

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	33.66	0.16	31.67	<=38.45	Pass
			836.6	33.79	0.16	31.80	<=38.45	Pass
			848.8	33.53	0.16	31.54	<=38.45	Pass
	EGPRS	1 TX Slot	824.2	26.71	0.16	24.72	<=38.45	Pass
		2 TX Slots	824.2	26.39	0.16	24.40	<=38.45	Pass
		3 TX Slots	824.2	24.81	0.16	22.82	<=38.45	Pass
		4 TX Slots	824.2	23.80	0.16	21.81	<=38.45	Pass
		1 TX Slot	836.6	26.71	0.16	24.72	<=38.45	Pass
		2 TX Slots	836.6	26.70	0.16	24.71	<=38.45	Pass
		3 TX Slots	836.6	25.07	0.16	23.08	<=38.45	Pass
		4 TX Slots	836.6	24.00	0.16	22.01	<=38.45	Pass
		1 TX Slot	848.8	26.69	0.16	24.70	<=38.45	Pass
		2 TX Slots	848.8	26.60	0.16	24.61	<=38.45	Pass
		3 TX Slots	848.8	25.05	0.16	23.06	<=38.45	Pass
		4 TX Slots	848.8	24.02	0.16	22.03	<=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	20.4	10.418	0.0126	-2.5 to 2.5	Pass
			24	15.569	0.0189	-2.5 to 2.5	Pass
			27.6	13.950	0.0169	-2.5 to 2.5	Pass
		-30	24	16.968	0.0206	-2.5 to 2.5	Pass
		-20	24	13.389	0.0162	-2.5 to 2.5	Pass
		-10	24	15.971	0.0194	-2.5 to 2.5	Pass
		0	24	11.938	0.0145	-2.5 to 2.5	Pass
		10	24	14.349	0.0174	-2.5 to 2.5	Pass
		30	24	15.979	0.0194	-2.5 to 2.5	Pass
		40	24	14.679	0.0178	-2.5 to 2.5	Pass
		50	24	18.512	0.0225	-2.5 to 2.5	Pass
	836.6	20	20.4	24.516	0.0293	-2.5 to 2.5	Pass
			24	20.429	0.0244	-2.5 to 2.5	Pass
			27.6	14.004	0.0167	-2.5 to 2.5	Pass
		-30	24	21.045	0.0252	-2.5 to 2.5	Pass
		-20	24	20.337	0.0243	-2.5 to 2.5	Pass
		-10	24	16.837	0.0201	-2.5 to 2.5	Pass
		0	24	16.681	0.0199	-2.5 to 2.5	Pass
		10	24	17.653	0.0211	-2.5 to 2.5	Pass
		30	24	18.672	0.0223	-2.5 to 2.5	Pass
		40	24	18.548	0.0222	-2.5 to 2.5	Pass

		50	24	15.858	0.0190	-2.5 to 2.5	Pass
	848.8	20	20.4	17.942	0.0211	-2.5 to 2.5	Pass
			24	18.130	0.0214	-2.5 to 2.5	Pass
			27.6	18.347	0.0216	-2.5 to 2.5	Pass
			-30	24	19.759	0.0233	-2.5 to 2.5
		-20	24	19.561	0.0230	-2.5 to 2.5	Pass
		-10	24	19.547	0.0230	-2.5 to 2.5	Pass
		0	24	18.420	0.0217	-2.5 to 2.5	Pass
		10	24	19.621	0.0231	-2.5 to 2.5	Pass
		30	24	16.704	0.0197	-2.5 to 2.5	Pass
		40	24	22.023	0.0259	-2.5 to 2.5	Pass
		50	24	19.121	0.0225	-2.5 to 2.5	Pass
EGPRS	824.2	20	20.4	35.415	0.0430	-2.5 to 2.5	Pass
			24	37.324	0.0453	-2.5 to 2.5	Pass
			27.6	36.394	0.0442	-2.5 to 2.5	Pass
		-30	24	38.190	0.0463	-2.5 to 2.5	Pass
		-20	24	34.576	0.0420	-2.5 to 2.5	Pass
		-10	24	36.223	0.0439	-2.5 to 2.5	Pass
		0	24	34.937	0.0424	-2.5 to 2.5	Pass
		10	24	35.741	0.0434	-2.5 to 2.5	Pass
		30	24	31.946	0.0388	-2.5 to 2.5	Pass
		40	24	32.027	0.0389	-2.5 to 2.5	Pass
		50	24	34.491	0.0418	-2.5 to 2.5	Pass
	836.6	20	20.4	34.854	0.0417	-2.5 to 2.5	Pass
			24	34.571	0.0413	-2.5 to 2.5	Pass
			27.6	31.363	0.0375	-2.5 to 2.5	Pass
		-30	24	33.439	0.0400	-2.5 to 2.5	Pass
		-20	24	34.733	0.0415	-2.5 to 2.5	Pass
		-10	24	33.816	0.0404	-2.5 to 2.5	Pass
		0	24	34.212	0.0409	-2.5 to 2.5	Pass
		10	24	33.113	0.0396	-2.5 to 2.5	Pass
		30	24	32.537	0.0389	-2.5 to 2.5	Pass
		40	24	34.209	0.0409	-2.5 to 2.5	Pass
		50	24	34.031	0.0407	-2.5 to 2.5	Pass
	848.8	20	20.4	34.274	0.0404	-2.5 to 2.5	Pass
			24	31.518	0.0371	-2.5 to 2.5	Pass
			27.6	34.150	0.0402	-2.5 to 2.5	Pass
		-30	24	32.055	0.0378	-2.5 to 2.5	Pass
		-20	24	34.273	0.0404	-2.5 to 2.5	Pass
		-10	24	34.798	0.0410	-2.5 to 2.5	Pass
		0	24	33.676	0.0397	-2.5 to 2.5	Pass
		10	24	32.176	0.0379	-2.5 to 2.5	Pass
		30	24	34.969	0.0412	-2.5 to 2.5	Pass
		40	24	33.347	0.0393	-2.5 to 2.5	Pass
		50	24	32.578	0.0384	-2.5 to 2.5	Pass

3. 99% & 26dB Bandwidth

3.1 Test Result

3.1.1 GSM850_OBW

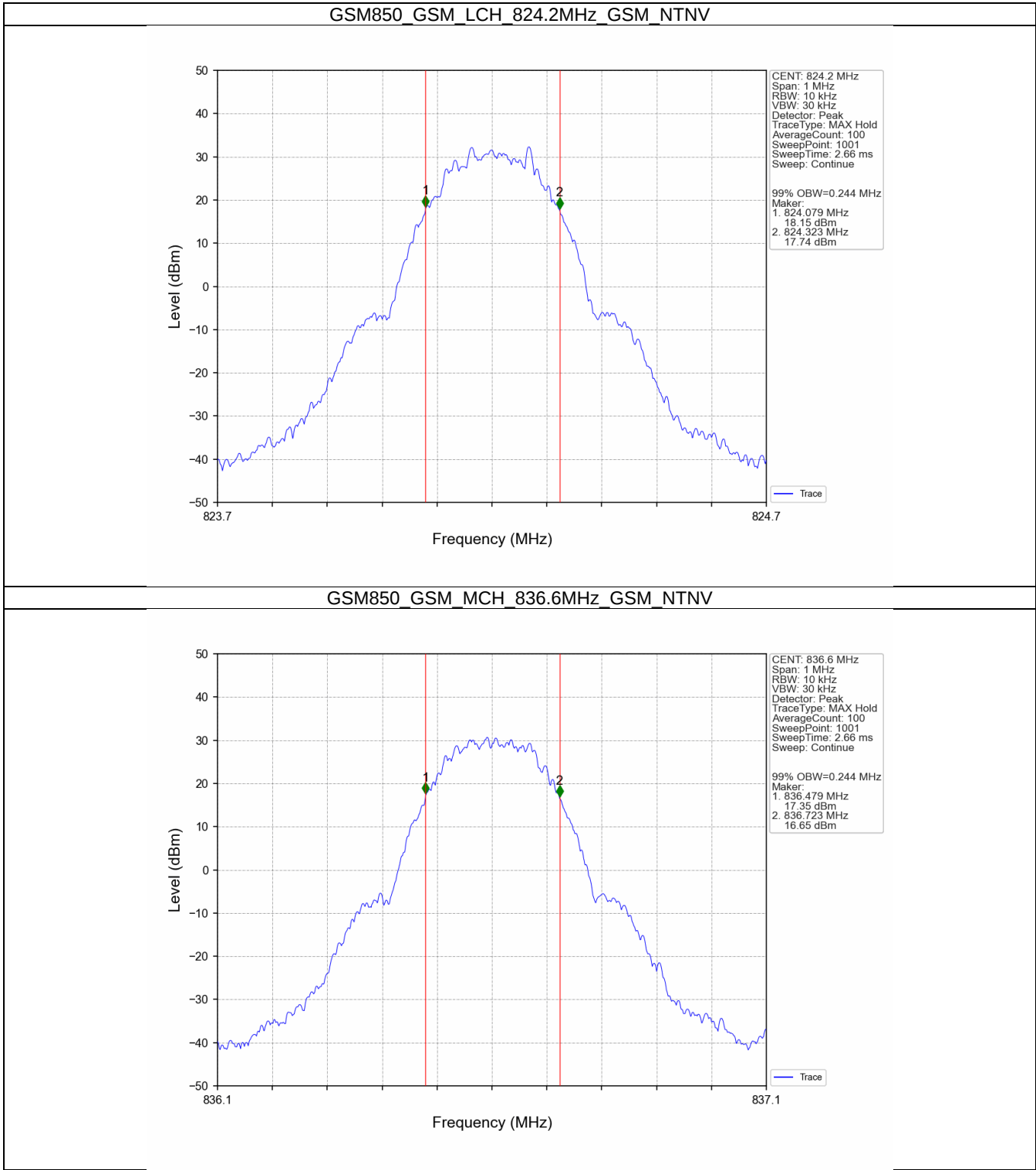
Band: GSM850						
ENV	Mode		Frequency (MHz)	99% Occupied Bandwidth (MHz)		Verdict
	Network	Subset		Result	Limit	
NTNV	GSM	GSM	824.2	0.244	/	Pass
			836.6	0.244	/	Pass
			848.8	0.246	/	Pass
	EGPRS	1 TX Slot	824.2	0.233	/	Pass
			836.6	0.244	/	Pass
			848.8	0.234	/	Pass

3.1.2 GSM850_XDB

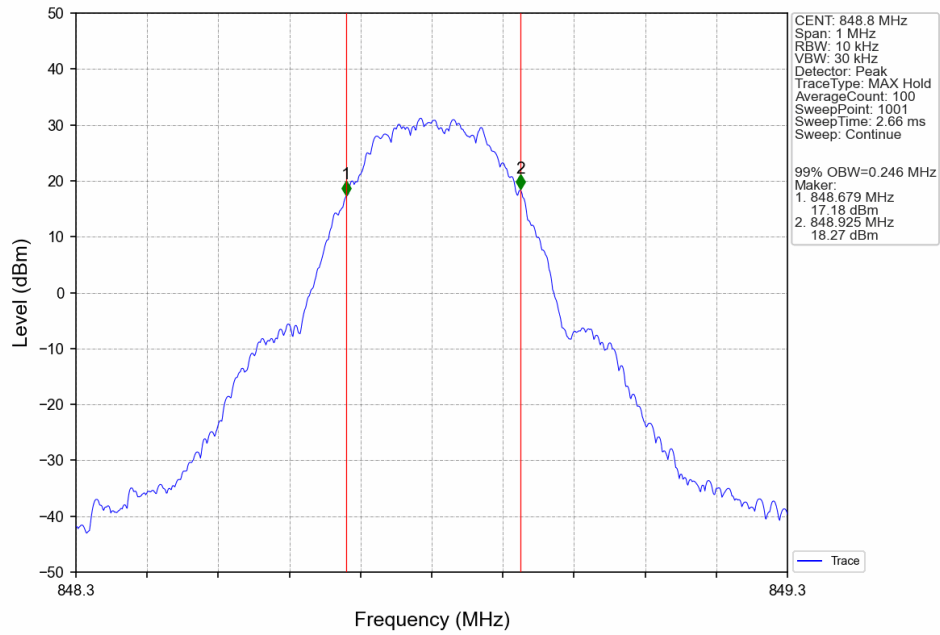
Band: GSM850						
ENV	Mode		Frequency (MHz)	26dB Bandwidth (MHz)		Verdict
	Network	Subset		Result	Limit	
NTNV	GSM	GSM	824.2	0.314	/	Pass
			836.6	0.319	/	Pass
			848.8	0.320	/	Pass
	EGPRS	1 TX Slot	824.2	0.315	/	Pass
			836.6	0.308	/	Pass
			848.8	0.300	/	Pass

3.2 Test Graph

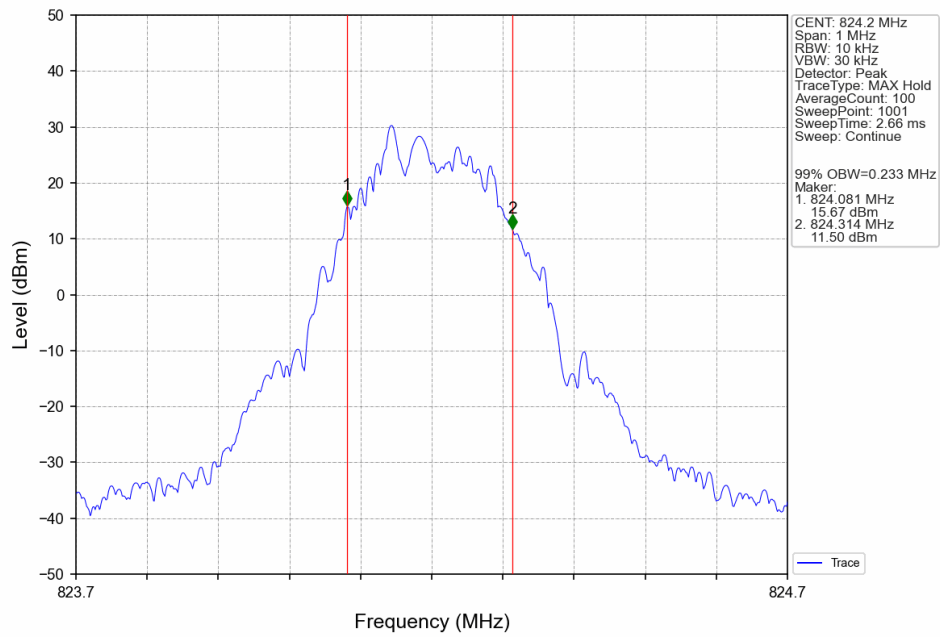
3.2.1 GSM850_OBW



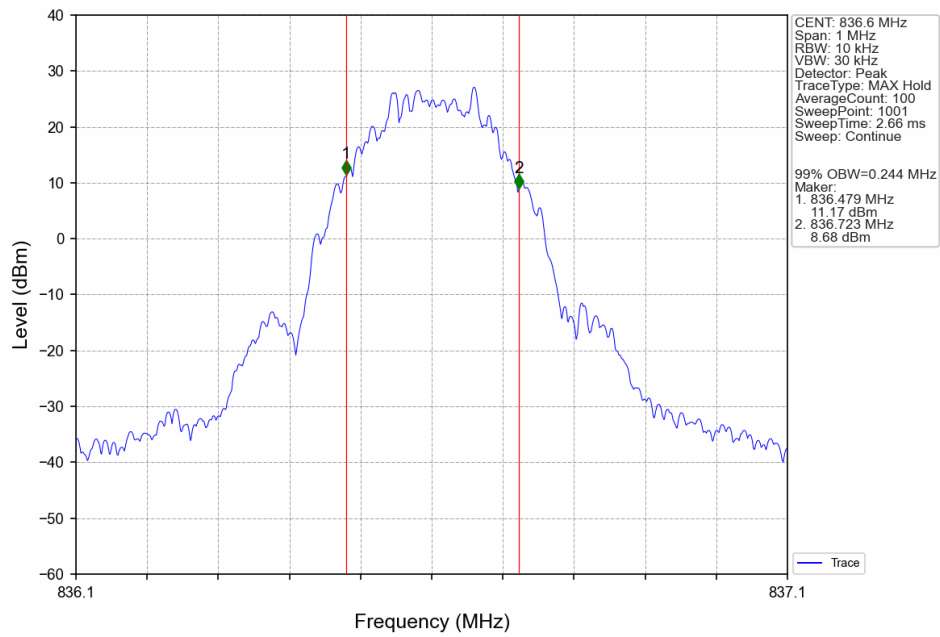
GSM850_GSM_HCH_848.8MHz_GSM_NTNV



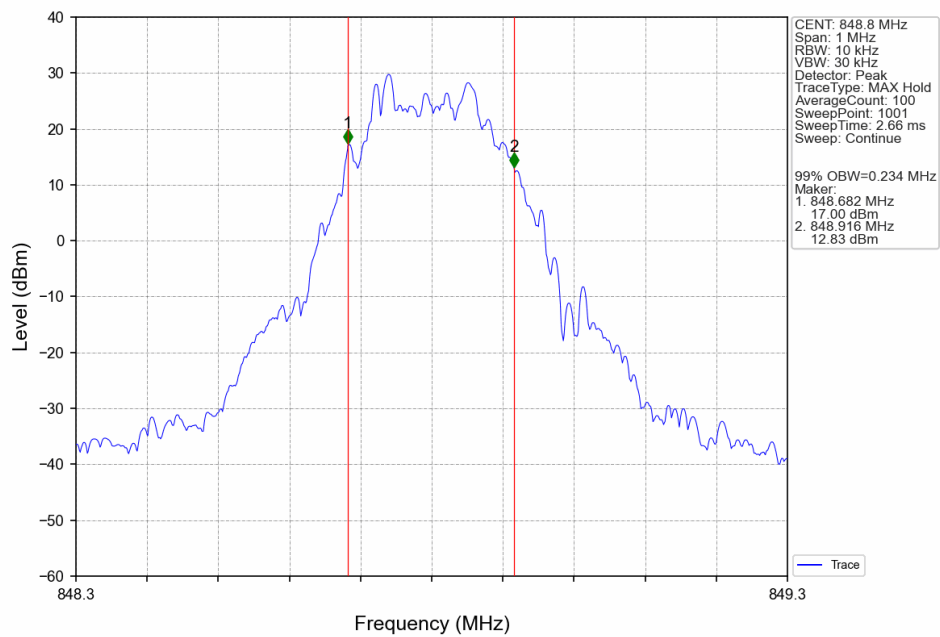
GSM850 EGPRS LCH 824.2MHz 1 TX Slot NTNV



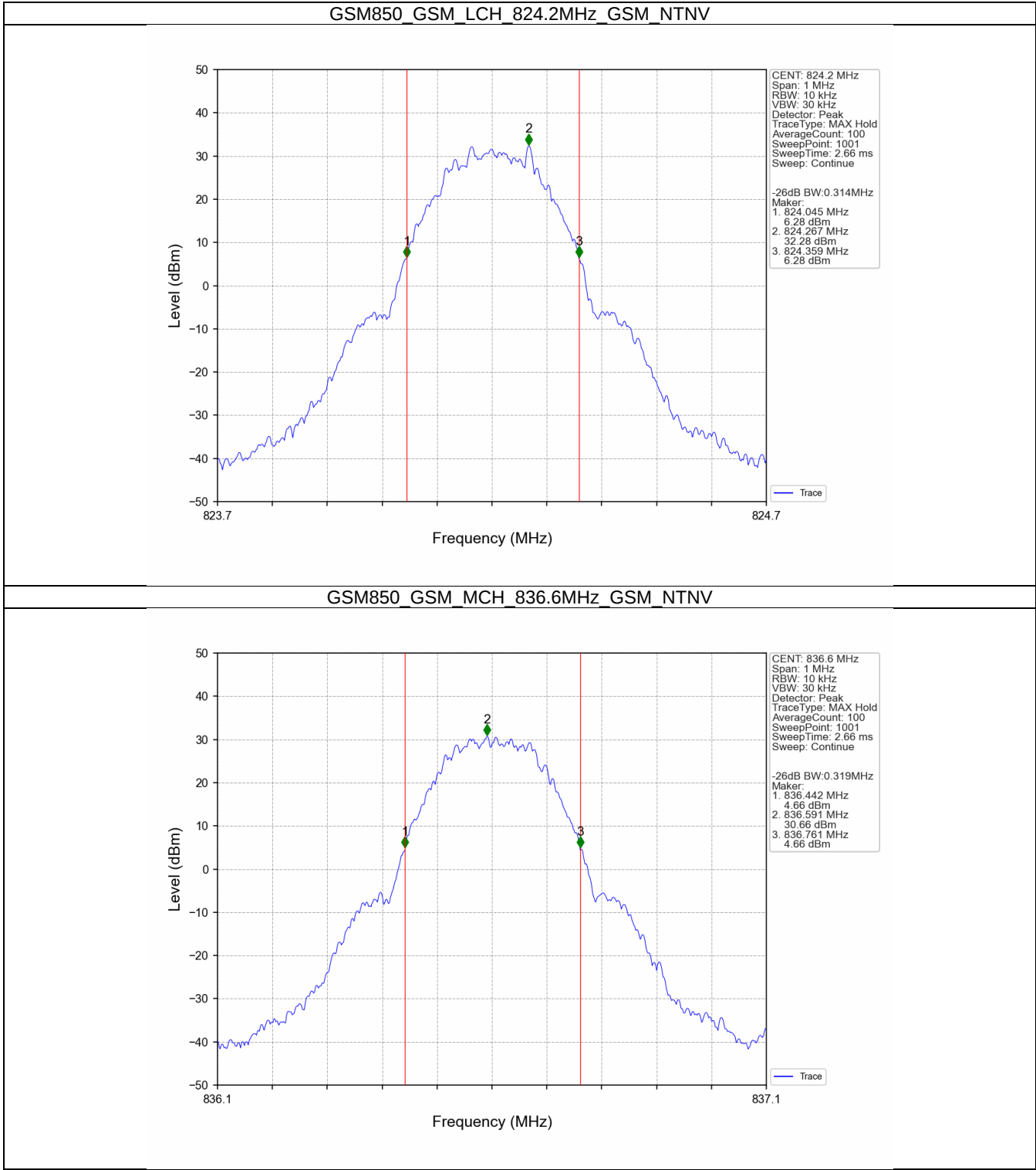
GSM850 EGPRS MCH 836.6MHz 1 TX Slot NTNV



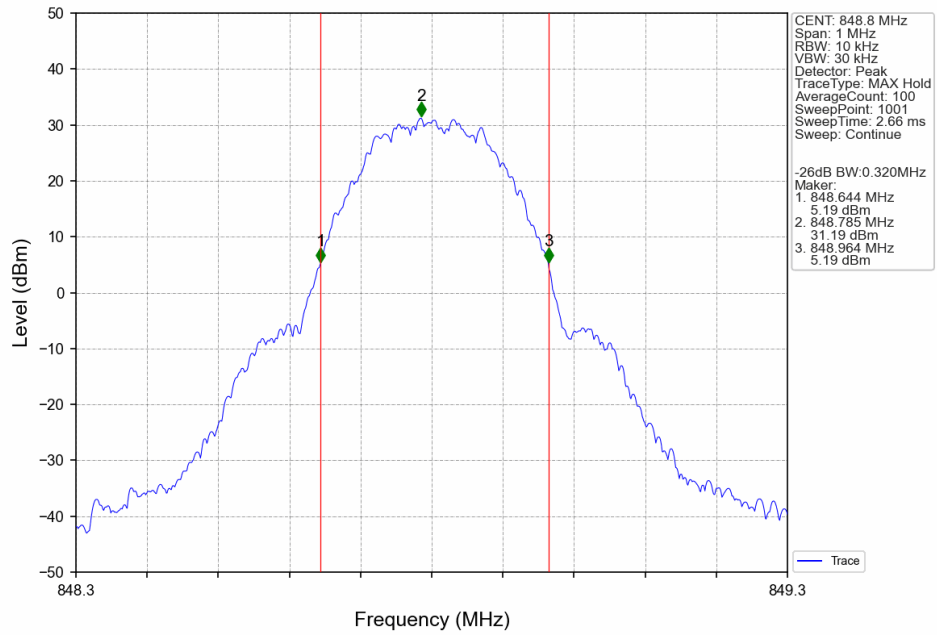
GSM850 EGPRS HCH 848.8MHz 1 TX Slot NTNV



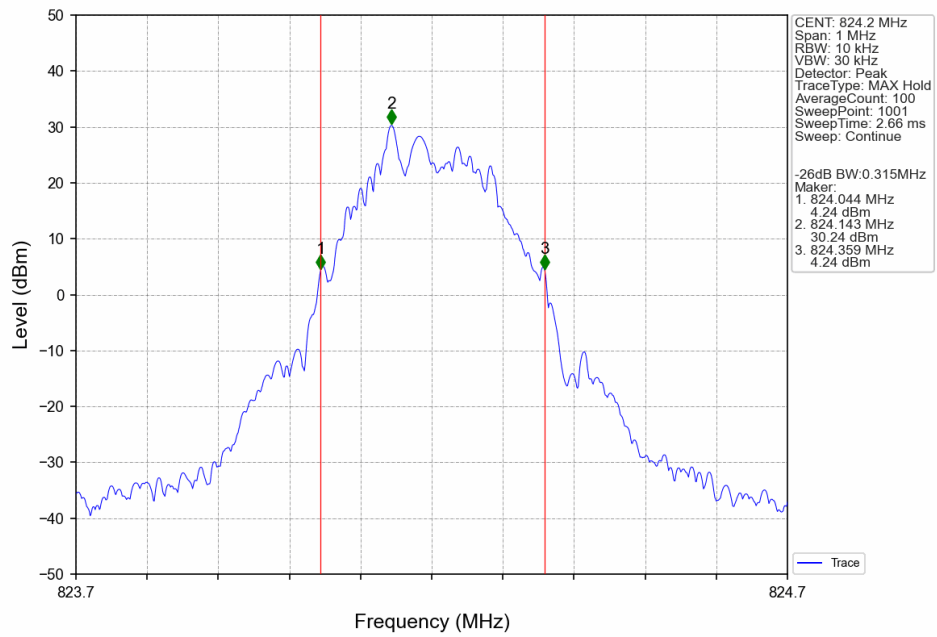
3.2.2 GSM850_XDB



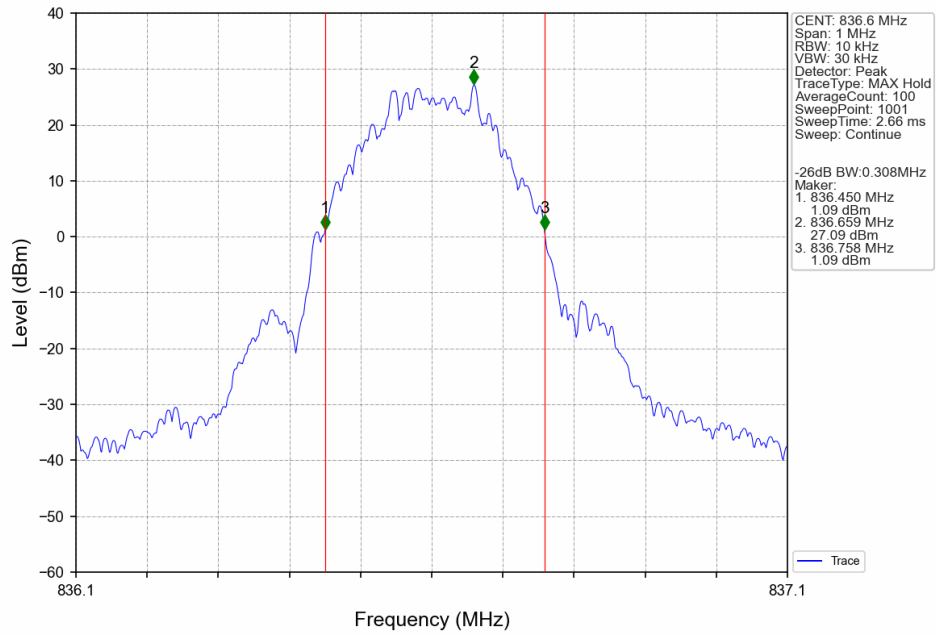
GSM850_GSM_HCH_848.8MHz_GSM_NTNV



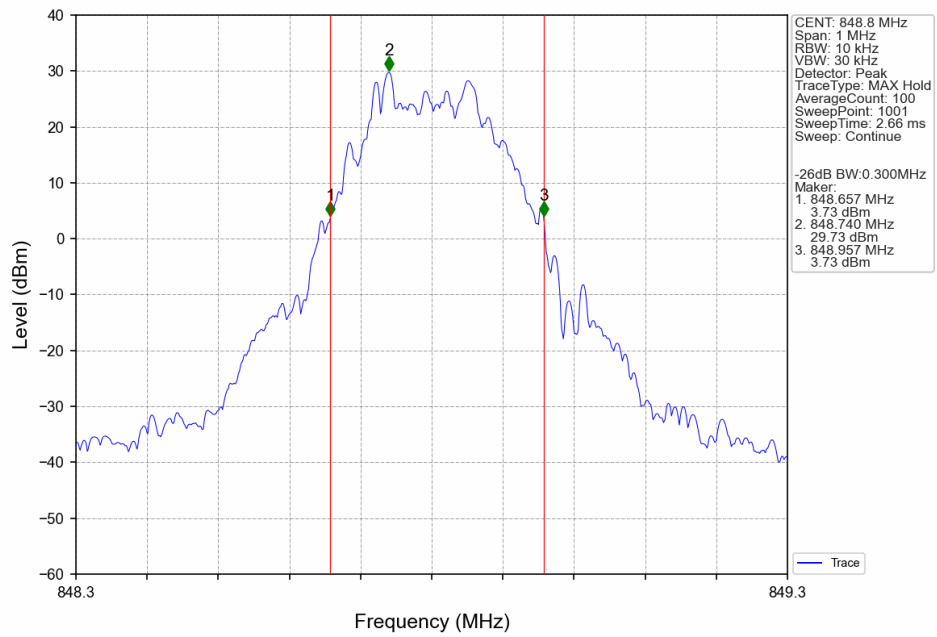
GSM850 EGPRS LCH 824.2MHz 1 TX Slot NTNV



GSM850 EGPRS MCH 836.6MHz 1 TX Slot NTNV



GSM850 EGPRS HCH 848.8MHz 1 TX Slot NTNV



4. Peak-Average Ratio

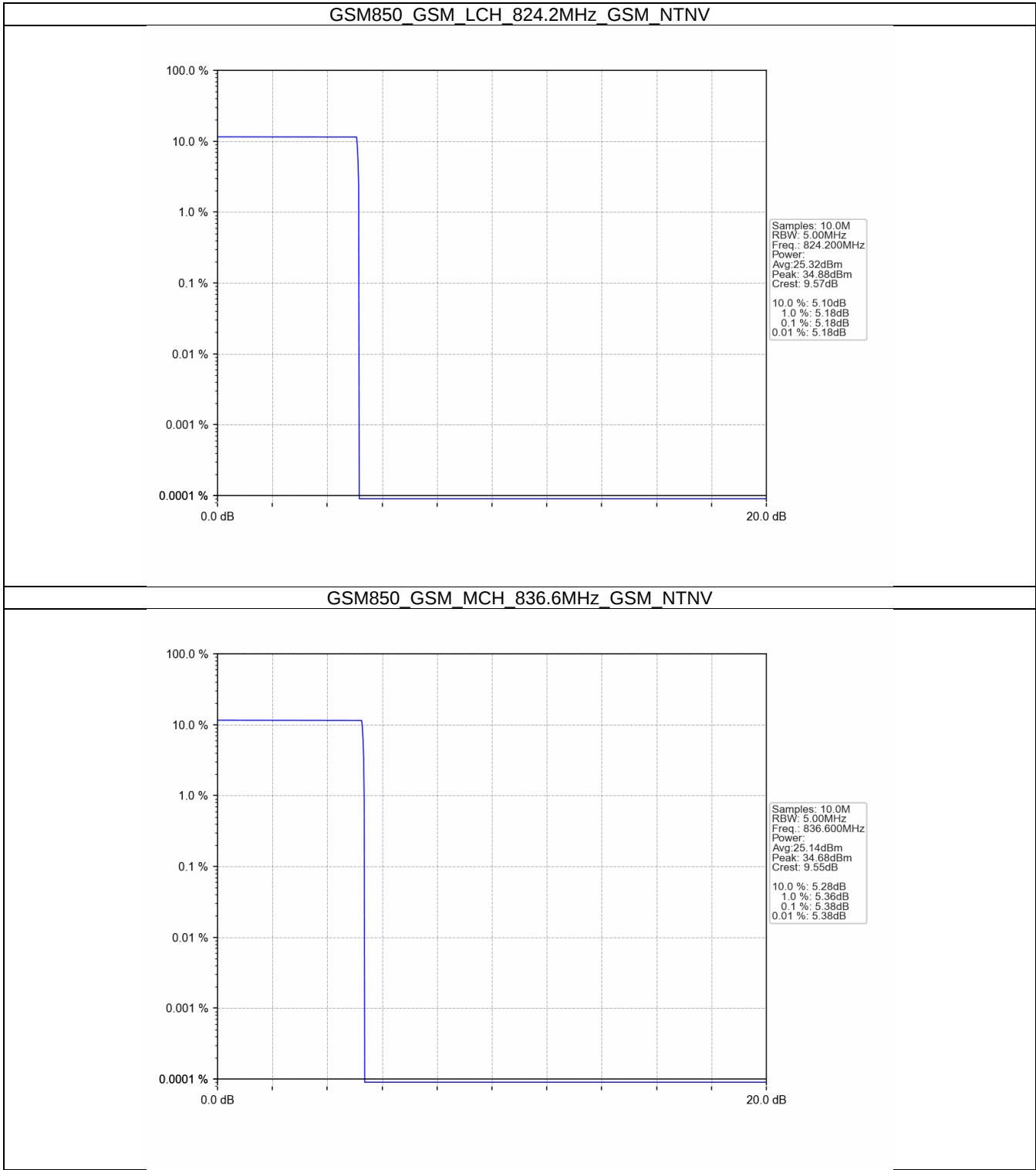
4.1 Test Result

4.1.1 GSM850

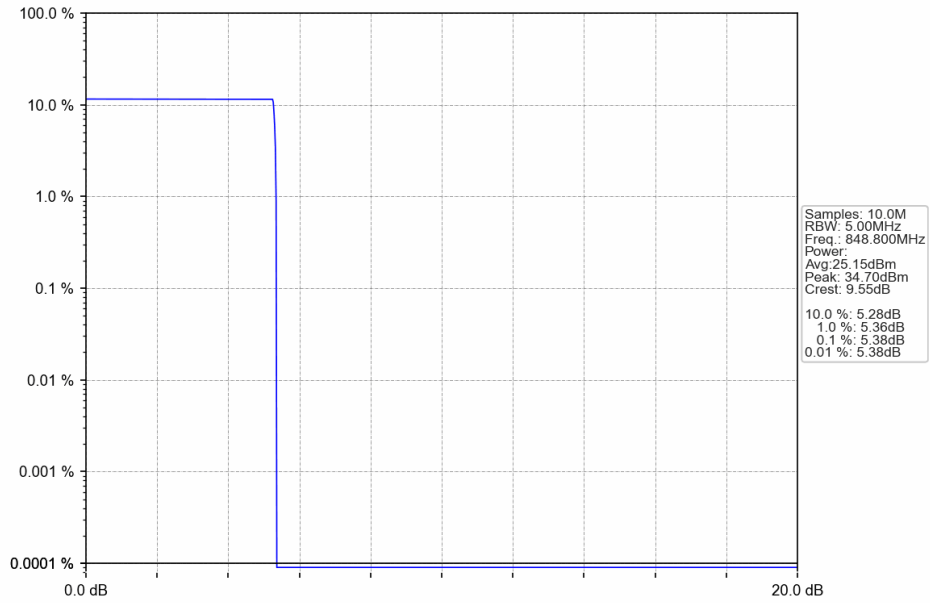
Band: GSM850						
ENV	Mode		Frequency (MHz)	Peak-Average Ratio (dB)		Verdict
	Network	Subset		Result	Limit	
NTNV	GSM	GSM	824.2	5.18	<=13	Pass
			836.6	5.38	<=13	Pass
			848.8	5.38	<=13	Pass
	EGPRS	4 TX Slots	824.2	8.46	<=13	Pass
			836.6	8.46	<=13	Pass
			848.8	8.50	<=13	Pass

4.2 Test Graph

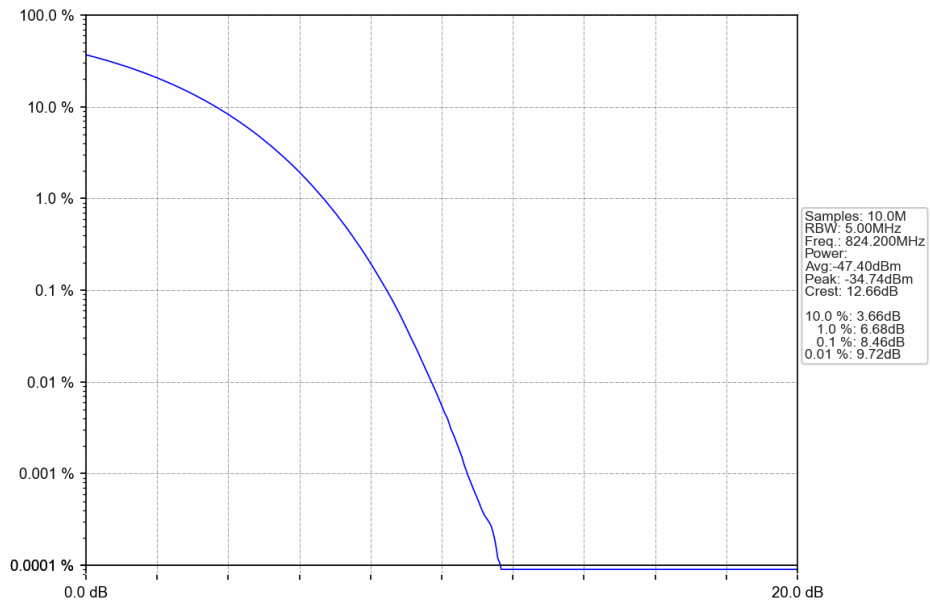
4.2.1 GSM850



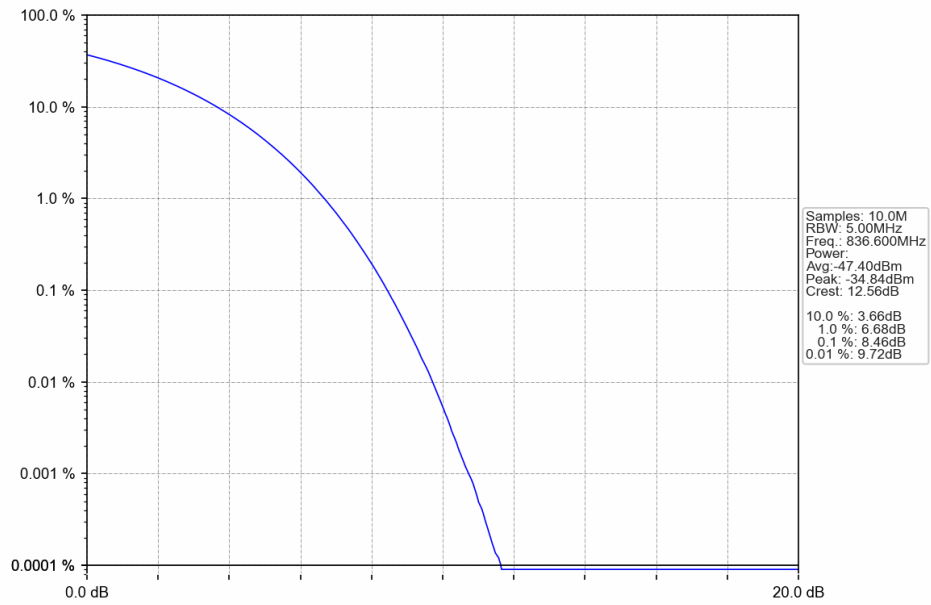
GSM850_GSM_HCH_848.8MHz_GSM_NTNV



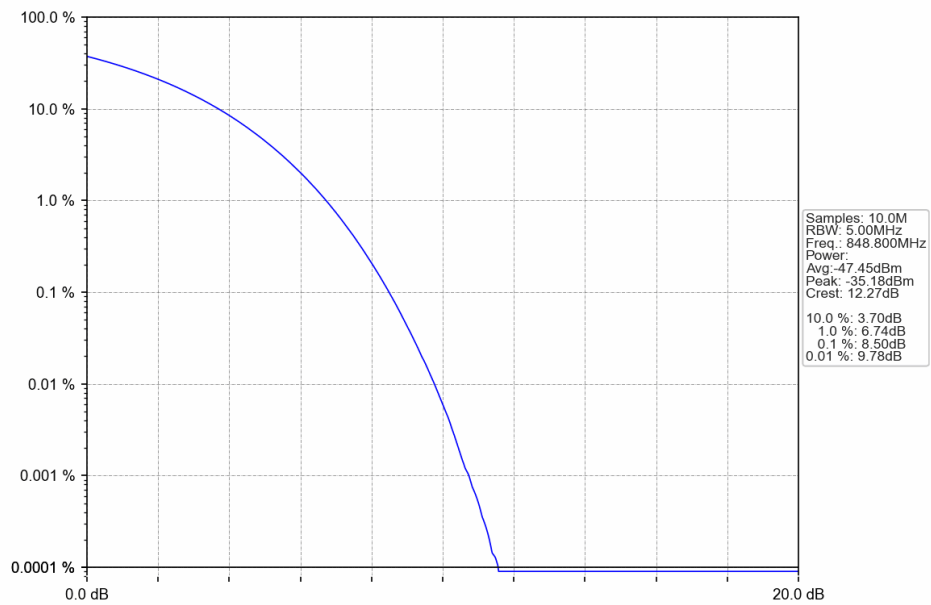
GSM850 EGPRS LCH 824.2MHz 4 TX Slots NTN



GSM850_EGPRS_MCH_836.6MHz_4 TX Slots_NTNV



GSM850_EGPRS_HCH_848.8MHz_4 TX Slots_NTNV



5. Spurious Emission

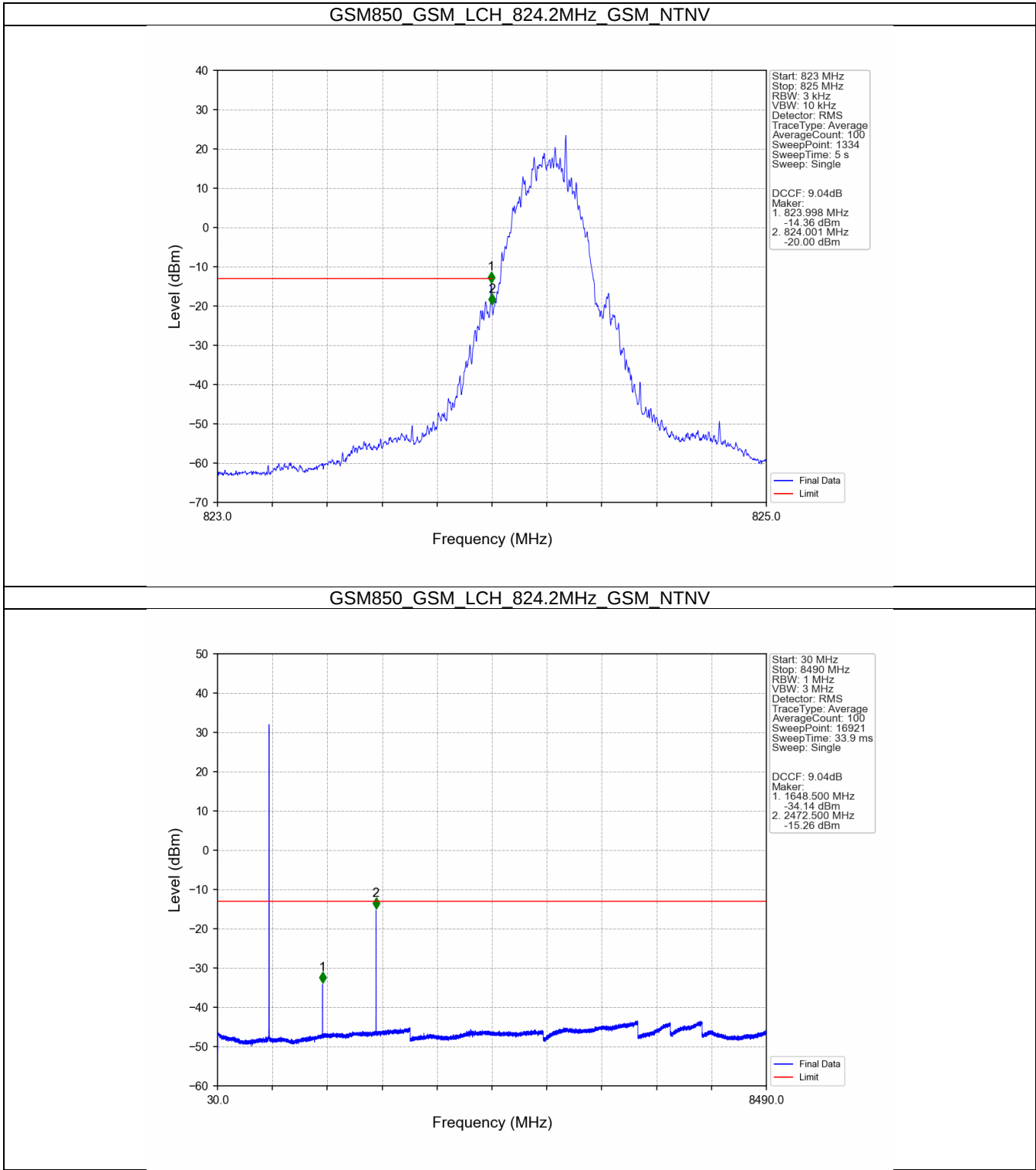
5.1 Test Result

5.1.1 GSM850

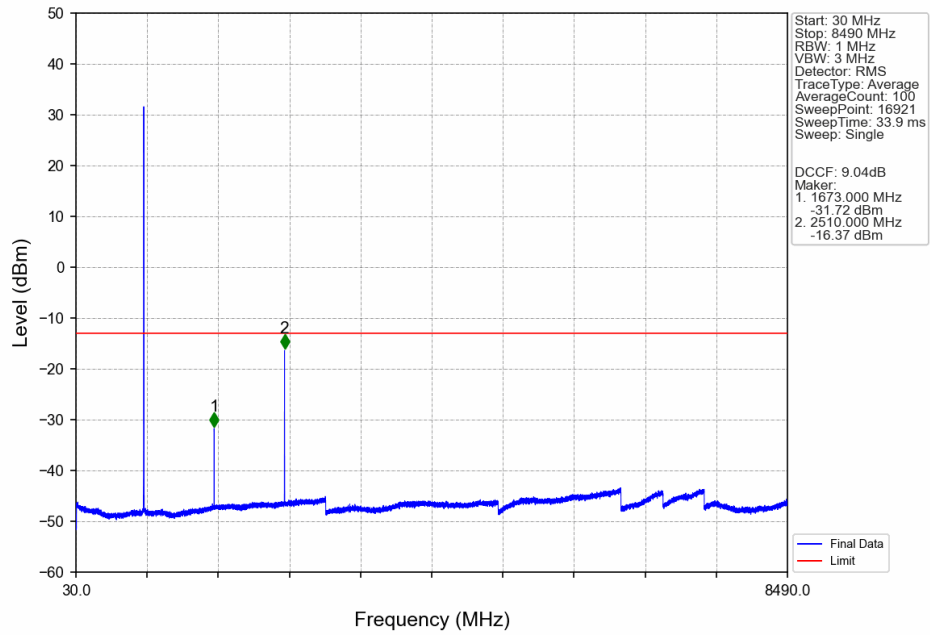
Band: GSM850						
ENV	Mode		Frequency (MHz)	Spurious Emission		Verdict
	Network	Subset		Result	Limit	
NTNV	GSM	GSM	824.2	Refer To Test Graph		Pass
			836.6	Refer To Test Graph		Pass
			848.8	Refer To Test Graph		Pass
	EGPRS	1 TX Slot	824.2	Refer To Test Graph		Pass
			836.6	Refer To Test Graph		Pass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

5.2 Test Graph

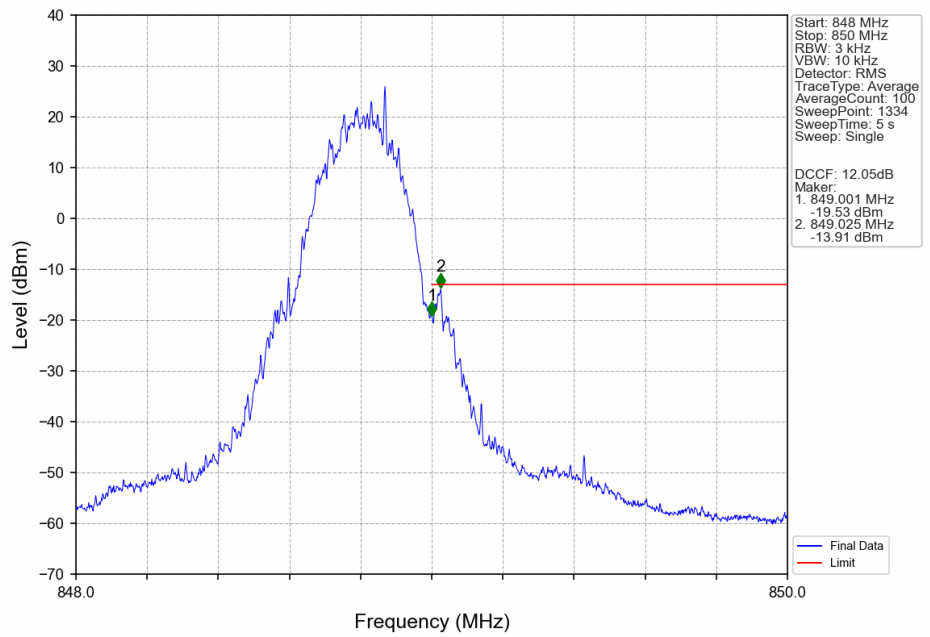
5.2.1 GSM850



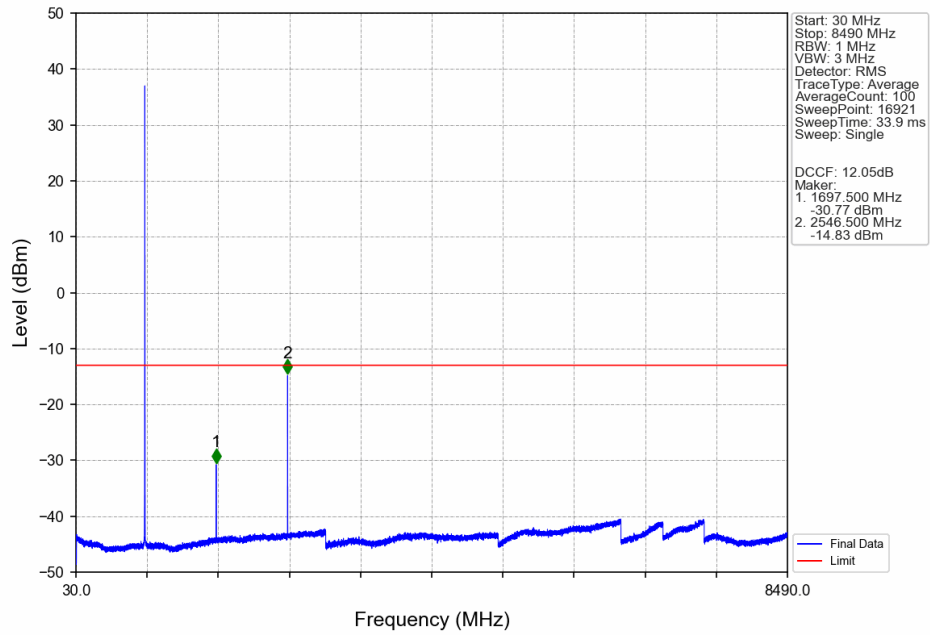
GSM850 GSM MCH 836.6MHz GSM NTNV



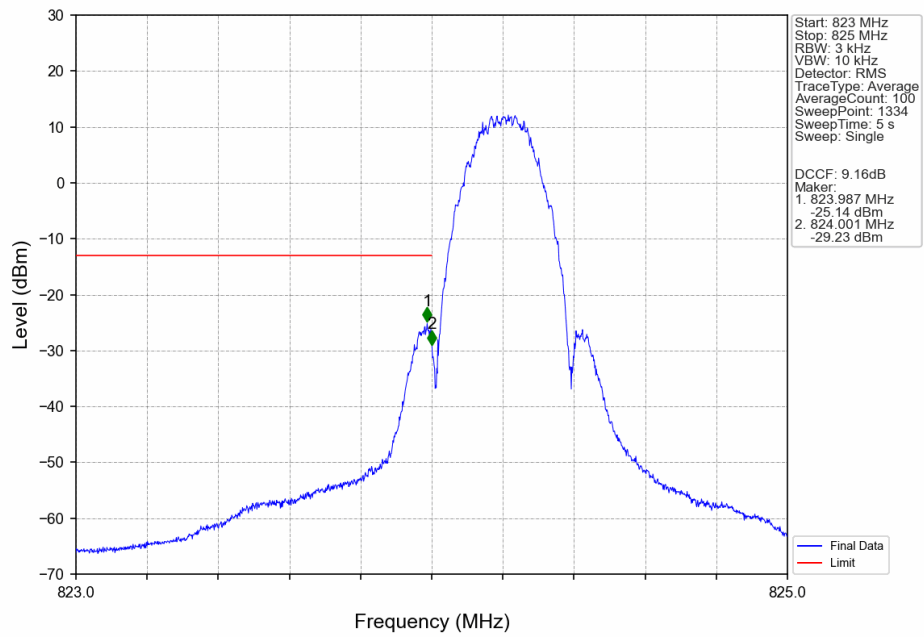
GSM850 GSM HCH 848.8MHz GSM NTNV



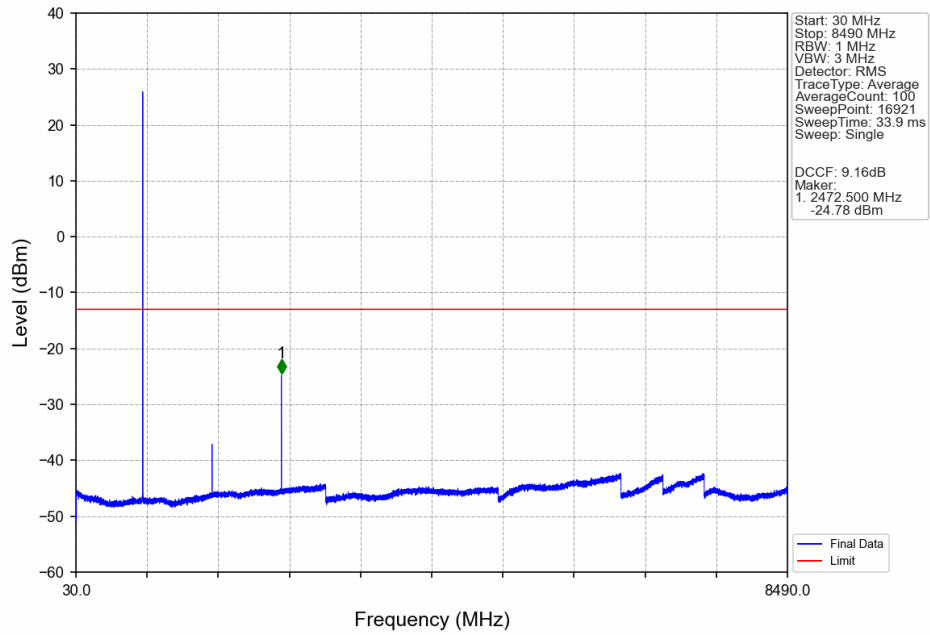
GSM850_GSM_HCH_848.8MHz_GSM_NTNV



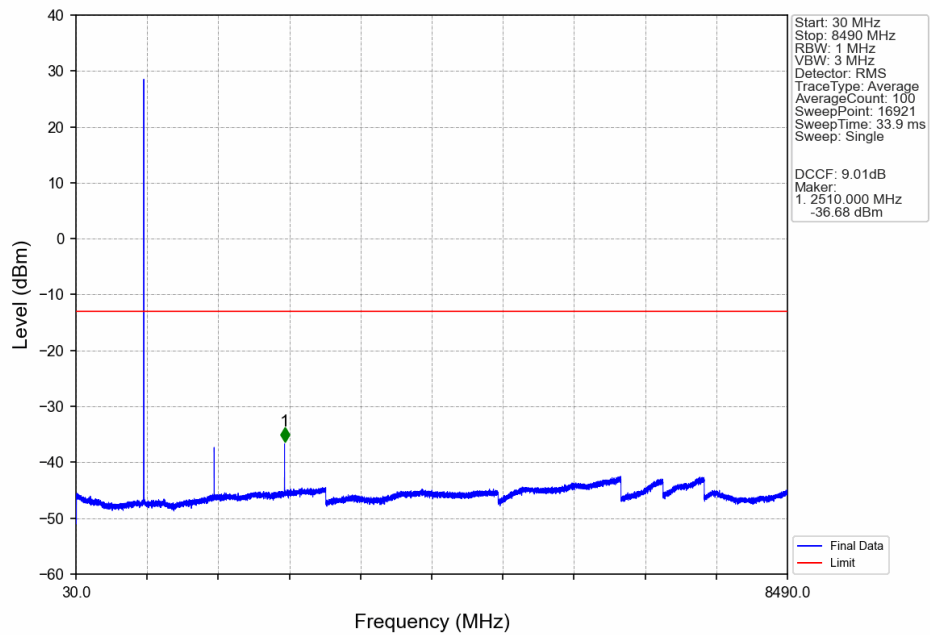
GSM850 EGPRS LCH 824.2MHz 1 TX Slot NTNV



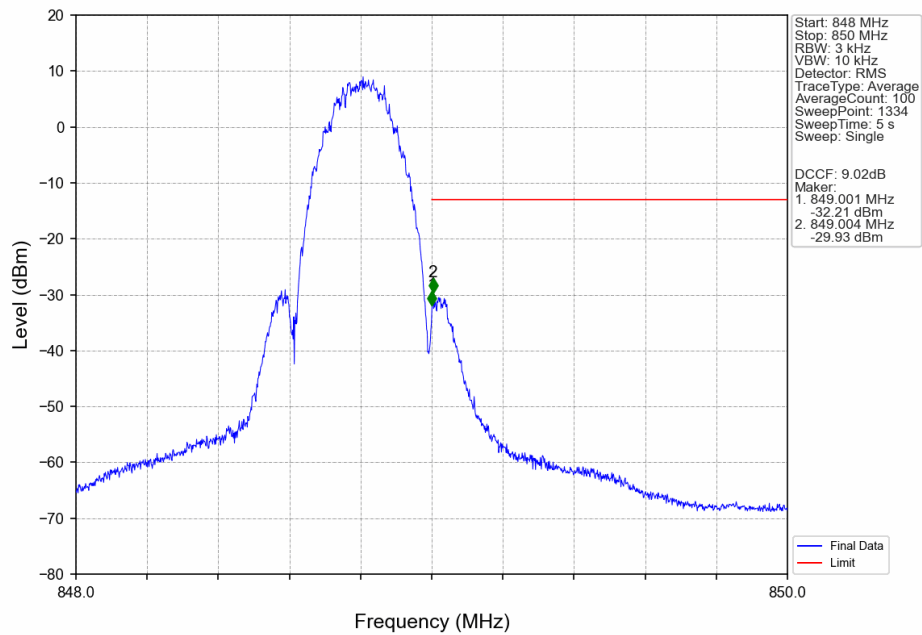
GSM850 EGPRS LCH 824.2MHz 1 TX Slot NTNV



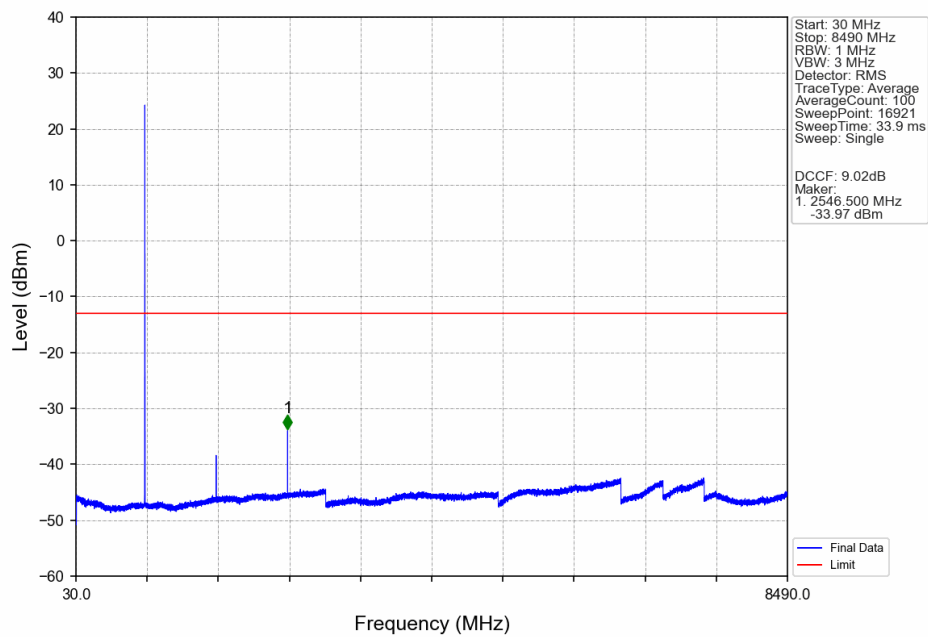
GSM850 EGPRS MCH 836.6MHz 1 TX Slot NTNV



GSM850 EGPRS HCH 848.8MHz 1 TX Slot NTNV



GSM850 EGPRS HCH 848.8MHz 1 TX Slot NTNV



6. Field Strength of Spurious Radiation

Test Band = GSM 850_

Test Channel = Low Channel

Data List								
NO.	Frequency [MHz]	Reading [dBμV]	Factor [dB]	AF [dB/m]	Level [dBm]	Limit [dBm]	Margin [dB]	Polarity
1	4945.7778	53.50	-48.07	31.08	-58.75	-13.00	45.75	Horizontal
2	1648.4	60.57	-49.83	25.57	-58.95	-13.00	45.95	Horizontal
3	2472.6	68.69	-49.06	27.15	-48.48	-13.00	35.48	Horizontal
4	3296.8	49.12	-48.63	28.34	-66.43	-13.00	53.43	Horizontal
5	4121	48.25	-48.28	29.49	-65.80	-13.00	52.80	Horizontal
6	5769.4	50.74	-47.65	32.71	-59.47	-13.00	46.47	Horizontal

Data List								
NO.	Frequency [MHz]	Reading [dBμV]	Factor [dB]	AF [dB/m]	Level [dBm]	Limit [dBm]	Margin [dB]	Polarity
1	1648.4	62.37	-49.83	25.57	-57.15	-13.00	44.15	Vertical
2	2472.6	57.75	-49.06	27.15	-59.42	-13.00	46.42	Vertical
3	3296.8	50.15	-48.63	28.34	-65.40	-13.00	52.40	Vertical
4	4121	50.60	-48.28	29.49	-63.45	-13.00	50.45	Vertical
5	4945.2	55.69	-48.07	31.08	-56.57	-13.00	43.57	Vertical
6	5769.4	49.83	-47.65	32.71	-60.38	-13.00	47.38	Vertical

Test Band = GSM 850_
Test Channel = Mid Channel

Data List								
NO.	Frequency [MHz]	Reading [dBμV]	Factor [dB]	AF [dB/m]	Level [dBm]	Limit [dBm]	Margin [dB]	Polarity
1	1672.8	53.04	-49.78	25.61	-66.39	-13.00	53.39	Horizontal
2	2509.2	64.00	-48.93	27.22	-52.97	-13.00	39.97	Horizontal
3	3345.6	48.53	-48.66	28.38	-67.01	-13.00	54.01	Horizontal
4	4182	47.99	-48.34	29.59	-66.02	-13.00	53.02	Horizontal
5	5018.4	50.69	-47.95	31.25	-61.27	-13.00	48.27	Horizontal
6	5854.8	50.17	-47.33	32.74	-59.68	-13.00	46.68	Horizontal

Data List								
NO.	Frequency [MHz]	Reading [dBμV]	Factor [dB]	AF [dB/m]	Level [dBm]	Limit [dBm]	Margin [dB]	Polarity
1	2509.3333	55.86	-48.93	27.22	-61.11	-13.00	48.11	Vertical
2	1672.8	53.89	-49.78	25.61	-65.54	-13.00	52.54	Vertical
3	3345.6	49.86	-48.66	28.38	-65.68	-13.00	52.68	Vertical
4	4182	49.38	-48.34	29.59	-64.63	-13.00	51.63	Vertical
5	5018.4	51.35	-47.95	31.25	-60.61	-13.00	47.61	Vertical
6	5854.8	50.18	-47.33	32.74	-59.67	-13.00	46.67	Vertical

Test Band = GSM 850_
Test Channel = High Channel

Data List								
NO.	Frequency [MHz]	Reading [dBμV]	Factor [dB]	AF [dB/m]	Level [dBm]	Limit [dBm]	Margin [dB]	Polarity
1	5093.3333	53.63	-47.92	31.46	-58.09	-13.00	45.09	Horizontal
2	1697.6	53.45	-49.72	25.65	-65.89	-13.00	52.89	Horizontal
3	2546.4	65.71	-49.03	27.28	-51.29	-13.00	38.29	Horizontal
4	3395.2	48.99	-48.69	28.42	-66.54	-13.00	53.54	Horizontal
5	4244	48.85	-48.21	29.69	-64.93	-13.00	51.93	Horizontal
6	5941.6	49.35	-47.26	32.78	-60.40	-13.00	47.40	Horizontal

Data List								
NO.	Frequency [MHz]	Reading [dBμV]	Factor [dB]	AF [dB/m]	Level [dBm]	Limit [dBm]	Margin [dB]	Polarity
1	3395.1111	51.63	-48.69	28.42	-63.90	-13.00	50.90	Vertical
2	5093.3333	56.74	-47.92	31.46	-54.98	-13.00	41.98	Vertical
3	1697.6	51.19	-49.72	25.65	-68.15	-13.00	55.15	Vertical
4	2546.4	57.80	-49.03	27.28	-59.20	-13.00	46.20	Vertical
5	4244	50.37	-48.21	29.69	-63.41	-13.00	50.41	Vertical
6	5941.6	49.72	-47.26	32.78	-60.03	-13.00	47.03	Vertical