



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	32.90	-1.71	29.04	<=38.45	Pass	
			836.6	33.00	-1.71	29.14	<=38.45	Pass	
			848.8	33.05	-1.71	29.19	<=38.45	Pass	
	GPRS	1 TX Slot	824.2	32.91	-1.71	29.05	<=38.45	Pass	
			2 TX Slots	824.2	32.14	-1.71	28.28	<=38.45	Pass
			3 TX Slots	824.2	30.33	-1.71	26.47	<=38.45	Pass
			4 TX Slots	824.2	29.17	-1.71	25.31	<=38.45	Pass
		2 TX Slots	836.6	32.98	-1.71	29.12	<=38.45	Pass	
			2 TX Slots	836.6	32.23	-1.71	28.37	<=38.45	Pass
			3 TX Slots	836.6	30.45	-1.71	26.59	<=38.45	Pass
			4 TX Slots	836.6	29.31	-1.71	25.45	<=38.45	Pass
		3 TX Slots	848.8	32.99	-1.71	29.13	<=38.45	Pass	
			2 TX Slots	848.8	32.26	-1.71	28.4	<=38.45	Pass
			3 TX Slots	848.8	30.48	-1.71	26.62	<=38.45	Pass
			4 TX Slots	848.8	29.33	-1.71	25.47	<=38.45	Pass
	EGPRS	1 TX Slot	824.2	25.62	-1.71	21.76	<=38.45	Pass	
			2 TX Slots	824.2	24.31	-1.71	20.45	<=38.45	Pass
			3 TX Slots	824.2	22.03	-1.71	18.17	<=38.45	Pass
			4 TX Slots	824.2	20.67	-1.71	16.81	<=38.45	Pass
		2 TX Slots	836.6	25.50	-1.71	21.64	<=38.45	Pass	
			2 TX Slots	836.6	24.31	-1.71	20.45	<=38.45	Pass
			3 TX Slots	836.6	22.00	-1.71	18.14	<=38.45	Pass
			4 TX Slots	836.6	20.51	-1.71	16.65	<=38.45	Pass
		3 TX Slots	848.8	25.48	-1.71	21.62	<=38.45	Pass	
			2 TX Slots	848.8	24.00	-1.71	20.14	<=38.45	Pass
			3 TX Slots	848.8	21.83	-1.71	17.97	<=38.45	Pass
			4 TX Slots	848.8	20.27	-1.71	16.41	<=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	3.27	-7.232	-0.0088	-2.5 to 2.5	Pass
			3.85	-7.619	-0.0092	-2.5 to 2.5	Pass
			4.43	-6.393	-0.0078	-2.5 to 2.5	Pass
		-30	3.85	-5.941	-0.0072	-2.5 to 2.5	Pass
			-20	3.85	-8.136	-0.0099	-2.5 to 2.5
		-10	3.85	-6.877	-0.0083	-2.5 to 2.5	Pass
			0	3.85	-6.651	-0.0081	-2.5 to 2.5



		10	3.85	-4.068	-0.0049	-2.5 to 2.5	Pass
		30	3.85	-7.006	-0.0085	-2.5 to 2.5	Pass
		40	3.85	-5.715	-0.0069	-2.5 to 2.5	Pass
		50	3.85	-1.808	-0.0022	-2.5 to 2.5	Pass
	836.6	20	3.27	-10.525	-0.0126	-2.5 to 2.5	Pass
			3.85	-8.846	-0.0106	-2.5 to 2.5	Pass
			4.43	-7.942	-0.0095	-2.5 to 2.5	Pass
		-30	3.85	-5.392	-0.0064	-2.5 to 2.5	Pass
		-20	3.85	-6.812	-0.0081	-2.5 to 2.5	Pass
		-10	3.85	-3.584	-0.0043	-2.5 to 2.5	Pass
		0	3.85	-4.455	-0.0053	-2.5 to 2.5	Pass
		10	3.85	-5.715	-0.0068	-2.5 to 2.5	Pass
		30	3.85	-6.845	-0.0082	-2.5 to 2.5	Pass
		40	3.85	-6.457	-0.0077	-2.5 to 2.5	Pass
		50	3.85	-3.196	-0.0038	-2.5 to 2.5	Pass
		848.8	20	3.27	-6.748	-0.0080	-2.5 to 2.5
	3.85			-8.362	-0.0099	-2.5 to 2.5	Pass
	4.43			-7.329	-0.0086	-2.5 to 2.5	Pass
	-30		3.85	-2.486	-0.0029	-2.5 to 2.5	Pass
	-20		3.85	-6.296	-0.0074	-2.5 to 2.5	Pass
-10	3.85		-6.489	-0.0076	-2.5 to 2.5	Pass	
0	3.85		-5.101	-0.0060	-2.5 to 2.5	Pass	
10	3.85		-7.329	-0.0086	-2.5 to 2.5	Pass	
30	3.85		-6.554	-0.0077	-2.5 to 2.5	Pass	
40	3.85		-9.363	-0.0110	-2.5 to 2.5	Pass	
50	3.85		-4.907	-0.0058	-2.5 to 2.5	Pass	
GPRS	824.2		20	3.27	-5.133	-0.0062	-2.5 to 2.5
		3.85		-8.685	-0.0105	-2.5 to 2.5	Pass
		4.43		-7.232	-0.0088	-2.5 to 2.5	Pass
		-30	3.85	-8.394	-0.0102	-2.5 to 2.5	Pass
		-20	3.85	-7.619	-0.0092	-2.5 to 2.5	Pass
		-10	3.85	-9.524	-0.0116	-2.5 to 2.5	Pass
		0	3.85	-11.203	-0.0136	-2.5 to 2.5	Pass
		10	3.85	-8.233	-0.0100	-2.5 to 2.5	Pass
		30	3.85	-11.106	-0.0135	-2.5 to 2.5	Pass
		40	3.85	-3.777	-0.0046	-2.5 to 2.5	Pass
		50	3.85	-3.035	-0.0037	-2.5 to 2.5	Pass
		836.6	20	3.27	-10.622	-0.0127	-2.5 to 2.5
	3.85			-8.459	-0.0101	-2.5 to 2.5	Pass
	4.43			-8.104	-0.0097	-2.5 to 2.5	Pass
	-30		3.85	-8.588	-0.0103	-2.5 to 2.5	Pass
	-20		3.85	-10.041	-0.0120	-2.5 to 2.5	Pass
	-10		3.85	-6.651	-0.0080	-2.5 to 2.5	Pass
	0		3.85	-7.329	-0.0088	-2.5 to 2.5	Pass
	10		3.85	-6.941	-0.0083	-2.5 to 2.5	Pass
	30		3.85	-5.359	-0.0064	-2.5 to 2.5	Pass
40	3.85		-4.972	-0.0059	-2.5 to 2.5	Pass	
50	3.85		-4.165	-0.0050	-2.5 to 2.5	Pass	
848.8	20		3.27	-10.331	-0.0122	-2.5 to 2.5	Pass
		3.85	-11.235	-0.0132	-2.5 to 2.5	Pass	
		4.43	-10.331	-0.0122	-2.5 to 2.5	Pass	
	-30	3.85	-8.975	-0.0106	-2.5 to 2.5	Pass	
	-20	3.85	-8.556	-0.0101	-2.5 to 2.5	Pass	
	-10	3.85	-8.846	-0.0104	-2.5 to 2.5	Pass	
	0	3.85	-8.491	-0.0100	-2.5 to 2.5	Pass	
	10	3.85	-8.523	-0.0100	-2.5 to 2.5	Pass	
30	3.85	-8.653	-0.0102	-2.5 to 2.5	Pass		
40	3.85	-7.523	-0.0089	-2.5 to 2.5	Pass		



EGPRS	824.2	50	3.85	-7.652	-0.0090	-2.5 to 2.5	Pass
		20	3.27	-0.646	-0.0008	-2.5 to 2.5	Pass
			3.85	-2.486	-0.0030	-2.5 to 2.5	Pass
			4.43	-3.164	-0.0038	-2.5 to 2.5	Pass
		-30	3.85	-4.875	-0.0059	-2.5 to 2.5	Pass
		-20	3.85	-4.617	-0.0056	-2.5 to 2.5	Pass
		-10	3.85	-5.230	-0.0063	-2.5 to 2.5	Pass
		0	3.85	-5.521	-0.0067	-2.5 to 2.5	Pass
		10	3.85	-3.681	-0.0045	-2.5 to 2.5	Pass
		30	3.85	-3.713	-0.0045	-2.5 to 2.5	Pass
	40	3.85	1.324	0.0016	-2.5 to 2.5	Pass	
	50	3.85	1.743	0.0021	-2.5 to 2.5	Pass	
	836.6	20	3.27	-5.166	-0.0062	-2.5 to 2.5	Pass
			3.85	-1.711	-0.0020	-2.5 to 2.5	Pass
			4.43	-4.778	-0.0057	-2.5 to 2.5	Pass
		-30	3.85	-4.391	-0.0052	-2.5 to 2.5	Pass
		-20	3.85	-2.421	-0.0029	-2.5 to 2.5	Pass
		-10	3.85	-1.808	-0.0022	-2.5 to 2.5	Pass
		0	3.85	-5.973	-0.0071	-2.5 to 2.5	Pass
		10	3.85	-1.776	-0.0021	-2.5 to 2.5	Pass
		30	3.85	-6.586	-0.0079	-2.5 to 2.5	Pass
		40	3.85	-1.324	-0.0016	-2.5 to 2.5	Pass
	50	3.85	-1.582	-0.0019	-2.5 to 2.5	Pass	
	848.8	20	3.27	-2.647	-0.0031	-2.5 to 2.5	Pass
			3.85	-3.971	-0.0047	-2.5 to 2.5	Pass
			4.43	-0.613	-0.0007	-2.5 to 2.5	Pass
		-30	3.85	-6.360	-0.0075	-2.5 to 2.5	Pass
		-20	3.85	-4.326	-0.0051	-2.5 to 2.5	Pass
		-10	3.85	-1.033	-0.0012	-2.5 to 2.5	Pass
		0	3.85	-6.037	-0.0071	-2.5 to 2.5	Pass
		10	3.85	-6.134	-0.0072	-2.5 to 2.5	Pass
		30	3.85	-1.324	-0.0016	-2.5 to 2.5	Pass
		40	3.85	-6.070	-0.0072	-2.5 to 2.5	Pass
	50	3.85	-1.130	-0.0013	-2.5 to 2.5	Pass	

3. Modulation Characteristics

3.1 GSM850

3.1.1 Test Result

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

3.1.2 Test Graph

GSM850_GSM_MCH_836.6MHz_GSM_NTNV

GSM Measurement - V3.7.30 - Base V 3.7.172 - TX Measurement

Band/Ch: GSM850 / 190 Freq.: 836.60000 MHz Ref. Level: 39.00 dBm Meas Slots: ●●●●●●●● Tim. Advance.: 0

IQ

Statistic Count
■■■■■■■■■■ 10 / 10

Bursts out of Tolerance
0.00 %

Mod.View Throughput
100.0 %

Burst Type
GMSK

GSM

Multi Evaluation
RDY

RF Settings

Trigger

Display

Signaling Parameter

GSM Signaling
ON

CS: Call Established

PS: Attached

DL: ○○○○○○○○ MCS-5

UL: ○○○○○○○○ MCS-5

Go To Local
Show Remote Screen

GSM850_GPRS_MCH_836.6MHz_1 TX Slot_NTNV

GSM Measurement - V3.7.30 - Base V 3.7.172 - TX Measurement

Band/Ch: GSM850 / 190 Freq.: 836.60000 MHz Ref. Level: 39.00 dBm Meas Slots: ●●●●●●●● Tim. Advance.: 0

IQ

Statistic Count
■■■■■■■■■■ 10 / 10

Bursts out of Tolerance
0.00 %

Mod.View Throughput
100.0 %

Burst Type
GMSK

GSM

Multi Evaluation
RDY

RF Settings

Trigger

Display

Signaling Parameter

GSM Signaling
ON

CS: Synchronized

PS: TBF Established

DL: ○○○○○○○○ CS-1

UL: ○○○○○○○○ CS-1

Go To Local
Show Remote Screen



GSM850_EGPRS_MCH_836.6MHz_1 TX Slot_NTNV

GSM Measurement - V3.7.30 - Base V 3.7.172 - TX Measurement

Band/Ch: GSM850 / 190 Freq.: 836.60000 MHz Ref. Level: 42.23 dBm Meas Slots: [●●●●●●●●] Tim. Advance: 0

IQ

Q

I

Statistic Count: 10 / 10

Bursts out of Tolerance: 0.00 %

Mod. View Throughput: 100.0 %

Burst Type: 8PSK

CS: Synchronized

PS: TBF Established

DL: ○○○○○○ MCS-5

UL: ○○○○○○ MCS-5

GSM

Multi Evaluation: **RDY**

RF Settings

Trigger

Display

Signaling Parameter

GSM Signaling: **ON**

Go To LocalShow Remote Screen



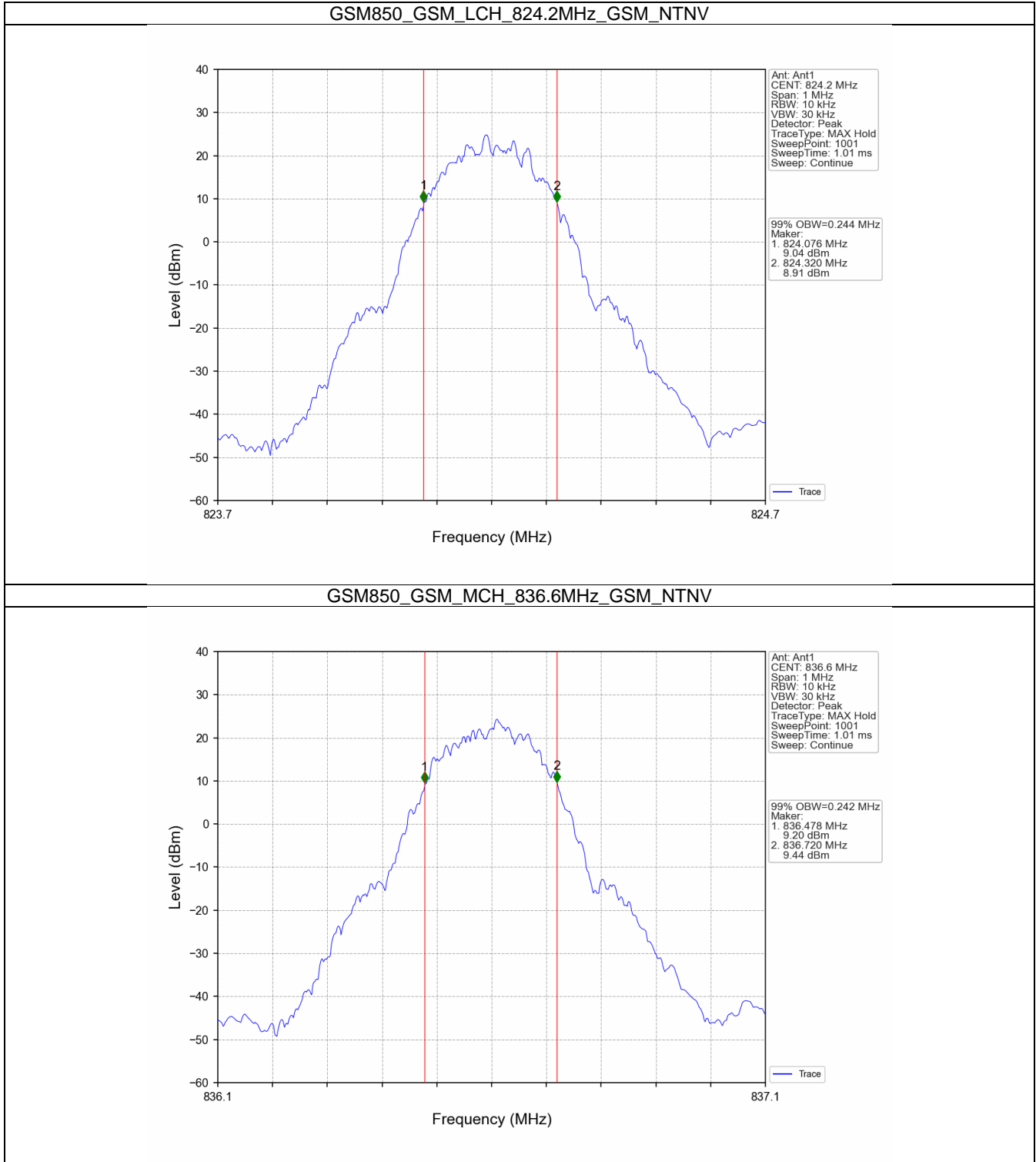
4. 99% & 26dB Bandwidth

4.1 GSM850_OBW

4.1.1 Test Result

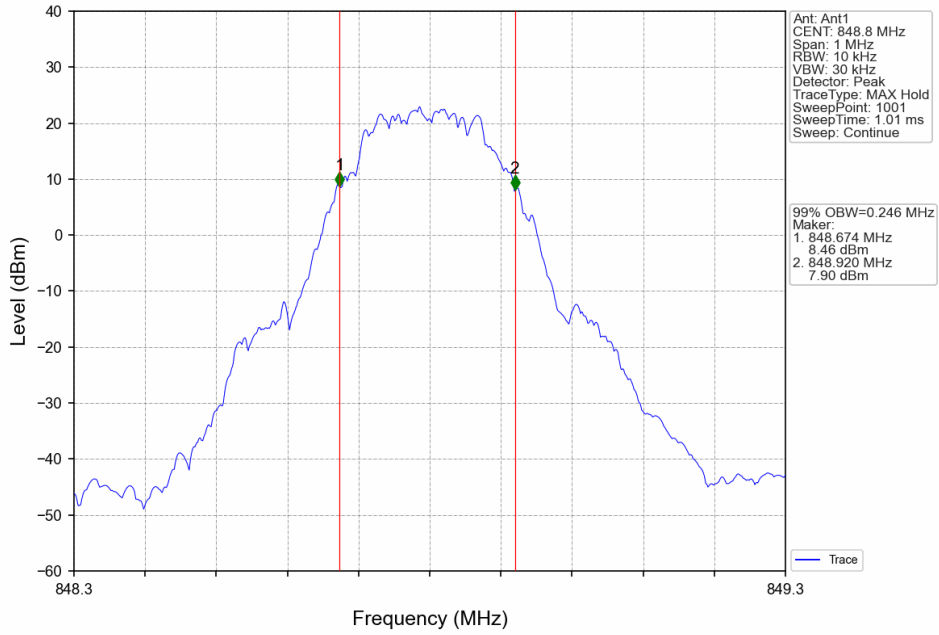
Band: GSM850						
ENV	Mode		Frequency (MHz)	99% Occupied Bandwidth (MHz)		Verdict
	Network	Subset		Result	Limit	
NTNV	GSM	GSM	824.2	0.244	/	Pass
			836.6	0.242	/	Pass
			848.8	0.246	/	Pass
	GPRS	1 TX Slot	824.2	0.242	/	Pass
			836.6	0.245	/	Pass
			848.8	0.239	/	Pass
	EGPRS	1 TX Slot	824.2	0.242	/	Pass
			836.6	0.238	/	Pass
			848.8	0.243	/	Pass

4.1.2 Test Graph

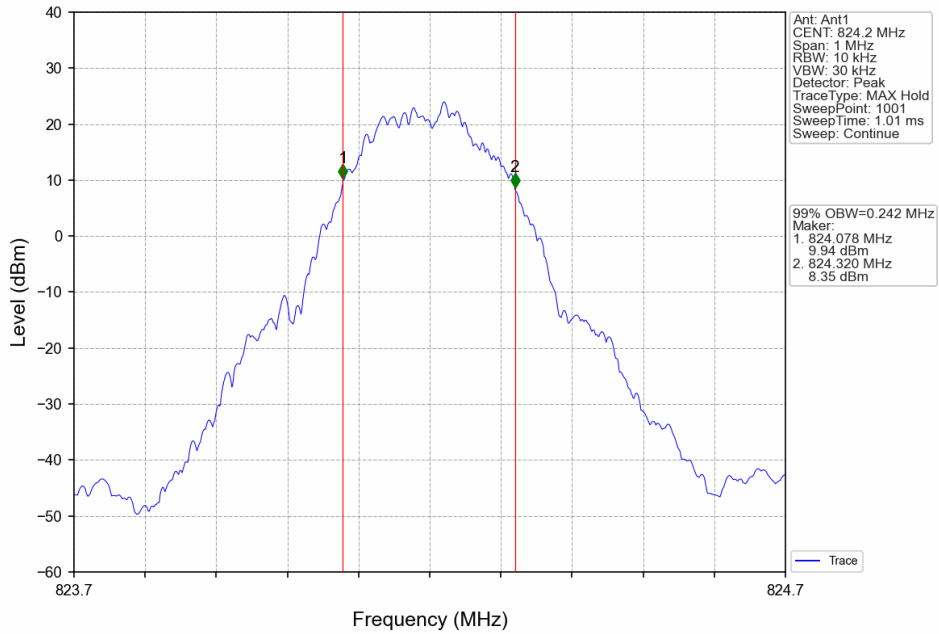




GSM850_GSM_HCH_848.8MHz_GSM_NTNV

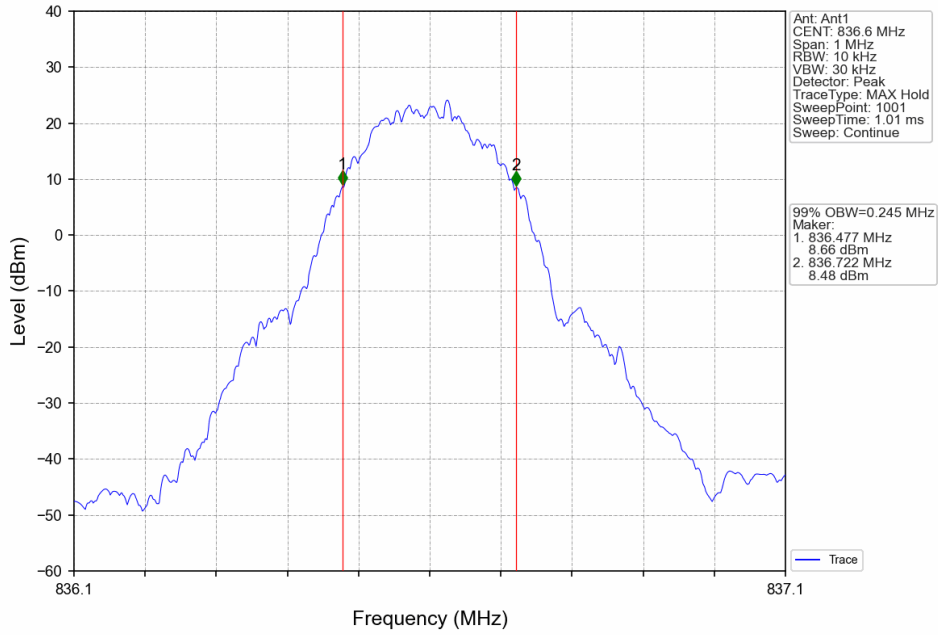


GSM850_GPRS_LCH_824.2MHz_1 TX Slot_NTNV

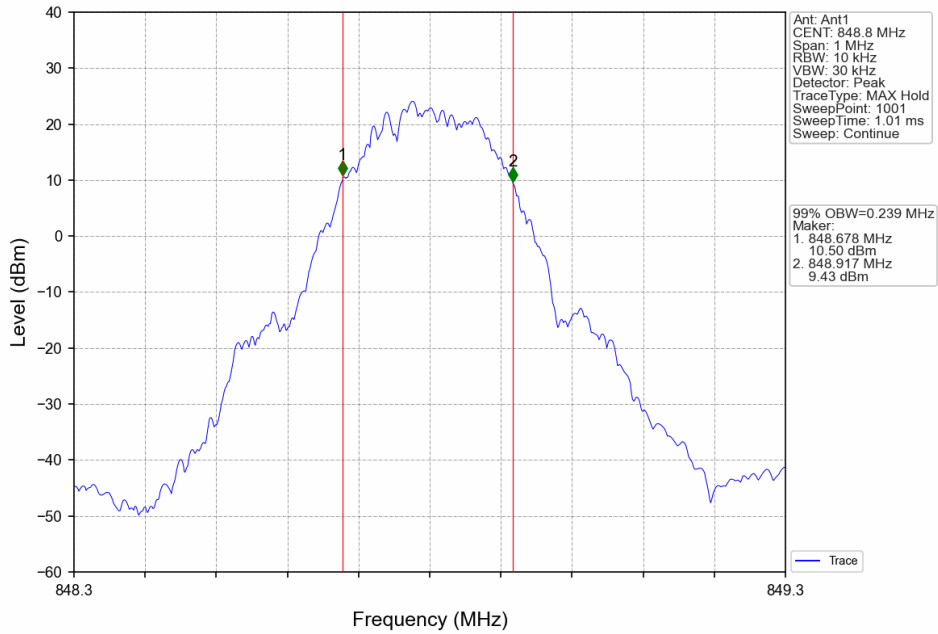




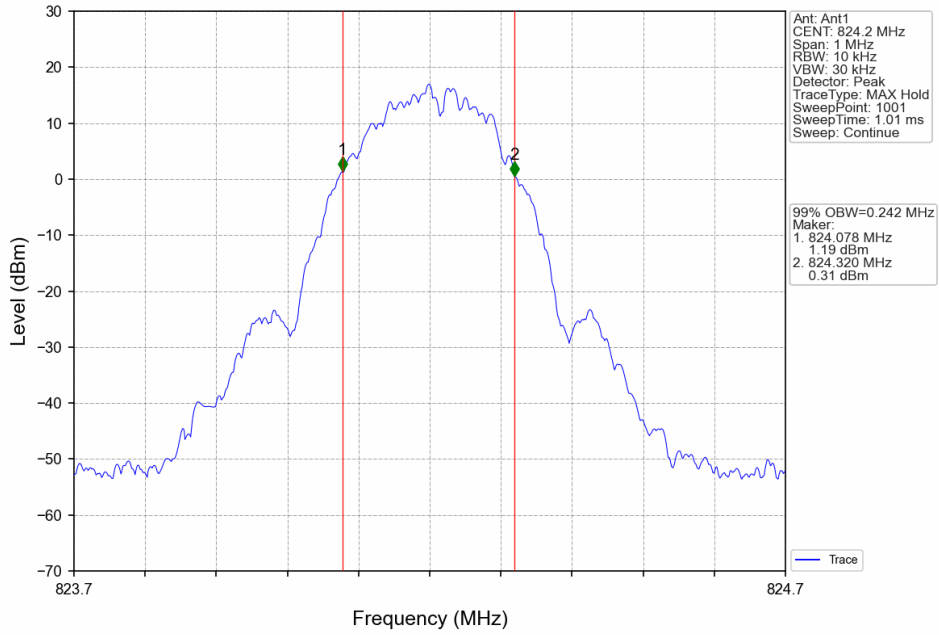
GSM850_GPRS_MCH_836.6MHz_1 TX Slot_NTNV



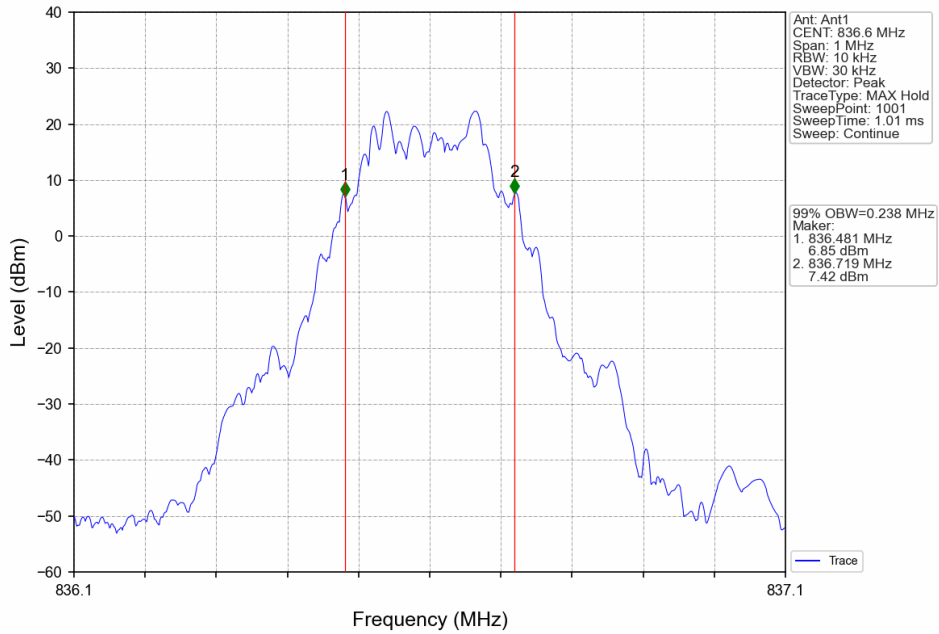
GSM850_GPRS_HCH_848.8MHz_1 TX Slot_NTNV

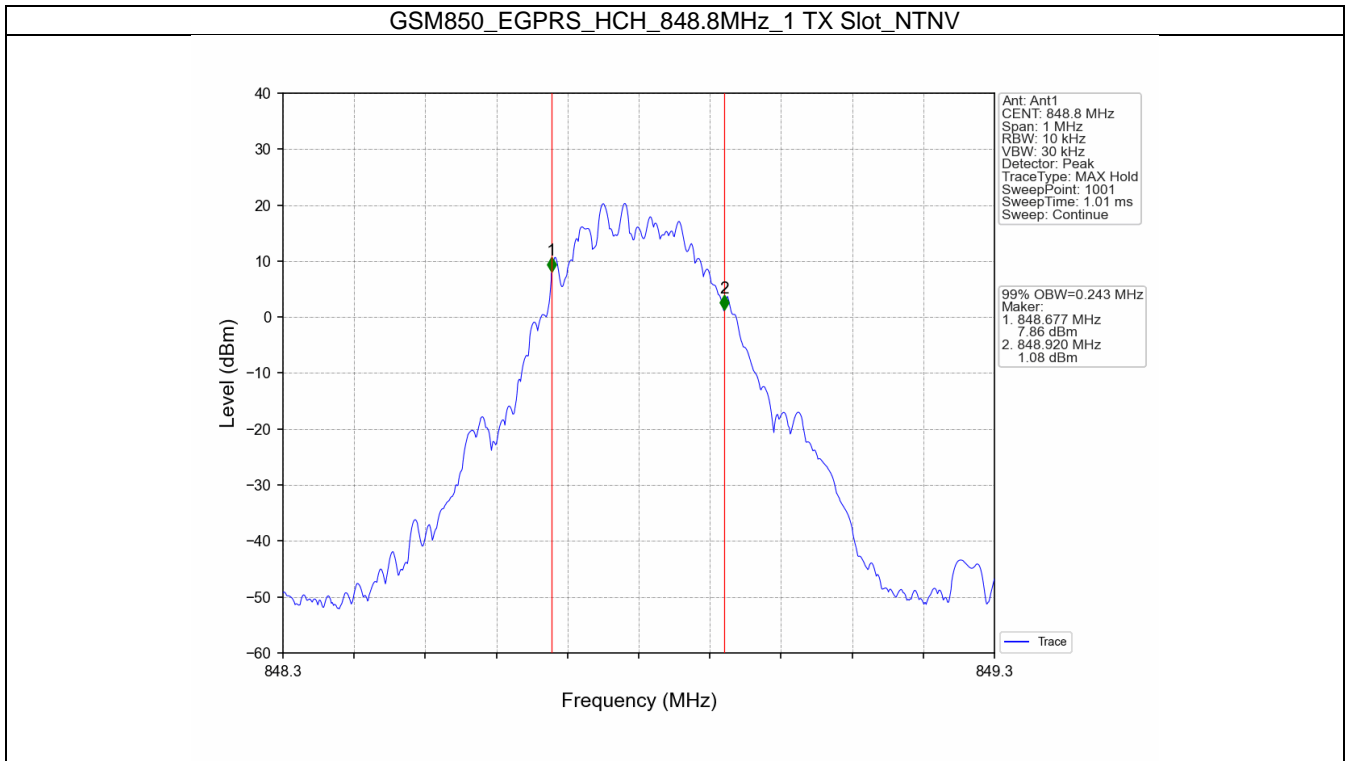


GSM850_EGPRS_LCH_824.2MHz_1 TX Slot_NTNV



GSM850_EGPRS_MCH_836.6MHz_1 TX Slot_NTNV





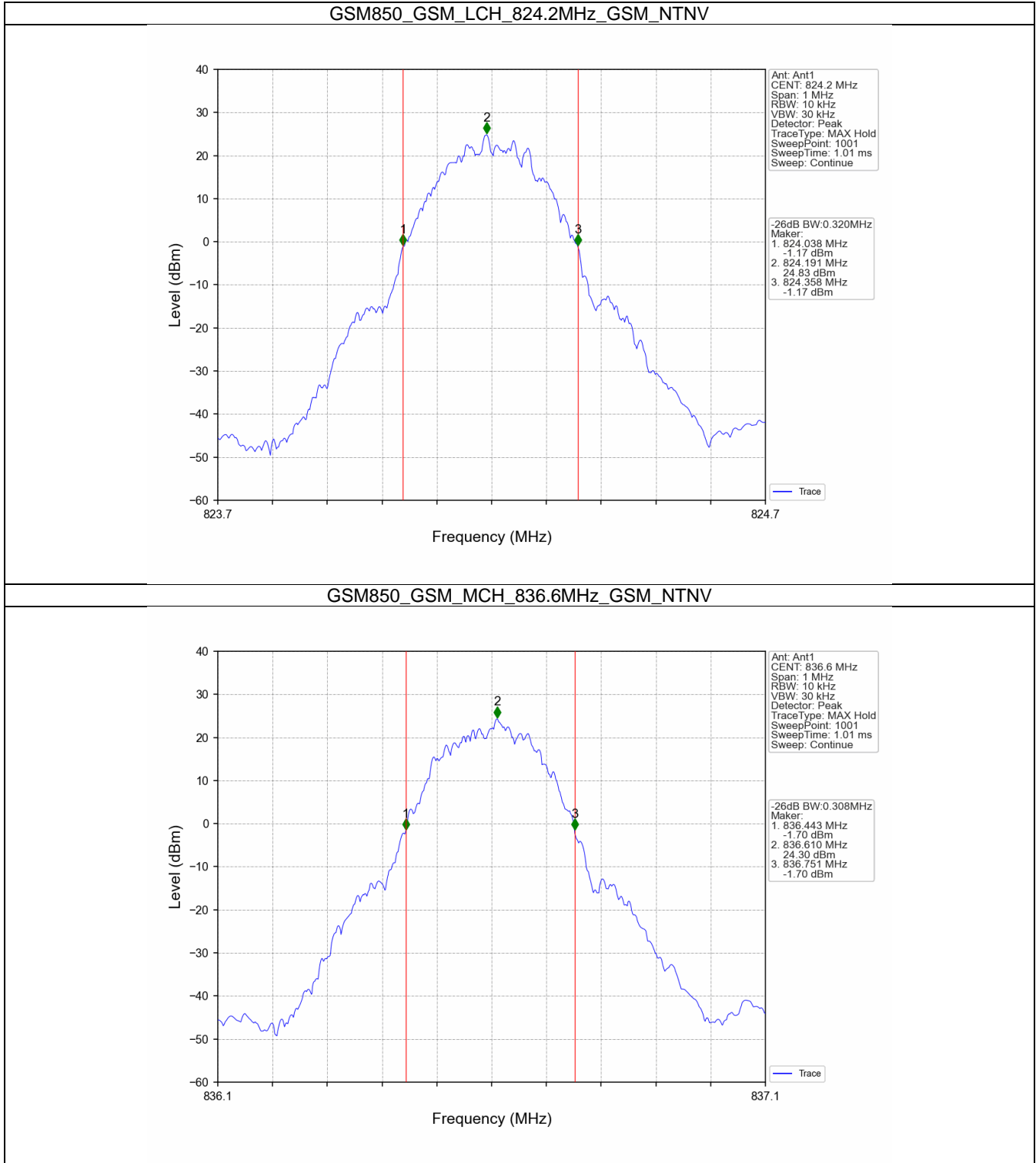


4.2 GSM850_XDB

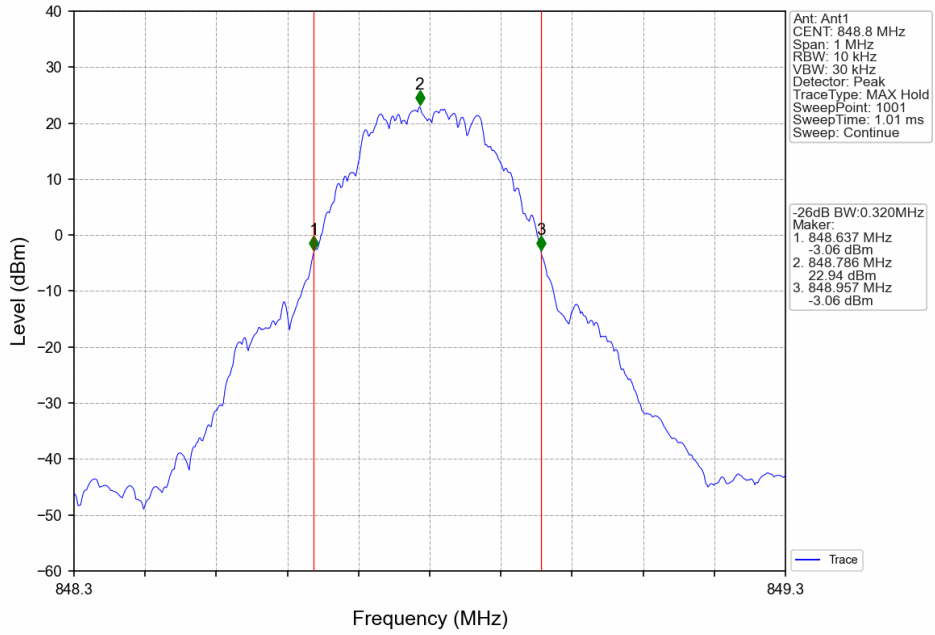
4.2.1 Test Result

Band: GSM850						
ENV	Mode		Frequency (MHz)	26dB Bandwidth (MHz)		Verdict
	Network	Subset		Result	Limit	
NTNV	GSM	GSM	824.2	0.320	/	Pass
			836.6	0.308	/	Pass
			848.8	0.320	/	Pass
	GPRS	1 TX Slot	824.2	0.317	/	Pass
			836.6	0.312	/	Pass
			848.8	0.313	/	Pass
	EGPRS	1 TX Slot	824.2	0.305	/	Pass
			836.6	0.308	/	Pass
			848.8	0.305	/	Pass

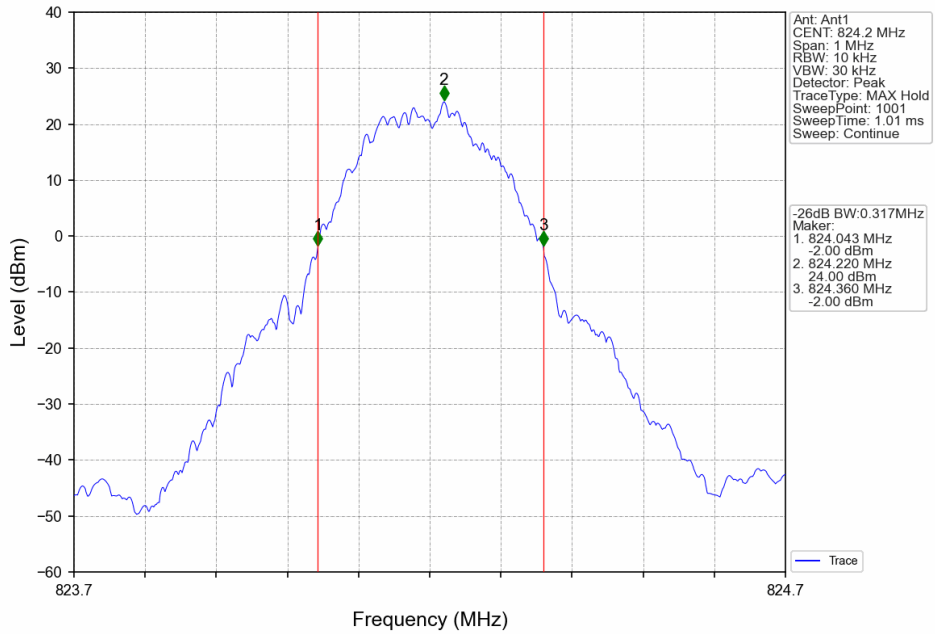
4.2.2 Test Graph



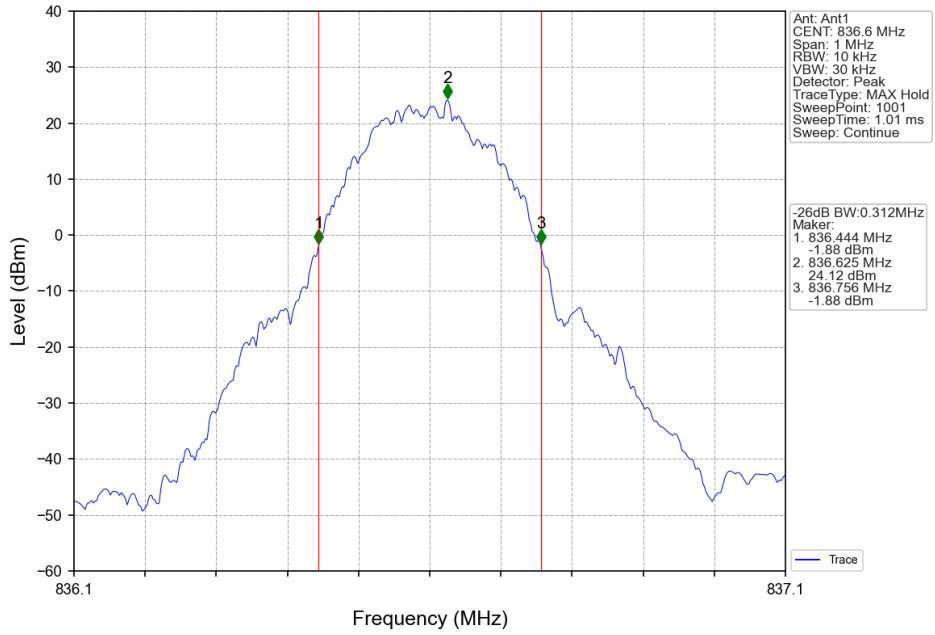
GSM850_GSM_HCH_848.8MHz_GSM_NTNV



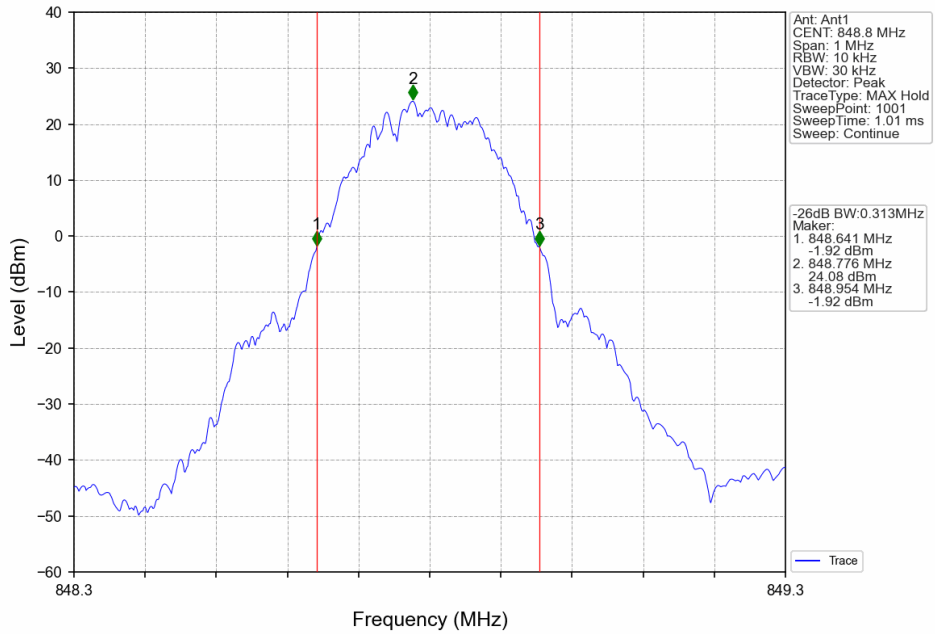
GSM850_GPRS_LCH_824.2MHz_1 TX Slot_NTNV



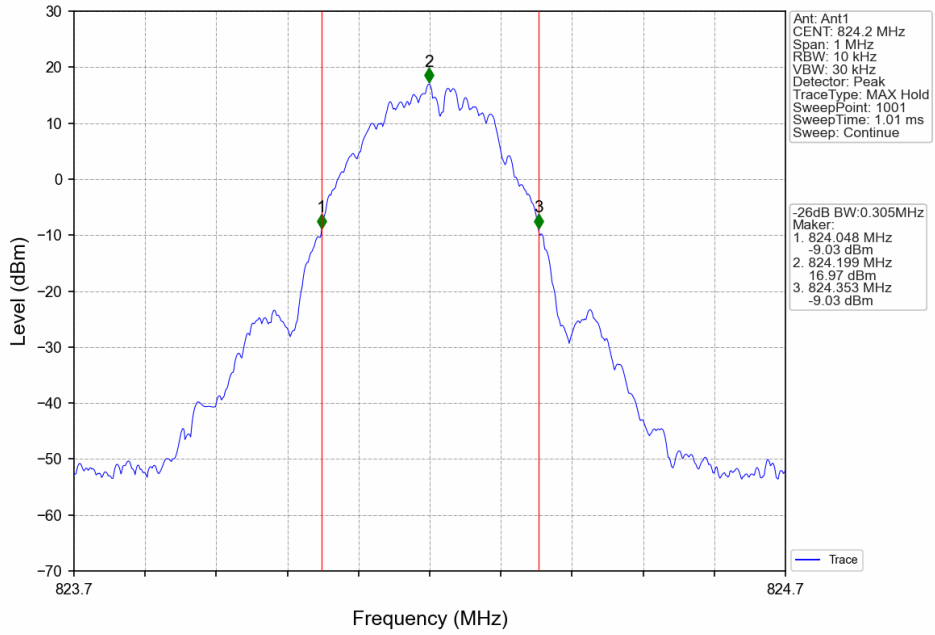
GSM850_GPRS_MCH_836.6MHz_1 TX Slot_NTNV



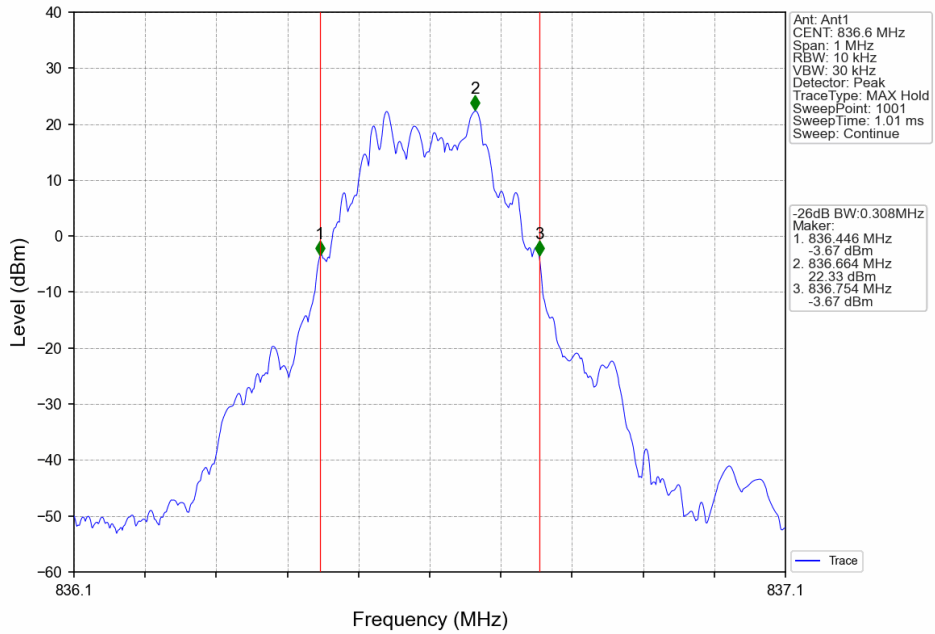
GSM850_GPRS_HCH_848.8MHz_1 TX Slot_NTNV



GSM850_EGPRS_LCH_824.2MHz_1 TX Slot_NTNV

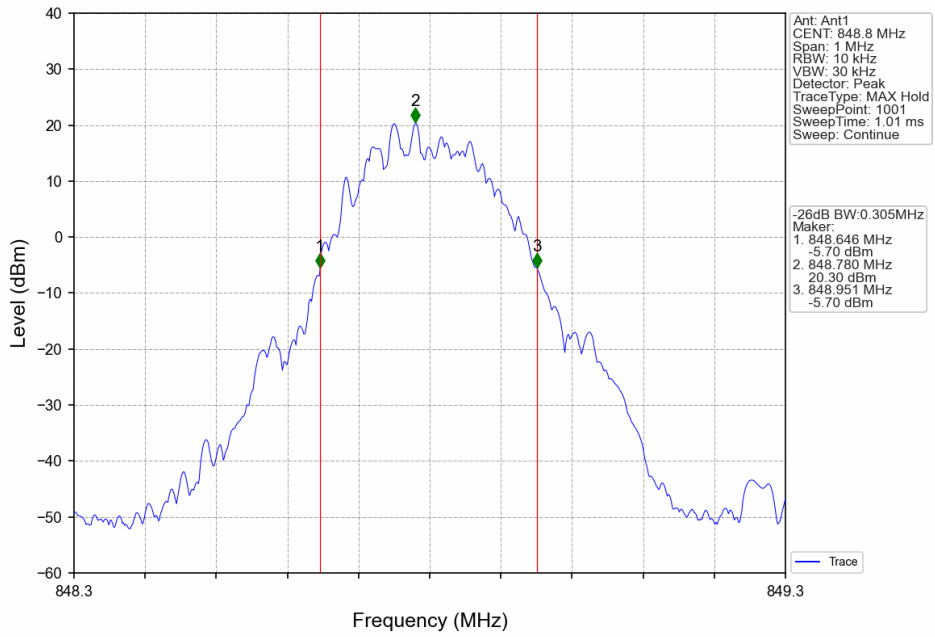


GSM850_EGPRS_MCH_836.6MHz_1 TX Slot_NTNV





GSM850_EGPRS_HCH_848.8MHz_1 TX Slot_NTNV





5. Peak-Average Ratio

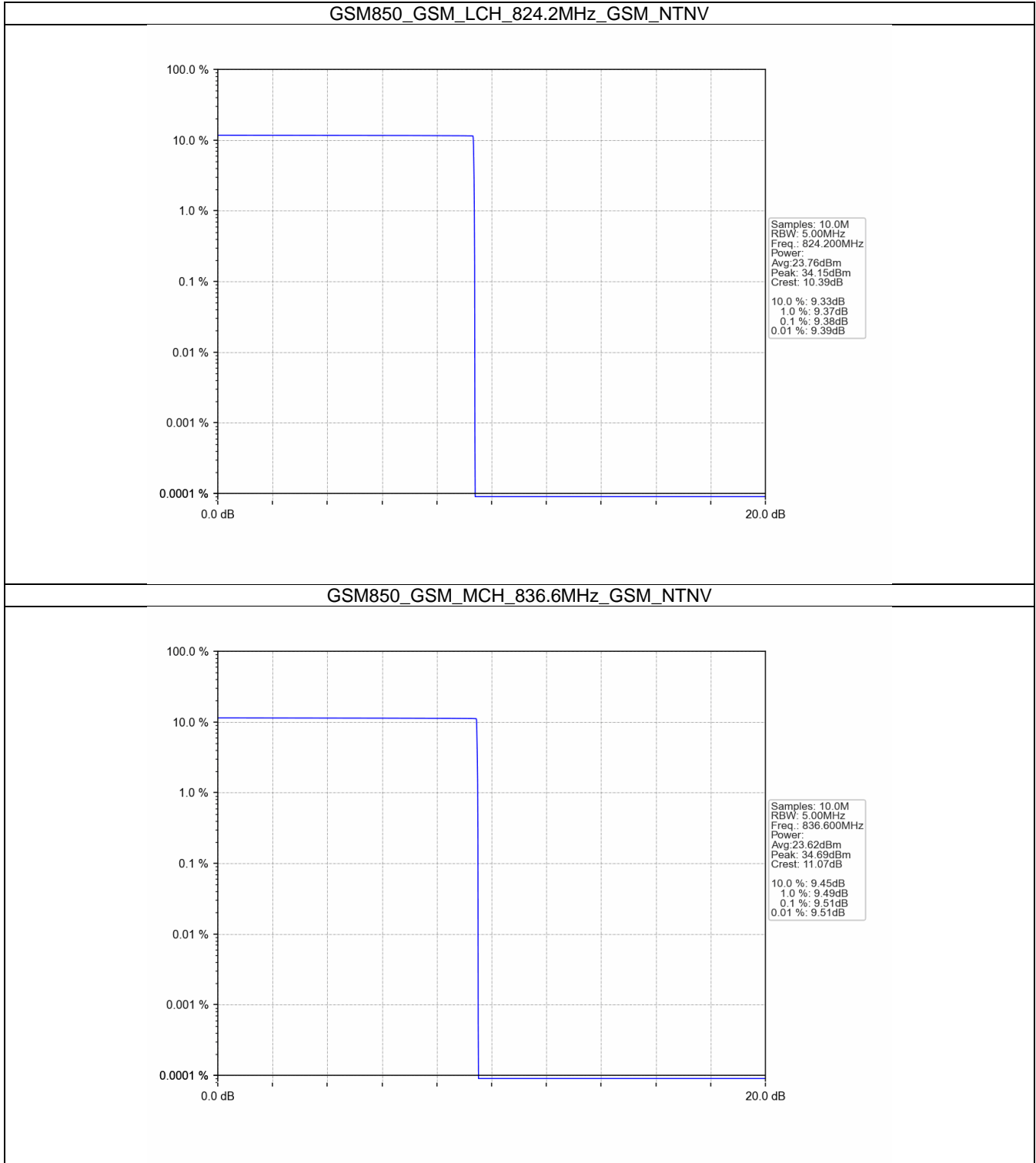
5.1 GSM850

5.1.1 Test Result

Band: GSM850						
ENV	Mode		Frequency (MHz)	Peak-Average Ratio (dB)		Verdict
	Network	Subset		Result	Limit	
NTNV	GSM	GSM	824.2	9.38	<=13	Pass
			836.6	9.51	<=13	Pass
			848.8	9.18	<=13	Pass
	GPRS	4 TX Slots	824.2	3.55	<=13	Pass
			836.6	3.51	<=13	Pass
			848.8	3.48	<=13	Pass
	EGPRS	4 TX Slots	824.2	12.53	<=13	Pass
			836.6	12.41	<=13	Pass
			848.8	12.66	<=13	Pass

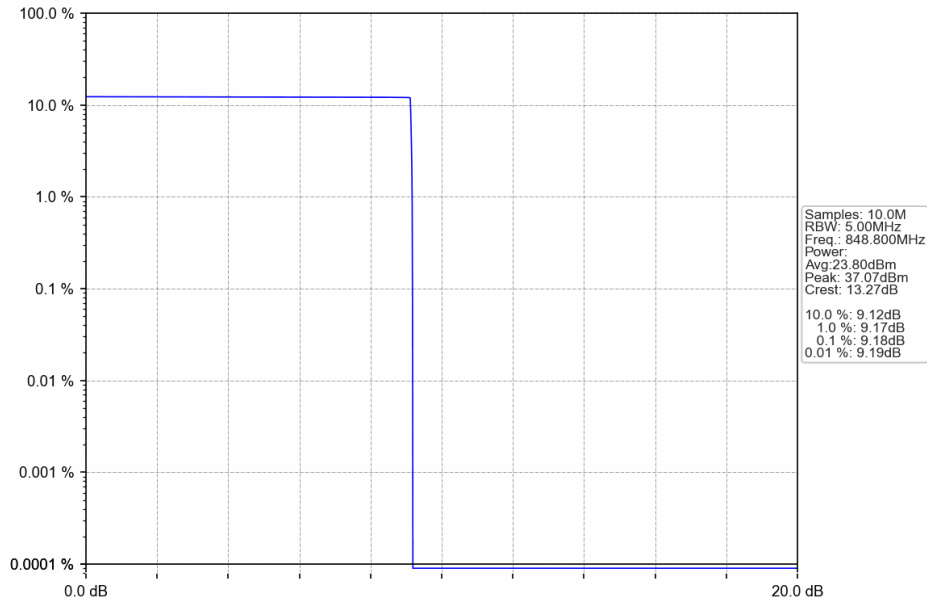


5.1.2 Test Graph

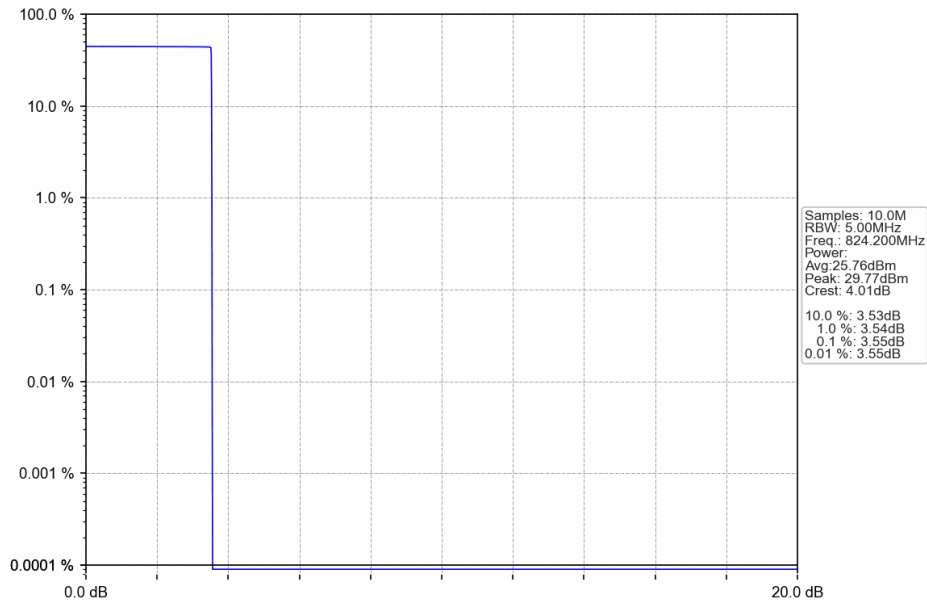




GSM850_GSM_HCH_848.8MHz_GSM_NTNV

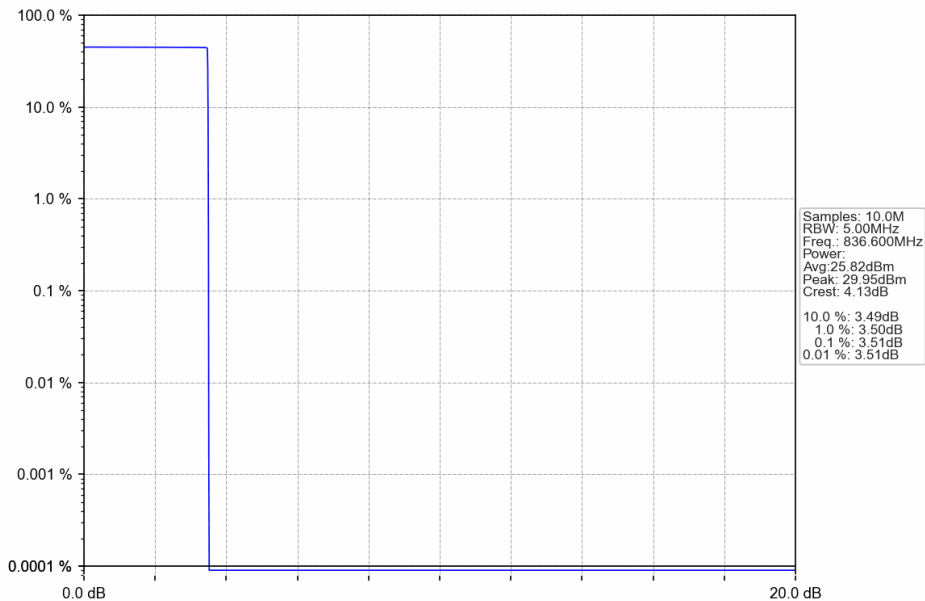


GSM850_GPRS_LCH_824.2MHz_4 TX Slots_NTNV

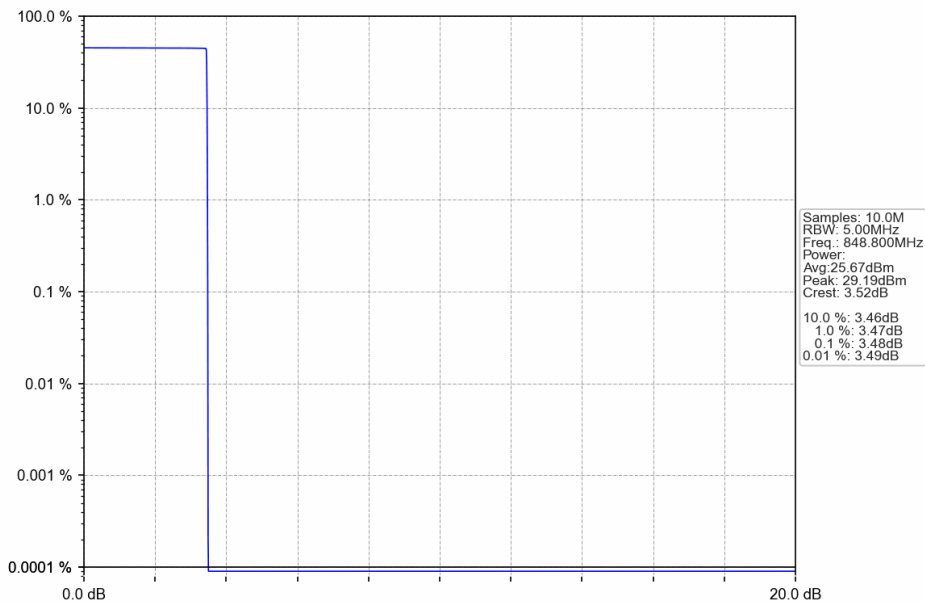




GSM850_GPRS_MCH_836.6MHz_4 TX Slots_NTNV

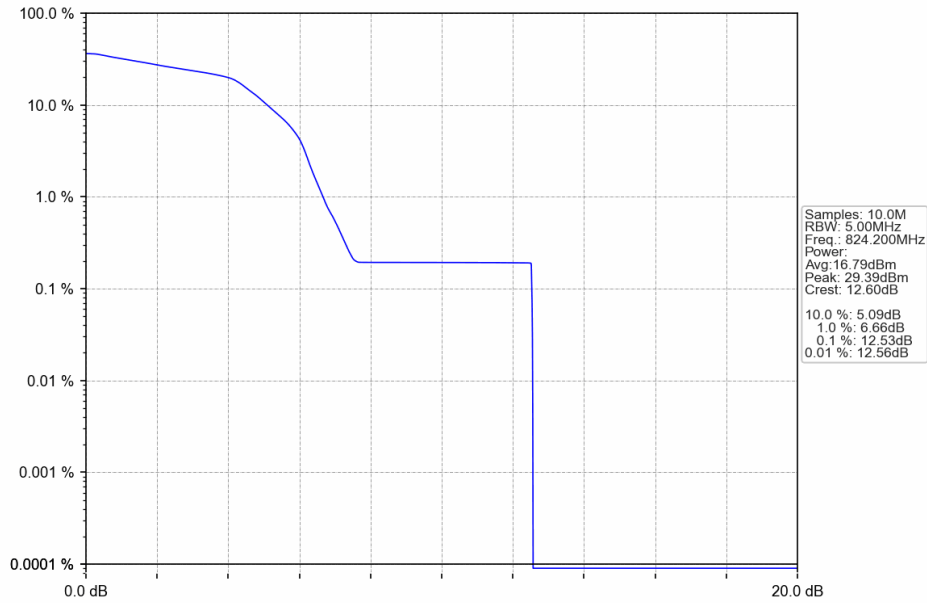


GSM850_GPRS_HCH_848.8MHz_4 TX Slots_NTNV

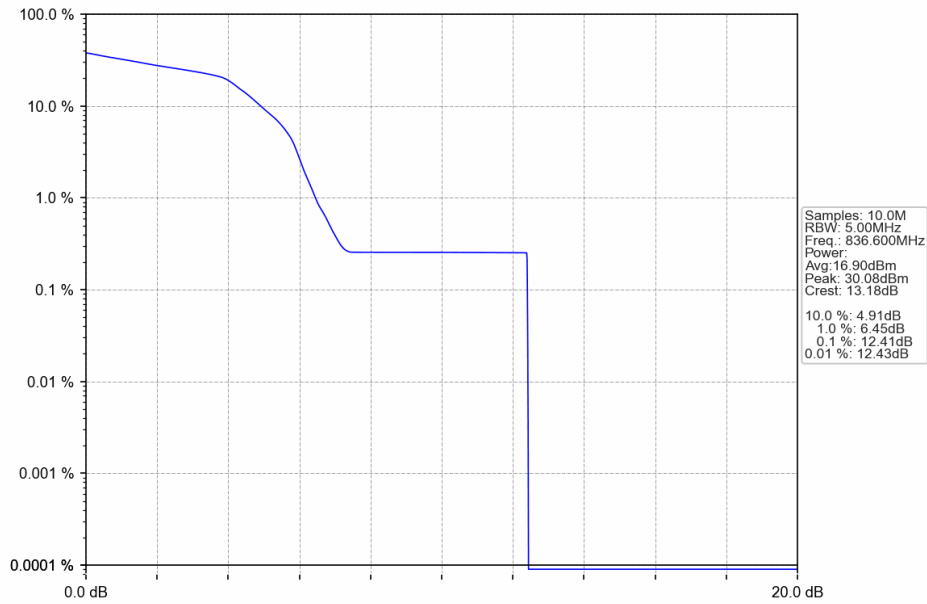




GSM850_EGPRS_LCH_824.2MHz_4 TX Slots_NTNV

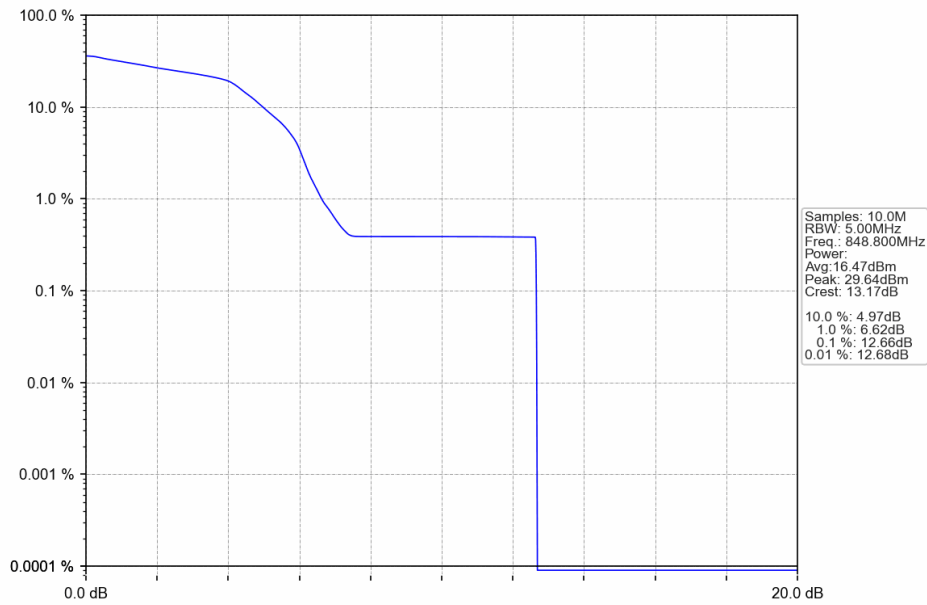


GSM850_EGPRS_MCH_836.6MHz_4 TX Slots_NTNV





GSM850_EGPRS_HCH_848.8MHz_4 TX Slots_NTNV





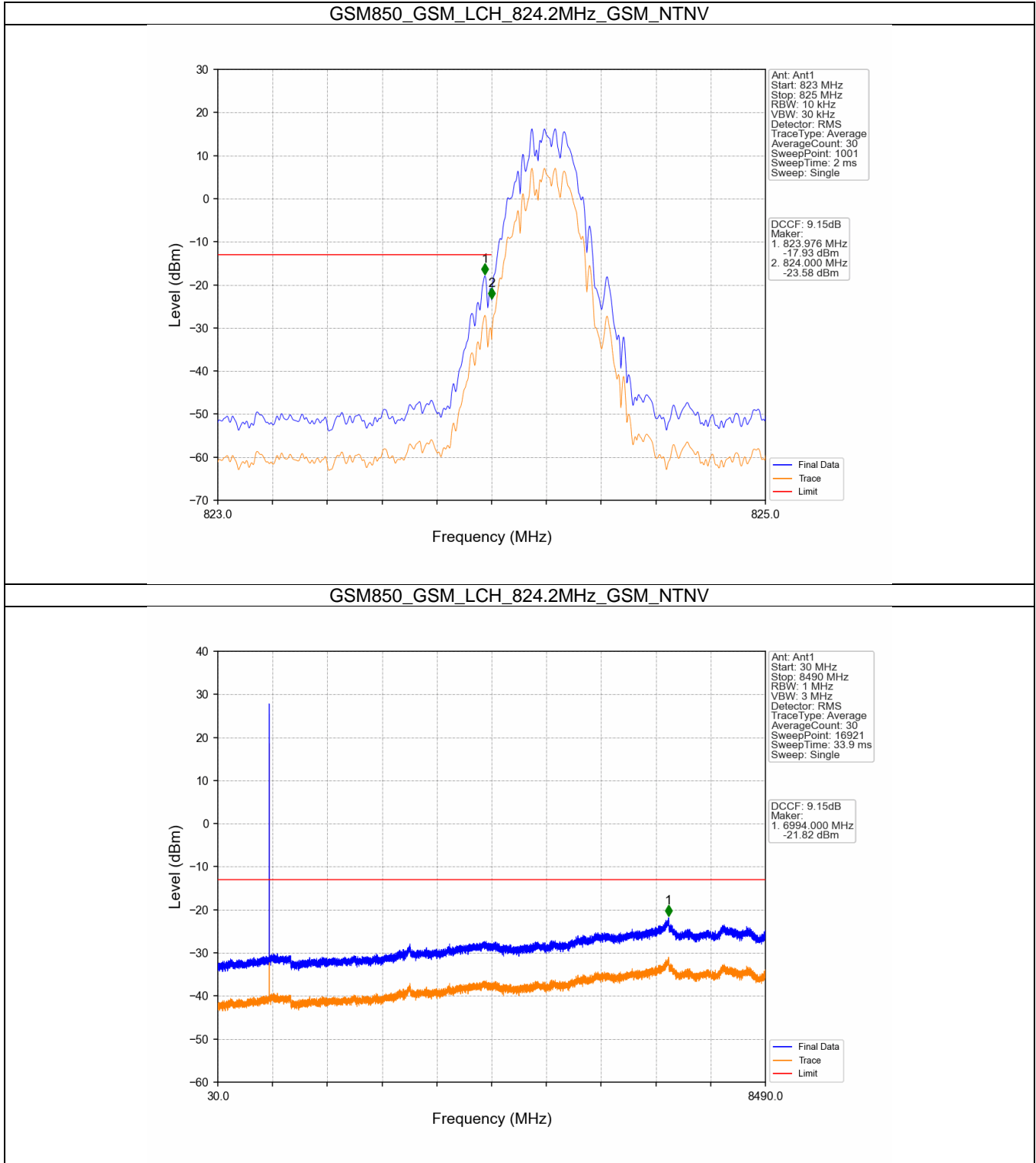
6. Spurious Emission

6.1 GSM850

6.1.1 Test Result

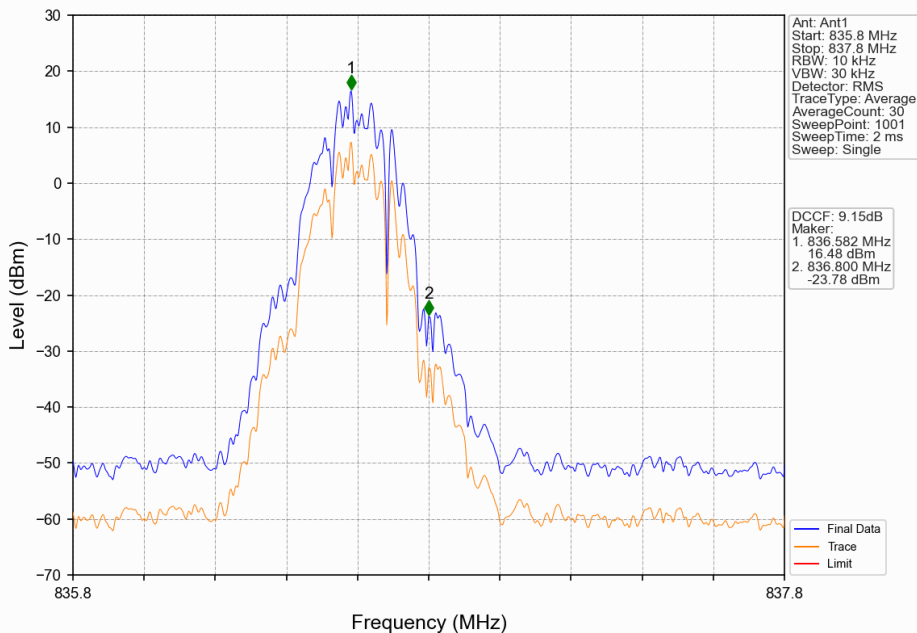
Band: GSM850						
ENV	Mode		Frequency (MHz)	Spurious Emission		Verdict
	Network	Subset		Result	Limit	
NTNV	GSM	GSM	824.2	Refer To Test Graph	Pass	
			836.6	Refer To Test Graph	Pass	
			848.8	Refer To Test Graph	Pass	
	GPRS	1 TX Slot	824.2	Refer To Test Graph	Pass	
			836.6	Refer To Test Graph	Pass	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

6.1.2 Test Graph

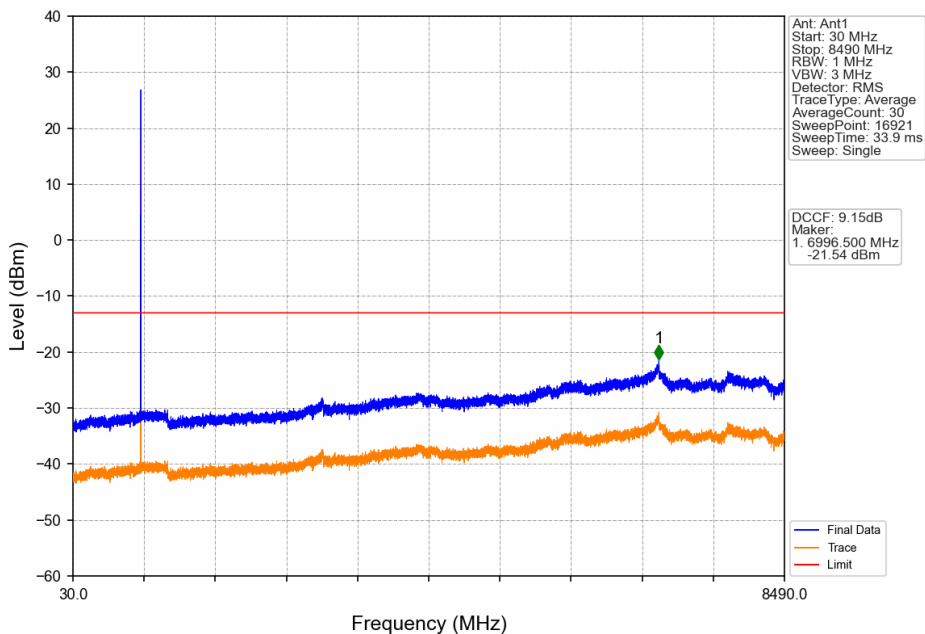




GSM850_GSM_MCH_836.6MHz_GSM_NTNV

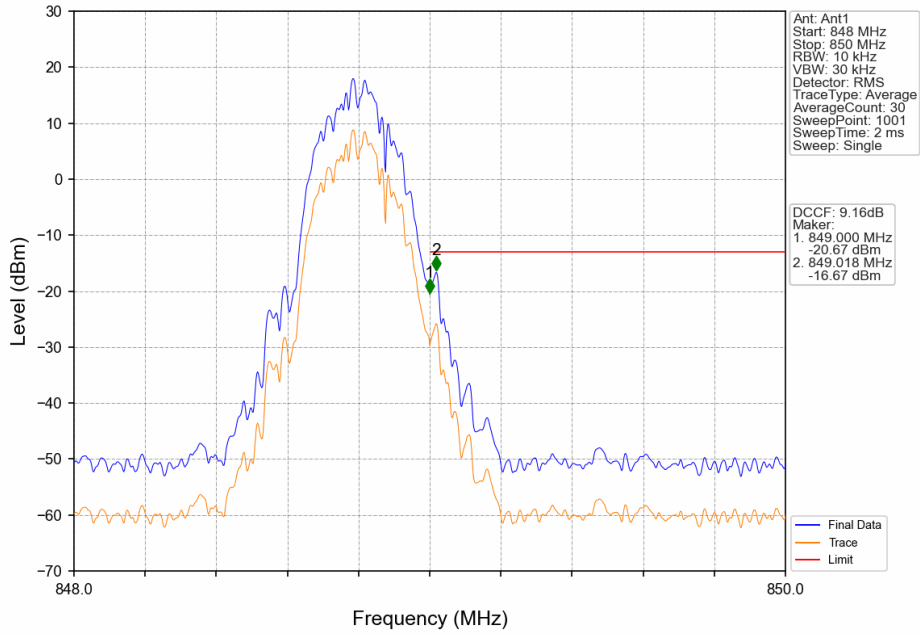


GSM850_GSM_MCH_836.6MHz_GSM_NTNV

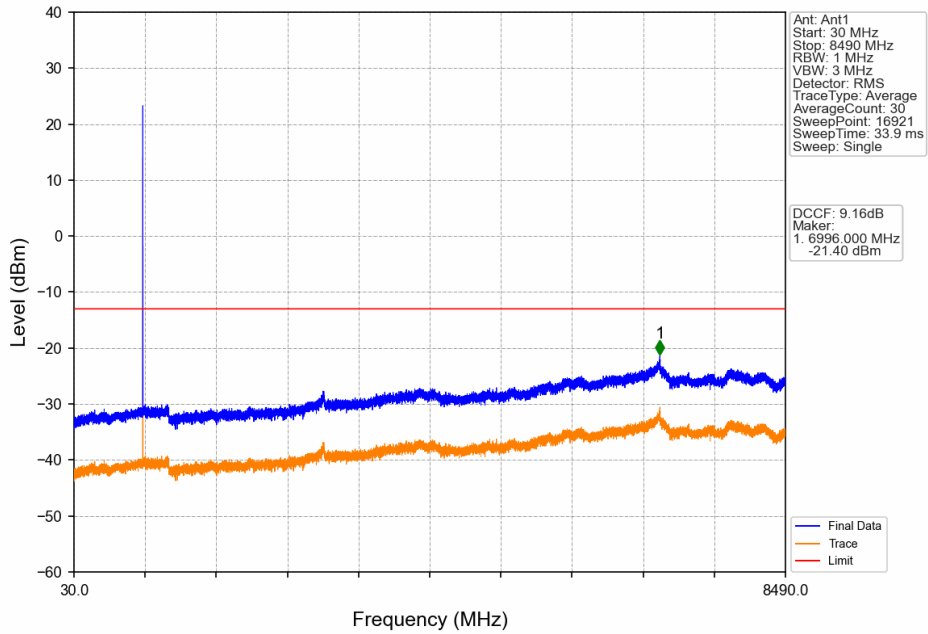




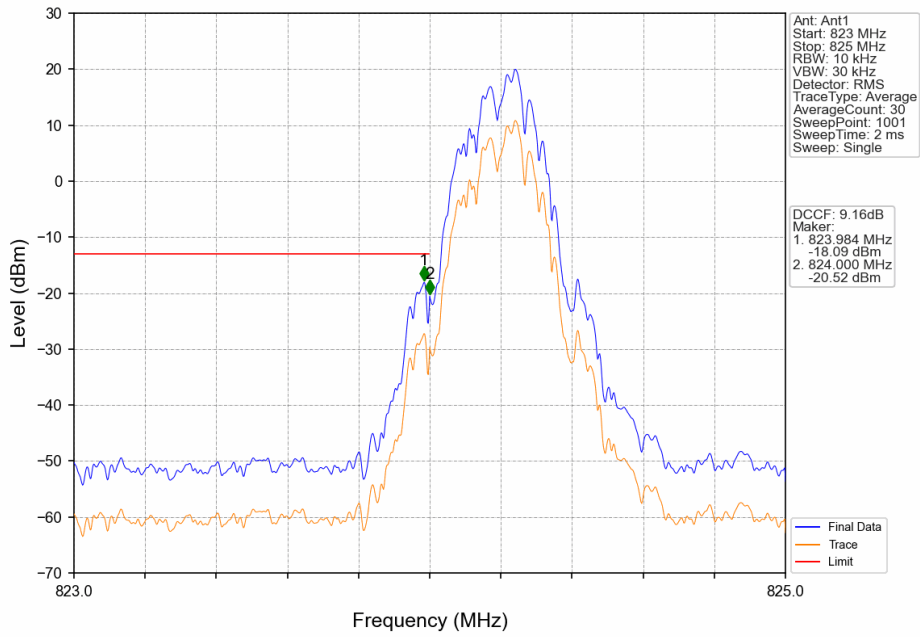
GSM850_GSM_HCH_848.8MHz_GSM_NTNV



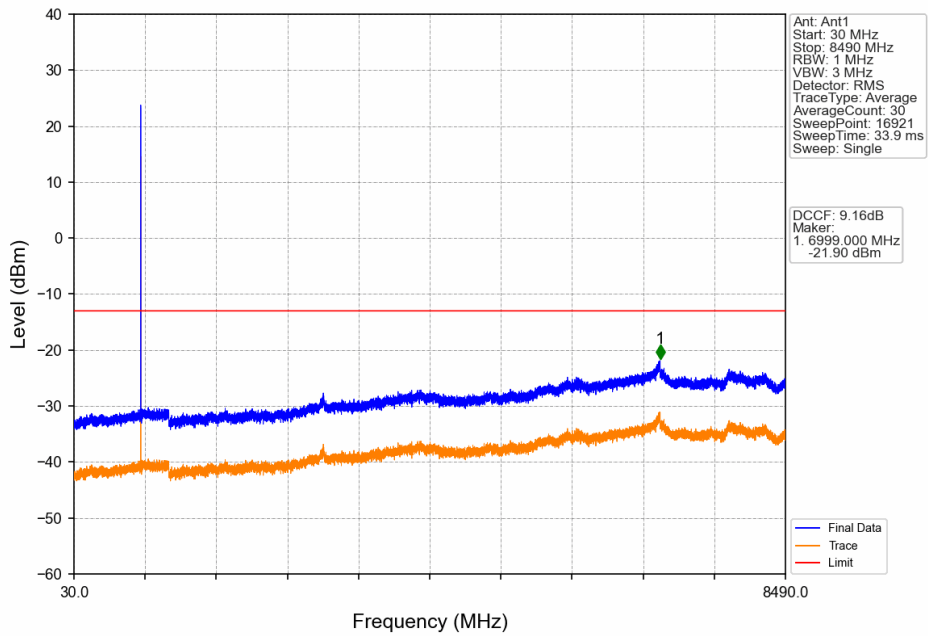
GSM850_GSM_HCH_848.8MHz_GSM_NTNV



GSM850_GPRS_LCH_824.2MHz_1 TX Slot_NTNV

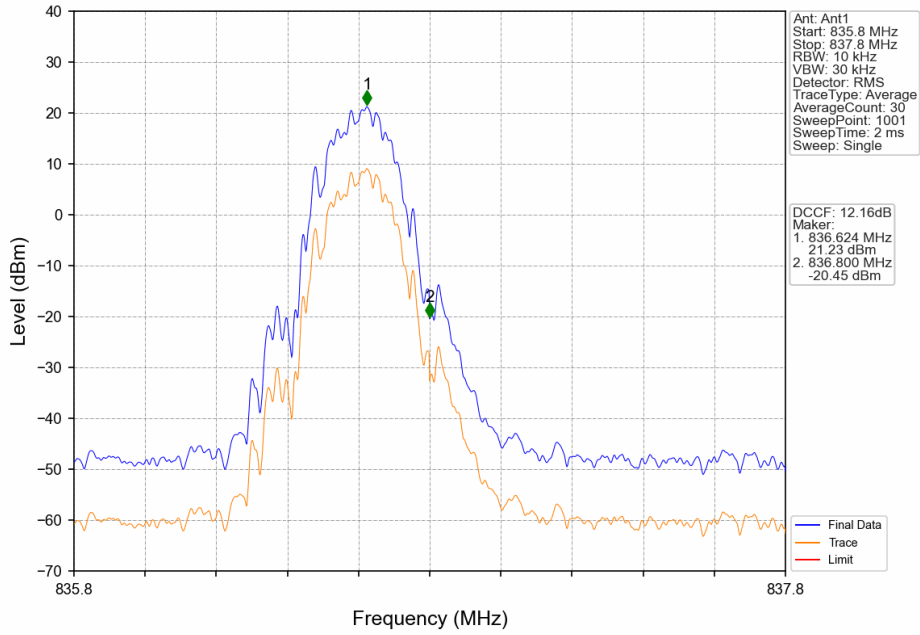


GSM850_GPRS_LCH_824.2MHz_1 TX Slot_NTNV

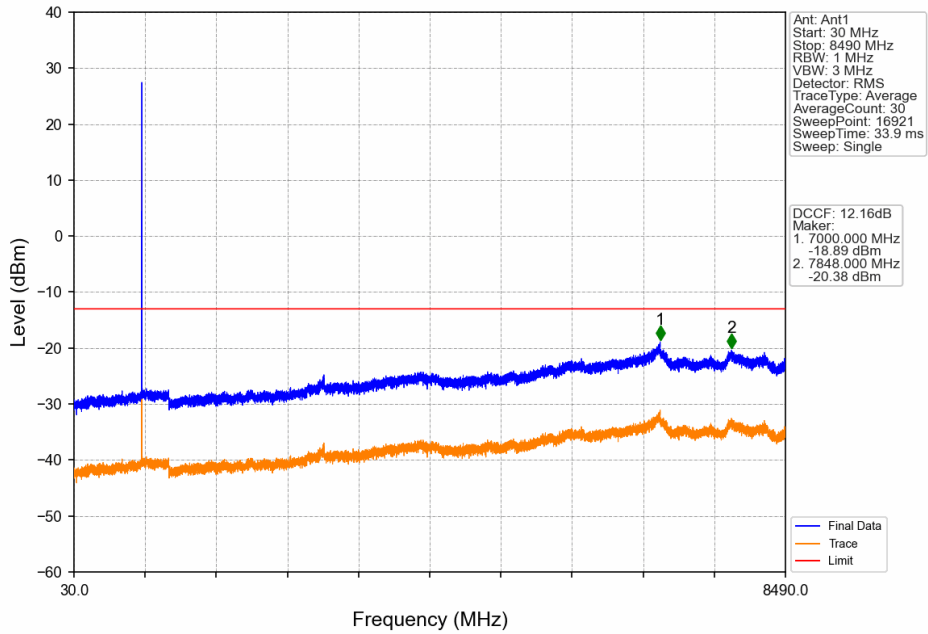




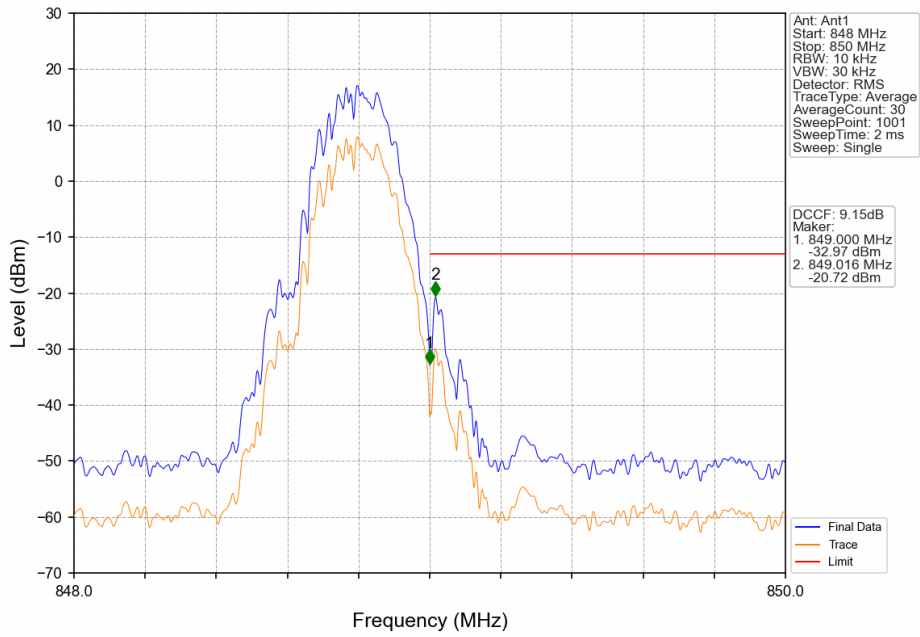
GSM850_GPRS_MCH_836.6MHz_1 TX Slot_NTNV



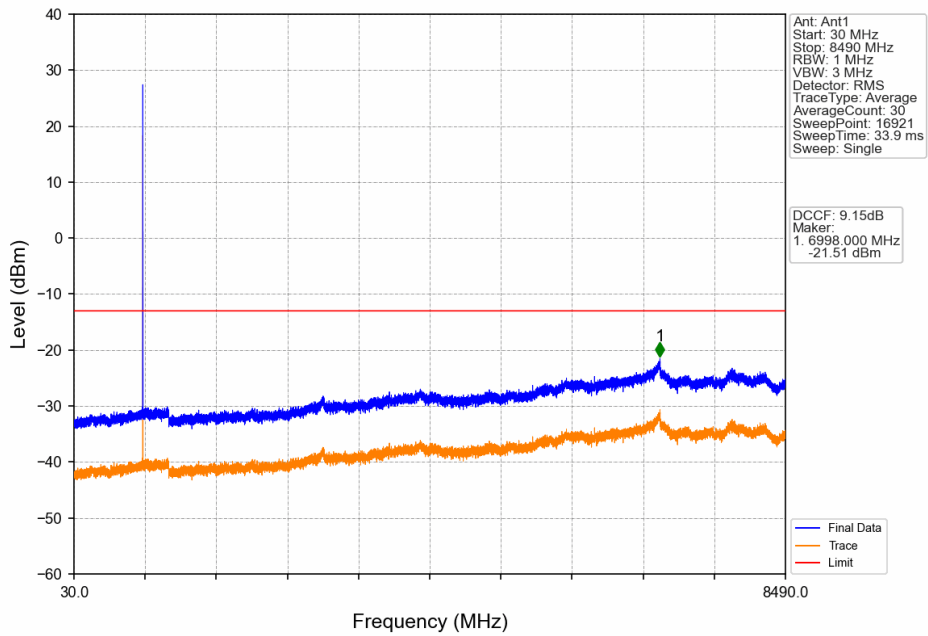
GSM850_GPRS_MCH_836.6MHz_1 TX Slot_NTNV



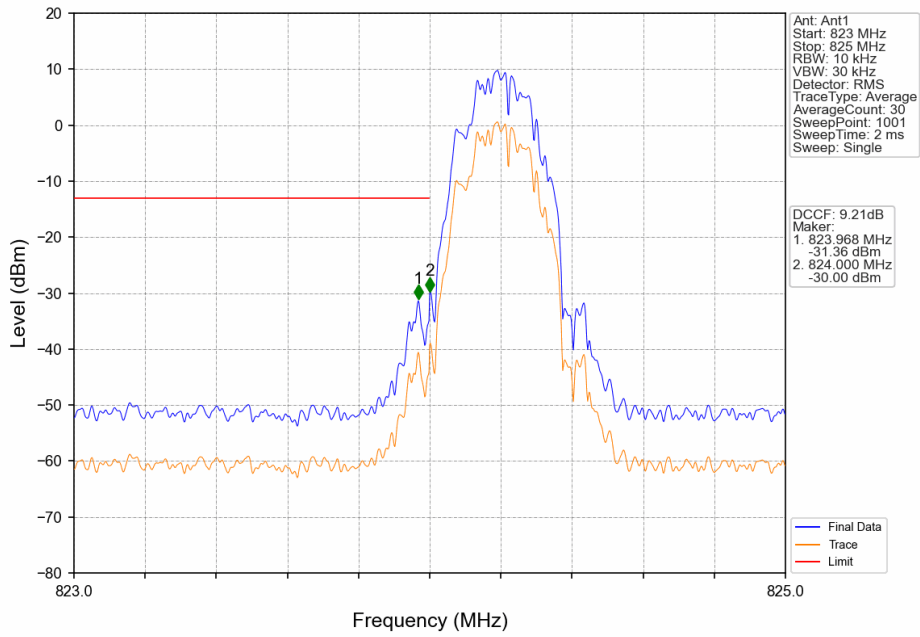
GSM850_GPRS_HCH_848.8MHz_1 TX Slot_NTNV



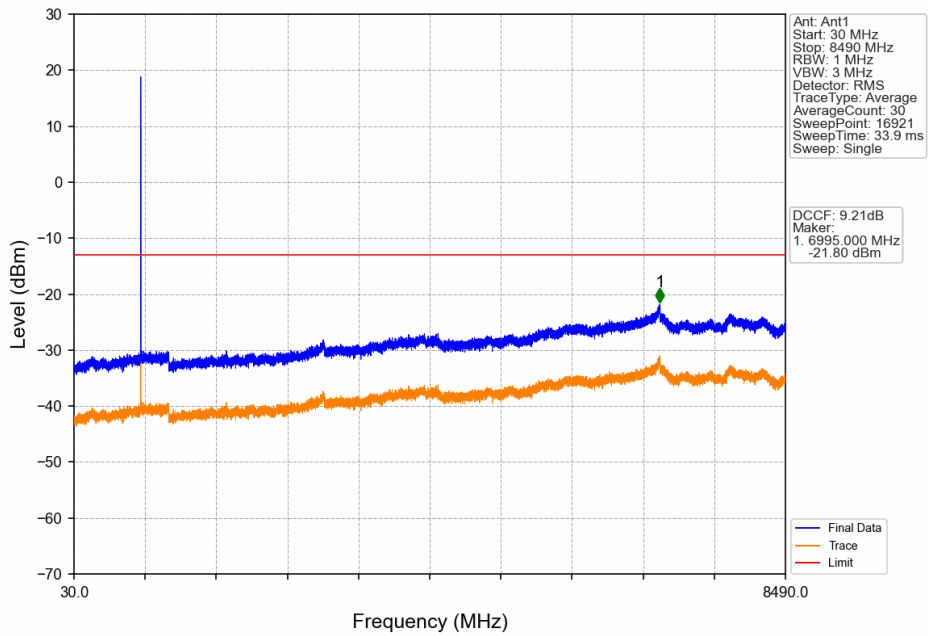
GSM850_GPRS_HCH_848.8MHz_1 TX Slot_NTNV



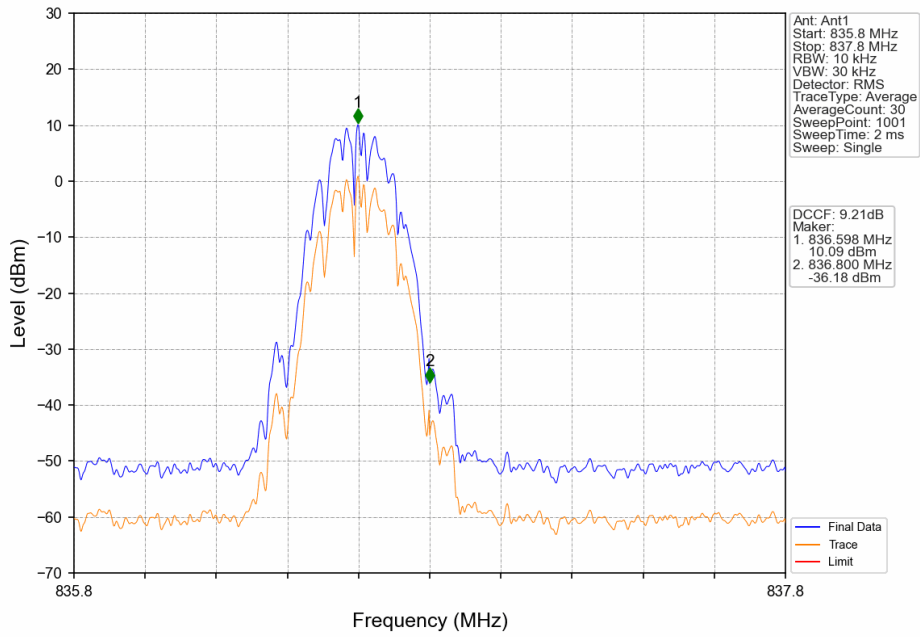
GSM850_EGPRS_LCH_824.2MHz_1 TX Slot_NTNV



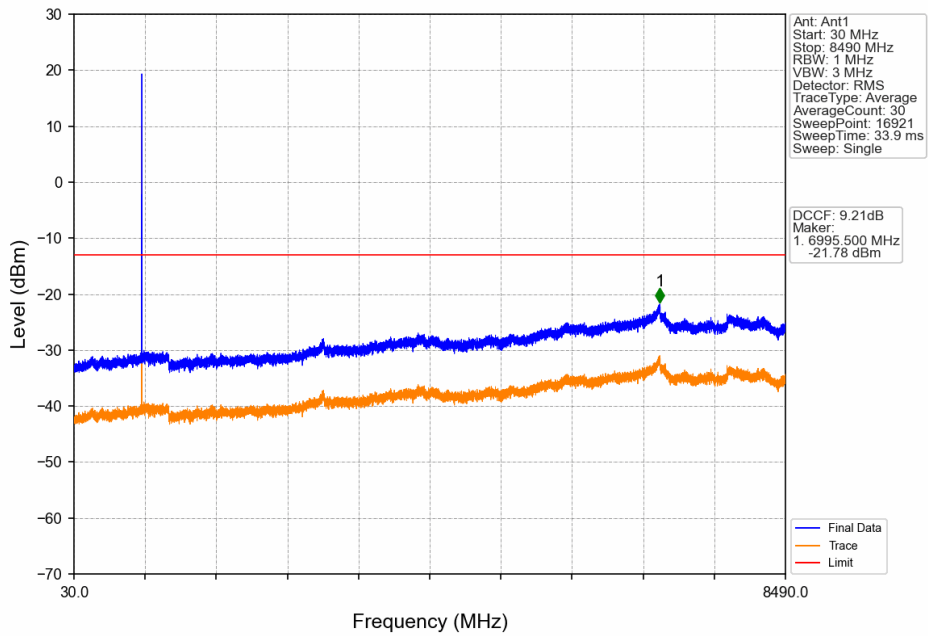
GSM850_EGPRS_LCH_824.2MHz_1 TX Slot_NTNV



GSM850_EGPRS_MCH_836.6MHz_1 TX Slot_NTNV

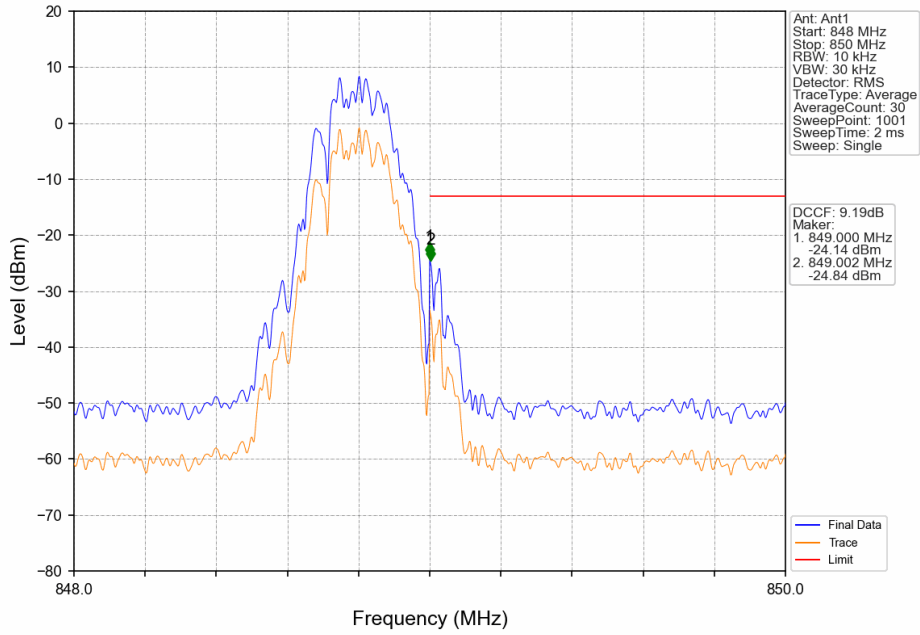


GSM850_EGPRS_MCH_836.6MHz_1 TX Slot_NTNV





GSM850_EGPRS_HCH_848.8MHz_1 TX Slot_NTNV



GSM850_EGPRS_HCH_848.8MHz_1 TX Slot_NTNV

