

1. Effective (Isotropic) Radiated Power Output Data

1.1 GSM850_ERP

1.1.1 Test Result

Band: GSM850									
ENV	Mode		Frequency (MHz)	Conducted Power (dBm)	Gain (dBi)	ERP (dBm)		Verdict	
	Network	Subset				Result	Limit		
NTNV	GSM	GSM	824.2	31.26	-3.50	25.61	<=38.45	Pass	
			836.6	31.56	-3.50	25.91	<=38.45	Pass	
			848.8	31.50	-3.50	25.85	<=38.45	Pass	
	GPRS	1 TX Slot	824.2	31.19	-3.50	25.54	<=38.45	Pass	
		2 TX Slots	824.2	29.16	-3.50	23.51	<=38.45	Pass	
		3 TX Slots	824.2	27.17	-3.50	21.52	<=38.45	Pass	
		4 TX Slots	824.2	25.73	-3.50	20.08	<=38.45	Pass	
		1 TX Slot	836.6	31.60	-3.50	25.95	<=38.45	Pass	
		2 TX Slots	836.6	29.48	-3.50	23.83	<=38.45	Pass	
		3 TX Slots	836.6	27.48	-3.50	21.83	<=38.45	Pass	
		4 TX Slots	836.6	25.93	-3.50	20.28	<=38.45	Pass	
		1 TX Slot	848.8	30.96	-3.50	25.31	<=38.45	Pass	
		2 TX Slots	848.8	29.45	-3.50	23.80	<=38.45	Pass	
		3 TX Slots	848.8	27.36	-3.50	21.71	<=38.45	Pass	
		4 TX Slots	848.8	25.85	-3.50	20.20	<=38.45	Pass	
		EGPRS	1 TX Slot	824.2	26.59	-3.50	20.94	<=38.45	Pass
			2 TX Slots	824.2	24.71	-3.50	19.06	<=38.45	Pass
			3 TX Slots	824.2	22.73	-3.50	17.08	<=38.45	Pass
			4 TX Slots	824.2	20.93	-3.50	15.28	<=38.45	Pass
			1 TX Slot	836.6	27.05	-3.50	21.40	<=38.45	Pass
			2 TX Slots	836.6	24.96	-3.50	19.31	<=38.45	Pass
			3 TX Slots	836.6	22.75	-3.50	17.10	<=38.45	Pass
	4 TX Slots		836.6	22.81	-3.50	17.16	<=38.45	Pass	
	1 TX Slot		848.8	27.94	-3.50	22.29	<=38.45	Pass	
	2 TX Slots		848.8	24.85	-3.50	19.20	<=38.45	Pass	
	3 TX Slots		848.8	22.92	-3.50	17.27	<=38.45	Pass	
	4 TX Slots		848.8	21.09	-3.50	15.44	<=38.45	Pass	
Note1: ERP=Conducted Power+Antenna Gain-2.15									

2. Frequency Stability

2.1 GSM850

2.1.1 Test Result

Band: GSM850							
Network	Frequency (MHz)	Temp. (°C)	Voltage (VDC)	Freq. Error (Hz)	Freq. vs. Rated (ppm)		Verdict
					Result	Limit	
GSM	824.2	20	3.65	14.247	0.0173	-2.5 to 2.5	Pass
			3.87	14.700	0.0178	-2.5 to 2.5	Pass
			4.45	16.365	0.0199	-2.5 to 2.5	Pass
		-30	3.87	17.084	0.0207	-2.5 to 2.5	Pass
		-20	3.87	17.198	0.0209	-2.5 to 2.5	Pass
		-10	3.87	15.813	0.0192	-2.5 to 2.5	Pass
		0	3.87	13.200	0.0160	-2.5 to 2.5	Pass
		10	3.87	15.969	0.0194	-2.5 to 2.5	Pass
		30	3.87	15.537	0.0189	-2.5 to 2.5	Pass
		40	3.87	18.463	0.0224	-2.5 to 2.5	Pass
		50	3.87	15.912	0.0193	-2.5 to 2.5	Pass
	836.6	20	3.65	16.040	0.0192	-2.5 to 2.5	Pass
			3.87	15.363	0.0184	-2.5 to 2.5	Pass
			4.45	14.141	0.0169	-2.5 to 2.5	Pass
		-30	3.87	14.147	0.0169	-2.5 to 2.5	Pass
		-20	3.87	14.085	0.0168	-2.5 to 2.5	Pass
		-10	3.87	15.358	0.0184	-2.5 to 2.5	Pass
		0	3.87	14.590	0.0174	-2.5 to 2.5	Pass
		10	3.87	9.163	0.0110	-2.5 to 2.5	Pass
		30	3.87	13.898	0.0166	-2.5 to 2.5	Pass
		40	3.87	17.584	0.0210	-2.5 to 2.5	Pass
		50	3.87	14.857	0.0178	-2.5 to 2.5	Pass
	848.8	20	3.65	12.100	0.0143	-2.5 to 2.5	Pass
			3.87	15.836	0.0187	-2.5 to 2.5	Pass
			4.45	13.199	0.0156	-2.5 to 2.5	Pass
		-30	3.87	12.118	0.0143	-2.5 to 2.5	Pass
		-20	3.87	10.821	0.0127	-2.5 to 2.5	Pass
		-10	3.87	11.654	0.0137	-2.5 to 2.5	Pass
		0	3.87	12.690	0.0150	-2.5 to 2.5	Pass
		10	3.87	13.534	0.0159	-2.5 to 2.5	Pass
		30	3.87	11.148	0.0131	-2.5 to 2.5	Pass
		40	3.87	13.746	0.0162	-2.5 to 2.5	Pass
GPRS	824.2	20	3.65	22.168	0.0269	-2.5 to 2.5	Pass
			3.87	25.669	0.0311	-2.5 to 2.5	Pass
			4.45	22.754	0.0276	-2.5 to 2.5	Pass
		-30	3.87	22.530	0.0273	-2.5 to 2.5	Pass
		-20	3.87	23.758	0.0288	-2.5 to 2.5	Pass
		-10	3.87	24.421	0.0296	-2.5 to 2.5	Pass
		0	3.87	23.652	0.0287	-2.5 to 2.5	Pass
		10	3.87	22.011	0.0267	-2.5 to 2.5	Pass
		30	3.87	24.367	0.0296	-2.5 to 2.5	Pass
		40	3.87	24.905	0.0302	-2.5 to 2.5	Pass
		50	3.87	25.292	0.0307	-2.5 to 2.5	Pass
	836.6	20	3.65	28.769	0.0344	-2.5 to 2.5	Pass
			3.87	26.605	0.0318	-2.5 to 2.5	Pass

			4.45	28.032	0.0335	-2.5 to 2.5	Pass
		-30	3.87	25.415	0.0304	-2.5 to 2.5	Pass
		-20	3.87	27.330	0.0327	-2.5 to 2.5	Pass
		-10	3.87	27.420	0.0328	-2.5 to 2.5	Pass
		0	3.87	26.592	0.0318	-2.5 to 2.5	Pass
		10	3.87	26.589	0.0318	-2.5 to 2.5	Pass
		30	3.87	26.140	0.0312	-2.5 to 2.5	Pass
		40	3.87	26.965	0.0322	-2.5 to 2.5	Pass
		50	3.87	26.174	0.0313	-2.5 to 2.5	Pass
	848.8	20	3.65	26.939	0.0317	-2.5 to 2.5	Pass
			3.87	25.936	0.0306	-2.5 to 2.5	Pass
			4.45	26.367	0.0311	-2.5 to 2.5	Pass
		-30	3.87	26.063	0.0307	-2.5 to 2.5	Pass
		-20	3.87	23.822	0.0281	-2.5 to 2.5	Pass
		-10	3.87	25.575	0.0301	-2.5 to 2.5	Pass
		0	3.87	26.834	0.0316	-2.5 to 2.5	Pass
		10	3.87	25.485	0.0300	-2.5 to 2.5	Pass
		30	3.87	27.831	0.0328	-2.5 to 2.5	Pass
		40	3.87	27.109	0.0319	-2.5 to 2.5	Pass
		50	3.87	26.291	0.0310	-2.5 to 2.5	Pass
EGPRS	824.2	20	3.65	27.089	0.0329	-2.5 to 2.5	Pass
			3.87	26.409	0.0320	-2.5 to 2.5	Pass
			4.45	25.842	0.0314	-2.5 to 2.5	Pass
		-30	3.87	24.943	0.0303	-2.5 to 2.5	Pass
		-20	3.87	27.135	0.0329	-2.5 to 2.5	Pass
		-10	3.87	25.436	0.0309	-2.5 to 2.5	Pass
		0	3.87	25.885	0.0314	-2.5 to 2.5	Pass
		10	3.87	26.077	0.0316	-2.5 to 2.5	Pass
		30	3.87	26.601	0.0323	-2.5 to 2.5	Pass
		40	3.87	28.052	0.0340	-2.5 to 2.5	Pass
		50	3.87	28.815	0.0350	-2.5 to 2.5	Pass
	836.6	20	3.65	26.511	0.0317	-2.5 to 2.5	Pass
			3.87	27.467	0.0328	-2.5 to 2.5	Pass
			4.45	28.635	0.0342	-2.5 to 2.5	Pass
		-30	3.87	27.095	0.0324	-2.5 to 2.5	Pass
		-20	3.87	27.423	0.0328	-2.5 to 2.5	Pass
		-10	3.87	28.610	0.0342	-2.5 to 2.5	Pass
		0	3.87	28.363	0.0339	-2.5 to 2.5	Pass
		10	3.87	26.959	0.0322	-2.5 to 2.5	Pass
		30	3.87	27.561	0.0329	-2.5 to 2.5	Pass
		40	3.87	27.326	0.0327	-2.5 to 2.5	Pass
		50	3.87	28.056	0.0335	-2.5 to 2.5	Pass
	848.8	20	3.65	27.820	0.0328	-2.5 to 2.5	Pass
			3.87	25.475	0.0300	-2.5 to 2.5	Pass
			4.45	24.612	0.0290	-2.5 to 2.5	Pass
		-30	3.87	26.025	0.0307	-2.5 to 2.5	Pass
		-20	3.87	25.796	0.0304	-2.5 to 2.5	Pass
		-10	3.87	26.678	0.0314	-2.5 to 2.5	Pass
		0	3.87	27.509	0.0324	-2.5 to 2.5	Pass
		10	3.87	28.016	0.0330	-2.5 to 2.5	Pass
		30	3.87	27.833	0.0328	-2.5 to 2.5	Pass
		40	3.87	28.868	0.0340	-2.5 to 2.5	Pass
		50	3.87	28.095	0.0331	-2.5 to 2.5	Pass

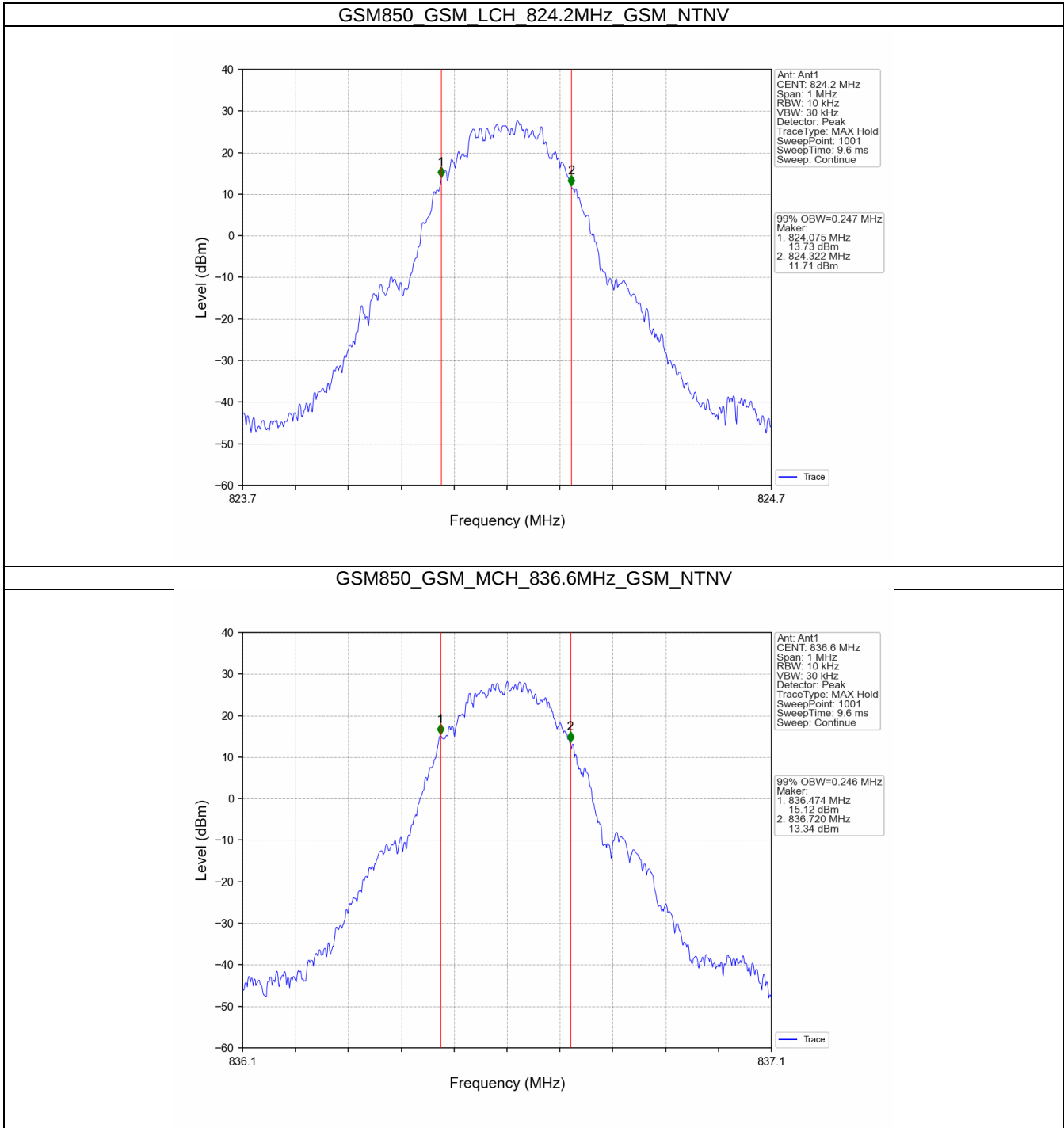
3. 99% & 26dB Bandwidth

3.1 GSM850_OBW

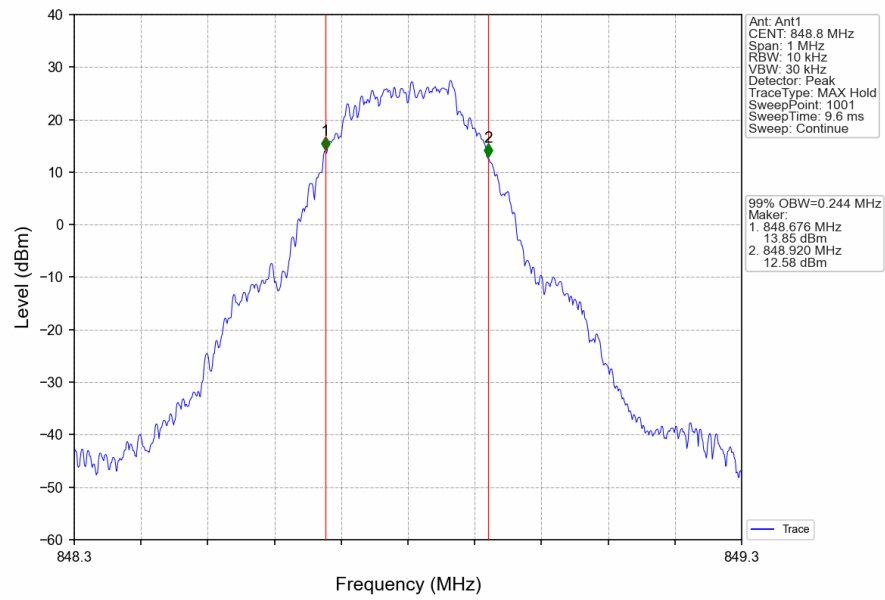
3.1.1 Test Result

Band: GSM850						
ENV	Mode		Frequency (MHz)	99% Occupied Bandwidth (MHz)		Verdict
	Network	Subset		Result	Limit	
NTNV	GSM	GSM	824.2	0.247	/	Pass
			836.6	0.246	/	Pass
			848.8	0.244	/	Pass
	GPRS	1 TX Slot	824.2	0.249	/	Pass
			836.6	0.246	/	Pass
			848.8	0.241	/	Pass
	EGPRS	1 TX Slot	824.2	0.241	/	Pass
			836.6	0.244	/	Pass
			848.8	0.246	/	Pass

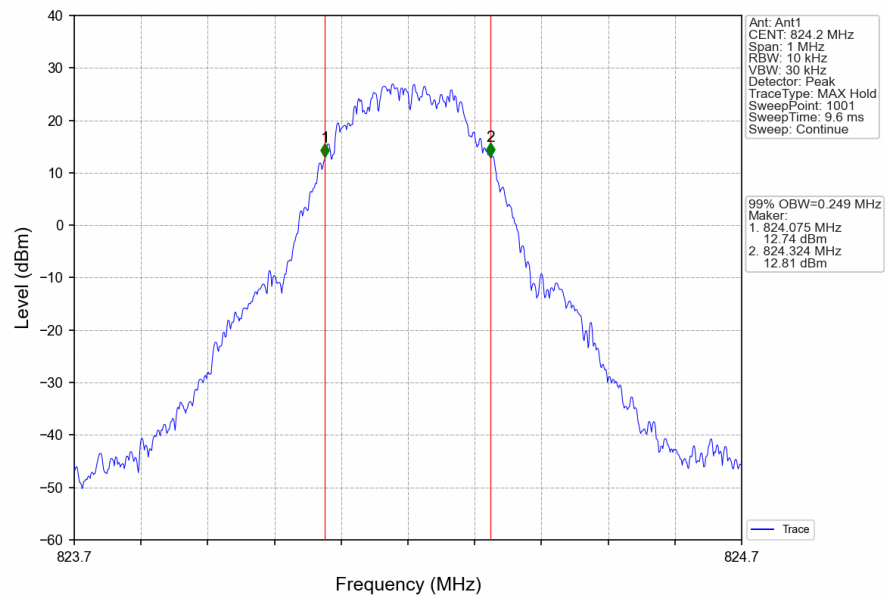
3.1.2 Test Graph



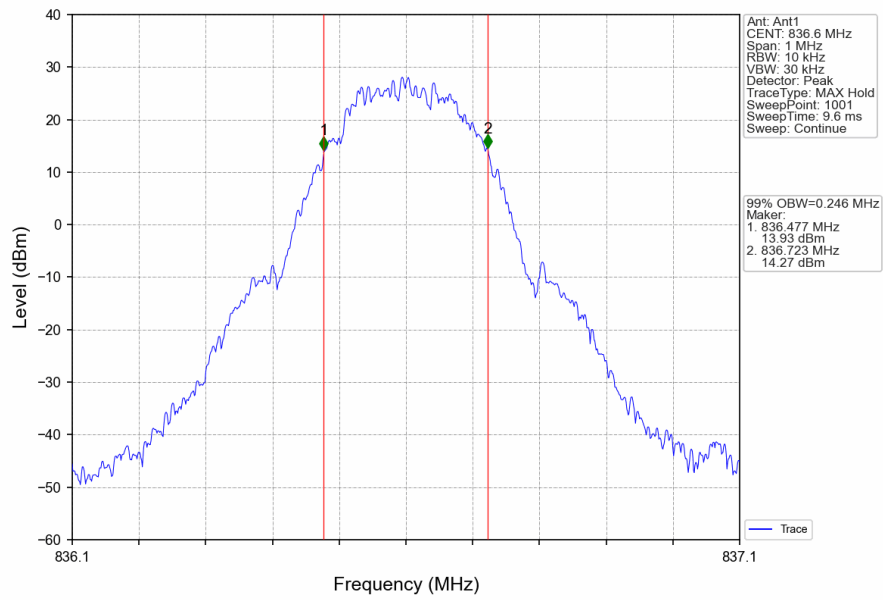
GSM850 GSM_HCH_848.8MHz GSM_NTNV



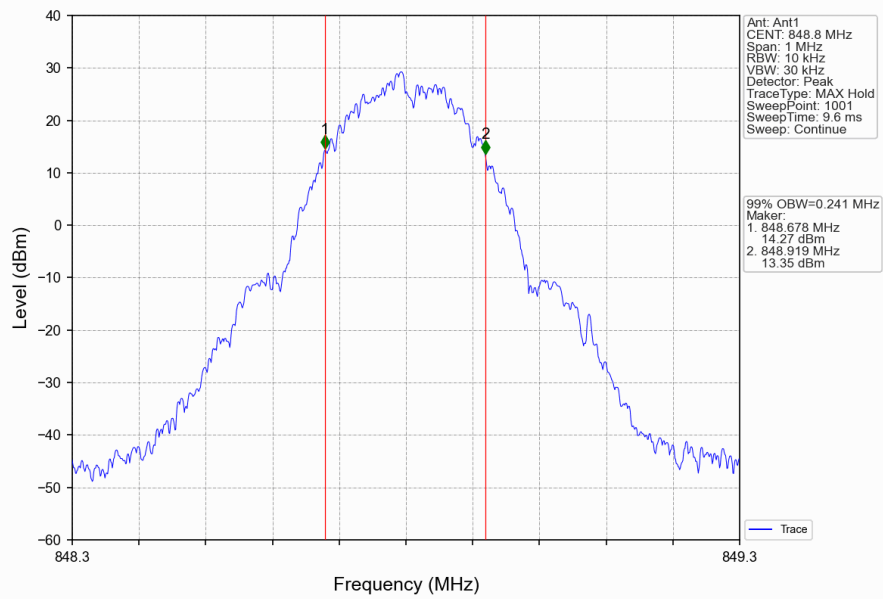
GSM850_GPRS_LCH_824.2MHz_1 TX Slot_NTNV



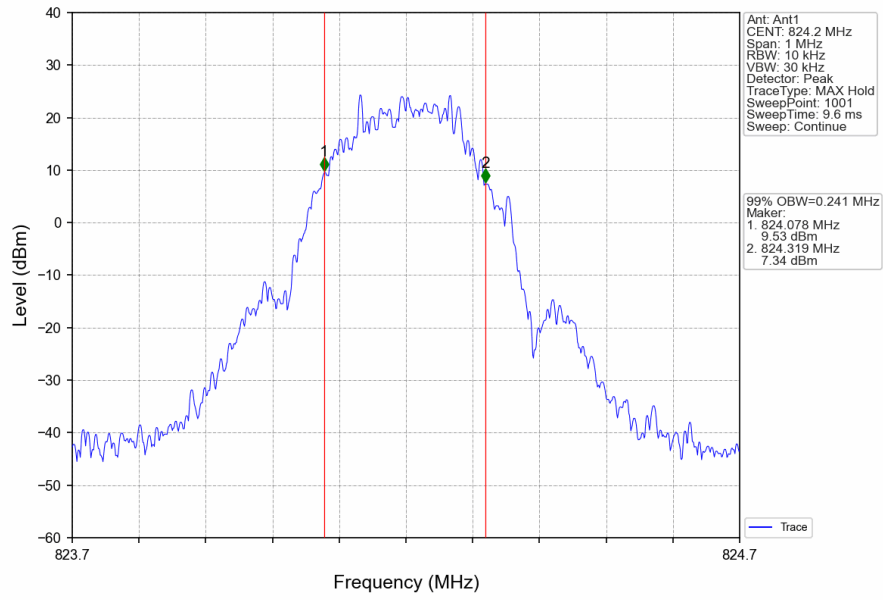
GSM850_GPRS_MCH_836.6MHz_1 TX Slot_NTNV



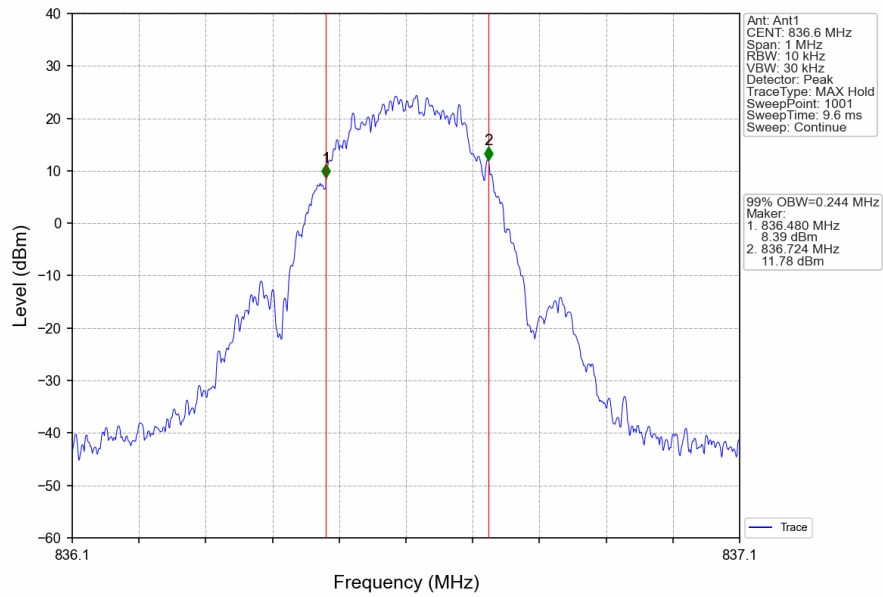
GSM850_GPRS_HCH_848.8MHz_1 TX Slot_NTNV



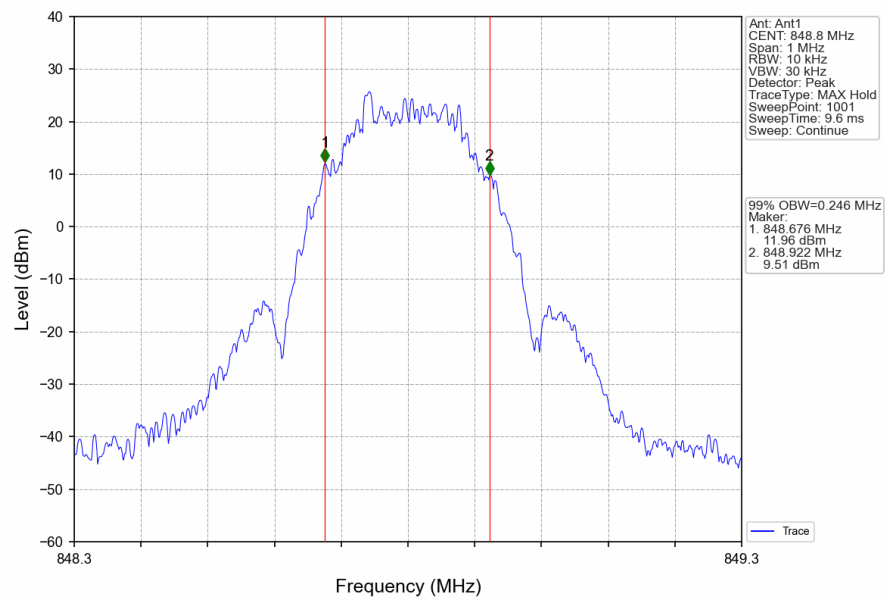
GSM850_EGPRS_LCH_824.2MHz_1 TX Slot_NTNV



GSM850_EGPRS_MCH_836.6MHz_1 TX Slot_NTNV



GSM850 EGPRS HCH 848.8MHz 1 TX Slot NTV

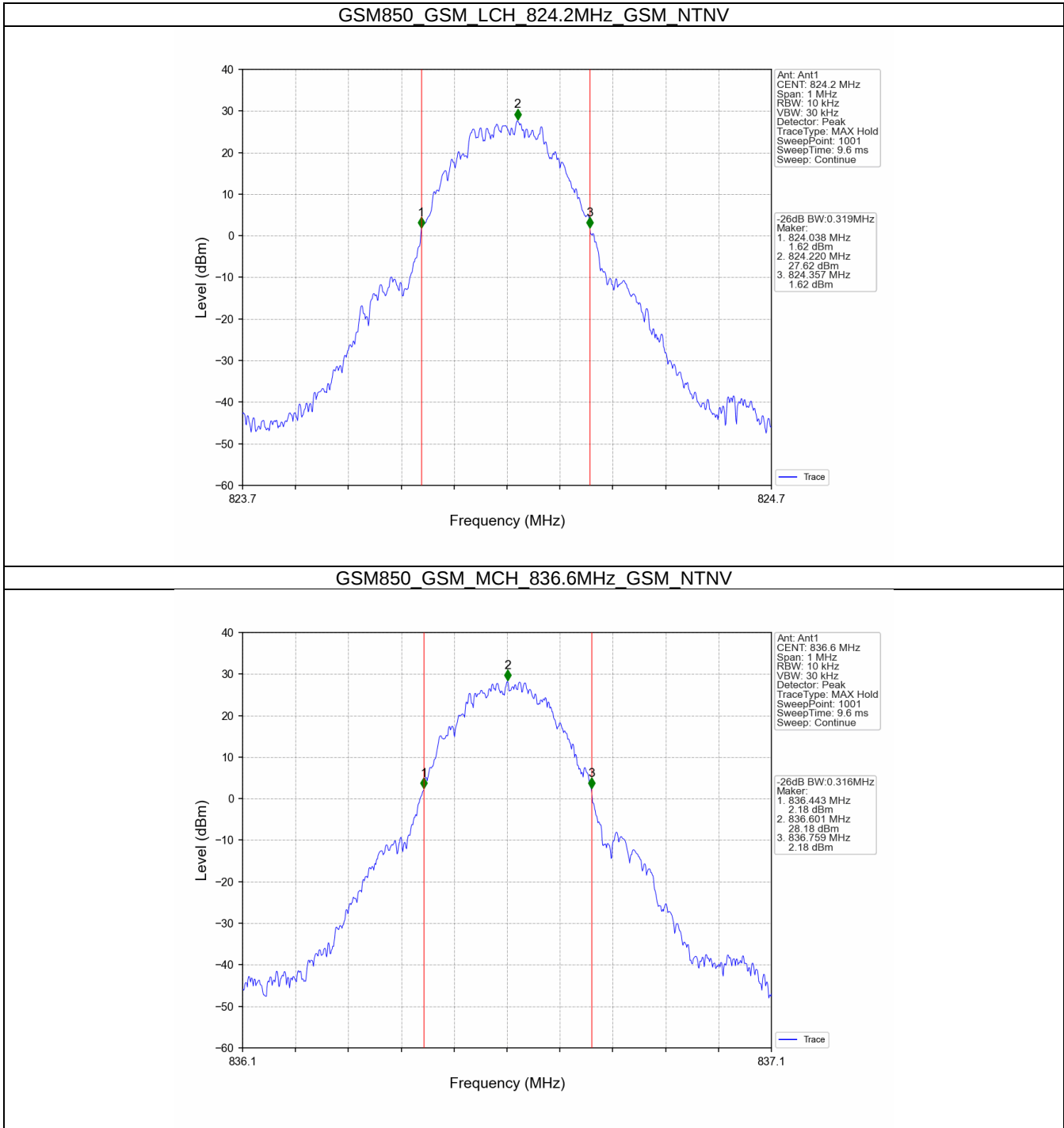


3.2 GSM850_XDB

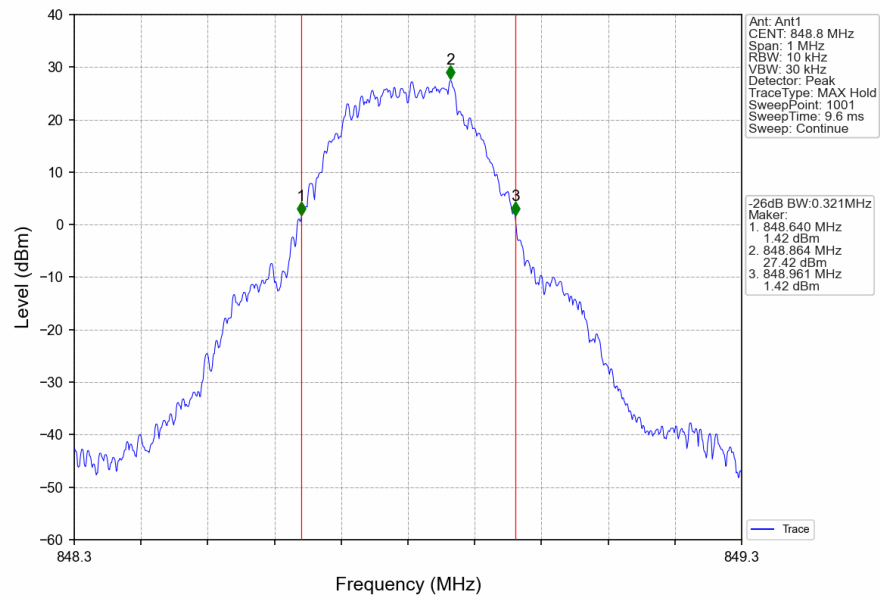
3.2.1 Test Result

Band: GSM850						
ENV	Mode		Frequency (MHz)	26dB Bandwidth (MHz)		Verdict
	Network	Subset		Result	Limit	
NTNV	GSM	GSM	824.2	0.319	/	Pass
			836.6	0.316	/	Pass
			848.8	0.321	/	Pass
	GPRS	1 TX Slot	824.2	0.322	/	Pass
			836.6	0.322	/	Pass
			848.8	0.313	/	Pass
	EGPRS	1 TX Slot	824.2	0.311	/	Pass
			836.6	0.319	/	Pass
			848.8	0.305	/	Pass

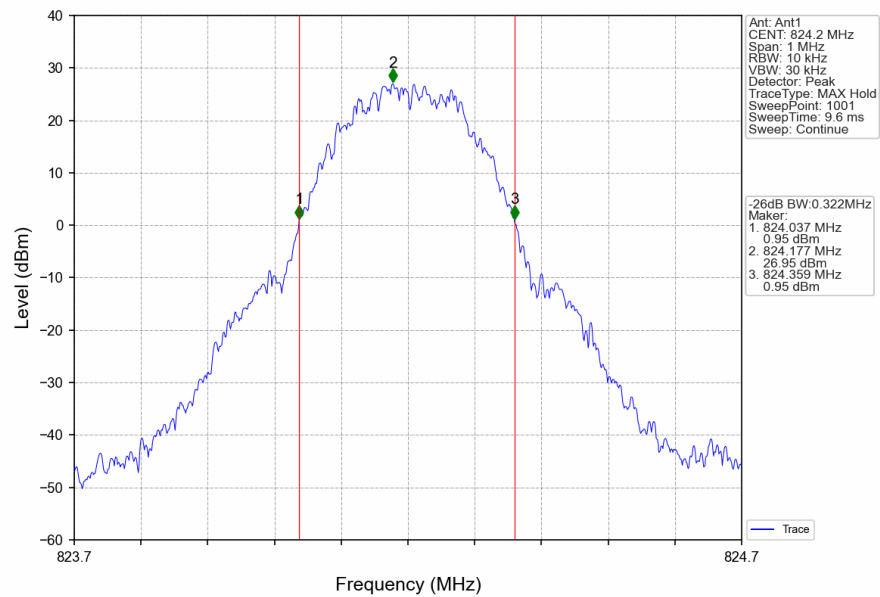
3.2.2 Test Graph



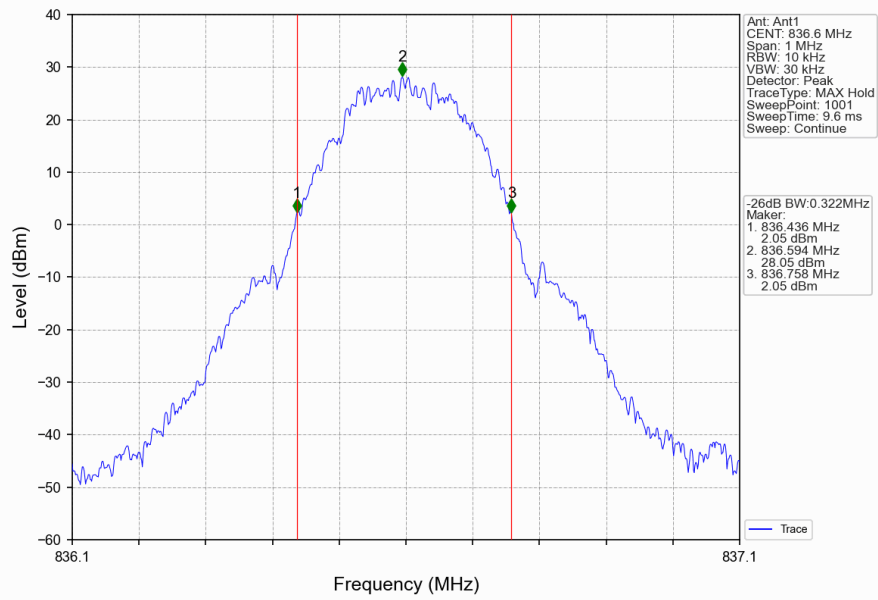
GSM850 GSM_HCH_848.8MHz GSM_NTNV



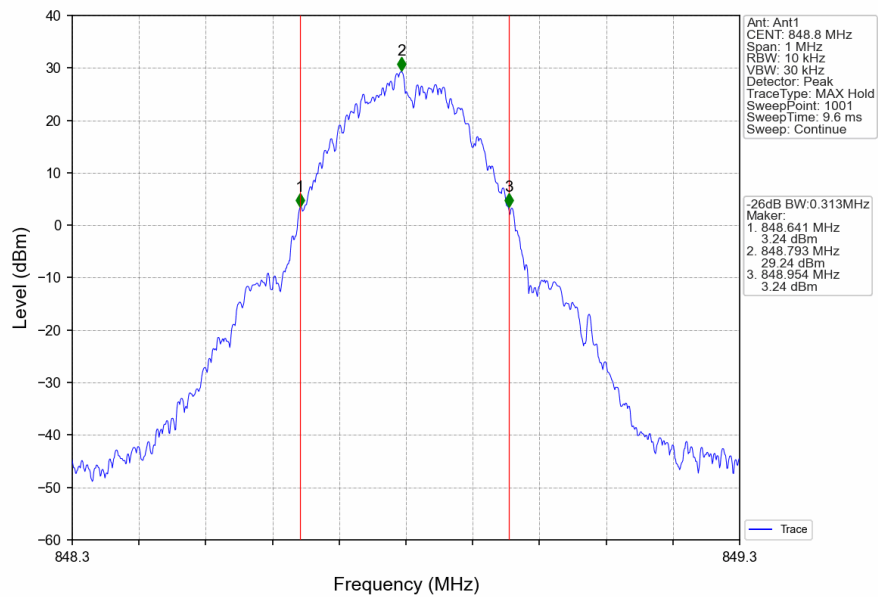
GSM850_GPRS_LCH_824.2MHz_1 TX Slot_NTNV



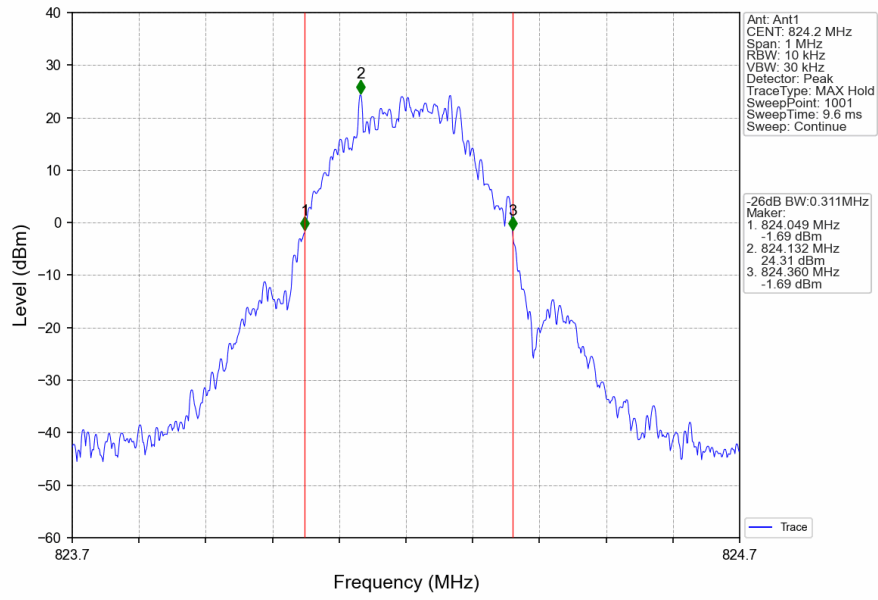
GSM850_GPRS_MCH_836.6MHz_1 TX Slot_NTNV



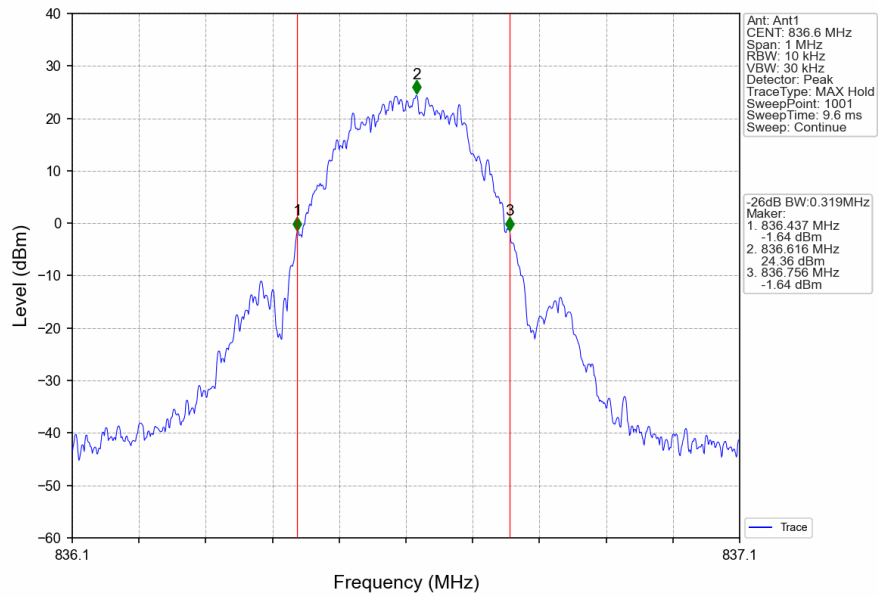
GSM850_GPRS_HCH_848.8MHz_1 TX Slot_NTNV



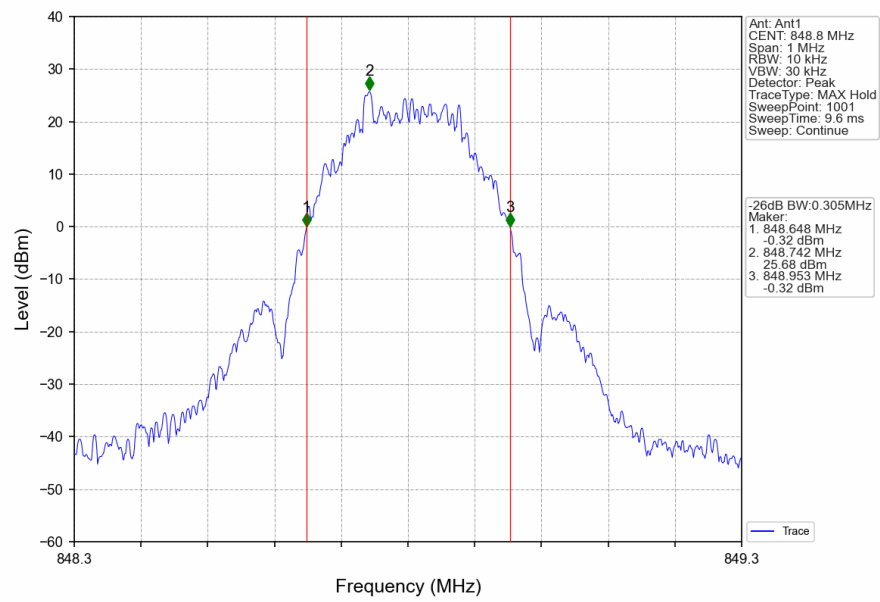
GSM850_EGPRS_LCH_824.2MHz_1 TX Slot_NTNV



GSM850_EGPRS_MCH_836.6MHz_1 TX Slot_NTNV



GSM850 EGPRS HCH 848.8MHz 1 TX Slot NTNV



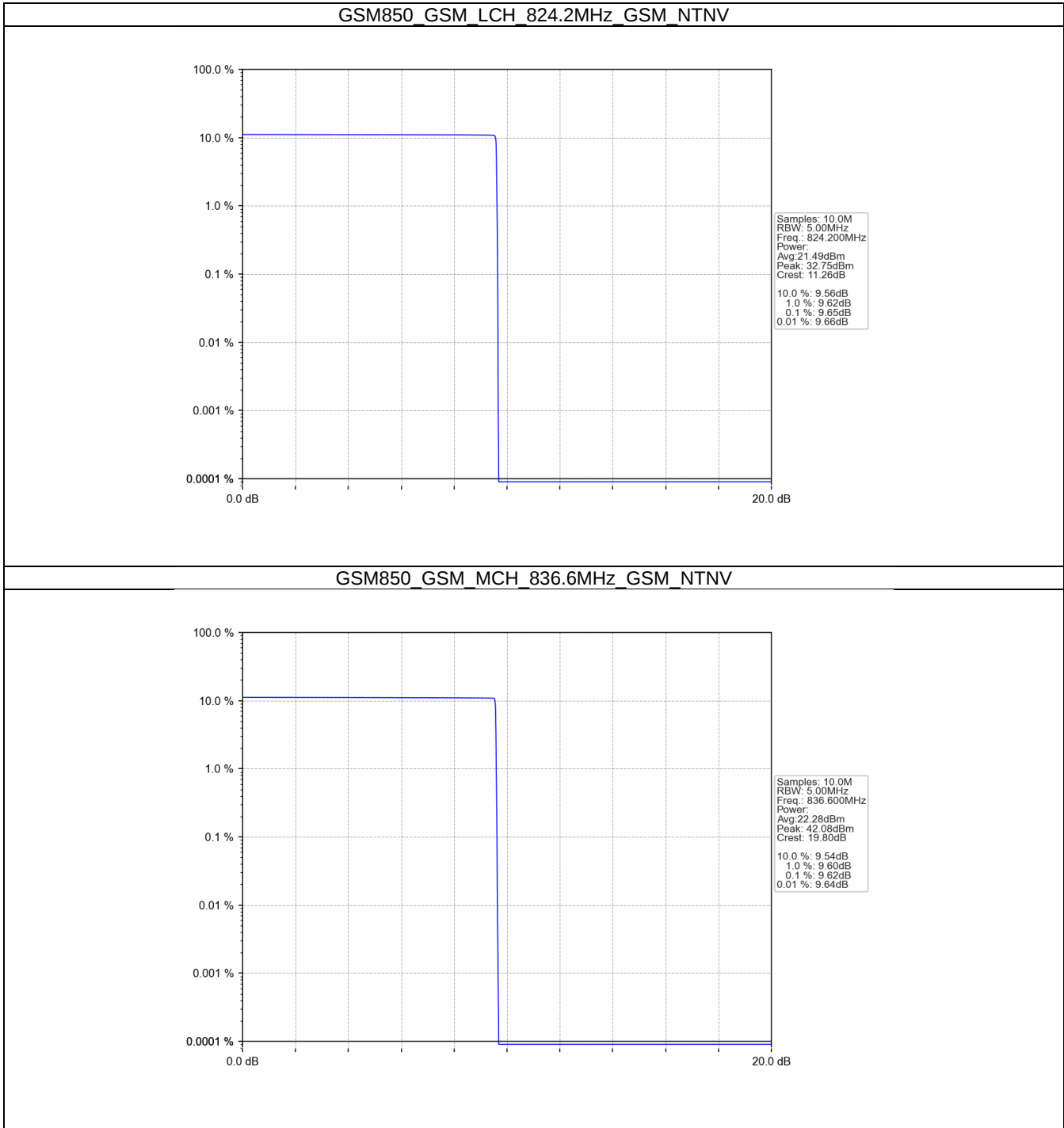
4. Peak-Average Ratio

4.1 GSM850

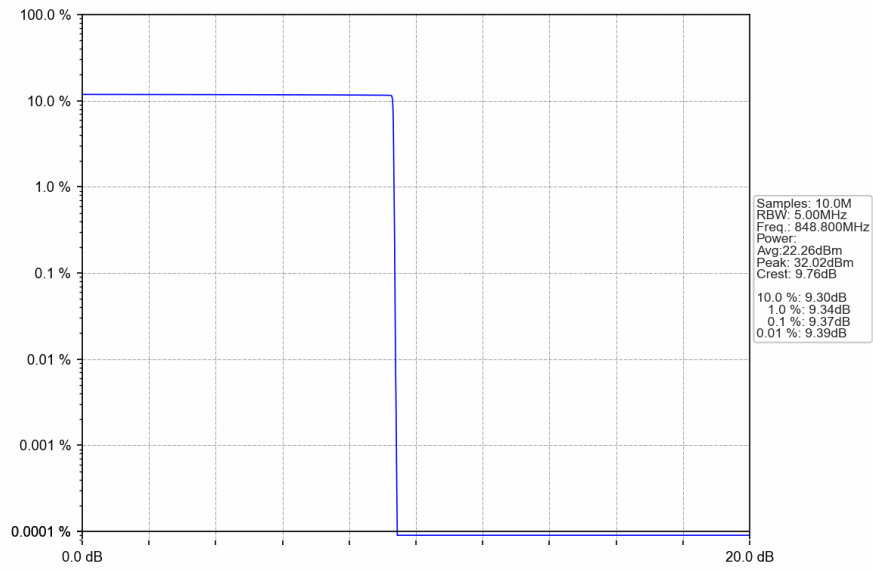
4.1.1 Test Result

Band: GSM850						
ENV	Mode		Frequency (MHz)	Peak-Average Ratio (dB)		Verdict
	Network	Subset		Result	Limit	
NTNV	GSM	GSM	824.2	9.65	<=13	Pass
			836.6	9.62	<=13	Pass
			848.8	9.37	<=13	Pass
	GPRS	4 TX Slots	824.2	3.70	<=13	Pass
			836.6	3.66	<=13	Pass
			848.8	3.59	<=13	Pass
	EGPRS	4 TX Slots	824.2	8.48	<=13	Pass
			836.6	8.52	<=13	Pass
			848.8	8.43	<=13	Pass

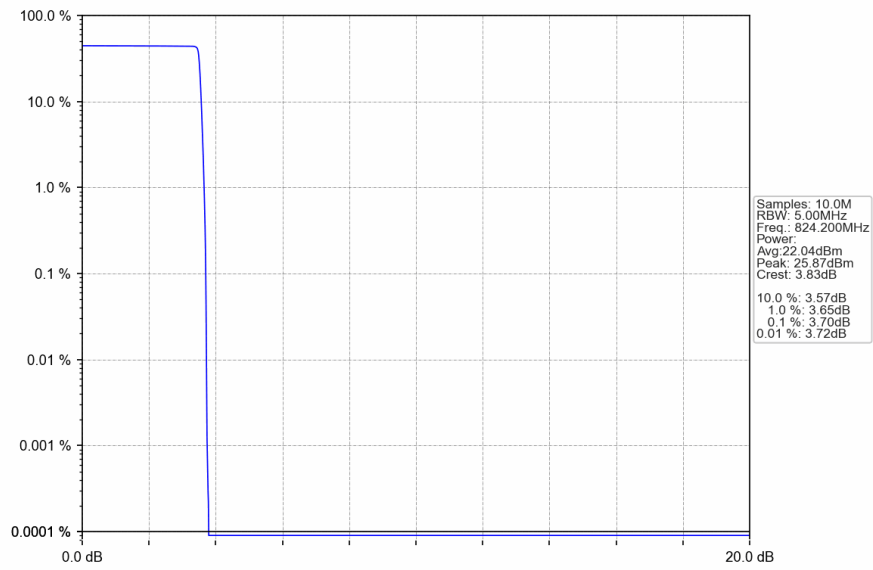
4.1.2 Test Graph



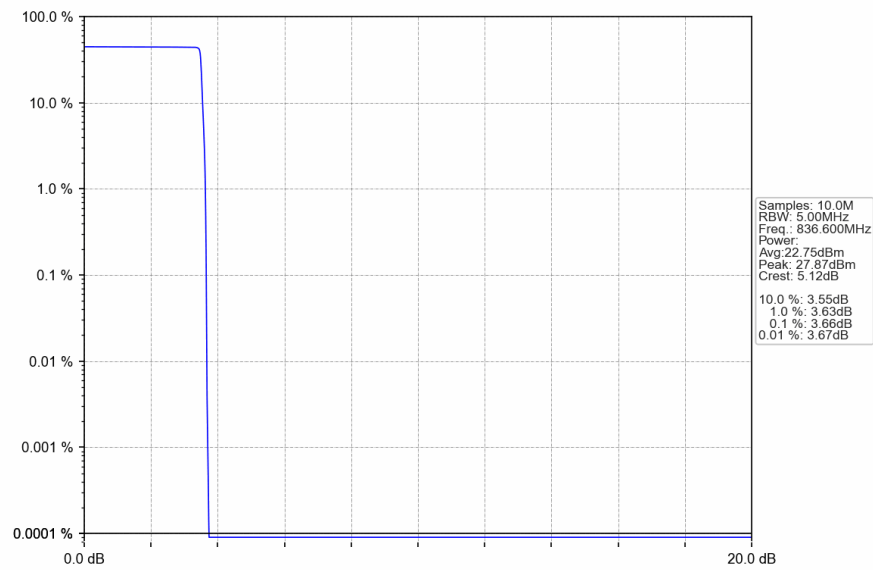
GSM850 GSM_HCH_848.8MHz GSM_NTNV



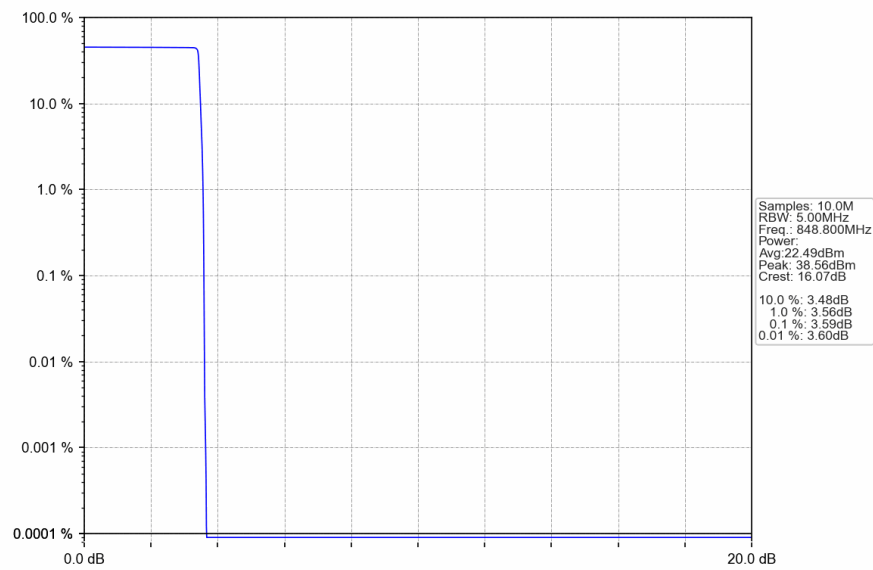
GSM850 GPRS_LCH_824.2MHz_4 TX Slots_NTNV



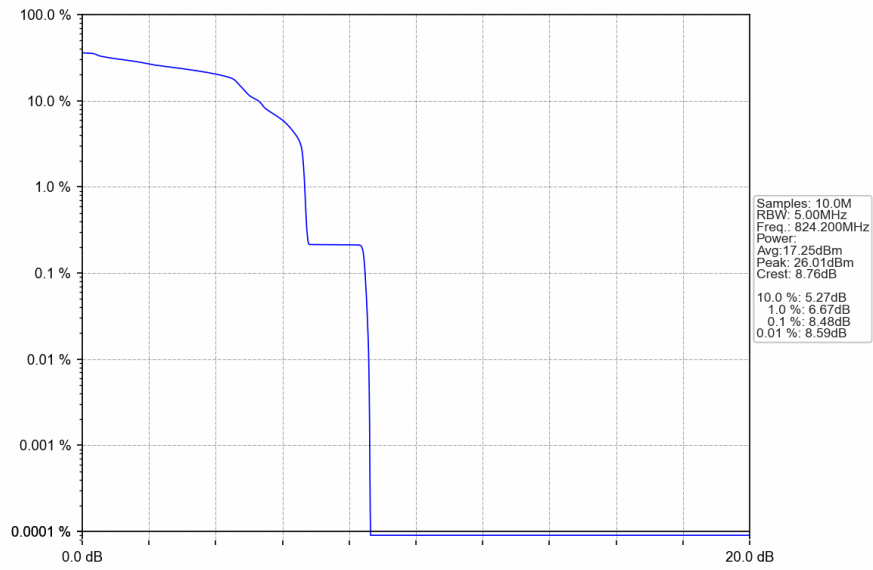
GSM850_GPRS_MCH_836.6MHz_4 TX Slots_NTNV



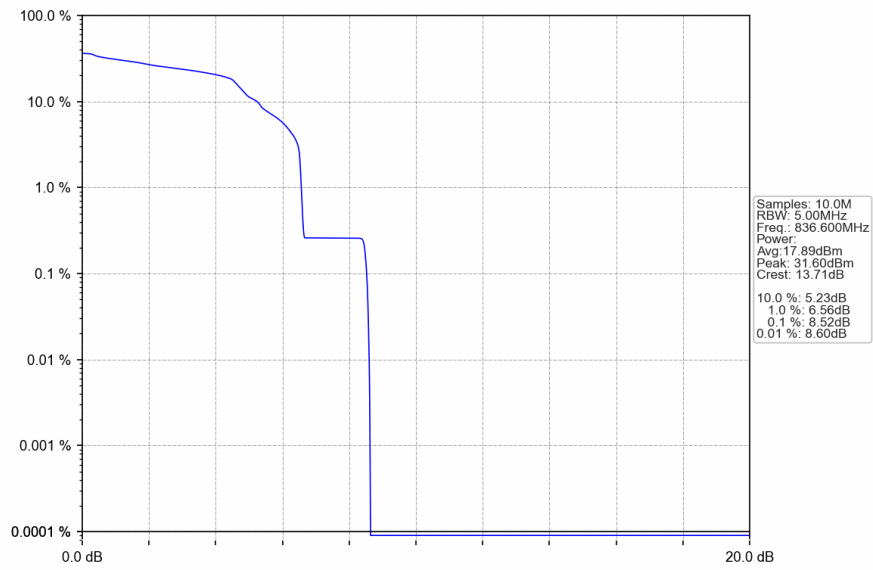
GSM850_GPRS_HCH_848.8MHz_4 TX Slots_NTNV



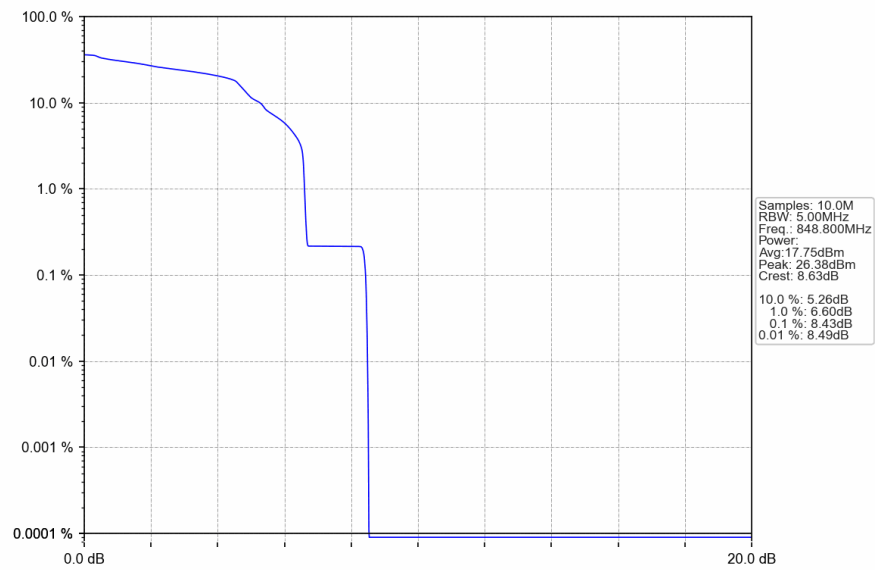
GSM850_EGPRS_LCH_824.2MHz_4 TX Slots_NTNV



GSM850_EGPRS_MCH_836.6MHz_4 TX Slots_NTNV



GSM850_EGPRS_HCH_848.8MHz_4_TX_Slots_NTNV



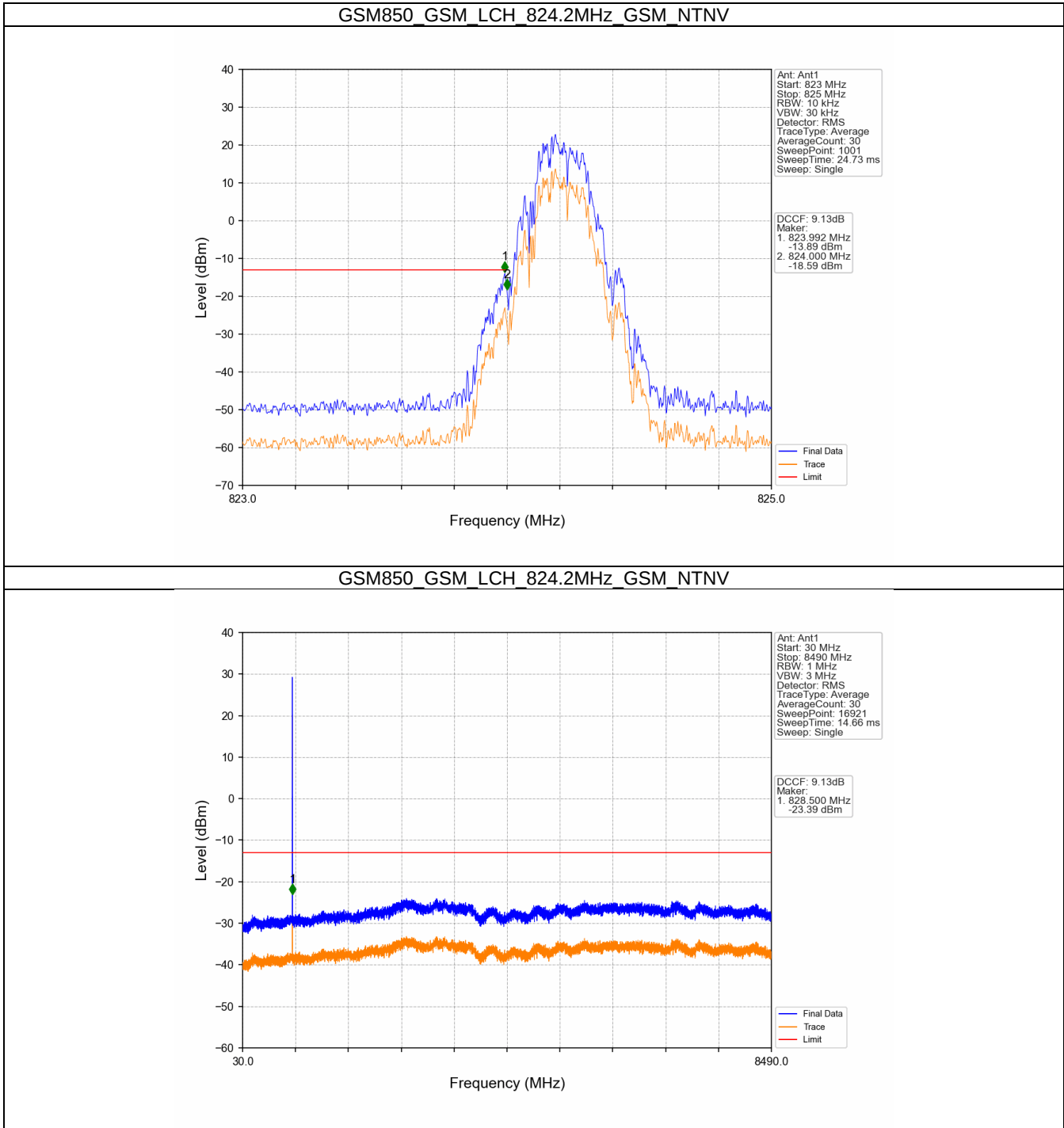
5. Spurious Emission

5.1 GSM850

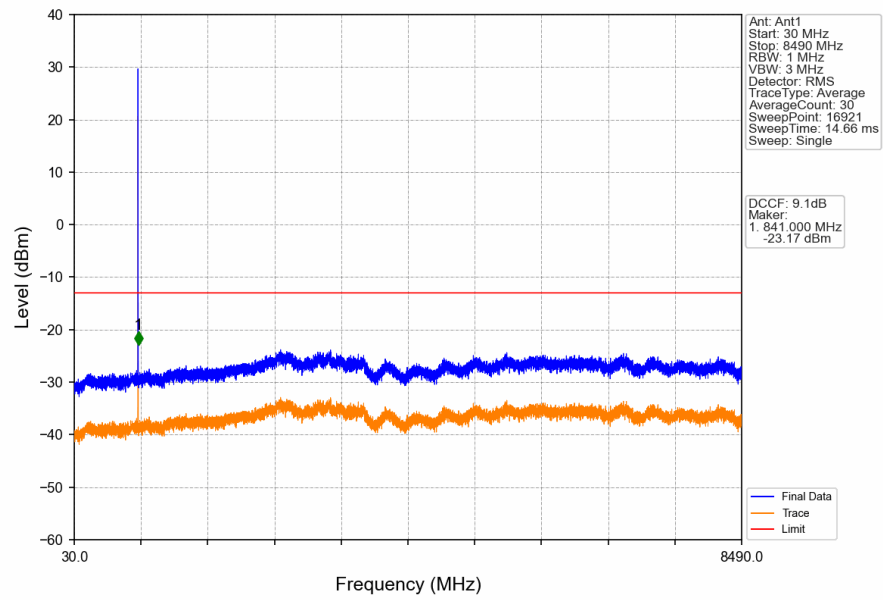
5.1.1 Test Result

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	

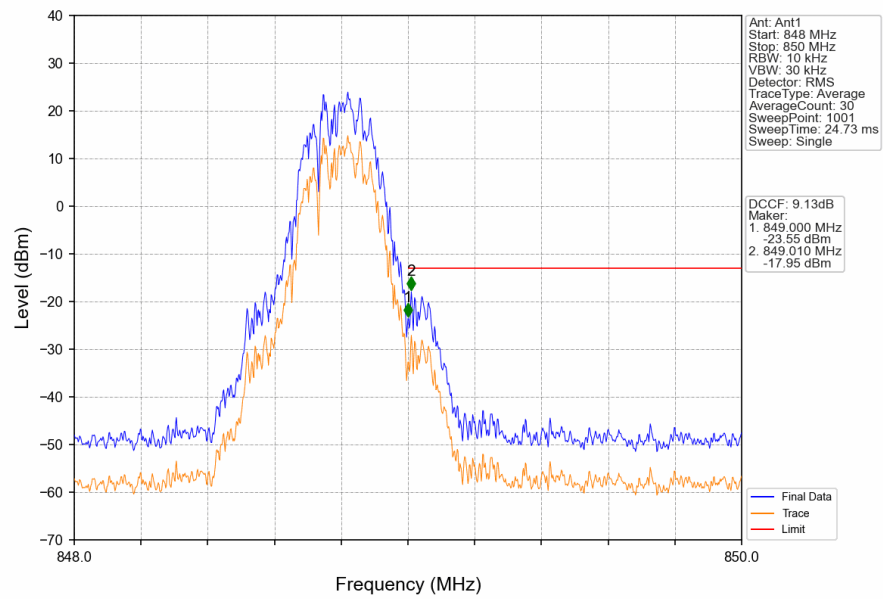
5.1.2 Test Graph



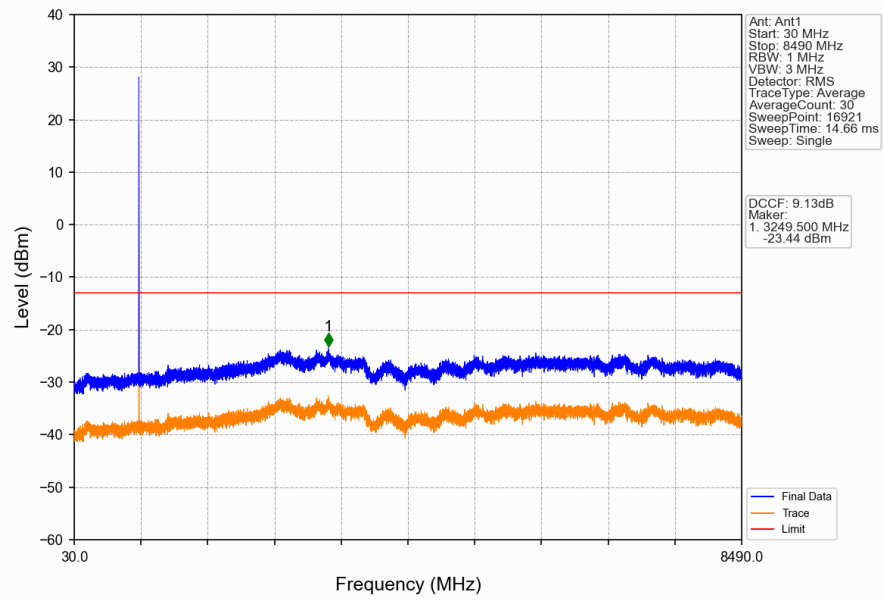
GSM850 GSM_MCH_836.6MHz_GSM_NTNV



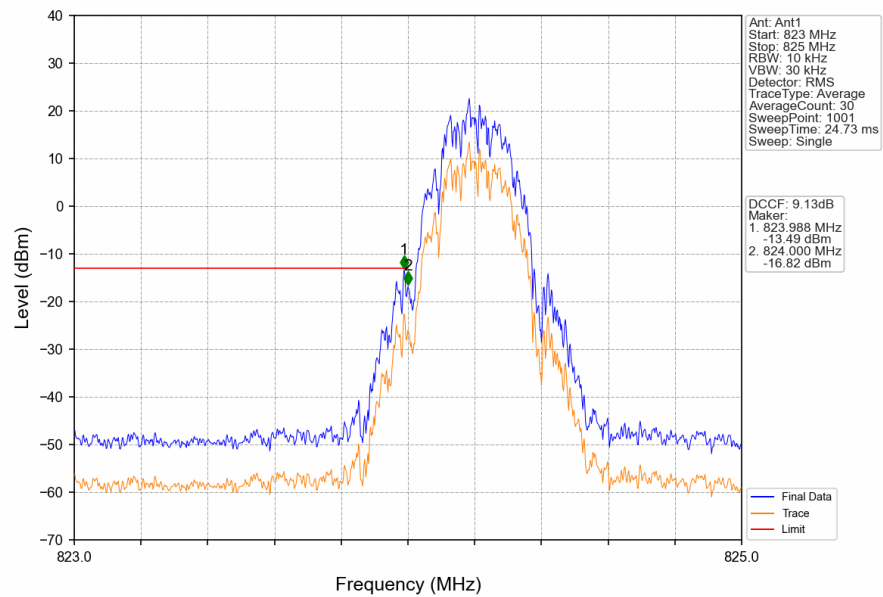
GSM850 GSM_HCH_848.8MHz_GSM_NTNV



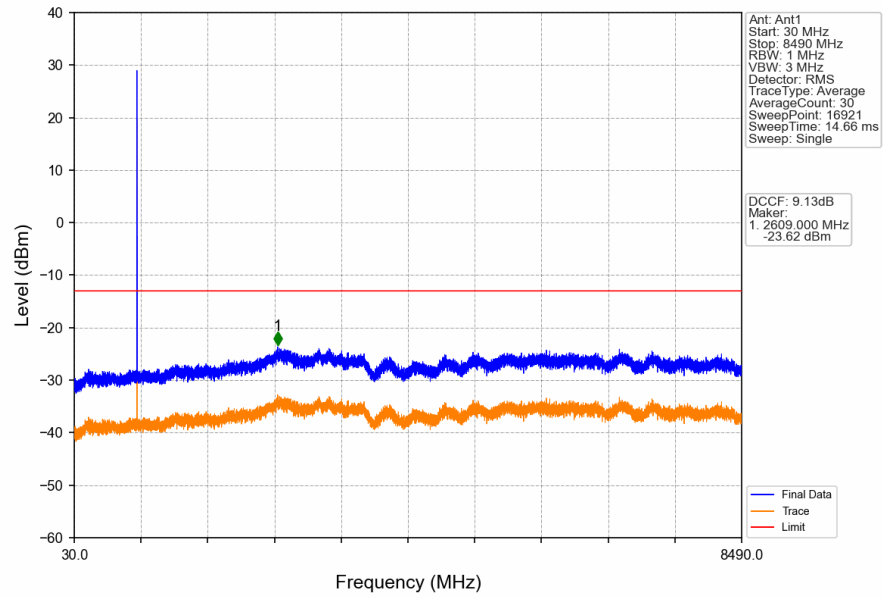
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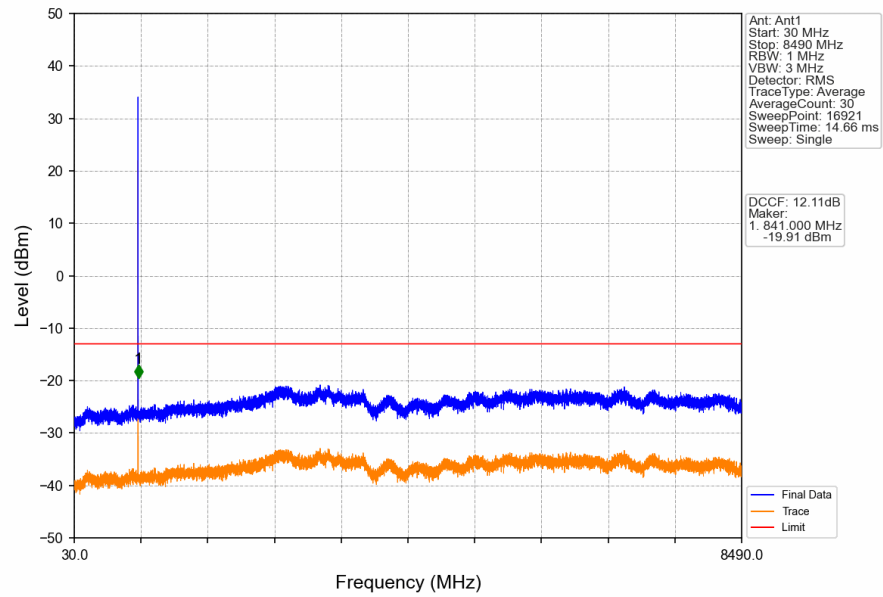
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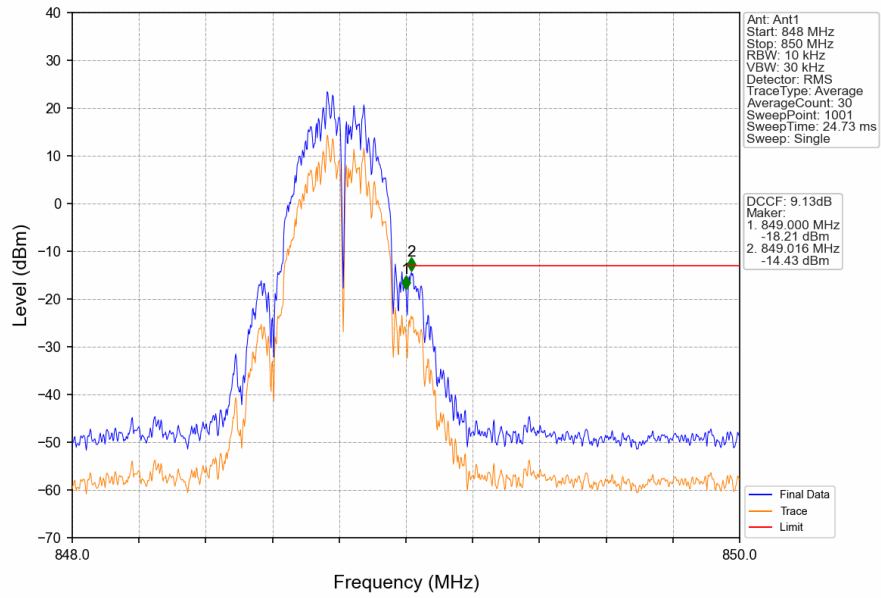
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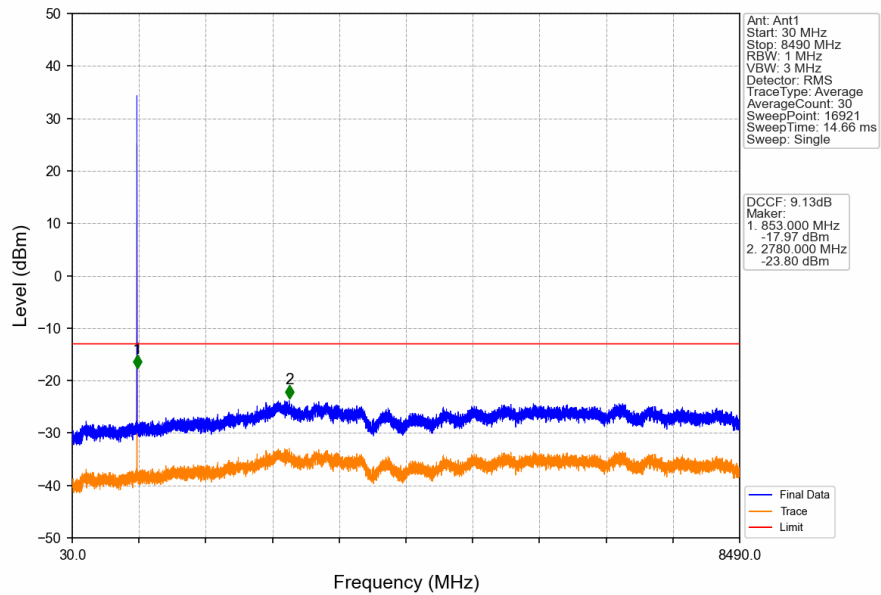
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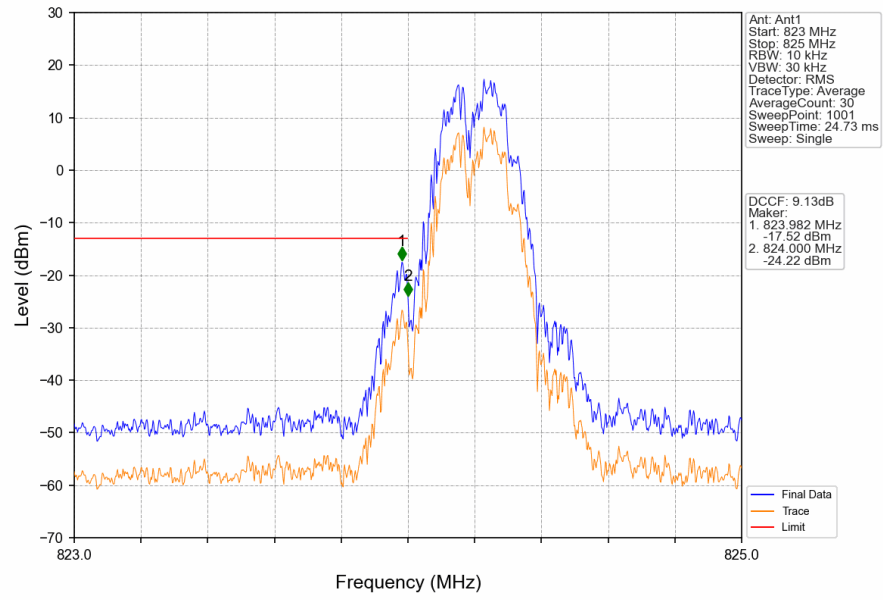
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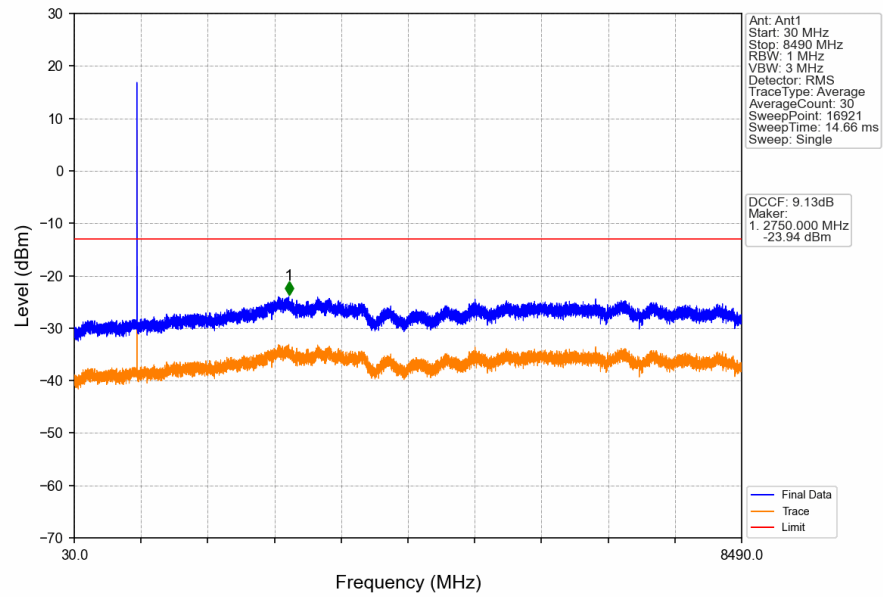
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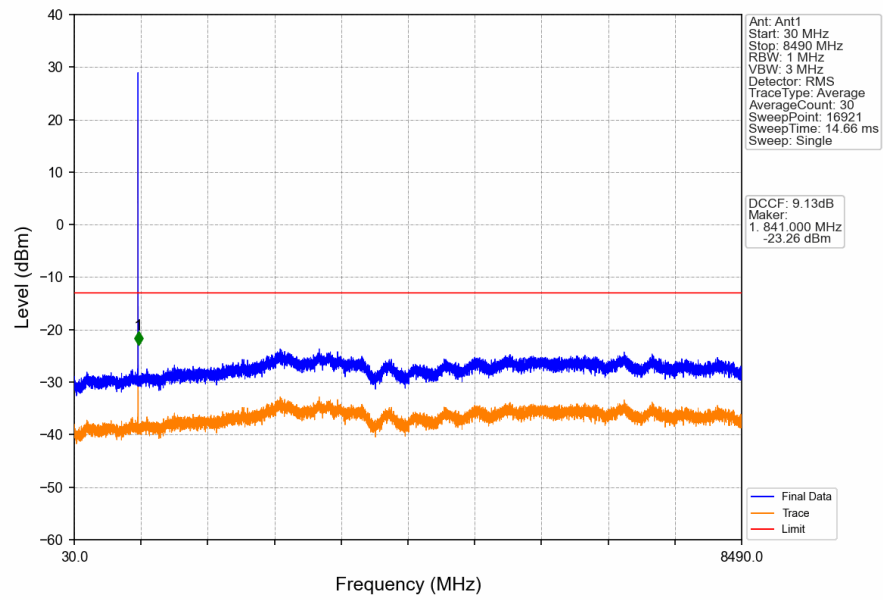
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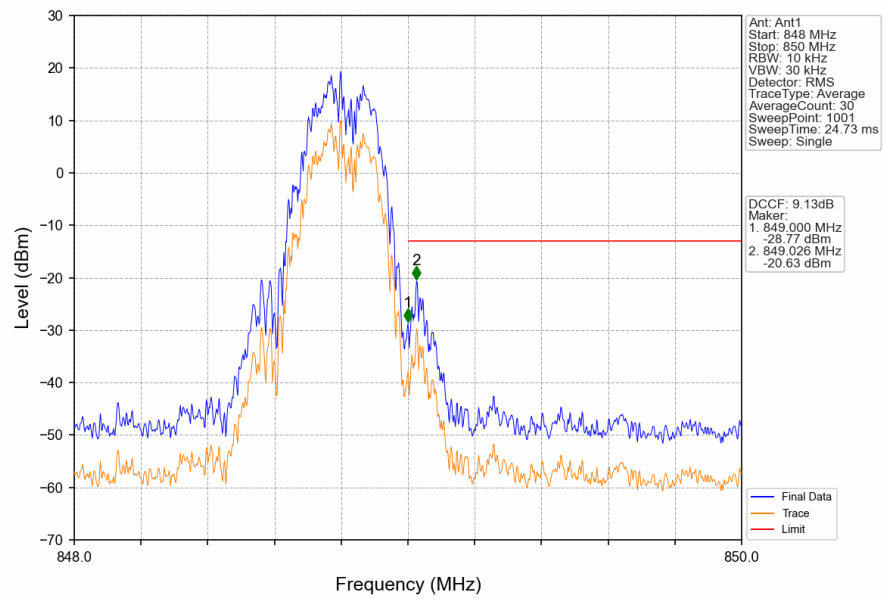
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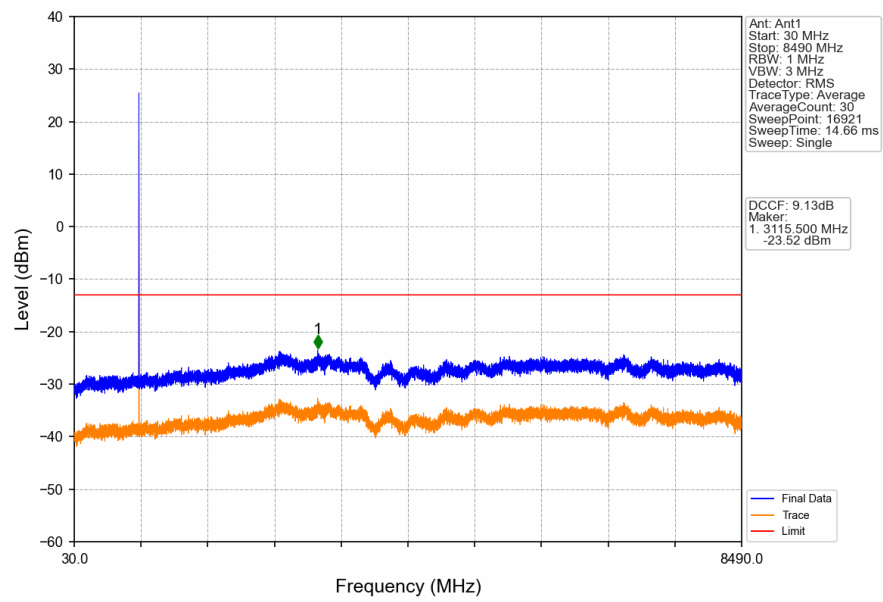
GSM850_EGPRS_MCH_836.6MHz_1 TX Slot_NTNV



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-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
1652.8	-69.11	-13	-56.11	-71.98	2.62	5.49	Horizontal	Pass
2479.2	-52.48	-13	-39.48	-55.18	3.07	5.77	Horizontal	Pass
3305.6	-67.25	-13	-54.25	-71.63	3.3	7.68	Horizontal	Pass
1652.8	-59.79	-13	-46.79	-62.66	2.62	5.49	Vertical	Pass
2479.2	-44.64	-13	-31.64	-47.34	3.07	5.77	Vertical	Pass
3305.6	-66.92	-13	-53.92	-71.3	3.3	7.68	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
1672.8	-68.66	-13	-55.66	-71.47	2.63	5.44	Horizontal	Pass
2509.2	-47.02	-13	-34.02	-49.78	3.08	5.84	Horizontal	Pass
3345.6	-66.96	-13	-53.96	-71.42	3.32	7.78	Horizontal	Pass
1672.8	-60.46	-13	-47.46	-63.27	2.63	5.44	Vertical	Pass
2509.2	-46.13	-13	-33.13	-48.89	3.08	5.84	Vertical	Pass
3345.6	-67.05	-13	-54.05	-71.51	3.32	7.78	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	-73.07	-13	-60.07	-75.81	2.64	5.38	Horizontal	Pass
2546.4	-62.5	-13	-49.5	-65.33	3.09	5.92	Horizontal	Pass
3395.2	-67.62	-13	-54.62	-72.18	3.35	7.91	Horizontal	Pass
1697.6	-62.45	-13	-49.45	-65.19	2.64	5.38	Vertical	Pass
2546.4	-50.38	-13	-37.38	-53.21	3.09	5.92	Vertical	Pass
3395.2	-67.43	-13	-54.43	-71.99	3.35	7.91	Vertical	Pass