

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	33.07	-5.82	25.10	<=38.45	Pass
			836.6	33.31	-5.82	25.34	<=38.45	Pass
			848.8	33.34	-5.82	25.37	<=38.45	Pass
	GPRS	1 TX Slot	824.2	33.00	-5.82	25.03	<=38.45	Pass
		2 TX Slots	824.2	30.00	-5.82	22.03	<=38.45	Pass
		3 TX Slots	824.2	28.50	-5.82	20.53	<=38.45	Pass
		4 TX Slots	824.2	27.22	-5.82	19.25	<=38.45	Pass
		1 TX Slot	836.6	33.27	-5.82	25.30	<=38.45	Pass
		2 TX Slots	836.6	30.06	-5.82	22.09	<=38.45	Pass
		3 TX Slots	836.6	28.37	-5.82	20.40	<=38.45	Pass
		4 TX Slots	836.6	27.12	-5.82	19.15	<=38.45	Pass
		1 TX Slot	848.8	33.31	-5.82	25.34	<=38.45	Pass
		2 TX Slots	848.8	30.08	-5.82	22.11	<=38.45	Pass
		3 TX Slots	848.8	28.52	-5.82	20.55	<=38.45	Pass
		4 TX Slots	848.8	27.27	-5.82	19.30	<=38.45	Pass
	EGPRS	1 TX Slot	824.2	25.98	-5.82	18.01	<=38.45	Pass
		2 TX Slots	824.2	23.69	-5.82	15.72	<=38.45	Pass
		3 TX Slots	824.2	22.02	-5.82	14.05	<=38.45	Pass
		4 TX Slots	824.2	21.35	-5.82	13.38	<=38.45	Pass
		1 TX Slot	836.6	25.98	-5.82	18.01	<=38.45	Pass
		2 TX Slots	836.6	23.59	-5.82	15.62	<=38.45	Pass
		3 TX Slots	836.6	22.20	-5.82	14.23	<=38.45	Pass
		4 TX Slots	836.6	21.25	-5.82	13.28	<=38.45	Pass
		1 TX Slot	848.8	26.05	-5.82	18.08	<=38.45	Pass
		2 TX Slots	848.8	23.84	-5.82	15.87	<=38.45	Pass
		3 TX Slots	848.8	22.16	-5.82	14.19	<=38.45	Pass
		4 TX Slots	848.8	21.31	-5.82	13.34	<=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	Freq. Error (Hz)	Freq. vs. Rated (ppm)		Verdict
					Result	Limit	
GSM	824.2	20	LV	16.821	0.0204	-2.5 to 2.5	Pass
			NV	18.887	0.0229	-2.5 to 2.5	Pass
			HV	16.692	0.0203	-2.5 to 2.5	Pass
		-30	NV	19.856	0.0241	-2.5 to 2.5	Pass
		-20	NV	17.273	0.0210	-2.5 to 2.5	Pass
		-10	NV	13.366	0.0162	-2.5 to 2.5	Pass
		0	NV	14.141	0.0172	-2.5 to 2.5	Pass
		10	NV	16.756	0.0203	-2.5 to 2.5	Pass
		30	NV	13.980	0.0170	-2.5 to 2.5	Pass
		40	NV	17.273	0.0210	-2.5 to 2.5	Pass
		50	NV	11.526	0.0140	-2.5 to 2.5	Pass
	836.6	20	LV	11.139	0.0133	-2.5 to 2.5	Pass
			NV	15.271	0.0183	-2.5 to 2.5	Pass
			HV	18.564	0.0222	-2.5 to 2.5	Pass
		-30	NV	15.497	0.0185	-2.5 to 2.5	Pass
		-20	NV	14.916	0.0178	-2.5 to 2.5	Pass
		-10	NV	14.141	0.0169	-2.5 to 2.5	Pass
		0	NV	17.015	0.0203	-2.5 to 2.5	Pass
		10	NV	15.594	0.0186	-2.5 to 2.5	Pass
		30	NV	16.789	0.0201	-2.5 to 2.5	Pass
		40	NV	15.626	0.0187	-2.5 to 2.5	Pass
		50	NV	16.143	0.0193	-2.5 to 2.5	Pass
	848.8	20	LV	18.048	0.0213	-2.5 to 2.5	Pass
			NV	12.688	0.0149	-2.5 to 2.5	Pass
			HV	15.594	0.0184	-2.5 to 2.5	Pass
		-30	NV	14.303	0.0169	-2.5 to 2.5	Pass
		-20	NV	17.402	0.0205	-2.5 to 2.5	Pass
		-10	NV	16.918	0.0199	-2.5 to 2.5	Pass
		0	NV	16.660	0.0196	-2.5 to 2.5	Pass
		10	NV	21.244	0.0250	-2.5 to 2.5	Pass
		30	NV	16.595	0.0196	-2.5 to 2.5	Pass
		40	NV	18.435	0.0217	-2.5 to 2.5	Pass
		50	NV	16.595	0.0196	-2.5 to 2.5	Pass
GPRS	824.2	20	LV	22.180	0.0269	-2.5 to 2.5	Pass
			NV	22.923	0.0278	-2.5 to 2.5	Pass
			HV	21.858	0.0265	-2.5 to 2.5	Pass
		-30	NV	23.343	0.0283	-2.5 to 2.5	Pass
		-20	NV	23.052	0.0280	-2.5 to 2.5	Pass
		-10	NV	24.505	0.0297	-2.5 to 2.5	Pass
		0	NV	22.891	0.0278	-2.5 to 2.5	Pass
		10	NV	23.052	0.0280	-2.5 to 2.5	Pass
		30	NV	22.826	0.0277	-2.5 to 2.5	Pass
		40	NV	21.696	0.0263	-2.5 to 2.5	Pass
		50	NV	22.988	0.0279	-2.5 to 2.5	Pass
	836.6	20	LV	22.310	0.0267	-2.5 to 2.5	Pass
			NV	21.406	0.0256	-2.5 to 2.5	Pass
			HV	24.150	0.0289	-2.5 to 2.5	Pass

		-30	NV	24.085	0.0288	-2.5 to 2.5	Pass
		-20	NV	22.858	0.0273	-2.5 to 2.5	Pass
		-10	NV	23.020	0.0275	-2.5 to 2.5	Pass
		0	NV	23.762	0.0284	-2.5 to 2.5	Pass
		10	NV	23.117	0.0276	-2.5 to 2.5	Pass
		30	NV	23.892	0.0286	-2.5 to 2.5	Pass
		40	NV	22.665	0.0271	-2.5 to 2.5	Pass
		50	NV	22.988	0.0275	-2.5 to 2.5	Pass
	848.8	20	LV	21.341	0.0251	-2.5 to 2.5	Pass
			NV	22.536	0.0266	-2.5 to 2.5	Pass
			HV	21.599	0.0254	-2.5 to 2.5	Pass
		-30	NV	22.245	0.0262	-2.5 to 2.5	Pass
		-20	NV	21.147	0.0249	-2.5 to 2.5	Pass
		-10	NV	21.599	0.0254	-2.5 to 2.5	Pass
		0	NV	20.276	0.0239	-2.5 to 2.5	Pass
		10	NV	23.149	0.0273	-2.5 to 2.5	Pass
		30	NV	22.568	0.0266	-2.5 to 2.5	Pass
		40	NV	22.148	0.0261	-2.5 to 2.5	Pass
		50	NV	21.180	0.0250	-2.5 to 2.5	Pass
EGPRS	824.2	20	LV	20.728	0.0251	-2.5 to 2.5	Pass
			NV	21.502	0.0261	-2.5 to 2.5	Pass
			HV	23.020	0.0279	-2.5 to 2.5	Pass
		-30	NV	21.147	0.0257	-2.5 to 2.5	Pass
		-20	NV	22.406	0.0272	-2.5 to 2.5	Pass
		-10	NV	20.728	0.0251	-2.5 to 2.5	Pass
		0	NV	23.698	0.0288	-2.5 to 2.5	Pass
		10	NV	20.695	0.0251	-2.5 to 2.5	Pass
		30	NV	22.600	0.0274	-2.5 to 2.5	Pass
		40	NV	24.214	0.0294	-2.5 to 2.5	Pass
		50	NV	25.603	0.0311	-2.5 to 2.5	Pass
	836.6	20	LV	23.666	0.0283	-2.5 to 2.5	Pass
			NV	22.568	0.0270	-2.5 to 2.5	Pass
			HV	22.148	0.0265	-2.5 to 2.5	Pass
		-30	NV	22.632	0.0271	-2.5 to 2.5	Pass
		-20	NV	23.924	0.0286	-2.5 to 2.5	Pass
		-10	NV	22.051	0.0264	-2.5 to 2.5	Pass
		0	NV	22.794	0.0272	-2.5 to 2.5	Pass
		10	NV	21.954	0.0262	-2.5 to 2.5	Pass
		30	NV	21.793	0.0260	-2.5 to 2.5	Pass
		40	NV	24.085	0.0288	-2.5 to 2.5	Pass
		50	NV	23.117	0.0276	-2.5 to 2.5	Pass
	848.8	20	LV	21.115	0.0249	-2.5 to 2.5	Pass
			NV	21.761	0.0256	-2.5 to 2.5	Pass
			HV	23.310	0.0275	-2.5 to 2.5	Pass
		-30	NV	22.762	0.0268	-2.5 to 2.5	Pass
		-20	NV	22.406	0.0264	-2.5 to 2.5	Pass
		-10	NV	22.697	0.0267	-2.5 to 2.5	Pass
		0	NV	22.503	0.0265	-2.5 to 2.5	Pass
		10	NV	22.051	0.0260	-2.5 to 2.5	Pass
		30	NV	22.729	0.0268	-2.5 to 2.5	Pass
		40	NV	22.051	0.0260	-2.5 to 2.5	Pass
		50	NV	21.438	0.0253	-2.5 to 2.5	Pass

3. 99% & 26dB Bandwidth

3.1 Test Result

3.1.1 GSM850_OBW

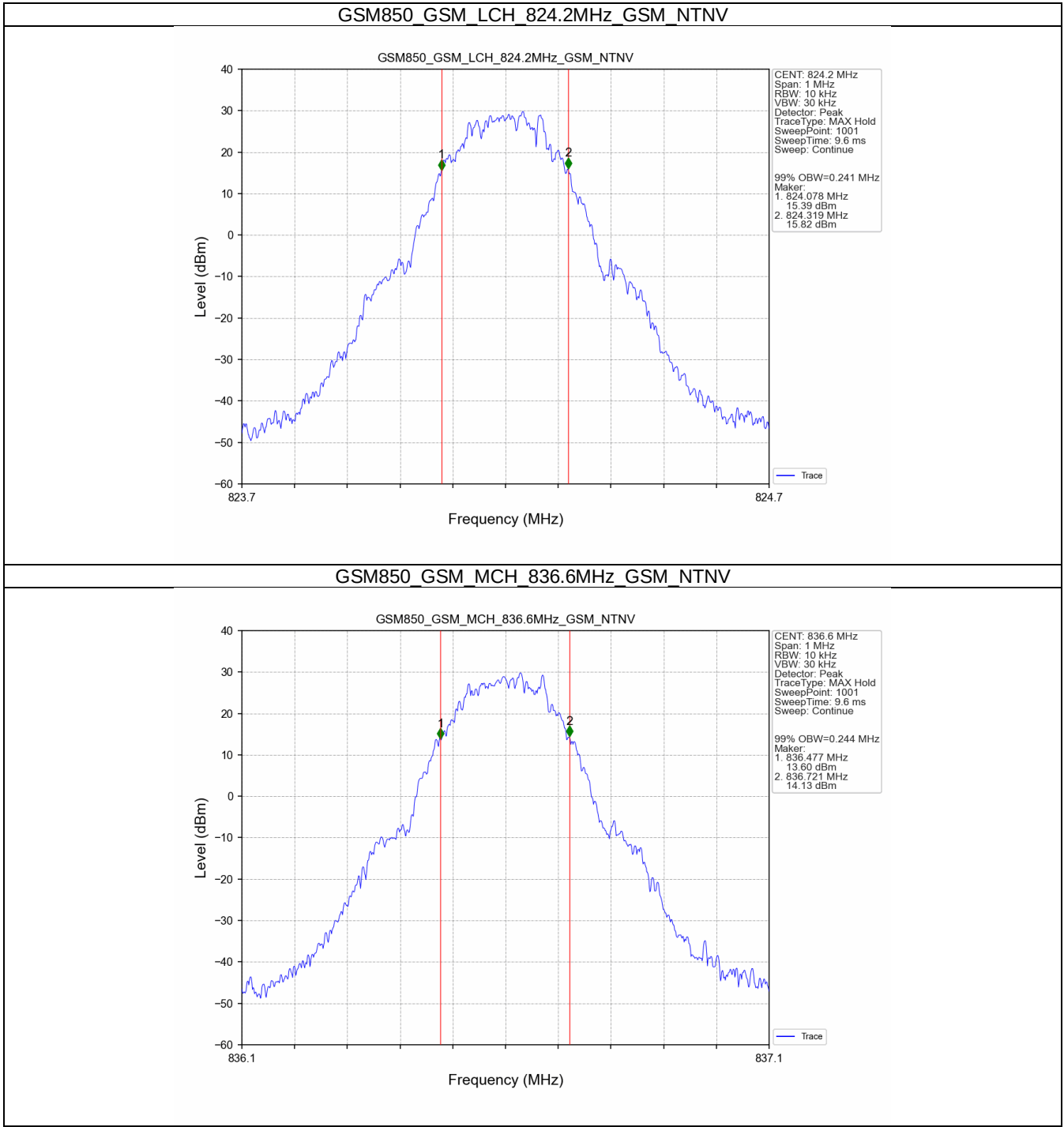
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ENV	Mode		Frequency (MHz)	99% Occupied Bandwidth (MHz)		Verdict
	Network	Subset		Result	Limit	
NTNV	GSM	GSM	824.2	0.241	/	Pass
			836.6	0.244	/	Pass
			848.8	0.243	/	Pass
	GPRS	1 TX Slot	824.2	0.242	/	Pass
			836.6	0.245	/	Pass
			848.8	0.241	/	Pass
	EGPRS	1 TX Slot	824.2	0.233	/	Pass
			836.6	0.256	/	Pass
			848.8	0.238	/	Pass

3.1.2 GSM850_XDB

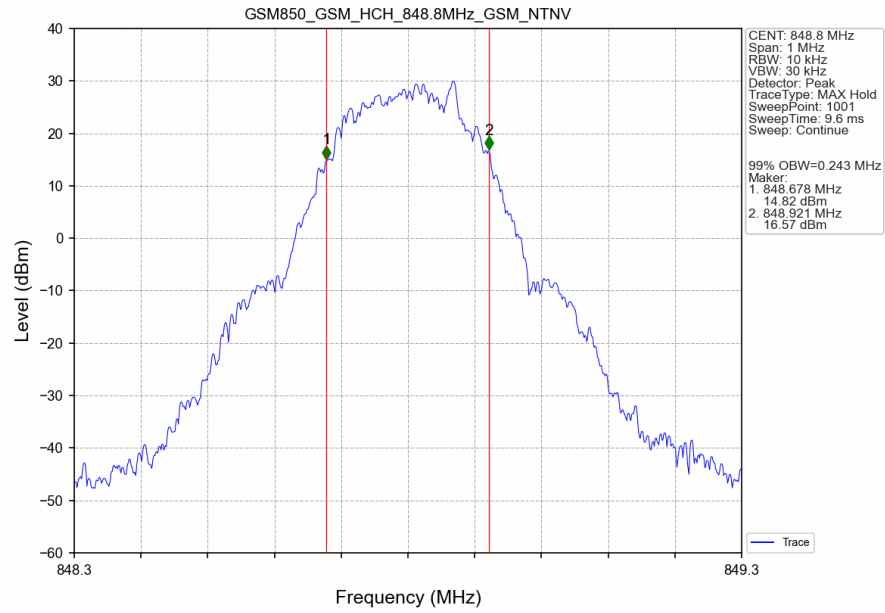
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ENV	Mode		Frequency (MHz)	26dB Bandwidth (MHz)		Verdict
	Network	Subset		Result	Limit	
NTNV	GSM	GSM	824.2	0.317	/	Pass
			836.6	0.323	/	Pass
			848.8	0.312	/	Pass
	GPRS	1 TX Slot	824.2	0.315	/	Pass
			836.6	0.319	/	Pass
			848.8	0.314	/	Pass
	EGPRS	1 TX Slot	824.2	0.281	/	Pass
			836.6	0.325	/	Pass
			848.8	0.308	/	Pass

3.2 Test Graph

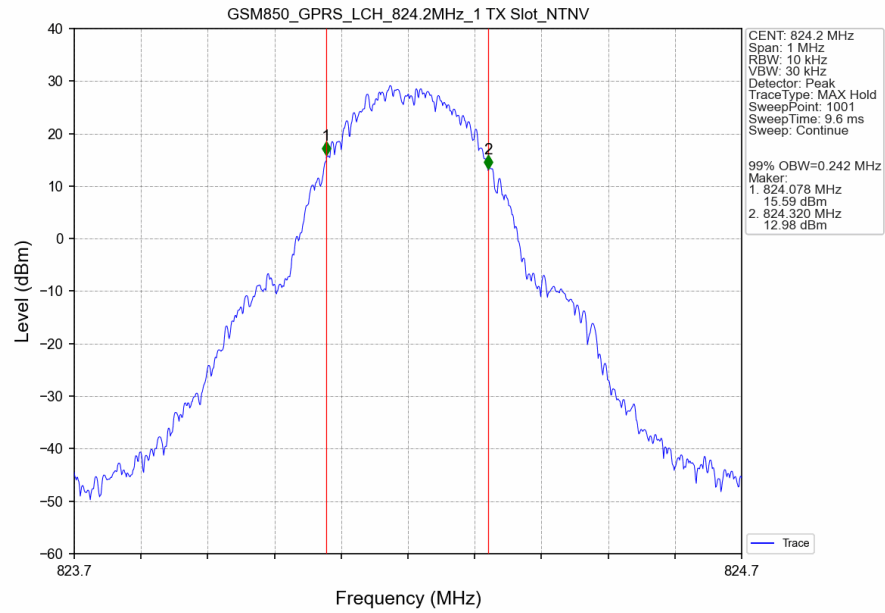
3.2.1 GSM850_OBW



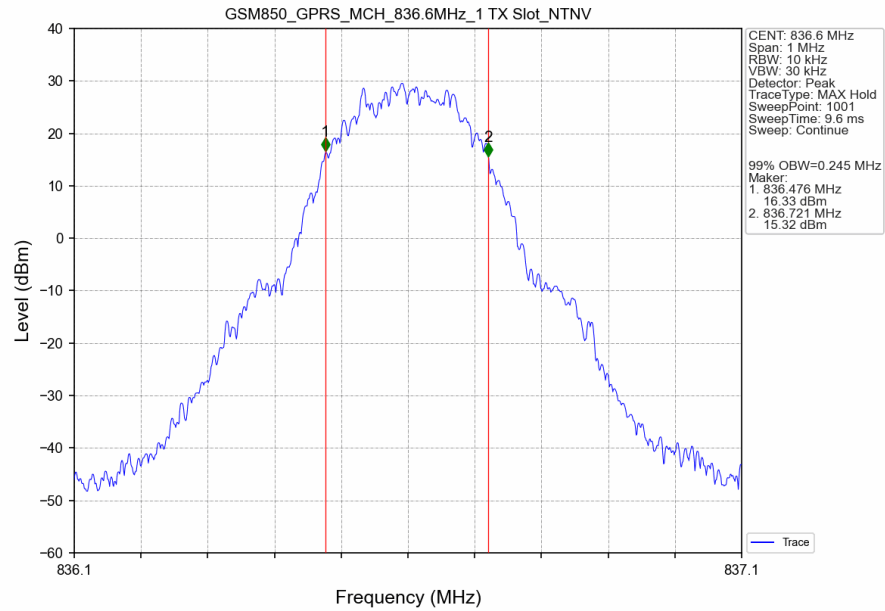
GSM850 GSM HCH 848.8MHz GSM NTNV



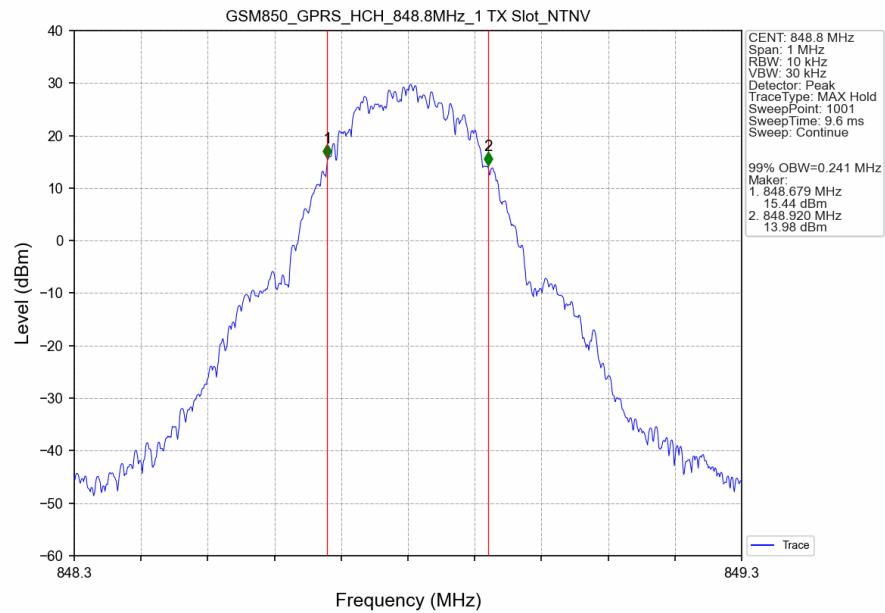
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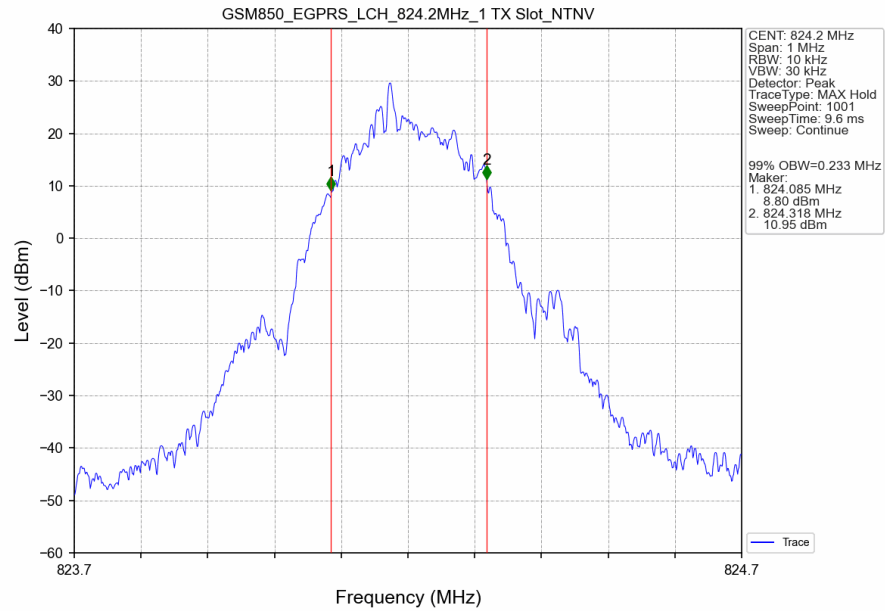
GSM850_GPRS_MCH_836.6MHz_1 TX Slot_NTNV



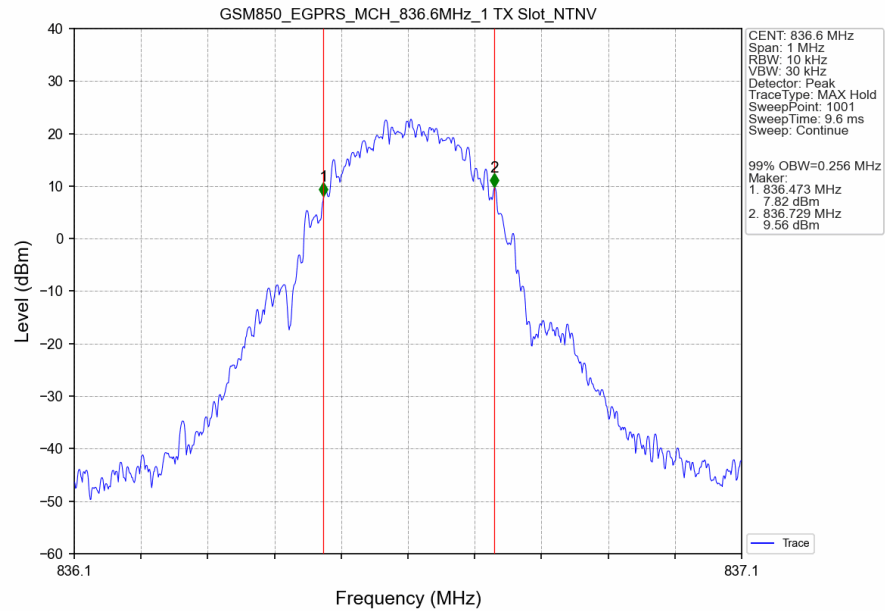
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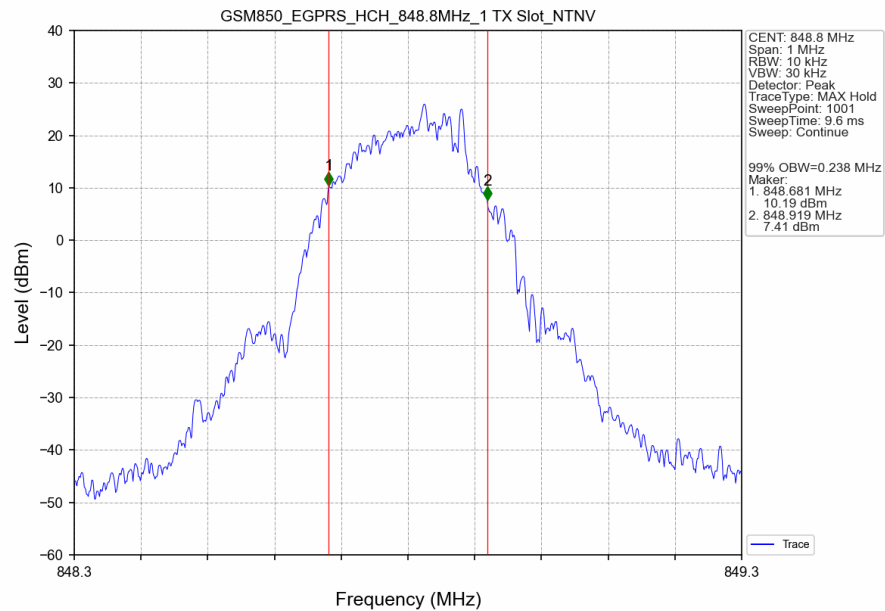
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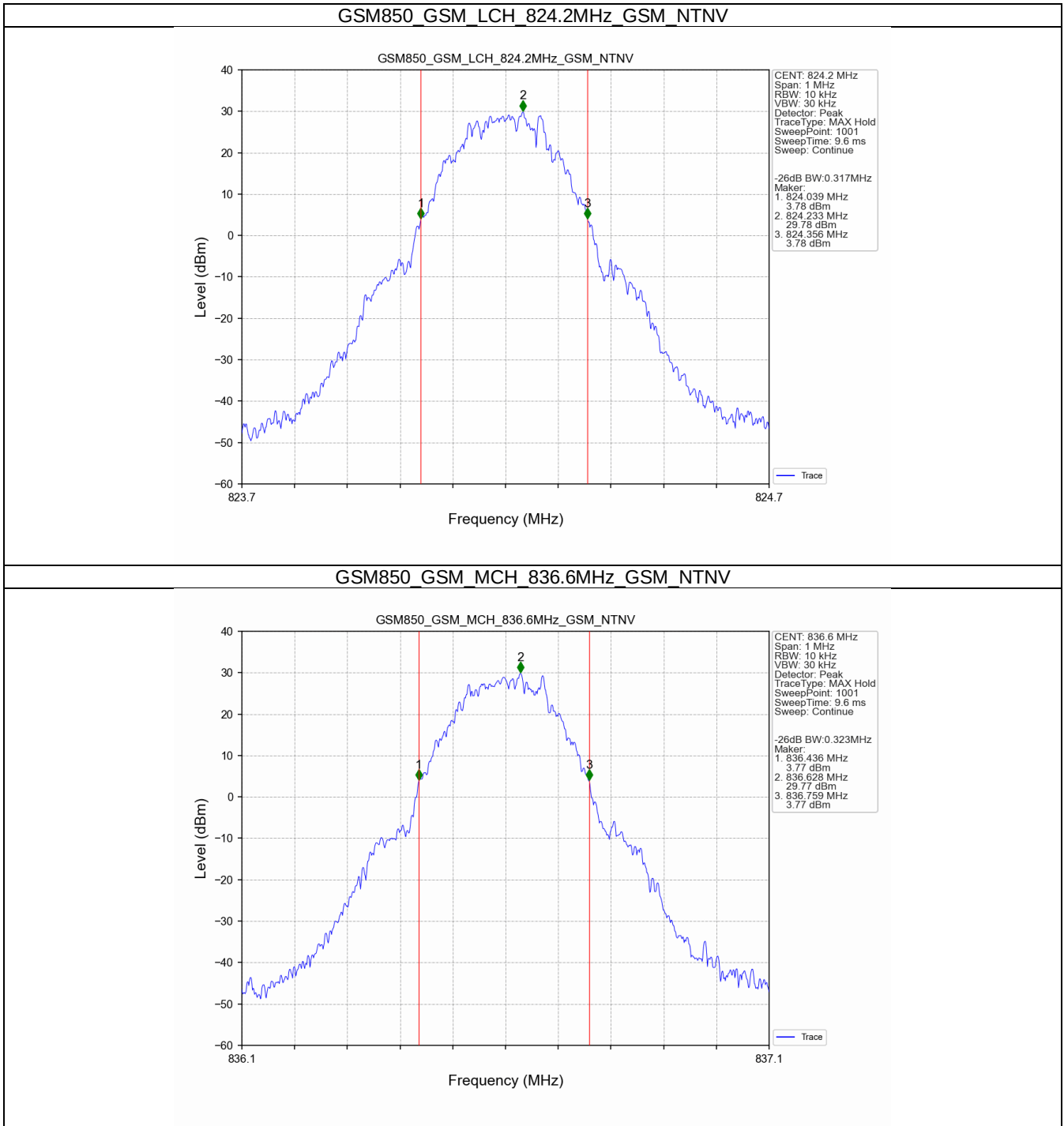
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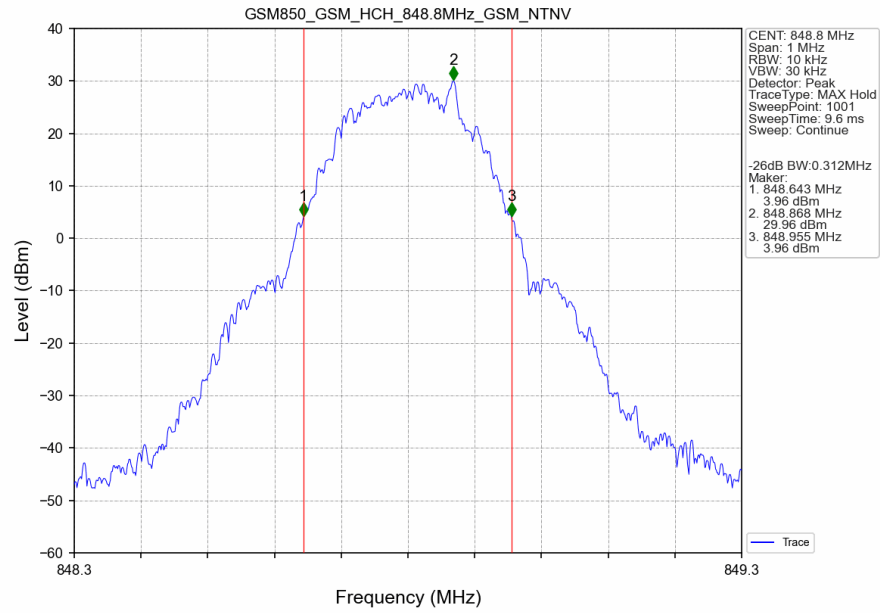
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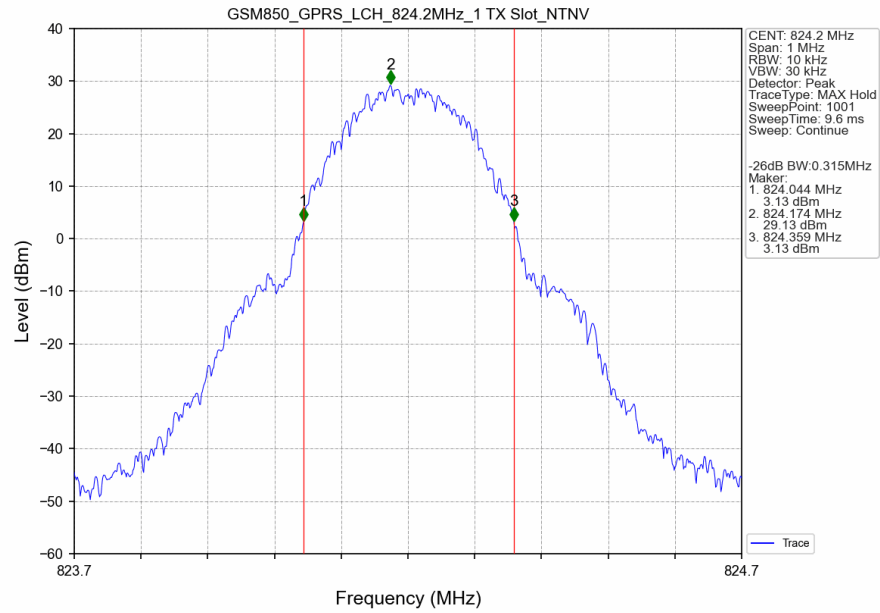
3.2.2 GSM850_XDB



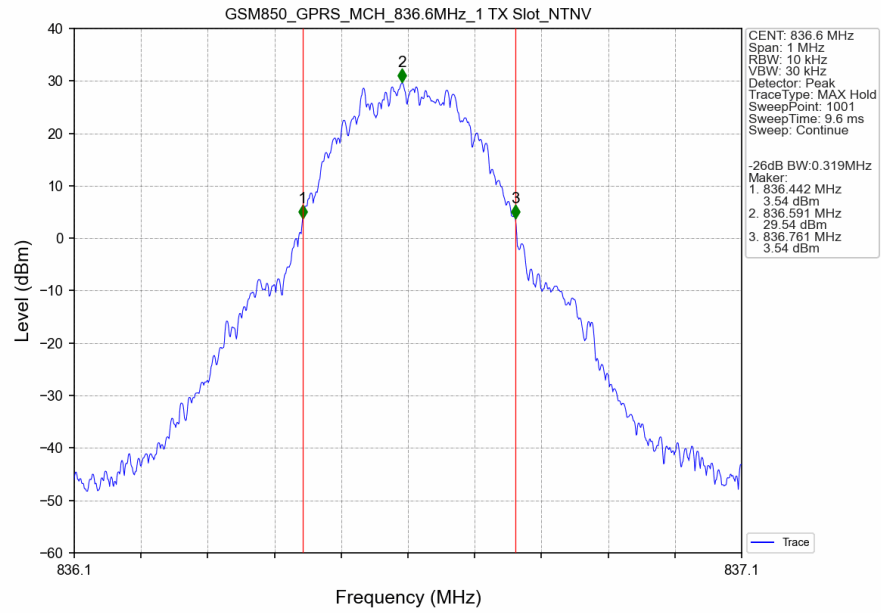
GSM850 GSM HCH 848.8MHz GSM NTN



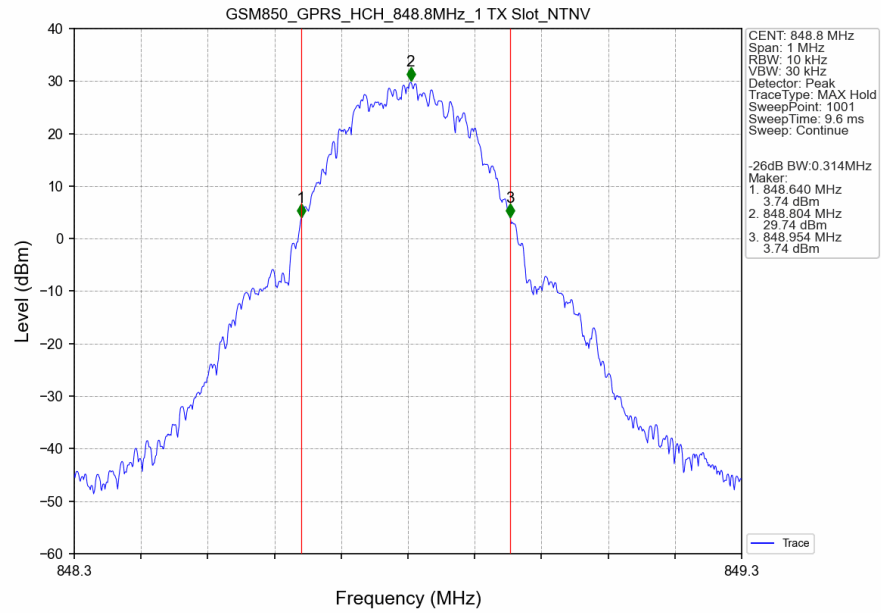
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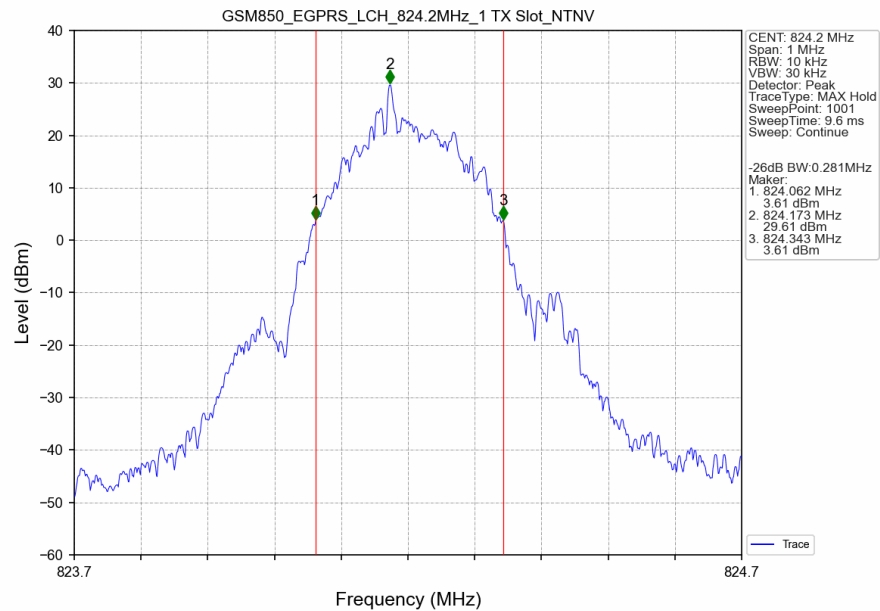
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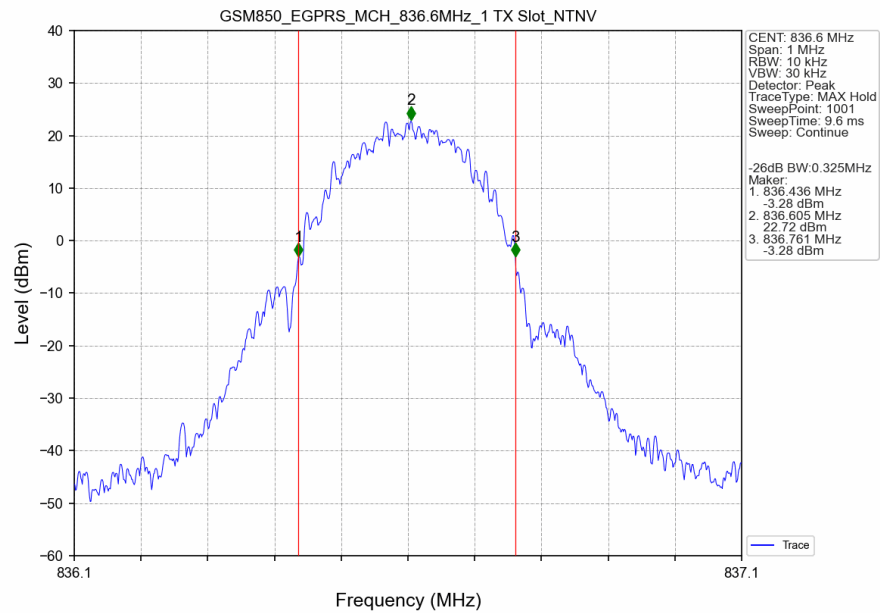
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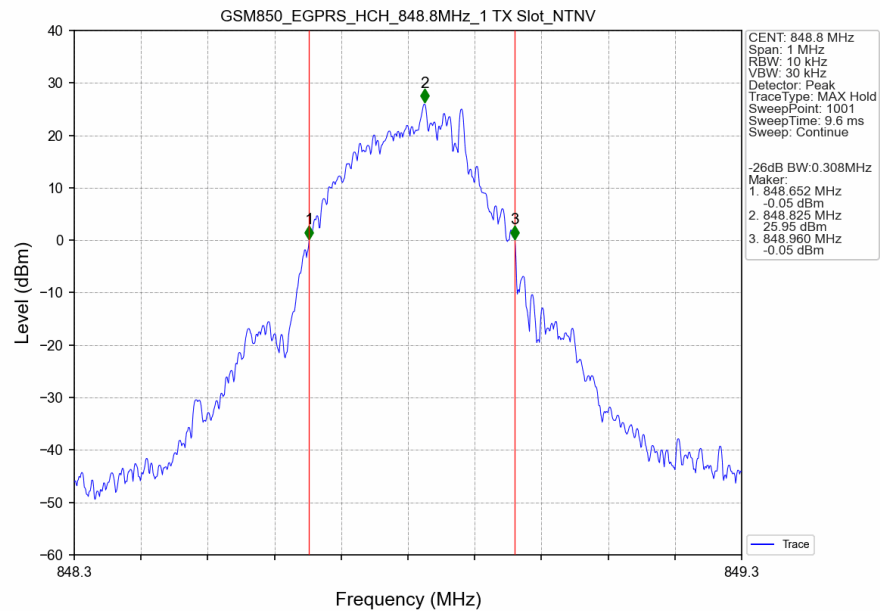
GSM850 EGPRS LCH 824.2MHz 1 TX Slot NTNV



GSM850 EGPRS MCH 836.6MHz 1 TX Slot NTNV



GSM850 EGPRS HCH 848.8MHz 1 TX Slot NTNV



4. Peak-Average Ratio

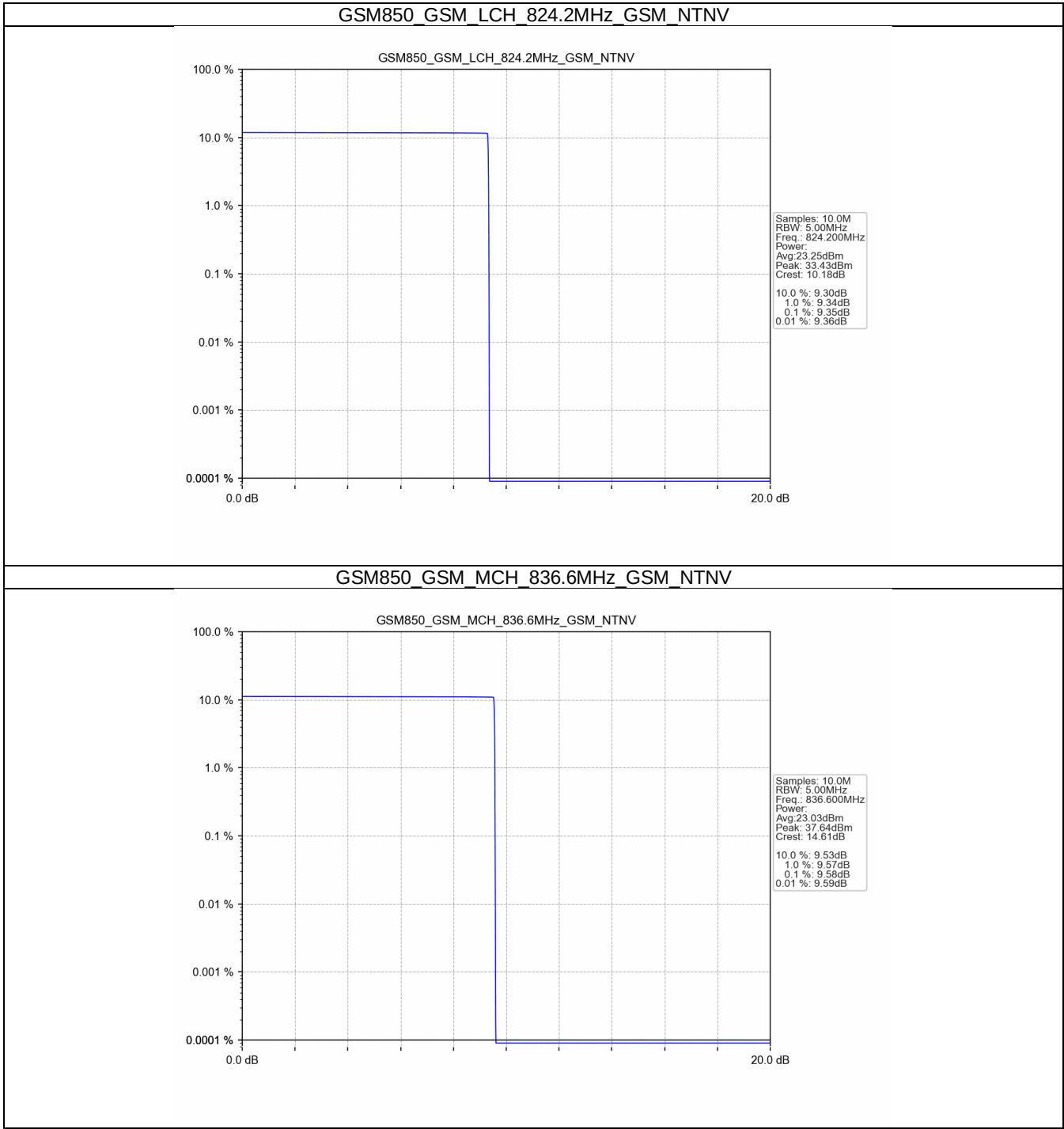
4.1 Test Result

4.1.1 GSM850

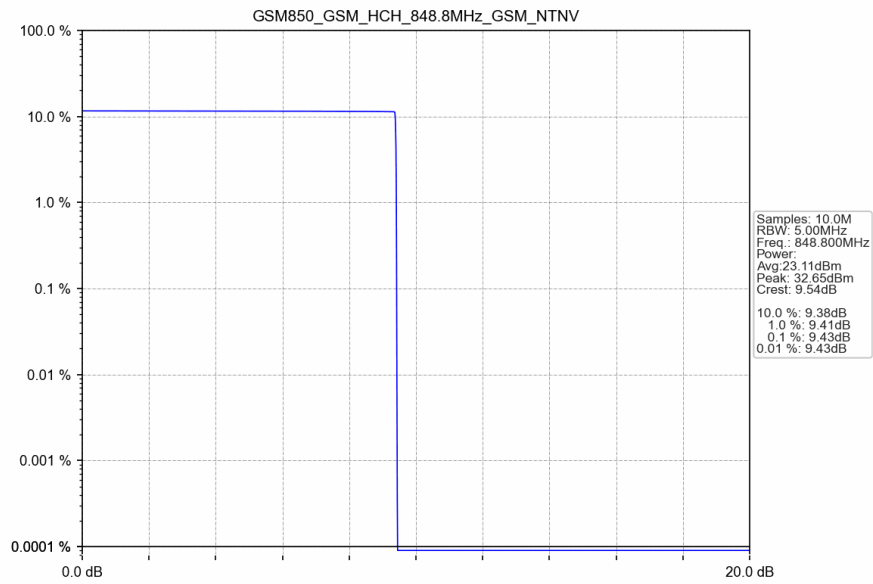
Band: GSM850						
ENV	Mode		Frequency (MHz)	Peak-Average Ratio (dB)		Verdict
	Network	Subset		Result	Limit	
NTNV	GSM	GSM	824.2	9.35	<=13	Pass
			836.6	9.58	<=13	Pass
			848.8	9.43	<=13	Pass
	GPRS	4 TX Slots	824.2	3.71	<=13	Pass
			836.6	3.76	<=13	Pass
			848.8	3.69	<=13	Pass
	EGPRS	4 TX Slots	824.2	9.31	<=13	Pass
			836.6	9.25	<=13	Pass
			848.8	9.63	<=13	Pass

4.2 Test Graph

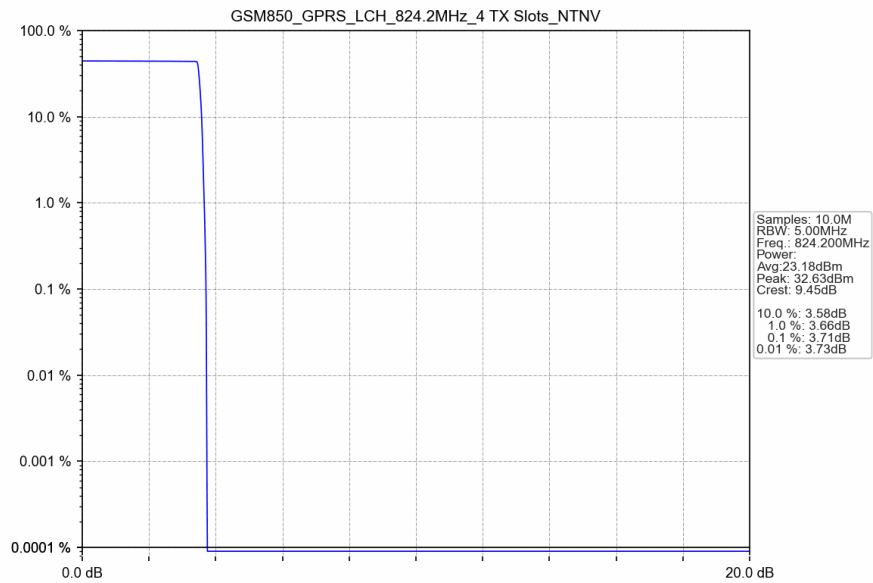
4.2.1 GSM850



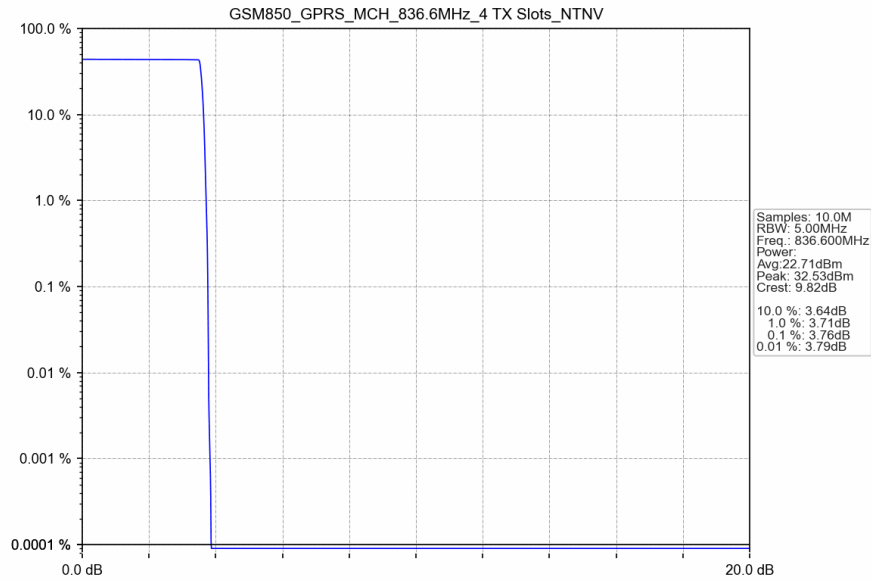
GSM850 GSM HCH 848.8MHz GSM NTNV



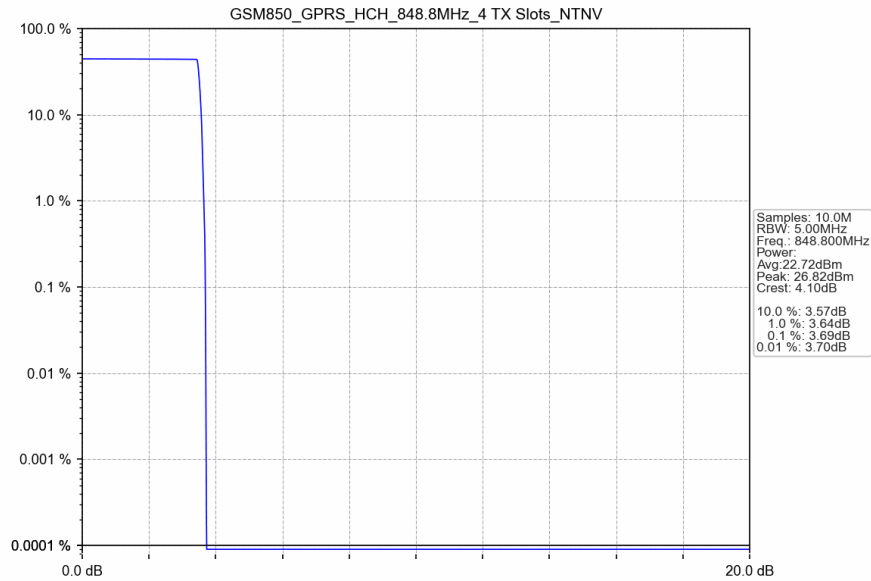
GSM850 GPRS LCH 824.2MHz 4 TX Slots NTNV



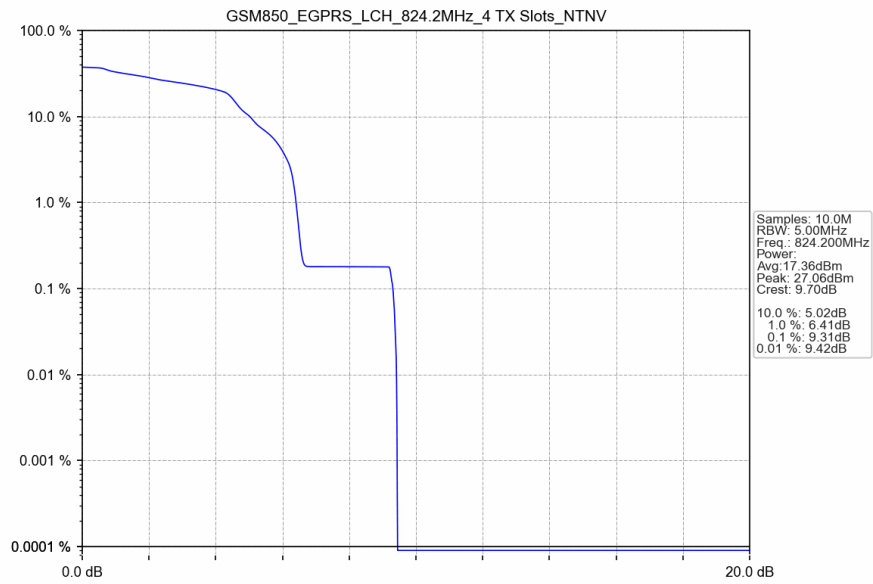
GSM850 GPRS MCH 836.6MHz 4 TX Slots NTNV



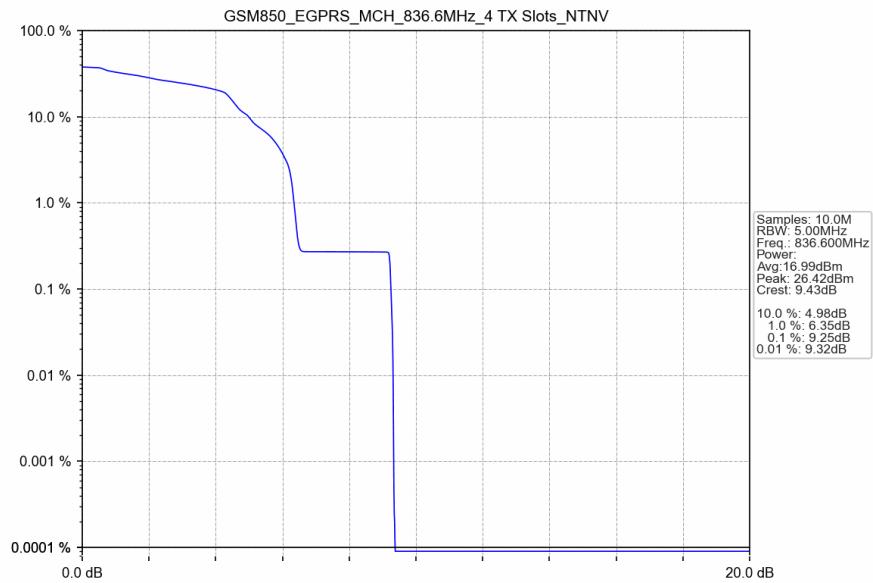
GSM850 GPRS HCH 848.8MHz 4 TX Slots NTNV



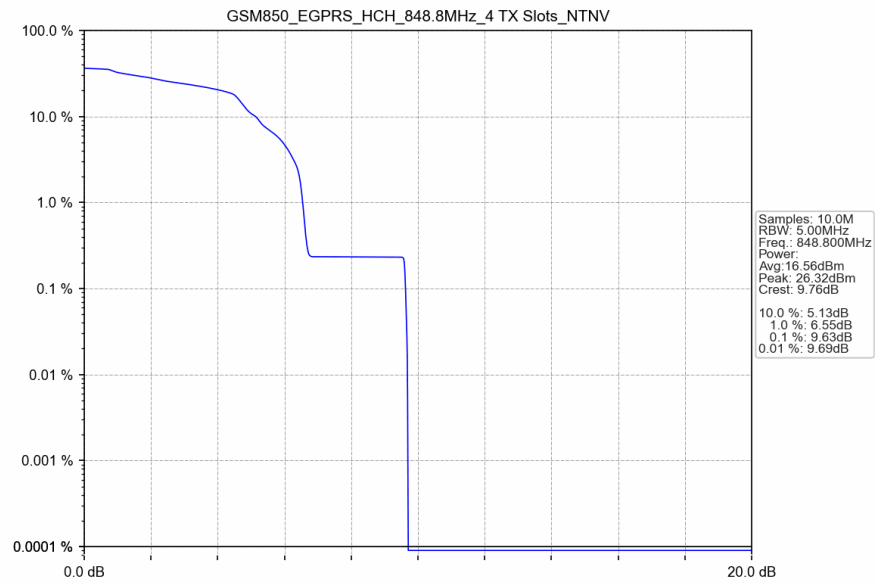
GSM850_EGPRS_LCH_824.2MHz_4 TX Slots_NTNV



GSM850_EGPRS_MCH_836.6MHz_4 TX Slots_NTNV



GSM850 EGPRS HCH 848.8MHz 4 TX Slots NTNV



5. Spurious Emission

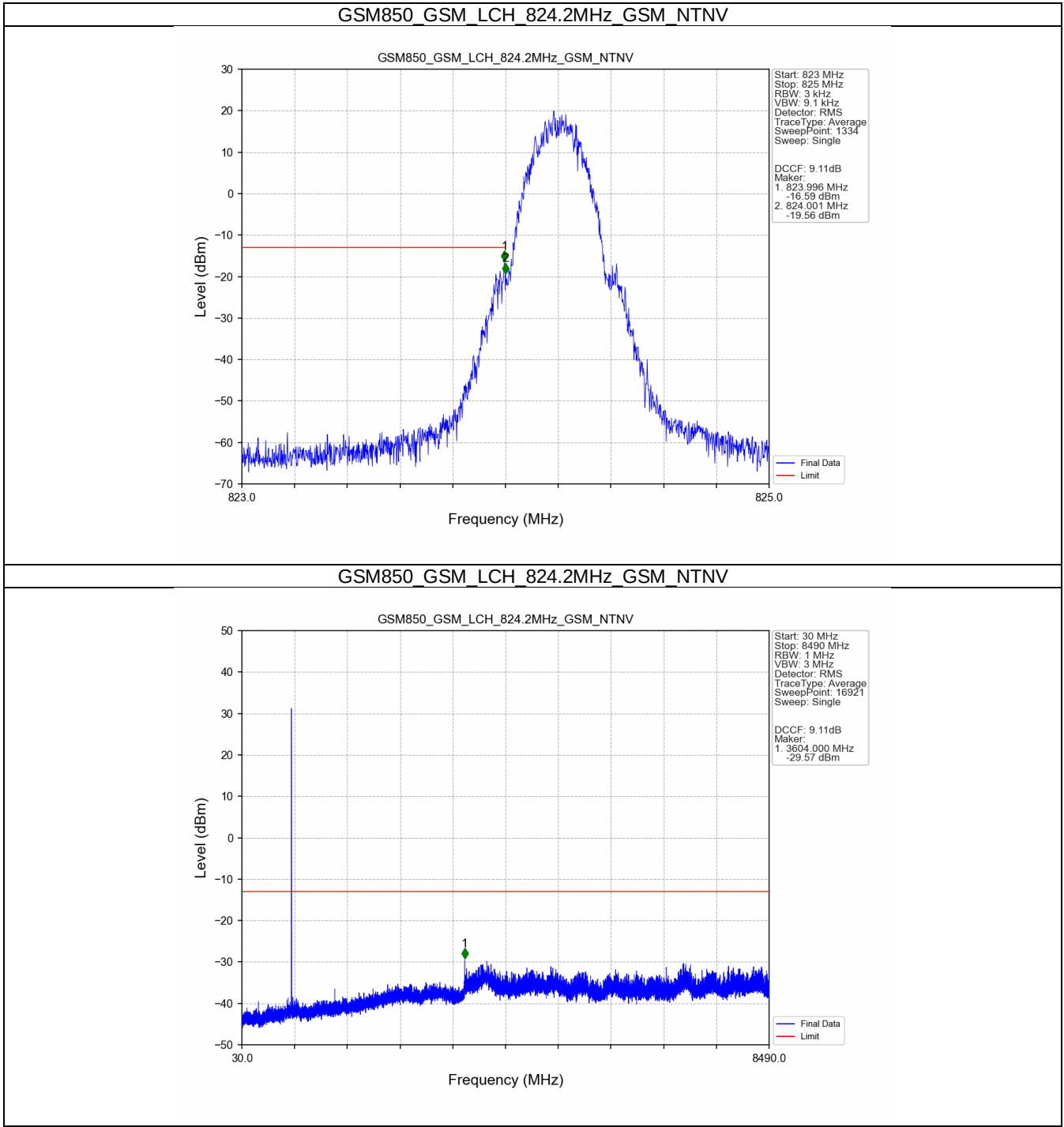
5.1 Test Result

5.1.1 GSM850

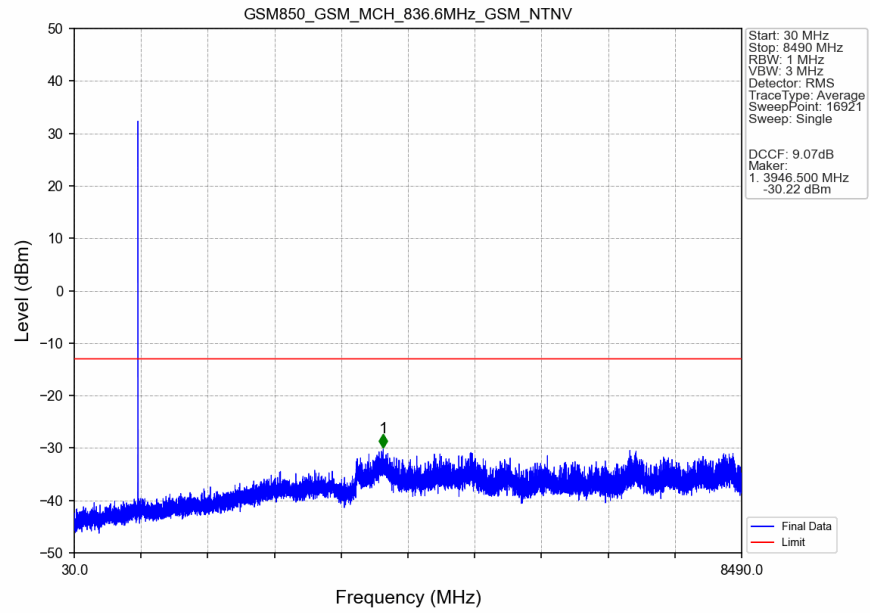
Band: GSM850						
ENV	Mode		Frequency (MHz)	Spurious Emission		Verdict
	Network	Subset		Result	Limit	
NTNV	GSM	GSM	824.2	Refer To Test Graph	Pass	
			836.6	Refer To Test Graph	Pass	
			848.8	Refer To Test Graph	Pass	
	GPRS	1 TX Slot	824.2	Refer To Test Graph	Pass	
			836.6	Refer To Test Graph	Pass	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

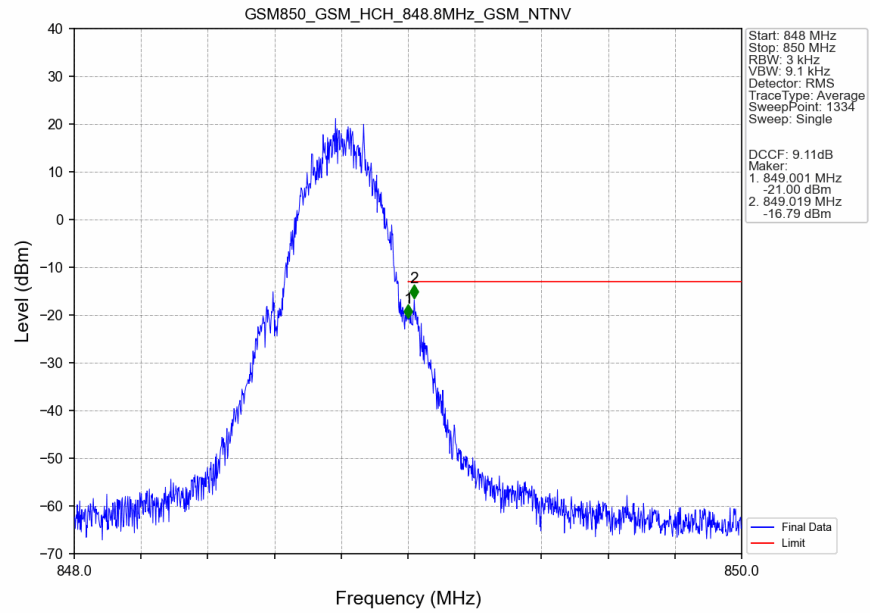
5.2.1 GSM850



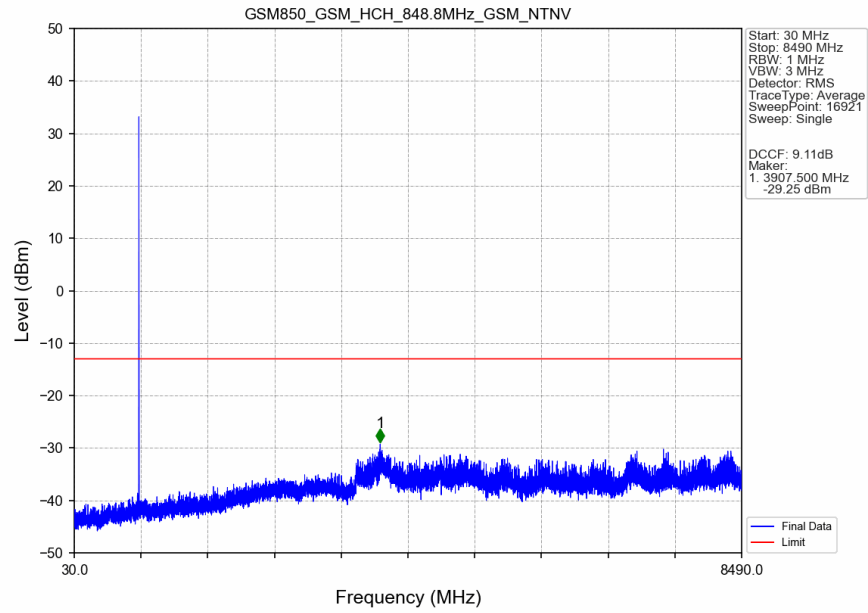
GSM850 GSM MCH 836.6MHz GSM NTNV



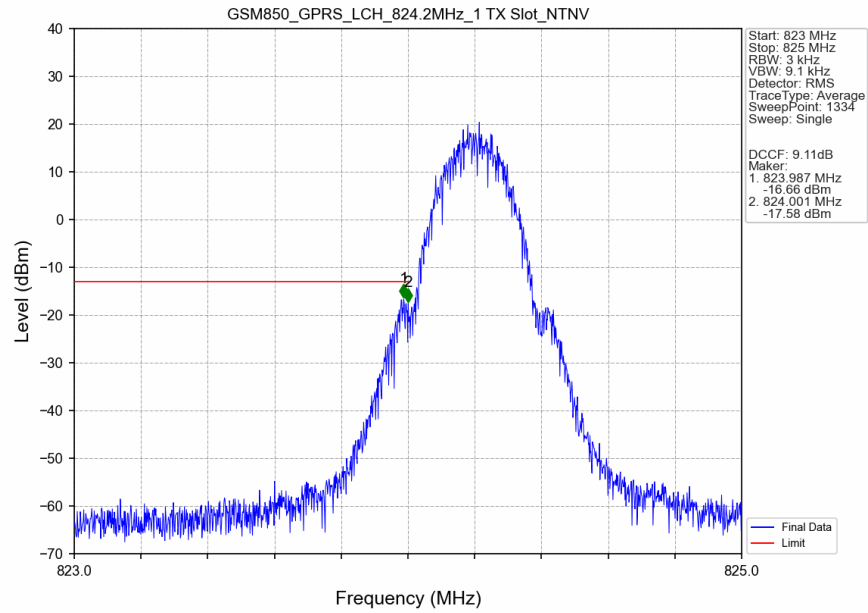
GSM850 GSM HCH 848.8MHz GSM NTNV



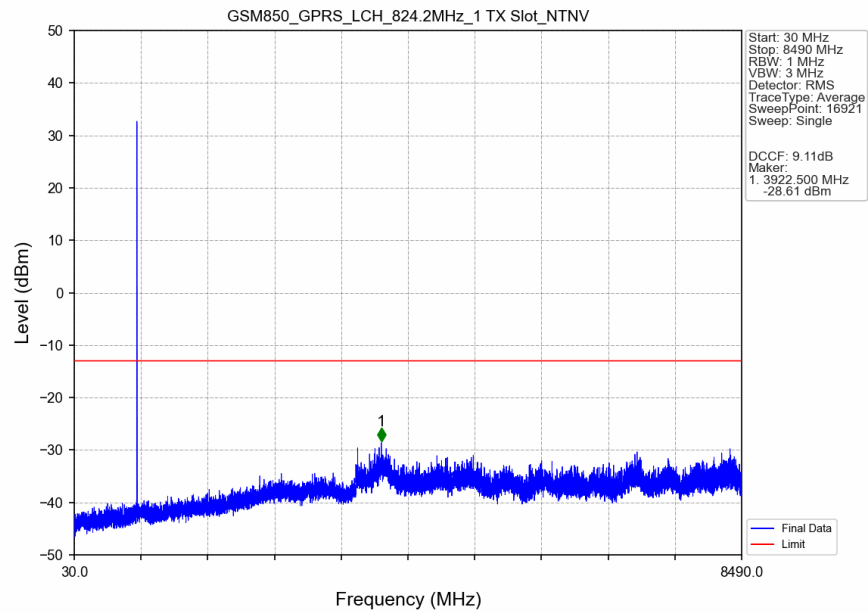
GSM850 GSM HCH 848.8MHz GSM NTNV



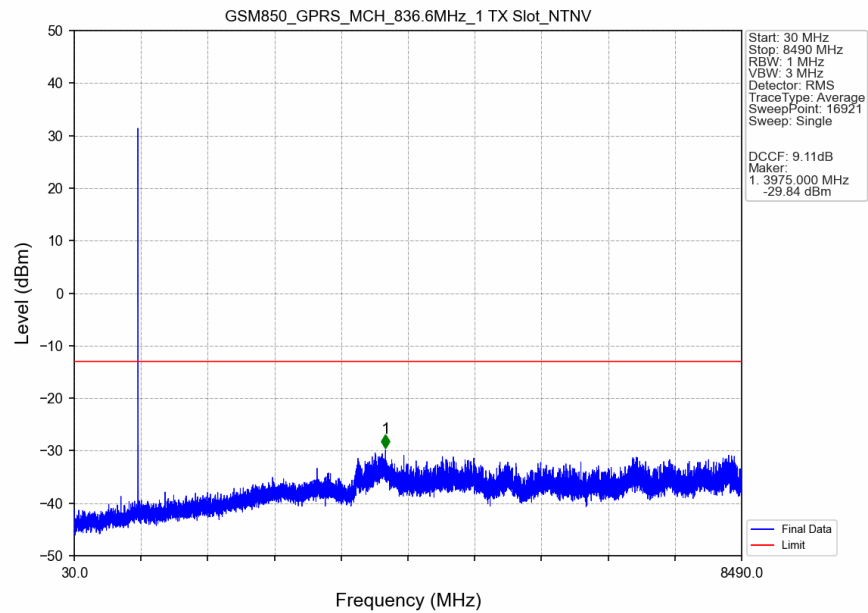
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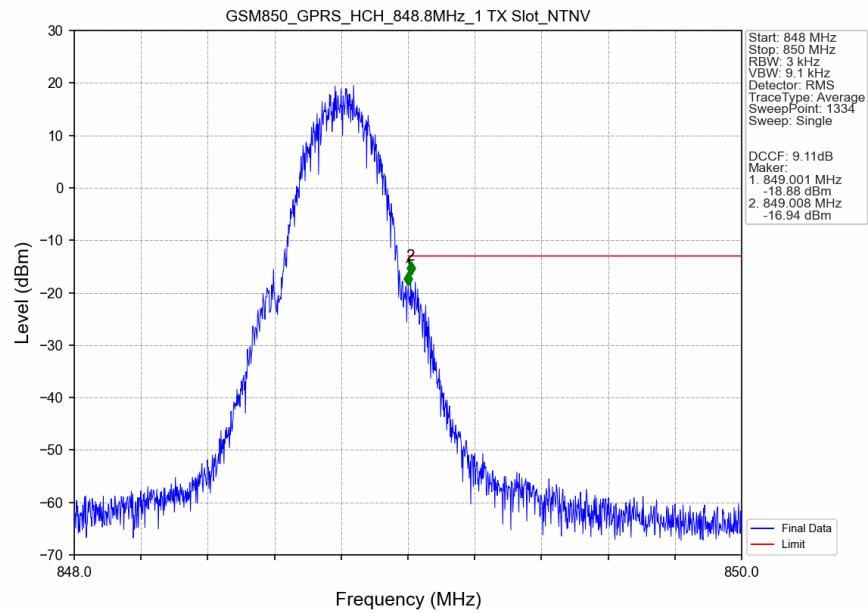
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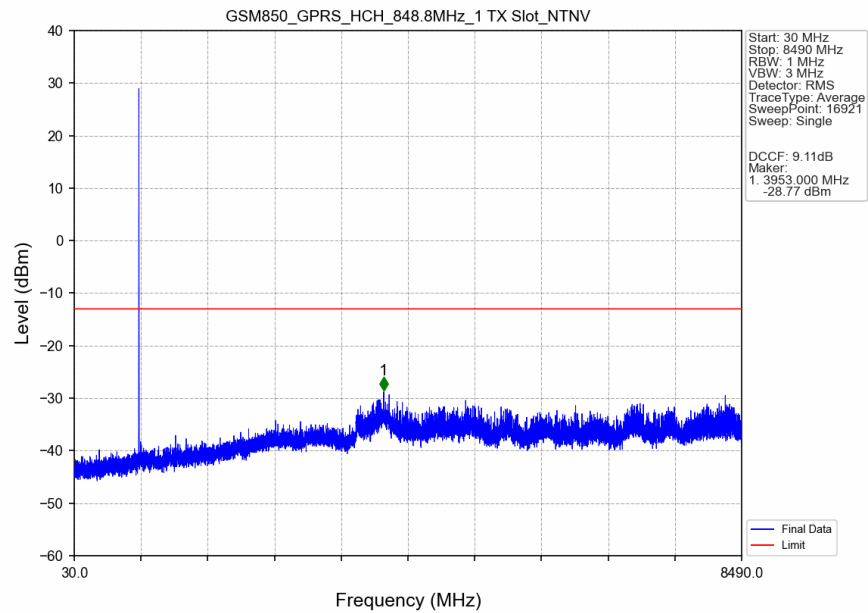
GSM850 GPRS MCH 836.6MHz 1 TX Slot_NTNV



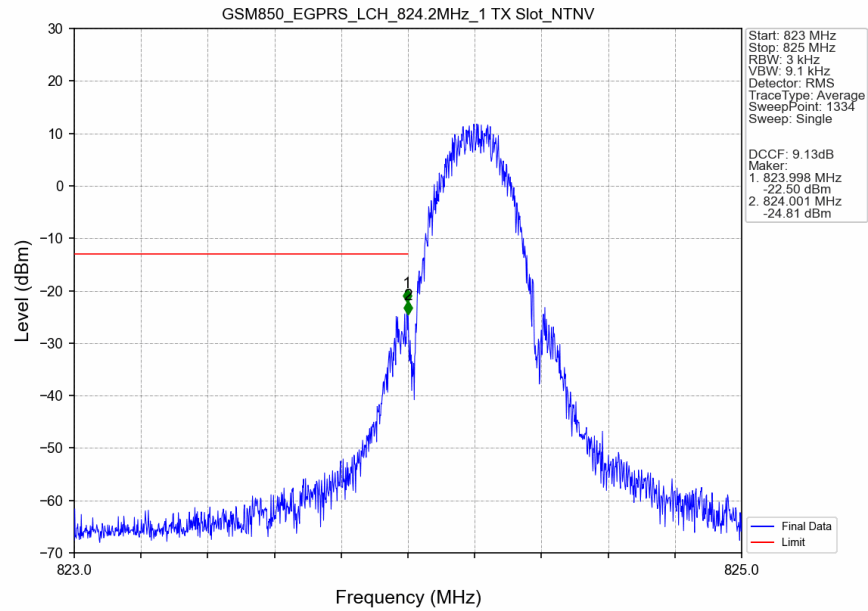
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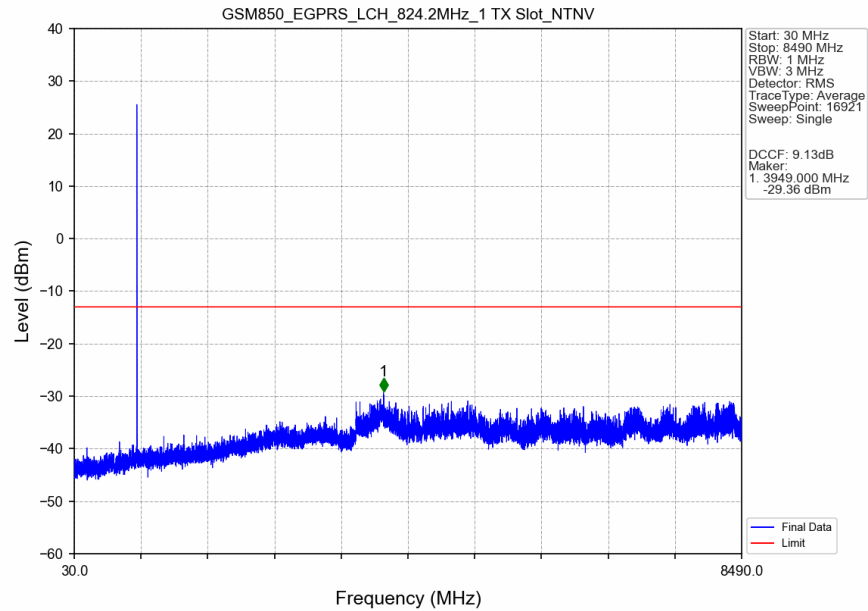
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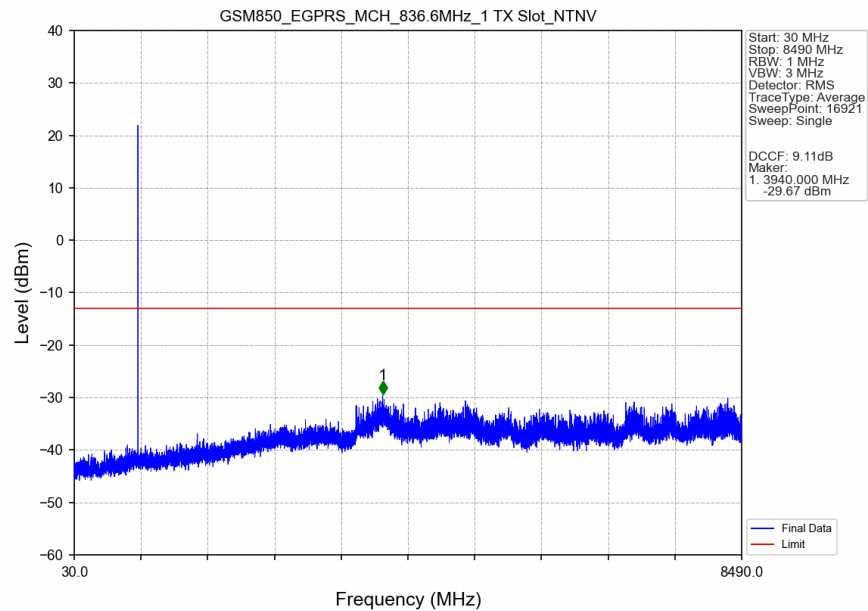
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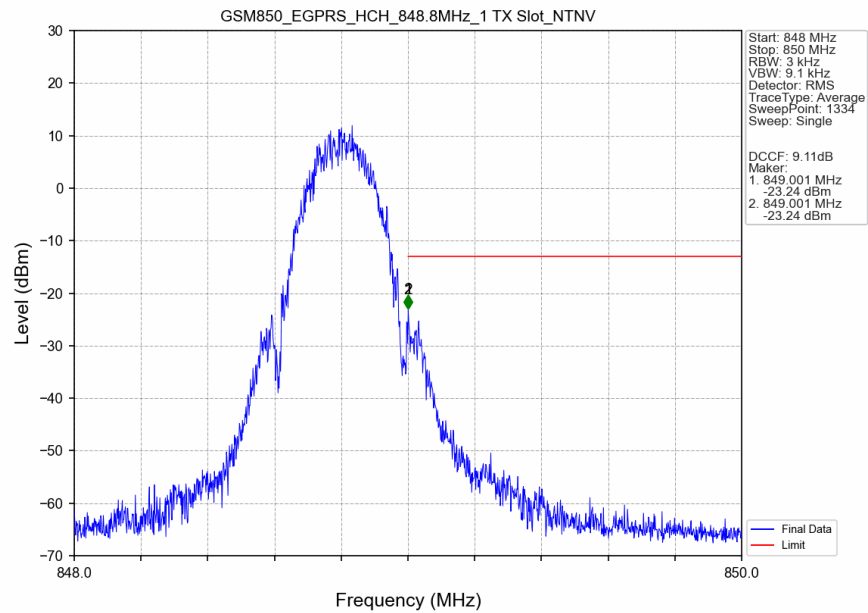
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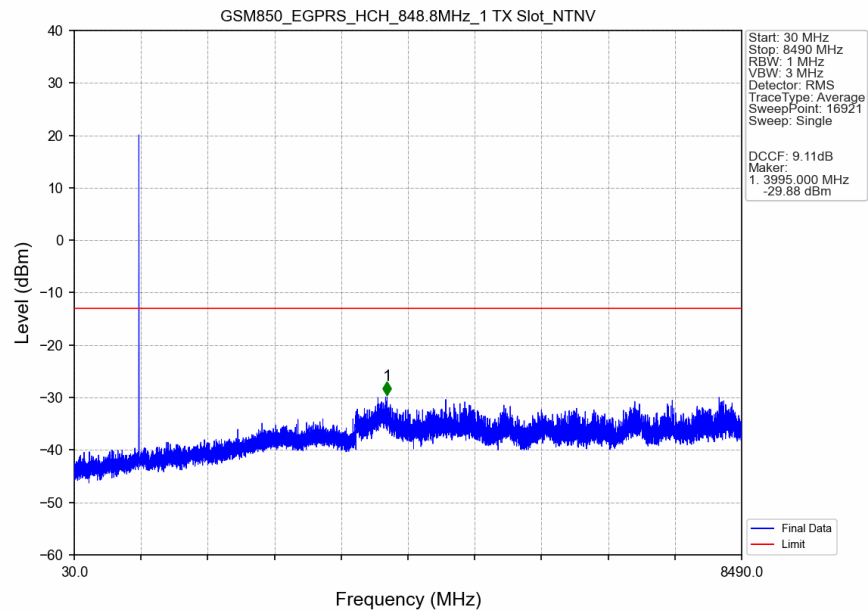
GSM850 EGPRS MCH 836.6MHz 1 TX Slot_NTNV



GSM850 EGPRS HCH 848.8MHz 1 TX Slot_NTNV



GSM850 EGPRS HCH 848.8MHz 1 TX Slot NTNV



6. Field Strength of Spurious Radiation

GSM850 ANT0-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
1648.4	-71.28	-13	-58.28	-74.17	2.62	5.51	Horizontal	Pass
2472.6	-69.27	-13	-56.27	-71.96	3.06	5.75	Horizontal	Pass
3296.8	-65.6	-13	-52.6	-69.96	3.3	7.66	Horizontal	Pass
1648.4	-70.65	-13	-57.65	-73.54	2.62	5.51	Vertical	Pass
2472.6	-69.46	-13	-56.46	-72.15	3.06	5.75	Vertical	Pass
3296.8	-66.93	-13	-53.93	-71.29	3.3	7.66	Vertical	Pass

GSM850 ANT0 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
1673.2	-71.22	-13	-58.22	-74.03	2.63	5.44	Horizontal	Pass
2509.8	-68.71	-13	-55.71	-71.47	3.08	5.84	Horizontal	Pass
3346.4	-65.16	-13	-52.16	-69.63	3.32	7.79	Horizontal	Pass
1673.2	-71.17	-13	-58.17	-73.98	2.63	5.44	Vertical	Pass
2509.8	-68.47	-13	-55.47	-71.23	3.08	5.84	Vertical	Pass
3346.4	-65.71	-13	-52.71	-70.18	3.32	7.79	Vertical	Pass

GSM850 ANT0-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	-72.21	-13	-59.21	-74.95	2.64	5.38	Horizontal	Pass
2546.4	-68.78	-13	-55.78	-71.61	3.09	5.92	Horizontal	Pass
3395.2	-66.56	-13	-53.56	-71.12	3.35	7.91	Horizontal	Pass
1697.6	-71.86	-13	-58.86	-74.6	2.64	5.38	Vertical	Pass
2546.4	-68.32	-13	-55.32	-71.15	3.09	5.92	Vertical	Pass
3395.2	-65.57	-13	-52.57	-70.13	3.35	7.91	Vertical	Pass