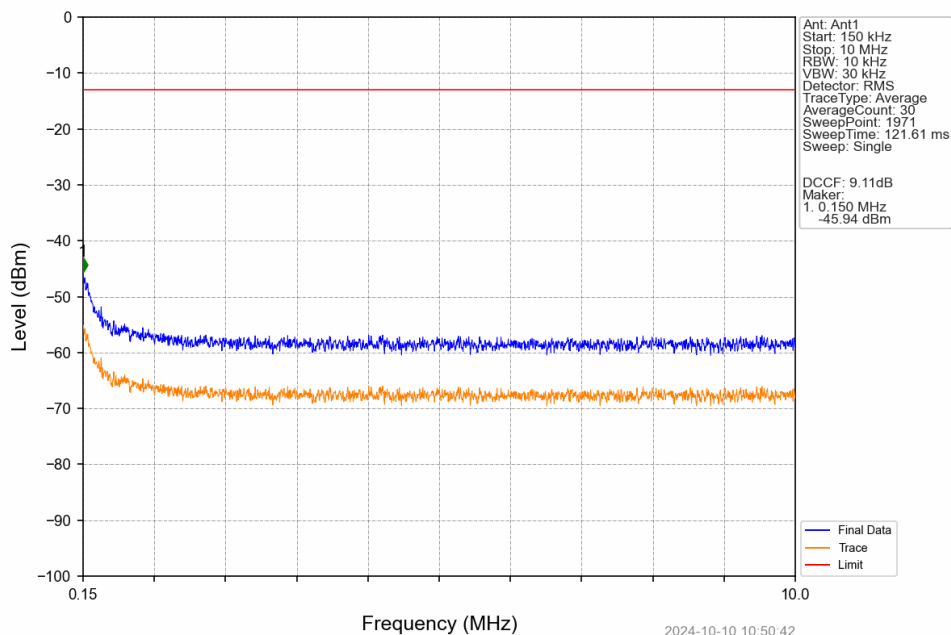
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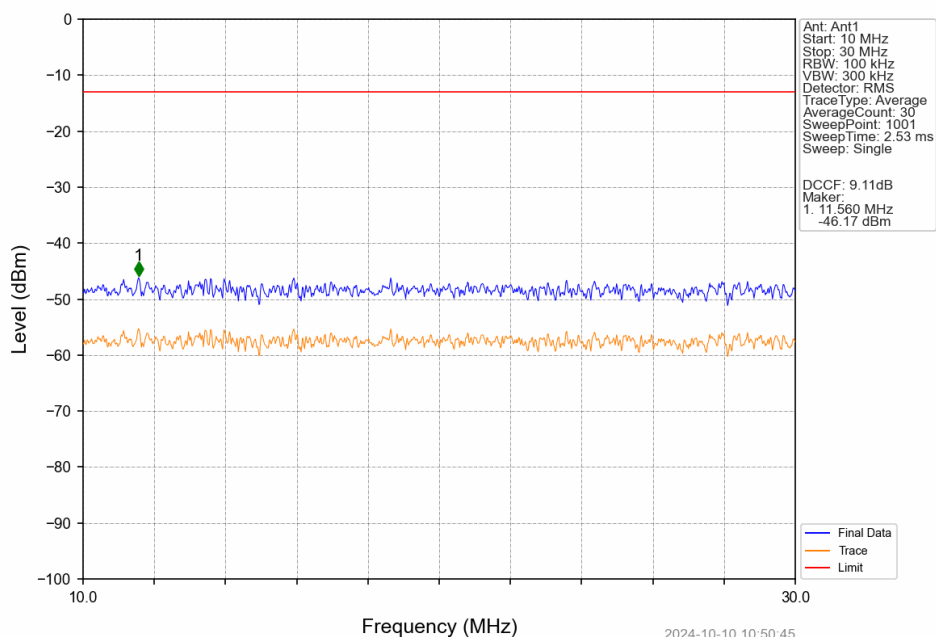
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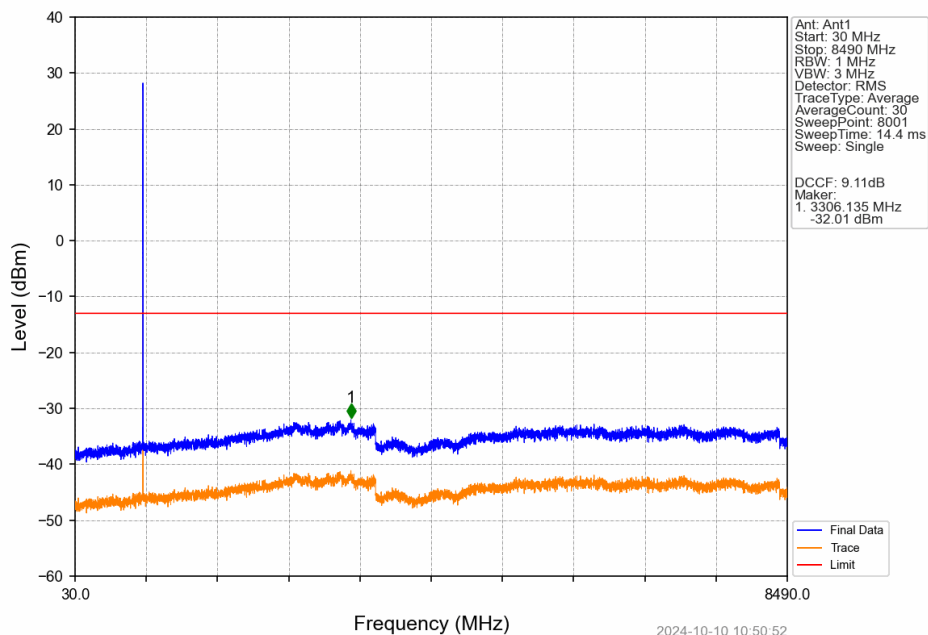
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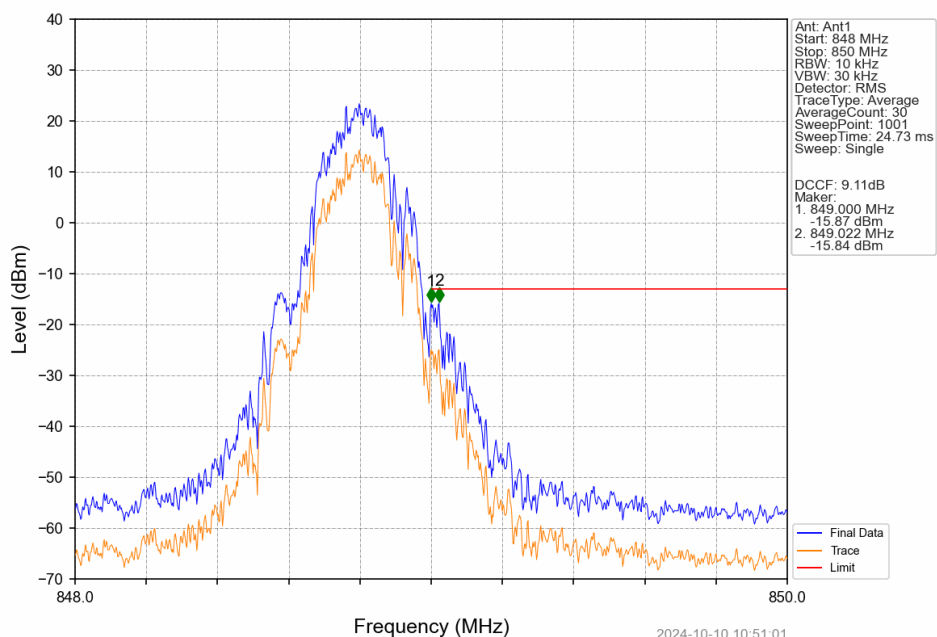
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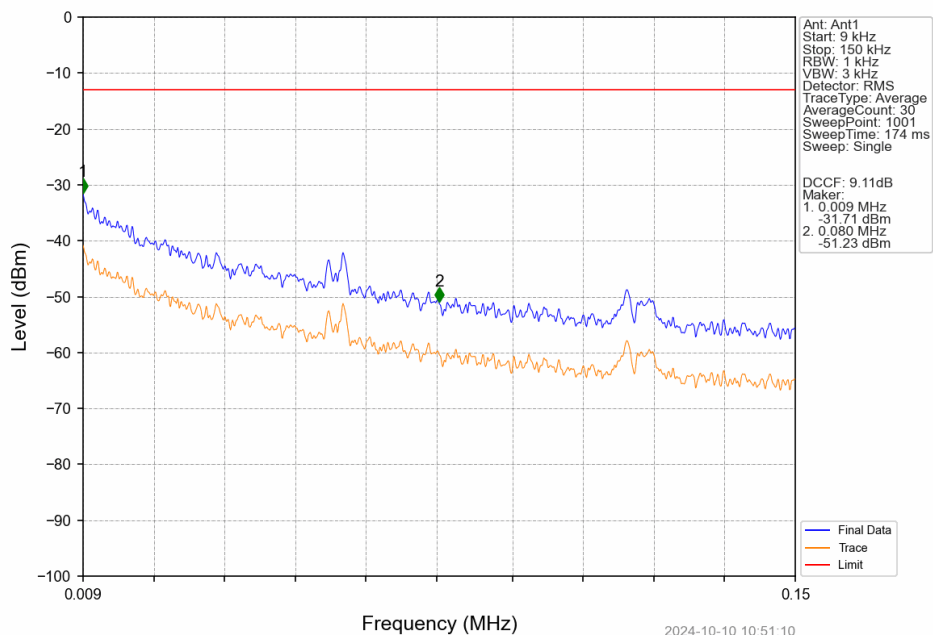
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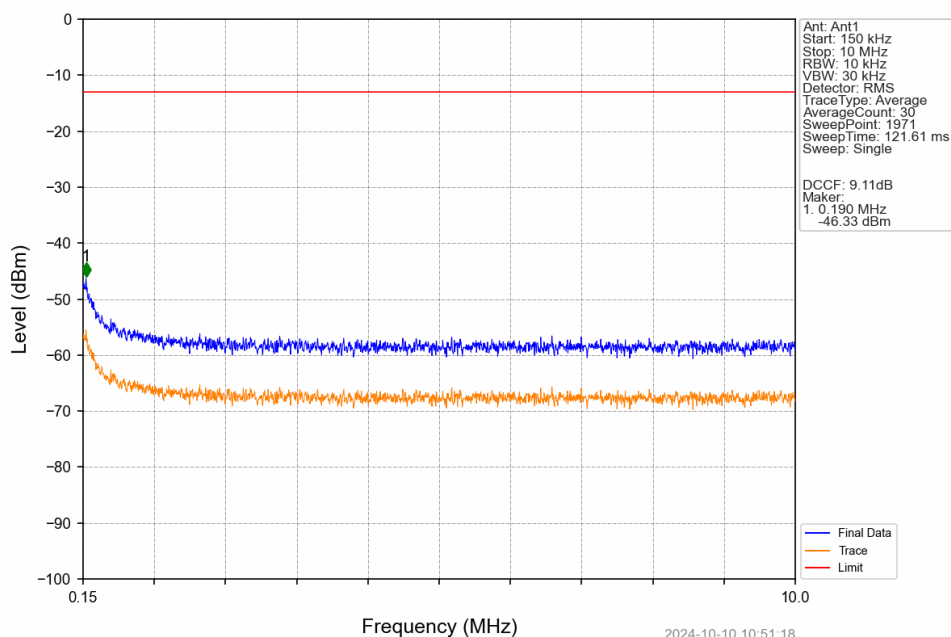
GSM850_GPRS_HCH 848.8MHz 1 TX Slot_NTNV



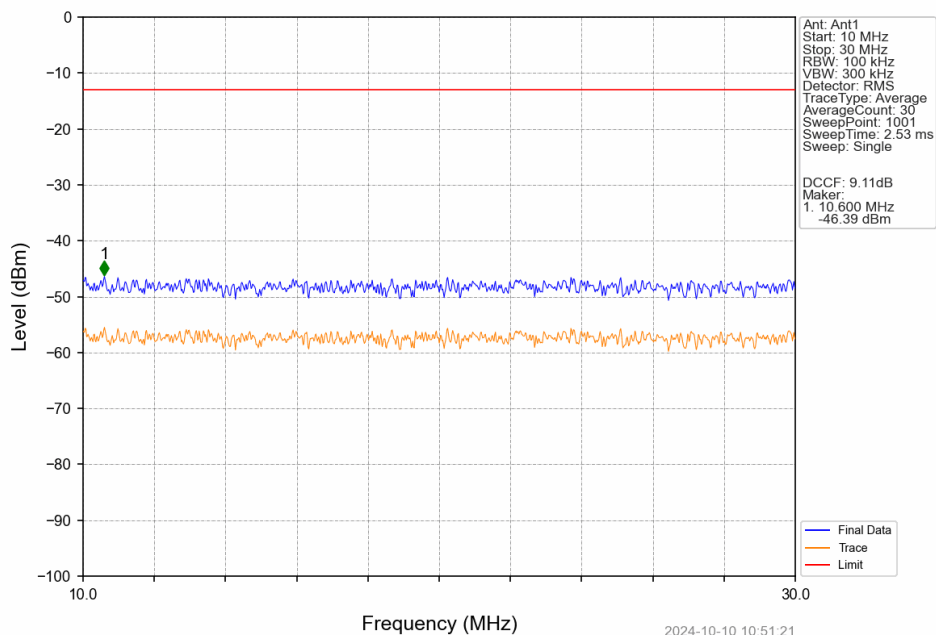
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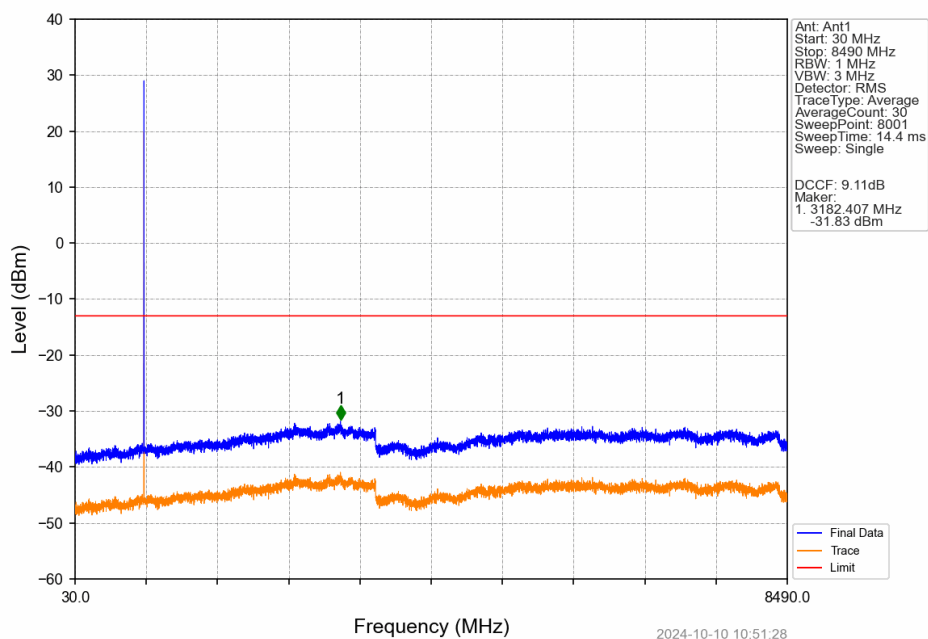
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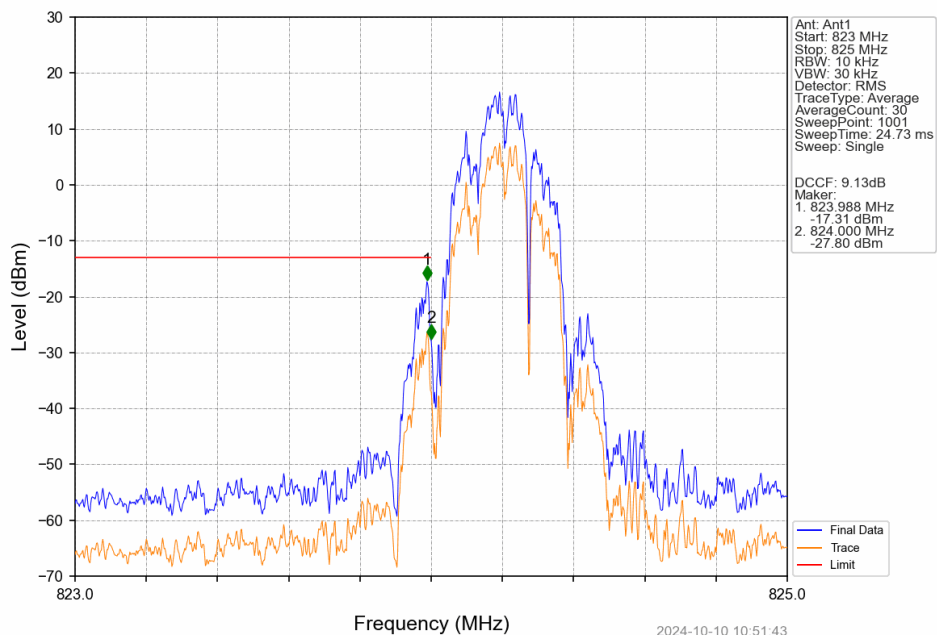
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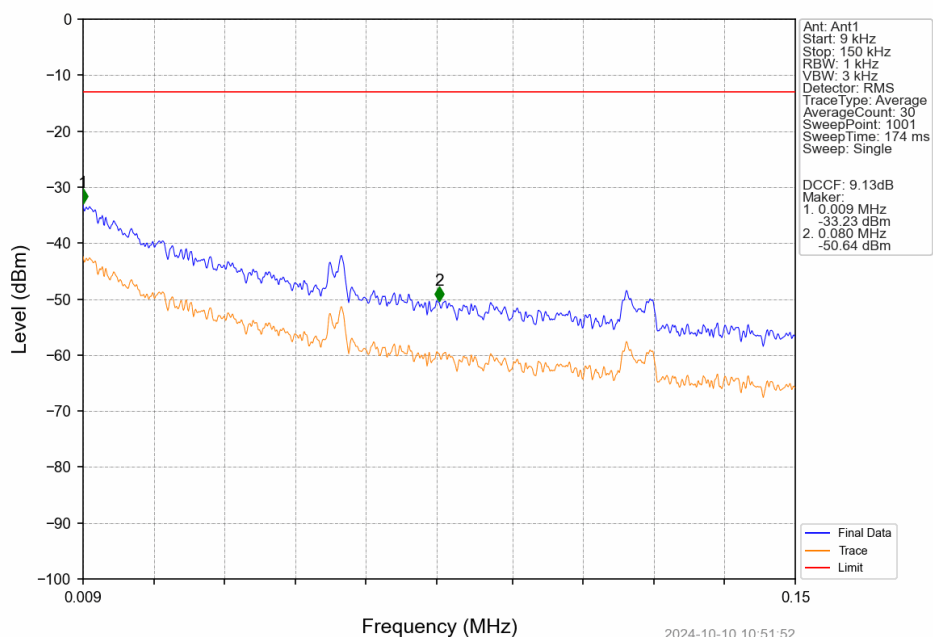
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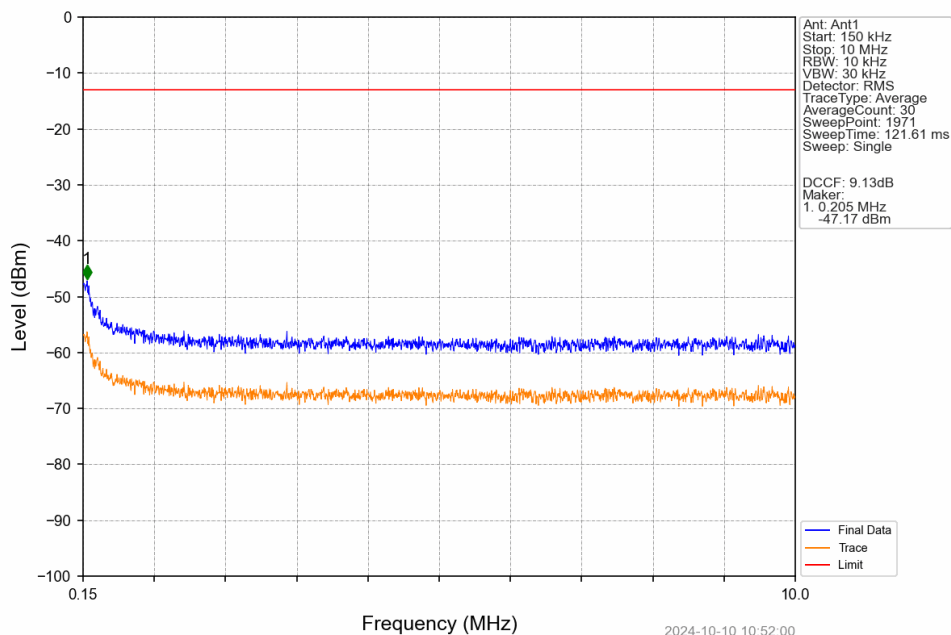
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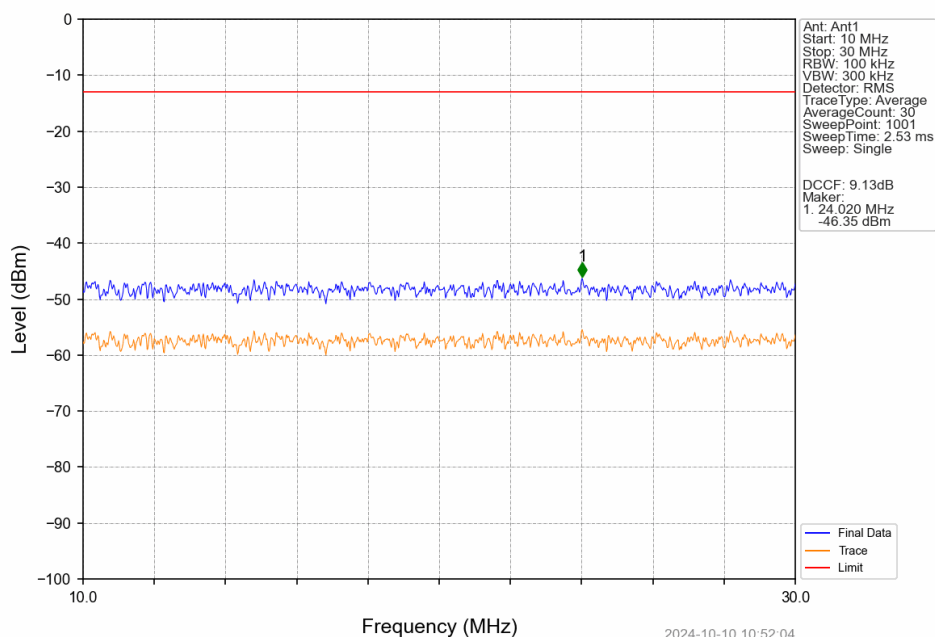
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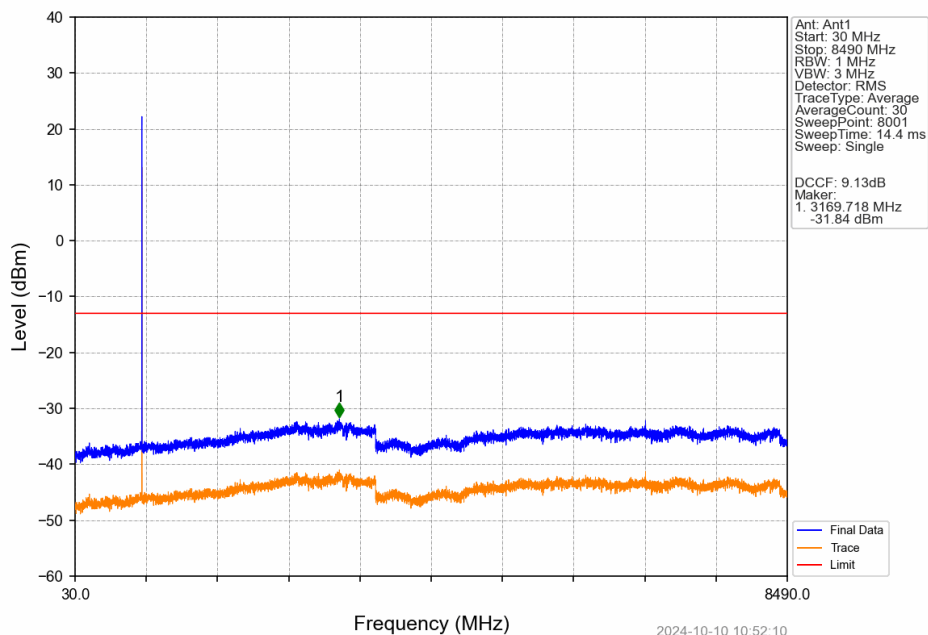
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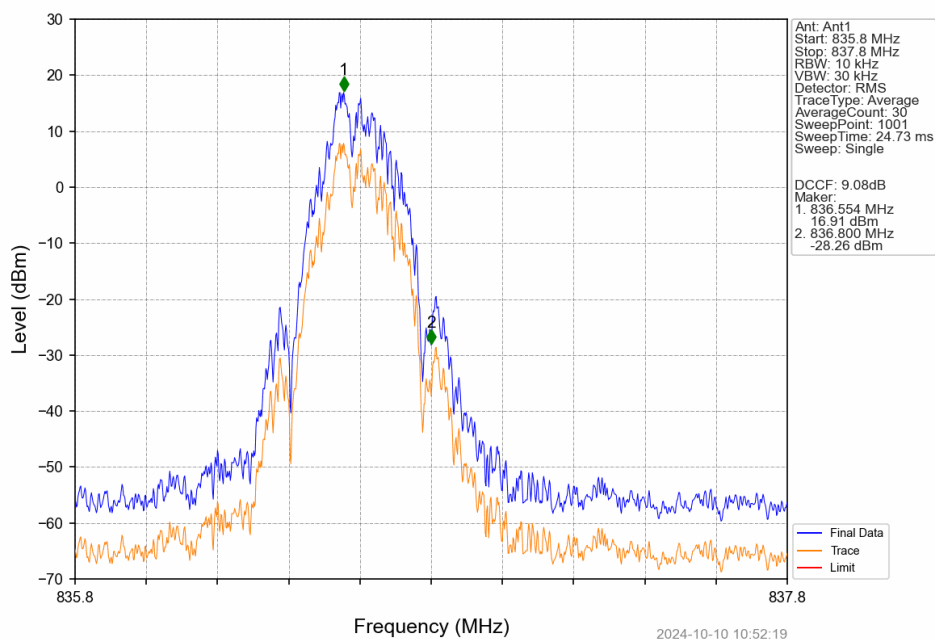
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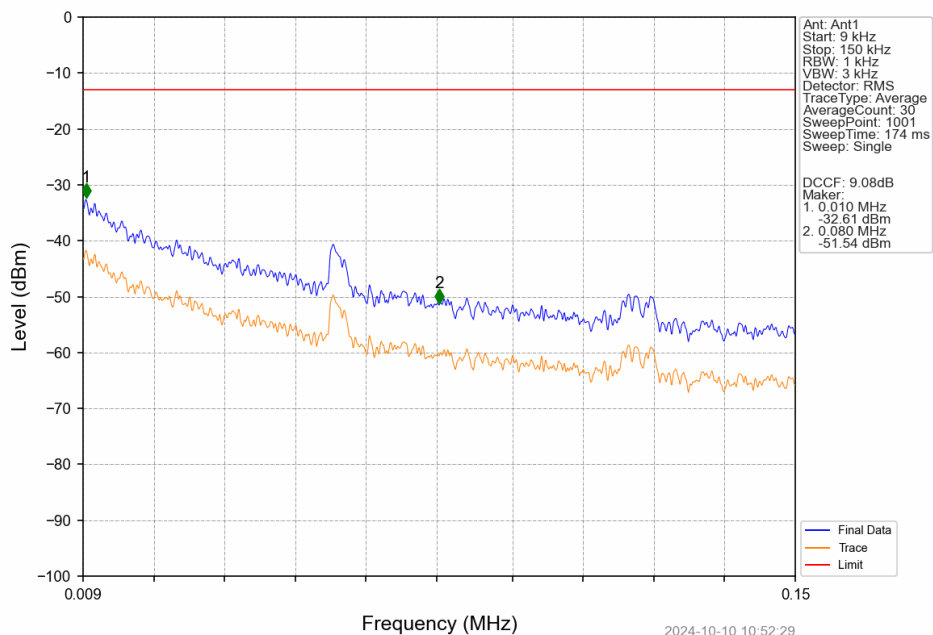
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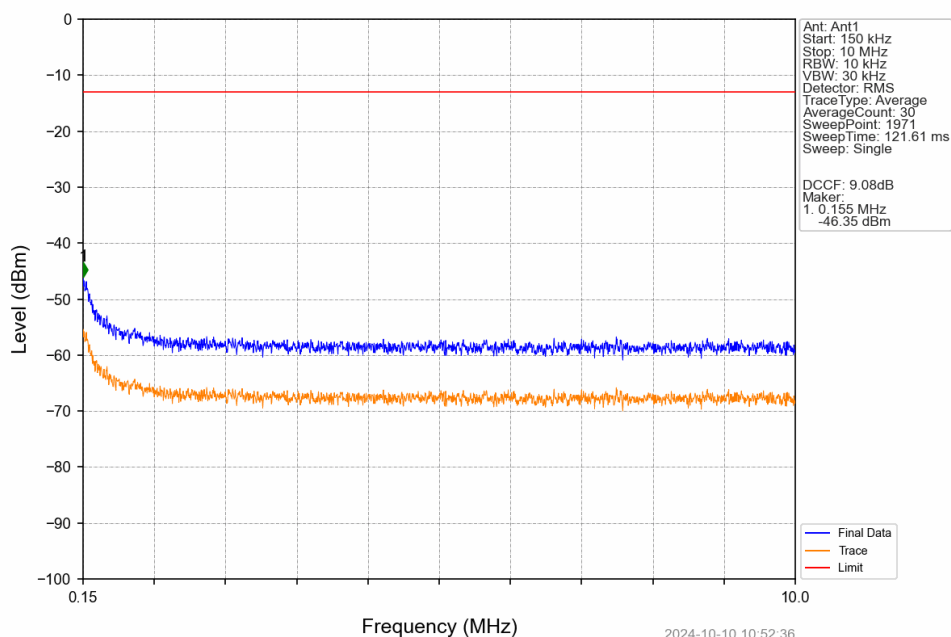
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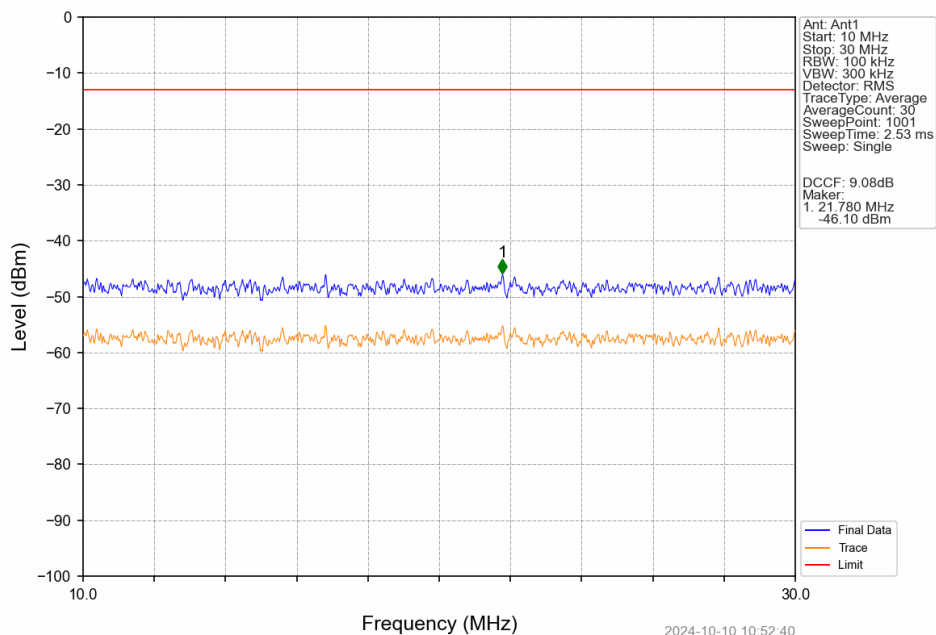
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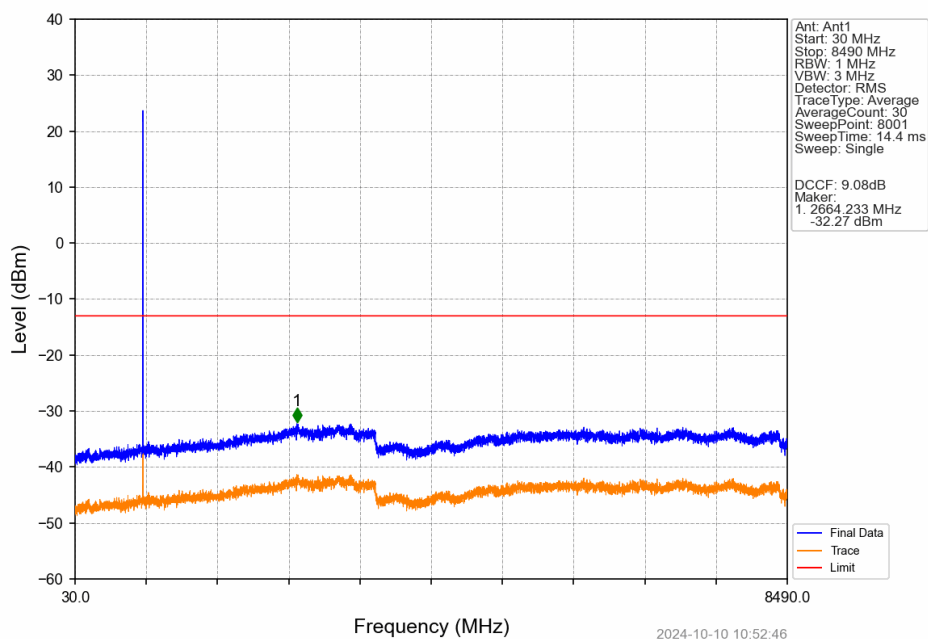
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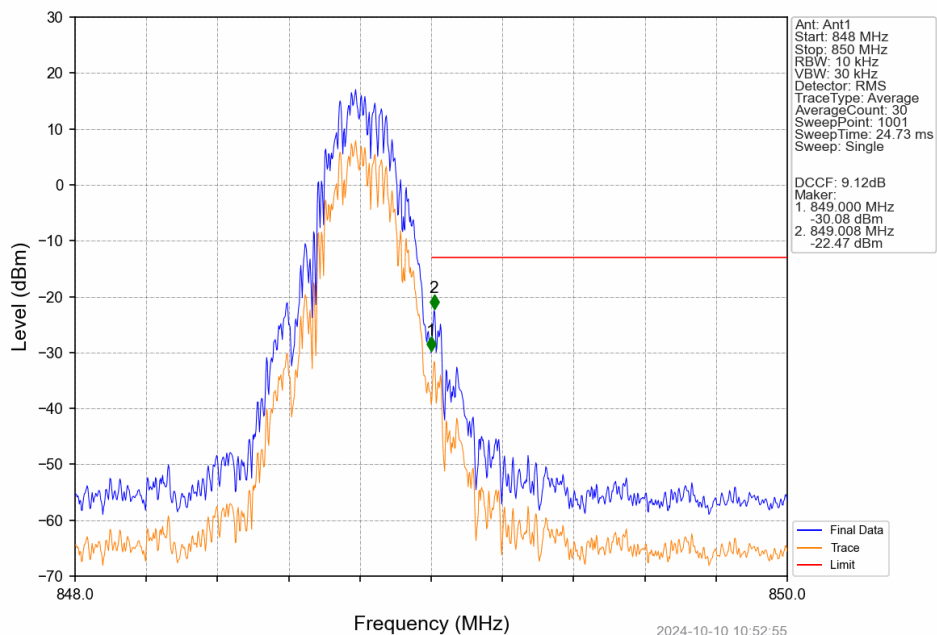
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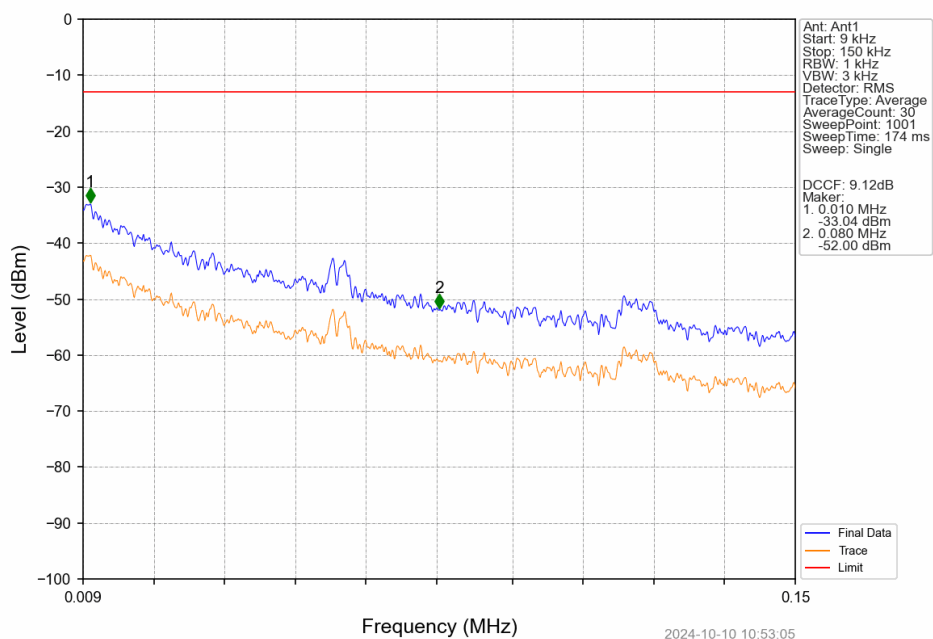
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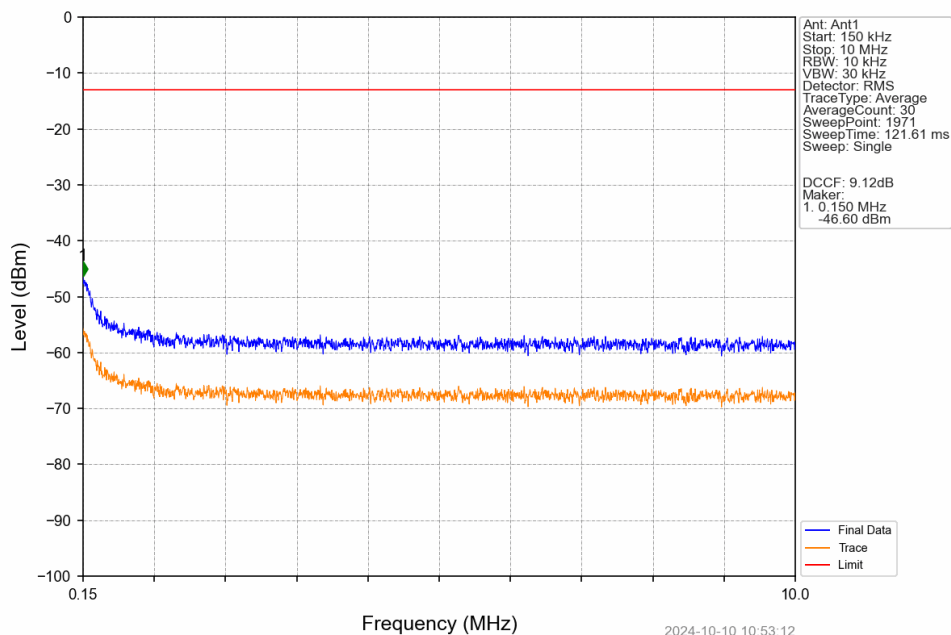
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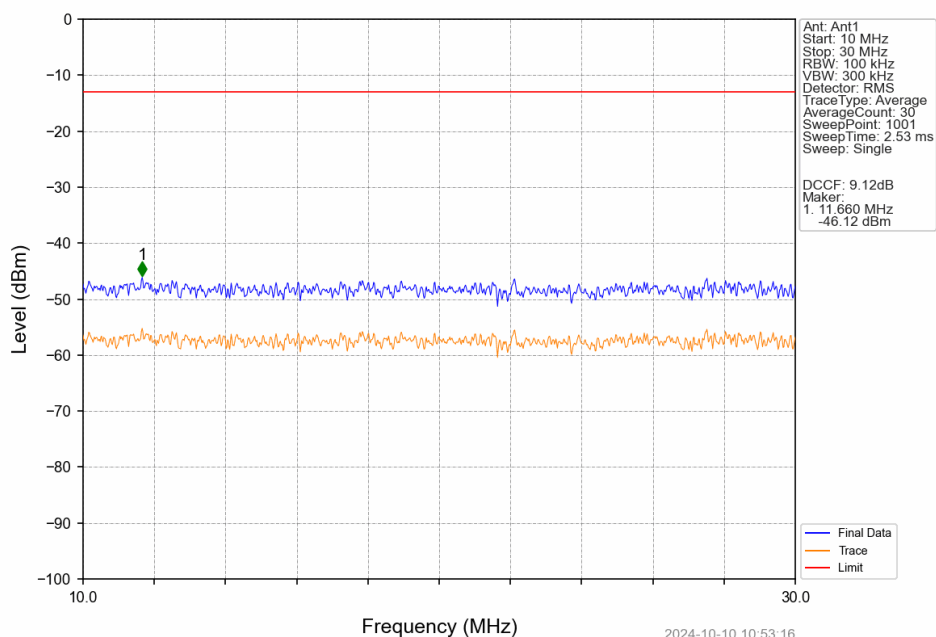
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GSM850 EGPRS HCH 848.8MHz 1 TX Slot NTNV



GSM850 EGPRS HCH 848.8MHz 1 TX Slot NTNV



GSM850 EGPRS HCH 848.8MHz 1 TX Slot NTNV

