



Annex for GSM850

Test Report No.: CTL2405163031-WF

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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	GPRS	1 TX Slot	824.2	33.29	0.94	32.08	<=38.45	Pass
		2 TX Slots	824.2	32.08	0.94	30.87	<=38.45	Pass
		3 TX Slots	824.2	30.22	0.94	29.01	<=38.45	Pass
		4 TX Slots	824.2	28.59	0.94	27.38	<=38.45	Pass
		1 TX Slot	836.6	33.41	0.94	32.20	<=38.45	Pass
		2 TX Slots	836.6	32.23	0.94	31.02	<=38.45	Pass
		3 TX Slots	836.6	30.30	0.94	29.09	<=38.45	Pass
		4 TX Slots	836.6	28.59	0.94	27.38	<=38.45	Pass
		1 TX Slot	848.8	33.57	0.94	32.36	<=38.45	Pass
		2 TX Slots	848.8	32.45	0.94	31.24	<=38.45	Pass
		3 TX Slots	848.8	30.46	0.94	29.25	<=38.45	Pass
		4 TX Slots	848.8	28.75	0.94	27.54	<=38.45	Pass
	EGPRS	1 TX Slot	824.2	25.74	0.94	24.53	<=38.45	Pass
		2 TX Slots	824.2	24.52	0.94	23.31	<=38.45	Pass
		3 TX Slots	824.2	22.81	0.94	21.60	<=38.45	Pass
		4 TX Slots	824.2	21.72	0.94	20.51	<=38.45	Pass
		1 TX Slot	836.6	25.57	0.94	24.36	<=38.45	Pass
		2 TX Slots	836.6	24.51	0.94	23.30	<=38.45	Pass
		3 TX Slots	836.6	22.64	0.94	21.43	<=38.45	Pass
		4 TX Slots	836.6	21.49	0.94	20.28	<=38.45	Pass
		1 TX Slot	848.8	25.62	0.94	24.41	<=38.45	Pass
		2 TX Slots	848.8	24.25	0.94	23.04	<=38.45	Pass
		3 TX Slots	848.8	22.89	0.94	21.68	<=38.45	Pass
		4 TX Slots	848.8	21.63	0.94	20.42	<=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	
GPRS	824.2	20	3.27	12.591	0.0153	-2.5 to 2.5	Pass
			3.85	9.524	0.0116	-2.5 to 2.5	Pass
			4.43	9.492	0.0115	-2.5 to 2.5	Pass
		-30	3.85	7.781	0.0094	-2.5 to 2.5	Pass
		-20	3.85	9.105	0.0110	-2.5 to 2.5	Pass
		-10	3.85	8.427	0.0102	-2.5 to 2.5	Pass
		0	3.85	10.331	0.0125	-2.5 to 2.5	Pass

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		10	3.85	10.848	0.0132	-2.5 to 2.5	Pass
		30	3.85	8.362	0.0101	-2.5 to 2.5	Pass
		40	3.85	8.491	0.0103	-2.5 to 2.5	Pass
		50	3.85	8.233	0.0100	-2.5 to 2.5	Pass
	836.6	20	3.27	12.236	0.0146	-2.5 to 2.5	Pass
			3.85	8.653	0.0103	-2.5 to 2.5	Pass
			4.43	11.397	0.0136	-2.5 to 2.5	Pass
		-30	3.85	10.299	0.0123	-2.5 to 2.5	Pass
		-20	3.85	12.591	0.0151	-2.5 to 2.5	Pass
		-10	3.85	10.590	0.0127	-2.5 to 2.5	Pass
		0	3.85	10.751	0.0129	-2.5 to 2.5	Pass
		10	3.85	11.784	0.0141	-2.5 to 2.5	Pass
		30	3.85	13.205	0.0158	-2.5 to 2.5	Pass
		40	3.85	16.434	0.0196	-2.5 to 2.5	Pass
		50	3.85	14.238	0.0170	-2.5 to 2.5	Pass
	848.8	20	3.27	14.787	0.0174	-2.5 to 2.5	Pass
			3.85	16.853	0.0199	-2.5 to 2.5	Pass
			4.43	18.629	0.0219	-2.5 to 2.5	Pass
		-30	3.85	18.500	0.0218	-2.5 to 2.5	Pass
		-20	3.85	16.853	0.0199	-2.5 to 2.5	Pass
		-10	3.85	17.531	0.0207	-2.5 to 2.5	Pass
		0	3.85	18.468	0.0218	-2.5 to 2.5	Pass
		10	3.85	20.308	0.0239	-2.5 to 2.5	Pass
		30	3.85	20.276	0.0239	-2.5 to 2.5	Pass
		40	3.85	18.306	0.0216	-2.5 to 2.5	Pass
		50	3.85	17.628	0.0208	-2.5 to 2.5	Pass
EGPRS	824.2	20	3.27	20.889	0.0253	-2.5 to 2.5	Pass
			3.85	18.306	0.0222	-2.5 to 2.5	Pass
			4.43	17.854	0.0217	-2.5 to 2.5	Pass
		-30	3.85	20.824	0.0253	-2.5 to 2.5	Pass
		-20	3.85	19.662	0.0239	-2.5 to 2.5	Pass
		-10	3.85	18.597	0.0226	-2.5 to 2.5	Pass
		0	3.85	20.211	0.0245	-2.5 to 2.5	Pass
		10	3.85	19.662	0.0239	-2.5 to 2.5	Pass
		30	3.85	21.535	0.0261	-2.5 to 2.5	Pass
		40	3.85	20.534	0.0249	-2.5 to 2.5	Pass
		50	3.85	19.888	0.0241	-2.5 to 2.5	Pass
	836.6	20	3.27	20.372	0.0244	-2.5 to 2.5	Pass
			3.85	20.340	0.0243	-2.5 to 2.5	Pass
			4.43	23.633	0.0282	-2.5 to 2.5	Pass
		-30	3.85	21.406	0.0256	-2.5 to 2.5	Pass
		-20	3.85	18.758	0.0224	-2.5 to 2.5	Pass
		-10	3.85	22.406	0.0268	-2.5 to 2.5	Pass
		0	3.85	19.565	0.0234	-2.5 to 2.5	Pass
		10	3.85	20.566	0.0246	-2.5 to 2.5	Pass
		30	3.85	21.599	0.0258	-2.5 to 2.5	Pass
		40	3.85	20.437	0.0244	-2.5 to 2.5	Pass
		50	3.85	21.083	0.0252	-2.5 to 2.5	Pass
	848.8	20	3.27	22.213	0.0262	-2.5 to 2.5	Pass
			3.85	24.537	0.0289	-2.5 to 2.5	Pass
			4.43	20.760	0.0245	-2.5 to 2.5	Pass
		-30	3.85	21.502	0.0253	-2.5 to 2.5	Pass
		-20	3.85	22.180	0.0261	-2.5 to 2.5	Pass
		-10	3.85	21.373	0.0252	-2.5 to 2.5	Pass
		0	3.85	20.824	0.0245	-2.5 to 2.5	Pass
		10	3.85	21.987	0.0259	-2.5 to 2.5	Pass
		30	3.85	19.759	0.0233	-2.5 to 2.5	Pass

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		40	3.85	20.050	0.0236	-2.5 to 2.5	Pass
		50	3.85	21.147	0.0249	-2.5 to 2.5	Pass

3. Modulation Characteristics

3.1 Test Result

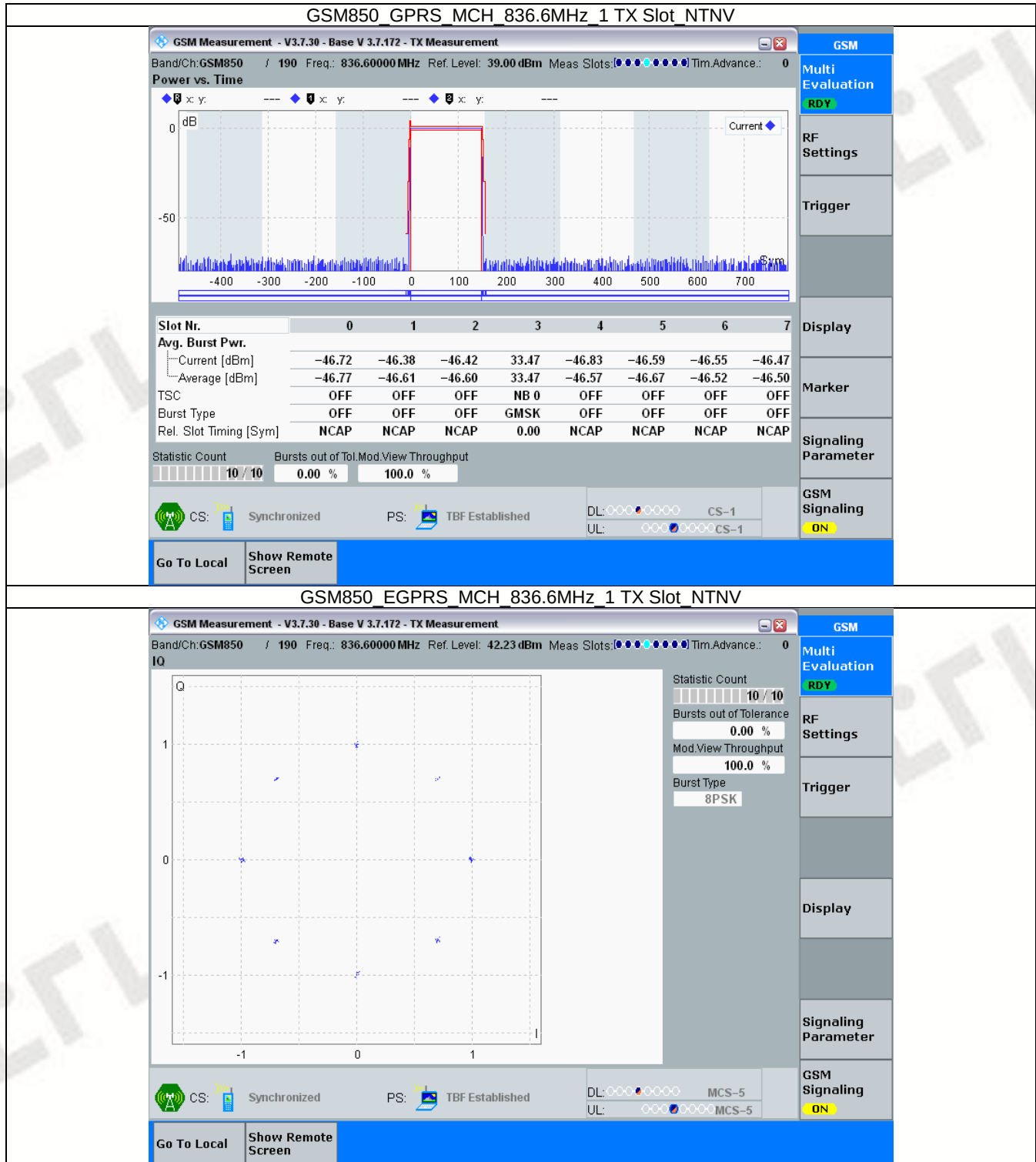
3.1.1 GSM850

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

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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	GPRS	1 TX Slot	824.2	0.243	/	Pass
			836.6	0.245	/	Pass
			848.8	0.246	/	Pass
	EGPRS	1 TX Slot	824.2	0.246	/	Pass
			836.6	0.236	/	Pass
			848.8	0.231	/	Pass

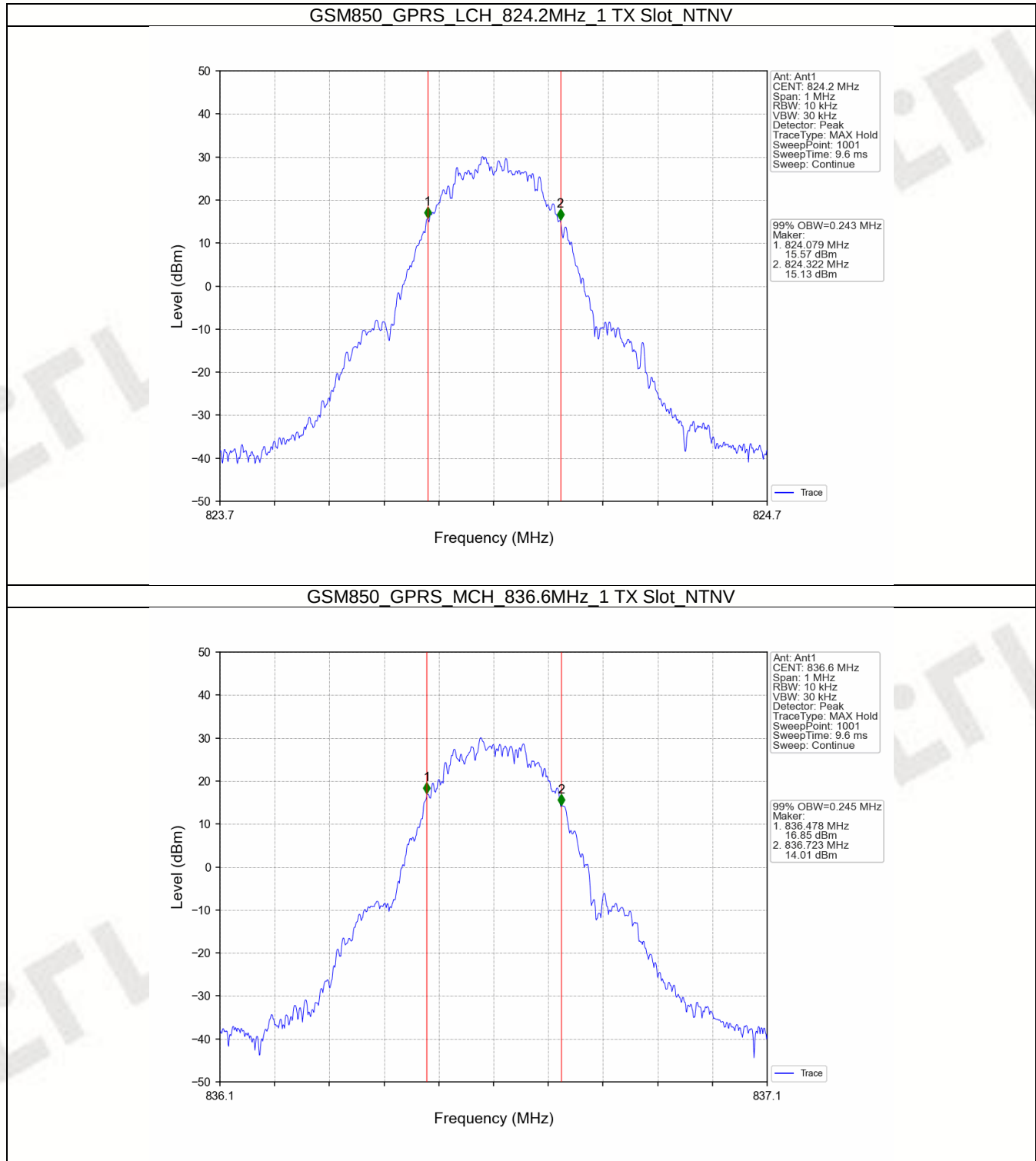
4.1.2 GSM850_XDB

Band: GSM850						
ENV	Mode		Frequency (MHz)	26dB Bandwidth (MHz)		Verdict
	Network	Subset		Result	Limit	
NTNV	GPRS	1 TX Slot	824.2	0.308	/	Pass
			836.6	0.315	/	Pass
			848.8	0.311	/	Pass
	EGPRS	1 TX Slot	824.2	0.310	/	Pass
			836.6	0.303	/	Pass
			848.8	0.299	/	Pass

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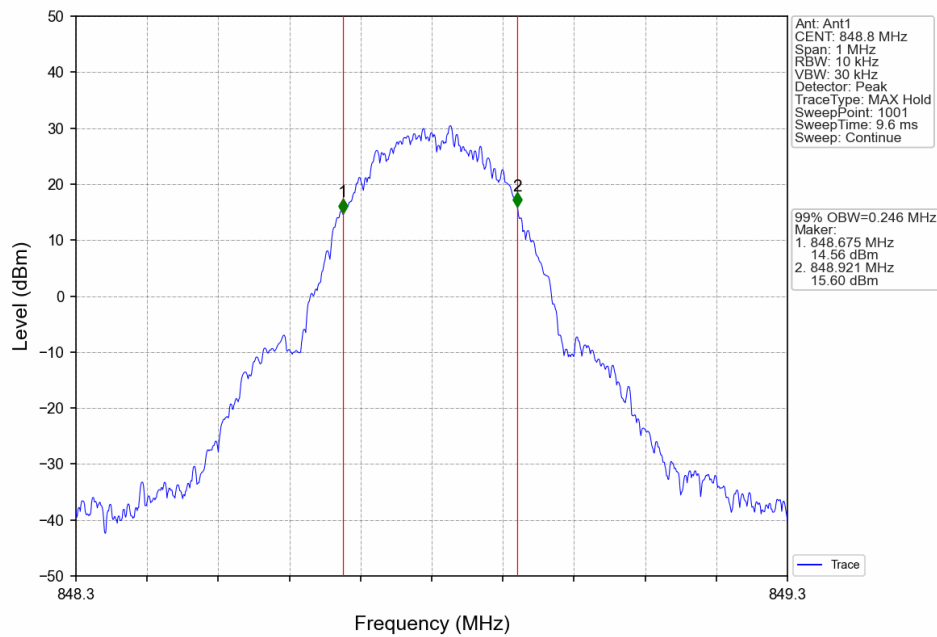
4.2 Test Graph

4.2.1 GSM850_OBW

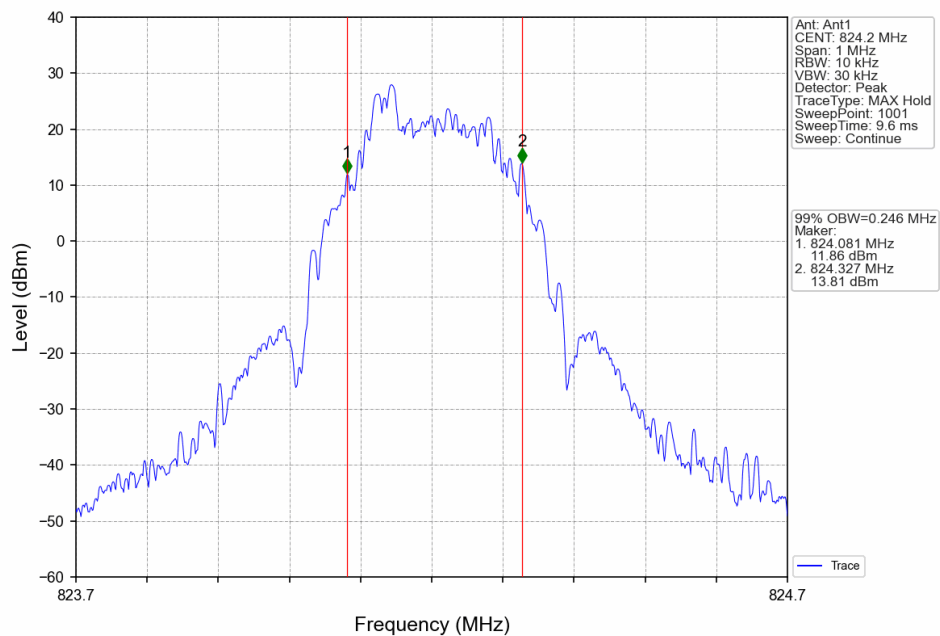


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GSM850_GPRS_HCH_848.8MHz_1 TX Slot_NTNV

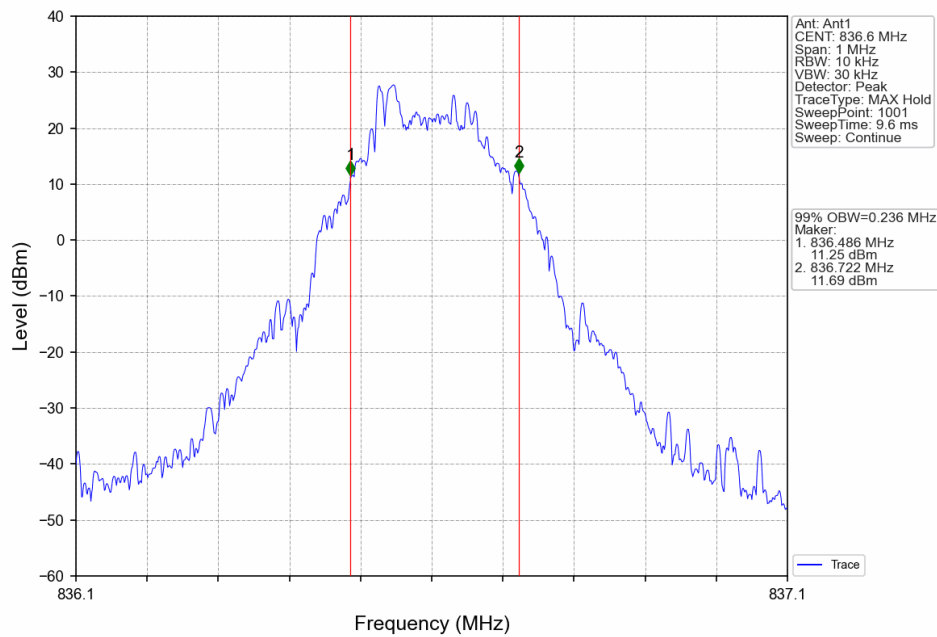


GSM850_EGPRS_LCH_824.2MHz_1 TX Slot_NTNV

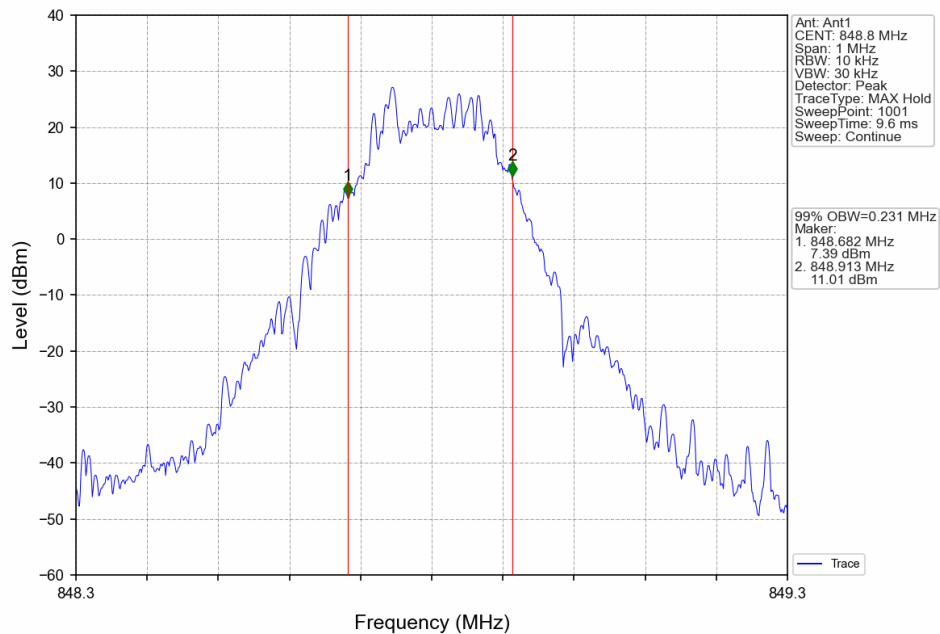


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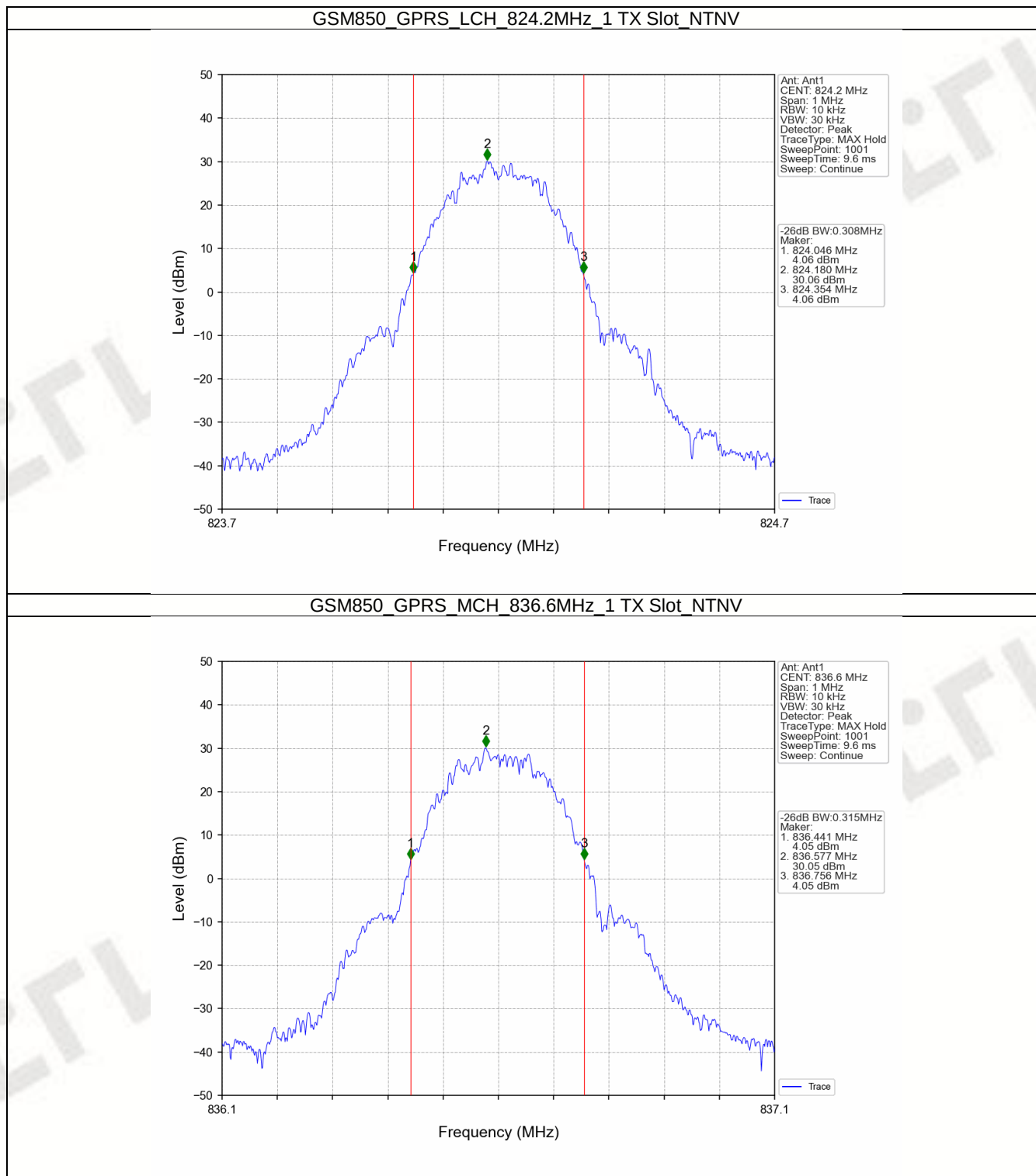
GSM850_EGPRS_MCH_836.6MHz_1 TX Slot_NTNV



GSM850_EGPRS_HCH_848.8MHz_1 TX Slot_NTNV

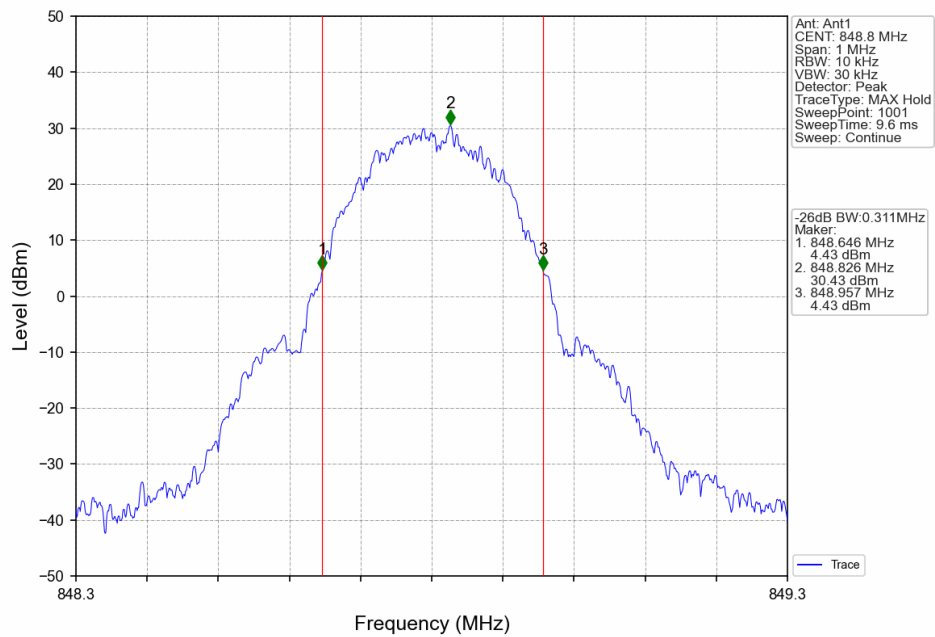


4.2.2 GSM850_XDB

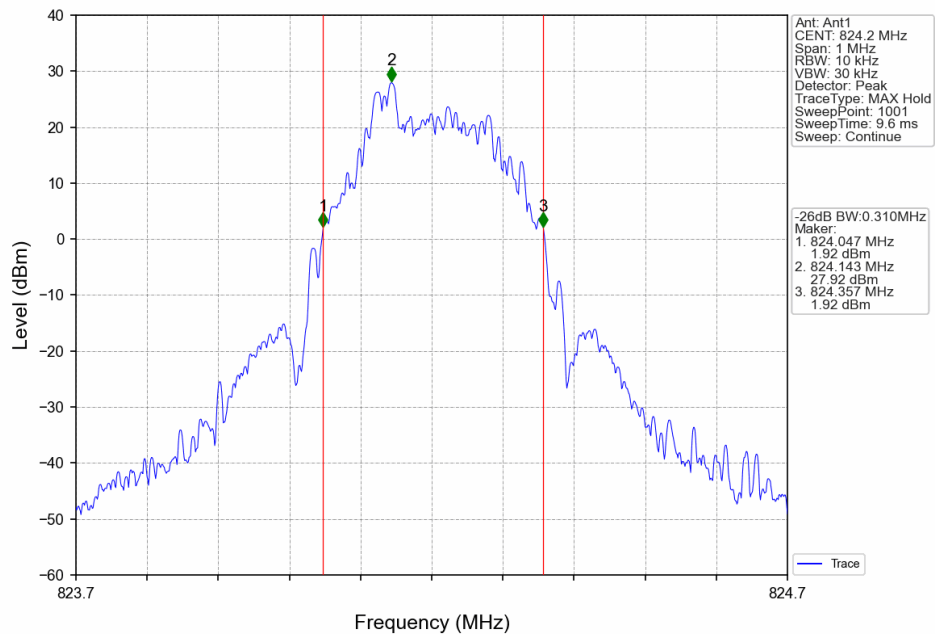


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GSM850_GPRS_HCH_848.8MHz_1 TX Slot_NTNV

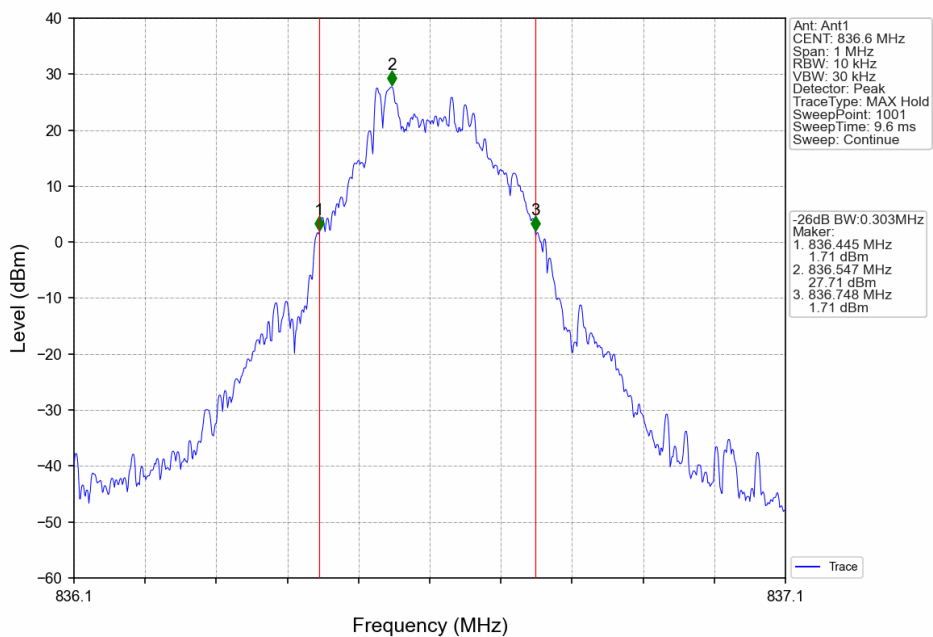


GSM850_EGPRS_LCH_824.2MHz_1 TX Slot_NTNV

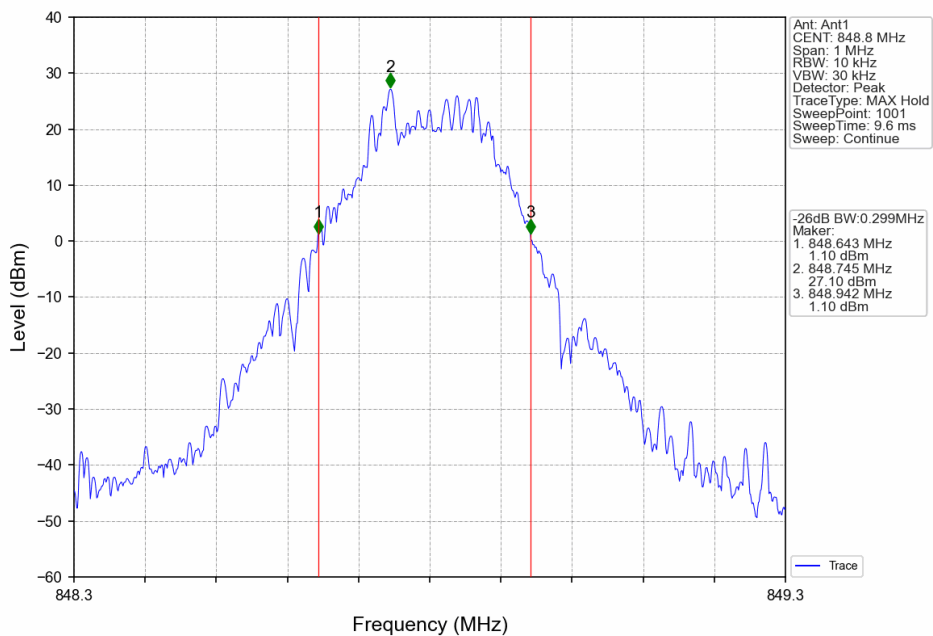


FCCID: 2BCUE-P8GLOBAL

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

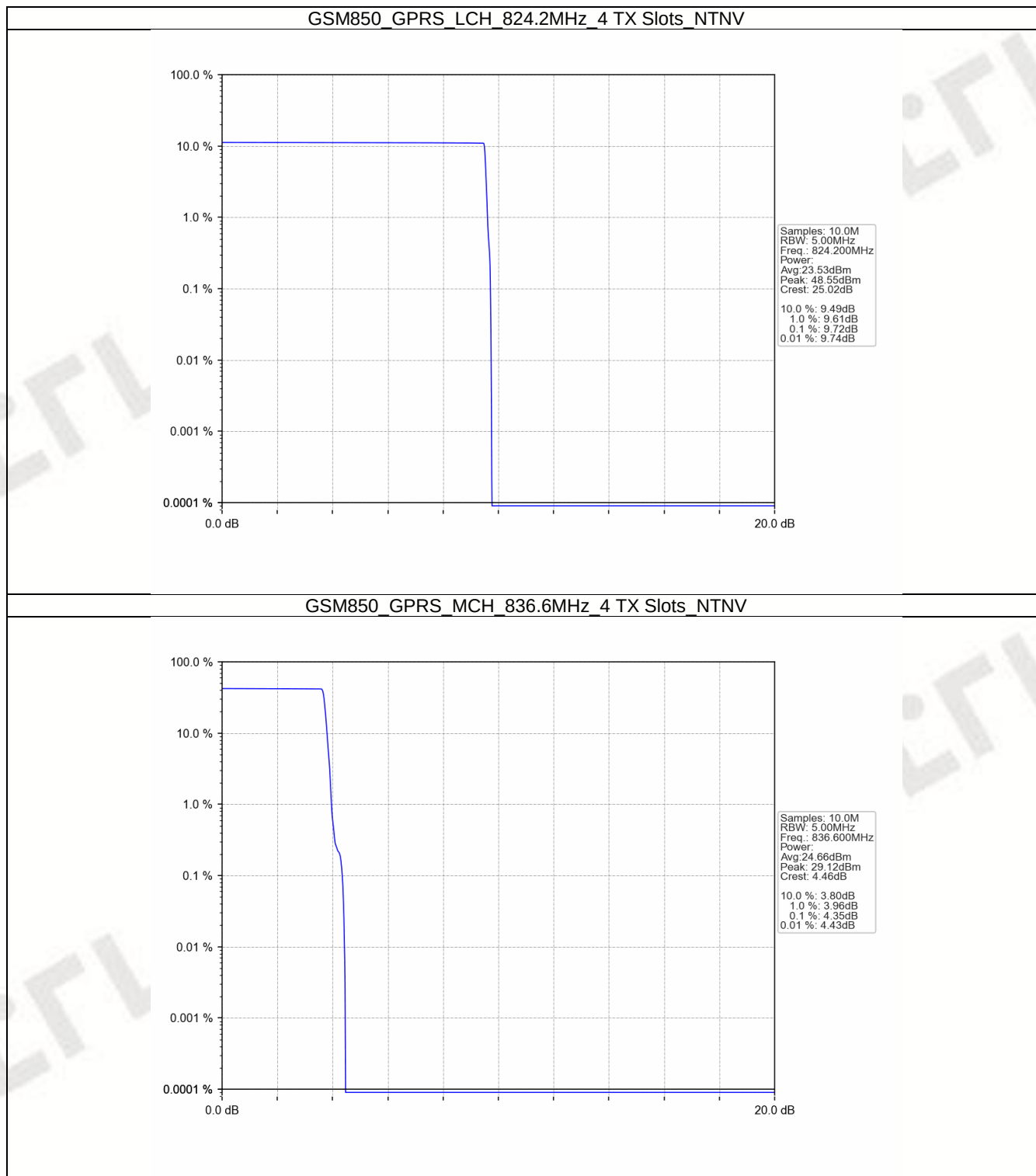
5.1.1 GSM850

Band: GSM850						
ENV	Mode		Frequency (MHz)	Peak-Average Ratio (dB)		Verdict
	Network	Subset		Result	Limit	
NTNV	GPRS	4 TX Slots	824.2	9.72	<=13	Pass
			836.6	4.35	<=13	Pass
			848.8	3.97	<=13	Pass
	EGPRS	4 TX Slots	824.2	10.94	<=13	Pass
			836.6	10.90	<=13	Pass
			848.8	10.99	<=13	Pass

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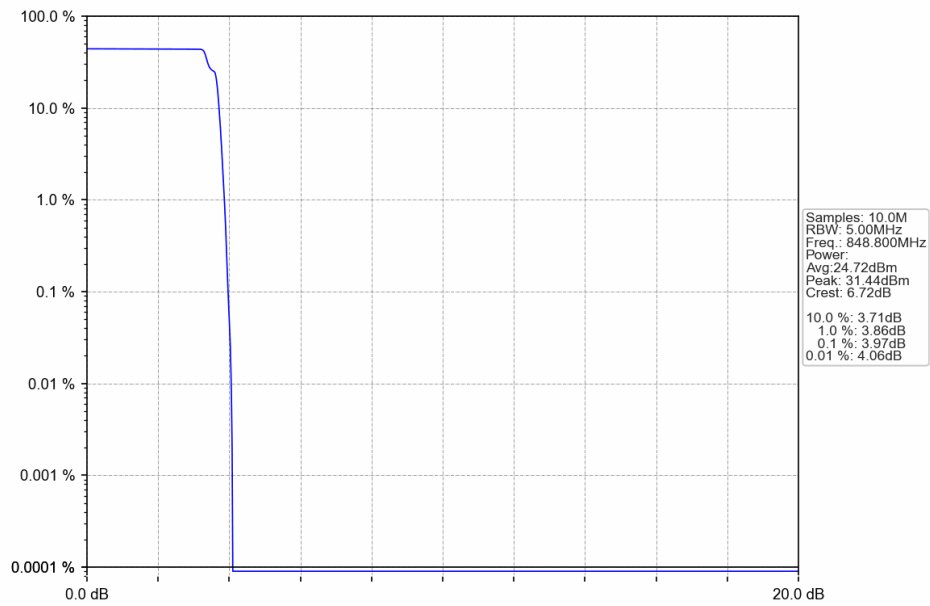
5.2 Test Graph

5.2.1 GSM850

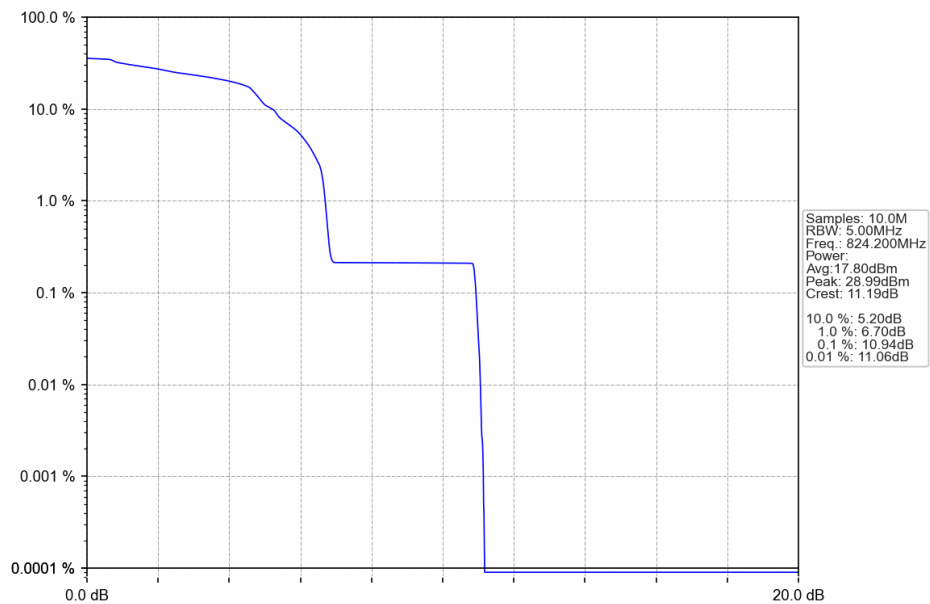


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GSM850_GPRS_HCH_848.8MHz_4 TX Slots_NTNV

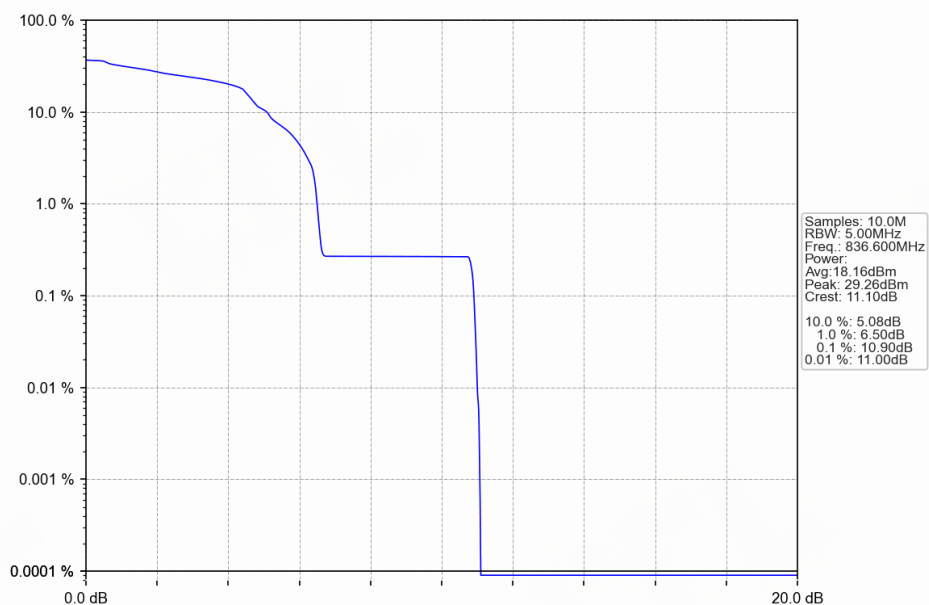


GSM850_EGPRS_LCH_824.2MHz_4 TX Slots_NTNV

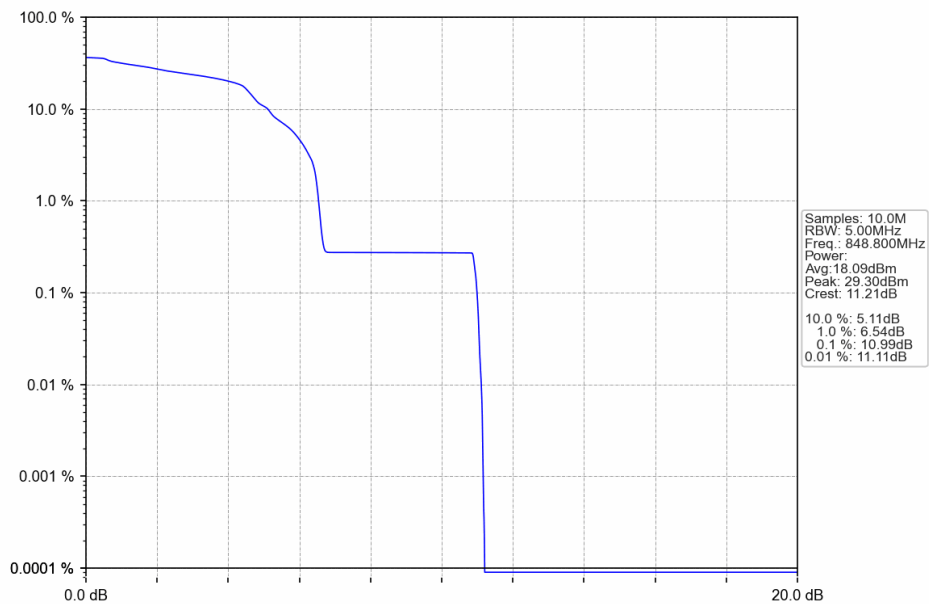


FCCID: 2BCUE-P8GLOBAL

GSM850_EGPRS_MCH_836.6MHz_4 TX Slots_NTNV



GSM850_EGPRS_HCH_848.8MHz_4 TX Slots_NTNV



6. Spurious Emission

6.1 Test Result

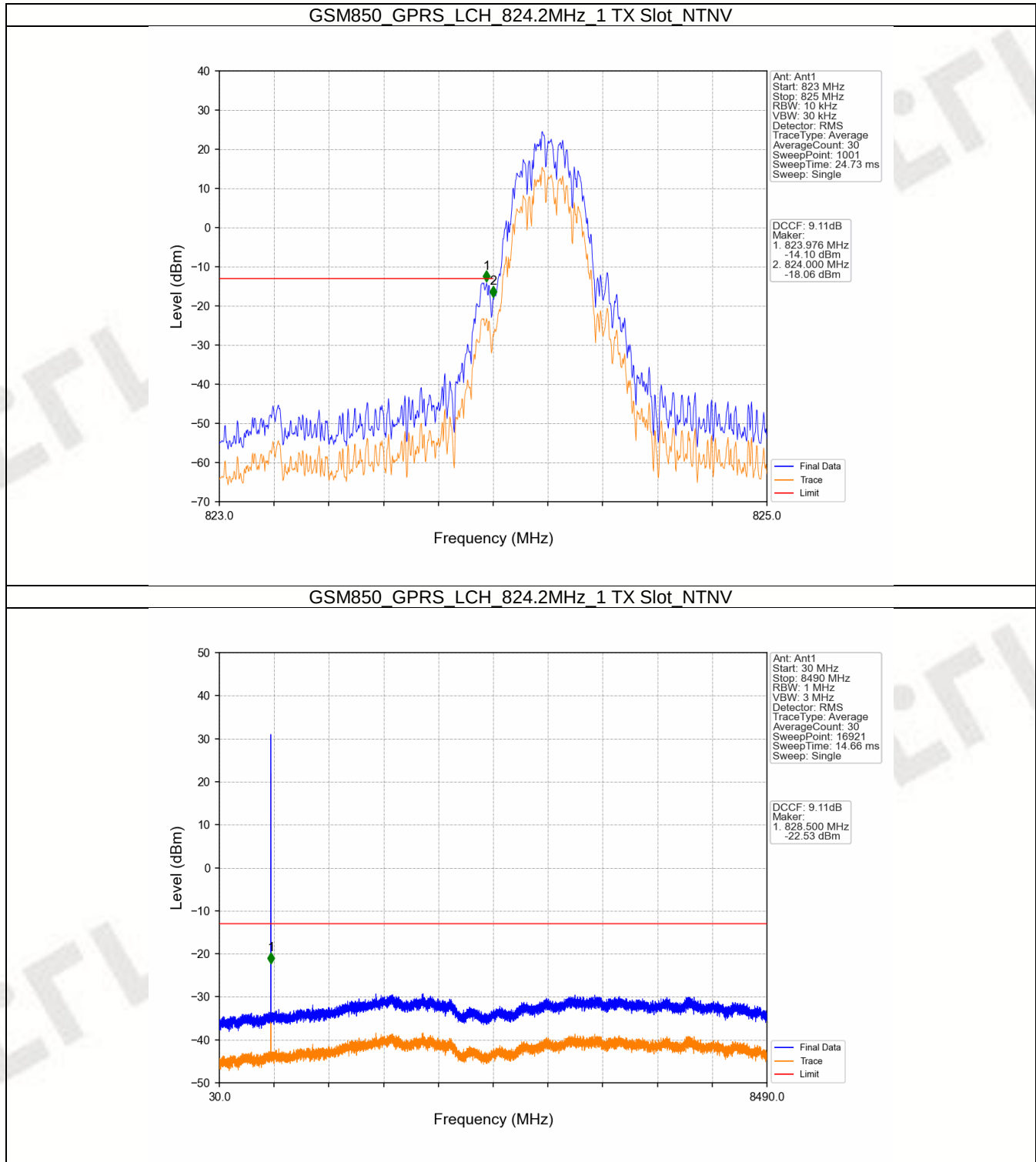
6.1.1 GSM850

Band: GSM850						
ENV	Mode		Frequency (MHz)	Spurious Emission		Verdict
	Network	Subset		Result	Limit	
NTNV	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	

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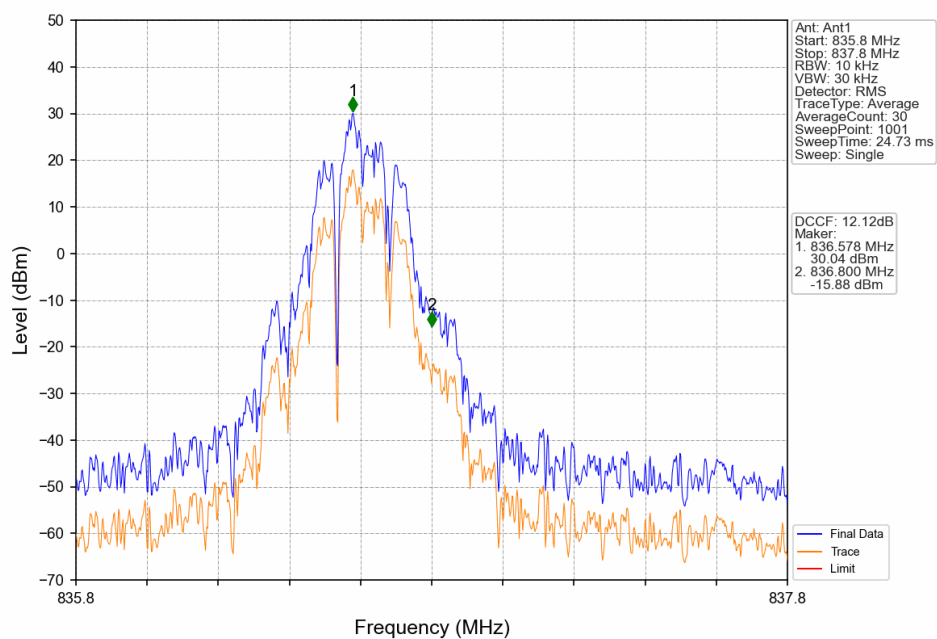
6.2 Test Graph

6.2.1 GSM850

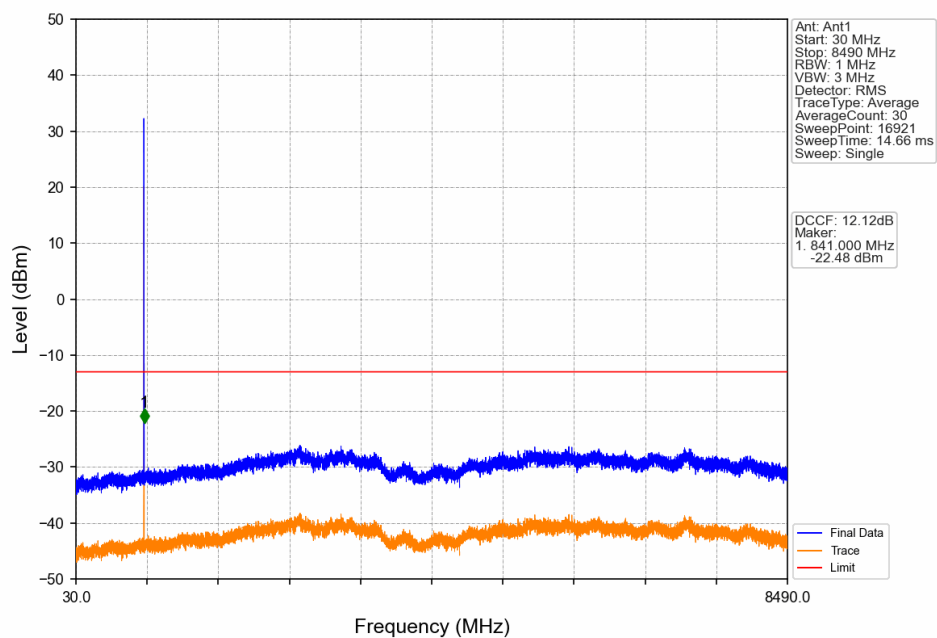


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GSM850_GPRS_MCH_836.6MHz_1 TX Slot_NTNV

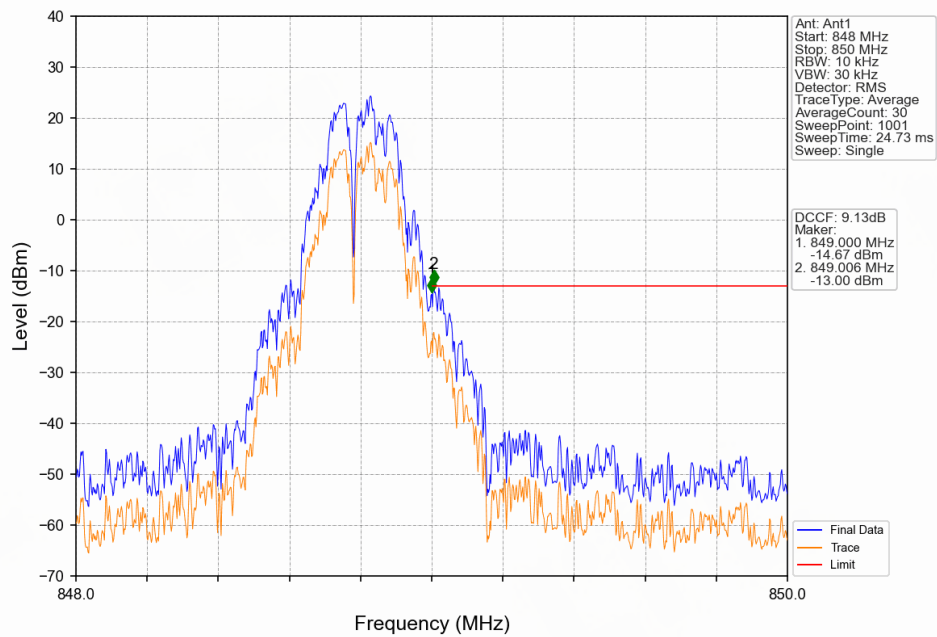


GSM850_GPRS_MCH_836.6MHz_1 TX Slot_NTNV

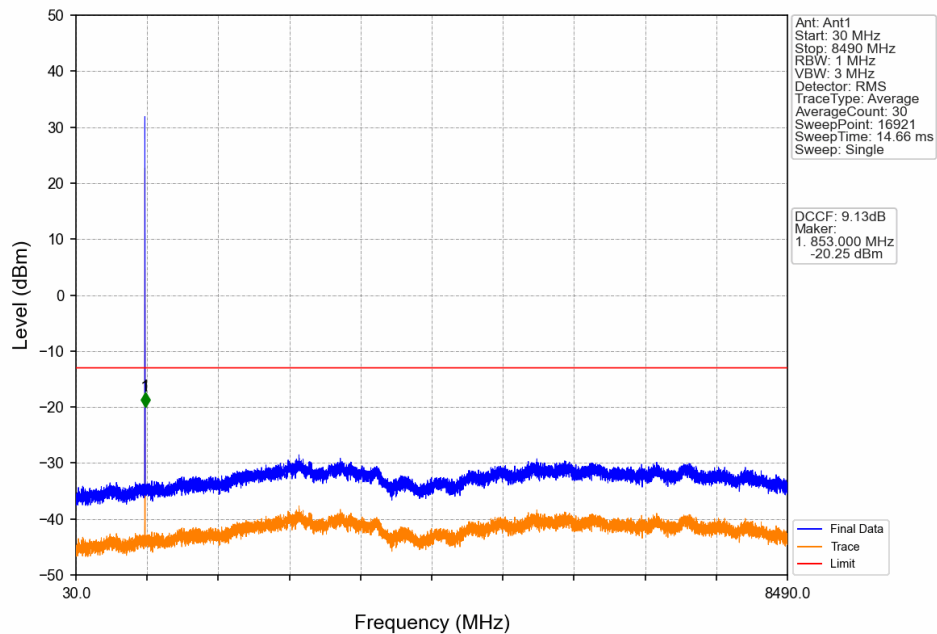


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GSM850_GPRS_HCH_848.8MHz_1 TX Slot_NTNV

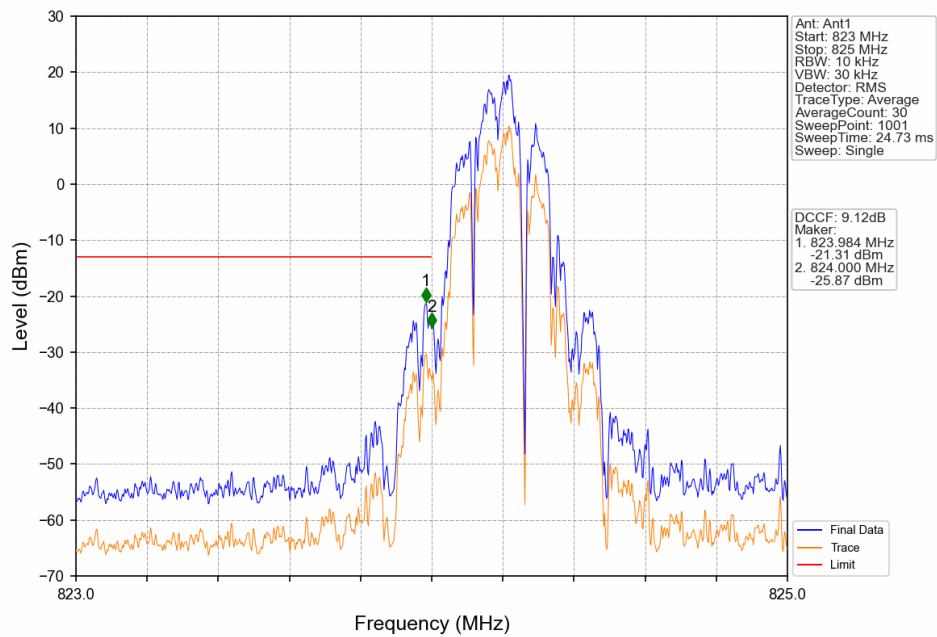


GSM850_GPRS_HCH_848.8MHz_1 TX Slot_NTNV

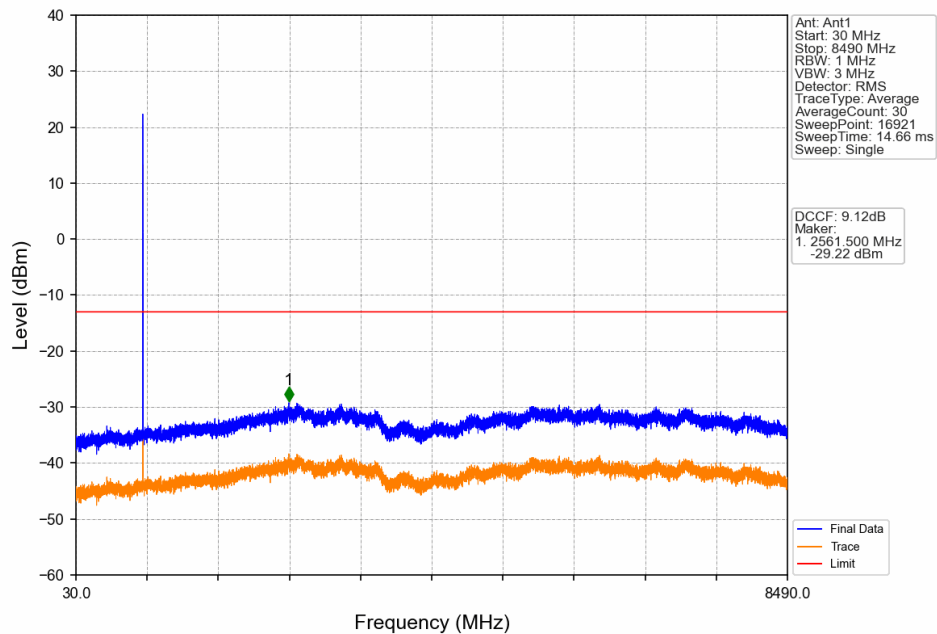


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GSM850_EGPRS_LCH_824.2MHz_1 TX Slot_NTNV

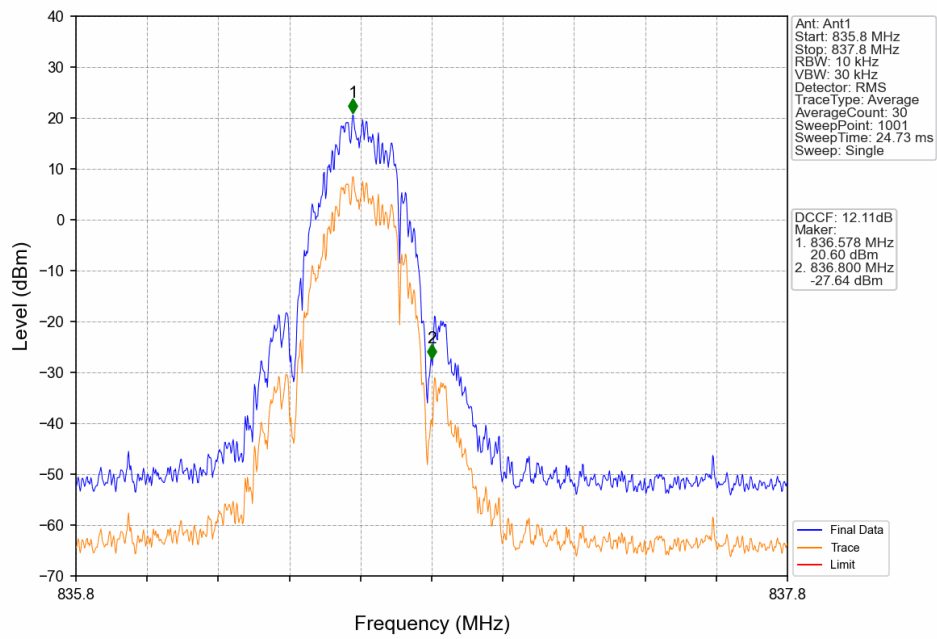


GSM850_EGPRS_LCH_824.2MHz_1 TX Slot_NTNV

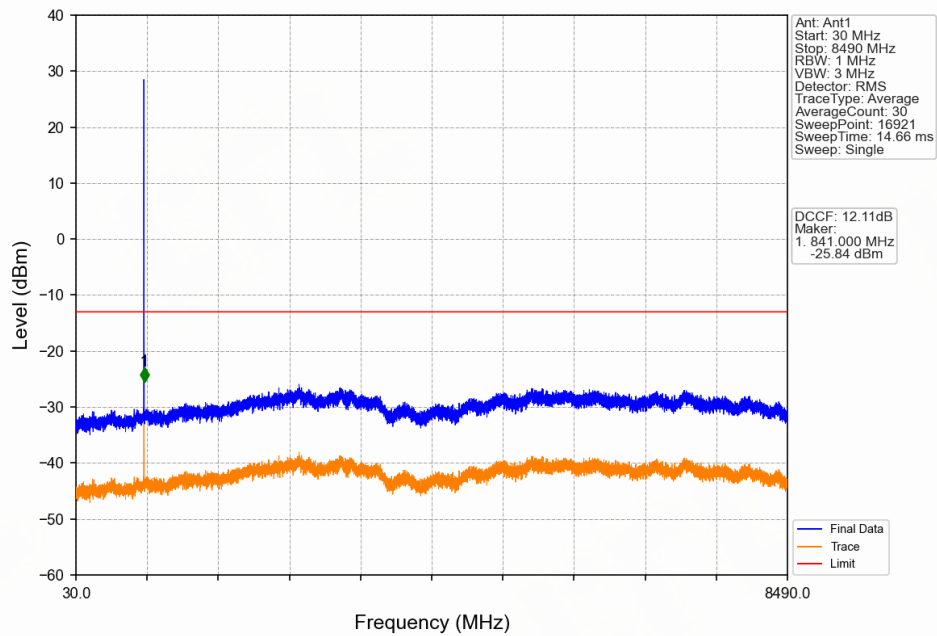


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GSM850_EGPRS_MCH_836.6MHz_1 TX Slot_NTNV

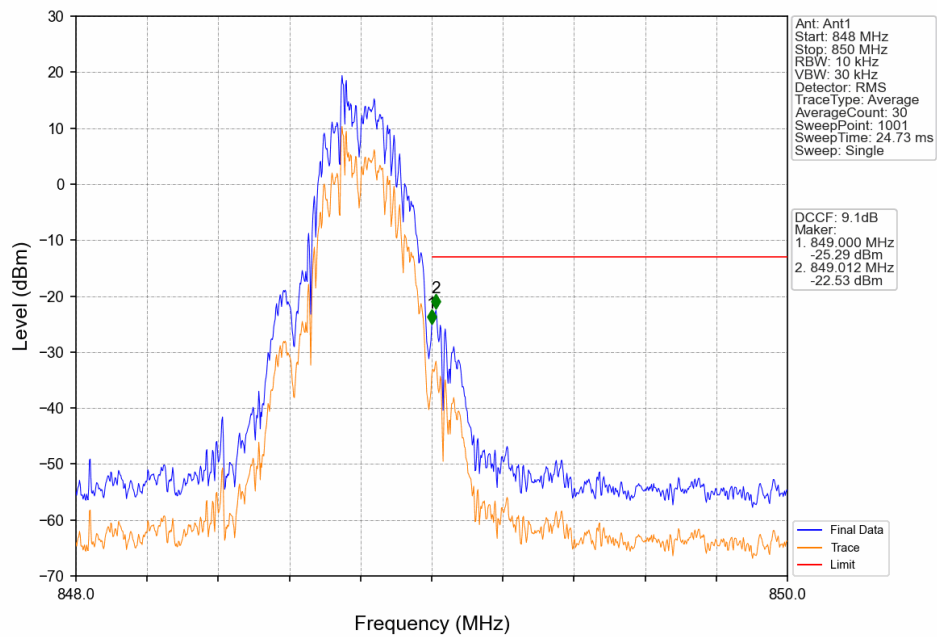


GSM850_EGPRS_MCH_836.6MHz_1 TX Slot_NTNV



FCCID: 2BCUE-P8GLOBAL

GSM850_EGPRS_HCH_848.8MHz_1 TX Slot_NTNV



GSM850_EGPRS_HCH_848.8MHz_1 TX Slot_NTNV

