

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	30.97	-2.37	26.45	<=38.45	Pass		
			836.6	31.02	-2.37	26.50	<=38.45	Pass		
			848.8	31.02	-2.37	26.50	<=38.45	Pass		
	GPRS	1 TX Slot	824.2	30.97	-2.37	26.45	<=38.45	Pass		
			824.2	30.30	-2.37	25.78	<=38.45	Pass		
			824.2	29.06	-2.37	24.54	<=38.45	Pass		
			824.2	28.30	-2.37	23.78	<=38.45	Pass		
			836.6	30.91	-2.37	26.39	<=38.45	Pass		
			836.6	30.29	-2.37	25.77	<=38.45	Pass		
			836.6	29.07	-2.37	24.55	<=38.45	Pass		
			836.6	28.29	-2.37	23.77	<=38.45	Pass		
			848.8	30.88	-2.37	26.36	<=38.45	Pass		
			848.8	30.28	-2.37	25.76	<=38.45	Pass		
			848.8	29.06	-2.37	24.54	<=38.45	Pass		
			848.8	28.28	-2.37	23.76	<=38.45	Pass		
			EGPRS	1 TX Slot	824.2	26.92	-2.37	22.40	<=38.45	Pass
					824.2	25.86	-2.37	21.34	<=38.45	Pass
					824.2	23.91	-2.37	19.39	<=38.45	Pass
	824.2	22.71			-2.37	18.19	<=38.45	Pass		
	836.6	26.87			-2.37	22.35	<=38.45	Pass		
	836.6	25.91			-2.37	21.39	<=38.45	Pass		
	836.6	23.78			-2.37	19.26	<=38.45	Pass		
	836.6	22.69			-2.37	18.17	<=38.45	Pass		
	848.8	26.93			-2.37	22.41	<=38.45	Pass		
	848.8	25.91			-2.37	21.39	<=38.45	Pass		
	848.8	23.87			-2.37	19.35	<=38.45	Pass		
	848.8	22.75			-2.37	18.23	<=38.45	Pass		

Note1: ERP=Conducted Power+Antenna Gain-2.15

2. 99% & 26dB Bandwidth

2.1 Test Result

2.1.1 GSM850_OBW

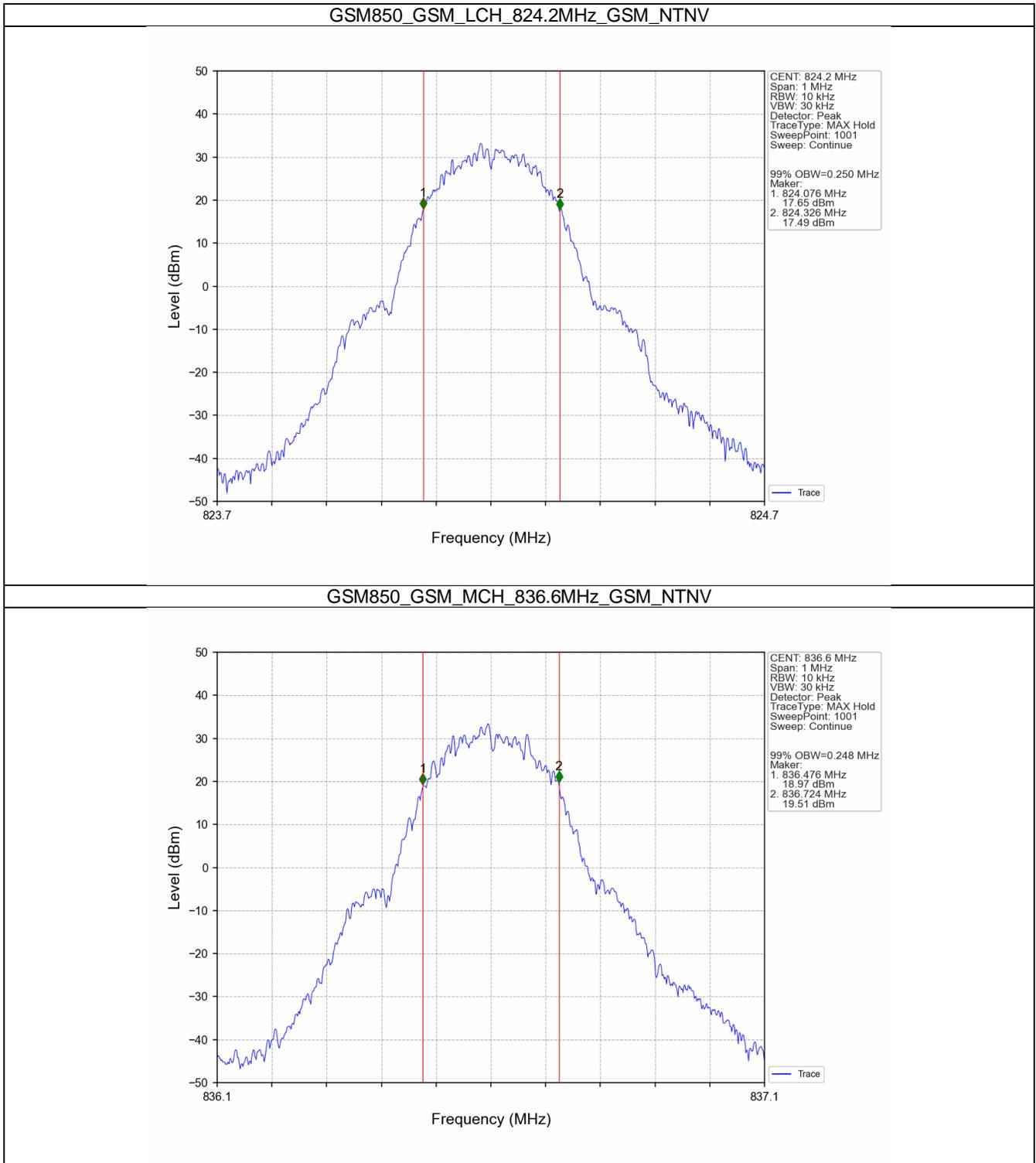
Band: GSM850						
ENV	Mode		Frequency (MHz)	99% Occupied Bandwidth (MHz)		Verdict
	Network	Subset		Result	Limit	
NTNV	GSM	GSM	824.2	0.250	/	Pass
			836.6	0.248	/	Pass
			848.8	0.248	/	Pass
	GPRS	1 TX Slot	824.2	0.243	/	Pass
			836.6	0.243	/	Pass
			848.8	0.245	/	Pass
	EGPRS	1 TX Slot	824.2	0.258	/	Pass
			836.6	0.251	/	Pass
			848.8	0.244	/	Pass

2.1.2 GSM850_XDB

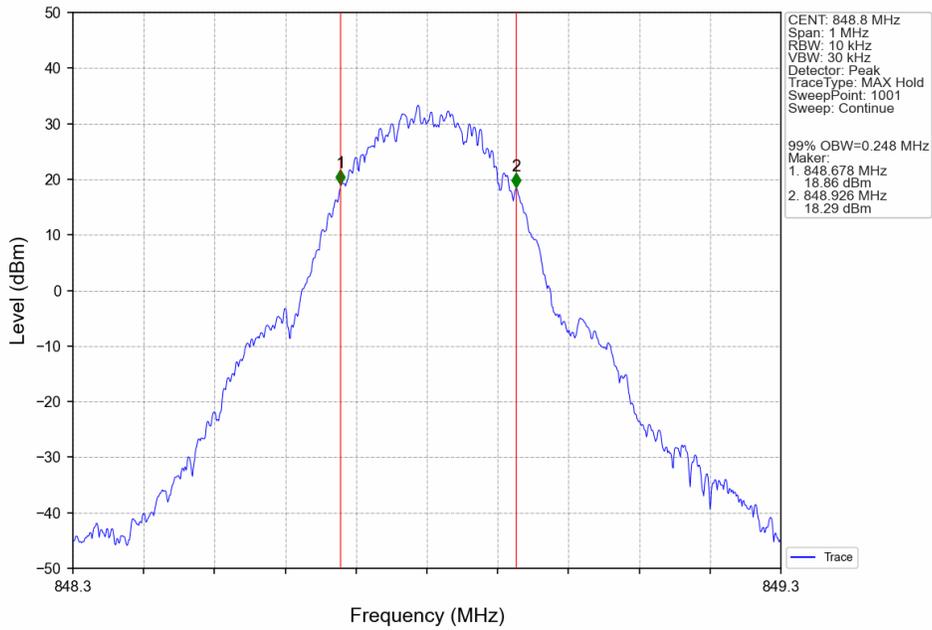
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ENV	Mode		Frequency (MHz)	26dB Bandwidth (MHz)		Verdict
	Network	Subset		Result	Limit	
NTNV	GSM	GSM	824.2	0.318	/	Pass
			836.6	0.314	/	Pass
			848.8	0.313	/	Pass
	GPRS	1 TX Slot	824.2	0.308	/	Pass
			836.6	0.316	/	Pass
			848.8	0.320	/	Pass
	EGPRS	1 TX Slot	824.2	0.328	/	Pass
			836.6	0.321	/	Pass
			848.8	0.317	/	Pass

2.2 Test Graph

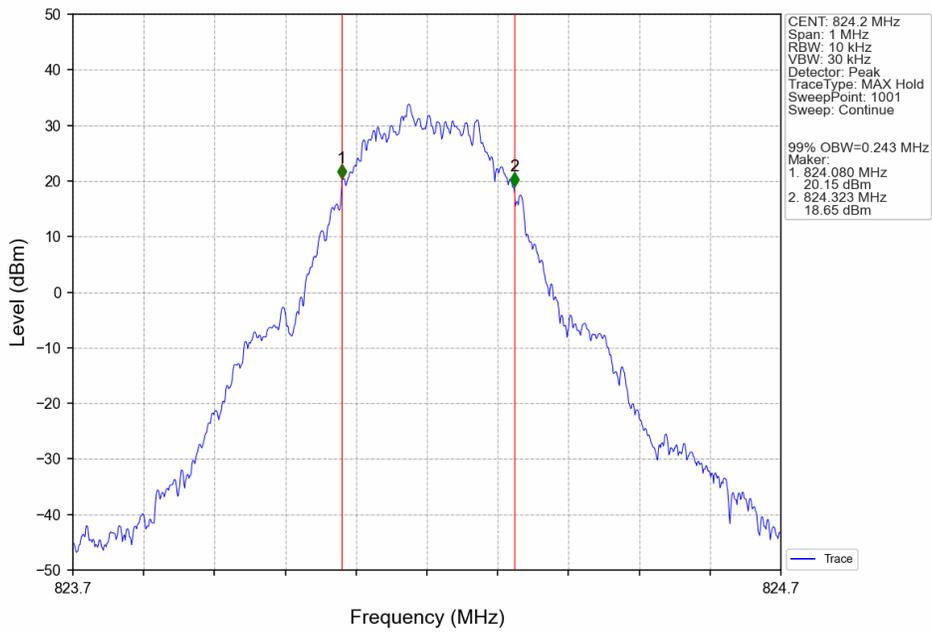
2.2.1 GSM850_OBW



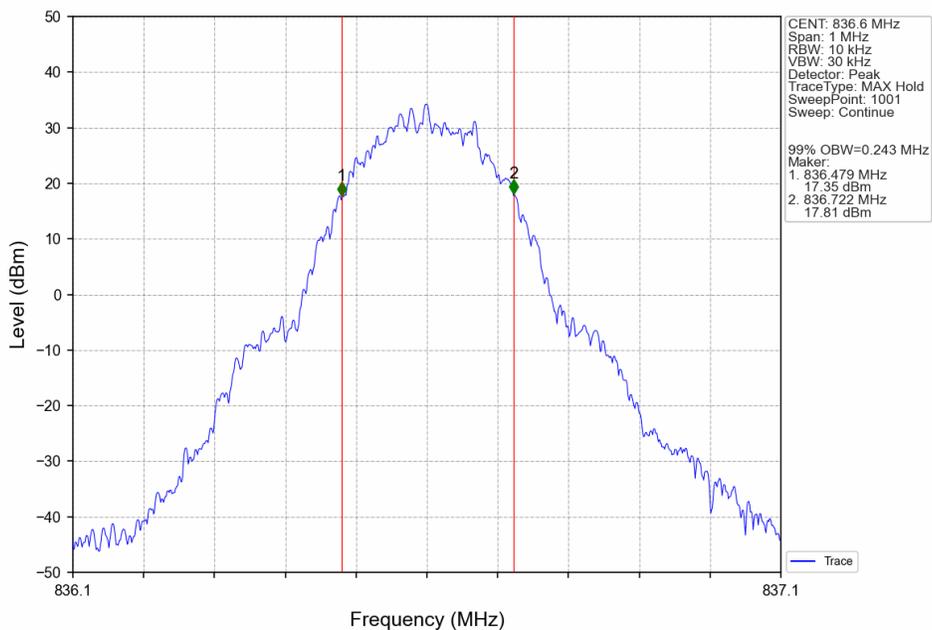
GSM850_GSM_HCH_848.8MHz_GSM_NTNV



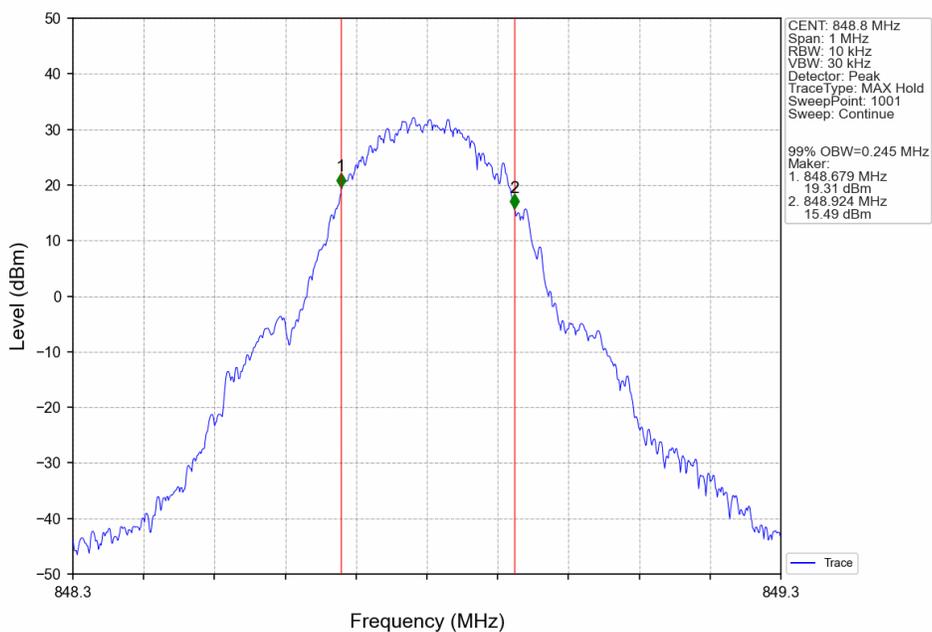
GSM850_GPRS_LCH_824.2MHz_1 TX Slot_NTNV



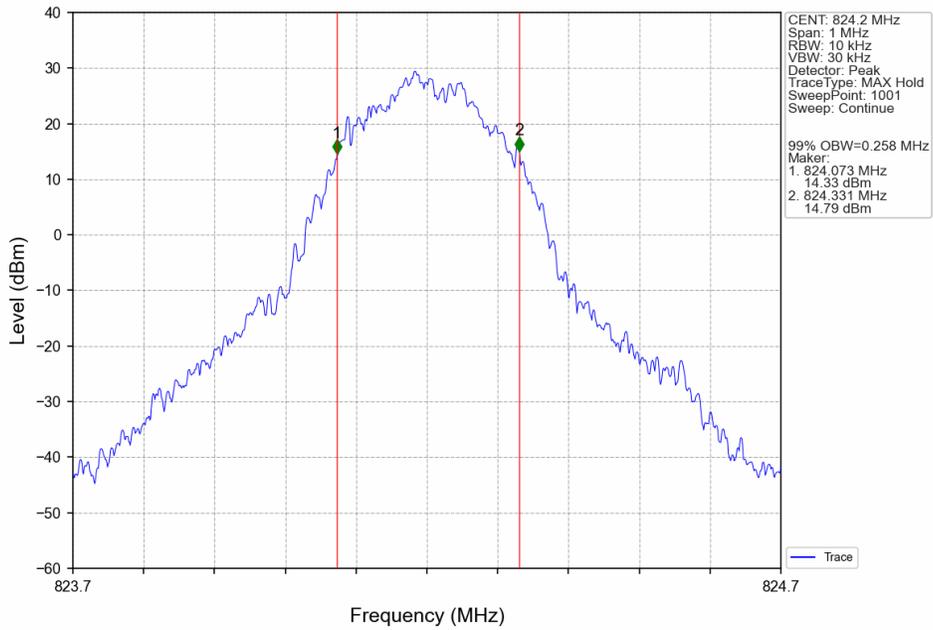
GSM850_GPRS_MCH_836.6MHz_1 TX Slot_NTNV



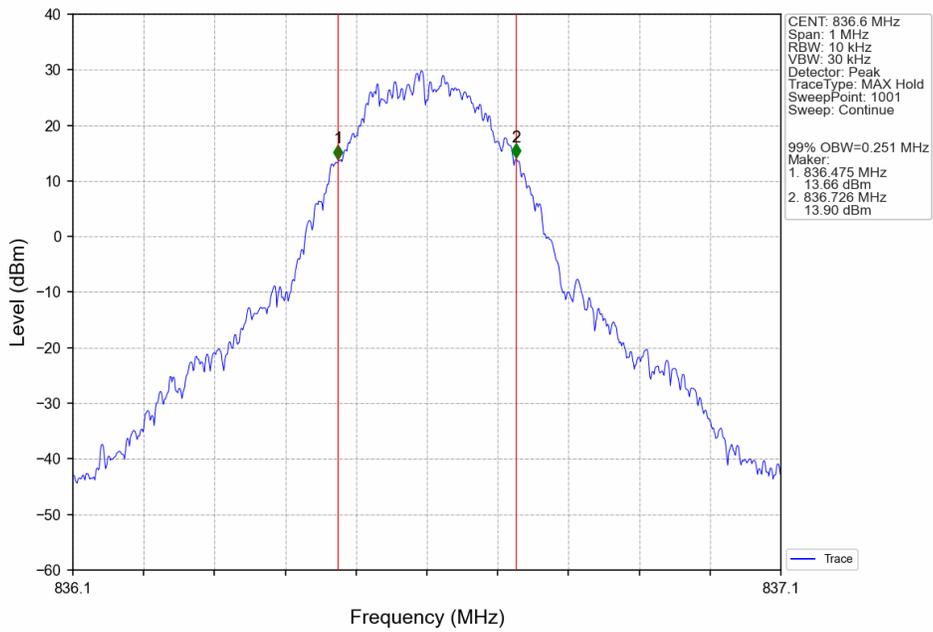
GSM850_GPRS_HCH_848.8MHz_1 TX Slot_NTNV



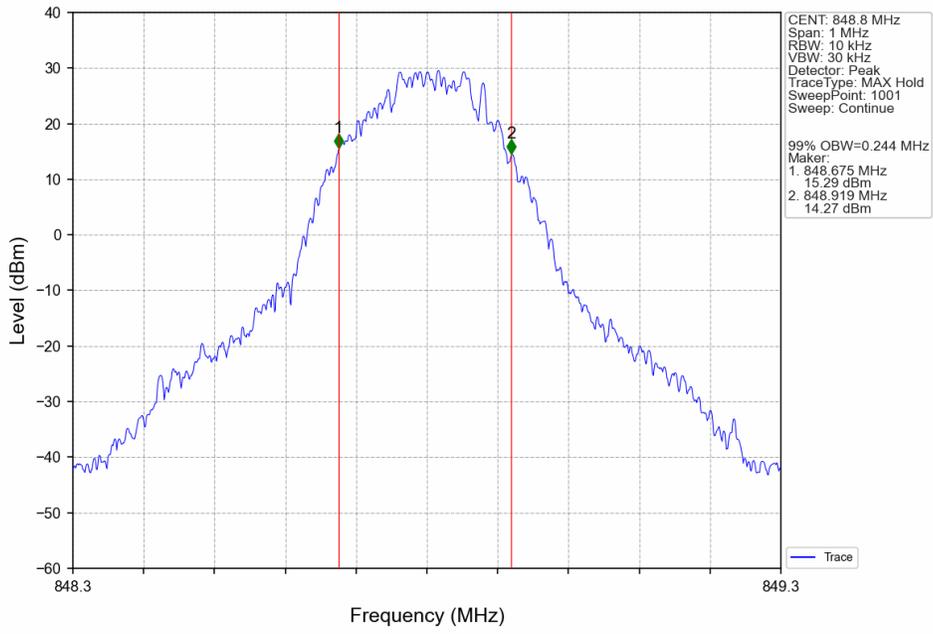
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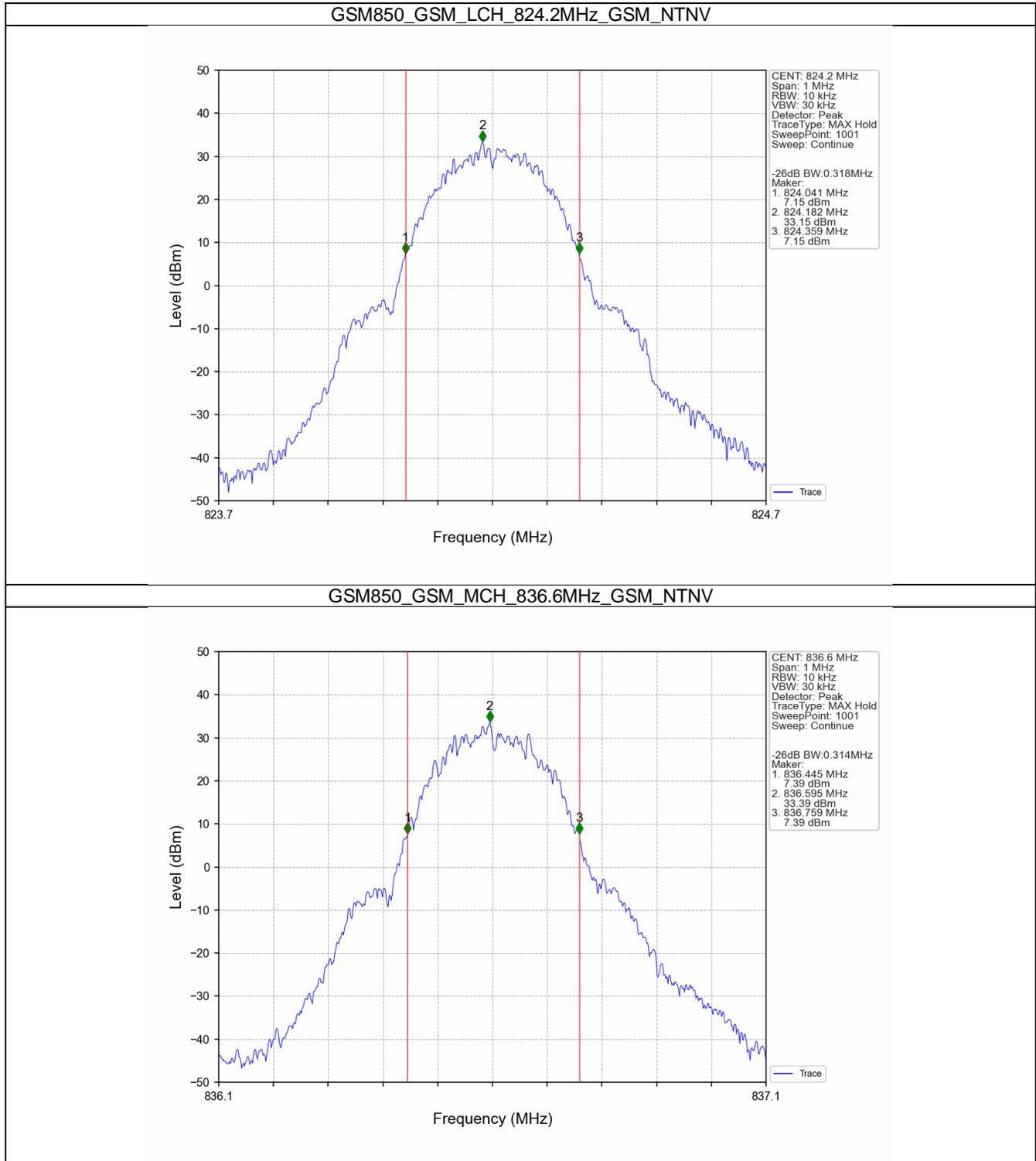
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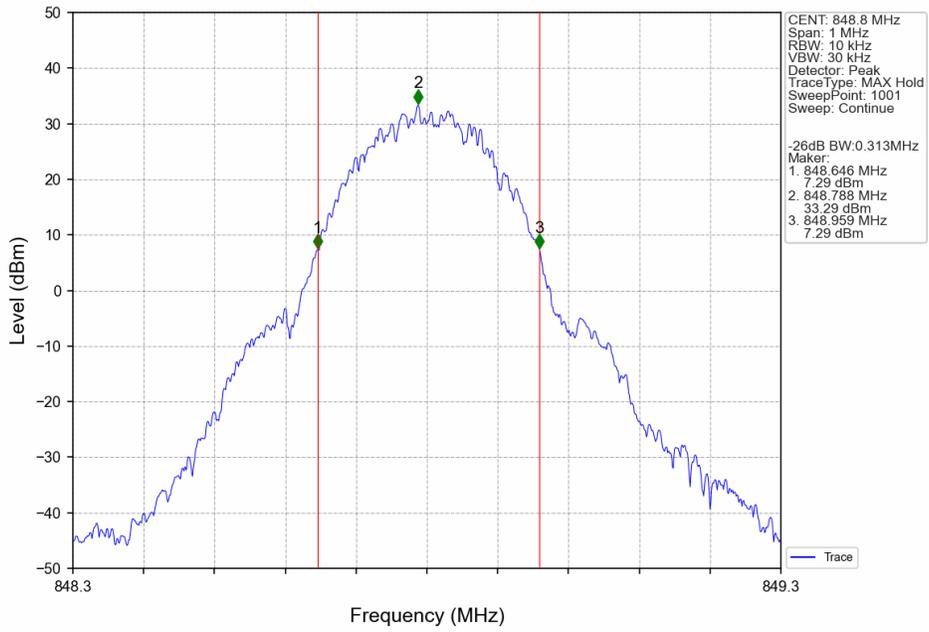
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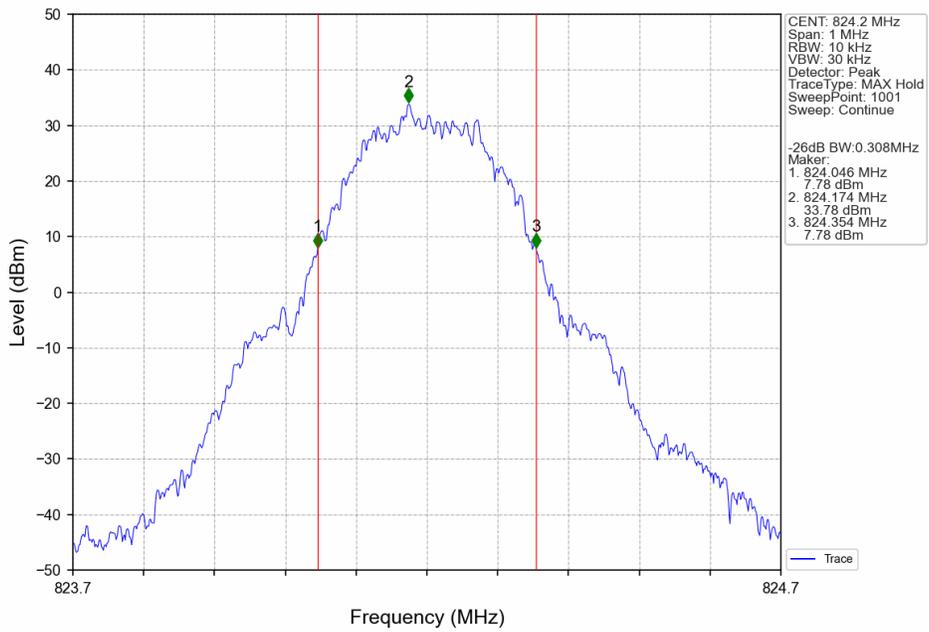
2.2.2 GSM850_XDB



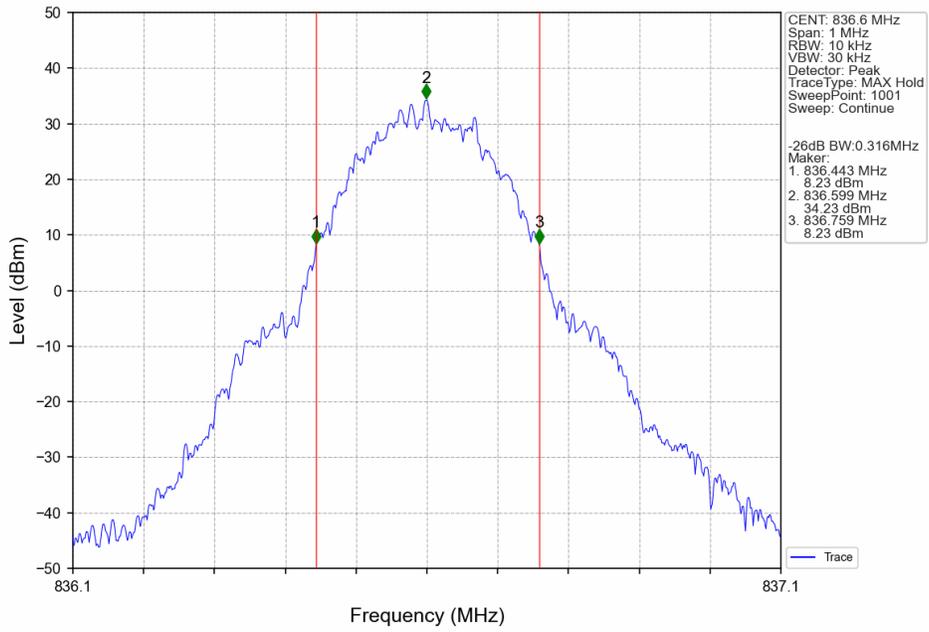
GSM850_GSM_HCH_848.8MHz_GSM_NTNV



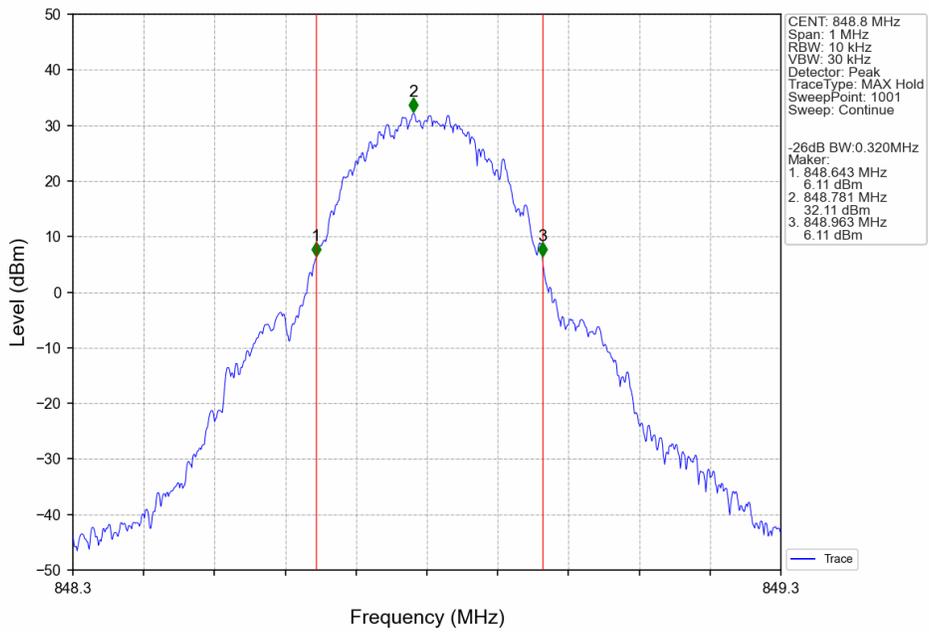
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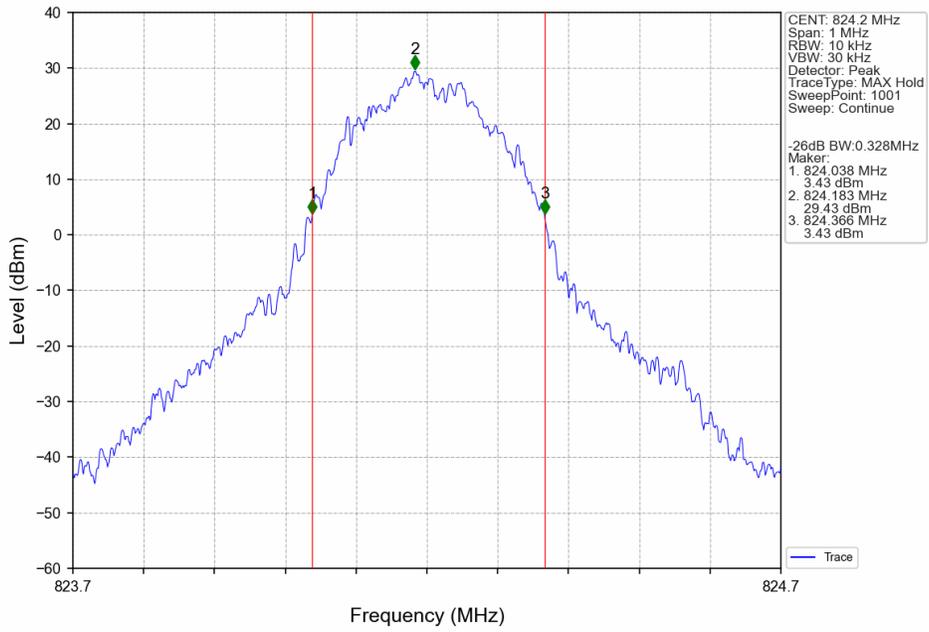
GSM850_GPRS_MCH_836.6MHz_1 TX Slot_NTNV



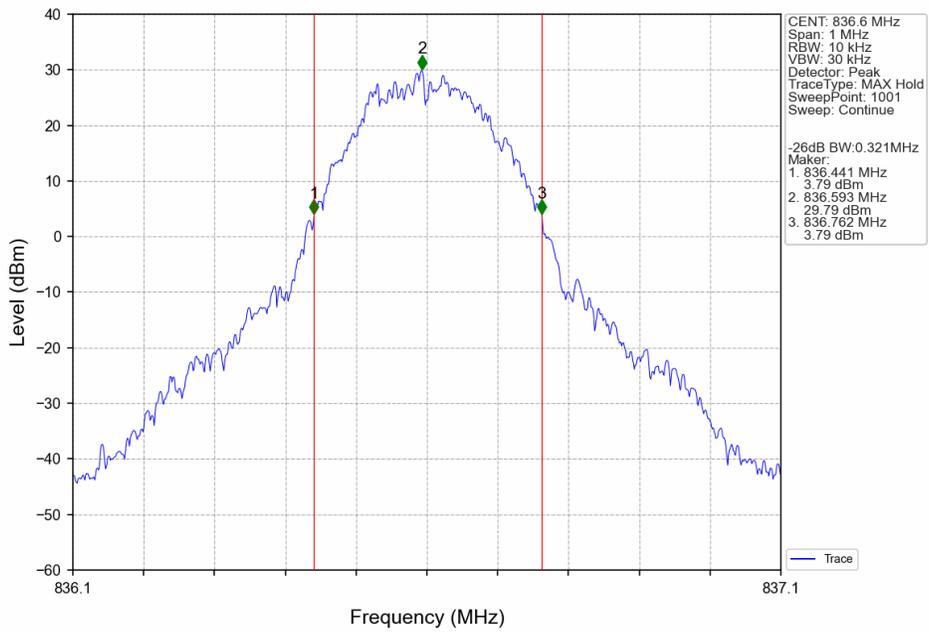
GSM850_GPRS_HCH_848.8MHz_1 TX Slot_NTNV



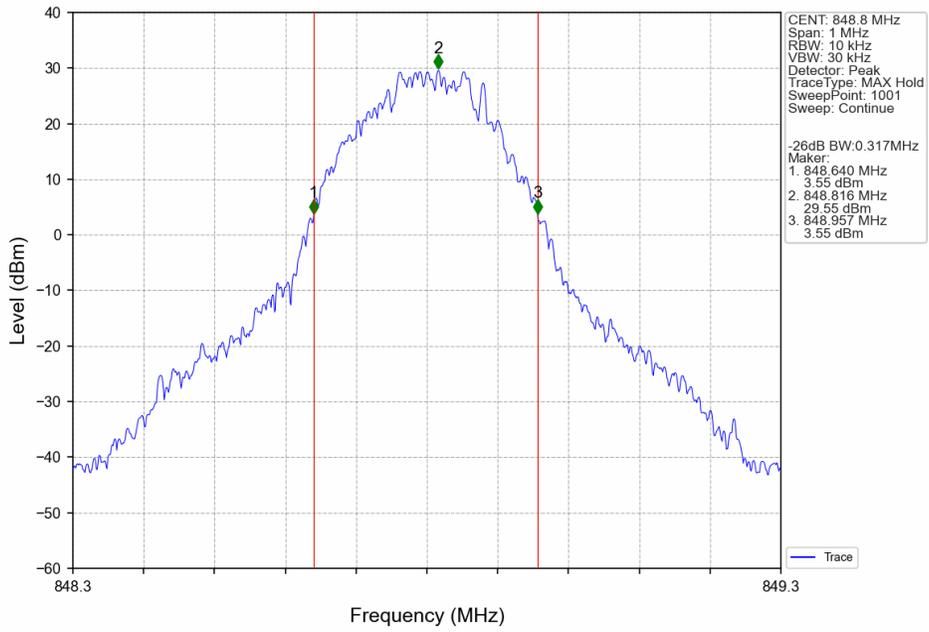
GSM850_EGPRS_LCH_824.2MHz_1 TX Slot_NTNV



GSM850_EGPRS_MCH_836.6MHz_1 TX Slot_NTNV



GSM850_EGPRS_HCH_848.8MHz_1 TX Slot_NTNV



3. Peak-Average Ratio

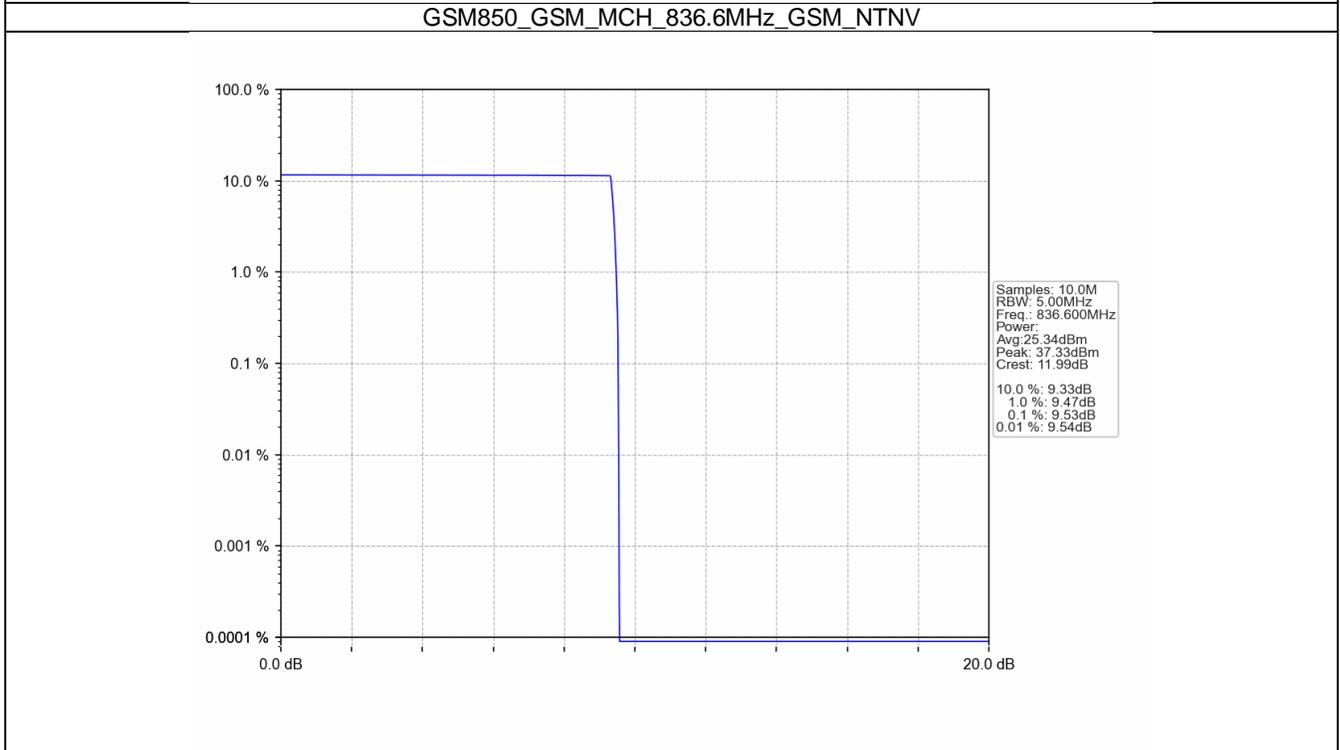
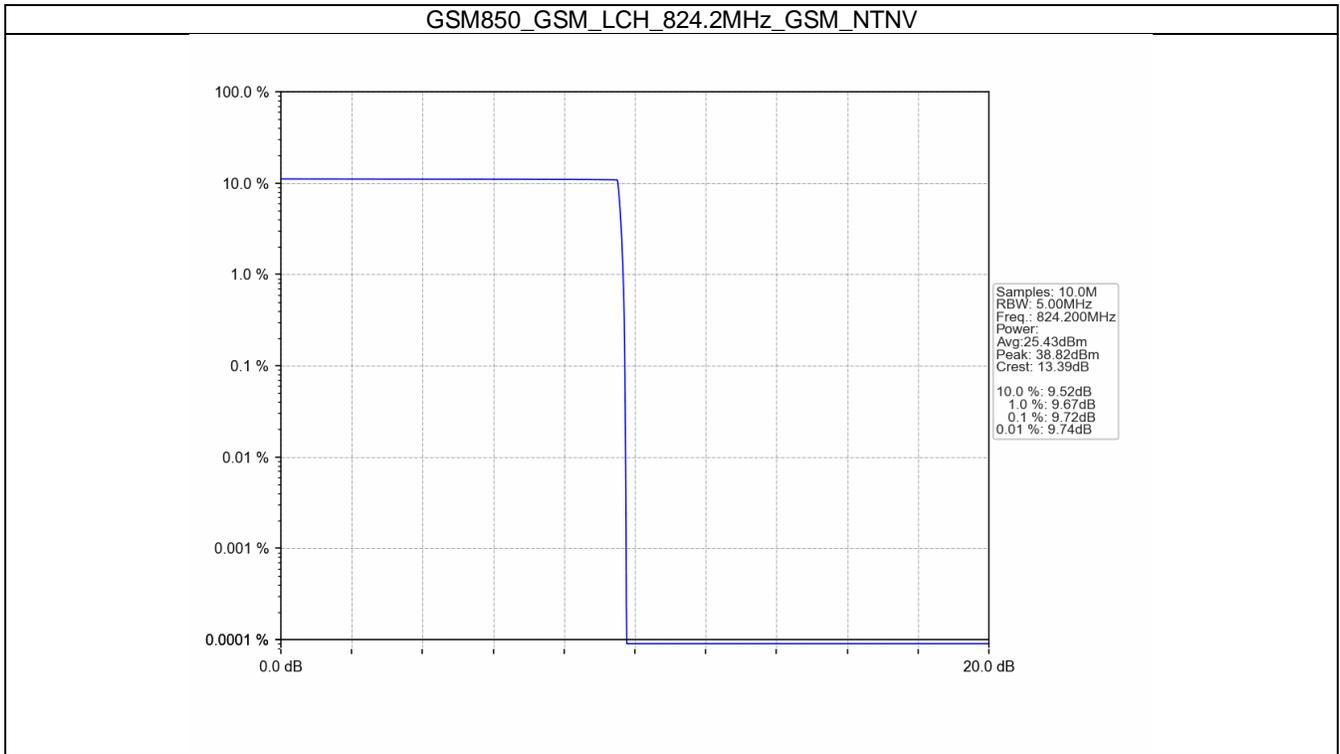
3.1 Test Result

3.1.1 GSM850

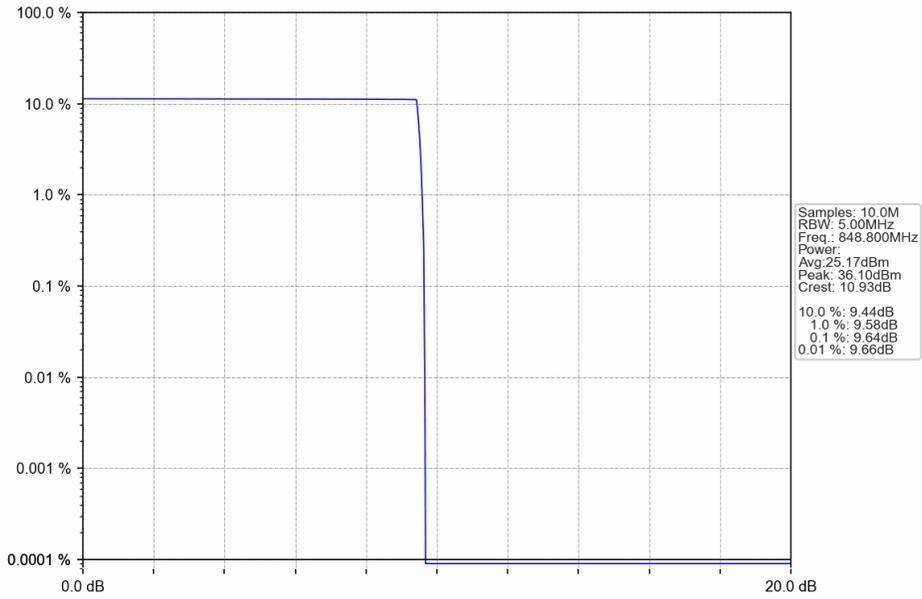
Band: GSM850						
ENV	Mode		Frequency (MHz)	Peak-Average Ratio (dB)		Verdict
	Network	Subset		Result	Limit	
NTNV	GSM	GSM	824.2	9.72	<=13	Pass
			836.6	9.53	<=13	Pass
			848.8	9.64	<=13	Pass
	GPRS	4 TX Slots	824.2	3.86	<=13	Pass
			836.6	3.87	<=13	Pass
			848.8	3.77	<=13	Pass
	EGPRS	4 TX Slots	824.2	9.36	<=13	Pass
			836.6	9.35	<=13	Pass
			848.8	9.32	<=13	Pass

3.2 Test Graph

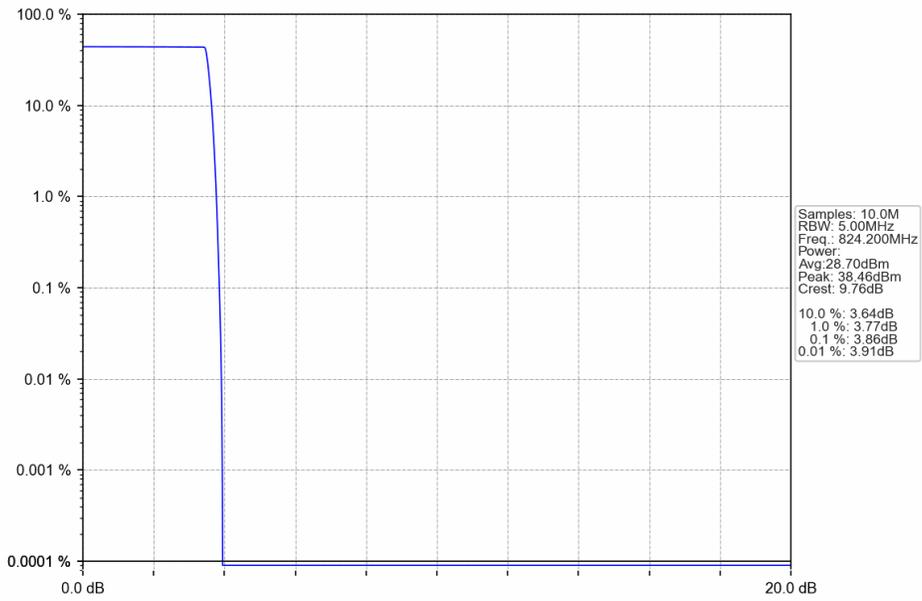
3.2.1 GSM850



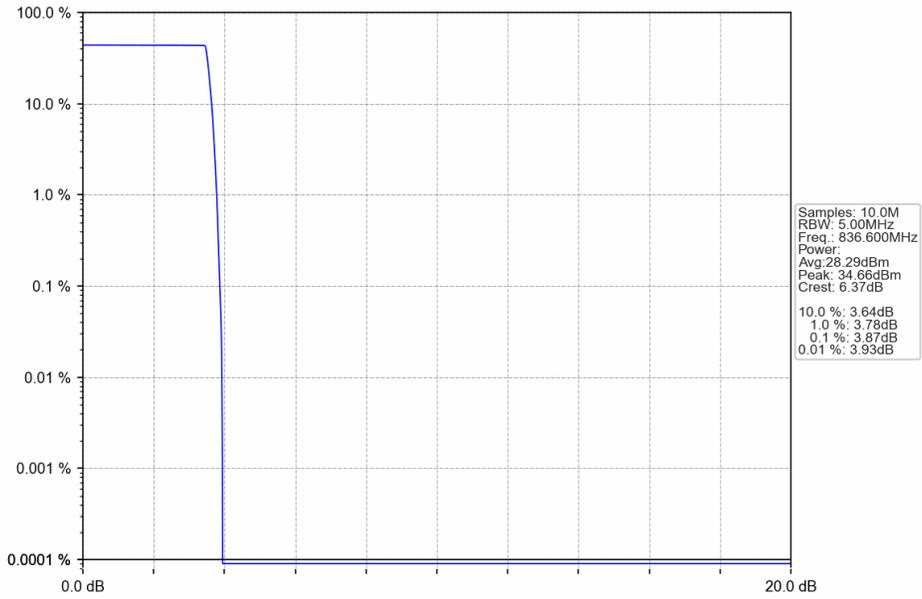
GSM850_GSM_HCH_848.8MHz_GSM_NTNV



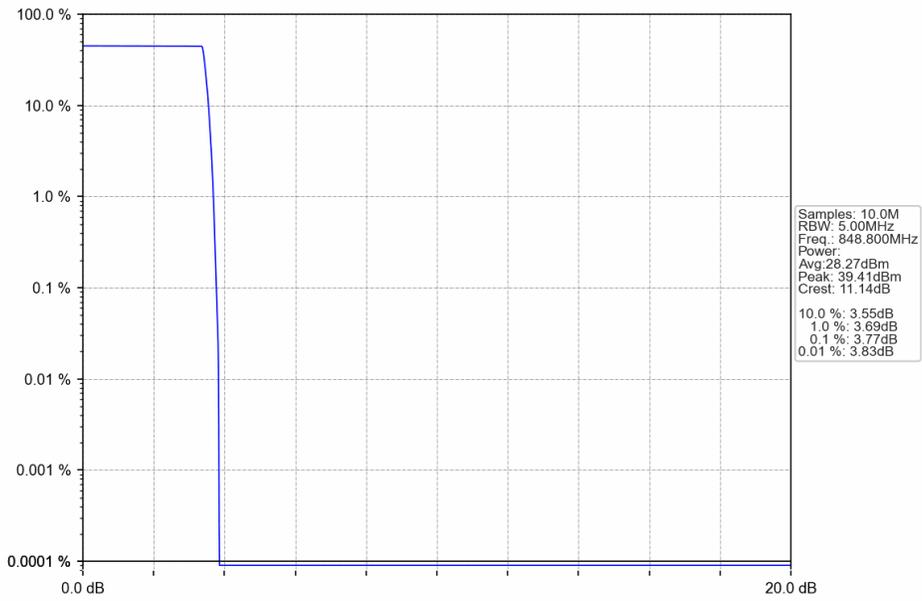
GSM850_GPRS_LCH_824.2MHz_4 TX Slots_NTNV



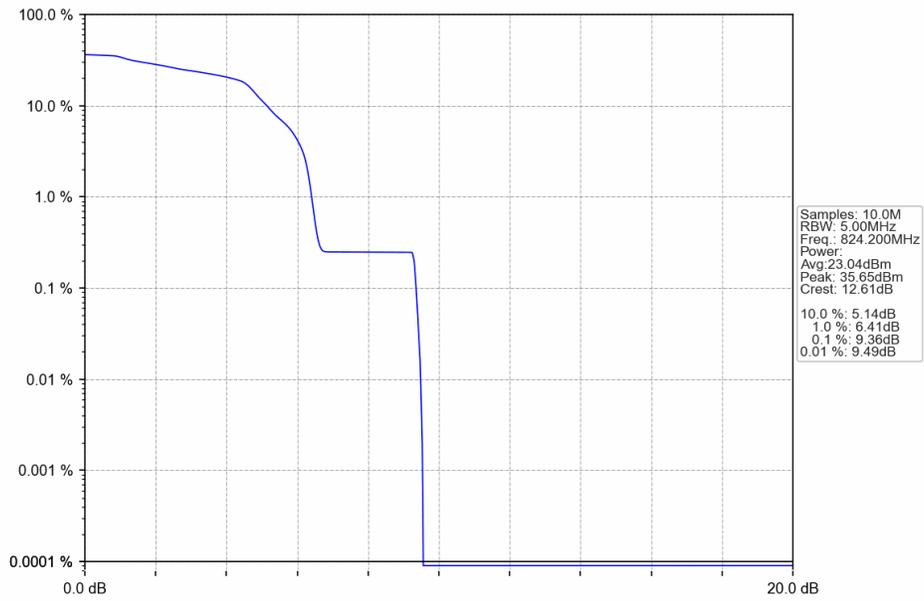
GSM850_GPRS_MCH_836.6MHz_4 TX Slots_NTNV



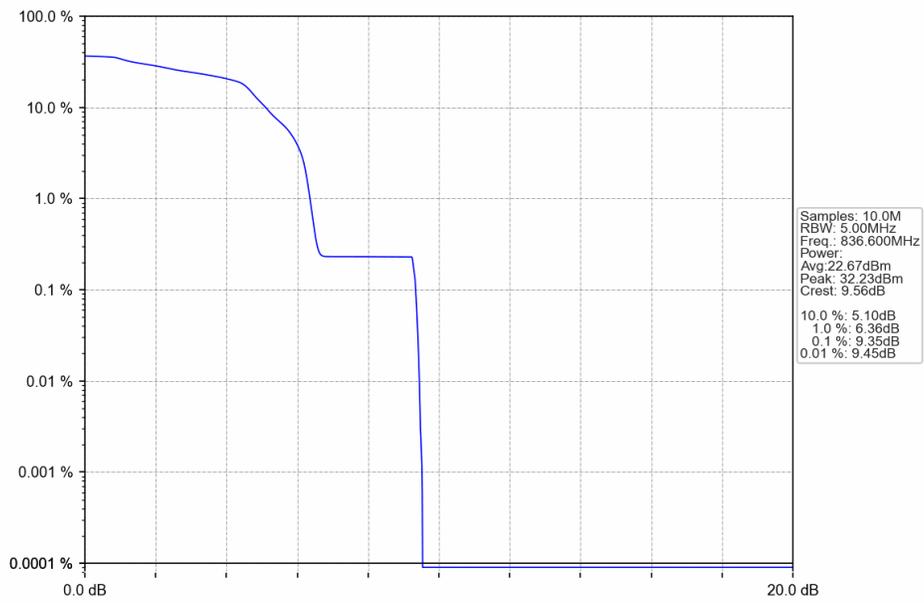
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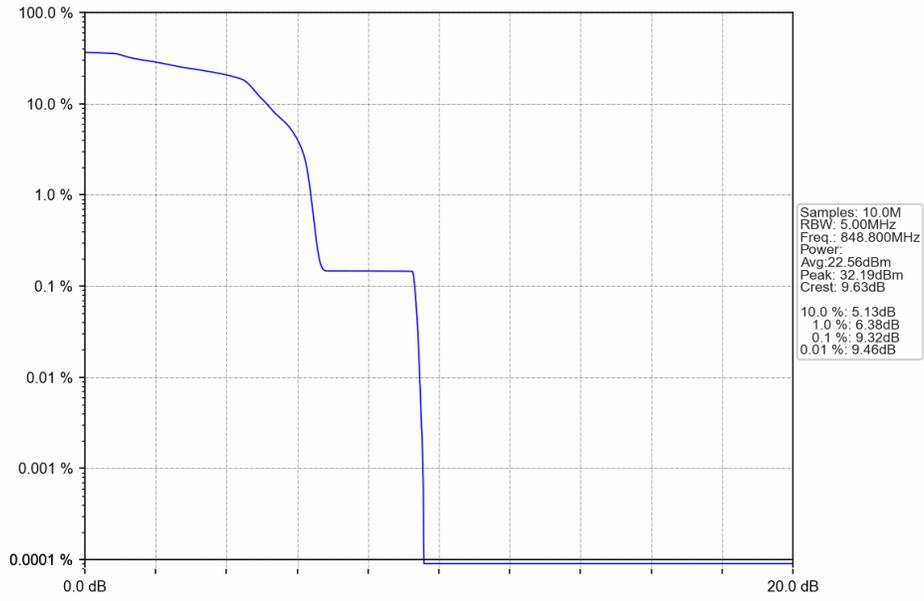
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GSM850_EGPRS_MCH_836.6MHz_4 TX Slots_NTNV



GSM850_EGPRS_HCH_848.8MHz_4 TX Slots_NTNV



4. Spurious Emission

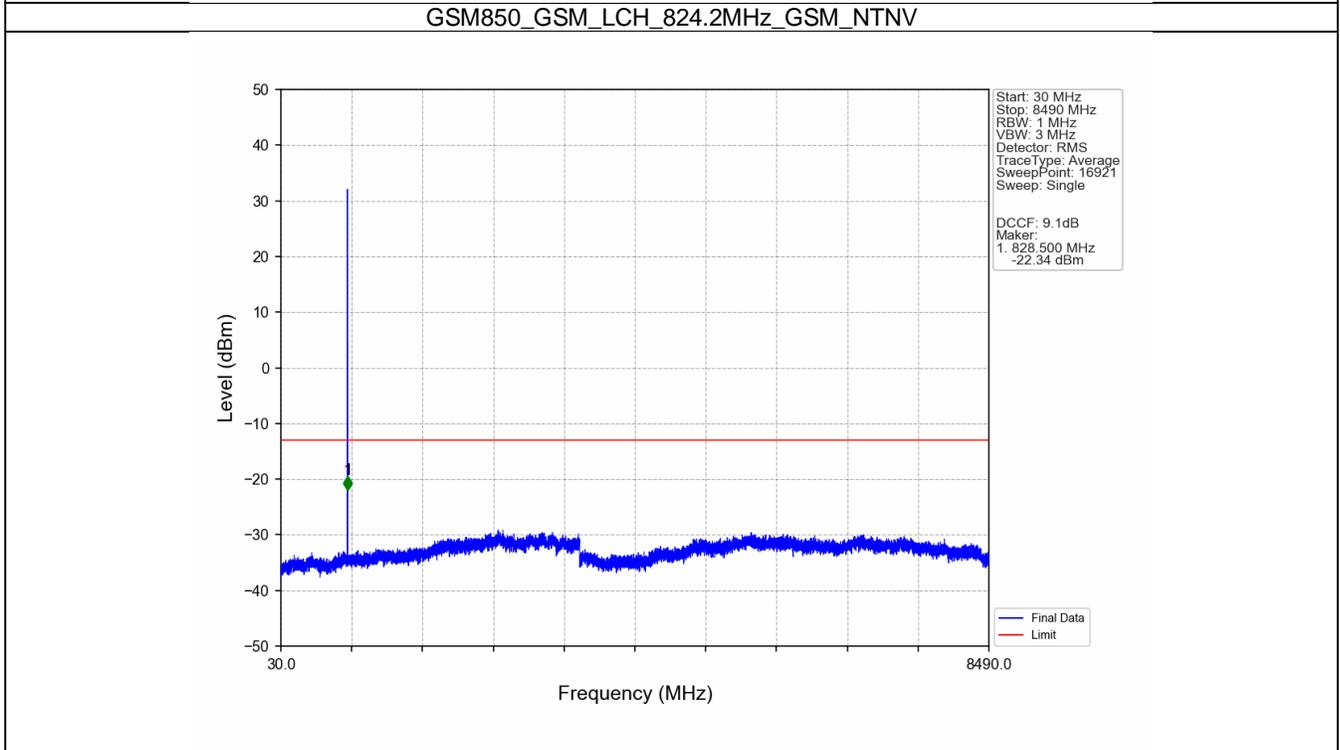
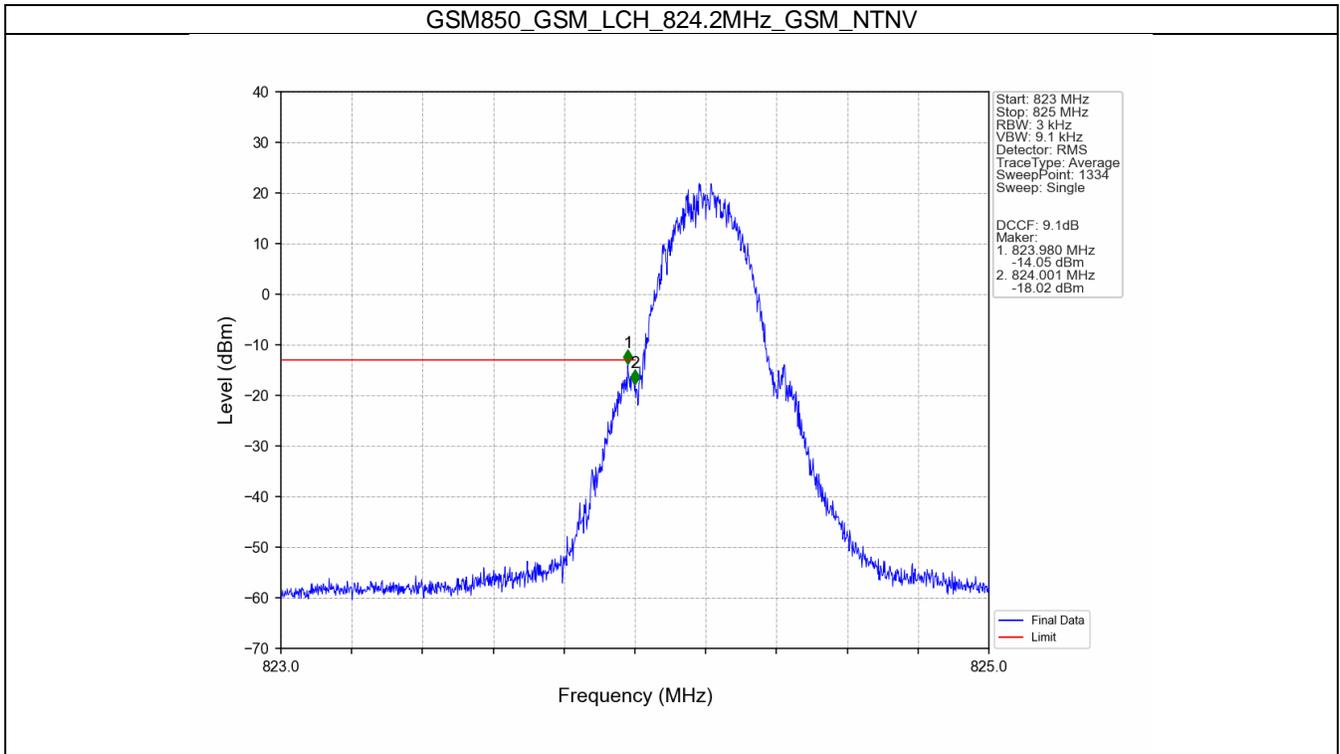
4.1 Test Result

4.1.1 GSM850

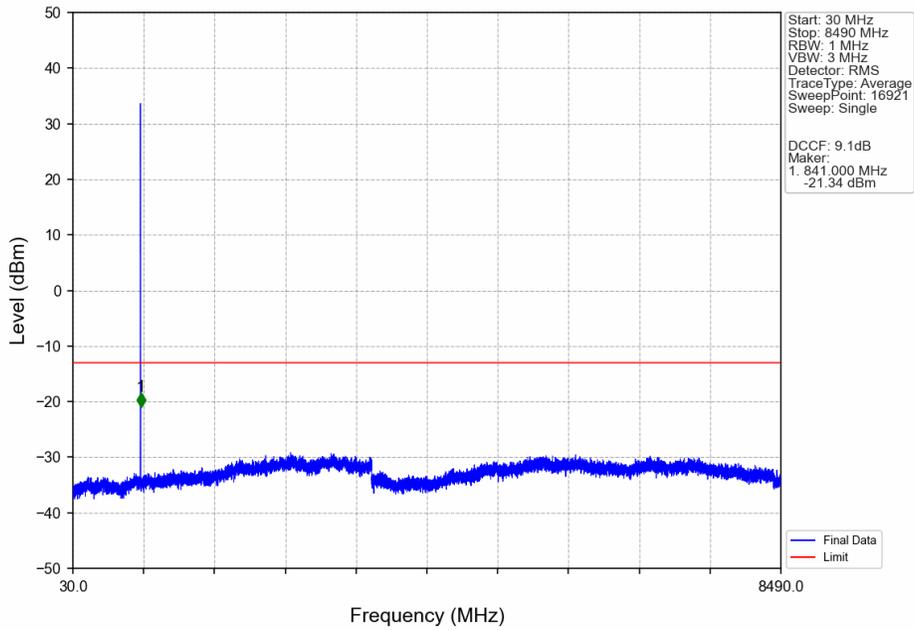
Band: GSM850						
ENV	Mode		Frequency (MHz)	Spurious Emission		Verdict
	Network	Subset		Result	Limit	
NTNV	GSM	GSM	824.2	Refer To Test Graph	Pass	
			836.6	Refer To Test Graph	Pass	
			848.8	Refer To Test Graph	Pass	
	GPRS	1 TX Slot	824.2	Refer To Test Graph	Pass	
			836.6	Refer To Test Graph	Pass	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

4.2 Test Graph

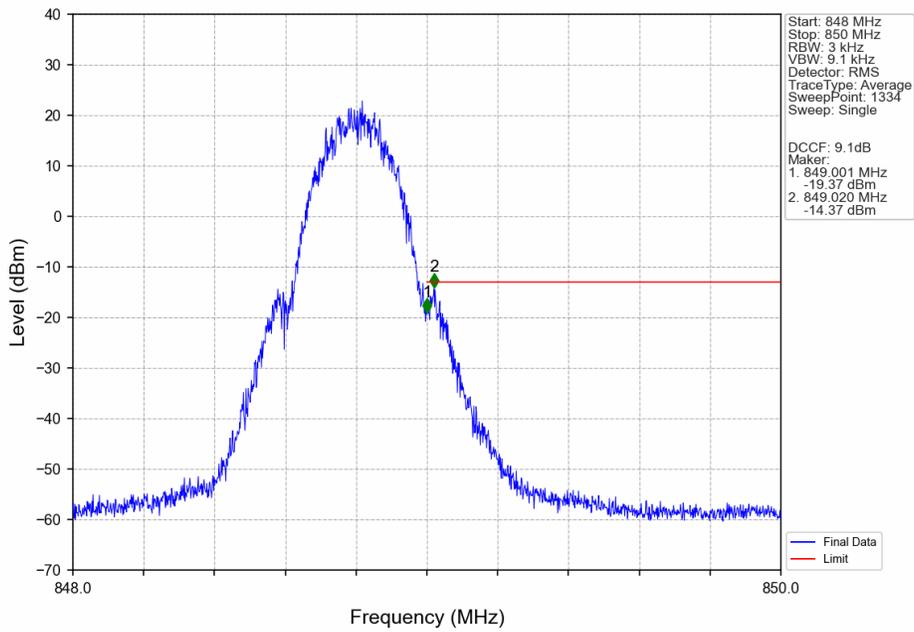
4.2.1 GSM850



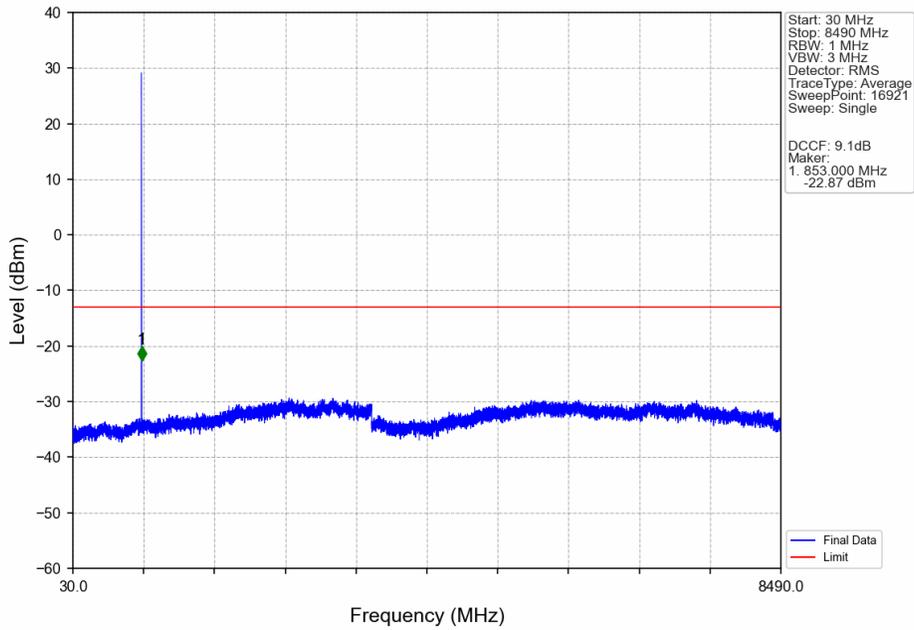
GSM850_GSM_MCH_836.6MHz_GSM_NTNV



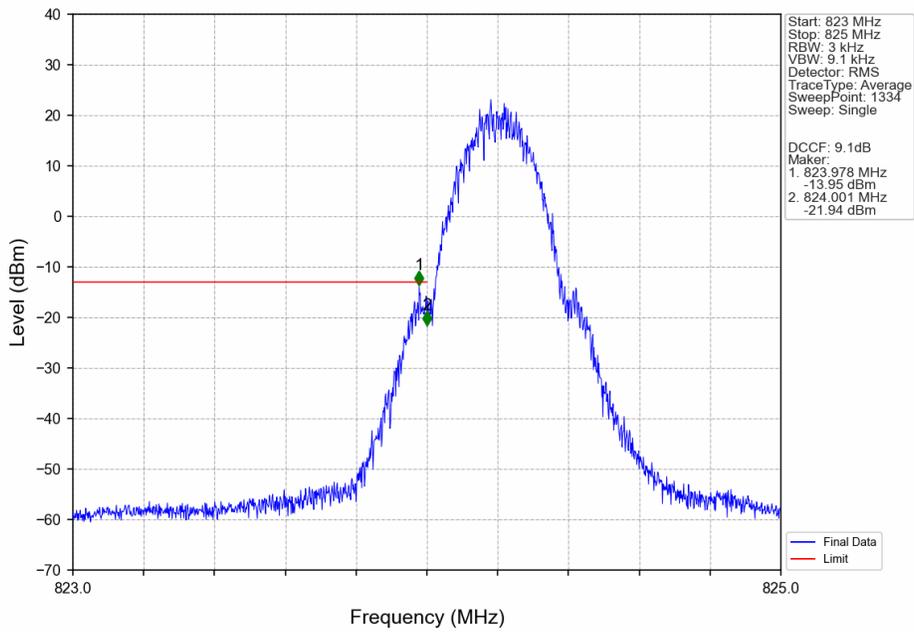
GSM850_GSM_HCH_848.8MHz_GSM_NTNV



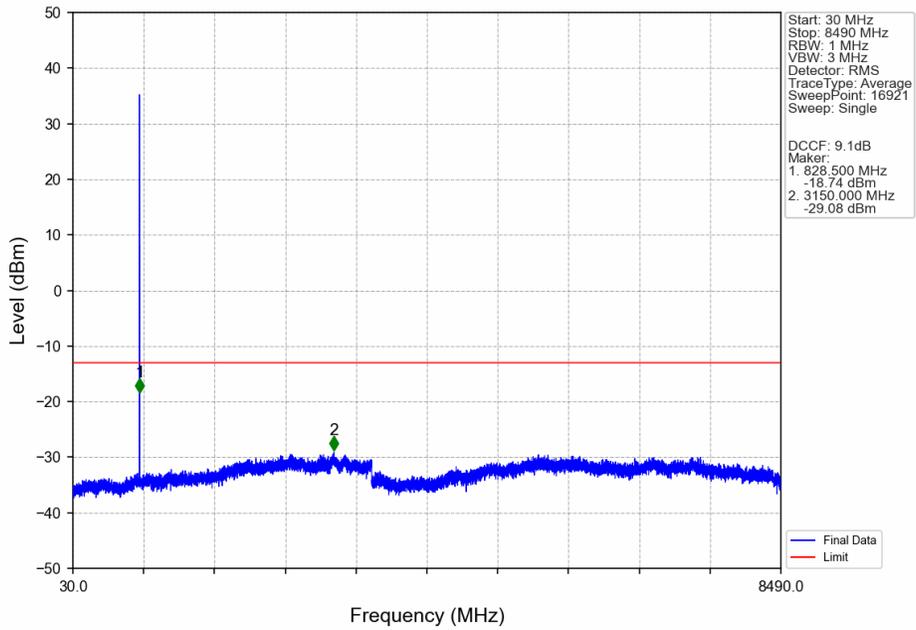
GSM850_GSM_HCH_848.8MHz_GSM_NTNV



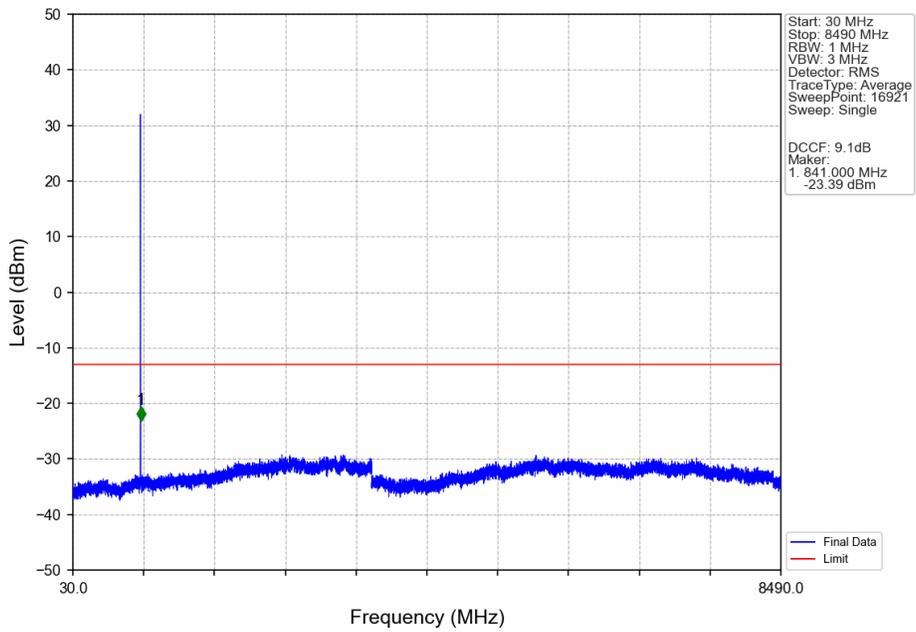
GSM850_GPRS_LCH_824.2MHz_1 TX Slot_NTNV



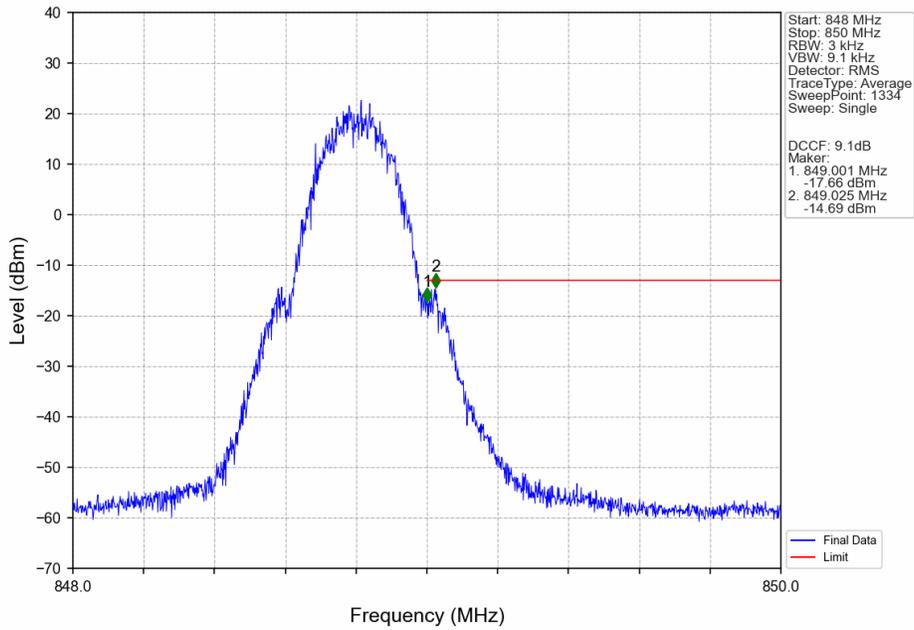
GSM850_GPRS_LCH_824.2MHz_1 TX Slot_NTNV



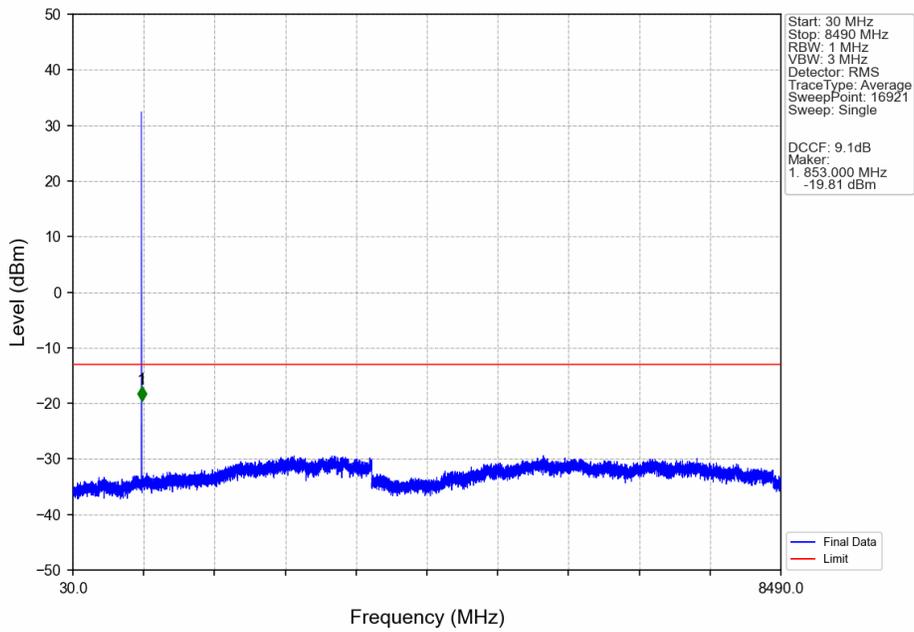
GSM850_GPRS_MCH_836.6MHz_1 TX Slot_NTNV



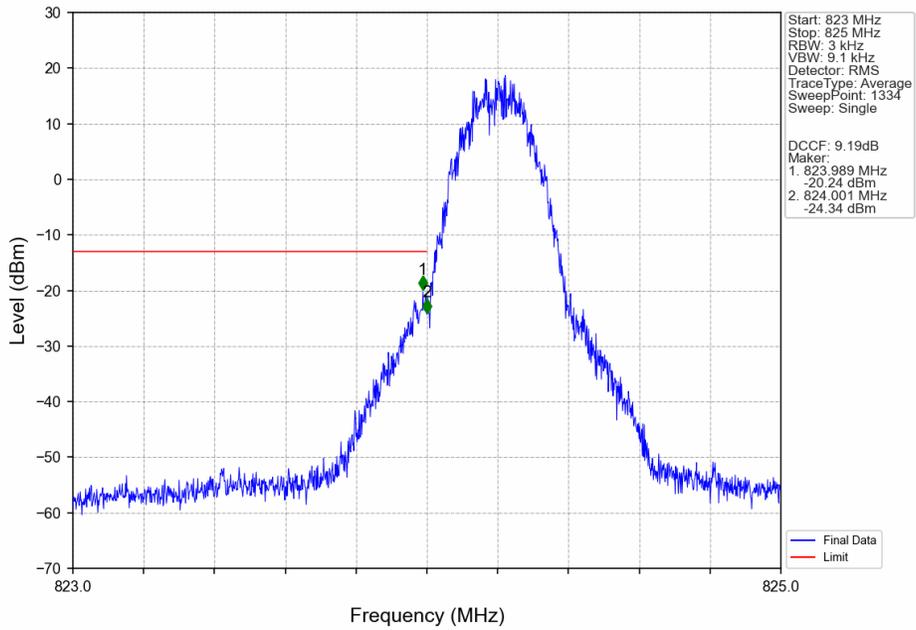
GSM850_GPRS_HCH_848.8MHz_1 TX Slot_NTNV



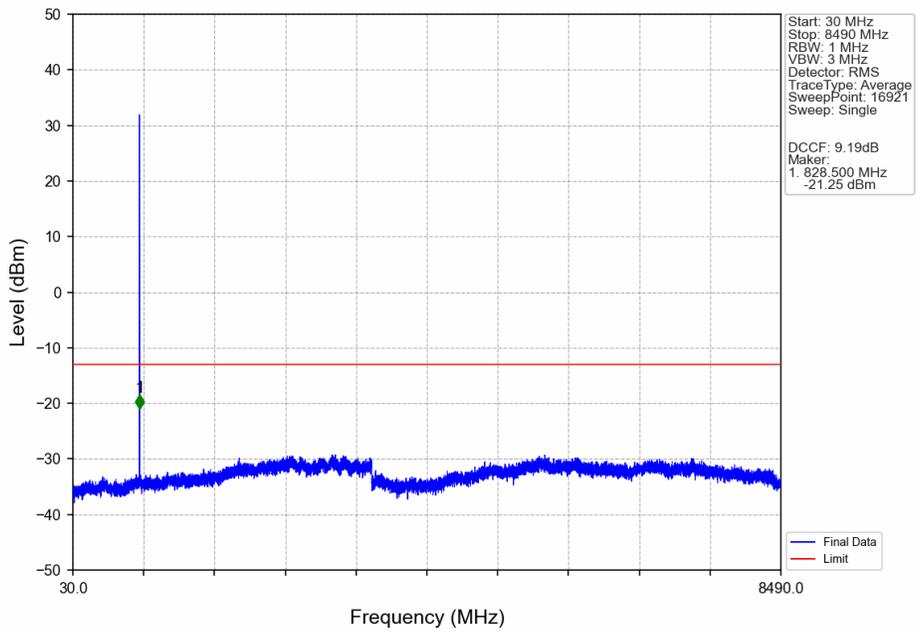
GSM850_GPRS_HCH_848.8MHz_1 TX Slot_NTNV



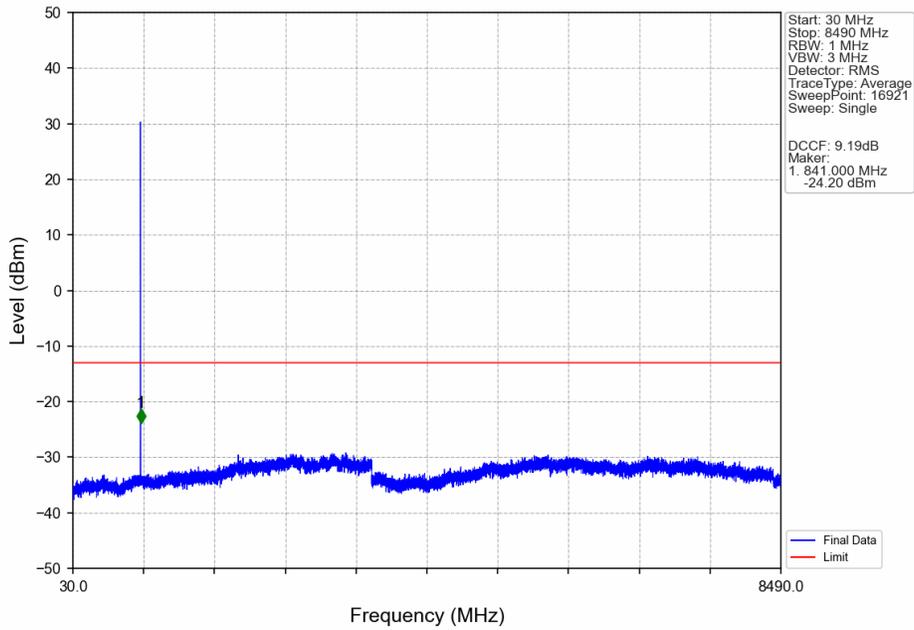
GSM850_EGPRS_LCH_824.2MHz_1 TX Slot_NTNV



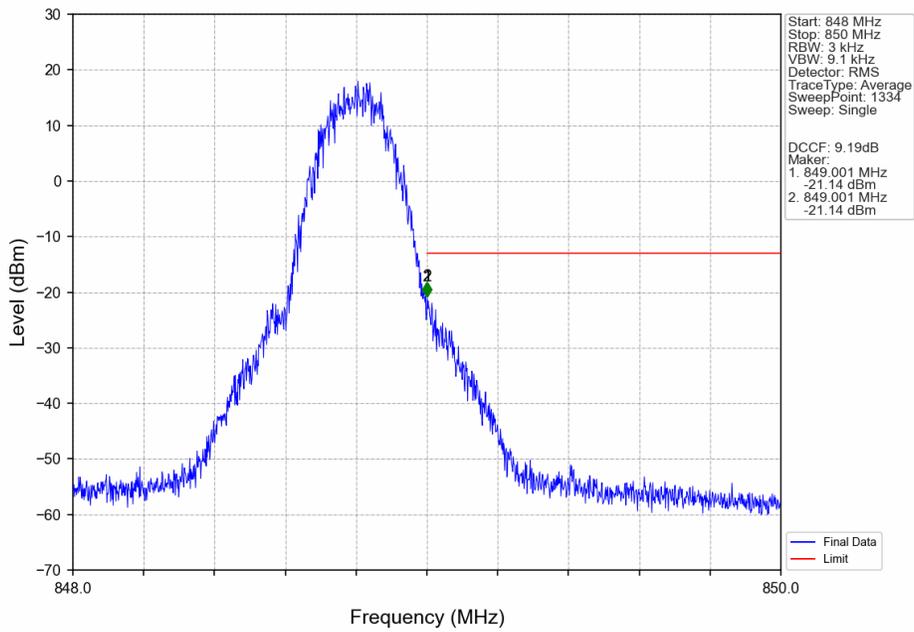
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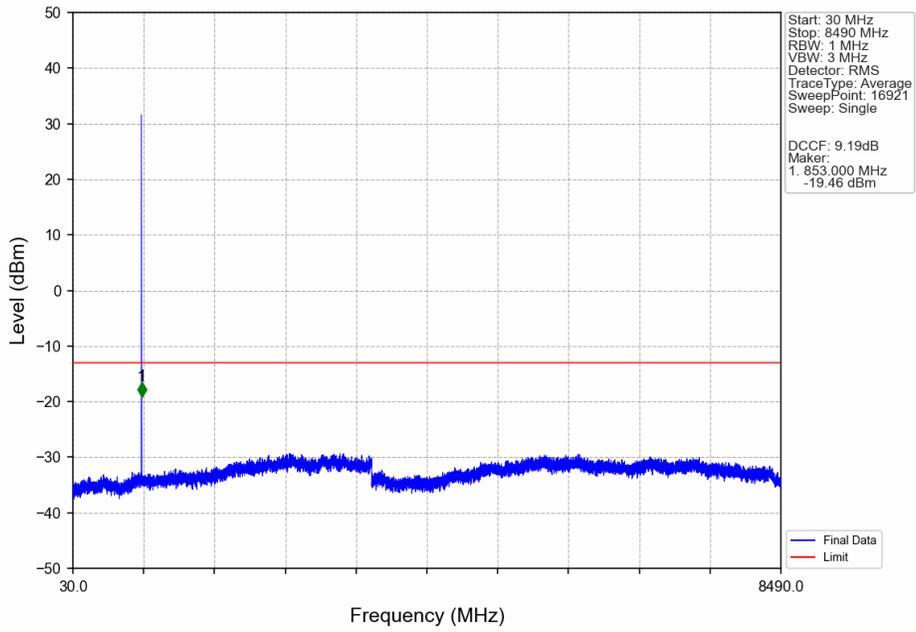
GSM850_EGPRS_MCH_836.6MHz_1 TX Slot_NTNV



GSM850_EGPRS_HCH_848.8MHz_1 TX Slot_NTNV



GSM850_EGPRS_HCH_848.8MHz_1 TX Slot_NTNV



5. Frequency Stability

5.1 Test Result

5.1.1 GSM850

Band: GSM850									
Network	Frequency (MHz)	Temp. (°C)	Voltage (VDC)	Freq. Error (Hz)	Freq. vs. Rated (ppm)		Verdict		
					Result	Limit			
GSM	824.2	20	3.4	-1.259	-0.0015	-2.5 to 2.5	Pass		
			3.8	-3.777	-0.0046	-2.5 to 2.5	Pass		
			4.45	-3.067	-0.0037	-2.5 to 2.5	Pass		
		836.6	20	3.4	-9.363	-0.0112	-2.5 to 2.5	Pass	
				3.8	-6.683	-0.0080	-2.5 to 2.5	Pass	
				4.45	-4.229	-0.0051	-2.5 to 2.5	Pass	
			848.8	20	3.4	-5.359	-0.0063	-2.5 to 2.5	Pass
					3.8	-6.812	-0.0080	-2.5 to 2.5	Pass
					4.45	-6.167	-0.0073	-2.5 to 2.5	Pass
	824.2			20	3.4	-5.327	-0.0065	-2.5 to 2.5	Pass
					3.8	-10.105	-0.0123	-2.5 to 2.5	Pass
					4.45	-11.235	-0.0136	-2.5 to 2.5	Pass
		836.6		20	3.4	-6.586	-0.0079	-2.5 to 2.5	Pass
					3.8	-6.619	-0.0079	-2.5 to 2.5	Pass
					4.45	-2.615	-0.0031	-2.5 to 2.5	Pass

	848.8	-10	3.8	-11.784	-0.0141	-2.5 to 2.5	Pass	
		0	3.8	-12.591	-0.0151	-2.5 to 2.5	Pass	
		10	3.8	-6.554	-0.0078	-2.5 to 2.5	Pass	
		30	3.8	-7.652	-0.0091	-2.5 to 2.5	Pass	
		40	3.8	-11.558	-0.0138	-2.5 to 2.5	Pass	
		50	3.8	-8.975	-0.0107	-2.5 to 2.5	Pass	
		20	3.4	-4.875	-0.0057	-2.5 to 2.5	Pass	
			3.8	-7.619	-0.0090	-2.5 to 2.5	Pass	
			4.45	-5.521	-0.0065	-2.5 to 2.5	Pass	
		-30	3.8	-12.947	-0.0153	-2.5 to 2.5	Pass	
	-20	3.8	-6.845	-0.0081	-2.5 to 2.5	Pass		
	-10	3.8	-10.138	-0.0119	-2.5 to 2.5	Pass		
	0	3.8	-8.653	-0.0102	-2.5 to 2.5	Pass		
	10	3.8	-5.133	-0.0060	-2.5 to 2.5	Pass		
	30	3.8	-5.521	-0.0065	-2.5 to 2.5	Pass		
	40	3.8	-4.617	-0.0054	-2.5 to 2.5	Pass		
	50	3.8	-9.234	-0.0109	-2.5 to 2.5	Pass		
	EGPRS	824.2	20	3.4	-8.717	-0.0106	-2.5 to 2.5	Pass
				3.8	-8.749	-0.0106	-2.5 to 2.5	Pass
				4.45	-4.940	-0.0060	-2.5 to 2.5	Pass
-30			3.8	-5.327	-0.0065	-2.5 to 2.5	Pass	
-20			3.8	-8.717	-0.0106	-2.5 to 2.5	Pass	
-10			3.8	-5.069	-0.0062	-2.5 to 2.5	Pass	
0			3.8	-8.911	-0.0108	-2.5 to 2.5	Pass	
10			3.8	-7.393	-0.0090	-2.5 to 2.5	Pass	
30			3.8	-6.877	-0.0083	-2.5 to 2.5	Pass	
40			3.8	-4.488	-0.0054	-2.5 to 2.5	Pass	
50		3.8	-9.201	-0.0112	-2.5 to 2.5	Pass		
836.6		20	3.4	-8.911	-0.0107	-2.5 to 2.5	Pass	
			3.8	-5.941	-0.0071	-2.5 to 2.5	Pass	
			4.45	-6.199	-0.0074	-2.5 to 2.5	Pass	
		-30	3.8	-2.744	-0.0033	-2.5 to 2.5	Pass	
		-20	3.8	-5.392	-0.0064	-2.5 to 2.5	Pass	
		-10	3.8	-3.584	-0.0043	-2.5 to 2.5	Pass	
		0	3.8	-3.196	-0.0038	-2.5 to 2.5	Pass	
		10	3.8	-3.487	-0.0042	-2.5 to 2.5	Pass	
		30	3.8	-3.099	-0.0037	-2.5 to 2.5	Pass	
	40	3.8	-9.008	-0.0108	-2.5 to 2.5	Pass		
50	3.8	-8.846	-0.0106	-2.5 to 2.5	Pass			
848.8	20	3.4	-4.455	-0.0052	-2.5 to 2.5	Pass		
		3.8	-8.071	-0.0095	-2.5 to 2.5	Pass		
		4.45	-7.845	-0.0092	-2.5 to 2.5	Pass		
	-30	3.8	-8.588	-0.0101	-2.5 to 2.5	Pass		
	-20	3.8	-7.555	-0.0089	-2.5 to 2.5	Pass		
	-10	3.8	-2.647	-0.0031	-2.5 to 2.5	Pass		
	0	3.8	-5.844	-0.0069	-2.5 to 2.5	Pass		
	10	3.8	-12.204	-0.0144	-2.5 to 2.5	Pass		
	30	3.8	-6.263	-0.0074	-2.5 to 2.5	Pass		
	40	3.8	-7.200	-0.0085	-2.5 to 2.5	Pass		
50	3.8	-4.197	-0.0049	-2.5 to 2.5	Pass			

6. Field Strength of Spurious Radiation

GSM850-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	-63.36	-13	-50.36	-66.25	2.62	5.51	Horizontal	Pass
2472.6	-56.21	-13	-43.21	-58.9	3.06	5.75	Horizontal	Pass
3296.8	-61.72	-13	-48.72	-66.08	3.3	7.66	Horizontal	Pass
1648.4	-63.46	-13	-50.46	-66.35	2.62	5.51	Vertical	Pass
2472.6	-53.65	-13	-40.65	-56.34	3.06	5.75	Vertical	Pass
3296.8	-67.08	-13	-54.08	-71.44	3.3	7.66	Vertical	Pass

GSM850-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	-62.08	-13	-49.08	-64.89	2.63	5.44	Horizontal	Pass
2509.8	-47.91	-13	-34.91	-50.67	3.08	5.84	Horizontal	Pass
3346.4	-62.74	-13	-49.74	-67.21	3.32	7.79	Horizontal	Pass
1673.2	-63.52	-13	-50.52	-66.33	2.63	5.44	Vertical	Pass
2509.8	-47.84	-13	-34.84	-50.6	3.08	5.84	Vertical	Pass
3346.4	-64.79	-13	-51.79	-69.26	3.32	7.79	Vertical	Pass

GSM850-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	-65.66	-13	-52.66	-68.4	2.64	5.38	Horizontal	Pass
2546.4	-44.46	-13	-31.46	-47.29	3.09	5.92	Horizontal	Pass
3395.2	-66.83	-13	-53.83	-71.39	3.35	7.91	Horizontal	Pass
1697.6	-67.35	-13	-54.35	-70.09	2.64	5.38	Vertical	Pass
2546.4	-46.96	-13	-33.96	-49.79	3.09	5.92	Vertical	Pass
3395.2	-64.78	-13	-51.78	-69.34	3.35	7.91	Vertical	Pass