

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	32.17	-6.00	24.02	<=38.45	Pass
			836.6	32.37	-6.00	24.22	<=38.45	Pass
			848.8	32.52	-6.00	24.37	<=38.45	Pass
	EGPRS	1 TX Slot	824.2	26.85	-6.00	18.70	<=38.45	Pass
		2 TX Slots	824.2	25.72	-6.00	17.57	<=38.45	Pass
		3 TX Slots	824.2	24.54	-6.00	16.39	<=38.45	Pass
		4 TX Slots	824.2	22.25	-6.00	14.10	<=38.45	Pass
		1 TX Slot	836.6	27.02	-6.00	18.87	<=38.45	Pass
		2 TX Slots	836.6	25.76	-6.00	17.61	<=38.45	Pass
		3 TX Slots	836.6	23.64	-6.00	15.49	<=38.45	Pass
		4 TX Slots	836.6	22.45	-6.00	14.30	<=38.45	Pass
		1 TX Slot	848.8	27.11	-6.00	18.96	<=38.45	Pass
		2 TX Slots	848.8	25.95	-6.00	17.80	<=38.45	Pass
		3 TX Slots	848.8	23.60	-6.00	15.45	<=38.45	Pass
		4 TX Slots	848.8	22.50	-6.00	14.35	<=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	3.6	1.583	0.0019	-2.5 to 2.5	Pass
			3.88	-0.769	-0.0009	-2.5 to 2.5	Pass
			4.53	-2.469	-0.0030	-2.5 to 2.5	Pass
		-30	3.88	3.505	0.0043	-2.5 to 2.5	Pass
		-20	3.88	-0.408	-0.0005	-2.5 to 2.5	Pass
		-10	3.88	0.867	0.0011	-2.5 to 2.5	Pass
		0	3.88	-0.404	-0.0005	-2.5 to 2.5	Pass
		10	3.88	-1.856	-0.0023	-2.5 to 2.5	Pass
		30	3.88	-7.841	-0.0095	-2.5 to 2.5	Pass
		40	3.88	-10.008	-0.0121	-2.5 to 2.5	Pass
		50	3.88	-4.666	-0.0057	-2.5 to 2.5	Pass
	836.6	20	3.6	1.758	0.0021	-2.5 to 2.5	Pass
			3.88	1.779	0.0021	-2.5 to 2.5	Pass
			4.53	1.792	0.0021	-2.5 to 2.5	Pass
		-30	3.88	-0.255	-0.0003	-2.5 to 2.5	Pass
		-20	3.88	1.187	0.0014	-2.5 to 2.5	Pass
		-10	3.88	-0.240	-0.0003	-2.5 to 2.5	Pass
		0	3.88	-2.679	-0.0032	-2.5 to 2.5	Pass
		10	3.88	-5.877	-0.0070	-2.5 to 2.5	Pass
		30	3.88	-5.580	-0.0067	-2.5 to 2.5	Pass
		40	3.88	-5.333	-0.0064	-2.5 to 2.5	Pass

		50	3.88	-6.949	-0.0083	-2.5 to 2.5	Pass
	848.8	20	3.6	1.031	0.0012	-2.5 to 2.5	Pass
			3.88	0.926	0.0011	-2.5 to 2.5	Pass
			4.53	-1.426	-0.0017	-2.5 to 2.5	Pass
			-30	3.88	1.943	0.0023	-2.5 to 2.5
		-20	3.88	-0.991	-0.0012	-2.5 to 2.5	Pass
		-10	3.88	0.967	0.0011	-2.5 to 2.5	Pass
		0	3.88	-0.487	-0.0006	-2.5 to 2.5	Pass
		10	3.88	-1.090	-0.0013	-2.5 to 2.5	Pass
		30	3.88	-10.120	-0.0119	-2.5 to 2.5	Pass
		40	3.88	-5.628	-0.0066	-2.5 to 2.5	Pass
	50	3.88	-7.699	-0.0091	-2.5 to 2.5	Pass	
EGPRS	824.2	20	3.6	-6.389	-0.0078	-2.5 to 2.5	Pass
			3.88	-5.488	-0.0067	-2.5 to 2.5	Pass
			4.53	-7.018	-0.0085	-2.5 to 2.5	Pass
		-30	3.88	-8.870	-0.0108	-2.5 to 2.5	Pass
		-20	3.88	-3.336	-0.0040	-2.5 to 2.5	Pass
		-10	3.88	-6.693	-0.0081	-2.5 to 2.5	Pass
		0	3.88	-5.532	-0.0067	-2.5 to 2.5	Pass
		10	3.88	-7.502	-0.0091	-2.5 to 2.5	Pass
		30	3.88	-8.133	-0.0099	-2.5 to 2.5	Pass
		40	3.88	-8.544	-0.0104	-2.5 to 2.5	Pass
		50	3.88	-4.608	-0.0056	-2.5 to 2.5	Pass
	836.6	20	3.6	-3.239	-0.0039	-2.5 to 2.5	Pass
			3.88	-3.217	-0.0038	-2.5 to 2.5	Pass
			4.53	-2.494	-0.0030	-2.5 to 2.5	Pass
		-30	3.88	-3.951	-0.0047	-2.5 to 2.5	Pass
		-20	3.88	-2.771	-0.0033	-2.5 to 2.5	Pass
		-10	3.88	-4.711	-0.0056	-2.5 to 2.5	Pass
		0	3.88	-3.733	-0.0045	-2.5 to 2.5	Pass
		10	3.88	-1.495	-0.0018	-2.5 to 2.5	Pass
		30	3.88	-6.666	-0.0080	-2.5 to 2.5	Pass
		40	3.88	-10.638	-0.0127	-2.5 to 2.5	Pass
		50	3.88	-10.718	-0.0128	-2.5 to 2.5	Pass
	848.8	20	3.6	-6.928	-0.0082	-2.5 to 2.5	Pass
			3.88	-4.908	-0.0058	-2.5 to 2.5	Pass
			4.53	-5.313	-0.0063	-2.5 to 2.5	Pass
		-30	3.88	-3.431	-0.0040	-2.5 to 2.5	Pass
		-20	3.88	-6.314	-0.0074	-2.5 to 2.5	Pass
		-10	3.88	-5.098	-0.0060	-2.5 to 2.5	Pass
		0	3.88	-3.102	-0.0037	-2.5 to 2.5	Pass
		10	3.88	-5.667	-0.0067	-2.5 to 2.5	Pass
		30	3.88	-11.217	-0.0132	-2.5 to 2.5	Pass
		40	3.88	-7.696	-0.0091	-2.5 to 2.5	Pass
		50	3.88	-11.711	-0.0138	-2.5 to 2.5	Pass

3. 99% & 26dB Bandwidth

3.1 Test Result

3.1.1 GSM850_OBW

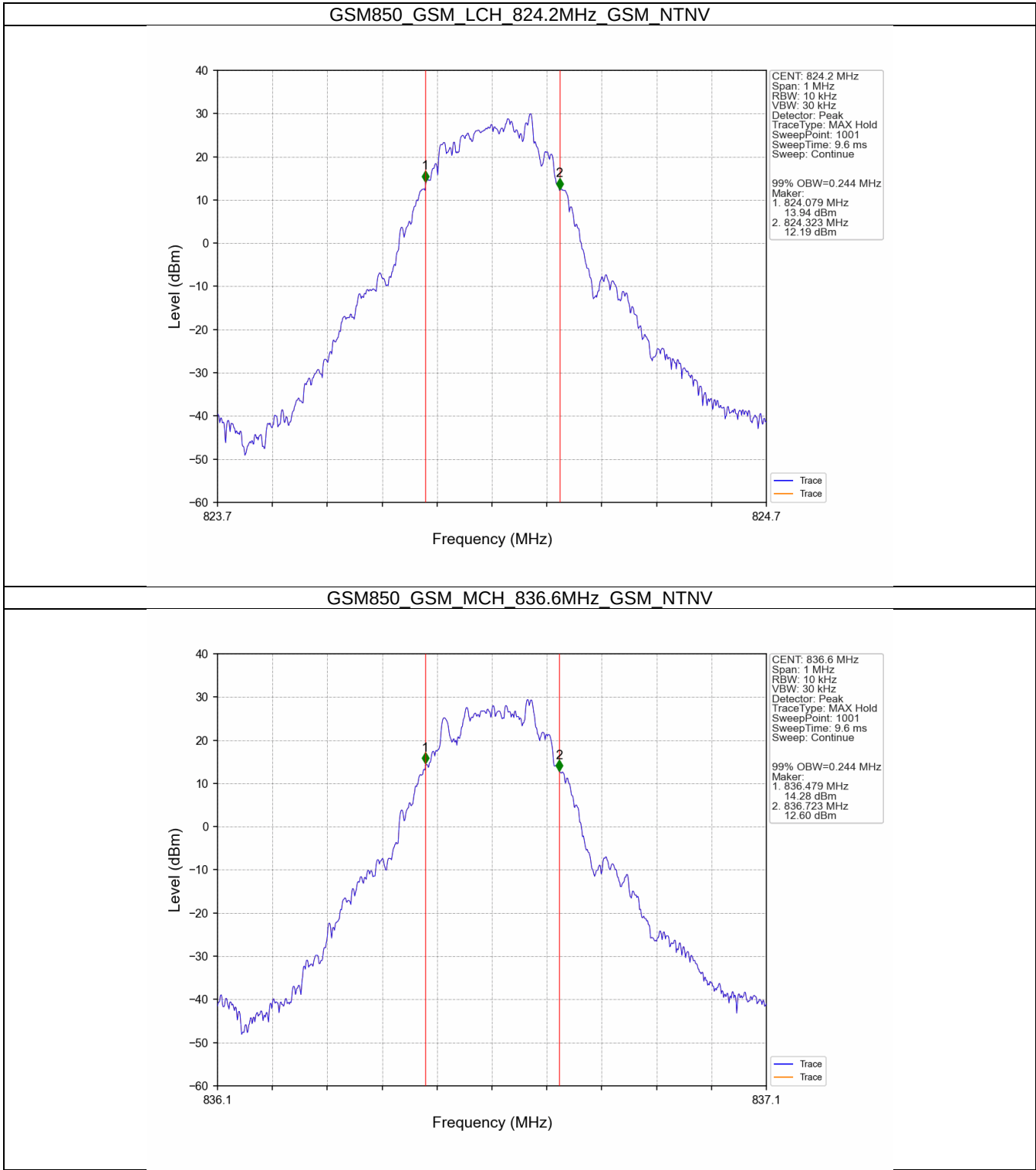
Band: GSM850						
ENV	Mode		Frequency (MHz)	99% Occupied Bandwidth (MHz)		Verdict
	Network	Subset		Result	Limit	
NTNV	GSM	GSM	824.2	0.244	/	Pass
			836.6	0.244	/	Pass
			848.8	0.274	/	Pass
	EGPRS	1 TX Slot	824.2	0.257	/	Pass
			836.6	0.242	/	Pass
			848.8	0.243	/	Pass

3.1.2 GSM850_XDB

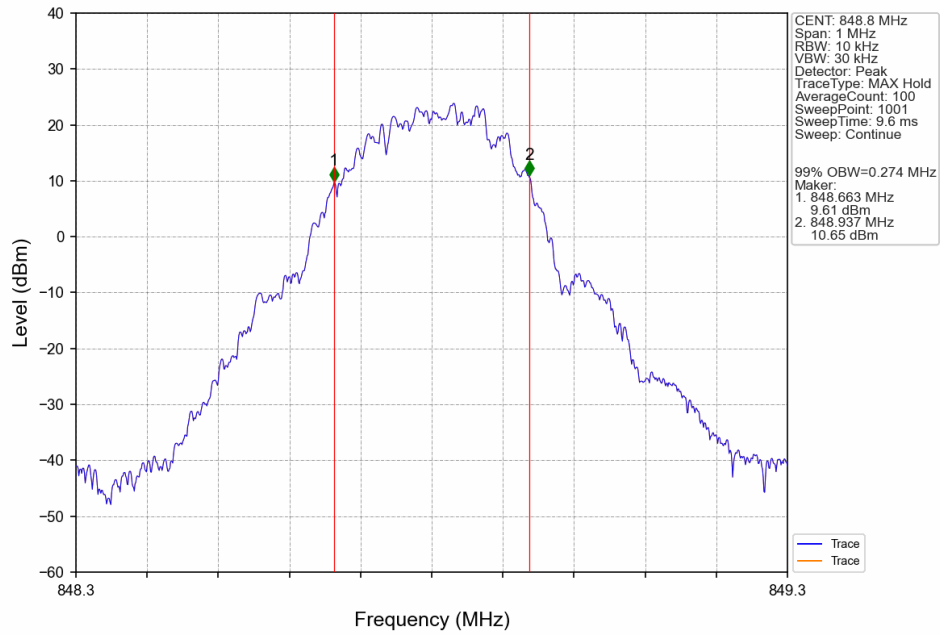
Band: GSM850						
ENV	Mode		Frequency (MHz)	26dB Bandwidth (MHz)		Verdict
	Network	Subset		Result	Limit	
NTNV	GSM	GSM	824.2	0.309	/	Pass
			836.6	0.324	/	Pass
			848.8	0.344	/	Pass
	EGPRS	1 TX Slot	824.2	0.318	/	Pass
			836.6	0.299	/	Pass
			848.8	0.295	/	Pass

3.2 Test Graph

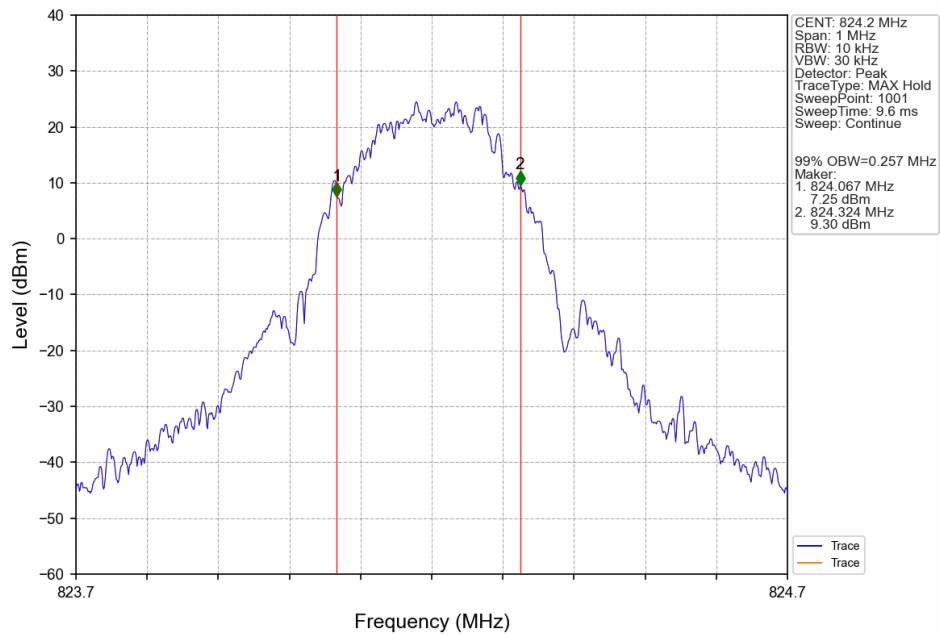
3.2.1 GSM850_OBW



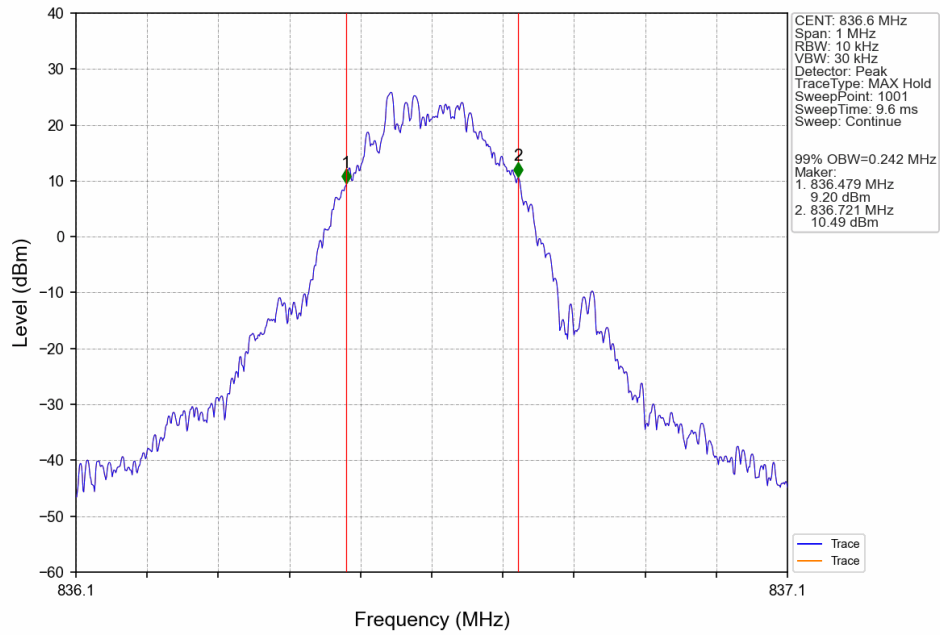
GSM850_GSM_HCH_848.8MHz_GSM_NTNV



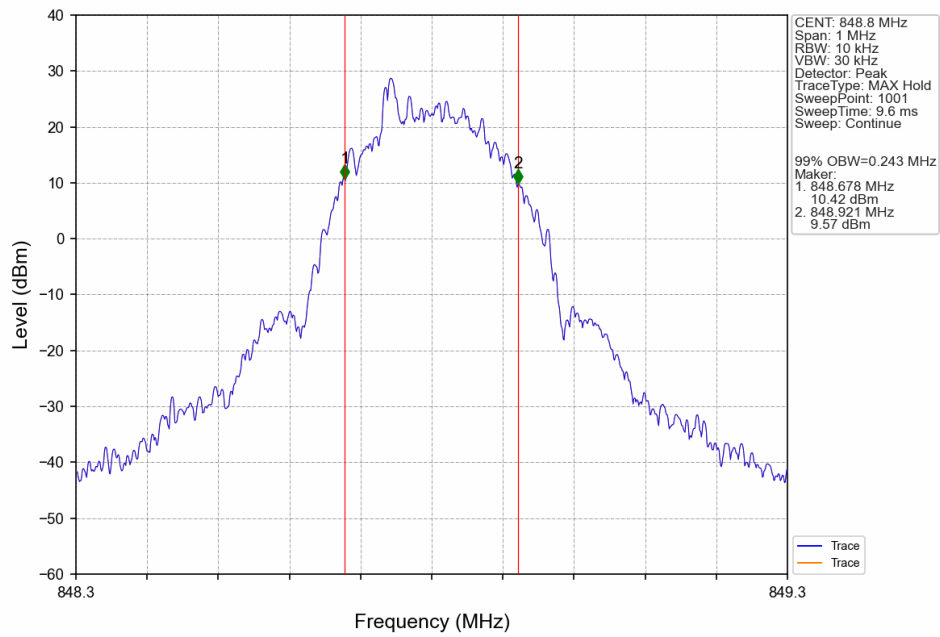
GSM850 EGPRS LCH 824.2MHz 1 TX Slot NTNV



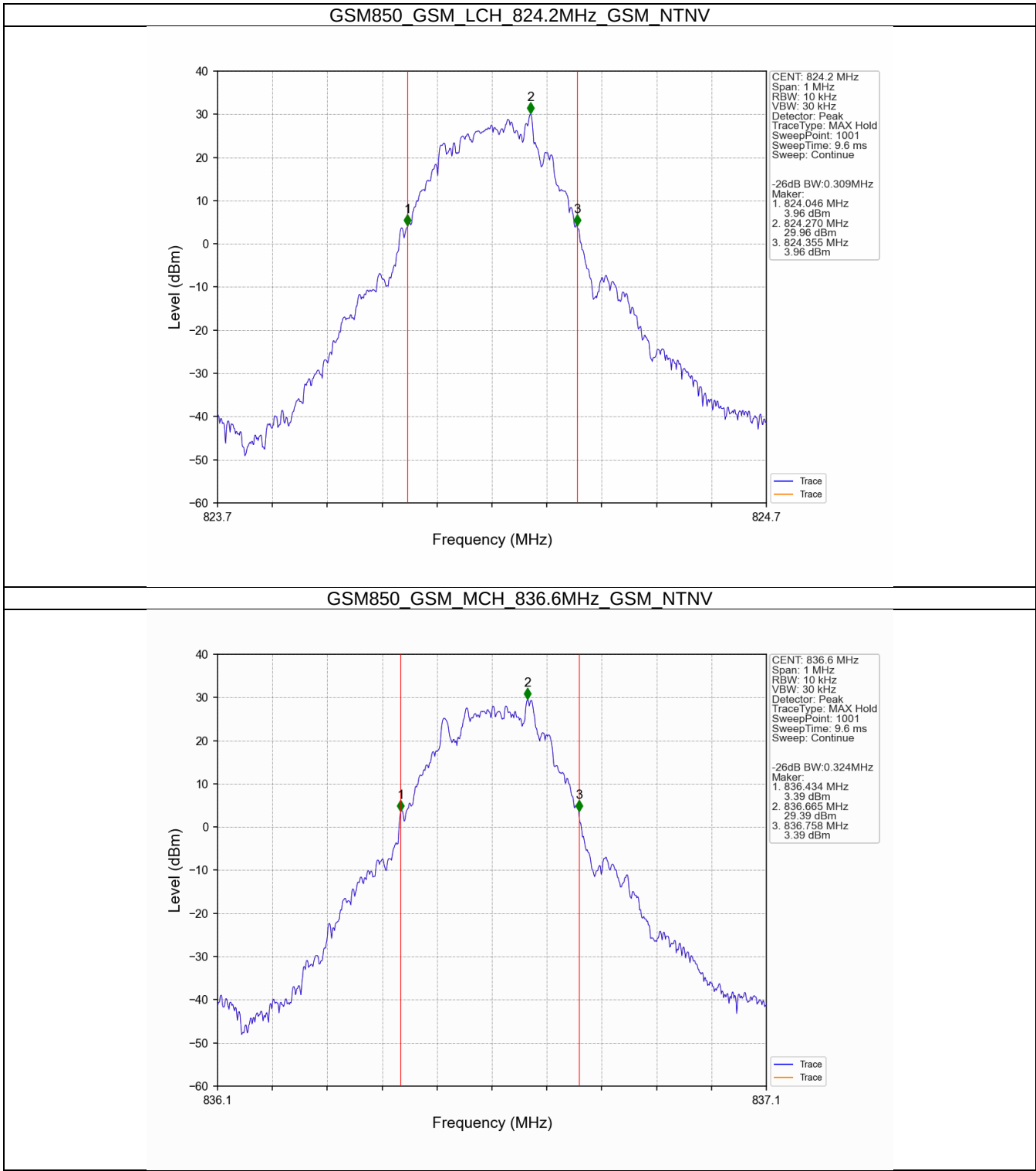
GSM850 EGPRS MCH 836.6MHz 1 TX Slot NTNV



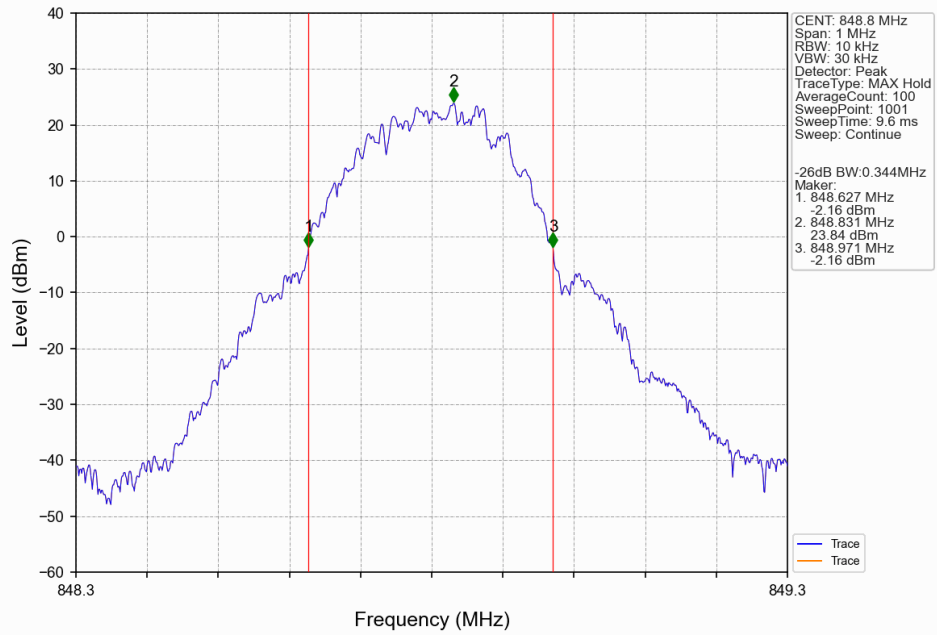
GSM850 EGPRS HCH 848.8MHz 1 TX Slot NTNV



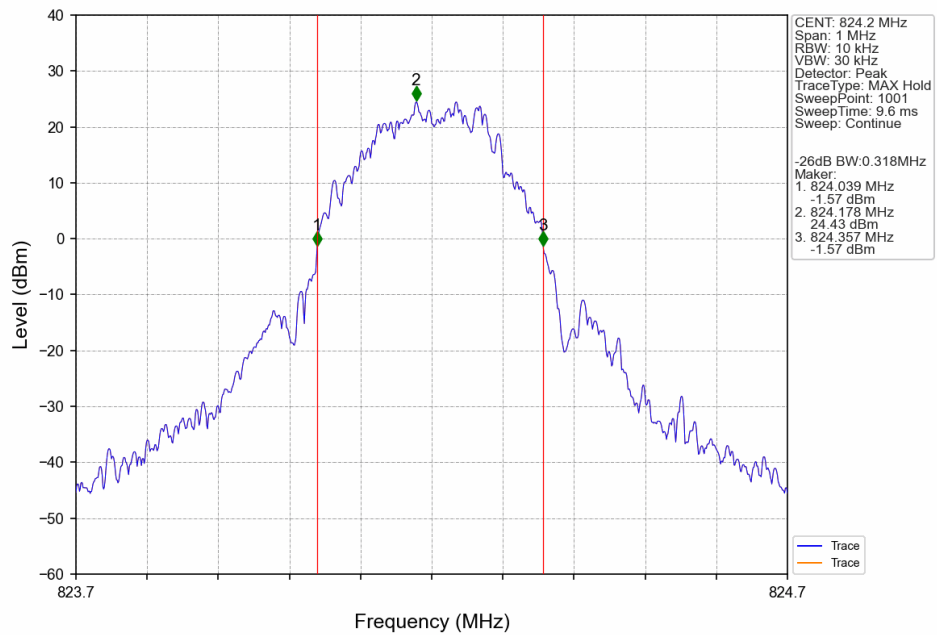
3.2.2 GSM850_XDB



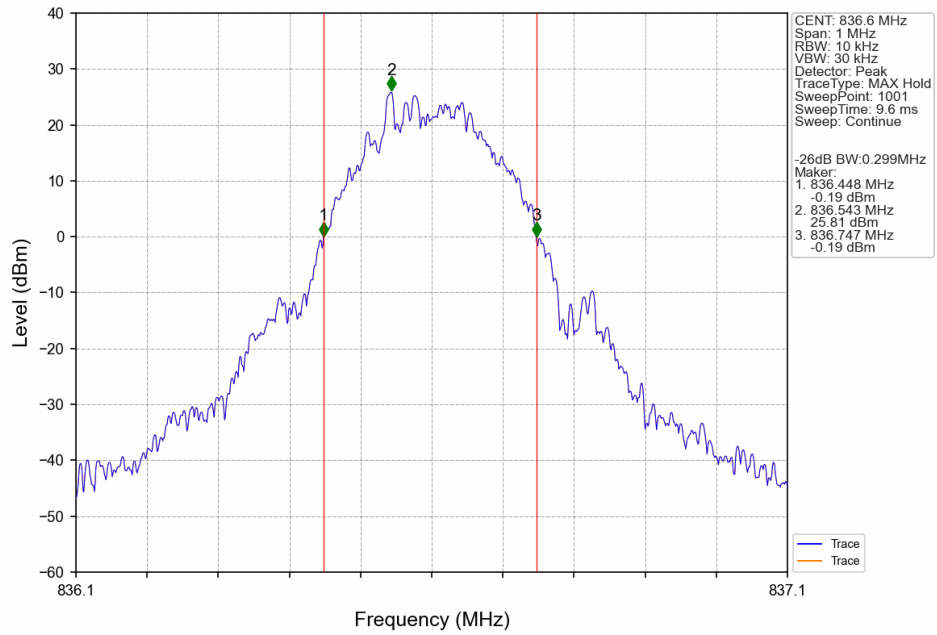
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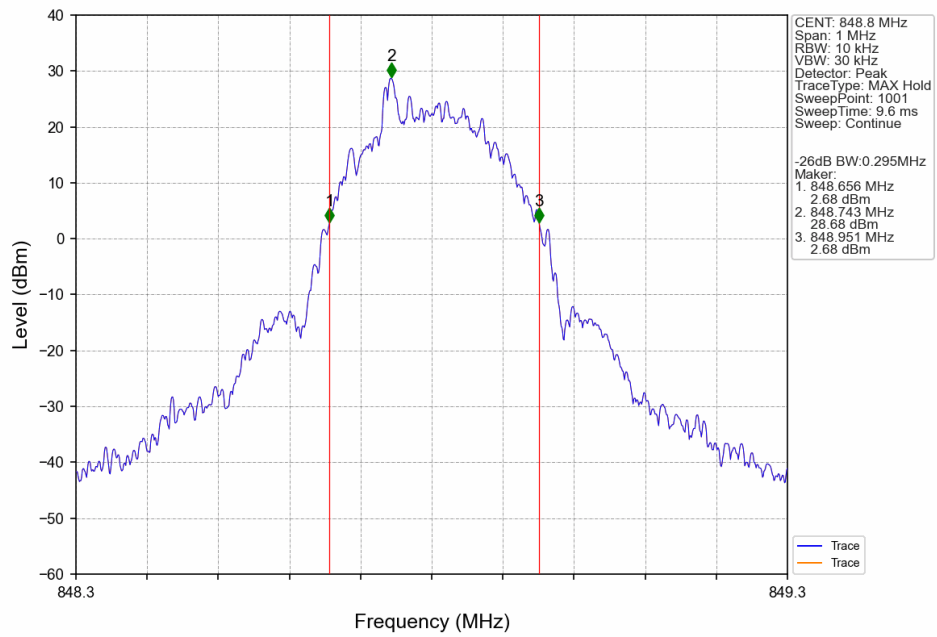
GSM850 EGPRS LCH 824.2MHz 1 TX Slot NTNV



GSM850 EGPRS MCH 836.6MHz 1 TX Slot NTNV



GSM850 EGPRS HCH 848.8MHz 1 TX Slot NTNV



4. Peak-Average Ratio

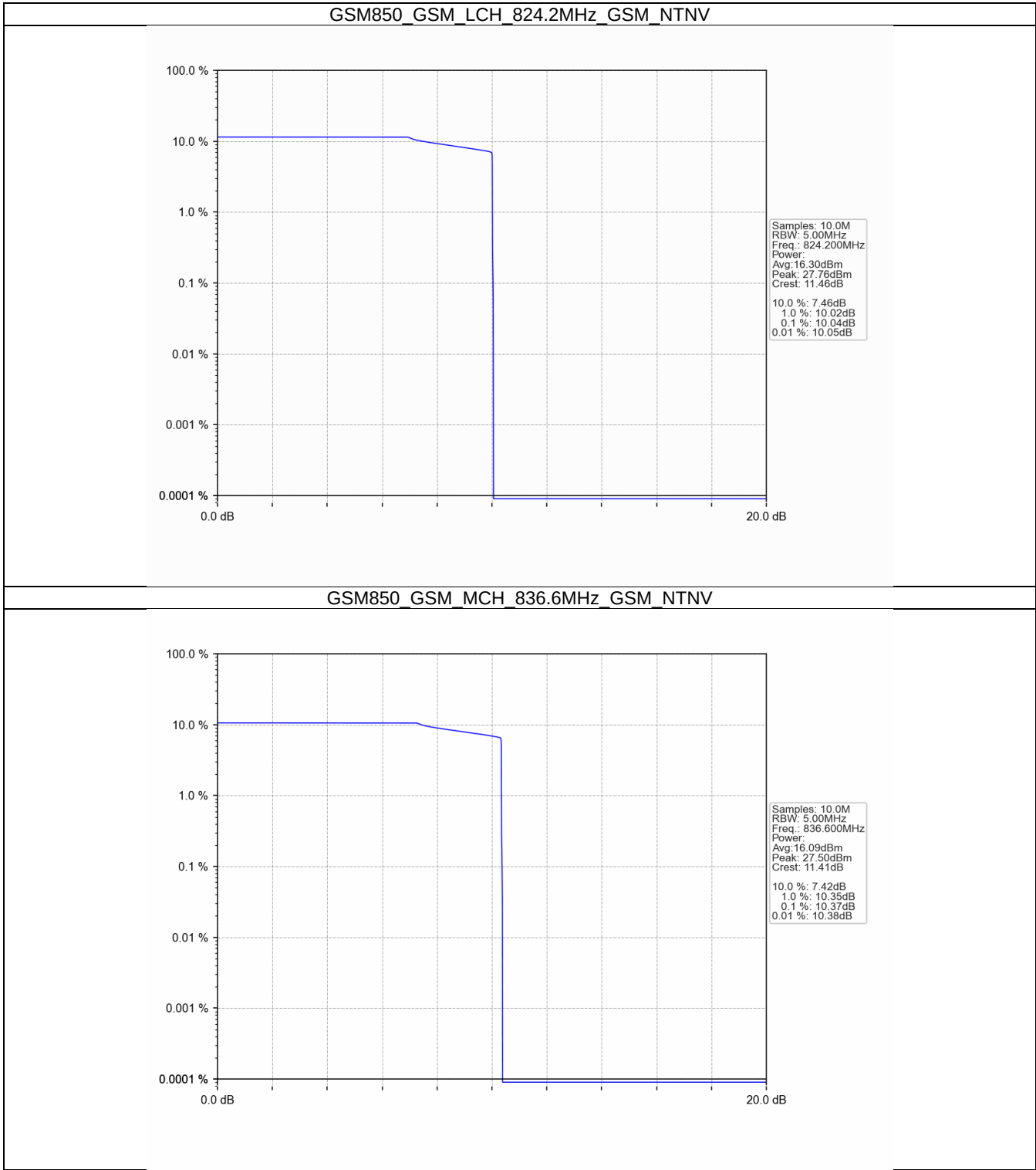
4.1 Test Result

4.1.1 GSM850

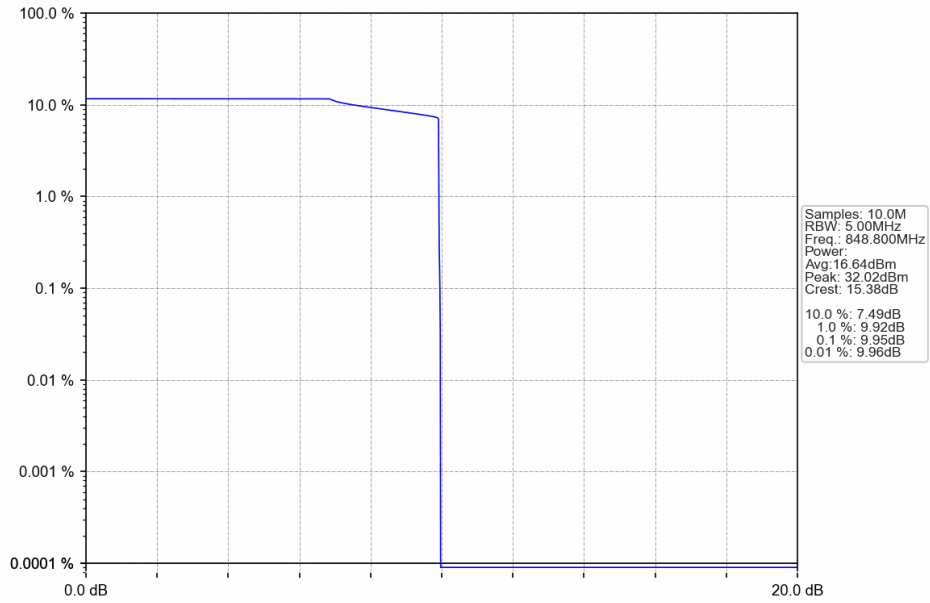
Band: GSM850						
ENV	Mode		Frequency (MHz)	Peak-Average Ratio (dB)		Verdict
	Network	Subset		Result	Limit	
NTNV	GSM	GSM	824.2	10.04	<=13	Pass
			836.6	10.37	<=13	Pass
			848.8	9.95	<=13	Pass
	EGPRS	4 TX Slots	824.2	7.32	<=13	Pass
			836.6	7.61	<=13	Pass
			848.8	6.69	<=13	Pass

4.2 Test Graph

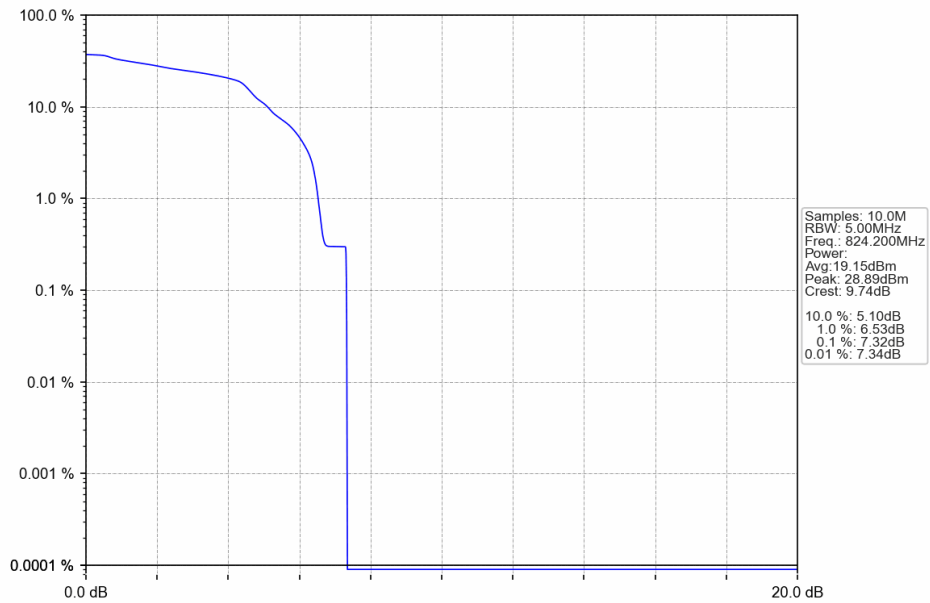
4.2.1 GSM850



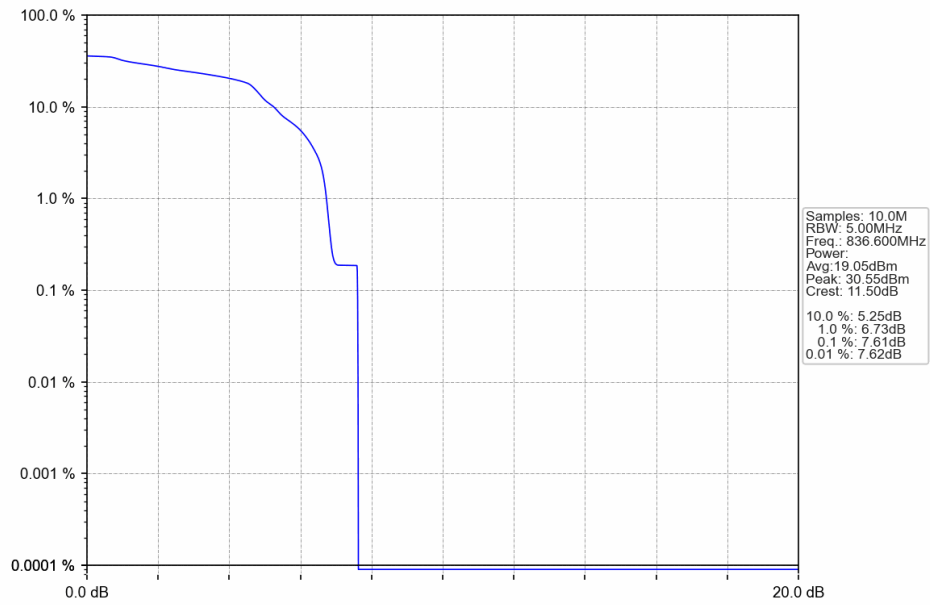
GSM850_GSM_HCH_848.8MHz_GSM_NTNV



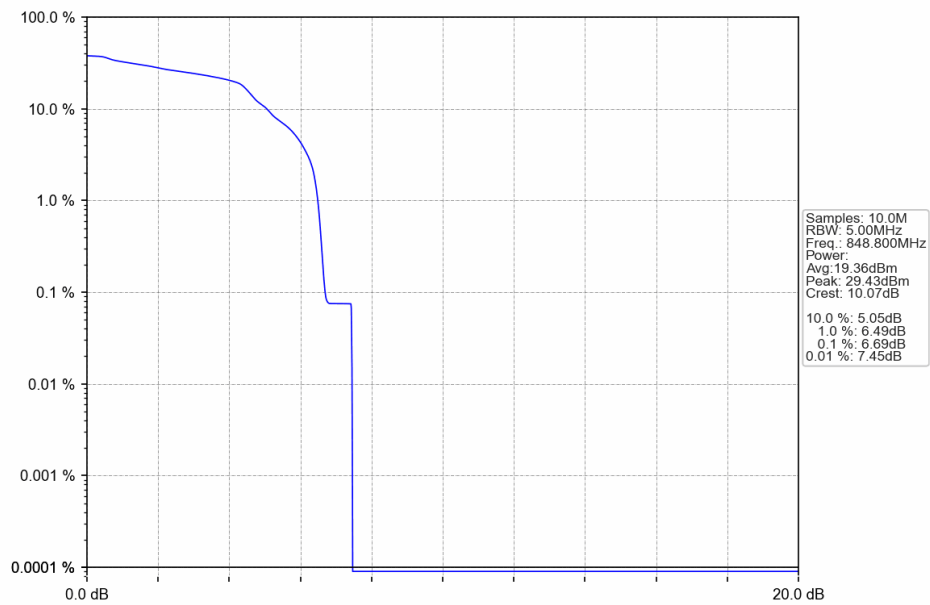
GSM850 EGPRS LCH 824.2MHz 4 TX Slots NTN



GSM850_EGPRS_MCH_836.6MHz_4 TX Slots_NTNV



GSM850_EGPRS_HCH_848.8MHz_4 TX Slots_NTNV



5. Spurious Emission

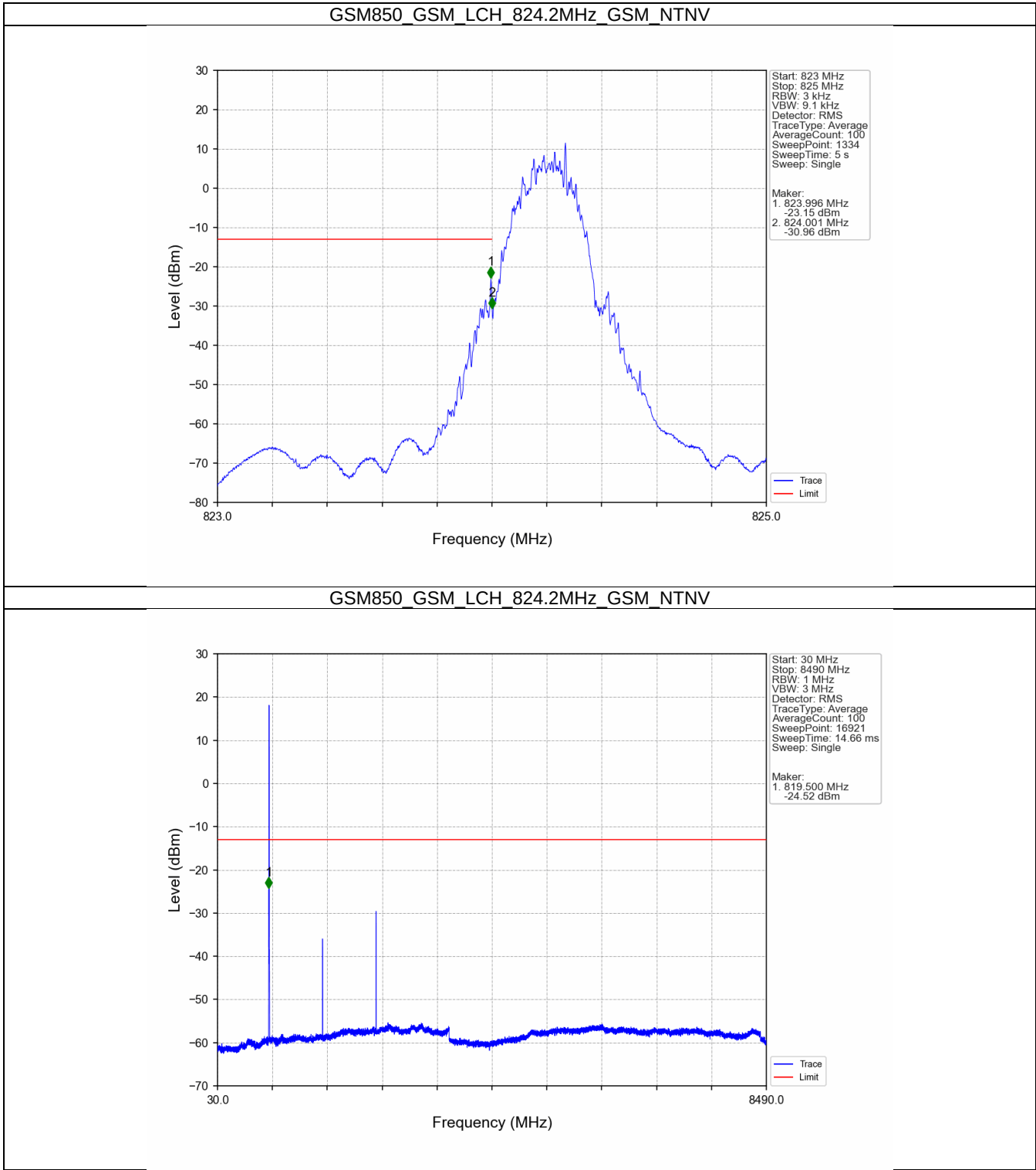
5.1 Test Result

5.1.1 GSM850

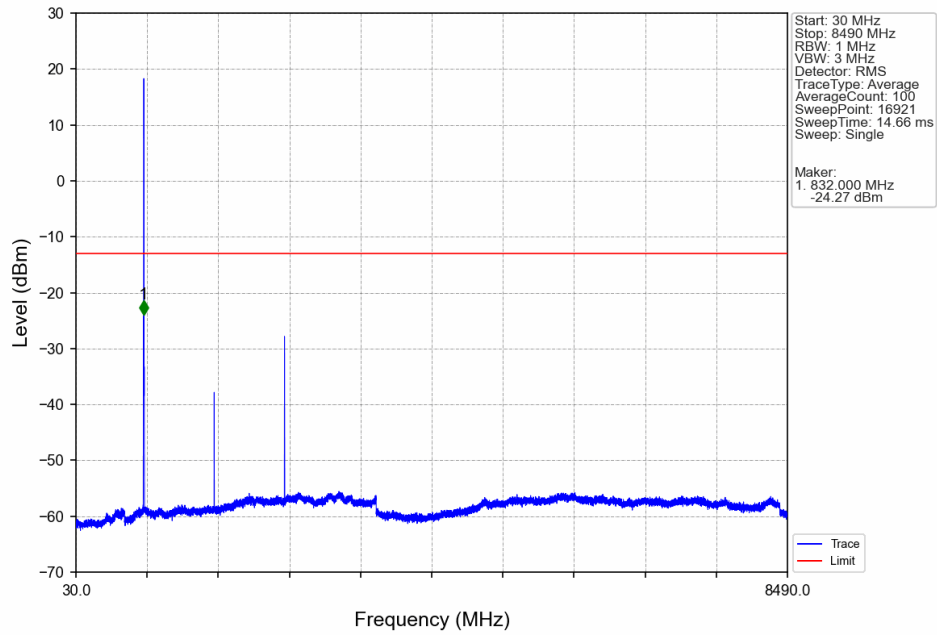
Band: GSM850						
ENV	Mode		Frequency (MHz)	Spurious Emission		Verdict
	Network	Subset		Result	Limit	
NTNV	GSM	GSM	824.2	Refer To Test Graph		Pass
			836.6	Refer To Test Graph		Pass
			848.8	Refer To Test Graph		Pass
	EGPRS	1 TX Slot	824.2	Refer To Test Graph		Pass
			836.6	Refer To Test Graph		Pass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

5.2 Test Graph

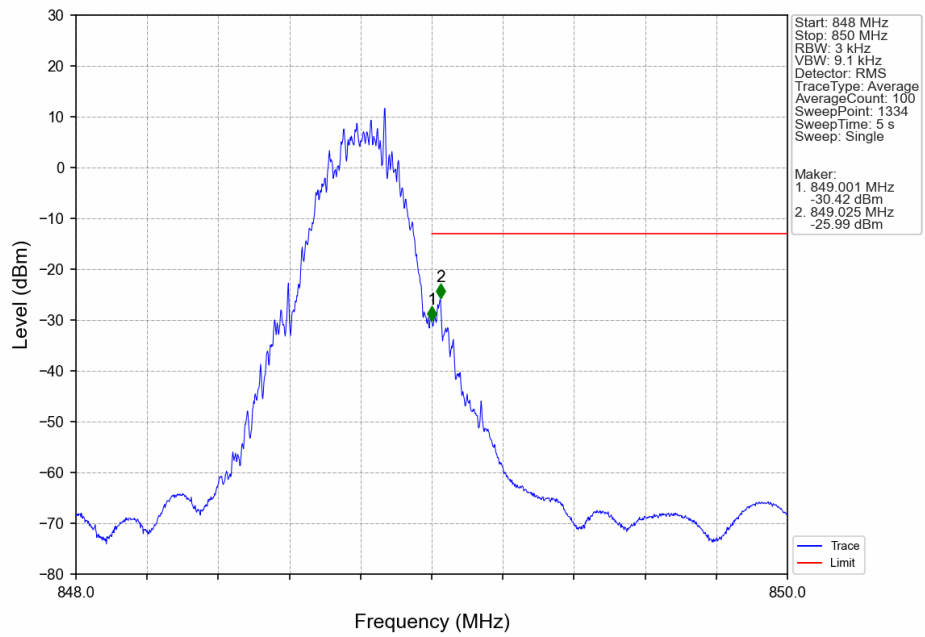
5.2.1 GSM850



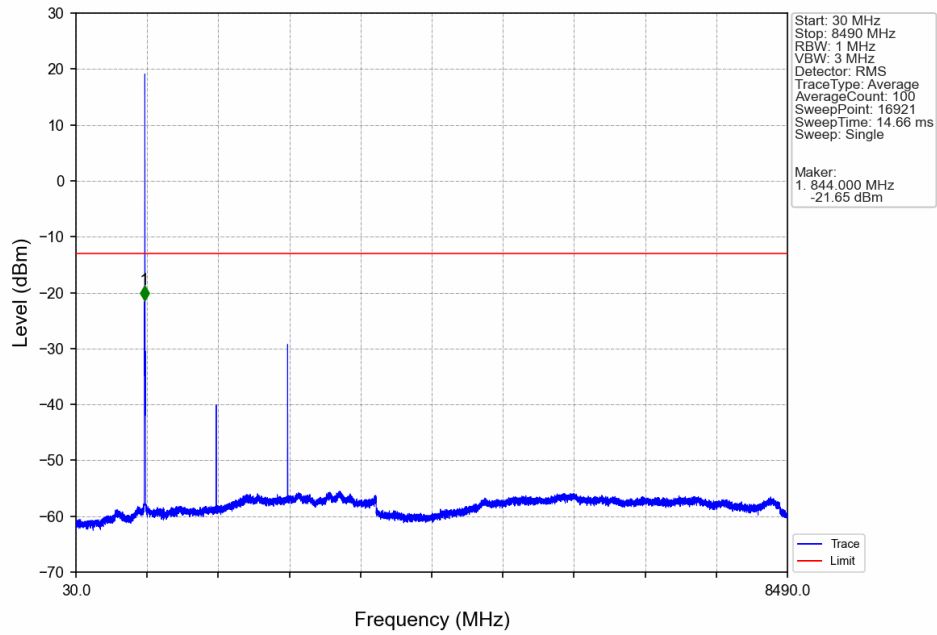
GSM850 GSM MCH 836.6MHz GSM NTN



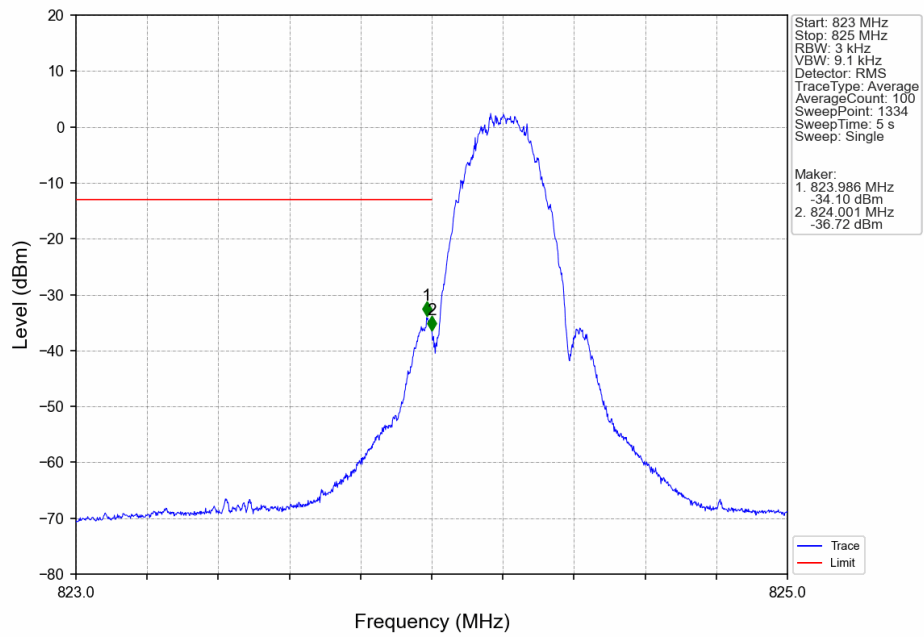
GSM850 GSM HCH 848.8MHz GSM NTN



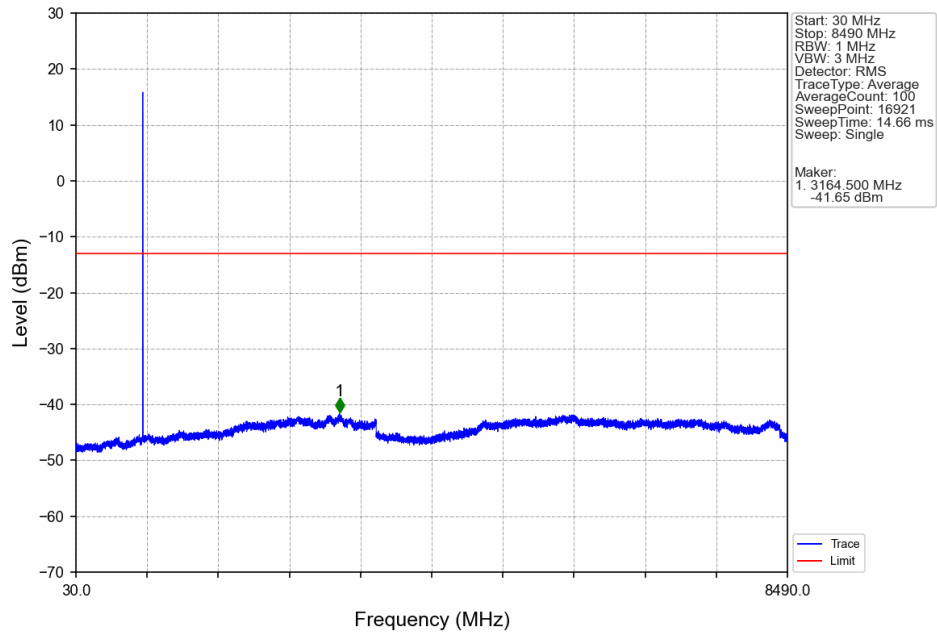
GSM850_GSM_HCH_848.8MHz_GSM_NTNV



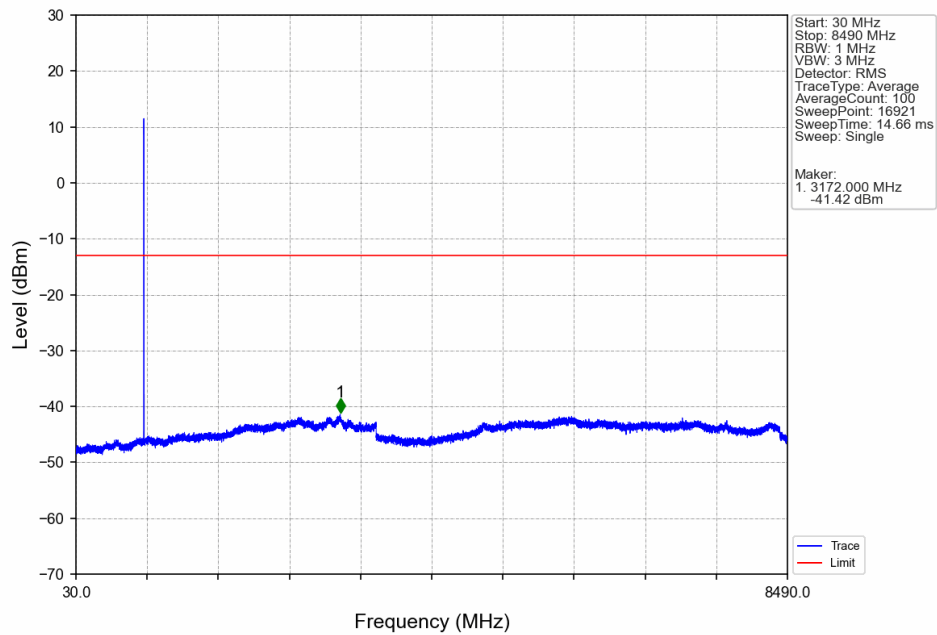
GSM850 EGPRS LCH 824.2MHz 1 TX Slot NTNV



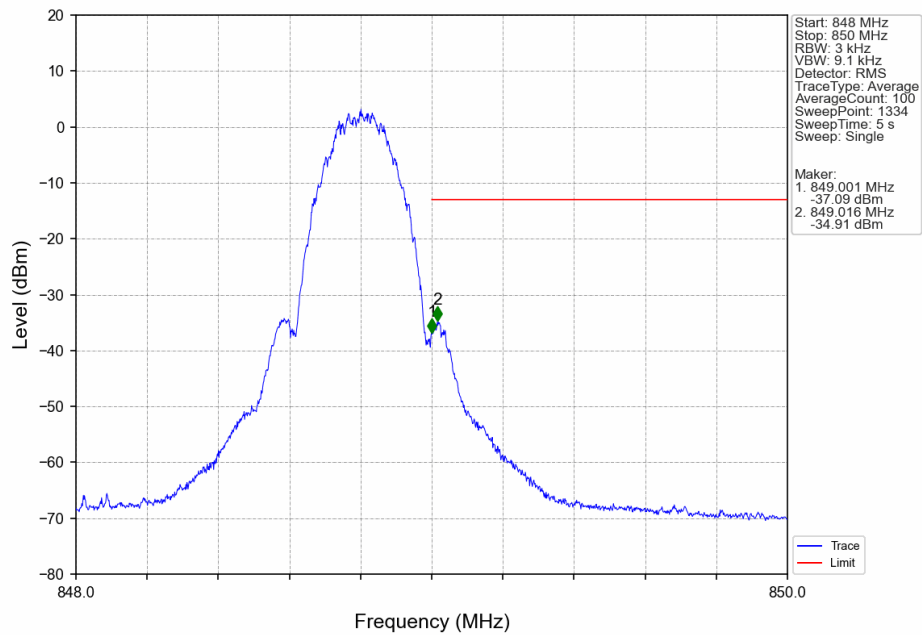
GSM850 EGPRS LCH 824.2MHz 1 TX Slot NTNV



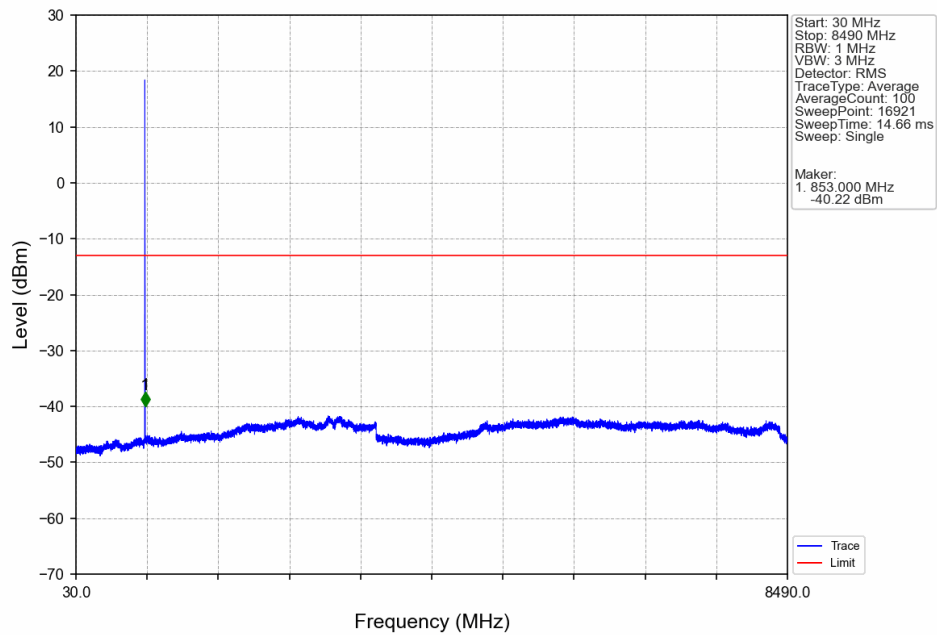
GSM850 EGPRS MCH 836.6MHz 1 TX Slot NTNV



GSM850 EGPRS HCH 848.8MHz 1 TX Slot NTN



GSM850 EGPRS HCH 848.8MHz 1 TX Slot NTN



6. Field Strength of Spurious Radiation

For Sample 1

Test Band = GSM850

Test Channel = Low

Data List								
NO.	Frequency [MHz]	Reading [dBμV]	Factor [dB]	AF [dB/m]	Level [dBm]	Limit [dBm]	Margin [dB]	Polarity
1	1648	53.23	-48.22	25.45	-64.80	-13.00	51.80	Horizontal
2	2226.8571	44.61	-47.63	26.65	-71.63	-13.00	58.63	Horizontal
3	3012.5714	43.62	-46.55	28.11	-70.08	-13.00	57.08	Horizontal
4	4849.1429	59.61	-45.61	31.16	-50.10	-13.00	37.10	Horizontal
5	5899.4286	43.20	-44.97	32.38	-64.65	-13.00	51.65	Horizontal
6	6814.2857	42.04	-44.13	34.67	-62.68	-13.00	49.68	Horizontal

Data List								
NO.	Frequency [MHz]	Reading [dBμV]	Factor [dB]	AF [dB/m]	Level [dBm]	Limit [dBm]	Margin [dB]	Polarity
1	1242.8571	53.86	-48.38	25.12	-64.66	-13.00	51.66	Vertical
2	1648	49.72	-48.22	25.45	-68.31	-13.00	55.31	Vertical
3	1789.7143	45.50	-47.97	25.59	-72.14	-13.00	59.14	Vertical
4	2182.8571	44.84	-47.69	26.57	-71.54	-13.00	58.54	Vertical
5	3279.4286	43.75	-46.60	28.38	-69.73	-13.00	56.73	Vertical
6	4846.8571	47.38	-45.61	31.15	-62.34	-13.00	49.34	Vertical

Test Band = GSM850
Test Channel = Mid

Data List								
NO.	Frequency [MHz]	Reading [dBμV]	Factor [dB]	AF [dB/m]	Level [dBm]	Limit [dBm]	Margin [dB]	Polarity
1	1648	52.63	-48.22	25.45	-65.40	-13.00	52.40	Horizontal
2	2200.5714	42.60	-47.68	26.60	-73.74	-13.00	60.74	Horizontal
3	2857.1429	43.16	-46.72	27.84	-70.98	-13.00	57.98	Horizontal
4	3355.4286	42.88	-46.60	28.46	-70.53	-13.00	57.53	Horizontal
5	4124.5714	42.92	-45.91	29.70	-68.56	-13.00	55.56	Horizontal
6	5086.8571	42.57	-45.44	31.56	-66.57	-13.00	53.57	Horizontal

Data List								
NO.	Frequency [MHz]	Reading [dBμV]	Factor [dB]	AF [dB/m]	Level [dBm]	Limit [dBm]	Margin [dB]	Polarity
1	1648.5714	63.70	-48.22	25.45	-54.33	-13.00	41.33	Vertical
2	2429.1429	44.73	-47.40	27.06	-70.87	-13.00	57.87	Vertical
3	3217.7143	43.65	-46.36	28.32	-69.65	-13.00	56.65	Vertical
4	3841.1429	43.75	-46.19	29.15	-68.55	-13.00	55.55	Vertical
5	4450.2857	43.66	-45.74	30.48	-66.86	-13.00	53.86	Vertical
6	4980.5714	43.34	-45.77	31.37	-66.32	-13.00	53.32	Vertical

Test Band = GSM850
Test Channel = High

Data List								
NO.	Frequency [MHz]	Reading [dBμV]	Factor [dB]	AF [dB/m]	Level [dBm]	Limit [dBm]	Margin [dB]	Polarity
1	1697.7143	46.13	-48.16	25.50	-71.80	-13.00	58.80	Horizontal
2	2546.2857	50.70	-47.11	27.28	-64.39	-13.00	51.39	Horizontal
3	3484	43.06	-46.54	28.58	-70.16	-13.00	57.16	Horizontal
4	4424	42.93	-45.82	30.42	-67.73	-13.00	54.73	Horizontal
5	5398.2857	42.75	-44.98	32.12	-65.37	-13.00	52.37	Horizontal
6	6822.2857	41.94	-44.13	34.68	-62.77	-13.00	49.77	Horizontal

Data List								
NO.	Frequency [MHz]	Reading [dBμV]	Factor [dB]	AF [dB/m]	Level [dBm]	Limit [dBm]	Margin [dB]	Polarity
1	1697.1429	55.32	-48.16	25.50	-62.61	-13.00	49.61	Vertical
2	2546.2857	57.16	-47.11	27.28	-57.93	-13.00	44.93	Vertical
3	3357.7143	43.85	-46.60	28.46	-69.55	-13.00	56.55	Vertical
4	4423.4286	43.83	-45.82	30.42	-66.84	-13.00	53.84	Vertical
5	5153.1429	42.87	-45.17	31.68	-65.89	-13.00	52.89	Vertical
6	5745.7143	43.03	-44.61	32.35	-64.49	-13.00	51.49	Vertical

Test on the worst case :

For Sample 2

Test Band = GSM 850_ TM1

Test Channel = Low

Final Data List								
NO.	Frequency [MHz]	Reading [dBμV]	Factor [dB]	AF[dB/m]	Level [dBm]	Limit [dBm]	Margin [dB]	Polarity
1	1745.7143	40.73	-48.06	25.55	-77.05	-13.00	64.05	Horizontal
2	2232.5714	42.20	-47.62	26.67	-74.02	-13.00	61.02	Horizontal
3	3021.7143	42.02	-46.57	28.12	-71.69	-13.00	58.69	Horizontal
4	3821.7143	42.23	-46.18	29.11	-70.09	-13.00	57.09	Horizontal
5	4759.4286	41.97	-45.70	31.02	-67.98	-13.00	54.98	Horizontal
6	5722.2857	41.32	-44.59	32.34	-66.19	-13.00	53.19	Horizontal

Final Data List								
NO.	Frequency [MHz]	Reading [dBμV]	Factor [dB]	AF[dB/m]	Level [dBm]	Limit [dBm]	Margin [dB]	Polarity
1	1538.2857	44.28	-48.30	25.34	-73.95	-13.00	60.95	Vertical
2	1823.4286	43.61	-47.97	25.67	-73.95	-13.00	60.95	Vertical
3	2358.8571	43.61	-47.47	26.92	-72.20	-13.00	59.20	Vertical
4	2529.7143	43.01	-47.17	27.25	-72.17	-13.00	59.17	Vertical
5	3216	42.51	-46.35	28.32	-70.79	-13.00	57.79	Vertical
6	4299.4286	42.43	-45.78	30.12	-68.49	-13.00	55.49	Vertical

Test Band = GSM 850_ TM1
Test Channel = Mid

Final Data List								
NO.	Frequency [MHz]	Reading [dBμV]	Factor [dB]	AF[dB/m]	Level [dBm]	Limit [dBm]	Margin [dB]	Polarity
1	1496.5714	40.07	-48.31	25.30	-78.20	-13.00	65.20	Horizontal
2	2086.8571	42.55	-47.73	26.37	-74.07	-13.00	61.07	Horizontal
3	2556.5714	42.03	-47.08	27.30	-73.01	-13.00	60.01	Horizontal
4	3342.2857	41.78	-46.62	28.44	-71.66	-13.00	58.66	Horizontal
5	4118.8571	41.98	-45.91	29.69	-69.51	-13.00	56.51	Horizontal
6	4920	41.94	-45.63	31.27	-67.67	-13.00	54.67	Horizontal

Final Data List								
NO.	Frequency [MHz]	Reading [dBμV]	Factor [dB]	AF[dB/m]	Level [dBm]	Limit [dBm]	Margin [dB]	Polarity
1	1489.7143	44.45	-48.29	25.29	-73.81	-13.00	60.81	Vertical
2	2011.4286	43.07	-47.88	26.22	-73.85	-13.00	60.85	Vertical
3	2359.4286	43.26	-47.47	26.92	-72.55	-13.00	59.55	Vertical
4	2970.2857	42.69	-46.53	28.05	-71.06	-13.00	58.06	Vertical
5	3823.4286	42.44	-46.18	29.12	-69.88	-13.00	56.88	Vertical
6	4959.4286	41.76	-45.72	31.34	-67.88	-13.00	54.88	Vertical

Test Band = GSM 850_ TM1
Test Channel = High

Final Data List								
NO.	Frequency [MHz]	Reading [dBμV]	Factor [dB]	AF[dB/m]	Level [dBm]	Limit [dBm]	Margin [dB]	Polarity
1	1472	42.01	-48.23	25.27	-76.21	-13.00	63.21	Horizontal
2	2215.4286	42.64	-47.65	26.63	-73.64	-13.00	60.64	Horizontal
3	2556.5714	42.13	-47.08	27.30	-72.91	-13.00	59.91	Horizontal
4	3194.2857	41.97	-46.32	28.29	-71.31	-13.00	58.31	Horizontal
5	4131.4286	42.02	-45.92	29.72	-69.44	-13.00	56.44	Horizontal
6	5182.8571	41.40	-45.06	31.73	-67.19	-13.00	54.19	Horizontal

Final Data List								
NO.	Frequency [MHz]	Reading [dBμV]	Factor [dB]	AF[dB/m]	Level [dBm]	Limit [dBm]	Margin [dB]	Polarity
1	1441.7143	44.70	-48.13	25.24	-73.45	-13.00	60.45	Vertical
2	2080	43.15	-47.75	26.36	-73.50	-13.00	60.50	Vertical
3	2357.7143	42.90	-47.47	26.92	-72.92	-13.00	59.92	Vertical
4	2777.1429	42.89	-46.95	27.70	-71.62	-13.00	58.62	Vertical
5	3525.1429	42.66	-46.49	28.64	-70.45	-13.00	57.45	Vertical
6	4417.1429	42.92	-45.84	30.40	-67.78	-13.00	54.78	Vertical