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	GPRS	1 TX Slot	824.2	32.44	3.00	33.29	<=38.45	Pass
		2 TX Slots	824.2	29.88	3.00	30.73	<=38.45	Pass
		3 TX Slots	824.2	28.83	3.00	29.68	<=38.45	Pass
		4 TX Slots	824.2	27.73	3.00	28.58	<=38.45	Pass
		1 TX Slot	836.6	32.78	3.00	33.63	<=38.45	Pass
		2 TX Slots	836.6	29.68	3.00	30.53	<=38.45	Pass
		3 TX Slots	836.6	28.68	3.00	29.53	<=38.45	Pass
		4 TX Slots	836.6	27.58	3.00	28.43	<=38.45	Pass
		1 TX Slot	848.8	32.18	3.00	33.03	<=38.45	Pass
		2 TX Slots	848.8	29.56	3.00	30.41	<=38.45	Pass
		3 TX Slots	848.8	28.53	3.00	29.38	<=38.45	Pass
		4 TX Slots	848.8	27.45	3.00	28.30	<=38.45	Pass
	EGPRS	1 TX Slot	824.2	26.23	3.00	27.08	<=38.45	Pass
		2 TX Slots	824.2	24.95	3.00	25.80	<=38.45	Pass
		3 TX Slots	824.2	22.93	3.00	23.78	<=38.45	Pass
		4 TX Slots	824.2	22.10	3.00	22.95	<=38.45	Pass
		1 TX Slot	836.6	26.48	3.00	29.33	<=38.45	Pass
		2 TX Slots	836.6	24.96	3.00	25.81	<=38.45	Pass
		3 TX Slots	836.6	23.01	3.00	23.86	<=38.45	Pass
		4 TX Slots	836.6	22.08	3.00	22.93	<=38.45	Pass
		1 TX Slot	848.8	26.04	3.00	28.89	<=38.45	Pass
		2 TX Slots	848.8	24.70	3.00	25.55	<=38.45	Pass
		3 TX Slots	848.8	22.70	3.00	23.55	<=38.45	Pass
		4 TX Slots	848.8	21.74	3.00	22.59	<=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	
GPRS	824.2	20	3.27	34.487	0.0418	-2.5 to 2.5	Pass
			3.85	38.442	0.0466	-2.5 to 2.5	Pass
			4.43	34.093	0.0414	-2.5 to 2.5	Pass
		-30	3.85	34.295	0.0416	-2.5 to 2.5	Pass
		-20	3.85	34.560	0.0419	-2.5 to 2.5	Pass
		-10	3.85	33.659	0.0408	-2.5 to 2.5	Pass
		0	3.85	29.468	0.0358	-2.5 to 2.5	Pass
		10	3.85	30.062	0.0365	-2.5 to 2.5	Pass

		30	3.85	35.960	0.0436	-2.5 to 2.5	Pass
		40	3.85	33.870	0.0411	-2.5 to 2.5	Pass
		50	3.85	34.426	0.0418	-2.5 to 2.5	Pass
	836.6	20	3.27	33.734	0.0403	-2.5 to 2.5	Pass
			3.85	38.964	0.0466	-2.5 to 2.5	Pass
			4.43	33.938	0.0406	-2.5 to 2.5	Pass
		-30	3.85	36.375	0.0435	-2.5 to 2.5	Pass
		-20	3.85	38.996	0.0466	-2.5 to 2.5	Pass
		-10	3.85	38.571	0.0461	-2.5 to 2.5	Pass
		0	3.85	33.956	0.0406	-2.5 to 2.5	Pass
		10	3.85	37.814	0.0452	-2.5 to 2.5	Pass
		30	3.85	38.502	0.0460	-2.5 to 2.5	Pass
		40	3.85	33.675	0.0403	-2.5 to 2.5	Pass
		50	3.85	34.186	0.0409	-2.5 to 2.5	Pass
	848.8	20	3.27	28.123	0.0331	-2.5 to 2.5	Pass
			3.85	29.553	0.0348	-2.5 to 2.5	Pass
			4.43	35.819	0.0422	-2.5 to 2.5	Pass
		-30	3.85	31.723	0.0374	-2.5 to 2.5	Pass
		-20	3.85	28.638	0.0337	-2.5 to 2.5	Pass
		-10	3.85	28.076	0.0331	-2.5 to 2.5	Pass
		0	3.85	28.677	0.0338	-2.5 to 2.5	Pass
		10	3.85	33.667	0.0397	-2.5 to 2.5	Pass
		30	3.85	33.608	0.0396	-2.5 to 2.5	Pass
		40	3.85	33.383	0.0393	-2.5 to 2.5	Pass
		50	3.85	31.550	0.0372	-2.5 to 2.5	Pass
EGPRS	824.2	20	3.27	27.592	0.0335	-2.5 to 2.5	Pass
			3.85	29.384	0.0357	-2.5 to 2.5	Pass
			4.43	28.941	0.0351	-2.5 to 2.5	Pass
		-30	3.85	23.829	0.0289	-2.5 to 2.5	Pass
		-20	3.85	26.607	0.0323	-2.5 to 2.5	Pass
		-10	3.85	32.065	0.0389	-2.5 to 2.5	Pass
		0	3.85	34.251	0.0416	-2.5 to 2.5	Pass
		10	3.85	28.597	0.0347	-2.5 to 2.5	Pass
		30	3.85	28.473	0.0345	-2.5 to 2.5	Pass
		40	3.85	29.539	0.0358	-2.5 to 2.5	Pass
		50	3.85	28.390	0.0344	-2.5 to 2.5	Pass
	836.6	20	3.27	27.401	0.0328	-2.5 to 2.5	Pass
			3.85	31.672	0.0379	-2.5 to 2.5	Pass
			4.43	35.361	0.0423	-2.5 to 2.5	Pass
		-30	3.85	34.177	0.0409	-2.5 to 2.5	Pass
		-20	3.85	32.119	0.0384	-2.5 to 2.5	Pass
		-10	3.85	31.671	0.0379	-2.5 to 2.5	Pass
		0	3.85	26.415	0.0316	-2.5 to 2.5	Pass
		10	3.85	27.217	0.0325	-2.5 to 2.5	Pass
		30	3.85	36.655	0.0438	-2.5 to 2.5	Pass
		40	3.85	36.575	0.0437	-2.5 to 2.5	Pass
		50	3.85	35.914	0.0429	-2.5 to 2.5	Pass
	848.8	20	3.27	31.934	0.0376	-2.5 to 2.5	Pass
			3.85	27.947	0.0329	-2.5 to 2.5	Pass
			4.43	34.176	0.0403	-2.5 to 2.5	Pass
		-30	3.85	32.485	0.0383	-2.5 to 2.5	Pass
		-20	3.85	31.292	0.0369	-2.5 to 2.5	Pass
		-10	3.85	29.689	0.0350	-2.5 to 2.5	Pass
		0	3.85	36.157	0.0426	-2.5 to 2.5	Pass
		10	3.85	35.423	0.0417	-2.5 to 2.5	Pass
		30	3.85	37.622	0.0443	-2.5 to 2.5	Pass
		40	3.85	30.915	0.0364	-2.5 to 2.5	Pass

		50	3.85	29.575	0.0348	-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	GPRS	1 TX Slot	824.2	0.248	/	Pass
			836.6	0.249	/	Pass
			848.8	0.246	/	Pass
	EGPRS	1 TX Slot	824.2	0.253	/	Pass
			836.6	0.242	/	Pass
			848.8	0.255	/	Pass

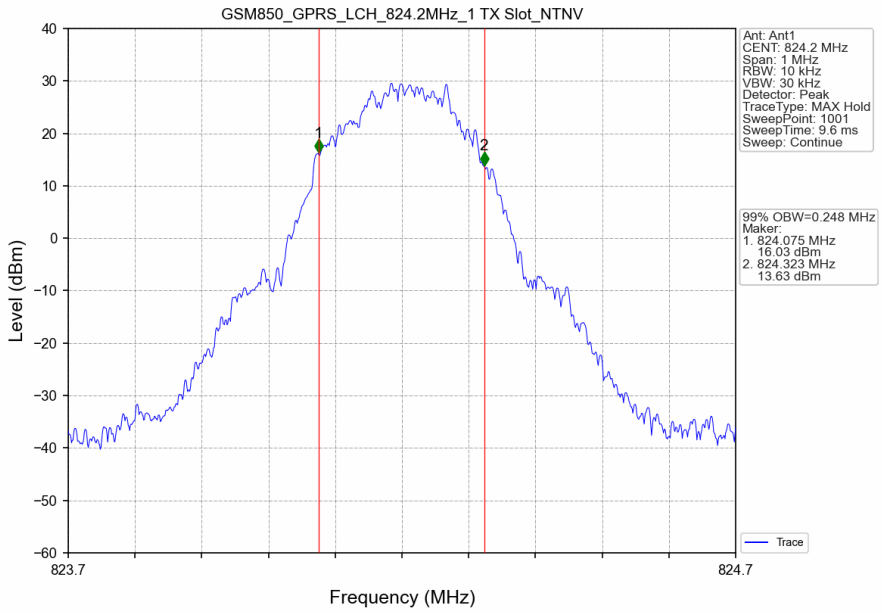
3.1.2 GSM850_XDB

Band: GSM850						
ENV	Mode		Frequency (MHz)	26dB Bandwidth (MHz)		Verdict
	Network	Subset		Result	Limit	
NTNV	GPRS	1 TX Slot	824.2	0.313	/	Pass
			836.6	0.314	/	Pass
			848.8	0.308	/	Pass
	EGPRS	1 TX Slot	824.2	0.309	/	Pass
			836.6	0.309	/	Pass
			848.8	0.316	/	Pass

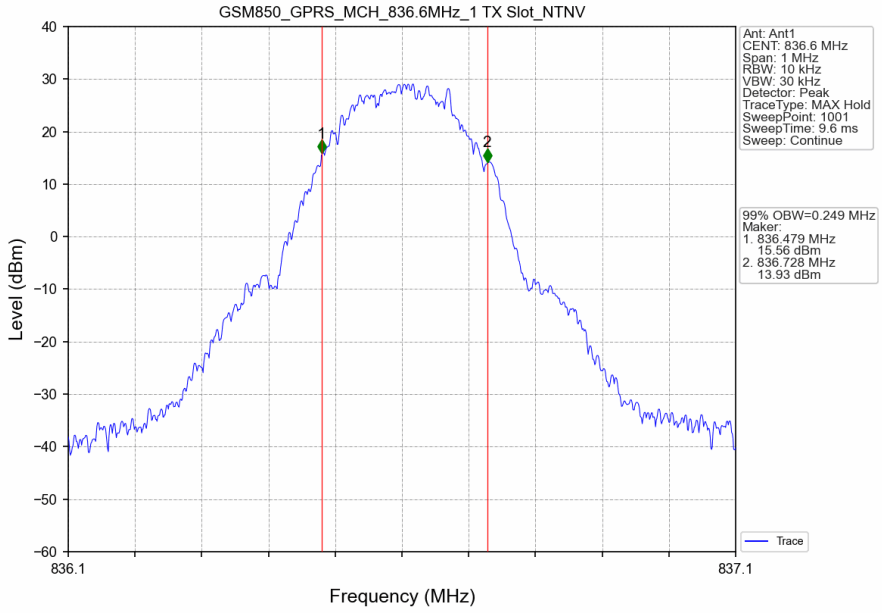
3.2 Test Graph

3.2.1 GSM850_OBW

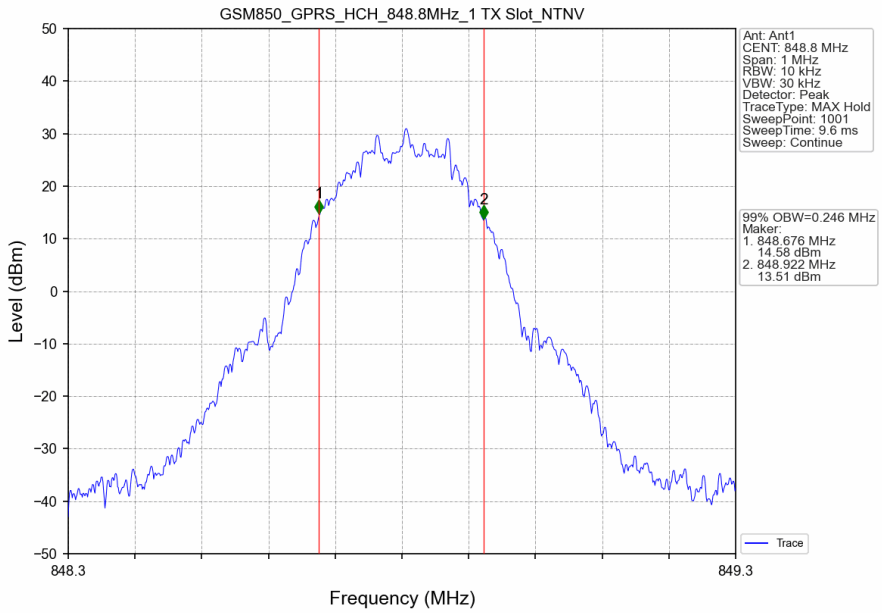
GSM850_GPRS_LCH_824.2MHz_1 TX Slot_NTNV



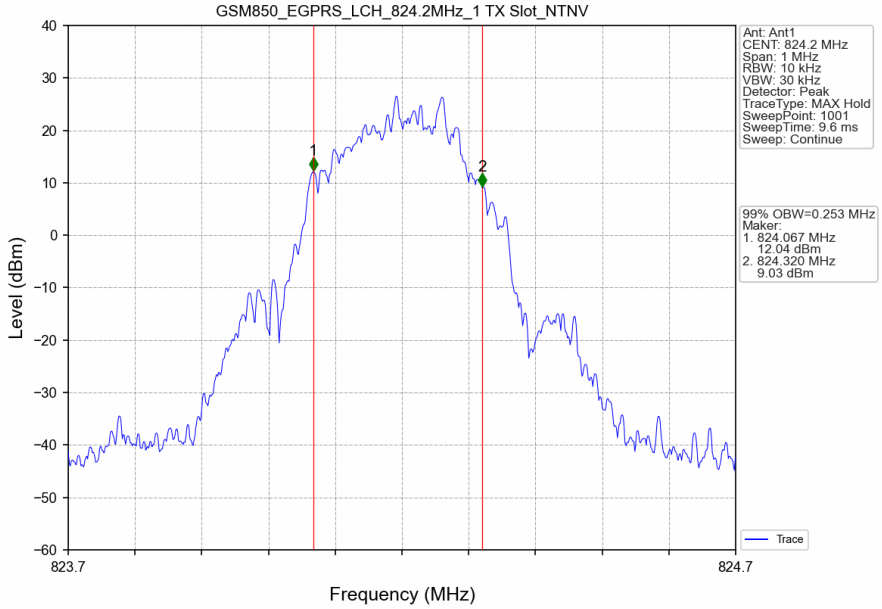
GSM850_GPRS_MCH_836.6MHz_1 TX Slot_NTNV



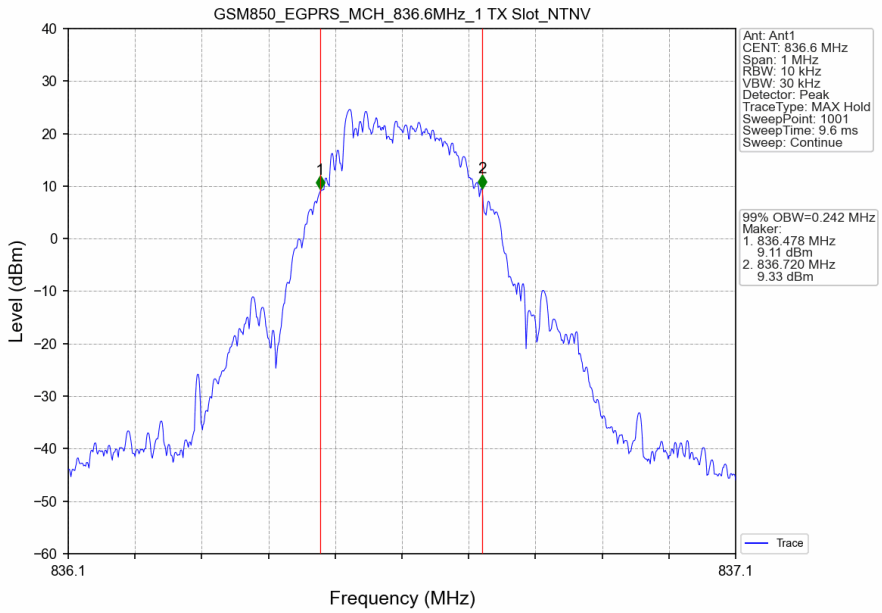
GSM850_GPRS_HCH_848.8MHz_1 TX Slot_NTNV



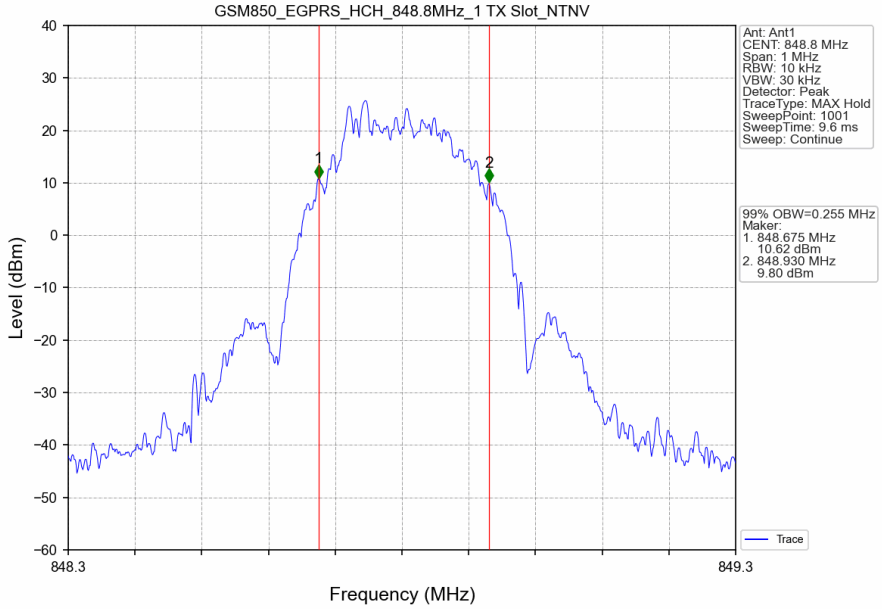
GSM850_EGPRS_LCH_824.2MHz_1 TX Slot_NTNV



GSM850_EGPRS_MCH_836.6MHz_1 TX Slot_NTNV

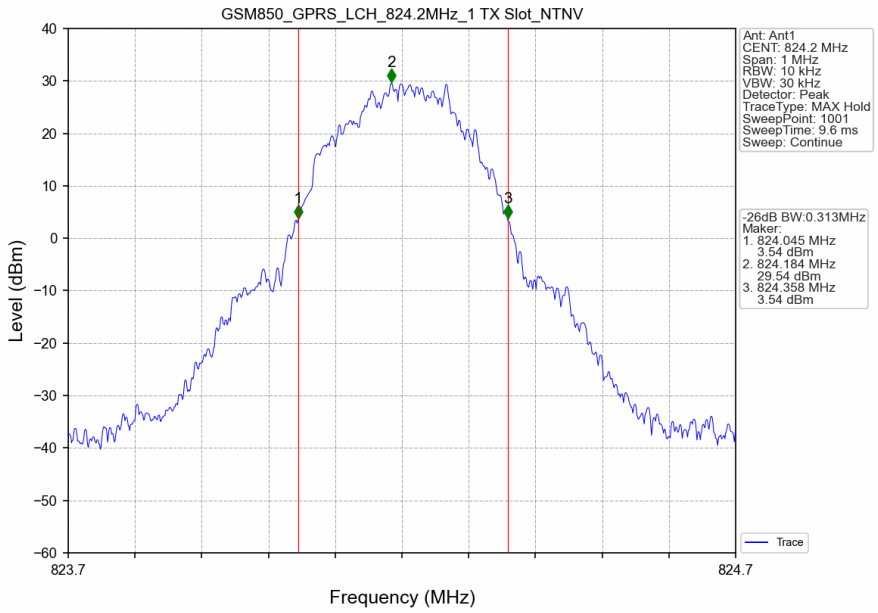


GSM850_EGPRS_HCH_848.8MHz_1 TX Slot_NTNV

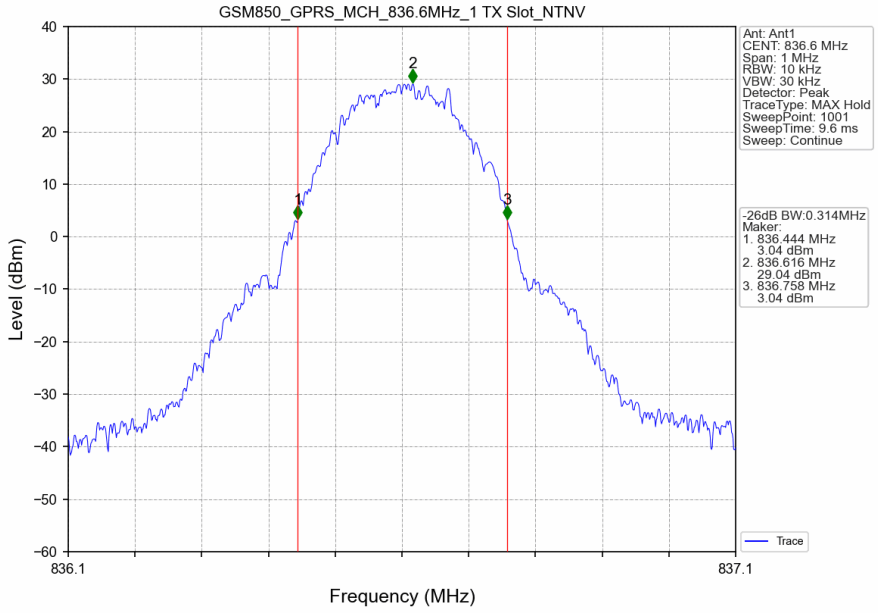


3.2.2 GSM850_XDB

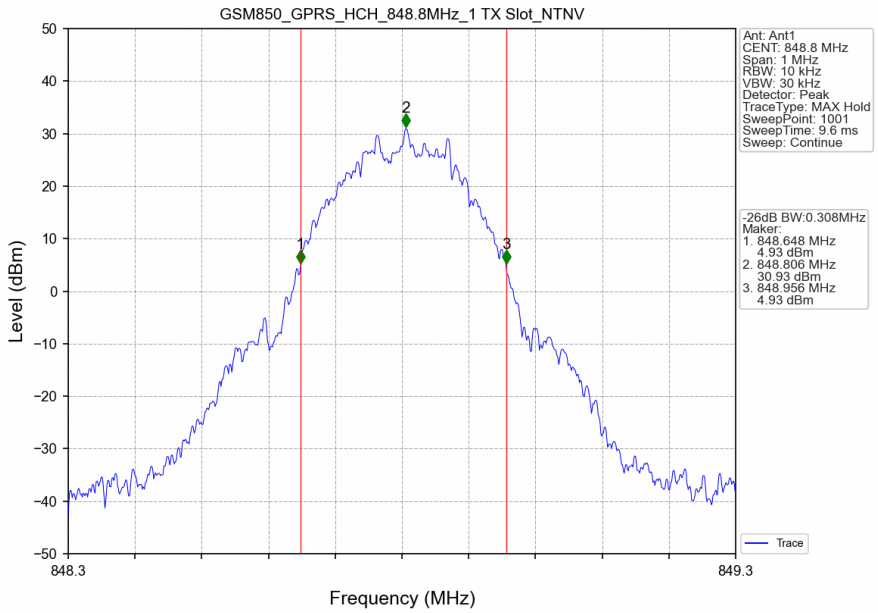
GSM850_GPRS_LCH_824.2MHz_1 TX Slot_NTNV



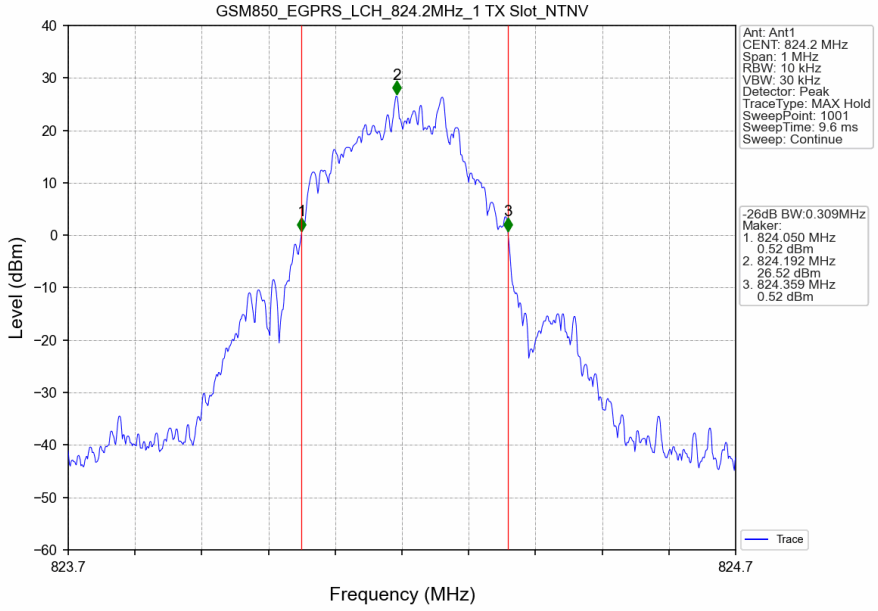
GSM850_GPRS_MCH_836.6MHz_1 TX Slot_NTNV



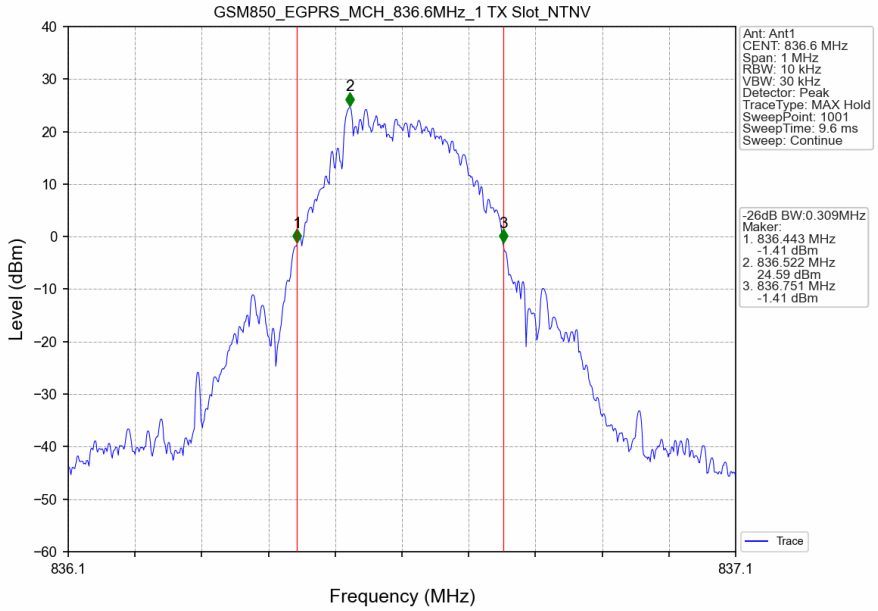
GSM850_GPRS_HCH_848.8MHz_1 TX Slot_NTNV



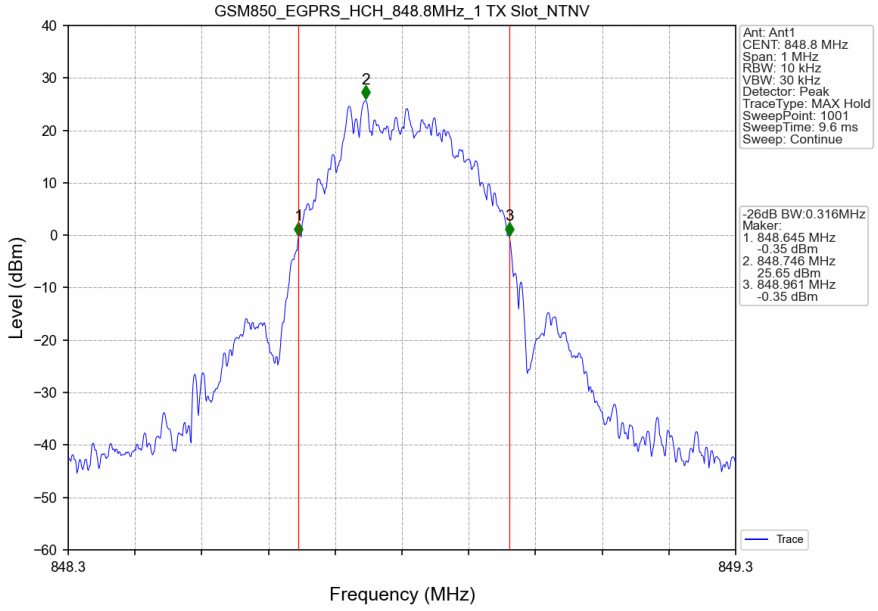
GSM850_EGPRS_LCH_824.2MHz_1 TX Slot_NTNV



GSM850_EGPRS_MCH_836.6MHz_1 TX Slot_NTNV



GSM850_EGPRS_HCH_848.8MHz_1 TX Slot_NTNV



4. Peak-Average Ratio

4.1 Test Result

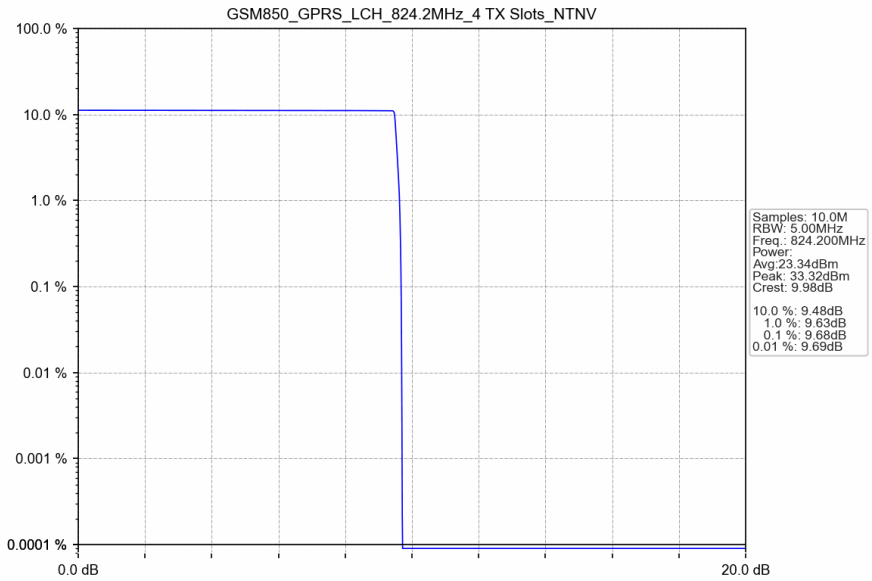
4.1.1 GSM850

Band: GSM850						
ENV	Mode		Frequency (MHz)	Peak-Average Ratio (dB)		Verdict
	Network	Subset		Result	Limit	
NTNV	GPRS	4 TX Slots	824.2	9.68	<=13	Pass
			836.6	3.91	<=13	Pass
			848.8	3.85	<=13	Pass
	EGPRS	4 TX Slots	824.2	9.46	<=13	Pass
			836.6	9.48	<=13	Pass
			848.8	9.49	<=13	Pass

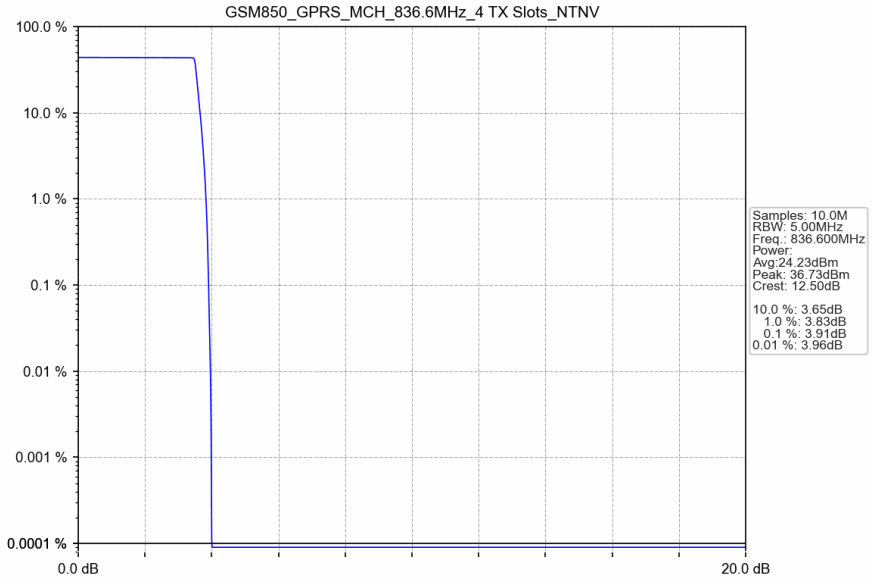
4.2 Test Graph

4.2.1 GSM850

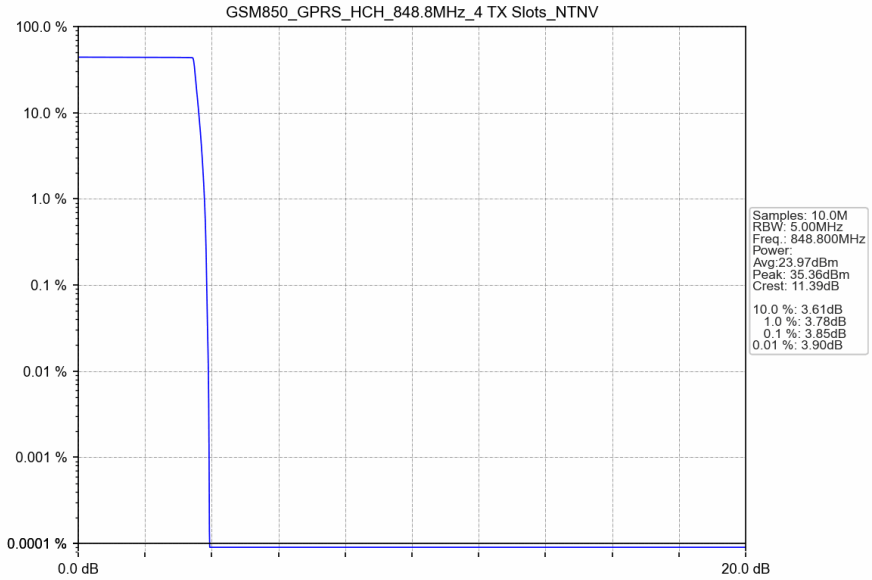
GSM850_GPRS_LCH_824.2MHz_4 TX Slots_NTNV



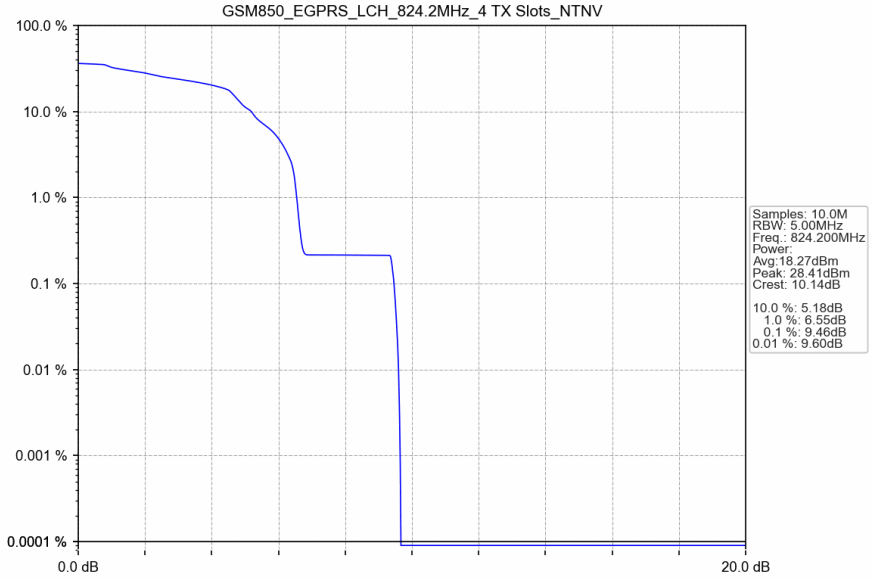
GSM850_GPRS_MCH_836.6MHz_4 TX Slots_NTNV



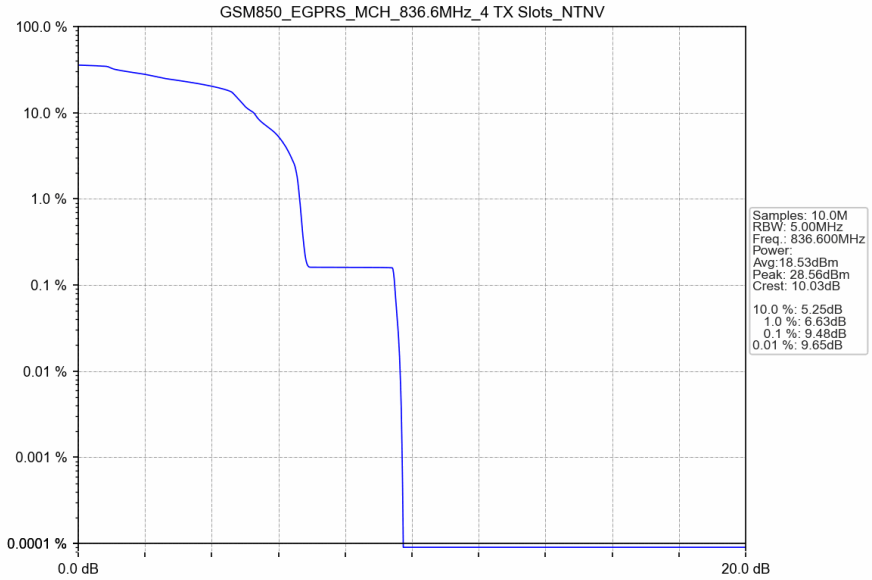
GSM850_GPRS_HCH_848.8MHz_4 TX Slots_NTNV



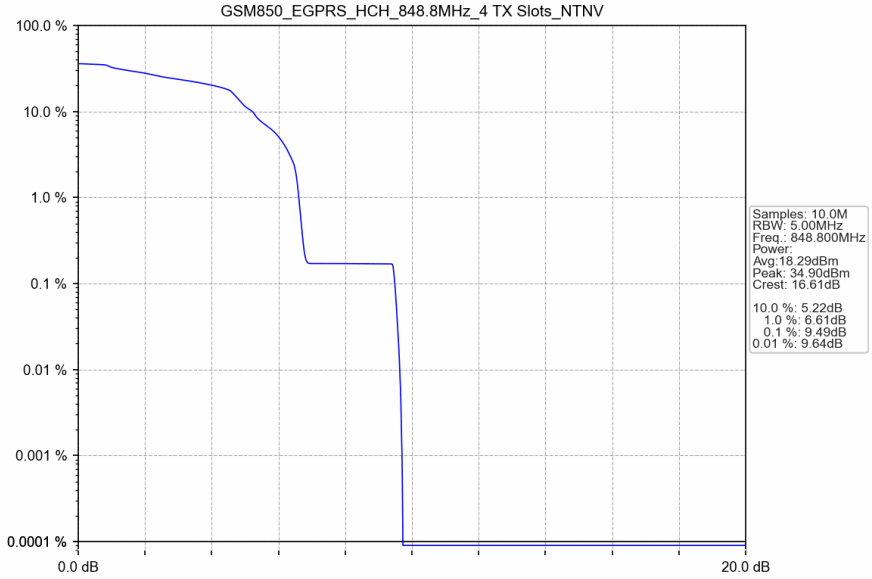
GSM850_EGPRS_LCH_824.2MHz_4 TX Slots_NTNV



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

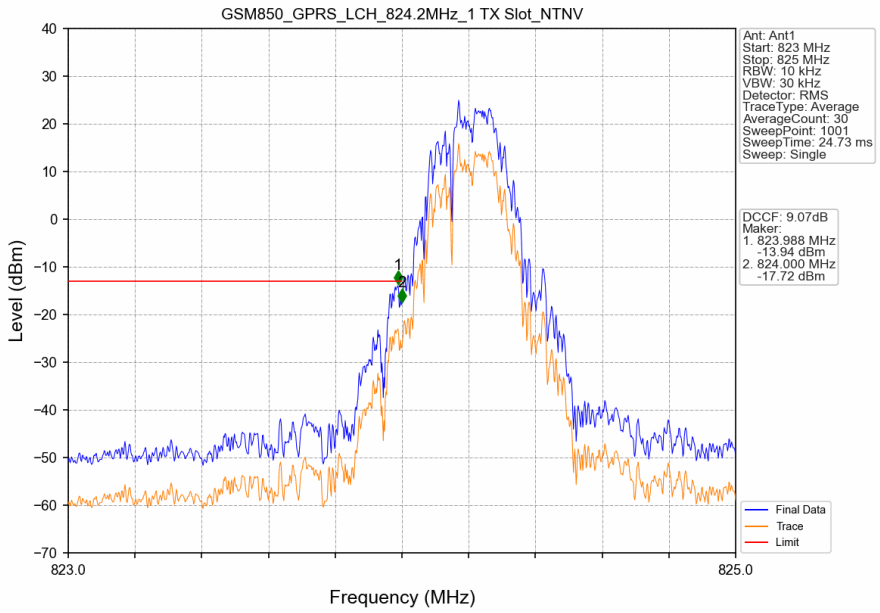
5.1.1 GSM850

Band: GSM850						
ENV	Mode		Frequency (MHz)	Spurious Emission		Verdict
	Network	Subset		Result	Limit	
NTNV	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

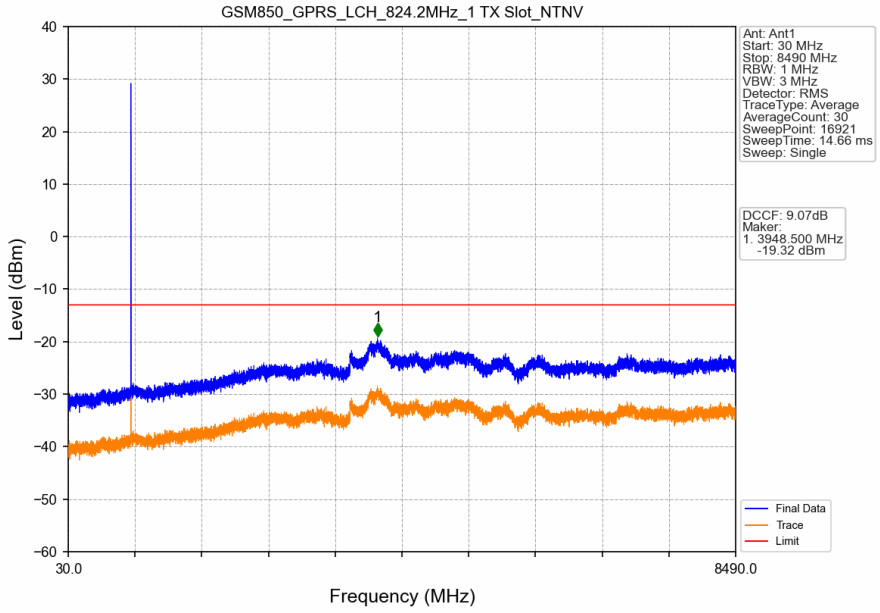
5.2 Test Graph

5.2.1 GSM850

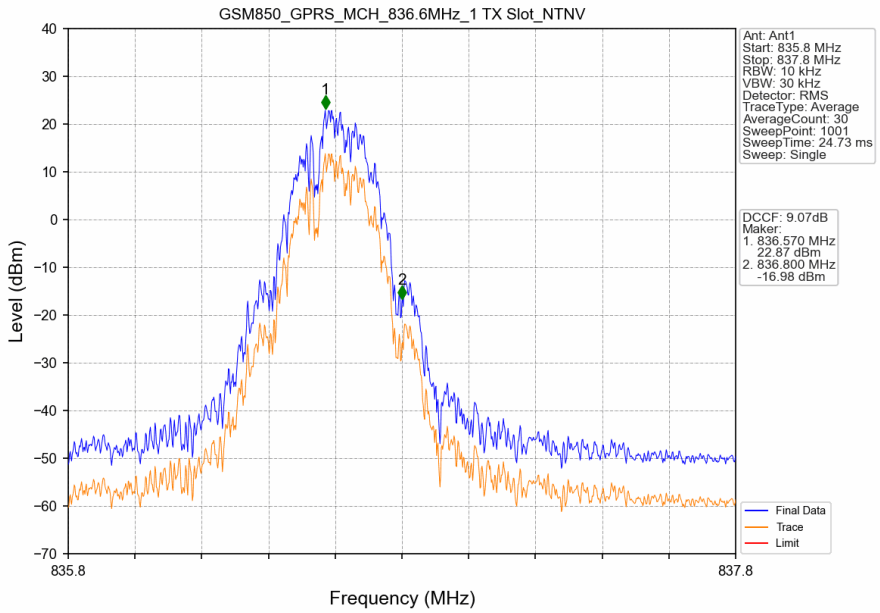
GSM850_GPRS_LCH_824.2MHz_1 TX Slot_NTNV



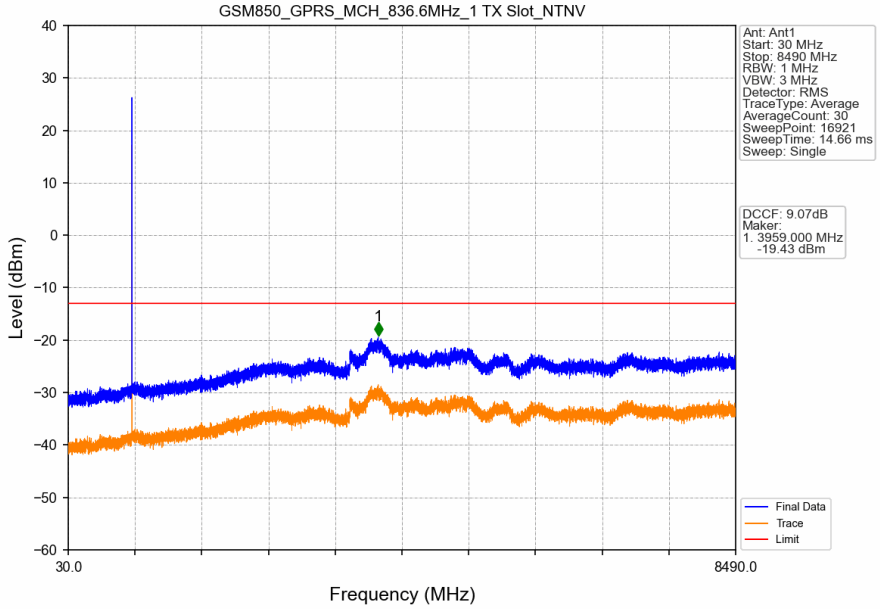
GSM850_GPRS_LCH_824.2MHz_1 TX Slot_NTNV



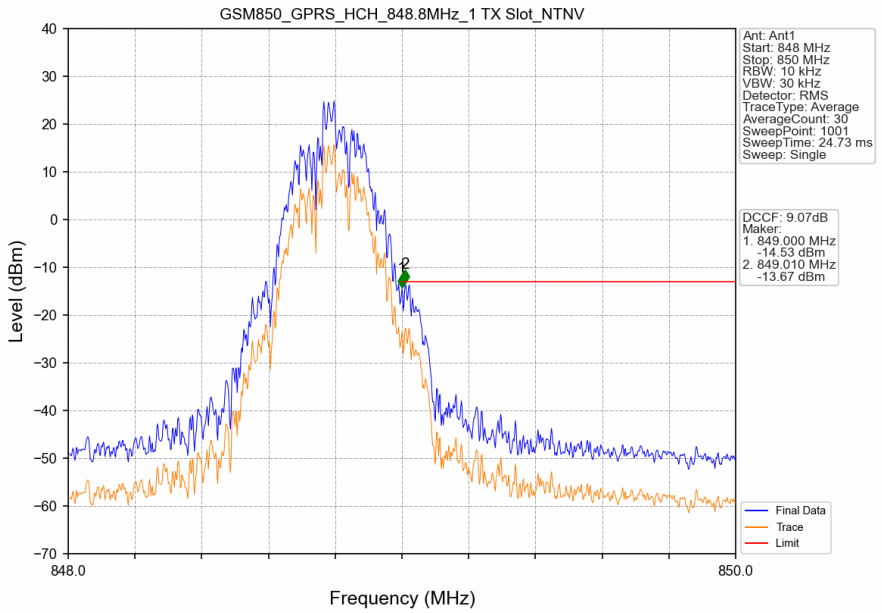
GSM850_GPRS_MCH_836.6MHz_1 TX Slot_NTNV



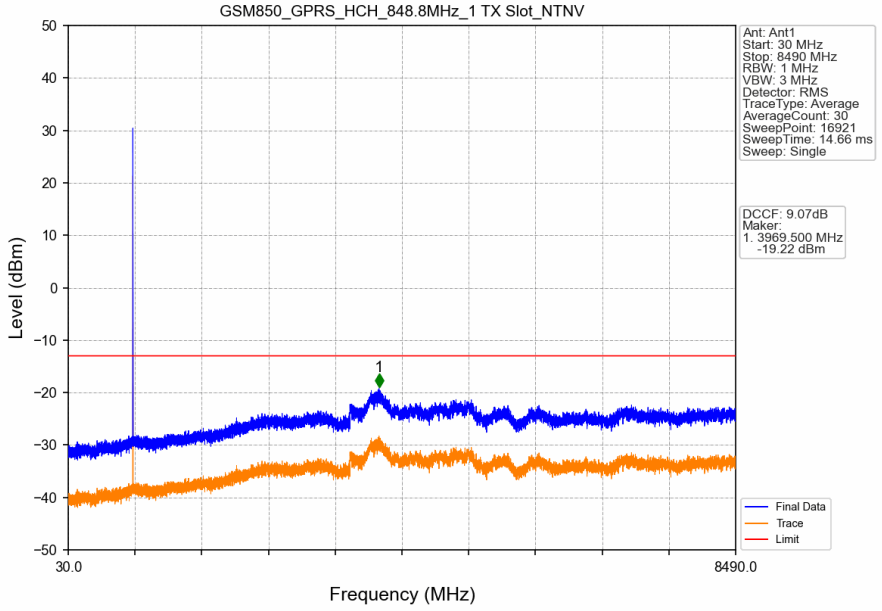
GSM850_GPRS_MCH_836.6MHz_1 TX Slot_NTNV



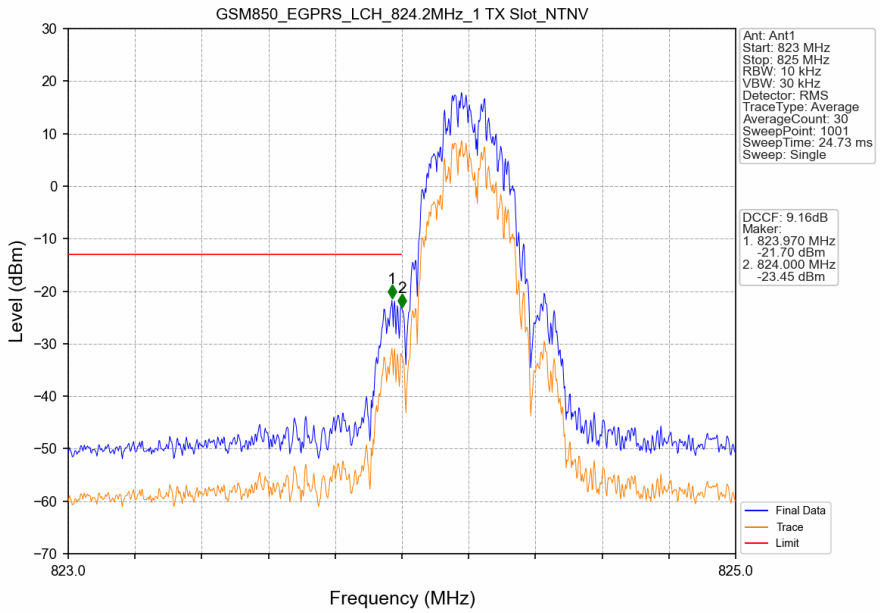
GSM850_GPRS_HCH_848.8MHz_1 TX Slot_NTNV



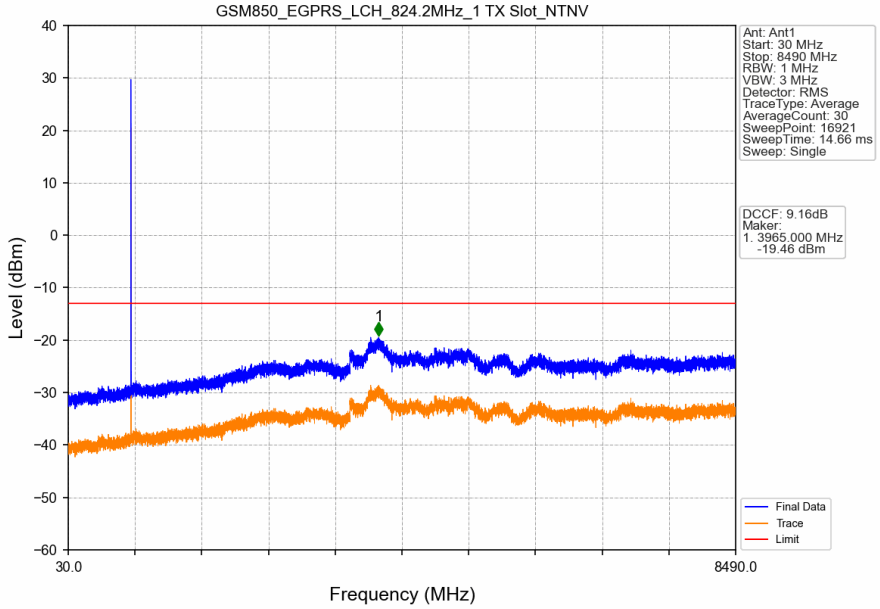
GSM850_GPRS_HCH_848.8MHz_1 TX Slot_NTNV



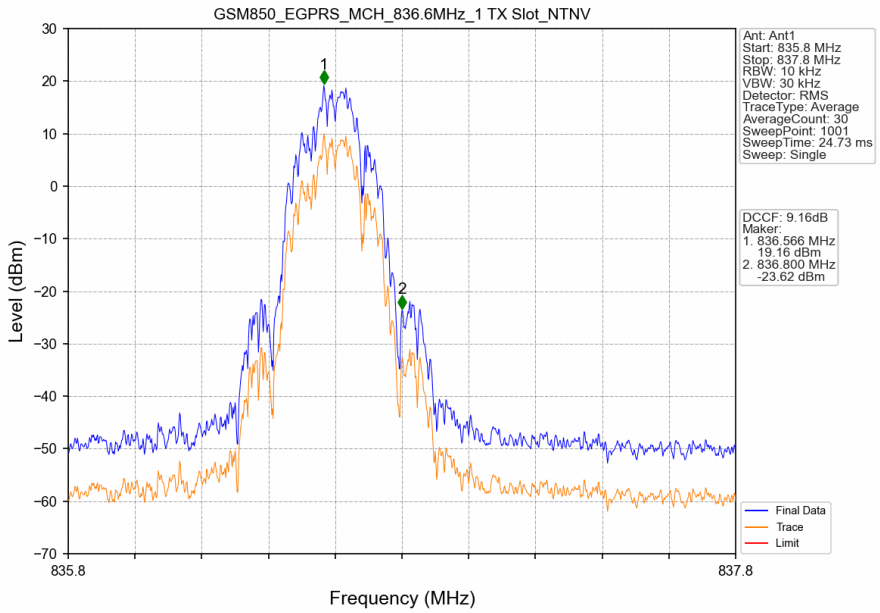
GSM850_EGPRS_LCH_824.2MHz_1 TX Slot_NTNV



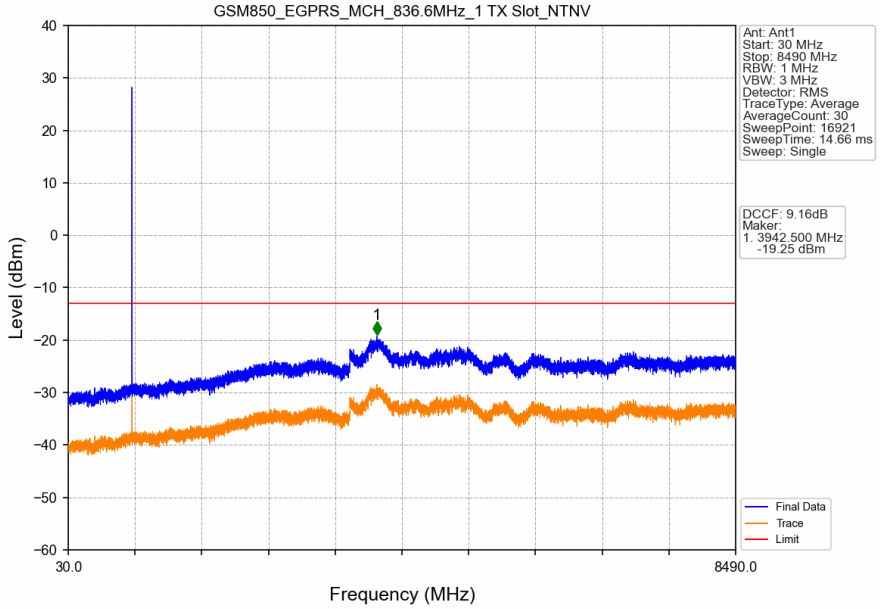
GSM850_EGPRS_LCH_824.2MHz_1 TX Slot_NTNV



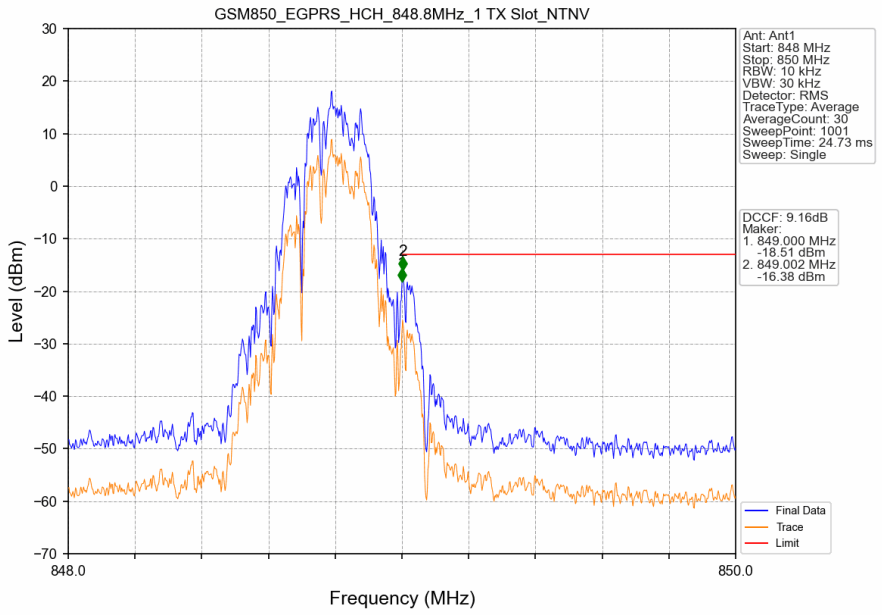
GSM850_EGPRS_MCH_836.6MHz_1 TX Slot_NTNV



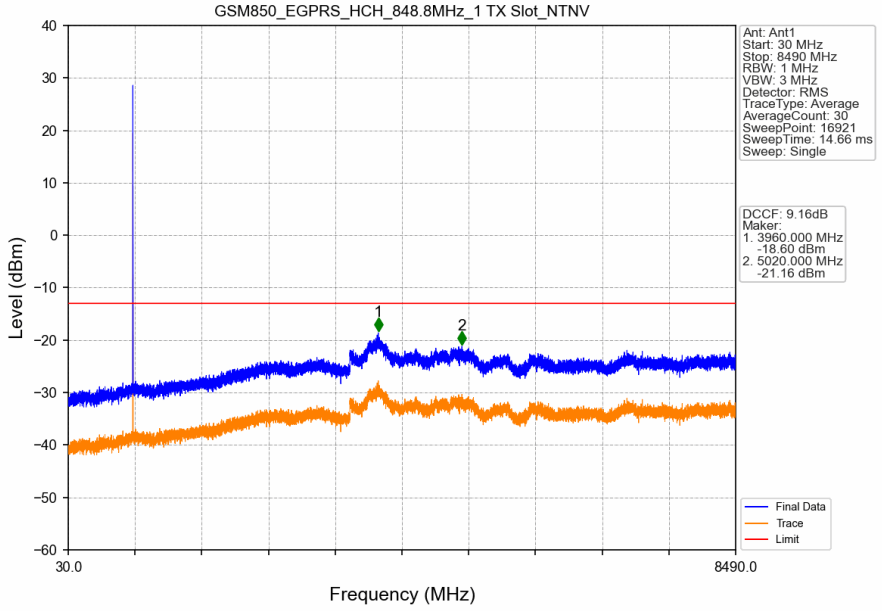
GSM850_EGPRS_MCH_836.6MHz_1 TX Slot_NTNV



GSM850_EGPRS_HCH_848.8MHz_1 TX Slot_NTNV



GSM850_EGPRS_HCH_848.8MHz_1 TX Slot_NTNV



6. Field Strength of Spurious Radiation

GSM 850-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**
1385.177	-62.79	-13	-49.79	-65.48	2.46	5.15	Horizontal	Pass
5009.426	-51.43	-13	-38.43	-57.01	4.57	10.15	Horizontal	Pass
9636.161	-50.79	-13	-37.79	-58.6	5.37	13.18	Horizontal	Pass
5151.676	-51.05	-13	-38.05	-56.66	4.62	10.23	Vertical	Pass
9514.293	-51.06	-13	-38.06	-58.95	5.34	13.23	Vertical	Pass
11027.98	-53.63	-13	-40.63	-61.11	5.79	13.27	Vertical	Pass

GSM 850 -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**
1464.963	-62.95	-13	-49.95	-66.07	2.54	5.66	Horizontal	Pass
5086.523	-50.94	-13	-37.94	-56.53	4.6	10.19	Horizontal	Pass
9538.543	-50.66	-13	-37.66	-58.53	5.35	13.22	Horizontal	Pass
4996.69	-51.75	-13	-38.75	-57.32	4.57	10.14	Vertical	Pass
9465.979	-50.7	-13	-37.7	-58.61	5.33	13.24	Vertical	Pass
11254.86	-53.6	-13	-40.6	-61.01	5.84	13.25	Vertical	Pass

GSM 850-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**
1472.44	-62.25	-13	-49.25	-65.41	2.55	5.71	Horizontal	Pass
5073.591	-50.97	-13	-37.97	-56.57	4.59	10.19	Horizontal	Pass
9636.161	-49.59	-13	-36.59	-57.4	5.37	13.18	Horizontal	Pass
5747.586	-51.1	-13	-38.1	-56.79	4.76	10.45	Vertical	Pass
9417.908	-51.03	-13	-38.03	-58.96	5.31	13.24	Vertical	Pass
10062.31	-53.87	-13	-40.87	-61.44	5.47	13.04	Vertical	Pass