

Appendix RF 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	33.33	-1.13	30.05	<=40.61	Pass	
			836.6	33.38	-1.13	30.10	<=40.61	Pass	
			848.8	33.34	-1.13	30.06	<=40.61	Pass	
	GPRS	1 TX Slot	824.2	33.32	-1.13	30.04	<=40.61	Pass	
			2 TX Slots	824.2	32.57	-1.13	29.29	<=40.61	Pass
			3 TX Slots	824.2	30.77	-1.13	27.49	<=40.61	Pass
			4 TX Slots	824.2	29.60	-1.13	26.32	<=40.61	Pass
		2 TX Slots	836.6	33.31	-1.13	30.03	<=40.61	Pass	
			836.6	32.58	-1.13	29.30	<=40.61	Pass	
			836.6	30.81	-1.13	27.53	<=40.61	Pass	
			836.6	29.66	-1.13	26.38	<=40.61	Pass	
		3 TX Slots	848.8	33.24	-1.13	29.96	<=40.61	Pass	
			848.8	32.52	-1.13	29.24	<=40.61	Pass	
			848.8	30.75	-1.13	27.47	<=40.61	Pass	
			848.8	29.62	-1.13	26.34	<=40.61	Pass	
	EGPRS	1 TX Slot	824.2	27.34	-1.13	24.06	<=40.61	Pass	
			2 TX Slots	824.2	26.26	-1.13	22.98	<=40.61	Pass
			3 TX Slots	824.2	24.45	-1.13	21.17	<=40.61	Pass
			4 TX Slots	824.2	23.29	-1.13	20.01	<=40.61	Pass
		2 TX Slots	836.6	27.22	-1.13	23.94	<=40.61	Pass	
			836.6	26.17	-1.13	22.89	<=40.61	Pass	
			836.6	24.39	-1.13	21.11	<=40.61	Pass	
			836.6	23.49	-1.13	20.21	<=40.61	Pass	
		3 TX Slots	848.8	27.04	-1.13	23.76	<=40.61	Pass	
			848.8	26.11	-1.13	22.83	<=40.61	Pass	
			848.8	24.27	-1.13	20.99	<=40.61	Pass	
			848.8	23.11	-1.13	19.83	<=40.61	Pass	
			848.8	23.11	-1.13	19.83	<=40.61	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	3.874	0.0047	-2.5 to 2.5	Pass
			3.85	3.810	0.0046	-2.5 to 2.5	Pass
			4.43	1.453	0.0018	-2.5 to 2.5	Pass
		-30	3.85	7.071	0.0086	-2.5 to 2.5	Pass
		-20	3.85	4.585	0.0056	-2.5 to 2.5	Pass
		-10	3.85	5.004	0.0061	-2.5 to 2.5	Pass
		0	3.85	4.552	0.0055	-2.5 to 2.5	Pass
		10	3.85	4.907	0.0060	-2.5 to 2.5	Pass
		30	3.85	2.647	0.0032	-2.5 to 2.5	Pass
		40	3.85	-3.358	-0.0041	-2.5 to 2.5	Pass
	50	3.85	0.904	0.0011	-2.5 to 2.5	Pass	
	836.6	20	3.27	6.651	0.0080	-2.5 to 2.5	Pass
			3.85	6.199	0.0074	-2.5 to 2.5	Pass
			4.43	6.554	0.0078	-2.5 to 2.5	Pass
		-30	3.85	6.522	0.0078	-2.5 to 2.5	Pass
		-20	3.85	5.456	0.0065	-2.5 to 2.5	Pass
		-10	3.85	6.489	0.0078	-2.5 to 2.5	Pass
		0	3.85	7.200	0.0086	-2.5 to 2.5	Pass
		10	3.85	3.713	0.0044	-2.5 to 2.5	Pass
		30	3.85	7.458	0.0089	-2.5 to 2.5	Pass
		40	3.85	-0.904	-0.0011	-2.5 to 2.5	Pass
	50	3.85	-1.227	-0.0015	-2.5 to 2.5	Pass	
	848.8	20	3.27	7.781	0.0092	-2.5 to 2.5	Pass
			3.85	7.393	0.0087	-2.5 to 2.5	Pass
			4.43	8.523	0.0100	-2.5 to 2.5	Pass
		-30	3.85	7.393	0.0087	-2.5 to 2.5	Pass
		-20	3.85	7.393	0.0087	-2.5 to 2.5	Pass
		-10	3.85	6.360	0.0075	-2.5 to 2.5	Pass
		0	3.85	5.747	0.0068	-2.5 to 2.5	Pass
		10	3.85	5.553	0.0065	-2.5 to 2.5	Pass
30		3.85	7.555	0.0089	-2.5 to 2.5	Pass	
40		3.85	1.808	0.0021	-2.5 to 2.5	Pass	
50	3.85	-2.292	-0.0027	-2.5 to 2.5	Pass		
GPRS	824.2	20	3.27	3.713	0.0045	-2.5 to 2.5	Pass
			3.85	1.388	0.0017	-2.5 to 2.5	Pass
			4.43	4.617	0.0056	-2.5 to 2.5	Pass
		-30	3.85	3.551	0.0043	-2.5 to 2.5	Pass
		-20	3.85	4.520	0.0055	-2.5 to 2.5	Pass
		-10	3.85	4.875	0.0059	-2.5 to 2.5	Pass
		0	3.85	5.941	0.0072	-2.5 to 2.5	Pass
		10	3.85	4.100	0.0050	-2.5 to 2.5	Pass
		30	3.85	4.036	0.0049	-2.5 to 2.5	Pass
		40	3.85	7.103	0.0086	-2.5 to 2.5	Pass
	50	3.85	13.043	0.0158	-2.5 to 2.5	Pass	
	836.6	20	3.27	1.485	0.0018	-2.5 to 2.5	Pass
			3.85	3.390	0.0041	-2.5 to 2.5	Pass
			4.43	2.163	0.0026	-2.5 to 2.5	Pass
		-30	3.85	2.712	0.0032	-2.5 to 2.5	Pass
-20		3.85	2.744	0.0033	-2.5 to 2.5	Pass	
-10	3.85	4.391	0.0052	-2.5 to 2.5	Pass		

		0	3.85	4.488	0.0054	-2.5 to 2.5	Pass		
		10	3.85	1.776	0.0021	-2.5 to 2.5	Pass		
		30	3.85	1.937	0.0023	-2.5 to 2.5	Pass		
		40	3.85	1.743	0.0021	-2.5 to 2.5	Pass		
		50	3.85	5.585	0.0067	-2.5 to 2.5	Pass		
	848.8	20	3.27	5.844	0.0069	-2.5 to 2.5	Pass		
			3.85	9.750	0.0115	-2.5 to 2.5	Pass		
			4.43	4.940	0.0058	-2.5 to 2.5	Pass		
		-30	3.85	8.136	0.0096	-2.5 to 2.5	Pass		
		-20	3.85	5.037	0.0059	-2.5 to 2.5	Pass		
		-10	3.85	4.262	0.0050	-2.5 to 2.5	Pass		
		0	3.85	8.039	0.0095	-2.5 to 2.5	Pass		
		10	3.85	8.685	0.0102	-2.5 to 2.5	Pass		
		30	3.85	7.490	0.0088	-2.5 to 2.5	Pass		
		40	3.85	2.744	0.0032	-2.5 to 2.5	Pass		
		50	3.85	8.071	0.0095	-2.5 to 2.5	Pass		
		EGPRS	824.2	20	3.27	-4.649	-0.0056	-2.5 to 2.5	Pass
					3.85	-6.134	-0.0074	-2.5 to 2.5	Pass
					4.43	-8.007	-0.0097	-2.5 to 2.5	Pass
-30	3.85			-6.974	-0.0085	-2.5 to 2.5	Pass		
-20	3.85			-5.844	-0.0071	-2.5 to 2.5	Pass		
-10	3.85			-5.811	-0.0071	-2.5 to 2.5	Pass		
0	3.85			-6.877	-0.0083	-2.5 to 2.5	Pass		
10	3.85			-6.619	-0.0080	-2.5 to 2.5	Pass		
30	3.85			-7.749	-0.0094	-2.5 to 2.5	Pass		
40	3.85			-4.036	-0.0049	-2.5 to 2.5	Pass		
50	3.85			3.616	0.0044	-2.5 to 2.5	Pass		
836.6	20			3.27	-6.974	-0.0083	-2.5 to 2.5	Pass	
				3.85	-7.135	-0.0085	-2.5 to 2.5	Pass	
				4.43	-3.584	-0.0043	-2.5 to 2.5	Pass	
	-30		3.85	-7.167	-0.0086	-2.5 to 2.5	Pass		
	-20		3.85	-9.879	-0.0118	-2.5 to 2.5	Pass		
	-10		3.85	-6.941	-0.0083	-2.5 to 2.5	Pass		
	0		3.85	-10.299	-0.0123	-2.5 to 2.5	Pass		
	10		3.85	-10.235	-0.0122	-2.5 to 2.5	Pass		
	30		3.85	-6.522	-0.0078	-2.5 to 2.5	Pass		
	40		3.85	-7.264	-0.0087	-2.5 to 2.5	Pass		
	50		3.85	4.972	0.0059	-2.5 to 2.5	Pass		
	848.8		20	3.27	-7.329	-0.0086	-2.5 to 2.5	Pass	
				3.85	-6.393	-0.0075	-2.5 to 2.5	Pass	
				4.43	-6.909	-0.0081	-2.5 to 2.5	Pass	
			-30	3.85	-2.518	-0.0030	-2.5 to 2.5	Pass	
			-20	3.85	-4.778	-0.0056	-2.5 to 2.5	Pass	
-10			3.85	-10.364	-0.0122	-2.5 to 2.5	Pass		
0			3.85	-4.843	-0.0057	-2.5 to 2.5	Pass		
10			3.85	-2.938	-0.0035	-2.5 to 2.5	Pass		
30		3.85	-6.812	-0.0080	-2.5 to 2.5	Pass			
40		3.85	-1.259	-0.0015	-2.5 to 2.5	Pass			
50		3.85	2.002	0.0024	-2.5 to 2.5	Pass			

3. Modulation Characteristics

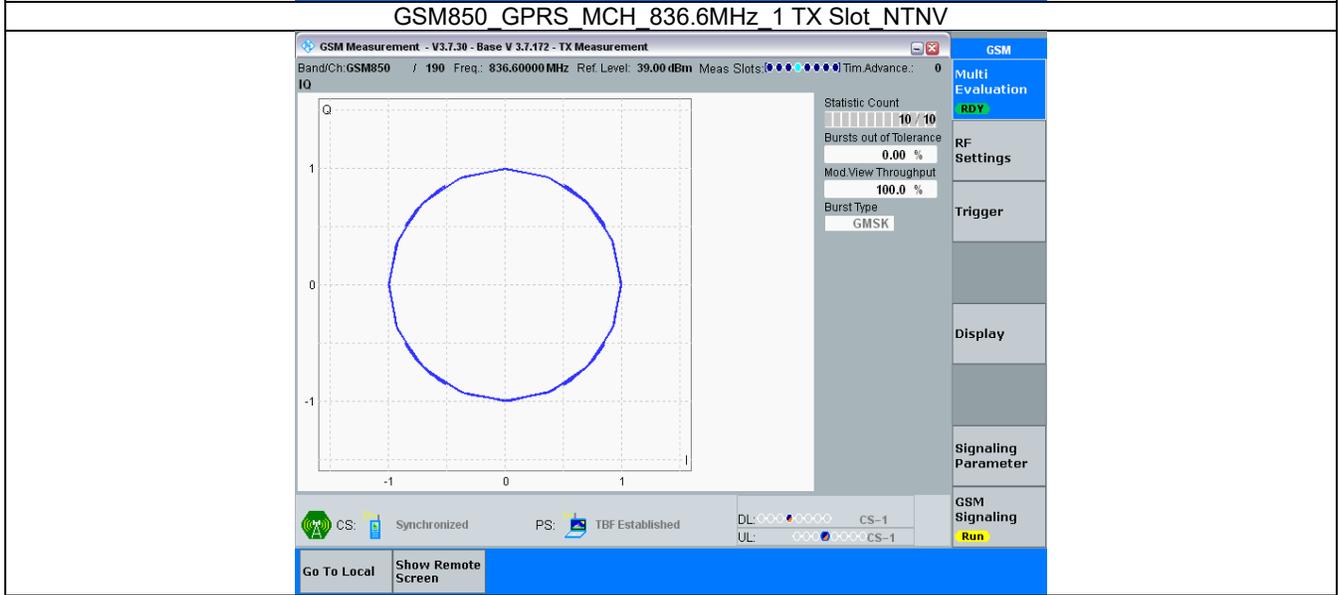
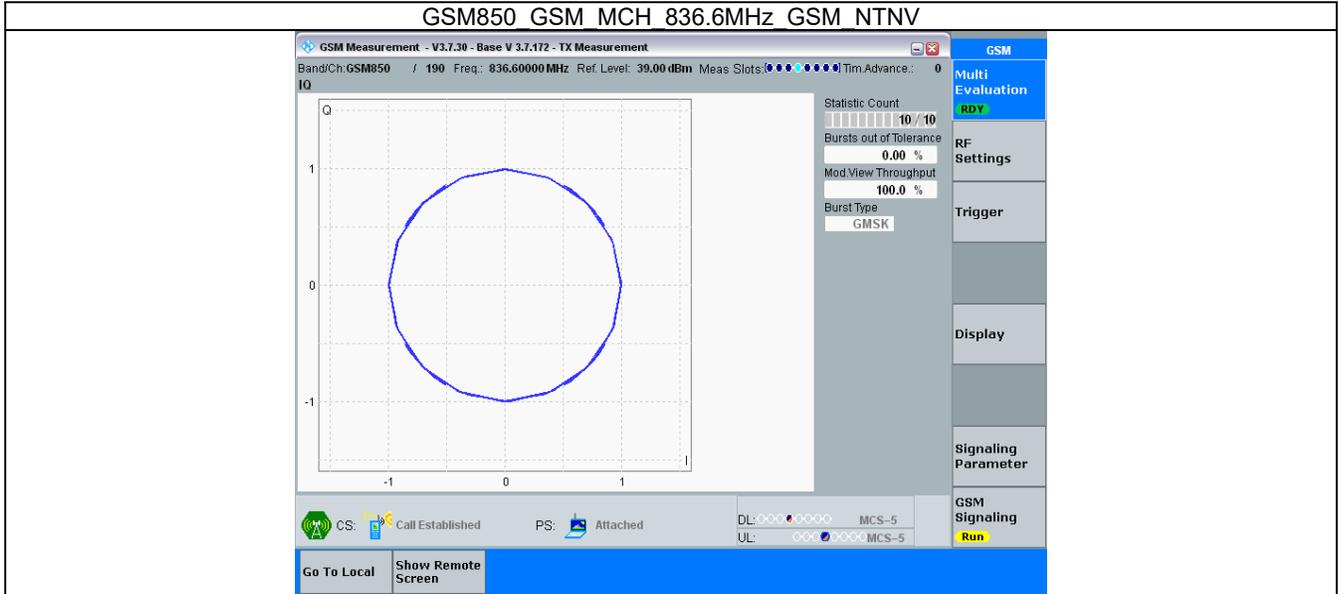
3.1 Test Result

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 EGPRS MCH 836.6MHz 1 TX Slot NTN

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

GSM

Multi Evaluation

RDY

RF Settings

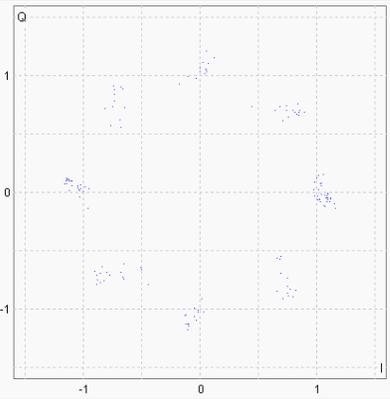
Trigger

Display

Signaling Parameter

GSM Signaling

Run



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

Go To Local

Show Remote Screen

4. 99% & 26dB Bandwidth

4.1 Test Result

4.1.1 GSM850_OBW

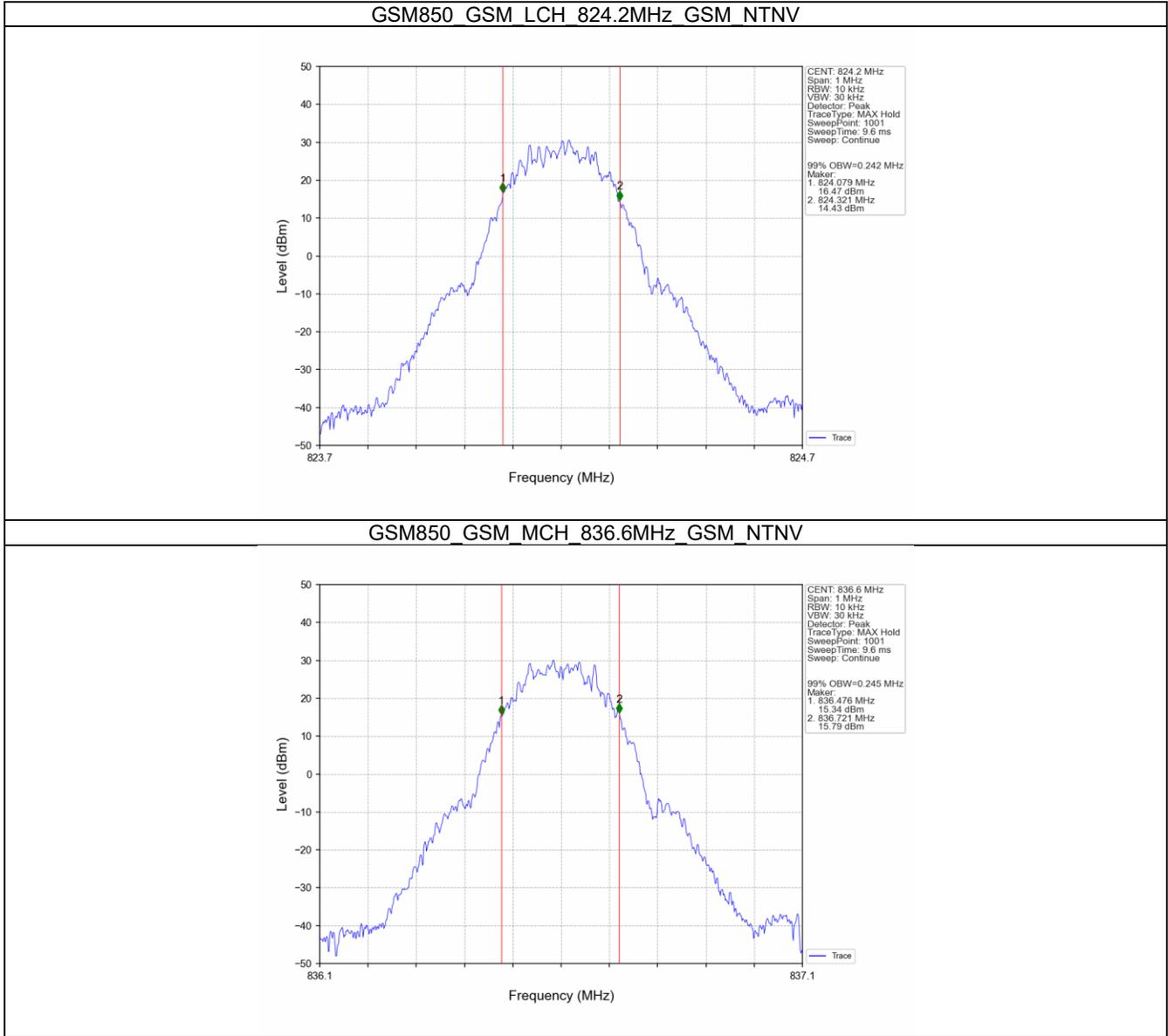
Band: GSM850						
ENV	Mode		Frequency (MHz)	99% Occupied Bandwidth (MHz)		Verdict
	Network	Subset		Result	Limit	
NTNV	GSM	GSM	824.2	0.242	/	Pass
			836.6	0.245	/	Pass
			848.8	0.242	/	Pass
	GPRS	1 TX Slot	824.2	0.245	/	Pass
			836.6	0.242	/	Pass
			848.8	0.244	/	Pass
	EGPRS	1 TX Slot	824.2	0.260	/	Pass
			836.6	0.252	/	Pass
			848.8	0.255	/	Pass

4.1.2 GSM850_XDB

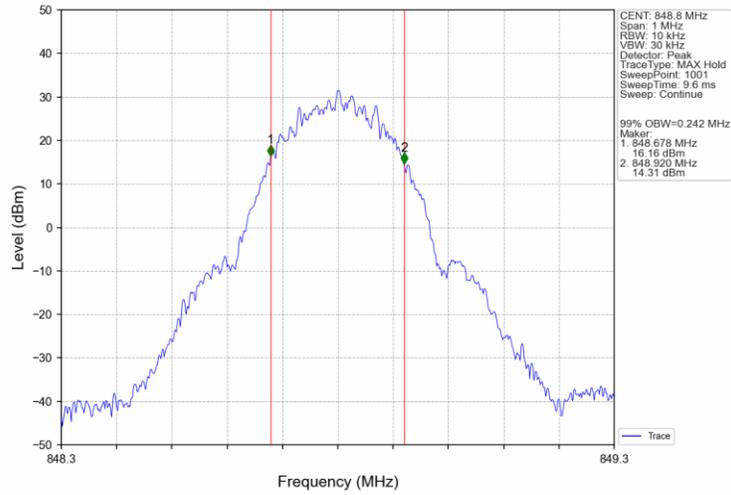
Band: GSM850						
ENV	Mode		Frequency (MHz)	26dB Bandwidth (MHz)		Verdict
	Network	Subset		Result	Limit	
NTNV	GSM	GSM	824.2	0.310	/	Pass
			836.6	0.313	/	Pass
			848.8	0.307	/	Pass
	GPRS	1 TX Slot	824.2	0.314	/	Pass
			836.6	0.326	/	Pass
			848.8	0.313	/	Pass
	EGPRS	1 TX Slot	824.2	0.325	/	Pass
			836.6	0.314	/	Pass
			848.8	0.309	/	Pass

4.2 Test Graph

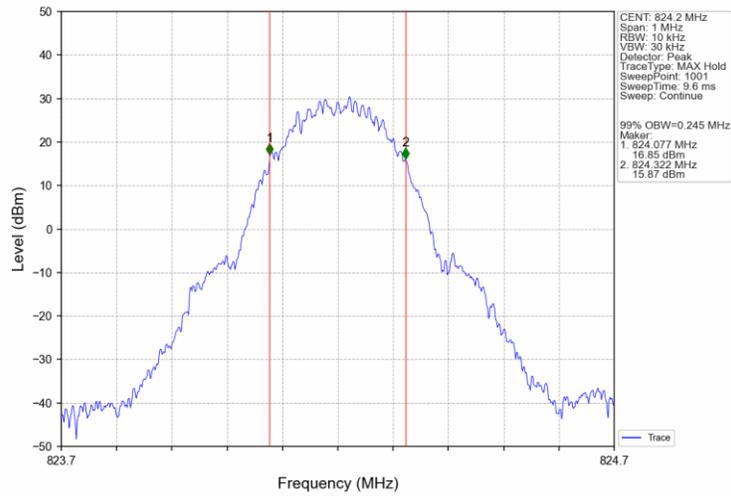
4.2.1 GSM850_OBW



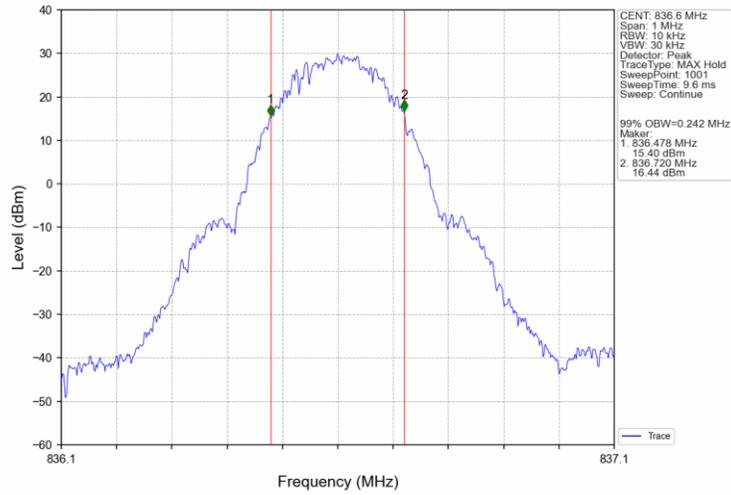
GSM850 GSM HCH 848.8MHz GSM NTV



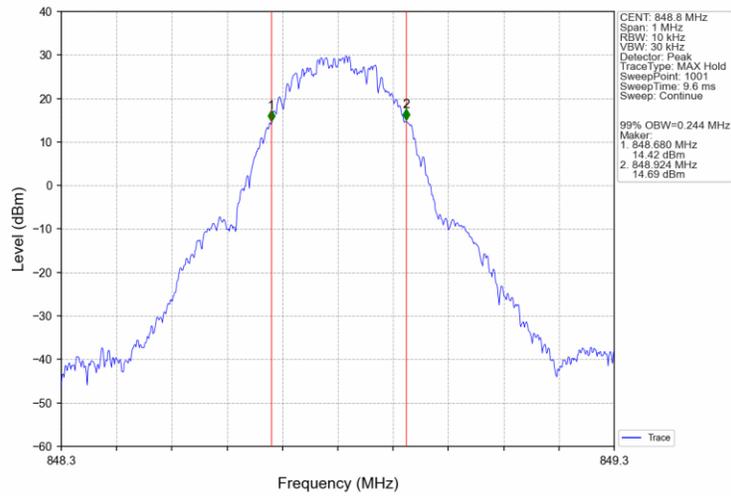
GSM850 GPRS LCH 824.2MHz 1 TX Slot NTV



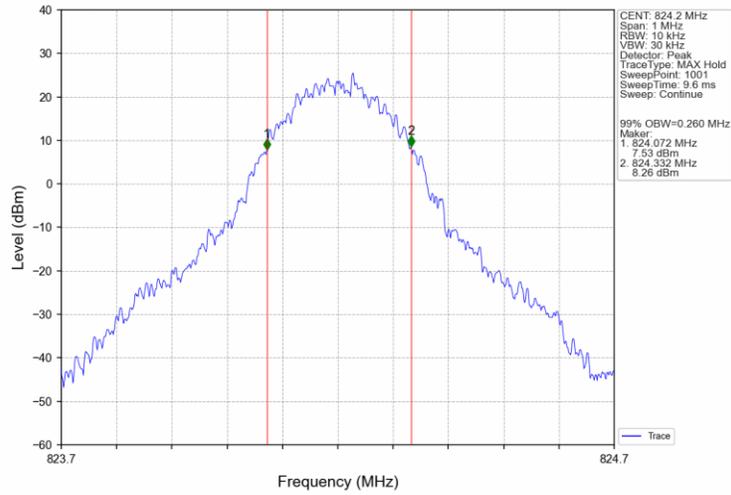
GSM850 GPRS MCH 836.6MHz 1 TX Slot NTV



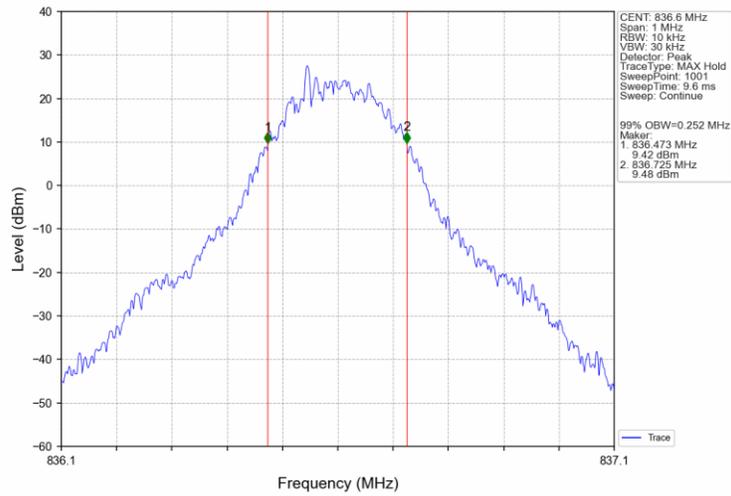
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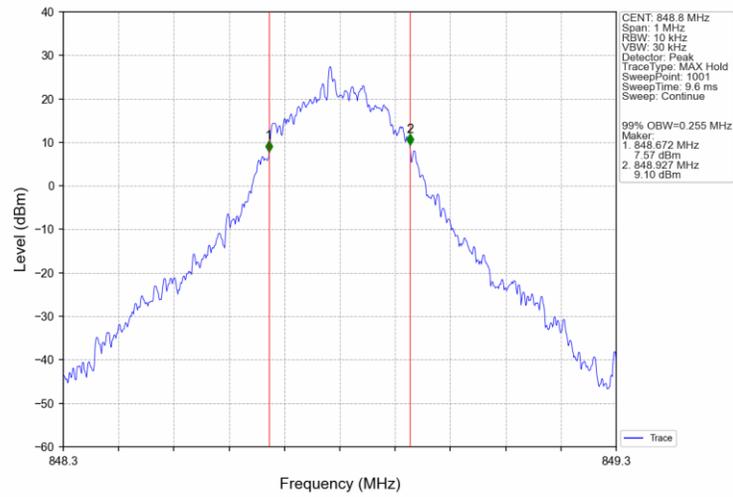
GSM850 EGPRS LCH 824.2MHz 1 TX Slot NTNV



GSM850 EGPRS MCH 836.6MHz 1 TX Slot NTNV

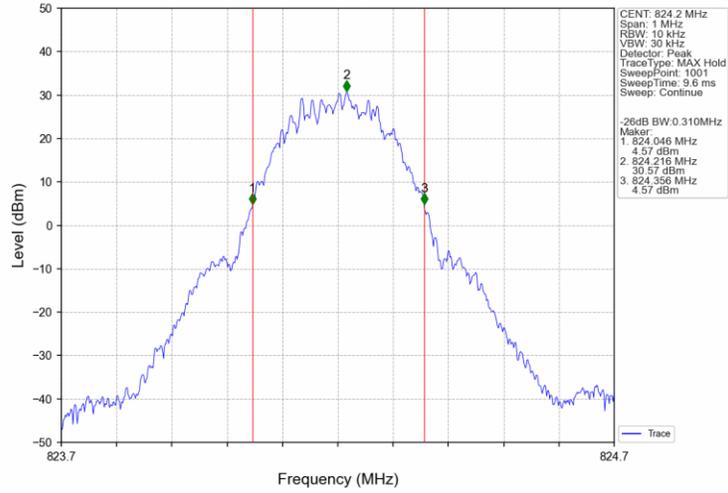


GSM850 EGPRS HCH 848.8MHz 1 TX Slot NTNV

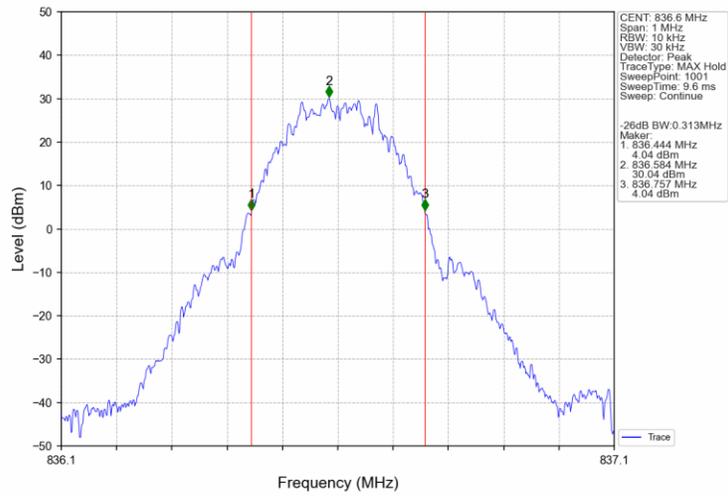


4.2.2 GSM850_XDB

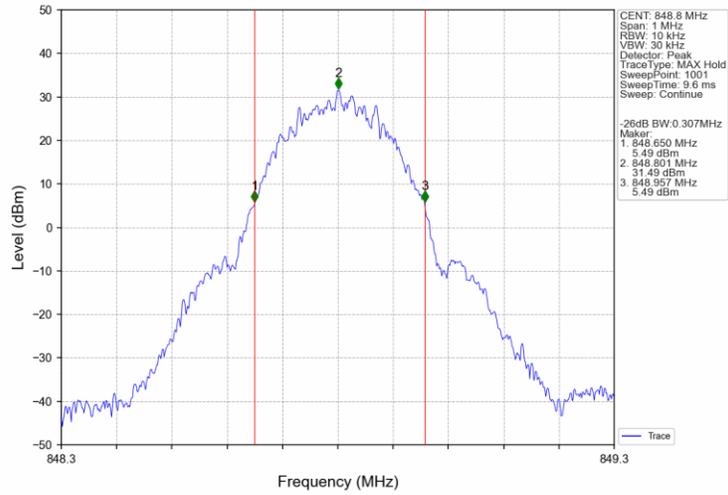
GSM850 GSM LCH 824.2MHz GSM NTN



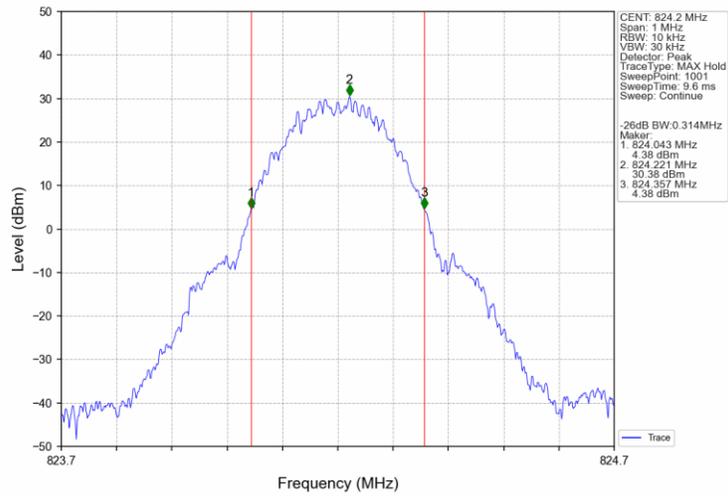
GSM850 GSM MCH 836.6MHz GSM NTN



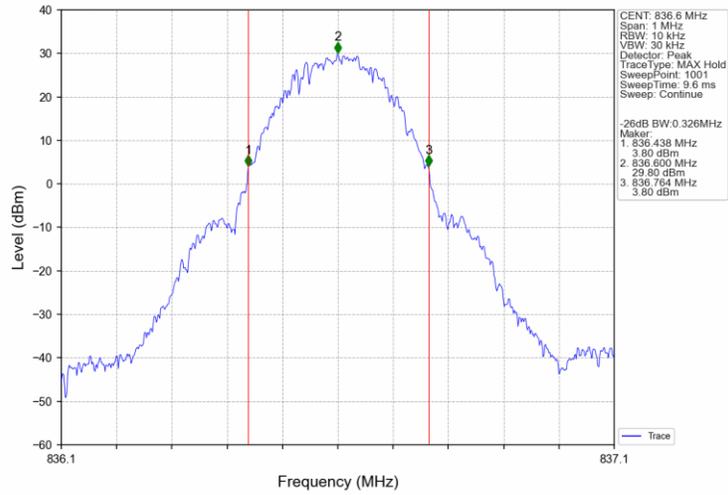
GSM850 GSM HCH 848.8MHz GSM NTV



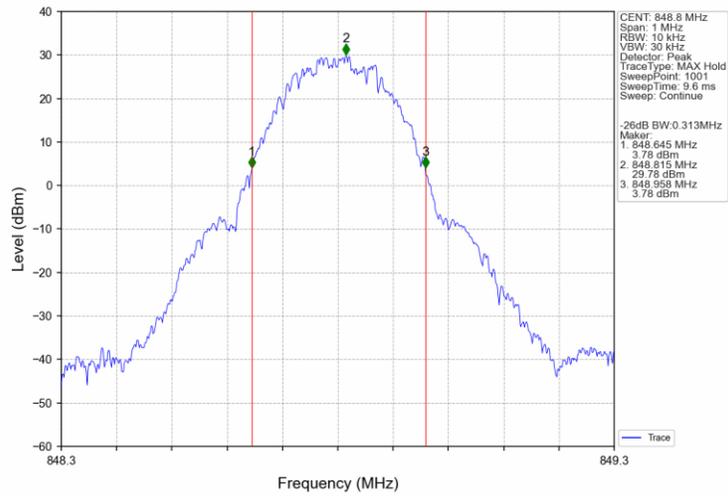
GSM850 GPRS LCH 824.2MHz 1 TX Slot NTV



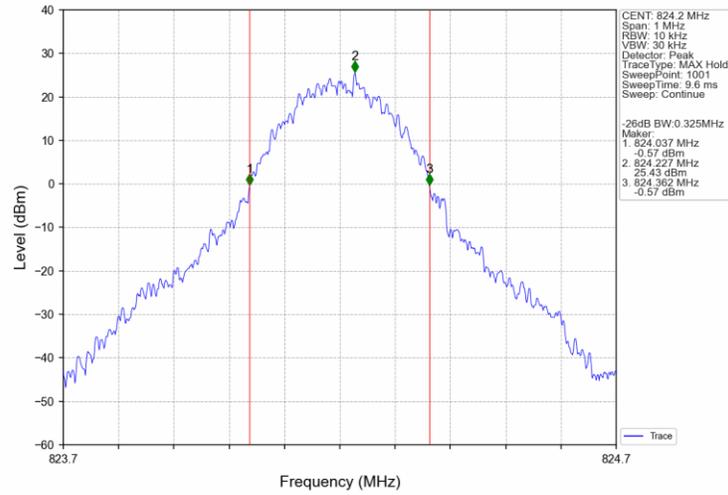
GSM850_GPRS_MCH_836.6MHz_1_TX_Slot_NTNV



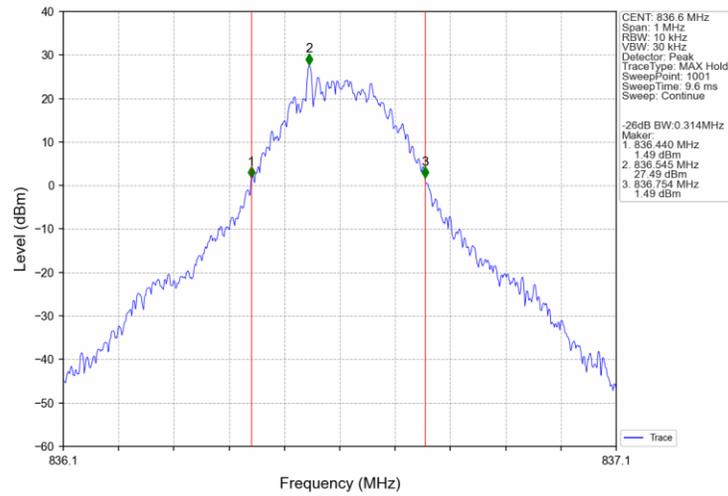
GSM850_GPRS_HCH_848.8MHz_1_TX_Slot_NTNV



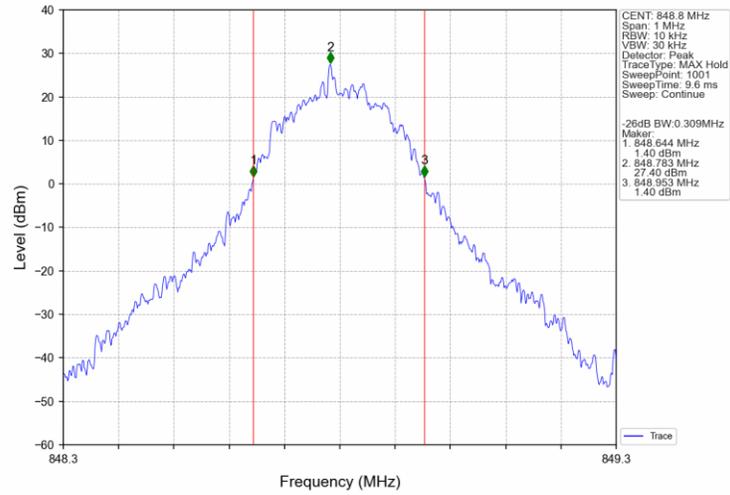
GSM850 EGPRS LCH 824.2MHz 1 TX Slot NTNV



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

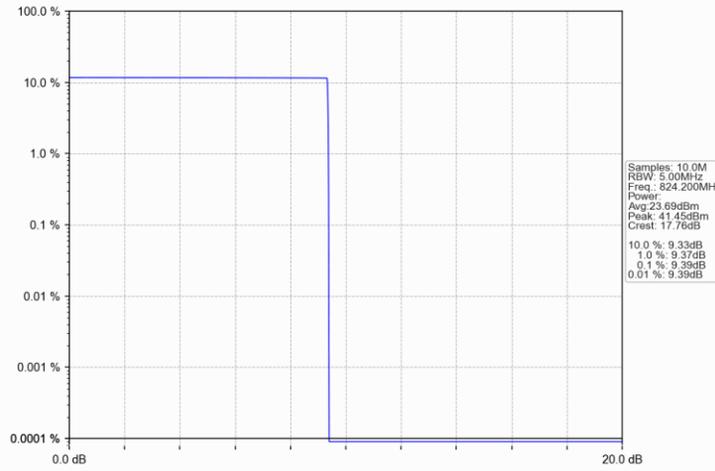
5.1.1 GSM850

Band: GSM850						
ENV	Mode		Frequency (MHz)	Peak-Average Ratio (dB)		Verdict
	Network	Subset		Result	Limit	
NTNV	GSM	GSM	824.2	9.39	<=13	Pass
			836.6	9.45	<=13	Pass
			848.8	9.42	<=13	Pass
	GPRS	4 TX Slots	824.2	3.59	<=13	Pass
			836.6	3.43	<=13	Pass
			848.8	3.60	<=13	Pass
	EGPRS	4 TX Slots	824.2	9.89	<=13	Pass
			836.6	9.89	<=13	Pass
			848.8	10.26	<=13	Pass

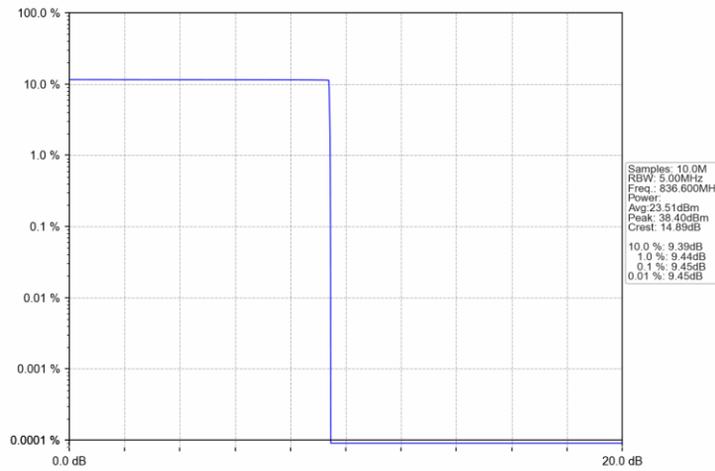
5.2 Test Graph

5.2.1 GSM850

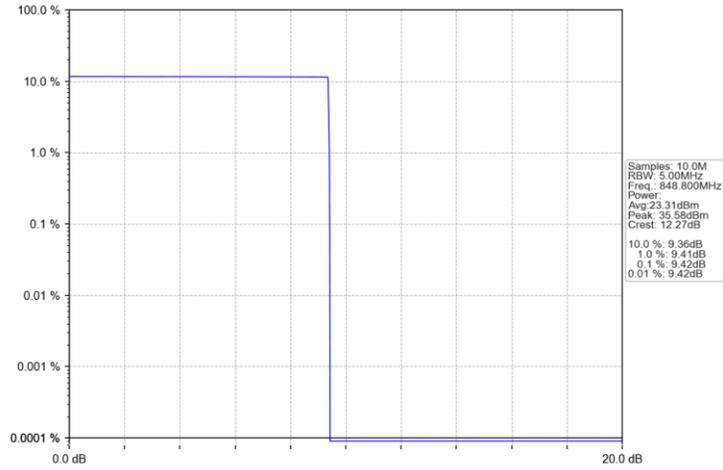
GSM850 GSM LCH 824.2MHz GSM NTN



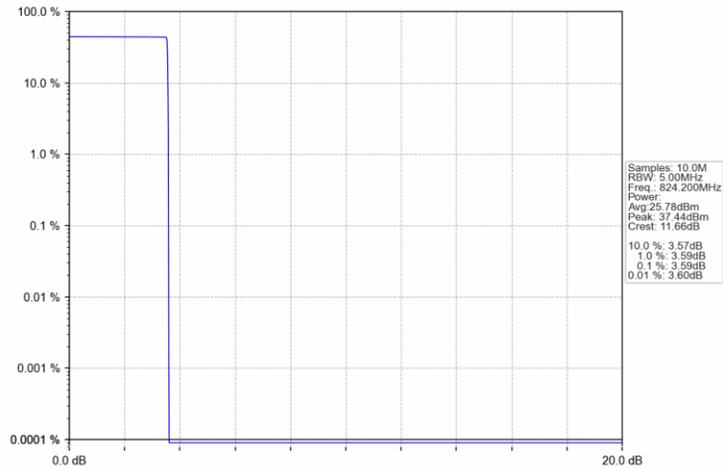
GSM850 GSM MCH 836.6MHz GSM NTN



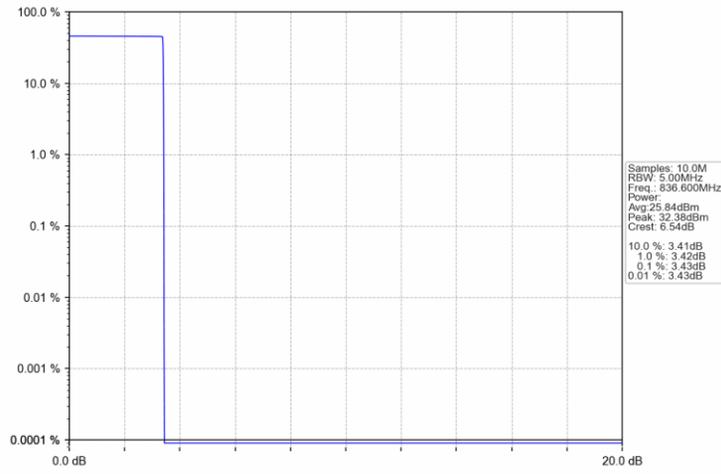
GSM850 GSM HCH 848.8MHz GSM NTNV



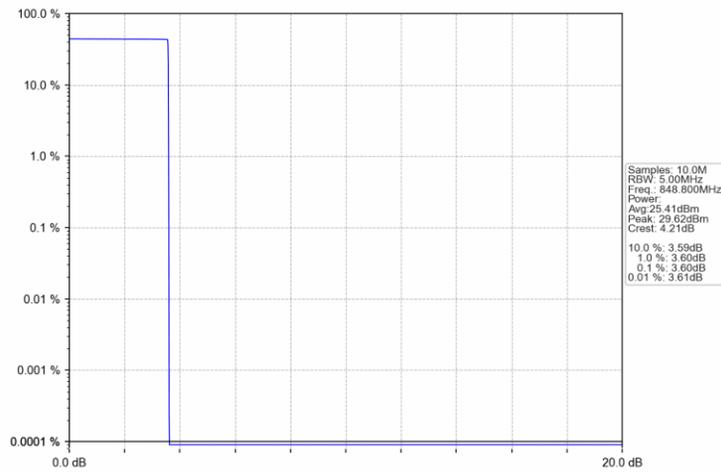
GSM850 GPRS LCH 824.2MHz 4 TX Slots NTNV



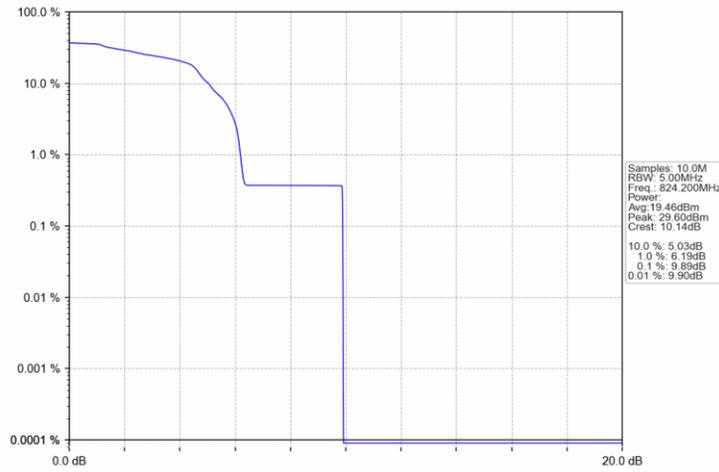
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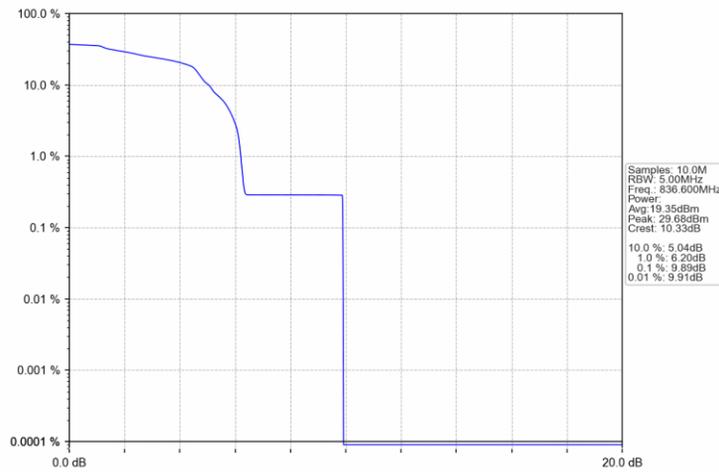
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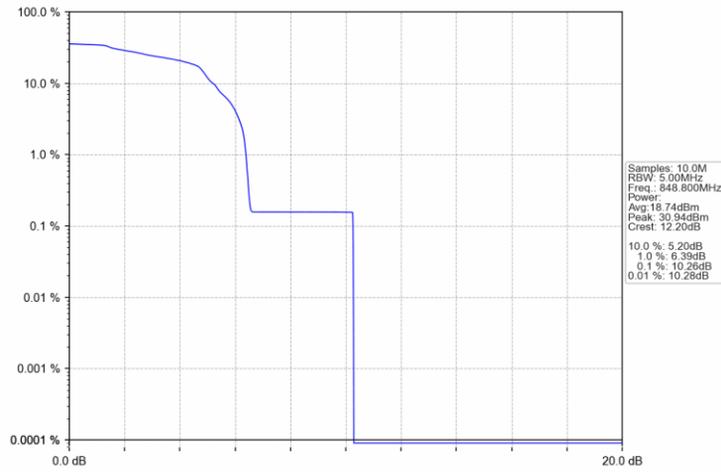
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GSM850_EGPRS_MCH_836.6MHz_4_TX_Slots_NTNV



GSM850 EGPRS HCH 848.8MHz 4 TX Slots NTN



6. Spurious Emission

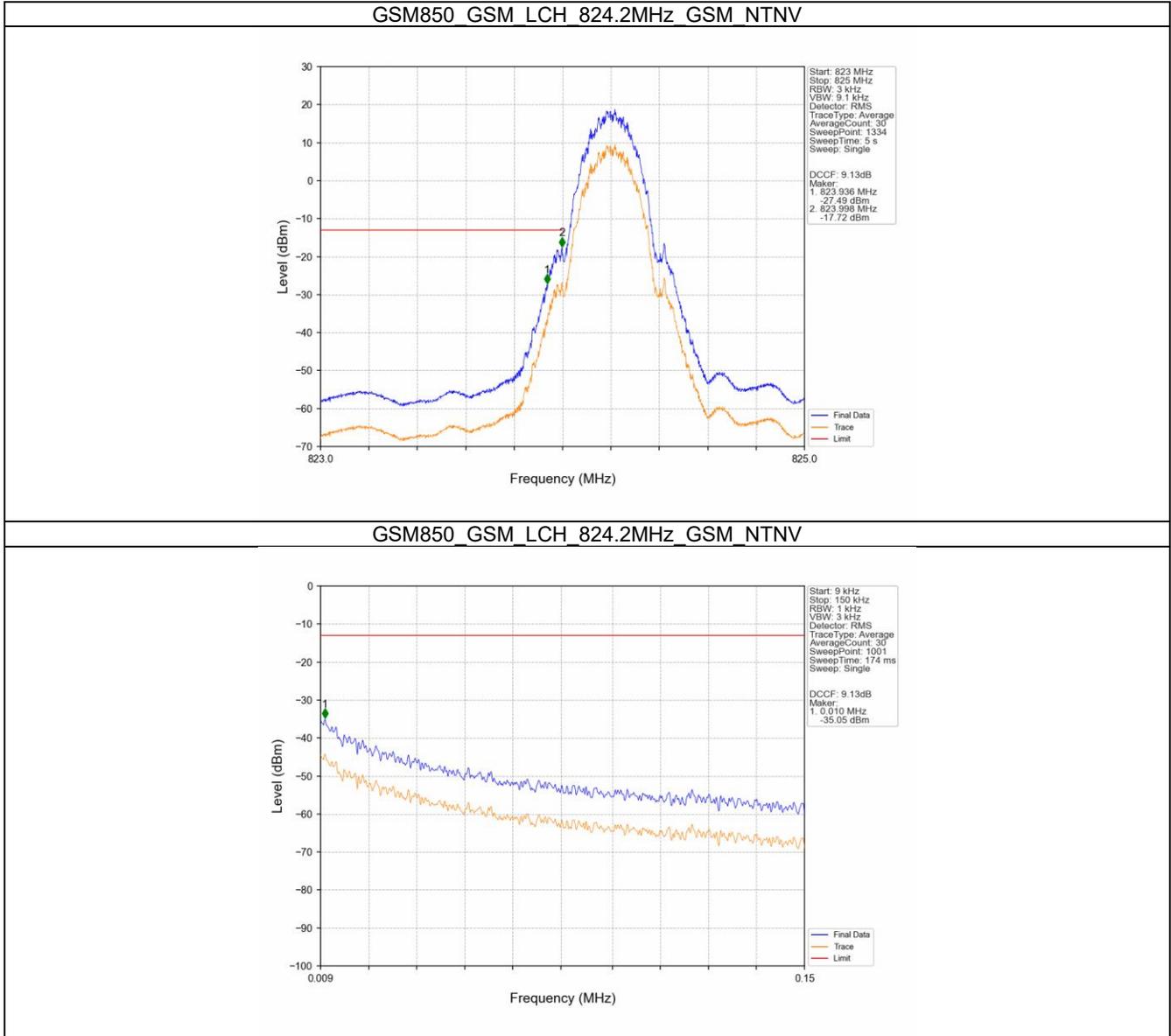
6.1 Test Result

6.1.1 GSM850

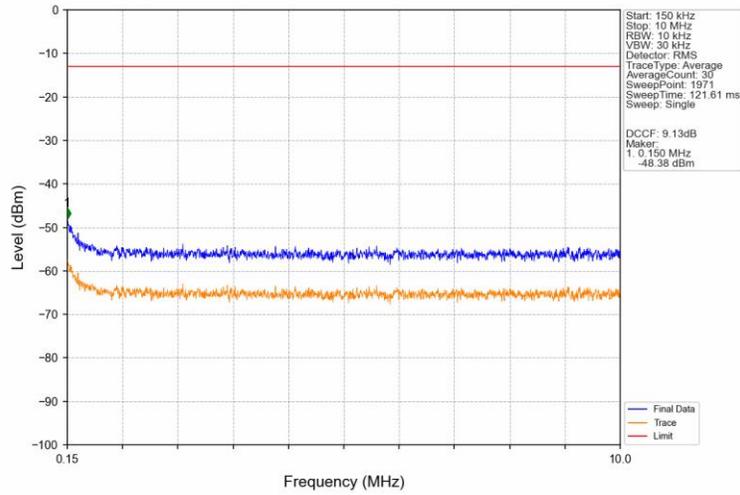
Band: GSM850						
ENV	Mode		Frequency (MHz)	Spurious Emission		Verdict
	Network	Subset		Result	Limit	
NTNV	GSM	GSM	824.2	Refer To Test Graph		Pass
			836.6	Refer To Test Graph		Pass
			848.8	Refer To Test Graph		Pass
	GPRS	1 TX Slot	824.2	Refer To Test Graph		Pass
			836.6	Refer To Test Graph		Pass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

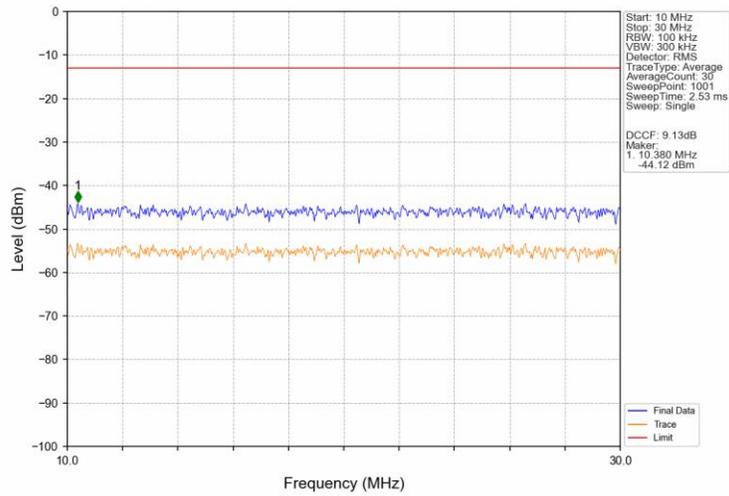
6.2.1 GSM850



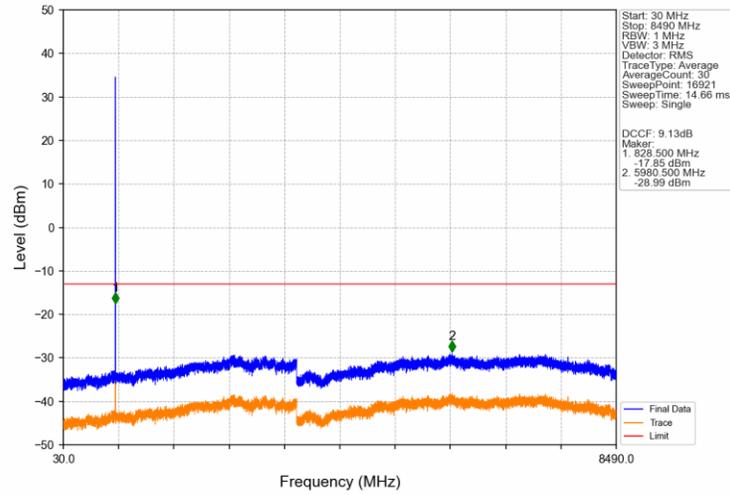
GSM850 GSM LCH 824.2MHz GSM_NTNV



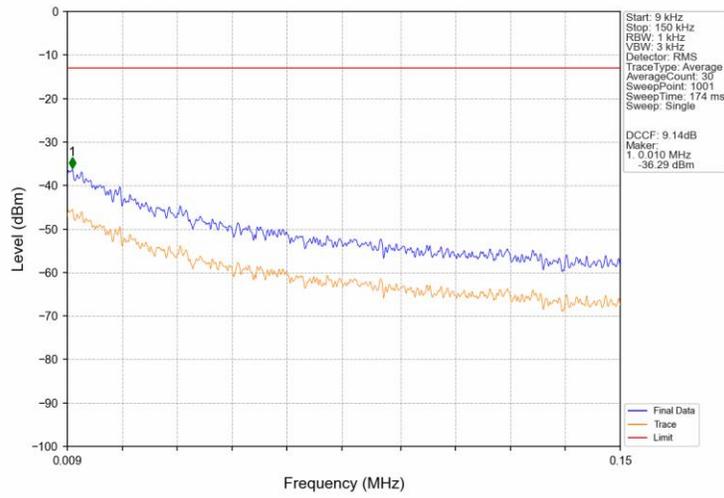
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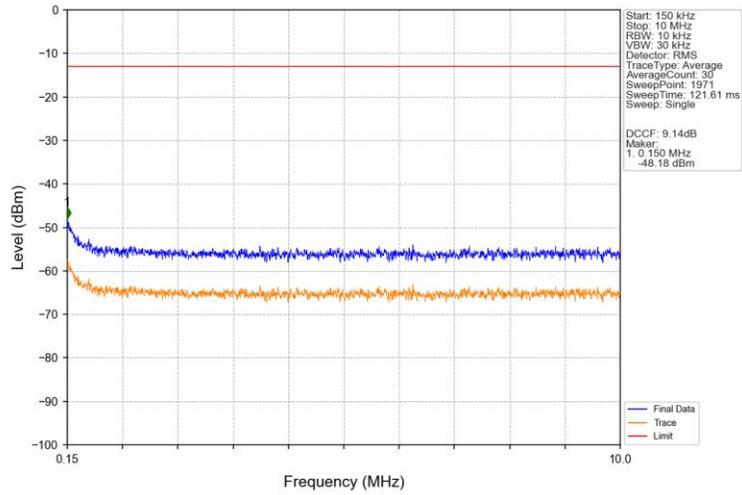
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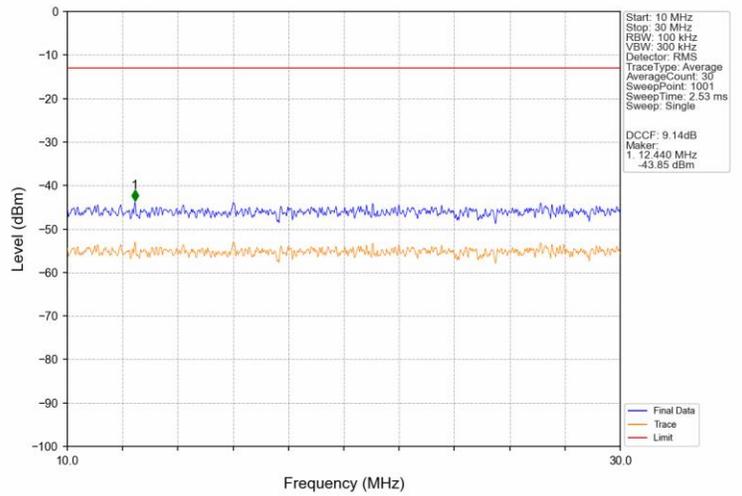
GSM850 GSM MCH 836.6MHz GSM NTN



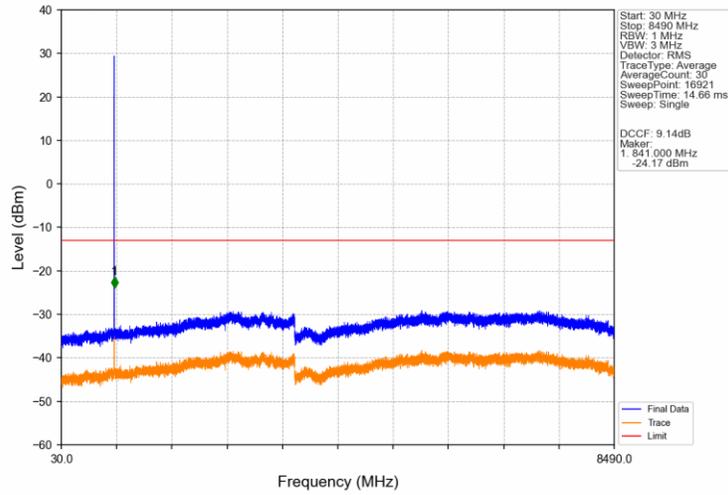
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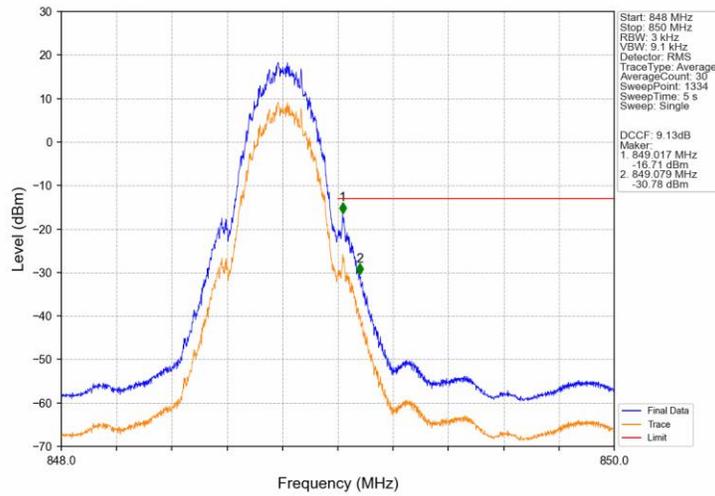
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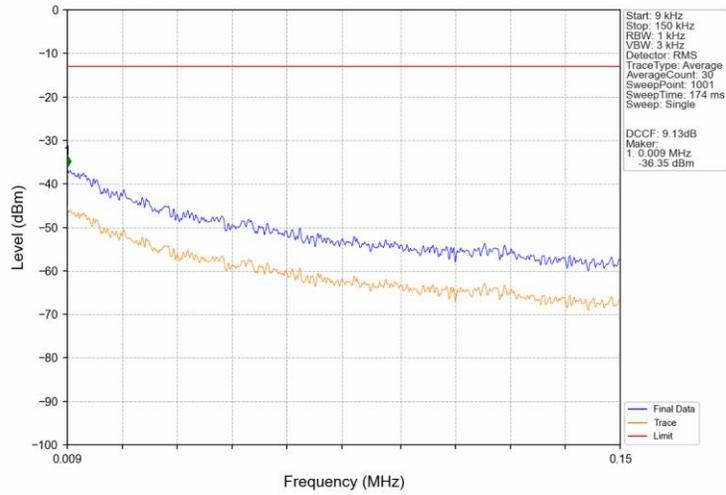
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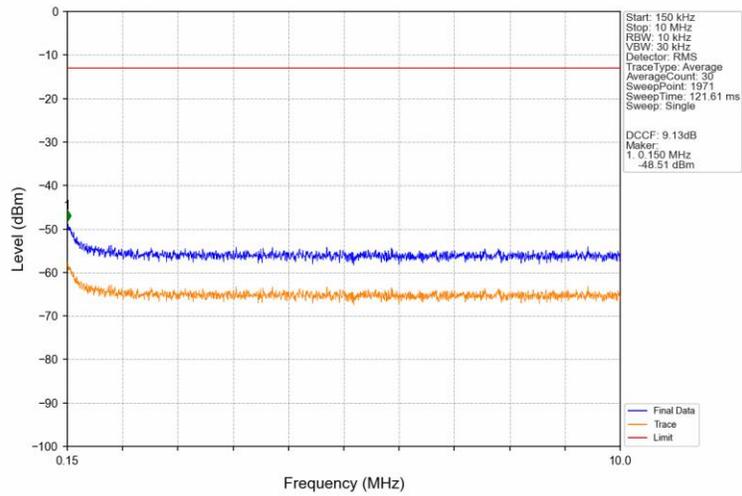
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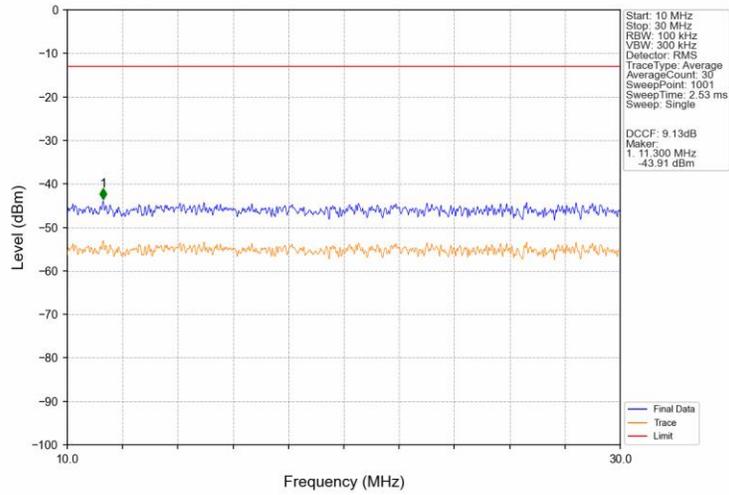
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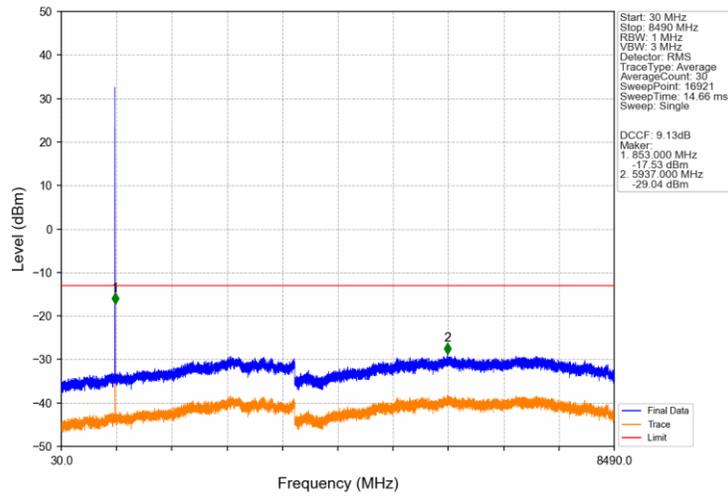
GSM850 GSM_HCH_848.8MHz GSM_NTNV



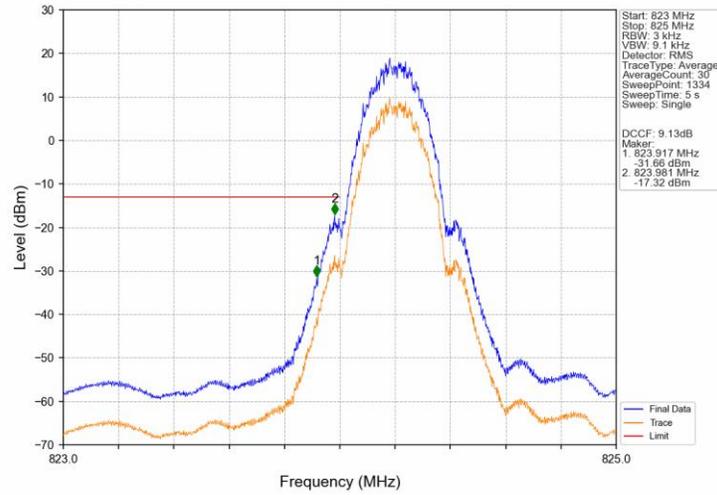
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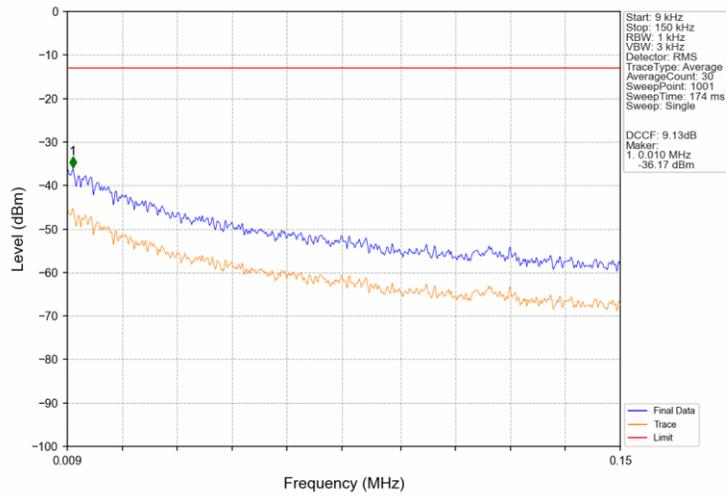
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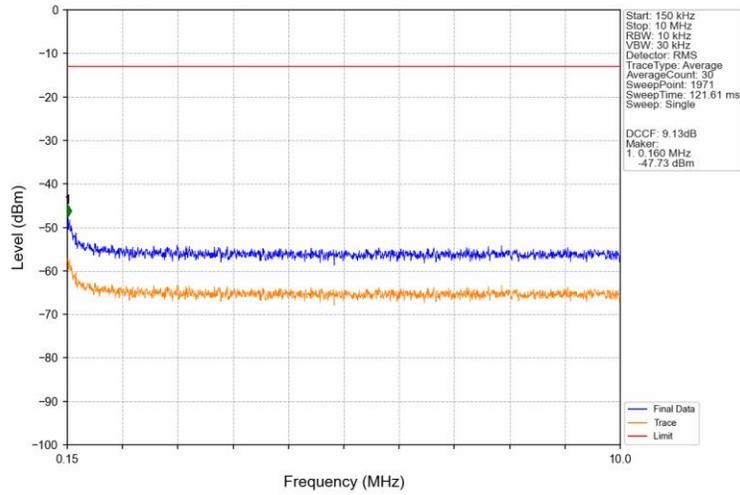
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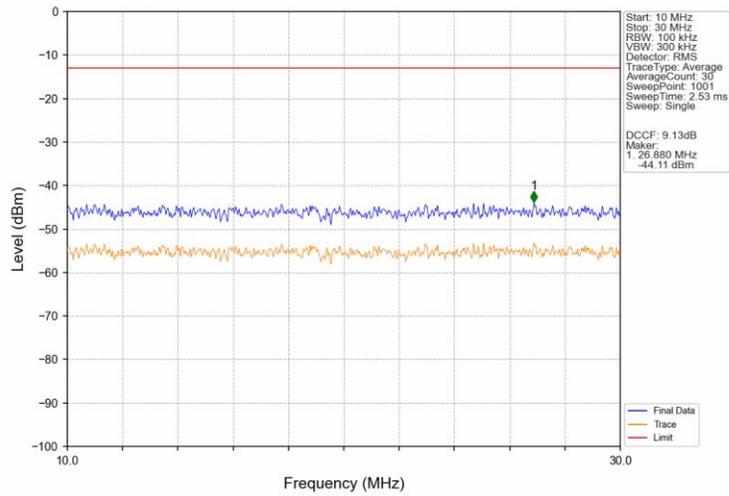
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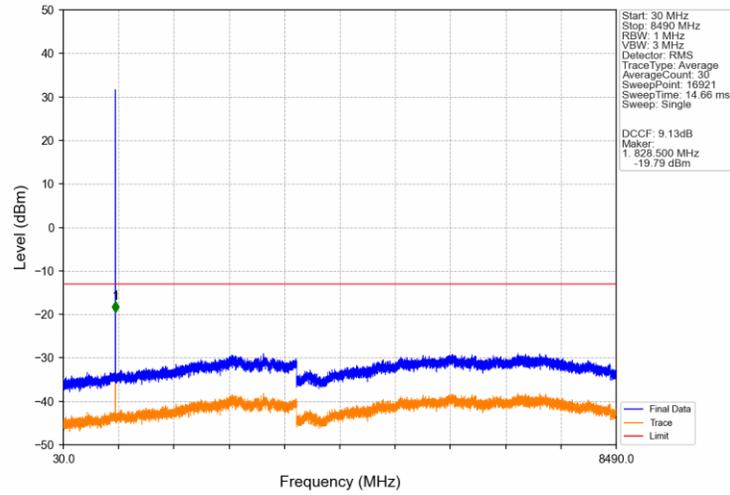
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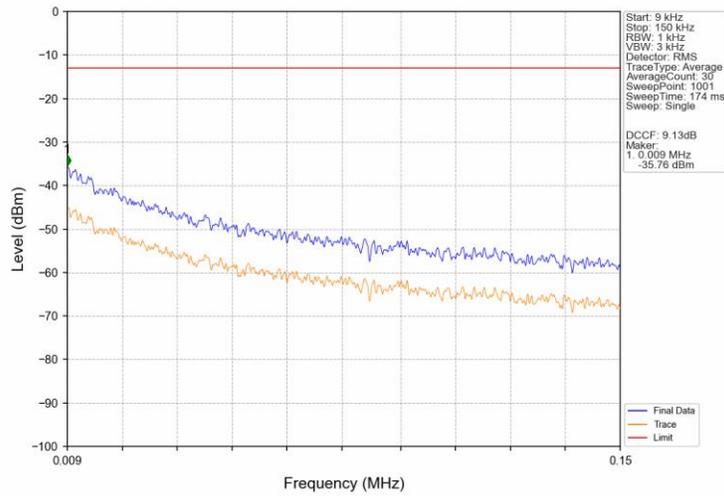
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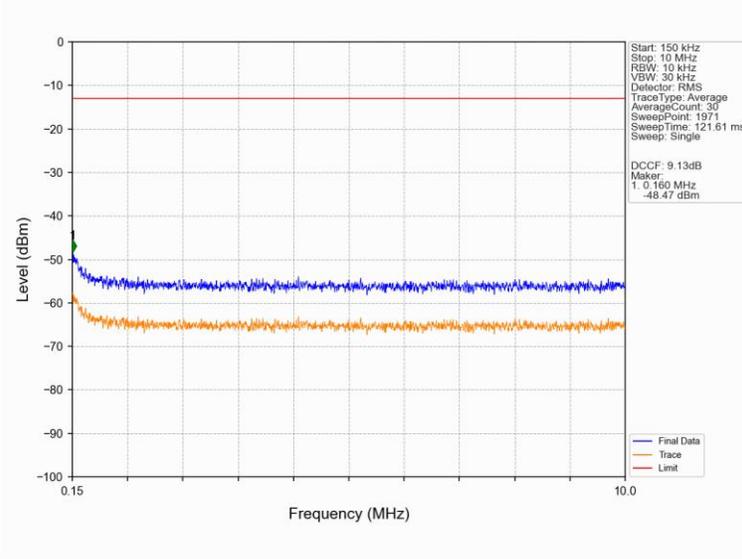
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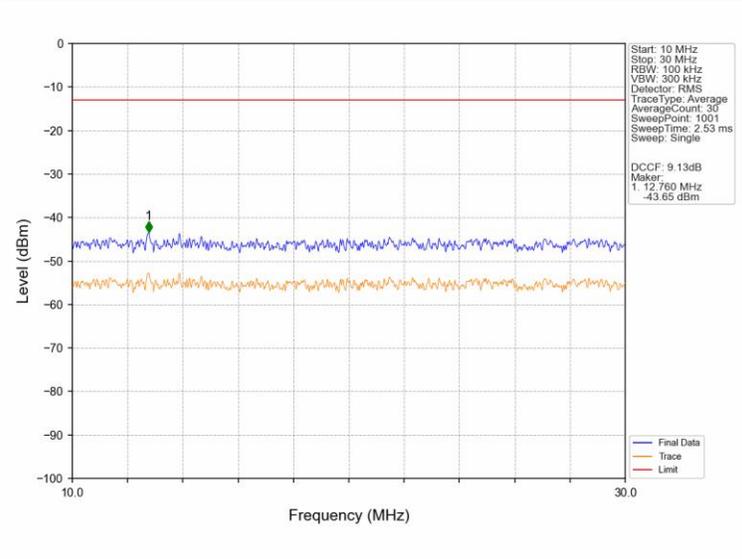
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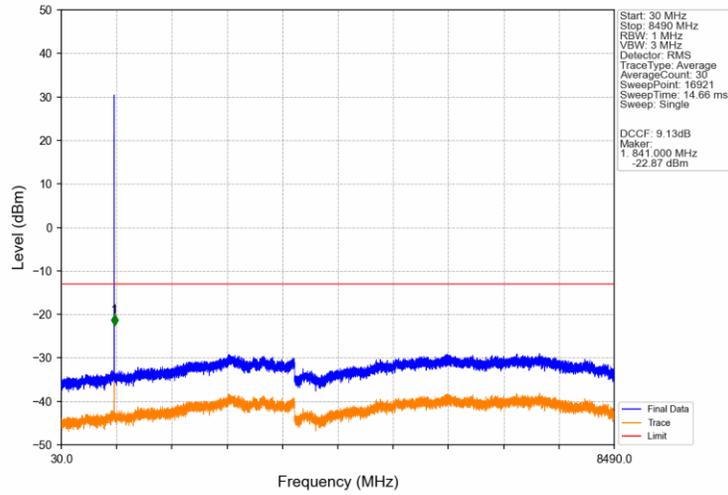
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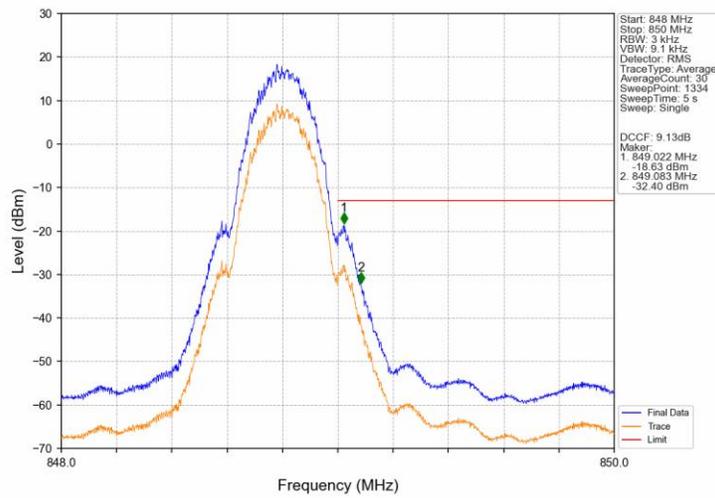
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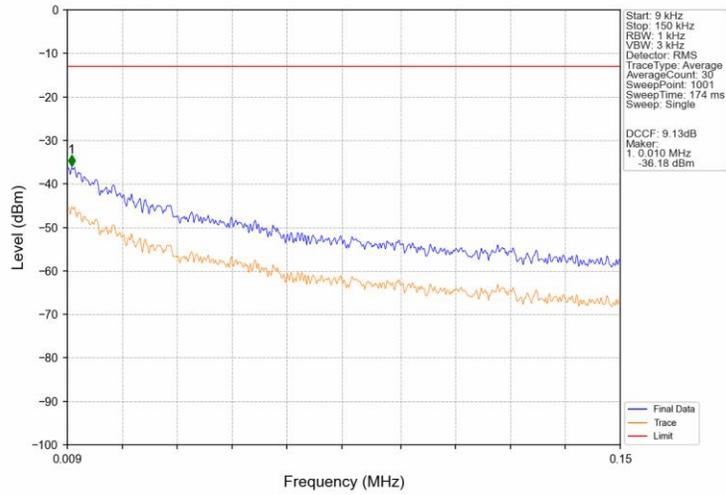
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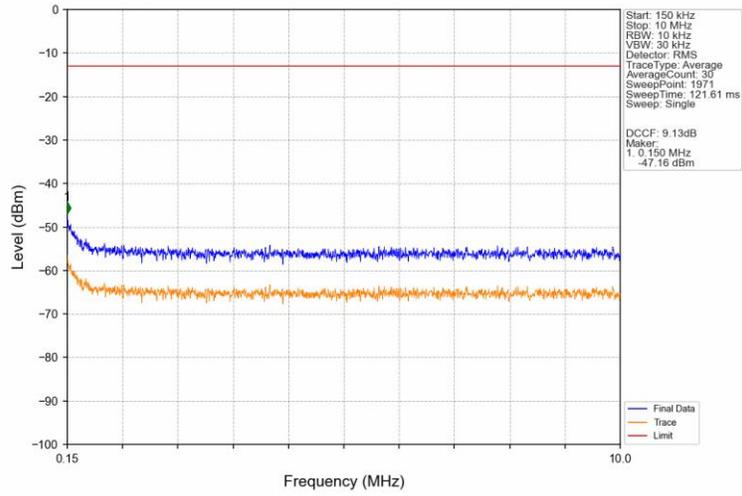
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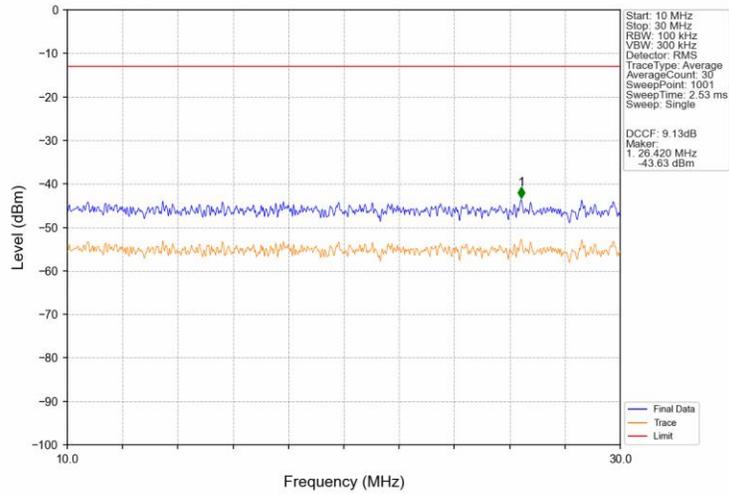
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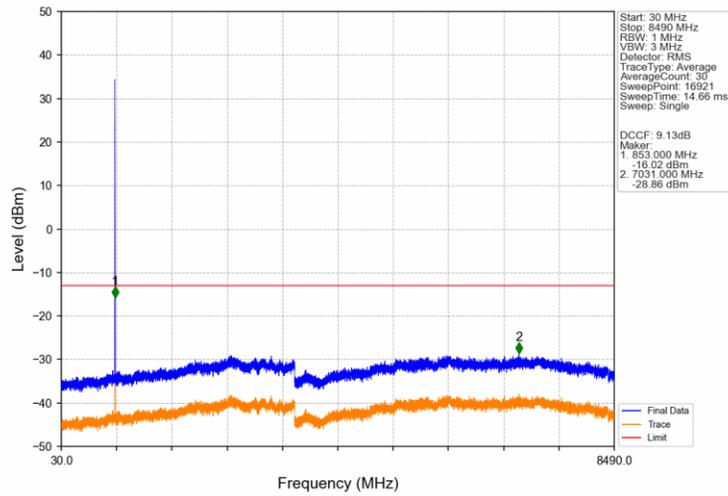
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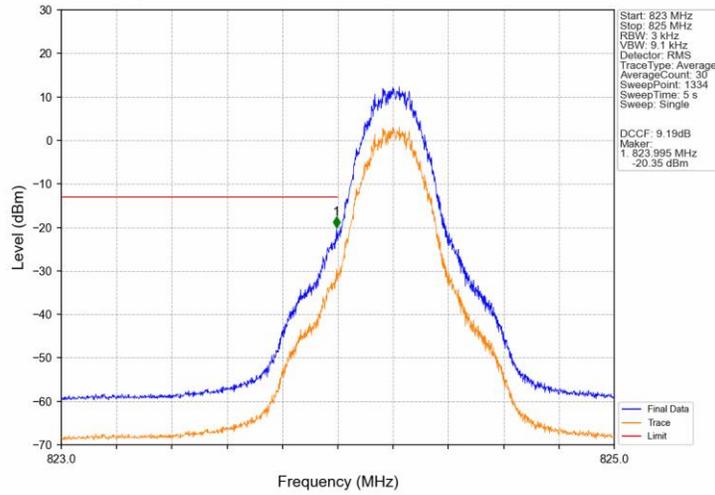
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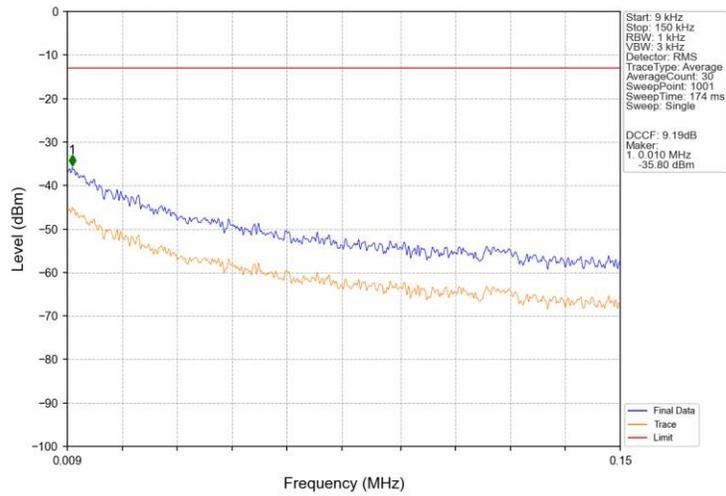
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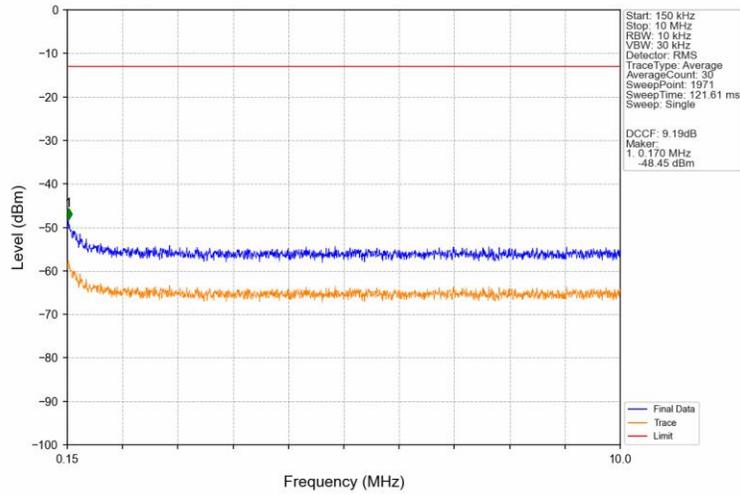
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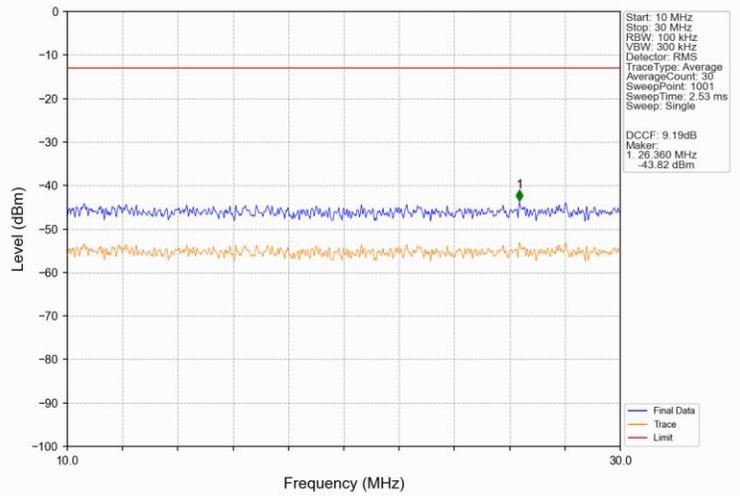
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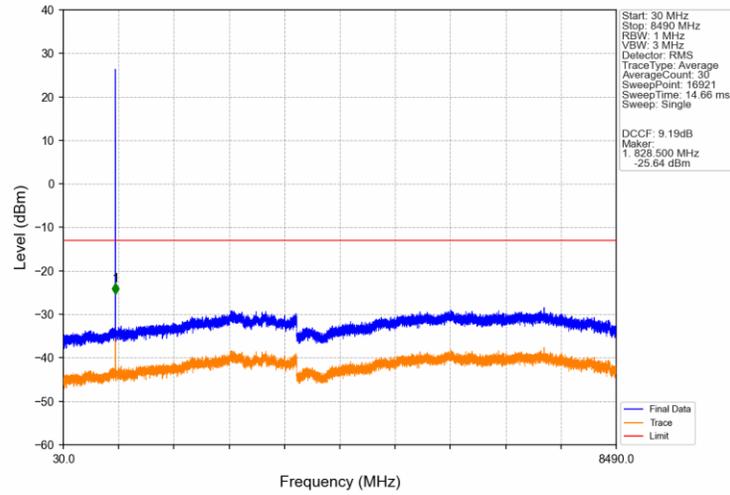
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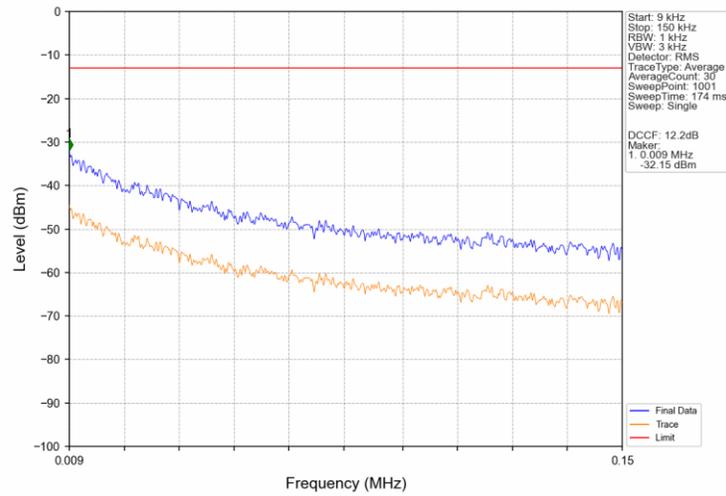
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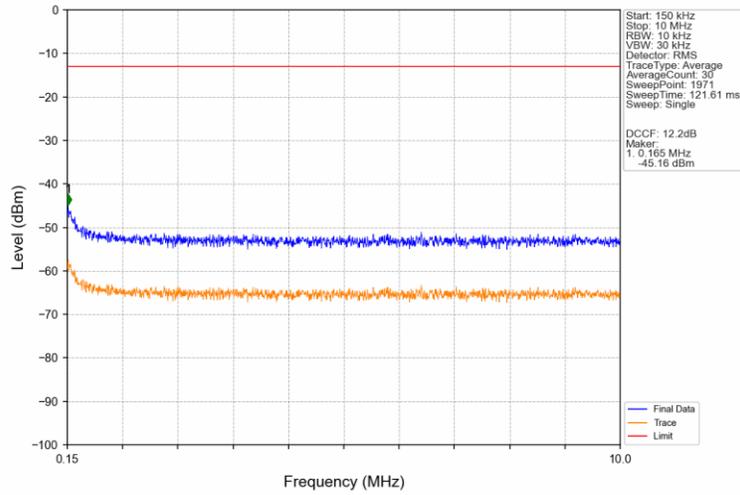
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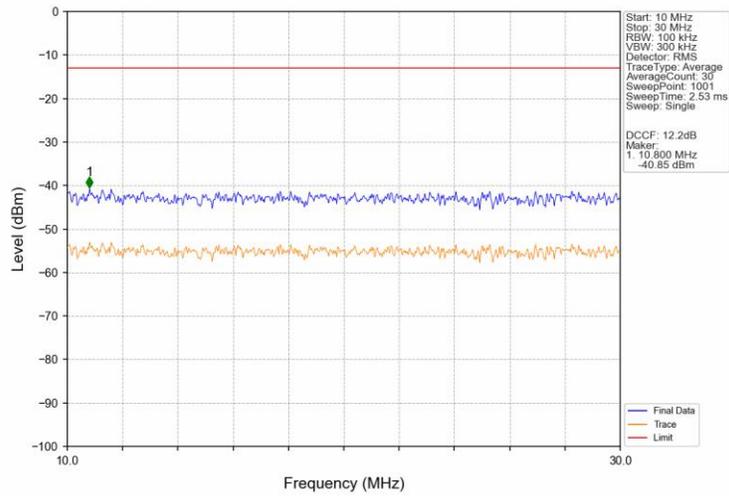
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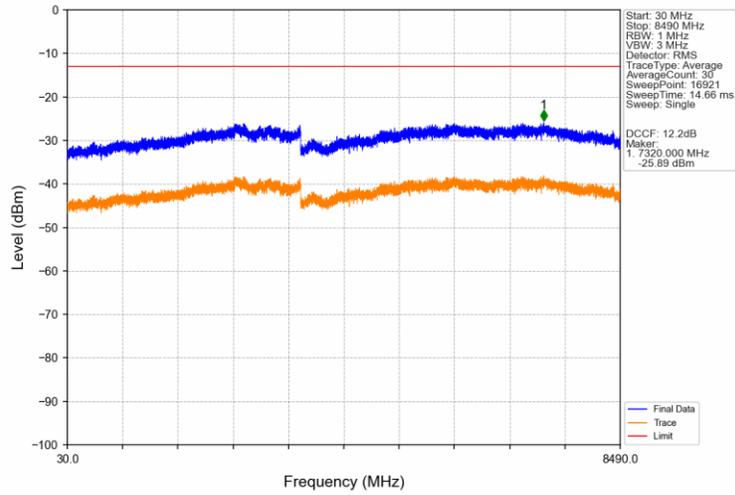
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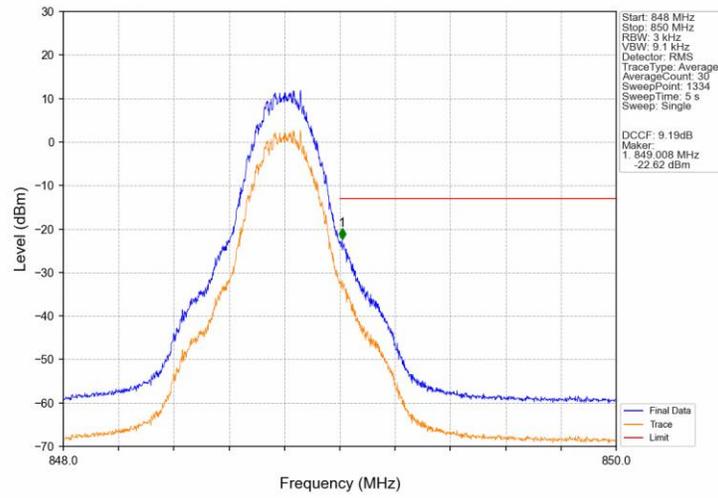
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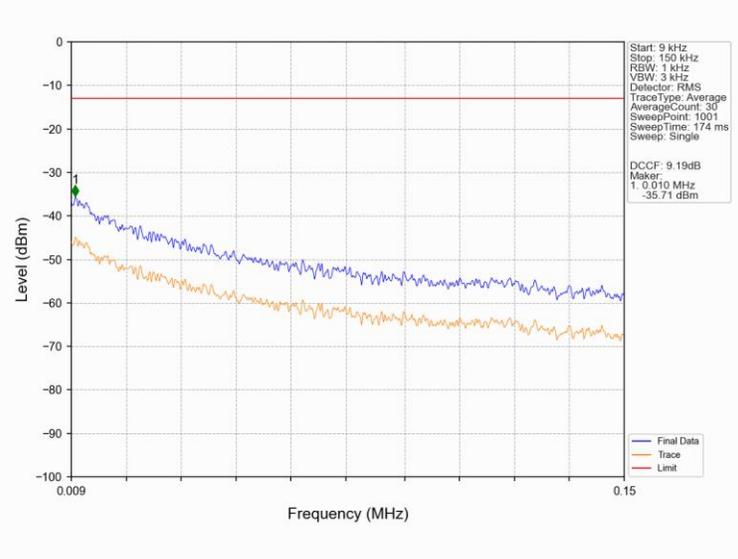
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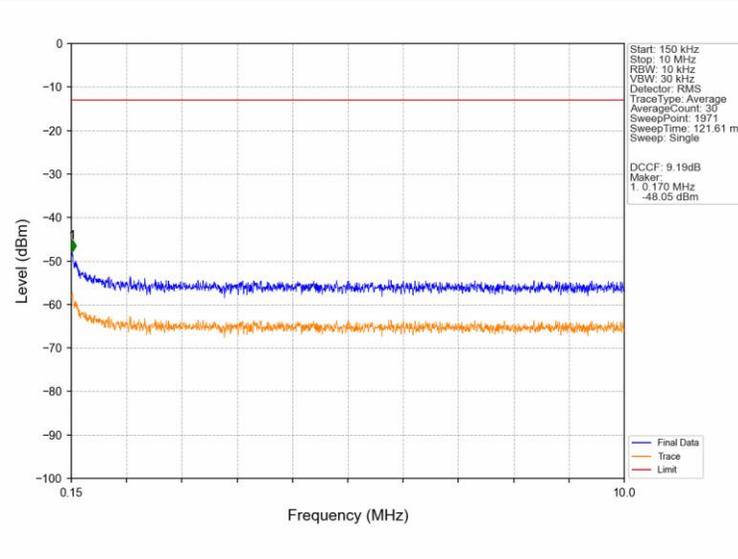
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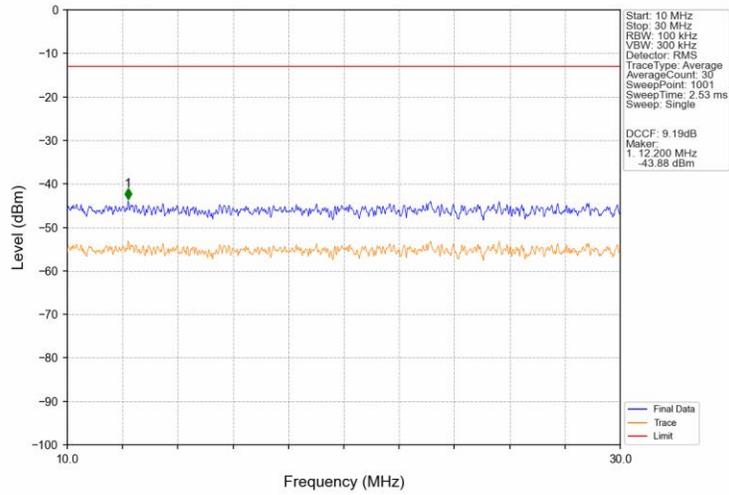
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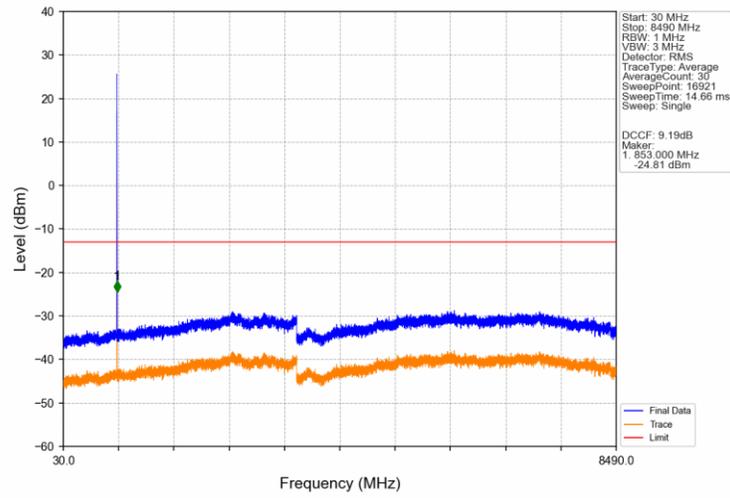
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GSM850 EGPRS HCH 848.8MHz 1 TX Slot NTNV



GSM850 EGPRS HCH 848.8MHz 1 TX Slot NTNV



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