

1. Effective (Isotropic) Radiated Power Output Data

1.1 GSM850_ERP

1.1.1 Test Result

Band: GSM850								
ENV	Mode		Frequency (MHz)	Conducted Power (dBm)	Gain (dBi)	ERP (dBm)		Verdict
	Network	Subset				Result	Limit	
NTNV	GSM	GSM	824.2	31.87	0.62	30.34	<=38.45	Pass
			836.6	31.86	0.62	30.33	<=38.45	Pass
			848.8	31.71	0.62	30.18	<=38.45	Pass
	GPRS	1 TX Slot	824.2	31.87	0.62	30.34	<=38.45	Pass
		2 TX Slots	824.2	31.09	0.62	29.56	<=38.45	Pass
		3 TX Slots	824.2	29.42	0.62	27.89	<=38.45	Pass
		4 TX Slots	824.2	28.41	0.62	26.88	<=38.45	Pass
		1 TX Slot	836.6	31.85	0.62	30.32	<=38.45	Pass
		2 TX Slots	836.6	31.09	0.62	29.56	<=38.45	Pass
		3 TX Slots	836.6	29.41	0.62	27.88	<=38.45	Pass
		4 TX Slots	836.6	28.39	0.62	26.86	<=38.45	Pass
		1 TX Slot	848.8	31.71	0.62	30.18	<=38.45	Pass
		2 TX Slots	848.8	30.98	0.62	29.45	<=38.45	Pass
		3 TX Slots	848.8	29.34	0.62	27.81	<=38.45	Pass
		4 TX Slots	848.8	28.34	0.62	26.81	<=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	12.882	0.0156	-2.5 to 2.5	Pass
			3.85	8.168	0.0099	-2.5 to 2.5	Pass
			4.43	8.265	0.0100	-2.5 to 2.5	Pass
		-30	3.85	9.524	0.0116	-2.5 to 2.5	Pass
		-20	3.85	7.426	0.0090	-2.5 to 2.5	Pass
		-10	3.85	3.713	0.0045	-2.5 to 2.5	Pass
		0	3.85	0.678	0.0008	-2.5 to 2.5	Pass
		10	3.85	-2.777	-0.0034	-2.5 to 2.5	Pass
		30	3.85	-3.551	-0.0043	-2.5 to 2.5	Pass
		40	3.85	-4.423	-0.0054	-2.5 to 2.5	Pass
		50	3.85	0.097	0.0001	-2.5 to 2.5	Pass
	836.6	20	3.27	7.264	0.0087	-2.5 to 2.5	Pass
			3.85	-9.686	-0.0116	-2.5 to 2.5	Pass
			4.43	0.452	0.0005	-2.5 to 2.5	Pass
		-30	3.85	-0.678	-0.0008	-2.5 to 2.5	Pass
		-20	3.85	0.517	0.0006	-2.5 to 2.5	Pass
		-10	3.85	-2.647	-0.0032	-2.5 to 2.5	Pass
		0	3.85	0.194	0.0002	-2.5 to 2.5	Pass
		10	3.85	3.842	0.0046	-2.5 to 2.5	Pass
		30	3.85	-3.067	-0.0037	-2.5 to 2.5	Pass

		40	3.85	-3.681	-0.0044	-2.5 to 2.5	Pass
		50	3.85	0.936	0.0011	-2.5 to 2.5	Pass
	848.8	20	3.27	1.098	0.0013	-2.5 to 2.5	Pass
			3.85	1.065	0.0013	-2.5 to 2.5	Pass
			4.43	4.552	0.0054	-2.5 to 2.5	Pass
		-30	3.85	-2.551	-0.0030	-2.5 to 2.5	Pass
		-20	3.85	-1.033	-0.0012	-2.5 to 2.5	Pass
		-10	3.85	2.583	0.0030	-2.5 to 2.5	Pass
		0	3.85	0.517	0.0006	-2.5 to 2.5	Pass
		10	3.85	3.681	0.0043	-2.5 to 2.5	Pass
		30	3.85	8.297	0.0098	-2.5 to 2.5	Pass
		40	3.85	2.292	0.0027	-2.5 to 2.5	Pass
		50	3.85	2.647	0.0031	-2.5 to 2.5	Pass
GPRS	824.2	20	3.27	8.071	0.0098	-2.5 to 2.5	Pass
			3.85	3.035	0.0037	-2.5 to 2.5	Pass
			4.43	4.165	0.0051	-2.5 to 2.5	Pass
		-30	3.85	-0.097	-0.0001	-2.5 to 2.5	Pass
		-20	3.85	3.325	0.0040	-2.5 to 2.5	Pass
		-10	3.85	4.681	0.0057	-2.5 to 2.5	Pass
		0	3.85	8.717	0.0106	-2.5 to 2.5	Pass
		10	3.85	8.265	0.0100	-2.5 to 2.5	Pass
		30	3.85	10.816	0.0131	-2.5 to 2.5	Pass
		40	3.85	5.521	0.0067	-2.5 to 2.5	Pass
		50	3.85	9.234	0.0112	-2.5 to 2.5	Pass
	836.6	20	3.27	10.590	0.0127	-2.5 to 2.5	Pass
			3.85	9.040	0.0108	-2.5 to 2.5	Pass
			4.43	3.422	0.0041	-2.5 to 2.5	Pass
		-30	3.85	11.494	0.0137	-2.5 to 2.5	Pass
		-20	3.85	9.815	0.0117	-2.5 to 2.5	Pass
		-10	3.85	7.329	0.0088	-2.5 to 2.5	Pass
		0	3.85	8.136	0.0097	-2.5 to 2.5	Pass
		10	3.85	9.201	0.0110	-2.5 to 2.5	Pass
		30	3.85	14.981	0.0179	-2.5 to 2.5	Pass
		40	3.85	15.045	0.0180	-2.5 to 2.5	Pass
		50	3.85	12.688	0.0152	-2.5 to 2.5	Pass
	848.8	20	3.27	-1.259	-0.0015	-2.5 to 2.5	Pass
			3.85	-1.776	-0.0021	-2.5 to 2.5	Pass
			4.43	3.261	0.0038	-2.5 to 2.5	Pass
		-30	3.85	2.163	0.0025	-2.5 to 2.5	Pass
		-20	3.85	2.195	0.0026	-2.5 to 2.5	Pass
		-10	3.85	1.065	0.0013	-2.5 to 2.5	Pass
		0	3.85	0.936	0.0011	-2.5 to 2.5	Pass
		10	3.85	0.032	0.0000	-2.5 to 2.5	Pass
		30	3.85	1.259	0.0015	-2.5 to 2.5	Pass
		40	3.85	1.937	0.0023	-2.5 to 2.5	Pass
		50	3.85	-3.261	-0.0038	-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

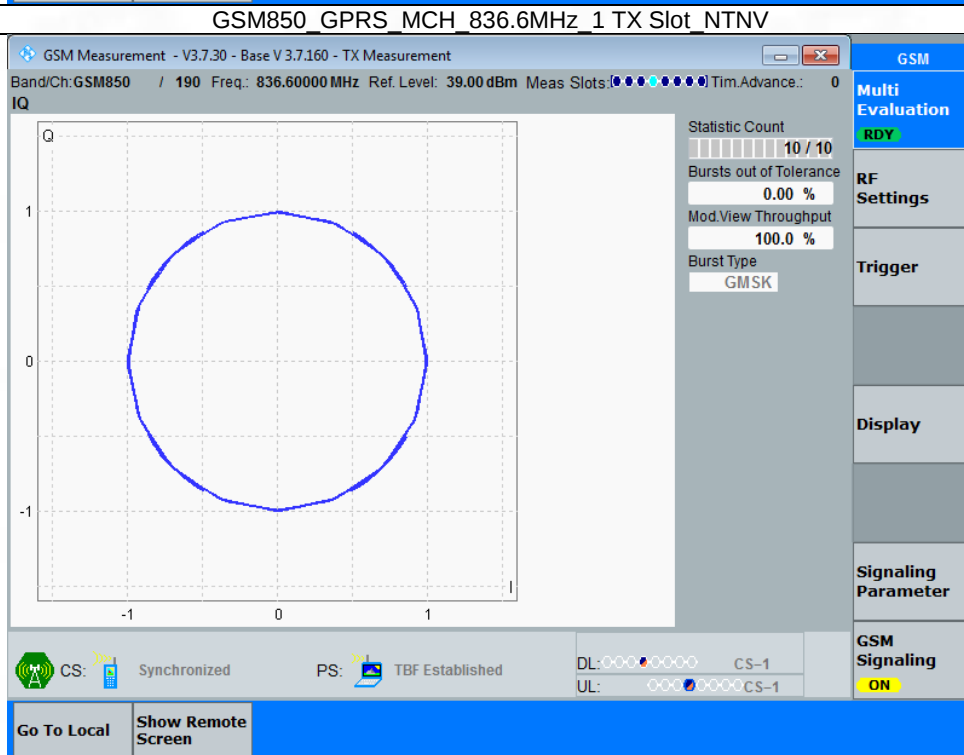
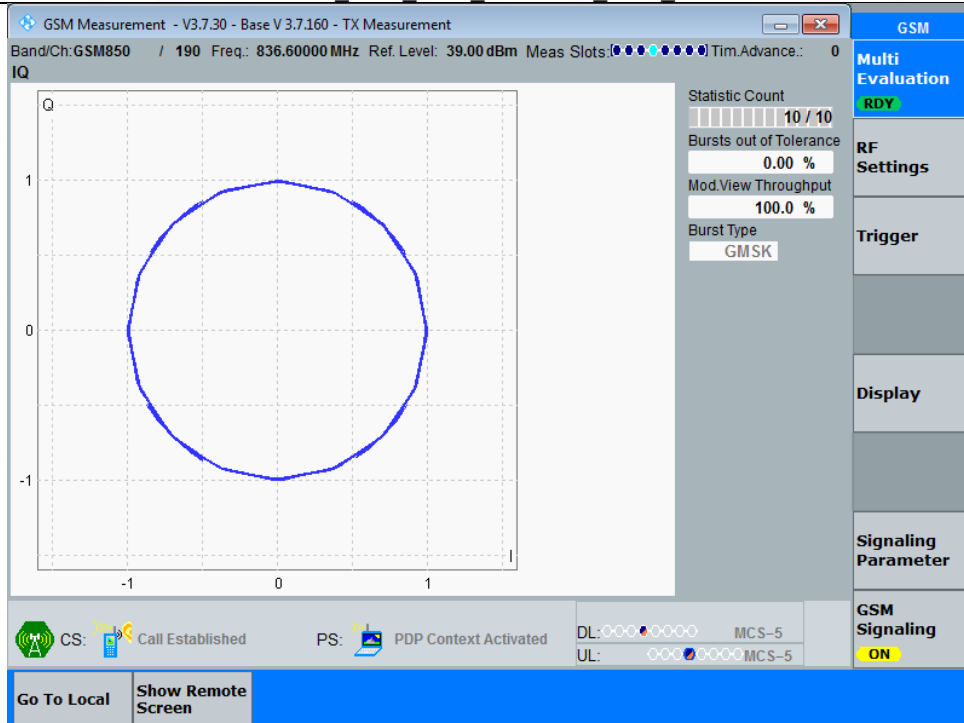
The figure displays two screenshots of the GSM Measurement software interface, showing the 'Call Established' and 'Synchronized' states.

Top Screenshot: Call Established

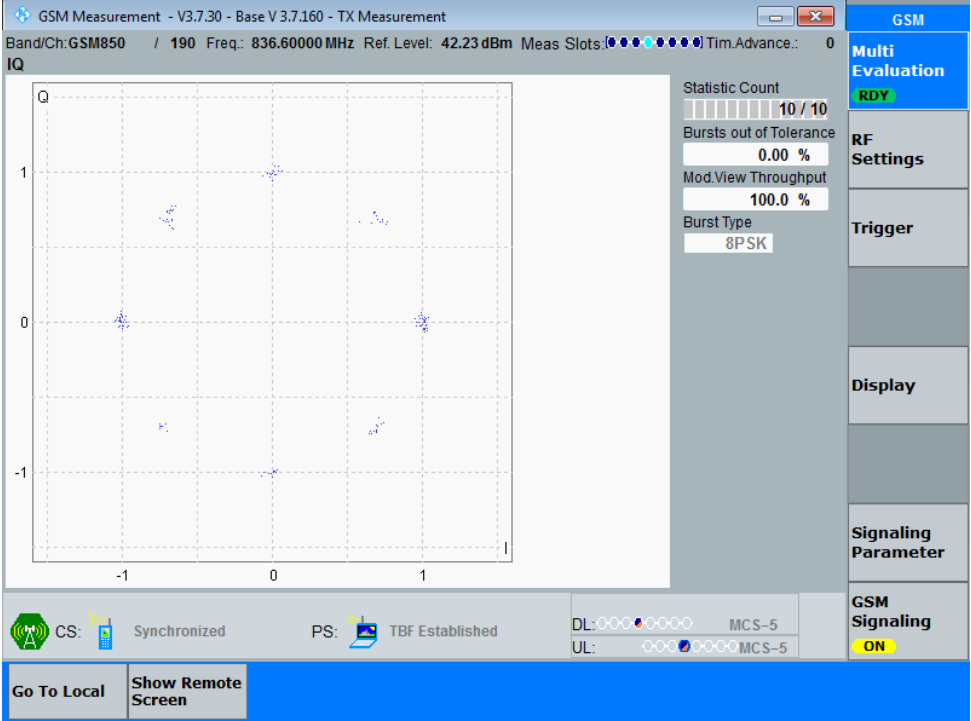
- Header:** GSM Measurement - V3.7.30 - Base V 3.7.160 - TX Measurement
- Band/Ch:** GSM850 / 190 Freq.: 836.60000 MHz Ref. Level: 39.00 dBm Meas Slots: 10 / 10 Tim. Advance.: 0
- IQ Plot:** A circular constellation diagram with a radius of approximately 1, centered at (0,0). The x-axis is labeled 'I' and the y-axis is labeled 'Q'.
- Statistic Count:** 10 / 10
- Bursts out of Tolerance:** 0.00 %
- Mod View Throughput:** 100.0 %
- Burst Type:** GMSK
- Multi Evaluation:** RDY
- RF Settings:** MCS-5
- Trigger:** ON
- Display:** ON
- Signaling Parameter:** ON
- GSM Signaling:** ON
- Buttons:** Go To Local, Show Remote Screen

Bottom Screenshot: Synchronized

- Header:** GSM Measurement - V3.7.30 - Base V 3.7.160 - TX Measurement
- Band/Ch:** GSM850 / 190 Freq.: 836.60000 MHz Ref. Level: 39.00 dBm Meas Slots: 10 / 10 Tim. Advance.: 0
- IQ Plot:** A circular constellation diagram with a radius of approximately 1, centered at (0,0). The x-axis is labeled 'I' and the y-axis is labeled 'Q'.
- Statistic Count:** 10 / 10
- Bursts out of Tolerance:** 0.00 %
- Mod View Throughput:** 100.0 %
- Burst Type:** GMSK
- Multi Evaluation:** RDY
- RF Settings:** CS-1
- Trigger:** ON
- Display:** ON
- Signaling Parameter:** ON
- GSM Signaling:** ON
- Buttons:** Go To Local, Show Remote Screen



GSM850 EGPRS MCH 836.6MHz 1 TX Slot NTN



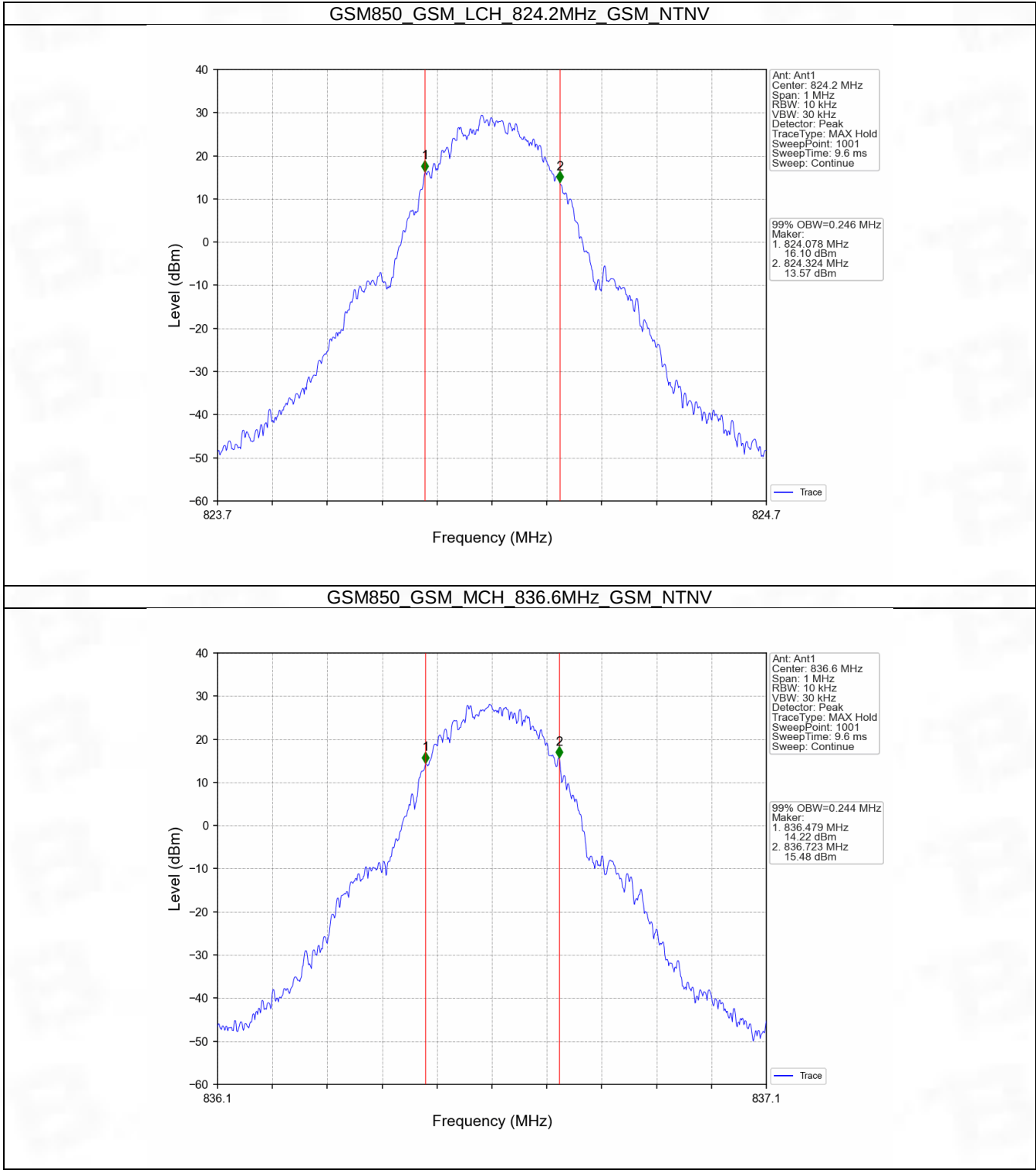
4. 99% & 26dB Bandwidth

4.1 GSM850_OBW

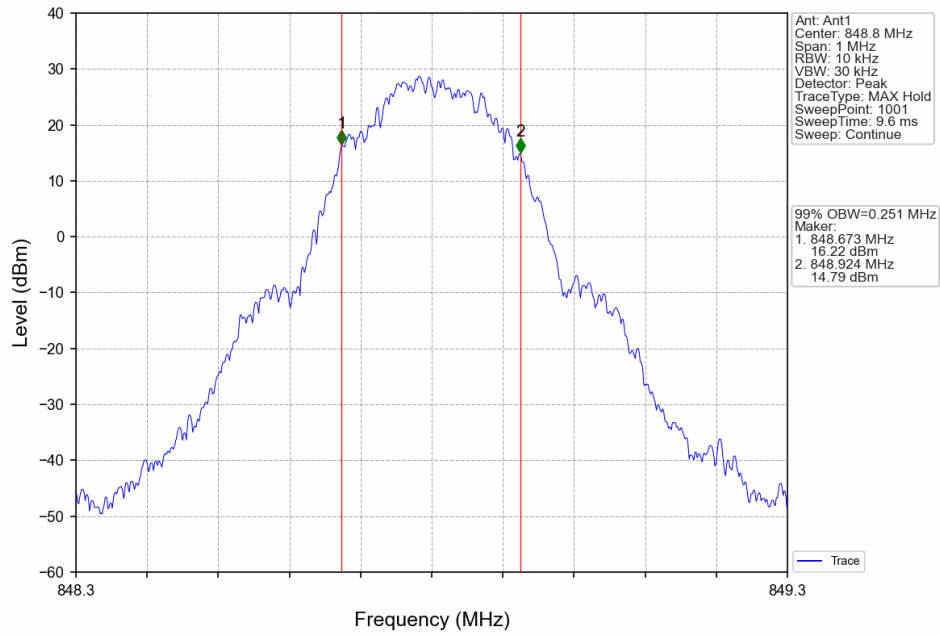
4.1.1 Test Result

Band: GSM850						
ENV	Mode		Frequency (MHz)	99% Occupied Bandwidth (MHz)		Verdict
	Network	Subset		Result	Limit	
NTNV	GSM	GSM	824.2	824.2	0.246	Pass
			836.6	836.6	0.244	Pass
			848.8	848.8	0.251	Pass
	GPRS	1 TX Slot	824.2	824.2	0.250	Pass
			836.6	836.6	0.244	Pass
			848.8	848.8	0.246	Pass

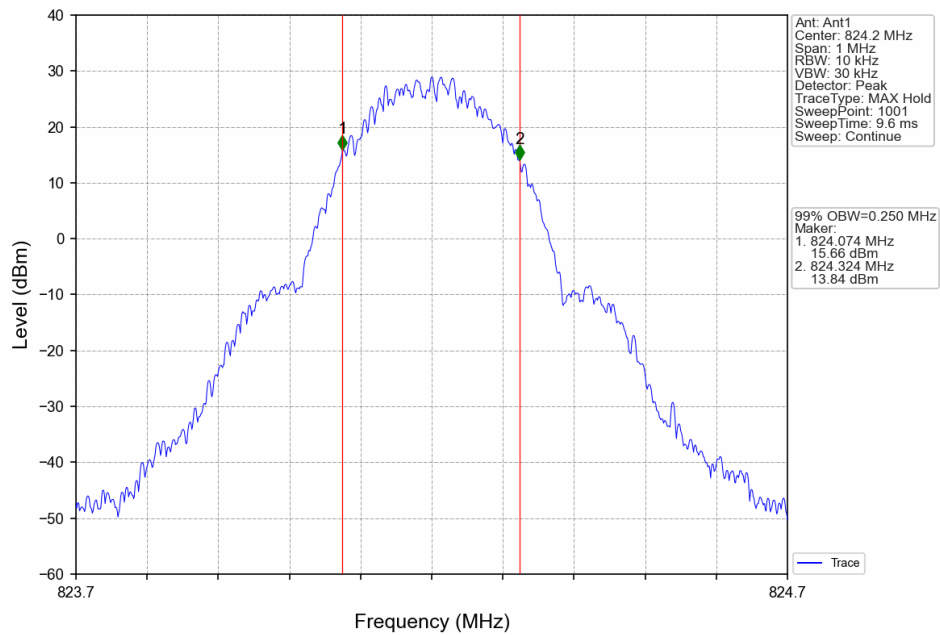
4.1.2 Test Graph



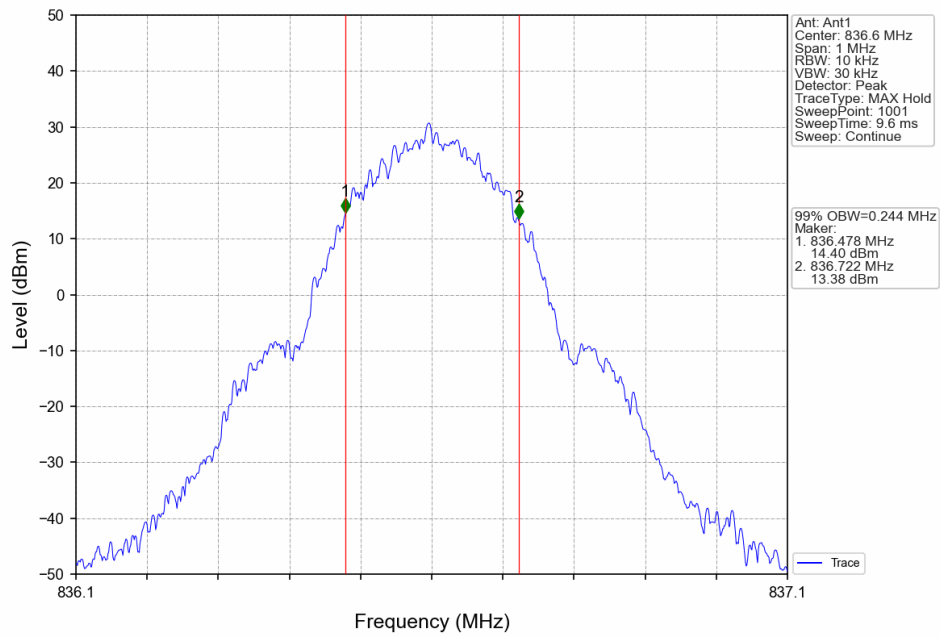
GSM850 GSM HCH 848.8MHz GSM NTN



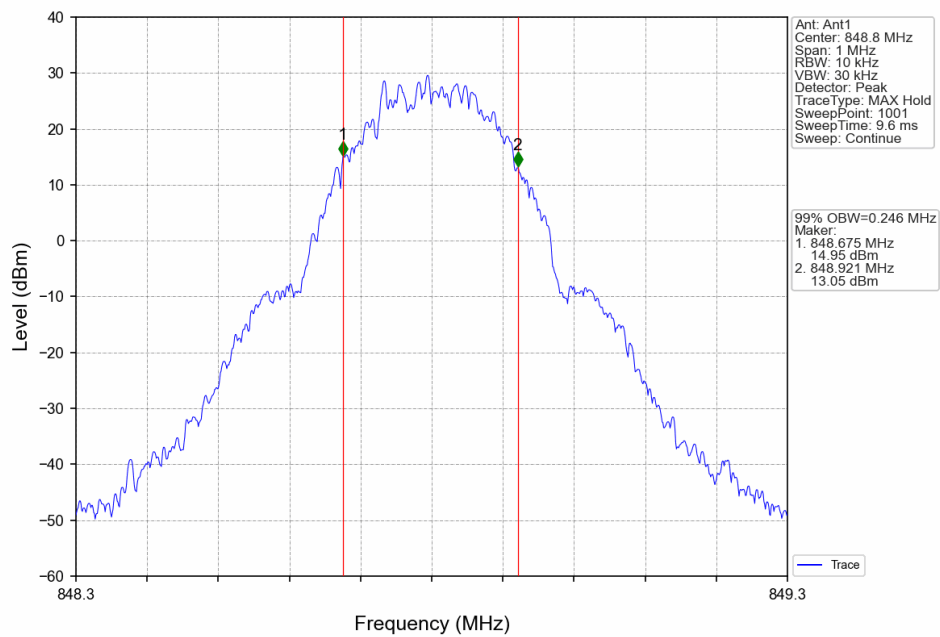
GSM850 GPRS LCH 824.2MHz 1 TX Slot NTN



GSM850 GPRS MCH 836.6MHz 1 TX Slot NTN



GSM850 GPRS HCH 848.8MHz 1 TX Slot NTN

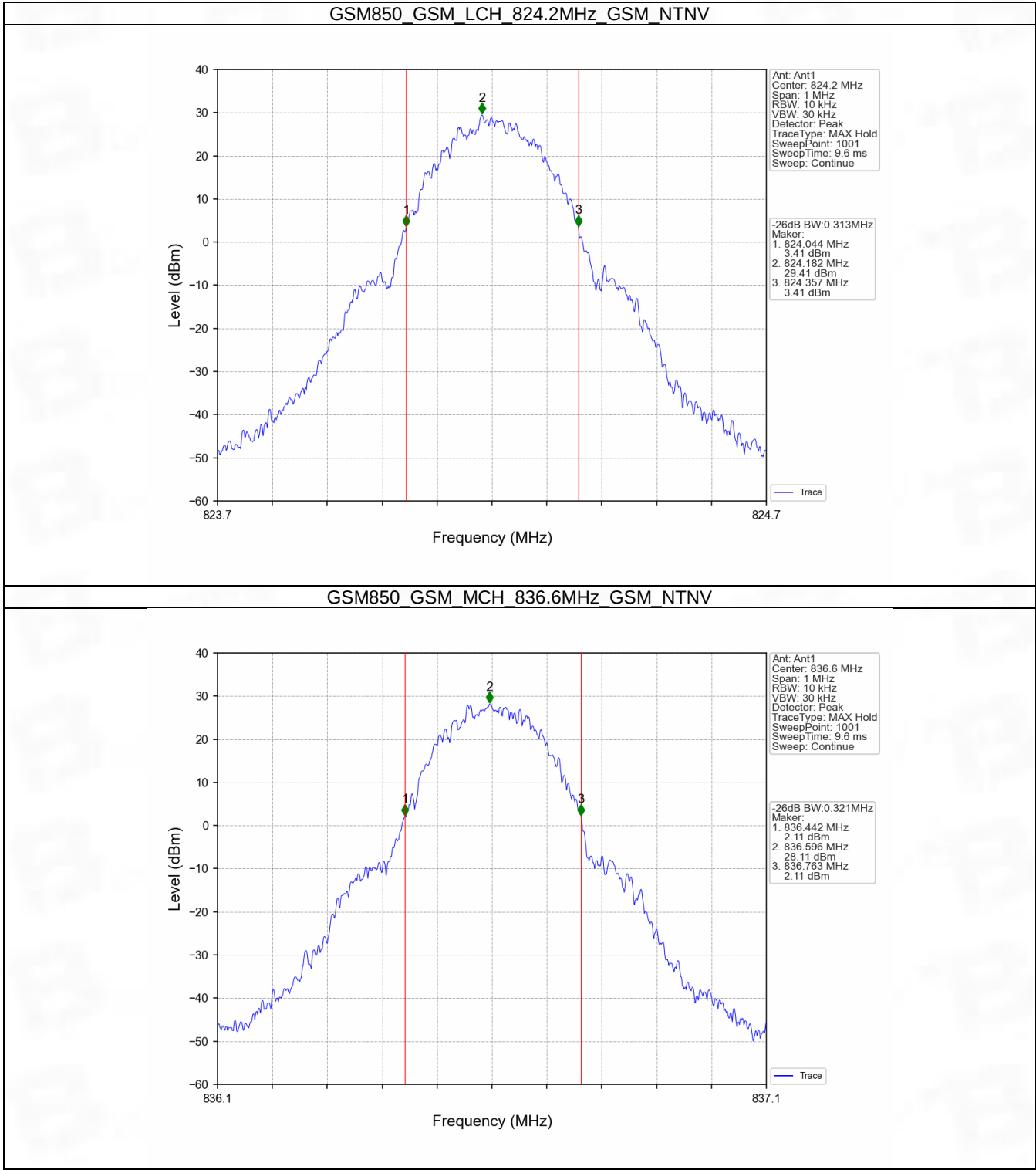


4.2 GSM850_XDB

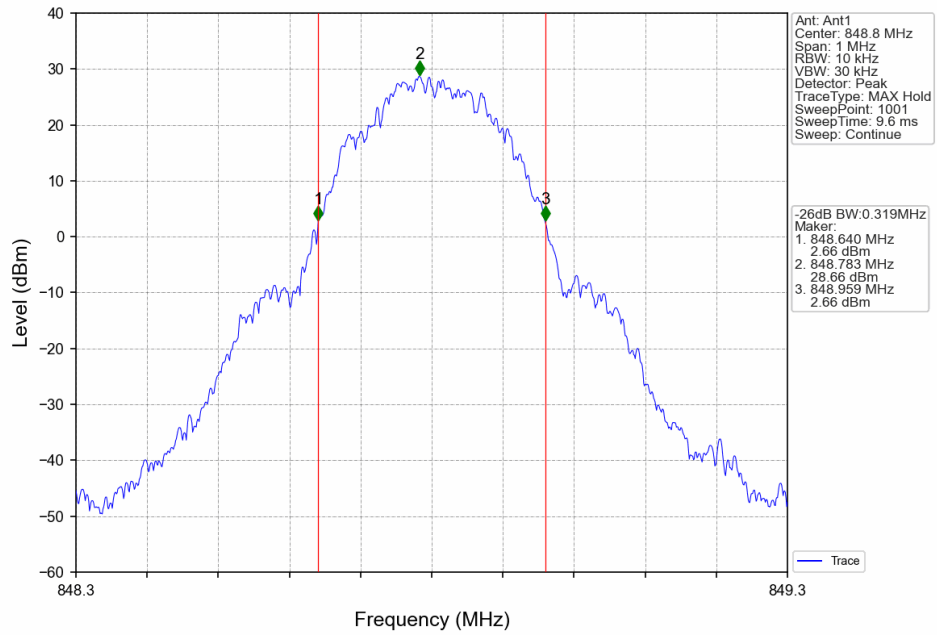
4.2.1 Test Result

Band: GSM850						
ENV	Mode		Frequency (MHz)	26dB Bandwidth (MHz)		Verdict
	Network	Subset		Result	Limit	
NTNV	GSM	GSM	824.2	0.313	/	Pass
			836.6	0.321	/	Pass
			848.8	0.319	/	Pass
	GPRS	1 TX Slot	824.2	0.317	/	Pass
			836.6	0.300	/	Pass
			848.8	0.319	/	Pass

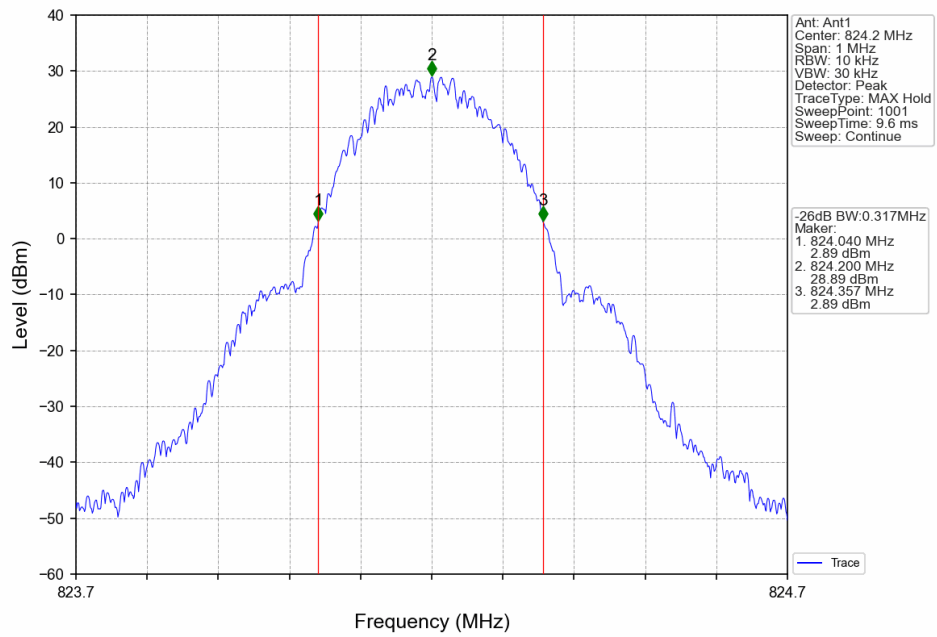
4.2.2 Test Graph



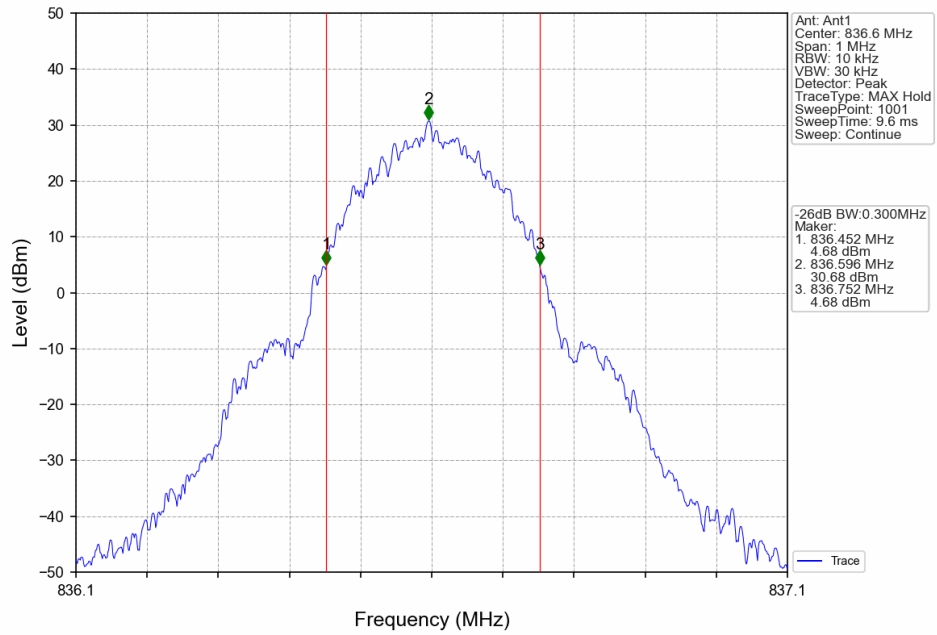
GSM850 GSM HCH 848.8MHz GSM NTN



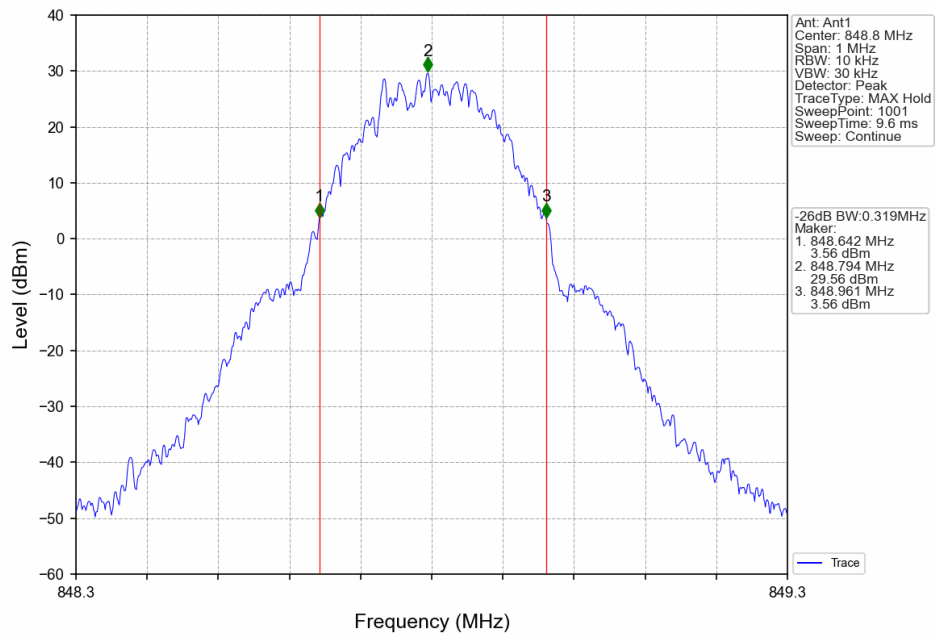
GSM850 GPRS LCH 824.2MHz 1 TX Slot NTN



GSM850 GPRS MCH 836.6MHz 1 TX Slot NTN



GSM850 GPRS HCH 848.8MHz 1 TX Slot NTN



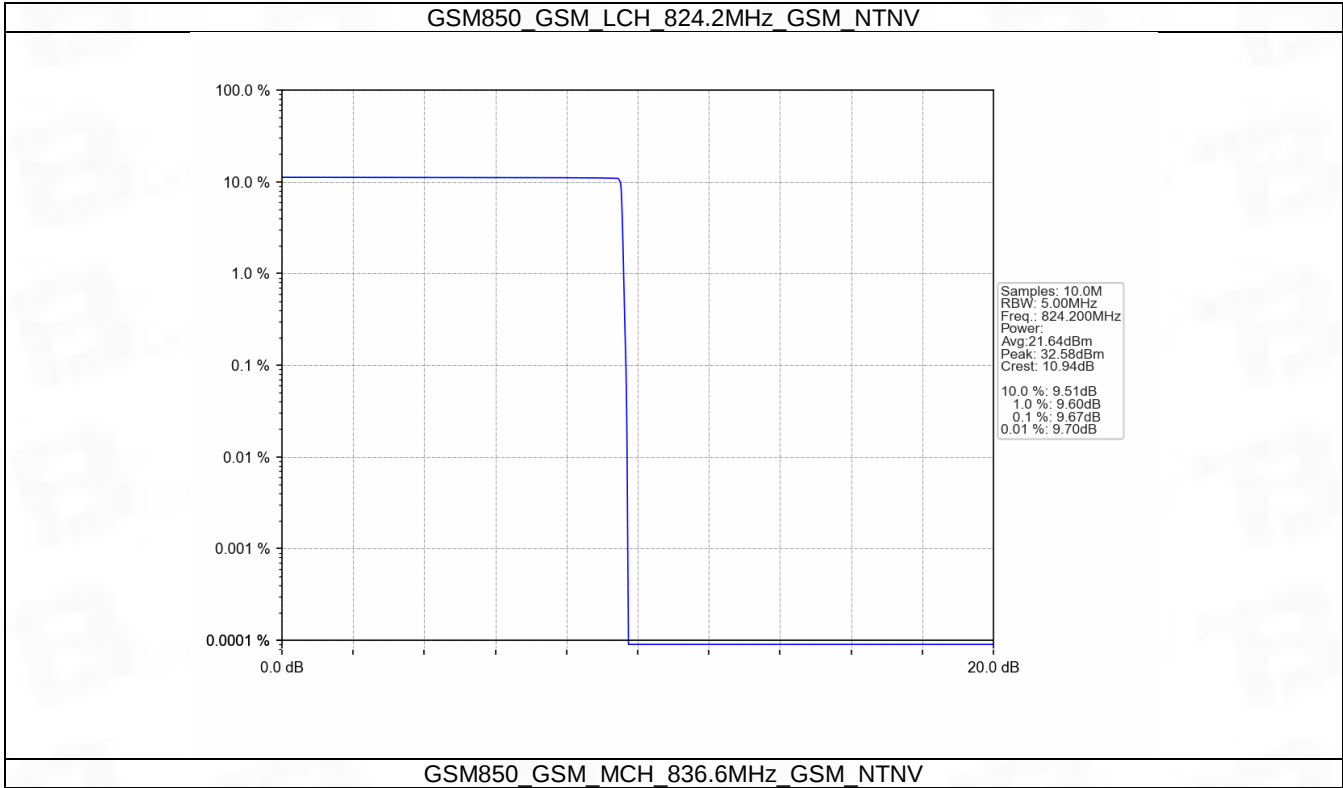
5. Peak-Average Ratio

5.1 GSM850

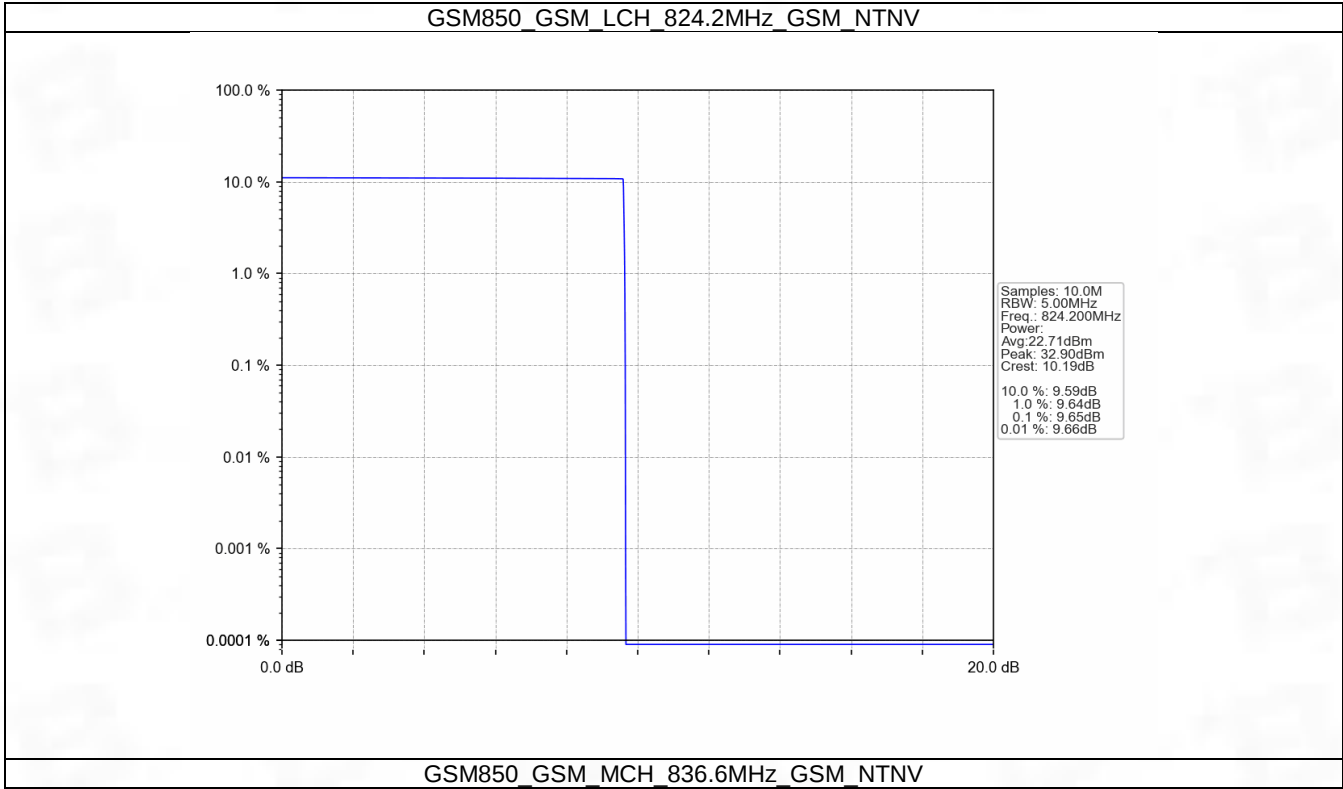
5.1.1 Test Result

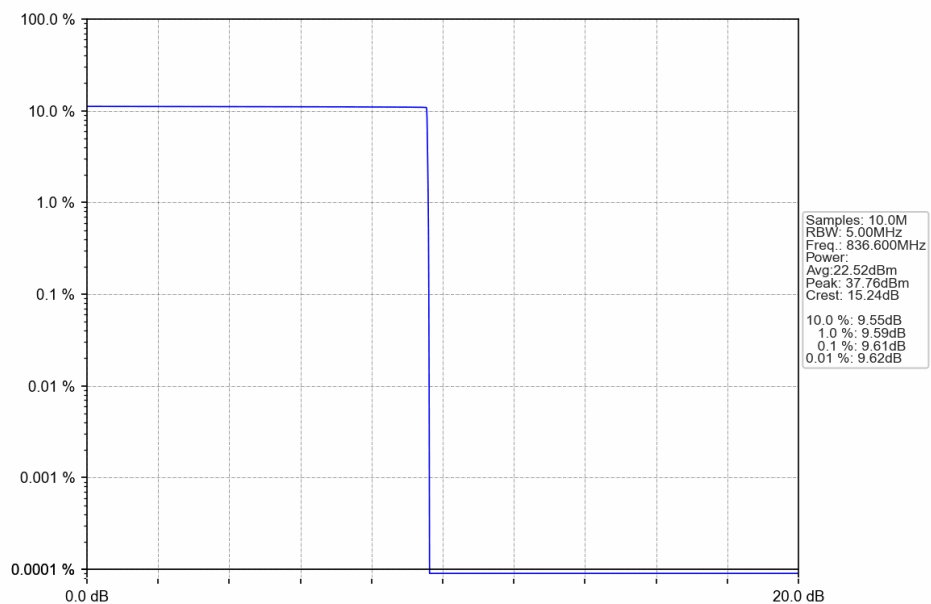
Band: GSM850						
ENV	Mode		Frequency (MHz)	Peak-Average Ratio (dB)		Verdict
	Network	Subset		Result	Limit	
NTNV	GSM	GSM	824.2	9.65	<=13	Pass
			836.6	9.61	<=13	Pass
			848.8	8.91	<=13	Pass
	GPRS	4 TX Slots	824.2	10.11	<=13	Pass
			836.6	3.62	<=13	Pass
			848.8	3.55	<=13	Pass

5.1.2 Test Graph

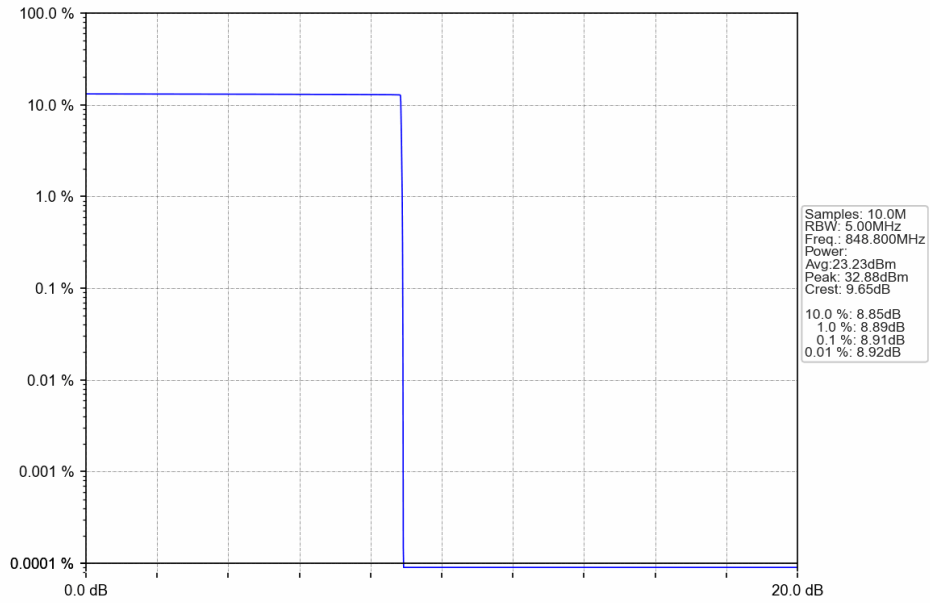


5.1.2 Test Graph

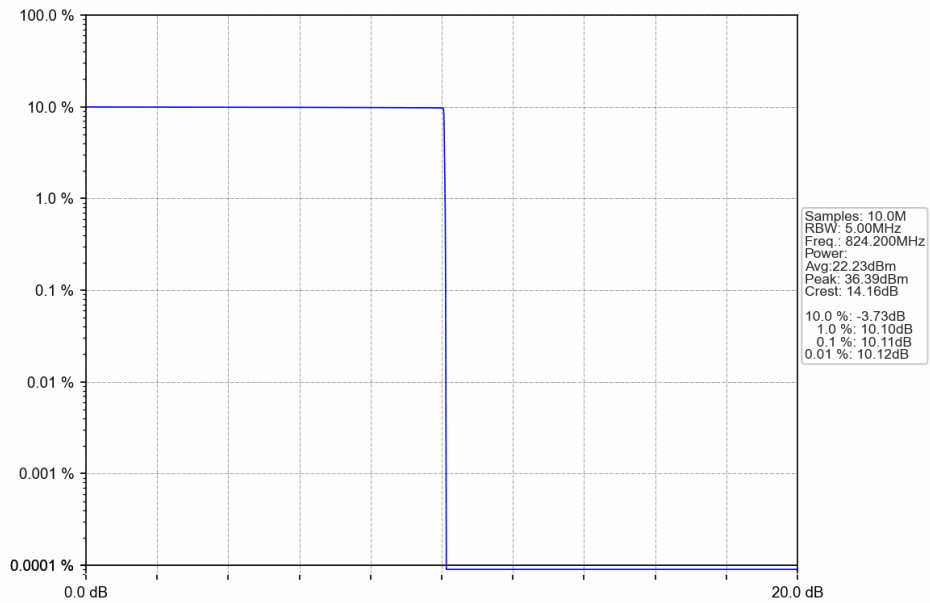




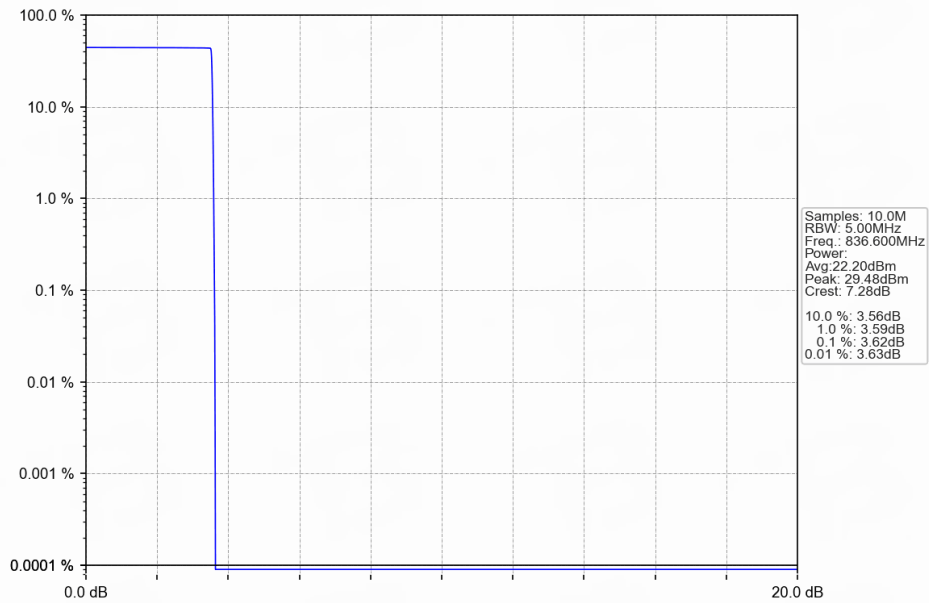
GSM850 GSM HCH 848.8MHz GSM NTN



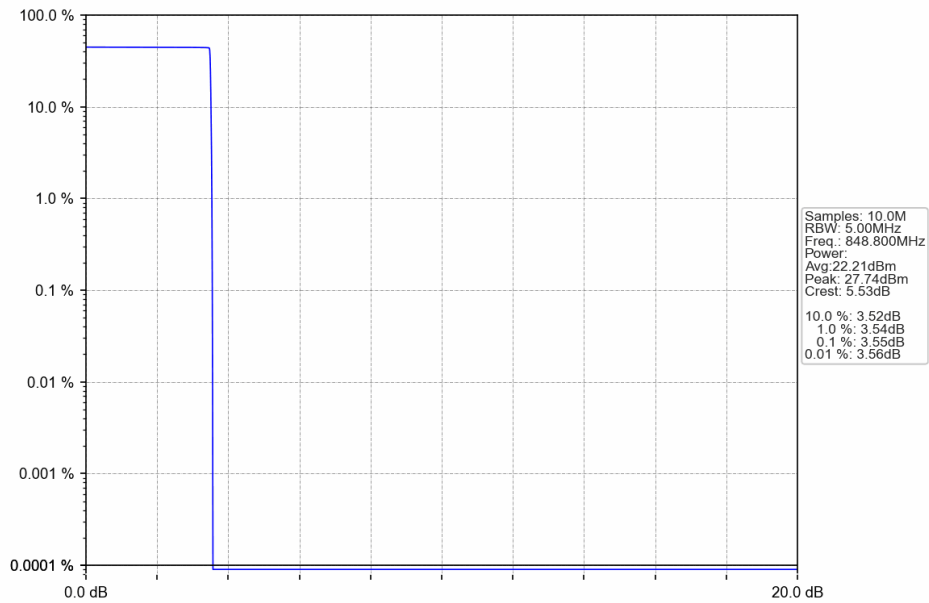
GSM850 GPRS LCH 824.2MHz 4 TX Slots NTN



GSM850 GPRS MCH 836.6MHz 4 TX Slots NTNV



GSM850 GPRS HCH 848.8MHz 4 TX Slots NTNV



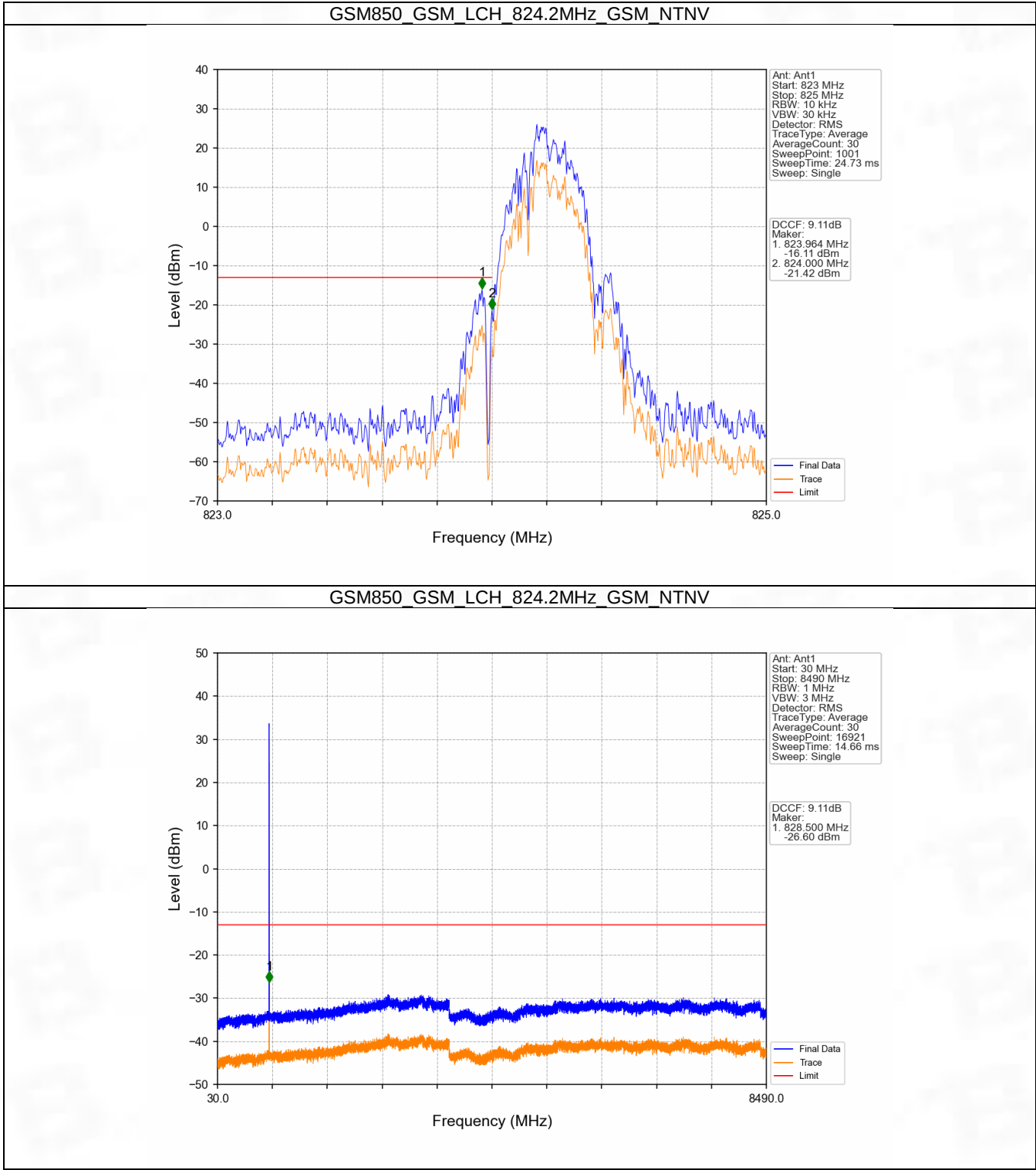
6. Spurious Emission

6.1 GSM850

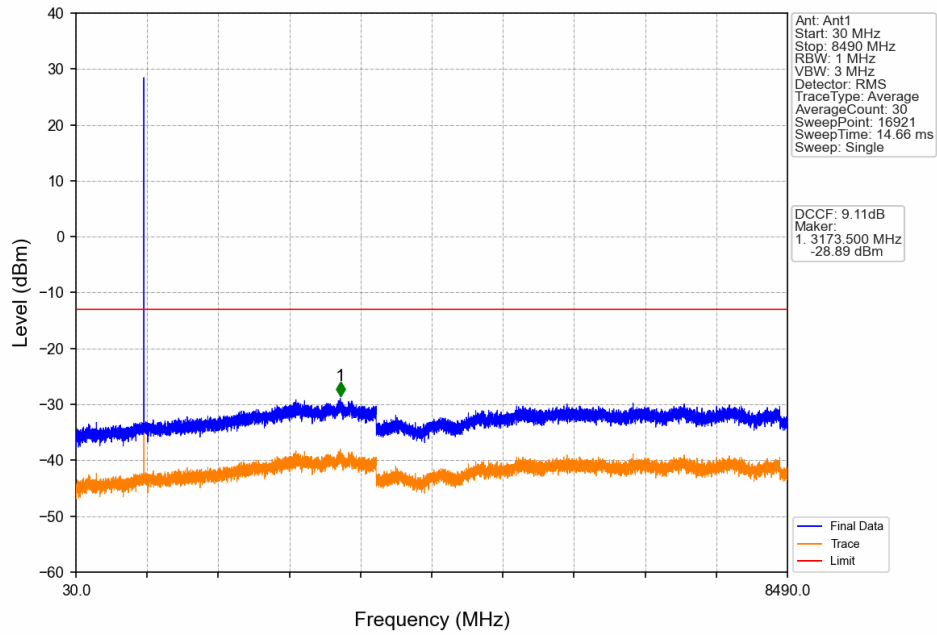
6.1.1 Test Result

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	

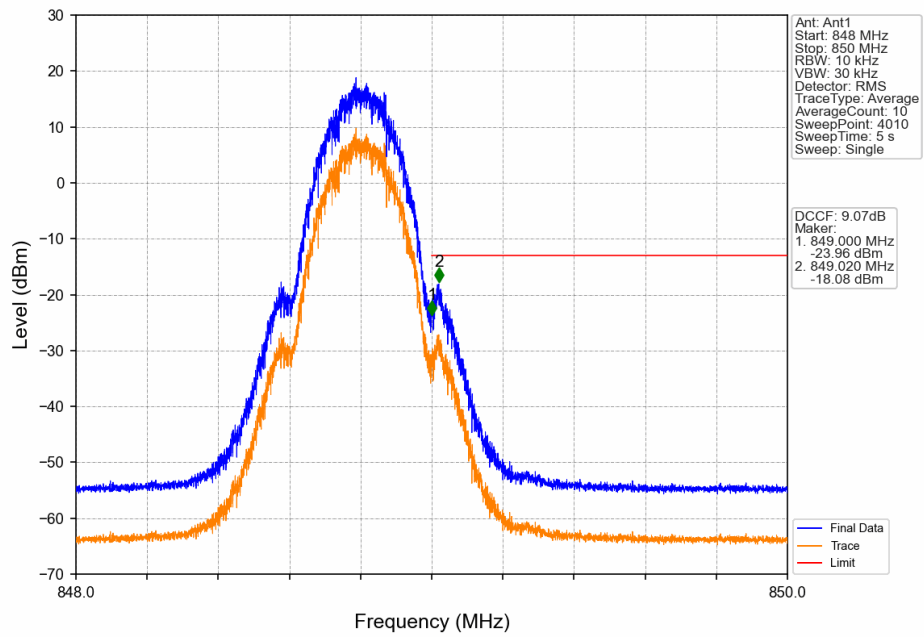
6.1.2 Test Graph



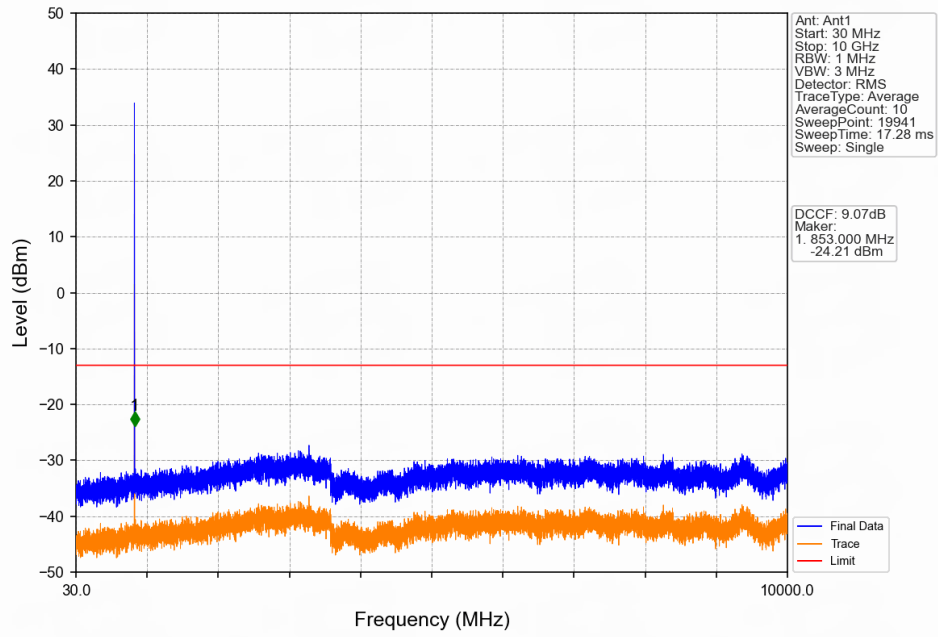
GSM850 GSM MCH 836.6MHz GSM NTNV



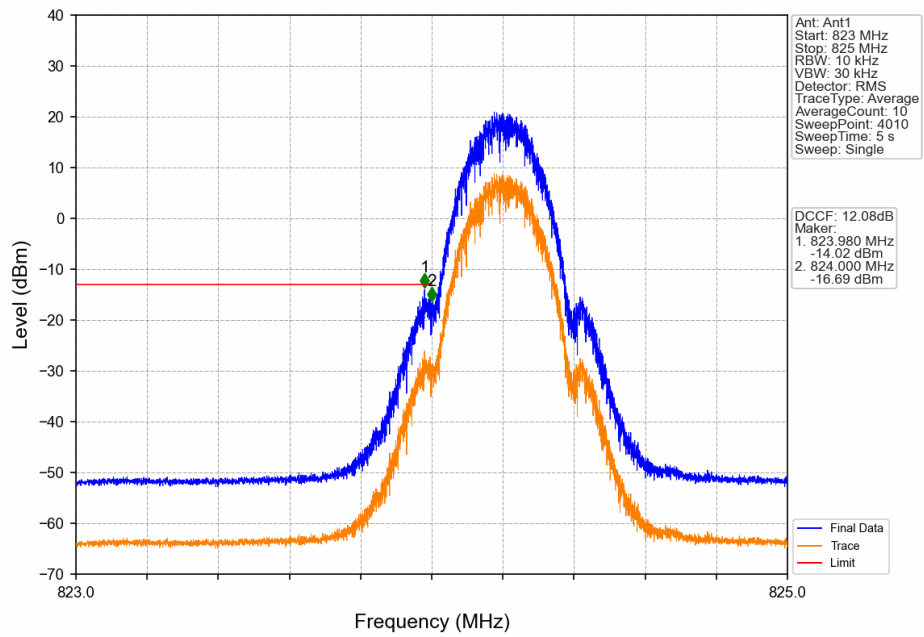
GSM850 GSM HCH 848.8MHz GSM NTNV



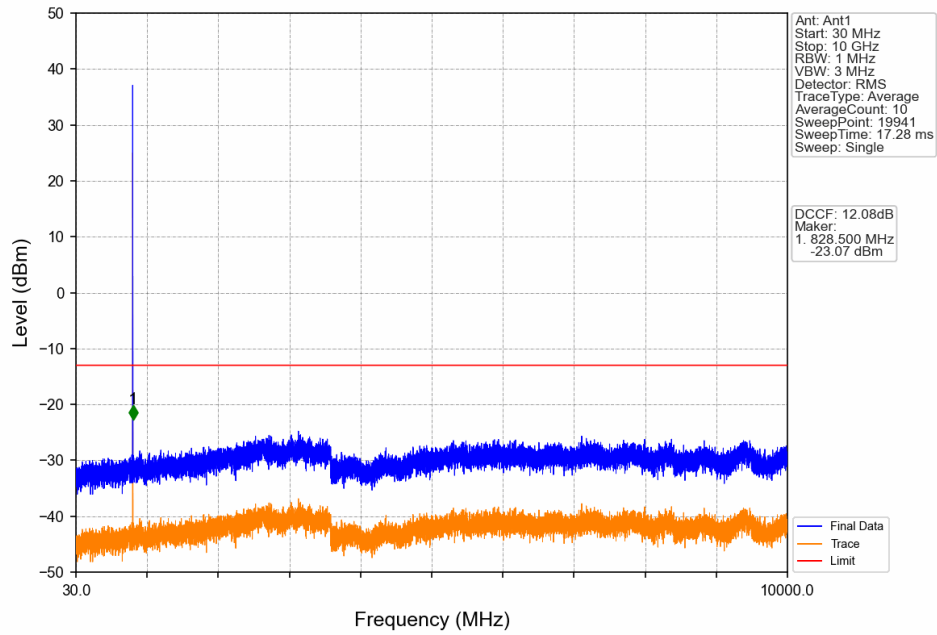
GSM850 GSM HCH 848.8MHz GSM NTN



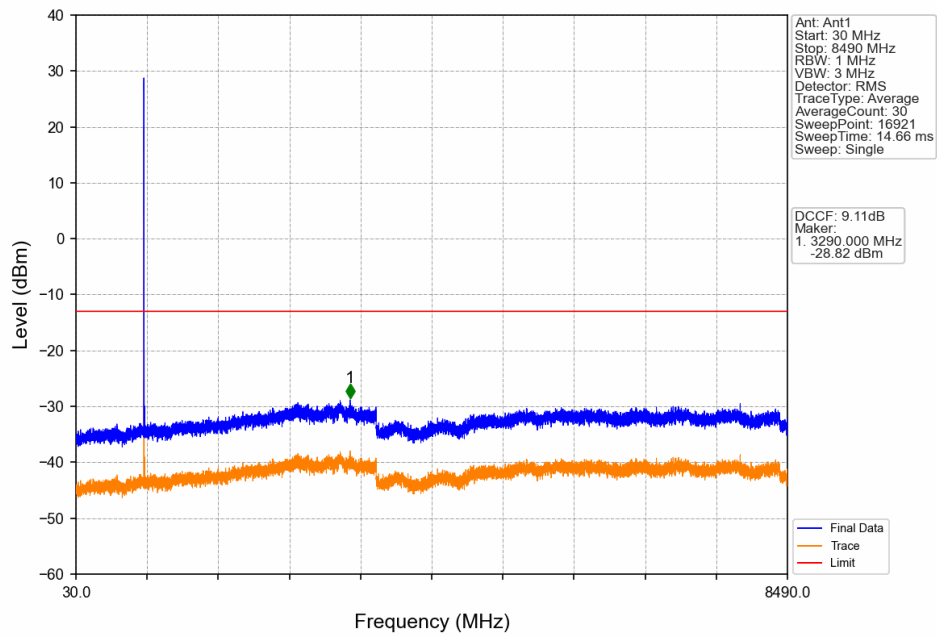
GSM850 GPRS LCH 824.2MHz 1 TX Slot NTN



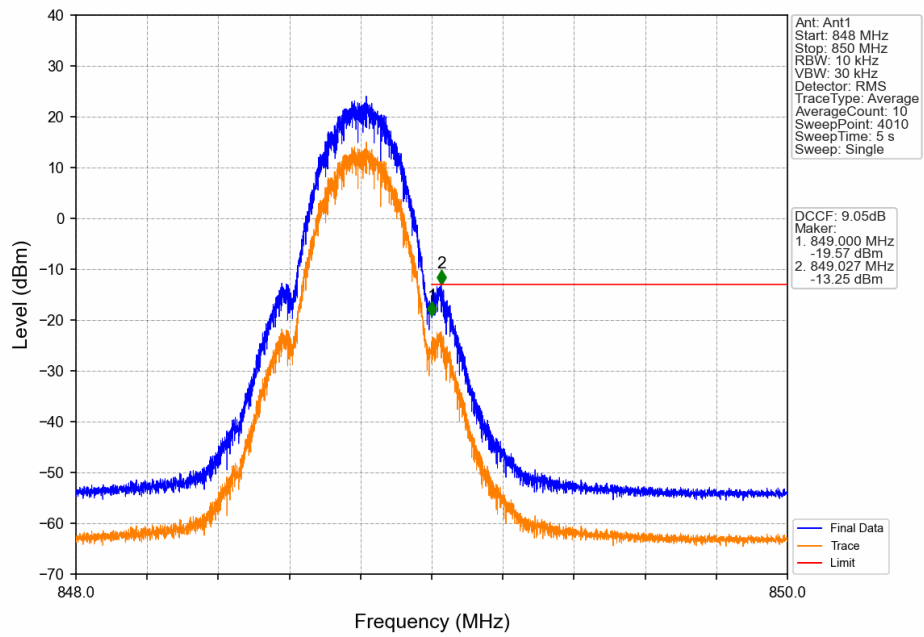
GSM850 GPRS LCH 824.2MHz 1 TX Slot NTNV



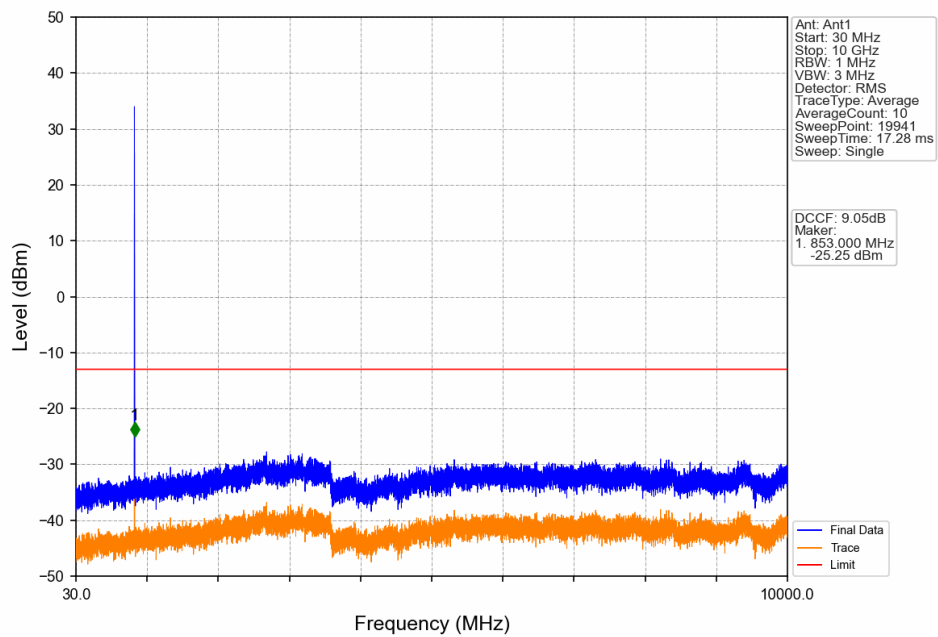
GSM850 GPRS MCH 836.6MHz 1 TX Slot NTNV



GSM850 GPRS HCH 848.8MHz 1 TX Slot NTN



GSM850 GPRS HCH 848.8MHz 1 TX Slot NTN



7. Form731

7.1 Form731_Power

7.1.1 Test Result

Band	BW	Lower Freq	High Freq	MAX Power (W)	Value	Hz/ppm	Emission Designator	Rule Parts	MAX Power (dBm)
GSM850	0.2	824.2	848.8	1.5382	0.0156	ppm	251KGXW	22H	31.87

7.2 Form731_ERP

7.2.1 Test Result

Band	BW	Lower Freq	High Freq	MAX Power (W)	Value	Hz/ppm	Emission Designator	Rule Parts	MAX Power (dBm)
GSM850	0.2	824.2	848.8	1.0814	0.0156	ppm	251KGXW	22H	30.34