Appendix Test Data for GSM_band_GSM850

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	33.35	-0.71	30.49	<=38.45	Pass
			836.6	33.42	-0.71	30.56	<=38.45	Pass
			848.8	33.38	-0.71	30.52	<=38.45	Pass
	GPRS	1 TX Slot	824.2	33.35	-0.71	30.49	<=38.45	Pass
		2 TX Slots	824.2	32.60	-0.71	29.74	<=38.45	Pass
		3 TX Slots	824.2	30.82	-0.71	27.96	<=38.45	Pass
		4 TX Slots	824.2	29.67	-0.71	26.81	<=38.45	Pass
		1 TX Slot	836.6	33.37	-0.71	30.51	<=38.45	Pass
		2 TX Slots	836.6	32.65	-0.71	29.79	<=38.45	Pass
		3 TX Slots	836.6	30.89	-0.71	28.03	<=38.45	Pass
		4 TX Slots	836.6	29.76	-0.71	26.90	<=38.45	Pass
		1 TX Slot	848.8	33.32	-0.71	30.46	<=38.45	Pass
		2 TX Slots	848.8	32.59	-0.71	29.73	<=38.45	Pass
		3 TX Slots	848.8	30.85	-0.71	27.99	<=38.45	Pass
		4 TX Slots	848.8	29.74	-0.71	26.88	<=38.45	Pass
	EGPRS	1 TX Slot	824.2	27.44	-0.71	24.58	<=38.45	Pass
		2 TX Slots	824.2	26.57	-0.71	23.71	<=38.45	Pass
		3 TX Slots	824.2	24.67	-0.71	21.81	<=38.45	Pass
		4 TX Slots	824.2	23.65	-0.71	20.79	<=38.45	Pass
		1 TX Slot	836.6	29.34	-0.71	26.48	<=38.45	Pass
		2 TX Slots	836.6	26.61	-0.71	23.75	<=38.45	Pass
		3 TX Slots	836.6	24.81	-0.71	21.95	<=38.45	Pass
		4 TX Slots	836.6	23.78	-0.71	20.92	<=38.45	Pass
		1 TX Slot	848.8	29.32	-0.71	26.46	<=38.45	Pass
		2 TX Slots	848.8	26.48	-0.71	23.62	<=38.45	Pass
		3 TX Slots	848.8	24.64	-0.71	21.78	<=38.45	Pass
		4 TX Slots	848.8	23.47	-0.71	20.61	<=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	3.27	1.873	0.0023	-2.5 to 2.5	Pass
			3.85	4.229	0.0051	-2.5 to 2.5	Pass
			4.43	2.131	0.0026	-2.5 to 2.5	Pass
		-30	3.85	6.102	0.0074	-2.5 to 2.5	Pass
		-20	3.85	2.228	0.0027	-2.5 to 2.5	Pass
		-10	3.85	6.393	0.0078	-2.5 to 2.5	Pass
		0	3.85	5.618	0.0068	-2.5 to 2.5	Pass
		10	3.85	5.682	0.0069	-2.5 to 2.5	Pass
		30	3.85	4.229	0.0051	-2.5 to 2.5	Pass
		40	3.85	4.714	0.0057	-2.5 to 2.5	Pass
		50	3.85	4.262	0.0052	-2.5 to 2.5	Pass
	836.6	20	3.27	5.166	0.0062	-2.5 to 2.5	Pass
			3.85	3.229	0.0039	-2.5 to 2.5	Pass
			4.43	2.744	0.0033	-2.5 to 2.5	Pass
		-30	3.85	2.841	0.0034	-2.5 to 2.5	Pass
		-20	3.85	4.488	0.0054	-2.5 to 2.5	Pass
		-10	3.85	2.131	0.0025	-2.5 to 2.5	Pass
		0	3.85	2.357	0.0028	-2.5 to 2.5	Pass
		10	3.85	2.228	0.0027	-2.5 to 2.5	Pass
		30	3.85	3.067	0.0037	-2.5 to 2.5	Pass
		40	3.85	3.874	0.0046	-2.5 to 2.5	Pass
		50	3.85	3.551	0.0042	-2.5 to 2.5	Pass
	848.8	20	3.27	4.391	0.0052	-2.5 to 2.5	Pass
			3.85	3.455	0.0041	-2.5 to 2.5	Pass
			4.43	4.875	0.0057	-2.5 to 2.5	Pass
		-30	3.85	5.844	0.0069	-2.5 to 2.5	Pass
		-20	3.85	4.875	0.0057	-2.5 to 2.5	Pass
		-10	3.85	4.585	0.0054	-2.5 to 2.5	Pass
		0	3.85	7.845	0.0092	-2.5 to 2.5	Pass
		10	3.85	6.037	0.0071	-2.5 to 2.5	Pass
		30	3.85	5.973	0.0070	-2.5 to 2.5	Pass
		40	3.85	5.941	0.0070	-2.5 to 2.5	Pass
		50	3.85	4.972	0.0059	-2.5 to 2.5	Pass
GPRS	824.2	20	3.27	3.035	0.0037	-2.5 to 2.5	Pass
			3.85	2.615	0.0032	-2.5 to 2.5	Pass
			4.43	5.747	0.0070	-2.5 to 2.5	Pass
		-30	3.85	0.323	0.0004	-2.5 to 2.5	Pass
		-20	3.85	1.647	0.0020	-2.5 to 2.5	Pass
		-10	3.85	0.420	0.0005	-2.5 to 2.5	Pass
		0	3.85	2.260	0.0027	-2.5 to 2.5	Pass
		10	3.85	5.037	0.0061	-2.5 to 2.5	Pass
		30	3.85	10.267	0.0125	-2.5 to 2.5	Pass
		40	3.85	8.491	0.0103	-2.5 to 2.5	Pass
		50	3.85	7.716	0.0094	-2.5 to 2.5	Pass
	836.6	20	3.27	2.551	0.0030	-2.5 to 2.5	Pass
			3.85	1.259	0.0015	-2.5 to 2.5	Pass
			4.43	1.550	0.0019	-2.5 to 2.5	Pass
		-30	3.85	3.003	0.0036	-2.5 to 2.5	Pass
		-20	3.85	2.131	0.0025	-2.5 to 2.5	Pass
		-10	3.85	1.517	0.0018	-2.5 to 2.5	Pass

		0	3.85	3.390	0.0041	-2.5 to 2.5	Pass
		10	3.85	3.067	0.0037	-2.5 to 2.5	Pass
		30	3.85	6.877	0.0082	-2.5 to 2.5	Pass
		40	3.85	6.554	0.0078	-2.5 to 2.5	Pass
		50	3.85	5.811	0.0069	-2.5 to 2.5	Pass
			3.27	1.485	0.0017	-2.5 to 2.5	Pass
		20	3.85	2.712	0.0032	-2.5 to 2.5	Pass
			4.43	2.712	0.0032	-2.5 to 2.5	Pass
		-30	3.85	1.647	0.0019	-2.5 to 2.5	Pass
		-20	3.85	2.551	0.0030	-2.5 to 2.5	Pass
	848.8	-10	3.85	0.000	0.0000	-2.5 to 2.5	Pass
		0	3.85	2.195	0.0026	-2.5 to 2.5	Pass
		10	3.85	5.327	0.0063	-2.5 to 2.5	Pass
		30	3.85	6.328	0.0075	-2.5 to 2.5	Pass
		40	3.85	6.005	0.0071	-2.5 to 2.5	Pass
		50	3.85	8.265	0.0097	-2.5 to 2.5	Pass
			3.27	-9.976	-0.0121	-2.5 to 2.5	Pass
		20	3.85	-5.650	-0.0069	-2.5 to 2.5	Pass
			4.43	-10.687	-0.0130	-2.5 to 2.5	Pass
		-30	3.85	-8.814	-0.0107	-2.5 to 2.5	Pass
		-20	3.85	-9.331	-0.0113	-2.5 to 2.5	Pass
	824.2	-10	3.85	-11.784	-0.0143	-2.5 to 2.5	Pass
		0	3.85	-8.136	-0.0099	-2.5 to 2.5	Pass
		10	3.85	-7.587	-0.0092	-2.5 to 2.5	Pass
		30	3.85	-9.395	-0.0114	-2.5 to 2.5	Pass
		40	3.85	-2.841	-0.0034	-2.5 to 2.5	Pass
		50	3.85	-4.003	-0.0049	-2.5 to 2.5	Pass
			3.27	-10.041	-0.0120	-2.5 to 2.5	Pass
		20	3.85	-9.298	-0.0111	-2.5 to 2.5	Pass
			4.43	-7.781	-0.0093	-2.5 to 2.5	Pass
		-30	3.85	-7.619	-0.0091	-2.5 to 2.5	Pass
		-20	3.85	-12.365	-0.0148	-2.5 to 2.5	Pass
EGPRS	836.6	-10	3.85	-11.752	-0.0140	-2.5 to 2.5	Pass
		0	3.85	-10.816	-0.0129	-2.5 to 2.5	Pass
		10	3.85	-9.427	-0.0113	-2.5 to 2.5	Pass
		30	3.85	-6.489	-0.0078	-2.5 to 2.5	Pass
		40	3.85	-6.974	-0.0083	-2.5 to 2.5	Pass
		50	3.85	-9.072	-0.0108	-2.5 to 2.5	Pass
			3.27	-10.235	-0.0121	-2.5 to 2.5	Pass
		20	3.85	-10.331	-0.0122	-2.5 to 2.5	Pass
			4.43	-6.554	-0.0077	-2.5 to 2.5	Pass
		-30	3.85	-12.204	-0.0144	-2.5 to 2.5	Pass
		-20	3.85	-8.136	-0.0096	-2.5 to 2.5	Pass
	848.8	-10	3.85	-6.909	-0.0081	-2.5 to 2.5	Pass
		0	3.85	-8.233	-0.0097	-2.5 to 2.5	Pass
		10	3.85	-8.975	-0.0106	-2.5 to 2.5	Pass
		30	3.85	-7.232	-0.0085	-2.5 to 2.5	Pass
		40	3.85	-7.232	-0.0085	-2.5 to 2.5	Pass
		50	3.85	-5.295	-0.0062	-2.5 to 2.5	Pass

3. Modulation Characteristics

3.1 Test Result

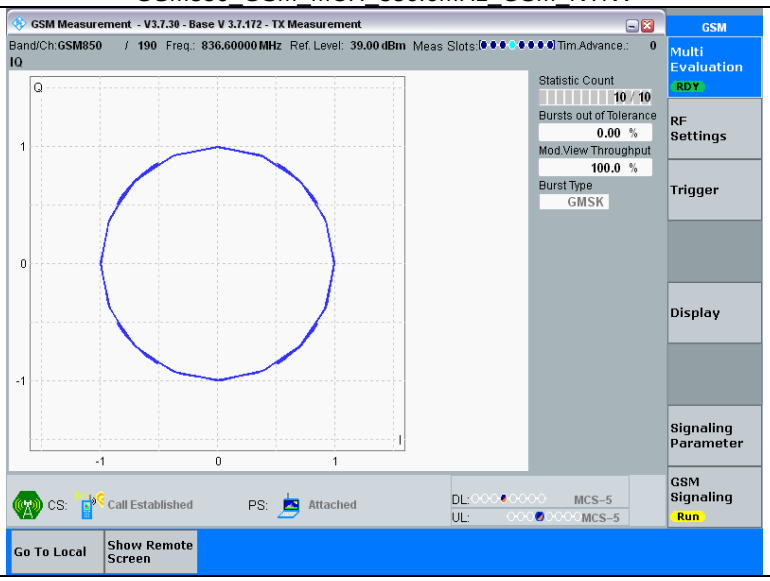
3.1.1 GSM850

Band: GSM850						
ENV	Mode		Frequency (MHz)	Modulation Characteristics		Verdict
	Network	Subset		Result	Limit	
NTNV	GSM	GSM	836.6	Refer To Test Graph		Pass
	GPRS	1 TX Slot	836.6	Refer To Test Graph		Pass
	EGPRS	1 TX Slot	836.6	Refer To Test Graph		Pass

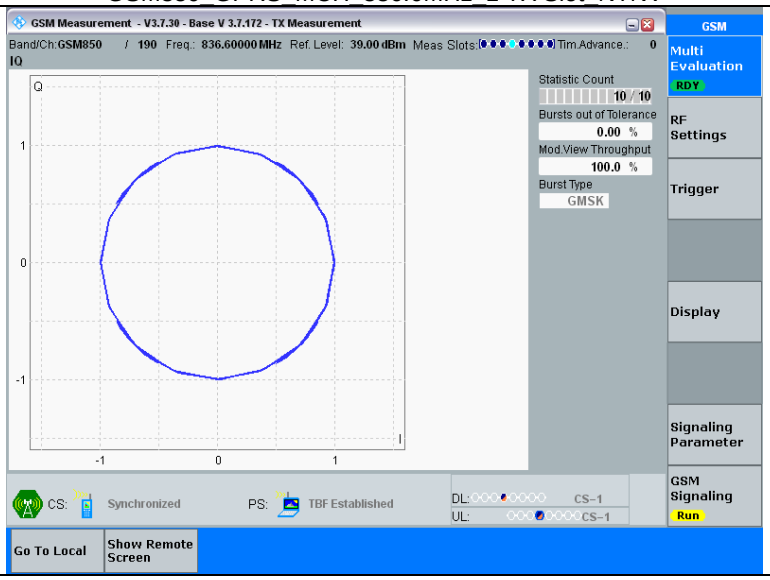
3.2 Test Graph

3.2.1 GSM850

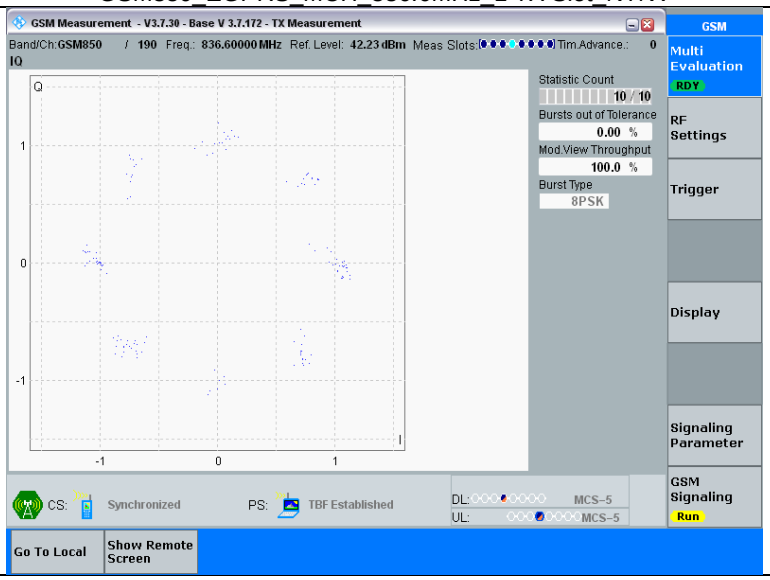
GSM850_GSM_MCH_836.6MHz_GSM_NTNV



GSM850_GPRS_MCH_836.6MHz_1 TX Slot_NTNV



GSM850_EGPRS_MCH_836.6MHz_1 TX Slot_NTNV



4. 99% & 26dB Bandwidth

4.1 Test Result

4.1.1 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	0.243	/	Pass
			848.8	0.239	/	Pass
	GPRS	1 TX Slot	824.2	0.241	/	Pass
			836.6	0.249	/	Pass
			848.8	0.244	/	Pass
	EGPRS	1 TX Slot	824.2	0.256	/	Pass
			836.6	0.260	/	Pass
			848.8	0.256	/	Pass

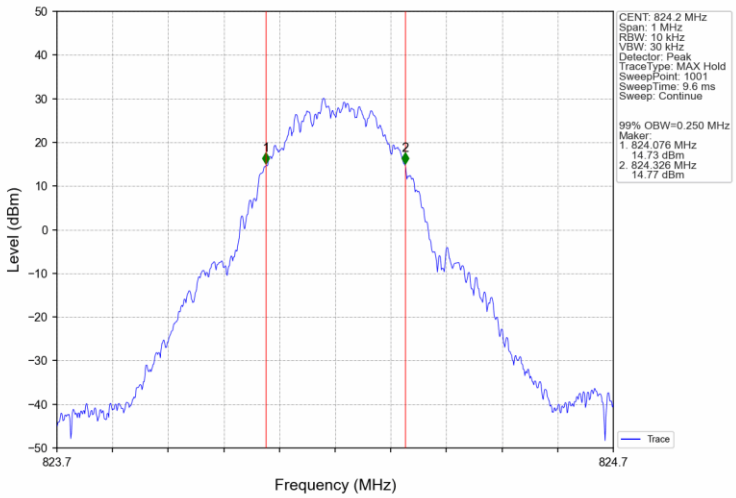
4.1.2 GSM850_XDB

Band: GSM850						
ENV	Mode		Frequency (MHz)	26dB Bandwidth (MHz)		Verdict
	Network	Subset		Result	Limit	
NTNV	GSM	GSM	824.2	0.316	/	Pass
			836.6	0.312	/	Pass
			848.8	0.322	/	Pass
	GPRS	1 TX Slot	824.2	0.320	/	Pass
			836.6	0.325	/	Pass
			848.8	0.319	/	Pass
	EGPRS	1 TX Slot	824.2	0.317	/	Pass
			836.6	0.334	/	Pass
			848.8	0.313	/	Pass

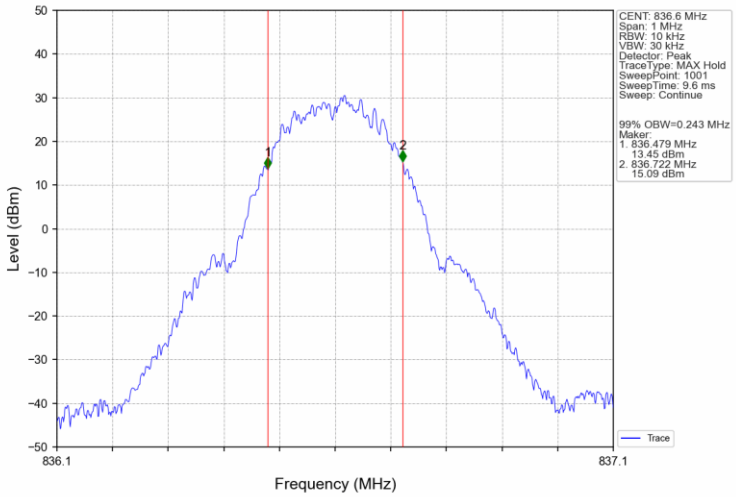
4.2 Test Graph

4.2.1 GSM850_OBW

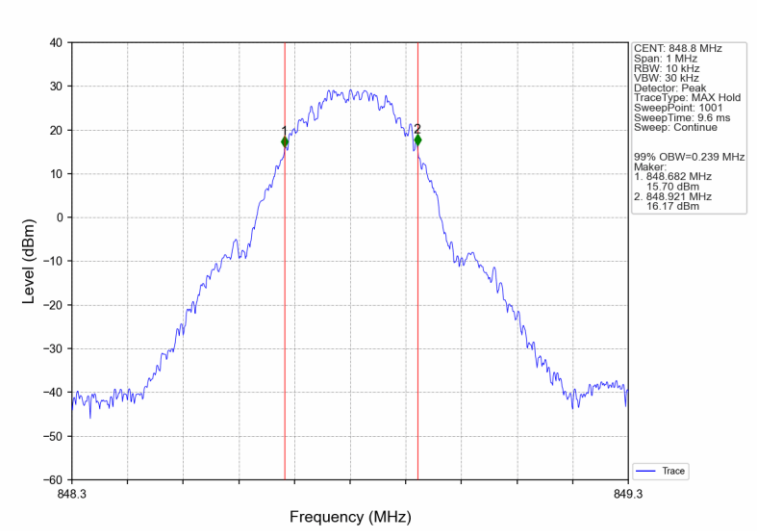
GSM850_GSM_LCH_824.2MHz_GSM_NTNV



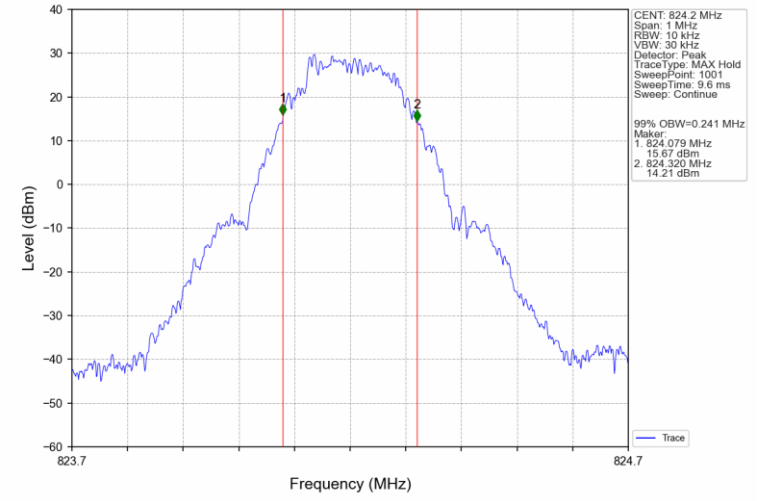
GSM850_GSM_MCH_836.6MHz_GSM_NTNV



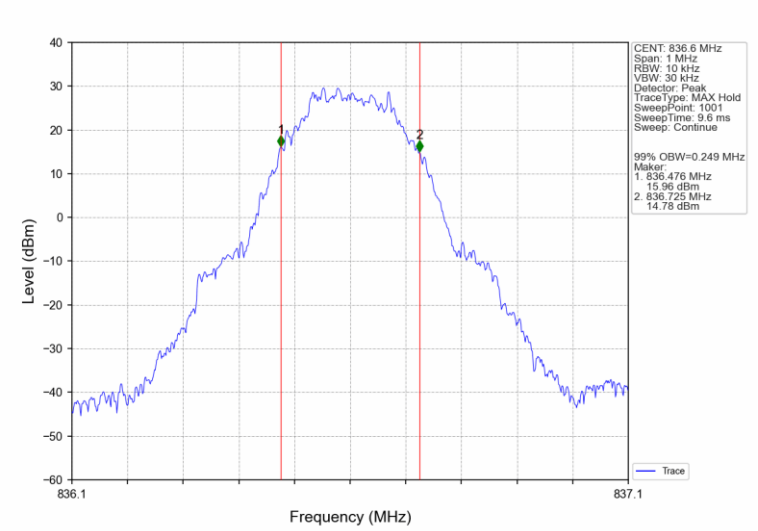
GSM850_GSM_HCH_848.8MHz_GSM_NTNV



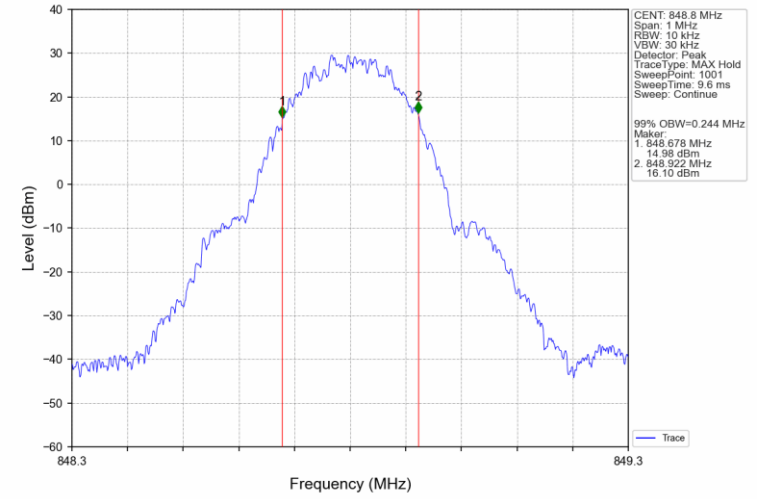
GSM850_GPRS_LCH_824.2MHz_1 TX Slot_NTNV



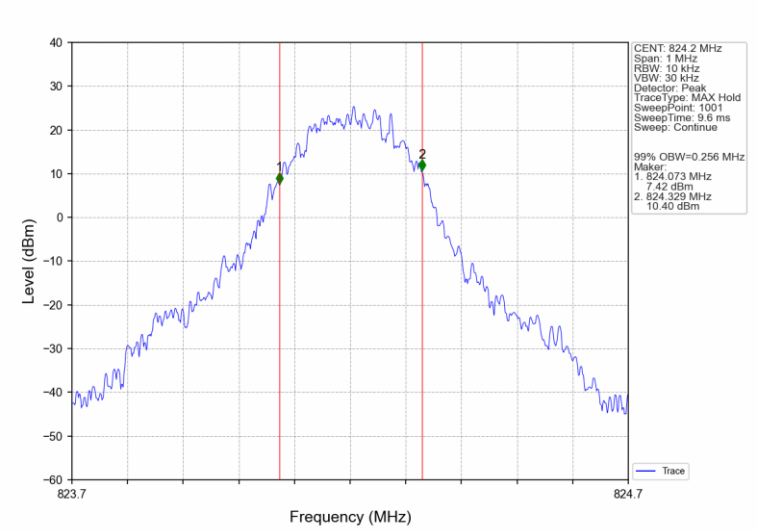
GSM850_GPRS_MCH_836.6MHz_1 TX Slot_NTNV



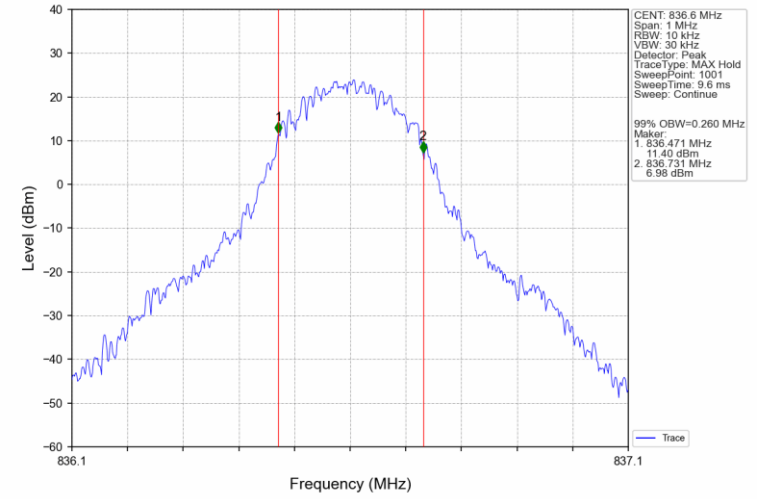
GSM850_GPRS_HCH_848.8MHz_1 TX Slot_NTNV



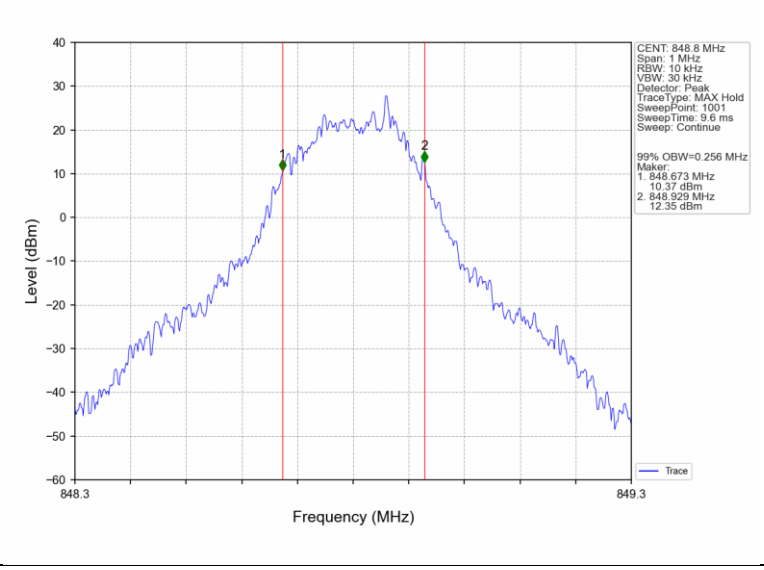
GSM850_EGPRS_LCH_824.2MHz_1 TX Slot_NTNV



GSM850_EGPRS_MCH_836.6MHz_1 TX Slot_NTNV

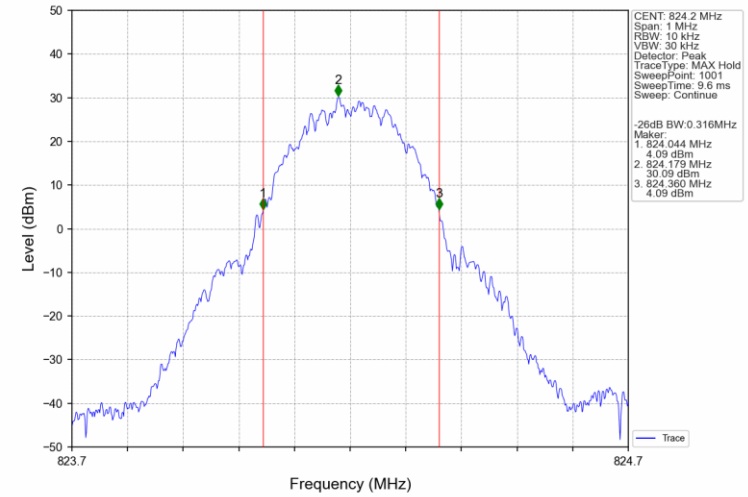


GSM850_EGPRS_HCH_848.8MHz_1 TX Slot_NTNV

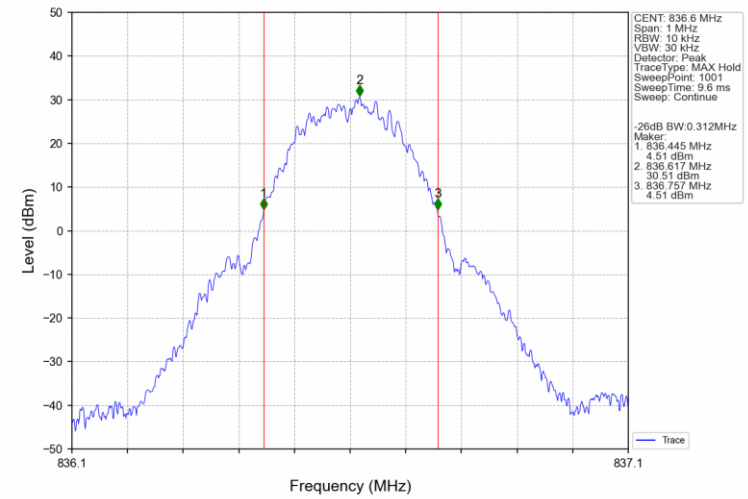


4.2.2 GSM850_XDB

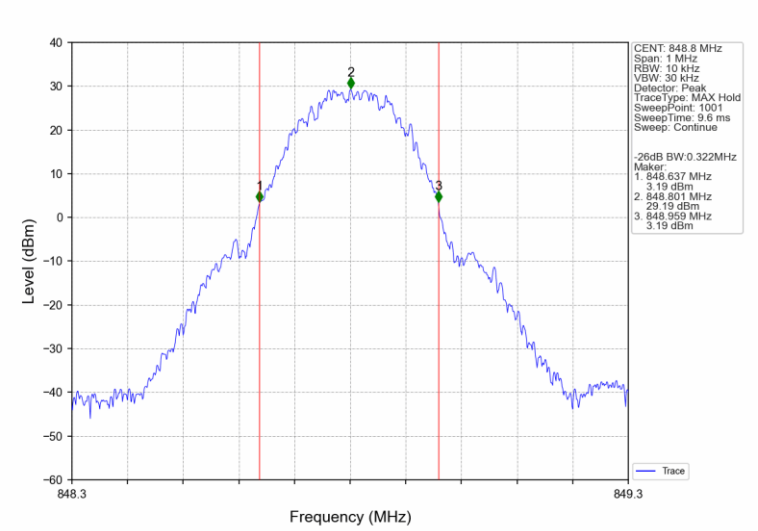
GSM850_GSM_LCH_824.2MHz_GSM_NTNV



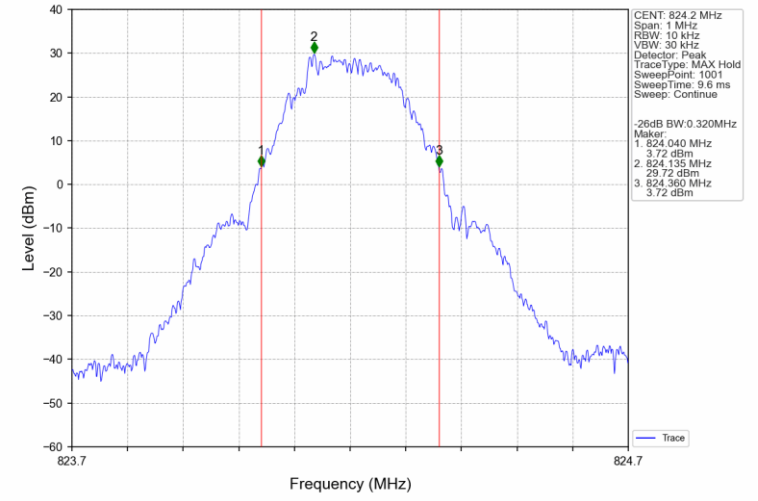
GSM850_GSM_MCH_836.6MHz_GSM_NTNV



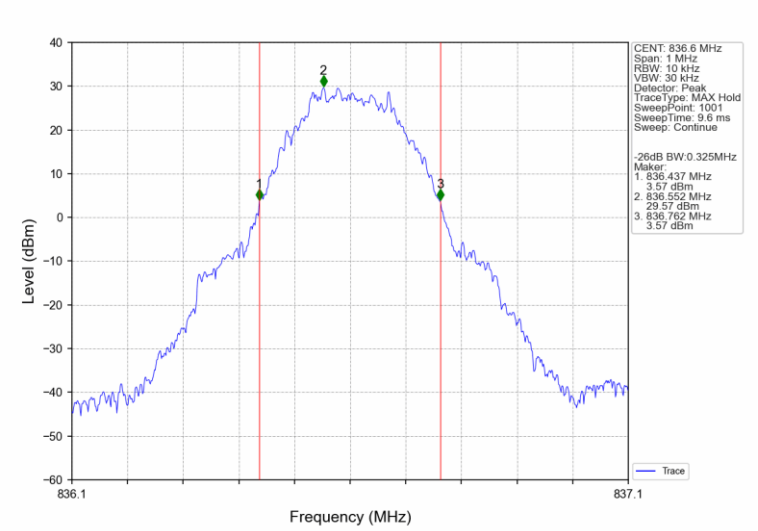
GSM850_GSM_HCH_848.8MHz_GSM_NTNV



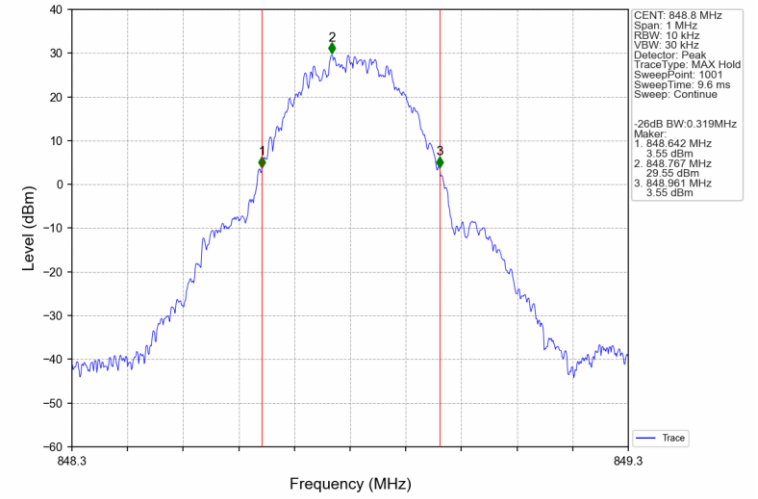
GSM850_GPRS_LCH_824.2MHz_1 TX Slot_NTNV



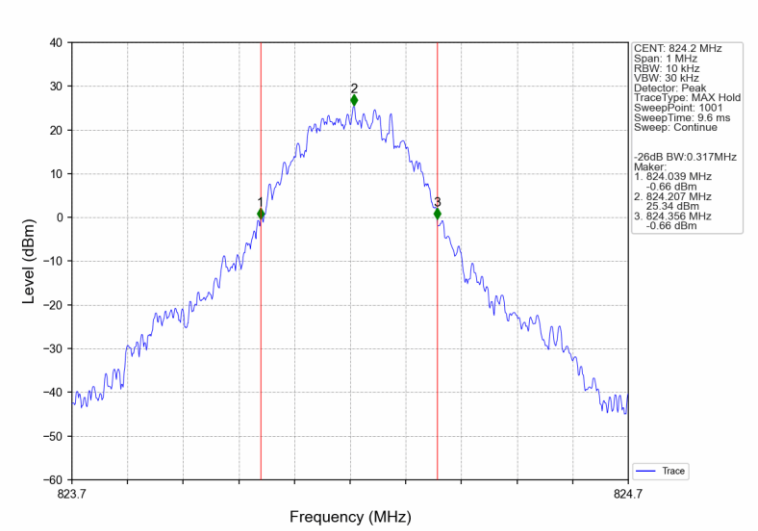
GSM850_GPRS_MCH_836.6MHz_1 TX Slot_NTNV



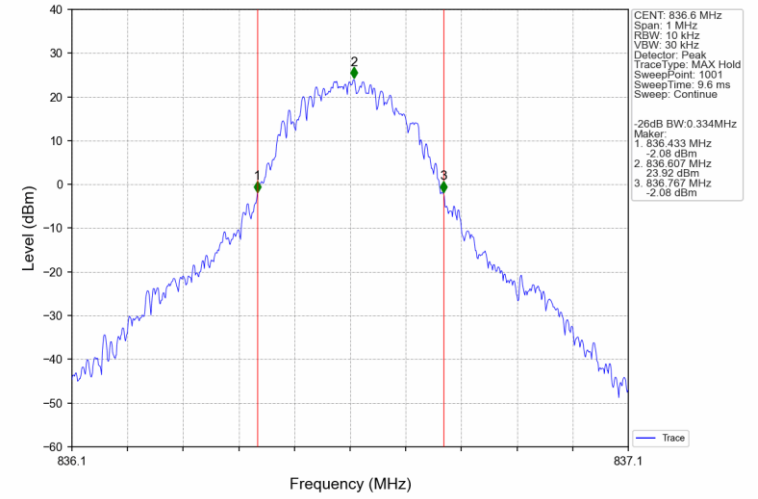
GSM850_GPRS_HCH_848.8MHz_1 TX Slot_NTNV



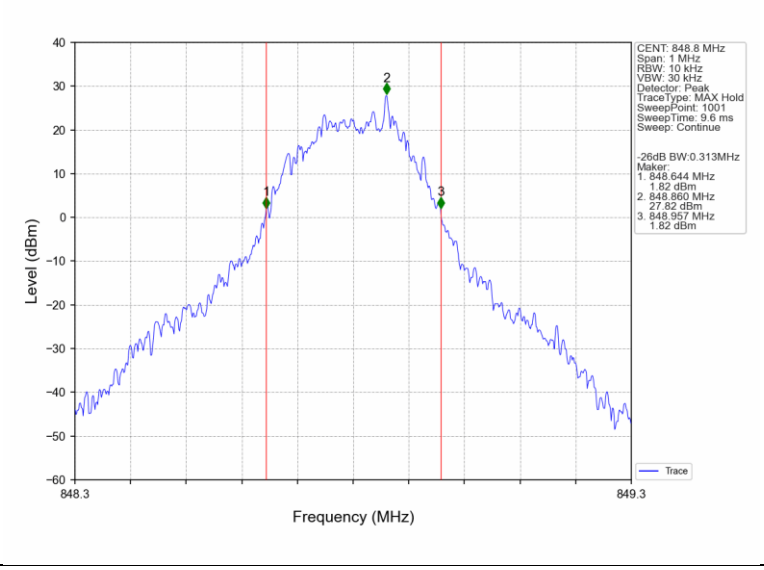
GSM850_EGPRS_LCH_824.2MHz_1 TX Slot_NTNV



GSM850_EGPRS_MCH_836.6MHz_1 TX Slot_NTNV



GSM850_EGPRS_HCH_848.8MHz_1 TX Slot_NTNV



5. Peak-Average Ratio

5.1 Test Result

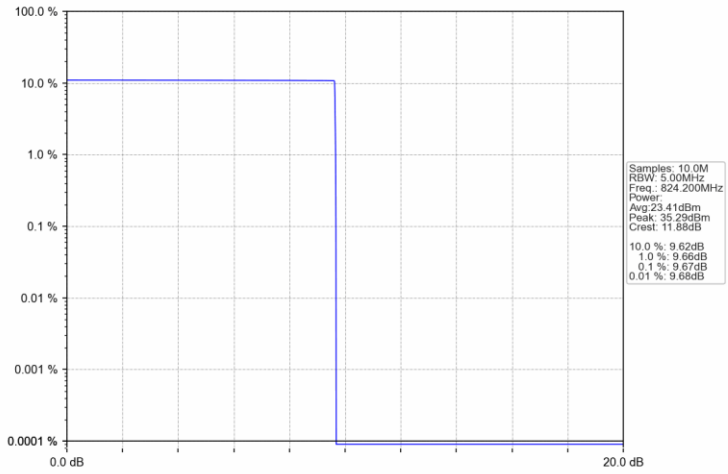
5.1.1 GSM850

Band: GSM850						
ENV	Mode		Frequency (MHz)	Peak-Average Ratio (dB)		Verdict
	Network	Subset		Result	Limit	
NTNV	GSM	GSM	824.2	9.67	<=13	Pass
			836.6	9.41	<=13	Pass
			848.8	9.27	<=13	Pass
	GPRS	4 TX Slots	824.2	3.57	<=13	Pass
			836.6	3.65	<=13	Pass
			848.8	3.61	<=13	Pass
	EGPRS	4 TX Slots	824.2	9.53	<=13	Pass
			836.6	9.50	<=13	Pass
			848.8	9.69	<=13	Pass

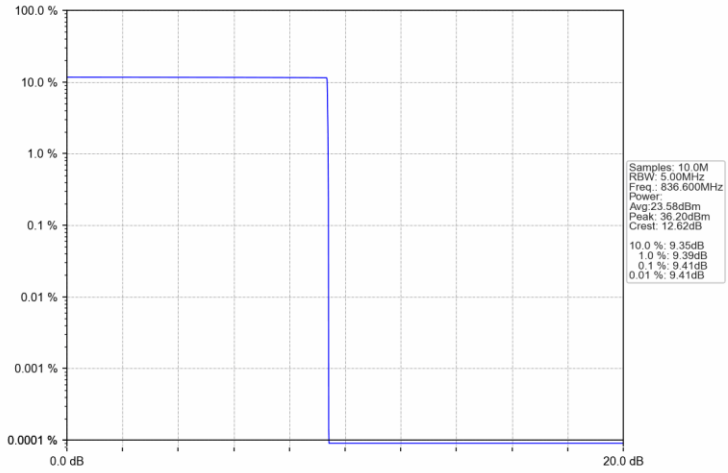
5.2 Test Graph

5.2.1 GSM850

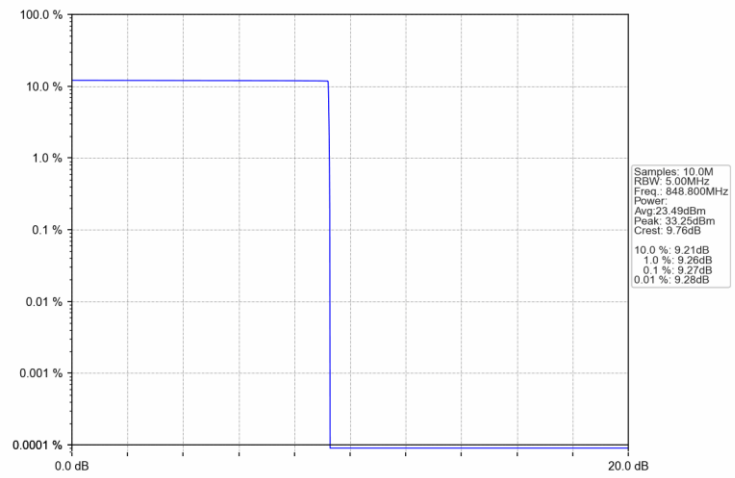
GSM850_GSM_LCH_824.2MHz_GSM_NTNV



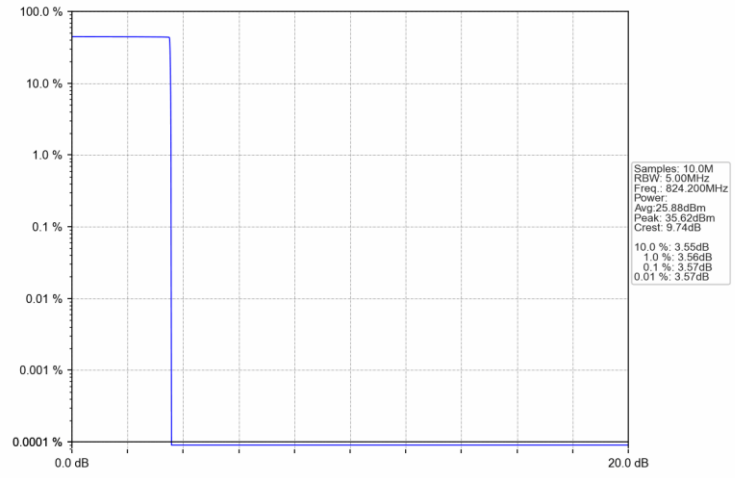
GSM850_GSM_MCH_836.6MHz_GSM_NTNV



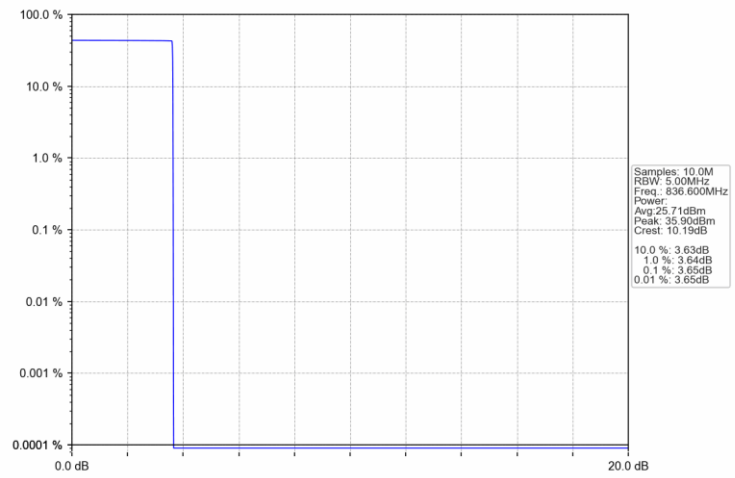
GSM850_GSM_HCH_848.8MHz_GSM_NTNV



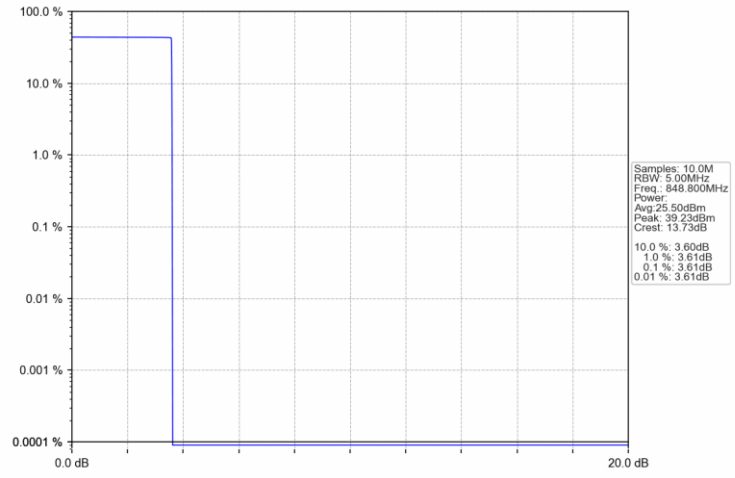
GSM850_GPRS_LCH_824.2MHz_4 TX Slots_NTNV



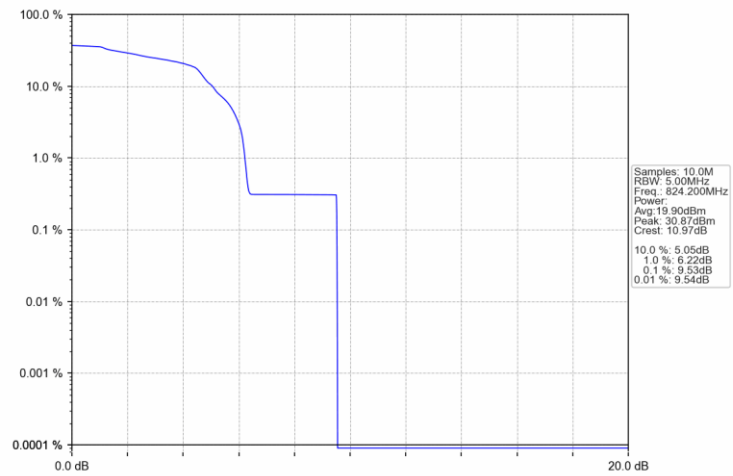
GSM850_GPRS_MCH_836.6MHz_4 TX Slots_NTNV



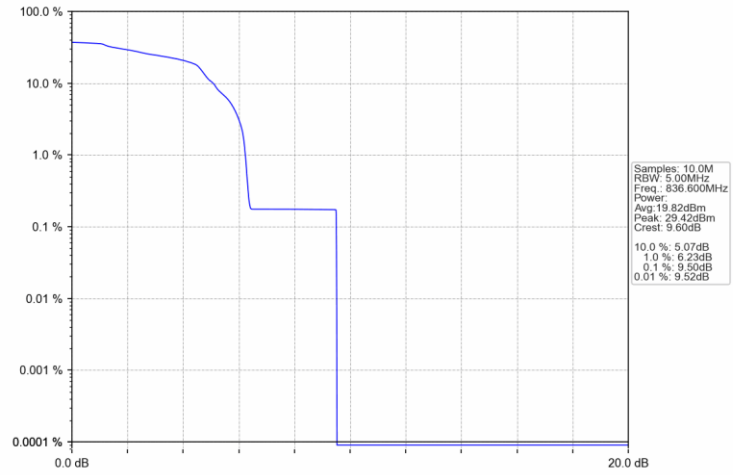
GSM850_GPRS_HCH_848.8MHz_4 TX Slots_NTNV



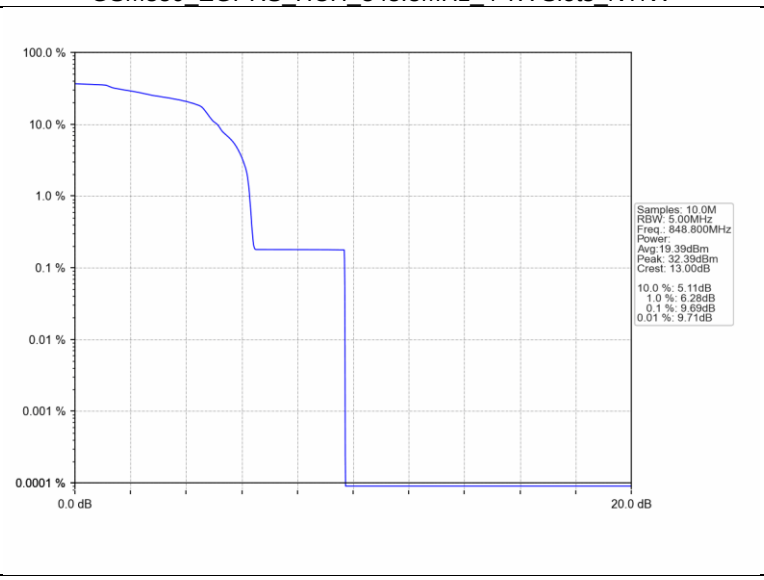
GSM850_EGPRS_LCH_824.2MHz_4 TX Slots_NTNV



GSM850_EGPRS_MCH_836.6MHz_4 TX Slots_NTNV



GSM850_EGPRS_HCH_848.8MHz_4 TX Slots_NTNV



6. Spurious Emission

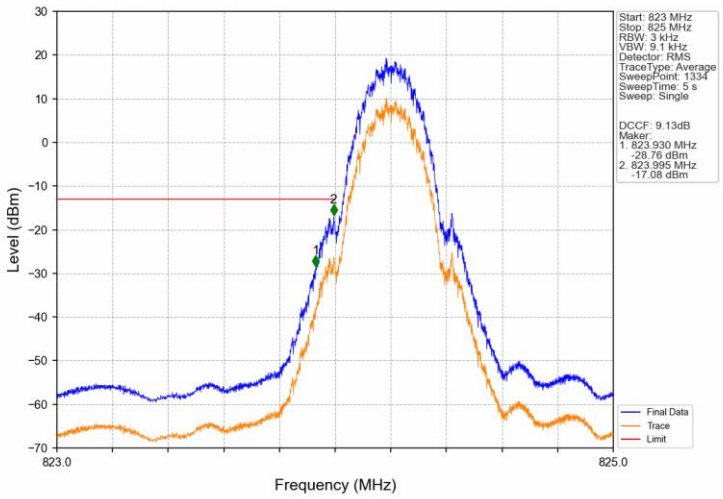
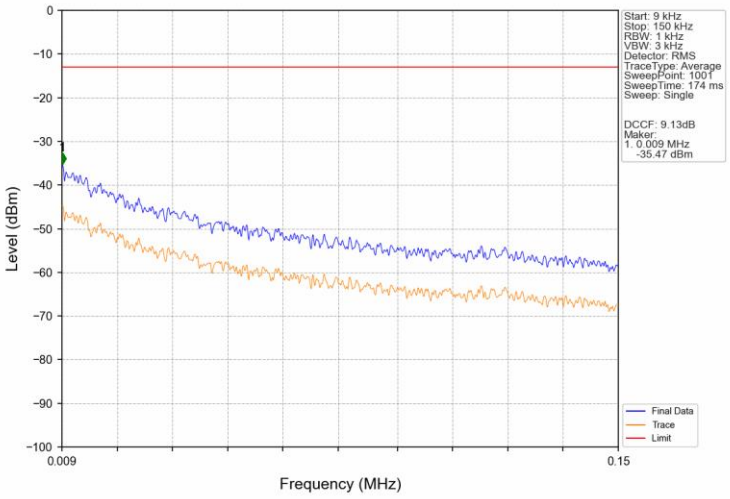
6.1 Test Result

6.1.1 GSM850

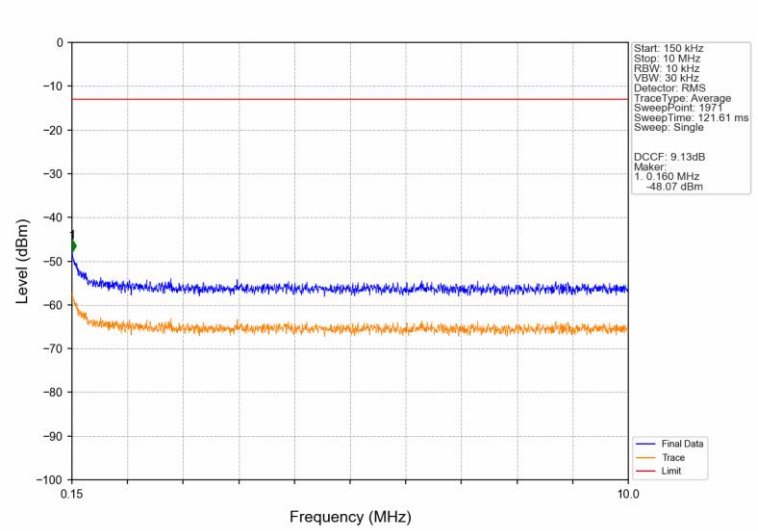
Band: GSM850						
ENV	Mode		Frequency (MHz)	Spurious Emission		Verdict
	Network	Subset		Result	Limit	
NTNV	GSM	GSM	824.2	Refer To Test Graph		Pass
			836.6	Refer To Test Graph		Pass
			848.8	Refer To Test Graph		Pass
	GPRS	1 TX Slot	824.2	Refer To Test Graph		Pass
			836.6	Refer To Test Graph		Pass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

6.2 Test Graph

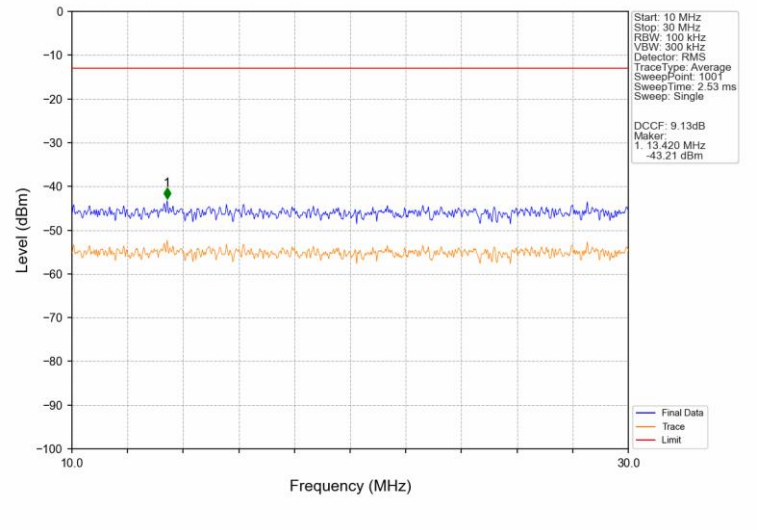
6.2.1 GSM850

GSM850_GSM_LCH_824.2MHz_GSM_NTNV

GSM850_GSM_LCH_824.2MHz_GSM_NTNV


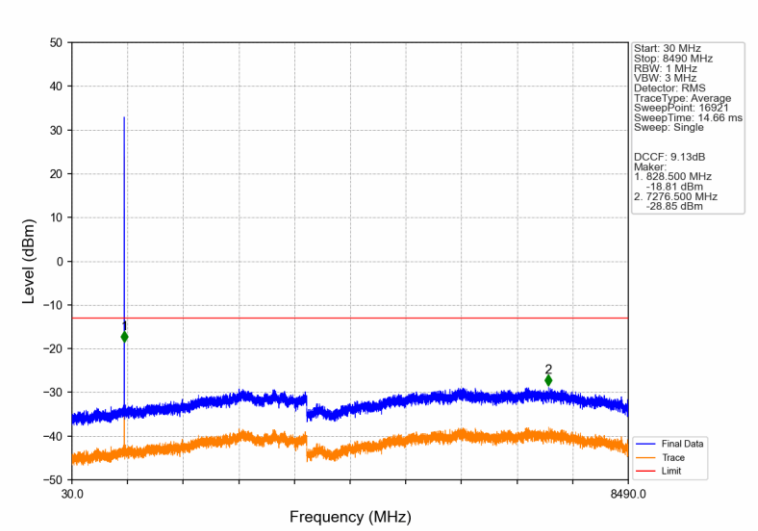
GSM850_GSM_LCH_824.2MHz_GSM_NTNV



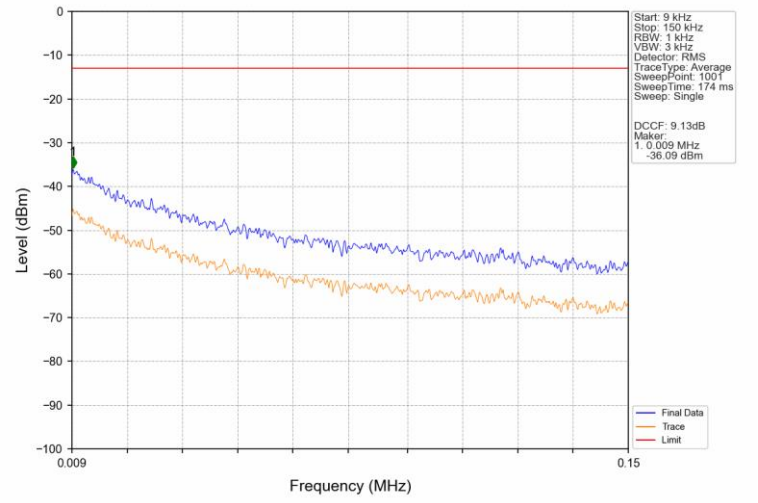
GSM850_GSM_LCH_824.2MHz_GSM_NTNV



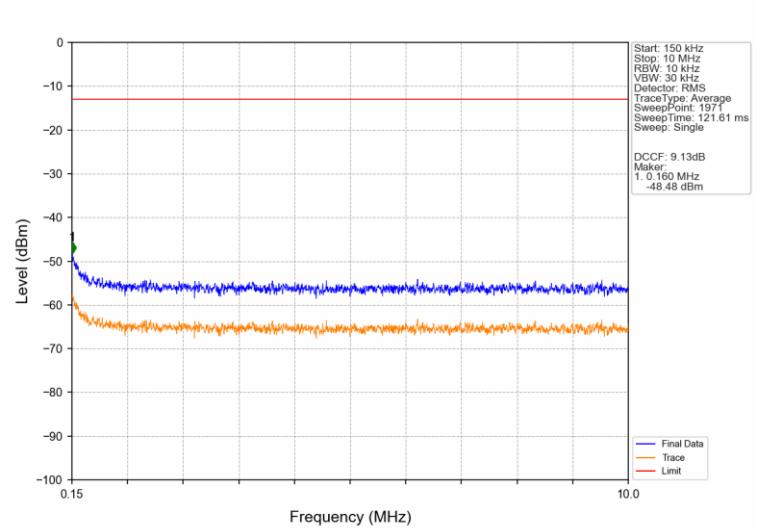
GSM850_GSM_LCH_824.2MHz_GSM_NTNV



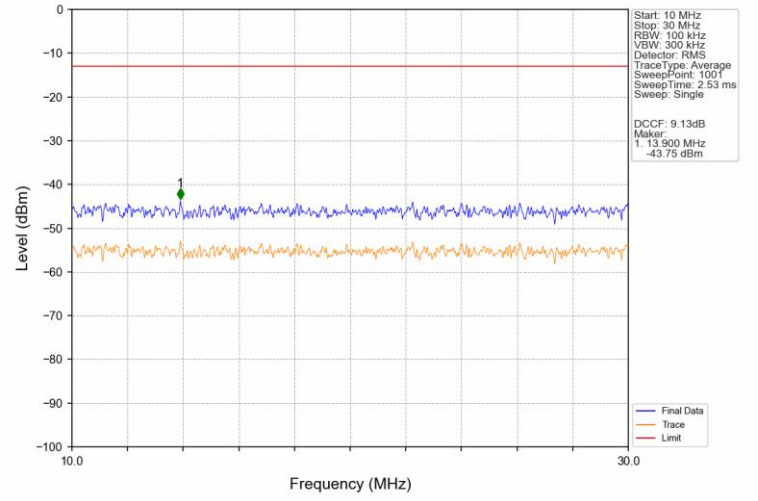
GSM850_GSM_MCH_836.6MHz_GSM_NTNV



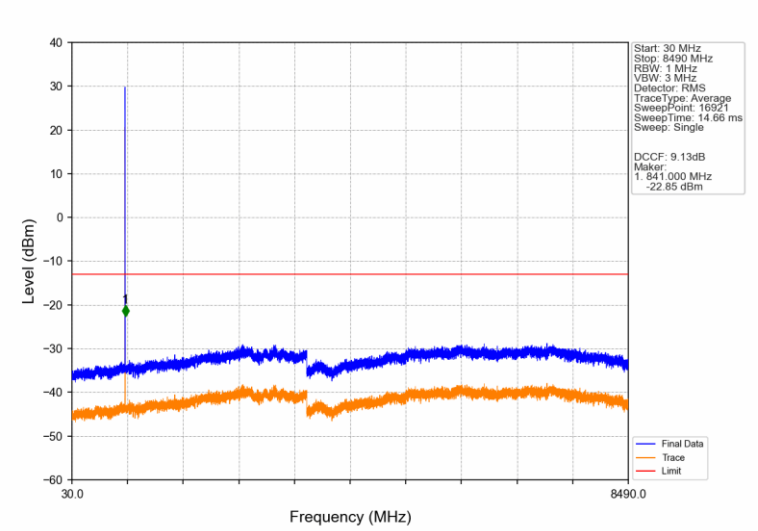
GSM850_GSM_MCH_836.6MHz_GSM_NTNV



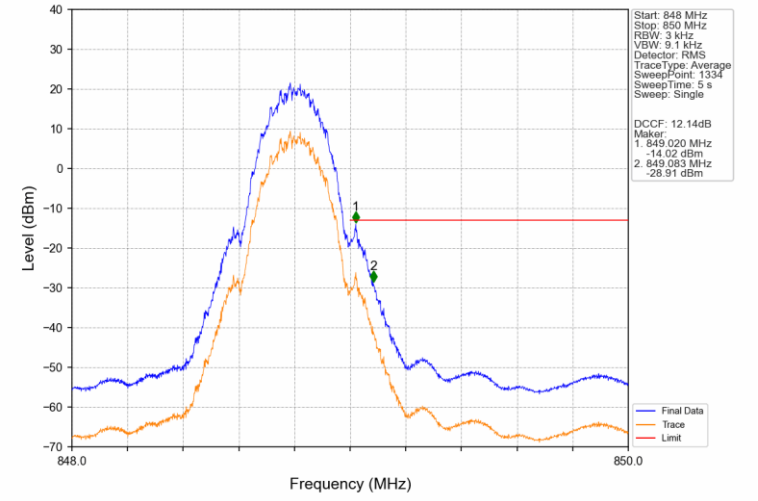
GSM850_GSM_MCH_836.6MHz_GSM_NTNV



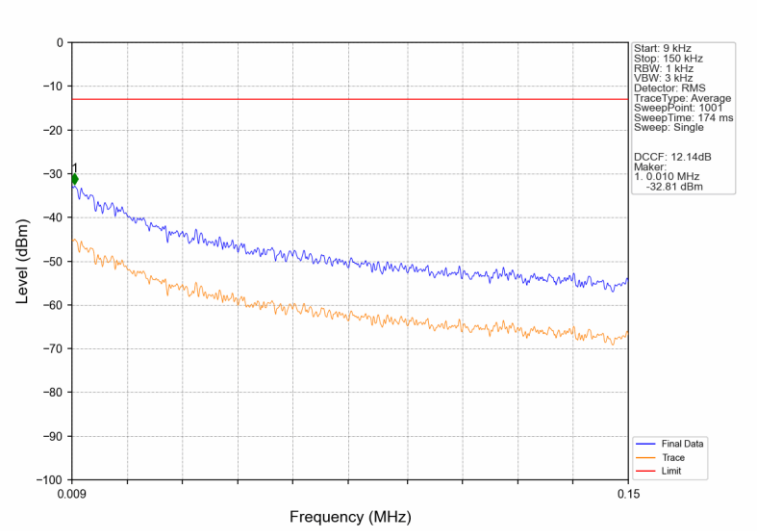
GSM850_GSM_MCH_836.6MHz_GSM_NTNV



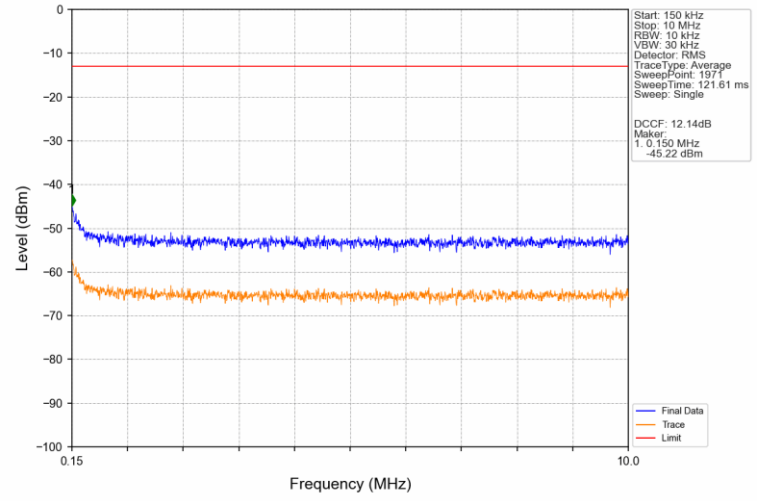
GSM850_GSM_HCH_848.8MHz_GSM_NTNV



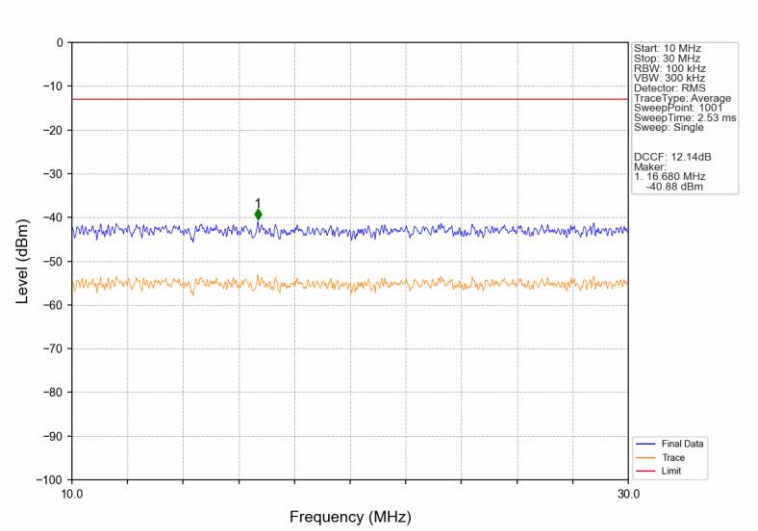
GSM850_GSM_HCH_848.8MHz_GSM_NTNV



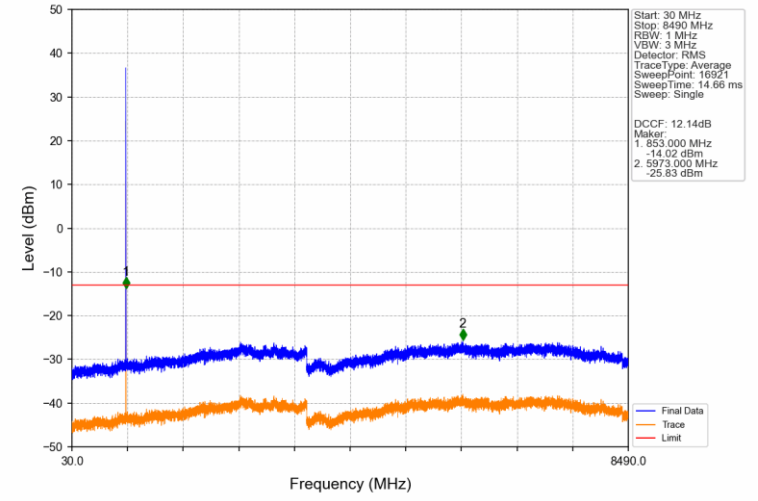
GSM850_GSM_HCH_848.8MHz_GSM_NTNV



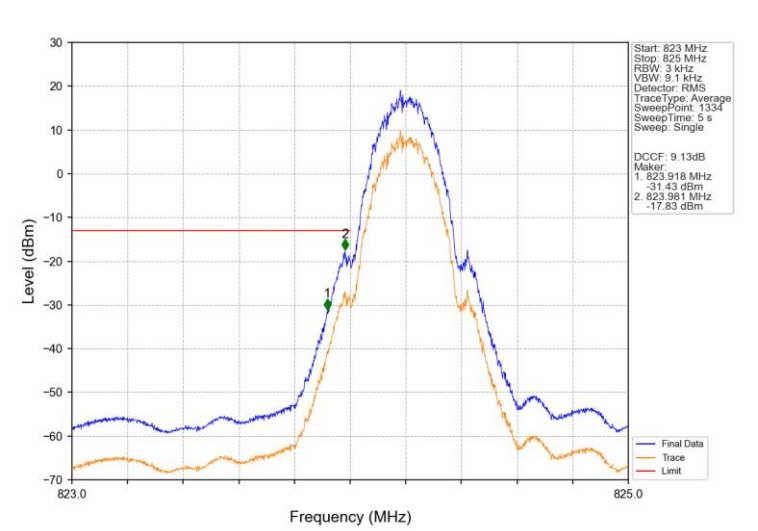
GSM850_GSM_HCH_848.8MHz_GSM_NTNV



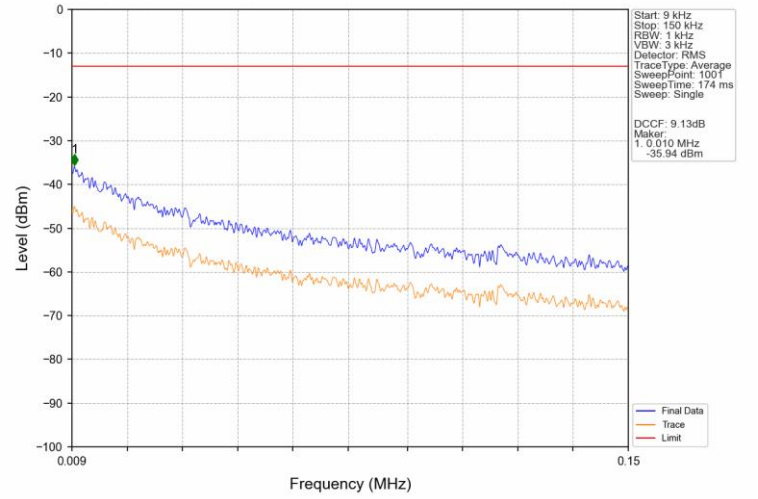
GSM850_GSM_HCH_848.8MHz_GSM_NTNV



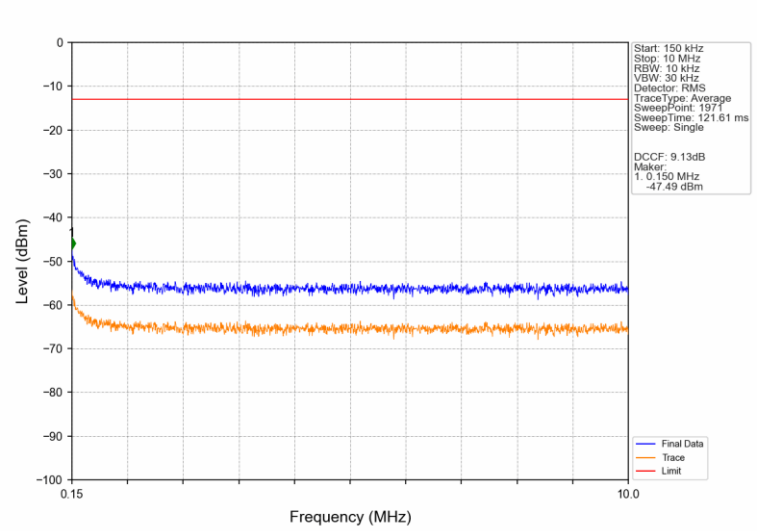
GSM850_GPRS_LCH_824.2MHz_1 TX Slot_NTNV



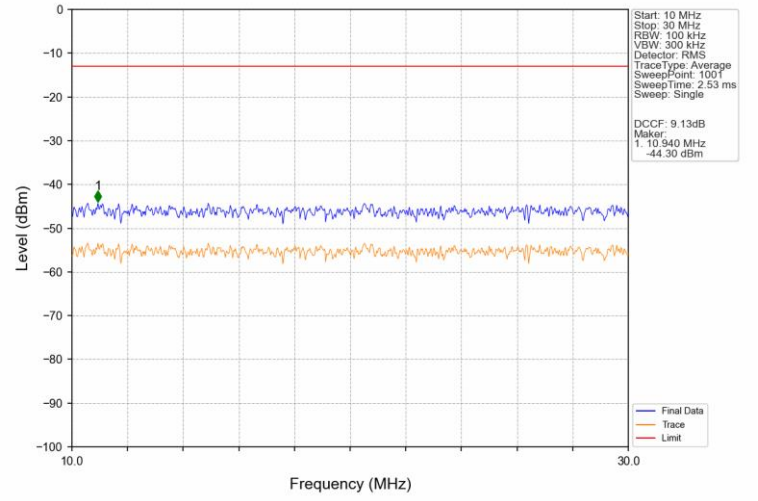
GSM850_GPRS_LCH_824.2MHz_1 TX Slot_NTNV



GSM850_GPRS_LCH_824.2MHz_1 TX Slot_NTNV



GSM850_GPRS_LCH_824.2MHz_1 TX Slot_NTNV



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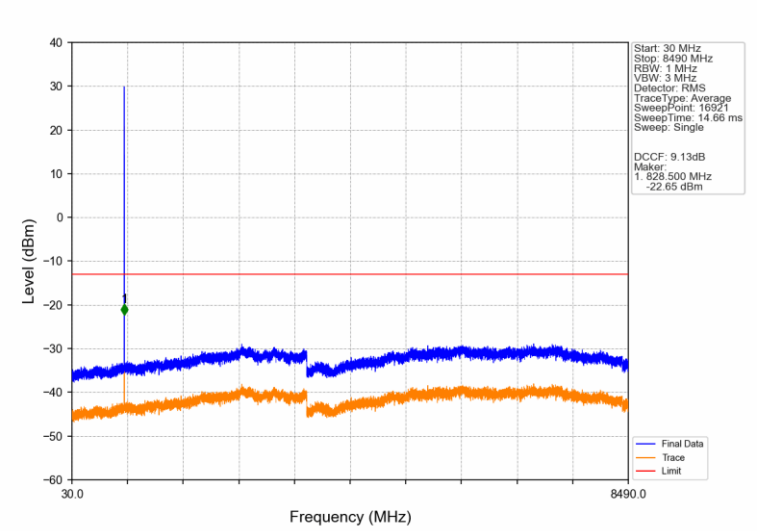
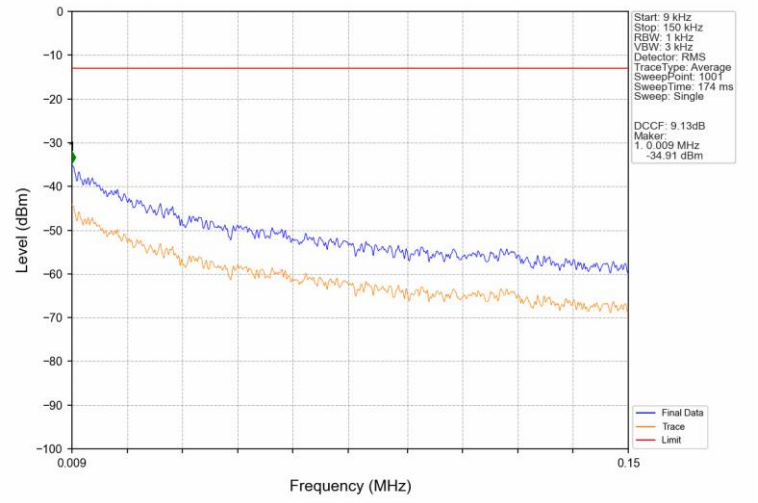


GSM850_GPRS_MCH_836.6MHz_1 TX Slot_NTNV



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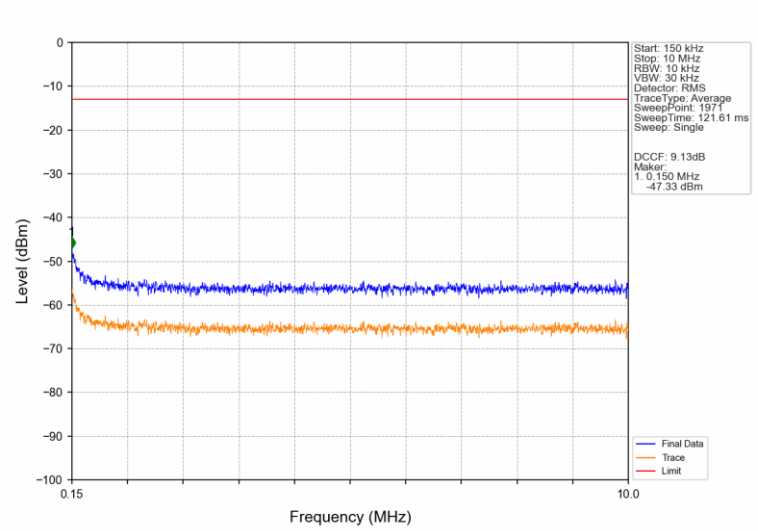
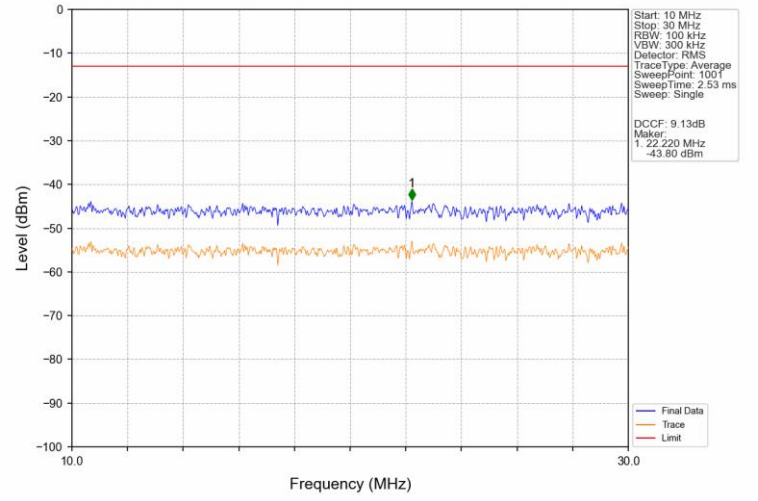
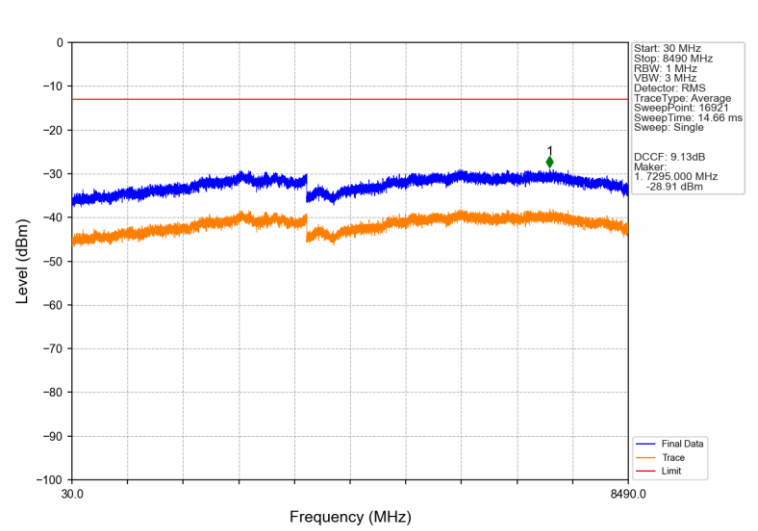


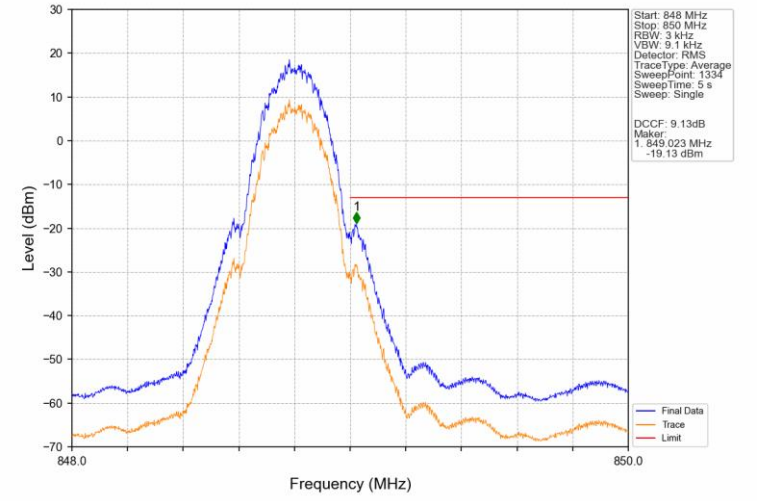
GSM850_GPRS_MCH_836.6MHz_1 TX Slot_NTNV



GSM850_GPRS_MCH_836.6MHz_1 TX Slot_NTNV



GSM850_GPRS_HCH_848.8MHz_1 TX Slot_NTNV



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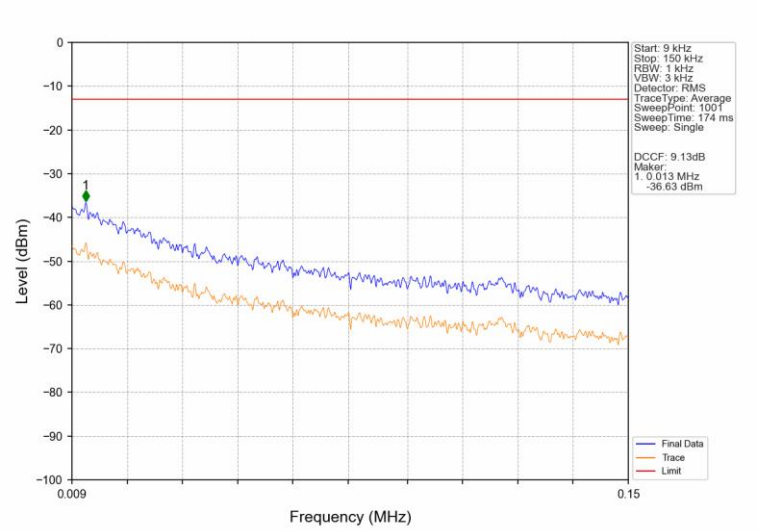

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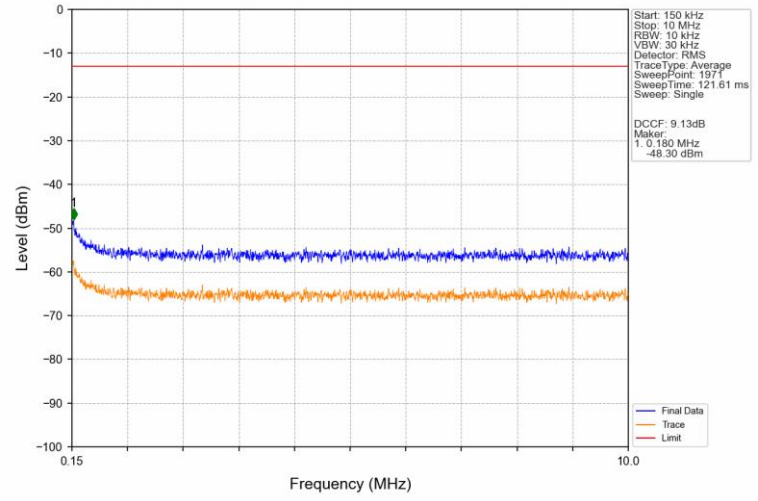

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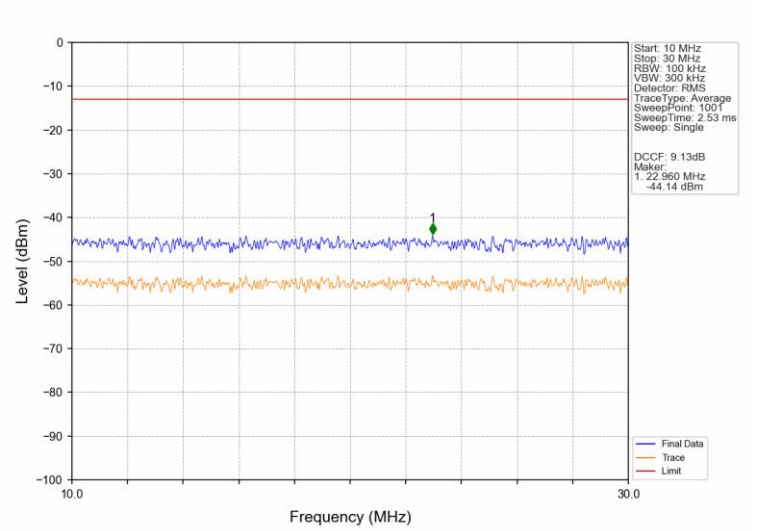

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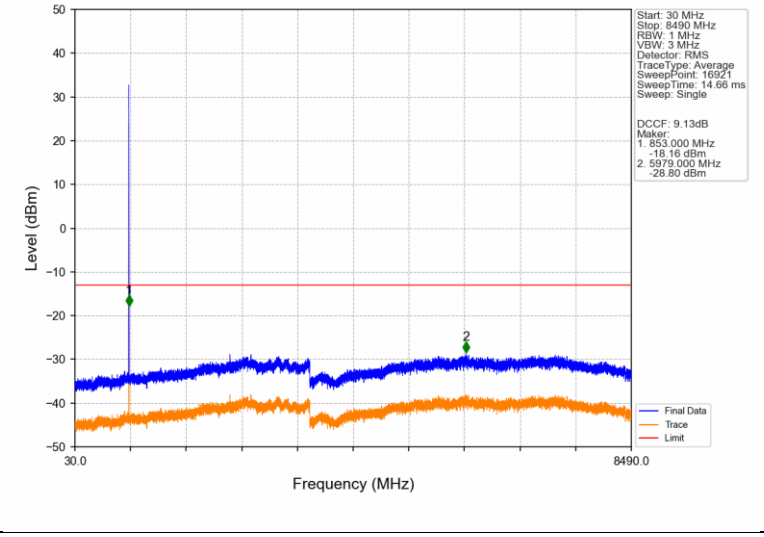
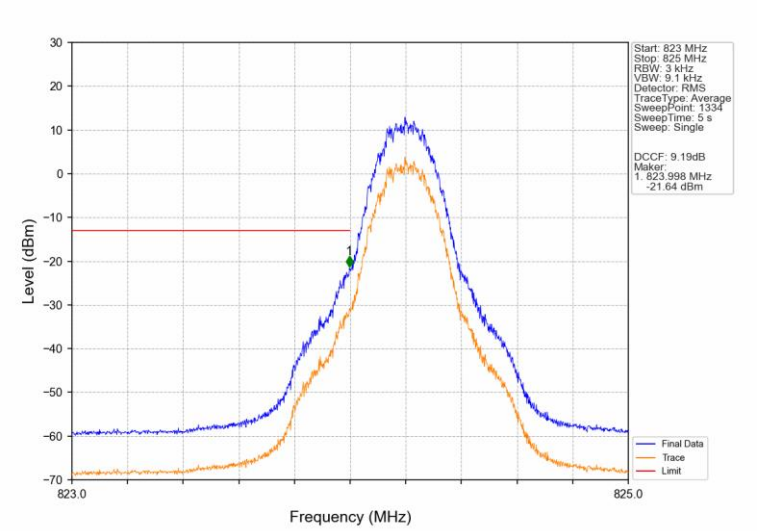
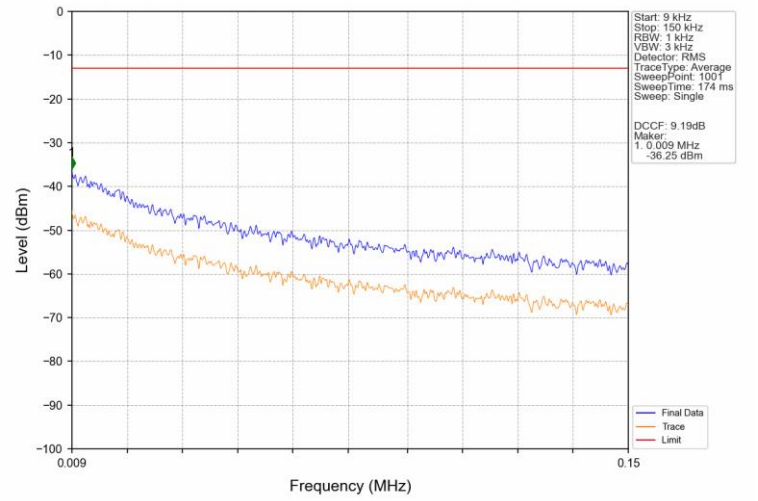


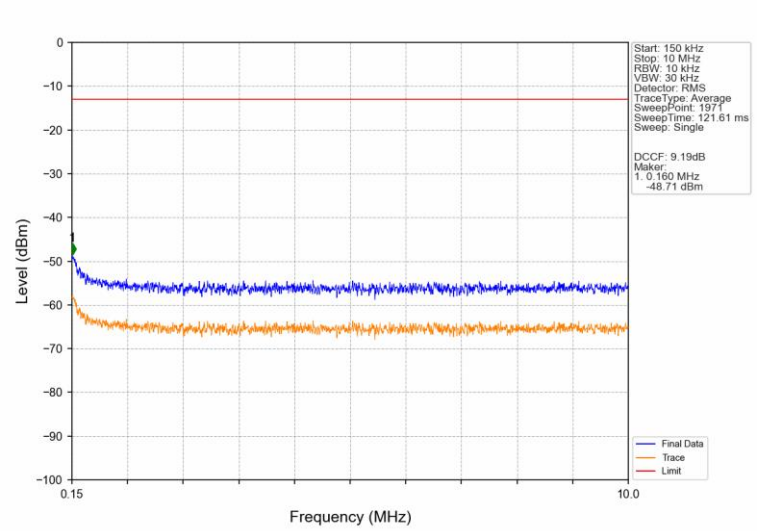
GSM850_EGPRS_LCH_824.2MHz_1 TX Slot_NTNV



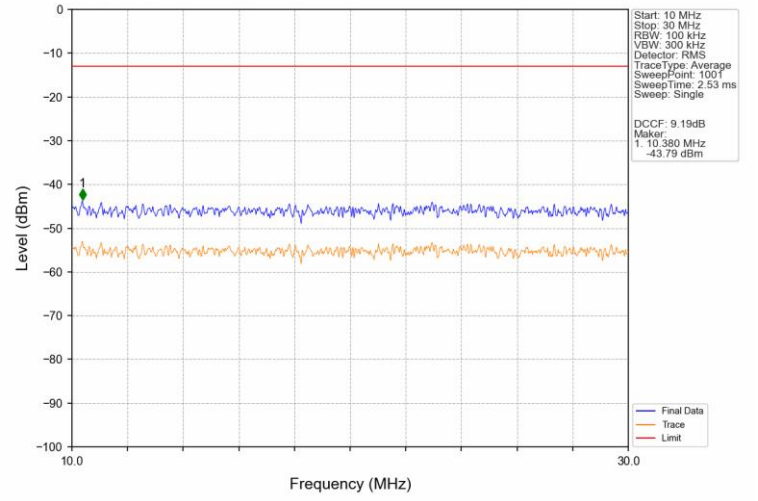
GSM850_EGPRS_LCH_824.2MHz_1 TX Slot_NTNV



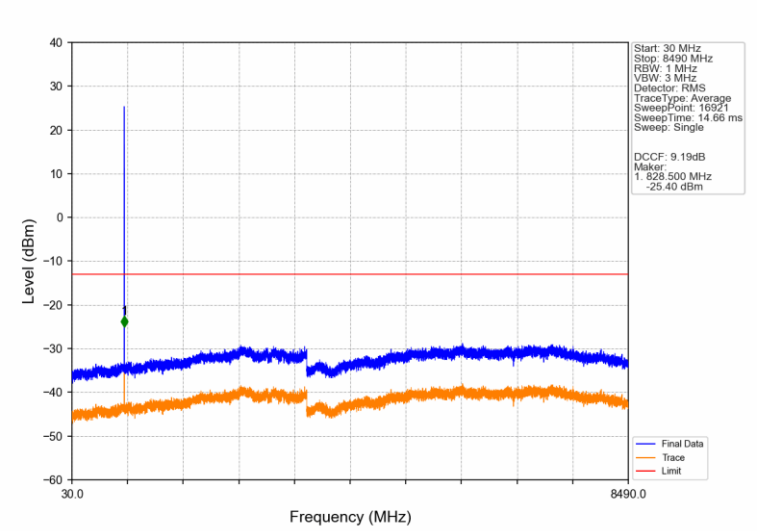
GSM850_EGPRS_LCH_824.2MHz_1 TX Slot_NTNV



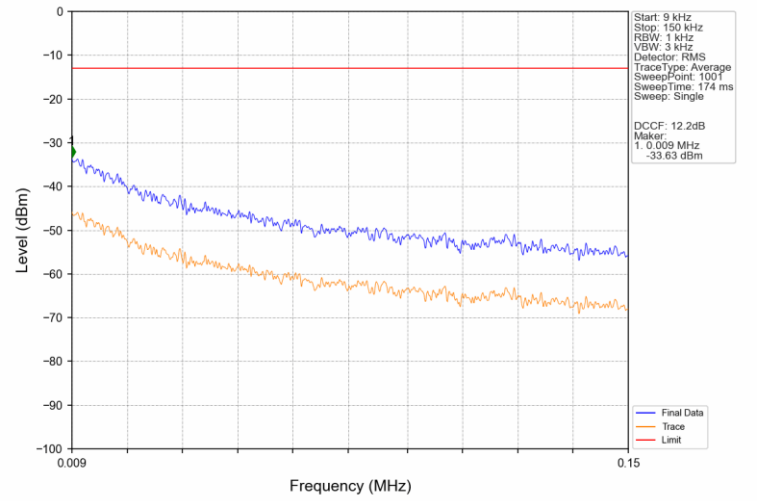
GSM850_EGPRS_LCH_824.2MHz_1 TX Slot_NTNV



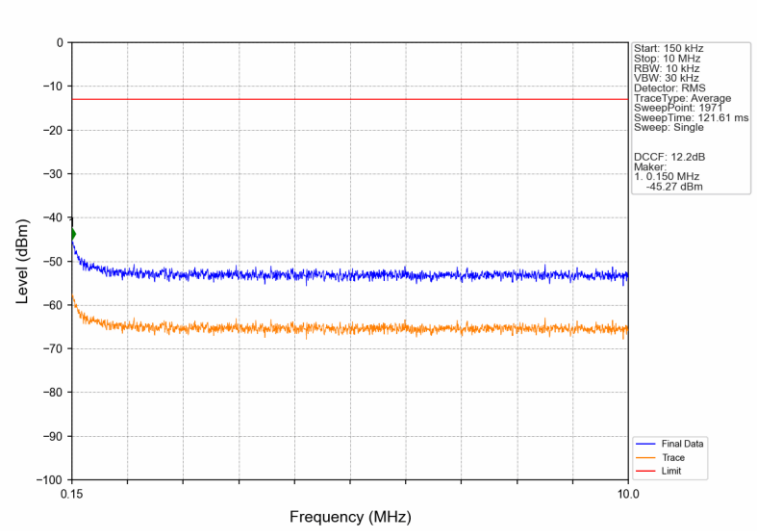
GSM850_EGPRS_LCH_824.2MHz_1 TX Slot_NTNV



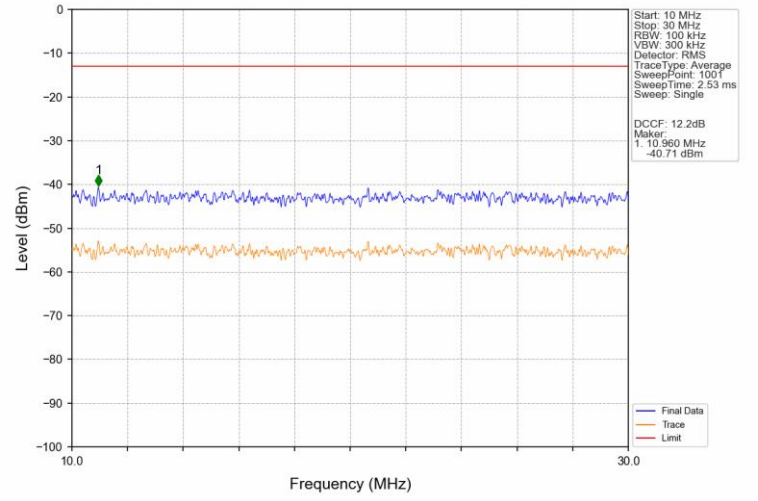
GSM850_EGPRS_MCH_836.6MHz_1 TX Slot_NTNV



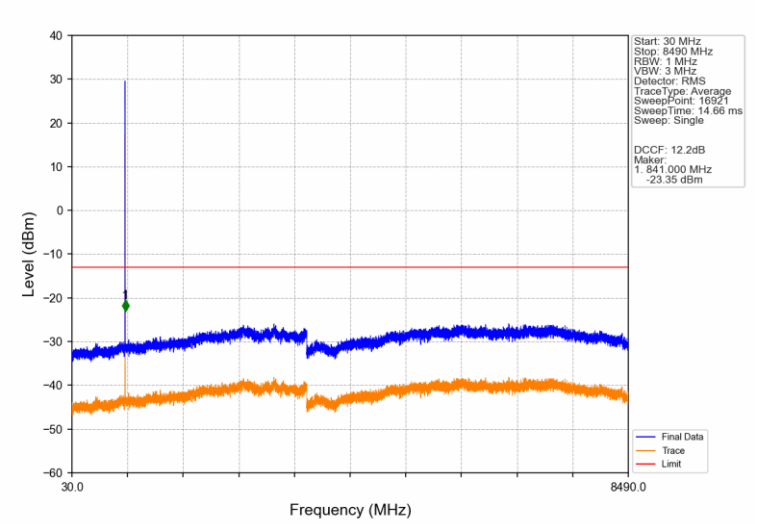
GSM850_EGPRS_MCH_836.6MHz_1 TX Slot_NTNV



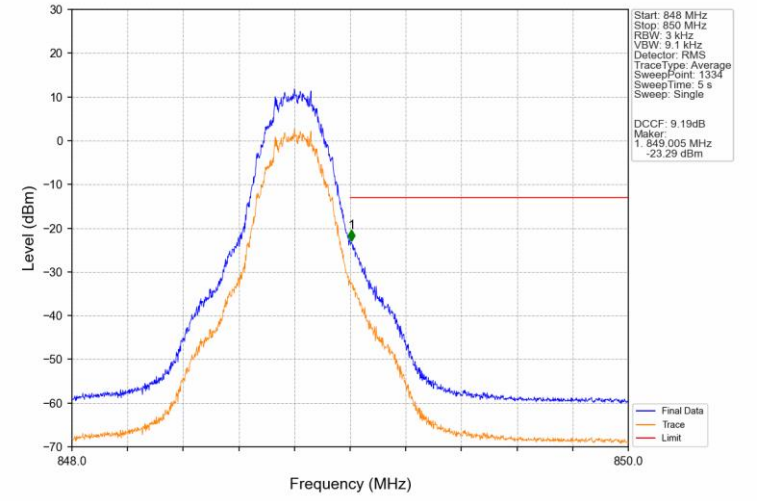
GSM850_EGPRS_MCH_836.6MHz_1 TX Slot_NTNV



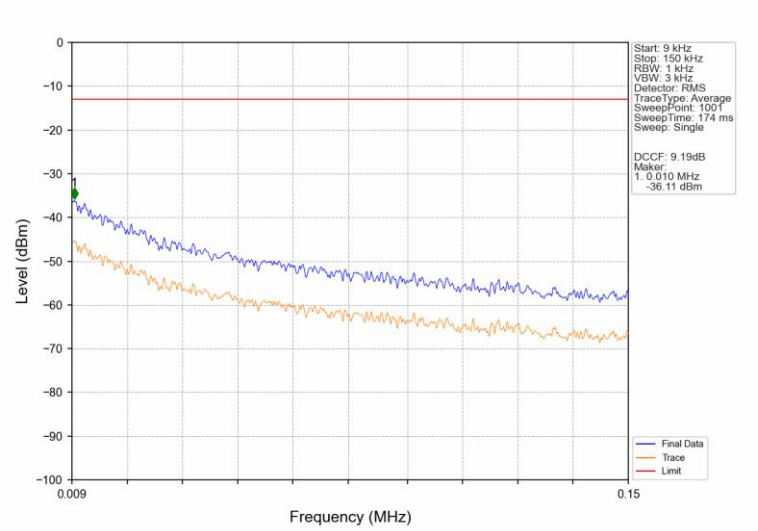
GSM850_EGPRS_MCH_836.6MHz_1 TX Slot_NTNV



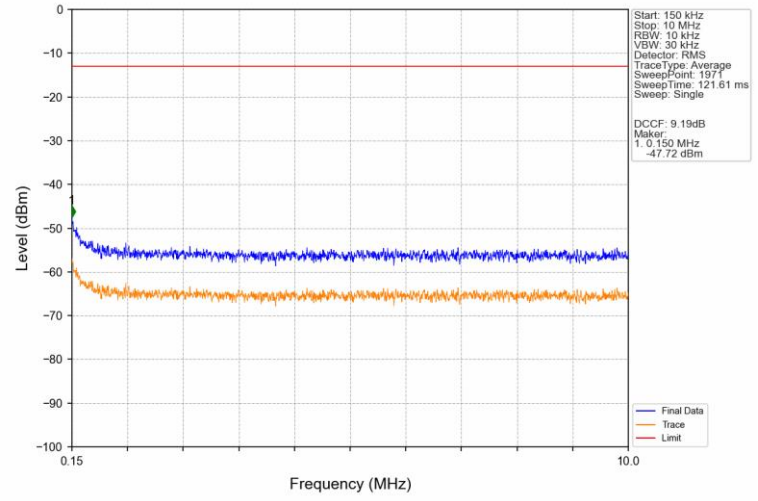
GSM850_EGPRS_HCH_848.8MHz_1 TX Slot_NTNV



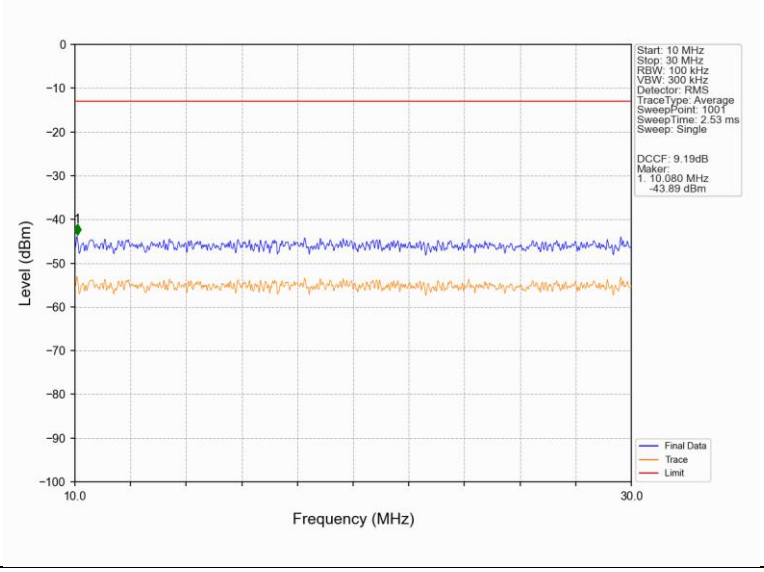
GSM850_EGPRS_HCH_848.8MHz_1 TX Slot_NTNV



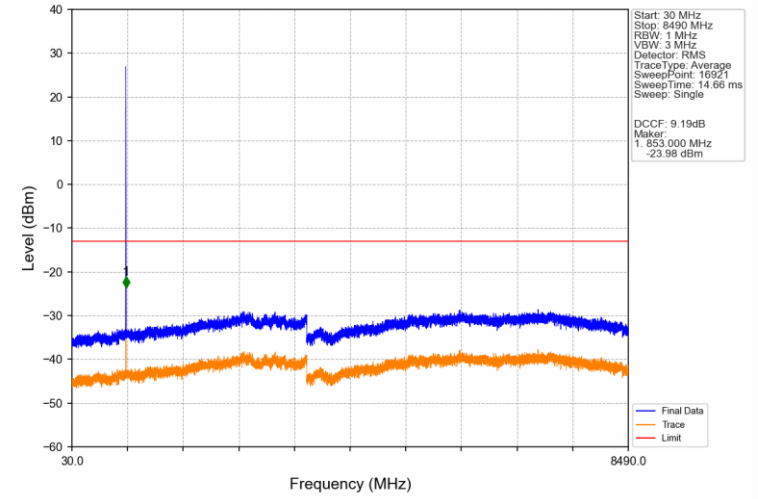
GSM850_EGPRS_HCH_848.8MHz_1 TX Slot_NTNV



GSM850_EGPRS_HCH_848.8MHz_1 TX Slot_NTNV



GSM850_EGPRS_HCH_848.8MHz_1 TX Slot_NTNV



********** End of Report **********